FIELD BOOK

G-226

# CITY ENGINEER'S OFFICE

Pages.

| | | |
|---|---|---|
| 1-2 | — | Water line stakes — Bramson Pl. |
| 3 | — | Sewer stakes — Balboa stables. |
| 4-5 | | Curb stakes — 39th — N. of Adams. |
| 6-8 | | Water line stakes — 69th N. of Saranac |

Grades for 6" Water Main
on Bramson Place from 33rd to
Boundary — 10' S. of ℄ and stakes
4' S.

**Left page**
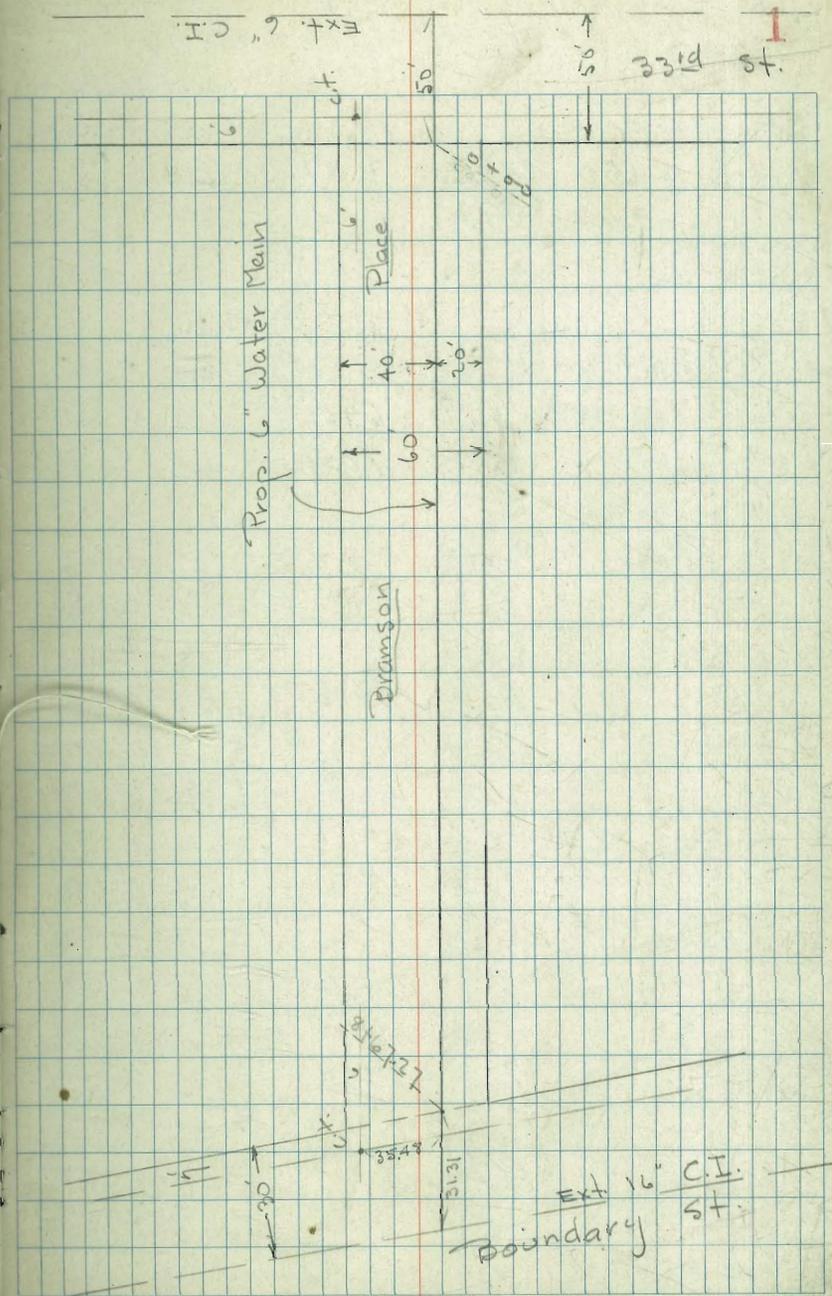
| | | | | |
|---|---|---|---|---|
| B.M. | | | | 374.25  SW. 33rd + El Cajon |
| | 1.56 | 375.81 | 8.52 | 367.29 |
| | 4.62 | 371.91 | | |

| Sta. | | | Grade | |
|---|---|---|---|---|
| 0+00 = W/ 33rd | 5.9 | 69.9 | 67.0 | C 2.9 |
| | 5.0 | 70.8 | | |
| +50 | | | 66.9 | C 3.9 |
| 1+00 | 5.9 | 69.9 | 66.4 | C 3.5 |
| +40 | 6.6 | 69.2 | 65.8 | C 3.4 |
| +80 | 7.0 | 68.8 | 65.3 | C 3.5 |
| 2+20 | 7.5 | 68.3 | 64.7 | C 3.6 |
| +60 | 8.1 | 67.7 | 64.2 | C 3.5 |
| 3+00 | 8.5 | 67.3 | 63.6 | C 3.7 |
| +40 | 5.4 | | 63.1 | C 3.4 |

**Right page**

| | | | | |
|---|---|---|---|---|
| 3+80 | 5.9 | 66.0 | 62.5 | C 3.5 |
| 4+20 | 6.5 | 65.4 | 62.0 | C 3.4 |
| +60 | 11.7 | 60.2 | 61.6 | (F) 1.4 |
| 5+00 | 6.9 | 65.0 | 61.6 | C 3.4 |
| +40 | 6.1 | 65.8 | 62.0 | C 3.8 |
| 6+00 | 4.8 | 67.1 | 62.8 | C 4.3 |
| +50 | 4.8 | 67.1 | 63.4 | C 3.7 |
| 7+00 | 4.3 | 67.6 | 64.1 | C 3.5 |
| +50 | 3.8 | 68.1 | 64.7 | C 3.4 |
| 8+00 | 2.8 | 69.1 | 65.4 | C 3.7 |
| +40 | 3.1 | 68.8 | 65.7 | C 3.1 |
| | | | 4.62 | 367.29 |
| 8+67.27 = E.L. Boundary | | | Check | |
| | 8.46 | 375.75 | 15/ G.M. | 374.24 |

Begining at W. End Balboa Riding Stab
To old Line in goldgulch Road

Arbitrary Elev. of flowLine of M.H. 1     100.00'

| Station | | | | | |
|---|---|---|---|---|---|
| | | 6.89 | 106.89 | 12.58 | 94.31 |
| | | 0.64 | 94.95 | 12.50 | 82.45 |
| | | 0.03 | 82.48 | 12.76 | 69.72 |
| | | 0.40 | 70.12 | 13.09 | 57.03 |
| | | −0.03 | 57.00 | 12.85 | 44.15 |
| 3+52.83 | M.H.#3 | 9.87 | 34.48 | 29.39 | C5.1 |
| 3+13 | | 4.82 | 39.5 | 38.3 | C1.2 |
| 2+73 | Bk | 4.78 | 52.22 | 47.22 | C5.0 |
| 2+33 | | 6.17 | 63.95 | 58.03 | C5.9 |
| 1+93 | Bk | 9.64 | 72.84 | 68.84 | C4.0 |
| 1+53 | | 1.96 | 80.52 | 75.9 | C4.6 |
| 1+13 | | 6.66 | 88.29 | 82.95 | C5.3 |
| | Δ Rt | 140° 15' | | | |
| 0+72.98 | MH 2 | 12.58 | 94.31 | 90.0 | C4.31 |
| 0+36.5 | | 5.32 | 101.57 | 95.0 | C6.6 |
| 00 | MH 1 | .49 | 100.00 | 106.40 | C6.4 |
| | | .20 | 44.35 | | |

11th St. Canyon

Gold Gulch Road.

M.H.2   50° 15'

0+72.98

3+52.83   M.H. 3

M.H.1.

Balboa Riding Stables

Curb Stakes for City Crew to
Raise Sunken curb on E. side
39th 300' N. of Adams

3-25-47

Osborne

#897

W.O. 210

Circle Dr.

39th St.

3+00

c.t.

Merivale Ave

N

← 25' →

← 10'

15' →

curb face

0+00

12'

10' Rad.

Adams

Ave.

c.t.
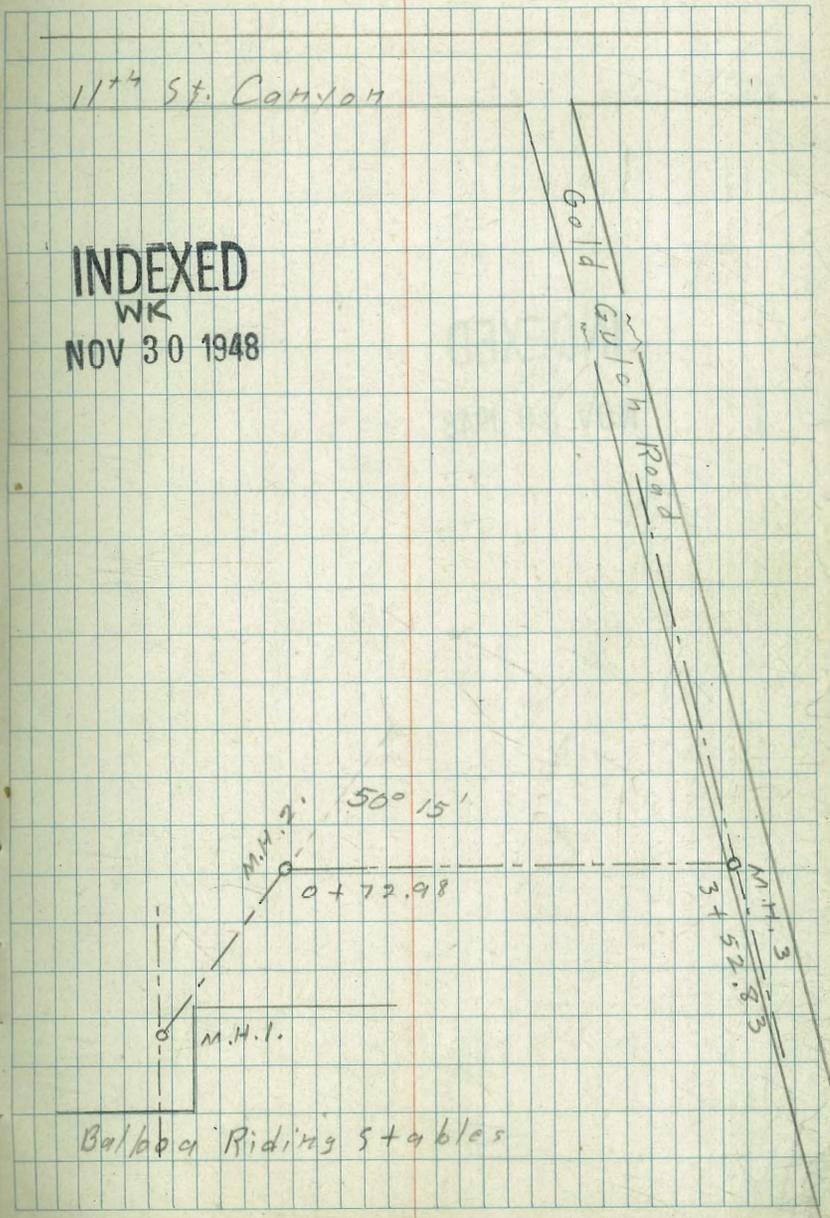
| Sta. | | | | | S.E. 39th + Adams |
|---|---|---|---|---|---|
| B.M. | 1.38 | 372.25 | | 370.87 | |
| | | | | | |
| 0+00 = N.L. Adams | | | | 370.50 | |
| | | | | 1.75 | |
| +40 | | | | 68.30 | |
| | | | | 3.95 | |
| +60 | | | | 67.40 | |
| +61 | | | 67.36 | 4.85 | |
| | | | 4.89 | | |
| +80 | | | | 66.60 | |
| | | | | 5.65 | |
| 1+00 | | | | 65.90 | |
| | | | | 6.35 | |
| +20 | | | | 65.40 | |
| | | | | 6.85 | |
| +40 = P.VC. | | | | 65.10 | |
| | | | | 7.15 | |
| +79 | | | 64.78 | | |
| +80 | | | 7.47 | 64.77 | |
| T.P. | 4.74 | 369.61 | 7.38 | 362.87 | |
| 2+20 | | | | 64.44 | |
| | | | | 5.17 | |
| +60 | | | | 64.11 | |
| | | | | 5.50 | |
| 3+00 | | | | 63.78 | |
| | | | | 5.83 | |

Grades for Prop. 6" Water Main
on 69th N. of Saranac.

# 953                        3-28-47
W.O. 295                        Osborne

El. Stake
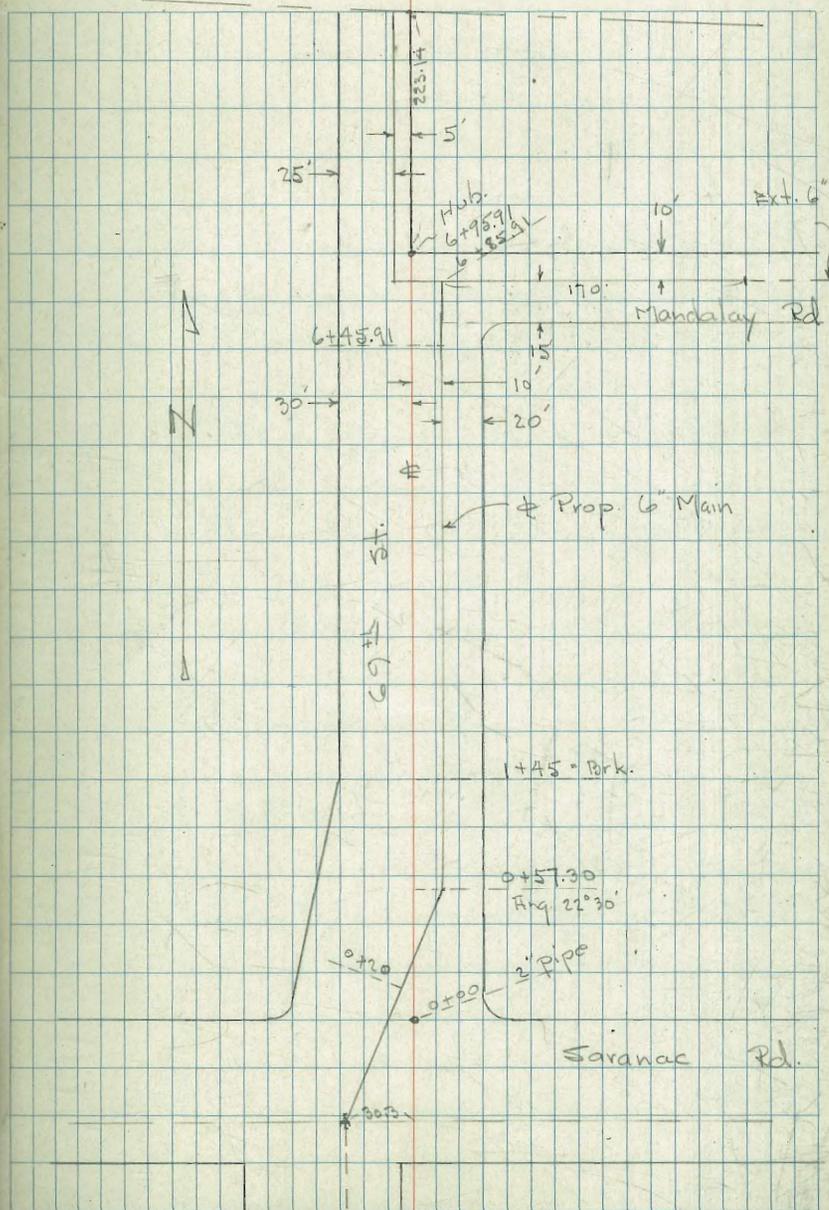
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B.M | . | 2.28 | 463.09 | | 460.81 | | S.E. TopHyd Saranac 469 st |
| Sta | | | | | | | |
| 0+20 | -Stakes 10'W. | | | 4.8 / 58.3 | 456.1 (8.3) | C 2.2 | |
| +57.30 = Ang. | | | | 4.5 / 58.6 | 55.7 (86) | C 2.9 | |
| 1+01.15 | | | | 4.9 / 58.2 | 55.2 (82) | C 3.0 | |
| 1+45 = Brk. | | | | 5.8 / 7.3 | 54.7 (73) | C 2.6 | |
| 2+00 | | | | 6.0 / 57.1 | 54.5 (71) | C 2.6 | |
| +50 | | | | 6.6 / 6.5 | 54.3 (65) | C 2.2 | |
| 3~ | | | | 6.6 / 56.5 | 54.1 (65) | C 2.4 | |
| +50 | | | | 6.9 / 6.2 | 53.9 (62) | C 2.3 | |
| 4~ | | | | 6.8 / 6.3 | 53.7 (63) | C 2.6 | |
| +50 | | | | 6.5 / 6.6 | 53.5 (66) | C 3.1 | |
| 5~ | | | | 6.4 / 6.7 | 53.3 (67) | C 3.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5+50 | | | | 5.8 (7.3) | 53.1 | C 4.2 |
| T.P. | 6.60 | 463.92 | 5.7 | 457.32 | | |
| 6~ | | | | 58 / 8.1 | 52.9 | C 5.2 |
| +45.91 | | | | 57 / 8.2 | 52.7 (8.2) | C 5.5 |
| +85.91 = Tee = 0+00 to E. | Stake 10' N. | | | 58.7 | 52.6 | C 6.1 |
| 0+50 | 10' N. | | | 4.6 / 59.3 | 54.5 (9.3) | C 4.8 |
| 1+10 | " " | | | 2.6 / 61.3 | 56.8 (1.3) | C 4.5 |
| 1+70 = Join Ext. Main | | | | 59.0 | | |
| Line N. of Mandalay — N" | | | | | | |
| 0+00 = N.L. Mandalay | stake 4' E. | | | 57.6 | 52.5 | C 5.1 |
| +50 - 4'E. of ₵ | | | | 6.2 / 57.7 | 52.3 (7.7) | C 3.4 |
| 1+00 | " | | | 7.6 / 56.3 | 51.9 (6.3) | C 4.4 |
| +50 | " | | | 9.1 / 54.2 | 50.8 (4.2) | C 3.4 |
| 2+00 | " | | | 12.2 / 51.7 | 48.4 (51.7) | C 3.3 |

2+00                    51.7    48.4 c 3.3

                        14.1      9 8
+23.14 = end.          49.8    47.1 c 2.7

set gut.  0.76 Below cb. grade
B.M.        4.57   232.62        228.05

#682-5
Ext 47th +Fed.
Gut. Grade

0+00 = S.L. Fed Blvd.
0+00 stakes 2' back   4.35        27.89  C0.38   (8.27)
                       28.27

+20                    4.34        27.64  C0.64   (8.28)
                       28.28

+53                    4.37        27.34  C0.91   (8.25)
                       28.25

1+03                   4.79        26.82  C1.01   (7.83)
                       27.83

+48                    5.17        26.61  C0.84   (7.45)
                       27.45

+93 = P.U.C.           5.48        26.41  C0.73   (7.14)
                       27.14

2+13                   5.62        26.28  C0.72   (7.00)
                       27.00

El. ext. cb. -                 Est Grade
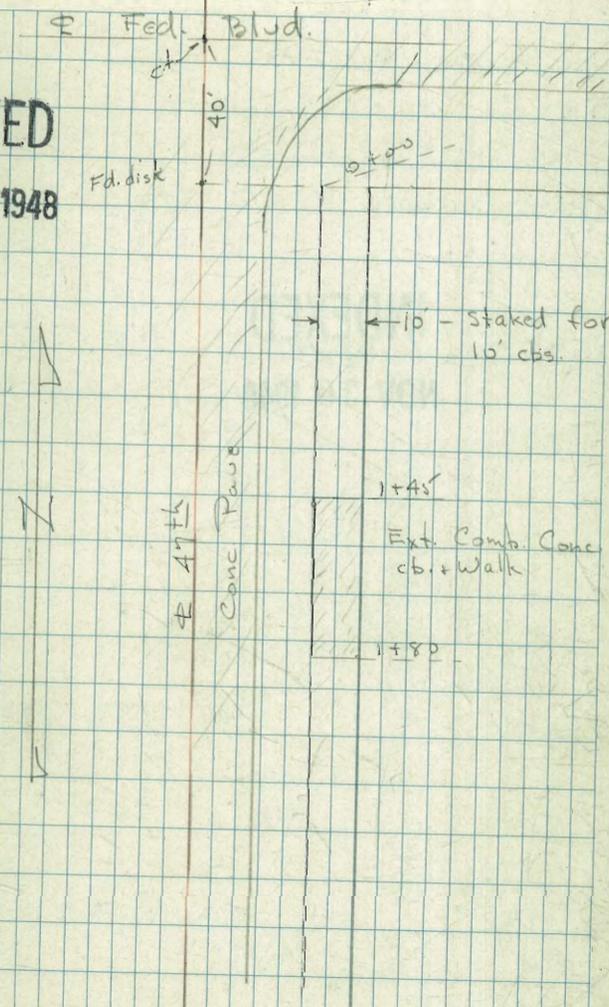1+45                   5.16   27.46   27.39
1+80                   5.38   27.24   27.23

