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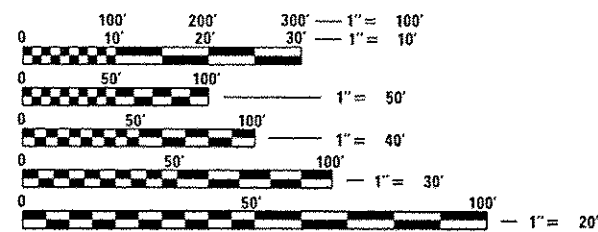
LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06	
001001-02	631032-09
280001-07	667101-02
420406	701301-04
482001-02	701311-03
515001-03	
	701901-06
630001-11	
	725001-01
630301-07	BLR 21-9

LIST OF DISTRICT 4 CADD STANDARDS

205001-D4
281001-D4
406101-D4
440001-D4
505001-D4
630101-D4
780001-D4

ADT = 1350 (2013)  
 % HCV = 3.56 (2013)  
 % SU = 2.22 (2013)  
 % MU = 1.33 (2013)  
 TOWNSHIP: MONMOUTH  
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
 1-800-892-0123  
 OR 811

PROJECT ENGINEER: CHRISTOPHER MAUSHARD 309-671-3453  
 PROJECT MANAGER: SOBHI LABABIDI 309-671-3460

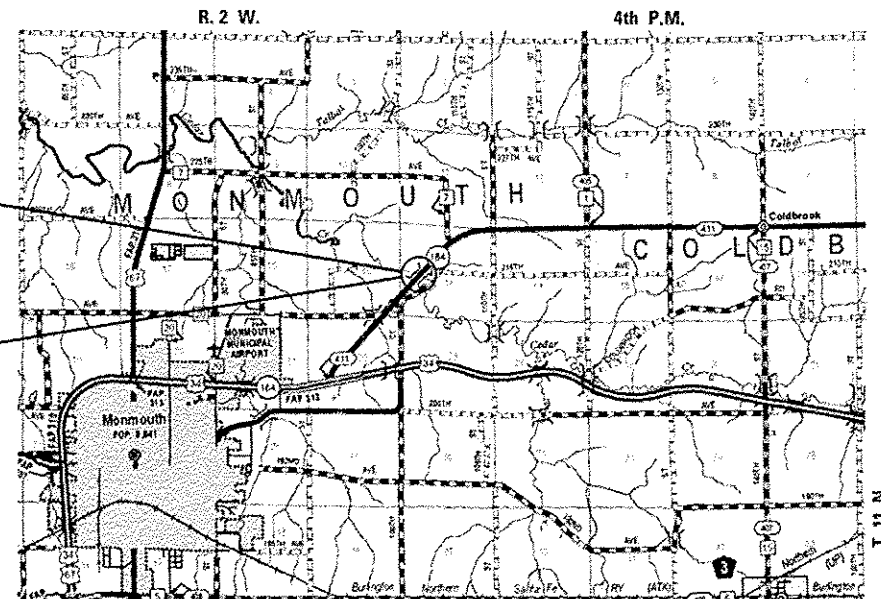
CATALOG NO. 034921-00D  
 CONTRACT NO. 68B43

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

PROPOSED  
 HIGHWAY PLANS

FAS 411 (IL ROUTE 164)  
 SECTION (103B)BR  
 PROJECT ACRS-0411(102)  
 WARREN COUNTY  
 C-94-049-13

END PROJECT  
 STA 603 + 02  
 END ROADWAY  
 IMPROVEMENT  
 STA. 601 + 12  
 BEGIN PROJECT  
 STA 589 + 64  
 BEGIN ROADWAY  
 IMPROVEMENT  
 STA. 591 + 71



LOCATION PLAN

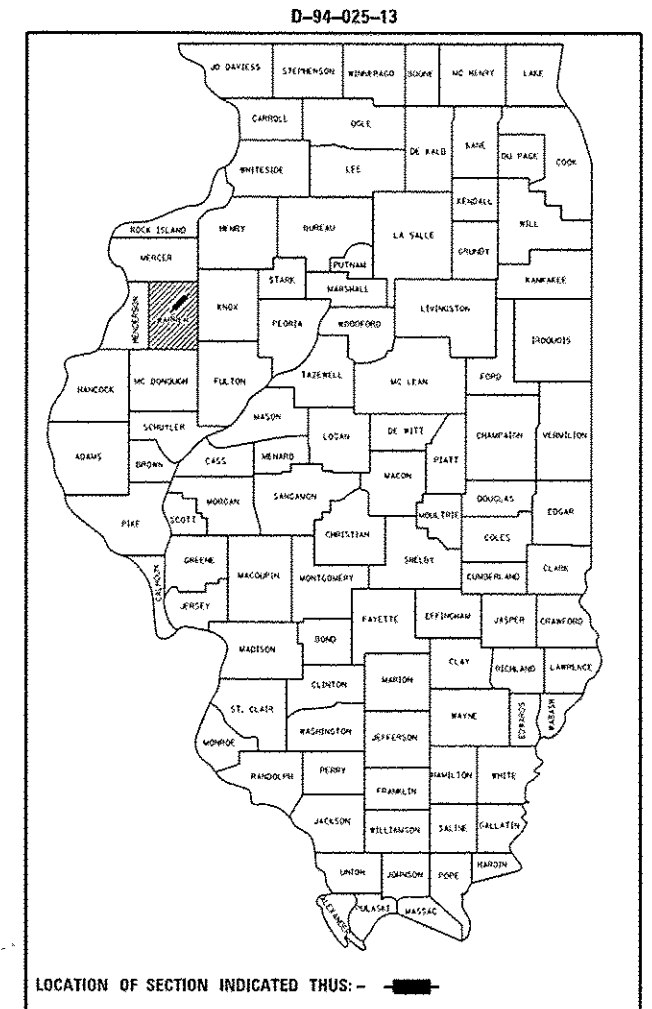
NET LENGTH OF PROJECT = 1338.00 FEET = 0.253 MILES



**V&K**  
 Allen Henderson & Associates  
 A Division of Veenstra & Kimm, Inc.  
 Springfield, IL. Phone: (217)544-8033  
 IL Design Firm No. 184-001939

\* 76 + 10 = 86 TOTAL SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
411	(103B)BR	WARREN	76	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	68B43	



PROJECT DESCRIPTION  
 REMOVE & REPLACE EX STRUCTURE OVER  
 CEDAR CREEK  
 EX SN 094-0009  
 PR SN 094-0052  
 STA 597 + 32

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED October 17, 2016  
Paula James  
 REGION THREE ENGINEER

Dec 9 2016  
Maurice M. Addis, PE  
 ENGINEER OF DESIGN AND ENVIRONMENT

Dec 9 2016  
Christopher P. Hehlert, PE  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



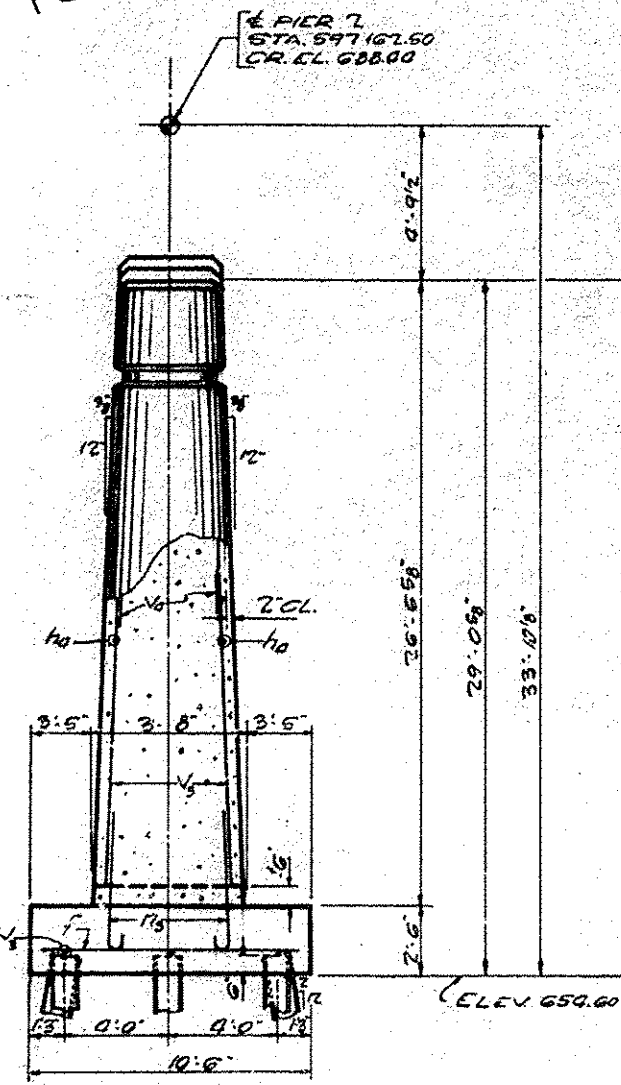
Christopher P. Hehlert 11/30/2017  
 EXPIRATION: 11/30/2017

