F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	114BR	LIVINGSTON		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

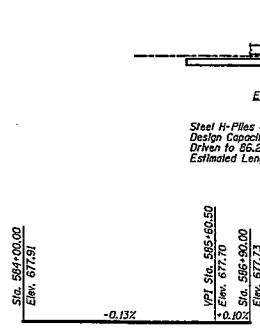
SHEET NO. 1 OF 1 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

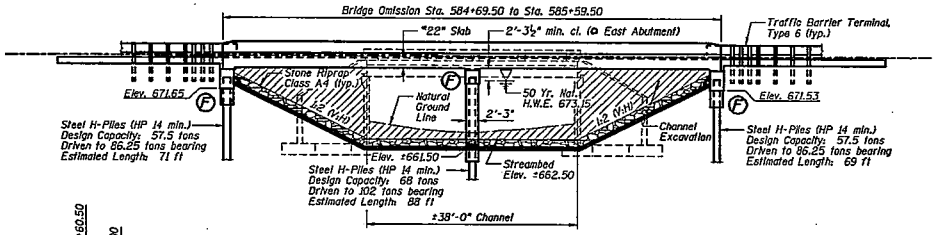
Benchmarks: U.S.G.S. Brass disk, top of Northeast wingwall. Station 585+33.50/28.50' LT., Elevation = 677.70.
R.R. Spike in Power Pole, Northwest Quadrant of IL Rte. 47 & IL Rte. 116 @ ROW Corner, ±100' Northeast of Bridge. Station 586+19/151' LT., Elevation = 673.54.

Existing Structure: SN 053-0076 was originally constructed in 1964 as SBI Rte. 116, Section 114BR. The structure consists of a single span precast prestressed concrete deck beam superstructure with closed concrete abutments supported on spread footings. The back-to-back abutment dimension measures 39'-0" while the out-to-out width measures 56'-4". The structure is to be replaced using stage construction.

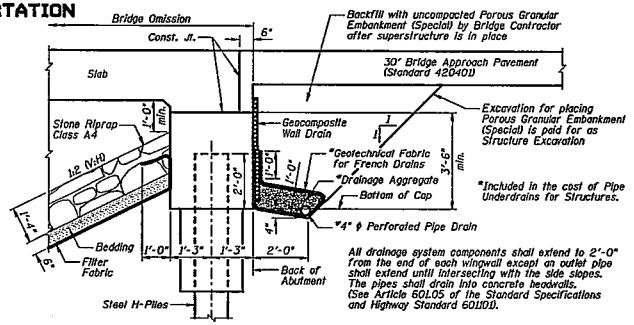
No Salvage.



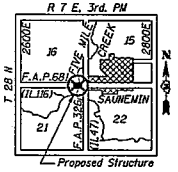
PROFILE GRADE
(Along ℄ Roadway)



