APPENDIX C

Pavement Distress

Appendix C. Observed Pavement Distress

This appendix quantifies the distresses observed on site for each test section included in this study. At the site, distress surveys were conducted containing information on transverse cracks, spalling, visual faulting and drain conditions. Based on these observations, the level of distress has been evaluated.

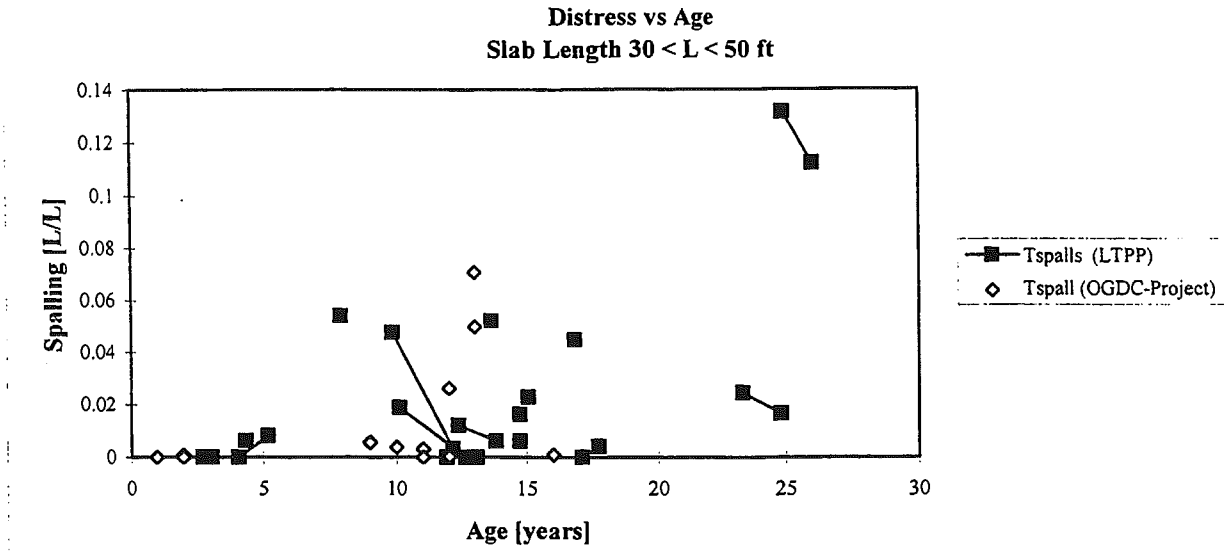
A crack was identified as a transverse crack if it is longer than 4 ft, and spaced more than 4 ft from another crack. The crack widths associated with the transverse cracks were measured using a Crack Comparator Card. The measured crack width was taken as the average of two measurements (e.g. the crack width at outer wheel path and at slab centerline). Spalling was measured as the length of spall; volume estimates were made and can be found on accompaning distress surveys. Faulting was measured using a faultmeter at 2 test sections, however the severity of faulting was estimated for all test sections.

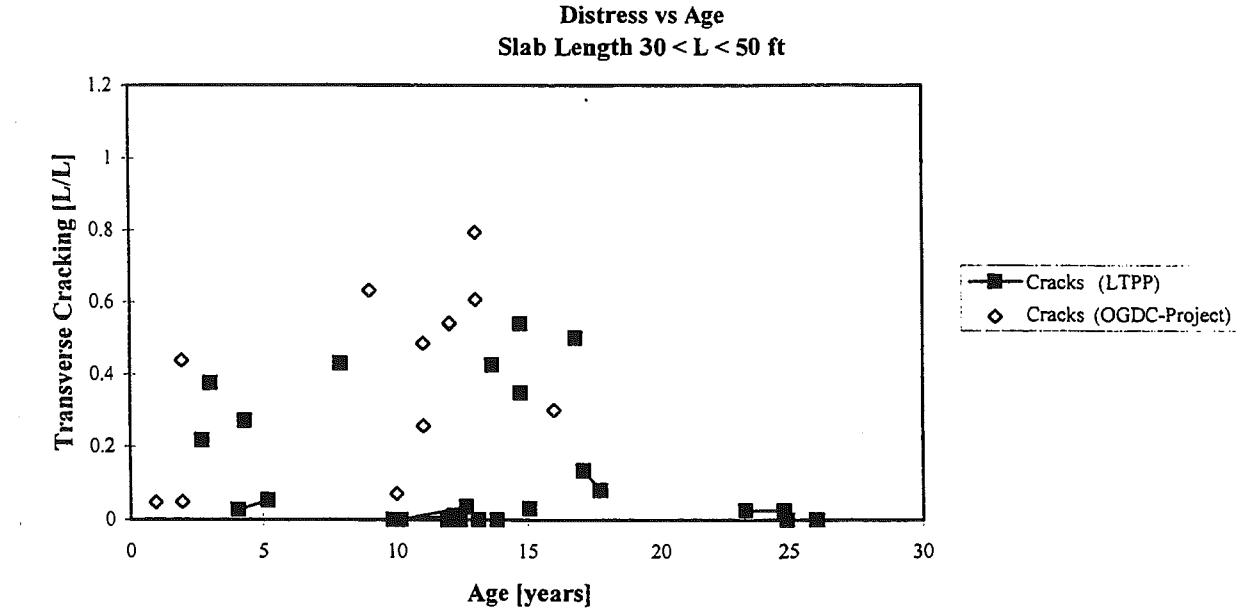
For each test section a table can be found listing each slab, and any distresses associated with it. Shown in the table for each slab is the station number at the midslab; the length of spalling; number of cracks; the total length of cracking in feet; average crack width in the slab; accumulated faulting; number of faults (1 joint is considered with each slab, as are the cracks); and finally the average fault per slab.

In addition, each table quantifies transverse cracking as sum of crack length divided by job length (L/L). This is also done for spalling. These calculations are performed so that the sections may be compared with similar sections in the SHRP LTPP database .

Distress for OGDC Project

Test Section	Age	Spalling L/L	Transverse Cracking L/L	Faulting per 500 ft ave fault [mm]
19042-02233A Sec C	9	0.0056	0.6328	
19042-24680A Sec B	10	0.0038	0.0714	
19043-02234A EB	11	0.0031	0.4854	
19043-02234A WB	11	0.0000	0.2570	
44044-18804A	12	0.0262	0.5396	
77024-20821A Sec A	13	0.0708	0.6074	
77024-17988A Sec B	12	0.0004	0.5424	
25132-06582A	16	0.0010	0.3009	-0.04
77023-21586A	13	> 0.0500	0.7941	-1.21
11017-32516A Sec A	2	0.0007	0.4379	
11017-32516A Sec C	2	0.0000	0.0485	-0.32
11017-32516A Sec D	1	0.0000	0.0475	


Distress vs Age
Slab Length 30 < L < 50 ft
Spalling [L/L]
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
5
10
15
20
25
30
Age [years]
Tspalls (LTPP)
Tspall (OGDC-Project)


Distress vs Age
Slab Length 30 < L < 50 ft
Transverse Cracking [L/L]
1.2
1
0.8
0.6
0.4
0.2
0
0
5
10
15
20
25
30
Age [years]
Cracks (LTPP)
Cracks (OGDC-Project)

11017-32516A Section A

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	179017	0	0	0	0.00
2	179033	0	0	0	0.00
3	179049	0	1	3	0.08
4	179065	0	2	4	0.08
5	179081	4	1	3	0.08
6	179098	0	1	1	0.08
7	179116	0	1	14	0.35
8	179132	0	1	14	0.30
9	179148	0	1	14	0.35
10	179164	0	1	14	0.35
11	179180	0	1	14	0.00
12	179196	0	2	4.5	0.08
13	179212	0	1	14	0.30
14	179228	0	1	14	0.30
15	179244	0	1	14	0.30
16	179260	0	1	14	0.40
17	179276	0	2	4	0.09
18	179292	0	1	2	0.08
19	179308	0	1	14	0.20
20	179324	0	1	14	0.25
21	179340	0	2	3	0.08
22	179356	0	3	9	0.08
23	179372	0	1	3	0.08
24	179388	0	4	8	0.09
25	179404	0	1	2.5	0.08
26	179420	0	2	4	0.10
27	179436	0	2	4.5	0.13
28	179452	0	1	1	0.15
29	179468	0	2	4	0.09
30	179484	0	1	1	0.10
31	179500	0	1	3	0.08
	Total length 499 ft	L/L = 0.0007		L/L = 0.4379	

11017-32516A Section C

Slab	Station number	Spalling	Transverse Cracking			Faulting		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]	Sum of Faults per Slab [mm]	Number of faulted locations	Average fault [mm]
1	168270	0	1	0	0.08	-0.300	1	-0.300
2	168286	0	1	0	0.08	-0.800	1	-0.800
3	168303	0	1	0	0.08	-0.500	1	-0.500
4	168220	0	1	0	0.08	-0.400	1	-0.400
5	168336	0	1	0	0.08	-0.400	1	-0.400
6	168351	0	1	0	0.08	-0.350	1	-0.350
7	165368	0	1	0	0.08	-0.400	1	-0.400
8	168384	0	1	0	0.08	-0.400	1	-0.400
9	168399	0	1	0	0.08	-0.400	1	-0.400
10	168416	0	1	0	0.08	-0.300	1	-0.300
11	168432	0	1	0	0.08	-0.100	1	-0.100
12	168447	0	1	0	0.08	-0.300	1	-0.300
13	168464	0	1	0	0.08	-0.500	1	-0.500
14	168480	0	1	0	0.08	-0.800	1	-0.800
15	168494	0	1	0	0.08	0.000	1	0.000
16	168511	0	1	0	0.10	-0.400	1	-0.400
17	168527	0	0	0	0.00	-0.400	1	-0.400
18	168542	0	0	0	0.00	-0.400	1	-0.400
19	168559	0	0	0	0.00	-0.200	1	-0.200
20	168575	0	0	0	0.00	-0.200	1	-0.200
21	168590	0	0	0	0.00	-0.500	1	-0.500
22	168606	0	1	0	0.08	-0.500	1	-0.500
23	168622	0	1	0	0.08	-0.400	1	-0.400
24	168637	0	1	0	0.08	-0.500	1	-0.500
25	168654	0	1	0	0.10	-0.600	1	-0.600
26	168670	0	1	0	0.08	-0.300	1	-0.300
27	168685	0	1	0	0.08	-0.400	1	-0.400
28	168703	0	1	0	0.08	-0.200	1	-0.200
29	168719	0	1	0	0.10	-0.200	1	-0.200
30	168734	0	1	0	0.08	-0.200	1	-0.200
31	168751	0	1	14	0.60	-1.000	2	-0.500
32	168767	0	1	0	0.08	-0.300	1	-0.300
33	168782	0	0	0	0.00	-0.400	1	-0.400
34	168800	0	1	0	0.08	-0.500	1	-0.500
35	168816	0	1	7	0.08	-0.300	1	-0.300
36	168832	0	1	0	0.08	-0.400	1	-0.400
37	168848	0	1	14	0.33	-0.800	2	-0.400
38	168864	0	0	0	0.00	0.000	1	0.000
39	168879	0	0	0	0.00	-0.300	1	-0.300
40	168895	0	1	0	0.10	-0.300	1	-0.300
41	168911	0	1	0	0.08	-0.400	1	-0.400
42	168926	0	1	0	0.10	0.000	1	0.000
43	168943	0	1	0	0.08	-0.100	1	-0.100
44	168959	0	1	0	0.10	-0.500	1	-0.500
45	168974	0	1	0	0.08	1.300	1	1.300
46	168991	0	1	14	0.55	-0.300	2	-0.150
47	169007	0	1	0	0.08	-0.450	1	-0.450
	Total length 753 ft	L/L =0.0000		L/L = 0.0485		Fault per 500 feet: -10.69 mm		

11017-32516A Section D

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	179300	0	2	32	0.25
2	179285	0	1	16	0.35
3	179169	0	0	0	0.00
4	179153	0	0	0	0.00
5	179137	0	0	0	0.00
6	179121	0	0	0	0.00
7	179105	0	0	0	0.00
8	179089	0	0	0	0.00
9	179073	0	0	0	0.00
10	179057	0	0	0	0.00
11	179041	0	0	0	0.00
12	179025	0	0	0	0.00
13	179009	0	0	0	0.00
14	178993	0	0	0	0.00
15	178977	0	0	0	0.00
16	178961	0	0	0	0.00
17	178945	0	0	0	0.00
18	178929	0	0	0	0.00
19	178913	0	0	0	0.00
20	178897	0	0	0	0.00
21	178881	0	0	0	0.00
22	178865	0	0	0	0.00
23	178849	0	0	0	0.00
24	178833	0	0	0	0.00
25	178817	0	0	0	0.00
26	178801	0	0	0	0.00
27	178785	0	0	0	0.00
28	178769	0	0	0	0.00
29	178753	0	0	0	0.00
30	178737	0	0	0	0.00
31	178721	0	0	0	0.00
32	178705	0	0	0	0.00
33	178689	0	0	0	0.00
34	178673	0	0	0	0.00
35	178657	0	0	0	0.00
36	178641	0	0	0	0.00
37	178625	0	0	0	0.00
38	178609	0	0	0	0.00
39	178593	0	0	0	0.00
40	178577	0	0	0	0.00
41	178561	0	0	0	0.00
42	178545	0	0	0	0.00
43	178529	0	0	0	0.00
44	178513	0	0	0	0.00
45	178497	0	0	0	0.00
46	178481	0	0	0	0.00
47	178465	0	0	0	0.00
48	178449	0	0	0	0.00
49	178433	0	0	0	0.00
50	178417	0	0	0	0.00
51	178401	0	0	0	0.00
52	178385	0	0	0	0.00
53	178369	0	0	0	0.00
54	178353	0	0	0	0.00
55	178337	0	0	0	0.00
56	178321	0	0	0	0.00
57	178305	0	0	0	0.00
58	178289	0	0	0	0.00
59	178273	0	0	0	0.00
60	178257	0	0	0	0.00
61	178241	0	0	0	0.00
62	178225	0	0	0	0.00
63	178209	0	0	0	0.00
64	178193	0	0	0	0.00
	Total length 1010 ft	L/L =0.0000		L/L = 0.0475	

19042-24680A Section B

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	27540	0	0	0	0.00
2	27580	0	0	0	0.00
3	27620	0	0	0	0.00
4	27660	0	0	0	0.00
5	27700	0	0	0	0.00
6	27740	0	0	0	0.00
7	27780	0	1	6	0.15
8	27820	2	0	0	0.00
9	27865	15	0	0	0.00
10	27910	0	0	0	0.00
11	27950	0	0	0	0.00
12	27990	0	0	0	0.00
13	28035	2	1	6	0.10
14	28070	0	0	0	0.00
15	28110	12	2	24	0.20
16	28150	0	1	12	0.30
	Total length 672 ft	L/L = 0.0038		L/L = 0.0714	

19042-02233A Section C

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	52740	5	2	24	0.55
2	52780	7	3	36	0.47
3	52820	0	3	36	0.40
4	52860	0	3	30	0.40
5	52900	5	5	45	0.27
6	52940	0	3	27	0.33
7	53070	0	3	36	0.40
8	53110	0	3	36	0.42
9	53150	0	3	28	0.27
10	53190	22	3	36	0.40
11	53230	0	1	9	0.30
12	53270	0	2	24	0.33
	Total length 580 ft	L/L = 0.0056		L/L = 0.6328	

19043-02234A WB

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	14976	0	1	12	0.25
2	14964.5	0	2	18	0.20
3	14951	0	2	15	0.09
4	14939	0	2	18	0.23
5	14926	0	0	0	0.00
6	14914	0	2	21	0.20
7	14900	0	0	0	0.00
8	14890	0	0	0	0.00
9	14877.5	0	2	18	0.23
10	14864	0	2	24	0.29
11	14851	0	1	12	0.33
12	14840	0	2	18	0.13
13	14826	0	1	12	0.33
14	14815	0	0	0	0.00
15	14802	0	0	0	0.00
16	14790	0	2	15	0.23
	Total length 712 ft	L/L = 0.0000		L/L = 0.2570	

19043-02234A EB

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	13705.5	3	2	24	0.30
2	13717	10	2	24	0.50
3	13731	10	2	24	0.55
4	13742	0	2	24	0.50
5	13755	0	2	18	0.34
6	13767	0	2	18	0.24
7	13780	0	2	15	0.29
8	13792	0	2	24	0.32
9	13804	0	1	12	0.33
10	13816	1	2	24	0.40
11	13830	0	2	24	0.37
12	13841.5	0	2	24	0.28
13	13854	0	2	18	0.20
14	13866	0	1	12	0.50
15	13878	0	1	12	0.30
16	13891	0	2	18	0.19
	Total length 649 ft	L/L = 0.0031		L/L = 0.4854	

25132-06582A

Slab	Station number	Spalling	Transverse Cracking			Faulting		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]	Sum of Faults per Slab [mm]	Number of faulted locations	Average fault [mm]
1	66012	0	1	12	0.50	0.800	2	0.400
2	65971	0	1	12	0.65	0.800	2	0.400
3	65927	0	1	12	0.90	0.075	1	0.075
4	65882	0	2	24	0.60	0.700	3	0.233
5	65828	18	1	12	0.60	0.070	2	0.035
6	65794	0	1	12	0.50	-3.400	2	-1.700
7	65751	0	1	12	0.40	-1.550	2	-0.775
8	65706	0	1	12	0.00	-1.400	2	-0.700
9	65662	0	1	12	0.50	0.300	2	0.150
10	65615	0	1	12	0.50	0.050	2	0.025
11	65575	0	1	12	0.65	-0.250	2	-0.125
12	65531	0	1	12	0.80	0.800	2	0.400
13	65490	0	1	12	0.50	-0.800	2	-0.400
14	65446	0	1	12	0.50	0.850	2	0.425
15	65402	0	1	12	0.80	-1.200	2	-0.600
16	65358	0	1	12	0.60	0.250	2	0.125
17	65313	0	0	12	0.00	0.350	1	0.350
18	65280	0	1	12	0.00	-0.500	2	-0.250
19	65235	0	2	24	0.50	-0.500	2	-0.250
20	65191	0	1	12	0.50	1.300	2	0.650
21	65147	0	1	12	0.70	-0.450	2	-0.225
22	65105	0	0	12	0.00	0.300	1	0.300
23	65061	0	1	12	0.70	0.500	2	0.250
24	65019	0	1	12	0.25	0.650	2	0.325
	Total length 1037 ft	L/L = 0.0000		L/L = 0.3007		Fault per 500 feet: -1.087		

44044-18804A

Slab	Station number	Spalling	Transverse Cracking		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	66625	0	1	12	0.40
2	66665	0	2	24	0.25
3	66705	2	2	24	0.24
4	66745	0	2	24	0.40
5	66785	0	2	24	0.50
6	66825	4	2	24	0.50
7	66865	4	2	24	0.50
8	66905	42	2	24	0.70
9	66945	25	1	12	1.00
10	66985	4	1	12	0.60
12	67025	4	2	24	0.55
13	67065	36	2	24	0.50
14	67105	0	2	24	0.45
15	67145	54	2	24	0.55
	Total length 556 ft	L/L = 0.0262		L/L = 0.5396	

77023-21586A

Slab	Station number	Spalling	Transverse Cracking			Faulting		
#	at midslab [ft]	Length [in]	Number of Cracks	Crack Length [ft]	Average Crack Width [mm]	Sum of Faults per Slab [mm]	Number of faulted locations	Average fault [mm]
1	182007		4	48	0.30	-5.200	3	-1.733
2	182048		3	36	0.63	-2.900	3	-0.967
3	182088		5	52	0.50	-10.000	3	-3.333
4	192128		4	48	0.48	-4.230	2	-2.115
5	182170		3	36	0.67	-1.700	4	-0.425
6	182211		3	36	0.53	0.225	3	0.075
7	182251		2	24	0.25	-8.525	3	-2.842
8	182292		3	36	0.53	-3.250	3	-1.083
9	182333		4	48	0.40	-9.000	4	-2.250
10	182375		3	36	0.53	-7.175	3	-2.392
11	182415		3	36	0.47	-3.070	3	-1.023
12	182454		4	48	0.30	-6.050	3	-2.017
13	182497		2	24	0.53	-4.500	3	-1.500
14	182537		2	24	0.60	0.375	3	0.125
15	182578		2	24	0.50	-0.775	2	-0.388
16	182620		3	36	0.37	0.225	2	0.113
17	182660		2	24	0.40	-3.500	3	-1.167
18	182700		2	24	0.40	-5.450	2	-2.725
19	182741		2	24	0.25	-1.875	2	-0.938
20	182783		3	36	0.37	-0.400	1	-0.400
21	182825		2	24	0.40	0.500	3	0.167
22	182565		2	24	0.23	0.375	3	0.125
23	182906		2	24	0.25	-42.214		-1.213
24	182948		2	24	0.55	0.650	2	0.325
25	182990		3	36	0.20			
26	183030		2	24	0.35			
27	183071		2	24	0.25			
28	183113		2	24	0.60			
29	183153		3	36	0.30			
30	183194		3	36	0.17			
31	183235		2	24	0.20			
32	183276		3	36	0.29			
33	183317		2	24	0.25			
34	183357		2	24	0.22			
35	183398		3	36	0.22			
36	183441		4	48	0.25			
37	183486		3	36	0.27			
	Total length 1516 ft	L/L >= 0.05		L/L = 0.7942		Fault per 500 feet:		

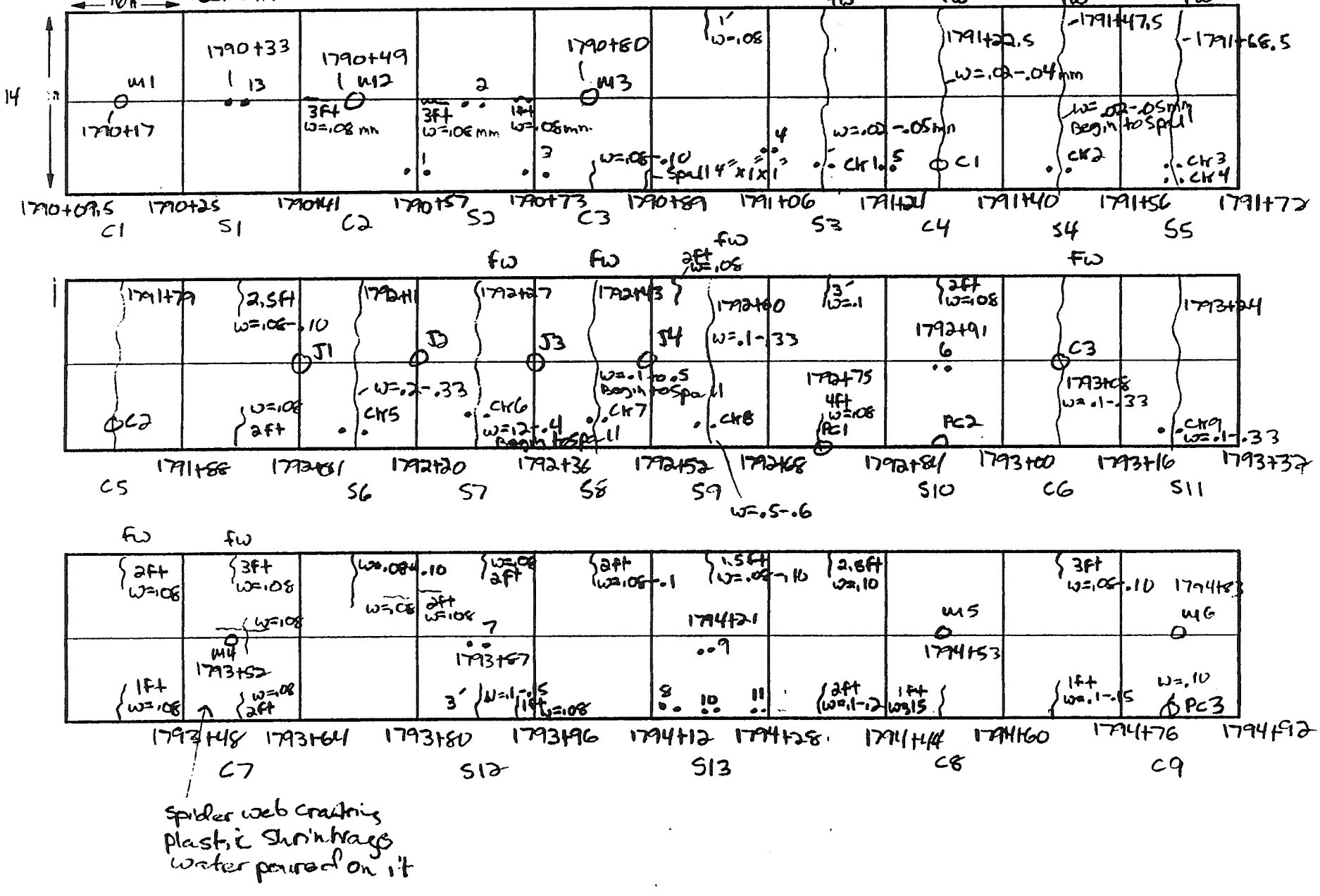
77024-20821A Section A

Slab #	Station number at midslab [ft]	Spalling Length [in]	Transverse Cracking		
			Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	8380	12	2	24	0.55
2	8420	0	2	24	0.38
3	8460	16	2	24	0.50
4	8500	1	2	24	0.45
5	8544	76	2	24	0.80
6	8585	144	2	24	1.00
7	8625	0	2	24	0.38
8	8665	2	2	24	0.55
9	8705	1	2	24	0.55
10	8750	0	2	24	0.40
11	8790	12	1	12	0.50
12	8830	0	2	24	0.50
13	8870	73	2	24	1.00
14	8910	144	3	36	0.87
15	8950	73	3	36	0.53
16	8990	0	2	24	0.33
	Total length 652 ft	L/L = 0.0708		L/L = 0.6074	

77024-17988(A) Section B

Slab #	Station number at midslab [ft]	Spalling Length [in]	Transverse Cracking		
			Number of Cracks	Crack Length [ft]	Average Crack Width [mm]
1	40830	0	2	24	0.33
2	40867	0	2	24	0.21
3	40908	0	1	12	0.10
4	40949	0	2	18	0.19
5	41362	0	2	24	0.30
6	41400	3	2	24	0.35
7	41440	0	2	20	0.24
8	41481	0	2	24	0.18
9	41524	0	3	30	0.21
10	41565	0	2	24	0.23
11	41606	0	2	18	0.12
12	41645	0	2	18	0.15
13	41688	0	2	24	0.15
14	41728	0	2	24	0.33
15	41757	0	0	0	0.00
16	41812	0	1	12	0.08
	Total length 590 ft	L/L = 0.0004		L/L = 0.5424	

Project # 11017-32516 A Direction EB Survey Date 4-23-97 Geometry 16ft Joint Spacing Beginning Station 1790 + 09.5
Section A Surveyed By AD Slab Thickness 12" Ending Station 1795 + 08



Project # 11017-32516A Direction EB Survey Date 4-23-97 Geometry 16 ft Joint Spacing Beginning Station 1790+09.5

Surveyed By AD Slab Thickness 12" Ending Station 1795+08

16 Section A

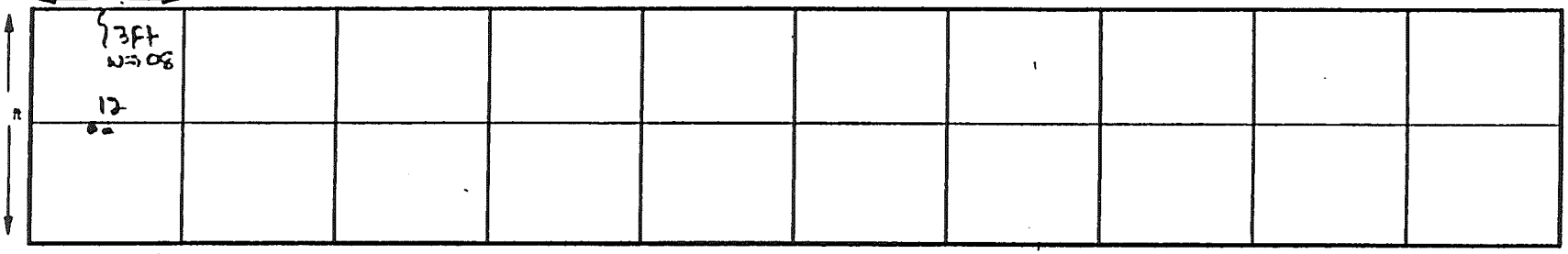
14 ft

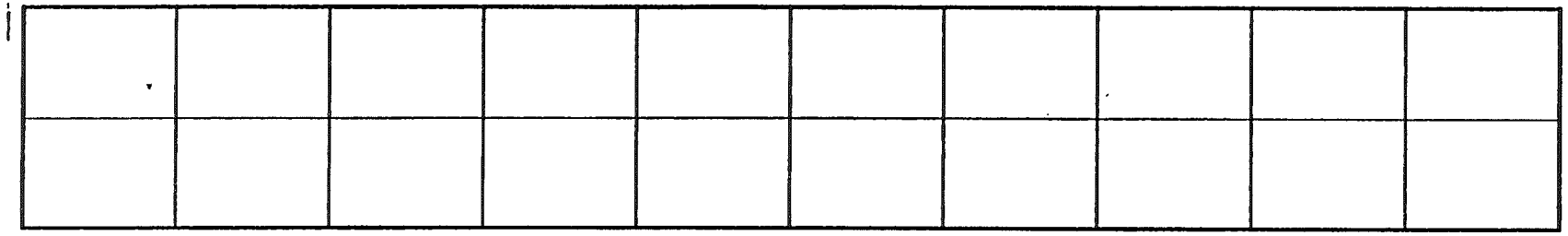
3ft
W=08

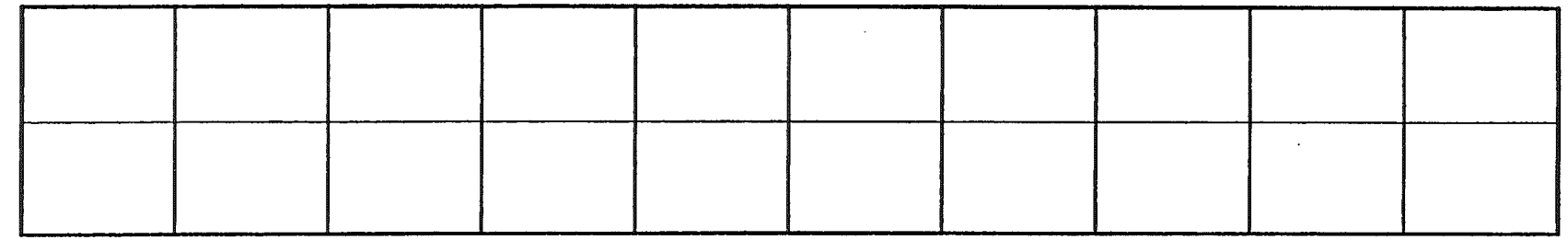
12

1794+92 1795+08

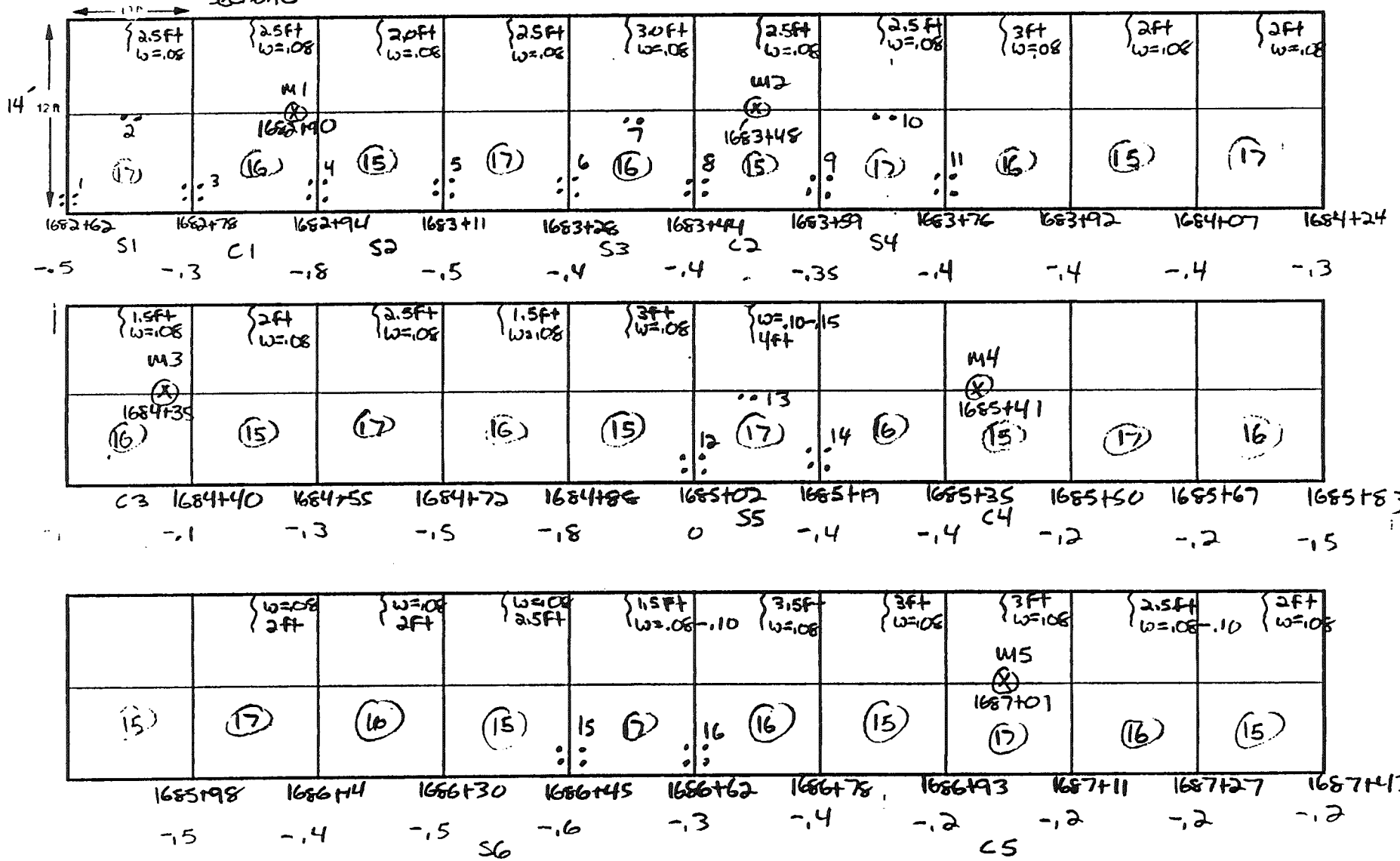
514



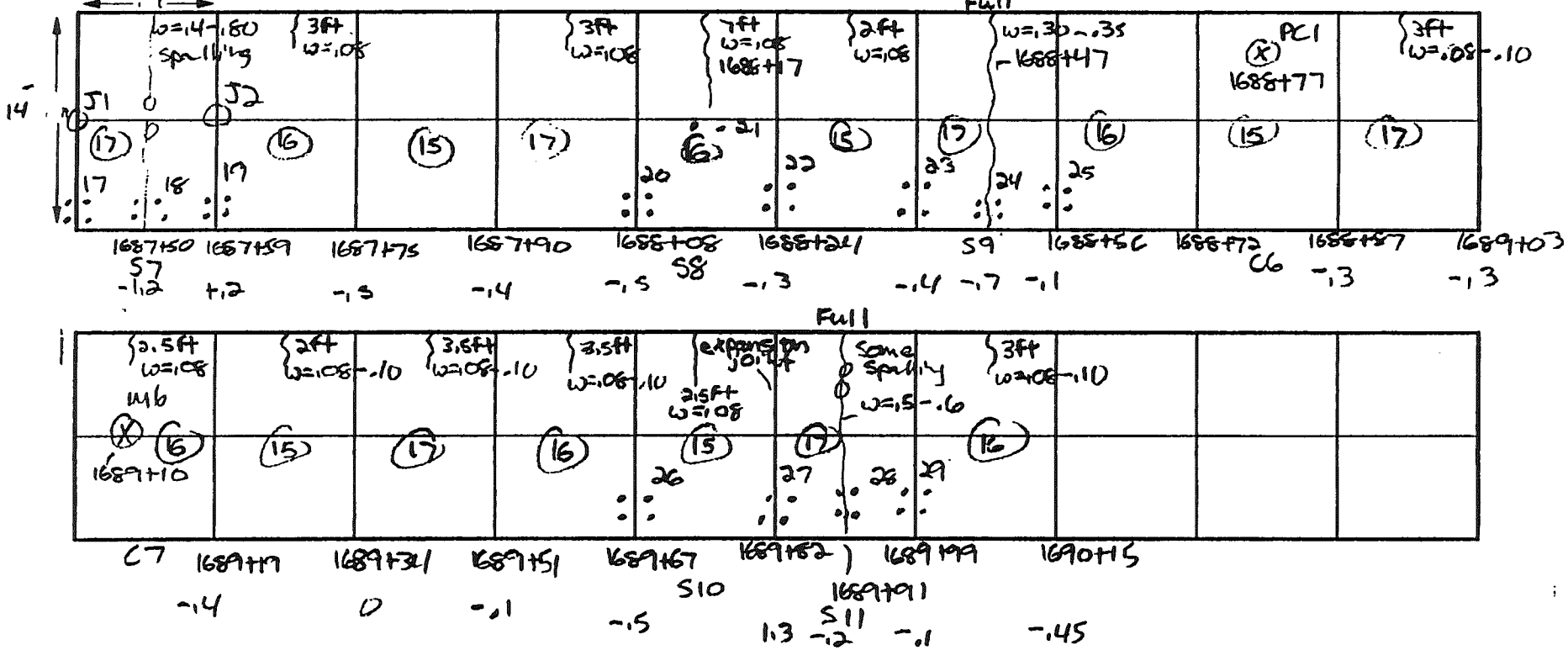




Project # 11017-32516A Direction EB Survey Date 4-30-97 Geometry 15, 16, 17 Ft Joint Sp. Beginning Station 1682+62
Section C Surveyed By AD Slab Thickness 12 Ending Station 1690+15

