

Bench Mark: Chiseled "□" at the NE corner of structure 060-0131, Elev. 514.05

Existing Structure: S.N. 060-0131 built in 1937 as F.A. Rte. 156, Sec. 12-B. In 1974 the superstructure was replaced and the substructure was widened. The existing three span structure consists of precast prestressed concrete deck beams supported by column abutments and column piers, dimensions are 155'-2 1/4" bk. to bk. abutments and 33'-0" o. to o. with a 20° skew. The existing structure is to be removed and replaced utilizing stage construction.

No salvage

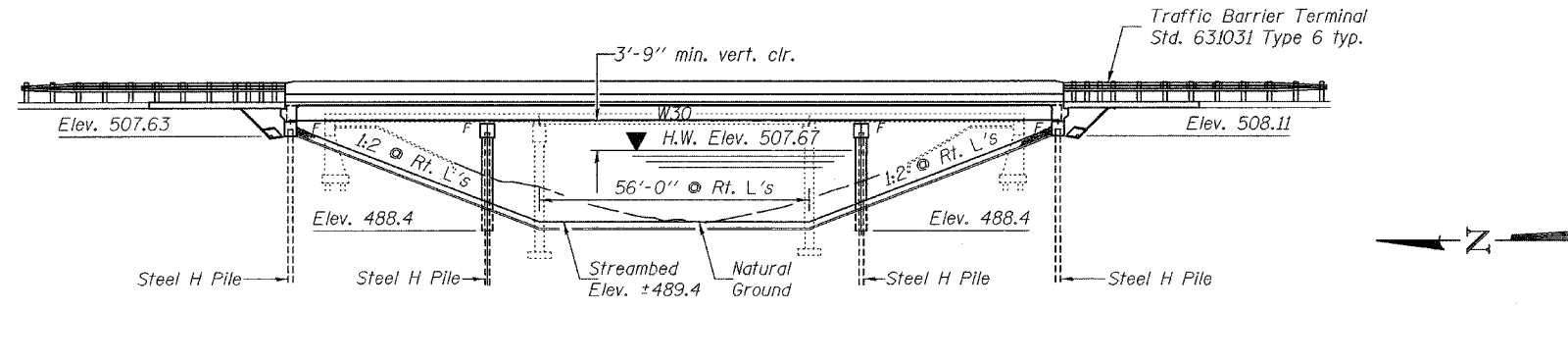
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOWNSHIP	SHEET	SHEET NO. 1
F.A.P. 692	12-1BR-1	MADISON		26	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

