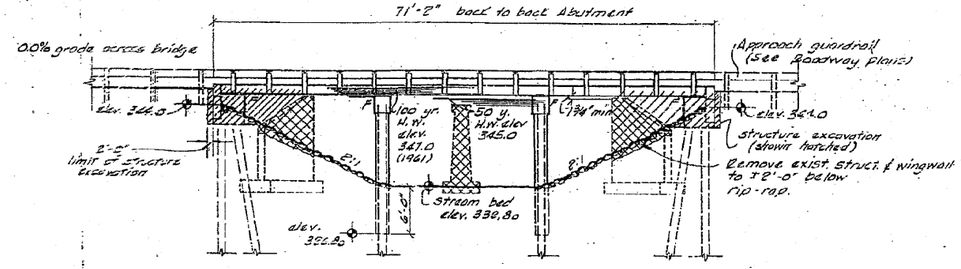
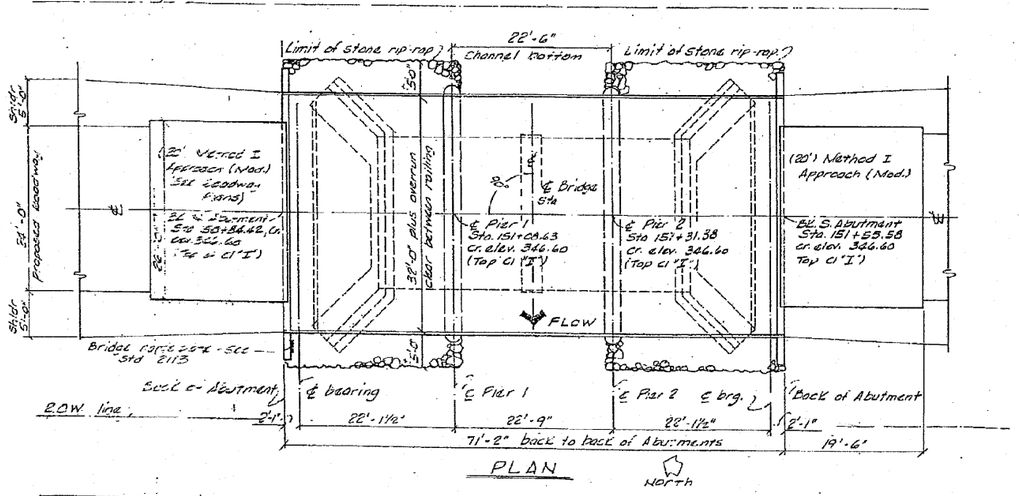
B.M. = R.R. spike in P.R. 30' left sta 140+78 - elev. = 343.13

Existing structure, built in 1921 as a 2-span R.C. slab on closed R.C. Abutments and R.C. Pier. ± 22.2' superstructure width, ± 44 long. Superstructure and portions of substructure to be removed in stages as indicated on plans. Traffic (one-way) to be maintained by stage construction.



ELEVATION



PLAN

WATERWAY INFORMATION	
Drainage area = 5.37 Sq. mi.	3437 Acres
Character = 75% cultivated, 15% pasture, 10% timber	
Design discharge (50 yr. frequency)	1900 c.f.s.
Existing opening (at low H.W.)	407 Sq. ft.
Required opening (at 50 yr. H.W.)	506 Sq. ft.
Proposed opening (at 50 yr. H.W.)	503 Sq. ft.
100 yr. discharge	2175 c.f.s.
Created head for des. gn. flood	0.0 ft.*
Created head for 50 yr. flood	0.0 ft.*

* Hydraulic heads are controlled by D.S. bridge downstream

DESIGN STRESSES		
	Field Units	Prestressed Units
f'_c	4000 psi	5000 psi
f_c	3500 psi	2000 psi
f_{ci}		
f_s	24000 psi	270,000 psi
f_s		189,000 psi
n	9	

Design Specifications - AASHTO 1977 & 1978 Interim. 25 lbs/sq. ft. allowance made for future resurfacing.

Loading HS 20-44

MD36, JOHNSON, SANDOVAL & ASSOC. LTD.

Dist.	Section	County	Sheets	Sheet No.
Proposal	16-A-B	Pulaski	19	8
Sta.	151+20			
Plans Rev.	Illinois Hwy.			

