

GRADES

154

POSTS

LEVEL BOOK

No. 380

INDEXED
WIC
JAN 7 1949

289
Our Leather Bound Engineers Note Books are carried in the following rulings:

- No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.
- No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.
- No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.
- No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

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THE FREDERICK POST CO.
ENGINEERING and DRAFTING SUPPLIES
IRVING PARK STATION
CHICAGO, ILL.

MICROFILMED

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01

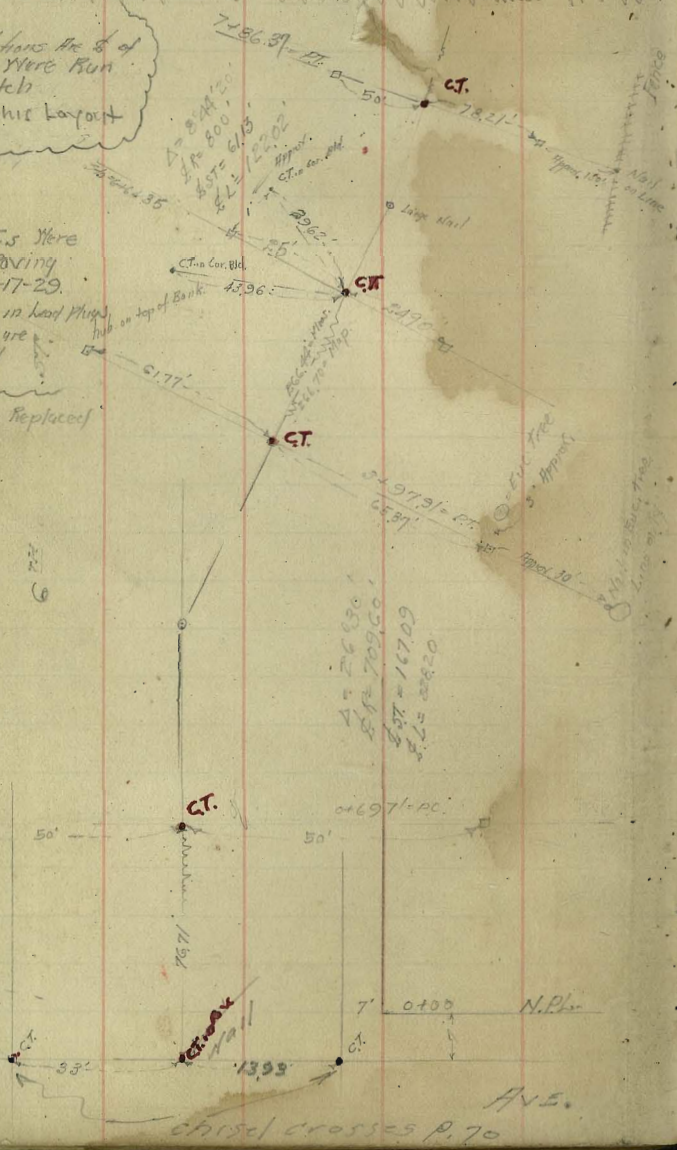
Water
Nelson
Looking
Station
4-6-59

6th St. Extension
& Alignment
AND TIES ETC.
From University Ave
to Linda Vista Road

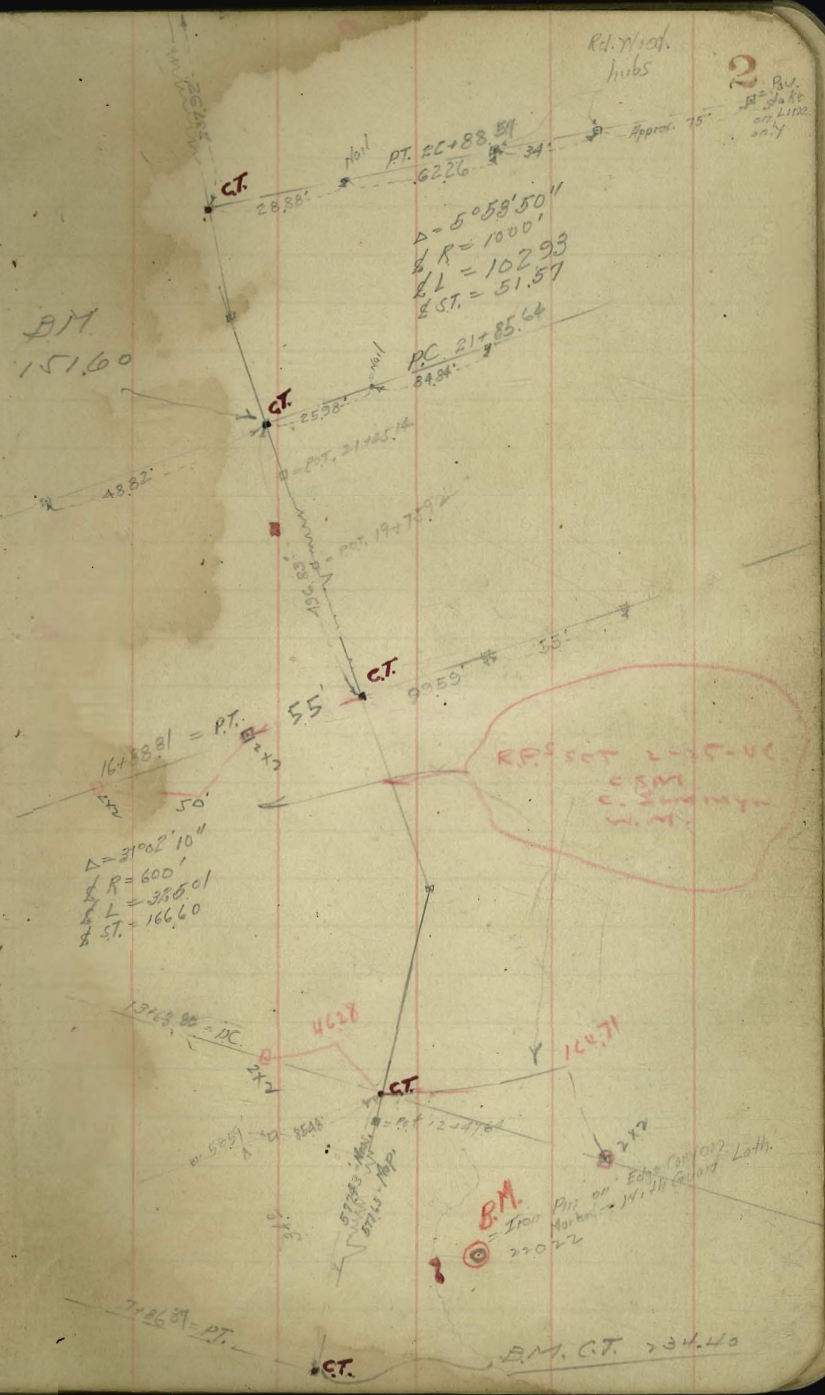
Note: All stations are S of
Improvement and were run
11' or per sketch
for hard copy this layout
See #4641

All B.C.'s and E.C.'s were
put back after paving
Completed 12-17-29
With copper tacks in lead plugs
in E paving and are
indicated by Red
Circles

Note: for B.M.s replaced
See Page 53



Rd. V. of.
hubs
2
Pav.
on L. 1122
only



UNIV

chisel crosses p. 70
AVS.

BM. CT. 234.40

200 ft
 18-59
 1-18-59

BENCH MARKS
 6th St. EXTENSION
 From Univ. Ave to Linda Vista Rd.

	T			
	12.485	122.426	589.94	101.80
TP	0.765	134.749	8.441	583.984
TP	0.388	137.326	15.811	71.238
TP	0.765	162.030	11.261	561.765
TP	0.92	250.658	12.292	249.738
TP	0.703	521.260	10.101	510.557
TP	0.988	829.341	12.207	828.353
TP	0.10	817.928	11.513	817.828
TP	0.936	205.949	12.915	205.013
TP	1.035	196.896	11.088	194.861
TP	0.815	185.878	10.833	185.063
TP	3.26	177.748	11.39	174.988
TP	0.46	170.263	7.245	170.503
TP	1.08	160.106	11.937	159.026
TP	1.022	149.102	12.026	148.080
TP	0.708	137.693	12.117	136.985
TP	0.204	131.155	6.742	130.951
TP	0.901	123.601	8.455	122.700
			7.823	116.778
TP	1.405	112.246	12.76	110.841
TP	0.562	100.595	12.213	100.033
TP	1.245	91.085	10.755	89.84
TP	1.068	82.118	10.035	81.050
TP	0.268	72.676	9.71	72.408

NOV 80
 Univ. Ave 515
 NOV. 7 1/2 ft
 Univ. + 6 ft
 11th March 187
 100' South
 Nail in 7th Post
 from South end Guard
 Sta. 15+32
 3rd Post from 14
 end Guard
 Rail 17+30
 about 21188
 Plate in E. side Rd.
 on R.T.
 North Post in
 Guard Fence
 about 29100
 about 31415
 Plate on Truss
 Road.
 30+30.72
 on tie hub
 20' W E

72.476

5

TP	0.81	61.901	11.585	61.091
TP	0.965	57.826	5.04	56.861
TP	0.566	48.413	9.979	47.847
TP	1.570	39.060	10.917	37.496
TP	0.480	30.456	9.09	29.976
TP	3 Nails		6.74	23.70

on tie hub
 48' E E
 16. 97+16.60
 8N in 216
 30' Camino Ave
 4600 ft

Y01X0
5-3-29

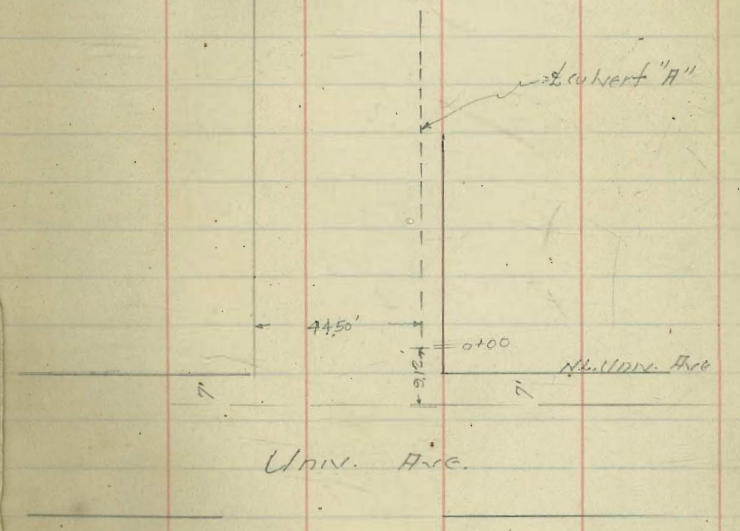
E+H 57. Extension
Extra culvert # "A" 18" Con. Pipe

295187

6

			BM. 247	11/14 + 6 1/2
	1.50	285.18		283.98
0+00 top of tie	3.50		281.68	
+100 on Floor Line	5.92	279.26	279.26	
+33	3.9	281.8	276.77	
+67.59 = PC of Pav.	5.9	279.3	277.40	
+93.59 = PC of 34° 14' Rf. = 8h.	6.2	279.0	275.46	
chds = 237.0'				
1 - def = 4° 16' 45"	7.3	277.9	274.00	
8° 33' 30"	8.8	276.4	272.00	
15° 50' 15"	10.2	275.0	271.00	
1 + 88.62 17° 07' = EC. End Pipe	12.5	272.7	270.00	

			- 8h				
279.26	277.40	275.46	274.00	273.00	272.00	271.00	270.00
5.92	7.78	9.72	11.18	12.18	13.18	14.18	15.18
2.00	4.00	6.87	9.09	11.51	14.62	18.21	21.97
+7.92	+3.78	+4.85	+5.09	4.17	4.58	4.07	13.21
+3.72							
	26.77	275.21					
	8.41	9.97					
	4.00	4.87					
	+4.1	+5.10					



Walker
McHoon
McHoon
Lecker
5-3-29

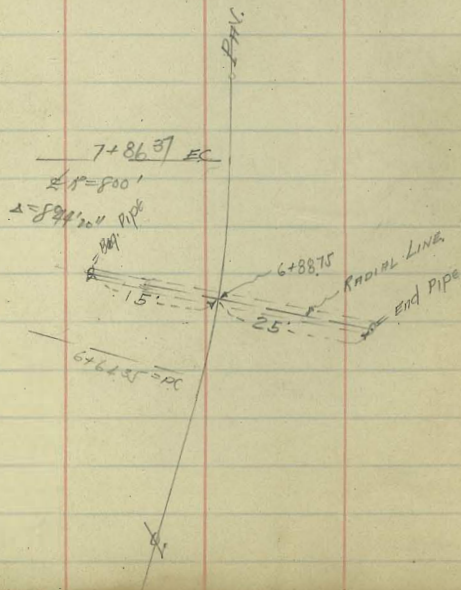
6th St. Extension

"B" Culvert 18" Con. Pipe

	π	Ground Elev.	
114	247.16	246.02	= BM on top P-5
0+00	37	243.5	
+15	47	242.5	
+31	45	242.7	
+36	36	243.5	
+40 = End Pipe	63	240.9	

GRADES For Above Pipe

		Flow Line	
0+00	378	243.38	237.00 +6.38
+40	398	243.18	235.00 +8.18



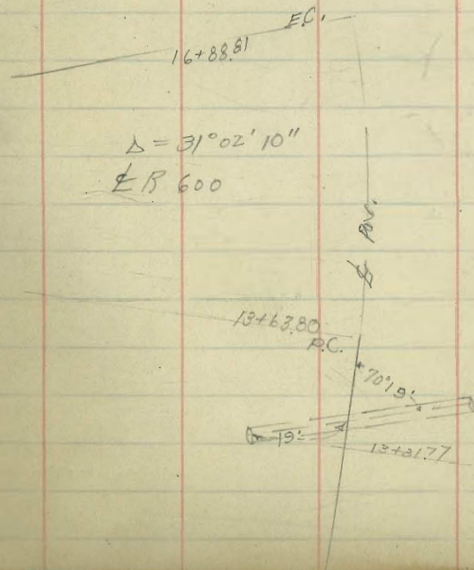
"C" Culvert

46' 18" Con. Pipe.

	π		
	203.9		
19' West 1331.27			
= 0+00		4.0	199.9
+05		6.7	197.2
+08		14	202.5
+13		5.3	198.6
+17		6.3	197.6
+37		6.9	197.0
+40		6.0	197.9
+46		8.3	195.6

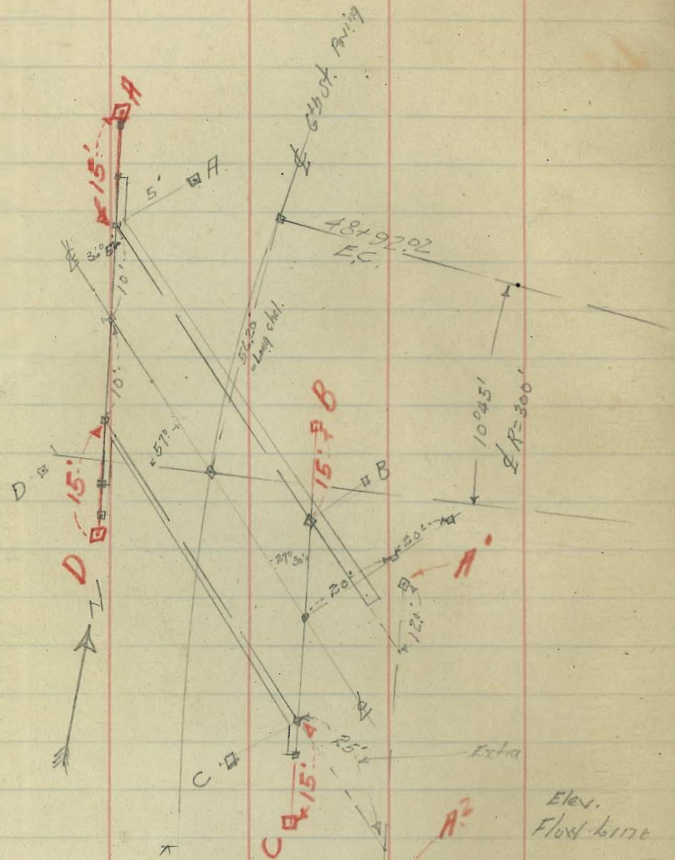
GRADES For Above Pipe

	Flow Line	Cuts
0+00	250 201.10	196.0 +5.10
+46	837 195.53	194.0 +2.53



199.89 = Grade on Rt.
- 22' = Fill of 1331.77
177.7
6.3 = +
203.9 = π

6th St. Extension
Box Culvert #4



			Elev.	Flood-line	
A	37.94	7.28	30.66	29.55	+ 1.11
B		4.17	33.77	30.99	+ 2.78
C		4.02	33.92	31.61	+ 2.31
D		3.88	34.06	29.98	+ 4.08

