

Bench Mark: Chiseled "□" on the N.W. wingwall of S.N. 090-0086 Elev. 628.74

Existing Structure: S.N. 090-0086 Built in 1917, as Route 9 Section 8A & 8B, at Station 319+70.
The structure consists of a single span reinforced concrete slab bridge supported on closed abutments.
22'-0" Bk. to Bk. abutments. 32'-2" O.-O. The structure is to be removed and replaced.
One lane of traffic will be maintained with the use of traffic activated signals during stage construction.

No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 6769	(8B) BR-4	TAZEWELL	102	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		16 SHEETS

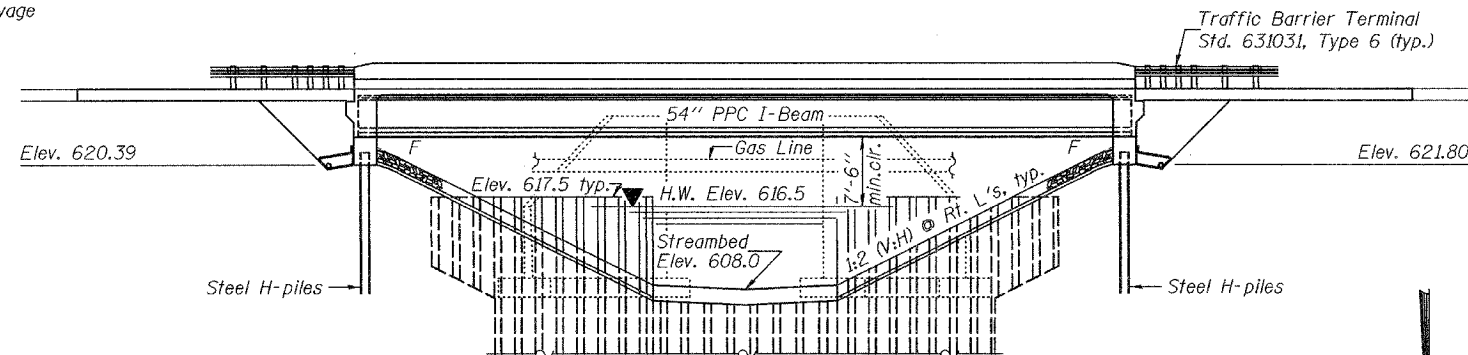
Contract No. 68247

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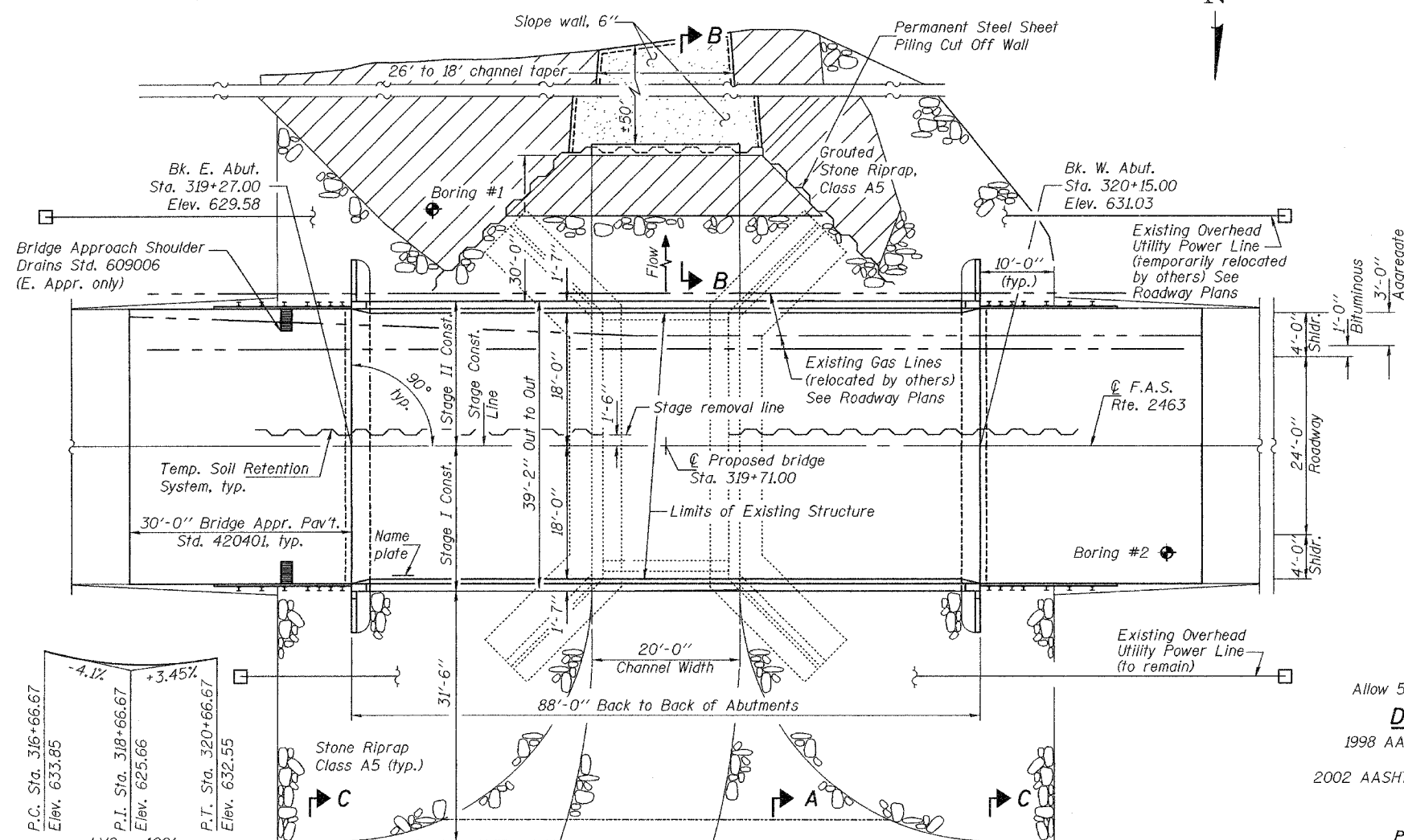
GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
All construction joints shall be bonded.
Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.
Slope wall shall be reinforced with welded wire fabric, 4"x 4"-W6.0 x W6.0 weighing 127 lbs per 100 sq. ft.
The Contractor shall drive two steel HP12x74 test piles in a permanent location one at each abutment as directed by the Engineer before ordering the remainder of piles.



