



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0163-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: GCX Corporation

Manufacturer's Technical Representative: Rob Glaser

Mailing Address: 3875 Cypress Drive, Petaluma, CA. 94954-5635

Telephone: (800) 228-2555 Email: rglaser@gcx.com

Product Information

Product Name: GCX Wall Mount with M & VHM Arms w/Horizontal Rails

Product Type: Cantilever

Product Model Number: 19" & 37" Wall Channels w/M, VHM & VHM25 Arms & Horizontal Rails

General Description: Wall Mounted 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: 5/3/16

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: *J. Enzler* Date: 01-31-2017  
Print Name: Jeffrey Enzler  
Title: DSE  
Condition of Approval (if applicable): \_\_\_\_\_

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



**EASE****EQUIPMENT ANCHORAGE  
& SEISMIC ENGINEERING**5877 Pine Ave, Ste. 210  
Chino Hills, CA. 91709  
Phn: (909) 606-7622Office of Statewide Health Planning and Development  
**PREAPPROVAL OF MANUFACTURER'S CERTIFICATION**  
**OPM-0163-13****THIS PREAPPROVAL CONFORMS TO THE 2016 CALIFORNIA BUILDING CODE**MANUFACTURER: **GCX CORPORATION**  
EQUIPMENT NAME: **GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS**Sheet: 1 of 11  
Date: 11/18/16GENERAL 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.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE  $S_{Ds} = 1.20$ ,  $a_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ .
5. THE DETAILS IN THIS PREAPPROVAL MAY BE USED AT ANY LOCATION IN THE STATE OF CALIFORNIA, WHERE  $S_{Ds}$  IS NOT GREATER THAN 1.20.
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 2016 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 PLATE, BLOCKING, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



### GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**2**

### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

DATE **11/18/16**

OF **11** SHEETS

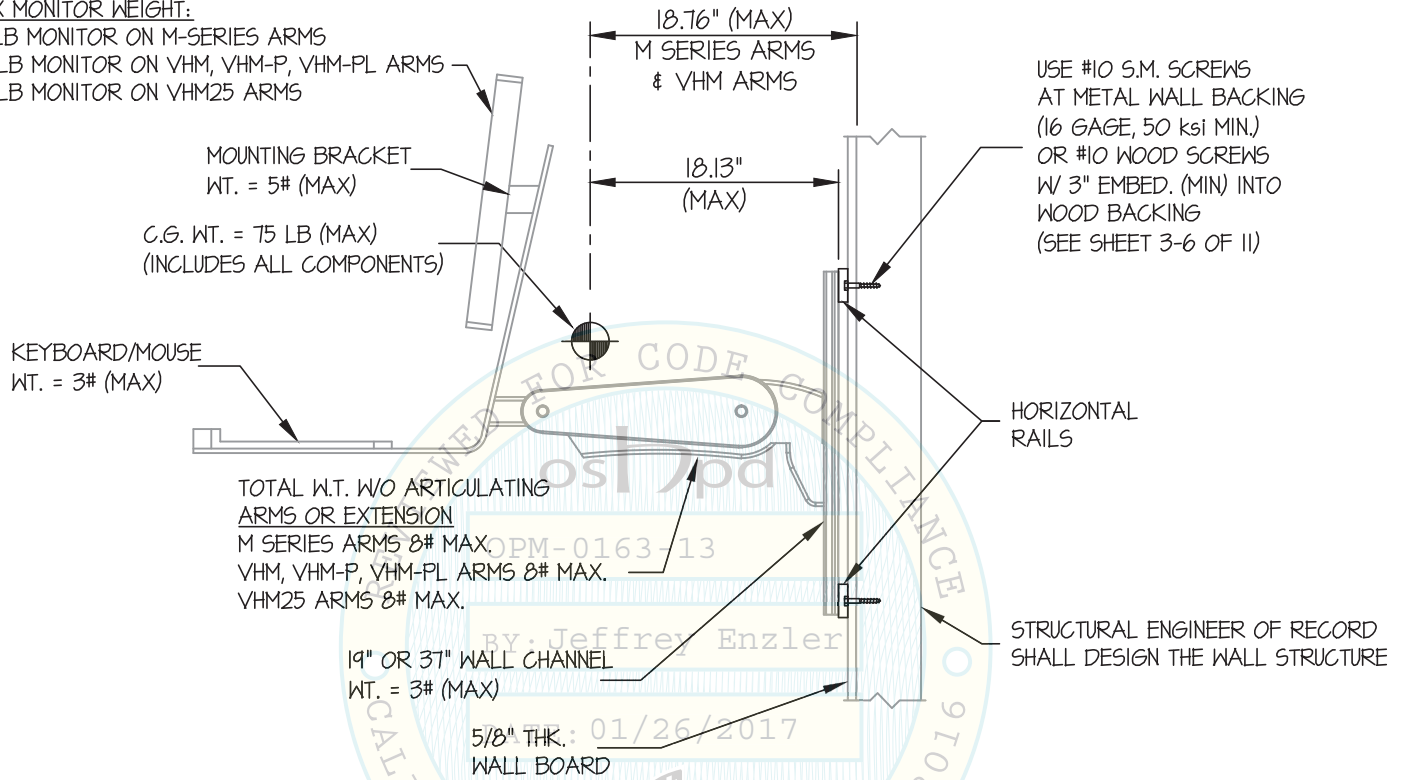
SEISMIC SUPPORTS & ATTACHMENTS

W/O EXTENSION

WALL MOUNTED

MAX MONITOR WEIGHT:

