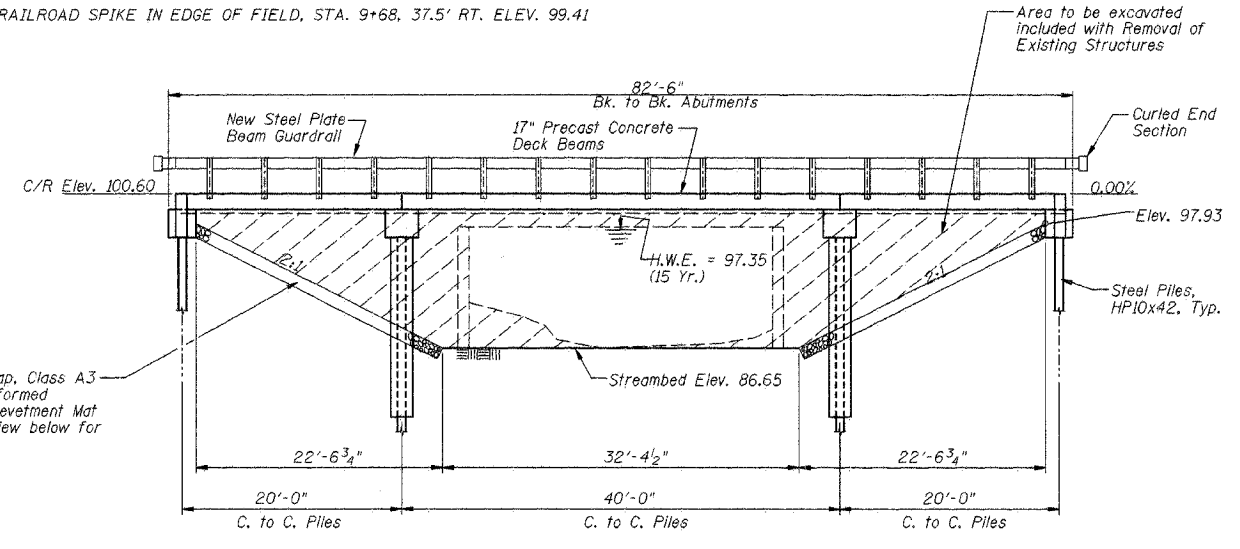


Existing Structure: EXISTING STRUCTURE NO. 074-3040, EXISTING STRUCTURE IS A
TIMBER DECK ON STEEL STRINGERS SUPPORTED BY CONCRETE
ABUTMENTS, 28' LONG & 18'-4" WIDE.
BM #1 - CHISELED "□" IN TOP OF WINGWALL AT SW CORNER OF BRIDGE, ELEV. 100.00
BM #2 - RAILROAD SPIKE IN EDGE OF FIELD, STA. 9+68, 37.5' RT. ELEV. 99.41

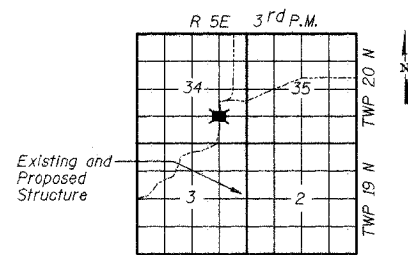
BORING DATA

N - Standard Penetration Test - Blows per foot to drive 2" O.D. split spoon sampler 12" with 140 lb. hammer falling 30".
Qu - Unconfined Compressive Strength - Tons/Sq. Ft.
W - Water Content - Percentage of oven dry weight - %
B - Bulge Failure, V - Shear Failure, E - Estimated Value
S - Splitting Failure

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
TR 43	*	PIATT	11	4
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT NO. 04-04124-00-BR	



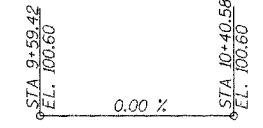
ELEVATION



LOCATION SKETCH

STRUCTURE NO. 074-3298
SEC. 04-04124-00-BR BUILT 200
GOOSE CREEK ROAD DISTRICT
PIATT COUNTY
LOADING HS-20-44

NAME PLATE
See Standard 515001



PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO (2002) and applicable Interims

DESIGN LOADING

HS 20-44
25 P.S.F Future Wearing Surface

DESIGN STRESSES

- $f'_c = 3,500$ psi (Cast in Place Concrete)
- $f'_c = 5,000$ psi (P.P.C. Units)
- $f'_{ci} = 4,000$ psi (P.P.C. Units)
- $f_y = 60,000$ psi (Reinforcement)
- $f'_s = 270,000$ psi ($1/2"$ ϕ Strands)
- $f'_{si} = 201,960$ psi ($1/2"$ ϕ Strands)

WATERWAY DATA

Drainage Area	16.56 Sq. Mi.
Existing Opening (15 Yr.)	264.4 Sq. Ft.
Required Opening (15 Yr.)	266.5 Sq. Ft.
Proposed Opening (15 Yr.)	533 Sq. Ft.
Design Discharge (15 Yr.)	902 C.F.S.
Computed Discharge (100 Yr.)	1407 C.F.S.
15 Yr. Head	0.01 Ft.
100 Yr. Head	0.19 Ft.

