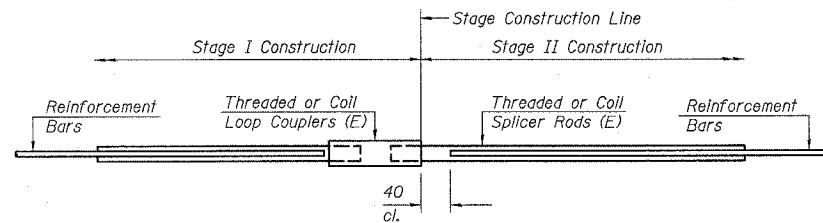


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FAP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
337	20R-5	LAKE	562	424	13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
0-91-552-99		Contract No. 60881			



**BAR SPLICER ASSEMBLY DETAIL**

Bar Size	No. Assemblies Required	Location
#13	10	Top Slab
#25	12	Top Slab
#19	22	Walls
#16	20	Bottom Slab

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**

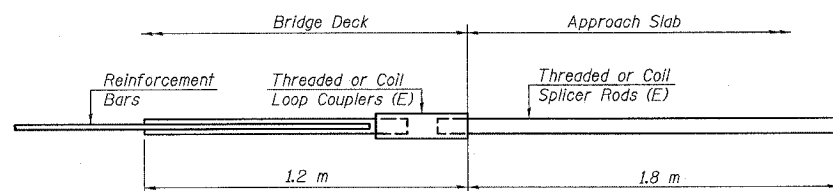
Wire Connector



**WELDED SECTIONS**

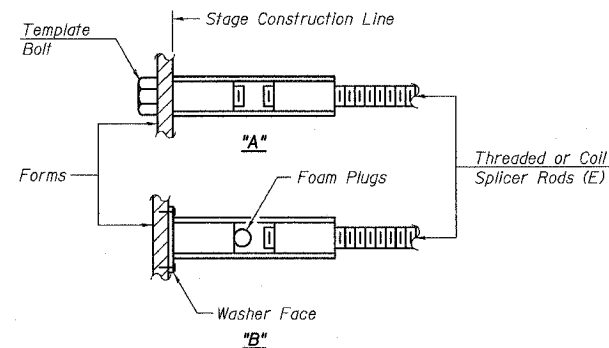
**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



**INTEGRAL ABUTMENT  
BAR SPLICER ASSEMBLY DETAIL  
FOR #15 BAR**

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



**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 420 MPa yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel 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 =  $1.25 \times 10^3 \times f_y \times A_t$   
(Tension in kN)
- ② Minimum \*Pull-out Strength =  $1.25 \times 10^3 \times f_{sallow} \times A_t$   
(Tension in kN)

Where  $f_y$  = Yield strength of lapped reinforcement bars in MPa.  
 $f_{sallow}$  = 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 Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#13	510 mm	68	27
#16	610 mm	102	41
#19	790 mm	147	59
#22	1.04 m	201	80
#25	1.37 m	262	105

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.

TYLIN INTERNATIONAL

DESIGNED	TD, MAF
CHECKED	MI
DRAWN	MAF
CHECKED	MI
DATE	03-22-2004

BSD-1 (M) 10-31-02

**BAR SPLICER (COUPLER)  
DETAILS**

IL ROUTE 22 OVER  
PEDESTRIAN TUNNEL  
FAP 337 SECTION 20R-5  
LAKE COUNTY  
STA. 100+775.000  
S.N. 049-T016