

098-0096

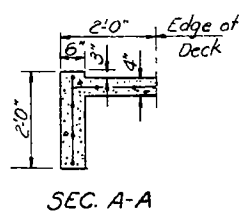
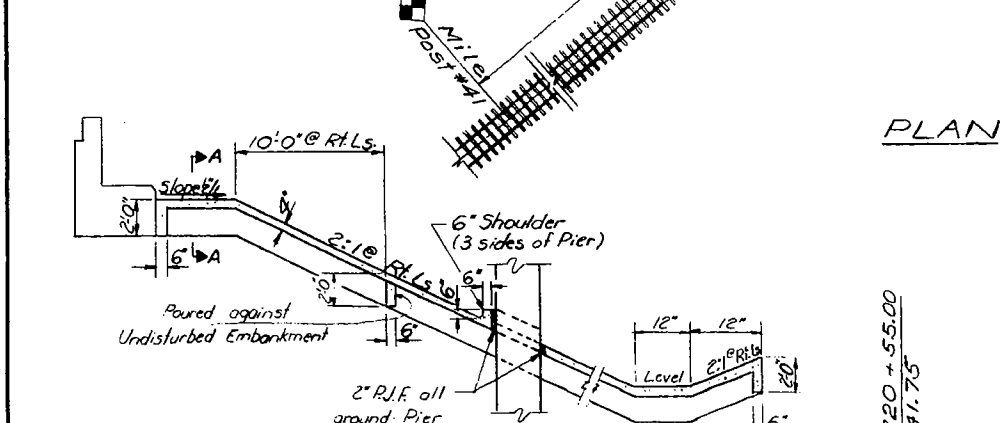
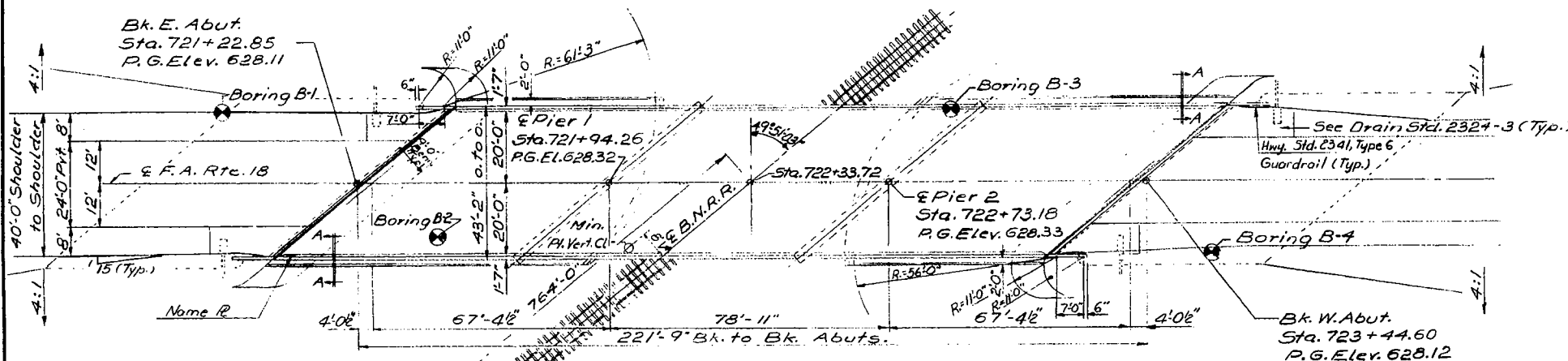
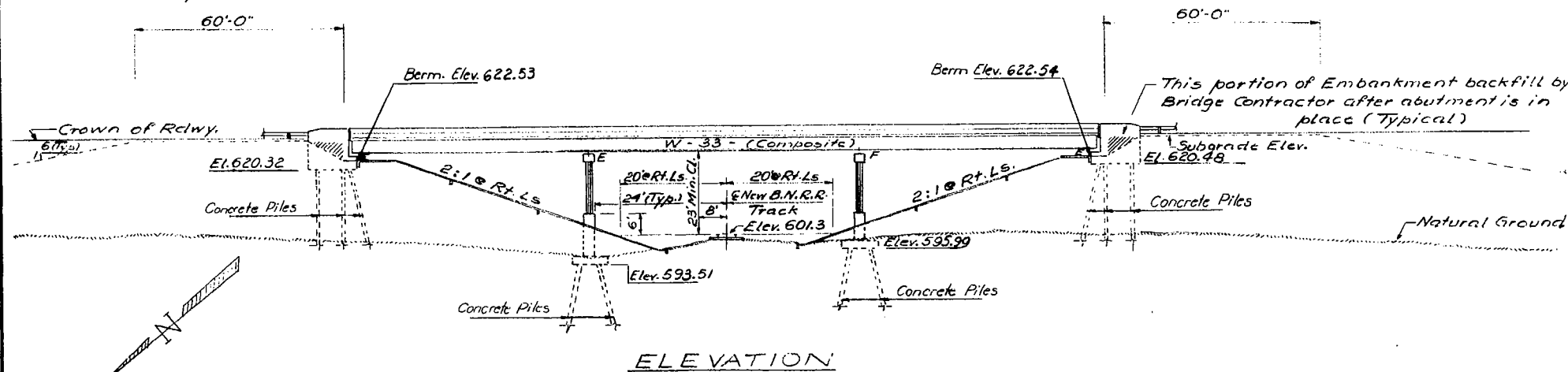
B.M.: Chis "D" on S. End E. Hubguard of CB &
Q R R Bridge 722+03 Elev. 624.695.
Existing Structure: N° 098-0019 built as
S.B.I. 80, Sec. 107 VB in 1933 @ Sta. 720+92.3
Concrete slab on steel Bms, Timber substructure (Five Span, 209'-10" Back to Back and 25'-0" Out to Out)
to be removed by contractor at time of construction.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
107-1	107VB-1	WHITESIDE	61	36	13 SHEETS
107-1B	107VB-1	WHITESIDE	61	36	

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M53, Grade 60.
See Proposal for Boring Data.
Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ ", open holes $\frac{1}{16}$ " unless otherwise noted.
Calculated weight of Structural Steel=199,710 Pounds.
The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.
Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
Anchor bolts shall be set before bolting diaphragms over supports.
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 lbs. per 100 sq. ft.
Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ ". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the wide flange beams.
The Contractor shall drive one concrete test pile each in a permanent location at Pier #1 and West Abutment as directed by the Engineer before ordering the remainder of piles.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.



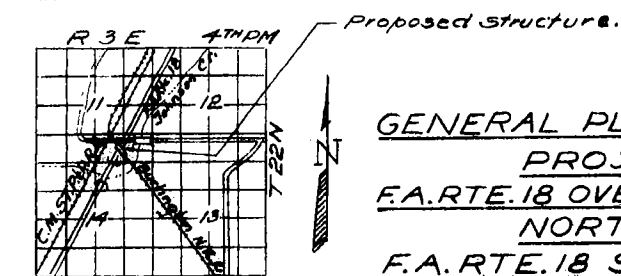
STATION 722+33.72
BUILT 19 BY
STATE OF ILLINOIS
F.A. RT. 18 SEC. 107VB-1
PROJECT: GR-18(100)
LOADING HS20
*STR. NO.
NAME PLATE
(See Std. 2113)

*Structure Number to be supplied by District.

DESIGN STRESSES

$f_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinf.)}$
 $f_y = 50,000 \text{ psi (Struct. Steel M-223, Grade 50)}$

Loading HS20-44
Allow $25 \frac{1}{2}$ " for Future W.S.
Design Specifications: 1977 AASHTO
and 1978 Interim Specifications.
Epoxy Coated Reinf. Bars shall be used
in the top layer of the slab.

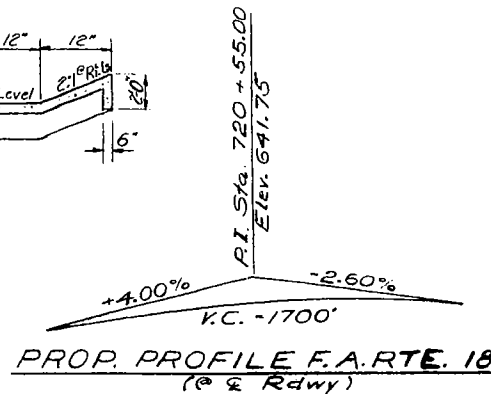


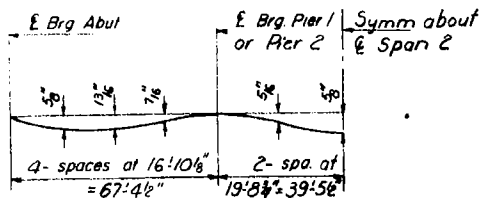
LOCATION SKETCH

GENERAL PLAN & ELEVATION
PROJECT: GR-18(100)
F.A. RTE. 18 OVER BURLINGTON
NORTHERN R.R.
F.A. RTE. 18 SECTION 107VB-1
WHITESIDE COUNTY
STA. 722+33.72

DESIGNED	Suresh Desai
CHECKED	DAU KRULL
DRAWN	R. Doly
CHECKED	D. K.

