

San Diego Sewer

No. 3.

TRANSIT

F.B. 714



714

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

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1	2½	21	49	41	95½
2	4¾	22	51½	42	98
3	7	23	53¾	43	100½
4	9½	24	56	44	102¾
5	11¾	25	58½	45	105
6	14	26	60¾	46	107½
7	16½	27	63	47	109¾
8	18¾	28	65½	48	112
9	21	29	67¾	49	114½
10	23½	30	70	50	116¾
11	25¾	31	72½	51	119
12	28	32	74¾	52	121½
13	30½	33	77	53	123¾
14	32¾	34	79½	54	126
15	35	35	81¾	55	128½
16	37½	36	84	56	130¾
17	39¾	37	86½	57	133
18	42	38	88¾	58	135½
19	44½	39	91	59	137¾
20	46¾	40	93½	60	140

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Table for Running on Slopes.

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

Angle.	Cor. in links	Angle.	Cor. in links.	Angle.	Cor. in links.	Angle.	Cor. in links.
0		0		0		0	
4	0-24	11	1-88	18	5-14	25	10-54
5	0-38	12	2-24	19	5-76	26	11-26
6	0-55	13	2-63	20	6-42	27	12-24
7	0-76	14	3-06	21	7-11	28	13-37
8	0-98	15	3-53	22	7-85	29	14-34
9	1-24	16	4-02	23	8-64	30	15-47
10	1-55	17	4-56	24	9-47	35	22-07

For Index See

Page 49 + 50

13+B } 22  
 13+C }  
 Calif + G 33  
 Calif E 34  
 21 + H 46  
 21 + G 47

L  
 N  
 T

2-8-5  
 111  
 41  
 571



17<sup>th</sup> St. N of K. Plugs 4 ft W. of Centre

Sta

2+00 = N. E. K. St = End of F. M. Donavans

work = Commencing of J. H. Finleys work

+25

+50

+75

1+00

+25

+50

+75

2+00

+25

+50

+75

3+00 = S. line of J St



17<sup>th</sup> St. N. of M. Algs 4 ft W. of Centre

Sta

$$\begin{array}{r} 59 \\ 25 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 159 \\ 59 \\ \hline 276 \end{array}$$

0+00

of P.C.

+12.4

+24.8

+37.2

+49.6

+62.0

+74.4

+83

1+09

+34

+59

+84

2+09

+34

+59

+84

3+09

+34

+59

= S. line L.

0+59

0+59 = N.L.M. St.

P.C.



14<sup>#</sup> St N of M. St  $\frac{1}{2}$  W. of Centre

Sta

3+79

+79

4+19

4+39 = N. line of L

+64

+89

5+14

+39

+64

+89

6+14

+39

+64

+89

7+14

+39 =

S. L of K. St

+59

+79

+99

8+19 =

N. L of K. St = Sta 0+00

For Continuation See Page (1)



of the St N. of B. St 3 ft W. of Centre

Sta

41+70 = 50' S. of S. line of A

41+95

42+22.5 = S. line of A. St

42+42.5

+62.5

+82.5

43+02.5 = N. line of A. St

+27.5

+52.5

+77.5

44+02.5

+27.5

+52.5

+77.5

45+02.5

+27.5

+52.5

+77.5

46+02.5 = S. line of A. St

+22.5

+42.5



8<sup>th</sup> St N. of B. 1/2<sup>mi</sup> W of Centre

Sta

46+62.5

+82.5 = N. line of 4th St

47+07.5

+32.5

+57.5

+82.5

48+07.5

+32.5

+57.5

+82.5

49+07.5

+32.5

+57.5

+82.5

49+02.5

+22.5

+42.5

+62.5

+87.5

50+12.5

+37.5

S. line of 4th St

N. line of 4th St



of <sup>the</sup> St N. of B. pgs 3 & 4 W. of Centre

Sta

50+62.5

+67.5

51+12.5

+57.5

+62.5

+67.5

52+12.5

+57.5

+62.5 = S. line of Cedar St

+82.5

53+02.5

+22.5

+42.5 = N. line of Cedar St

+67.5

+92.5

54+17.5

+42.5

+67.5

+92.5

55+17.5

+42.5



of <sup>th</sup> St N. of B. Fly 3 ft W of Centre

Sta

55+67.5

+92.5

56+17.5

2/4.0

+47.5 =

S. line of Date = 7 ft S. of Red line



Curve at 14<sup>th</sup> + D. running West to 15<sup>th</sup> flgs 4 ft S of Center  
Sta

0+00

Δ B.C. Lc

+09.9 = 49° 00'

+19.8 = 53°

+29.7 = 57°

+39.6 = 61°

+49.5 = 65°

+59.4 = 67° 30'

Δ E.C.

