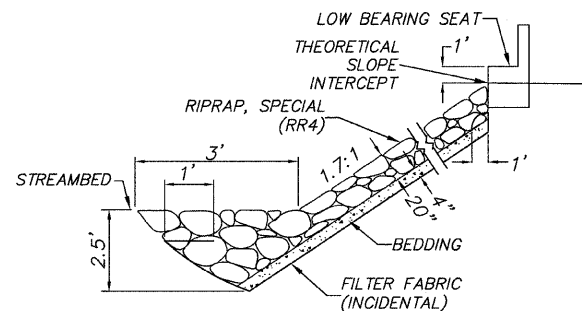


BM #1 - SET CHISLED SQUARE ON N. SIDE CONC. PAD FOR GRAIN BIN RT. STA. 5+80 ELEV. = 672.89

EXISTING STRUCTURE - SN. 034-3140  
27' x 22' CONCRETE SLAB BRIDGE WITH CLOSED CONCRETE ABUTMENTS AND WINGWALLS

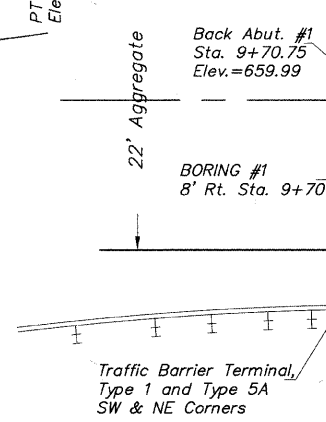
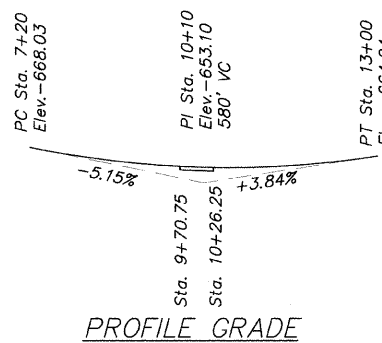
SALVAGE - NO SALVAGEABLE MATERIALS.



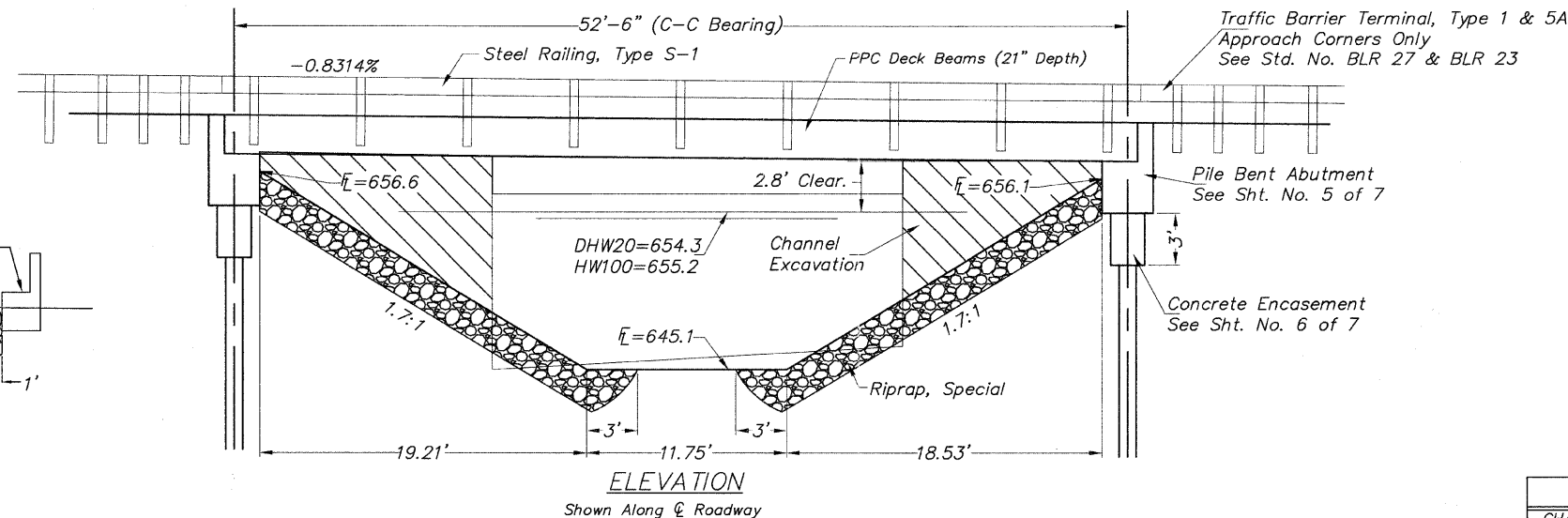
ITEM	UNIT	BENT 1	BENT 2	TOTAL
RIPRAP, SPECIAL	TON	177	172	349
FILTER FABRIC	SQ. YD.	166	164	330