Note: A Fix D Part
38.49

A	5.54	32.95	29.55	+ 3.40
D	4.57	33.92	29.98	+ 3.94

$$37.50 = BM \\ 8.79 \\ \hline 46.29 = T$$

$$32.20 = BM \\ 6.29 \\ \hline 38.49 = T \\ 8$$

GRADES FOR Culvert
Location changed to points
as shown in Red squares in sketch

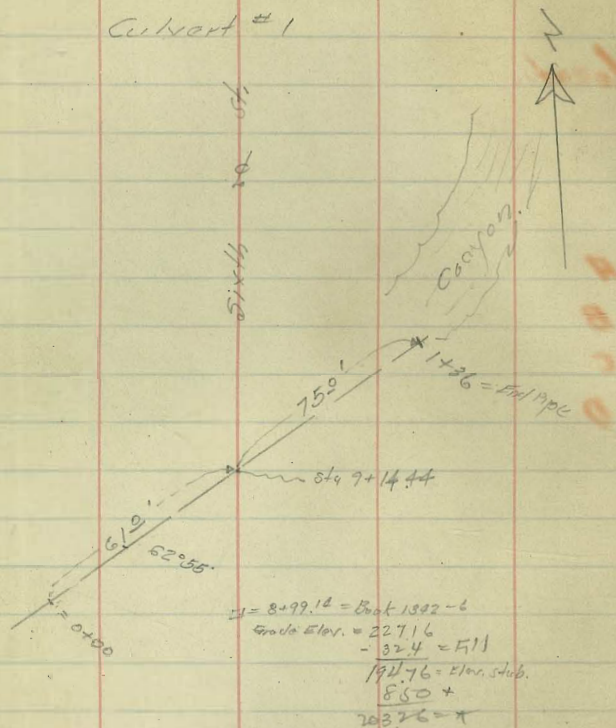
T		Grade to top of Box	
38.43			
A	5.92	32.51	33.00 - 0.49
B	4.78	33.65	33.50 + 0.15
C	4.03	34.40	33.50 + 0.90
D	4.21	34.72	33.00 + 1.72
T	40.29		
A' top Box	5.90	34.39	33.57 + 0.82
A' " "	4.82	35.47	33.61 + 1.86

$$BM \text{ on the Hub } 35' E \text{ of } S 64.8192 P-5 = 38.60 \\ 5.14 + \\ \hline 37.94 = T$$

$$32.20 = BM \\ 6.29 + \\ \hline 38.49 = T$$

Std. Fr. Extensions

Culvert #1



0+00	20326	2.30	20096	20056	+04
+61		6.30	19696	19516	+18
1+36 = End Pipe		14.3	188.96	188.56	+04

BM	2382	202-78	Ground	on stub
0+0		2.1	188.96	outlet No. 1
+65		5.9	200.9	200.39
+73		5.3	196.9	197.70
+79		6.4	192.5	194.5
+90		9.3	186.2	191.5
+8		12.4	183.5	193.1
+17		12.9	180.4	190.2
+36 = End of No. 1 Flange		11.58	189.7	191.60

Yakima
No. 100
1/19/29

TRADES
ST. EXTENSION
From Univ. Ave. to Linda Vista Rd.

Station	Grade	Notes
20100	PXC	
+34.85	84	
+69.71	RC	17' 26" 30"
+91.42	05	2' 17" 36" Echls
+13.13	04	1° 45' 12"
+39.84	04	2° 07' 48"
+156.56	04	3° 20' 24"
+78.27	04	4° 23' 00"
2100	EXC	5° 15' 36"
+423.81	04	6° 13' 16" Echls. 23.81
+107.62	04	7° 11'
+71.93	04	8° 08' 36"
+95.24	04	9° 06' 16"
+26.41	04	5° 15' 30" Echls = 317'
+57.58	04	10° 21' 46"
+57.58	04	11° 37' 16"
+77.75	04	6° 48' 50" Echls 20.16
+77.75	04	12° 26' 06"
+77.75	04	13° 15' 00"
4140	32	
+86.73	04	
5231.14	04	
+75.06	04	
6419.97	04	
+6435	RC	14.844' 20" Echls = 2442'
+98.75	04	0° 52' 26"

INDEXED
WK
JAN 7 1949

LEFT Cuts	RIGHT Grades
282.33	282.73
281.61	281.52
280.04	280.05
278.05	278.07
277.97	278.02
276.82	276.91
275.61	275.71
274.23	274.23
272.83	272.83
271.27	271.27
269.72	269.82
268.16	268.26
266.61	266.71
264.56	264.66
262.51	262.61
261.18	261.28
259.86	259.96
256.93	257.03
254.91	254.11
251.08	251.18
248.16	248.26
245.23	245.33
242.31	242.41
240.71	240.81

Note: Grades below cut for 20' strip edges and 2' of finished paving
Computed from 40' future roadway

LEFT Grades	RIGHT Grades
282.73	282.38
281.52	281.23
280.05	279.86
278.07	278.90
278.02	277.88
276.91	276.80
275.71	275.61
274.23	274.23
272.83	272.83
271.27	271.27
269.82	269.72
268.26	268.16
266.71	266.61
264.66	264.56
262.61	262.51
261.28	261.18
259.96	259.86
257.03	256.93
254.11	254.01
251.18	251.08
248.26	248.16
245.33	245.23
242.41	242.31
240.81	240.71

1131620 8M7' back = 25377
& Univ. Ave.
Elev. Top Wall 270.35-TP
at East

RIGHT Cuts	RIGHT Grades
282.73	282.38
281.23	281.23
279.86	279.86
278.90	278.90
277.88	277.88
276.80	276.80
275.61	275.61
274.23	274.23
272.83	272.83
271.27	271.27
269.72	269.72
268.16	268.16
266.61	266.61
264.66	264.66
262.61	262.61
261.28	261.28
259.96	259.96
257.03	257.03
254.11	254.11
251.18	251.18
248.26	248.26
245.33	245.33
242.41	242.41
240.81	240.81

25377
266.4
287.83-T
270.35-TP
492.4
283.27-T
1303
270.74-TP
213.4
270.37-T
637.
270.46
269.26-T
1037
25377-TP
327.4
257.01-T
246.02-TPW 811
176
4778-T

Stations	def	Left	Left Grades
7+13.15	1°44'54"	240.77	239.11 ✓
137.55	2°37'20"	237.53	237.50 ✓
161.95	3°29'41"	235.89	235.89 ✓
+86.37-EC	4°22'10"	234.28	234.28 ✓
7+79.74	-54'	233.40	233.40 ✓
8+49.74		230.23	230.23 ✓
199.74		227.06	227.06 ✓
9+49.74		223.89	223.89 ✓
+99.74		220.72	220.72 ✗
10+49.74		217.55	217.55 +5
+99.74		214.38	214.38 ✓
11+49.74		211.21	211.31
+99.74		208.04	208.14
12+49.74		204.87	204.97
+99.74		201.70	201.80
13+49.74		199.69	199.84
+6380-X	31°02'10"	197.68	197.88
+87.01	1°26'30"	196.20	196.40
14+10.23	25°13'	194.72	194.92
+33.44	3°19'30"	193.24	193.44
+56.56	4°26'	191.76	191.96
+79.87	5°32'30"	190.27	190.47
+15+03.1	6°39'	188.79	188.99
+26.7	7°45'30"	187.31	187.51
+49.52	8°52'	185.83	186.03

T
 219.74
 259.68
 11.05
 237.63
 1.34
 240.77
 11.43
 239.54
 1.99
 237.53
 11.27
 220.22
 1.37
 221.51
 13.00
 208.51
 11.05
 219.53
 7.13
 212.41
 212.41
 0.23
 212.41
 12.37
 190.07
 1.66
 191.78

See Book #2
 1385

cont. on p. 12

Grades	Grades	RIGHT Grades	Right Graded Fill
239.71	239.71	239.11 ✓	
237.60	237.60	237.50 ✓	
235.99	235.99	235.89 ✓	5.09 7.91 -1.9
234.38	234.38	234.28 ✓	26.9 8.01 -1.3
233.50	233.50	233.40 ✓	7.57 8.07 -0.5
230.33	230.33	230.23 ✓	13.74 11.25 -2.5
227.16	227.16	227.06 ✓	4.47 4.47 0.00
223.99	223.99	223.89 ✓	7.64 7.02 +1.6
220.82	220.82	220.72 ✗	10.81 11.21 -0.5
217.65	217.65	217.55 ✓	3.96 3.59 +1.4
214.48	214.48	214.38 ✓	7.13 2.71 -1.1
211.31	211.31	211.21 ✓	10.30 10.44 -1.1
208.14	208.14	208.04 ✓	13.17 13.00 +1.5
204.97	204.97	204.87 ✓	4.64 2.92 -1.3
201.80	201.80	201.70 ✓	7.83 8.25 -1.7
199.84	199.84	199.89 ✓	7.64 12.80 -1.2 for W side
197.88	197.88	198.08 ✓	10.15 12.40 -2.0
196.40	196.40	196.60	6.04 5.17 +1.2
194.92	194.92	195.12 ✓	4.52 3.28 0.00
193.44	193.44	193.64 ✓	9.06 10.76 -1.8
191.96	191.96	192.16 ✓	10.48 10.57 -2.1
190.47	190.47	190.67 ✓	1.06 3.4 -2.3
188.99	188.99	189.19 ✓	3.54 2.29 -1.8
187.51	187.51	187.71 ✓	4.62 5.36 -1.3
186.03	186.03	186.23 ✓	5.50 6.8 -1.3

6th ST. Extensions

Stk.	dct	π	LEFT Cuts	RIGHT Grades
15+72.73	9°58'30"	191.73 11.57 190.16 2.39 187.77	+0.7 7.38 4.2	184.35 ✓
+75.95	11°05'	183.06 169.50 2.30 171.20 15.52 155.68 0.33 161.17 9.36 151.81	+0.9 8.84 7.94 +0.7 10.34 9.58 +0.1 11.92 11.67	182.87 ✓ 181.39 ✓ 179.91 ✓
16+19.16	12°11'30"	151.83 0.26 152.09	+0.4 4.12 3.73	178.43 ✓
+42.38	13°18'	153.09	+0.2 5.40 5.30 7.47	176.95 ✓
+65.6	14°24'30"			175.08 ✓
+88.81 = FC. 15°31'05"				173.84 ✓
114+19.52 = Bk.				172.68 ✓
(30') 4				173.94 ✓
17+39.52 = Bk.				172.78 ✓
+59.52 = Bk.				171.69 ✓
+77.52 = Bk.				170.57 ✓
+99.52 = Bk. = FC				168.08 ✓
1-30' 21'				166.71 ✓
18+50				165.61 ✓
19+00				163.24 ✓
+50				160.77 ✓
20+00				158.20 ✓
+50				155.73 ✓
21+00				153.26 ✓
+50				151.51 ✓
+85.64 = FC. 15°53'00"				150.34 ✓
+11.57	15°57'30"			149.07 ✓
+37.10	17°25'38"			147.80 ✓
+62.93	20°13'43"			
	24°52'55"			

Grades	d cuts	RIGHT Grades	π Cuts and fills
184.55		184.75 ✓	4.98 7.73 -0.1
183.07		183.27 ✓	8.46 7.94 +0.5
181.59		181.79 ✓	9.44 9.52 +0.1
180.11		180.31 ✓	11.92 11.57 -0.1
178.63		178.83 ✓	3.72 3.52 +0.2
177.15		177.35 ✓	5.20 5.37 -0.2
175.18		175.08 ✓	7.47 7.28 +0.2
173.94		173.84 ✓	8.71 8.68 0.0
172.78		172.68 ✓	9.87 9.83 0.0
171.69		171.59 ✓	10.94 11.20 -0.2
170.67		170.57 ✓	11.98 13.06 -1.1
168.18		168.08 ✓	3.42 4.21 -0.8
166.71		165.61 ✓	5.89 5.58 +0.3
163.24		163.14 ✓	9.36 7.58 +0.5
160.77		160.67 ✓	10.83 10.69 +0.2
158.20		158.20 ✓	2.94 4.30 -1.2
155.73		155.73 ✓	3.46 7.24 -1.8
153.26		153.26 ✓	7.93 9.54 -1.6
151.61		151.51 ✓	9.68 10.58 -0.9
150.34		150.24 ✓	1.86 2.72 -0.3
149.07		148.97 ✓	3.14 3.72 -0.6
147.80		147.107 ✓	7.34 7.13 +0.2

6+H St. Extension.

Stations	Left Grades	Grades	Rt. Grades
25+88.57=EC. 11.33	146.43 ✓	146.53	146.43 ✓
23+26.5	144.56 ✓	144.66	144.56 ✓
+76.5	142.09 ✓	142.19	142.09 ✓
24+26.5	139.62 ✓	139.72	139.62 ✓
+76.5	137.15 ✓	137.25	137.15 ✓
25+26.49=PC. 67 4°08'20" R=1000'	134.68 ✓	134.78	134.68 ✓
+50.1	133.52 ✓	133.62	133.52 ✓
+73.7	132.35 ✓	132.45	132.35 ✓
+97.27=EC. (50.45)+	131.18 ✓	131.28	131.18 ✓
26+47.72	128.68	128.78	128.68
+98.17	126.19	126.29	126.19
27+48.62	123.70	123.80	123.70
+99.07=BT	121.21	121.31	121.21
28+49.01=BT. =PC. 27 36'00" LT=New A P.3	118.84	118.99	119.14
+72.34 4/4=2°40'06"	117.69	117.84	117.99
+95.67 1°50'16"	116.53	116.68	116.83
29+19 5°00'18"	115.38	115.53	115.68
+42.33 5°40'34"	114.23	114.38	114.53
+65.66 3°50'30"	113.08	113.23	113.38
+89.00 4°00'36"	111.92	112.07	112.22
30+12.33 4°40'42"	110.77	110.92	111.07
+55.66 5°00'48"	109.62	109.77	109.92
+59.00 6°00'54"	108.47	108.62	108.77
+82.33 6°41'00"	107.31	107.46	107.61
31+05.66 7°21'06"	106.16	106.31	106.46

P.P. 1115
Box

Note: Grade Change
See Book 1343 - P-49

Contour P. 14

5.14
2.05
+0.9
7.53
7.97
-1
12.0
11.3
-1.3
1.00
2.32
-1.5
4.07
2.11
-1.6
6.54
1.34
-1.8
7.70
2.22
-1.3
8.87
4.82
-1.05
10.04
-1.9

6th St. Extension
Cont. from P-13

Stations	def.	LEFT GRADES	GRADES	Rt. GRADES
31+29	= 8° 01' 12"	105.81	105.16	105.31
+52.33	8° 41' 18"	103.85	104.00	104.15
+75.66	9° 21' 24"	102.70	102.85	103.00
31+99 = Bk	10° 01' 30"	101.55	101.70	101.85
	8° 56' 37"			
32+31.94	10° 58' 07"	99.82	99.97	100.12
	08° 51' 31"			
+64.88	11° 54' 44"	98.08	98.23	98.38
+97.82	12° 51' 21"	96.34	96.49	96.64
33+30.72 = E.C.	13° 48' 00"	94.60	94.75	94.90

Grade Change
See Book 1543-49

GRADES From Sta. 95+42.84 - P26 This Book

95+42.84 = E.C.
(99°)'
95+52.74 = Bk.
(40°)'
95+92.74 = Bk.
96+50
97+00
+50
98+00
+50
99+00
+50
100+00
+50
101+00
+50
102+00

Cont. on P-20

92.11	98.71	94.1	99.9
600	97.17	587	640
98.71	6.54	4.12	3.59
		4304.27	404
		424003.85	4243.59
		567	572 595
	92.64 92.69 92.54		
91.37	92.32 92.27 92.22 92.17		
	6.07 6.01 6.17		
	91.89 92.17 92.29		
91.32	91.51 91.77 91.97	92.12	
	82 82 82		
	11.87 92.19 92.29		
	6.82 6.52 6.42		
		9.99	9.89
		7.09	7.35
		1.70	2.14
	2.72 2.90 2.92		
2.33	2.00 2.48 2.55 2.64		
	7.29 7.19 7.27		