+67.2 = 25' W. from 14<sup>th</sup> St

+92.

1+17.2

+42.

+67.

+92.

2+17.2

Δ E.C. Lc = 2' 30" per ft.

+42.7 = E. line 13<sup>th</sup> St

+60.

+62.

+82.7 = C. 13<sup>th</sup> StP.C. L.  
P.E. R.

+11.

+12.

+17.

24



13<sup>st</sup> N of D. St

Sta.

2+84.14 = Def 28

+95 = " 32

3+06.18 = " 38

+17.2 = " 40

+28.22 = " 47

+31.1 = " 45 E.C.

+46.0 = 50 N of N. Side of D

+71

+96

4+21

+46

+71

+96

5+21

+46

+71

+96 = S. line of C. St

Donaldson



Survey at D. + 13<sup>m</sup> 22' Back from

Center running South

Sta

0

P.C.

+09.9 = 49°

+19.8 = 53°

+29.7 = 57°

+39.6 = 61°

+49.5 = 65°

+59.4 = 67° 30'

P.T.

+67° = 25' S. of S. of D.

+92

1+17

+42

+67

+92

2+17

+42

+67

+92

3+17

+42 = N. L. E. of



18<sup>m</sup> S of D St

Sta

0 3+62

+ +82

+ 4+02

+ +22 = S. S. of E. St

+ +47

+ +72

+ +97

+ 5+22

+ +47

1 + +72

+ +97

6 +22

+ +47

2 + +72

+ +97

7+22 = N. S. of F. St

3



## State N. of Ash.

Curva from ash to State

Sta	P.C.
0 0+00	P.C.
+ 09.9 = 49°	
+ 19.8 = 53°	
+ 29.7 = 57°	
+ 39.6 = 61°	
+ 49.5 = 65°	
+ 53.7	67° 30' (P.C.)
+ 67.6 = 25' off N. line of Beech	
+ 92.	
1- 1+17.6	
+ 42.	
+ 67.	
+ 92.	
2- 2+17.6	
+ 42	
+ 67	
+ 92	
3- 3+17.6	
+ 42.6 = S. Side Beech	
62.	
82.	



State St N. of Ash

Sta

4+02.6

+ 22.6 = N. line Buch

+ 47.

+ 72.

+ 97.

+ 5+22.6

+ 47.

+ 72.

+ 97.

1- 6+22.6

+ 47.

+ 72.

+ 97.

2- 7+22.6 = S. line of Cedar

+ 42.

+ 62.

+ 82.

3- 8+02.6 = N. line of Cedar

+ 27.

+ 52.

+ 77.



## State St. Map Ash.

Sta

9 + 02.6

+ 27.

+ 52.

+ 77.

10 + 02.6

+ 27.

+ 52.

+ 77.

11 + 00.0

= S. Line of Date

+ 20.

+ 40

+ 60

+ 80

= N. E. of Date St. = Ang  $9^{\circ} 48'$  L

12 + 05

+ 30

+ 55

+ 80

13 + 05

+ 30

+ 55

+ 80



State St. N. of Ash

Sta

14+05

+30

<sup>19</sup>

+49 = S. L. of Calm. St

+69

+89

15+09

+29 = N. L. of Calm. St

+54

+79

16+04

+29

+54

+79

17+04

+29

+54

+79

18+04

+20

+40

+60

= S. line of Fir St = Aug 10. 17' Left



State St N. of Ash

Sta

18+80

19+00 = N. line of Fir St.

+25

+50

+75

20+00

+25

+50

+75

21+00

+25

+50

+75

22+00 = S. line of Grape St.

+20

+40

+60

+80 = N. line of Grape St.

23+05

+30

+55



State St. of Ash St

Sta

23+80

24+05

+30

+55

+80

25+05

+30

+55

+80.2 = S line of Hawthorn St - Wash tank



Curva from Prop't line on N. 41<sup>st</sup>

0+00 Y = W. line of 18<sup>th</sup> St on N. = 24

+07 = P.C.

+17 = 2° 30'

+27 = 5° 00'

+37 = 7° 30'

+47 = 10° 00'

+57 = 12° 30'

+67 = 15° 00'

+77 = 17° 30'

+87 = 20° 00'

+96.6 = 22° 24' P.T.

