

B.M. - Cut "□" in SE corner of the South Abutment wall of the N-S Railroad Bridge over Palatine Road. Bridge located ±2100' west of the C of Wolf Road. Elev. = 654.66

Existing Structure - Structure No. 016-2529 built as East Frontage Road over F.A.S. Route 116, Palatine Road, Section 110-1415 in 1963. In 2006, the bituminous overlay was replaced with a reinforced concrete overlay, the approach "notch" was removed and replaced and preformed joint seals replaced the existing joint filler. The superstructure consists of 33"x36" PPC Deck Beams supporting a reinforced concrete overlay. The length of the structure is 65'-6" center of center of bearings. The existing deck width is 41'-0" out to out of deck. The deck is not skewed. The road will be closed during construction.

Salvage - Remove and reinstall existing West Parapet Railing. The East Parapet Railing shall be salvaged and delivered to the IDOT Maintenance Facility in Elk Grove Village.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- 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.
- Concrete Sealer shall be applied to the surface of the backwalls, abutment seats, and front face of new concrete on abutments.
- The minimum thickness of the Concrete Overlay shall be 5 inches and varies as required to adjust for the new Profile Grade and Beam Camber.
- Slipforming of the parapets is not allowed.
- If the Contractor's procedures for existing deck beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Superstructures, No. 2.

INDEX OF SHEETS

- General Plan & Elevation
- Removal Plan
- Deck Plan
- Superstructure Details
- South Bridge Approach Slab
- North Bridge Approach Slab
- Bridge Approach Slab Details
- Preformed Joint Strip Seal
- Parapet Railing
- PPC Deck Beam Framing Plan
- 33"x36" PPC Deck Beam
- 33"x36" PPC Deck Beam Details
- South Abutment
- North Abutment
- Bar Splicer Assembly Details

LOADING HL93

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

DESIGN STRESSES

FIELD UNITS

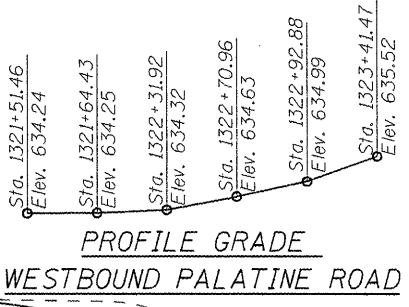
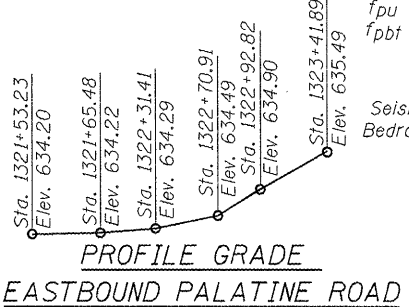
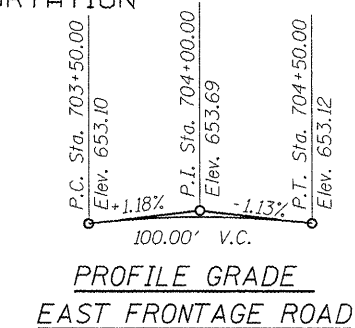
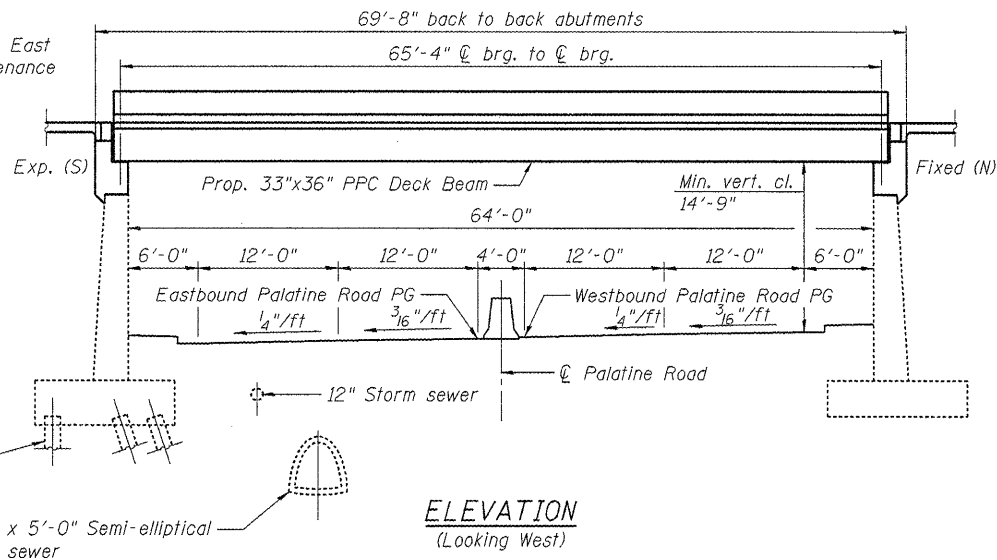
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low relax strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low relax strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

