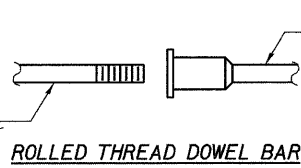


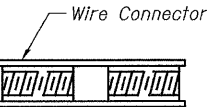
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.



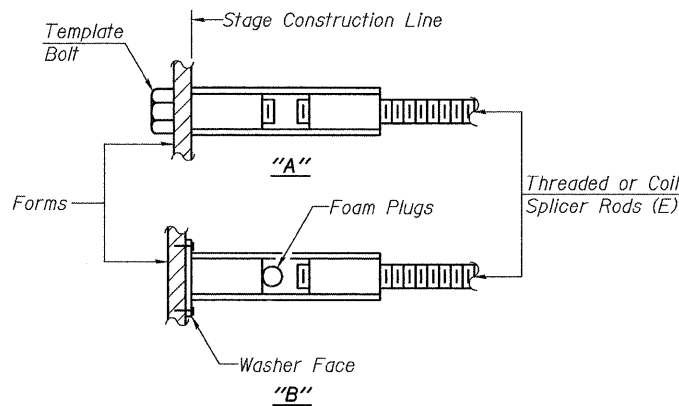
\*\* ONE PIECE



WELDED SECTIONS

**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



**INSTALLATION AND SETTING METHODS**

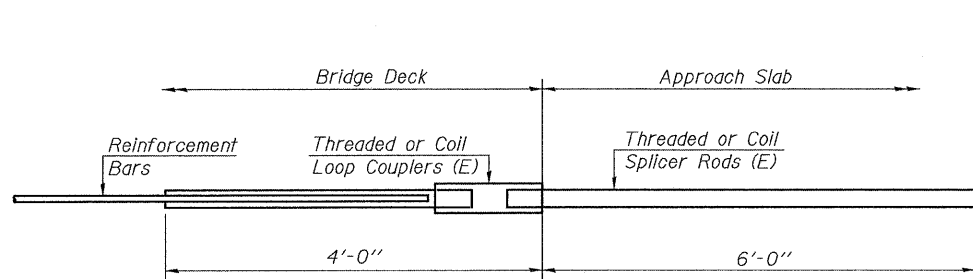
"A": Set bar splicer assembly by means of a template bolt.  
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.

**NOTES**

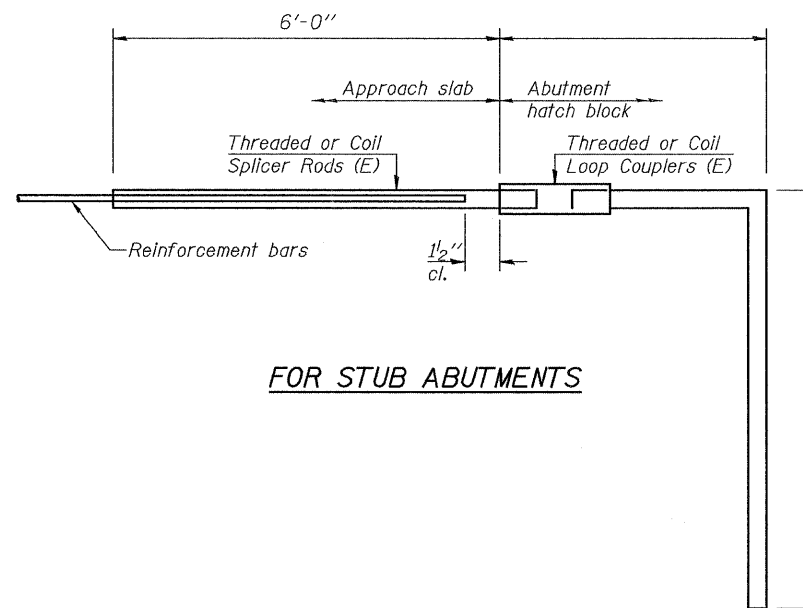
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to 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

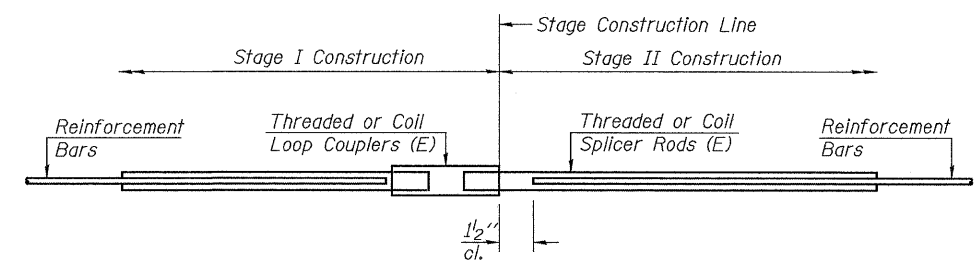
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**



**FOR STUB ABUTMENTS**



**STANDARD**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 66	

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

Bar Size	No. Assemblies Required	Location
#5	409	Deck
#6	16	Abut. Diaph.
#8	12	Abutments
#6	4	Abutments
#6	16	Piers
#5	44	Piers

**JD** Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

BSD-1 5-16-08

**BAR SPLICER ASSEMBLY DETAILS**  
ILLINOIS 96 OVER  
FOX CREEK  
STRUCTURE NO. 007-0028

SHEET 18 OF 22	F.A.P. RTE. 304	SECTION 5A-BR	COUNTY CALHOUN	TOTAL SHEETS 60	SHEET NO. 41
	STA. 475+19.62		CONTRACT NO. 76886		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

FILE: J:\JDQ\1064 IL DBV\9 IL 96 Fox Creek-FINAL\1-FoxCreek\IBarsplicer.dgn  
USER: DCD  
DATE: 11/26/2008 10:40:59