

Benchmark #1: Concrete Tablet stamped "TT Sta. No. 78 JL S 1927"
Elev. 606.295

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAP RT. 308	109 BR-3	Whiteside	47	30

Contract # 64g29

Sheet 1 of 12

Existing Structure:

Originally built in 1931 as S.B.I. Rt. 80, Sec. 109B at Sta. 1135+12.5. Rehabilitated and widened in 1971. The structure consists of 1 span PPC deck beams on closed abutments on spread footings. The bk. to bk. abutments dimension measures 48'-0"; the o.-o. width measures 40'-0". The existing superstructure shall be replaced with PPC deck beams. One reversible lane of traffic will be maintained throughout construction using temporary traffic signals.

Salvage existing substructure.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

LOADING HS20-44 (New Construction)

50 p.s.f. allowance for future wearing surface.

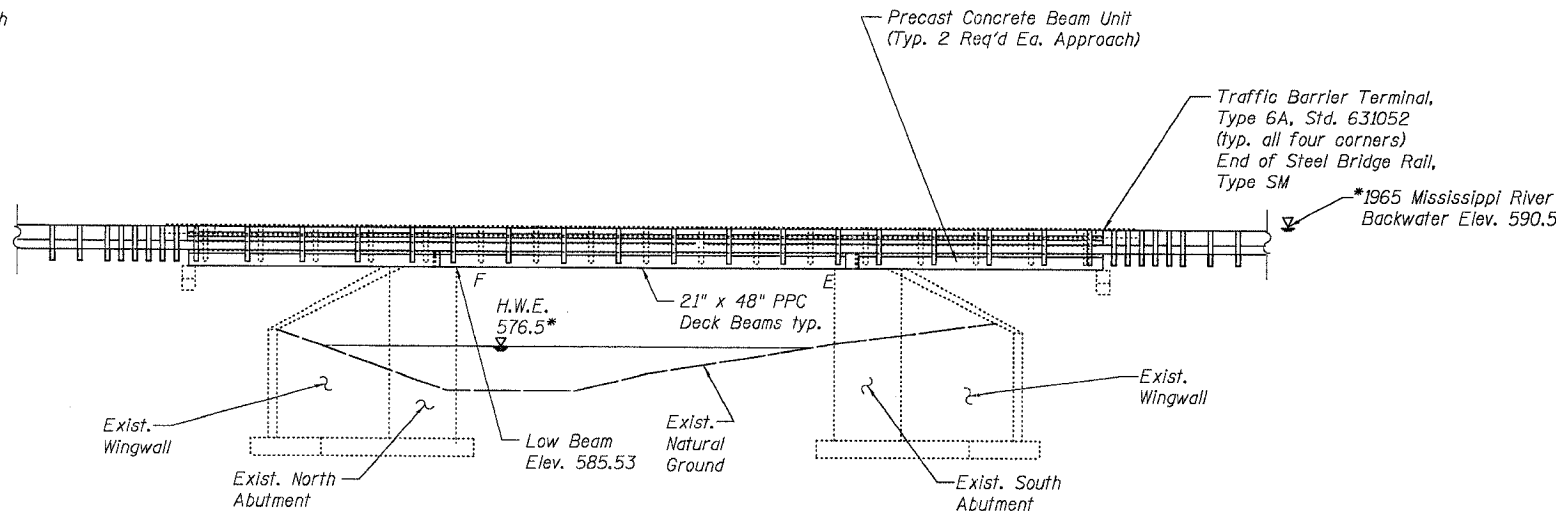
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement Bars)
 $f'_c = 5,000$ psi (conc. wearing surface)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_{cl} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" low lax. strands)
 $f_{sl} = 201,960$ psi (1/2" low lax. strands)

