

PLANS SURVEY
LOWER AFTON RD.
From East Co. Line
To City Limits
CO. PROJ. N^o 25-55
ROAD^o N^o 71

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Date Filed 8-9-24

File No. 1

date
8-26-24

#-line

Project 25-55

Lower Afton Road

Alignment Notes

Sta. 0+00 to Sta. 54+89.20

From E. Co. Line to City Limits

H. L. Wilshusen

H. G. Briggs

R. Pearson

M. Hackney

Office of Ramsey Co. Engineer

ST. PAUL, MINN.

Date Filed

8/9/24 (25-55)

File No.

"1"

E. Co. LINE TO CITY LIMITS

Sta. Lt. Δ Rt.
16+31.47 ✓ P.T. 13°-45'

16+00 12°-29' 1/2

+50 10°-29' 1/2

15+00 8°-29' 1/2

14+63.10 P.I.

+50 6°-29' 1/2

14+00 4°-29' 1/2

+50 2°-29' 1/2

13+00 0°-29' 1/2

12+87.72 ✓ P.C. 0°-00'

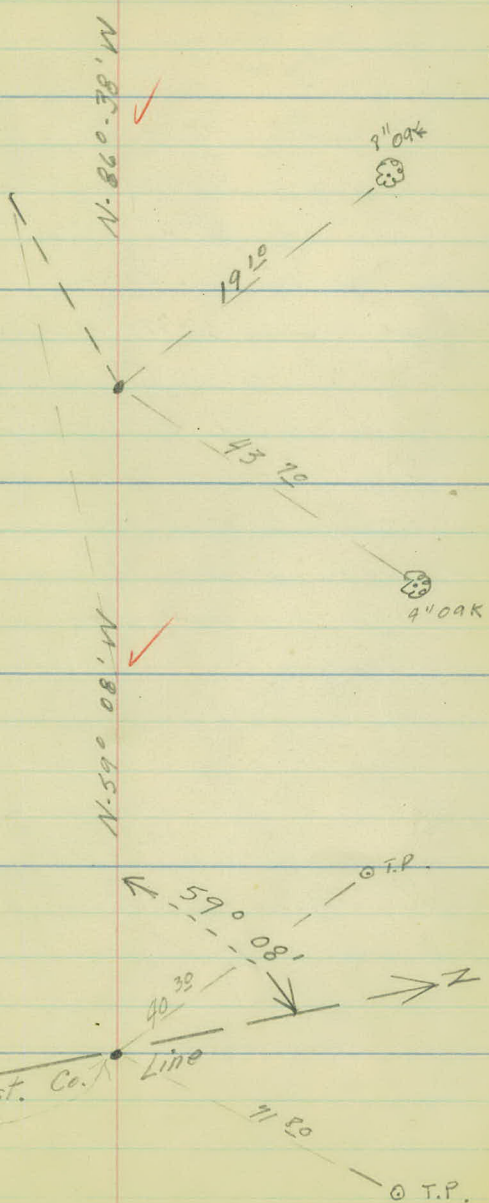
0+00

Cor .13
P.I. = 14+63.10
Δ = 27°-30'-
D = 8°-00' Lt.
Tan = 175.38 ✓
L.C. = 343.75 ✓

Lt.

¢

Rt.



APRY. ¢
 Mont. 29+91

East. Co. Line

© T.P.

Sta. Point Lt. Δ Rt.

.04

26+77.05 P.T. 8°-13'

+50 7°-32'

Cor. 04

26+00 6°-17' P.I. = 25+13.9

+50 5°-02' Δ = 16°-26'

25+13.9 P.I. D = 5°-00' Lt.

25+00 3°-47' Tan = 165.51 53

+50 2°-32' L.C. = 328.66 67

24+00 1°-17'

23+48.39 P.C. 0°-00'

To Revision

21+32.68 P.T. 5°-55'

21+00 5°-16' P.I. = 19+85.30

+50 4°-16' Δ = 11°-50'

D = 4°-00' Rt.

Tan = 148.45 42

20+00 3°-16' L.C. = 295.83 ✓

19+85.30 P.I.

