



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0246-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: Capsa Solutions, LLC.
Manufacturer's Technical Representative: Rody Hardy
Mailing Address: 4253 NE 189th Ave., Portland, OR. 97230
Telephone: (800) 437-6633 Email: rhardy@capsasolutions.com

Product Information

Product Name: AX Standard Wall Arm Assembly with CPU Bracket
Product Type: Cantilever Elements
Product Model Number: 202006
General Description: Wall Mounted CPU, Monitor and Keyboard Support

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, 2016.

Signature of Applicant: [Signature] Date: 7/1/15
Title: Principal Engineer Company Name: EASE Co.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

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: 909-606-7622 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 1950-16
- Other* (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 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 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature:  Date: 01-31-2017

Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable): _____

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**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-0246-13

THIS PREAPPROVAL CONFORMS TO THE 2016 CALIFORNIA BUILDING CODE

MANUFACTURER: **CAPSA SOLUTIONS, LLC**
EQUIPMENT NAME: **WALL MOUNT MONITOR ARM**

Sheet: 1 of 9

Date: 9/11/15

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2016 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2016 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 2016 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 $S_{Ds} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $z/h \leq 1$ CONCRETE WALL. 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. SHEET METAL SCREWS SHALL BE TEK SCREWS BY ITW BUILDEX (ICC ESR-1976).
8. CONCRETE WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (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 2016 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 WALL 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 CONCRETE WALL 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.
 - G. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



CAPSA SOLUTIONS, LLC

WALL MOUNT MONITOR ARM

DES. **J. ROBERSON**

JOB NO. **11-1518**

DATE **9/11/15**

SHEET

2

OF **9** 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
1/4"	Normal Weight	3000	Hilti Kwik HUS	ESR-3027	1.92"	2.5"	12"	6"	N/A	779

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE WALL EDGES, 12" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING OF CONCRETE SCREW ANCHORS PER 2016 CBC, 1910A.5: TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

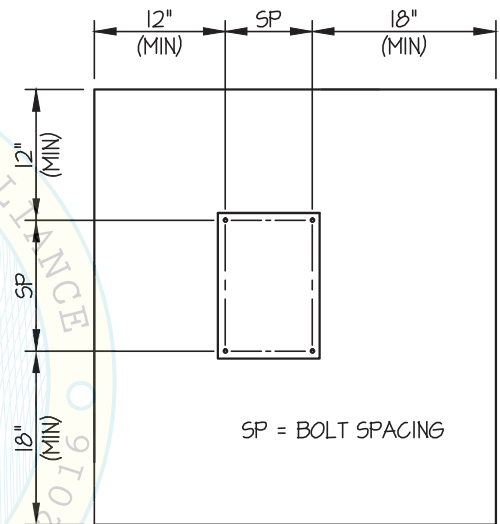
(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

(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.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE WALL WHEN INSTALLING CONCRETE SCREW ANCHORS



TYPICAL CONCRETE EDGE DETAIL

BY: Jeffrey Y. Kikumoto



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

3

JOB NO. **11-1518**

WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

MAX MONITOR WEIGHT 25 LB

MONITOR ARM

22"
MAX

STRUCTURAL ENGINEER OF RECORD
SHALL DESIGN THE WALL STRUCTURE
(16 GA., 50 KSI MIN.)

C.G. WT. = 55 LB (MAX)
(CONTENTS INCLUDED)

MAX CPU
WEIGHT 40 LB

MAX KEYBOARD
WEIGHT 6 LB

CPU HOLDER
INSTALLED ON WALL
ADJACENT TO RAIL
SEE SHEET 7 & 8 OF 9

USE 13- 1/4"Ø TEK SCREWS
TO STRUCTURAL WALL SUPPORT
(16 GA, 50 KSI MIN)

KEYBOARD ARM

PRE-MANUFACTURED
EXTRUDED 6063-T5 ALUMINUM RAIL
(BY CAPSA SOLUTIONS, LLC)
(4mm THK, Fy=21 KSI MIN)

