

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

PAC-74

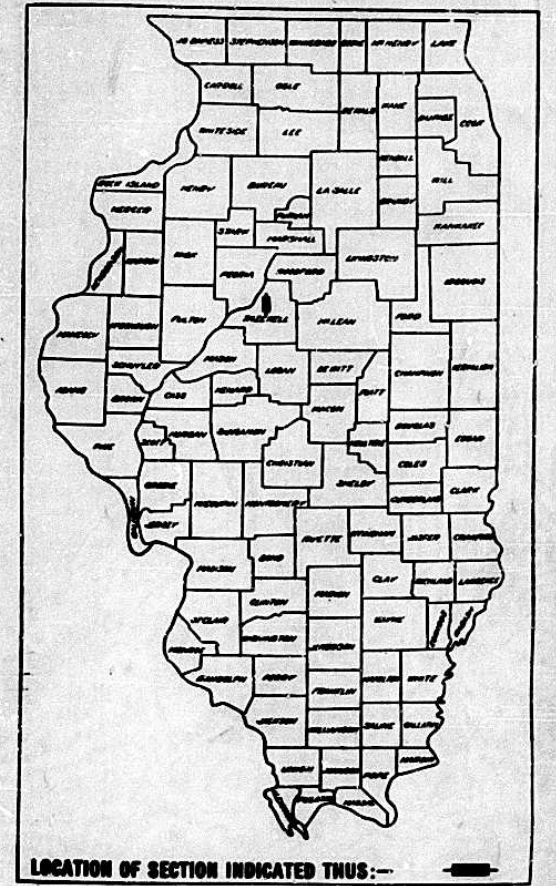
PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-5	90-14	TAZEWELL	20	1
FEB. ROAD ACT, 1957		ILLINOIS PROJECT	I-05-4 (28)	

SCALES

PLAN	1 INCH	100 FT.
PROFILE HOR.	1 INCH	100 FT.
PROFILE VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	8 FT. VERT. 10 FT. HOR.

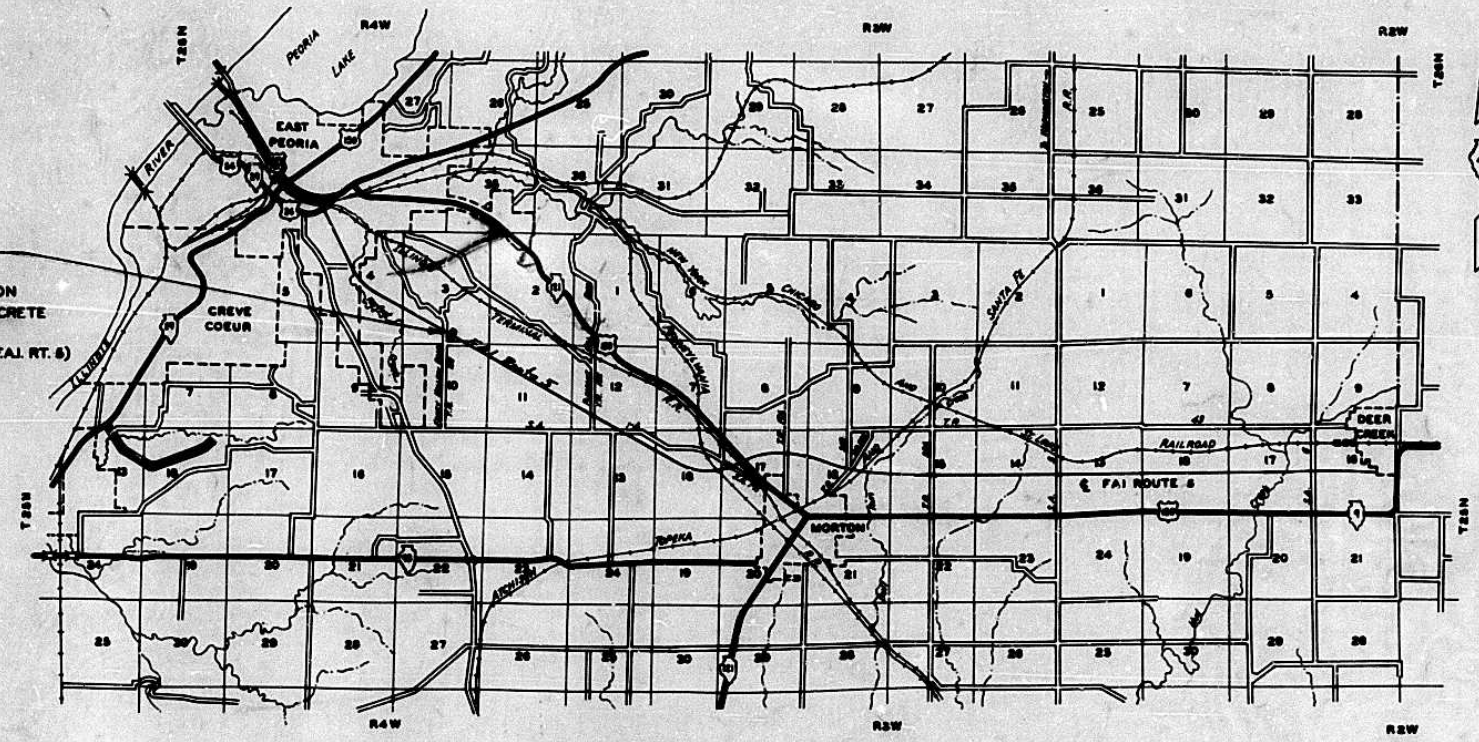
PAC-74

F.A.I. ROUTE 5 - SECTION 90-14 HB-1
PROJECT I-05-4 (28)
TAZEWELL, COUNTY



PROPOSED IMPROVEMENT

INCLUDES A 4 SPAN STEEL W/ BEAM GRADE SEPARATION STRUCTURE (CARRYING TR 132 OVER F.A.I. RT. 5) ON CONCRETE PILE BENT ABUTMENTS AND RC. PIERS ON TIMBER PILES, SPANS 2 @ 57'-6" AND 2 @ 40'-4" AT STATION 363+40.81 (F.A.I. RT. 5)



LAYOUT
 APPROXIMATE SCALE 1" = 1 MILE

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

SUBMITTED Jan. 14, 1959

EXAMINED Feb. 20, 1959

PASSED Feb. 20, 1959

APPROVED Feb. 20, 1959

APPROVED Feb. 20, 1959

PLANS FOR STRUCTURES EXAMINED JAN. 16, 1959

W.M. Ross
 ENGINEER OF BRIDGE & TRAFFIC STRUCTURES

PLANS PREPARED BY
WARREN AND VAN PRAAG, INC.
 CONSULTING ENGINEERS
 DECATUR ILLINOIS
 SUBMITTED September 3, 1958
Gilbert D. Manning

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

APPROVED

[Redacted Signature] [Redacted Date]

DIVISION ENGINEER DATE

WARREN AND VAN PRAAG, INC.
 CONSULTING ENGINEERS
 DECATUR ILLINOIS

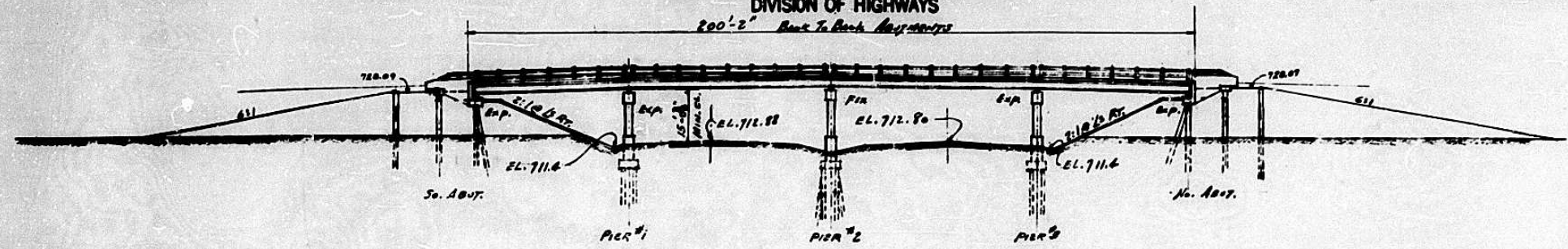
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PA 5-74

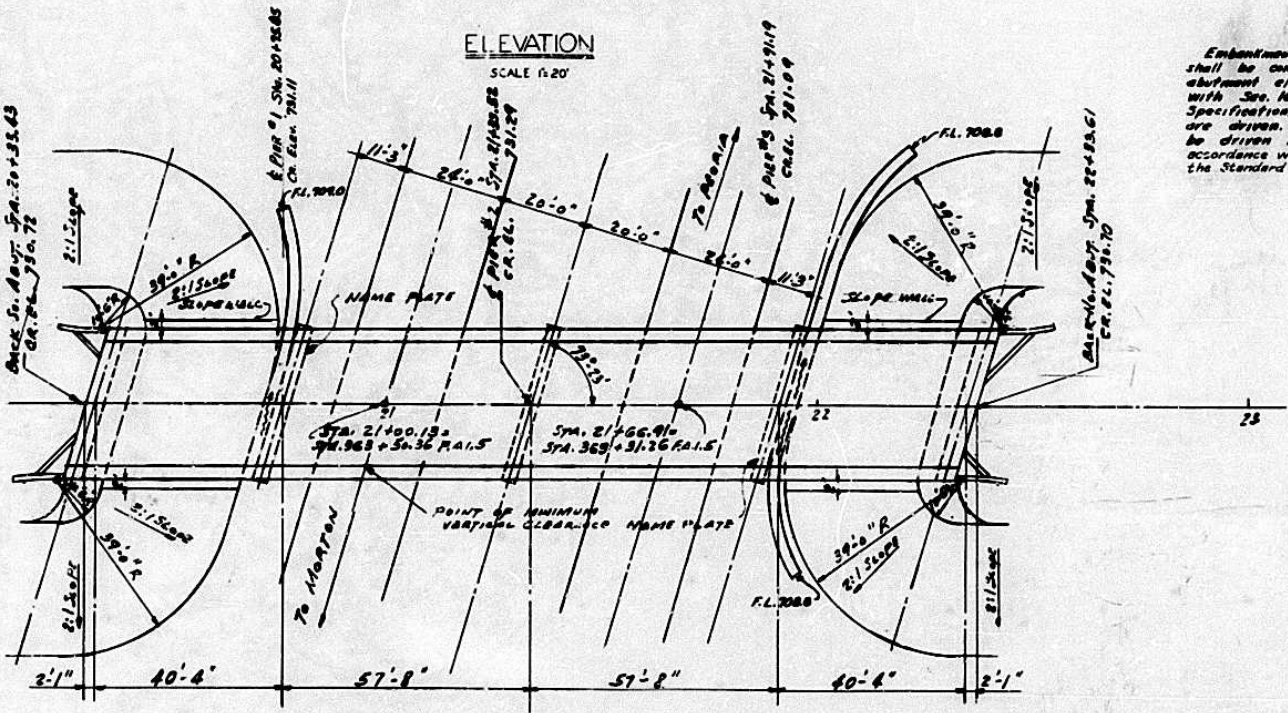
DISTRICT	SEC.	COUNTY	SECTION	POST-MILE
F.A.I. 5	90-14	TAZEWELL	20	6
PROJECT NO.		PROJECT		

