

**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID HIGHWAY**

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	1
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT I-05-6(12)		



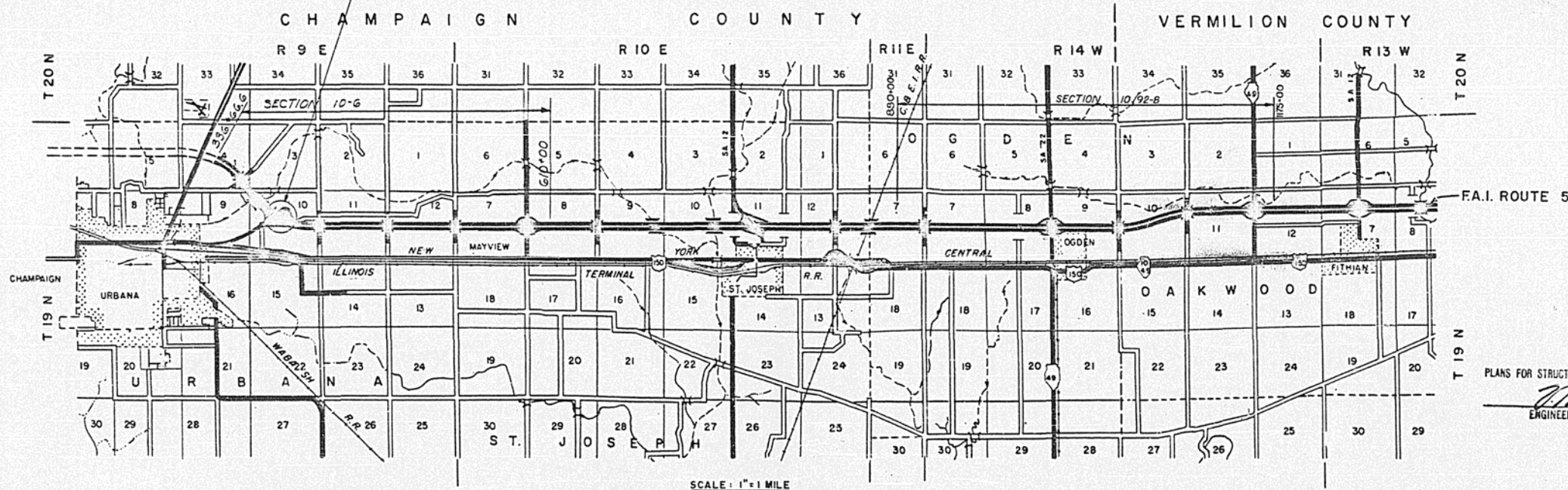
SCALES { PLAN 1 INCH = 100 FT  
 PROFILE HOR 1 INCH = 100 FT  
 PROFILE VERT 1 INCH = 10 FT  
 CROSS SECTIONS 1 INCH = 5 FT

*official copy*  
*REVISED*

**F.A.I. ROUTE 5, SECTION 10-6HB-1 CHAMPAIGN COUNTY**  
**PROJECT I-05-6(12)**



SECTION 10-6HB-1 INCLUDES A 4 SPAN PRECAST  
 PRETENSIONED CONCRETE I BEAM GRADE SEPARATION  
 STRUCTURE, SPANS 40'-0", 60'-0", 74'-0", 40'-0" AT  
 STATION 399+80.13



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

SUBMITTED Sept 25, 1958  
 J. T. Cychol  
 DISTRICT ENGINEER

EXAMINED Feb 25, 1959  
 R. W. ...  
 CHIEF OF ROAD PLANS AND CONTRACTS

PASSED Feb 25, 1959  
 ...  
 CHIEF OF DIVISION

APPROVED Feb 25, 1959  
 ...  
 CHIEF OF BUREAU

APPROVED Feb 25, 1959  
 ...  
 DIRECTOR

PLANS FOR STRUCTURES EXAMINED SEPT. 29 1958  
 M. ...  
 ENGINEER OF BRIDGE & TRAFFIC STRUCTURES

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

APPROVED  DATE

DIVISION ENGINEER DATE

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

989  
*Arthur W. Consoer*

SHEETS 2, 3, & 6 CORRECTED  
 MAY 12, 1959 CTD

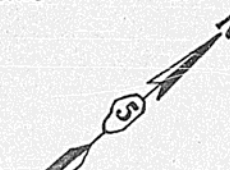


ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
10-6HB-1	CHAMPAIGN	ILLINOIS	24	3
STA. 37100	TO STA. 54170			
FED. ROAD DIST. No. 7		ILLINOIS	FED. AID PROJECT	

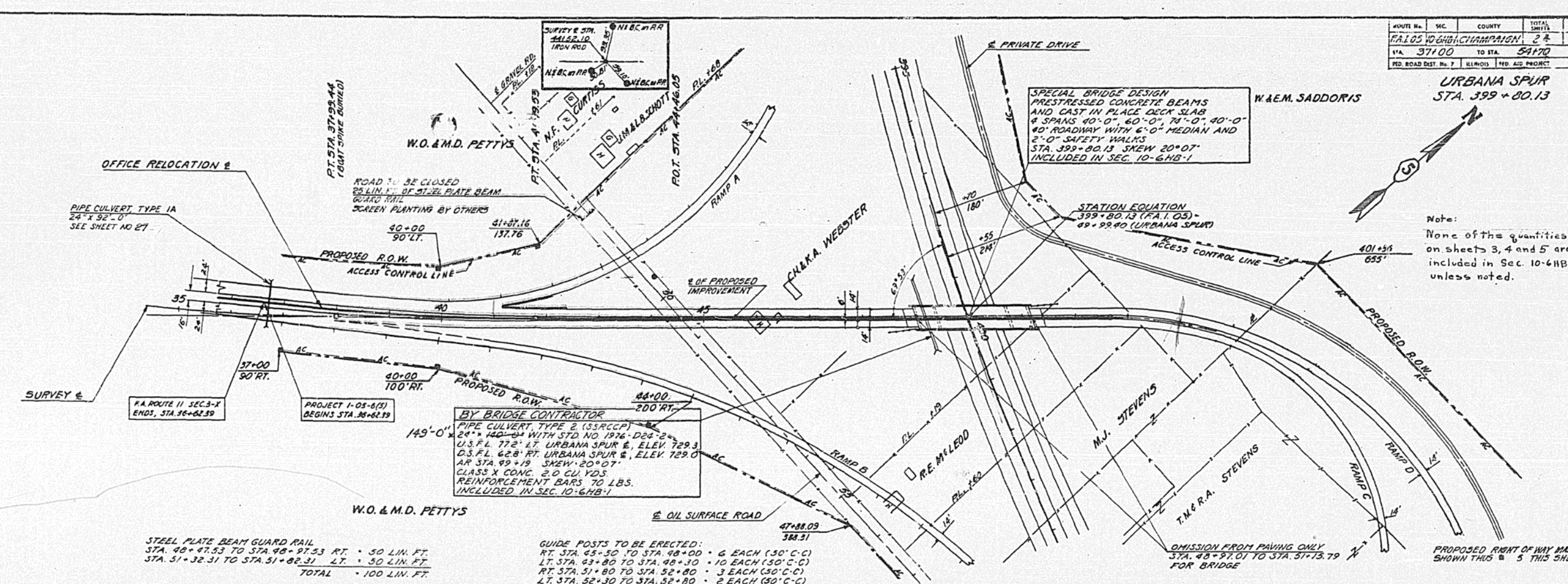
URBANA SPUR  
STA. 399 + 80.13

W.A.E.M. SADDORIS

SPECIAL BRIDGE DESIGN  
PRESTRESSED CONCRETE BEAMS  
AND CAST IN PLACE DECK SLAB  
4 SPANS 40'-0", 60'-0", 74'-0", 40'-0"  
40'-0" ROADWAY WITH 6'-0" MEDIAN AND  
2'-0" SAFETY WALKS  
STA. 399 + 80.13 SKEW 20° 07'  
INCLUDED IN SEC. 10-6HB-1



Note:  
None of the quantities shown  
on sheets 3, 4 and 5 are  
included in Sec. 10-6HB-1  
unless noted.



STEEL PLATE BEAM GUARD RAIL  
STA. 40 + 47.53 TO STA. 49 + 97.53 RT. • 50 LIN. FT.  
STA. 51 + 32.31 TO STA. 51 + 82.31 LT. • 50 LIN. FT.  
TOTAL • 100 LIN. FT.

GUIDE POSTS TO BE ERECTED:  
RT. STA. 45 + 30 TO STA. 48 + 00 • 6 EACH (30' C-C)  
LT. STA. 43 + 80 TO STA. 48 + 30 • 10 EACH (30' C-C)  
RT. STA. 51 + 80 TO STA. 52 + 80 • 3 EACH (30' C-C)  
LT. STA. 52 + 30 TO STA. 52 + 80 • 2 EACH (30' C-C)  
TOTAL • 21 EACH

OMISSION FROM PAVING ONLY  
STA. 48 + 97.01 TO STA. 51 + 13.79  
FOR BRIDGE

PROPOSED RIGHT OF WAY MARKERS  
SHOWN THIS SHEET

DATE: 2-57  
BY: RANNEY, DANV/DSON  
CHECKED: R.T. OF WAY CHECKED  
NO.

DATE: 2-57  
BY: RANNEY, DANV/DSON  
CHECKED: R.T. OF WAY CHECKED  
NO.

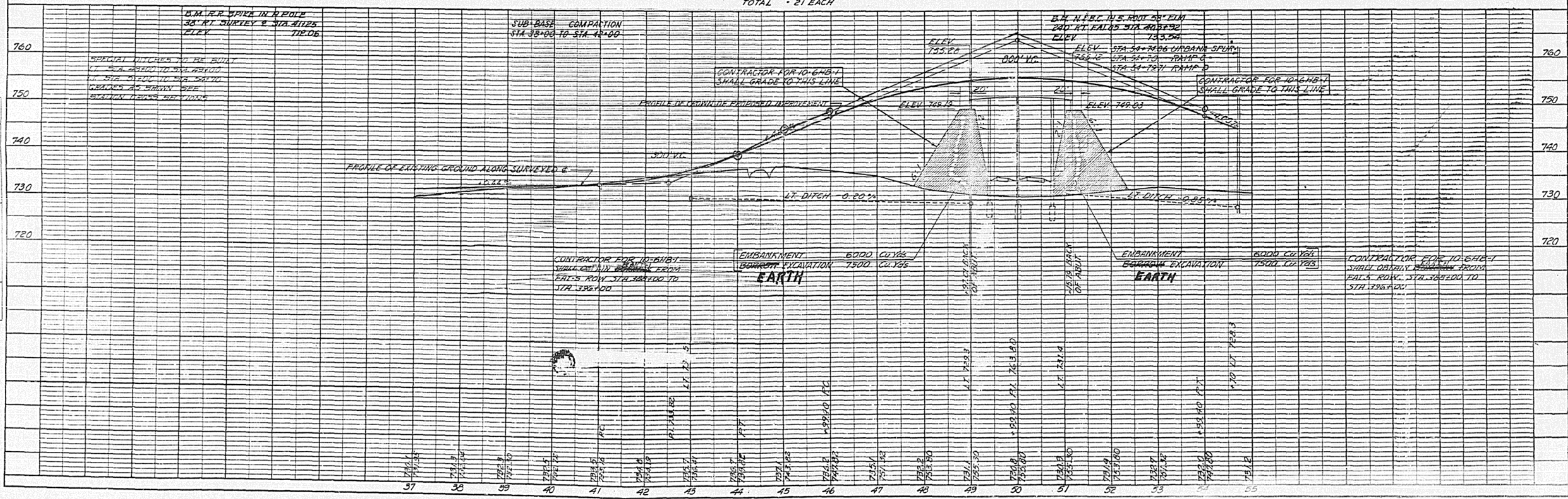
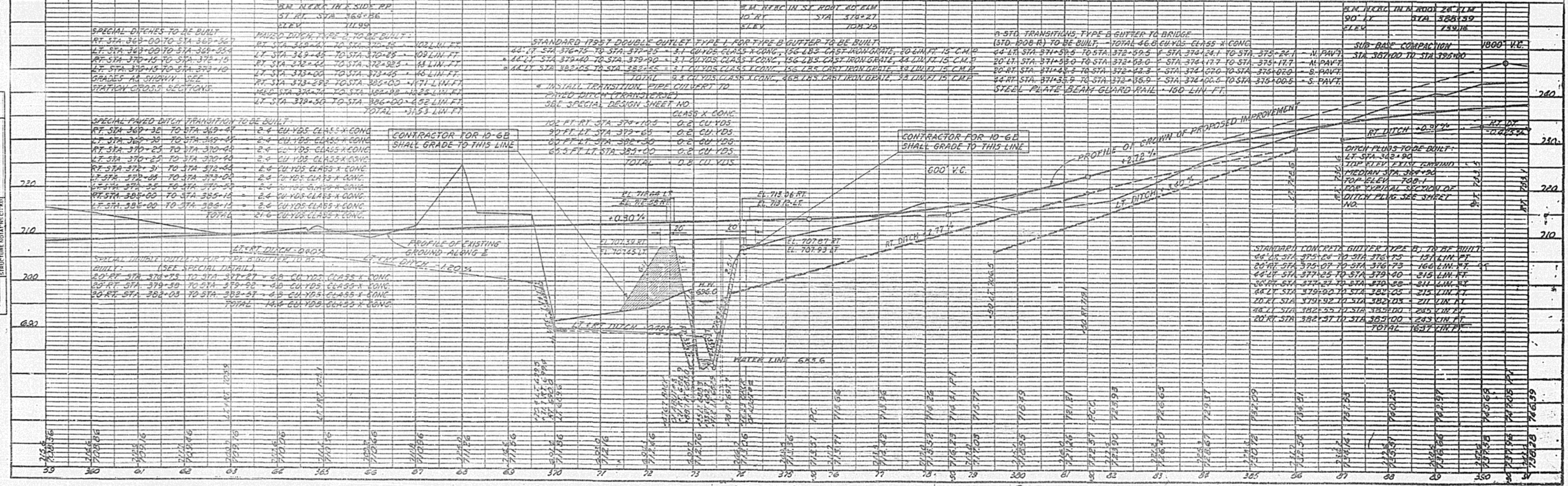
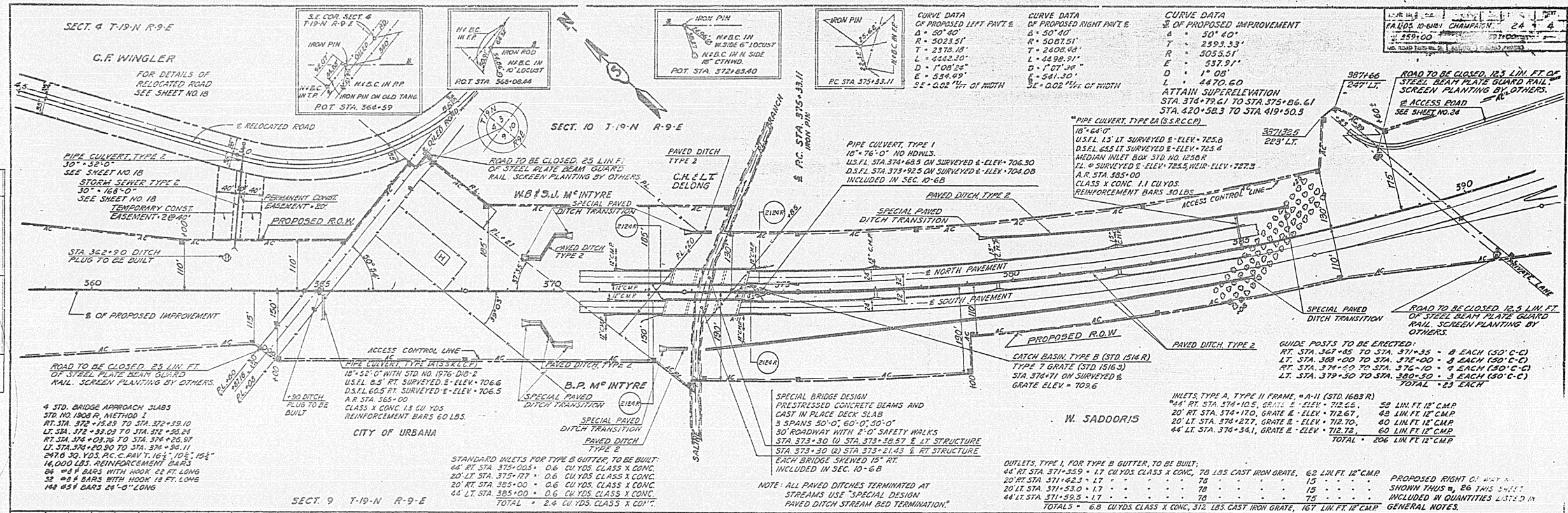


PLATE 1 - PLAN - PROFILE

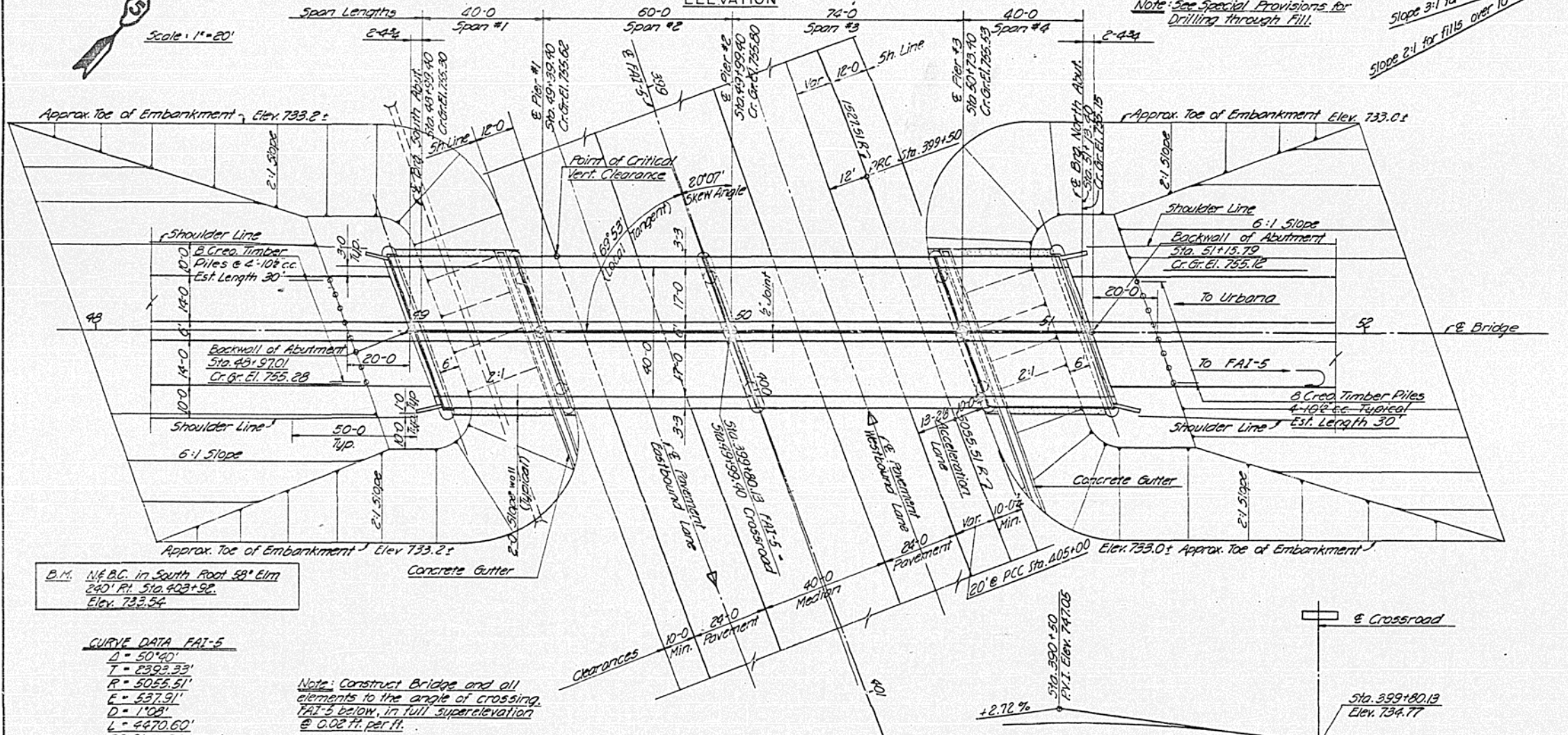
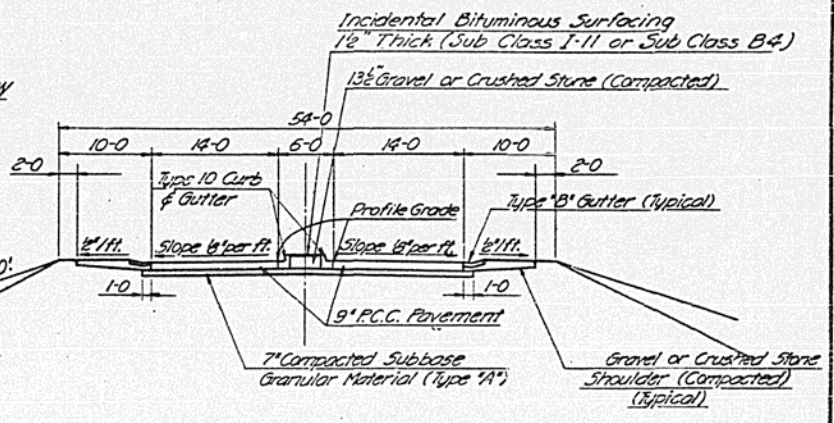
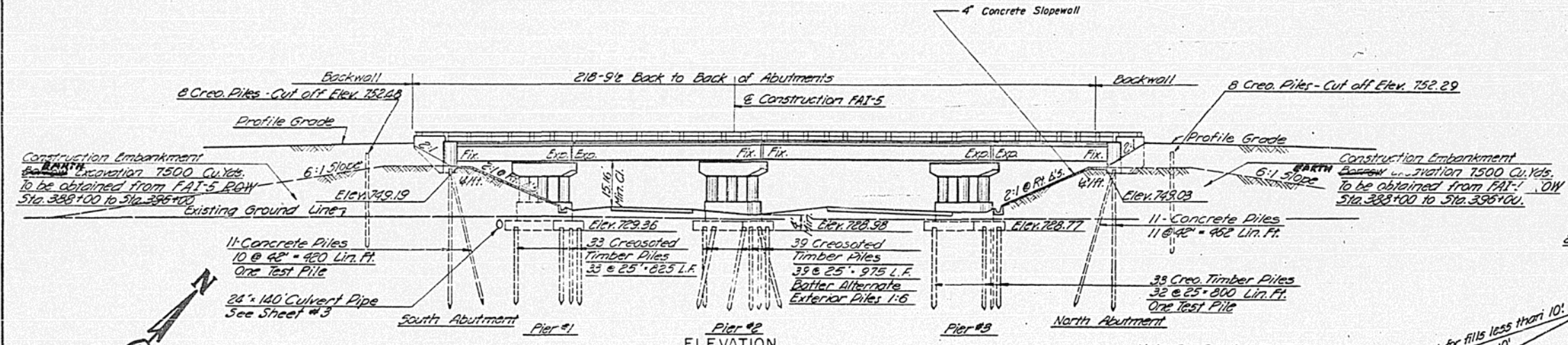
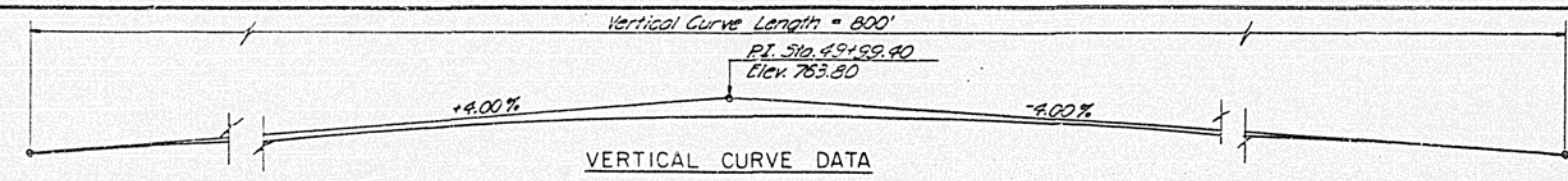
DESIGNED BY  
 CHECKED BY  
 DATE  
 NO. 2

DESIGNED BY  
 CHECKED BY  
 DATE  
 NO. 2

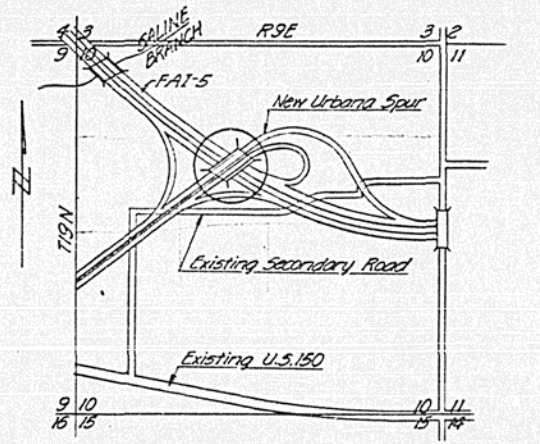




F.A.I. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	6
FEDERAL ROAD DISTRICT NO. 7		F.L.S.H. NO.	PROJ.	



