

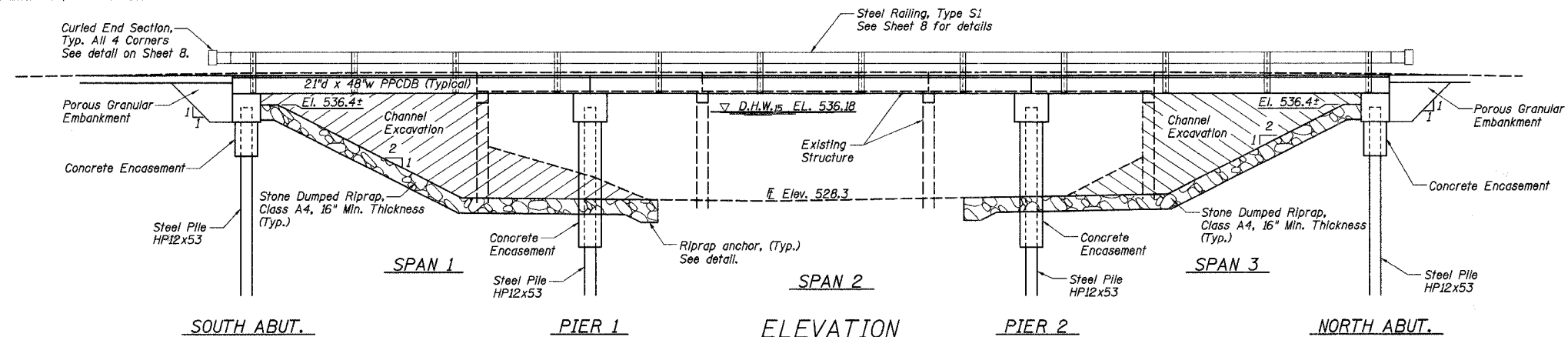
TBM 7/18/06 C - RR spike in east face power pole, 8.64' Lt., Sta. 5+75.13 - Elev. 549.69

TBM 7/18/06 B - RR spike in east face power pole, 23.31' Lt., Sta. 7+97.62 - Elev. 538.81

TBM 7/18/06 D - RR spike in east face power pole, 21.12' Lt., Sta. 12+85.67 - Elev. 537.96

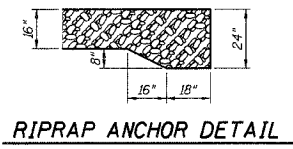
Existing Structure: Three (3) span bridge with precast concrete bridge slabs supported on closed timber abutments and timber piers. 60' bk. to bk. abutments, 22.5' out to out of deck. Existing Structure Number 026-3105.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 254	06-12121-00-BR	FAYETTE	10	5
FED. ROAD DIST. NO. 7		ILLINOIS	FEDERAL AID PROJECT	
CONTRACT NO. 95531				



### BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUB	SUPER	TOTAL
CHANNEL EXCAVATION	CU YD	389	-	389
POROUS GRANULAR EMBANKMENT	TON	52	-	52
STONE DUMPED RIPRAP, CLASS A4	TON	220	-	220
REMOVAL OF EXISTING STRUCTURES	EACH	-	-	1
CONCRETE STRUCTURES	CU YD	31.8	-	31.8
CONCRETE ENCASUREMENT	CU YD	12.8	-	12.8
PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	-	2424	2424
REINFORCEMENT BARS	POUND	4480	-	4480
STEEL RAILING, TYPE S1	FOOT	-	206	206
FURNISHING STEEL PILES HP 12x53	FOOT	975	-	975
DRIVING PILES	FOOT	975	-	975
TEST PILE STEEL HP 12x53	EACH	1	-	1
NAME PLATES	EACH	1	-	1
TERMINAL MARKER - DIRECT APPLIED	EACH	-	4	4



### GENERAL NOTES

See Section 502 of the Standard Specifications for Structural Excavation.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

See Specifications for Soil Borings.