NOVEMBER 21 1978
EXAMINED
PASSED
APPROVED

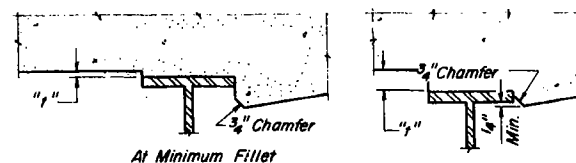




DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

PROJECT NO.	107-1	SECTION	WHITESIDE 61	SHEET NO.	37
DATE	10/18/10	BY			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
E Brg. E. Abut.	72148.876	-18.542	627.887	627.887
a	72158.876	-18.542	627.919	627.951
b	72168.876	-18.542	627.947	628.003
c	72178.876	-18.542	627.970	628.035
d	72188.876	-18.542	627.990	628.065
e	72198.876	-18.542	628.007	628.092
f	72208.876	-18.542	628.019	628.104
E Brg. Pier 1	72216.251	-18.542	628.025	628.025
g	72226.251	-18.542	628.031	628.045
h	72236.251	-18.542	628.032	628.061
i	72246.251	-18.542	628.030	628.070
j	72256.251	-18.542	628.024	628.075
k	72266.251	-18.542	628.014	628.053
l	72276.251	-18.542	628.000	628.027
m	72286.251	-18.542	627.982	627.995
E Brg. Pier 2	72295.168	-18.542	627.953	627.963
n	72305.168	-18.542	627.938	627.958
o	72315.168	-18.542	627.909	627.949
p	72325.168	-18.542	627.876	627.935
q	72335.168	-18.542	627.839	627.901
r	72345.168	-18.542	627.798	627.853
s	72355.168	-18.542	627.754	627.778
E Brg. W. Abut.	72362.543	-18.542	627.718	627.718

SOUTH LONGITUDINAL BONDED CONST. JOINT

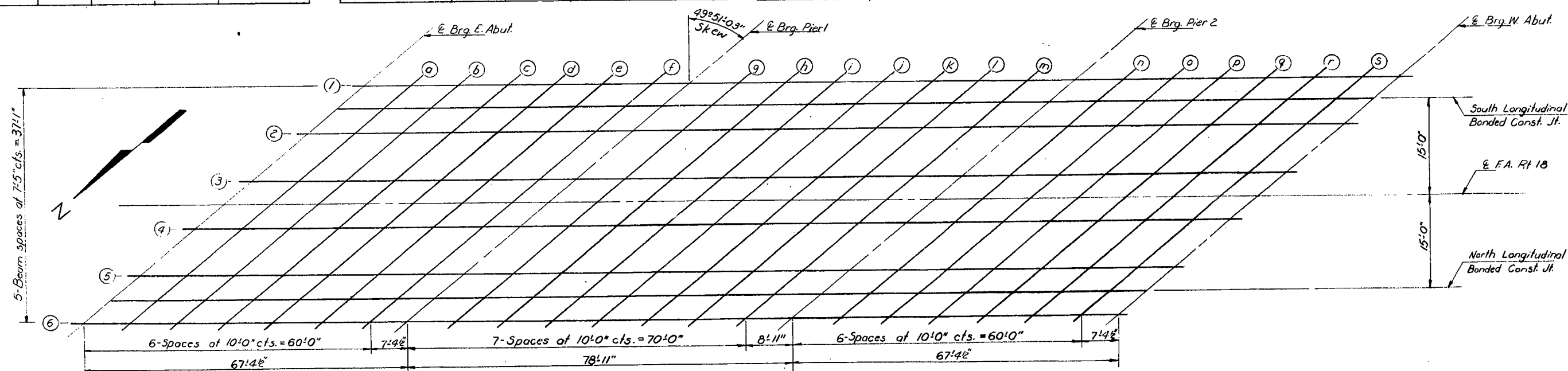
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
E Brg. E. Abut.	72144.677	-15.000	627.946	627.946
a	72154.677	-15.000	627.980	628.012
b	72164.677	-15.000	628.009	628.066
c	72174.677	-15.000	628.035	628.099
d	72184.677	-15.000	628.056	628.111
e	72194.677	-15.000	628.077	628.109
f	72204.677	-15.000	628.088	628.103
E Brg. Pier 1	72212.052	-15.000	628.096	628.096
g	72222.052	-15.000	628.103	628.117
h	72232.052	-15.000	628.106	628.134
i	72242.052	-15.000	628.105	628.146
j	72252.052	-15.000	628.101	628.152
k	72262.052	-15.000	628.092	628.131
l	72272.052	-15.000	628.080	628.107
m	72282.052	-15.000	628.064	628.076
E Brg. Pier 2	72290.969	-15.000	628.046	628.046
n	72300.969	-15.000	628.022	628.043
o	72310.969	-15.000	627.995	628.015
p	72320.969	-15.000	627.964	628.023
q	72330.969	-15.000	627.929	627.991
r	72340.969	-15.000	627.889	627.944
s	72350.969	-15.000	627.846	627.871
E Brg. W. Abut.	72358.344	-15.000	627.812	627.812

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
E Brg. E. Abut.	72140.083	-11.125	628.006	628.006
a	72150.083	-11.125	628.041	628.073
b	72160.083	-11.125	628.072	628.129
c	72170.083	-11.125	628.099	628.164
d	72180.083	-11.125	628.123	628.178
e	72190.083	-11.125	628.142	628.177
f	72200.083	-11.125	628.158	628.173
E Brg. Pier 1	72207.458	-11.125	628.157	628.167
g	72217.458	-11.125	628.176	628.190
h	72227.458	-11.125	628.181	628.209
i	72237.458	-11.125	628.162	628.222
j	72247.458	-11.125	628.179	628.230
k	72257.458	-11.125	628.173	628.212
l	72267.458	-11.125	628.162	628.189
m	72277.458	-11.125	628.148	628.160
E Brg. Pier 2	72280.375	-11.125	628.132	628.132
n	72290.375	-11.125	628.110	628.130
o	72300.375	-11.125	628.084	628.124
p	72310.375	-11.125	628.055	628.114
q	72320.375	-11.125	628.021	628.084
r	72330.375	-11.125	627.986	628.039
s	72340.375	-11.125	627.943	627.967
E Brg. W. Abut.	72353.750	-11.125	627.909	627.909

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
E Brg. E. Abut.	72131.291	-3.708	628.088	628.088
a	72141.291	-3.708	628.126	628.158
b	72151.291	-3.708	628.161	628.217
c	72161.291	-3.708	628.191	628.256
d	72171.291	-3.708	628.219	628.273
e	72181.291	-3.708	628.241	628.276
f	72191.291	-3.708	628.260	628.275
E Brg. Pier 1	72198.666	-3.708	628.272	628.272
g	72208.666	-3.708	628.284	628.299
h	72218.666	-3.708	628.293	628.321
i	72228.666	-3.708	628.297	628.338
j	72238.666	-3.708	628.298	628.349
k	72248.666	-3.708	628.295	628.334
l	72258.666	-3.708	628.286	628.314
m	72268.666	-3.708	628.277	628.289
E Brg. Pier 2	72277.582	-3.708	628.263	628.263
n	72287.582	-3.708	628.245	628.265
o	72297.582	-3.708	628.223	628.263
p	72307.582	-3.708	628.197	628.256
q	72317.582	-3.708	628.167	628.229
r	72327.582	-3.708	628.133	628.188
s	72337.582	-3.708	628.093	628.119
E Brg. W. Abut.	72344.957	-3.708	628.064	628.064



ELEVATIONS LOCATION PLAN

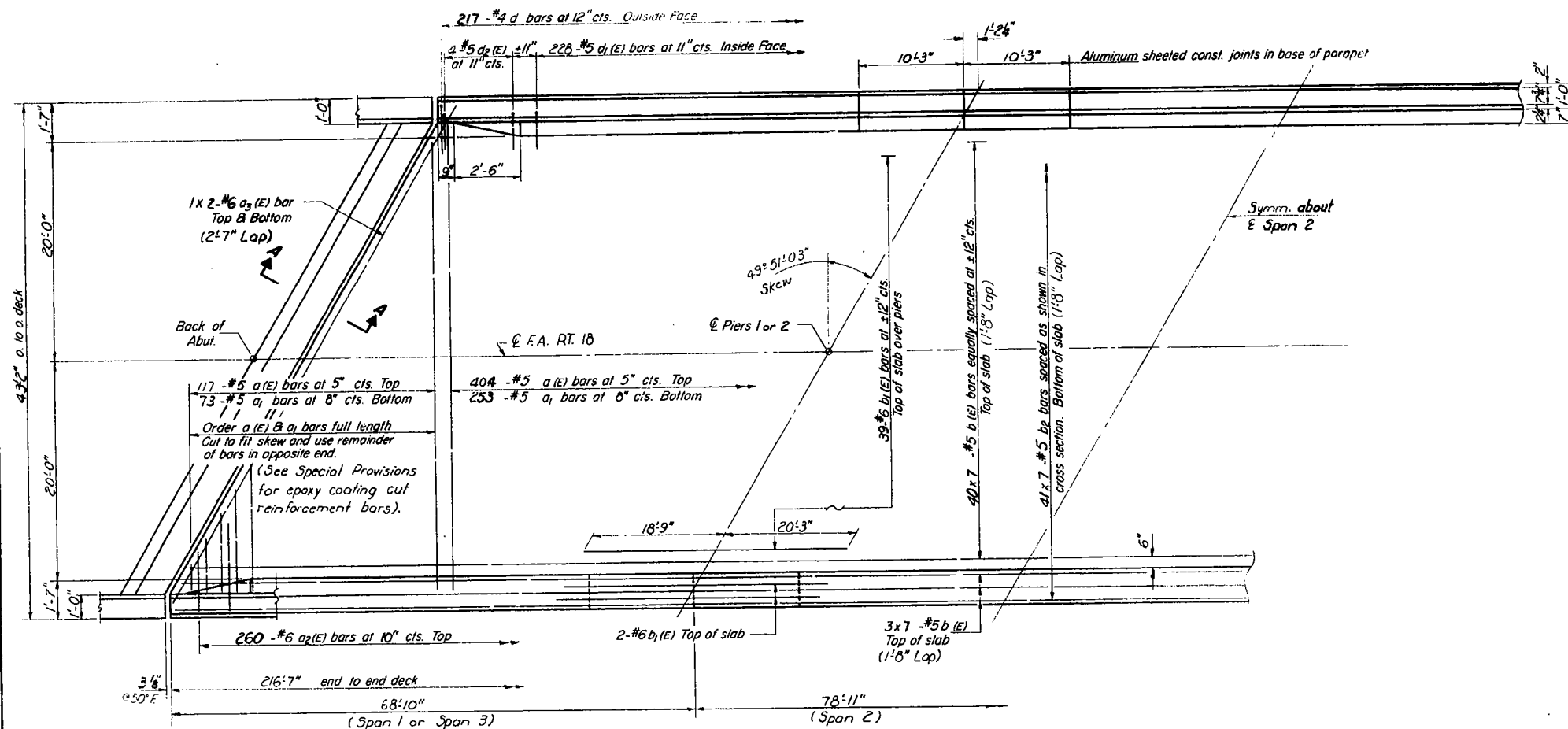
DESIGNED	Smesh Desai
CHECKED	DAU
DRAWN	P.G. Barnett R. Doty
CHECKED	

