* EXISTING STRUCTURE: 3-SPAN PRECAST, PRESETRESSED CONCRETE DECK BEAM BRIDGE
136'-6" B-B ABUTMENTS AND 30'-0" O-O DECK WIDTH ON PILE
BENT ABUTMENTS AN PIERS

* SALVAGE: NO SALVAGE

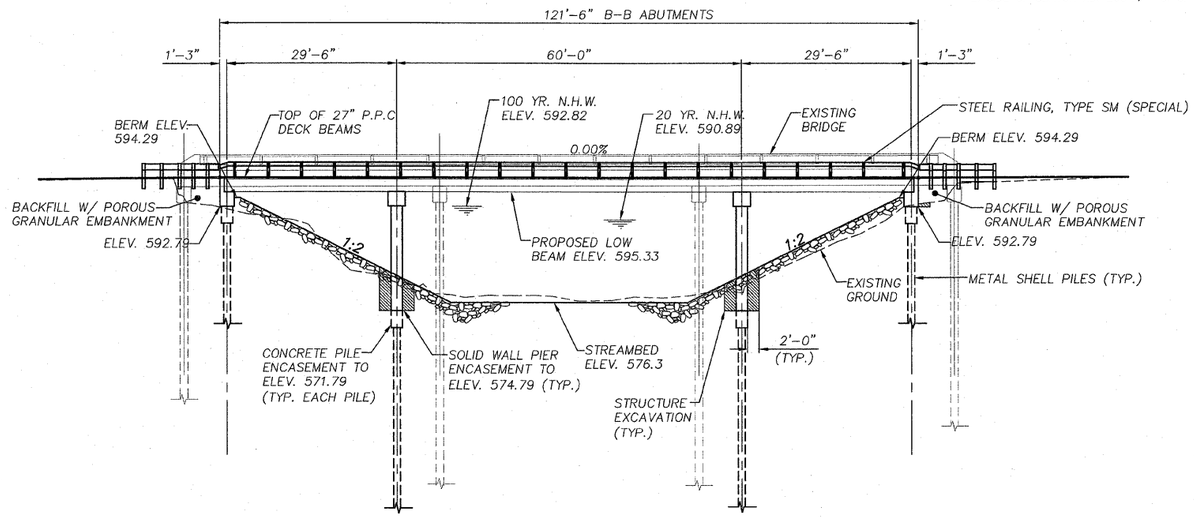
BENCHMARKS:

B.M ELEV. 596.90
TBM1-NAIL SET IN E. FACE OF P. POLE
600'+/- N. OF CENTER BRIDGE W. SIDE OF
SEATON RD.

B.M ELEV. 594.12
TBM2-NAIL IN FENCE POST ON N. SIDE OF FIELD ENT.
E. SIDE OF SEATON RD. 200'+/- S. OF CENTER OF BRIDGE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 214	*	MERCER	16	7
FED. ROAD DIST. NO. 7	ILLINOIS	89387		

