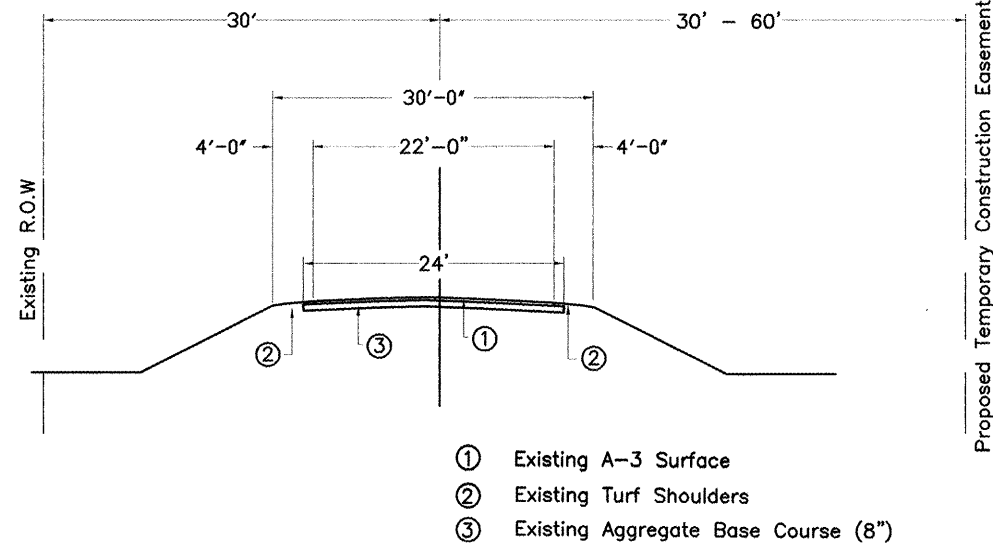
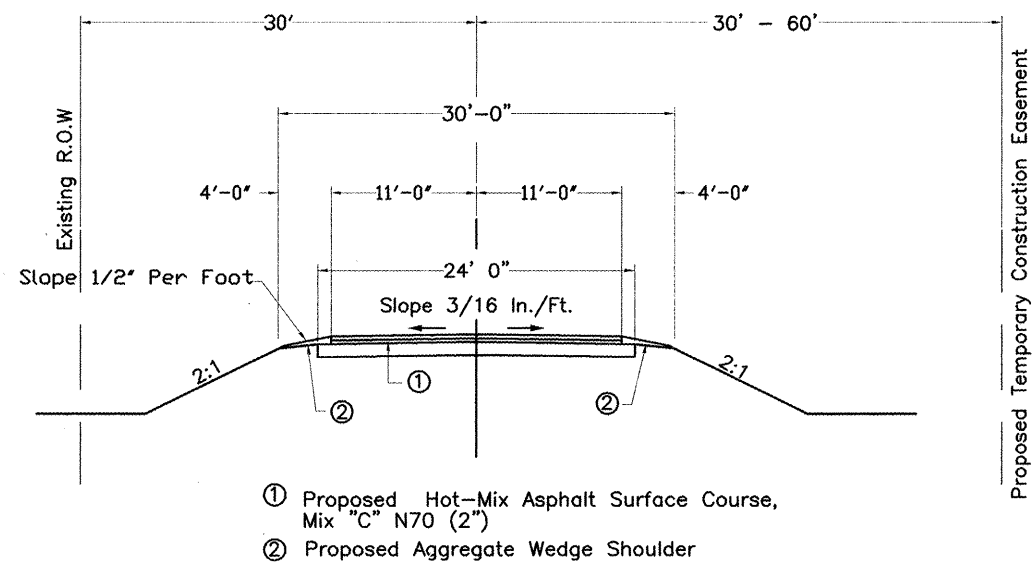


CONTRACT NO. 97363



EXISTING TYPICAL SECTION

Sta. 104+45.33 To Sta. 106+00.56
Sta. 106+51.56 To Sta. 109+08.10



PROPOSED TYPICAL SECTION

Sta. 104+45.33 To Sta. 105+74.06
Sta. 106+78.06 To Sta. 109+08.10

QUANTITIES USED FOR ESTIMATING

Bituminous Materials (Prime Coat) 0.07 Gal./Sq.Yd.

