

0330041-76410-GPEL-OLDGN SEPT. 1, 2009

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BENCHMARK: T.B.M. Nail Set (by IDOT)
 Existing Bridge Sta. 124+00
 El. 452.638

EXISTING STRUCTURE S.N. 031-0013 was built in 1946 as FA Route 155, Section 401B. The existing structure consists of a concrete deck and steel stringers on closed concrete abutments measuring 42'-6" back to back of abutments and 28'-0" out to out of deck. The existing structure is to be removed and replaced. The road shall be closed to traffic.

SALVAGE: No Salvage

Hatched areas indicate excavation between existing abutments and the new abutments. For quantities of Pavement Removal and Excavation, see Roadway Plans.

Traffic Barrier Terminal
 Std. 631031 Type 6,
 Typical Each Corner

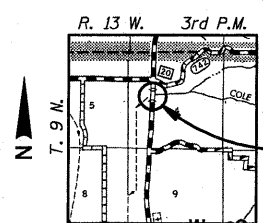
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Feet)	N. Abut.	S. Abut.
	441.88	441.95

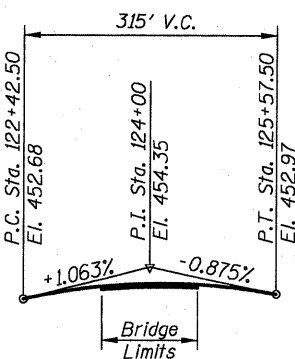
WATERWAY INFORMATION

Drainage Area = 4.09 Sq. Mi. Low Grade El. 451.24 @ Sta. 118+90.80

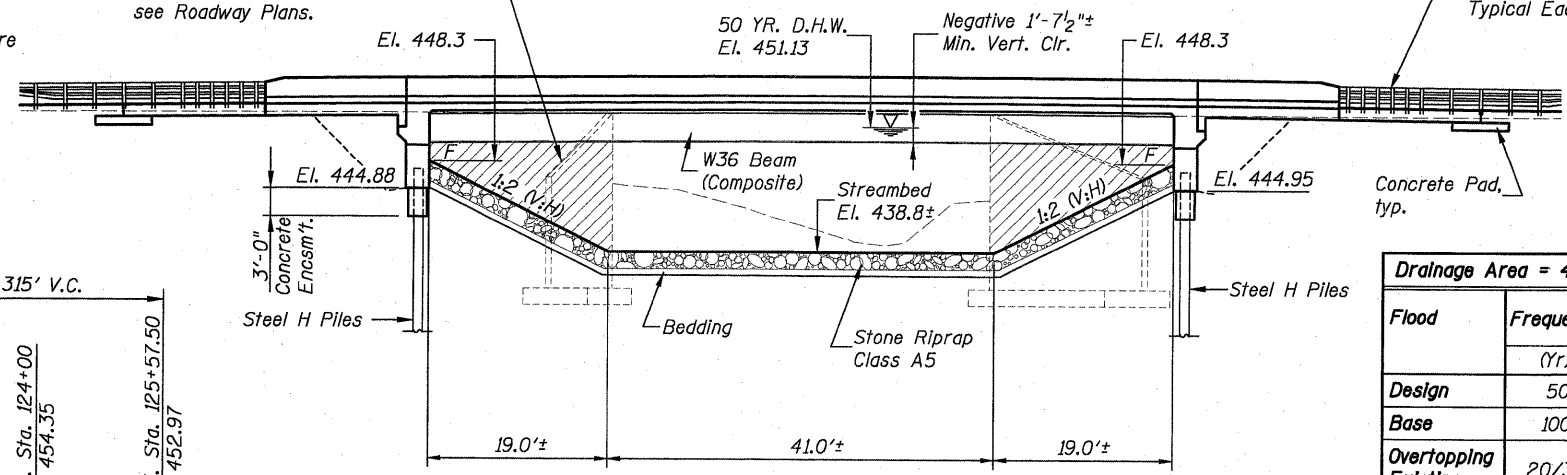
Flood	Frequency (Yr)	Q (CFS)	Opening		Natural H.W.E. (Ft)	Created Head		H.W.E.	
			Existing (Sq Ft)	Proposed (Sq Ft)		Existing (Ft)	Proposed (Ft)	Existing (Ft)	Proposed (Ft)
Design	50	2,934	303	640	451.13	0.76	0.40	451.89	451.53
Base	100	3,422	303	640	451.63	0.54	0.36	452.17	451.99
Overtopping Existing	20/35	2,301/2,750	303	640	450.42/450.93	0.82	0.31	451.24	451.24
Scour	10	1,823	303	640	449.76	0.67	0.25	450.43	450.01



