

CHATSWORTH PRODUCTS, INC.

UNIVERSAL CABLE RUNWAY

DES. **R. LA BRIE**

JOB NO. **11-0816**

DATE **6/3/10**

SHEET

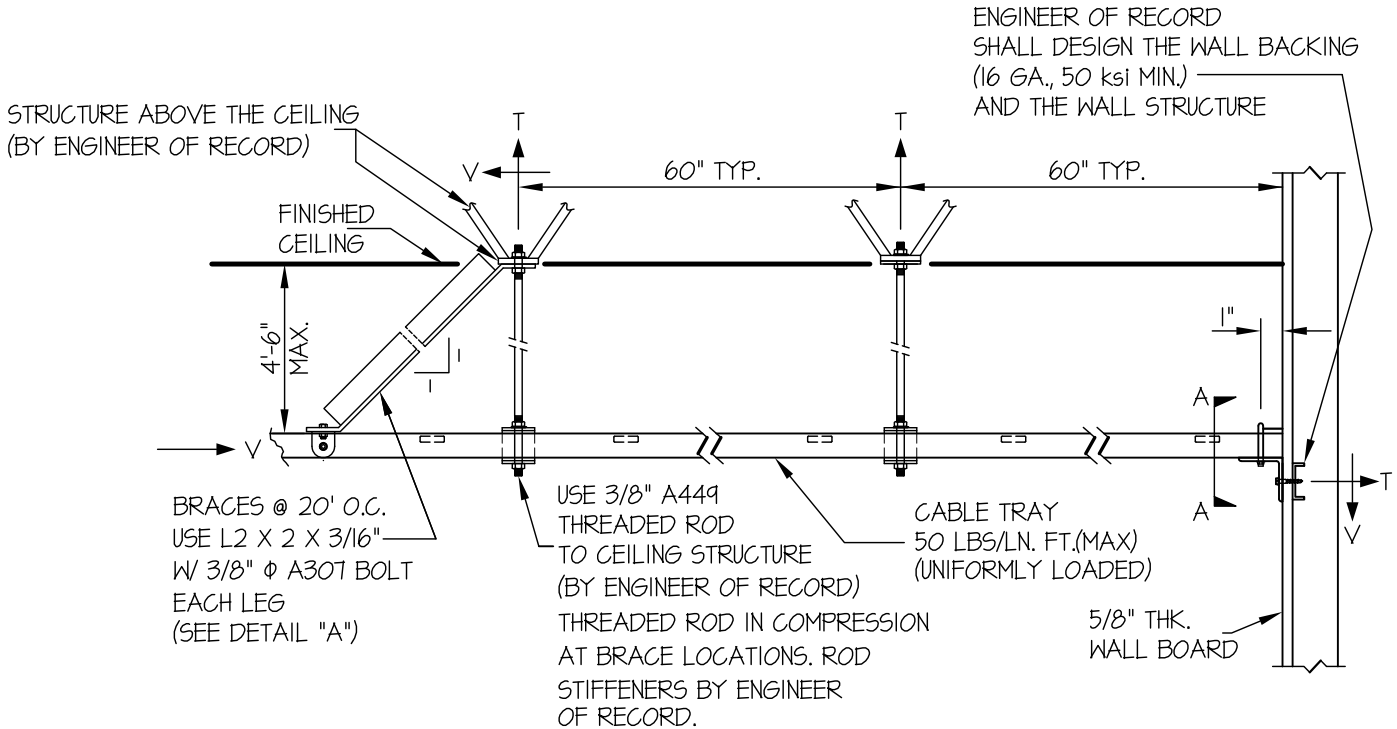
1

OF **3** SHEETS

SEISMIC ANCHORAGE

OSHPD-10250 CABLE RUNWAY .PDF

CEILING MOUNTED



ELEVATION

AT THREADED ROD

$T_{ROD} = 645 \text{ LBS/ROD}$

AT WALL BRACKET

$T_{WALL} = 176 \text{ LBS/SCREW}$

$V_{WALL} = 140 \text{ LBS/SCREW}$

AT BRACING (BY OTHERS)

$v = 486 \text{ LBS/BRACE}$

NOTES:

1. FORCES ARE DETERMINED PER 2007 CALIFORNIA BUILDING CODE SECTION 1613A AND ASCE 7-05 SECTIONS 12 AND 13. ALLOWABLE STRESS DESIGN IS USED.