#964          4-2-47
W.O. 304       7.0.                    9

£ Fed. Blvd.
Fd. disk
40'
0+00
10' — staked for 10' cbs.
1+45
Ext. Comb. Conc. cb. + Walk
1+80
£ 47th
Conc. Pave

LOT ____ BLK ____ ADD ____
OWNER    Lenored Drug
CONTR    J.W. Campbell Co
PERMIT NO.                55114
                10-8-51

Grade Stakes on Santa Barbara Place
+ Alley S. - 100' E. of Strand way
#1206                    6-26-47    F.O.
W.O. 21018    H.I. $\frac{I}{=}$ 8.75

| Santa Barbara | | Grade | | |
|---|---|---|---|---|
| 0+90 | 7.40 | 1.35 | 7.37 | Nail in fence C003 |
| 1+00 | 7.77 | .98 | 7.77 | Stake 1' in st. |
| 1+20 | 8.24 | .51 | 8.24 = | Nail in fence |

H.I.: 8.19

Alley

| | | | | |
|---|---|---|---|---|
| 0+90 | 7.33 | .86 | 7.13 | Cross in Conc. C020 |
| 1+00 | | .50 | | on apron |
| 1+20 | 8.15 | .04 | 8.15 - | stake 1' in Alley |

1.72
8.75
6.87
1.93
7.89
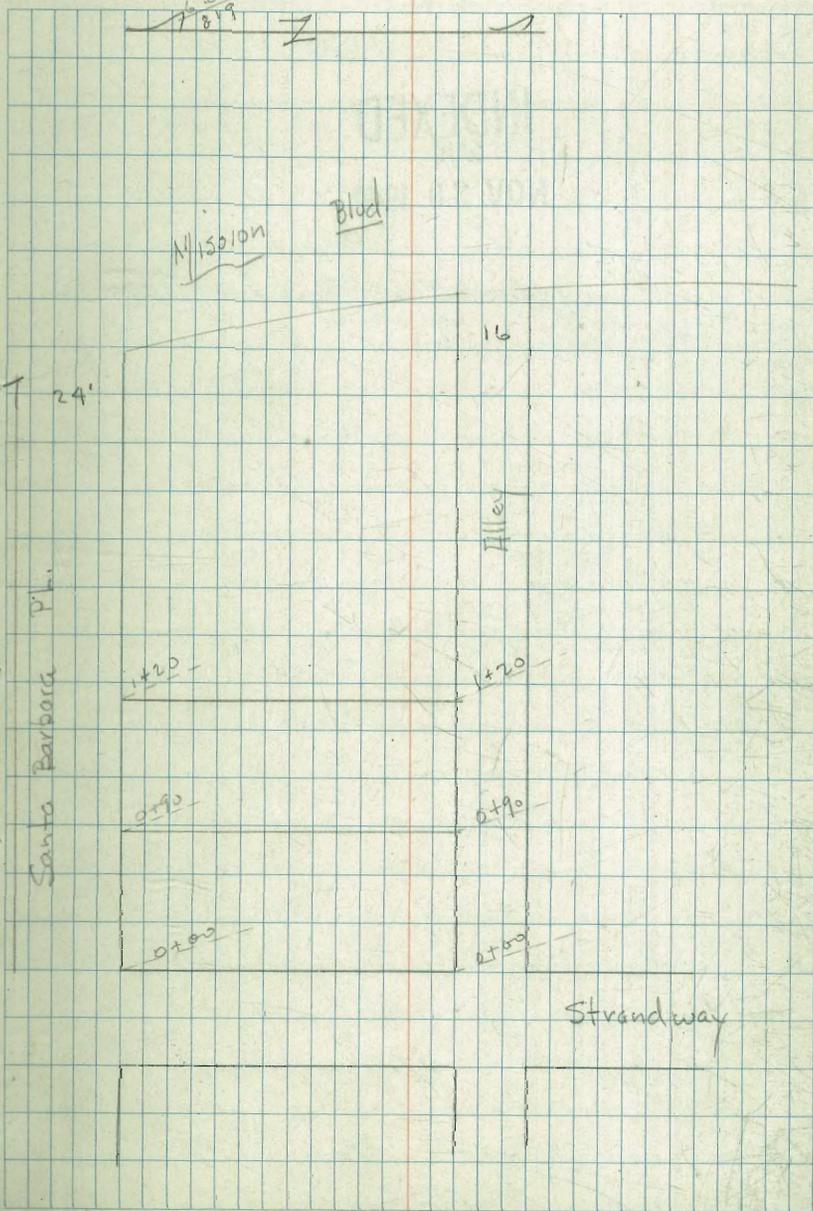
Hendricks   Stake Out Fire Station #12
Hardin        Imperial & Ozark
Smith
Worrell
8-4-47
W0# 90052

**INDEXED**
WK
NOV 30 1948

_See Next Page for Grades_



Alley

132'

20'

8'

Set Stubs
4: Offset

D
E
C
B
36'
4'
4'
4'

80'2"
47.8"

25'  25'  200'

G
F
H
I
J
K
L
M
N
A
11
4'2"
20.2"
30.8"
16'4"
50'
90°

30'
30'

Ozark St.

Fd. L&T. Imperial    Ave.

F&L&T
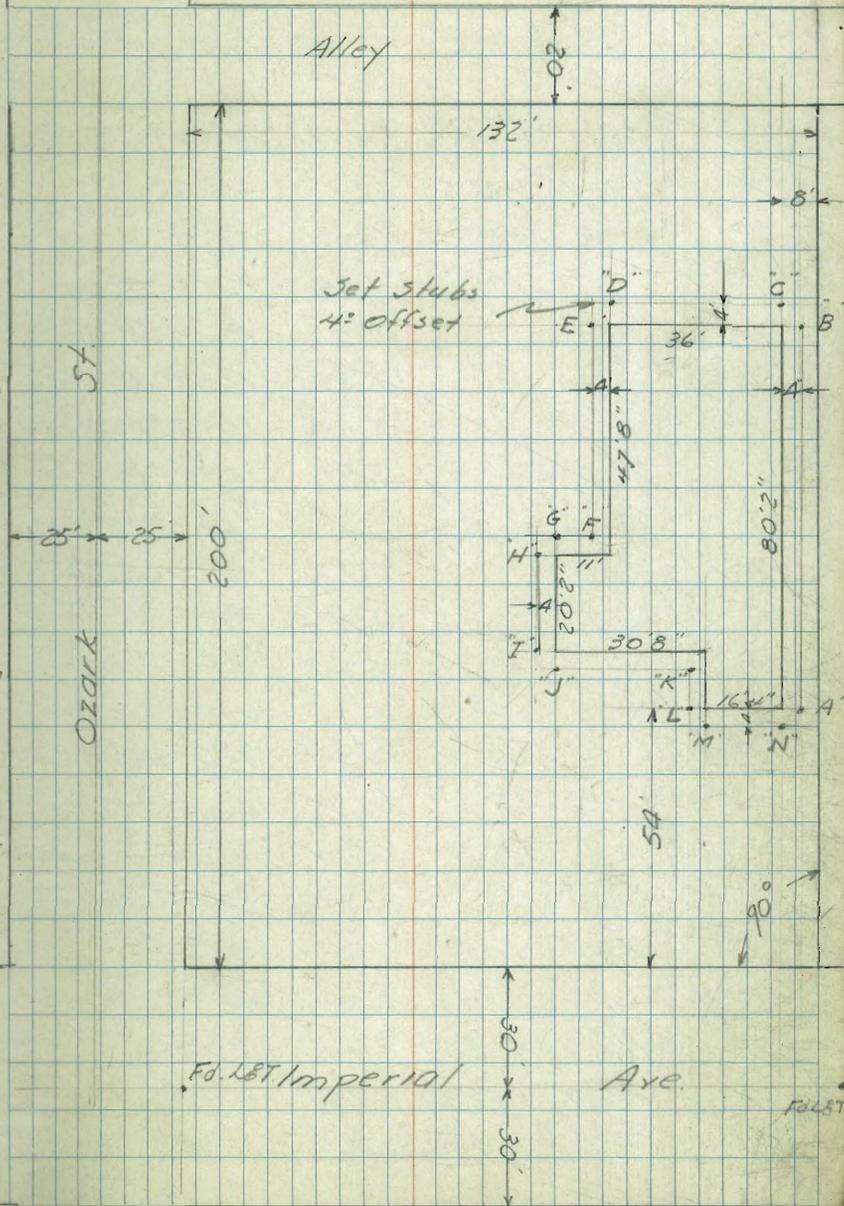
Grades for Fire Station #12
  Imperial & Ozark

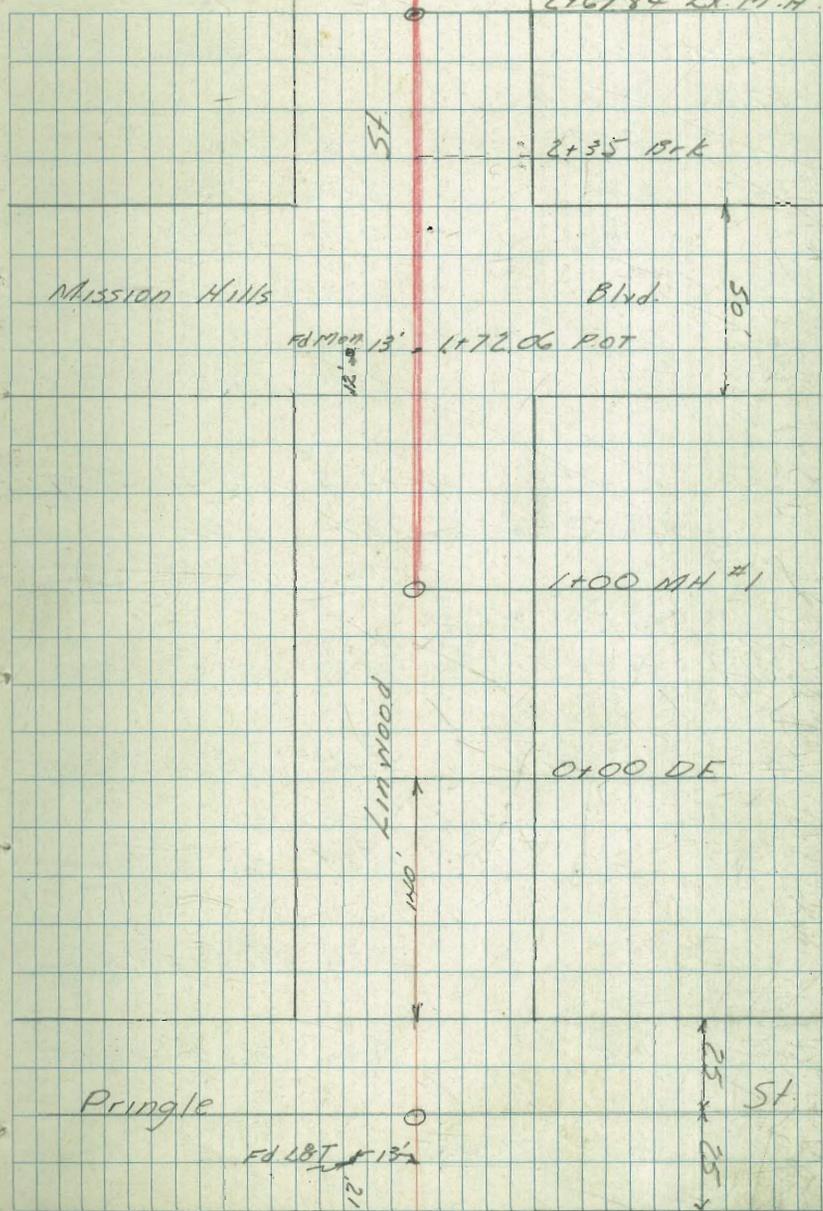| Sta | + | H.I. | − | Elev. Stakes | Fin. Floor Grade | Cut or Fill w° Offsets |
|-----|---|------|---|------|------|------|
| B.M. | | | 10.78 | 137.88 | 137.89 | ℄&T ℄ Imperial & 48th St. |
| TP | 0.04 | 148.66 | 10.45 | 148.62 | | |
| T.P. | 0.12 | 159.07 | 10.13 | 158.95 | | ℄&T ℄ Imperial & 15' W ℄ Ozark |
| "N" | | | 4.24 | 164.84 | 166.00 | F 1.16 |
| "M" | | | 5.06 | 164.02 | 166.00 | F 1.98 |
| "L" | | | 5.32 | 163.76 | 166.00 | F 2.24 |
| "K" | | | 5.26 | 163.82 | 166.00 | F 2.18 |
| "J" | | | 5.96 | 163.12 | 166.00 | F 2.88 |
| "I" | | | 5.84 | 163.24 | 166.00 | F 2.76 |
| "H" | | | 5.72 | 163.36 | 166.00 | F 2.64 |
| "G" | | | 5.46 | 163.62 | 166.00 | F 2.38 |
| "F" | | | 5.42 | 163.66 | 166.00 | F 2.34 |
| "E" | | | 5.12 | 163.96 | 166.00 | F 2.04 |
| "D" | | | 4.96 | 164.12 | 166.00 | F 1.88 |
| "C" | | | 4.38 | 164.70 | 166.00 | F 1.30 |
| "B" | | | 4.19 | 164.89 | 166.00 | F 1.11 |
| "A" | | | 4.17 | 164.91 | 166.00 | F 1.09 |
| TP | 7.02 | 169.08 | 1.93 | 162.06 | | |
| | | | 5.04 | 158.95 | | ℄&T ℄ Imperial & 15' West ℄ Ozark |
| TP | 11.62 | 163.99 | 0.01 | 152.37 | | |
| T.P. | 8.57 | 152.38 | 3.98 | 143.81 | | |
| B.M. | 9.90 | 147.79 | | 137.89 | | ℄ &T Imperial & 48th St. |

Hendricks    Stake out Sewer on Linwood St.
Hardin    165 No. & Pringle St. to Existing
Smith      MH No. of Mission Hills Blvd
Worrell
Aug 6, 1947
WO #60129

See Next Page for Grades

2+67.84 Ex. M.H.

St.

2+35 Brk

Mission Hills        Blvd.

50'

Fd Mon 13' - Lt 72.06 P.O.T.

1+00 MH #1

Linwood

0+00 DE

140'

Pringle

25' x 25'

0

Fd L8T + 13½'
+21

St.

Grades for Sewer Linwood St.

| Sta. | + | H.I. | - | Stake Elev | Grade Elev | Cuts 4' Lt. |
|---|---|---|---|---|---|---|
| TP on Rim MH | | | 8.29 | 100.52 | 100.54 | FB 1727 P-59 |
| 2+67.84 Ex. MH | | | | | 92.39 | FL |
| TP | 7.63 | 108.81 | 12.32 | 106.18 | | |
| 2+35 Brk | | | 8.06 | 110.44 | 106.60 | 3.84 |
| TP | 0.58 | 118.50 | 12.92 | 117.92 | | |
| 2+00 | | | 8.28 | 122.56 | 118.32 | 4.24 |
| TP | 0.22 | 130.84 | | | | |
| 1+75 | | | 12.94 | 130.62 | 126.70 | 3.92 |
| 1+50 | | | 4.15 | 139.41 | 135.07 | 4.34 |
| TP | 0.02 | 143.56 | 12.74 | 143.54 | | |
| 1+25 | | | 7.42 | 148.86 | 143.45 | 5.41 |
| TP | 0.63 | 156.28 | | | | |
| 1+00 MH#1 | | | 12.90 | 155.65 | 151.82 | 3.83 |
| 0+75 | | | 5.41 | 163.14 | 152.32 | 10.82 |
| 0+50 | | | 4.89 | 163.66 | 152.82 | 10.84 |
| 0+25 | | | 4.76 | 163.79 | 153.32 | 10.47 |
| 0+00 D.E. | | | 5.24 | 163.31 | 153.82 | 9.49 |
| | | 4.23 | 168.55 | | 164.32 | LBT on 13'5" N Line Pringle & Linwood |

Hendricks     Tie Backs Felton & Meade &
Hardin            34th & Meade
Worrell
Aug 8, 1947

W.O. 21018

Replaced Lead & Tacks shown in
Red  —    8-20-47    —  7.0.
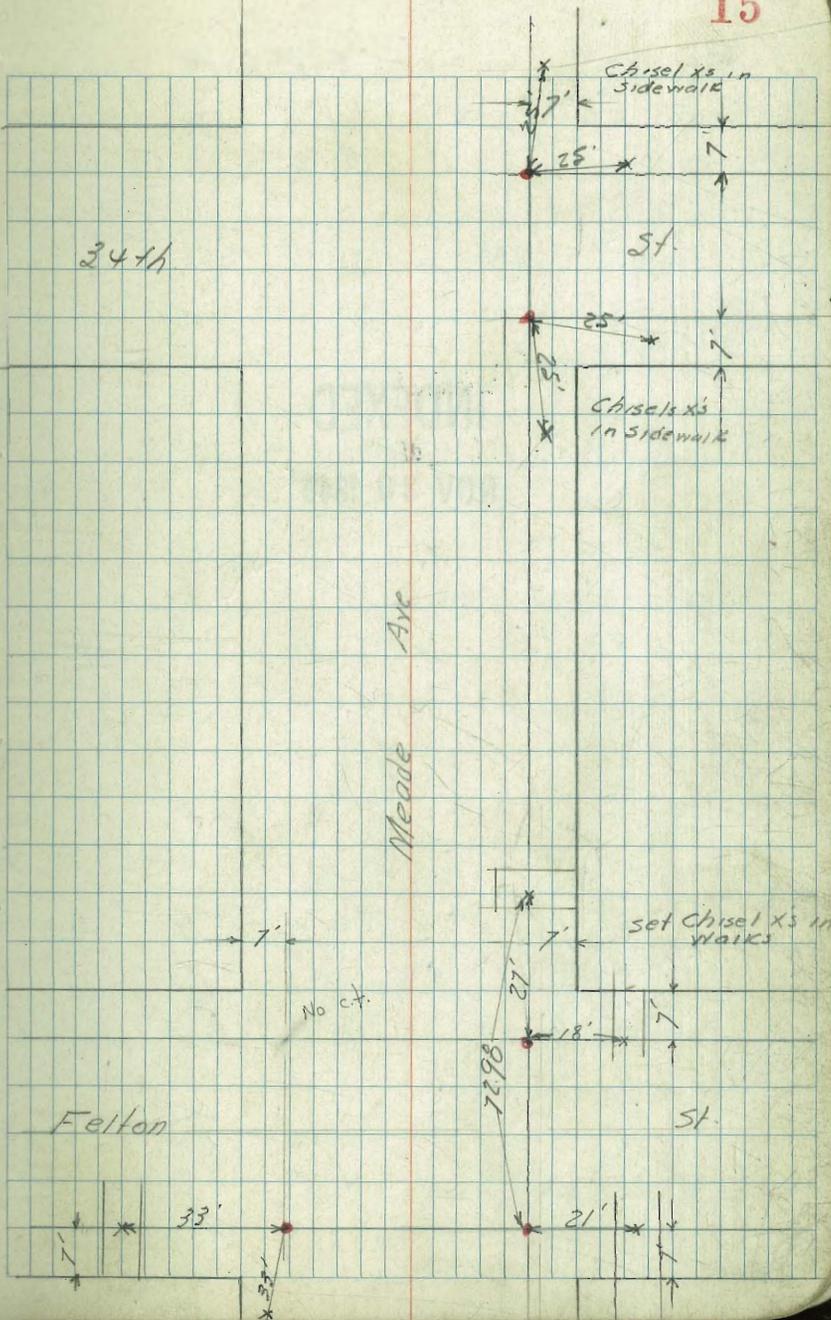
Stake Sewer on Brooklyn Ave
from 68<sup>th</sup> to 67<sup>th</sup>

\# 1400                    8-18-47.    Osborne
                                      Hardin
W.O. 31011                            Smith
Drawing # 6554-L - T.P. 12 - P.65     Worrell
Carroll + Foster - Contr.

Grades - P. 17

Stakes   6' N.
M.H.   6' + 12'  R.P.

