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

Existing Structure -
The three span I-55 structures were built in 1994 as part of the state of Illinois F.A.I 55, Sec. 278-1BR(89). The northbound (S.N. 099-4615) and southbound (S.N. 099-4616) carry freeway traffic over Mink Creek. The continuous slab superstructure consists of three equal span lengths of 25'-0". Both structures are 77'-8" long from bk. to bk. of abutments and 45'-2" wide. The reinforced concrete deck slab is 12" thick. The abutments and piers are founded on steel piles with reinforced concrete encasement. The existing concrete deck shall be partially removed and widened. The road shall be kept open with two lanes of traffic in each direction at all times utilizing stage construction.

Salvage -
None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

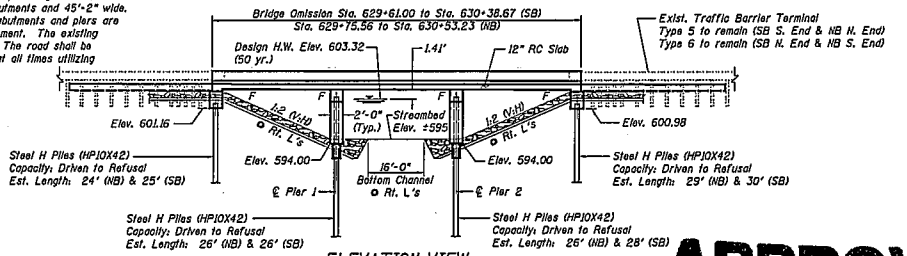
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	42	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 of 2 SHEETS

** SECTION 27 VB-R

SCOPE OF WORK

1. Partially remove and widening both the northbound and southbound approach pavements to the inside median.
2. Widen the northbound and southbound bridges to the inside median with new cip reinforced 12" concrete slab.
3. Widening the existing substructure elements. Completely remove the existing northbound and southbound inside wingwalls in accordance with the Standard Specifications.
4. Add new 15" riprap slopewall at new construction and maintain existing slopewall.
5. Repair all substructure defects with formed concrete repair and/or epoxy crack seal.
6. Utilize stage construction as noted herein.



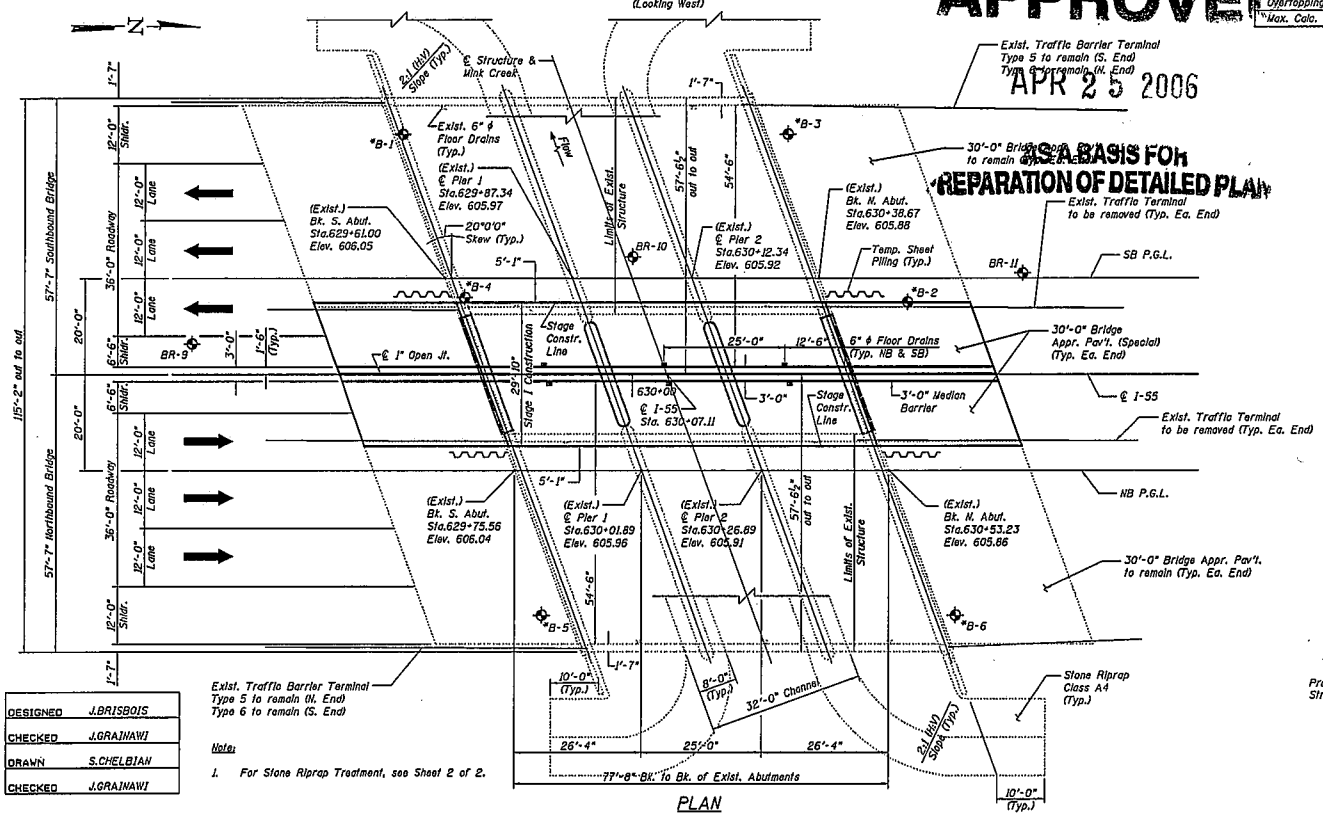
ELEVATION VIEW
(Looking West)

