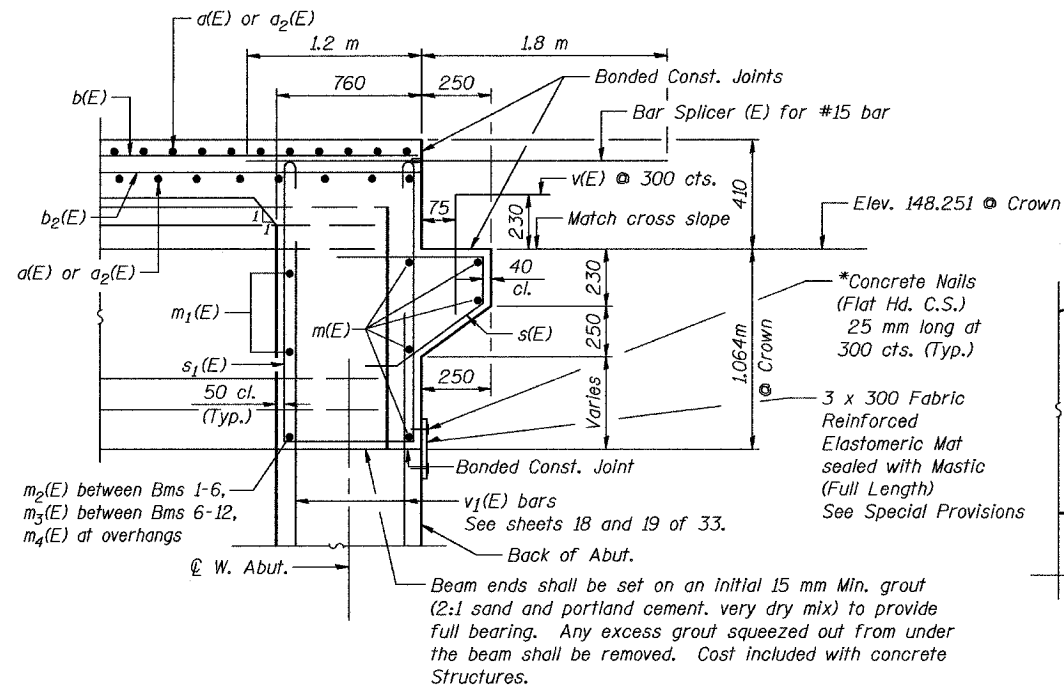


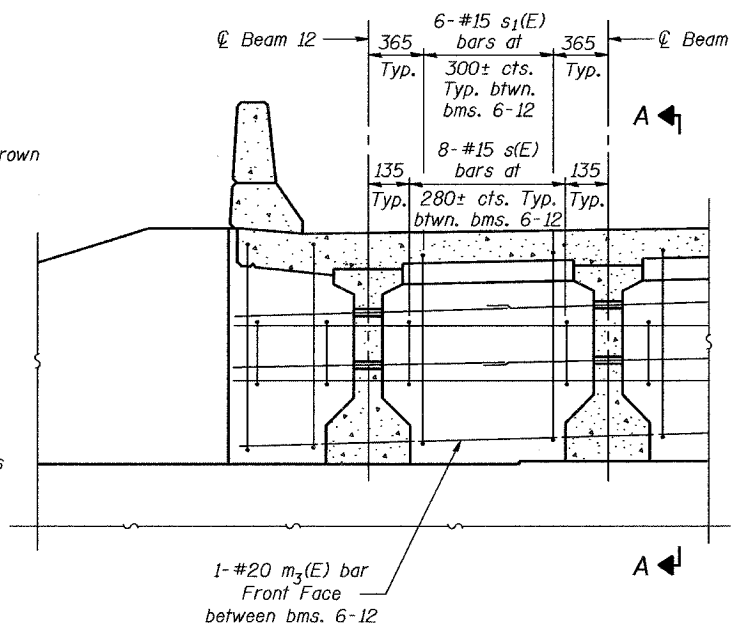
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-11VB1B	TAZEWELL	1366	404
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



