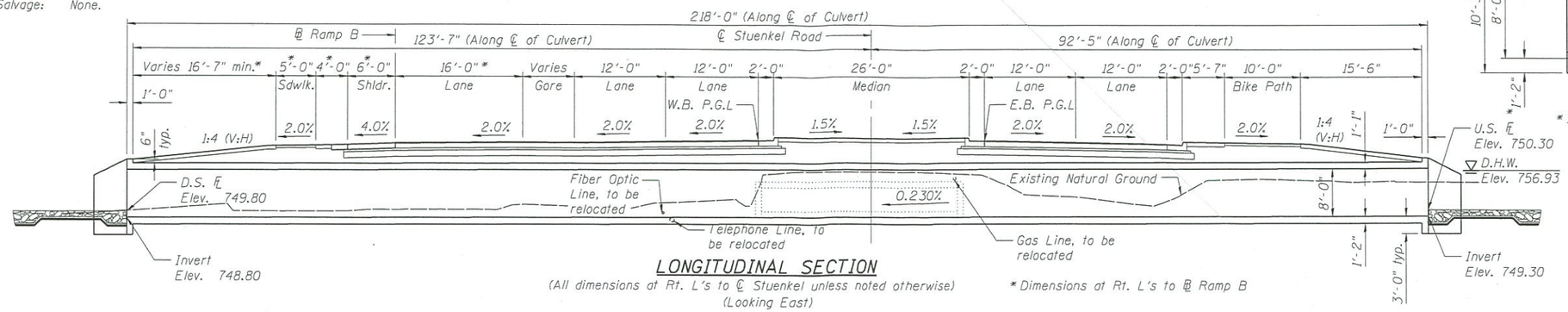
Benchmark: RR Spike in N. Face of first power pole west of culvert under Stuenkel Rd., east of I-57, south side of Stuenkel, Elev. = 760.034

Existing Structure: Existing SN 099-6751, originally built in 1940 is a double 12.5'X4' R.C. box culvert with a culvert length of 35'. Existing plan data not available. Stuenkel Road is currently closed with a detour.

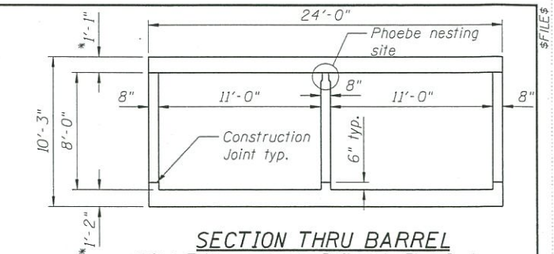
Salvage: None.



LONGITUDINAL SECTION

(All dimensions at Rt. L's to ℄ Stuenkel unless noted otherwise)
(Looking East)

* Dimensions at Rt. L's to ℄ Ramp B



SECTION THRU BARREL

* Slab Thickness May be Refined in Final Design.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications 6th Edition with 2013 Interims

HIGHWAY CLASSIFICATION

Stuenkel Road
Functional Class: Collector - Urban
ADT: 20,000 (2030)
ADTT: 3,200 (2030)
DHV: 2030
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.
2-Way Traffic
Directional Distribution: 50:50
Stuenkel Road is currently closed to traffic