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 OF THE STATE OF ILLINOIS

REV. 1-6-17

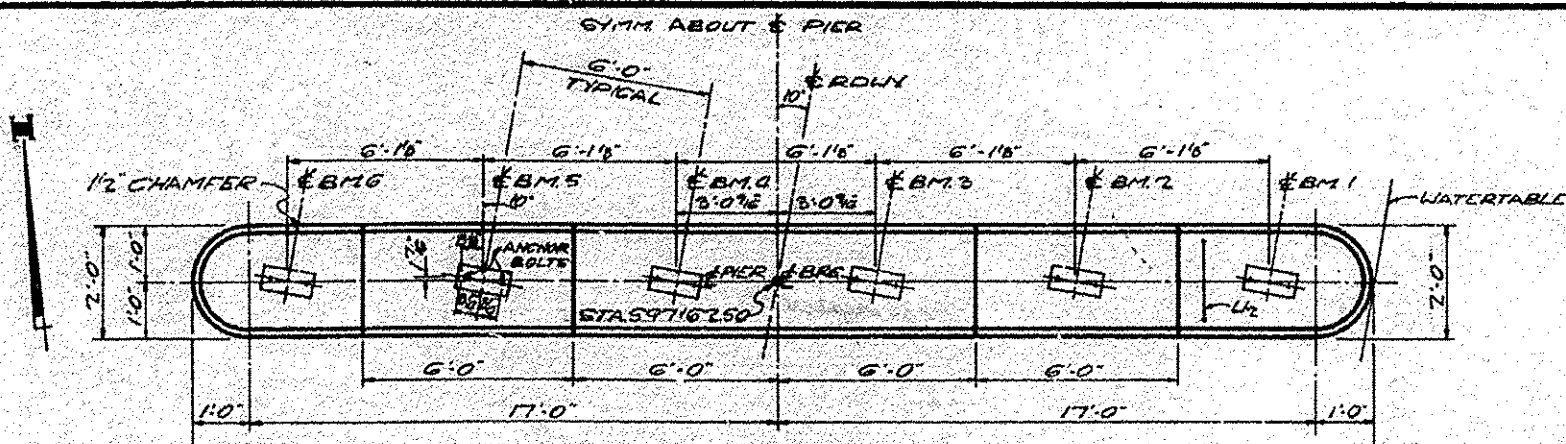
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	103-B	WARREN	19	13
FED. ROAD DIST. NO. 7			PROJECT	

FOR INFORMATION ONLY

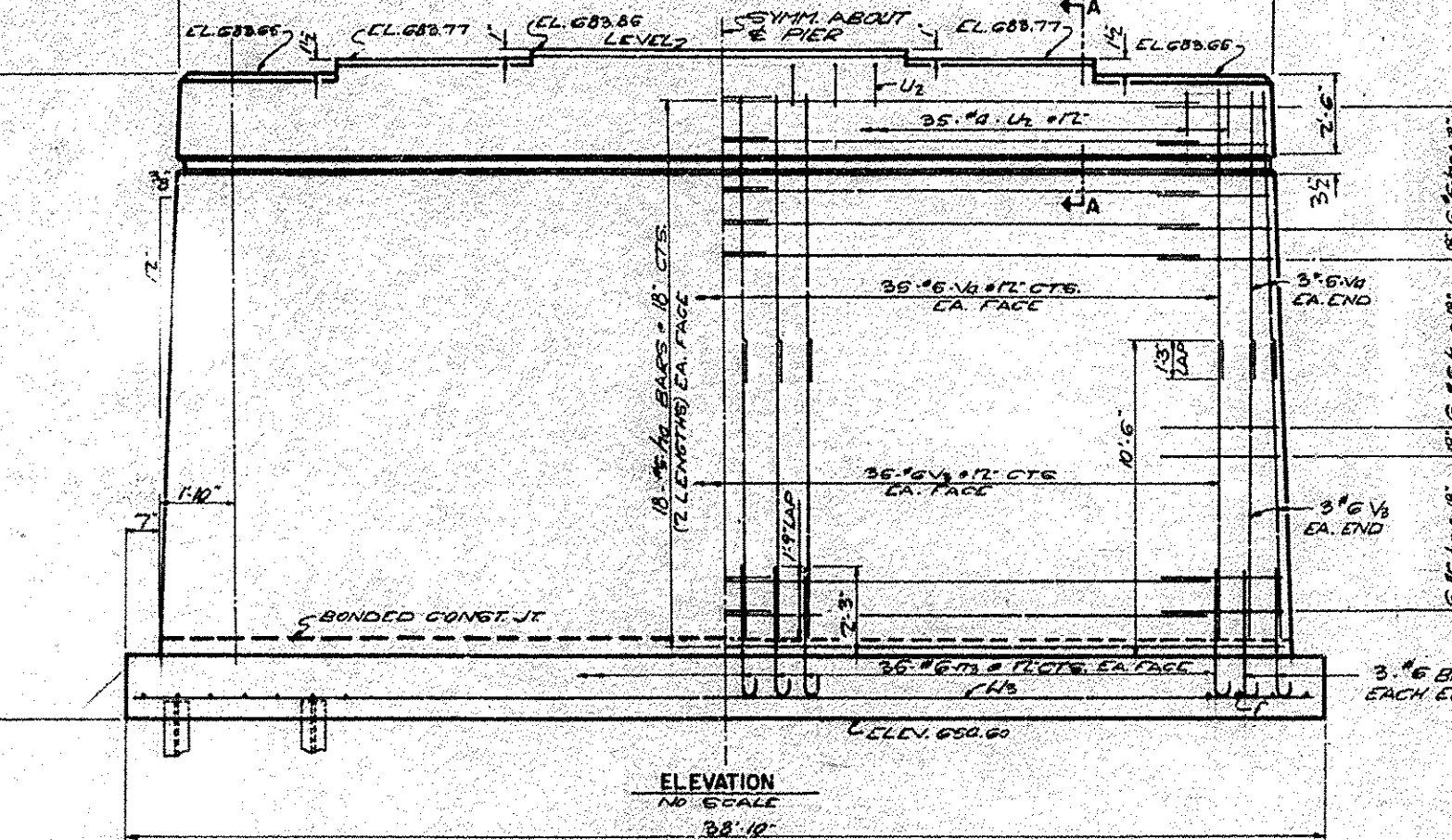


END VIEW  
NO SCALE

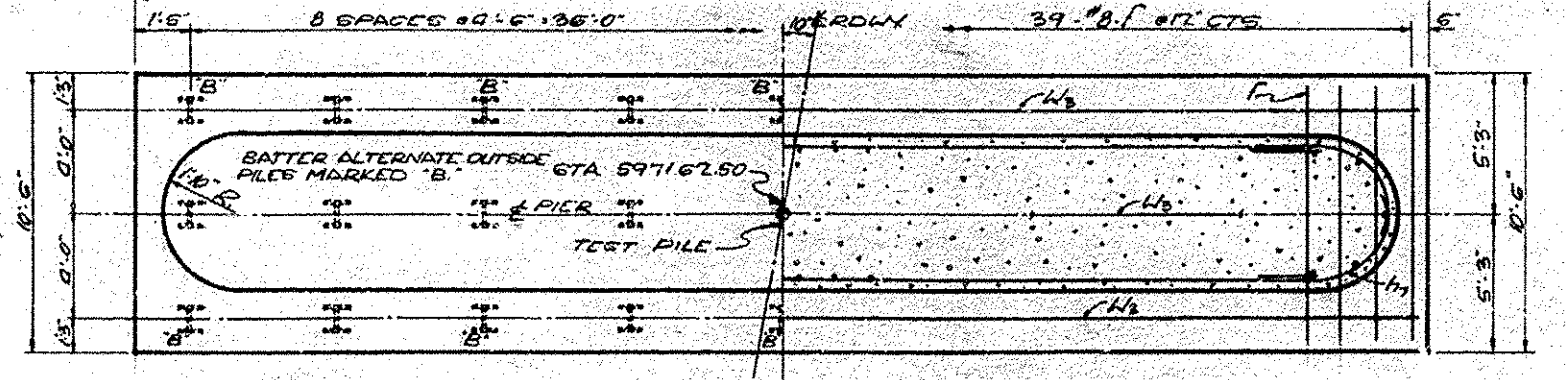
**PILE DATA**  
 TYPE STEEL H PILES (8 BP 36)  
 MIN. CAPACITY 30 TONS  
 EST. LENGTH 13'-0"  
 NO. REED. 2611 TEST PILE  
 MIN. PENETRATION DRIVE TO REFUSAL  
 IN ROCK



