Bench Mark: Permanent survey marker 105 @ Sta. 603+00, 20 ft. Right Elev. 395.77'

Existing Structure: S.N. 028-0017 Built in 1921 as S.B.I. Rt. 14 Section 4B at Station 603+80 as a 1-span 43' R.C. T-beam, closed abutments, supported on spread footings. Bridge widening in 1947 to 45'-4" out-to-out, and new bituminous overlay in 1970. Existing bridge to be removed & replaced. Traffic to be maintained utilizing stage construction.

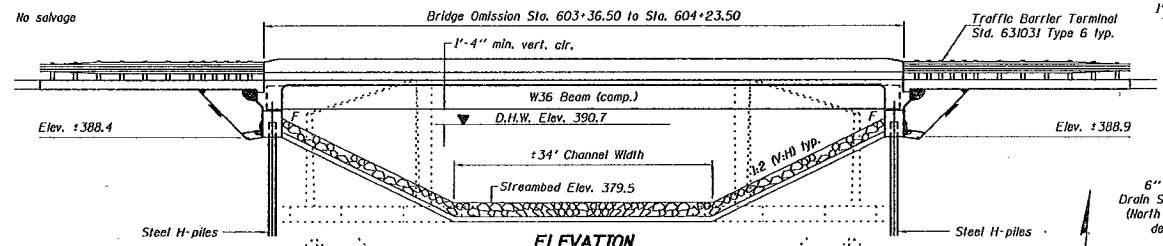
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

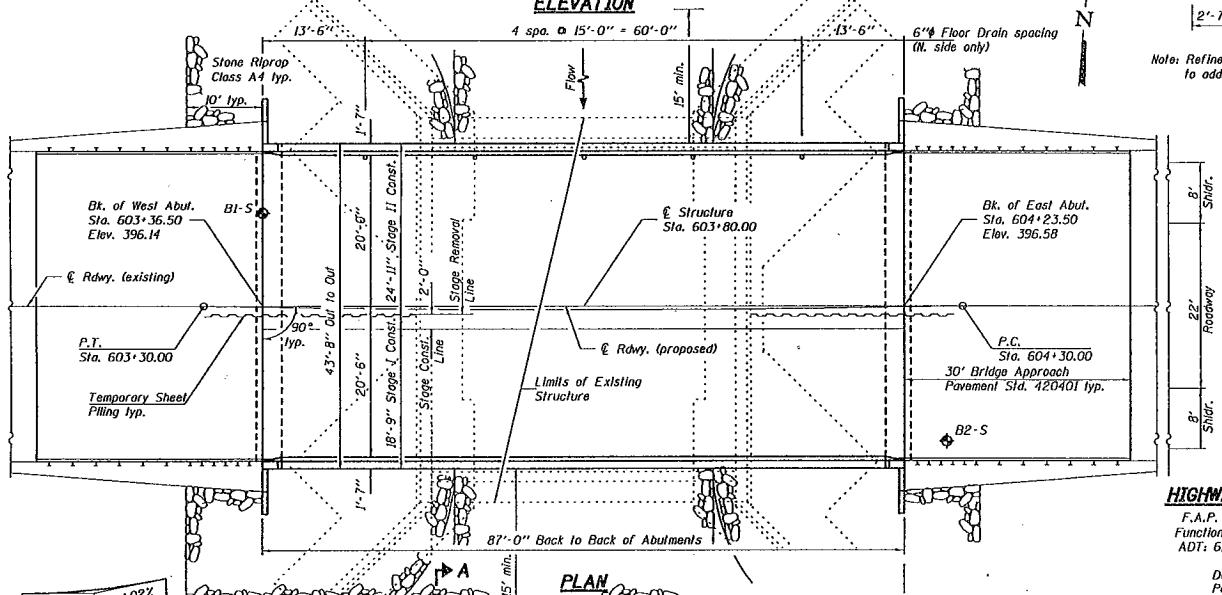
Note: Temporary brace or excavate behind existing abutments during removal of existing superstructure and substructure.