EXAMINED	Nov 21 1978
PASSED	
APPROVED	
DIRECTOR OF HIGHWAYS	

TOP OF SLAB ELEVATIONS
F.A. RT. 18 SEC. 107VB-1
WHITESIDE COUNTY
STA. 722+33.72

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
107-1	107VB-1	WHITESIDE	61	39	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



TOP OF FLANGE ELEVATIONS

(Before any deflection)

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
E Brq. E. Abut.	627.22	627.34	627.42	627.34	627.23	627.04
E Pier #1	627.30	627.44	627.55	627.49	627.40	627.23
E Splice #1	627.32	627.47	627.58	627.53	627.45	627.28
E Splice #2	627.29	627.45	627.53	627.58	627.47	627.32
E Pier #2	627.24	627.41	627.49	627.55	627.45	627.30
E Brq. W. Abut.	627.05	627.24	627.35	627.43	627.35	627.23

* For fabrication only

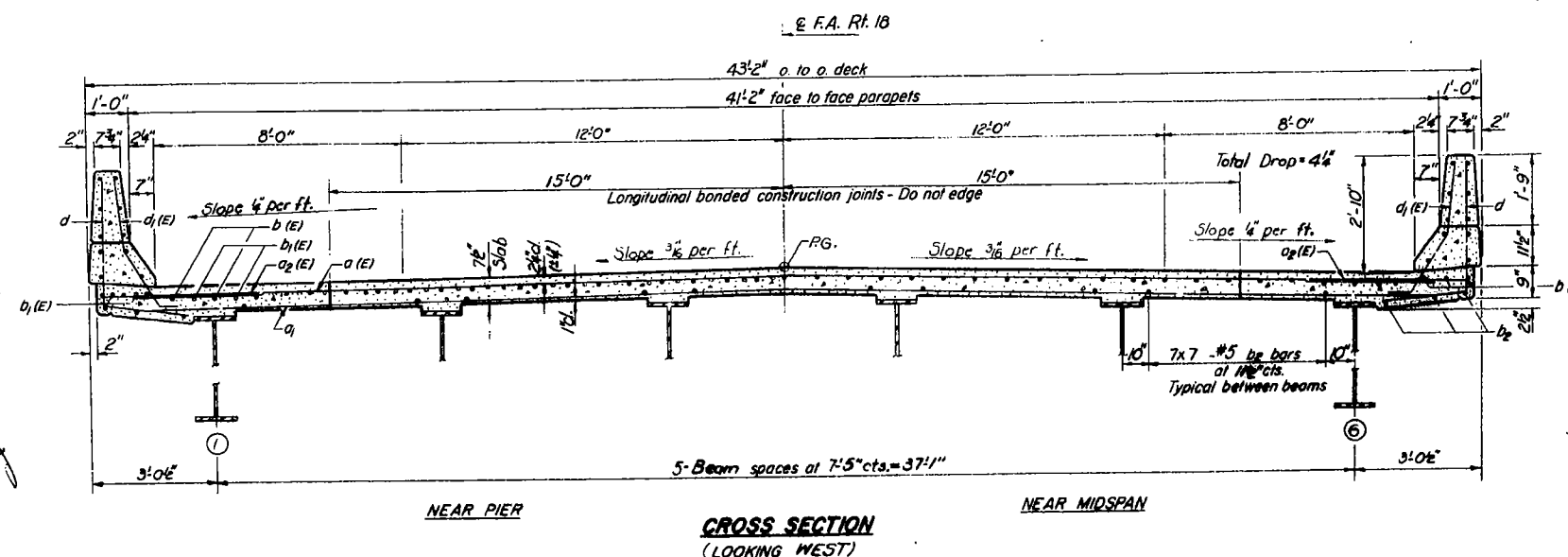
INTERIOR BEAM MOMENT TABLE

	4 Splice 3	Pier 1 or 2	.5 Span 2
I _s (in ⁴)	6710	6710	6710
I _c (in ⁴)	17173		17173
S _s (in ³)	405	405	405
S _c (in ³)	582		582
P (k/ft)	.862	.862	.862
M _P (k)	286	463	208
R _P (k/ft)	.323	.323	.323
M _R (k)	122	137	114
M _L (k)	544	320	550
M _{max} (k)	142	80	138
	2020	1648	1912
	3308	1638	3308
VR (k)	55.9	47.8	

INTERIOR BEAM REACTION TABLE

	E. Abut.	Pier 1 or 2	W. Abut.
R _P (k)	31.1	95.7	31.1
R _L (k)	40.8	53.4	40.8
Imp. (k)	10.6	13.3	10.6
R _{total} (k)	82.5	162.4	82.5

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing I_s TOTAL.
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing I_s TOTAL.
VR is the maximum 4+Impact shear range in span used to determine shear connector spacing.



NOTES:
See sheet #5 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	Suresh Desai
CHECKED	DAU KROLL
DRAWN	P. J. J.
CHECKED	D. N.

EXAMINED	Nov 21 1978
PASSED	
APPROVED	
DIRECTOR OF HIGHWAYS	

ROUTE NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
S. E. 1.	107-1	WHITESIDE	61	40
P. 18	107B			
	107B-1			
FED. ROAD DIST. NO. 3		ILLINOIS	FED. AID PROJECT-	

[illegible][illegible]

Two component non-staining gray sealing compound with polysulfide liquid polymer gun-grade with primer.

2" Preformed Cork Jt. Filler (In accordance with Articles 715.07 or 715.08) Cost Incidental

Construction Joints
1/4" Aluminum sheet ASTM: B 209 alloy 3003-H14. Cost incidental.

Const. Jt. (Optional)

Bonded Const. Jt. (Mandatory)

Parapet Jt/s

1/4" 1/4" 1/4" 1/4" 1/4" 1/4"

PARAPET JOINT SEALING

Diagram of **BAR d** and **BAR d₁(E)** showing dimensions and angles.

BAR d dimensions:

- Vertical leg: $3' - 2''$
- Horizontal leg: $2' - 2''$
- Base width: $2\frac{1}{2}''$

BAR d₁(E) dimensions:

- Vertical leg: $2' - 3''$
- Horizontal leg: $9\frac{1}{2}''$
- Base width: $6''$
- Angle between legs: 111°
- Angle between vertical leg and horizontal line: 101°

Bar	No.	Size	Length	Shape
a(E)	521	#5	4'-13"	_____
a ₁	326	#5	4'-13"	_____
a ₂ (E)	520	#6	4'-0"	_____
a ₃ (E)	8	#6	34'-6"	_____
b(E)	322	#5	32'-5"	_____
b ₁ (E)	86	#6	39'-0"	_____
b ₂	287	#5	32'-5"	_____
b ₃ (E)	12	#5	30'-1"	_____
b ₃	12	#5	30'-1"	_____
b ₄	24	#8	31'-1"	_____
b ₅ (E)	8	#5	10'-0"	_____
b ₅	8	#5	10'-0"	_____
b ₆	16	#8	10'-0"	_____
d	434	#4	5'-4"	L _____
d ₁ (E)	456	#5	3'-11"	L _____
d ₂ (E)	16	#5	4'-2"	L _____
e	108	#4	19'-3"	_____
e ₁	48	#4	10'-0"	_____
Reinforcement Bars			Lbs.	29,810
Reinforcement Bars (Epoxy Coated)			Lbs.	4,420
Class X Concrete			Cu.Yds.	276

For details of expansion joint
See sheet #6.

2" @ 50" F.
at Rft. Ls
a(E)
a3(E)
b(E)
a(E)
7 1/2" Slab
a1
b2
3" at lowest beam
a1
14 1/2" 7 1/2" Measured along E beam
E Brg.
SECTION A-A

Note:
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.

SUPERSTRUCTURE DETAILS

DESIGNED	Suresh Desai
CHECKED	DAU KRUL
DRAWN	R. Doty
CHECKED	34

Nov. 21 1978

EXAMINED 

PASSED

APPROVED

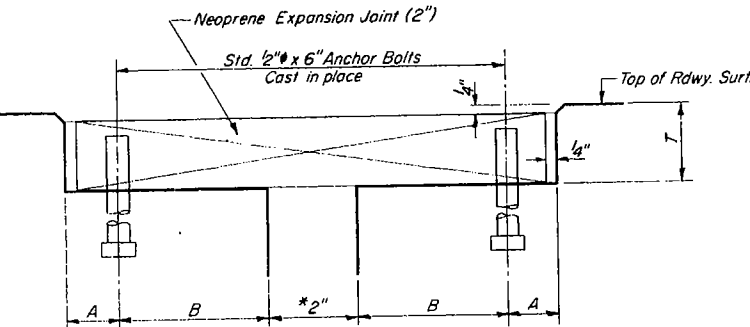
DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
107VB-1	WHITE SIDE	.61	41	13 SHEETS
P.D. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

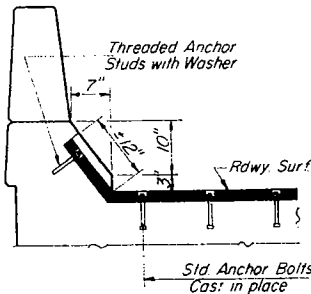
ALTERNATE NEOPRENE EXPANSION JOINTS (2")
(See Special Provisions)

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 200A	General Tire Company	$T = 1\frac{3}{16}"$, $A = 1\frac{1}{8}"$, $B = 3\frac{5}{16}"$
WABOFLEX, MODEL SR 2	Watson Bowman Associates, Inc.	$T = 1\frac{3}{16}"$, $A = 1\frac{1}{4}"$, $B = 3\frac{3}{16}"$
FEL-SPAN, MODEL T-30 Set joint seal $1\frac{5}{8}"$ at 50°F.	Fel-Pro Building Products Inc.	$T = 1\frac{3}{4}"$, $A = 2\frac{1}{4}"$, $B = 2\frac{13}{16}"$
WABO ELASTODAM, TYPE 300 Set joint seal $1\frac{5}{8}"$ at 50°F.	Watson Bowman Associates, Inc.	$T = 1\frac{3}{4}"$, $A = 2\frac{1}{4}"$, $B = 2\frac{13}{16}"$
WABO ALU-STRIP, TYPE III S3CO Set joint seal $1\frac{1}{2}"$ at 50°F. Permitted for 0° skew only.	Watson Bowman Associates, Inc.	$T = 1\frac{3}{4}"$, $A = 1\frac{5}{8}"$, $B = 2\frac{3}{4}"$
LOW PROFILE ONFLEX-25 Set joint seal $1\frac{1}{2}"$ at 50°F. Roadway bolt channel shall be filled with approved grout. Permitted for up to 50° skew.	Structural Accessories, Inc.	$T = 1\frac{3}{4}"$, $A = 1\frac{5}{8}"$, $B = 2\frac{3}{8}"$

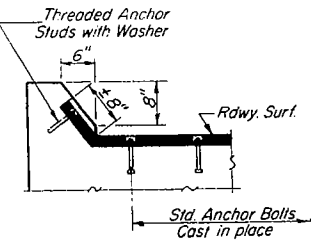


CROSS SECTION
*At 50°F
Dimensions are at right angles.