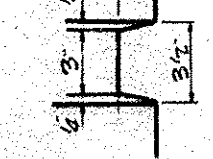
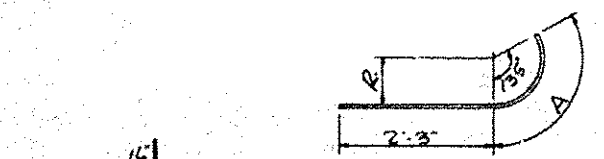
TOP VIEW  
NO SCALE



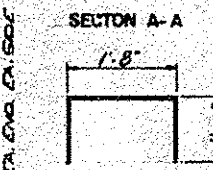
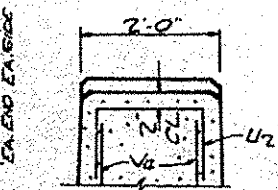
ELEVATION  
NO SCALE



FOOTING PLAN  
NO SCALE



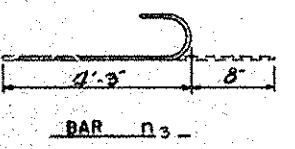
NOTCH DETAIL



SECTION A-A  
BAR U2

BAR	R	A
h6	10	2'-0"
h6	1'-2"	2'-9"
h7	1'-5"	3'-0"

DETAIL OF BARS  
h6, h6 #17



BAR #3

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
f	39	#8	10'-3"	—
h6	72	#5	17'-6"	—
h6	24	#5	4'-3"	—
h6	24	#5	5'-0"	—
h7	24	#6	5'-7"	—
n3	76	#6	4'-11"	—
U2	311	#4	4'-8"	□
U2	3	#6	38'-6"	—
v6	75	#5	17'-3"	—
v6	76	#6	10'-0"	—
CLAS A CONCRETE CU YDS. 189.2				
REINFORCEMENT BARS LBS. 6110				
TURN STEEL PILES 8 BP 36 LF 668				
DRIVING STEEL PILES LIFT 668				
TEST PILES (STEEL) 8 BP 36 LF 1				

PIER 2  
 F.A. RTE 9 SEC 103-B  
 F.A. 9 OVER CEDAR CREEK  
 WARREN CO, ILLINOIS  
 STA. 697130

△ SHEET ADDED 1-6-17



**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.
F.A. 9	103-B	WARREN	19	1
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	F-21 (7)	

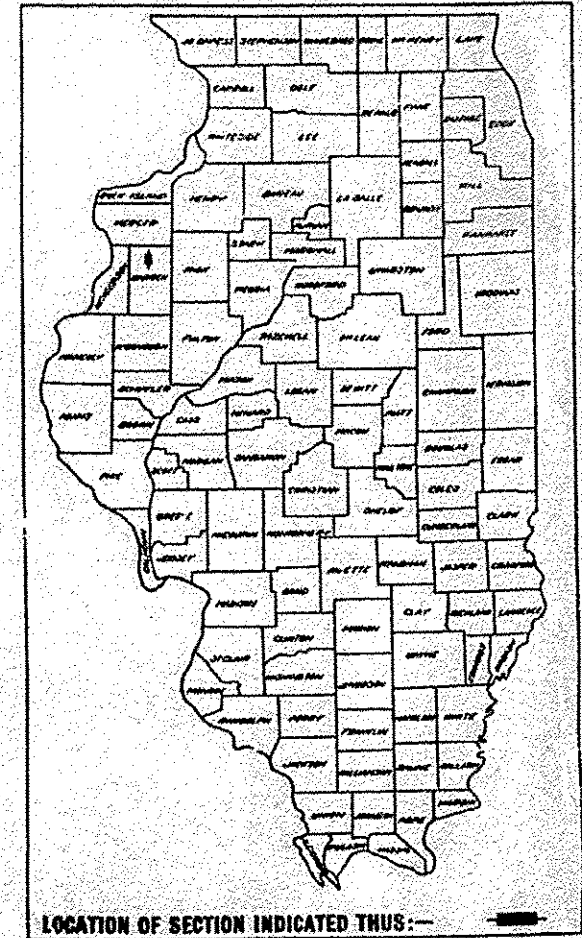
**SCALES**

PLAN	1 INCH	100 FT.
PROFILE HOR.	1 INCH	100 FT. (AND AS NOTED)
PROFILE VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	5 FT. VERT.
	1 INCH	10 FT. HOR.

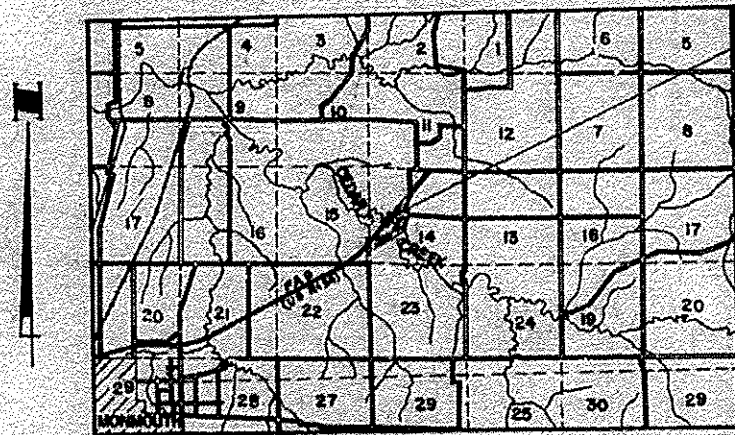
INDEX OF SHEETS ON SHEET 2

F.A. ROUTE 9 SECTION 103 B  
 PROJECT F-21 (7)  
 WARREN COUNTY

FOR INFORMATION ONLY



LOCATION OF SECTION INDICATED THUS:—



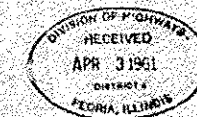
LOCATION MAP  
 SCALE 1" = 1 MILE

**SECTION 103 B INCLUDES:**  
 A THREE SPAN CONTINUOUS STEEL I-F BEAM BRIDGE (CARRYING F.A. 9 OVER CEDAR CREEK) ON SOLID R.C. PIERS ON STEEL H PILES AND R.C. OPEN ABUTTS ON STEEL H PILES. SPANS 55'-0" 66'-0" 56'-0" AT STA. 591+30 ON F.A. 9 AND CONSTRUCTION OF EARTH EMBANKMENT CONES AND CHANNEL CHANGE.

