

Bench Mark: A "P.K." in center median east of S.N. 022-0158, Sta. 103+45.79, Elev. 672.16.

Existing Structure: S.N. 022-0158 was constructed in 1985 as section 543X-M82). The structure consists of a three span structure with PPC deck beams supported on reinforced concrete slab abutments on two rows of steel H-piles and reinforced concrete solid wall piers sitting on rock. The superstructure consists of twenty-five 21" deep by 48" wide PPC deck beams, topped with a 5" minimum concrete overlay. The bridge is 154'-1" back-to-back abutments and 101'-2" out-to-out deck.

Traffic to be maintained utilizing staged construction. During the demolition and setting of the beams, the existing bike path under the bridge will be closed.

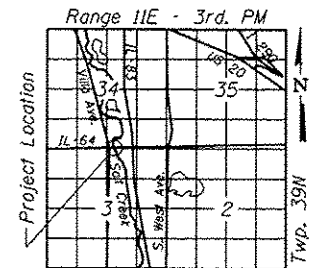
No Salvage.

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	670.22	655.33	651.78	668.06

**SCOPE OF WORK**

1. Remove and replace PPC Deck Beams.
2. Modify abutments as required.
3. Construct 5" (min.) concrete wearing surface, sidewalks, median, and parapets/rails.
4. Remove and replace bridge approach slabs.
5. Repair existing substructure units and slope walls as required.



**LOCATION SKETCH**

STATION 100+00.00  
RE-BUILT 20... BY  
STATE OF ILLINOIS  
F.A.P. RT. 307 SEC. 131B-BR  
LOADING HL-93  
STR. NO. 022-0158

**NAME PLATE**

(See Std. 515001)  
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93 (NEW CONST.)**

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

**DESIGN STRESSES**

**FIELD UNITS (PROPOSED)**

f'c = 3,500 psi  
f'c = 5,000 psi (CWS only)  
fy = 60,000 psi (Reinforcement)

**FIELD UNITS (EXISTING)**

f'c = 3,500 psi (Piers & Abutments)  
fy = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS (PROPOSED)**