NOTE: ALUMINUM RAIL 3.5 LB
MONITOR ARM 5.45 LB
KEYBOARD ARM 9.95 LB
CPU HOLDER 4.59 LB

5/8" THK.
WALL BOARD

Tu WALL = 134 LB/SCREW (MAX)
Vu WALL = 73 LB/SCREW (MAX)
(VALUES DO NOT INCLUDE Ω)

STEEL STUD WALL SECTION

NOTES:

- FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10 STRENGTH DESIGN IS USED. ($S_{ds} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $z/h \leq 1$)

$$\text{HORIZONTAL FORCE } (E_h) = 3.96 W_p$$

$$\text{VERTICAL FORCE } (E_v) = 0.44 W_p$$

- CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 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.
- SEE GENERAL NOTES: SHEETS 1



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

4

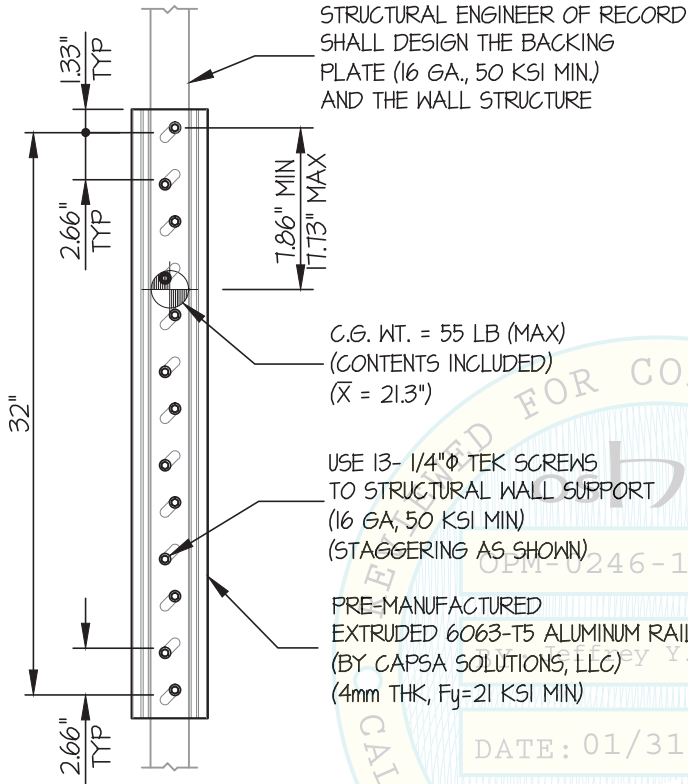
JOB NO. **11-1518**

WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

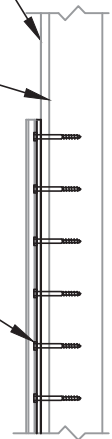


5/8" THK. WALL BOARD

WALL MOUNTED

VERTICAL 4x STUD MIN (DOUGLAS-FIR LARCH NUMBER 2 MIN.) (DESIGNED BY STRUCTURAL ENGINEER OF RECORD)