FILTER FABRIC AND BEDDING MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A-4 (SPECIAL)

**RIPRAP PLACEMENT DETAIL**

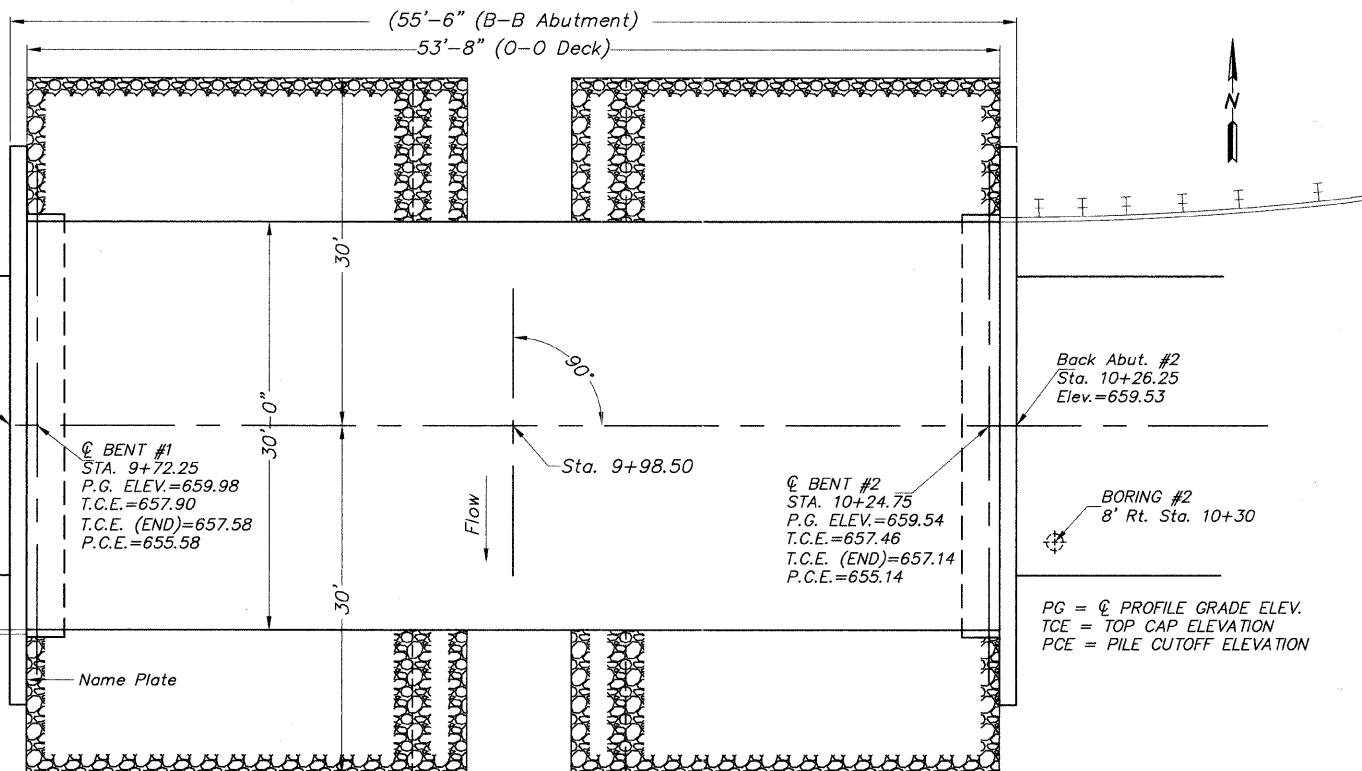


**PLAN**



**ELEVATION**

Shown Along  $\phi$  Roadway



**PLAN**

**GENERAL NOTES**

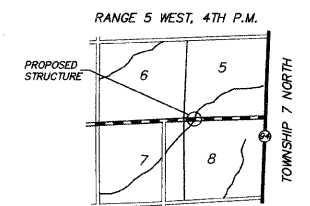
- SEE SPECIAL PROVISIONS FOR BORING LOGS.
- ALL GROUT ON THIS PROJECT SHALL BE NON-SHRINK.
- CORROSION INHIBITOR, PER ARTICLE 1020.05(b)(12) AND 1021.06 OF THE STANDARD SPECIFICATIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
- STONE RIPRAP SHALL BE PLACED TO THE DIMENSIONS SHOWN OVER A GEOTECHNICAL FABRIC IN ACCORDANCE WITH THE RIPRAP PLACEMENT DETAIL AND APPLICABLE SPECIAL PROVISIONS.
- LAYOUT OF THE SLOPE PROTECTION MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD AS DIRECTED BY THE ENGINEER.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706, GRADE 60.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- THE CONTRACTOR SHALL DRIVE TEST PILES TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN PRODUCTION LOCATIONS AT SUBSTRUCTURES SPECIFIED OR APPROVED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER.	SUBSTRUCTURE		TOTAL
			PIER	ABUT.	
CHANNEL EXCAVATION	CU. YD.	----	----	200	200
STONE RIPRAP, CLASS A-4 (SPECIAL)	TON	----	----	349	349
HOT-MIX ASPHALT SURFACE CSE., MIX "C", N50	TON	23	----	----	23
REMOVAL OF EXISTING STRUCTURE	EACH	----	----	----	1
CONCRETE STRUCTURES	CU. YD.	----	----	29.2	29.2
P.P. CONCRETE DECK BEAMS 21" DEPTH	SQ. FT.	1,610	----	----	1,610
REINFORCEMENT BARS, EPOXY COATED	POUND	----	----	3,230	3,230
STEEL RAILING, TYPE S-1	FOOT	108	----	----	108
FURNISHING METAL SHELL PILES 12" X 0.179	FOOT	----	----	414	414
DRIVING PILES	FOOT	----	----	414	414
TEST PILE METAL SHELLS	EACH	----	----	1	1
NAME PLATES	EACH	----	----	1	1
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	179	----	----	179

