

B.M. Square cut in top of southwest wingwall, left of Sta. 58+50 Elev. 100.00 Existing structure: #053-0070 Built 1927 as S.B.I. Rte. 116 Sec. 113 B. The existing single span R.C. slab on closed abutments measures 29'-10" Bk. to Bk. and has a 42" x 2" water table. The contractor shall adequately brace the existing abutments prior to removal of the entire superstructure and portions of the substructure. This brace shall remain in place through completion of construction. The contractor shall construct a new superstructure and new abutment caps. Also parts of the existing south abutment shall be repaired. Traffic shall be detoured during construction. No salvage.

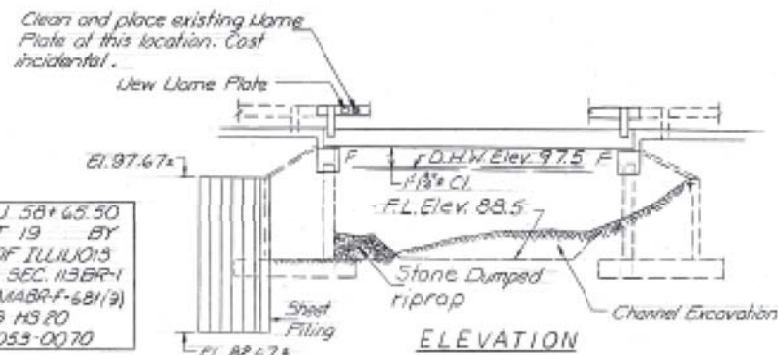
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
053-0070	(113 BR-1)	LIVINGSTON	25	21

3 SHEETS

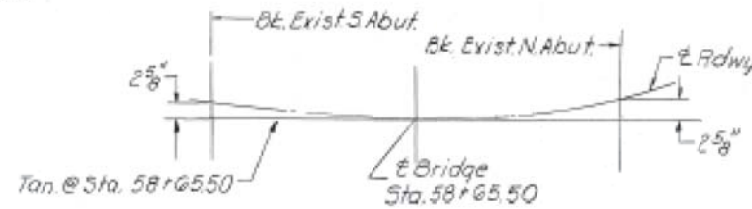
GENERAL NOTES

See Proposal for Boring Data.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
The top surface of the beams shall be finished in accordance with Article 505.06 of the Std. Specs. except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
Expansion bolts shall consist of approved expansion anchors, providing min. certified proof load = 4,080 Lbs. and 3/8" x 12" hooked bolts.
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.
A Calcium Nitrate Corrosion Inhibitor, as covered in the Special Provisions shall be used in the concrete for precast prestressed concrete deck beams.
Removal of existing rail shall be incidental to Removal of Existing Superstructures.



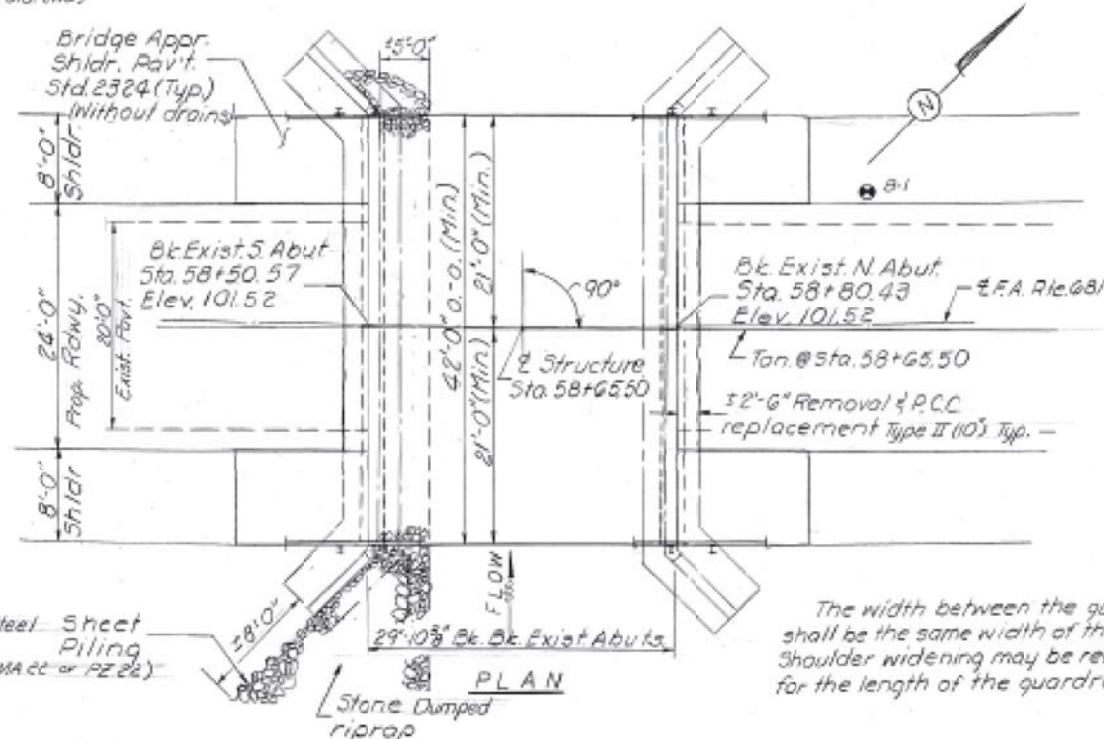
STATION 58+65.50
REBUILT 19 BY
STATE OF ILLINOIS
EA. RT. 681 SEC. 113 BR-1
FA. PROJ. MABRF-681(9)
LOADING HS 20
STR. NO. 053-0070