SUMMARY OF QUANTITIES

Bridge Construction Code - X081-2A

Quantity	Unit	Item	Item Number
852	Cu Yd	Channel Excavation	20300100
74	Ton	Porous Granular Embankment	20700110
461	Ton	Stone Dumped Riprap, Class A4	28100807
18	Ton	Aggregate Base Course, Type B	35101400
62	Gallon	Bituminous Material (Prime Coat)	40600100
73	Sq Yd	Hot-Mix Asphalt Surface Removal - Butt Joint	40600982
138	Ton	Hot-Mix Asphalt Surface Course, Mix "C", N70	40603315
17	Ton	Aggregate Shoulders, Type B	48101200
1	L Sum	Removal of Existing Structures	50100200
27.8	Cu Yd	Concrete Structures	50300225
4.2	Cu Yd	Concrete Encasement	50300280
3140	Pound	Reinforcement Bars	50800105
205	Foot	Steel Railing , Type SM	50901050*
450	Foot	Furnishing Steel Piles HP12X53	51201600
450	Foot	Driving Piles	51202305
2	Each	Test Pile Steel HP12X53	51203600
12	Each	Pile Shoes	51204650
1	Each	Name Plates	51500100
341	Sq Yd	Waterproofing Membrane System	58100200
922	Foot	Portland Cement Mortar Fairing Course	58300100
2	Each	Traffic Barrier Terminal, Type 6A	63100087*
2	Each	Traffic Barrier Terminal, Type 1, Special (Tangent)	63100167*
1	L Sum	Mobilization	67100100
2	Each	Terminal Marker-Direct Applied	78201000*
3073	Sq Ft	Precast Prestressed Concrete Deck Beams (42" Depth)	XX003515
83	Cu Yd	Structure Excavation	50200100

* Denotes Specialty Items.

Δ Revised 2-19-09

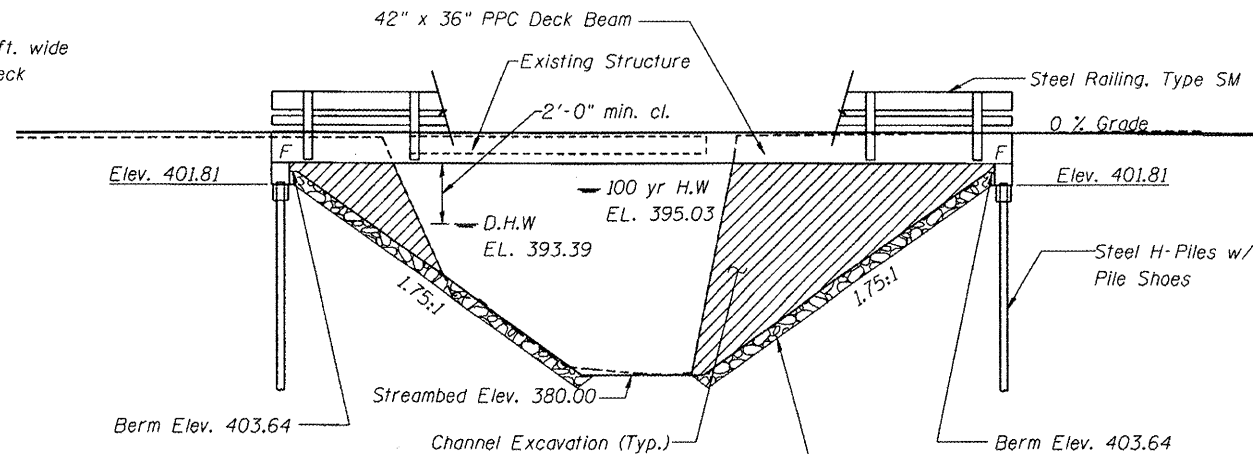
GENERAL NOTES

- All Construction Signs shall be 48 inch Fluorescent Orange.
- Pavement Marking to be done by Others.