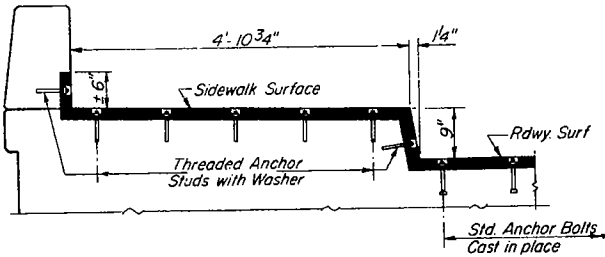
NOTE:
Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.



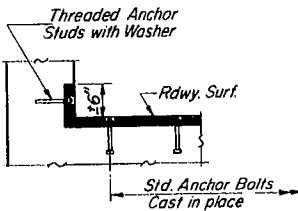
AT CURBS



TYPICAL END TREATMENTS



AT SIDEWALK



AT ABUTMENT

DESIGNED	Suresh Desai
CHECKED	J. J. J.
DRAWN	J. J. J.
CHECKED	J. J. J.

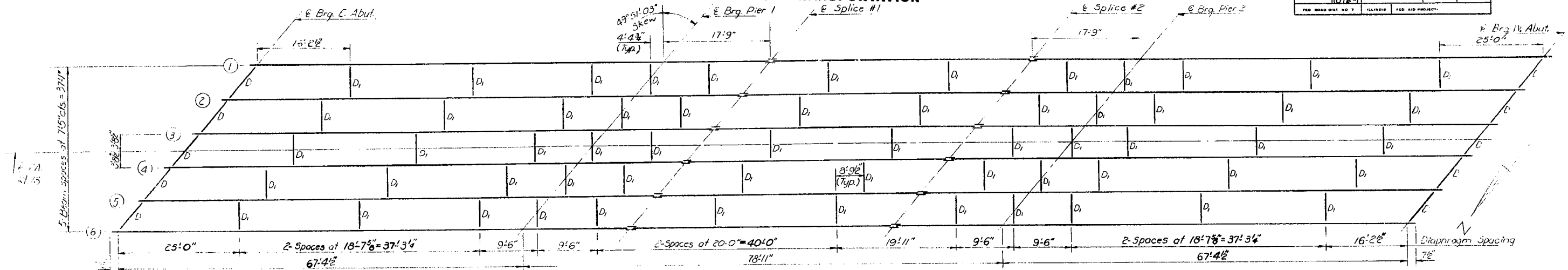
EXAMINED	Nov 21 1978
PASSED	
APPROVED	
DIRECTOR OF HIGHWAYS	

NEOPRENE EXPANSION JOINTS (2")
FOR EXPANSION LENGTH OF DECK = 0 to 160 ft.

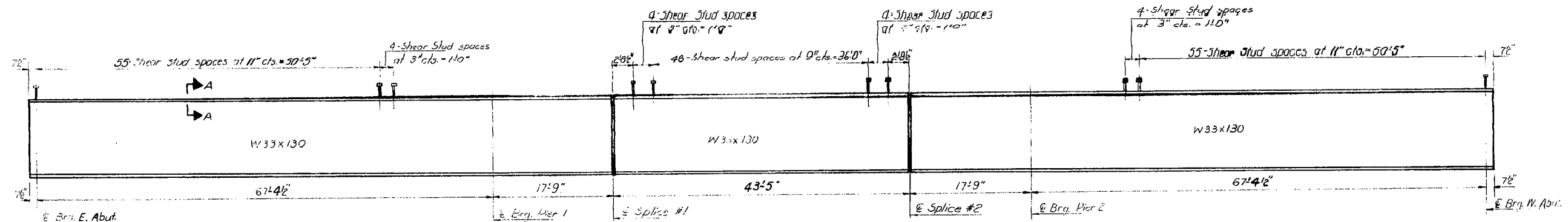
F.A. RT. 18 SEC. 107VB-1
WHITESIDE COUNTY
STA. 722+33.72

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

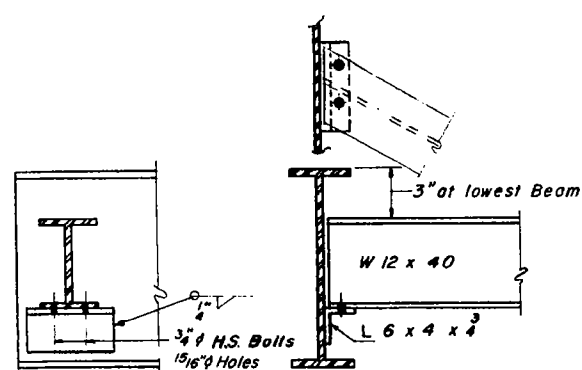
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
107-1	1071B-1	WHITESIDE	61	42	13 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			



FRAMING PLAN

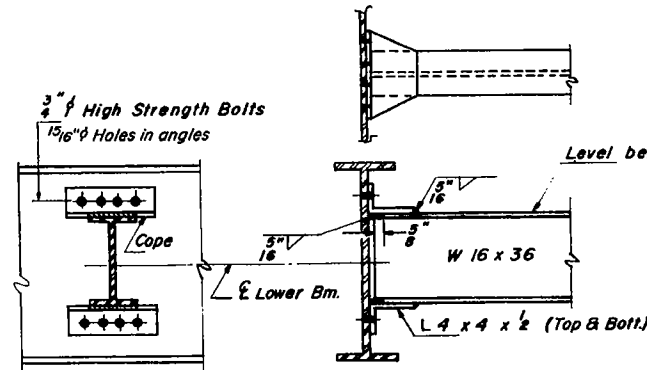


BEAM ELEVATION



DIAPHRAGM D

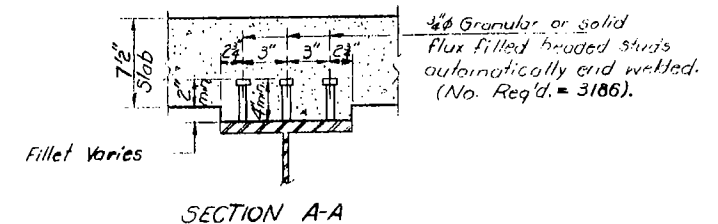
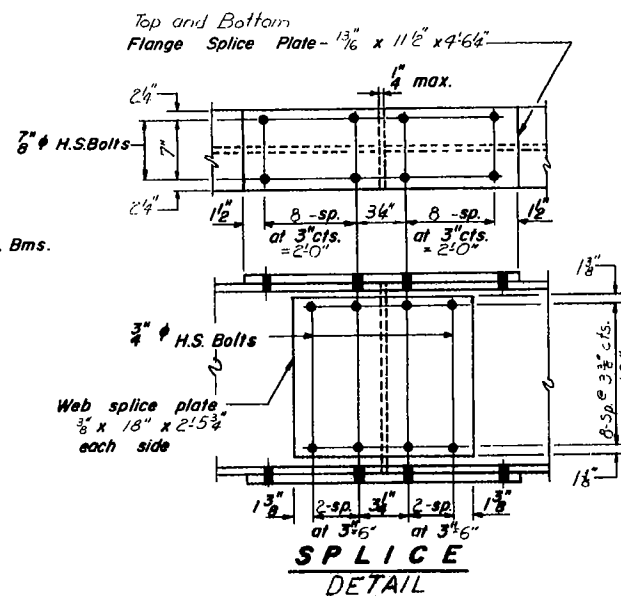
10 - Required



DIAPHRAGM D1

60 - Required

Note: Hardened washers shall be required over 15/16" holes in angles.



Note:
For Top of Flange Elevations Table, Interior Beam Moment Table and Interior Beam Reaction Table see sheet #4.