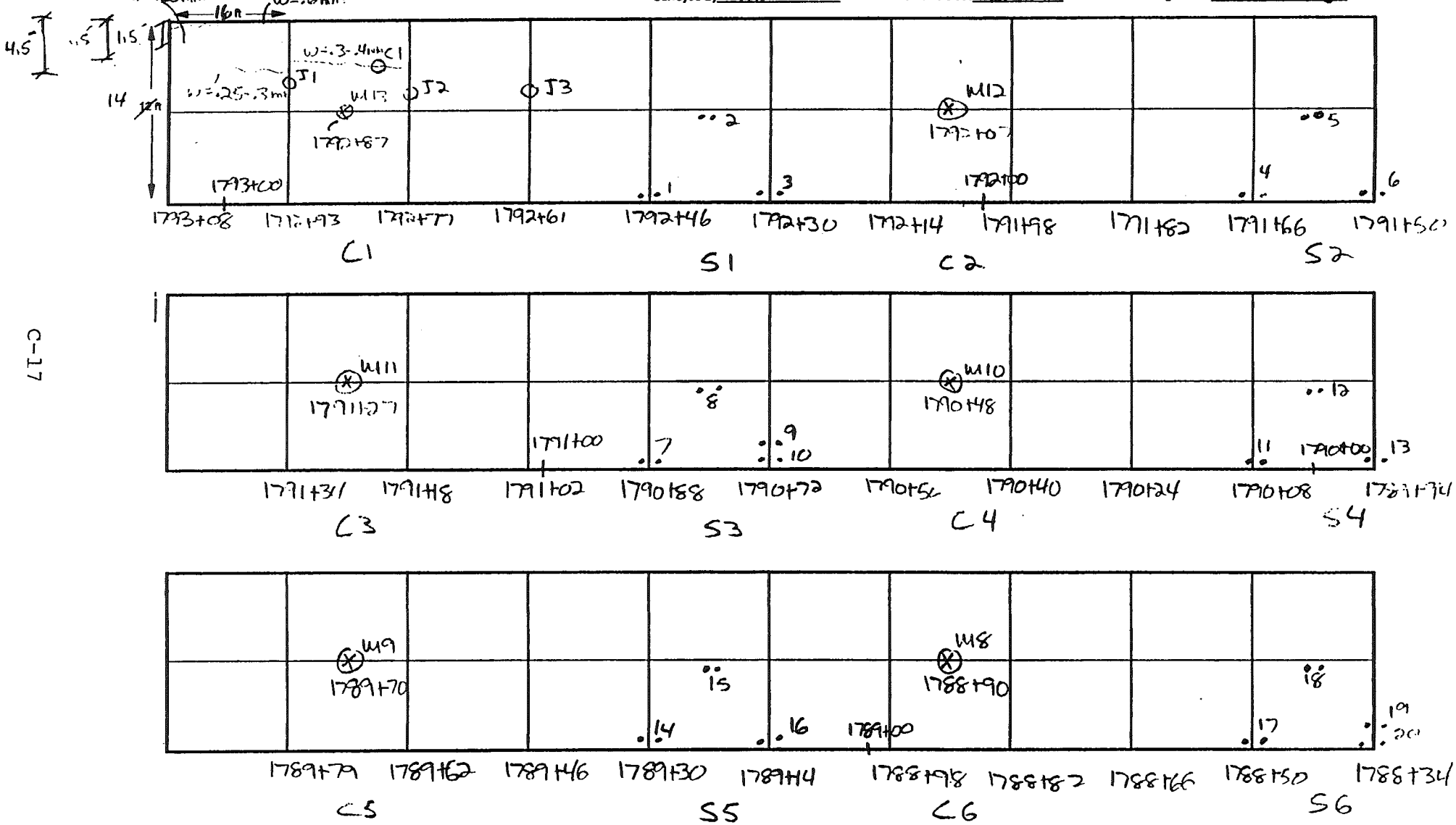


Project # 11017-32516A Section C Direction EB Survey Date 4-30-97 Surveyed By AD Geometry 15, 16, 17 joint sp. Slab Thickness 12" Beginning Station 1682+62 Ending Station 1690+15



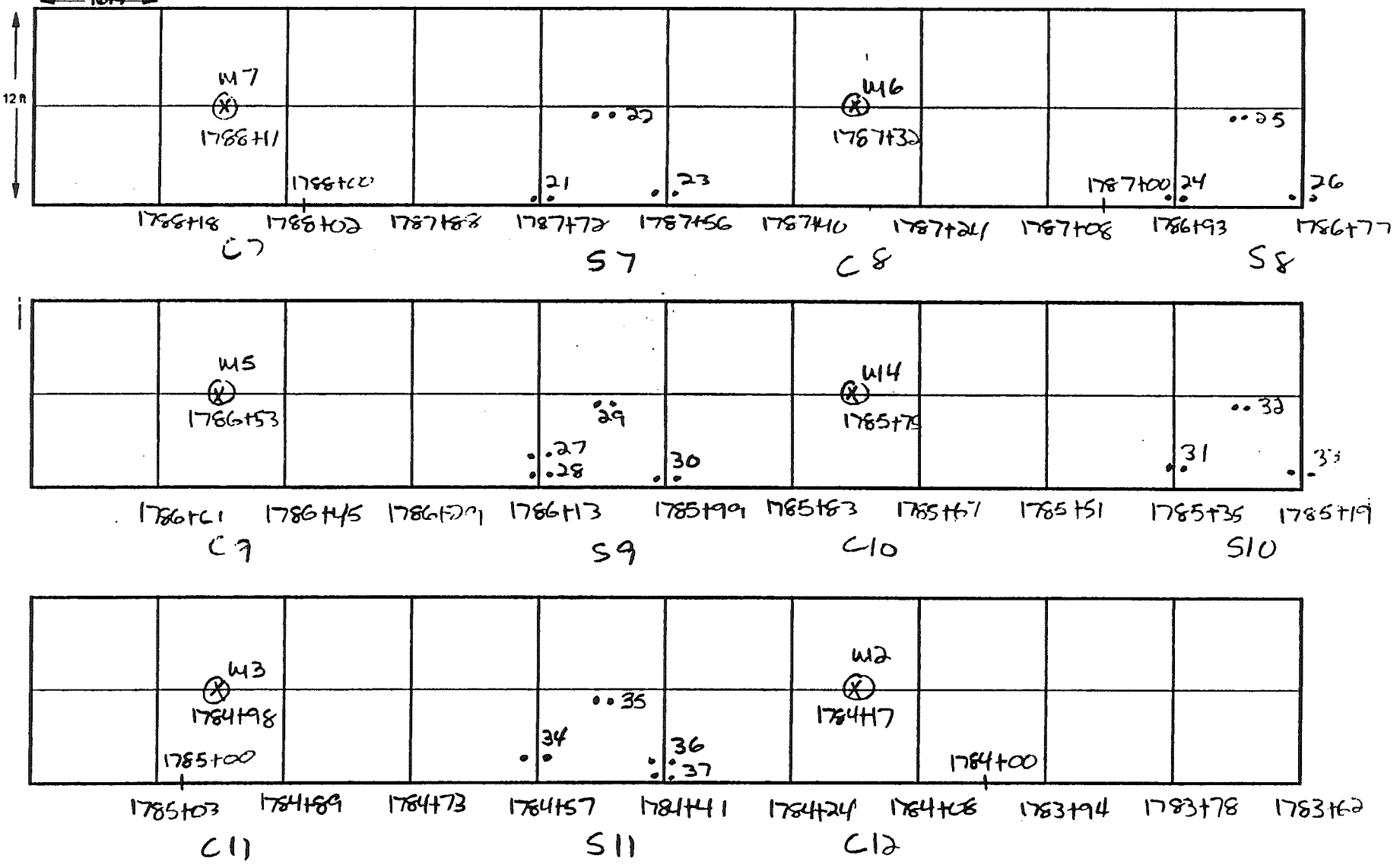
Section D

Project # 11017-32516A Direction WB Survey Date 5-28-97 Surveyed By AD Geometry 16 ft. JS Stab Thickness 12" Beginning Station 1793+08 Ending Station 1782+98



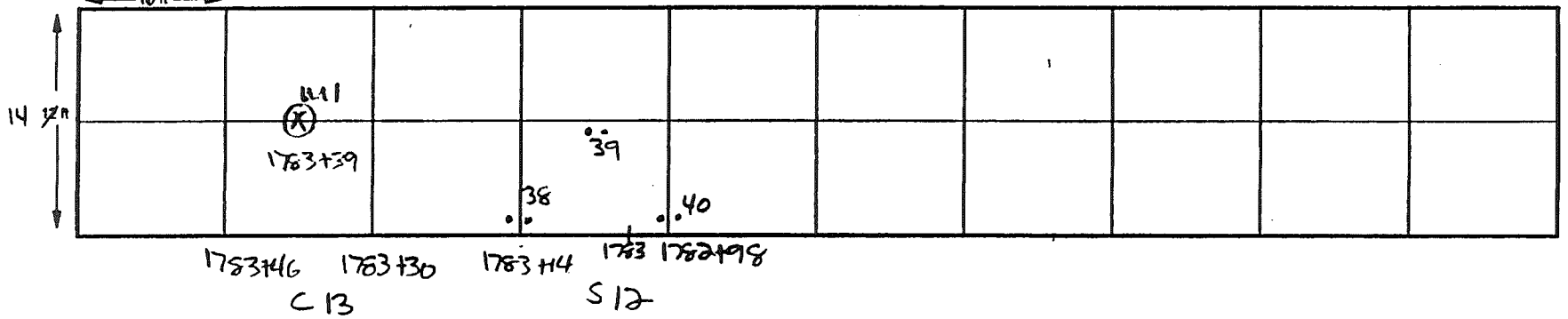
Section D

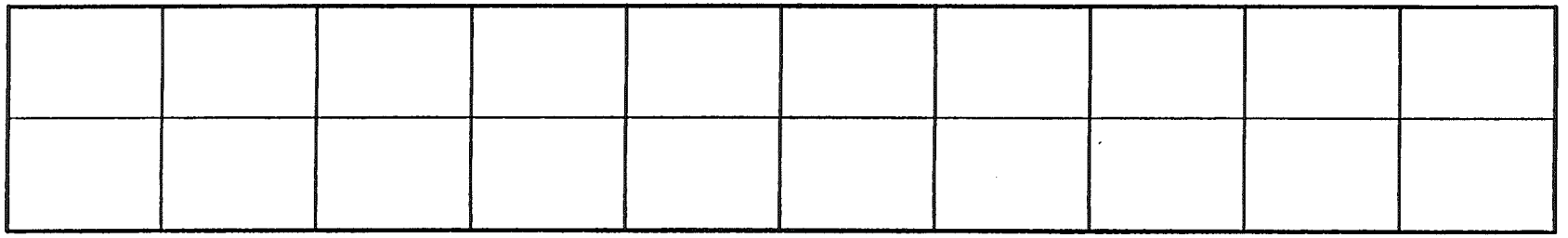
Project # 11017-32516A Direction WB Survey Date 5-28-97 Surveyed By AD Geometry 16 ft JTS. Slab Thickness 12" Beginning Station 1793+08 Ending Station 1782+98

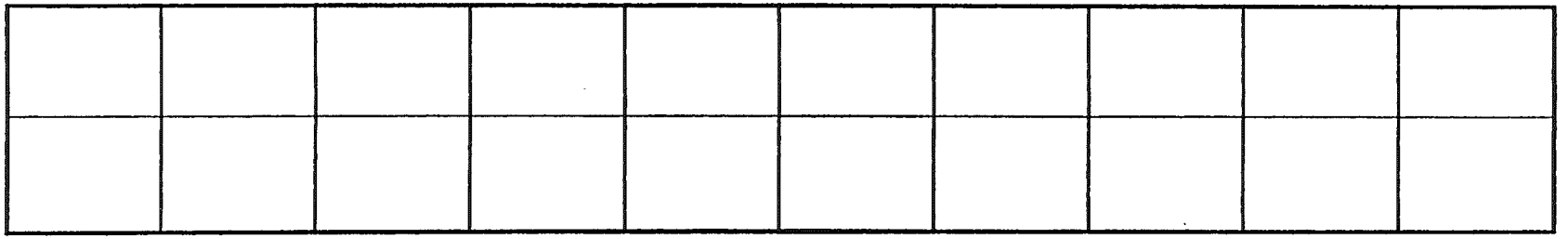


Section D

Project # 11017-32516A Direction WB Survey Date 5-28-97 Surveyed By AD Geometry 16ft JS Slab Thickness 12" Beginning Station 1793+06 Ending Station 1782+98

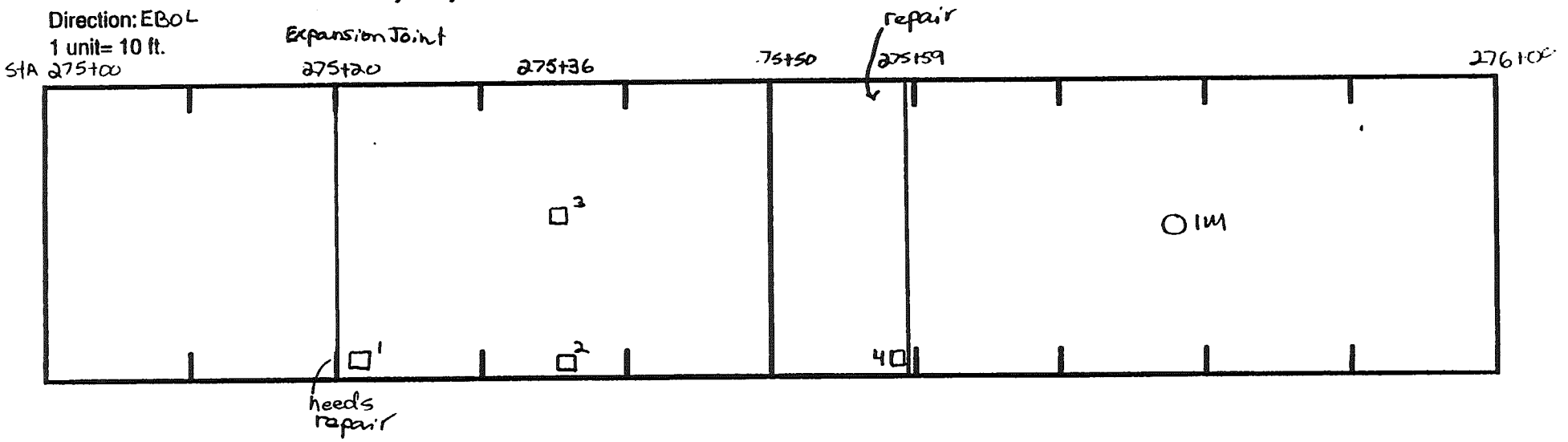


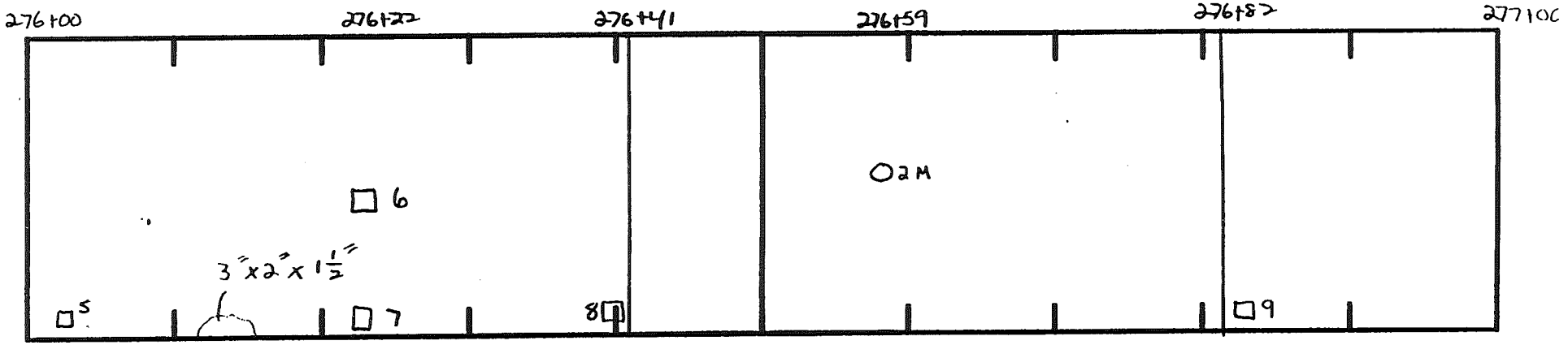




Project # P042(B)-2468.0A Survey Date: 8-13-96 Beginning Station: 275+00 Weather:
Surveyed By: ET End Station: 277+00 Comments:

Direction: EBOL
1 unit= 10 ft.

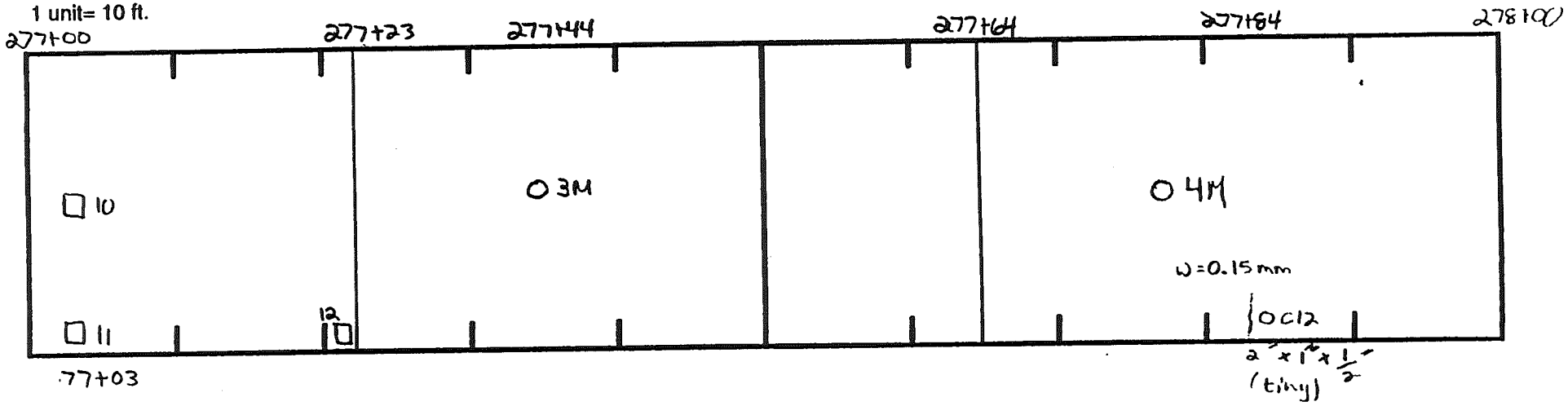


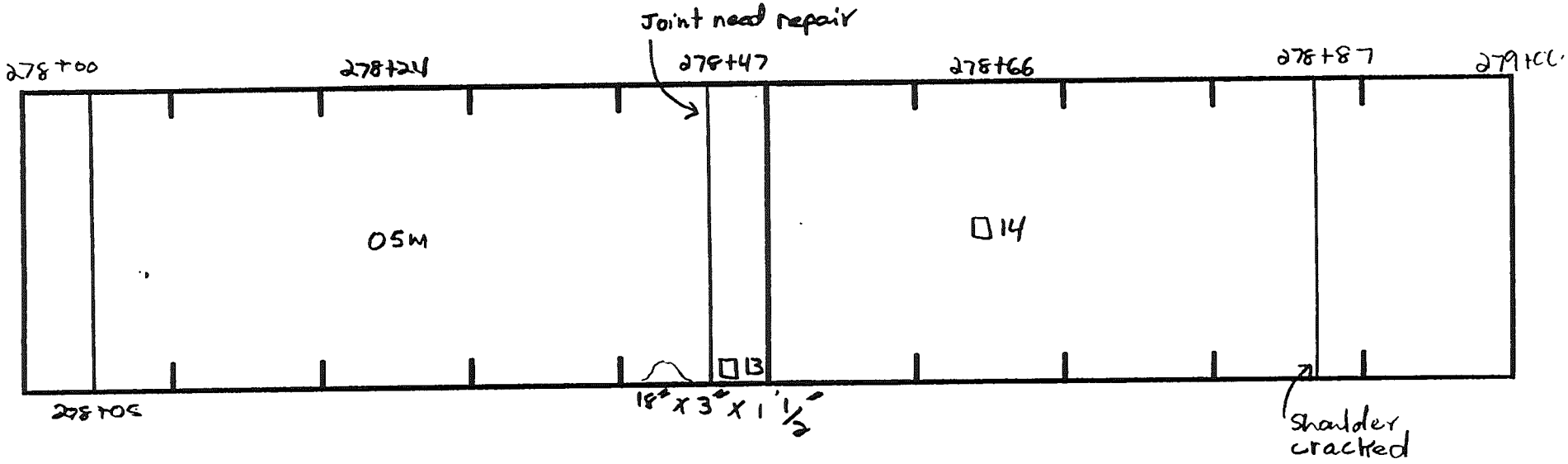


C-20

Project # 19042(B)-24660A **Survey Date:** 8-13-96 **Beginning Station:** 277+00 **Weather:**
Surveyed By: EJ **End Station:** 279+00 **Comments:**

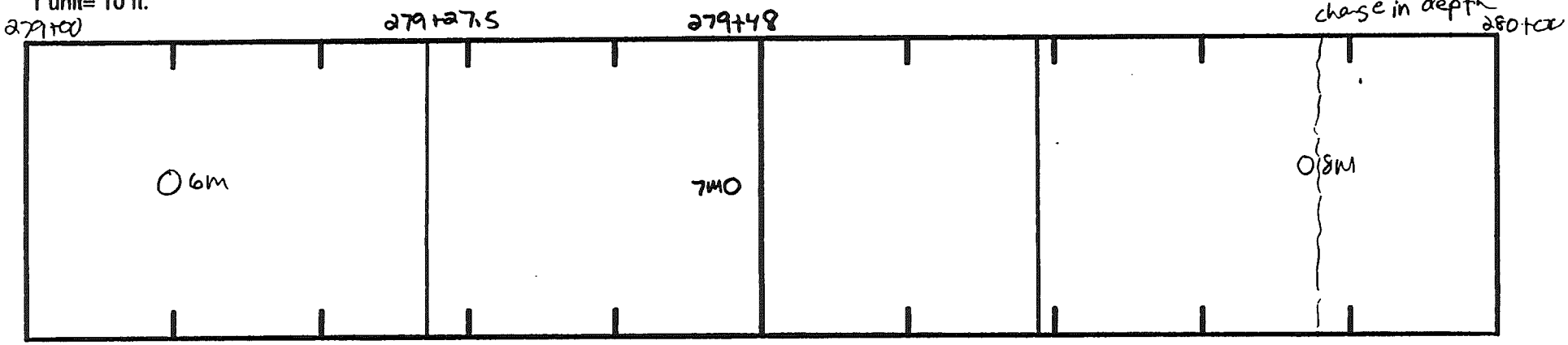
Direction: EBOL
1 unit= 10 ft.



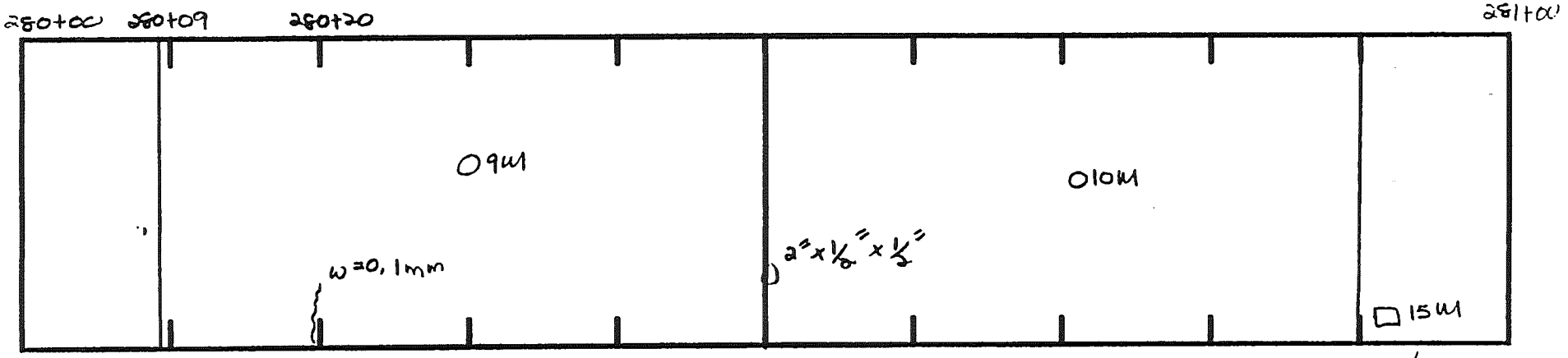


Project # 19042(B)-24680A Survey Date: 6-13-96 Beginning Station: 279+00 Weather:
Surveyed By: EJ End Station: 281+00 Comments:

Direction: EBOL
1 unit= 10 ft.

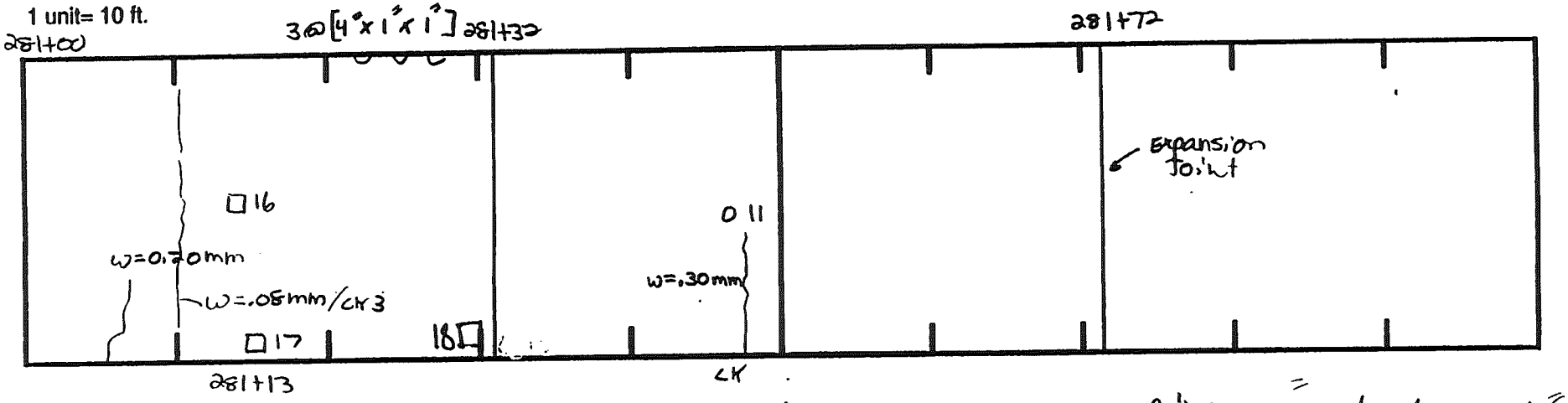


C hole in shoulder
20" x 15" x 3"

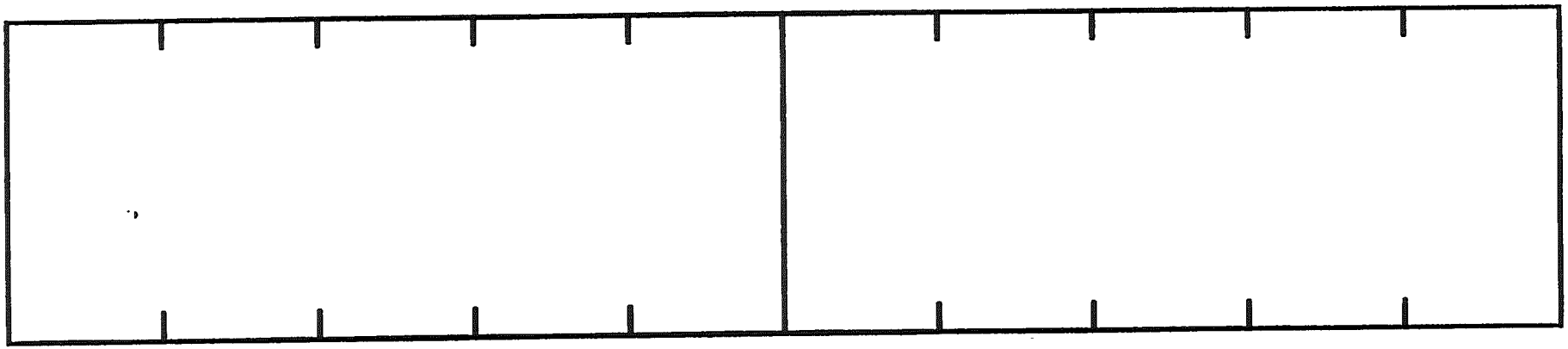


Project # P042(8)-246E0A Survey Date: 8-13-96 Beginning Station: 281+00 Weather:
Surveyed By: EJ End Station: 281+72 Comments:

Direction: EBOL
1 unit= 10 ft.

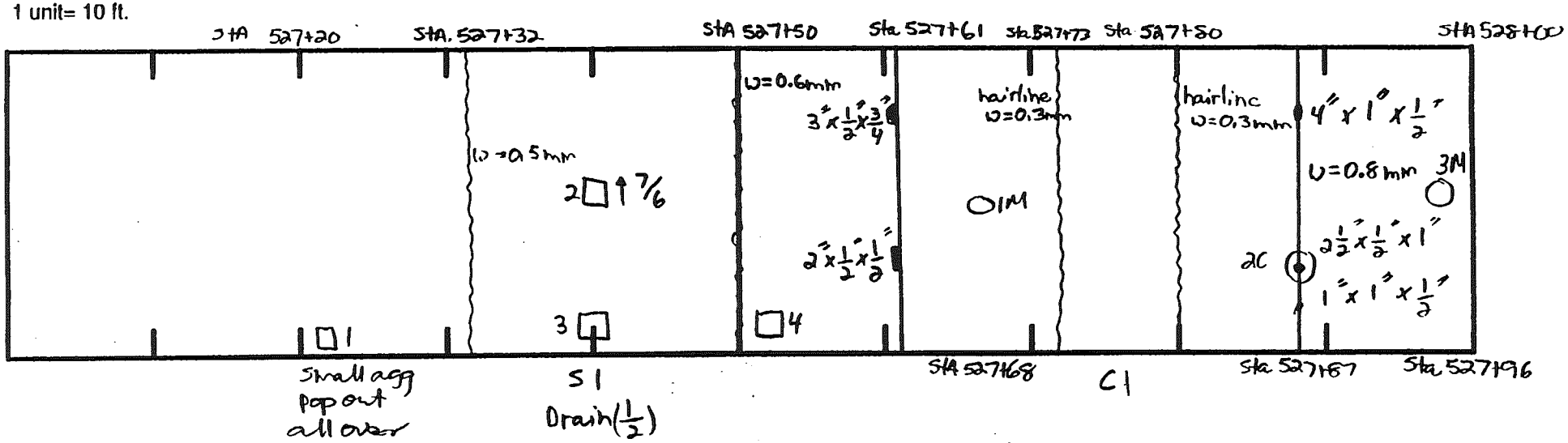


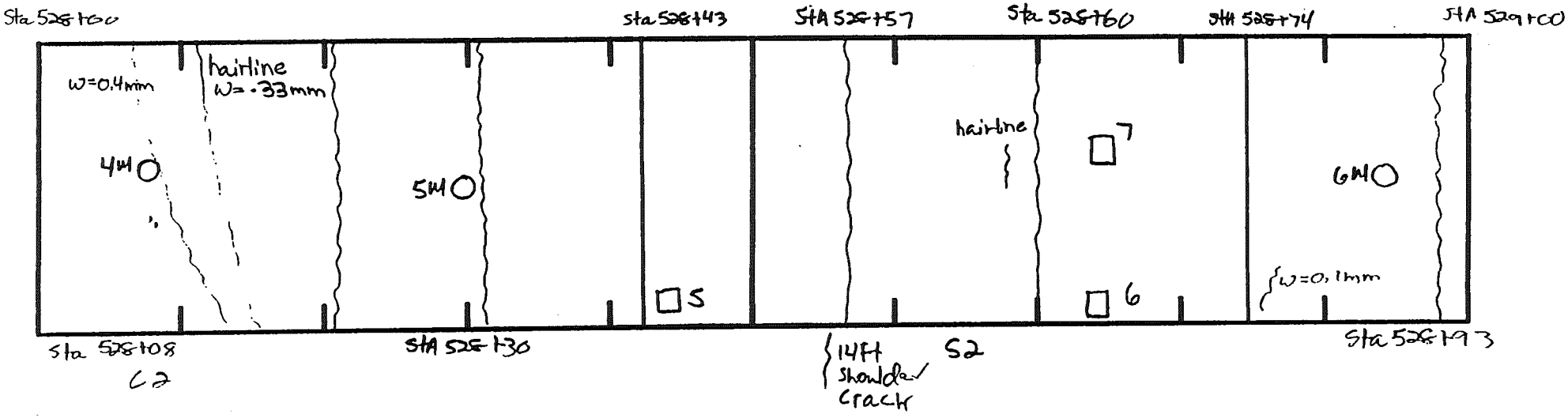
many transverse joints are in poor condition - Sealant popout from Thermal Expansion. Overall 3-6 popouts per slab



Project # 19042(C)-02233A **Survey Date:** 7-8-96 **Beginning Station:** 527+20 **Weather:**
Surveyed By: EJ **End Station:** 529+00 **Comments:**

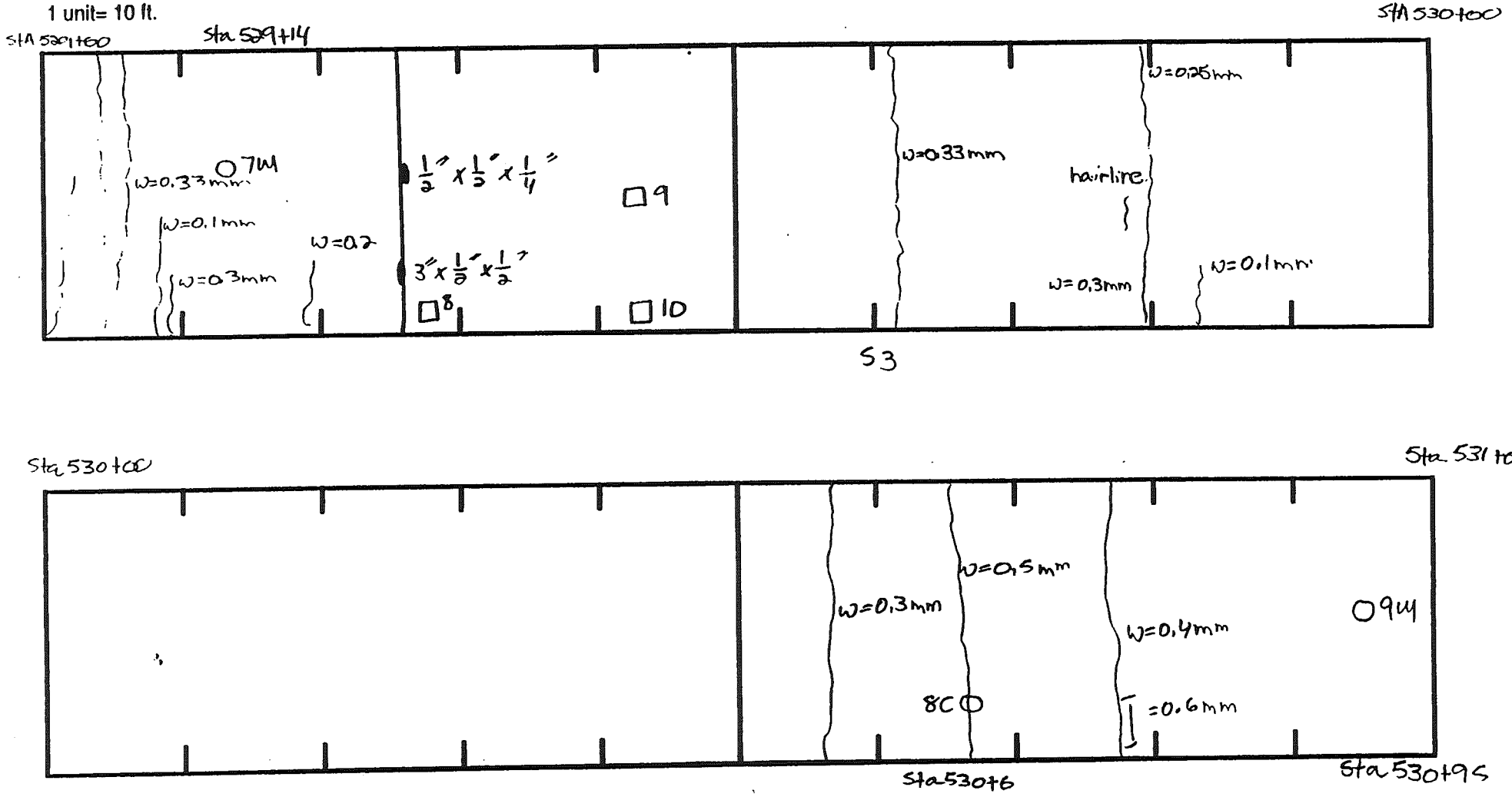
Direction: EBOL
1 unit= 10 ft.





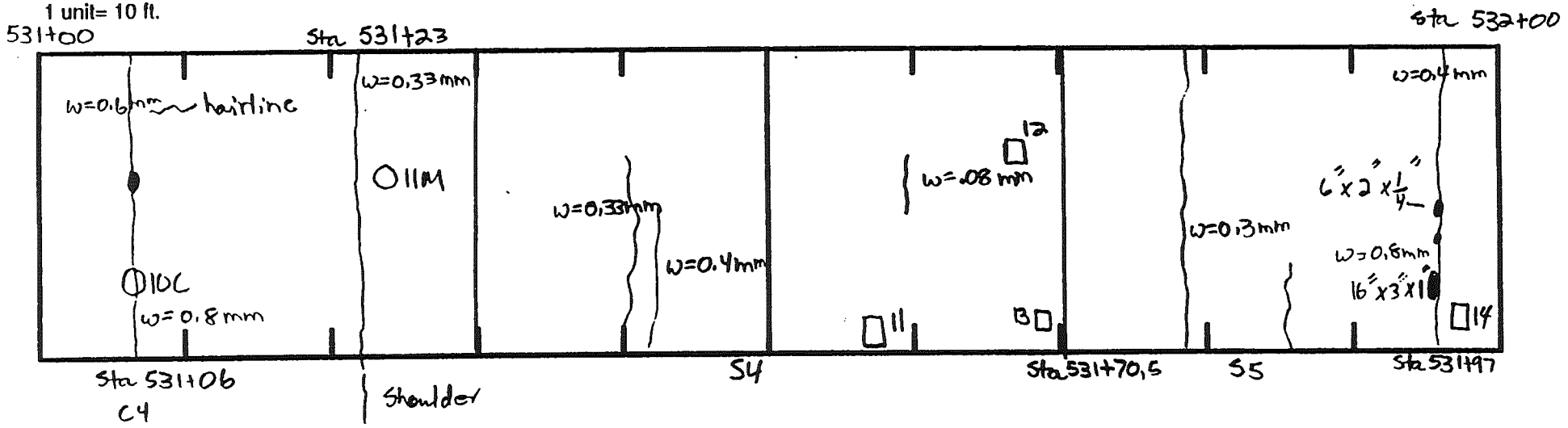
Project # NH42(C)-02233A **Survey Date:** 7-8-96 **Beginning Station:** 529+00 **Weather:**
Surveyed By: EJ **End Station:** 531+00 **Comments:**

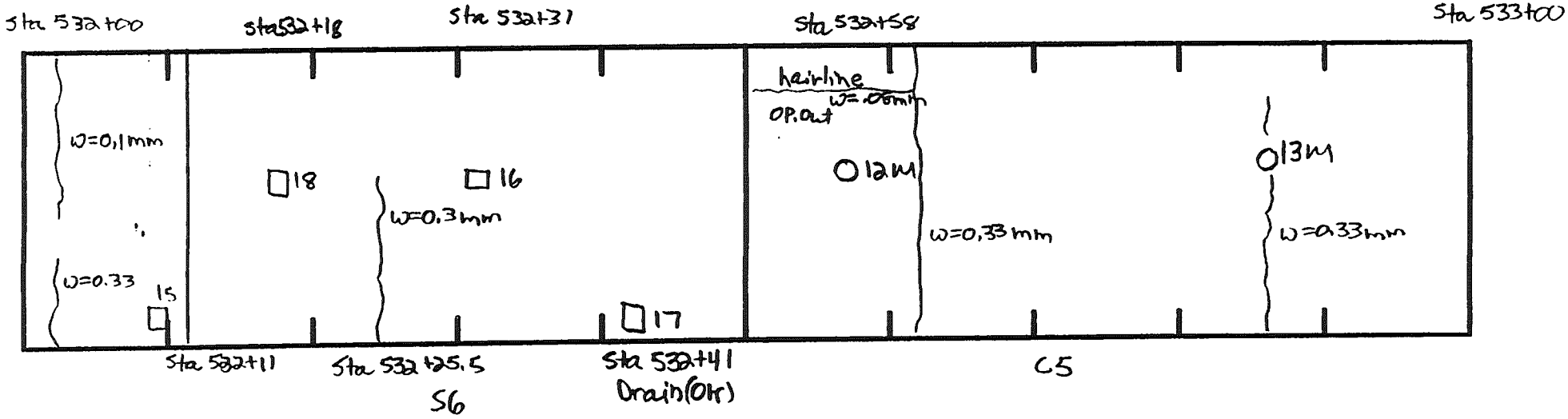
Direction:
1 unit= 10 ft.



Project # 19042(C)-02233A Survey Date: 7-8-96 Beginning Station: 531+00 Weather:
Surveyed By: ES End Station: 533+00 Comments:

Direction: EBOL
1 unit= 10 ft.



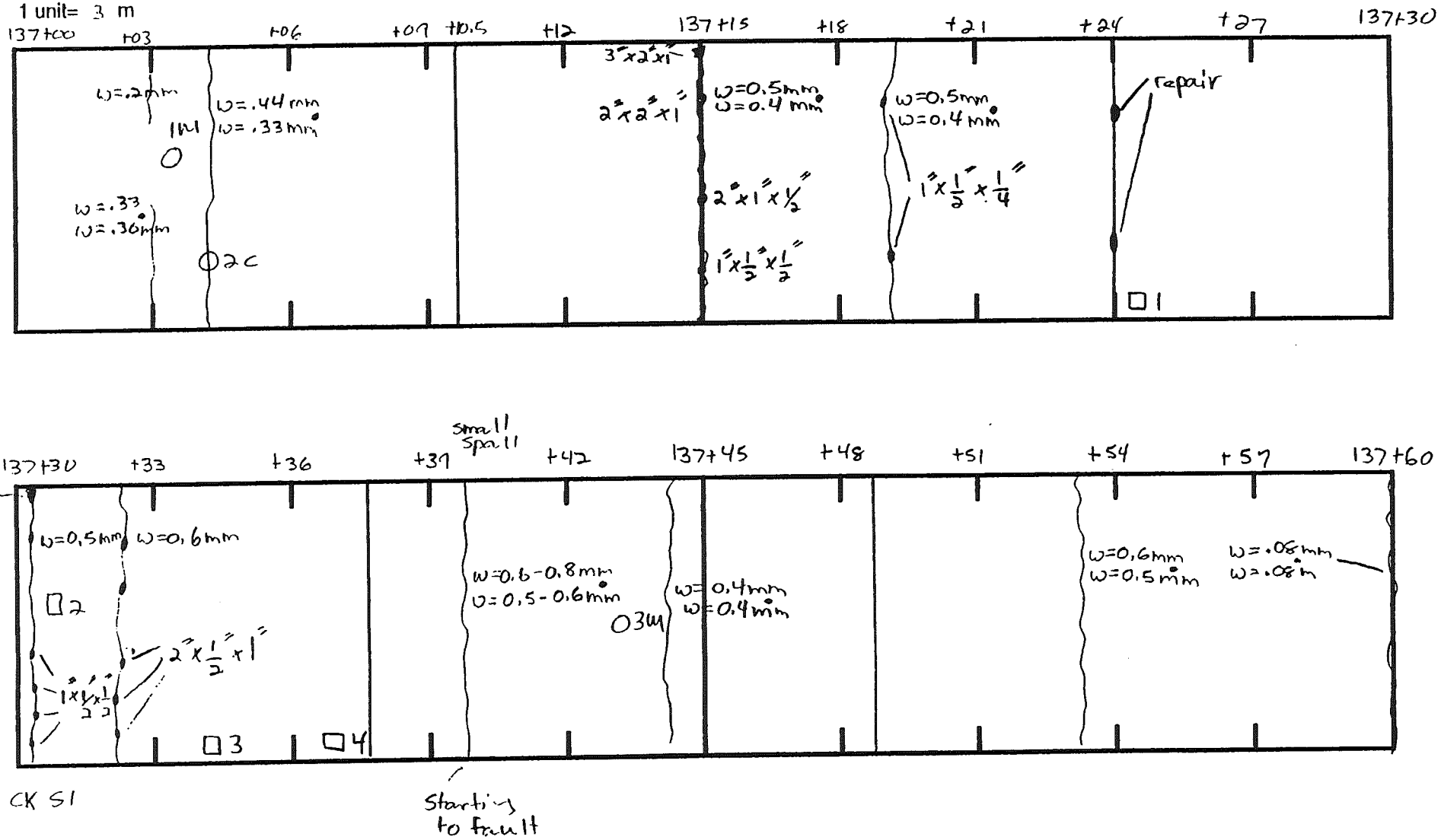


Project # 19043-02234A Survey Date: 8-15-96 Beginning Station: 137+00 m Weather: warm/partly cloudy

Surveyed By: EJ End Station: 137+60 m Comments:

Direction: EBOL

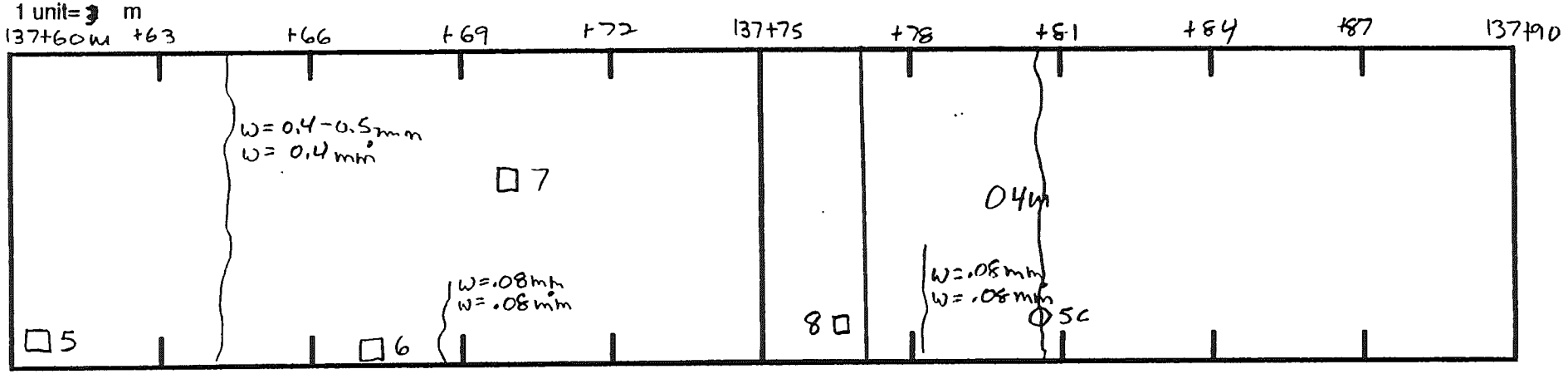
1 unit= 3 m

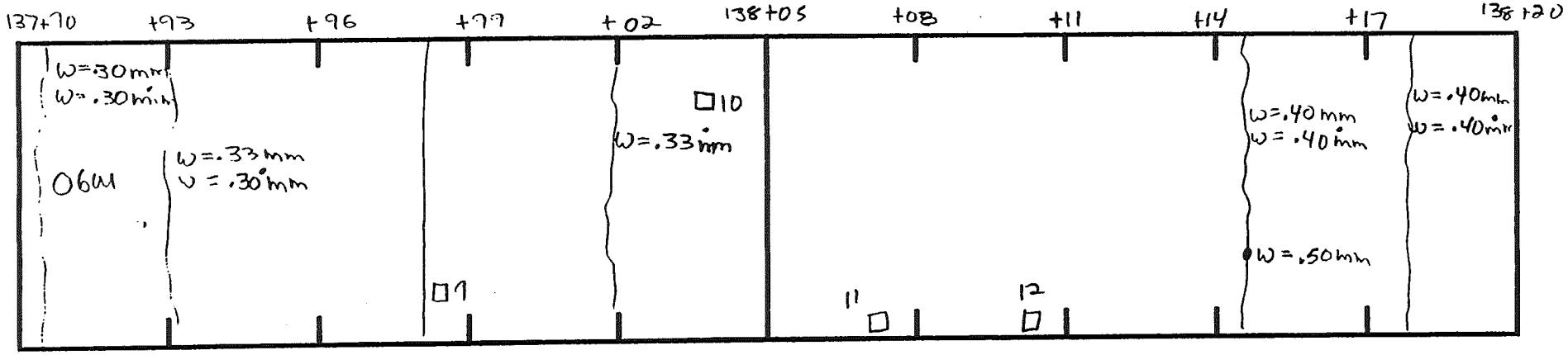


C-27

Project # 19043-02234A
Survey Date: 8-15-96
Surveyed By: EJ
Beginning Station: 137+60 M
End Station: 138+20 M
Weather:
Comments:

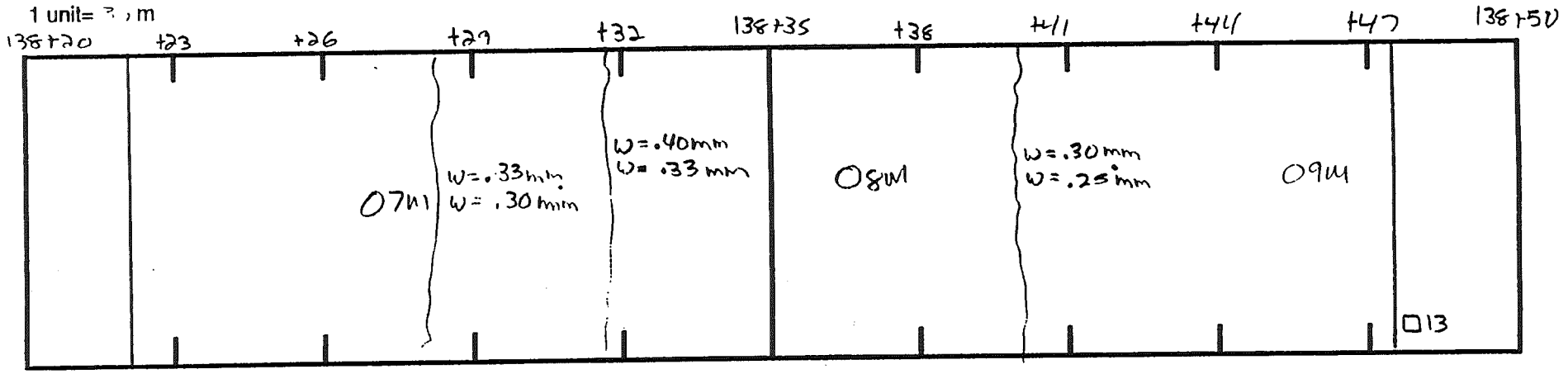
Direction: EBOL
1 unit= 3 m

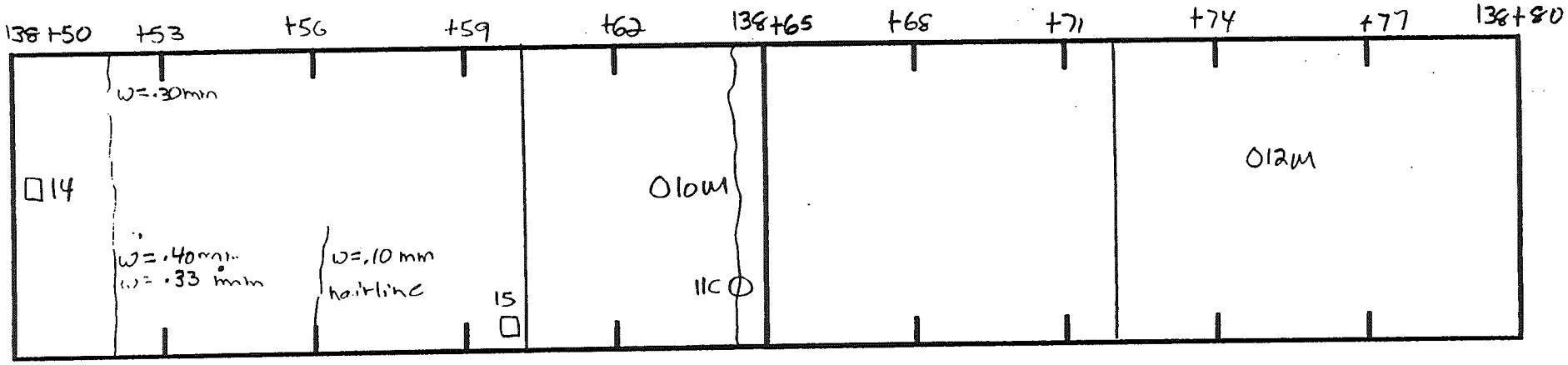




Project #19043-02234A Survey Date: 8-15-96 Beginning Station: 138+20M Weather:
Surveyed By: ET End Station: 138+80 m Comments:

Direction: EBOL
1 unit= 3 m



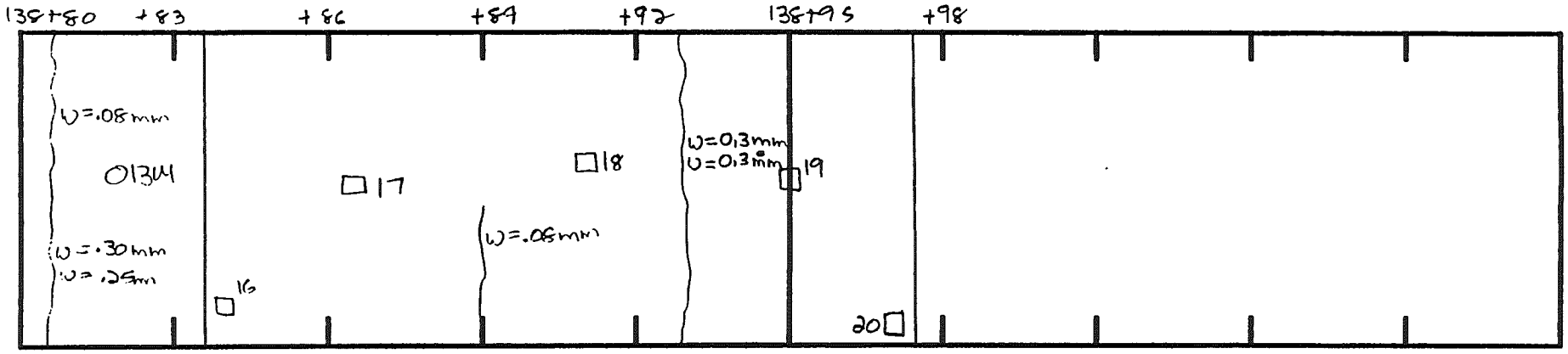


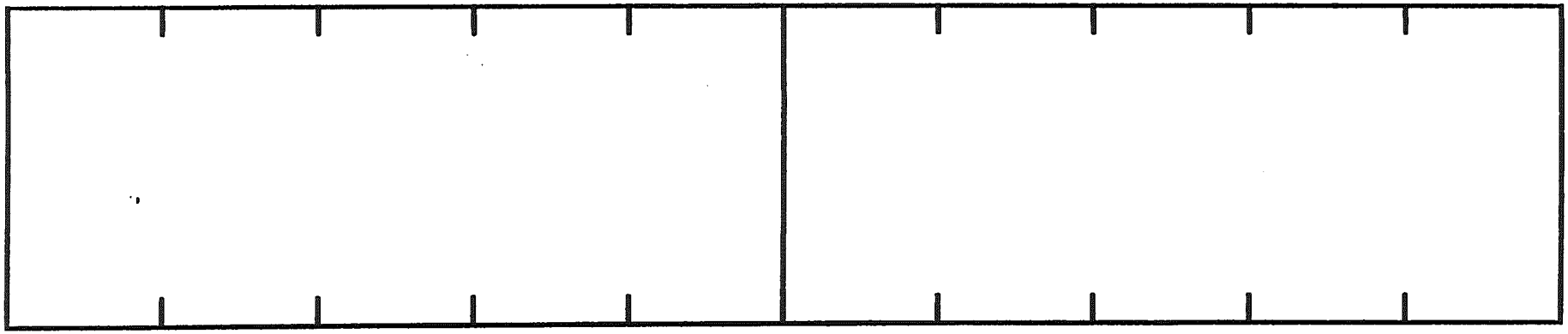
Project # 19043-02234/A **Survey Date:** 8-15-96 **Beginning Station:** 138+80 m **Weather:**

Surveyed By: EJ **End Station:** 138+97 m **Comments:**

Direction: EBOL

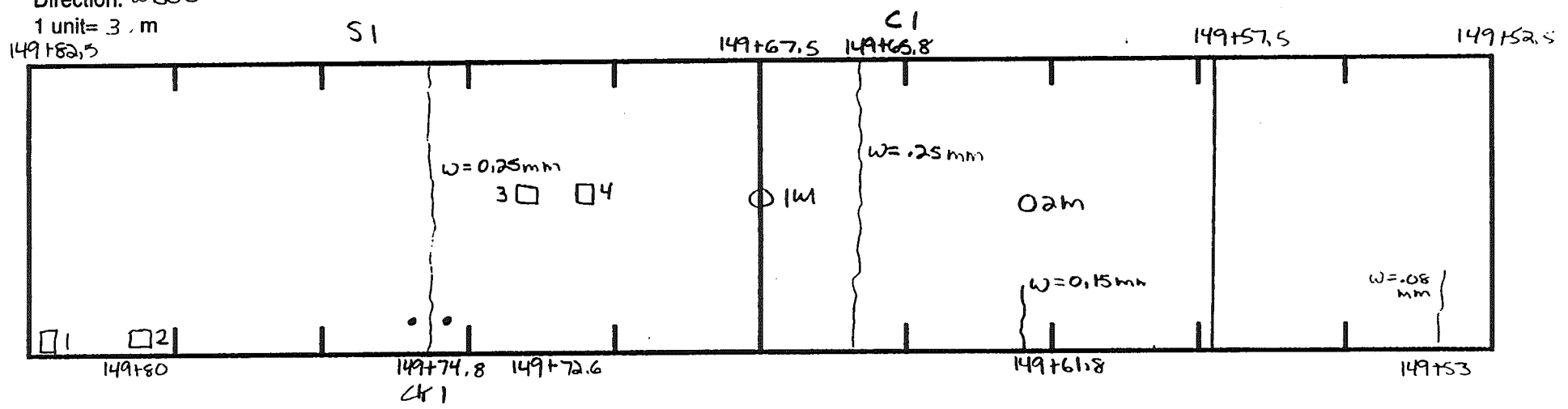
1 unit= 3 m

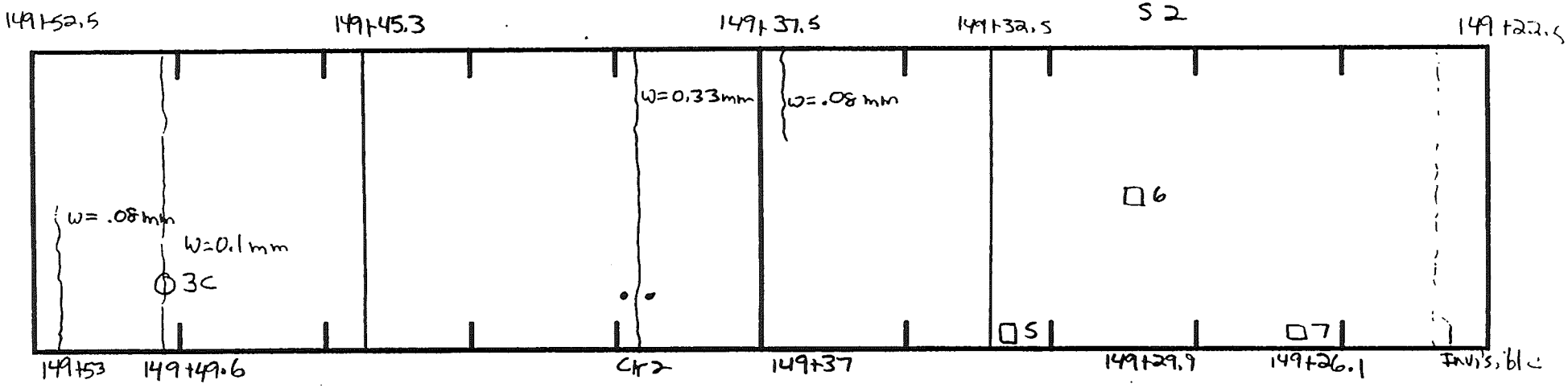




Project # 9013-02234A Survey Date: 10-3-96 Beginning Station: 149+82.5 m Weather: cold (subzero), sunny morning, partly cloudy during daytime.
Surveyed By: EJ End Station: 149+22.5 m Comments:

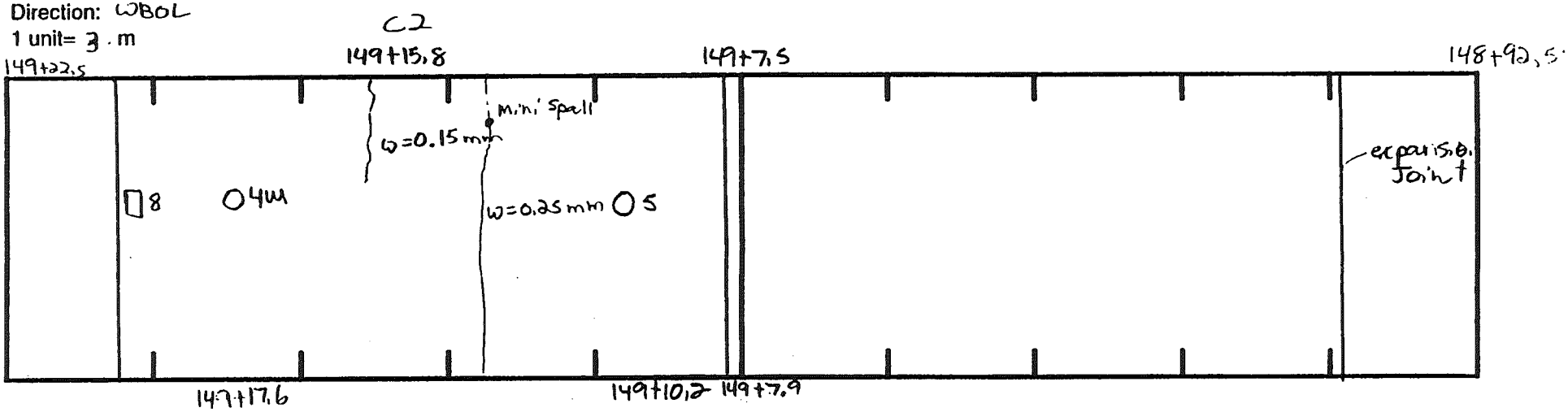
Direction: WBOL
1 unit= 3 . m

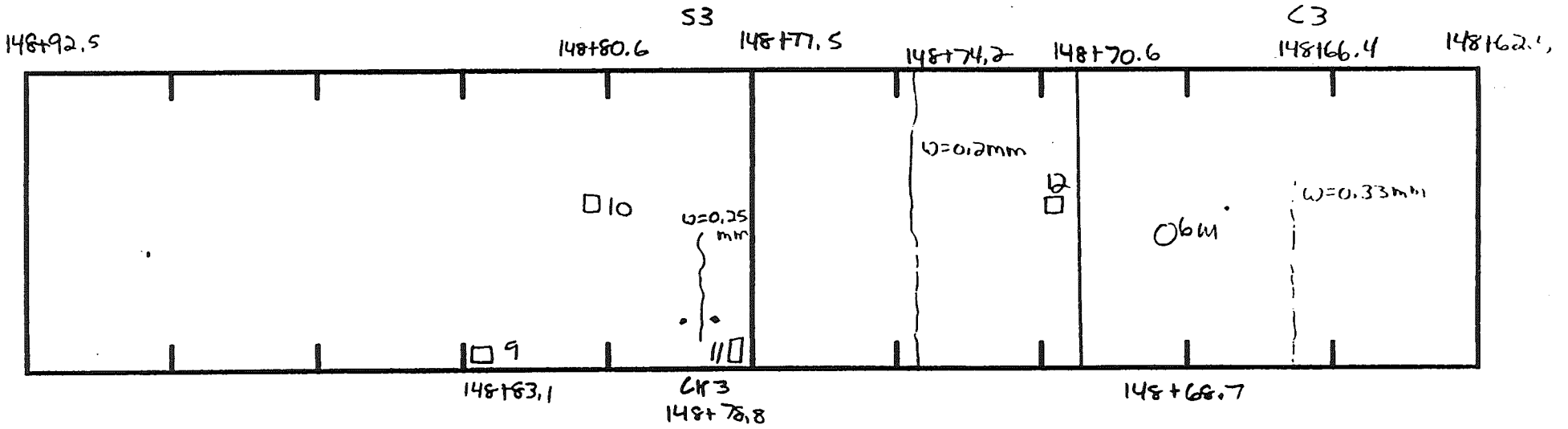




Project # M073-02234A Survey Date: 10-3-96 Beginning Station: 149+22.5m Weather: Same as previous sheet
Surveyed By: EJ End Station: 148+62.5 m Comments:

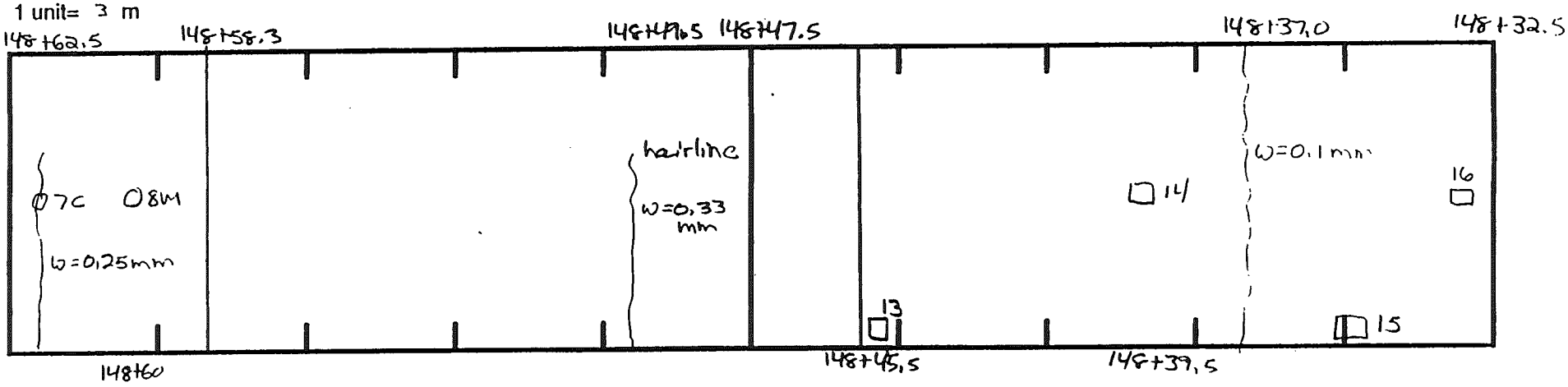
Direction: WBOL
1 unit= 3 . m

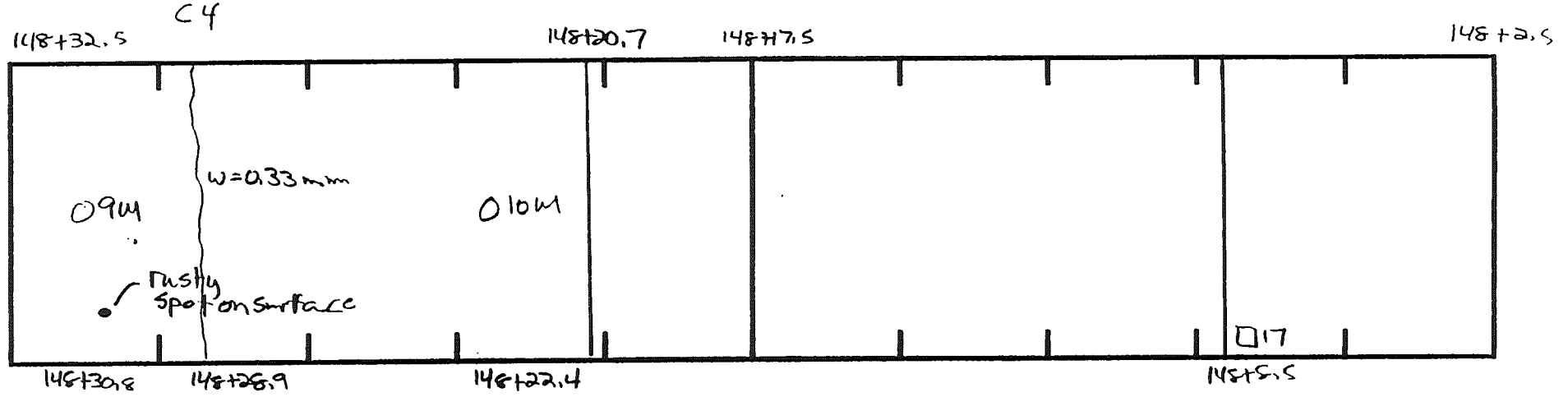




Project # 19043-022314A Survey Date: 10-3-96 Beginning Station: 148+62.5 m Weather: Same as first Shot
Surveyed By: EJ End Station: 148+2.5 m Comments:

Direction: WBOL
1 unit= 3 m



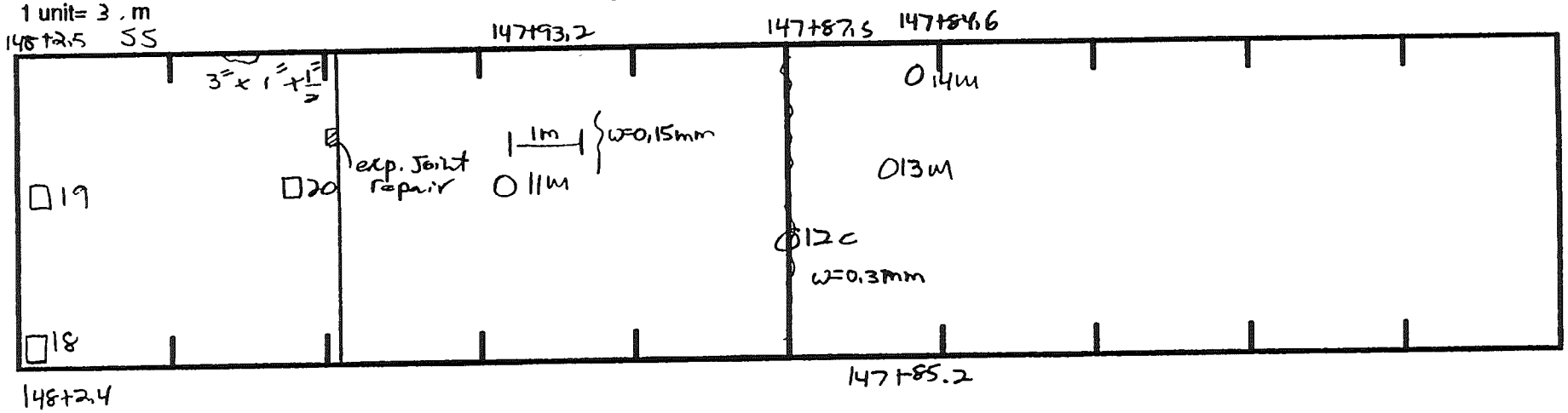


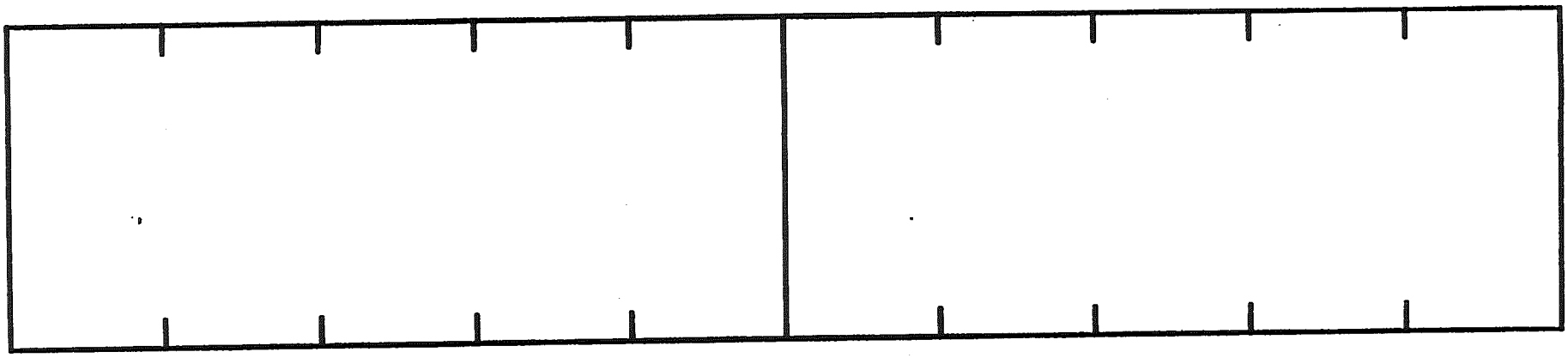
Project # 19043-02234A Survey Date: 10-3-96 Beginning Station: 148+2.5 Weather: Same as first sheet
Surveyed By: EJ End Station: 147+83.7 Comments:

Direction: WBOL

1 unit= 3 . m

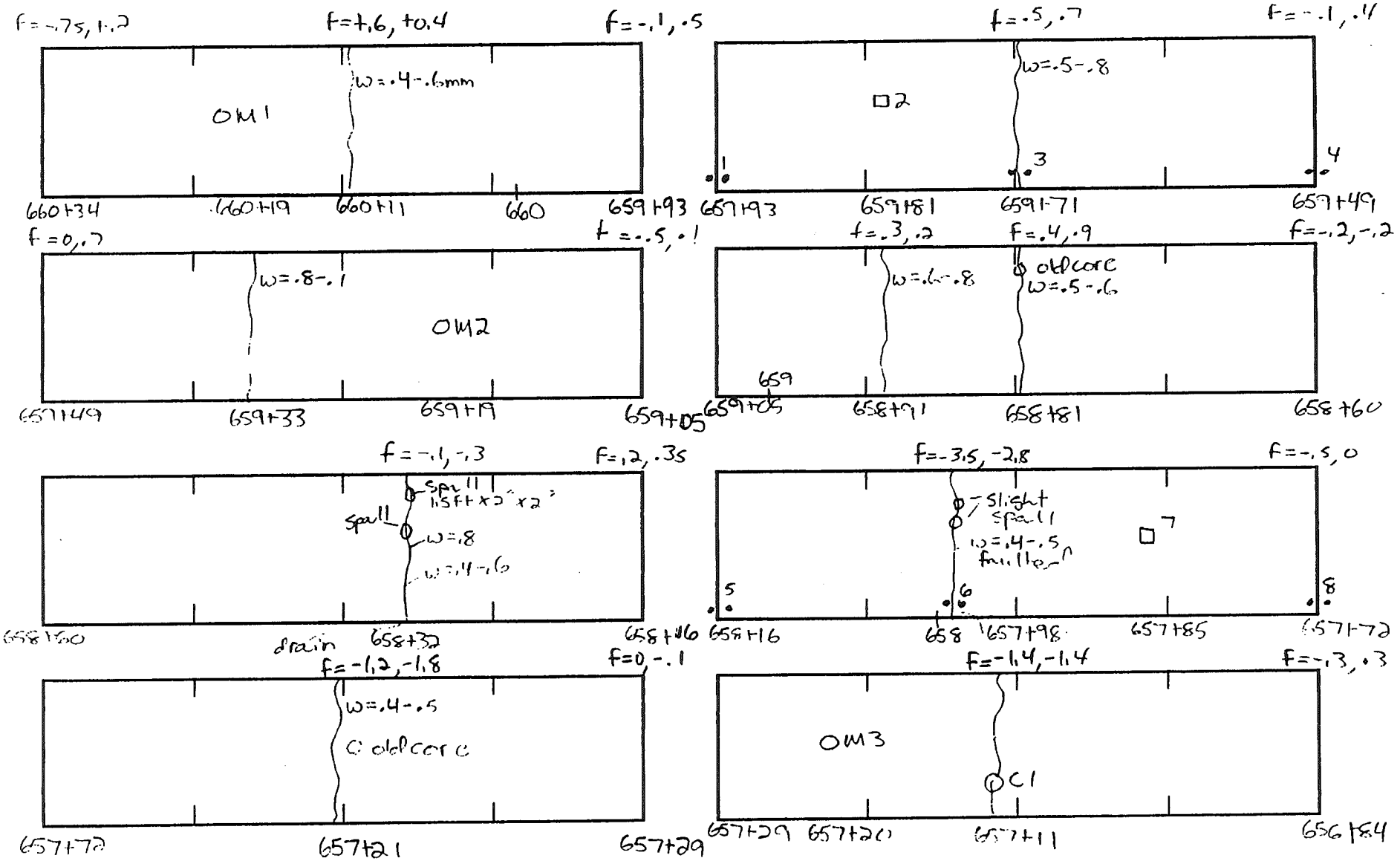
C5





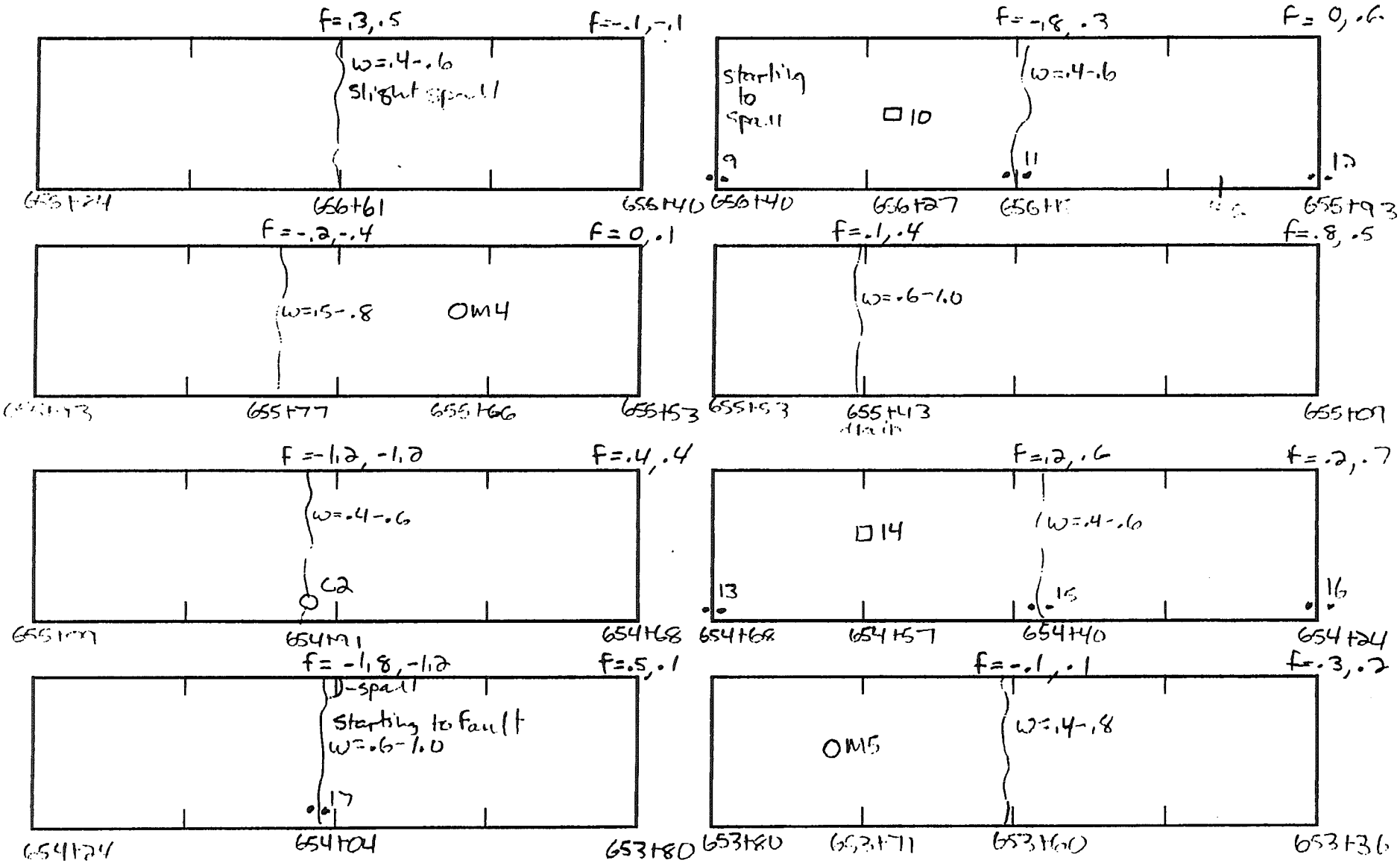
Project # 25132-(665821) Date 6-26-97 JS 44ft POB 660+30

Direction SB By AD Slab 9 in POE 649+97



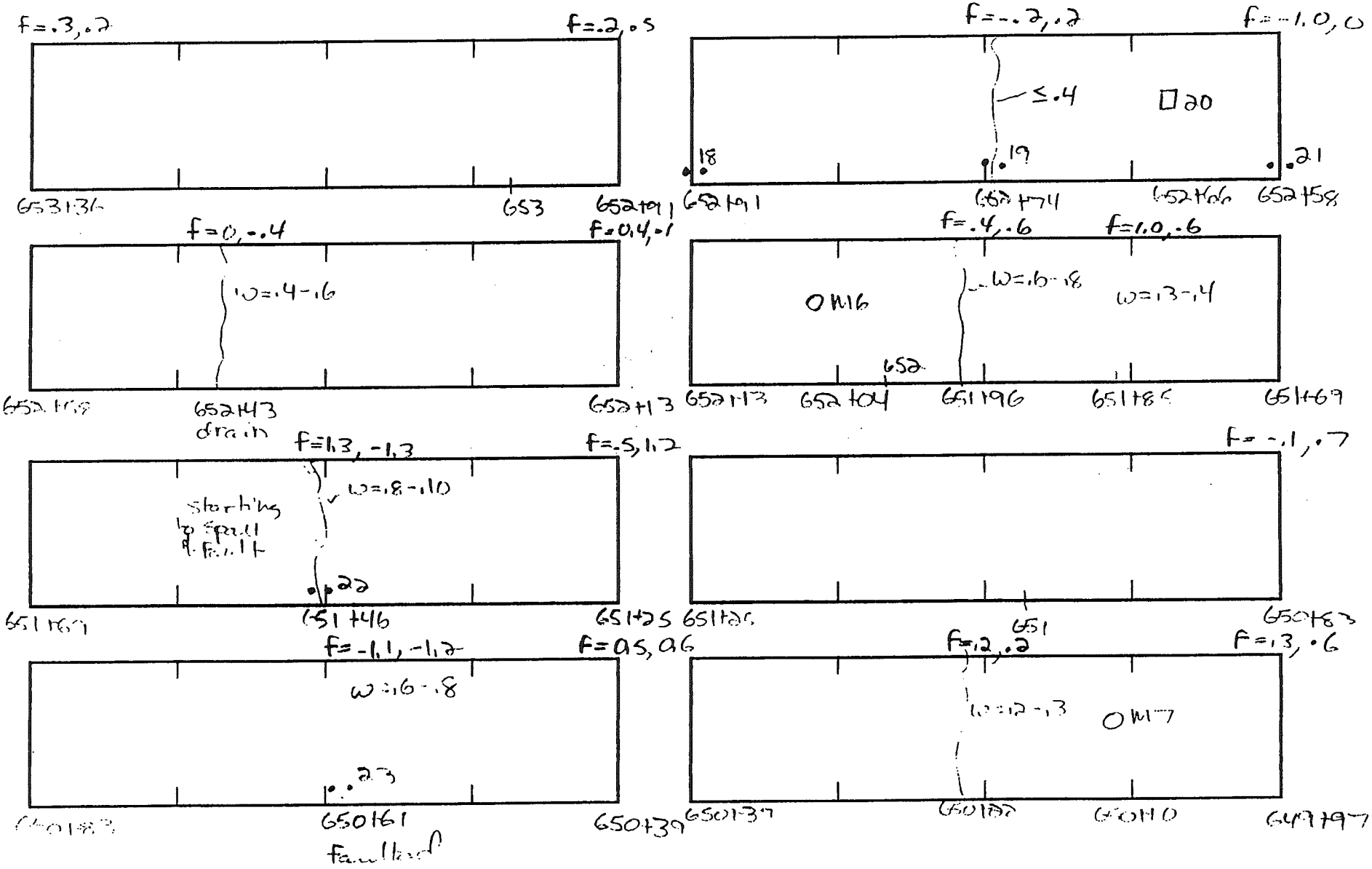
Project # 25132-0582A Date 6-26-97 JS 44ft, 12ft Truck lane, 10ft shoulder POB 660+30

Direction SB By AD Slab 9in POE 649+97



Project # 25132-006582A1 Date 6-26-97 JS 44ft POB 660+30

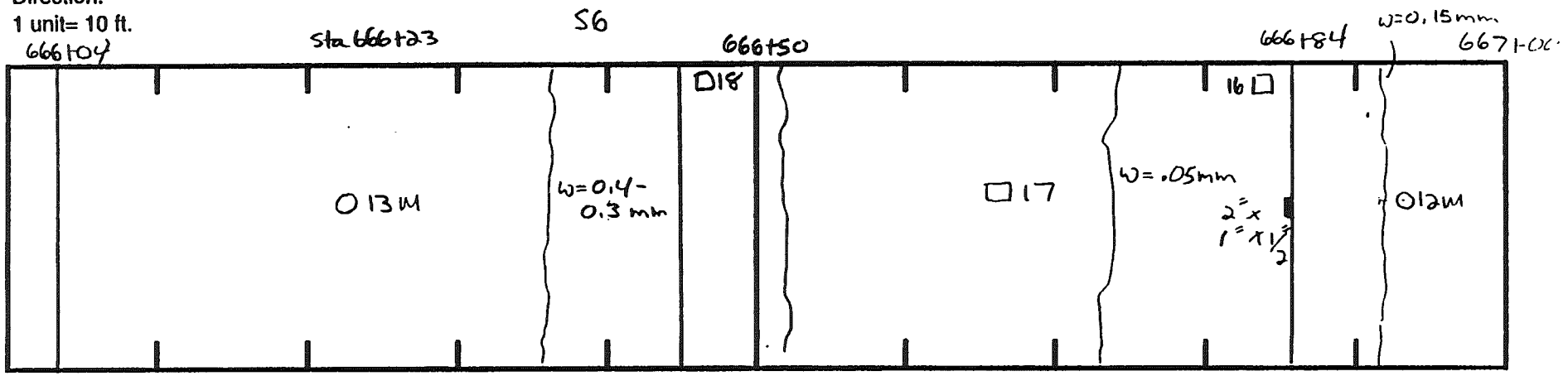
Direction SB By AD Slab 9.5" POE 649+97

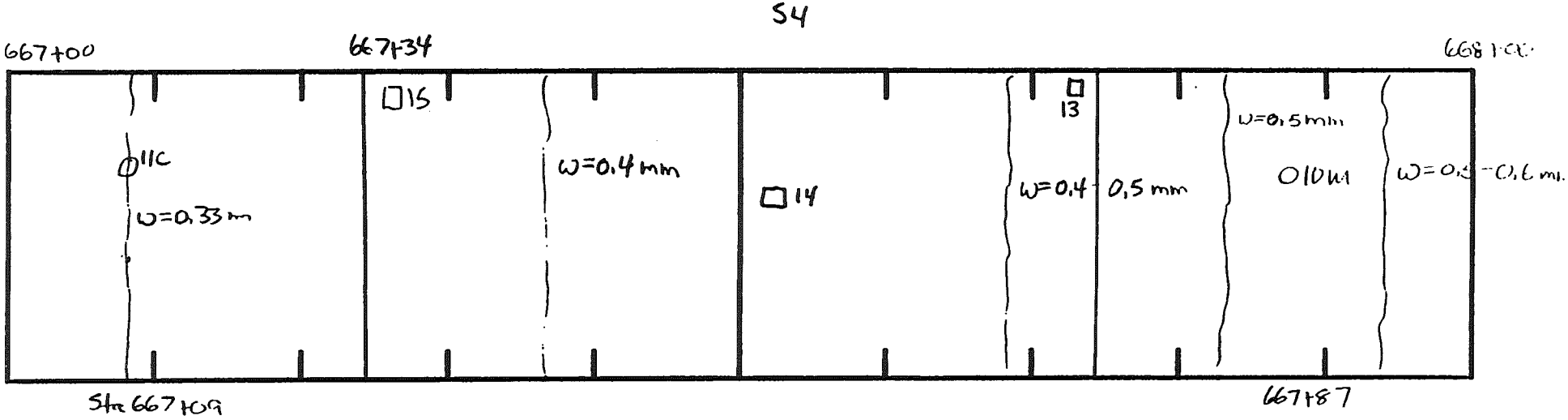


C-37

Project # 40444-1884A Survey Date: 7-24-96 Beginning Station: 666+04 Weather:
Surveyed By: EJ End Station: 668+00 Comments:

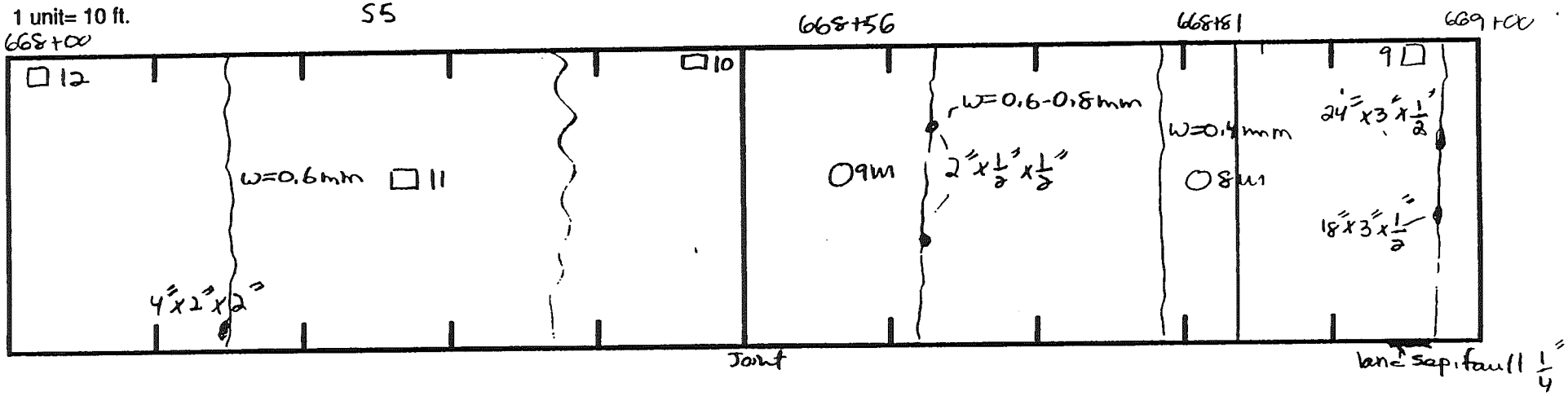
Direction: W30L
1 unit= 10 ft.

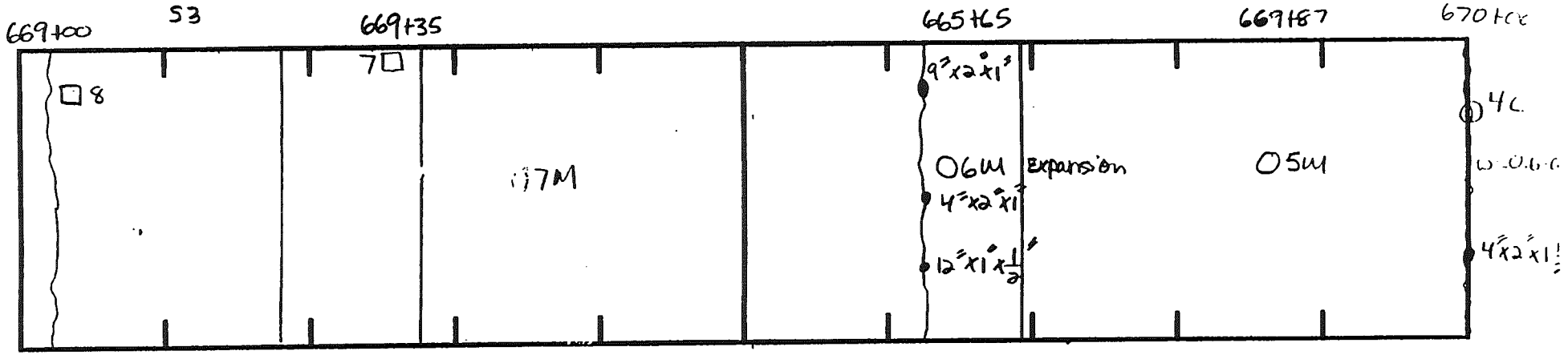




Project # 40444-1880KA
Survey Date: 7-24-96
Surveyed By: EJ
Beginning Station: 668+00
End Station: 670+00
Weather:
Comments:

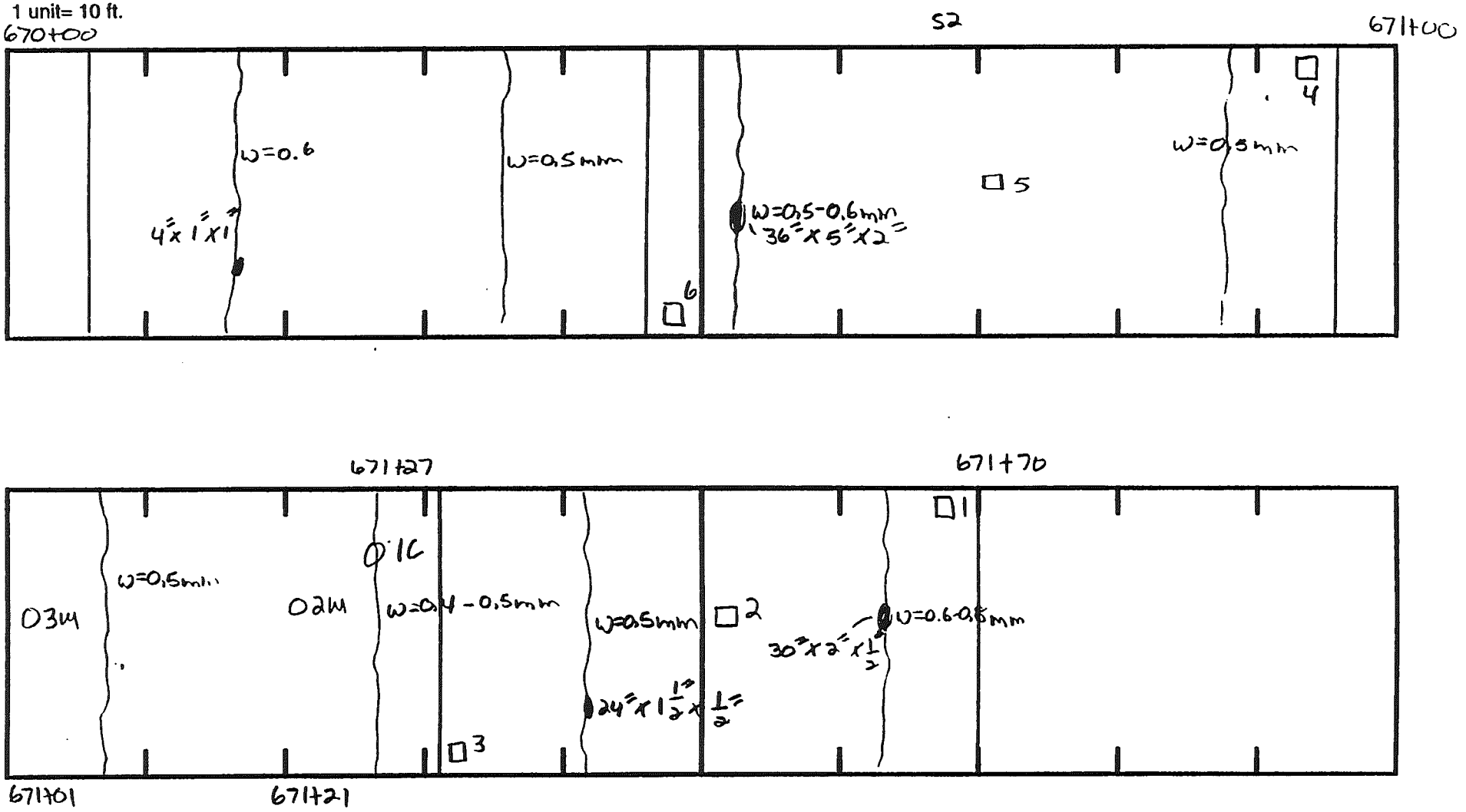
Direction: WBOL
1 unit= 10 ft.





Project # 40444-1880HA **Survey Date:** 7-24-96 **Beginning Station:** 670+00 **Weather:**
Surveyed By: EJ **End Station:** 671+70 **Comments:**

Direction: WBOL
1 unit= 10 ft.



Section
3G slag

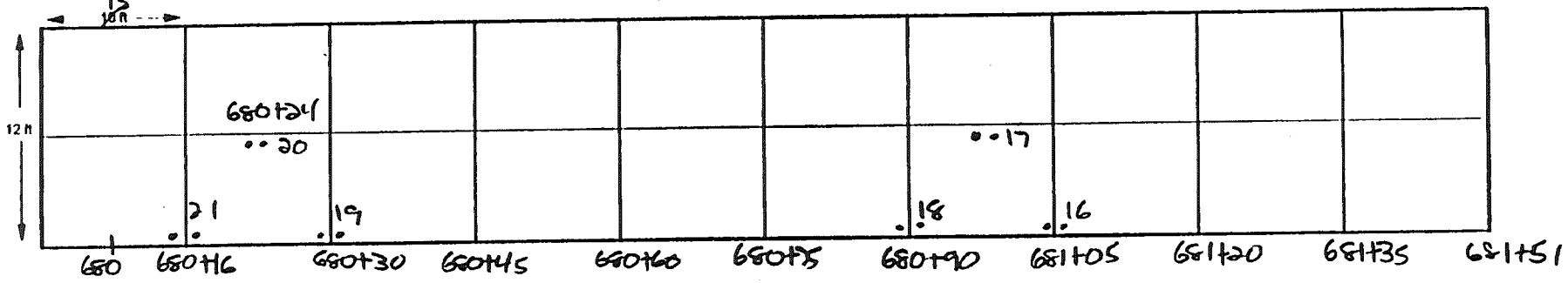
I-96 Howell

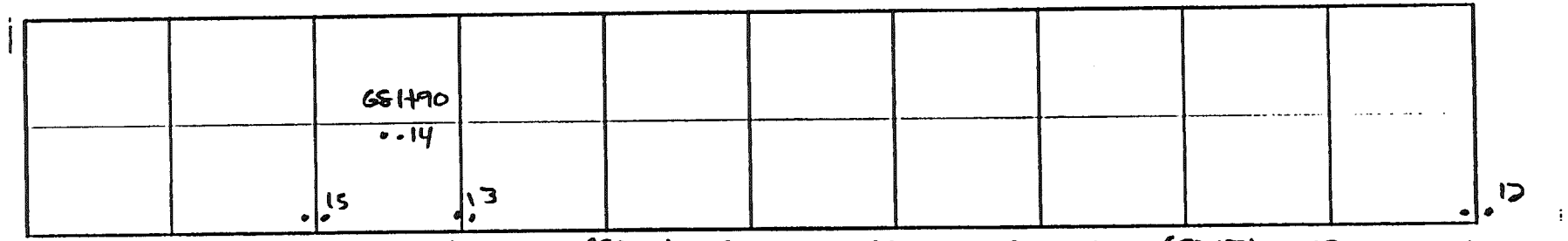
Project # 47065-28215A Direction WB

Survey Date 6-2-97
Surveyed By AD

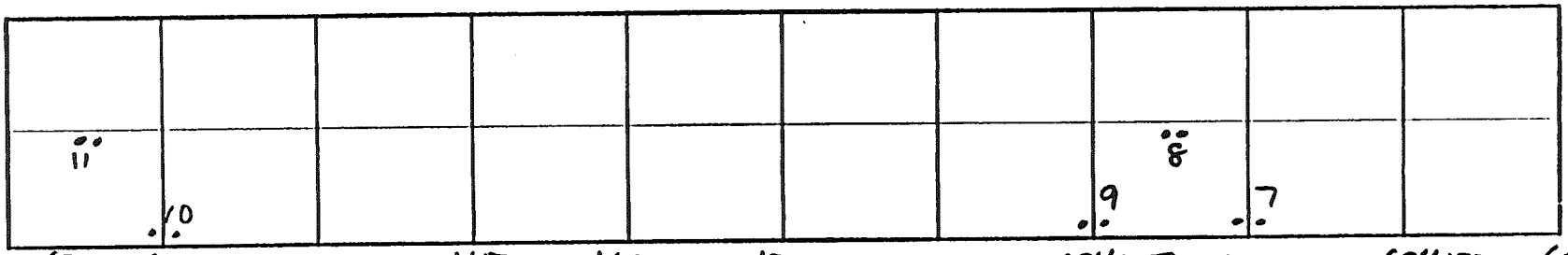
Geometry 15 ft JS
Slab Thickness 10"

Beginning Station 680+60
Ending Station 686+20





* data logger



Data logging station

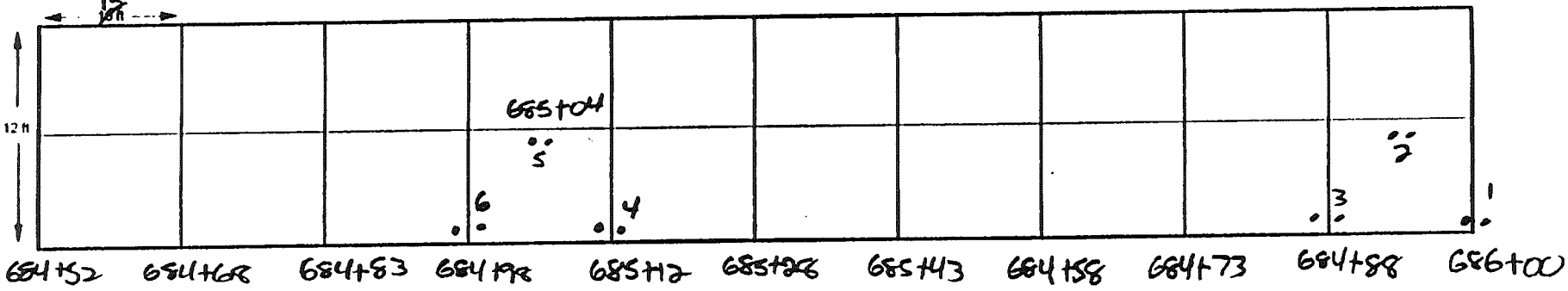
I-96 Howell

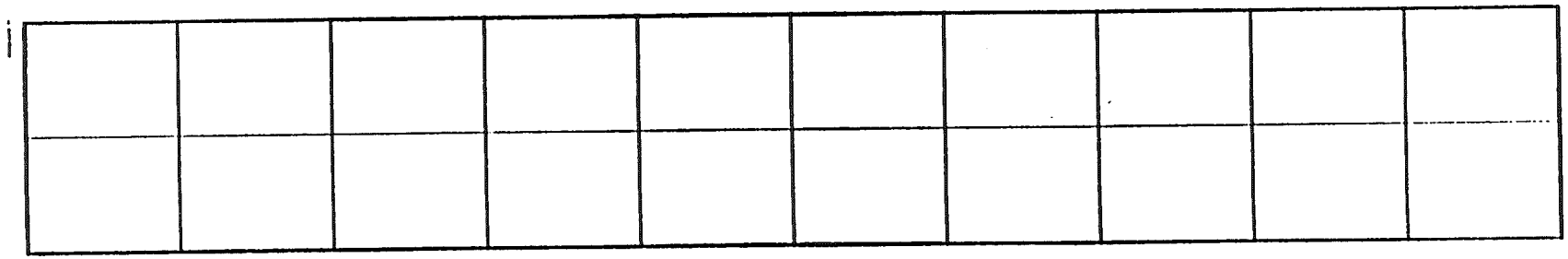
Project # 47066-2821SA Direction WB

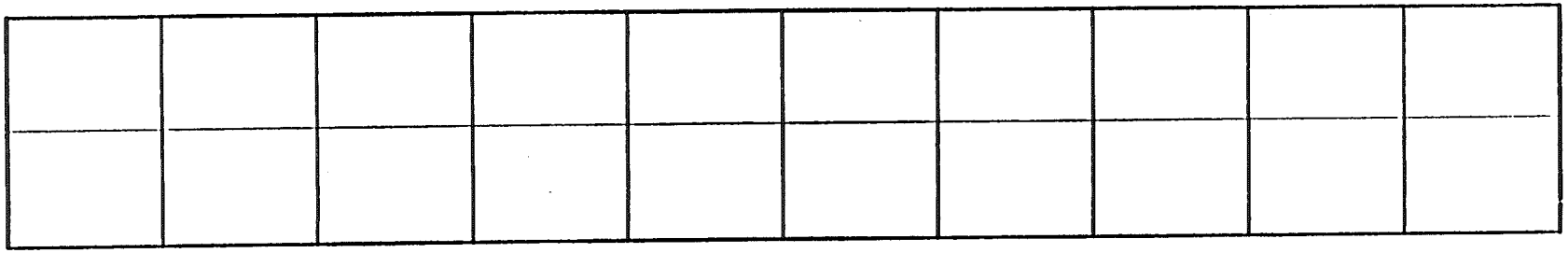
Survey Date 6-2-97
Surveyed By AD

Geometry 15 ft JS
Slab Thickness 10"

Beginning Station 680+00
Ending Station 686+00



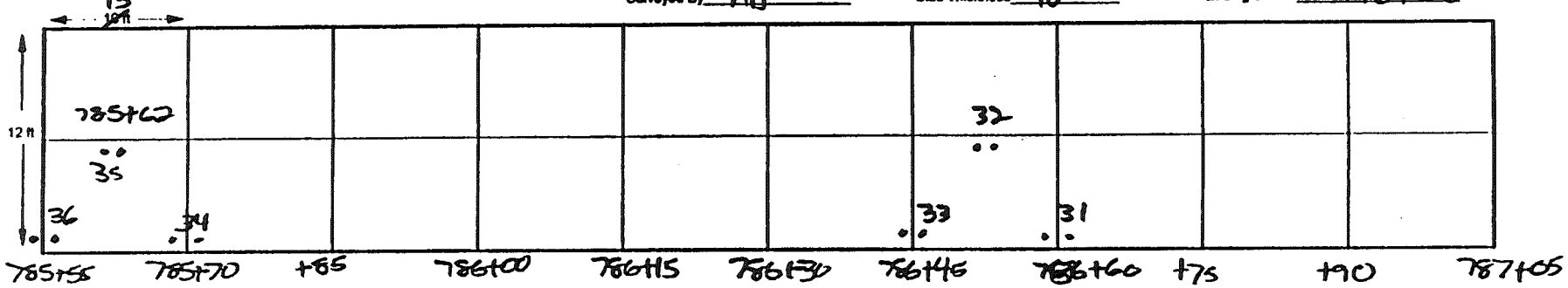


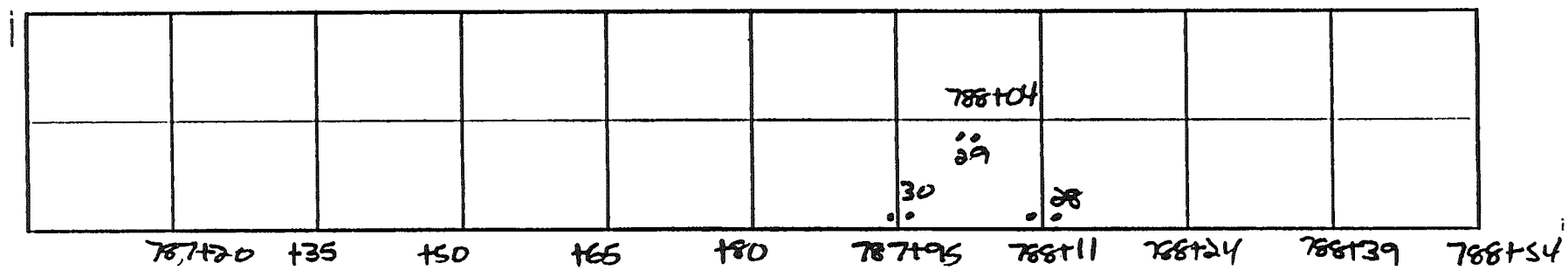


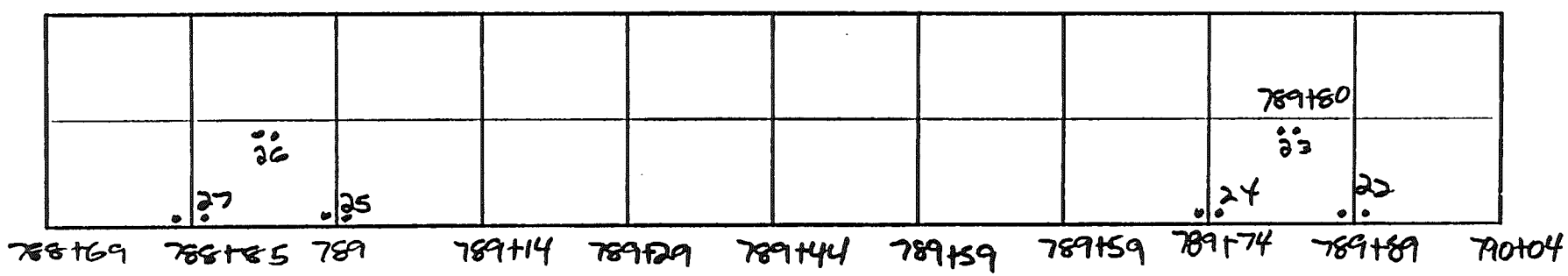
350 AA Limestone

I-96 Howell

Project # 47065-28215A Direction WB Survey Date 6-3-97 Surveyed By AD Geometry 15 JT Sp Slab Thickness 10" Beginning Station 785+55 Ending Station 796+00

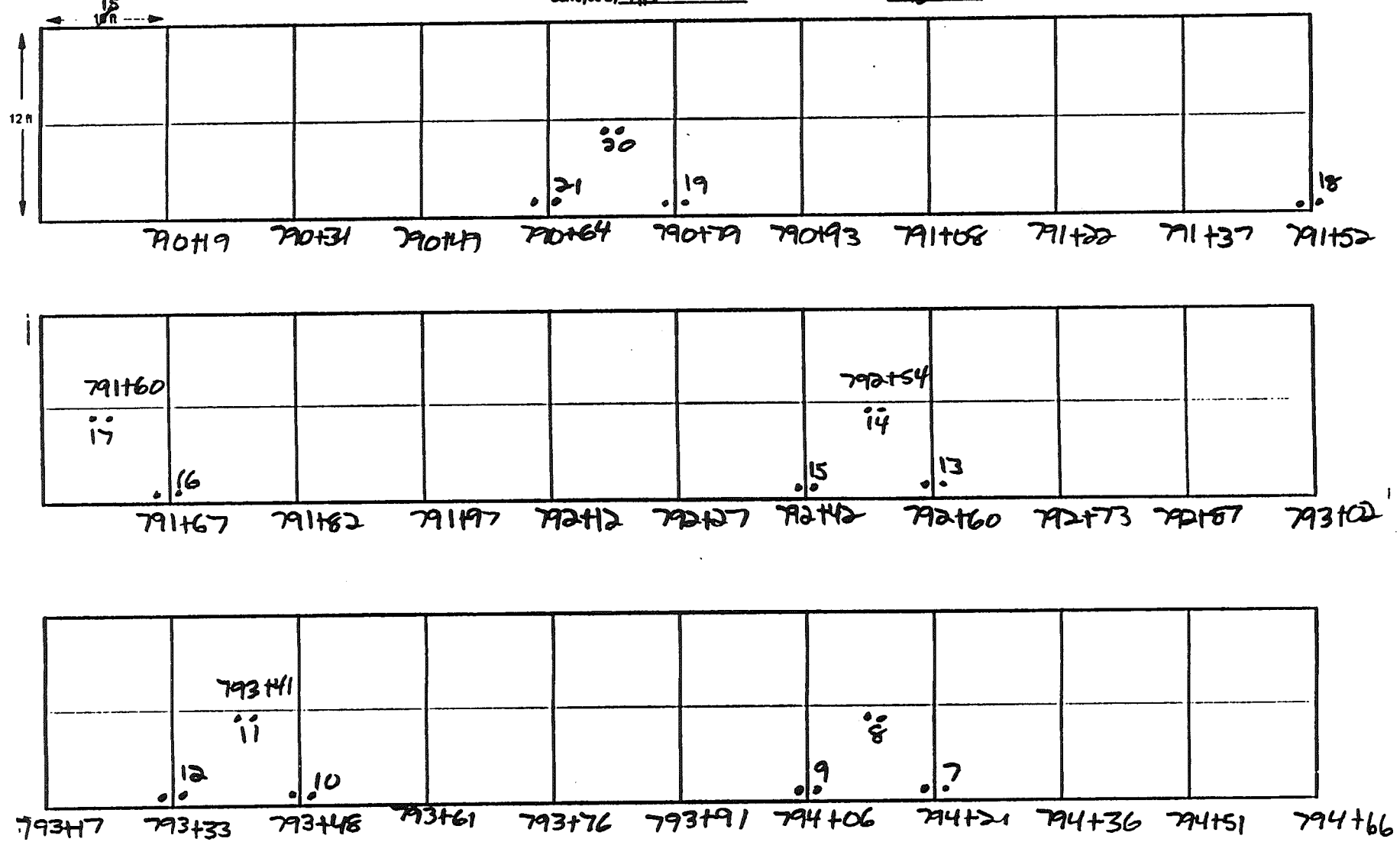






Base: Limestone section

Project # 47065-28215A Direction WB Survey Date 6-3-97 Surveyed By AD Geometry 15ft Sp Slab Thickness 10" Beginning Station 785+55 Ending Station 796+00

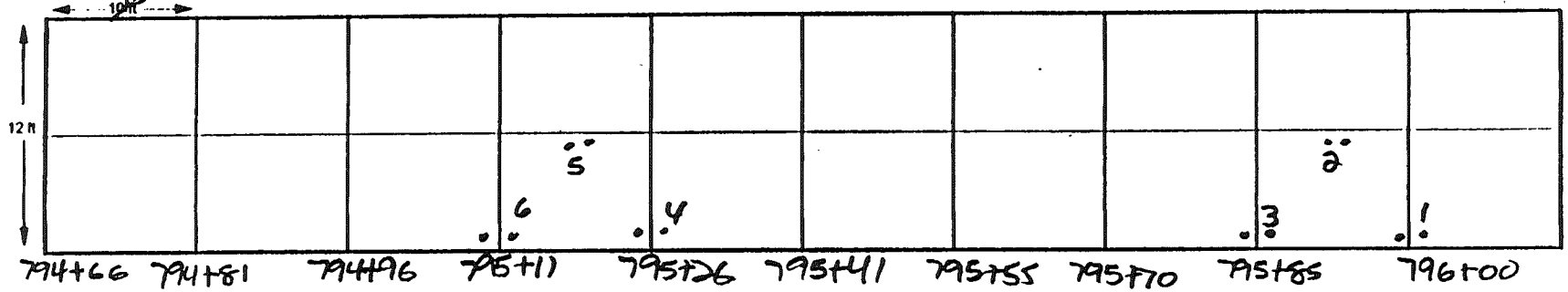


Project # 47065-2821SA Direction WB

Survey Date 6-3-97
Surveyed By AH

Geometry 15ft JS
Slab Thickness 10"

Beginning Station 785+55
Ending Station 796+00



East end of Job
350 AA Slag

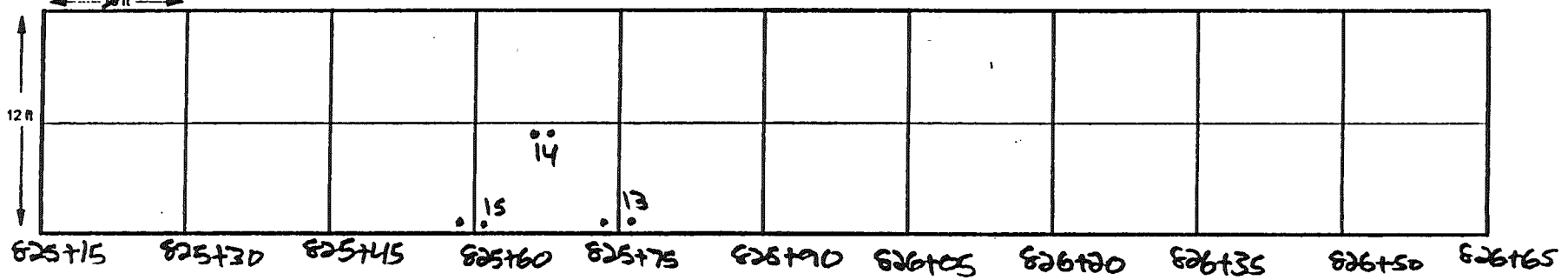
I-96 Howell

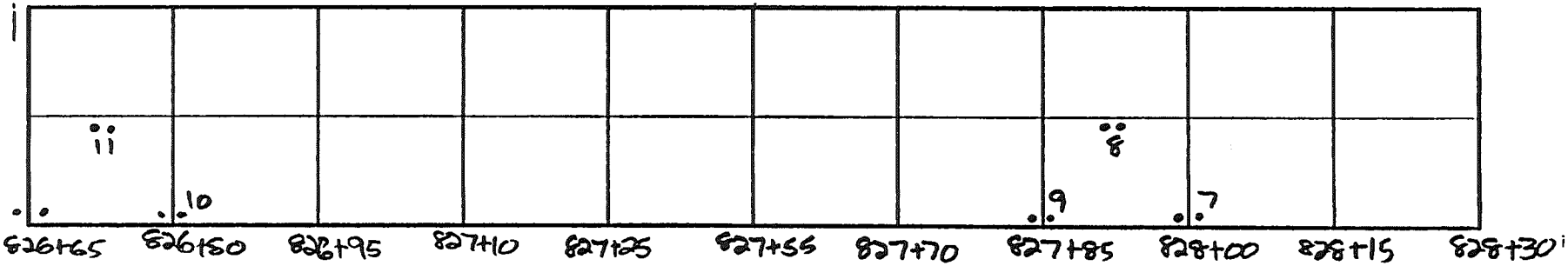
Project # 47065-28215A Direction WB

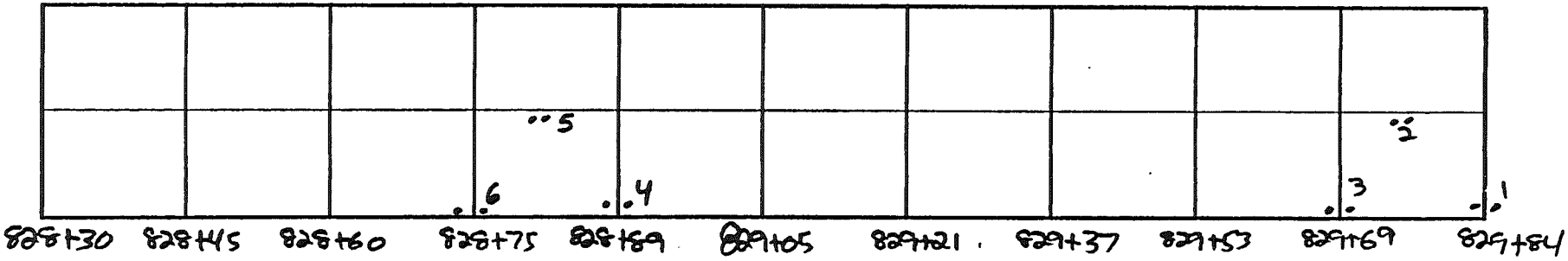
Survey Date 6-2-97
Surveyed By AD

Geometry 15 FT JS
Slab Thickness 10"

Beginning Station 829+84
Ending Station 820+65

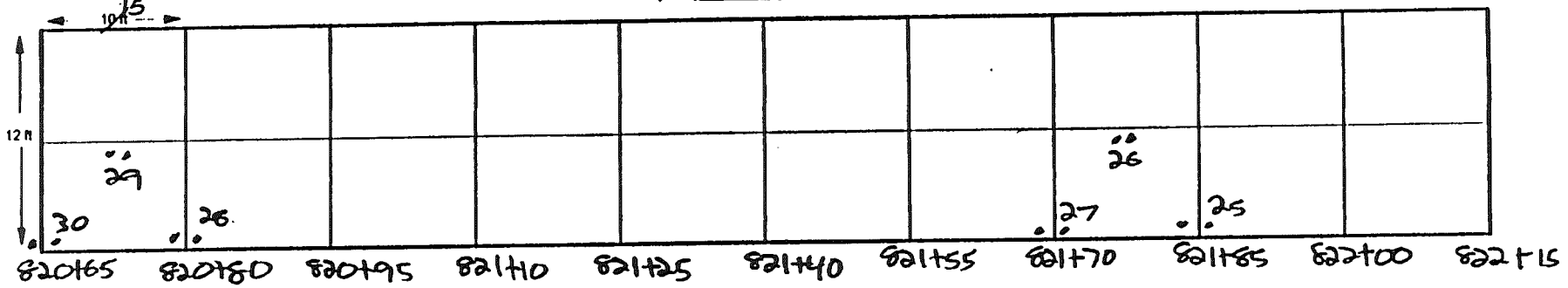


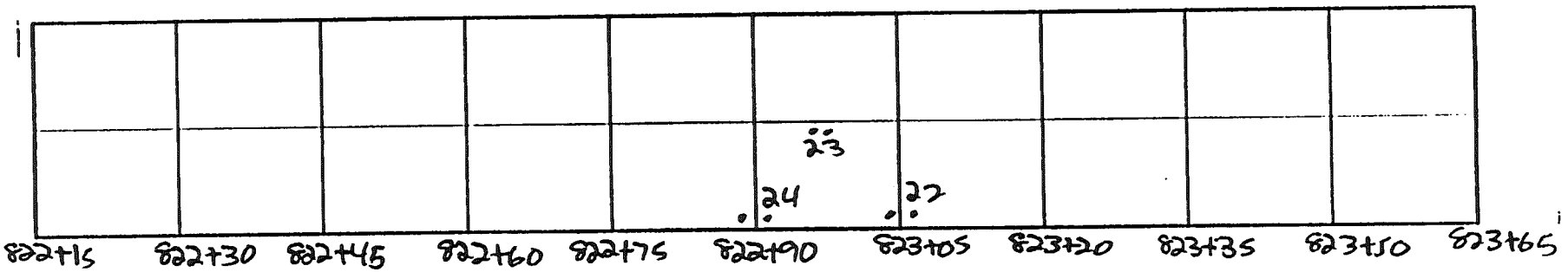


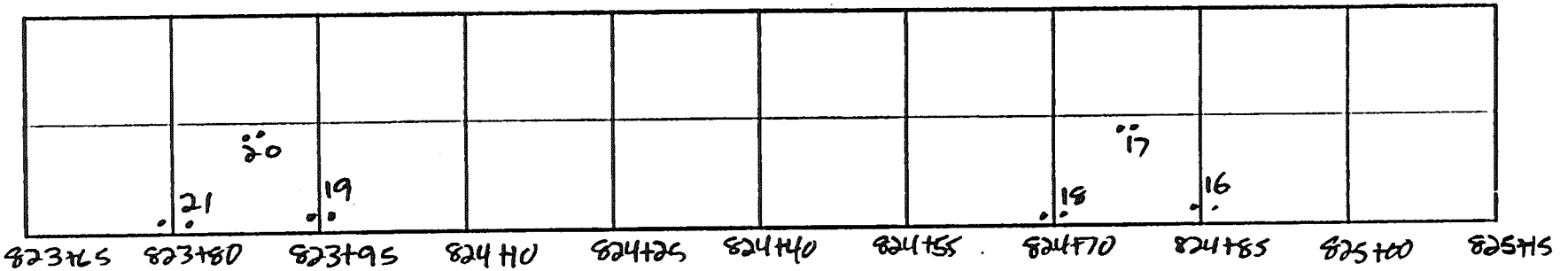


I-96 Howell

Project # 47065-28215A Direction WB Survey Date 6-2-97 Surveyed By AD Geometry 15ft JS Slab Thickness 10" Beginning Station 819+84 Ending Station 820+65



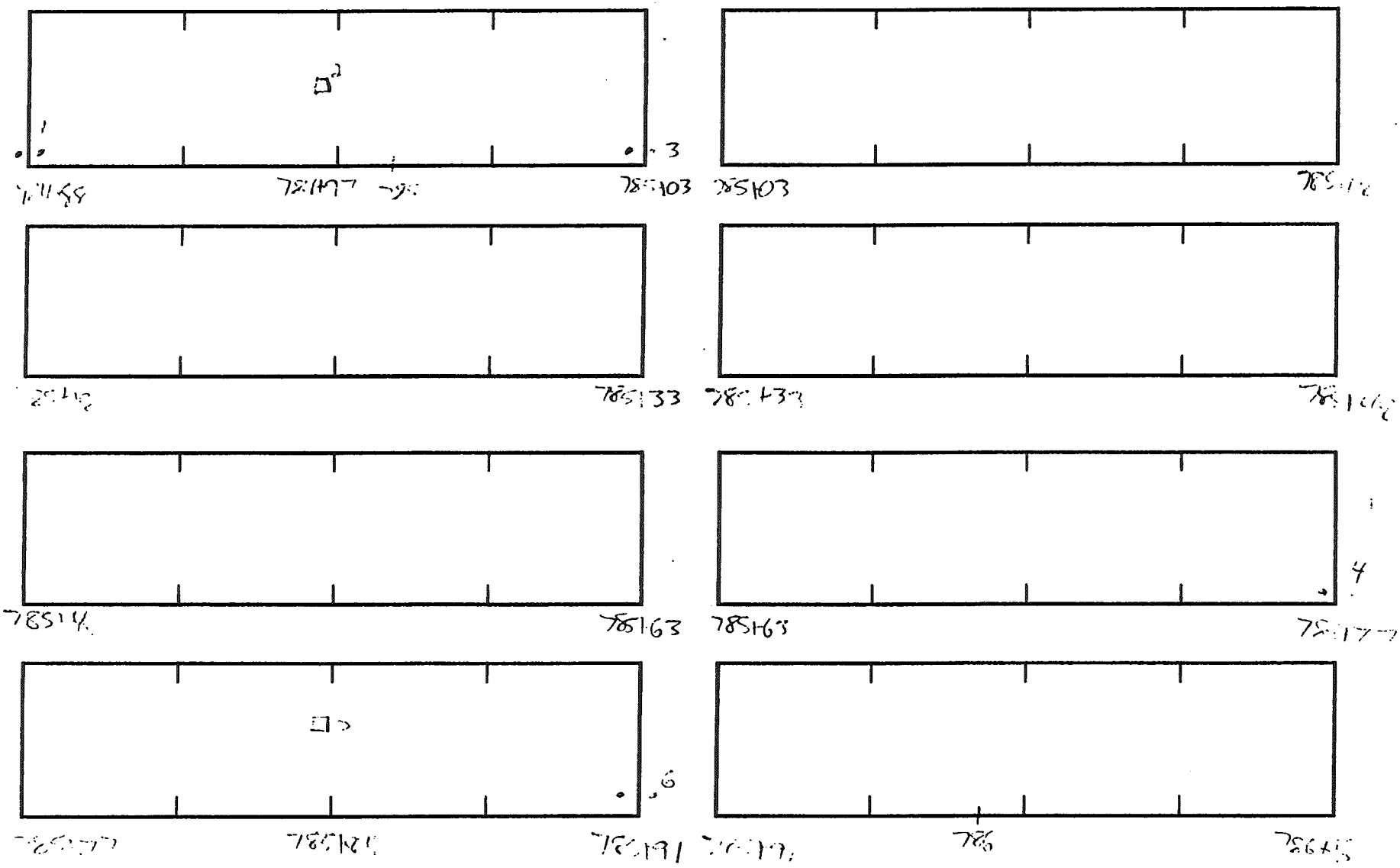




Shoulder and fast 1 -0
36 Limestone section
more fines than 1-94
watertight

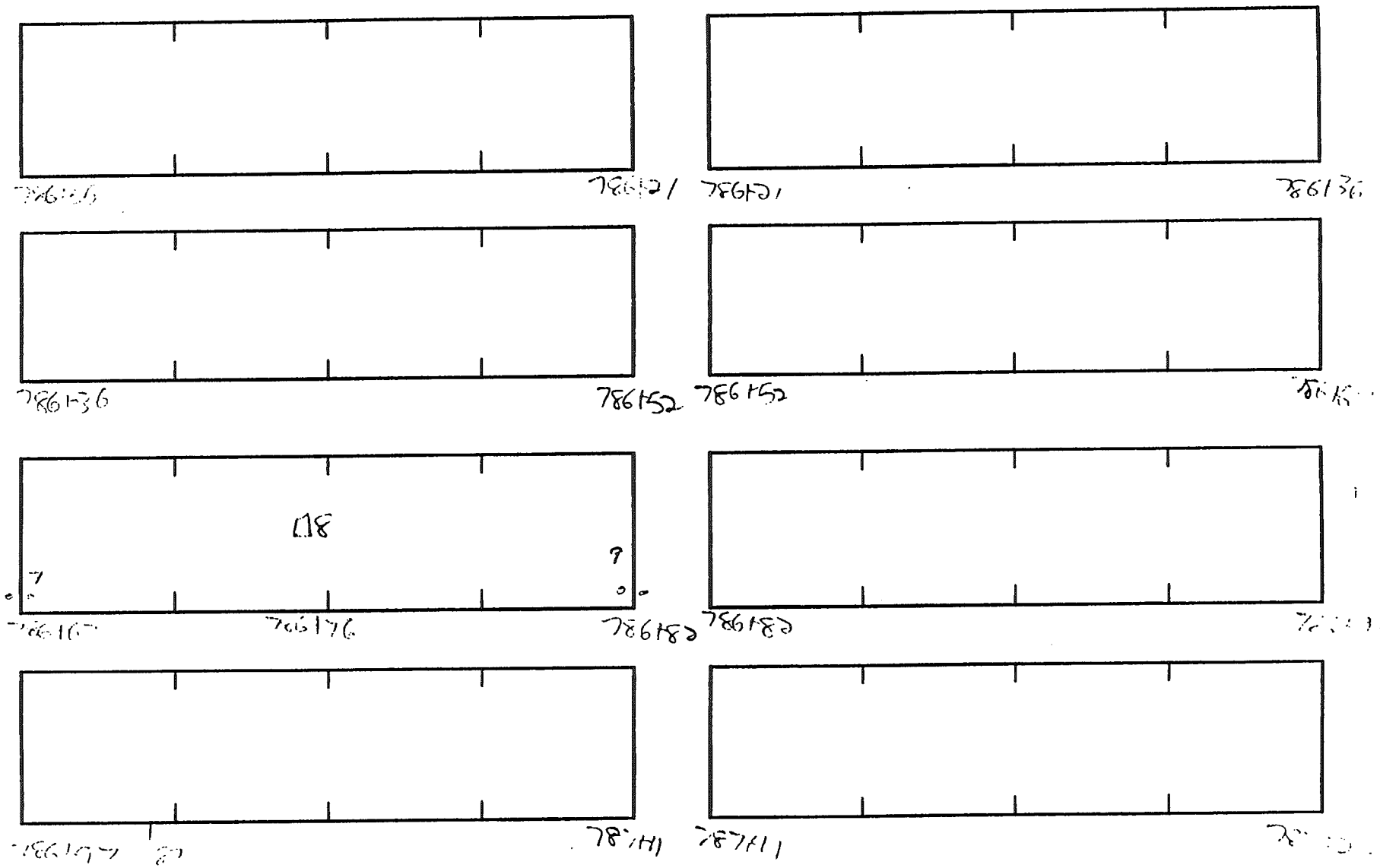
Project # 47065-28215A Date 7-31-97 JS 15 POB [illegible]

Direction EB By AD Slab 10" POE [illegible]



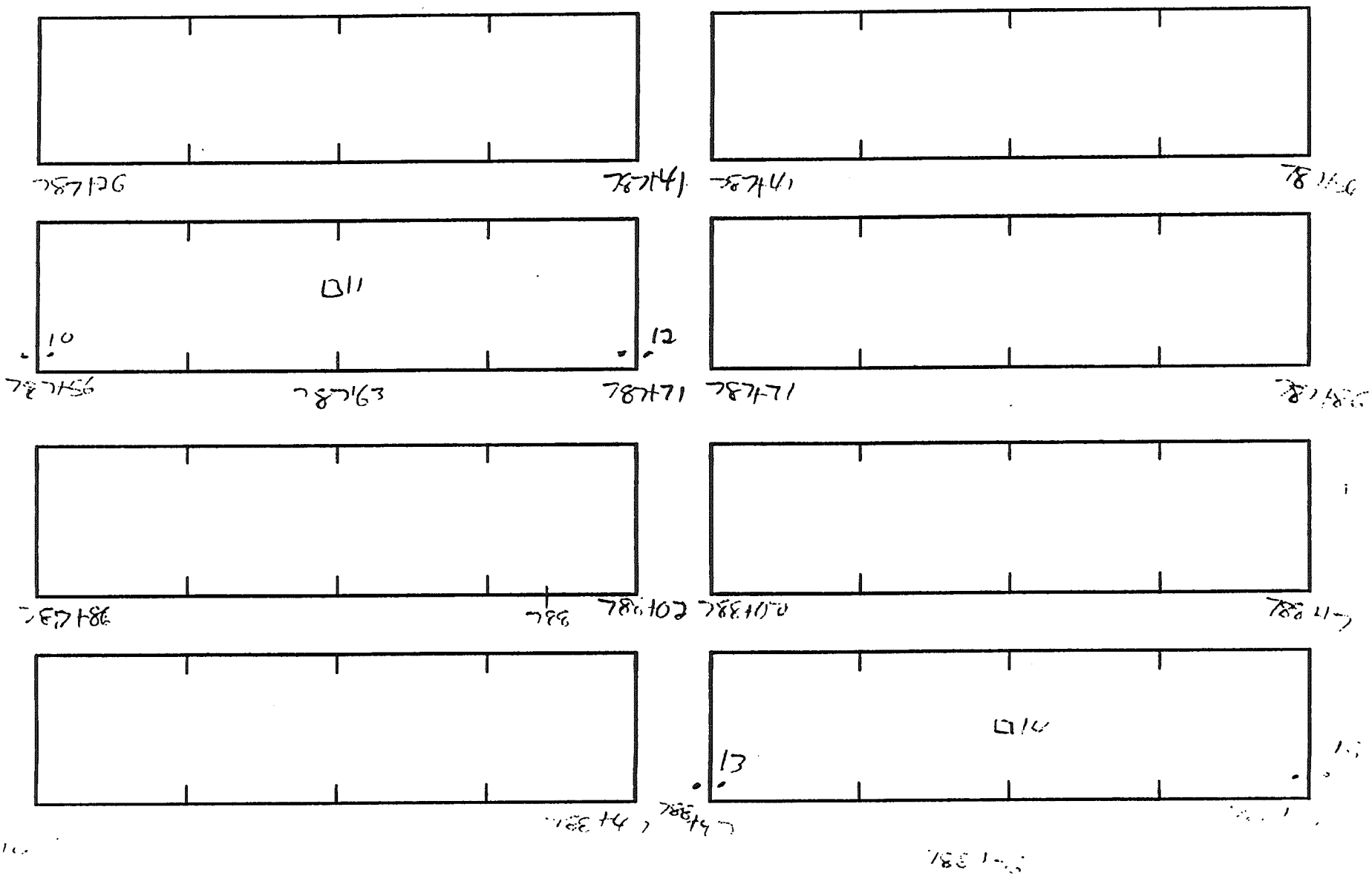
Project # 47066-28215A Date 7-31-97 JS 15 POB 784+58

Direction EB By AD Slab 10" POE 795+07



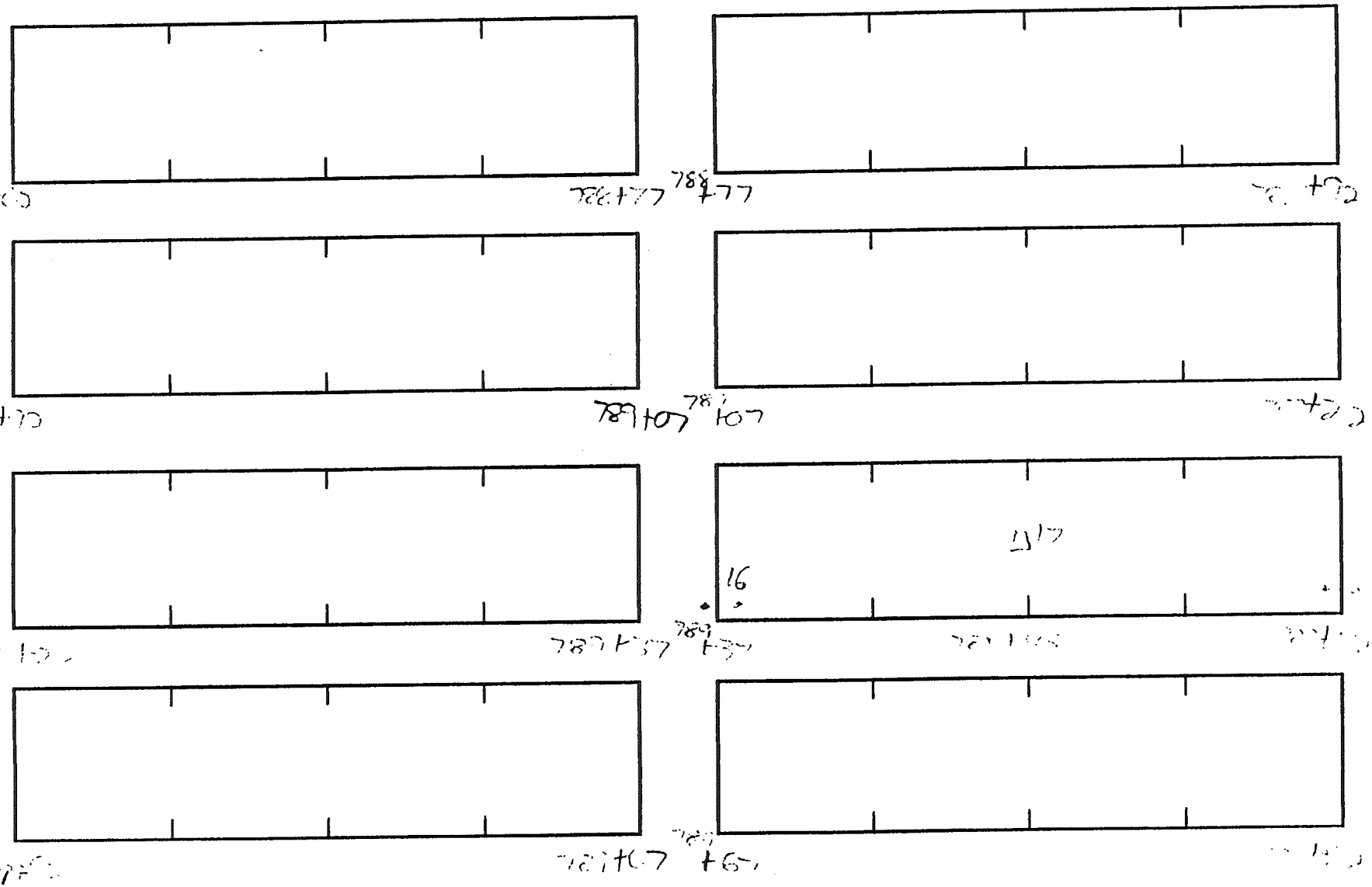
Project # 47065-2815A Date 7-31-97 JS 15 POB 784+88

Direction EB By AD Slab 10" POE 795+07



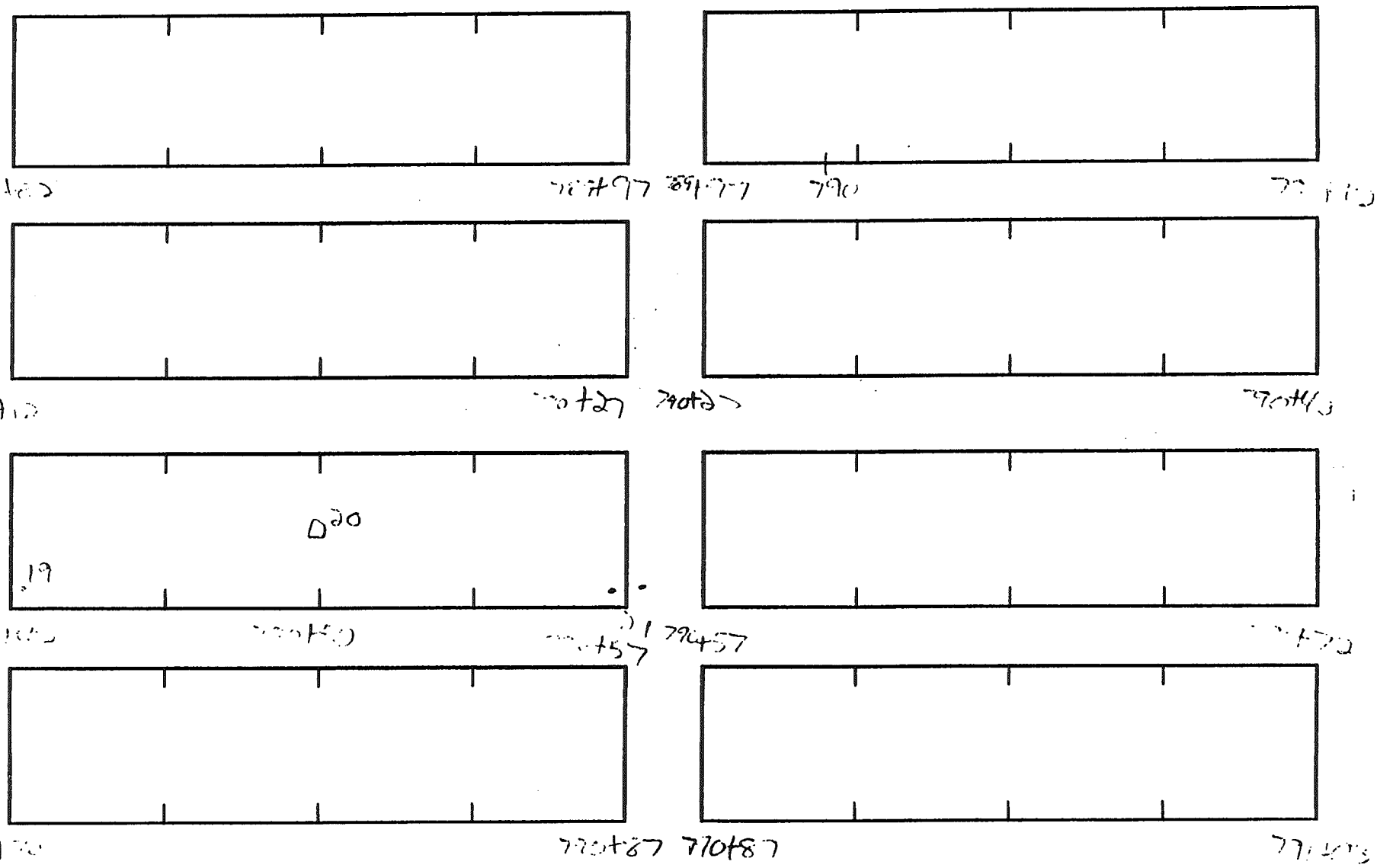
Project # 47065-28215A Date 7-31-97 JS 15 POB 784168

Direction EB By AD Slab 10" POE 795107



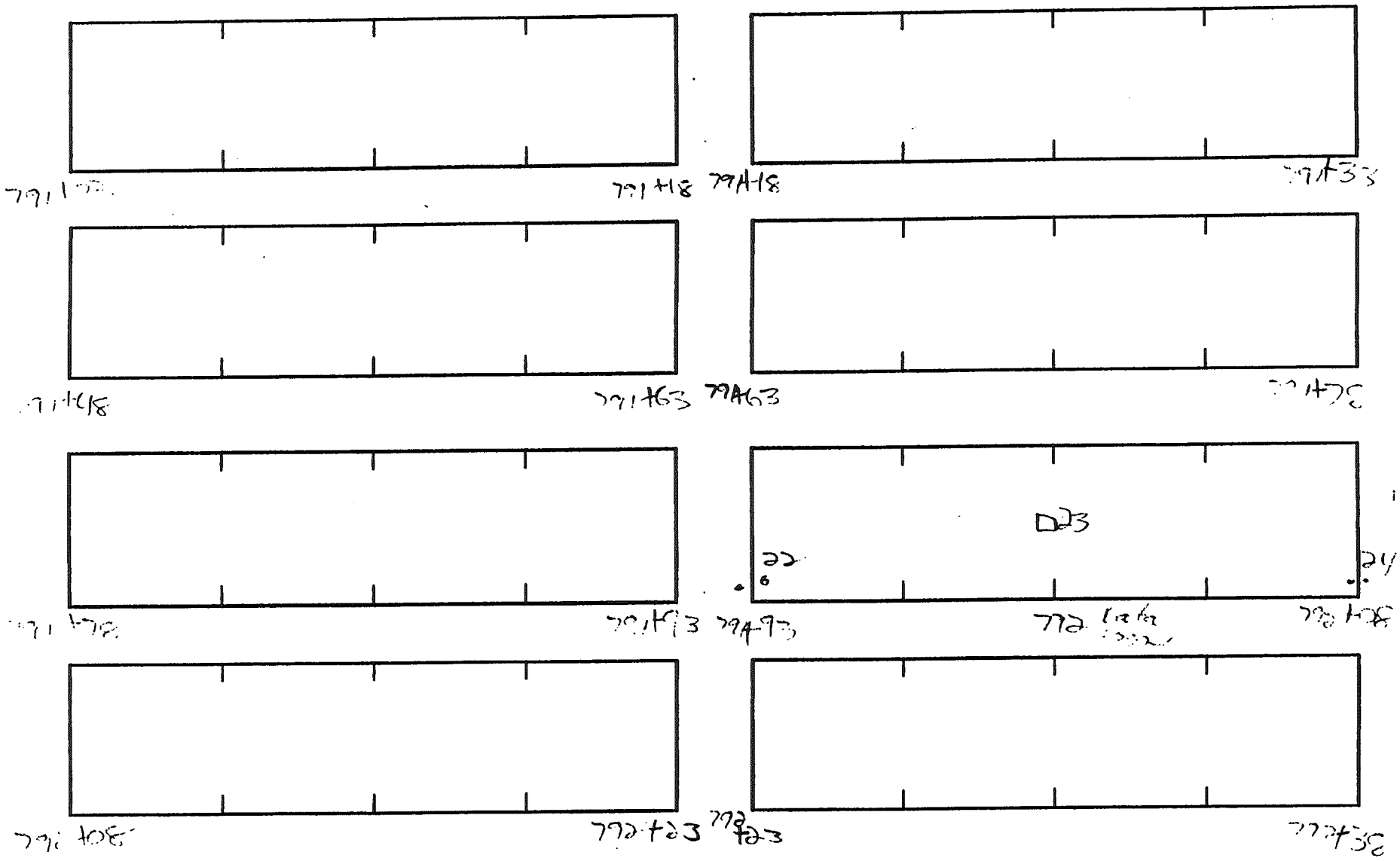
Project # 47065-2821SA Date 7-31-97 JS 15 POB 784+88

Direction EB By AO Slab 10" POE 795+07



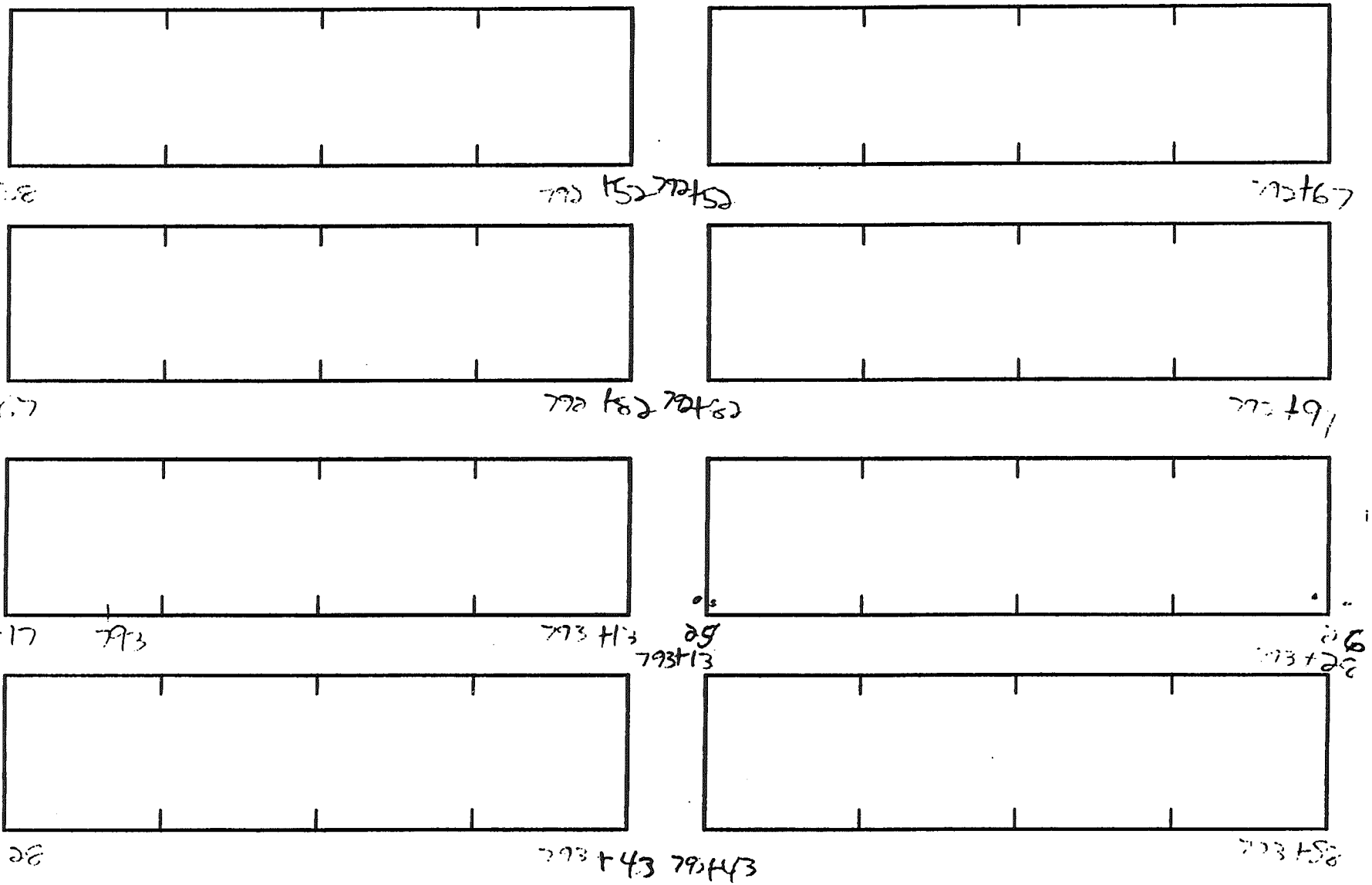
Project # 47066-2615A Date 7-31-97 JS 15 POB 784+88

Direction EB By AD Slab 10" POE 795+07



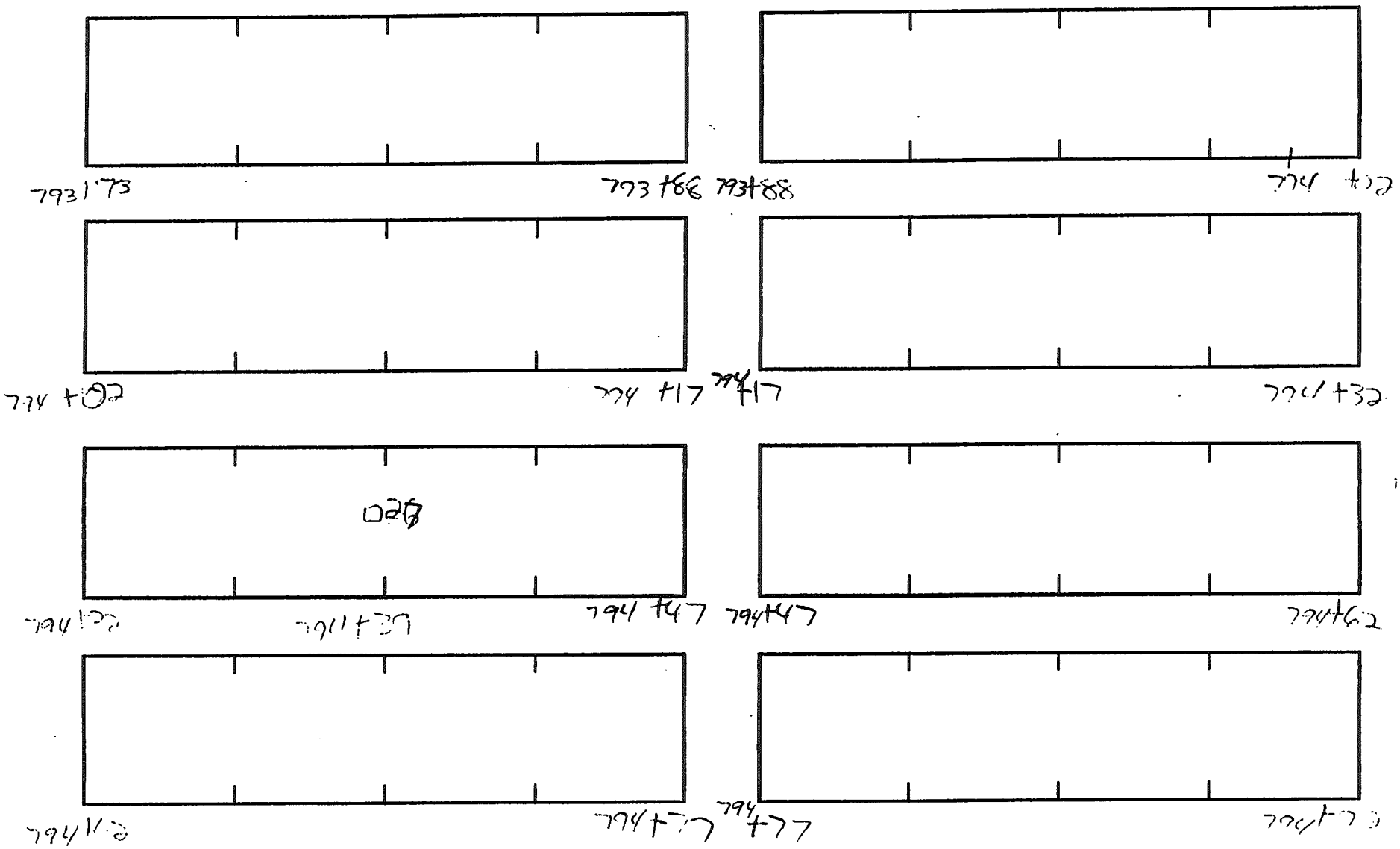
Project # 47065-2815A Date 7-31-97 JS 15 POB 784+88

Direction EB By AD Slab 10" POE 795+07



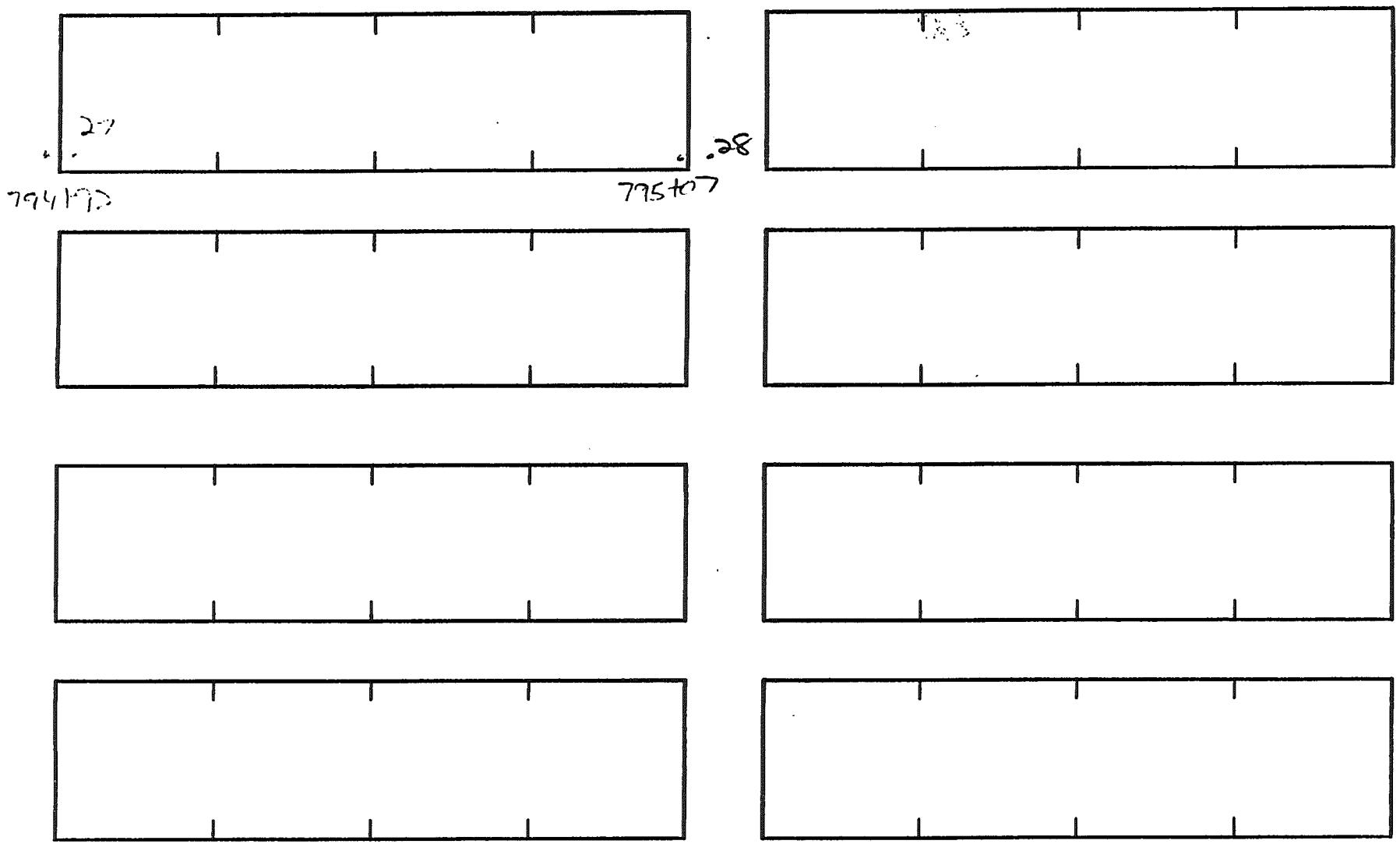
Project # 47065-2815A Date 7-31-97 JS 15 POB 784+88