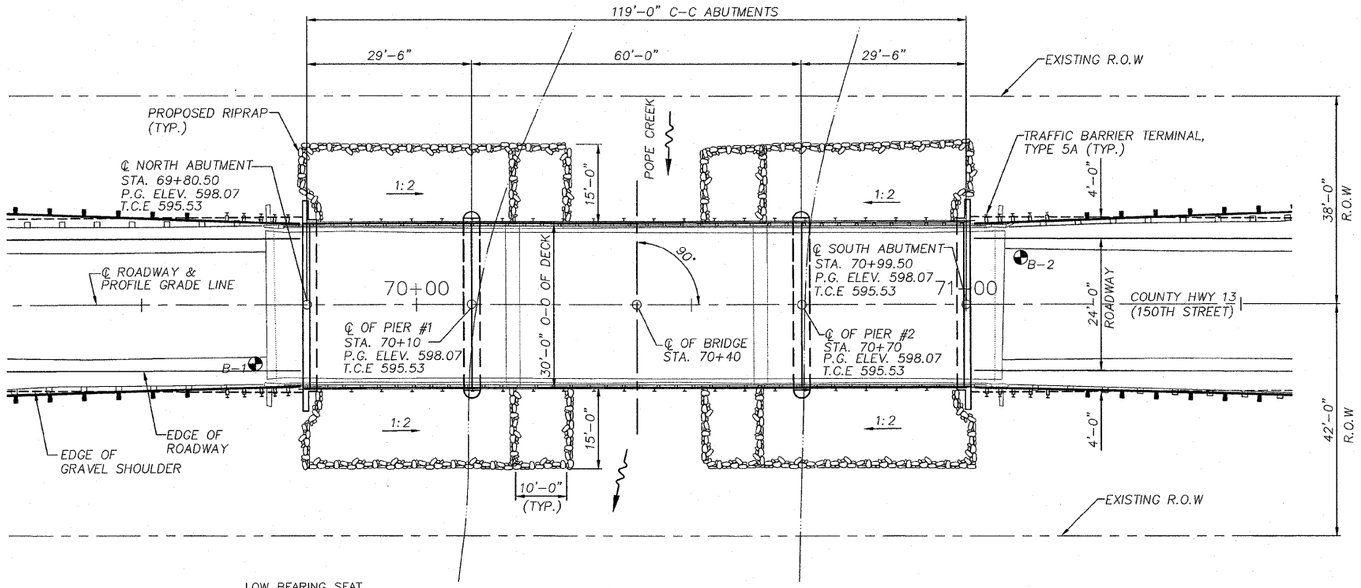
*05-00023-02-BR



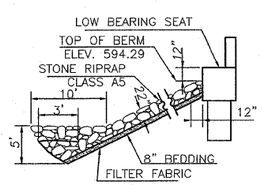
ELEVATION

DESIGN SCOUR ELEVATION TABLE

DESIGN SCOUR ELEV. (FT), 100 YR.	N. ABUT	PIER #1	PIER #2	S. ABUT
	592.79	560.8	560.8	592.79



PLAN



TOE STONE ANCHOR DETAIL

DESIGNED	MHM
CHECKED	JBF
DRAWN	MHM
CHECKED	JBF

Exp. 11/30/2008
JOHN B. FELLMAN
061-005167
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

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 COMPLEIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES".

John B. Fellman — 1-31-2008
JOHN B. FELLMAN, S.E. — DATE

GENERAL NOTES

CLASS SI CONCRETE SHALL BE USED IN ALL CONCRETE STRUCTURES, EXCEPT FOR THE PRECAST, PRESTRESSED CONCRETE (P.P.C.) DECK BEAMS.

THE CONTRACTOR SHALL DRIVE 4 TEST PILE(S) AS SPECIFIED, IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER, BEFORE ORDERING THE REMAINING PILES.

SEE SHEETS 15 AND 16 FOR BORING LOGS.

LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

T.C.E. = TOP OF CAP ELEVATION.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUBSTRUCTURE		TOTAL
			PIERS	ABUTS.	
REMOVAL OF EXISTING STRUCTURES	EACH				1
CHANNEL EXCAVATION	CU.YD.				132.7
STRUCTURE EXCAVATION	CU.YD.		98.5	4.9	103.4
CONCRETE STRUCTURES	CU.YD.		129.3	22.2	151.5
P.P.C. DECK BEAMS (27" DEPTH)	SQ.FT.	3,594			3,594
STEEL RAILING, (SPECIAL)	FOOT	240			240
REINFORCEMENT BARS	POUND		7,860	2,700	10,560
FURNISHING METAL SHELL PILES, 14"x0.312"	FOOT		660	320	980
DRIVING PILES	FOOT		660	320	980
TEST PILE METAL SHELLS	EACH		2	2	4
NAME PLATES	EACH				1
STONE RIPRAP, CLASS A5	SQ.YD.				693
FILTER FABRIC	SQ.YD.				693
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOCATION 1	EACH		1		1
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOCATION 2	EACH		1		1
CONCRETE ENCASEMENT	CU.YD.		7.6	5.5	13.1
HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50	TON	67.1			67.1
PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1071			1071
WATERPROOFING MEMBRANE SYSTEM	SQ.YD.	399.3			399.3
ASBESTOS BEARING PAD REMOVAL	EACH				40

DRAINAGE AREA = 138.95 Sq.Mi. LOW GRADE ELEV. = 597.2 @ STA. 68+80

FLOOD	FREQ. YEAR	Q C.F.S.	OPENING SQ.FT.		NATURAL H.W.E.	HEAD-FT.		HEADWATER EL.	
			EXISTING	PROPOSED		EXISTING	PROPOSED	EXISTING	PROPOSED
DESIGN	20	6,152	1061.2	1066.0	590.89	0.18	0.16	591.07	591.05
BASE	100	9,003	1314.3	1286.4	592.82	0.58	0.56	593.40	593.38
OVERTOPPING									
MAX. CALC.	500	11,716	1383.3	1359.8	593.08	1.05	1.05	594.13	594.10

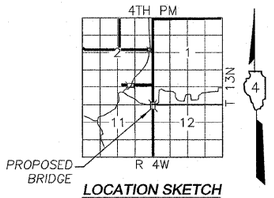
POPE CREEK
BUILT 20__ BY
MERCER COUNTY
SEC. 05-00023-02-BR
STATION 70+40.00
STR. NO. 066-3043 LOADING HS20

LETTERING FOR NAME PLATE
LOCATE NAME PLATE AT NORTHWEST CORNER OF BRIDGE
(SEE STD. 515001)

DESIGN SPECIFICATIONS
2002 AASHTO
HS20-44 LOADING. LOAD FACTOR DESIGN.
ALLOW 50#/SQ.FT. FOR FUTURE WEARING SURFACE.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi

PRECAST UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2" dia. strands)
f'si = 201,960 psi (1/2" dia. strands)



LOCATION SKETCH

GENERAL BRIDGE PLAN & ELEVATION

SECTION 05-00023-02-BR
F.A.S. 214, STA. 70+40
MERCER COUNTY
STRUCTURE NO. 066-3043

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