

Benchmark: Chisled "a" on SW corner of bridge 098-0017 on top of the wingwall. Elev.: 648.31

Existing Structure: S.N. 098-0017. Three span Precast-Prestressed Concrete deck beams on pile bent piers and abutments. The overall length is 124'-0" and the overall width is 46'-6". The contractor shall remove the existing structure in stages and replace it with a three span wide flange beam with reinforced concrete slab superstructure.

No Salvage.

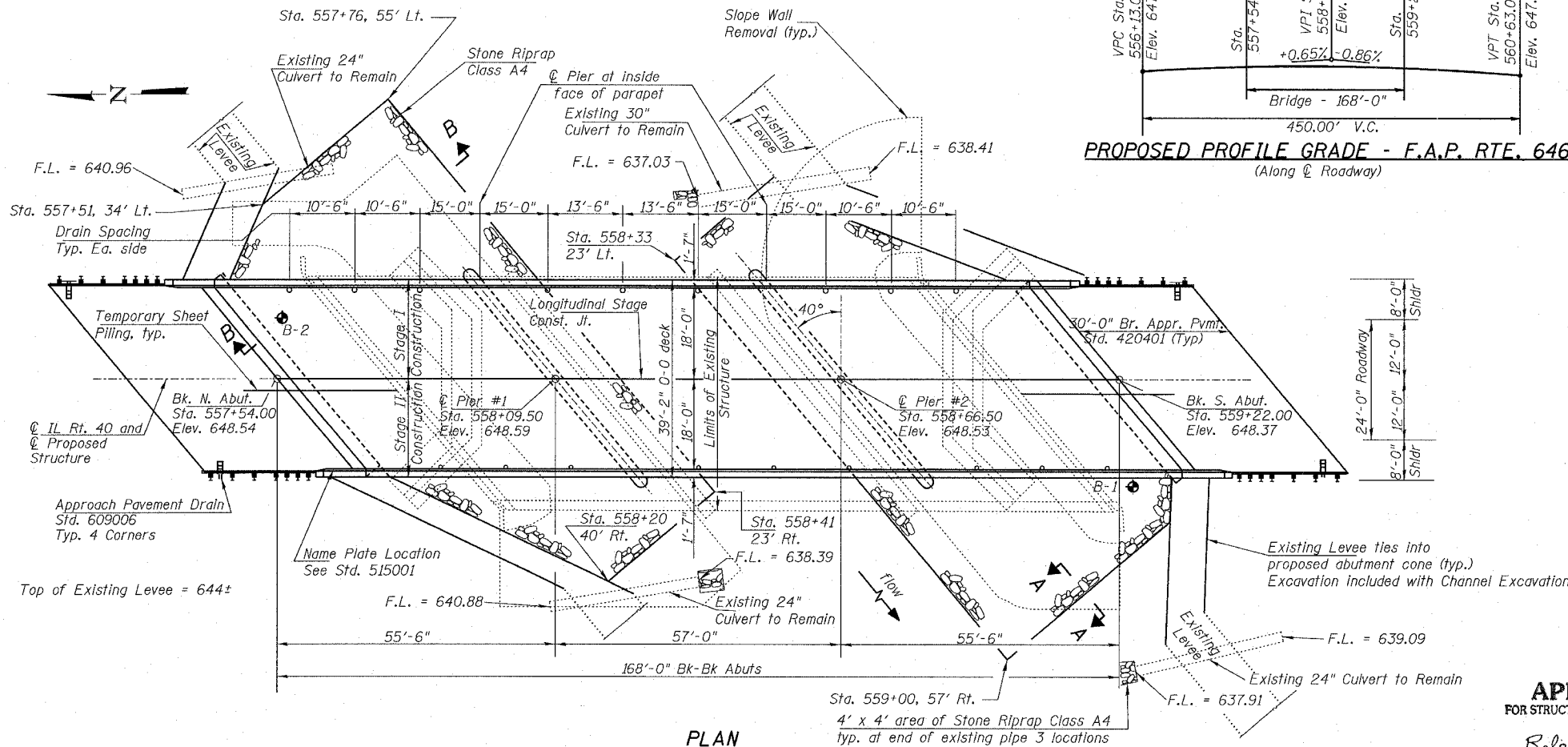
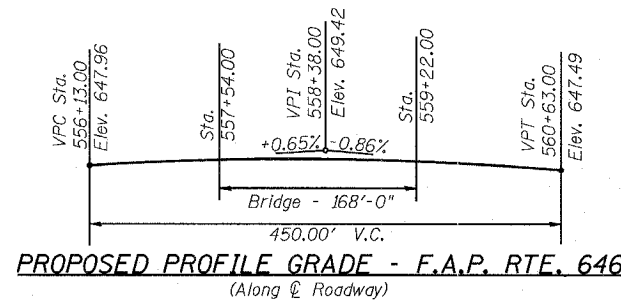
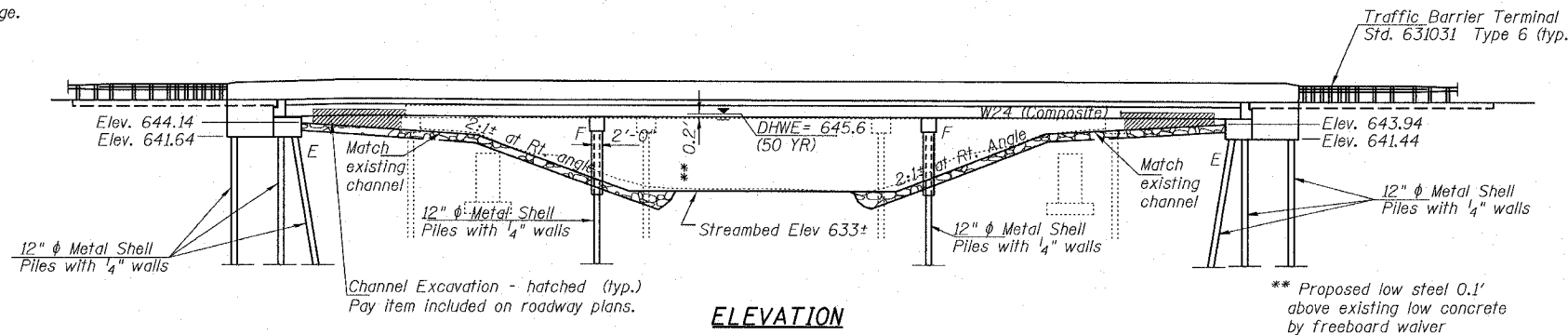
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. 646	(102) BR-3	Whiteside	57	13
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 64426

