F.B. 370 A

DOCUMENT NO.

Published by H. S. CROCKER COMPANY, Stationers, Drawing Materials, and Mathematical Instruments, San Francisco.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES.	LKS.	MINUTES.	LKS.	MINUTES.	LKS.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

MICROFILMED
DEC 19 1964

ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS
°		°		°		°	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

ENGINEERING DEPARTMENT
CITY OF SAN DIEGO.
CALIFORNIA.

Communication
79 Oct 3 1901 change of Mon. on S Line of Bay.

Communication
0027 Sept 16-1878 Discription of Corners SE, SW, and Cor in Mission Valley.

Oct 6th Dug around mon at SE Cor and found rd marks on the stone
found Mr. Steele who said the
Stone had been there since '79 to his
knoledge and had not been moved.

Copy from Map by King

Random Line -

0+00		SE Cor PL Mon & H Ave N.C.
31+11.8	4.7	Left to old 3"x4" Post.
48+50.5	1.0	Right to Cor Marked 18 on N 19 on S
73+06	8.8	" " Cement Mon.
90+69.2	6.8	" " " "
100+49	5.7	" " 3"x4" Post
135+51	5.0	" " City limits post Cabalta Creek
142+00	11.0	" " Hub in Rock mound
155+84	14.5	" " 3"x4" Post
168+97.5		Xing of 4th Standard
267+41	23	Right to City limits sign (El Cajon)
324+01.5	34.7	Right to Pt in Mission Valley.

Bearing Random Line N.16°16' W

" Corrected " N.16°12' W

South Line S 71 W

6518.8 Length of S line of City by King

6527.4 - - - - - - Hayes

Found Granit Mon at Intersection of N.L. National Ranch and ℄ of H Ave.

Determined random Line by this Mon. and a pt. 8.04 East of old 3"x4" Post at Sta 31+11.8 of Kings Line.

0+00	Mon.	SE Cor Pueblo
20+00.5	△	
27+00	△	
31+08.0	△	8.04 West to 3"x4"
47+56.3	△	(0.64)
48+43		3.8 West to Stake 18/19 N/S
55+67.5	△	(0.75)
59+06.5	△	(0.80)
65+38.2	△	(0.88) (1.01) or (1.16 from Tack)
75+10.7		1.5' East to tack on Mon at Cemetry
76+13.9	△	(1.03)
99+64.15	△	(1.35)
111+28.2	△	(1.51) 2.45 E to Kings hub 111+43
119+38.5	△	(1.62)
125+35		9.8' West to City Limits Sign Cholla Valley
141+67.8	△	(1.92)
155+62		4.4' West to 3"x4" (old) with White 4x4" Guard Stake SW Cor Lot 8

