

VERMILION

SEC 92(11RS,11BR,11VB-BR,11VB-1-BR)

I & R

JUNE 21, 1991

307

95%
7-16-94

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

FOR INDEX OF SHEETS, SEE SHEET NO. 5
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 7-11 (INCL.)

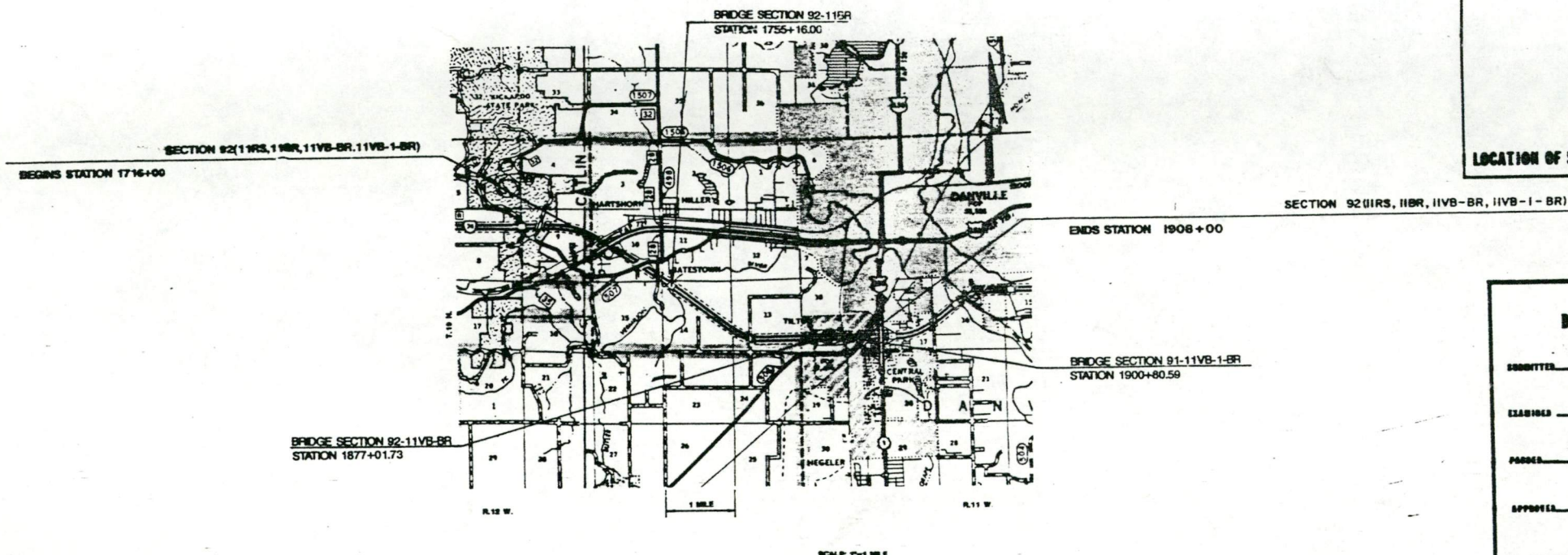
SCALES
PLAN 1" = 1/4" HORIZ.
PROFILE HOR.
PROFILE VERT.
CROSS-SECTION

F.A.I. ROUTE 74, SECTION 92(11RS,11BR,11VB-BR,11VB-1-BR)

VERMILION COUNTY

C-95-067-90

INTERSTATE RESURFACING AND BRIDGE REHABILITATION



DESIGN DESIGNATION

1630 (13) INTERSTATE 6.13(COMP-6)

CONTRACT NO. 90165

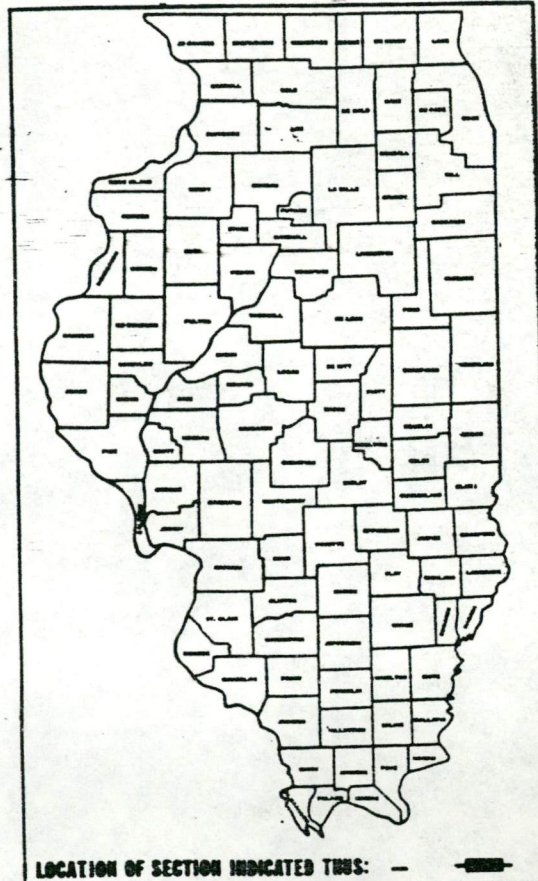
TOTAL & NET LENGTH OF SECTION 92(11RS,11BR,11VB-BR,11VB-1-BR) = 19,200.00 FEET = 3.63 MILES

TOLL FREE J.U.L.I.E. TELEPHONE NO.
1-800-892-0123

DANVILLE TOWNSHIP

F.A.I. RTE.	SECTION	COUNTY	TOTAL FEET
74	92	VERMILION	165
PROJECT			
SECTION 92(11RS,11BR,11VB-BR,11VB-1-BR)			

D-95-026-89



LOCATION OF SECTION INDICATED THIS: — — —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 25, 1991
EXAMINED [Signature] DISTRICT ENGINEER
FORWARDED [Signature] DIVISION OF PLANS AND CONTRACTS
APPROVED [Signature] ENGINEER OF DESIGN
DATE 9/1
DIVISION ENGINEER OF DESIGN

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

MJE

VERMILION COUNTY SECTION * F.A.I. ROUTE 74

*92(11RS,11BR,11VB-BR,11VB-1-BR)

092-0128

5-161

092-0128

PROJECT ENGINEER: PAUL KOEHLER
SQUAD LEADER: DON CHAM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	VERMILION	145	60

• 92(11RS,11BR,11VB-BR,11VB-I-BR)

SEC. 92-11HB-2
BOYDE ROAD (TR 300)
STA. 1826+70.03

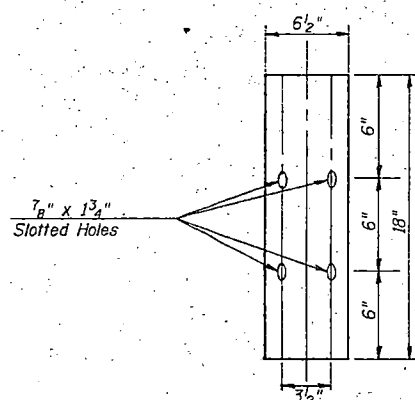


FACE OF PROPOSED RAIL TO BE PLACED FLUSH WITH FACE OF EXISTING CURB

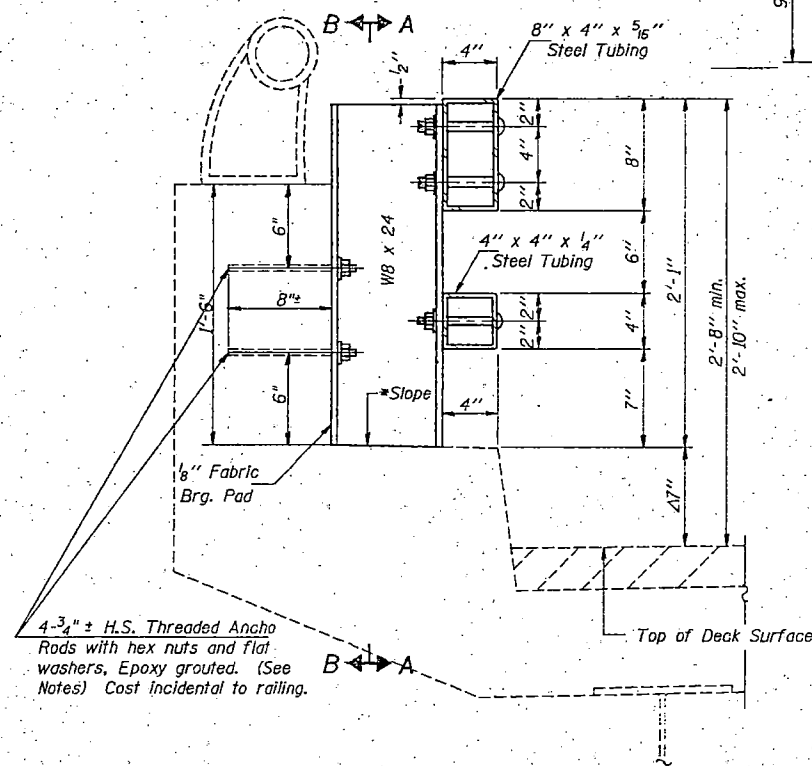


DESIGNED: FMS 1-91
CHECKED:

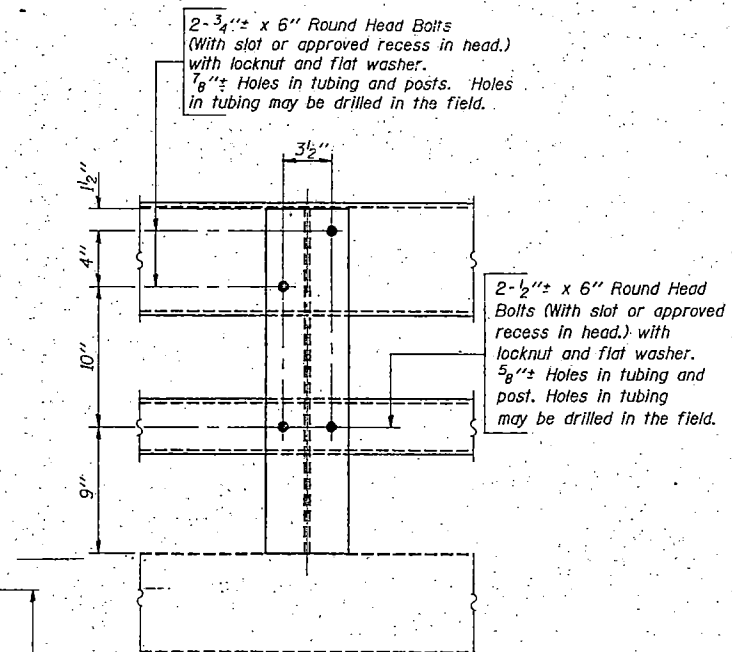
DETAIL OF STEEL BRIDGE RAIL SPECIAL



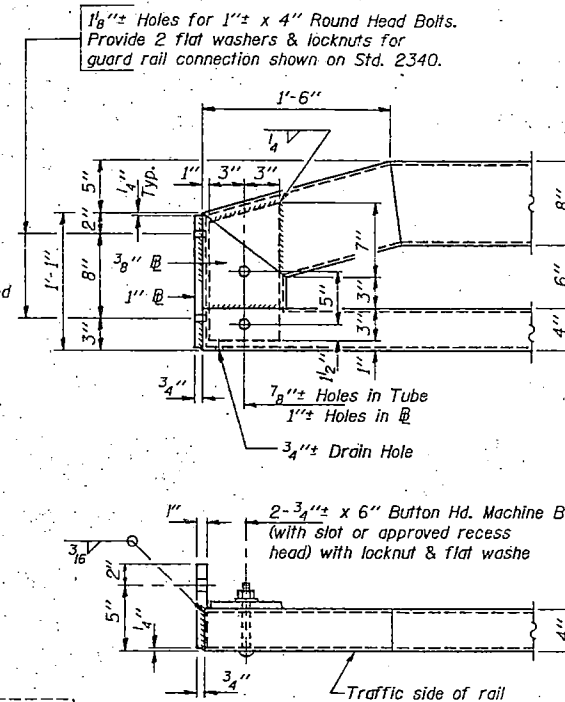
DETAIL OF SHIMS



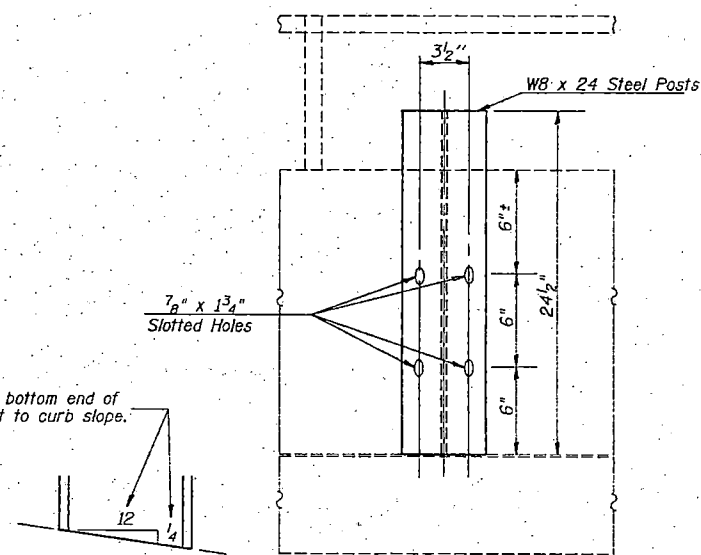
SECTION AT RAIL POST



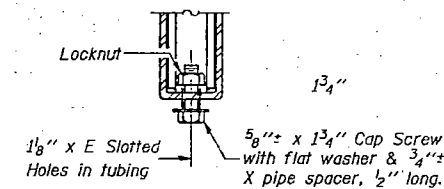
SECTION A-A



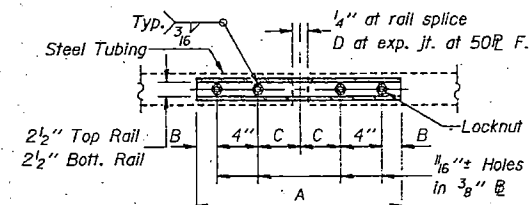
END OF RAIL DETAILS



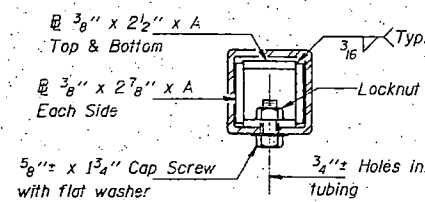
SECTION B-B



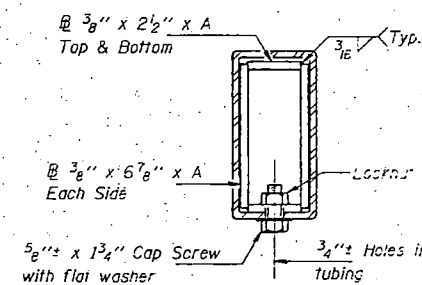
RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE @
TYPICAL