TYPICAL APPROACH ROADWAY CROSS SECTION



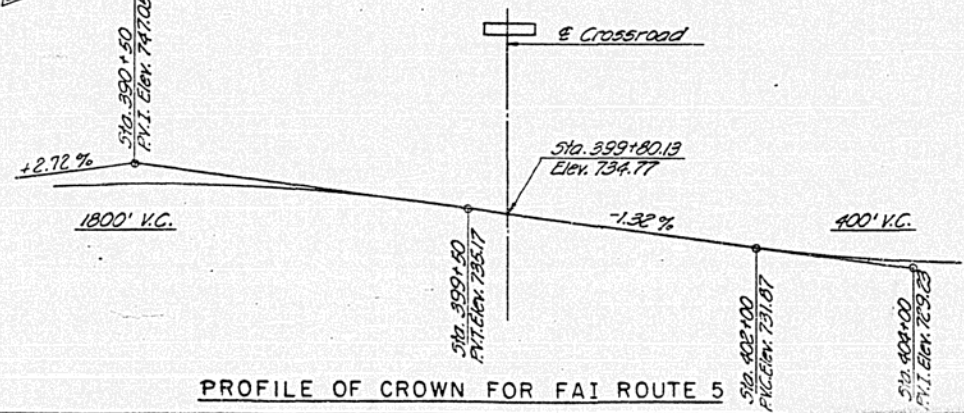
BRIDGE LOCATION  
Design Loading This Structure H20-516-44  
Roadway Classification C

D.M. N.E. BC. in South Root 58' Elm  
240' PI. Sta. 403+92  
Elev. 733.54

**CURVE DATA FAI-5**  
 Δ = 50°40'  
 T = 2393.33'  
 R = 5055.51'  
 E = 537.91'  
 D = 1°02'  
 L = 4470.60'  
 P.C. Sta. 375+23.11  
 P.I. Sta. 392+26.44  
 P.T. Sta. 420+03.71 Back = Sta. 420+03.00 Ahead  
 S.E. = 0.02 ft. per ft.

Note: Construct Bridge and all elements to the angle of crossing, FAI-5 below, in full super-elevation @ 0.02 ft. per ft.

PLAN



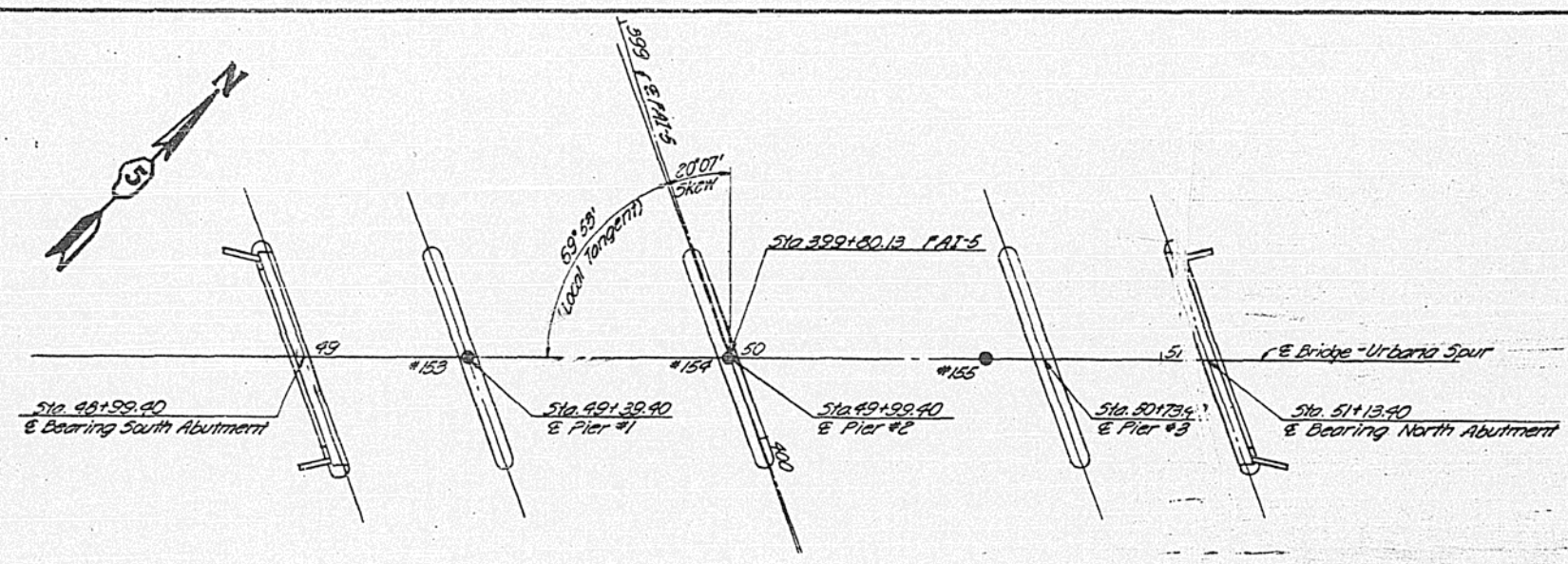
PROFILE OF CROWN FOR FAI ROUTE 5

**CONSOER, TOWNSEND & ASSOCIATES**  
 CONSULTING ENGINEERS CHICAGO, ILLINOIS  
**ILLINOIS DIVISION OF HIGHWAYS**  
 URBANA SPUR OVER FAI-5  
 FAI-5 SECTION 10-6HB-1  
 CHAMPAIGN COUNTY STA. 399+80.13

GENERAL PLAN B LOCATION

DESIGNED	DRAWN	TRACES	CHECKED	REVISED	DATE	REVISION
JWH	JWH	DS	LOB	EB		
			CWY	HSM	6-24-58	

F.A.L. RITE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	D 6HB-1	CHAMPAIGN	24	7
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		



PLAN OF BORING LOCATION

CLASSIFICATION	Pr	Qu	Qp
Elev. 733.2			
Top Soil - Black Loose	-0.5		
Clay - Some Silt - Trace of Sand - Dk. Br. Tough	-2.0	7	1.9
Clay - Some Silt - Trace of Sand - Br. & Gr. Very Tough	-4.0		2.2
Clay - Some Silt - Trace of Sand - Br. & Gr. Very Tough	-6.0		1.5
Clay & Silt - Some Sand - Trace of Gravel - Br. & Gr. Tough	-9.0		0.80
Clay - Some Silt & Sand - Trace of Gravel - Br. & Gr. Stiff			2.6
Silt & Clay - Some Sand - Brown & Gray - Dense	-13.5		
		1.0	
Silt - Some Sand - Trace of Clay - Gray - Dense			
	59		
	-23.5		
Clay - Some Silt - Trace of Sand - Blue - Very Tough	20		3.0
	-32.0	26	2.1

BORING # 153

CLASSIFICATION	Pr	Qu	Qp
Elev. 733.0			
Top Soil - Black Loose	-1.0		
Clay - Some Silt - Trace of Sand - Br. & Gr. Tough		1.9	2.7
Clay - Some Silt - Trace of Sand - Br. & Gr. Tough	-6.0	1.8	
Clay - Some Silt & Sand - Brown & Gray - Stiff	-9.0		0.55
Silt - Some Clay & Sand - Brown - Very Tough			2.7
	-13.5		
Silt - Some Sand - Trace of Clay - Gray - Dense			2.1
	-18.5		
Silt - Some Sand - Trace of Clay - Gray - Very Dense	67		
	-23.5		
Silt - Some Sand - Trace of Clay - Gray - Dense (Coarse Sand Seams)	57		
	-28.5		
Clay - Some Silt & Sand - Blue - Very Tough	39		3.0
	-33.5		
Silt & Sand - Some Clay - Trace of Gravel - Gray - Medium Dense	15		
	-38.5		
Clay - Some Silt - Trace of Sand - Blue - Very Tough	19		2.0
	-47.0	15	2.0

BORING # 154

CLASSIFICATION	Pr	Qu	Qp
Elev. 733.0			
Top Soil - Black - Loose	-1.0		
Clay - Some Silt - Trace of Sand - Br. & Gr. Tough	-4.0		
Clay - Some Silt - Trace of Sand - Br. & Gr. Very Tough	-6.0	2.0	
Clay - Some Silt & Sand - Trace of Gravel - Brown & Gray - Stiff	-9.0		0.90
Silt & Clay - Some Sand - Brown - Medium Dense			1.5
	-13.5		
		0.95	
Silt - Some Sand - Trace of Clay - Gray - Medium Dense			
	26		
	-23.5		
Silt - Some Clay & Sand - Trace of Gravel - Gray - Medium Dense	67		4.5+
	-32.0	63	

BORING # 155

Note:  
 \* Denotes approximate location of borings.  
 Boring data shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.  
 Borings taken May, 1957.

Pr = Number of blows shown indicates number of blows required to drive a 2" O.D. Sampling pipe for penetration of one ft., using a 140 lb weight falling 30 inches.

Qp = Approximate unconfined compressive strength as determined by a Calibrated Penetrometer (T/Sq. Ft.)

Qu = Unconfined compressive strength (T/Sq. Ft.)

CONSOER, TOWNSEND & ASSOCIATES  
 CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
 URBANA SPUR OVER FAI-5  
 FAI-5 SECTION 10-6HB-1  
 CHAMPAIGN COUNTY STA. 399+80.13

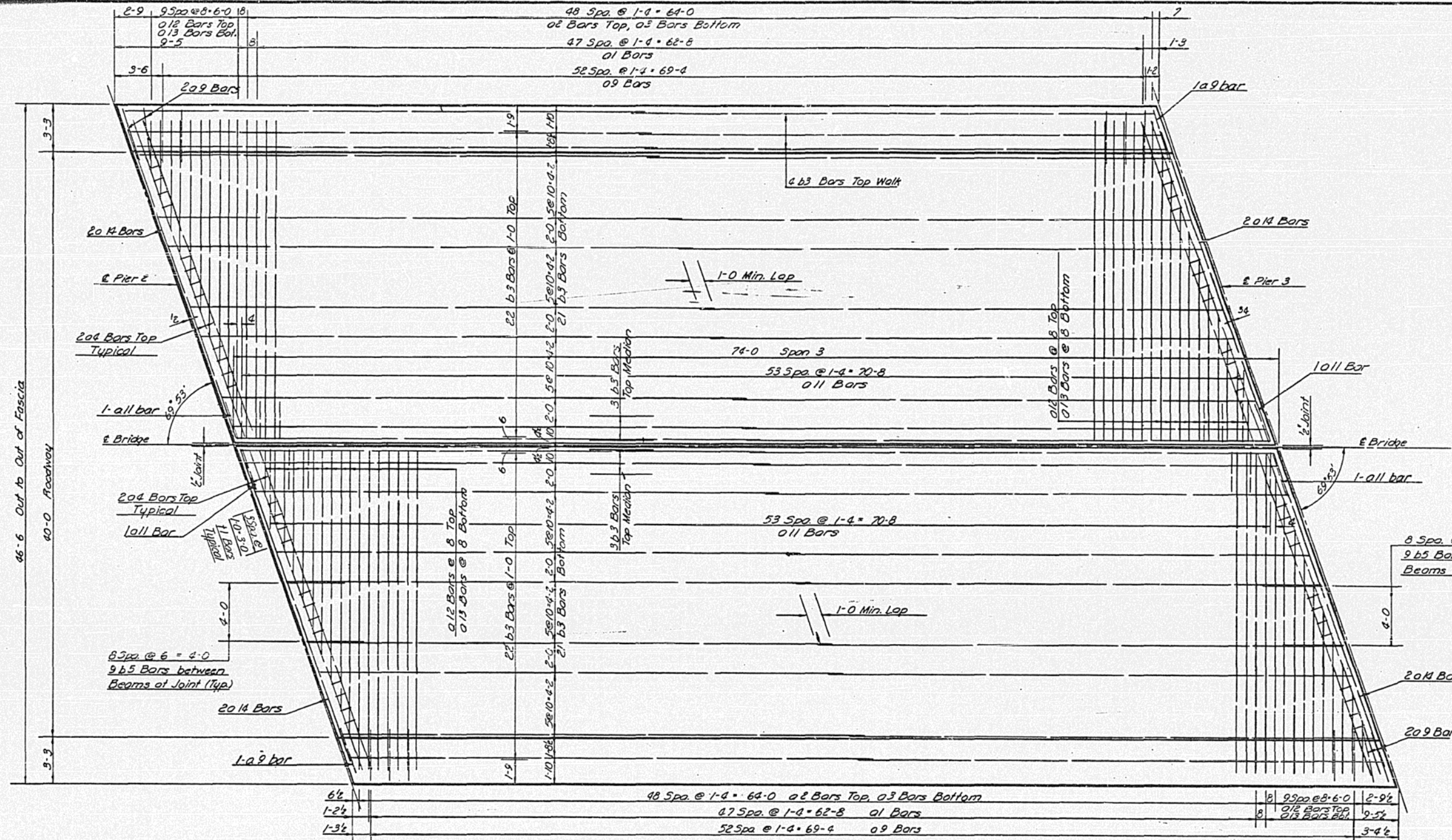
BORING LOGS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	SYMBOL
	IH	IH	JH LDB	CW.H.	HSM 6-28-58	





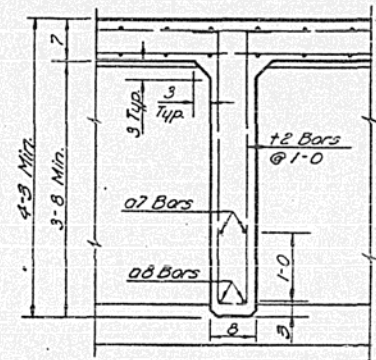
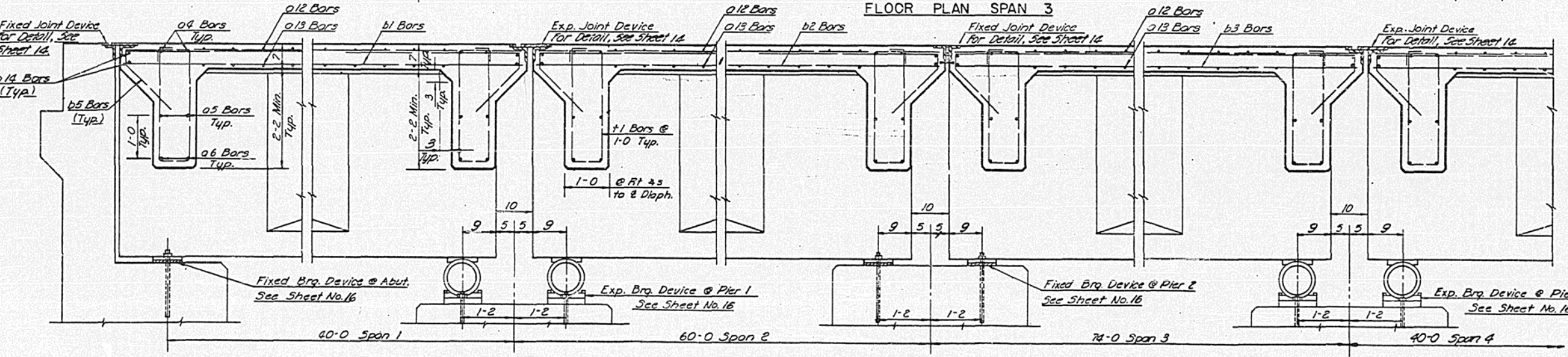
F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	9
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



Note: Where a12 & a13 Bars are placed in the skew end of the deck slab they shall be cut in the field and the two parts of the bar placed in diagonal corners.

8 Sp. @ 6" = 4'-0"  
9 b5 Bars between Beams at Joint (Typ)

8 Sp. @ 6" = 4'-0"  
9 b5 Bars between Beams at Joint (Typ)



TYPICAL INTERMEDIATE DIAPHRAGM  
For Spacing, See Plan of Girders and Diaphragms - Sheet No. 13.

TYPICAL PART LONGITUDINAL SECTION

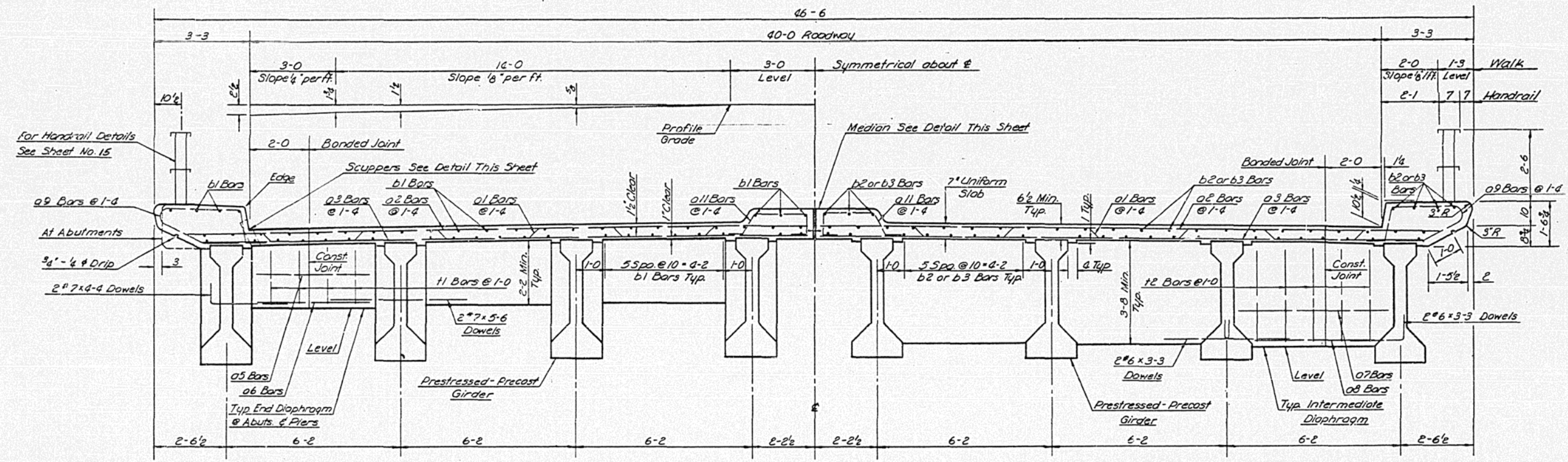
**CONSOER, TOWNSEND & ASSOCIATES**  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

**ILLINOIS DIVISION OF HIGHWAYS**  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+60.7

**SUPERSTRUCTURE FLOOR PLAN**

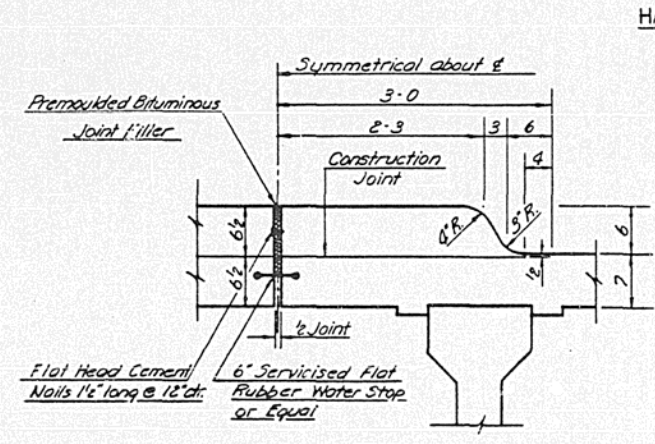
DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
EB	RLF	RLF	JWH LDB CWW	HSM 6-20-58	

F.A.I. DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-64B-1	CHAMPAIGN	24	10
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	

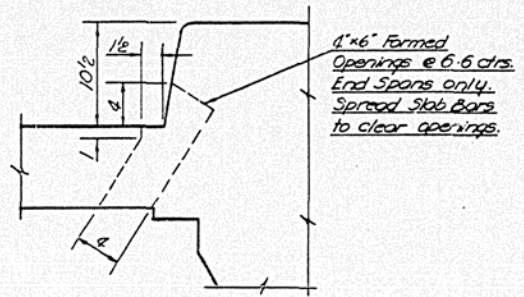


BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
a1	268	5	22-10	1-4	~
a2	270	5	21-11	1-4	~
a3	270	5	21-3	1-4	~
a4	32	7	23-6	As Shown	~
a5	96	4	4-3	"	~
a6	96	7	4-3	"	~
a7	84	4	5-4	"	~
a8	84	6	4-3	"	~
a9	320	4	7-10	1-4	~
a10	10	4	8-3	1-4	~
a11	332	4	4-7	1-4	~
a12	80	5	23-10	0-8	~
a13	80	5	23-3	0-8	~
a14	32	5	22-5	As Shown	~
b1	400	4	21-0	As Shown	~
b2	200	4	30-4	"	~
b3	200	4	37-4	"	~
b4	4	4	2-6	"	~
b5	432	5	5-8	0-6	~
f1	192	4	7-2	1-0	U
f2	210	4	9-3	1-0	U

SUPERSTRUCTURE QUANTITIES	
Class X Concrete	377.1 Cu Yds
Reinforcement Bars	28,860 Lbs.
Prestressed Concrete Beams (42 Depth) / 1707 Lin. Ft.	