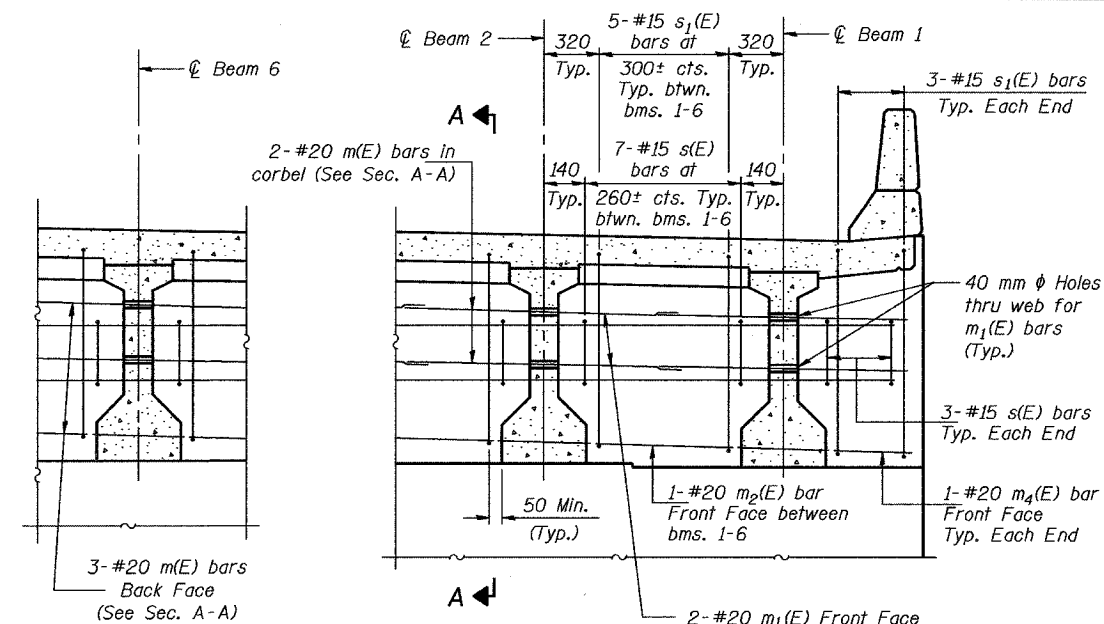
SECTION A-A

Dimensions at right angles to abutment.
*Cost included with Concrete Structures.



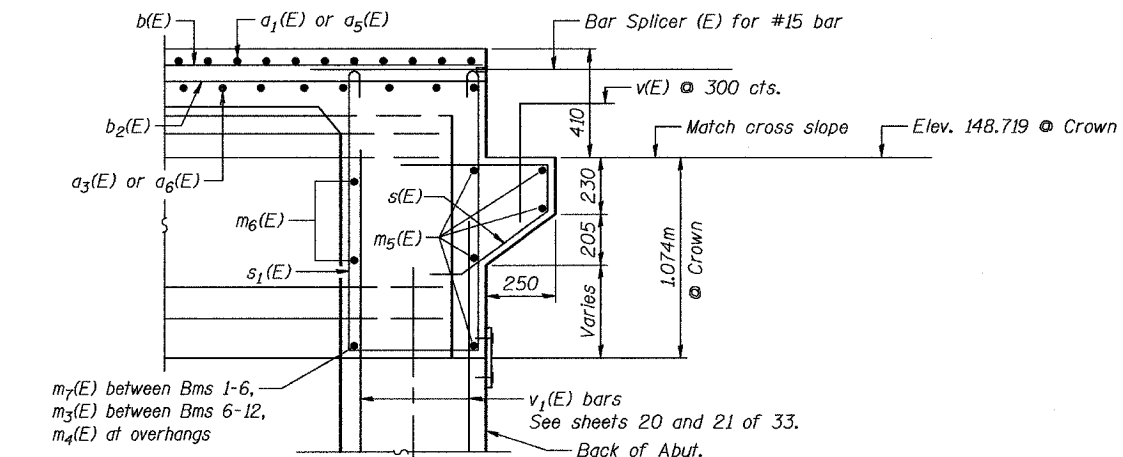
DIAPHRAGM AT WEST ABUTMENT

(Looking West)



