



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION

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 OPM-0179-13

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.

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

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY  
OSH-FD-700 (REV 1/24/13)



osHPD

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**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: 909-606-7667

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 bracing, 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: Jeffrey Kikumoto Date: 10-12-2015

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"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY  
OSH-FD-700 (REV 1/24/13)

oshpd

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**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**

Sheet: 1 of 9  
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  $\Omega_o$
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. 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  $6h_{ef}$  FROM THIS UNIT'S ANCHORS.





### MILESTONE AV

DES. J. ROBERSON

SHEET

3

### TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

JOB NO. 11-1368

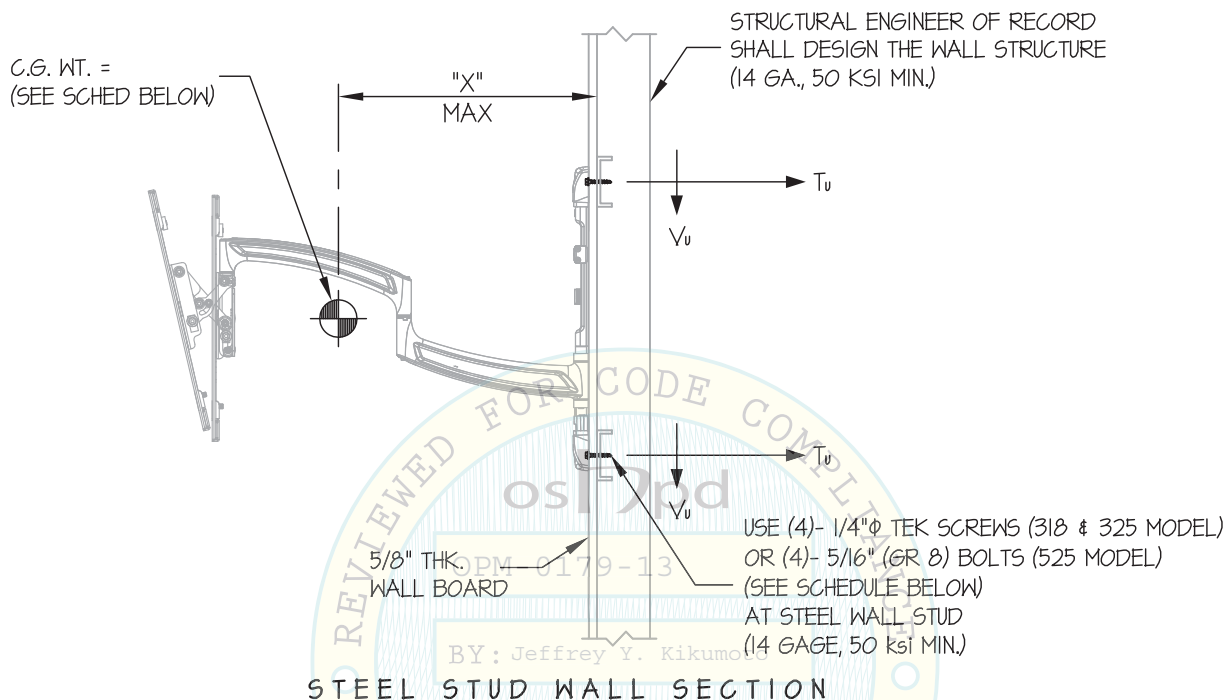
DATE 10/7/15

OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

AT STEEL STUD WALL

WALL MOUNTED



#### STEEL STUD WALL SECTION

| EQUIPMENT | MAX S <sub>DS</sub> | TOTAL WT (lb.) | "X" (in.) | * T <sub>u</sub> (lb.) | * V <sub>u</sub> (lb.) | CONNECTION TYPE  |
|-----------|---------------------|----------------|-----------|------------------------|------------------------|------------------|
| TS318TU   | 180                 | 103            | 19.3      | 181                    | 163                    | SEE SHEET 4 OF 9 |
| TS325TU   | 180                 | 107            | 25.2      | 227                    | 178                    | SEE SHEET 4 OF 9 |
| TS525TU   | 220                 | 180            | 25.8      | 383                    | 364                    | SEE SHEET 5 OF 9 |

\* VALUES DO NOT INCLUDE  $\Omega$

#### NOTES:

- FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.