GENERAL NOTES

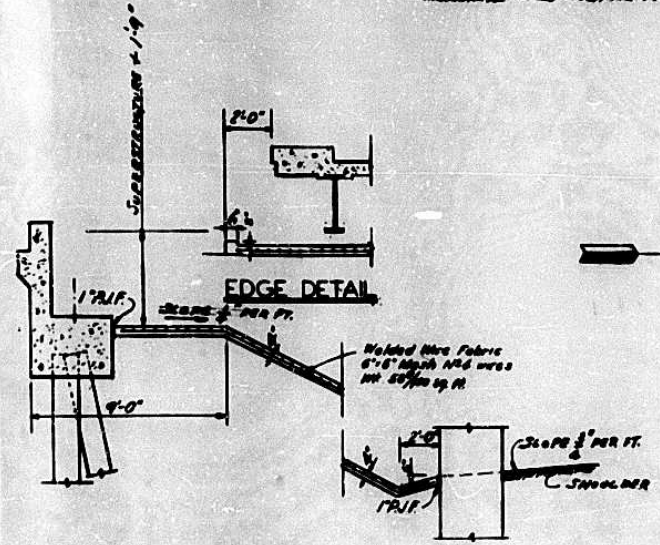
- Class 'X' Concrete shall be used throughout.
- The Concrete floor shall be finished in accordance with applicable provisions of Article 51.1 of the Standard Specifications and shall be poured in one continuous operation between ends of curb joints shown.
- All curbs and slab outside of longitudinal banded construction joint shall be poured monolithically.
- All rebar, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.5 of the Standard Specifications and are included in quantity of Structural Steel. Estimated Weight 3576 lbs.
- Relets to be 3/8" and holes 3/8" unless otherwise noted.
- Except as otherwise noted, all structural steel and metal handrail shall receive one (1) shop coat of red lead paint and two (2) field coats of aluminum paint. See Article 35.1 through 35.5 inclusive of the Standard Specifications. All paint shall be furnished and applied by the Contractor.
- The Contractor shall drive one Concrete Test Pile in the South Abutment as directed by the Engineer before casting the remainder of the piers.
- The Contractor shall drive one Cross Timber Test Pile in a permanent location at Pier 2 as directed by the Engineer before ordering the remainder of Piles.
- Unless otherwise shown on the plans, reinforcement bars shall be lapped 24 bar diameters, but not less than 18 inches.



ELEVATION
SCALE 1/20'

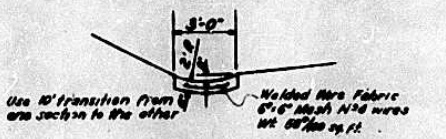


PLAN
SCALE 1/20'

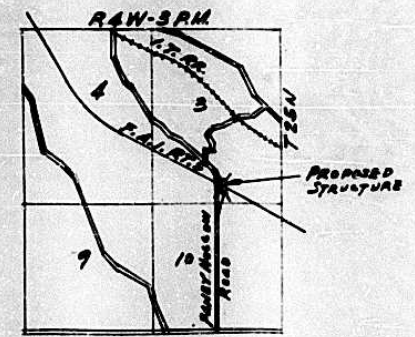


EDGE DETAIL
SCALE 1/4" = 1'-0"

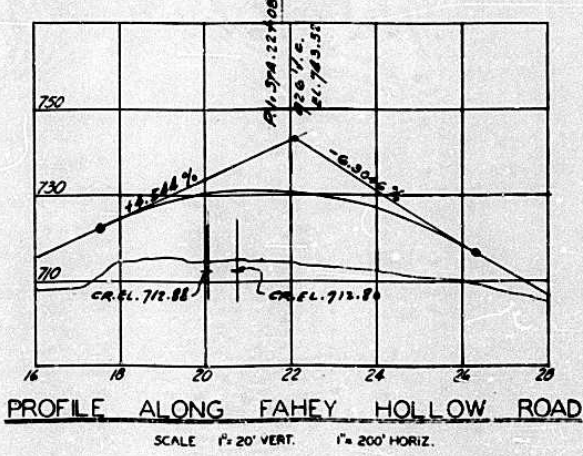
SLOPE WALL DETAILS AND GUTTER SECTION AT PIER



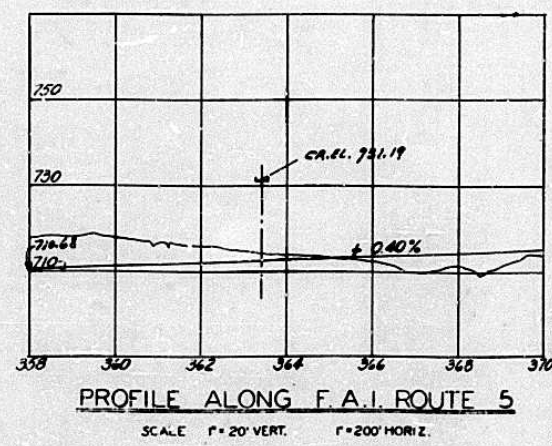
DETAIL OF PAVED DITCH (3') SECTION AWAY FROM PIER



LOCATION SKETCH



PROFILE ALONG FAHEY HOLLOW ROAD
SCALE 1/20' VERT. 1/200' HORIZ.



PROFILE ALONG F.A.I. ROUTE 5
SCALE 1/20' VERT. 1/200' HORIZ.

STA. 363+40.81
BUILT 195 BY
STATE OF ILLINOIS
P.A.I.R.T.S. SEC. 90-14 HB1
F.A. PROJ. 05-4(100)
LOADING H20-51G

LETTERING FOR NAME PLATE
See Std. 2113

DESIGN STRESSES
f_c 1800 lb./sq. in. (Concrete) (No. 4 Bars)
f_s 1600 lb./sq. in. (Steel) (No. 4 Bars)
f_s 20000 lb./sq. in. (Reinforcing Steel)
n = 10
LOADING H20-51G

ROAD CLASSIFICATION 'C' WITHIN LIMITS OF THE INTERCHANGE

TOTAL BILL OF MATERIAL

ITEM	SUPER. ST.	SUB. ST.	TOTAL	
CL. 'X' CONCRETE	CU. YDS.	176.7	265.4	370.1
REINFORCEMENT BARS	LBS.	37580	20000	57580
FURNISHING & ERECTING STRUCTURAL STEEL	LBS.	192640		192640
FURNISHING & ERECTING METAL HANDRAIL	LINEAR FT.	428		428
FURNISHING CONC. PILES	LINEAR FT.		495	495
DRIVING CONC. PILES	LINEAR FT.		495	495
FURNISHING CROSS-SECT. PILES	LINEAR FT.		1595	1595
DRIVING TIMBER PILES	LINEAR FT.		1595	1595
TEST PILES (CONC.)	EA.		1	1
TEST PILE (CROSS-TIMBER)	EA.		1	1
SLOPE WALL	SQ. YD.		341	341
CL. 'A' EXCAVATION FOR SPRAY	CU. YD.		330	330
NAME PLATES	EA.		2	2
PAVED DITCH (3')	LINEAR FT.		116	116

GENERAL PLAN & ELEVATION

F.A.I. ROUTE 5-SECTION 90-14 HB-1

T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAZEWELL, COUNTY

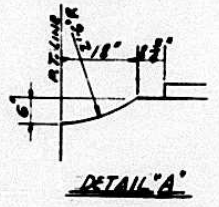
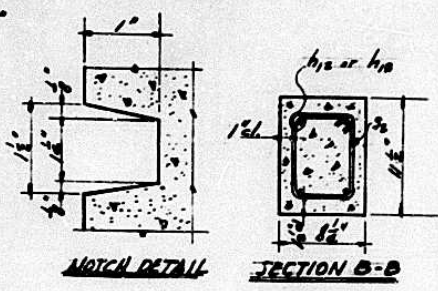
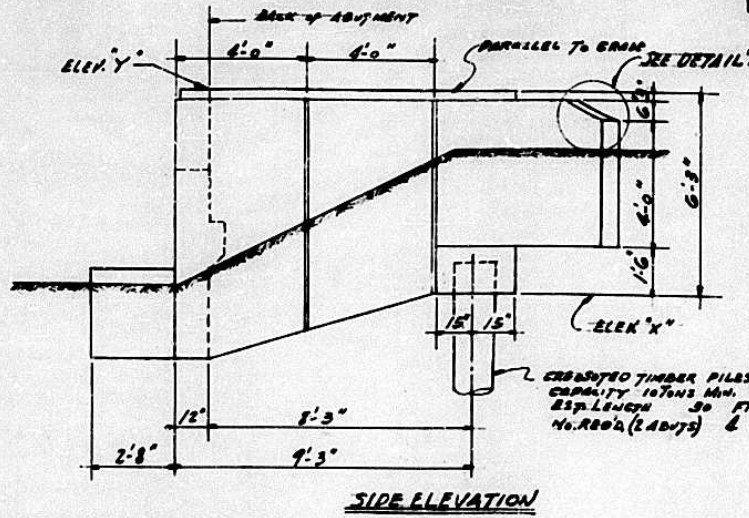
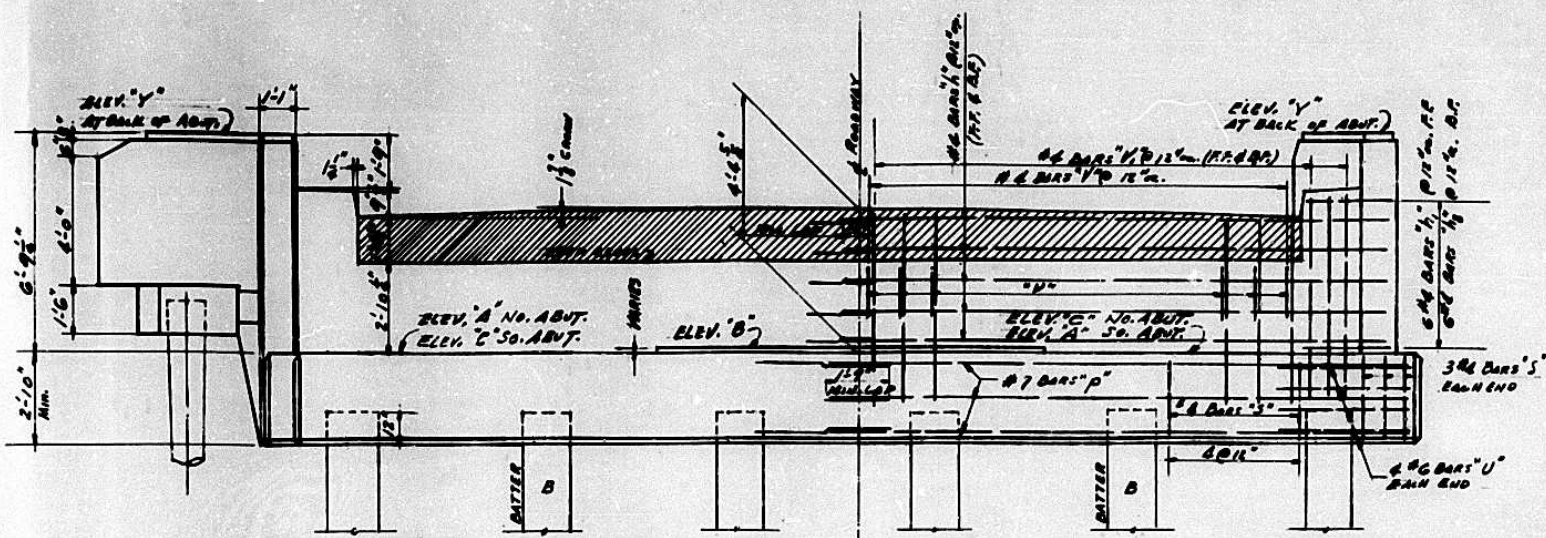
WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

DESIGNED	T. K. ...	EXAMINED	
CHECKED	P.M.	PASSED	
DRAWN	H.E.K.	APPROVED	
CHECKED	P.M.		

