EASE
EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING
www.EquipmentAnchorage.com

FOLLETT CORPORATION

25/50 HI/HR 425 A/W DISPENSERS

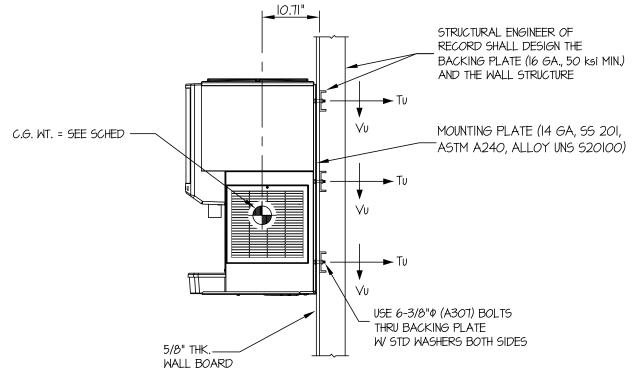| DES.	J. ROBERSON	SHEET
JOB NO.	11-1420	1
DATE	5/22/14	OF 2 SHEETS

SEISMIC ANCHORAGE | WALL MOUNTED

10.71"

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

T_u

V_u

C.G. WT. = SEE SCHED

MOUNTING PLATE (14 GA, SS 201,
ASTM A240, ALLOY UNS S20100)

T_u

V_u

T_u

V_u

USE 6-3/8"∅ (A307) BOLTS
THRU BACKING PLATE
W/ STD WASHERS BOTH SIDES

5/8" THK.
WALL BOARD

S I D E   E L E V A T I O N

NOTES:
1. FORCES ARE DETERMINED 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 $\leq$ 1)

   HORIZONTAL FORCE (E_h) = 1.80
   VERTICAL FORCE (E_v) = 0.50 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. 6-30-2014
5/22/14
STRUCTURAL
STATE OF CALIFORNIA

NOT
STRUCTURAL
OF RECORD

EASE

EQUIPMENT ANCHORAGE & SEISMIC ENGINEERING
www.EquipmentAnchorage.com

FOLLETT CORPORATION

25/50 HI/HR 425 A/W DISPENSERS
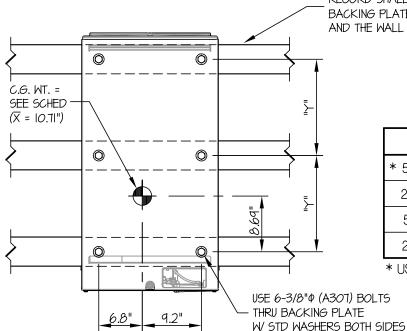
DES.	J. ROBERSON
JOB NO.	11-1420
DATE	5/22/14

SHEET
2

OF **2** **SHEETS**

SEISMIC ANCHORAGE

WALL MOUNTED

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

C.G. WT. = SEE SCHED ($\overline{X}$ = 10.71")

"Y"

"Y"

8.69"

6.8" 9.2"

USE 6-3/8"φ (A307) BOLTS THRU BACKING PLATE W/ STD WASHERS BOTH SIDES

MODEL	MAX WT	"Y"	T_U	V_U
* 50HI425A	254	15"	313	157
25HI425A	225	13"	319	154
50HR425	168	15"	208	104
25HR425	139	13"	198	96

* USED IN CALCULATION

BACK 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 $\leq$ 1)
WEIGHT = 254 LB
HORIZONTAL FORCE (E_h) = 1.80 W_p = 457 LB
VERTICAL FORCE (E_v) = 0.50 W_p = 127 LB

BOLT FORCES:

BOLT SPEC: 3/8"φ (A307) BOLTS
φT= 3589 LB/BOLT
φV= 1914 LB/BOLT

TENSION (T)

$$T_{U\,VERTICAL} = \frac{(254\#(1.2) + 127\#)(10.71")(9.2")}{1_{BOLT}(30")(16")} = 89 \text{ LB/BOLT}$$

$$T_{U\,PARALLEL} = \frac{457\#(10.71")(8.69")}{1_{BOLT}(16")(15")} = 178 \text{ LB/BOLT}$$

$$T_{U\,PERP.} = \frac{457\#(8.69")(9.2")}{1_{BOLT}(15")(16")} = 153 \text{ LB/BOLT}$$

$$T_{U\,MAX} = 89\# + (0.3)(153\#) + 178\# = 313 \text{ LB/BOLT (MAX)}$$

SHEAR (V)

$$V_{U\,MAX} = \sqrt{\left(\frac{(254\#(1.2") + 127\#)(9.2")}{3_{BOLTS}(16")}\right)^2 + \left(\frac{457\#(8.69")}{2_{BOLTS}(15")}\right)^2} = 157 \text{ LB/BOLT (MAX)}$$