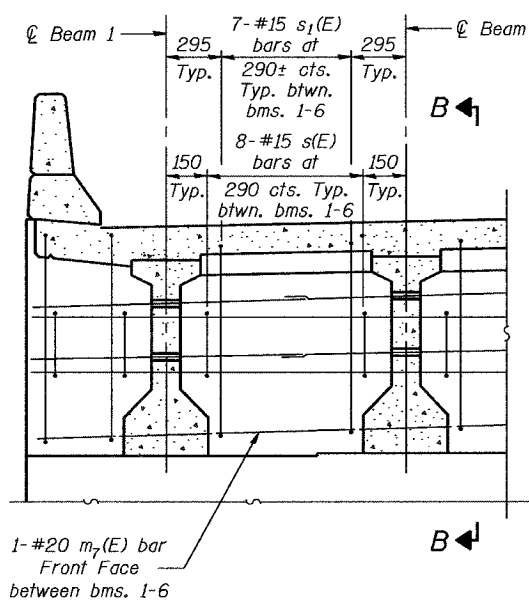
MIN. BAR. LAP

#20 bar = 850



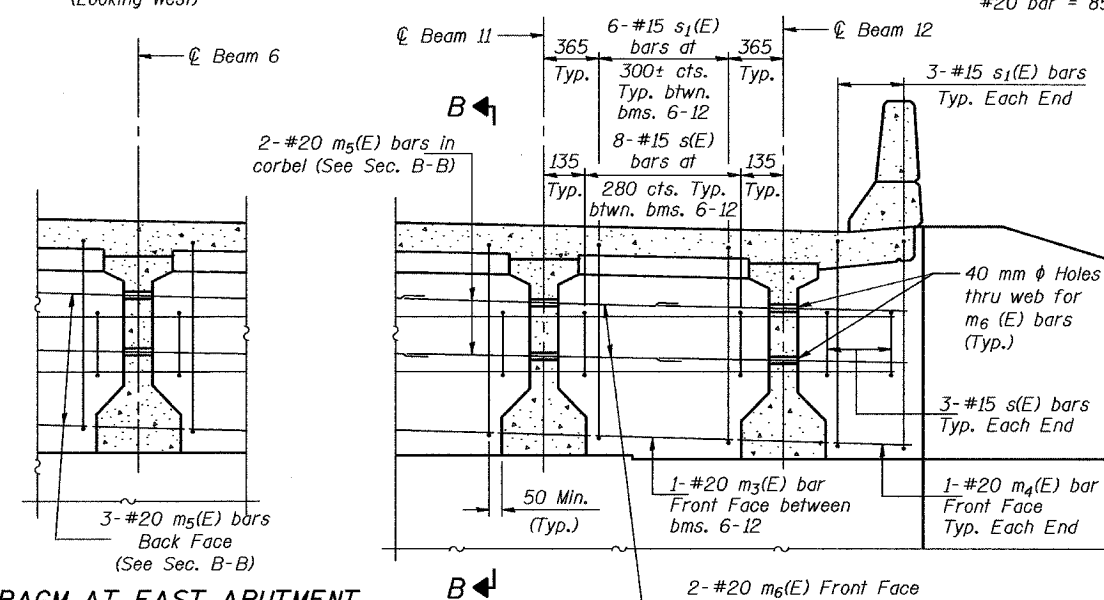
SECTION B-B

See Section A-A for dimensions and details not shown.



DIAPHRAGM AT EAST ABUTMENT

(Looking East)



	West Abutment	Pier 1 Span 1	Pier 1 Span 2	Pier 2 Span 2	Pier 2 Span 3	East Abutment
R _∅	(kN) 153	153	252	252	161	161
Rs _∅	(kN) 30	68	81	81	70	33
R _⊥	(kN) 197	213	224	224	214	198
Imp.	(kN) 55	60	54	54	60	56
R (Total)	(kN) 423	466	577	578	476	435

I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

Strand Pattern	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
I (10 ⁶ mm ⁴)	59986		59986		59986
I' (10 ⁶ mm ⁴)	173718		173718		173718
S _b (10 ³ mm ³)	111998		111998		111998
S _b ' (10 ³ mm ³)	187206		187206		187206
S _t (10 ³ mm ³)	87750		87750		87750
S _t ' (10 ³ mm ³)	596466		596466		596466
∅ (kN/m)	19.59		19.59		19.59
M _∅ (kN·m)	498		1609		661
s _∅ (kN/m)	6.29		6.29		6.29
Ms _∅ (kN·m)	66	297	218	305	87
M _⊥ (kN·m)	502	536	662	542	534
M (Imp) (kN·m)	150	150	199	152	160

NOTES:

Reinforcement bars in diaphragm are billed with superstructure on sheet no. 11 of 33.

Concrete in diaphragm is included with Concrete Superstructure on sheet no. 11 of 33.

For details of bars s(E) and s₁(E) see sheet no. 11 of 33.

The s(E), s₁(E) and s₂(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Cost of 4.4 kg/m roofing felt is included with Concrete Superstructure. All dimensions are in millimeters (mm) except as noted.

For details of deck reinforcing bars, see sheets no. 9 and 10 of 33.

ABUTMENT DIAPHRAGM DETAILS

Date	Designed JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No.
Revisions	Drawn JEH		16
	Checked RME		of 33
	Approved DLC		



Date: 7-21-04

URS Job No. 2100001243.02