

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	STATE SHEET	SHEET NO.
F.A.P. 595	5HBR	Rock Island	139	33
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT -		

SHEET NO. 33
33 SHEETS

Contract #64931

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:

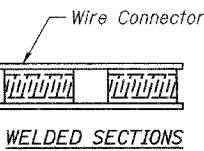
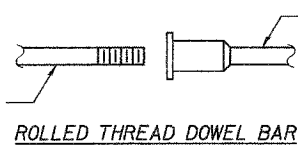
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

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

A_t = Tensile stress area of lapped reinforcement bars.

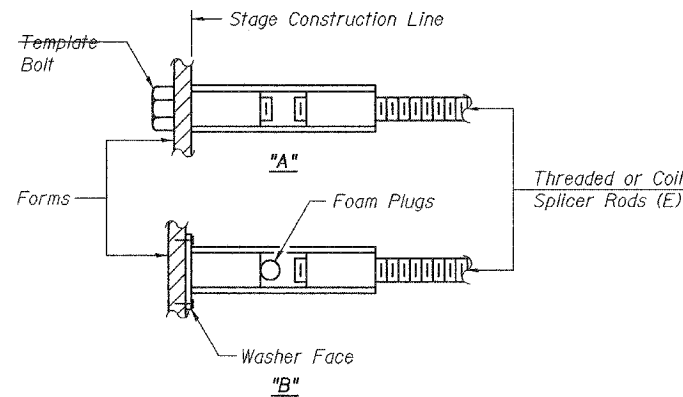
* = 28 day concrete

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



BAR SPLICER ASSEMBLY ALTERNATIVES

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



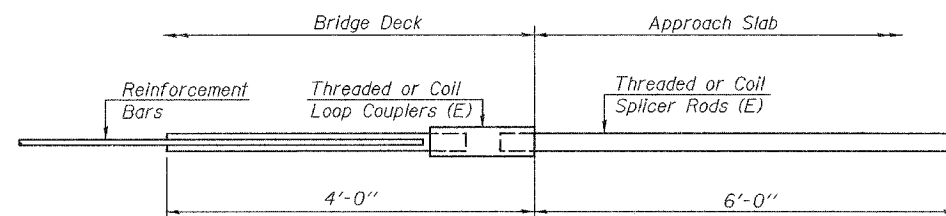
INSTALLATION AND SETTING METHODS

"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.

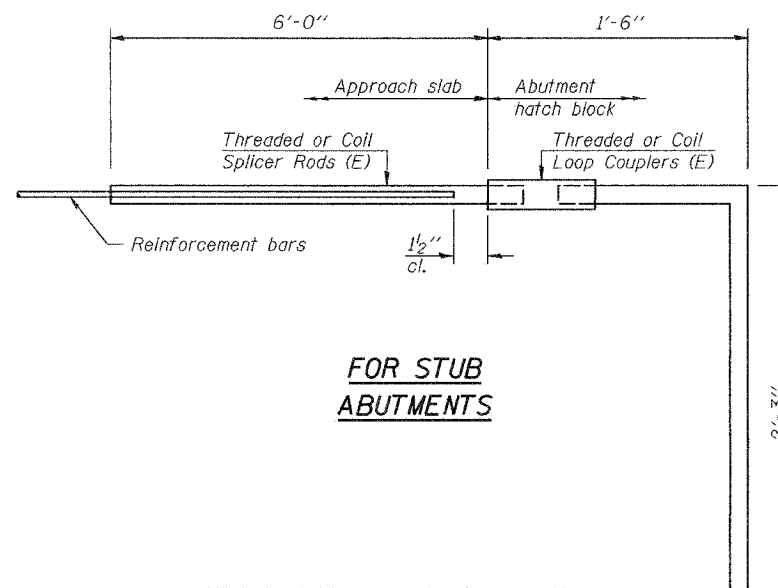
(E) : Indicates epoxy coating.

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



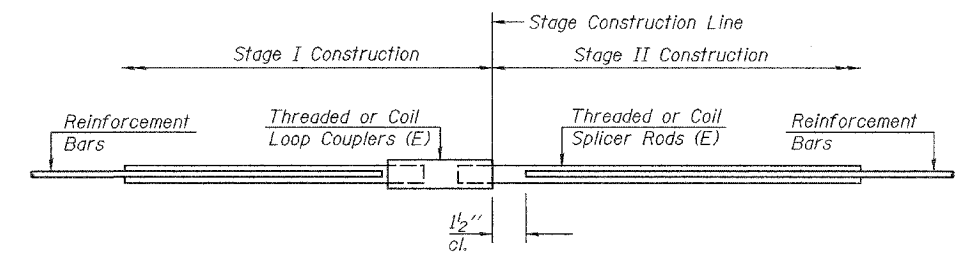
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 221



STANDARD

Bar Size	No. Assemblies Required	Location
#5	459	Deck
#6	8	Deck
#7	8	Deck
#4	16	S. Abut.
#5	69	S. Abut.
#6	5	S. Abut.
#5	70	N. Abut.
#6	5	N. Abut.
#5	24	Pier
#8	7	Pier

BAR SPLICER ASSEMBLY DETAILS

IL. RTE. 5 OVER IL. RTE. 84

F.A.P. RTE. 595 - SECTION 5HBR

ROCK ISLAND COUNTY

STATION 623+65.69

S.N. 081-0169

DESIGNED	Dewey H. Coultas
CHECKED	Chad E. Hodel
DRAWN	W.D. Collins
CHECKED	D.H.C./C.E.H.

EXAMINED	October 5, 2007	Thomas J. Damagala
PASSED		Ralph E. Anderson

BSD-1

11-1-06