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

OFFICE USE ONLY
APPLICATION #: OPM-0179-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Milestone AV Technologies

Manufacturer's Technical Representative: Michael Harrell

Mailing Address: 8401 Eagle Creek Parkway, Ste 700, Savage, MN. 55378

Telephone: (952) 225-6313 Email: Michael.harrell@milestone.com

Product Information

Product Name: TSXXXTU Monitor Wall Mounts

Product Type: Cantilever

Product Model Number: TS318TU, TS325TU, TS525TU

General Description: Extended Arm, Articulating TV Wall Mount

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: 9/28/15

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: 10-12-2015

Print Name: Jeffrey Kikumoto

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-0179-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **MILESTONE AV**

EQUIPMENT NAME: **TS318TU/TS325TU/TS525TU SERIES WALL MOUNT**

Date: 10/7/15

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 1.10, 1.65, 1.80 & 2.20. 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} = 1.10, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$
   WHERE S_{DS} = 1.65, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$
   WHERE S_{DS} = 1.80, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$
   WHERE S_{DS} = 2.20, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$
   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 TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976).
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 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 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 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 6hef FROM THIS UNIT'S ANCHORS.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2016
10/7/15
STRUCTURAL
STATE OF CALIFORNIA

MILESTONE AV

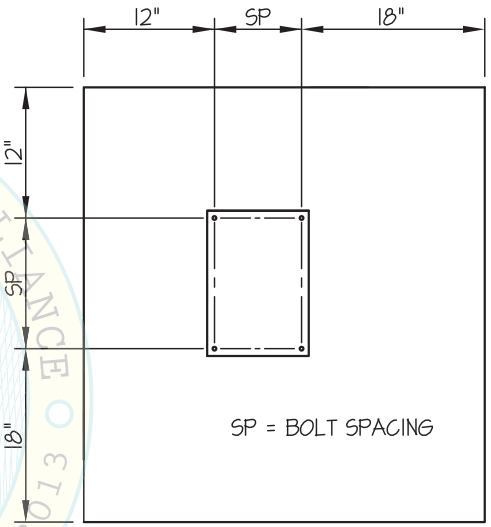
TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

10. **SCREW 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
1/4"	Normal Weight	3000	Hilti Kwik HUS	ESR-3027	1.92"	8"	12"	6"	N/A	779 lb

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



TYPICAL CONCRETE EDGE DETAIL

C. TESTING OF SCREW 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

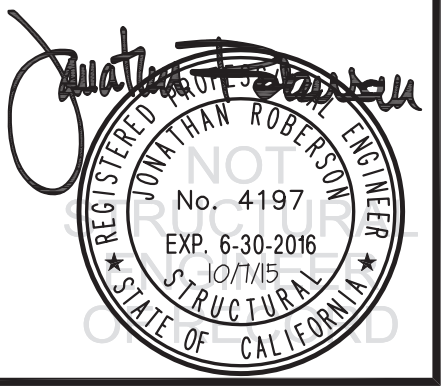
(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

(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.

