

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
183	99-01120-00	Shelby	14	4
STA. 10+00			TO STA. 20+00	

**GENERAL NOTES**

1. THE CONTRACTOR SHALL DRIVE ONE (1) METAL SHELL PILE IN A PERMANENT LOCATION, IN EACH ABUTMENT, AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
2. BORING DATA IS SHOWN ONLY AS A GUIDE TO BIDDERS IN ESTIMATING SOIL CONDITIONS THAT MAY BE ENCOUNTERED.
3. ALL REINFORCING BARS SHALL BE LAPPED AS SHOWN ON PLANS.

**DESIGN STRESSES:**

SUBSTRUCTURE

F<sub>y</sub> = 60,000 p.s.i. (REINFORCEMENT)  
 F<sub>c</sub> = 3,500 p.s.i.  
 n = 9

P.P.C. SUPERSTRUCTURE

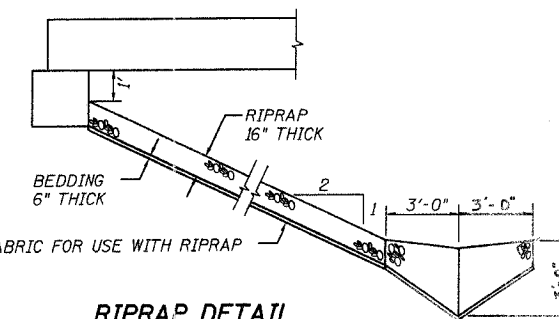
F<sub>y</sub> = 60,000 p.s.i. (REINFORCEMENT)  
 F<sub>c</sub> = 5,000 p.s.i.  
 F<sub>ci</sub> = 4,000 p.s.i.  
 F<sub>s</sub> = 270,000 p.s.i. (1/2" STRANDS)  
 F<sub>si</sub> = 189,000 p.s.i. (1/2" STRANDS)