+97.9 = 50' N. of N. line of ch. St



D. St E. of 14<sup>th</sup> St

0+00	=	V. P.C. = 20' S of Centre
+09.9	=	49° 20'
+19.8	=	53.40'
+29.7	=	58.10'
+39.6	=	62.20'
+49.5	=	66.40'
+51.0	=	67.30' = P.T. = 10' E. of E. End of 14 <sup>th</sup> St
+66	=	25' E of E. line of 14 <sup>th</sup> St
+91		
1+16		
+41		
+66		
+91		
2+16		
+41		
+66		
+91		
3+16		
+41		
+66		
+91		



D St E of 14<sup>th</sup>

4+16

+41

= W. line of 15<sup>th</sup> St = flush Tank



13<sup>th</sup> St N of D. 0+00 =

20' Back from Centre of D.

Sta

0+00 = P.C.

+10 = 49° 20'

+20 = 53° 40'

+30 = 58° 00'

+40 = 62° 20'

+50 = 66° 40'

+56 = 69° 30' P.T.

+67 = 25' N of N. E. of D. St.

+92.

1+17.

+42.

+67.

+92.

2+17.

+42.

+67.

+92.

3+17.

+42.8 =

S. E. of C. St



13<sup>th</sup> St of D

Sta

3+62.8

+82.

4+02.

+22.8=

N. L. of C. St

+47

+72.

+97.8

5+22.

+47.

+72.

+97.

6+22.8

+47.

+72.

+97.

7+22.8=

S. L. of B. St

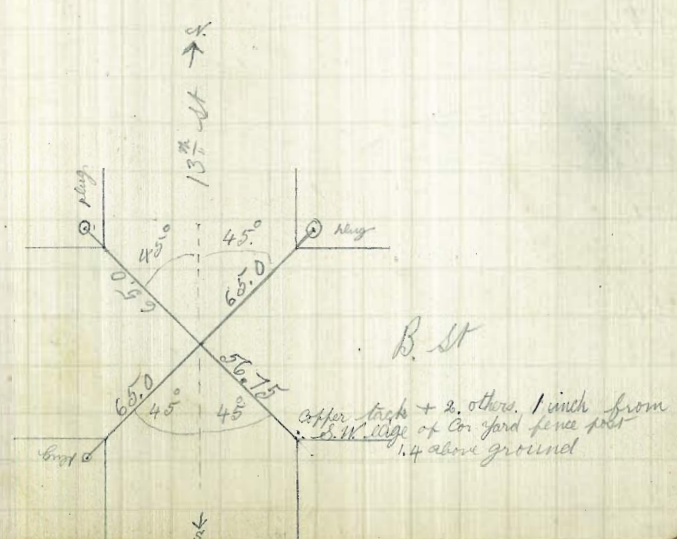
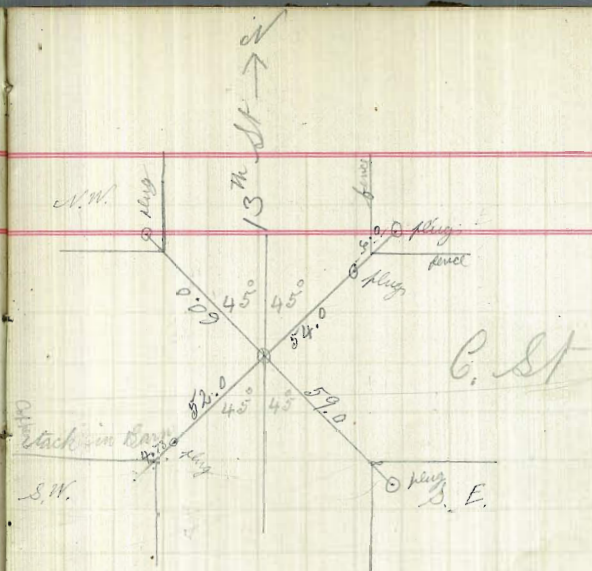
+42

+62

+82.

8+02.8=

N. L. of B.





13<sup>th</sup> St. of D.

Sta

8+27.8

+52.

+77.

9+02.8

+27.

+52.

+77.

10+02.8

+27.

+52.

+77.

11+02 = S. of St. = flush Tank



F<sup>th</sup> St West of 15<sup>th</sup>

0+00 = 20' from Centre P.C.

+10 = 48° 22' 40"

+20 = 51° 47' 20"

+30 = 55° 08'

+40 = 58° 30' 40"

+6 = 61° 18'

+61 = 25' W. of W. L. of 15<sup>th</sup> St

+86

1+11

+36

+61

+86

2+11

+36

+61

+86

3+11

+36

+61

+86

4+11

+37.3

+37.3 = E. L. of 14<sup>th</sup> St = flush tank



Con from 1<sup>st</sup> St to 9<sup>th</sup> St

0	=	of	
+14	=	P.C.	
+20	=	5° 06'	
+26	=	10° 12'	
+32	=	15° 18'	
+38.9	=	20° 38'	P.T. = 5.5 N. of N.E. St

Con at 1<sup>st</sup> St to 10<sup>th</sup> St

0+00	=		
+14	=	P.C.	
+20	=	5° 06'	R
+26	=	10° 12'	"
+32	=	15° 18'	"
+38.9	=	20° 38'	P.T. 3.0 N. of N.E. of 1 <sup>st</sup> St



Con with Main line at 12<sup>th</sup> + L St

Sta

0+00 =

of

+10 =

P.C.

