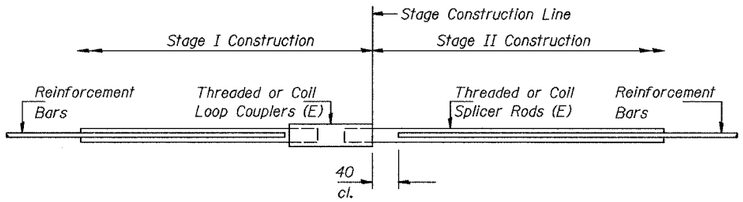
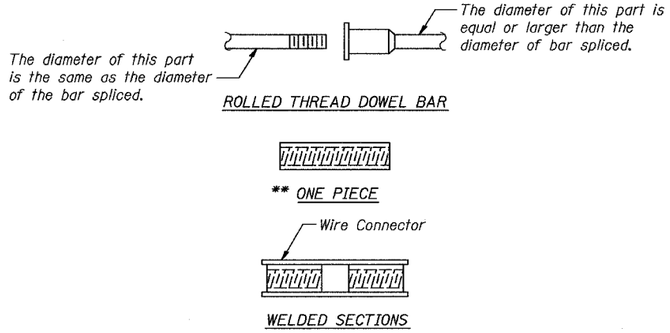
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



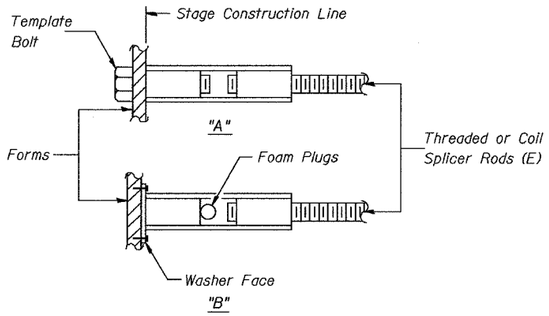
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
#15	82	West Abutment Backwall
#15	90	East Abutment Backwall



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) $= 1.25 \times 10^{-3} \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kN) $= 1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in MPa.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)

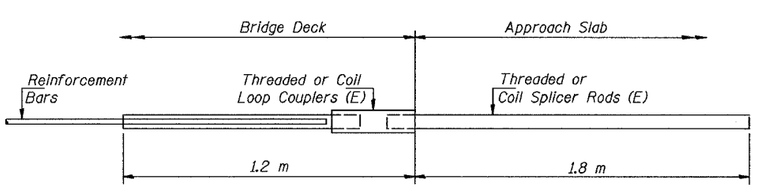
A_t = Tensile stress area of lapped reinforcement bars (mm^2).

* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

All dimensions are in millimeters (mm) except as noted.



INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 172

BAR SPLICER ASSEMBLY DETAILS

Date			
Revisions	Designed JLK	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. 28 of 33
	Drawn JEH		
	Checked RME		
	Approved DLC		
	Date: 7-21-04		URS Job No. 2100001243.02

URS CORPORATION
ST. LOUIS, MO