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

TRANSIT

398

F.B. 369

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	100½
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.

MICROFILMED
DEC 1 1964

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.

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

Uvn bet. Florida & Alabama (Colvert 16-19
Pipe under Uvn Ave. Bridge 20-
Levels & location Uvn Ave Colvert 22-23

X sect. 1st Street Intersection at Palm Mar. 28/10 {Shields Barber Taylor

		Ht.		
	2.20	257.20		255.00
T.P.	2.15	249.13	10.22	246.98
	No. line Palm,			Elev
E line			0.5	248.6
			0.7	248.4
			1.4	247.7
℄			1.5	247.6
			2.1	247.0
			2.7	246.4
W line			2.4	246.7
	5' no. of north line			
W line			4.1	245.0
			4.1	245.0
			4.4	244.7
℄			3.9	245.2
			3.3	245.8
			5.2	243.9
E line			8.1	241.0

Hd. 249.13

	no. curb.		Elev.
E line		16.5	233.6
		13.7	235.4
		11.8	237.3
℄		10.2	238.9
		8.3	240.8
		6.5	242.6
W. line		5.8	243.3
	3' no. of north 1/4		
W line		7.5	241.6
		10.0	239.1
W 1/4		12.3	236.8
℄	no. 1/4		
W. line		8.6	240.5
		9.7	239.4
W 1/4		13.7	235.4
	Center		
W line		11.3	237.8
W ℄		13.9	235.2

249.13

Palm street

West line 1st

		Elev.
℄	11,3	237.8
¼	8,6	240.5
3' no ¼	7,5	241.6
Curb	5.8	243.3
5' no. pro. line	4,1	245.0
no. line	2.4	246.7
15' west.		
no line	5,0	244.1
	6,8	242.3
	8.9	240.2
C	13,1	236.0
30' west		
C	13,5	235.6
	9,9	239.2
	7,3	241.8
Pro line	6,2	242.9
45' west		
no. line	7.6	241.5
	8.0	241.1
	9,5	239.6
C	13,3	235.8

249.13

		Elev
60' west		
C	14.0	235.1
	10,8	238.3
	9,5	239.6
no. line	9,3	239.8
75' west		
no line	11,3	237.8
¼	11.2	237.9
½	11.7	237.4
C	15.2	233.9
90' west		
C	14,2	234.9
½	12,5	236.6
¼	12,5	236.6
no. line	12,5	236.6
T.P.	0.78 236.95	12,96 236.17
1st street		
3' no. of ¼		
C	3.4	233.5
½	6,2	230.7
¼	6.1	230.8
E. line	4.1	232.8

236.95

280 1/4

		Elev
C	4.3	232.6
	8.5	228.4
	8.4	228.5
Elm	7.4	229.5
Center		
C	13.5	223.4
W. 1/4	7.5	229.4
So. 1/4		
W. line	5.3	231.6
Cb.	9.1	227.8
So. Cb		
W. line	12.7	224.2
Palm Street		
West line 1st.		
So. 1/4	5.3	231.6
So. Cb	12.7	224.2
15' west.		
So 1/4	6.6	230.3
So. Cb.	11.8	225.1
30' west		
So. Cb.	12.9	224.0
So. 1/4	8.0	228.9
45' west		
So 1/4	7.9	229.0

236.95

60' west

		Elev
So. 1/4	7.4	229.5
75' west.		
So. 1/4.	8.2	228.7
So. Cb.	13.6	223.3
90' west		
So. Cb	11.2	225.7
So. 1/4	6.1	230.8
105' west		
So. line	13.1	223.8
	6.0	230.9
	3.5	233.4
C	2.1	234.8
I.P.	2,30,237.75	1.50 235.45
1/4	2.4	235.3
	2.8	235.0
No. line	2.2	235.6
170' west		
No. line	4.0	233.7
	4.3	233.4
	4.0	233.7
C	3.7	234.0
	4.6	233.1
	5.6	232.1
So. line	9.2	228.5

237.75

130' west

So. line	7.2	230.5
	6.2	231.5
	5.7	232.0
C	5.4	232.3
	5.8	231.8
	5.8	231.9
No. line	5.5	232.2

135' west

No. line	6.1	231.6
	6.1	231.6
	6.0	231.7
C	5.5	232.2
	6.0	231.7
	6.6	231.1
So. line	7.5	230.2

150' west

So. line	8.4	229.3
	7.7	230.0
	7.7	230.0
C	7.3	230.4
	7.6	230.1
	8.0	229.7
No. line	8.1	229.6

K.I.

1.52 225.95

90' west

So. line	6.6	219.3

75' west

So. line	9.8	216.1

60' west

	8.7	217.2
So. Cb.	3.0	222.9

45' west

So. Cb.	2.7	223.2
So. line	8.9	217.0

30 west

So. line	8.4	217.4

15' west

So. line	6.9	219.0

west. line

So. line	8.3	217.6

12.52 224.43

1st Street 225.95

Center

E ¼		6.6	219.3
		5.9	220.0
E line		5.8	221.1

So. ¼

E line		11.4	214.5
		13.5	212.4
		12.5	213.4
C		8.5	217.4
W. ¼		2.1	223.8

So. CB.