HIGHWAY NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		2 SHEETS

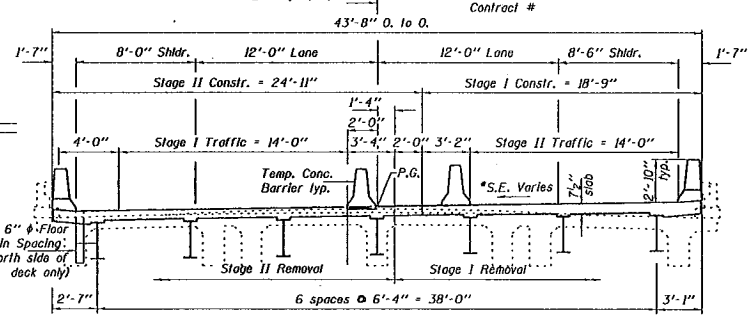
Contract #



ELEVATION



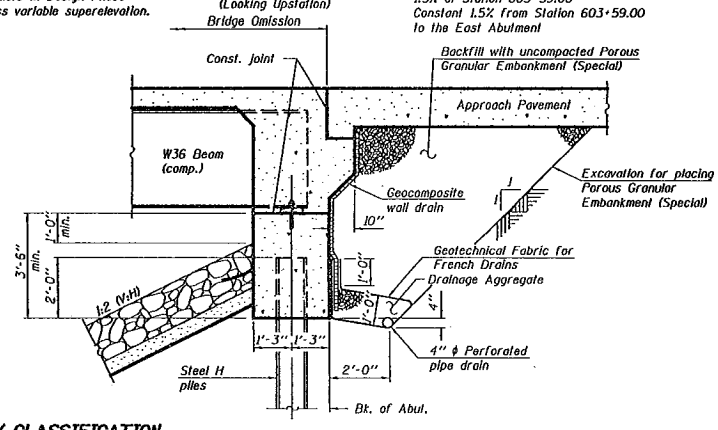
PLAN



CROSS SECTION
(Looking Upstation)

Note: Refine fillets in Design Phase to address variable superelevation.

*Varies from 1.96% at the West Abutment to 1.5% at Station 603+59.00
Constant 1.5% from Station 603+59.00 to the East Abutment



HIGHWAY CLASSIFICATION

F.A.P. Rte. 869 - IL. Rte. 14
Functional Class: Other Minor Arterial
ADT: 6,140 (2008); 8,270 (2028)
DHV: 795
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.

LOADING HL-93

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

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications
U.S. 3rd. Edition 2004 w/2005 Interims

DESIGN STRESSES

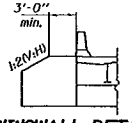
FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (Structural Steel M270 Grade 50)

SEISMIC DATA

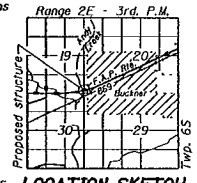
Seismic Performance Zone (SPZ) = 2
Bedrock Acceleration Coefficient (A) = 11.5
Site Coefficient (S) = 1.5

SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)



Design Scour Elevation (feet)	W. Abutment	E. Abutment
	388	389

WINGWALL DETAIL



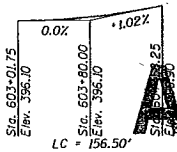
LOCATION SKETCH

WATERWAY INFORMATION

Exist. Low Grade Elev. 395.4 @ Sta. 597+50
Drainage Area = 16.83 sq. mi. Prop. Low Grade Elev. 395.4 @ Sta. 597+50

Flood	Freq. Yr.	Structure Number	O-C.F.S. Exist.	O-C.F.S. Prop.	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	028-0076	1,380	1,575	418.7	532.8	389.4	0.1	0.1	389.5	389.5
		028-2013	880	685	209.3	209.3					
		Total	2,260		628.0	742.1					
Design	50	028-0076	2,054	2,475	469.0	631.9	390.7	0.3	0.1	391.0	390.8
		028-2013	1,226	805	209.3	209.3					
		Total	3,280		678.3	841.2					
Base	100	028-0076	2,366	2,860	488.4	671.8	391.2	0.4	0.1	391.6	391.3
		028-2013	1,344	850	209.3	209.3					
		Total	3,710		697.7	881.1					
Max. Calc.	500	028-0076	2,932	3,690	512.5	769.0	392.4	1.0	0.0	393.4	392.4
		028-2013	1,768	1,010	209.3	209.3					
		Total	4,700		721.8	978.3					

