Bench Mark: USGS Reference Mark on S.W. wingwall of structure 049-0055 Elev. 228.867

Existing Structure: S.N. 049-0055, single span 9.720m Back to Back abutments, 15.748m Out to Out, R.C. slab bridge on closed abutments. Built as IL Route 173, Section 134B at Sta. 830+21 (English) in 1931. The contractor shall remove the existing superstructure and replace it with a single span Composite Steel Wide Flange Superstructure. The road shall be kept open to traffic at all times utilizing stage construction.

Note: All dimensions in millimeters (mm) except as noted.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

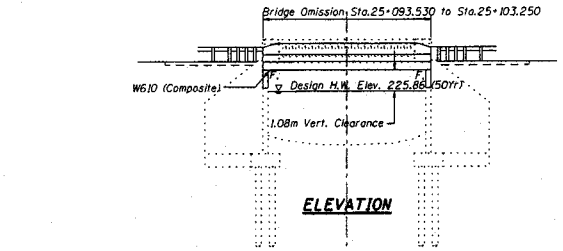
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.				
F.A.P.				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID "PROJECT"	

SHEET NO. 1
SHEETS 2

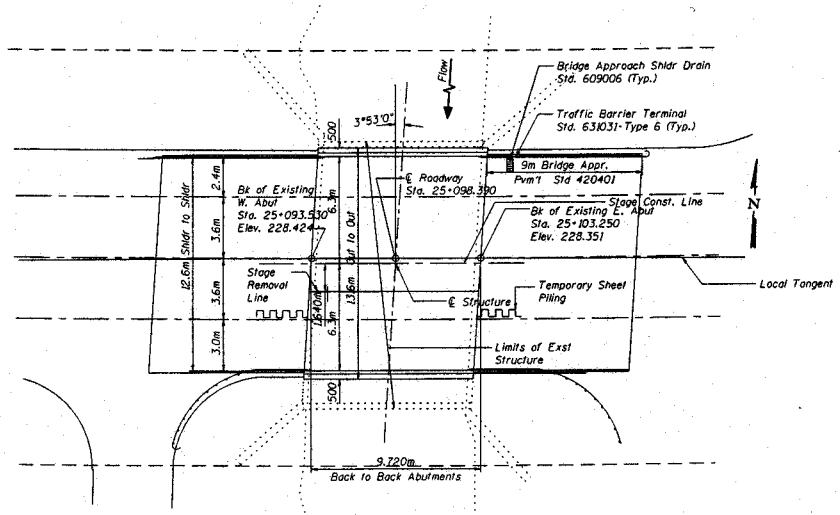
APPROVED

DEC 03 2002

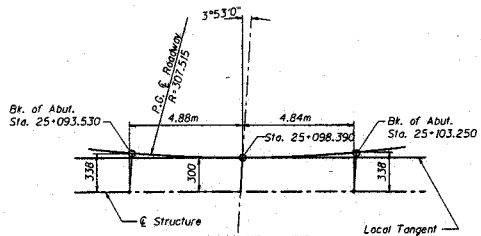
AS A BASIS FOR PREPARATION OF DETAILED PLANS



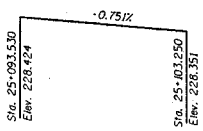
ELEVATION



PLAN



OFFSET SKETCH



PROFILE GRADE
Along ℄ Roadway

CURVE DATA

Δ= 117°58'50.836"
T= 511.600
R= 307.515
L= 633.221
E= 289.394
S.E.= 0.083
P.C. STA= 24+702.249
P.T. STA= 25+335.470
P.I. STA= 25+213.849

WATERWAY INFORMATION

Drainage Area = 2256 km2 Low Grade Elev. 226.94 @ Sta. 25+103

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. M Exist.	Opening Sq. M Prop.	Natural H.W.E. Exist.	Natural H.W.E. Prop.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	N/A	12.5	12.5	225.46	225.46	0.00	0.00	225.46	225.46
Design	50	N/A	16.3	16.3	225.86	225.86	0.00	0.00	225.86	225.86
Base	100	N/A	17.8	17.8	226.04	226.04	0.00	0.00	226.04	226.04
Overtopping		N/A					0.00	0.00		
Max. Calc.	500	N/A	21.8	21.8	226.44	226.44	0.00	0.00	226.44	226.44

HIGHWAY CLASSIFICATION
FAP Rte. 303 - IL Rte. 173
Class: Principal Arterial
ADT: 10,400 (1996); 14,040 (2016)
DHV: 1040 (1996)
Design Speed: 65 km/hr
Posted Speed: 65 km/hr

LOADING MS18
Allow 2.4 kN/m² for future wearing surface.

