



\*Included in the cost of Pipe Underdrains for Structures. All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

**SECTION THRU ABUTMENTS**  
(Horiz. dim. @ Rt. L's)

**GENERAL NOTES**

All structural steel shall be AASHTO M 270 Grade 50W.  
 Calculated weight of Structural Steel = 49,350 lbs, Grade 50W.  
 Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts (in painted areas and M164 Type 3 in unpainted areas). Bolts 3/4 in. φ, holes 15/16 in. φ, unless otherwise noted.  
 No field welding is permitted except as specified in the contract documents.  
 For Soil Boring Logs, see sheet 14 & 15 of 15.  
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".  
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.  
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.  
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
① Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	115	115
Channel Excavation	CU YD	—	520	520
Concrete Superstructure	CU YD	74.1	—	74.1
Concrete Structures	CU YD	—	25.9	25.9
Furnishing Metal Shell Piles 12"x0.25"	FOOT	—	408	408
Driving Piles	FOOT	—	408	408
Test Pile Metal Shells	EACH	—	2	2
Pile Shoes	EACH	—	10	10
Concrete Encasement	CU YD	—	4.6	4.6
Furnishing and Erecting Structural Steel	L SUM	1	—	1
Anchor Bolts, 1"	EACH	—	20	20
① Reinforcement Bars, Epoxy Coated	POUND	15,280	3,510	18,790
Stone Riprap, Class A5	TON	—	480	480
Filter Fabric	SQ YD	—	440	440
Steel Bridge Rail, Type SM (Special)	EACH	143	—	143
Protective Coat	SQ YD	238	—	238
Bridge Deck Grooving	SQ YD	222	—	222
Stud Shear Connectors	EACH	900	—	900
Name Plates	EACH	1	—	1
① Porous Granular Embankment, Special	CU YD	—	85	85
① Pipe Underdrains For Structures 4"	FOOT	—	120	120
① Geocomposite Wall Drain	SQ YD	—	52	52

① See Special Provisions

**GENERAL NOTES & BILL OF MATERIAL**  
**COUNTY HIGHWAY 10 OVER**  
**FOUNTAIN CREEK TRIBUTARY**  
**SEC. 07-00216-01-BR**  
**IROQUOIS COUNTY**  
**STATION 20+02.60**