

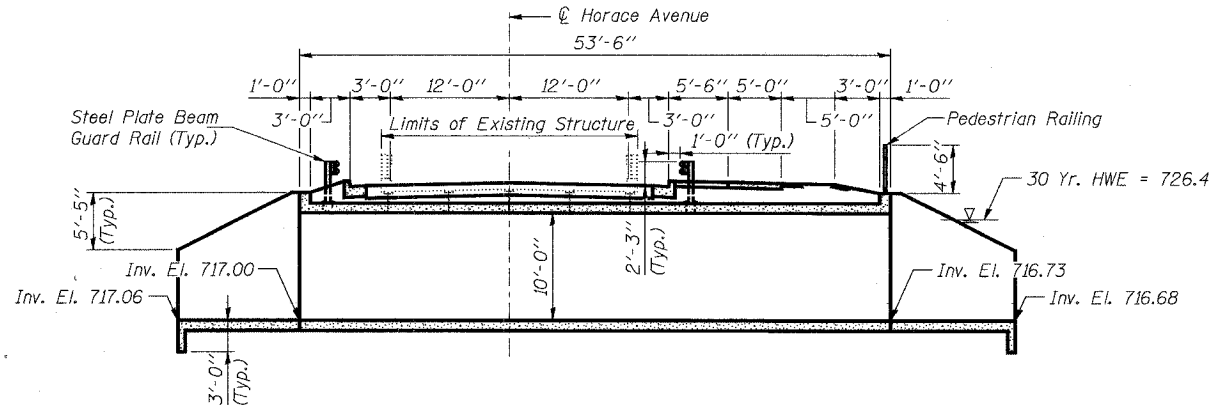
ROUTE NO.	SECTION	COUNTY	SHEETS	"SET"	SHEET NO. 1
F.A.U. 5100		WINNEBAGO	17	10	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	BHM-5099(63)		
04-00526-00-BR					

Bench Mark #1: Benchmark disk located in concrete headwall of concrete arch viaduct structure over South Fork of Kent Creek. This structure is located immediately north of Cunningham Road and about 65 yards west of South Horace Avenue. The benchmark disk is located in south headwall of the structure about 2 feet west of east end of headwall, 1.5 feet north of south edge of headwall, and about 2 feet below level of former railroad track. Elev. 751.26

Bench Mark #2: Set spike in tree located on the roadway side of the existing fence parallel to Horace Avenue near southeast corner of existing structure. Tree is located about 65 feet south and about 30 feet east of the centerline of Horace Avenue. Elev. 729.62