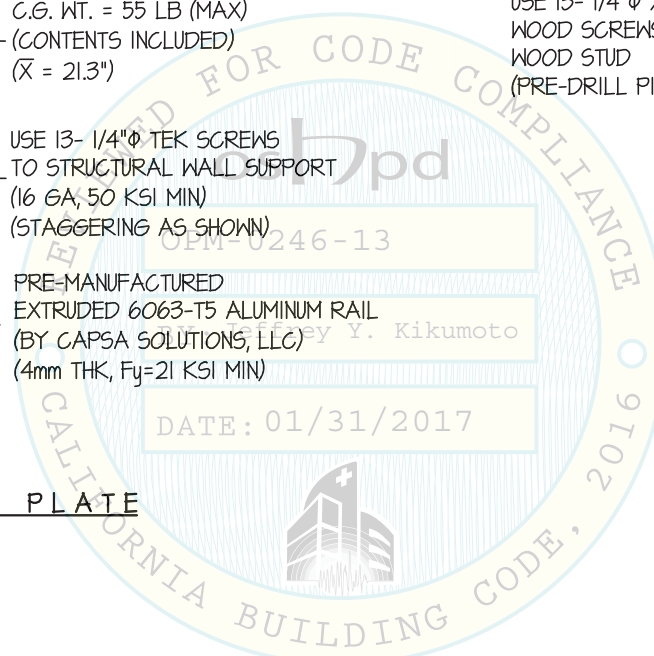
USE 13- 1/4" Φ X 4" FLAT HEAD WOOD SCREWS TO WOOD STUD (PRE-DRILL PILOT HOLES)



NOTE:
MIN EDGE DISTANCE = 1"
MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

ELEVATION AT WALL PLATE



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

5

JOB NO. **11-1518**

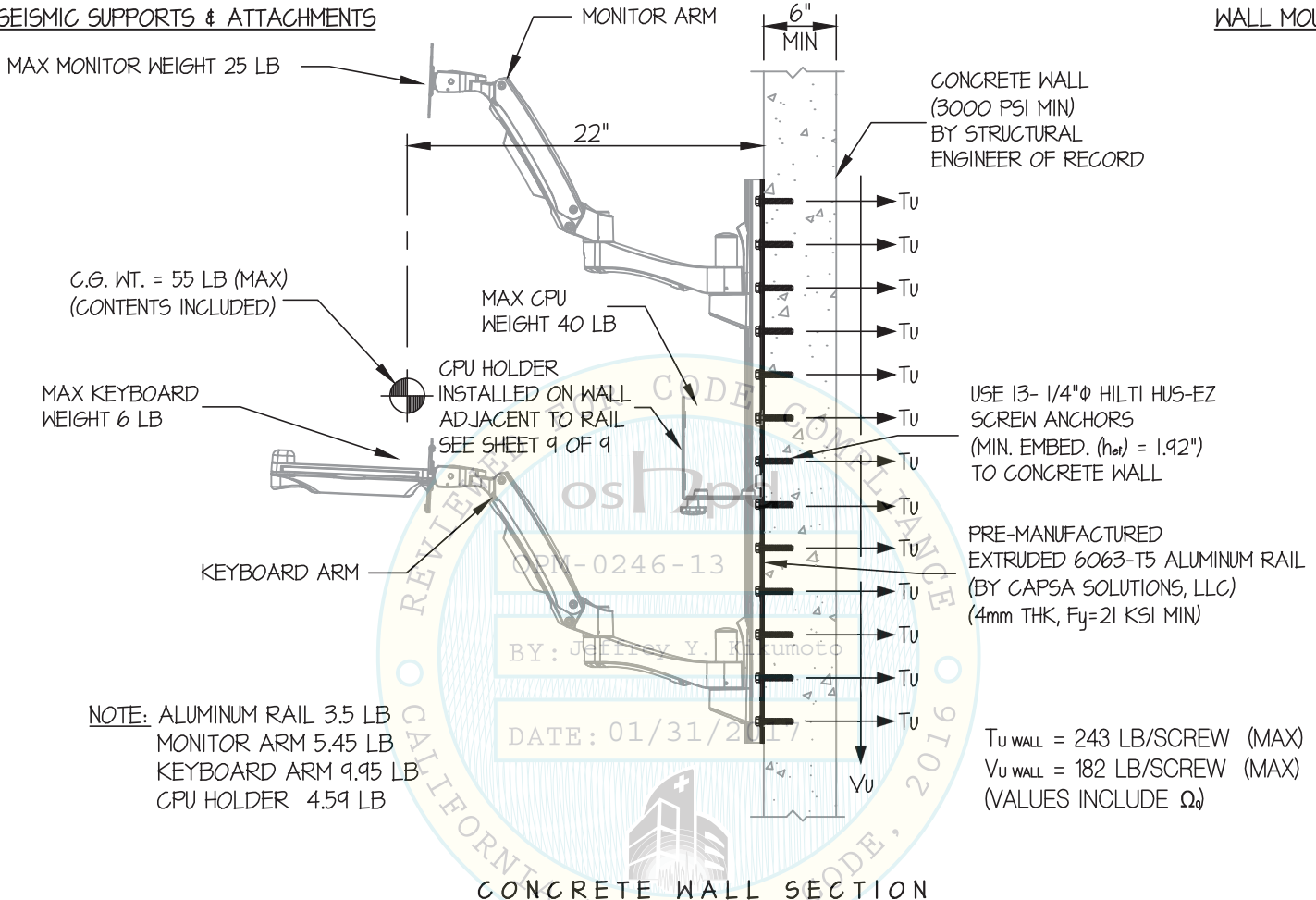
WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



