Bench Mark: "X" on curb at northwest corner of Mary Drive. Elevation 910.64.

Existing Structure: S.N. 045-0235 built in 1946 as a double 7'x4' R.C. box culvert. 40'-0" edge of shoulder to edge of shoulder with culvert length of 41'-4". It was extended later on an unknown date at both ends to a culvert length of 64'-10". Traffic to be maintained utilizing stage construction.

No salvage.

WATERWAY INFORMATION

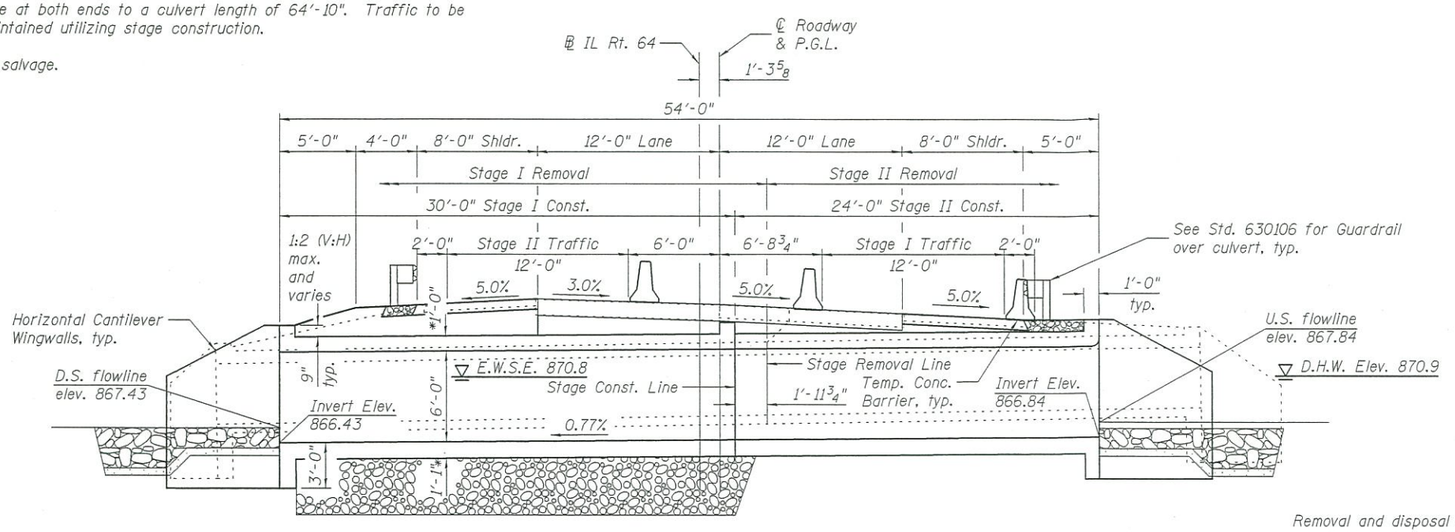
Drainage Area = 1.8 sq. mi

Exist. Overtopping Elev. 875.8 @ Sta. 672+02
Prop. Overtopping Elev 875.8 @ Sta. 672+02

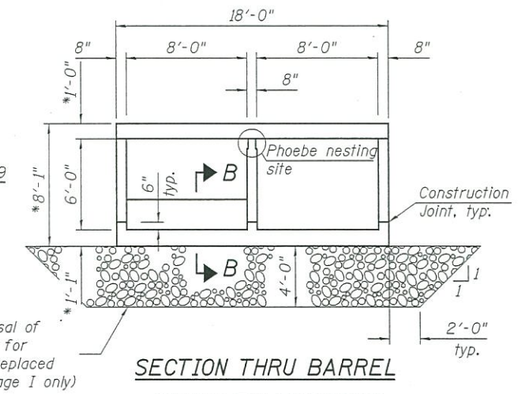
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	118	22	31	870.4	0.5	0.3	870.9	870.7
Design	50	260	29	39	870.9	1.4	1.0	872.3	871.9
Base	100	294	31	41	871.0	1.6	1.1	872.6	872.1
Overtopping									
Max. Calc.	500	558	39	51	871.6	3.0	2.4	874.6	874.0

10-Year Velocity Through Existing Structure = 3.2 fps
10-Year Velocity Through Proposed Structure = 3.0 fps

2-Year Peak Flow = 40 cfs
2-Year Peak Elevation = 869.83
2-Year Peak Bypass Opening = 15 sq. ft.

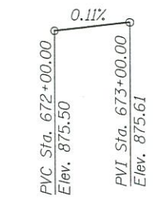


LONGITUDINAL SECTION



SECTION THRU BARREL

(Upstream End, Looking North)
*Slab thickness may be refined in final design.

