

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	FISCAL SHEETS	SHEET NO.	SHEET NO. 4 6 SHEETS
FAP 328	*	CLAY	109	16	
FED. ROAD DIST. NO.	ILL. DIST.	FED. AID PROJECT	Contract #74107 *6BR-1B-1		

**NOTES**

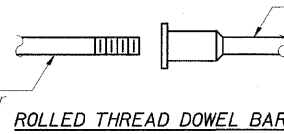
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to 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 (Tension in kips) =  $1.25 \times f_y \times A_t$
- ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_t$

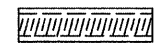
Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

BAR SPLICER ASSEMBLIES			
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'-0"	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

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.



ROLLED THREAD DOWEL BAR



\*\* ONE PIECE

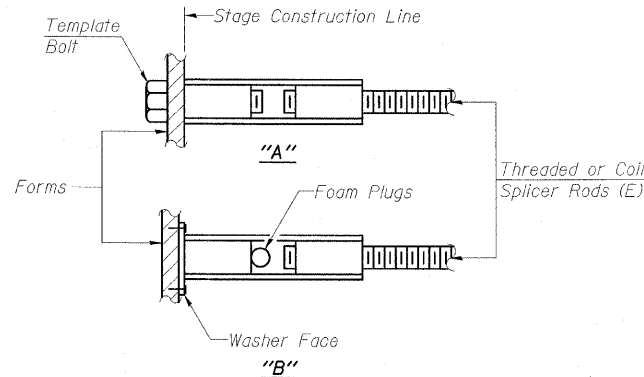
Wire Connector



WELDED SECTIONS

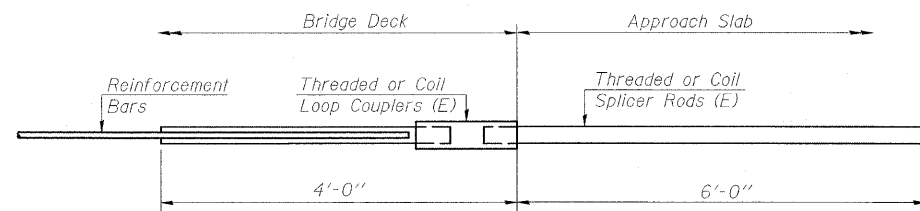
**BAR SPLICER ASSEMBLY ALTERNATIVES**

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

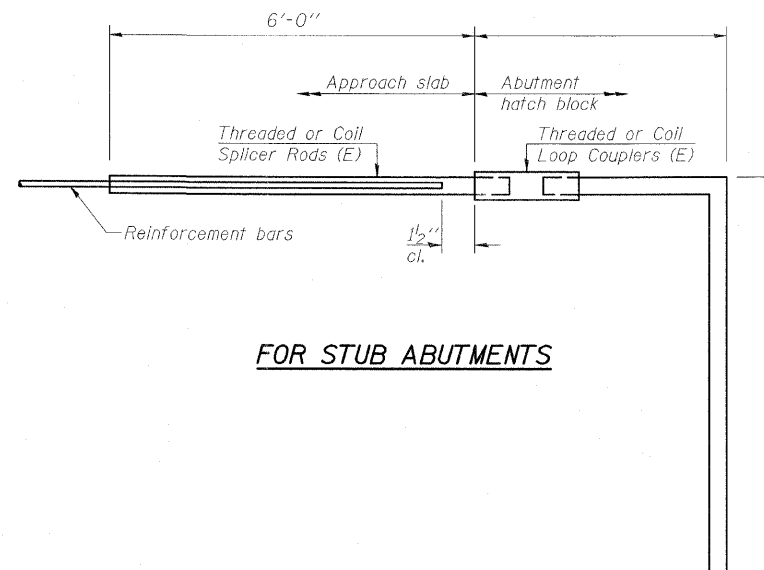


**INSTALLATION AND SETTING METHODS**

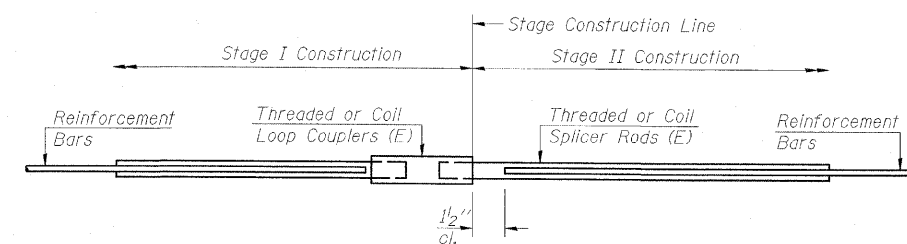
"A": Set bar splicer assembly by means of a template bolt.  
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.



**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 =	0	

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	56	Bottom Slab
#5	30	Walls
#6	56	Top Slab

**BAR SPLICER ASSEMBLY DETAILS**  
US 45 OVER GROVE CREEK  
FAP ROUTE 328 - SECTION (6BR-1)B-1  
CLAY COUNTY  
STATION 1413+68.00  
STRUCTURE NO. 013-2009

**ESCA**  
CONSULTANTS, INC.

DESIGNED BY:	FMA	02/08
DRAWN BY:	CJ	02/08
CHECKED BY:	ELH	05/08
APPROVED BY:	RDP	08/08