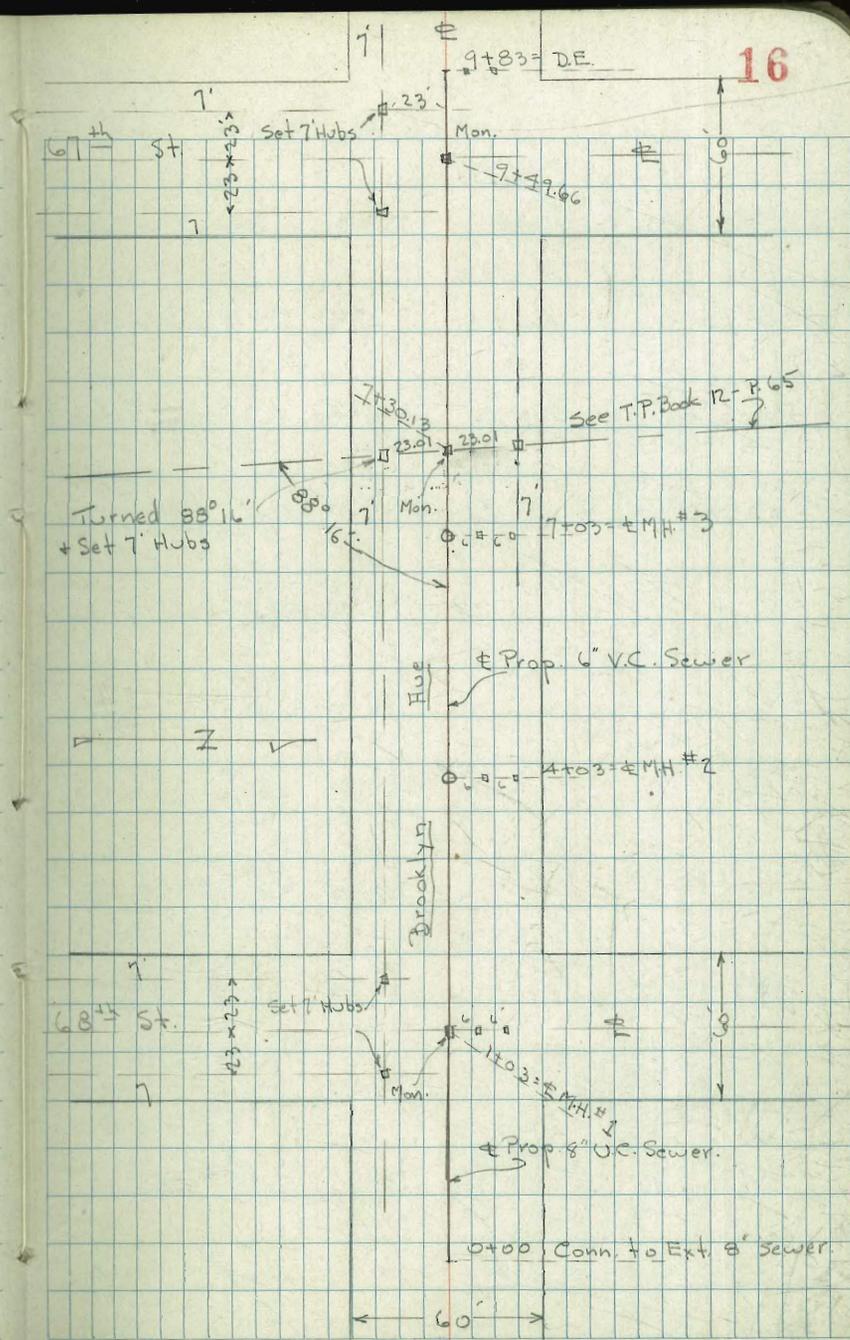| Sta. | | | Grade | Stake | Cut |
|---|---|---|---|---|---|
| | | 286.85 | | | |
| 0+00 = Conn. to 8" pipe | | | 73.63 | 13.22 / 73.63 | |
| +34.33 | | | 73.79 | 6.88 / 79.97 / 3.79 | 6.18 |
| +68.66 | | | 73.94 | 7.04 / 79.81 / 3.94 | C 5.87 |
| 1+03 = ℄ M.H. #1 | | | 274.10 | 6.67 / 80.18 / 4.10 | C 6.08 |
| +53 | | | 74.75 | 5.90 / 80.95 / 4.75 | C 6.20 |
| 2+03 | | | 75.40 | 4.34 / 82.51 / 5.40 | C 7.11 |
| +53 | | | 76.05 | 3.01 / 83.84 / 6.05 | C 7.79 |
| 3+03 | | | 76.70 | 0.80 / 86.05 / 6.90 | C 9.35 |
| | 295.87 | | | | |
| +53 | | | 77.35 | 7.75 / 88.12 / 7.35 | C 10.77 |
| 4+03 = ℄ M.H. #2 | | | 78.00 | 6.59 / 89.28 / 28.00 | C 11.28 |
| +53 | | | 78.65 | 5.54 / 90.33 / 78.65 | C 11.68 |
| 5+03 | | | 79.30 | 5.16 / 90.71 / 79.30 | C 11.41 |

| | 295.87 | Grade | Stake | Cut |
|---|---|---|---|---|
| 5+53 | | 79.95 | 4.78 / 91.09 / 79.95 | C 11.14 |
| 6+03 | | 80.60 | 4.43 / 91.44 / 80.60 | C 10.84 |
| +53 | | 81.25 | 3.91 / 91.96 / 81.25 | C 10.71 |
| 7+03 = ℄ M.H. #3 | | 81.90 | 3.20 / 92.27 / 81.90 | C 10.37 |

See Next page

279.42 = Mon. ℄ 68th & Brooklyn
7.43
286.85        286.85
0.80
286.05
9.82                     7.06   279.79 =
295.87                          Top F.H.
3.32                            S.E. Cor.
292.55                          68th & Brooklyn
4.16
296.71

|  |  |  | 295.87 |  |  |  |
|---|---|---|---|---|---|---|
| 7+03 = | MH |  | 281.90 |  |  |  |
| +43 |  |  | 82.17 | 9255 | 3.32 | c 10.38 |
|  |  | 296.71 |  | 82.17 |  |  |
| +83 |  |  | 82.44 | 9260 | 4.11 | c 10.16 |
|  |  |  |  | 82.44 |  |  |
| 8+23 |  |  | 82.71 | 9265 | 4.06 | c 9.94 |
|  |  |  |  | 82.71 |  |  |
| +63 |  |  | 82.98 | 9222 | 4.49 | c 9.24 |
|  |  |  |  | 2.98 |  |  |
| 9+03 |  |  | 83.25 | 9126 | 5.45 | c 8.01 |
|  |  |  |  | 3.25 |  |  |
| +43 |  |  | 83.53 | 9058 | 6.13 | c 7.05 |
|  |  |  |  | 3.53 |  |  |
| 9+83 = | D.E. |  | 83.80 | 9005 | 6.66 | c 6.25 |
|  |  |  |  | 3.80 |  |  |
| on ₵ Mon. 67th ₵ Brooklyn |  |  | 6.75 | 289.96 | 289.97 |  |
| on Top F.H. - S.E. 67th |  |  | 3.82 | 292.89 |  |  |
| ₵ Brooklyn |  |  |  |  |  |  |

Stake Sewer Extension on Adams
Ave - Bet. Alma Pl. & Antioch Pl.
8-25-47    - F.O.

**INDEXED**
**WK**
**NOV 30 1948**

Grades - Next Page



Apparant line
bet. Lots

Jet D.E. 1 from
N.L. of P.C.
10' W. of P.C.

New & Prop. 6" U.C. as
staked.

Prop. M.H. Drop
Ext. D.E. 7+89.92

Adams Ave

U.C. Sewer

Ext. 83.66
Ext. 6

Cross in Conc.
90° to Line to E.

U.P.

N

Ext. 6" U.C.
Sewer

Ext. M.H. #5

Antioch Pl. 112°23'
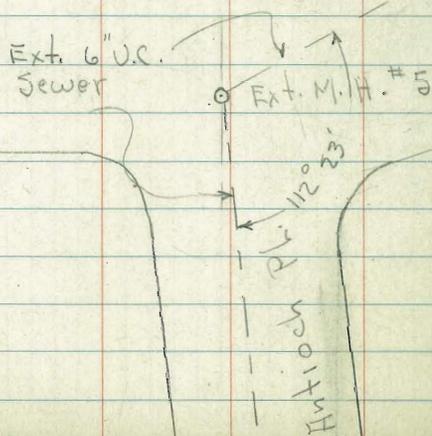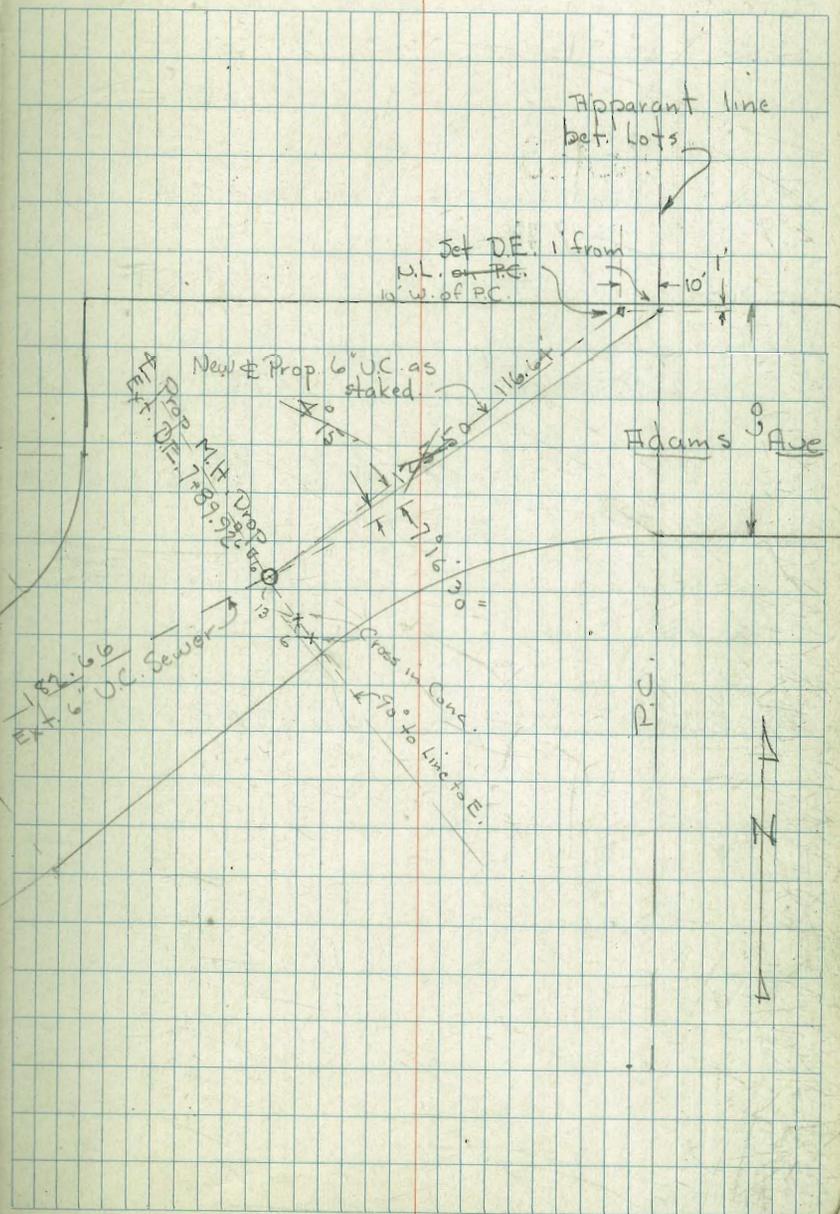
Grades on Prop. Sewer on Adams

Stakes — 6' Lt.

Grade

0+00 = ₵ Dead End = ₵ Prop. Drop M.H.
402.74

Top M.H. 392.10

F.L. Ext. 6" Sewer 381.02

F.L. Prop. 6" U.C. Sewer ^(to E.) 10.80 91.94 / 91.94 387.10 C. 4.84

Void. 8.40 94.34 / 94.34 89.30 C 5.04

See New Line 0+41.83 other Page 5.84 96.90 / 96.90 91.50 C 5.40

0+83.66

1+25.50 = F.L. DE. 1.16 401.58 / 01.58 393.70 C 7.88

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NE. 54th + Adams

B.M. 0.20 413.60 413.40

0.83 402.74 11.69 401.91

New Line — Stakes 6' Rt. — 9-17-47
402.88 H.I.

at M.H. = To East. = 0+00 11.03 91.85
F.L. Upper 6' Line 91.85 387.10 C. 4.75

0+38.88 8.72 94.16
94.16 89.30 C 4.86

0+77.76 6.14 8.74
98.74 91.50 C 5.24

1+16.64 = F.L. D.E. 4.10 8.78
98.78 93.70 C 5.08

Note = at 0+55 — 2u Rt. Nly of
Water pipe at Ang. pt.

Emerald St

Mon.

See P. 22 for Grades.

80'

Morrell St

N

Mon.

Cross in Conc.
Strip

385 50%

Set Hub
Buried

Set Hub
33'
Fd. Hub

St

80'

Noyes

A

20' Alley

62'    200

Feldspar St

33    33'
Fd. Hub

Set Hub
Buried

Rough Grade Stakes on W. side
of Noyes - Bet. Felspar + Emereld
and 200' along N. side of Felspar.

#1835

W.O. 25001

**INDEXED**
**WK**
**NOV 30 1948**

10-15-47

Osborne
Hardin
Smith
Worrell

| BM. | 1.82 | 93.21 | | 91.39 | SW. F.H. Diamond + Noyes |
| | 0.58 | 80.84 | 12.95 | 80.26 | |
| | 6.30 | 75.06 | 12.08 | 68.76 = | Pipe N.W. Cor. Noyes + Felspar |
| | | Rod. | stake | Grade | cut. |

W. side of Noyes.
0+00 = N.W. Cor. Felspar + Noyes
Stakes 2' Back    80.84

| 0+00 | | 12.2 | 68.6 | 67.50 | C 1.1 |
| +45 | | 11.0 | 69.8 | 68.80 | C 1.0 |
| +90 | | 10.3 | 70.5 | 70.10 | C 0.4 |
| 1+35 | | 9.4 | 71.4 | 71.40 | C .00 |
| +80 | | 7.9 | 73.1 | 72.70 | C 0.4 |

80.84

| 2+25 | | 6.4 | 74.4 | 74.0 | C 0.4 |
| 2+70 = SW. Noyes | + Emereld. | 4.6 | 76.2 | 75.30 | C 0.9 |
| End cb on WL | | | 76.11 | | |
| + S. cb. line | | | | | |

along N. side Felspar
75.06

| 0+00 = N.W. | | | | 67.50 |
| +50 | | 5.5 | 69.6 | 68.5 | C 1.1 |
| 1+00 | | 4.7 | 70.4 | 69.5 | C 0.9 |
| +50 | | 3.8 | 71.3 | 70.4 | C 0.9 |
| 2+00 | | 1.2 | 73.9 | 71.0 | C 2.9 |

| T.P. | 12.22 | 80.98 | 6.30 | 68.76 |
| | 12.33 | 93.30 | 0.01 | 80.97 |
| check Starting BM | | | 1.90 | 91.40 -91.39 |

Sections on Fortuna - E. of
Ingraham - to Check Grade

0 + 91 = W. end Ret. on Rt.



0 + 50



0 + 12.5 = P.C. Ret.



0 + 00 = E.L. Ingraham



0 - 17.5 = edge Conc. Pave



2:62   47.46          44.84    c.f.
                               ₤ Fortuna
                               + Ingraham

|  | Lt. | ₤ |  | Rt. |  |
|---|---|---|---|---|---|
| | 41.79 | 41.70 | 41.24 | 41.75 | |
| | •5.67 | 5.76 | 6.12 | 5.71 | |
| | 8 | | 18 | 18 | |
| | | | 9v.t | Top | |
| | | | | | |
| | 42.73 | 42.76 | 42.65 | | |
| | 4.73 | 4.70 | 4.81 | 4.7 | |
| | 8 | | 8.5 | 18 | |
| | | | edge | | |
| | 43.80 | 43.84 | 43.78 | | |
| 2.9 | 36.6 | 3.62 | 3.68 | 3.0 | |
| 20 | 8.4 | | 8.5 | 18 | |
| | 44.12 | 44.14 | 44.08 | | |
| 2.9 | 3.34 | 3.32 | 3.39 | 2.7 | 2.0 |
| 3.75 20 | 8 | | 8.5 | 18 | 37.5 |
| | edge | | edge | | |
| 44.80 | 44.70 | 44.59 | 44.46 | 44.43 | 44.26 |
| 2.66 | 2.76 | 2.87 | 3.00 | 3.03 | 3.20 |
| 37.5 | 20 | | 8.5 | 18 | 37.5 |
| cb. line | | | | cb. line | |
| | | 47.46 | | | |

Left page:

3+40

2+90 = E.L.

2+52.5 = ₵

2+15 = W.L.

2+00

1+60

1+24 = E. end P.C. Ret

Right page:

Lt.      37.16  ₵  37.27     Rt. 90   37.39

| | | | |
|---|---|---|---|
| 10.30 | 10.19 | 10.56 | 10.07 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 38.06 | 38.13 | 37.86 | 38.34 |
| 9.40 | 9.33 | 9.60 | 9.12 |
| 8 | | 18 | 18 |
| 38.78 | 38.82 | 38.52 | 39.02 |
| 8.68 | 8.64 | 8.94 | 8.44 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 39.38 | 39.45 | 39.16 | 39.66 |
| 8.08 | 8.01 | 8.30 | 7.80 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 39.68 | 39.71 | 39.45 | 39.93 |
| 7.78 | 7.75 | 8.01 | 7.53 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 40.43 | 40.52 | 40.22 | 40.71 |
| 7.03 | 6.94 | 7.24 | 6.75 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 41.20 | 41.19 | 40.84 | 41.35 |
| 6.26 | 6.27 | 6.62 | 6.11 |
| 8 | | 18 | 18 |
| | | Gut. | Top |
| 47.46 | | | |

| | | | | | sw.7'ct. Beryl & Ingraham |
|---|---|---|---|---|---|
| B.M. | 3.71 | 128.79 | | 125.08 | |
| | | cb.grade | end Ret. E.L. Ing | 9'out= Pave | |
| S.L. Alley | P.C. | 117.41 | 118.00 | Meet | |
| | | 11.38 | 10.79 | | |
| £ Alley | | | 117.95 | | |
| | | | 10.84 | | |
| N.L. Alley = 0+00 | | 18.43 | 118.55 | 18.57 | |
| | | 10.36 | 10.24 | 10.22 | |
| 0+02 = P.C. Alley Ret. | | 18.52 | | | |
| | | 10.27 | | | |
| 0+28.9 | | 20.03 | | 20.19 | |
| | | 8.76 | | 8.60 | |
| 0+57.8 | | 21.65 | | 21.81 | |
| | | 7.14 | | 6.98 | |
| 0+86.7 | | 23.27 | | 23.43 | |
| | | 5.52 | | 5.36 | |
| 1+15.6 = P.C. | | 24.89 | | 25.05 | |
| | | 3.90 | | 3.74 | |
| 1+25.8 = S.L. Beryl | | 25.53 | | 25.52 | |
| | | 3.28 | | 3.27 | |
| 1+43.4 = E.L. Ingram | | 126.80 | | | |
| | | 1.99 | | | |

Pave Grades
W.O. 80023
11-10-47
7.0.
See Drawing
6929-L

Beryl St.
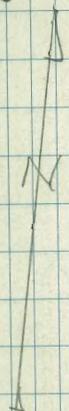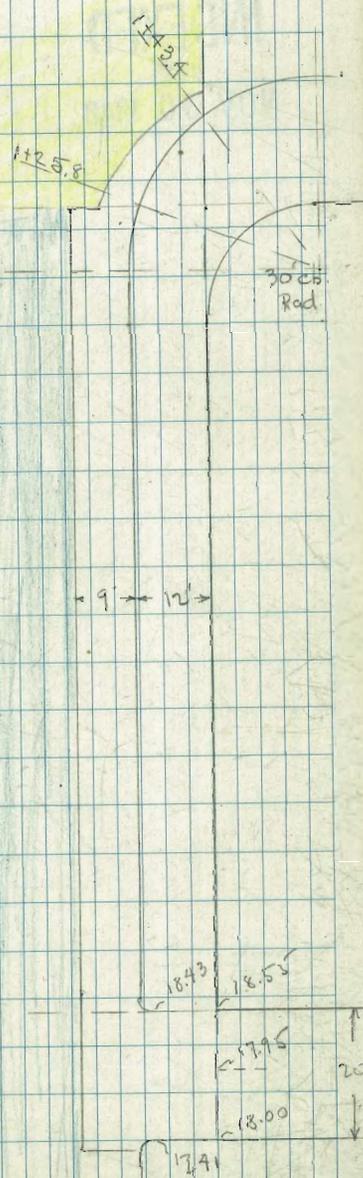
2+62.5 end est.
Grade - Toe of bank

Torrence
St

← 35 → ←11'→      ⌐   Z

∠ Water 6" Main

0+00

Conn to Ext Main

Renard Way

#1895
W.O. 60216      7.0.      11-14-47

Eagle                                        St

⌐ Conn to Ext. Main

5+21 Eagle Conc. Pave

Torrence
St

← 35 → ←11'→

Grade Stakes for 6" Water Main P-26
on Torrence - Reynard to Eagle - See sketch
Stakes - 4'S.

B.M.    12.44    207.27              194.83   Cross - ₵ Reynard
                                              ₵ S.L. Torrence
        12.39    219.43    0.23    207.04    B.1811 - P.2
        12.59    232.01    0.01    219.42
        12.69    244.69    0.01    232.00
        11.86    256.40    0.15    244.54
        7.98     264.32    0.06    256.34
check B.M. B.P - N.W. Eagle      7.38    256.97    256.93
            ↑ Torrence

Note: Ext. ground is too low to put in
to Grade - So water Dept. will lay to obtain
        H.I. 207.3          suitable cover.

| sta. | | Rod | Grade | Cut | |
|---|---|---|---|---|---|
| 0+00=₵.L.to.S. | Reynard way | 12.9 / 9.4.4 | 191.8 | 2.6 - Marked. | |
| 0+42.5 | | 13.4 / 93.9 | 93.7 | 0.2 | |
| +82.5 | | 11.9 / 95.4 | 97.4 / 54 | + 2.0 | |
| 1+22.5 | | 8.6 / 98.7 | 203.1 / 98.7 | + 4.4 | |
| 1+62.5 | | 2.5 / 04.8 | 09.2 / 48 | + 4.4 | |

| | | | | | |
|---|---|---|---|---|---|
| | | ₮ = 219.4 | | | |
| 2+02.5 | | 8.0 / 11.4 | 12.6 | + 1.2 | |
| 2+32.5 | | 5.3 / 14.1 | 14. / 13.2 | - 0.9 | |
| 2+62.5 = end est. grade | | 4.7 / 14.7 | 14.7 / 13.8 | - 0.9 | |
| | ₮ 244.69 | 7.5 | | | |
| 3+00 | ₮ 264.32 | 242.2 | | | |
| +36 = Top. | | 6.9 / 257.4 | 55.5 | To High | |
| +65 = | | 5.5 / 58.8 | 8.8 / 55.4 | C 3.4 | |
| 4+00 | | 5.9 / 58.4 | 8.4 / 55.2 | C 3.2 | |
| +50 | | 6.0 / 58.3 | 8.3 / 54.9 | C 3.4 | Marked |
| +85 | | 6.6 / 57.7 | 7.7 / 54.8 | C 2.9 | |
| 5+21 = W.L Eagle | | 7.5 / 56.8 | 53.6 | C 3.2 | |

Alta Vista Sub

Block A
Alta Vista - Suburb
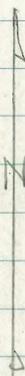
Block B

5+90
D.E.

15'

N

7.5

15

← 60' →

West

3+40 =
M.H. #8

6" U.C. Sewer

30

B-10   B-10

Hub Going out

23

30

3+75
M.H. #9

"I"              St

⊕ 0+00 = Conn. to
     Ext. M.H.

0+00

± 6" U.C. Sewer

23        Set Hub

Set Hub  A  23

12    14

Cross in Drive        15

16' — Cross in cb.

St

0+00    66.15
M.H. #9
Bothways

Cross in cb.

60

6" UC Sewer.

Block G

3+40 = M.H. #10

7.5'

15'

80'

1'
7—
7—

6+31.6
M.H. #11

Logan

30

MH.# 6
5+23

30

Block F

N

7.5
15'

1.0

M.H.# 4
11+54

Ave
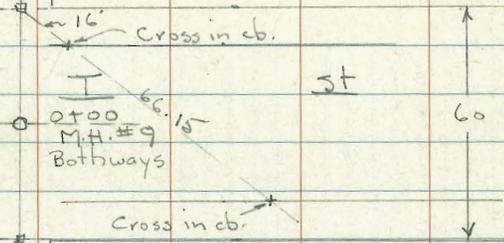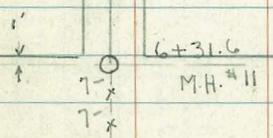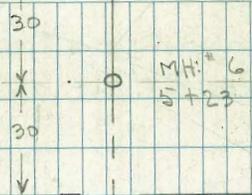
## Left page

Sewer Grades - 6" Line on ℄ "T" st.
From Alley in Block A to Alley in Block B
Stakes - 7' Lt = N.

| | | | | | |
|---|---|---|---|---|---|
| B.M. | 8.71 | 95.45 | | 86.74 | Hub. St. T + ℄ Alley - Blk A |
| | | | Rod. | Grade | Cuts |
| 0+00 = Conn. to Ext. M.H. | | | | 81.02 | Used 81.00 for Grade |
| +32.5 | | | 7.93 / 87.52 | 81.30 | C 6.22 |
| +65 | | | 7.50 / 87.95 | 81.60 | 6.35 |
| +97.5 | | | 6.98 / 88.47 | 81.90 | 6.57 |
| 1+30 | | | 6.32 / 89.13 | 82.20 | 6.93 |
| +62.5 | | | 5.53 / 89.92 | 82.50 | 7.42 |
| +95 | | | 4.91 / 90.54 | 82.80 | 7.74 |
| 2+27.5 | | | 4.32 / 91.13 | 83.10 | 8.03 |
| +60 | | | 3.78 / 91.67 | 83.40 | 8.27 |
| +92.5 | | | 3.27 / 92.18 | 83.70 | 8.48 |
| 3+25 = M.H. #9 | 2 stubs - 7+14 on Diag | | 2.84 / 92.61 | 84.00 | 8.61 |

INDEXED
WK
NOV 30 1948

## Right page

| ℄ T st | | | Grade | cut |
|---|---|---|---|---|
| 0+00 = ℄ M.H. #9 | | | 84.00 | |
| +34 | | 4.44 / 91.01 | 84.34 | C 6.67 |
| +68 | | 3.64 / 91.81 | 84.68 | 7.13 |
| 1+02 | | 2.77 / 92.68 | 85.02 | 7.66 |
| +36 | | 2.07 / 92.38 | 85.36 | 7.02 |
| +5.78 | π 98.36 | | | |
| +70 = T.P. | | 2.87 / 92.58 | 85.70 | 6.88 |
| 2+04 | | 6.26 / 92.10 | 86.04 | 6.06 |
| +38 | | 5.88 / 92.48 | 86.38 | 6.10 |
| +72 | | 6.28 / 92.08 | 86.72 | 5.36 |
| 3+06 | | 5.81 / 92.55 | 87.06 | 5.49 |
| 3+40 = ℄ M.H. #8 | 31.25 | 4.64 / 93.72 | 87.40 | 6.32 |
| +71.25 | | 4.42 / 93.94 | 87.62 | 6.32 |

| | | | π=98.36 | | Grade | cut. |
|---|---|---|---|---|---|---|
| 4+02.50 | | | 4.52 / 93.84 | | 87.84 | 6.00 |
| .+33.75 | | | 4.39 / 93.97 | | 88.06 | 5.91 |
| +65 | | | 4.01 / 94.35 | | 88.27 | 6.08 |
| +96.25 | | | 3.85 / 94.51 | | 88.50 | 6.01 |
| 5+27.50 | | | 3.24 / 95.12 | | 88.72 | 6.40 |
| +58.75 | | | 3.47 / 94.89 | | 88.94 | 5.95 |
| 5+90=P.E. | | | 3.34 / 95.02 | | 89.15 | 5.87 |

BM+ SL.T=Hub.    Rod.    Grade    cut.

E.Alley 7.10   π=99.39

| Station | Rod. | Grade | cut. |
|---|---|---|---|
| | | 92.29 | |
| 0+00= MH.#9 | | 84.00 | |
| Stakes= 7'Lt. | | | |
| +34 | 6.14 / 93.25 | 84.24 | C 9.01 |
| +68 | 5.89 / 93.50 | 84.48 | 9.02 |
| 1+02 | 5.48 / 93.91 | 84.71 | 9.20 |
| +36 | 4.96 / 94.43 | 84.95 | 9.48 |
| +70 | 5.00 / 94.39 | 85.19 | 9.20 |
| 2+04 | 5.98 / 93.41 | 85.43 | 7.98 |
| +38 | 5.71 / 93.68 | 85.66 | 8.02 |
| +72 | 7.00 / 92.39 | 85.90 | 6.49 |
| 3+06 | 5.90 / 93.49 | 86.14 | 7.35 |
| 3+40= M.H#10 | 4.53 / 94.86 | 86.38 | 8.48 |
| +76.45 | 3.12 / 96.27 | 86.63 | 9.64 |

| | | 99.39 | | | |
|---|---|---|---|---|---|
| 4+12.90 | | 5.14 94.25 | 86.89 | ℮ 7.36 | |
| +49.35 | | 5.95 93.44 | 87.14 | 6.30 | |
| +85.80 | | 4.98 94.41 | 87.40 | 7.01 | |
| 5+22.25 | | 3.67 95.72 | 87.65 | 8.07 | |
| T.P. | 5.82 | 100.05 | 1.16 | 98.23 | |
| +58.70 | | 1.16 98.23 | 87.91 | 10.32 | |
| +95.15 | | 3.54 100.51 | 88.16 | 12.35 | |
| 6+31.60 = M.H. # 11 | | 6.09 97.96 | 88.42 | 9.54 | |

⊄ Ext. 8" U.C →

10'32

↓ Conn. to Ext. 8" U.C.
0+00

Block   C

44

0+37.5
Trg. pt.

6.5

Block   D

Ryncho St

0 M.H. #7
1 +49

0 M.H. #1
3 +00

⊄ 6" U.C →

7.5

15

7.5

15

⊄ 8" U.C.

D.E.
6+04

Hub.

14'

Hub

R.P. Crosses
in c.b.

30

39.38

0 M.H. #6
5 +23

I

St

30   53.7

Hub.

Hub.

MH # 6
5+23

↑ 30'

Block F

MH # 5
8+39

← 75

← 15

⊄8" U.C →

1.0

M.H. # 4
11+54

Logan

⊄6" U.C

St

D.E.
20+40

30.37

Block E.

⊄6" U.C

N

M.H. # 2
17+78

← 75

← 15

5—×
5—×
M.H. # 3
14+79

Pynchon

Ave

Grades on 8" U.C. - Beg. in Alley Blk. "C"

114.67

| | | | | | of ₵ O.U. ₵ Alley |
|---|---|---|---|---|---|
| B.M. | 5.56 | 103.06 | | 97.50 | |
| Ext 8" U.C. 0+00 = Conn. to | Stakes ₮ Lt. | | 3.74 99.32 | 91.88 | C 7.44 |
| +37.25 | | | 3.39 99.67 | 92.21 | 7.46 |
| +74.50 | | | 4.25 98.81 | 92.55 | 6.26 |
| 1+11.75 | | | 5.00 98.06 | 92.88 | 5.18 |
| 1+49 = M.H.#7 | | | 5.21 97.85 | 93.22 | 4.63 |
| +86.4 | | | 4.40 98.66 | 93.46 | 5.20 |
| 2+23.8 | | | 4.16 98.90 | 93.70 | 5.20 |
| +61.2 | | | 3.41 99.65 | 93.94 | 5.70 |
| +98.6 | | | 3.08 99.98 | 94.19 | 5.79 |
| T.P. | 12.49 | 114.67 | 0.88 | 102.18 | |
| 3+36 | | | 2.01 101.05 | 94.43 | 6.62 |
| | | 114.67 | | | |
| +73.4 | | | 10.38 04.29 | 94.67 | 9.62 |
| 4+10.8 | | | 8.26 06.41 | 94.92 | 11.49 |

| | | | | |
|---|---|---|---|---|
| 4+48.2 | | 6.39 08.28 | 95.14 | C 13.12 |
| +85.6 | | 5.14 09.53 | 95.40 | 14.13 |
| 5+23 = M.H.#6 | | 5.87 08.80 | 95.65 | 13.15 |
| +58.11 | | 2.80 11.87 | 95.95 | 15.92 |
| +93.22 | | 2.63 12.04 | 96.25 | 15.79 |
| 6+28.33 | | 6.47 09.20 | 96.55 | 12.65 |
| +63.44 | | 8.41 06.26 | 96.85 | 9.41 |
| +98.55 | | 9.89 04.78 | 97.15 | 7.63 |
| 7+33.66 | | 11.55 03.12 | 97.45 | 5.67 |
| +68.77 | | 10.50 04.17 | 97.75 | 6.42 |
| 8+03.88 | | 8.64 06.03 | 98.05 | 7.98 |
| 8+39 = M.H.#5 | | 5.61 09.06 | 98.34 | 10.72 |

| Station | | | | | |
|---|---|---|---|---|---|
| 8+74 = T.P. | 2.21 | 111.78 | 5.10 / 109.57 | 98.64 | 10.93 |
| 9+09 | | | 2.52 / 09.26 | 98.93 | 10.33 |
| +44 | | | 3.53 / 08.25 | 99.23 | 9.02 |
| +79 | | | 4.66 / 07.12 | 99.53 | 7.59 |
| 10+14 | | | 4.25 / 07.53 | 99.82 | 7.71 |
| +49 | | | 4.56 / 07.22 | 100.12 | 7.10 |
| +84 | | | 5.76 / 06.02 | 100.42 | 5.60 |
| 11+19 | | | 4.63 / 07.15 | 100.72 | 6.43 |
| +54 = M.H. #4 | | | 4.73 / 07.05 | 101.02 | 6.03 |
| | 9.06 | 116.60 | 4.24 | 107.54 | ct & Logan |
| +86.5 | Cross in walk 5' South | | 8.46 / 08.14 | 101.34 | 6.80 |
| 12+19 | | | 7.86 / 08.74 | 101.67 | 7.07 |
| +51.5 | | | 7.42 / 09.18 | 101.99 | 7.19 |

| Station | | | |
|---|---|---|---|
| 12+84 | 6.89 / 09.71 | 102.32 | 7.39 |
| 13+16.5 | 6.95 / 09.65 | 102.64 | 7.01 |
| +49 | 5.88 / 10.72 | 102.97 | 7.75 |
| +81.5 | 5.04 / 11.56 | 103.29 | 8.27 |
| 14+14 | 3.98 / 12.62 | 103.62 | 9.00 |
| +46.5 | 2.96 / 13.64 | 103.94 | 9.70 |
| +79 = MH #3 | 2.31 / 14.29 | 104.27 | 10.02 |
| stakes π = 121.72 | | | |
| 15+12.22 | 8.12 / 13.60 | 104.50 | 9.10 |
| +45.44 | 7.81 / 13.91 | 104.73 | 9.18 |
| +78.66 | 7.72 / 14.00 | 104.96 | 9.04 |
| 16+11.88 | 8.49 / 13.23 | 105.20 | 8.03 |
| +45.10 | 7.88 / 13.84 | 105.43 | 8.41 |

| | | | | |
|---|---|---|---|---|
| | 121.72 | | | |
| 16+78.32 | | 8+0 13.62 | 105.66 | 7.96 |
| 17+11.54 | | 7.04 14.68 | 105.89 | 8.79 |
| +44.76 | | 5.36 16.36 | 106.13 | 10.23 |
| +78 = M.H. #2 | | 4.27 17.45 | 106.36 | 11.09 |
| 18+10.75 | | 2.02 19.70 | 106.59 | 13.11 |
| +43.5 | | 2.46 19.26 | 106.82 | 12.44 |
| +76.25 | | 4.15 17.57 | 107.06 | 10.52 |
| 19+09 | | 4.81 16.91 | 107.28 | 9.63 |
| +41.75 | | 5.45 16.27 | 107.51 | 8.76 |
| +74.5 | | 5.32 16.40 | 107.74 | 8.66 |
| 20+07.25 | | 3.64 18.06 | 107.97 | 10.09 |
| 20+40 = D.E. | | 2.69 19.03 | 108.20 | 10.83 |

114.19

122.23

| | | | | |
|---|---|---|---|---|
| 0+00 = Conn. to Ext. M.H. | | .5.04 / 99.15 | 99.15 = 98.77 | F.L. of stub. |
| +37.5 | 122.23 | 4.66 / 09.53 | .99.74 | 9.79 |
| +75 | | 11.58 / 10.65 | 100.33 | 10.32 |
| 1+12.5 | | 9.60 / 12.63 | 00.92 | 11.71 |
| +50 | | 7.43 / 14.80 | 01.51 | 13.29 |
| +87.5 | | 7.53 / 14.70 | 02.10 | 12.60 |
| 2+25 | | 10.01 / 12.22 | 02.69 | 9.53 |
| +625 | | 12.59 / 09.64 | 03.28 | 6.36 |
| 3+00 = M.H.# 1 | | 12.42 / 09.81 | 03.87 | 5.94 |
| +38 | | 10.97 / 11.26 | 04.52 | 6.74 |
| +76 | | 8.16 / 14.07 | 05.16 | 8.91 |
| 4+14 | | 5.56 / 16.67 | 05.81 | 10.86 |

| | | | | |
|---|---|---|---|---|
| 4+52 | | 1.96 / 20.27 | 106.45 | 13.82 |
| +90 | | 1.32 / 20.91 | 07.10 | 13.81 |
| 5+28 | | 4.18 / 21.05 | 07.75 | 13.30 |
| +66 | | 4.18 / 18.05 | 08.39 | 9.66 |
| 6+04 = D.E. | | 5.78 / 16.45 | 109.04 | 7.41 |

| | | | |
|---|---|---|---|
| 3.54 | 114.19 | 15.58 | 110.65 |
| 5.22 | 122.23 | | 117.01 = S.L.T. ₤ Alley E. |

Grades on S.L. Contour - 52<sup>nd</sup> W. to
Alley.

| | | | | Prop. grade .12 above est. |
|---|---|---|---|---|
| P.C. on 52<sup>nd</sup> | | | | 383.74 |
| P.C on Contour = 0+00 | | | | 83.62 |
| +22.08 | | | | 83.73 |
| +44.16 | | | | 83.85 |
| +66.24 | | | | 83.97 |
| +88.32 | | | | 84.08 |
| 1+10.40 | | | | 84.20 |
| +29.8 = Alley | | | | 84.30 |

0.5% Rise

| 16' Back | 83.81 |
|---|---|
| 21' Back = | 83.95 |
| 20' Back | 84.07 |
| 19' Back = | 84.18 |
| 36' Back = | 84.38 |

## Left page

155.25'

| | | | Grade | cut |
|---|---|---|---|---|
| BC. 0+00 = Meet 18" pipe | | | 146.03 | |
| 0+19.04 | | 5.75 / 49.50 | 9.50 / 46.79 | 2.71 |
| +38.09 | | 5.78 / 49.47 | 9.47 / 47.55 | 1.92 |
| +57.13 | | 2.27 / 52.98 | 52.98 / 48.31 | 4.67 |
| +76.18 = EC. | | 0.74 / 54.51 | 54.51 / 49.07 | 5.44 |
| +88.59 = end. | | 0.32 / 54.93 | 54.93 / 49.57 | 5.36 |

stakes 6' Lt.

**INDEXED**
WK
NOV 30 1948

Cross on 13 Line    61.27

| | | | | |
|---|---|---|---|---|
| B.M. B.P. | 1.68 | 155.25 | 153.57 | E. cb. Curlew opp Ostego |

## Right page

Stake Drain Extension - By City

# 1971     1-2-48

W.O. 80080     7.0.



£ of prop Ext.

Δ = 35°36'
R = 122.6
T = 39.36
ch = 19.03
d = 4°27'

Meet pipe 0+00

0+76.18 = PC.

0+88.59 = End

Brant St

Brookes Ave   30
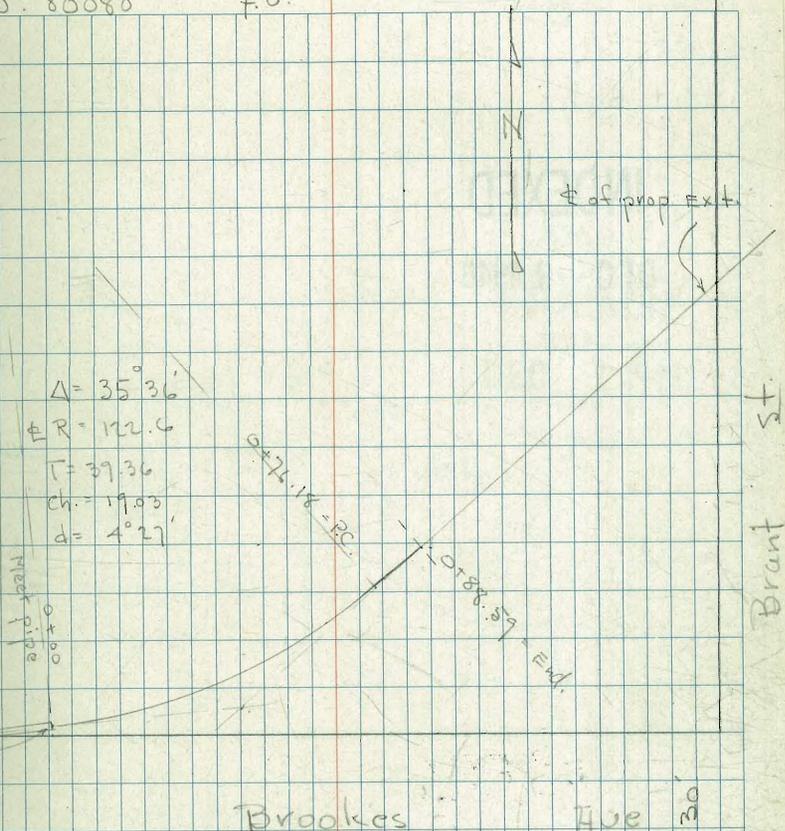
See B.1810 - P.1
for Ties

Prop 20' Rad.  
N.W. Cor.    – 14' –  
2nd + Ash

7'

20' Rad  
Cross  X

cross

□ Pillar

7'        15

14

ct.

To 7'ct. – S.W.Cor.

---
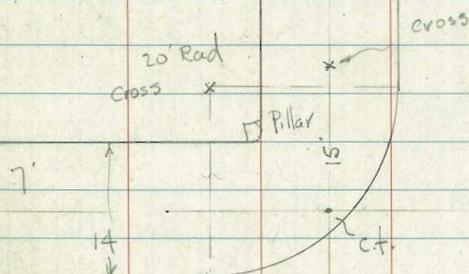
Prop. 15' Rad.  
N.W. Cor  
10th + F
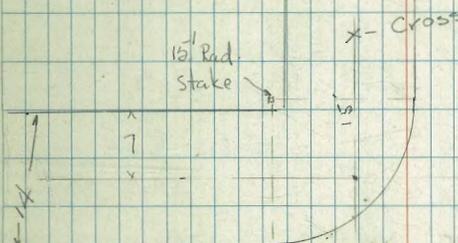
W.O. 25001  
1-22-48  
7.0

← 14' →

← 7' →

15' Rad  
Stake

X – Cross

7'   15

14

To 7'ct. s.w. Cor.

Prop. 15' Rad.
N.W. Cor. -            14'
9th & E.

7'

B.P. = B.M.

7'  Cross 7'
                    15'        TO NE 7'ct →
14
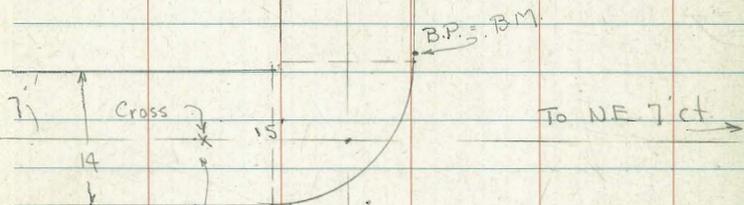
Cross is
0.13 Lower
Than The
B.M.

Prop. 15' Rad.
S.E. Cor
Thorn & Front

Curb ring around
Tree

To 7'ct on S.W. Cor.          15'  x  Cross          7'

                                                      7'

Set 15' Rad.
Stake

7'

14
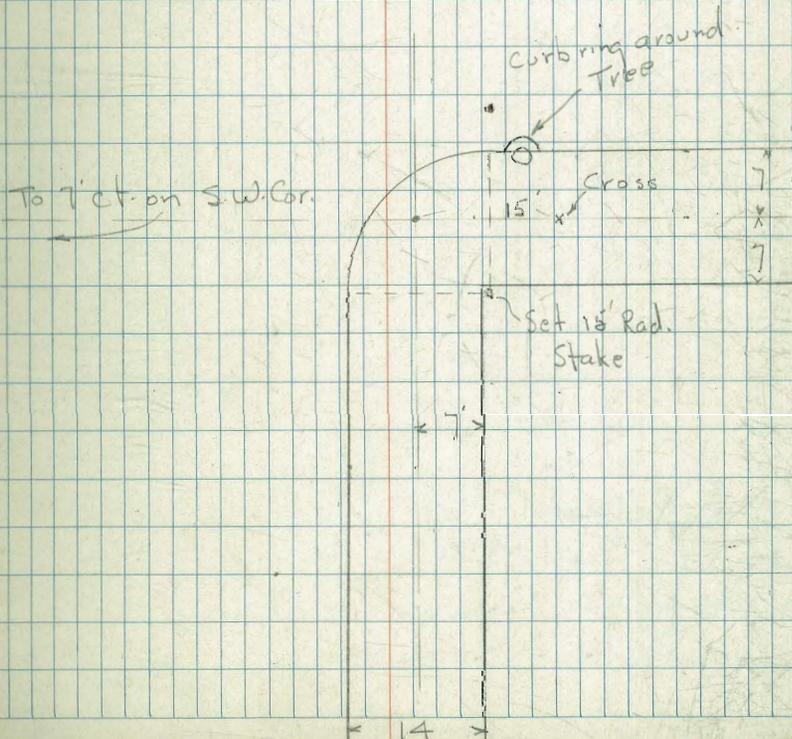
Grades —

Cuts.

Sta.

| | | | stakes | Grade | |
|---|---|---|---|---|---|
| 0+00 = end Ext. 24" | | | | 306.74 | 1779-P 3 |
| | 4.40 | 311.14 | | | |
| | | | 1.14 | | |
| 0+40 = stake 8' Lt. | | | 310.00 | 303.94 C 6.06 | |
| | | | 3.50 | | |
| 0+80 - stake 6 Rt. | | | 307.64 | 301.14 C 6.50 | |

Sandy Culvert
Lot 582 Unit # 3
Talmadge Park
Aldine Dr. & Monroe Ave.

Grade Stakes for 80' R.C. Culvert.
Drawing 3295-B  —  Book 1779- P. 2
#2003                        1-22-48
W.O. 80045                   7.0.
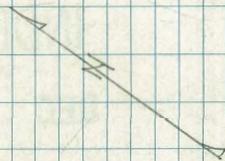
Lot 582 - Talmadge Park
Unit 3

₵ Prop:
24" RC Pipe

Fd. stub.
1779-P.2

1+10.61

2A 30

0+80=end.

0+00

End of Ext. 24"
Cor. Pipe
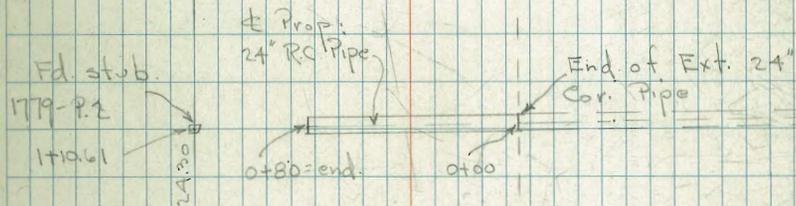
NEly. Line of
Aldine Dr.

Paving Stakes - Blk. 120 - Univ. Hts.
N.+S. 20' Alley

see P. 45 for Grades

Sta.
0+00 = N.L. Howard
# 20 17
W.O. 310 20

INDEXED
WK
DEC. 2 1948

2-2-48
7.0

El Cajon Ave



156.95          156.95    10         Ct.
                                  10
7                                           7

Blk. 120

Univ. Hts.        10 10              N
                                              Kansas St.
Utah

1+75

0+00

Ct.

Howard    Pave &        Ave
          Ret in
          good shape
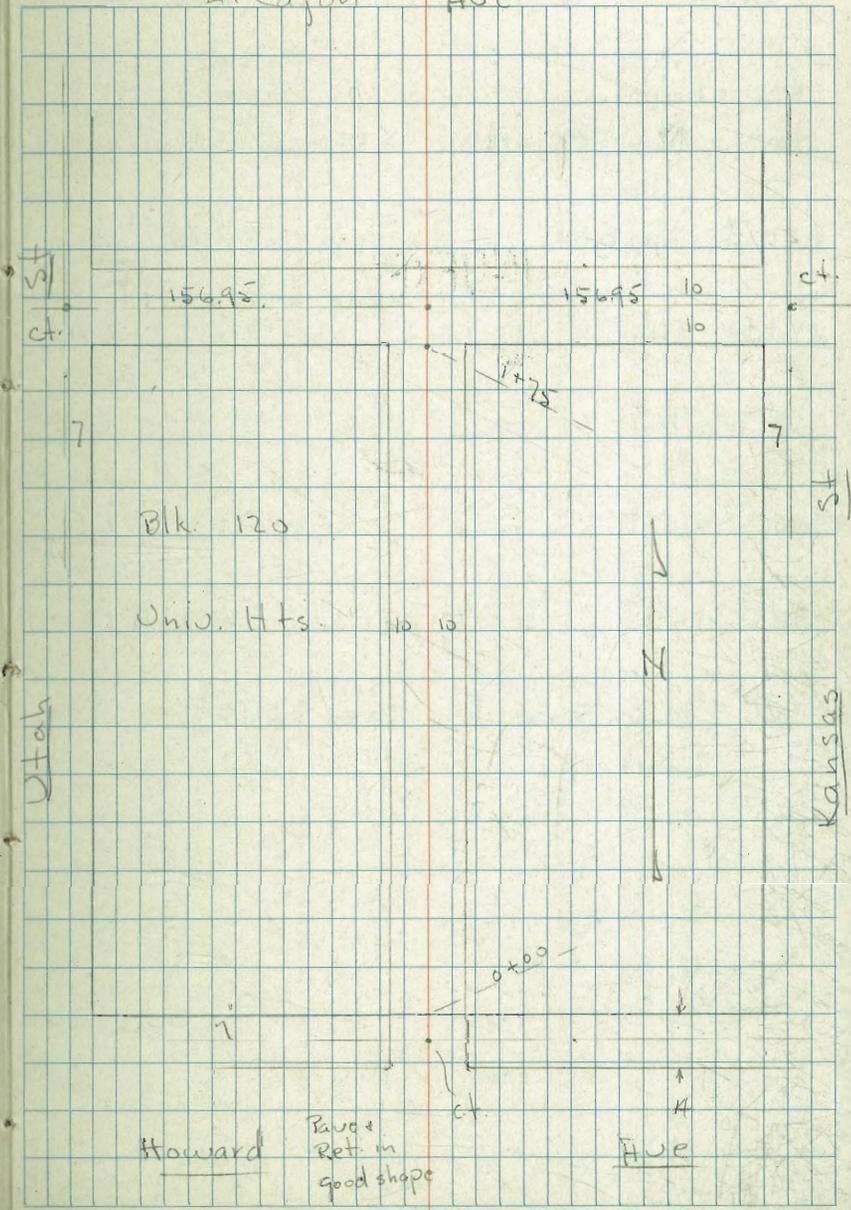
**Grades - 20' Alley - Blk. 120 - Univ. Hts.**

| Sta | | | W.side Grade | |
|---|---|---|---|---|
| 0+00 = | N.L. Howard. stake | 5.21 | 371.63 | curb cut |
| +20 | 2' Back | 4.86 / 71.98 | 71.75 | C 0.23 |
| +40 | 2' " | 4.78 / 72.06 | 71.71 | C 0.35 |
| +73.75 | 2' " | 4.99 / 71.85 | 71.51 | C 0.34 |
| 1+07.50 | 2' " | 5.40 / 71.44 | 71.31 | C 0.13 |
| +41.25 -4' " | | 4.40 / 72.44 | 71.10 | C 1.34 |
| 1+75 = S.L. 20' E&W Alley | 2' Back + on Alley Line = SL | 5.98 / 70.86 | 70.90 | C 0.04 |

| | | | | E.Side Grade | |
|---|---|---|---|---|---|
| | Pave = | | 5.45 | 371.39 | ok. |
| 2' | Back | | 5.16 / 71.68 | 71.62 | C 0.06 |
| " | " | | 5.70 / 71.64 | 71.61 | C 0.03 |
| " | " | | 5.32 / 71.52 | 71.41 | C 0.11 |
| " | " | | 5.60 / 71.24 | 71.21 | C 0.03 |
| " | " | | 5.22 / 71.62 | 71.00 | C 0.62 |
| " | " +0.5 N. of S.L.E.&W. Alley. | | 5.84 / 71.00 | 70.80 | C 0.20 |

Drawing 7116-L

Return Grades - S.W. Cor. El Cajon &

Fairmount.

| | | | | |
|---|---|---|---|---|
| | 502  357.05 | | 352.03 | S.W. Cor. |
| P.C. = S.L. El Cajon | Stake - 3' Back | 5.05 | 352.00 = Grade | |
| 1/4 | Stake 3' Back | 5.05 | 52.00 | Grade |
| 1/2 = ₵ | Cross 5' Back | ~~4.85~~ ~~51.20~~ 52.19 | 52.00  C 0.19 | |
| From ₵ 5' cross to F.L. of Box | | | 47.00  C 5.20 | |
| 3/4 | Cross 3' Back | 5.01 52.04 | 52.00  C 0.04 | |
| E.C. = S. cb. El Cajon | Cross 7' Back | ~~5.14~~ ~~51.86~~ | 52.14 52.00  C 0.14 | |
| 37.5 W = Stake 3' Back | | | 52.12  Grade | |
| 65 W = Join | | | 52.21 | |
| 0+00 = P.C. = S.L. | | | | |
| 0+30 | | | 52.38 | |
| 0+60 | | | 52.76 | |
| 0+90 | | | 53.14 | |
| 1+20 | | | 53.52 | |
| 1+429 = P.C. 5' Rad = cross | 53.91 | | 53.80  C 0.11 | |
| Meet 1+57 = | | | 53.97 | |



INDEXED
WK
DEC 2 1948

Temp. B.M.
EL. 351.62
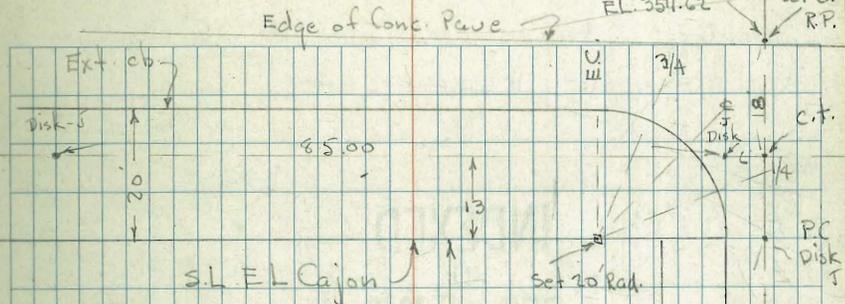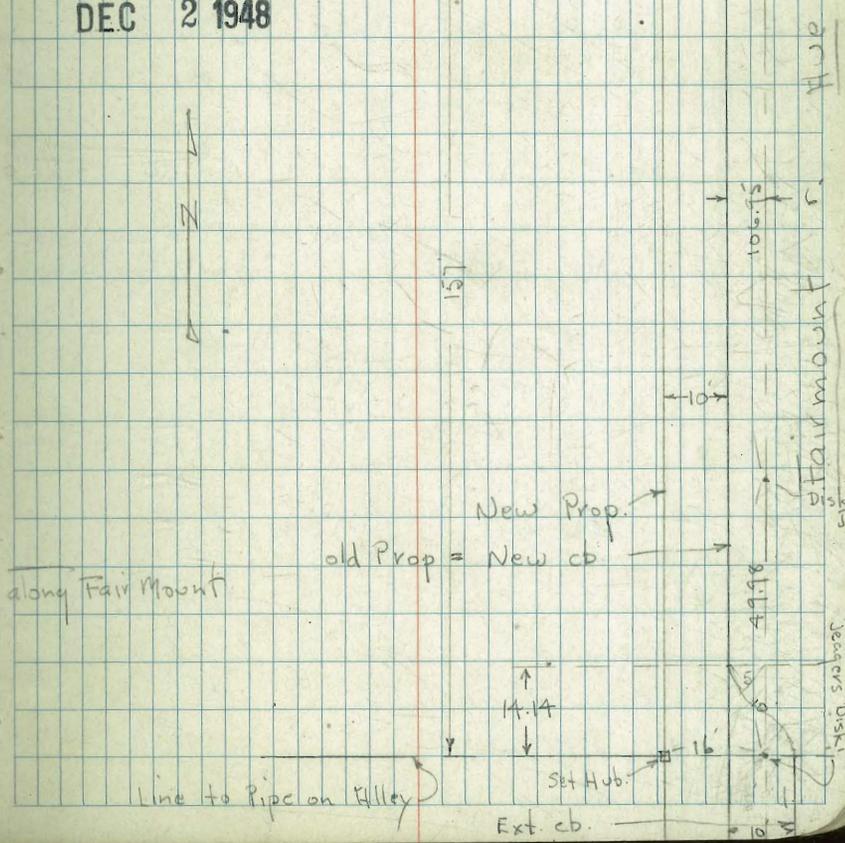
Paving Stakes - N. 315' of 15th Alley
in Block 6 - Florence Hts

#2037
W.O. 31059

2-6-48
Osborne
Hardin
Worrell
Rohr.

Grades - next Page

| | | | | | |
|---|---|---|---|---|---|
| B.M. | .7.34 | 284.33 | | 276.99 | N.W. Wash. + Albatross |
| T.P. | 4.15 | 281.57 | 6.91 | 277.42 | |

Washington St

Nail

0+00

Albatross St

Block 6
Florence Hts

← 15'
← 7.5

N

Front St
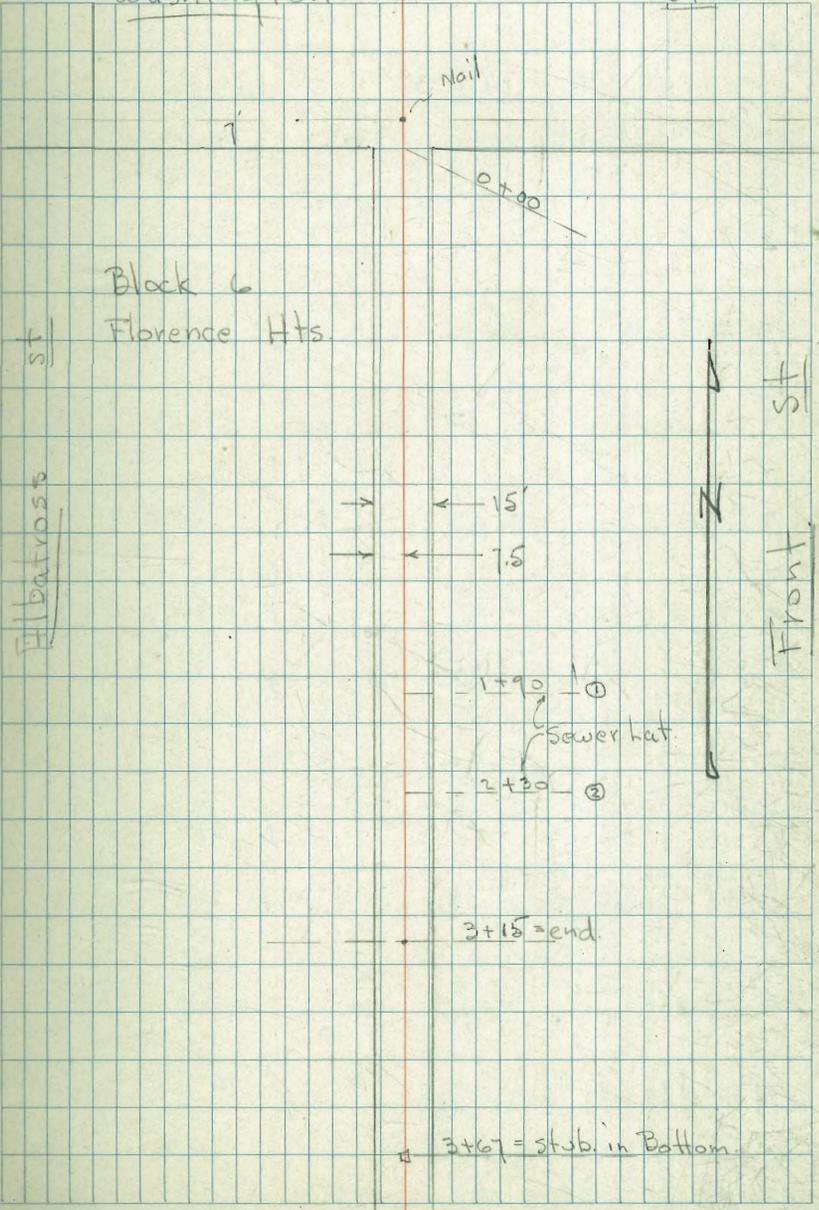
— 1+90 ①
Sewer Lat
— 2+30 ②

3+15 = end.

3+67 = stub. in Bottom

Grades – Filley – Blk. 6 –

| sta | | 284.33 | | W.side | |
|---|---|---|---|---|---|
| 0+00 = S.L. Washington | | | 591[²] 78.42 | 278.42 | Meet Pave |
| +20 | | | 4.40 79.93 | 78.70 | C 1.23 |
| +40 | | | 4.65 79.68 | 78.72 | C 0.91 |
| +60 | | | 5.24 79.09 | 78.63 | C 0.46 |
| +80 | | | 5.55 78.78 | 78.28 | C 0.50 |
| 1+15 | | | 6.65 77.68 | 77.47 | C 0.21 |
| T.P. | 281.57 | | | | |
| +50 | | | 4.32 77.25 | 76.67 | C 0.58 |
| +85 | | | 4.54 77.03 | 75.86 | C 1.17 |
| 1+90 = Sewer Lat # ① on E side | | | | 70.15 | |
| 2+20 | | | 6.63 74.94 | 75.06 | F 0.12 |
| 2+30 = Sewer Lat # ② | | | | | |

284.33

| | 284.33 | | E.Side | |
|---|---|---|---|---|
| | 5.66 7.8.67 | | 78.64 | C 0.03 |
| | 4.06 80.27 | | 78.83 | C 1.44 |
| | 4.47 79.86 | | 78.83 | C 1.03 |
| | 5.54 78.79 | | 78.65 | C 0.14 |
| | 5.80 78.53 | | 78.28 | C 0.25 |
| | 4.60 79.73 | | 77.47 | C 2.26 |
| 2.81.57 | | | | |
| | 4.35 77.22 | | 76.67 | C 0.55 |
| | 5.20 76.37 | | 75.86 | C 0.51 |
| | 5.29 76.28 | | 70.75 | C 5.53 |
| | 6.10 75.47 | | 75.06 | C 0.41 |
| | 6.42 75.15 | | 69.82 | C 5.33 |

| | | 281.57 | | W. Side | | | 281.57 | | E. Side |
|---|---|---|---|---|---|---|---|---|---|
| 2+40 | | 7.05 74.52 | 74.58 | F 0.06 | | | 6.64 74.93 | 74.58 | C 0.35 |
| +60 | | 7.45 74.12 | 74.05 | C 0.07 | | | 6.06 75.51 | 74.05 | C 1.46 |
| +80 | | 8.25 73.32 | 73.48 | F 0.16 | | | 6.65 74.92 | 73.48 | C 1.44 |
| 3+00 | | 8.57 73.03 | 72.86 | C 0.17 | | | 7.90 73.67 | 72.86 | C 0.81 |
| 3+15=end. | | 9.22 72.35 | 72.38 | F 0.03 | | | 9.20 72.37 | 72.38 | F 0.01 |

Sewer Grades - Lot 24 - LaMesa Colony
E. of Seminole Dr. - Plan - 3399-B
                                    1774 - 49

W.O. 60214    **INDEXED**        2-6-48
                    wk              7.0
             **DEC. 3 1948**

      4.51      463.81      459.30 = 0+
              Stakes 4 Rt.   Grade   Cut.