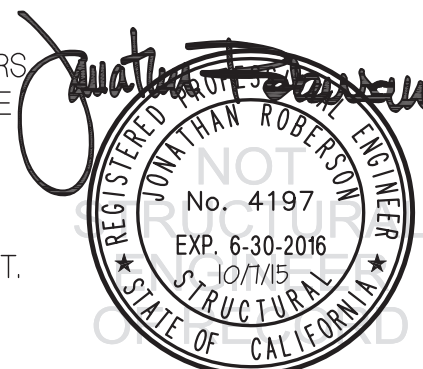
STRENGTH DESIGN IS USED. ( $a_p = 2.5$ ,  $l_p = 1.5$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ )

$$S_{DS} = 2.20 \quad S_{DS} = 1.80$$

$$\text{HORIZONTAL FORCE (E}_h\text{)} = 3.96 W_p \quad 3.24 W_p$$

$$\text{VERTICAL FORCE (E}_v\text{)} = 0.44 W_p \quad 0.36 W_p$$

- 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 AND 2.





**MILESTONE AV**

DES. **J. ROBERSON**

SHEET

**4**

**TS318TU/TS325TU/TS525TU SERIES  
WALL MOUNT**

JOB NO. **11-1368**

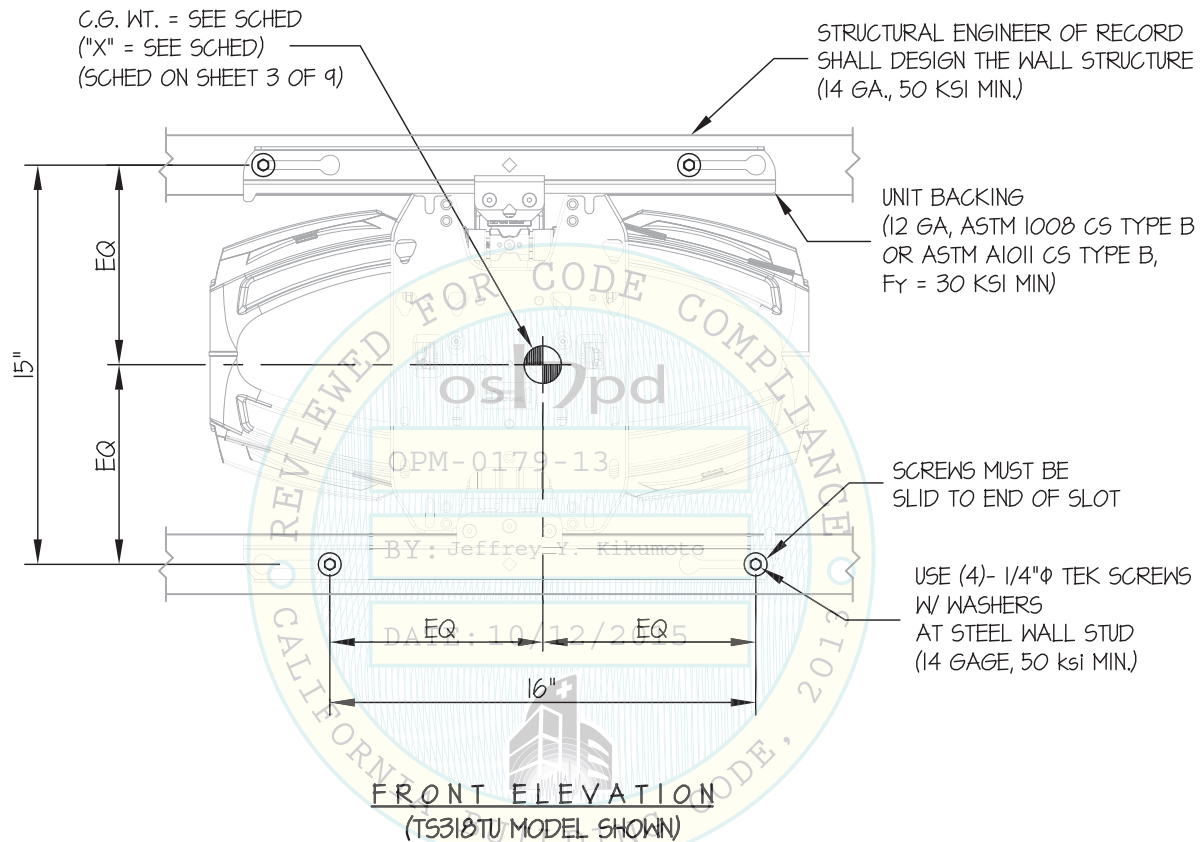
DATE **10/7/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

