

1289

Rose Cañon

X. Section etc

PAS

LEVEL 200

No. 390

ENGINEERING DEPARTMENT,  
CITY OF SAN DIEGO,  
CALIFORNIA.

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DEC 2 1964

No. 380 to 385 7/20/64

B.M. R.R. Spike Telegraph Pole on  
W.L. of Santa Fe R.R. 100' north  
of Balboa Ave. 48.58

B.M. #1 3ft West of 60ft R.P.  
B.C Sta 16+98.94 Set exr hub  
with nail in top

B.M. #2 on fence line - 140ft East  
of Sta 42+80 exr hub with nail

Rose Canyon Road - Bench Levels				1
Sta.	+ H.I.	-	Elev.	
U.S. G.S. B.M.				19.31
	1.70	21.01		
T.P.		5.81	15.20	
	2.10	17.30		
T.P.		5.91	11.39	
	7.34	18.73		
T.P.		2.70	16.03	
	7.06	23.09		
T.P.		3.21	19.88	
	8.00	27.88		
B.M.		2.42		25.46
	2.42	27.88		
T.P.		0.10	27.78	
	7.50	35.28		
T.P.		3.18	32.10	
	6.39	38.49		
T.P.		3.12	35.37	
	6.79	42.16		
T.P.		2.52	39.64	
	9.79	49.43		
T.P.		0.12	49.31	
	9.73	59.04		
T.P.		0.14	58.90	
	9.59	68.49		
B.M.		12.84		55.65

Sta	+	H.I.	-	Elev
				55.65
	12.05	67.70		
B.M.			1.28	66.42
	13.15	79.57		
T.P.			1.53	78.04
	13.05	91.09		
T.P.			10.75	80.34
	1.35	81.69		
B.M.			5.36	76.33
	11.99	88.32		
T.P.			1.16	87.16
	12.11	99.27		
T.P.			1.27	98.00
	12.74	110.74		
T.P.			0.21	110.53
	3.69	114.22		
T.P.			12.17	102.05
	2.78	104.83		
B.M.			12.68	92.15
	12.68	104.83		
T.P.			4.60	100.23
	5.58	105.81		
T.P.			6.84	98.97
	3.90	102.87		
B.M.			2.47	100.40

B.M. #3. 126 Ft East of Sta. 48+00  
Set 2x2 Redwood hub keel on high corner

B.M. #4. Set 2x2 Redwood hub with nail. 158 Ft East of Sta. 66+24

B.M. #5 Set 2x2 Redwood hub with nail on 1<sup>st</sup> P.L. 90 Ft from &

Set 2x2 Redwood hub with nail 143 Ft East of & opposite clay pit

Sta.	+	H.I.	-	Elev.	
				100.40	
	2.47	102.87			
T.P.			5.80	97.07	
	2.36	99.43			
T.P.			0.59	98.84	
	11.64	110.48			
B.M.			2.78	107.70	B.M.#7
	2.78	110.48			
T.P.			11.79	98.69	
	1.10	99.79			
T.P.			12.20	87.59	
	3.83	91.42			
B.M.			4.76	86.66	B.M.#8 Set 2x2 Redwood hub 100ft. East of $\phi$ at Sta. 115+30 30ft. From $\phi$ of R.R.
	8.25	94.91			
T.P.			5.22	89.63	
	5.97	95.60			
T.P.			4.20	91.40	
	5.67	97.07			
B.M.			3.12	93.95	B.M.#9 Set 2x2 Redwood hub with nail 50ft. East from Sta. 128+35 50ft. to $\phi$ of R.R.
	6.90	100.85			
T.P.			2.98	97.87	
	7.97	105.84			
T.P.			2.13	103.71	
	6.64	110.35			
B.M.			0.57	109.78	B.M.#10 Set 2x2 Redwood hub with nail 50ft. East & 50ft. west of R.R. Right angles to Sta. 144+28

Sta.	+ H.I.	- Elev		
			109.75	
	5.75	115.53		
T.P.		4.83	110.70	
	7.41	118.11		
T.P.		3.87	114.24	
	7.07	121.31		
B.M.		4.40	116.91	B.M. #11 8x8 in. Post 6 in. above ground with R.R. Spike in top. 47 ft. East of R.R. & 147 ft. East of Sta. 158+36
	4.40	121.31		
T.P.		0.24	121.07	
	7.30	128.37		
T.P.		2.00	126.37	
	7.81	134.18		
B.M.		3.20	130.98	B.M. #12. Set 2x2 Redwood hub on fence on edge of Rd. entering Ranch. 132 ft. East of Sta. 170+30
	6.79	137.77		
T.P.		1.06	136.71	
	11.79	148.50		
B.M.		9.09	139.41	B.M. #13 Set 2x2 Redwood hub on fence Line. with nail in top 100 ft. East of Sta. 177+29.
	12.06	151.47		
T.P.		0.64	150.83	
	12.26	163.09		
T.P.		0.96	162.13	
	13.01	175.14		
T.P.		1.26	173.88	
	11.90	185.78		
T.P.		1.69	184.09	

Sta.	+	H.I.	-	Elev	
				184.09	
	7.73	191.82			
B.M.			8.84	182.98	B.M. #14 Set 2x2 Redwood hub on fence
	12.45	195.43			Line 20ft. East of Main Highway
T.P.			2.74	192.69	71ft. West of Sta. 182+65
	6.69	199.38			
T.P.			3.36	196.02	
	9.68	205.70			
T.P.			2.16	203.54	
	10.60	214.14			
T.P.			0.32	213.82	
	12.87	226.69			
B.M.			0.54	226.15	B.M. #15 Set 2x2 Redwood hub with nail
	13.12	239.27			in top 95ft. West of Sta. 203+63
T.P.			6.41	232.86	
	10.22	243.08			
T.P.			4.23	238.85	
	12.36	251.21			
B.M.			1.41	249.80	B.M. #16. Set 2x2 hub with nail in top
	5.98	255.78			67ft West of Sta. 216+63
B.M.			13.06	242.72	B.M. #17. (535ft North of Sta. 216+63
	7.14	249.86			48ft. West of Main Highway)
T.P.			3.23	246.63	
	12.63	259.26			
T.P.			1.00	258.26	

Sta.	+	H.I.	-	Elev.	
				258.26	
	12.62	270.88			
B.M.			1.20	269.68	B.M.#18 Set 2x2 Redwood hub with nail in top 90 Ft. West of Sta. 242+45
	9.93	279.61			
B.M.			2.88	276.73	B.M.#19 Set 2x2 Redwood hub with nail in top 90 Ft. West of Sta. 247+87
	7.64	284.37			
T.P.			10.69	273.68	
	12.13	285.81			
T.P.			0.75	285.06	
	10.27	295.33			
B.M.			0.73	294.60	B.M.#20 Set 2x2 Redwood hub with nail in top 100 Ft. West of Sta. 260+00
	10.38	304.98			
T.P.			1.50	303.48	
	12.84	316.32			
B.M.			0.42	315.90	B.M.#21 Set 2x2 Redwood hub with nail in top 122 Ft. West of Sta. 267+93
	0.42	316.32			
T.P.			8.61	307.71	
	12.49	320.20			
T.P.			0.83	319.37	
	12.65	332.02			
T.P.			0.43	331.59	
	13.27	344.86			
T.P.			0.35	344.51	
	12.07	356.58			
B.M.			1.66	354.92	B.M.#22 Set 2x2 hub with nail in top. In Eucalyptus Grove 105 Ft. West of Sta. 276+30



Sta.	+	H.I.	-	Elev.
				354.92
	1.66	356.58		
T.P.			0.62	355.96
	13.06	369.02		
T.P.			0.07	368.95
	12.54	381.49		
T.P.			0.57	380.92
	8.96	389.88		
T.P.			0.82	389.06
	9.56	398.62		
T.P.			3.08	395.54
	6.22	401.76		
B.M.			3.96	397.80
		See Page 14		397.845
	2.74	400.585		
See Page 14			5.60	394.95 B.M. #24
			6.35	394.235

B.M. #23 Set 2x2 Redwood hub with nail in top  
 2 ft. West of pole No. D 202347.  
 60 ft. East of pavement. 126 ft. North of  
 Sta. 289+83<sup>23</sup>. Intersection of line with East  
 edge of pavement  
 Tack D.C. Pavement on Curve West of "Italian Villa"

+	H.I.	-	Elev
			397.80
1.43	399.23		
		8.92	390.31
1.24	391.55		
		8.48	383.07
0.55	383.62		
		10.70	372.92
0.33	373.25		
		12.90	360.35
0.12	360.47		
		5.54	354.93 354.92
0.15	355.08		
		10.55	344.53
0.56	345.09		
		12.90	332.19
0.33	332.52		
		13.21	319.31
1.23	320.54		
		13.17	307.37
4.54	311.91		
		1.20	310.71
6.00	316.71		
		0.81	315.90
0.81	316.71		
		11.01	305.70

B.M.#23 ✓

B.M.#22 ✓

B.M.#21 Elev. 315.90 ✓

+	H.I.	-	Elev.	
			327.72	
1.10	306.80			
		9.61	297.19	
4.92	302.11			
		7.48	294.63	B.M.#20 Elev. 294.60 ✓
8.80	303.43			
		5.22	298.21	
10.18	308.39			
		12.54	295.85	
2.43	298.28			
		12.24	286.04	
0.75	286.79			
		10.02	276.77	B.M.#19 Elev. 276.73
2.28	279.05			
		9.33	269.72	B.M.#18 Elev. 269.68 ✓
2.82	272.54			
		10.65	261.89	
3.88	265.77			
		10.55	255.22	
3.54	258.76			
		12.50	246.26	
2.81	249.07			
		6.29	242.78	B.M.#17 Elev. 242.72 ✓
12.89	255.67			
		5.81	249.86	B.M.#16 Elev. 249.80

+	H.L.	-	Elev.
			249.86
2.47	252.33		
		12.57	239.76
2.00	241.76		
		12.30	229.46
9.82	239.28		
		13.08	226.20
7.29	233.19		
		9.86	223.63
4.98	228.61		
		12.96	215.65
3.28	218.93		
		11.99	206.94
3.28	210.22		
		12.49	197.73
3.89	201.62		
		11.06	190.56
3.51	194.07		
		11.01	183.06
7.88	190.94		
		11.95	178.99
1.05	180.04		
		12.53	167.51
0.33	167.84		
		12.57	155.27

B.M. # 15 Elev. 226.15

B.M. # 14 Elev. 182.98

+	H.I.	-	Elev.
			155.27
0.32	155.59		
		12.36	143.23
1.05	144.28		
		4.79	139.49

STA	+	H.I.	-	Elev.
B.M. #12	First Levels			130.98
	12.44	143.42		
T.P.			5.00	138.42
	9.53	147.95		
B.M. #13			8.53	139.42
"	First Levels			139.41
	12.51	151.92		
			0.05	151.87
T.P.	12.03	163.90		
			1.16	162.74
	12.18	174.92		
			0.05	174.87
	10.58	185.45		
			1.45	184.00
	6.79	190.79		
B.M. #14			7.80	182.99
"	First Levels			182.98
	12.29	195.27		
			2.44	192.83
	9.98	202.81		
			3.70	199.11
	7.95	207.06		
			3.90	203.16
	11.04	214.20		

Sta.	+	H.I.	-	Elev.	
		214.20			
			0.08	214.12	
	12.98	227.10			
B.M. #15			0.96	226.14	226.14
	First Levels.				226.15
	13.08	239.23			
			6.25	232.98	
	13.14	246.12			
			4.12	242.00	
	12.23	254.23			
B.M. #16			4.40	249.83	249.83
	First Levels				249.80
	4.41	254.21			
			11.95	242.26	
	3.78	246.04			
			12.81	233.23	
	5.97	239.20			
B.M. #15			13.07	226.13	226.13
	First Levels				226.15

Sta	+	H.I.	-	Elev	
BM #17				242.72	
	12.70	255.42			
			9.16	246.26	
	13.13	259.39			
			0.55	258.84	
	12.94	271.78			
			2.11	269.67	269.67
BM #18	First Levels				269.68
BM #20				294.60	
	12.20	306.80			
			0.62	306.18	
	12.97	319.15			
			3.24	315.91	315.91
BM #21	First Levels				315.90
BM #12				130.98	
	11.69	142.67			
			0.84	141.83	
	11.44	153.27			
			0.36	152.91	
	12.16	165.07			
			0.80	164.27	
	11.59	175.86			
			5.36	170.50	

Check on U.S. G.S. - B.M. Elev 176.640

Adjusted Levels

14

B.M. #1	25.46
#2	55.65
#3	66.42
#4	76.33
#5	92.15
#6	100.40
#7	107.71
#8	86.67
#9	93.96
#10	109.80
#11	116.93
#12	131.00
#13	139.43
#14	183.00
#15	226.17
#16	249.845
#17	242.765
#18	269.725
#19	276.775
#20	294.645
#21	315.945
#22	354.965
#23	397.845
#24	394.985

2' x 2' RW 3' W. of 60' R.P. of B.C. 16+98<sup>24</sup>

" " On Fence Line 100' E. of 42+80

" " 126' E. of 48+00

" " 158' E. " 66+24

Not Set in Conc. Culvert on <sup>S</sup>E. Side of Pavement  
due West of "Italian Villa" Inn.



London  
Isbell  
Morgan.

A sec Rose Canyon Road.

