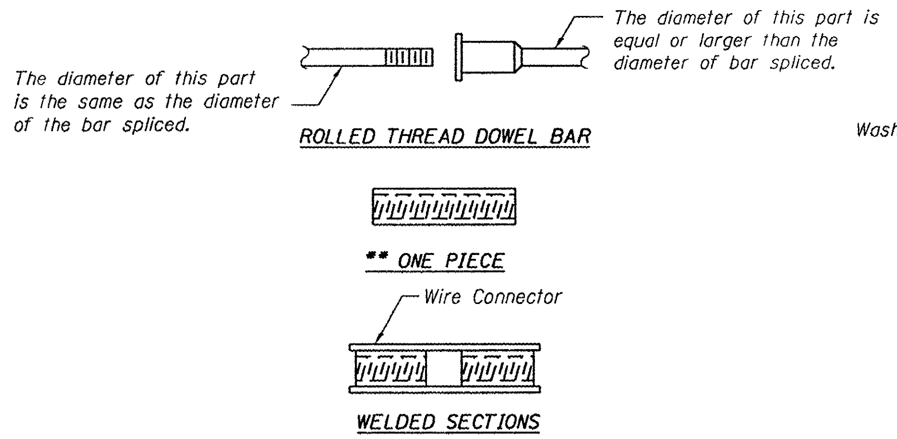
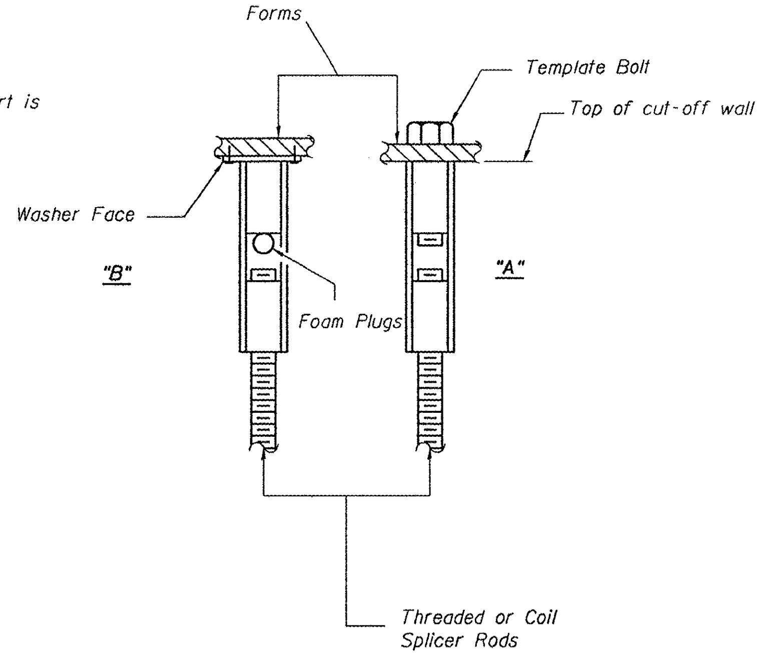


BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, 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.

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 420 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

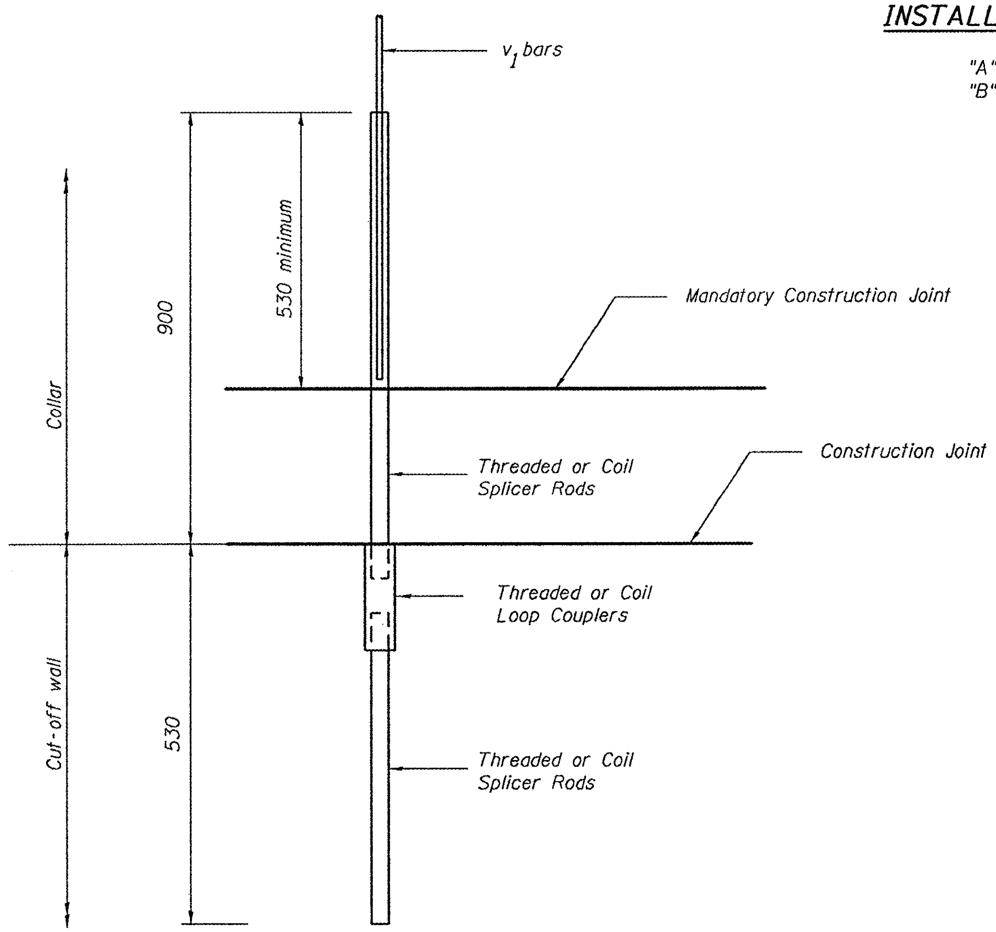
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 0.66 \times fy \times A_t$