NOTES:

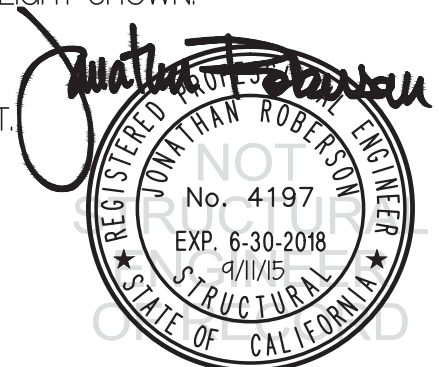
- FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. ($S_{ds} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $\Omega_o = 2.5$, $z/h \leq 1$)

$$\text{HORIZONTAL FORCE (E}_h\text{)} = 3.96 W_p$$

$$\text{HORIZONTAL FORCE (E}_{mh}\text{)} = 4.95 W_p \text{ (FOR CONCRETE ANCHORAGE)}$$

$$\text{VERTICAL FORCE (E}_v\text{)} = 0.44 W_p$$

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



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

6

JOB NO. **11-1518**

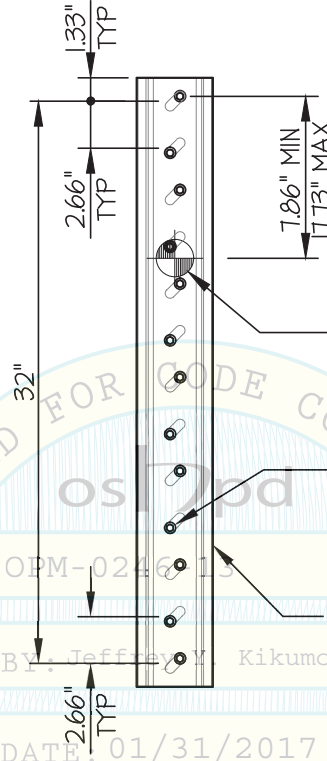
WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



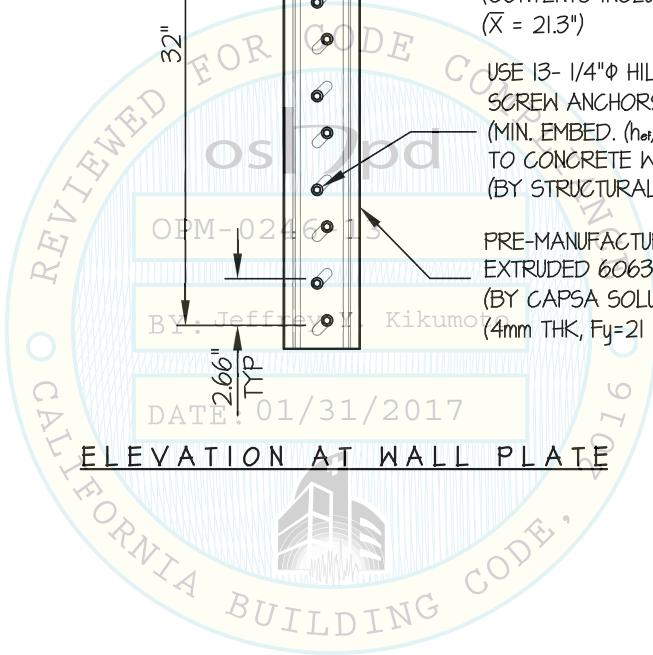
C.G. WT. = 55 LB (MAX)
(CONTENTS INCLUDED)
(\bar{X} = 21.3")

