

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A. 646	(102) BR-2	Whiteside	69	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 64427

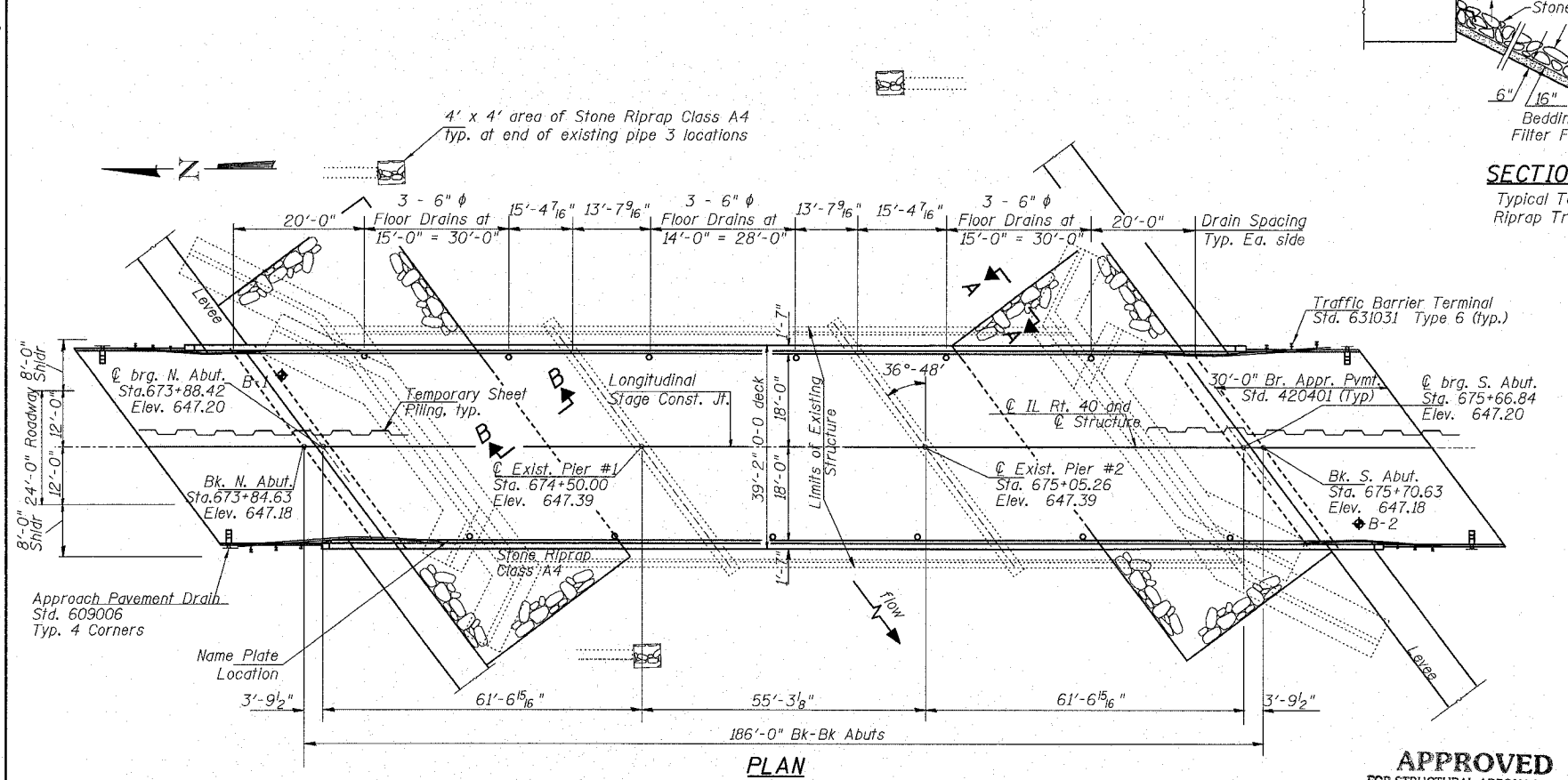
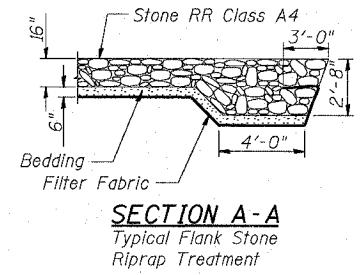
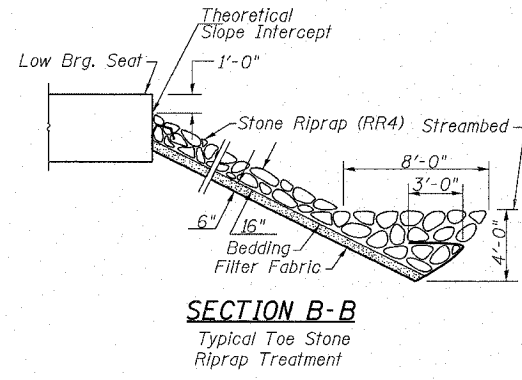
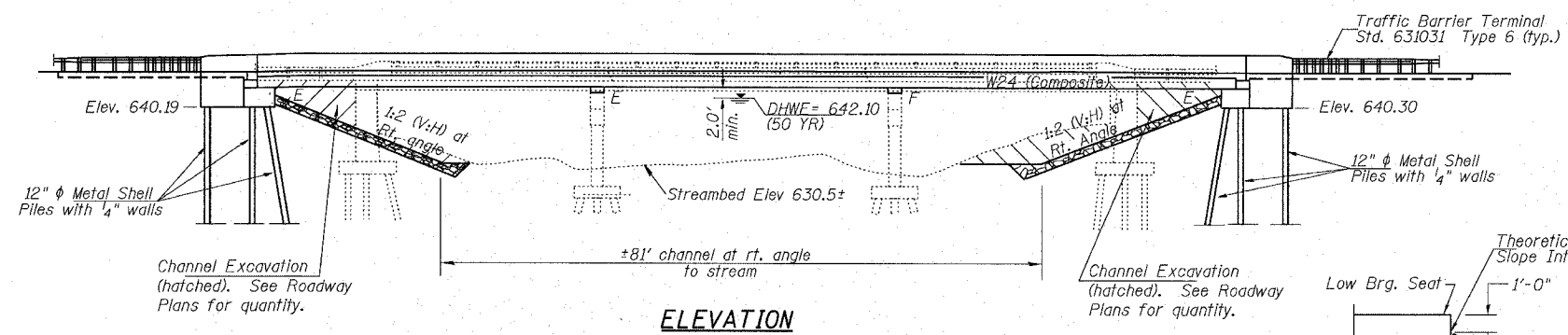
Benchmark: Chisled "C" on SW corner of bridge 098-0018 on top of the wingwall. Elev.: 644.77  
 Existing Structure: S.N. 098-0018. Built as SBI Route 88, Sec. 102B in 1927. Three simple span precast-prestressed concrete deck beams are on hammerhead concrete piers and closed abutments. The overall length is 146'-0" and the overall width is 46'-0". The contractor shall remove the existing superstructure and abutments in stages and replace it with a three span wide flange beam with reinforced concrete slab superstructure on the existing concrete piers and new concrete abutments.  
 No Salvage.