Bridge Sheet No. 1 of 7 Sheets

GENERAL NOTES:

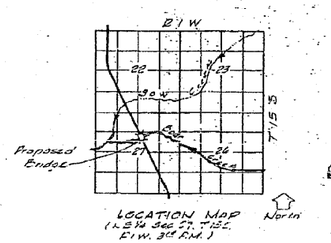
1. The top surface of the beams shall be finished in accordance with Art. 505.06 of the Standard Specifications, except that the surface shall not be roughened by screening. The surface shall be free from depressions or high spots with sharp corners.
2. For WATERPROOFING MEMBRANE SYSTEM, see Special Provisions.
3. For boring data, see Bidding Proposal.
4. Reinforcement bars shall conform to AASHTO M-31 or, M-53, Grade 60.
5. It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
6. The item "REMOVAL OF EXISTING SUPERSTRUCTURE" shall be in accord. with Art. 501.01 of the Standard Specifications. Concrete removal of the required portions of the Substructure shall be in accord with Art. 501.03 of the Std. Specifications.
8. For item "PORTLAND CEMENT MORTAR FAIRING COURSE" see Special provisions.
9. Item "STONE - Rip-Rap" shall be in accordance with Section 601 of the Standard Specifications and shall extend 5'-0" beyond each side of the bridge and to the back of the abutments.
10. The cost of pavement removal, Method I Approaches, including Class "I" surfacing on approaches are included for payment in Roadway Plans.
11. The Contractor shall drive one test pile, each in a permanent location, at the North Abutment and at Pier 1 as directed by the Engineer before ordering the remainder of the piles. See Art. 513 of the Standard Specifications.
12. Item "Structure Excavation" shall be in accordance w/ Section 502 of the Standard Specifications. For this project, the excavation required between the existing abutments, and the new abutments shall be included in this item.

TOTAL BILL OF MATERIAL

Item	Unit	Quantity Superstr.	Abut's.	Piers	Total
Precast Prestressed Concrete Deck Beam, (11")	Sq. ft.	2176			2176
Bituminous Concrete Surf. Course Mixture "D" (1") Type	Tons	28			28
Waterproofing Membrane System	Sq. yd.	257			257
Steel Railing - Type "S"	lin. ft.	138			138
Portland Cement Mortar Fairing Course	lin. ft.	476			476
Removal of Existing Superstructure	each	1			1
Concrete Removal	cu. yd.		23.0	80.8	103.8
Stone Rip-rap	Sq. yd.				198
Class "X" Concrete	cu. yd.		38.6	18.9	113.5
Reinforcement Bars	lbs.		2490	4760	7250
Furnishing Concrete Piles	lin. ft.		390	559	949
Driving Concrete Piles	lin. ft.		390	559	949
Test Pile - Concrete	each		1	1	2
Name Plates	each	1			1
Structure Excavation	cu. yd.				159.9
Temporary Bridge Rail	lin. ft.				109

STRUCTURE NO.
BOAR CREEK - STA. 151+20
REBUILT 19 BY
STATE OF ILLINOIS
FAS RTE 2938 — SEC. 16A-B
FA PROJ. BR-S-2936(101)
LOADING HS 20

LETTERING FOR NAME PLATE
See Standard 281113
Note: Bridge No. to be furnished by District
Locate name plate on south face of north wingwall



APPROVED
FOR ATMOSPHERIC EMERGENCY ONLY
Engineer of Bridges & Traffic Structures

2182 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS

GENERAL PLAN & ELEVATION

PROJECT
FAS Rte 2936 (U.S. 51) over Boar Creek
SECTION 16A-B
Pulaski County Illinois
Station 151+20

08-08-006 | November 1978

FILE NAME = 08280(1-sht-reml).dgn	USER NAME = HAS	DESIGNED - DAJ	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - RJT/HAS	REVISED -			2936	16BR-1	PULASKI	68	56
	PLOT SCALE = 0.8833 ' / IN.	CHECKED - MTD	REVISED -						CONTRACT NO. 78071	
	PLOT DATE = 5/17/2010 1:03:56 PM	DATE - 05/10	REVISED -		SCALE: SHEET NO. 1 OF 7 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT AID		