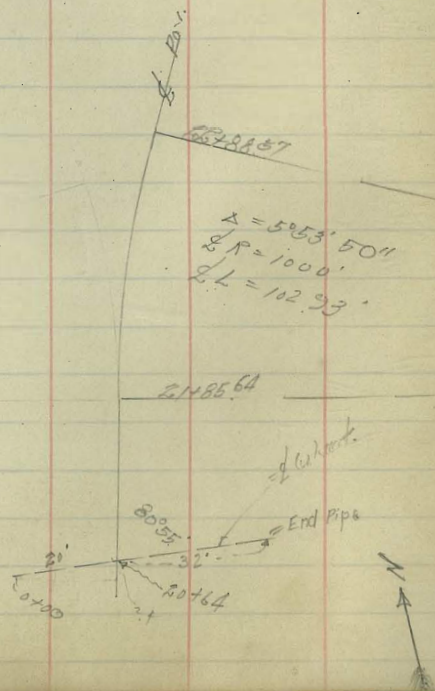
6th St. Extension
Culvert "D" 52'-24" Con. Pipe

	12.64	140.72	148.08	-814 P-5
0+00		6.1		
+05		7.1		
+10		1.6		
+15		4.4		
+26		6.2		
+50		6.7		
+52 = End.		8.0		

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GRADES For Above Culvert

			Flow	
0+00	3.28	157.41	153.50	+391
+52	6.80	153.92	151.50	+242



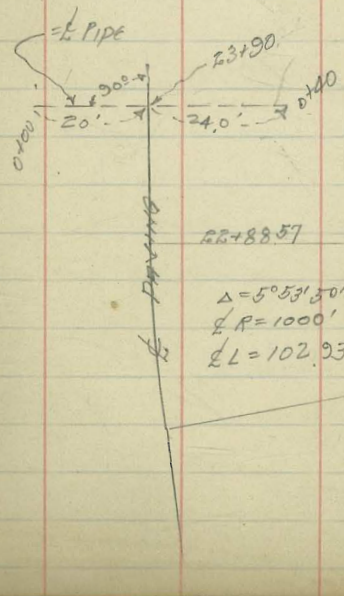
6th St. Extension
Culvert "E" 44'-18" Con. Pipe

15

			141.57 = GRADE 23490
			1.0 = SURFOS FILL
			137.57 = Elev. Stub.
			5.87
			142.97 = π
	142.97		
0+00		4.2	
+07		6.3	
+11		3.0	
+20		5.4	
+42		5.7	
+44 = End Pipe		6.6	

GRADES For Above Pipe

		Flow	
0+00	3.41	139.50	138.0 +1.56
+44	5.92	137.05	136.0 +1.05



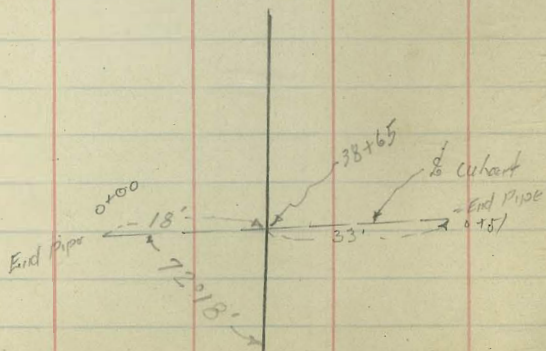
Culvert "F" 51- 24" Con. Pipe

	9.55	T 66.41	52.86 = 87' R-5
0+00			0.8
+07			1.8
+09			4.4
+18			5.1
+51			6.4

GRADES For Above Culvert

	66.41	1.05	65.36	Floor Line 62.10	+3.26
0+00					
+51 = End Pipe		6.44	59.97	60.00	-0.03

Note: this culvert location changed
see Sissons Notes.



Culvert No. 5

16

	BN	2.80	26.50	23.20	Spk. Pole
	2P	3.84	26.97	5.35	21.15
0+0 = Inlet					21.15 Floor
+30 = Outlet					23.60

Culvert "G"

40'-72" Con. Pipe

3.06	59.92	56.86	= B.M. P-5
0+00 = 19' Head & Covering	6.1		
+19 = " "	5.3		
+40 = End Pipe	5.4		

Note: this Culvert left out

GRADES For Above Culvert		Flow Line	
0+00	5.97	53.95	53.4 +0.55
+40 = End	5.62	54.30	54.4 +2.9

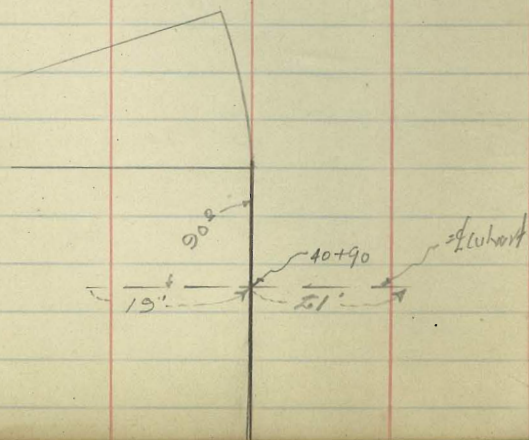
Change in Location

Culvert # 3 New Location = Sta 59+75.3

Elev. Grade	29+15.66 = 112.23
	- 18.2 = 411
Elev. Sub	= 98.03
	9.47 +
	107.50

34.50' Head & Cov.	104.50
= 0+00	3.6
+11	5.2
+18	6.5
+26	7.2
+38	9.2
+49	10.8
+66	13.3
+84 = End Pipe	14.2

GRADE for Above		Flow Line	
0+00	3.53	10.0	78.9 +2.1
+84 =	14.2	9.3	90.3 +0.0



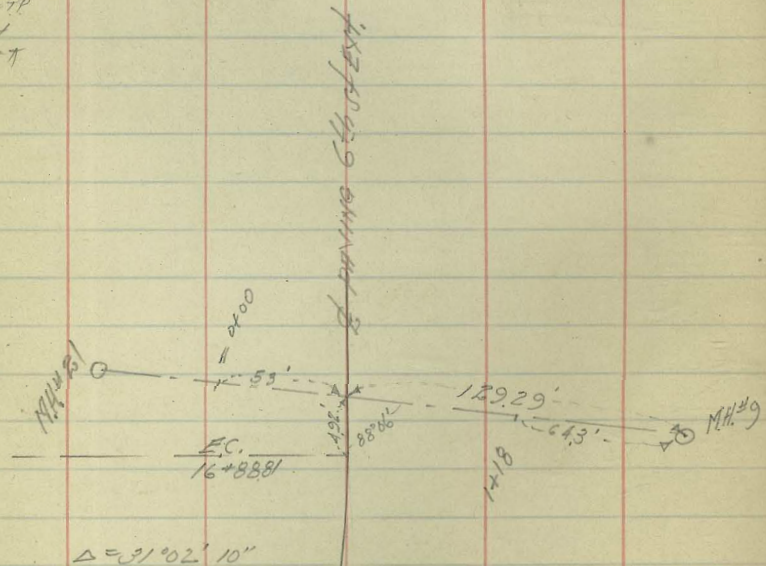
Yakky
ME Hugh
Mo Hoorn
Lookey
5-14-29

^{And Maps}
SEWER Const. in 1962 St. Ext.
BET. M.H. #51 and M.H. #9
SEE sheet 449-D

	X				
0+00 = toe of slope	157.67	0.53	137.14	151.26	4588
+59		8.00	149.67	144.94	4473
1+18 = End = toe of slope		13.63	144.04	138.63	4541

170.50 = 814 Page 5
-257+
17307 = T
-1081-
16219 = TP
+076+
16295
-1535-
15060 = TP
+511+
15671 = T
-611-
15060 = TP
+707+
15767 = T

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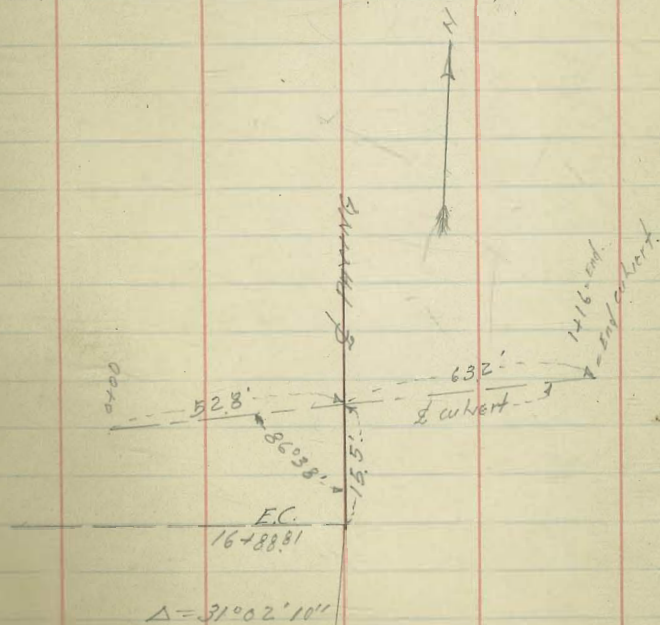
Change in Location
Culvert #2

18

X	
157.67	
0+00	1.8
+17	4.4
+35	5.4
+64	7.8
1+16 = End.	13.9

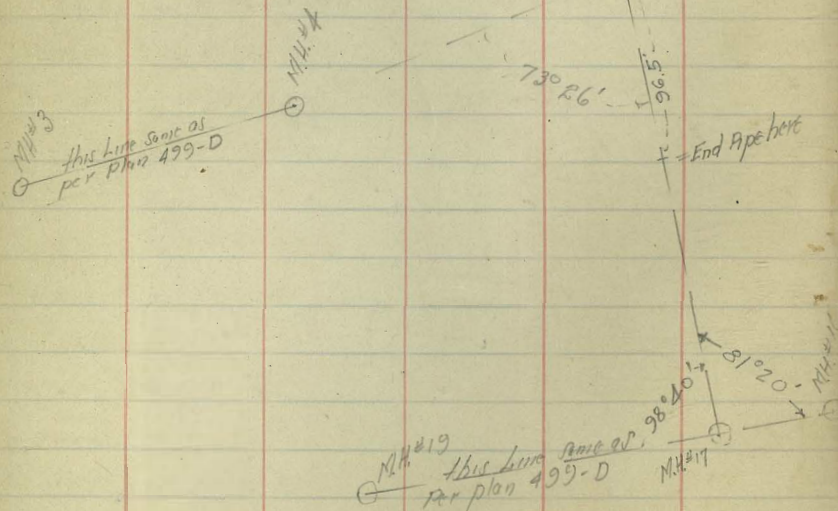
Grades for Above Culvert.

	X				
0+00	157.67	0.89	166.78	155.00	+1.78
+52.8		7.70	160.47	149.0	+1.47
1+16		13.95	143.72	142.00	+1.72



SEWER Const. in ^{2nd} course 6" S₄ Ext.
bet. M.H. #2 No 6 and M.H. No 7
Sheet 499-D

228.85 - 841. P.S.
 $\frac{0.53}{-}$
 228.93 +
 $\frac{11.93}{-}$
 516.00 = T.P.
 $\frac{0.49}{+}$
 516.49 +
 $\frac{13.01}{-}$
 503.42 = T.P.
 $\frac{1.38}{+}$
 504.80 = T.
 $\frac{5.72}{-}$
 199.08 = T.P. on Co. Pipe
 $\frac{50.27}{-}$
 204.10 = T.



SEWER Const. for Lines as shown
on opp. Page 19

26.5' Joint to M.H. #5 = 0+00 = beg. Const.	20410	448	199.62	193.51	+6.11
+43		716	196.44	190.16	+6.28
+96.5 = 2' M.H. #5 H. 2211'	1035	193.75	185.99		+7.76
+13.5 = End. Const.	128	191.32	183.77		+7.55

115' West M.H. #5 Const. bet. M.H. #4 & M.H. #5

= 0+00 = beg. Const.	20410	251	201.59	196.29	+5.30
+57.5		899	195.11	191.14	+3.97
+15 = 2' M.H. #5	1035	193.75	185.99		+7.76
Fin. M.H. #5	Sub = 193.75	20300			- 9.25

6th St. Ext.
Cont. from P-14

20

102+42.85-88

+96.03 = P.C. Lt 390471

103+20 Δ def. = Δ P.C. chd. 236' - 12' 11" d

0°52'49" = 2397' 212' 12" 11" d
Co. 44 04" chd. 200' 203' - 12' 11" d

+40

1°36'53" = 8. P.C.

203' - 12' 11" d

+60

2°30'57"

179' - 12' 11" d

+80

3°05'01"

104+00 3°49'05"

+80

4°33'09"

+40

5°17'14"

+60

6°01'18"

+80

6°45'22"

105+00 7°29'27"

+80

8°13'31"

+40

8°57'35"

+60

9°41'40"

+80

10°25'44"

106+00 11°09'48"

+80

11°53'53"

+40

12°37'57"

+60

13°22'02"

+80

14°06'07"

107+00 14°50'12"

+80

15°34'18"

+40

16°18'23"

+60

17°02'28"

169.55 = E.C. 17°23'30" = 1. P.C. chd. 9.55' 738' - 12' 11" d

767' - 12' 11" d

Cont. P-21

108+107

+50

109+100

+50

110+100

+50

111+100

+50

111+807-86

112+25 57

+70 12 - PC. 12 6458'

+85 19

113+100

ch 1/2 = 345.042' 20" chds 150' } 14' X 8' chds 12' N E. Ave.
= 1° 54' 40" = 12' N E.

(0° 57' 18") chds

+20 2° 21' 58"

= 1799' 20.37 chds 12' N E.

+40 3° 19' 16"

1759' = 12' N E.

+60 4° 16' 34"

+80 5° 13' 52"

114+100 6° 11' 10"

+20 7° 08' 28"

+40 8° 05' 46"

+60 9° 03' 04"

+80 10° 00' 22"

115+100 10° 57' 40"

+20 11° 54' 58"

+40 12° 52' 16"

+60 13° 49' 34"

115+80 14° 46' 52"

- 116+00 15°44'10" ✓ ✓
 +20 16°41'28" ✓
 +40 17°28'46" ✓
 +60 18°36'04" ✓
 +80 19°33'22" ✓
 117+00 20°30'40" ✓
 +20 21°28'00" ✓
 +40 22°25'16" ✓
 +60 23°22'34" ✓
 +80 24°19'52" ✓
 118+00 25°17'10" ✓
 +20 26°14'28" ✓
 +40 27°11'46" ✓
 +60 28°09'04" ✓
 +75.57 (0°44'30") ✓ chd = 15.56 = 2 15.58 = 5' 11" W of top 15611
 28°53'40" ✓ = bog. set wall 1588 = chd 12' 4" E
 194.37 (0°03'51") ✓ chd. 1525 = " 12' 5" E
 29°47'31" ✓ chd = 18.79 18.45 = 5' 11" " " "
 119+13.17 30°41'22" ✓ chd 12' 1/2" = 19.19
 " 12' 5" = 18.43
 431.97 31°35'13" ✓
 +50.77 EC 32°29'00" ✓
 (22.07) ✓
 119+72.84 = 0.4 ✓
 (50.11) ✓
 119+92.25 = 0.4 ✓
 (50.1) ✓
 120+42.25 ✓
 +92.25 = 0.4 ✓
 (28.52) ✓
 121+51.17 ✓
 +50 ✓
 122+00 ✓

125+50

123+00

+50

123+79.60 - R. R. 2133.20"

124+00 $\Delta H = 20.40$
0°58'26"+20 (0°57'13") = 1161.70'
10°55'44"

+40 2°53'02"

+60 3°50'20"

+80 4°47'38"

125+00 5°44'56"

+20 6°42'14"

+40 7°39'32"

+60 8°36'50"

+80 9°34'08"

126+05.23 = E. L. 1046.40"
(1°12'33") $\Delta H = 25.32$

126+50.86

+96.99

127+41.91 = 86.