- 55 LB MONITOR ON M-SERIES ARMS
- 40 LB MONITOR ON VHM, VHM-P, VHM-PL ARMS
- 20 LB MONITOR ON VHM25 ARMS



STEEL STUD WALL SECTION

NOTES:

1. **FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10.**

STRENGTH DESIGN IS USED. ( $S_{ds} = 1.20$ ,  $a_p = 2.5$ ,  $I_p = 15$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ )

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 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



### GCX CORPORATION

DES. J. ROBERSON

SHEET

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### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. 11-1441

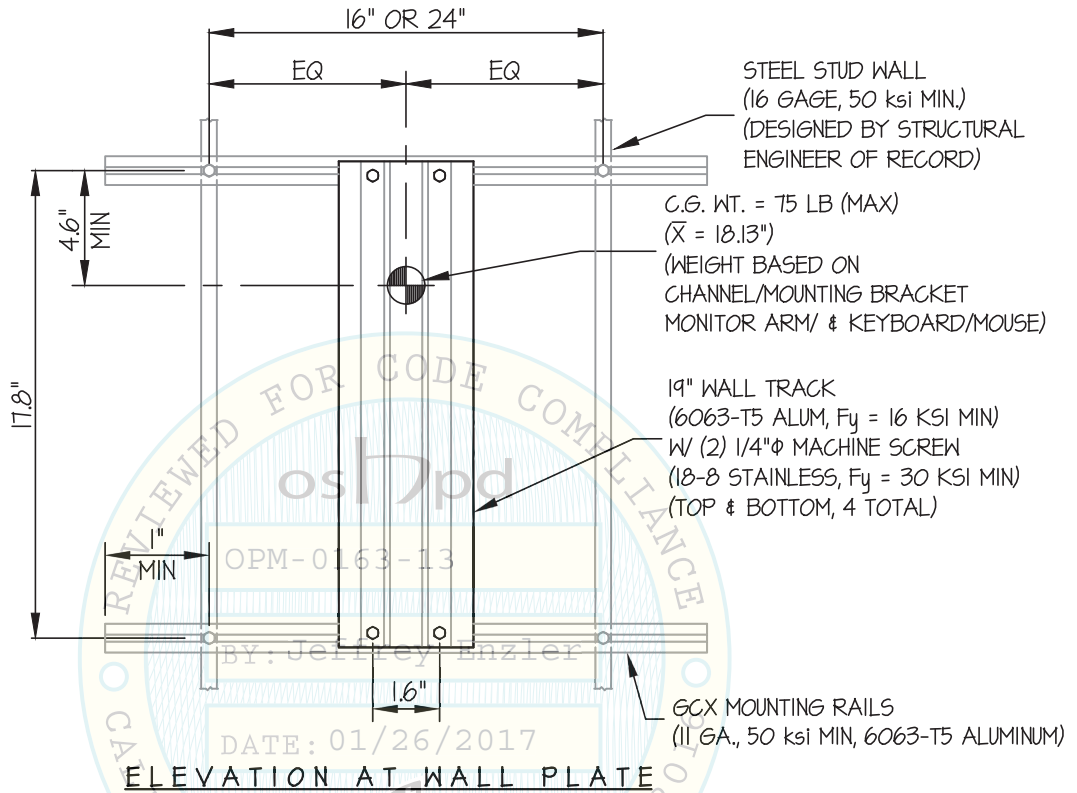
DATE 11/18/16

OF 11 SHEETS

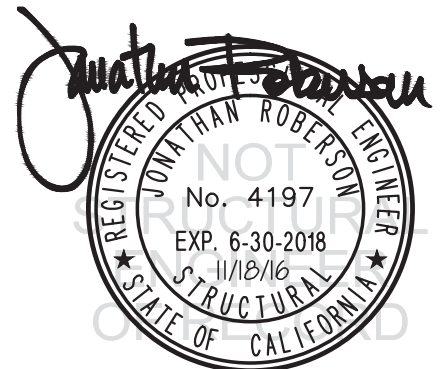
SEISMIC SUPPORTS & ATTACHMENTS

W/O EXTENSION

WALL MOUNTED



$T_u$  = 135 LB/SCREW (MAX)  
 $V_u$  = 85 LB/SCREW (MAX)





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**4**

### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

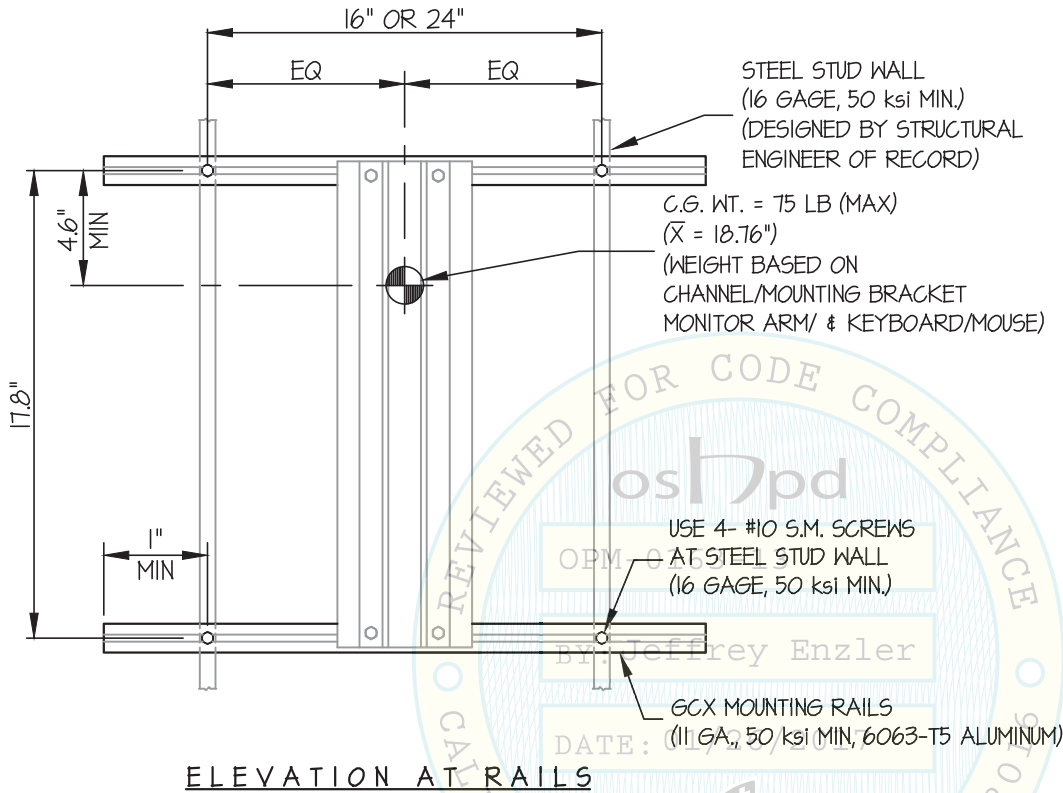
DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

