

**SUMMARY OF QUANTITIES**

CODE #	ITEM	UNIT	QUANTITY	HBP FUNDING 80% FEDERAL 20% STATE ROADWAY 1000	HBP FUNDING 80% FEDERAL 20% STATE SN 029-0066 X081-2A
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	102	0	102
60100945	PIPE DRAINS 12"	FOOT	74	74	0
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	170	0	170
60900240	TYPE C INLET BOX, STANDARD 609006	EACH	2	2	0
60900515	CONCRETE THRUST BLOCKS	EACH	2	2	0
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	275	275	0
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	0
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	0
63200310	GUARDRAIL REMOVAL	FOOT	400	400	0
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	2	2	0
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3	0
67000600	ENGINEER'S FIELD LABORATORY	CAL MO	3	3	0
67100100	MOBILIZATION	L SUM	1	1	0
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	0
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	0
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	0
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10	0
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	0
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6	0
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	160	160	0
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4818	4818	0
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	22	22	0
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1965	1965	0
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500	500	0
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425	425	0
78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	2600	2600	0
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9	0
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2	0

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78200405	GUARDRAIL MARKERS	EACH	11	11	0
78200500	BARRIER WALL MARKERS	EACH	21	21	0
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	0
78300100	PAVEMENT MARKING REMOVAL	SQ FT	705	705	0
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	11	11	0
X0301512	GUARDRAIL AGGREGATE EROSION CONTROL	TON	124	124	0
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	860	0	860
X2503100	MOWING	UNIT	5	5	
<del>X0230000</del>	<del>UNINTERRUPTABLE POWER SUPPLY</del>	<del>EACH</del>	<del>1</del>	<del>1</del>	<del>0</del>
X0325569	TEMPORARY BRIDGE TRAFFIC SIGNALS RESIDENTIAL APPROACH	EACH	1	1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	0
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	0
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2	0
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	0
+ Z0076600	TRAINEES	HOUR	500	500	

+ FUNDING CODE Y080  
▲ NP 100% STATE

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

3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

ELGIN • SPRINGFIELD

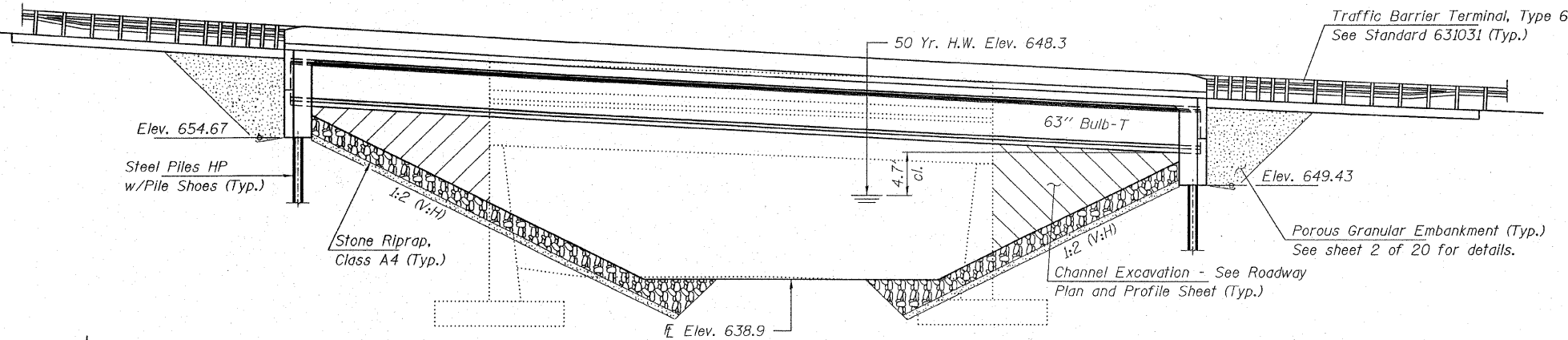
PROJECT NUMBER: 12-37-0003-1      DATE: 08/13/08  
DESIGNED: L.F.S.      CHECKED: S.W.M.      DRAWN: D.T.M.

**SUMMARY OF QUANTITIES**  
F.A.P. ROUTE 665 (IL 116) OVER LITTLERS CREEK  
SECTION (144-B) BR  
FULTON COUNTY

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.

