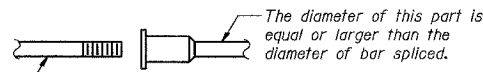


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 351	2008-001VB	COOK	579	378
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 60E10	

SHEET NO. 30
37 SHEETS

The diameter of this part is the same as the diameter of the bar spliced.



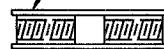
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

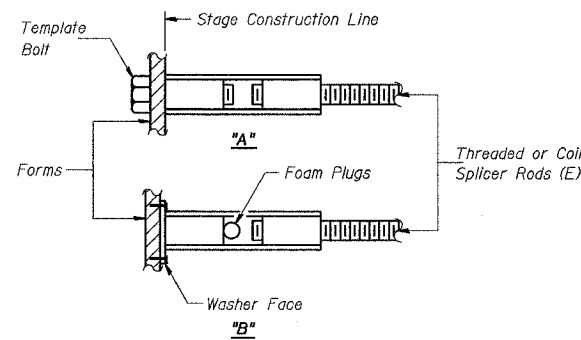
Wire Connector



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.

Location	Bar Size	No. Req'd
Deck: Stage I-II splice	#5	208
N. Abutment: Stage I-II splice	#5	61
	#7	* 11
S. Abutment: Stage I-II splice	#5	62
	#7	12
Pier: Stage I-II splice	#5	22
	#10	26

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) = $1.25 \times f_y \times A_t$
- ② Minimum Pull-out Strength @ 28 days (Tension in kips) = $1.25 \times f_{sallow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#10	7'-3"	95.0	38.0

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

* Bend Stage I half of bar splicer assemblies 90° that are installed into Stage I Center Closure Wall.
The unused half of the bar splicers shall be bundled together and clearly labeled with structure number, size, and location within the structure (for example: SN 016-2755 #5 bar splicers for north abutment). They shall be given to IDOT for storage and used in a future stage. The open end of the coated bar splicer shall be plugged with an Insert subject to the approval of the Engineer. The inserts shall allow traffic to travel over without causing vehicular damage and shall be easily removed. Cost is included with Bar Splicers.

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DESIGNED	DRS
CHECKED	JJG
DRAWN	SOI
CHECKED	JJG

URS
100 South Wacker Drive,
Suite 500
Chicago, IL 60606
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
US RTE 6 FROM I-294 TO IL RTE 1
BAR SPLICER DETAILS
METRA & CN BRIDGE 20.6
OVER U.S. RTE. 6 (159TH STREET)
STATION 91+24.94 STRUCTURE NO. 016-2755
SCALE: DATE: 2/21/2008