(59.4) 32

127+70.75

128+00

+50

129+00

+50

130+00

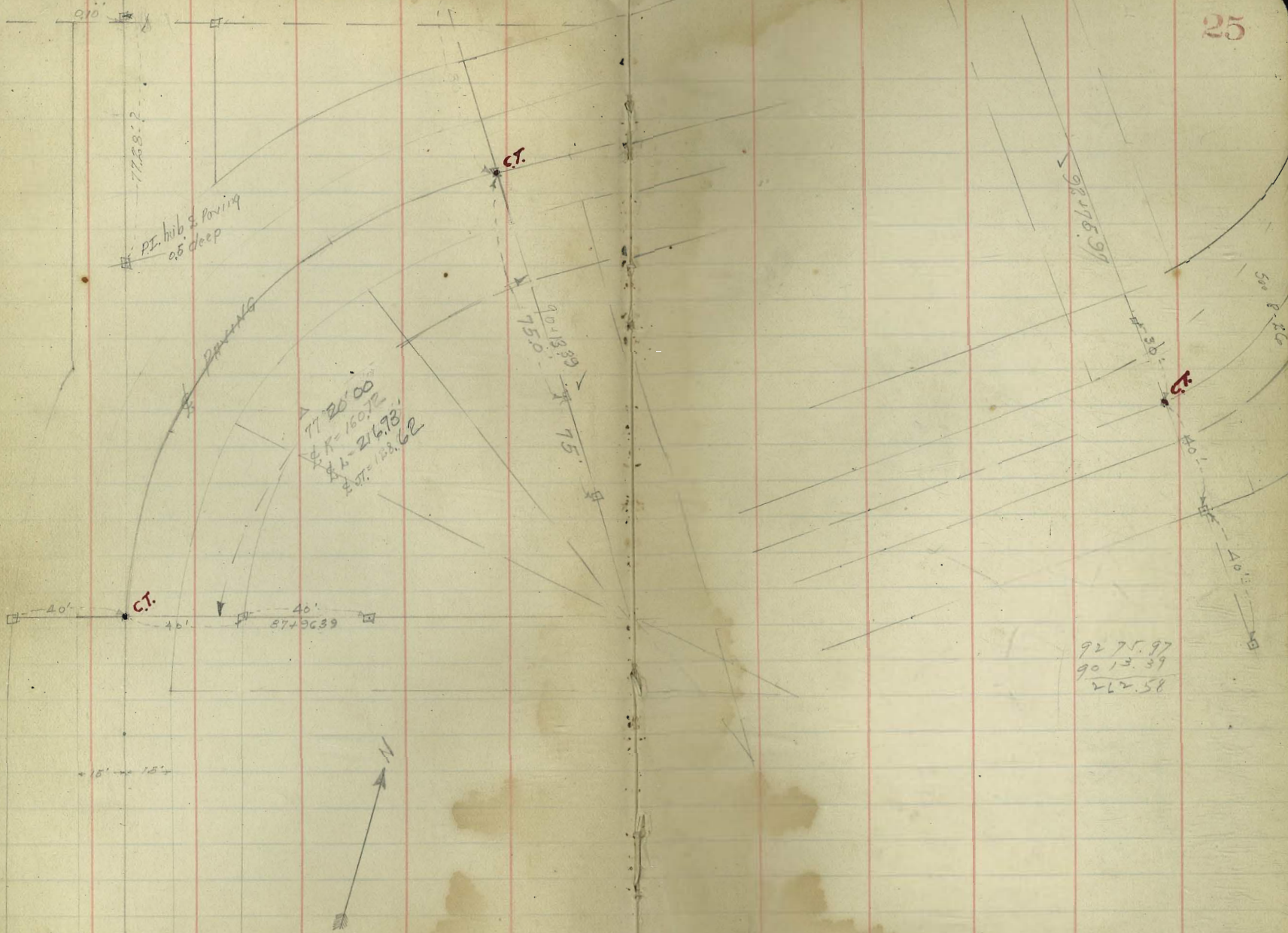
+50

131+00

Cont. on P. 24

	Lt.	Rt.
131+50		
+64 ²	RC 11.85' 13' 30"	
+80.00	def. = 0.94' 51" ch = 15.66	15.42' chd. 2' from cb.
	(0° 57' 18")	11.16' chd. 2' from cb.
132+00	1° 42' 09"	19.54' chd. 2' from cb.
+20	2° 39' 27"	20.47' chd. 2' from cb.
+40	3° 36' 45"	
+60	4° 34' 03"	
+80	5° 31' 21"	
133+00	6° 28' 39"	
+20	7° 25' 57"	
+40	8° 23' 15"	
+60	9° 20' 33"	
+80	10° 17' 51"	
134+07.55	EC (1° 8' 54")	
+50	11° 36' 45"	26.91' chd. 2' from cb.
		28.19' chd. 2' from cb.
135+00		
+50		
136+00		
+50		
137+00		
+42 = BK		
137+71		
138+00		
+50		
139+00		
+50		

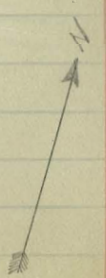
Cont. on P-29



PI. hib. & Paving
25 deep

DRAINAGE

77.20.00
87.16.72
87.21.93
87.13.62



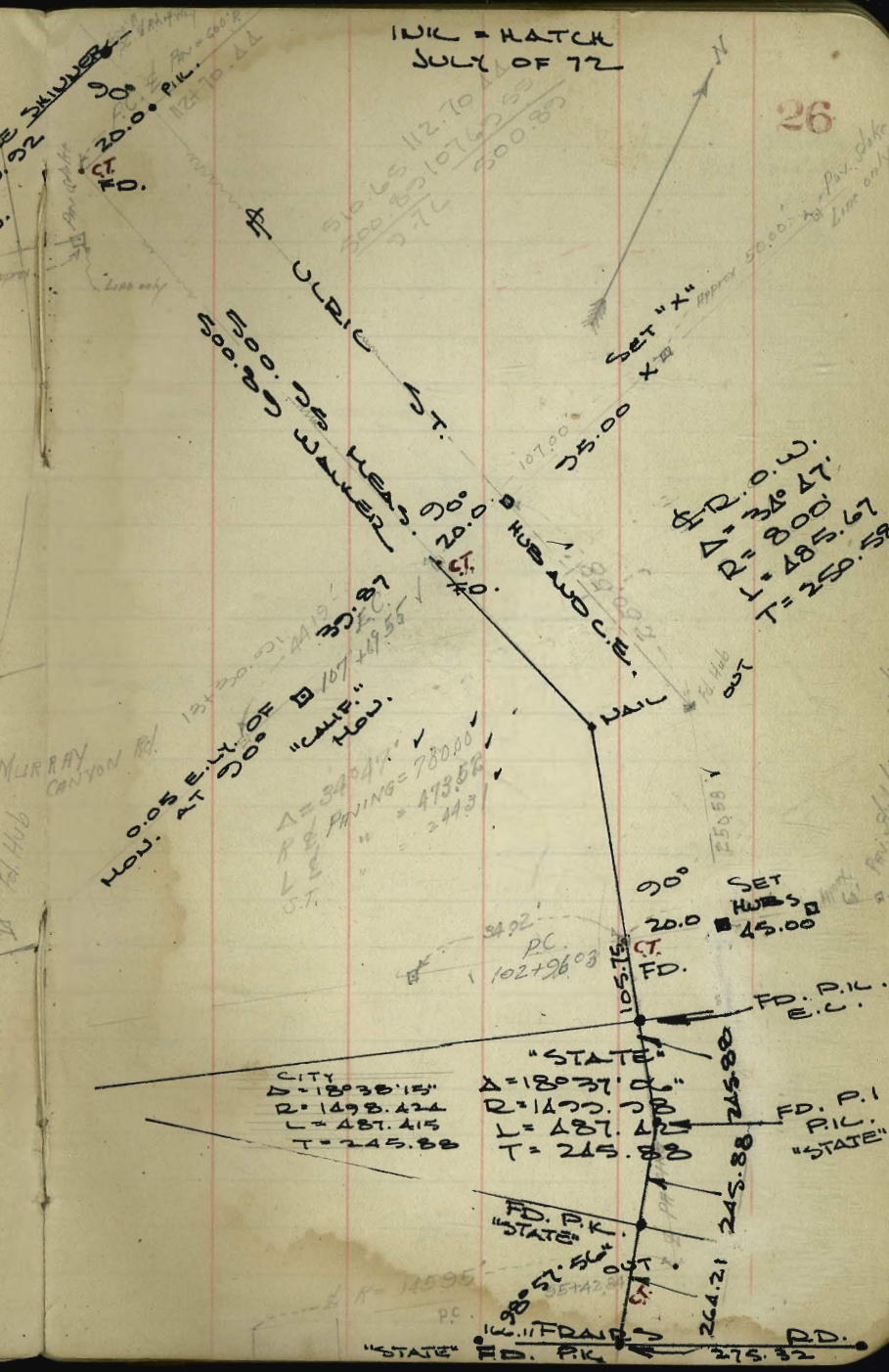
Cont. from P-4

92.75.97
90.13.39
212.58



$\Delta = 104.61$
 $R = 276.87$
 $L = 129.41$
 $T = 145.95$

INIL = HATCH
JULY OF 72



MOOSE ELY OF D
 HUB AT 300
 $\Delta = 349.47$
 $R = 780.00$
 $L = 419.58$
 $T = 244.3$

$\Delta = 210.00$
 $R = 800$
 $L = 485.67$
 $T = 250.58$

CITY
 $\Delta = 180.37$
 $R = 1498.424$
 $L = 487.415$
 $T = 245.88$

"STATE"
 $\Delta = 180.37$
 $R = 1498.424$
 $L = 487.415$
 $T = 245.88$

FD. P.K. "STATE"

FD. P.K. "STATE"

FD. P.I. P.I. "STATE"

FD. P.K. "STATE"

FD. P.K. "STATE"

FD. P.K. "STATE"

149 +00

+50

+74.85 = NYC

+94.85 = B.H.

150 + 14.85 = "

+34.85 = "

+54.85 = "

+74.85 = "

+94.85 = " = E.V.C.
(97.57) 2

151 + 22.42

151 + 50.

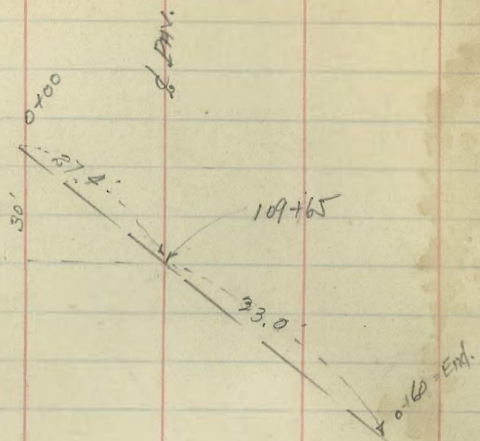
152 + 00

+50

153 + 00

+39.31 = R.C. on Lt.

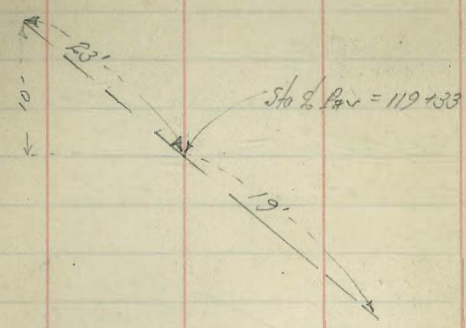
Culvert "H"
60' - 18" Con.



0+00	147.23	32.3	144.00	Flow line	142.37	+ 1.63
+60' End.		4.3	142.50		139.9	+ 2.60

143.87 = Elev. Grade 109+65
 2.9
 141.0 = Elev. Stub
 6.23 +
 147.23 = X

Culvert #7
42' - 18" Con. Pipe.



GRADES Above Culvert

	208.43		Flow line	
0+00	302	205.41	202.80	+ 2.61
+42	582	202.61	199.5	+ 3.11

p-28
 205.12 = Elev. top of wall
 - 31.0 = Fill on stub
 202.02 = Elev. stub
 6.41 +
 208.43 = X

GRADES For Drainage
Channel

GRADES
Channel

32

10+72.84 P.C. L. 63°21'
= 0+00 = Drainage channel R=603.26

603.7

Station	Grade	Notes
	def. = 1'25.28"	
+30	5°50'56"	
+60	4°16'24"	Moved 2' East
+70	5°41'52"	" 3' "
+75	7°07'50"	" 4' "
+80	8°32'50"	" 5' "
	(1°16'55")	
2+07	9°49'43"	" 4.7' "
+34	11°06'38"	" 4.7' "
+61	12°23'33"	" 4.6' "
+88	13°40'28"	" 4.5' "
3+15	14°57'23"	" 4.4' "
+42	16°14'18"	" 4.1' "
+69	17°31'13"	" 4.0' "
+96	18°48'08"	" 3.9' "
4+23	20°05'03"	Note: Moved 37' Channel shifted to clear toe of slope rising moved 36' East
+50	21°22'00"	
+77	22°38'55"	" 3.8' "
5+00	23°55'50"	" 3.4' "
+31	25°12'45"	" 3.3' "
+58	26°29'40"	" 3.2' "
+85	27°46'35"	" 3.1' "
6+12	29°03'30"	" 3' "
+39	30°20'55"	" 2' "

6+67.94 = E.C. 31°43'07" = B.P.

164.6

Cont. on p. 33

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DRAINAGE CHANNEL
 6th St. Ext. Cont. from P-32
 GRADES

(2067) 3
 7+08.6
 +49.3
 +89.74 = Bk.
 8+25.94 = West end Wall
 Lt. 6°08' Note make Bk.
 +55.94 = 1/2 in Wall there
 -175. = East end Ret. Wall
 9+25.94 = 1/2 Rt. 5°09'
 9+57.94
 +89.94 = Bk.
 (30')
 10+19.94
 -49.94
 +79.94
 11+09.94
 +57.94
 Rt. 35°40' & R-100'
 11+69.12 = R. Channel = 12' N of Rt. Way
 94 = 1006' 20"
 (5°57' 57")
 12+00
 +27 2°04' 17"
 +54 3°02' 14"
 +81 4°00'
 13+08 4°57'
 +85 5°54'
 +62 6°52'
 +89 7°50'
 14+16 8°48'
 +43 7°46'
 +70 = Bk. 10°24'
 Cont. on P-34

154.7
 156.90 = Top Wall
 156.36 = " "
 154.36 = " "
 146.6 = Floor Channel
 143.5
 140.4

Note: Elev. to
 Channel
 is 2.83' lower
 than Top Wall

6th ST Ext. Channel

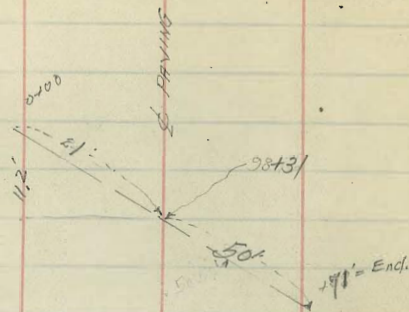
Cont. from p-33

34

14+97 = Bk. 11° 42'	109.00
15+24 12° 40'	
+51 13° 37' 40"	
+78 14° 35' 40" = Bk.	101.7
16+05 15° 33' 40"	
+32 16° 31'	
+61 = EC. 17° 50'	
16+86 = Bk.	94.3
⁵¹⁵ 17+3.5	
17+61 = Bk. 18° 32' 59"	
18+11	
+61	
19+11	
+61 = 16° 11' 48"	
20+11	
+61	
21+02 = End Channel	69.20

644 ST. EXT.

CULVERT #6



0+00

72.54

+71

			Flow Line	
4.01	68.53	67.60	+0.93	
29.6	69.58	65.00	+4.58	

Elev. Grade 98+00 = 68.50
 5.00' Fill = 2.0
 66.50 = Elev. Sub.
 6.04' =
 72.54 = π

0+00

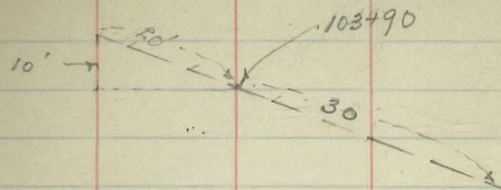
+50

Culvert "6"

50'-18" Con. Pipe

Note: Culvert "4" on P-31

35



112.00

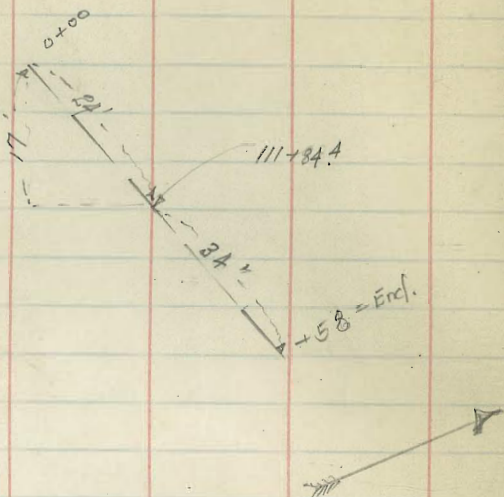
0+00

+50

			Flow Line	
5.00	107.00	103.8	+3.2	
9.22	102.78	101.6	+1.18	

Grade 104+00 = 107.60
 5.8' Fill = 5.8
 105.8 = Elev. Sub.
 6.2' =
 112.0 = π

Cutout "I"
 58'-24" Con. Pipe



	T 16718		Flow Line	
0+00	86.5	158.53	157.00	+1.53
+58	10.22	156.96	154.80	+2.16

CANYON
Lots of Water

13+00

Channel

$\Delta = 34^{\circ} 47'$
R of Pav. = 780'
" " = 473.52'

107+69.55 = 2nd Pav. Sta.
EC:

Channel Sta = 11+68.62

9+25.5 L to P10'

Branch to Channel to
Elevation 104.1611

Branch Channel 8+80

CANYON

Sta of Pav. = 112+70.44
P.C.

