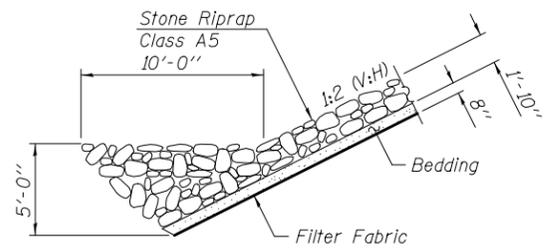


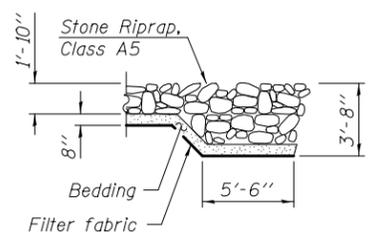
**SECTION THRU PILE SUPPORTED
STUB ABUTMENT**
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions)

Notes:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
Removal of Existing Structures No. 1 is for NB S.N. 046-0003.
Removal of Existing Structures No. 2 is for SB S.N. 046-0004.



SECTION A-A



SECTION B-B

WATERWAY INFORMATION

Drainage Area = 4567 mi. ²		Existing Low Grade Elev. 610.8 ft. @ Sta. 251+00		Proposed Low Grade Elev. 610.8 ft. @ Sta. 251+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
-	10	36563	9956	10212	602.4	602.5
Hydraulic Design	50	50696	12114	12496	605.7	605.8
Base	100	56404	12114	13136	607.7	608.1
Scour Design	200	62043	12114	13136	609.5	610.0
Max. Calc.	500	69508	12114	13136	609.7	610.4
Overtopping	-	-	-	-	-	-

10 Year velocity through existing bridge = 3.7 ft./sec.
10 Year velocity through proposed bridge = 3.5 ft./sec.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Structure	N. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	S. Abut.
NB		602.10	568	565	572	572	602.00
SB		602.00	568	565	572	572	602.10

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		2,534	2,534
Filter Fabric	Sq. Yd.		2,534	2,534
Removal of Existing Structures No. 1	Each			1
Removal of Existing Structures No. 2	Each			1
Structure Excavation	Cu. Yd.		314.2	314.2
Cofferdam Excavation	Cu. Yd.		885.2	885.2
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Cofferdam (Type 2) (Location - 3)	Each		1	1
Cofferdam (Type 2) (Location - 4)	Each		1	1
Cofferdam (Type 2) (Location - 5)	Each		1	1
Cofferdam (Type 2) (Location - 6)	Each		1	1
Cofferdam (Type 2) (Location - 7)	Each		1	1
Cofferdam (Type 2) (Location - 8)	Each		1	1
Concrete Structures	Cu. Yd.		1,497.9	1,497.9
Concrete Superstructure	Cu. Yd.	2,640.2		2,640.2
Bridge Deck Grooving	Sq. Yd.	7,987		7,987
Seal Coat Concrete	Cu. Yd.		658.8	658.8
Concrete Encasement	Cu. Yd.		37.2	37.2
Protective Coat	Sq. Yd.	9,937		9,937
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	25,152		25,152
Reinforcement Bars	Pound		346,270	346,270
Reinforcement Bars, Epoxy Coated	Pound	708,320	237,250	945,570
Bar Splicers	Each		1,948	1,948
Mechanical Splicers	Each		768	768
Furnishing Steel Piles HP 14x73	Foot		3,392	3,392
Driving Piles	Foot		3,392	3,392
Test Pile Steel HP 14x73	Each		4	4
Pile Shoes	Each		68	68
Name Plates	Each	2		2
Permanent Casing	Foot		849.6	849.6
Drilled Shaft in Soil	Cu. Yd.		878.7	878.7
Drilled Shaft in Rock	Cu. Yd.		188.8	188.8
Anchor Bolts, 1"	Each		48	48
Anchor Bolts, 1/2"	Each		168	168
Concrete Sealer	Sq. Ft.		2,892	2,892
Geocomposite Wall Drain	Sq. Yd.		212.3	212.3
Drainage Scuppers, DS-11	Each	16		16
Modular Expansion Joint 6"	Foot	98		98
Modular Expansion Joint 9"	Foot	98		98
Pipe Underdrains for Structures 4"	Foot		352	352
High Load Multi-Rotational Bearings, Guided Expansion, 200k	Each	24		24
High Load Multi-Rotational Bearings, Guided Expansion, 500k	Each	12		12
High Load Multi-Rotational Bearings, Guided Expansion, 550k	Each	24		24
High Load Multi-Rotational Bearings, Fixed, 500k	Each	12		12
Granular Backfill for Structures	Cu. Yd.		556.8	556.8

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 7/8 in. ϕ , holes 15/16 in. ϕ , unless otherwise noted.
Calculated weight of Structural Steel = 3,880,570 Lbs.
All structural steel shall be AASHTO M 270 Grade 50W except HLMR bearings and modular expansion joints.
No field welding is permitted except as specified in the contract documents.
Reinforcement bars designated (E) shall be epoxy coated.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
Concrete Sealer shall be applied to the designated areas of the abutments.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
All structural steel within a distance of 10 ft. each way from the deck joints and all exposed surfaces of the bearings (at all piers and abutments) shall be painted as specified in Section 506 of the Standard Specifications.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR 3704 Floodway Construction permit number allowing permanent construction as shown in the contract plans.
Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

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STATION 260+90.00
BUILT 201 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (140)BR&BR-1
LOADING HL-93
STRUCTURE NO. 046-0135

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NAME PLATES
See Std. 515001