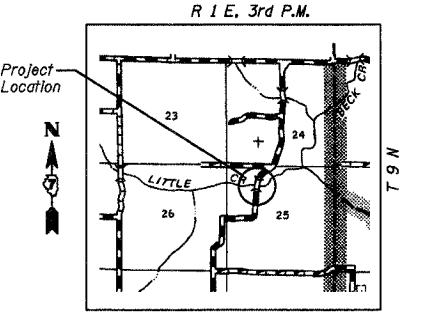
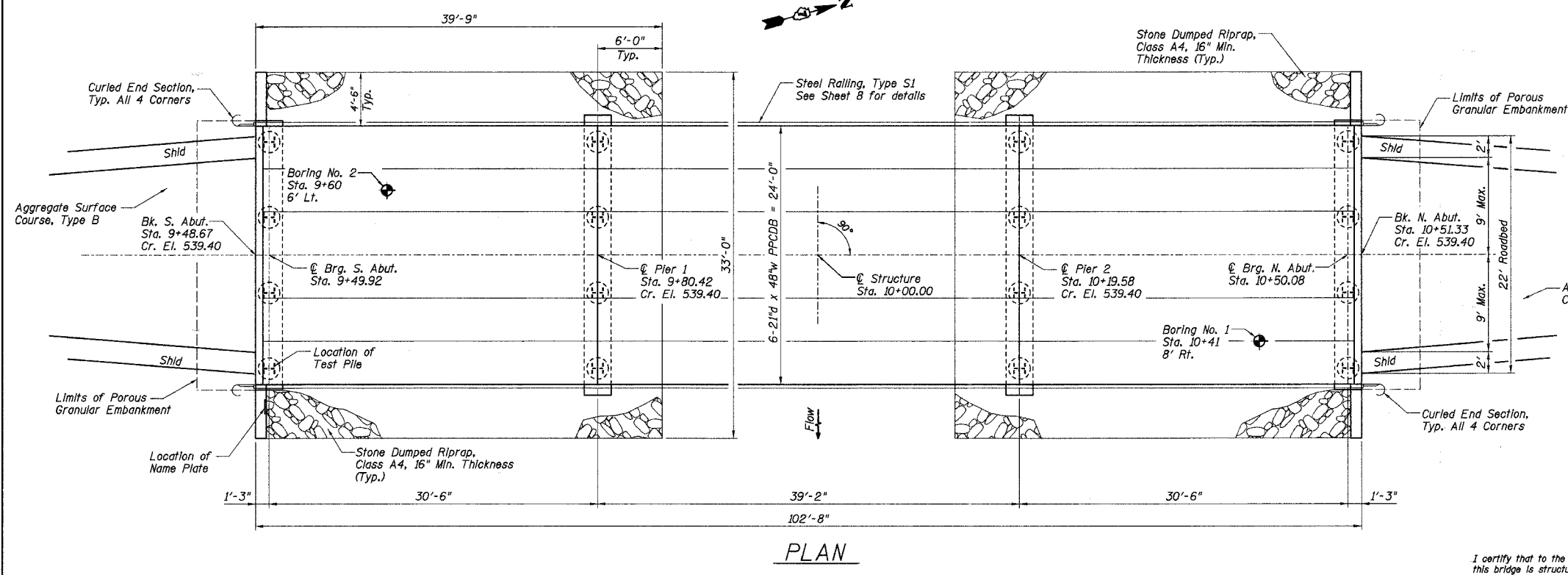
Do not scale these drawings.

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The Contractor shall drive one (1) Steel HP12x53 Test Pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of the piles.

**LITTLE CREEK**  
 BUILT 200 BY FAYETTE COUNTY  
 TR 254  
 SEC. 06-12121-00-BR  
 PROJECT NO. BROS-051(78)  
 STRUCTURE NO. 026-3436  
 LOADING HS 20

**NAME PLATE**  
 (See State Standard 515001 for details)



I certify that to the best of my information, knowledge, and belief, this bridge is structurally adequate for the design loading shown on plans. The design is an economical one for the structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



GARY L. HAHN  
 81-4853  
 LICENSED  
 STRUCTURAL  
 ENGINEER  
 ILLINOIS LICENSED STRUCTURAL  
 ENGINEER NO. 81-4853  
 EXPIRES NOV. 30, 2008

### WATERWAY DATA

Drainage Area = 12.95 Sq. Mi. Low Grade Elev. 537.7 @ Sta. 12+00									
Flood	Freq. Yr.	Q C.F.S.	Opening	Sq. Ft.	Natural	Head - Ft.	Headwater	Headwater	Headwater
Design	15	2770	381	553	536.18	0.98	0.32	537.16	536.50
Base	100	4498	416	607	536.80	2.52	0.96	539.32	537.76
Max. Calc.	500	5929	440	647	537.23	2.70	1.98	539.93	539.21

### SEISMIC DESIGN

Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.08g  
 Site Coefficient (S) = 1.0

### DESIGN SPECIFICATIONS

AASHTO - 2002 17th Edition

### LOADING HS 20-44

Allow 25#/sq. ft. for future wearing surface.

### DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi

### PRECAST PRESTRESSED UNITS

$f'_c = 5,000$  psi  
 $f_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ " strands)  
 $f'_{si} = 189,000$  psi ( $\frac{1}{2}$ " strands)

### GRADE ON STRUCTURE

Bk. South Abutment Sta. 9+48.67 Cr. El. 539.40	0.00%	0.00%	0.00%
Span 1	Span 2	Span 3	
0.00%	0.00%	0.00%	

10/31/2007