MEDIAN DETAIL

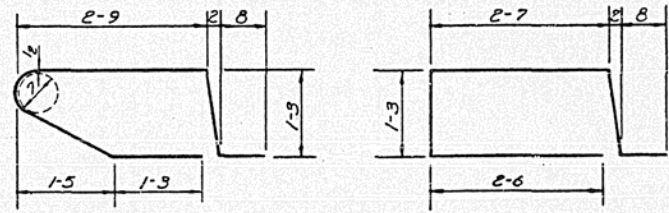
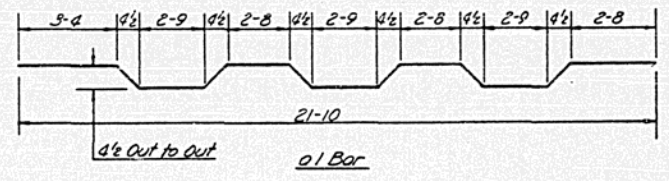


SCUPPER DETAIL

TYPICAL DECK SECTION

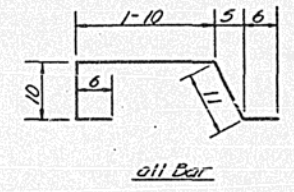
Note: For Girder Layout and Designation See Sheet No. 13 For Reinforcing in Girders See Sheet No. 11 & 12

HALF SECTION INTERIOR SPAN

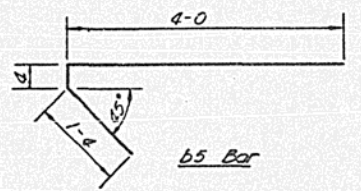


a9 Bar

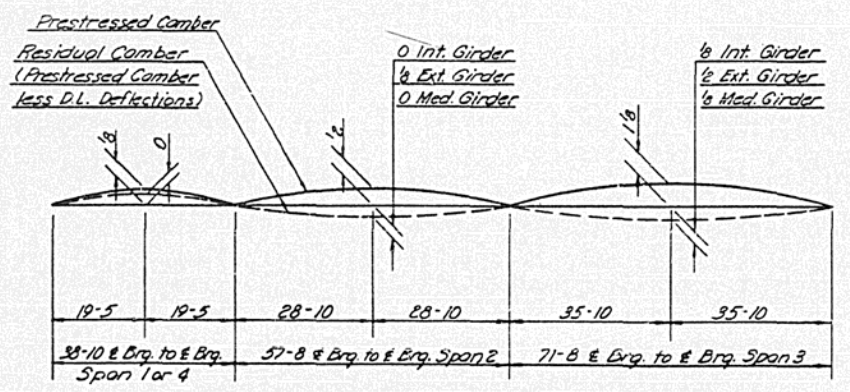
a10 Bar



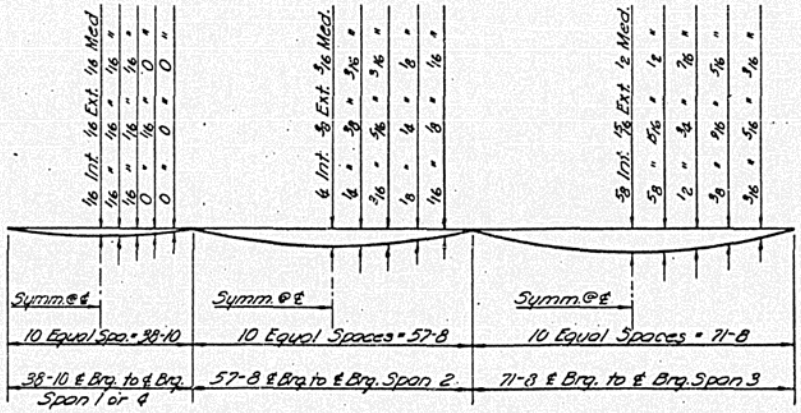
a11 Bar



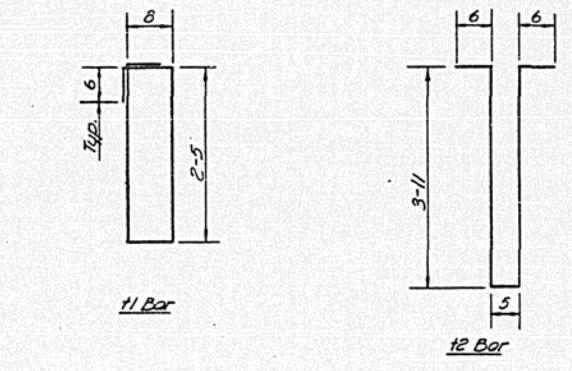
b5 Bar



TOTAL DEAD LOAD DEFLECTION CAMBER DIAGRAM



SLAB DEAD LOAD DEFLECTION



f1 Bar

f2 Bar

BENDING DIAGRAMS  
(All Reinforcing Bar Dimensions are Out to Out)

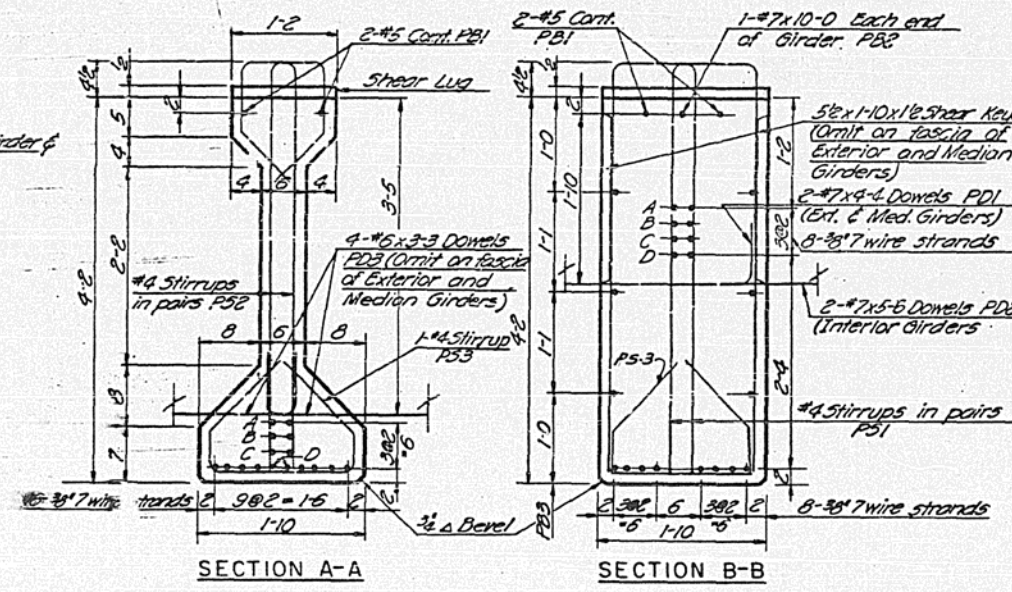
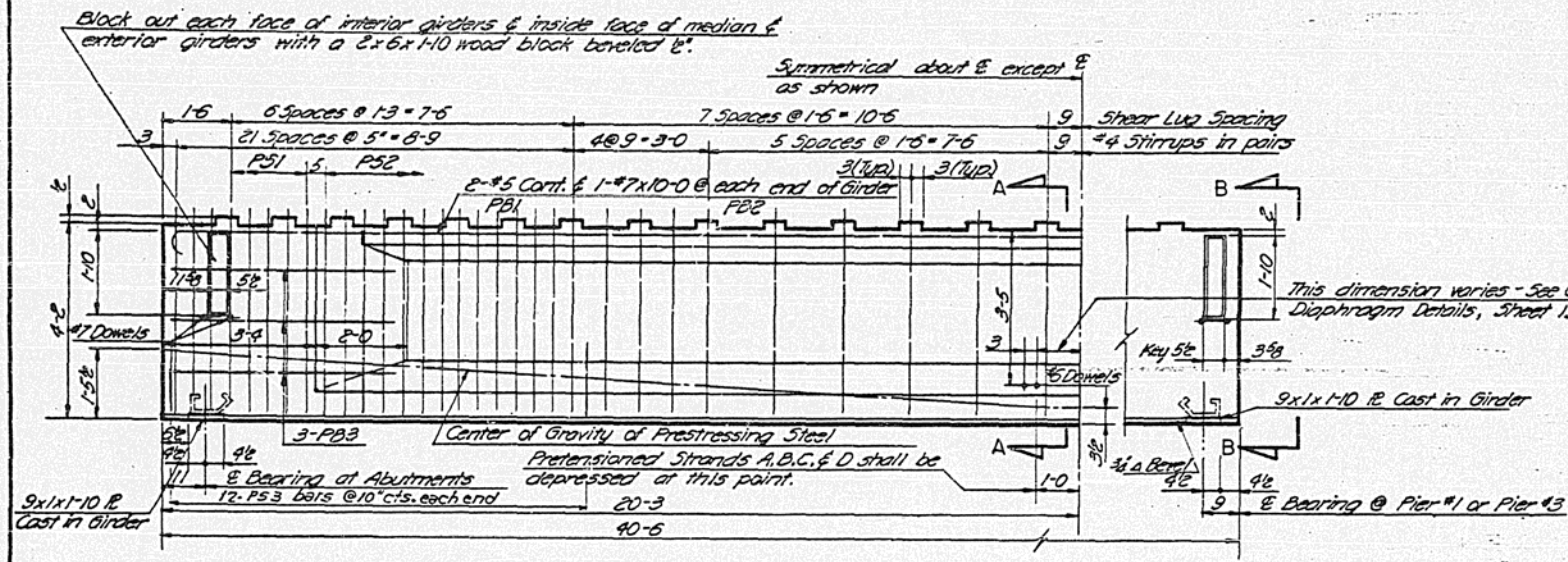
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA 399+80.13

SUPERSTRUCTURE DETAILS

DESIGNED	DRAWN	TRACKED	CHECKED	REVISED	DATE	REVISION
JWH	RLF	RLF	JWH	LDB	CWW	HSM 6-24-58

FED. AID DIST. NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	11
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	

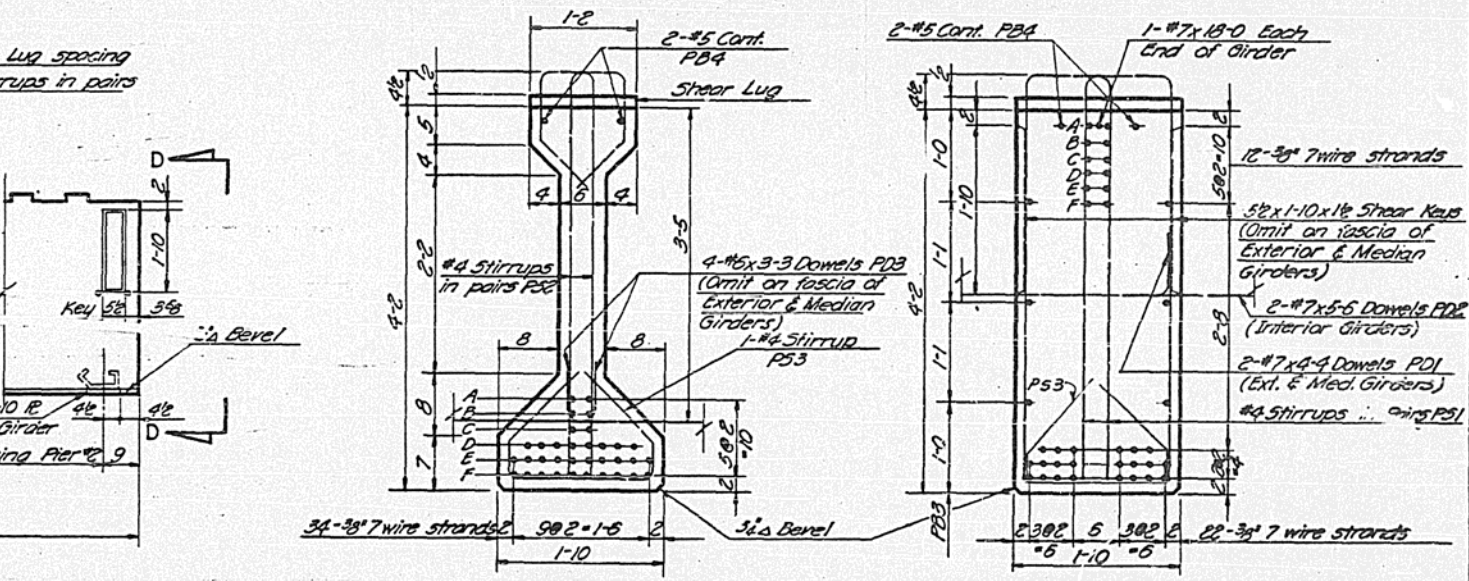
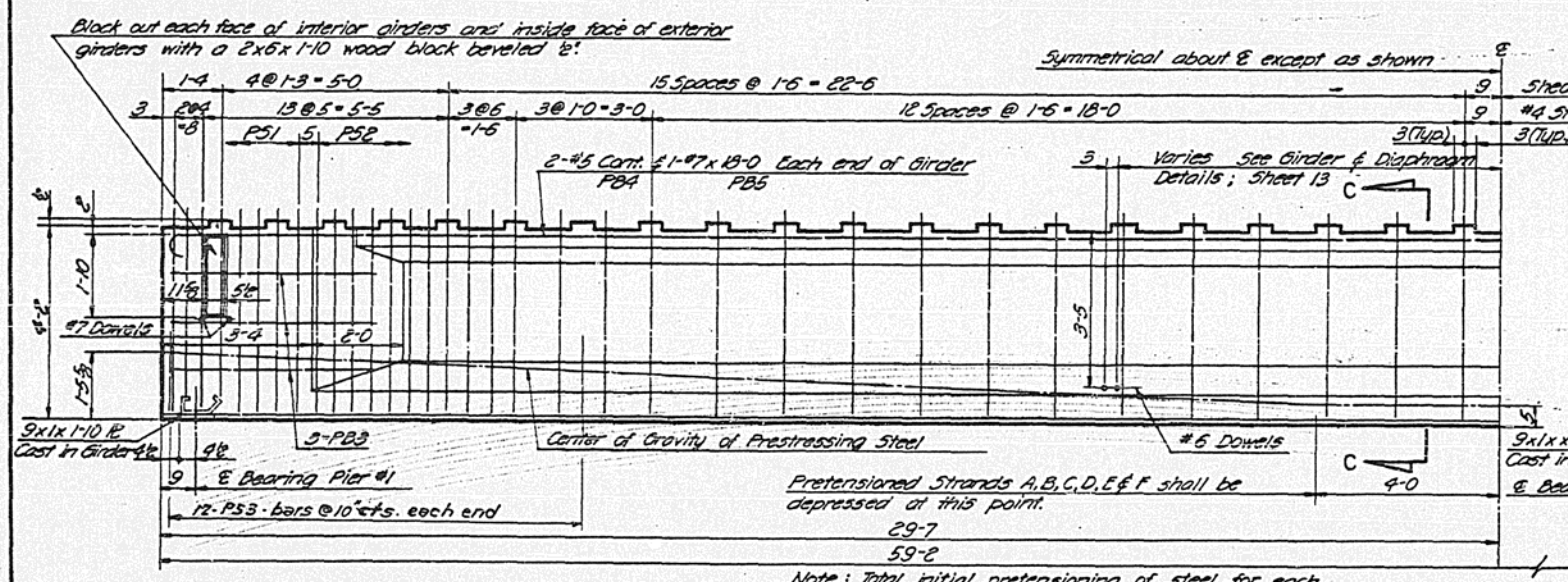


BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
PB1	64	5	21-4	As Shown	U
PB2	32	7	10-0		U
PB3	192	4	11-11		U
PB4	32	5	30-8		U
PB5	16	7	18-0		U
PB6	32	5	37-9		U
PB7	15	7	22-0	As Shown	U
PDI	64	7	4-4	As Shown	U
PDE	64	7	5-6	As Shown	U
PDB	168	6	3-3	As Shown	U
P51	1088	4	10-5	As Shown	U
P52	3456	4	6-6	As Shown	U
P53	768	4	4-6	As Shown	U

Note: Reinforcing listed is total reinforcing required for 4-G1, 8-G2, 4-G3, 2-G4, 4-G5, 2-G6, 2-G7, 4-G8 & 2-G9 girders except prestressing steel and handling hooks.

HALF ELEVATION

GIRDER G1, G2, OR G3  
(Reqd. 4-G1, 8-G2, 4-G3)



HALF ELEVATION

GIRDER G4, G5, OR G6  
(Reqd. 2-G4, 4-G5, 2-G6)

Note: Prestressed precast girders are prestressed. All reinforcing bars shown on this sheet and cast with prestressed girders, all handling hooks, and all 9x11-10 anchored end bearing plates shall be included in the unit price bid for "Prestressed Concrete Beams" (4'-8" Depth).

PRESTRESSED, PRECAST CONCRETE GIRDER DETAILS

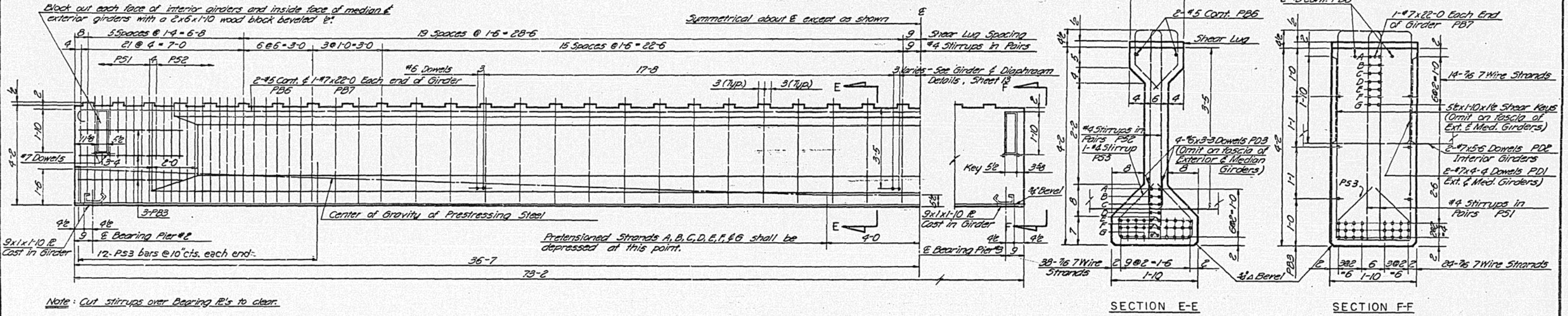
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+80.13

SUPERSTRUCTURE DETAILS

DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
ACK	ACK	DS	JH LDB CWY	HSM 6-24-58	

F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB1	CHAMPAIGN	24	12
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



Note: Cut stirrups over bearing I's to clear.

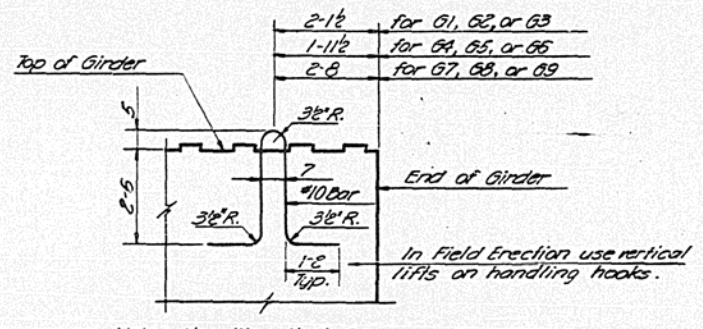
Note: Total initial prestressing of steel for each girder (67, 68, or 69) shall be 724 kips. Stress each strand to 175,000 psi. (19,060 lbs).

HALF ELEVATION

GIRDERS G7, G8, OR G9  
Reqd. 2-67, 46, 2-69

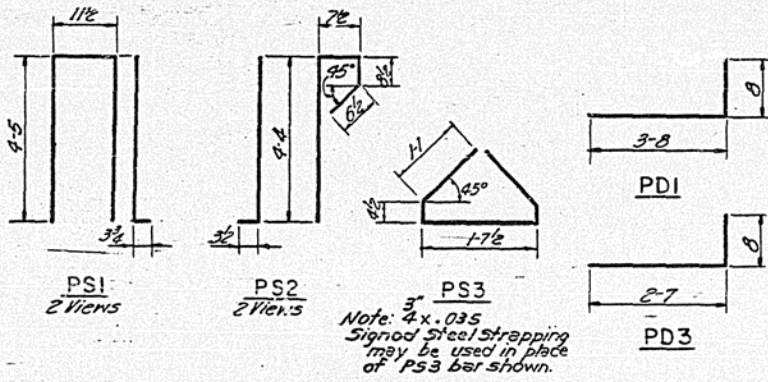
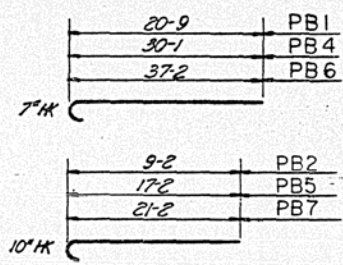
PRESTRESSED, PRECAST CONCRETE GIRDER DETAILS

Note: Prestressed, precast girders are prestressed. All reinforcing bars shown on this sheet and cast with prestressed girders, all handling hooks, and all 9x1x10 anchored end bearing plates shall be included in the unit price bid for "Prestressed Concrete Girders": (4'-2" Depth).



Note: Handling Hook for Girders G1, G2, G3, G4, G5, G6, G7, G8, or G9.  
HANDLING HOOK  
(2 per Girder)

Alternate Handling Hook meeting the approval of the Engineer may be used in place of hook shown.

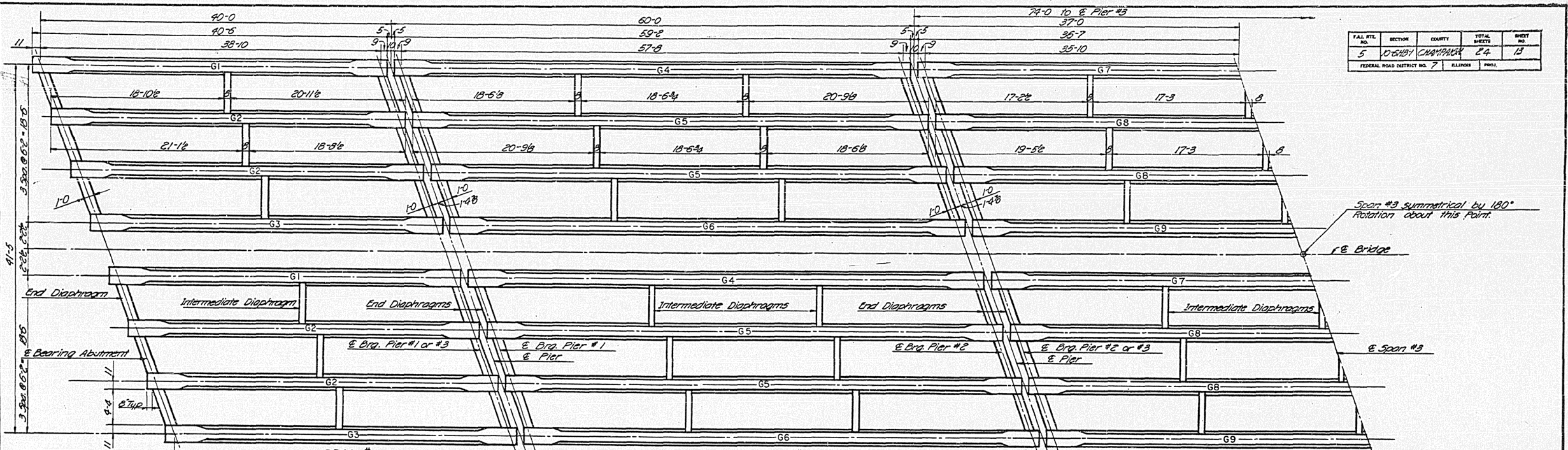


Note: 3/4" x .035 Signod Steel Strapping may be used in place of PS3 bar shown.

