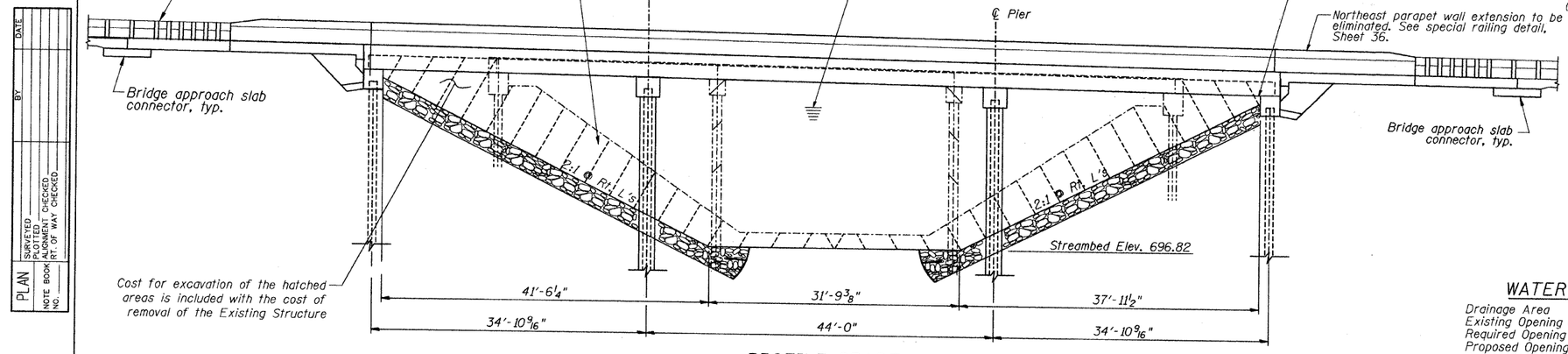
CONTRACT NUMBER 91402

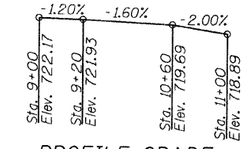
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N. LINCOLN AVE.	07-25932-00-BR	CHAMPAIGN	50	13
STA.	TO STA.			
F.H.W.A. REG.	ILLINOIS PROJECT			

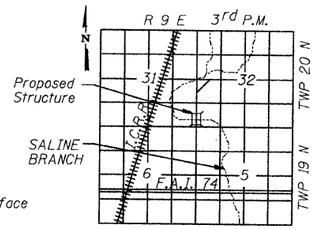
BENCHMARK DATA:
BM #1 - Cotton spindle in East face of power pole West side of Lincoln Avenue. Sta. 11+22.11 39.3' Lt.
BM #2 - Cotton spindle in East face of power pole with transformer & light, West side of Lincoln Avenue. Sta. 8+71.69 38.0' Lt.
BM #1 - Center Cap Bolt on Fire Hydrant Southwest corner of Lincoln & Wilbur, Sta. 7+29, 50.3' Lt.

EXISTING STRUCTURE DESCRIPTION
NO. 010-3168, three span 88'-3/8" long, back to back abutments, with a 28'-0" roadway surface, with precast concrete beams supported on concrete abutments and concrete piers supported by precast concrete piles. Built as Sec. 11B at sta. 2+47.02 in 1963.
The contractor shall remove the existing structure as required. The existing structure shall be replaced with a three span steel girder concrete deck bridge at a 0° Skew



PROFILE GRADE
(along ℄ Roadway)





LOCATION SKETCH

DESIGN LOADING
HL 93 and Allowance for
25 P.S.F. Future Wearing Surface

DESIGN STRESSES
f_c' = 3,500 psi (Concrete)
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 GRADE 50W)

