

Bench Mark: IDOT BM#20A Chsd. "□" on SW corner of hub guard. S.N. 059-0008 Sta. 447+50, offset = 15.2' RT. NGVD 29, Elev. 602.96

Existing Structure: S.N. 059-0008 built in 1961 as SBI Rte. 4, Section (V,T) B-1 at Sta. 447+03.8. The superstructure consists of a reinforced concrete deck on wide flange beams. The substructure consists of pile bent abutments and 2 single hammerhead piers supported on spread footings. The Bk. to Bk. Abut. dimension measures 108'-0" while the O.-O. deck width measures 33'-8". The structure is to be removed and replaced using stage construction.

No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

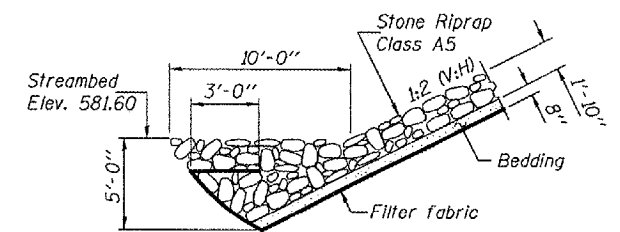
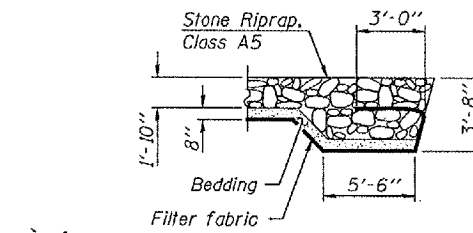
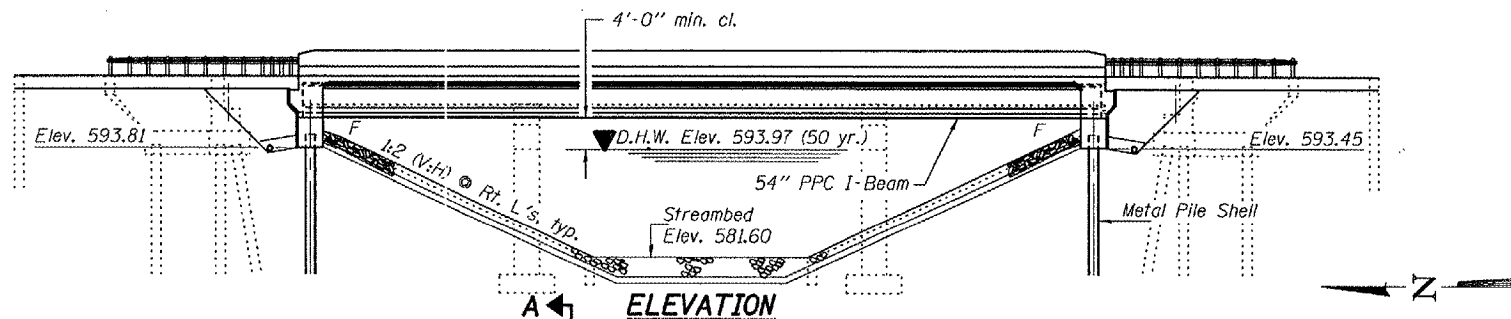
- 1 General Plan & Elevation
- 2 Stage Construction Details
- 3 Temporary Shoring Details at Existing Piers
- 4 Temporary Concrete Barrier Details
- 5-6 Top of Slab Elevations
- 7 Superstructure
- 8 Superstructure Details
- 9 Diaphragm Details
- 10 Framing Plan
- 11-12 Beam Details
- 13 North Abutment
- 14 South Abutment
- 15 This sheet is intentionally left blank
- 16 Metal Shell Pile Details
- 17 Bar Splicer Details
- 18-20 Boring Logs

ROUTE NO.	SECTION	COUNTY	TOWNSHIP	SHEET NO.	SHEET NO. 1
FAP 662	(V,T)B-2	MACOUPIN	603	32	20 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract #72993