+50 2°-16'

19+00 1°-16'

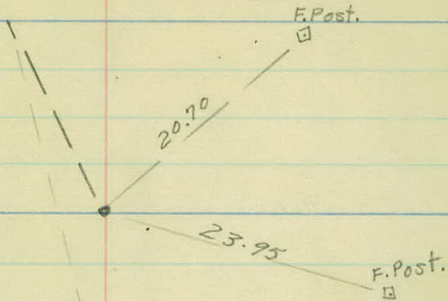
18+36.85 P.C. 0°-00'

42 ✓

Lt.

#

Rt.



N. 84° 48' W



16" OAK



62.90

59.90

12" OAK

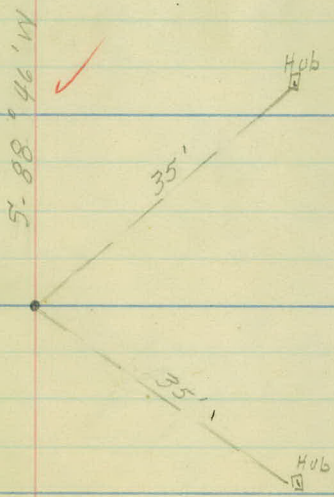
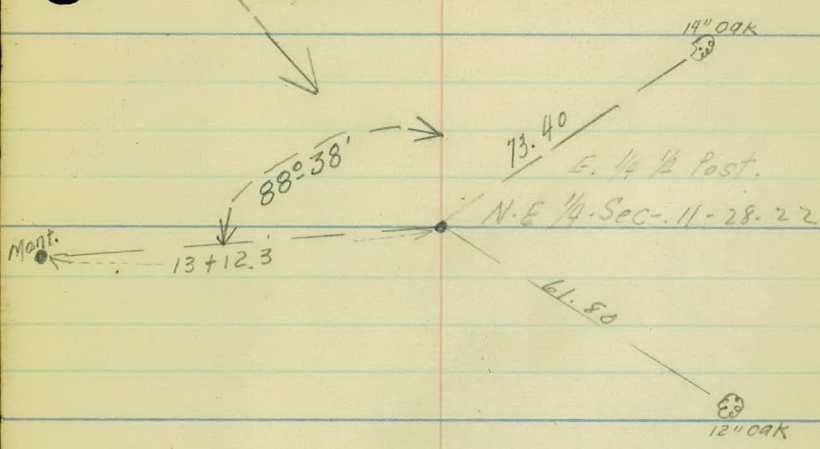


