

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 322	(23-BR - 2)BR	FAYETTE	19	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 94968

SHEET NO. 8
11 SHEETS

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:

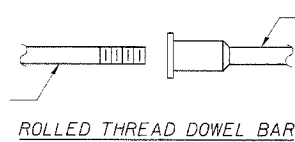
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

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

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

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

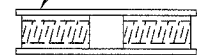


ROLLED THREAD DOWEL BAR



** ONE PIECE

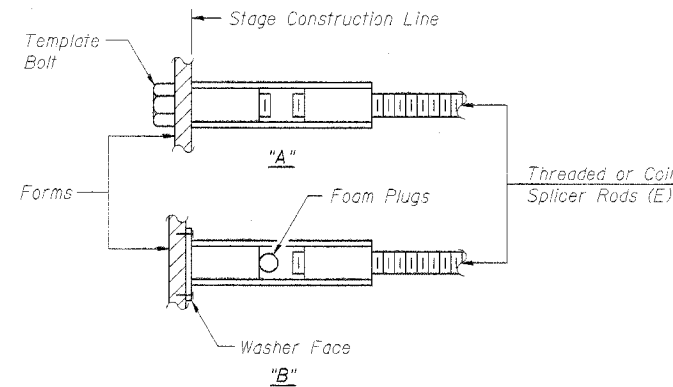
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



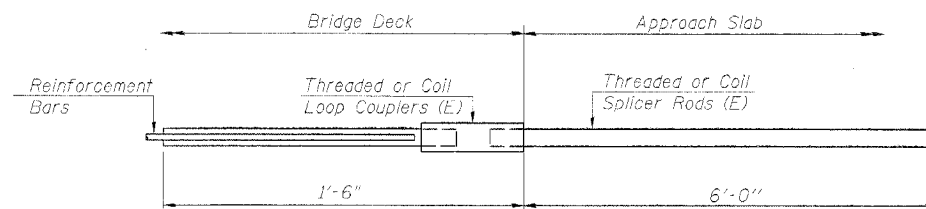
INSTALLATION AND SETTING METHODS

"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.

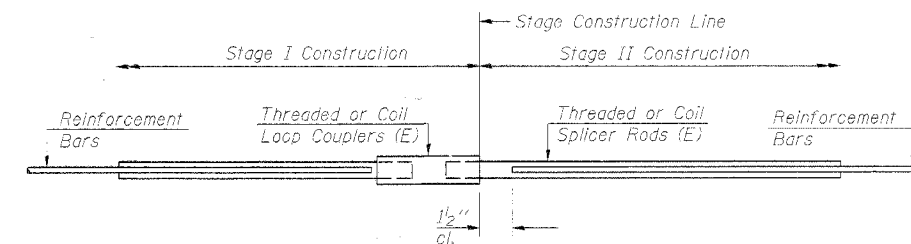
(E) : Indicates epoxy coating.

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



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 = 102



STANDARD

Bar Size	No. Assemblies Required	Location
#4	127	Superstructure
#5	9	Superstructure
#4	2	Substructure
#5	12	Substructure

BENTON & ASSOCIATES, INC.

DESIGNED MBH	200
CHECKED NRF	EXAMINED
DRAWN MBH	PASSED
CHECKED NRF	ENGINEER OF BRIDGES AND STRUCTURES

BSD-1

11-1-06

BAR SPLICER DETAILS
US 45 / DEER CREEK
F.A.P. RT. 328
WAYNE COUNTY
SN. 096-0068