NET LENGTH OF IMPROVEMENT = 179.75 FEET = 0.034 MILE  
 NET LENGTH OF PROJECT = 179.75 FEET = 0.034 MILE

PLANS FOR STRUCTURES EXAMINED Nov 1, 1961  
*W.E. Baumann*  
 ENGINEER OF BRIDGE & TRAFFIC STRUCTURES

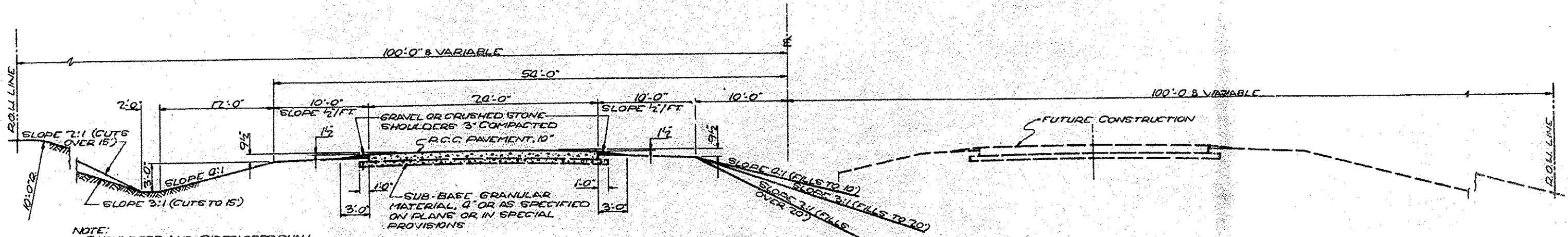
STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	<u>June 29, 1961</u>
EXAMINED	<u>December 12, 1961</u>
FORWARDED	<u>December 14, 1961</u>
APPROVED	<u>December 14, 1961</u>
APPROVED	<u>December 14, 1961</u>



PLANS PREPARED BY  
 MISSMAN, STANLEY, FARMER & ASSOCIATES  
 CIVIL ENGINEERS  
 ROCK ISLAND, ILLINOIS  
 SUBMITTED March 27, 1961

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS  
 APPROVED  
 DIVISION ENGINEER DATE

△ SHEET ADDED 1-6-17



NOTE:  
SHOULDERS AND SIDESLOPES SHALL BE ROUNDED 12" IN EACH DIRECTION FROM THE TANGENT INTERSECTION OF THESE SURFACES.

TYPICAL SECTION F.A. ROUTE 9

FOR INFORMATION ONLY

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	TYPICAL SECTION F.A. ROUTE 9
	INDEX OF SHEETS - SUMMARY OF QUANTITIES
3	PLAN & PROFILE - F.A. ROUTE 9
4	PLAN & PROFILE - CEDAR CREEK
5	GENERAL PLAN & ELEVATION AND GENERAL NOTES
6	BORINGS & EXPANSION DETAILS
7	SUPERSTRUCTURE
8	STRUCTURAL STEEL
9	HANDRAIL DETAILS
10	END POST DETAILS
11	ABUTMENTS
12	PIER 1
13	PIER 2
14 - 17	CROSS SECTIONS
18	STANDARDS 2113, 1686-2
19	STANDARD 1909-3
19A	STANDARDS 2114, 1971-3

SUMMARY OF QUANTITIES - SEC. 103-B

QUANT.	UNITS	ITEM	CODE NO.
6.1	ACRE	TREE REMOVAL, ACRES	010005
18,889	CU. YD.	EARTH EXCAVATION	011001
5680	CU. YD.	CHANNEL EXCAVATION	012001
840	CU. YD.	CLASS A EXCAVATION FOR STRUCTURES	050001
327	CU. YD.	CLASS B EXCAVATION FOR STRUCTURES	050002
277.2	CU. YD.	CLASS A CONCRETE	052002
260.1	CU. YD.	CLASS X CONCRETE	052003
167530	POUND	FURNISHING AND ERECTING STRUCTURAL STEEL	054001
355	LIN. FT.	FURNISHING AND ERECTING METAL HANDRAIL	055001
52,380	POUND	REINFORCEMENT BARS	059001
385	LIN. FT.	FURNISHING CREOSOTED PILES 20.1 TO 38 FEET	060005
385	LIN. FT.	DRIVING TIMBER PILES	060008
1992	LIN. FT.	FURNISHING STEEL PILES 8BP 36	060027
4	EACH	TEST PILE STEEL 8 BP 36	060036
1992	LIN. FT.	DRIVING STEEL PILES	060037
1	EACH	NAME PLATES	061001
2402	SQ. YD.	SLOPE WALL 6 INCH	083003
745	SQ. YD.	PROTECTIVE COAT	052021

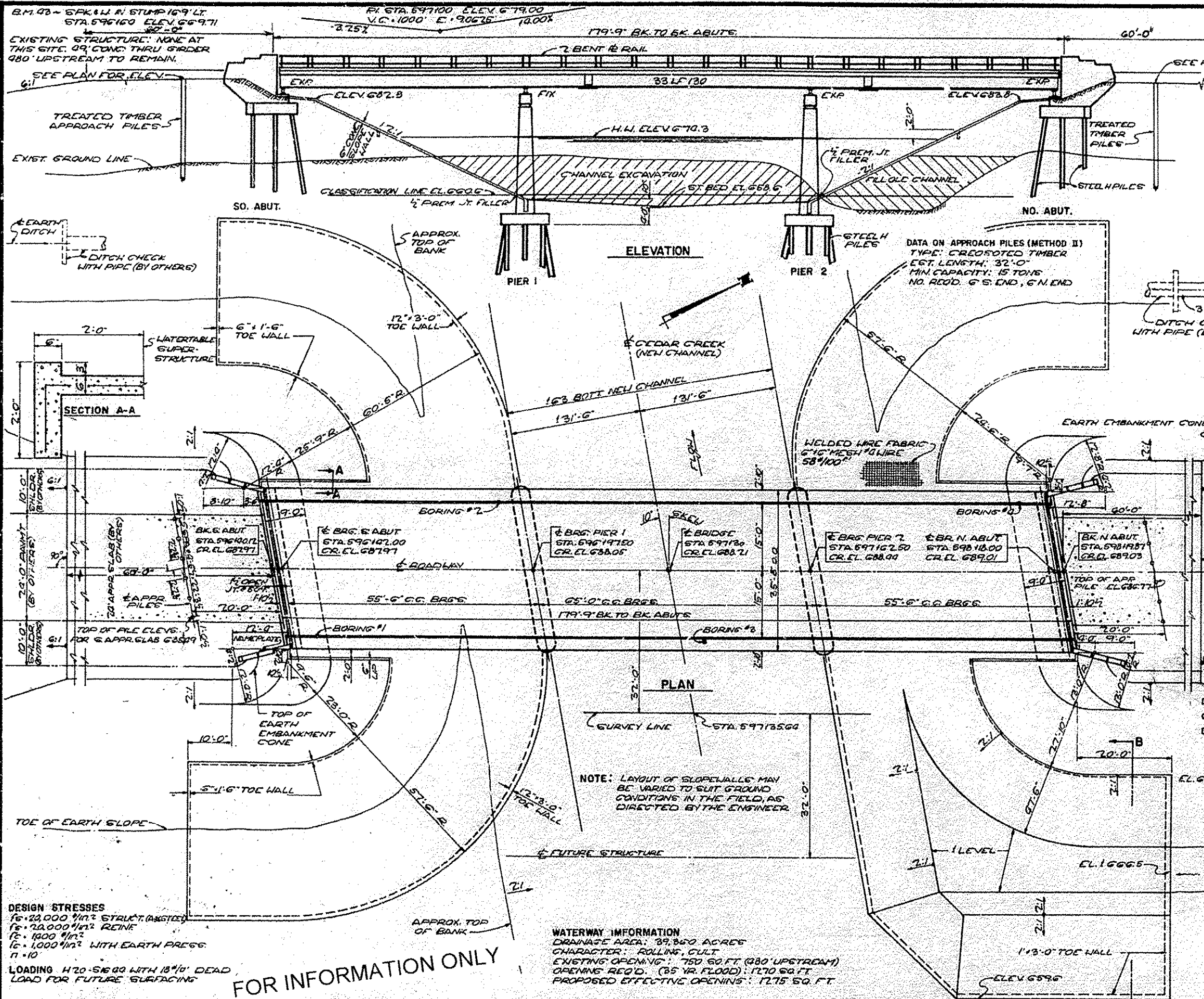
HIGHWAY CLASSIFICATION

F.A. ROUTE 9  
786-T-70-1983  
MAXIMUM GRADE 4.00 %  
LENGTH OF MAXIMUM GRADE 1075 FT.  
MINIMUM STOPPING SIGHT DISTANCE 600 FT.  
MINIMUM HORIZONTAL RADIUS TANGENT

SUBMITTED May 24, 1961  
DISTRICT DESIGN ENGINEER  
EXAMINED June 27, 1961  
DISTRICT CONSTRUCTION ENGINEER  
EXAMINED MAY 26, 1961  
DISTRICT MAINTENANCE ENGINEER  
EXAMINED 24 May 61  
DISTRICT TRAFFIC ENGINEER  
ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY  
DATE June 29, 1961  
DISTRICT ENGINEER

△ SHEET ADDED 1-6-17



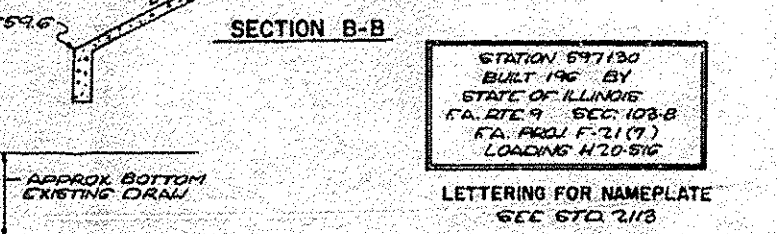


**GENERAL NOTES**  
 CLASS X CONCRETE SHALL BE USED THROUGHOUT EXCEPT CLASS A CONCRETE SHALL BE USED IN FACES. COARSE AGGREGATE WHICH IS TO BE USED IN END POSTS SHALL BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGHT & SOFT SANDS. THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ART. 519 OF THE STANDARD SPECIFICATIONS AND SHALL BE POURED IN ONE CONTINUOUS OPERATION ON EITHER SIDE OF THE LONGITUDINAL CONSTRUCTION JOINTS. ALL ROCKERS, BOLSTERS, BEARING PLATES, FINITE AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 515 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL EST. WT. 6500. ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER PIERS AND ABUTMENTS. ALL RIVETS 3/4" AND OPEN HOLES 1 1/2" EXCEPT AS NOTED. ALL LF BEAM SPLICES SHALL BE SUBPUNCHED, REAMED, AND MATCH-MARKED. SUBPUNCH 1/4" AND REAM TO PROPER SIZE. ALL LF BEAMS SHALL BE SHOP ASSEMBLED TO THEIR F TOPER GRADE AND ALIGNMENT WITH OR WITHOUT DIAPHRAGMS, INSPECTED AND REAMED WHILE SO ASSEMBLED. WELDING SHALL CONFORM TO ARTICLE 505 (C) OF THE STANDARD SPECIFICATIONS. EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR. STRUCTURAL STEEL SHALL BE INSPECTED BY THE ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING. THE CONTRACTOR SHALL DRILL TEST PILES IN PERMANENT LOCATIONS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER, BEFORE ORDERING THE REMAINDER OF THE PILING.

**TOTAL BILL OF MATERIAL**

ITEM	UNITS	SUPER	SUB	TOTAL
CLASS X CONCRETE	CYDS	170.5	89.6	260.1
FURNISHING & ERECTING STRUCTURAL STEEL	LBS	167,620		167,620
REINFORCEMENT BARS	LBS	33,770	16,610	50,380
FURNISHING & ERECTING METAL HANDRAIL	LN. FT.	355		355
CHANNEL EXCAVATION	CYDS		5680	5680
CLASS A CONCRETE	CYDS		277.2	277.2
FURNISHING CROCODATED PILES (20.1 TO 38.0)	LN. FT.		385	385
DRIVING TIMBER PILES	LN. FT.		385	385
FURNISHING STEEL PILES 8 BP 36	LN. FT.		1992	1992
DRIVING STEEL PILES	LN. FT.		1992	1992
TEST PILE (STEEL 8 BP 36)	EA.		0	0
NAME PLATES	EA.		1	1
SLOPE WALL 6"	SQ. YD.		745	745
CLASS A EXCAVATION FOR STRUCTURES	CYDS		800	800
CLASS B EXCAVATION FOR STRUCTURES	CYDS		327	327
PROTECTIVE COAT	SQ. YD.		745	745

DESIGNED: S. SCHOLL, T.D.G.  
 CHECKED: J. DUNLAP, S.S.  
 DRAWN: R. RHODES & F.H.



STATION 597130  
 BUILT 196 BY  
 STATE OF ILLINOIS  
 F.A. RTE. 9 SEC. 103-B  
 F.A. PROJ. F-21(7)  
 LOADING H 20-S16

LETTERING FOR NAMEPLATE  
 SEC 670 213

**GENERAL PLAN & ELEVATION**  
 SEC. 103-B F.A. ROUTE 9  
 PROJECT F-21(7)  
 OVER CEDAR CREEK  
 WARREN CO., ILLINOIS  
 STA. 597 + 30

**DESIGN STRESSES**  
 15,000 #/in<sup>2</sup> STRUCT. (ANGLES)  
 15,000 #/in<sup>2</sup> REINFC.  
 15,000 #/in<sup>2</sup> WITH EARTH PRESS.  
 n = 10

**LOADING** H 20-S16 40 WITH 18'10" DEAD LOAD FOR FUTURE SURFACING

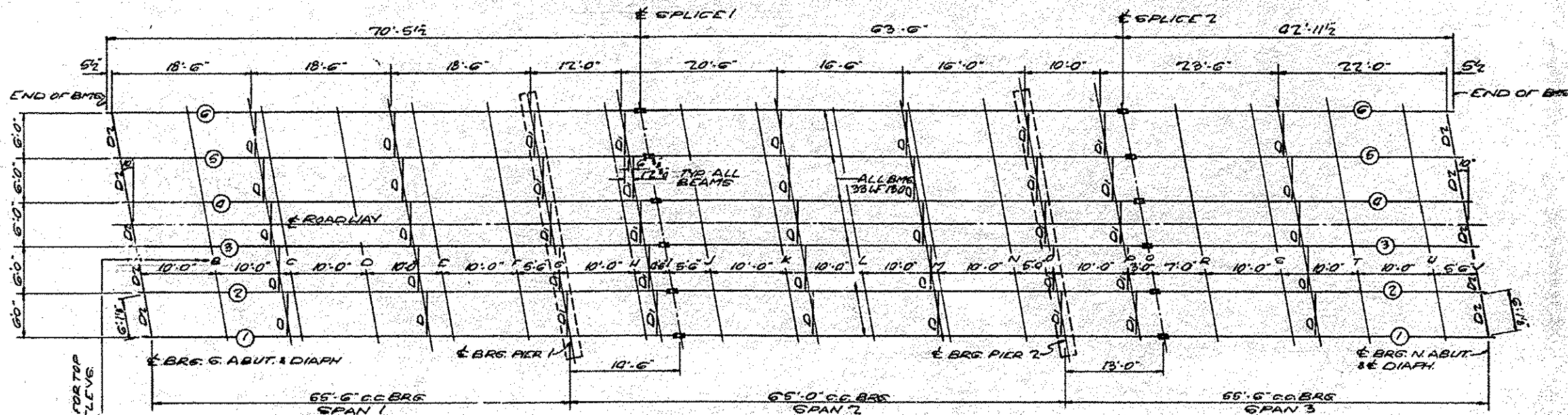
**FOR INFORMATION ONLY**

**WATERWAY INFORMATION**  
 DRAINAGE AREA: 39,800 ACRES  
 CHARACTER: ROLLING, CULT  
 EXISTING OPENING: 750 SQ. FT. (880' UPSTREAM)  
 OPENING REQ'D. (85' VR. FLOOD): 1270 SQ. FT.  
 PROPOSED EFFECTIVE OPENING: 1275 SQ. FT.





ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 9	103-B	WARREN	19	8
FED. ROAD DIST. NO. 7 PROJECT				



FOR INFORMATION ONLY

TOP OF SLAB ELEVATIONS

LOC.	BM. 1	BM. 2	BM. 3	BM. 4	BM. 5	BM. 6
A	68778	68789	68796	68796	68790	68778
B	68778	68789	68796	68796	68789	68778
C	68779	68790	68796	68796	68790	68778
D	68780	68792	68798	68798	68791	68779
E	68785	68792	68800	68800	68793	68781
F	68786	68797	68803	68802	68796	68782
G	68788	68799	68805	68804	68798	68786
H	68792	68803	68809	68808	68801	68789
I	68793	68805	68811	68810	68803	68791
J	68797	68808	68813	68813	68806	68793
K	68802	68813	68819	68818	68811	68799
L	68808	68819	68825	68824	68817	68805
M	68815	68826	68832	68831	68824	68812
N	68828	68830	68839	68838	68831	68819
O	68827	68838	68843	68842	68835	68823
P	68836	68847	68852	68851	68844	68831
Q	68839	68850	68856	68854	68847	68834
R	68846	68856	68861	68860	68853	68840
S	68866	68877	68882	68881	68874	68860
T	68867	68877	68882	68881	68874	68861
U	68879	68889	68894	68893	68886	68872
V	68886	68896	68901	68900	68893	68879

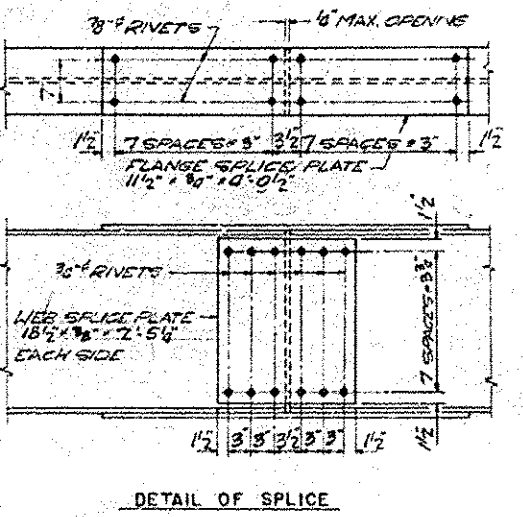
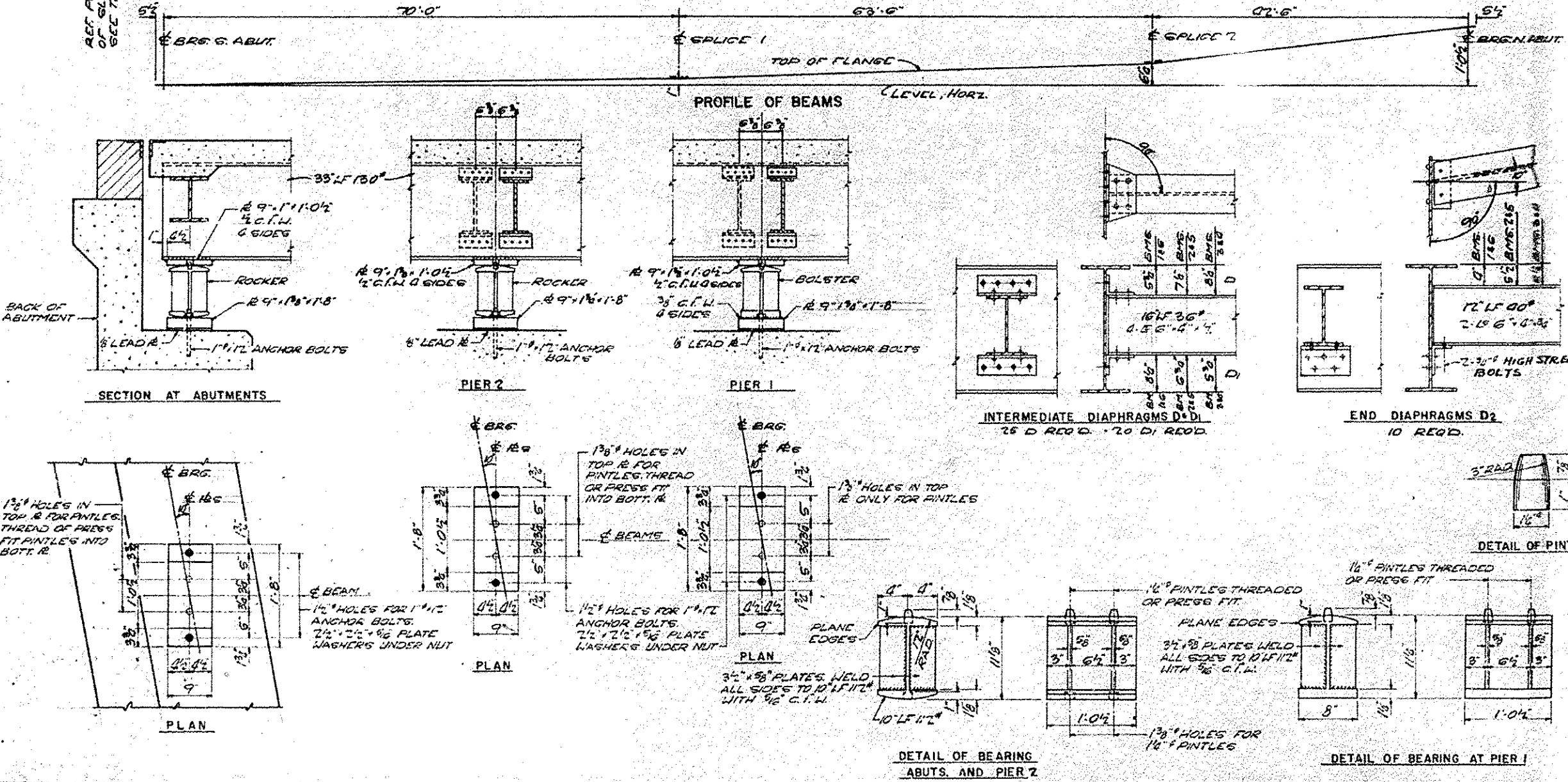
NOTE: DOES NOT INCLUDE D.L. DEFLECTIONS

\* ELEVATIONS TOP OF WF BEAMS

LOCATION	1	2	3	4	5	6
S. ABUT.	68778	68778	68788	68751	68728	68778
PIER 1	68729	68736	68707	68747	68786	68739
SPLICE 1	687250	687381	687060	687460	68781	687250
PIER 2	687603	687729	687812	687812	687729	687603
SPLICE 2	687693	687818	687901	687901	687818	687693
N. ABUT.	688210	688339	688422	688422	688339	688210

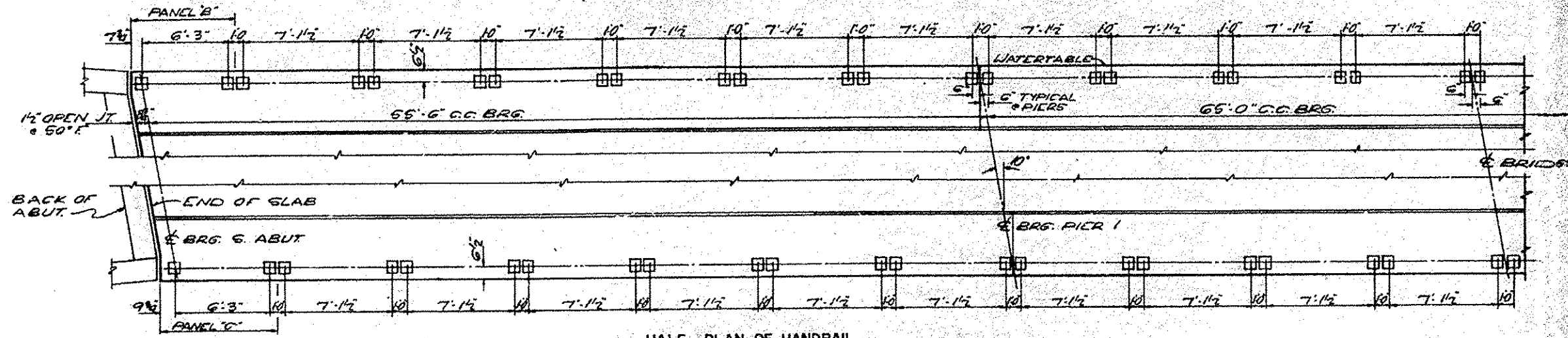
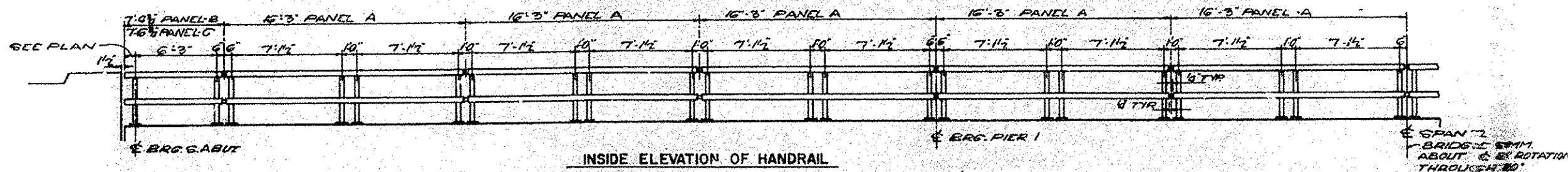
\* ELEVATIONS REFER TO TOP OF TOP FLANGES OF ACTUAL ROLLED BEAMS DOES NOT INCLUDE SPLICE IN.