C12

$\Delta = 64^{\circ} 58'$

of Pav. R = 600'
" " " = 680.33'

DRAINAGE

530'

614.5'

EC Sta. of Channel = 114+05

58'

102+96.03
P.C.

Channel

$\Delta = 34^{\circ} 47'$
R of Pav. = 780'
" " " = 473.52'

W. H. Key
1952.1.19.13
No. 11000
Leakey

LEVELS FOR DRAINAGE CHANNEL
Location on P. 37

15974

38

	π		B.M. on Stab	T.P.	012	147.62	13.34	147.50
	12.98	171.85	158.87	9+60			2.9	144.7
6+12		0.1	171.7	+85			3.6	144.0
+40		0.0	171.8	10+05			6.0	141.6
+70		1.8	170.0	+50			8.6	139.0
7+00		5.8	166.0	+70			11.0	136.6
+66		14.8	157.0	+85			11.6	136.0
8+14		10.5	161.3	T.P.	073	135.86	12.49	135.13
+87		10.6	161.2	11+10			2.8	133.0
+31		14.6	157.2	+30			4.1	131.7
+42		14.6	157.2	+40			3.9	132.0
+47		12.9	158.9	+50			5.1	130.8
T.P.	0.76	159.74	12.87	11+68.62 = P.C. Pt.			4.7	131.1
			158.98	+80			4.9	131.0
$\frac{1}{2}$ Main Channel at Sta 8+80 = 0+100		Branch Channel		12+00			7.1	128.7
		-2.4	157.3	+30			8.6	127.2
0+35		+5.5	165.2	+55			9.9	126.0
+55		+7.9	167.6	+80			11.2	124.6
+63		+6.7	166.4	+90			13.4	122.5
+71 = End Channel		+7.8	167.5	T.P.	081	123.72	12.98	122.88
				13+10			2.8	120.9
8+69		0.8	158.9	+35			4.1	119.6
+80		2.4	157.3	+60			6.1	117.6
9+00		6.6	153.1	14+00			6.1	117.6
+25.5 = Δ 0.010' Lt.		11.0	148.7	+40			8.8	114.9
+48		14.4	145.3	+80			12.8	110.9

Make at least 5' deep here

120.72

T.P.	020	110.99	12.93	110.79
15+15			2.0	109.0
+23			5.6	105.4
+50			6.5	104.5
+80			9.2	101.8
16+15			10.2	100.8
+25			12.2	98.8
+40			12.0	99.0
T.P.	3.94	102.15	12.78	98.21
16+60 S=EC.			5.1	97.0
+90			7.2	95.0
17+00			9.4	92.7
+90			11.9	90.2
18+00			11.3	90.8
+50			13.43	88.72
T.P.	1.81	90.53	13.43	88.72
19+00			4.4	86.1
+50			7.6	82.9
20+00			11.4	79.1
T.P.	0.54	78.10	12.97	77.56
50+15			0.7	78.4
+35			3.3	74.8
+75			5.4	72.7
21+00			7.5	70.6
+50			8.8	69.3
22+00,			12.0	66.1

7810

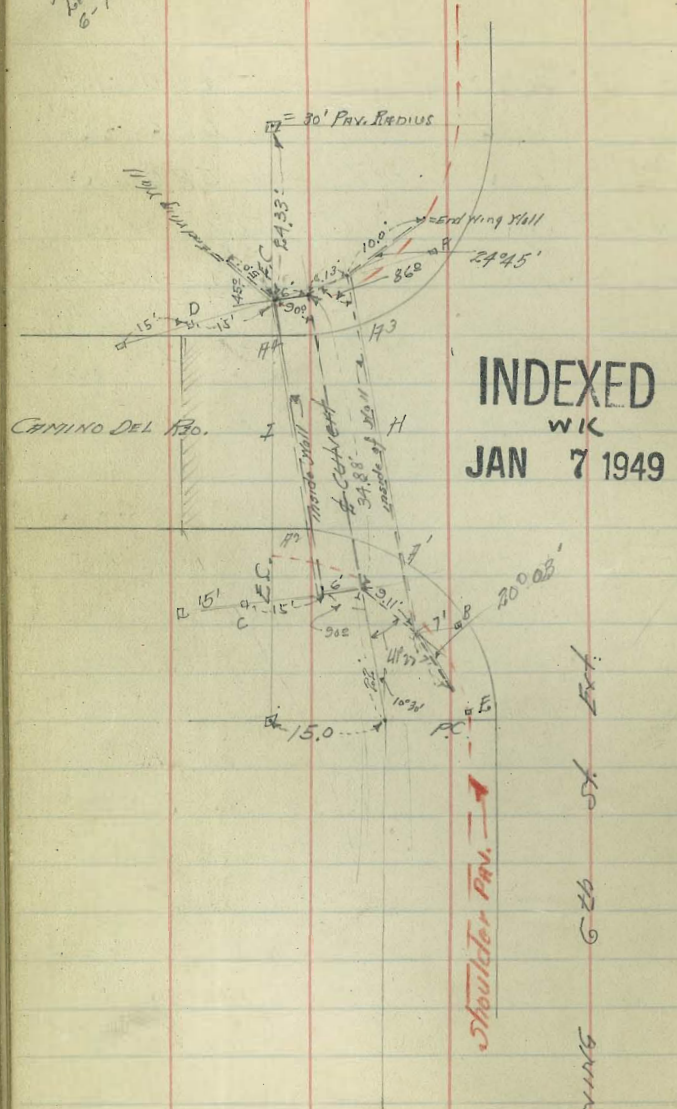
T.P.	3.00	68.73	12.37	65.73
22+50			5.7	63.0
+71			6.7	62.0
+75			10.7	58.0
chk. on 2.5.66 95-192.74			12.76	55.97

0.60 = diff
 35.25 = Elev. of P.M.
 55.85 = Elev. slab = Sissors
 55.97 = Above " " = water
 0.12 = diff.

39

Walker
McHugh
Johnson
Lambert
6-7-29

Box. CURVE AT CAMINO DEL RIO
ON N/E ST



B.P.
Cor. 1st W.
2104-B.M.

2651

40

			Flow Line	
A	5.29	21.22	20.50	+ 1.02
B	3.46	23.05	20.40	+ 2.65
C	4.28	22.23	20.40	+ 1.83
D	4.44	22.07	20.2	+ 2.05
E	3.36	23.15	20.4	

2104-B.M.
729
2833

2870-B.M.
281
2657-T

A	Top Pav	2833	23.45
B	" "		23.69
C	" "		23.62
D	" "		23.45
H	" "		23.71
I	" "		23.66
H'	" "		23.74
H''	" "		23.61
H'''	" "		23.48
H ⁴	" "		23.55

23.45 23.69 23.62 23.45 23.71 23.66 23.74 23.61 23.48 23.55
4.88 4.4 4.71 4.88 4.42 4.67 4.59 4.72 4.85 4.78

6th ST Ext.

GRADES And Line

Bet 0+00 And 2+00

N.L. Univ. Ave.

= 0+00

+20 = Brk.

+40 = "

+60 = "

+60 = Brk.

+69.71 = P.C. Pt. 26°30'

+80 = Brk. def. = 0°24'44"

(0°48'27")

+100 = " E.V.C. " = 1°18'11"

(0°20'33")

+117.97 " = 1°56'44"

+135.24 2°40'17"

+153.91 = Brk. 3°23'50"

2°55'53"

+176.95 4°19'46"

2+00 = Brk. 5°15'36"

LEFT

±

RIGHT.

282.88 282.73 282.38

282.65 282.55 282.25

282.26 282.21 281.96

281.60 281.60 281.40

281.22 281.19 280.97

280.71 280.76 280.61

279.46 279.56 279.46

278.24 278.34 278.24

277.01 277.11 277.01

275.78 275.88 275.78

274.31 274.41 274.31

272.83 272.93 272.83

282.98 Brk. Page 5 N.L. Univ. Ave. + 6+5

0.68

28464-T

1307-

27167-TP

1394

27901-T

1255-

26046-TP

2201

26066-T

1092

24774-B.M.P. 5

27578

886

76

08

27578

886

76

08

26251

26251

105

113

08

283.98

276.51

12.27

274.31

0.46

274.77

12.27

262.51

0.24

263.45

274.31

240.71

41

282.88	282.73	282.38	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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282.65	282.55	282.25	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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282.26	282.21	281.96	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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281.60	281.60	281.40	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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281.22	281.19	280.97	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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280.71	280.76	280.61	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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279.46	279.56	279.46	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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278.24	278.34	278.24	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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277.01	277.11	277.01	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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275.78	275.88	275.78	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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274.31	274.41	274.31	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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272.83	272.93	272.83	281.60	281.60	281.40	279.46	279.56	279.46	278.24	278.34	278.24	277.01	277.11	277.01	275.78	275.88	275.78	274.31	274.41	274.31	272.83	272.93	272.83
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6th St. Extension
Sta. 20797.27 EC. continued from P. 13 this Book

42

\$ Sta.	T	L. Cuts & Hills	L. Grades	R. Grades	\$ Cuts	R. Grades	R. Cuts & Hills
25 + 97.27 = EC.	10.88 129.96 12.29		131.18	131.28		131.18	
26 + 99.02	117.67 117.26 119.63 12.01		128.51	128.61		128.51	1.45 2.71 -.72
+ 90.77	107.62 1.82 109.44		125.85	125.95		125.85	4.11 5.79 -1.68
27 + 37.51	11.65 97.79 0.17 97.96		123.19	123.29		123.19	6.77 5.62 -1.15
+ 84.28			120.53	120.63		120.53	7.42 7.62 -0.20
28 + 31.00			117.87	117.97		117.87	12.29 -2.40
+ 49.01 = RC		2.83 3.28 -4.05	116.80 ✓	117.05		117.10 ✓	3.53 3.71 -.18
+ 72.39	0° 40' 06"	4.17 5.63 -1.46	115.46 ✓			115.76 ✓	3.87 4.10 -.23
+ 75.67	1° 20' 12"	5.50 5.07 +.07	114.13 ✓			114.83 ✓	5.20 5.20 -.00
29 + 19.0	2° 00' 18"	6.83 6.72 +.11	112.80 ✓			113.10 ✓	6.63 4.87 -1.76
+ 42.33	2° 40' 24"	8.16 8.20 +.04	111.77 ✓			111.77 ✓	7.86 8.12 -.26
+ 65.66	3° 20' 30"	9.49 9.23 +.26	110.14 ✓			110.44 ✓	9.19 9.05 +.14
+ 89.0	4° 00' 36"	10.82 10.35 +.47	108.81 ✓			109.11 ✓	10.53 10.31 +.22
30 + 12.33	4° 40' 42"	12.15 12.22 -.07	107.48 ✓			107.78 ✓	11.84 12.01 -.17
+ 35.66	5° 20' 48"	3.39 3.31 +.08	106.15 ✓			106.45 ✓	2.99 3.21 -.22
+ 59.0	6° 00' 54"	4.62 4.64 -.02	104.82 ✓			105.12 ✓	4.32 4.68 -.36
+ 82.33	6° 41' 00"	5.95 5.33 +.62	103.49 ✓			103.79 ✓	5.65 5.24 +.41
31 + 05.66	7° 21' 06"	7.29 6.82 +.47	102.15 ✓			102.45 ✓	6.90 6.82 +.08
+ 29.0	8° 01' 12"	8.62 8.60 +.02	100.82 ✓			101.12 ✓	8.32 8.50 -.18
+ 52.33	8° 41' 18"	9.95 10.82 -.87	99.49 ✓			99.79 ✓	9.65 9.43 +.22
+ 75.66	9° 21' 24"	11.28 12.02 -.74	98.16 ✓			98.46 ✓	10.98 10.54 +.44
31 + 99.0	10° 01' 30"	11.13 11.10 +.03	98.83 ✓			97.13 ✓	12.31 11.65 +.66
32 + 31.94	10° 58' 07"	3.02 3.72 -.70	94.99 ✓			98.24 ✓	2.72 3.51 -.79
+ 64.88	11° 54' 44"	4.91 4.24 +.67	93.05 ✓			93.35 ✓	4.61 5.24 -.63
+ 97.82	12° 51' 21"	6.90 7.10 -.20	91.16 ✓			91.46 ✓	6.50 7.12 -.62
33 + 30.72 = EC. 13° 48' 01"		3.60	89.56 ✓	89.61		89.66 ✓	8.30 7.34

457a

6th Extension

33 + 64.86

+ 99.0

34 + 30

+ 65

35 + 50.00 = Brk

+ 30

+ 65

36 + 00

+ 30

+ 65

37 + 00

+ 30

+ 65

38 + 00

+ 30

+ 65

39 + 0

+ 30

+ 49 = Brk

+ 74

+ 99

40 + 24

+ 49 = Brk

41 + 00

+ 30

+ 57.72 = P.C.

89.84 B.M.P.S
3.00
77.84

87.54 B.M.P.S
0.77
70.21 T

12.61
78.00
4.51 T

82.31 T
12.17
70.14

4.10
71.24 T
12.53

58.74
1.48
40.17 T

3.21
56.92 = 56.96 B.M.P.S

2 Cuts & Fills

10.34
4.65

12.19
11.23
7.31

13.49
11.05
+ 2.63

8.13
8.33
- .2

1.51
1.24
1.27

2.71
2.86
- .15

4.53
4.21
7.22

2.16
2.25
- .09

7.56
7.27
1.21

9.19
9.24
- .05

10.37
11.21
- 1.1

12.31
12.17
+ .14

4.79
1.87
7.9

4.31
0.95
+ 1.36

5.61
7.88
+ 2.27

7.06
3.21
+ 2.35

8.51
6.20
+ 2.1

7.72
8.34
+ 1.37

10.19
9.32
+ 1.27

11.37
10.42
+ .95

12.29
12.23
- .06

2.09
2.33
- .24

3.99
3.38
+ .61

4.57
5.23
- .66

5.88
5.22
+ .66

6.21

2 Grades

87.50 ✓

85.65 ✓

84.16 TR

82.48 ✓

80.80 ✓

79.40 ✓

77.78 ✓

76.15 ✓

74.75 ✓

73.12 ✓

71.50 ✓

70.10 ✓

68.50 ✓

66.98 ✓

65.68 ✓

64.23 ✓

62.78 ✓

61.57 ✓

60.80 ✓

59.90 ✓

59.00 ✓

58.10 ✓

57.20 ✓

55.62 ✓

54.69 ✓

53.85 ✓

2 Grades

87.65 ✓

85.65 ✓

84.16 ✓

82.48 ✓

80.80 ✓

79.40 ✓

77.78 ✓

76.15 ✓

74.75 ✓

73.12 ✓

71.50 ✓

70.10 ✓

68.50 ✓

66.98 ✓

65.68 ✓

64.23 ✓

62.78 ✓

61.57 ✓

60.80 ✓

59.90 ✓

59.00 ✓

58.10 ✓

57.20 ✓

55.62 ✓

54.69 ✓

53.85 ✓

2 Grades

87.65 ✓

85.65 ✓

84.16 ✓

82.48 ✓

80.80 ✓

79.40 ✓

77.78 ✓

76.15 ✓

74.75 ✓

73.12 ✓

71.50 ✓

70.10 ✓

68.50 ✓

66.98 ✓

65.68 ✓

64.23 ✓

62.78 ✓

61.57 ✓

60.80 ✓

59.90 ✓

59.00 ✓

58.10 ✓

57.20 ✓

55.62 ✓

54.69 ✓

53.85 ✓

2 Cuts & Fills

10.17
10.40
- .21

6.34
6.14
+ .20

	Sta.	def	L.Cuts & Fills	L.Grades	R.Grades	R.Cuts & Fills
33	41+	88.63	1°28'33"	52.96 ✓	52.96 ✓	
34	42+	19.54	2°37'06"	52.08 ✓	52.08 ✓	
	43+	50.16 = EC.	4°25'40"	51.19 ✓	51.19 ✓	
35	43+	00		49.77	49.77	
		+30		18.91	48.91	
		+65		47.91	47.91	
36	44+	00		46.90	46.90	36.54
		+30		46.04	46.04	35.91
		+65		45.04	45.04	.63
37	45+	00		44.03	44.03	28
		+30		43.17	43.17	28
		+65		42.17	42.17	28
38	46+	00		41.16	41.16	
	46+	48.18 = BK		39.78	39.78 ✓	
	46+	81.87		38.93	38.78	
39	47+	15.60 = PC.		38.10 ✓	37.80 ✓	
		+37.65	2°06'21"	37.47 ✓	37.17 ✓	
		+59.71	4°12'42"	36.87 ✓	36.54 ✓	
		+81.76	6°19'02"	36.21 ✓	35.91 ✓	
	48+	03.81	8°25'25"	35.56 ✓	35.26 ✓	
40		+25.86	10°31'46"	34.93 ✓	34.63 ✓	
		+47.92	12°38'07"	34.30 ✓	34.00 ✓	
41		+69.97	14°44'28"	33.69 ✓	33.39 ✓	
		+92.02 = EC.	16°50'50"	33.12	32.82 ✓	

Sta	L cuts & Fills	L Grades	Grades	R Grades	R Cuts & Fills
49+27.11		32.12 ✓		31.92 ✓	
+ 62.8		31.13 ✓		31.03 ✓	
+ 98.18		30.26		30.26 ✓	
50+38.18		29.58		29.38	
+ 78.18		28.57		28.57	
51+18.18		27.85		27.85	
+ 50		27.28		27.28	
52+0 Brk.		27.62		27.62	
+ 50					
53+0					
+ 50					
54+0					
+ 19.8 = P.C. on L.		23.99 ✓		23.99 ✓	
+ 59.8					
54+97.8 = P.C. on R.		23.11 ✓		23.41 ✓	
55+18.18					
+ 58.18		22.96 ✓		22.96 ✓	
+ 97.68		23.26 ✓		22.79 ✓	
56+37.18		23.56 ✓		23.02 ✓	
56+76.68 = P.C.		23.26 ✓	39A	23.06 ✓	4.7A
57+00.15	4° 38' 57"				
57+33.62	8° 57' 55"				
57+47.09	13° 26' 53"				
57+70.56	17° 55' 50"				
57+94.03	22° 24' 47"				

Sta	L. Cuts & Fills	L. Grades	R. Grades	R. Cuts & Fills
58 + 17.50	26° 53' 45"	23.86		23.06
58 + 40.97	31° 22' 42"			
58 + 64.44	35° 51' 40"	23.86		23.06
58 + 87.91	40° 30' 37"			
59 + 11.34 = EC	44° 49' 35"	23.86		23.06
+ 63.28		23.45		23.10
60 + 15.27 = Brk		23.13		23.13
+ 00		23.06		23.06
61 + 0	23.03			
+ 50	22.93			
62 + 0	22.83			
62 + 15.37 = Brk		22.93		22.73 ✓
+ 53.9		22.52		22.75 ✓
+ 49.07 = RC on L.		22.21		22.72 ✓
+ 32.44 = R.C.		22.33 ✓		22.79 ✓
63 + 16.30		23.5 ✓		22.81 ✓
+ 40.16		23.7 ✓		22.83 ✓
+ 64.02		23.9 ✓		22.85 ✓
+ 87.58		24.1 ✓		22.87 ✓
64 + 11.74		24.3 ✓		22.89 ✓
+ 35.60		24.5 ✓		22.91 ✓
+ 59.46		25.17 ✓		22.93 ✓
+ 83.33 = RC on L.		22.56 ✓		
65 + 06.70 = EC on L.		22.61		
65 + 19.63		22.74 ✓		
+ 55.98 = Brk		22.78		
66 + 0				

& def. on 332

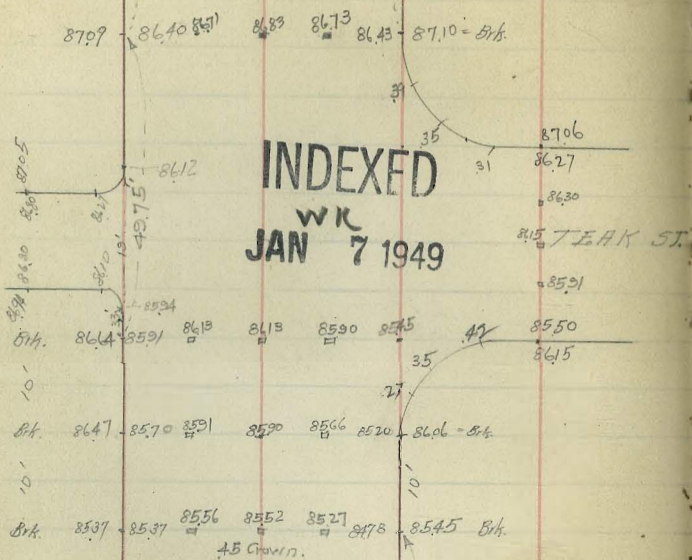
Angle	Grade	Notes
5° 27' 20"	22.79 ✓	22.77 22.78 22.79 22.80 22.81 22.82
11° 14' 48"	22.81 ✓	485 484 483 482 481 480 557 549 538 541 540 537 -073 -063 -053 -059 -059 -071
16° 52' 12"	22.83 ✓	528 528 528 528 528 528
22° 29' 36"	22.85 ✓	478 477 476 475 473 472 535 537 537 531 511 524 -060 -060 -064 -056 -038 -057
28° 07' 00"	22.87 ✓	22.93
33° 14' 24"	22.89 ✓	469
39° 21' 48"	22.91 ✓	
44° 59' 15"	22.93 ✓	

Brk 1502-10

2313-814
2.91
2762

Sta	L.Cuts & Fills	L.Grades	R.Grades	R.Cuts & Fills
66+50		22.85	22.85	
67+0		22.90	22.90	
+50		22.96	22.96	
68+		23.02	23.02	
+50		23.08	23.08	
69		23.13	23.13	
+50		23.19	23.19	
70		23.25	23.25	
+50		23.31	23.31	
+ 66-P.M.C.		22.86	23.36	
71.		23.36	23.36	
+ 16.02 = End concrete		23.05	23.43	
+ 55.93		23.74	23.74	
+ 95.93		24.15	24.15	
72 + 35.93		24.79	24.79	
+ 75.93-P.M.C.		25.42	25.42	
73 + 05.93		26.06	26.06	
+ 35.93		26.69	26.69	
+ 75.93		27.09	27.09	
74 + 15.93		27.20	27.20	
+ 55.93 = E/O Bridge				

38TH ST
PAYING



INDEXED
WK
JAN 7 1949

TEAK ST.

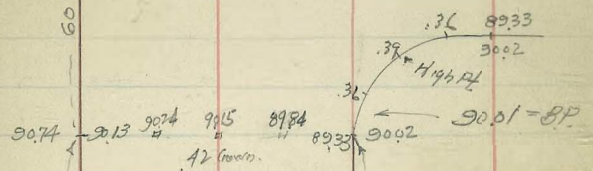
OCEAN VIEW BLYD.

92.14 9147

9040 9106

48

5. ST.



TEAK ST.

Alley

38TH

10575

10575

Alley 8766
 9018 8951
 9000 8933
 8744 20' 8862

Alley
 8862
 8847 8922 8945
 67'
 8844 8912 B.H.
 8787 8860 E.V.C.

8433
 8600 8533
 8533 28
 8533 28
 Valley gutter
 8493
 16 8414
 FLORENCE

Flow
 8105
 8009 8530
 Valley gutter
 28 8424
 31 8498
 36 8440 8500
 8454 8521
 3840

8393 8326
 640
 8350 34
 38
 32

8383
 8384
 8509
 35
 31

8277 8298
 8237
 1
 51
 8203
 8233

Flow
 8320
 35
 35
 8340 8404
 8374 8438
 Sid. in gutter line

LOGAN

Valley gutter

57

AVE.

E.V.C.

8932 8873
 9012 8935
 8750
 9016 8951

8773 8832
 8837 8904 8940
 8852 8930
 8930

3840

NATIONAL

AVE.

108' 118' 114' 114' 117' 122' 118'
 77.65 76.73 73.05 74.91 76.70 76.19 76.65

10'

77.56 77.22 77.00 76.58 77.25
 57.77

Alley

Alley

3824

51

No. 1. And 38th

	7.34	83.92		76.58
T.P.	11.35	94.43	0.84	83.08
T.P.	10.04	94.91	9.56	84.87
T.P.	7.61	99.72	2.80	92.11
T.P.	2.10	92.11	9.71	90.01
			8.48	

Chk. on S.W. top of st. Ocean View Blvd. 24 38th

83.63 - Ndc. used this
 83.66 = S.M. in running
 0.03 = difference

SE. B.P.
 5th 7' fact.
 Logun + 38th
 5th 7' fact.
 Florence + 38th
 2th 7' fact.
 T. St. And 38th
 NW. B.P.
 J. St. And 38th

Walter
Leckey
Kamaryn
H. H. H. H.

12-16-29

BENCH MARKS

6TH ST. EXTENSION

TRANSFERRED From tie Hubs ETC.
to Permanent ties, Copper Tacks
And Lead Plugs in Pavement

Sta. & Pav.

B.M.
Elev.

6th St And LINDA Vista Rd top Hd Wall on Lt BP	352.34	
134+07.55=EC. Page 27	232.36	Lead Plug With Cop. tack.
119+50 Brass Plug top Hd Wall on Lt	206.37	" " " "
102+26.88=BC. " 26	100.56	" " " "

INDEXED

WK

JAN 7 1949

55+42.84 EC. " 26	52.24	" " " "
-------------------	-------	---------

Brass Plug Beg. McAdams Rd Pav. Approx. 300' South of Bridge	23.09	in Con. Pav. 1' from W. edge.
---	-------	----------------------------------

6th St Ext. And Concrete Rd on West Brass Plug. South end Box Culvert	23.70	
--	-------	--

33+30.72=EC. Page 3	89.62	Lead Plug With Cop. tack.
---------------------	-------	------------------------------

7+86.87=EC. Page 2	234.40	" " " "
--------------------	--------	---------

W. H. H. H.

Right of Way Camino Del Rio
W. of 6th St. Extension

INDEXED

JAN ^{WIK} 7 1949

PL 1105

N. Line

S. Line Camino Del Rio

10' W

680.8'

PL 1118

PIPE

50'

10' W
3' 6" E
CITY

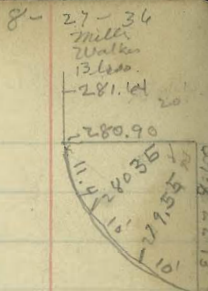
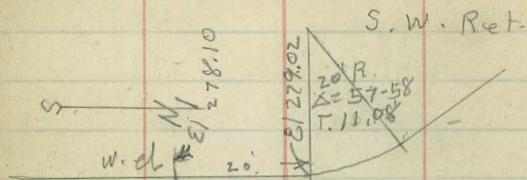
6th ST. EXTENSION

PL 1106

54

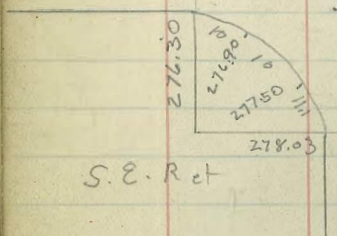
PIPE
PL 1117

Richmond & Brookes
Curb. Returns.

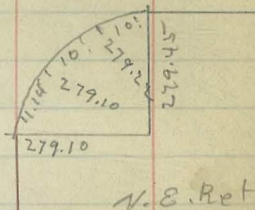


Richmond

INDEXED
WK
JAN 7 1949



Brookes.



B.M. Top Hydr. 4.25 284.48 280.23

N.E. Ret. = Turn.

E	279.00	279.10	279.22	279.15	N.
	5.48	5.38	5.26	5.33	
	curb	5.29	4.19	5.53	
		+0.09	+1.07	-0.20	

S.E. Return

E	279.03	277.50	276.90	276.30
	6.45	6.92	7.58	8.78
	curb	6.25	5.42	6.68
		+0.73	+2.16	+1.50

S.W. Ret.

S	278.10	279.02	279.34	279.66
	6.38	5.46	5.14	4.82
	5.78	5.43	5.14	curb
	+6.60	0.0	0.0	

N.W. Ret

W.	2.47	2.95	80.35	79.35	N. End
El	282.01	281.53	3.58	5.13	5.88
el		el	1.97	1.79	5.50
			1.61	+3.13	+3.94
					+0.38

55

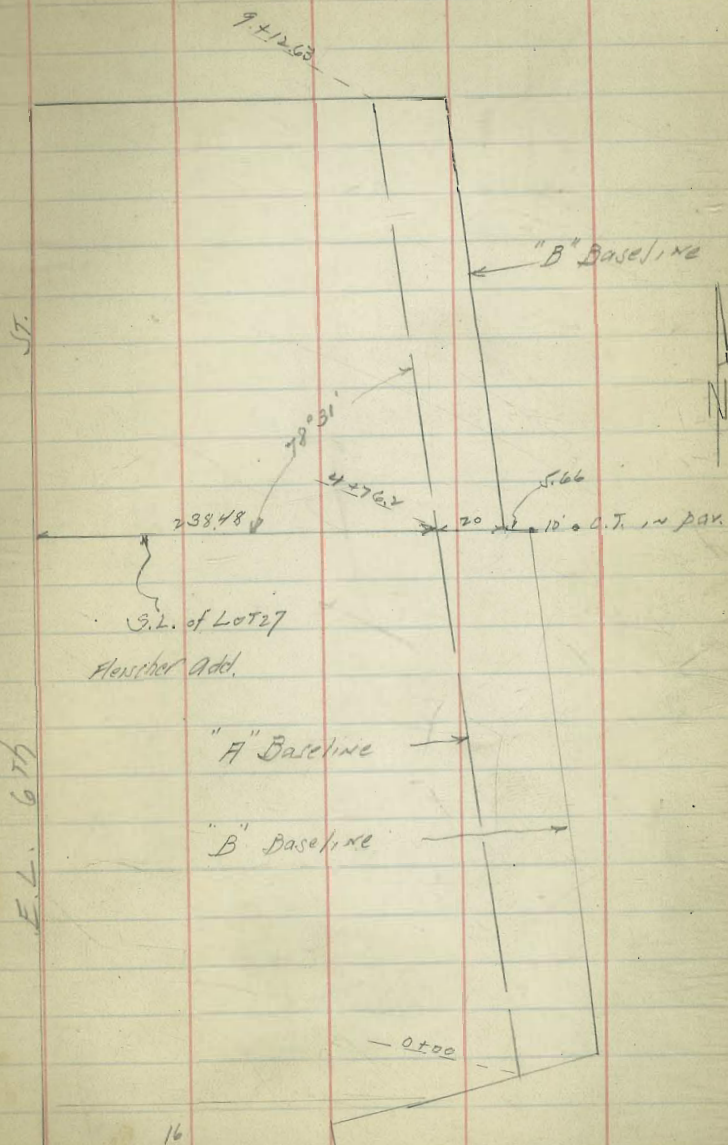
S.E. Richmond
& Brookes.

Xsec of Proposed Borrow in
Lots 17 to 34 Fleischer Add.

Moore
Sisson
7-11-36

Indexed
C.S.K.

56



Sections at Pt. A with Baselines

0+25				
T.P.	12.26	210.79	0.55	204.53
0+07				
T.P.	12.74	205.08	1.16	192.36
0+04				
00				
0-10				
T.P.	8.00	193.52	13.23	184.92
T.P.	0.30	198.15	12.58	197.85
T.P.	0.40	210.43	12.75	210.02
T.P.	0.28	222.78	11.21	222.50
7+86.37 EG 4.22.07 EXT.	0.31	234.71		234.40 C.T. 011

L.F. "A"
Baseline
& 211.3

211.7	211.3	8.203.8	203.4
5.5	5.5	1.3	1.3
			23

57

200.1	210.79	1970
5.5	5.5	1.1
179.3	205.08	178.4
1.2	1.1	1.5
178.3	177.4	177.80
1.5	1.1	1.5
172.1	172.0	172.1
21.4	21.5	21.4

All
OUTSIDE PT. = Edge of
EX. OUT

1 + 85

1 + 65

1 + 50

T.P. 7.63 222.75 307 213.12

+25

1 + 00

0 + 75

0 + 50

216.79

225.6	216.6	212.5	209.1
+ 8.8	6.2	10.3	12.7
15	15	15	15
225.6	222.8	222.8	221.8
+ 7.1	3.8	8.5	8.5
15	15	15	15
223.9	220.5	220.5	214.7
+ 5.5	4.3	8.1	8.1
15	15	15	15
223.9	216.7	216.7	206.7
+ 9.6	23	19.9	14.1
15	15	15	15
226.4	210.7	197.9	192.6
226.4	214.5	214.5	203.3
222.75	222.75	222.75	203.3
216.6	216.6	216.6	200.7
0.2	0.2	14.1	13

216.79

T.P. for check
To "B"

3219

,0604

on rock
10' 8" 3123

3 + 45

3 + 33

3 + 15

2 + 80

2 + 50

T.P. 0.89 198.23 12.50 197.34

2 + 05

T.P. 0.20 209.84 13.11 209.64
222.75

"A"

59

Lt. d Rt.

