F.B. 47

FIELD BOOK.

360 N.

47

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

MICROFILMED
DEC 4 1964

47

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

Sta	North	Center	South
0	57.50	57.0	56.50
+50	57.13	56.75	56.38
1	56.75	56.50	56.25
+50	56.87	56.25	56.13
2	56.00	56.00	56.00
+40	56.00	56.00	56.00
0	56.00	56.00	56.00
+50	58.00	58.00	58.00
1	60.00	60.00	60.00
+50	62.00	62.00	62.00
2	64.00	64.00	64.00
+40	64.50	64.50	64.50
0	65.00	65.00	65.00
+50	70.00	70.00	70.00
1	75.00	75.00	75.00
+50	80.00	80.00	80.00
2	85.00	85.00	85.00
+40	85.50	85.50	85.50
0	86.00	86.00	86.00

Sixteenth St

Seventeenth Street

Eighteenth Street

Sta	North	Center	South
+50	86.75	86.75	86.75
1	87.50	87.50	87.50
+50	88.25	88.25	88.25
2	89.00	89.00	89.00
+40	89.50	89.50	89.50
0	90.00	90.00	90.00
+50	91.25	91.25	91.25
1	92.50	92.50	92.50
+50	93.75	93.75	93.75
2	95.00	95.00	95.00
+40	95.50	95.50	95.50
0	96.00	96.00	96.00
+50	101.0	101.00	101.00
1	106.0	106.00	106.00
+50	101.0	111.0	111.0
2	116.00	116.00	116.00
+40	116.50	116.50	116.50
0	117.00	117.00	117.00
+50	122.5	122.50	122.50

Nineteenth St

Twenty first St

Sta	North	Center	South
1	128.00	128.00	128.00
+50	133.50	133.50	133.50
2	139.00	139.00	139.00
+45	139.50	139.50	139.50
0	140.00	140.00	140.00
+60	145.00	145.00	145.00
1	150.00	150.00	150.00
+50	155.00	155.00	155.00
2	160.00	160.00	160.00
+25	160.50	160.50	160.50
0	161.00	161.00	161.00
+50	165.33	165.33	165.33
1	169.67	169.67	169.67
+50	174.00	174.00	174.00
+80	174.50	174.50	174.50
0	175.00	175.00	175.00
+50	176.83	176.75	176.66
1	178.66	178.50	178.33
+50	180.50	180.25	180.00

Twenty second St

Center line of 22nd St

Twenty fourth St

	N		S
2	182.33	182.00	181.66
+50	184.16	183.75	183.33
3	186.00	185.50	185.00
+50	186.33	185.83	185.33
4	186.67	186.16	185.67
+50	187.00	186.49	186.00
5	187.33	186.83	186.33
+50	187.67	187.16	186.67
6	188.00	187.50	187.00
+50	188.00	187.50	187.00
0	188.00	187.50	187.00
+50	188.18	187.68	187.18
1	188.36	187.86	187.36
+50	188.54	188.03	187.53
2	188.71	188.21	187.71
+50	188.89	188.39	187.89
3	189.07	188.58	188.08
+50	189.25	188.75	188.25
4	189.43	188.93	188.43

Twenty fifth St

+50	189.61	189.11	188.61
5	189.78	189.28	188.78
+50	189.96	189.46	188.96
+60	190.00	189.50	189.00
+90	190.00	189.50	189.00
0	190.00	189.50	189.00

Twenty sixth St.

North × South

Elev	Grade	Cut	Elev	Grade	Cut
		(57.67)			
8.23			9.07		
49.44	56.00	-6.56	48.60	56.00	-7.4
9.62			7.02		
48.05	58.00	-9.95	50.65	58.00	-7.3
7.45			7.60		
50.22	60.00	-9.78	50.07	60.00	-9.9
7.30			6.76		
50.37	62.00	-11.63	50.91	62.00	-11.1
7.98			4.65		
49.69	64.00	-14.3	53.02	64.00	-11.0
2.58			5.33		
54.69	64.5	-9.8	52.34	64.50	-12.2
2.97					
54.70	65.00	-10.3			

Cut & Fill stake on R from 16 ft to 19 ft

Hamlin & 3 men Oct. 25 ft

6

Sta	+	HO	−	Elev
B.M.	5.46	57.67		52.21
0				
+50				
1				
+50				
2				
+40	17 ft St			
0				
#	9.86	65.60	1.93	55.74
B.M.			4.40	61.20

North Elev	Grade cut		South Elev	Grade cut	
		(73.17)			
			14.60		
			58.6	65.00	−6.4
11.47		(73.2)		(87.02)	
				12.80	
61.70	70.00	−8.3	74.12	70.00	+4.1
1		(87.02) ×		(100.13)	
11.02			11.54		
76.00	75.00	+1.0	88.59	76.00	+13.6
			(100.13)		
5.34			2.61		
94.79	80.0	+14.8 ✓	97.52	80.0	+17.5 ✓
			(113.25)		
9.35			12.38		
103.90	85.00	+18.9 ✓	100.87	85.00	+15.9 ✓
5.43			10.42		
107.42	85.5	+21.9 ✓	102.83	85.5	+17.3 ✓
3.58			8.22		
109.67	86.00	+23.7 ✓	105.03	86.00	+19.0 ✓

Sta	+	BS	−	Elev
B.M.	11.98	73.17		61.19
0				
+50				
#	14.03	87.02	0.18	72.99
1				
#	13.52	100.13	0.45	86.07
+50 ✓				
#	13.77	113.25	0.65	99.48
2	Work of 18 Aug			
+40				
0				
		13.22		100.03

North × South

Elev	Grade	cut	Elev	Grade	cut
			(113.25)		
0.27			7.91		
110.98	86.75	+ 24.2	105.34	86.75	+ 18.5
5.09			9.38		
108.16	87.15	+ 20.7	103.87	87.15	+ 16.7
11.36			13.85		
101.89	88.3	+ 13.6	99.40	88.3	+ 11.1
			(99.41)		
3.72			6.89		
95.69	89.00	+ 6.7	92.52	89.00	+ 3.5
10.37			10.30		
89.04	89.50	- 0.5	89.11	89.15	- 0.4
12.50			10.24		
86.91	90.00	- 3.1	89.17	90.00	- 0.8
			(96.98)		
11.36			8.24		
84.56	91.25	- 6.69	88.68	91.25	- 2.57
12.36			7.64		
84.54	92.50	- 8.0	89.28	92.5	- 3.2

Sta + HO — Elev

113.25

0+60

/

+50

0.00 99.41 13.84 99.41

2.

+40 Cent of 19th

12.32 87.09

0

7.73 96.98 10.22 89.19

+50

1

North			×	South						
Elev	- Grade	cut	Elev	Grade	cut	Sta	+	HI	-	Elev
			(96.92)					96.92		
			5.83							
10.67										
86.25	93.75	-7.5	91.09	93.75	-2.7	1+50				
6.67			4.44							
90.25	95.00	-4.7	92.48	95.00	-2.5					
						#	10.00	104.15	2.77	94.15
						B.M. 20 A+B.			7.18	96.97

Cut & Fill stakes in 12 St from 21st to 22nd St Oct 25 1892
Hamlin & Omen

North Elev	North Grade	North Cut	South Elev	South Grade	South Cut	Sta	+	HO	−	Elev.
			(125.34)			BM	12.27	125.34		113.07
10.56			11.16							
114.78	117.00	− 2.2	114.18	117.00	− 2.8	0	East line of 21st St			
1.18		(125.34) ×	(137.44) 11.93							
124.16	122.50	+ 1.7	125.51	122.50	+ 3.0	+50				
			(137.44)			#	12.23	137.44	0.13	125.21
7.20			7.92							
130.24	128.0	+ 2.2	129.52	128.00	+ 1.5	1				
2.32			2.54							
135.12	133.5	+ 1.7	134.90	133.5	+ 1.4	+50				
		(147.07)				#	11.87	147.07	2.24	135.20
7.07			7.91							
140.0	139.00	+ 1.0	139.16	139.00	+ 0.2	2	West of 22nd St		4.66	142.41
						BM				

B.M.2 on H St 12th to 26th

Hamilton Level. Oct 29 1892
Shaw Rod.

Sta	+	HO	−	Elev.	
B.M.	0.22	73.57		73.35	12th & H St.
#	0.75	62.98	11.34	62.23	
B.M.			2.91	60.07	13th & H. N.W. spk in ground.
#	3.78	61.43	5.33	57.65	
B.M.			3.90	57.53	14th & H. S.W. spk cor of fence
#	1.89	60.40	2.92	58.51	
B.M.			2.01	58.39	15th & H St.
B.M. #	5.26	57.49	8.17	52.23	16th & H St spk cor fence 100' N of NE cor.
#	11.57	68.62	0.44	57.05	
B.M.			7.40	61.22	17th St.
#	11.77	79.56	0.83	67.79	
#	11.22	89.79	0.99	78.57	
#	12.24	101.41	0.62	89.17	18th & H.
B.M.			1.38	100.03	
#	2.26	102.77	0.90	100.51	
#	5.53	96.48	11.82	90.95	
B.M.			9.39	87.09	19th St & H.
#	5.65	99.45	2.68	93.80	
B.M.			2.54	96.91	20th & H.