NOTE: ALL STEEL TO BE A-36 STEEL. ALL RIVETS HOLES IN SPLICE TO BE REAMED WITH PARTS ASSEMBLED TO GRADE AND MATCH MARKED.



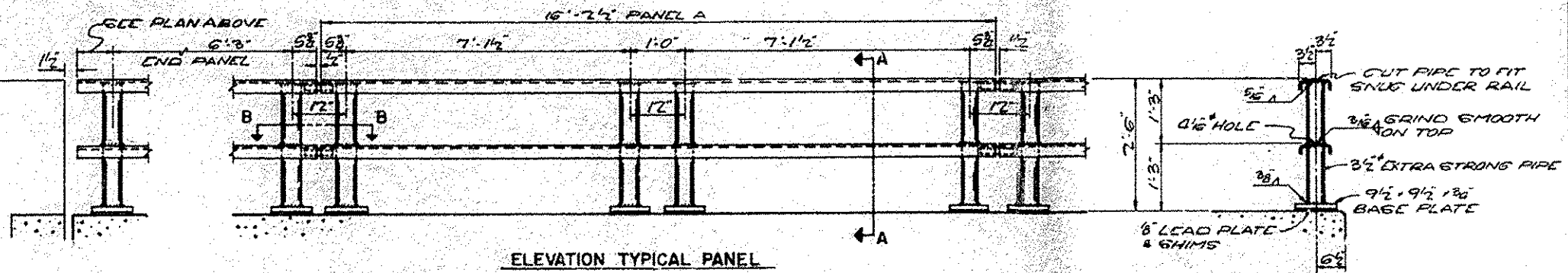
STRUCTURAL STEEL  
 I.A. RTE. 9 SEC. 103-B  
 FA. 9 OVER CEDAR CREEK  
 WARREN CO., ILLINOIS  
 STA. 597130

NO.	SEC.	COUNTY	SHEET	SHEET
F.A. 9	103-B	WARREN	19	4
FED. ROAD DIST. NO. 7 PROJECT				



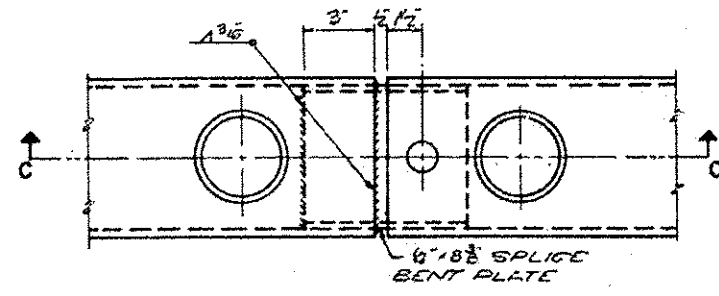
FOR INFORMATION ONLY

HALF PLAN OF HANDRAIL  
SYMM. ABOUT & BRIDGE  
BY ROTATION THROUGH 180°

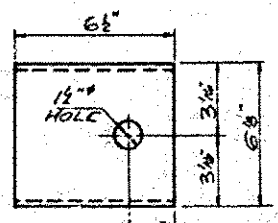


ELEVATION TYPICAL PANEL

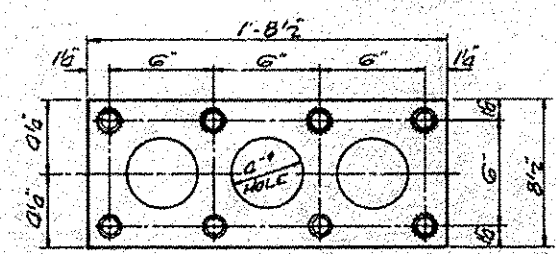
SECTION A-A  
GENERAL NOTES:  
AFTER EREC. KON ALL BOLTS AND WASHERS  
SHALL BE PAINTED WITH ONE COAT OF RED  
LEAD AND TWO COATS OF ALUMINUM PAINT.  
PROVIDE 1-1/8" AND 7-1/8" GIMES FOR 50%  
OF THE POSTS.



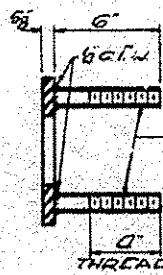
SECTION B-B



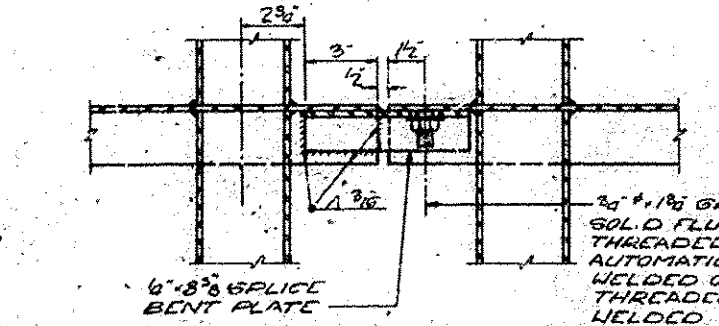
PLAN



ANCHOR DEVICE  
FOR DOUBLE POST WITHIN  
EACH PANEL

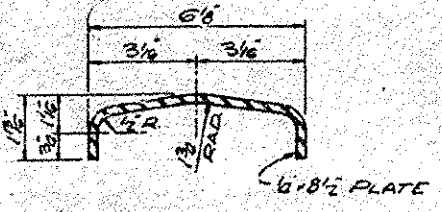


ANCHOR DEVICE  
FOR SINGLE POST AT EACH  
END OF PANEL

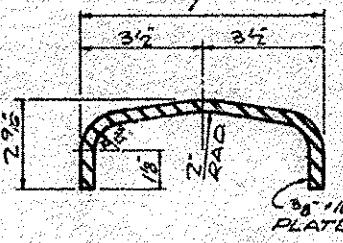


SECTION C-C

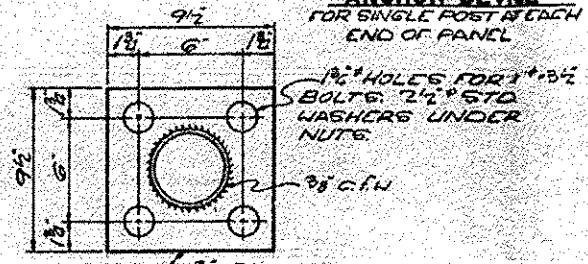
3/4" x 1 1/2" GRANULAR OR  
SOLID FLUX FILLED STUD,  
THREADED FULL LENGTH,  
AUTOMATICALLY END  
WELDED OR 3/4" x 1 1/2" FULLY  
THREADED STUD  
WELDED WITH 1/2" C.F.W.  
PROVIDE WASHER AND  
LOCKNUT



DETAIL OF SPLICE  
BENT PLATE



DETAIL OF RAIL



BASE PLATE  
ALL POSTS-SUPERSTRUCTURE

BILL OF MATERIAL

ITEM	UNIT	QUAN.
METAL HANDRAIL	LIN. FT.	355

HANDRAIL DETAILS  
F.A. RTE. 9 SEC. 103-B  
F.A. 9 OVER CEDAR CREEK  
WARREN CO., ILLINOIS  
STA. 597+30









ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	103-B	WARREN	79	10
FED. ROAD DIST. NO. 7			PROJECT	