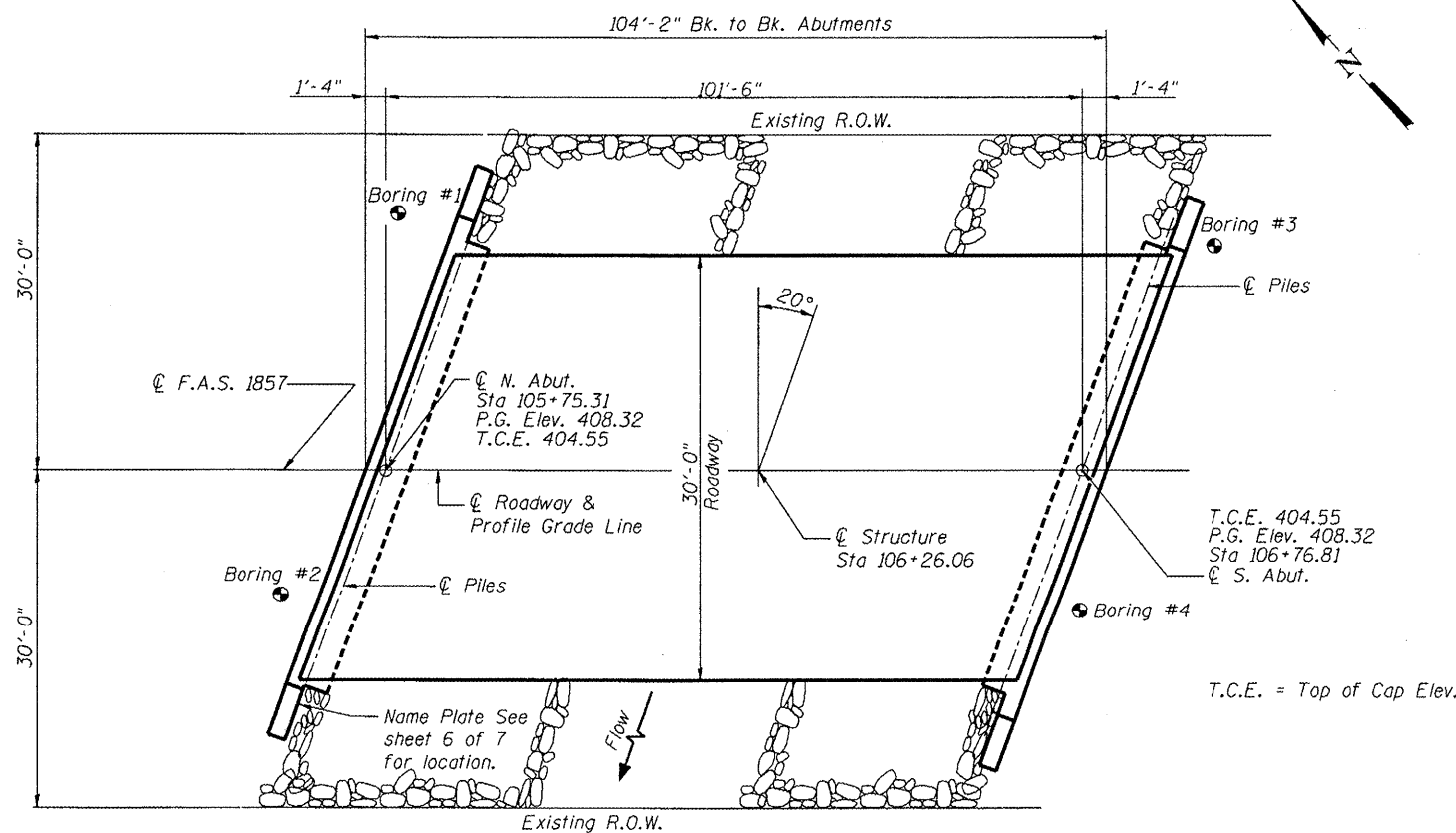
BM#1 - NGSC-286 Benchmark located near a Power Pole at Sta. 107+40 Rt. Elev. = 406.81

Existing Structure:
Single Span, 50 ft. long, 25 ft. wide
Steel I-Beam and Concrete Deck
Structure on Timber Piling.

Salvage - None



ELEVATION



PLAN

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.28g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.65g
Soil Site Class = D

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims.