Sta.	+	HI	−	Elev		
		99.45				
#	11.82	111.20	0.07	99.38		
#	11.62	122.80	0.02	111.18		
B.M.			9.69	113.11		s/k in tel. new S.W. cor
B.M. #	11.65	132.89	1.56	121.24		s/k cor fence S.E. cor old B.M. 21st & HB
#	12.11	143.95	1.05	131.84		
B.M.			1.55	142.40		22nd & HB.
#	11.37	154.52	0.80	143.15		
#	11.93	164.87	1.58	152.94		
B.M.			2.41	162.46		23rd & HB
#	11.55	176.01	0.41	164.46		
B.M. #	12.25	187.21	1.05	174.96		24th & HB
B.M.			15.02	172.19	0.06 172.25	24th & E.
#	8.29	195.14	0.36	186.85		
B.M. #	10.00	195.47	9.67	185.47		25th & HB on Plg at N.E. cor. (~~old BM~~)
B.M.			10.50	184.99		(s/k in ground about 30' N.E. of cor 25th & HB)
B.M.			0.24	195.25	0.08 195.33	26th & HB S.W. on Plg.

North				South		
Elev	Grade	cut	Elev	Grade	cut	
B.M.			(62.70)			
	56.50			56.0		
4.96			5.28			
57.74	57.1	+0.6	57.42	56.8	+0.6	
4.05			5.13			
58.65	57.8	+0.9	57.87	57.5	+0.1	
3.95			4.21			
58.75	58.4	+0.4	58.49	58.3	+0.2	
3.72			3.93			
58.98	59.0	-0.0	58.77	59.0	-0.2	
2.34			3.00			
60.36	59.3	+1.1	59.7	59.3	+0.4	
2.77			3.57			
59.93	59.5	+0.4	59.13	59.5	-0.4	
			(64.43)			
4.32			4.83			
60.11	60.0	+0.1	59.60	60.0	-0.4	
4.76			3.57			
59.67	60.5	-0.8	60.86	60.5	+0.4	

Cut & Fill stakes on B St from 6th to 12 th. Oct 25 1852 Hamlin & Part

Sta	+	100	−	Elev.
B.M.	5.28	62.70		57.42
0	East line of 6th St			
+50				
1				
+50				
2	West line of 7th			
+40				
0	East line of 7th			
B.M.#	3.08	64.43	1.35	61.35
+50				
1				

North			South			
Elev	Grade	cut	Elev	Grade	cut	
						64.43
		(64.43)				
3.80			3.20			
60.63	61.0	−0.4	61.23	61.0	+0.2	+60
3.39			2.14			
61.04	61.5	−0.5	62.29	61.5	+0.8	2 West line of 8th St
2.43			0.72			
62.00	62.0	0.0	63.71	62.0	+1.7	+40 8th St
0.90			0.60			
63.53	62.5	+1.0	63.83	62.5	+1.3	0 East line of 8th
		(70.26)				# 6.72 70.26 0.89 63.54
5.69			6.13			
64.57	63.1	+1.5	64.13	63.1	+1.0	+50
4.93			5.67			
65.33	63.7	+0.9	64.59	63.7	+0.9	1
4.13			5.23			
66.13	64.4	+1.7	65.03	64.4	+0.6	+60
4.20			5.47			
66.06	65.0	+1.0	64.79	65.0	−0.2	2 West line of 9th St
3.55			4.55			
66.71	65.5	+1.2	65.71	65.5	+0.2	+40 1

North Elev	North Grade	North cut	South Elev	South Grade	South cut					
		(70.26)						70.26		
3.35			4.57							
66.91	66.0	+0.9	65.69	66.0	−0.4	0	East line of 9th St			
		(74.05)				#	7.14	74.05	3.35	66.91
6.05			7.35							
68.00	67.3	+0.7	66.70	67.3	−0.6	+50				
4.96			6.26							
69.09	68.5	+0.6	67.79	68.5	−0.7	1				
3.96			4.61							
70.09	69.7	+0.4	69.44	69.7	−0.3	+50				
2.70			2.83							
71.35	71.0	+0.4	71.22	71.0	+0.2	2	West line of 10th			
0.74			1.64							
73.31	71.5	+1.8	72.41	71.5	+0.9	+40				
00			1.00							
74.00	72.0	+2.0	73.05	72.0	+1.0	0	East line of 10th St			
		(80.38)				#	7.54	80.38	1.21	72.84
4.67			6.00							
75.71	73.4	+2.3	74.38	73.4	+1.0	+50 B.M. (10th & C)			5.84	74.54
3.75			5.27							
76.53	74.8	+1.7	75.11	74.8	+0.3	1				

			(80.38)					80.38	
2.17			3.51						
78.21	76.1	+2.1	76.87	76.1	+0.8	+50			
0.74			3.26						
79.64	77.5	+2.1	77.12	77.5	−0.4	2	West line of 11th St		
			(88.12)			#	9.30	88.12	1.56	78.82
7.07			10.20						
81.05	78.0	+3.0	77.92	78.0	−0.1	+40			
7.20			9.93						
80.92	78.5	+2.4	78.19	78.5	−0.2	0	East line of 11th		
5.77			8.71						
82.35	80.0	+2.4	79.41	79.7	−0.3	+50			
3.94			7.12						
84.18	81.5	+2.7	81.00	81.0	0.0	1			
3.01			5.56						
85.11	83.0	+2.1	82.57	82.3	+0.3	+50			
1.99			4.07						
86.13	84.5	+1.6	84.05	83.5	+0.5	2	West line of 12th St		
						B.M.		2.23	85.99

Cut & Fill stakes on H St from 24th to 26th

Oct 31 1892

Hamlin Book
Show Level
William Rod
Van Hook Stake

North Elev	North Grade	North cut	South Elev	South Grade	South cut	Sta	+	HO	−	Elev.
			(186.94)			B.M.	11.98	186.94		174.96
7.80			9.13							
179.14	175.00	+4.1	177.81	175.00	+2.8	0 East of 24th St				
						B.M. New			8.22	178.72
6.99			9.03							
179.95	176.83	+3.12	177.91	176.66	+1.25	+50				
7.36			9.47							
179.58	178.66	+0.92	177.47	178.33	−0.86	1				
5.05			5.63							
181.89	180.50	+1.39	181.31	180.00	+1.31	+50				
		(194.11)	× (186.94)			#	9.23	194.11	2.06	184.88
6.87			2.92							
187.24	182.33	+4.91	184.02	181.66	+2.36	2				
			(194.11)							
6.67			8.23							
187.44	184.16	+3.28	185.88	183.33	+2.55	+50				
5.32			6.72							
188.79	× 186.00	+2.8	187.39	× 185.00	+2.4	3				
3.93			5.38							
190.18	186.33	+3.85	188.73	185.33	+3.40	+50				
3.82			4.61							
190.29	186.67	+3.62	189.50	185.67	+3.83	4				

North			×	South		
Elev	Grade	cut		Elev	Grade	cut
				194.11		
1.70				4.18		
192.41	187.00	+ 5.4		189.93	186.00	+ 3.9
3.08				3.90		
191.08	187.33	+ 3.75		190.21	186.33	+ 3.88
2.43				3.07		
191.68	187.67	+ 4.01		191.04	186.67	+ 4.37
2.27				1.91		
191.84	188.00	+ 3.8		192.20	187.00	+ 5.2
		193.82				
5.28				4.85		
188.54	188.00	+ 0.15		188.97	187.00	+ 2.0
8.31				9.15		
185.51	188.00	- 2.49		184.67	187.00	- 2.33
10.73				11.91		
185.09	188.18	- 5.09		181.91	187.18	- 5.27
		182.85				
3.65				5.94		
179.20	188.36	- 9.16		176.91	187.36	- 10.45
15.04				11.29		
171.77	188.54	-16.77		171.56	187.54	-16.00

Sta	+	HI	−	Elev
		194.11		
4+50				
5				
+50				
6	West line of 25th St			
#	1.98	193.82	2.27	191.84
+50	25th St			
B.M. 25th St.			8.83	184.99
0	East line of 25th St			
+50				
#	0.93	182.85	11.90	181.92
1				
+50				
#	4.20	175.76	11.29	171.56

North Elev	Grade	cut	South Elev	Grade	cut	Sta	+	HO	−	Elev
			175.76					175.76		
4.58			11.77							
171.18	188.71	−16.5	163.99	187.71	−23.7	2				
		182.42	175.76			#	11.24	182.42	4.58	171.18
6.45			7.71							
175.97	188.89	−12.92	168.05	187.89	−19.84	+50				
		182.42	182.42							
0.58			3.50							
181.84	189.07	−7.23	178.92	188.07	−9.15	3				
			192.02			#	10.13	191.97	0.58	181.84
2.84			6.47							
189.18	189.25	−0.07	185.55	188.25	−2.70	+50				
		198.75	192.02			#	8.30	198.70	1.57	190.45
6.49			2.02							
192.26	189.43	+2.83	190.00	188.43	+1.57	4				
			198.75							
4.82			6.65							
193.93	189.61	+4.3	192.10	188.61	+3.5	+50				
3.01			4.70							
195.74	189.78	+6.0	194.05	188.78	+5.27	5				
	189.96			188.96		+50				
1.68			3.40							
197.07	190.00	+7.1	195.35	189.00	+6.4	+60	West line of 26th			
									3.40	195.30

North				South			
Elev	Grade	cut	+ Elev (198.73)	Grade	cut		
4.33			3.91				198.70
194.12	190.0	+4.2	194.84	189.00	+5.8	5+90	Centre of 26 ft
9.01			9.25				
189.74	190.0	−0.3	189.60	189.00	+0.6	0	Each line of 26 ft