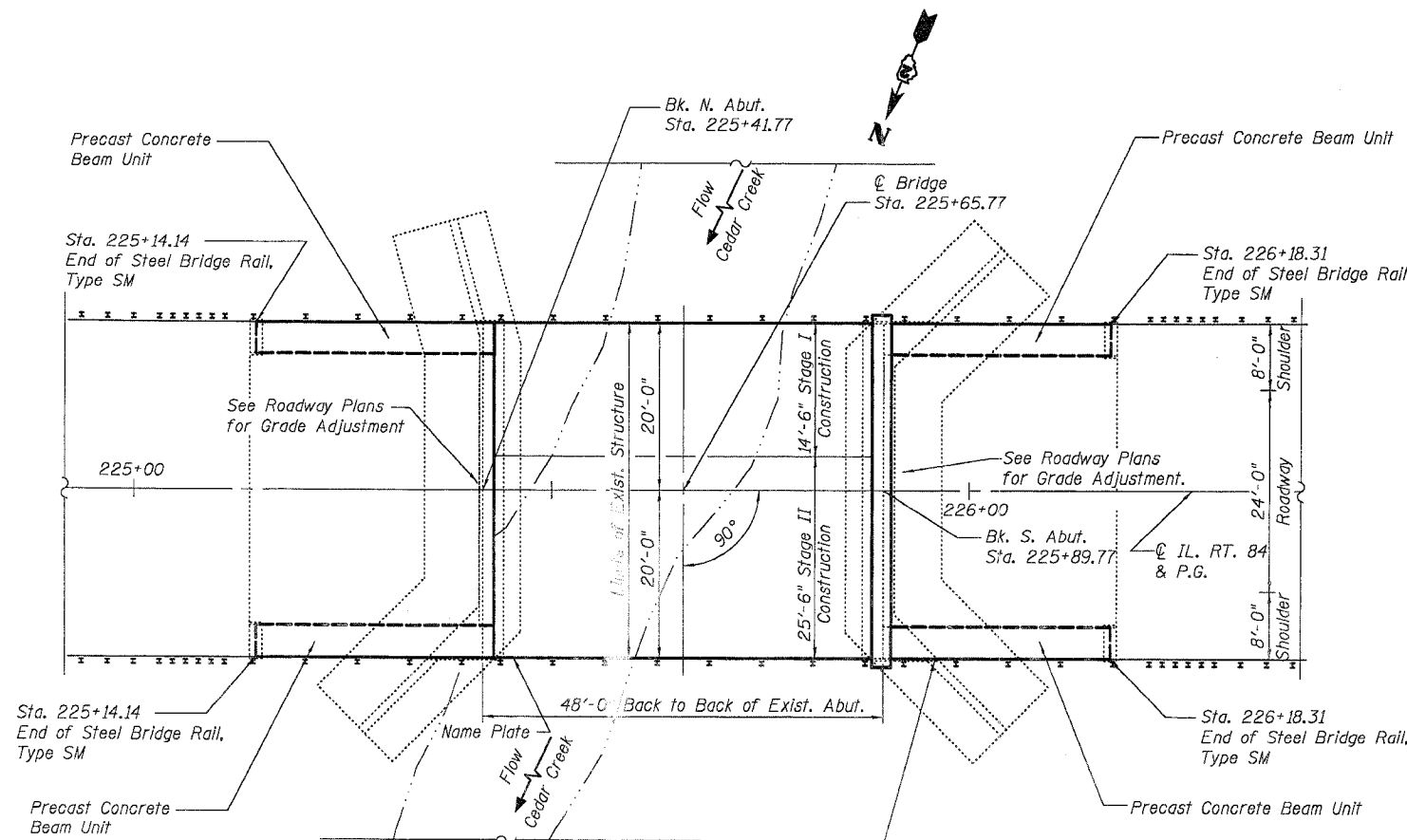


ELEVATION

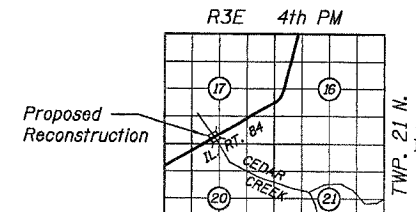
* Notes from 1971 SBI 80, SEC 109BR-1, Whiteside County Plans.

EXISTING BEAM REMOVAL AND PROPOSED BEAM ERECTION SEQUENCE

- Five adjacent existing bridge beams and two approach channel beams shall be removed.
- Four new bridge beams and two approach beams shall be installed and doweled into position.
- Construct Concrete Wearing Surface and move traffic to new beams.
- Remaining five existing bridge beams and two approach channel beams shall be removed.
- Remaining six new bridge beams and two approach beams shall be installed and doweled into position.



PLAN



LOCATION SKETCH

To the best of my 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".

Robert G. Davies
IL Licensed Structural Engineer

12-28-05
Date
11-20-06
License Expires



INDEX OF SHEETS

- General Plan and Elevation
- General Notes and Bill of Materials
- Superstructure
- Superstructure Details
- Superstructure Details
- Superstructure Details
- Deck Joint Details
- Steel Bridge Rail, Type SM at PPC Concrete Deck Beams
- Steel Bridge Rail, Type SM at Precast Concrete Beam Unit
- Substructure
- Bar Splicer Assembly Details
- Temporary Concrete Barrier for Stage Construction

Remove existing concrete channel beam (Typ. each approach). This work shall be paid for under the item Bridge Approach Shoulder Removal



GENERAL PLAN AND ELEVATION
IL. RT. 84
OVER CEDAR CREEK
F.A.P. ROUTE 308 - SECTION 109 BR-3
WHITESIDE COUNTY
STA. 225+65.77
SH 098-0022

STATION 225+65.77
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 308 SEC. 109 BR-3
LOADING HS20
STR. NO. 098-0022

LETTERING FOR NAME PLATE

See Sta. 515001

Attach to backside of 8" rail element. Remove, clean, and relocate existing name plate adjacent to new name plate. Cost included in Name Plates.

DESIGNED	MGH
CHECKED	RGD
DRAWN	MDJ
CHECKED	NRF