APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APR 03 2006

AS A BASIS FOR PREPARATION OF DETAILED PLANS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	454	204

SHEET NO. 1 of 3 SHEETS

B.M. 3206 -
Cut on top SE wingwall of bridge over Mink Creek and 200' S. of Renwick Rd.
Elev. 606.27

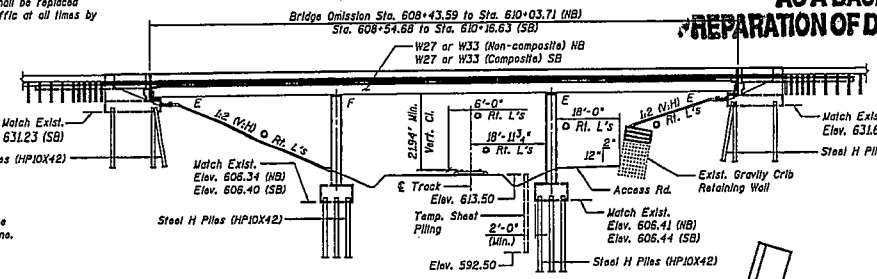
Existing Structure -
S.N. 099-0018 (NB) & S.N. 099-0019 (SB) were both built in 1955 as part of the state of Illinois F.A. Route 34, Section 27-VB and project F.G.I. 18718, Will County. Both the superstructure and substructure were widened in 1977. Also, additional rehabilitation work was performed in 1994. Both structures consist of R.C. deck supported on three-span continuous steel beams. The abutments are supported on concrete piles and/or HP steel piles. The piers are supported on timber piles and/or HP steel piles. The bridge length is 161'-0" bk. to bk. abutments. The northbound width is 52'-5" o. to o. of deck. The southbound deck width varies from 44'-2" to 44'-9". The NB existing concrete deck shall be partially removed and widened. The SB existing concrete deck shall be replaced and widened. The road shall be kept open with two lanes of traffic at all times by utilizing staged construction.

Salvage -
Salvage and reuse 13 - 6'-0" Existing Gravity Crib Wall Units to buildup existing retaining wall sections designated on Sheet 3 of 3.

SCOPE OF WORK

** SECTION 27 VB-R

1. Remove and replace both the northbound and southbound approach pavements.
2. Remove the existing northbound deck inside shoulder. Widen northbound deck with a new cip reinforced concrete deck supported by a new shallower steel superstructure.
3. Remove the existing southbound deck and maintain existing steel superstructure. Replace and widen southbound deck with a new cip reinforced concrete deck supported by a new shallower steel superstructure.
3. Remove and replace all expansion joints.
4. Clean and paint all existing structural steel to remain.
5. Widen the existing substructure elements. Remove the existing northbound and southbound inside and southbound outside wingwalls in accordance with Standard Specifications. Add new outside southbound wingwalls to accommodate widening.
6. Widen the aggregate slope walls at both the north and south abutments. Widen the gravity crib retaining wall at the north abutment.
7. Repair substructure defects with formed concrete repair and/or epoxy crack seal.
8. New girder lines will utilize steel rocker bearings at southbound pier 2 to match existing.
9. Utilize stage construction as noted herein.

