

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	1Y-B-R-1	LAKE	121	64
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

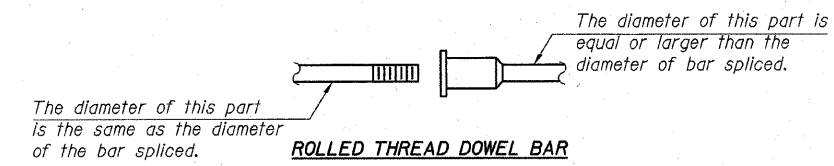
CONTRACT NO. 62032

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 400m Pa 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 = $1.25 \times 10^3 \times f_y \times A_t$
(Tension in kN)
 - ② Minimum *Pull-out Strength = $1.25 \times 10^3 \times f_s \text{ allow.} \times A_t$
(Tension in kN)
- Where f_y = Yield strength of lapped reinforcement bars in MPa.
 A_t = Tensile stress area of lapped reinforcement bars (mm^2).
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

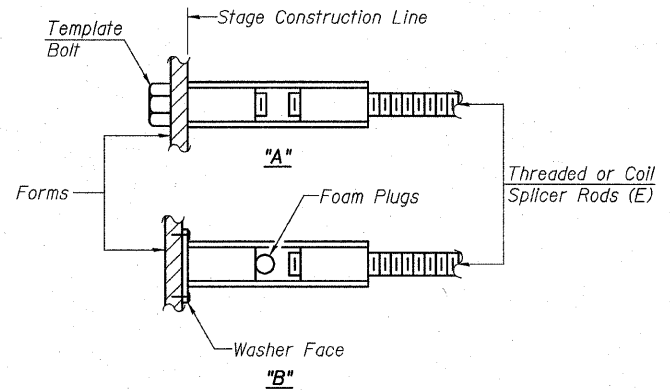
Wire Connector



WELDED SECTIONS

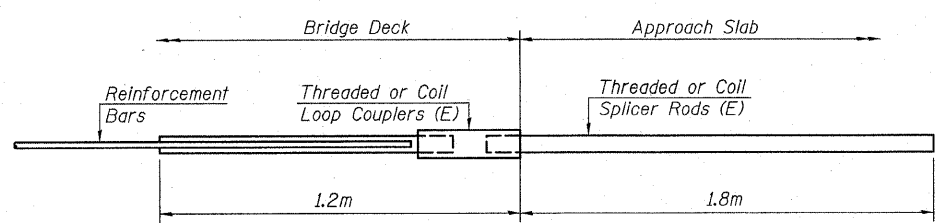
BAR SPLICER ASSEMBLY ALTERNATIVES

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



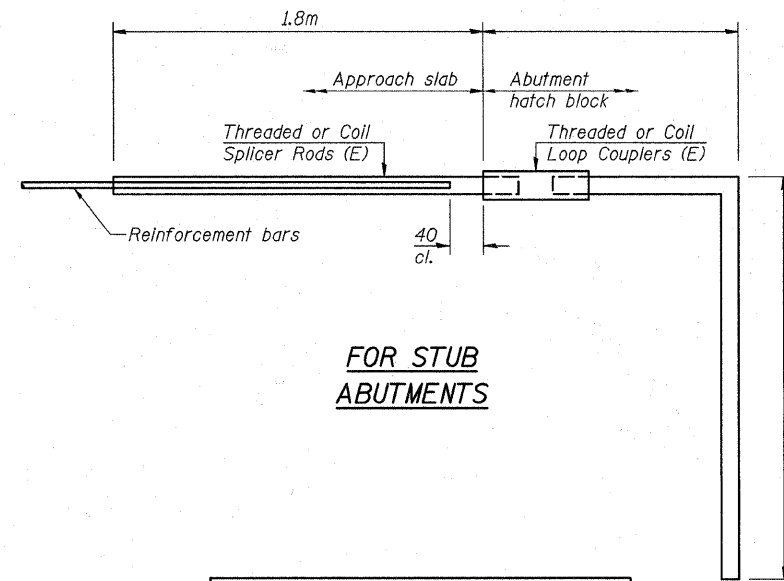
INSTALLATION AND SETTING METHODS

"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.



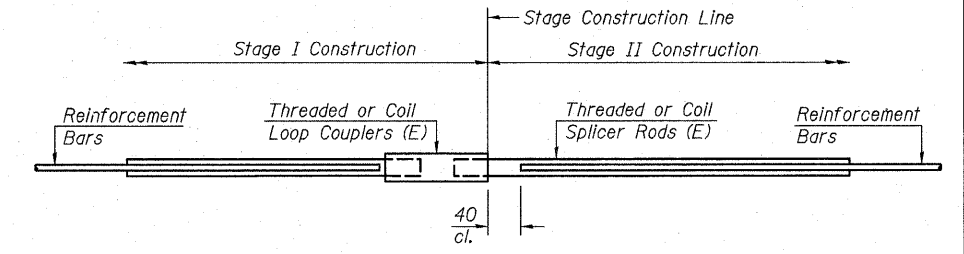
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #15 bar		
Min. Capacity =	100kN - tension	
Min. Pull-out Strength =	54kN - tension	
No. Required =	-	



FOR STUB ABUTMENTS

Bar Splicer for #15 bar		
Min. Capacity =	100kN - tension	
Min. Pull-out Strength =	54kN - tension	
No. Required =	-	



STANDARD

Bar Size	No. Assemblies Required	Location
#15	135	Deck Slab
#25	14	Abutments
#15	40	Piers
#30	18	
Total	207	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 BAR SPLICER ASSEMBLY DETAILS
 U.S. RTE. 45 / IL. RTE. 21
 OVER
 APTAKISIC CREEK
 F.A.P. RTE. 330 SECTION: 1Y-B-R-1
 LAKE COUNTY STATION 10+000.000
 STRUCTURE NO. 049-0194
 SCALE: NONE DRAWN BY: D.L./F.M.
 DATE: OCTOBER 16, 2007 CHECKED BY: B.N.S.
CHRISTIAN-ROGE & ASSOC., INC.
 CHICAGO ILLINOIS