W/O EXTENSION

WALL MOUNTED



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

USE 4- #10 X 4" FLAT HEAD WOOD SCREWS TO WOOD STUD (PRE-DRILL PILOT HOLES)

5/8" THK. WALL BOARD

NOTE:  
MIN EDGE DISTANCE = 3/4"  
MIN END DISTANCE = 2"

**WOOD STUD WALL SECTION**

T<sub>u</sub> = 138 LB/SCREW (MAX)  
V<sub>u</sub> = 85 LB/SCREW (MAX)



## GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**5**

## GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

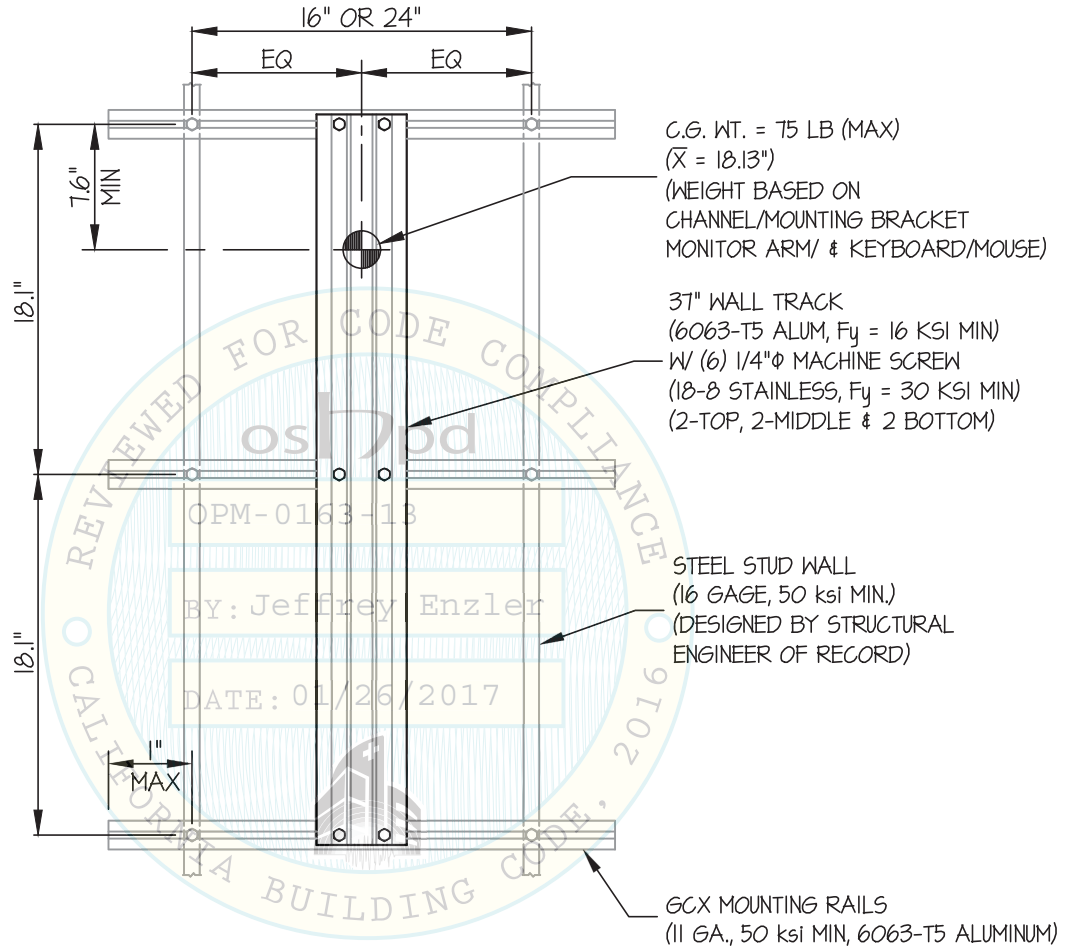
DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

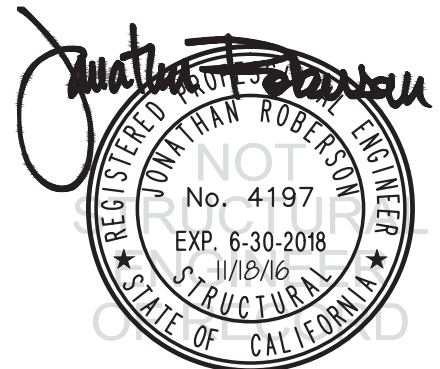
W/O EXTENSION

WALL MOUNTED



$T_u$  = 135 LB/SCREW (MAX)  
 $V_u$  = 83 LB/SCREW (MAX)