BOTTOM RAIL



TOP RAIL

SECTIONS AT RAIL SPLICE

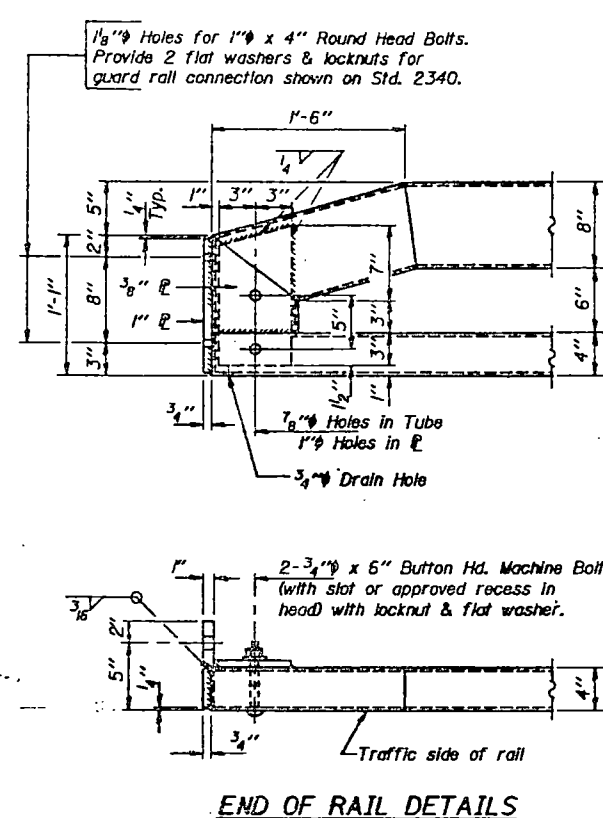
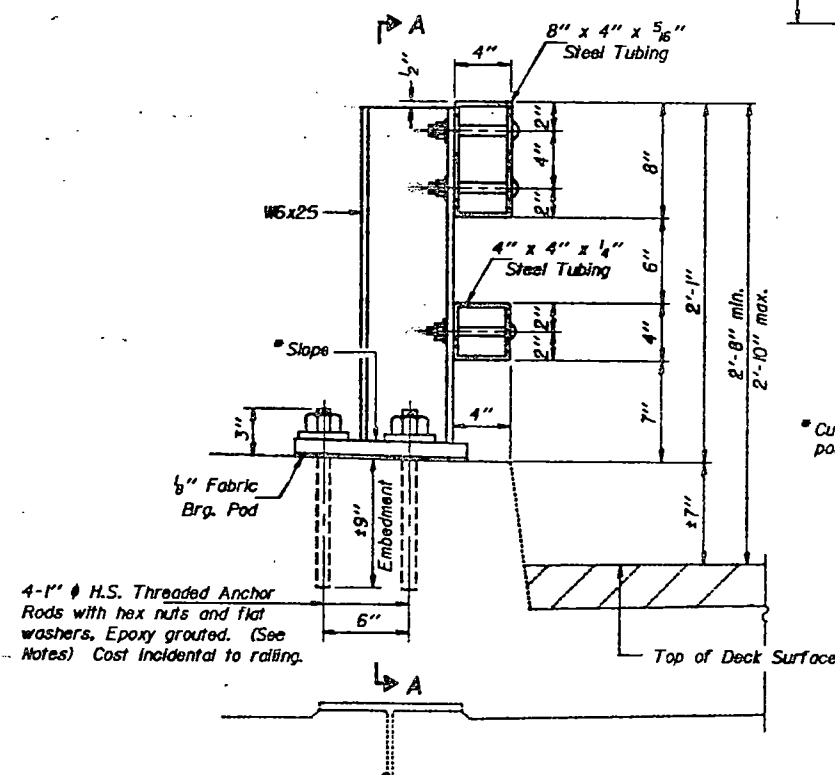
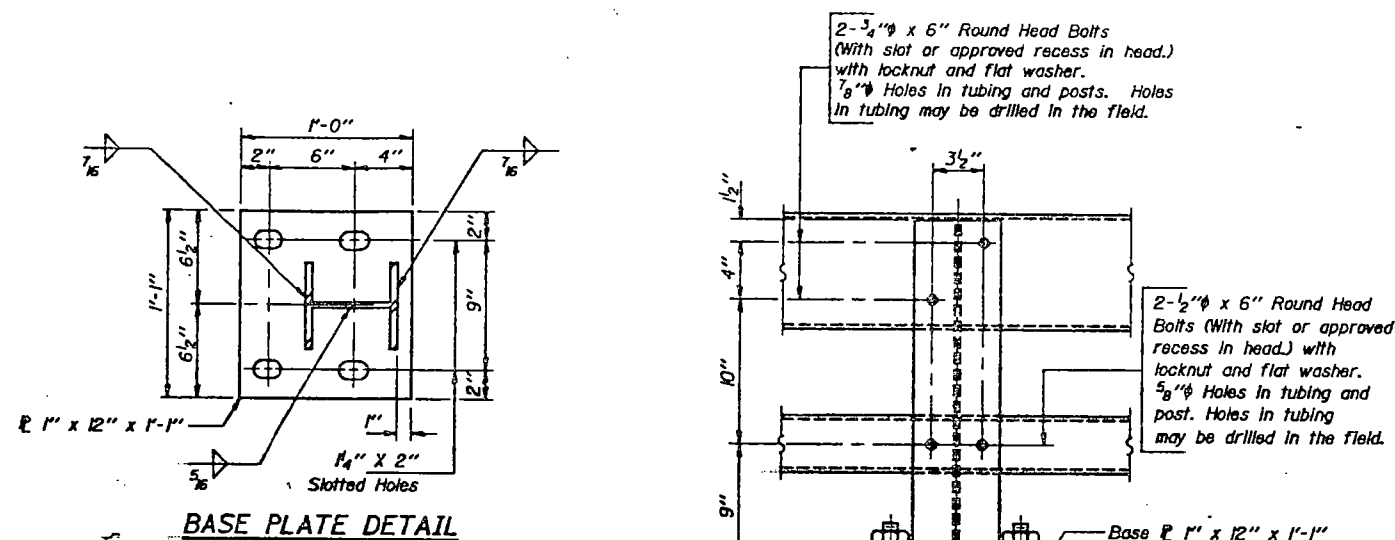
	NAME	DATE
DESIGNED	D.D.C.	10-87
CHECKED		
CADD NO.	F-5.21	

(6'-4" Maximum Post Spacing)

SPLICE DIMENSIONS

T	D	A	B	C	E
"4"	2 $\frac{1}{2}$ "	1'-8"	2"	4"	2 $\frac{1}{2}$ "
"4" $\triangle$ 6 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	2'-0"	2"	5 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "
"6 $\frac{1}{2}$ " $\triangle$ 9"	5"	2'-4"	3 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	5"
"9" $\triangle$ 13"	7"	2'-10"	4 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	11"
Rail Splice	6"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.



NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500, Grade B, Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-163 except posts shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A-307 except that threaded rods, nuts and washers shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication in accordance with AASHTO M-III and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per lineal foot for STEEL BRIDGE RAIL.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

STEEL BRIDGE RAIL expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

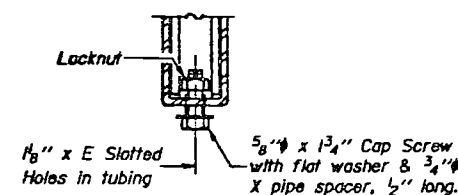
Provide one $\frac{1}{8}$ " and two $\frac{1}{16}$ " steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

Expansion joint width shall be "D" at 50° F and shall be adjusted for other temperatures according to Article 503.07(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge shall be a sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

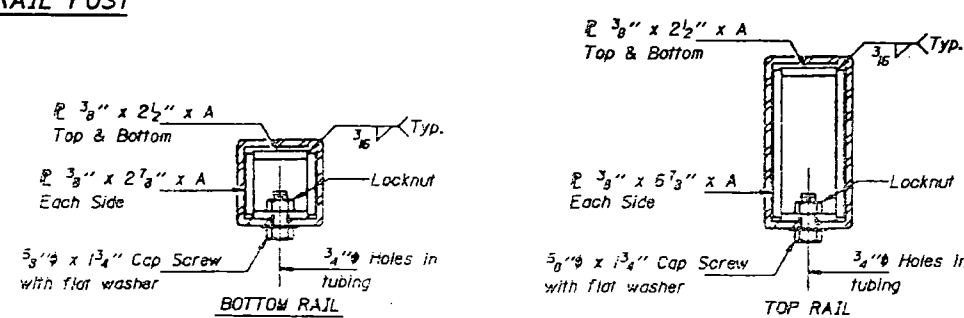
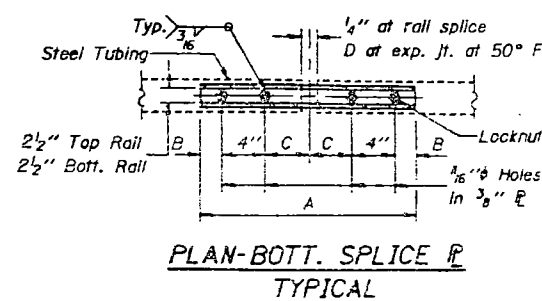
Nuts for 1" ϕ threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional $\frac{1}{8}$ turn.



SPLICE DIMENSIONS

T	D	A	B	C	E
$\leq 4''$	2 $\frac{1}{2}''$	1'-8"	2 $\frac{1}{2}''$	4''	2 $\frac{1}{2}''$
$>4'' \leq 6\frac{1}{2}''$	3 $\frac{1}{4}''$	2'-0"	2 $\frac{1}{2}''$	5 $\frac{1}{2}''$	3 $\frac{1}{2}''$
$>6\frac{1}{2}'' \leq 9''$	5"	2'-4"	3 $\frac{1}{2}''$	6 $\frac{1}{2}''$	9"
$>9'' \leq 13''$	7"	2'-10"	4 $\frac{1}{2}''$	8 $\frac{1}{2}''$	11"
Rail Splice	1 $\frac{1}{2}''$	1'-8"	2"		—

T = Total movement of expansion joint as shown on the design plans.



(6'-3" Maximum Post Spacing)

Illinois Department of Transportation

PASSED Sept. 1, 1987

James J. [Signature]

Engineer of Bridge and Traffic Structures

APPROVED Sept. 1, 1987

[Signature]

Engineer of Design

STATE OF ILLINOIS

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED

FEDERAL AID HIGHWAY

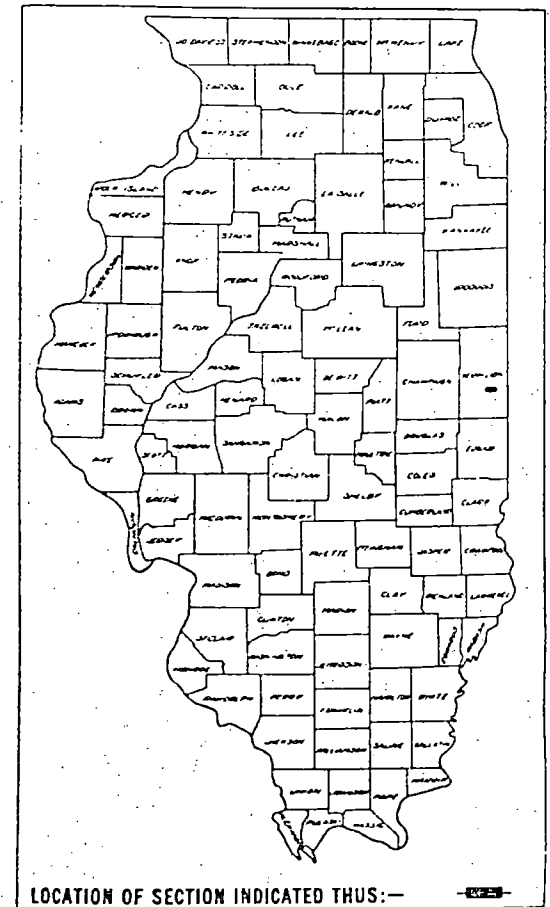
FOR INDEX OF SHEETS — SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES — SEE SHEET NO. 3

PLAN 1" = 100 FT
PROFILE, HORIZ 1" = 100 FT
PROFILE, VERT 1" = 10 FT
CROSS SECTIONS 1" = 5 FT

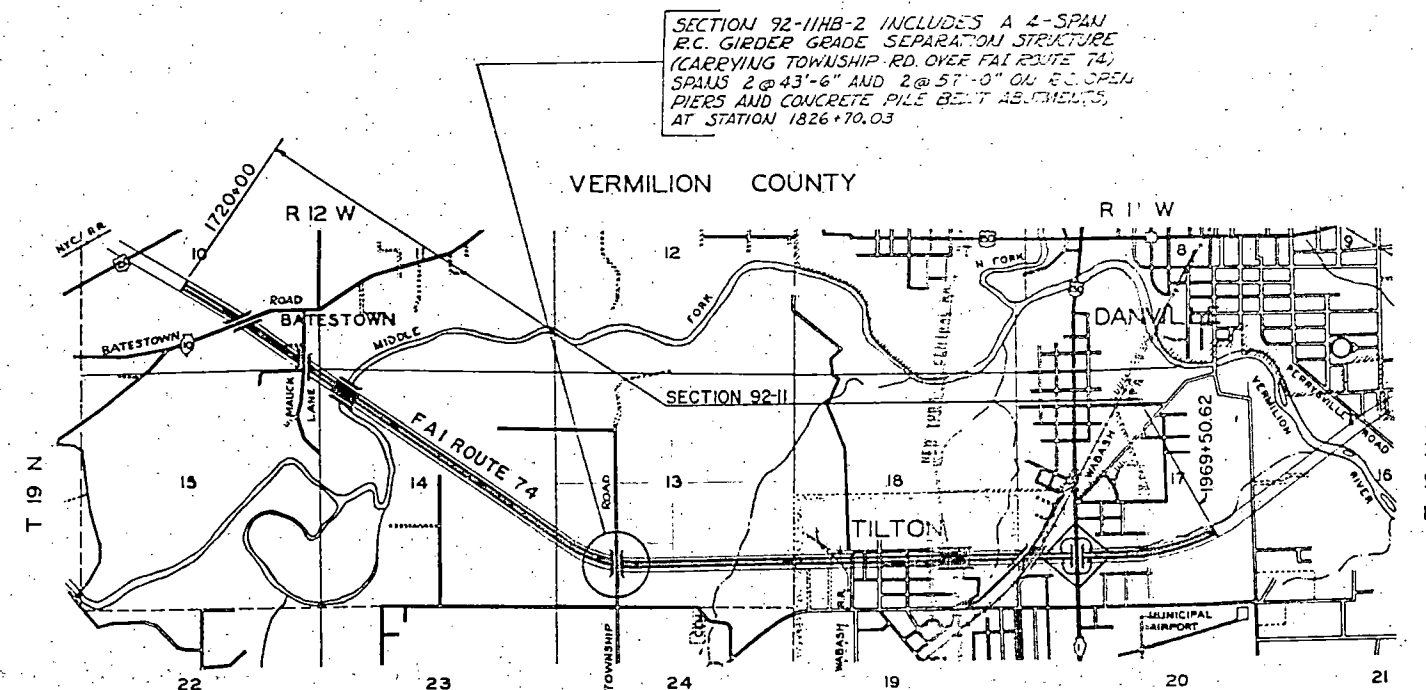
F.A.I. ROUTE 74, SECTION 92-IIHB-2
VERMILION COUNTY
PROJECT 1-74-6(36)215



FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-IIHB-2	VERMILION	37	1
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT 1-74-6(36)215				



LOCATION OF SECTION INDICATED THUS:—



PLANS PREPARED BY
CONSOER TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
360 EAST GRAND AVE.
CHICAGO, ILL.

APPROVED *H.G. Benner*
ENGINEER IN CHARGE & TRAFFIC STUDY

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED <i>April 24, 1961</i>	DESIGNED <i>H.G. Benner</i>
EXAMINED <i>May 29, 1961</i>	CHECKED <i>W. H. Benner</i>
PASSED <i>May 29, 1961</i>	IN CHARGE <i>H.G. Benner</i>
APPROVED <i>May 29, 1961</i>	DATE <i>May 29, 1961</i>

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	DATE
DIVISION ENGINEER	

REEL
5-36

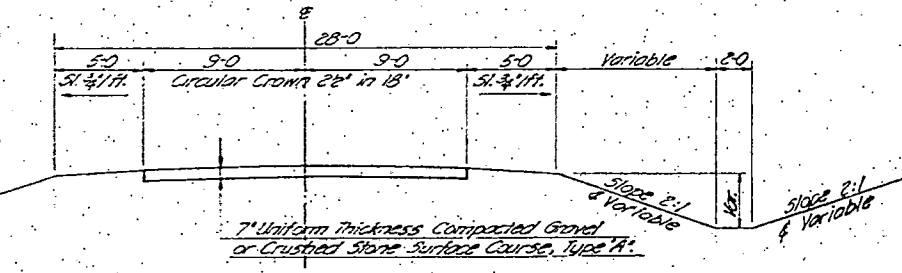
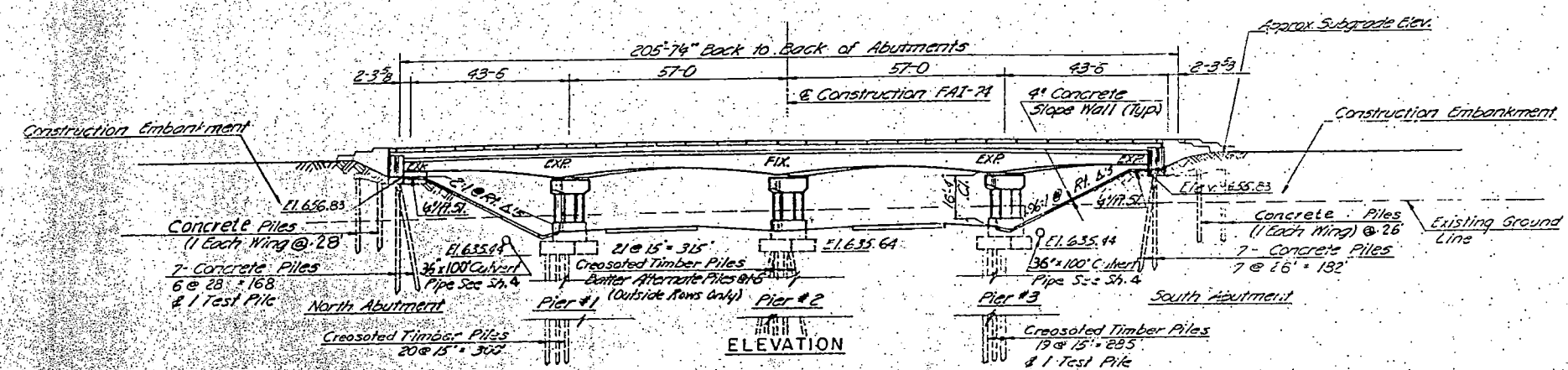
092-0128

