C. St. Ry. Levels —
Logan Ave Ry " —
5th St " "

308

TRANSIT

F.B. 219

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.

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

45.11 SE Cor. N. End. Hydt Hinge C

C. Street Ry

POSTED

6/ Hatch
29 Wetmore
05 Thomas.

	India & C. -				
BM.	2.99	21.29		18.30	
E. Line India.			4.39	16.90	✓
50			3.51	17.78	✓
100			2.64	18.65	✓
150			1.76	19.53	✓
200	5.39	25.79	0.89	20.40	✓
℄ Columbia			4.89	20.90	-
E. Line "			4.39	21.40	-
50			3.76	22.03	✓
100			3.14	22.65	✓
150			2.51	23.28	✓
200			1.89	23.90	✓
℄ State.			1.64	24.15	✓
E. Line "			1.39	24.40	✓
BM	2.84	29.03		26.19	
50			3.75	25.28	✓
100			2.88	26.15	✓
150			2.00	27.03	✓
200	5.49	33.39	1.13	27.90	✓
℄ Union			4.99	28.40	-
E. Line "			4.49	28.90	-
50			3.86	29.53	✓

Grade 0.10 below ℄ of Street   22.19

469
x4

18.30
6.89
25.19
2.97
22.22
5.96
28.18
1.96
26.22

4.75

26.22
2.90
29.12
4.75
24.37

29.09
18.30
10.79

26.19
2.90
29.09
4.75
24.34

33.28
6.81

29.09
22.19
6.90

30.40
8.69

		33.39			
100			3.24	30.15	✓
150			2.61	3078	✓
200			1.99	31.40	✓
℄ Front.	4.54	37.12	5.22	32.58 31.90	✓
E. Line "			4.72	32.40	✓
50			4.09	33.03	✓
100			3.47	33.65	✓
150			2.84	34.28	✓
200	4.97	39.87	2.22	34.90	✓
℄ 1st			4.47	35.40	✓
E. Line "			3.97	35.90	✓
50			3.34	36.53	✓
100			2.72	37.15	✓
150			2.09	3778	✓
200			1.47	38.40	✓
BM. ℄ 2d	8.10	48.10	9.20	40.00 38.90	✓
E. Line "			8.70	39.40	✓
50			8.07	40.03	✓
100			7.45	40.65	✓
150			6.82	41.28	✓
200			6.20	41.90	✓

6/29/05

4.97
8
4.89

48.10
37.78
10.32

33.39
0.82
32.57 check.
32.58

Angle ∠ 0°17′

40.00
8.10
48.10
3.005
45.095
13.105
38.40
97

Stake Raised to 3498 Angle ∠ 0°07′

2 Stakes set 5′ each side of car line at elev. 35.54 = elev of car line

check.

7/5/05

3d ✓ C	2d ✓ B	2d ✓ D
45.105	43.175	37.19
.22	0.21	6.11
45.325	43.385	43.30
6.97	5.04	5.04
38.355	38.345	38.26
38.40	38.40	38.40

POSTED

7/5/05

		48.10			
¢ 3rd St.			5.70	42.40	✓
E. Line "			5 20	4290	✓
50			4.10	44.00	✓
100			3.00	4510	✓
150			1.90	46.20	✓
200			0.80	47.30	✓
¢ 4th St.	7.34	5723	9.70	49.89 47 53	✓
E. Line "			9.60	4763	✓
50			8.48	48.75	✓
100			7.36	49.87	✓
150			6.24	50.99	✓
200			5.13	52.10	✓
¢ 5th St			4.98	52.25	✓
E line 5th			5.03	52.20	✓
50			4.11	53.12	✓
100			3.19	54.04	✓
150			2.26	54.97	
200					

POSTED ¢ 47.30 47.95 0.45

(860). 1½" low.
3/8" high
1½" "

3/4" "
3/8" "
3/8" "
1/2" "
1/2" "

7/5/06

BM	2.66	60.08		5742		
S Line C.				5560		
50			5.25	54,83	✓	
100			6.04	5404	✓	
150			6.83	5325	✓	1/2" high
200			7.62	5246	✓	3/4" "
250			8.41	51.67	✓	
300			9.20	5088	✓	1/2" "
¢ D St.			9.50	50.58	✓	1/2" "
BM.	270	54.80	798	52.10	✓	
S. Line D.			440	5040	✓	1/4" low
50			5.60	4920	✓	
100			6.82	4798	✓	1/2" "
150			8.04	46.76	✓	1 1/2" "
200			9.26	45.54	✓	
250			10.48	44.32	✓	
300.			11.70	43.10	✓	
¢ E St.			12.34	4246	✓	
S Line E. St.			12.73	42.07	✓	1/2" low
	1.05	46.59	9.26	45.54		
50			545	41.14	✓	1/2" low.
100			6.39	4020	✓	7/8" "

Elevations are 0.04 above Grade { Elevations are 0.02 above Grade

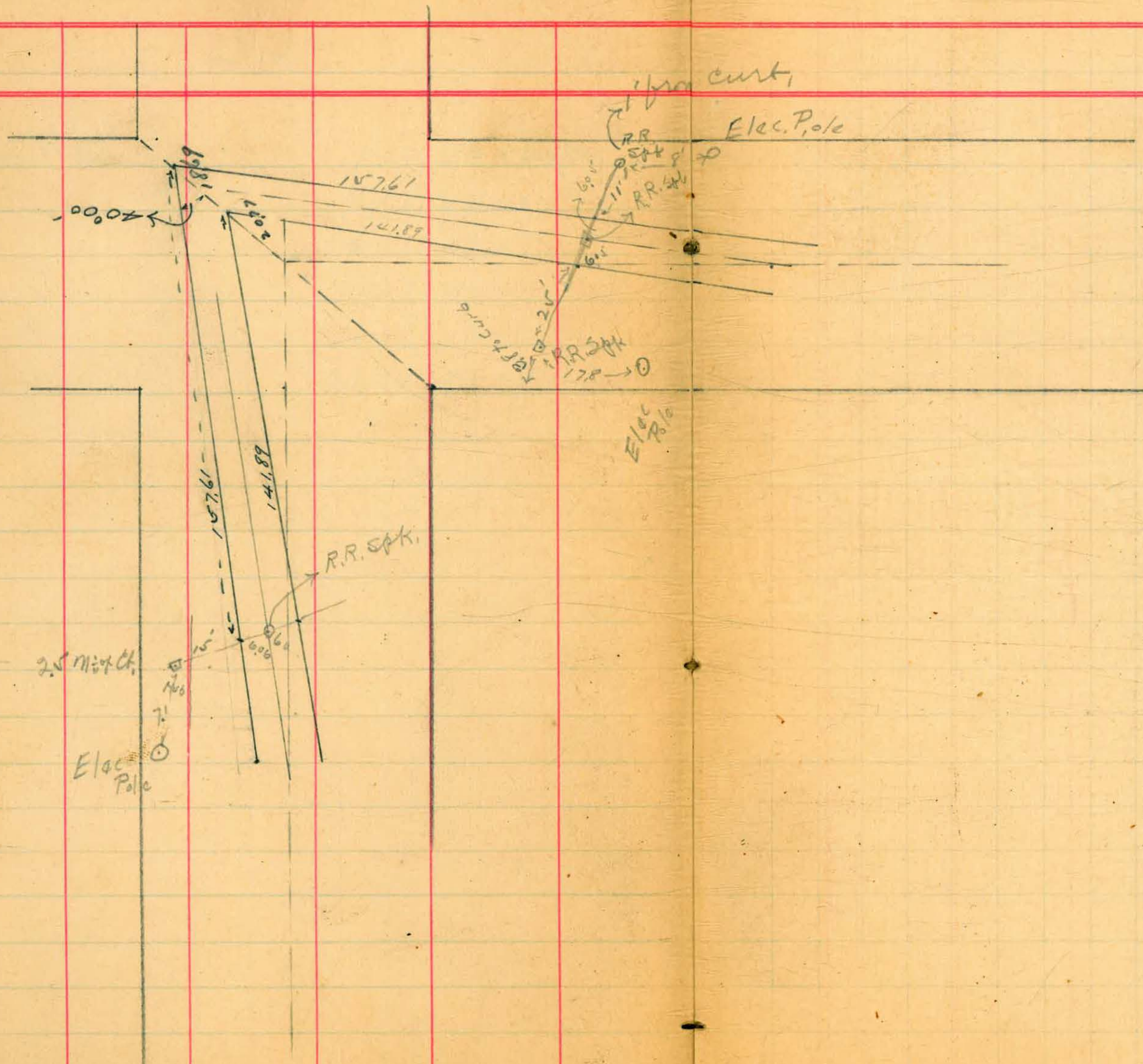
798
5210
52.07 check

270

4956

7/5/25

		46.59					
150			7.33	39.26	✓	1/2" high	BM. F.&G. 37.60
200			8.27	38.32	✓	7/8" "	
250			9.21	37.38	✓	—	
300			1013	3646	✓	—	
℄ F St.			10.31	36.28			
S line F. St.			10.61	35.98			


1' fr curb,
Elec. Pole
R.R. Spk
8'
R.R. Spk
60.5
11'
6.5
2.5'
6.5'
ft curb
R.R. Spk
17.8
Elec Pole
157.61
141.89
40.00
10.00
6.00
157.61
141.89
R.R. Spk.
2.5 N of Ct.
15'
6.00
Hub
7'
Elec Pole

8/8/05 Hatch
Evans
Thomas.

Track Centres & Grades
Logan Ave

	5.98	46.98		41.00	
E.L. 22d				41.00	
50				41.17	
100			5.65	41.33	✓
150			5.48	41.50	✓
200			5.32	41.66	✓
250			5.15	41.83	✓
300			4.98	42.00	✓
350			4.82	42.16	✓
400			4.65	42.33	✓
450			4.49	42.49	✓
500			4.32	42.66	✓
550			4.15	42.83	✓
T.P.		49.97			
600			6.97	43.00	✓
℄ 23d			6.97	43.00	✓
E.L. 23d			6.97	43.00	✓
50			6.51	43.46	✓
100			6.05	43.92	✓
150			5.60	44.37	✓
200			5.14	44.83	✓
250			4.68	45.29	✓

BM 44.88
7.68
52.56
8.62
43.94
6.03
49.97 HI

		49.97			
300			4.22	45.75	✓
350			3.76	46.21	✓
400			3.31	46.66	✓
450			2.85	47.12	✓
500			2.39	47.58	✓
550			1.93	48 04	✓
600			1.47	48.50	✓
¢ 24th			1.22	48.75	✓
EL. 24th			0.97	49.00	✓
B.M.	0.17	68.99		68.82	
	1.48	60.78	9.69	59.30	
50			10.65	50.13	✓
100			9.53	51.25	✓
150			8.40	52.38	✓
200			7.28	53.50	✓
250			6.15	54.63	✓
300			5.03	55.75	✓
350			3.90	56.88	✓
400			2.78	58.00	✓
450	7.18	66.31	1.65	59.13	✓

8/9/05

8/9/05

7.60
60.70

		66.31			
500			6.06	60.25	✓
550			4.93	61.38	✓
600			3.81	62.50	✓
EL 25th			3.81	62.50	✓
50			3.66	62.65	✓
100			3.52	62.79	✓
150			3.37	62.94	✓
200			3.23	63.08	✓
250			3.08	63.23	✓
300	3.95	67.32	2.94	63.37	✓
350			3.80	63.52	✓
400			3.65	63.67	✓
450			3.51	63.81	✓
500			3.36	63.96	✓
550			3.21	64.11	✓
600			3.07	64.25	
BM	1.51	68.22		66.71	
E Line 26th			3.97	64.25	✓
50			4.42	63.80	✓
100			4.89	63.33	✓

8/9/05

		6822			
150			5.35	62.87	✓
200			5.81	62.41	✓
250			627	61.95	✓
300			6.74	61.48	✓
350			7.20	61.02	✓
400			7.66	60.56	✓
450				60.16	
500				59.64	
515	S line of Logan.			59.50	

McLeran
8/24 Wm Lippincott 5th St from Switch bet Palm + Quince

Surface below grade — Fill
" above " + cut

B.M	3.83			278.38		SW co Spike in Elec. Car Pole
Rail Switch		282.21	4.41	277.80	~~277.62~~	+ 2 cut 287.40
25		"	4.38	277.83	277.92	— 1 Fill
			——		278.21	
1125		"	3.86	278.35	278.00	—.15 Fill
Quince 0		"	3.80	278.41	278.50	—.1 Fill
100		"	3.46	278.75	278.83	— 00
200		"	2.86	279.35	279.26	+ 10
300 T.P.	4.28		2.90	279.31	279.00	+ 20 C
Redwood 0		283.59	4.12	279.47	279.50	+ .03 C
100		"	3.86	279.73	279.83	—.10 F
200		"	3.63	279.96	280.17	— 2
300		"	3.23	280.36	280.50	— 1
Spruce 0			3.18	280.41	280.50	— 1
T.P. 100	5.37		2.83	280.76	280.[illegible]	— 0
200		286.13	4.85	281.28	281.33	— 0
300			4.41	281.72	281.75	— 0
Thorn 0			3.92	282.21	282.25	— 0
100			2.94	283.19	283.32	— 13
200			1.85	284.28	284.41	— 13
T.P. 300	3.69		0.74	285.39	285.50	— 11
B.M.		289.08	1.76	287.32	287	

Upos							Corrected	
0		289.08	3.62	285.46	285.50	-.04	+04	5 ft. East ~~sewtre~~ centre line of cut
100			4.49	284.59	284.84	-25	-1.7	stakes at property line
167	—	—	4.70	284.38	284.56	-18	-10	and each 50 feet.
Walnut								
0			5.29	283.79	284.00	-21	-13	
100			5.78	283.30 283.38	283.10	+20	+28	Correct from last B.M. call it 283.38 T.P. elevation
169.56	2.77	286.15	3.25	282.90	282.73	+17		
Ivy Lane +80ft			4.45	281.70	281.75	-05		
180			5.15	281.00	281.01	-00		
280			6.86	280.29	280.25	+04		
380	3.24		6.53	279.62	279.50	+12		
Brooks								
0	—	282.86	3.24	279.62	279.58	—		
—			4.56	278.30		BM S.W. cor Brooks		
75			4.12	277.74	279.81			
175			4.79	278.07	280.23			
275			4.22	278.64	280.66			
Anderson								
0			4.20	278.66	280.88	—		
75			3.71	279.15	281.05			
175	6.45		3.22	279.64	281.59			
275		286.09	5.92	280.17				
Thornton								
0			5.56	280.53				
75			5.12	280.97				
275			4.34	281.65				

275		286.09	3.44	282.65
Davidson 0			2.97	283.12
op 100	6.65		2.32	283.77
200		290.42	5.85	284.57
Robinson			4.97	285.45
0			4.36	286.06
100			3.94	286.48
200			3.56	286.86
300			3.09	
416			2.55	

Grades for Car Track
in Upper 5th St. 2/25 { Adams Brooks
8/8 { Haslam

						Sta	Grade	
	6.04	284.42			278.38	0 · No. line Palm	276.75	7.67
						+50	277.04	
						100	277.33	
						150	277.62	
						200	277.91	6.51 ✓
						250	278.21	6.21 ✓
						300 So line Quince	278.50	5.92 ✓
						Ctr	278.50	5.92
						0 · No " "	278.50	5.92 ✓
						50	278.66	5.76 ✓
						100	278.83	5.59 ✓
						150	278.99	5.43 ✓
						200	279.16	5.26 ✓
						250	279.33	5.09 ✓
						300	279.50	4.92 ✓
						0 = No line Redwood.	279.50	4.92 ✓
T.P.	2.24	284.77	1.89		282.53			

