

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15V B-1-R-1	COOK	243	160
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62388				

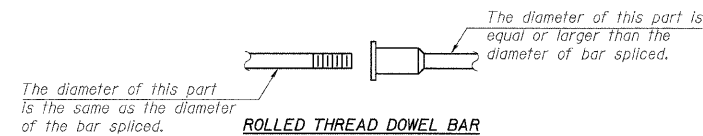
NOTES

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 (413.7 MPa) 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:

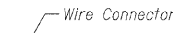
- ① Minimum Capacity = $1.25 \times f_y \times A_1$
(Tension in kips (kN))
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_1$
(Tension in kips (kN))

Where f_y = Yield strength of lapped reinforcement bars in ksi (MPa).
 A_1 = 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
#5 (#15)	2'-2" (660)	23.0 (102.3 kN)	12.3 (54.7 kN)
#6 (#20)	2'-7" (787)	33.1 (147.2 kN)	17.4 (77.4 kN)
#8 (#25)	4'-6" (1372)	58.9 (262.0 kN)	31.3 (139.2 kN)



** ONE PIECE

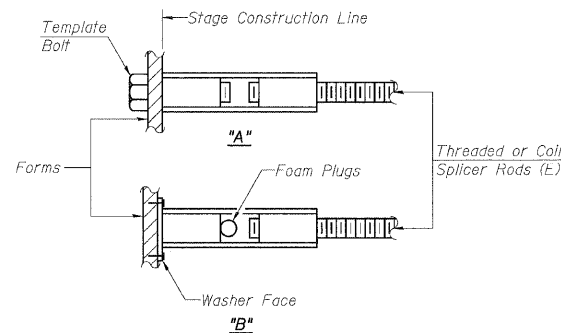


Wire Connector

WELDED SECTIONS

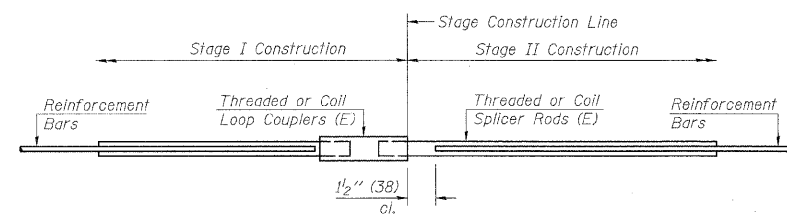
BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

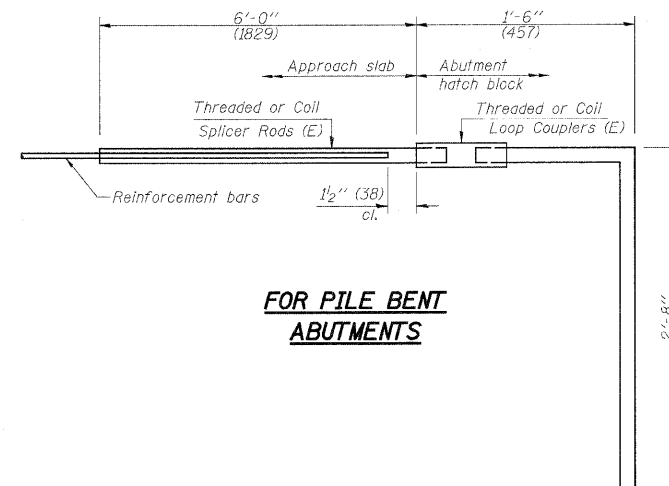
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD

Bar Size	No. Assemblies Required	Location
#5 (#15)	51	Pier 2
#8 (#25)	14	
#5 (#15)	65	Pier 3
#8 (#25)	12	
#5 (#15)	4	Pier 4
#8 (#25)	12	
#5 (#15)	4	Pier 5
#8 (#25)	12	
#5 (#15)	4	Pier 12
#8 (#25)	12	
#5 (#15)	4	Pier 13
#8 (#25)	12	
#5 (#15)	4	Pier 14
#8 (#25)	12	
#5 (#15)	4	Pier 15
#8 (#25)	12	

Bar Size	No. Assemblies Required	Location
#5 (#15)	11	South Abutment
#6 (#20)	4	
#8 (#25)	8	North Abutment
#5 (#15)	9	
#6 (#20)	4	
#8 (#25)	8	
#5 (#15)	1801	Deck - Unit I
#5 (#15)	12	Deck - Unit II
#5 (#15)	1018	Deck - Unit III
#5 (#15)	736	Deck - Unit IV



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 (#15) bar	
Min. Capacity =	23.0 (102.3 kN) kips - tension
Min. Pull-out Strength =	12.3 kips (54.7 kN) - tension
No. Required =	136

BAR SPLICER ASSEMBLY DETAILS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAJ 3578 SECTION 15V B-1-R-1
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: M. Tryon
 DATE: 6/17/09 CHECKED BY: A. Yarglaoglu

All dimensions shown in Parathesis (mm) are in mm, except as noted.

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10-1-08