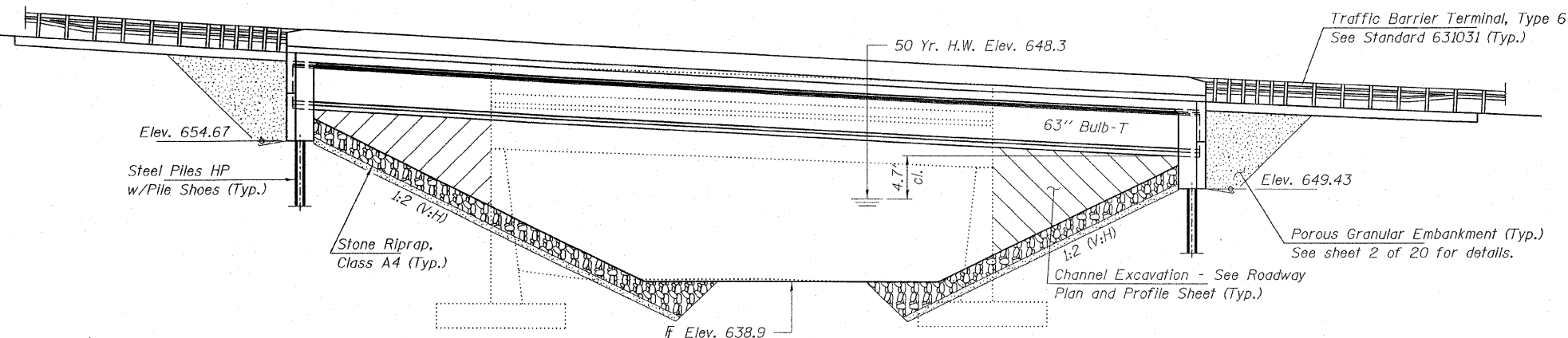


Bench Mark: Railroad spike in 1st power pole east of Str. #029-0016, 58' rt. of Sta. 573+04. Elev. 646.49.

Existing Structure: The existing structure, No. 029-0016, was built in 1930 as SBI 97, Section 144-B. The structure is a buried single span reinforced concrete T girder bridge supported on closed concrete abutments. The bridge is 53'-0" bk. to bk. of abutments and 50'-0" fa. to fa. of curbs. The contractor shall remove the existing structure as required and replace it with a single span PPC Bulb-T superstructure on integral abutments. The road shall be kept open to one lane of traffic at all times by using stage construction.

No Salvage.

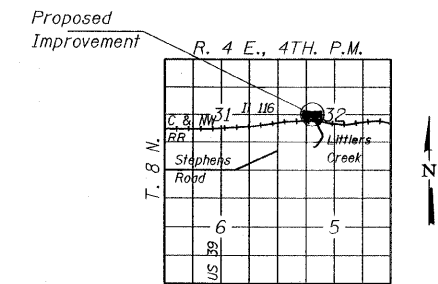


ELEVATION

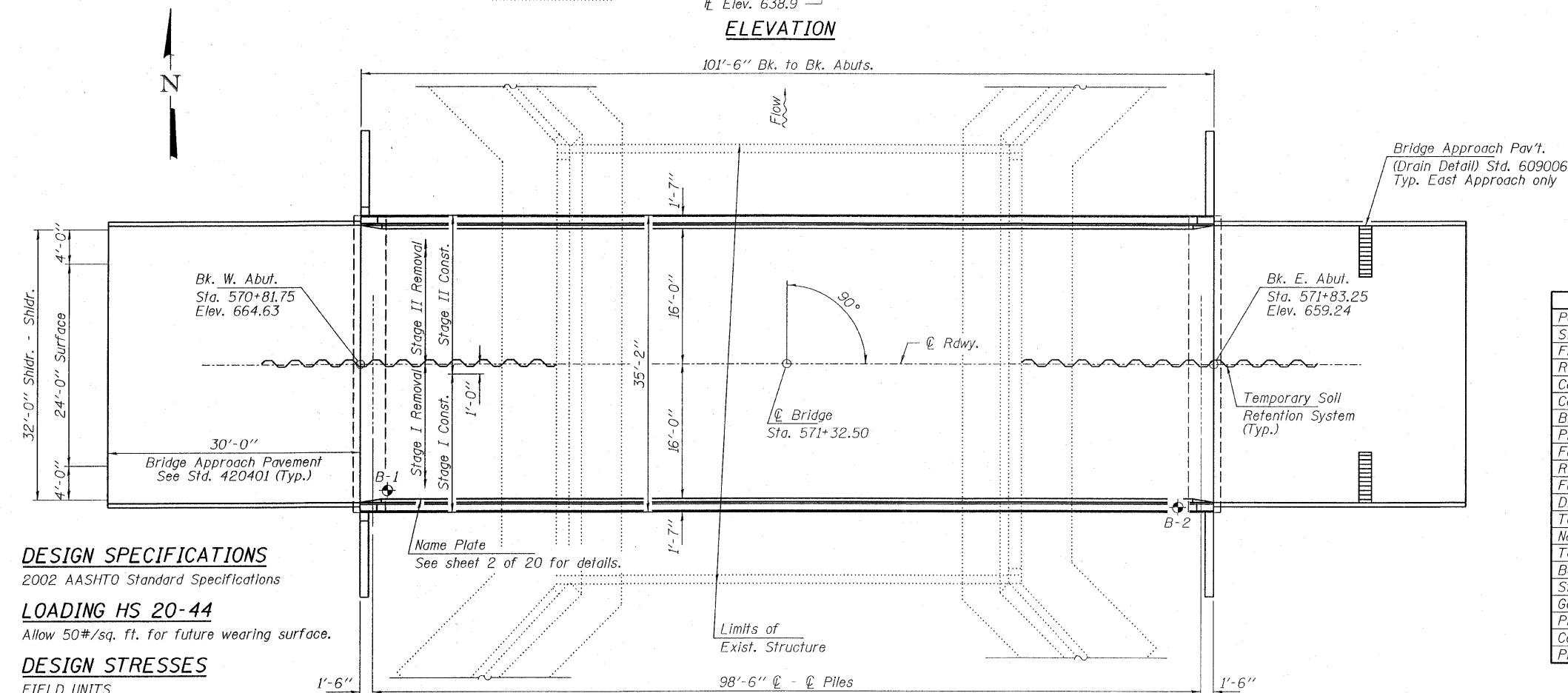
101'-6" Bk. to Bk. Abut.