0+00 = MH.# 1 = Conn. to
Ext. 6" Sewer.           4.27
                         59.54   453.06   6.48


+24.96                   4.35
                         59.46   53.23    6.23


+49.92                   4.39
                         59.42   53.41    6.01


+74.9 = Ang. 17°20' Rt.  4.40
2 stakes - 4 + 4'        59.41   53.58    5.83

1+02.4                   4.33
                         59.48   53.78    5.70


1+29.9 = D.E.            4.27
                         59.54   53.97    5.57

Tommasa                              Map 2309
Sub.                        2" Pipe

                                         ₡ Exist. 6" Sewer →
± Prop. MH 0+00
Make Conn.
                            ←3'          Lot 22

          Lot 23

    ₡ Prop. Sewer →
                         2" Pipe
            0+74.9   4  4'
          Ang. 17°20' Rt.              Lot 21


          Lot 24           → ←3'
          LaMesa Colony


    Seminole Dr.    1+29.9 = D.E.

          1+29.9 = D.E.

                                     Lot 20

Grades on Laterals- Sewer. in Alleys.
20' Alley - Blk. 139 - Beardsley + National
Lat. #① = 190' W. of W.L. Beardsley
Used. S. cb.

| | | | | |
|---|---|---|---|---|
| 5.13 | 43.62 | | 38.49 | W.L. - S. cb |

stake - 2' Back
6.84

F.L. Lat.   36.78   31.76   C 4.82

___

20' Alley - Blk. 79 + 6 - 30$^{th}$ + 1$^{st}$
S. cb. - W.L. 30$^{th}$

5.62   77.10   7.48

Lat. ② = 160' W. of W.L. 30$^{th}$
F.L. Lat.   450
72.60   68.60 C. 4.00
on Nail in fence
0.4 in Alley

Lat. ① - 260' W. of W.L. 30$^{th}$

F.L. Lat.   4.20
72.90   68.90 C 4.00
on Nail .24
Back.

___

Laterals on Lotus St
5.18   7.65   2.47   S.W. Abbott +
Voltaire

Lat. ① - 130' E. of Abbott - 2' Back of N.L.
F.L. Lat. =   3.25
4.40   - 1.20 C 5.60

Lat ② = 115' W. of Bacon - 2' Back of N.L.
F.L. Lat.   taps
7.68   2.13   C 5.55

Lat. ③ = 50' E. of Abbott - 2' S. of 3L.
F.L. Lat.   4.18
3.47   - 1.96 C 5.43

Grades for Walk and Drive - at
Fire Sta. - Ozark + Imperial
W.O. 90052          2-16-48 - 7.0.

|        |        |        |         | c+.&Imp + |
|--------|--------|--------|---------|-----------|
| 10.19  | 168.96 |        | 158.77  | W. 10' Ozark |

Stakes = 3' Back
May be changed - set as shown on sketch

Cuts on 4' Radius stake for end of walk

| 4' Rad. on E. |       | 4.88  | 64.08 |        |
|---------------|-------|-------|-------|--------|
| P.C. Grade    |       |       | 65.17 | F 1.09 |
| E.C. = end.   |       |       | 65.57 | F 1.49 |

| 4' Rad. on W. |       | 5.20  | 63.80 |        |
|---------------|-------|-------|-------|--------|
| P.C. Grade    |       |       | 65.11 | F 1.31 |
| E.C. = end.   |       |       | 64.97 | F 1.17 |
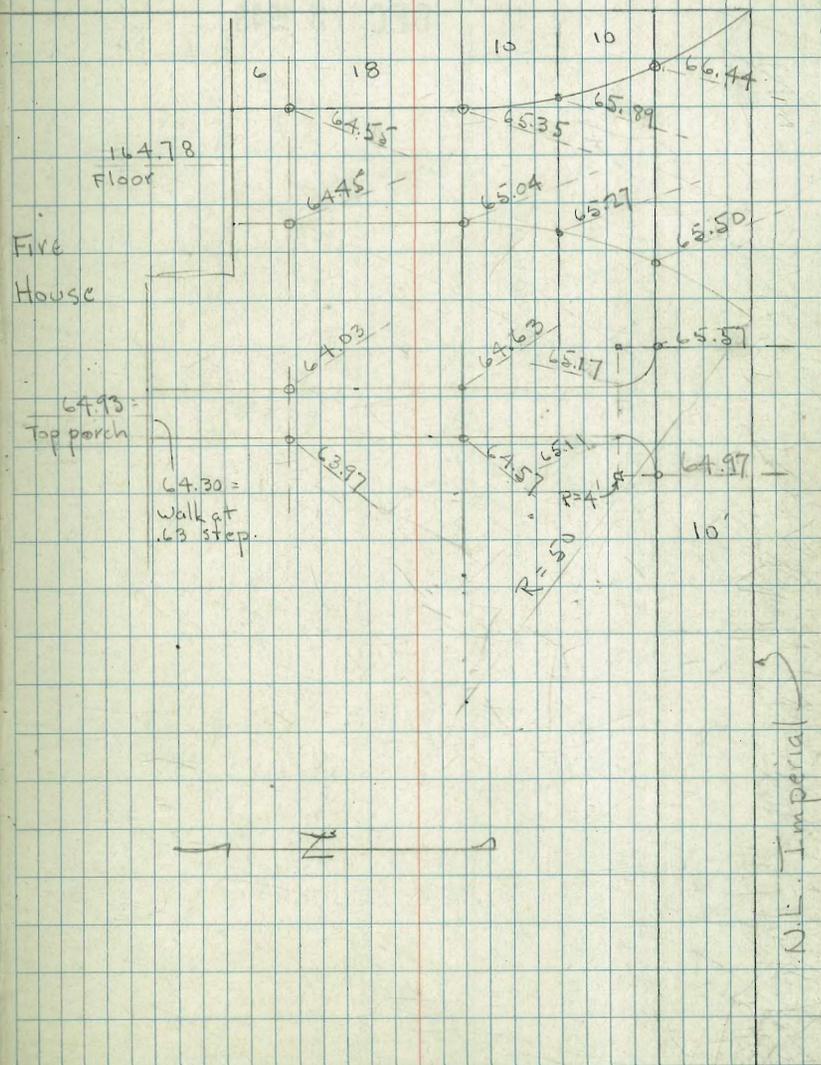
3+25.17

**INDEXED**
wk
**DEC 3 1948**

Curb Stakes
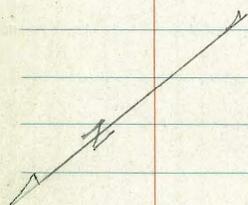
W.O. 31213

205.11.502

St

R 4'

R.P. Hubs    30'    30'

Lotus St

100.06

10'    30'    10'

5'

0+00

7'    38'    7'

set c.t.    7 c.t.

Abbott    St.

---

7 c.t.
36'    6 + 00 A6

set 7 c.t.

-on Lotus St

2-17-48
Osborne
Hardin
Worrell
Rorer

St

225.29

Lotus

3+75.17

R.P Hubs    50    5'    50    5'
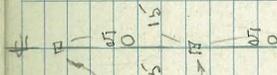
3+50.17
C L Chamberlain ct.
split improvements
to est. this Line

10'    30'    10'

Curb Grades - Lotus - Abbott to Bacon
North Side

| B.M. | 5.26 | 7.73 | | 2.47 | |
|---|---|---|---|---|---|
| sta | | | | Grade | |
| 0+00= E.L. Abbott | | | 5.30 2.43 | 2.50 = .07 Low | |
| Stakes -3' Back | | | 4.91 | | |
| +30 | | | | 2.82 | Grade |
| +65 | | | 4.53 | 3.20 | " |
| +96= P.C. -4' Rad | | | 4.33 3.40 | 3.53 | F 0.13 |
| E.C. on W.L. Alley | | | | 3.61 | F 0.21 |
| 2' Back { | | | | | |
| End.= N.L. Lotus | | | 4.06 | 3.67 | Grade |
| E. side of Alley - on NL | | | 3.84 | 3.89 | " |
| E.C. on W.L. Alley | | | 3.80 3.93 | 3.83 | C 0.10 |
| P.C.= Nicb Line | | | | 3.83 | C 0.10 |
| 0+00= E.L. Alley | | | | | |
| +35 | | | 3.56 | 4.17 | Grade |
| +70 | | | 3.18 | 4.55 | " |
| 1+05 | | | 2.80 | 4.93 | " |

| | | | | Grade | |
|---|---|---|---|---|---|
| 1+40 | | | 2.42 | 5.31 | Grade |
| T.P | 5.33 | 10.63 | 2.43 | 5.30 | |
| +75 | | | 4.94 | 5.69 | " |
| 2+05= W.L. Chamberlain | | | 4.63 | 6.00 | " |
| N.L. Lotus | | | 4.63 | 6.00 | " |
| N.L. Lotus | | | 4.33 | 6.30 | " |
| 0+00= E.L. Chamberlain | | | 4.33 | 6.30 | " |
| +35 | | | 4.01 | 6.56 | " |
| +70 | | | 3.80 | 6.83 | " |
| 1+05 | | | 4.04 6.59 | 7.09 = | F 0.50 |
| +40 | | | 3.27 | 7.36 | Grade |
| +75 | | | 3.05 | 7.62 | " |
| 2+00 = Cross in Walk | | | 2.71 7.86 | 7.81 | C 0.05 |
| 2+25= W.L. Bacon | | | 2.63 | 8.00 | |

| 5.60 | 10.90 | | 5.30 = T.P. |
|---|---|---|---|

## South Side – sta.

| sta. | | | Grade |
|---|---|---|---|
| 0+00 = EL Abbott | 8.55 | 2.45 | 2.50 |
| +35 | 8.02 | | 2.88  Grade |
| +70 | 7.64 | | 3.26  " |
| 1+05 | 7.26 | | 3.64  " |
| +40 | 6.88 | | 4.02  " |
| +75 | 6.50 | | 4.40  " |
| 2+10 | 6.13 | | 4.77  " |
| +45 | 5.75 | | 5.15  " |
| +85 | 5.32 | | 5.58  " |
| 3+25.17 = W.L. Chamb | 4.90 | | 6.00  " |
| ₵ | 4.75 | | 6.15  " |
| 0+00 = E.L. Chamb. | 4.60 | | 6.30  " |

| sta. | | Grade |
|---|---|---|
| +35 | 4.24 | 6.64  Grade |
| +70 | 3.92 | 6.98  " |
| 1+05 | 3.58 | 7.32  " |
| +40 | 3.24 | 7.66  " |
| +75 | 2.90 | 8.00  " |
| 2+00 | 2.65 | 8.25  " |
| +25 = W.L. Bacon | 2.40 / 8.50 | 8.50  — " |

Set stubs-6+12
Mon

Set stubs
6x12
Set Disk

30.93 - To ± M.H.-27

Foster St

M.H.-27

90° Mon.

99.00 To ± M.H.-24

3+36.63 = M.H.26

± Imperial

20'

P.C.?

90°

Set Hub

50'

Imperial

Set Disk

20'

Mon.-.66 W.
of Sewer.

24.66 from D.
To Sewer.

1+44.71 on
Sewer.

Flicker St

Ditch
in Walk

Pigeon St

2+35 = D.E.

see P. 61

0+00 =
M.H.-25

Set 7' Hubs

7

300

Mon.

St

7

Mon.

1+35 = D.E.

Rainbow St

St

25-25

25  25

25-25

Lisbon St

St

Set 3-7' Hubs

Set 3-7' Hubs

Grades on Stakes for Prop. Bldg.
at City Shops —

| | | | | | | |
|---|---|---|---|---|---|---|
| B.M. | 2.04 | 68.56 | | 66.52 | | B.P. in step Main office |
| Stakes – 3' offset. | W. L. | Grade | | E. L. | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0-03 | F1.53 | 4.09 64.47 | 66.00 | 4.95 63.61 | 66.00 | F 2.39 | |
| on ₵ | | | 4.39 64.17 | 66.00 | F 1.83 | | |
| 0+60 | F1.45 | 4.01 64.55 " | | 4.75 63.81 | | F 2.19 | |
| +30 | F2.62 | 5.18 63.38 " | | 4.49 64.07 | | F 1.93 | |
| +60 | F2.15 | 4.71 63.85 " | | 4.47 64.09 | 66.00 | F 1.91 | |
| +90 | F2.01 | 4.57 63.99 " | | 4.49 64.07 | | F 1.93 | |
| 1+20 | F1.98 | 4.54 64.02 " | | 4.44 64.12 | | F 1.88 | |
| +50 | F1.45 | 4.01 64.55 " | | 4.53 64.03 | | F 1.97 | |
| +80 | F0.94 | 3.50 65.06 " | | 4.26 64.30 | | F 1.70 | |
| 2+10 | C0.51 | 2.05 66.51 " | | 3.13 65.43 | | F 0.57 | |
| +13 | C0.48 | 2.08 66.48 " | | 3.05 65.51 | | F 0.49 | |
| on ₵ | | | | 2.47 66.09 | = C 0.09 | | |

W.O. 60127
2-18-48
T.O.

57

Used line 20'
from Bldg. as
base line - Cor.=
10' out from NL "B"

To Cross in cb. on N side
of A St.



←— 20' —→
←— 50' —→

2+10
1+80     3' offset 70'
1+50     3' offset stakes
1+20
+90
+60
0+30
0+100
0+00

210'

N

NL-B St.

Set Cross in walk

Exist. Bldg. Line - outside of lower panel

Stakes for Water Laterals - Alley - Blk. 3
East Gate

| | | | | | |
|---|---|---|---|---|---|
| B.M. | 6.94 | 359.50 | | 352.56 | N.W 45½ + Orange |

| Sta. £ Lat | N. W. Grades | | N. E Grades | |
|---|---|---|---|---|
| 0 + 19 | | | 52.54 | 52.39 |
| + 36 | 53.29 | 53.10 | | |
| + 68 | | | 53.61 | 53.57 |
| + 73 | 53.95 | 53.91 | | |
| 1 + 19 | | | 53.91 | 53.90 |
| + 30 | 54.28 | 54.27 | | |
| + 59 | | | 54.13 | 54.12 |
| + 73 | 54.50 | 54.49 | | |
| 2 + 09 | 54.69 | 54.68 | | |
| + 10 | | | 54.40 | 54.38 |
| + 61 | | | 54.66 | 54.64 |

INDEXED
WK
DEC 3 1948

El Cajon          Ave

45 ft          Chamoune

0+00

Orange          Ave
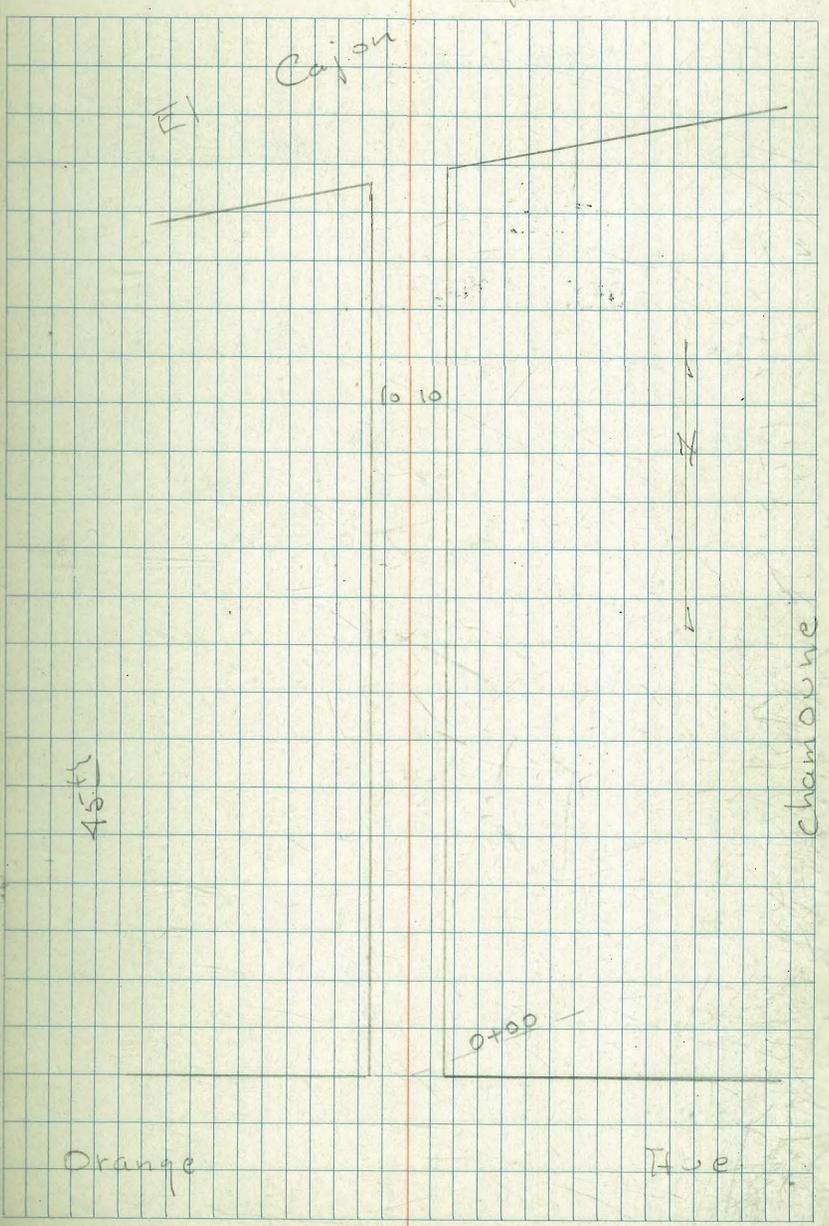
| ι | N W S | | N E S | |
|---|---|---|---|---|
| 2+76 | 55.04 | 55.03 | | |
| 3+20 | | | 54.97 | 54.95 |
| +37 | 55.35 | 55.34 | | |
| +40 | | | 55.07 | 55.05 |
| +84 | 55.60 | 55.58 | | |
| 4+10 | | | 55.46 | 55.45 |
| +32 | 55.91 | 55.90 | | |
| +65 | | | 55.90 | 55.88 |
| +93 | 56.50 | 56.49 | | |
| +98 | | | 56.25 | 56.23 |
| 5+34 | 56.95 | 56.93 | | |
| +57 | 57.22 | 57.20 | | |
| +73 | | | 57.12 | 57.08 |

| | N W S | | N E S | |
|---|---|---|---|---|
| 5+99 | | | 57.40 | 57.36 |
| 6+66 | 58.31 | 58.31 | | |
| +82 | | | 58.09 | 58.09 |

W.O. 31131

Grades for Sewer - Drake - st.

| | | | | |
|---|---|---|---|---|
| B.M. | -3.25 | 232.29 | | 229.04 | 1709-47 |
| 0+00 = Exist. M.H. | | | | 215.95 | |
| ...on Cross in Rim of M.H. in Park | | | 141 | 230.88 = B.M. | |
| +25.87 | | | 9.81 / 23.48 | 16.28 | C 7.20 |
| +51.74 | | | 11.23 / 21.06 | 16.62 | C 4.44 |
| +77.6 | | | 9.73 / 22.56 | 16.96 | C 5.60 |
| 1+03.3 | | | 5.12 / 27.17 | 17.30 | C 9.87 |
| +29.2 | | | 5.29 / 27.00 | 17.63 | C 9.37 |
| +55.2 | | | 4.99 / 27.30 | 17.97 | C 9.33 |
| +81.07 | | | 4.68 / 27.61 | 18.31 | C 9.30 |
| 2+06.94 | | | 4.61 / 27.68 | 18.64 | C 9.04 |
| +32.8 | | | 4.29 / 28.00 | 18.98 | C 9.02 |
| +58.70 | | | 4.20 / 28.09 | 28.09 / 19.32 | C 8.77 |
| +84.6 | | | 3.61 / 28.68 | 19.65 | C 9.03 |
| 3+10.41 - MH #1 | | | 3.21 / 29.08 | 19.99 | C 9.09 |

2-24-48
7.0.

Lot line →

Hub

125'    7.5

Imperial

Drake st

3+10.41
27°58' Lt

90°

El 230.88
B.M. on Rim of Exist.
Cross.   M.H.

stakes 10' Rt.

Sec 1709-46
for Orig.

