

B.M. No. 1 - Disk in concrete abutment stamped "SCHD",
NW corner of bridge, sta. 20+21.12. 12.79' LT
Elev. 572.63

Existing structure SN 087-3302 is a two span steel beam bridge
with an oil & chip surface.
The structure measures 83'-0" bk to bk of abutments,
has a 0'-0" clear span and a 18'-0" clear deck width.
The substructure is closed timber abutments on timber piles
with and timber planking walls.
Skew = 20° Fwd. Lt.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	578.77	565.60	571.16	578.77

BECK'S CREEK
BUILT 20__ BY
SHELBY COUNTY
SEC. 09-00267-00-BR
CH 12 STA. 9+95.00
LOADING HL-93
STR. NO. 087-3574

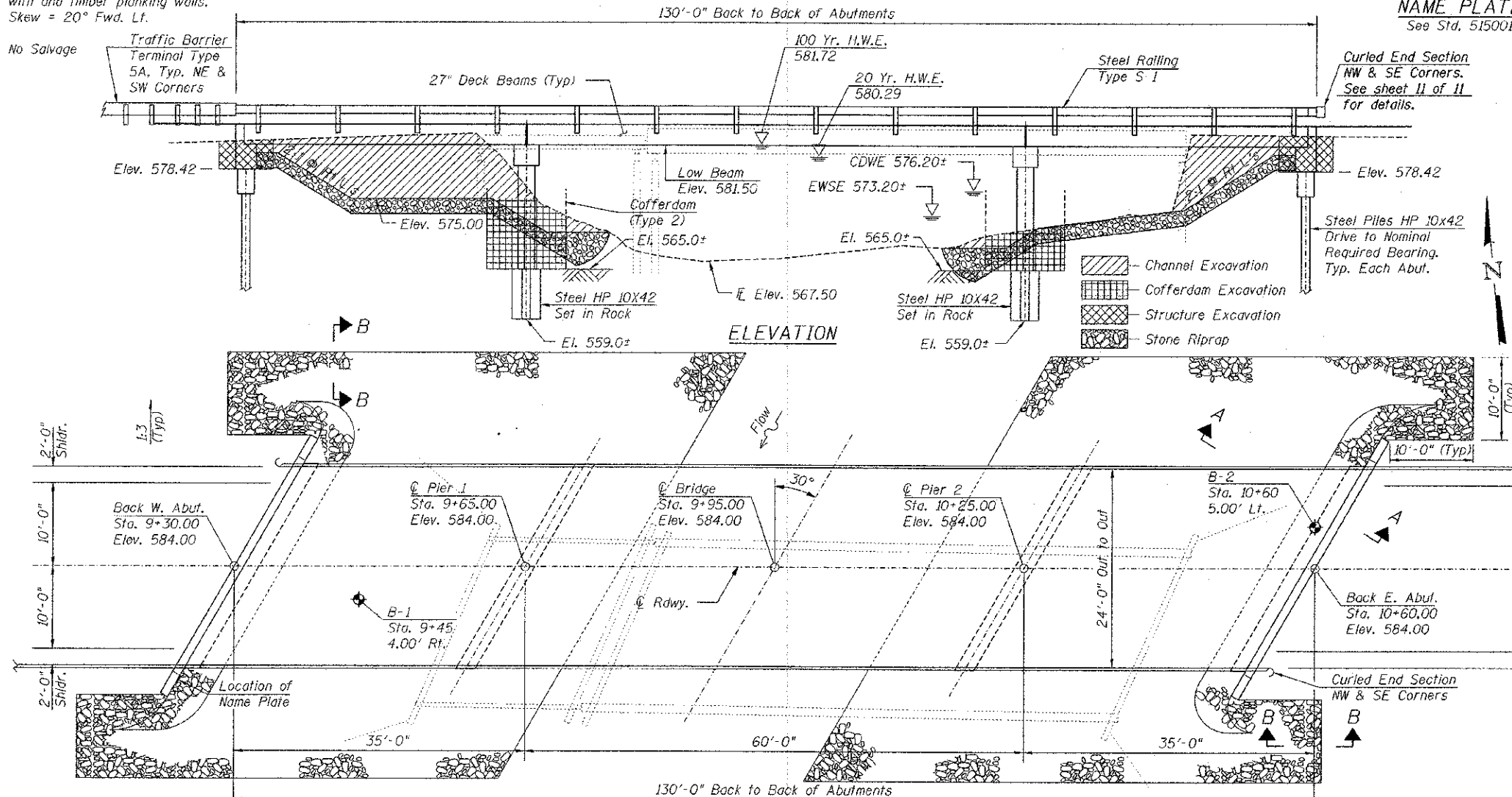
WATERWAY INFORMATION

Drainage Area	33.70	Sq. Mi.
Required Opening (20 yr.)	776	Sq. Ft.
Provided Opening	839	Sq. Ft.
Present Opening	839	Sq. Ft.
20 yr. Discharge	5,620	cfs
100 yr. Discharge	8,370	cfs
Created head at Bridge (100 yr.)	< 1.0	Ft.
Created Head 1000' upstream (100 yr.)	< 0.5	Ft.

NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
CHANNEL EXCAVATION	CU YD		544	544
STONE RIPRAP, CLASS A4	TON		1,232	1,232
FILTER FABRIC	SQ YD		640	640
REMOVAL OF EXISTING STRUCTURES No. 1	EACH		1	1
STRUCTURE EXCAVATION	CU YD		74	74
CONCRETE STRUCTURES	CU YD		104.6	104.6
CONCRETE ENCASEMENT	CU YD		3.6	3.6
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	3,061		3,061
REINFORCEMENT BARS	POUND		9,220	9,220
STEEL RAILING, TYPE S1	FOOT	258		258
FURNISHING STEEL PILES HP10X42	FOOT		502	502
DRIVING PILES	FOOT		152	152
TEST PILE STEEL HP10X42	EACH		2	2
NAME PLATES	EACH		1	1
SETTING PILES IN ROCK	EACH		14	14
COFFERDAM EXCAVATION	CU YD		219	219
COFFERDAM (TYPE 2) (LOCATION 1)	EACH		1	1
COFFERDAM (TYPE 2) (LOCATION 2)	EACH		1	1



GENERAL NOTES

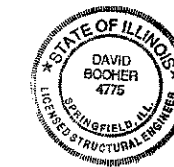
See Proposal for Boring Data.

The contractor shall drive one Test Pile at a permanent location at each Abutment. The Test Piles shall be driven to 110% of the Nominal Required Bearing specified in production locations at the structures specified or approved by the Engineer before ordering the remainder of the piles.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

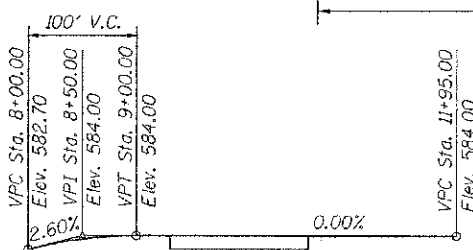
Reinforcement bars designated (E) shall be epoxy coated.

Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.



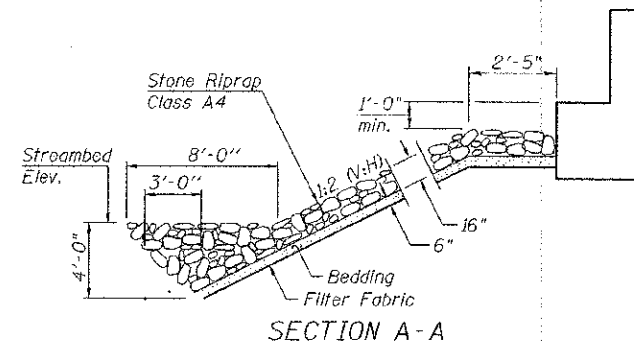
David Booher, Illinois S.E. 081-004775 Date
Expires 11-30-2014

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 requirements of the current "AASHTO LRFD Bridge Design Specifications".



PROFILE GRADE

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SECTION A-A

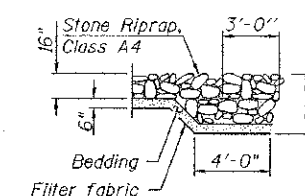
DESIGN SPECIFICATIONS
AASHTO LRFD Bridge Design Specifications, 5th Edition with 2010 Interims

DESIGN STRESSES

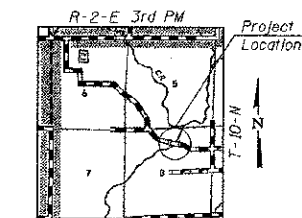
FIELD UNITS	PRECAST UNITS
f'c = 3,500 psi	f'c = 6,000 psi
fy = 60,000 psi (Reinforcement)	f'ci = 5,000 psi
	f's = 270,000 psi
	f'si = 189,000 psi

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



SECTION B-B



LOCATION SKETCH

FILE NAME	USER NAME	DESIGNED	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND DETAILS STRUCTURE NO. 087-3574	C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SCD				12	09-00267-00-BR	SHELBY	24	14
		DRB								
		JEB								
		SCD								

SHEET NO. 1 OF 11 SHEETS

CONTRACT NO. 95700
ILLINOIS FED. AID PROJECT