WATERWAY INFORMATION

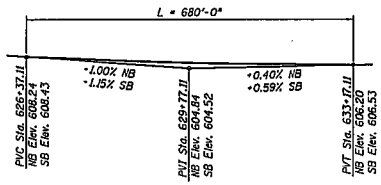
Existing Low Grade Elev. 605.67' @ Sta. 631+00.00
Drainage Area = 9.0 sq. mi. Proposed Low Grade Elev. 606.11' @ Sta. 631+75.50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1095	270.9	271.7	603.16	0.20	0.24	603.36	603.40
Design	50	1565	279.8	280.6	603.32	0.41	0.46	603.73	603.78
Base	100	1739	296.7	297.5	603.61	0.44	0.51	604.05	604.12
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	2212	339.0	339.9	604.33	0.53	0.61	604.86	604.94

APPROVED
APR 25 2006
AS A BASIS FOR
PREPARATION OF DETAILED PLAN



PLAN



NB & SB PROFILE GRADE OF I-55

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
fy = 60,000 psi (reinforcement)

SEISMIC DATA

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

HIGHWAY CLASSIFICATION

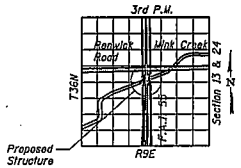
Interstate I-55
Functional Class: Rural Freeway
ADT: 32,000 (2004), 32,830 (2021)
ADTT: 21%
DHV: 3080
Design Speed: 70 m.p.h.
Posted Speed: 65 m.p.h.

LOADING HS20-44 & ALT.

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

DESIGN SPECIFICATIONS

2002 AASHTO



LOCATION SKETCH

LEGEND

- * B-1 - Soil Boring Location (1993)
- BR-1 - Soil Boring Location (2006)

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

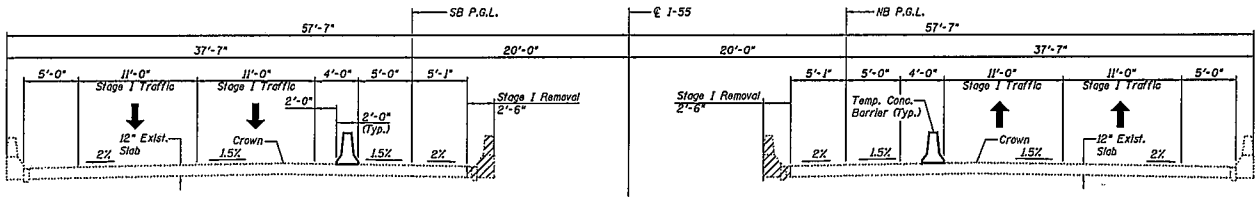
Note:
1. For Stone Riprap Treatment, see Sheet 2 of 2.

GENERAL PLAN
I-55 OVER MINK CREEK
FAI ROUTE 55-SECTION 27 VB-R
WILL COUNTY
STATION 630+07.11
S.N. 099-4615 (NB)
S.N. 099-4616 (SB)

