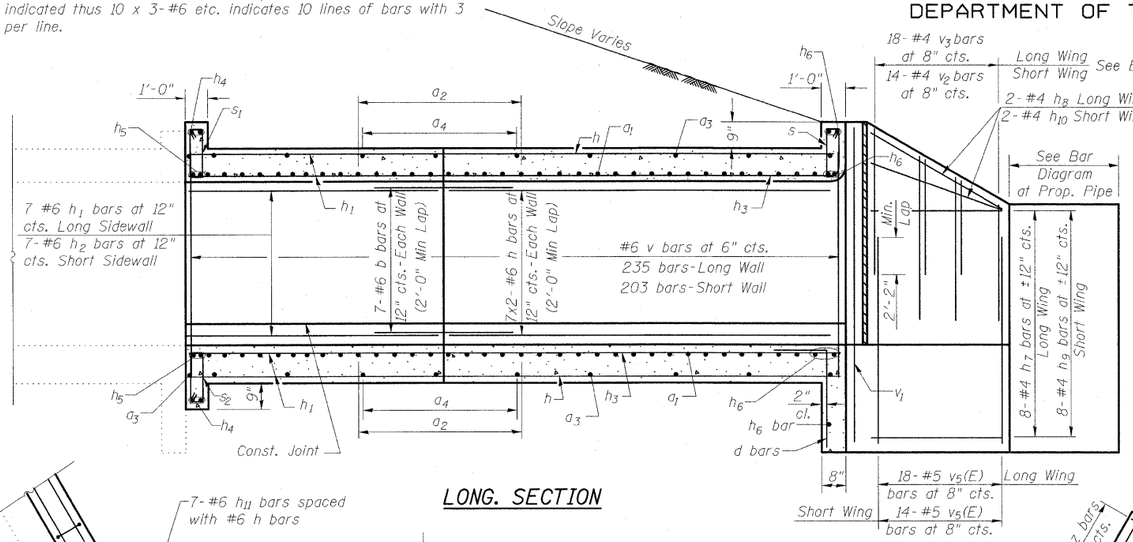
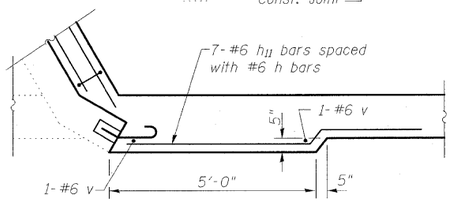
Notes:
Bars indicated thus 10 x 3-#6 etc. indicates 10 lines of bars with 3 lengths per line.

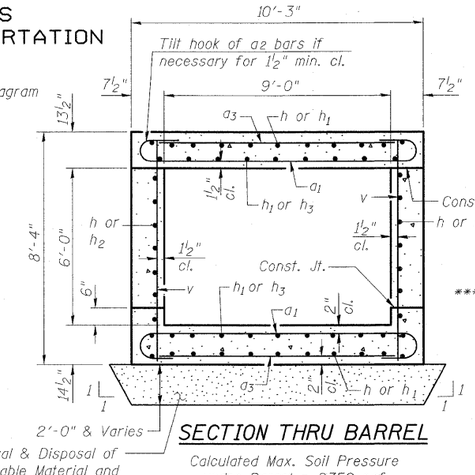
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONG. SECTION

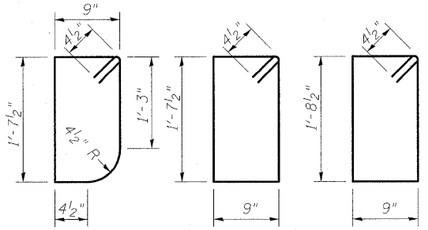


DETAIL A

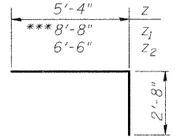


SECTION THRU BARREL

Calculated Max. Soil Pressure under Barrel = 2350 psf



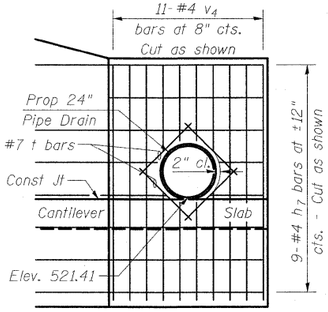
*** Longest length required - 8'-8"
Field cut remaining bars to fit



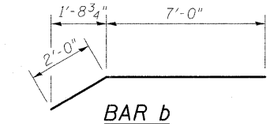
BAR z, z1 & z2

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	404	#10	12'-9"	
a_2	20	#10	13'-1"	
a_3	112	#4	9'-11"	
a_4	6	#4	10'-3"	
b	54	#6	9'-0"	
b_1	7	#5	4'-4"	
d	10	#4	4'-6"	
h	68	#6	47'-10"	
h_1	47	#6	18'-0"	
h_2	7	#6	6'-9"	
h_3	60	#6	32'-7"	
h_4	4	#6	12'-2"	
h_5	6	#10	12'-2"	
h_6	7	#6	10'-0"	
h_7	9	#4	17'-3"	
h_8	2	#4	11'-4"	
h_9	9	#4	8'-8"	
h_{10}	2	#4	9'-3"	
h_{11}	7	#6	7'-3"	
s	10	#4	5'-4"	
s_1	13	#4	5'-6"	
s_2	13	#4	5'-8"	
t	4	#7	3'-4"	
v	440	#6	8'-0"	
v_1	4	#7	10'-6"	
v_2	7	#4	10'-11"	
v_3	9	#4	11'-0"	
v_4	11	#4	3'-9"	
$v_5(E)$	43	#5	6'-0"	
w	7	#5	19'-5"	
w_1	7	#5	6'-1"	
w_2	7	#5	16'-5"	
z	31	#7	8'-0"	
z_1	7	#7	10'-8"	
z_2	4	#7	9'-2"	
Concrete Box Culverts		Cu. Yd.	140.6	
Reinforcement Bars, Epoxy Coated		Pound	270	
Reinforcement Bars		Pound	41790	
¾" Expansion Bolts		Each	22	
Concrete Removal		Cu. Yd.	6.9	
Removal & Disposal of Unsuitable Material		Cu. Yd.	112	
Rockfill-Replacement		Ton	235	