DESIGN SPECIFICATIONS
2007 AASHTO LFRD 4th Edition

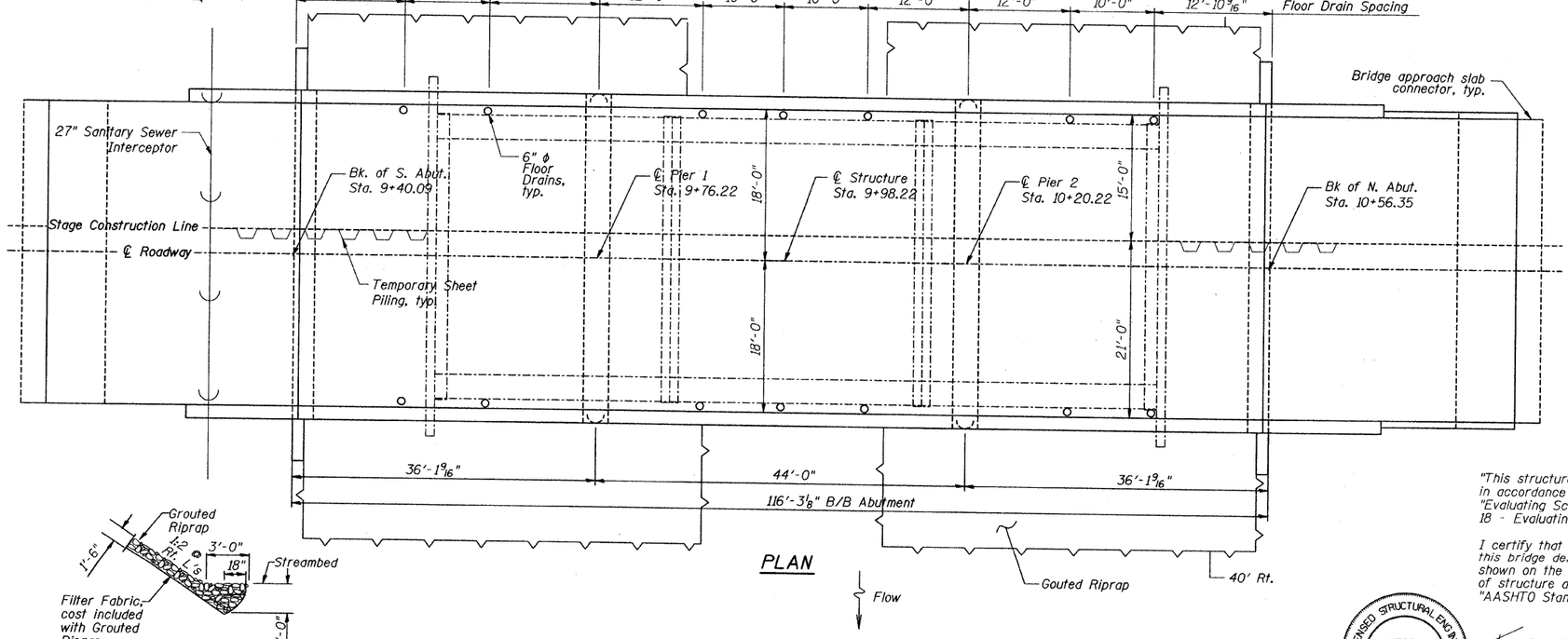
WATERWAY DATA

Drainage Area	58.42	Sq. Mi.
Existing Opening (30 Year)	810	Sq. Ft.
Required Opening (30 Year)	627	Sq. Ft.
Proposed Opening (30 Year)	1134	Sq. Ft.
Design Discharge (30 Year)	3732	C.F.S.
Computed Discharge (100 Year)	4920	C.F.S.

STRUCTURE NO. 010-4541
SEC. 07-25932-00-BR BUILT 20XX
F.A.U. 7177
CHAMPAIGN COUNTY
LOADING HL-93

NAME PLATE
See Std. 515001

PLAN



SECTION B-B THRU TOE OF RIPRAP
R-O-W TO R-O-W

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Bridge Deck Grooving	Sq. Yd.	461		461
Concrete Superstructures	Cu. Yd.	284.9		284.9
Concrete Structures	Cu. Yd.		199.6	199.6
Reinforcement Bars, Epoxy Coated	Pound	67,000	13,650	80,650
Protective Coat	Sq. Yd.	563		563
Name Plates	Each	1		1
Bar Splicers	Each	537	132	669
Structure Excavation	Cu. Yd.		262	262
Porous Granular Embankment	Cu. Yd.		338	338
Stud Shear Connectors	Each	1288		1288
Furnishing and Erecting Structural Steel	L. Sum	1		1
Furnishing Steel Piles HP 10X42	Foot		1538	1538
Driving Piles	Foot		1538	1538
Pile Shoes	Each		30	30
Test Pile Steel HP 10x42	Each		4	4
Grouted Riprap	Sq. Yd.		862	862
Concrete Cut-Off Wall	Cu. Yd.		7.2	7.2
Floor Drains	Each	14		14
Temporary Sheet Piling	Sq. Ft.		1400	1400
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1

"This structure has been designed to be stable for scour conditions in accordance with the FHWA Technical Advisory - T 5140.23, "Evaluating Scour at Bridges" and Hydraulic Engineering Circular 18 - Evaluating Scour at Bridges.

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current "AASHTO Standard Specifications for Highway Bridges".

LICENSED STRUCTURAL ENGINEER
KEITH E. BRANDAU
81-4905
CHAMPAIGN
STATE OF ILLINOIS

Keith E. Brandau 06/25/09
KEITH E. BRANDAU DATE
Illinois Licensed Structural Engineer Number 4905
License Expires 11/30/10

GENERAL PLAN AND ELEVATION
SECTION: 07-25932-00-BR
CHAMPAIGN COUNTY
℄ STATION 10+00

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O.W. CHECKED, NOTE BOOK, NO.; DATE, BY

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, B.M.s NOTED, STRUCTURE NOTATNS CHKD; DATE, BY

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