179.9
18.3
172.1

180.5

17.7

187.6

10.6
179

181.3

16.9

168.0
16.1
151.9

171.3

26.7

167.6
16.0
151.6

163.0
16.2
146.8

164.0

163.0

161.1
16.1
145.0

165.3
16.2
149.1

163.0

35.2

160.0
16.2
143.8

175.1
16.1
159.0

171.6

26.6

166.1
16.1
150.0

197.9
11.9
186.0

198.23

199.4

10.6

196.4
13.4
183.0

209.84

5 + 50

5 + 35

5

T.P. 2.40 198.44 2.27 195.96

L + 76.2 = 51y Lot 27

+ 50

4

3 + 50

198.23

"A"

196.0
+ 8.0
194.0
+ 5.0
189.0
+ 8.0
181.0

203.2
+ 5.0
198.2
194.7
192.7
189.8
186.7

191.7
194.4
196.9
191.0

198.42
192.52
186.1
185.4
182.1
179.8
177.0

183.9
189.0
191.0
183.5
177.0
175.4
181.8
181.8

Jog Baseline here

198.23

+30

7+00

T.P. 8.64 200.20 0.86 191.54

+80

+65

+22

6+05

5+65

198.42

197.4
 $\frac{2.8}{25}$
 199.0

187.8
 $\frac{10.6}{10}$
 181.0
 $\frac{17.4}{10}$
 156.0
 $\frac{22.4}{2}$
 152.3
 $\frac{46.1}{1}$

184.0
 $\frac{7.2}{15}$

187.2
 $\frac{12.3}{10}$
 190.9
 $\frac{9.3}{15}$

200.20
 $\frac{184.200}{10}$
 176.2
 $\frac{22.2}{10}$
 151.2
 $\frac{47.2}{10}$
 151.8
 $\frac{26.6}{15}$

184.0
 $\frac{7.2}{15}$

168.8
 $\frac{29.2}{15}$
 175.9
 $\frac{24.5}{25}$

172.2
 $\frac{26.2}{15}$
 169.3
 $\frac{28.1}{10}$
 148.9
 $\frac{29.5}{10}$
 151.9
 $\frac{26.3}{15}$

175.8
 $\frac{17.6}{17}$

142.3
 $\frac{56.1}{34}$

198.42

1.400

+75

+50

0+25

0+07

0+04

00

0-10

B

±

At
167.0
5.9
12

168.1
1.8
169.2

170.7
1.7
172.4

171.7
1.4
172.4

171.9
1.4
172.4

172.4
1.0
172.9

172.9
1.0
172.9

172.9
1.0
172.9

All extreme H. elev.

= 505 CUT.

63

T.P. 59

687

172.86

166.04

172.86

3 + 15

+ 80

T.P. 1.05 160.66 1325 159.61

+ 50

2 + 05

+ 85

+ 65

+ 50

1 + 25

172.80

160.66

172.80

8

2

157.1
<u>3.6</u>
7
1584
<u>2.3</u>
4

157.6
<u>15.3</u>
2
161.8
<u>11</u>
8
162.8
<u>10.1</u>
9
163.7
<u>9.2</u>
9
164.4
<u>8.5</u>
10
165.8
<u>7.1</u>
10

64

5 + 00

TP: 0.00 148.54 12.80 147.84

4 + 76.2 = 1/4 of Lot 27

+ 50

4 + 15.5 = 21 + 85.04 P.C. CT. p. 2 Set B.M.

4

+ 50

+ 45

3 + 33

160.66

"B"

4

4

148.54
4

147.2
147.2
1.3
9.5 87

148.5
12.2
6.2

149.6
11.1
1

9.06 151.60

152.0
8.7
1

154.7
6.0

6.2 155.6 12 155.2

160.66
3

65

Set B.M.

157.61

157.61
= 1/4
of
grade
area

7+00

T.P. 1.18 137.64 12.04 136.46

+80

+65

+24

6+05

+65

+50

5+35

148.52

"B"

4

$\frac{137.64}{4}$

$\frac{137.1}{0.5}$

$\frac{137.1}{11.4}$

$\frac{139.1}{20.5}$

$\frac{141.1}{17.4}$

$\frac{141.9}{16.6}$

$\frac{144.1}{16.3}$

$\frac{144.8}{16.7}$

$\frac{145.7}{16.8}$

$\frac{148.52}{2}$

9 + 12.63

8 + 60

+ 30

8

+ 60

7 + 30

137.44

"B"

4

KL

67

126.1
11.5
29.5

129.2
11.5
29

8.8
130.8

11.5
29

132.4
11.5
29.5

134.9
11.5
29.5

135.8
11.5

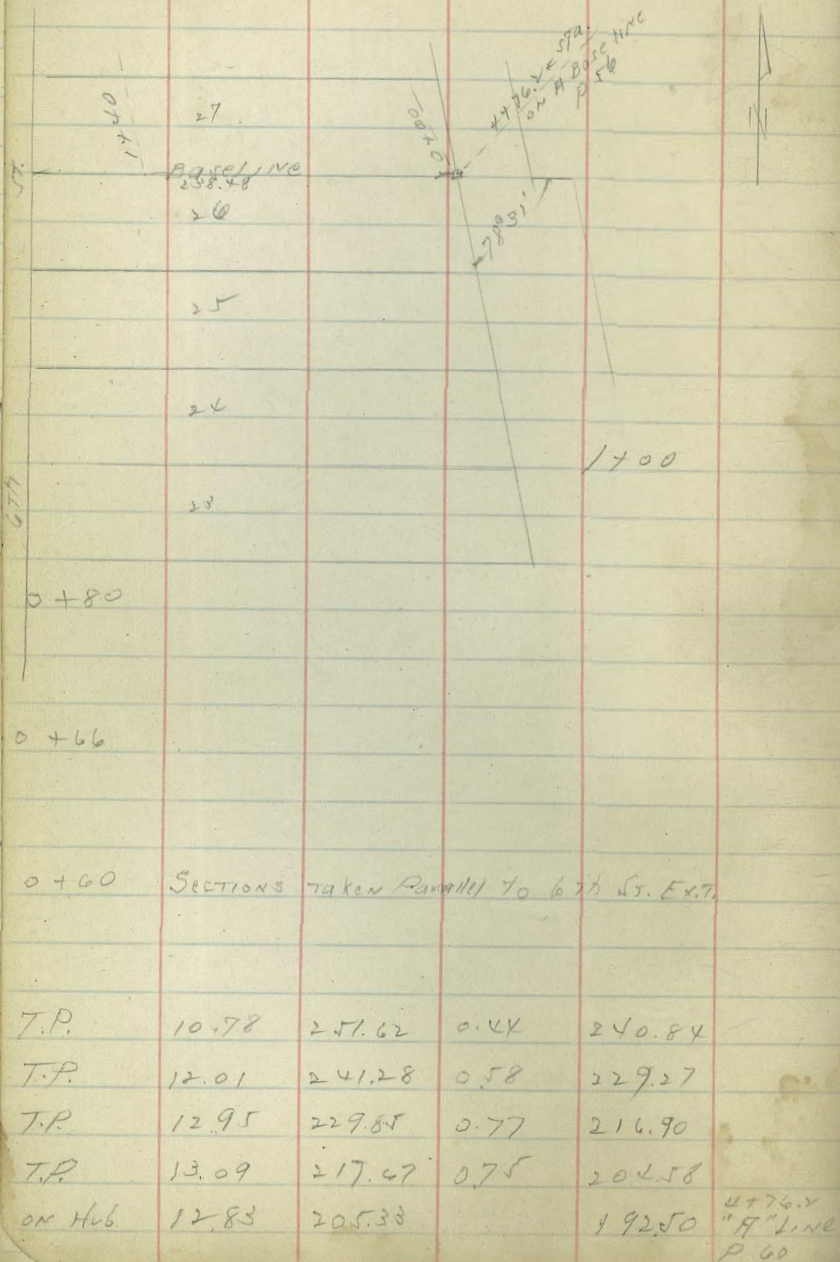
11.8
29

137.44

XREC for Borrow Pit
 Lots 25-27 Heister Add.
 17042
 1-18-27

Baseline S/Sy Lot 27

68



Hand level
 check ground 3+15 "A"
 P 59

87.3 164.3 162.0
 0.3

see p 69

692	71.2	23.5	36.1	4.7	+1.7	+2.8	12.1	6.4	13.6	32.7
204	280	785	142	100	80	50	17	15	25	51

721	740	63.6	37.5	10.7	7.5	10.5	6.7	8.4	15.7	36.2
204	200	785	142	100	80	50	17	18	25	51

204	78.0	63.7	39.0
204	204	785	142

78.5	74.3	40.3	23.0	23.4	28.1	17.1	17.2	27.7	36.1
204	180	142	100	80	50	17	20	20	51

257.62

4776.4
 "A" Line
 P 60

Parcel No

47

1 + 40 = W/y LIST of Prop. Berrow
Good Blp. size to West

78.2 68.0 40.4
507 185 150
Bot.
Draw

17.5 97 5.0 0.3 + 1.4 + 0.3 2.7
125 112 100 75 50 50 15 730 132 17.9 22.8
Hos 20 33 51

T.P. 13.15 262.63 0.12 251.48
251.62

264.63

Levels for Curb & Walk
 on NE 1/4 Cor. of
 6th & Univ

Checked
 by
 Beggs
 8-15-44

INDEXED
 WK
JAN 7 1949

R 709.6
 Sec P. 4

0+19.71 B.C.R.

294.67 Elev. to
 meter on top of
 Check this Base
 294.67 changed
 294.57 Id. Point

6th St. Ext.

to NE 7th CT
 5th & Univ.

N 7' line of
 Univ. Ave.

89° 47'

200' 5"

16' 11.7' CT

to NE 7th CT
 on 7th Univ.

33

vert
 0-7

139.5

10

6th St. Ext.
 Sec P. 4

1+18.7

1+00
 0+99.9

0+75

0+19.71 B.C.R.

18'

10'

0+49.7
 Beg. 20' width
 Con. Pav.

0+35.9

18' x 18" Con. Box
 drain

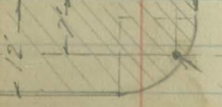
0+10.5

0+10.25

0+81

0+200

full width
 Con. Paving



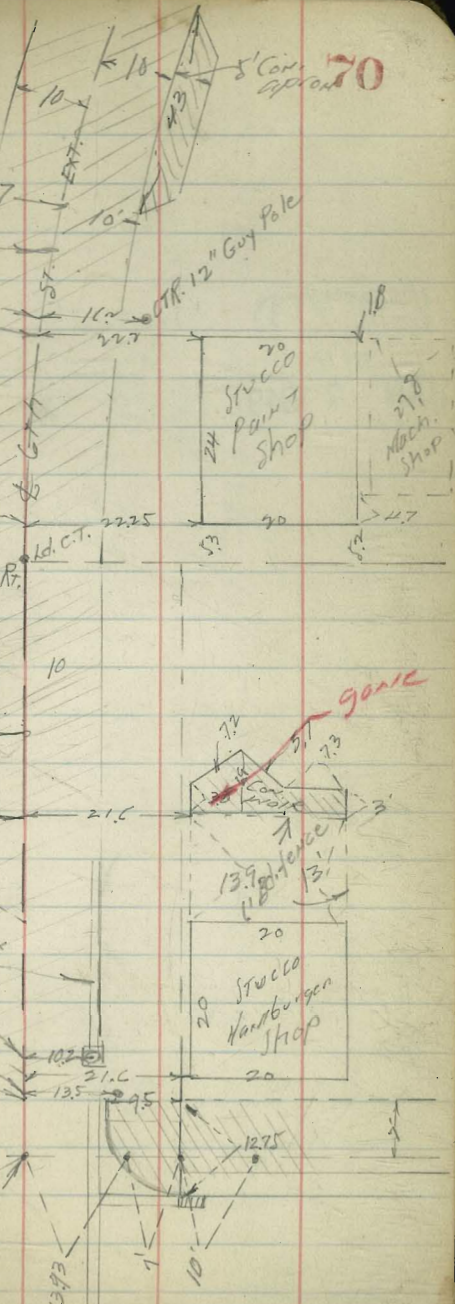
Univ. Ave

vert
 0-7

139.3

10'

Id. C.T. gone - Reset with Chisel Crosses



70

gone

8-21-44

indexed
c.s.k.

Levels on pav. Cth & Univ. Ave

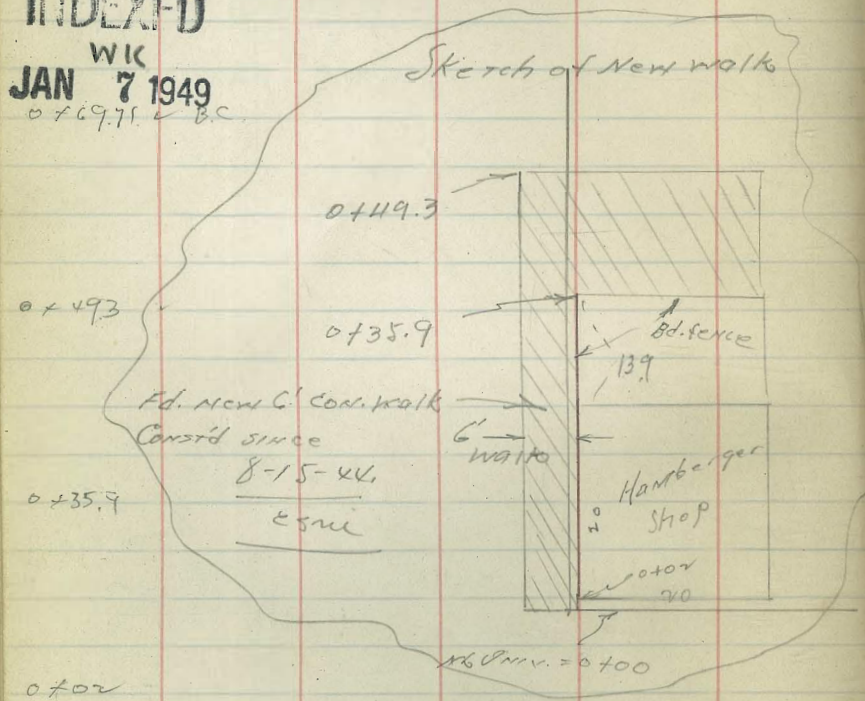
Elev. Con. floors point Shop

INDEXED

WK
JAN 7 1949

0+69.75 & BC

Sketch of New walk



NSWP 3.44 ~ 87.31

282.87 Cth & Univ

Lt.

Baseline

Cth

R7

71

				280.30	
				10	Con. floor Point Shop
				22.2	
				280.9	
				10	
				22	
				281.6	
				282.03	
				282.05	
				5.50	
				5.8	
				10	
				15.5	
				15.6	
				5.21	
				21.0	
				282.05	
				282.45	
				282.57	
				5.5	
				5.3	
				10	
				15.5	
				15.1	
				4.77	
				21.0	
				282.46	
				4.85	
				21.0	
				282.40	
				4.9	
				15.1	
				282.24	
				5.07	
				21.0	
				282.06	
				5.25	
				15.1	
				281.97	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				4.35	
				15	
				282.93	
				4.92	
				282.93	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				5.25	
				15.1	
				282.06	
				5.25	
				15.1	
				282.24	
				5.07	
				21.0	
				282.06	
				5.25	
				15.1	
				281.97	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				4.35	
				15	
				282.93	
				4.92	
				282.93	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				5.25	
				15.1	
				282.06	
				5.25	
				15.1	
				282.24	
				5.07	
				21.0	
				282.06	
				5.25	
				15.1	
				281.97	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				4.35	
				15	
				282.93	
				4.92	
				282.93	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				5.25	
				15.1	
				282.06	
				5.25	
				15.1	
				282.24	
				5.07	
				21.0	
				282.06	
				5.25	
				15.1	
				281.97	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				4.35	
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				282.93	
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				11.4	
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				281.97	
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				282.96	
				5.25	
				15.1	
				282.06	
				5.25	
				15.1	
				282.24	
				5.07	
				21.0	
				282.06	
				5.25	
				15.1	
				281.97	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				4.35	
				15	
				282.93	
				4.92	
				282.93	
				5.3	
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				21.0	
				282.06	
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				15.1	
				281.97	
				5.3	
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				21.0	
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				06	
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				282.96	
				4.35	
				15	
				282.93	
				4.92	
				282.93	
				5.3	
				11.4	
				06	
				1 Pav	
				282.96	
				5.25	
				15.1	
				282.06	
				5.25	

Walker
McCaughey
McAdams
Remmen
7-26-29

Alley Pavilion Bk. N.
Univ. Hts.
Bet. Oregon and Idaho
From Copley to Collier St.