10-Year Velocity Through Existing Bridge = 3.3 fps 10-Year Velocity Through Prop. Bridge = 3.5 fps



PROFILE GRADE
(Il. Rte. 14)

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

APPROVED
JUN 07 2006
EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN
ILLINOIS ROUTE 14 OVER ANDY CREEK
F.A.P. ROUTE 869 - SECTION 4B-1
FRANKLIN COUNTY
STATION 603+80.00
STRUCTURE NO. 028-0076

6-7-06

D-99-004-05

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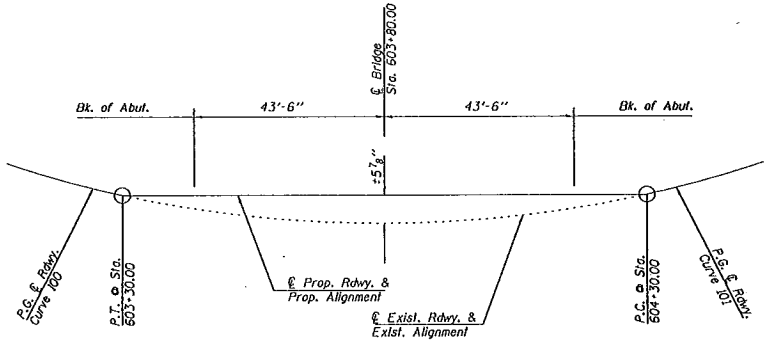
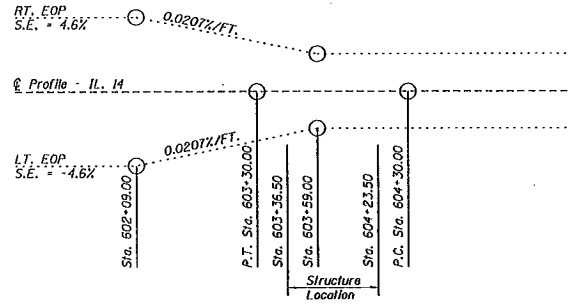
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
2 SHEETS
Contract #





CURVE DATA - CURVE NEW14-1

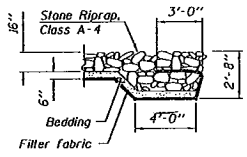
PI Sta. = 600+60.22
Δ = 13°-37'-08" (LT)
D = 2°-30'-44"
R = 2280.8'
T = 272.35'
L = 542.13'
E = 16.20'
P.C. Sta. = 597+87.87
P.T. Sta. = 603+30.00

CURVE DATA - CURVE NEW14-2

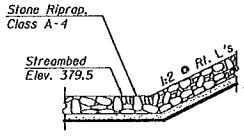
PI Sta. = 607+87.03
Δ = 4°-54'-10" (LT)
D = 0°-41'-13"
R = 8339.79'
T = 357.04'
L = 713.64'
E = 7.64'
P.C. Sta. = 604+30.00
P.T. Sta. = 611+43.63

SUPERELEVATION TRANSITION SKETCH

PROPOSED HORIZONTAL ALIGNMENT



SECTION A-A



RIPRAP DETAIL

APPROVED

JUN 0 7 2006

AS A BASIS FOR
PREPARATION OF DETAILED PLANS

DETAILS
ILLINOIS ROUTE 14 OVER
ANDY CREEK
F.A.P. ROUTE 869 - SECTION 4B-1
FRANKLIN COUNTY
STATION 603+80.00
STRUCTURE NO. 028-0076

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

200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

6-7-06

D-99-004-05

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