Direction EB By AD Slab 10" POE 795+07



Project # 47065-28215A Date 7-31-97 JS 15 POB 784+88

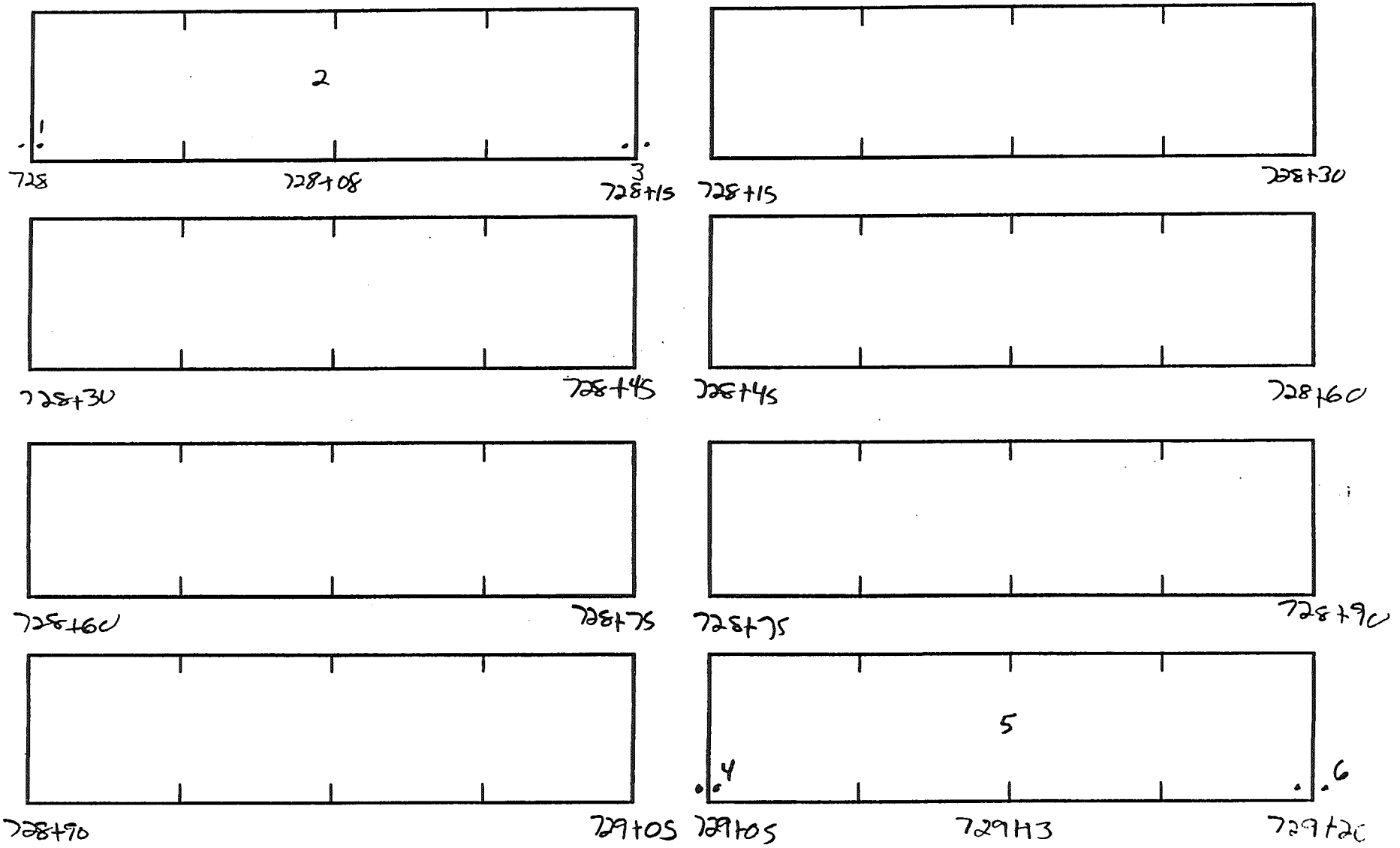
Direction EB By AD Slab 10" POE 795+07



10" Sand Subbase
3" 22A Separator
4" 3G Slag Base

Project # 47065-28215A Date 8-6-97 JS 15ft POB 728+00

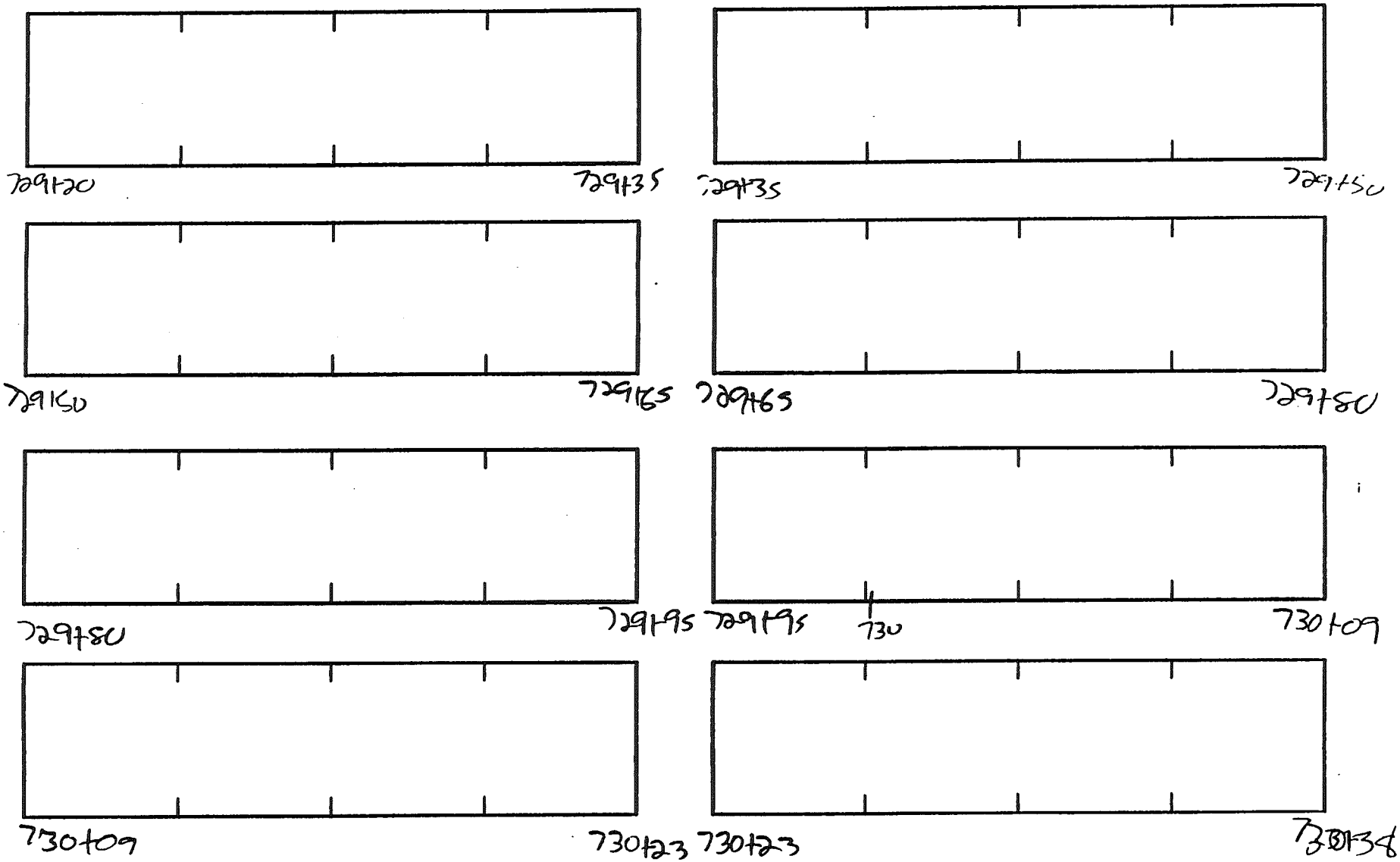
Direction EB By AD Slab 11" POE 733+66



3651

Project # 47065-2821SA Date 8-6-97 JS 15ft POB 728+60

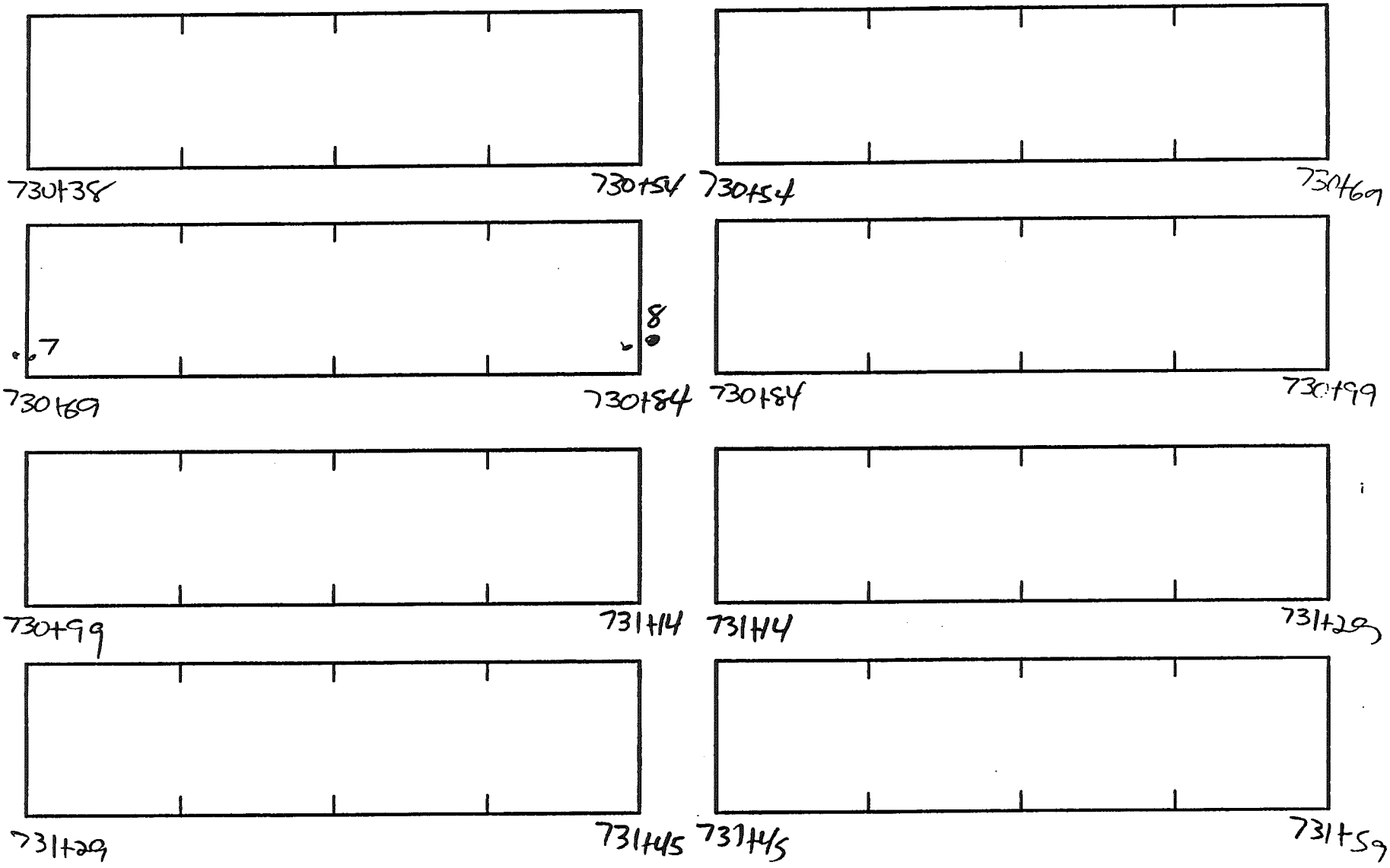
Direction EB By AD Slab 11" POE 733+66



Sla

Project # 47065-28215A Date 8-6-97 JS 15ft POB 728+00

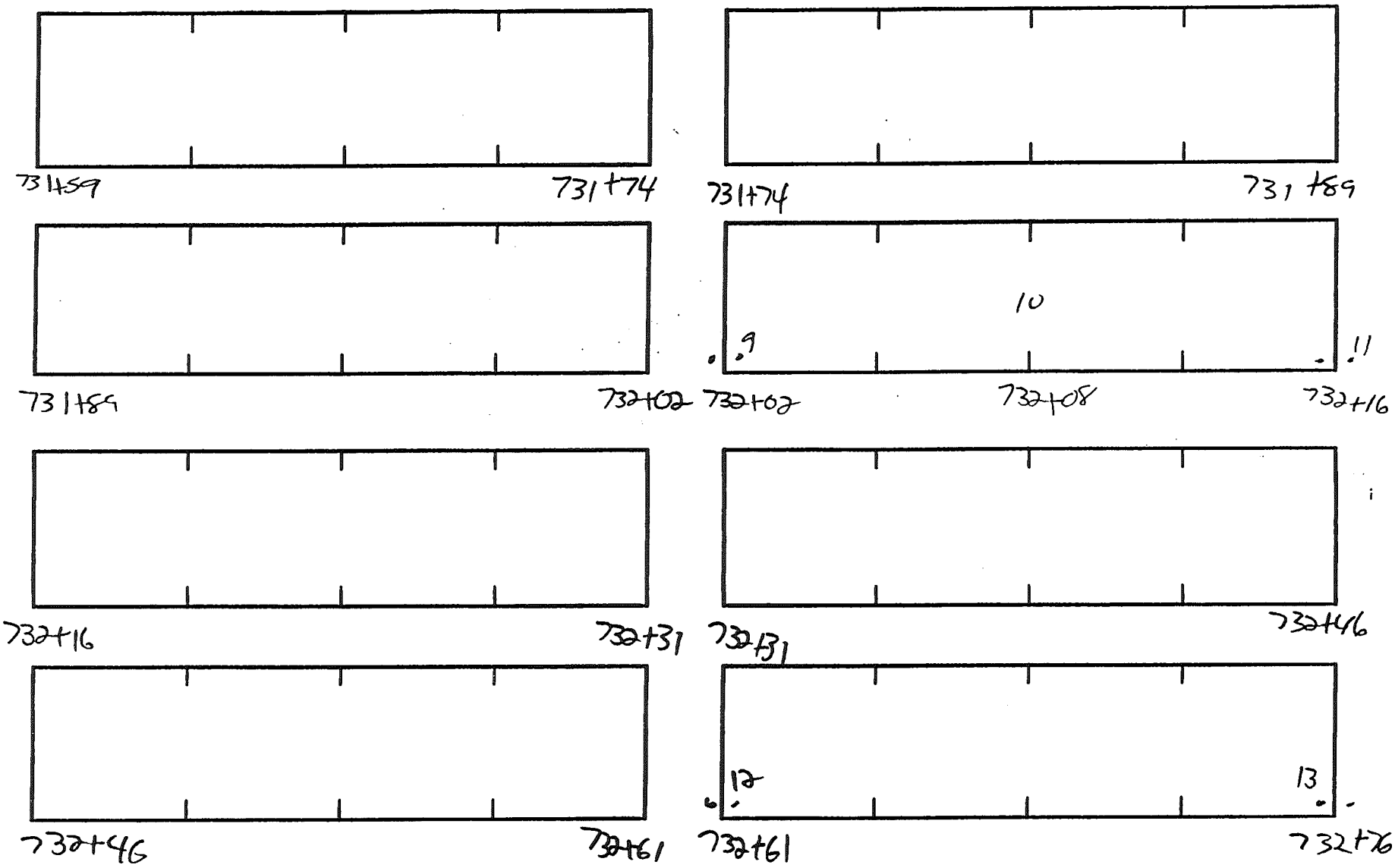
Direction EB By AD Slab 11" POE 733+66



36 slag

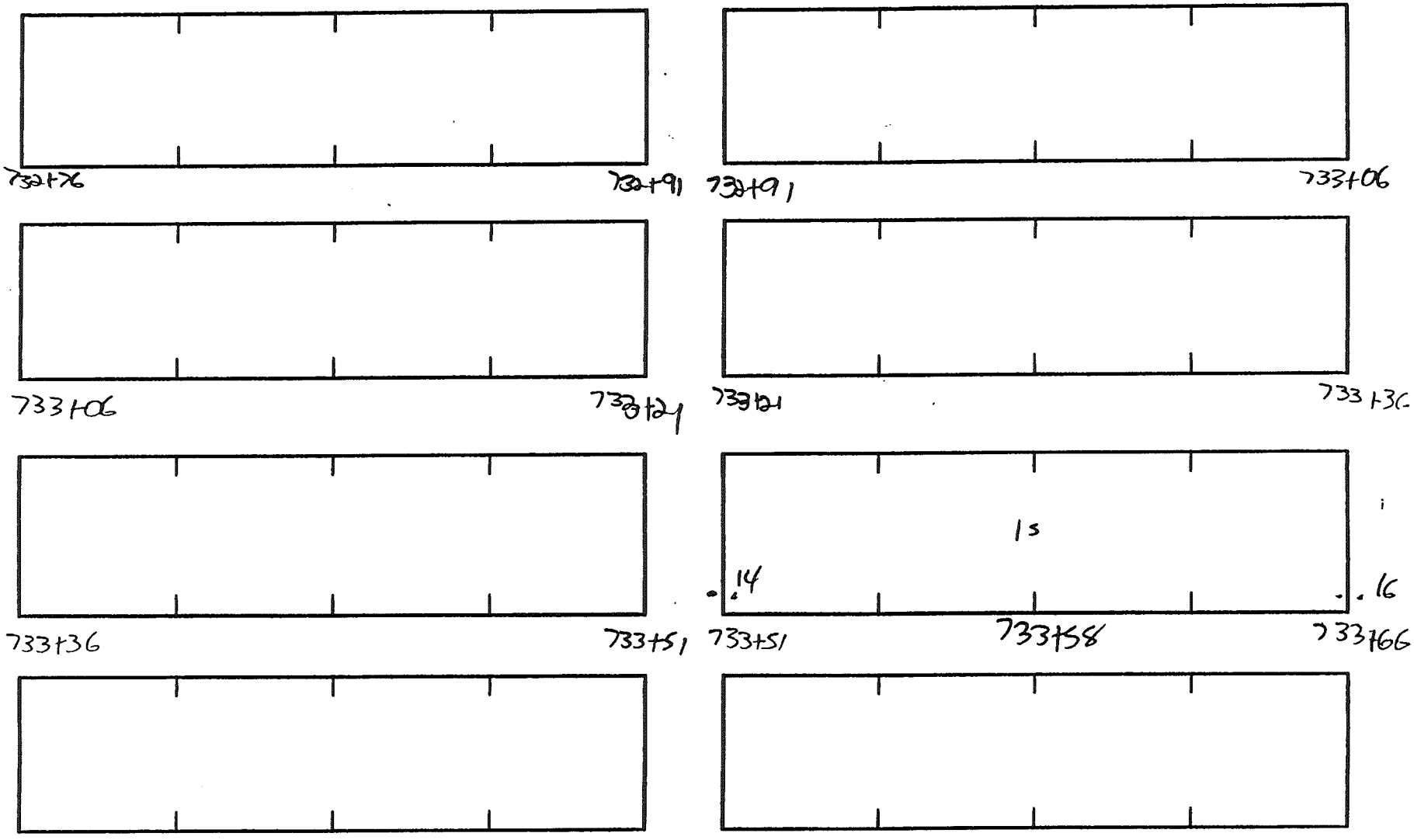
Project # 47065-28215 Date 8-6-97 JS 15ft POB 728+00

Direction EB By AD Slab 11" POE 733+66



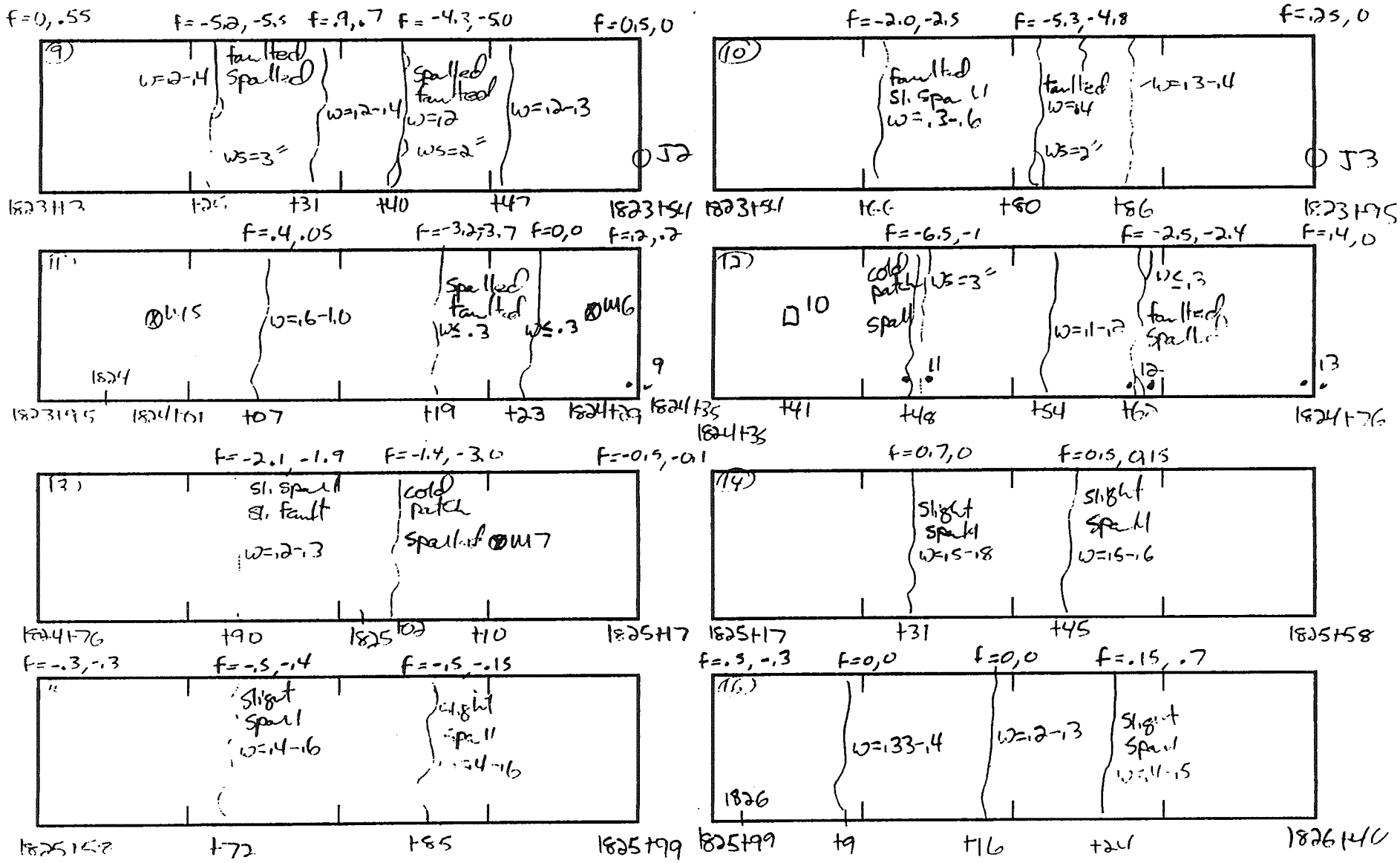
Project # 47065-2821SA Date 8-6-97 JS 15 POB 728+00

Direction EB By AD Slab 11 POE 733+66



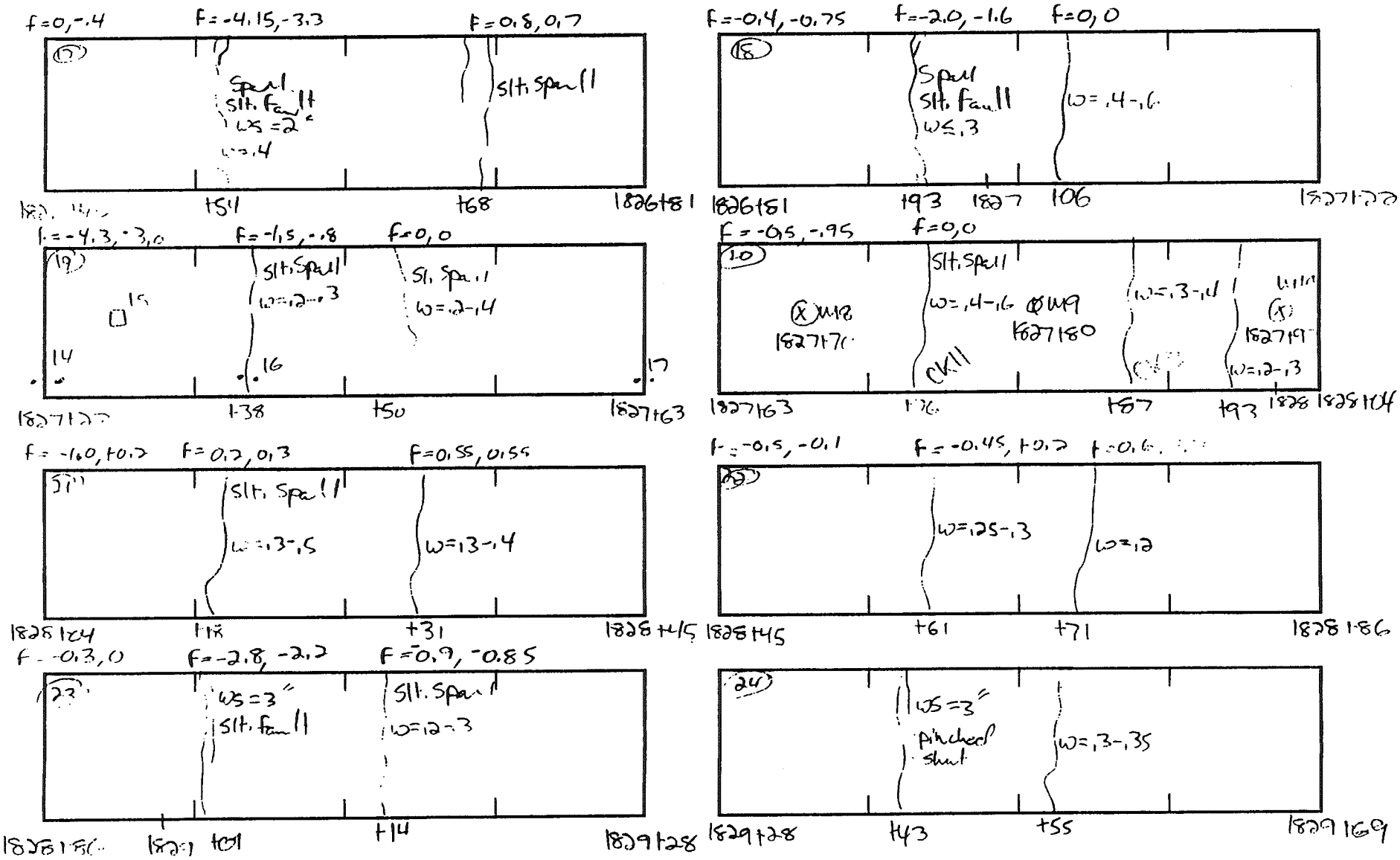
Project # 77023-21586A Date 7-2-97 JS 41 ft POB 1819+87

Direction EB By AD Slab 9" POE 1835+03



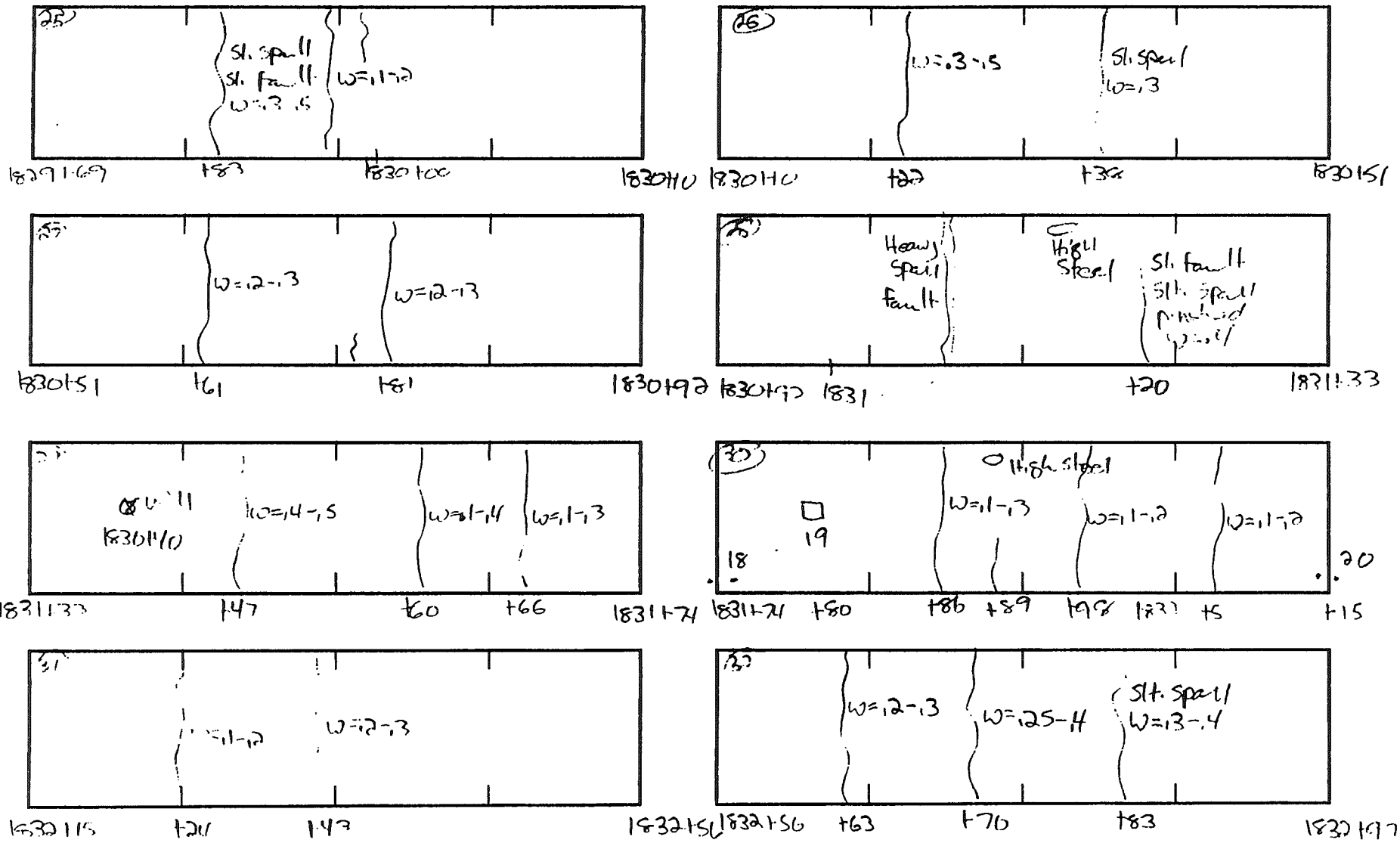
Project # 77023-21586A Date 7-2-97 JS 41 Ft POB 1811+87

Direction EB By AN Slab 9" POE 1835+03



Project # 77023-21586A Date 7-2-97 JS 41 ft POB 1819+[illegible]

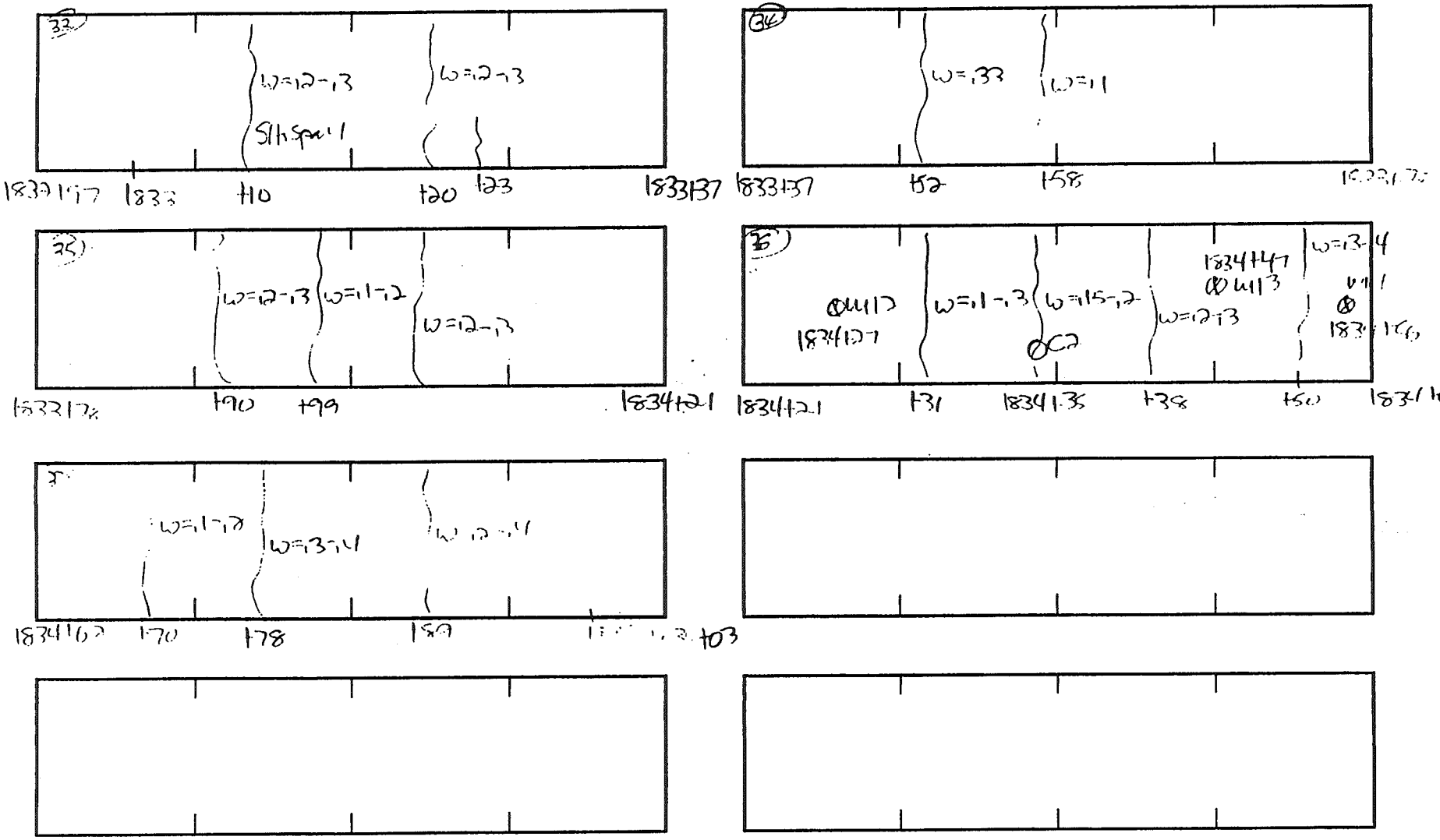
Direction EB By AN Slab 9" POE 1835+03



C-64

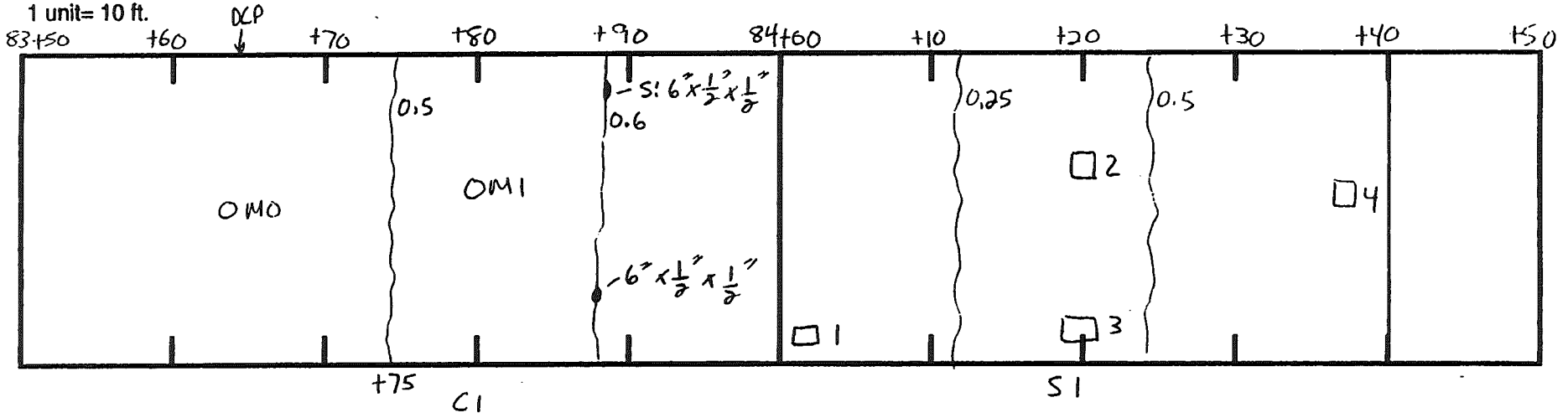
Project # 77023.21586A Date 7-2-97 JS 41 ft POB 1819+87

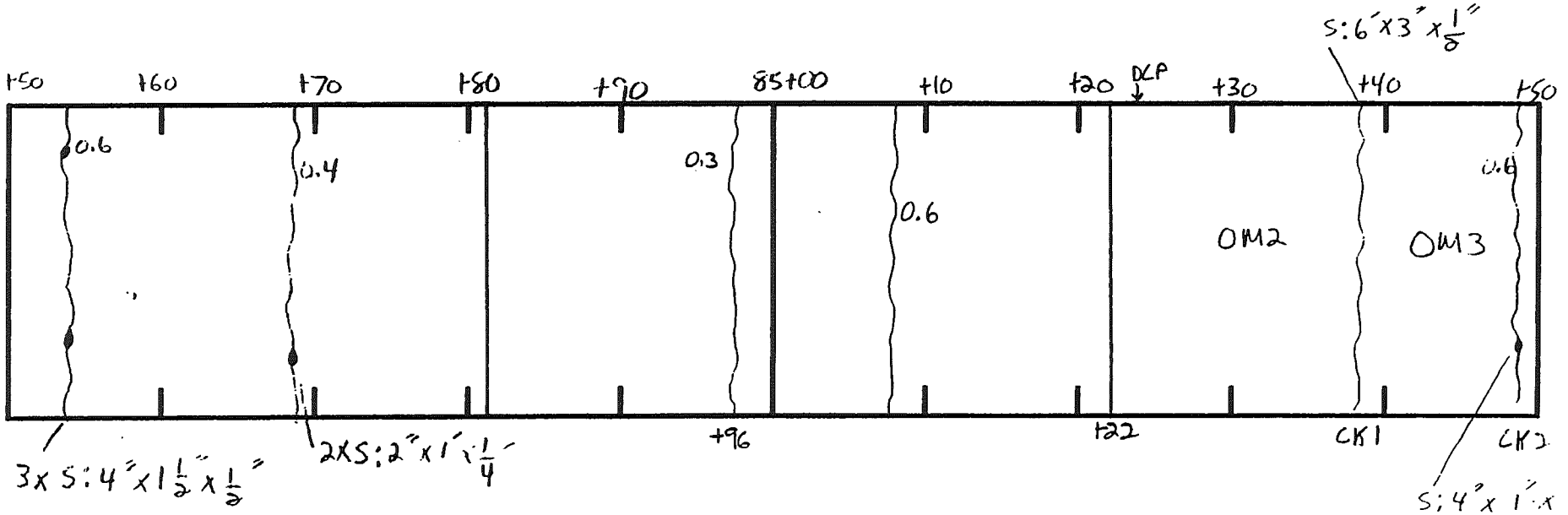
Direction EB By AD Slab 9" POE 1835+03



Project # 77024(A)-20821 A
Survey Date: 10-17-96
Surveyed By: EJ
Beginning Station: 83+50
End Station: 85+50
Weather:
Comments:

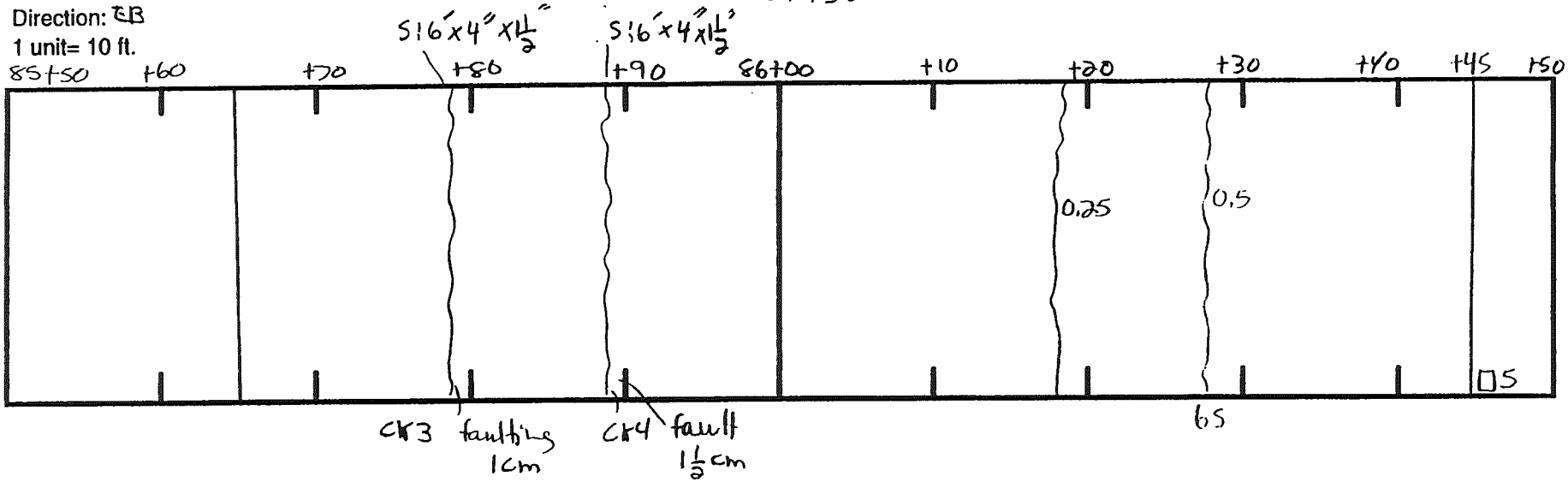
Direction: EB
1 unit= 10 ft.

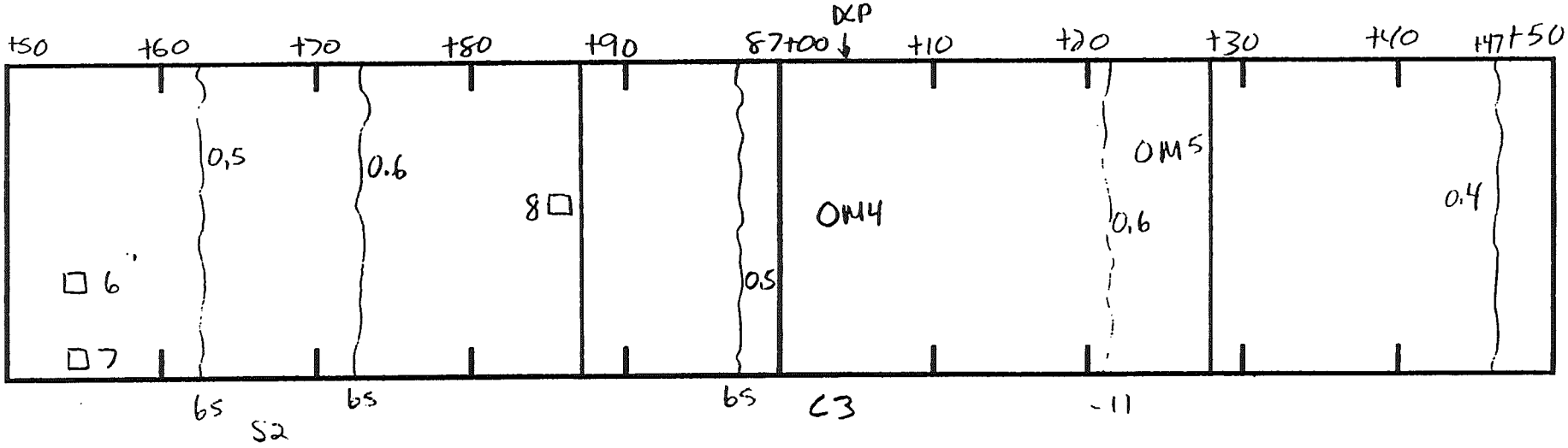




Project # 77024(A)-2082(A) Survey Date: 10-17-96 Beginning Station: 85+50 Weather:
Surveyed By: EJ End Station: 87+50 Comments:

Direction: EB
1 unit= 10 ft.

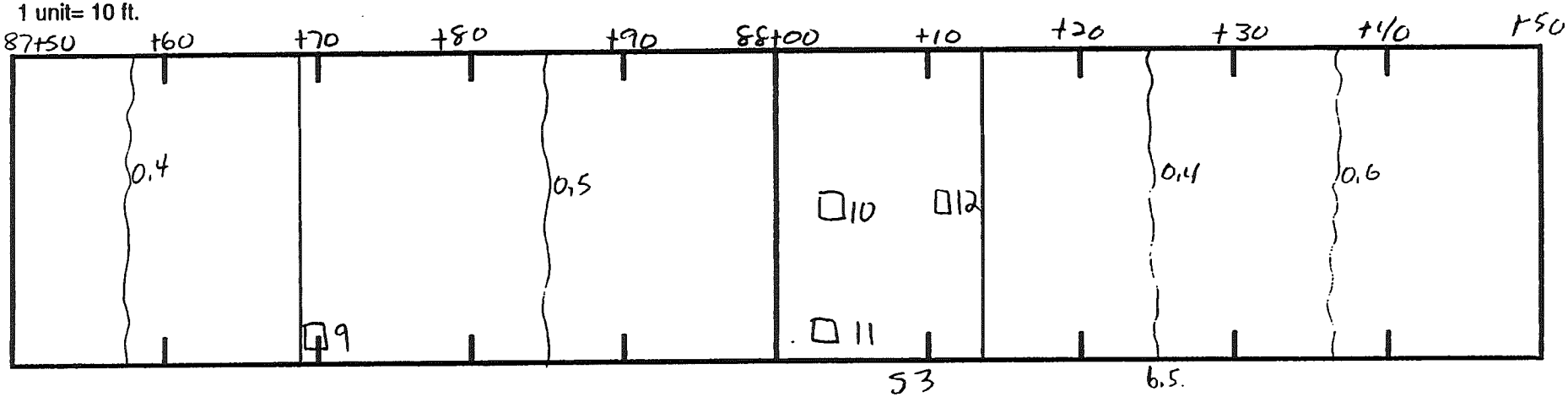


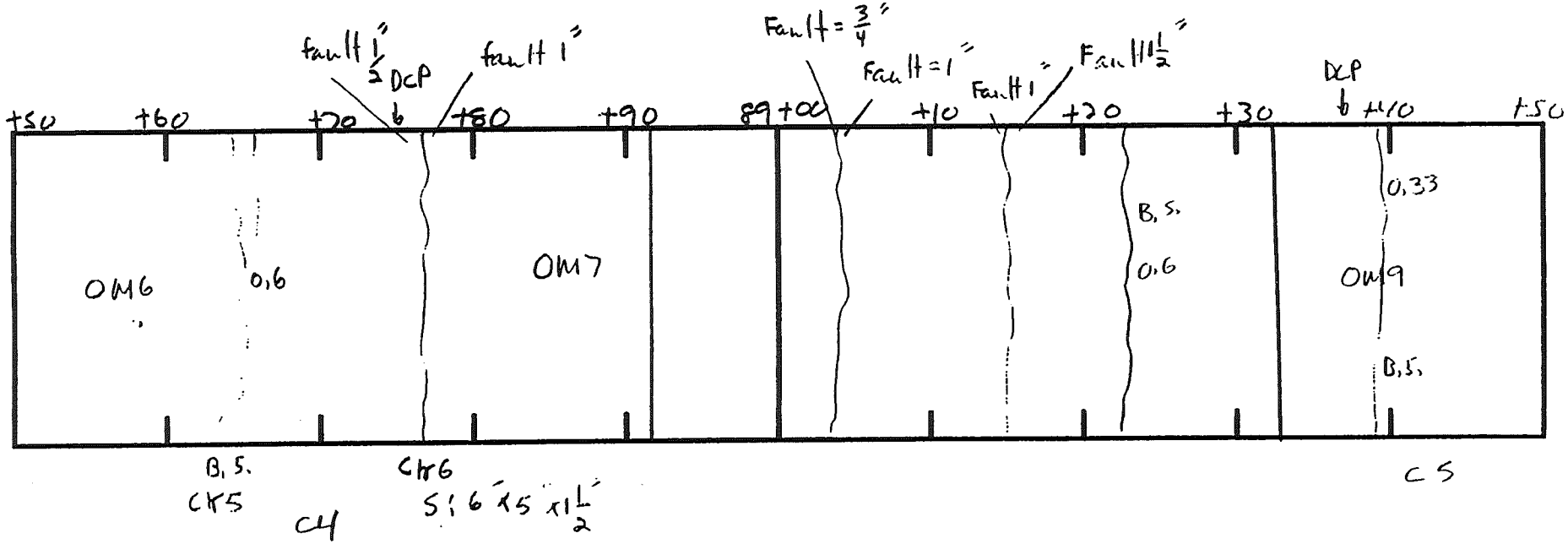


C-67

Project # 77024(A) - 20821A **Survey Date:** 10-17-96 **Surveyed By:** EJ **Beginning Station:** 87+50 **End Station:** 89+50 **Weather:** **Comments:**

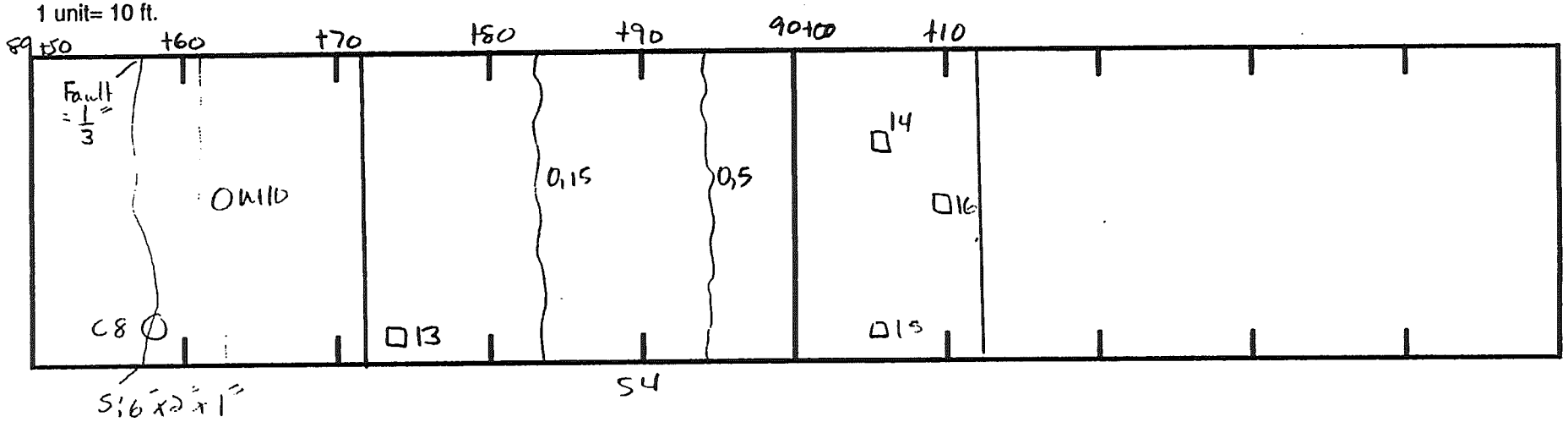
Direction: EB
1 unit= 10 ft.

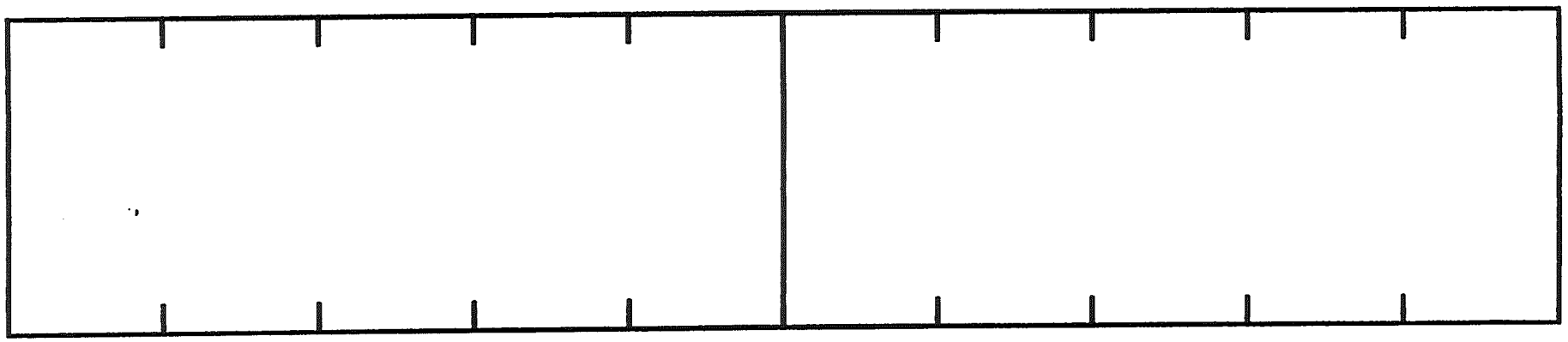




Project # 77021(A)-20821A Survey Date: 10-17-96 Beginning Station: 89+50 Weather:
Surveyed By: EJ End Station: Comments:

Direction: EB
1 unit= 10 ft.

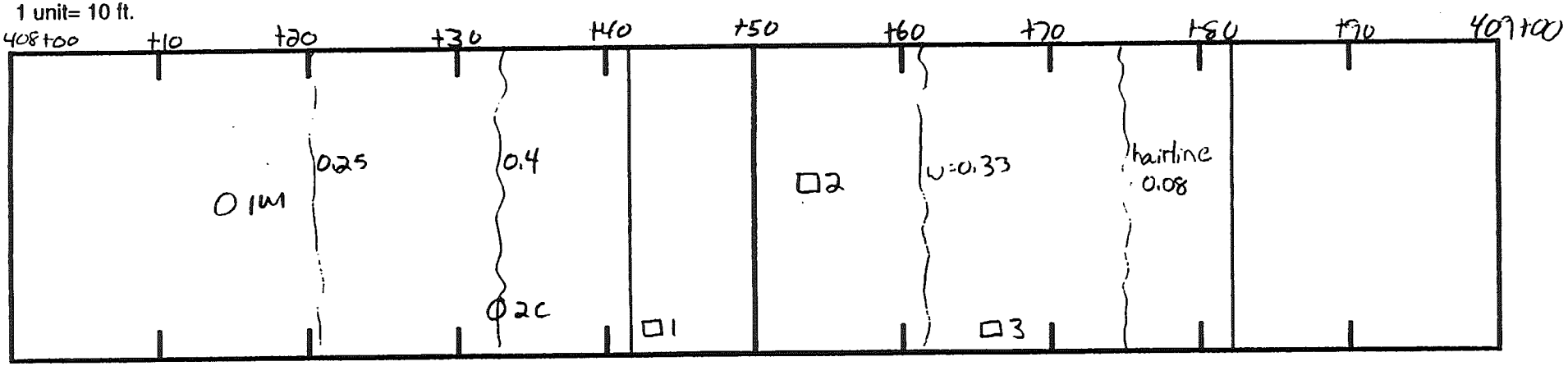


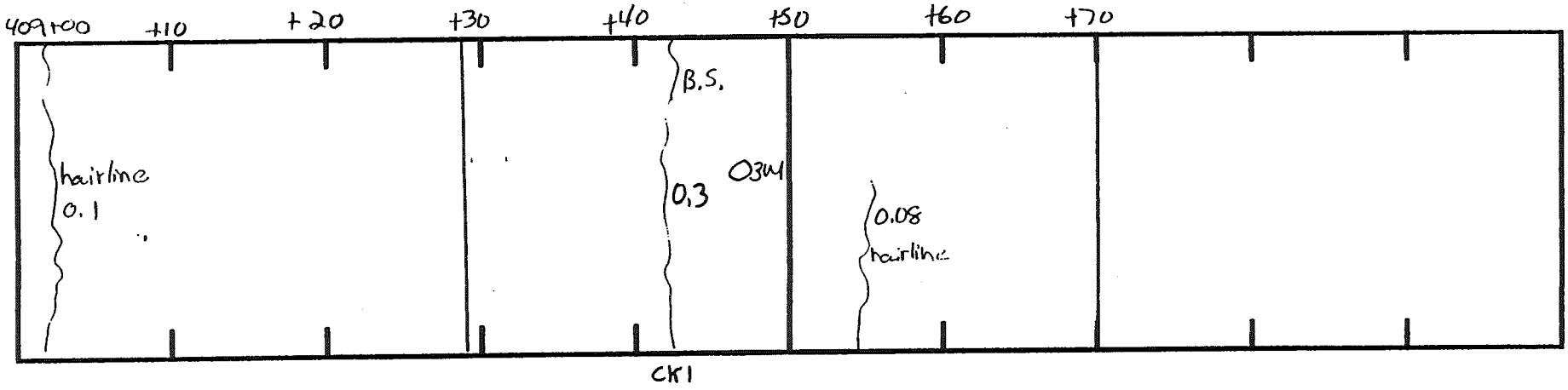


Project # 77024(B)-17788A Survey Date: 10-29-96 Beginning Station: 408+00
Surveyed By: EJ End Station: 409+70

Weather: Rain night before Windy + Showers.
Comments: very wet in ditch and water in lowland

Direction: EB
1 unit= 10 ft.



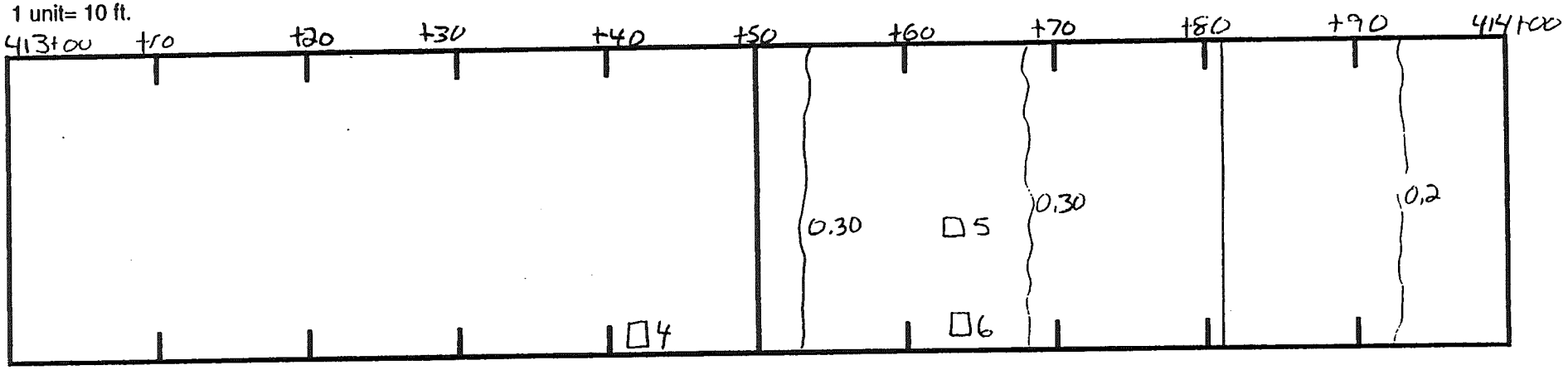


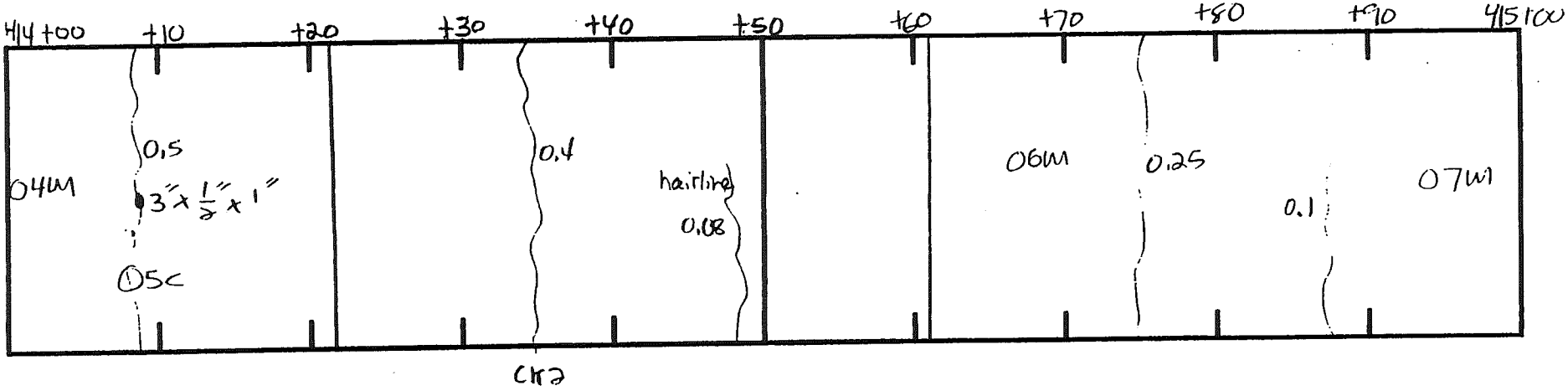
Project # 77024(B)+17985A **Survey Date:** 10-29-96 **Beginning Station:** 413+00 **Weather:** See first sheet

Surveyed By: EJ **End Station:** 415+00 **Comments:**

Direction: EB

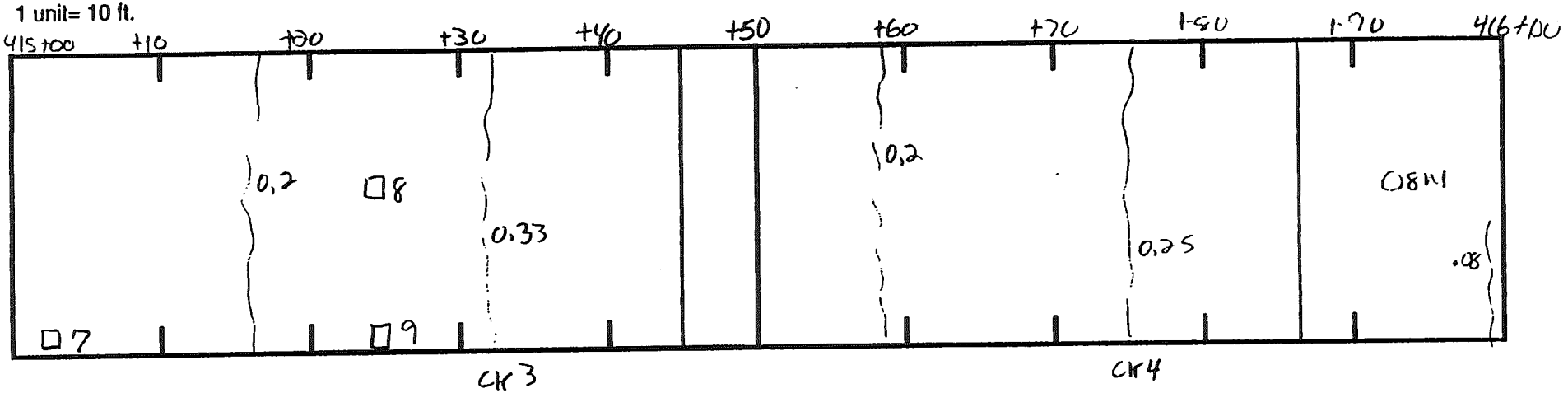
1 unit= 10 ft.

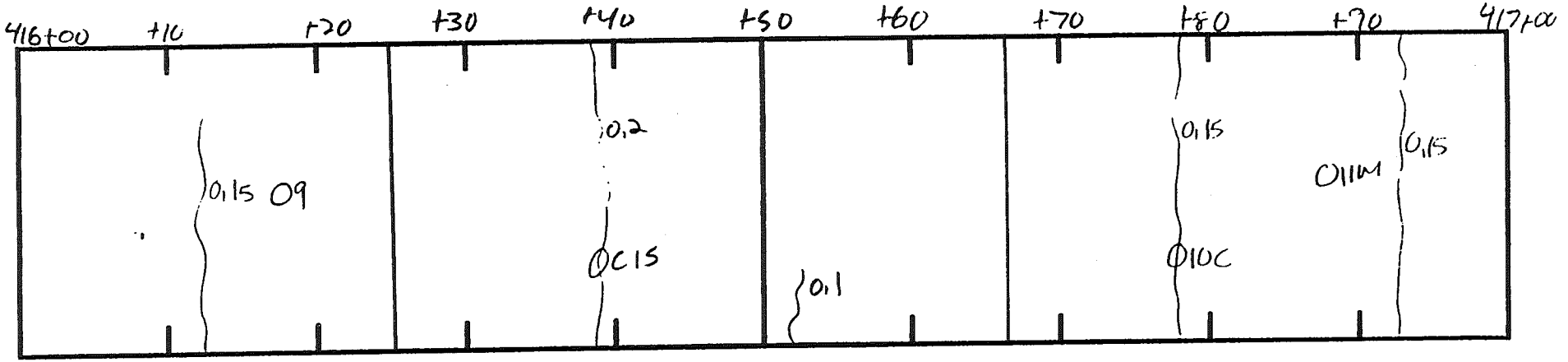




Project # 77021(B)-17988 Survey Date: 10-29-96 Beginning Station: 415+00 Weather: See first Sheet
Surveyed By: ES End Station: 417+00 Comments:

Direction: EB
1 unit= 10 ft.

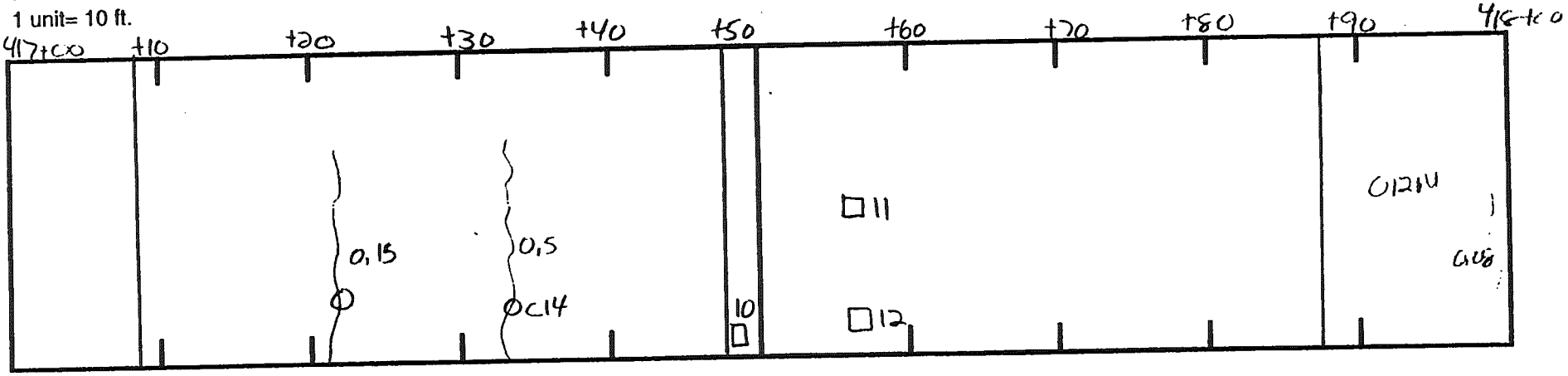


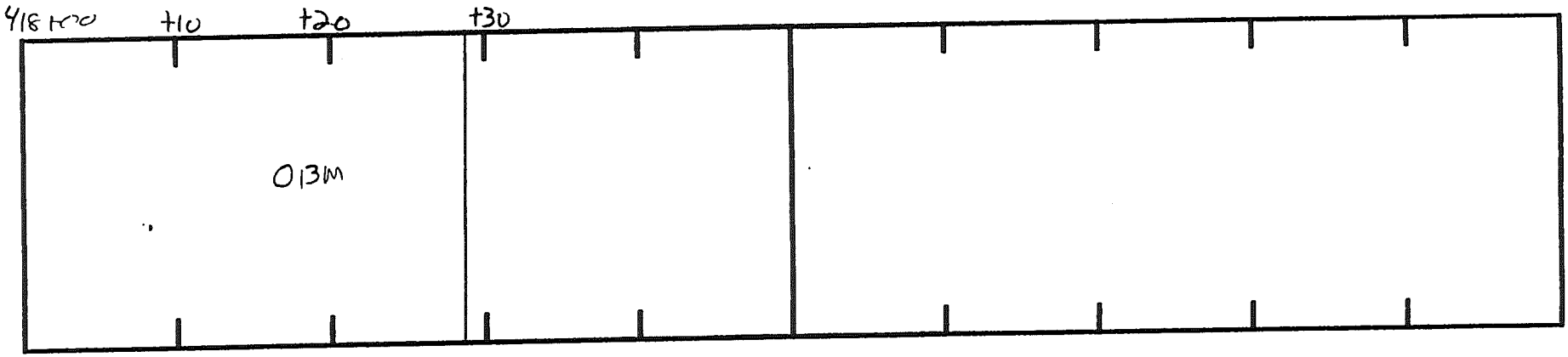


C-72

Project #77024(D)-1798A Survey Date: 10-29-96 Beginning Station: 417+00 Weather: See First Sheet
Surveyed By: EJ End Station: Comments:

Direction: EB
1 unit= 10 ft.

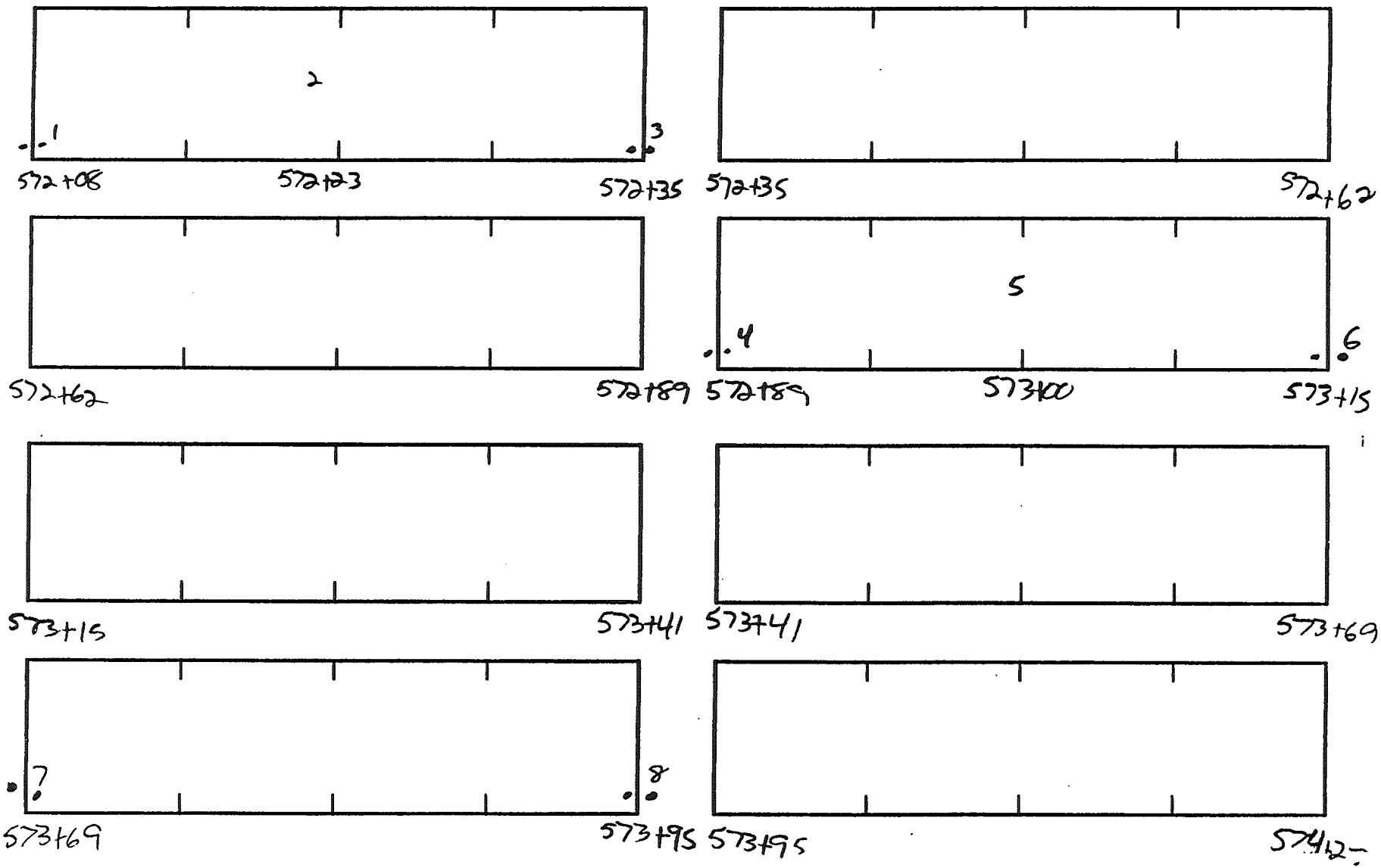




Also tested was Station 649, one slab north of willow
Also tested near 549, one slab, South of Will Carelton

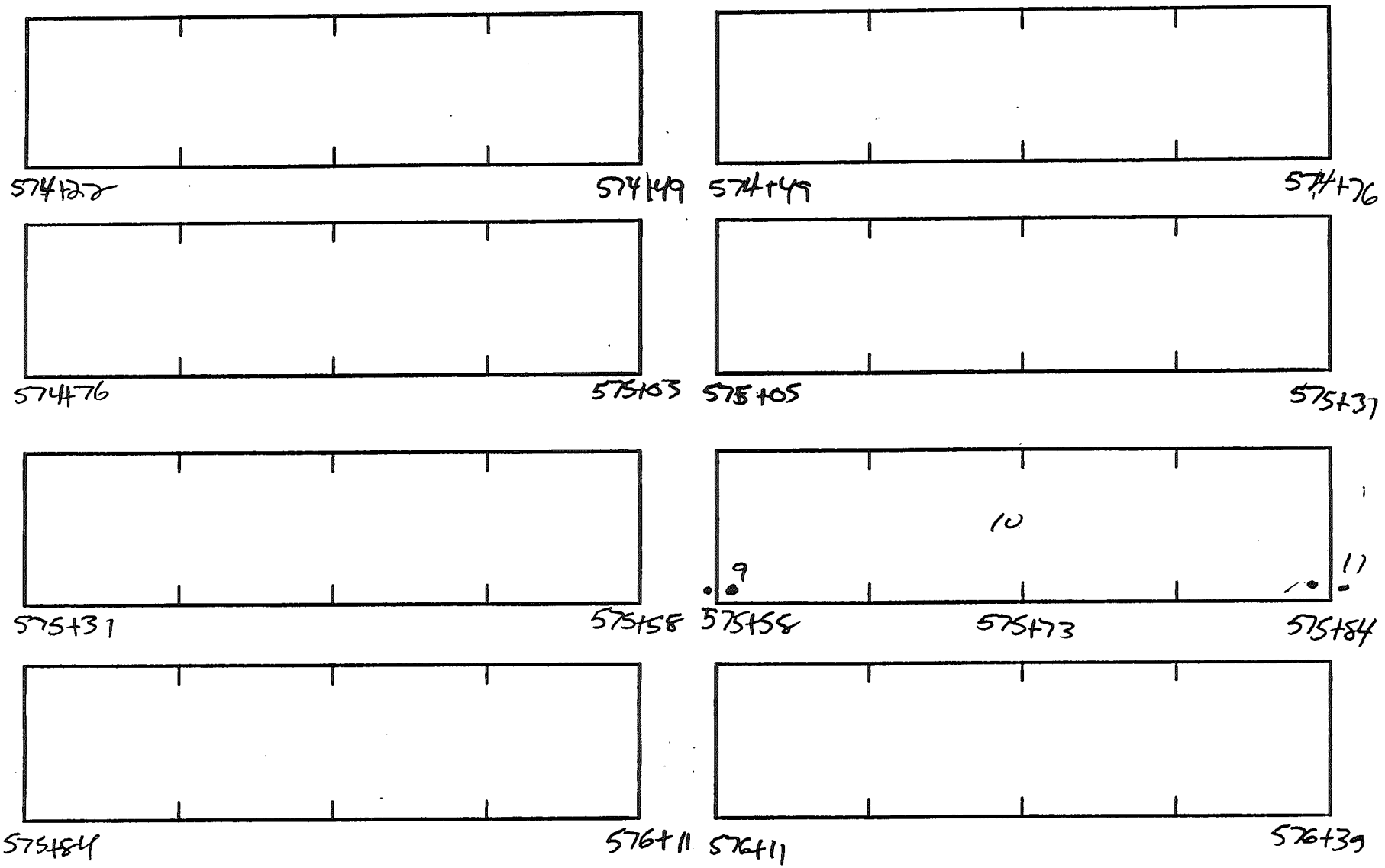
4" Base 350 AA Limestone 06DC
4" Aggregate separator course
2" Slag Base from old I-275 which was not removed from Will Carelton to Willow Rds

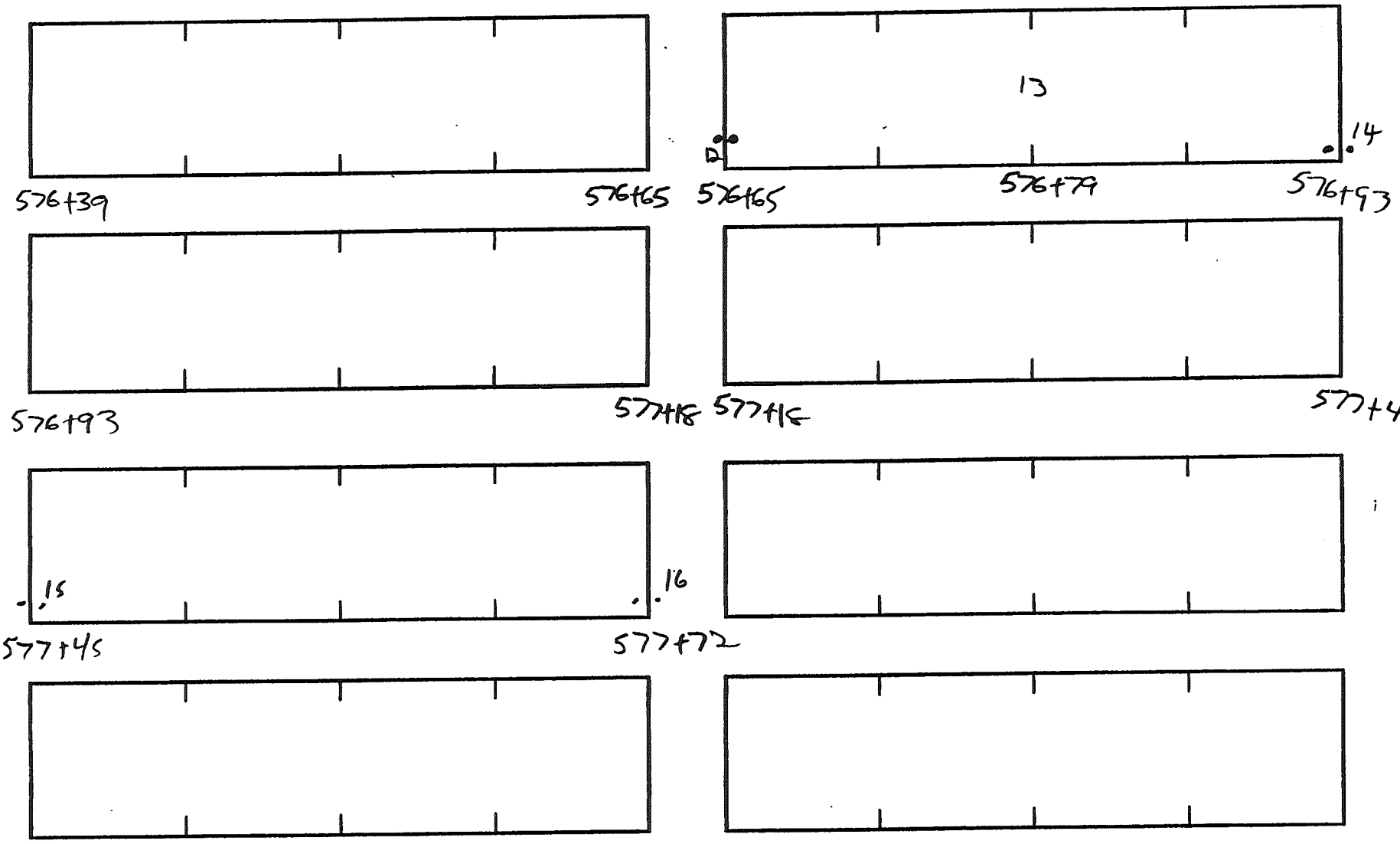
Project # 82291-37305A Date 8-7-97 JS 27 POB 572+08
Direction NB By AD Slab 11" POE 577+72



Project # 82291-3730SA Date 8-7-97 JS 27 POB 572+08

Direction NB By AD Slab 11" POE 577+72



Project # 82291-373054 Date 8-797 JS 27 POB 572+08

Direction N/B By AD Slab 11" POE 577+72