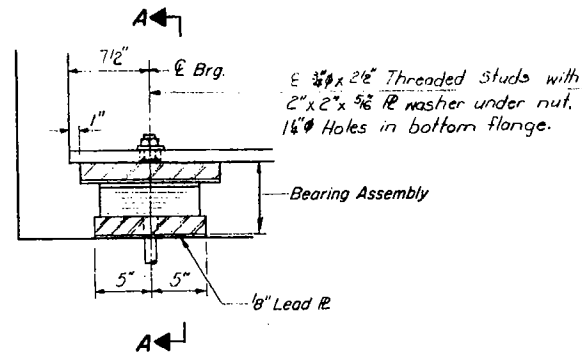
DESIGNED	Suresh Desai
CHECKED	Joe [Signature]
DRAWN	R. Dohy
CHECKED	[Signature]

EXAMINED	Nov 21 1979
PASSED	[Signature]
APPROVED	OWNER BY DESIGN
	DIRECTOR OF HIGHWAYS

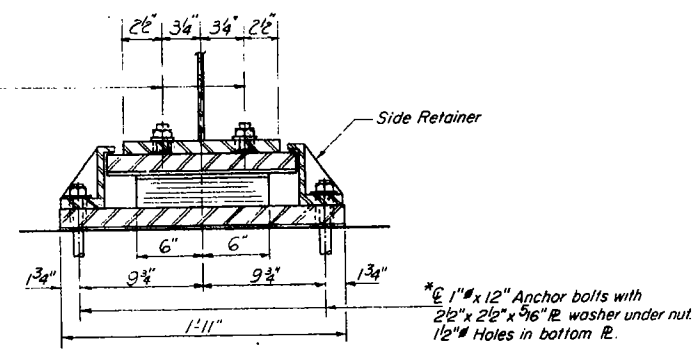
STRUCTURAL STEEL
FA. RT. 10 SEC. 1071B-1
WHITESIDE COUNTY
STA. 722+33.72

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

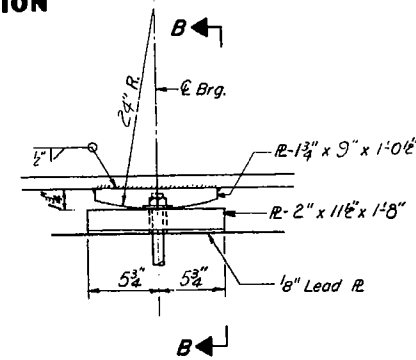
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
107-1	107-1	WHITESIDE	61	43	13 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			



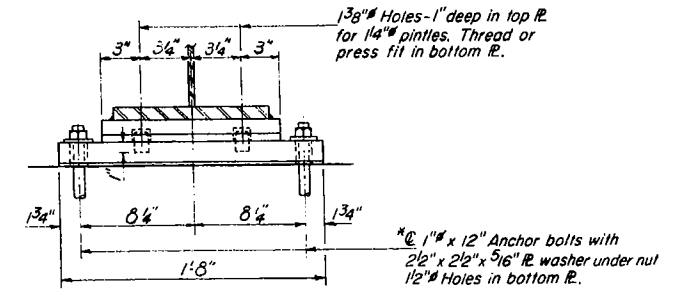
SECTION AT EAST ABUT.



SECTION A-A

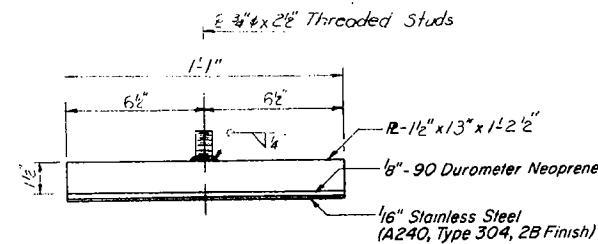


ELEVATION AT PIER 2

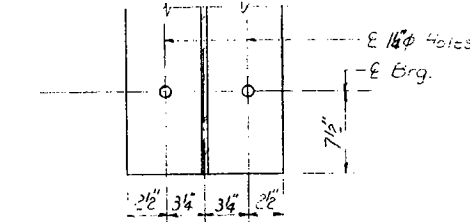


SECTION B-B

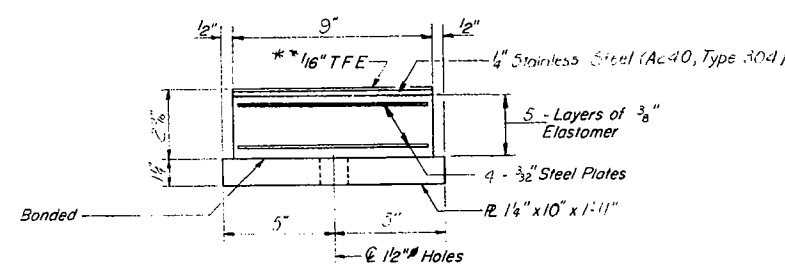
TYPE II TFE ELASTOMERIC EXP. BRG.



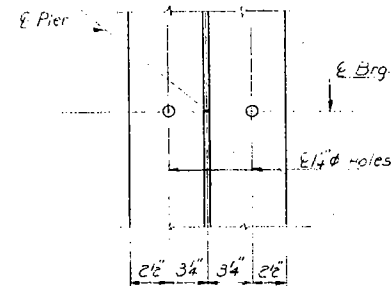
TOP BEARING ASSEMBLY



PLAN-BOTTOM FLANGE
(At Abut.)

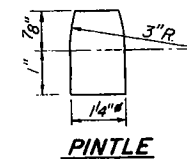


BOTTOM BEARING ASSEMBLY

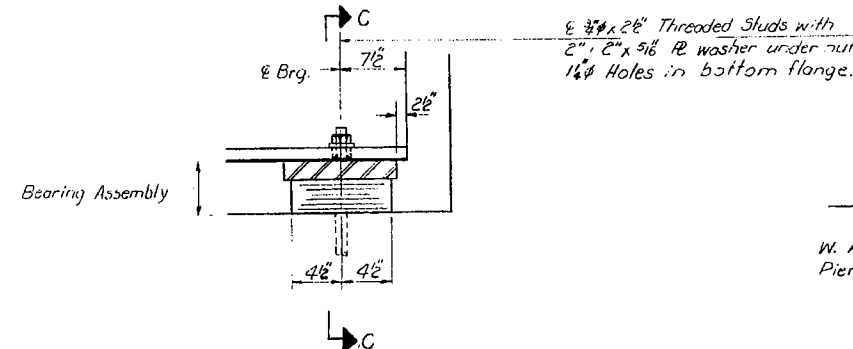


PLAN-BOTTOM FLANGE
(At Pier 1)

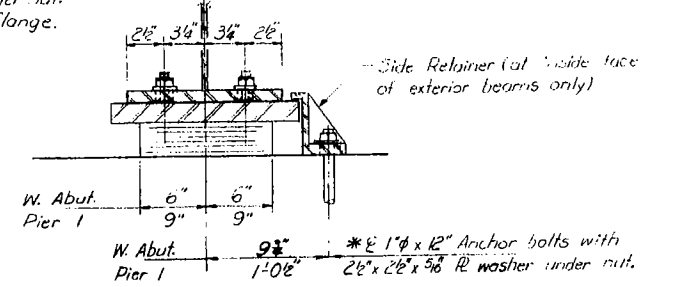
*Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.



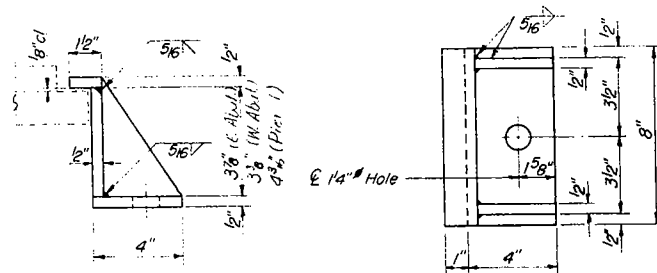
PINTLE



SECTION AT WEST ABUT.

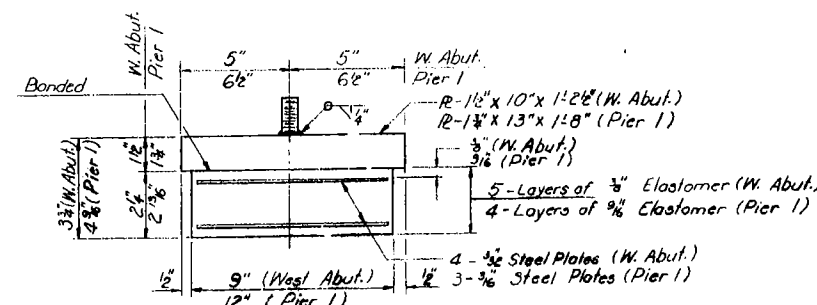


SECTION C-C

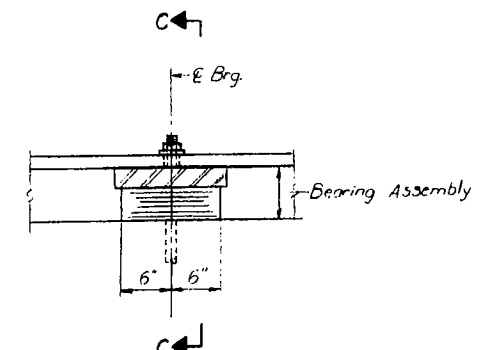


SIDE RETAINER

**Note: The 1/8" TFE sheet shall be bonded directly to the top steel laminate sheet with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surface.



BEARING ASSEMBLY



SECTION AT PIER 1

BEARING DETAILS
F.A. RT. 10. SEC. 10MB1
MAY 1978
31-10-312

DESIGNED	Suresh Desai	EXAMINED	Nov 21 1978
CHECKED	DAN KROU	PASSED	
DRAWN	R. SOY	APPROVED	
CHECKED	J.S.	DIRECTOR OF HIGHWAYS	

Note: Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.

WING WALL ELEVATION

The drawing shows a cross-section of a wing wall with the following dimensions and features:

- Top Width:** 11'-6"
- Top Slope:** 2'-0" horizontal to 5" vertical
- End Post:** 4'-8" high, located 2'-0" from the left edge.
- Bonded Const. Joint:** with 3/4" notch on outside face.
- Construction Joint:** located below the bonded joint.
- Bottom Width:** 2'-6"
- Vertical Dimensions (from top):**
 - 3'-11 3/8"
 - 3'-11 3/8"
 - 7'-5 3/8"
 - 7'-7 3/8"
- Labels for Vertical Dimensions:**
 - No. Wing
 - So. Wing
 - No. Wing
 - So. Wing
- Other Dimensions:** 3'-6" and 3'-8 3/8" are also indicated for the lower section.
- Notes:** "End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade."

ELEVATION
(Looking East)

65-#4 v bars at 12" cts. Each Face
64-#4 v bars at 12" cts. Back Face
(See Sec. Thru Abut.)
Elev. 627.63
4x2-#5 h bars (1'-8" Lap)
(See Sec. Thru Abut.)
Elev. 624.01
Elev. 624.12
Elev. 624.20
Elev. 624.12
Elev. 624.00
Elev. 620.32
3-#5 h e.e. Lap with h bars
2-#4 s bars
3x2-#5 h bars @ 12" cts.
Each Face (1'-8" Lap)
8x2-#7 p bars (3'-5" Lap)
See Sec. Thru Abut.
2-#4 s bars
4'-6" u
1'-5"
1'-8"
1'-7 1/2"
1'-9"
3-#5 h e.e.
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.