W. CB.		6.1	219.8
		8.2	217.7

So. line

W line			8.3	217.6
W. CB.		1st I.	13.0	212.9
J.P.	0.33	213.74	12.54	213.41

So. CB.

E ¼		7.1	206.6
		9.8	203.9
E line		2.0	211.7

213.74

So line

E. line	4.5	209.2
CB	13.2	200.5
CB + 15	15.5	197.2
¼	12.9	200.8
C	8.2	205.5
W. ¼	2.1	211.6

Xsection of Palm St from West line of 2nd to East line of Front with Slopes, 1½ walks, 12' ½'s.
BM 263.03 AT NE 2nd & Quince

Dec 23-12 {Donnan. Shaw. Devine.

	+	HI.	−	Ele
				7
	0.71	263.74		263.03
	0.81	251.92	12.63	251.11
	0.34	246.69	0.07	246.35
00 = West line of 1st St.				
00 N.L.			0.35	246.3
cl			0.71	246.0
+1			1.9	244.8
+12 Top wall			1.8	244.9
+12 Bottom wall			7.4	239.3
½			7.5	239.2
+5			9.8	236.9
C			9.8	236.9
+5 N.L.			2.6	244.1
+25 N.L.			4.1	242.6
cl			4.2	242.5
+12 Top wall			3.0	243.7
+12 Bottom wall			8.3	238.4
¼			8.5	238.2
C			10.5	236.2
+55 N.L.			6.7	240.0
cl			7.1	239.6
½			8.0	238.7
C			11.6	235.1
+75 N.L.			9.8	236.9

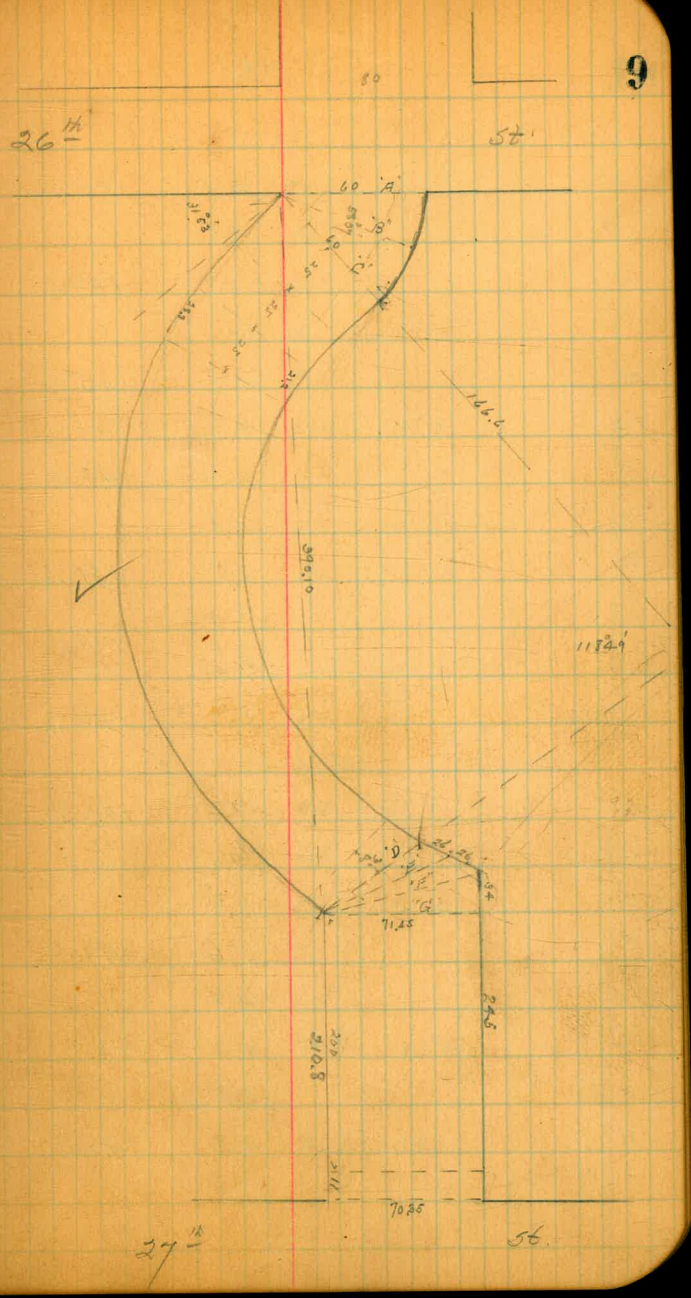
	+	HI.	−	Ele
		246.69		
cl			9.7	237.0
½			9.5	237.2
C			14.1	232.6
+100 N.L.			11.9	234.8
cl			12.0	234.7
½			12.4	234.3
C			12.8	233.9
H	0.28	284.19	12.78	233.91
00 = West line of 1st St.				
00 N.L.			17.6	216.6
cl			10.8	223.4
½			3.5	230.7
+25 N.L.			18.1	216.1
cl			11.0	223.2
½			4.4	229.8
+50 N.L.			18.5	215.7
cl			10.7	223.5
½			9.1	230.1
+75 N.L.			18.8	215.4
cl			11.9	222.3
½			6.1	228.1
+100 N.L.			12.3	221.9
cl			6.0	228.2
½			1.7	232.5
H	0.17	221.86	12.00	221.19