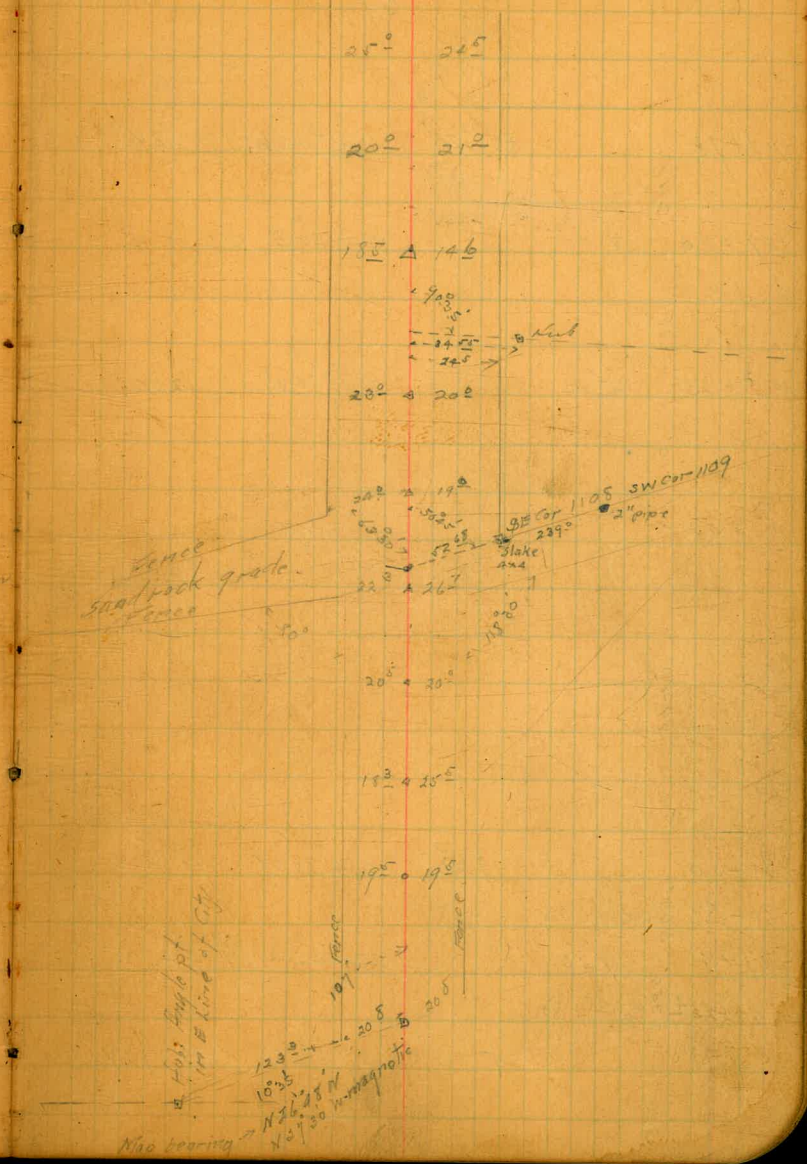
169+72		Marked (NW Cor Lot 8) 16' E to 4"x4" White Stake
177+03.8	△	(2.40)
183+00	△	(2.57)
184+88		23' West to Fence Cor Marked NE Cor 11.39
220+11.2	△	(2.98)
233+02.1	△	(3.15)
240+31.5		10.4 West to Mon on Univ Ave
244+68.7	△	(3.31)
258+39.3	△	(3.50)
266+75.6		8' West to City Limits Sign at El Cajon
269+00	△	(3.64)
280+31.3	△	(3.79)
290+00.3	△	(3.92)
294+65	△	(3.99)
294+82.5		5.6 West to Mon on Adams
301+21.6	△	(4.07)
306+36		3.6 West to Post Marked Cor 7
309+39.3	△	
321+49.1	△	
322+25.45		
324+11.1		4.37 West to Hub supposed to be ∠ pt of Line, 123.3 Ft N of Fence post at Road in Mission Valley

(Hub at Alpine Shaft tack 0.04 East)

