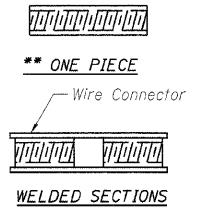
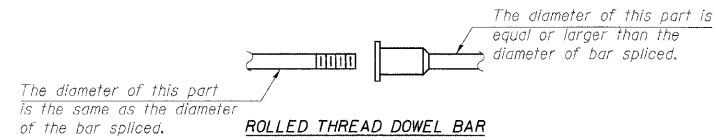
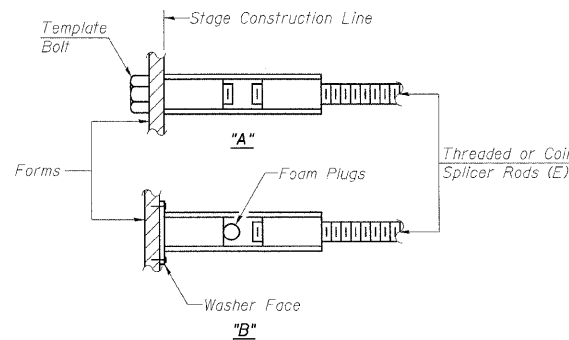


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPICER ASSEMBLY ALTERNATIVES

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



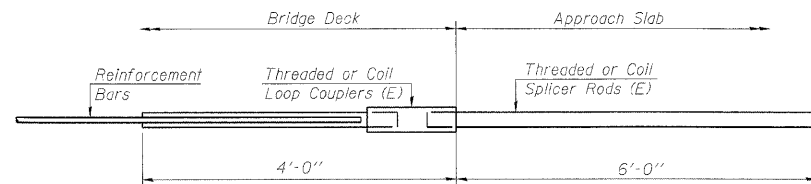
INSTALLATION AND SETTING METHODS

"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.

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:

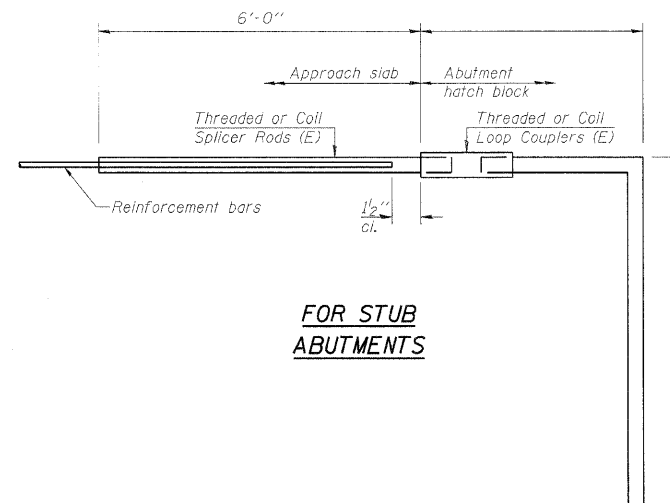
- ① Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



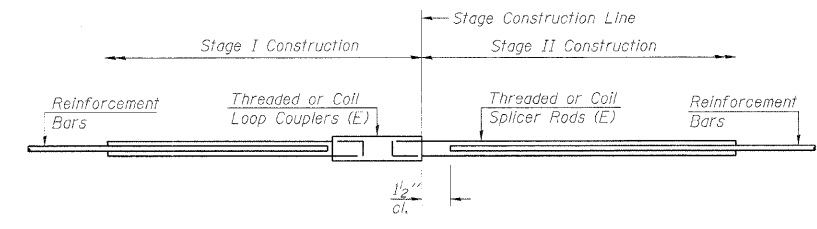
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



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	16	Deck
#6	6	Deck

**BAR SPICER ASSEMBLY DETAILS
STRUCTURE NO. 022-0098**

DESIGNED -	MFB
CHECKED -	KWS
DRAWN -	RMC
CHECKED -	KWS

BSD-1

10-1-08

benesch

alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10050

SHEET NO. 8 8 SHEETS	F.A.I. RTE. 290	SECTION 22(1, 1-1, 2&3)RS-7	COUNTY DUPAGE	TOTAL SHEETS 546	SHEET NO. 262
	CONTRACT NO. 60G51			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

x:\10000s\10050\engineer\ing. documents\contract.1\SN.022.0098.0099.Church.St.0098-60G51-008-Bar-Splicer.dgn 17:59:11 11/12/2009