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 $\frac{7}{8}$ " ϕ , open holes $\frac{5}{16}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 123,930 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.
- 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 $\frac{3}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- The contractor shall drive one test pile at the north abutment, one test pile at Pier #1 and one test pile at Pier #2 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 Structures	Each			1
Concrete Structures	Cu. Yd.		199.3	199.3
Concrete Superstructure	Cu. Yd.	203.8		203.8
Reinforcement Bars, Epoxy Coated	Pound	47,060	17,480	64,540
Furnishing Metal Pile Shells 12"	Lin. Ft.		3725	3725
Driving and Filling Shells	Lin. Ft.		3725	3725
Test Pile Metal Shells	Each		3	3
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3276		3276
Name Plates	Each	1		1
Stone Riprap, Class A4	Sq. Yd.		1044	1044
Protective Coat	Sq. Yd.	1042		1042
Structure Excavation	Cu. Yd.		418	418
Neoprene Expansion Joint 2"	Lin. Ft.	97		97
Filter Fabric for use with Riprap	Sq. Yd.		1044	1044
Temporary Sheet Piling	Sq. Ft.		1560	1560
Bridge Deck Grooving	Sq. Yd.	649		649
Floor Drains	Each	18		18
Bar Splicers	Each	501	92	593
Porous Granular Embankment (Special)	Cu. Yd.		134	134
Elastomeric Bearing Assembly Type II	Each	12		12
Bridge Seat Sealer	Sq. Ft.		256	256
Underwater Structure Excavation Protection, No. 1	Each		1	1
Underwater Structure Excavation Protection, No. 2	Each		1	1
Slope Wall Removal	Sq. Yd.		1040	1040

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TND)
ENGINEER OF BRIDGES AND STRUCTURES

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Revised 7-30-01
8/8/2005

WATERWAY INFORMATION

Drainage Area = 54.3 sq. mi. Low Grade Elev. 645.2 ft. @ Sta. 565+00

Flood	Freq. Yr.	Q C.F.S.	Opening Exist. Prop.	Sq. Ft. Exist. Prop.	Natural H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.	Headwater El. Prop.
Overtop	5	2488	620	631	644.6	0.6	0.6	645.2
Design	50	4657	679	690	645.6	1.1	1.1	646.7
Base	100	5267	679	690	646.3	0.8	0.8	647.1

STATION 558+38
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 646
SEC. (102)BR-3
LOADING HS20
STR. NO. 098-0109

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS

AASHTO Standard Specs. - 2002 17th Edition

SEISMIC DATA

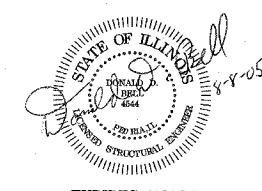
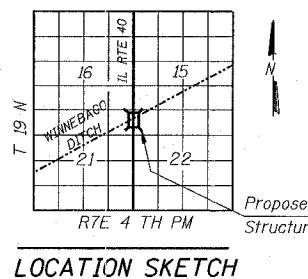
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035g
Site Coefficient (S) = 1.0

LOADING HS 20-44

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

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)



EXPIRES: 11/30/06

GENERAL PLAN AND ELEVATION
IL RTE 40 OVER WINNEBAGO DITCH
F.A.P. 646 SECTION (102)BR-3
WHITESIDE COUNTY
STATION 558+38
S.N. 098-0109

DESIGNED	DDB		FILE NUMBER	136.110
CHECKED	AMPH		DATE	Aug. 2005
DRAWN	JDB			
CHECKED	DDB			