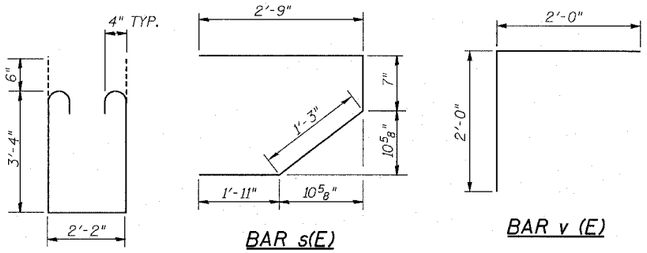
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 567	(12)BR-1	LEE	68	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
24 SHEETS

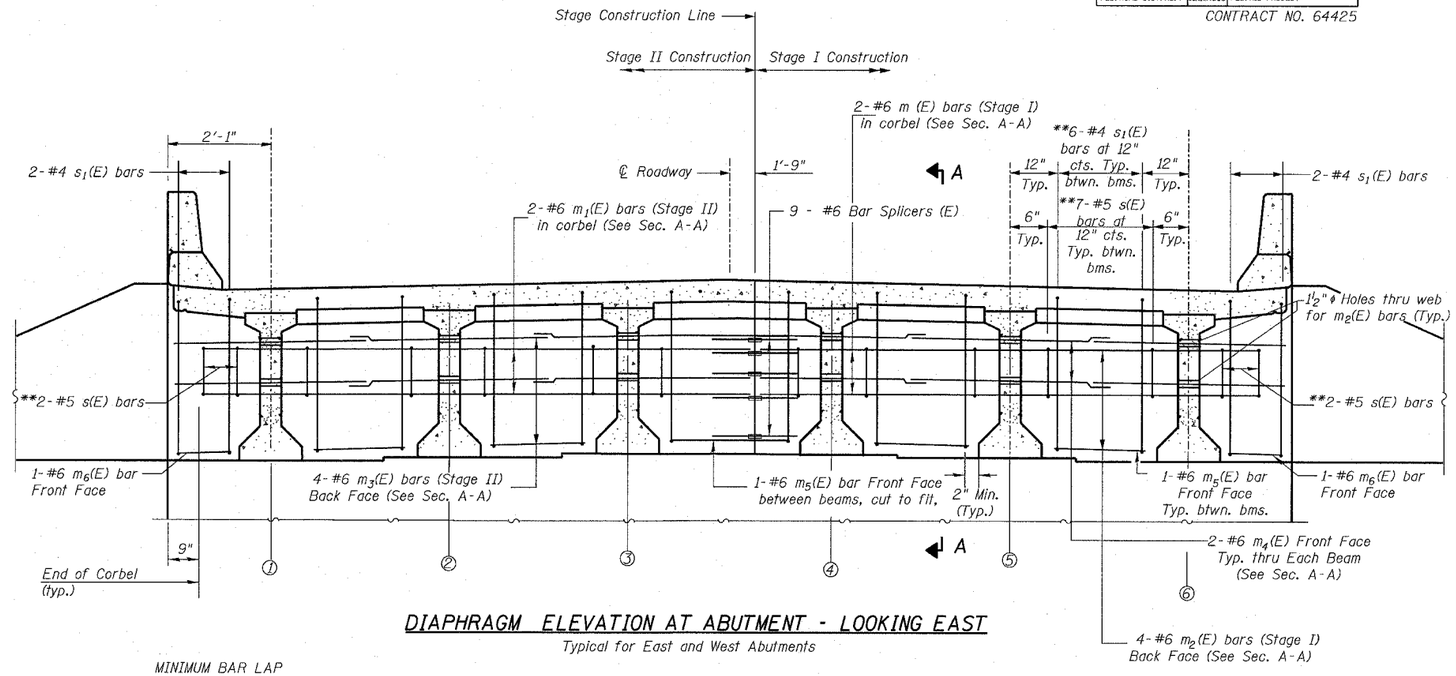
CONTRACT NO. 64425



BAR $s_1(e)$ BAR s(E) BAR v (E)

Notes: Reinforcement bars and diaphragm concrete shown on this sheet are included in Superstructure Bill of Material on Sheet 8 of 24.