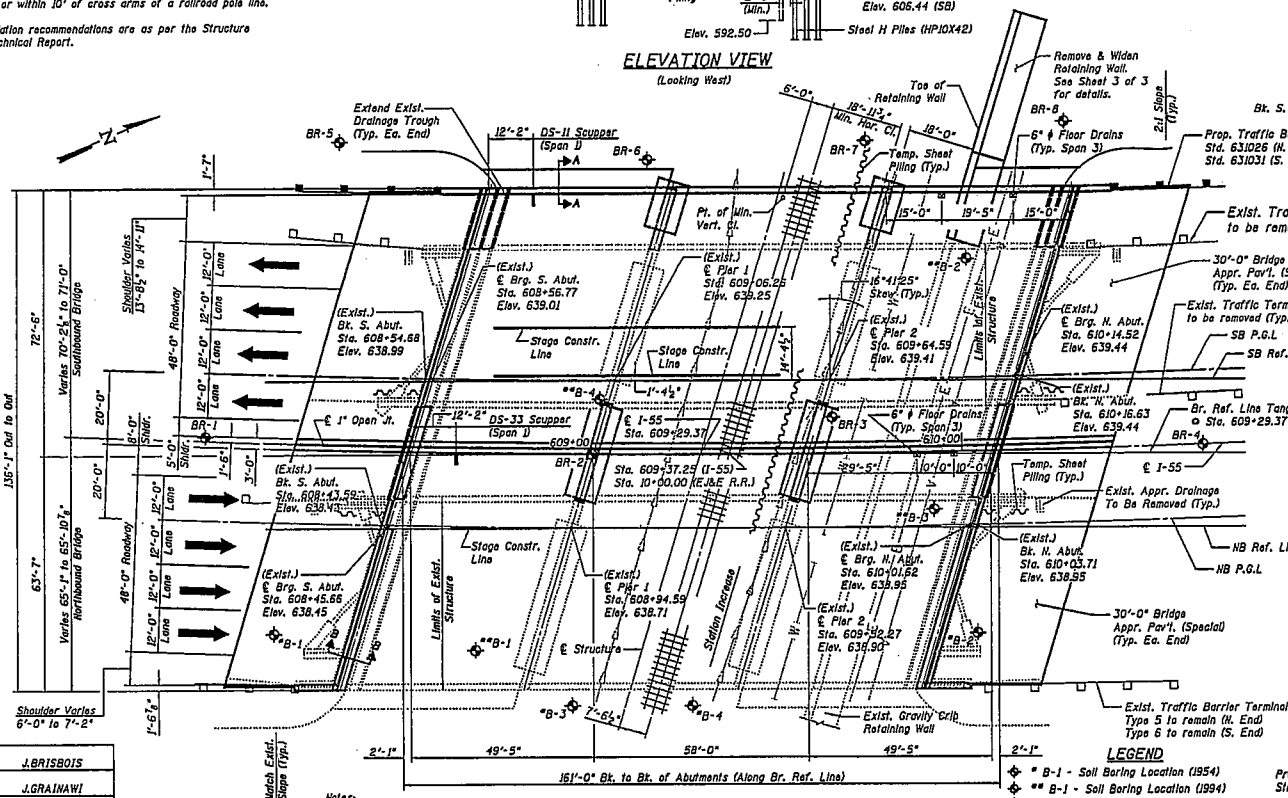


ELEVATION VIEW

(Looking West)

Notes:

1. No deck drainage will be permitted in the span over the track or within 10' of cross arms of a railroad pole line.
2. Foundation recommendations are as per the Structure Geotechnical Report.



PLAN

Notes:

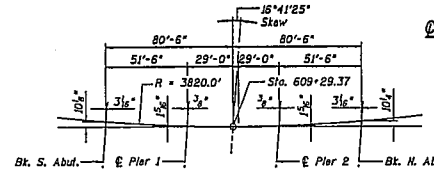
1. See Sheet 3 of 3 for Section A-A.
2. See Sheet 3 of 3 for Section B-B.

LEGEND

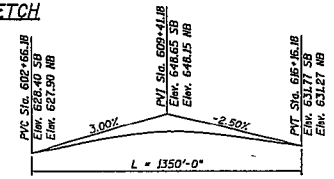
- * B-1 - Soil Boring Location (1954)
- ** B-1 - Soil Boring Location (1994)
- BR-1 - Soil Boring Location (2006)
- Underground Electrical
- A — Aerial Lines
- W — Water
- E — Conductor Underground Cable

℄ I-55 CURVE DATA

Prop. Curve C19
Δ = 43° 22' 01" (LT)
T = 1,518.89'
L = 2,891.35'
E = 290.89'
R = 3,820.00'
SE = 2.0%
PC = 595+59.70
PT = 624+51.05
PI = 610+78.59



OFFSET SKETCH



NB & SB PROFILE GRADE OF I-55

Note:
Mile post 7 is approximately 30' west of station 10+00.00 along EJ&E Railroad.

Sta. 8+22.50	Sta. 10+00.00	Sta. 11+43.25
El. 613.03	El. 613.21	El. 613.33

TOP OF RAIL ELEVATIONS EJ&E RAILROAD

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44 & ALT.

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

DESIGN STRESSES

FIELD UNITS

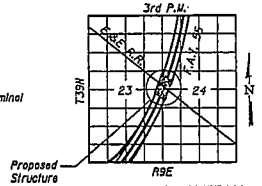
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_s = 20,000 psi (exist. structural steel)
f_y = 36,000 psi (new structural steel)

HIGHWAY CLASSIFICATION

Interstate I-55
Functional Class: Rural Freeway
ADT: 32,000 (2004); 32,830 (2021)
ADTT: 21%
DHV: 3080
Design Speed: 70 m.p.h.
Posted Speed: 65 m.p.h.