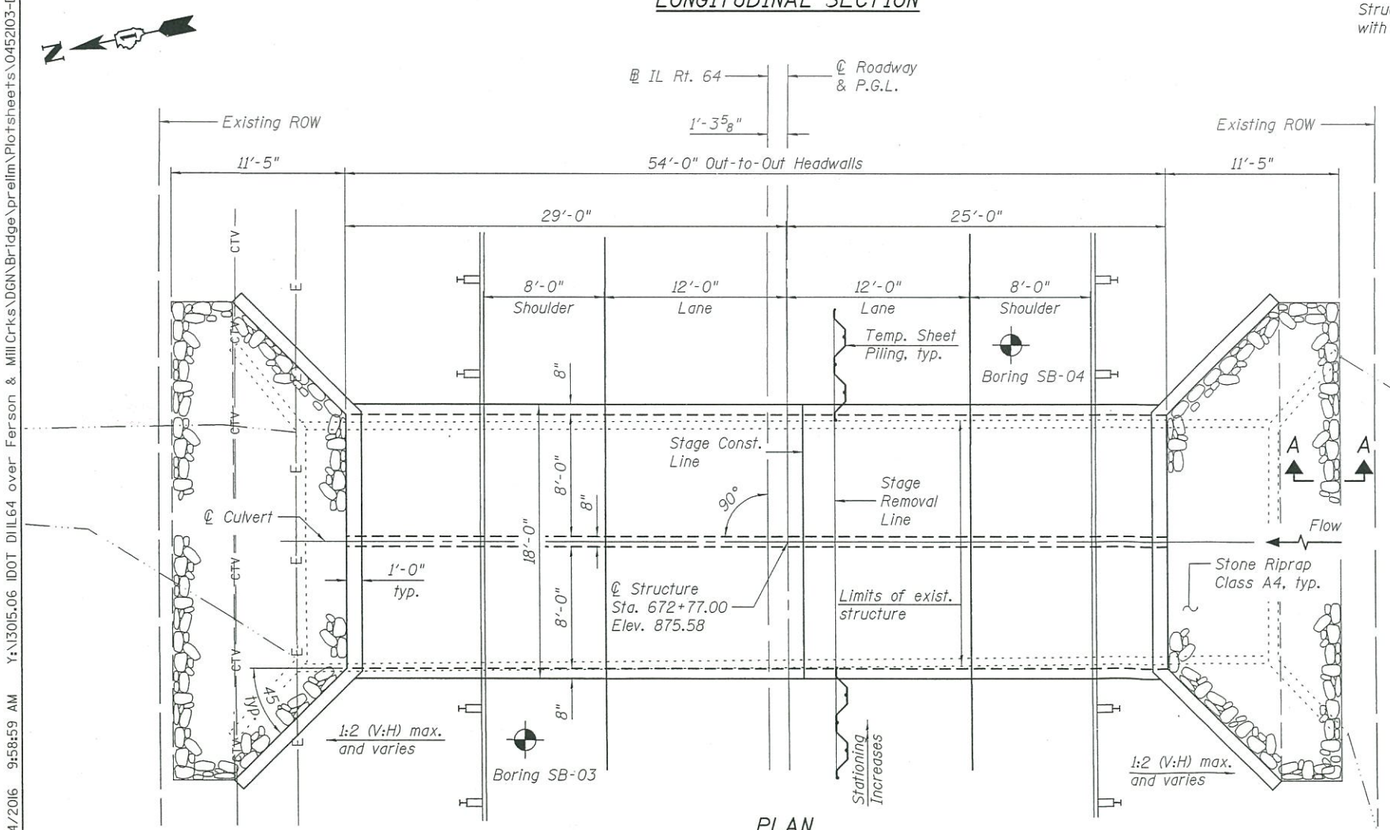


PROFILE GRADE

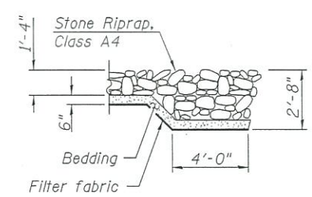
(Along IL Rt. 64 PGL)

HIGHWAY CLASSIFICATION

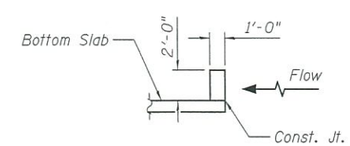
F.A.P. Rte. 307 - Il. Rte. 64
Functional Class: Other Principal Arterial
ADT: 4150(2013); 11,000(2040)
ADTT: 310(2013); 825(2040)
DHV: 415(2013)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two Way Traffic
Directional Distribution: 55(WB):45(EB)



PLAN



SECTION A-A



SECTION B-B

LOADING HL-93

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

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims

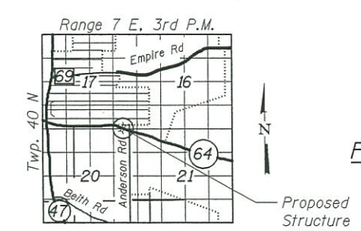
DESIGN STRESSES

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

APPROVED
APR 0 6 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS

CURVE DATA

Ex-IL64-1
P.I. Sta. = 671+02.97
Δ = 21°30'30" (RT)
D = 1°48'00"
R = 3,183.23'
T =604.59'
L = 1,194.96'
E = 56.91'
e = 4.7%
P.C. Sta. = 664+98.38
P.T. Sta. = 676+93.34



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 64 OVER
FERSON CREEK
F.A.P. RTE 307 - SEC 2015-041B
KANE COUNTY
STATION 672+77.00
STRUCTURE NO. 045-2103

PRINT DATE: 3/24/2016 9:58:59 AM Y:\130\5.06 IDOT DIL64 over Ferson & Mill Crks\DGN\Bridge\prelim\Plotsheets\0452103-D162B02-0_-TSL_FersonCreek.dgn

EFK•Moen, LLC
Civil Engineering Design
125 S. Wacker Drive, Suite 2090
Chicago, IL 60606
Phone 312-396-4065

USER NAME = jo	DESIGNED - JSR	REVISED -	
	CHECKED - CDL	REVISED -	
PLOT SCALE = 0.1667 ' / in.	DRAWN - JSR	REVISED -	
PLOT DATE = 3/24/2016	CHECKED - CDL	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	2015-041B	KANE		

CONTRACT NO. 62B02
ILLINOIS FED. AID PROJECT