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

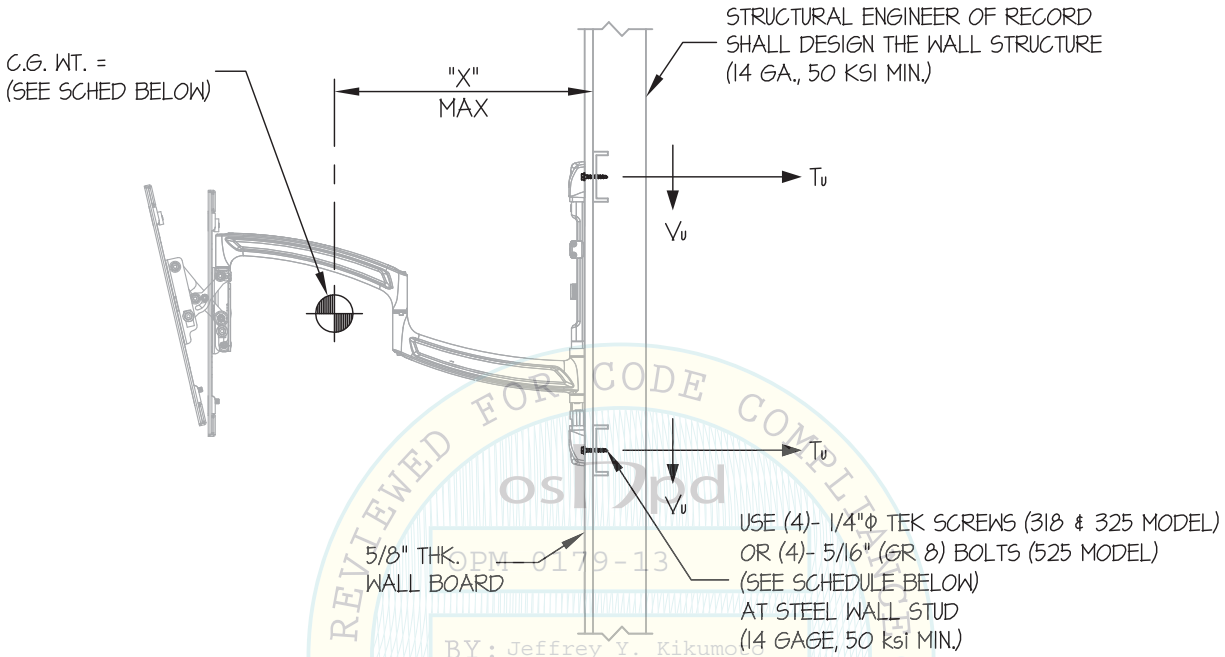


MILESTONE AV

TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1368
DATE 10/7/15
SHEET 3 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — AT STEEL STUD WALL — WALL MOUNTED



STEEL STUD WALL SECTION

EQUIPMENT	MAX S_{DS}	TOTAL WT (lb.)	"X" (in.)	* Tu (lb.)	* Vu (lb.)	CONNECTION TYPE
TS318TU	1.80	103	19.3	181	163	SEE SHEET 4 OF 9
TS325TU	1.80	107	25.2	227	178	SEE SHEET 4 OF 9
TS525TU	2.20	180	25.8	383	364	SEE SHEET 5 OF 9

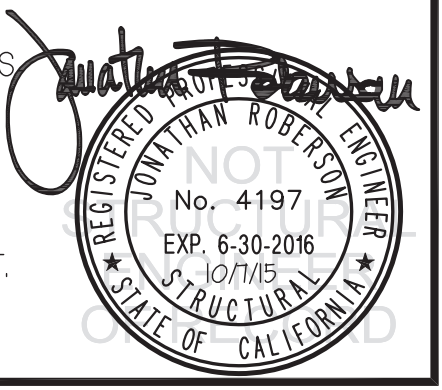
* VALUES DO NOT INCLUDE Ω_o

NOTES:

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

	S_{DS}= 2.20	S_{DS}= 1.80
HORIZONTAL FORCE (E_h) =	3.96 W_p	3.24 W_p
VERTICAL FORCE (E_v) =	0.44 W_p	0.36 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.
4. SEE GENERAL NOTES: SHEETS 1 AND 2.