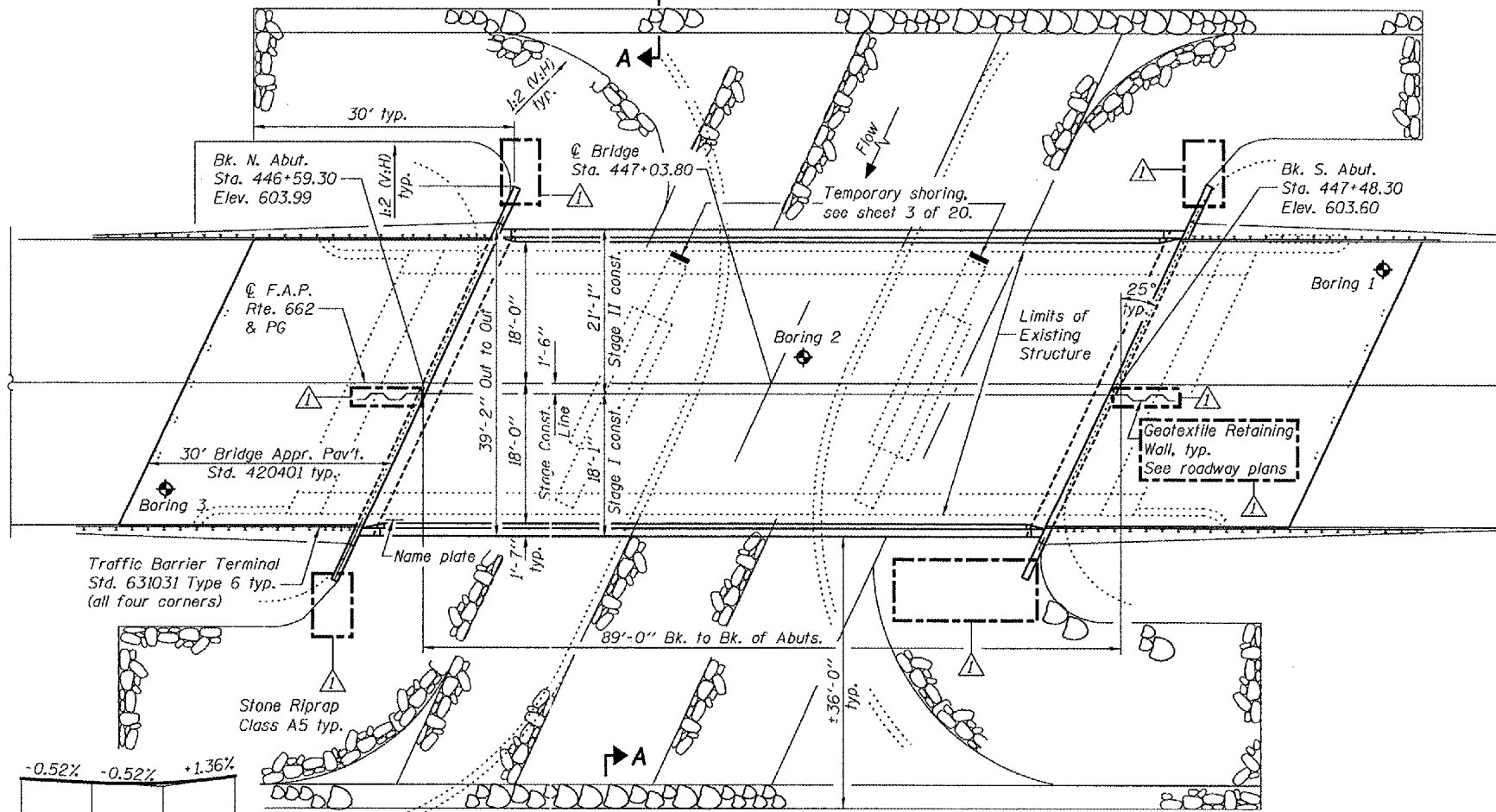
GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Reinforcement bars designated (E) shall be epoxy coated.
The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in the production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.



SECTION A-A

STONE RIPRAP ANCHOR DETAIL



STATION 447+03.80
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 662 SEC. (V,T)B-2
LOADING HL93
STRUCTURE NO. 059-0504

NAME PLATE

See Std. 515001

LOADING HL-93

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

DESIGN SPECIFICATIONS

2004 AASHTO LRFD with 2005 & 2006 Interims

DESIGN STRESSES

FIELD UNITS

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

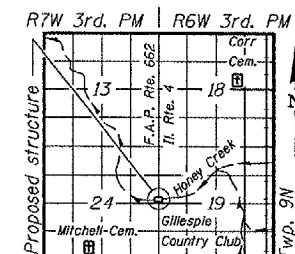
PRECAST PRESTRESSED UNITS

$f_c = 6,000$ psi
 $f_{ci} = 5,000$ psi
 $f_s = 270,000$ psi ($1/2$ " ϕ low lax. strands)
 $f_{si} = 201,960$ psi ($1/2$ " ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 6.7%
Site Coefficient (S) = 1.5

* See roadway plans for details



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 4 OVER

HONEY CREEK
F.A.P. RT. 662 SECTION (V,T)B-2
MACOUPIN COUNTY
STATION 447+03.80
STRUCTURE NO. 059-0504

WATERWAY INFORMATION

Exist. Low Grade Elev. 602.40 @ Sta. 447+08.8

Drainage Area = 14.5 sq. mi.		Prop. Low Grade Elev. 603.58 @ Sta. 447+60						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater E.L. Exist.	Headwater E.L. Prop.
	10	2599	460	570	592.83	0.21	593.04	592.83
Design	50	4020	534	652	593.97	0.69	593.52	593.03
Base	100	4629	562	682	594.37	0.92	593.75	593.17
Overtopping	-	-	-	-	-	-	-	-
Max. Calc.	500	6099	622	748	595.22	1.56	594.39	593.59

Sta. 446+00.00	Elev. 604.30
PC Sta. 447+00.00	Elev. 603.78
PT Sta. 448+50.00	Elev. 603.00
PT Sta. 450+00.00	Elev. 605.04

vc = 300'

PROFILE GRADE

DESIGNED	Phung P. Nareewala
CHECKED	h.t. duong
DRAWN	h.t. duong
CHECKED	DPN AJB FT

EXAMINED: *Thomas D. Dolecki*
ENGINEER OF BRIDGE DESIGN
PASSED: *Robert J. Dolecki*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
"SHOW ME" INSURANCE
081-004625
SPRINGFIELD
ILLINOIS

EXPIRES 11-30-2008

Note: Cost of removal of the existing sloped wall is included in the pay item Removal of Existing Structures.