EASE

EQUIPMENT **ANCHORAGE** & SEISMIC ENGINEERING
www.EquipmentAnchorage.com

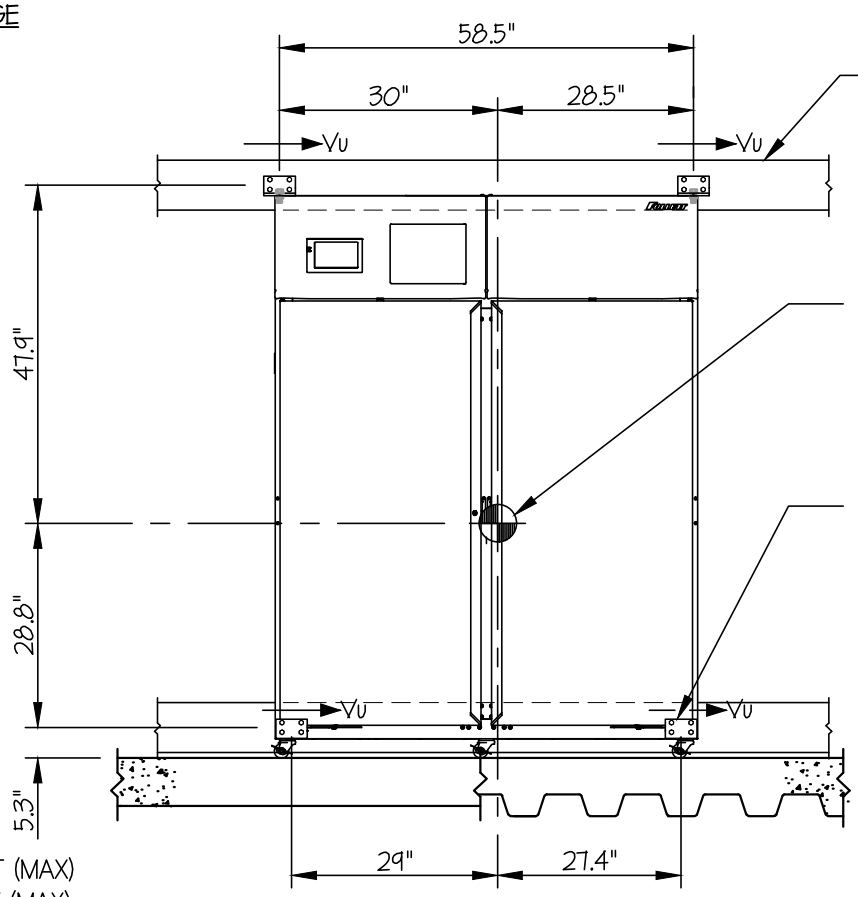
FOLLETT CORPORATION

REF45

DES.	J. ROBERSON
JOB NO.	11-1711
DATE	4/5/17
SHEET	1
OF	2 SHEETS

SEISMIC ANCHORAGE

SLAB ON GRADE / UPPER FLOOR



STRUCTURAL ENGINEER OF RECORD SHALL DESIGN THE WALL STRUCTURE

PRE-MANUFACTURED MOUNTING BRACKET KITS (BY FOLLETT) W/ (4)- 1/4"Φ TEK SCREWS AT STEEL STUD WALL (16 GA., 50 ksi MIN.) OR WHERE STUDS DO NOT LINE UP WITH SCREWS PROVIDE WALL BACKING (2 TOP BRACKETS & 2 BOTTOM BRACKETS) (16 SCREWS TOTAL)

T_u = 209 LB/BOLT (MAX)
V_u = 169 LB/BOLT (MAX)

FRONT ELEVATION

NOTES:

1. **FORCES ARE DETERMINED PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.00, a_p = 1.0, I_p = 1.5, R_p = 2.5, $z/h \leq 1$)

   HORIZONTAL FORCE (E_h) = 1.44 W_p
   VERTICAL FORCE (E_v) = 0.40 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS 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.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2016
4/5/17
STRUCTURAL
STATE OF CALIFORNIA

