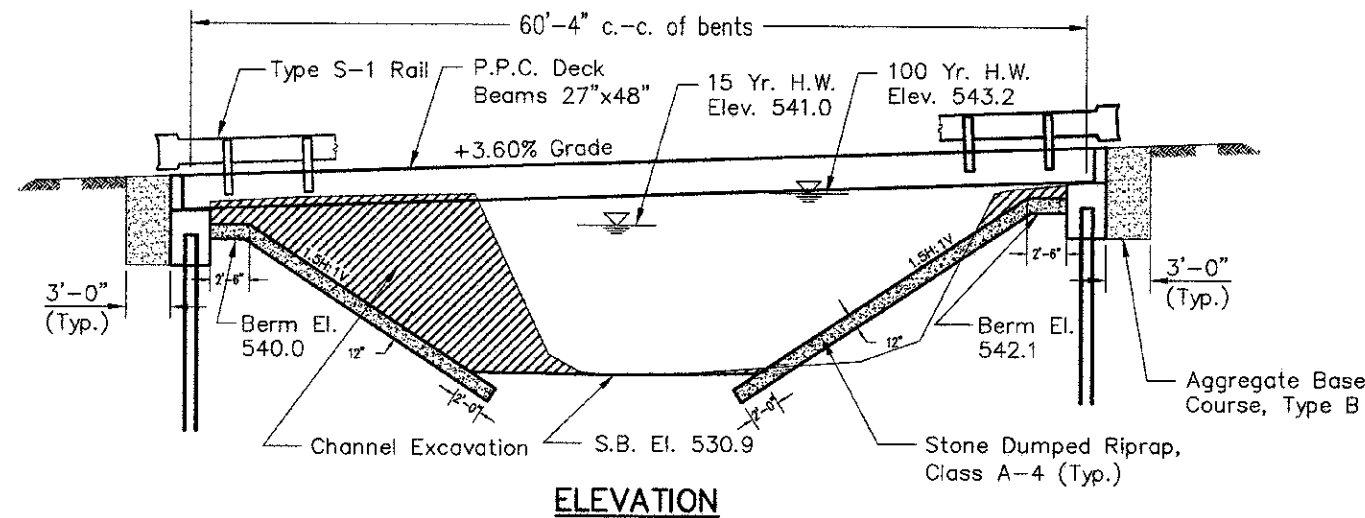


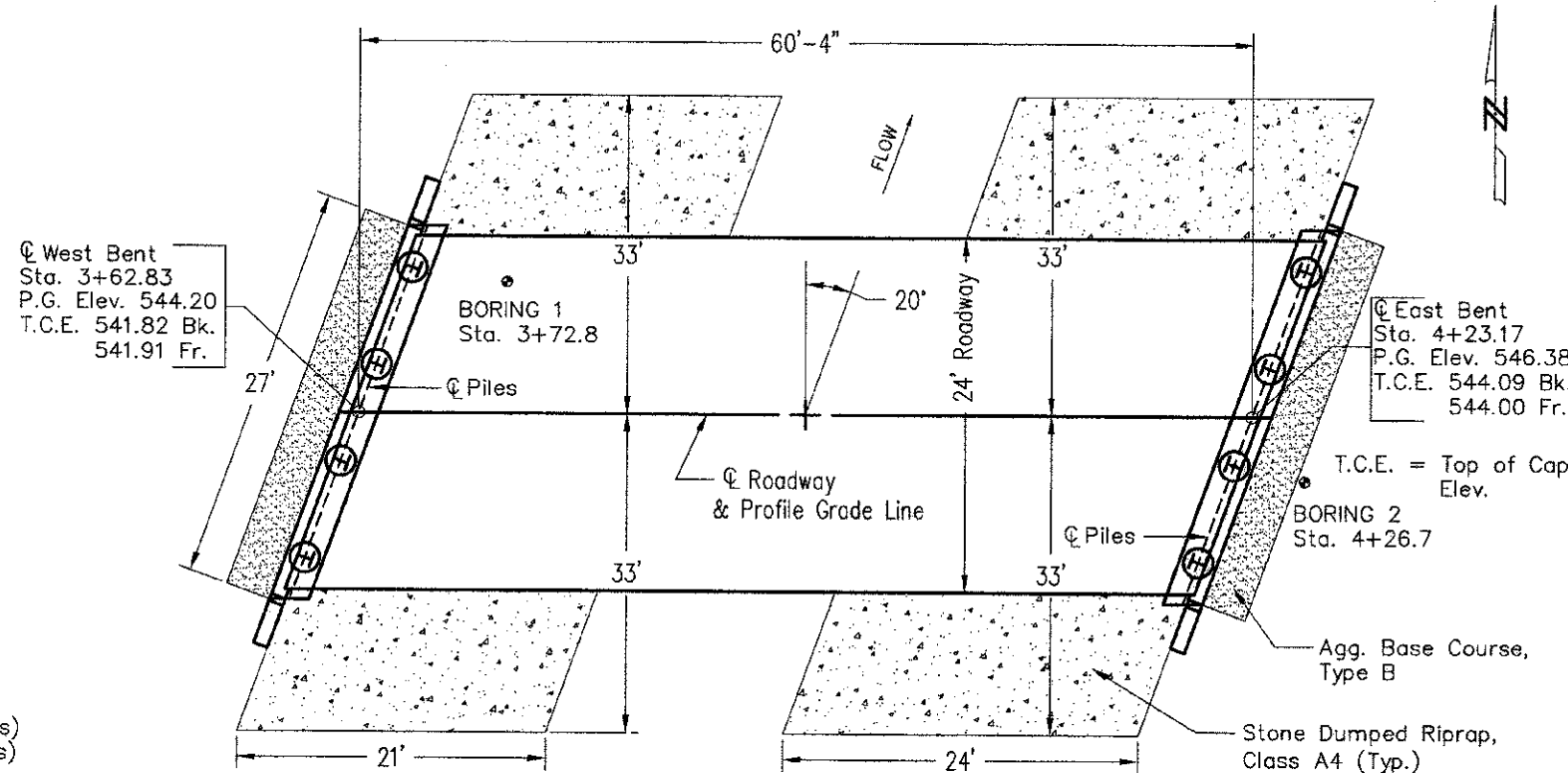
B.M.—Lt. Sta. 3+66, spike in Locust tree, Elev. 540.37