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

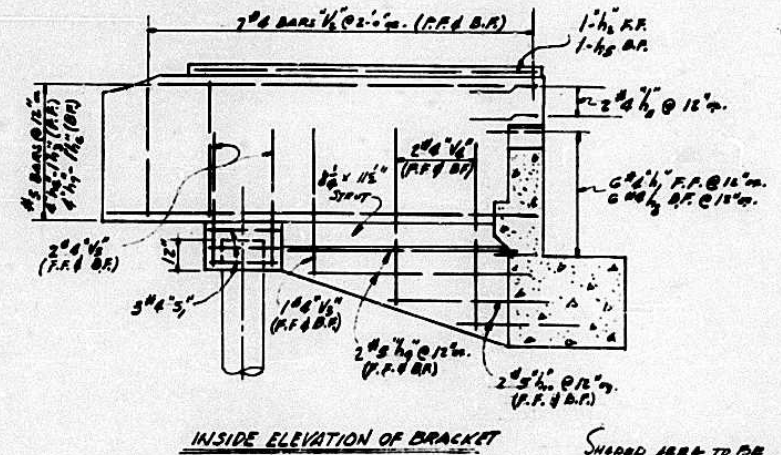
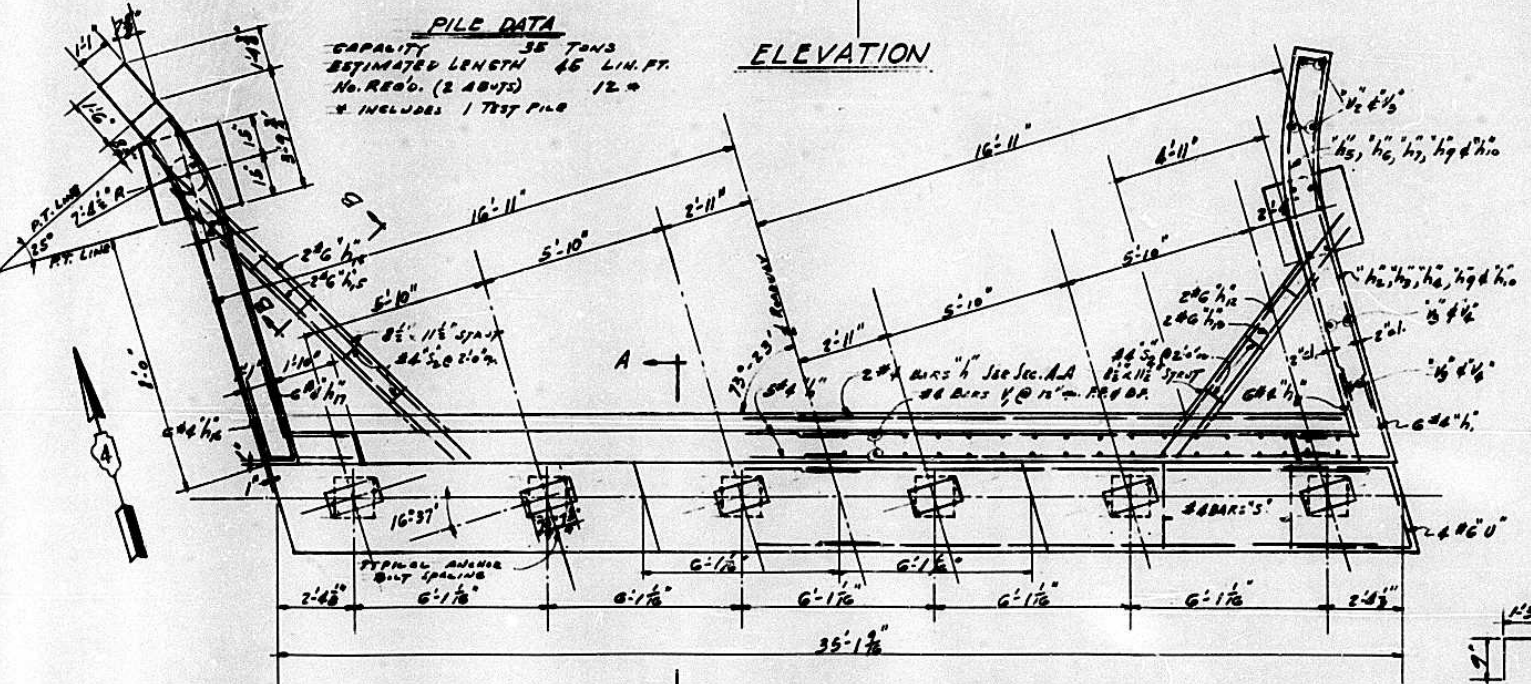
PRE-7A

DATE	NO.	BY	CHKD.	APP.
FAS 5	90-14	TAEWELL	20	7
PROJECT (No. 7) BRIDGE				



PILE DATA
CAPACITY 35 TONS
ESTIMATED LENGTH 45 LIN. FT.
NO. PILES (2 ABUTS) 12
* INCLUDES 1 TEST PILE

ELEVATION



BILL OF MATERIAL - ABUTMENTS

BAR	No.	SIZE	LENGTH	SHAPE
h	48	#6	16'-9"	—
h1	12	#6	5'-0"	—
h2	6	#6	10'-6"	—
h3	6	#6	11'-8"	—
h4	16	#6	13'-6"	—
h5	6	#6	11'-6"	—
h6	6	#6	12'-8"	—
h7	16	#6	13'-6"	—
h8	12	#6	4'-0"	—
h9	16	#6	7'-0"	—
h10	16	#6	5'-9"	—
h11	8	#6	6'-9"	—
h12	6	#6	10'-6"	—
h13	6	#6	9'-0"	—
h14	6	#6	13'-6"	—
h15	6	#6	11'-0"	—
h16	12	#6	5'-0"	—
h17	12	#6	4'-0"	—
P	24	#7	18'-0"	—
S	62	#6	12'-4"	□
S1	12	#6	9'-3"	□
S2	14	#6	3'-0"	□
U	16	#6	11'-4"	—
V	60	#6	3'-6"	—
V1	136	#6	6'-0"	—
V2	24	#6	4'-3"	—
V3	24	#6	6'-6"	—
V4	16	#6	5'-6"	—

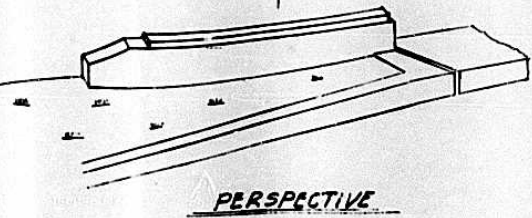
CE. & C. CONCRETE 58.2 CU. YDS.
REINFORCEMENT BARS 6380 LBS.
FURNISHING CREOSOTED PILES 120 LIN. FT.
DRIVING TIMBER PILES 120 LIN. FT.
FURNISHING CONC. PILES 495 LIN. FT.
DRIVING CONC. PILES 495 LIN. FT.
TEST PILES CONC. 1 BA

ABUTMENTS

F.A.I. ROUTE 5 - SECTION 90-14HB-1

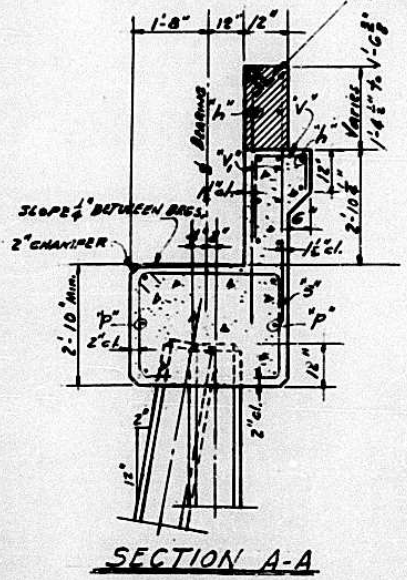
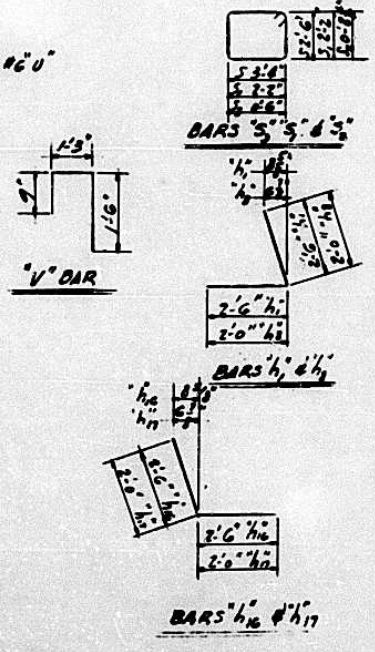
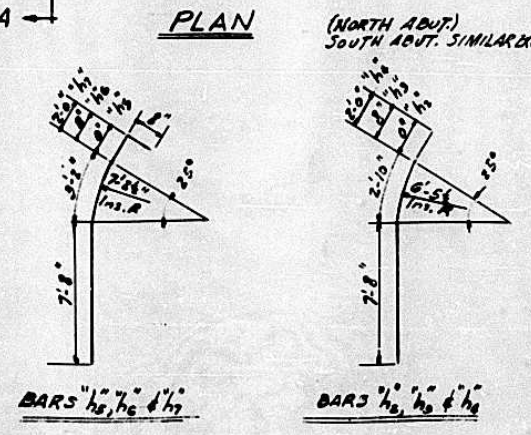
T.R. 132 FAMEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAEWELL, COUNTY

WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS



PERSPECTIVE

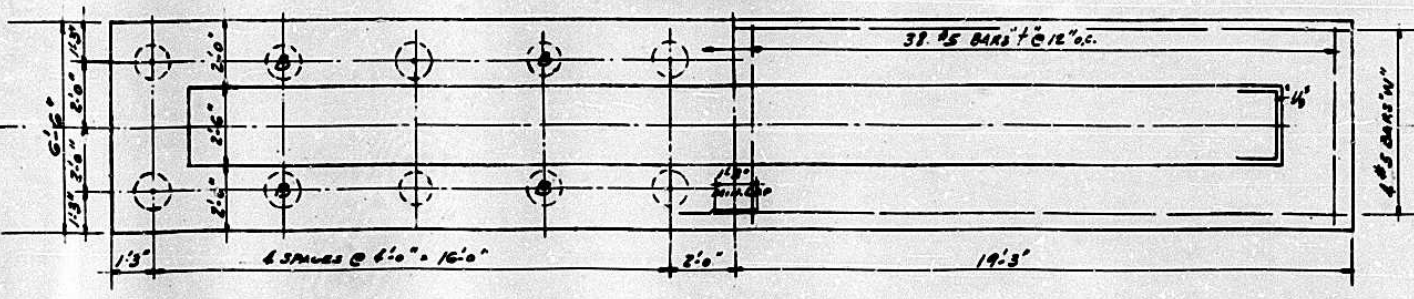
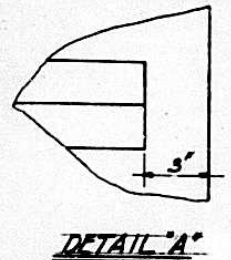
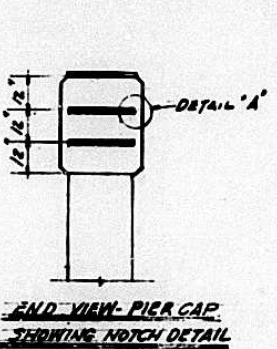
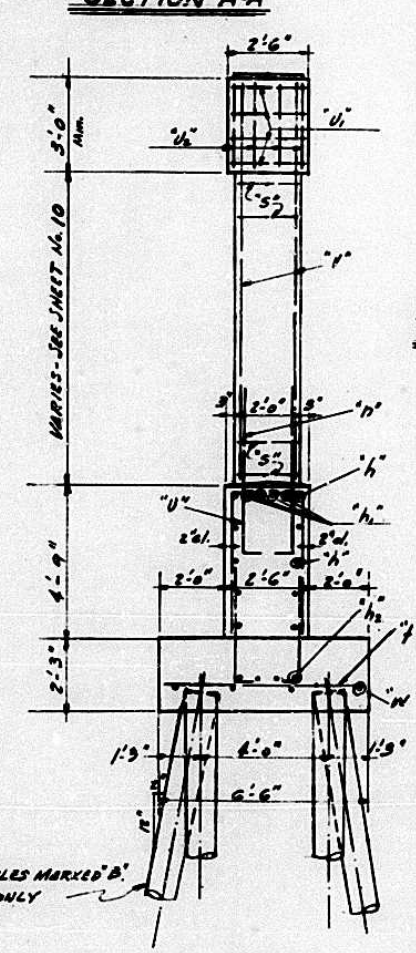
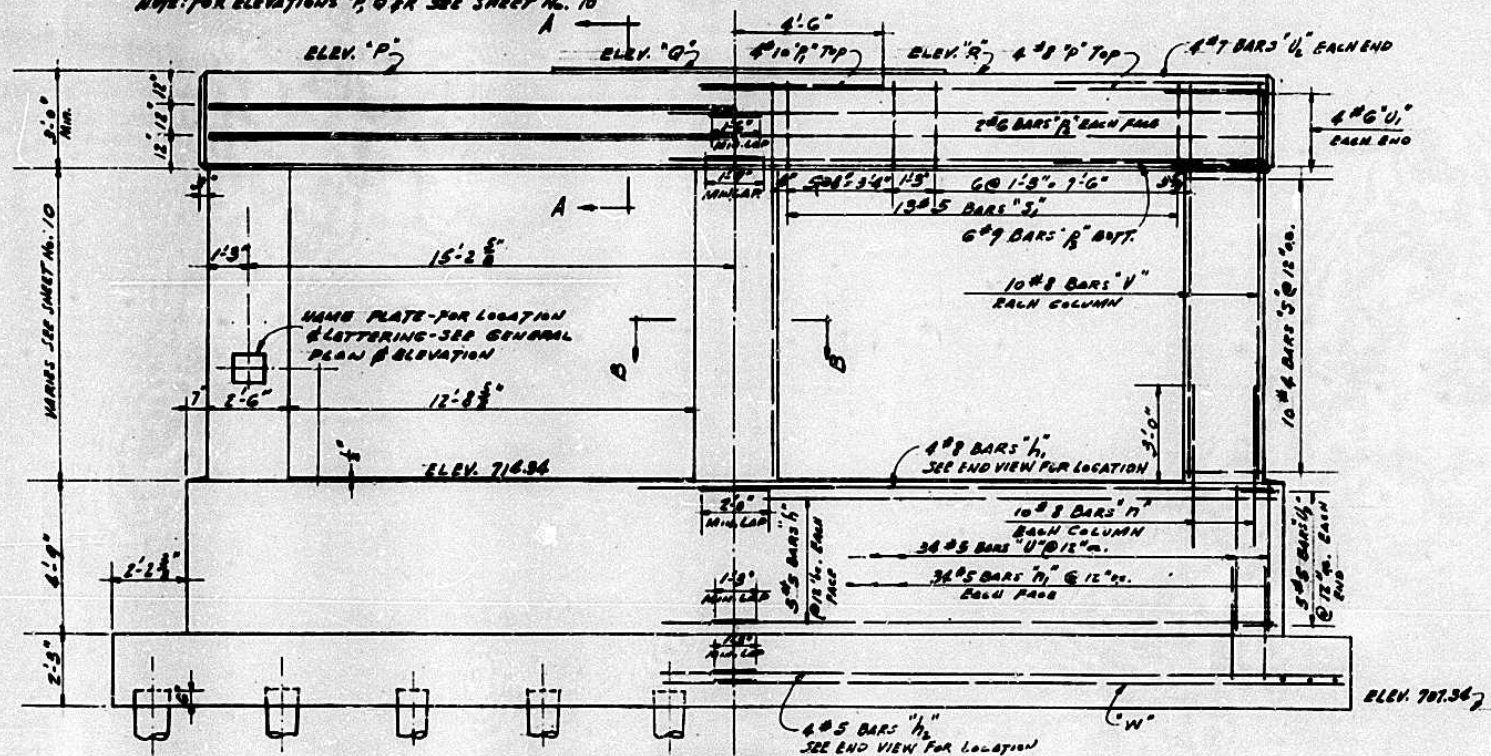
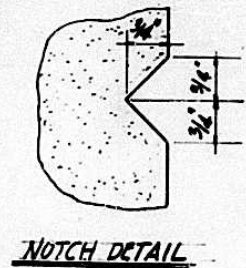
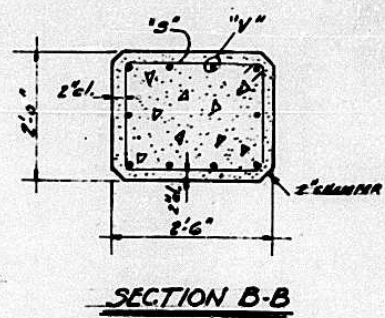
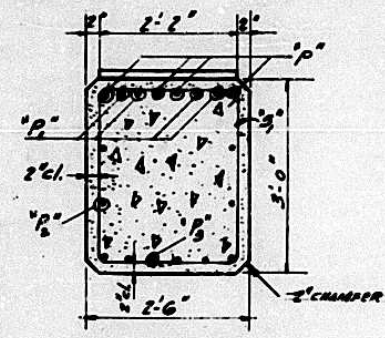
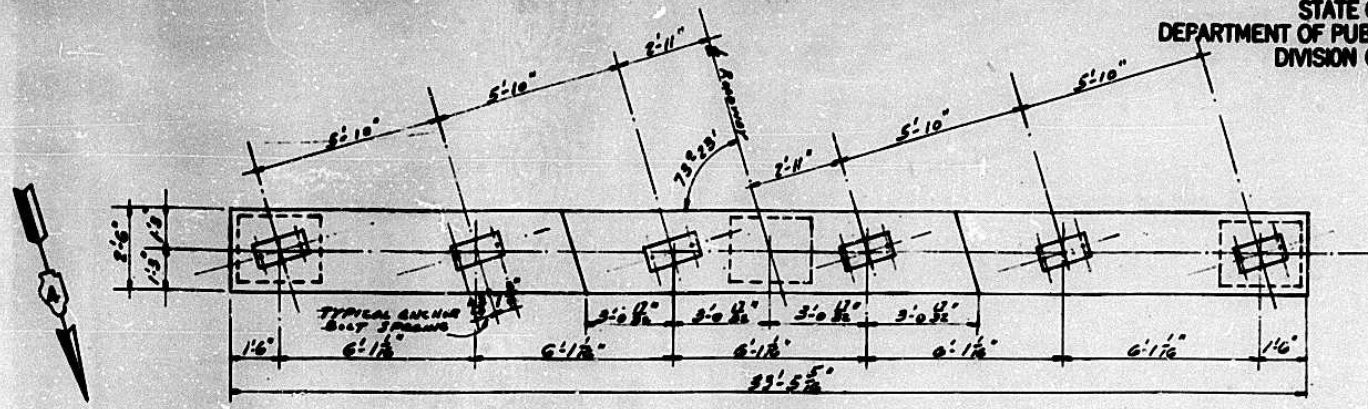
DESIGNED	H.E.K.	EXAMINED	
CHECKED	G.L.	PASSED	
DRAWN	H.E.K.	APPROVED	
CHECKED	G.L.		



SECTION A-A

PAE-74

ISSUE NO.	REV.	DATE	BY
F.A.I.S.	90-14	TAEZEWELL	20
NO. 1			B



BILL OF MATERIAL - SPIERS

BAR	No.	SIZE	LENGTH	WEIGHT
h	60	#5	17'-6"	
h1	24	#8	18'-0"	
h2	24	#5	19'-6"	
n	90	#8	5'-6"	
n1	24	#5	4'-0"	
P	12	#8	27'-3"	
P	12	#10	9'-0"	
P2	24	#6	17'-0"	
P3	36	#9	17'-6"	
s	90	#6	8'-5"	
S1	78	#5	16'-5"	
T	14	#5	6'-0"	
U	102	#5	11'-2"	
U1	24	#6	8'-2"	
U2	24	#7	13'-0"	
U3	30	#5	4'-8"	
V	90	#8	12'-0"	
W	24	#5	19'-6"	

CL. A CONCRETE 151.2 CU. YDS.
REINFORCEMENT BARS 15420 LBS.
CL. A EXCAVATION 330 CU. YDS.
CREOSTEED PILES 1476 LIN. FT.
TEST PILES 1 EA.

DESIGNED	H.C. Kaufmann
CHECKED	P.M.S.
DRAWN	H.C. Kaufmann
CHECKED	P.M.S.

EXAMINED	
PASSED	
APPROVED	

PILE DATA

TYPE	CREOSTEED
CAPACITY	20 TONS
ESTIMATED LENGTH	25 FT.
No. REQ'D.	60 "
* INCLUDES 1 TEST PILE	

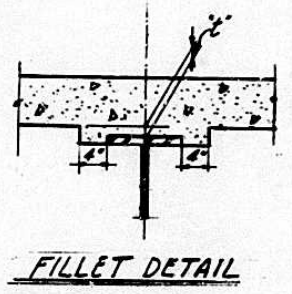
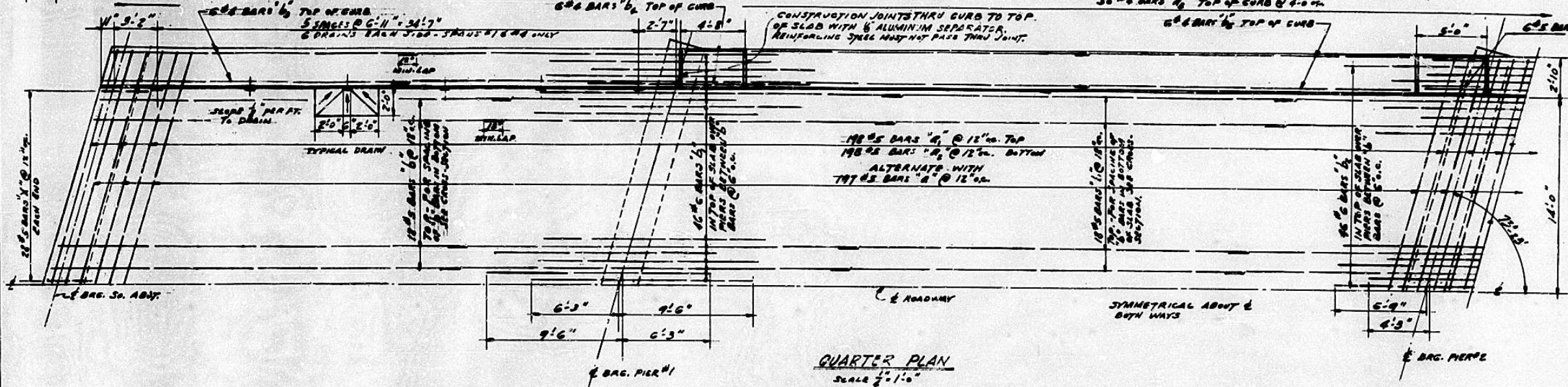
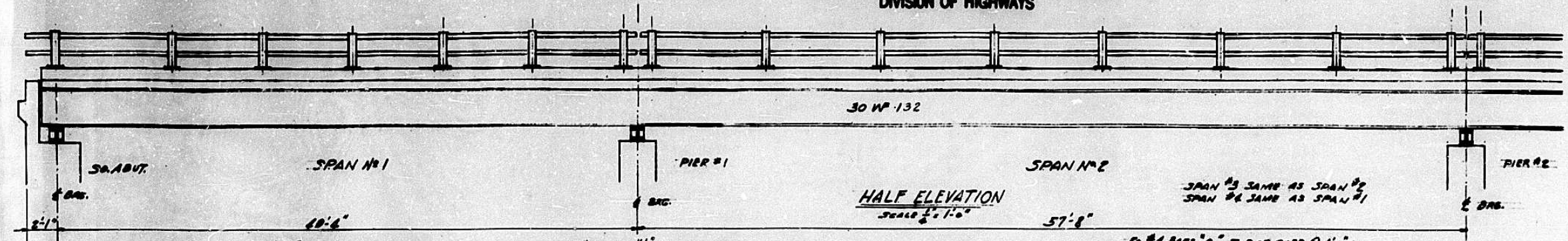
PIERS
F.A.I. ROUTE 5-SECTION 90-14 HB-1
T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAEZEWELL, COUNTY
WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS-DECATUR, ILLINOIS

