Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts  $^{7}8$ " $\phi$ , holes  $^{15}16$ " $\phi$ , unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.

The Contractor shall field verify all proposed P dimensions and spacing of holes prior to ordering 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 and exterior steel surfaces shall be Gray, Munsell No. 5B 7/1.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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

All new structural steel shall conform to AASHTO Classification M-270 GR. 36 unless otherwise noted.

No field welding is permitted except as specified in the contract documents.

The Contractor shall remove and replace existing bolts and nuts in the bridge, bridge rail and bridge handrail satisfying the requirements for corroded or missing bolts and nuts as stated in the special provision BOLT REPLACEMENT. Contractor shall allow for 10 bolt replacements over and above those shown in the plans, the location of which shall be determined by the Contractor to conform with the special provision and/or as determined by the Engineer.

As directed by the Engineer, existing cracked tack welds to the arch ties shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welds, grinding and inspecting weld areas and grinding cracks will be paid for according to the special provision GRINDING AND REMOVAL OF TACK WELDS.

Use of barges on the Mississippi River or staging repairs from the river will not be allowed.

Reinforcement bars designated (E) shall be epoxy coated.

The Contractor shall not use cranes or any other equipment which would extend past the height of the bridge arch.

All bolts for structural steel repairs shall be included with the item Structural Steel Repair. Replacement of missing rivets with H.S. Bolts shall be included with Bolt Replacement item.

## TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	10.0		10.0
Protective Shield	Sq. Yd.	357		357
Concrete Superstructure	Cu. Yd.	10.0		10.0
Furnishing and Erecting Structural Steel	Pound	29,322		29,322
Reinforcement Bars, Epoxy Coated	Pound	1,240		1,240
Fabric Reinforced Elastomeric Trough	Ft.	94		94
Anchor Bolts, 1/2"	Each	4		4
Traffic Barrier Terminal, Type 6A	Each			1
Impact Attenuators (Fully Directive, Narrow) , Test Level 2	Each			1
Concrete Pad	Sq. Yd.			11
Bolt Replacement	Each	<i>1</i> 65		<i>1</i> 65
Steel Bridge Rail Posts	Each	61		61
Remove and Reinstall Finger Plate Joint	Each	2		2
Furnish and Install Handrail	Ft.	3,404		3,404
Structural Steel Removal	Pound	28,769		28,769
Structural Steel Repair	Pound	49,140		49,140
Bridge Handrail Removal	Ft.	3,404		3,404
Cleaning Drainage System	L. Sum			1
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq. Ft.		588	588
Drainage System	L. Sum	1		1
Silicone Joint Sealer	Ft.	14		14
Railroad Protective Liability Insurance	L. Sum			1
Temporary Support System	Each	2		2
Temporary Shoring and Cribbing	Each	22		22
Canopy Repair	L. Sum	1		1
Grinding and Removal of Tack Welds	Each	3		3

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