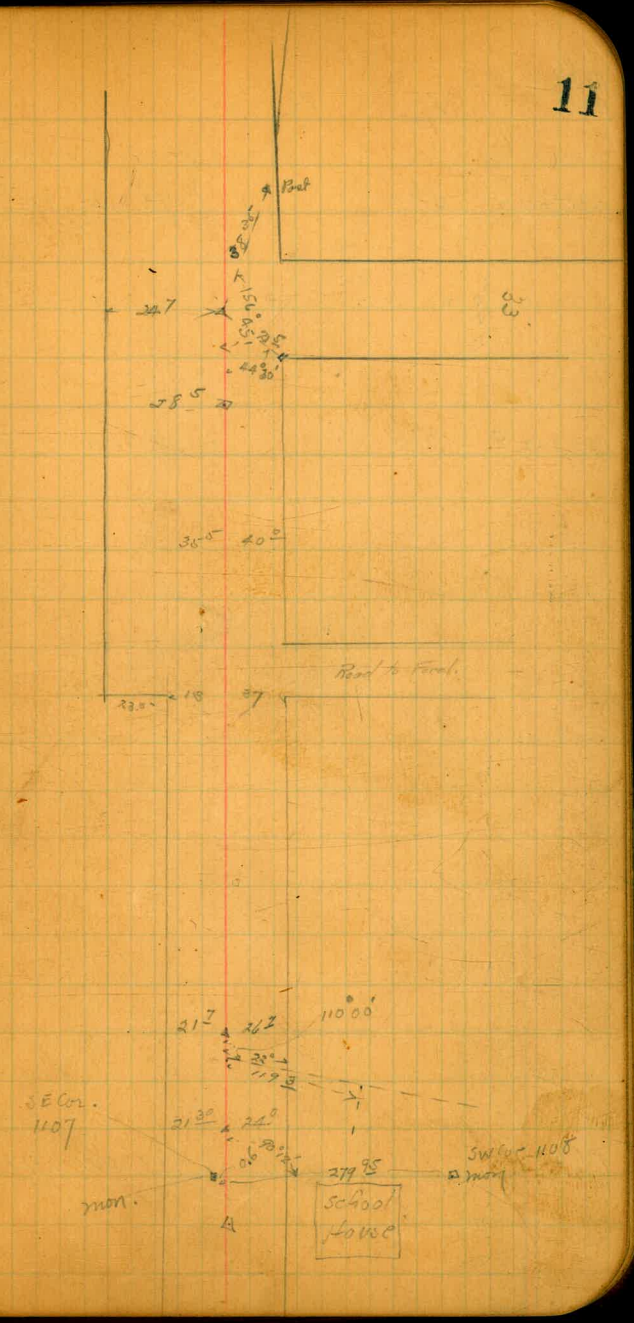
12 Hatch
12 Moore
10 Rogers

	Angle L	Angle R	Course Magnetic	Course Deduced	
49+90		19°00'	S69°W	S69°17'W	
	420'				
45+20	16°00'		S50°00'W	S50°17'W	21°17
	266'				
42+54	7°45'		S66°00'W	S66°17'W	37°17
	1054'				
40+56					
32+00	1°10'		S73°30'W	S74°02'W	45°02
	408'				
27+92	38°30'		S74°30'W	S75°12'W	54°12
	79'				
27+18	Intersection				
27+13		14°30'	N67°W	N66°18'W	58°42'W
	353'				
23+60		12°30'	N81°30'W	N80°48'W	
	135'				
22+25		13°00'	S86°00'W	S86°42'W	
	2025'				
2+00	6°30'		S73°00'W	S73°42'W	
	200'				
0+00	73° 107°00'		S79°30'W	S80°12'W	

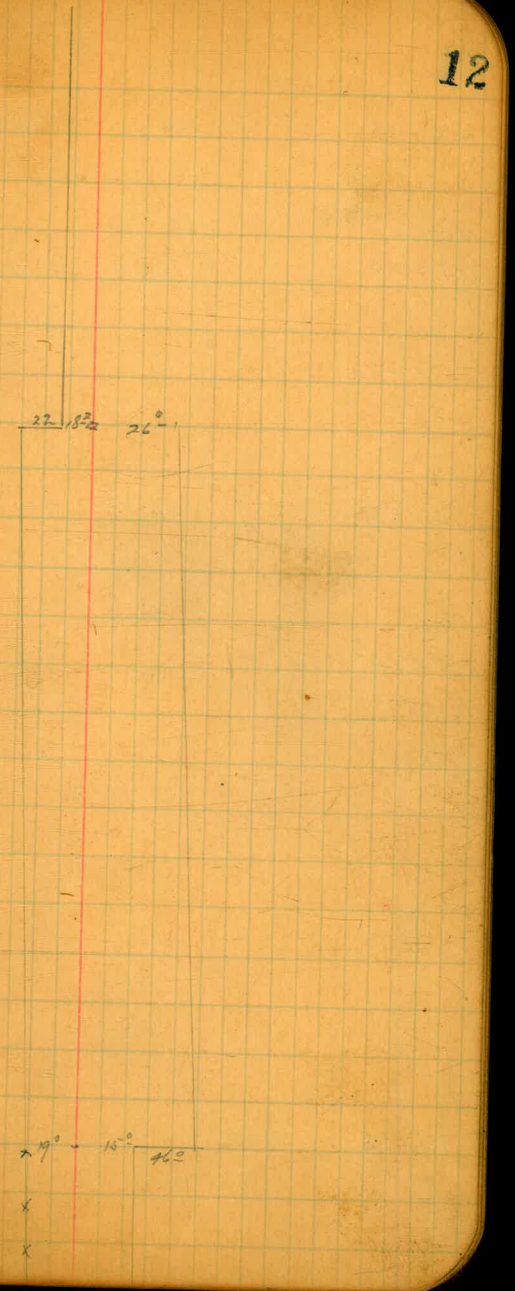
Road in Mission Valley from the East Line of City to



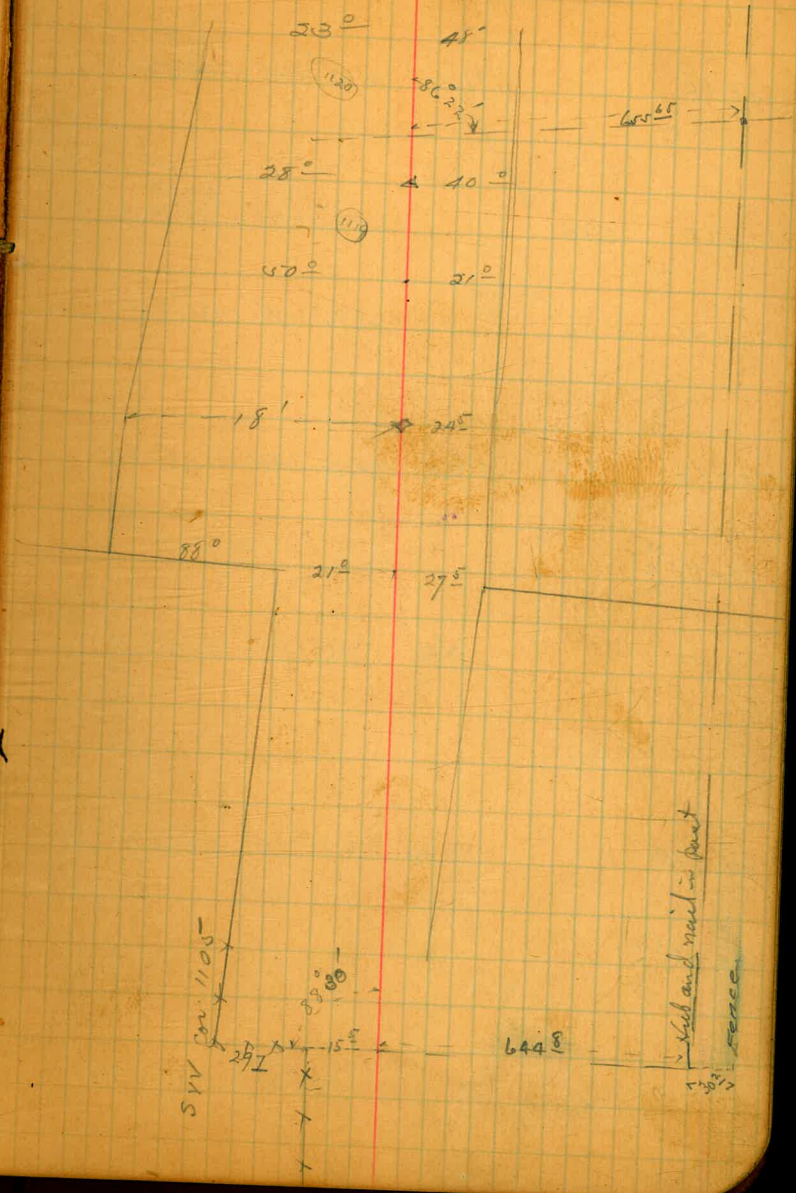
	Angle L	Angle R	Course Mag.	Course Dec.
109+78		85°40'	S75°00'W	S74°52'W
107+30	50°00'		S10°30'E	S10°48'E
105+50	35°00'		S39°20'W	S39°12'W
100+40				
81+00		19°30'	S74°20'W	S74°12'W
80+87	Pueblo line			
77+40	19°45'		S54°30'W	S54°42'W
54+23	Pueblo Cor.			
53+85		5°10'	S74°00'W	S74°27'W