Job No 20959

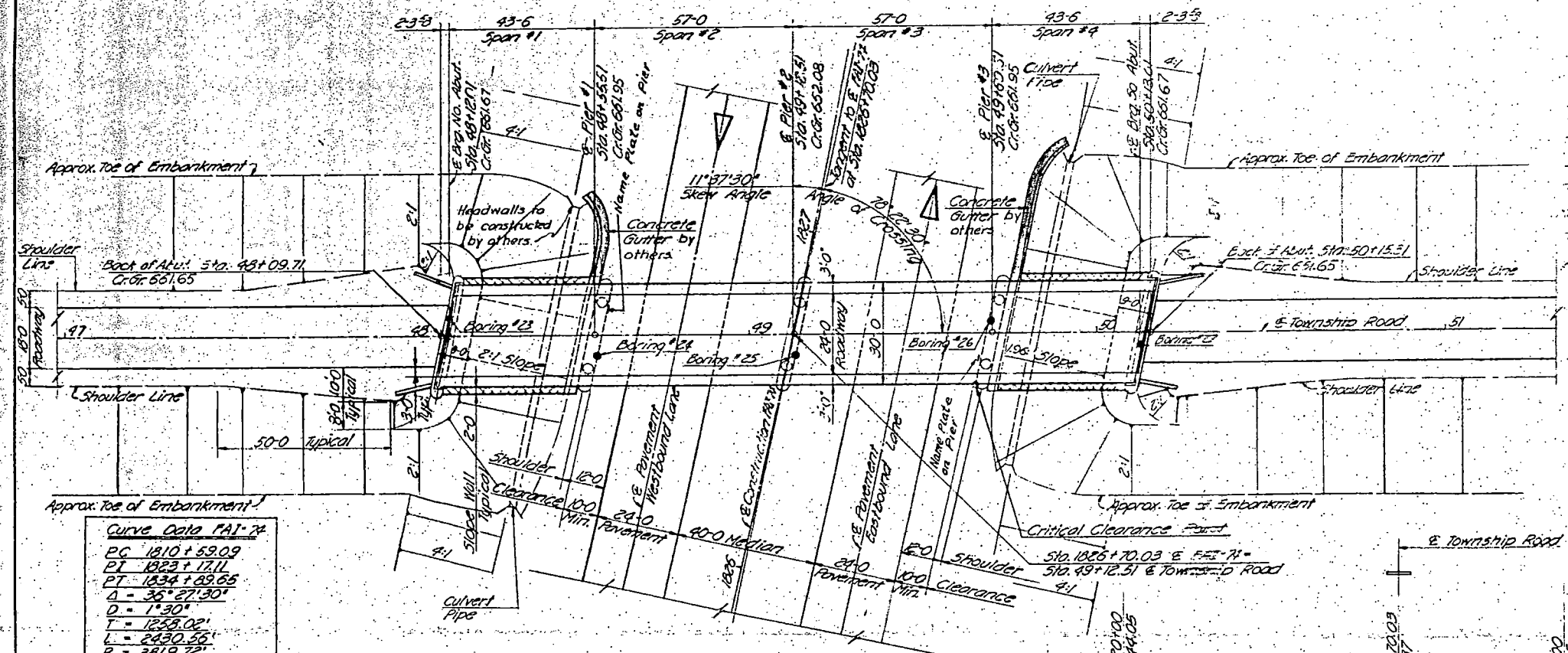
VERMILION COUNTY SECTION 92-IIHB-2 F.A.I. ROUTE 74

FED. AID DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	22-11B2	VERMILION	37	7
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		

VERTICAL CURVE DATA



TYPICAL APPROACH ROADWAY CROSS SECTION



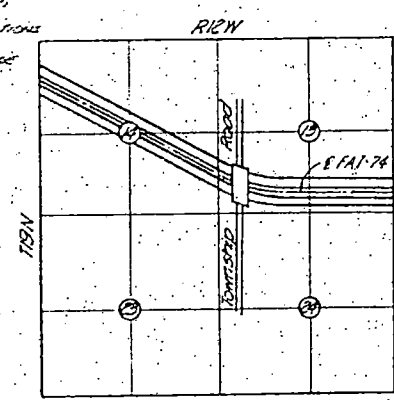
Curve Data FAI-74

PG	1810+59.09
PI	1823+17.11
PT	1834+69.65
Δ	35° 27' 30"
D	1.30'
T	1258.02'
L	2430.56'
R	3819.72'
SE	0.02 H/1%

Note: Construct Bridge and all Elements to Angle of Skew (11° 37' 30").

PLAN

NOTE:
SUBSEQUENT TO THE COMPLETION OF THIS CONTRACT, THE BRIDGE OFFICE LEARNED OF THE FORMER MINING OPERATIONS IN THIS AREA. ADDITIONAL DEEP REPAIRS WERE MADE OUTSIDE THE LIMITS OF THE PIERS. COAL WAS FOUND TO HAVE BEEN DEPOSITED IN TWO OF THE THREE REPAIRS MADE. BECAUSE OF THE HIGH COST OF PERSONAL TRAVEL, IT WAS DECIDED TO LEAVE THE STRUCTURE AS CONSTRUCTED & ERECT RAILS IF & WHEN SOON NECESSARY.



BRIDGE LOCATION

Note: Design Loading This Structure H15-S12-94 Roadway Classification 'E-1'

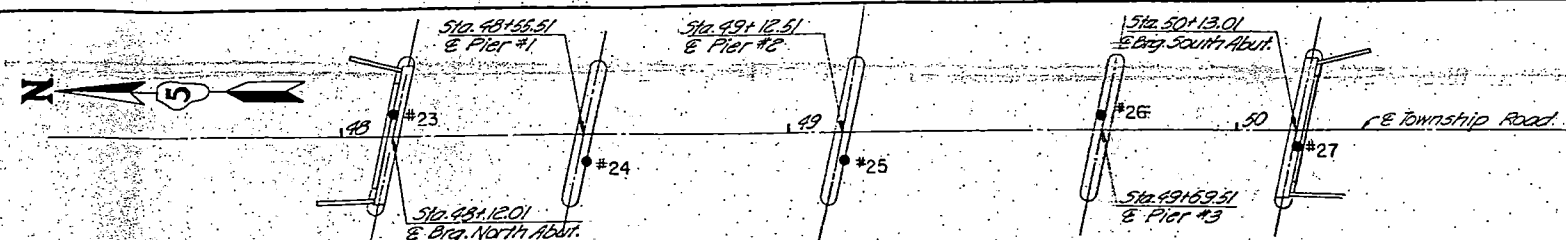
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAI RT. 74
FAI-74 SECTION 92-11-HB2
VERMILION COUNTY STA. 1826+70.03

GENERAL PLAN AND LOCATION

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RLF	RLF	DS	JWH	LDB	HSM	SEP 29, 60

PROFILE OF CROWN FOR FAI-74



PLAN OF BORING LOCATIONS

FED. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-11-57	VERMILION	37	8
FEDERAL ROAD DISTRICT NO. 7			ELIHOE	PROJ.

BORING NO. 23				
DATE: 11-11-57				
GROUND ELEVATION: +643.91				
E	S	PR	CU	R
42.9	1	30	0.2	
41.9				
40.9	2	25	0.7	
39.9				
38.9	3	24	0.5	
37.9				
36.9	4	26	0.2	
35.9				
34.9				
33.9				
32.9	5	25	0.9	
31.9				
30.4				
28.9				
27.9	6	125	6.9	0.8
26.9				
23.9				
22.9	7	98	5.7	0.8
21.9				

BORING NO. 24				
DATE: 11-9-57				
GROUND ELEVATION: +644.51				
E	S	PR	CU	R
43.6	1	23	0.2	
42.6				
41.6	2	28	0.6	
40.6				
39.6	3	23	0.5	
38.6				
37.6	4	22	0.4	
36.6				
35.6				
34.6				
33.6	5	22	0.6	
32.6				
31.1				
29.6				
28.6	6	107	0.7	
27.6				
25.1				
24.6				
23.6	7	106	5.2	0.7
22.6				

BORING NO. 25				
DATE: 11-9-57				
GROUND ELEVATION: +645.51				
E	S	PR	CU	R
44.4	1	17	0.3	
43.5				
42.5	2	17	0.2	
41.5				
40.5	3	16	0.25	0.4
39.5				
38.5	4	22	4.2	0.5
37.5				
35.5				
34.5	5	18	1.0	
33.5				
32.9				
30.5				
29.5	6	40	4.2	0.9
28.5				
27.5				
25.5				
25.0	7	90	3.8	0.5
24.5				
24.0	7A	107		0.5
23.5				
22.0				
20.5				
20.0	8	210		0.4
19.8				

BORING NO. 26				
DATE: 11-11-57				
GROUND ELEVATION: +645.81				
E	S	PR	CU	R
44.8	1	35	0.4	
43.8				
42.8	2	13	0.3	
41.8				
40.8	3	12	0.2	
39.8				
38.8	4	18	0.6	
37.8				
36.8				
34.8	5	20	0.7	
33.8				
32.2				
30.8				
29.8	6	77	5.7	0.7
28.8				
27.8				
26.8	7	110		0.5
25.8				
24.8				
23.8				
22.8	8	155	5.6	0.3
21.8				

BORING NO. 27				
DATE: 11-11-57				
GROUND ELEVATION: +646.01				
E	S	PR	CU	R
45.0	1	35	0.6	
44.0				
43.0	2	20	2.7	0.4
42.0				
41.0	3	20	0.2	
40.0				
39.0	4	14	0.2	
38.0				
36.0				
35.0	5	14	0.8	
34.0				
32.5				
31.0				
30.0	6	155	5.8	1.0
29.5				
27.8				
26.0				
25.5	7	218		0.4
25.0				

BORING	STATION	OFFSET
23	48+12.01	5' L.
24	48+55.01	6' R.
25	48+12.51	6' R.
26	49+70.01	3' L.
27	50+13.01	3' R.

GENERAL NOTES

1950 CHICAGO BUILDING CODE SOIL CLASSIFICATIONS ARE USED.

E : ELEVATION
S : SAMPLE NUMBERS
PR : PENETRATION IN BLOWS PER FOOT OF 140 POUNDS
CU : UNCONFIRMED COMPRESSIVE STRENGTH IN T.S.F.
R : RECOVERY IN FEET
SS : SPLIT-SPONGE SIZE; 2" O.D. - SIZE: 1/2" I.D.
(M) : MOIST
(D) : DRY
(W) : WET

*LOGS PREPARED BY
SOIL TESTING SERVICES, INC.
1827 N. HARLEM AVE.
CHICAGO, ILL.

WATER LEVELS INDICATED ON THE BORING LOGS ARE THE LEVELS MEASURED IN THE BORING AT THE TIMES INDICATED. IN PVIOUS SOILS, THE INDICATED ELEVATIONS ARE CONSIDERED RELIABLE. GROUND WATER LEVELS IN IMPERVIOUS SOILS, THE ACCURATE DETERMINATION OF GROUND WATER ELEVATIONS IS NOT POSSIBLE IN EVEN SEVERAL DAYS OBSERVATION, AND ADDITIONAL EVIDENCE OR GROUND WATER ELEVATIONS MUST BE OBTAINED.

S.T.C. JOB NO. 3791-8

E	S	PR	CU	R	CLASSIFICATION
---	---	----	----	---	----------------

E	S	PR	CU	R	CLASSIFICATION
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E	S	PR	CU	R	CLASSIFICATION
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E	S	PR	CU	R	CLASSIFICATION
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E	S	PR	CU	R	CLASSIFICATION
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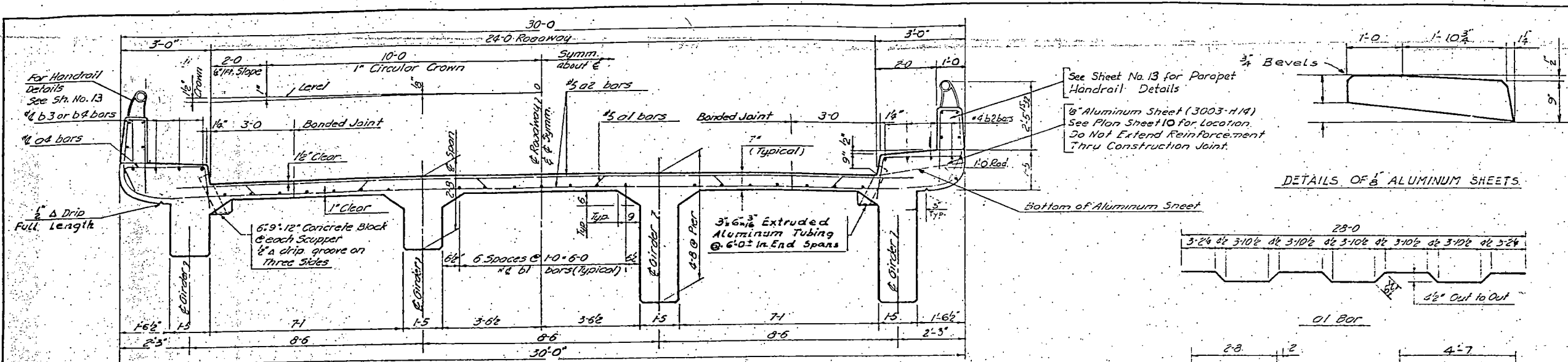
LOCATION # 4
REVISED 1-7-58 DJK
3-5-58 DJK

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAIR RT. 74
FAI - 74 SECTION 92-11-11-57
VERMILION COUNTY STA 1626+70.03

BORING LOGS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			LDB			
				HSM	SEP 29, 60	



F.A.I. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-II-HB2	Vermilion	37	9
FEDERAL ROAD DISTRICT NO. 7 ILLINOIS PROJ.				

BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
01	168	5	29'-0"	1'-2"	U
02	358	5	26'-8"	1'-2"	U
04	348	8	7'-1"	1'-2"	C
05	12	7	24'-2"	6"	U
01	147	4	30'-0"	1'-0"	U
02	63	4	9'-0"	As Shown	U
03	32	4	19'-0"	10"	U
04	32	4	19'-5"	10"	U
01	32	10	18'-0"	As Shown	U
02	32	10	26'-0"	As Shown	U
03	32	11	34'-10"	As Shown	U
04	32	11	34'-0"	As Shown	U
05	24	11	29'-0"	As Shown	U
06	24	10	40'-0"	As Shown	U
07	24	10	60'-0"	As Shown	U
08	16	9	17'-6"	As Shown	U
09	32	9	18'-6"	As Shown	U
10	36	6	15'-0"	As Shown	U
11	18	6	22'-0"	As Shown	U
12	27	6	25'-0"	As Shown	U
13	12	5	38'-0"	As Shown	U
14	12	5	32'-0"	As Shown	U
15	12	5	35'-0"	As Shown	U
16	12	5	32'-0"	As Shown	U
m1	44	5	34'-9"	As Shown	U
m2	28	5	40'-0"	As Shown	U
m3	90	4	9'-6"	As Shown	U
515	148	4	6'-8"	As Shown	U
516	496	4	4'-10"	1'-0"	U
517	240	4	5'-4"	1'-3"	U
518	192	4	5'-10"	1'-6"	U
519	192	4	6'-6"	1'-6"	U
520	42	4	5'-3"	1'-0"	U
521	84	4	5'-7"	1'-0"	U
522	63	4	9'-5"	1'-0"	U
x1	98	5	9'-0"	6"	U

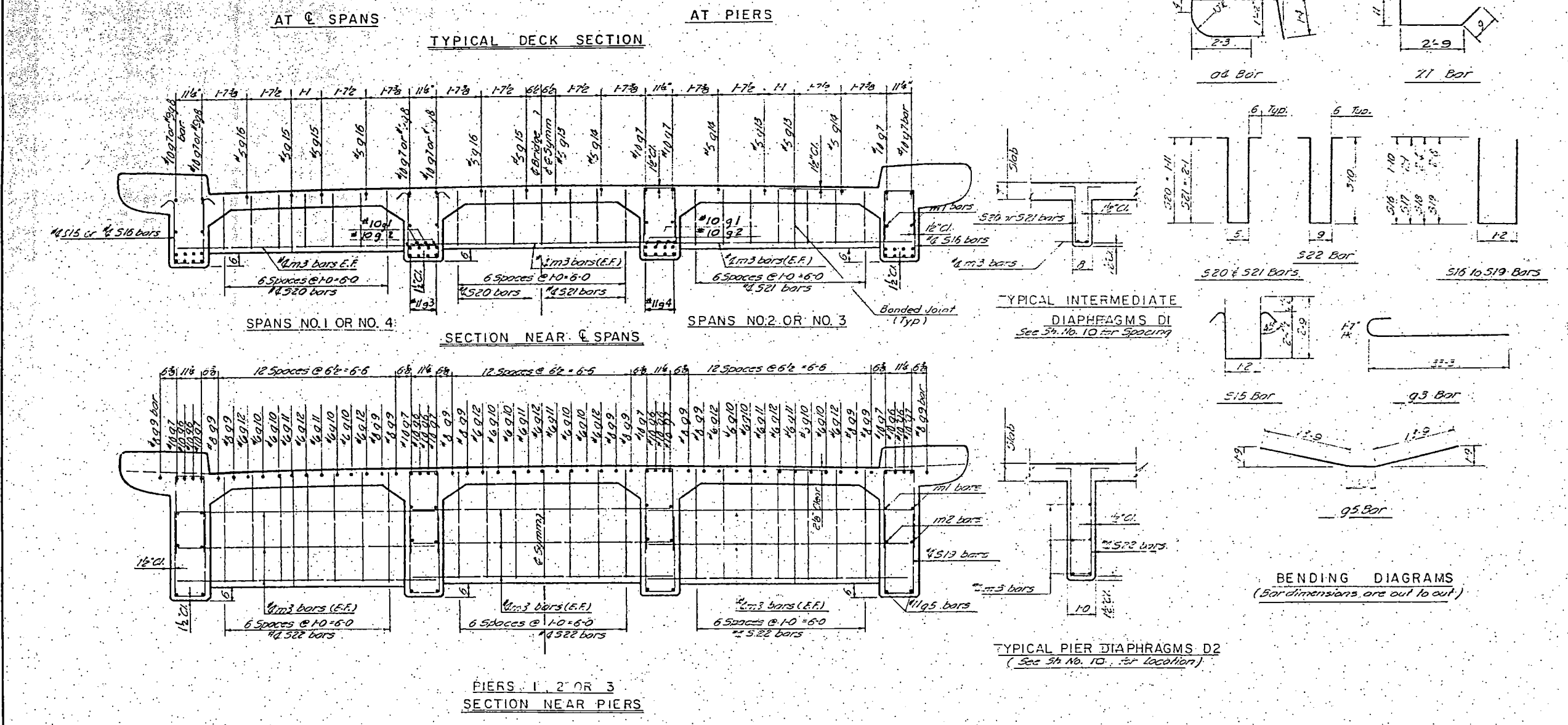
SUPERSTRUCTURE QUANTITIES	
Class 1 Concrete	365.0 Cu. Yds.
Reinforcement Bars	70,160 Lbs.

