Bench Mark: Brass washer in N.E. wingwall of S.N. 100-0028. Elev. 559.402

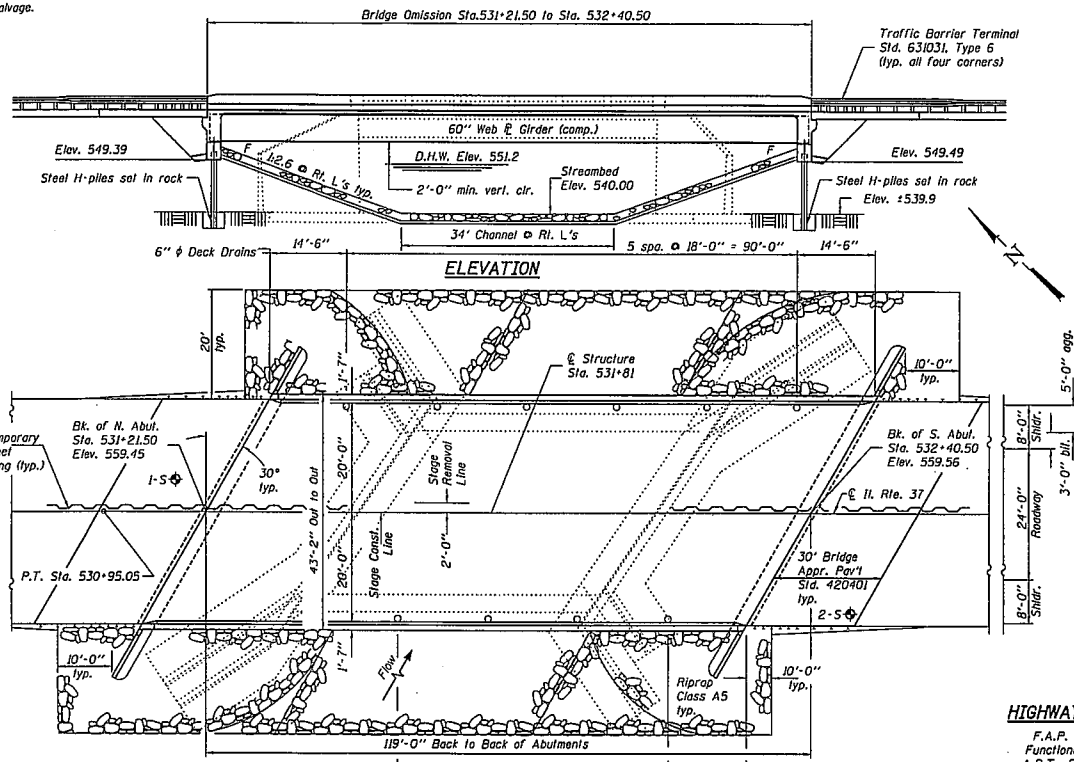
Existing Structure: S.N. 100-0028 Built in 1931 as S.B.I. Rte. 147, Sec. 113B at Station 531+81 as a one-span reinforced concrete beam 58'-8½" Bk. to Bk. abutments, supported on spread footings. Bridge widening, in 1953 to 30 ft. bridge clear width. Existing bridge to be removed and replaced. Traffic maintained utilizing stage construction.

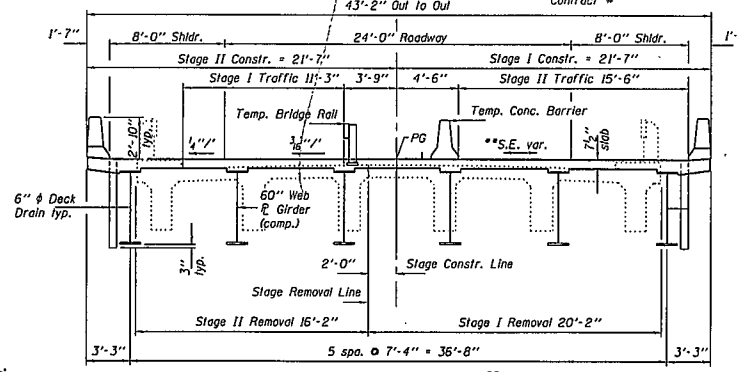
No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		1
F.A.P. ROUTE DIST. NO. 7		ILLINOIS	F.A.P. RTE. PROJECT	1 SHEETS