ELEVATION AT WALL PLATE



### GCX CORPORATION

DES. **J. ROBERSON**

SHEET

# 6

## GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

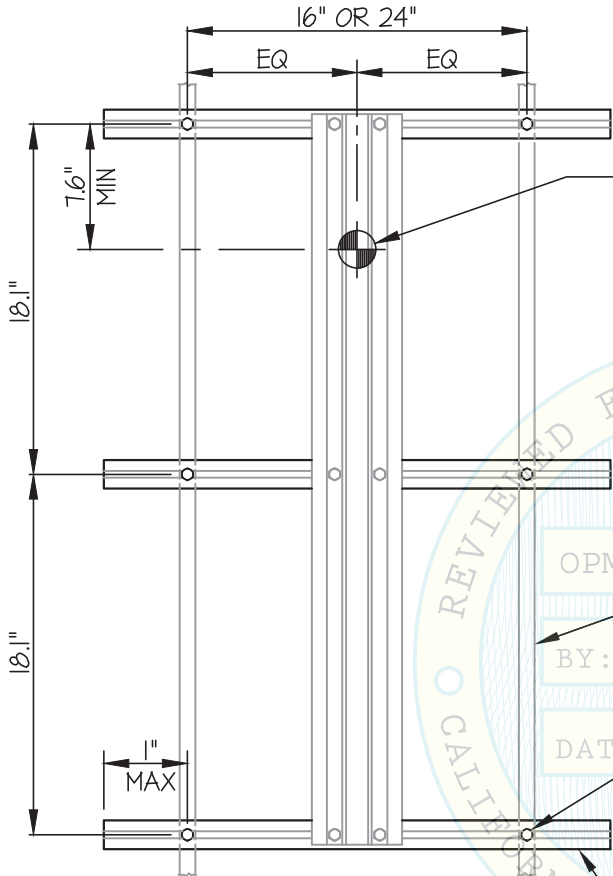
DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

W/O EXTENSION

WALL MOUNTED



C.G. WT. = 75 LB (MAX)  
 ( $\bar{X} = 18.76"$ )  
 (WEIGHT BASED ON  
 CHANNEL/MOUNTING BRACKET  
 MONITOR ARM/ & KEYBOARD/MOUSE)

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

USE 6- #10 X 4" FLAT HEAD  
 WOOD SCREWS TO  
 WOOD STUD  
 (PRE-DRILL PILOT HOLES)

5/8" THK.  
 WALL BOARD

NOTE:  
 MIN EDGE DISTANCE = 3/4"  
 MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

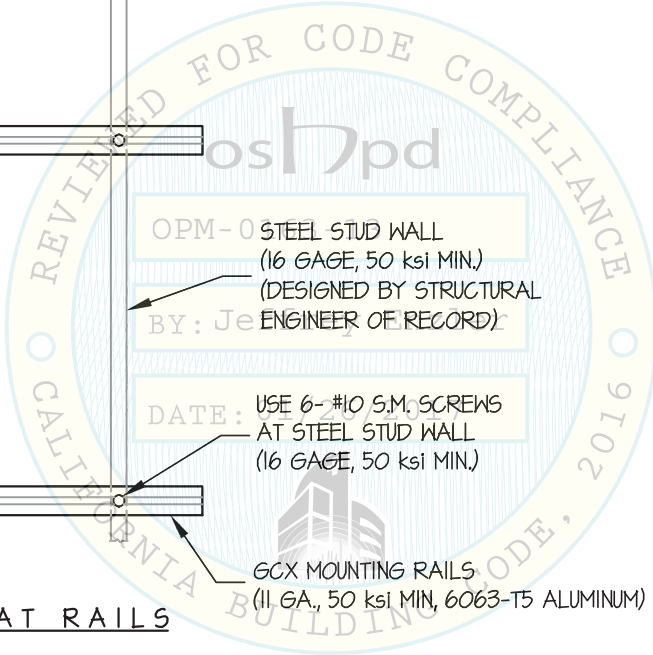
OPM-0 STEEL STUD WALL  
 (16 GAGE, 50 ksi MIN.)  
 (DESIGNED BY STRUCTURAL  
 ENGINEER OF RECORD)

DATE: USE 6- #10 S.M. SCREWS  
 AT STEEL STUD WALL  
 (16 GAGE, 50 ksi MIN.)

GCX MOUNTING RAILS  
 (11 GA., 50 ksi MIN, 6063-T5 ALUMINUM)

ELEVATION AT RAILS

T<sub>u</sub> = 137 LB/SCREW (MAX)  
 V<sub>u</sub> = 83 LB/SCREW (MAX)





### GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**7**

### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

W/ EXTENSION

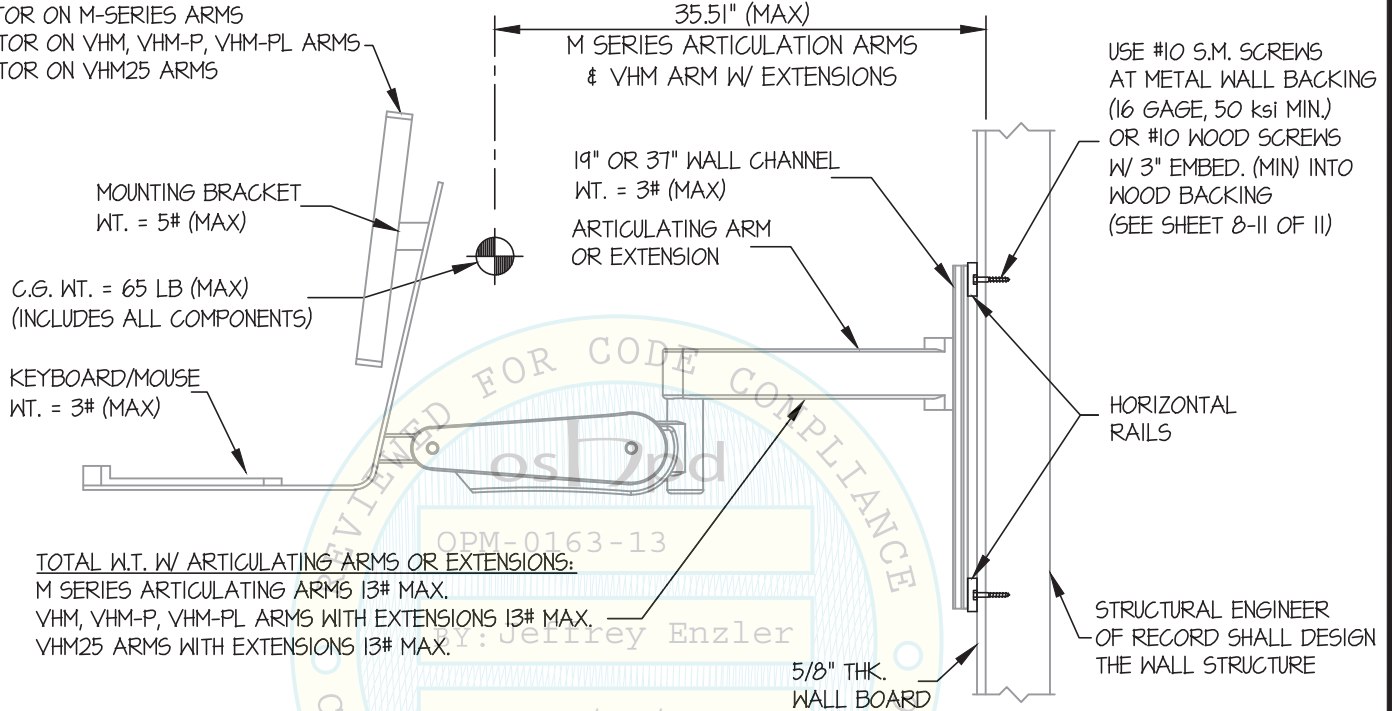
WALL MOUNTED

MAX MONITOR WEIGHT:

25 LB MONITOR ON M-SERIES ARMS

40 LB MONITOR ON VHM, VHM-P, VHM-PL ARMS

20 LB MONITOR ON VHM25 ARMS

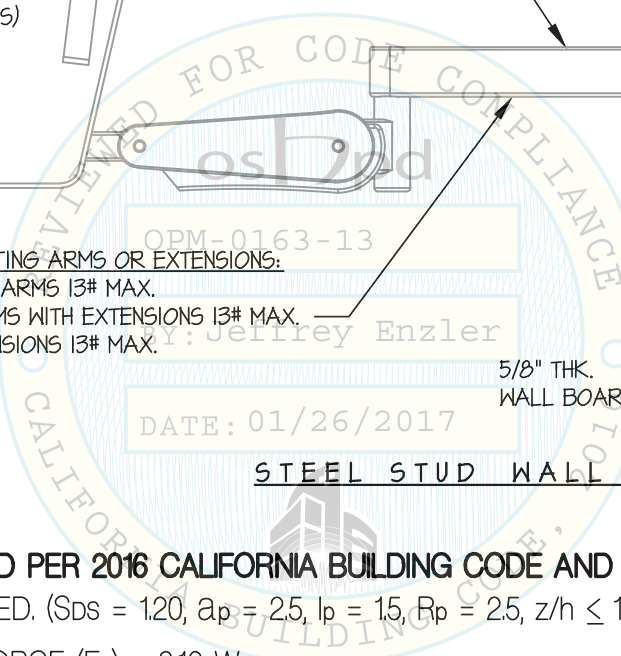


TOTAL W.T. W/ ARTICULATING ARMS OR EXTENSIONS:

M SERIES ARTICULATING ARMS 13# MAX.

VHM, VHM-P, VHM-PL ARMS WITH EXTENSIONS 13# MAX.

VHM25 ARMS WITH EXTENSIONS 13# MAX.



STEEL STUD WALL SECTION

NOTES:

1. **FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10.**

STRENGTH DESIGN IS USED. ( $S_Ds = 1.20$ ,  $a_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 2.5$ ,  $z/h \leq 1$ )

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 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



### GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**8**

### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

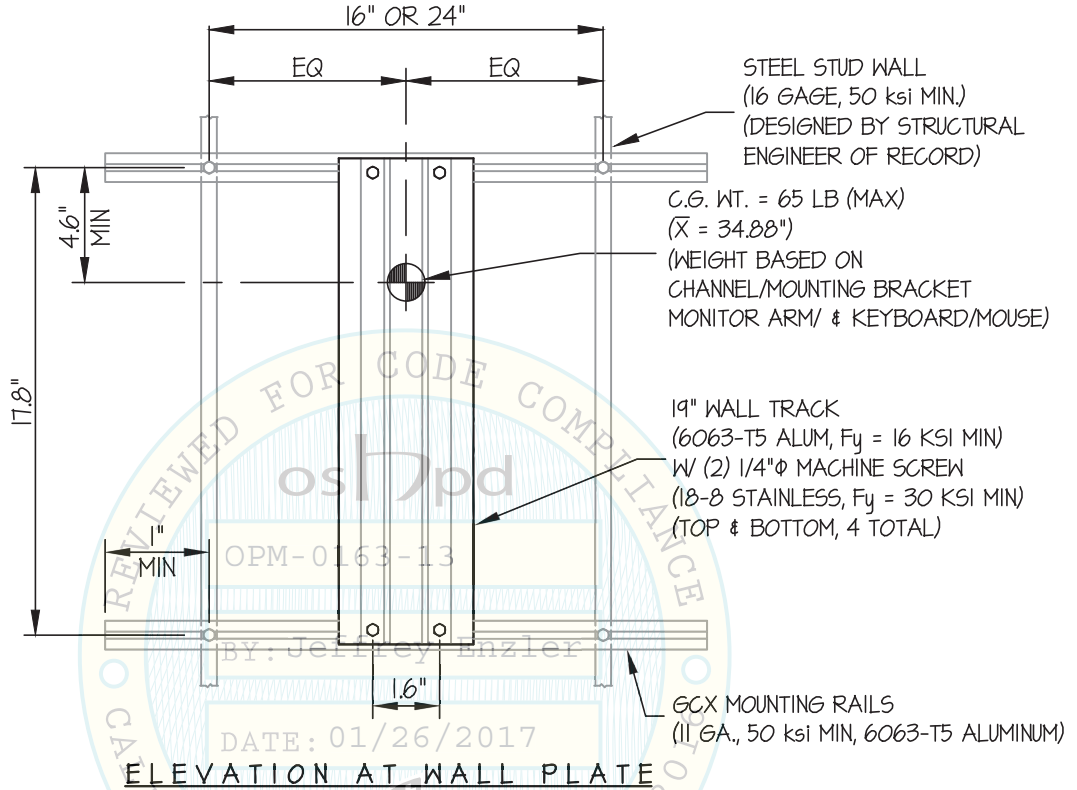
DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

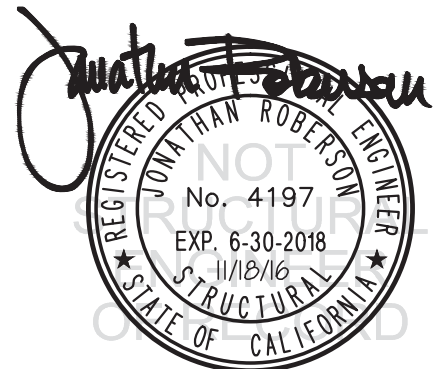
W/ EXTENSION

WALL MOUNTED



$T_u$  = 163 LB/SCREW (MAX)

$V_u$  = 75 LB/SCREW (MAX)



## GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**9**

## GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

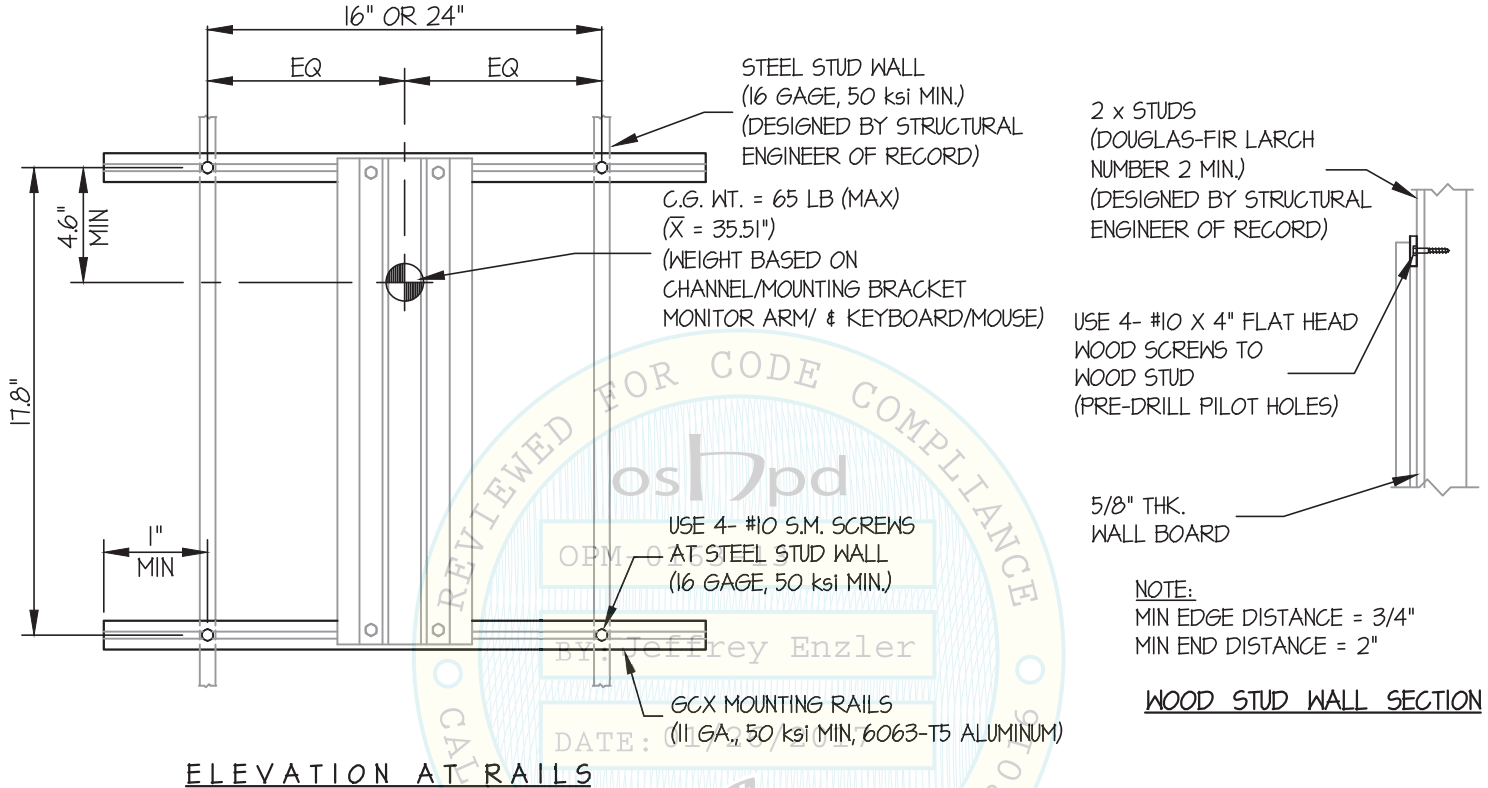
DATE **11/18/16**

OF **11** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

W/ EXTENSION

WALL MOUNTED



$T_u = 165 \text{ LB/SCREW (MAX)}$   
 $V_u = 75 \text{ LB/SCREW (MAX)}$

*Jonathan Roberson*

REGISTERED PROFESSIONAL ENGINEER  
JONATHAN ROBERSON  
No. 4197  
EXP. 6-30-2018  
11/18/16  
STRUCTURAL  
STATE OF CALIFORNIA

