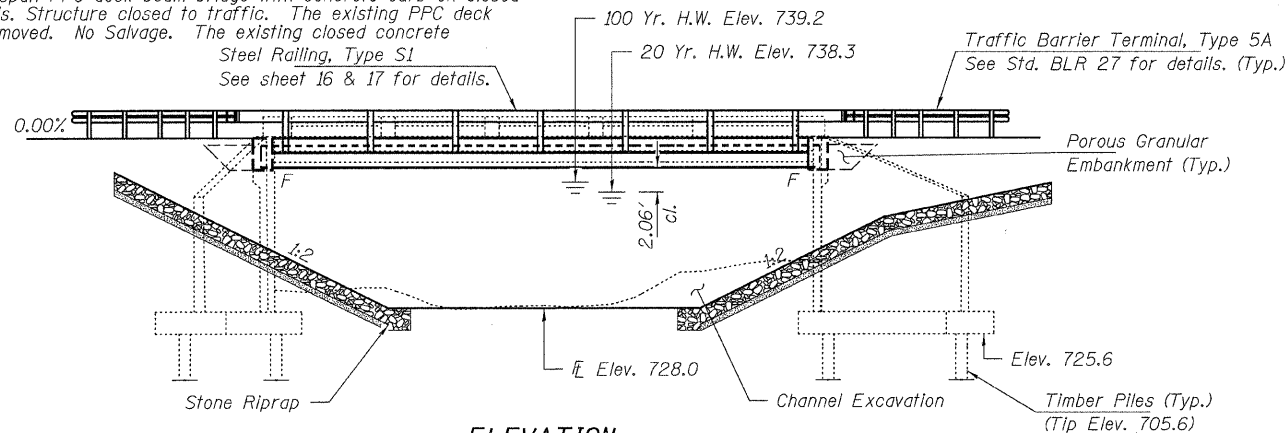
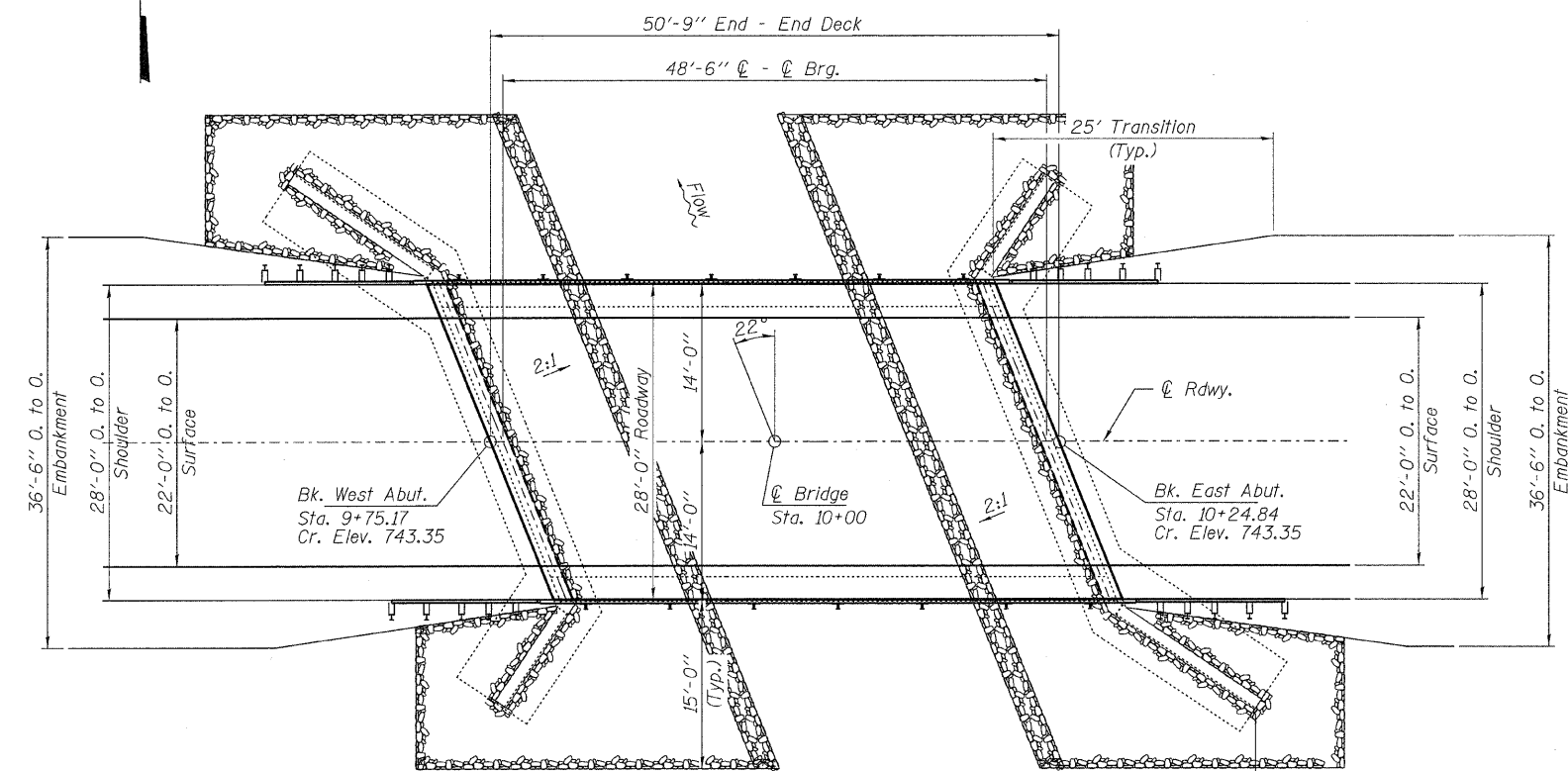