DESIGN LOADING

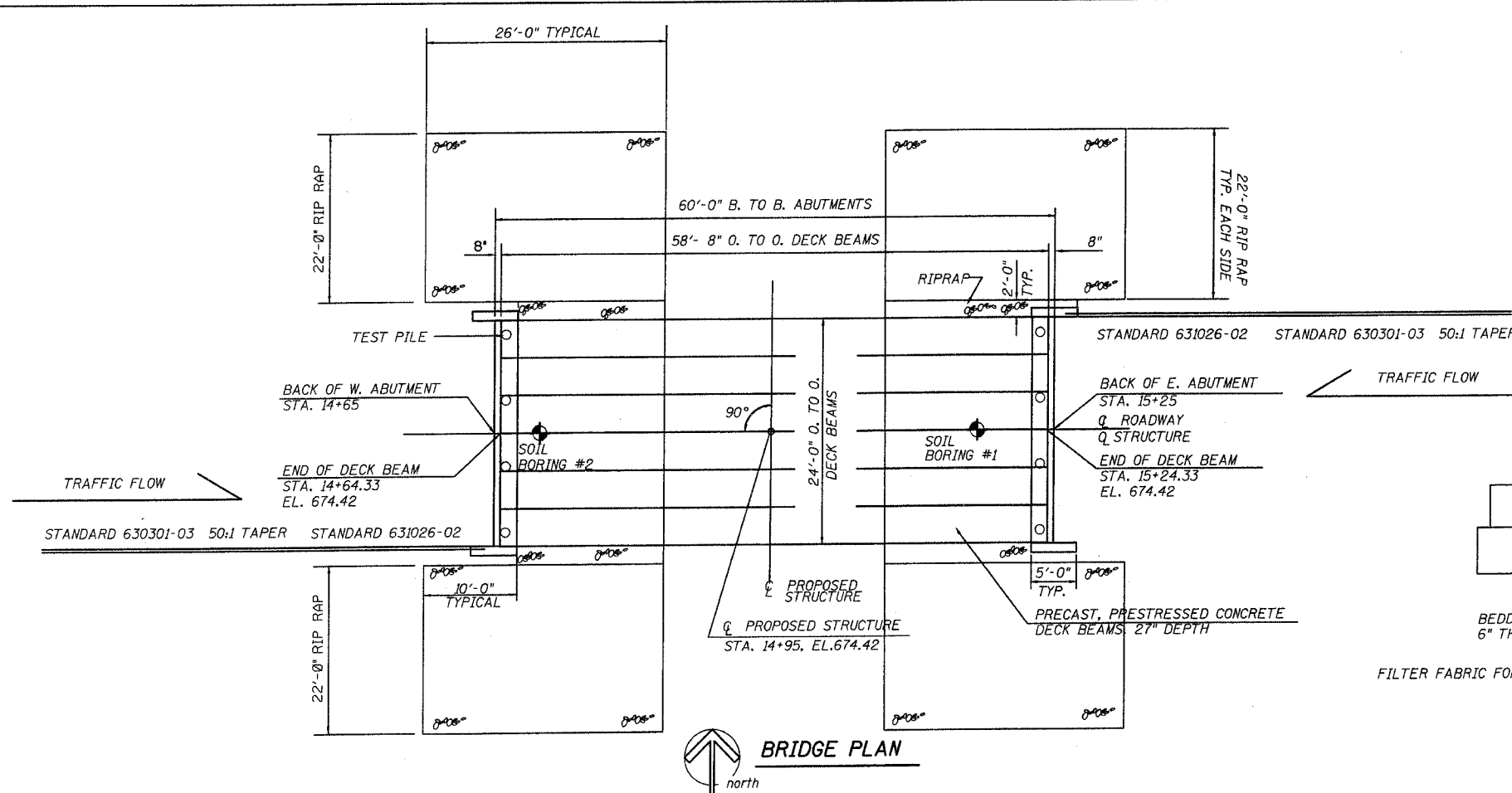
HS 20-44

DESIGN SPECIFICATIONS

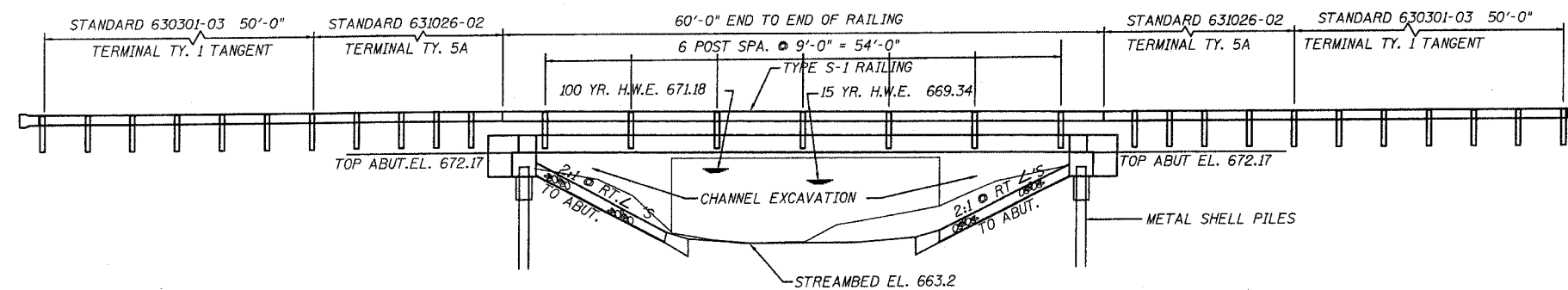
2002 A.A.S.H.T.O., STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES



**RIPRAP DETAIL**



**BRIDGE PLAN**



**BRIDGE ELEVATION**

CLEAR CREEK  
 BUILT 2006 BY  
 SHELBY COUNTY  
 SEC. 99-01120-00-BR  
 STATION 14+95 PROJ. NO. BROS-173(125)  
 STR. NO. 087-3516 LOADING HS20

**LETTERING FOR NAME PLATE**

LOCATE SW WINGWALL

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUBSTR.	SUPER	TOTAL
PRECAST, PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ. FT.		1408	1408
CONCRETE STRUCTURES	CU. YD.	18		18
REINFORCEMENT BARS	POUNDS	2290		2290
TYPE "S-1" RAILING	LIN. FT.	120		120
NAME PLATE	EACH		1	1
FURNISHING METAL PILE SHELLS 12"	LIN. FT.	258		258
DRIVING AND FILLING SHELLS	LIN. FT.	258		258
TEST PILES METAL SHELLS	EACH	2		2
REMOVAL OF EXISTING STRUCTURE	EACH	1		1
STRUCTURE EXCAVATION	CU. YD.	86		86
STONE RIPRAP, CLASS A4	TON	240		240
FILTER FABRIC	SOYD	362		362
CHANNEL EXCAVATION	CUYD	351		351
CONCRETE ENCASEMENT	CUYD	2.1		2.1
TRAFFIC BARRIER TERMINAL TY. 1 (TAN)	EACH	2		2
TRAFFIC BARRIER TERMINAL TYPE 5A	EACH	2		2

**WATERWAY INFORMATION**

DRAINAGE AREA = 2.4 SQ. MI. LOW GRADE ELEV. = 672.17 @ STA. 14+95

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST.	PROP.	NAT. H.W.E.	HEAD - FT. EXIST.	PROP.	HEADWATER EL. EXIST.	PROP.
DESIGN	15	726	167	272	669.33	1.7	0	671.02	669.34
BASE	100	1175	167	272	670.50	1.7	0.7	672.20	671.18
MAX. CALC.	500	1542	167	272	671.18	1.6	1.6	672.65	673.29

THIS STRUCTURE HAS BEEN DESIGNED TO BE STABLE FOR SCOUR CONDITIONS IN ACCORDANCE WITH THE FHWA TECHNICAL ADVISORY - T 5140.23, "EVALUATING SCOUR AT BRIDGES" AND HYDRAULIC ENGINEERING CIRCULAR 18 - EVALUATING SCOUR AT BRIDGES.

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 STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES".

MARTIN J. SILVESTER  
 STRUCTURAL ENGINEER  
 LICENSE EXP. DATE: 11-30-06

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BRIDGE PLAN & ELEVATIONS**  
 TR 183 OVER CLEAR CREEK  
 SECTION 99-01120-00-BR  
 SHELBY COUNTY STA. 14+95  
 STRUCTURE NO. 087-3516

SCALE: N.T.S.  
 DATE

DRAWN BY: BJF  
 CHECKED BY: