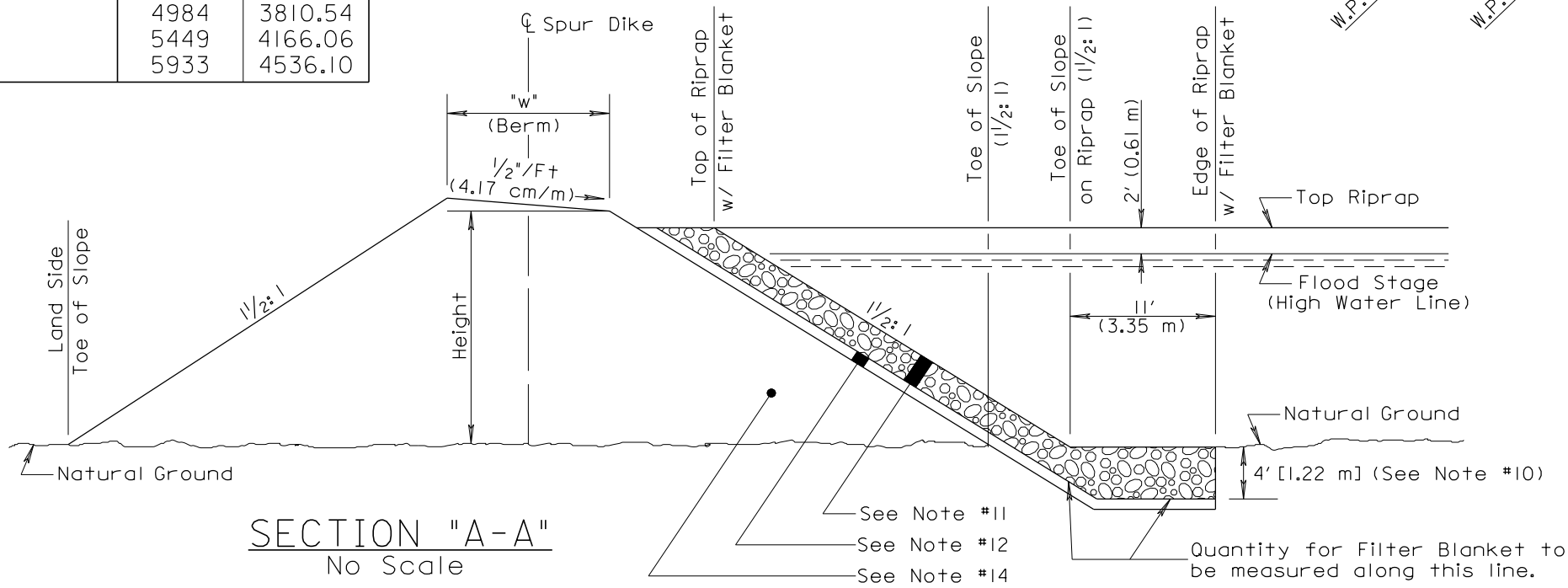


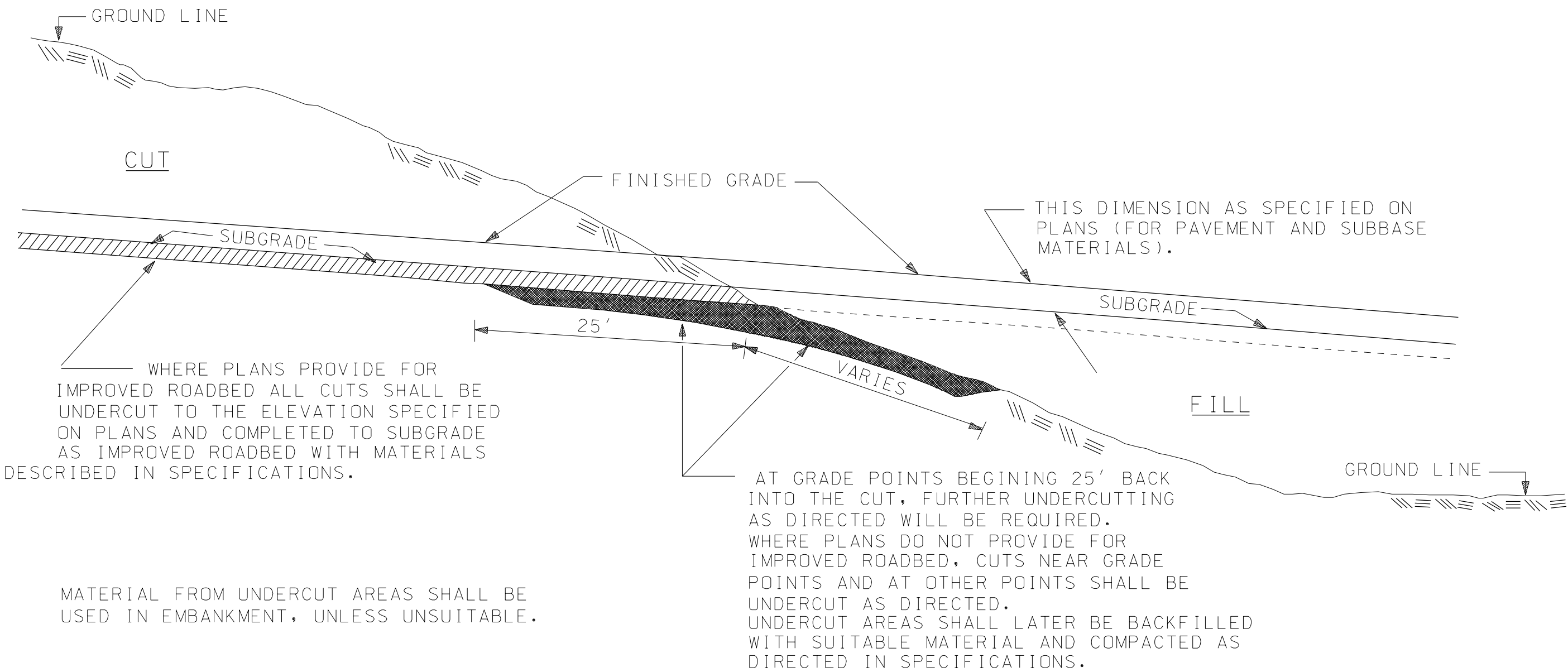
100 Ft [30.48 m] Dike (Ls = 100' [30.48 m])						
w = 12 Ft [3.66 m] (Berm Width) R = 6 Ft [1.83 m] with Ls/4 Protection						
Height	Ls/4	Estimate Volume		θ	Coordinates	
		Cu Yds	Cu Meters		"X"	"Y"
0		0	0	0°	0	40.00' (12.19 m)
1' (0.30 m)		61	46.64	2°18'7.6"	10' (3.05 m)	39.80' (12.13 m)
2' (0.61 m)		136	103.98	4°40'05"	20' (6.10 m)	39.19' (11.95 m)
3' (0.91 m)		224	171.26	7°10'9.7"	30' (9.14 m)	38.16' (11.63 m)
4' (1.22 m)		325	248.48	9°54'9.9"	40' (12.19 m)	36.66' (11.17 m)
5' (1.52 m)		441	337.17	13°04'38"	50' (15.24 m)	34.64' (10.56 m)
6' (1.83 m)		569	435.03	16°41'57"	60' (18.29 m)	32.00' (9.75 m)
7' (2.13 m)		712	544.36	21°24'22"	70' (21.33 m)	28.57' (8.71 m)
8' (2.44 m)		868	663.63	28°04'21"	80' (24.38 m)	24.00' (7.32 m)
9' (2.74 m)		1037	792.84	39°32'46"	90' (27.43 m)	17.44' (5.32 m)
10' (3.05 m)		1220	932.76	50°35'23"	95' (28.96 m)	12.49' (3.81 m)
11' (3.35 m)		1416	1082.61	63°05'07"	98' (29.87 m)	7.96' (2.43 m)
12' (3.66 m)	25' (7.62 m)	1626	1243.17	90°00'	100' (30.48 m)	0
13' (3.96 m)		1850	1414.43			
14' (4.27 m)		2088	1596.39			
15' (4.57 m)		2338	1787.53			
16' (4.88 m)		2603	1990.14			
17' (5.18 m)		2881	2202.68			
18' (5.49 m)		3172	2425.17			
19' (5.79 m)		3477	2658.36			
20' (6.10 m)		3795	2901.49			

125 Ft [38.10 m] Dike (Ls = 125' [38.10 m])						
w = 12 Ft [3.66 m] (Berm Width) R = 6 Ft [1.83 m] with Ls/4 Protection						
Height	Ls/4	Estimate Volume		θ	Coordinates	
		Cu Yds	Cu Meters		"X"	"Y"
0		0	0	0°	0	50.00' (15.24 m)
1' (0.30 m)		75	57.34	2°18'7.6"	12.5' (3.81 m)	49.75' (15.16 m)
2' (0.61 m)		167	127.68	4°40'04.7"	25.0' (7.62 m)	48.99' (14.93 m)
3' (0.91 m)		275	210.25	7°10'9.7"	37.5' (11.43 m)	47.70' (14.54 m)
4' (1.22 m)		400	305.82	9°54'06"	50' (15.24 m)	45.83' (13.97 m)
5' (1.52 m)		542	414.39	13°00'15"	62.5' (19.05 m)	43.30' (13.20 m)
6' (1.83 m)		700	535.19	16°41'57"	75' (22.86 m)	40.00' (12.19 m)
7' (2.13 m)		875	668.99	21°24'27"	87.5' (26.67 m)	35.71' (10.88 m)
8' (2.44 m)		1067	815.78	28°04'21"	100' (30.48 m)	30.00' (9.14 m)
9' (2.74 m)		1275	974.81	39°33'32"	112.5' (34.29 m)	21.79' (6.64 m)
10' (3.05 m)		1500	1146.83	50°35'39"	118.75' (36.20 m)	15.61' (4.76 m)
11' (3.35 m)		1742	1331.85	63°05'07"	122.5' (37.34 m)	9.95' (3.03 m)
12' (3.66 m)	31.25' (9.53 m)	2000	1529.11	90°00'	125' (38.10 m)	0
13' (3.96 m)		2275	1739.36			
14' (4.27 m)		2567	1962.61			
15' (4.57 m)		2875	2198.10			
16' (4.88 m)		3200	2446.58			
17' (5.18 m)		3542	2708.05			
18' (5.49 m)		3900	2981.76			
19' (5.79 m)		4275	3268.47			
20' (6.10 m)		4667	3568.18			

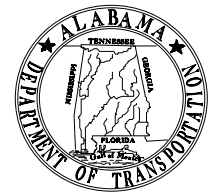
150 Ft [45.72 m] Dike (Ls = 150' [45.72 m])						
w = 15 Ft [4.57 m] (Berm Width) R = 7.5 Ft [2.29 m] with Ls/4 Protection						
Height	Ls/4	Estimate Volume		θ	Coordinates	
		Cu Yds	Cu Meters		*X*	*Y*
0		0	0	0°	0	60.00' (18.29 m)
1' (0.30 m)		109	83.34	2°18'7.6"	15' (4.57 m)	59.70' (18.20 m)
2' (0.61 m)		237	181.20	4°40'03.5"	30' (9.14 m)	58.79' (17.92 m)
3' (0.91 m)		386	295.12	7°10'9.7"	45' (13.72 m)	57.24' (17.45 m)
4' (1.22 m)		554	423.56	9°54'09.9"	60' (18.29 m)	54.99' (16.76 m)
5' (1.52 m)		742	567.30	13°00'15"	75' (22.86 m)	51.96' (15.84 m)
6' (1.83 m)		950	726.33	16°41'57"	90' (27.43 m)	48.00' (14.63 m)
7' (2.13 m)		1177	899.88	21°24'30"	105' (32.00 m)	42.85' (13.06 m)
8' (2.44 m)		1424	1088.73	28°04'21"	120' (36.58 m)	36.00' (10.97 m)
9' (2.74 m)		1691	1292.86	39°33'24.6"	135' (41.15 m)	26.15' (7.97 m)
10' (3.05 m)		1978	1512.29	50°34'56"	142.5' (43.43 m)	18.74' (5.71 m)
11' (3.35 m)		2284	1746.29	63°05'07"	147' (44.81 m)	11.94' (3.64 m)
12' (3.66 m)	37.5' (11.43 m)	2611	1996.25	90°00'	150' (45.72 m)	0
13' (3.96 m)		2957	2260.79			
14' (4.27 m)		3323	2540.62			
15' (4.57 m)		3708	2834.97			
16' (4.88 m)		4114	3145.38			
17' (5.18 m)		4539	3470.31			
18' (5.49 m)		4984	3810.54			
19' (5.79 m)		5449	4166.06			
20' (6.10 m)		5933	4536.10			



REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO



UNDERCUTTING AND BACKFILLING IN CUTS AND GRADE POINTS

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	DESIGN BUREAU SPECIAL DRAWING DETAILS FOR UNDERCUTTING AND BACKFILLING AT GRADE POINTS	
Bureau Std Engr: <u>D.J.W.</u> DRAWN BY: _____ DATE DRAWN: <u>12-16-74</u>	SPECIAL DRAWING NO UBC-210	INDEX NO 21004

NOT TO SCALE