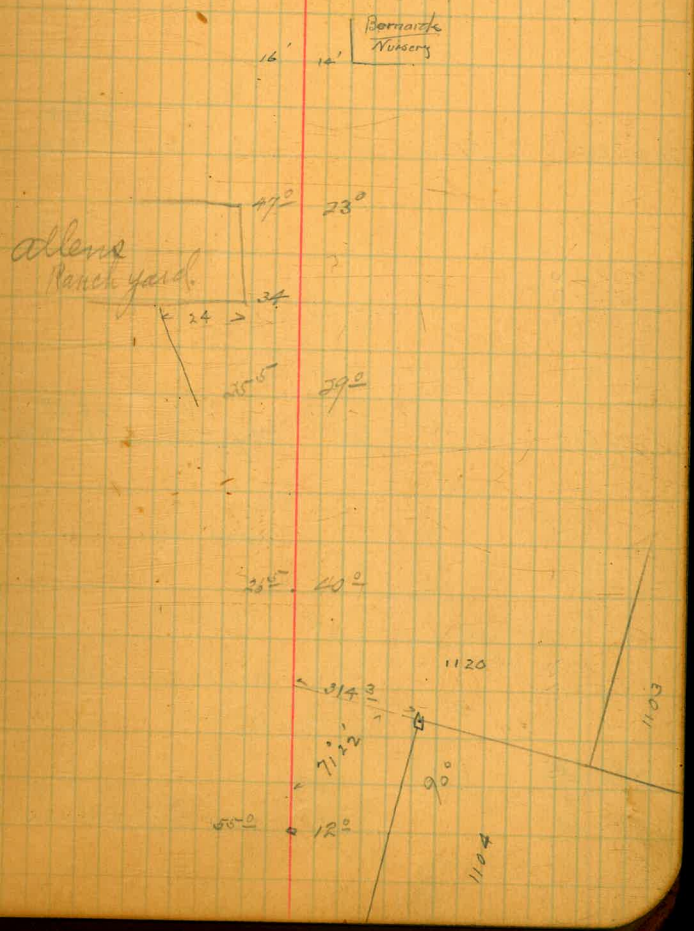
	L	R		
135+00	2°0'		S72°30'W	S72°52'W
	1144'			
123+56	2°0'		S75°00'W	S74°52'W
	705'			
116+51	2°0'		S77°00'W	S77°02'W
	673'			



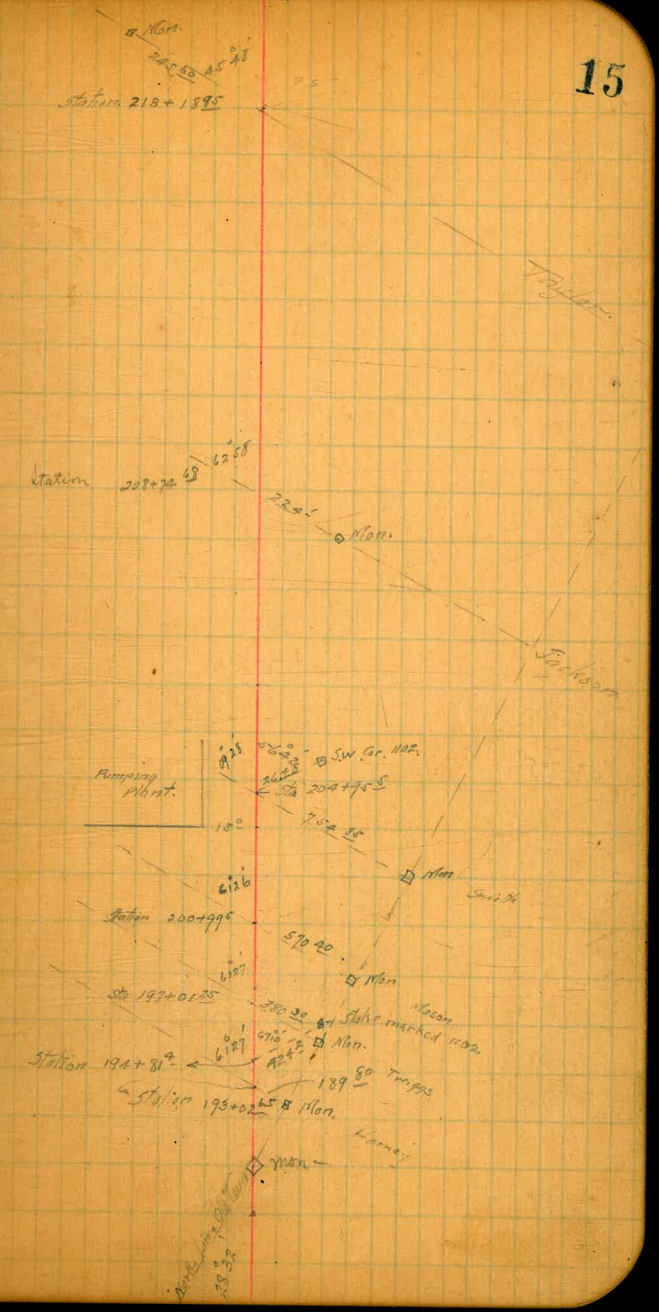
	L	R		
156+80		23°00'	N65°00'W	N65°38'W
151+94	58°0'			
151+00		11°30'	N87°40'W	N88°38'W
149+00	51°8'			
145+82		from 14 to 28° 26°00'	S81°00'W	S79°52'W
144+14	16°8' 19°00		S53°40'W	S53°52'W
136+83	9°14'			

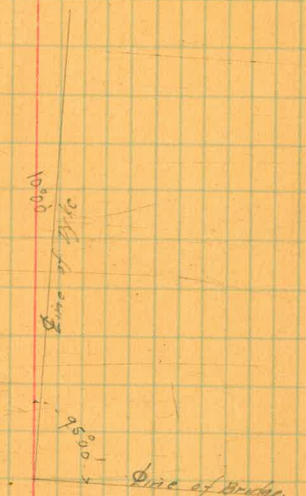


	L	R		
184+86		21°00'	N88°40W	N89°48W
168'				
183+18	23°40'		S70°20W	S69°12W S70°28W
173'				
175+45	5°30'		N86°00W	N86°08W
339'				
172+06		31°30	N35°00W	N36°08W
156'				
170+85				
170+50		38°00'	N66°30W	N67°38W
380'				
166+70		20°30	S75°30W	S74°22W
570'				
164+68				
420'				
161+00	60°00'		S55°00W	S54°22W



	L	R.		
212+00	17°10'		S81°20'W	S81°18'W 80.02
435'				
207+65	6°30'		N81°30'W	N81°32'W 82°48
305'				
204+60		8°00'	N75°30'W	N75°02'W 76.18
1711'				
189+04 85				
187+49	15585	5°30'	N83°20'W	N83°02'W 84°18'
263'				





210758

358'

Survey of Road in Mission Valley to connect with Ramsey's Survey at Sta 50+92

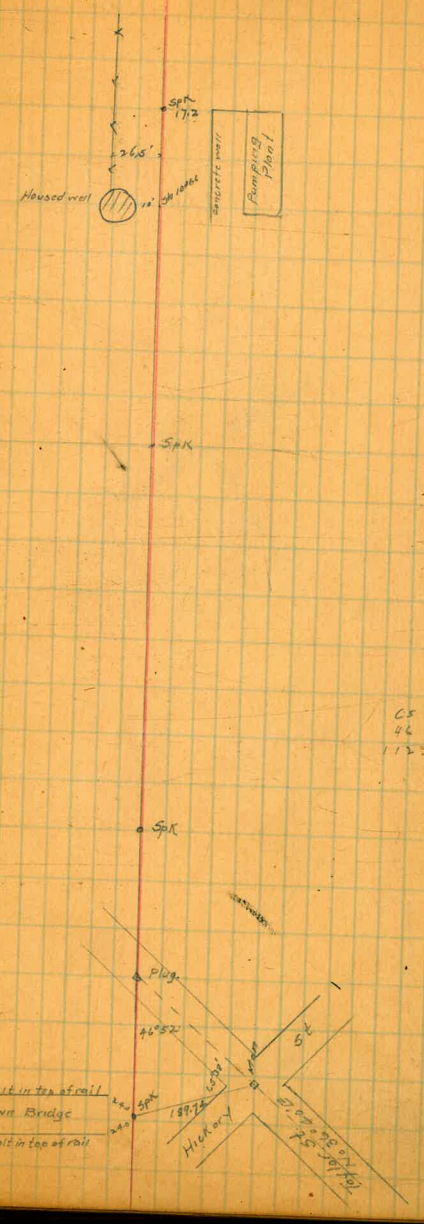
1/19/70 { Davis, Williams, Honeycutt

Book 121 P 15

Sta	Ang	Bearing	Mag Bearing
10+96	29°39'	S84°37'E	N79°40'E
7+77	R6°10'	S74°58'E	N89°20'E
3+77	R16°20'	S80°08'E	N84°10'E
0+00	R112°30'	N83°32'E	N67°50'

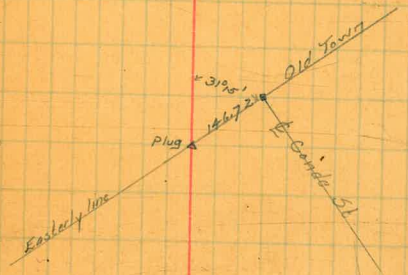
319

410



25+25.98

1431.98

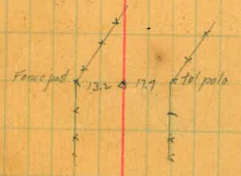


Sta	Ang.	Bearing	Mag. Bearing
43+42.35	Δ L 36°21'	S68°49'E	S84°45'E
39+96	Δ R 52°09'	S32°28'	S048°25'E