INDEX OF SHEETS

1. General Plan & Elevation
2. Riprap Detail
3. Temporary Soil Retention System
4. Stage Construction Details
5. Temporary Concrete Barrier For Stage Construction
- 6.-7. Slab Elevations
8. West Approach Slab Elevations
9. East Approach Slab Elevations
10. Superstructure
- 11.-13. Superstructure Details
- 14.-15. Beam Details
16. West Abutment
17. East Abutment
18. Bar Splicer Assembly Details
19. Steel H Piles
20. Borings



LOCATION SKETCH



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING HS 20-44

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

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.04g
 Site Coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 13.9 Sq. Mi. Low Grade Elev. 652.3 @ Sta. 576+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	3,410	364	493	648.3	1.8	0.7	650.1	649.0
Base	100	3,970	382	518	648.6	2.3	1.0	650.9	649.6
Overtopping	433	5,120	414	x	649.1	3.2	x	652.3	x
Max. Calc.	500	5,350	419	573	649.3	3.4	1.7	652.7	651.0

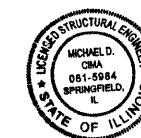
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	651.2	646.0

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.			215
Stone Riprap, Class A4	Ton			1,339
Filter Fabric	Sq. Yd.			1,604
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		40.0	40.0
Concrete Superstructure	Cu. Yd.	153.5		153.5
Bridge Deck Grooving	Sq. Yd.	339		339
Protective Coat	Sq. Yd.	447		447
Furnishing & Erecting P.P.C. Bulb-T Beams 63"	Foot	599		599
Reinforcement Bars, Epoxy Coated	Pound	25,700	6,340	32,040
Furnishing Steel Piles HP12x63	Foot		260	260
Driving Piles	Foot		260	260
Test Pile Steel HP12x63	Each		2	2
Name Plates	Each	1		1
Temporary Soil Retention System	Sq. Ft.			860
Bar Splicers	Each	362	20	382
Structure Excavation	Cu. Yd.		402	402
Geocomposite Wall Drain	Sq. Yd.		102	102
Pipe Underdrain for Structures 4"	Foot		170	170
Concrete Encasement	Cu. Yd.		4.2	4.2
Pile Shoes	Each		12	12

DESIGNED - P.S.L.
CHECKED - M.D.C.
DRAWN - D.A.B.
CHECKED - M.D.C.



Michael D. Cova
 ILLINOIS STRUCTURAL NO. 081-5984

Expires 11-30-08
 9-8-2008

GENERAL PLAN AND ELEVATION
IL-116 OVER LITTLERS CREEK
F.A.P. 665 / SECTION (144-B)BR
FULTON COUNTY
STATION 571+32.50
STRUCTURE NO. 029-0066

PROJECT NUMBER: 12-37-0003-1	DATE: 07/31/08	SHEET NO. 1	F.A.P. 665	SECTION (144-B)BR	COUNTY FULTON	TOTAL SHEETS	SHEET NO.
						67	17
IL 116 OVER LITTLERS CREEK						CONTRACT NO. 68091	
FED. ROAD DIST. NO. 4 ILLINOIS						FED. AID PROJECT	

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

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