Note: Work this Steel with Sheets 9 & 10.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAI RT. 74
FAI 74 SECTION 92-II-HB2
VERMILION COUNTY STA. 1826+70.03

SUPERSTRUCTURE DETAILS					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
SMH	J.T.	J.T.	RLF	HSM	SEP 29, 60



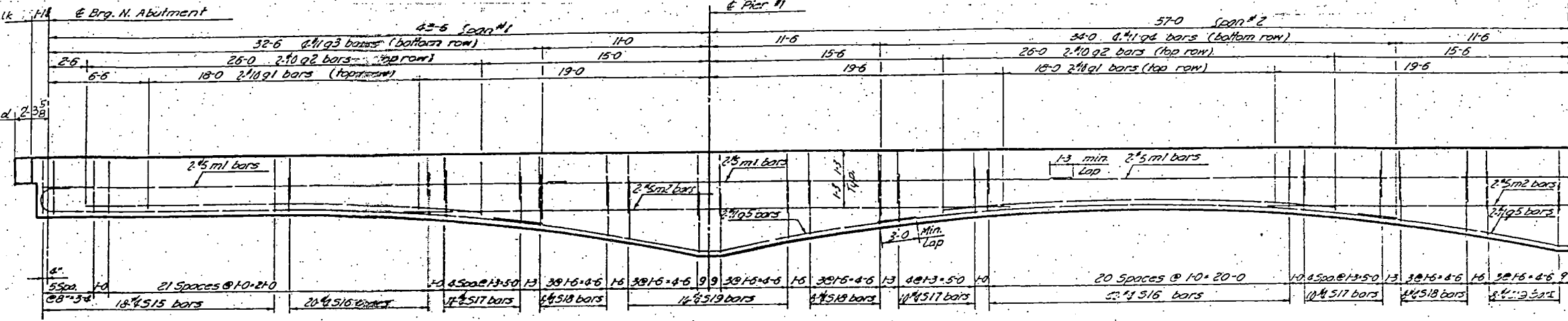
At Walk FAI & Brg. N. Abutment

At Road 238

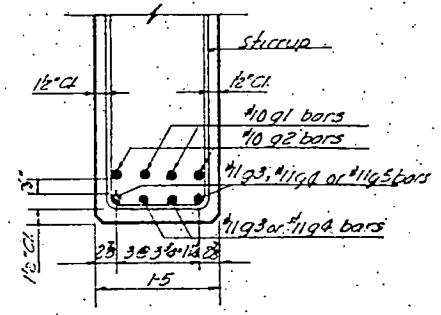
& Pier #1

& Pier #2

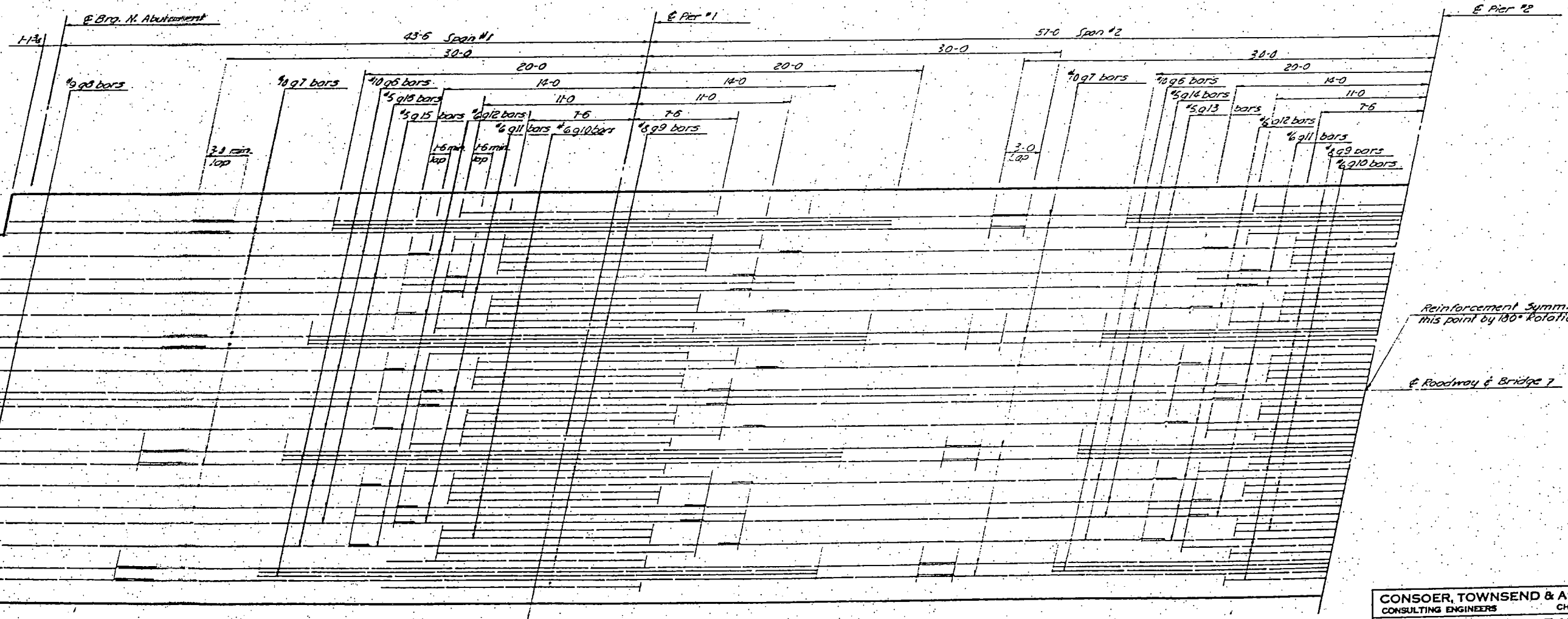
TOTAL SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-II-HB2	Vermilion	37	11
FEDERAL ROAD DISTRICT NO. 7				
ILLINOIS			PLAN	



GIRDER ELEVATION



GIRDER SECTION



REINFORCING PLAN - TOP OF SLAB

Reinforcement Symm. about this point by 180° rotation

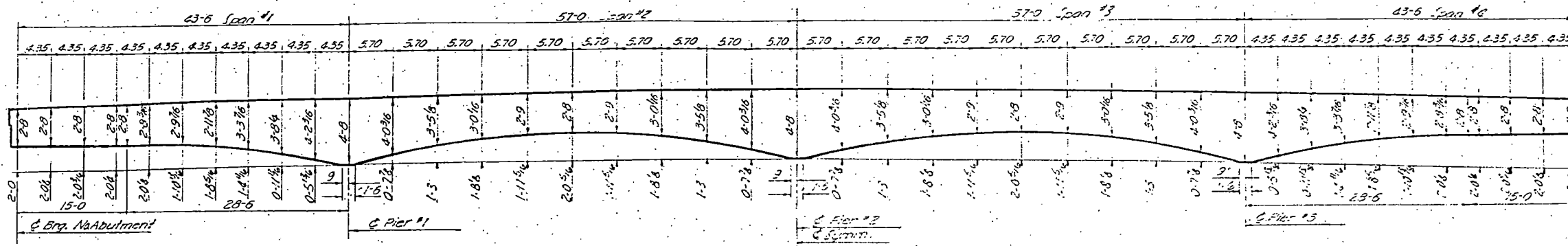
& Roadway & Bridge 7

CONSOER, TOWNSEND & ASSOCIATES
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ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAI RT 74
FAI-74 SECTION 92-II-HB2
VERMILION COUNTY STA. 1826+70.03

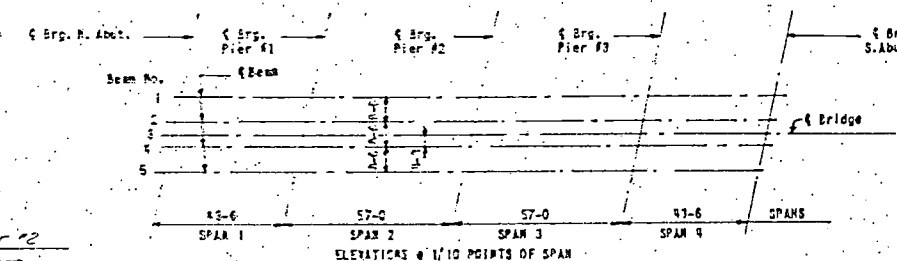
SUPERSTRUCTURE DETAILS

DESIGNED SMH	DRAWN J.T.	TRACED J.T.	CHECKED RUF	REVIEWED LDB	DATE SEP 29, 60
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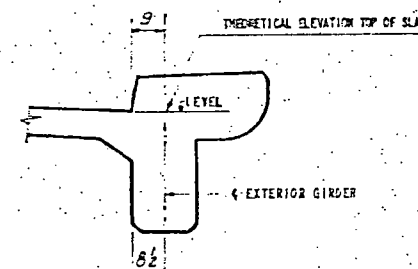


GIRDER ELEVATION
(Includes D.L. Deflection)

- NOTES: 1. THEORETICAL ELEVATION IS THE THEORETICAL TOP OF SLAB ELEVATION.
2. ADJUSTED ELEVATION IS THE THEORETICAL TOP OF SLAB ELEVATION ADJUSTED FOR THE CONCRETE DEAD LOAD DEFLECTION.



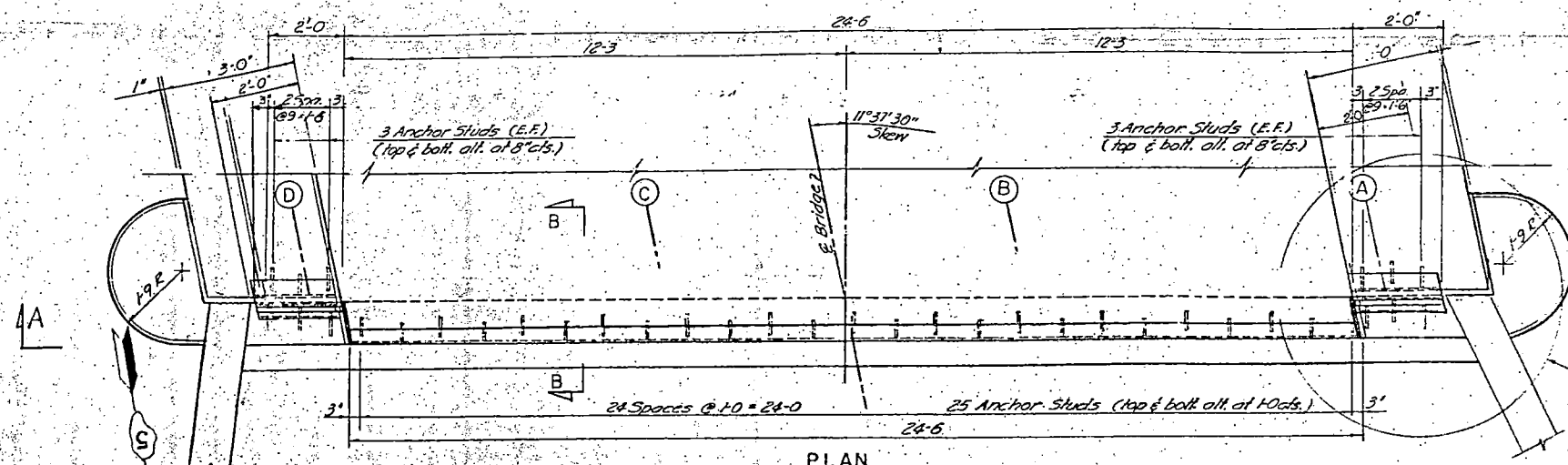
PLAN



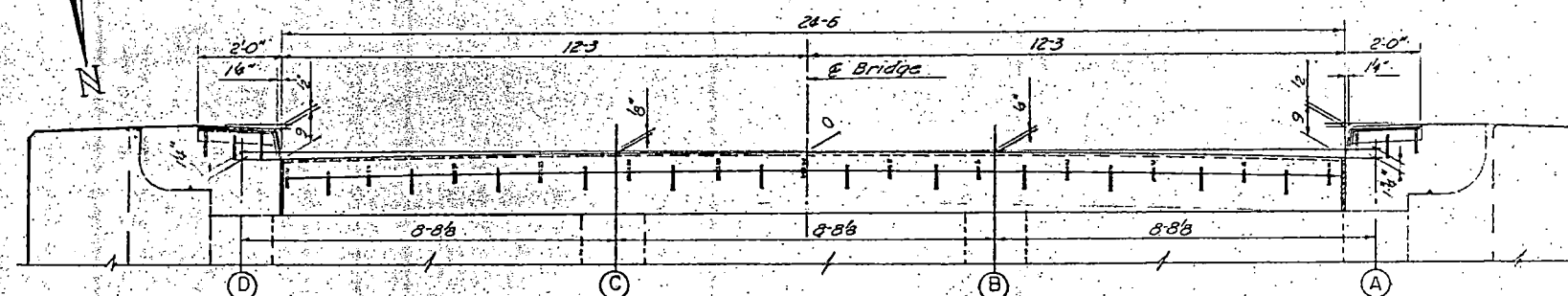
SECTION EXT. GIRDER

SPAN 1				SPAN 2				SPAN 3				SPAN 4							
ELEVATION				ELEVATION				ELEVATION				ELEVATION							
1/10 POINT	BEAM	STATION	THEOR.	ADJUSTED	1/10 POINT	BEAM	STATION	THEOR.	ADJUSTED	1/10 POINT	BEAM	STATION	THEOR.	ADJUSTED	1/10 POINT	BEAM	STATION	THEOR.	ADJUSTED
1	1	4814.632	661.567	661.567	1	1	4863.832	661.859	661.869	1	1	4922.832	661.952	661.957	1	1	4976.482	661.789	661.789
2	2	4812.884	661.667	661.667	2	2	4862.084	661.966	661.971	2	2	4919.084	662.067	662.072	2	2	4974.734	661.912	661.912
3	3	4812.010	661.670	661.670	3	3	4861.210	661.973	661.978	3	3	4918.210	662.078	662.083	3	3	4973.860	661.927	661.927
4	4	4811.135	661.653	661.653	4	4	4860.335	661.980	661.985	4	4	4917.335	662.088	662.093	4	4	4972.985	661.941	661.941
5	5	4809.267	661.528	661.528	5	5	4858.457	661.837	661.842	5	5	4915.457	661.959	661.959	5	5	4971.237	661.815	661.815
6	6	4808.982	661.600	661.610	6	6	4859.532	661.880	661.890	6	6	4925.532	661.947	661.957	6	6	4980.832	661.765	661.770
7	7	4817.238	661.701	661.711	7	7	4867.788	661.988	661.998	7	7	4924.788	662.053	662.073	7	7	4979.084	661.830	661.835
8	8	4816.360	661.705	661.715	8	8	4866.910	661.995	662.005	8	8	4923.910	662.074	662.084	8	8	4978.210	661.905	661.910
9	9	4815.485	661.688	661.698	9	9	4866.035	661.982	661.992	9	9	4923.035	662.085	662.095	9	9	4977.335	661.899	661.904
10	10	4813.737	661.559	661.569	10	10	4864.287	661.860	661.870	10	10	4921.287	661.951	661.961	10	10	4976.482	661.875	661.880
11	11	4822.332	661.632	661.648	11	11	4873.232	661.858	661.868	11	11	4932.232	661.939	661.955	11	11	4985.182	661.741	661.751
12	12	4821.588	661.738	661.754	12	12	4872.488	662.007	662.023	12	12	4930.488	662.058	662.072	12	12	4983.434	661.865	661.875
13	13	4820.710	661.738	661.754	13	13	4871.735	662.015	662.031	13	13	4929.735	662.068	662.084	13	13	4982.560	661.881	661.891
14	14	4819.835	661.721	661.737	14	14	4870.860	661.982	661.992	14	14	4928.860	662.079	662.095	14	14	4981.685	661.875	661.885
15	15	4818.960	661.693	661.709	15	15	4869.985	661.841	661.851	15	15	4927.985	661.988	661.998	15	15	4980.800	661.860	661.870
16	16	4827.682	661.643	661.659	16	16	4879.189	662.024	662.040	16	16	4937.189	661.928	661.954	16	16	4985.182	661.741	661.751
17	17	4826.807	661.748	661.764	17	17	4878.310	662.032	662.048	17	17	4936.310	662.058	662.072	17	17	4984.334	661.865	661.875
18	18	4825.932	661.748	661.764	18	18	4877.435	662.019	662.035	18	18	4935.435	662.050	662.076	18	18	4983.460	661.855	661.865
19	19	4825.057	661.721	661.737	19	19	4876.560	661.900	661.926	19	19	4934.560	662.050	662.076	19	19	4982.585	661.855	661.865
20	20	4824.182	661.693	661.709	20	20	4875.685	661.887	661.913	20	20	4933.685	661.958	661.984	20	20	4981.710	661.840	661.850
21	21	4823.307	661.665	661.681	21	21	4874.810	661.874	661.900	21	21	4932.810	661.915	661.941	21	21	4980.835	661.830	661.840
22	22	4822.432	661.637	661.653	22	22	4873.935	661.861	661.887	22	22	4931.935	661.881	661.907	22	22	4979.960	661.815	661.825
23	23	4821.557	661.609	661.625	23	23	4873.060	661.848	661.874	23	23	4931.060	661.868	661.894	23	23	4979.085	661.800	661.810
24	24	4820.682	661.581	661.597	24	24	4872.185	661.835	661.861	24	24	4930.185	661.858	661.884	24	24	4978.210	661.785	661.795
25	25	4819.807	661.553	661.569	25	25	4871.310	661.822	661.848	25	25	4929.310	661.848	661.874	25	25	4977.335	661.770	661.780
26	26	4818.932	661.525	661.541	26	26	4870.435	661.809	661.835	26	26	4928.435	661.835	661.861	26	26	4976.460	661.755	661.765
27	27	4818.057	661.497	661.513	27	27	4869.560	661.796	661.822	27	27	4927.560	661.812	661.838	27	27	4975.585	661.740	661.750
28	28	4817.182	661.469	661.485	28	28	4868.685	661.783	661.809	28	28	4926.685	661.799	661.825	28	28	4974.710	661.725	661.735
29	29	4816.307	661.441	661.457	29	29	4867.810	661.770	661.796	29	29	4925.810	661.786	661.812	29	29	4973.835	661.710	661.720
30	30	4815.432	661.413	661.429	30	30	4866.935	661.757	661.783	30	30	4924.935	661.773	661.799	30	30	4972.960	661.695	661.705
31	31	4814.557	661.385	661.401	31	31	4866.060	661.744	661.770	31	31	4924.060	661.760	661.786	31	31	4972.085	661.680	661.690
32	32	4813.682	661.357	661.373	32	32	4865.185	661.731	661.757	32	32	4923.185	661.747	661.773	32	32	4971.210	661.665	661.675
33	33	4812.807	661.329	661.345	33	33	4864.310	661.718	661.744	33	33	4922.310	661.734	661.760	33	33	4970.335	661.650	661.660
34	34	4811.932	661.301	661.317	34	34	4863.435	661.705	661.731	34	34	4921.435	661.721	661.747	34	34	4969.460	661.635	661.645
35	35	4811.057	661.273	661.289	35	35	4862.560	661.692	661.718	35	35	4920.560	661.708	661.734	35	35	4968.585	661.620	661.630
36	36	4810.182	661.245	661.261	36	36	4861.685	661.679	661.705	36	36	4919.685	661.695	661.721	36	36	4967.710	661.605	661.615
37	37	4809.307	661.217	661.233	37	37	4860.810	661.666	661.692	37	37	4918.810	661.682	661.708	37	37	4966.835	661.590	661.600
38	38	4808.432	661.189	661.205	38	38	4859.935	661.653	661.679	38	38	4917.935	661.669	661.695	38	38	4965.960	661.575	661.585
39	39	4807.557	661.161	661.177	39	39	4859.060	661.640	661.666	39	39	4917.060	661.656	661.682	39	39	4965.085	661.560	661.570
40	40	4806.682	661.133	661.149	40	40	4858.185	661.627	661.653	40	40	4916.185	661.643	661.669	40	40	4964.210	661.545	661.555
41	41	4805.807	661.105	661.121	41	41	4857.310	661.614	661.640	41	41	4915.310	661.630	661.656	41	41	4963.335	661.530	661.540
42	42	4804.932	661.077	661.093	42	42	4856.435	661.601	661.627	42	42	4914.435	661.617	661.643	42	42	4962.460	661.515	661.525
43	43	4804.057	661.049	661.065	43	43	4855.560	661.588	661.614	43	43	4913.560	661.604	661.630	43	43	4961.585	661.500	661.510
44	44	4803.182	661.021	661.037	44	44	4854.685	661.575	661.601	44	44	4912.685	661.591	661.617	44	44	4960.710	661.485	661.495
45	45	4802.307	661.000	661.016	45	45	4853.810	661.562	661.588	45	45	4911.810	661.578	661.604	45	45	4959.835	661.470	661.480
46	46	4801.432	661.000	661.016	46	46	4852.935	661.549	661.575	46	46	4910.935	661.565	661.591	46	46	4958.960	661.455	661.465
47	47	4800.557	661.000	661.016	47	47	4852.060	661.536	661.562	47	47	4910.060	661.552	661.578	47	47	4958.085	661.440	661.450
48	48	4799.682	661.000	661.016	48	48	4851.185	661.523	661.549	48	48	4909.185	661.539	661.565	48	48	4957.210	661.425	661.435
49	49	4798.807	661.000	661.016	49	49	4850.310	661.510	661.536	49	49	4908.310	661.526	661.552	49	49	4956.335	661.410	661.420
50	50	4797.932	661.000	661.016	50	50	4849.435	661.497	661.523	50	50	4907.435	661.513	661.539	50	50	4955.460	661.395	661.405
51	51	4797.057	661.000	661.016	51	51	4848.560	661.484	661.510	51	51	4906.560	661.500	661.526	51	51	4954.585	661.380	661.390
52	52	4796.182	661.000	661.016	52	52	4847.685	661.471	661.497	52	52	4905.685	661.487	661.513	52	52	4953.710	661.365	661.375
53	53	4795.307	661.000	661.016	53	53	4846.810	661.458	661.484	53	53	4904.810	661.474	661.500	53	53	4952.835	661.350	66