SPRING CREEK  
BUILT 20 BY  
HANCOCK COUNTY  
SEC. 94-00091-00-BR  
PROJECT NO. RS-0067(143)  
C.H.# 14 STA. 9+98.50  
STR. NO. 034-3141 LOADING HL-93

**LETTERING FOR NAME PLATE**  
Locate Name Plate at Southwest Wingwall of Bridge  
(See Std. 515001)



**LOCATION SKETCH**



I Certify That to the Best of my Knowledge, Information and Belief, the Revised Standard Detail Sheets and/or Special Component Sheets Included with the Standard Bridge Detail Sheets are 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.  
The Design Complies With the Requirements of the Current AASHTO Guide Specifications for Seismic Design of Highway Bridges.

David S. Poland  
Licensed Structural Engineer  
State of Illinois No. 81-005124  
expires 11/30/2012

**DESIGN SPECIFICATIONS**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 4th ED. WITH 2009 INTERIMS.

THIS DESIGN COMPLIES WITH ALL REQUIREMENTS OF THE CURRENT AASHTO GUIDE SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES

**LOADING HL-93**

ALLOW 50#/SQ.FT. FOR FUTURE WEARING SURFACE

**DESIGN STRESSES**

(PRESTRESSED UNITS) (FIELD UNITS)  
f'ci = 5.0 KSI f'c = 3.5 KSI  
f'c = 6.0 KSI fy = 60 KSI  
fy = 60 KSI

**PILE DATA (2-ABUTMENTS)**

PILE TYPE AND SIZE: METAL PILE SHELLS 12" (.179" WALL)  
NOMINAL REQUIRED BEARING: 170 KIPS  
FACTORED RESISTANCE AVAILABLE: 85 KIPS  
ESTIMATED LENGTH: 46 FEET (BENT #1)  
46 FEET (BENT #2)  
NUMBER OF PRODUCTION PILES: 5 (BENT #1) 4 (BENT #2)  
NUMBER OF TEST PILES: 1 (BENT #2)

**SEISMIC DATA**

SEISMIC PERFORMANCE ZONE (SPZ) = 1  
DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. = 0.045  
DESIGN SPECTRAL ACCELERATION AT 0.2 SEC = 0.10  
SOIL SITE CLASS = D

**DESIGN SCOUR ELEVATION TABLE**

DESIGN SCOUR ELEVATION (FT.)	BENT #1	BENT #2
	654.58	654.14

**WATERWAY INFORMATION**

DRAINAGE AREA - 3,122 SQ. MI			LOW GRADE ELEVATION = 659.48 AT STA. 10+53					
FLOOD FREQUENCY (YEAR)	FLOW VOLUME (CFS)	OPENING SQ. FT.	NATURAL H.W.E.		HEAD - FT.		HEADWATER ELEV.	
			EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
DESIGN 20	1,086	196	248	654.3	0.3	0.2	654.6	654.5
BASE 100	1,614	208	275	655.2	0.7	0.3	655.8	655.5
OVERTOPPING								
MAX. CALC 500	2,193	211	299	655.80	1.30	0.60	657.10	656.40

**INDEX OF SHEETS**

- BRIDGE GENERAL PLAN AND ELEVATION
- P.P.C. DECK BEAM SUPERSTRUCTURE
- P.P.C. 21"x36" DECK BEAM
- P.P.C. 21"x36" DECK BEAM BENT DETAILS
- P.P.C. DECK BEAM PILE BENT ABUTMENT DETAILS
- METAL SHELL PILE DETAILS
- STEEL RAILING, TYPE S-1

GENERAL PLAN & ELEVATION  
HANCOCK COUNTY  
SECTION 94-00091-00-BR  
CH #14 OVER SPRING CREEK

SHEET NO. 1 OF 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
	CH #14	94-00091-00-BR	HANCOCK	14	8
S.N. 034-3141		CONTRACT NO. 93555			
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJ.			