



**MINIMUM BAR LAP**  
a2(E) #4 bar = 2'-1"

Notes:  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	180	#7	23'-1"	
a1(E)	180	#7	12'-0"	
a2(E)	60	#4	8'-8"	
d(E)	42	#4	4'-6"	
h(E)	40	#6	29'-8"	
h1(E)	36	#5	29'-8"	
h2(E)	21	#6	29'-8"	
h3(E)	48	#7	8'-0"	
h4(E)	40	#7	14'-6"	
h5(E)	10	#6	21'-2"	
h6(E)	40	#6	29'-8"	
h7(E)	36	#5	29'-8"	
h8(E)	21	#6	29'-8"	
v(E)	274	#5	8'-3"	
v1(E)	16	#4	11'-2"	
Concrete Box Culverts			Cu. Yd.	129.3
Reinforcement Bars, Epoxy Coated			Pound	25810

FILE: J:\INDO\10299 IL-D88VW19 IL-13 Marliss-Ph2\1-RCBC\0822046-76E21-005-BoxCulvert.dgn  
 SAVE DATE: 6/9/2013

DB-H-0 7-1-10 (Modified)

FILE NAME =	USER NAME = DCD	DESIGNED - DCD	REVISED -
... \0822046-76E21-005-BoxCulvert.dgn		CHECKED - PGM	REVISED -
PLOT SCALE =		DRAWN - P. Ray	REVISED -
PLOT DATE = 06/28/2013 16:47:37		CHECKED - DCD	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BOX CULVERT DETAILS**  
**STRUCTURE NO. 082-2046**

SHEET NO. 5 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	23BR-1	ST. CLAIR	38	24
STA. 674+45		CONTRACT NO.	76E21	
ILLINOIS FED. AID PROJECT				