

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 673	++	Tazewell	17	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 68B57 ++(102-HB-2)I-2

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 50, unless otherwise noted.

Fasteners shall be high strength bolts. Flange splice holes shall be  $1\frac{1}{8}$ "  $\phi$  for  $7\frac{1}{8}$ "  $\phi$  bolts. Web splice holes shall be  $1\frac{1}{8}$ "  $\phi$  for  $7\frac{1}{8}$ "  $\phi$  bolts.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing".

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

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 Blue, Munsell No. 10B 3/6. See Special Provision "Cleaning and Painting New Metal Structures".

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

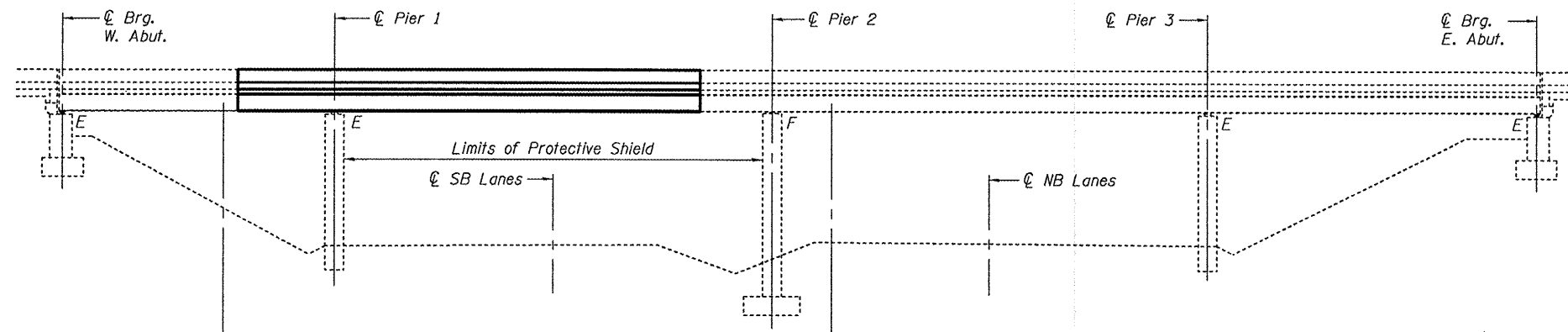
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that can not be removed by grinding  $\frac{1}{4}$ " deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Diaphragm connection holes shall be  $1\frac{1}{8}$ "  $\phi$  for  $3\frac{1}{4}$ "  $\phi$  bolts. Two hardened washers shall be required at diaphragm connections.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

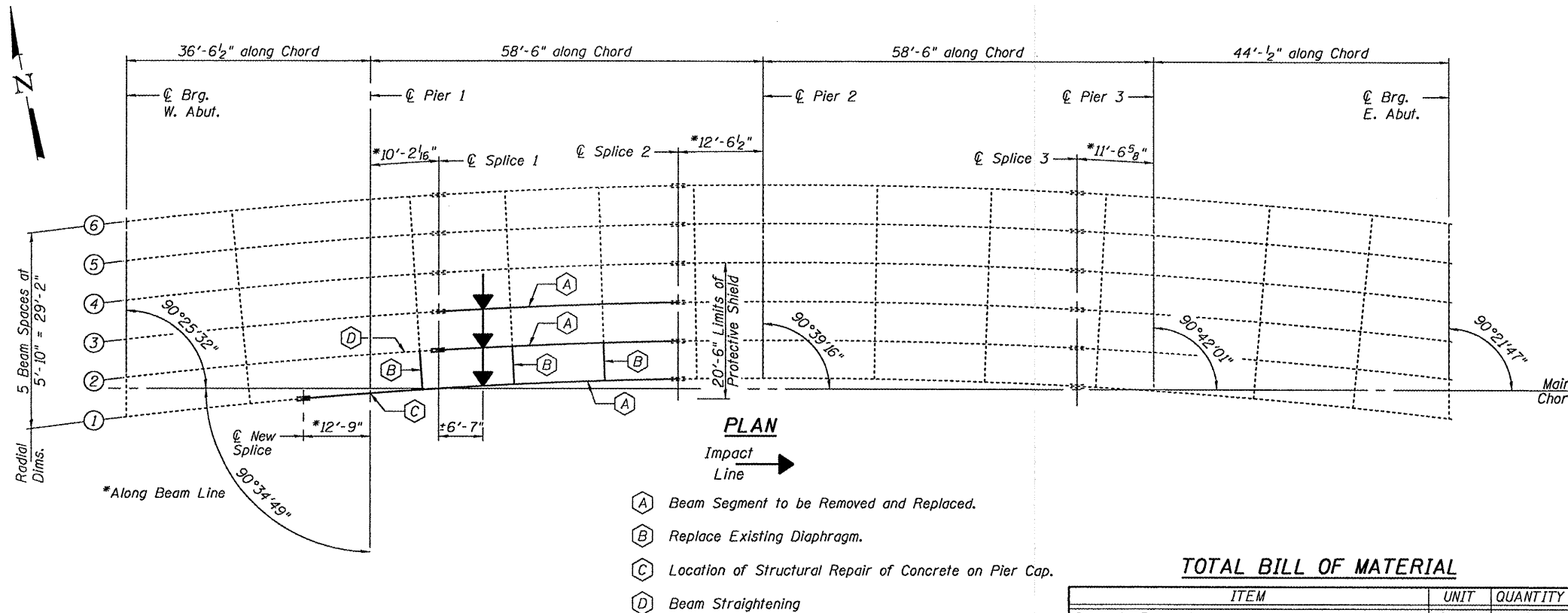
After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".



**ELEVATION**

Temporary shoring is required for Beam 1 and may be required for Beams 2 and 3. To be paid for as Temporary Shoring and Cribbing. Removal and replacement of the slopewall, if required, shall be included with Temporary Shoring and Cribbing.

Temporary shoring may be required to facilitate alignment of splice. Use 12"x12" timbers or HP's. To be paid for as Temporary Shoring and Cribbing. The shoring shall be removed as soon as possible after the splice is completed to minimize traffic control.



**PLAN**

Impact Line

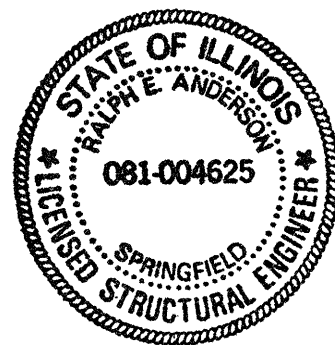
- (A) Beam Segment to be Removed and Replaced.
- (B) Replace Existing Diaphragm.
- (C) Location of Structural Repair of Concrete on Pier Cap.
- (D) Beam Straightening

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	27.5
Concrete Superstructure	Cu. Yd.	27.6
Furnishing and Erecting Structural Steel	Pound	16,640
Reinforcement Bars, Epoxy Coated	Pound	6,520
Beam Straightening	L.S.	1
Temporary Shoring and Cribbing	L.S.	1
Stud Shear Connectors	Each	504
Protective Shield	Sq. Yd.	127.6
Structural Repair of Concrete >5"	Sq. Ft.	2.5
Bridge Deck Grooving	Sq. Yd.	77.7
Protective Coat	Sq. Yd.	110.4
Structural Steel Removal	Pound	16,640
Anchor Bolts, 1 1/4"	Each	1

**PLAN AND ELEVATION**  
F.A. RT. 317  
TAZEWELL COUNTY  
SN 090-0069

DESIGNED	March 19, 2009
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	



Expires: November 30, 2010