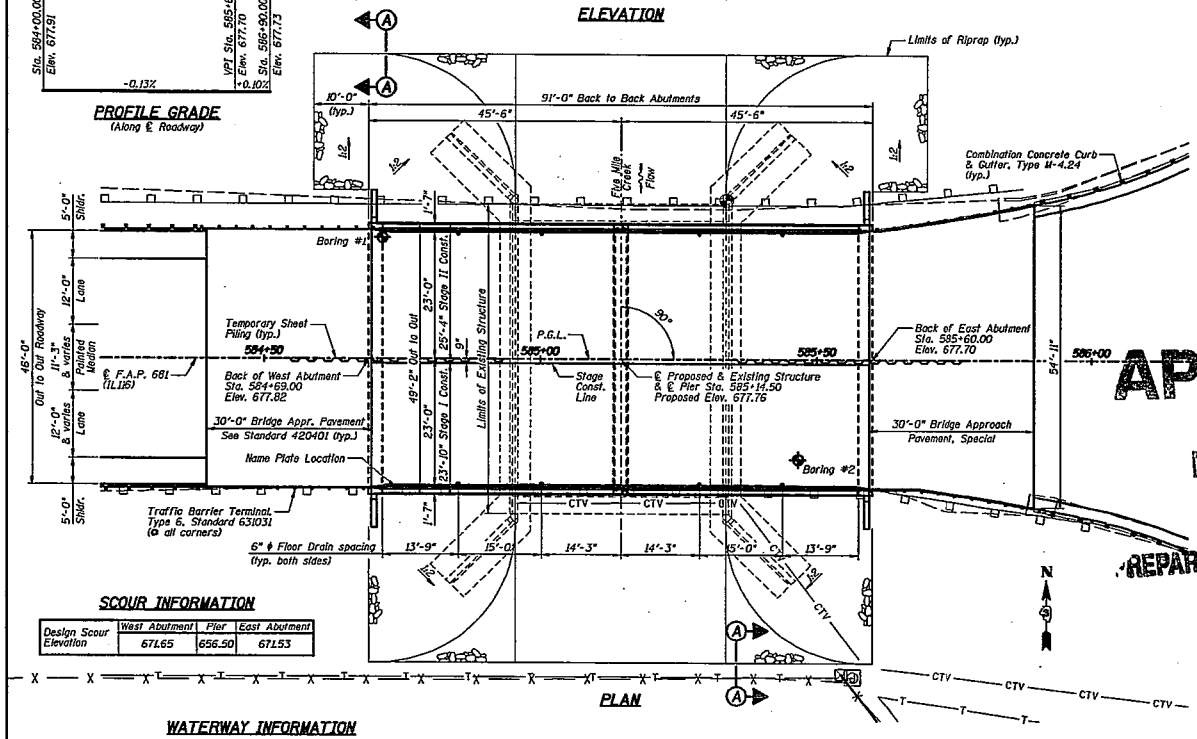
ELEVATION



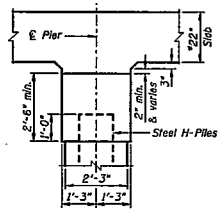
SECTION THRU INTEGRAL ABUTMENT



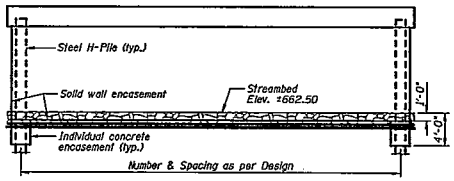
LOCATION SKETCH



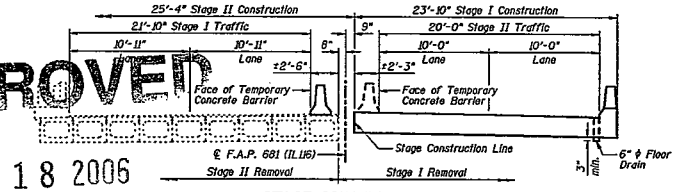
PLAN



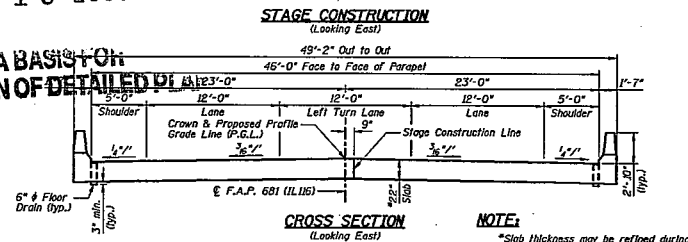
SECTION THRU PIER
(Horizontal dimensions @ Rt. L's)



PIER SKETCH



STAGE CONSTRUCTION
(Looking East)



CROSS SECTION
(Looking East)

NOTE:
*Slab thickness may be refined during final design.

APPROVED
MAY 18 2006
AS A BASIS FOR PREPARATION OF DETAILED PLANS

SCOUR INFORMATION

Design Scour Elevation	West Abutment	Pier	East Abutment
	671.65	656.50	671.53

WATERWAY INFORMATION

Drainage Area = 9.60 Sq. Mi. Low Grade Elev. 677.32 ft. @ Sta. 586+50.00

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	1057	300	463	672.54	0.25	0.17	672.80	672.70
Design	50	1579	323	504	673.15	0.61	0.33	673.80	673.50
Base	100	1793	331	518	673.35	0.80	0.41	674.20	673.80
Overtopping									
Max. Calc.	500	2294	347	547	673.77	1.44	0.62	675.20	674.40

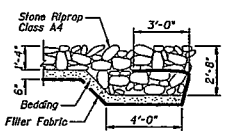
DESIGN SPECIFICATIONS
AASHTO 2002

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (Cast-In-Place)
fy = 60,000 psi (Reinforcement)

HIGHWAY CLASSIFICATION
F.A.P. Route 681
Class: Minor Arterial (Rural)
A.D.T.: 1500 (2004), 2450 (2024)
A.D.T.T.: 230 (2004), 296 (2024)
D.H.V.: 190 (2004), 245 (2024)
Design Speed: 55 M.P.H.
Posted Speed: 55 M.P.H.

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.042
Site Coefficient (S) = 1.0



SECTION A-A

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
F.A.P. 681 (IL116) OVER FIVE MILE CREEK
SECTION 114BR
LIVINGSTON COUNTY
STATION 585+14.50
STRUCTURE NO. 053-0181

DESIGNED BY: MSW DRAWN BY: DJM
DATE: 01/17/06 CHECKED BY: MGO