

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUBSTRUCTURE		TOTAL
			ABUT.	PIER	
Porous Granular Embankment (Special)	Cu. Yd.		460		460
Stone Riprap, Class A4	Sq. Yd.		1051	1088	2139
Filter Fabric	Sq. Yd.		1051	1088	2139
Protective Coat	Sq. Yd.	6091			6091
Removal of Existing Structures	Each	2			2
Structure Excavation	Cu. Yd.		1289	152	1441
Cofferdam Excavation	Cu. Yd.			1244	1244
Cofferdams, Location 1	Each			1	1
Cofferdams, Location 2	Each			1	1
Cofferdams, Location 3	Each			1	1
Cofferdams, Location 4	Each			1	1
Floor Drains	Each	108			108
Concrete Structures	Cu. Yd.		368.0	7354.6	7722.6
Concrete Superstructure	Cu. Yd.	1944.7			1944.7
Bridge Deck Grooving	Sq. Yd.	4861			4861
Seal Coat Concrete	Cu. Yd.			710	710
Concrete Encasement	Cu. Yd.		32.8	38.0	70.8
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 72"	Foot	6387			6387
Reinforcement Bars, Epoxy Coated	Pound	445060	32680	203860	681600
Bar Splicers	Each	3158	284	456	3898
Furnishing Steel HP 14x73	Foot	3948	13396	17344	17344
Driving Piles	Foot	3948	13396	17344	17344
Test Piles, Steel HP 14x73	Each		4	8	12
Name Plates	Each	2			2
Preformed Joint Strip Seal	Each	184			184
Elastomeric Bearing Assembly, Type II	Each	28			28
Anchor Bolts, 5/8"	Each		56		56
Anchor Bolts, 1/4"	Each			32	32
Concrete Sealer	Sq. Ft.		2727		2727
Geocomposite Wall Drain	Sq. Yd.		185		185
Pipe Underdrains for Structures, 4"	Foot		325		325
Mechanical Splicer	Each		12	1536	1548
Underwater Structure Excavation Protection, Location 1	Each			1	1
Underwater Structure Excavation Protection, Location 2	Each			1	1
Underwater Structure Excavation Protection, Location 3	Each			1	1
Underwater Structure Excavation Protection, Location 4	Each			1	1
Diamond Grinding (Bridge Section)	Sq. Yd.	4630			4630
Temporary Soil Retention System	Sq. Ft.		1638		1638

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Concrete Sealer shall be applied to the designated areas of the Substructure.  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
 Layout of slope protection system may be varied in the field to suit ground conditions 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.  
 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.  
 Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.  
 Slip forming of the concrete parapet is not allowed.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi  
 f'ci = 5,000 psi  
 fpu = 270,000 psi (low lax. 1/2" dia. strands)  
 fpbt = 201,960 psi (low lax. 1/2" dia. strands)

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications  
 4th Edition with 2008 Interims