USE 13- 1/4" ϕ HILTI HUS-EZ
SCREW ANCHORS (STAGGERING AS SHOWN)
(MIN. EMBED. (h_{ef}) = 1.92")
TO CONCRETE WALL
(BY STRUCTURAL ENGINEER OF RECORD)

PRE-MANUFACTURED
EXTRUDED 6063-T5 ALUMINUM RAIL
(BY CAPSA SOLUTIONS, LLC)
(4mm THK, F_y =21 KSI MIN)

OPM-0246-13
BY: Jeffrey Kikumoto
DATE: 01/31/2017

ELEVATION AT WALL PLATE



Jonathan Roberson
REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2018
9/11/15
STRUCTURAL
STATE OF CALIFORNIA

CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

7

JOB NO. **11-1518**

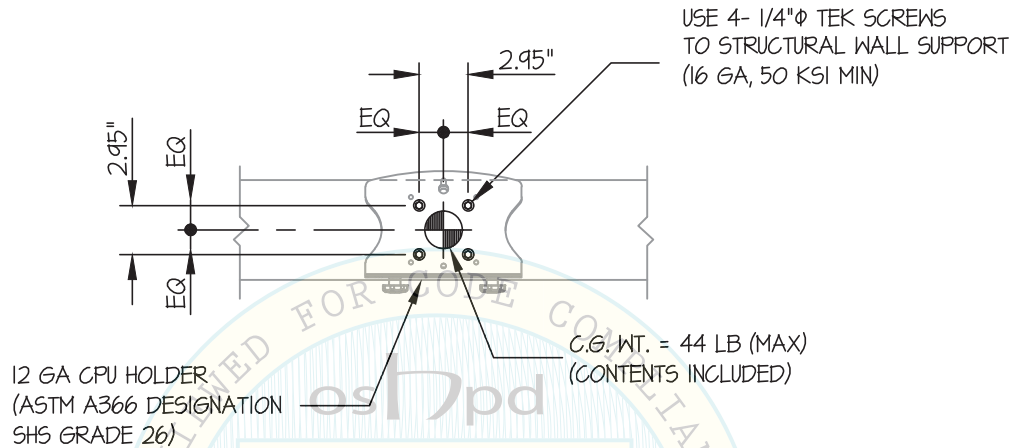
WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



$T_{U\ WALL} = 221\text{ LB/SCREW (MAX)}$
 $V_{U\ WALL} = 49\text{ LB/SCREW (MAX)}$
 (VALUES DO NOT INCLUDE Ω_2)

ELEVATION AT WALL PLATE
 (600508 AX SERIES CPU HOLDER)

DATE: 01/31/2017

NOTES:

1. FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. ($S_{Ds} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $\Omega_o = 2.5$, $z/h \leq 1$)

HORIZONTAL FORCE (E_h) = $3.96 W_p$

HORIZONTAL FORCE (E_{mh}) = $4.95 W_p$ (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 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.



