

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6713	05-00148-00-PV	TAZEWELL	74	58
STA. 154+17.98		STRUCTURE NO. 090-0027		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		

**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 =  $1.25 \times f_{s_{allow}} \times A_t$   
(TENSION IN KIPS)

WHERE  $f_y$  = YIELD STRENGTH OF LAPPED REINFORCEMENT BARS IN KSI.  
 $f_{s_{allow}}$  = ALLOWABLE TENSILE STRESS IN LAPPED REINFORCEMENT BARS IN KSI (SERVICE LOAD)  
 $A_t$  = TENSILE STRESS AREA OF LAPPED REINFORCEMENT BARS.  
 \* = 28 DAY CONCRETE

**BAR SPLICER ASSEMBLIES**

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	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."

THE DIAMETER OF THIS PART IS THE SAME AS THE DIAMETER OF THE BAR SPLICED.

**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

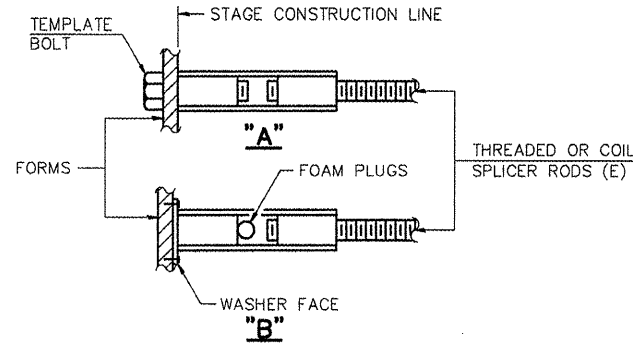
WIRE CONNECTOR



**WELDED SECTIONS**

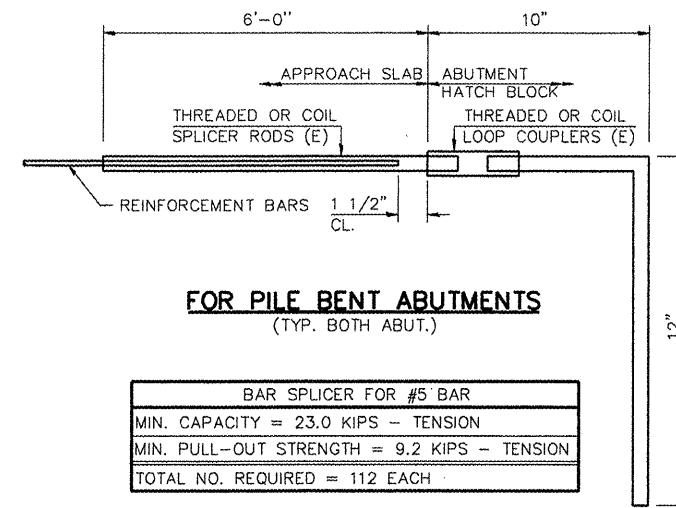
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* HEAVY HEX NUTS CONFORMING TO ASTM A 563, GRADE C, D OR DH MAY BE USED.



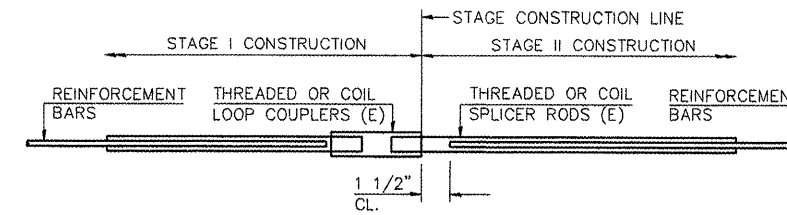
**INSTALLATION AND SETTING METHODS**

- "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.



**FOR PILE BENT ABUTMENTS**  
(TYP. BOTH ABUT.)

BAR SPLICER FOR #5 BAR	
MIN. CAPACITY = 23.0 KIPS - TENSION	
MIN. PULL-OUT STRENGTH = 9.2 KIPS - TENSION	
TOTAL NO. REQUIRED = 112 EACH	



**STANDARD**

BAR SIZE	NO. ASSEMBLIES REQUIRED	LOCATION
#5	230	TOP OF DECK SLAB
#5	169	BOTT. OF DECK SLAB
#5	4	W. ABUT. "HATCHED AREA"
#5	4	E. ABUT. "HATCHED AREA"
TOTAL	407 EACH	

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CAMP ST. OVER FARM CREEK DIVERSION CHANNEL**  
**BAR SPLICER ASSEMBLY DETAILS**  
 SCALE: N.T.S. DRAWN BY: MGM  
 DATE: 12/22/2008 CHECKED BY: PUL