For bar splicer details, see sheet 20 of 24



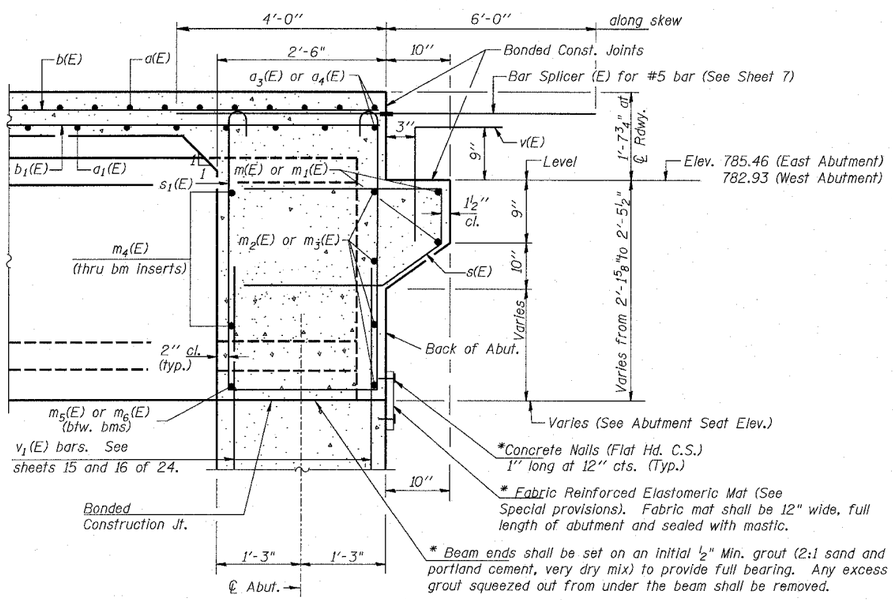
DIAPHRAGM ELEVATION AT ABUTMENT - LOOKING EAST

Typical for East and West Abutments

** Place parallel to beams and space at right angles to beams

MINIMUM BAR LAP

#6 = 2'-0"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

* Cost included with Concrete Superstructure.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. #1 0.6 Sp. #3	Pier 1 or 2	0.5 Sp. #2
Strand Pattern				
I	(in^4)	48,648		48,648
I'	(in^4)	172,451		172,451
S_b	(in^3)	3,165		3,165
S_b'	(in^3)	5,878		5,878
S_t	(in^3)	2,358		2,358
S_t'	(in^3)	25,894		25,894
DL	(k/')	1.045		1.045
M DL	('k)	303		372
s DL	(k/')	0.483	0.483	0.483
Ms DL	('k)	87	131	53
M LL	('k)	309	235	283
M (Imp)	('k)	90	68	79

INTERIOR BEAM REACTION TABLE				
		Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R DL	(k)	25.1	25.1	27.9
Rs DL	(k)	9.2	13.9	13.9
R LL	(k)	35.2	21.7	21.7
Imp.	(k)	10.2	6.3	6.3
R (Total)	(k)	79.7	67.0	69.8

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.

ABUTMENT DIAPHRAGM DETAILS
IL RTE 38 OVER FRANKLIN CREEK
F.A.P. RTE 567 SECTION (12)BR-1
LEE COUNTY
STATION 439+12.17
S.N. 052-0020

DESIGNED JFJ CHECKED DDB DRAWN JB CHECKED DDB	RANDOLPH & ASSOCIATES, INC. 911 N. PLUMER AVENUE, PEORIA, IL 61603-3224 TEL.309-673-1550 FAX.309-673-8202 1-888-531-7021 HTTP://WWW.RANDOLPHINC.COM CONSULTING ENGINEERS • LAND SURVEYORS	FILE NUMBER 136.109 DATE July 2004

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