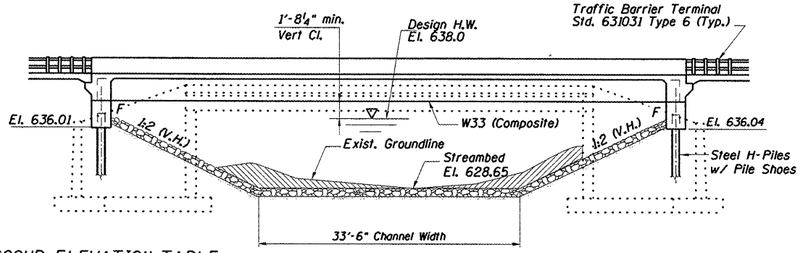
B.M. #2: Chiseled "X" in S.E. Headwall, Sta. 133+53.70, 20.96' Rt., Elev. 641.50

Existing Structure: S.N. 062-0002, originally constructed in 1924 and widened in 1956. Existing structure consists of 6 single span cast-in-place T-beams on closed abutments. 53' back to back of abutments and 36'-4" out out of deck.
Existing structure to be removed and replaced. Traffic is to be detoured.

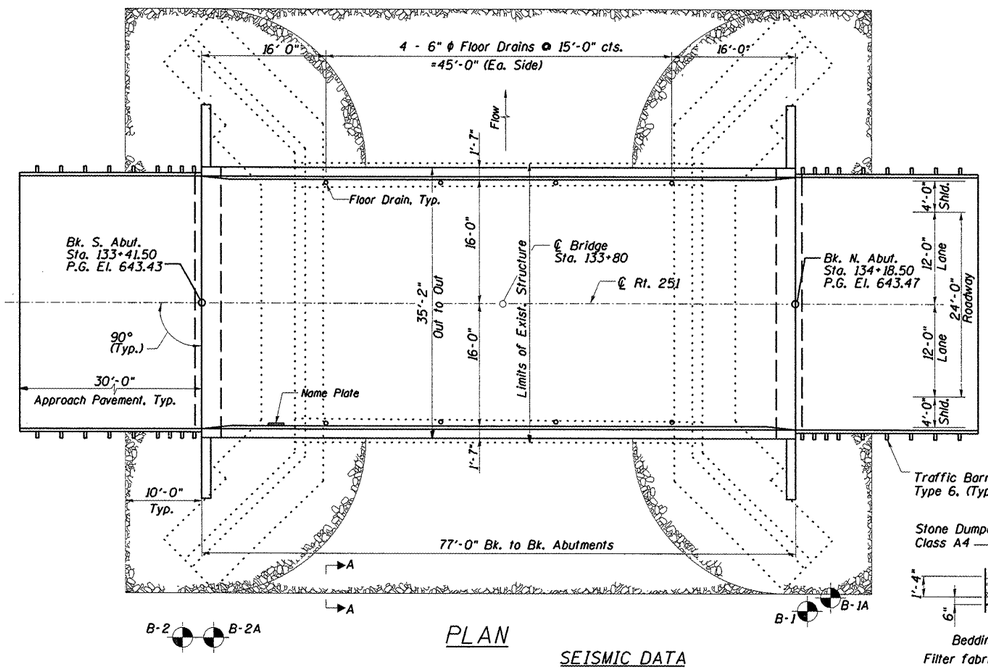
No salvage



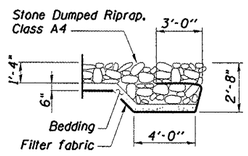
ELEVATION

DESIGN SCOUR ELEVATION TABLE

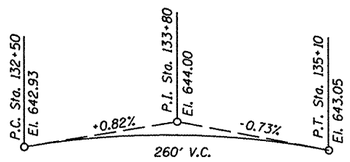
Design Scour Elevations	S. Abut.	N. Abut.
	636.01	636.04



