

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(48-26HB-4)I	KNOX	54	52
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

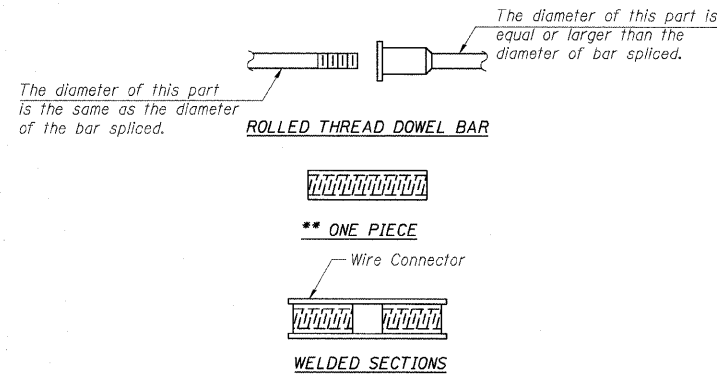
CONTRACT 88919

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:

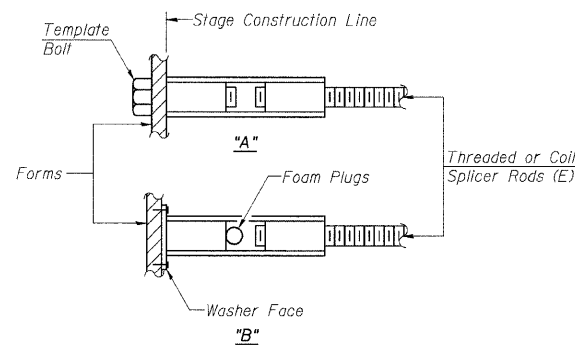
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_f$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_f$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_f = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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	7.9
#5	2'-2"	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



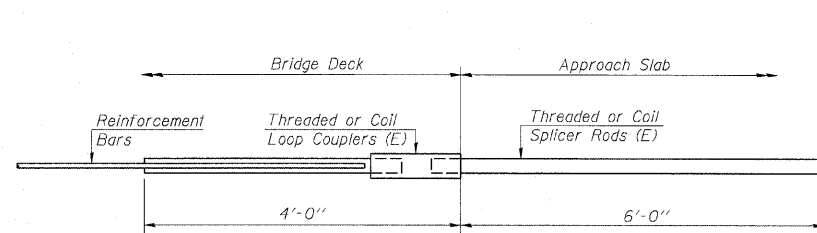
BAR SPLICER ASSEMBLY ALTERNATIVES

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



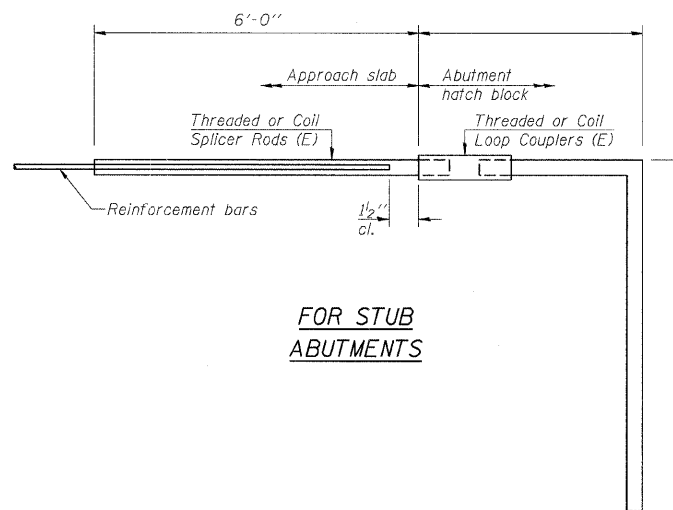
INSTALLATION AND SETTING METHODS

"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.



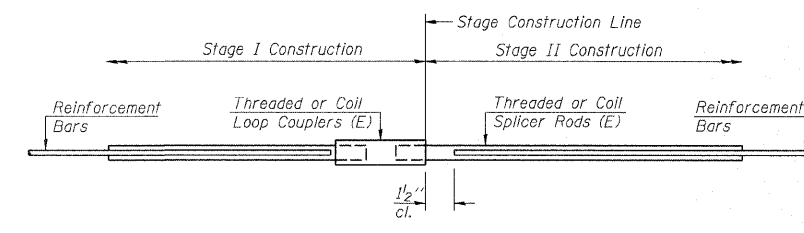
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 204	



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	1600	Deck
#5	16	Abutments
#6	44	Abuts. & Diaphs.

BAR SPLICER ASSEMBLY DETAILS

Date	Designed ACW	U.S. ROUTE 34 OVER F.A.I. ROUTE 74 F.A.I. RTE. 74 SECTION (48-26HB-4)I KNOX COUNTY STA. 212+20.71 STRUCTURES NO. 048-0019 (WB) & 048-0020 (EB)	Sheet No.
Revisions	Drawn SRS		<div style="font-size: 2em; font-weight: bold; text-align: center;">28</div> of 30
	Checked KWB		
	Approved KWB		
Prepared by: WVP CORPORATION A Division of URS Greiner Woodward Clyde			