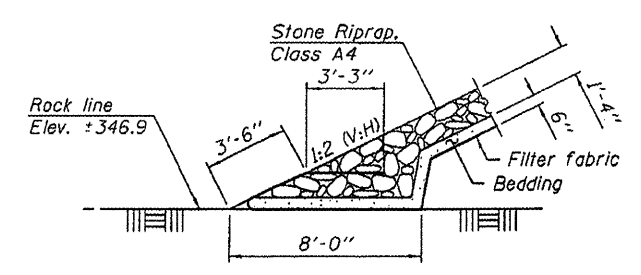


SECTION THRU SEMI-INTEGRAL EAST ABUTMENT

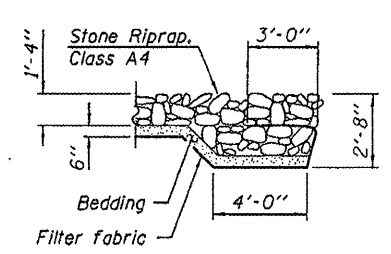
SECTION THRU SEMI-INTEGRAL WEST ABUTMENT

*Included in the cost of Pipe Underdrains for Structures, 4".
 **According to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width and vertically at edges to the abutment cap with a 3/8" x 5" steel plate and 1/2" φ studs with nuts & washers at 12" cts. Cost included with Concrete Superstructures.

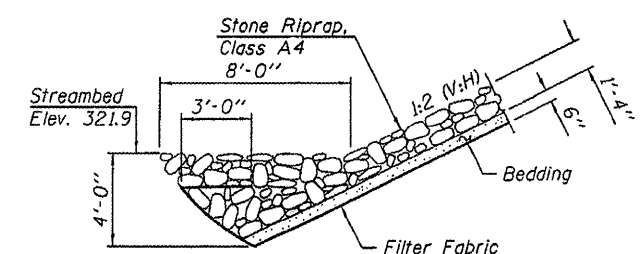
Note: All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

Fasteners shall be ASTM A 325 Type 3. Bolts 7/8" φ, holes 15/16" φ, unless otherwise noted.
 Calculated weight of Structural Steel = 176410 lbs (M 270 Grade 50W).
 All structural steel shall be AASHTO M 270 Grade 50W.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
 Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
 Excavation behind existing west abutment wall shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing west abutment only at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
 Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		121	121
Stone Riprap, Class A4	Sq. Yd.		1040	1040
Filter Fabric	Sq. Yd.		1040	1040
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		188	188
Floor Drains	Each	20		20
Concrete Structures	Cu. Yd.		233.3	233.3
Concrete Superstructure	Cu. Yd.	353.9		353.9
Bridge Deck Grooving	Sq. Yd.		871	871
Concrete Encasement	Cu. Yd.		2.4	2.4
Protective Coat	Sq. Yd.	1127		1127
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4464		4464
Reinforcement Bars, Epoxy Coated	Pound	87350	70080	157430
Bar Splicers	Each	829	706	1535
Furnishing Steel Piles HPI2x53	Foot		189	189
Driving Piles	Foot		189	189
Temporary Soil Retention System	Sq. Ft.		558	558
Name Plates	Each	1		1
Drilled Shaft in Soil	Cu. Yd.		33.9	33.9
Drilled Shaft in Rock	Cu. Yd.		62.7	62.7
Elastomeric Bearing Assembly, Type I	Each		12	12
Anchor Bolts 1"	Each		24	24
Anchor Bolts 1 1/4"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.		65	65
Pipe Underdrains for Structures, 4"	Foot		138	138
Mechanical Splicers	Each		192	192
Asbestos Bearing Pad Removal	Each	36		36

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	E. Abut.	Pier 1	Pier 2	W. Abut.
	351.02	321.9	321.9	351.02

WATERWAY INFORMATION

Existing Low Grade Elev. 358.37 @ Sta. 1258+00
 Proposed Low Grade Elev. 358.78 @ Sta. 1258+00
 Drainage Area = 56.9 mi.²

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	10900	2756.0	3185.0	350.9	0.1	0.1	350.9	350.9
Base	100	12400	2770.0	3201.0	351.0	0.1	0.1	351.1	351.1
Max. Calc.	500	16200	2770.0	3201.0	351.0	0.2	0.2	351.2	351.2

10 year velocity through existing bridge = 2.7 ft/s
 10 year velocity through proposed bridge = 2.4 ft/s