BENCHMARK: Cut "□" on SE Wingwall. 15, Rt., Sta. 10+31, Elev. 743.16

EXISTING STRUCTURE: Single span PPC deck beam bridge with concrete curb on closed concrete abutments and wingwalls. Structure closed to traffic. The existing PPC deck beam superstructure shall be removed. No Salvage. The existing closed concrete abutments shall be used in place.



ELEVATION



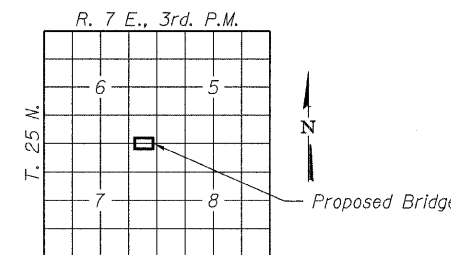
PLAN

GENERAL NOTES

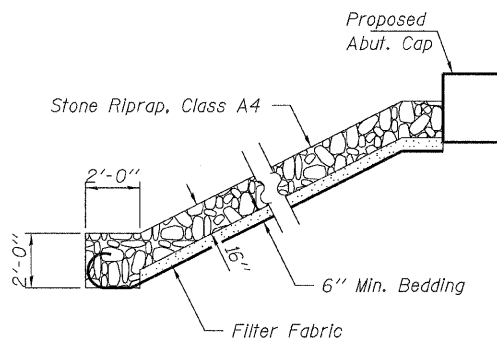
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
Fasteners shall be AASHTO M164 Type 3. Bolts 3/4 in. φ, holes 15/16 in. φ, unless otherwise noted.
Calculated weight of Structural Steel = 24,720
No field welding is permitted except as specified in the contract documents.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cpa plus 3 in. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
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.

INDIAN CREEK
BUILT 20... BY
LIVINGSTON COUNTY
SEC. 08-00161-01-BR
C.H. 22 / FAS 473
STR. NO. 053-3036
LOADING HL-93

NAME PLATE
See Std. 515001



LOCATION SKETCH



SECTION A-A

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			90
Porous Granular Embankment	Ton			24
Stone Riprap, Class A4	Sq. Yd.		320	320
Filter Fabric	Sq. Yd.		320	320
Concrete Structures	Cu. Yd.		0.9	0.9
Removal of Existing Super Structures	Each			1
Concrete Removal	Cu. Yd.		1.8	1.8
Concrete Superstructures	Cu. Yd.	48.1		48.1
Bridge Deck Grooving	Sq. Yd.	147		147
Protective Coat	Sq. Yd.	173		173
Stud Shear Connectors	Each	1,260		1,260
Reinforcement Bars, Epoxy Coated	Pound	9,910		9,910
Steel Railing, Type S1	Foot	107		107
Name Plates	Each	1		1
Furnishing & Erecting Structural Steel	L. Sum	1		1

EXISTING DESIGN STRESSES

f_c = 1,000 psi
f_s = 20,000 psi (Reinf.)
Loading HS15 (Substructure)

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (Reinf.)
f_y = 50,000 psi (Struct.)

LOADING HL-93 (SUPER)

Design Specifications: 2007 AASHTO LRFD
with all applicable Interims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.045g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.056g
Soil Site Class = D

WATERWAY INFORMATION

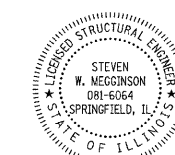
Drainage Area = 16.2 Sq. Mi. Existing Low Grade Elev. 740.9 @ Sta. 7+00
Proposed Low Grade Elev. 740.9 @ Sta. 7+00

Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	10	1910	370	370	737.83	0.41	0.41	738.24	738.24
Base	20	2400	390	390	738.32	0.71	0.71	739.03	739.03
Max. Calc.	100	3600	430	430	739.18	1.26	1.26	740.44	740.44
	500	4900	470	470	739.93	1.92	1.92	741.85	741.85

10 Year Velocity through Existing Bridge = 5.2 fps
10 Year Velocity through Proposed Bridge = 5.2 fps

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. Morrison 3/25/2010
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2010

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 053-3036

DESIGNED - A.S.L.
CHECKED - M.G.B.
DRAWN - D.T.M.
CHECKED - D.A.B.

HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com
184.000559
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
PROJECT NUMBER: 09.0125.130 DATE: 03/25/10

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22	08-00161-01-BR	LIVINGSTON	23	12
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT BRS-0473(108)	
CONTRACT NO. 87452				