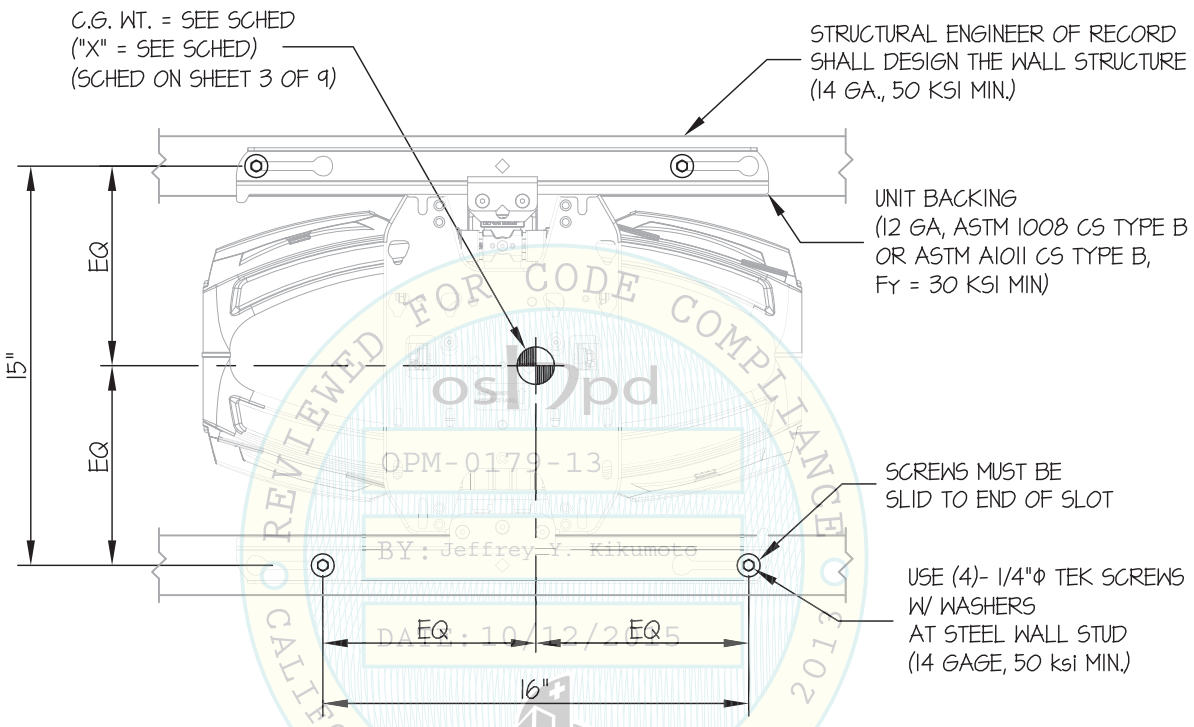


MILESTONE AV

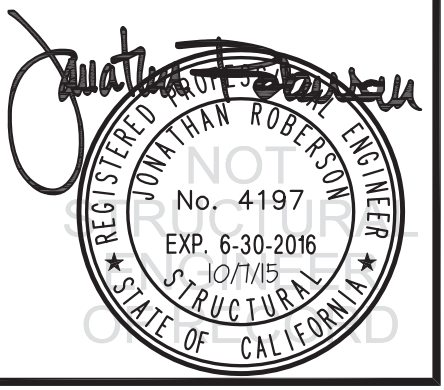
TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1368
DATE 10/7/15
SHEET 4 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS | AT STEEL STUD WALL | WALL MOUNTED



FRONT ELEVATION
(TS318TU MODEL SHOWN)