HORIZONTAL FORCE (E_h) = $0.97 W_p$ ($S_{Ds} = 1.93$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 2.5$)

VERTICAL FORCE (E_v) = $0.27 W_p$

2. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS CALCULATION ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.

3. ARCHITECT OR STRUCTURAL ENGINEER OF RECORD SHALL PROVIDE SUPPORT STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN.



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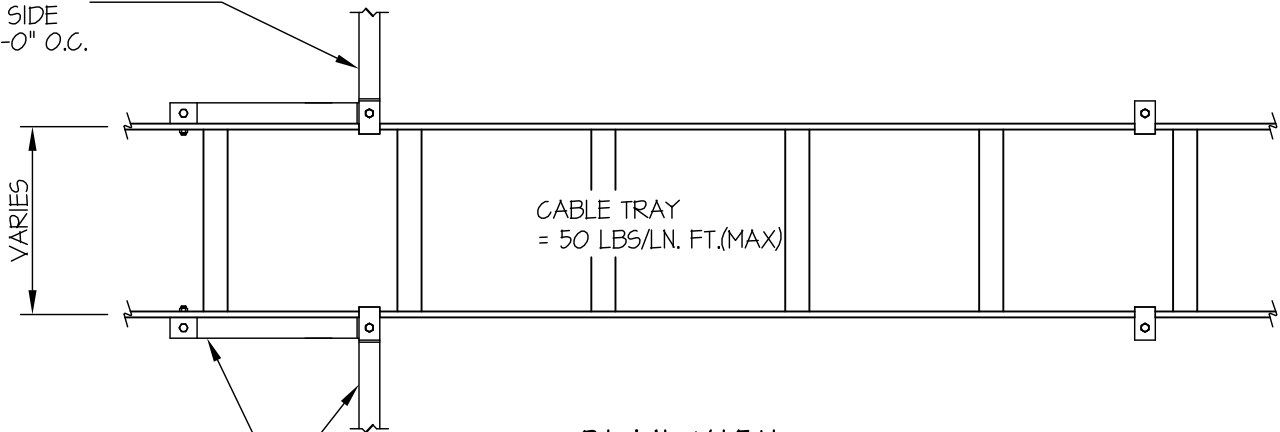
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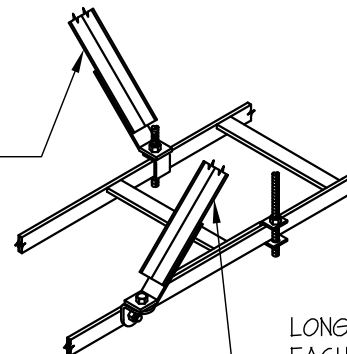
TRANSVERSE BRACE
EACH SIDE
@ 20'-0" O.C.



BRACES @ 20' O.C.
USE L2 X 2 X 3/16"
(SEE DETAIL "A")

PLAN VIEW

TRANSVERSE BRACE
EACH SIDE
@ 20'-0" O.C.



LONGITUDINAL BRACE
EACH SIDE
@ 20'-0" O.C.

LOADS:

WEIGHT = 250 LBS (SUPPORTS @ 5'-0" O.C.)

HORIZONTAL FORCE (E_h) = 243 LBS

VERTICAL FORCE (E_v) = 68 LBS

TENSION (T)

$$T_{\text{VERTICAL}} = \frac{250\# + 68\#}{2 \text{ RODS}} = 159 \text{ LBS}$$

$$T_{\text{HORIZONTAL}} = \frac{243\#(4 \text{ BAYS})}{2 \text{ BRACES}} = 486 \text{ LBS}$$

* BRACES @ EVERY 4TH DROP OR 20' CENTERS

$$T_{\text{TOTAL}} = 159\# + 486\# = 645 \text{ LBS/BOLT (MAX)}$$

SHEAR (V)

$$V = \frac{243\#(4 \text{ BAYS})}{2 \text{ BRACES}} = 486 \text{ LBS/BOLT (MAX) (PER AISC J3.7, LESS THAN 20% STRESS)}$$

NOTE: NOT ALL BRACES ARE SHOWN FOR CLARITY. FOR COMPLETE BRACING LAYOUT, SEE ELEVATION AND PLAN VIEW.

