ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	2	1

SHEET NO. 1 OF 2 SHEETS

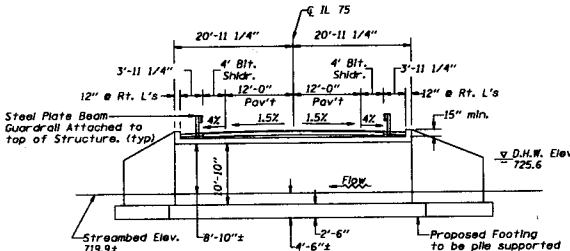
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark: Chiseled "□" top of southeast wingwall of SN 101-0114. Elev. = 728.74

Existing Structure: SN 101-0114 to be removed. Originally built in 1928 as SBI Route 75 Section 115. In 1971, SBI 75, Section 115BR replaced and widened the original superstructure. Single span prestressed concrete box beam with closed abutments on timber piles. 38'-4 3/4" Bk. to Bk. Abutments.

One lane traffic to be maintained using stage construction.

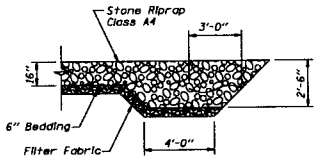
No Salvage.



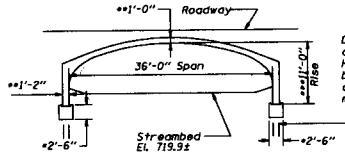
PROPOSED LONGITUDINAL SECTION
Looking East
(Dimensions are at Rt. L's to Roadway unless noted)

WATERWAY INFORMATION									
Drainage Area= 8.2 Sq. Mi. Low Grade Elev.= 730.3 (Exist./Prop.) @ Sta. 67+00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
	10	918	143	178	725.1	0.8	0.7	725.9	725.8
Design	50	1371	159	193	725.6	1.4	1.2	727.0	726.8
Base	100	1556	162	196	725.7	1.7	1.5	727.4	727.2
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1988	171	205	726.0	2.5	2.1	728.5	728.1

10-Year velocity through existing bridge= 6.4 Fps
10-Year velocity through prop. bridge= 5.2 Fps



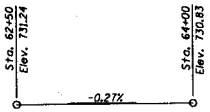
SECTION A-A



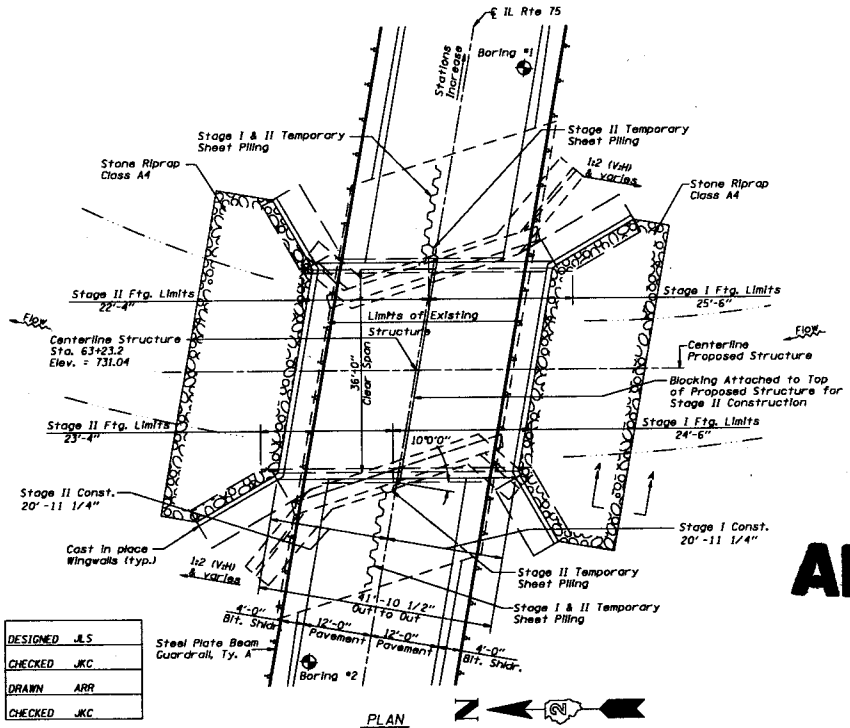
Dimensions are shown for a Con Span structure. Hy-Span and Tri-Span bridge sections are also acceptable, but dimensions may vary.

SECTION THRU STRUCTURE
(At Rt. L's to Structure)

* Indicates dimension subject to refinement in final design.
** May vary per pre-caster's final design.
*** Includes 2" Footing Socket.