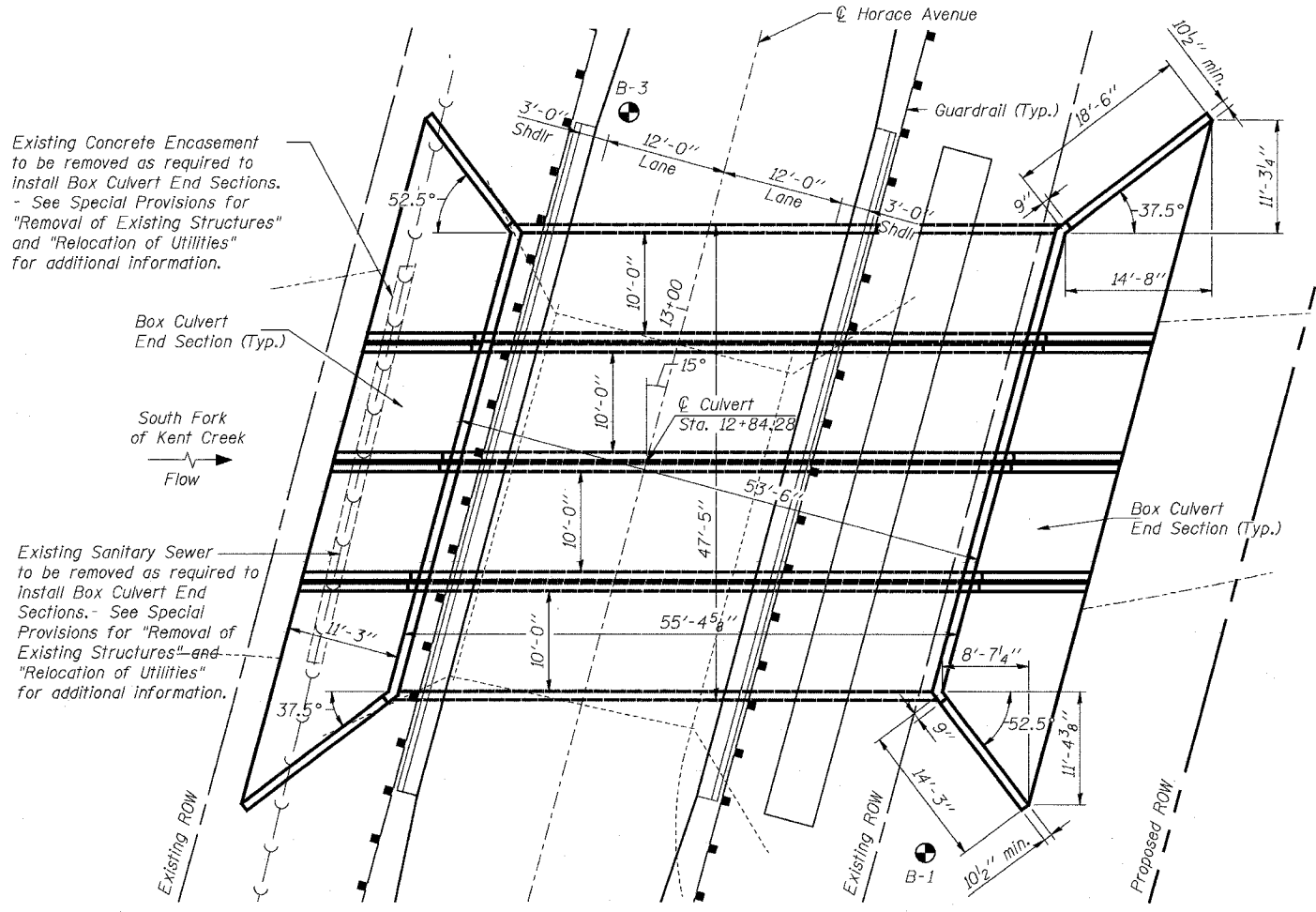
Existing Structure: Structure Number 101-6122. Built in 1950. The existing bridge is a reinforced concrete deck supported on a single span steel beam superstructure on closed concrete abutments. The existing bridge is 24 feet wide out-to-out and 38 feet long end-to-end of deck. The existing structure shall be removed as required to accommodate construction of a new precast concrete box culvert structure. The road will be closed during construction and will utilize a signed detour route.

No salvage.

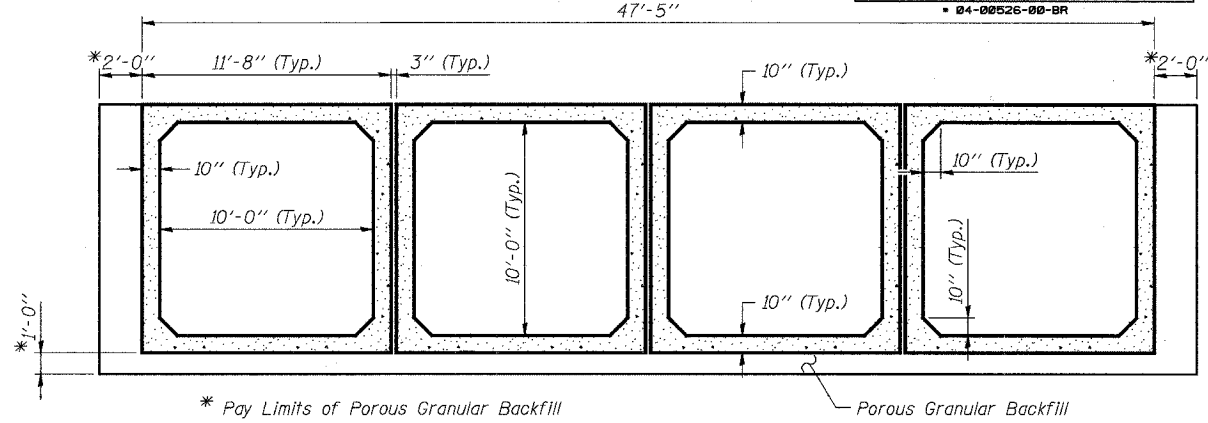


LONGITUDINAL SECTION

(Looking North, Dimensions at Right Angles to Centerline of Horace Avenue)