Center grades on 6St from 6th to 8th

Sta	+	H.I.	Scale	Rod	Elev	
B.M.	5.11	62.53			57.42	
0			55.92	6.61		
+50			56.94	5.59		
1			57.62	4.91		
+50			58.31	4.22		
2			59.00	3.53		
+40			59.25	Not Set		7th St
B.M.	3.24	64.60	1117		61.36	
0			59.50	5.10		
+50			60.00	4.60		
1			60.50	4.10		
+50			61.00	3.60		
2			61.50	3.10		
+40			62.00			8th St
0			62.50			
+50			63.13			
1			63.75			

Stn	+	HI	Grade	Dod.
+00			64.38	
2			65.00	
+40				
6				

98+84

Finishing stakes on C St from 6th to 7

Sta	+	HI	Grade	Rod	Elev	
BM						
0			55.92			East line of 6th
+50			56.54			
1			57.62			
+50			58.31			
2			59.00			West line of 7th
			3			
+40			59.25			
0			59.50			East line of 7th
+50			60.00			
1			60.50			
+50			61.00			
2			61.50			East line of 8th
BM	1.80	67.87			66.07	8th & B.
+40			62.00			
0			62.50	5.37 .13	✓	West line of 8th
+50			63.13	4.74 .62	✓	
1			63.75	4.12 .03	✓	
+50			64.38	3.49 .62	✓	
2			65.00	2.87	✓	West line of 9th
				10.13	57.73	

Curb grades on 6th from 6th to 7th

Sta	North Grade	North Rod	+	South Grade	South Rod
BM 6th & b		(62.74)			
BM 7th & C					
0	56.50	6.24		56.0	6.74
		.31			.38
+25	56.81	5.93		56.38	6.36
		.32			.37
+50	57.13	5.61		56.75	5.99
		.31			.38
+75	57.44	5.30		57.13	5.61
		.31			.37
1	57.75	4.99		57.50	5.24
		.31			.38
+25	58.06	4.68		57.88	4.86
		.32			.37
+50	58.38	4.36		58.25	4.49
		.31			.38
+75	58.69	4.05		58.63	4.11
		.31			.37
2	59.00	3.74		59.00	3.74

Nov 5 1892 Hamlin & Party

+	HO	—	Elev.
5.32	62.74		57.42
		1.40	61.34

East of 6th St

West of 7th St

Cut and Fill stakes on 18 St
from East of 20th to West of 21st

North Side Elev	Grade	cut +	(106.23) Elev	South Side Grade	cut −
				20th & B.	
11.14			10.96		
95.09	96.00	− 0.91	95.37	96.00	− 0.63
7.62			11.64		
98.61	101.00	− 2.4	94.59	101.00	6.41
4.32			7.65		
101.91	106.00	− 4.1	98.58	106.00	− 7.42
			(115.53)		
8.93			8.05		
106.60	111.00	− 4.4	107.48	111.00	− 3.52
4.97			4.92		
110.56	116.00	− 5.44	110.61	116.00	− 5.4

Dec 1 1892 Hamilton and Owen

25

Sta	+	BS	−	Elev
BM.		9.22	106.23	96.91
0	East line of 20th			
+50				
1				
#		9.57	115.53 0.21	106.02
+50				
2	West line of 21st			113.11
B.M.			2.45	110.08
+40	Center line of 21st			

Cut and Fill stakes on H St between 23rd and 24th Sts

North Side			× South Side		
Elev	Grade	cut	Elev	Grade	cut
		(173.00)		23rd & H Sts	
	~~160.50~~			~~160.50~~	
7.08			8.35		
165.92	161.00	+4.9	164.65	161.00	+3.7
4.2			5.17		
168.8	165.33	+3.5	167.83	165.33	+2.5
(173.0)			(181.17)		
0.87			10.27		
172.13	169.67	+2.46	170.90	169.67	+1.23
		(181.17)			
6.14			7.37		
175.03	174.00	+1.0	173.80	174.00	-0.2
	174.50			174.50	

Dec 1 1892 Hamlin and Simer

Sta	+	HO	−	Elev
BM	10.54	173.00		162.46
2+25	Center line of 23rd St			
0	East " "			
+50				
#	9.04	181.17	0.87	172.13
1				
+50	West line of 24th St			
BM			2.43	new 178.74
+80	Center " "			
BM Old			6.21	174.96

Cut and Fill stakes on H St bet. 22nd & 23rd

North Side × South Side

Elev	Grade	Rod	Elev	Grade	Rod
			151.36		
6.82			9.47		
144.54	139.50	+ 5.0	141.89	139.50	+1.4
4.20			2.25		
147.16	140.00	+7.2	149.11	140.00	+9.1
162.28			151.36		
10.58			0.45		
151.70	145.00	+6.7	150.91	145.00	+ 5.9
			162.28		
6.58			7.50		
155.70	150.00	+5.7	154.78	150.00	+4.8
2.92			3.98		
159.36	155.00	+4.4	158.30	155.00	+.33
			173.02		
10.37			11.50		
162.65	160.00	+2.7	161.52	160.00	+1.5

173.02
11.50
161.52

Dec 1 1892 151.36 / 11.35 / 140.0

Sta	+	HI	−	Elev
B.M.	8.96	151.36		142.40
2+40	Center line of 22nd St			
0				
+50				
# 0	11.79	162.28	0.87	150.49
1				
+50				
#	11.74	173.02	1.00	161.28
2				
B.M.			10.55	162.47

Grades for Manhole on S of 16 ft & NE
by request of Supt of Sewers

Jan 3 1893 Hamlin & Williams

Sta	+	HI	−	Elev	Grade	cut
B.M.	2.82	55.05		52.23	52.23	16 ft & NE spk fence post 100 of N.E. cor
			6.28	48.77	56.00	− 7.23 Grade at 16 ft & NE on South
#	8.17	61.07	2.15	52.90		
B.M.			2.69	58.38		15 ft & NE. St.

Grades for H St Bridge cut off's for Posts

Jan 5 1892

Hamlin
Williams
Shaw.

Sta	+	HI	Grade	Rod	Elev	
B.M.	1.06	59.44			58.38	15th & N
						Grade at S.W. 56.40
						" " S.E.
						all other points 56.00
56 / 2.33 / 53.67		St grade 56.0	53.67	5.77		N.E. cor of Bridge
		"	"	"		N.E. cor " "
		"	"	"		West line of 16th St
56.40 / 2.33 / 54.07		56.40	54.07	5.37		South west cor.
56.05 / 2.33 / 53.72		56.05	53.72	5.72		South East cor
					52.22	
B.M.				7.23	52.21	16th & N.

all grades set 28" or 2.33' below bridge floor.

Finishing stakes on 16th St from 16th to 20th St

Sta	Grade	Rod	Grade	Rod
B.M.		(61.70)		
0	56.00	5.70	56.00	5.70
+50	58.00	3.70	58.00	3.70
1	60.00	1.70	60.00	1.70
			(71.26)	
+50	62.00	9.26	62.00	9.26
2	64.00	7.26	64.00	7.26
B.M. 17th & 18 St				
+40	64.50	6.76	64.50	6.76
0	65.00	6.26	65.00	6.26
+50	70.00	1.26	70.00	1.26
		C.1.4 (81.89)		C 2.3
1	75.00	6.89	75.00	6.89
		C.2.7 (92.15)		C.2.4
+50	80.00	12.15	80.00	12.15
2	85.00	7.15	85.00	7.15
BM 19th & C.				
+40	85.50		85.50	
0	86.00		86.00	
+50	86.75		86.75	

Jan. 19 1893 Hamlin Level
William
Shaw
Cummings

+	HI		Elev.
9.47	61.70		52.23
	center set with same rods		
11.26	71.26	1.70	60.00
			(clk 61.22)
		10.05	61.21
Center line of 17th St			
11.89	81.89	1.26	70.00
11.18	92.15	0.92	80.97
6.13	97.36	0.92	91.23
		10.25	87.11
Center line of 18th St			

Finishing stakes on 18 St. bet. 16th & 20th St

Sta	Grade	Rod	Grade	Rod
1	87.50		87.50	
+50	88.25		88.25	
2	89.00		89.00	
+40	89.50		89.50	
B.M. 18th & 1		96.17		
0	90.00	6.17	90.00	6.17
+50	91.25	1.25 / 4.92	91.25	4.92
1	92.50	1.25 / 3.67	92.50	3.67
+50	93.75	1.25 / 2.42	93.75	2.42
2	95.00	1.25 / 1.17	95.00	1.17
B.M. 20th & 1				
+40	95.50		95.50	

Sta	+	H.I.	Grade	Rod	Elev
B.M.	2.34	60.72			58.38
0					
0			56.50	4.22	
0			57.50	3.22	
1 or corner			56.75	3.97	

+	H.I.	−	Elev

Center line of 19th St

9.08	96.17		87.09

Center set on the same rods

4.48	99.48	1.17	95.00
		2.54	96.94

Center line of 20th St

East line of 15th South

" " " North

60.72
8.53
52.19

Measurements from surface to bottom of cut as of present on H St bet 18th & 19th St

Jan 26 1893

Hamilton Shaw

Sta			Half			Half	mean cut	End area	cu yds
2	19.0	18.9	+0.0	15.0	15.9	0.0	0.0	18.0	
									141.
+40	19.5	21.9	+2.4	15.5	17.8	+1.8	+2.1	186	
									453.
0	18.5	23.7	+5.2	14.0	19.0	+5.0	+5.1	426	
									878.0
+50	18.0	24.2	+6.2	12.0	18.5	+6.5	+6.3	522	
									967
1	16.0	20.7	+4.7	8.5	16.4	+7.9	+6.3	522	
									819
+50	9.0	13.6	+4.6	7.0	11.1	+4.1	+4.3	362	
									465
2	5.0	6.7	+1.7	2.0	3.5	+1.5	+1.6	146.0	
									3723
+40									
0									

18th St

cu yds approximate.

19th St

3723
723
3000

probable amount in hole scraped out

Check of gutter grades on 4th St
(S side) between 2nd & 4th

Sta	+	HI	Grade	rod	Elev	
BM	6.23	46.23			40.00	
0			40.33	5.90	5.23	
+25			40.67	5.56	4.89	OK.
+50			41.00	5.23	4.56	0.06 low
+75			41.33	4.90	4.23	0.09 low.
1			41.67	4.56	3.89	0.07 low.
+25			42.01	4.22	3.55	0.00 OK.
+50			42.35	3.88		
+75			42.68	3.55		
2			43.03	3.20		

46.20
42
4.22

Grade stakes on 26th St bet 25th & 26th
North side

Sta	+	HI	Grade	Rod	Elev.
B.M.	7.87	192.86			184.99
3			189.07	3.79	
+50			189.25	3.61	
4			189.43	3.43	
+50			189.61	3.25	
5			189.78	3.08	
+60			190.0	2.86	
+90			190.0		
6+20			190.0	2.86	

Grade stakes South Side on 26 St bet 25th & 26th

3		192.86	188.08	4.78	
+50			188.25	4.61	
4			188.43	4.43	
+50			188.61	4.25	
5			188.78	4.08	
+60			189.00	3.86	
+90			189.00		
6+20			189.00	3.86	
#	6.20	197.56		1.50	191.36

Mar 8 1893

Hamlin
Shaw
Crowell

26th & 26 Street

184.99
7.87
192.86
185.00
3.88

Center line of 26th St

Cut and Fill staked on 18 St between 24th & 25th. (North Side)

Nov. 4 1898

Hamlin
Shaw
Williams
Cummings

Sta	+	HI	−	Elev	Grade	±	
B.M.	6.00	184.74		178.74			
0			6.90	177.84	175.00	+ 2.8	East line of 24th
+ 50			5.7	179.0	176.83	+ 2.2	
1			5.8	178.9	178.66	− 0.2	
+ 50			4.22	180.52	180.50	0,0	
2			1.01	184.73	182.33	+ 2,4	
+ 50	6.72	190.97	0.49	184.25	184.16	− 0.2	
3			5.67	185.30	186.00	− 0.7	
+ 50			4.07	186.90	186.33	+ 0.6	
4			4.00	186.97	186.67	+ 0.3	
+ 50			3.35	187.62	187.00	+ 0.6	
5			3.40	187.57	187.33	+ 0.2	
+ 50			1.95	189.00	187.67	+ 1.3	
6			1.95	189.00	188.00	+ 1.0	West line of 25th
+ 50			2.63	188.34	188.00	+ 0,3	

Cut and Fill stakes on 26 St
bet. 24th & 25th St's (South Side)

Mar. 4 1893

Hamlin
Shaw
Williams
Cummings

Sta	+	HI	−	Elev	Grade	Cut	
B.M.	6.00	184.74		178.74			
0			7.10	177.64	175.00	+ 2.5	East line of 24th St
+50			6.55	178.19	176.66	+ 1.53	
1			7.00	177.74	178.33	− 0.59	
+50			4.32	180.42	180.00	+ 0.4	
2			2.34	182.40	181.66	+ 0.7	
+50 #	7.64	190.97	1.30	183.44	183.33	0.0	
3			6.11	184.86	185.00	− 0.1	
+50			5.29	185.38	185.33	0.0	
4			4.83	186.14	185.67	+ 0.47	
+50			4.39	185.58	186.00	− 0.4	
5			4.26	186.71	186.33	+ 0.3	
+50			2.12	188.85	186.67	+ 2.18	
6			1.35	189.62	187.00	+ 2.6	West side of 25th St
+50					187.00		
#	3.69	291.85	2.81	188.16			
B.M.				7.01	284.84	284.99	very windy leveled with transit

Curb stakes on HB St bet 25 ft
+ 26 ft on South Side Not set to line

Sta	+	HI	Grade	Rod	Elev
BM	7.01	19200			184.99
0				187.00	5.00
+50				187.18	4.82
1				187.36	4.64
+50				187.53	4.47
2				187.71	4.29
+50				187.89	4.11
3				188.08	3.92

Mar 3 1893 Hamlin
Shaw
Williams
Cummings

Sta	+	H.I.	Grade	Rod	
B.M.	8.00	192.99			184.99
			187.00	5.99	
B.M.	8.15	193.14			184.99
			188.00	5.14	
B.M.	10.32	189.06			178.74
3			185.00	4.06	
3			185.50	3.56	
3			186.00	3.06	
6	8.05	193.04			184.99
			188.00	5.04	
6	8.15	193.14			184.99
			187.00	6.14	
	2.37	181.01			178.74
			175.00	6.01	
	2.07	180.81			178.74
			175.0	5.81	

South Side

} Blk bet 24th & 25th

Mar 27 1895 Hamlin
Williams
Cummings

Finishing stakes on H St 23rd to 24

Sta	+	HI	Grade	Rod	Elev	
B M	0.20	178.94			178.74	H & 24th St
1+50			174.00	4.94	✓	West side of 24th
1			169.67	9.27	✓	
#	2.00	169.77		11.17	167.77	
+50			165.33	4.44	✓	
0			4.33 161.00	4.33 8.77	✓	East side of 23rd
2			160.00	9.77	✓	West side of 23rd
#	4.73	168.00	6.	6.50	163.27	
curb c & 24th				5.00	163.0	S.W. cor

Curb grades on H St 23rd to 24th

B.M.	9.39	170.39			161.00	Curb stake East of 23rd
0			161.00	9.39	✓	
+50			165.33	5.06	✓	
1 #	8.91	178.58	169.67	0.72	169.67	
+50			174.00	4.50		
curb 1+50						
0	7.85	168.85			161.00	
			165.33	3.52		
#	10.08	178.26		0.67	168.18	

Sta	+	HI	Hindl	Dist	Elev
1		178.26	169.67	8.59	
			174.00	4.26	
B.M.	0.43	179.17			178.74
1+50			174.00	5.17	
1 #	1.64	171.33	169.67	9.50	169.67
1+50			165.33	6.00	
2			161.00	10.33	

Finishing stakes on H St 22nd to 23rd

Apr 3 1893

Hamlin Inst
Williams
Shaw
Cummings

Sta	+	HI	Grade	Rod	Elev		
BM	9.28	151.68			142.40		
0			140.00	11.68	9.82	1.86	East line of 22nd St
+50			145.00	6.68			
1 #	11.15	161.15	150.00	1.68	150.00		
+50			155.00	6.15			
2			160.00	1.15			West line of 23rd St
+25			160.50				checked on old curb stake

Sta	+	HI	Grade	Rod	Elev	
B M	11.11	124.74			113.63	
0			117.00	7.74		East line of 21st St
50			122.50	2.24		
#	11.32	136.06		0.00	124.74	
1			128.00	8.06		
50			133.50	2.56		
#	4.03	143.59		1.70	134.96	
2			139.00			West line of 22nd St
40			139.50			
B.M.				1.52	142.07	
B M	1.52	143.92			142.40	
2			139.00	4.92		
50			133.50	10.42		

Finishing stakes on 18 St bet 21st & 22nd Street level across.

Apr 4 1893

Hamlin level
Shaw rod

Sta	+	HI	Grade	Rod	Elev	
B.M.	10.20	107.11			96.91	20th & 18
#	11.71	118.32		0.50	106.61	
B.M.				2.32	116.00	B.M. S.E. spk tel pole
0			117.00	1.32		East side of 21st
#	11.47	128.47		1.32	117.00	
+50			122.50	5.97		
1			128.00	0.47		
# 11	11.70	139.70		0.47	128.00	
			133.50	6.20		
			139.00	0.70		West line of 22nd St
#	6.57	145.57		0.70	139.00	
				3.27	142.30	B.M. C & 22nd St
#	1.93	143.39		4.11	141.46	
				3.01	140.38	B.M. E & 22nd St

Sta	+	[illegible]	Grade	Rod	Elev
	11.94	127.94			116.00
0			117.00	10.94	
+50			122.50	5.44	
#	11.55	138.53		0.96	126.98
1			128.00	10.53	
+50			133.50	5.03	
#	7.38	143.90		2.01	136.52
			139.00	4.90	
B.M.				1.61	142.29
				4.93	138.97
#	11.23	153.37		1.76	142.14
#	11.42	164.49		0.30	153.07
B.M.				2.36	162.13

2 3rd & 4th spk in first post S of S.W. cor

Finishing stakes on 16 St - Set 15th & 16th Sts (North Side)

Sta	+	HI	Grade	Rod	Elev
B M	2.36	60.74			58.38
0			57.50	3.24	✓
				.37	
+50			57.13	3.61	✓
				.38	
1			56.75	3.99	✓
				.38	
+50			56.37	4.37	✓
				.37	
2			56.00	4.74	✓
+40			56.00	4.74	✓

a/c 10 1893 Heuman

East line of 15th St

West line of 16th St

checked Center line of 16th

Finishing stakes on 16 St bet 15th & 16th on (South Side)

Sta	+	HI	Grade	Rod	Elev
B.M.	2.36	60 74			58.38
0			56.50	4.24	✓
+50			56.38	4.36	✓
1			56.25	4.49	✓
+50			56.13	4.61	✓
2			56.00	4.74	✓
+40			56.00	4.74	✓

A/D 10 1893 Hamline

East line of 15th St

Set back from curb

West line of 16th St

Center line of 16th St

Finishing stakes on Pf St bet 15th & 16th Sts (center line)

Sta	+	HO	Grade	Rod	Elev
BM	2.36	60.74			58.38
0			57.00	3.74	
+50			56.75	3.99	
1			56.50	4.24	
+50			56.25	4.49	
2			56.00	4.74	
+40			56.40	4.74	

Apr 10 1872 Hamlin

East line of 15th St

West line of 16th St

Center line of 16th St

Finishing stakes on 16th St bet 16th & 17th (Steel level)

Sta	+	H.I.	Grade	Rod	Elev.
B.M.	3.48	59.48			56.00
0			56.00	3.48	
+50			58.00	1.48	
1			60.00	5.48	
+50			62.00	3.48	
2			64.00	1.48	
	4.35	68.35		1.48	64.00
+40			64.50	3.85	
B.M.				7.16	61.19

Apr 10 1893 Hamlin

East line of 16th St

West line of 17th St

Center line of 17th St

17th & Ho St.

Finishing stakes on H St between 17th & 18th Sts (Street level)

Apr 10 1892

Hamlin Level
Shaw Rod
Williams Level

Sta	+	HO	Grade	Rod	Elev	
B.M.	11.73	72.95			61.22	
0			65.00	7.95	✓ ✓ ✓	East line of 17th St
+50			70.00	2.95	✓ ✓ ✓	
#	9.63	81.85		0.73	72.22	
1			75.00	6.85	✓	
+50			80.00	1.85		
#	10.34	90.34		1.85	80.00	
2			85.00	5.34		West line of 17th St
+40			85.50	4.84	✓	Center " " "

Finishing stakes on H St bet 18th & 19th Sts Street level

Sta	+	HO	Grade	Rod	Elev
BM		90.34 See Page 50			
0			86.00	4.34	2
+50			86.75		
#	5.88	94.57		1.65	88.69
1			87.50	7.07	
+50			88.25		
2			89.00	5.57	
+40			89.50		
			90.00	4.59 4.57	checked

Apr 10 1890

Hamlin
Shaw
Williams

BM 17th & H

East line of 18th St

West line of 19th St

Center " " " "

Finishing Stakes on 19th & 20th between H & K (Street-level)

Sta	+	H.I.	Grade	Rod	Elev.
B.M.	8.85	95.94			87.09
0			90.00	5.94	
				1.25	
+50			91.25	4.69	
				1.25	
1			92.50	3.44	
				1.25	
+50			93.75	2.19	
				1.25	
2			95.00	0.94	
#	5.29	100.29		0.94	95.00
+50			95.50	4.80	
					(94.91)
B.M.				3.36	96.93

April 1893

Hamlin Level
Shaw Rod
Williams Stake

East line of 19th St

West line of 20th

Center " " "

20th & H St

Finishing stakes on H.St. between 20 th & 21 st (Street level)

A/N. 6 1893

Hamlin level
Shaw rod
Williams Stake

Sta	+	HI	Grade	Rod	Elev	
BM	9.92	106.83			96.91	
0			96.00	10.83		East line of 20 th St
+50			101.00	5.83		
1			106.00	0.83		
	11.97	117.97		0.83	106.00	
+50			111.0	6.97		
2			116.00	1.97		West line of 21 st
+40			116.50	1.47		Center line of 21 st
B.M.				1.98	116.00 115.99	21 st & H S.W. of Pk. tel pole

Reseting finishing stakes on intersection of H & 22nd

A/V 10 1893 Hamlin

Sta	+	HI	Wall	Pod	Elev	
B.M.	4.87	147.17			142.30	
2			139.00	8.17		West side of 22nd St
+ 40			139.50	7.67		Middle line of 22nd St
0			140.00	7.17		East side of " "
+ 50			145.00	2.17		
#	1.29	140.29		8.17	139.00	
			133.50	6.79	clucked on old stake	

Centre grades on C.St. between 16th & 24th

A/N 13 1893

Hamlin level
Williams Rod
Shaw Stake

Sta	+	HO	Grade	Rod	Elev	
B.M.	10.07	62.03			57.96	16th & H.
2			60.00	2.03		
B.M.				1.51	60.52	16th & E
+40			60.00	2.03		16th St
0			60.00	2.03		
			1.25	1.25		
+50			58.75	3.28	✓	
			1.25	1.25		
1			57.50	4.53	✓	
				1.25		
+50			56.25	5.78	✓	
				1.25		
2			55.00	7.03	✓	
+40			54.50	7.53	✓	17th St
0 #	6.10	60.10	54.00	8.03	54.00	
+50			54.50	5.60	✓	
1			55.00	5.10	✓	
+50			55.50	4.60	✓	
2			56.00	4.10	✓	
B.M.				5.93	54.17	18th & C

203
5
1.53

Sta	+	BS	Grade	Rod	Elev
+40		60.10	56.50	3.60	
0			57.00	3.10	
+50 #	9.91	68.91	59.00	1.10	59.00
1			61.00	7.91	
+50			63.00	5.91	
2			65.00	3.91	
+40			66.00	2.91	
0 #	10.63	77.63	67.00	1.91	67.00
+50			72.00	5.63	
1 #	10.67	87.67	77.00	0.63	77.00
+50			82.00	5.67	
2 #	10.70	97.70	87.00	0.67	87.00
+40			88.00	9.70	
0			89.00	8.70	

Sta	+	HI	Grade	Rod	Elev	
+00		111.70	95.00	2.70		
#	11.78	109.15		0.03	97.67	
1			101.00	8.15		
+50			107.00	2.15		
#	11.97	120.22		0.80	108.25	
2			113.00	7.22		
B.M.		120.19		6.56	113.63	(113.66) corrected 4.9. here
+40			114.00	6.19		21st St
0						
#	11.78	131.26	116.00	5.19		
				0.71	119.48	
+50			121.00	10.26		
1			127.00	4.26		
#	11.67	142.34		0.59	130.67	
+50			133.00	9.34		
2			139.00	3.34		
+40			140.00	2.34		22nd St
0 #	11.80	152.80	141.00	1.34	141.00	
+50			146.50	6.30		
1 #	11.63	163.63	152.00	0.80	152.00	
+50			157.50	6.13		

Sta	+	OD	Made	Rod	Elev	
2 #	11.86	163.63	163.00	0.63	163.00	
		174.86				
+ 25			163.50	11.36	✓	23rd St
0			164.00	10.86	✓	
+ 50			169.17	5.69	✓	
1 #	8.55	182.88	174.33	0.53	174.33	
+ 46			179.10	3.78		Culverwell & Tagg Jack Line
B.M.				4.47	178.41	

Center stakes on C St between 6th & 14th Sts

A/v 15/1895

Hamlin
Shaw
Williams

Sta	+	HO	Grade	Rod	Elev	
B.M.	5.70	63.12			57.42	6th & C St
0		55.92		7.20	–	East line of 6th St
+50		56.94		6.18		
1		57.62		.68 5.50	✓	
+50		58.31		.69 4.81	✓	
2		59.00		.69 4.12	✓	
+40		59.25		.25 3.87	✓	7th St
B.M. #	4.42	65.75	–	1.79	61.33	7th & C St
0		59.50		6.25	✓	
+50		60.00		.50 5.75	✓	
1		60.50		.50 5.25	✓	
+50		61.00		.50 4.75	✓	
2		61.50		.50 4.25	✓	
+40		62.00		3.75	✓	8th St
B.M. #	4.47	68.79		1.43	64.32	
0		62.50		6.29	✓	
+50		63.13		5.66		

Sta	+	BS	Grade	Rod	Elev	
1		68.79	63.75	5.04	✓	
+50			64.38	4.41	✓	
2			65.00	3.79	✓	
+40			65.50	3.29	✓	9th St
V #	8.54	74.54	66.00	2.79	66.00	
+50	1.25		67.25	7.29	✓	
1			68.50	1.25 6.04	✓	Fill 0.2
+50			69.75	1.25 4.79	✓	Fill 0.1
2			71.00	1.25 3.54	✓	
+40			71.50	3.04	✓	10th St
B.M. #	6.06	80.61		0.0	74.55 74.54	
0			72.00	8.61	✓	cut 0.5'
+50			73.37	1.37 7.24	✓	" 0.5'
1			74.75	1.38 5.86	✓	" 0.1
+50			76.12	1.37 4.49	✓	" 0.1
2			77.50	1.38 3.11	✓	0.0

Sta		+	HI	Grade	Rod	Elev
			80.61			
40				78.00	2.61	
0		8.76	87.26	78.50	2.11	78.50
50				79.87	7.39	
					1.38	
1				81.25	6.01	
					1.37	
50				82.62	4.64	
2				84.00	3.26	
			N			S
40			2.76	84.00	3.26	3.76
B.M.					1.43	85.83
0				84.00	3.26	
50				80.12	7.14	
					3.87	
1		0.30	76.55	76.25	11.01	76.25
50				72.87	4.18	
2				68.50	8.05	
40				68.50	8.05	

11th St — Cut 0.5'; Fill 0.4 on South side; Cut 0.6' on South side

Cut	0.5'
"	0.2
"	0.0
"	0.1
Fill	0.1

12th St	N	C	S
	Cut 0.8'	Cut 0.2'	Cut 0.5'

12th to be changed

Fill	0.1'
Cut	0.3'
Cut	0.3'
"	0.0
"	0.5'

13th St

N	C	S
Fill 0.2	Cut 0.3	Fill 0.8

a/N 15 1895

Hamlin
Shaw
Williams

Sta	+	HO	Grade	Rod	Elev.
0		70.55	68.50	8.05	
				1.75	
+80			70.25	6.30	
				1.75	
/			72.00	4.55	
				1.75	
+50			73.75	2.80	
				1.75	
2			75.50	1.05	
		N			S
+40		(1.55)	75.50	1.05	(1.55)

cut 0.7'
" 0.4'
" 0.4'
Fill 0.1'

14th St

checked in curb at 13th St O.K.
checked also in curb at 14th St O.K.

