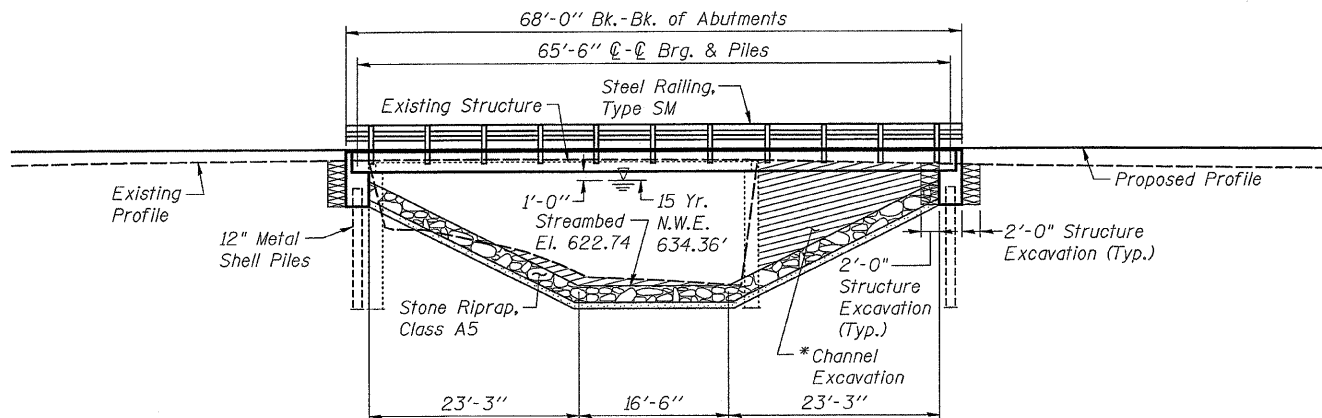


Existing Structure: S.N. 006-4242
 A single span (1 @ 41'-6") reinforced concrete thru girder bridge on closed reinforced concrete abutments @ Sta. 20+00. Skew 0°. To be removed. No salvage.

Benchmark: Chis. "□" on top of SE wingwall of exist. bridge, 12.69' Rt. of Sta. 20+38.69, El. 639.70

BILL OF MATERIAL - BRIDGE

Item	Unit	Sub	Super	Total
Channel Excavation	Cu. Yd.	330	—	330
Porous Granular Embankment	Cu. Yd.	19	—	19
Stone Riprap, Class A5	Sq. Yd.	1,490	—	1,490
Removal of Existing Structures	Each	—	—	1
Concrete Structures	Cu. Yd.	27.4	—	27.4
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	—	1,600	1,600
Reinforcement Bars	Pound	2,780	—	2,780
Steel Railing, Type SM	Foot	—	136	136
Furnishing Metal Shell Piles 12" x 0.250"	Foot	265	—	265
Driving Piles	Foot	265	—	265
Test Pile Metal Shells	Each	1	—	1
Name Plates	Each	—	1	1



ELEVATION VIEW
 *See General Notes

KING CREEK
 BUILT 2009 BY
 BUREAU COUNTY
 SECTION 07-17137-00-BR
 T.R. 257 STATION 20+10
 STR. NO. 006-4247 LOADING HL-93

GENERAL NOTES

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

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 substructures specified or approved by the Engineer before ordering the remainder of piles.

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

Channel to be transitioned to fit proposed structure inside Right of Way. Cost shall be included in price per Cubic Yard for Channel Excavation.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

NAME PLATE LETTERING

Refer To Std. 515001-03

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Horizontal Bedrock Acceleration Coefficient (A) = 0.045 g
 Site Coefficient (S) = D

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
 f'cl = 5,000 psi
 f's = 270,000 psi (1/2" φ Low Lax Strands)
 f'si = 189,000 psi (1/2" φ Low Lax Strands)

