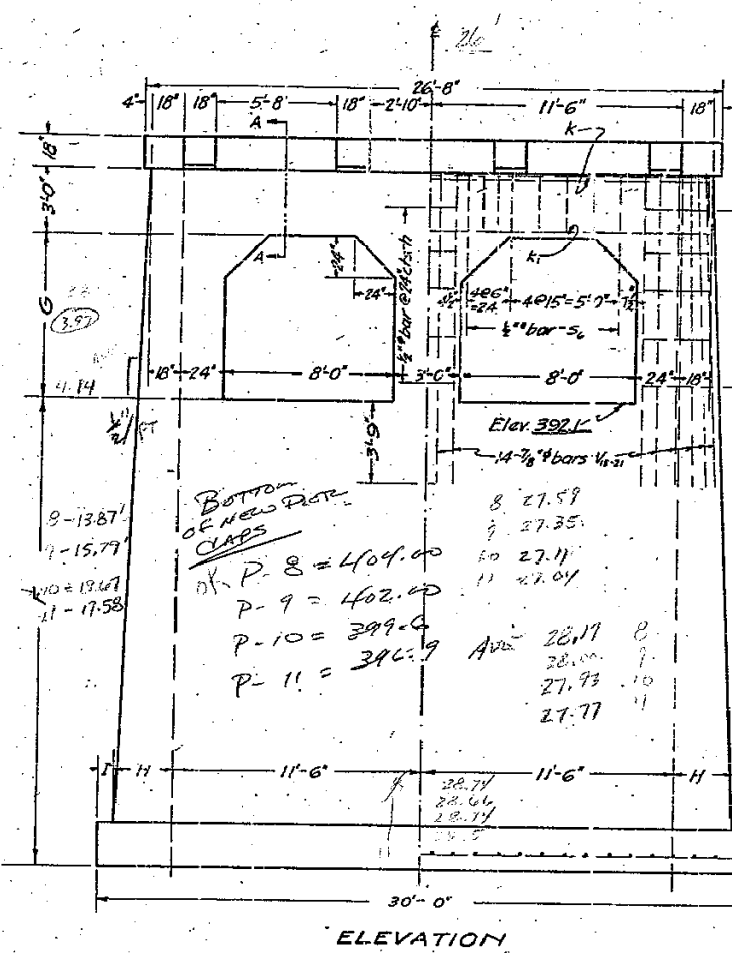
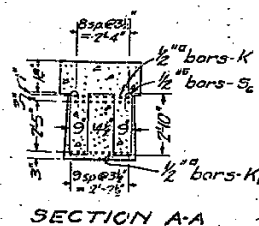
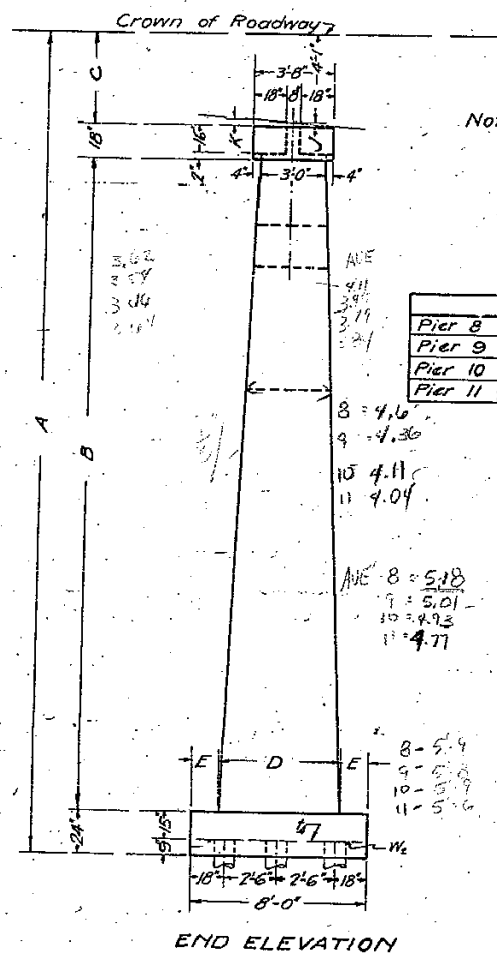


B.M. #44-S & W. root of 24" willow-75' Lt.
Sta. 296+75- Elev. 380.68.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
89	1254-B	Marshall	16	17
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				



Notes:
Class A concrete to be used throughout.
All reinforcing steel to be securely in place before concrete poured.

Pier 8

	Pier 8	Pier 9	Pier 10	Pier 11
A	40'-8"	39'-8"	40'-8"	40'-8"
B	32'-0"	32'-0"	33'-0"	33'-0"
C	2'-8"	2'-8"	2'-8"	2'-8"
D	5'-3"	5'-3"	5'-3"	5'-3"
E	13'-0"	12'-0"	13'-0"	13'-0"
F	15'-10"	17'-0"	17'-0"	17'-0"
G	16'-10"	15'-2"	16'-0"	16'-0"
H	2'-10"	2'-10"	2'-10"	2'-10"
I	1'-0"	1'-0"	1'-0"	1'-0"
J	1'-0"	1'-0"	1'-0"	1'-0"
K	2'-8"	2'-8"	2'-8"	2'-8"

BILLS OF MATERIAL
PIER 8

Bar No.	Size	Length
K	1/2"	29'-0"
K1	1/2"	25'-6"
V1	4/8"	22'-9"
L	9/16"	18'-0"
H1	1/2"	16'-0"
S1	1/2"	17'-9"
T1	3/8"	7'-9"
W1	2"	29'-6"

Reinf. Steel Lbs. - 3400
Conc. Class A Cu. Yds. 128.6

PIER 9

Bar No.	Size	Length
K	1/2"	29'-0"
K1	1/2"	25'-6"
V1	4/8"	22'-9"
L	9/16"	18'-0"
H1	1/2"	16'-0"
S1	1/2"	17'-9"
T1	3/8"	7'-9"
W1	2"	29'-6"

Reinf. Steel Lbs. - 3130
Conc. Class A Cu. Yds. 129.5

PIER 10

Bar No.	Size	Length
K	1/2"	29'-0"
K1	1/2"	25'-6"
V1	4/8"	17'-0"
H	6"	12'-6"
H1	1/2"	16'-0"
S1	1/2"	17'-9"
T1	3/8"	7'-9"
W1	2"	29'-6"

Reinf. Steel Lbs. - 2920
Conc. Class A Cu. Yds. 143.6

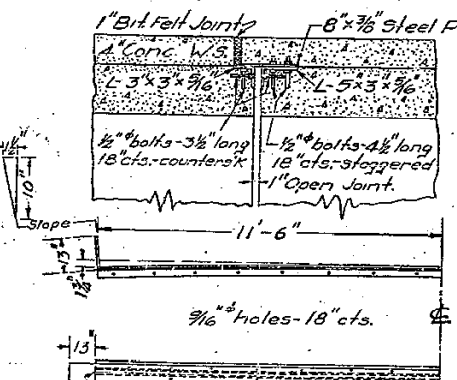
PIER 11

Bar No.	Size	Length
K	1/2"	29'-0"
K1	1/2"	25'-6"
V1	4/8"	12'-0"
H	5"	12'-0"
H1	1/2"	16'-0"
S1	1/2"	17'-9"
T1	3/8"	7'-9"
W1	2"	29'-6"

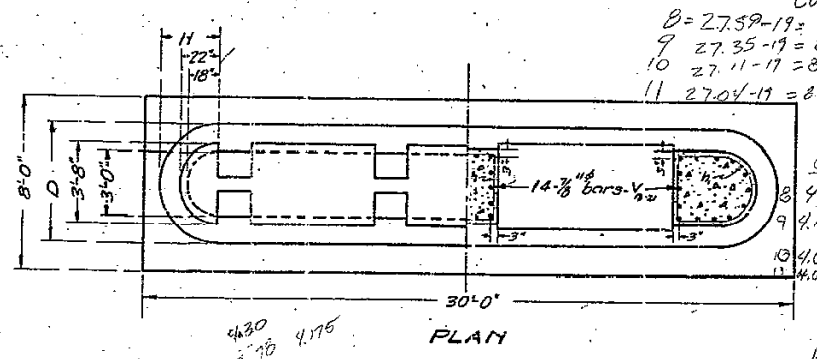
Reinf. Steel Lbs. - 2530
Conc. Class A Cu. Yds. 132.4

P-8 = 25.29
P-9 = 25.18
P-10 = 26.68
P-11 = 23.88

19 Top Untreated Piles - 20' Long
8" Tip - 12" Butt - 28 Required
in each of Piers 8, 9, 10 & 11.
Total No. Req'd - 112 - Est. Length - 2240 Lin. Ft.



COMPUTED - M. J. O'Brien	EXAMINED - June 2, 1939
CHECKED - M. J. O'Brien	PASSED - M. J. O'Brien
DRAWN - M. J. O'Brien	APPROVED - J. H. Smith
CHECKED - M. J. O'Brien	CHIEF HIGHWAY ENGINEER



OUTSIDE COLUMN WIDTH
8 = 27.59 - 19 = 8.59 / 2 = 4.3
9 = 27.35 - 19 = 8.35 / 2 = 4.18
10 = 27.11 - 17 = 8.11 / 2 = 4.06
11 = 27.01 - 17 = 8.01 / 2 = 4.01

OUTSIDE COLUMN TOP
8 = 4.3 - (11.91 / 0.4) = 3.82
9 = 4.18 - (9.91 / 0.4) = 3.78
10 = 4.06 - (7.51 / 0.4) = 3.78
11 = 4.01 - (4.81 / 0.4) = 3.83

Average Width
8 = 4.3 + 3.82 / 2 = 4.06
9 = 4.18 + 3.78 / 2 = 3.98
10 = 4.06 + 3.78 / 2 = 3.91
11 = 4.01 + 3.83 / 2 = 3.93

PIERS 8-9-10-11
BRIDGE OVER
SANTA FE R.R. & CROW C.
S.B.I. ROUTE 89 SECTION
MARSHALL COUNTY
STATION 301+00