Finishing stakes on 18 St. bet 18th & 19th Sts

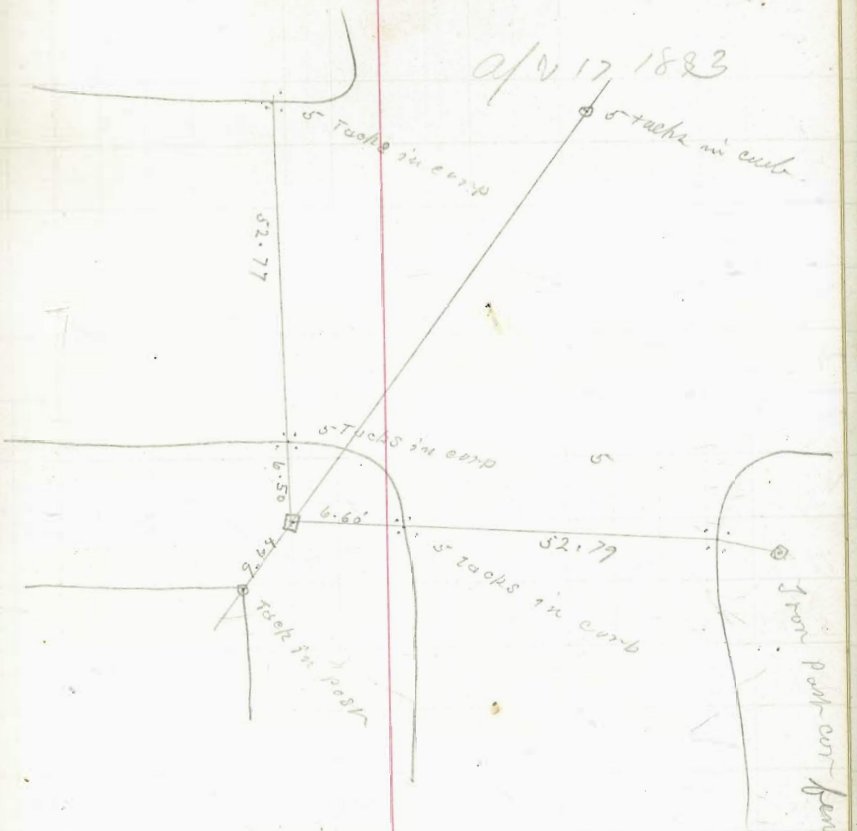
Apr 17 1893

Hamlin inst.
Shaw.
Williams

Sta	+	HI	Grade	Rod	Elev	
B.M.	7.38	92.38			85.00	grade stake N.W. on 18th & H
2				85.00	7.38	
					.50	
+40				85.50	6.88	18th St
					.50	
0				86.00	6.38	
				.75	.75	
+50				86.75	5.63	
				.75	.75	
1				87.50	4.88	
				.75	.75	
+50				88.25	4.13	(center & north side set only)
				.75	.75	
2				89.00	3.38	
+40				89.50	2.88	19th St
0				90.00	2.38	
#	3.92	93.94		2.46	89.92	
B.M. 19th & H.				6.81	87.03	

"Tie Points on 12th St."

a/N 17 1883



Shanties in Park

Set up & the N.W. point on Beech & 10th and located shower in City Park by Stadia all bearings are mag.)

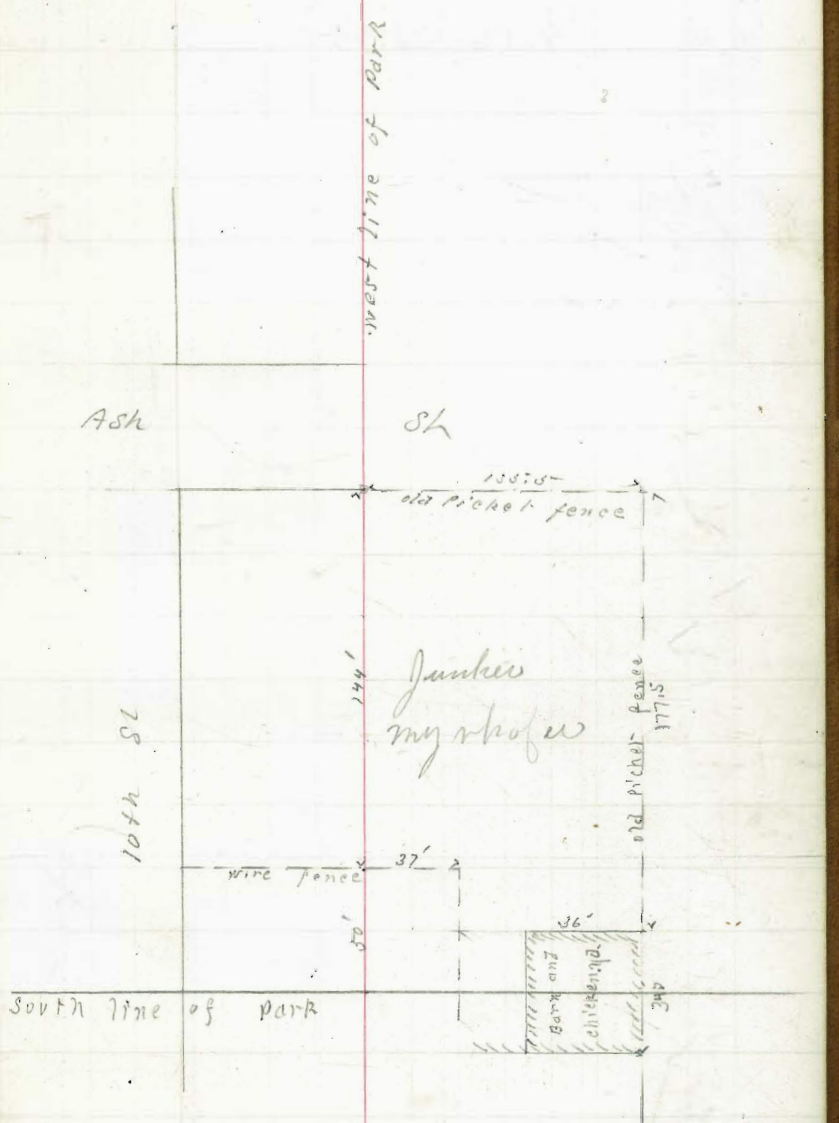
1	S 50° 35' E	735'	to N.W. corner of shanty	which measure 15 x 21 long way E. & W.
2	S 69° 30' E	720	to S.W. " " "	" " 21 x 24.5 " " N. & S.
3	S 76° 0' E	785	to N.W. " S.W. Barn	" " 21 x 33 " " N. & S.
4	S 88° 30' E	696	to N.W. " " Shanty (Barn & corrals)	" " 12 x 32.5 " " E. & W. (enclosure)
	N 80° 0' E	300'	to S.W.	S.W. water cart " " 60 x 144 N. & S.
	S 85° 0' E	235'	to S.W. Shanty	" " 12 x 24 N. & S.
	S 41° 15' E	380	" "	" " 73 x 83 N & S

Feb 7 1858

87 – 154.5

73

Sketch of buildings & Fences near the S.W. cor of SE 1/4 of P2

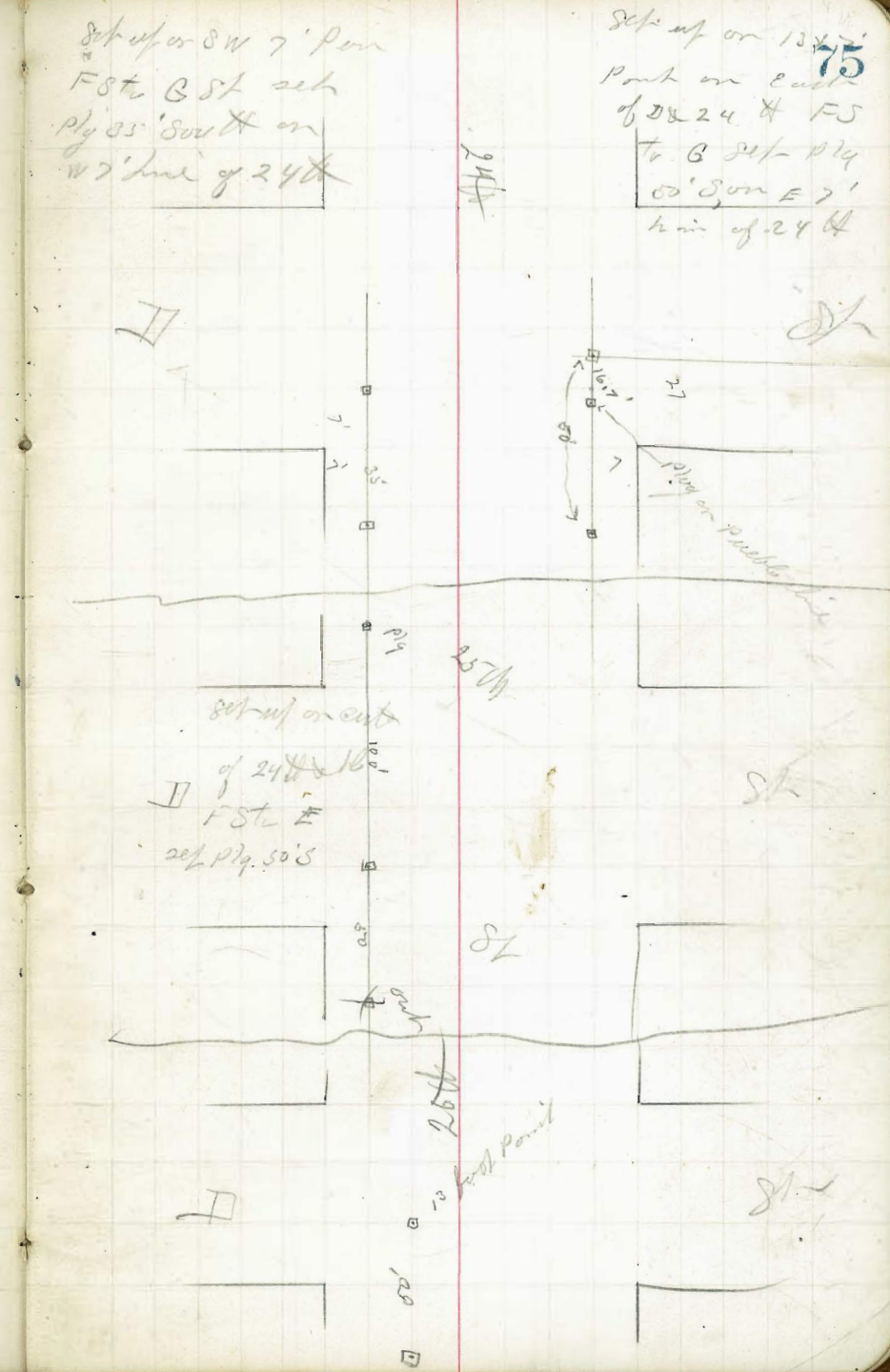


Sta	+	HI	—	Elev	Grade	Ant
B.M.	4.56	65.90		61.34		C & 7th
0					56.7	W of N. of B
1					58.4	
2					60.2	
3					62.0	S of C
0					62.0	N of C
1			5.57	60.33	62.3	
2					62.7	
3					63.0	S of B

S.W. cor 3' to 1st Post, 3' to 2nd Post, 8' to 3rd all rest 8' cen to c top of bridge to bottom of curb 9'

9
6
15

Sta	+	HO	—	Elev	
B M	0.33	58.71		58.38	15 St
			6.51	52.21	
	2.97	52.90	8.78	49.93	
North E	north side		9.77	43.13	
	south side		9.97	42.93	
South	East side		11.66	41.24	
	west side		12.55	40.35	



Elev on Sh Bridge Hamlin
Oct 29 1892 Shaw

Sta	+	HD	-	Elev
BM	2.01 (52.5)	60.4		58.39
0		3.2	7.1	53.3
+ 25		4.0	7.9	52.5
+ 50		4.9	8.8	51.6
+ 75		5.5	9.4	51.0
1		6.4	10.3	50.1
+ 25		6.6	10.5	49.9
+ 50		6.6	10.5	49.9
+ 75		6.6	10.5	49.9
+ 85		6.7	10.6	49.8

15 ~~H & H~~

Sta 0 in the ~~S.E.~~ W cor of Bridge

East side of Bridge

~~N.E.~~ E cor of Bridge

18" from top of floor to top of cap

Elevs on 26 St Bridge Apr 25 1892

Hamblin Level
Shaw Rod

Sta	+	H ☐	−	Elev
B.M.	2.01	60.40		58.39
	(56.15)			
.0		c 0.78	4.7	55.7
+ 25		2.8	5.7	54.7
+ 50		3.5	6.4	54.0
+ 75		3.3	7.2	53.2
1		4.6	7.9	52.5
+ 25		4.8	8.7	51.7
+ 50		5.5	9.4	51.0
+ 75		6.3	10.2	50.2
+ 80		6.5	10.4	50.0
2		6.4	10.3	50.1
+ 25		6.6	10.5	49.9
+ 50		6.6	10.5	49.9
+ 61		6.5	10.4	50.0

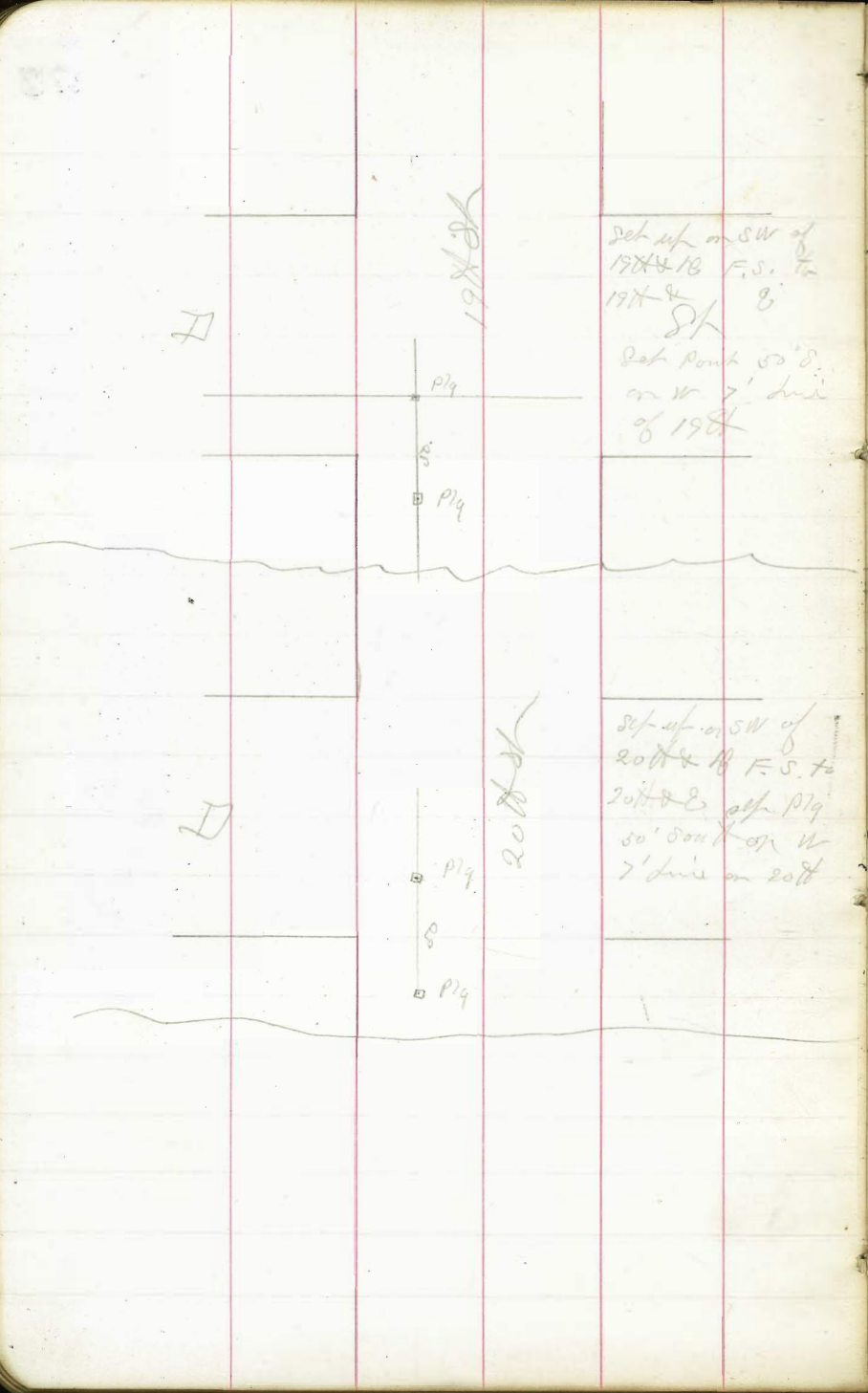
Sta 0 is the ~~S.W.~~ cor of Bridge

Sta 0

Work with S Bridge

North line of 26 St.