BENDING DIAGRAMS  
(Bar Dimensions are Out to Out.)

CONSOER, TOWNSEND & ASSOCIATES CONSULTING ENGINEERS CHICAGO, ILLINOIS					
ILLINOIS DIVISION OF HIGHWAYS URBANA SPUR OVER FAI-5 FAI-5 SECTION 10-6HB-1 CHAMPAIGN COUNTY STA. 399+80.13					
SUPERSTRUCTURE DETAILS					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
AEK	AEK	DS	JH LDB CWW	HSM	6-28-59

F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	13
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	

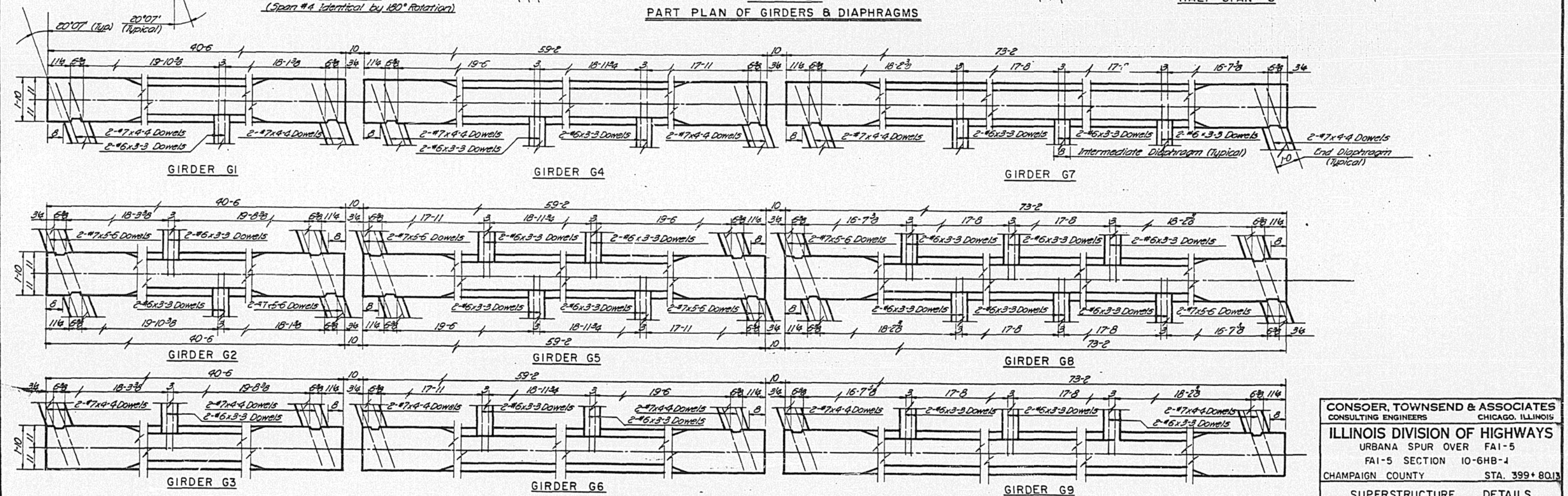


Span #3 symmetrical by 180° Rotation about this Point.

E Bridge

E Span #3

PART PLAN OF GIRDERS & DIAPHRAGMS



GIRDER & DIAPHRAGM DETAILS  
(Horizontal Sections Showing Dowels)

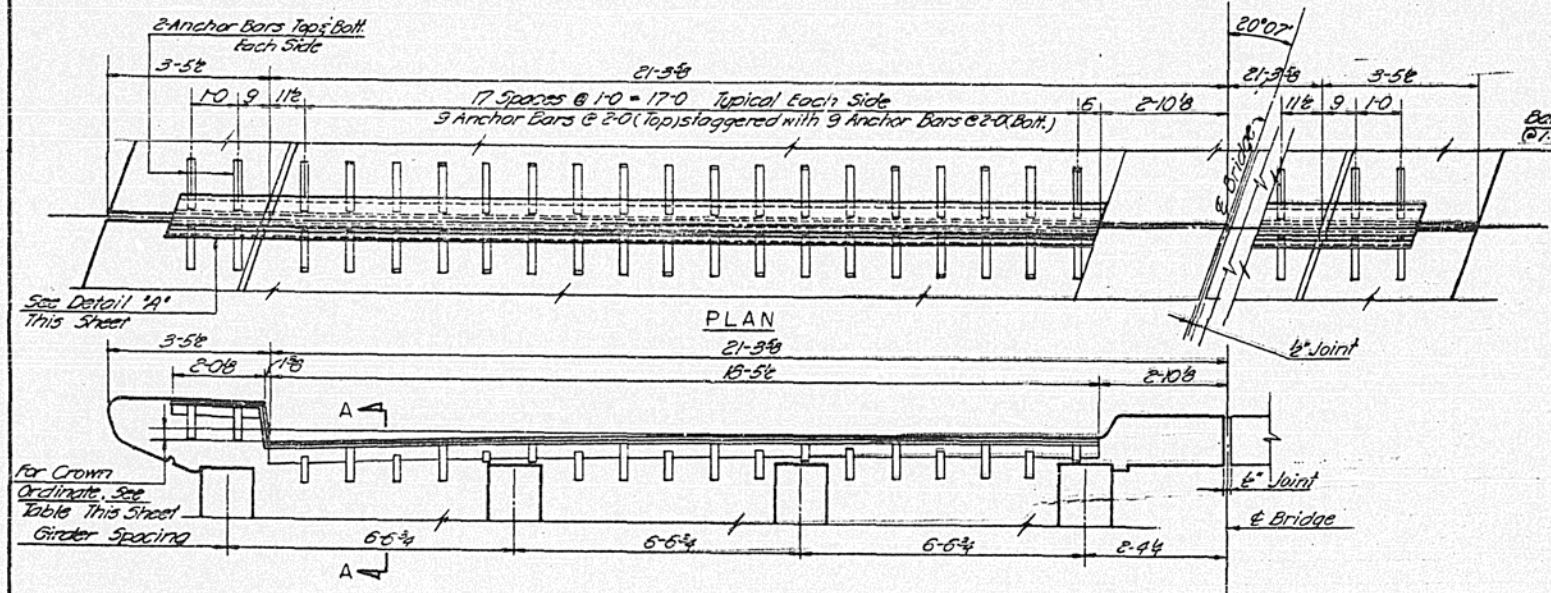
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+80.13

SUPERSTRUCTURE DETAILS

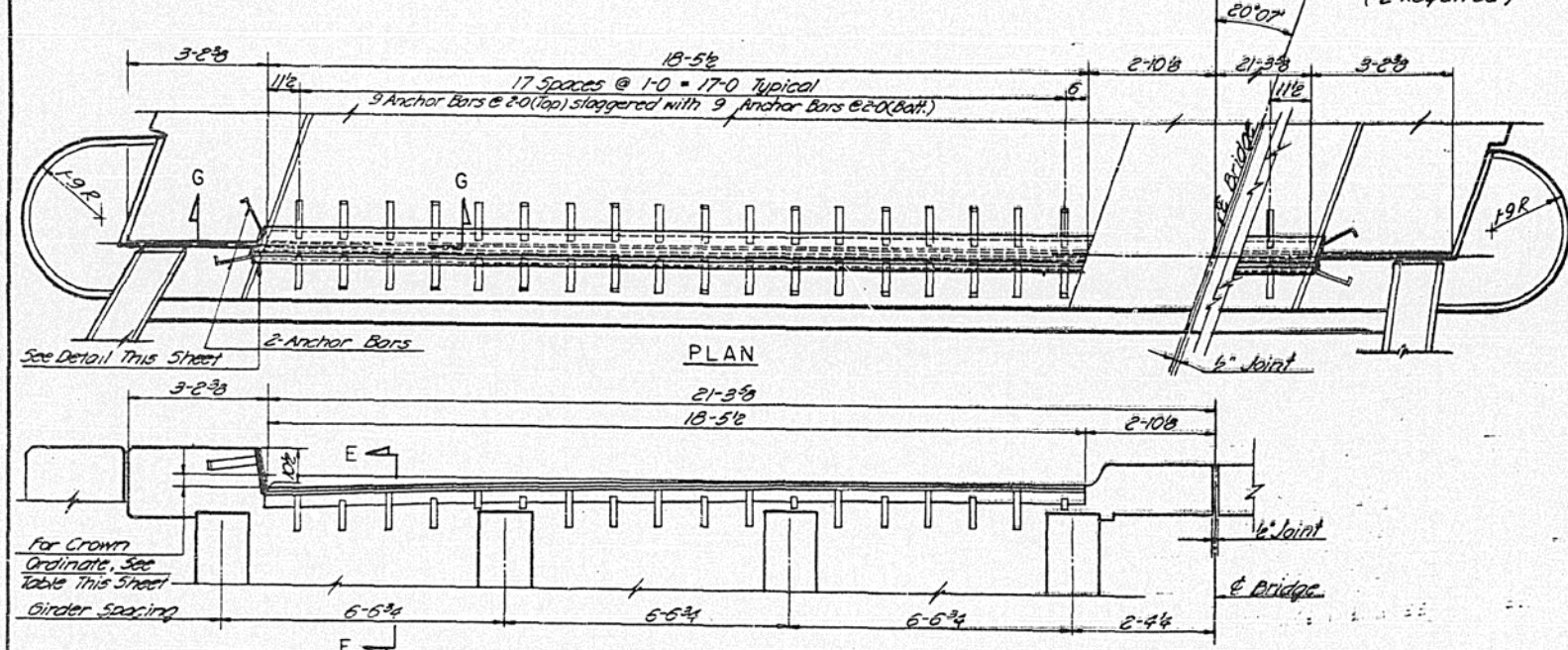
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
AEK	AEK	DS	JH LOB	CWW	HSM 6-20-55	

F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6H5-1	CHAMPAIGN	24	14
FEDERAL ROAD DISTRICT NO. 7			ILLINOIS	PROJ.



HALF ELEVATION

EXPANSION JOINT DEVICE AT PIERS #1 & #3  
(2 Required)

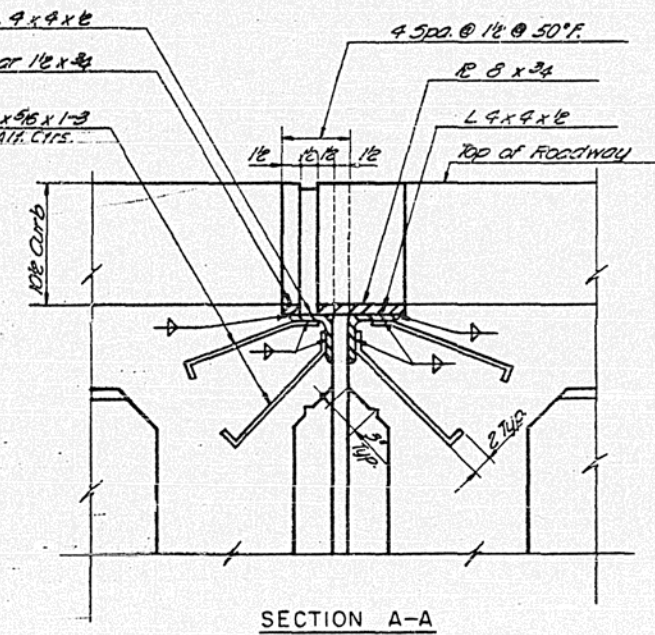


HALF ELEVATION

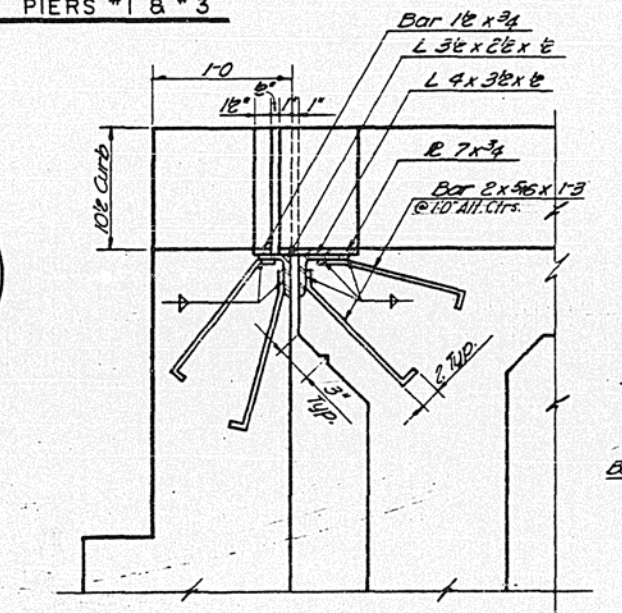
FIXED JOINT DEVICE AT ABUTMENTS  
(2 Required)

	Level	Top of Joint Device	E Bridge		E Bridge		E Bridge		E Bridge	
	3'-2 3/8	2'-7 1/2	6'-6 3/4	6'-6 3/4	2'-4 1/4	2'-4 1/4	6'-6 3/4	6'-6 3/4	2'-7 1/2	3'-2 3/8
So. Abut.	-285	-211	-175	-087	-008	+008	-025	-067	-085	-187
Pier #1	-255	-185	-153	-075	-005	+005	-039	-087	-110	-167
Pier #2	-211	-148	-121	-055	0	0	-065	-121	-148	-211
Pier #3	-157	-102	-082	-034	+006	-006	-079	-161	-194	-265
No. Abut.	-127	-076	-050	-021	+009	-011	-092	-130	-220	-296

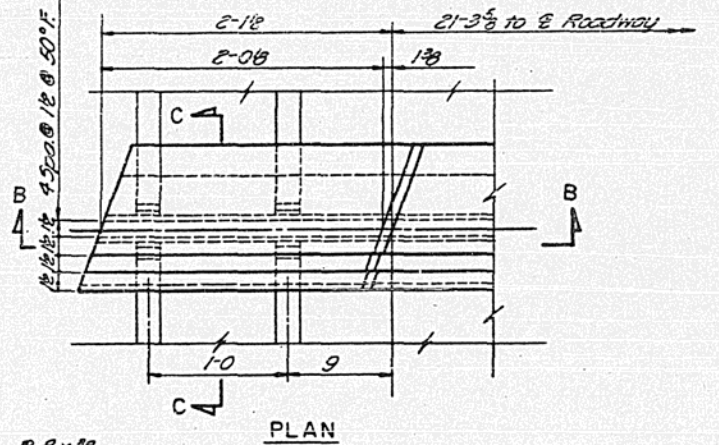
JOINT DEVICE ORDINATES IN FEET  
(Looking North)



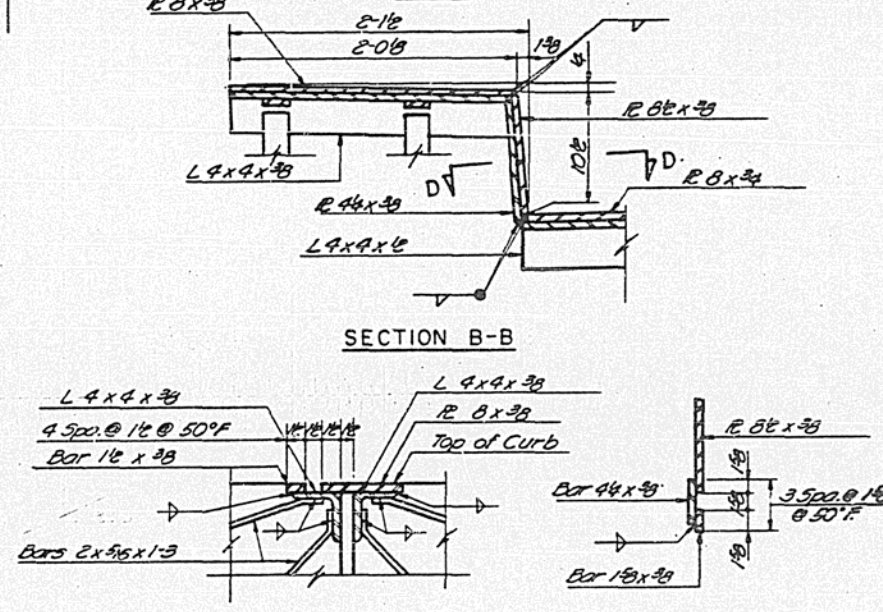
SECTION A-A



SECTION E-E



SECTION B-B



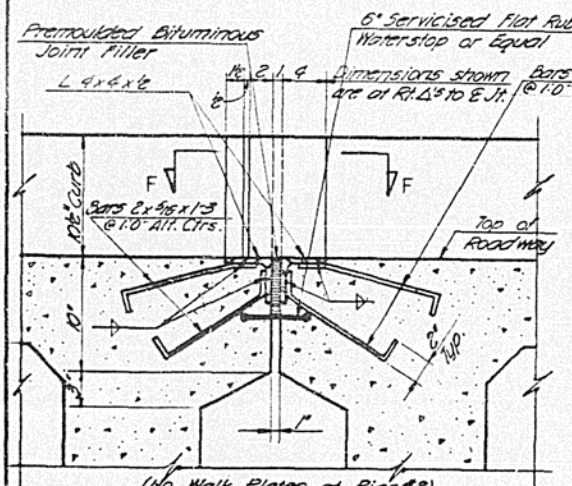
SECTION C-C

SECTION D-D

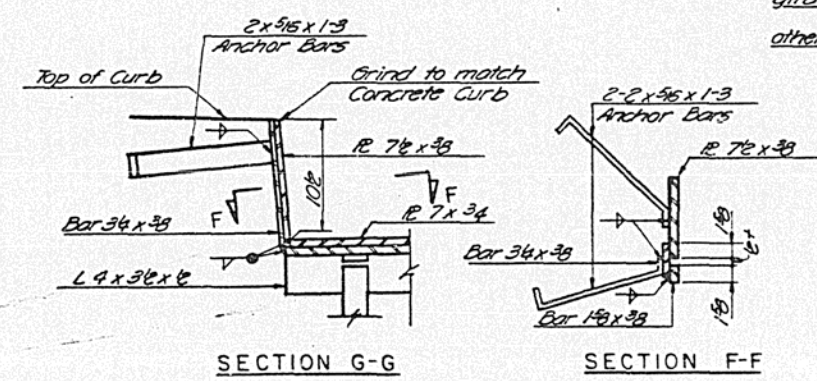
CURB & WALK PLATES, DETAIL "A"

TOTAL COMPUTED WEIGHT OF JOINT DEVICES  
STRUCTURAL STEEL 9280 LBS.

Note: Set curb & walk plates, or curb plates, flush with plane of curb and weld to roadway plates & angles as shown. Grind exposed welds smooth.  
Anchor bars shall be field bent to clear girders, where required.  
All welds are 3/8" fillet welds except as otherwise noted.



SECTION OF FIXED JOINT AT PIER #2  
(2 Required)



SECTION G-G

SECTION F-F

CURB PLATES

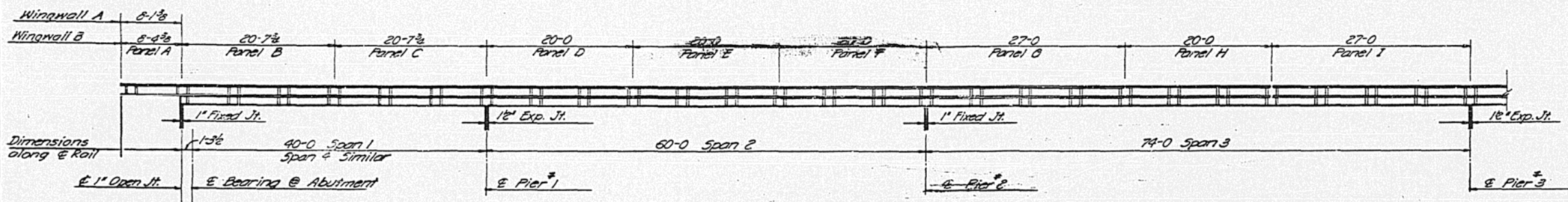
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6H5-1  
CHAMPAIGN COUNTY STA. 399+80.13

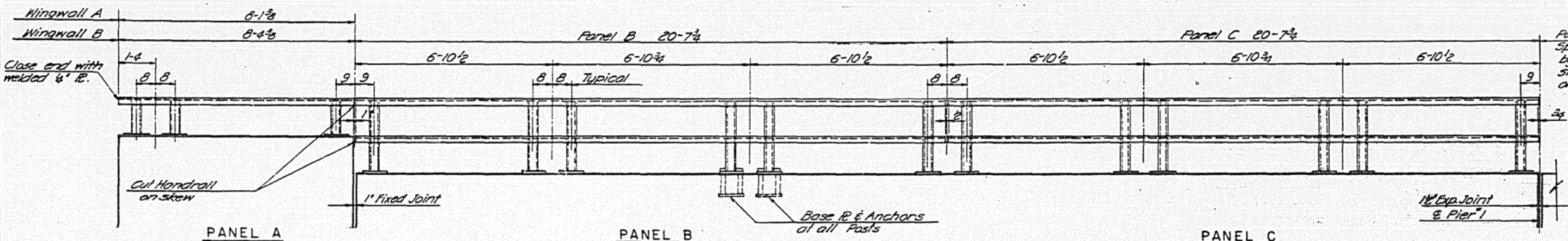
STRUCTURAL STEEL JOINT DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EB	JWH	DS	JWH LDB CWW	HSM	6-24-58	

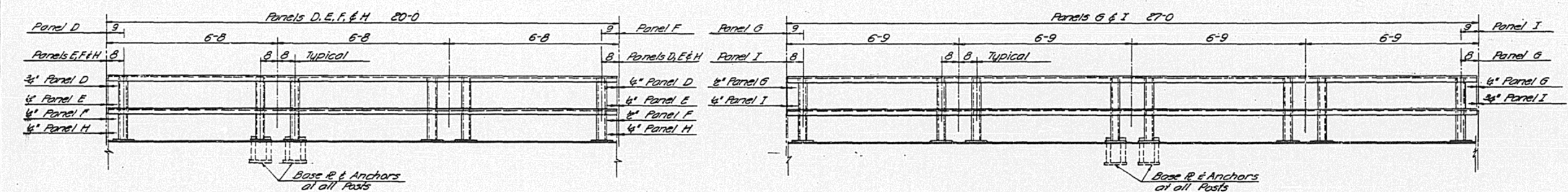
F.A.I. R.T.E. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	15
FEDERAL ROAD DISTRICT NO. 7			ILLINOIS	PROJ.