AT STEEL STUD WALL

WALL MOUNTED



## MILESTONE AV

DES. **J. ROBERSON**

SHEET

**5**

## TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

JOB NO. **11-1368**

DATE **10/7/15**

OF **9** SHEETS

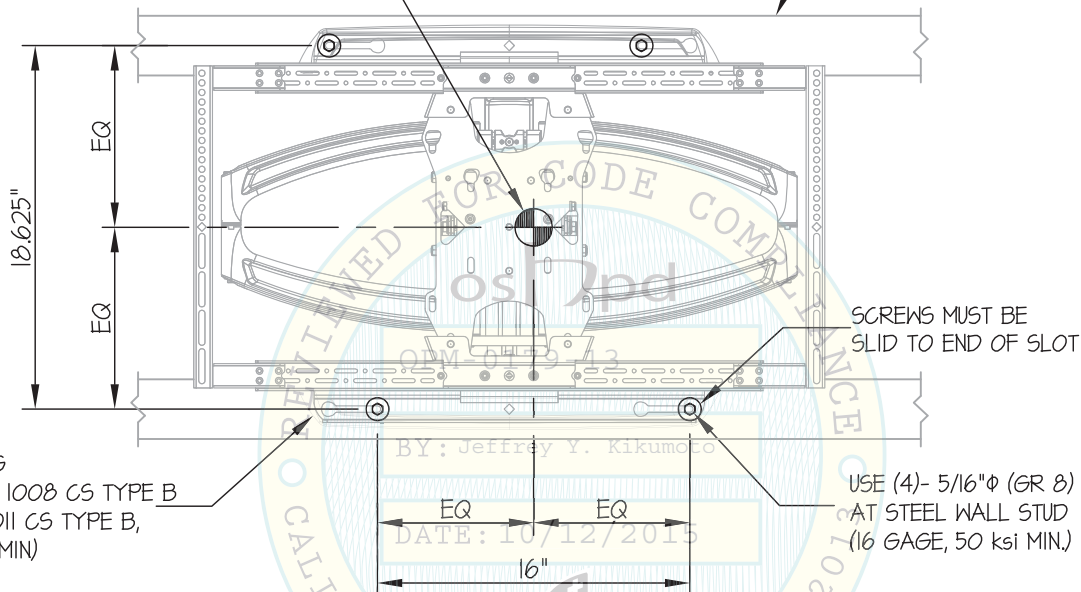
SEISMIC SUPPORTS & ATTACHMENTS

AT STEEL STUD WALL

WALL MOUNTED

C.G. WT. = SEE SCHED  
("X" = SEE SCHED)  
(SCHED ON SHEET 3 OF 9)

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



UNIT BACKING  
(12 GA, ASTM 1008 CS TYPE B  
OR ASTM A1011 CS TYPE B,  
Fy = 30 KSI MIN)

SCREWS MUST BE  
SLID TO END OF SLOT

USE (4)- 5/16"φ (GR 8) BOLTS  
AT STEEL WALL STUD  
(16 GAGE, 50 ksi MIN.)

FRONT ELEVATION  
(TS525TU MODEL SHOWN)