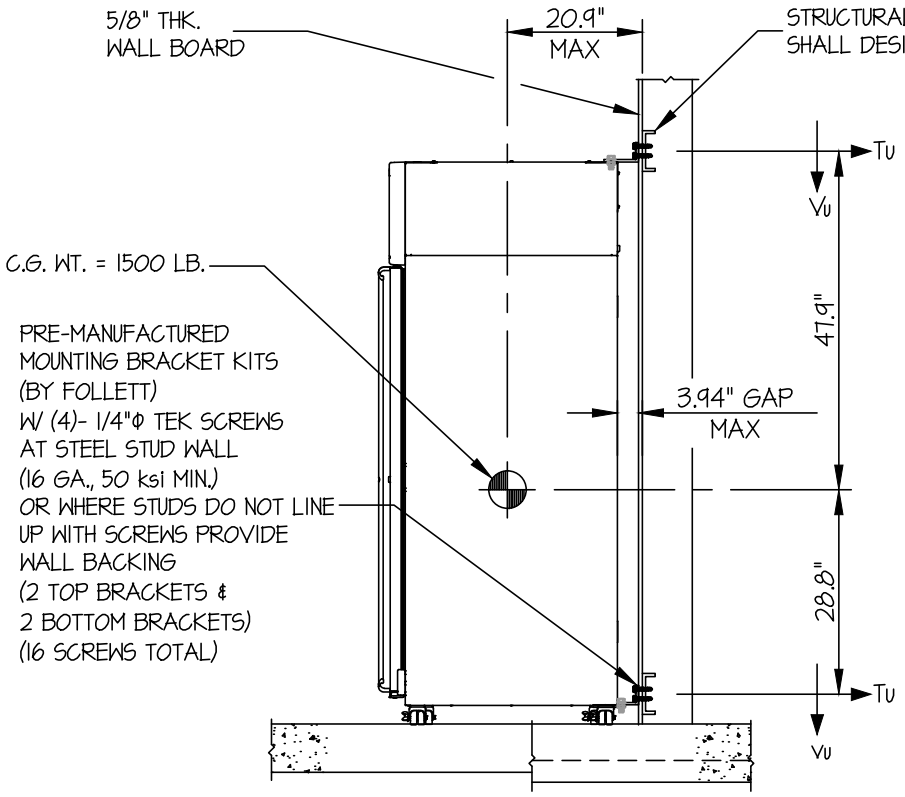
FOLLETT CORPORATION

REF45

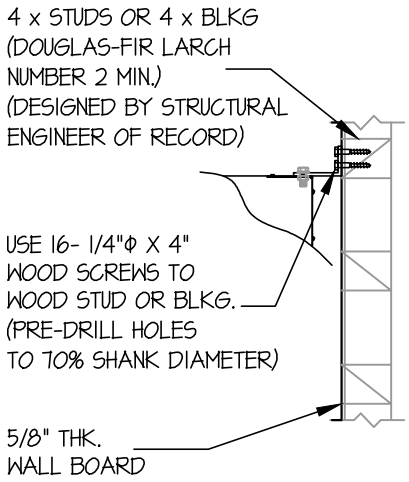
DES. J. ROBERSON
JOB NO. 11-1711
DATE 4/5/17
SHEET 2 OF 2 SHEETS

SEISMIC ANCHORAGE

SLAB ON GRADE / UPPER FLOOR



SIDE ELEVATION



WOOD STUD WALL SECTION

LOADS: PER 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10.
STRENGTH DESIGN IS USED (S_{DS} = 2.00, a_p = 1.0, I_p = 1.5, R_p = 2.5, $z/h \leq 1$)

WEIGHT = 1500 LB

HORIZONTAL FORCE (E_h) = 1.44 W_p = 2160 LB

VERTICAL FORCE (E_v) = 0.40 W_p = 600 LB

SCREW FORCES:

$$T_{u\ PARALLEL} = \frac{2160\#(20.9'')(47.9'')}{4\ SCREWS\ (58.5'')(76.7'')} = 121\ LB/SCREW$$

$$T_{u\ PERP.} = \frac{2160\#(47.9'')(30'')}{4\ SCREWS\ (76.7'')(58.5'')} = 173\ LB/SCREW$$

$$T_{u\ MAX} = (0.3)(121\#) + 173\# = 209\ LB/SCREW\ (MAX)$$

SHEAR (V)

$$V_{u\ WALL} = \frac{2160\#(47.9'')}{8\ SCREWS\ (76.7'')} = 169\ LB/SCREW$$

SCREW SPEC: 1/4"ϕ TEK SCREWS
ϕT = 418 LB/SCREW
ϕV = 362 LB/SCREW

UNITY CHECK:

$$\left(\frac{T_u}{\phi T}\right) + \left(\frac{V_u}{\phi V}\right) \leq 1.0$$

$$\left(\frac{209}{418}\right) + \left(\frac{169}{362}\right) = 0.97 \leq 1.0 \quad \therefore \text{ O.K.}$$

WOOD SCREWS: 1/4"ϕ
ϕT = 596 LB/SCREW
ϕV = 275 LB/SCREW

UNITY CHECK:

$$\left(\frac{T_u}{\phi T}\right) + \left(\frac{V_u}{\phi V}\right) \leq 1.0$$

$$\left(\frac{209}{596}\right) + \left(\frac{169}{275}\right) = 0.97 \leq 1.0 \quad \therefore \text{ O.K.}$$