Technical drawing showing the **WING WALL ELEVATION** and **SEC. B-B**.

WING WALL ELEVATION:

- Reinforcement details:
 - 12-#6 bars at 12" cts. (Inside Face)
 - 12-#6 bars at 12" cts. (Outside Face)
 - 12-#6 n at 12" cts.
 - 1-#4 h₃ (Ea. Face)
 - 3-#7 p₁ (So. Wall) (Ea. Face)
 - 3-#7 p₂ Each Face (No. Wall)
 - 3-#4 s₁
 - 9-#4 s₁ at 12" cts.
- Dimensions:
 - 3'-h₃
 - 5'-h₃
 - 9'-9"
 - 11'-6"
- Labels: A, B, Bend in Field, Lap with n bars #4 bars at 12" cts. Each Face, & Pile.

SEC. B-B:

- Reinforcement details:
 - v₁ or n
 - h₃
 - BAR v₃
- Dimensions:
 - 11'-6"
 - 1'-5"
 - 1'-5"
 - 6"
- Label: WP.

[illegible]

Bar	No.	Size	Length	Shape
n	20	#5	33'-9"	—
n ₁	6	#5	4'-6"	✓
n ₂	6	#5	4'-6"	✓
n ₃	36	#4	11'-3"	—
n	24	#6	10'-5"	U
p	16	#7	34'-3"	—
p ₁	6	#7	11'-3"	—
p ₂	6	#7	13'-6"	—
s	54	#4	15'-3"	□
s ₁	24	#4	9'-5"	□
u	4	#6	9'-0"	J
u ₁	4	#6	8'-10"	J
v	130	#4	5'-3"	—
v ₁	24	#6	6'-5"	—
v ₂	24	#6	6'-6"	—
v ₃	64	#4	3'-3"	✓
v ₄	38	#5	2'-6"	—
Class X Concrete			Cy. Yds.	58.4
Reinforcement Bars			Lbs.	4,800
Concrete Piles			Lin. Ft.	936

TOP VIEW

Dimensions and bearings shown in the top view include:

- Overall width: $65'1\frac{3}{4}"$
- Overall length: $30'9\frac{1}{2}"$ and $34'4\frac{1}{4}"$
- Bearing spaces: $5 - \text{Bearing Spaces at } \pm 11'6" \text{ cts.} = 57'6"$
- Individual dimensions: $10'6\frac{1}{2}"$, $11'6"$, $25'8\frac{1}{2}"$, $8'9"$, $2'9"$, $11'6"$, $31'10\frac{1}{2}"$, $11'6"$, $6'7\frac{1}{4}"$
- Structural details: ϵ Bm. 6, ϵ Brg., ϵ Rdwy., ϵ Bm. 1, W.P., Optional Const. Jt., h_2 , h_1 , $2\frac{1}{2}"$, $1'6"$, $4'5"$, $2'11"$, $3'4"$, $1'9\frac{3}{4}"$, $4'10\frac{1}{2}"$, $2'7\frac{1}{4}"$, $1'0\frac{1}{2}"$, $1'6"$, $1'0"$, $4'10"$, $4'9"$
- Reinforcement: $38 - \#5 \text{ v.s. bars @ } 12" \text{ cts.}$ (See Sec. Thru Abut.)
- Angles: $49^\circ 51' 03"$ SKEW
- Stationing: Sta. 721+22.85
- Other labels: Back of Abutment, BAR V, BAR

PILE DATA

Type	Concrete
Capacity	33 tons
Est. Length	72'
No. Required	13

PLAN PILE CAP

ELEVATION

PILE DATA

Type	Concrete
Capacity	33 tons
Est. Length	72'
No. Required	13

PLAN PILE CAP

ELEVATION

PILE DATA

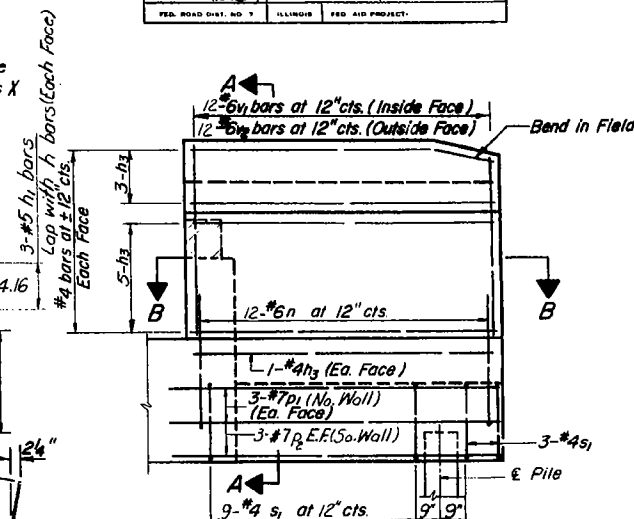
Type	Concrete
Capacity	33 tons
Est. Length	72'
No. Required	13

DESIGNED <i>Suresh Desai</i>	EXAMINED <i>[Signature]</i>	DATE <i>Nov 21 1970</i>
CHECKED <i>DAN KROLL</i>	<i>[Signature]</i>	
DRAWN <i>S. Poley</i>	PASSED	
CHECKED <i>DK</i>	APPROVED	
		DIRECTOR OF HIGHWAYS

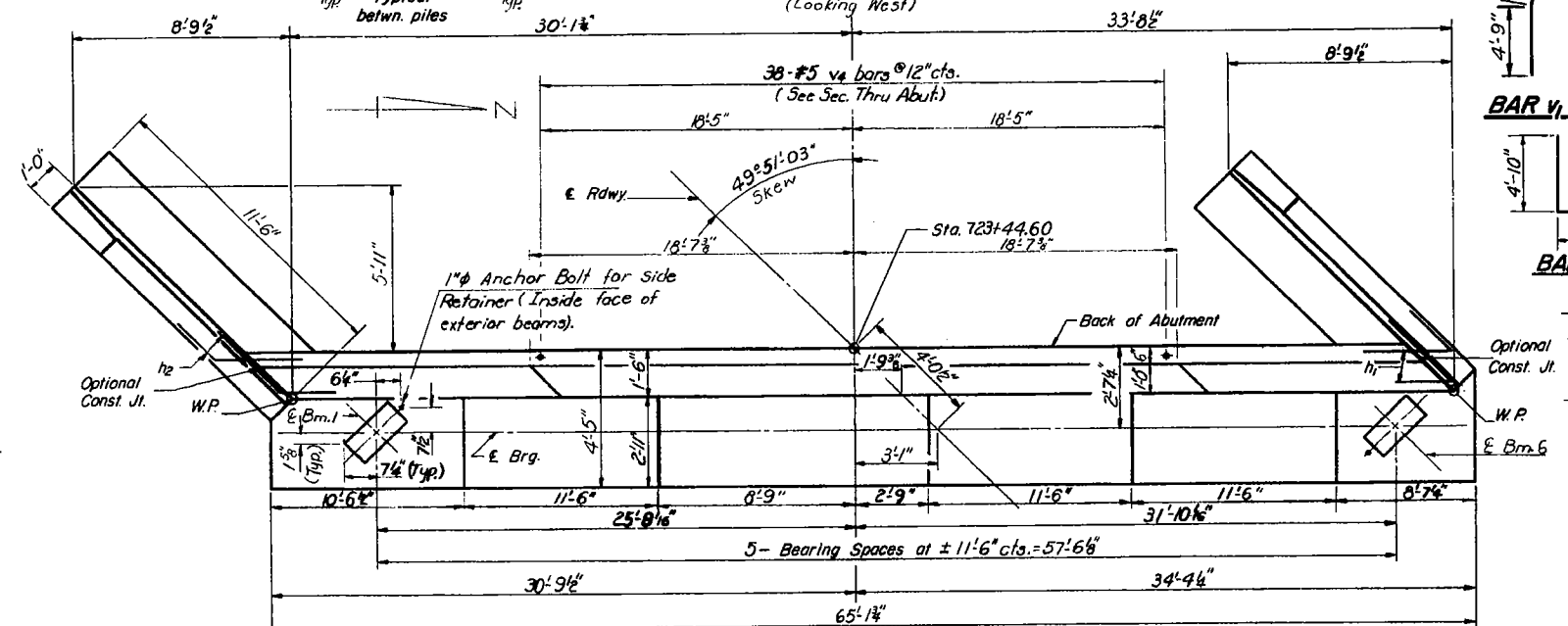
EAST ABUTMENT
F.A. RT. 10 SEC. 10 T14N R1E
WHITE SIDE COUNTY
SOUTH DAKOTA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
601 P. 18	107-1 107VS-1 107B-1	WHITESIDE	61	45
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT.	