0+00 - Exist. MH

| | | | | | |
|---|---|---|---|---|---|
| | 1.49 | 261.11 | | 259.62 | Stb -21+06.4 = 1709-33 |
| B.M. - Nail in Pole | | | 3.89 | 257.22 | |
| | | | | | |
| 0+00 = Exist. M.H. | | | | 248.06 | 48.00 = F.L. |
| +25.63 | | | 10.86 50.25 | 48.35 | C 1.90 |
| +51.26 | | | 6.36 54.75 | 48.65 | C 6.10 |
| +76.89 | | | 4.06 57.05 | 48.95 | C 8.10 |
| 1+02.52 | | | 7.53 53.58 | 49.24 | C 4.34 |
| +28.15 | | | 4.26 56.85 | 49.54 | C 7.31 |
| +53.78 | | | 3.90 57.21 | 49.84 | C 7.37 |
| 1+79.42 = ₵ M.H. 25 | | | 1.01 60.10 | 50.14 | C 9.96 |
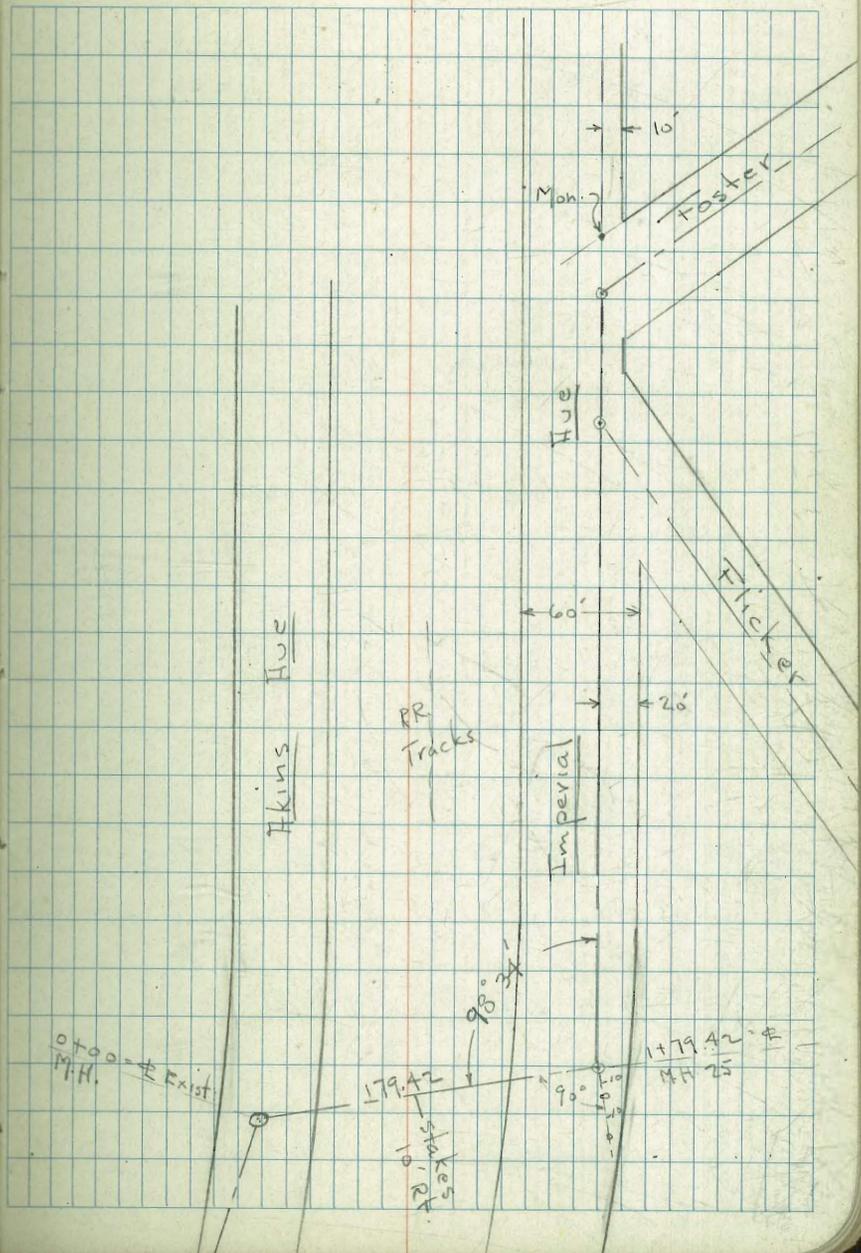
Grades - M.H. 1 to 2

| | | | | | |
|---|---|---|---|---|---|
| | 0.77 | 231.65 | | 23.88 = Rim M.H. |
| 0+00 = ℄ MH #1 | | | | 219.99 |
| +25 | | | 2.02 29.63 | 20.31 | C 9.32 |
| +50 | | | 1.63 30.02 | 20.64 | C 9.38 |
| +75 | | | 1.43 30.22 | 20.96 | C 9.26 |
| 1+00 | | | 1.11 30.54 | 21.29 | C 9.25 |
| +25 | | | 7.57 24.08 | 21.61 | C 2.47 |
| +50 | | | 6.22 24.43 | 21.94 | C 3.49 |
| +75 | | | 6.93 24.72 | 22.26 | C 2.46 |
| 2+00 | | | 2.58 29.07 | 22.59 | C 6.48 |
| +25 | | | 0.39 31.26 | 22.91 | C 8.35 |
| T.P. | 7.39 | 238.87 | 0.17 231.48 | 23.24 | C 8.17 |
| +50 | | | 7.46 31.41 | 23.24 | C 8.17 |
| +75 | | | 7.10 31.77 | 23.56 | C 8.21 |

68 th

68th

℄ Sewer →

← 20

← 10'

strike

80    Hub    82.5

6.15

0+00 = ℄ MH 3

4+29.25 = ℄ MH 2 = 0+00

Drake

1+41.35 = MH
0+00    23

Lot Line →

7.5

℄ Sewer

1+57.78

D.E.

50'

Imperial Ave

30'

A+17.76 = MH 4
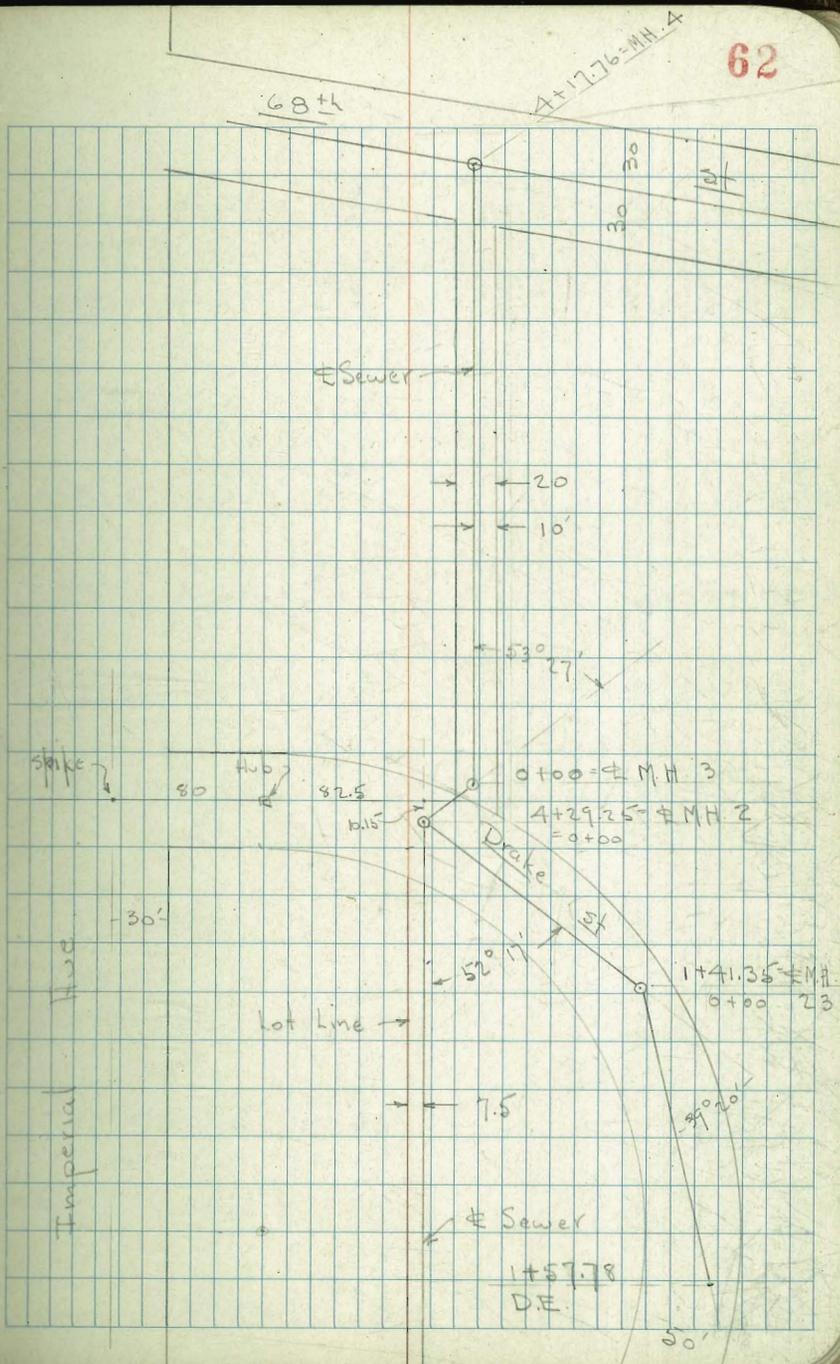
238.87

| 3+00 | | 6.69 / 32.18 | 23.89 | C 8.29 |
| +25 | | 6.41 / 32.46 | 24.21 | 8.25 |
| +50 | | 5.89 / 32.98 | 24.54 | 8.44 |
| +75 | | 5.45 / 33.42 | 24.86 | 8.56 |
| 4+00 | | 4.45 / 34.42 | 25.19 | 9.23 |
| +29.25 = ₤ MH #2 = 10' Rt | | 5.06 / 33.81 | 225.57 | 8.24 |
| 10' Lt. | | 5.19 / 33.68 | | 8.11 |

from M.H. 2 to 23 — in Drake

| 0+00 = ₤ M.H. 2 | | | 225.57 | |
| +28.27 | | 4.80 / 34.07 | 26.53 | C 7.54 |
| +56.54 | | 4.36 / 34.51 | 27.50 | C 7.01 |
| +84.81 | | 3.55 / 35.32 | 28.46 | 6.86 |
| 1+13.08 | | 2.61 / 36.26 | 29.43 | 6.83 |

238.87

| 1+41.35 = ₤ MH 23 | 153.TP / 37.34 | 30.40 | C 6.94 |
| = 0+00 | | | |
| 4.58    241.92 | | | |
| 0+26.29 | 4.51 / 37.41 | 30.66 | 6.75 |
| +52.58 | 4.57 / 37.35 | 30.92 | 6.43 |
| +78.87 | 4.99 / 36.93 | 31.19 | 5.74 |
| 1+05.16 | 5.03 / 36.89 | 31.45 | 5.44 |
| +31.45 | 4.33 / 37.59 | 31.71 | 5.88 |
| 1+57.78 = D.E. | 2.76 / 39.16 | 231.98 | 7.18 |

Grades - M.H. 3 to M.H. 4 - Thru Alley.

|  | 2.05 | 239.39 |  | 237.34 | MH.stub T.P. |
|---|---|---|---|---|---|
|  |  |  |  | Grade | Cut |
| 0+00 = ℄ M.H. 3 |  | 4.43 / 34.96 | 225.99 | C.897 |  |
| +25 |  | 4.28 / 35.11 | 26.31 | 8.80 |  |
| +50 |  | 3.96 / 35.43 | 26.64 | 8.79 |  |
| +75 |  | 4.34 / 35.05 | 26.96 | 8.09 |  |
| 1+00 |  | 4.28 / 35.11 | 27.29 | 7.82 |  |
| +25 |  | 6.04 / 33.35 | 27.61 | 5.74 |  |
| +50 |  | 6.46 / 32.93 | 27.94 | 4.99 |  |
| +75 |  | 4.27 / 35.12 | 28.26 | 6.86 |  |
| 2+00 |  | 4.05 / 35.34 | 28.59 | 6.75 |  |
| +25 |  | 3.66 / 35.73 | 28.91 | 6.82 |  |
| +50 |  | 2.44 / 36.95 | 29.24 | 7.71 |  |
| +75 |  | 2.38 / 37.01 | 29.56 | 7.45 |  |

|  |  |  |  |  | Cut |
|---|---|---|---|---|---|
| 3+00 |  |  | 1.54 / 37.85 | 29.89 | 7.96 |
| TP | 6.42 | 244.95 | 0.86 / 238.53 |  |  |
| +25 |  |  | 6.08 / 38.87 | 30.21 | 8.66 |
| +50 |  |  | 5.10 / 39.85 | 30.54 | 9.31 |
| +75 |  |  | 4.14 / 40.81 | 30.86 | 9.95 |
| 4+00 |  |  | 4.67 / 40.28 | 31.19 | 9.09 |
| +17.76 = ℄ MH #4 |  |  | 3.87 / 41.08 | 231.42 | 9.66 |
| B.M. Nail in Pole |  |  | 4.10 | 240.85 |  |

Imperial Ave

1+42
D.E.

1+72.91
M.H. 21

2+N.8
M.H. 22

St.

30    30

1+41
00
9

4+17.96 = M.H. 4
0+00

Set spike

0+73.31
M.H. 5

Set Hubs

Jamacha        Rd.

30    30

30

2+50.96
M.H. 24

7'        7'

Lisbon    St.

2+50.46 = MH 14
0+00

2+63 = M.H 15

4.50

Hub

Post
Nail

2+60
D.E.

2+57.36 = M.H. 13
0+00

30 — 50

St

St

69th

Chester    St

1+30 = 0+00
MH 18

Set 3 - Tie out
Hubs

Prop. Cor.        30'

Set 3 Hubs

43'

36

30

20

36

MH

MH

Set spike = M.H. 15
0+00

Lisbon

Set 7 Hubs

Chester st

2+10 =
D.E.

Stub.

st

Flicker st

0+00

1+80 =
M.H. 19

Jamacha

Set 3 - 7 Hubs

M.H. 7

0+00

M.H. 8
2+34
0+00

st

1+50 = D.E.

Cross in wall
Mark on House

30

st

2+40 =
M.H. 20

Pidgeon st

Set 3 - 7' Hubs

Rd.

6+12
M.H. 9

2+
0+00
M.H. 12

2+0 (51)
0+00
M.H. 11

3+4
M.H. 12

90

M.H. 11

Set R.P.
Hubs

**Grades - MH. #4 to 5 to 24 to #6**
4.60   245.45   [240.85] = Nail in Pole

£MH.4 = 0+00

Grades 231.42

| Stakes 6' Rt. | | | Cut. |
|---|---|---|---|
| 0+36.65' | 5.5.7 / 39.88 | 31.90 | 7.98 |
| 0+73.31 = MH.5 = 0+00 | 6.32 / 39.13 | 32.38 | 6.75 |
| +50 | 5.87 / 39.58 | 33.03 | 6.155 |
| 1~ | 5.08 / 40.37 | 33.68 | 6.69 |
| +50 | 4.52 / 40.93 | 34.33 | 6.60 |
| 2~ | 4.02 / 41.43 | 34.98 | 6.45 |
| 2+50.96 = MH.24 = 0+00 | 3.19 / 42.26 | 35.64 | 6.62 |
| +50 | 2.65 / 42.80 | 36.29 | 6.51 |
| 1~ | 2.49 / 42.96 | 36.94 | 6.02 |
| +50 | 1.83 / 43.62 | 37.59 | 6.03 |
| 2~ | 0.61 / 44.84 | 38.24 | 6.60 |
| 2+50 = MH.6 | | 38.89 | |

T.P.   8.74   252.15   30.4   243.41

| Stakes 6' Rt. | | | Cut |
|---|---|---|---|
| MH.6 = 0+00 | 5.83 / 46.32 | 238.89 | 7.43 |
| 1 | | | |
| +50 | 5.55 / 46.60 | 39.76 | 6.84 |
| 1+00 | 4.28 / 47.87 | 40.64 | 7.23 |
| +50 | 3.30 / 48.85 | 41.51 | 7.34 |
| 2+00 | 1.52 / 50.63 | 42.39 | 8.24 |
| +29.5 | 0.53 / 51.62 | 42.90 | 8.72 |
| 2+59 = MH.7 | +0.41 / 51.56 | 43.42 | 9.14 |

Set BM. — Nail in Pole     5.79     246.36
69th & Jamacha

| | | | | | |
|---|---|---|---|---|---|
| | 9-62 | 250.47 | | 240.85 | = Nail in pole |
| 0+00 = M.H. 4 | | | | 231.42 | |
| stakes 6' Rt. | | | | | |
| +50 | | | 7.38 / 43.09 | 34.08 | C 9.01 |
| +75 | | | 6.09 / 44.38 | 35.41 | C 8.97 |
| 1+00 | | | 5.17 / 45.30 | 36.74 | 8.56 |
| +50 | | | 3.91 / 46.56 | 39.40 | 7.16 |
| 1+72.91 = M.H. 21    6+12 | | | 3.67 / 46.80 | 40.61 | 6.19 |
| = 6+00    6.75    253.61 / T.P.    stakes 6' Lt. | | | 3.61 | 246.86 | |
| +50 | | | 5.90 / 47.71 | 41.11 | 6.60 |
| 1+00 | | | 5.27 / 48.34 | 41.61 | 6.73 |
| +50 | | | 4.75 / 48.86 | 42.11 | 6.75 |
| +80.9 | | | 4.46 / 49.15 | 42.42 | 6.73 |
| 2+11.8 = MH. 22    0+00    6+12 Lt | | | 4.18 / 49.43 | 42.73 | 6.70 |
| +35 | | | 3.84 / 49.77 | 43.08 | 6.69 |
| +70 | | | 3.55 / 50.06 | 43.43 | 6.63 |

| | | | | | |
|---|---|---|---|---|---|
| 1+05 | | | 3.22 / 50.37 | 43.78 | C 6.61 |
| 1+40 = D.E. - 6 Lt. | | | 2.98 / 50.63 | 44.13 | 6.50 |
| check B.M. - capped pipe    69½ | | 0.20 | | 253.41 | |
| | | | | 253.44 | |
| | | | | 17.09 | |

Grade Stakes for Alley – Blk. 6 + 79

W.O. 31116                    3-11-48
                              7.0.

Blk 6 Rects Central Rd.
  " 79   R. M. Powers  Sub.

29th



Nail

0+00

10  10

7+2A.81

1'
156.80 (meas)

30th

69

|  |  |  |  | 29±&K. |  | 80.99 |  |  |
|---|---|---|---|---|---|---|---|---|
|  | 5.58 | 85.05 |  | 79.47 |  |  |  |  |
|  | 3.15 | 80.99 | 7.21 | 77.84 |  |  |  |  |
|  |  |  |  | South. Grades |  |  | North Grades |  |
| 0+00 = EL. 29th |  |  |  | 78.26 |  |  | 78.37 |  |
| +20 |  |  | 3.37 77.62 | 77.63 -Grade |  |  | 3.05 77.94 | 77.79 C 0.15 |
| +40 |  |  | 3.98 77.01 | 77.07 F 0.06 |  |  | 3.72 77.27 | 77.27 Grade |
| +60 |  |  | 4.39 76.60 | 76.63 F 0.03 |  |  | 4.19 76.80 | 76.83 F 0.03 |
| +90 |  |  | 4.68 76.31 | 76.08 C 0.23 |  |  | 4.42 76.57 | 76.28 C 0.29 |
| 1+20 |  |  | 5.05 75.94 | 75.54 C 0.40 |  |  | 4.98 76.01 | 75.74 C 0.27 |
| +60 |  |  | 5.86 75.13 | 74.86 C 0.27 |  |  | 4.94 76.05 | 75.05 C 1.00 |
| 2+00 |  |  | 6.54 74.44 | 74.31 C 0.14 |  |  | 5.71 75.28 | 74.48 C 0.80 |
|  | 2.22 | 76.95 | 6.26 | 74.73 |  | 76.95 |  |  |
| +35 |  |  | 2.72 74.23 | 73.88 C 0.35 |  |  | 2.42 74.53 | 74.03 C 0.50 |
| +70 |  |  | 2.91 74.04 | 73.46 C 0.58 |  |  | 2.51 74.44 | 73.57 C 0.87 |
| 3+05 |  |  | 2.91 74.04 | 73.04 C 1.00 |  |  | 3.80 73.15 | 73.11 C 0.04 |

South

| | | | | | |
|---|---|---|---|---|---|
| 3+40 | | | 3.33 73.62 | 72.62 | C 1.00 |
| +80 | | | 4.24 72.71 | 72.28 | C 0.43 |
| 4+20 | | | 4.92 72.03 | 72.03 | Grade |
| +55 | | | 4.01 72.94 | 71.94 | C 1.00 |
| +90 | | | 4.10 72.85 | 71.85 | C 1.00 |
| 5+25 | | | 4.19 72.76 | 71.76 | C 1.00 |
| +60 | | | 4.27 72.68 | 71.68 | C 1.00 |
| +95 | 475 | 77.03 | 4.36 72.59 4.67 | 71.59 72.28 | C 1.00 |
| 6+30 | | | 4.68 72.35 | 71.50 | C 0.85 |
| +65 | | | 4.46 72.57 | 71.41 | C 1.16 |
| 7+00 | | | 4.73 72.30 | 71.33 | C 0.97 |
| +24.81=W.L.30+5 | | | | 71.37 | |

North

| | | | |
|---|---|---|---|
| 4.04 72.91 | 72.65 | C 0.26 |
| 4.11 72.84 | 72.26 | C 0.58 |
| 4.00 72.95 | 72.03 | C 0.92 |
| 4.74 72.21 | 71.94 | C 0.27 |
| 4.10 72.85 | 71.85 | C 1.00 |
| 4.19 72.76 | 71.76 | C 1.00 |
| 4.67 72.28 | 71.68 | C 0.60 |
| 4.57 72.38 | 71.59 | C 0.79 |
| 4.07 72.88 | 71.50 | C 1.38 |
| 77.03 5.17 71.86 | 71.41 | C 0.45 |
| 4.97 72.06 | 71.33 | C 0.73 |
| | 71.37 | |