## GCX CORPORATION

DES. **J. ROBERSON**

SHEET

**10**

## GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. **11-1441**

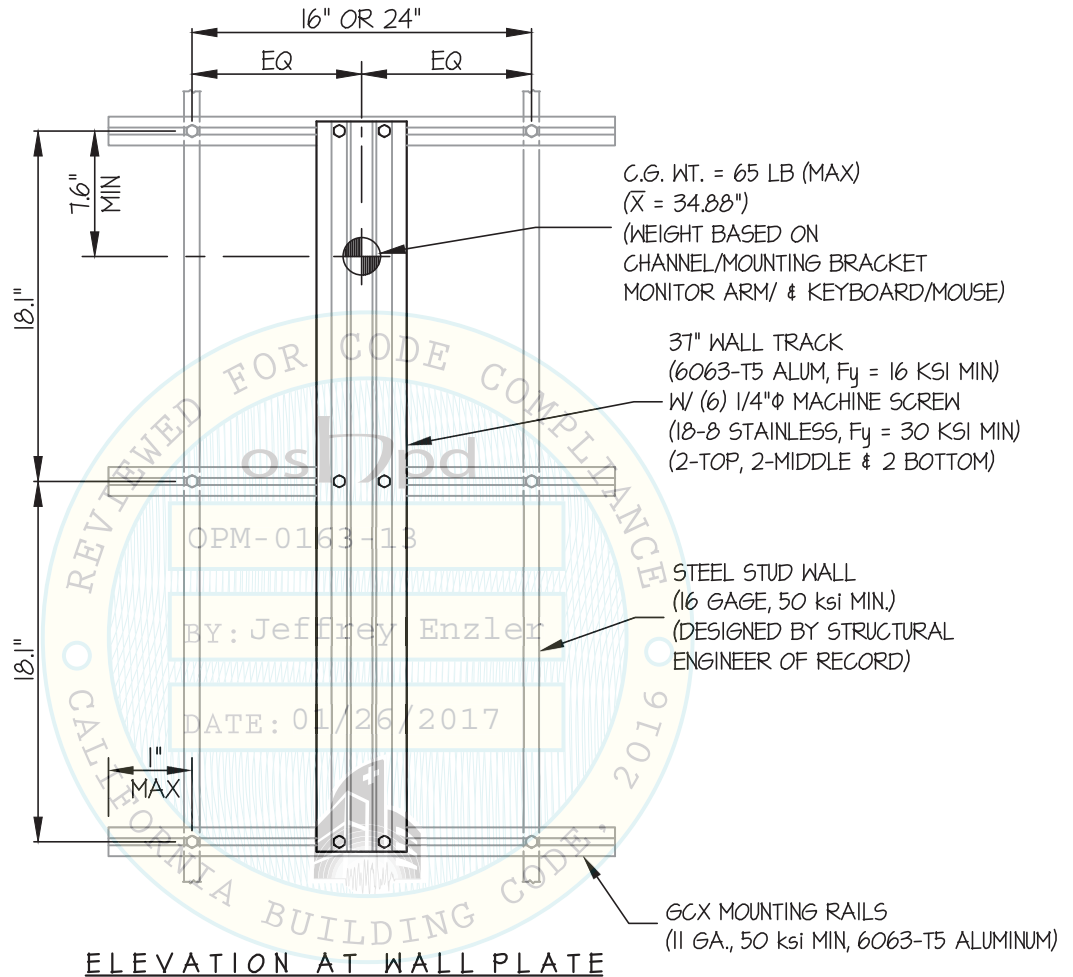
DATE **11/18/16**

OF **11** SHEETS

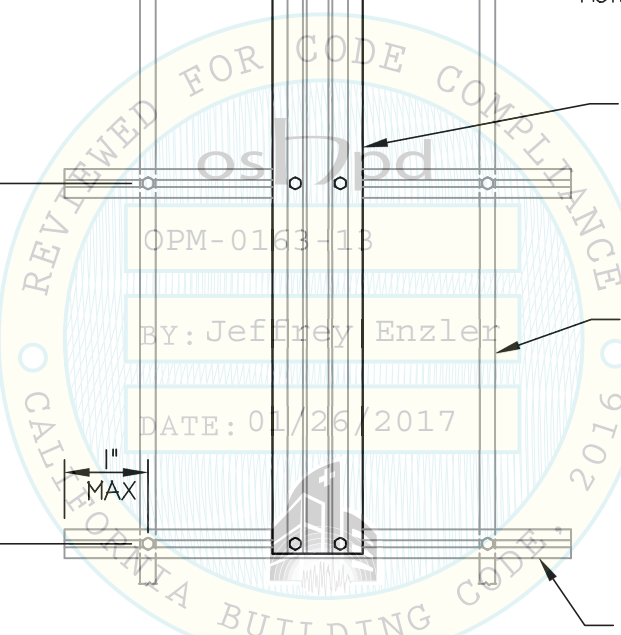
SEISMIC SUPPORTS & ATTACHMENTS

W/ EXTENSION

WALL MOUNTED



$T_u$  = 156 LB/SCREW (MAX)  
 $V_u$  = 73 LB/SCREW (MAX)



*Jonathan Roberson*  
REGISTERED PROFESSIONAL ENGINEER  
JONATHAN ROBERSON  
No. 4197  
EXP. 6-30-2018  
11/18/16  
STRUCTURAL  
STATE OF CALIFORNIA

### GCX CORPORATION

DES. J. ROBERSON

SHEET

11

### GCX WALL MOUNT W/ M & VHM ARMS W/HORIZONTAL RAILS

JOB NO. 11-1441

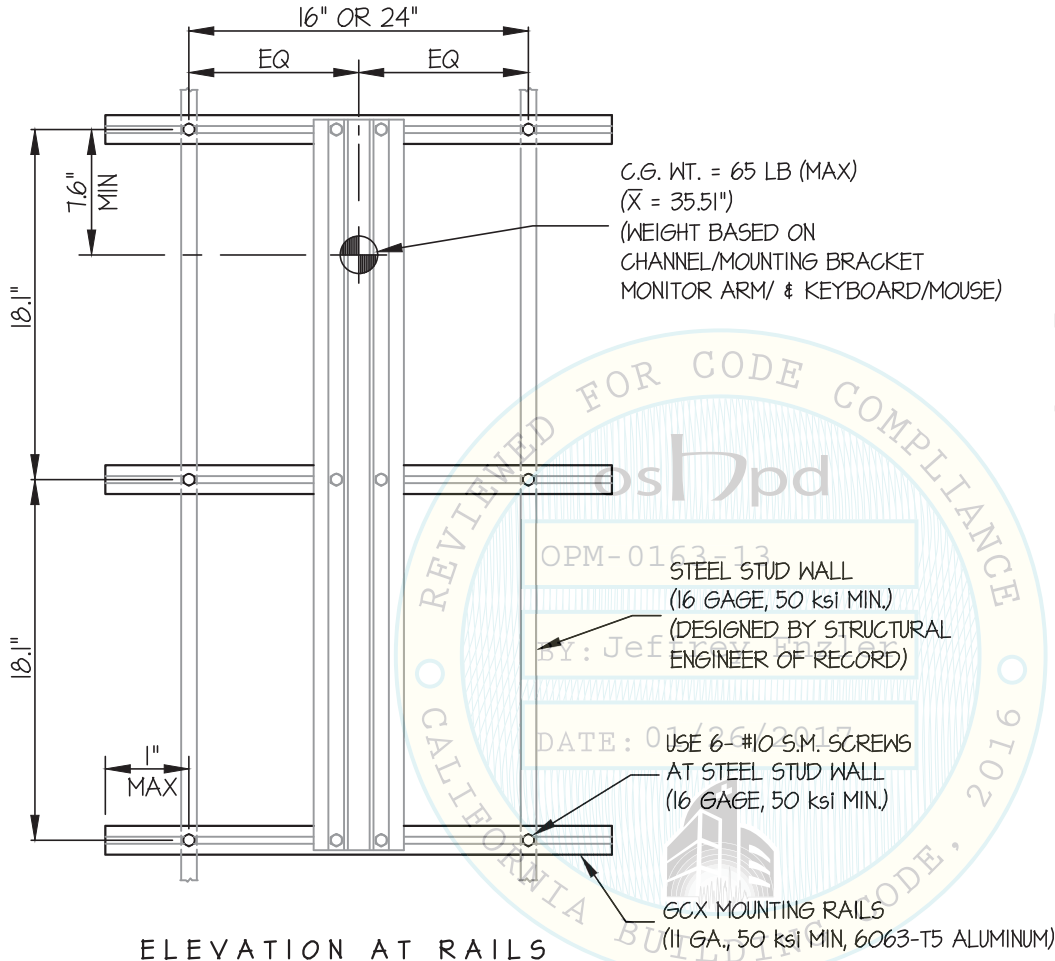
DATE 11/18/16

OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

W/ EXTENSION

WALL MOUNTED



ELEVATION AT RAILS

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

USE 6- #10 X 4" FLAT HEAD WOOD SCREWS TO WOOD STUD  
(PRE-DRILL PILOT HOLES)

5/8" THK. WALL BOARD

NOTE:  
MIN EDGE DISTANCE = 3/4"  
MIN END DISTANCE = 2"

WOOD STUD WALL SECTION

$T_u$  = 157 LB/SCREW (MAX)  
 $V_u$  = 72 LB/SCREW (MAX)

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