SHEET NO. 10
13 SHEETS



ELEVATION
(Looking West)



SEC. THRU ABUT.
(Dist. 2 R: Ls)

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
n	20	#5	33'-9"	
n ₁	6	#5	4'-6"	→
n ₂	6	#5	4'-6"	↘
n ₃	36	#4	11'-3"	—
n	24	#6	10'-5"	U
p	16	#7	34'-3"	—
p ₁	6	#7	11'-3"	—
p ₂	6	#7	13'-6"	—
s	54	#4	15'-3"	□
s ₁	24	#4	9'-5"	□
u	4	#6	9'-0"	S
u ₁	4	#6	8'-10"	S
v	130	#4	5'-3"	—
v ₁	24	#6	6'-5"	—
v ₂	24	#6	6'-6"	—
v ₃	64	#4	3'-3"	↘
v ₄	30	#5	2'-6"	
Class X Concrete			Cu. Yds.	57.
Reinforcement Bars			Lbs.	430
Concrete Piles			Lin. Ft.	92
Test Piles Concrete			Ea.	1

WEST ABUTMENT
F.A. RT. 10 SEC. 10 T10N B-
WHITESIDE COUNTY
STA. 722+33.72

DESIGNED	Suresh Desai
CHECKED	DAN KROLL
DRAWN	R. Do:4
CHECKED	DK

EXAMINED 

ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED

ENGINEER OF BRIDGES
APPROVED

DIRECTOR OF HIGHWAYS

A-1-L (35°-60°) E-25-76

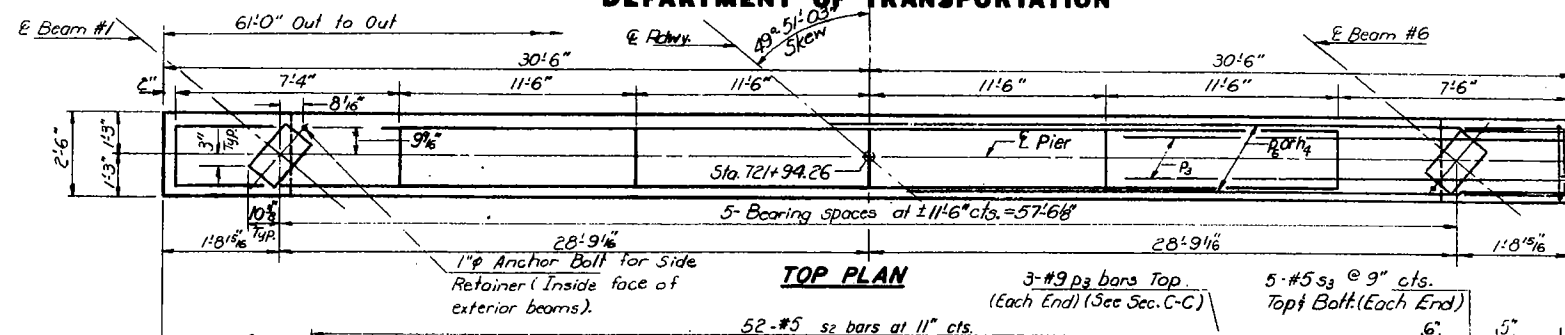
PLAN-PILE CAP

NOTES:

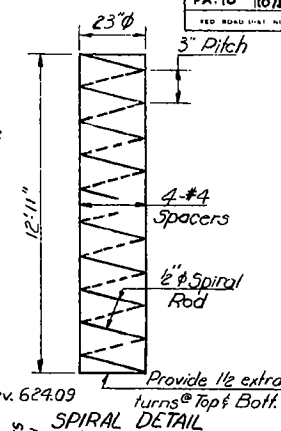
Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard 3/4" chamfer except as noted.
Pour steps monolithically with cap.
Min Spiral lap: 48 Dia.
Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

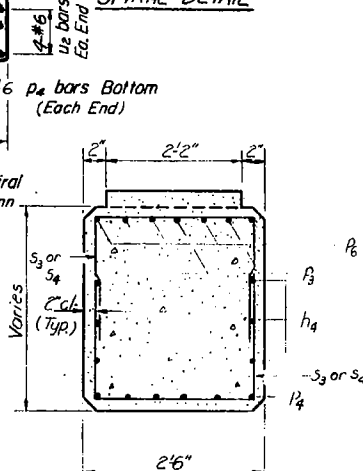
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
FA. 18	107VB-1	WHITESIDE	61	46	13 SHEETS



TOP PLAN

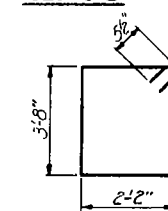


SEC. A-A

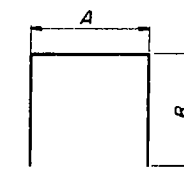


SEC. B-B

SEC. C-C



BAR S2



BAR S3, S4, S5, S6 & U2

BAR DIMENSIONS

Bar	A	B
S3	2'2"	2'8"
S4	2'2"	2'3"
S5	2'2"	1'4"
S6	2'2"	4'2"
U2	2'1"	2'6"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n1	36	#7	5'10"	U
p3	6	#9	18'0"	—
p4	12	#6	9'6"	—
p5	12	#6	25'0"	—
p6	8	#9	33'0"	—
s2	52	#5	12'7"	□
s3	20	#5	7'6"	□
s4	20	#5	6'8"	□
s5	48	#5	24'10"	□
s6	48	#5	10'6"	□
sp	4	#4	12'11"	WWW
u2	34	#6	7'1"	—
v5	36	#7	15'3"	—
w	18	#5	25'0"	—
Class X Concrete			Cu. Yds.	112.5
Reinforcement Bars			Lbs.	10,250
Concrete Piles			Lin. Ft.	134.4
Test Piles Concrete			Each	1

PIER 1
F.A. RT. 18, SEC. 107VB-1
WHITESIDE COUNTY
STA. 722+33.72

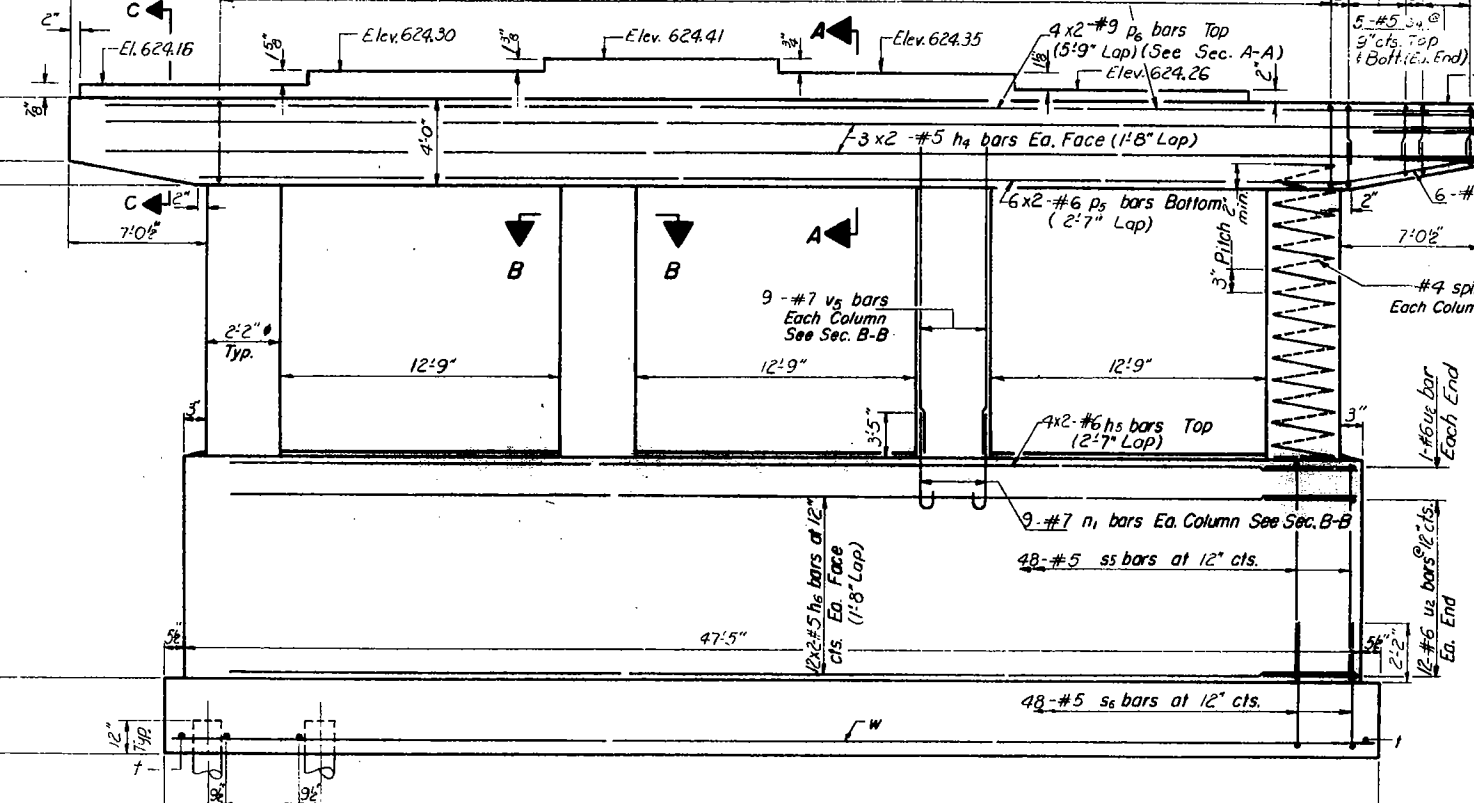
END VIEW

PILE DATA

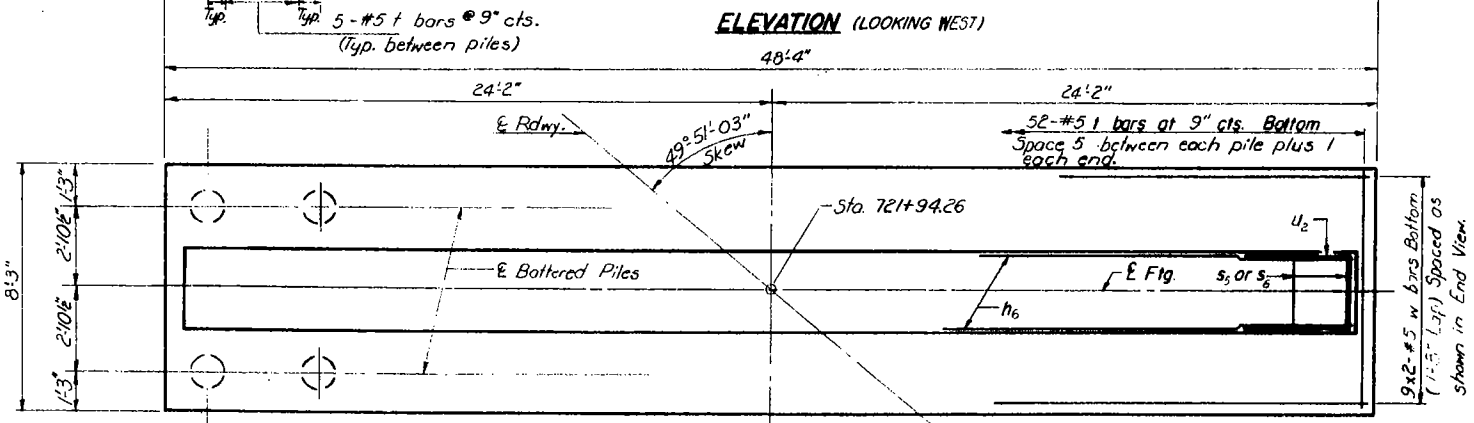
Type Concrete
Capacity 35 Tons
Est. Length 64'
No. Required 1
Permanent location.