+20 = 6° 30' L

+30 = 13° 00'

+40 = 19° 30'

+45 = 22° 32' P.T. = 7.4' dep. N. of L St

Connection with Main line at 11<sup>th</sup> St + L St

0+00 =

of

+14 =

P.C.

+20 = 5° 06'

+26 = 10° 12'

+32 = 15° 18'

+38 = 20° 24'

+40.55 = 22° 35' P.T.



17<sup>m</sup> N. of H. St

Sta

0+00 = <sup>avg from sp. = 25' left</sup> 36.9 W of W line of 17<sup>m</sup> St  
 +41 = P.C. 90. L.  
 +51 = 4° 30'  
 +61 = 9° 00'  
 +71 = 13° 30'  
 +81 = 18° 00'  
 +91 = 22° 30'  
 1+01 = 27° 00'  
 +09 = 32.08 = 1+12.4 P.T. = 25' N. of W. line of H. St  
 +34.  
 +59  
 +84'  
 2+09  
 +34  
 +59  
 +84'  
 3+09  
 +34  
 +59.  
 +94.6 = S. line of S. St



17<sup>th</sup> N. Pop H. St

Sta

4 + 14.6

+ 34

+ 54

+ 74.6

N. line of G. St

5 + 00

+ 25

+ 50

+ 75

6 + 00

+ 25

+ 50

+ 75

7 + 00

+ 25

+ 50

8 + 00 = S. line of F. St

+ 20

+ 40

+ 60

+ 80 = N. line of F. St



17<sup>th</sup> St Nap H. St

Sta

9+05

+30

+55

+80

10+05

+30

+55

+80

11+05

+30

+55

+80 = S line of E. St. Truck Tank



17<sup>th</sup> St South of D. St  
Sta

0+00 = V

+20.7 = PC

+30.7 = 4° 30'

+40.7 = 9° 00'

+50.7 = 13° 30'

+60.7 = 18° 00'

+70.7 = 22° 30'

+80.7 = 27° 00'

+88.8 = 25' S. of S. line of D. St

~~+87.8~~ 31° 00' P.T. not set =

1+14

+39

+64'

+89

2+14

+39

+64'

+89

3+14

+39

~~+64'~~

+97 = N. line of E. St = Flush tank



19<sup>th</sup> St N. of H St = 11 ft W of W. L. of 19<sup>th</sup> St

Sta

0+00 = V

+18 = P.C. 90° L

+28 = 4° 30' Sub. Tan 38.7

+38 = 9° 00' P.I. 62° 32'

+48 = 13° 30'

+58 = 18° 00'

+68 = 22° 30' back in bank

+78 = 27° 00'

+87.5 = 31° 16' P.T.

1+01.5 = 25' N. of N. line of H St

+26

+51

+76

2+01

+26

+51

+76

3+01

+26

+51

+86 = S. line of G St



Sta 0+00 = Y 22' W of  
Centre on H.

# California St. N. of H.

Sta

0+00 =	Y = P.C.	
+09.9 = 49°		Note; Plugs on Curva are
+19.8 = 53°		4 ft W from Centre of ditch
+29.7 = 57°		
+39.6 = 61°		
+49.5 = 65°		
+56.1 = 67.30° = P.T.		N. line of H. St
+81		
1+06		= E rail of Side track
+18.5		= C. of " "
+31.0		skun to = W. rail of " "
+56		
+81		
2+06		
+31		
+56		
+81		
3+06		
+31		
+54.5 =		S. line of G. St
+92.0		

Note; Plugs from N. line of H.  
are 3 ft E of Centre







California St N of H. plugs 3 ft E of Centre  
Sta

9+79.5

10+04.5

+29. = S. rail of side track

+54. = N.W. rail. plug under rail closest H. tie

+79. =

11+04.5 = S. line E. St

+42.0 = Centre line E. St

+77.5 = N. line E. St

12+04.5 =

+29.

+54.

+79.

13+04.

+29.

+54.

+79.