Existing Structure — Existing structure No. 025-3126 consists of a double span wooden deck on steel I-beams bearing on closed concrete abutments with solid concrete pier. The bk. to bk. of abutments length is 34.5' and the out-to-out roadway width is 15.5'. The existing structure shall be completely removed. Road closure shall be used during construction.

Salvage — Any material deemed salvageable by the Engineer shall be stockpiled on the R.O.W. and shall become the property of West Road District. The Contractor shall dispose of all remaining material.



ELEVATION



PLAN

Skew Angle = 20° Forward Left

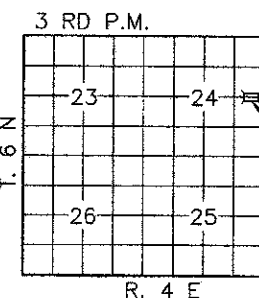
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

STATION 3+93.00
LIMESTONE CREEK
SEC. 10-15110-00-BR BUILT 201_
WEST ROAD DISTRICT
EFFINGHAM COUNTY
LOADING HL-93
STR. NO. 025-3322

LETTERING FOR NAME PLATE

Locate Name Plate at S.W.
Corner of Bridge (See Std. 515001)



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 6.36 SQ MI		Low Grade Elev = 541.60 @ Sta. 2+24					
Flood	Freq. Yr.	Q. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.	
			Exist.	Prop.	Exist.	Prop.	Exist.
Design	15	1675	274	322	541.0	0.2	0.1
Base	100	2895	300	413	543.2	0.4	0.3
Overtopping							
Max. Calc.	500						

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 283	10-15110-00-BR	EFFINGHAM	15	5
CONTRACT NO. 05665		ILLINOIS	PROJECT BROS-0049(159)	

GENERAL NOTES

- The Contractor shall drive test pile(s) to 110% of the nominal required bearing specified in production locations at the West Abutment as approved by the Engineer before ordering the remainder of piles.
- See Bridge Plan Sheet 12 for boring logs.
- A Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- Concrete sealer shall be applied to exterior face of each fascia beam.
- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
- The Steel H-piles shall be according to AASHTO M270 Grade 50.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified).
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each	-	-	-	1
Concrete Structures	Cu. Yd.	-	-	24.6	24.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1474	-	-	1474
Steel Railing, Type S-1	Foot	123	-	-	123
Reinforcement Bars, Epoxy Coated	Pound	-	-	3340	3340
Furnishing Steel Piles HP 10 X 42	Foot	-	-	315	315
Driving Piles	Foot	-	-	315	315
Test Pile HP 10 X 42	Each	-	-	1	1
Name Plates	Each	-	-	1	1
Concrete Encasement	Cu. Yd.	-	-	2.8	2.8
Aggregate Base Course, Type B	Tons	-	-	75	75
Stone Dumped Riprap, Class A4	Tons	-	-	285	285
Channel Excavation	Cu. Yd.	-	-	280	280

I certify that to the best of 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.

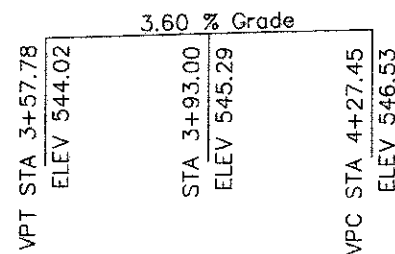


7/23/2011
07-06-2011

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ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184-002813

GENERAL PLAN & ELEVATION

STRUCTURE NO. 025-3322
T.R. 283
OVER LIMESTONE CREEK
SECTION 10-15110-00-BR
EFFINGHAM COUNTY
STATION 3+93.00



PROFILE GRADE
(along roadway)

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 ($\frac{1}{2}$ " low relax. strands)
 $F_{si} = 201,960$ psi ($\frac{1}{2}$ " low relax. strands)

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design
Specifications - 5th ed.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.233g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.524g
Soil Site Class = D

PILE DATA (2-ABUTS.)

Type	HP 10 X 42
Nominal Required Bearing	334 kips
Factored Resistance Available	184 kips
Estimated Pile Length	45 Feet - West Abutment
	45 Feet - East Abutment
Number of Production Piles	7
Number of Test Piles	1