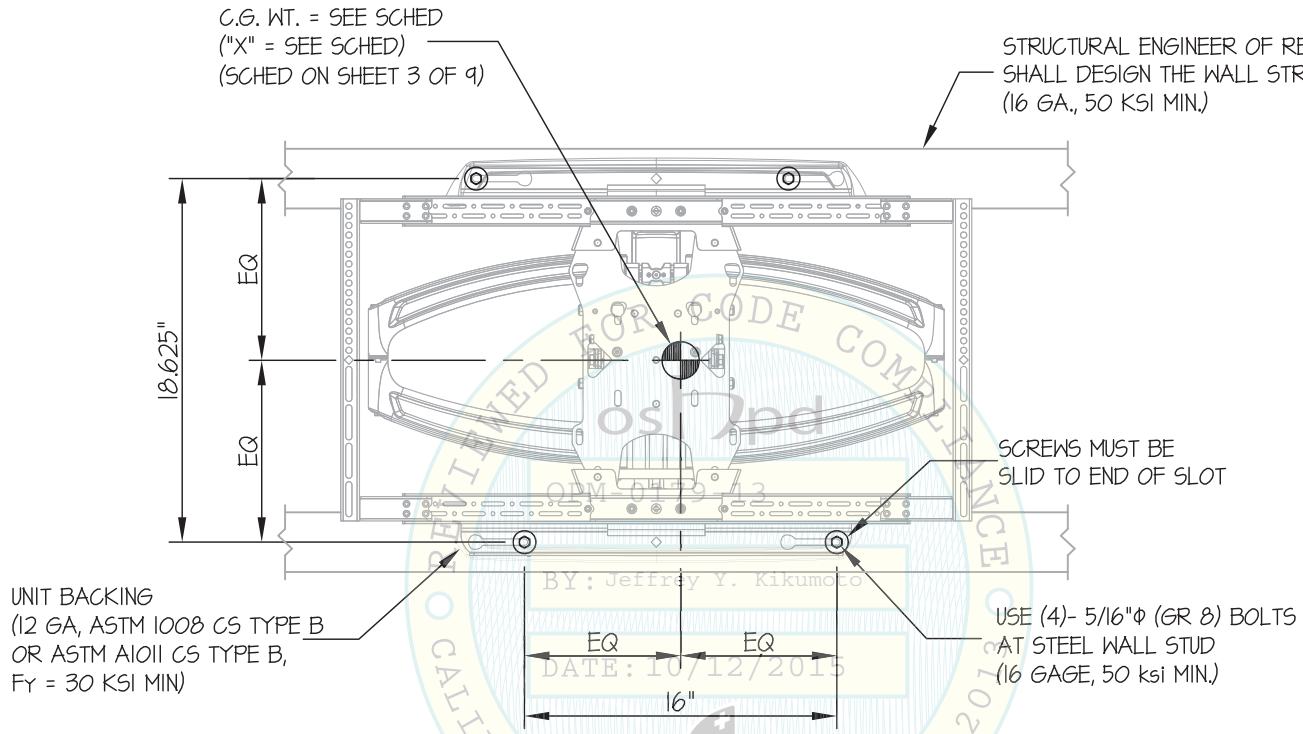


MILESTONE AV

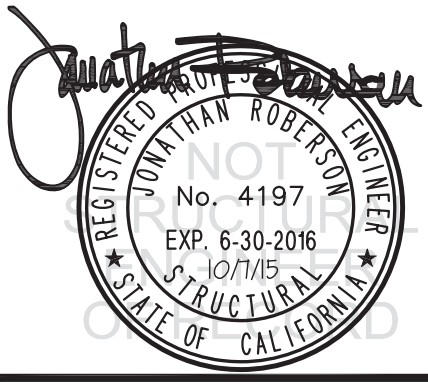
TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1368
DATE 10/7/15
SHEET 5 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS | AT STEEL STUD WALL | WALL MOUNTED



FRONT ELEVATION
(TS525TU MODEL SHOWN)



MILESTONE AV

TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES. J. ROBERSON
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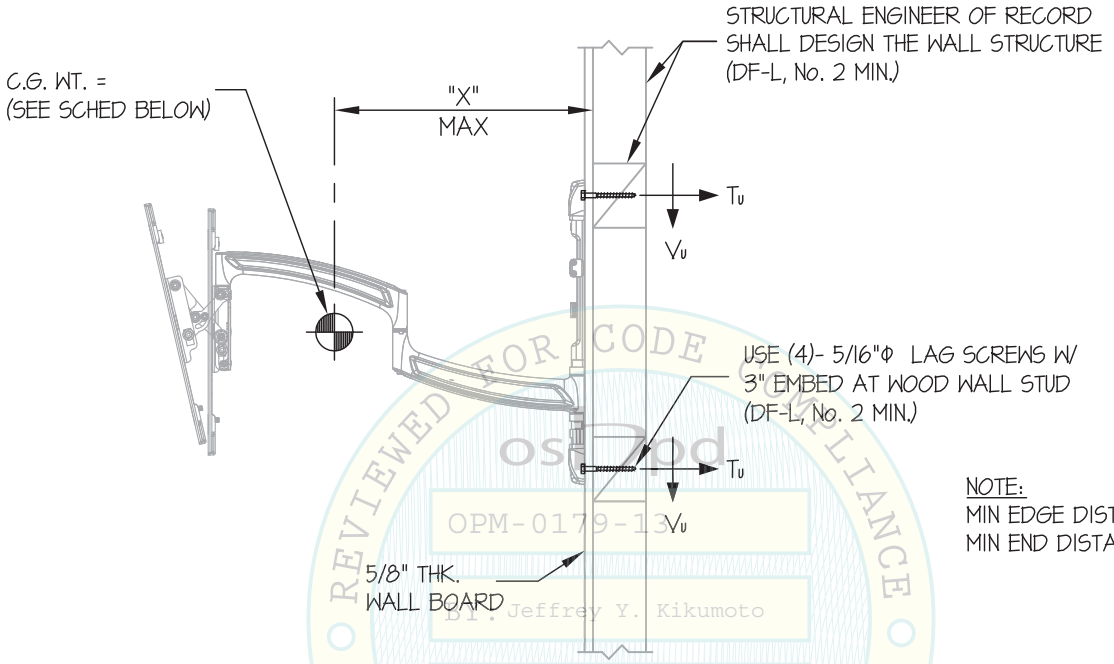
DATE 10/7/15
SHEET 6 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — AT WOOD STUD WALL — WALL MOUNTED