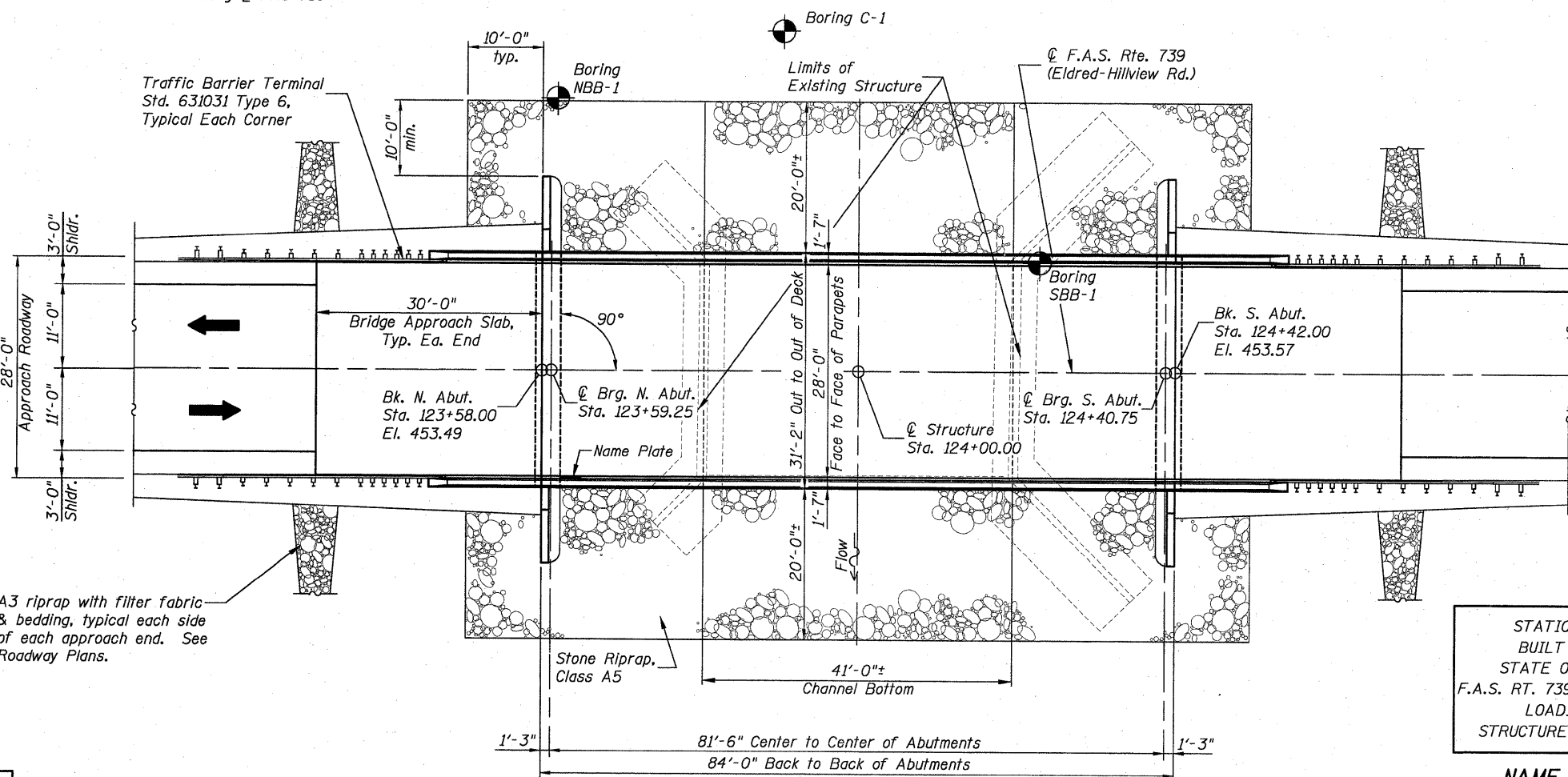
LOCATION SKETCH



PROFILE GRADE
 along @ FAS 739



ELEVATION



INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Top of Slab Elevations
4. Top of Slab Elevations
5. Top of Slab Elevations
6. Top of North Approach Slab Elevations
7. Top of South Approach Slab Elevations
8. Superstructure
9. Superstructure Details
10. Integral Abutment Diaphragm Details
11. Bridge Approach Slab Details
12. Bridge Approach Slab Details
13. Structural Steel
14. Steel Details
15. North Abutment
16. South Abutment
17. Bar Splicer Assembly Details
18. HP Pile Details
19. Soil Boring Logs
20. Soil Boring Logs
21. Soil Boring Logs

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications w/2008 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270, Grade 50)
 $f_y = 36,000$ psi (M270, Grade 36)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.160g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.294g
 Soil Site Class = D

STATION 124+00
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A.S. RT. 739 SEC. 401-2BR
 LOADING HL93
 STRUCTURE NO. 031-0041

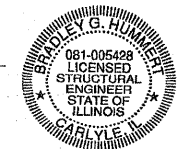
NAME PLATE
 See Std. 515001

**GENERAL PLAN & ELEVATION
 ELDRED-HILLVIEW ROAD
 OVER COLE CREEK
 STATION 124+00**

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

Bradley G. Hummert
 Bradley G. Hummert
 Licensed Structural Engineer
 in Carlyle, Illinois
 No. 081-005428, Expires 11/30/2010

Date: 12/1/09



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Robert E. Anderson (TS)
 ENGINEER OF BRIDGES AND STRUCTURES

PLAN ← N

SHEET NO. 1 21 SHEETS	F.A.S. RTE. 739	SECTION 401-2BR	COUNTY GREENE	TOTAL SHEETS 150	SHEET NO. 34
	S.N. 031-0041		CONTRACT NO. 76410		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		