F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-PB2	VERMILION	37	14
FEDERAL ROAD DISTRICT NO. 7 ILLINOIS PROJ.				



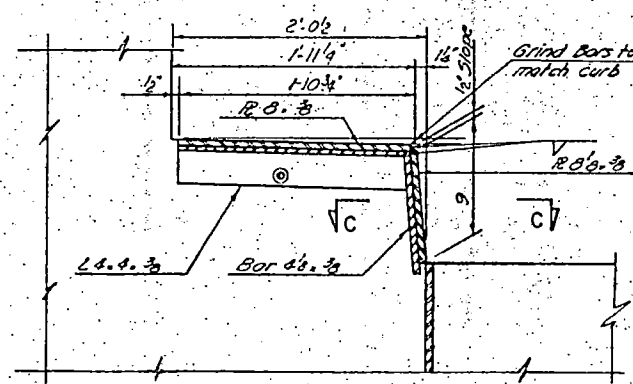
PLAN



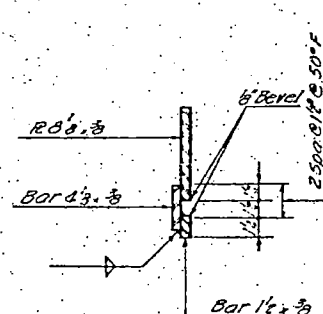
SECTION A-A

EXPANSION JOINT DEVICE AT NORTH ABUTMENT

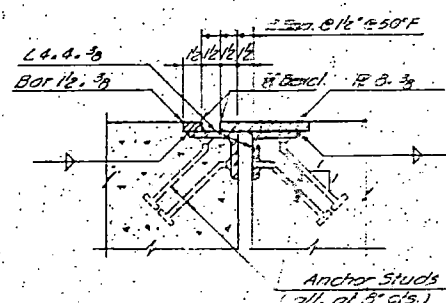
Expansion Joint at South Abutment identical by 180° Rotation
2 Required



SECTION E-E

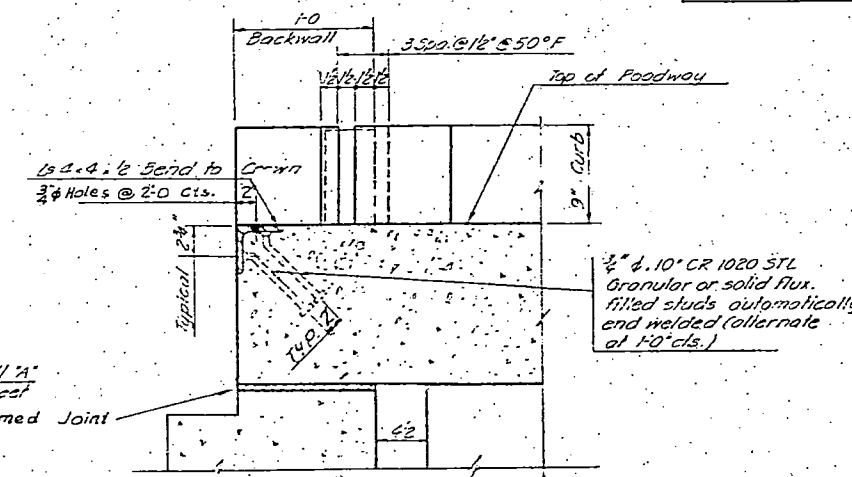


SECTION C-C

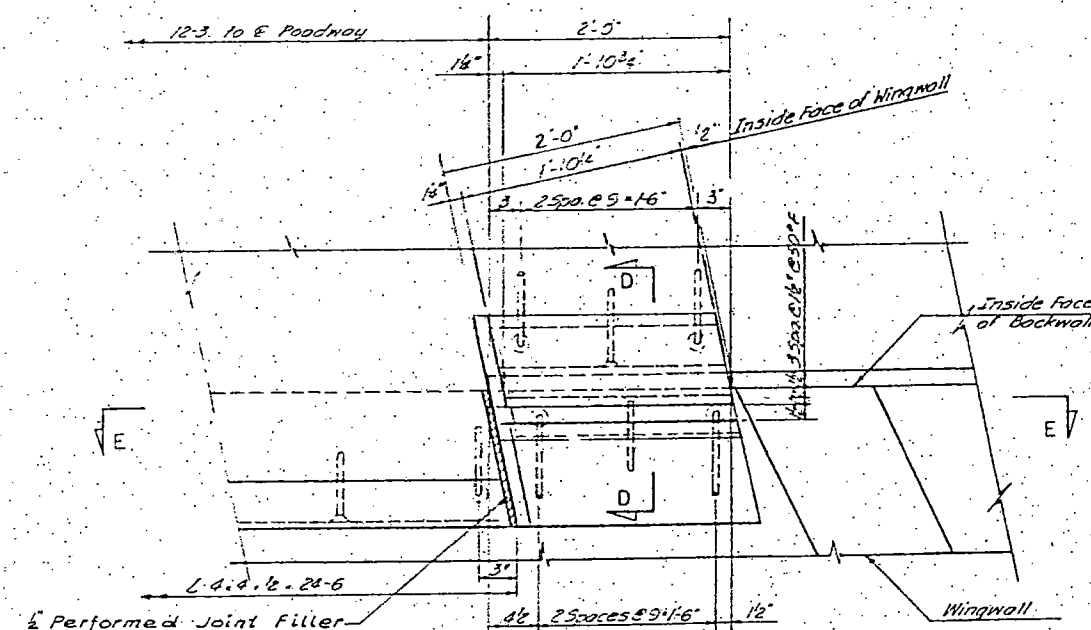


SECTION D-D

CURB & WALK PLATE DETAILS



SECTION B-B



DETAIL A

TOTAL COMPUTED WEIGHT OF JOINT DEVICES
STRUCTURAL STEEL 1,030 LBS

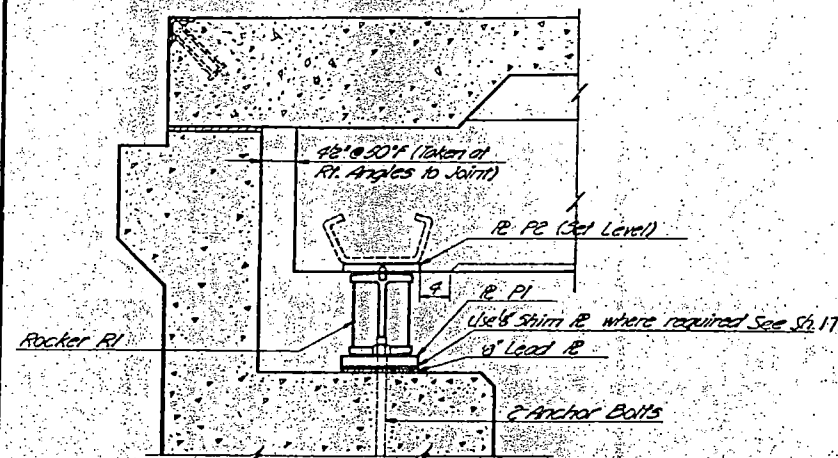
NOTE:

Grind exposed welds smooth.
All welds are 3/16" fillet welds except as otherwise noted.

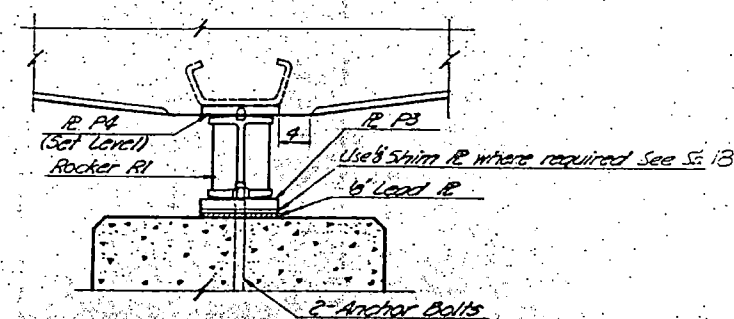
NOTE: All 3/4" x 10" CR 1020 STL Granular or Solid Flux Filled Studs Automatically End Welded shall be included in the unit price bid for "Furnishing and Erecting Structural Steel."

CONSOER, TOWNSEND & ASSOCIATES		CHICAGO, ILLINOIS	
CONSULTING ENGINEERS		ILLINOIS DIVISION OF HIGHWAYS	
TOWNSHIP RD. BRIDGE OVER FAI RT. 74		FAI-74 SECTION 92-11-PB2	
VERMILION COUNTY		STA. 1826+70.03	
STRUCTURAL STEEL JOINT DETAILS			
DESIGNED	DRAWN	TRACED	CHECKED
JWH	J.T.	J.T.	RLF
			LDB
REVISED	DATE	REVISED	
HSM	SEP. 29, 60		

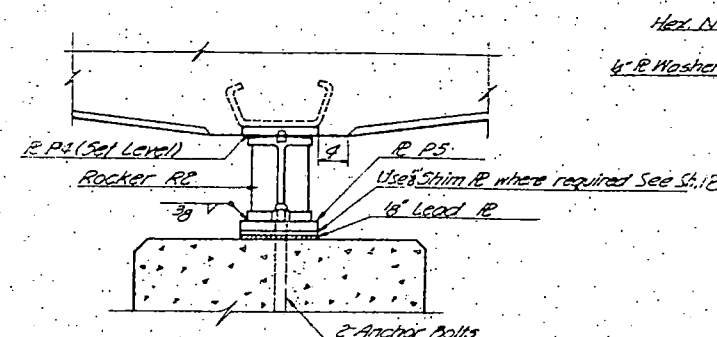
F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-HB2	VERMILION	37	15
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



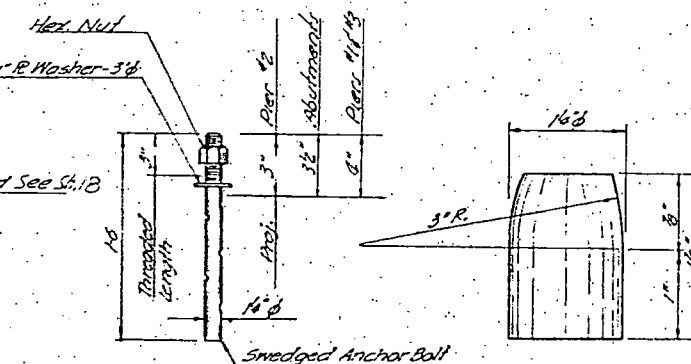
ELEVATION - EXPANSION BEARING DEVICE
AT ABUTMENTS



ELEVATION - EXPANSION BEARING DEVICE
AT PIERS 1 & 3

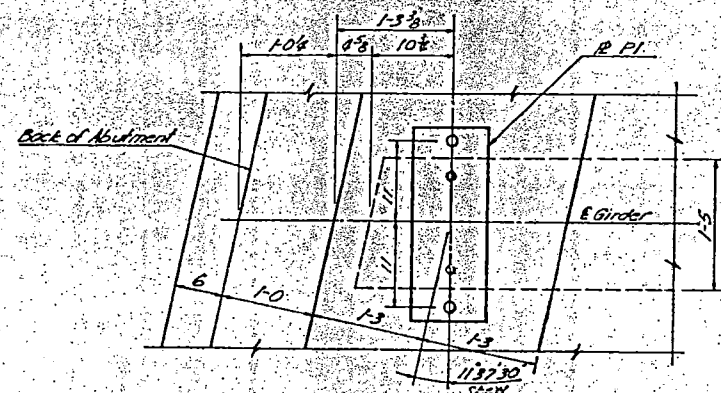


ELEVATION - FIXED BEARING DEVICE
AT PIER 2

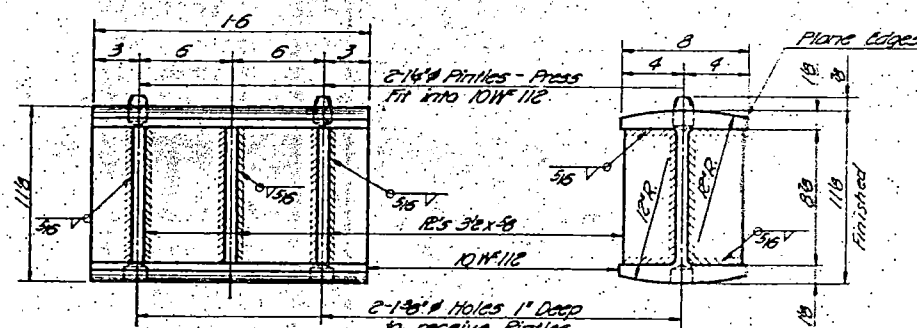


ANCHOR BOLT
(10 Req'd)

