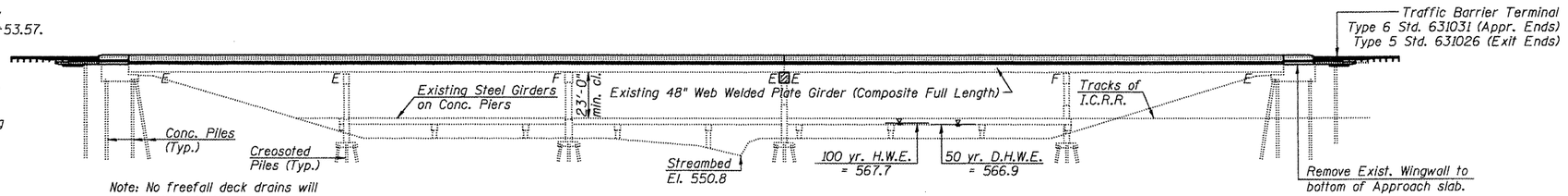
Benchmark: S.W. Corner of South Railroad Abutment Wingwall, Sta. 538+08, 94' Rt., Elev. 568.32

Existing Structure: S.N. 054-0053 & 054-0054, originally built in 1974 as F.A.I. 55, Section 54-4BVB at Sta. 537+53.57. The existing structure is a Five Span Steel Continuous Multi-girder Composite Structure on Stub Abutments and Column Supported Piers. The existing structure has a Microsilica overlay done and had expansion joints replaced in 1999. The overall length is 581'-1" back to back of abutments on a 54°06'40" left forward skew. The existing out to out bridge width is 42'-0", with a clear roadway width of 38'-6", measured face to face of curbs. The bridge deck, cap and exterior columns at expansion piers and elastomeric bearings at abutments and expansion piers will be replaced utilizing crossovers.

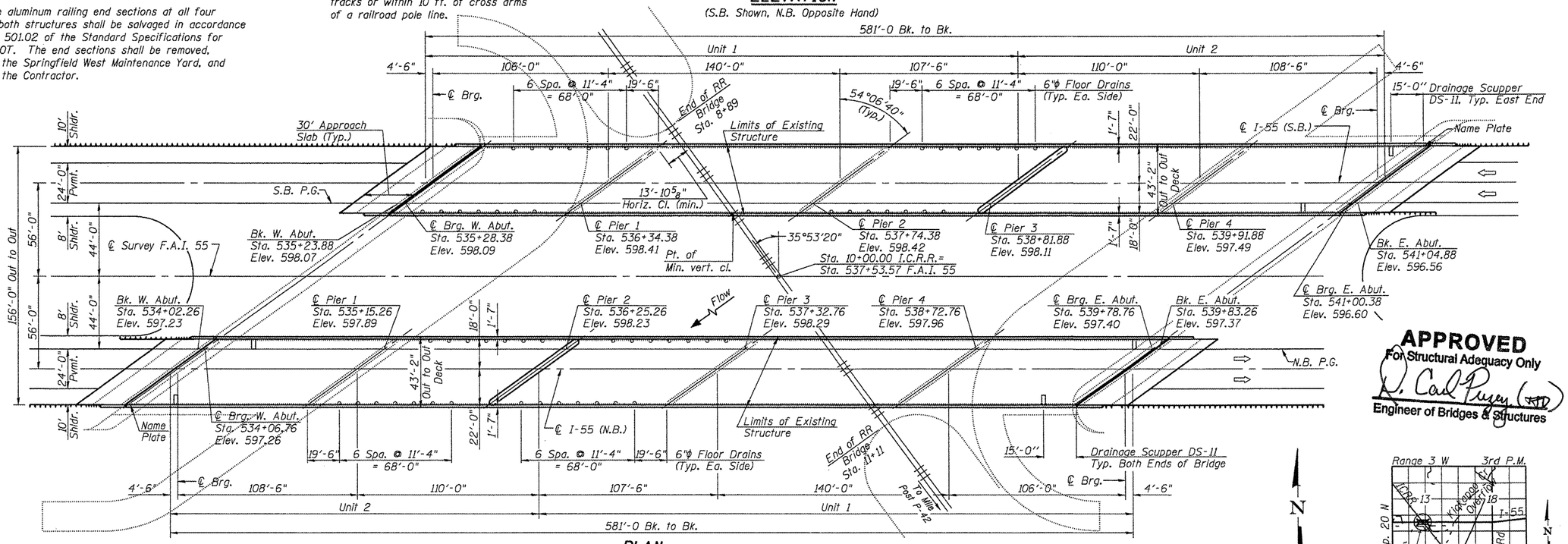
Salvage: The aluminum railing end sections at all four corners of both structures shall be salvaged in accordance with section 501.02 of the Standard Specifications for reuse by IDOT. The end sections shall be removed, delivered to the Springfield West Maintenance Yard, and unloaded by the Contractor.