	H.I. 221.36			
	0.20	209.55	13.01	209.35
Slope station 00, 25' N of N line of Palm			3.7	204.9
" " " 50 " " " " " "			18.7	189.9
" " 25' 50' " " " " " "			18.3	190.3
" " " 25' " " " " " "			9.8	203.8
" " 50 " " " " " "			13.6	203.0
" " " 50' " " " " " "			18.7	189.9
" " 75' " " " " " "			17.9	190.7
" " " 25' " " " " " "			13.2	203.4
" " 1+00 " " " " " "			10.15	208.1
" " " 50' " " " " " "			12.6	196.0
	0.94	234 85		T.P. 233.91 See Page 7.
1+25 N.L.			2.6	232.3
cl			2.7	232.2
1/2			2.9	232.0
c			3.2	231.7
1/2			3.6	231.3
cl			3.9	231.0
N.L. 1+50			6.1	228.8
N.L.			6.6	228.3
cl			6.3	228.6
1/2			6.0	228.9
c			5.5	229.4
1/2			5.3	229.6
cl			5.2	229.7

	+	H.I. 234.85	−	Elc
N.L. 1+75			5.3	229.6
N.L.			7.0	227.9
cl			7.3	227.6
1/4			7.3	227.6
c			7.4	227.5
1/4			7.9	227.0
cl			8.1	226.8
N.L.			8.3	226.6
2+00 = East line of Fremont St.				
2+00 N.L.			10.8	224.6
cl			10.4	224.5
1/2			10.0	224.9
c			9.4	225.5
1/2			9.4	225.5
cl			9.4	225.5
N.L.			9.5	225.4

12/26/12 Hatch Moore Hall Xsec of J. St. on Front Hill

BM SW 26" J	1234	148.13 ✓		135.788
		Sec A		
S			9.0	139.1
cb			9.0	139.1
1/a			9.0	139.1
c			8.3	139.8
1/a			7.7	140.4
cb			7.3	140.9
+7			7.0	141.1
N			6.1	142.0
		Sec B		
N			1.4	146.7
+0.5			4.4	
+5.0			5.2	142.9
cb			5.7	142.4
1/a			6.9	
c			7.5	140.6
1/4			8.3	
cb			8.4	139.7
S			9.0	139.1
		Sec C		
S			9.0	139.1
cb			8.0 8.4	140.1 139.7
1/a			7.8	
c			6.7	141.4



		148.1	
1/4		6.1	
cb		5.1	143.0
+9		4.1	
N		+0.9	149.0
	25' E of C		
N		3.1	145.0
+3		4.3	
cb		4.7	143.4
1/c		5.8	
c		6.8	141.6
1/c		7.4	
b		7.8	140.3
		7.4	140.7
S		7.8	140.3
	50' E		
S		7.3	140.8
cb		7.1	141.0
		7.3	140.8
1/c		6.6	
c		5.6	142.5
1/c		4.9	
cb		4.0	144.1
+7		3.5	
N		2.8	145.3

		148.1	
	75 E		
N		+1.2	146.9
+1		1.8	
+5		2.8	
cb		3.6	144.5
1/c		4.5	
c		5.2	142.9
1/c		6.2	
cb		6.8	141.3
		6.3	141.8
S		6.6	141.5
	100 E		
S		5.8	142.3
		5.6	142.5
cb		6.2	141.9
1/c		5.4	
c		4.4	143.7
1/c		3.8	
cb		3.1	145.0
+5		2.5	
+9		1.5	
N		+0.5	145.6
	125 E		
N		+3.7	144.3
+1.5		1.3	
+5		2.1	

		148.13		
B			2.6	145.5
1/2			3.1	
C			4.1	144.0
1/2			4.8	
B			5.5	142.6
			4.9	143.2
S			5.2	142.9
		150 E		
S			4.5	143.6
B			4.4	143.7
			4.9	
1/2			3.7	
C			2.8	145.3
1/2			2.2	
B			1.7	146.4
+5			1.2	
TP	652	152.80	1.85	146.28
+7.8			5.2	
N			+1.8	151.0
		175 E		
N			+2.8	150.0
+2			4.2	
+5			5.1	
B			6.0	146.8
1/2			6.5	
C			7.2	145.6

		152.8	
1/2		8.1	
		8.9	143.9
B		8.3	144.5
S		8.5	144.3
	200 E		
S		7.8	145.0
+9		7.7	
B		8.3	144.5
1/2		7.9	
C		6.5	146.3
1/2		5.6	
B		5.2	147.6
+5		4.9	
+8.5		4.3	
N		+1.7	151.1
	220 E		
N		2.2	150.6
B		4.2	148.4
1/2		5.0	
C		6.0	146.8
1/2		7.0	
B		7.5	145.3
+1		7.0	
S		7.1	145.7

152.80

250 E

S	6.3	146.5
+8	6.4	
cb	6.9	145.9
1/c	5.9	
c	5.4	147.3
1/c	4.8	
cb	3.9	148.9
N	2.0	150.8

275 E

N	1.8	151.0
+6	3.1	
cb	3.4	149.4
1/c	4.0	
c	4.8	148.0
1/c	5.6	
cb	6.0	146.8
+2	5.9 5.5	
S	5.5	147.3