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

8

JOB NO. **11-1518**

WALL MOUNT MONITOR ARM

DATE **9/11/15**

OF **9** SHEETS

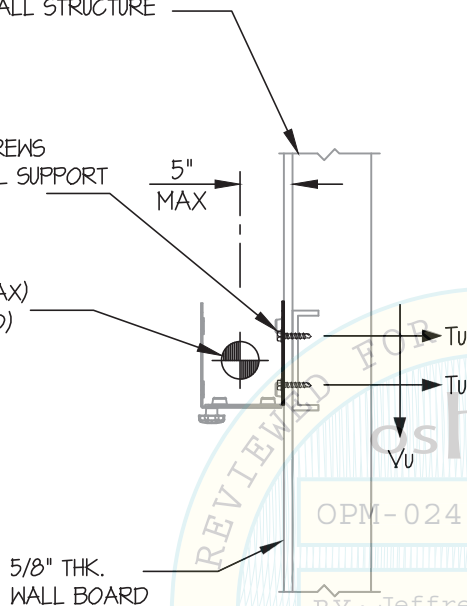
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

STRUCTURAL ENGINEER OF RECORD SHALL DESIGN THE WALL STRUCTURE (16 GA., 50 KSI MIN.)

USE 4- 1/4"Φ TEK SCREWS TO STRUCTURAL WALL SUPPORT (16 GA., 50 KSI MIN)

C.G. WT. = 44 LB (MAX) (CONTENTS INCLUDED)

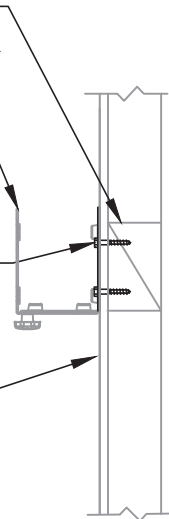


4 x STUDS OR 4 x BLKG (DOUGLAS-FIR LARCH NUMBER 2 MIN.) (DESIGNED BY STRUCTURAL ENGINEER OF RECORD)

600508 AX SERIES CPU HOLDER

4- 1/4"Φ x 4" FLAT HEAD WOOD SCREWS TO WOOD STUD (PRE-DRILL PILOT HOLES)

5/8" THK. WALL BOARD

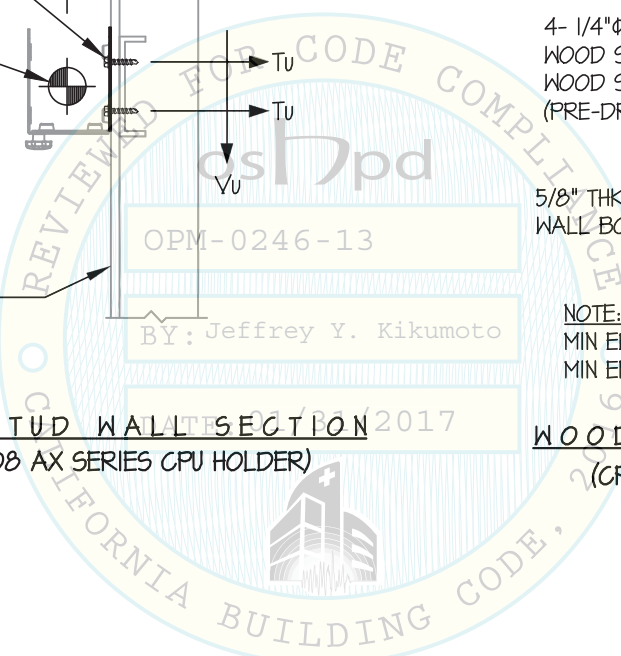


NOTE:

MIN EDGE DISTANCE = 1"
MIN END DISTANCE = 2"

STEEL STUD WALL SECTION
(600508 AX SERIES CPU HOLDER)

WOOD STUD WALL SECTION
(CPU HOLDER ATTACHMENT TO WALL)



