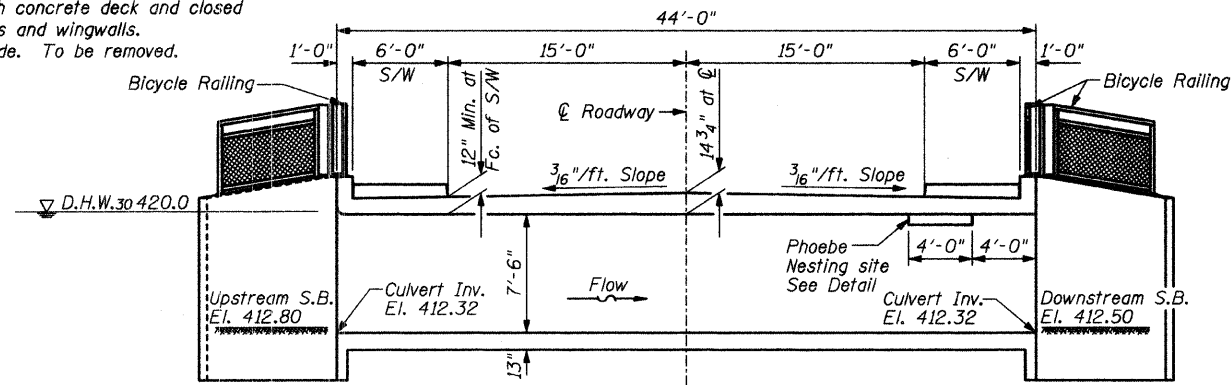


Bench Mark #1: P.K. nail is power pole,  
66' Lt., Sta. 2+59 - Elev. 420.55

Existing Structure: S.N. 096-6004. Single span  
I-beam bridge with concrete deck and closed  
concrete abutments and wingwalls.  
22' long x 36' wide. To be removed.  
No salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**LONGITUDINAL SECTION**

(Horizontal dimensions  
at Rt. L's to  $\bar{C}$  Roadway)  
(Looking North)

STATION 2+19.00  
BUILT 2010 BY  
CITY OF FAIRFIELD  
SEC. 06-00047-00-BR  
LOADING HS20-44  
STRUCTURE NO. 096-6012

**NAME PLATE**  
See Std. 515001

**BILL OF MATERIALS (CULVERT ONLY)**

ITEM	UNIT	QUANTITY
Removal and Disposal of Unsuitable Material	Cu Yd	122
Channel Excavation	Cu Yd	96
Porous Granular Embankment	Ton	435
Stone Riprap, Class A1	Ton	215
Removal of Existing Structures	Each	1
Floor Drains	Each	8
Reinforcement Bars, Epoxy Coated	Pound	40,270
Bicycle Railing	Foot	89
Name Plates	Each	1
Concrete Box Culverts	Cu Yd	193.7

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.

All reinforcement shall be Epoxy Coated, (E).

All exposed edges shall be chamfered  $\frac{3}{4}$ ", unless noted otherwise.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

See Section 502 of the Standard Specifications for Structural Excavation.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

See Special Provisions for Soil Borings.

Do not scale these drawings.

**LOADING AASHTO HS 20-44**

50#/sq. ft. included in dead load for future wearing surface.

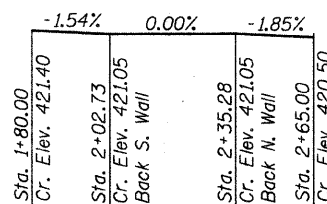
**DESIGN SPECIFICATIONS**

AASHTO Standard Specifications for Highway Bridges, 17th Edition - 2002

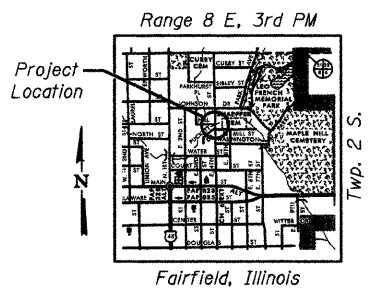
**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)



**PROFILE GRADE ACROSS STRUCTURE**  
(along  $\bar{C}$  N. E. 4th St.)



**LOCATION SKETCH**

I certify that to the best of knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



Gary L. Hahn  
12-21-2009  
Date of Signing  
11-30-2010  
Date of License Expiration

**GENERAL PLAN AND ELEVATION**  
**N.E. 4th STREET OVER BRANCH OF POND CREEK**  
**CITY OF FAIRFIELD, WAYNE COUNTY**  
**STATION 2+19.00**  
**STRUCTURE NO. 096-6012**

SHEET NO. 1 4 SHEETS	ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	NE 4th	06-00047-00-BR	WAYNE	8	5
CONTRACT NO. 95617					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**RHUTASEL and ASSOCIATES, INC.**  
CONSULTING ENGINEERS • LAND SURVEYORS  
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS  
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

**WATERWAY INFORMATION**

(By Connor & Connor, Inc.)

Drainage Area = 1.78 sq. mi. Low Grade Elev. 419.9 @ Sta. 3+00

Flood	Freq. Yr.	a C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Exist. Prop.	Headwater El.
			Exist.	Prop.		Exist.	Prop.		
Design	30	965	103	180	420.0	0.2	0.2	420.2	420.2
Base	100	1530	103	180	420.8	0.1	0.1	420.9	420.9
Overtopping									
Max. Calc.	500	2120	103	180	421.4	-0.1	0.4	421.3	421.8

DESIGNED	- GLH
CHECKED	- GLH
DRAWN	- JN
CHECKED	- GLH

12/21/2009 RAAI #50809