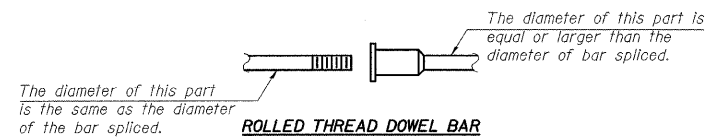


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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) = $1.25 \times f_y \times A_1$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_1$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_1 = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

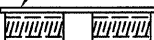


ROLLED THREAD DOWEL BAR



** ONE PIECE

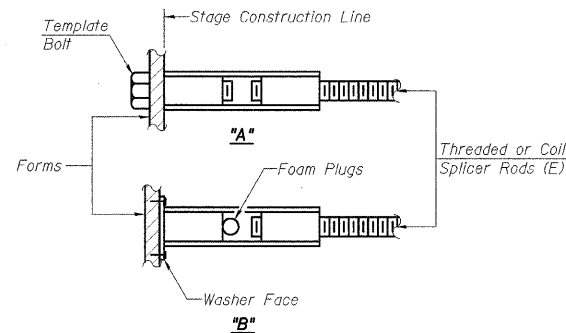
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

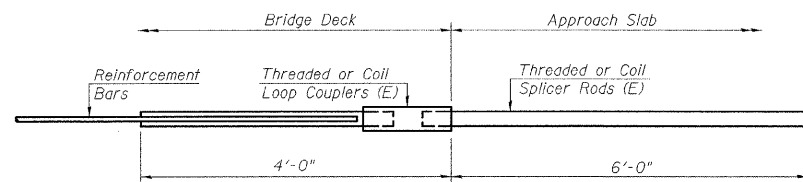
**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

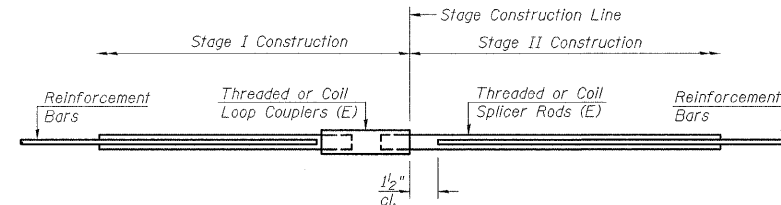
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

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 SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 80



STANDARD

Bar Size	No. Assemblies Required	Location
#5	357	Top of Deck
#5	215	Bottom of Deck
#4	25	West Approach
#5	86	West Approach
#4	25	East Approach
#5	86	East Approach
#6	24	Diaphragms
#4	4	West Abutment
#4	4	East Abutment
#4	3	Pier 1
#4	3	Pier 2
#4	3	Pier 3

DESIGNED SDH
CHECKED JML
DRAWN JWK/DJM
CHECKED MSW

DATE 10/07/09

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 053-0150

SHEET NO. B33	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	44	49
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 66691	