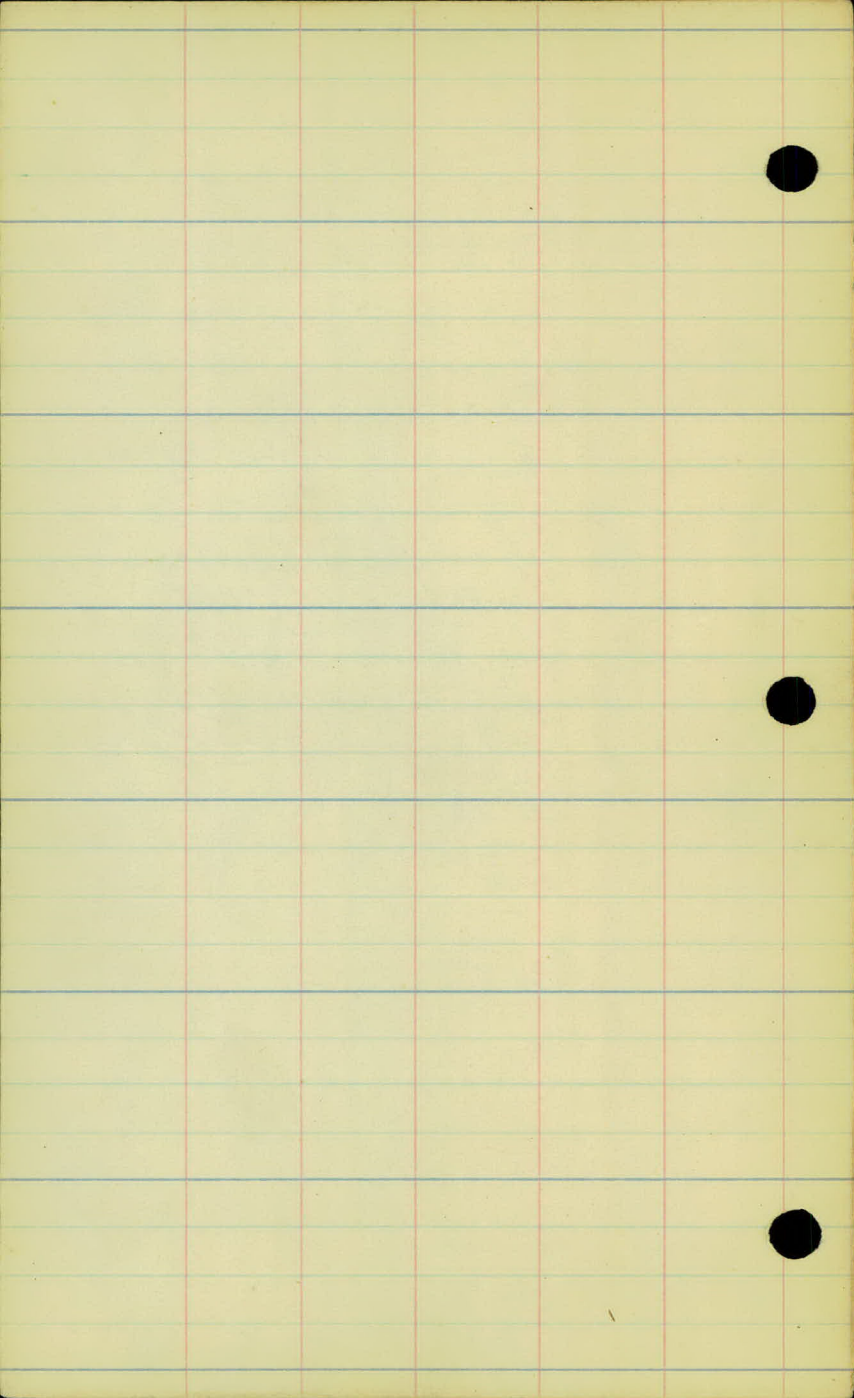
Sta. Point Lt. Δ Rt.

54+89²⁰ Mont.

33+54.4 P.O.T

Note
 Cov. City Limits
 and Lower 9th Rd.





Date - 9-2-24

Project 25-55 B-Line

Alignment notes

Revision

From Sta 2132.68 to Sta $26+47.09$
 $= 26+52.35$
Equation

Party

H. L. Wilstusen

H. G. Briggs

R. Pearson

Waits

Sta. Point Lt. A Rt

25+00.25 P.T. 12°25'

+50 8°54'

+13.20 P.I. 24°50'

24+00 5°24'

+50 1°54'

23+22.81 P.C. 0°00'

22+46.⁰⁴₀₂ P.T. 4°-12'

+50 3°-38' P.I. = 22+06.18

+06.18 P.I. 8°-24' D = 7°-00' Rt.

22+00 1°-53' L.C. = 60.16¹⁴ 120.00 ✓

21+46.⁰⁴₀₂ P.C. 0°-00'

21+32.68 P.T.

Cor. 22

P.I. = 24+13.20

$\Delta = 24^\circ - 50'$ Lt.

$D = 14^\circ - 00'$ Lt.

Tan = 90.32 ✓

L.C. = 177.37 ✓

P.I. = 22+06.18

$\Delta = 8^\circ - 24'$

D = 7°-00' Rt.

Tan = 60.16¹⁴

L.C. = 120.00 ✓

27.

RT.

12" Bveldey

S. 88° 46' W.

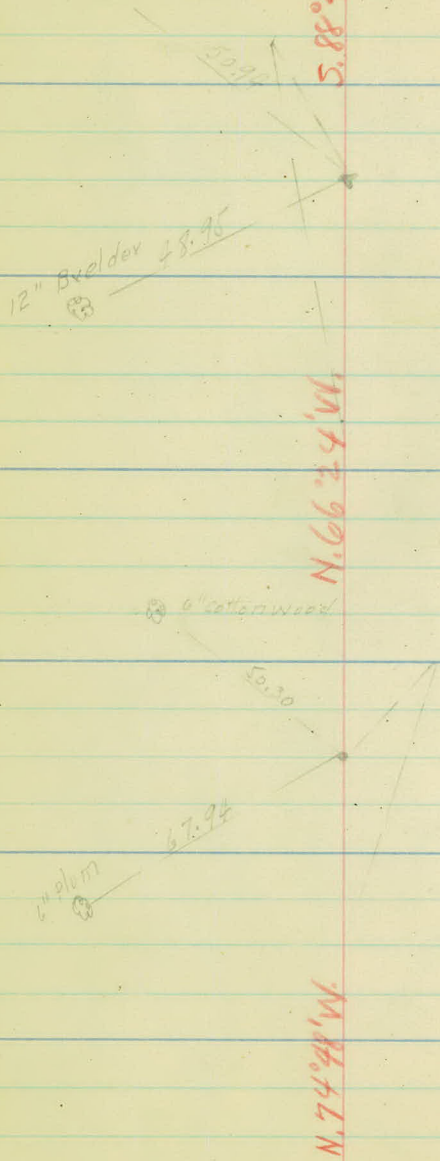
12" Bveldey 48.95

N. 66° 24' W.

6" Cottonwood

N. 74° 41' W.

6" plum



Sta Point Lt. A Rt

= 26777.09
~~26782.35~~ P.T. Equation

Date 9-2-24

H-Line

Project 25-55

Artificial Topography

Lower after Road

Sta 0+00 to Sta 54+89.20

From E. Co. Line to City Limits

Party

H.L. Wilshusen

H.C. Briggs

M. Hackney

R. Pearson

5+00

4+00

3+00

2+00

1+00

0+00

3x100
 11x200
 +71-1400-25'
 +73-1400-25'
 +75-1400-25'
 +78-1400-25'
 +81-1400-25'
 +84-1400-25'
 +87-1400-25'
 +90-1400-25'
 +93-1400-25'
 +96-1400-25'
 +99-1400-25'
 +102-1400-25'
 +105-1400-25'
 +108-1400-25'
 +111-1400-25'
 +114-1400-25'
 +117-1400-25'
 +120-1400-25'
 +123-1400-25'
 +126-1400-25'
 +129-1400-25'
 +132-1400-25'
 +135-1400-25'
 +138-1400-25'
 +141-1400-25'
 +144-1400-25'
 +147-1400-25'
 +150-1400-25'
 +153-1400-25'
 +156-1400-25'
 +159-1400-25'
 +162-1400-25'
 +165-1400-25'
 +168-1400-25'
 +171-1400-25'
 +174-1400-25'
 +177-1400-25'
 +180-1400-25'
 +183-1400-25'
 +186-1400-25'
 +189-1400-25'
 +192-1400-25'
 +195-1400-25'
 +198-1400-25'
 +201-1400-25'
 +204-1400-25'
 +207-1400-25'
 +210-1400-25'
 +213-1400-25'
 +216-1400-25'
 +219-1400-25'
 +222-1400-25'
 +225-1400-25'
 +228-1400-25'
 +231-1400-25'
 +234-1400-25'
 +237-1400-25'
 +240-1400-25'
 +243-1400-25'
 +246-1400-25'
 +249-1400-25'
 +252-1400-25'
 +255-1400-25'
 +258-1400-25'
 +261-1400-25'
 +264-1400-25'
 +267-1400-25'
 +270-1400-25'
 +273-1400-25'
 +276-1400-25'
 +279-1400-25'
 +282-1400-25'
 +285-1400-25'
 +288-1400-25'
 +291-1400-25'
 +294-1400-25'
 +297-1400-25'
 +300-1400-25'

R-11

R-4

EE

+91 E.E.