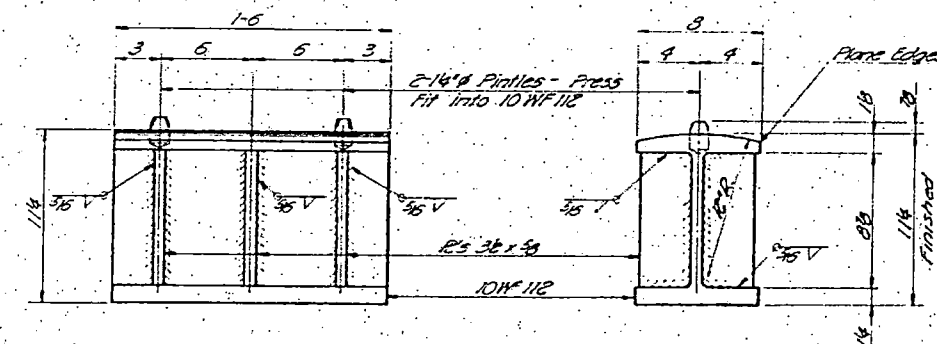
PINTLE



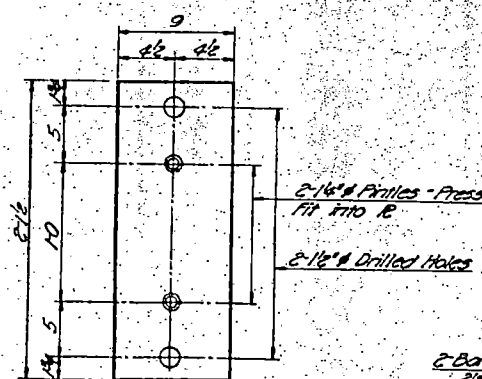
PLAN - BOTTOM ABUTMENT BEARING PLATE



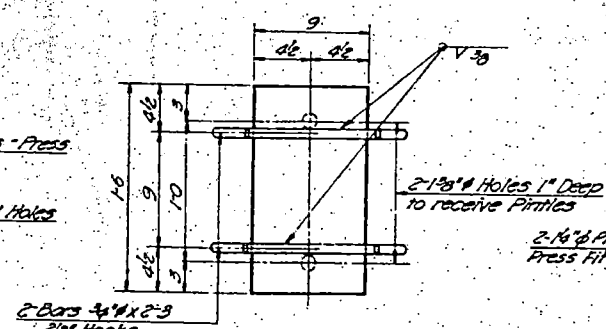
ROCKER - R1
(16 Req'd)



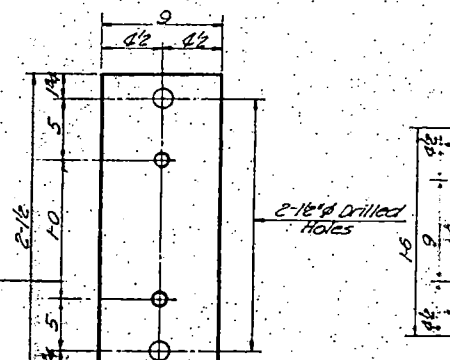
ROCKER - R2
(4 Req'd)



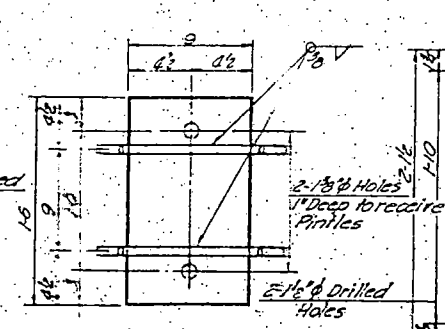
PLAN



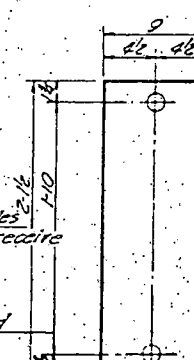
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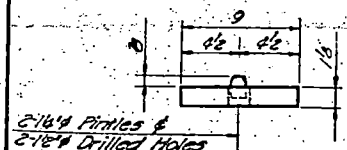
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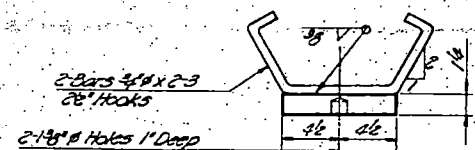
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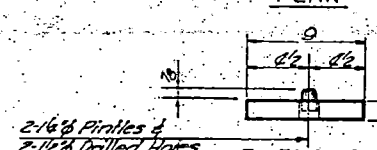
PLAN



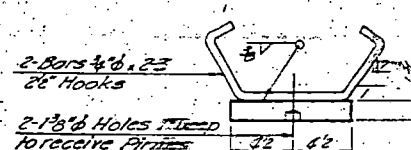
ELEVATION
PLATE - P1
(8 Req'd)



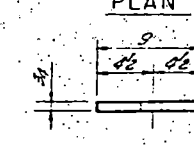
ELEVATION
PLATE - P2
(8 Req'd)



ELEVATION
PLATE - P3
(8 Req'd)



ELEVATION
PLATE - P4
(12 Req'd)



ELEVATION
PLATE - P5
(12 Req'd)

TOTAL COMPUTED WEIGHT OF BEARING DEVICES
STRUCTURAL STEEL 7,940 LBS.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS

TOWNSHIP RD. BRIDGE OVER FAI RT. 74

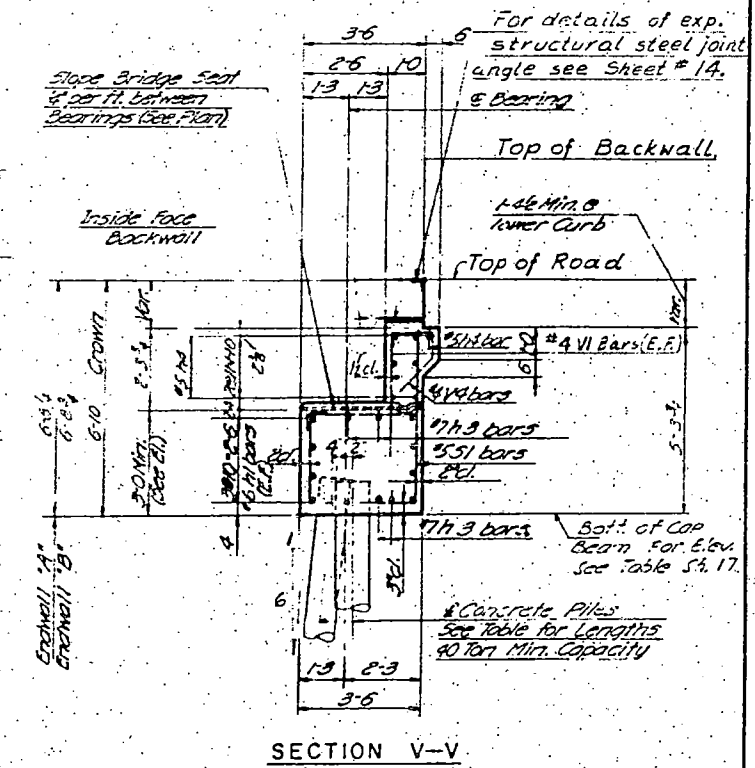
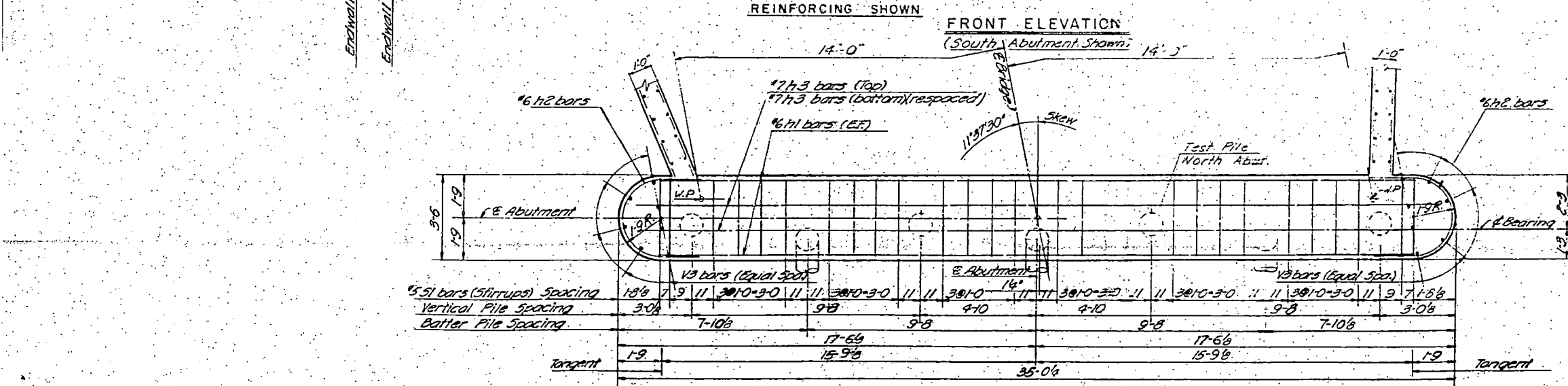
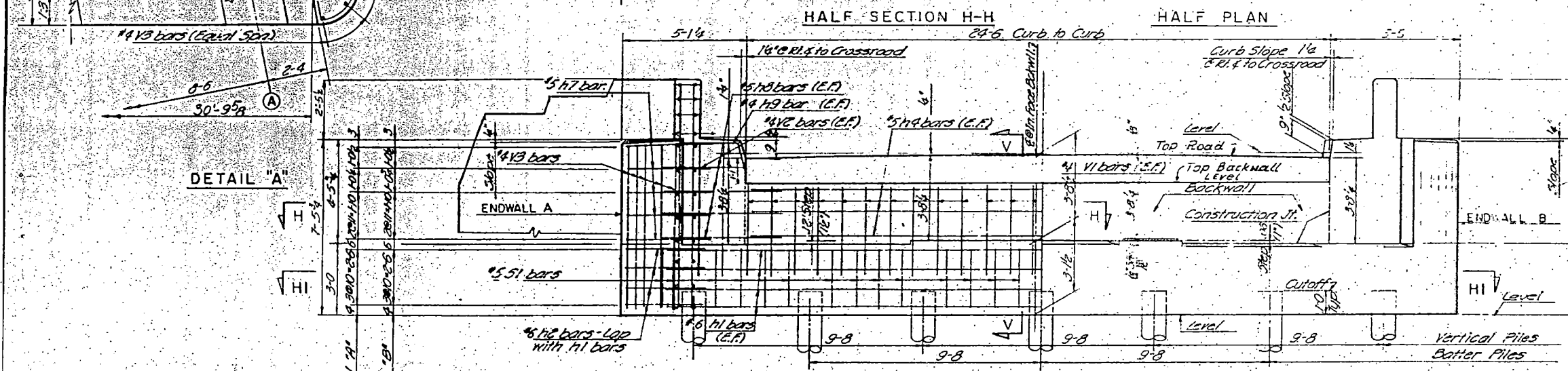
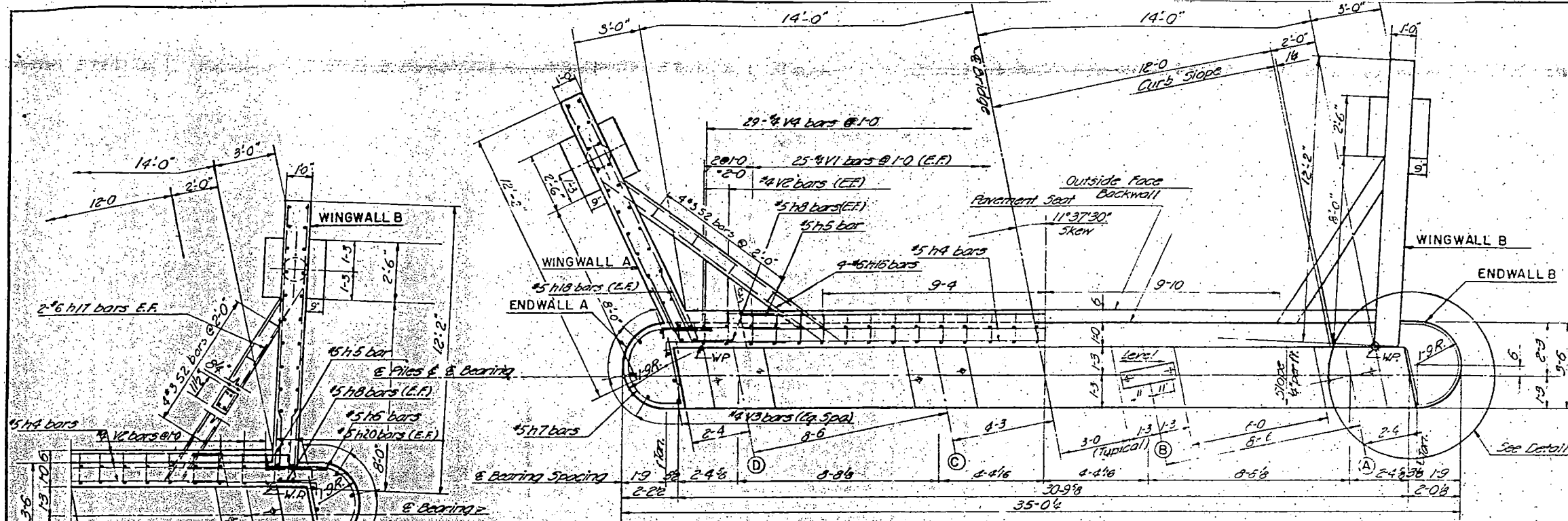
FAI - 74 SECTION 92-11-HB2

VERMILION COUNTY STA. 1826 + 70.03

STRUCTURAL STEEL BEARING DEVICES

DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	JT	DS	RLF	LDB	HSM SEP 29, 60

F.A.I. R.T. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	32-11-HB2	ILLINOIS	37	16
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



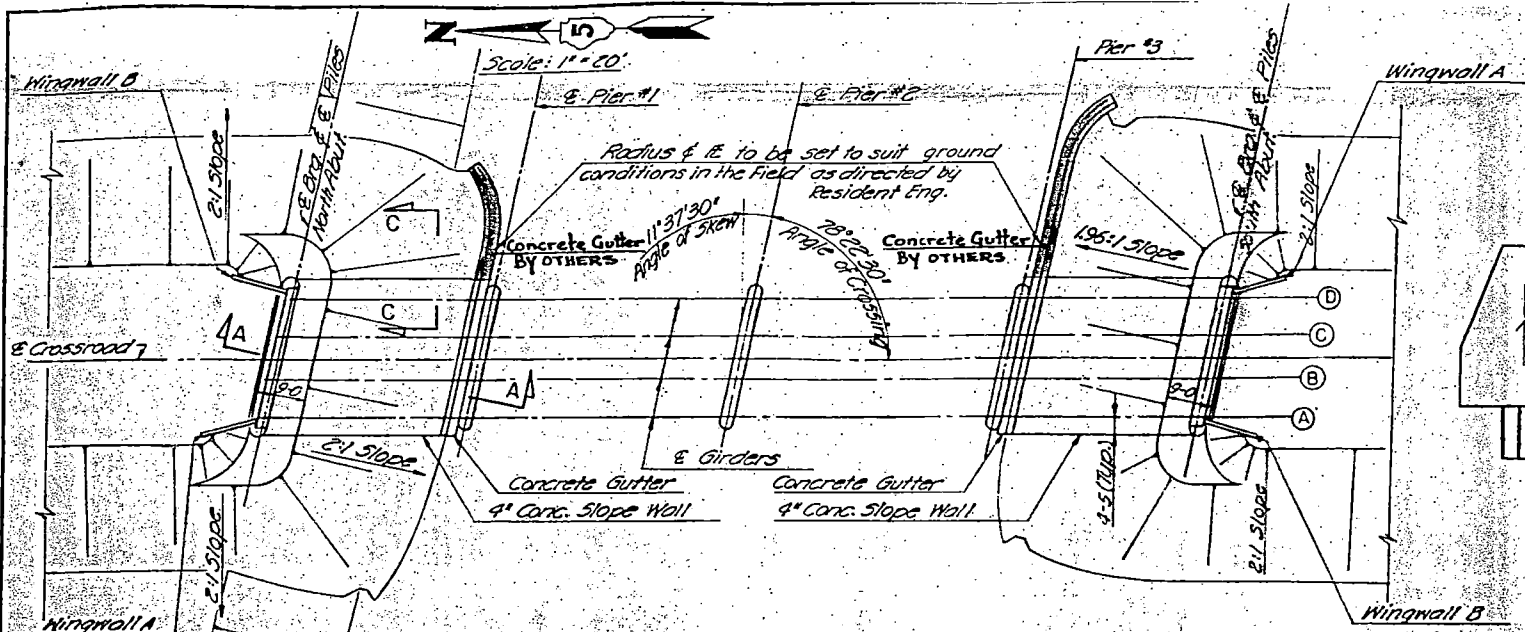
ESTIMATED LENGTHS & QUANTITIES OF PILES		
Concrete Piles		
North Abutment	8 @ 28'	224 Lin. Ft.
South Abutment	9 @ 26'	234 Lin. Ft.
Total		458 Lin. Ft.
Test Pile (in N. Abut.)		1 Each

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

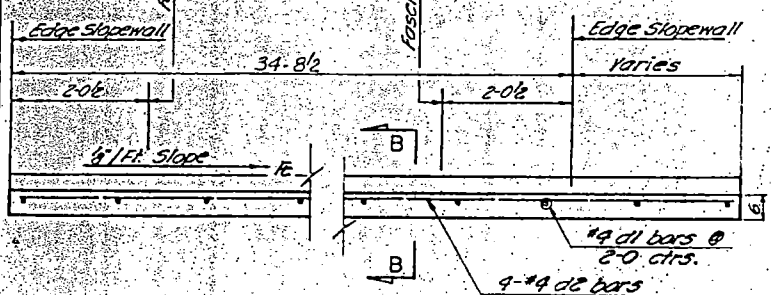
ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAI. RT. -74
FAI-74 SECTION 32-11-HB2
VERMILION COUNTY STA. 1826+70.03

ABUTMENTS

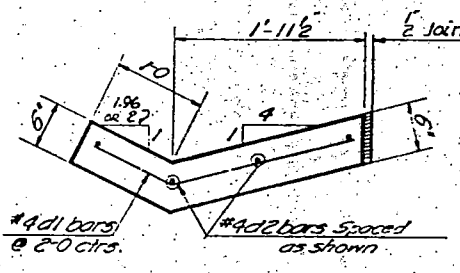
DRAWN	DATE	DESIGNED	DATE	REVIEWED	DATE	REVIEWED
J.T.	J.T.	D.S.	A.L.R.	L.D.S.	4:5M	SEP 29, 60