HANDRAIL PART ELEVATION



Panels B & C Handrail for Span #4 identical to span #1 by 180° Rotation except for skew cut at abutment end of Panel B

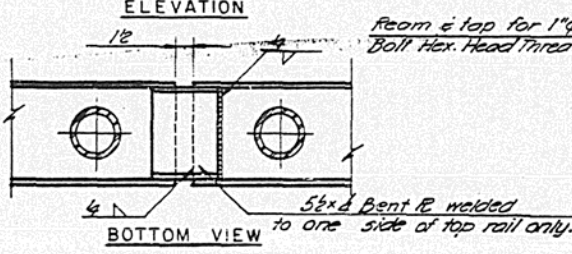
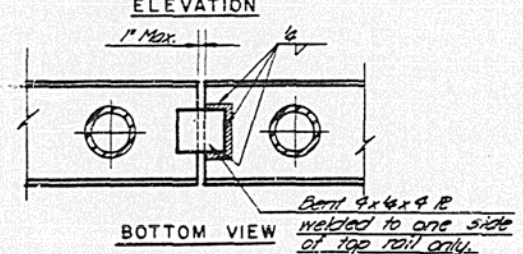
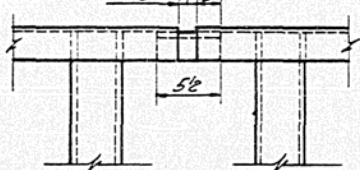
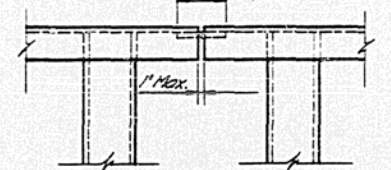
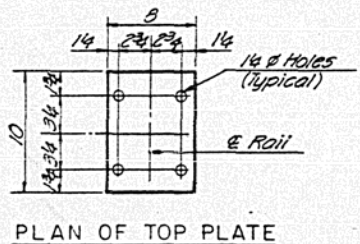


PANELS D, E, F, & H

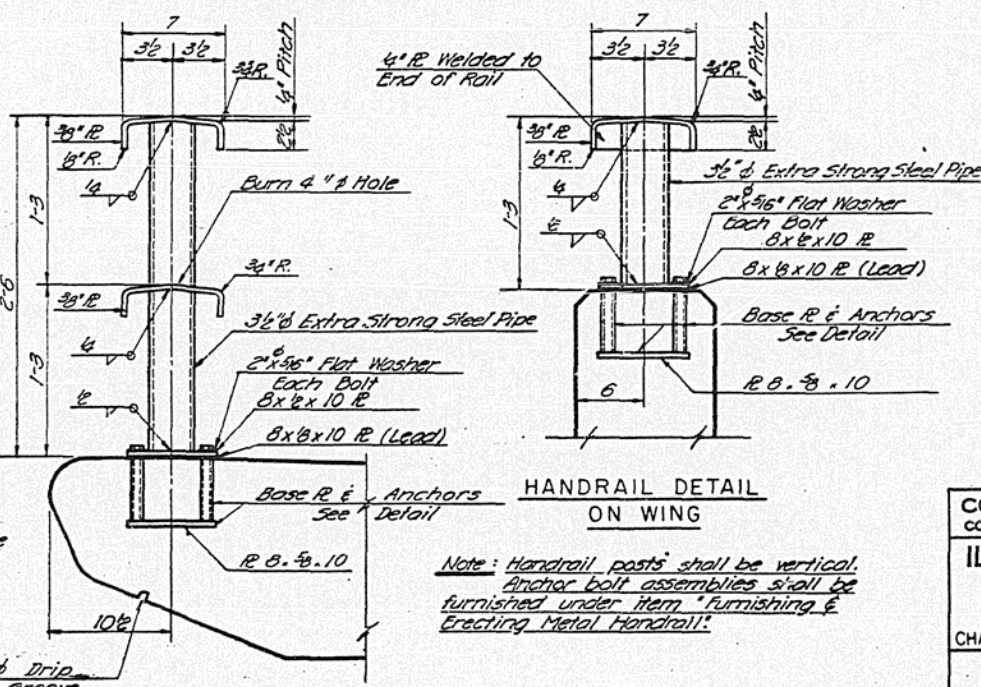
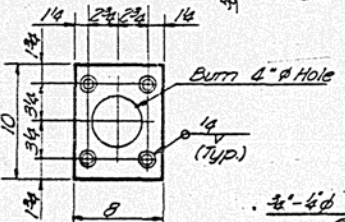
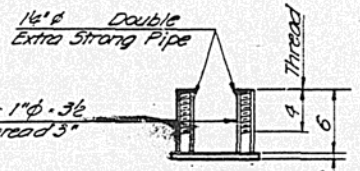
PANELS G, & I

Panel B	Panel C
Panel D	Panel E
Panel F	Panel G
Panel H	Panel I

Panel C	Panel D
Panel I	Panel H



HANDRAIL JUNCTION PLATES



Note: Handrail posts shall be vertical. Anchor bolt assemblies shall be furnished under item "Furnishing & Erecting Metal Handrail".

STATION 399+80.15  
BUILT 195 BY  
STATE OF ILLINOIS  
F.A.I. R.T.E. 5 SEC. 10-6HB-1  
F.A. PROJ. 1-05-6(12)  
LOADING H20-S16

BRASS OR BRONZE NAME PLATE.  
See Illinois Highway Standard No. 2113 - (Provide 2)

BRIDGE NAME PLATE

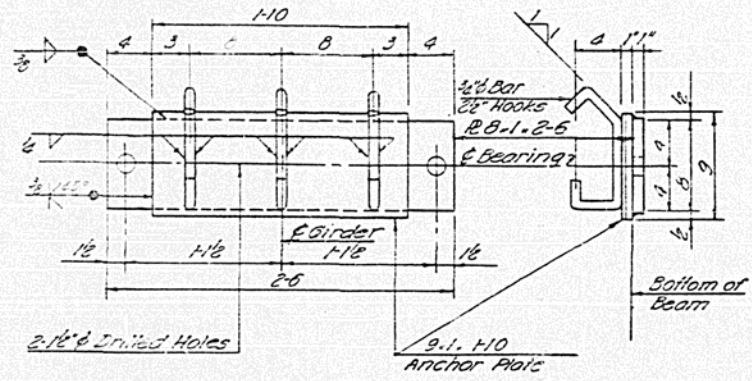
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI-5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+80.15

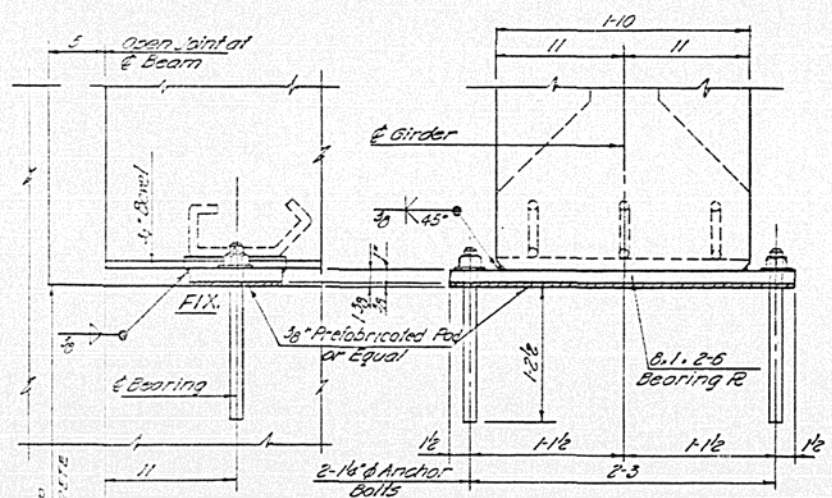
HANDRAIL DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EB	RLF	DS	JWH LDB CWW	HSM	6-24-58	

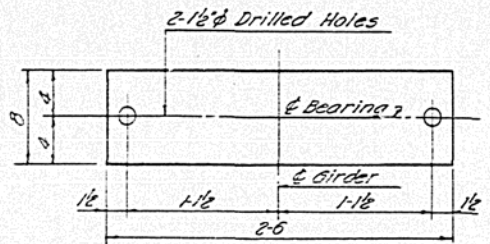
F.A.L. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	105R31	CHAMPAIGN	24	16
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PPOL	



TOP VIEW SIDE VIEW



SIDE VIEW FRONT VIEW

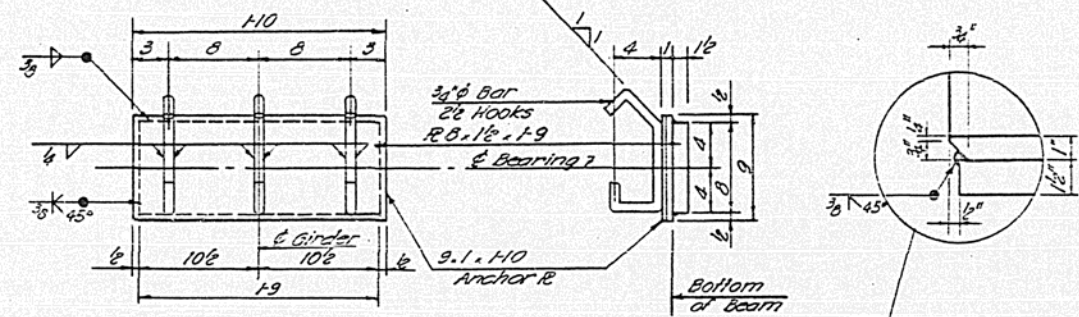


PREFABRICATED PAD (8-3-2-6)

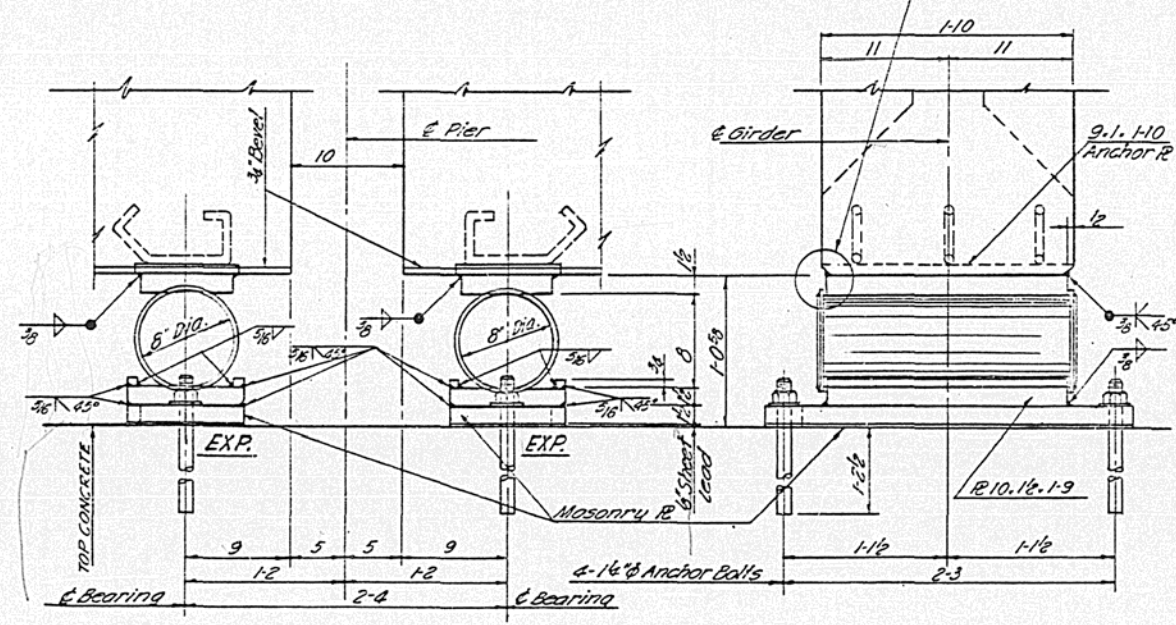
Note: All Prefabricated Pads to be included in unit price bid for "Furnishing & Erecting Structural Steel."

FIXED BEARING AT ABUTMENTS FIX.

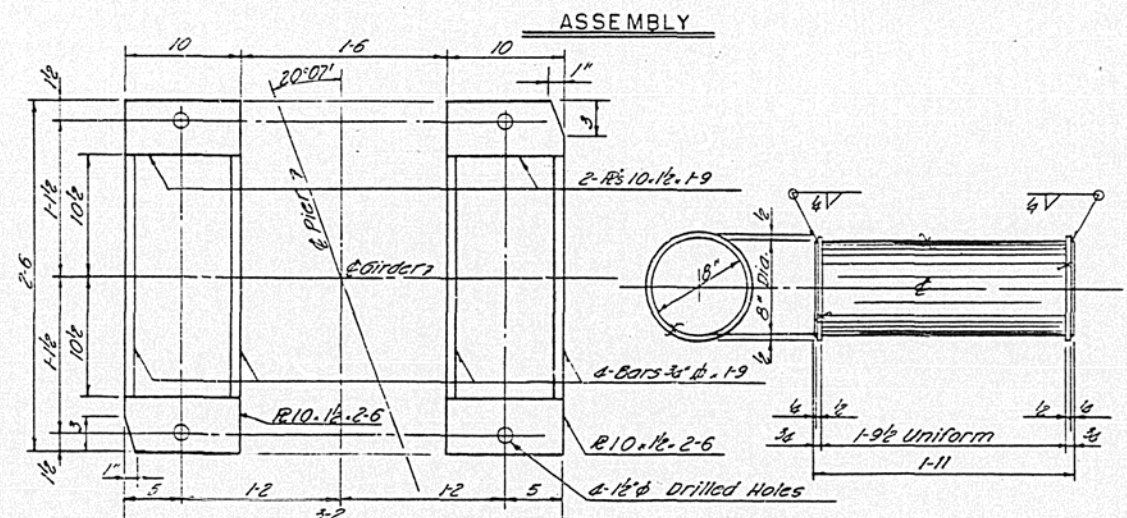
Note: In place of welding the top plate of the bearing assemblies to the sole plate cast in the beam, the Contractor may at his option bolt the top plate of the bearing assembly to the sole plate in the beam with 6-3/8" flat head cap screws. The sole Pl. shall be tapped to receive these screws and the holes in the bearing plate shall be countersunk to receive the head of the cap screw.



TOP VIEW SIDE VIEW



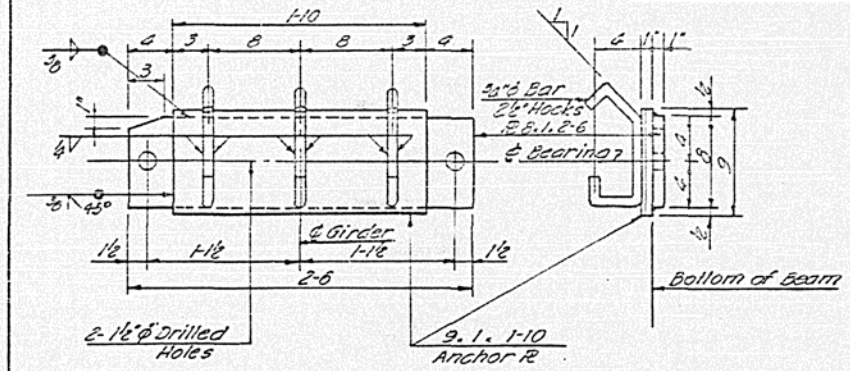
SIDE VIEW FRONT VIEW



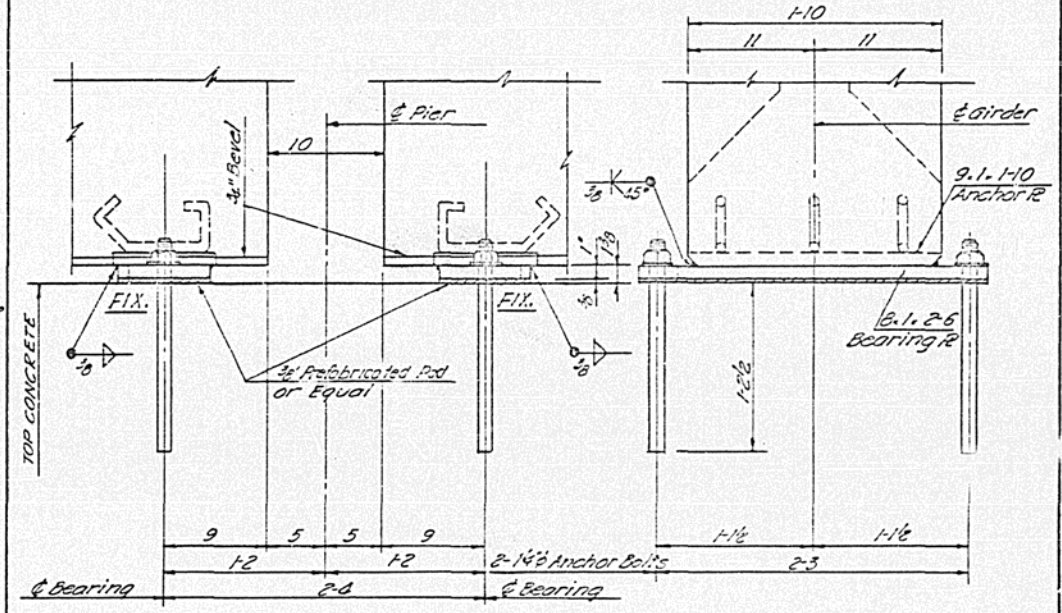
MASONRY PLATE ASSEMBLY

EXPANSION BEARING AT PIERS #1 & #3 EXP.-EXP.

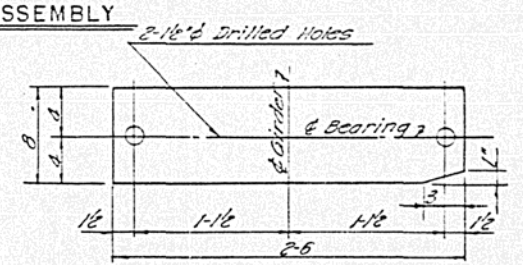
PIN



TOP VIEW SIDE VIEW



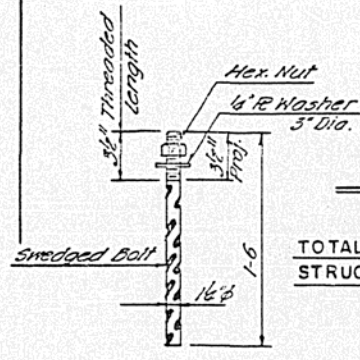
SIDE VIEW FRONT VIEW



PREFABRICATED PAD (8-3-2-6)

FIXED BEARING AT PIER #2 FIX.-FIX.

TOTAL COMPUTED WEIGHT OF BEARING DEVICES STRUCTURAL STEEL 23,500 LBS.



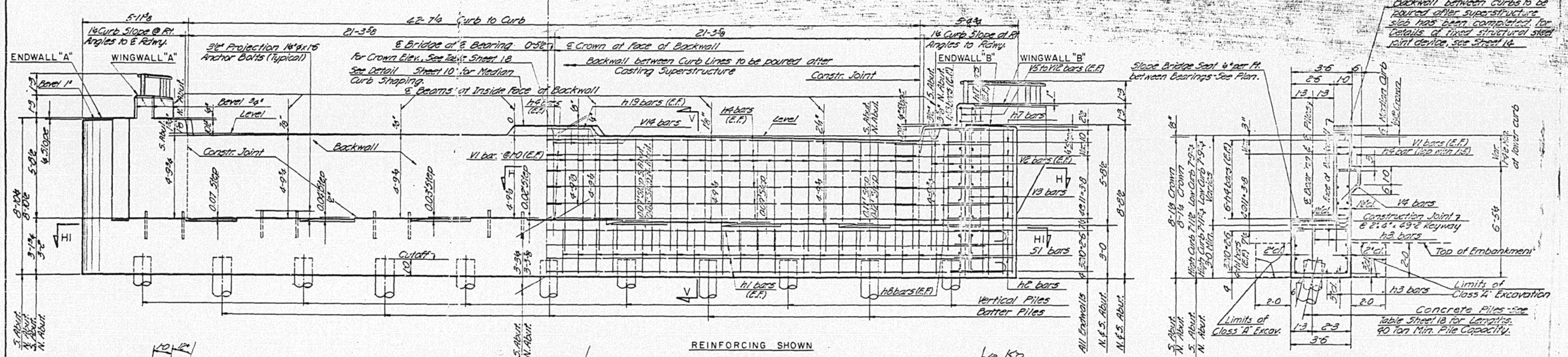
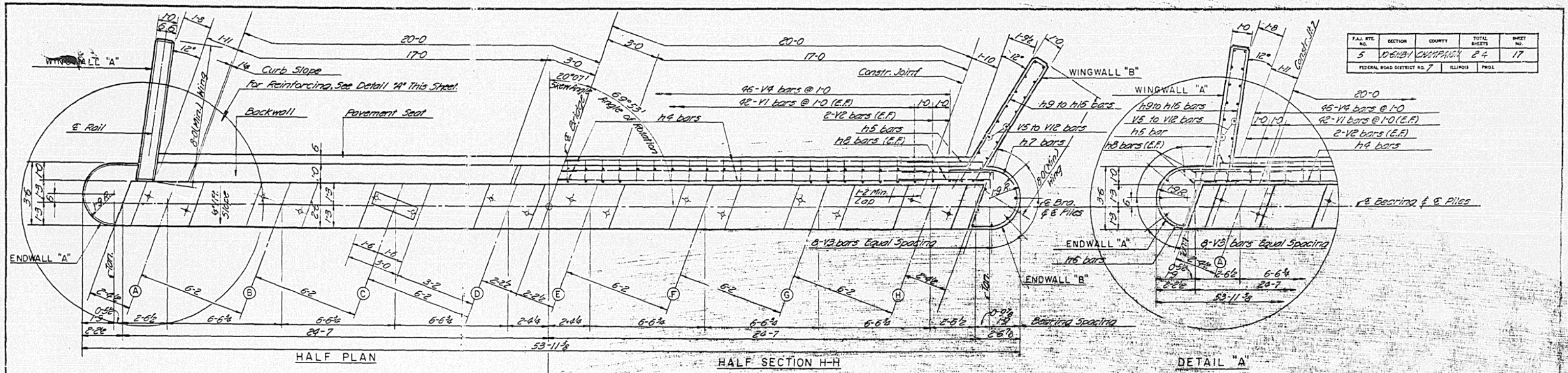
ANCHOR BOLT 120 Req'd

Note: All 9-1-10 anchored bearing plates in prestressed concrete beams are included in the unit price bid for "Prestressed Concrete Beams (6" Depth)."