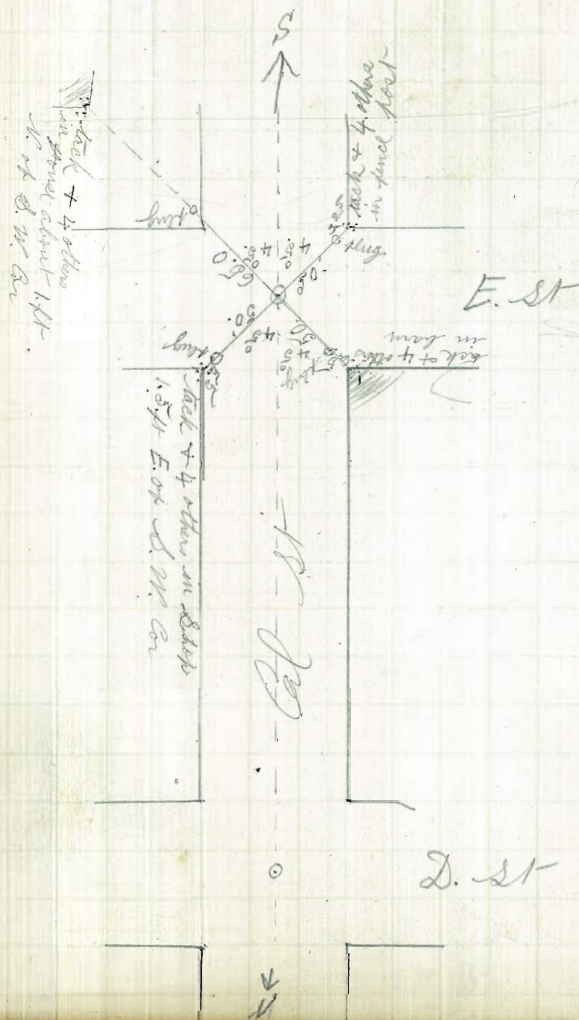
14+04.

+29.

+54.

+79.

S. line D. St





COUNTERSIGNED:

CITY ENGINEER.

**TIME CHECK.**

SAN DIEGO, ..... 188

City of San Diego, Dr.

To .....

For ..... days labor at \$ ..... per day, \$ .....

Less ..... \$ .....

Balance, \$ .....

Accrued .....

Work done on .....



State + Loy T. No 1 Finley

Column + Hare T No 1

13 + M T No 4 P 32

2 + Loy T No 4 P 20

3 + Loy T No 4 P 15

20 + H T No 4 P 2

20 + G T No 3 P 47

21 + H T No 3 P 46

Cal + E T No 3 P 34

Cal + G T No 3 P 33

*[Large handwritten scribble]*



California N of H. St Apr 3<sup>rd</sup> 11 E of Centre

Sta

Main line of R.R. = 8' from  
 Plug line to W. rail

15+04.

+29.

+41.5 Centre D. St

+54.

+79.

16+04. N. line D. St <sup>4.2 from cor. of front street to</sup>  
 back in station

+29.

+54.

+79.

17+04. ✓

+29.

+54.

+79.

18+04. ✓

+29.

+54.5

+72.0 = S. line C. St

+92

19+12 = C. " " "

+32 = on S. E. rail of side track

+52 = N. line C. St



California St N. of H. ~~plugs 3 ft E of Centre to Sta 22+02~~

Sta. ~~plugs 7 ft E of Centre from Sta 22+77~~

19+62 = N.W. rail of side track

+77 = 25' N. of ch. line le. St

20+02

+27

+52

+77

21+02

+27

+52

+77.49 = W. rail of side track) ~~Sewer to be on Centre of~~

22+02 = ang 3° 13' R Street to this point

+24 = E. rail

+27 track in the also plugs down

+52 = S. line B. St

+72 = ang 3° 13' L. ~~Sewer to be 4 ft E. of~~  
Centre of St. from this point

+92

23+12 = tack in 3<sup>rd</sup> plank from N. side of Flume

+32 = N. line B. St

+57

+82

24+07

+32



Cal. Permian St. N. of St. 119077 East St Center  
Sta

24+57

+82

25+07

+32

+57

+82

26+07

+32 = S. line St. St.

+52

+72

+92

27+12 = N. line St. St.

