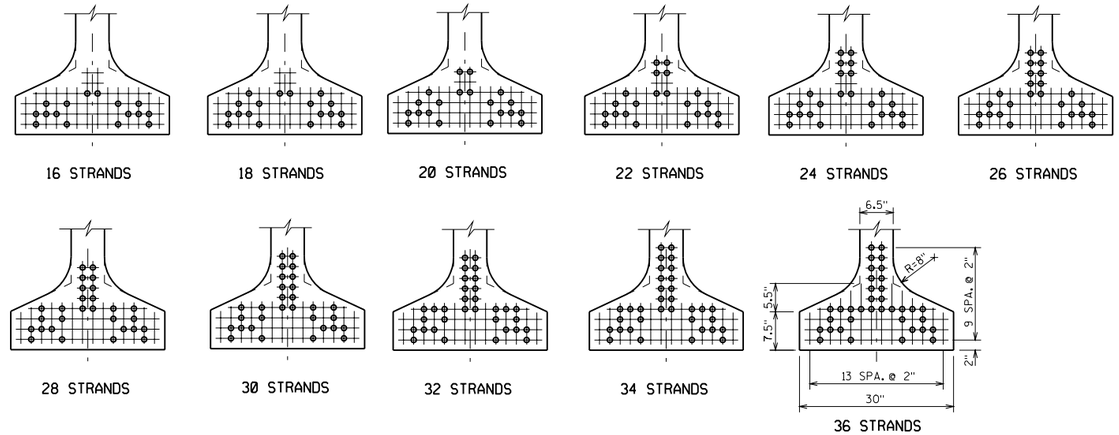
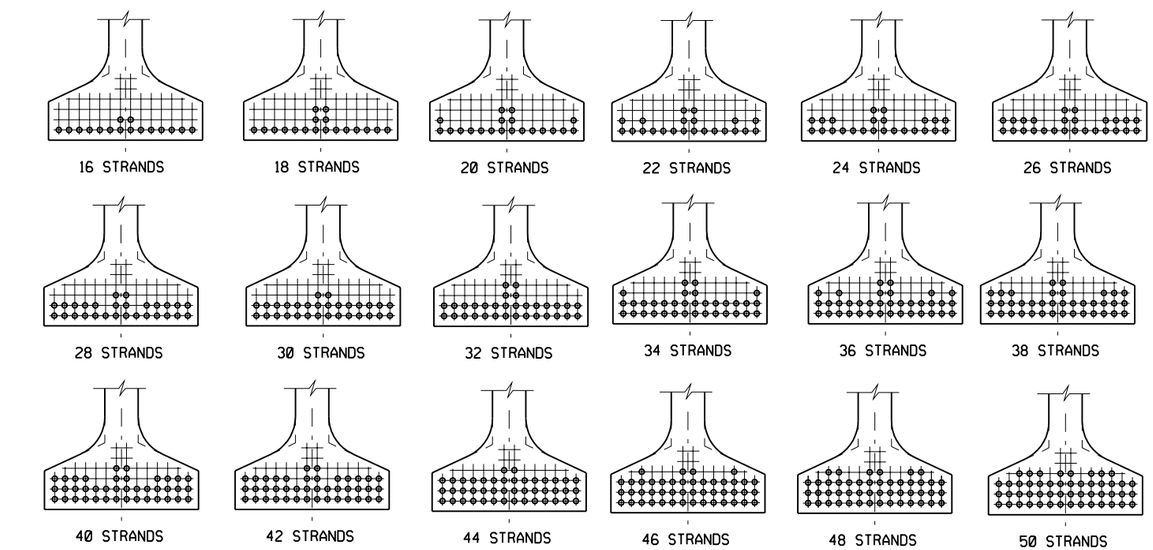
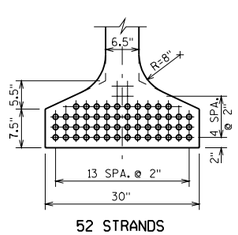


STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF 0.6"Φ STRANDS





ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED 0.6"Φ STRANDS

82W" GIRDER

A = 980 SQ. IN.

r^2 = 924.1 IN.^{2}

y_T = 42.32 IN.

y_B = 39.68 IN.

I = 905,453 IN.^{4}

S_T = 21,396 IN.^{3}

S_B = 22,819 IN.^{3}

WT. = 1021 #/FT.

PRE-TENSION

f'_s = 270,000 P.S.I.

f_s = 0.75 X 270,000 = 202,500 P.S.I.
for low relaxation strands

Pi PER 0.6" Φ STRAND= 0.217 X 202,500 = 43.94 KIPS

(COMPRESSION IS NEGATIVE)

N NO. STRANDS	(1) e_s (inches)
STANDARD PATTERNS FOR UNDRAPED STRANDS	
16	35.18
18	34.79
20	34.08
22	33.32
24	32.50
26	32.30
28	32.25
30	31.55
32	31.56
34	30.86
36	30.90
STANDARD PATTERNS FOR DRAPED STRANDS	
16	37.43
18	37.01
20	36.88
22	36.77
24	36.68
26	36.60
28	36.54
30	36.48
32	36.18
34	36.03
36	35.90
38	35.79
40	35.68
42	35.58
44	35.50
46	35.33
48	35.18
50	35.04
52	34.91

82W" PRETENSIONED GIRDER DESIGN DATA

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DEVELOPMENT SECTION

APPROVED: _____

DATE: 1-06