CONSOER, TOWNSEND & ASSOCIATES		CONSULTING ENGINEERS		CHICAGO, ILLINOIS	
ILLINOIS DIVISION OF HIGHWAYS					
URBANA SPUR OVER FAI-5					
FAI-5 SECTION 10-6HB-1					
CHAMPAIGN COUNTY			STA 399+80.13		
STRUCTURAL STEEL BEARING DEVICES					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
E.B.	J.T.	J.T.	J.H. LOB	CHW	4-24-55

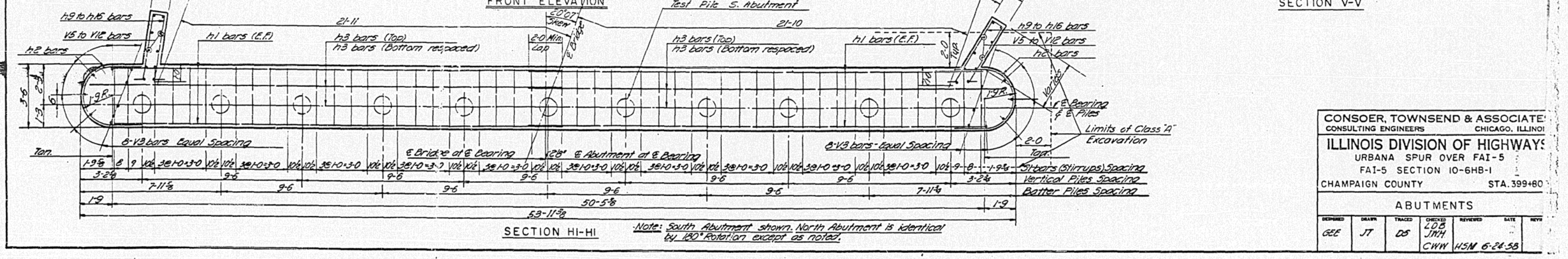


F.A.L. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	IO-6HB-1	CHAMPAIGN	24	17
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



Backwall between curbs to be poured after superstructure slab has been completed for details of fixed structural steel joint device, see Sheet 14.

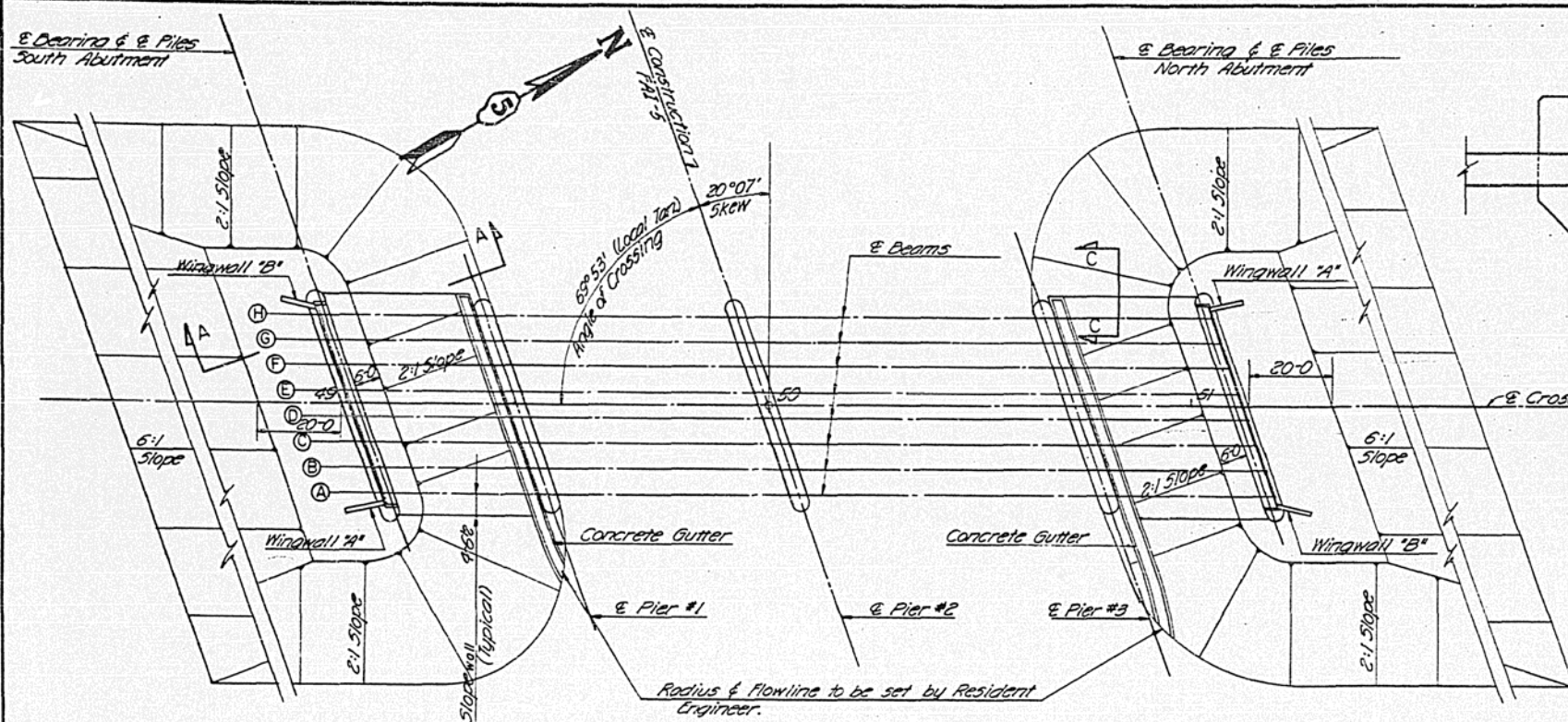
Limits of Class "A" Excavation  
 Concrete Piles - see Table Sheet 18 for Lengths  
 90 Ton Min. Pile Capacity.



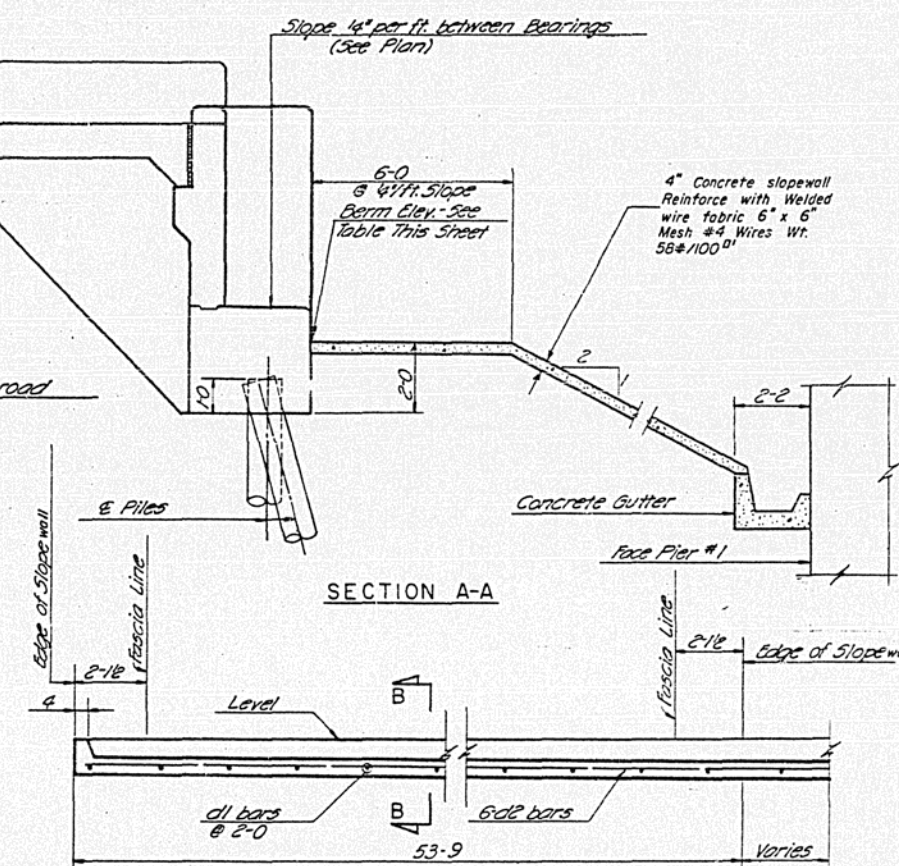
**CONSOER, TOWNSEND & ASSOCIATE**  
 CONSULTING ENGINEERS CHICAGO, ILLINOIS

**ILLINOIS DIVISION OF HIGHWAYS**  
 URBANA SPUR OVER FAI-5  
 FAI-5 SECTION IO-6HB-1  
 CHAMPAIGN COUNTY STA. 399+80

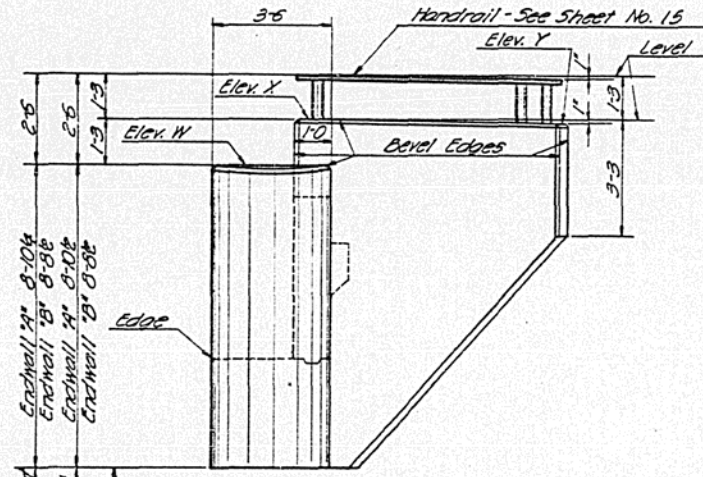
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	BY
GEF	JT	DS	JMH	CWW	HSN 6-24-58	



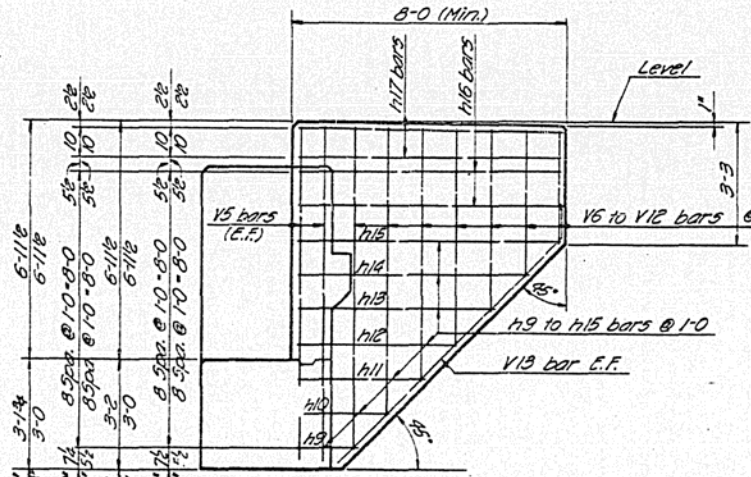
PLAN OF ABUTMENTS & CONCRETE GUTTERS



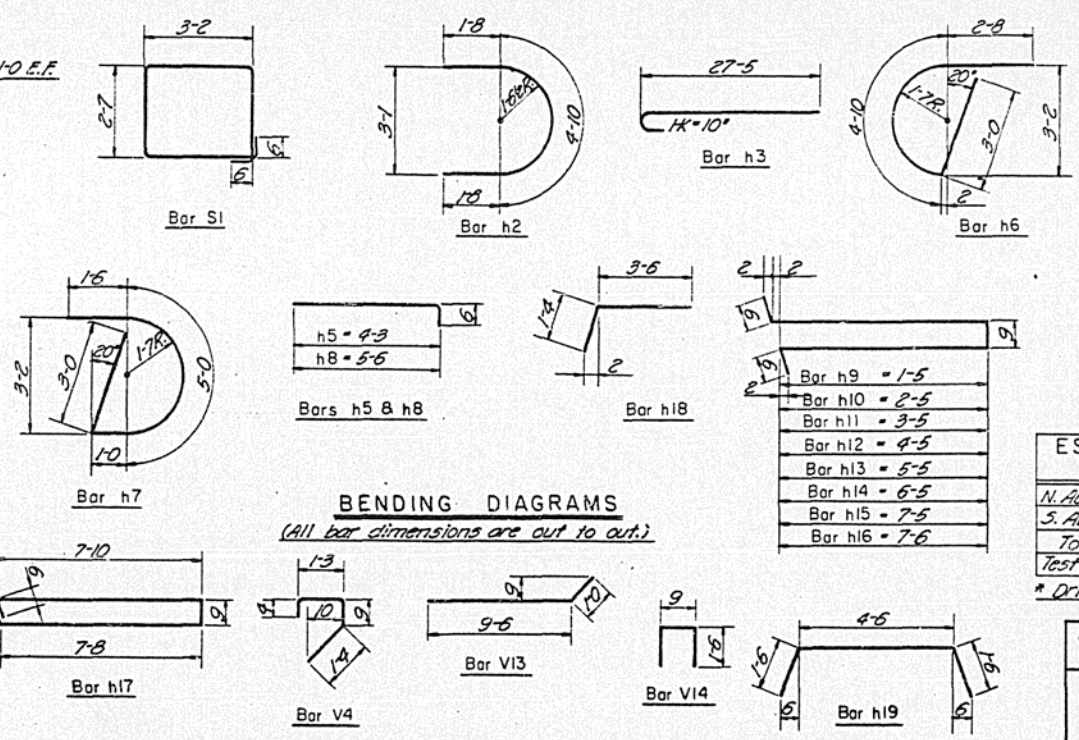
LONGITUDINAL SECTION THRU CONCRETE GUTTER



SIDE ELEVATION



WINGWALL REINFORCING



BENDING DIAGRAMS

(All bar dimensions are out to out.)

PLAN SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	18
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	

BAR SCHEDULE

Bar	No.	Size	Length	Spacing	Shape
h1	32	6	25-2	10	—
h2	16	6	8-2	10	—
h3	16	7	28-3	As shown	—
h4	52	5	22-0	—	—
h5	4	5	4-9	—	—
h6	14	5	10-6	—	—
h7	14	5	10-6	—	—
h8	58	5	6-0	As shown	—
h9	4	5	4-9	10	—
h10	4	5	6-9	10	—
h11	4	5	8-9	10	—
h12	4	5	10-9	10	—
h13	4	5	12-9	10	—
h14	4	5	14-9	10	—
h15	4	5	16-9	10	—
h16	8	5	16-11	10	—
h17	8	5	17-3	As shown	—
h18	8	4	4-10	As shown	—
h19	4	4	7-6	9	—
V1	168	4	6-3	10	—
V2	16	4	7-3	10	—
V3	32	4	8-5	As shown	—
V4	52	4	3-8	10	—
V5	16	4	9-9	As shown	—
V6	8	4	9-0	10	—
V7	8	4	8-0	10	—
V8	8	4	7-0	10	—
V9	8	4	6-0	10	—
V10	8	4	5-0	10	—
V11	8	4	4-0	10	—
V12	8	4	3-0	10	—
V13	8	4	10-6	As shown	—
V14	10	4	3-9	10	—
S1	88	4	12-6	As shown	—
d1	78	4	3-9	2-0	—
d2	60	4	15-3	As shown	—

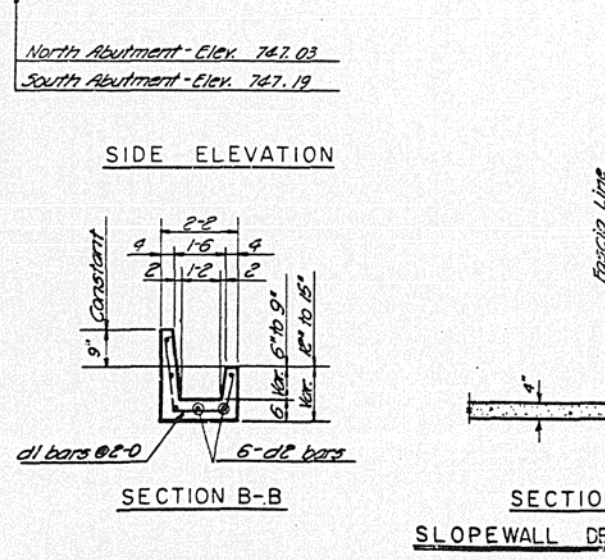
ABUTMENT QUANTITIES

Class X Concrete 88.4 Cu. Yds.  
 Reinforcing Bars 8040 Lbs.  
 Class A Excavation for Structures 64 Cu. Yds.  
 The above quantities are for both Abutments & Concrete Gutters.  
 Estimated total length of Concrete Gutter = 153 Lin. Ft.  
 \* Field Bend.

ESTIMATED LENGTHS & QUANTITIES CONCRETE PILES

Abutment	11" @ 42'-0"	462 Lin. Ft.
N. Abutment	10 @ 42'-0"	420 Lin. Ft.
S. Abutment	10 @ 42'-0"	420 Lin. Ft.
Total		882 Lin. Ft.
Test Pile		One Each*

\* Drive one test pile in S. Abutment as shown.



SECTION B-B

SECTION C-C

SLOPEWALL DETAIL

Abutment	Berm Elev.	Bottom of Cap Beam	Drawn Elev. @ Inside Face of Backwall	Wingwall 'A'			Wingwall 'B'			Bearing Seat Elevations - Top of Concrete							
				W	X	Y	W	X	Y	A	B	C	D	E	F	G	H
North Abut.	749.03	747.03	755.14	755.91	757.16	757.08	755.74	756.99	756.91	750.03	750.15	750.24	750.32	750.34	750.31	750.27	750.20
South Abut.	749.19	747.19	755.29	756.05	757.30	757.22	755.90	757.15	757.07	750.34	750.41	750.45	750.48	750.46	750.39	750.30	750.19

TABLE OF ELEVATIONS

Revised WAS 10-22-58 Changed Slope Pymt to Slopewall in Sec. A-A  
 Revised Sec. B-B bar d1, B B/M bar d1