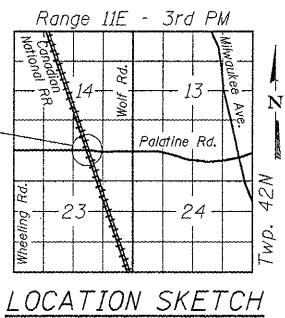
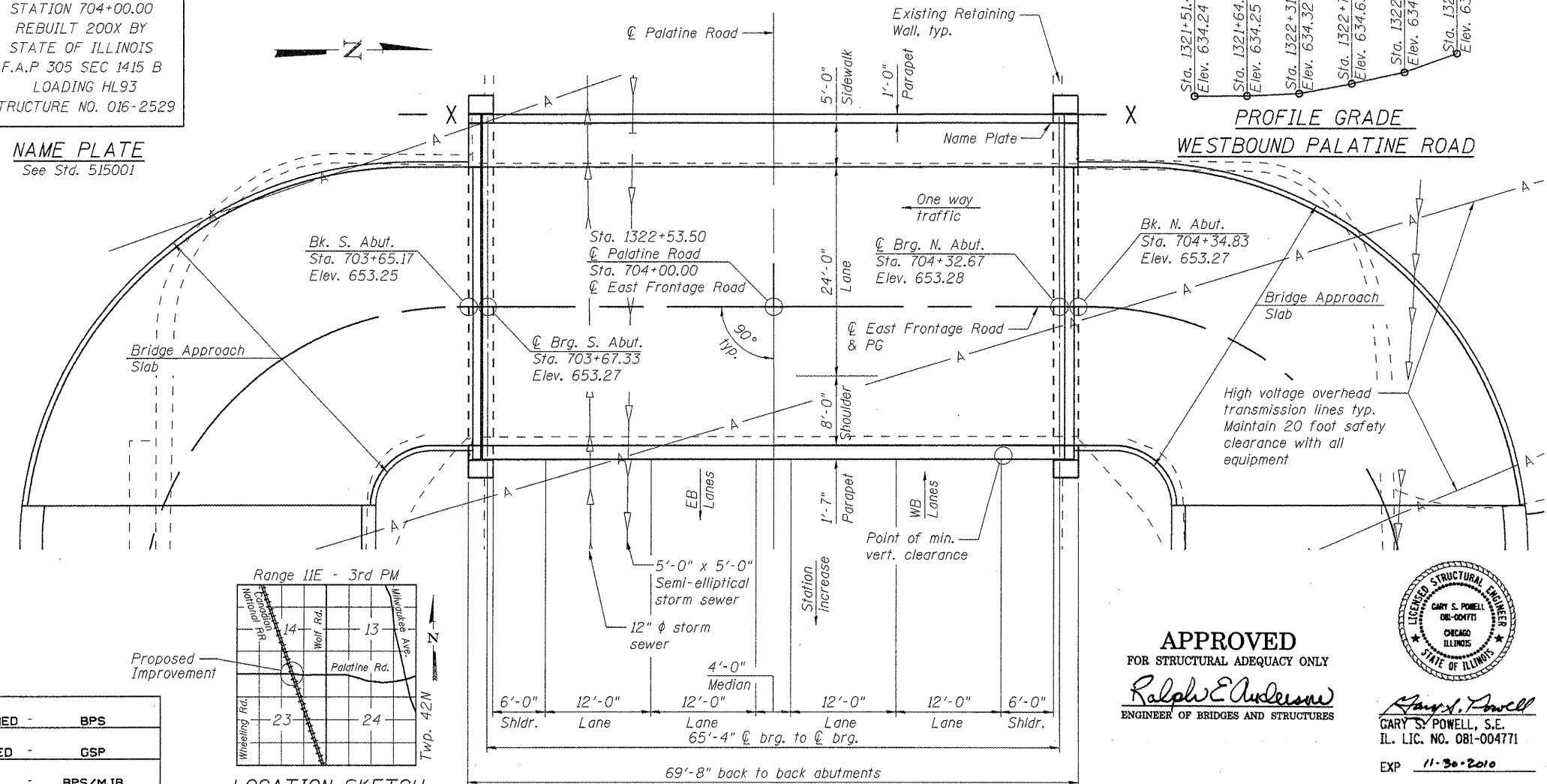


TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Removal of Existing Superstructures No. 2	Each	1		1
Concrete Removal	Cu. Yd.		35.0	35.0
Structure Excavation	Cu. Yd.		50	50
Concrete Structures	Cu. Yd.		63.8	63.8
Concrete Superstructures	Cu. Yd.	188.5		188.5
Bridge Deck Grooving	Sq. Yd.	582		582
Protective Coat	Sq. Yd.	695		695
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,594		2,594
Reinforcement Bars, Epoxy Coated	Pound	39,370	11,370	50,740
Bar Splicers	Each	66		66
Removing and Re-erecting Existing Railing	Foot	66.5		66.5
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	39.5		39.5
Concrete Sealer	Sq. Ft.		641	641
Concrete Wearing Surface, 5"	Sq. Yd.	292.5		292.5
Asbestos Bearing Pad Removal	Each	26		26

STATION 704+00.00
REBUILT 200X BY
STATE OF ILLINOIS
F.A.P 305 SEC 1415 B
LOADING HL93
STRUCTURE NO. 016-2529

NAME PLATE
See Std. 515001



PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Gary S. Powell
GARY S. POWELL, S.E.
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EXP 11-30-2010
DATE 01-28-2009



GENERAL PLAN & ELEVATION
EAST FRONTAGE ROAD OVER PALATINE ROAD
F.A.P. 305/PALATINE ROAD
SECTION 1415 B
COOK COUNTY
STATION 704+00.00
STRUCTURE NO. 016-2529

DESIGNED	BPS
CHECKED	GSP
DRAWN	BPS/MJB
CHECKED	GSP

SHEET NO. 1 15 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	305	1415 B	COOK	75	24
CONTRACT NO. 60F60					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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