## MILESTONE AV

DES. J. ROBERSON

SHEET

6

TS318TU/TS325TU/TS525TU SERIES  
WALL MOUNT

JOB NO. 11-1368

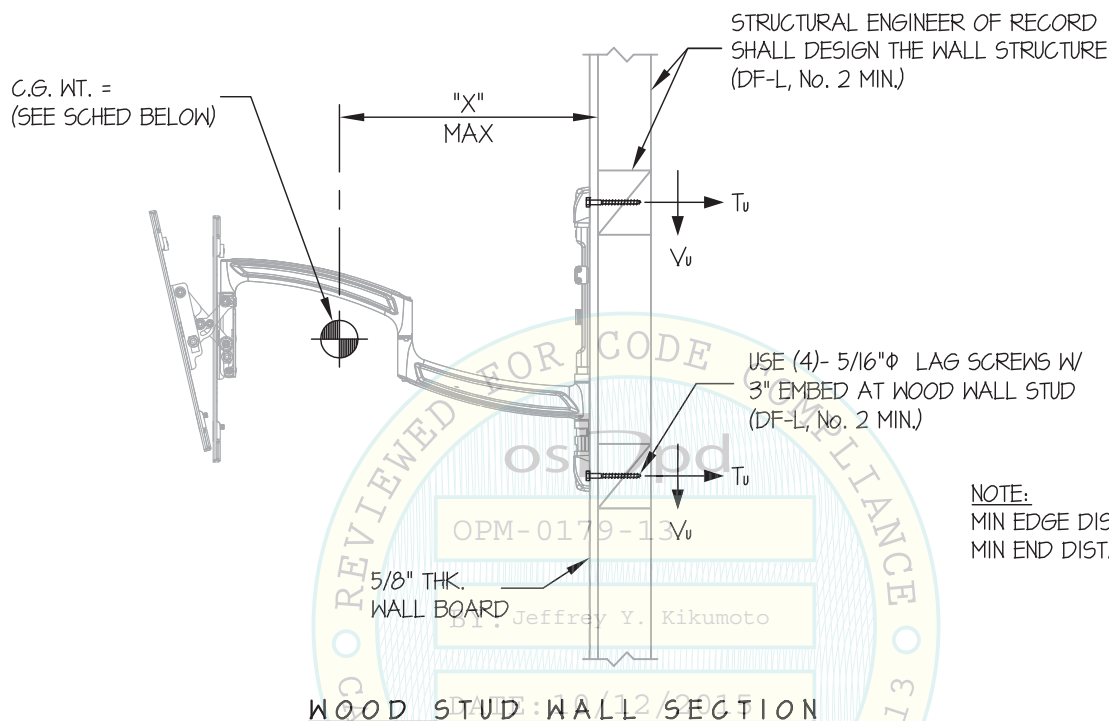
DATE 10/7/15

OF 9 SHEETS

SEISMIC SUPPORTS &amp; ATTACHMENTS

AT WOOD STUD WALL

WALL MOUNTED



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

| EQUIPMENT | MAX $S_{ds}$ | TOTAL WT (lb.) | "X" (in.) | * $T_u$ (lb.) | * $V_u$ (lb.) |
|-----------|--------------|----------------|-----------|---------------|---------------|
| TS318TU   | 165          | 103            | 19.3      | 178           | 158           |
| TS325TU   | 165          | 107            | 25.2      | 217           | 164           |

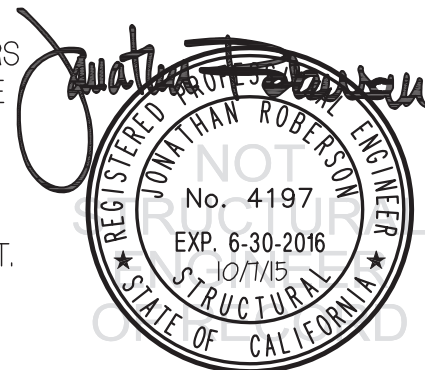
\* VALUES DO NOT INCLUDE  $\Omega_o$ 

## NOTES:

- FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.

STRENGTH DESIGN IS USED. ( $S_{ds} = 1.65$ ,  $a_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ )HORIZONTAL FORCE ( $E_h$ ) =  $2.97 W_p$ VERTICAL FORCE ( $E_v$ ) =  $0.34 W_p$ 

- 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 AND 2.