R-8'

R-5

Cultivated

+68-T.P.-19'

R-8'

R-5'

Orchard

R-9'

+200 T.P.-18'
R-6'

+55-Coe Orchard

R-11

R-8'

R-9'-+36
 +33-1400-25'
 +31-1400-25'
 +07-5400-22'

Cultivated

Cultivated

+56-R-9'
 +33 T.P.-19'
 +33-5400-17'
 +32-5400-18'

11+00

10+00

9+00

8+00

7+00

6+00

5+00

R-5'

R-10

Cultivated

+77-T.P. 18'

R-6'

R-8'

Meadow

R-7'

R-7'

+77-T.P. -18'

R-8'

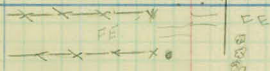
R-6'

Cultivated

Cultivated

R-9'

M.C. Cor. 28'
+97
H.C. Cor. 28'
+74-M.B.X-13



+07-T.P. 19' E.C'

+91 F.F.
+57-Tree 32'
+23-Tree 32'
+65-Tree 26'
+56-Tree 25'

+30-Tree -25'
+20-Tree 23'

R-10'

Cultivated

Form Yard

+00-Tree R-5'
+52-Tree 32'
+75-Tree 28'
+10-Tree 28'
+65-Tree 28'
+61-Tree 28'
+50-Tree -28'
+42-H.C.S.O. 18'
+58-T.P. 18'
+31-Tree -28'
+45-Tree -28'

R-11'

R-9'

17+00

16+00

15+00

14+00

13+00

12+00

11+00

R-6'

+71.8-Rush-18'

R-5'

R-9' +50

R-8'

+50-R-5'

R-3'

+85.M. 52-6'

R-4 +50

R-6'

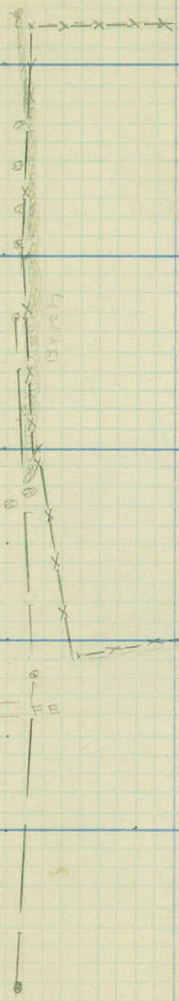
R-4'

R-6'

Meadow

Meadow

Cultivated



+21. E. Brush
+23. F.C.
R-8' F22'

+71-1428-17'

+47. Tm. 17'

+26. 1700-19'

+63. 1700-18'

R-7' F19'

+69. T.P. 15'

R-450 6'

R-9' F-27

+72. 1700-Brush

+77. 1700-22

+73. 1700-14

R-450-10'

R-16'

+96. F.C.

+84. T.P. 24'

+66. F.E.

R-4 +50

R10

+19. T.P. 15'

R70'

R10

73+00

74+00

71+00

70+00

19+00

18+00

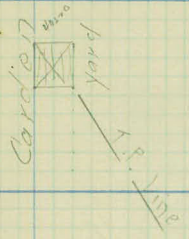
17+00

Lt. # Rt.

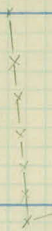
+10 - E R-20

E 60' = R-16

+16 House - 98'
+17 W. Box
+18 Tree - 5'
+38 House



R-8'



Cultivated

+9 F.C.
R-9'

+10 Garden
+14 Tree - 21'
+14 Tree - 27'
+12 Tree - 26'
+20 Tree - 30'
+15 Tree - 26'
R-11

E 60'

Meadow

col. 160
351.5' VP

+18 T.P. 10'
R-3'

+15 Tree - 27'
+12 Tree - 30'
+17 Tree - 27'

R-11 + 50

+10 R-1'

R-11'

R-6'

Meadow

Woods

+25 Tree - 22'
R-8'

+30 T.P. - 18'

R-8'

+16 Tree - 31'
+18 Tree - 22'
+15 Tree - 29'
+18 Tree - 24'
+17 Tree - 29'
+16 Tree - 30'
+11 Tree - 22'
+17 Tree - 26'
+20 R. Brush - 25'
R-9'

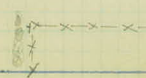
Meadow

Meadow

R-8'

+15 T.P. 16'
F.C. 23-22'
+27 F. of brush
R-8' - F-22'

R-6'



29+00

28+00

27+00

26+00

25+00

24+00

23+00

Lt. 7 Rf.