DEPTH (ft)	BORING B-1			DESCRIPTION	BORING B-2		
	N	Qu	W		N	Qu	W
0				Gravel/Dirt			
1	10	6.30	23	Dk. Brown Silty CLAY, Dry Small Pebbles	7	--	13
2	7	2.81V	19		6	2.55V	15
3	3	0.30B	23		6	1.50	18
4	8	2.16	13	Tan/Grey Mottled CLAY, Damp, Sticky, Soft, small-medium pebbles	8	4.12	11
5	12	5.10	11		14	5.55B	11
6	14	3.22	12	(3" SAND Seam @ 19')	12	6.30	12
7	11	3.00	14		11	7.72	11
8	13	3.60	12	Grey Silty CLAY, small-medium pebbles, dry	13	4.50	12
9	39	5.86S	10		30	1.17S	10
10	16	2.47	13	Dark Brown Sandy Silty CLAY, Small pebbles	14	1.53	15
11	11	5.4VS	13		14	0.51V	18

BORING B-1
STA 10+30, Along ϕ of Roadway

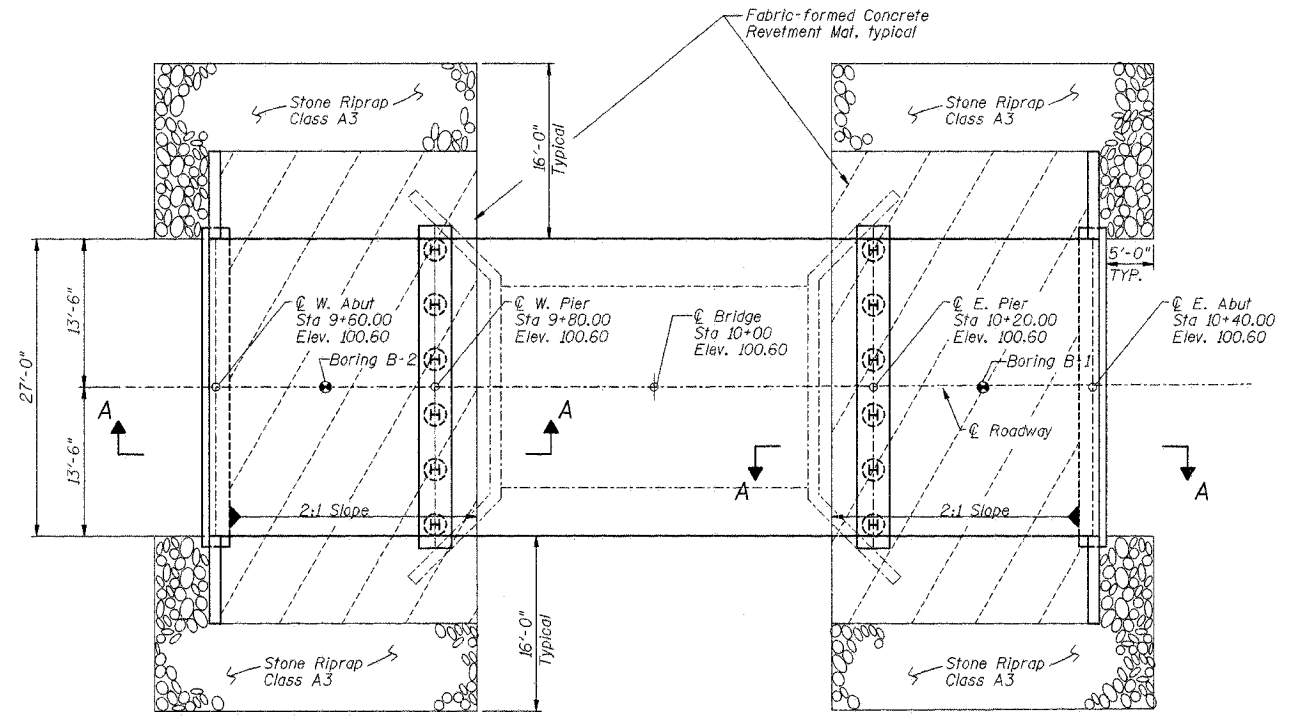
BORING B-2
STA 9+70, Along ϕ of Roadway

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
*Removal of Existing Structures	Each	1		1
Precast Prestressed Concrete Deck Beams (17" Deep)	Sq. Ft.	2187		2187
Steel Railing, Type S-1	Foot	162		162
Concrete Structures	Cu. Yds.		57.9	57.9
Furnishing Steel Piles, HP10x42	Foot		648	648
Driving Steel Piles	Foot		648	648
Test Piles, Steel HP10x42	Each		4	4
Metal Shoes	Each		16	16
Fabric Formed Concrete Revetment Mats	Sq. Yds.		234	234
Stone Riprap, Class A3	Sq. Yds.		104	104
Name Plate	Each		1	1
Reinforcement Bars	Pound		7570	7570
Structure Excavation	Cu. Yds.		146	146

*See Special Provisions

Stone Riprap, Class A3 or Fabric-formed Concrete Revetment Mat See Plan view below for locations



SECTION A-A

GENERAL NOTES

- The Contractor shall drive 1 steel test pile in a permanent location at each Abutment & Pier as directed by the Engineer before ordering the remainder of piles.
- Boring Data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.
- Class SI or MS Concrete shall be used in the abutments.



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

Keith E. Brandau 8/14/05
KEITH E. BRANDAU
Illinois Licensed Structural Engineer Number 4905
License Expires 11/30/06

FRAUENHOFFER

Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, Il. 61822 217-351-6268

GENERAL PLAN AND ELEVATION

GOOSE CREEK ROAD DISTRICT
SECTION 04-04124-00-BR
PIATT COUNTY

SHEET	4
DWG NO.	4067-gpe.dgn
DATE	DEC 2004
PROJ NO.	4067

DSGN	R.T. Mumm				
DR	R.T. Mumm				
CHK	K.E. Brandau				
APVD	K.E. Brandau	NO.	DATE	REVISION	BY