+37

+62

+87

28+12

+37

+62

+87

29+12

+37



California St. N. of H. Plugs 7 ft. E. of St. Center

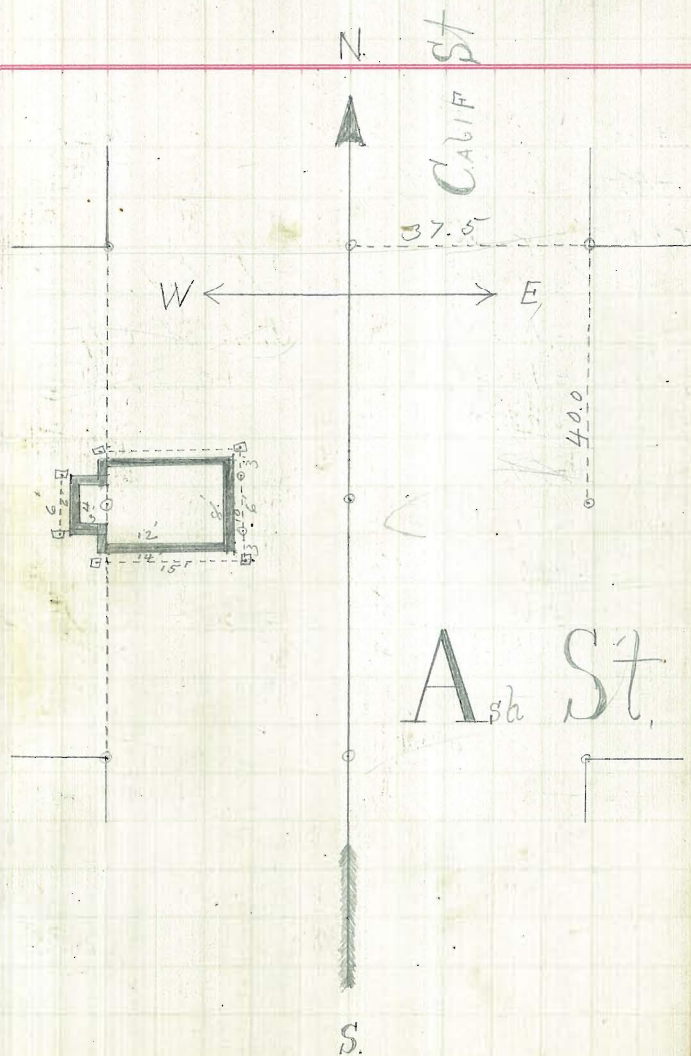
Sta

29+62

+89

$\frac{14}{2}$   
30+11

= S. line Ash = Flush tank





21<sup>th</sup> St. S. of J.

0+00 =  $\gamma$  on 3<sup>rd</sup> Sta. of line running <sup>curve</sup> W. of Centre of 21<sup>th</sup>

+02.8 = P.C. 90° R

+12.8 = 4° 30' R.

+22.8 = 9° 00'

P.I. 67° 50'

+32.8 = 13° 30'

Sub tan 42.8

+42.8 = 18° 00'

Curva 33° 55'

+52.8 = 22° 30'

+62.8 = 27° 00'

+72.8 = 31° 30'

+78.2 = 33° 55'

P.T.

+85.4 =

25' S. of S. of J. St

+10.

+35

+60 ✓

+85

2+10

+35

+60 ✓

+85



21<sup>st</sup> St S of II St

3+10

+35

+60 = N. line of J. St = flush tank



20<sup>th</sup> St N of N. Plunge 4 ft W of Centre

0+00 = Y = <sup>P.C.</sup> 22' W of Centre of 20<sup>th</sup> St. on cl.

+09.9 = 49°

+19.8 = 53°

+29.7 = 57°

+39.6 = 61°

+49.5 = 65°

+56. = 67° 30' = P.T.

+68 = 25' N of N. line of N. St

+93

1+18

+43

+68

+93

2+18

+43

+68

+93

3+18

+43 = S. L of M. St

+63

+83 = C. . . m. St



20<sup>th</sup> St. N. of N. St. Plugs 4 ft W. of Centre

Sta

4+03

+23 = N. Lot 9M St

+48

+73

+98

5+23

+48

+73

+98

6+23

+48

+73

+98

7+21 = S. line of L. St

+41

+61 = E. " " " St

+81

8+01 = N. line of L. St

+26

+51

+76



20<sup>th</sup> St. Cap. N. St. 4 ft. W. of Centre

Sta

9+01<sup>✓</sup>

+26

+57

+76

10+01<sup>✓</sup>

+26

+51

+76

11+03 = S. line of K. St

+23

+43 = S. " " " "

+63

+83 = N. S. of K. St

12+08

+33

+58

+83<sup>✓</sup>

13+08

+33

+58

+83<sup>✓</sup>



20<sup>th</sup> St Kap N St pgs 4 ft W of Centre

Sta

14+08

+33

+58

+83 = S. L. of J. St = flush tank



21<sup>st</sup> N. of I. St Y.N. = 38 ft W. of W. L. of 21<sup>st</sup> St

Flags 4 ft W. of Centre

Location of Curve

- 0+00 =
- +05 = 2° 30'
- +10 = 5° 00'
- +15 = 7° 30'
- +20 = 10° 00' not set
- +22.5 = 11° 15'
- +47.4 =
- +57 = 5° 10'
- +67 = 10° 00'
- +77 = 15° 00'
- +87 = 20° 00'
- +97 = 25° 00'
- 1+07.4 = 30° 00'
- +14.8 = 33° 42'
- +27.0 =
- +52
- +77
- 2+02
- +27
- +52
- +77

