

STANDARD

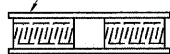
Bar Size	No. Assemblies Required	Location
#4	4	Pier 1 - Diaphragm
#4	4	Pier 2 - Diaphragm
#4	4	Pier 3 - Diaphragm
#5	19	North Abutment
#5	19	South Abutment
#5	351	Top of Deck
#5	274	Bottom of Deck
#6	10	Bottom of Deck
#6	2	Pier 1 - Diaphragm
#6	2	Pier 2 - Diaphragm
#6	2	Pier 3 - Diaphragm
#7	12	Top of Deck

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

ROLLED THREAD DOWEL BAR



Wire Connector



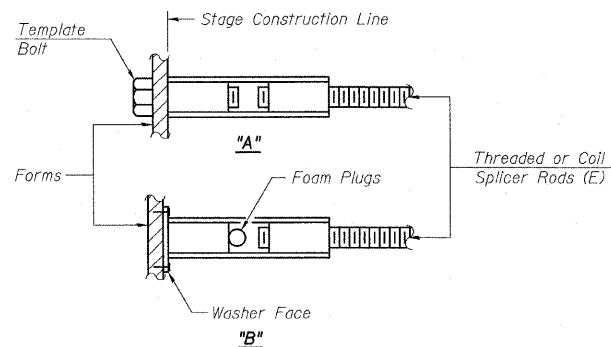
BAR SPLICER ASSEMBLY ALTERNATIVES

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

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:

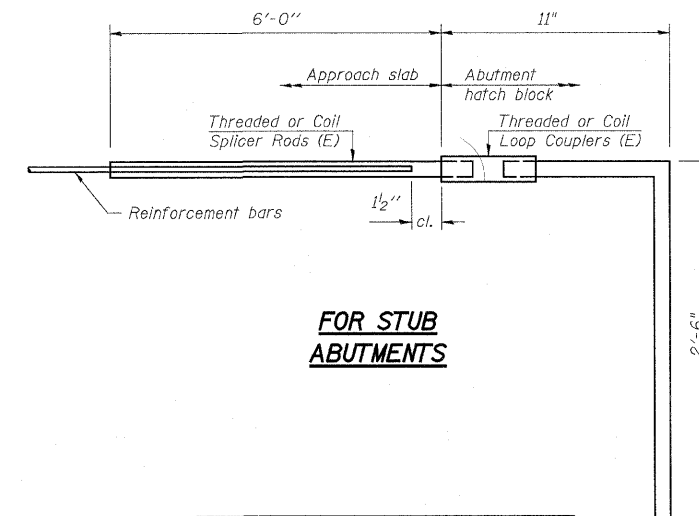
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Bar 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



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 STUB ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 104	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 BAR SPLICER DETAILS
 FA ROUTE 173 (SAYRE AVENUE) OVER
 INTERSTATE 90 (KENNEDY EXPRESSWAY)
 COOK COUNTY STATION 8+02.48
 SECTION 267-1414-15D
 STRUCTURE NO. 016-1104
 SCALE: NONE DRAWN BY: R. Clinton
 DATE: DEC. 2007 CHECKED BY: G. Hatlestad