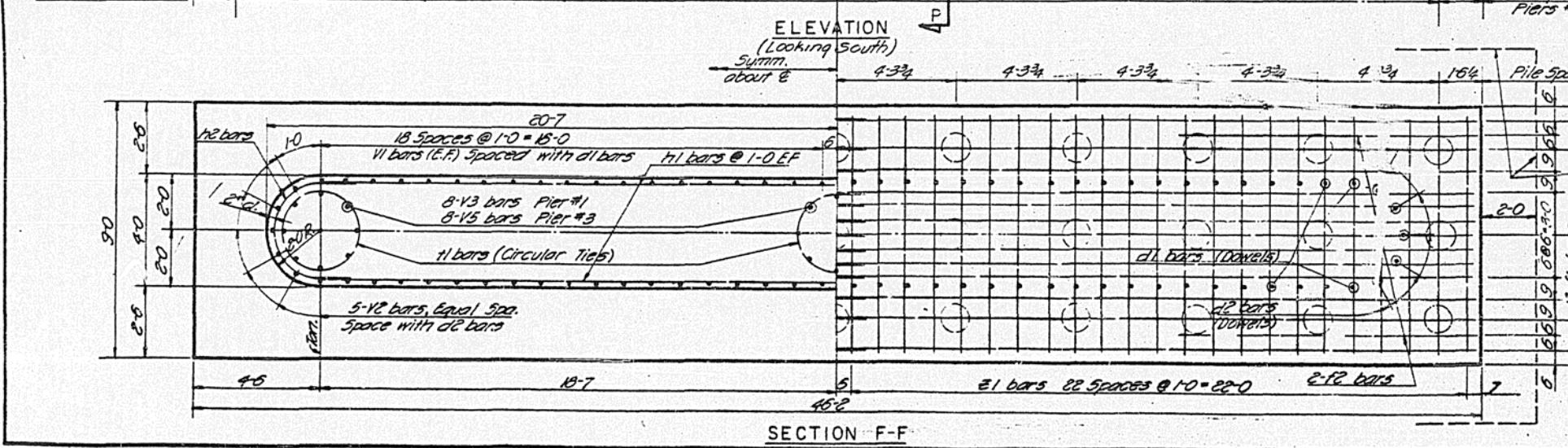
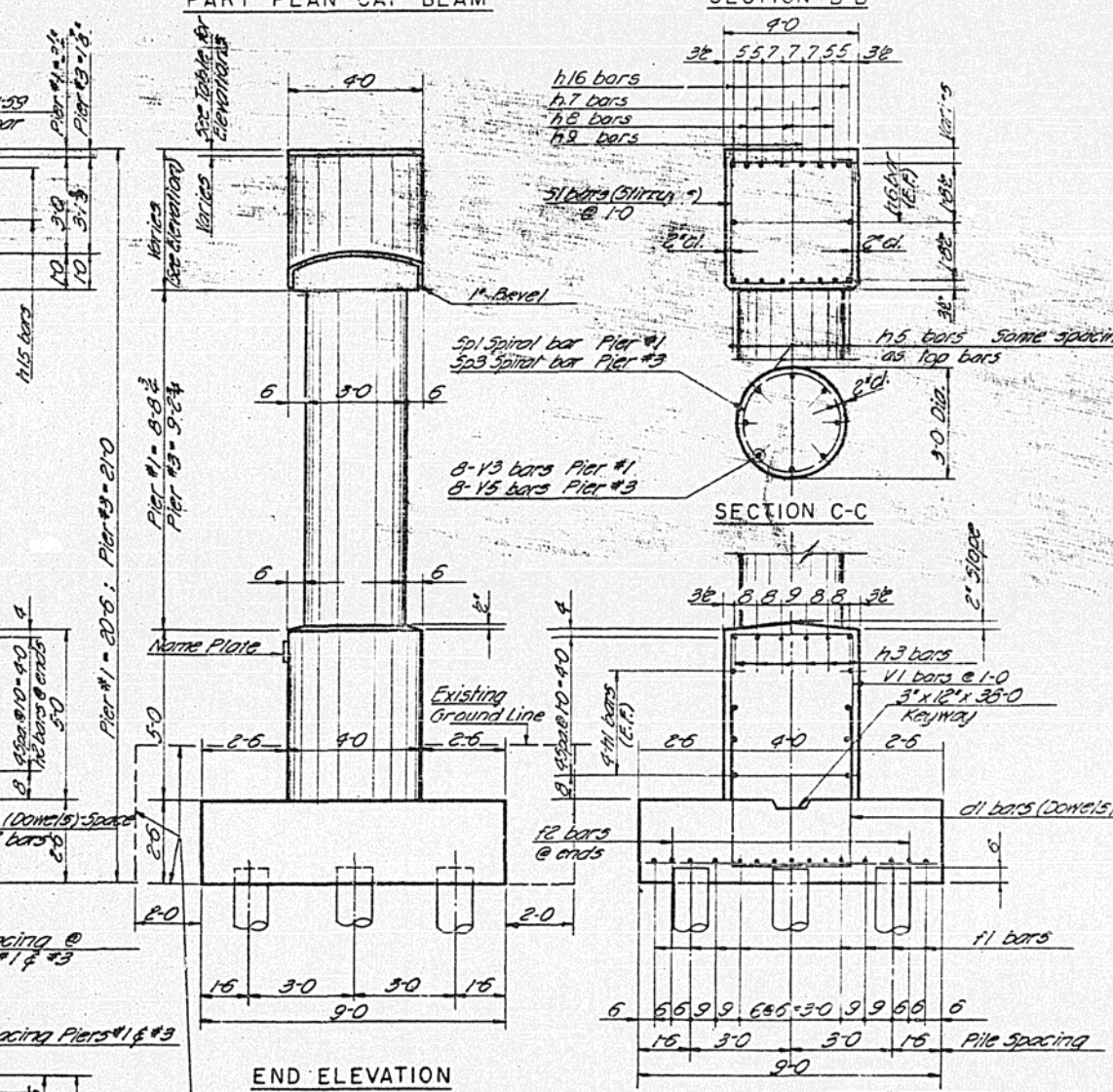
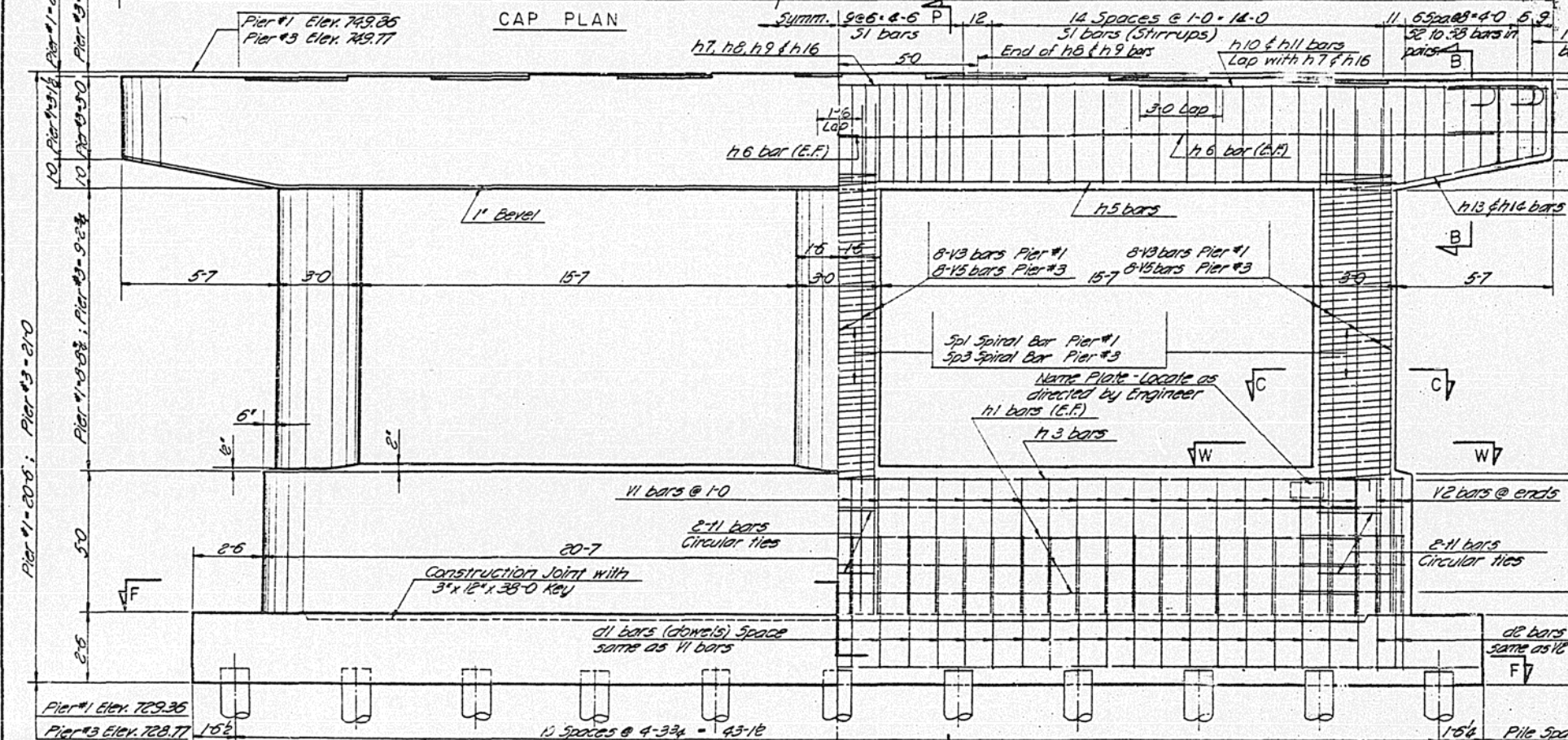
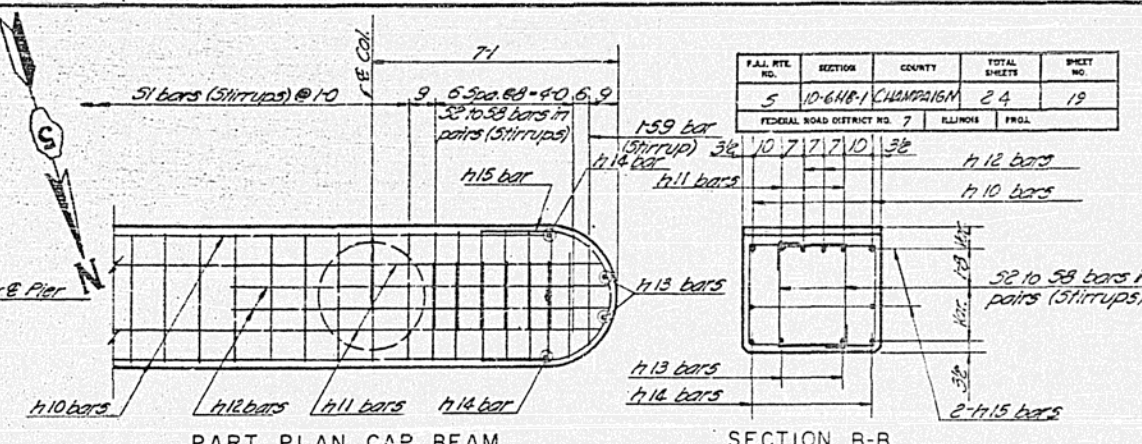
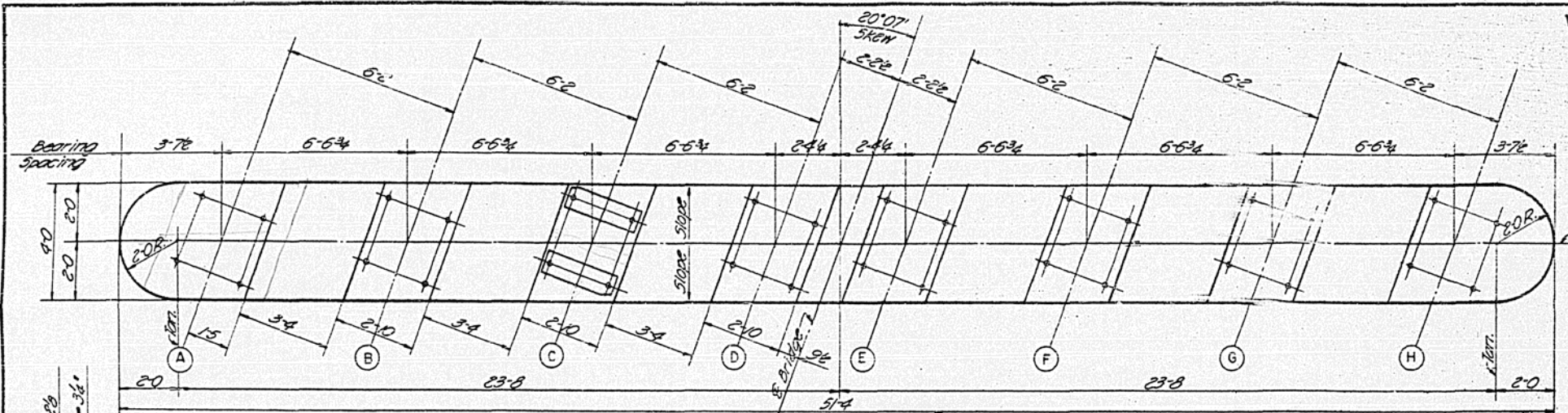
**CONSOER, TOWNSEND & ASSOCIATES**  
 CONSULTING ENGINEERS CHICAGO, ILLINOIS

**ILLINOIS DIVISION OF HIGHWAYS**  
 URBANA SPUR OVER FAI-5  
 FAI-5 SECTION 10-6HB-1  
 CHAMPAIGN COUNTY STA. 399+80.13

**ABUTMENTS**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLE	JT	DS	JWH LDB CWW	HSM	6-24-58	

F.A.L. FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	19
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



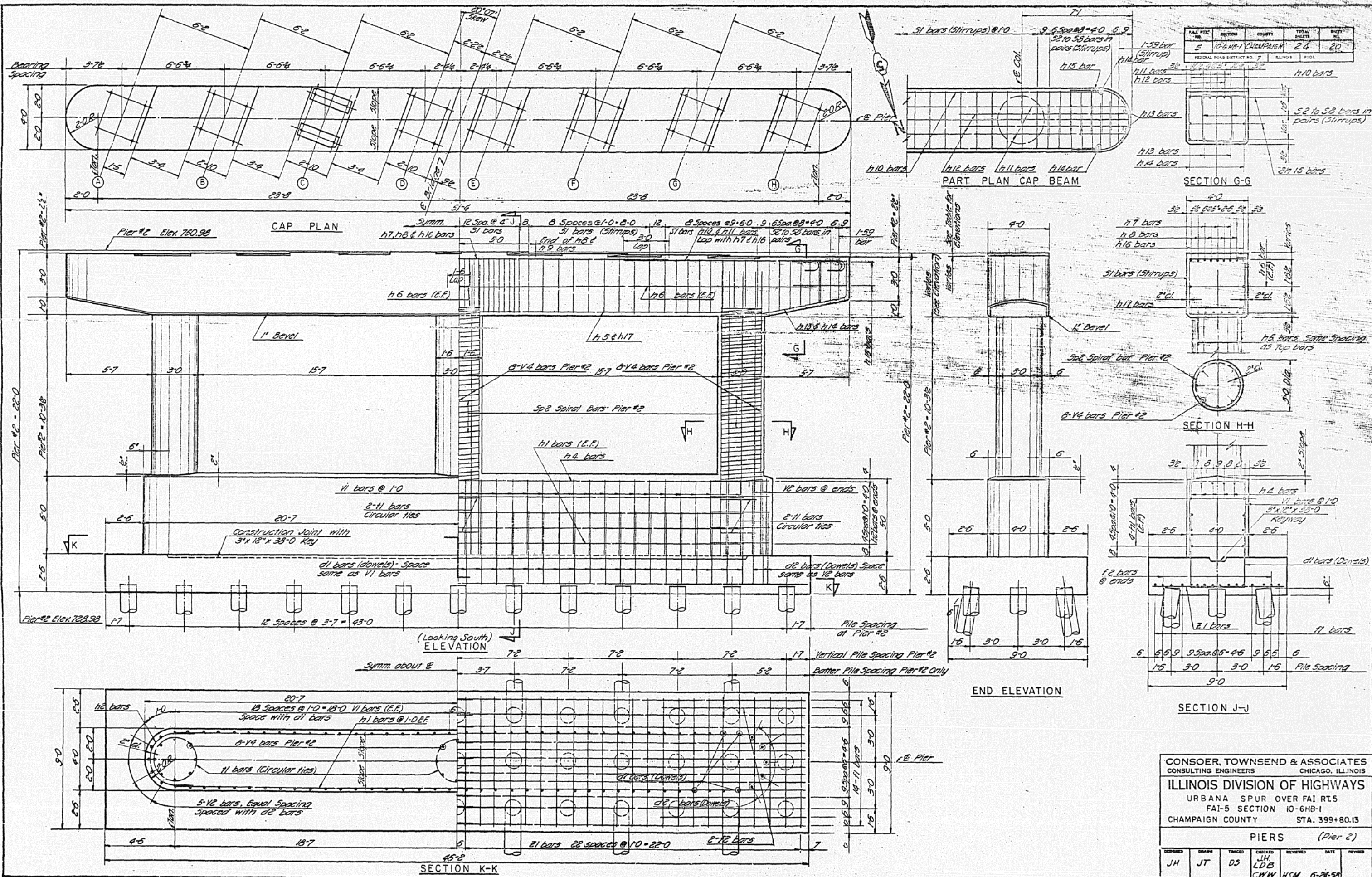
Limits for Class A Excavation Typical for All Piers.

**CONSOER, TOWNSEND & ASSOCIATES**  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

**ILLINOIS DIVISION OF HIGHWAYS**  
URBANA SPUR OVER FAI RT.5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+80.13

**PIERS (Piers 1 & 3)**

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISION
JH	JT	DS	J.H. LDB C.W.M.	H.S.M.	6-24-58	

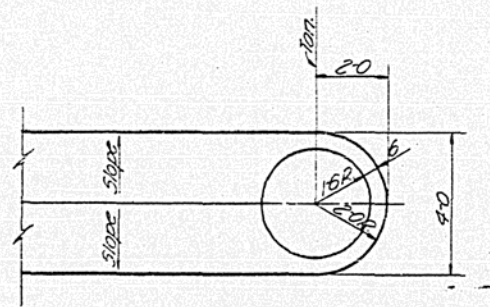


FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6-HB-1	CHAMPAIGN	24	20
FEDERAL ROAD DISTRICT NO. 7				
ILLINOIS				
PIER				

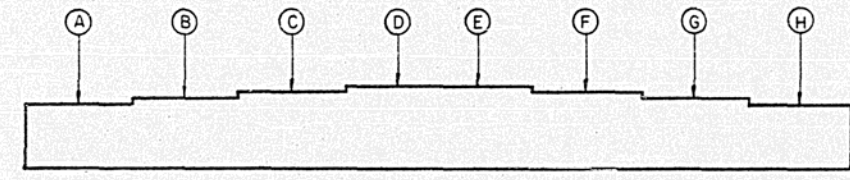
**CONSOER, TOWNSEND & ASSOCIATES**  
 CONSULTING ENGINEERS CHICAGO, ILLINOIS  
**ILLINOIS DIVISION OF HIGHWAYS**  
 URBANA SPUR OVER FAI RT.5  
 FAI-5 SECTION 10-6HB-1  
 CHAMPAIGN COUNTY STA. 399+80.13  
**PIERS (Pier 2)**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
JH	JT	DS	JH, LDB, CHW	HSM	6-28-58	

FAL. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	21
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	

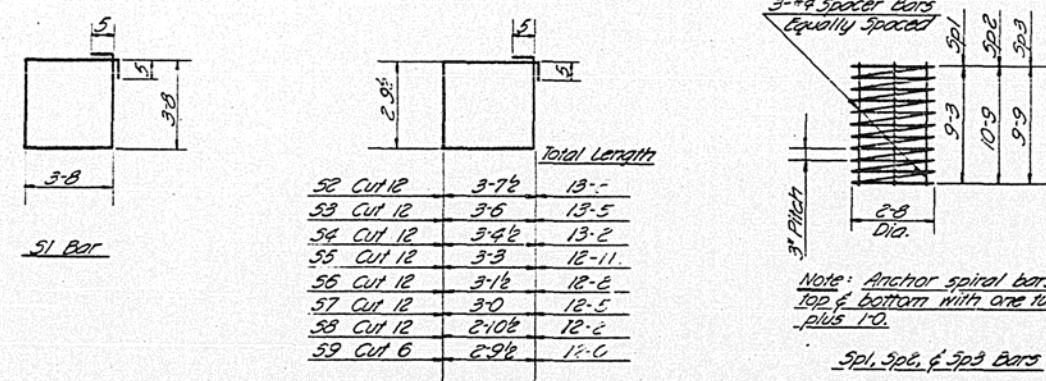
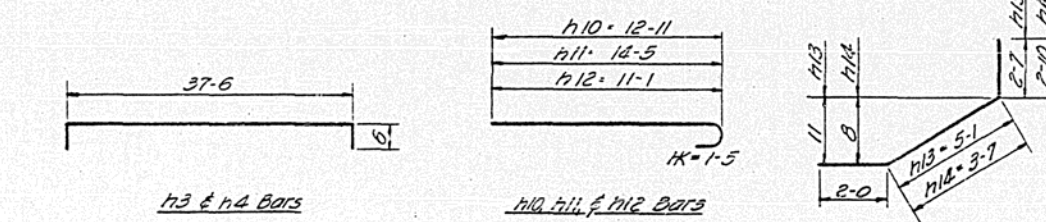
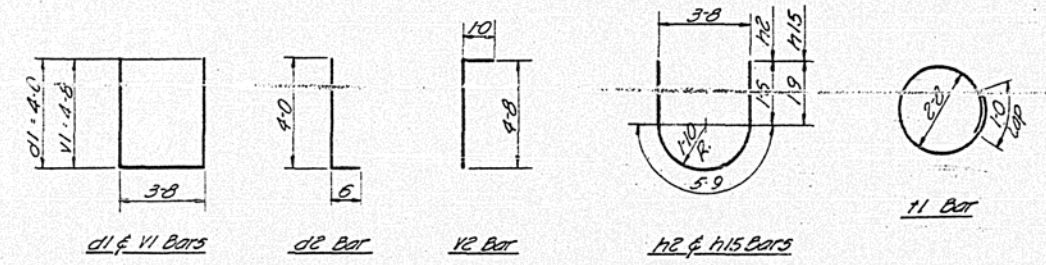


SECTION W-W



Pier	Bearing Seat Elevations - Top of Concrete							
	A	B	C	D	E	F	G	H
No.1	749.69	749.77	749.83	749.87	749.85	749.79	749.70	749.60
No.2	750.77	750.85	750.92	750.98	750.98	750.92	750.85	750.77
No.3	749.50	749.60	749.69	749.76	749.77	749.74	749.68	749.61

BAR SCHEDULE						
Piers	Bar	No.	Size	Length	Spacing	Shape
1-2-3	f1	80	7	23-10	As Shown	—
1-2-3	f2	12	7	10-0	As Shown	—
1-2-3	e1	138	5	8-6	1-0	—
1-2-3	d1	114	5	11-8	1-0	U
1-2-3	d2	30	5	4-6	As Shown	L
1-2-3	v1	114	5	13-0	1-0	□
1-2-3	v2	30	5	5-8	As Shown	7
1	v3	24	9	16-0		—
2	v4	24	9	17-6		—
3	v5	24	9	16-6		—
1-2-3	t1	18	4	9-4	As Shown	O
1-2-3	h1	24	5	37-2	1-0	—
1-2-3	h2	30	5	8-9	1-0	C
1-3	h3	12	9	38-6	As Shown	—
2	h4	6	10	38-6		—
1-2-3	h5	23	5	40-0		—
1-2-3	h6	12	5	24-6		—
1-2-3	h7	7	10	27-6		—
1-2-3	h8	2	10	10-0	As Shown	—
1-3	h9	4	11	10-0	7	—
1-2-3	h10	12	10	14-4	As Shown	—
1-2-3	h11	14	10	15-10		—
1-2-3	h12	12	10	12-6		—
1-2-3	h13	12	5	9-8		—
1-2-3	h14	12	5	8-5		—
1-2-3	h15	12	5	9-3	As Shown	—
2	h16	6	11	27-6		—
2	h17	2	9	40-0		—
1-2-3	s1	159	5	15-6	As Shown	□
1-2-3	s2-s9	x	4	x		□
1	Sp1	3	4	x		—
2	Sp2	3	4	x		—
3	Sp3	3	4	x	As Shown	—



BENDING DIAGRAMS  
(All bar dimensions are out to out)

PIER QUANTITIES		
Class "X" Concrete	319.2	Cu. Yds.
Reinforcement Bars	29900	Lbs.
Timber Piles	2600	Lin. Ft.
Test Piles (Pier #3 Only)	One Each	
Class "A" Excavation for Structures	290	Cu Yds.

\* See Bending Diagrams

ESTIMATED LENGTHS & QUANTITIES TIMBER PILES		
Pier #1	33 @ 25	825 Lin. Ft.
Pier #2	39 @ 25	975 Lin. Ft.
Pier #3	32 @ 25	800 Lin. Ft.
Total		2600 Lin. Ft.
One Test Pile @ Pier #3		

