

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	(62-2VB)I	MARSHALL	19	11
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

**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.

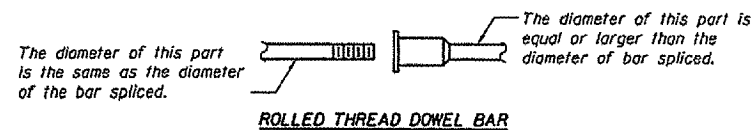
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_l$
- ② Minimum Pull-out Strength (Tension in kips) =  $1.25 \times f_{s_{allow}} \times A_l$

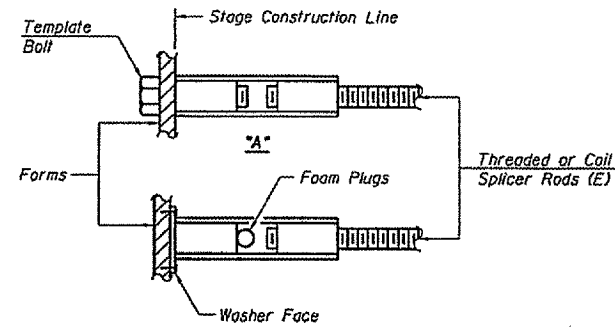
Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $f_{s_{allow}}$  = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)  
 $A_l$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

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	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."



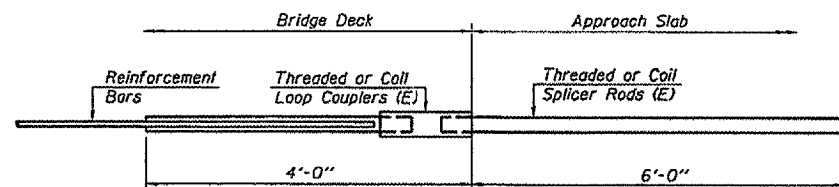
ROLLED THREAD DOWEL BAR



**INSTALLATION AND SETTING METHODS**

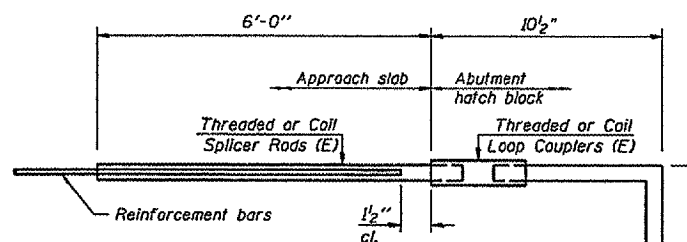
"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.

4 - Bar Splicers @ 12" cts. for #6 h(E) bars



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

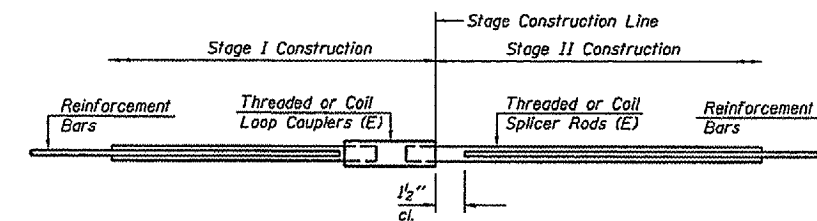
Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



**FOR PILE BENT ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

Size	No. Assemblies Required	Location
#4	41	BACK WALL



**STANDARD**

Size	No. Assemblies Required	Location
#6	4	END DAM
#5	6	BACK WALL
#4	8	Approach Pavement
#5	30	Approach Pavement
#4	24	Approach Pavement (Concrete Pad)
#6	28	Approach Pavement Connector

**BAR SPLICER ASSEMBLY DETAILS**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BAR SPLICER ASSEMBLY DETAIL**  
 FAI 412 (I-39)  
 SECTION (62-2VB)I  
 STA. 165+90.23  
 MARSHALL COUNTY

SCALE: VERT. 1"=1'-0"  
 HORIZ. 1"=10'-0"  
 DATE 04/26/2005

DRAWN BY RLW  
 CHECKED BY

MARCH 21, 2005 C:\PROJECTS\CMA\106\CM301\DETAILS.DGN

BSD-1 9-01-03