CAPSA SOLUTIONS, LLC

DES. **J. ROBERSON**

SHEET

9

WALL MOUNT MONITOR ARM

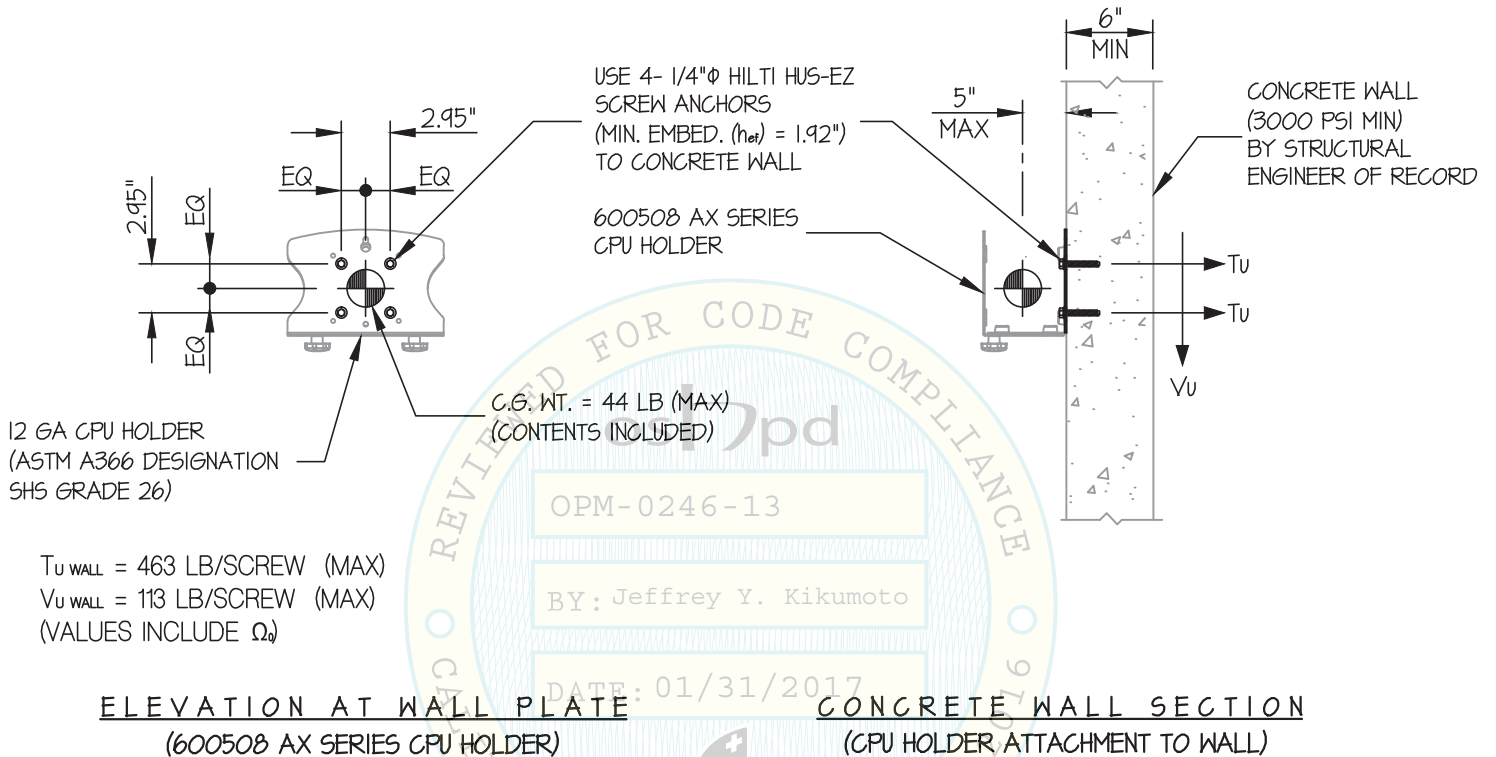
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OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



Jonathan Roberson

REGISTERED PROFESSIONAL ENGINEER
 JONATHAN ROBERSON
 No. 4197
 EXP. 6-30-2018
 9/11/15
 STRUCTURAL
 STATE OF CALIFORNIA