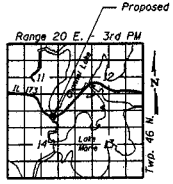
DESIGN SPECIFICATIONS
AASHTO 1996 thru 2000 & 2002 Interims

DESIGN STRESSES

FIELD UNITS
f'_c = 24 MPa
f_y = 400 MPa (Reinforcement)
f_y = 250 MPa (M270M Grade 250)
f_y = 345 MPa (M270M Grade 345)

EXISTING UNITS
f'_c = 24 MPa
f_y = 228 MPa (reinforcement)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035g
Site Coefficient (S) = 1.0



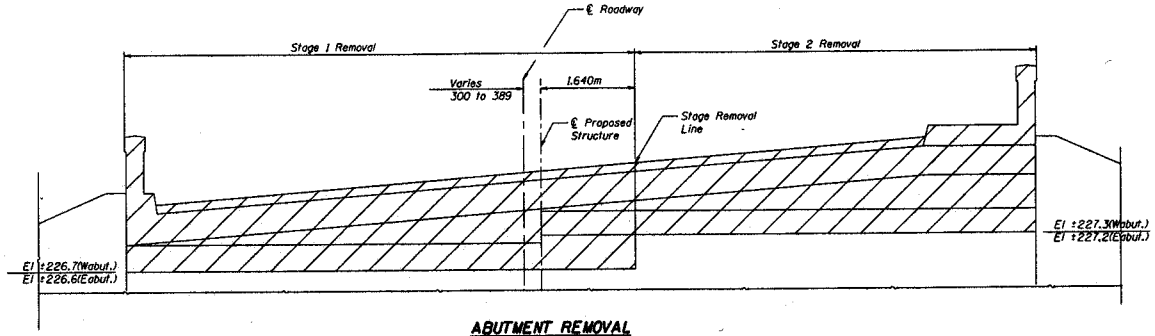
LOCATION SKETCH

DESIGNED	RGT
CHECKED	LLP
DRAWN	DJS
CHECKED	RGT

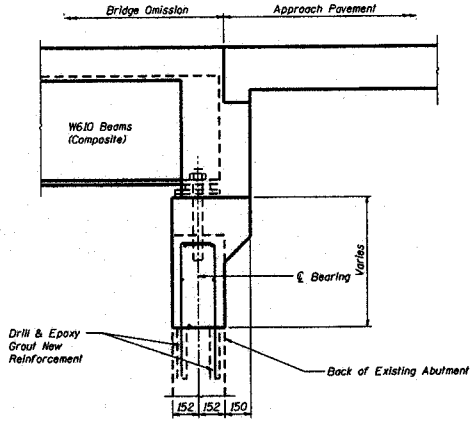
GENERAL PLAN
FAP 303 IL. ROUTE 173
OVER WEST BOAT CHANNEL
SECTION 134 (B & B-2) R-2
LAKE COUNTY
STATION 25+098.390
STRUCTURE NO. 049-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

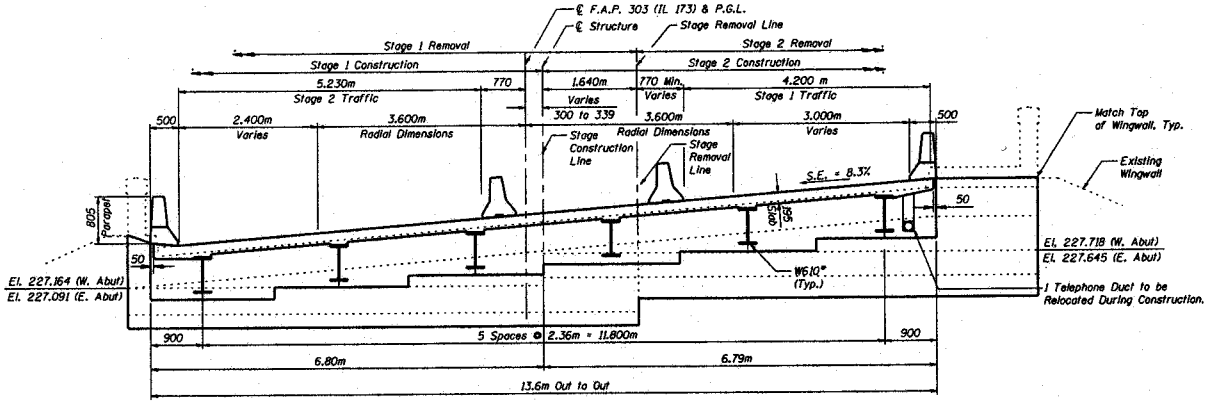
SHEET NO. 2
SHEETS 2



ABUTMENT REMOVAL
East Abutment Shown
West Abutment Similar



SECTION THRU ABUTMENT
(Dimensions at Rt. Angles)



CROSS SECTION
Looking East

* Utilize Composite Construction

DESIGNED	RGT
CHECKED	
DRAWN	DJS
CHECKED	

STAGE CONSTRUCTION DETAILS
FAP 303 IL. ROUTE 173
OVER WEST BOAT CHANNEL
SECTION 134 (B & B-2) R-2
LAKE COUNTY
STATION 25+098.390
STRUCTURE NO. 049-0055