Note: No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.

ELEVATION

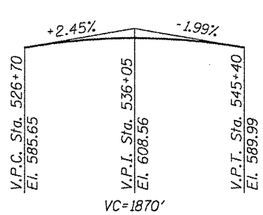
(S.B. Shown, N.B. Opposite Hand)



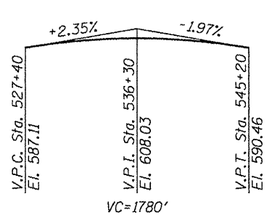
PLAN

DESIGN SPECIFICATIONS

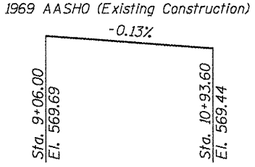
2002 AASHTO (New Construction)
2010 AASHTO (Bridge Deck)
1995 FHWA Seismic Retrofit Manual
1969 AASHO (Existing Construction)



PROFILE GRADE
N.B. S.N. 054-0053
Along median edge of pavement



PROFILE GRADE
S.B. S.N. 054-0054
Along median edge of pavement



PROFILE GRADE
Along west rail of I.C.R.R.

Note: The profile grades show the final elevations after grinding. Up to ¼ inch will be ground off the bridge slab, the bridge approach slab and bridge approach connector pavement.

LOADING HS20-44 & ALT

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

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.046g
Site Coefficient (S) = 2.0

SCOPE OF WORK

1. Remove and replace bridge deck.
2. Construct Temporary Support System at expansion piers.
3. Remove and replace pier cap and columns at expansion piers.
4. Concrete repair at abutments and piers.
5. Remove and replace end diaphrams at abutments and expansion piers.
6. Remove and replace bearings at expansion joints.
7. Remove and replace approach pavements.
8. Remove and replace abutment backwalls.
9. Place Scour Countermeasures.

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)

FIELD UNITS (Existing Construction)
fc = 1,200 psi (Deck Slab)
fc = 1,400 psi (Curb, Parapet, Substructure)
fs = 20,000 psi (Reinforcement & Structural Steel)

MICHAEL D. CUMMINS 4822 SPRINGFIELD
LICENSED STRUCTURAL ENGINEER ★ STATE OF ILLINOIS ★
Michael D. Cummins 9/9/11
(Expires 11/30/2012)

APPROVED
For Structural Adequacy Only
D. Carl Puzey (STD)
Engineer of Bridges & Structures

LOCATION SKETCH

GENERAL PLAN
I-55 OVER I.C.R.R. & KICKAPOO CREEK OVERFLOW
F.A.I. RTE 55
SECTION D6 LOGAN CO BR 2011
LOGAN COUNTY
STATION 537+53.57
STRUCTURE NO. 054-0053 (NB)
STRUCTURE NO. 054-0054 (SB)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2265.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	FILE = 0540053_0054-72E10-01-GPE.dgn	CHECKED - MDC	REVISED -	GENERAL PLAN STRUCTURE NO. 054-0053 & 054-0054
	DATE = 9/9/2011	DRAWN - TJD	REVISED -	SHEET NO. 1 OF 45 SHEETS
		CHECKED - MDC	REVISED -	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	117
		CONTRACT NO. 72E10		
	ILLINOIS FED. AID PROJECT			