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

WOOD STUD WALL SECTION

EQUIPMENT	MAX S_{DS}	TOTAL WT (lb.)	"X" (in.)	* Tu (lb.)	* Vu (lb.)
TS318TU	1.65	103	19.3	178	158
TS325TU	1.65	107	25.2	217	164

* VALUES DO NOT INCLUDE Ω_0

NOTES:

1. **FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.**
   STRENGTH DESIGN IS USED. (S_{DS} = 1.65, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h ≤ 1)
   HORIZONTAL FORCE (E_h) = 2.97 W_p
   VERTICAL FORCE (E_v) = 0.34 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.
4. SEE GENERAL NOTES: SHEETS 1 AND 2.

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DES. J. ROBERSON
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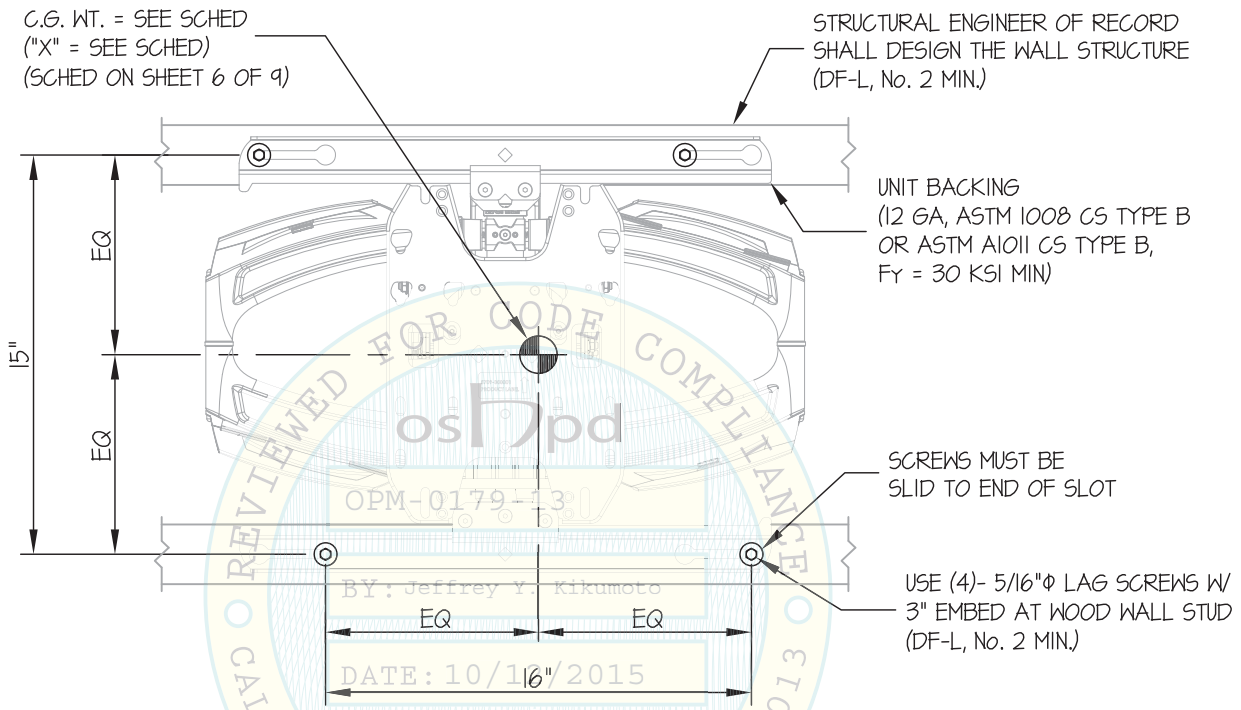
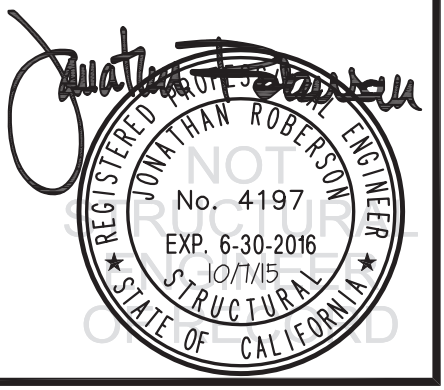
SHEET 7 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS | AT WOOD STUD WALL | WALL MOUNTED