Stations	East Grades	West Grades
Shire Copley = 0+00	391.04 ✓	391.02 ✓
+20 = Bk.	392.20 ✓	392.0 ✓
+40 "	392.90 ✓	392.70 ✓
+60 "	393.20 ✓	393.00 ✓
+80 " = Exc (467)3	393.20 ✓	393.00 ✓
1+26.67	392.60	392.40
173.34	392.00	391.80
2+20 = PXC	391.40 ✓	391.20 ✓
+40	391.00 ✓	390.80 ✓
+60	390.50 ✓	390.40 ✓
+80	389.80 ✓	389.70 ✓
3+00 = N.L. Collier St. 50	389.00 ✓	388.89 ✓

INDEXED
WIK
JAN 7 1949

39447 - 81745E Top Five Hf. Copley + Idaho Book 1301 - P-63

39104	39220	39290	39270	39320	39260	39200
573	757	3.87	425	415	4.85	5.15
	257	1.87	310	328	3.47	5.29
	1200	1200	1115	1099	1143	1016
39102	39200	39270	39200	39300	39240	39180
575	177	207	377	445	505	565
	361	513	330	396	466	566
	1708	1064	1047	1049	1039	001
39140	39100	39050	38980	38900		
605	645	675	765	845		
553	579	615	681			
1082	1052	1080	1084			
39120	39080	39040	38970	38889		
625	665	705	775	856		
590	465	631	679	854		
1035	1200	1073	1076	002	1147	

Tough Grades on Rt. Side Roadway
 6th St. Ext. Bet. Stations 219524 and 219528
 Page 10 and Page 11

INDEXED
 JAN WK
 7 1949

24774-8M Rpt 5
 = 249524 Rpt 10
 = Bk
 = EC

26221-T Rk	26626	26456	26251	26118	25986	25695	25401	25108
1241								
24774-TP	+441	+335	+202	+117	+35	+53	+82	+113
137+	+50	+37	+25	+11	+3	+5	+9	+12
	+01	-77	-28	-01	-09	-05	-07	-41
25113-T Rk	24816	24503	24231	24071	23911	23750	23589	23428
1216								
23895-TP	+441	+390	+352	+312	+272	+232	+192	+152
23	+47	+48	+48	+47	+46	+45	+44	+43
24053-T	+07	+15	+18	+07	+05	+09	-29	-74
23340 Rk	23023	22706	22389	22072	21755	21438	21121	
1212								
22022-8M								
167								
21189-T Rk	20804	20487	20170	19853	19536	19219	18902	
1248								
21414-TP	+41	+785	+110	+188	+267	+346	+425	
131	+50	+81	+113	+145	+177	+209	+241	
21272-T	+03	+03	+03	+16	+18			
138								
20197-T								

175085-8M Rpt 5
 = 175085 Rpt 10
 = Bk
 = EC

Tough Grades Bet. 161916 and 214856

1818-T Rk	1803	1788	17735	17508	17284	17060	16836	16612
1290-	0.8	2.3	3.8	5.3	6.8	8.3	9.8	11.3
16967-TP	+01	+01	+0.3	+0.1	+0.2			
200								
17159-T Rk	1706	1681	1656	1631	1607	1582	1557	1533
1500								
1587-TP	+129	+36	+61	+86	+110	+135	+160	+185
1571-T	+09	+10	+07	+09	+03	-16	-32	-48
1525-TP								
1534								
1559								
1571								

Tough Grades on left side of station 1816380
 and 16+8881 on P-4+12 and 411

17169-T Rk	17168	1702	1687	1672	1657	1642	1627	1612
1231								
16938-TP	+3.7	+5.4	+7.1	+8.8	+10.5	+12.2	+13.9	+15.6
1603								
1579								
1482								
18583 Rk	18435	18287	18139	17991	17843	17695		
1212								
1816380	+1.2	+2.4	+3.6	+4.8	+6.0	+7.2		
1816380	+0.7	+1.4	+2.1	+2.8	+3.5	+4.2		

BM P-2
 = 22022
 = 1371
 = 22175-T
 = 1301-
 = 20874-TP
 = 0.75+
 = 20972-T
 = 1246+
 = 19726-TP
 = 116-
 = 19842-T
 = 251-
 = 19561-TP
 = 302+
 = 17863-T

19863
 16572
 17611-TP
 2302
 18847-T

8/2

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

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

IMPROVED TABLES

AND

INFORMATION

To find Tangent and External for curve of
any other degree, divide by degree of curve and
add connection found in column of connection.

Degree of curve with a given L may be found
by dividing tangent (or external), opposite L by
given tangent (or external).

The distance from a point on the tangent to
the curve is very nearly the square of the tangent
length divided by twice the radius.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

74281, 10 1/2
 27 5/2 20
 10739 30
 17959 60
 7720 30

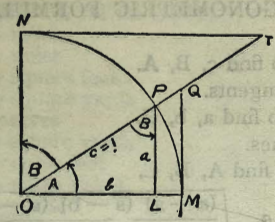


TABLE II
TRIGONOMETRIC FORMULÆ.

$$\begin{aligned} \angle A &= \angle MOP & \angle B &= \angle PON = \angle OPL \\ R &= OB = c = 1 \\ \sin A &= \frac{a}{c} = \frac{a}{1} = a = \cos B = LP \\ \cos A &= \frac{b}{c} = \frac{b}{1} = b = \sin B = OL \\ \tan A &= \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ \\ \cot A &= \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT \\ \sec A &= \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ \\ \csc A &= \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT \\ \text{vers } A &= \frac{LM}{OP} = LM = \text{covers } B \# \end{aligned}$$

$$\begin{aligned} \text{covers } A &= \frac{OP - LP}{OP} = OP - LP = \text{vers } B \\ \text{exsec } A &= PQ = \text{coexsec } B \\ \text{coexsec } A &= PT = \text{exsec } B \\ \sin \frac{1}{2} A &= \sqrt{\frac{1 - \cos A}{2}} & \cos \frac{1}{2} A &= \sqrt{\frac{1 + \cos A}{2}} \\ \sin 2A &= 2 \sin A \cos A & \cos 2A &= \cos^2 A - \sin^2 A \\ \text{Law of Sines} & \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C} \\ \text{Law of Cosines} & c^2 = a^2 + b^2 - 2ab \cos C \\ \text{Law of Tangents} & \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)} \end{aligned}$$

TABLE II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Tangents.

Given A, B, c; to find a, b, C.

Use Law of Sines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11
$\frac{1}{16}$	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219
$\frac{1}{8}$	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271
$\frac{3}{16}$	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323
$\frac{1}{4}$	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375
$\frac{5}{16}$	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427
$\frac{3}{8}$	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479
$\frac{7}{16}$	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531
$\frac{1}{2}$	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583
$\frac{9}{16}$	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635
$\frac{5}{8}$	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688
$\frac{11}{16}$	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740
$\frac{3}{4}$	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792
$\frac{7}{8}$	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844
$\frac{15}{16}$	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896
$\frac{1}{1}$	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948
	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.0000
	0	1	2	3	4	5	6	7	8	9	10	11

TABLE IV
USEFUL RELATIONS.

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links
360°	= 21600'	= 1296000"
Radius	= arc of 57.2957790°	
Arc of 1° (radius = 1)	= .017453292	
Arc of 1' (radius = 1)	= .000290888	
Arc of 1" (radius = 1)	= .000004848	

$$\pi = 3.141592654$$

$$\sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163$$

$$\sqrt[3]{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776$$

$$\pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167$$

$$\frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776$$

$$\sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205$$

$$\frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11½ miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{\sum v^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULAE.

Horizontal Distance = R — R sin² a + C cos a

Vertical Distance = R ½ sin 2 a + C sin a

R = Reading × $\frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

910 14
43
914 44
119 50.8
7
119 43.8
33

46.5
67
67
9.64
304
912
1703

TABLE X.
MIDDLE ORDINATES OF RAILS
Length of Rail (feet)

C	R	30	28	26	24	22	20	C	R	30	28	26	24	22	20
o /	Feet	Inch	Inch	Inch	Inch	Inch	Inch	o	Feet	Inch	Inch	Inch	Inch	Inch	Inch
0-20	17189	.08	.07	.06	.05	.04	.03	8	716.8	1.88	1.64	1.42	1.20	1.01	.84
0-40	8594	.16	.14	.12	.10	.08	.07	9	637.3	2.12	1.84	1.60	1.35	1.14	.94
1-0	5730	.24	.20	.18	.15	.13	.10	10	573.7	2.36	2.05	1.78	1.50	1.27	1.04
1-20	4297	.31	.27	.23	.20	.17	.13	11	521.7	2.59	2.26	1.95	1.65	1.39	1.15
1-40	3438	.39	.34	.29	.25	.21	.17	12	478.3	3.83	2.47	2.15	1.81	1.54	1.26
2-0	2865	.47	.41	.35	.30	.25	.20	13	441.7	3.05	2.66	2.30	1.96	1.66	1.36
2-20	2456	.55	.48	.41	.35	.29	.23	14	410.3	3.30	2.87	2.48	2.10	1.78	1.46
2-40	2149	.63	.55	.47	.40	.33	.27	15	383.1	3.54	3.08	2.68	2.26	1.91	1.57
3-0	1910	.71	.62	.53	.45	.38	.31	16	359.3	3.76	3.28	2.83	2.40	2.04	1.67
3-20	1719	.78	.68	.59	.50	.42	.35	17	338.3	4.00	3.48	3.02	2.57	2.16	1.78
3-40	1563	.86	.75	.65	.55	.46	.38	18	319.6	4.21	3.67	3.18	2.70	2.28	1.87
4-0	1433	.94	.82	.71	.60	.50	.42	19	302.9	4.45	3.89	3.36	2.86	2.41	1.98
4-20	1323	1.02	.89	.77	.65	.55	.45	20	287.9	4.70	4.09	3.55	3.00	2.54	2.09
4-40	1228	1.10	.96	.83	.70	.59	.48	22	262.0	5.16	4.44	3.84	3.30	2.80	2.29
5	1146	1.18	1.03	.89	.75	.63	.52	24	240.5	5.64	4.92	4.20	3.59	3.04	2.50
6	955.3	1.41	1.23	1.06	.90	.76	.62	26	222.3	6.07	5.29	4.58	3.88	3.29	2.70
7	819.0	1.65	1.44	1.24	1.05	.89	.73								

TABLE XI.
SHORT RADIUS CURVES

Radius Feet	Chord Feet	Central Angle	Deflection Angle	Deflection for 1 Foot
35	10	16-26	8-13	49.3
45	10	12-46	6-23	38.3
50	15	17-16	8-38	34.5
60	15	14-22	7-11	28.8
75	15	11-30	5-45	23.0
100	20	11-30	5-45	17.3
120	20	9-34	4-47	14.3
150	20	7-39	3-49	11.5
190	25	7-32	3-46	9.15
200	25	7-10	3-35	8.6
225	25	6-25	3-12	7.7
240	25	5-58	2-59	7.2
250	25	5-44	2-52	6.9
275	25	5-12	2-36	6.2
288	50	9-58	4-59	6.0
300	50	9-32	4-46	5.7
350	50	8-12	4-06	4.9
376	50	7-40	3-50	4.6
400	50	7-10	3-35	4.3
410	50	7-00	3-30	4.2

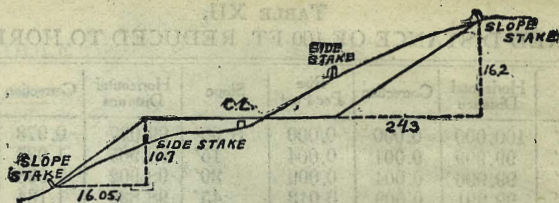
To find length of curve divide angle from P. C. to P. T. by central angle of chord, and multiply by length of chord.

TABLE XII.
INCLINED DISTANCE OF 100 FT. REDUCED TO HORIZONTAL

Slope	Horizontal Distance	Correction	Rise Per Foot	Slope	Horizontal Distance	Correction	Rise Per Foot
0°00'	100.000	0.000	0.000	8°00'	99.027	0.973	0.139
15'	99.999	0.001	0.004	15'	98.965	1.035	0.143
30'	99.996	0.004	0.009	30'	98.902	1.098	0.148
45'	99.991	0.009	0.013	45'	98.836	1.164	0.152
1 00	99.985	0.015	0.017	9 00	98.769	1.231	0.156
15	99.976	0.024	0.022	15	98.700	1.300	0.161
30	99.966	0.034	0.026	30	98.629	1.371	0.165
45	99.953	0.047	0.031	45	98.556	1.444	0.169
2 00	99.939	0.061	0.035	10 00	98.481	1.519	0.174
15	99.923	0.077	0.039	15	98.404	1.596	0.178
30	99.905	0.095	0.044	30	98.325	1.675	0.182
45	99.885	0.115	0.048	45	98.245	1.755	0.187
3 00	99.863	0.137	0.052	11 00	98.163	1.837	0.191
15	99.839	0.161	0.057	15	98.079	1.921	0.195
30	99.813	0.187	0.061	30	97.993	2.008	0.199
45	99.786	0.214	0.065	45	97.905	2.095	0.204
4 00	99.756	0.244	0.070	12 00	97.815	2.185	0.208
15	99.725	0.275	0.074	15	97.723	2.277	0.212
30	99.692	0.308	0.078	30	97.630	2.370	0.216
45	99.657	0.343	0.083	45	97.534	2.466	0.221
5 00	99.619	0.381	0.087	13 00	97.437	2.563	0.225
15	99.580	0.420	0.092	15	97.338	2.662	0.229
30	99.540	0.460	0.096	30	97.237	2.763	0.233
45	99.497	0.503	0.100	45	97.134	2.866	0.238
6 00	99.452	0.548	0.105	14 00	97.030	2.970	0.242
15	99.406	0.594	0.109	15	96.923	3.077	0.246
30	99.357	0.643	0.113	30	96.815	3.185	0.250
45	99.307	0.693	0.118	45	96.705	3.295	0.255
7 00	99.255	0.745	0.122	15 00	96.593	3.407	0.259
15	99.200	0.800	0.126	15	96.479	3.521	0.263
30	99.144	0.856	0.131	30	96.363	3.637	0.267
45	99.087	0.913	0.135	45	96.246	3.754	0.271

TABLE XIII.
MINUTES IN DECIMALS OF A DEGREE.

0 30"	.00833	10' 30"	.17500	20' 30"	.34167	30' 10"	.50833	40' 30"	.67500	50' 10"	.84167
1 00	.01667	11 00	.18333	21 00	.35000	31 00	.51667	41 00	.68333	51 00	.85000
30	.02500	30	.19167	30	.35833	30	.52500	30	.69167	30	.85833
2 00	.03333	12 00	.20000	22 00	.36667	32 00	.53333	42 00	.70000	52 00	.86667
30	.04167	30	.20833	30	.37500	30	.54167	30	.70833	30	.87500
3 00	.05000	13 00	.21667	23 00	.38333	33 00	.55000	43 00	.71667	53 00	.88333
30	.05833	30	.22500	30	.39167	30	.55833	30	.72500	30	.89167
4 00	.06667	14 00	.23333	24 00	.40000	34 00	.56667	44 00	.73333	54 00	.90000
30	.07500	30	.24167	30	.40833	30	.57500	30	.74167	30	.90833
5 00	.08333	15 00	.25000	25 00	.41667	35 00	.58333	45 00	.75000	55 00	.91667
30	.09167	30	.25833	30	.42500	30	.59167	30	.75833	30	.92500
6 00	.10000	16 00	.26667	26 00	.43333	36 00	.60000	46 00	.76667	56 00	.93333
30	.10833	30	.27500	30	.44167	30	.60833	30	.77500	30	.94167
7 00	.11667	17 00	.28333	27 00	.45000	37 00	.61667	47 00	.78333	57 00	.95000
30	.12500	30	.29167	30	.45833	30	.62500	30	.79167	30	.95833
8 00	.13333	18 00	.30000	28 00	.46667	38 00	.63333	48 00	.80000	58 00	.96667
30	.14167	30	.30833	30	.47500	30	.64167	30	.80833	30	.97500
9 00	.15000	19 00	.31667	29 00	.48333	39 00	.65000	49 00	.81667	59 00	.98333
30	.15833	30	.32500	30	.49167	30	.65833	30	.82500	30	.99167
10 00	.16667	20 00	.33333	30 00	.50000	40 00	.66667	50 00	.83333	60 00	1.00000



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

Handwritten calculations and notes on the right page of the notebook. The calculations involve sums and differences of numbers, often with a horizontal line underneath, suggesting a process of finding a total or a specific value. Some numbers are circled or underlined. The notes include:

999
402
597

276
999
505
494

589 569 538

597 571 545 520 494
410 430 461

999
520
479

504 516 508

479 430 483 484 487
495 483 491

999
405
594

618 627 618

594 594 594 594
618 627 3.81

C
0
0-20
0-40
1-0
1-20
1-40
2-0
2-20
2-40
3-0
3-20
3-40
4-0
4-20
4-40
5
6
7

To find