300 E

S	5.0	147.8
+8	4.8 5.3	
cb	5.5	147.3
1/c	4.8	

152.8

C	3.8	149.0
1/c	3.3	
cb	3.0	149.8
N	1.6	151.2

325 E

N	+1.3	151.5
+1	1.2	
+3	2.1	
cb	2.5	150.3
1/c	2.9	
c	3.3	149.5
1/c	4.2	
cb	4.5 4.2	148.3 148.6
N	4.2	148.6

350 E

S	3.5	149.3
cb	3.7 4.1	149.1 148.7
1/c	3.3	
c	2.6	150.2
1/c	2.3	
cb	1.9	150.9
+5	1.6	
+9	0.2	
N	+1.8	151.0

		152.80		
		375 E		
N			+1.3	154.1
+1			0.7	
+4			1.3	
cb			1.6	151.2
1/c			1.9	
c			2.1	150.7
1/c			2.6	
cb			3.2	149.6
			2.7	150.1
S			2.7	150.1
		400 E		
S			2.1	150.7
cb			2.2	150.6
			2.5	150.3
1/c			2.1	
c			1.6	151.2
1/c			1.4	
cb			1.1	151.7
T.P	3.89	155.39	1.30	151.50
+8			3.2	
N			2.0	153.4
		Sec D		
N			1.0	154.4
+1			2.8	
+4			3.2	

		155.4		
cb			3.6	151.8
1/c			4.0	
c			4.2	151.2
1/c			4.7	
cb			4.8	150.6
			4.5	150.9
S			4.7	150.7
		Sec E		
S			4.7	150.7
cb			4.8	150.6
1/c			4.6	
c			4.2	151.2
1/c			3.8	6
cb.			3.5	151.9
+8			2.7	
N			1.4	154.0
		Sec F		
N			1.8	153.6
cb			3.3	152.1
1/c			3.8	
c			4.3	151.1
1/c			4.7	
cb			5.0	150.4
S			4.7	150.7

155.39

Sec G

S	4.7	150.7
ab	5.0	150.4
1/4	4.9	150.5
4	4.5	150.9
1/4	4.4	151.0
ab	4.4	151.0
	3.9	151.5
N	3.2	152.2

25' E

N	4.1	151.3
ab	4.8	150.6
	5.2	150.2
1/4	5.3	150.1
C	5.1	150.3
1/4	5.5	149.9
ab	5.7	149.7
	5.2	150.2
S	5.3	150.1

50 E

S	6.5	148.9
ab	6.2	149.2
	6.4	149.0
1/4	6.1	149.3
C	5.9	149.5
1/4	5.9	149.5
ab	5.9	149.5
	5.4	150.0
N	4.8	150.6

155.4

75' E

N	6.5	149.9
ab	6.2	149.2
	6.9	148.5
1/4	6.8	149.6
C	6.5	148.9
1/4	7.0	148.4
ab	7.2	148.2
	6.7	148.7
S	7.1	148.3

100 E

S	7.7	147.7
ab	7.6	147.9
	7.9	147.5
1/4	7.7	147.7
C	7.3	148.1
1/4	7.5	147.9
ab	7.4	148.0
	7.0	148.4
N	6.2	149.2

125' E

N	6.7	148.7
ab	7.6	147.9
	8.0	147.4
1/4	8.2	147.2
C	7.9	147.5
1/4	8.5	146.9
ab	8.9	146.5
	8.5	146.9
S	8.9	146.5

	155.39		
	150 'E		
S		9.6	145.8
		9.5	145.9
CB		9.8	145.6
1/4		9.3	146.1
C		9.0	146.4
1/4		8.8	146.6
		8.5	146.9
CB		7.9	147.5
N		7.2	148.2
	175 'E		
N		7.8	147.6
+3		8.5	146.9
		8.7	146.7
CB		9.3	146.1
1/4		10.2	145.2
C		10.3	145.1
1/4		10.7	144.7
gutter		11.1	144.3
cement curb		10.7	144.7
S		10.4	145.0
	200 'E		
S		12.1	143.3
curb cement		12.3	143.1
gutter		12.5	142.9
1/4		12.4	143.0
C		11.8	143.6

155.4		
1/4	11.4	144.0
	11.1	144.3
+10	10.7	144.7
CB	10.4	145.0
+7	10.1	145.3
N	8.6	146.6
211 'E = WA. 27 1/2		
N	11.6	143.8
CB	11.8	143.6
1/4	12.1	143.3
C	12.9	142.5
1/4	13.3	142.1
cement curb	13.44	142.0 ?
S	13.9	141.5
20' W of 27 1/2 on cement curb	11.58	143.8
50 W " " " on south side of street	9.58	145.5

12/27/12 Sec Univ Ave under Inv 20 between Florida & Alabama
Capitol Theatre Hall and location of culvert.

RM NE Alabama & Univ Ave	5.30	270.72		265.419
		285 'E of Florida (S. side)		
S			4.0	266.7
+8			2.9	267.8
cb			3.2	267.5
1/a			2.6	268.1
c			2.5	268.2
		209 'E = E end of Bridge		
c			0.5	270.2
1/a			0.9	269.8
cb			1.5	269.2
+6			2.3	268.4
S			6.7	264.0
TP	7.76	265.82	1.66	258.06
		209 'E Under bridge		
cb			+2.5	268.3
1/a			1.5	264.3
c			+1.5	267.3
		190 'E		
S			9.9	255.9
cb			6.7	259.1
1/a			7.2	258.6
c			6.0	259.8
TP	4.59	257.65	12.76	253.06
		257.65		
		175 'E		
S			10.5	247.2
+8			6.8	250.9
cb			6.5	251.2
1/a			6.5	251.2
+3			7.6	250.1
c			5.3	252.4
1/a			6.7	251.0
+6			8.6	249.1
cb			8.2	249.5
N			8.7	249.0
10 'N			10.8	246.9
30 'N			11.6	246.1
90 'N			11.9	245.8
		165 'E		
40 'N			13.2	244.5
N			11.5	246.2
cb			11.5	246.2
1/4			11.3	246.4
c			11.7	246.0
+7			11.6	246.1
1/a			9.7	248.0
+4			10.8	246.9
cb			10.4	247.3

257.65

S	13.6	244.1
13'S	15.9	241.8
22'S	16.2	241.5
40'S	7.4	250.3
175'E		
40'S	9.6	248.1
28'S	16.4	241.3
19'S	16.4	241.3
190'E		
20'S	14.4	243.3
27'S	16.7	241.0
37'S	16.7	241.0
45'S	14.2	243.5
209'E		
30'S	12.7	245.0
47'S	17.4	240.3
225'E		
33'S	12.5	245.2
150'E		
40'S	5.6	252.1
12'S	7.7	250.0
	14.7	243.0
S	15.5	242.2
S	14.1	243.6
+4	12.4	245.3

257.65

1/4	12.6	245.1
C	12.4	245.3
1/4	12.4	245.3
ob	12.2	245.5
N	13.0	244.7
40'N	12.1	245.6
145'E		
40'N	11.1	246.6
30"	12.4	245.3
N	13.8	243.9
ob	13.7	244.0
1/4	13.5	244.2
C	13.7	244.0
1/4	14.2	243.5
ob	15.0	242.7
S	14.8	242.9
3'S	14.2	243.5
5'S	7.0	250.7
40S	5.2	252.5
185'E		
40'S	4.1	253.6
S	5.0	252.7
+5	8.0	249.7
	11.2	246.5
ob	12.3	245.4

		257.65		
1/4			12.6	245.1
C			18.5	244.2
1/4			13.1	244.6
cb			12.9	244.8
N			12.7	245.0
20 N			12.1	245.6
40 N			10.4	247.3
		120 E		
40 N			9.2	248.5
N			9.5	248.2
cb			9.5	248.2
1/4			9.8	247.9
C			8.8	248.9
1/4			7.6	250.1
+5			7.2	250.5
cb			5.5	252.2
S			2.0	255.7
40 S			3.0	254.7
		105 E		
40 S			1.7	256.0
T.P.	10.60	267.06	11.9	256.46
S			7.4	259.7
cb			8.8	258.3
+9			11.0	256.1

		267.06		
1/4			10.2	256.9
+3			11.3	255.8
C			11.6	255.5
+7			10.7	256.4
1/4			12.7	254.4
+7			13.9	253.2
cb			13.4	253.7
N			14.8	252.3
40 N			15.6	251.5
		85 E		
30 N			7.7	259.4
10 N			8.5	258.6
N			4.0	263.1
cb			1.9	265.2
+6			2.3	264.8
1/4			3.2	263.9
+10			-0.4	266.7
C			1.4	265.7
1/4			0.9	266.2
+7			0.8	266.3
cb			+0.6	267.7
S			3.1	264.0
30 S			7.4	259.7

		267.06		
		68' E - W. end of bridge (und		
20's			3.9	263.2
15 S			1.9	265.2
T.P.	10.22	276.19	1.09	265.97
S			4.0	272.2
ob.			+1.0	277.2
1/c			+0.5	276.7
C			+0.5	276.7
1/c			+0.5	276.7
ob			+0.5	276.7
N			2.8	273.4
5' N			8.4	267.8
20' N			9.9	266.3
T.P.	12.53	284.89	3.83	272.36
4's of curb. on top			4.6	280.3
1/c			4.9	280.0
C			4.9	280.0
1/c			5.1	279.8
+9			5.0	279.9
		60' E		
20' S			16.6	268.3
S			5.6	279.3
+3			4.0	280.9
ob			3.6	281.3

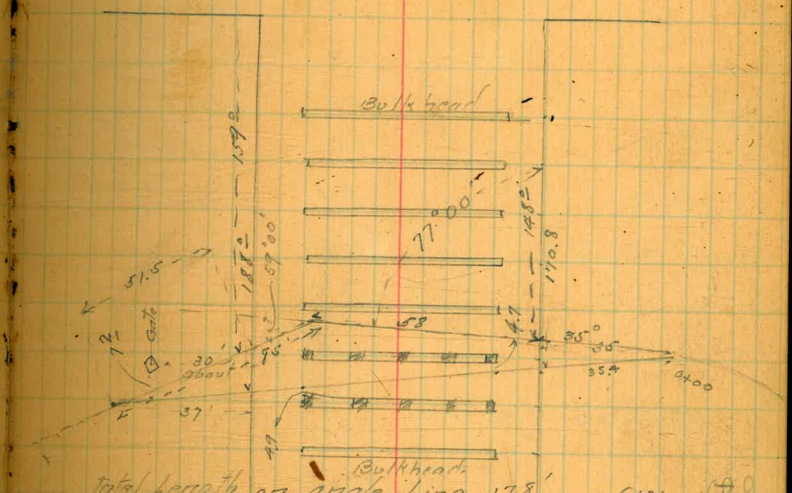
		284.89		
1/c			3.6	281.3
C			3.6	281.3
1/c			3.6	281.3
ob.			3.0	281.9
N			3.4	281.5
13' N			10.4	274.5
T.P.	0.0	271.93	12.96	271.93
		235' E		
N 1/c			3.9	268.0
+10			4.2	267.7
ob.			3.7	268.2
N			3.4	268.5
		209 E (Top)		
N 1/c			1.4	270.5
ob			2.8	269.1
+7			2.6	269.3
N			6.9	265.0
T.P.	6.02	265.58	12.37	259.56
		under bridge		
ob			+1.7	267.3
1/c			+1.7	267.3
C			+1.7	267.3

		265.58		
		190 E		
N/c			6.9	258.7
Cb.			7.9	257.7
N			8.4	256.2
T.P.	139	254.10	12.87	252.71
25 N			6.0	248.1
35 N			7.4	246.7
		209 E		
37 N			6.3	247.8
27 N			6.1	248.0

Profile on Pipe Line

0+00 = Head			9.5	244.6
+25			8.2	245.9
+35.4 NL of Ave			7.4	246.7
+50			5.2	248.9
T.P.	791	257.39	4.62	249.48
+75			4.6	252.8
1+00			1.5	255.9
+15			2.3	255.1
+30			7.8	249.6
+40			18.4	240
T.P.	632	250.85	12.86	244.53
15-4 S. end.			10.5	240.4

Interstate 5th



Total length on angle line 178' (13/30 ± Del.

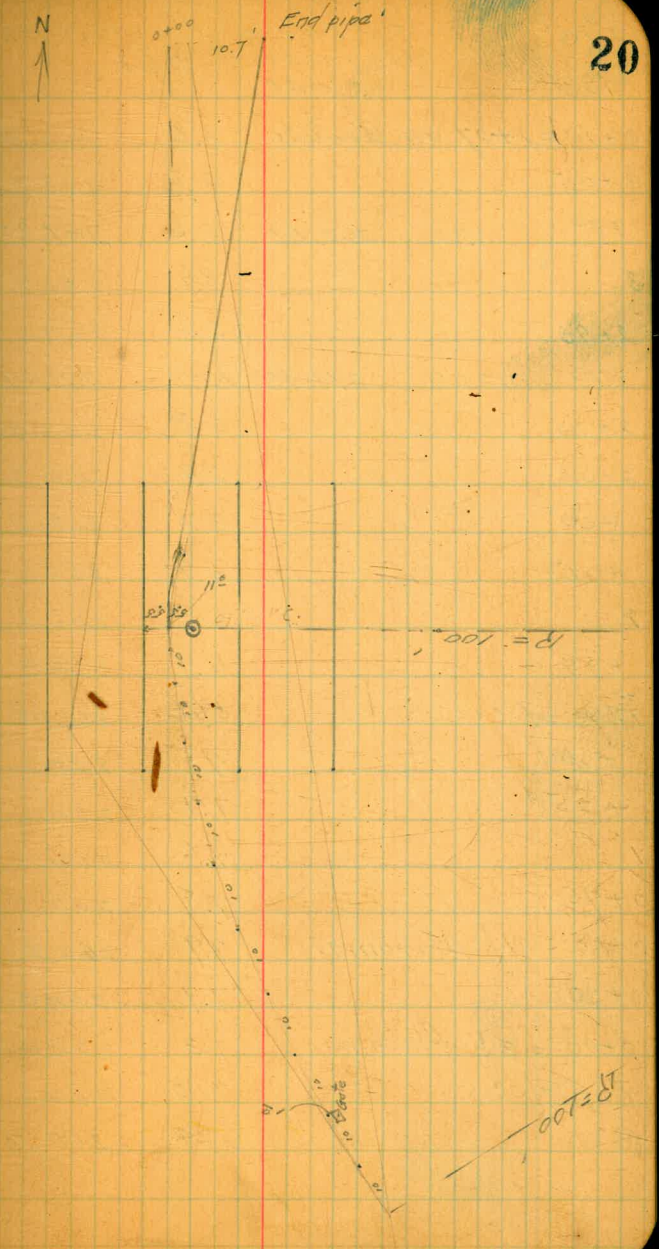
angle at Sta 0+93 = 37°30'

TP 0.575 250.03 249.48

0+00	5.0	243.0
+35 NL of Ave	5.5	244.5
+50	6.0	244.0
+75	6.3	243.7
+93 angle pt	5.1	244.9
1+25	7.3	242.7
+265.5 SL of Ave	7.2	242.8
+65	8.8	241.2
+78	9.7	240.3

11/13 Hatch Levels on center line of Pipe under Iron Ave bridge.

	400	250.48		249.48
0+00 =	40' N of Nh.		5.4	245.08
+35			5.8	244.7
+40			5.3	245.2
+50			5.3	245.2
+65			5.3	245.2
+80	PC.		5.1	245.4
Top of Manhole			4.5	246.0
Bottom.	"		10.2	240.2
+90			5.3	245.2
+7	gutterline (Sta 3+19)		5.0	245.5
+10			4.6	245.9
			5.8	244.7
+20			7.0	243.5
+30			7.4	243.1
+40			9.1	241.4
+50			9.7	240.8
+60			9.1	241.4
+70			9.1	241.4
+80			9.9	240.6
Top of Water Gate box.			7.8	



1/9/18 Hatch Levels on gutter line (South) Rod of Fun Chr from Eh of X
Fall Alabama to Pipe.

		250.48		
3+19 = 1407 on Pipeline			4.6	245.9
3+05			2.3	248.2
TP	11.22	260.47	1.23	249.25
3			8.6	251.9
2+90			3.5	257.0
TP	12.27	271.74	1.00	259.47
2+75			6.3	265.44
2+66			2.4	269.3
+50			3.7	268.0
+25			5.1	266.6
2			6.5	265.2
+75			6.9	264.8
Top of curb			5.66	266.08
+50			7.5	264.2
+25			7.7	264.0
1			7.6	264.1
0+75			7.8	263.9
0+60 = Wh. Alabama.			7.9	263.8
0+30			7.7	264.0
0+00 = Eh-Alabama.			7.3	264.4
Top of curb.			7.10	264.6
BM			6.24	265.50 265.42

Levels + Location Univ Culvert.

	+	HI	−	Surface.	Bot Pipe.	Cuts.
B.M. NE Univ & Alabam.				265.42		
	3.40	268.82				
T.P.			12.92	255.90		
	0.55	256.45				
T.P.			11.13	245.32		
	4.74	250.06				
0+00 = 1438' W of WL. Alabama St. and 40' N of NL. Univ St.			5.4	244.7	244.7	.00 ✓ St.gr. = 274.08
0+69.5 = PC. 100' R.			5.0	245.1	242.80	2.3 ✓
+83.5	4°01'		4.9	245.2	242.42	2.8 ✓
1+05.2 = ℄ 18" Culvert 15' N of S. Curb of Univ.			3.9	246.2		2.4 ✓
1+08.5	11°12'		4.7	245.4	241.83 241.74	3.7 ✓
+33.5	18°23'		8.1	242.0	241.06	1.0 ✓
+58.5	25°36'		9.2	240.9	240.38	0.5 ✓
+83.5 = End of Pipe.	32°45'		10.4	239.7	239.7	0.0 ✓ St.gr. 118.0 W. WL. 466.0 m N. = 271.26
- 14' S of SL. Univ.						

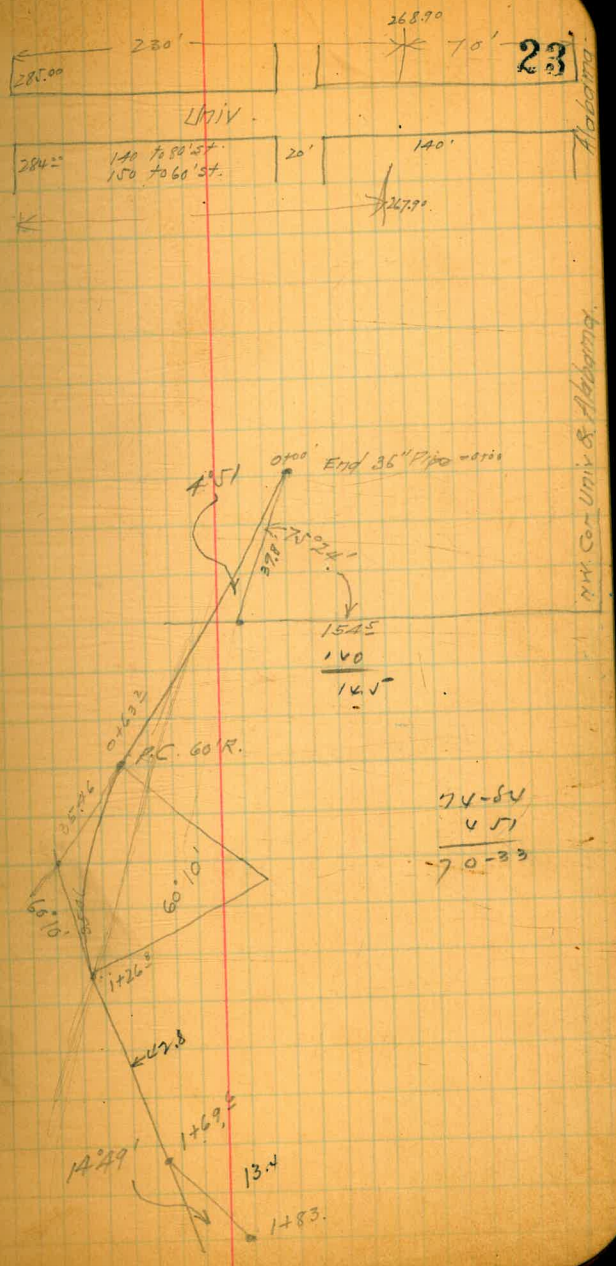
40

Culvert on ℄

			℄ Elev's.	But Pipe Gr.
	4.45	249.77	245.32	
0+00 End Pipe. = 143' W WL Alab. = 38' N of NL Univ.		5.12	244.65	244.5
0+63 = PC 60°R.		5.9	243.9	243.95
0+88		6.3	243.5	24234
+95 = Top 36" Pipe water main.		7.74	242.03	342.17
1+13		7.1	242.7	241.73
1+26 = P.T.		6.3	243.5	241.40
1+69 = ~~L.14°R.~~		7.9	241.9	240.35
1+83 End 36" Pipe.				240.00

0+30 Offset to W.

0+00	4.72	245.05	244.50	0.5
+63	6.27	243.50	242.95	0.5
+88	5.82	243.95	242.34	1.6
1+13	7.47	242.30	241.73	0.6
1+26	7.81	241.96	241.40	0.6
1+69	7.46	242.31	240.35	1.9
1+83.	7.00	242.77	241.00	2.8



#998

14 '26.

.188
2732
32
5444
8196
86

500
366
1340
1281
590
549
410

(2732

n 845098
2 000000
8.845098
4°01'

2732
695
13660
24588
16392
1898740

244.70
1.90
242 80
38
242.42
68
24174
68
24106
68
240.38
68

2732
14
10928
2732
38248

4|2732
683

24174

2297 · 125

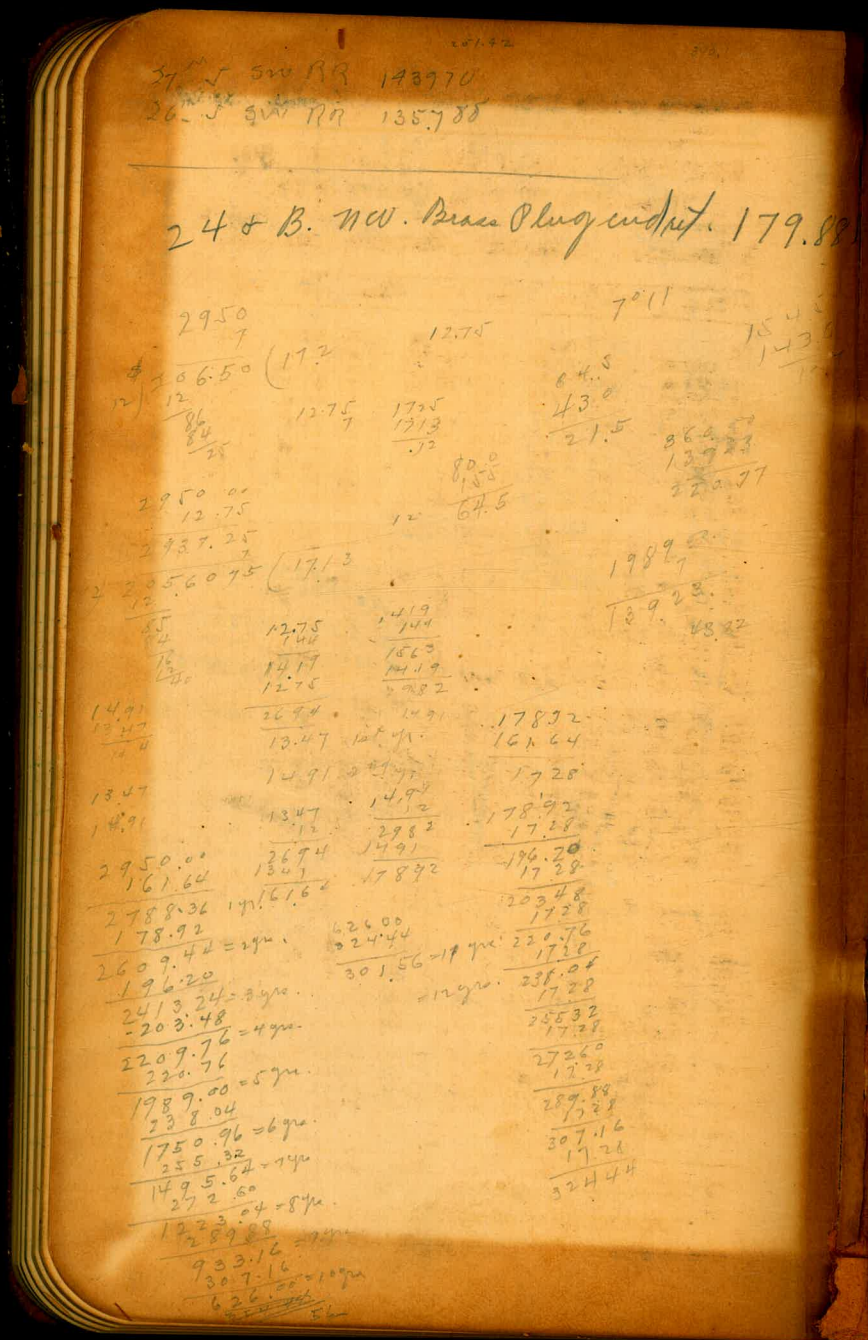
.125/100 = log sin

log 12.5 = 1.096910
n 100 = 2.000000
log sin = 9.096910

7°11' = natl fn .25 Ckd

4°01
11.12
7.11
18.23
7.11
25.34
7.11
3245

27 3.8
2397
34.1
4.0
30.0
15
45.



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.		