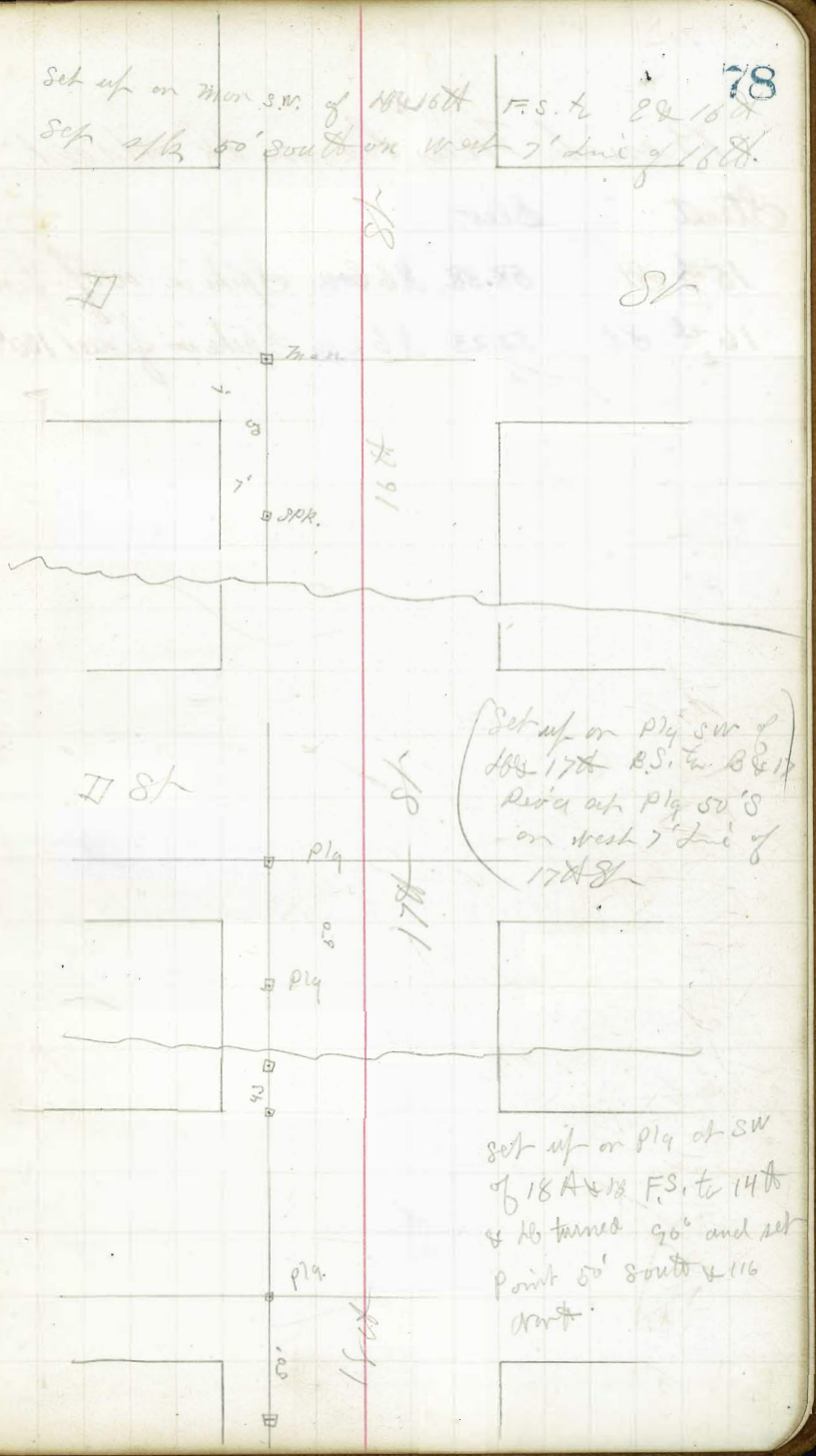
N.W. cor of Bridge



Set up on SW of 19th & 18 F.S. to 19th & E
Set Point 50' S on W 7' line of 19th

Set up on SW of 20th & 18 F.S. to 20th & E set Plg 50' South on W 7' line on 20th

Set up on Mon S.W. of 18 & 16th F.S. to E & 16th
Set spk 50' South on West 7' line of 16th.



Set up on Plg SW of 18 & 17th B.S. to B & 17
Rev'd set Plg 50' S on West 7' line of 17th St

Set up on Plg at SW of 18 A & 18 F.S. to 14th & 18 turned 90° and set Point 50' South & 116 North

Bench Marks on H Street from 15th to 26th St.

Street	Elev.		
15th St.	58.38	N.E. Cor.	Spike in cor of fence
16th St.	52.23	N.E. Cor.	Spike in fence 100' N. of Cor.
17th St.	61.22		s/k in ground, 50' of — S.W. cor.
18th St.	100.03		tack in North End of — hand rail of steps 100 South of S.E. cor.
19th St.	87.09		s/k in ground 100 South — SE cor.
20th St.	96.91		s/k in " 50 N of — N E Cor.
21st St.	116.00	S.W.	s/k in Elec Pole
22nd St.	142.30	S.W.	s/k top of fence Post
23rd St.	162.13	S.W.	s/k 1st Post S of Cor
24th St.	174.96	N.W.	cp tack in Plg 1' from — N.W. Cor.
25th St.	184.55	N.E.	s/k in ground about 30 — N.E. of N.E. Cor
26th St.	195.25	S.W.	Plug at blk Cor.
24th & C St.	178.38	S.W.	Tack in north end of s/p.

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TABLE I.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8333
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

TABLE II.—Inches in Decimals of a Foot.

1-16	3-32	⅛	3-16	¼	5-16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

TABLE III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan. Def.	Chd. Def.	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan. Def.	Chd. Def.	Def. for 1 Foot
0°10′	34377.	.036	.145	.291	0.05′	7°	819.0	1.528	6.105	12.21	2.10′
20	17189.	.073	.291	.582	0.10	20′	781.8	1.600	6.335	12.79	2.20
30	11459.	.109	.436	.873	0.15	30	764.5	1.637	6.540	13 08	2.25
40	8594.4	.145	.582	1.164	0.20	40	747 9	1.673	6.685	13.37	2.30
50	6875.5	.182	.727	1.454	0.25	8	716.8	1.746	6.976	13.95	2.40
1	5729.6	.218	.873	1.745	0.30	20	638.2	1.819	7.236	14.53	2.50
10	4911.2	.255	1.018	2.036	0.35	30	674.7	1.855	7.411	14.82	2.55
20	4297.3	.291	1.164	2.327	0.40	40	661.7	1.892	7.556	15.11	2.60
30	3819.8	.327	1.309	2.618	0.45	9	637.3	1.965	7.845	15.69	2.70
40	3437.9	.364	1.454	2.909	0.50	20	614.6	2.037	8.136	16.27	2.80
50	3125.4	.400	1.600	3.200	0 55	30	603.8	2.074	8.281	16.56	2 85
2	2364.9	.436	1.745	3.490	0.60	40	593.4	2.110	8.426	16.85	2 90
10	2644.6	.473	1 891	3.781	0 65	10	573.7	2.183	8.716	17.43	3.00
20	2455.7	.509	2.036	4.072	0.70	30	546.4	2.292	9.150	18.30	3.15
30	2292.0	.545	2.181	4.363	0.75	11	521.7	2.402	9.585	19.16	3.30
40	2148.8	.582	2.327	4.654	0.80	30	499.1	2.511	10.02	20.04	3 45
50	2022.4	.618	2.472	4.945	0.85	12	478.3	2.620	10.45	20.91	3.60
3	1910.1	.655	2.618	5.235	0 90	30	459.3	2.730	10.89	21.77	3.75
10	1809.6	.691	2.763	5.526	0.95	13	441.7	2.839	11.32	22.64	3.90
20	1719.1	.727	2.908	5.817	1 00	30	425.4	2.949	11.75	23.51	4.05
30	1637.3	.764	3.054	6.108	1.05	14	410.3	3.058	12.18	24.37	4.20
40	1562.9	.800	3.199	6.398	1.10	30	396.2	3.168	12.62	25.24	4.35
50	1495.0	.836	3.345	6.689	1.15	15	383.1	3.277	13.05	26.11	4.50
4	1432.7	.873	3.490	6.980	1.20	30	370.8	3 387	13.49	26.97	4.65
10	1375.4	.909	3.635	7.271	1.25	16	359.3	3.496	13.92	27.84	4.80
20	1322.5	.945	3 718	7.561	1.30	30	348.5	3.606	14.35	28.70	4.95
30	1273.6	.982	3.926	7.852	1.35	17	338.3	3.716	14.78	29.56	5.10
40	1228.1	1.018	4.071	8.143	1.40	18	319.6	3 935	15.64	31.29	5.40
50	1185.8	1.055	4.217	8.433	1 45	19	302.9	4.155	16.51	33.01	5.70
5	1146 3	1.091	4.362	8.724	1 50	20	287.9	4.374	17.37	34.73	6.00
10	1109.3	1.127	4.507	9.014	1 55	21	274.4	4.594	18.22	36.44	6.30
20	1074.7	1.164	4.653	9.305	1 60	22	262 0	4 814	19.08	38.16	6.60
30	1042.1	1.200	4.798	9.596	1.65	23	250.8	5.035	19.94	39.87	6.90
40	1011.5	1.237	4 943	9.886	1.70	24	240.5	5.255	20.79	41.58	7.20
50	982.6	1.273	5.088	10.18	1.75	25	231.0	5.476	21.64	43.28	7.50
6	955.4	1.309	5.234	10.47	1.80	26	222.3	5.697	22.50	44.99	7.80
10	929.6	1.346	5.379	10.76	1.85	27	214 2	5.918	23.35	46.69	8 10
20	905.1	1.382	5.524	11.05	1.90	28	206.7	6.139	24.19	48.38	8.40
30	881.9	1.418	5.669	11.34	1.95	29	199.7	6.360	25.04	50 07	8.70
40	859.9	1.455	5.814	11.63	2.00	30	193.2	6 583	25.88	51.76	9.00