

(Looking at Box Sections)

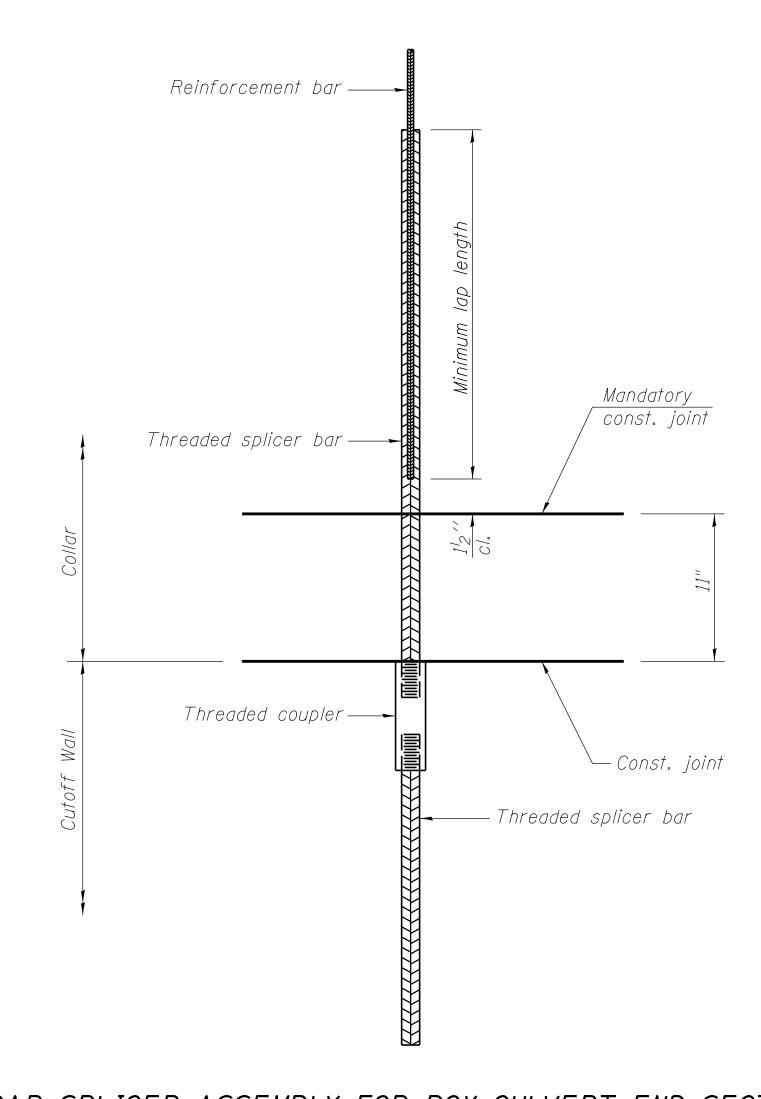
## LIMITS OF MEMBRANE WATERPROOFING FOR CULVERTS

Note: Membrane Waterproofing for Culverts shall cover top of the top slab, top one foot of side walls, and 6 inches up inside face of the headwalls.

## <u>NOTES</u>

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi ield strenath.

All reinforcement shall be lapped and tied to the splicer bars. See approved list of bar splicer assemblies and mechanical splicers for alternatives.



## BAR SPLICER ASSEMBLY FOR BOX CULVERT END SECTION

Minimum Lap Lengths							
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	
3, 4	1'-5''	1'-11''	2'-1''	2'-4''	2'-7''	2'-11''	
5	1'-9''	2'-5''	2'-7''	2'-11''	3'-3''	3'-8''	
6	2'-1''	2'-11''	3'-1''	3′-6′′	3'-10''	4'-5''	
7	2'-9''	3'-10''	4'-2''	4'-8''	5'-2''	5'-10''	
8	3'-8''	5'-1''	5′-5′′	6'-2''	6'-9''	7′-8′′	
9	4'-7''	6'-5''	6'-10''	7'-9''	8'-7''	9'-8''	

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

Table 3: Epoxy bar, 0.8 Class C

Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Table 5: Epoxy bar, Class C

Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length +  $1^{l_2}^{\prime\prime}$  + thread length

Location	Bar size	No. assemblies required	Table for minimum lap length
* Cutoff Wall	5	10	1

\* For one end section



USER NAME =	DESIGNED	-	CJB	REVISED
	CHECKED	_	CCF	REVISED
PLOT SCALE =	DRAWN	_	CCF	REVISED
PLOT DATE =	CHECKED	_	CJB	REVISED

BAR SPLICER ASSEMBLY DETAILS AND WATERPROOFING LIMITS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 050-2056	786	110BR-3	LASALLE	69	39
3111001011L 140. 030-2030			CONTRAC	T NO.	66B19
SHEET NO. 6 OF 7 SHEETS	ILLINOIS FED AID PROJECT				