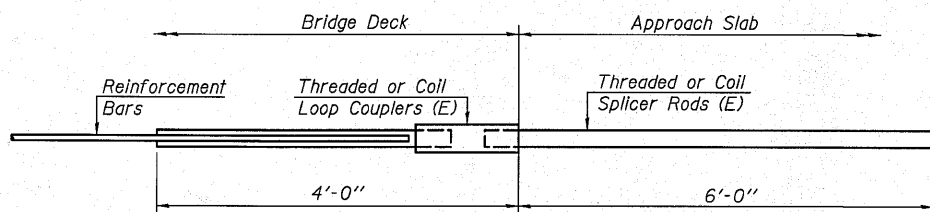


**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	

**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 60 ksi 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:

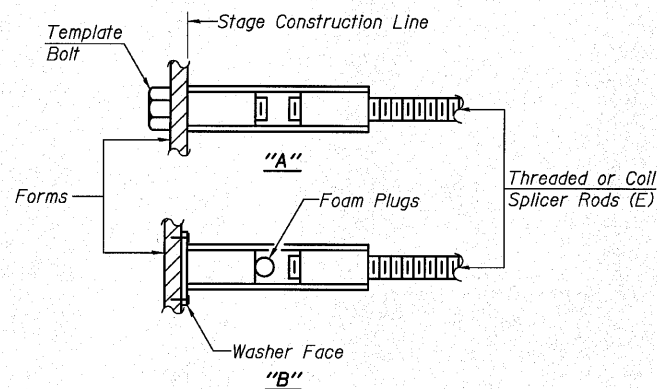
- ① Minimum Capacity =  $1.25 \times f_y \times A_t$   
(Tension in kips)
- ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_t$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.

$A_t$  = Tensile stress area of lapped reinforcement bars.

\* = 28 day concrete

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

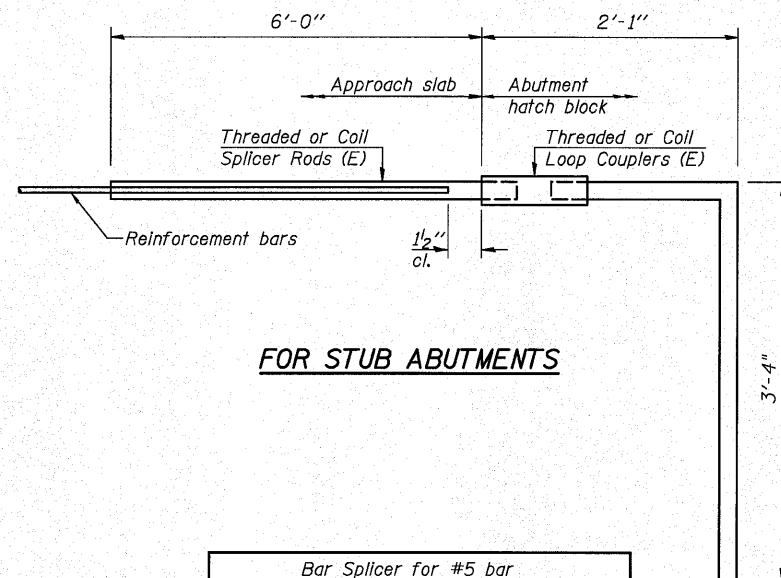


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

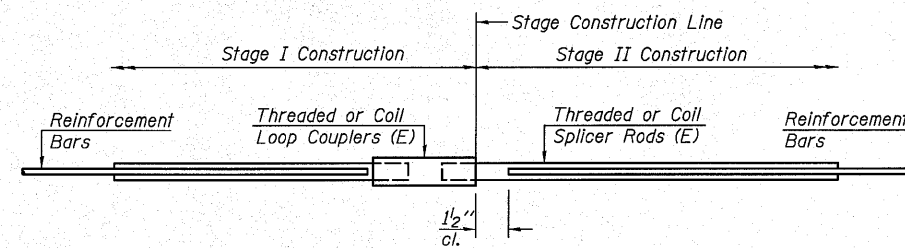
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 376	

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



**STANDARD**

**NB STRUCTURE**

Bar Size	No. Assemblies Required	Location
#5	6	N. Abut.
#5	6	S. Abut.
#5	531	Deck
#5	16	Edge Beam
#6	5	N. Abut.
#6	5	S. Abut.
#6	66	Pier 1
#6	58	Pier 2
#7	10	N. Abut.
#7	10	S. Abut.
#9	11	Pier 1
#9	11	Pier 2

**SB STRUCTURE**

Bar Size	No. Assemblies Required	Location
#5	6	N. Abut.
#5	6	S. Abut.
#5	531	Deck
#5	16	Edge Beam
#6	5	N. Abut.
#6	5	S. Abut.
#6	66	Pier 1
#6	58	Pier 2
#7	10	N. Abut.
#7	10	S. Abut.
#9	11	Pier 1
#9	11	Pier 2

**BAR SPLICER ASSEMBLY DETAILS**

STRUCTURE NO. 028-0081 (SB)

STRUCTURE NO. 028-0082 (NB)

SHEET NO. 40	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	(28-3-DVB-1)	FRANKLIN	98	64
43 SHEETS	CONTRACT NO. 78068				
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				
	Eastport Business Center 1 100 Lanter Court, Suite 1 Collinsville, Illinois 62234 618-345-2200			DESIGNED -	
	Design Firm License No. 184.001115			CHECKED -	
				DRAWN -	
				CHECKED -	