ELEVATION

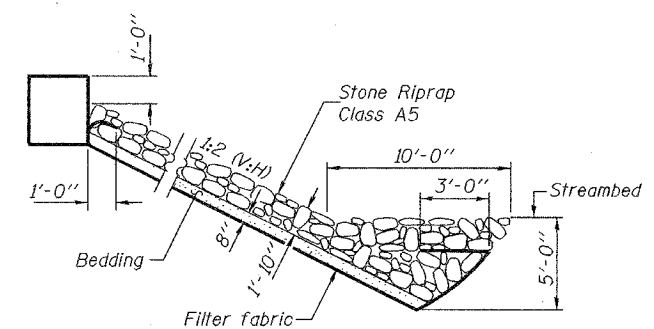
Notes: Hatched area denotes grouted limits.
For Section B-B, see sheet 2 of 16.



PLAN

STATION 319+71
BUILT 20 BY
STATE OF ILLINOIS
F.A.U. 6769 SEC. (8B)BR-4
LOADING HL93
STRUCTURE NO. 090-0173

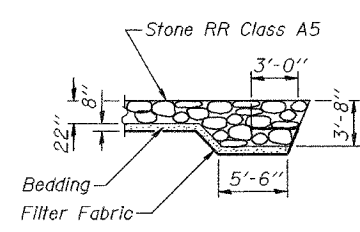
NAME PLATE
See Std. 515001



SECTION C-C

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		207	207
Stone Riprap, Class A5	Sq. Yd.		1612	1612
Filter Fabric	Sq. Yd.		1612	1612
Grout for Use with Riprap	Cu. Yd.		42	42
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		100	100
Driving Piles	Foot		515	515
Geocomposite Wall Drain	Sq. Yd.		92	92
Pipe Underdrains for Structures 4"	Foot		153	153
Concrete Structures	Cu. Yd.		39.9	39.9
Concrete Superstructure	Cu. Yd.	143.3		143.3
Bridge Deck Grooving	Sq. Yd.	332		332
Protective Coat	Sq. Yd.	427		427
Furnishing and Erecting Precast Prestressed Concrete I Beams, 54"	Foot	519		519
Stud Shear Connectors	Each		120	120
Reinforcement Bars, Epoxy Coated	Pound	23470	6140	34610
Furnishing Steel Piles HP12x74	Foot		515	515
Test Pile Steel HP12x74	Each		2	2
Permanent Steel Sheet Piling	Sq. Ft.		1614	1614
Name Plates	Each		1	1
Bar Splicers	Each	318	20	338
Temporary Soil Retention System	Sq. Ft.		1123	1123
Slope Wall, 6"	Sq. Yd.		123	123



SECTION A-A

LOADING HL-93

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

DESIGN SPECIFICATIONS

1998 AASHTO LRFD Bridge Design Specifications with 1999 thru 2005 Interims.
2002 AASHTO Division I-A Seismic Design Specifications

DESIGN STRESSES

PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi (reinforcement)
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)
 $f_{sl} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)

FIELD UNITS

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

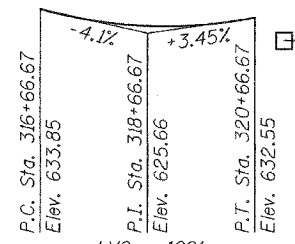
SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 4.3%g
 Site Coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 1.36 mi.² Low Grade Elev. 628.4 @ Sta. 319+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	1220	158	170	614.6	616.5	1.4	2.0	616.0	618.5
Base	100	1440	172	184	617.2	619.5	2.3	2.3	619.5	619.5
Max. Calc.	500	1990	202	263	618.7	621.6	2.9	2.9	621.6	621.6



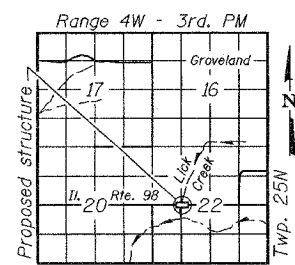
PROFILE GRADE (along ϕ roadway)

DESIGNED	Maui Sluffa
CHECKED	Hyun Kim
DRAWN	h.t. duong
CHECKED	MDS / HJB

EXAMINED
 PASSED
 ENGINEER OF BRIDGE DESIGN
 ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-2006



LOCATION SKETCH

GENERAL PLAN & ELEVATION
 IL. ROUTE 98 OVER
 LICK CREEK
 F.A.U. 6769 - SECTION (8B)BR-4
 TAZEWELL COUNTY
 STATION 319+71
 STRUCTURE NO. 090-0173