Grades - M.H. 7 to 8 - Sketch - P.66
Jamacha Rd.

| | | | |
|---|---|---|---|
| | 12.51  258.87 | 246.36 = Nail in Pole | |
| | Stakes - 6' Rt | | |
| 0+00 = M.H.7 | | 243.42 | |
| +50 | 5.87 53.00 | 44.29  C 8.71 | |
| 1~ | 4.62 54.25 | 45.17 | 9.08 |
| +50 | 3.75 55.12 | 46.04 | 9.08 |
| 2~ | 3.41 55.76 | 46.92 | 8.84 |
| +34 = MH 8 | | 47.52 | |

Chester. - M.H. 7 to 18 to D.E

| | | | |
|---|---|---|---|
| 0+00 = MH.7 | | | |
| +32.5 | 5.46 53.41 | 44.82 | 8.59 |
| +65 | 4.96 53.91 | 46.22 | 7.69 |
| +97.5 | 4.64 54.23 | 47.62 | 6.61 |
| 1+30 = MH.18 | 3.52 55.35 | 49.01 | 6.34 |
| = 0+00 | | | |

INDEXED
WR
DEC 3 1948

258.87

| | | | | | |
|---|---|---|---|---|---|
| +40 | | | 1.84 57.03 | 51.81 | 5.52 |
| T.P | 12.98 | 270.01 | 1.84  257.03 | | |
| +80 | | | 9.64 60.37 | 54.61 | 5.76 |
| 1+20 | | | 7.00 63.01 | 57.41 | 5.60 |
| +60 | | | 3.76 66.75 | 60.21 | 6.04 |
| 2+00 | | | 0.19 67.82 | 63.01 | 6.81 |
| T.P | 6.01 | 275.83 | 0.19  269.82 | | |
| +30 | | | 4.42 74.41 | 65.11 | 6.30 |
| 2+60 = D.E | | | 4.00 71.83 | 67.21 | 4.62 |

| | | | | | |
|---|---|---|---|---|---|
| B.M on old Hub | | | 8.24 | | 267.59 |
| T.P. Chester 0+40 | 4.82 | 261.85 | | 257.03 | |

Grades - M.H. 8 to 9 - Jamacha Rd.

| | | | | |
|---|---|---|---|---|
| 0+00 = M.H 8  Stakes 6+12 | | 5.50 56.35 | 247.52 | C 8.83 |
| +50 6' Rt | | 4.69 57.14 | 48.39 | C 8.77 |
| 1+00 | | 4.13 57.72 | 49.27 | 8.45 |

## Left page

261.85

| Station | | | | |
|---|---|---|---|---|
| 1 + 50 | | 3.48 / 58.37 | 50.14 | 8.23 |
| 2 + 00 | | 2.62 / 59.23 | 51.02 | 8.21 |
| | 7.84 | 268.39 | | |
| +50 = M.H.9 =0+00 | | 8.73 / 59.66 | 251.89 | 7.77 |
| B.M - S.W. Pidgeon (Nail in Pole) | | 1.30 | 260.55 | |
| 0 + 50 | | 7.18 / 61.21 | 52.76 | 8.45 |
| 1 + 00 | | 6.43 / 61.96 | 53.64 | 8.32 |
| +50 | | 5.30 / 63.09 | 54.51 | 8.58 |
| 2 + 00 | | 4.19 / 64.20 | 55.39 | 8.81 |
| +35 | | 3.81 / 64.58 | 56.00 | 8.58 |
| 2+67.91 = M.H. 10 =0+00 | | 3.24 / 65.15 | 56.58 | 8.57 |
| +50 | | 2.46 / 65.93 | 56.93 | 9.00 |
| 1 ~ | | 1.68 / 66.71 | 57.28 | 9.43 |
| +50 | | 1.03 / 67.36 | 57.63 | 9.73 |
| | 5.51 | 272.87 | 1.03 / 267.36 | |

## Right page

272.87

| Station | | | | |
|---|---|---|---|---|
| 2 + 00 | | 5.00 / 67.87 | 57.98 | C 9.89 |
| +50 | | 4.55 / 68.32 | 58.33 | 9.99 |
| 3 + 00 | | 4.15 / 68.72 | 58.68 | 10.04 |
| 3+45 = M.H.11 =0+00 | | 4.41 / 68.46 | 259.00 | 9.46 |
| +50 | | 4.54 / 68.33 | 59.35 | 8.98 |
| 1 ~ | | 5.12 / 67.75 | 59.70 | 8.05 |
| +50 | | 5.15 / 67.72 | 60.05 | 7.67 |
| 2 ~ | | 5.49 / 67.38 | 60.40 | 6.98 |
| +50 | | 5.40 / 67.47 | 60.75 | 6.72 |
| 3 ~ | | 5.02 / 67.85 | 61.10 | 6.75 |
| 3+42.31 = M.H.12 =end | | 5.56 / 67.31 | 261.39 | 5.92 |
| Nail in Pole on S. | | 2.12 | 270.75 | |

Left page:

| Station | | | | |
|---|---|---|---|---|
| | 4.09 | 264.64 | 260.55 | |
| 0+00 = M.H. #8 | | | 247.52 | |
| +45 | 6.84 / 57.80 | | 50.04 | C 7.76 |
| +90 | 5.48 / 59.16 | | 52.56 | 6.60 |
| 1+35 | 3.56 / 61.08 | | 55.08 | 6.00 |
| 1+80 = M.H. #19 | 0.49 / 64.15 | | 57.60 | 6.55 |
| =0+00 | 12.67 | 276.82 | 0.49 | 264.15 |
| +35 | 9.61 / 67.21 | | 60.26 | 6.95 |
| +70 | 5.84 / 70.98 | | 62.92 | 8.06 |
| 1+05 | 2.43 / 74.39 | | 65.58 | 8.81 |
| T.P. | 5.48 | 281.56 | 0.74 | 276.08 |
| +40 | 4.22 / 77.34 | | 68.24 | 9.10 |
| +75 | 3.22 / 78.34 | | 70.90 | 7.44 |
| 2+10 = D.E. | 3.58 / 77.98 | | 73.56 | 4.42 |

INDEXED WK DEC 3 1948

Right page:

| Station | | | | |
|---|---|---|---|---|
| | 13.22 | 273.77 | 260.55 = Nail in Pole | |
| 0+00 = M.H. #9 | | | 251.89 | |
| +40 | 11.11 / 62.66 | | 55.17 | C 7.47 |
| +80 | 8.89 / 64.88 | | 58.45 | 6.43 |
| 1+20 | 5.91 / 67.86 | | 61.73 | 6.13 |
| +60 | 2.44 / 71.33 | | 65.01 | 6.32 |
| | 12.38 | 285.88 | 0.27 | 273.50 |
| 2+00 | 10.82 / 75.06 | | 68.29 | 6.77 |
| 2+40 = M.H. #20 - 2 stakes 6&n | 6.80 / 79.03 | | 71.57 | 7.46 |
| =0+00 | | | | |
| +30 | 2.58 / 83.30 | | 75.05 | 8.25 |
| T.P. | 11.52 | 276.75 | 0.65 | 265.23 |
| +60 | 9.03 / 87.72 | | 78.53 | 9.19 |
| +90 | 4.86 / 91.89 | | 82.01 | 7.88 |
| 1+20 | 3.44 / 93.34 | | 85.49 | 7.85 |
| +50 = D.E. | 3.83 / 92.92 | | 88.97 | 3.95 |

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## Sewer Grades - 69th

|  | | 0.12 | 253.56 | | 253.44 | 2" Pipe in Culvert |
|---|---|---|---|---|---|---|
| M.H. #6 = 0+00 | Stakes - 4.5 Rt. | | | | 238.89 | |
| +50 | | | 6.75 / 48.81 | 39.30 | C 7.51 | |
| 1~ | | | 6.44 / 47.12 | 39.71 | 7.41 | |
| +50 | | | 6.65 / 46.91 | 40.12 | 6.79 | |
| 2+00 | | | 6.48 / 47.08 | 40.53 | 6.55 | |
| +30 | | | 6.17 / 47.39 | 40.78 | 6.61 | |
| 2+57.36 =0+00 | M.H. 6+6 13 | | 5.93 / 47.61 | 41.00 | 6.61 | |
| +50 | | | 5.77 / 47.79 | 42.10 | 5.69 | |
| 1~ | | | 5.23 / 48.33 | 43.20 | 5.13 | |
| +50 | | | 4.68 / 48.58 | 44.30 | 4.58 | |
| 2~ | | | 2.72 / 50.84 | 45.40 | 5.44 | |
| T.P. | 13.16 / 266.60 | 0.12 | 253.44 | | | |
| 2+50.45 =0+00 | M.H. 6+18 14 | | 12.44 / 54.16 | 46.51 | 7.65 | |
| +50 | | | 11.28 / 55.35 | 48.51 | 6.84 | |

## Lisbon St

| | 266.60 | | |
|---|---|---|---|
| 1+00 | 9.80 / 56.80 | 50.51 | C 6.29 |
| Stakes 4.5 Rt | | | |
| +50 | 7.91 / 58.69 | 52.51 | 6.18 |
| 2~ | 5.46 / 61.15 | 54.51 | 6.64 |
| 2+20.63 =0+00  M.H. 6+12 15 | 4.55 / 62.05 | 55.34 | 6.71 |
| +50 | 1.95 / 64.65 | 58.14 | 6.51 |
| T.P.  11.49  277.61 | 0.48  266.12 | | |
| 1~ | 10.18 / 67.43 | 60.94 | 6.49 |
| +50 | 7.65 / 70.46 | 63.74 | 6.72 |
| 2~ | 4.26 / 73.35 | 66.54 | 6.81 |
| +34.28 =0+00  M.H. 6+12 16 | 2.47 / 75.14 | 68.45 | 6.69 |
| Nail in Pole - Flicker | 0.04  277.57 | | |
| 5.01  282.58 | | | |
| +50 | 4.96 / 77.62 | 70.95 | 6.67 |
| 1~ | 2.45 / 80.13 | 73.45 | 6.68 |
| T.P.  13.16  294.98 | 0.76  281.82 | | |
| +50 | 12.13 / 82.95 | 75.55 | 6.90 |

**Left page**

94.98

| | | | | | |
|---|---|---|---|---|---|
| 2+00 | | | 9.73 / 85.25 | 78.45 | 6.80 |
| 2+50.35 =0+00 | M.H.17 Ridgeon | 97.35 | 7.49 / 87.49 | 80.97 | 6.52 |
| +50 | | | 8.03 / 89.32 | 81.97 | 7.35 |
| 1~ | | | 7.00 / 90.35 | 82.97 | 7.38 |
| +50 | | | 6.37 / 90.98 | 83.97 | 7.01 |
| 2~ | | | 5.98 / 91.37 | 84.97 | 6.40 |
| +30 | | | 5.63 / 91.72 | 85.57 | 6.15 |
| 2+54 = D.E. | | | 5.31 / 92.04 | 86.05 | 5.99 |
| | | | | 292.30 = | Top F.H. Ridgeon |
| | T = 94.98 | | | 291.97 = | Nail in S. Pole at Lane |

N. on Ridgeon

| | | | | | |
|---|---|---|---|---|---|
| 0+00 = M.H.17 | | | | 80.97 | |
| +50 | | | 5.00 / 89.98 | 84.17 | C 5.81 |
| 1~ | | | 1.13 / 93.85 | 87.37 | 6.48 |

**Right page**

305.71

| | | | |
|---|---|---|---|
| 1+50 | 7.64 / 98.07 | 90.57 | C 7.50 |
| 2~ | 4.94 / 00.77 | 93.77 | 7.00 |
| +25 = D.E. | 3.48 / 02.23 | 96.01 | 6.22 |
| | | 302.17 = | Nail in Pole 1/2 on Ridgeon |

N. on Flicker    82.58

| | | | |
|---|---|---|---|
| 0+00 = M.H. 16 | | 68.45 | |
| +45 | 5.55 / 77.03 | 69.80 | 7.23 |
| +90 | 4.99 / 77.59 | 71.15 | 6.44 |
| 1+35 = D.E. Ranbow | 4.87 / 77.71 | 72.50 | 5.21 |

|  |  |  |  |  |
|---|---|---|---|---|
|  | 10.59 | 264.03 |  | 253.44 = Pipe 2" |
|  | stake 45 Rt |  |  |  |
| 0+00 = |  | 5.42 / 58.61 | 250.14 | C 8.47 |
| +50 | INDEXED WK DEC 3 1948 | 3.91 / 60.12 | 50.69 | 9.43 |
| 1~ |  | 3.86 / 60.17 | 51.24 | 8.93 |
| +50 |  | 3.87 / 60.16 | 51.79 | 8.37 |
| 2~ |  | 3.80 / 60.23 | 52.34 | 7.89 |
| +50 |  | 2.58 / 61.45 | 52.89 | 8.56 |
| 3~ |  | 2.44 / 61.59 | 53.44 | 8.15 |
| 3+36.63 = MH 26 | 6+12 in st. | 3.46 / 60.57 | 53.84 | 6.73 |
| 0+34.04 |  | 3.79 / 60.24 | 54.21 | 6.03 |
| 0+68.07 = M.H.27 | 6+12 in st. | 3.08 / 60.95 | 54.59 | 6.34 |
|  |  | 2.18 | 261.85 = Nail in Pole opp. MH 27 |  |

77

Stakes 6' Lt.

|  |  |  |  |  |
|---|---|---|---|---|
| 0+00 = M.H.27 | 76 37 |  | 254.59 |  |
| +40.22 | INDEXED WK DEC 3 1948 | 13.99 / 62.38 | 56.80 | C 6.58 |
| +80.44 = BVK | 8884 | 10.97 / 65.40 | 59.01 | 6.39 |
| 1+12.94 |  | 16.05 / 72.79 | 65.18 | 7.61 |
| +45.44 |  | 8.26 / 80.08 | 71.35 | 9.23 |
| +77.94 |  | 2.18 / 86.69 | 77.53 | 9.16 |
| 2+10.44 = MH 28 =0+00 | 6+12 - Ni     300.44 | 8.52 / 91.92 | 83.71 | 8.21 |
| +50 - 6' Lt |  | 5.24 / 95.16 | 86.31 | 8.85 |
| 1~ -4.5 Rt |  | 3.61 / 96.83 | 88.91 | 7.92 |
| +50 |  | 0.82 / 99.62 | 91.51 | 8.11 |
| 2~ | 0577 | 4.17 / 01.58 | 94.11 | 7.47 |
| 2+35 = DIE. |  | 3.52 / 02.25 | 95.93 | 6.32 |

**Grades- Flicker - Imp. to D.E.**

Stakes 4.5 Rt

74.85

| | | | |
|---|---|---|---|
| 0+00 = M.H. 26 | | 253.84 | |
| +50 | 9.12 65.73 | 56.99 | C 8.74 |
| 1~ | 3.95 70.90 | 60.14 | 10.76 |
| +50 | 2.01 72.84 | 63.29 | 9.55 |
| 2~ | 1.03 73.84 | 66.44 | 7.38 |
| +50 | 76.37 1.04 75.33 | 69.59 | 5.74 |
| 2+80 = D.E. | 0.80 76.17 | 71.48 | 4.69 |

**Separate Contract + on Lisbon - E. of Lane**

W.O. 80097

12.92    304.89    291.97 = Nail in Pole at Lane

| t Lane | | | |
|---|---|---|---|
| 0+00 = M.H. 1 | 12.40 92.49 | 286.32 | C 6.17 |
| +50 | 11.55 93.34 | 87.67 | 5.67 |
| 1~ | 10.10 94.59 | 89.02 | 8.77 |
| +50 | 8.74 96.65 | 90.37 | 6.28 |
| 2~ | 6.43 98.26 | 91.72 | 7.04 |
| +50 | 3.80 01.09 | 93.07 | 8.02 |
| 3~ | 1.32 03.57 | 94.42 | 9.15 |
| 3+25 = M.H. 2 = 0+00 | 10.69 0.37 04.52 | 95.10 | 9.42 |
| +50 | 4.77 05.92 | 95.45 | 10.47 |
| 1~ | 4.28 06.41 | 95.80 | 10.61 |
| +50 | 4.59 06.10 | 96.15 | 9.95 |
| 2~ | 5.29 05.40 | 96.53 | 8.90 |

$\overline{R} = 10.69$

| | | | 5.85 | | |
|---|---|---|---|---|---|
| 2 + 30 | | | 04.84 | 96.71 | 8.13 |
| | | | 6.45 | | |
| 2 + 61 = D.E. | | | 04.24 | 96.93 | 7.31 |

# IMPROVED TABLES
## AND
# INFORMATION

| HORIZONTAL STADIA CORRECTIONS |||
|---|---|---|
| 2°—00' — 0.1 | 21°—00' — 12.8 | 33°—00' — 29.7 |
| 3°—00' — 0.3 | 21°—30' — 13.4 | 33°—15' — 30.1 |
| 4°—00' — 0.5 | 22°—00' — 14.0 | 33°—30' — 30.5 |
| 5°—00' — 0.8 | 22°—30' — 14.7 | 33°—45' — 30.9 |
| 6°—00' — 1.1 | 23°—00' — 15.3 | 34°—00' — 31.3 |
| 7°—00' — 1.5 | 23°—30' — 15.9 | 34°—15' — 31.7 |
| 8°—00' — 1.9 | 24°—00' — 16.5 | 34°—30' — 32.1 |
| 9°—00' — 2.5 | 24°—30' — 17.2 | 34°—45' — 32.5 |
| 10°—00' — 3.0 | 25°—00' — 17.9 | 35°—00' — 32.9 |
| 10°—30' — 3.3 | 25°—30' — 18.6 | 35°—15' — 33.3 |
| 11°—00' — 3.6 | 26°—00' — 19.2 | 35°—30' — 33.7 |
| 11°—30' — 4.0 | 26°—30' — 19.9 | 35°—45' — 34.1 |
| 12°—00' — 4.3 | 27°—00' — 20.6 | 36°—00' — 34.6 |
| 12°—30' — 4.7 | 27°—30' — 21.3 | 36°—15' — 35.0 |
| 13°—00' — 5.1 | 28°—00' — 22.0 | 36°—30' — 35.4 |
| 13°—30' — 5.5 | 28°—30' — 22.8 | 36°—45' — 35.8 |
| 14°—00' — 5.9 | 29°—00' — 23.5 | 37°—00' — 36.2 |
| 14°—30' — 6.3 | 29°—30' — 24.3 | 37°—15' — 36.6 |
| 15°—00' — 6.7 | 30°—00' — 25.0 | 37°—30' — 37.1 |
| 15°—30' — 7.2 | 30°—15' — 25.4 | 37°—45' — 37.5 |
| 16°—00' — 7.6 | 30°—30' — 25.8 | 38°—00' — 37.9 |
| 16°—30' — 8.1 | 30°—45' — 26.2 | 38°—15' — 38.3 |
| 17°—00' — 8.5 | 31°—00' — 26.5 | 38°—30' — 38.7 |
| 17°—30' — 9.0 | 31°—15' — 26.9 | 38°—45' — 39.1 |
| 18°—00' — 9.5 | 31°—30' — 27.3 | 39°—00' — 39.6 |
| 18°—30' — 10.1 | 31°—45' — 27.7 | 39°—15' — 40.0 |
| 19°—00' — 10.6 | 32°—00' — 28.1 | 39°—30' — 40.5 |
| 19°—30' — 11.2 | 32°—15' — 28.5 | |
| 20°—00' — 11.7 | 32°—30' — 28.9 | |
| 20°—30' — 12.3 | 32°—45' — 29.3 | |

| Chains to Feet ||
|---|---|
| 1 | 66 |
| 2 | 132 |
| 3 | 198 |
| 4 | 264 |
| 5 | 330 |
| 6 | 396 |
| 7 | 462 |
| 8 | 528 |
| 9 | 594 |
| 10 | 660 |

| Feet to Chains ||
|---|---|
| 100 | 1.515 |
| 200 | 3.030 |
| 300 | 4.545 |
| 400 | 6.060 |
| 500 | 7.575 |
| 600 | 9.090 |
| 700 | 10.606 |
| 800 | 12.121 |
| 900 | 13.636 |
| 1,000 | 15.151 |

# DIRECTIONS FOR USE OF TABLES

## TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1½ 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 lenth divided by twice the radius.
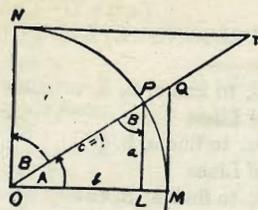
TABLE II

### TRIGONOMETRIC FORMULÆ.

$\angle A = \angle MOP \qquad \angle B = \angle PON = \angle OPL$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \ \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$\text{exsec } A = PQ = \text{coexsec } B$
$\text{coexsec } A = PT = \text{exsec } B$

$$\sin \tfrac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \qquad \cos \tfrac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \qquad \cos 2A = \cos^2 A - \sin^2 A$$

Law of Lines $\quad \dfrac{\sin A}{a} = \dfrac{\sin B}{B} = \dfrac{\sin C^1}{C}$

Law of Cosines $\quad c^2 = a^2 + b^2 - 2\,ab \cos C$

Law of Tangents $\dfrac{a+b}{a-b} = \dfrac{\tan \tfrac{1}{2}(A+B)}{\tan \tfrac{1}{2}(A-B)}$

99.00

30.93

22 + 14.88

45
31
——
14