SEISMIC DATA

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



LOCATION SKETCH

DESIGNED	J.BRISBOIS
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

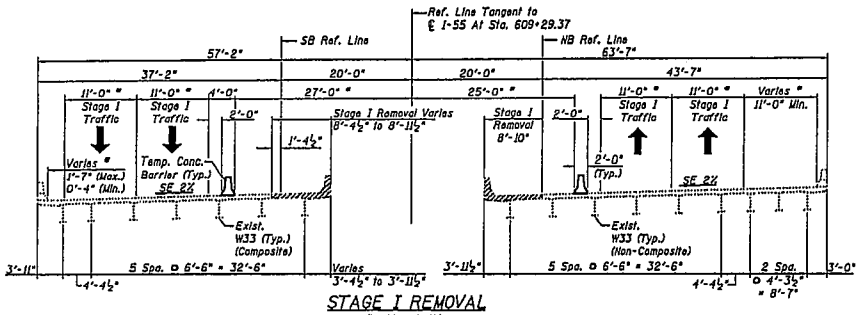
GENERAL PLAN
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SECTION 27 VB-R
WILL COUNTY
STATION 609+29.37
S.N. 099-0018 (NB)
S.N. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

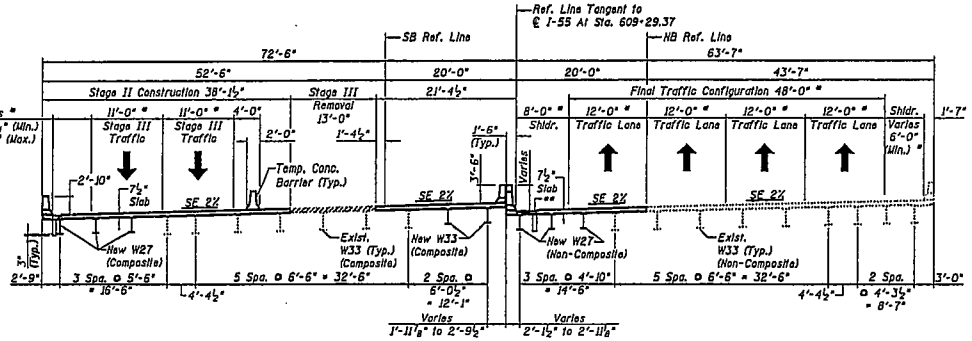
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	454	205
PROJ. REF. SHEET NO. 2	ILLINOIS	PROJ. AID PROJECT(S)		