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

PAE-79

DATE	BY	CHKD.	APP.
FAIS 10-11-1	TASWELL	20	9
NO. SHEETS 7			

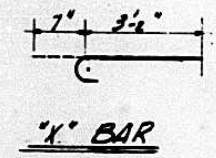
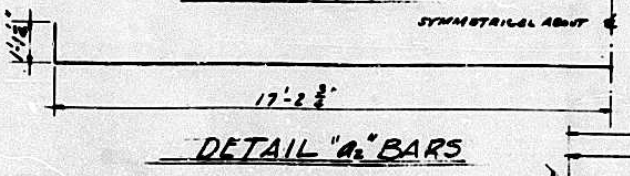
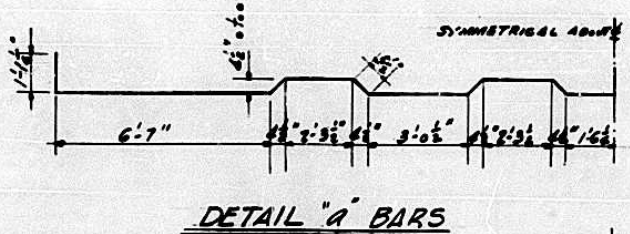
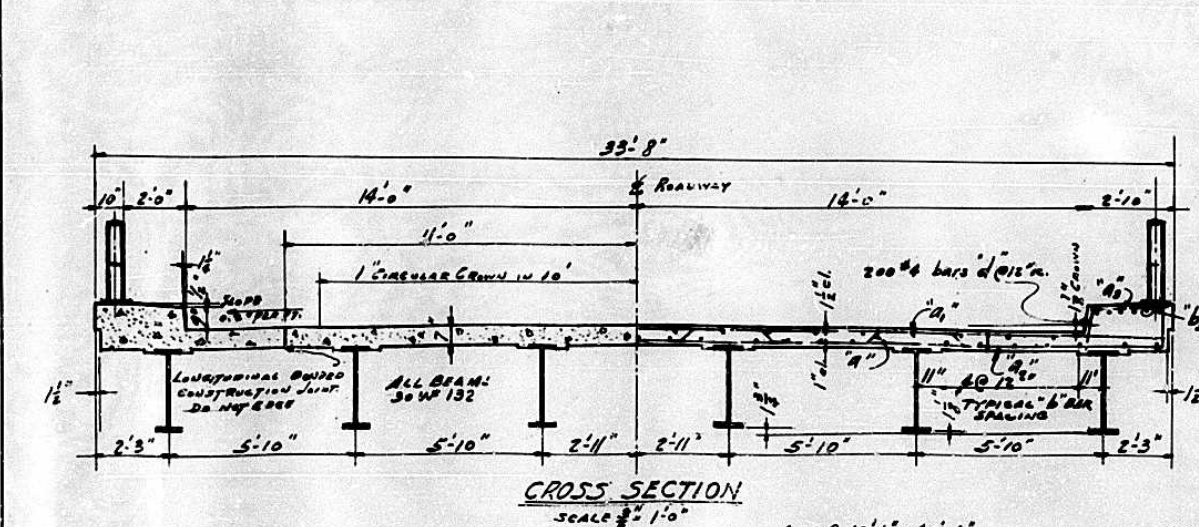
Note: In determining fillet height "t", after the structural steel has been graded, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 feet. From these elevations, subtract the increments of deflection determined from the Dead Load Deflection Diagram. The elevations so obtained, subtracted from the theoretical grade elevations minus the floor thickness equals "t".



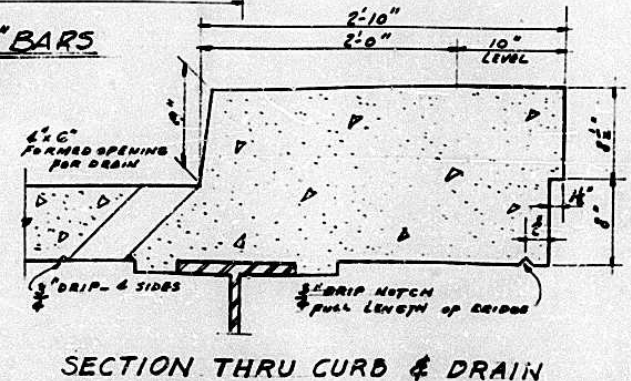
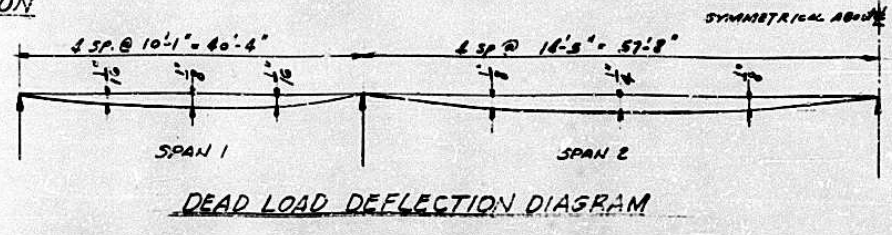
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a	197	#5	57'-4"	U
a	198	#5	36'-6"	U
a2	198	#5	36'-8"	U
b	100	#4	2'-6"	—
b	319	#5	24'-9"	—
b	92	#6	15'-9"	—
b2	86	#6	11'-0"	—
b2	88	#6	21'-6"	—
b2	78	#4	4'-0"	—
b2	43	#4	28'-0"	—
b2	12	#2	4'-6"	—
x	56	#5	3'-9"	C
d	600	#4	1'-1"	—

6 1/2" CONCRETE 1747 CU YD
REINFORCEMENT BARS 37580 LBS
STRUCTURAL STEEL 192,640 LBS
NORMAL HAND RAIL 828 LBS FT



DESIGNED H.E.K.	EXAMINED
CHECKED P.M.S.	PASSED
DRAWN H.E.K.	APPROVED
CHECKED P.M.S.	

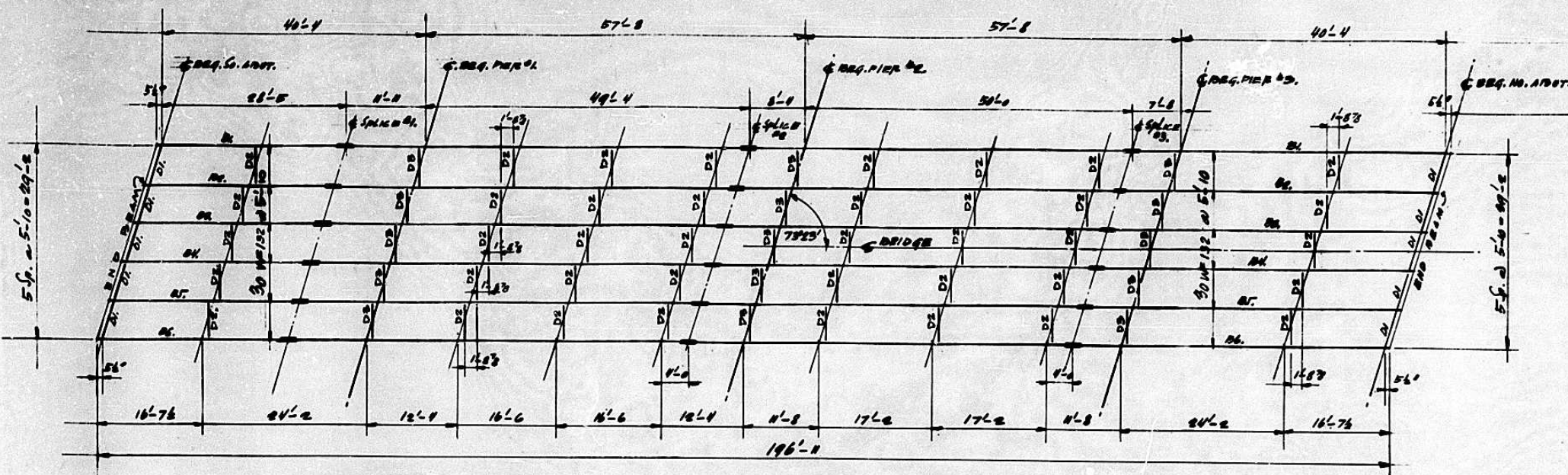


SUPERSTRUCTURE
F.A.I. ROUTE 5 - SECTION 90-14 HB-1
T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 383+48.81
TASWELL, COUNTY
WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

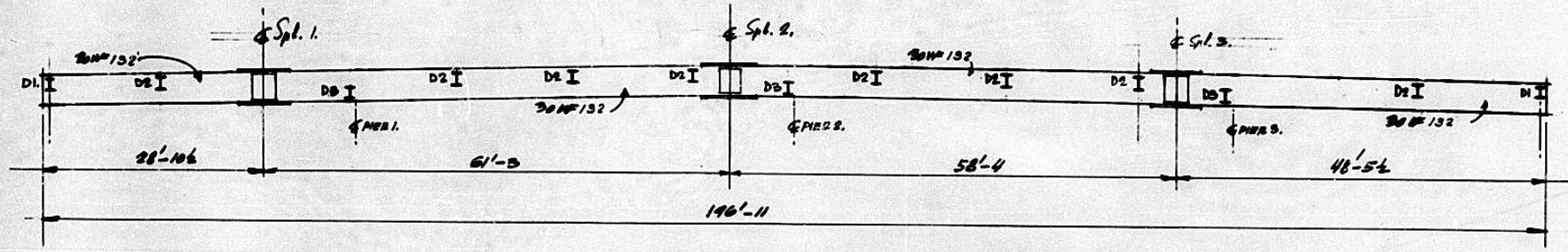
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PAE-74

DATE	BY	CHKD	APP'D	REV.
F.A.I.S.	NO. 1	TAEWELL	20	10



PLAN STRUCTURAL STEEL



ELEVATION BEAM

TOP OF BEAM-ELEVATIONS

BEAM No.	So. ABUTMENT	SPLICE #1	PIER #1	SPLICE #2	PIER #2	SPLICE #3	PIER #3	No. ABUTMENT
1	730.05	730.30	730.38	730.55	730.55	730.37	730.33	729.76
2	730.12	730.39	730.48	730.65	730.65	730.40	730.43	730.05
3	730.15	730.42	730.51	730.70	730.70	730.54	730.49	730.13
4	730.13	730.41	730.50	730.69	730.70	730.56	730.51	730.16
5	730.07	730.35	730.46	730.65	730.65	730.52	730.40	730.12
6	729.94	730.26	730.33	730.55	730.56	730.43	730.39	730.06