GENERAL NOTES

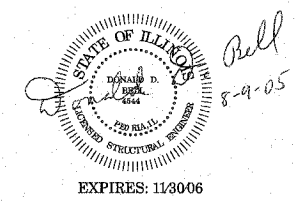
- Fasteners shall be high strength bolts AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas. Bolts  $\frac{3}{8}$ "  $\phi$ , open holes  $\frac{1}{16}$ "  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel = 167,230 pounds.
- All structural steel shall be AASHTO M 270 Grade 50W.
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M 31 or M322 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Plan dimensions and details relative to existing structure have been taken from existing plans and some field measurements and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two  $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two  $\frac{1}{8}$ " adjusting shims shall be provided for each bearing and placed as detailed.
- The contractor shall drive one test pile at the north abutment and one test pile at the south abutment in permanent locations as directed by the Engineer before ordering the remainder of piles.
- Bridge Seat Sealer shall be applied to the seat area of the north and south abutments.
- AASHTO M 270 Grade 50W structural steel shall only be painted, for a distance of three times the depth of the beams or girders (but not exceeding 10 feet) each way from the deck joints. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- All Construction joints shall be bonded.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Structures	Cu. Yd.		100.6	100.6
Concrete Superstructure	Cu. Yd.	228.6		228.6
Reinforcement Bars, Epoxy Coated	Pound	53,200	9,470	62,670
Furnishing Metal Pile Shells 12"	Lin. Ft.		1736	1736
Driving and Filling Shells	Lin. Ft.		1736	1736
Test Pile Metal Shells	Each		2	2
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3762		3762
Name Plates	Each	1		1
Stone Riprap, Class A4	Sq. Yd.		784	784
Protective Coat	Sq. Yd.	890		890
Structure Excavation	Cu. Yd.		280	280
Neoprene Expansion Joint 2"	Lin. Ft.	92		92
Filter Fabric <del>For use with Riprap</del>	Sq. Yd.		784	784
Temporary Sheet Piling	Sq. Ft.		1887	1887
Bridge Deck Grooving	Sq. Yd.	722		722
Floor Drains	Each	18		18
Bar Splicers	Each	648	44	692
Porous Granular Embankment (Special)	Cu. Yd.		124	124
Removal of Existing Substructures	Each		2	2
Elastomeric Bearing Assembly Type I	Each	18		18
Bridge Seat Sealer	Sq. Ft.		262	262



APPROVED  
FOR STRUCTURAL ADEQUACY ONLY  
*Robert E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES



DESIGN STRESSES

FIELD UNITS  
 $f_c = 3500$  psi  
 $f_y = 60,000$  psi (Reinf.)  
 $f_y = 50,000$  psi (Structural Steel)  
 AASHTO M270 Grade 50W

SEISMIC DATA

Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = .04g  
 Site Coefficient (S) = 1.0

STATION 674+77.63  
 BUILT 20 BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 646 SEC.  
 SEC. (102) BR-2  
 LOADING HS20  
 STR. NO. 098-0018

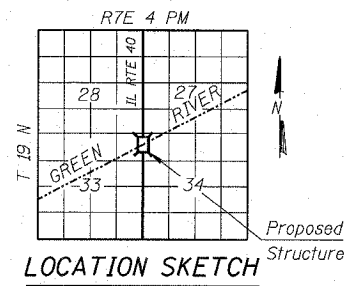
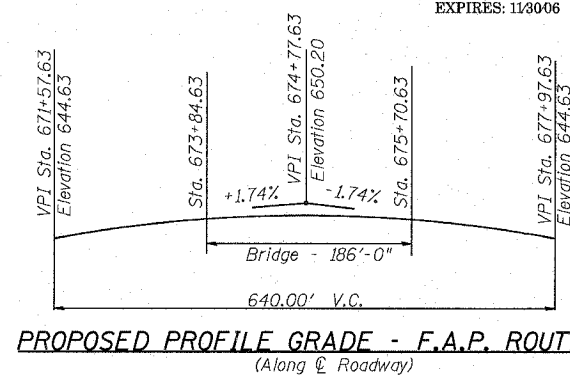
NAME PLATE  
 See Std. 515001

LOADING HS 20-44

Allow 50#/sq. ft for future wearing surface

DESIGN SPECIFICATIONS

AASHTO Standard Specs - 2002, (17th Edition)



GENERAL PLAN AND ELEVATION  
 IL RTE 40 OVER GREEN RIVER  
 F.A.P. 646 SECTION (102)BR-2  
 WHITESIDE COUNTY  
 STATION 674+77.63  
 S.N. 098-0018

DESIGNED	DDB		FILE NUMBER	136.111
CHECKED	JFJ		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			

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