B.M.: RR Spike in Power Pole
Sta. 26+98, 40' Lt.
Elev. 516.75

RR Spike in Power Pole
Sta. 34+82, 36' Lt.
Elev. 512.07

Existing Structure:
Single span concrete deck on steel girders superstructure on concrete closed abutments. The structureis 24'-0" back to back of abutments, 31'-0" out to out of deck and is not skewed.
Str. No. 063-3028

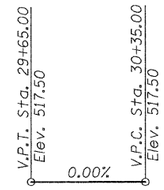
Salvage: None

Road to be closed to traffic during construction.

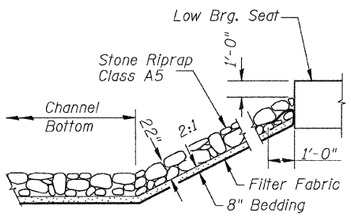
DUFF ARMSTRONG DITCH
BUILT 201_ BY
MASON COUNTY
SEC. 10-00016-02-BR
C.H. 5 STATION 30+00.00
F.A. PROJ. BRS-0572(305)
STR. NO. 063-3029 LOADING HL-93

NAME PLATE

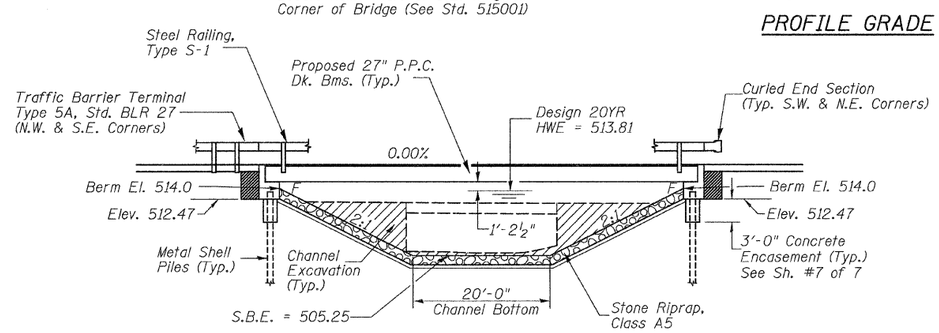
Locate Name Plate at S.E. Wingwall Corner of Bridge (See Std. 515001)