VARIABLES FOR ABUTMENTS

ABUTMENT	ELEV. "A"	ELEV. "B"	ELEV. "C"	ELEV. "Y"	ELEV. "X"	SHIM PLATES					
						BEAM #1	BEAM #2	BEAM #3	BEAM #4	BEAM #5	BEAM #6
SOUTH	726.09	726.47	726.28	WEST SIDE 728.16 EAST SIDE 723.05	726.91 726.80	—	9" x 1 1/2" x 1'-7"	9" x 1 1/2" x 1'-7"	—	9" x 1 1/2" x 1'-7"	—
NORTH	726.20	726.47	726.30	WEST SIDE 723.05 EAST SIDE 728.16	726.80 726.90	—	9" x 1 1/2" x 1'-7"	—	9" x 1 1/2" x 1'-7"	9" x 1 1/2" x 1'-7"	—

VARIABLES FOR PIERS

PIER No.	ELEV. "P"	ELEV. "Q"	ELEV. "R"	SHIM PLATES					
				BEAM #1	BEAM #2	BEAM #3	BEAM #4	BEAM #5	BEAM #6
1	726.66	726.78	726.61	—	9" x 1 1/2" x 1'-7"	9" x 1 1/2" x 1'-7"	—	9" x 1 1/2" x 1'-7"	—
2	726.90	727.05	726.91	—	9" x 1 1/2" x 1'-7"	—	—	9" x 1 1/2" x 1'-7"	—
3	726.61	726.77	726.67	—	9" x 1 1/2" x 1'-7"	—	9" x 1 1/2" x 1'-7"	9" x 1 1/2" x 1'-7"	—

DESIGNED *H. Kay*
CHECKED *G.L.*
DRAWN *G.L.*
CHECKED *H. Kay*

EXAMINED _____
PASSED _____
APPROVED _____

SUPERSTRUCTURE-STRUCTURAL STEEL

F.A.I. ROUTE 5 - SECTION 90-14HB-1

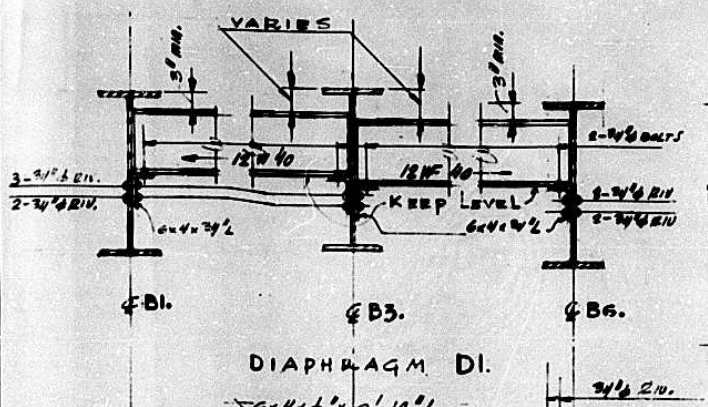
T.R. 132 FAMEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAEWELL, COUNTY

WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

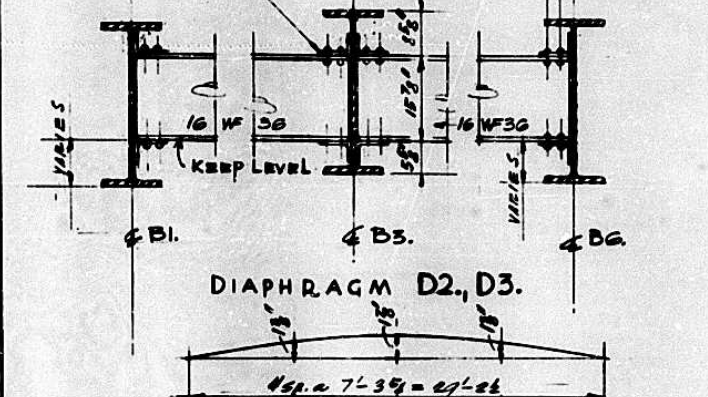
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PAE-79

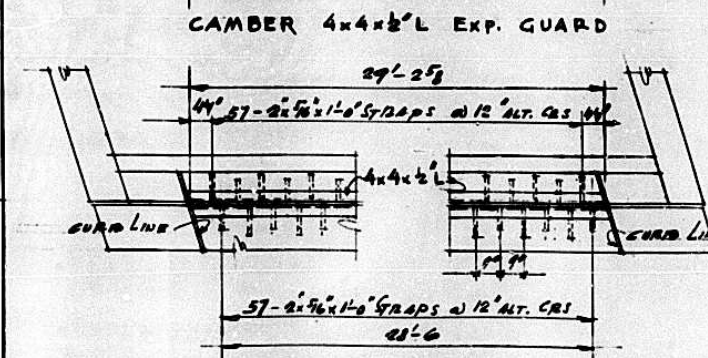
NO. 1	NO. 2	NO. 3	NO. 4
F.A.I. S	90-14	TAZEWELL	20
	NO. 1		11



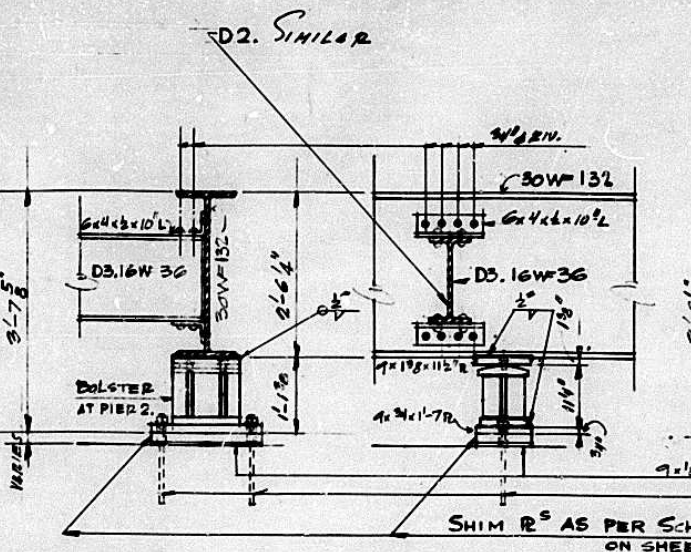
DIAPHRAGM D1.



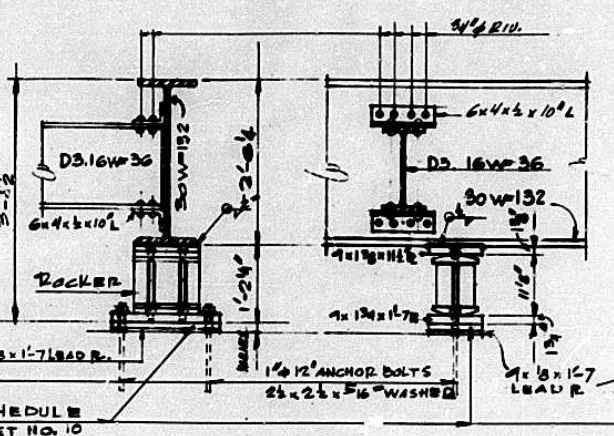
DIAPHRAGM D2, D3.



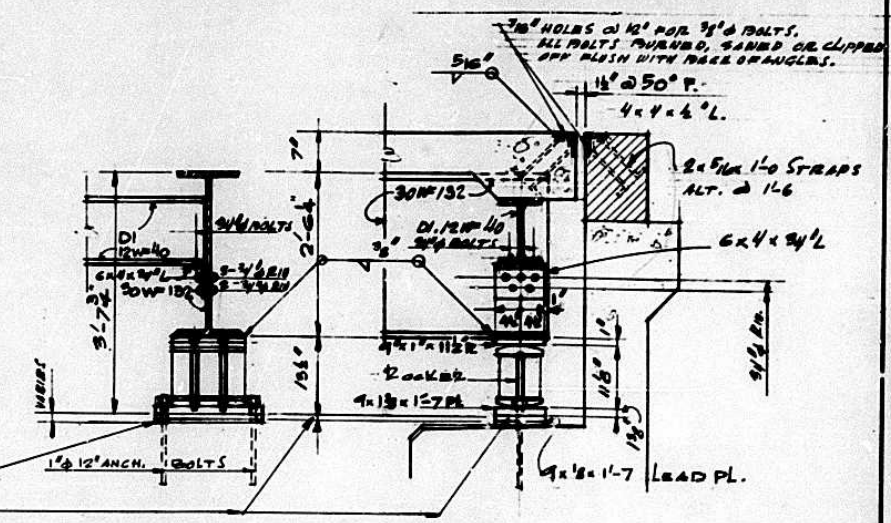
EXPANSION GUARD PLAN



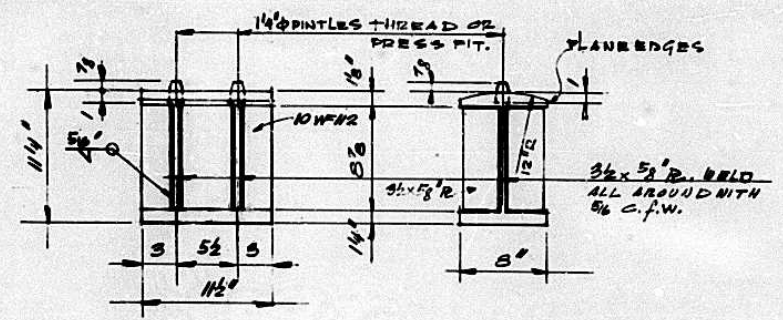
BEARING AT PIER 2.



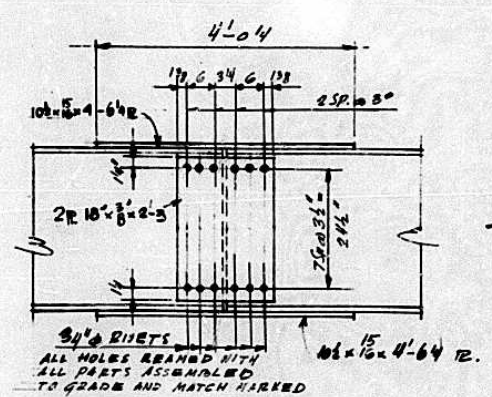
BEARING AT PIER 1 AND 3.



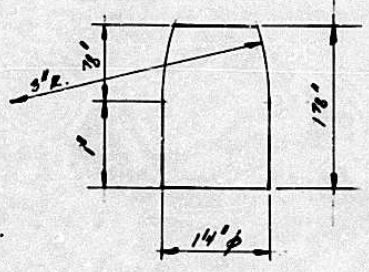
NO. ABUT. AS SHOWN
SO. ABUT. OPP. HAND



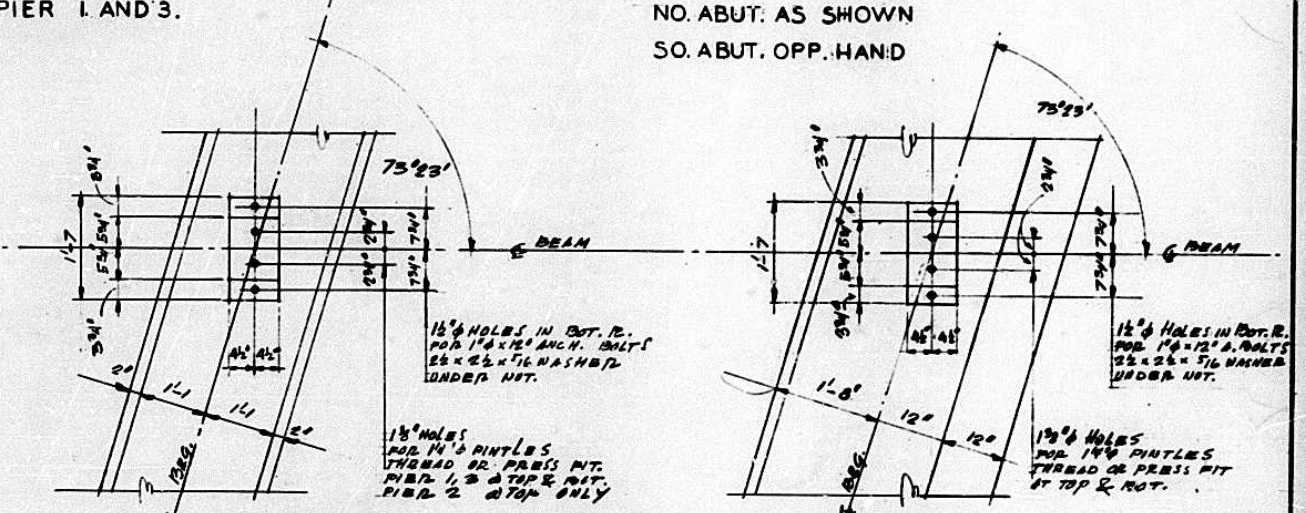
BOLSTER @ PIER 2.



SPLICE 1, 2, 3.



PINTLE



ROCKER @ PIER 1, 3, & ABUT.'S

DESIGNED	K.K.
CHECKED	G.L.
DRAWN	G.L.
CHECKED	P.M.

EXAMINED	
PASSED	
APPROVED	

STRUCTURAL STEEL DETAILS
F.A.I. ROUTE 5-SECTION 90-14-HB-1

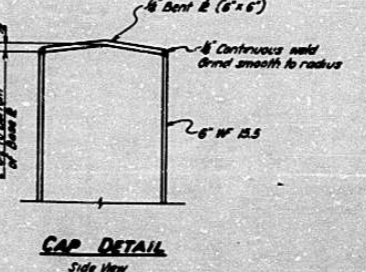
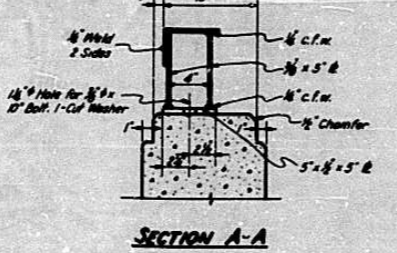
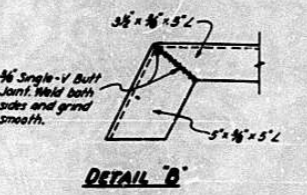
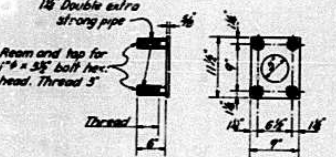
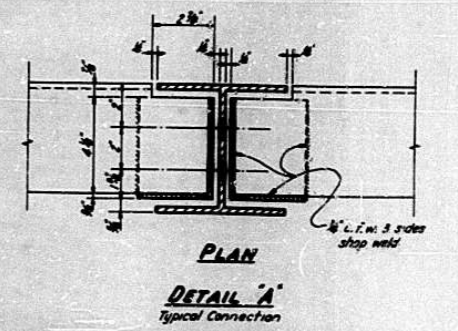
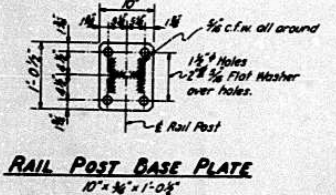
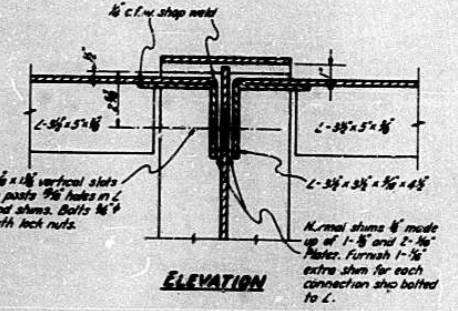
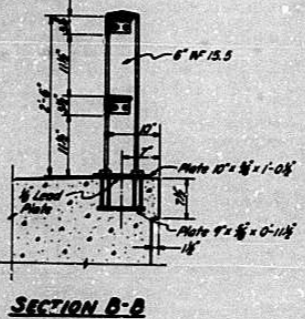
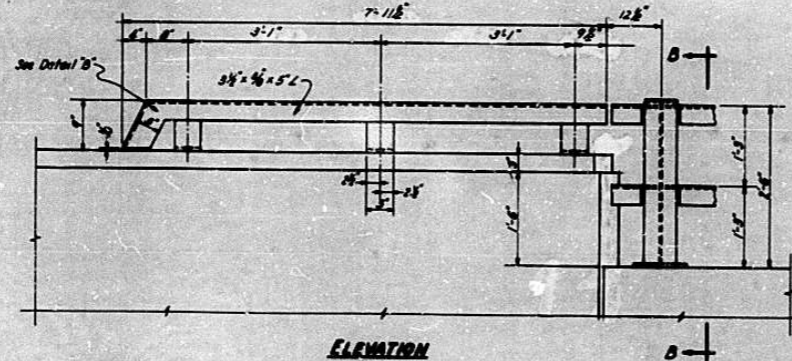
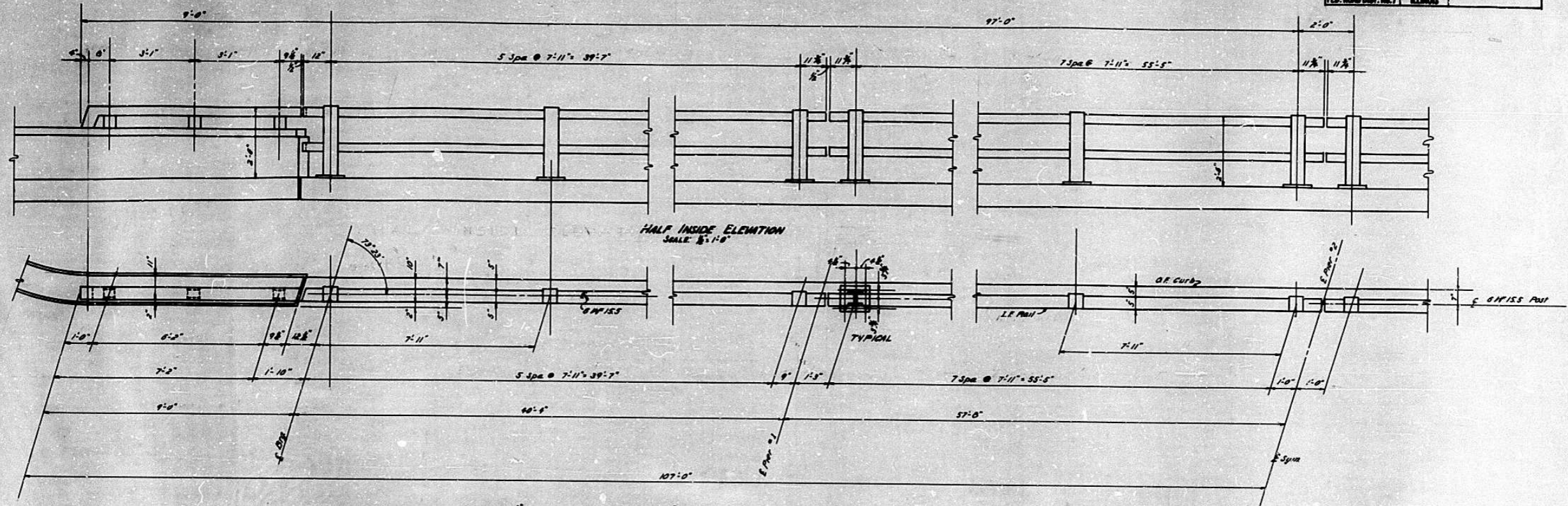
T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAZEWELL COUNTY

WARREN AND VAN PRAAG INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

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

FAI-74

ROUTE No.	SEC.	COUNTY	SHEET	TOTAL
FAI 5	90-14 HB-1	TAZEWELL	20	12
FED. ROAD DIST. No. 7 ILLINOIS				



Notes:
Provide 1/8" and 2 1/8" shim plates for 30% of the posts.

HANDRAIL

F.A.I. ROUTE 5 - SECTION 90-14 HB-1

T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAZEWELL, COUNTY

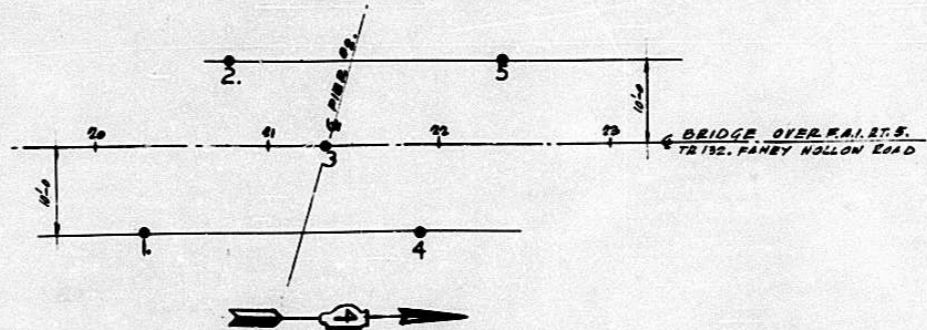
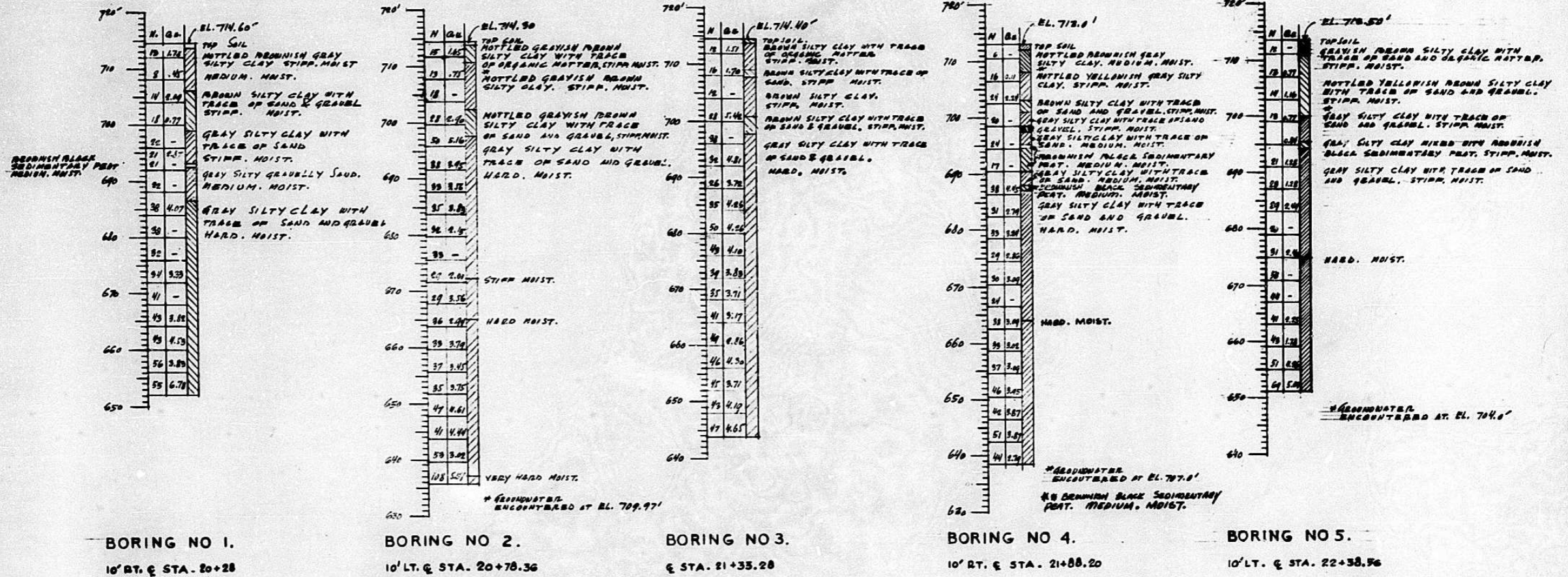
WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

DESIGNED	G.L.
CHECKED	H.E.K.
DRAWN	D.W.N.
CHECKED	H.E.K.

EXAMINED	ENGINEER OF DESIGN AND TRAFFIC STRUCTURES
PASSED	CHIEF OF BUREAU
APPROVED	CHIEF HIGHWAY ENGINEER

Metal Handrail Fabricated Erect	Lin. Ft.	428.0
NOTE: Metal Handrail Includes Both The Metal Handrail on the Superstructure and the Abutment		

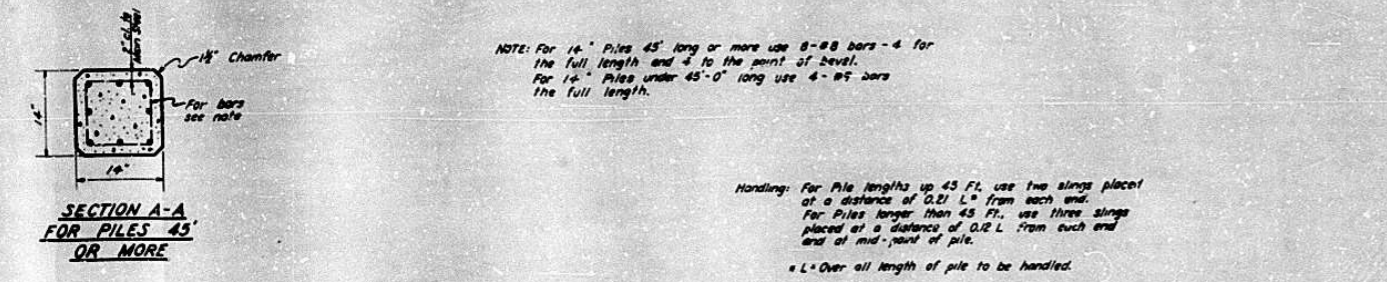
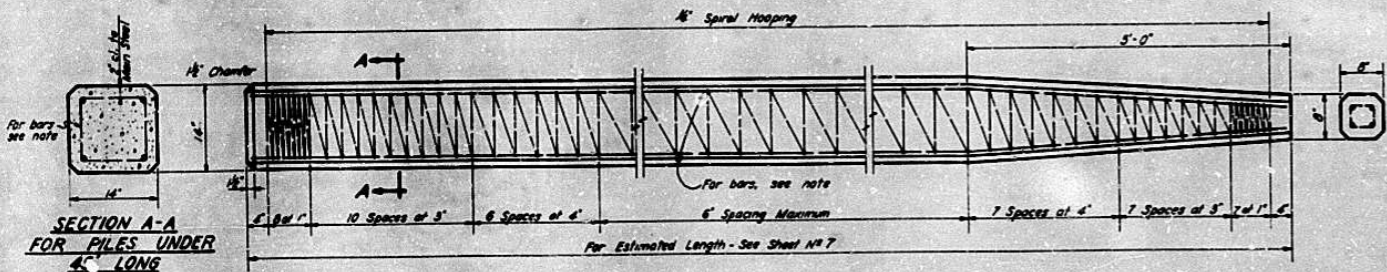
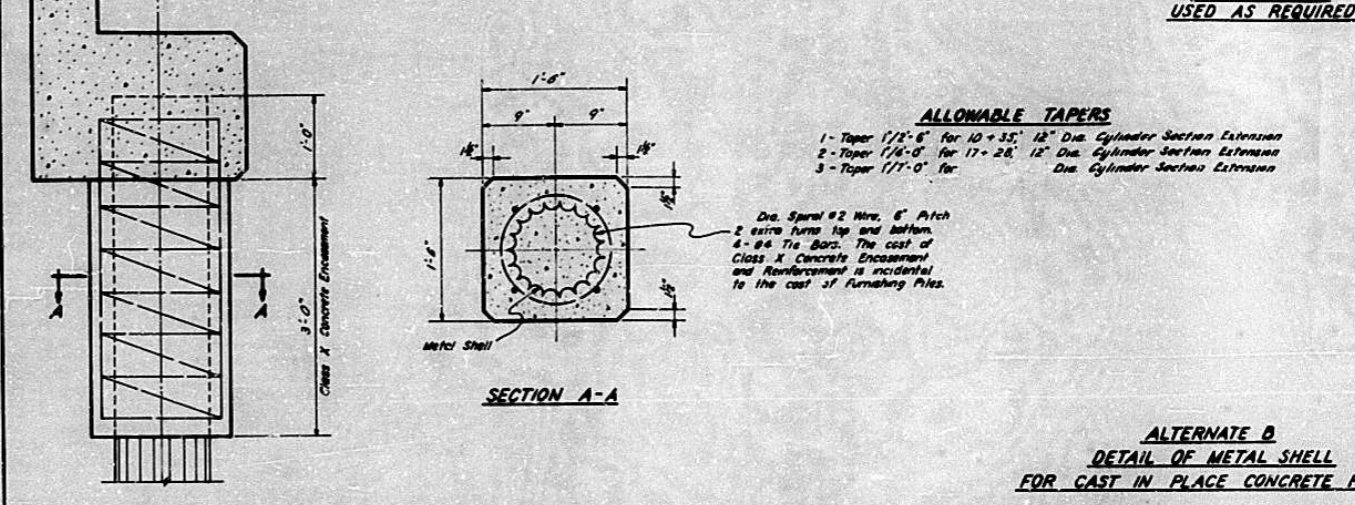
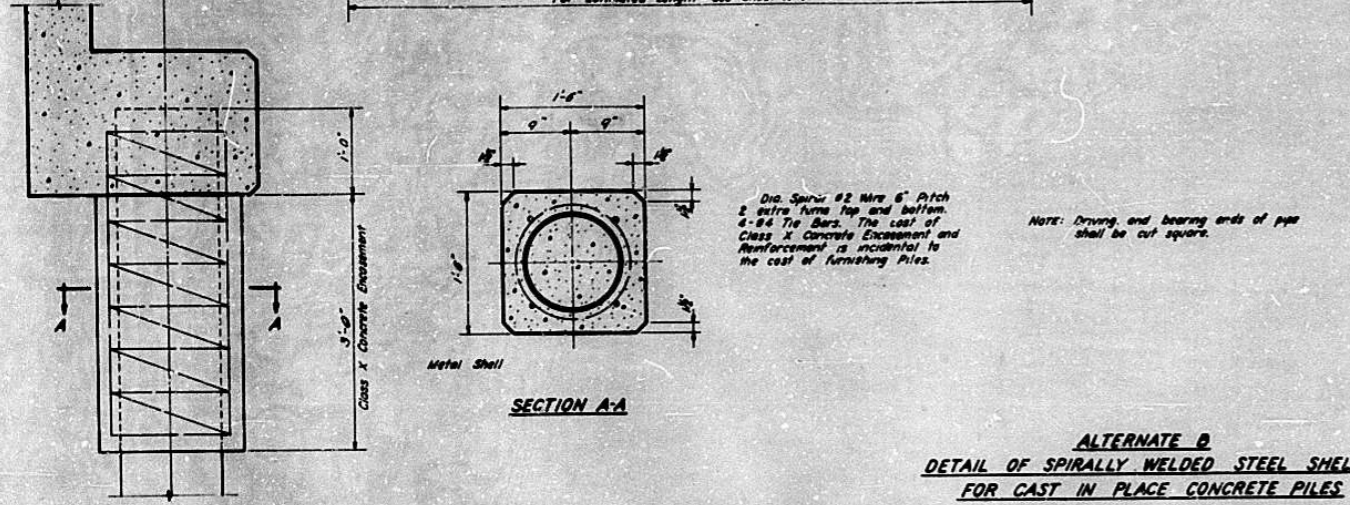
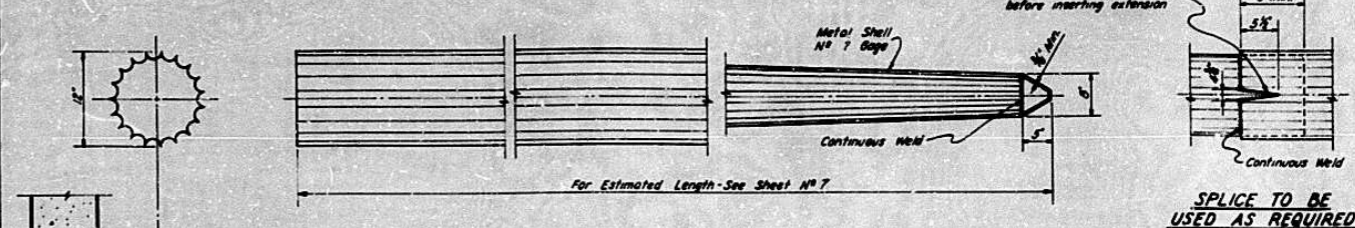
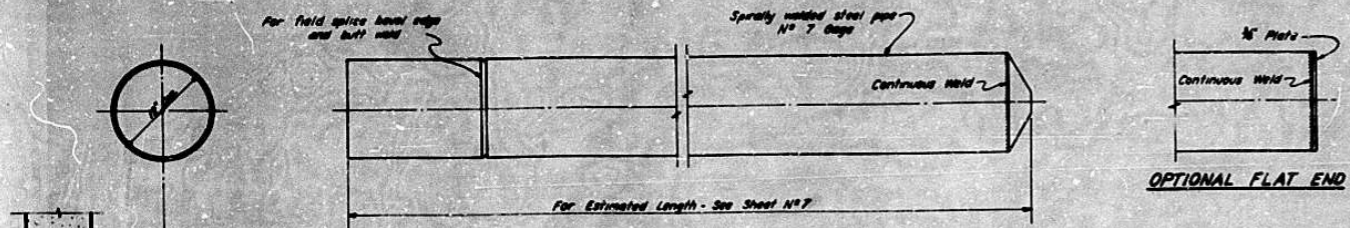
ROUTE No.	20	SECTION	90-14	NO. 1
F.A.I.S. No.	363+40.81	TOWN	TAZEWELL	COUNTY
DATE	20	YEAR	15	



SOIL BORINGS
F.A.I. ROUTE 5-SECTION 90-14 NB-1
T.R. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAZEWELL, COUNTY
WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS - DECATUR, ILLINOIS

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN <i>AL</i>	APPROVED
CHECKED <i>P.M.E</i>	

ROUTE No.	SEC.	COUNTY	STATION	SHEET
F.A.I. 5	90-14	TAZEWELL	20	14
FEB. ROAD DIST. No. 7 ILLINOIS				



DESIGNED	H.E.K.	EXAMINED	
CHECKED	P.M.C.	PASSED	
DRAWN	D.W.N.	APPROVED	
CHECKED	H.E.K.		

ALTERNATE A
DETAIL OF PRECAST CONCRETE PILES

PILE DETAILS
F.A.I. ROUTE 5 - SECTION 90-14HB-1

TR. 132 FAHEY HOLLOW ROAD OVER F.A.I. ROUTE 5
STATION 363+40.81
TAZEWELL, COUNTY

WARREN AND VAN PRAAG, INC.
CONSULTING ENGINEERS-DECATUR, ILLINOIS