SHEET NO. 2 of 3 SHEETS

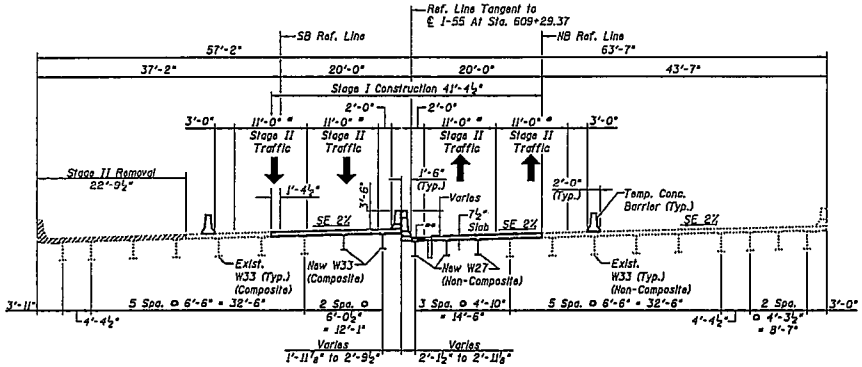
** SECTION 27 VB-R



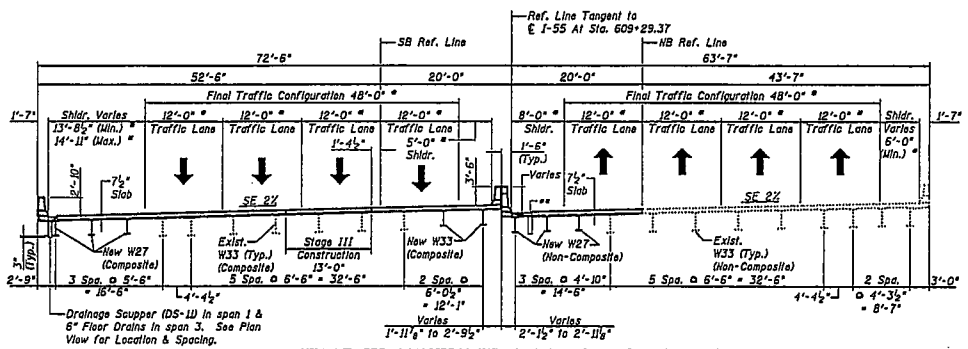
STAGE I REMOVAL
(Looking North)



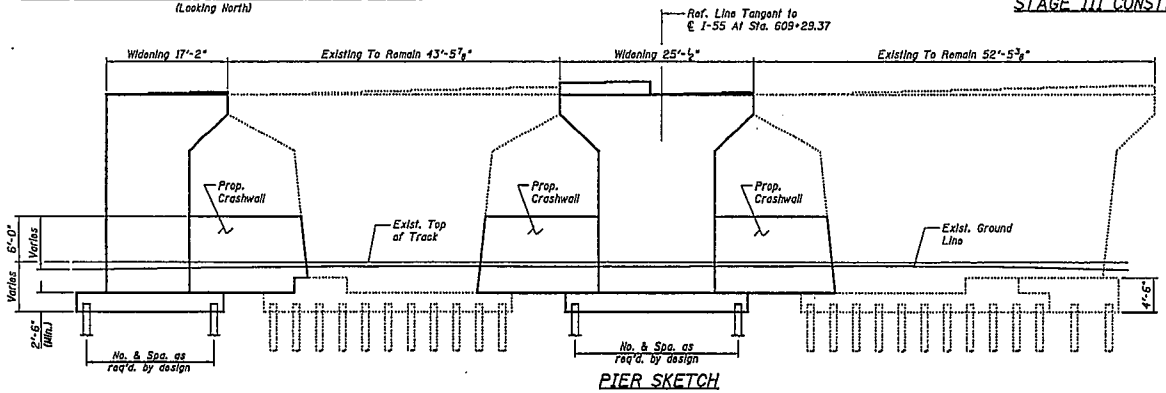
STAGE II CONSTRUCTION / STAGE III REMOVAL
(Looking North)



STAGE I CONSTRUCTION / STAGE II REMOVAL
(Looking North)



STAGE III CONSTRUCTION / PROPOSED SECTION
(Looking North)



PIER SKETCH
(Looking North)

NOTES:

1. * Designates radial dimensions normal to ℄ I-55.
2. ** Designates Drainage Scupper (DS-33) in span 1 & 6" ϕ Floor Drains in span 3. See Plan View on Sheet 1 of 3 for Location and Spacing.

LEGEND

Hatched Area Indicates Removal

DESIGNED	J.BRISBOIS
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

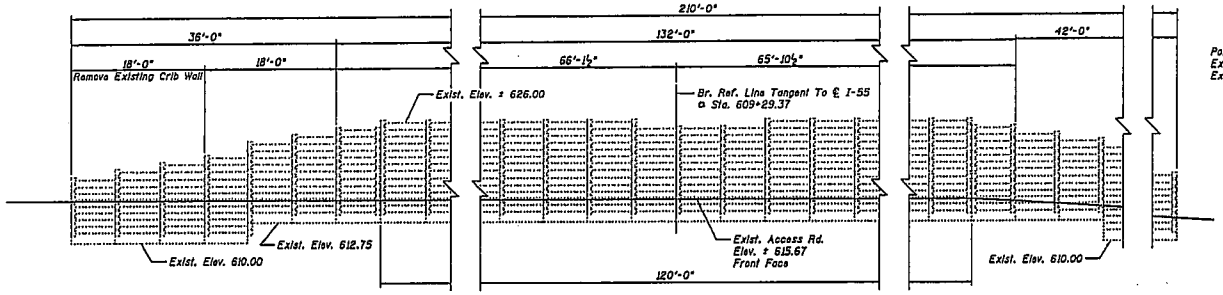
DETAILS 1
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SECTION 27 VB-R
WILL COUNTY
STA. 609+29.37
S.N. 099-0018 (NB)
S.N. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