Car Track Levels

						Sta	Grade	
		284.77				50' No Redwood.	279.67	5.10✓
						100 "	279.83	4.94✓
						150 .	280.00	4.77✓
						200 .	280.17	4.60✓
						250 .	280.33	4.44✓
						50. line Spruce	280.50	4.27✓
TP	4.10	284.60	4.27		280.50	Ctr "	280.50	4.27✓
						No. line "	280.50	4.10✓
						50' No "	280.71	3.89✓
						100 .	280.91	3.69✓
						150 .	281.12	3.48✓
						200 .	281.33	3.27✓
						250 "	281.54	3.06✓
						50 line Thorn	281.75	2.85✓
						Ctr "	282.00	2.60✓
	5.54	287.79	2.35		282.25	No. . "	282.25	2.35✓
						50' No	282.79	5.00✓
						100 "	283.33	4.46✓
						150 "	283.87	3.92✓
						200	284.41	3.38✓
						250 .	284.96	2.83✓

Car Track Levels

8/26/05 { L Davis
Brooks
Haslam }

					Sta	Grade	
	287.79				So. line Upas	285.50	2.29 ✓
2.05	289.45			287.40	Ctr " "	285.50	2.29 ✓
					No. " "	285.50	3.95 ✓
					50' No '	285.22	4.23 ✓
					100 "	284.94	4.51 ✓
					167.4 " So line Walnut	284.56	4.89 ✓
					Ctr "	284.28	5.17 ✓
					No line '	284.00	5.45 ✓
					50' No "	283.63	5.82 ✓
					100' " "	283.26	6.19 ✓
1.86	289.26		287.40		169.6 " = S.L. Ivy Lane	282.74	6.71 ✓
0.55	285.87	3.94	285.32		No. line " "	282.37	3.50 ✓
					350 So. of Brookes	282.14	3.73 ✓
					300 "	281.76	4.11 ✓
					250 "	281.39	4.48 ✓
					200 "	281.01	4.86 ✓
				380.4'	150 "	280.83	5.04 ✓
					100 "	280.26	5.61 ✓
					50 "	279.88	5.99 ✓
0.50	284.12	2.25	283.62		So. line Brookes	279.50	6.37 ✓

Car Track Grades

		284.12			
	4.61	285.27	3.46	280.66	
				B.M. Spk in pole 2.74 S.E Thornton	282.53
	5.34	287.91			282.57

Sta	Grade	
Ctr Brooks	279.50	4.62 ✓
No. line "	279.50	4.67 ✓
25' No "	279.61	4.51 ✓
75 "	279.82	4.30 ✓
125 "	280.03	4.09 ✓
175 "	280.24	3.88 ✓
225 "	280.45	3.67 ✓
275 " = So. line Anderson Place	280.66	3.46 ✓
No. line " "	280.84	4.43 ✓
25' No " "	280.95	4.32 ✓
75' "	281.16	4.11 ✓
125 "	281.37	3.90 ✓
175 "	281.58	3.69 ✓
225 "	281.79	3.48 ✓
275 = So line Thornton	282.00	3.27 ✓
Ctr "	282.25	5.66 ✓
No. line "	282.50	5.41 ✓
25' No "	282.70	5.21 ✓
75 " "	283.08	4.83 ✓
125 "	283.48	4.43 ✓
175	283.87	4.04 ✓

Car Track Grades 5th St

						Sta	Grade	
		287.91				225 No Thornton	284.26	3.65✓
						275 ·: So line Evans Place	284.65	3.26✓
	1.63	290.82			289.19	No. line " "	285.11	5.71✓
						25' No " "	285.33	5.49✓
						75 "	285.76	5.06✓
						125 "	286.20	4.62✓
						175 "	286.63	4.19✓
						225 "	287.06	3.76✓
						275 ·: So line Robinson	287.50	3.32✓
						Ctr "	287.75	3.07✓
						No. line "	288.00	2.82✓
						50' No "	288.24	2.58✓
						100 "	288.48	
						150 "	288.72	
						200 "	288.96	
						250 "	289.20	
						300 "	289.44	
						350 "	289.68	
						400 "	289.92	
						416 · So line Univ.	290.00	

290.0

Car Track Grades University Ave.

			Sta.	Grade	
7.32	290.86	283.54	E.line 5th	290.00	
			50' E "	288.54	2.32 ✓
			100' " "	287.07	3.79 ✓
			150' " "	285.61	5.25 ✓
			W.line 6th	284.15	6.71 ✓
3.03	286.57	283.54	E. " "	283.15	3.42 ✓
			50 E "	283.30	3.27 ✓
			100 "	283.45	3.12 ✓
			150 "	283.60	2.97 ✓
			200 "	283.75	2.82 ✓
			250 "	283.90	2.67 ✓
			W.L. 7th	284.05	2.52 ✓
				284.00	4.51 ✓
3.86	288.11	284.25	E.L. 7th	283.95	4.16 ✓
			50' E "	284.13	3.98 ✓
			100 " "	284.30	3.81 ✓
			150 " "	284.48	3.63 ✓
			200 "	284.46	3.65 ✓
			230 E W.L. 8th No. Side	284.44	3.67 ✓
			300 - W.L. 8th So. Side	284.30	3.81 ✓

Univ. Ave. 9/12/05 {Davis Brooks Haslam

	3.46	287.71			284.25	0 E. line 8th So. Side	284.20	3.51 ✓
						50 E "	284.04	3.67 ✓
						100 "	283.87	3.84 ✓
						141 " " P.S	283.74	3.97 ✓
						150 " "	283.71	4.00 ✓
						190 W.L. 9th No Side	283.56	4.15 ✓

					Sta	Grade	
3.21	287.46			284.25	0=E.L.9-So.Side	283.40	4.06✓
					+50	283.19	4.27✓
					100	282.99	4.47✓
					+50	282.79	4.67✓
					200	282.58	4.88✓
6.50	288.85	5.11		282.35	+57.2=W.L.10th	282.35	5.11✓
					0=E.L.10th So. Side	283.47	5.38✓
					+50	284.13	4.72✓
					1	284.79	4.06✓
					+50	285.45	3.40✓
					2	286.10	2.75✓
6.29	293.05	2.09		286.76	+50	286.76	2.09✓
					3	287.42	1.43
					+50	288.08	0.77
					4	288.74	
					+50	289.40	✓
					+80.5=W.L.Vmt.	289.80	

GRADES FOR R.R. TRACK ON "B." ST. 25TH, EAST

Sta.	+R.R.	H.I.	-R.R.	GRADE ELEV.
B.M.	8.05	199.51		191.46
	7.10	205.56	1.05	198.46
0 =				196.40 1.18
+50			7.98	197.58 1.18
1			6.80	198.76 1.18
+50			5.62	199.94 1.18
2			4.44	201.12 1.18
+50			3.26	202.30 1.18
3			2.08	203.48 1.18
+50			0.90	204.66 .24
+60			0.66	204.90 1.50
4			2.16	203.40 1.875
+50			4.035	201.525 1.875
5			5.91	199.650 1.875
+50			7.785	197.775 .375
+60			8.16	197.400
	5.09	202.49	8.16	197.40
			4.49	198.00

GRADE ELEV. = 0.10' BELOW CENTER LINE GRADE OF "B" ST.

Covert
Munson } Oct 2 1905
Haslam

SPIKE IN ELECTRIC MAST AT S.W. COR 25TH & C.

0 = EAST LINE OF 25TH ST.

205.55
197.58
7.98
1.18
6.80
1.18
5.62

204

205.56
198.76
6.80

375
40
1.5000

0.90
1.50
2.40

204.90
197.40
2) 7.50
375
1.875

0.66
1.50
2.16
1.875
4.035
1.875
5.910
1.875
7.785
375
8.160

GRADE HUB FOR CURB AT N.W. COR 26TH & "B"

Grades for St RR - B St 10/3/05 {Davis / Wetmore / Thomas

						Sta	Grade	Rod
			B.M. Spk fence Post 8' No of N.W Cor					
	0.20	202.61			202.41	0=W.L 27th	196.40	6.21 ✓
						+50	196.48	6.13 ✓
						1	196.57	6.04 ✓
						+50	196.65	5.96 ✓
						2	196.73	5.88 ✓
						+50	196.82	5.79 ✓
						3	196.90	5.71
	4.90	201.42	6.09		196.52	+50	196.98	4.44 ✓
						4	197.07	4.35 ✓
						+50	197.15	4.27 ✓
						5	197.23	4.19 ✓
						+50	197.32	4.10 ✓
						6=E.L. 26th	197.40	4.02 ✓

Grades as below grade of Center line of St

GRADES FOR St. RY. ON. 25TH ST.
"B" — "D"

		H. I.	R.R.	GRADES.
B.M.	5.13	196.59		191.46
0			not set 0.69	195.90
+50			1.36	195.23
1			2.02	194.57
+50			2.69	193.90
2			3.35	193.24
+50			4.02	192.57
3			4.69	191.90
0			5.69	190.90
+50			6.19	190.40
1			6.69	189.90
+50			7.19	189.40
2			7.69	188.90
+50			8.19	188.40
3			8.69	187.90

GRADES GIVEN ARE 0.10 BELOW CENTER GRADE OF ST.

COVERT – WETMORE – THOMAS.
OCT – 21, 05

SPIKE IN. ELEC. POLE S.W. COR. C & 25TH

SOUTH LINE OF B ST.

196.59 196.59
195.90 195.23
0.69 1.36

196.59 196.59
194.57 193.90
2.02 2.69

196.59 196.59
193.24 192.57
3.35 4.02

NORTH LINE OF C ST.

196.59 196.59
191.90 190.90
4.69 ~~5.69~~

SOUTH LINE OF C ST.

196.59 196.59
190.40 189.90
6.19 6.69

196.59 196.59
189.40 188.90
7.19 7.69

196.59 196.59
188.40 187.90
8.19 8.69

NORTH LINE OF D ST.

28th St 1/29/06 {Hatch Hawkins Thomas

	3.11	208.29		205.18	
50' N of B.St			9.22	199.07	
100			8.06	200.23	
150	11.36	212.76	6.89	201.40	
200			10.19	202.57	
250			9.03	203.73	
300			7.86	204.90	
Cr. A St.			6.86	205.90	
N.Line " "			5.86	206 90	
50'			5.17	207.59	
100			4 49	208.27	
				208.96	
				209.65	

Track Grade is 0.1 below Centre grade of Street.

POSTED

POSTED

Grades for Car track on 3rd St across "B" St. [illegible]

				N.W	N.E	
				44.5	45.5	
				"B	" St.	
				S.W	S.E	
				44.5	44.5	
S.L. B		44.40				
Ctr "		44.65				
N.L "		44.90				
	3.14	48.25 H.I.			45.11	BM. S.E 3rd & "C".

44.40
3.85

44.90
3.35

44.65
3.60

58.64 BM.
3.44
62.08 H.I.

57.00
56.24
105) .760 (.007238
735
250
210
400
315
850
840

5.84
56.24

105

56.56
5.52

56.78
5.30

56.24
.3257
56.5657
2172
56.7829
57.0001

.007238
45
36190
28952
.325710

.007238
30
.217140

3d St. line –

11/7/06 {Hatch {Evans {Wunsle

POSTED

				Grade
	5.75	45.75		40.00
Nh. D. (End of Curve)			✓ 3.85	41.9
50			✓ 3.76	41.99
100			✓ 3.66	42.09
150			✓ 3.57	42.18
200			✓ 3.48	42.27
250	0.77	45.88	✓ 3.52	45.11 42.36
270 S.L. C St.			✓ 3.48	42.40
Cr.	"	"	✓ 3.48	42.40
N.L.	"	"	✓ 3.48	42.40
50			✓ 3.15	42.73
100			✓ 2.81	43.07
150			✓ 2.48	43.40
200			✓ 2.15	43.73
250			✓ 1.81	44.07
300			✓ 1.48	44.40

D Street 12th

11/8/06 Hatch Kneagle Cooley

POSTED

F	2.34	75.75		73.41
EL 12th			✓ 4.50	71.25
Cr "			✓ 4.13	71.62
WL 12th			✓ 375	72.00
50			—✓ 3 25	72.50
100			✓ 275	73.00
150			✓ 3.13	72.62
200 EL 11th			✓ 3.50	72.25
Cr	2.58	75.32	✓ 3.50	72.74 71.82
WL 11th			✓ 3.92	71.40
50			✓ 4.71	70.61
100			✓ 5.50	69.82
150			✓ 6.28	69.04
200 EL 10th			7.07	68.25
Cr	"			67.50
WL 10th				66.75
50				65.43
100				64.12
150				62.81
200 EL 9th				61.5

11/15/06 { Hatch
minerals

	0.15	73.56		73.41	
EL 12th			2.31	71.25	0.5 low.
50			✓ 5.38	68.18	
100			✓ 8.44	65.12	
150	1.86	63.92	11.50	62.06	
200 WL 13th	221	61.68	✓ 2.68	59.47 59.00	
Cr.			✓ 3.18	58.50	
EL. 13th			✓ 3.68	58.00	
50			✓ 3.93	57.75	
100			✓ 4.18	57.50	
150			✓ 4.43	57.25	
200 W.L 14th			✓ 4.68	57.00	
			✓ "	57.00	
			✓ "	57.00	
Bm 14th St	416	61.54		57.38	
50			✓ 4.29	57.25	
100			✓ 4.64	57.50	
150			✓ 3.79	57.75	
200			✓ 354	5800	
250			✓ 379	5775	
300			✓ 404	5750	

13th St

SW 58.50 NW 59.72

14th St

NE 57.38 NW 57.50

SE 56.37 SW 56.36

15th St

NE 57.50 NW 57.61

SE 56.50 SW 56.50

		61.54			
350			✓ 4.29	5725	
400			✓ 454	5700	
Cr.	15'm		"	"	
Eh.	"		"	"	

"D.A"

W.L. 7th	53.25	✓
Ctr "	53.62	✓
E.L. "	54.00	✓
+50	54.50	✓
1	55.00	✓
+50	55.50	✓
2 = W.L. 8th	56.00	✓
Ctr "	56.37	✓
E.L. 8th	56.75	✓
+50	57.62	✓
1	58.50	✓
+50	59.37	✓
2 = W.L. 9th	60.25	✓
Ctr "	60.87	
E.L. 9th	61.50	

11 Davis
10 Lamore
16 Thomas

H.1.

2.83 60.58 57.75

56.00	55.50	55.00	54.50	54.00
4.58	5.08 ✓	5.58 ✓	6.08	6.58

53.62	53.25	56.37	56.75
6.96	7.33	4.21 ✓	3.83 ✓

57.62	58.50	59.37	60.25
2.96 ✓	2.08 ✓	1.21 ✓	0.33 ✓

W.L. 7th	53.25
+50	52.62
1	52.00
+50	51.37
E.L. 6th	50.75

51.25
53.25

51
50.74

14

1.07 55.88 54.81 BM

53.25	52.62	52.00	51.37
2.63	3.26	3.88	4.51

1.02 55.83 54.81

53.25	52.62	52.00	51.37
2.58	3.21	3.83	4.46

"F" St Car Line

POSTED

Ctr 21st	118.65	✓
W.L 21st	117.90	✓
50 W "	113.15	✓
100 " "	108.40	✓
150 " "	103.65	✓
E.L 20th	98.90	✓
Ctr 20th	98.15	✓
W.L 20th	97.40	✓
50 W "	93.02	✓
100 " "	88.65	✓
150 " "	84.27	✓
E.L. 19th	79.90	✓
W.L. 19th	78.90	✓
50 W "	76.90	✓
100 " "	74.90	✓
150 "	72.90	✓
E.L. 18th	70.90	✓

6.31 110.42 104.11

98.90 103.65 108.40
11.52 ✓ 6.77 ✓ 2.02

12.20 122.44 ✓ 0.18 110.24

113.15 117.90 118.65
9.29 4.54 3.79

3.35 102.25 98.90

98.15 97.40 93.02
4.10 ✓ 4.85 9.23

0.40 89.72 12.93 89.32

88.65 84.27 79.90 7.79 81.93 ✓ 81.94
1.07 5.45 ✓ 9.82

0.35 82.29 81.94

78.90 76.90 74.90
3.39 5.39 ✓ 7.39 ✓ 9.39 11.39 ✓

"F" St Car Line

W.L. 18th	69.90 ✓
50' W "	69.15 ✓
100' " "	68.40 ✓
150' " "	67.65 ✓
E.L. 17th	66.90 ✓
W.L. 17th	65.90 ✓
50' W "	62.52 ✓
100' " "	59.15 ✓
150' " "	55.77 ✓
E.L. 16th	52.40 ✓
	52.40
W.L. 16th	51.40 ✓
50' W "	49.27 ✓
100' "	47.15 ✓
150' "	45.02 ✓
E.L. 15th	42.90

5 150 601
555

1st.

82.29

69.90 3.11 73.01 12.39 69.90
12.39

69.15 68.40 67.65 66.90 65.90
6.86 4.61 5.36 6.11 7.11

1.81 67.71 7.11 65.90

62.52 59.15 55.77
5.19 8.56 11.94

0.06 55.60 12.17 55.54

52.40
3.20

4.01 65.51 51.50

51.40 49.27 47.15 45.02 42.90
4.11 6.24 8.36 10.49 12.61

W.L. 15th	42.90
50 W "	43.52
100	44.15
150	44.77
200	45.40
250	46.02
300	46.65
350	47.27
400 W. E.L. 14th	47.90
W.L. 14th	48.90
+50	50.65
100	52.40
150	54.15
200 E.L. 13th	55.90
W.L. 13th	56.90
50	57.47
100	58.03
150	58.59
200 E.L. 12th	59.15

H.I. BM Hyd SW 1x4 F

6.02 57.53 51.51

55.90	54.15	52.40	50.65	48.90
1.63	3.38	5.13	6.88	8.63
47.90	47.27	46.65	46.02	
9.63	10.26	10.88	11.51	

2.81 48.83 11.51 46.02

45.40	44.77	44.15	43.52	42.90
3.43	4.06	4.68	5.31	5.93

7.76 63.66 55.90

56.90	57.47	58.03	58.59	59.15
6.76	6.19	5.63	5.07	4.51

2.18 60.75 58.57

W.L. 12th	59.15
	58.39
	57.65
	56.90
E.L 11th	56.15
W.L 11th	54.90
	54.27
	53.65
	53.02
E.L 10th	52.40
W.L. 10th	52.40
	51.90
	51.40
	50.90
E.L. 9th	50.40

6366

60.75 ~~~~

59.15 58.39 57.65 56.90 56.15

1.60 2.36 3.10 3.85 4.60

~~~~

50.26

7.52 57.78

50.40 50.90 51.40 51.90 52.40

7.38 6.88 6.38 5.88 5.38

53.02 53.65 54.27 54.90 56.15

4.76 4.13 3.51 2.88 1.63

50.26

0.83 51.09
~~~~

W.L. 9th	49.40
50	48.21
'	47.02
50	45.83
x=E.L. 8th	44.65
W.L. 8th	

POSTED

HI
51.09

$\frac{49.40}{1.69}$ $\frac{48.21}{2.88}$ $\frac{47.02}{4.07}$ $\frac{45.83}{5.26}$ $\frac{44.65}{6.44}$

7th St St Fe Track

POSTED

N.L. L	5.75
+50	6.58 ✓
1	7.42
+50	8.25
2	9.08
+50	9.92
3 = S.L. R	10.75 ✓
N.L. R	11.25 ✓
+50	11.87 ✓
1	12.50 ✓
+50	13.12 ✓
2	13.75 ✓
+50	14.37 ✓
3 = S.L. C	15.00
S.L. L	4.50 ✓
+50	4.16 ✓
1	3.83 ✓
+50	3.50 ✓
2	3.16
+50	2.83 ✓
3 = N.L. M	2.50

0.29 15.86 15.57

10.75 9.92 9.08 8.25 7.42 6.58
5.11 5.94 6.78 7.61 8.44 9.28

5.75
10.11

6.95 17.70 10.75

11.25 11.87 12.50 13.12 13.75 14.37
6.45 5.83 5.20 4.58 3.95 3.33

15.00
2.73

1.14 6.89 5.75

4.50 4.16 3.83 3.50 2.83 2.50
2.39 2.73 3.06 3.39 4.06 4.39

7th St Fe Track.

0=N.L.J	16.75 ✓
+50	16.50 ✓
1	17.25 ✓
+50	18.00 ✓
2	18.75 ✓
+50	19.50
3=S.L.I	20.25 ✓
Siding	
S.L.J.	14.90 ✓
50' So	14.24 ✓
100 "	13.58 ✓
150 "	12.92 ✓
200	12.27
250	11.61
300' So - N.L.K	10.95

6.77 20.51 13.74

15.75	16.50	17.25	18.00	18.75
4.76	4.01	3.26	2.51	1.76

14.90	14.24	13.58	12.92	20.25
5.61	6.27	693	7.59	.26

14.77 - St.

7th St Fc - S. along W side

N.L.	✓	14.93
+25		15.30 ✓
+75		16.05 ✓
1+25		16.80 ✓
1+75		17.55 ✓
2+25		18.30 ✓
3+00 = S I		19.43 ✓

5' W. of C.L.

8.07 21.81 13.74 B.M.

$\frac{7.22}{14.49 - SW\ J}$ $\frac{6.31}{15.60 - SE\ J.}$ $\frac{5.81}{16.00\ NE\ J}$ $\frac{6.31}{15.50\ NW\ J.}$

$\frac{1.81}{20.00\ SW\ I}$ $\frac{1.31}{20.50\ SE\ I}$ $\underline{14.90}$

$\frac{15.30}{6.07}$ ✓ $\frac{16.05}{5.76}$ ✓ $\frac{16.80}{5.01}$ $\frac{17.55}{4.26}$ ✓ $\overset{6.91}{\frac{18.30}{3.51}}$ ✓ $\frac{19.43}{2.38}$ ✓

Grades for India St and Ivy St Ry.

POSTED

S.L. Ivy	76.00	
W.L. State	75.00	
+50	72.50	✓
1	70.00	✓
+50	67.50	✓
2.00 E.L. Columbia	66.00	
+375 Ctr ″	64.00	
W.L. ″	63.00	✓
+50	59.25	✓
1	55.50	✓
+50	51.75	
2 E.L. India N.	48.00	
W.L. Ivy	47.00	
+50	47.17	✓
1	47.33	✓
+50	47.50	✓
2	47.67	✓
+50	47.83	✓
3' S.L. Juniper	48.00	

[illegible]

0.33 83.48 83.15

76.00 / 7.48 75.50 / 7.98 75.00 / 8.48

T.P. 0.64 74.64 9.48 74.00

72.50 / 2.04 70.00 / 4.58 67.50 / 7.04 65.00 / 9.54

8.24 63.22 11.56 & N.W. Curb 62.98

63.00 / 022 59.25 / 3.97✓ 55.50 / 7.72 51.75 / 11.47 48.00 / 15.22

0.05 63.03 62.98

51.75
11.28
2.51 53.45 12.09 50.94

48.00 / 5.45 47.50 / 5.95 47.40 / 6.05 47.70 / 5.75 47.17 / 6.28 47.33 / 6.12✓

47.50 / 5.95✓ 47.67 / 5.78✓ 47.83 / 5.62 48.00 / 5.45

0.32 51.78 1.99 51.46

Ctr Juniper	48.00 ✓
N.L "	48.00 ✓
+50	47.17
1	46.33 ✓
+50	45.50 ✓
2	44.67 ✓
+50	43.83 ✓
3+S.L Kalmia	43.00 ✓
Ctr "	43.00 ✓
N.L. "	43.00
+50	44.92
1	46.83
+50	48.75 ✓
2	50.67 ✓
+50	52.58 ✓
3 S.L Laurel	54.50 ✓
Ctr	55.00 ✓
N.L Laurel	55.50 ✓
+50	59.08 ✓
1	62.67 ✓
+50	66.25 ✓

H.I.
51.78

48.00 / 3.78 48.00 47.17 / 4.61 ✓ 46.33 / 5.45 ✓ 45.50 / 6.28 ✓ 44.67 / 7.11 ✓

43.83 / 7.95 ✓ 43.00 / 8.78 H.I. Bm Pole NW cor Bridge
11.55 59.04 4.29 47.49

48.75 / 10.29 50.67 / 8.37 ✓ 52.58 / 6.46 ✓ 54.50 / 4.54 ✓ 55.00 / 4.04 55.50 / 3.54 ✓

12.23 71.00 0.27 58.77

59.08 / 11.92 ✓ 62.67 / 8.33 ✓ 66.25 / 4.75

2	69.83 ✓
10	73.42 ✓
3^rd S.L. Maple	77.00 ✓
Ctr "	77.50 ✓
N.L "	78.00 ✓
+50	80.17 ✓
1	82.33 ✓
+50	84.50 ✓
2	86.67 ✓
150	88.83 ✓
3^rd S.L Nutmeg	91.00 ✓
+40 Ctr "	91.60
N.L. "	92.00 ✓
+40	93.17 ✓
+90	94.62 ✓
1+40	96.08 ✓
+90	97.54 ✓
2+40	99.00 ✓
+74.05 S.L Olive.	100.00

71.00 HI

68.83 / 1.17 12.40 83.20 0.20 70.80

73.42 / 9.78 77.00 / 6.20 77.50 / 5.70 78.00 / 5.20 80.17 / 3.03 82.33 / 0.87

12.16 94.64 6.72 82.48

84.50 / 10.14 86.67 / 7.97 88.83 / 5.81 91.00 / 3.65

SpK Pole N W Nutmeg

9.98 102.60 2.02 92.62

92.00 / 10.60 93.17 / 9.43 94.62 / 7.98 96.08 / 6.52 97.54 / 5.06 99.00 / 3.60

SpK Pole N.W Olive

100.00 / 2.60 3.08 99.52

5.47
99.52
104.99 HI 100.40 / 4.59

Ctr Olive	
N.L. Olive	100.40 ✓
+50	100.21 ✓
1	100.03 ✓
+50	99.85 ✓
2	99.67 ✓
+50	99.49 ✓
+74 - S.L. Palm	99.40 ✓
Ctr "	99.40 ✓
N.L "	99.40 ✓
+50	100.73 ✓
1	102.07 ✓
+50	103.40 ✓
2	103.07 ✓
+50	102.73 ✓
3 - S.L Quince	102.40 ✓
Ctr "	102.40
N.L "	102.40

5.84   105.36   99.52 Bm

100.21   100.40   100.03   99.85
5.15 ✓   4.96 ✓   5.03   5.51 ✓

99.67   99.49   99.40   100.73   102.07
5.69 ✓   5.87   5.96   4.62 ✓   3.29 ✓

103.40   103.07   102.73   102.40
7.96 ✓   2.29   2.63 ✓   2.96

Bm - S.W. Quince
3.82   107.54

N.L. Quince			102.40	✓	
+50			101.73	✓	
1			101.07	✓	
+50			100.40	✓	
2			99.73	✓	
+50			99.07	✓	
3 - S.L. Redwood			98.40	✓	
Ctr "			97.90	✓	
N.L "			97.40	✓	
+50			95.40	✓	
1			93.40	✓	
+50			91.40	✓	
2			89.40	✓	
+50			87.40	✓	
3 - S.L. Spruce			85.40	✓	

3.11 104.65 107.54

$\frac{102.40}{2.25}$ $\frac{101.73}{2.92}$ $\frac{101.07}{3.58}$ $\frac{100.40}{4.25}$ $\frac{99.73}{4.92}$ ✓

$\frac{99.07}{5.58}$ $\frac{98.40}{6.25}$ $\frac{97.90}{6.75}$ $\frac{97.40}{7.25}$ $\frac{95.40}{9.25}$ ✓

$\frac{93.40}{11.25}$ ✓

1.08 94.48 11.25 93.40

$\frac{91.40}{3.08}$ $\frac{89.40}{5.08}$ $\frac{87.40}{7.08}$ $\frac{85.40}{9.08}$

BM - S.E. Spruce

1.90 88.44 7.94 86.54

Ctr Spruce	85.40 ✓
N.L. "	85.40 ✓
+50	85.23 ✓
1+50	85.07 ✓
+50	84.90 ✓
2	84.73 ✓
+50	84.57 ✓
3 = S.L. Soss.	84.40 ✓
Ctr "	84.40 ✓
N.L "	84.40 ✓
+50	85.07 ✓
1	85.73 ✓
+50	86.40 ✓
2	87.07 ✓
+50	87.73 ✓
3 = S.L Thorn.	88.40

HI.
88.44

85.40 85.23 85.07 84.90 84.73
3.04 3.21 3.37 3.54 3.71

84.57 84.40 85.07 85.73 86.40
3.87 4.04 3.37 2.71 2.04

87.07 87.73
1.37 0.71 1.41
2.28 90.01 0.71 87.73

88.40
1.61

0.38
89.63 BM. S.E Thorn

Ctr. Thorn	88.40	✓
N.L "	88.40	✓
+50	87.57	✓
1	86.73	✓
+50	85.90	✓
2	85.07	✓
+50	84.23	✓
3 S.L Upas	83.40	✓
Ctr "	83.40	✓
N.L "	83.40	✓
+50	83.23	✓
1	83.07	✓
+50	82.90	✓
2	82.73	✓
+50	82.57	✓
3 S.L Vine	82.40	✓

H.I.

