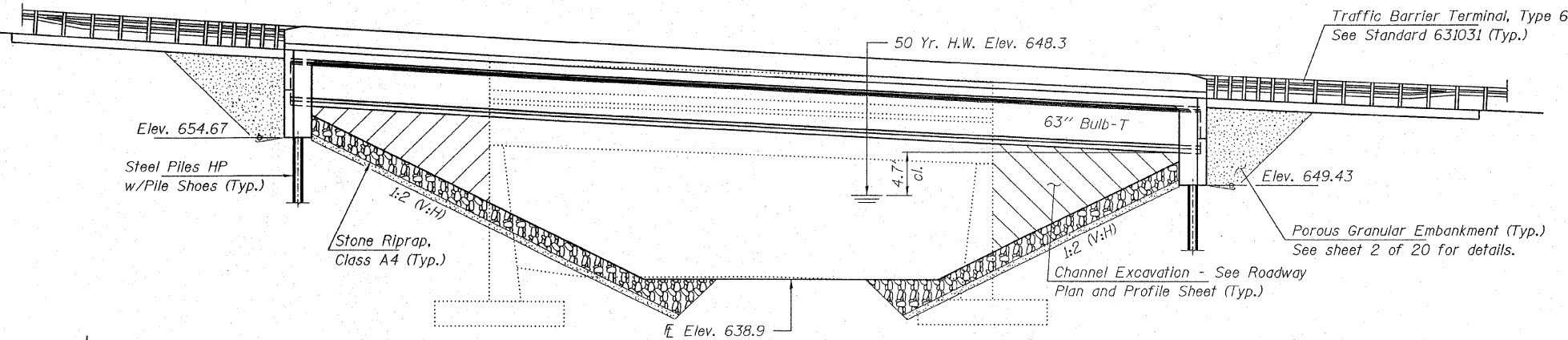


Bench Mark: Railroad spike in 1st power pole east of Str. #029-0016, 58' rt. of Sta. 573+04. Elev. 646.49.

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.

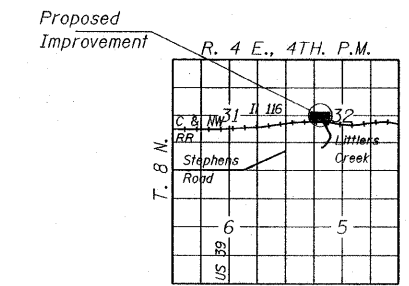


**ELEVATION**

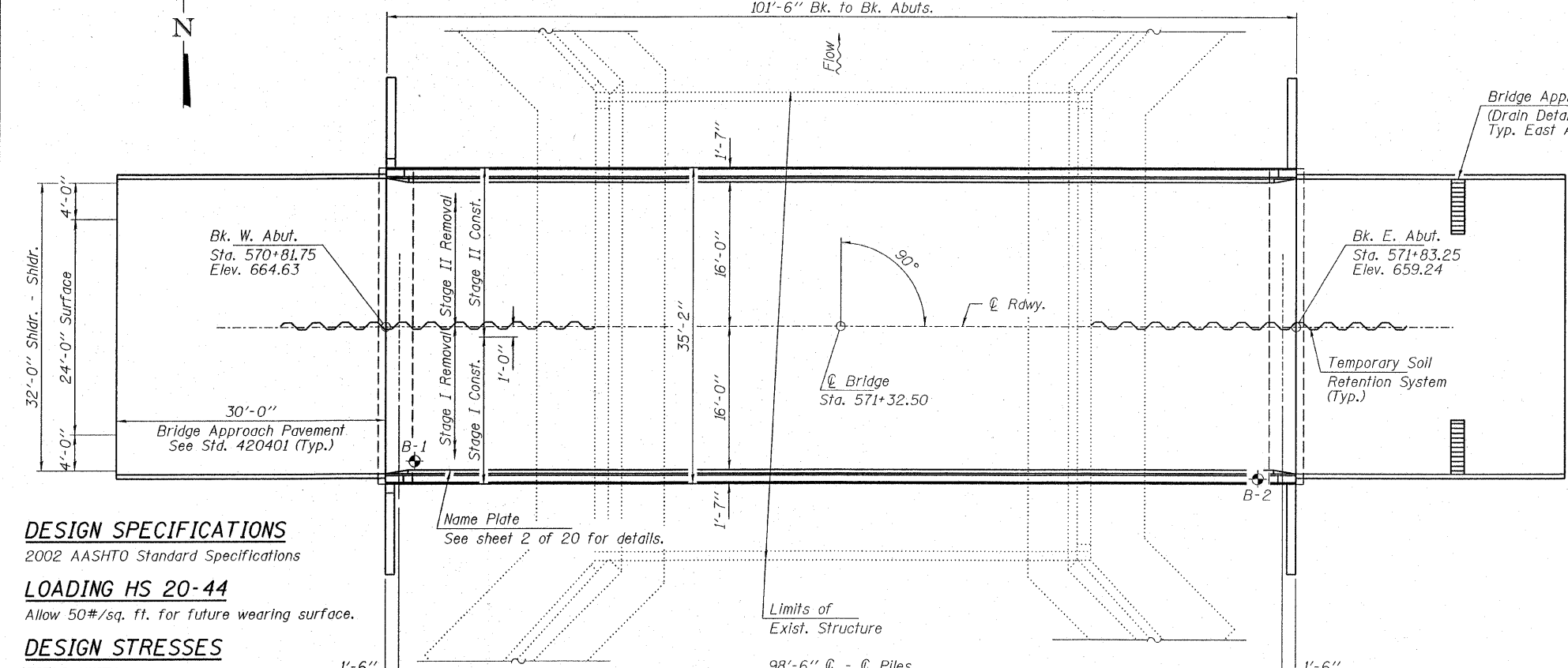
101'-6" Bk. to Bk. Abuts.

**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 ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f'_si = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  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.		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

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

**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

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES



*Michael D. Caira*  
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	20 SHEETS	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				665	(144-B)BR	FULTON	67	17
				IL 116 OVER LITTLERS CREEK		CONTRACT NO. 68091		
				FED. ROAD DIST. NO. 4 ILLINOIS		FED. AID PROJECT		