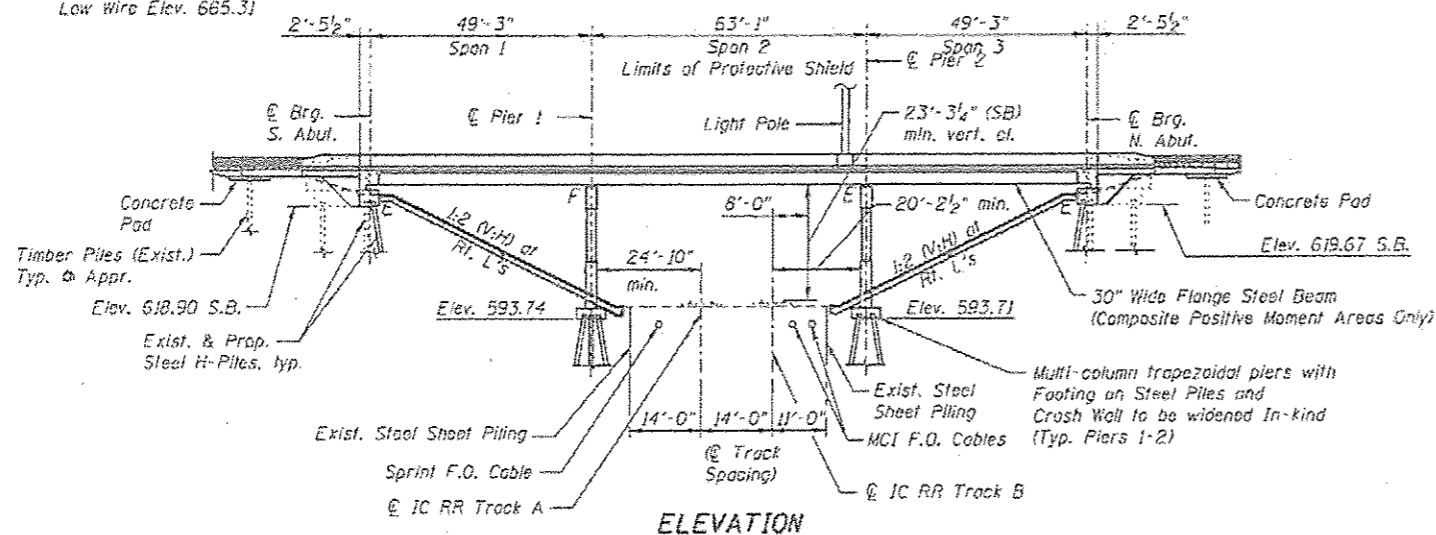


Bench Marks: Chisled square on SW corner of SB IL-171 bridge wing wall over IC RR, El. 629.23.

Existing Structure: S.H. 016-0488 (SB) was built in 1963 as F.A. Rte. 133, Section 0707-617 VB at Sta. 22+90.24. Existing dual structures each consist of three continuous span reinforced concrete decks on eight steel 30" WF beams in all three spans. The reinforced concrete deck is 7" thick, including a 2" microsilica concrete overlay. The abutments are reinforced concrete stub abutments founded on steel H-piles. Each pier is reinforced concrete consisting of a cap beam, multiple trapezoidal columns on a crashwall supported by a continuous spread footing on steel piles. The structure is 166'-6" back-to-back of abutments and the out-to-out deck width is 48'-0". Structure has a 12° 42' 19" skew. Traffic will be maintained utilizing crossovers. All Elevations in the proposed plans are based on NAVD83 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 594.02 = NAVD83 Elev. 593.74.

No Salvage.

O.H. Wire SB Sta. 22+52.46
Low Wire Elev. 665.81



SCOPE OF WORK

1. Remove the existing concrete deck and microsilica concrete overlay and replace with new 8" reinforced concrete deck.
2. Widen abutments, piers, and slopewalls to the outside.
3. Remove and replace approach slabs and wingwalls as shown for new deck width and semi-integral abutments.
4. Add one additional steel beam line to outside of the structure.
5. Repair spalls, delaminations and open cracks in substructures using formed concrete repair and epoxy crack injection. Replace failed slopewall panels.
6. Remove and replace existing roadway lighting.
7. Retrofit cover plates on the top flanges of steel beams.
8. Perform miscellaneous repairs including debris/vegetation removal.
9. Re-set the steel expansion rocker bearings at Pier 2.
10. Remove existing backwalls and convert abutments to semi-integral.
11. Remove and dispose of existing electrical conduits and junction boxes attached to the beams and/or deck.

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

FIELD UNITS (Exist. Construction)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

SEISMIC DATA

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

LOADING HS20-44

No future wearing surface allowed.

DESIGN SPECIFICATIONS

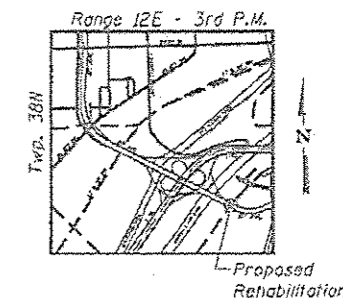
2002 AASHTO Standard Specifications for Highway Bridges

STA. 22+90.24
RE-BUILT 2011 BY
STATE OF ILLINOIS
F.A.P. RT. 373
SECTION 2013-038B-R
LOADING HS20-44
STR. NO. 016-0488

NAME PLATE

(See Sta. 515001)

Existing Name Plate Shall be cleaned and relocated next to the new Name Plate. Cost included with Name Plates.

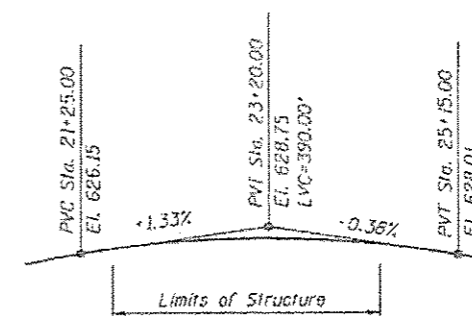


LOCATION SKETCH



EXISTING UTILITY LEGEND

- Underground Storm Sewer
- Aerial Electric Line
- Underground Gas Line
- Underground Fiber Optic Line
- Existing Drainage Structure



PROFILE GRADE SB IL-171

(Along SB IL-171)

NOTE:

For Section A-A, see Sheet SH2.

APPROVED

For Structural Adequacy Only

Dr. Carl Kasper
Engineer of Bridges & Structures

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SB IL-171 OVER IC RR
FAP 373 - SECTION 2013-038B-R
COOK COUNTY
STATION 22+90.24
STRUCTURE NO. 016-0488

benesch
engineers • scientists • planners

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312-665-0450 Job No. 10085

FILE NAME	USER NAME	DESIGNED	REVISIONS
R16-2485-0216-PRI-General Plan and Elevation	lgensche	CMK	
		CHECKED	JAW
		DRAWN	CMK
		CHECKED	JAW
		REVISIONS	
		REVISIONS	
		REVISIONS	
		REVISIONS	

SHEET NO. 581 OF 5336 SHEETS

P.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
373	2013-038B-R	COOK	821	739
				CONTRACT NO. 60J16
ILLINOIS FED. AID PROJECT				

X:\1008025\1008025-Eng. Docs-Phase II\SH.016.0488.0489.1st.ave.ovr.11C.L.RR.VFinal.0488.016-0488-581-001-General Plan and Elevation.dwg 3:41:50 PM 6/23/2014