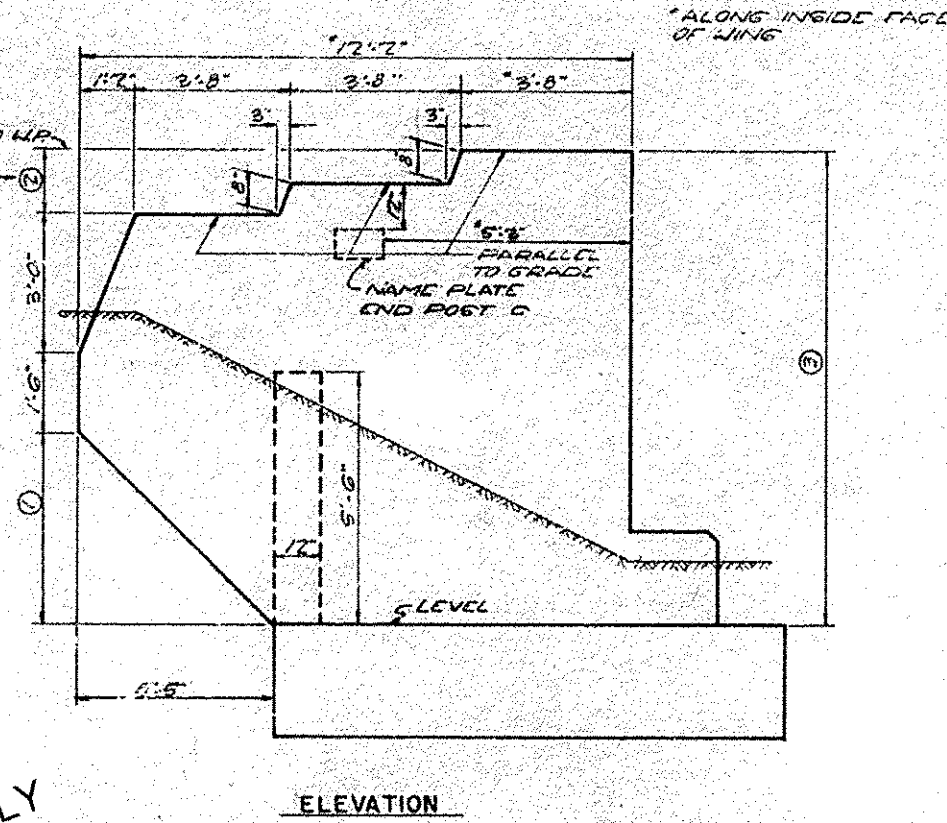
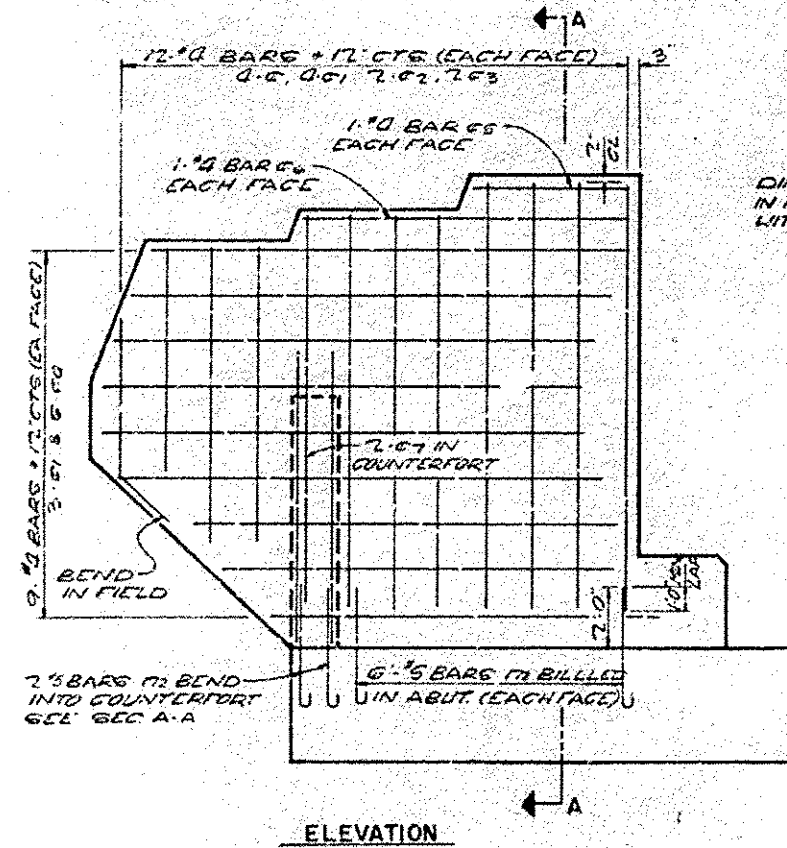
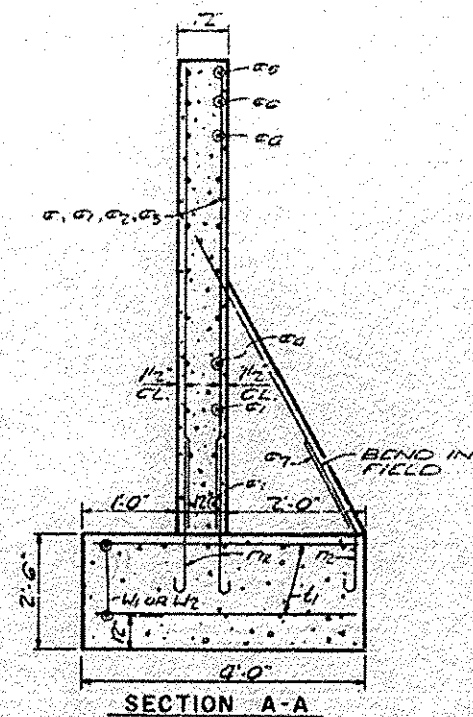
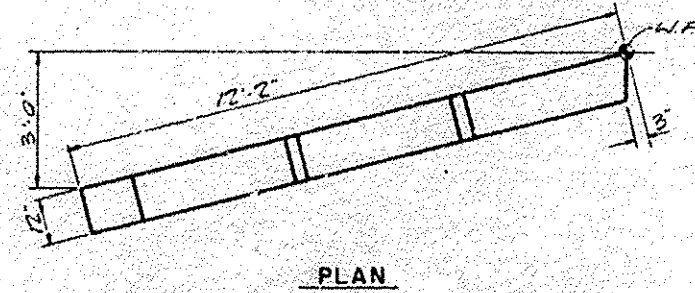
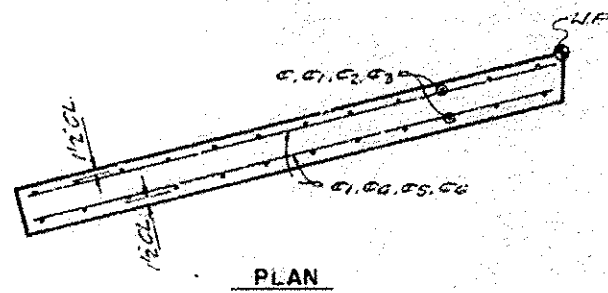


TABLE FOR END POST DIMENSIONS

END POST	DIM. (1)	(2)	(3)
A	4'-8 3/8"	1'-2 3/8"	10'-0 6/8"
B	4'-0 3/8"	1'-2 6/8"	10'-1 1/8"
C	4'-2 1/2"	1'-0"	10'-0 1/2"
D	4'-2 1/2"	1'-0"	10'-0 1/2"

SEE ABUT. SHEET NO. 11 FOR END POST DESIGNATION

FOR INFORMATION ONLY



BILL OF MATERIAL (4 POSTS)

BAR NO.	SIZE	LENGTH	SHAPE
5	#4	9'-3"	—
51	#4	8'-6"	—
52	#4	6'-6"	—
53	#4	5'-0"	—
54	#4	10'-6"	—
55	#4	3'-5"	—
56	#4	7'-0"	—
57	#5	7'-0"	—

\* CLASS X CONCRETE CUMBR 15.8  
 \* REINFORCEMENT BARS LBS 1070

\* QUANTITIES INCLUDED IN TOTAL SHOWN ON ABUT. SHEET

END POST DETAILS  
 F.A. RTE. 9 SEC. 103-B  
 F.A. 9 OVER CEDAR CREEK  
 WARREN CO. ILLINOIS  
 STA. 697+30