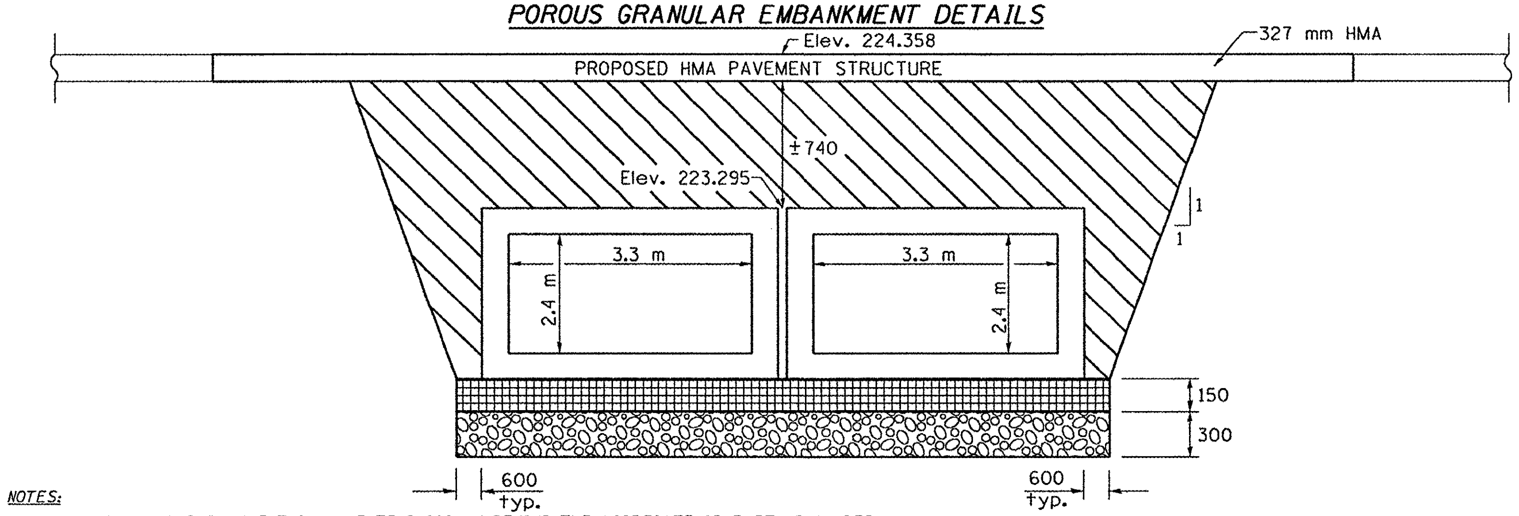
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Bar Splicer for #16 bar
Min. Capacity = 103.0 kN - tension
Min. Pull-out Strength = 54.7 kN - tension
No. Required = 36



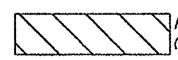
FOR BOX CULVERT END SECTIONS

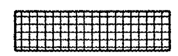
POROUS GRANULAR EMBANKMENT DETAILS



NOTES:

1. POROUS GRANULAR EMBANKMENT SHALL EXTEND 600 MM BEYOND THE AGGREGATE OR EARTH SHOULDER.
2. WORK SHOWN IN THIS DETAIL SHALL BE PERFORMED ACCORDING TO THE APPLICABLE PORTIONS OF ARTICLES 207 AND 540 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER FOR POROUS GRANULAR EMBANKMENT AND SHALL ALSO BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 AND SECTION 282 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER METRIC TON FOR STONE RIPRAP, CLASS A-1.
3. THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERTS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS ASSOCIATED WITH BOX CULVERT CONSTRUCTION.
4. THIS DETAIL IS NOT TO SCALE.
5. THE EXCAVATION AND REMOVAL OF THE UNSUITABLE MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR STONE RIPRAP, CLASS A-1. THE STONE RIPRAP, CLASS A-1 SHALL EXTEND BEYOND THE BARREL FROM BACK TO BACK OF CUTOFF WALLS.
6. THE FILTER FABRIC WILL NOT BE PAID FOR SEPARETLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR STONE RIPRAP, CLASS A-1.


PAY LIMITS OF POROUS GRANULAR EMBANKMENT - CA-6 (SEE SPECIAL PROVISIONS)


POROUS GRANULAR MATERIAL - CA 7 (150) INCLUDED IN PAY ITEM FOR BOX CULVERT


STONE RIPRAP, CLASS AI

FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - R. CARROLL	REVISED -
		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY & POROUS GRANULAR EMBANKMENT DETAIL
S.N. 057-2039

SCALE: | SHEET NO. 4 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	(102X)BR,BR-3	MCLEAN	42	29
		CONTRACT NO. 70529		
		ILLINOIS FED. AID PROJECT		

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