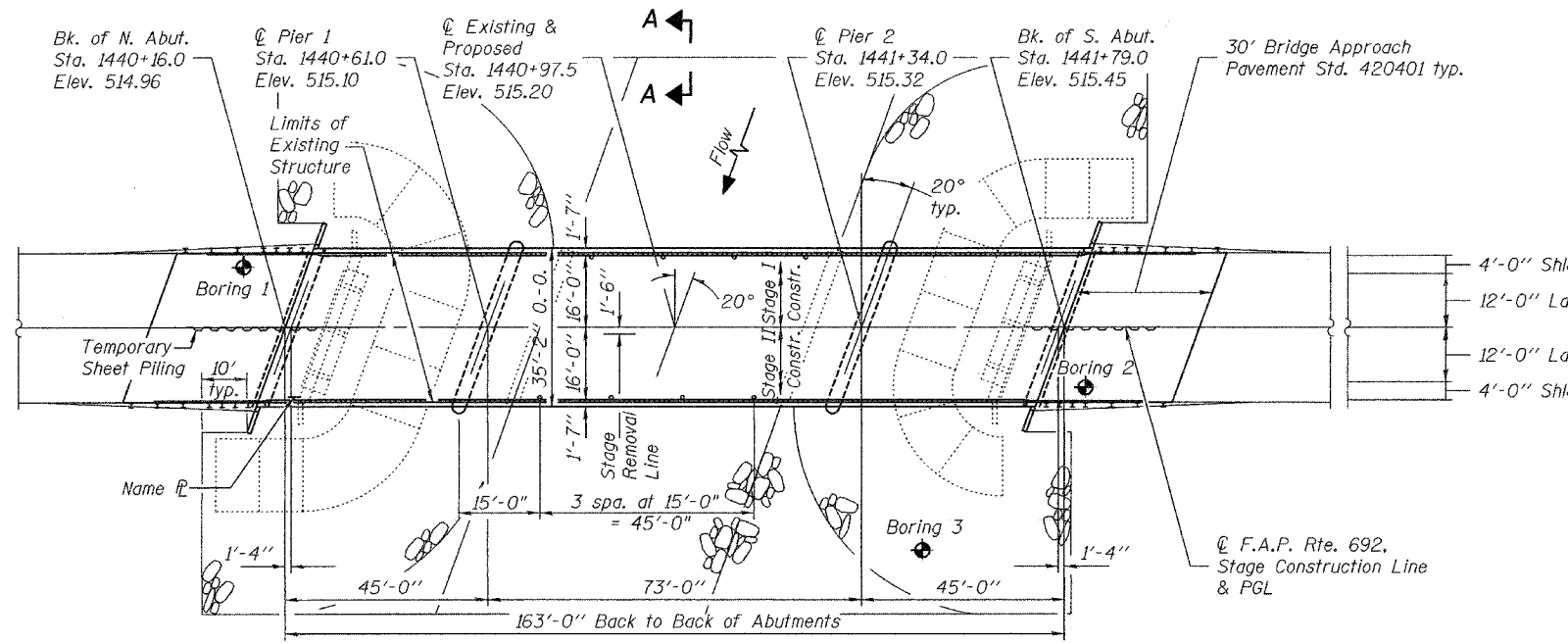
Contract #76386

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 1 5/16" φ, unless otherwise noted.
 Calculated weight of Structural Steel = 112,050 AASHTO M 270 Gr. 50.
 Calculated weight of Structural Steel = 11,830 AASHTO M 270 Gr. 36.
 Field welding of construction accessories will not be permitted to beams.
 Anchor bolts shall be set before bolting diaphragms over supports.
 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 M 322 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 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 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.
 The contractor shall drive two test piles in a permanent location one at each abutment as directed by the Engineer before ordering the remainder of piles.
 All Construction joints shall be bonded.
 In addition to all other requirements of section 512 of the Standard specifications, splices for HP 14x89 piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.
 The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5 G 4/8. See special provisions for Cleaning and Painting New Metal Structures.



ELEVATION



PLAN

INDEX OF SHEETS

1. General Plan
2. Temporary Sheet Piling
3. Stage Construction Details
4. Temporary Concrete Barrier
- 5.-6. Top of Slab Elevations
- 7.-9. Superstructure Details
- 10.-11. Structural Steel
12. Bearings
13. Anchor Bolts
14. North Abutment
15. South Abutment
16. Piers 1 & 2
17. Bar Splicer Details
- 18.-20. Boring Logs

WATERWAY INFORMATION

Drainage Area = 38.9 Sq. Mi. Low Grade Elev. 513.81 @ Sta. 1440+11

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	9,470	1,250 1,556	507.67 0.94 0.66	508.61	508.33
Base	100	10,700	1,331 1,640	508.35 1.06 0.74	509.41	509.09
Scour	10	6,520	978 1,270	505.22 0.81 0.60	506.03	505.82
Max. Calc.	500	12,700	1,524 1,838	509.91 1.13 0.81	511.04	510.72

STATION 1440+97.5
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 692 SEC. 12-1BR-1
LOADING HL 93
STR. NO. 060-0335

NAME PLATE
See Std. 515001

LOADING HL 93
w/FWS = 50 psf

DESIGN SPECIFICATIONS
1998 AASHTO LRFD Bridge Design Specifications
with 1999 thru 2003 Interims.
2002 AASHTO Division I-A Seismic Design Specifications

DESIGN STRESSES

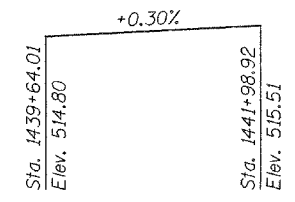
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (structural steel AASHTO M 270, Gr. 50)
 $f_y = 36,000$ psi (structural steel AASHTO M 270, Gr. 36)

SEISMIC DATA

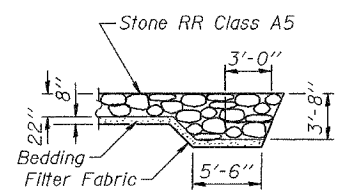
Seismic Performance Category (SPC) = B
 Bedrock Acceleration Coefficient (A) = 0.10g
 Site Coefficient (S) = 1.5

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.		137	137
Stone Riprap, Class A5	Sq. Yd.		2717	2717
Filter Fabric for Riprap	Sq. Yd.		2717	2717
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		100.6	100.6
Driving Steel Piles	Foot		315	315
Floor Drains	Each	8		8
Concrete Structures	Cu. Yd.		189.9	189.9
Concrete Superstructure	Cu. Yd.	199.5		199.5
Bridge Deck Grooving	Sq. Yd.	542.2		542.2
Protective Coat	Sq. Yd.	716.1		716.1
Furnishing and Erecting Structural Steel	L. Sum			1
Stud Shear Connectors	Each	2934		2934
Reinforcement Bars, Epoxy Coated	Pound	45400	13000	58400
Furnishing Steel Piles HP 14x89	Foot		1067	1067
Test Pile Steel HP 14x89	Each		2	2
Temporary Sheet Piling	Sq. Ft.		420.4	420.4
Name Plates	Each	1		1
Bar Splicers	Each	523	122	645
Underwater Structure Excavation Protection Location 1	Each		1	1
Underwater Structure Excavation Protection Location 2	Each		1	1
Setting Piles in Rock	Each		16	16



PROFILE GRADE
(along roadway)



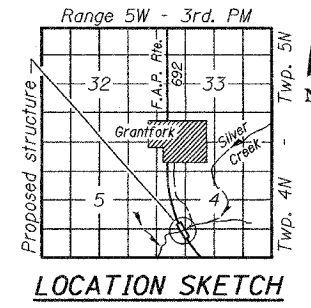
SECTION A-A

DESIGNED	Tom Hartschuh
CHECKED	Alan Johnson
DRAWN	Paul Sumner
CHECKED	T.K. AMT

EXAMINED April 22, 2005
 ENGINEER OF BRIDGE DESIGN
 PASSED
 ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-2006



LOCATION SKETCH

GENERAL PLAN
 ILLINOIS ROUTE 160 OVER
 SILVER CREEK
 F.A.P. ROUTE 692 - SECTION 12-1BR-1
 MADISON COUNTY
 STATION 1440+97.5
 STRUCTURE NO. 060-0335