

Benchmark: Chiseled "□" N-E Wingwall, Offset 32'-10" RT. Sta. 112+64 Elev. 535.96

Existing Structure: S.N. 099-0098, single span precast prestressed concrete bridge deck beams with a concrete wearing surface on closed abutments. Substructure built in 1934 and widened in 1990, superstructure reconstructed in 1974 and partially reconstructed in 1990 with additional deck beams added to widen the structure. The structure measures 39' - 8 7/8" Back to Back of abutments and 68'-0" out to out deck. Traffic is to be maintained utilizing stage construction. One lane for both directions will be provided.

Salvage: None

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK

1. Total superstructure and substructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See roadway sheet for details.

INDEX OF SHEETS

- S-1 General Plan & Elevation
- S-2 Stage Construction Details
- S-3 Temporary Concrete Barrier
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- S-5 17"x36" PCC Deck Beam Details
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STATION 112+00.00  
REBUILT 20 BY  
STATE OF ILLINOIS  
F.A.U. RT. 318 SEC. DB-1-R-B  
LOADING HL 93  
STR. NO. 099-0098

NAME PLATE  
See Std. 515001

LOADING HL-93

No future wearing surface allowed

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications  
(4th Edition, 2007)

DESIGN STRESSES

FIELD UNITS	PRESTRESSED UNITS
$f'_c = 3,500$ psi	$f'_c = 6,000$ psi
$f_y = 60,000$ psi	$f'_{ci} = 5,000$ psi
	$f'_s = 270,000$ psi (1/2" $\phi$ low lax. strands)
	$f'_{sl} = 201,900$ psi (1/2" $\phi$ low lax. strands)

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Attach new Name Plate to the inside face of parapet as shown. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

Reinforcement Bars designated (E) shall be epoxy coated.

No in-stream work will be allowed on this project.

Slip forming of the parapets is not allowed.

The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new deck beams.

After the removal of the existing beams for stage 1 removal, the Contractor shall re-connect or re-engage the transverse ties in the existing beams for stage 1 traffic.

Burn or cut the existing dowel rods flush with existing bearing seat. Grind the existing dowel rods smooth and seal with epoxy. The cost of this work shall be included with "Removal of Existing Superstructure."

WATERWAY INFORMATION

		Low Grade Elev. = 535.1		At Sta. 10+45		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Nat. H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	30	760**	131 131	532.5*	0 0	532.5 532.5
Base	100	1178**	155 155	534.1*	0 0	534.1 534.1
Overtopping						
Max. Calc.	500					