LOADING HL-93

Allow 25#/sq.ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'_c = 6,000 psi
 f'_{ci} = 5,000 psi
 f'_s = 270,000 psi ($\frac{1}{2}$ " ϕ low lax. strands)
 f'_{si} = 201,960 psi ($\frac{1}{2}$ " ϕ low lax. strands)

PRAIRIE DU ROCHER CREEK
BUILT 20 BY
RANDOLPH COUNTY
SECTION 99-00073-00-BR
FAS 1857 STA 106+26.06
STR. NO 079-3072 LOADING HL93

LETTERING FOR NAME PLATE
See STD. 515001

GENERAL NOTES

- 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.
- See Special Provisions for boring data.
- Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- The top surface of the beams shall be finished according to the IDOT Manual for the Fabrication of Precast Prestressed Concrete Products.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

- INDEX OF SHEETS**
- General Plan & Elevation
 - Superstructure
 - Deck Beam
 - Deck Beam Details
 - Steel Railing
 - Pile Bent Abutments
 - Pile Details

WATERWAY INFORMATION

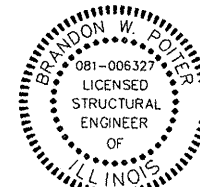
Drainage Area = 7.65 SQ MI		Low Grade Elev = 407.20		Sta. 104+00					
Flood	Freq. Yr.	Q C.F.S.	Opening Sq.Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	3828	403	515	393.39	0.87	0.11	394.26	393.50
Base	100	5912	484	621	395.03	1.76	0.36	396.79	395.39
Overtopping									
Max. Calc	500								

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			852
Stone Dumped Riprap, Class A4	Ton			461
Hot-Mix Asphalt Surface Course, Mix "C", N70	Ton	46		46
Removal of Existing Structures	L. Sum			1
Concrete Structures	Cu. Yd.		27.8	27.8
Concrete Encasement	Cu. Yd.		4.2	4.2
Steel Railing, Type SM	Foot	205		205
Reinforcement Bars	Pound		3140	3140
Furnishing Steel Piles HP 12x53	Foot		450	450
Driving Steel Piles	Foot		450	450
Test Piles Steel HP 12x53	Each		2	2
Pile Shoes	Each		12	12
Name Plates	Each			1
Waterproofing Membrane System	Sq. Yd.	341		341
Portland Cement Mortar Fairing Course	Foot	922		922
Precast Prestressed Concrete Deck Beams (42" Depth)	Sq. Ft.	3073		3073
Structure Excavation (Cu. Yd.)			83	83

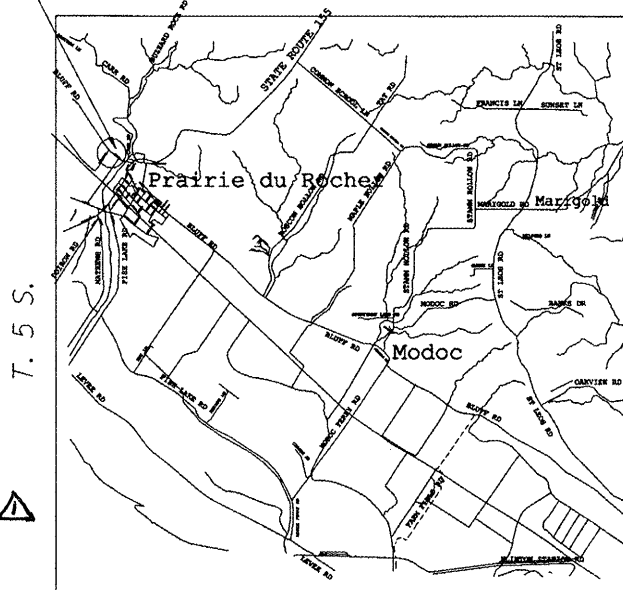
Revised 2-19-09

I certify that to the best of my knowledge, information and belief, this bridge 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 Bridge Design Specifications".



Brandon W. Patis
DATE: 11/5/08
EXP: 11/30/08

PROJECT LOCATION
3RD P.M.



R. 9 W.

LOCATION SKETCH

GENERAL PLAN & ELEVATION
BLUFF ROAD OVER
PRAIRIE DU ROCHER CRK.
STATION 106+26.06
SN 079-3072

THOUVENOT, WADE & MOERCHEN, INC.		CORPORATE OFFICE 4940 Old Collinsville Road Swansea, Illinois 62226 Tel: 618.624.4488 Fax: 618.624.6888		TWM ENGINEERS • SURVEYORS • PLANNERS	
SHEET NO. 1	F.A.S. RTE. 1857	SECTION 99-00073-00-BR	COUNTY RANDOLPH	TOTAL SHEETS 11	SHEET NO. 5
7 SHEETS		CONTRACT NO. 97363			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			