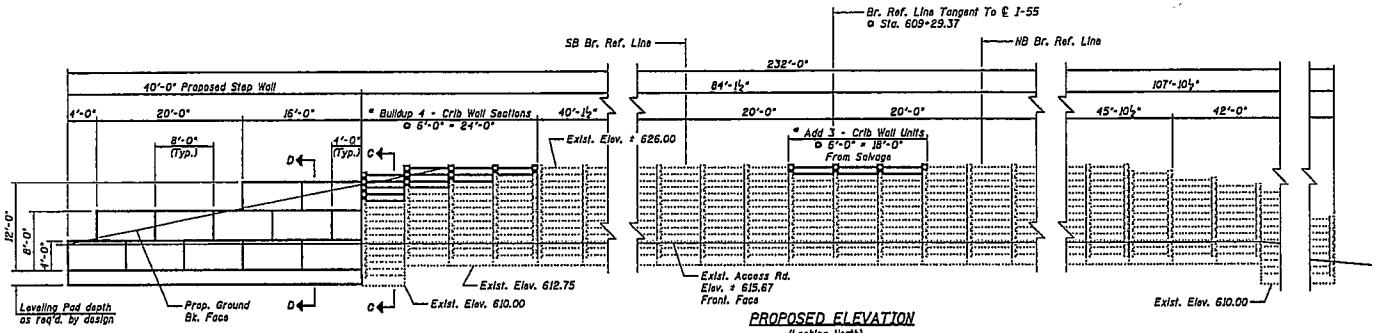
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	454	206
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 3 of 3 SHEETS

** SECTION 27 VB-R



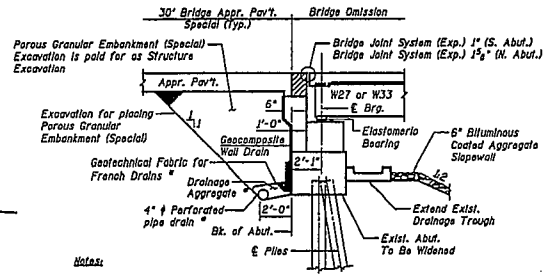
EXISTING ELEVATION
(Looking North)



PROPOSED ELEVATION
(Looking North)

Notes:

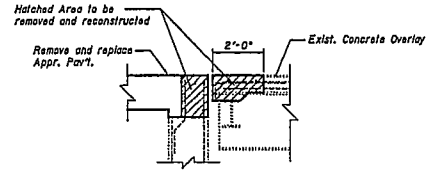
1. * 13 - 6'-0" existing crib wall units shall be salvaged from crib wall removal and used to buildup the existing designated wall sections outlined in proposed elevation.



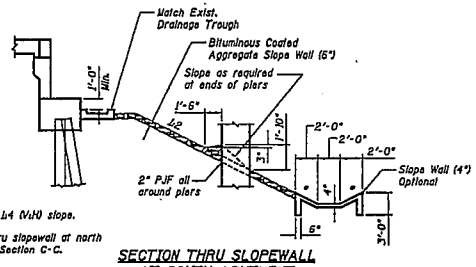
Notes:

1. * Included in the cost of Pipe Underdrains for Structures.
2. All drainage systems components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

SECTION THRU ABUTMENTS
(Dimensions @ Rt. L's)



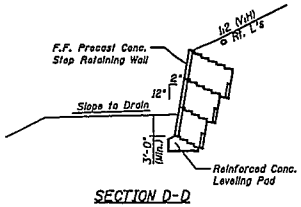
SECTION B-B
(Section Thru Existing Abutment)



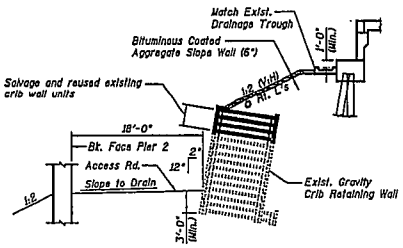
Notes:

1. * Designates 1:4 (V:H) slope.
2. For section thru slopewall at north abutment, see Section C-C.

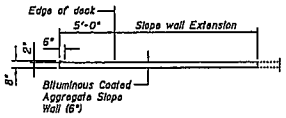
SECTION THRU SLOPEWALL
AT SOUTH ABUTMENT
(Dimensions @ Rt. L's)



SECTION D-D



SECTION C-C



SECTION A-A

DESIGNED	J.BRISBOIS
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

DETAILS 2
I-55 OVER EJ&E R.R.
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