\* Back Water From Thorne Creek  
\*\* Discharges From Thorne Creek

TOTAL BILL OF MATERIAL

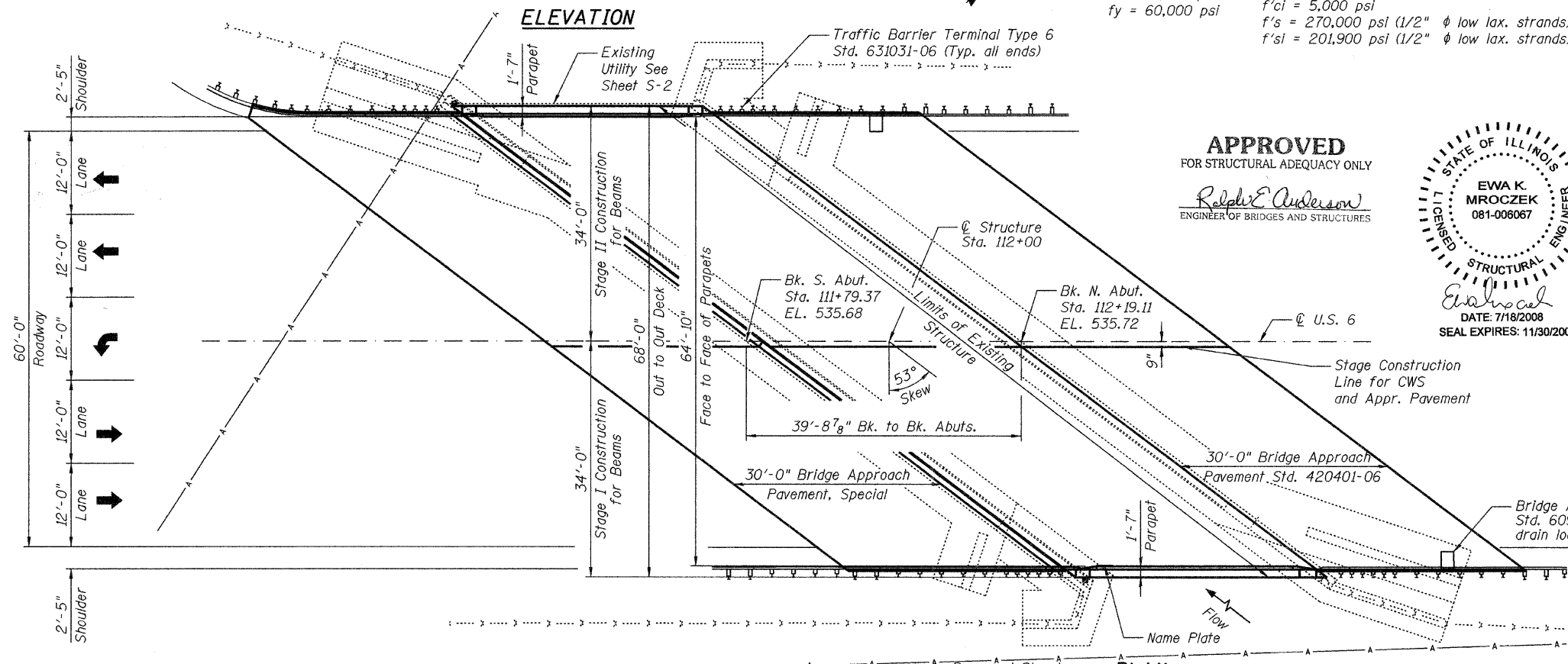
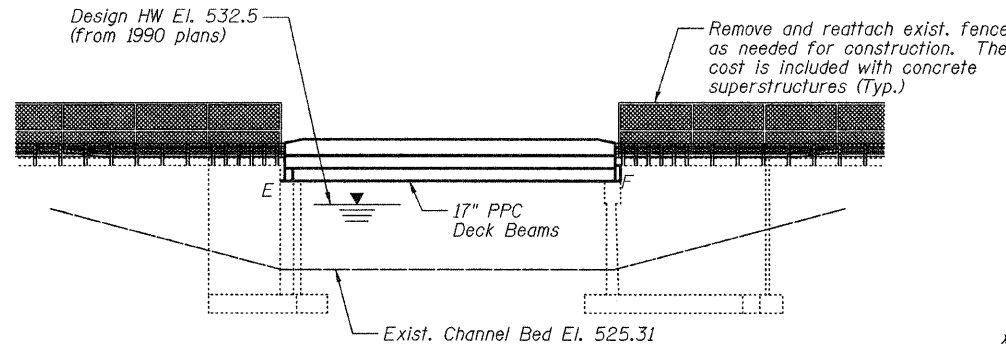
ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Removal	Cu. Yd.	6.1
Concrete Superstructure	Cu. Yd.	15.9
Bridge Deck Grooving	Sq. Yd.	263
Protective Coat	Sq. Yd.	321
Concrete Wearing Surface 5"	Sq. Yd.	300
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,468
Reinforcement Bars, Epoxy Coated	Pound	8,170
Bar Splicers	Each	43
Name Plates	Each	1
Preformed Joint Strip Seal	Foot	113
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	354
Asbestos Bearing Pad Removal	Each	17

\* Special Provision

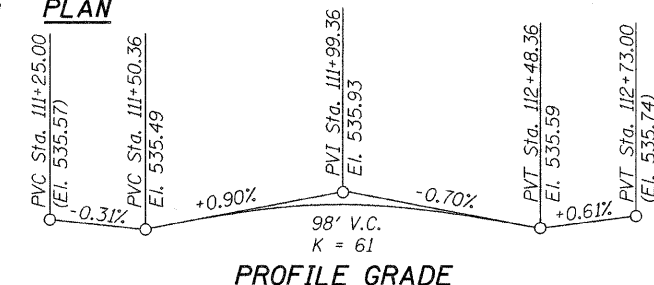
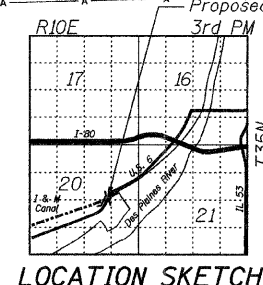
GENERAL PLAN AND ELEVATION  
US 6 (RAILROAD AVE.) OVER I & M CANAL

STA. 112+00  
S.N. 099-0098

SHEET NO. S-1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-14 SHEETS	0318	DB-1-R-B	WILL	40	23
			CONTRACT NO. 60D88		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	



APPROVED  
FOR STRUCTURAL ADEQUACY ONLY  
*Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES



DESIGNED B. Sauter  
CHECKED E. Mroczek  
DRAWN R. Danley  
CHECKED B. Sauter

**CG** Ciorba Group, Inc.  
CONSULTING ENGINEERS  
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656  
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

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