DETAIL "A"

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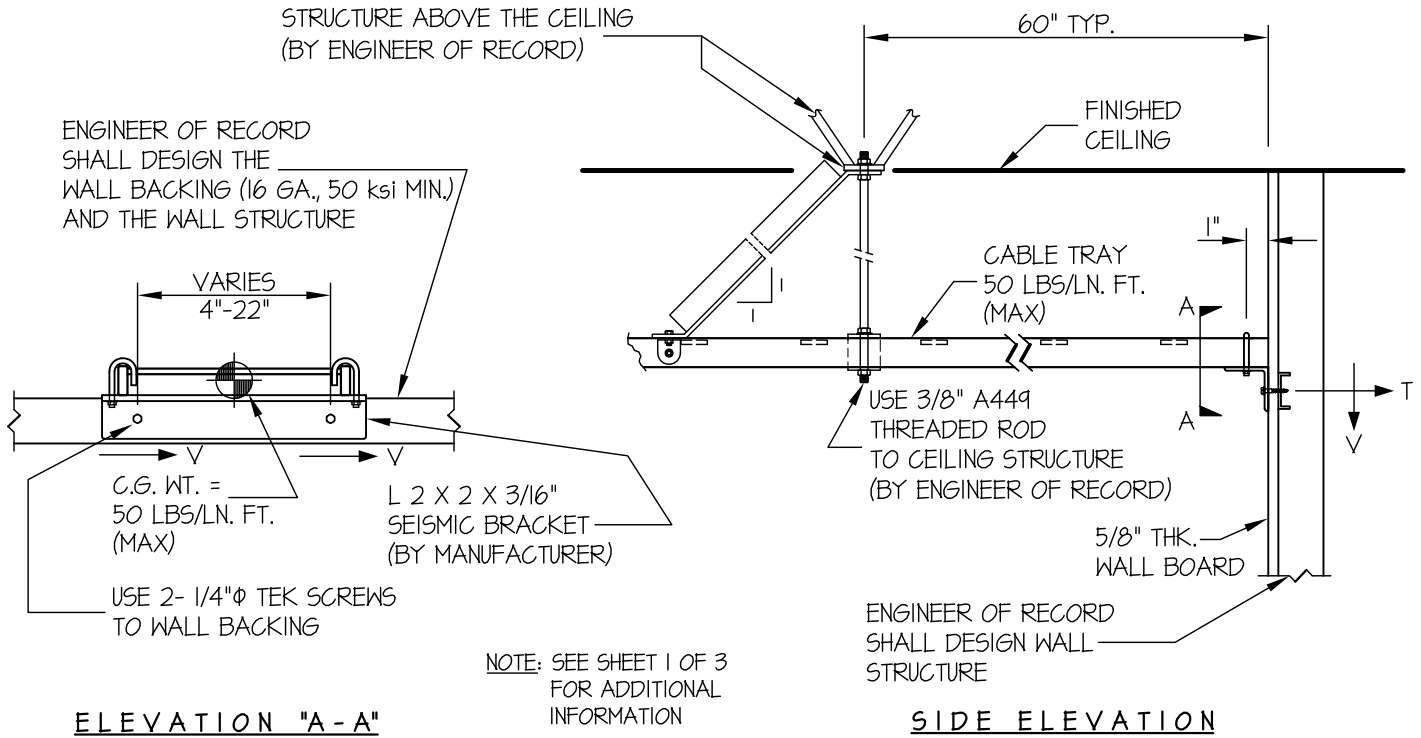
3

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LOADS:

WEIGHT = 125 LBS
(WEIGHT TRIBUTARY TO WALL BRACKET)
HORIZONTAL FORCE (E_h) = 121 LBS
VERTICAL FORCE (E_v) = 34 LBS

BOLT FORCES:

TENSION (T)

$$T = \frac{(125\# + 34\#)1.6''}{2 \text{ SCREWS } (1'')} + \frac{121\#(1.6'')}{4''} = 176 \text{ LBS/SCREW (MAX)}$$

SHEAR (V)

$$V = \frac{125\# + 34\# + 121\#}{2 \text{ SCREWS}} = 140 \text{ LBS/SCREW (MAX) (PER AISC J3.7, LESS THAN 20% STRESS)}$$