

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark:
B.M. #82 - Square cut in exist. S.W. winwall of S.N. 100-0010.
Elev. = 410.99

Existing Structure:
S.N. 100-0010 and S.N. 100-0011 built in 1961 under FAI 57, Section XI-4B-1 at station 228+25 as dual single span reinforced concrete T-beam bridges on closed abutments with spread footings bearing on soil. The bridges span 39'-2" Bk. to Bk. of abutments. The bridges have an out to out width of 44'-4". In 1979, the original concrete handrails were replaced with three beam rail and in 2004, the bituminous overlay was replaced with a microsilica overlay. Superstructure is to be removed and replaced, foundations widened and retaining walls are to be constructed between abutments. Stage construction, with two lanes open to traffic each direction, is to be utilized.

Salvage: No Salvage

STATION 228+25.00
RE-BUILT 20L BY
STATE OF ILLINOIS
F.A.I. RT 57 SEC. (X1-4-1) BR-1
LOADING HL-93
STR. NO. 100-0010 (N.B.)

STATION 228+25.00
RE-BUILT 20L BY
STATE OF ILLINOIS
F.A.I. RT 57 SEC. (X1-4-1) BR-1
LOADING HL-93
STR. NO. 100-0011 (S.B.)

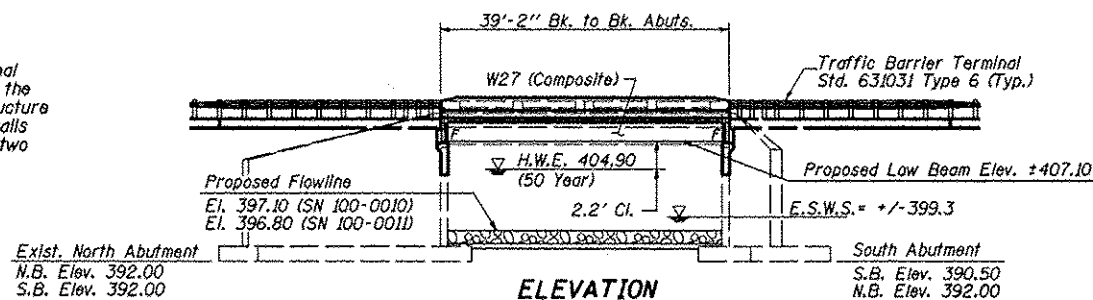
NAME PLATE

See Sta. 515001
(Locate Name Plate on South end of East hdl.)

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

NAME PLATE

See Sta. 515001
(Locate Name Plate on North end of West hdl.)

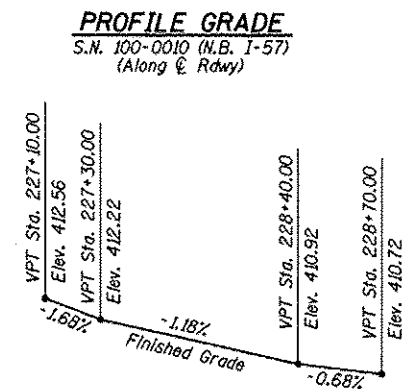
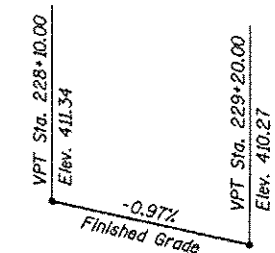
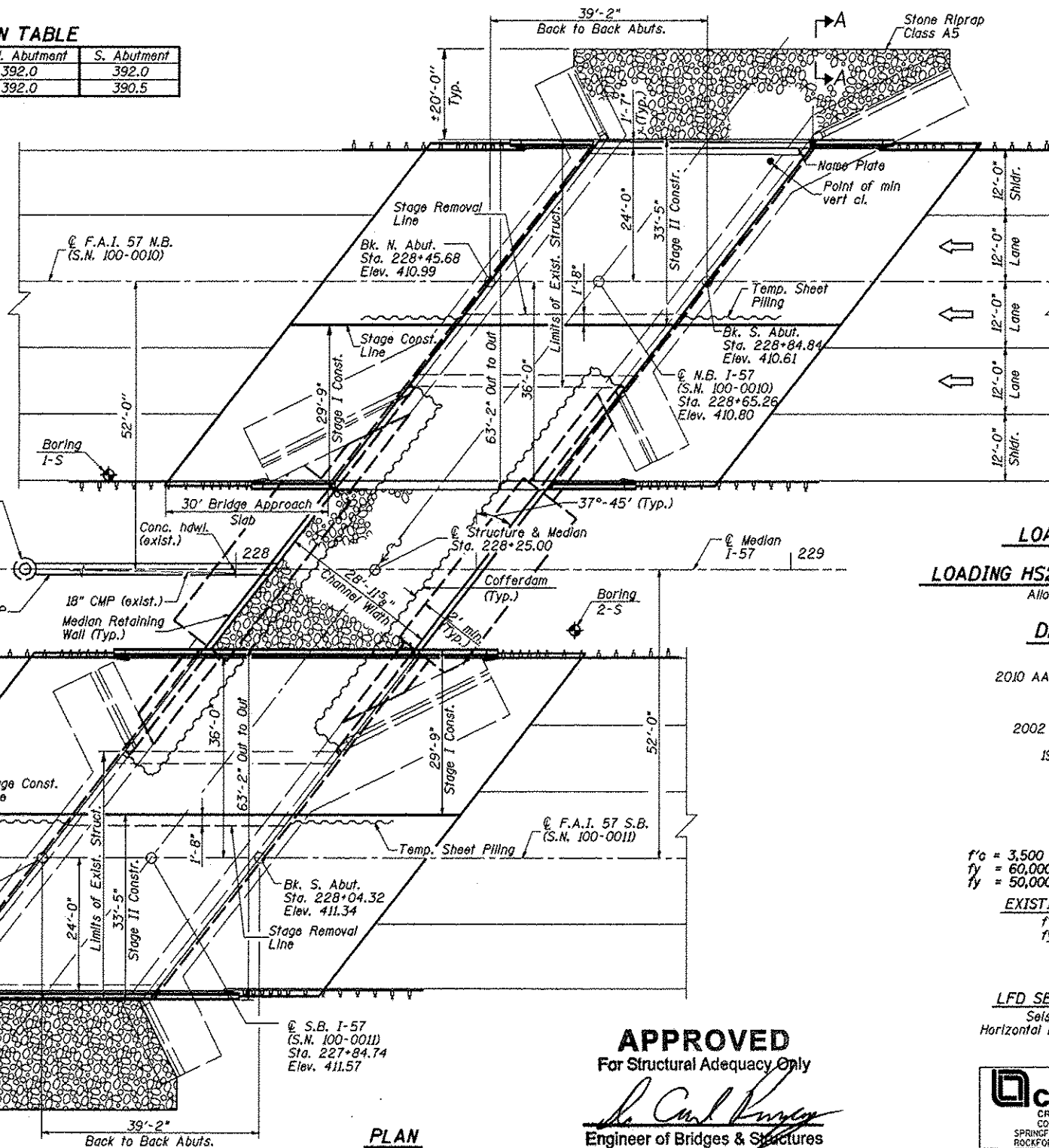


DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (feet)	Structure	N. Abutment	S. Abutment
	S.N. 100-0010	392.0	392.0
	S.N. 100-0011	392.0	390.5

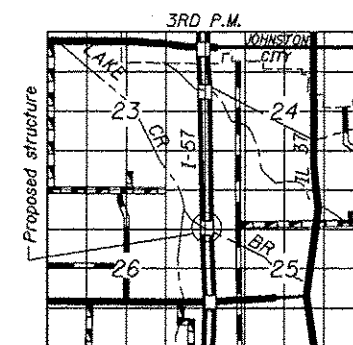
BORING DATA

Boring No.	Station	Offset
1-S	227+77	17' Lt.
2-S	228+61	11' Rt.



INDEX OF SHEETS

SHEET NO.	TITLE
1.	General Plan and Elevation
2.	General Data
3.	Stage Construction Details
4.	Temporary Concrete Barrier
5.	Deck Elevations 1
6.	Deck Elevations 2
7.	Deck Elevations 3
8.	Approach Slab Elevations 1
9.	Approach Slab Elevations 2
10.	Superstructure (S.N. 100-0010)
11.	Superstructure Details (S.N. 100-0010)
12.	Curtain Wall Details (S.N. 100-0010)
13.	Superstructure (S.N. 100-0011)
14.	Superstructure Details (S.N. 100-0011)
15.	Curtain Wall Details (S.N. 100-0011)
16.	Approach Slab Details 1
17.	Approach Slab Details 2
18.	Framing Plan and Details
19.	Framing Details
20.	North Abutment 1
21.	North Abutment 2
22.	North Abutment 3
23.	South Abutment 1
24.	South Abutment 2
25.	South Abutment 3
26.	Abutment Details
27.	Bar Splicer Details
28.	Can/lover Forming Brackets
29.	Boring Logs



LOADING HL-93 (NEW CONST.)
LOADING HS20-44 & ALT. MIL. (EXIST. CONST.)
Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

NEW CONSTRUCTION
2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

EXISTING CONSTRUCTION
2002 AASHTO Standard Specifications for Highway Bridges
1995 FHWA Seismic Retrofit Manual

DESIGN STRESSES

NEW CONSTRUCTION

FIELD UNITS

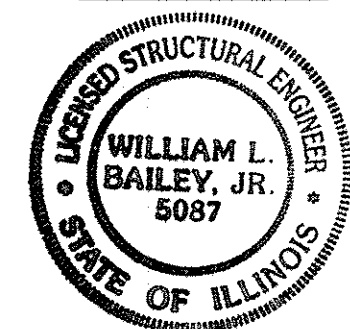
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (structural steel) (AASHTO M270, Gr. 50W)

EXISTING CONSTRUCTION (SUBSTRUCTURE)

$f'_c = 2,500$ psi
 $f_y = 40,000$ psi (reinforcement)

SEISMIC DATA

LFD SEISMIC DATA - EXISTING CONSTRUCTION
Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.12g
Site Coefficient (S) = 1.0



Walt Z. Rypka

William L. Bailey Jr., P.E., S.E.
Illinois Licensed Structural Engineer
License Number 081-005087
Expiration Date: November 30, 2014

GENERAL PLAN AND ELEVATION

**F.A.I. RTE. 57 OVER
LAKE CREEK BRANCH
STATION 228+25.00
STRUCTURE NO. 100-0010 (N.B.)
STRUCTURE NO. 100-0011 (S.B.)**

APPROVED
For Structural Adequacy Only

De Carl Rypka
Engineer of Bridges & Structures

CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL ■ AUBURN, IL ■ ST. LOUIS, MO
ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

DESIGNED BY: KEH
CHECKED BY: NLB
DRAWN BY: GLD
DATE: 4/12/10

SHEET NO. 1
29 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-57	(X1-4-1) BR -1	WILLIAMSON	202	E
CONTRACT NO. 7833-				
FED. ROAD DIST. NO. 9 ILLINOIS FED. AID PROJECT				