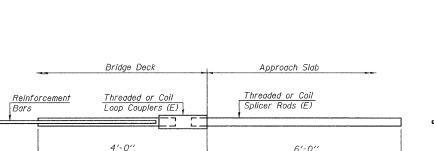


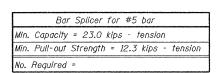
## BAR SPLICER ASSEMBLY ALTERNATIVES

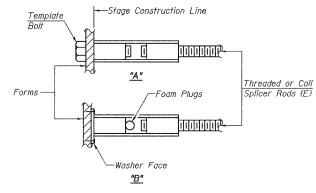
WELDED SECTIONS

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



# FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

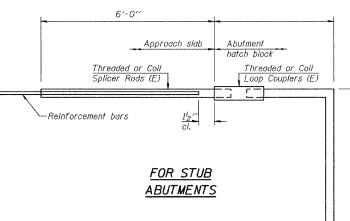




#### INSTALLATION AND SETTING METHODS

"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 Splicer for #5 bar |          |          |      |      |       |   |         |
|------------------------|----------|----------|------|------|-------|---|---------|
| Min.                   | Capacity | = 23.0   | kips | - 10 | ensio | n |         |
| Min.                   | Pull-out | Strength | = 12 | 2.3  | kips  | - | tension |

### **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:

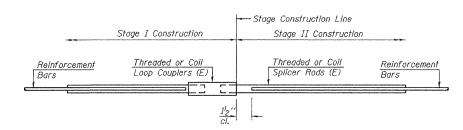
Minimum Capacity (Tension in kips) =  $1.25 \times fy \times A_t$ 

(Tension in kips)
Minimum \*Pull-out Strength =  $0.66 \times fy \times A_f$ 

Where fy = Yield strength of lapped reinforcement bars in ksi.

 $A_t$  = Tensile stress area of lapped reinforcement bars. \* = 28 day concrete

| BAR SPLICER ASSEMBLIES    |                                    |                                 |  |  |  |  |  |
|---------------------------|------------------------------------|---------------------------------|--|--|--|--|--|
|                           | Splicer Rod or<br>Dowel Bar Length | Strength Requirements           |  |  |  |  |  |
| Bar Size to<br>be Spliced |                                    | Min. Capacity<br>kips - tension | Min. Pull-Out Strength<br>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                                     |  |  |  |  |



## STANDARD

| 128 | Deck      |
|-----|-----------|
|     |           |
| 12  | Abutments |
|     | <u> </u>  |
|     | 12        |

BAR SPLICER ASSEMBLY DETAILS I-74 OVER 19th STREET FAI 74 (I-74) SECTION 81-(1-2,1,2-2)RS-1 & M ROCK ISLAND COUNTY STRUCTURE NUMBER 081-0099 (SB) and

Sheet 18 of 18

<u>081-0100 (NB)</u>

| BSD-1       | 10-1-08                |          |           |
|-------------|------------------------|----------|-----------|
| FILE NAME = | USER NAME = \$USER\$   | DESIGNED | REVISED   |
| \$FILEL\$   |                        | DRAWN    | REVISED   |
|             | PLOT SCALE = \$SCALE\$ | CHECKED  | REVISED   |
|             | PLOT DATE = \$DATE\$   | DATE -   | REVISED   |
|             |                        |          | REVISED - |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

**Bar Splicers** 74 81-(1-2,1,2-2)RS-1 & M Rock Island 246 447 SCALE: None SHEET NO. 5 OF 5 SHEETS STA. TO STA.

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