

FPM RTL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	114 BY-R-1	WILL	139	87
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES

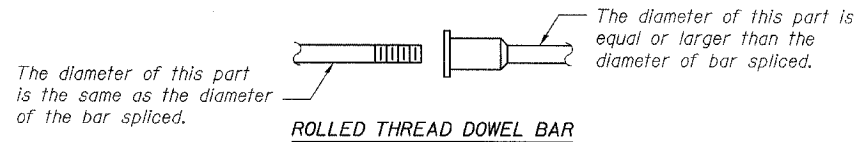
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the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

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

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



** ONE PIECE

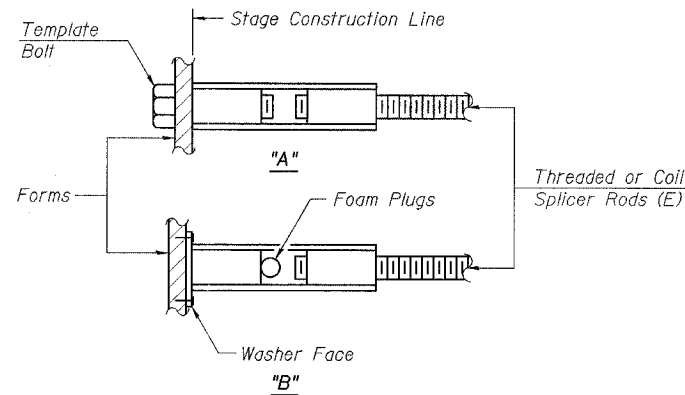
Wire Connector



WELDED SECTIONS

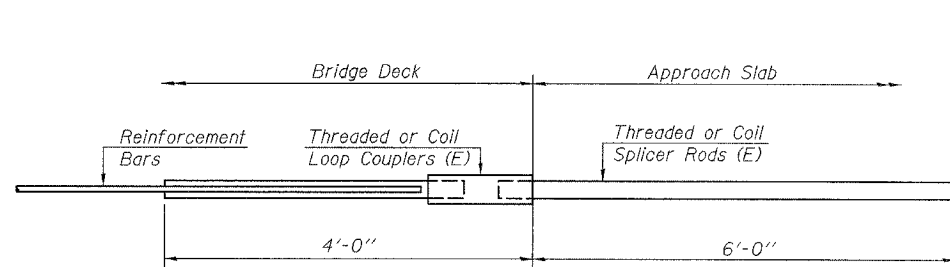
BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

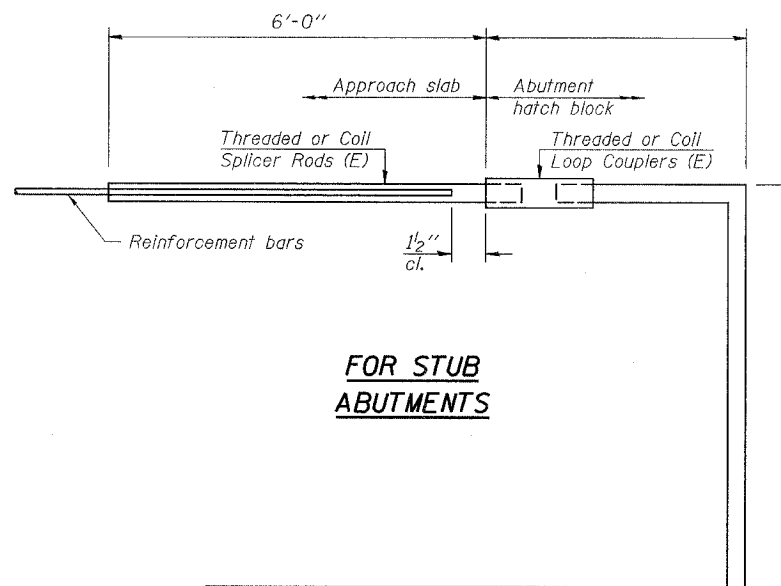
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

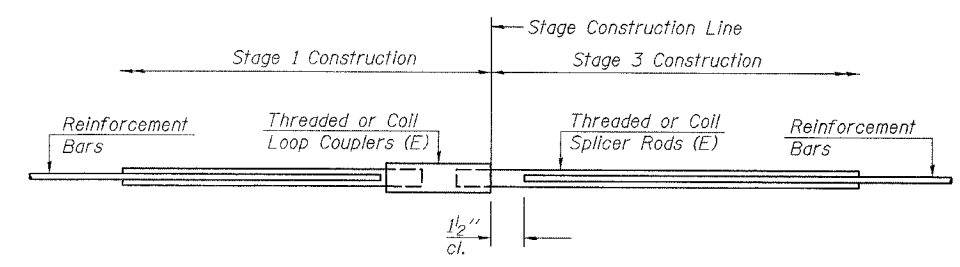
Bar Splicer for #5 bar		
Min. Capacity = 23.0 kips - tension		
Min. Pull-out Strength = 12.3 kips - tension		
No. Required = 176		

Bar Size	No. Assemblies Required	Location
#5	88	South Abutment
#5	88	North Abutment



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	734	Deck
#6	8	S. Abut. Diaph.
#6	8	N. Abut. Diaph.
#4	4	Pier 1 Diaph.
#6	2	Pier 1 Diaph.
#4	4	Pier 2 Diaph.
#6	2	Pier 2 Diaph.

Bar Size	No. Assemblies Required	Location
#7	12	South Abutment
#7	12	North Abutment
#7	12	Pier 1
#4	22	Pier 1
#7	12	Pier 2
#4	22	Pier 2

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS
 ILLINOIS ROUTE 59 OVER DuPAGE RIVER
 FAP ROUTE 338 SECTION 114 BY-R-1
 WILL COUNTY
 STATION 3209+85.00
 STRUCTURE NUMBER 099-0339
 SCALE: NONE DESIGNED BY: SB DRAWN BY: TL
 DATE: 08/17/07 CHECKED BY: WPM CHECKED BY: SB

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