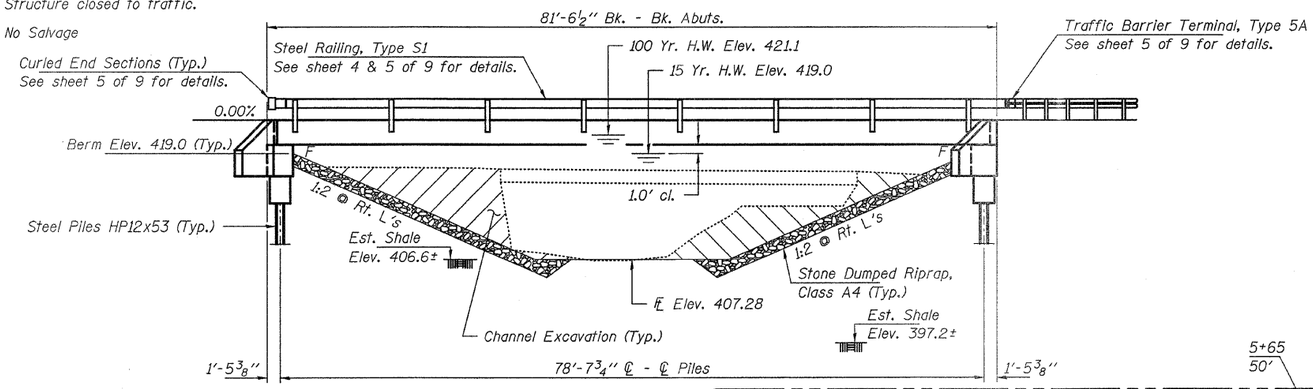
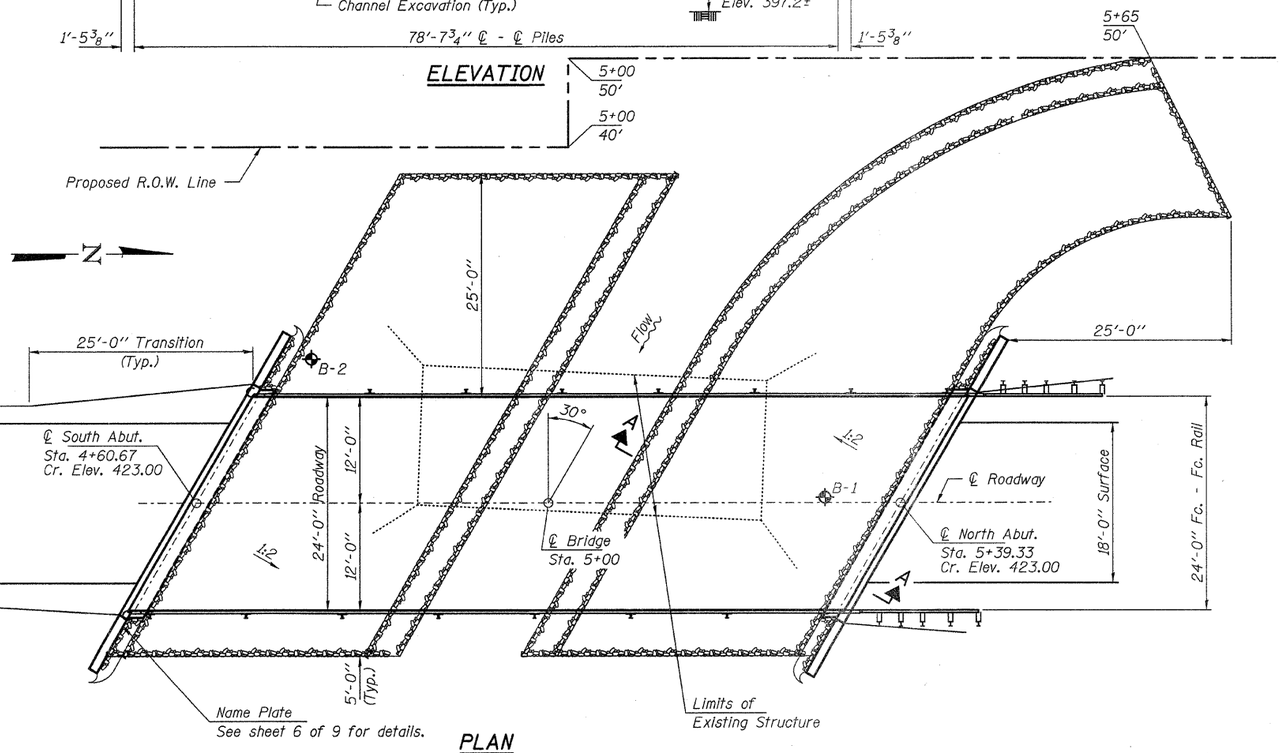
BENCHMARK: Iron Pin, 5.0' Lt. Sta. 1+76.8, Elev. 426.36

EXISTING STRUCTURE: 39' single span bridge with 2" wood deck with 2" wood runners on 5-15" I-Beams, and 2-15" C-Channels with concrete abutments and wingwalls. Structure closed to traffic.

No Salvage



ELEVATION



PLAN

GENERAL NOTES

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

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

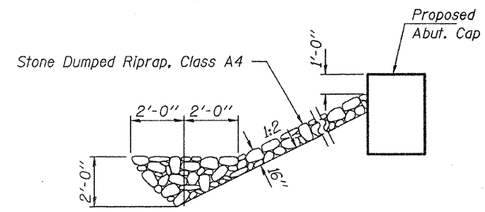
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.

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.

See sheet 9 of 9 for Borings.

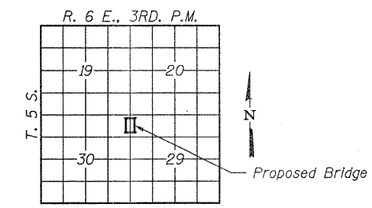
TEN MILE CREEK
BUILT 200_ BY
HAMILTON COUNTY
SEC. 07-08126-00-BR
McLEANSBORO ROAD DISTRICT
STR. NO. 033-3308
LOADING HL-93

NAME PLATE
See Std. 515001



SECTION A-A

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



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			350
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		30.0	30.0
Concrete Encasement	Cu. Yd.		3.4	3.4
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,920		1,920
Reinforcement Bars	Pound		3,600	3,600
Steel Railing, Type S1	Foot	161		161
Furnishing Steel Piles HP12x53	Foot		210	210
Driving Piles	Foot		125	125
Name Plates	Each		1	1
Setting Piles in Rock	Each		5	5

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.473g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.880g
Soil Site Class = E

WATERWAY DATA

Drainage Area_____ 9.3 Sq. Mi.
Existing Opening (15 yr)_____ 217 Sq. Ft.
Req'd Opening (15 yr)_____ 457 Sq. Ft.
Proposed Opening (15 yr)_____ 457 Sq. Ft.
Design Discharge (15 yr)_____ 3,027 C.F.S.
Created Head (15 yr)_____ 0.1 Ft.
100 Yr. Discharge_____ 5,240 C.F.S.
100 Yr. Created Head_____ 0.3 Ft.

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".

Steven W. Meggenson 2-6-2009
ILLINOIS STRUCTURAL NO. 081-6064

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

Expires 11-30-2010

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 033-3308

DESIGNED -	S.M.S
CHECKED -	S.W.M.
DRAWN -	D.A.B.
CHECKED -	D.T.M.

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

PROJECT NUMBER: 08.0103.130 DATE: 01/21/09

SHEET NO. 1
9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
200	07-08126-00-BR	HAMILTON	13	5
McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-065(056)		