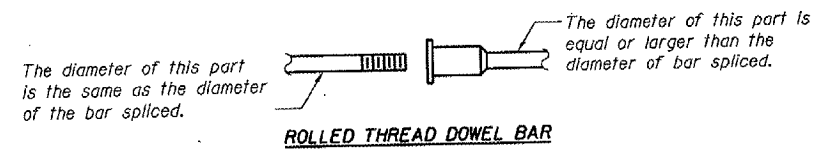
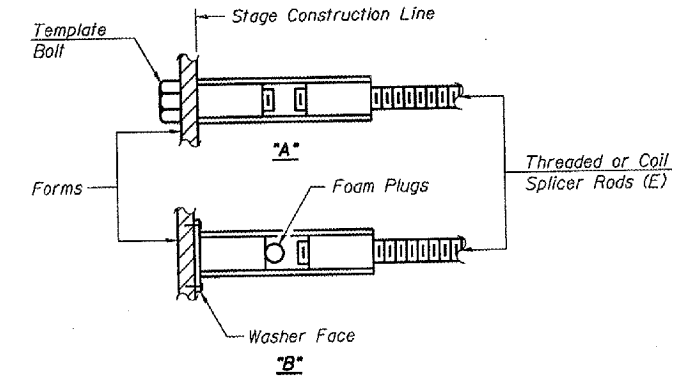


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	(50-8VB)I	LASALLE	31	21
FED. ROAD DIST. NO. - ILLINOIS				



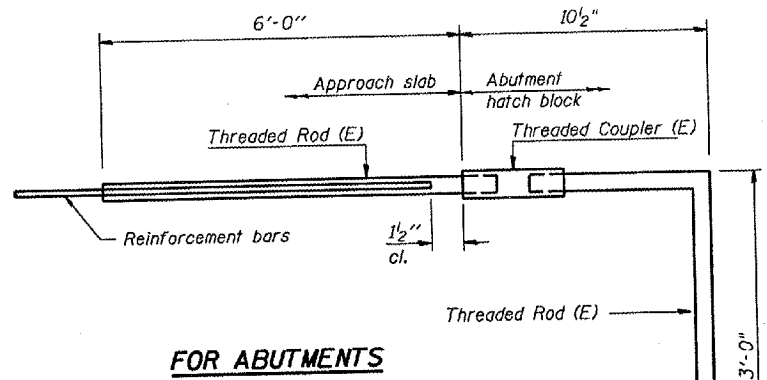
BAR SPLICER ASSEMBLY ALTERNATIVES

** 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 ABUTMENTS

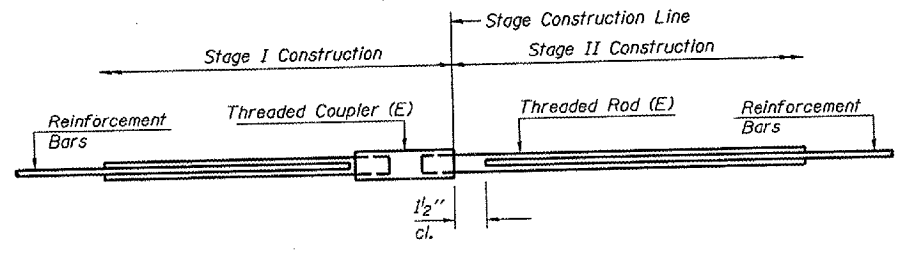
BAR SIZE	NO. ASSEMBLIES REQUIRED	LOCATION
#5	168	Abutment Backwall

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 = $1.25 \times f_y \times A_l$
 (Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_l$
 (Tension in kips)

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_l = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete



STANDARD

BAR SIZE	NO. ASSEMBLIES REQUIRED	LOCATION
#4	32	Approach Pavement (Top)
#4	12	Approach Pavement Connector (Top)
#5	24	Back Wall
#5	120	Approach Pavement (Bottom)
#5	96	Concrete Pad (Top & Bottom)
#6	12	Abutment Backwall
#6	24	Deck (Top & Bottom)
#6	20	Deck (Bottom Haunch)
#7	24	Deck (Top)

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."

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICERS ASSEMBLY DETAILS
 F.A.I. 412 OVER BNSF RAILROAD
 SECTION (50-8VB)I
 LASALLE COUNTY
 STA. 758+10
 DATE 06/01/2005
 DRAWN BY RLV

JULY 1, 2005 C:\PROJECTS\CM1\ING6\CM3\B\DETAILS.DGN

BSD-1 9-01-03