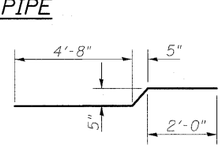


BAR DIAGRAM AT PROP. PIPE

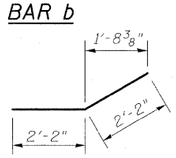


BAR d

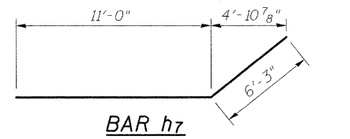
BAR b



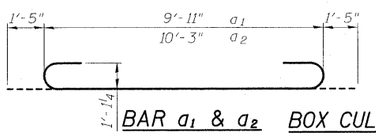
BAR h_{11}



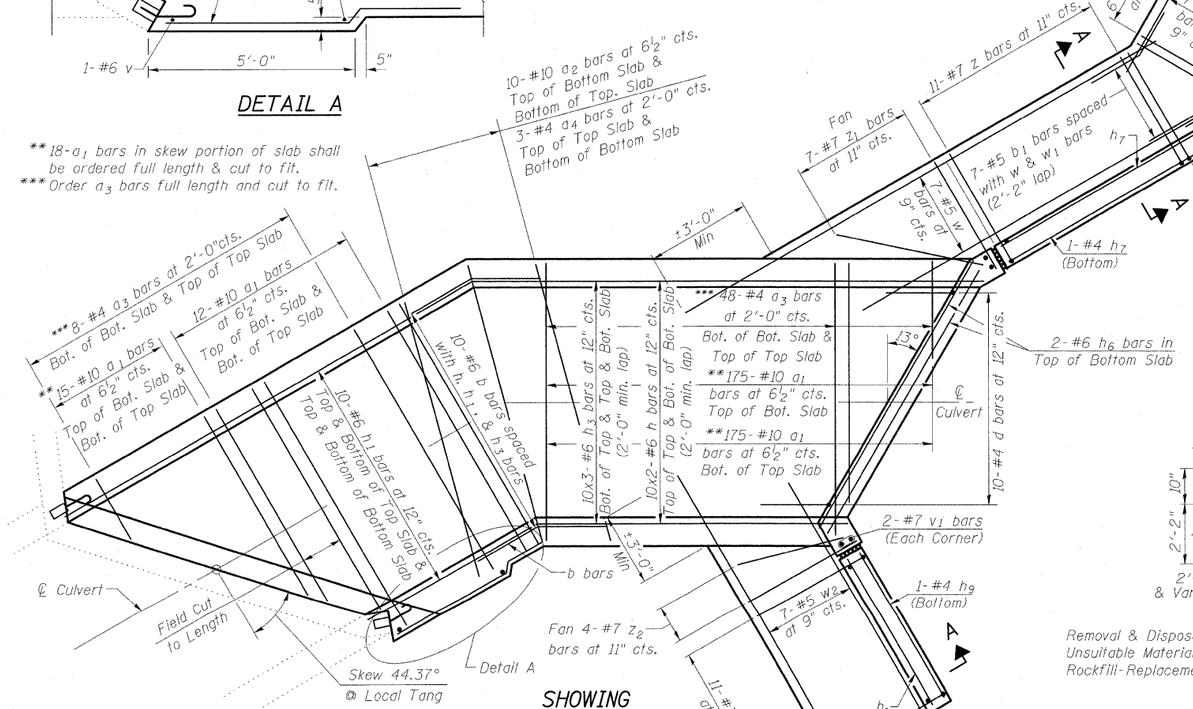
BAR b_1



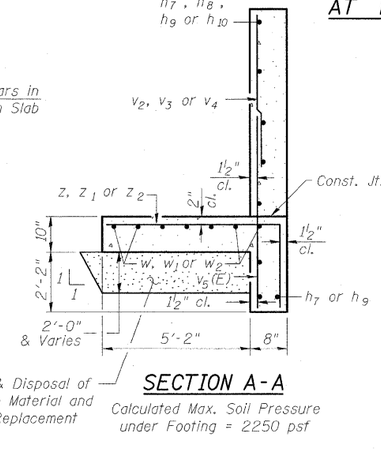
BAR h_7



BAR a_1 & a_2



SHOWING REINFORCEMENT PLAN



SECTION A-A

Calculated Max. Soil Pressure under Footing = 2250 psf

DESIGNED -	BB
CHECKED -	CJF
DRAWN -	RCB
CHECKED -	CJF

⚠ Revised Sheet 5/21/10 CJF

BERNARDIN LOCHMUELLER & ASSOCIATES, INC.
3 Oak Drive
Maryville, IL 62062-5635
Local-(618) 288-4665
Fax 618-288-4666

SHEET NO. 2 OF 3 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57/70	(25-3)R	EFFINGHAM	1416	449
			CONTRACT NO. 74296		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BOX CULVERT DETAILS
LT STA 2046+35.61
FAI ROUTE 70 WB (RDWY A)

159.22 PW 5/21/2010 - culvert LT 2046+35.61 sheets.dgn