DESIGN SPECIFICATIONS

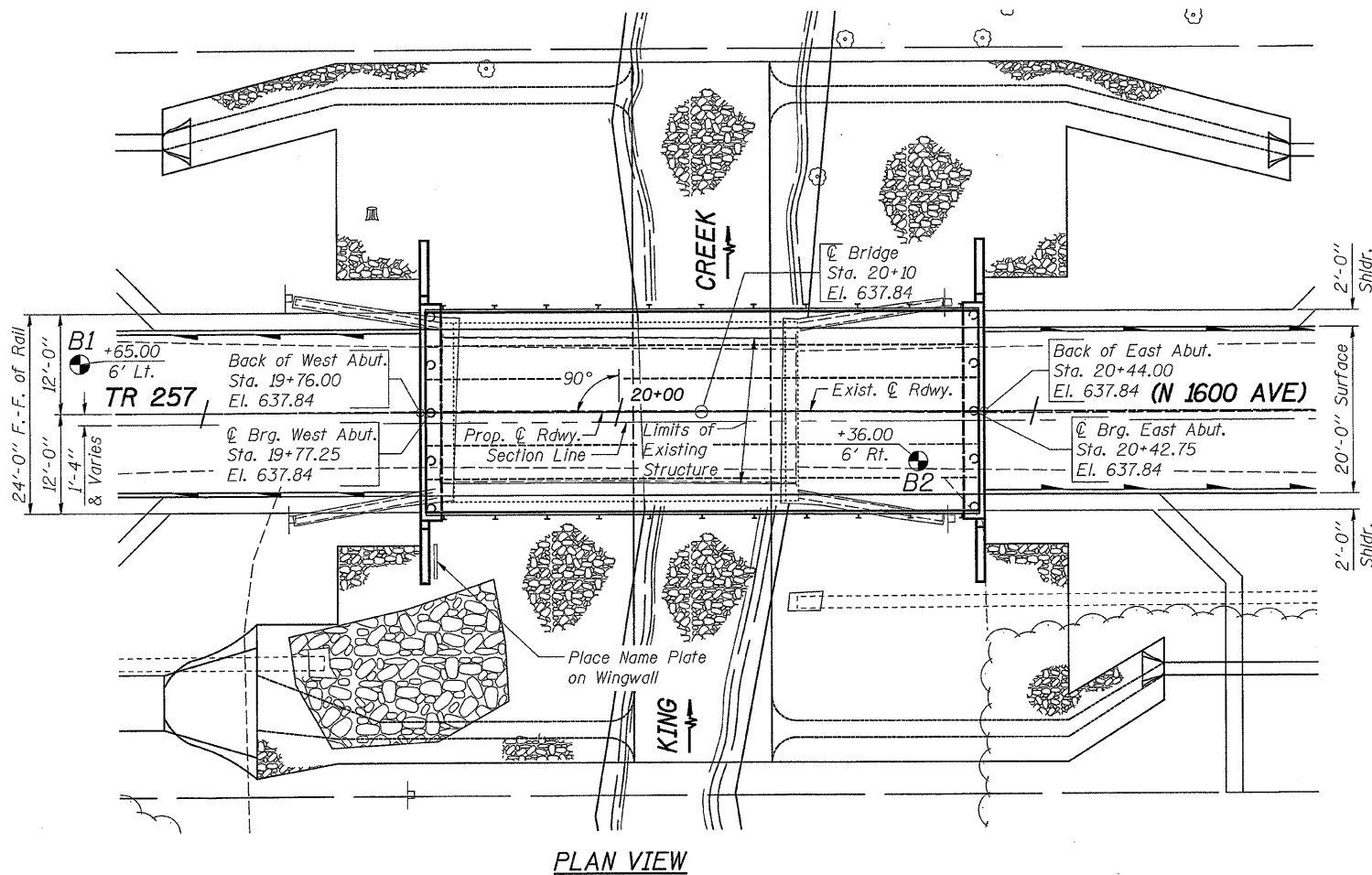
2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

LOADING HL-93

Allow 50#/Sq. Ft. for Future Wearing Surface.

WATERWAY INFORMATION

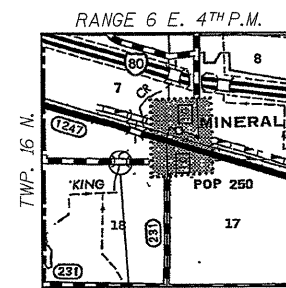
DRAINAGE AREA	17.95 Sq. Mi.
DESIGN DISCHARGE (15 YR.)	3,260 C.F.S.
EXISTING OPENING	341 Sq. Ft.
REQUIRED OPENING	464 Sq. Ft.
PROPOSED OPENING	464 Sq. Ft.
CREATED HEAD (15 YR.)	< 0.5'
100 YR. DISCHARGE	5,450 C.F.S.
CREATED HEAD (100 YR.)	< 1.0'
HIGH WATER ELEV. (100 YR.)	635.12 Ft.
CREATED HEAD (1,000' UPSTREAM)	< 0.5'



PLAN VIEW



Brian K. Converse
 DATE: 7/11/2009
 EXPIRES 11/30/10



BRIDGE SITE LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
 TR 257 (N. 1600 AVE.) OVER KING CREEK
 STA. 20+10 (S.N. 006-4247)
 SECTION 07-17137-00-BR
 MINERAL ROAD DISTRICT
 BUREAU COUNTY**

WHA JOB NUMBER	1115D08	 WILLET, HOFMANN & ASSOCIATES, INC. CONSULTING ENGINEERS <small>Land Surveying - Transportation - Structural Environmental - Architecture</small> <small>809 East Second Street Dixon, Illinois 61021</small> <small>Phone 815.284.3381 Fax 815.284.3386</small> <small>Design Firm #18-00218 www.willett-hofmann.com</small>	Designed By: M.C. Wagner Date: 4/09	
			Checked By: B.K. Converse Date: 4/09	
			Drawn By: R.D. Allen Date: 4/09	
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
257	07-17137-00-BR	BUREAU	27	12
CONTRACT NO. 87381				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BROS-0011(071)				

STRUCTURAL SHEET NO. 1 OF 9 SHEETS

"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 SPECIFICATIONS FOR HIGHWAY BRIDGES'."