90.01

$\frac{88.40}{1.61}$ ✓ $\frac{87.57}{2.44}$ ✓ $\frac{86.73}{3.28}$ ✓ $\frac{85.90}{4.11}$ ✓ $\frac{85.07}{4.94}$ ✓ $\frac{84.23}{5.78}$ ✓

$\frac{83.40}{6.61}$ ✓ $\frac{83.40}{6.61}$ $\frac{83.23}{6.78}$ ✓ $\frac{83.07}{6.94}$ ✓

2.82 85.89 6.94 ✓ 83.07

$\frac{82.90}{2.99}$ $\frac{82.73}{3.16}$ ✓ $\frac{82.57}{3.32}$ ✓ $\frac{82.40}{3.49}$ BM-S.E.Vine

0.16 83.14 2.91 82.98

Ctr Vine	81.90	✓
N.L "	81.40	✓
+50	79.73	✓
1	78.07	✓
+50	76.40	✓
2	74.73	✓
+50	73.07	✓
3 = S.L Willow	71.4	✓
Ctr "	71.4	✓
N.L "	71.4	✓
+50	70.73	✓
1	70.07	✓
+50	69.40	✓
2	68.73	✓
+50	68.07	✓
3 = S.L Chalmers	67.40	✓

83.14 HI

81.90	81.40	79.73	78.07	76.40	74.73
1.24 ✓	1.74 ✓	3.41 ✓	5.07 ✓	6.74 ✓	8.41

73.07	71.40
10.07 ✓	11.74 ✓

2.56 73.96 11.74 ✓ 71.40

71.40	70.73	70.07	69.40	68.73	68.07
2.56 ✓	3.23 ✓	3.89 ✓	4.56	5.23	5.89

BM. S.E Chalmers

67.40
6.56 ✓

5.61 68.35

POSTED

Ctr Chalmers	67.4 ✓
N.L "	67.4 ✓
+00	69.23 ✓
1	71.07 ✓
+00	72.90 ✓
2	74.73 ✓
+50	76.59 ✓
3" S.L. Winders	78.40 ✓
Ctr "	78.40
N.L "	78.40

Nt.

12.07 80.42 68.35

67.40 69.23 71.07 72.90 74.73

13.02 11.19 ✓ 9.36 ✓ 7.52 ✓ 5.69 ✓

76.57 78.40 2.28

3.85 2.02 ✓ 78.14 Bn N.W Winder Frnt

3rd St. D - N.

5/7/07 {Haldt, Donnan, Emery}

	6.74	45.85		45.11	SE 3d - C. Hyd
	2.60	43.66	4.79	41.06	
	SL D st		✓ 3.51	40.15	40.35
50			✓ 4.37	39.29	39.49
100			✓ 5.50	38.16	38.36
145			✓ 6.51	37.15	37.35
200			✓ 8.02	35.64	35.84
250			✓ 9.39	34.27	34.47
300	NL E St		✓ 10.76	32.9	33.10
BM 4" F. .837		33.87		25.50	
Cr	E		✓ 1.47	32.4	32.60
	S.L E		✓ 1.97	31.9	32.10
50			✓ 3.14	30.73	30.93
100			✓ 4.31	29.56	29.76
150			✓ 5.47	28.40	28.60
200			✓ 6.64	27.23	27.43
250			✓ 7.80	26.07	26.27
300	NLF		✓ 8.97	24.90	25.10
Cr	F		✓ 9.47	24.40	24.60

Levels for West Track are 0.1 below Cr,
" " East " to be 0.1 above "

S.E 3d & E BM. N.H. Hyd.

6.86 41.42 34.56

$\frac{40.35}{1.07}$ $\frac{39.49}{1.93}$ $\frac{38.36}{3.06}$ $\frac{37.35}{4.07}$ $\frac{35.84}{5.58}$ $\frac{34.47}{6.95}$ $\frac{33.10}{8.32}$

5.66 46.66 0.42 41.00

~~5~~ 46.63 1.53 45.10

1.56 42.53 5.66 40.97

$\frac{39.49}{3.04}$ $\frac{38.36}{4.17}$ $\frac{37.35}{5.18}$ $\frac{35.84}{6.69}$ $\frac{34.47}{8.06}$ $\frac{33.10}{9.43}$

7.65 33.15 25.50 BM

$\frac{24.60}{8.55}$ $\frac{25.10}{8.05}$ $\frac{26.27}{6.88}$ $\frac{27.43}{5.72}$ $\frac{28.60}{4.55}$ $\frac{29.76}{3.39}$ $\frac{30.93}{2.22}$

$\frac{32.10}{1.05}$ $\frac{32.60}{0.55}$

Adam
Moore
Thom

3 59

	1.71	27.21		25.50	
SL	F		3.31	23.9	24.10
50			4.14	23.07	23.27
100			4.98	22.23	22.43
150			5.81	21.40	21.60
200			6.64	20.57	20.77
250			7.48	19.73	19.93
300	NLG		8.31	18.9	19.10
	3.90 "	23.32		19.42	
Cr	G		4.92	18.4	18.60
SL	"		5.42	17.9	18.10
50			6.42	16.9	17.10
100			7.42	15.9	16.10
150			8.42	14.9	15.10
200			9.42	13.9	14.19
250			10.42	12.9	13.10
300	NLH		11.42	11.9	17.10

GBM 19.95 SE Cor Hydt Muzzle
H. 13.57 SE " " Hinge
~~Ht~~
E 12.5 – 12.0 W

H.I.
0.26 25.76 25.50 BM.

$\frac{24.10}{1.66}$ $\frac{23.27}{2.49}$ $\frac{22.43}{3.33}$ $\frac{21.60}{4.16}$ $\frac{20.77}{4.99}$ $\frac{19.93}{5.83}$ $\frac{19.10}{6.66}$

$\frac{18.60}{7.16}$ 1.85 20.45 7.16 18.60

$\frac{18.10}{2.35}$ $\frac{17.10}{3.35}$ 4.35 5.35 6.35 7.35 8.35

$\frac{1357 \quad 316}{1673 \text{ HI}}$ $\frac{4.47}{12.26}$ $\frac{2.56}{14.17}$

1.91
.95
12.26
13.21
3.52

		grade	
El Stake 100' N of H.	14.17	14.21	.05
" " 50 " " "	13.21	13.23	.02
" " NL "	12.26	12.26	.00
" " 150 " " "	15.10	15.18	.08
" " 200	16.10	16.15	.05
" " 250	17.10	17.12	.02
" " 300	18.10	18.10	

1357 BM H St.
7.29
20.86
2.16
18.70
1.93
20.63
70
19.93 BM G St

20.63 HI

$\frac{6.50}{14.13}$ $\frac{6.71}{13.92}$

		273.32				
Sh Penn.			3.57	269.75		
Cr			3.32	270.00		
NL "			3.07	270.25		
50			263	270.69		
100			219	271.13		
			1.76	271.56		
200			1.32	272.00		
			0.88	272.44		
300			0.44	272.88		7.27
			6.84	273.31	✓	
400			6.40	273.75	✓	
			5.96	274.19	✓	
500			5.52	274.63	✓	
			5.09	275.06	✓	
600	SL Robinson		4.65	275.50	✓	
				275.50	✓	
	Nh "		4.65	275.50	✓	
50			4.08	276.07	✓	
100			3.51	276.64	✓	

1.64	287.47		285.83 BM.
290	283.65	6.72	280.75
4.82	280.15	8.32	275.33

H.I.

280.15

150		277.21	2.94 ✓
200		277.78	2.37 ✓
250		278.35	1.80 ✓
300		278.92	4.70 ✓
350		279.50	4.12 ✓
400		280.07	3.55 ✓
416	S.L.	280.25	3.37 ✓
	N.L.	278.25	

5.27	283.62	.180	278.35

4946 2/6
28.5
97302
15568
38442 3
35846 10
55.4610

12.26
973
13.233
973
14.206
15,179
16,152
17.125
18.098

973 - 50
1946

352
55
407

280.76 2^c

348

283.24

790

275.34 grad. south

137

277.71

5. 836
74.88

840 803
684 (275.21) Bm
N.

