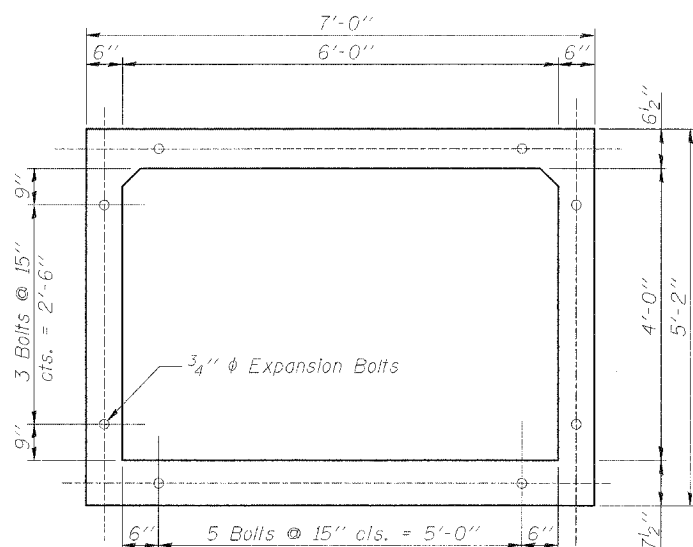


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAJ 5/	*	COLES	229	136
FED. AID DIST. NO. 7		ILLUS/ISS	FED. AID PROJECT-	

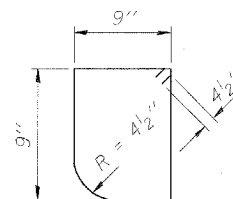
*99-00124-02-PV



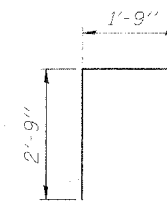
**SECTION THRU BARREL
SHOWING EXPANSION BOLTS**



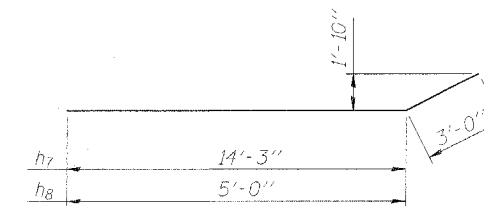
BAR a₁



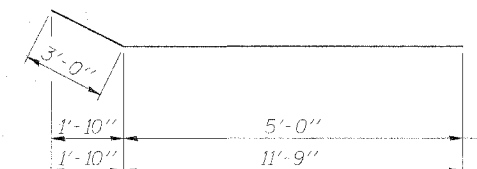
BAR s



BAR d



BAR h₇ & h₈



BAR h₄ & h₉

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	128	#7	8'-4"	U
a ₂	21	#4	6'-9"	—
d	14	#4	4'-6"	L
h	8	#6	39'-2"	—
h ₁	14	#4	32'-7"	—
h ₂	8	#5	20'-9"	—
h ₃	8	#5	11'-6"	—
h ₄	14	#7	8'-0"	—
h ₅	4	#6	7'-0"	—
h ₆	8	#7	7'-0"	—
h ₇	14	#7	17'-3"	—
h ₈	14	#7	8'-0"	—
h ₉	14	#7	14'-9"	—
h ₁₀	4	#6	6'-6"	—
h ₁₁	4	#7	6'-6"	—
s	14	#4	3'-7"	U
v	96	#4	4'-11"	—
v ₁	16	#4	7'-9"	—

Reinforcement Bars	Pound	5420
Concrete Box Culverts	Cu. Yd.	31.8
Partial Removal of Existing Structure	Each	2

GENERAL NOTES

1. A distance of half the wingwall but not less than 6 feet of the barrel shall be poured monolithically with the wingwalls.
2. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53. Grade 60.
3. All construction joints shall be bonded.
4. Expansion bolts shall be 3/4" φ hooked bolts. Hooked bolts shall extend a min. of 9" into new concrete. Cost of 3/4" φ expansion bolts shall be included with Concrete Box Culverts.
5. a₁ and a₂ bars in skew portion of slab shall be ordered full length cut to fit. Balance of bar to be used in opposite end of culvert.
6. h and h₁ bars in slab shall be ordered full length cut to fit. Balance of bar to be used in opposite end of culvert.

Corporate License Number 184-001-084

BOX CULVERT EXTENSION DETAILS
F.A.I. RTE. 57
SECTION 99-00124-02-PV
COLES COUNTY
STATION 880+00.78

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97S2028E

09/19/03

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LAYOUT	MNM	09/05/03
DRAWN	DAF	09/19/03
REVISED	JWM	/ /