**MILESTONE AV**

DES. **J. ROBERSON**

SHEET

**7**

**TS318TU/TS325TU/TS525TU SERIES  
WALL MOUNT**

JOB NO. **11-1368**

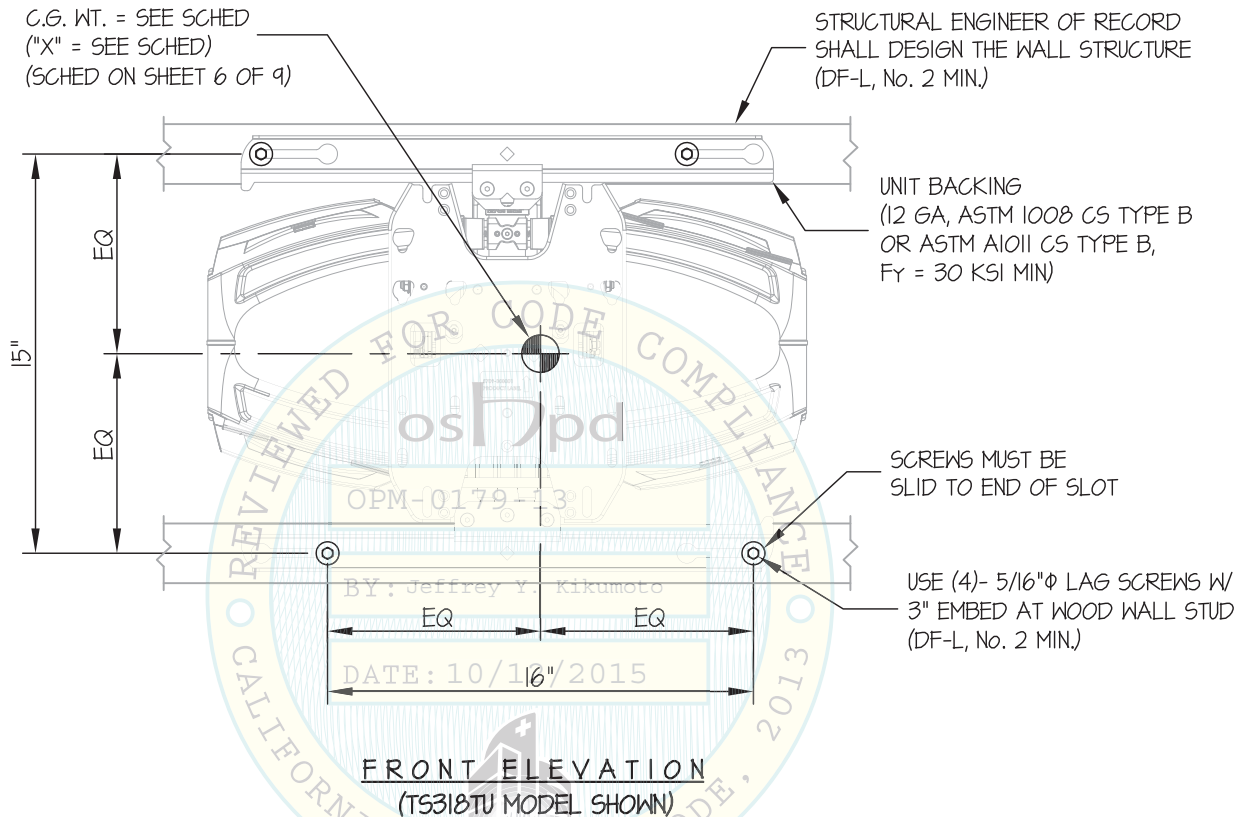
DATE **10/7/15**

OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

AT WOOD STUD WALL

WALL MOUNTED



### MILESTONE AV

DES. J. ROBERSON

SHEET

8

### TS318TU/TS325TU/TS525TU SERIES WALL MOUNT

JOB NO. 11-1368

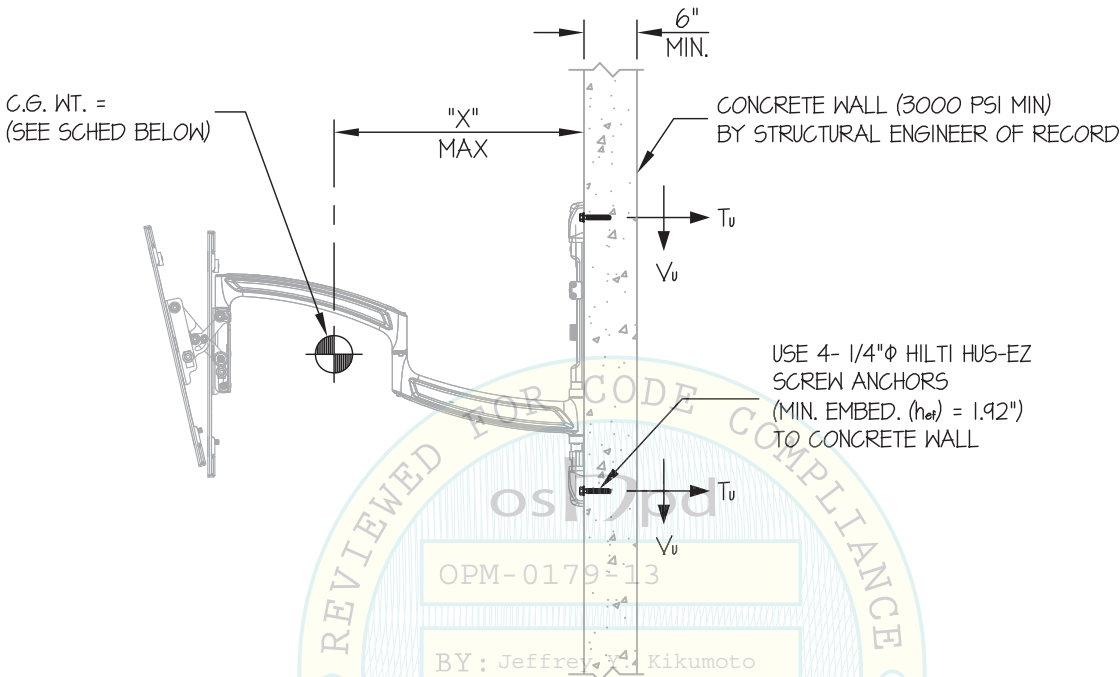
DATE 10/7/15

OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

AT CONCRETE WALL

WALL MOUNTED



#### CONCRETE WALL SECTION

| EQUIPMENT | MAX S <sub>ds</sub> | TOTAL WT (lb.) | "X" (in.) | * T <sub>u</sub> (lb.) | * V <sub>u</sub> (lb.) | "A" (in.) |
|-----------|---------------------|----------------|-----------|------------------------|------------------------|-----------|
| TS318TU   | 220                 | 103            | 19.3      | 364                    | 512                    | 15        |
| TS325TU   | 180                 | 107            | 25.2      | 357                    | 435                    | 15        |
| TS525TU   | 110                 | 180            | 25.8      | 400                    | 450                    | 18.625    |

\* VALUES INCLUDE Ω<sub>0</sub>

