

STRUCTURAL CALCULATIONS

FOR

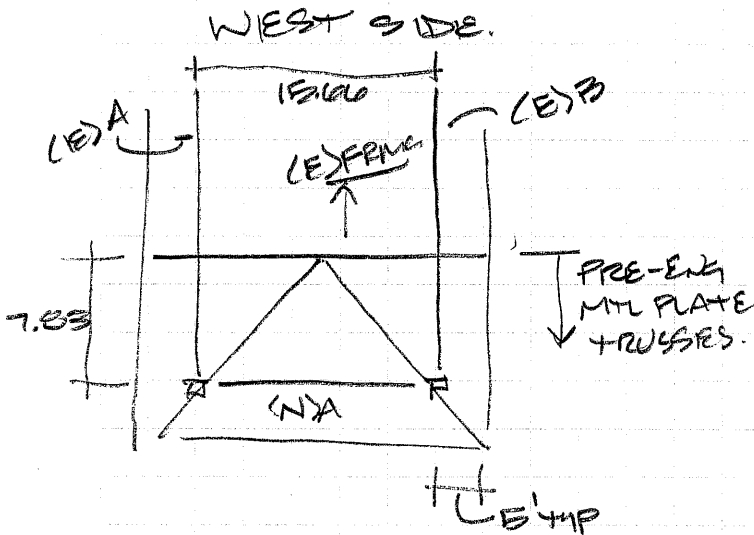
HNT EXISTING BUILDING
CANOPY MODIFICATIONS
3700 E MERCER WAY
MERCER ISLAND, WASHINGTON

PREPARED BY
PCS STRUCTURAL SOLUTIONS

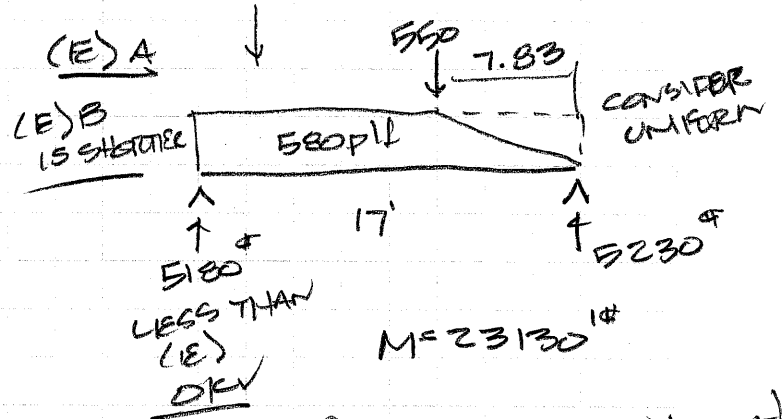


JANUARY 6, 2026
23-580

MODIFY (E) CANOPIES. DL=20psf SL=25psf.

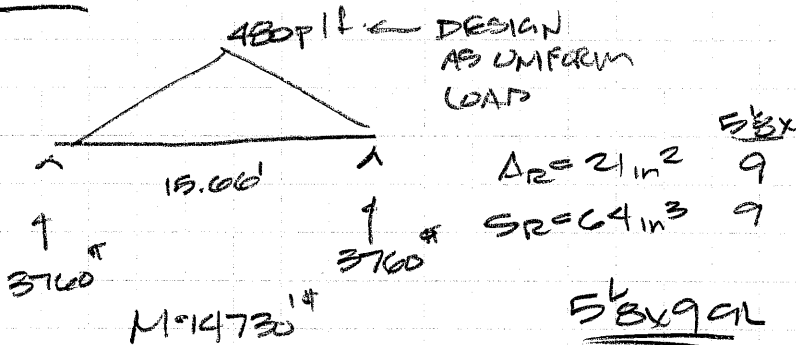


(E) $5^L 4 \times 22^{3/4} AL$ $A = 124 in^2$
 $S = 452 in^3$



$M = 23130 \text{ ft-lb}$
 $f_v = 63 \text{ psi OK ON EXIST!}$
 $f_b = 614 \text{ psi OK ON EXIST.}$

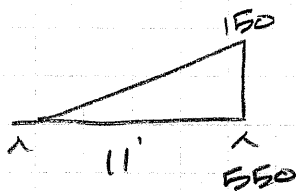
(N)A:



(E) BEAMS OKAY!

HUCQ5.25/9-SDS
 HANGERS
 $V_{all} = 4500 \text{ lb}$

HIP AT PEMP TRUSS



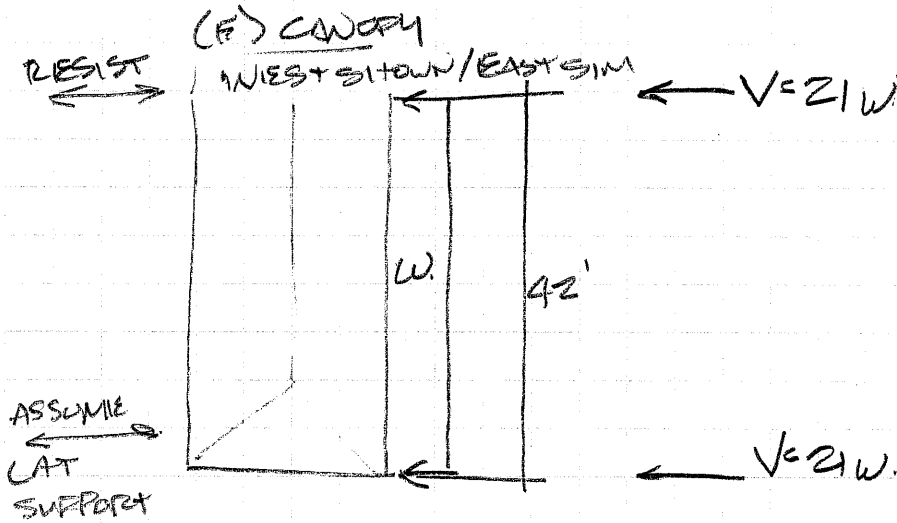
COLUMNS AT BM END.
 $P = 9265$ $h = 10'$

TRY 6x6 COL. $f_c = \frac{9265}{5.5(5.5)} = 300 \text{ psi}$
 $d = 22$ $f_c' = 803 \text{ psi}$ OK

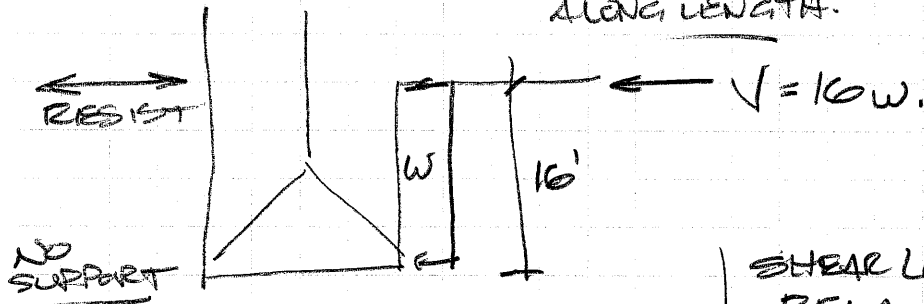
6x6 DF #1 OK.

$F_{TC} = \frac{9265}{\sqrt{1500}} = F_{30}$ OK

LATERAL CONSIDERATION.



MODIFIED - LATERAL LOAD UNCHANGED ALONG LENGTH.



SHEAR LOAD TO BLDG + REMAINING CANOPY IS REDUCED BY APPROX 25% NO MODIFICATIONS NEEDED LATERALLY.