EASE

EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING
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FOLLETT CORPORATION	DES. **J. ROBERSON**	SHEET **1**
MEDICAL GRADE REFRIGERATOR REF 2	JOB NO. **11-1420**	
	DATE **4/23/14**	OF **1** SHEETS

SEISMIC ANCHORAGE

WALL MOUNTED

C.G. WT. = 119 LB.

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

WHERE STUDS DO NOT LINE UP WITH SCREWS PROVIDE WALL BACKING 14 GA., 50 KSI MIN. (BY S.E.O.R.)

USE (6) 1/4"⌀ TEKS SCREWS TO BACKING PLATE

4"

4"

8"   8"

C.G.

5/8" THK. WALL BOARD

11"

T_u = 319 LB/SCREW (MAX)
V_u = 64 LB/SCREW (MAX)

FRONT ELEVATION

SIDE ELEVATION
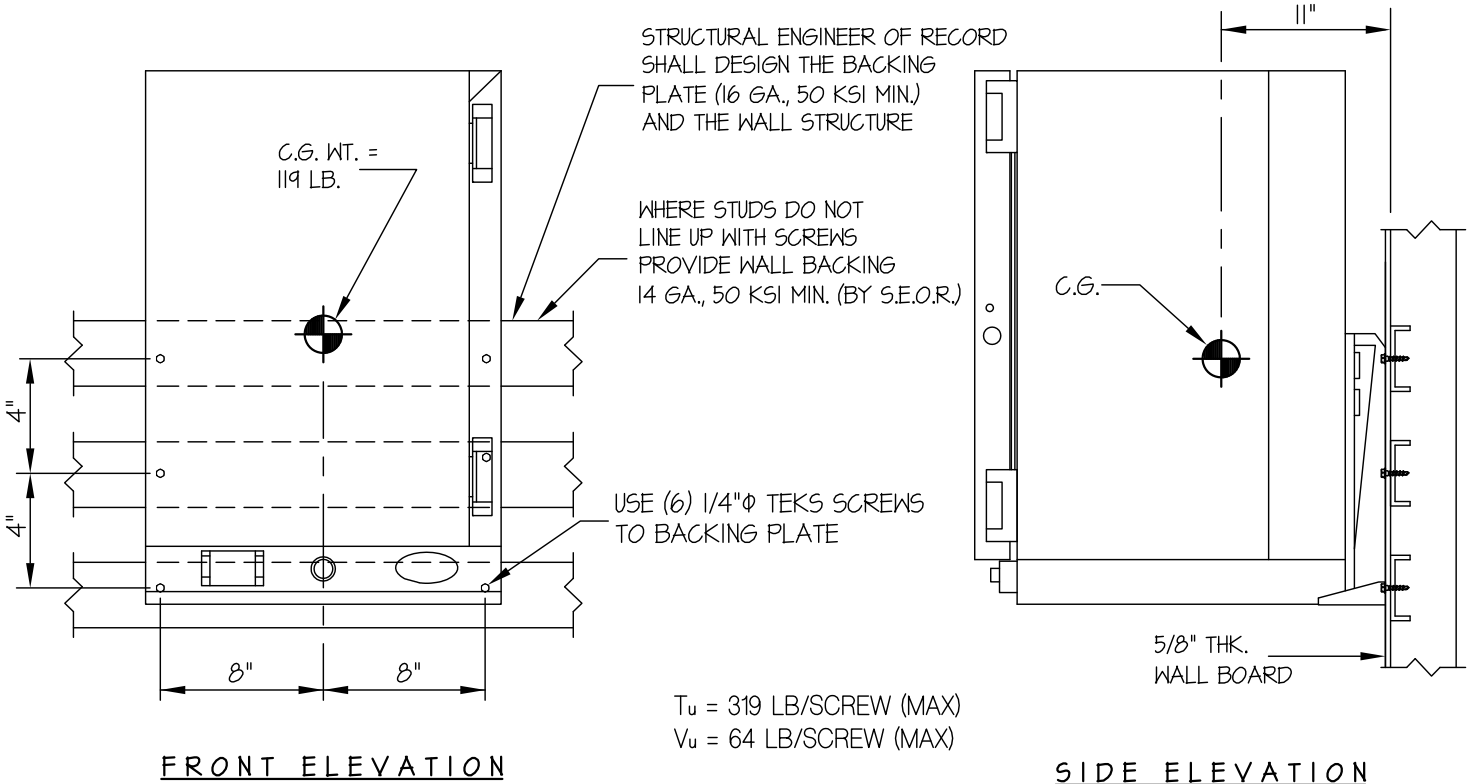
LOADS: PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.
(STRENGTH DESIGN IS USED) (S_{DS} = 2.5, a_p = 1.0, I_p = 1.5, R_p = 2.5, z/h ≤ 1)
WEIGHT = 119 LB
HORIZONTAL FORCE (E_h) = 1.80 W_p = 214 LB
VERTICAL FORCE (E_v) = 0.50 W_p = 60 LB

SCREW FORCES:

TENSION (T)

$$T_{u\ VERTICAL} = \frac{(1.2(119\#) + 60\#)11"}{2\ screws\ (8")} = 140\ LB/SCREW$$

$$T_{u\ PARALLEL} = \frac{214\#(11")}{1\ screw\ (16")} = 147\ LB/SCREW$$

$$T_{u\ PERP.} = \frac{214\#}{2\ screws} = 107\ LB/SCREW$$

$$T_{u\ MAX} = 140\# + (107\#)(0.3) + 147\# = 319\ LB/SCREW\ (MAX)$$

SHEAR (V)

$$V_{u\ MAX} = \sqrt{\left(\frac{1.2(119\#) + 60\#}{6\ SCREWS}\right)^2 + \left(\frac{214\#}{4\ SCREWS}\right)^2} = 64\ LB/SCREW\ (MAX)$$

1/4"⌀ TEK SCREWS 16 GAGE, 50 KSI
ϕT = 418 LB/SCREW   (TENSION)
ϕV = 362 LB/SCREW   (SHEAR)

NOTE:
STRUCTURAL ENGINEER OF RECORD SHALL PROVIDE RIGID (a_p = 1.0) SUPPORT STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2014
4/23/14
STRUCTURAL
STATE OF CALIFORNIA

NOT STRUCTURAL ENGINEER OF RECORD