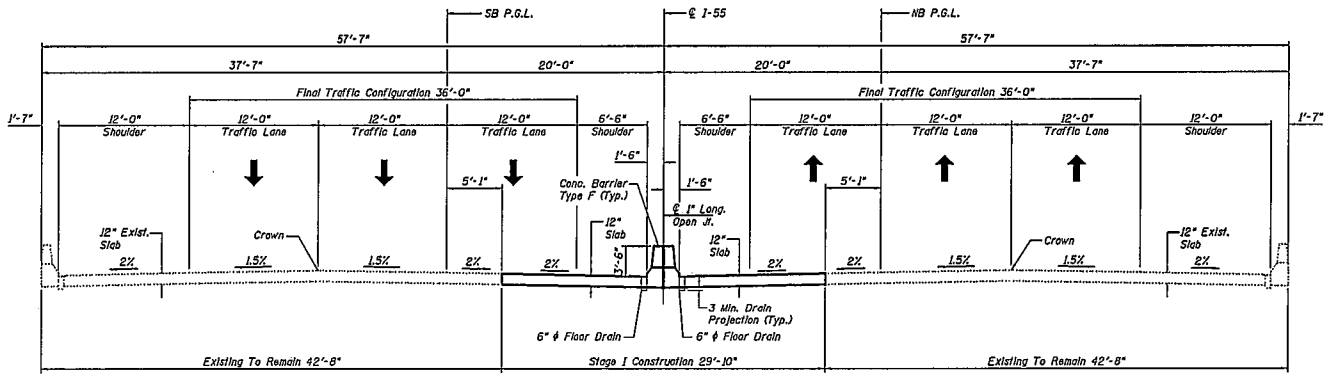
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FAI-55	**	WILL	42	19	SHEET NO. 2 OF 2 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

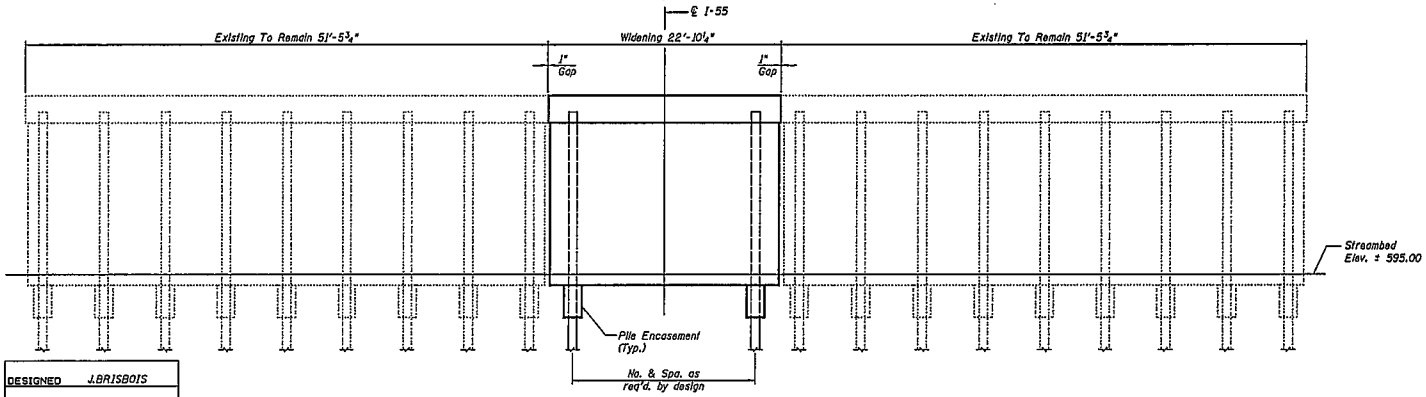
** SECTION 27 VB-R



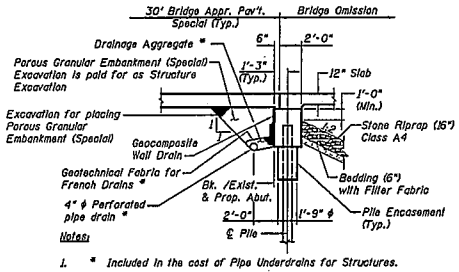
STAGE I REMOVAL
(Looking North)



STAGE I CONSTRUCTION / PROPOSED SECTION
(Looking North)



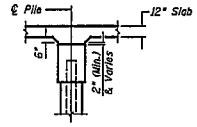
PIER SKETCH
(Looking North)



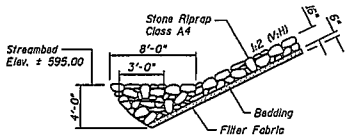
Notes:

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
(Dimension ⊙ Rt. L's)



SECTION THRU PIER



STONE RIPRAP TREATMENT
(Dimension ⊙ Rt. L's)

LEGEND

Hatched Area Indicates Removal

NOTE:

1. For location and spacing of Floor Drains, See Sheet 1 of 2.

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

DETAILS
I-55 OVER MINK CREEK
FAI ROUTE 55-SECTION 27 VB-R
WILL COUNTY
STA. 630+07.11
S.N. 099-4615 (NB)
S.N. 099-4616 (SB)