Benchmark: Chiseled "□" on top of N.W. Wingwall of S.N. 006-0071. Elev. 632.93

Existing Structure: SN 006-0071 to be removed.

Originally built in 1936 as S.A. 3 Section 13-X-B. Superstructure was widened and replaced in 1960. Three span prestressed concrete box beam with open abutments on piles and pile bent piers. 147'-8 1/2" Bk. to Bk. Abutments.

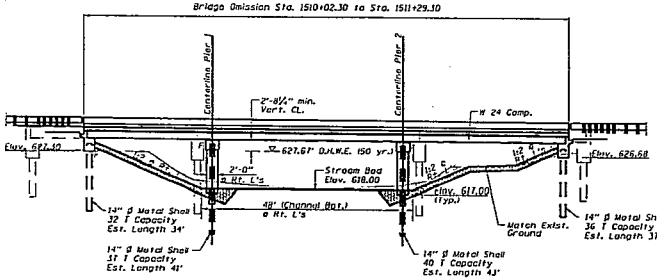
Construction to be completed using detour.

No Salvage.

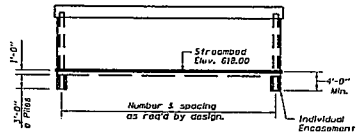
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 2247	*	BUREAU	1	1	SHEET NO. 1 OF 1 SHEETS

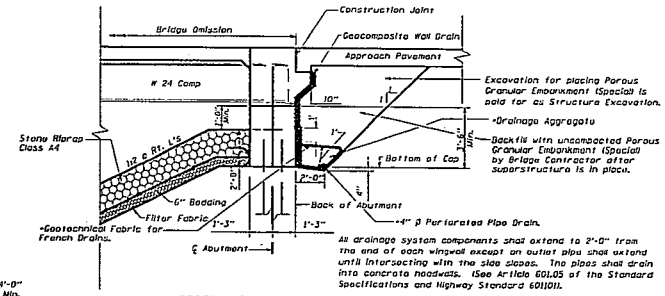
* 13X-BR-1



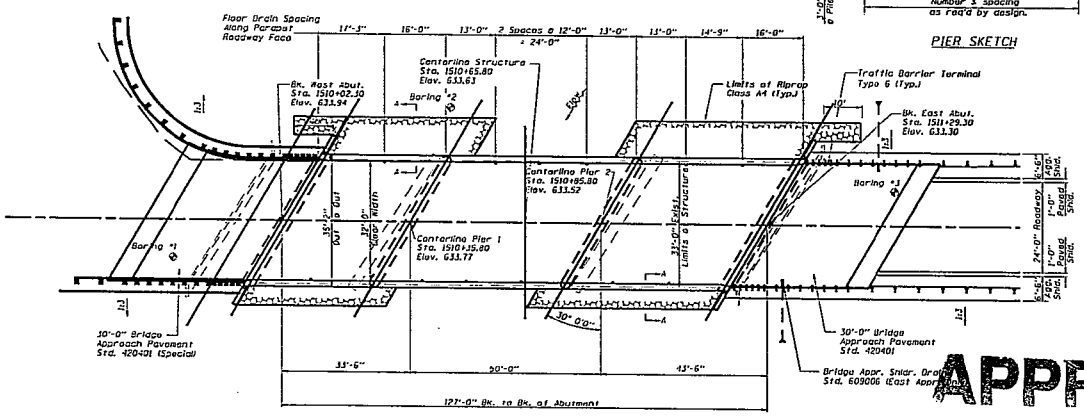
ELEVATION
(Looking North)



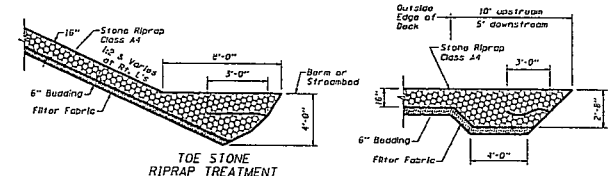
PIER SKETCH



SECTION THRU INTEGRAL ABUTMENT
DIMENSIONS AT RIGHT ANGLES
* Included in the cost of "Pipe Underdrains for Structures"

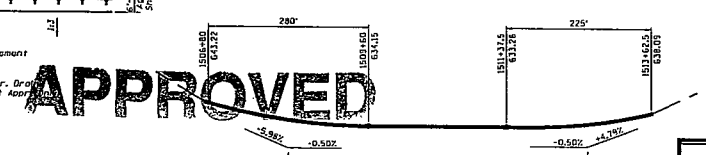


PLAN



TOE STONE RIPRAP TREATMENT

SECTION A-A



PROFILE GRADE
(Along Centerline Roadway)

APPROVED

MAY 18 2000

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DESIGN SCOUR	W. ABUT	PIER 1	PIER 2	E. ABUT
ELEVATION	627.00	610.00	610.00	626.60

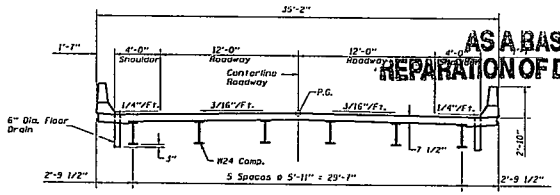
WATERWAY INFORMATION

DRAINAGE AREA: 43.1 SQ. MI.

Exist. Low Grade Elev.: 632.70 @ Sta. 1510+60.8
Prop. Low Grade Elev.: 633.20 @ Sta. 1511+59.7

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	2665	500.75	576.88	626.86	0.12	0.04	626.98	626.90
DESIGN	50	3922	575.79	657.63	627.67	0.21	0.17	627.88	627.84
BASE	100	4436	607.23	685.04	627.92	0.26	0.21	628.18	628.13
OVERTOPPING	-	-	-	-	-	-	-	-	-
MAX. CALC.	500	5634	662.98	738.16	628.41	0.42	0.34	628.83	628.75

10 Year Velocity Through Existing Bridge= 5.17 fps
10 Year Velocity Through Prop. Bridge= 4.60 fps



Note: Beams to be made composite in positive moment regions.

PROPOSED CROSS SECTION
(Looking East)

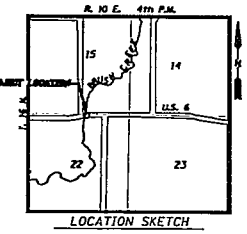
FAS Route: 2247
Class: Major Collector
A.D.T.: 2600 (2008) 3400 (2028)
A.D.T.T.: 145 (2008) 187 (2028)
D.H.V.: 340 (2028)
Design Speed: 55 mph
Posted Speed: 55 mph

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

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
Field Units
f'c = 3,500 psi (Substructure)
f'c = 3,500 psi (Superstructure)
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (M270 Grade 50W Structural Steel)

SEISMIC DATA
S.P.G.: A
A= 0.04
S= 1.0



LOCATION SKETCH

GENERAL PLAN
FAS ROUTE 2247 (I.L.S. 6)
OVER BRUSH CREEK
SECTION 13X-BR-1
STA. 1510+65.80
BUREAU COUNTY
SN 006-0169

FIGURE 6