1+17.02

Continued on Page

Sta 43+42.35 = Sta 50+92
on survey made by Rumsey
Book 121 P. 15 for continuation



Re Survey of a portion of Mission Valley Road Surveyed by Rumsey Commencing at Sta 169+72.26 and ending at Sta 195+56

Sta	Ang.	Bearing	Mag. Bearing

continued in Book 121 Page 22

196+57.2' - 195+56 old survey (Rumsey

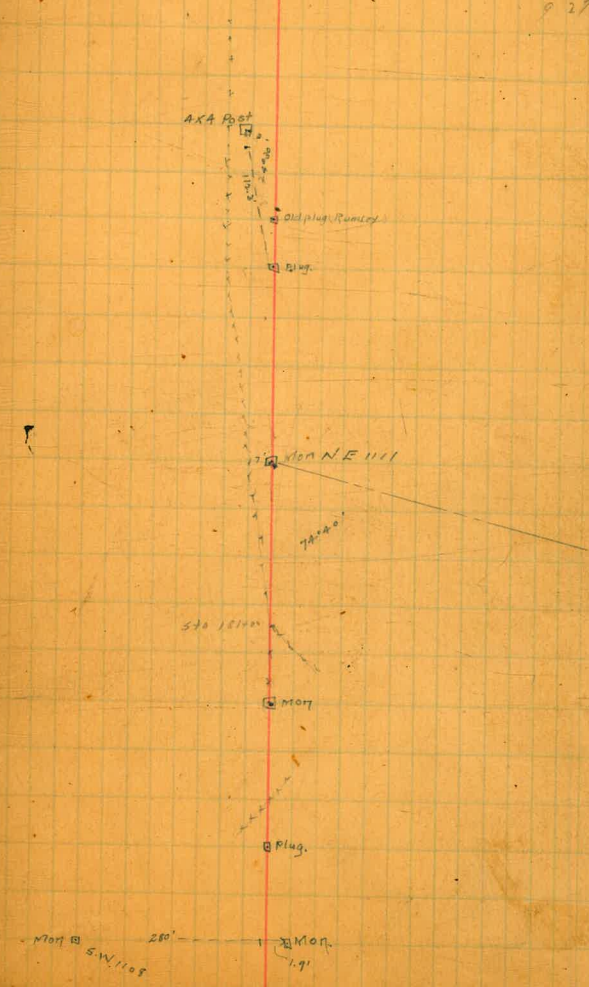
196+53	R24°30'	S80°14'E (17)	N84°05'E
183+25.8°			
173+98.6°	R56°38'	N75°16'E (13)	N59°35'E
170+66 (66)	L56°36'	N18°38'E (35)	N3°0'E
169+72.2°		N75°14'E	N59°35'E

332.6

continued from Book 121 Page 21

3 Davis
23 Williams
11 Hancock

185+25.8
173+98.6
9 27 2



31 2

1326 35

4,81

7½

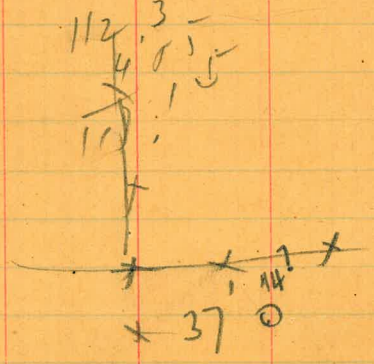
927.2) 75000 (00809
74176
8240

00029) 809 (27
58
229
203 27'30'

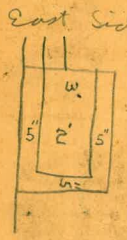
0°27'30"

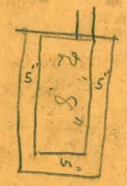
112.3
4.85
1.5
11

37 0



1203.5
1331.2
112.3
26470
1323.5
1203.5
120.0





ENGINEERING DEPARTMENT
CITY OF SAN DIEGO.
CALIFORNIA.

Return to City Engineers Office
City Hall, San Diego, Cal.

Published by H. S. CROCKER COMPANY, Stationers, Drawing Materials, Mathematical Instruments, etc., San Francisco.

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees
	DEGREES		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		