PLAN



SECTION A-A



PROFILE GRADE

STATION 133+80
BUILT BY
STATE OF ILLINOIS
F.A. RT. 251 SEC. 68 BR-1
LOADING HL-93
STR. NO. 062-0085

NAME PLATE
See Std. 515001

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS
2007 LRFD AASHTO
4th Edition

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
New Construction
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)
fy = 50,000 p.s.i. (M270 Grade 50W)

INDEX OF BRIDGE SHEETS

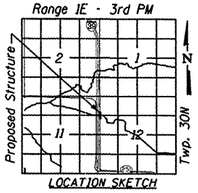
GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 3/4 in. ϕ, holes 15/16 in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 74,830 Pounds.
3. All structural steel shall be AASHTO M 270 Grade 50W.
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
8. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
9. 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.
10. Slipforming of the parapets is not allowed.

WATERWAY INFORMATION

Drainage Area = 14.5 sq. mi. Low Grade Elev. 641.1 ft. ℄ Sta. 130+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. ft Exist.	Opening Sq. ft Prop.	Nat. H.W.E. ft.	Head - ft. Exist.	Head - ft. Prop.	Headwater Elev. - El Exist.	Headwater Elev. - El Prop.
	10	1223	328	364	636.9	0.6	0.2	637.5	637.1
Design	50	1799	335	441	638.0	0.9	0.2	638.9	638.2
Base	100	2036	335	462	638.3	1.0	0.2	639.3	638.5
Max. Calc.	500	2589	335	529	639.2	1.4	0.2	640.6	639.4



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNITS	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	-	97	97
Stone Dumped Riprap, Class A4	Ton	-	820	820
Filter Fabric	Sq. Yd.	-	891	891
Removal of Existing Structures No. 2	Each	-	-	1
Structure Excavation	Cu. Yd.	-	340.6	340.6
Floor Drains	Each	8	-	8
Concrete Structures	Cu. Yd.	-	30.4	30.4
Concrete Superstructure	Cu. Yd.	111.8	-	111.8
Bridge Deck Grooving	Sq. Yd.	257	-	257
Concrete Encasement	Cu. Yd.	-	4.8	4.8
Protective Coat	Sq. Yd.	339	-	339
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	1,026	-	1,026
Reinforcement Bars, Epoxy Coated	Pound	21,700	3,880	25,580
Bar Splicers	Each	64	-	64
Furnishing Steel Piles HP12x53	Foot	-	336	336
Driving Piles	Foot	-	336	336
Test Pile Steel HP12x53	Each	-	2	2
Pile Shoes	Each	-	14	14
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	-	24	24
Geocomposite Wall Drain	Sq. Yd.	-	66	66
Pipe Underdrains for Structures 4"	Foot	-	134	134

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 253 (IL 251)	68 BR-1	MARSHALL	97	72
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
15 SHEETS

Contract #68573

APPROVED
For Structural Adequacy Only

Ralph E Anderson
Engineer of Bridges & Structures

Signed: Olufemi A. Oladeinde 10/17/2008
OLUFEMI A. OLADEINDE, P.E., S.E. Date
LICENSE EXPIRES 11-30-2010

LICENSED STRUCTURAL ENGINEER
OLUFEMI A. OLADEINDE
081-005196
CHICAGO
STATE OF ILLINOIS

SDI STRUCTURE DESIGNS, INCORPORATED
ARCHITECTS & ENGINEERS
PH (773) 838-1780 • www.structuredesignsinc.com

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
ILL. RTE. 251
OVER SANDY CREEK
F.A.S. 253 SEC. 68 BR-1
MARSHALL COUNTY
STA. 133+80.00 S.N. 062-0085

DESIGNED BY: S.G. DRAWN BY: T.C.S.
DATE: 11-20-08 CHECKED BY: O.A.O.

R:\0507-010\DWG\Bridge\GPE.dgn 11/19/2008 6:05:24 PM