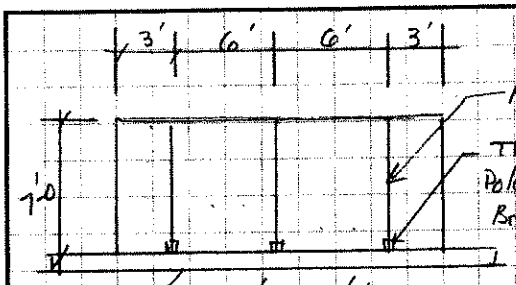
NEVILLE ENGINEERING
Consulting Engineer
213 RIVER BIRCH LN
CHAPEL HILL, NORTH CAROLINA 27514
(919) 942-5229 Cell: (919) 740-3427
neveng@aol.com

JOB Western Harnett Transmission Tank
SHEET NO. 1 OF 2
CALCULATED BY AN DATE 10 June 19
CHECKED BY DATE
SCALE



$\angle$ Existing sign

Harnett Co., NC
Design Wind Speed
V_{ult} - 120 mph
V_{asd} - 93 mph

$q_z = 0.00256 (K_d K_{zt} K_z V^2 I$
$K_d = .85, K_z = .57, K_{zt} = 1.0$
$q_z = 0.00256 (.85)(1.0)(93^2 =$
$= 10.72 psf = .011 ksf$

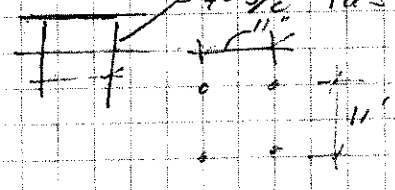
Assume 6' x 1.1' x 4' wide

$M_{req'd} = 1.91 \times 3/2 = 2.87$ ft-k

$F = q_z G C_f A$ $\Theta = 0°$
$C_f = B/s = 48/2 = 2.0$
$s/h = 1$
$C_f = 1.4$

$F = (.011)(.85)(1.4) A = .013 A$
$F_{max} = .013 \times 6 \times 7 = .55^k$
$M = .55 \times 3.5 = 1.91$ ft-k

No provide
$M = .075 \times 6 \times 4 \times 2$
$= 3.6$ ft-k > 2.87 OK



$M_1 = 1.91$ ft-k

$F = \frac{1.91 \times 12}{11} = 2.08^k/2 = 1.04^k/rod$

5/8" rod $A = .226$ $F = .226 \times 22 = 4.97^k$ OK

$M = 1.91 \times 2 = 3.82$ $S = 3.9$ $f = \frac{1.91 \times 12}{3.9} = 5.88$ ksi < 24 OK

NORTH CAROLINA PROFESSIONAL SEAL 005114 ENGINEER AUGUSTUS NEVILLE, III

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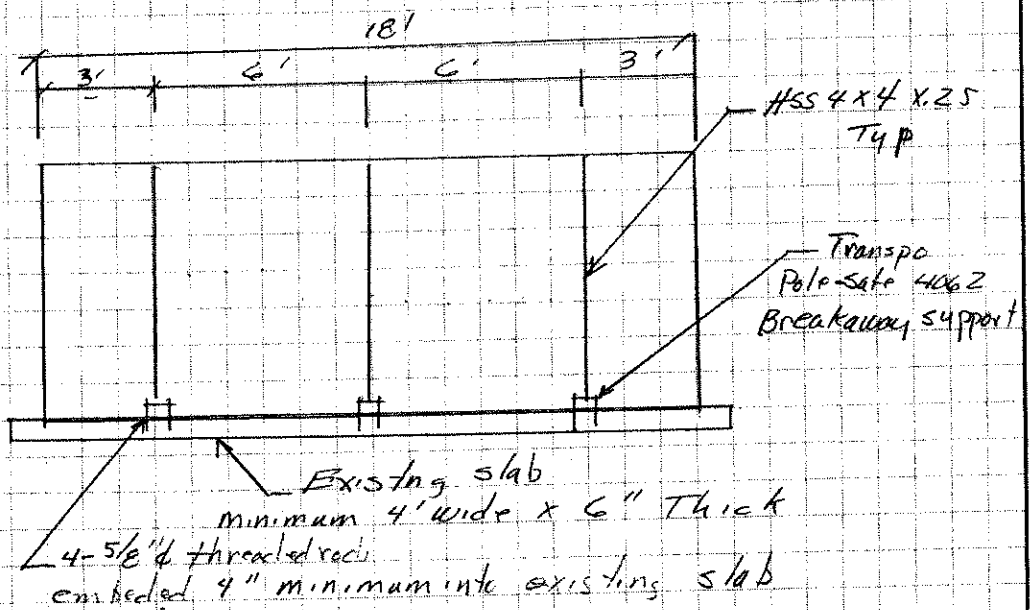
JOB Sign to Western Harnett Invention Park
SHEET NO. 2 OF 2
CALCULATED BY AN DATE 10 June 19
CHECKED BY DATE
SCALE



Harnett Co., NC.

Design Wind speed- Ult - 120mph
Vasd - 93mph

Structural steel ASTM A500B

NORTH CAROLINA PROFESSIONAL SEAL 005114 ENGINEER AUGUSTUS NEVILLE III

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