FRONT ELEVATION
(TS318TU MODEL SHOWN)



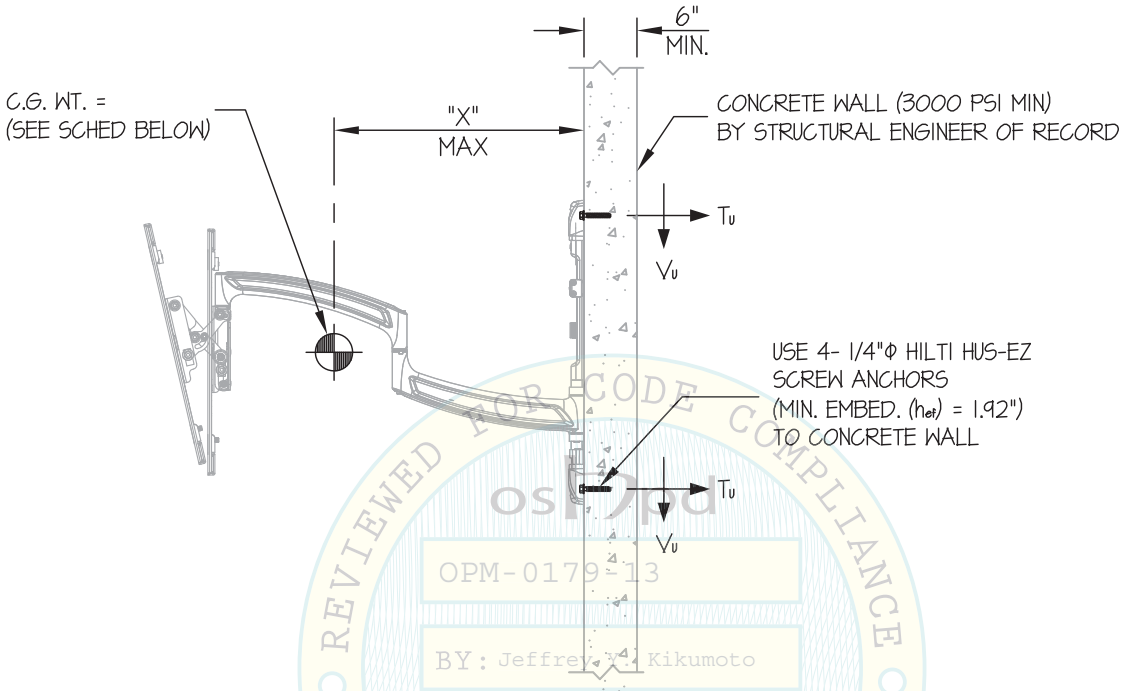
MILESTONE AV

TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1368
DATE 10/7/15

SHEET 8 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — AT CONCRETE WALL — WALL MOUNTED



CONCRETE WALL SECTION

EQUIPMENT	MAX S_{DS}	TOTAL WT (lb.)	"X" (in.)	* Tu (lb.)	* Vu (lb.)	"A" (in.)
TS318TU	2.20	103	19.3	364	512	15
TS325TU	1.80	107	25.2	357	435	15
TS525TU	1.10	180	25.8	400	450	18.625

* VALUES INCLUDE Ω_o

NOTES:

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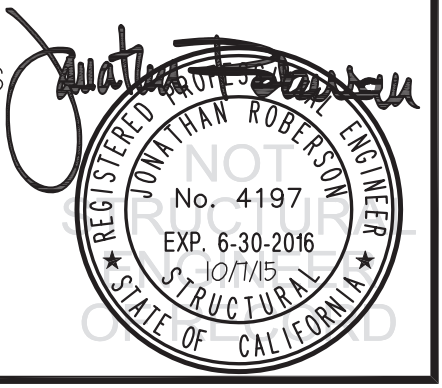

MILESTONE AV

TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

DES.	J. ROBERSON
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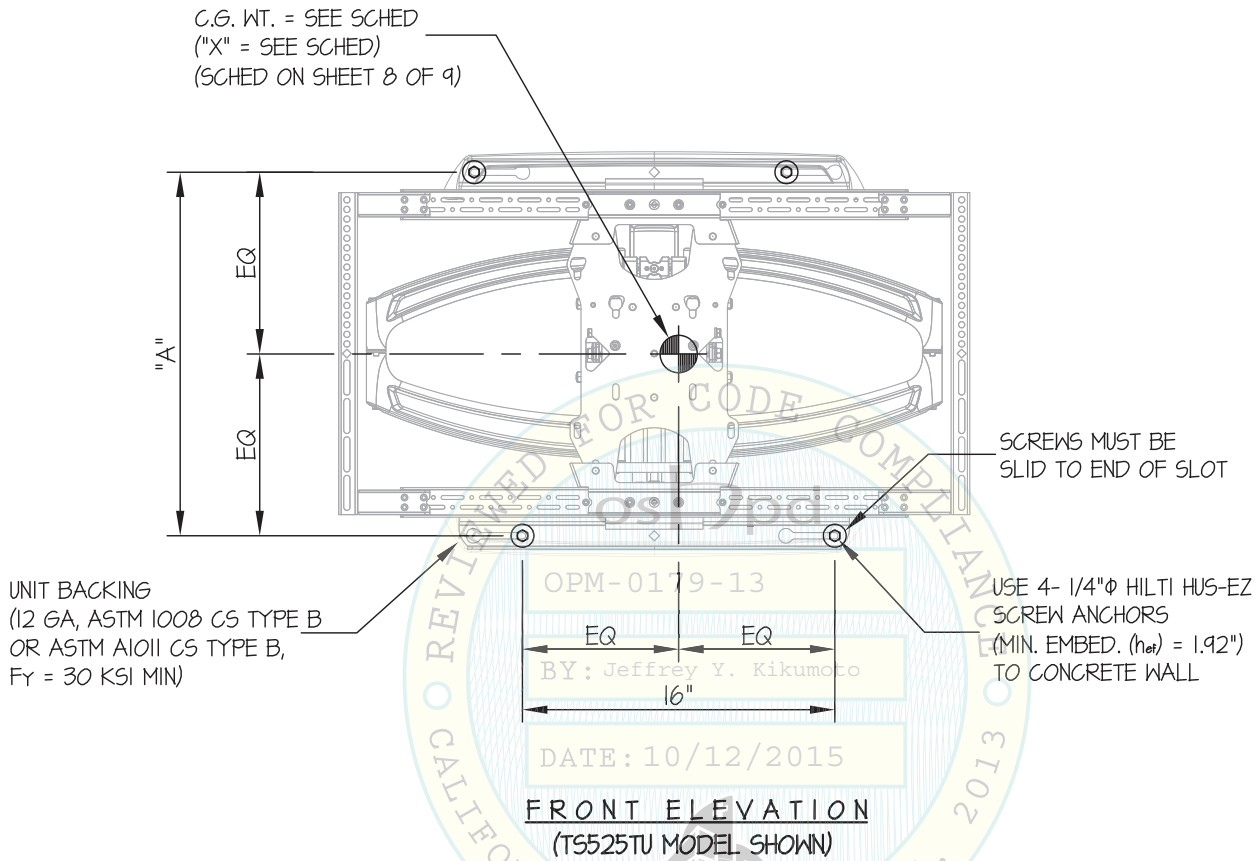
SHEET 9 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — AT CONCRETE WALL — WALL MOUNTED



FRONT ELEVATION
(TS525TU MODEL SHOWN)