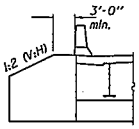
Contract #



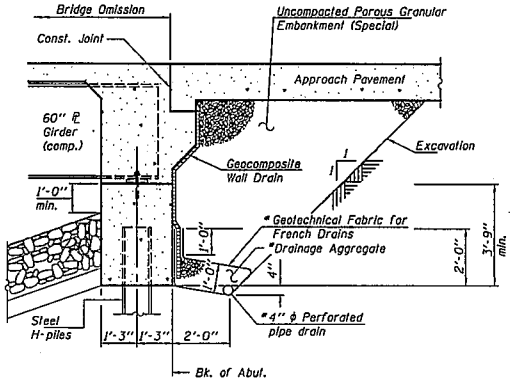


CROSS SECTION

**Eastbound S.E. varies: -1.29% @ N. Abut. to +1.30% @ S. Abut.



WINGWALL DETAIL



SECTION THRU INTEGRAL ABUTMENT

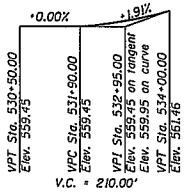
(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

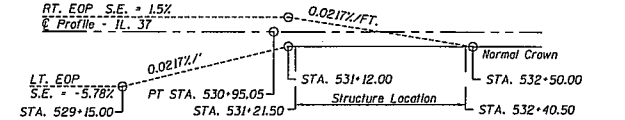
Design Scour Elevation (feet)	N. Abutment	S. Abutment
	549.39	549.49

CURVE DATA

PI Sta. = 525+17.88
Δ = 35°-31'-46" (LT)
D = 2°-58'-31"
R = 1,925.69'
T = 616.97'
L = 1,194.14'
E = 96.42'
e = variable (see sketch)
P.C. Sta. = 519+00.91
P.T. Sta. = 530+95.05



PROFILE GRADE



SUPERELEVATION TRANSITION SKETCH

WATERWAY INFORMATION

Exist. Low Grade Elev. 558.60 @ Sta. 531+50

Drainage Area = 6.99 sq. mi. Prop. Low Grade Elev. 559.61 @ Sta. 533+00

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	1670	345.6	565.8	549.6	0.6	0.5	550.2	550.1
Design	50	2490	416.8	706.6	551.2	0.8	0.5	552.0	551.7
Base	100	2830	439.0	753.3	551.7	0.9	0.6	552.6	552.3
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	3640	492.4	870.3	552.9	1.2	0.7	554.1	553.6

HIGHWAY CLASSIFICATION

F.A.P. Rte. 726 - Il. Rte. 37
Functional Class - Minor Arterial
A.D.T.: 5020 (2006) 6770 (2026)
D.H.V.: 610
Design Speed : 55 mph
Posted Speed : 55 mph

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

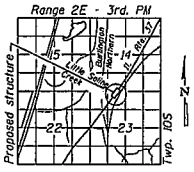
2004 AASHTO LRFD Bridge Design Specifications with 2005 Interims

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel)
M270 Grade 50W

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Bedrock Acceleration Coefficient (A) = 0.13Xg
Site Coefficient (S) = 1.5



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 37 OVER LITTLE SALINE CREEK
F.A.P. ROUTE 726 - SECTION (113A)B-1
WILLIAMSON COUNTY
STATION 531+81.00
STRUCTURE NO. 100-0091

DESIGNED R.J. Chaput	
CHECKED -	
DRAWN W.D. Collins	
CHECKED M.K. Christensen	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

4-7-06

D-99-017-03

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APPROVED

APR 1 0 2006

AS A BASIS FOR
PREPARATION OF DETAILED PLANS