LAME PLATE
(See Std. 2113)

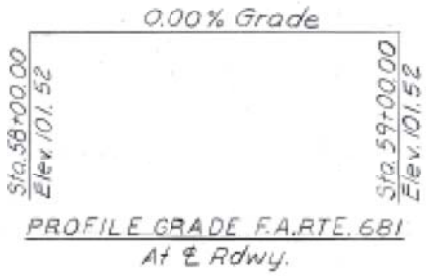


OFFSET SKETCH

CURVE DATA
P.I. Sta. 59+84.00
Δ = 89° 12'
D = 11° 12'
T = 504.25'
L = 796.07'
R = 511.57'
E = 206.80'
P.C. Sta. 59+79.75
P.T. Sta. 62+75.82
S.E. = 0.06 1/2 (Prop.)



The width between the guardrails shall be the same width of the bridge. Shoulder widening may be required for the length of the guardrail.



PROFILE GRADE F.A. RTE. 681
At E. Rdwy.

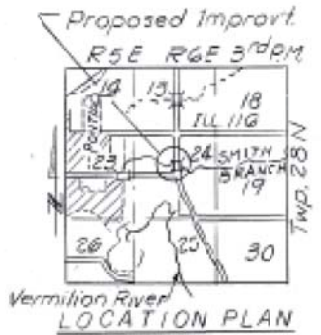
TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Structure Excavation	Cu. Yds.		35	35
Reinforcement Bars	Lbs.		1180	1180
Steel Piling Type S-1	Lin. Ft.	60		60
Bituminous Concrete Surface Course Class I	Tons	12.1		12.1
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		4.9	4.9
Expansion Bolts 3/8"	Each		36	36
Class X Concrete	Cu. Yds.		17.6	17.6
P.P.C. Deck Beams (17')	Sq. Ft.	1860		1860
Lame Plates	Each	1		1
P.C. Mortar Fairing Course	Lin. Ft.	330		330
Waterproofing Membrane System	Sq. Yds.	158.7		158.7
Steel Sheet Piling	Sq. Ft.		120	120
Pavement Removal of P.C.C. Replacement Type II (10')	Sq. Yds.	13.3		13.3
Epoxy Crack Sealing	Lin. Ft.		8	8
Repair Concrete Structures	Sq. Ft.		10.3	10.3
Temporary Wall Bracing System	L.S.		1.5	1.5
Stone Dumped Riprap	Sq. Yds.		42	42

*** See Special Provisions

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi.
f_y = 60,000 psi (Reinf.)
PRECAST PRESTRESSED UNITS
f_c = 5,000 psi, f'_{ci} = 4,000 psi.
f'_s = 270,000 psi. (6# Strands)
f'_s = 189,000 psi. (4# Strands)



Design Specifications 1977 AASHTO, 1978 1979 1980 (1981) Interim Specifications Allow 25#/sq ft for future Wear. Surf. **LOADING HS20 44**

GENERAL PLAN
ILL. RTE. 116 OVER SMITH BRANCH
F.A. RTE. 681 SEC. 113 BR-1
LIVINGSTON COUNTY
STA. 58+65.50

WATERWAY INFORMATION

Drainage Area 7.41 Sq. Mi. Low Grade Elev. 101.36 (Prop) 101.0 (Exist)

Flood	Prob. Yrs	Q CFS	Opening Sq. Ft. Exist	Prop.	NOF H.W.E. Exist	Prop.	Head - Ft. Exist	Prop.	Headwater El. Exist	Prop.
Design	50	1424	231	231	97.5'	0.0	0.0	97.5	97.5	97.5
Base	100	1634	235	240	97.8'	0.0	0.0	97.8	97.8	97.8
Max Calc	500	2122	235	287	98.4'	1.56	1.56	99.96	99.96	99.96

* Exist. Low concrete Elev. 97.65

DESIGNED Robert T. Bore
CHECKED Stan L. Drenas
DRAWN F.M.
CHECKED R.T.B.
EXAMINED
PASSED
APPROVED
January 10, 2013