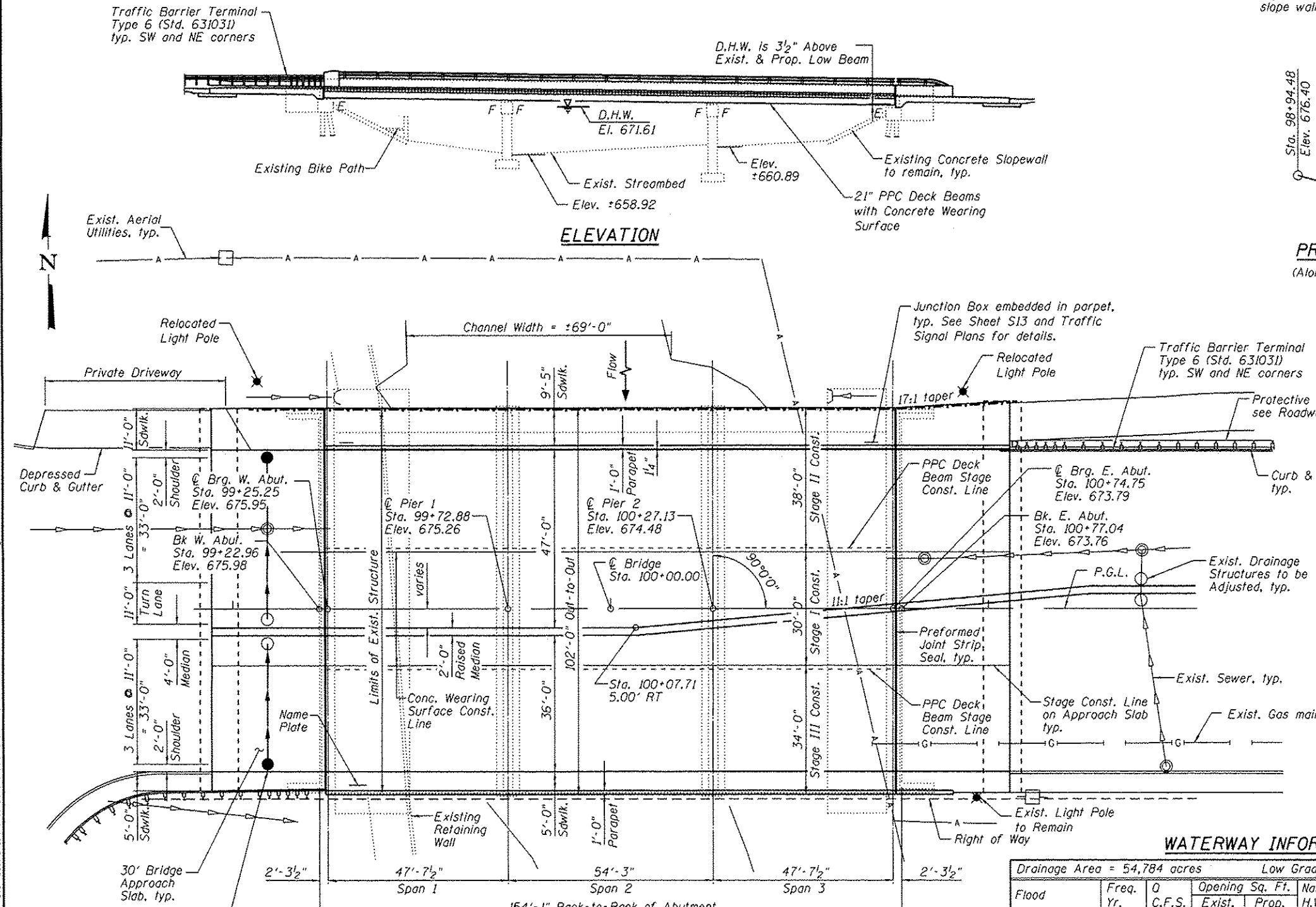
f'c = 7,000 psi  
f'ci = 6,000 psi  
fpu = 270,000 psi (1/2" φ Strands)  
fpbt = 201,960 psi (1/2" φ Strands)



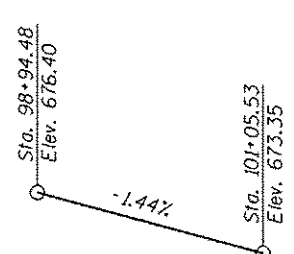
**APPROVED**  
For Structural Adequacy Only

*Ewa K. Mroczek*  
Engineer of Bridges & Structures

10/24/13  
**COLLINS ENGINEERS, INC.**  
EWA MROCZEK, P.E., S.E.  
NO. 081-006067  
EXP.: 11/30/2014



**PLAN**



**PROFILE GRADE**  
(Along P.G.L. IL Rte. 64)

**WATERWAY INFORMATION**

Drainage Area = 54,784 acres Low Grade Elev. 671.76 @ Sta. 103+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	10	2263	923	923	670.31	0.00	0.00	670.31	670.3
Base	50	3341	1067	1067	671.61	0.00	0.00	671.61	671.6
Overtopping	100	3846	1067	1067	672.21	0.00	0.00	672.21	672.2
Max. Calc.	<50	5224	1067	1067	673.71	0.00	0.00	673.71	673.7

**GENERAL PLAN**  
**IL RTE. 64 OVER SALT CREEK**  
**F.A.P. RTE. 307 - SEC. 131B-BR**  
**DuPAGE COUNTY**  
**STATION 100+00.00**  
**STRUCTURE NO. 022-0158**



USER NAME *	DESIGNED - LJ	REVISED
PLOT SCALE *	CHECKED - EKM	REVISED
PLOT DATE *	DRAWN - DR	REVISED
	CHECKED - LJ	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 022-0158**  
SHEET NO. 51 OF 526 SHEETS

F.A.P. RTE. 307	SECTION 131B-BR	COUNTY DUPAGE	TOTAL SHEETS 111	SHEET NO. 70
CONTRACT NO. 60V24				
ILLINOIS FED. AID PROJECT				