Y = P.C. 100 L

P.I. 22° 30' R  
Sub Tan 11.4  
Curva 11° 15'

P.C. 100 L

P.I. 67° 24'  
Sub Tan 38.2  
Curva 33° 42'

50' N. of N. L. of I. St

Sta

0+00 = P.B. L. 35' W. of W. L. of 21<sup>st</sup> St

- +11 = 4°
- +22 = 8°
- +33 = 12°
- +44 = 16°
- +55 = 20°
- +66 = 24°
- +77 = 28°
- +88 = 32°
- +99 = 36°
- +10 = 40°
- +21 = 44°

29  
24 14-45 P.I.

+39 = 1+27 = 50' N. of N. L. of I. St



21<sup>st</sup> St. of I. St. pgs 4<sup>th</sup> W. of Centre

Sta

3+02

+27

+52

<sup>30</sup>  
+82 = S. Loop H. St

4+07

+32

+57

+82 = N. Loop H. St

5+07

+32

+57

+82

6+07

+32

+57

+82

7+07

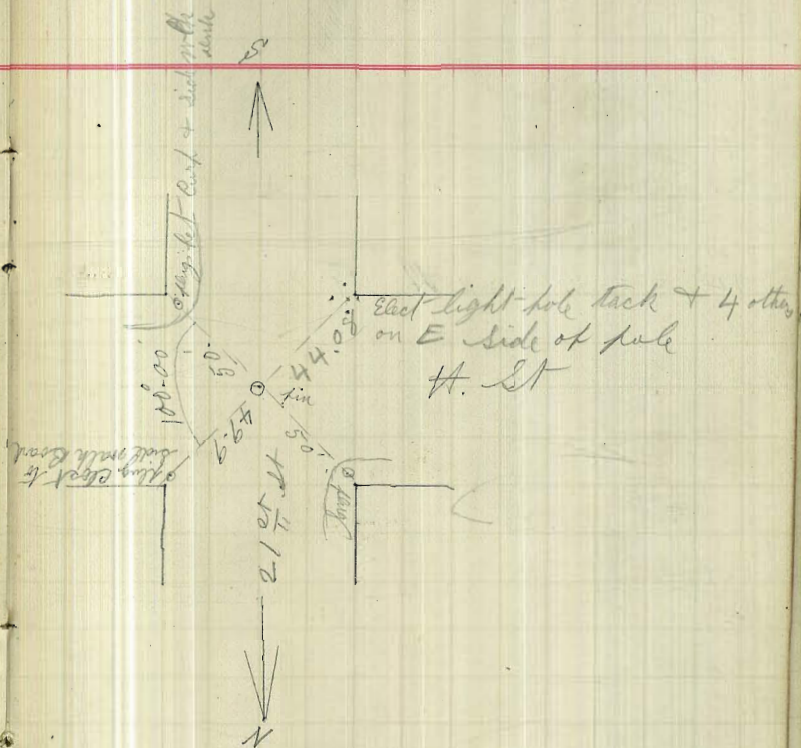
+32

+57

<sup>30</sup>  
+94 = S. Loop G. St

J. I. + H. St

J. I. + F. St





21<sup>st</sup> St N of II St 4 ft W of C

Sta

8+14

+34 = C. E. St = ang.  $00^{\circ}13' L$

+54

+74 = N. E. of St

+99

9+24

+49

+74

+99

10+24

+49

+74

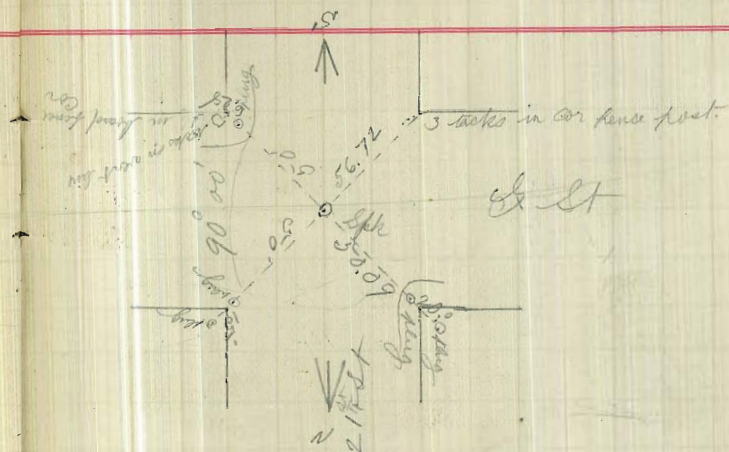
+99

11+24

+49

+73

= S. L. H. St = Truck tank





Location of Flush

- 1 on 8<sup>th</sup> at Date on Prop line
- 1 " 13<sup>th</sup> <sup>Sub A</sup> " " " "
- 2 " C. 200 ft E. of 14<sup>th</sup> <sup>2<sup>nd</sup></sup> 175 ft
- 2 " B. 175<sup>ft</sup> E " " <sup>2<sup>nd</sup></sup> 200
- 1 " 14<sup>th</sup> N. line of H.
- 1 " G. E. line " 14<sup>th</sup>
- 1 " 13<sup>th</sup> N. " " F.
- 1 " F. E. " " 14<sup>th</sup>
- 1 " E. E. " " 14<sup>th</sup>
- 1 " D. W. " " 15<sup>th</sup>
- 1 " I. E. " " 14<sup>th</sup> St
- 1 " 17<sup>th</sup> S. line of E. St
- 1 " 17<sup>th</sup> N. " " " "
- 1 " " " " " " "
- 1 on 20<sup>th</sup> at S. line of J. St
- 1 on 20<sup>th</sup> at N. line of J. St
- 1 on California St S. line of Ask St
- 1 on 21<sup>st</sup> St at S. line of F. St
- 1 on 21<sup>st</sup> St at N. line of J. St

Tanks

- plug 3 ft E. + W. of Centre
- " 4 ft " " " "
- W. of 15<sup>th</sup> plug 4 ft N. + S. of Centre
- " " " " " " " "
- plug 4 ft E. + W. of Centre
- " " N. + S. " "
- " " E. + W. " "
- " " N. + S. " "
- " " " " " "
- " " " " " "
- " " " " " "
- plug 4 ft E. + W. of Centre
- " " " " " "
- plug 4 ft E. + W. of Centre
- " " " " " "
- plug 3 ft E. + W. of Centre of Sewer
- plug 4 ft E. + W. of Centre
- " " " " " " " "



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- 1 17<sup>th</sup> N. of K. St
- 2 17<sup>th</sup> N. of M. "
- 3 " " " " "
- 4 8<sup>th</sup> N. of B. St
- 5 " " " " "
- 6 " " " " "
- 7 " " " " "
- 8 S. St W. of 14<sup>th</sup> St
- 9 ~~13<sup>th</sup> N. of D. St~~
- 10 13<sup>th</sup> S. of D. St
- 11 " " " " "
- 12 State N. of Oak St
- 13 " " " " "
- 14 " " " " "
- 15 " " " " "
- 16 " " " " "