PLAN



LOADING HS20

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

SECTION THRU BARREL

(At Right Angle to Centerline of Culvert)

DESIGN SPECIFICATIONS

2002 (17th Edition) AASHTO Standard Specifications for Highway Bridges

DESIGN LOADINGS

Design Fill Height < 2 Feet
 Allowable Average Net Bearing Pressure* = 2,500 psf (Strip Footings)
 5,000 psf (Culvert Sections)

* The allowable bearing values are valid only for undisturbed native materials anticipated to be present at the subgrade elevation for the bottom of box culvert or for unsuitable materials removed and replaced in accordance with the following requirements. If unsuitable materials are present at the base of excavation, these materials shall be removed and replaced in accordance with Article 542.04(a) of the Standard Specifications. Alternately, said material meeting the requirements of IDOT Gradation CA-6, compacted to 95% of the standard laboratory density. If such work is required, it shall be considered extra work and shall be paid in accordance with Article 109.04 of the Standard Specifications.

DESIGN STRESSES

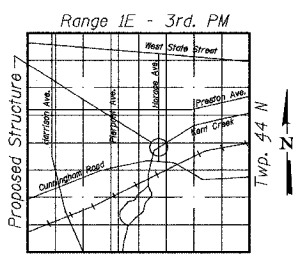
f'c = 5,000 psi
 fy = 60,000 psi (Reinforcement)
 fy = 65,000 psi (Welded Wire Fabric)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.035g
 Site Coefficient (S) = 1.0

SOUTH FORK OF KENT CREEK
 BUILT 200_ BY
 CITY OF ROCKFORD
 SECTION 04-00526-00-BR
 F.A.U. RT. 5100 STA. 12+84.28
 STR. NO. 101-6107 LOADING HS20

NAME PLATE
 See Std. 515001



LOCATION SKETCH

GENERAL NOTES

Precast concrete box culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M273.
 Reinforcement bars shall conform to the requirements of AASHTO M31, M42, or M53 Grade 60.
 Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.
 Box culvert sections shall be precast. Cast-in-place concrete alternative for box culvert sections is not allowed. End sections may either be precast or cast-in-place. See Special Provision for Box Culvert End Sections for additional information.

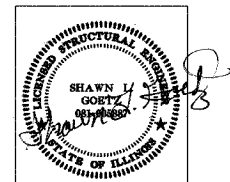
CULVERT BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Backfill	Cu. Yd.		202	202
Removal of Existing Structures	L. Sum			1
Name Plates	Each	1		1
Box Culvert End Sections	Each		8	8
Precast Concrete Box Culvert 10'x10' (M273)	Foot		213.5	213.5
Steel Plate Beam Guardrail, Attached to Structures (Special)	Foot	100		100
Pedestrian Railing	Foot	80		80

WATERWAY INFORMATION

Drainage Area = 14.4 sq. mi. Low Grade Elev. 727.30

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	1025	327.7	379.9	726.41	0.03	0.06	726.44 / 726.47
Base	100	1375	365.1	398.0	727.44	0.02	0.19	727.46 / 727.63



DATE SIGNED: 3/22/2005
 LIC. EXP. DATE: 11/30/2006

"I certify that to the best of my knowledge, information and belief, this bridge 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.'"

Corporate License Number 184-001-084

GENERAL PLAN & ELEVATION

HORACE AVENUE BRIDGE
 OVER SOUTH FORK OF KENT CREEK
 F.A.U. ROUTE 5100
 SECTION 04-00526-00-BR
 WINNEBAGO COUNTY
 STRUCTURE NUMBER 101-6107
 STATION 12+84.28

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JOB NO. 04R1901
 DATE 3/22/05

08-4633 PM 03/22/2005
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 LAYOUT: JKR 02/25/05
 DRAWN: JKR 03/01/05
 REVIEWED: SLG 03/22/05