LOADING HL-93

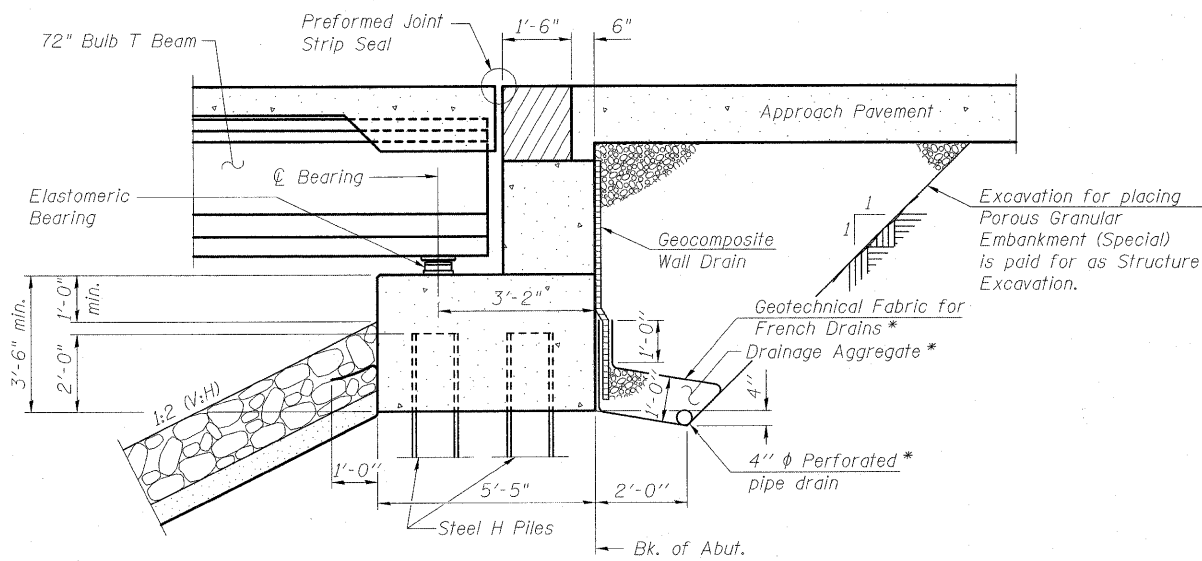
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.22 g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.48 g  
 Soil Site Class = D

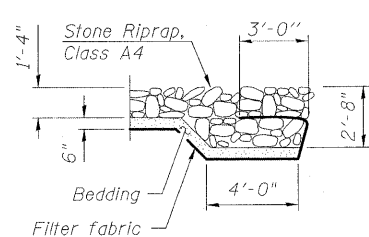
GENERAL DATA

S.N. 025-0107 & 025-0108

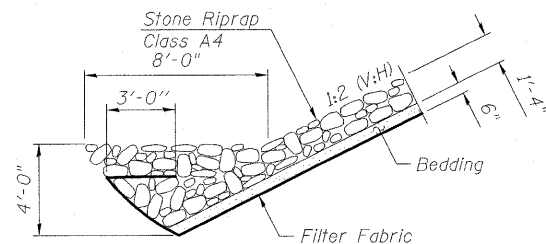


SECTION THRU PILE SUPPORTED  
STUB ABUTMENT

\* Included in the cost of Pipe Underdrain for Structures, 4"  
 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).

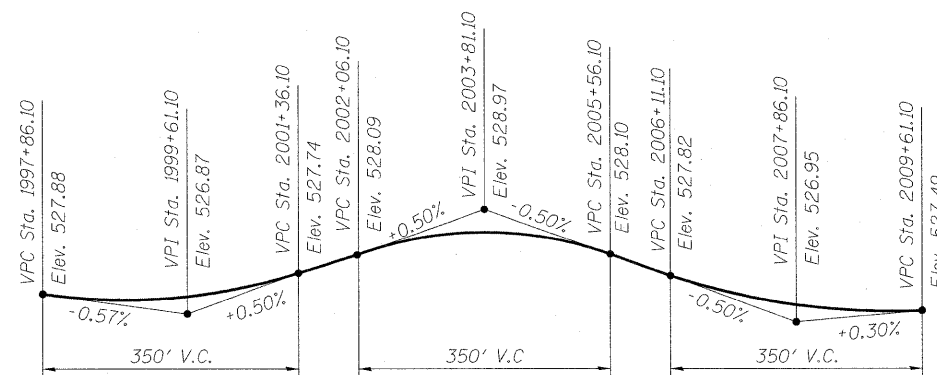


SECTION A-A



SECTION B-B

For Underwater Structure Excavation Protection Locations 1, 2, 3 & 4 see Elevation View on sheet 1 of 58.  
 For Cofferdams, Locations 1, 2, 3 & 4 see Plan View on sheet 4 of 58.



PROFILE GRADE

(E.B. & W.B. F.A.I. Rte. 70)



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DESIGNED	B.B.
CHECKED	A.C.S.
DRAWN	W.J.S.
CHECKED	C.J.F. & B.B.

SHEET NO. 2 58 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	(25-3)B	EFFINGHAM	1416	34
SN 025-0107 & 025-0108		CONTRACT NO. 74296			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT 70					