- 17 " " " " "
- 18 Curv at N. of 18<sup>th</sup> Sts
- 19 D. St E. of 14<sup>th</sup> St
- 20 " " " " "
- 21 13<sup>th</sup> N. of D. "

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- 22 13<sup>th</sup> St N. of D. St + Tie Points <sup>on B+C</sup> at 13<sup>th</sup>
- 23 " " " " " "
- 24 F. St W. of 15<sup>th</sup> St
- 25 Connection with main line at 9<sup>th</sup> + 10<sup>th</sup> at L.
- 26 " " " " " at 11<sup>th</sup> + 12<sup>th</sup> at L.
- 27 17<sup>th</sup> N. of H. St
- 28 " " " " " "
- 29 " " " " " "
- 30 17<sup>th</sup> S. of D. St
- 31 19<sup>th</sup> N. of H. St
- 32 California St N. of H.
- 33 tie points on S. St " " "
- 34 tie points on E. St " " "
- 35 " " " " " "
- 36 " " " " " "
- 37 " " " " " "
- 38 California St N. of H.
- 39 21<sup>th</sup> St S. of I
- 40 " " " " " "
- 41 20<sup>th</sup> St N. of H.
- 42 " " " " " "



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2	44	20 <sup>th</sup> St. N. of N. St.
3	45	21 <sup>st</sup> St. N. of I. St.
4	46	to 45 on 21 <sup>st</sup> + 4 <sup>th</sup> St.
5	47	" to 46 on " 21 <sup>st</sup> & 8 <sup>th</sup> St.
6	48	" " " " " "
7	49	Location of Flush Tanks
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21		



TRAVERSE TABLE FOR TRANSIT BOOK,  
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	80
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	81
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	82
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	83
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	84
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	85
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	86
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	87
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	88
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	89
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	90
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	71
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	72
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	73
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	74
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	75
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	76
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	77
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	78
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	79
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	80
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.

$\frac{3.57}{2}$   
 $\frac{0.009 \ 3.168}{0.5}$   
 $\frac{0.4}{20 \ 25 \ 30}$   
 $\frac{2.5 \ 2.10}{2}$