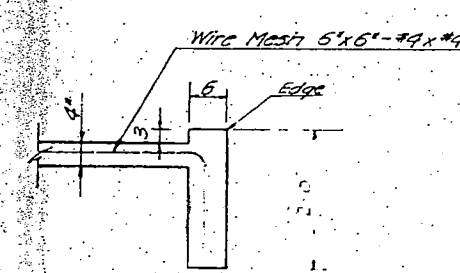
PLAN OF ABUTMENTS & CONCRETE GUTTER
(Abutments are identical by 180° Rotation)



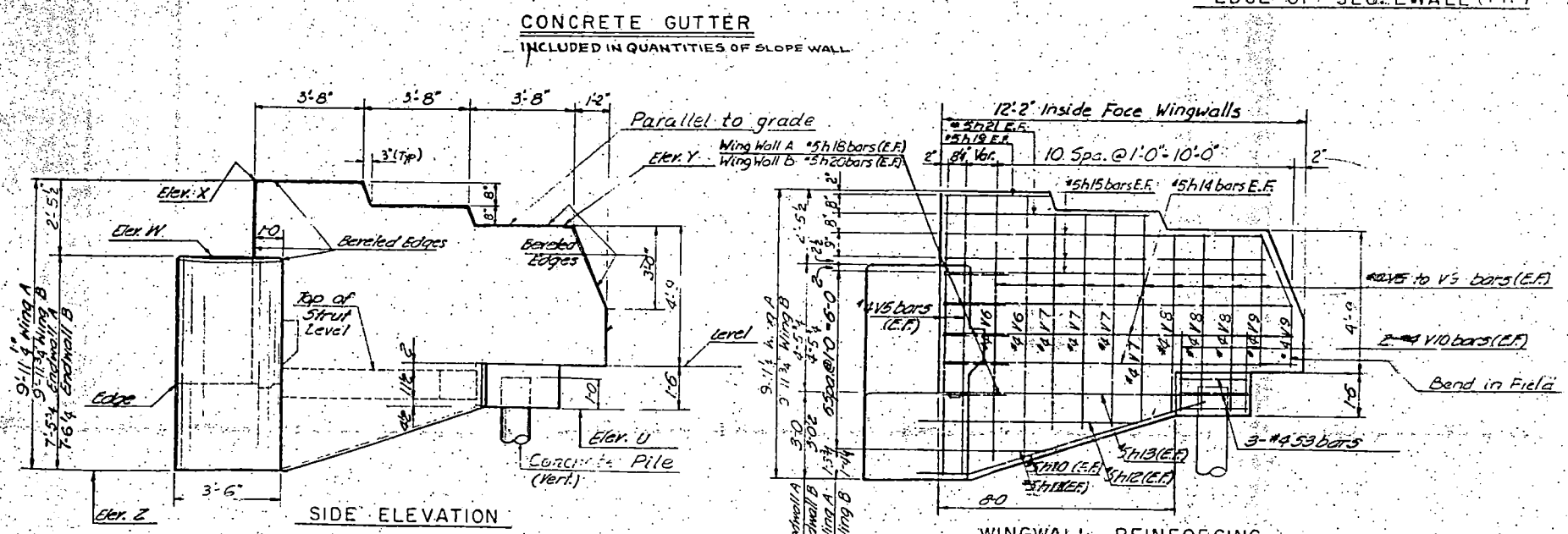
LONGITUDINAL SECTION



SECTION B-B



SECTION C-C
EDGE OF SLOPEWALL (TYP)

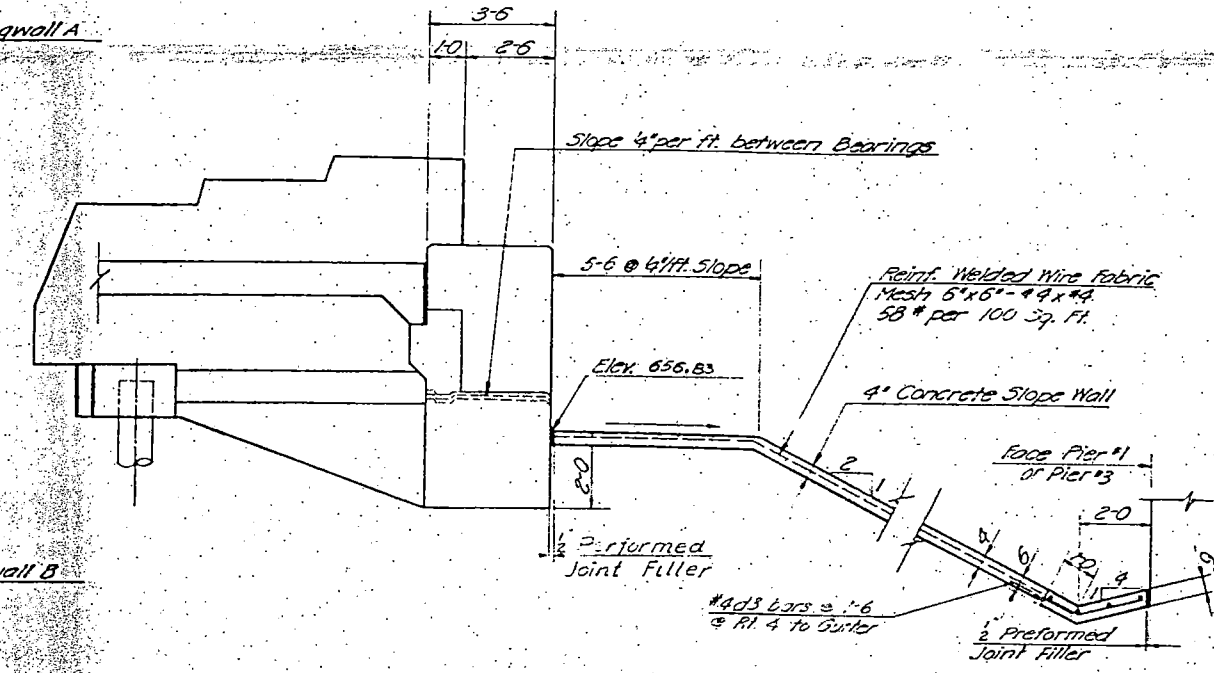


SIDE ELEVATION

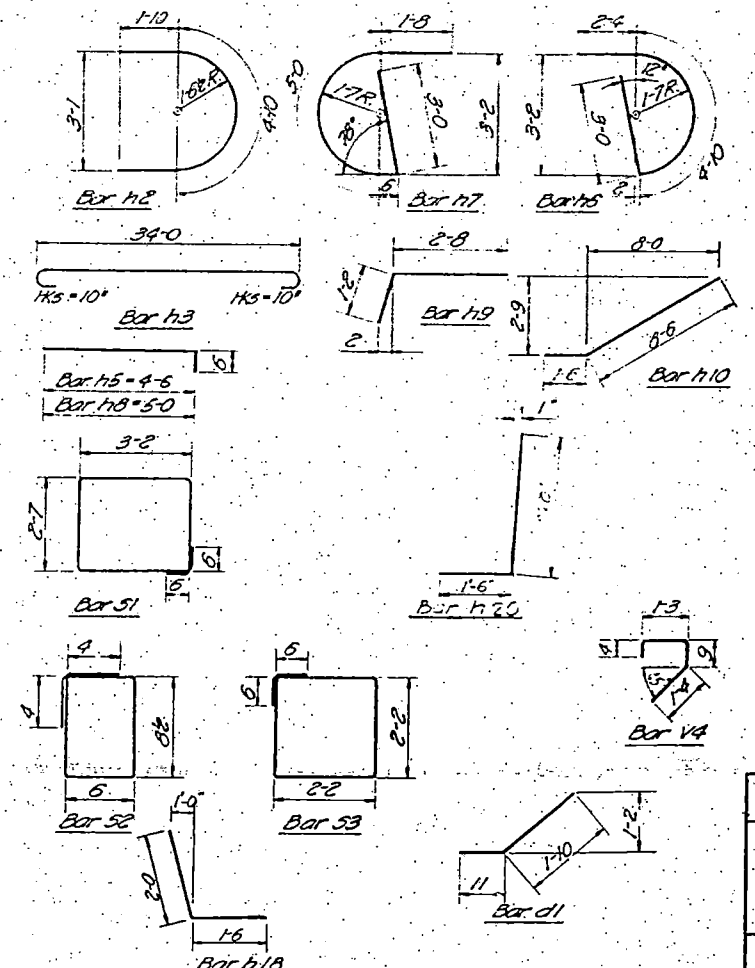
WINGWALL REINFORCING

Abutments	Berm Elev.	Bottom of Cop Beam	Crown Elev. Inside Face of Backwall	Wingwall A					Wingwall B					Bearing Seal Elev. (Top Conc.)			
				U	W	X	Y	Z	U	W	X	Y	Z	A	B	C	D
North Abut.	656.23	654.83	661.60	657.11	662.31	664.77	665.36	654.93	657.15	662.35	664.81	665.40	654.93	657.83	657.95	657.95	657.83
South Abut.	656.83	654.83	661.60	657.11	662.31	664.77	665.36	654.93	657.15	662.35	664.81	665.40	654.93	657.83	657.95	657.95	657.83

* 6" Spacing



SECTION A-A



BENDING DIAGRAMS
(All bar dimensions are out to out.)

F.A.L. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74-11-112	VERMILION	ILLINOIS	3	17

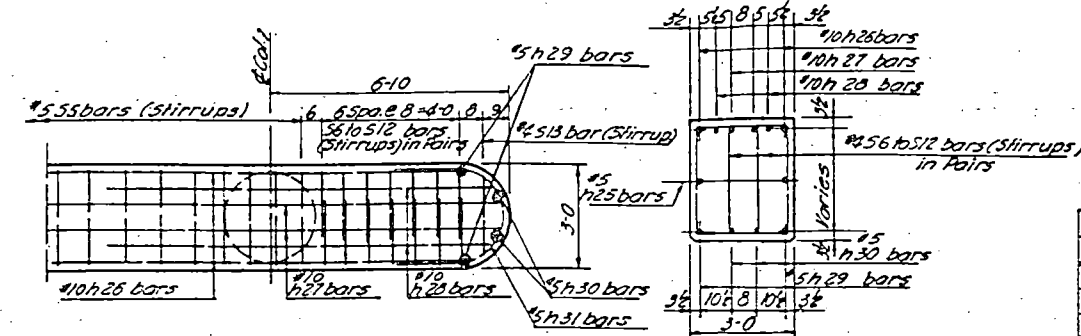
BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
h1	16	6	31-6	10	—
h2	16	6	8-6	10	—
h3	8	7	35-8	As Shown	—
h4	14	5	24-3	As Shown	—
h5	4	5	5-0	As Shown	—
h6	10	5	10-2	As Shown	—
h7	10	5	10-2	As Shown	—
h8	32	5	5-6	As Shown	—
h9	8	4	3-10	As Shown	—
h10	8	5	10-0	As Shown	—
h11	8	5	4-3	As Shown	—
h12	8	5	7-6	As Shown	—
h13	8	5	9-6	As Shown	—
h14	22	5	11-3	As Shown	—
h15	24	5	10-3	As Shown	—
h16	8	6	12-0	As Shown	—
h17	8	6	9-9	As Shown	—
h18	20	5	3-6	1-0	—
h19	8	5	3-2	As Shown	—
h20	20	5	3-6	1-0	—
h21	8	5	6-7	As Shown	—
h1	100	4	4-0	1-0	—
h2	16	4	6-0	1-0	—
h3	28	4	7-2	As Shown	—
h4	58	4	3-8	1-0	—
h5	16	4	8-8	As Shown	—
h6	16	4	9-3	1-0	—
h7	32	4	7-3	1-0	—
h8	24	4	3-10	1-0	—
h9	16	4	4-4	1-0	—
h10	16	4	3-0	1-0	—
* Field bend					
s1	56	5	12-6	As Shown	—
s2	16	5	3-1	2-0	—
s3	12	4	9-8	0-6	—
d1	72	4	2-9	2-0	—
d2	20	4	29-0	As Shown	—
d3	48	4	2-6	1-6	—

ABUTMENT QUANTITIES	
Class X Concrete	55.0 Cu. Yds.
Reinforcement Bars	6,130 Lbs.
Class A Excavation	44 Cu. Yds.
The above Quantities are for both Abutments	

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CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
TOWNSHIP RD. BRIDGE OVER FAI RT. 74
FAI-74 SECTION 92-11-HB2
VERMILION COUNTY STA. 1826+70.03

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
J.T.	J.T.	D.S.	R.L.F.			
			LDB	HSM	SER 2960	



SECTION B-B

BAR SCHEDULE						
Piers	Bar	No.	Size	Length	Spacing	Shape
1,2,3	f1	9	5	26-10	As shown	—
"	f2	84	5	7-6	As shown	—
"	d5	57	5	9-10	1-0	L
"	d6	10	5	4-1	Eq. Sp.	—
"	21	81	6	8-0	1-0	—
1,2,3	121	37	5	12-0	1-0	□
1,2,3	122	18	5	5-8	Eq. Sp.	—
1,2,3	123	48	9	16-8	Eq. Sp.	—
1,2,3	11	12	4	7-10	As shown	○
"	121	24	5	10-2	1-0	—
"	122	30	5	7-1	1-0	—
"	123	21	9	19-2	As shown	—
"	124	15	9	20-8	As shown	—
"	125	6	5	28-0	As shown	—
"	126	6	10	31-8	As shown	—
"	127	6	10	33-8	As shown	—
"	128	12	10	12-5	As shown	—
"	129	12	5	0-8	As shown	—
"	130	12	5	9-8	As shown	—
"	131	12	5	7-7	As shown	—
1,2,3	55	63	5	13-6	1-0	□
1,2,3	56-513	90 *	4	*	0	□
1,2,3	5P1	6	5	*	As shown	○

ITEM	QUANTITIES	
Class X Concrete	152.7	Cu. Yds
Reinforcement bars	15,340	Lbs.
Class A Excavation	638	Cu. Yds
Name Plate	2	Each

Pier #1	20¢ 15' =	300	Lin. Ft.
Pier #2	21¢ 15' =	315	Lin. Ft.
Pier #3	19¢ 15' =	285	Lin. Ft.
Total		900	Lin. Ft.

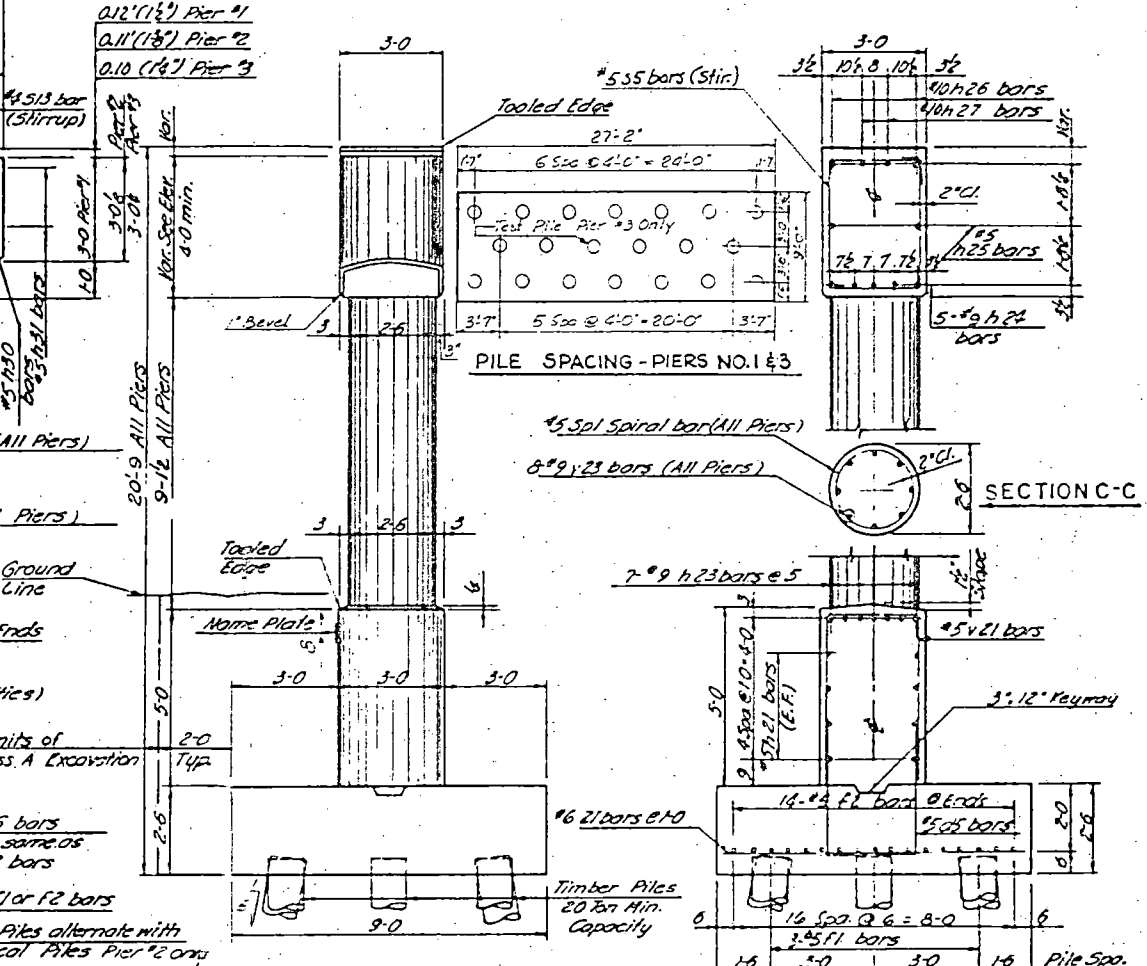
Test Pile Pier #3 only one Each.