PROFILE GRADE
(Along Centerline Roadway)



PLAN

DESIGNED	JLS
CHECKED	JKC
DRAWN	ARR
CHECKED	JKC

HIGHWAY CLASSIFICATION

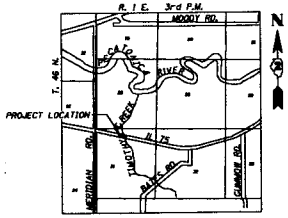
FAP Route:	505
Class:	Rural Minor Arterial
A.D.T.:	2700 (2008) 3650 (2028)
D.H.V.:	365 (2028)
Design Speed:	55 mph
Posted Speed:	55 mph

DESIGN SPECIFICATIONS
2002 AASHTO

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

DESIGN STRESSES
Field Units
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
Precast Units
f'c = 5,000 psi
fy = 60,000 psi (reinforcement)
fy = 65,000 psi (welded wire fabric)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.032
Site Coefficient (S) = 1.2



LOCATION SKETCH

APPROVED

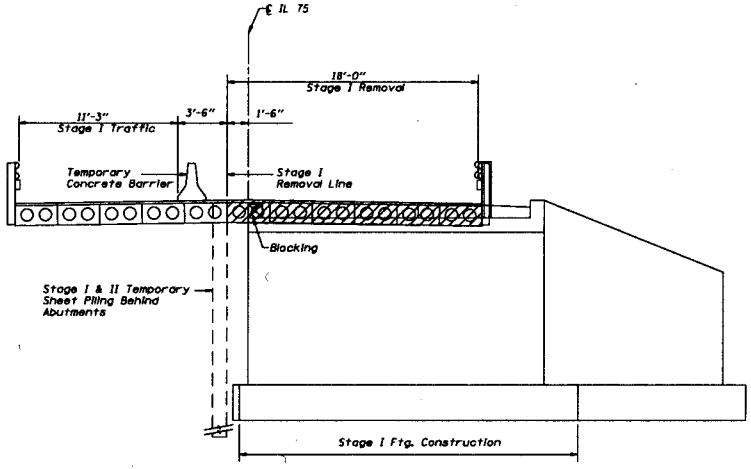
OCT 24 2005

AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN
FAP ROUTE 505 (IL 75)
OVER TIMOTHY CREEK
SECTION 115BR-1
STA. 63+23.20
WINNEBAGO COUNTY
SN 101-0183

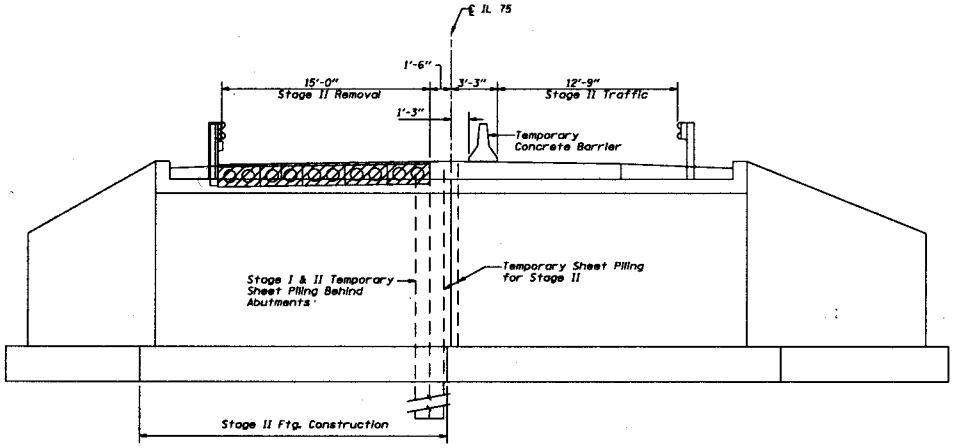
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	2	2

SHEET NO. 2 OF 2 SHEETS



STAGE I
Looking up Station
(Dimensions are at Rt. L's to Roadway unless noted)

Note: Because the existing abutments are restrained top and bottom, excavating the soil behind, or bracing the existing abutments may be required prior to removing the existing bridge superstructure.



STAGE II
Looking up Station
(Dimensions are at Rt. L's to Roadway unless noted)

DESIGNED	JLS
CHECKED	JKC
DRAWN	ARR
CHECKED	JKC

STAGE CONSTRUCTION DETAILS
FAP ROUTE 505 (IL 75)
OVER TIMOTHY CREEK
SECTION 115BR-1
STA. 63+23.20
WINNEBAGO COUNTY
SN 101-0183