DESIGNED	Suresh Desai
CHECKED	JAY KRULL
DRAWN	R. Doly
CHECKED	J. K.

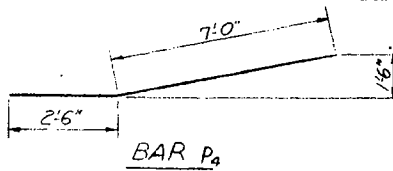
EXAMINED	28 1978
PASSED	
APPROVED	
DIRECTOR OF HIGHWAYS	



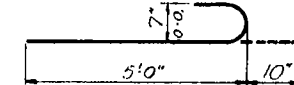
ELEVATION (LOOKING WEST)



FOOTING PLAN



BAR P4



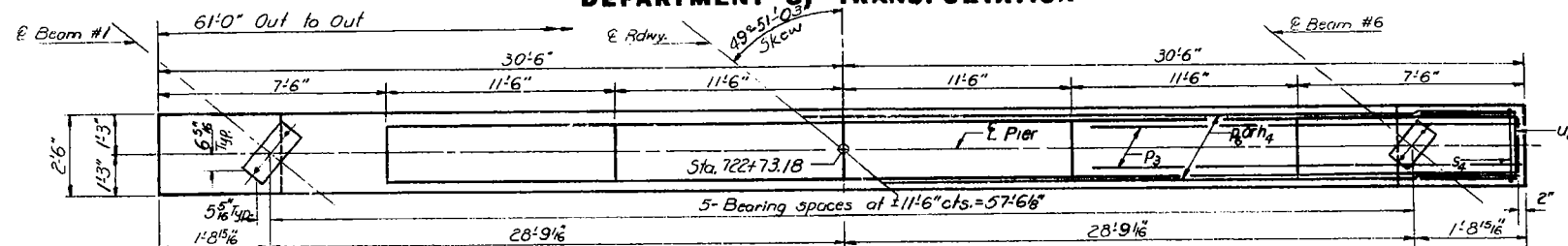
BAR n1

NOTES:

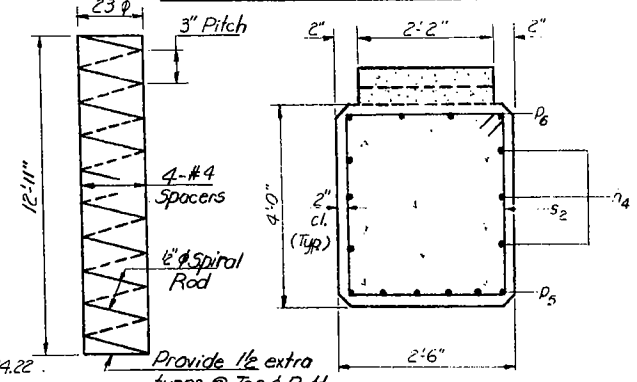
Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard $\frac{3}{4}$ " chamfer except as noted.
Pour steps monolithically with cap.
Min Spiral lap: 48 Dia.
Bars indicated thus 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
107-1	107VB-1	WHITESIDE	61	47
F.A. 10	107B-1			

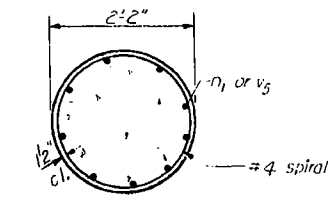


TOP PLAN

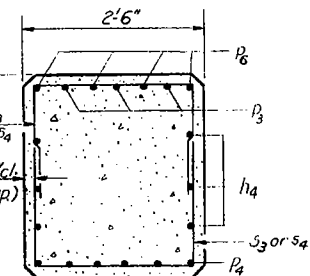


SPIRAL DETAIL

SEC. A-A



SEC. B-B

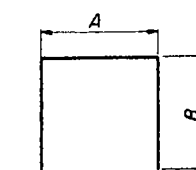


SEC. C-C

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	12	#5	31'-3"	
h5	8	#6	25'-0"	
h6	36	#5	24'-1"	
n1	36	#7	5'-10"	
p3	6	#9	18'-0"	
p4	12	#6	9'-6"	
p5	12	#6	25'-0"	
p6	8	#9	33'-3"	
s2	52	#5	12'-7"	
s3	20	#5	7'-6"	
s4	20	#5	6'-8"	
s6	48	#5	10'-6"	
s7	48	#5	20'-0"	
sp	4	#4	12'-11"	WWWW
l1	56	#5	7'-9"	
u2	28	#6	7'-1"	
v2	36	#7	15'-3"	
w	16	#5	25'-0"	
Class X Concrete			Cu. Yds.	100.7
Reinforcement Bars			Lbs.	9610
Concrete Piles			Lin. Ft.	1140

BAR s2



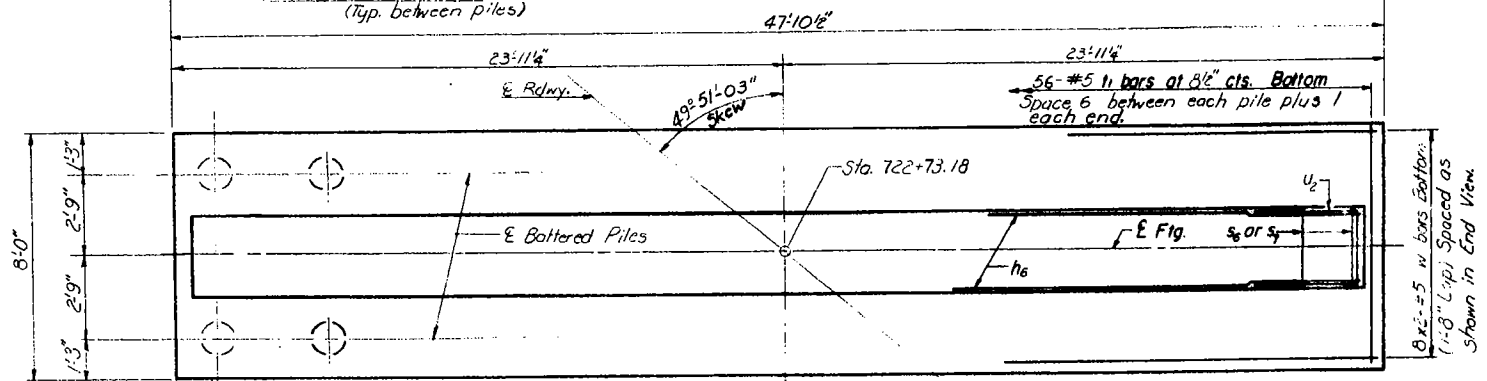
BAR S3, S4, S6, S7 & u2

BAR DIMENSIONS

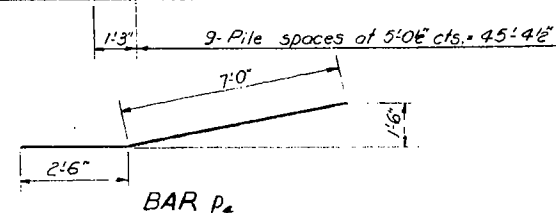
Bar	A	B
s3	2'-2"	2'-8"
s4	2'-2"	2'-3"
s6	2'-2"	4'-2"
s7	2'-2"	8'-11"
u2	2'-1"	2'-6"

PIER 2
F.A. RT. 10 SEC. 107VB-1
WHITESIDE COUNTY
STA. 722+32.72

ELEVATION (LOOKING WEST)



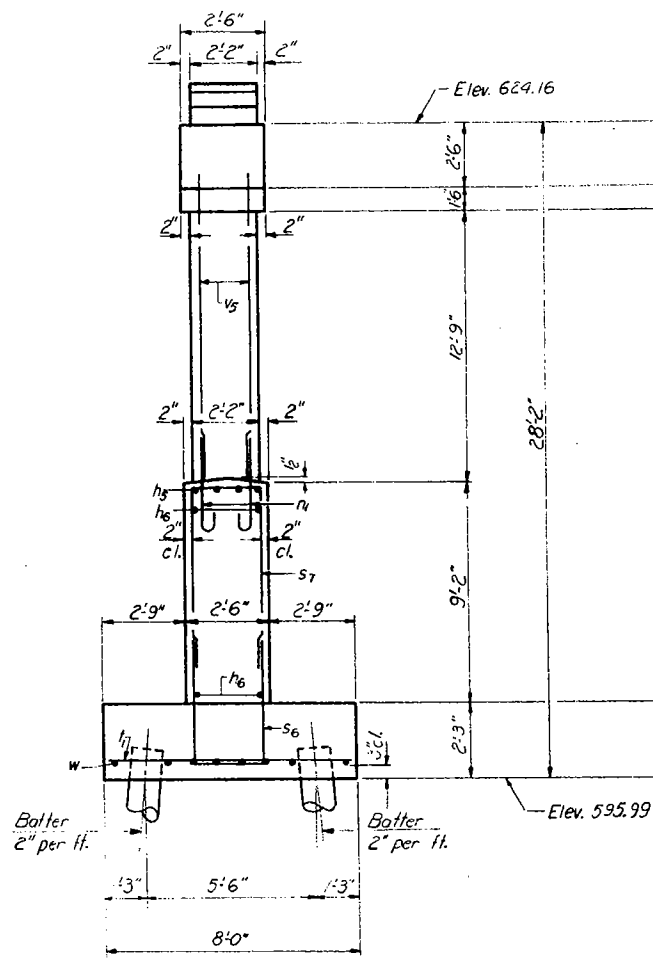
FOOTING PLAN



BAR p4

BAR n1

END VIEW



PILE DATA

Type: Concrete
Capacity: 35 Tons
Fst. Length: 57'
No Required: 20

DESIGNED	Smith Design
CHECKED	JAC KROLL
DRAWN	E. Doty
CHECKED	D. K.

EXAMINED	21 1073
PASSED	
APPROVED	