20 Ton Min Capacity

Pier	A	B	C	D
Pier #1	656.07	656.19	656.19*	656.09
Pier #2	656.28	656.39	656.39	656.28
Pier #3	656.09	656.19*	656.19	656.07

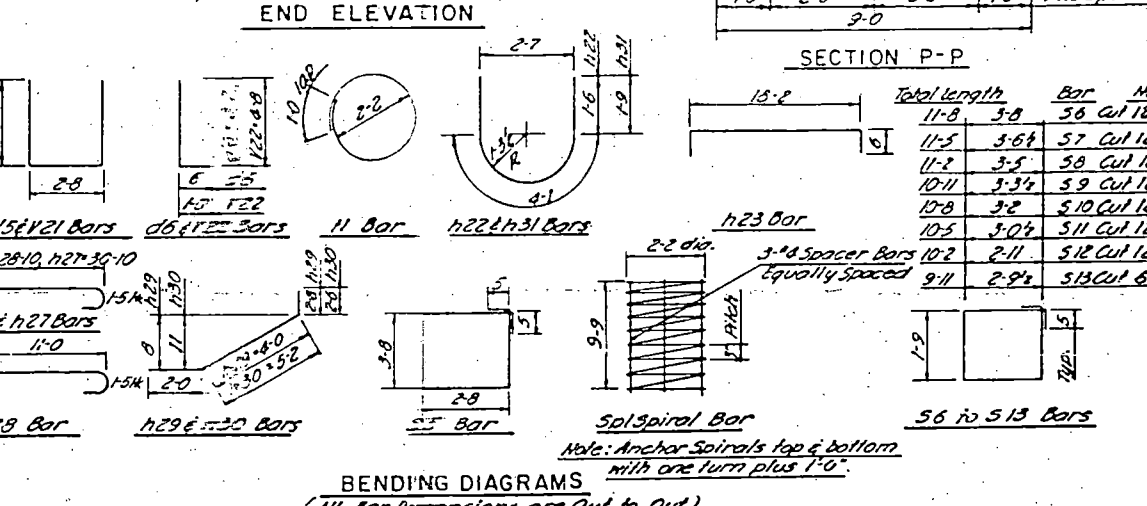
- *h'* Shim Plate

			LDB	USM SEP2060
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SECTION P-P

(Piers #1, 223)

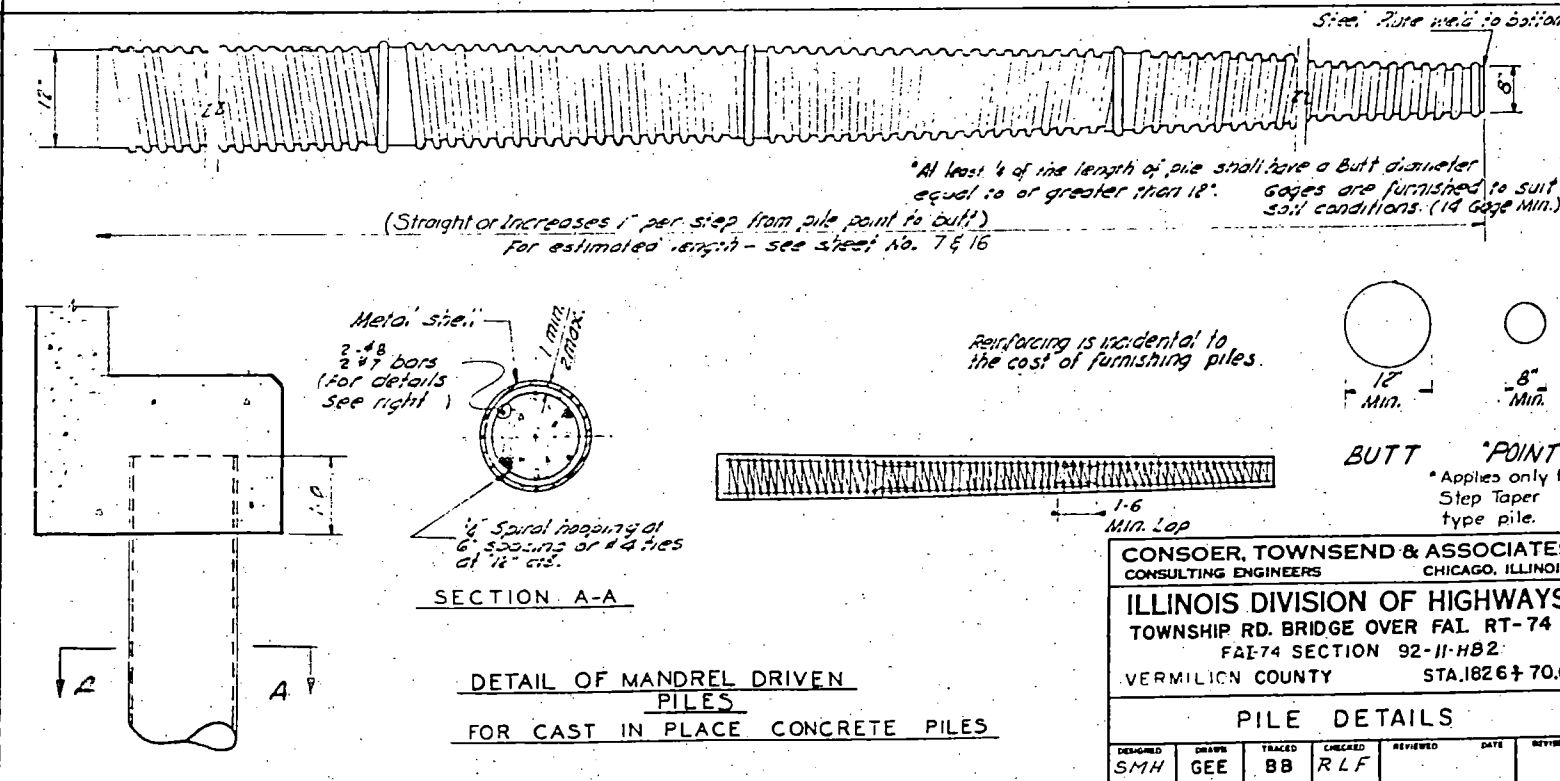
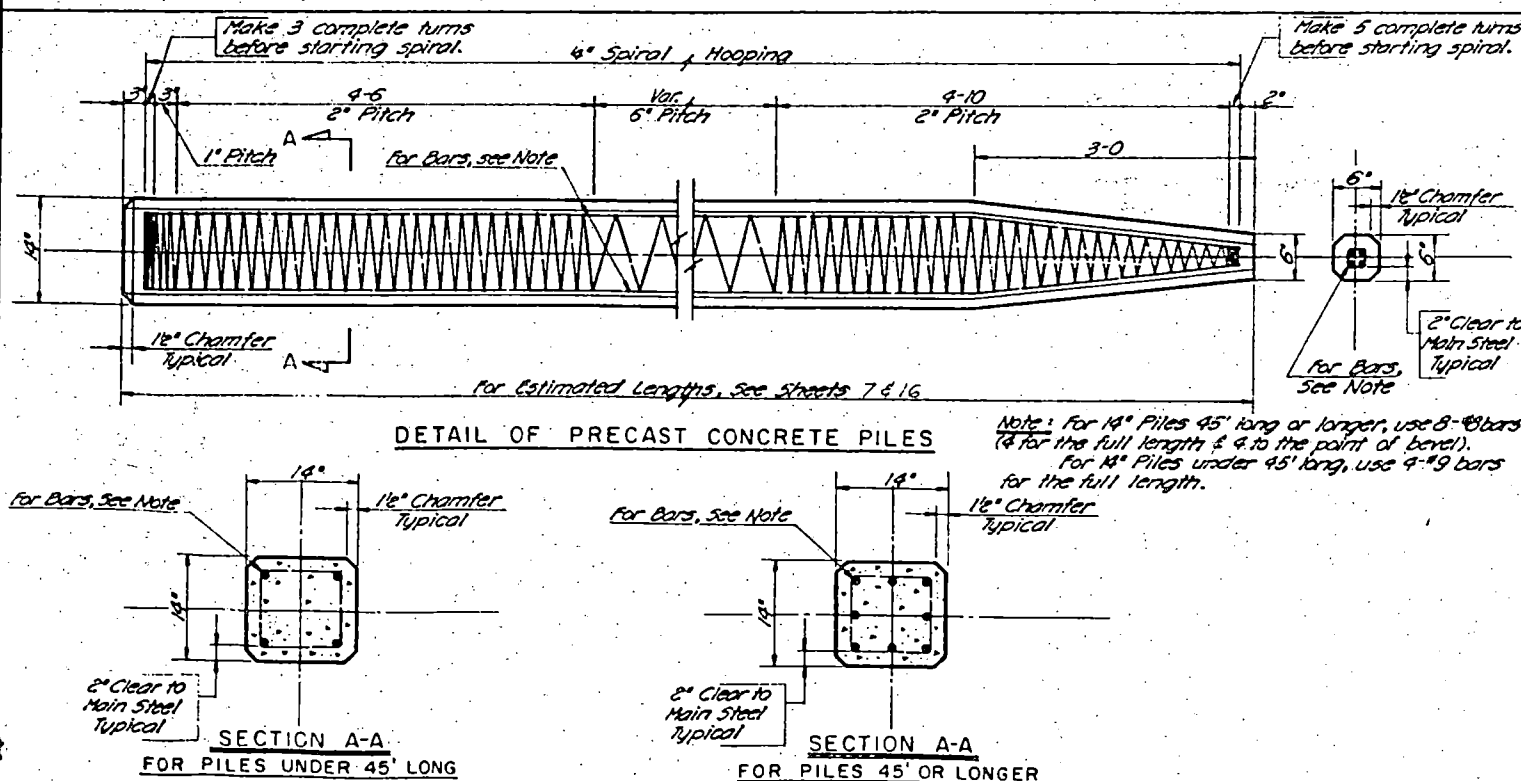
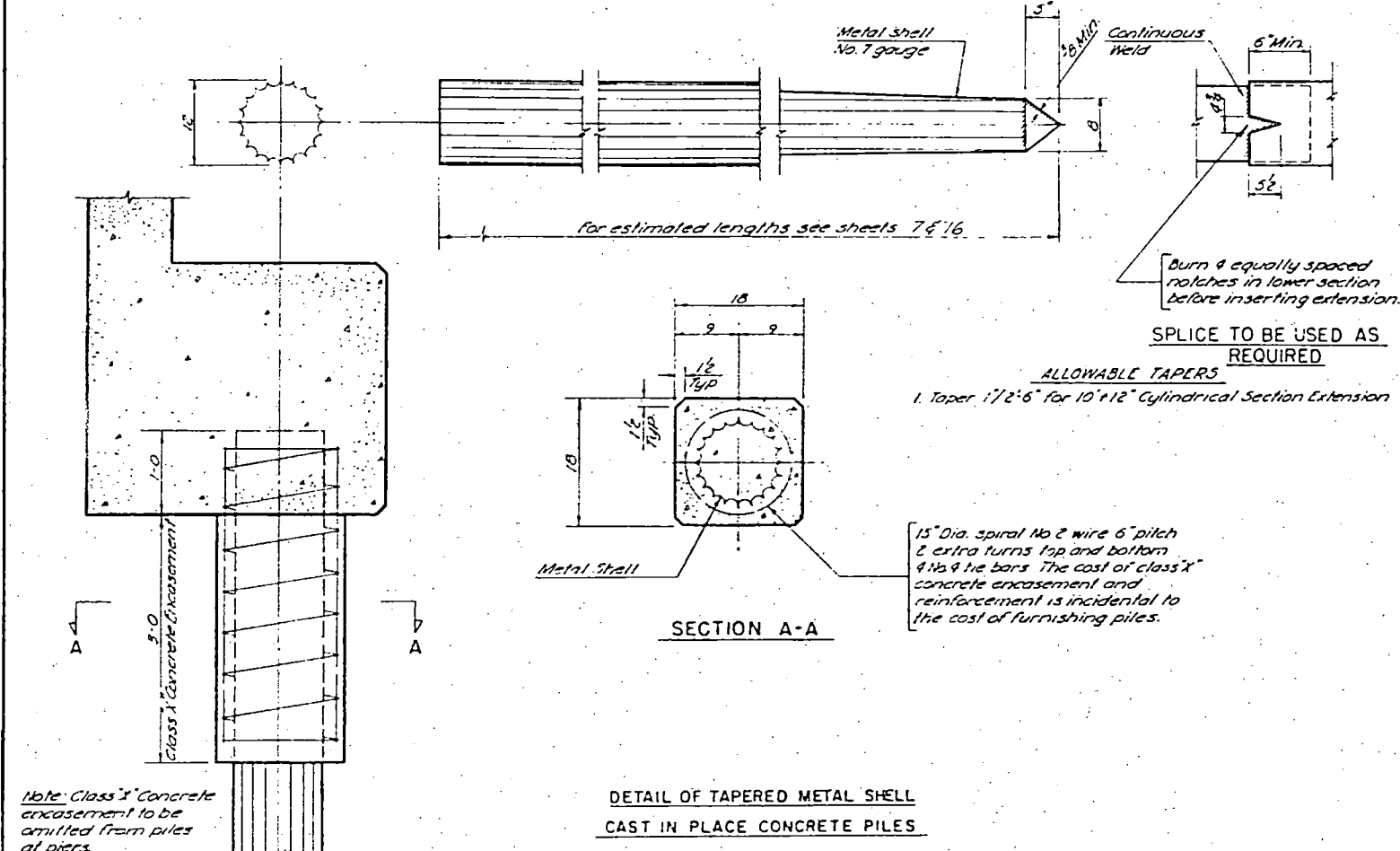
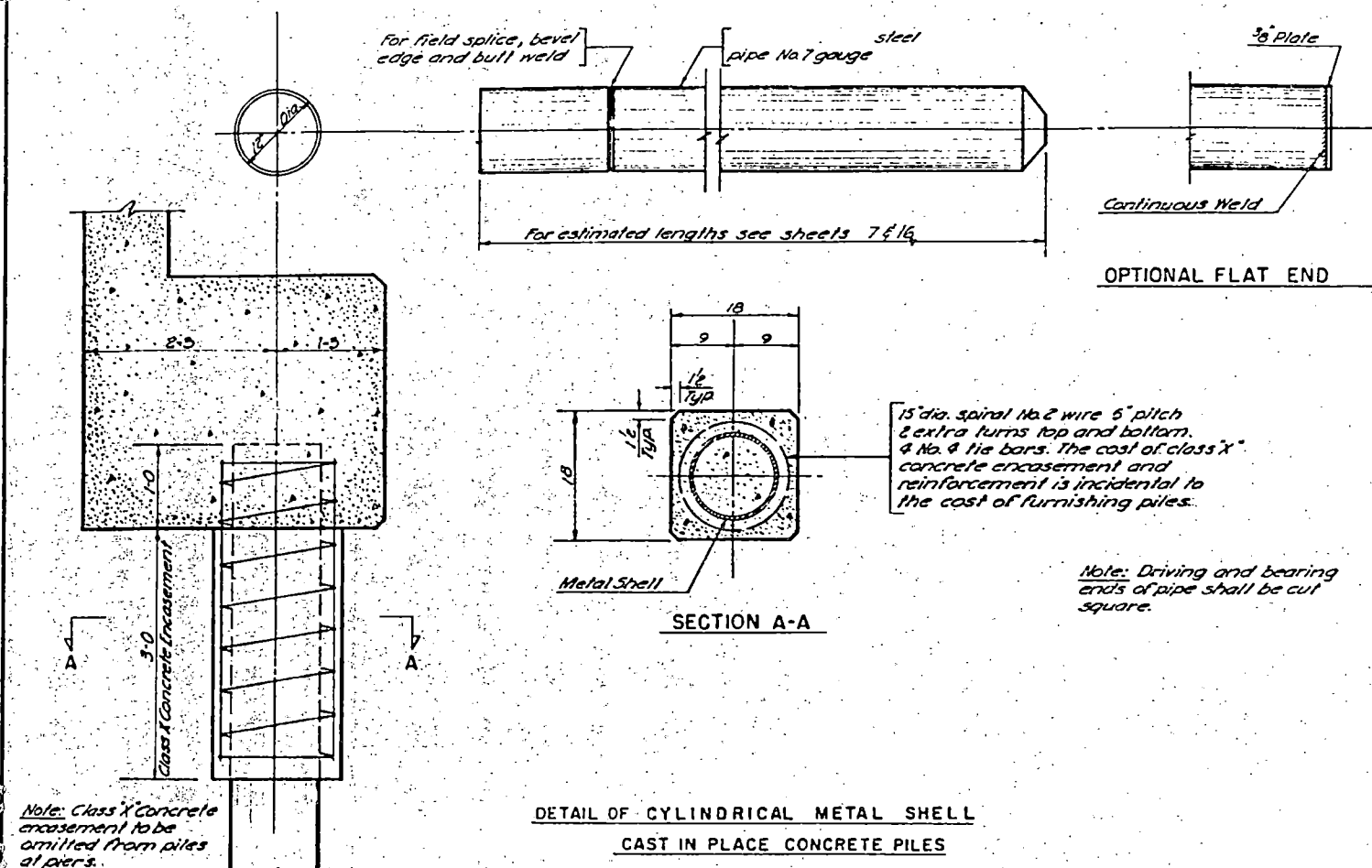


BENDING DIAGRAMS *with one*
(All Bar Dimensions are Out to Out)

SECTION F-F
(Reinforcement Shown for Piers #1, 2 & 3. Pile
Spacing Shown for Pier #2 Only)

SMH	J.T.	J.T.	RLF	
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FALL RITE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	VERMILION	37	19	
FEDERAL ROAD DISTRICT NO. 7 ILLINOIS PROJ.				



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ILLINOIS DIVISION OF HIGHWAYS TOWNSHIP RD. BRIDGE OVER ILL. RT-74 F&E-74 SECTION 92-11-HB2 VERMILION COUNTY STA. 182.67-70.03					
PILE DETAILS					
DESIGNED SMH	DRAWN GEE	TRACED BB	CHECKED RLF	REVIEWED LDB	DATE HSM, SEP. 29, 60