#### NOTES:

- FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.

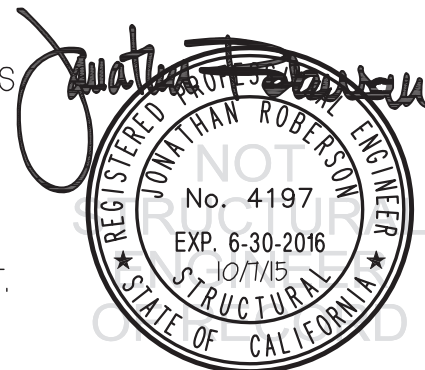
STRENGTH DESIGN IS USED. ( $\alpha_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ )

$$S_{ds} = 2.20 \quad S_{ds} = 1.80 \quad S_{ds} = 1.10$$

$$\text{HORIZONTAL FORCE (E}_h\text{)} = 3.96 W_p \quad 3.24 W_p \quad 1.98 W_p$$

$$\text{VERTICAL FORCE (E}_v\text{)} = 0.44 W_p \quad 0.36 W_p \quad 0.22 W_p$$

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- 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 AND 2.



**MILESTONE AV**

DES. **J. ROBERSON**

SHEET

**9**

**TS318TU/TS325TU/TS525TU SERIES  
WALL MOUNT**

JOB NO. **11-1368**

DATE **10/7/15**

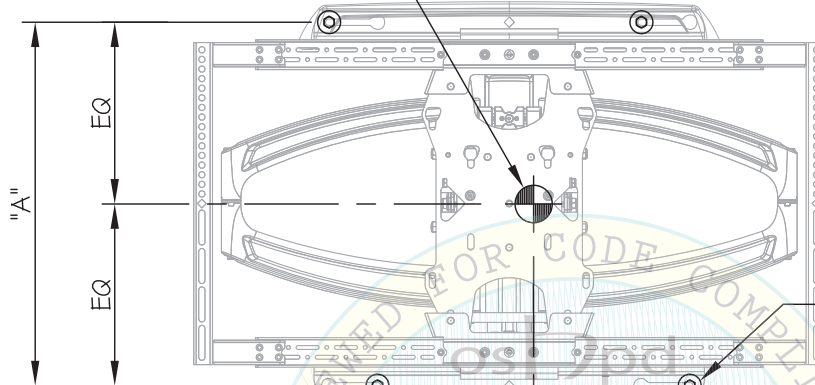
OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

AT CONCRETE WALL

WALL MOUNTED

C.G. WT. = SEE SCHED  
("X" = SEE SCHED)  
(SCHED ON SHEET 8 OF 9)



SCREWS MUST BE  
SLID TO END OF SLOT

UNIT BACKING  
(12 GA, ASTM 1008 CS TYPE B  
OR ASTM A1011 CS TYPE B,  
F<sub>y</sub> = 30 KSI MIN)

USE 4- 1/4"Ø HILTI HV5-EZ  
SCREW ANCHORS  
(MIN. EMBED. (h<sub>ef</sub>) = 1.92")  
TO CONCRETE WALL

OPM-0179-13

EQ EQ  
BY: Jeffrey Y. Kikumoto  
16"

DATE: 10/12/2015

**FRONT ELEVATION**  
(TS525TU MODEL SHOWN)