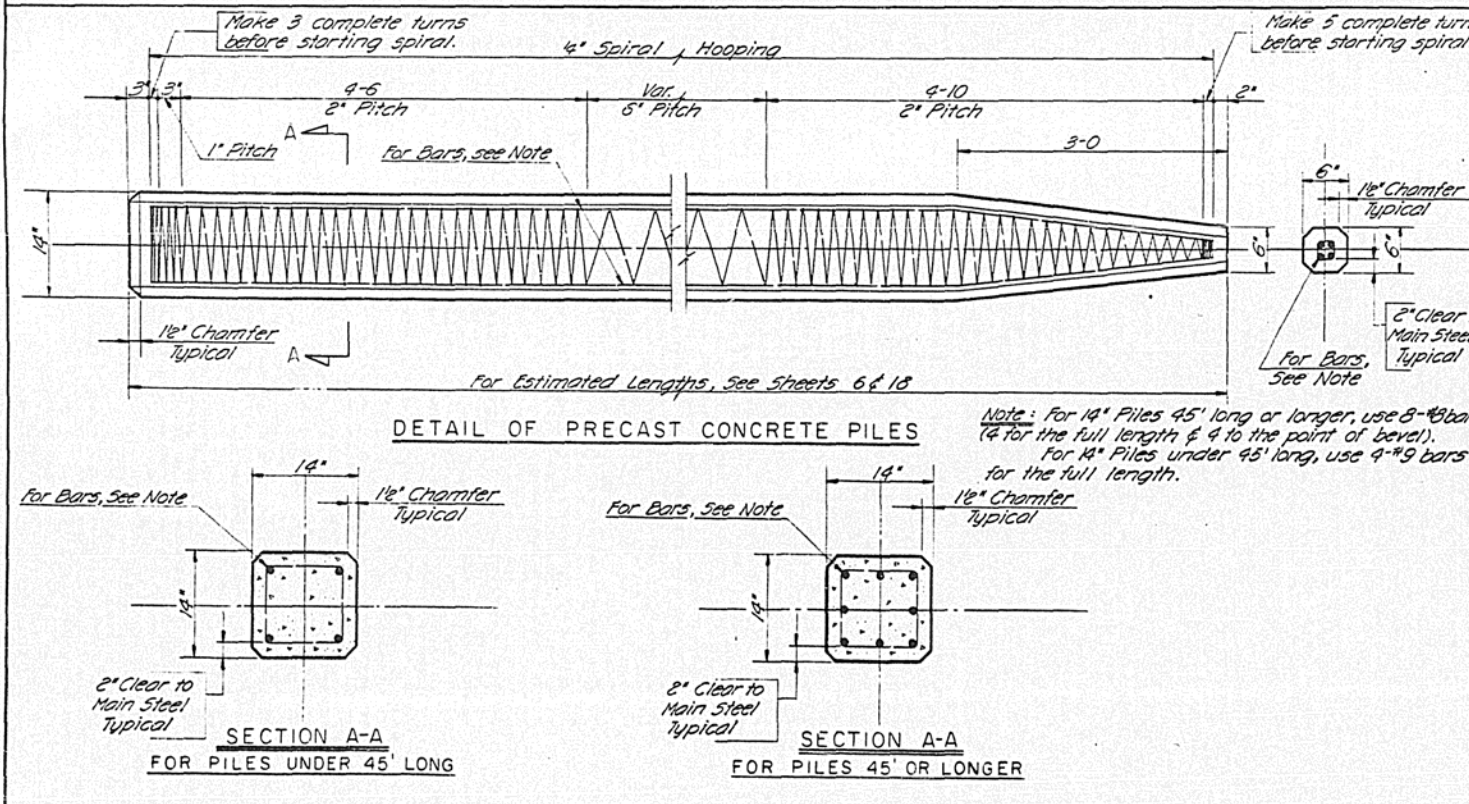
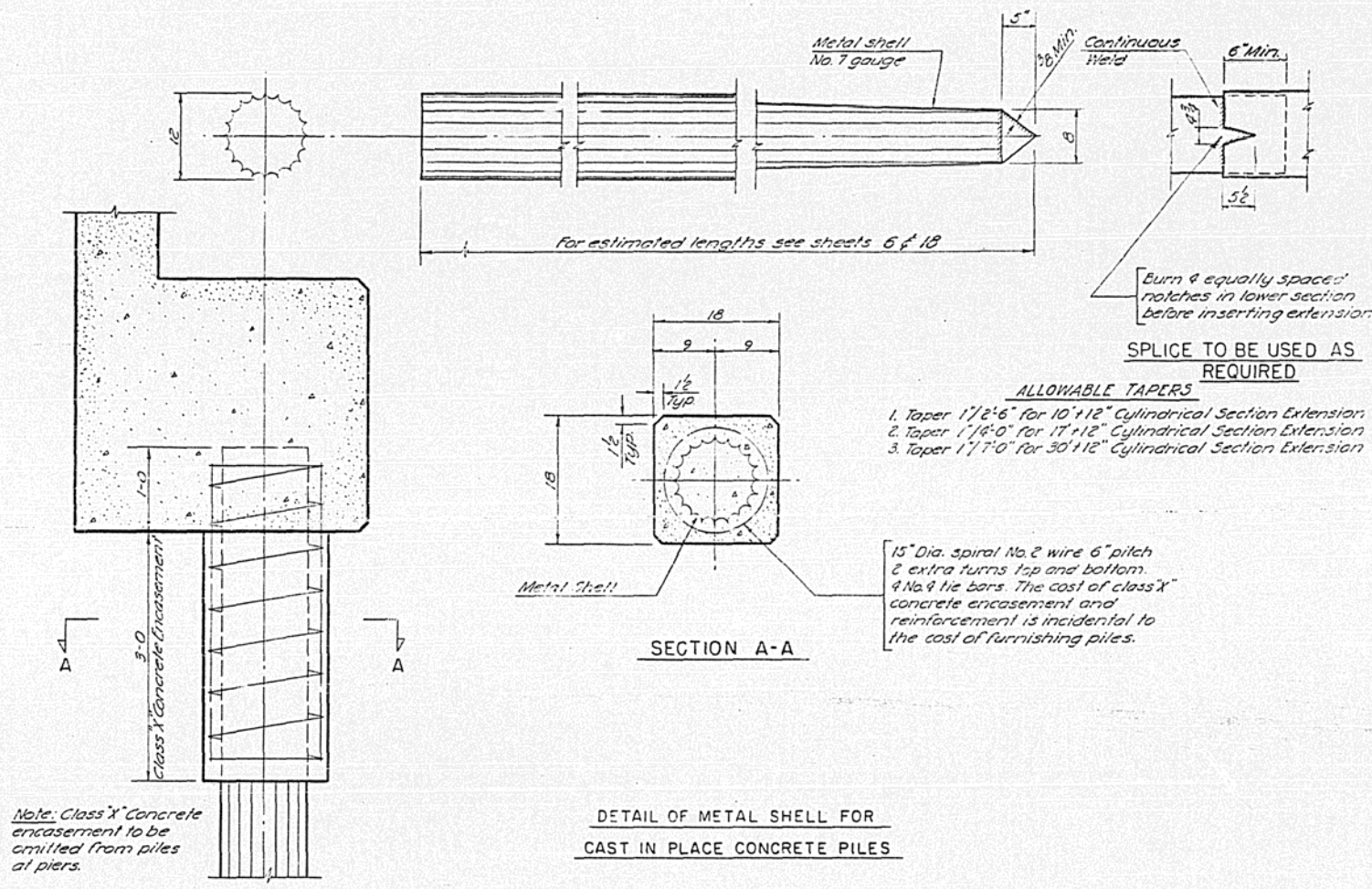
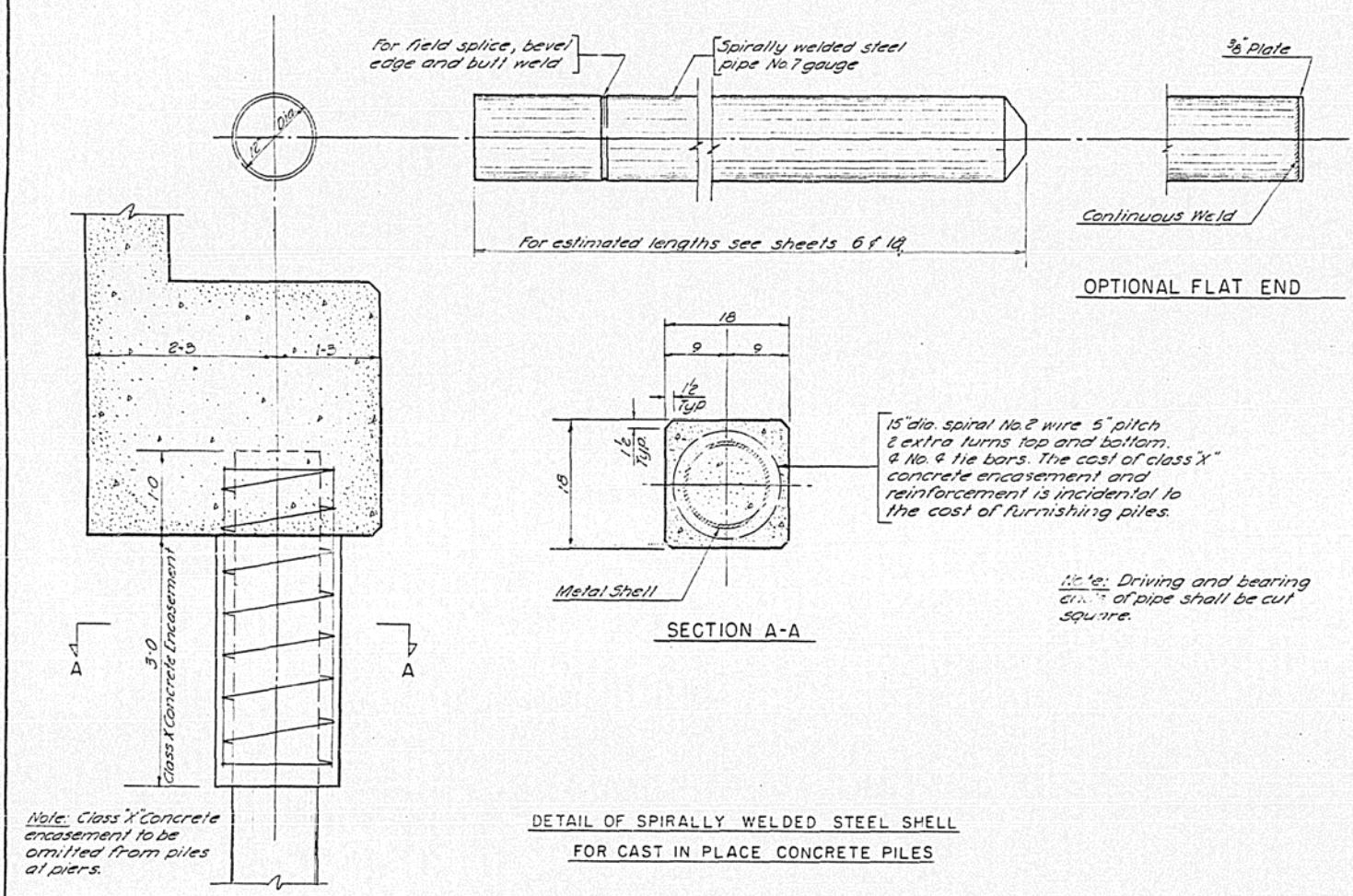
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS  
URBANA SPUR OVER FAI RT 5  
FAI-5 SECTION 10-6HB-1  
CHAMPAIGN COUNTY STA. 399+80.13

PIERS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
JH	JT	DS	JH, LDB, CWW	HSM	6-28-58	

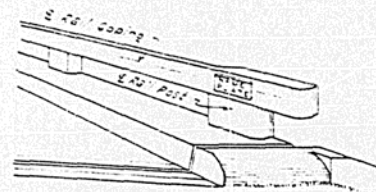
F.A.I. RTL. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	10-6HB-1	CHAMPAIGN	24	22
FEDERAL ROAD DISTRICT NO. 7			ILLINOIS	PROJ.



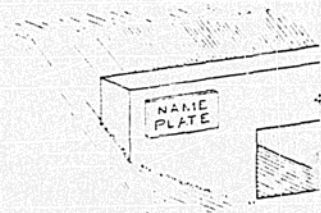
CONSOER, TOWNSEND & ASSOCIATES CONSULTING ENGINEERS CHICAGO, ILLINOIS					
ILLINOIS DIVISION OF HIGHWAYS URBANA SPUR OVER FAI RT. 5 FAI-5 SECTION 10-6HB-1 CHAMPAIGN COUNTY STA. 399+80.13					
PILE DETAILS					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
GEE	BB	JH LDB	CWW	HSN	6-24-58

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

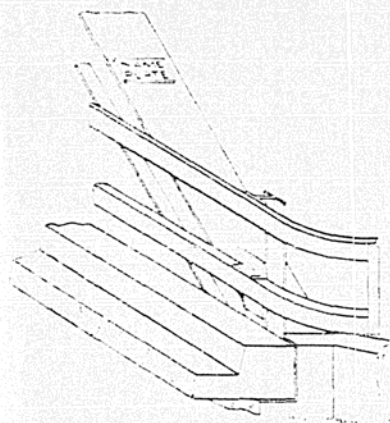
Sheet 1 of 1



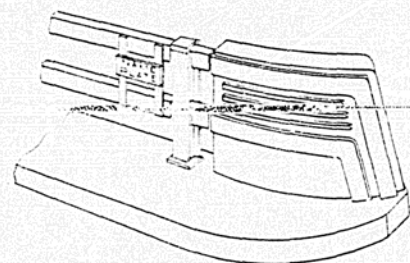
FOR CONCRETE RAILS



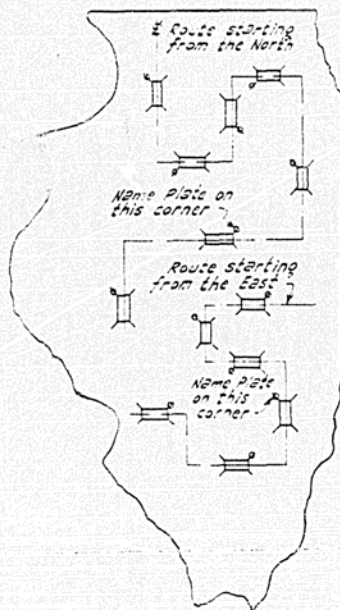
FOR CULVERT HEADWALLS



FOR TRUSSES



FOR STEEL RAILS

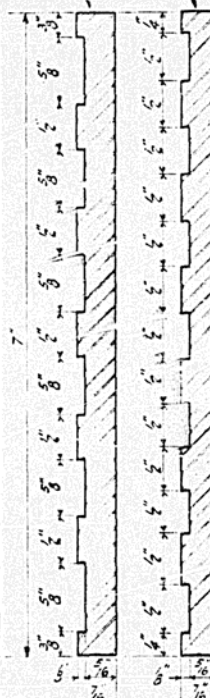


For S line  
Lettering

For S line  
Lettering

SEE DESIGN PLANS  
FOR  
LETTERING

NOTE:  
Lettering to be approved by the Engineer before ordering



SEC. A-A

MATERIAL: Best quality BRASS or BRONZE.  
BORDER & LETTERING: Raised 1/8 inch. 2 1/2\"/>

FOR CONCRETE RAILS, CULVERT HEADWALLS & SPANNS: Back of plate.  
FOR STEEL TRUSS SPANNS: Plate to be fastened on steel member at fabricating shop by bolting around entire perimeter of plate.  
FOR STEEL RAILS: Plate to be bolted on with 4-7/8\"/>

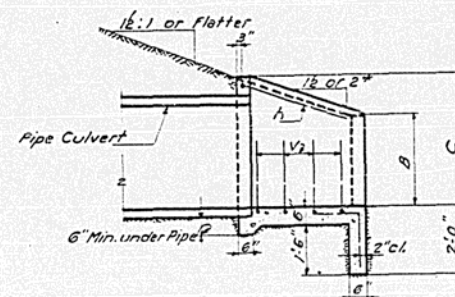
PLACING: FOR CONCRETE RAILS: Plate to be centered on 1/2 of rail post and 1/4 of handrail coping.  
FOR STEEL TRUSS SPANNS: Place to end post about five feet above roadway.  
FOR STEEL RAILS: Place midway between horizontal rail members.  
FOR SUBWAYS: See design plans for location.

DETAIL OF  
NAME PLATE FOR BRIDGES

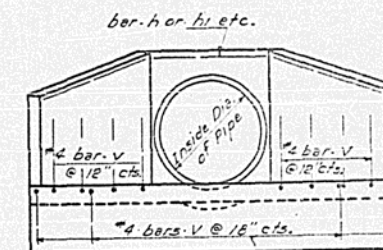
STD. No. 2113

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

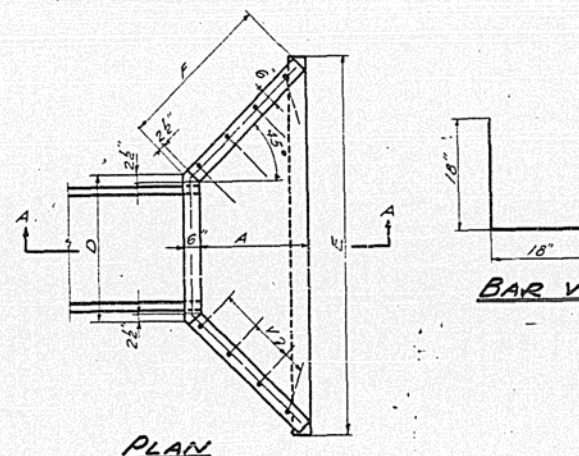
SHEET 1 OF 1



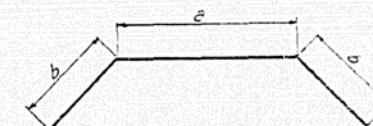
SECTION A-A



END VIEW



PLAN



BARS h TO h9

Send in field  
One Req. in each headwall

BAR V

TABLE OF DIMENSIONS

Design No.	Inside Dia. of Pipe	Slope of Fill	Dimensions						Cl. One 2 H.W.S. Cu. Yds.	Reinforcement Bars			
			A	B	C	D	E	F		h Bars Mark	V Bars Length	Total Wt. 2 H.W.S.	
D15-1/2	15	2:1	1'7"	10"	1'11"	2'0"	5'56"	2'58"	0.9	h	6'9"	16	40
D15-2	15	2:1	2'2"	10"	1'11"	2'0"	6'76"	3'54"	1.2	h1	8'3"	22	60
D18-1/2	18	2:1	1'7"	11"	2'2"	2'9"	5'66"	2'56"	1.0	h2	7'0"	16	40
D18-2	18	2:1	2'2"	11"	2'2"	2'9"	6'106"	3'34"	1.3	h3	8'6"	22	60
D24-1/2	24	2:1	2'1"	14"	2'9"	2'11"	7'46"	3'2"	1.5	h4	9'3"	22	60
D24-2	24	2:1	2'10"	14"	2'9"	2'11"	8'106"	4'26"	2.0	h5	11'0"	26	70
D30-1/2	30	2:1	2'6"	17"	3'3"	3'5"	8'86"	3'9"	2.0	h6	11'0"	26	70
D30-2	30	2:1	3'4"	17"	3'3"	3'5"	10'46"	4'11"	2.6	h7	13'0"	34	80
D36-1/2	36	1 1/2:1	3'0"	14'0"	3'10"	4'1"	10'46"	4'56"	2.6	h8	13'3"	30	80
D36-2	36	2:1	4'0"	14'0"	3'10"	4'1"	12'46"	5'106"	3.5	h9	15'6"	40	100

\* If embankment slope above headwall is flatter than 2:1, provide wings for 2:1 slope.

Mark	a	b
h	1'10"	2'56"
h1	1'10"	3'26"
h2	2'1"	2'56"
h3	2'1"	3'26"
h4	2'9"	3'3"
h5	2'6"	4'18"
h6	3'3"	3'106"
h7	3'3"	4'106"
h8	3'11"	4'6"
h9	3'11"	5'66"

Note:  
Class-X Concrete shall be used throughout.

EXAMINED July 24 1953  
PASSED W.E. Hanson  
APPROVED F.N. Barker

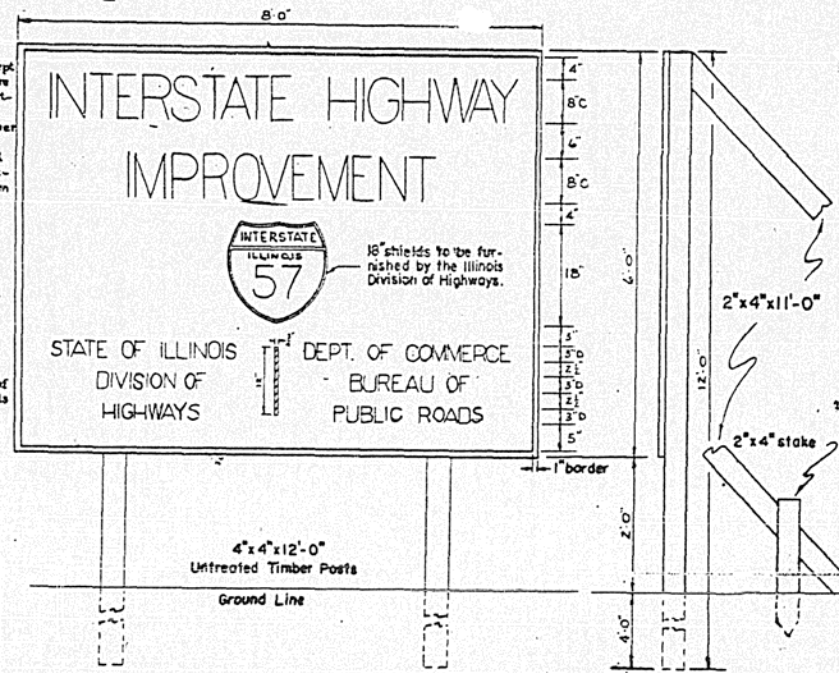
REINFORCED CONCRETE HEADWALLS  
FOR  
15"-18"-24"-30" & 36" DIAMETER  
PIPE CULVERTS  
AT RIGHT ANGLES WITH ROADWAY

M. Miller

STANDARD DESIGN  
FOR  
SIGN FOR INTERSTATE HIGHWAY IMPROVEMENT

GENERAL NOTES

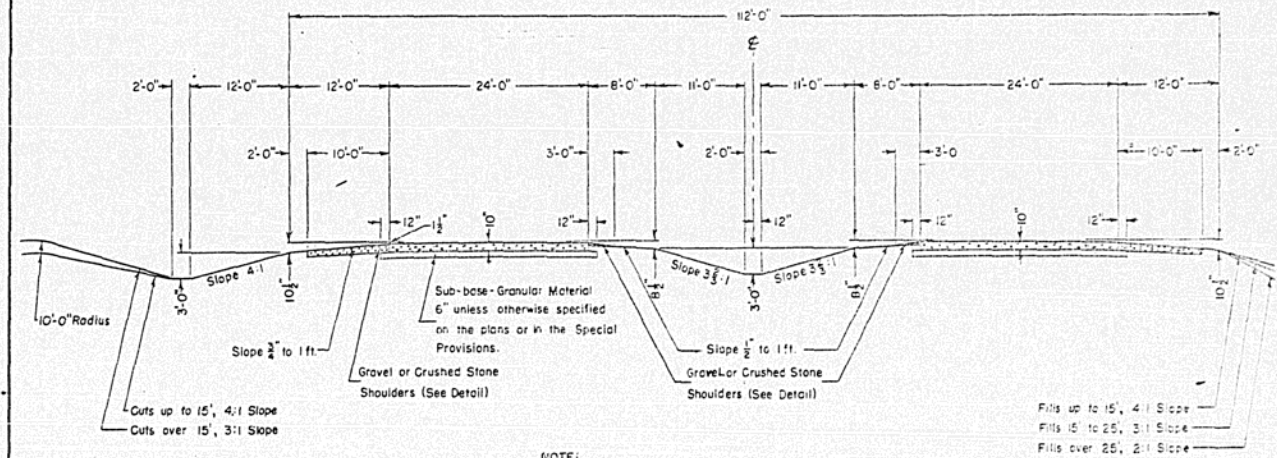
Signs shall be made of wood (2" lumber rigidly cleated), plywood (5/8" thick), or of metal, (18 gage or equivalent.)  
The Contractor shall furnish all material (except Shields) and labor for constructing and erecting the signs. The signs shall be placed prior to the starting of actual construction operations. Before any sign is erected, it shall be approved by the Engineer as to appearance and quality of construction. The signs shall remain in place and shall be maintained in a satisfactory condition until the project is accepted by the Department. The Contractor shall then remove the signs and the material (except Shields) will become his.  
The border shall be black and the letters printed black on a white background. The letters, width of stroke, width of letters and shape shall be Series C and D of the "Standard Alphabets for Highway Signs, Public Roads Administration, Federal Works Agency, 1945."  
The number of signs and their location will be shown on the plans. The cost of the signs, the erection and later removal of the signs shall be incidental to the cost of the construction.  
The Shields will be furnished by the Division of Highways, and upon removal of the signs, the Shields shall be returned to the Division of Highways.



STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS		REVISIONS	
DATE	BY	BY	DATE
DEC 10 1958	W. Williams		
DEC 10 1958			

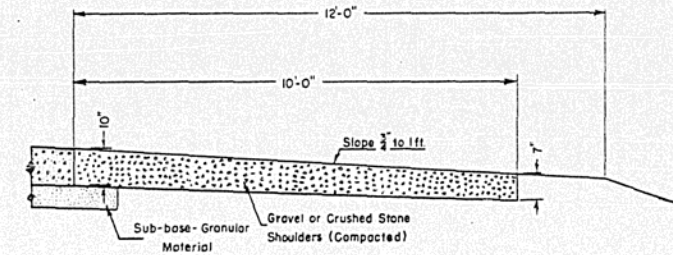
STANDARD 2128-1  
DRAWN BY U.F.L. 11-25-58

STANDARD DESIGN  
FOR  
DUAL PORTLAND CEMENT CONCRETE PAVEMENT  
WITH 40 FT. DEPRESSED MEDIAN  
(INTERSTATE HIGHWAYS)

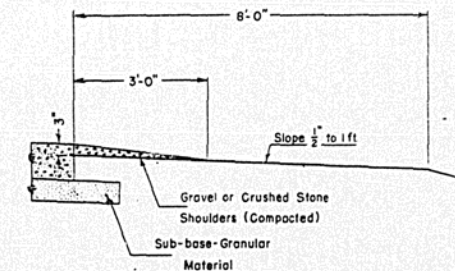


NOTE:  
Details of pavement to conform to  
Standard for 24 ft. pavement.

Shoulders and sideslopes shall be rounded 12 inches  
in each direction from the tangent intersection of  
these surfaces.



DETAIL  
OF  
OUTSIDE SHOULDER



DETAIL  
OF  
MEDIAN SHOULDER

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS		REVISIONS	
DATE	BY	BY	DATE
PASSED August 19 1957	J.E.B.	Am N. 57	
APPROVED August 14 1957			

STANDARD 2124R