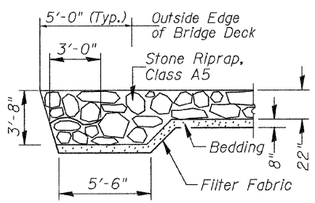
PROFILE GRADE



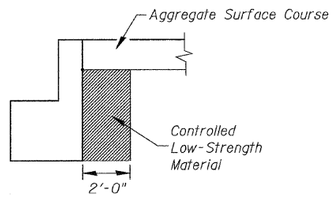
STONE RIPRAP DETAIL



ELEVATION

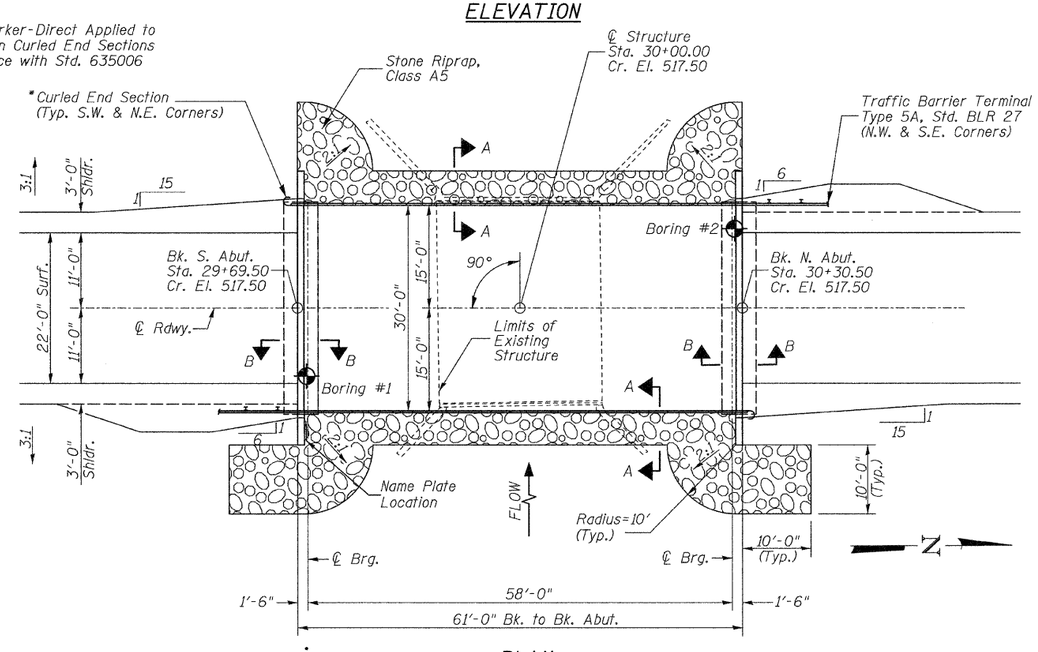


SECTION A-A



SECTION B-B

*Terminal Marker-Direct Applied to be placed on Curled End Sections in accordance with Std. 635006



PLAN

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.

For Soil Boring Logs, See Special Provisions.

A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(12) of the Standard Specifications.

Reinforcement Bars shall conform to the requirements of ASTM A706 Grade 60.

Reinforcement Bars designated (E) shall be epoxy coated.

Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Excavation behind existing closed abutment walls shall be done before removing existing Superstructure.

The existing structural steel coating may contain lead. The contractor should take appropriate precautions to deal with the presence of lead on this project.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Channel Excavation	CU YD	——	175	175
	Stone Riprap, Class A5	TON	——	400	400
	Filter Fabric	SQ YD	——	330	330
(1)	Removal of Existing Structures	EACH	——	——	1
	Structure Excavation	CU YD	——	10	10
	Concrete Structures	CU YD	——	25.4	25.4
(1)	Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,775	——	1,775
	Reinforcement Bars	POUND	——	2,850	2,850
	Steel Railing, Type S1	FOOT	122	——	122
	Furnishing Metal Shell Piles 12"x0.250"	FOOT	——	340	340
	Driving Piles	FOOT	——	340	340
	Test Pile Metal Shells	EACH	——	2	2
	Concrete Encasement	CU YD	——	2.6	2.6
	Name Plates	EACH	——	1	1
(1)	Controlled Low-Strength Material	CU YD	——	18.0	18.0

(1) See Special Provisions

JOSEPH E. HOLT JR. SON
062-006440
LICENSED
STRUCTURAL
ENGINEER
OF
JACKSONVILLE
10/24/2011
ILLINOIS
License Expires 11/30/2012

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 complies with requirements of the current AASHTO Standard Specification for Highway Bridges.

This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

10/24/2011
Illinois Structural No. 6440
Expires 11/30/2012

DESIGN SCOUR TABLE

Location	N. Abut.	S. Abut.
Design Scour Elevation	512.47	512.47

WATERWAY INFORMATION

Drainage Area = 4.70 Sq. Mi. Low Grade Elev. = 512.95 @ Sta. 33+91.73

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1,181	122	318	513.81	1.08	0.01	514.89	513.82
Base	100	1,790	122	360	514.59	1.55	0.02	516.14	514.61

OVER-THE-ROAD AREA

Freq. Yr.	Existing	Proposed
20	572	156
100	1,088	348

DESIGN SPECIFICATIONS

2007 AASHTO (LRFD) & Interims

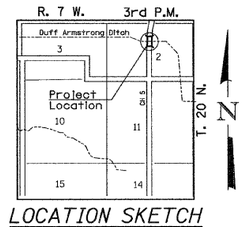
DESIGN STRESSES

(FIELD UNITS)
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Rein.)

(PRECAST PRESTRESSED UNITS)
f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i. (½" Strands)
f'si = 201,960 p.s.i. (½" Strands)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
MASON COUNTY
SECTION 10-00016-02-BR
C.H. 5 OVER DUFF ARMSTRONG DITCH

DESIGNED	S.T.M.
CHECKED	J.E.H.
DRAWN	S.T.M.
CHECKED	J.E.H.

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7 SHEETS	CH 5	10-00016-02-BR	MASON	22	7
		S.N. 063-3029	CONTRACT NO. 93568		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0572(305)		

2964b001