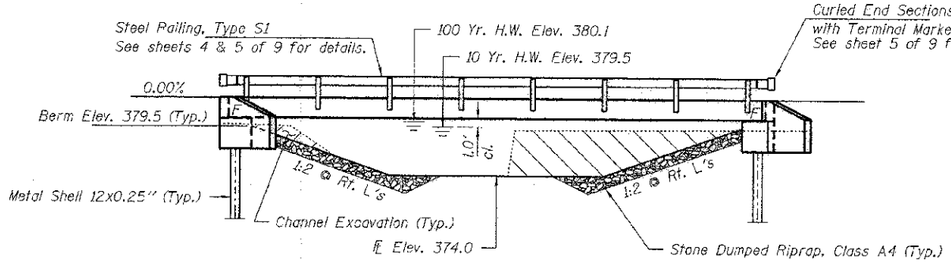
BENCHMARK:

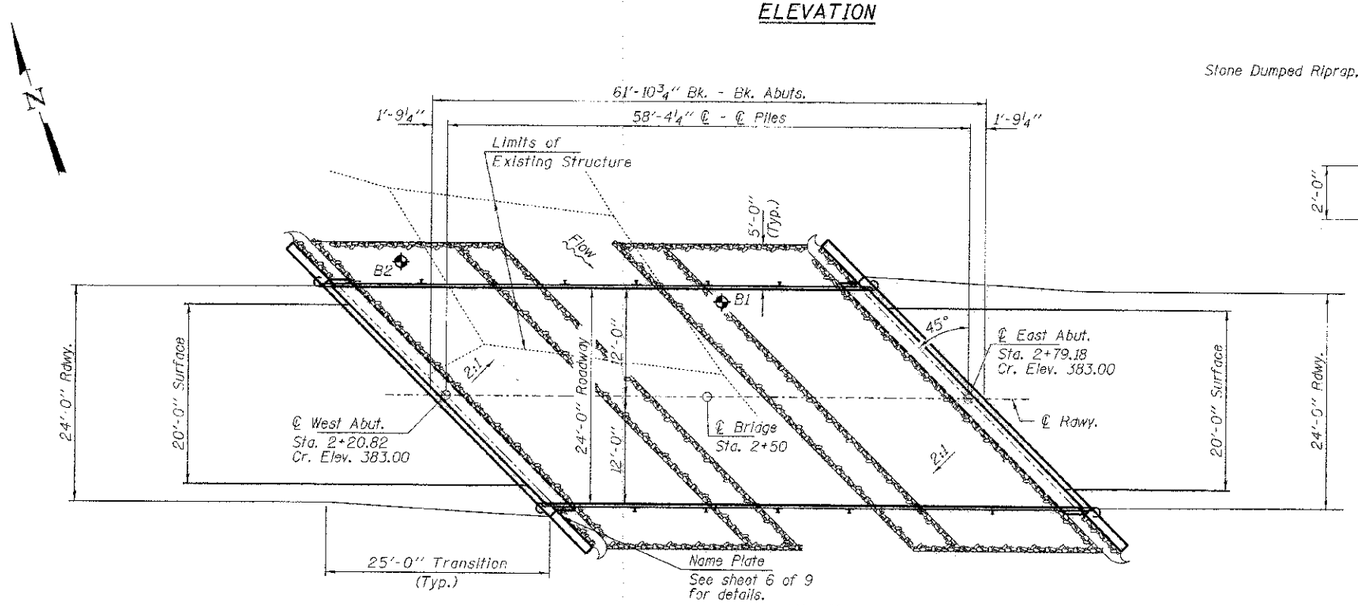
EXISTING STRUCTURE NO. 096-3183: Sta. 2+41 - Single span I-beam bridge with concrete deck on closed concrete abutments and wingwalls. 30.0' bk.-bk. abuts.; 16.0' o.-o. deck.

Structure closed to traffic during construction.

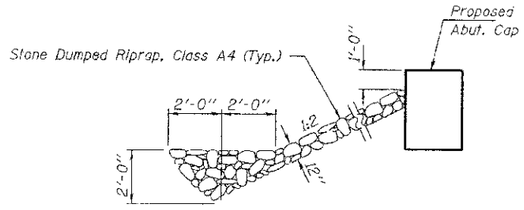
No Salvage



ELEVATION



PLAN



SECTION A-A

Note: See Special Provisions for Stone Dumped Riprap, Class A4.

GENERAL NOTES

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

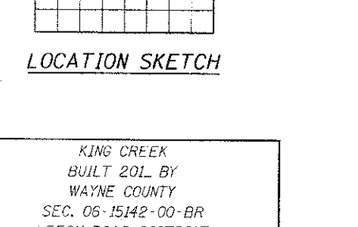
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the West Abutment or approved by the Engineer before ordering the remainder of piles.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.

All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

INDEX OF STRUCTURE SHEETS



LOCATION SKETCH

KING CREEK
BUILT 201_ BY
WAYNE COUNTY
SEC. 06-15142-00-BR
LEECH ROAD DISTRICT
STR. NO. 096-3457
LOADING HL-93

NAME PLATE

See Std. 515001

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"ϕ low lax. strands)
fpbt = 201,960 psi (½"ϕ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2012 AASHTO LRFD with all applicable interims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.279g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.670g
Soil Site Class = D

DESIGN SCOUR TABLE

Location	W. Abut.	E. Abut.
Elevation	376.90	376.90

WATERWAY INFORMATION

Drainage Area = 4.65 Sq. Mi.

Existing Low Grade Elev. 379.5 @ Sta. 3+00
Proposed Low Grade Elev. 382.9 @ Sta. 3+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.		Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	10	1280	108	151	*59	379.5	0.4	0.3	379.9	379.8
Base	100	2470	114	174	*180	380.1	0.3	0.8	380.4	380.9
Max. Calc.	500	3380	114	190	-	380.5	0.3	0.9	380.8	381.4

Low water approach to remain. *Approach

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 LRFD Specifications."

Steven W. Meginnison 11/06/2012
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064

STEVEN W. MEGINNISON 081-6064 SPRINGFIELD, IL — LICENSED STRUCTURAL ENGINEER — STATE OF ILLINOIS

Expires 11-30-2014

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			100
Stone Dumped Riprap, Class A4	Ton			120
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		32.2	32.2
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,440		1,440
Reinforcement Bars	Pound		3,290	3,290
Steel Railing, Type S1	Foot	116		116
Furnishing Metal Shell Piles 12x0.25"	Foot		495	495
Driving Piles	Foot		495	495
Test Pile Metal Shells	Each		1	1
Name Plates	Each		1	1

FILE NAME = 110294-sht-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2056 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILL-NOMS PROFESSIONAL DESIGN FIRM LO / PE / SE CORP 184.005969		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 11/6/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 096-3457
SHEET NO. 1 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
493	06-15142-00-BR	WAYNE	13	5
LEECH ROAD DISTRICT		CONTRACT NO. 95695		
ILLINOIS FED. AID PROJECT				