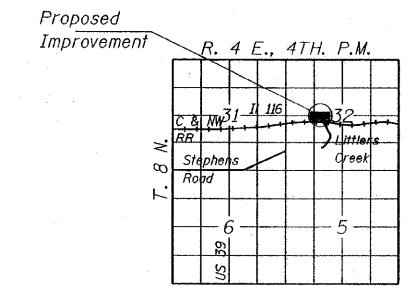


**ELEVATION**

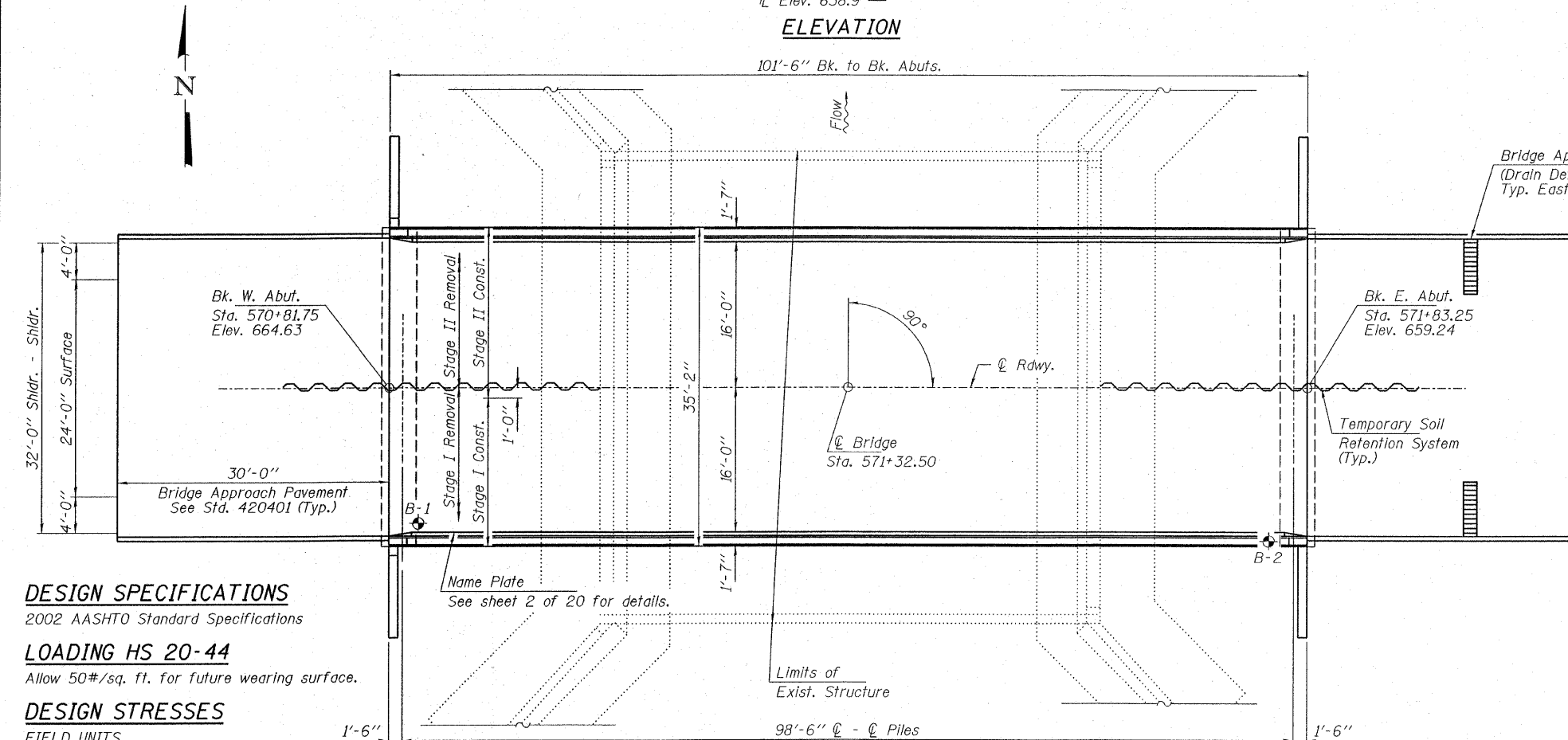
101'-6" Bk. to Bk. Abuts.

**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. Exist. Prop.	Natural H.W.E. Exist. Prop.	Head - Ft. Exist. Prop.	Headwater El. 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

**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**

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

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		