Dec 4-28

US 62 66 BM

B.M	5+00	24.31	19.31	1+00	24.31
	0-16 <sup>2</sup> (cont) $\Phi$			5DR	4.9 19.4
	5DR	4.51	19.8	28R	5.9 18.4
	$\Phi$	5.55	18.7	23R	5.4 18.9
	50L	6.75	17.5	19R	6.7 17.6
	0-6 <sup>3</sup> (cont) Sec on North edge Pav.			15R	6.8 17.5
	50L	6.99	17.3	14R	7.4 16.9
	$\Phi$	5.78	18.5	5R	6.8 17.5
	50R	4.56	19.7	$\Phi$	6.7 17.6
	0+00			12L	7.3 17.0
	50R	4.3	20.0	18L	6.9 17.4
	$\Phi$	5.6	18.7	23L	6.8 17.5
	50L	6.8	17.5	50L	7.4 16.9
	0+57			2+00	
	50L	7.1	17.2	50L	9.1 15.2
	23L	6.2	18.1	23L	8.2 16.1
	20L	6.1	18.2	21L	7.7 16.6
	15L	6.8	17.5	18L	8.1 16.2
	$\Phi$	6.4	17.9	15L	7.8 16.5
	6R	6.3	18.0	13L	8.2 16.1
	14R	6.8	17.5	$\Phi$	7.9 16.4
	23R	4.7	19.6	11R	7.9 16.4
	50R	4.5	19.8	12R	7.3 17.0
				17R	7.6 16.7
				23R	6.7 17.6
				27R	7.1 17.2
				50R	6.4 17.9

	3 + 00	2431		
50R			8.0	16.3
27R			6.2	16.1
23R			7.4	16.9
21R			8.0	16.3
13R			7.8	16.5
11R			7.7	16.4
10R			8.4	15.9
⊕			8.3	16.0
15L			8.8	15.5
16L			8.4	15.9
23L			8.7	15.6
38L			9.8	14.5
50L			9.9	14.4
3 + 75 <sup>15</sup>	B.C	2R		
50L			10.4	13.9
40L			10.1	14.2
23L			9.1	15.2
22L			8.6	15.7
14L			8.8	15.5
13L			9.2	15.1
⊕			8.7	15.6
10R			9.2	15.1
12R			8.6	15.7
21R			8.6	15.7
23R			8.1	16.2

	3 + 75 <sup>15</sup>	2431		
28R			8.7	15.6
50R			8.7	15.6
① 4 + 75 <sup>12</sup>				
50R			8.8	15.5
90R			9.4	14.9
27R			9.4	14.9
23R			9.1	15.2
15R			9.7	14.6
11R			9.9	14.4
10R			10.6	13.7
5R			9.7	14.6
⊕			9.7	14.6
14L			9.8	14.5
15L			9.5	14.8
23L			9.5	14.8
35L			9.8	14.5
50L			9.8	14.5
T.P	1.03	15.55	9.79	14.52
4 + 95				
50L			0.6	15.0
28L			1.1	14.5
23L			0.8	14.8
17L			0.7	14.9
14L			1.3	14.3
⊕			1.5	14.1

4+95

15.55

3R	57	9.9
10R	2.0	13.6
12R	1.0	14.6
14R	1.1	14.5
23R	0.5	15.1
30R	0.8	14.8
50R	0.3	15.3
5+03		
50R	0.7	14.9
23R	0.3	15.3
17R	0.5	15.1
10R	2.3	13.3
⊕	1.8	13.8
12L	1.6	14.0
16L	4.5	10.1
20L	1.0	14.6
23L	0.9	14.7
30L	5.4	10.2
42L	7.7	7.9
50L	9.0	6.6

5+28

15.55

50L	0.5	15.1
43L	0.6	15.0
38L	2.7	12.9
29L	2.8	12.8
23L	2.6	13.0
15L	2.1	13.5
10L	3.0	12.6
⊕	2.7	12.9
9R	3.0	12.6
10R	2.3	13.3
16R	0.8	14.8
21R	0.6	15.0
23R	0.6	15.0
50R	0.7	14.9
② 5+75-17		
50R	0.5	15.1
23R	0.2	15.4
18R	0.2	15.4
15R	2.0	13.6
6R	4.4	11.2
⊕	4.4	11.2
10L	4.3	11.3
13L	3.4	12.2
23L	3.2	12.4
30L	3.0	12.6
39L	4.7	10.9

5+75<sup>19</sup>

15.55

50L	8.0	7.6
6+33		
50L	7.6	8.0
23L	7.5	8.1
14L	7.4	8.2
9L	6.1	9.5
♀	6.1	9.5
7R	6.1	9.5
10R	8.1	7.5
15R	8.0	7.6
23R	7.8	7.8
50R	6.0	9.6
T.P. 4.55	18.82	1.28 14.27
③ 6+75 <sup>21</sup>		
50R	11.0	7.8
37R	10.5	8.3
23R	8.2	10.6
8R	8.0	10.8
7R	8.6	10.2
♀	8.9	9.9
12L	8.5	10.3
15L	6.9	11.9
23L	6.1	12.7
50L	6.8	12.0
60L	6.8	12.0

7+00

18.82

60L	9.4	10.4
50L	8.1	10.7
38L	8.1	10.7
30L	7.1	11.7
23L	6.8	12.0
15L	6.9	11.9
13L	8.1	10.7
♀	8.0	10.8
9R	7.7	11.1
12R	6.5	12.3
23R	6.0	12.8
40R	5.0	13.8
50R	5.3	13.5
60R	9.0	9.8
7+42 <sup>28</sup> E.C.		
60R	6.9	11.9
50R	6.9	11.9
40R	6.0	12.8
38R	6.4	12.4
27R	8.0	10.8
23R	8.1	10.7
11R	7.6	11.2
6R	6.9	11.9
♀	7.3	11.5
8L	7.4	11.4
12L	7.9	10.9

18

7+42<sup>98</sup> E.C. 1882

23L	8.7	10.1
50L	7.8	11.0
60L	6.0	12.8
7+70		
60L	6.0	12.8
50L	5.8	13.0
41L	4.9	13.9
23L	7.2	11.6
13L	7.2	11.6
10L	7.8	11.0
†	7.0	11.8
11R	6.8	12.0
18R	6.7	12.1
23R	8.9	9.9
38R	10.0	8.8
50R	7.5	11.3
60R	6.0	12.8
8+18 <sup>68</sup> B.C.		
60R	6.7	12.1
50R	5.1	13.7
47R	6.3	12.5
36R	5.8	13.0
23R	7.8	11.0
15R	6.5	12.3
†	6.2	12.6

6+18<sup>68</sup> B.C. 18.82

10L	6.2	12.6
23L	6.7	12.1
50L	6.1	12.7
60L	5.8	13.0
8+71 <sup>4</sup> C. curko		
60L	4.1	14.7
50L	4.5	14.3
23L	5.1	13.7
20L	6.3	12.5
12L	5.7	13.1
†	5.5	13.3
17R	5.2	13.6
23R	8.3	10.5
50R	7.1	11.7
60R	6.9	11.9
9+27 <sup>54</sup> E.C.		
60R	6.6	12.2
50R	6.6	12.2
40R	8.3	10.5
25R	8.0	10.8
23R	7.3	11.5
16R	4.9	13.9
†	4.5	14.3
13L	4.2	14.6

19

9+27<sup>59</sup>

18.82

23L	4.1	14.7
50L	3.7	15.1
60L	3.9	14.9
10+00		
60L	3.9	14.9
50L	3.8	15.0
23L	2.8	16.0
18L	2.6	16.2
15L	4.0	14.0
⊕	3.7	14.9
23R	4.4	14.4
28R	4.4	14.4
33R	12.5	6.3
45R	12.0	6.8
50R	8.8	10.0
55R	6.4	12.4
56R	4.2	14.6
60R	4.2	14.6

10+50

18.82

60R	3.7	15.1
50R	5.3	13.5
30R	5.1	13.7
23R	3.5	15.3
20R	3.1	15.7
13R	3.7	15.1
5R	3.2	15.6
⊕	3.3	15.5
10L	3.2	15.6
16L	3.5	15.3
18L	2.5	16.3
23L	2.0	16.8
30L	3.1	15.7
50L	3.4	15.4
60L	3.3	15.5
11+00		
60L	2.9	15.9
50L	2.6	16.2
32L	2.3	16.5
30L	1.9	16.9
23L	1.7	17.1
16L	2.7	16.1
⊕	2.9	15.9
20R	3.1	15.7
23R	3.7	15.1

20

11+00	18.82		
27R		4.3	14.5
45R		4.7	14.1
50R		4.4	14.4
60R		3.1	15.7

11+50

60R		2.1	16.7
50R		4.2	14.6
37R		3.6	15.2
23R		2.7	16.1
15R		2.4	16.4
⊕		2.2	16.6
17L		2.0	16.8
23L		1.2	17.6
35L		2.3	16.5
50L		2.3	16.5
60L		2.5	16.3

12+00

60L		2.2	16.6
50L		2.2	16.6
23L		1.3	17.5
20L		0.6	18.2
15L		1.4	17.4
⊕		1.8	17.0
14R		1.7	17.1
20R		1.2	17.6

12+00 18.82

23R		1.9	16.9
40R		3.5	15.3
50R		3.7	15.1
60R		3.5	15.3

12+50

60R		3.1	15.7
50R		3.1	15.7
45R		4.3	14.5
23R		0.8	18.0
17R		0.5	18.3
12R		1.1	17.7
⊕		1.2	17.6
23L		1.4	17.4
50L		0.5	18.3
60L		0.5	18.3
T.P.	9.01	26.72	1.11

13+00

60L		9.2	17.5
50L		9.2	17.5
23L		8.8	17.9
15L		8.4	18.3
14L		9.0	17.7
⊕		8.7	18.0
13R		8.3	18.4
14R		8.2	18.5

13+00

2672

19R	7.7	19.0
23R	8.4	18.3
34R	9.4	17.3
41R	11.6	15.1
50R	11.4	15.3
60R	10.8	15.9

13+50

60R	9.0	17.7
50R	12.4	14.3
30R	11.3	15.4
25R	7.9	18.8
23R	7.8	18.9
12R	7.8	18.9
11R	8.4	18.3
⊕	8.3	18.4
15L	8.7	18.0
16L	8.0	18.7
23L	8.4	18.3
50L	8.6	18.1
60L	9.1	17.6

14+00

2672

60L	8.5	18.2
50L	8.5	18.2
23L	7.8	18.9
17L	7.5	19.2
16L	8.3	18.4
⊕	8.0	18.7
10R	7.6	19.1
11R	7.4	19.3
20R	8.0	18.7
23R	9.1	17.6
40R	11.9	14.8
46R	11.5	15.2
49R	9.4	17.3
50R	9.4	17.3
60R	9.1	17.6

15+00

60R	8.3	18.4
50R	8.5	18.2
47R	8.6	18.1
43R	11.1	15.6
27R	10.9	15.8
23R	8.0	18.7
15R	8.2	18.5
10R	7.1	19.6
⊕	6.8	19.9

22



15+00	26.72		
12L	6.9	19.8	
19L	7.2	19.5	
20L	6.9	19.8	
23L	7.0	19.7	
30L	7.8	18.9	
50L	8.0	18.7	
60L	8.0	18.7	

15+50			
60L	7.2	19.5	
50L	7.2	19.5	
23L	6.7	20.0	
⊕	6.1	20.6	
10R	6.0	20.7	
13R	6.6	20.1	
23R	10.9	15.8	
33R	11.1	15.6	
43R	8.4	18.3	
50R	8.2	18.5	
60R	8.0	18.7	

16+00	26.72		
65R	7.8	18.9	
50R	7.8	18.9	
46R	7.9	18.8	
43R	10.9	15.8	
30R	10.7	16.0	
25R	9.4	17.3	
23R	9.4	17.3	
19R	9.1	17.6	
15R	5.7	21.0	
⊕	5.2	21.5	
14L	5.5	21.2	
18L	5.9	20.8	
19L	5.4	21.3	
23L	6.0	20.7	
25L	6.3	20.4	
50L	6.3	20.4	
65L	6.4	20.3	
16+50			
65L	5.1	21.6	
50L	5.3	21.4	
26L	5.3	21.4	
23L	4.7	20.0	
19L	4.3	22.4	
18L	4.6	22.1	
⊕	4.1	22.6	

16+50

26.72

10R	4.3	22.4
14R	5.4	21.3
17R	6.0	20.7
21R	8.7	18.0
23R	9.1	17.6
26R	8.1	18.6
30R	8.8	17.9
33R	10.7	16.0
42R	10.3	16.4
50R	7.6	19.1
65	7.6	19.1
70R	8.8	17.9
16+97 <sup>29</sup> = 16+98 <sup>29</sup>	BC VL	
70R	7.8	18.9
65R	7.2	19.5
62R	7.0	19.7
60R	8.7	18.0
50R	10.4	16.3
38R	9.9	16.8
31R	7.1	19.6
23R	5.7	21.0
10R	2.6	24.1
⊕	2.8	23.9
14L	3.1	23.6
19L	3.6	23.1

16+98<sup>24</sup>

26.72

21L	1.7	25.0
23L	1.7	25.0
30L	1.4	25.3
50L	1.6	25.1
65L	1.5	25.2
BM #1	6.45	31.99
17+49	1.29	25.48
65L	4.2	27.7
50L	4.8	27.1
23L	4.9	27.0
20L	7.2	24.7
10L	6.8	25.1
⊕	6.9	25.0
7R	6.6	25.3
9R	5.9	26.0
13R	6.1	25.8
23R	8.5	23.4
34R	11.4	20.5
46R	14.3	17.6
50R	14.0	27.9
52R	15.1	16.8
75R	14.3	17.6
80R	13.8	18.1
		25.96

① 17+98<sup>96</sup>

31.91

80R	13.9	18.0
76R	15.1	16.3
50R	14.1	17.8
23R	7.6	24.3
15R	5.6	26.3
11R	5.4	26.5
10R	6.1	25.8
⊕	6.1	25.8
15L	6.0	25.9
20L	6.6	25.3
23L	4.9	27.0
25L	4.2	27.7
50L	3.0	28.9
65L	2.6	29.3
18+49		
65L	0.6	31.3
50L	1.5	30.5
23L	3.5	28.4
20L	3.8	28.1
17L	6.2	25.7
10L	5.6	26.3
⊕	5.5	26.4
12R	5.6	26.3
17R	6.6	25.3
23R	7.9	24.0

18+49

31.91

36R	9.5	22.4
42R	14.0	17.9
50R	14.5	17.4
55R	13.7	18.2
56R	10.7	21.2
72R	10.3	21.6
80R	11.9	20.0
T.P.	11.02	39.06
3.87		28.04
② 18+98 <sup>28</sup>		
80R	19.6	19.5
70R	18.6	20.5
63R	17.1	22.0
50R	16.4	22.7
25R	15.5	23.6
23R	14.7	24.4
17R	12.2	26.9
⊕	12.2	26.9
12L	12.8	26.3
13L	12.0	27.1
16L	11.8	27.3
23L	6.4	32.7
50L	4.4	34.7
65L	3.2	35.9

25

19+49

39.06

65L	+7.7	46.8
50L	+5.8	44.9
29L	+1.8	40.9
23L	4.4	34.7
13L	12.0	27.1
⊕	11.5	27.6
19R	11.4	27.7
23R	13.1	26.0
28R	16.0	23.1
50R	17.2	21.9
61R	18.5	20.6
76R	19.4	19.7
80R	19.0	20.1
T.P.	5.85	33.22
③ 19+99 <sup>00</sup>		
80L	+34.4	67.6
50L	+27.0	60.2
26L	+18.8	52.0
23L	+2.0	35.2
16L	4.1	29.1
11L	5.2	28.0
⊕	5.3	27.9
23R	5.4	27.8
26R	7.9	25.3
36R	10.0	23.2

19+99<sup>00</sup>

33.82

42R	12.1	21.1
50R	12.0	21.2
65R	11.7	21.5
67R	12.5	20.7
76R	13.0	20.2
80R	12.0	21.2
T.P.	5.46	33.82
20+49		
90L	+50.5	84.3
50L	+38.7	72.5
41L	+34.6	68.4
32L	+28.0	61.8
23L	3.4	30.4
16L	5.6	28.2
⊕	5.2	28.6
18R	5.3	28.5
23R	8.2	25.6
30R	12.1	21.7
38R	11.7	22.1
50R	12.0	21.8
58R	13.3	20.5
80R	12.1	21.7
T.P.	5.38	34.81

①

20+9902	34.61 <sup>5</sup>		
80R	13.4	21.1	
50R	12.3	22.2	
23R	10.8	23.7	
15R	5.5	29.0	
⊕	5.2	29.3	
20L	5.4	29.1	
23L	4.4	30.1	
28L	4.2	30.3	
33L	+32.0	66.5	
50L	+42.0	76.5	
82L	+56.0	90.5	
100L	+57.5	92.0	
TP. 5.26	35.82 <sup>7</sup>	4.05	30.56 <sup>†</sup>
21+64			
100L	+60.7	96.4	
70L	+57.8	93.5	
57L	+50.6	86.3	
50L	+47.0	82.7	
34L	4.0	31.7	
26L	5.1	30.6	
23L	5.2	30.5	
⊕	5.2	30.5	
15R	5.7	30.0	
23R	11.3	24.4	

21+64

27R	12.9	22.8	
50R	13.0	22.7	
54R	14.5	21.2	
80R	13.7	22.0	
TP. 4.62	36.83 <sup>5</sup>	3.81	31.91 <sup>5</sup> <del>32.04</del>
22+24			
80R	13.7	22.8	
50R	14.2	22.3	
35R	12.6	23.9	
30R	10.5	26.0	
23R	10.7	25.8	
12R	5.5	31.0	
⊕	5.3	31.2	
23L	5.6	30.9	
28L	5.6	30.9	
29L	4.9	31.6	
38L	3.9	32.6	
50L	+30.5	67.0	
59L	+33.2	69.7	
93L	+59.5	86.0	

27

22+59

36.83

90L	+58.6	95.1
82L	+55.1	91.6
72L	+48.6	85.1
61L	+44.6	81.1
50L	+39.1	75.6
44L	+36.8	73.3
T.P.	3.45	37.14 <sup>v</sup>
36L	4.1	33.0
27L	5.7	31.4
23L	5.7	31.4
⊕	5.6	31.5
10R	5.5	31.6
23R	13.0	24.1
27R	14.4	22.7
50R	14.0	23.1
65R	13.2	23.9
70R	14.5	22.6
85R	14.1	23.0

② 22+99<sup>96</sup>

37.14

85R	14.0	23.1
50R	14.4	22.7
23R	14.4	22.7
8R	5.3	31.8
⊕	5.3	31.8
20L	5.0	32.1
23L	5.0	32.1
28L	5.2	31.9
32L	4.1	33.0
39L	3.2	33.9
50L	+34.0	71.1
56L	+37.1	74.2
90L	+60.6	97.7
T.P.	5.09	37.38 <sup>v</sup>
23+49	4.85	32.29 <sup>v</sup>
95L	+57.5	94.9
56L	+36.4	73.8
50L	+34.4	71.8
39L	4.0	33.4
23L	5.2	32.2
⊕	5.2	32.2
12R	5.7	31.7
20R	12.2	25.2
23R	12.2	25.2
50R	13.5	23.9
85R	12.7	24.7

28

	37.88		
T.P. 5.18	37.41	5.15	32.23
23 + 7962 EC.			
80R		12.4	25.0
60R		12.5	24.9
50R		13.7	23.7
27R		13.0	24.4
23R		11.5	25.9
12R		5.2	32.2
±		5.3	32.1
23L		5.2	32.2
33L		3.8	33.6
45L		+35.8	73.2
50L		+37.8	75.2
55L		+40.2	77.6
70L		+46.9	84.3
95L		+62.6	100.0
T.P. 4.66	37.90	4.17	33.24
24 + 50			
95L		+56.8	94.7
80L		+47.3	85.2
60L		+42.7	80.6
50L		+35.3	73.2
41L		+25.0	62.9
31L		+20.1	57.0
30L		3.2	34.7
23L		4.9	33.0

24 + 50	37.90		
±		5.2	32.7
14R		5.6	32.3
23R		12.6	25.3
25R		13.3	24.6
50R		13.6	24.3
56R		11.7	26.2
63R		13.1	24.8
80R		12.9	25.0
T.P. 5.42	38.66	4.66	33.24
25 + 00			
80R		13.7	25.0
70R		12.8	25.9
50R		14.4	24.3
30R		14.3	24.4
23R		12.1	26.6
14R		5.6	33.1
±		5.3	33.4
19L		5.3	33.4
23L		7.0	34.7
26L		3.1	35.6
34L		+12.8	51.5
50L		+24.7	63.4
86L		+47.5	86.2
T.P. 4.97	39.17	4.46	34.20

L R.

25+30<sup>56</sup> B.C. 39.17

87 L	+45.9	85.1
52 L	+22.7	61.9
43 L	+18.4	57.6
25 L	4.2	35.0
23 L	4.2	35.0
17 L	5.7	33.5
♀	5.3	33.9
16 R	5.3	33.9
23 R	11.2	28.0
30 R	15.0	24.2
50 R	14.7	24.5
60 R	13.5	25.7
80 R	13.8	25.4
T.P. 5.48	39.73	4.92
25+80 <sup>52</sup>		34.25
80 R	14.9	24.8
50 R	14.0	25.7
45 R	14.8	24.9
30 R	15.0	24.7
23 R	11.8	27.9
19 R	10.7	29.0
12 R	5.1	34.6
♀	5.3	34.4
16 L	6.0	33.7
17 L	4.1	35.6

25+80<sup>52</sup>

39.73

23 L	0.5	39.2
28 L	+7.6	47.3
50 L	+15.2	54.9
89 <sup>52</sup> L	+34.7	74.4
T.P. 12.92	48.48	4.17
① 26+30 <sup>52</sup>		35.56
90 L	+31.8	80.3
50 L	+10.4	58.9
28 L	1.1	47.4
23 L	8.0	40.5
18 L	14.2	34.3
♀	13.9	34.6
16 R	13.5	35.0
23 R	16.8	31.7
33 R	21.0	27.5
34 R	22.4	26.1
50 R	22.8	25.7
63 R	23.0	25.5
80 R	23.2	25.3

30



26+80<sup>6</sup>

48.48

80R	23.5	25.0
72R	22.0	26.5
50R	21.8	26.7
30R	20.0	28.5
23R	17.4	31.1
16R	13.6	34.9
⊕	13.9	34.6
19L	13.5	35.0
23L	8.7	39.5
28L	2.0	46.5
50L	+10.8	59.3
90L	+33.3	81.8
T.P. 4.25	40.25	12.48
27+30 <sup>57</sup>		35.00
90L	+42.0	82.3
50L	+18.1	58.4
34L	+8.9	49.2
23L	2.1	88.2
19L	5.0	35.3
⊕	5.2	35.1
15R	4.9	35.4
23R	9.9	30.4
40R	13.0	27.3
50R	13.6	26.7
80R	13.5	26.8

31

90.25

T.P. 6.24	41.87	4.62	38.63
28+16 <sup>29</sup>	E.C.		
80R		14.2	27.7
50R		14.5	27.4
23R		11.0	30.9
20R		9.9	32.0
13R		5.2	36.7
⊕		5.2	36.7
16L		5.7	36.2
17L		5.0	36.9
23L		+2.0	43.9
27L		+11.8	53.7
50L		+21.9	63.8
90L		+42.4	84.3
T.P. 5.39	42.16	5.10	36.71
29+00			
86L		+47.9	90.1
50L		+22.7	64.9
26L		+8.9	51.1
23L		4.4	37.8
⊕		5.2	37.0
16R		5.1	37.1
23R		10.5	31.7
50R		14.0	28.2
80R		14.7	28.5

		42.16		
T.P.	5.33	42.36	51.3	37.03
29	+45			
80R			14.4	28.0
60R			14.8	27.6
50R			14.2	28.2
30R			11.8	30.6
23R			10.2	32.2
15R			4.9	38.5
⊕			5.3	37.1
20L			4.3	38.1
23L			3.9	38.5
29L			+11.4	53.8
50L			+26.9	69.3
85L			+50.8	93.2
T.P.	5.05	42.82	4.59	37.77
30	+01 <sup>80</sup>	B.G	L L	
86L			+50.3	93.1
50L			+26.6	69.4
23L			+11.6	54.4
10L			3.7	39.1
5L			3.7	39.1
5L			5.5	37.3
⊕			5.2	37.6
15R			4.7	38.1
23R			10.6	32.2

		42.82		
30	+01 <sup>80</sup>	42.82		
50R			13.8	29.0
57R			15.2	27.6
80R			14.5	28.3
T.P.	5.60	43.41	5.01	37.81
30	+52			
80R			14.5	28.9
70R			15.5	27.9
50R			14.3	29.1
26R			12.1	31.3
23R			10.1	33.3
16R			4.9	38.5
⊕			5.2	38.2
5L			5.6	37.8
5L			3.8	39.6
18L			+7.6	51.0
23L			+9.6	53.0
50L			+28.6	72.0
84L			+53.2	96.6
T.P.	4.74	48.93	4.22	38.19
① 31	+01 <sup>82</sup>			
84L			+53.2	97.1
50L			+30.3	74.2
23L			+12.8	56.7
4L			4.0	39.9
4L			5.3	38.6

31+01<sup>82</sup>

13.93

⊕		5.2	38.7
17R		4.7	38.2
23R		10.1	33.8
35R		13.2	30.7
50R		14.5	29.4
80R		15.3	28.6
T.P.	4.72	44.35	4.30
			38.63

31+52

80R		15.2	29.2
50R		14.2	30.2
30R		12.2	32.2
23R		7.8	36.6
19R		4.5	39.9
⊕		5.3	39.1
2L		4.8	39.6
3L		3.0	41.4
15L		+4.6	49.0
23L		+7.7	52.1
50L		+22.8	67.2
89L		+46.9	91.3
T.P.	5.57	45.86	4.66
			38.69

② 32+01<sup>84</sup>

45.26

85L		+52.2	97.5
50L		+30.4	75.7
23L		+11.6	56.9
19L		+8.7	54.0
12L		2.3	43.0
7L		3.6	41.7
7L		5.6	39.7
⊕		5.3	40.0
15R		4.6	40.7
23R		10.5	34.8
28R		13.2	32.1
50R		15.5	29.8
80R		15.8	29.5
T.P.	6.19	46.81	4.64
			40.62
32+52			
80R		18.2	28.6
67R		16.0	30.8
50R		17.0	29.8
31R		16.9	29.9
23R		13.5	33.3
8R		4.3	42.5
⊕		5.2	41.6
15L		6.2	40.6
23L		0.2	46.6
34L		+16.9	63.7

33

32+52

46.81

50L	+27.3	74.1
86L	+51.0	97.8
T.P.	4.29	42.85
33+0.186	9.25	38.56
81L	+53.6	96.0
50L	+33.3	75.7
44L	+30.9	73.3
31L	+4.6	47.0
28L	+0.1	42.5
23L	+2.4	42.8
7L	+0.9	43.3
⊕	4.7	37.7
13R	10.7	31.7
23R	11.6	30.8
35R	10.1	32.3
50R	10.9	31.5
80R	13.0	29.4
T.P.	1.99	38.30
33+52	7.04	35.81
90R	7.5	29.8
67R	6.1	31.2
50R	6.5	30.8
23R	7.0	30.3
⊕	4.7	32.6
7L	2.6	34.7

33+52

37.30

23L	+6.6	43.9
41L	+6.4	43.7
42L	+8.8	46.1
50L	+13.7	51.0
68L	+35.5	72.8
T.P.	6.39	38.35
34+08.80	6.39	30.96
E.C.		
76L	+46.0	83.4
60L	+36.0	73.4
60L	+11.4	48.8
53L	+9.2	46.6
52L	+8.0	45.4
50L	+8.0	45.4
23L	+7.9	45.3
20L	+7.7	45.1
3L	4.4	33.0
⊕	4.8	32.6
7R	7.2	30.2
14R	5.3	32.1
23R	5.3	32.1
50R	7.1	30.3
90R	7.5	29.9
T.P.	4.38	38.83
	2.40	34.95

67  
34

3933

34+65 <sup>6.9</sup>	B	C	L	R
90R			8.0	31.3
70R			9.6	29.7
50R			7.7	31.6
30R			9.8	29.5
23R			8.6	30.7
10R			8.6	30.7
⊕			4.8	34.5
18L			+7.7	47.0
23L			+7.8	47.1
41L			+8.3	47.6
47L			+8.0	47.3
48L			+9.3	48.6
50L			+32.5	71.6
75L			+48.0	87.3
T.P.	8.29	43.24	4.38	34.95
35+15 <sup>00</sup>				
90L			+78.0	121.2
83L			+70.0	113.2
77L			+64.0	107.2
45L			+35.0	78.2
41L			+8.6	51.8
39L			+7.7	50.9
38L			+5.4	48.6
23L			+4.9	48.1
15L			+4.7	47.9

35+15<sup>00</sup>

43.24

⊕			4.6	38.6
8R			10.1	33.1
23R			12.3	30.9
50R			13.0	30.2
90R			13.2	30.0
T.P.	10.68	48.72	4.50	38.74
35+65 <sup>6.9</sup>				
90R			19.4	30.0
55R			17.2	32.2
50R			17.0	32.4
35R			20.3	29.1
23R			18.5	30.9
⊕			4.6	44.8
8L			+0.5	49.9
23L			+0.5	49.9
28L			+0.6	50.0
31L			+2.3	51.7
50L			+29.1	78.5
77L			+62.0	111.4
92L			+75.0	124.4
T.P.	6.03	54.43	1.02	48.40

36 + 16 <sup>00</sup>	54.43		
90L	+93.0	127.4	
75L	+61.4	115.8	
50L	+33.4	87.8	
23L	+4.2	58.6	
20L	3.4	51.0	
2L	3.1	51.3	
⊕	4.1	55.3	
23R	20.3	34.1	
27R	22.8	31.6	
44R	21.3	33.1	
50R	23.1	31.3	
90R	22.4	32.0	
T.P. 9.35	57.75	6.03	48.40 <sup>3</sup>
36 + 65 <sup>65</sup>			
90R	26.0	31.8	
70R	26.3	31.5	
50R	23.8	34.0	
30R	22.4	35.4	
23R	19.0	38.8	
2R	5.2	52.6	
⊕	5.2	52.6	
1AL	5.4	52.4	
15L	0.0	57.8	

36 + 65 <sup>65</sup>	57.75		
23L	+9.8	67.6	
50L	+37.2	95.0	
77L	+60.4	118.2	
T.P. 10.19	58.59	9.35	48.40 <sup>✓</sup>
37 + 15 <sup>65</sup>			
92L	+54.0	112.6	
57L	+38.7	97.3	
50L	+31.9	90.5	
23L	+7.7	68.3	
19L	+6.0	64.6	
18L	4.5	54.1	
⊕	4.8	53.8	
23R	20.6	38.0	
40R	24.0	34.6	
50R	29.5	34.1	
90R	26.0	32.6	
T.P. 11.73	60.33	10.19	48.40 <sup>✓</sup>
③ 37 + 65 <sup>66</sup>			
90R	26.4	33.9	
50R	22.0	38.3	
23R	15.0	45.3	
7R	4.5	55.8	
⊕	5.0	55.3	
11L	4.7	55.6	
12L	2.9	57.4	

37 + 65<sup>66</sup>

60 33

23 L		+9.9	70.2	
50 L		+31.6	91.9	
80 L		+50.00	110.3	
100 L		+60.00	120.3	
T.P	5.82	62.02	4.13	56.20 <sup>✓</sup>
38 + 15 <sup>6</sup>				
97 L		+58.0	120.0	
80 L		+49.0	111.0	
50 L		+30.1	92.1	
23 L		+11.3	73.3	
10 L		5.2	56.8	
¢		5.5	56.5	
9 R		5.1	56.9	
16 R		10.7	51.3	
23 R		13.1	48.9	
50 R		20.1	41.9	
80 R		25.7	36.3	
90 R		26.4	35.6	
T.P	6.64	62.84 <sup>✓</sup>	5.82	56.80 <sup>✓</sup>

38 + 72<sup>30</sup>62.84  
E.C.

90 R		24.6	38.2	
70 R		21.4	42.4	
50 R		18.8	44.0	
23 R		14.3	48.5	
20 R		13.0	49.8	
12 R		5.1	57.7	
¢		5.0	57.8	
6 L		4.9	57.9	
6 L		3.8	59.0	
11 L		3.1	59.7	
73 L		+10.0	72.8	
40 L		+24.4	87.2	
50 L		+31.6	94.4	
77 L		+46.7	109.5	
94 L		+56.7	119.5	
T.P	9.11	65.81 <sup>✓</sup>	6.64	56.20 <sup>✓</sup>
39 + 32 <sup>02</sup>				
90 L		+55.0	120.3	
74 L		+45.8	111.1	
50 L		+34.9	99.7	
37 L		+25.3	90.6	
23 L		+13.0	78.3	
14 L		+ 9.1	74.4	
2 L		5.1	60.2	
¢		5.4	59.9	

37

39 + 32 <sup>00</sup>	65.31		
18 R		5.1	60.2
23 R		11.5	53.8
31 R		16.2	49.1
50 R		19.4	45.9
90 R		24.1	41.2
T.P. 1032	66.52	9.11	56.20
39 + 72 <sup>00</sup>			
100 R		25.1	41.4
50 R		16.4	50.1
33 R		11.4	55.1
23 R		6.6	59.9
20 R		4.6	61.9
⊕		5.5	61.0
1 L		2.6	63.9
15 L		+9.2	75.7
23 L		+14.6	81.1
50 L		+29.5	96.0
73 L		+43.7	110.2
99 L		+55.0	121.5
T.P. 1140	67.60	10.32	56.28

40 + 50 <sup>00</sup>	67.60		
104 L		+58.6	126.2
87 L		+49.2	116.8
50 L		+26.5	94.1
23 L		+12.0	79.6
9 L		+3.5	71.1
2 L		2.5	65.1
1 L		5.2	62.4
⊕		5.4	62.2
20 R		4.5	63.1
23 R		6.8	60.8
29 R		11.7	55.9
50 R		12.1	50.5
90 R		24.0	43.6
T.P. 230	69.42	0.48	67.12
41 + 00			
90 R		25.1	44.3
50 R		21.8	47.6
33 R		14.2	55.2
23 R		7.9	61.5
20 R		5.2	64.2
10 R		5.7	63.7
⊕		5.3	64.1
1 L		3.8	65.6
23 L		+12.6	82.0
50 L		+28.1	97.5



41 +00	69.42		
84L	+44.9	114.3	
100L	+54.3	123.7	
T.P. 3.42	70.54	2.30	67.12 <sup>✓</sup>
41 +50			
95L	+51.8	122.3	
82L	+46.2	116.7	
50L	+22.9	93.4	
23L	+9.0	79.5	
8L	+11.6	72.1	
⊕	4.0	66.5	
1R	5.2	65.3	
11R	5.3	65.2	
20R	5.2	65.3	
23R	7.7	62.8	
36R	14.8	55.7	
50R	17.6	52.9	
90R	23.1	47.4	
T.P. 14.25	81.37 <sup>✓</sup>	3.42	67.12 <sup>✓</sup>
42 +00			
90R	30.0	51.4	
50R	25.8	55.6	
38R	23.5	57.9	
28R	14.4	67.0	
23R	14.1	67.3	
5R	14.3	67.1	

		81.37	
⊕		7.9	73.5
3L		5.6	75.8
23L		+6.4	87.8
50L		+27.8	109.2
89L		+47.7	129.1
T.P. 14.30	81.42 <sup>✓</sup>	14.25	67.12 <sup>✓</sup>
42 +50 <sup>00</sup>			
94L		+53.6	135.0
86L		+48.3	129.7
50L		+27.0	108.4
23L		+8.9	90.3
⊕		4.7	76.7
7R		8.2	73.2
11R		13.1	68.3
23R		12.5	68.9
36R		11.9	69.5
50R		18.7	62.7
90R		26.3	55.1
T.P. 0.17	68.58 <sup>✓</sup>	13.01	68.41 <sup>✓</sup>
BM #2		12.12	55.66 <sup>✓</sup>
ATP 13.03	81.43		68.40
T.P. 5.08	85.65 <sup>✓</sup>	0.86	80.51 <sup>✓</sup>

43+00 <sup>2</sup>		85.65	
100R	29.5	56.2	
62R	23.8	65.9	
58R	20.0	65.7	
50R	16.0	69.7	
46R	19.8	70.9	
41R	15.8	69.9	
38R	14.8	70.9	
23R	15.4	70.3	
17R	16.4	69.3	
9R	6.7	79.0	
⊕	4.9	80.8	
23L	+1.8	87.5	
50L	+19.1	104.8	
85L	+92.8	128.5	
95L	+47.3	133.0	
T.P. 7.62	88.17	5.08	80.57 ✓
43+50			
95L	+25.2	113.4	
50L	+10.4	98.6	
23L	+2.7	90.9	
⊕	4.8	83.4	
5R	6.6	81.6	
12R	16.6	71.6	
23R	16.4	71.8	

43+50 <sup>2</sup>		88.17	
37R	15.4	72.8	
45R	16.3	71.9	
50R	19.6	68.6	
58R	24.5	63.7	
65R	24.5	63.7	
68R	23.3	64.9	
80R	26.7	61.5	
100R	30.6	57.6	
T.P. 5.03	81.21 ✓	12.01	76.18 ✓
44+00			
100R	24.9	56.3	
90R	23.3	57.9	
88R	23.7	57.5	
82R	23.3	57.9	
76R	20.5	60.7	
58R	15.8	65.4	
50R	15.0	66.2	
39R	8.1	73.1	
32R	7.6	73.6	
23R	9.3	72.9	
4R	8.9	72.3	
⊕	4.5	76.7	
4L	0.8	80.4	
23L	+5.0	86.2	
50L	+13.0	94.2	

44+00	81.21		
75L		+23.3	104.5
85L		+26.0	107.2
T.P. 2.89	79.07	5.03	76.18 ✓
44+50			
90L		+40.3	119.4
50L		+13.1	92.2
23L		+1.9	81.0
14L		+0.4	79.5
5L		4.7	74.4
⊕		5.3	73.8
23R		4.7	74.4
33R		5.7	73.2
42R		10.8	68.3
50R		12.5	66.6
54R		13.1	66.0
64R		16.7	62.4
80R		19.0	60.1
100R		25.2	53.9
T.P. 4.25	80.43 ✓	2.89	76.18 ✓
45+00			
100R		26.0	54.4
85R		24.1	56.3
78R		19.1	61.3
65R		17.3	63.1
63R		16.3	64.1

41

45+00	80.43		
50R		12.6	67.8
47R		11.7	68.7
36R		9.8	70.6
28R		5.1	75.3
23R		4.8	75.6
21R		4.0	76.4
19R		4.5	75.9
⊕		5.2	75.2
6L		5.1	75.3
7L		2.5	77.9
13L		+4.0	84.4
23L		+7.1	87.5
50L		+14.5	94.9
60L		+17.9	98.3
90L		+36.6	117.0
T.P. 4.80	80.98 ✓	4.25	76.18 ✓
45+142L	B.C.	L L	
90L		+33.3	114.3
65L		+20.0	101.0
50L		+15.5	96.5
23L		+7.3	88.3
15L		+4.6	85.6
8L		2.8	78.2
7L		5.2	75.8
⊕		5.3	75.7

45+142L	80.98		
17R	4.9	76.1	
20R	4.2	76.8	
23R	5.2	75.8	
30R	6.0	75.0	
36R	10.3	70.7	
50R	13.7	67.3	
60R	16.2	64.8	
63R	17.9	63.1	
76R	19.4	61.6	
83R	24.5	56.5	
100R	26.4	54.6	
T.P. 7.41	83.59	4.80	76.18
45+89			
100R	27.1	56.5	
85R	25.2	58.4	
80R	21.4	62.2	
55R	19.6	64.0	
50R	17.6	66.0	
48R	15.1	68.5	
23R	6.4	77.2	
18R	5.9	77.7	
14R	4.7	78.9	
12R	5.1	78.5	
⊕	5.3	78.3	

45+89	83.59		
13L		5.3	78.3
19L		+1.1	84.7
23L		+1.6	85.2
50L		+13.4	97.0
90L		+31.7	115.3
T.P. 8.81	84.99	7.91	76.18
46+486L	E.C. = 46.55		
90L		+39.9	124.9
50L		+17.1	102.1
30L		+6.0	91.0
23L		+1.9	86.9
17L		4.0	81.0
11L		5.4	79.6
⊕		5.2	79.8
13R		5.6	79.4
16R		7.7	77.3
23R		7.5	77.5
34R		15.6	69.4
50R		20.0	65.0
58R		20.0	65.0
78R		22.0	63.0
100R		26.5	58.5
T.P. 1.51	86.16	0.34	84.65

47+00	86.16		
100R	23.7	62.5	
80R	19.7	66.5	
50R	16.0	70.2	
35R	12.3	73.9	
23R	7.0	79.2	
20R	5.0	81.2	
±	5.0	81.2	
7L	4.1	82.1	
13L	+1.4	87.6	
23L	+6.5	92.7	
50L	+20.5	106.7	
85L	+42.5	128.7	
104L	+53.5	139.7	
47+65			
90L	+39.4	125.6	
50L	21.7	107.9	
45L	+13.9	100.1	
39L	+9.5	95.7	
37L	+5.6	91.8	
23L	3.4	82.8	
±	1.5	84.7	
8R	2.3	83.9	
9R	3.9	82.3	
23R	3.7	82.5	
31R	3.3	82.9	

	86.16		
32R	5.2	81.0	
39 <sup>5</sup> R	5.2	81.0	
41R	3.8	82.4	
50R	7.7	78.5	
100R	18.3	67.9	
T.P.	4.63	89.38	1.51
48+10			
100R	18.2	71.1	
66R	10.9	78.4	
54R	12.0	77.3	
50R	10.7	78.6	
45R	9.4	79.9	
34R	8.4	80.9	
27R	5.8	83.5	
23R	6.0	83.3	
2R	5.3	84.0	
±	4.4	84.9	
23L	1.7	87.6	
50L	1.1	88.2	
54L	0.4	88.9	
90L	+25.0	114.3	
T.P.	5.13	89.78	4.63

48+50	89.78		
95L		+23.1	112.9
50L		0.0	89.8
23L		3.5	86.3
14L		5.2	84.6
⊕		5.4	84.4
13R		5.6	84.2
10R		8.2	81.6
21R		12.5	77.3
23R		13.0	76.8
50R		14.3	75.5
63R		13.8	76.0
92R		15.6	74.2
100R		16.8	73.0
T.P. 1.83	86.48	5.13	84.65
49+00			
100R		21.7	64.8
65R		12.6	73.9
50R		14.1	72.4
49R		10.3	76.2
23R		9.0	77.5
10R		8.7	77.8
7R		6.8	79.7
⊕		4.1	82.4
3L		3.0	83.5
23L		2.5	84.0

49+00	86.48		
33L		1.5	85.0
50L		0.2	86.3
70L		1.2	85.3
49+50			
80L		2.2	84.3
50L		2.2	84.3
23L		3.6	82.9
18L		4.1	82.4
⊕		10.7	75.8
23R		11.1	75.4
44R		11.1	75.4
46R		16.7	69.8
50R		18.6	67.9
64R		23.6	62.9
100R		27.4	59.1
50+00			
100R		31.0	55.5
92R		29.7	56.8
91R		28.0	58.5
81R		27.3	59.2
70R		21.0	65.5
50R		21.2	65.3
45R		16.6	69.9
43R		11.6	74.9
23R		11.0	75.5
⊕		11.4	75.1

50+00	86.48		
7L		11.2	75.3
11L		8.8	77.7
23L		6.6	79.9
33L		6.0	80.5
50L		5.3	81.2
65L		5.5	81.0
80L		5.6	80.9
50+50			
80L		6.8	79.7
50L		7.3	79.2
23L		7.2	79.3
10L		10.7	75.8
⊕		11.5	75.0
23R		11.3	75.2
44R		11.2	75.3
45R		13.0	73.5
50R		18.0	68.5
67R		18.2	68.3
79R		27.5	59.0
95R		29.6	56.9
100R		30.2	56.3

51+00	86.48		
100R		29.7	56.8
65R		25.7	60.6
65R		15.4	71.1
50R		17.2	69.3
40R		11.8	74.7
32R		10.8	75.7
23R		11.2	75.3
⊕		11.1	75.4
14L		11.5	75.0
23L		8.7	77.8
50L		6.8	79.7
57L		7.5	79.0
80L		7.1	79.4
T.P. 0.95	81.44	5.99	80.99
51+50			
70L		2.5	78.9
65L		2.4	79.0
63L		1.2	80.2
50L		0.3	81.1
40L		0.3	81.1
23L		4.6	76.8
18L		6.0	75.4
⊕		5.7	75.7
23R		5.6	75.8
29R		5.9	75.5

51 + 50

81.44

36R	10.2	71.2
42R	10.7	70.7
44R	8.4	73.0
50R	9.1	72.3
53R	9.7	71.7
53R	20.7	60.7
100R	24.0	57.4
52 + 00		
100R	24.6	56.8
55R	22.0	59.4
50R	10.5	70.9
40R	9.7	71.7
32R	9.4	72.0
27R	5.2	76.2
23R	5.3	76.1
⊕	5.8	75.6
15L	7.1	74.3
23L	4.6	76.8
56L	3.1	78.3
64L	2.1	79.3
70L	1.5	79.9

52 + 50

81.44

70L	1.2	80.2
64L	1.4	80.0
50L	3.1	78.3
35L	5.3	76.1
23L	5.6	75.8
8L	4.5	76.9
⊕	4.6	76.8
23R	4.7	76.7
27R	5.6	75.8
27R	8.0	73.4
35R	8.5	72.9
36R	6.9	74.5
49R	10.3	71.1
50R	23.0	58.4
100R	25.1	56.3
53 + 00		
100R	25.3	56.1
65R	25.3	56.1
37R	12.6	68.8
35R	3.7	77.7
33R	2.9	78.5
23R	5.8	75.6
19R	5.5	75.9
15R	3.9	77.5
⊕	4.1	77.3

46



53+00	81.44		
12L	4.0	77.4	
23L	5.3	76.1	
41L	4.0	77.4	
50L	1.8	79.6	
61L	0.0	81.4	
70L	10.2	81.6	

53+50			
70L	+1.0	82.4	
55L	+0.8	82.2	
50L	0.3	81.1	
44L	3.0	78.4	
23L	4.3	77.1	
⊕	3.8	77.6	
23R	3.2	78.2	
50R	4.0	77.4	
52R	4.7	76.7	
57R	15.7	65.7	
63R	26.0	55.4	
100R	26.6	54.8	

54+00			
100R	5.3	76.1	
90R	12.0	69.4	
70R	16.2	65.2	
55R	13.0	68.4	
50R	9.0	72.4	

54+00	81.44		
40R	3.5	77.9	
35R	2.1	79.3	
23R	2.3	79.1	
⊕	2.0	79.4	
15L	2.2	79.2	
T.P	12.58	91.92	2.10 79.39
23L		11.0	80.9
45L		6.8	85.1
50L		6.6	85.3
65L		6.6	85.3
70L		7.2	84.7

54+20			
70L	6.2	85.7	
66L	6.9	85.0	
57L	5.6	86.3	
50L	5.7	86.2	
40L	5.7	86.2	
23L	9.6	82.3	
15L	12.5	79.4	
⊕	12.3	79.6	
23R	12.2	79.7	
33R	11.9	80.0	
35R	0.8	91.1	
50R	2.4	89.5	
55R	2.7	89.2	
84R	10.8	81.1	

54+20

91.92

100R 15.4 76.5

55+00

86R 13.4 78.5

70R 5.0 86.9

30R 0.4 91.5

28R 11.8 80.1

23R 6 12.4 79.5

E 11.0 89.9

20L 3.6 88.3

23L 3.8 88.1

50L 3.9 88.0

66L 0.0 91.9

TR 7.15 90.73 8.34 83.58

55+50

80L +1.7 98.4

50L +0.2 90.9

44L 2.2 88.5

23L 2.4 88.3

E 2.4 88.3

8R 4.5 86.2

13R 9.5 81.2

23R 9.6 81.1

28R 9.6 81.1

29R 2.8 87.9

50R 3.4 87.3

55+50

90.73

67R 6.0 84.7

78R 13.0 77.7

56+00

87R 14.7 76.0

75R 12.2 78.5

70R 10.5 80.2

58R 10.3 80.4

50R 7.3 83.4

30R 4.4 86.3

23R 4.7 86.0

10R 3.8 86.9

E 4.6 86.1

23L 4.9 85.8

29L 7.6 86.1

33L +1.8 92.5

50L +4.0 94.7

57L +4.7 95.4

70L +8.6 99.3

80L +10.3 101.0

56+50

90L +10.9 101.6

50L +3.5 94.2

23L 0.7 90.0

21L 1.5 89.2

19L 7.1 83.6

56+50		9073	
±	6.4	84.3	
23R	5.3	85.4	
26R	7.6	83.1	
43R	9.7	81.0	
50R	11.4	79.3	
56R	13.7	77.0	
81R	15.7	75.0	
57+00			
80R	20.6	70.1	
75R	18.8	71.9	
61R	18.2	72.5	
54R	15.4	75.3	
50R	15.3	75.4	
40R	13.8	76.9	
30R	10.7	80.0	
23R	8.1	82.6	
15R	7.2	73.5	
±	9.2	82.5	
9L	8.8	81.9	
15L	2.7	88.0	
23L	1.0	89.7	
50L	+4.7	95.4	
80L	+12.4	103.1	

57+50		9073	
80L	+17.3	108.0	
50L	+8.7	99.4	
23L	+2.1	92.8	
8L	1.2	89.5	
4L	9.9	80.8	
±	9.5	81.2	
23R	9.2	82.5	
26R	7.6	83.1	
30R	9.3	81.4	
50R	13.8	76.9	
56R	15.4	75.3	
60R	19.6	73.1	
69R	18.1	72.6	
77R	20.4	70.3	
86R	21.4	69.3	
58+13			
85R	21.3	69.4	
80R	21.0	69.7	
77R	18.0	72.7	
50R	12.8	77.9	
23R	8.6	82.1	
±	10.8	79.9	
1L	10.8	79.9	
9L	2.1	88.6	
23L	+0.7	91.4	

56+13	90.73		
50L		+7.4	98.1
80L		+16.7	107.4
58+70			
80L		+21.7	112.4
50L		+11.7	102.4
23L		+1.8	92.7
6L		4.4	86.3
⊕		9.6	81.1
3R		12.2	78.5
22R		11.1	79.6
23R		11.2	79.5
32R		14.5	76.2
50R		18.2	72.5
70R		21.2	69.5
85R		25.6	65.1
T.P.	6.71	96.81	0.63 90.10
59+50			
90R		38.7	58.1
50R		33.4	63.4
43R		31.5	65.3
25R		18.1	78.7
23R		17.9	78.9
3R		19.5	77.3
⊕		17.2	79.6
23L		7.1	89.7

59+50	96.81		
50L		+50	101.8
76L		+26.0	122.8
T.P.	0.29	84.14	12.96 83.85
<del>60+00</del>			
90L		+39.4	123.5
50L		+18.9	103.0
23L		+6.2	90.3
⊕		4.1	80.0
3R		7.3	76.8
23R		7.3	76.8
28R		7.3	76.8
45R		20.6	63.5
50R		22.0	62.1
68R		26.4	57.7
95R		28.7	55.4
60+50			
95R		28.5	55.6
75R		26.5	57.6
50R		21.0	63.1
30R		7.5	76.6
23R		7.6	76.5
8R		8.4	75.7
⊕		2.2	81.9
T.P.	3.15	87.00	0.29 93.85
23L		+7.0	94.0

26.0

60+50	87.00		
50L		+19.9	106.9
90L		+40.3	127.3
T.P. 5.61	89.46	3.15	83.85
<u>61+00</u>			
90L		+39.0	128.5
50L		+22.8	112.3
23L		+8.5	98.0
£		4.7	84.8
8R		8.2	81.3
12R		13.4	76.1
23R		12.7	76.8
34R		12.8	76.7
50R		23.9	65.6
53R		25.8	63.7
85R		33.6	55.9
95R		34.4	55.1
T.P. 6.84	90.69	5.61	83.85
61+40			
95R		32.6	58.1
55R		25.2	65.5
50R		22.7	68.0
39R		14.0	76.7
23R		14.0	76.7
15R		14.5	76.2
14R		11.1	79.6
£		5.1	85.6

61+40	70.69		
23L		+6.5	97.2
50L		+20.0	110.7
90L		+36.5	127.2
T.P. 3.39	87.58	6.52	84.17
61+75			
90L		+31.9	119.5
50L		+13.9	101.5
23L		+3.9	91.5
£		4.9	82.7
17R		10.5	77.1
18R		11.2	76.4
23R		11.0	76.6
45R		10.6	77.0
50R		14.6	73.0
57R		18.8	68.8
100R		26.0	61.6
62+42			
100R		25.0	62.6
66R		14.5	69.1
54R		9.8	77.8
50R		10.0	77.6
27R		10.8	76.8
26R		8.8	78.8
23R		6.0	81.6
20R		3.9	83.7
T.P. 11.77	95.94	3.39	84.17

62+42	95.94		
♀		5.0	90.9
23L		+6.0	101.9
50L		+18.4	114.3
90L		+33.2	129.1
T.P. 11.80	95.97	11.77	84.12 ✓

63+00			
95L		+28.5	124.5
50L		+14.3	110.3
23L		+3.0	99.0
♀		9.9	91.1
23R		12.2	83.8
25R		12.7	83.3
33R		18.7	77.3
50R		17.9	78.1
59R		18.0	78.0
66R		21.7	74.3
100R		27.0	69.0

63+43			
100R		25.0	71.0
69R		20.0	76.0
63R		17.4	78.6
50R		17.5	78.5
37R		19.0	78.0
36R		17.2	78.8
28R		13.6	82.4

63+43	95.97		
23R		12.8	83.2
♀		7.9	88.1
23L		2.0	94.0
50L		+5.4	101.4
90L		+15.5	111.5

64+00			
90L		+26.0	122.0
50L		+12.0	108.0
23L		+3.1	99.1
♀		4.2	91.8
23R		11.0	85.0
33R		13.6	82.4
38R		17.2	78.8
50R		17.0	79.0
65R		16.9	79.1
71R		21.0	75.0
100R		24.6	71.4

64+50			
100R		24.6	71.4
75R		22.0	74.0
66R		16.1	79.9
50R		16.5	79.5
42R		16.8	79.2
47R		13.7	82.3
23R		9.2	86.8

64+50	95.97		
⊕		0.7	95.3
T.P. 6.85	99.96	2.86	93.11
23L		+9.0	104.0
50L		+15.4	115.4
95L		+31.8	131.8
T.P. 6.77	99.88	6.85	93.11
65+00			
95L		+28.6	128.5
50L		+14.1	114.0
23L		+4.4	104.3
⊕		4.5	95.4
23R		12.6	87.3
40R		16.9	83.0
45R		19.6	80.3
50R		19.2	80.7
73R		18.4	81.5
81R		23.1	76.8
100R		25.2	74.7
65+50			
100R		20.6	79.3
76R		17.0	82.9
50R		18.7	81.2
42R		12.5	87.4
23R		9.4	90.5
⊕		4.3	95.6

65+50	99.88				
23L		+1.8	101.7		
50L		+10.0	109.9		
90L		+21.6	121.5		
66+00					
90L		+17.6	117.5		
50L		+8.6	108.5		
23L		+2.7	102.6		
⊕		2.2	97.7		
23R		6.8	93.1		
45R		10.7	89.2		
T.P. 0.81	90.22	10.47	89.41		
50R		5.1	85.1		
53R		8.0	82.2		
82R		6.1	84.1		
100R		9.2	81.0		
T.P. 5.15	84.19	11.23	78.94		
BM #4	12.34	88.67	7.89	76.25	76.33
66+50					
100R		4.7	84.0		
86R		3.4	85.3		
72R		3.9	84.8		
57R		5.3	83.4		
T.P. 12.17	100.75	0.09	88.58		

66 + 50

100.75

52R	10.2	90.6
50R	9.6	91.2
23R	5.8	95.0
±	2.8	98.0
23L	+1.0	101.8
50L	+6.6	107.4
87L	+13.0	113.8
67+00		
90L	+16.0	116.8
50L	+9.6	110.4
23L	+4.8	105.6
±	+0.1	100.9
23R	3.4	97.4
50R	7.4	93.4
52R	7.7	92.9
58R	13.5	87.3
59R	16.3	84.5
75R	14.6	86.2
89R	14.2	86.6
100R	15.5	85.3

67+50

100.75

100R	15.0	85.8
86R	13.6	87.2
58R	15.1	85.7
52R	6.8	94.0
50R	6.4	94.4
23R	1.5	99.3
±	+2.9	103.7
23L	+7.4	108.2
50L	+13.0	113.8
90L	+22.5	123.3
67+87 <sup>24</sup> B.C. L	L	
90L	+22.2	123.0
50L	+13.2	114.0
23L	+6.9	107.7
±	+1.9	102.7
23R	3.1	97.7
44R	6.3	94.5
48R	14.0	86.8
50R	14.0	86.8
84R	12.3	88.5
100R	15.2	85.6
T.P.	6.18	101.84 ✓
	5.09	95.66 ✓

54



68+37	101.84		
100R		21.6	80.2
70R		17.3	84.7
54R		11.8	90.0
50R		12.2	89.6
29R		13.6	88.2
23R		8.7	93.1
22R		7.0	94.8
⊕		2.7	99.1
23L		+2.0	103.8
50L		+9.3	111.1
90L		+21.0	122.8
69+03 <sup>26</sup>	c-t curve		
90L		+37.2	139.0
50L		+17.5	119.3
23L		+4.5	106.3
⊕		4.7	97.1
6R		8.1	93.7
11R		11.8	90.0
23R		11.2	90.6
32R		11.0	90.8
41R		17.6	84.2
50R		19.8	82.0
100R		26.0	75.8

69+54	101.84		
100R		29.5	72.3
50R		23.9	77.9
34R		18.5	83.3
23R		10.3	91.5
3R		10.4	91.4
⊕		7.3	94.5
4L		3.8	98.0
23L		+4.7	106.5
50L		47.4	119.2
95L		+37.4	139.2
70+20 <sup>68</sup>	E.C.		
95L		+35.0	136.8
50L		+18.5	120.3
23L		+9.2	111.0
6L		3.1	98.7
2L		9.2	92.6
⊕		7.0	92.8
18R		8.5	93.3
23R		12.4	89.4
32R		18.8	83.0
50R		24.6	77.2
58R		26.3	75.5
100R		30.0	71.8
T.R	6.29 100.27	7.86	93.98

71+00	100.27		
100R		22.0	78.3
64R		18.6	81.7
50R		16.5	83.8
27R		12.0	88.3
23R		9.1	91.2
18R		5.2	95.1
⊕		5.1	95.2
5L		5.4	94.9
6L		3.8	96.5
12L		+0.6	100.9
23L		+5.0	105.3
50L		+16.0	116.3
90L		+36.4	136.7
T.P.	2.92	100.82	2.37
71+50			97.90
95L		+34.6	135.4
50L		+14.3	115.1
23L		+4.0	104.8
9L		0.6	100.2
2L		3.5	97.3
⊕		5.2	95.6
8R		4.5	96.3
23R		4.4	96.4
27R		4.6	96.2
33R		8.0	92.8

71+50	100.82		
50R		10.5	90.3
90R		16.2	84.6
72+00			
90R		12.6	88.2
57R		6.2	94.6
50R		4.8	96.0
46R		4.0	96.8
43R		2.2	98.6
23R		2.9	97.9
13R		3.2	97.6
11R		0.2	98.6
T.P.	10.27	108.19	2.92
⊕			5.1
23L		+0.4	108.6
50L		+8.3	116.5
95L		+25.1	133.3
T.P.	8.31	115.91	0.59
72+50			107.60
95L		+20.8	136.7
50L		+5.2	121.1
23L		1.3	114.6
⊕		5.0	110.9
23R		9.5	106.4
24R		9.8	106.0
29R		17.2	98.7

72+50

115.91

50R	16.0	99.9
61R	14.9	101.0
71R	18.6	97.3
90R	22.1	93.8
100R	23.8	92.1

73+912 B.C. L R

100R	20.9	95.0
81R	17.8	98.1
72R	13.9	92.0
50R	14.8	101.1
41R	15.2	100.7
35R	9.2	106.7
23R	4.8	111.1
⊕	1.6	114.3
23L	+3.4	119.3
50L	+9.4	125.3
95L	+20.9	136.8

73+69<sup>18</sup>

90L	+25.5	141.4
70L	+15.7	131.6
50L	+10.7	126.6
23L	+4.5	120.4
⊕	1.3	114.6
25R	6.4	109.5
27R	7.4	108.5

73+69<sup>18</sup>

115.91

35R	15.1	100.8
50R	14.2	101.7
64R	13.0	102.9
70R	16.3	99.6
100R	22.8	93.1

74+19<sup>19</sup>

100R	26.8	89.1
56R	17.5	98.4
50R	15.3	100.6
48R	13.3	102.6
23R	14.3	101.6
TR	6.92	115.10
17R	9.2	108.68
⊕	9.2	105.9
⊕	9.9	110.2
23L	+3.2	118.3
35L	+9.1	124.2
50L	+15.8	130.9
90L	+43.7	158.8

TR 6.80

115.48

74+69<sup>19</sup>

95L	+53.0	168.5
87L	+47.0	162.5
50L	+21.9	137.4
23L	+6.7	122.2
⊕	4.9	110.6

57

74+69<sup>19</sup>

115.48

12R	12.5	103.0
23R	12.1	103.4
36R	12.2	103.3
43R	17.3	98.2
50R	19.2	96.3
100R	27.0	88.5

75+19<sup>20</sup>

100R	28.0	87.5
50R	21.0	94.5
44R	19.4	96.1
32R	10.9	104.6
23R	11.2	104.3
10R	11.1	104.4
8R	7.2	108.3
4R	4.0	111.5
±	2.5	113.0

T.P. 9.22 117.90 6.80 108.68

A.L 1.7 116.2

23L +9.4 126.3

50L +25.7 143.6

87L +48.6 166.5

95L +54.2 172.1

TR 5.84 122.30 1.44 116.46

75+69<sup>23</sup>

122.30

90L	+42.6	164.9
50L	+21.5	143.8
23L	+7.3	129.6
±	4.1	118.2
5R	7.2	115.1
10R	16.7	105.6
23R	16.4	105.9
33R	16.0	106.3
45R	23.6	98.7
50R	24.9	97.4
65R	30.0	92.3
95R	35.0	87.3
T.P.	10.83	127.29

76+19<sup>23</sup>

96R	34.1	93.2
61R	28.5	98.8
50R	26.3	101.0
46R	24.7	102.6
39R	20.9	106.4
31R	19.8	107.5
23R	21.5	105.8
15R	20.6	106.7
±	12.0	115.3
2L	6.7	120.6

58

76+19 <sup>23</sup>	127.29		
23L		+0.3	127.6
50L		+12.4	139.7
104L		+31.2	158.5
TP 0.16	114.70	12.75	114.54

76+49			
80L		+17.6	132.3
68L		+18.2	132.9
50L		+16.2	130.9
48L		+16.2	130.9
23L		+9.8	124.7
8L		+4.6	119.3
⊕		9.4	105.3
23R		9.0	105.7
31R		8.9	105.8
50R		12.1	102.6
90R		18.0	96.7
TP 0.96	115.50	0.16	114.54

76+6929			
99R		20.6	94.9
90R		18.0	97.5
70R		14.4	101.1
50R		13.2	102.3
30R		12.1	103.4
25R		10.4	105.1
23R		10.4	105.1

76+6929	115.50		
⊕			
3L		10.8	104.7
8L		10.7	104.8
23L		+0.7	116.2
50L		+2.6	118.1
56L		+11.3	126.8
90L		+11.5	127.0
77+04			
90L		+9.4	124.9
50L			
23L		7.1	108.4
11L		9.7	105.8
⊕		7.6	107.9
16R		11.0	104.5
23R		10.8	104.7
37R		10.9	104.6
50R		14.1	101.4
67R		21.4	94.1
83R		24.4	91.1
90R		28.0	87.5
		27.6	87.9
		29.9	85.6

77+34	115.50		
95R	46.0	69.5	
50R	37.0	78.5	
30R	26.6	88.9	
23R	21.0	94.5	
7R	9.6	105.9	
⊕	11.0	104.5	
17L	10.5	105.0	
23L	15.5	100.0	
29L	19.6	95.9	
40L	12.4	103.1	
50L	10.6	104.9	
69L	9.2	106.3	
90L	2.0	113.5	
77+69 <sup>25</sup>			
90L	+6.9	122.4	
50L	7.1	108.4	
34L	12.8	102.7	
25L	12.8	102.7	
23L	12.0	103.5	
20L	10.4	105.1	
⊕	10.5	105.0	
23R	23.8	91.7	
50R	34.6	80.9	
100R	45.4	70.1	

78+19 <sup>29</sup>	115.50		
100R	47.6	67.9	
60R	24.2	91.3	
50R	20.0	95.5	
23R	12.5	103.0	
13R	11.2	104.3	
9R	9.7	105.8	
⊕	9.7	105.8	
16L	10.1	105.4	
23L	2.3	113.2	
26L	+1.2	116.7	
50L	+10.8	126.3	
90L	+26.4	141.9	
78+69 <sup>29</sup>			
90L	+26.2	141.7	
50L	+10.2	125.7	
30L	+3.2	118.7	
23L	1.3	114.2	
14L	8.8	106.7	
⊕	7.9	107.6	
8R	7.9	107.6	
10R	10.2	105.3	
23R	15.0	100.5	
33R	18.6	94.9	
50R	28.3	87.2	
90R	48.3	67.2	
110R	57.3	63.2	

			27	
			13	
			14	
79 + 19 <sup>29</sup>	115.50		6	
110R		52.3	63.2	
90R		48.7	66.8	
50R		26.5	89.0	
33R		16.0	99.5	
23R		13.3	102.2	
11R		9.3	106.2	
8R		6.9	108.6	
⊕		6.4	109.1	
13L		7.3	108.2	
19L		2.2	113.3	
23L		0.0	115.5	
T.P.	4.18	113.77	5.86	109.64
30L		+6.4	120.2	
50L		+12.7	126.5	
90L		+22.8	141.6	
79 + 69 <sup>32</sup>				
90L		+30.2	144.0	
50L		+13.0	126.8	
23L		+3.3	117.1	
14L		3.9	109.9	
⊕		3.3	110.5	
9R		3.3	110.5	
14R		7.0	106.8	
23R		9.0	104.8	
32R		12.3	101.5	

79 + 69 <sup>32</sup>	113.77			
50R		22.6	91.2	
95R		47.1	66.7	
101R		49.5	64.3	
116R		51.6	62.2	
T.P.	6.86	116.50	4.13	109.64
80 + 19 <sup>34</sup>				
135R		53.0	63.5	
95R		45.7	70.8	
60R		26.2	90.3	
33R		13.7	102.8	
23R		10.6	105.9	
18R		9.0	107.5	
13R		5.2	111.3	
⊕		5.0	111.5	
13L		6.0	110.5	
23L		+0.7	117.2	
50L		+10.2	126.7	
85L		+24.3	140.8	
T.P.	8.74	118.38	6.86	109.64

80 + 69<sup>34</sup> 118.38

100L	+22.0	140.4
50L	+7.1	125.5
23L	+0.8	119.2
15L	1.2	117.2
8L	7.2	111.2
♀	6.6	111.8
16R	5.9	112.5
21R	8.9	109.5
23R	10.1	108.3
50R	15.4	103.0
55R	16.4	102.0
95R	38.6	79.8

81 + 19<sup>35</sup>

100R	35.4	83.0
69R	17.2	101.2
50R	11.9	106.5
34R	8.9	109.5
28R	6.1	112.3
23R	5.0	113.4
♀	6.0	112.4
5L	6.2	112.2
13L	+0.8	119.2
23L	+3.1	121.5
50L	+8.7	127.1
90L	+15.3	133.7

81 + 69<sup>35</sup> 118.38

100L	+20.0	138.4
50L	+8.9	127.3
23L	+2.6	121.0
13L	+0.6	119.0
5L	6.0	112.4
♀	5.8	112.6
23R	5.2	113.2
31R	9.5	108.9
50R	13.1	105.3
68R	17.5	100.9
90R	26.3	92.1
100R	34.0	84.4

82 + 19<sup>36</sup>

100R	31.4	87.0
50R	14.7	103.7
32R	9.7	108.7
25R	7.6	110.8
23R	6.2	112.2
21R	5.0	113.4
♀	5.6	112.8
6L	5.9	112.5
13L	0.4	118.0
23L	+2.0	120.4
50L	+7.6	126.0
90L	+13.8	132.2



T.P.	2-63	118.38	118.25	2.26	115.62
	82 + 69 <sup>32</sup>				
90L				+11.3	129.6
50L				+3.4	121.7
23L				0.4	117.9
15L				1.5	116.8
10L				5.9	112.4
4				5.2	113.1
17R				4.6	113.7
23R				7.7	110.6
50R				12.9	105.4
80R				18.3	100.0
83 + 19 <sup>32</sup>					
85R				20.8	97.5
70R				16.9	101.4
50R				13.0	105.3
23R				9.1	109.2
16R				7.5	110.8
12R				4.7	113.6
4				4.8	113.5
14L				5.6	112.7
19L				3.0	115.3
23L				2.3	116.0
50L				+2.0	120.3
90L				+10.0	128.3

83 + 69 <sup>32</sup>	118.25
90L	+10.2 128.5
50L	+2.6 120.9
26L	1.8 116.5
23L	3.8 114.5
19L	5.4 112.9
4	4.6 113.7
7R	4.7 113.6
11R	7.2 111.1
23R	10.1 108.2
50R	14.6 103.7
80R	20.6 97.7
84 + 19 <sup>32</sup>	
90R	25.3 93.0
50R	17.5 100.8
23R	11.8 106.5
5R	8.0 110.3
4	4.7 113.6
23L	5.2 113.1
25L	5.2 113.1
30L	1.7 116.6
50L	+1.7 120.0
90L	+8.9 127.2

84	+69 <sup>99</sup>	118.25			
90L			+8.7	127.0	
50L			+2.1	120.4	
34L			0.8	117.5	
28L			4.3	114.0	
23L			4.6	113.7	
4L			4.3	114.0	
⊕			7.3	111.0	
6R			9.2	109.1	
23R			18.1	105.2	
50R			18.5	99.8	
90R			27.0	91.3	
T.P.	0.00	105.35	12.90	105.35	
B.M.F.	513.23	105.38	13.23	92.12	92.15
84	+97 <sup>52</sup>	P.C.C.	L.R.		
90R			14.3	91.1	
50R			5.8	99.6	
23R			0.0	105.9	
T.P.	12.88	117.78	0.48	104.90	
⊕			7.1	110.7	
6L			2.5	115.3	
23L			3.8	114.0	
29L			4.2	113.6	
32L			0.7	117.6	
50L			+3.9	121.7	
90L			+11.3	129.1	

85	+47 <sup>58</sup>	117.78			
90L			+12.5	130.3	
50L			+4.7	122.5	
35L			+1.0	118.8	
32L			3.7	113.9	
23L			3.3	114.5	
11L			2.8	115.0	
8L			4.5	113.3	
⊕			7.2	110.6	
23R			12.0	105.8	
50R			17.0	100.8	
90R			25.7	92.1	
85	+97 <sup>61</sup>				
90R			23.2	94.6	
50R			17.2	100.6	
23R			13.0	104.8	
⊕			9.9	108.9	
10L			6.8	111.0	
17L			2.9	114.9	
23L			2.8	115.0	
45L			3.6	114.2	
50L			+0.8	118.6	
70L			+5.1	122.9	

86+47<sup>62</sup>

117.78

70L	+3.0	120.8
67L	+1.7	119.5
61L	1.7	116.1
50L	3.4	114.4
23L	3.0	114.8
17L	7.1	110.7
⊕	10.6	107.2
23R	13.0	104.8
50R	17.0	100.8
90R	21.6	96.2
86+97 <sup>63</sup>		
90R	23.1	94.7
50R	17.0	100.8
23R	13.0	104.8
⊕	9.5	108.3
13L	7.2	110.6
T.P. 5.69	120.61	2.86 114.92
23L	6.1	114.5
28L	4.8	115.8
50L	5.6	115.0
56L	6.1	114.5
63L	2.1	118.5
75L	0.7	119.9

87+47<sup>64</sup>

120.61

75L	+0.5	121.1
65L	0.7	119.9
60L	6.0	114.6
50L	5.4	115.2
31L	5.3	115.3
25L	8.0	112.6
23L	8.5	112.1
6L	10.3	110.3
⊕	11.4	109.2
23R	14.4	106.2
50R	17.4	103.2
90R	23.2	97.4
87+97 <sup>66</sup>		
90R	22.3	98.3
50R	17.9	102.7
23R	15.4	105.2
⊕	11.3	109.3
23L	6.5	114.1
35L	4.4	116.2
36L	5.1	115.5
50L	5.3	115.3
61L	5.7	114.9
67L	1.0	119.6
75L	0.0	120.6

65

88 + 47 <sup>68</sup>	120.01		
75L		0.8	119.8
67L		5.2	115.4
50L		5.1	115.5
43L		4.5	116.1
23L		8.7	111.9
⊕		11.8	108.8
23R		14.7	105.9
50R		17.9	102.7
80R		23.0	97.6
88 + 97 <sup>69</sup>			
80R		22.2	98.4
70R		19.9	100.7
50R		18.0	102.6
23R		14.9	105.7
⊕		12.5	108.1
23L		9.7	110.9
43L		5.3	115.3
50L		5.0	115.6
75L		4.9	115.7
TP	8.63	124.44	4.80
			115.81

89 + 49 <sup>70</sup>	124.44		
80L		8.3	116.1
50L		9.0	115.4
45L		11.4	113.0
23L		14.0	110.4
⊕		15.0	109.4
23R		17.4	107.0
50R		20.1	104.3
90R		24.4	100.0
89 + 97 <sup>71</sup>			
90R		23.1	101.3
50R		18.7	105.7
23R		15.8	108.6
⊕		13.7	110.7
23L		11.7	112.7
39L		10.0	114.4
42L		8.3	116.1
50L		7.8	116.6
75L		6.9	117.5
90 + 49 <sup>72</sup>			
75L		2.7	121.7
72L		2.9	121.5
69L		3.9	120.5
57L		6.9	117.6
50L		6.6	117.8
35L		6.6	117.8

90 + 47<sup>23</sup> 124.44

29L	8.9	115.5
23L	9.8	114.6
⊕	12.6	111.8
23R	14.7	109.7
50R	18.1	106.3
90R	22.4	102.0
90 + 97 <sup>24</sup>		
90R	22.6	101.8
50R	19.0	106.4
23R	15.0	109.4
⊕	13.3	111.1
16L	9.7	114.7
23L	6.4	113.0
50L	7.3	117.1
53L	7.3	117.1
54L	5.7	118.7
58L	4.9	119.5
60L	3.2	121.2
75L	1.8	122.6

91 + 47<sup>25</sup> 124.44

75L	+2.8	127.2
50L	2.4	122.0
45L	3.9	120.5
40L	7.5	116.9
23L	6.8	117.6
14L	7.0	117.4
8L	10.5	113.9
⊕	12.7	111.7
23R	14.8	109.6
50R	17.6	106.8
90R	22.6	101.8
91 + 97 <sup>26</sup>		
90R	24.6	99.8
50R	20.5	103.9
23R	16.2	108.2
⊕	11.0	113.4
6L	6.9	117.5
23L	7.1	117.3
31L	7.4	117.0
31L	6.1	118.3
36L	2.8	121.6
50L	+2.1	126.5
95L	+17.7	142.1

67

92 + 47 <sup>28</sup>	124.44		
95L	+29.2	148.6	
50L	+5.2	129.6	
38L	+0.4	124.8	
23L	6.8	117.6	
⊕	7.4	117.0	
10R	13.3	111.1	
23R	16.0	108.4	
50R	21.2	103.2	
90R	25.2	99.2	
92 + 97 <sup>50</sup>			
100R	28.5	95.9	
50R	21.9	102.5	
23R	14.4	110.0	
11R	7.4	117.0	
⊕	7.1	117.3	
T.P. 8.18	125.36	7.26	117.18
10L	7.9	117.5	
11L	5.6	119.8	
20L	+10.9	126.3	
23L	+11.0	126.4	
50L	+11.3	136.7	
90L	+29.4	154.8	

93 + 47 <sup>81</sup>	125.36		
90L	+38.8	164.2	
50L	+20.5	145.9	
23L	+8.3	133.7	
2L	1.7	123.7	
⊕	3.2	122.2	
3R	7.5	117.9	
23R	7.7	117.5	
46R	22.4	103.0	
50R	23.6	101.8	
90R	31.9	93.5	
93 + 97 <sup>82</sup>			
95R	32.4	93.0	
60R	25.0	100.4	
50R	17.4	108.0	
35R	7.6	117.8	
23R	7.9	117.5	
16R	7.5	117.9	
14R	4.0	121.4	
T.P. 12.72	134.97	3.11	122.25
⊕	4.4	130.6	
23L	+8.7	143.7	
50L	+21.8	156.8	
85L	+39.3	174.3	
100L	+46.1	181.1	
T.P. 8.12	139.63	3.46	131.51

94+4784	139.63		
92L R	+55.6	195.2	
83L R	+50.8	190.4	
50L	+30.0	169.6	
23L	+9.6	149.2	
£	4.3	135.3	
18R	13.0	126.6	
22R	20.0	119.6	
23R	23.1	116.5	
45R	21.6	118.0	
50R	25.0	114.6	
70R	36.0	103.6	
90R	41.5	98.1	
100R	44.0	95.6	
* T.P. 12.45	143.96	8.12	131.51
94+9785			
101R	47.1	96.9	
92R	44.7	99.3	
65R	37.6	106.4	
50R	27.5	116.5	
47R	25.4	118.6	
25R	25.5	118.5	
23R	22.1	121.9	
8R	8.0	136.0	
£	4.1	139.9	

94+9785	143.96		
23L	+11.1	155.1	
50L	+30.2	174.2	
92L	+52.2	196.2	
98L	+62.5	206.5	
T.P. 12.53	144.04	12.45	131.51
95+4786			
103L	+62.7	206.7	
87L	+51.6	195.6	
50L	+26.0	170.0	
23L	+8.8	152.8	
£	4.5	139.5	
5R	9.1	134.9	
18R	24.3	119.7	
23R	23.5	120.5	
49R	23.0	121.0	
50R	24.3	119.7	
80R	40.1	103.9	
94R	42.9	101.4	
103R	44.7	99.3	

95 + 97<sup>89</sup>

144.04

25.2  
13.8

100R	42.9	101.1
53R	34.3	109.7
50R	33.5	110.5
36R	26.0	118.0
23R	26.0	118.0
12R	26.3	117.7
12R	25.0	119.0
±	17.7	126.3
11L	7.5	136.5
23L	1.6	142.4
50L	+13.8	157.8
80L	+31.9	175.9
90L	+38.6	182.6
96 + 47 <sup>88</sup>		
95L	+17.7	161.7
50L	4.2	139.8
23L	15.5	128.5
T.P.	0.50	132.65
19L	6.0	126.7
9L	14.2	118.5
±	14.2	118.5
17R	13.8	118.9
23R	18.0	114.7
32R	21.0	111.7
50R	23.8	108.9
90R	28.8	103.9

96 + 97<sup>90</sup>

132.65

90R	27.8	104.9
50R	24.2	108.5
23R	21.0	111.7
5R	17.7	115.0
±	16.2	116.5
4L	13.6	119.1
23L	13.8	118.9
35L	14.4	118.3
45L	7.3	125.4
50L	6.2	126.5
80L	+1.4	134.1
97 + 47 <sup>91</sup>		
80L	12.6	120.1
60L	14.2	118.5
50L	13.8	118.9
33L	14.0	118.7
T.P.	0.35	120.98
23L	5.4	115.6
±	7.6	113.4
23R	9.8	111.2
50R	12.5	108.5
80R	14.9	106.1



97 + 97<sup>93</sup>

12098

80R	16.5	104.5
50R	14.8	106.2
23R	12.9	108.1
±	16.3	104.7
12L	21.0	100.0
23L	17.7	103.3
37L	16.0	105.0
50L	12.8	108.2
62L	3.0	118.0
70L	2.3	118.7
98 + 23		
70L	2.4	118.6
53L	2.0	119.00
50L	2.7	118.3
40L	8.6	112.4
23L	10.8	110.2
±	13.5	107.5
19R	16.0	105.0
23R	24.0	97.0
50R	26.0	95.0
90R	29.7	91.3

98 + 47<sup>25</sup>

12098

90R	17.3	103.7
50R	14.5	106.5
23R	12.8	108.2
±	11.3	109.7
23L	9.3	111.7
34L	8.1	112.9
46L	1.8	119.2
50L	2.2	118.8
70L	2.2	118.8
98 + 97 <sup>26</sup>		
70L	0.0	121.0
68L	2.9	118.1
50L	2.0	119.0
39L	1.8	119.2
30L	7.0	114.0
23L	8.6	112.4
±	11.5	109.5
23R	13.3	107.7
50R	15.3	105.7
90R	17.4	103.6

71

99 + 47<sup>97</sup>

120.98

90R	18.5	102.5	
50R	15.3	105.7	
23R	12.4	108.6	
⊕	9.8	111.2	
23L	6.0	115.0	
26L	5.5	115.5	
32L	1.9	119.1	
50L	2.7	118.3	
58L	2.7	118.3	
58L	1.7	119.3	
75L	+1.0	122.0	
T.P. 3.98	124.84	0.12	120.86
99 + 47 <sup>98</sup>			
80L	+6.6	131.4	
52L	0.8	124.0	
50L	3.1	121.7	
48L	5.8	119.0	
23L	4.7	120.1	
16L	7.7	117.1	
⊕	11.2	113.6	
23R	15.9	108.9	
50R	19.0	105.8	
90R	23.8	101.0	

100 + 47<sup>98</sup>

12484

90R	26.3	98.5
50R	22.0	102.8
23R	18.0	106.8
⊕	13.3	111.5
8L	11.3	113.5
19L	5.0	119.8
23L	5.1	119.7
44L	5.6	119.2
50L	2.0	122.8
75L	+4.8	129.6
100 + 47 <sup>98</sup>		
70L	+10.3	135.1
35L	+5.5	130.3
50L	+2.4	127.2
45L	1.0	123.8
42L	5.4	119.4
23L	5.0	119.8
17L	5.0	119.8
⊕	13.8	111.0
23R	20.6	104.2
50R	25.0	99.8
90R	29.2	95.6

72

101 + 47<sup>03</sup> 124.84

90R	32.3	92.5
50R	28.3	96.5
30R	23.3	101.5
23R	20.7	104.1
4	10.5	114.3
8L	4.5	120.3
23L	4.7	120.1
30L	5.1	119.7
31L	1.3	123.5
50L	+7.0	131.8
53L	+8.5	133.3
80L	+21.4	146.2

101 + 65<sup>9L</sup> F.C.

80L	+21.0	145.8
50L	+9.2	134.0
33L	+3.8	128.6
30L	2.0	122.8
30L	4.7	120.1
23L	4.6	120.2
9L	4.4	120.4
4	10.0	114.8
23R	20.4	104.4
42R	29.0	97.8
50R	28.8	96.0
90R	32.4	92.4

102 + 50<sup>00</sup> 124.84

90R	35.4	89.4
60R	31.9	92.9
50R	27.8	97.0
23R	17.8	107.0
4	7.3	117.5
5L	4.1	120.7
23L	3.8	121.0
23L	1.2	123.6
T.P	5.25	127.68
37L	2.41	122.43
50L	+6.6	134.3
90L	+11.6	139.3
	+32.7	160.4

103 + 00

90L	+33.4	161.1
50L	+11.0	138.7
42L	+6.3	134.0
23L	1.6	126.1
18L	4.0	123.7
17L	6.9	121.3
4	7.0	120.7
12R	15.1	112.6
23R	20.0	107.7
50R	29.6	98.1
67R	35.5	92.2
90R	37.8	89.9

127.68

103 + 40<sup>34</sup> B.C. A L

100R	37.4	90.3
74R	35.2	92.5
50R	28.4	99.3
23R	17.5	110.2
3R	6.0	121.7
⊕	6.1	121.6
17L	5.7	122.0
23L	41.4	129.1
84L	+7.6	135.3
50L	+13.5	141.2
95L	+36.5	164.2
103 + 90 <sup>35</sup>		
95L	+40.6	168.3
50L	+18.8	146.5
23L	+5.4	133.1
10L	5.4	122.3
⊕	5.7	122.0
8R	5.4	122.3
23R	15.8	111.9
50R	27.7	100.0
74R	34.4	93.5
105R	36.0	91.7

104 + 40<sup>36</sup>

127.68

95R	33.6	94.1
83R	32.3	95.4
54R	24.8	102.9
50R	23.0	104.7
23R	8.6	119.1
17R	5.2	122.5
⊕	5.3	122.4
1L	4.0	123.7
23L	+8.2	136.9
50L	+23.0	150.7
73L	+34.8	162.5
85L	+37.8	165.5
104 + 90 <sup>37</sup>		
90L	+37.1	164.8
76L	+32.9	160.6
50L	+27.4	155.1
23L	+17.8	145.5
12L	+12.6	140.3
⊕	+7.3	135.0
10R	4.3	123.4
23R	4.1	123.6
25R	4.0	123.7
50R	19.6	107.1
73R	28.6	99.1
100R	31.0	96.7

74

105 + 40<sup>38</sup> 127.68

100R	28.0	99.7
65R	22.4	105.3
50R	16.5	111.2
29R	2.7	125.0
23R	3.1	124.6
13R	3.5	124.2
£	+9.0	136.7
23L	+21.2	148.9
50L	+30.0	157.7
75L	+31.0	158.7
105 + 90 <sup>39</sup>		
80L	+25.2	152.7
50L	+22.4	150.1
23L	+14.3	142.9
17L	+7.0	134.7
£	0.7	127.0
2R	3.6	124.1
20R	2.3	125.4
23R	4.1	123.6
50R	17.0	110.7
75R	19.8	107.9
90R	23.1	104.6
100R	21.2	106.5
T.R	2.38	127.07
	2.99	124.69

106 + 40<sup>40</sup> 127.07

90R	19.2	107.9
70R	19.4	107.7
60R	22.3	104.8
50R	16.1	111.0
39R	20.1	107.0
29R	15.8	111.3
23R	14.7	112.4
£	10.6	116.5
13L	2.7	124.2
23L	4.2	122.9
44L	5.5	121.6
50L	3.8	123.3
70L	5.0	122.1
106 + 90 <sup>41</sup>		
75L	7.5	119.6
70L	9.8	117.3
50L	11.9	115.2
23L	13.6	113.5
£	16.2	110.9
23R	14.5	112.6
34R	16.5	110.6
50R	17.2	109.9
75R	18.5	108.6
T.P	0.09	115.55
		11.61
BM#	76.95	114.65
		7.88
		107.67
		107.70

107 + 40<sup>92</sup>

114.65

70R	6.0	108.7
50R	5.0	109.7
23R	3.2	111.5
±	1.8	112.7
23L	0.3	114.4
50L	+1.1	115.8
70L	+2.0	116.7

107 + 90<sup>43</sup>

70L	0.4	114.3
50L	1.0	113.7
23L	2.2	112.7
±	3.4	111.3
23R	3.3	111.4
50R	6.4	108.3
70R	7.5	107.2

108 + 40<sup>94</sup>

70R	8.6	106.1
50R	7.5	107.2
23R	6.2	108.5
±	5.4	109.3
23L	4.7	110.0
50L	3.8	110.9
70L	4.2	110.5

108 + 90<sup>45</sup>

114.65

70L	4.7	110.0
50L	6.5	108.2
23L	7.3	107.4
±	7.7	106.8
23R	8.8	105.9
50R	9.7	105.0
70R	10.0	104.7

109 + 40<sup>46</sup>

70R	12.0	102.7
50R	11.5	103.2
23R	10.8	103.9
±	9.7	105.0
23L	9.3	106.4
50L	6.4	108.3
70L	5.0	109.7

109 + 90<sup>47</sup>

70L	5.4	109.3
50L	6.8	107.9
23L	8.7	106.0
±	10.3	104.4
23R	11.6	103.1
50R	13.7	101.0
70R	13.8	100.9

110 + 40<sup>98</sup>

114.65

70R	15.5	99.2
50R	14.2	100.5
23R	12.5	102.2
⊕	11.1	103.6
23L	9.8	104.9
50L	8.0	106.7
70L	6.2	108.5

110 + 90<sup>41</sup>

70L	7.7	107.0
50L	9.4	105.3
23L	11.4	103.3
⊕	13.0	101.7
23R	14.4	100.3
50R	15.4	99.3
70R	16.8	97.9

111 + 40<sup>50</sup>

70R	18.7	96.0
50R	18.0	96.7
23R	16.2	98.5
⊕	14.8	99.9
23L	12.9	101.8
50L	10.7	104.0
70L	8.8	105.9
TP.	1.05	103.02
	12.68	101.97

111 + 90<sup>51</sup>

103.02

70L	+1.0	104.0
50L	1.6	101.4
23L	3.0	100.0
⊕	4.9	98.1
23R	6.3	96.7
50R	7.9	95.1
70R	9.0	94.0

112 + 40<sup>52</sup>

70R	12.3	90.7
50R	10.2	92.8
23R	8.2	94.8
⊕	6.7	96.3
23L	4.9	98.1
50L	2.9	100.1
70L	1.8	101.2

112 + 90<sup>53</sup>

70L	3.8	99.2
50L	5.2	97.8
23L	7.0	96.0
⊕	8.6	94.4
23R	10.3	92.7
50R	12.4	90.6
70R	13.6	89.4

113+40<sup>54</sup>

103.02

70R	16.3	86.7
50R	14.3	88.7
23R	12.5	90.5
⊕	10.6	92.4
23L	8.9	94.1
50L	7.4	95.6
70L	6.0	97.0

113+87<sup>54</sup> E.C.

70L	7.5	95.5
50L	8.7	94.3
23L	10.5	92.5
⊕	12.2	90.8
23R	14.2	88.8
50R	16.5	86.5
70R	17.4	85.6

114+50

70R	16.7	86.3
50R	16.6	86.4
23R	15.6	87.4
⊕	13.8	89.2
23L	12.2	90.8
50L	10.8	92.2
70L	9.8	93.2

115+00<sup>00</sup>

103.02

70L	9.2	93.8
50L	10.3	92.7
23L	12.0	91.0
⊕	13.7	89.3
23R	15.0	88.0
50R	16.1	86.9
70R	16.3	86.7

116+00<sup>00</sup>

70R	14.6	88.4
50R	14.2	88.8
23R	13.2	89.8
⊕	12.0	91.0
23L	10.8	92.2
50L	8.9	94.1
70L	7.8	95.2

117+00<sup>00</sup>

70L	9.2	98.8
50L	5.6	97.4
23L	7.5	95.5
⊕	9.0	94.0
23R	10.2	92.8
50R	11.7	91.3
70R	13.0	90.0
T.P.	13.09	103.96
	12.15	90.87



117 + 53<sup>00</sup> 10396

64R Row.	13.0	91.0
60R	12.2	91.8
50R	12.1	91.9
23R	10.7	93.3
⊕	9.6	94.4
23L	8.1	95.9
50L	5.9	98.1
70L	4.1	99.9

118 + 100<sup>00</sup>

70L	3.2	100.8
50L	5.0	99.0
43L	6.9	97.1
⊕	8.7	95.3
23R	10.2	93.8
50R	11.2	92.8
63R Row.	11.7	92.3

119 + 100<sup>00</sup>

58R Row.	8.7	95.3
55R	7.8	96.2
50R	7.8	96.2
23R	6.6	97.4
⊕	4.7	99.3
23L	3.0	101.0
50L	1.0	103.0
70L	+0.5	104.5

119 + 50<sup>00</sup> 10376

70L	+ 1.5	105.5
50L	0.0	104.0
23L	1.9	102.1
⊕	3.7	100.3
23R	5.8	98.2
50R	7.0	97.0
53R	7.0	97.0
56R Row.	8.0	96.0

120 + 100<sup>00</sup>

55R Row.	7.6	96.4
52R	6.5	97.5
50R	6.5	97.5
23R	5.1	98.9
⊕	3.0	101.0
23L	1.0	103.0
50L	+2.0	106.0
70L	+3.6	107.6

120 + 30<sup>00</sup>

70L	+3.6	107.6
50L	+1.7	105.7
23L	0.8	103.2
⊕	3.0	101.0
23R	4.9	99.1
50R	6.0	98.0
53R Row.	7.1	96.9

Can't fit Book 1303

Notes reduced by C.S. Kelley, Jan. 9, 1928.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

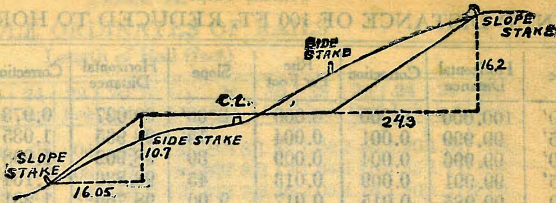
Distance of slope stake from side or shoulder stake for any width roadway, slope 1 1/2 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

of table in same row and column gives distance from side stake to slope stake. If ground is not

necessary. target. rod at this point and line of sight should cut to cut or fill and find distance in table. Set up amount if cut, elevate if fill. Add this amount the side stake and slope stake, lower target by this IMPROVED TABLES AND INFORMATION

TABLE No. 2.

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius. Degree of curve with a given I may be found by dividing tangent (or external), opposite I by given tangent (or external). Degree of curve with a given I may be found add connection found in column of corrections. any other degree, divide by degree of curve and To find Tangent and External for curve of



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

SLOPE 1 1/4 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0 30	0 45	0 60	0 75	0 90	1 05	1 20	1 35	0
1	1 50	1 65	1 80	1 95	2 10	2 25	2 40	2 55	2 70	2 85	1
2	3 00	3 15	3 30	3 45	3 60	3 75	3 90	4 05	4 20	4 35	2
3	4 50	4 65	4 80	4 95	5 10	5 25	5 40	5 55	5 70	5 85	3
4	6 00	6 15	6 30	6 45	6 60	6 75	6 90	7 05	7 20	7 35	4
5	7 50	7 65	7 80	7 95	8 10	8 25	8 40	8 55	8 70	8 85	5
6	9 00	9 15	9 30	9 45	9 60	9 75	9 90	10 05	10 20	10 35	6
7	10 50	10 65	10 80	10 95	11 10	11 25	11 40	11 55	11 70	11 85	7
8	12 00	12 15	12 30	12 45	12 60	12 75	12 90	13 05	13 20	13 35	8
9	13 50	13 65	13 80	13 95	14 10	14 25	14 40	14 55	14 70	14 85	9
10	15 00	15 15	15 30	15 45	15 60	15 75	15 90	16 05	16 20	16 35	10
11	16 50	16 65	16 80	16 95	17 10	17 25	17 40	17 55	17 70	17 85	11
12	18 00	18 15	18 30	18 45	18 60	18 75	18 90	19 05	19 20	19 35	12
13	19 50	19 65	19 80	19 95	20 10	20 25	20 40	20 55	20 70	20 85	13
14	21 00	21 15	21 30	21 45	21 60	21 75	21 90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23 10	23 25	23 40	23 55	23 70	23 85	15
16	24 00	24 15	24 30	24 45	24 60	24 75	24 90	25 05	25 20	25 35	16
17	25 50	25 65	25 80	25 95	26 10	26 25	26 40	26 55	26 70	26 85	17
18	27 00	27 15	27 30	27 45	27 60	27 75	27 90	28 05	28 20	28 35	18
19	28 50	28 65	28 80	28 95	29 10	29 25	29 40	29 55	29 70	29 85	19
20	30 00	30 15	30 30	30 45	30 60	30 75	30 90	31 05	31 20	31 35	20
21	31 50	31 65	31 80	31 95	32 10	32 25	32 40	32 55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33 60	33 75	33 90	34 05	34 20	34 35	22
23	34 50	34 65	34 80	34 95	35 10	35 25	35 40	35 55	35 70	35 85	23
24	36 00	36 15	36 30	36 45	36 60	36 75	36 90	37 05	37 20	37 35	24
25	37 50	37 65	37 80	37 95	38 10	38 25	38 40	38 55	38 70	38 85	25
26	39 00	39 15	39 30	39 45	39 60	39 75	39 90	40 05	40 20	40 35	26
27	40 50	40 65	40 80	40 95	41 10	41 25	41 40	41 55	41 70	41 85	27
28	42 00	42 15	42 30	42 45	42 60	42 75	42 90	43 05	43 20	43 35	28
29	43 50	43 65	43 80	43 95	44 10	44 25	44 40	44 55	44 70	44 85	29
30	45 00	45 15	45 30	45 45	45 60	45 75	45 90	46 05	46 20	46 35	30
31	46 50	46 65	46 80	46 95	47 10	47 25	47 40	47 55	47 70	47 85	31
32	48 00	48 15	48 30	48 45	48 60	48 75	48 90	49 05	49 20	49 35	32
33	49 50	49 65	49 80	49 95	50 10	50 25	50 40	50 55	50 70	50 85	33
34	51 00	51 15	51 30	51 45	51 60	51 75	51 90	52 05	52 20	52 35	34
35	52 50	52 65	52 80	52 95	53 10	53 25	53 40	53 55	53 70	53 85	35
36	54 00	54 15	54 30	54 45	54 60	54 75	54 90	55 05	55 20	55 35	36
37	55 50	55 65	55 80	55 95	56 10	56 25	56 40	56 55	56 70	56 85	37
38	57 00	57 15	57 30	57 45	57 60	57 75	57 90	58 05	58 20	58 35	38
39	58 50	58 65	58 80	58 95	59 10	59 25	59 40	59 55	59 70	59 85	39
40	60 00	60 15	60 30	60 45	60 60	60 75	60 90	61 05	61 20	61 35	40
41	61 50	61 65	61 80	61 95	62 10	62 25	62 40	62 55	62 70	62 85	41
42	63 00	63 15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64 35	42
43	64 50	64 65	64 80	64 95	65 10	65 25	65 40	65 55	65 70	65 85	43
44	66 00	66 15	66 30	66 45	66 60	66 75	66 90	67 05	67 20	67 35	44
45	67 50	67 65	67 80	67 95	68 10	68 25	68 40	68 55	68 70	68 85	45
46	69 00	69 15	69 30	69 45	69 60	69 75	69 90	70 05	70 20	70 35	46
47	70 50	70 65	70 80	70 95	71 10	71 25	71 40	71 55	71 70	71 85	47
48	72 00	72 15	72 30	72 45	72 60	72 75	72 90	73 05	73 20	73 35	48
49	73 50	73 65	73 80	73 95	74 10	74 25	74 40	74 55	74 70	74 85	49
50	75 00	75 15	75 30	75 45	75 60	75 75	75 90	76 05	76 20	76 35	50

Computed by L. Leland Locke.

- 0+00  
 3+75<sup>15</sup> B.C. L R  
 ① 4+75<sup>12</sup>  
 ② 5+75<sup>19</sup>  
 ③ 6+75<sup>21</sup>  
 7+42<sup>28</sup> E.C.  
 8+18<sup>68</sup> B.C. L L  
 9+27<sup>57</sup> E.C.  
 16+97<sup>39</sup> B.C. = 16+98<sup>24</sup> L L  
 ④ 17+98<sup>96</sup>  
 ⑤ 18+98<sup>98</sup>  
 ⑥ 19+99<sup>00</sup>  
 ⑦ 20+99<sup>02 1/2</sup>  
 ⑧ 21+99<sup>04</sup>  
 ⑨ 22+99<sup>06</sup>  
 23+79<sup>62</sup> E.C.  
 25+30<sup>56</sup> B.C. L R  
 ⑩ 26+30<sup>57</sup>  
 ⑪ 27+30<sup>57</sup>  
 28+16<sup>29</sup> E.C.  
 30+01<sup>60</sup> B.C. L L  
 ⑫ 31+01<sup>62</sup>  
 32+01<sup>64</sup>  
 33+01<sup>66</sup>  
 34+01<sup>68</sup>
- 216 + 50  
 5 35  
 -----  
 221 + 85

34+08<sup>90</sup> E.C.

34+65<sup>69</sup> B.C. L R

① 35+65<sup>69</sup>

② 36+65<sup>65</sup>

③ 37+65<sup>66</sup>

④ 38+65<sup>67</sup>

38+72<sup>30</sup>

ENGINEERING DEPARTMENT,  
CITY OF SAN DIEGO,  
CALIFORNIA.

40+46<sup>46</sup> = 46+48<sup>61</sup>

55+44<sup>42</sup> P.O.T. P.L.

62+41<sup>45</sup> P.O.T. P.L.

67+50<sup>60</sup> P.O.T.

67+87<sup>29</sup> B.C. L L

70+20<sup>68</sup> E.C.

73+19<sup>17</sup> B.C. L R

89+99<sup>57</sup> P.C.C. L R

101+65<sup>91</sup> E.C.

103+40<sup>39</sup> B.C. L L

113+87<sup>59</sup> E.C.

128+60<sup>49</sup> B.C. L L

133+020<sup>64</sup> E.C.

146+66<sup>60</sup> B.C. L R

156+73<sup>98</sup> E.C.

702.68  
6787.24

233.44

116.72

6787.24

6903.96

14