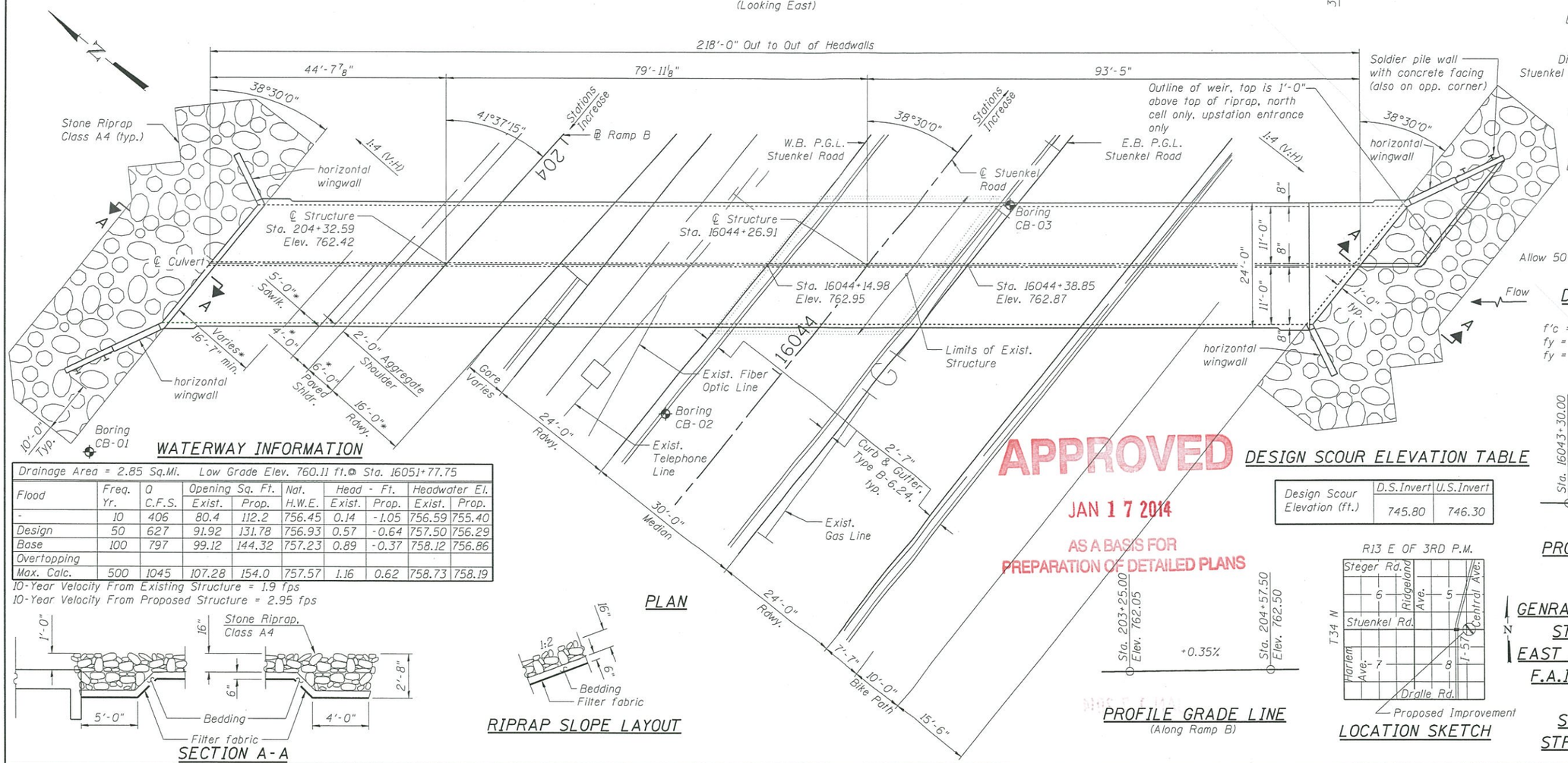
Ramp B
Functional Class: Interstate
ADT: 7,900 (2030)
ADTT: 790 (2030)
DHV: 380
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.
1-Way Traffic

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 50,000 psi (Structural Steel)
fy = 60,000 psi (Reinforcement)



PLAN

WATERWAY INFORMATION

Drainage Area = 2.85 Sq.Mi. Low Grade Elev. 760.11 ft.@ Sta. 16051+77.75

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	406	80.4	112.2	756.45	0.14	-1.05	756.59	755.40
Design	50	627	91.92	131.78	756.93	0.57	-0.64	757.50	756.29
Base	100	797	99.12	144.32	757.23	0.89	-0.37	758.12	756.86
Overtopping									
Max. Calc.	500	1045	107.28	154.0	757.57	1.16	0.62	758.73	758.19

10-Year Velocity From Existing Structure = 1.9 fps
10-Year Velocity From Proposed Structure = 2.95 fps

SECTION A-A

RIPRAP SLOPE LAYOUT

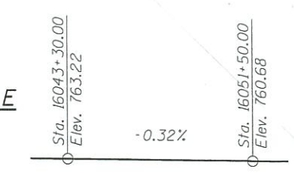
APPROVED
JAN 17 2014
AS A BASIS FOR PREPARATION OF DETAILED PLANS

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	745.80	746.30

PROFILE GRADE LINE

(Along Ramp B)



PROFILE GRADE LINE

(Along Stuenkel Road)

LOCATION SKETCH

GENRAL PLAN AND ELEVATION
STUENKEL ROAD OVER
EAST BRANCH HICKORY CREEK
F.A.I. 57 - SEC. 99-1HB-R1
WILL COUNTY
STATION 16044+26.91
STRUCTURE NO. 099-6010

FILE NAME =
TYLIN INTERNATIONAL

USER NAME =	DESIGNED - SP	REVISED
	CHECKED - PDF	REVISED
PLOT SCALE =	DRAWN - PK	REVISED
PLOT DATE =	CHECKED - SP	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 1 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99-1HB-R1	WILL		
STRUCTURE NO. 099-6010		CONTRACT NO. 60L69		
		ILLINOIS FED. AID PROJECT		

$FILE$ $TIME$ $DATE$