277.71
4 75

269.96
336

273.32 Nt

26975
28

269.47

3.85
28

4.13

923
392

8.31

Or grades

2^d Inv 278.75

50 278.5

100 278.75

279.0

200 279.25

279.5

300 279.95

280.85

400 281.15

282.12

500 283.09

284.06

Sh. mark - 560 10 284.25

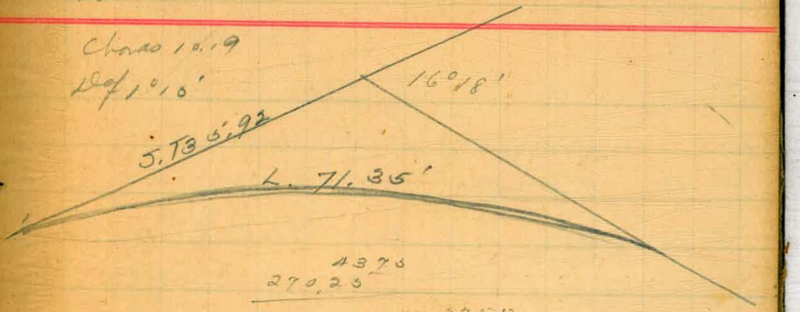
Curve at India & Olive

73° curve

R- 257.79

Chord 10.19

Def 1°10'



4375
270.25

270.6875
- 271.1250
271.5625
- 272.0000
272.4375
- 272.8750
273.3125
4) 273.7500
274.1875
274.6250
275.0625
275.5000

2755
27025

525 (12
48 .4375
45
36
90
84
60

280.0 Inv 280.5

275.0
275.0 Robinson 276.0
276.0

270.0 Penn 270.5

269.75

188.34 S.W. COR. NOZZLE OF HYDRANT

C. 8 25

191.46 S.W. COR. SPIKE IN ELECT. POLE.

197.49 N.W. COR " " TEL. "

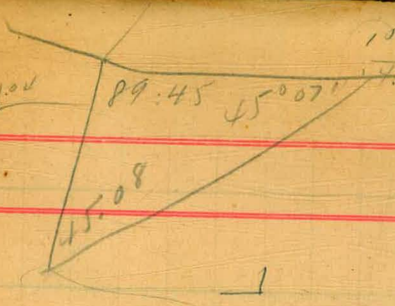
19.45
14.93
4.50
1.5
1.5 .015

30
.015
25
75
7
30
.375

.015
75
7
105
1.125

2450
.75

14.93
.375
15.305
75
16.055
16.805
75
17.555
18.305
1.125
19.43



15.50
67
14.83

20.00
67
19.33

20 25
16

80
24
56

24) 1.04 .04
11
.12
.11

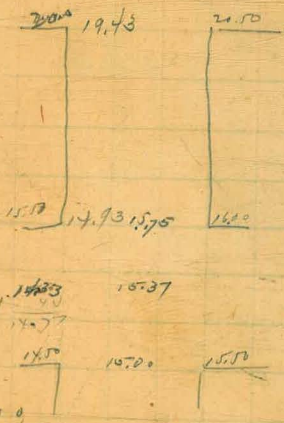
I

90 15

274) 8.00 .0292
548
2520
2466
540
548

.0292
34
1168
876
.9928

.0292
40
1.168
2.92
1.46



15.50
67
14.83

92.00
1.168
93.168
1.46
94.628
96.088
1.46
97.548
99.008
50.468
91.92

92.00
1168
93.168
1.46
94.62
96.08
1.46
97.54
99.00
99
98.04

179°60'
16°17½'
2)163.42½
81°51'

2)102
51

.5
.62

~~Cntl Ang~~ ~~Degree of Curve~~
~~Length of Curve~~

		287.71	Rail	Grade	
4°46	W.L 50	3.44	284.27	284.30	-0.03
4°46 9°32	E L 50	3.48	284.23	284.20	-0.03
4.46	50 ,	3.73	283.98	284.04	-0.06
14°18	4 100 ,	4.08	283.63	283.87	-0.24
19°0 4 4 6	150 .	4.45	283.26	283.71	-0.45
23°50		4.71	283.00	283.56	-0.56

2 4 4 6
28°36
33°22'

7th — 43.14 S.E Hydt Hinge

9th 50.26 S.W Cor " Nor.

9.04
.62
9.68

8.84
1.25
10.09
9.68
.41

80 9 8 74°27
74 8 4 37.13
154 17 4
77 8 9½
16

77

77.06) 74.233 (96331
69354
48790
46236
25540
23118
24220
23118
11020
7706

20) 96°20' (4°49'
80
16
16
4

20) 98 204.
80
180
18
36.48
4 49
41°37'

204.9
196.4
8.5

7.54
4.49
12°43
4 49
17°32'
4 49
22°21'
4 49
27°10'
4 49
31°59'
4 49
36°48

360) 8.5 (2.36
72
130
108
220
216
4

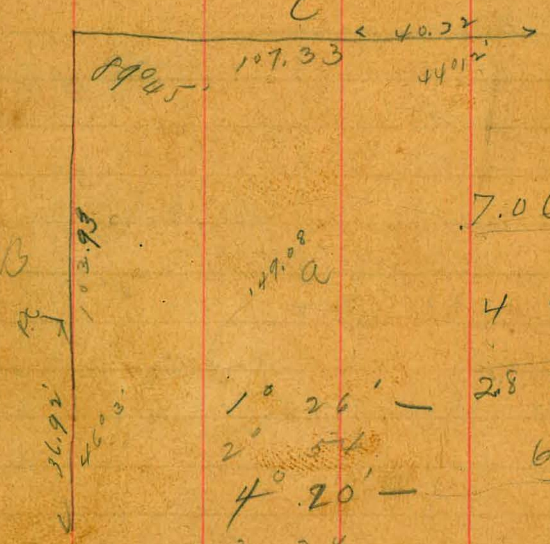
.0833 .057
.916
80

103.93
36.92
67.01

45.103
1.53
46.63
5.66
40.97

194

7.166
24.9
26,066 —
27,232 —
28,398 —
29,564 —
30,730 —
31,896



7.06

4 49
.7
2.8 34.3

1° 26' —
2° 54
4° 20' —
3 34.
7. 54 —

6449 (.80
48
10

4.8
.7
3.36
60
21.60

4°49'
7
34.3
64) 3 43
3.7
60
40

15° 48'

3° 22'

9°

37° 42'
3° 22
41° 02'
15 48
56° 50'

56° 50'
45 07
11° 43'

45°.07'
15 48'
29° 19'

pd 218

275) 1160
1100
600
550
500
275
2250
2200

113
45.13
153

306
306

81
34
7.16
6 (.166
10
2.5

9. 34
1 44
122
7.
17. 1 1

11° 02
3° 406
3 44
3° 21½
3 40½

40
5
345
12
22.5
40.6
17.7
28.46
3 25

279.50
1.055
279.6055
2109
279.81644
280.02734
2109
280.23824
280.44914
2109
280.66000

172

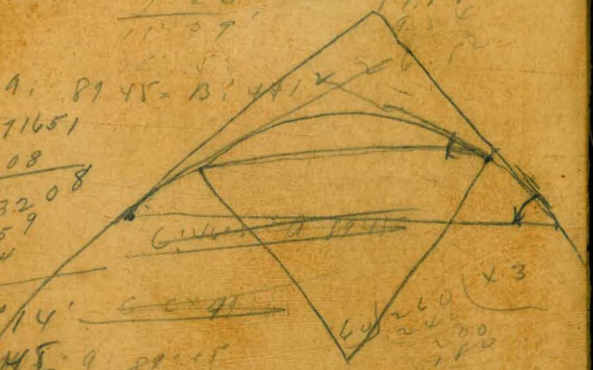
46. 13'
44. 12
179. 60'
90. 15'
89. 45

14° 52
3° 43
174° 00
7° 26
11° 09

37°

17.18

A, 89 45 = B, 44 12



6971651
149.08
8
55773208
59
27448
66 0 4

74 14'
15 48
90° 02'

a: 89 45 C; 46

x3
60) 260
240
200

37
7 5 (.574 3 3
44° 54' 8 66
60
17.1 9 6

89° 48'

219

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

ERC

2 2 4 3

2 8 3

2 1 0

9 2 5

68

.983

837

37

1 3 3

9 5

3 8

9.33
26.566
21.399
22.233
23.066
23.899

67

.83

1275

90251

5126