R-6'

R-11'

165. Berrie Patch $\frac{20'}{10'}$ →

X-X-X-X +53- P.C. 21'

R-6'

F-21' R-10'

R-7'

R-8' 2-20'

R-6' +50

+50-R-9- F-19'

R-3'

F-22' R-11'

+50-E Rd-5-26

± P. 18' F-33

F-38' +50
+50-E Rd 15

F-41' ± Rd. 14

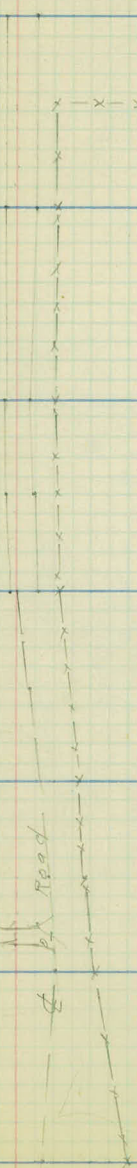
+50-E Rd-20'

F-60' ± Rd. 14'

Cultivated
Garden

± P. Road

+24-Vec-19'
+19- P.E.
+20-Vec-18'



35400

34400

33400

32400

31400

30400

29400

Meadow

R-7'

R-11'-F-20'

+90.F.C. 21'



127 Berry Patch-21'

R-6'

Berry Bushes

R-11'

Cultivated

R-7' B. Bushes

Bushes

R-8'

R-7' - B. Bushes

Rd. 9'

R-7' B. Bushes

R-10'

Berry

R-7'

R-9'

|| EF

Cultivated

+77

R-6'

R-11'

41+00

40+00

39+00

38+00

37+00

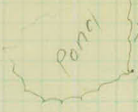
36+00

35+00

+72-FC-17'

+72-FC-20'

+25-Pond 20'



R-8' F-16'

R-8' F-17'

+70-TP-17'

+95-Tree-16'

+70-Tree-27'

+79-Tree-13'

+66-Tree-16'

R-7' F-14'

+11-Tree-13'

R-7' F-18'

+14-TP-16'

+64-Cult

+88-Tree-17'

+74-Tree-18'-25'

+6'-15'-VP

+43-Tree-29'

+30-F.Brush

R-7-F-19

R-7'-F-16'

+97-TP-17'

+66-F-19

R-9' F-28

+5-B-Brush-1C'
15'-wide

R-6' F-19'

+83-Tree-28'

+35-Tree 30'

+21-TP-17'

R-4' F-32'

R-12-F-22

Meadow

+09-FC-34'

R-5'

R-12'-F-21

+98-FC
+90-F.B. Patch
+80-TP-17'

T.P. Line



Yard

Berry Bushes

Meadow

+16
R-7

R-11-F-20

47+00

46+00

45+00

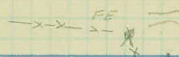
44+00

43+00

42+00

41+00

+42. Trap-26
+21. F.E.
+13. F.C. Trap 29
R-6'
+25. Trap-24
+17. F.E.-15
+8' F-17



R-8'

R-7' F-17'

+67. T.P.-15'

Cultivated R-8'

R-8' F-17

Meadow

R-8'

+47. T.P.-16

R-8' F-14'

R-10

+47. F.E.
+30. T.P.-13
+20. E. of Pond-29
R-6' F-13'



Cultivated

R-10 F

Meadow

Pond

+01. T.P.-15
Pond-20
R-7' F-14'

+06. F.C.-18'
R-9' F-18'

+72. P.S.-17'



+72. F.E.-21

+25. Pond-20'
R-8'-F-16'

R-8'-F-17'

53+00

52+00

51+00

50+00

49+00

48+00

47+00

Colv.

+79-28'-12" CM

R-6

R-8

Cultivated

R-5

+94-T.P. 12'

R-10

Cultivated

R-5'

+70-T.P. 12'

R-12'

Cultivated

R-4'

+95-RE

- +70-Tree 29'
- +59-Tree 24'
- +50 T.P. 12'
- +41-3-trees 70'

R-10'

FE.

Yard

R-5'

+98-Tree 25'

R-10'

+71-M.B.V. 51

+68-C. House .90'

+27 C. House

+24 T.P. 13'



R-9'

R-6'

Farm Yard

+76 Woods

+44-Tree 26'

+21-EE

+12-EE Tree 29'

R-6'

FE.

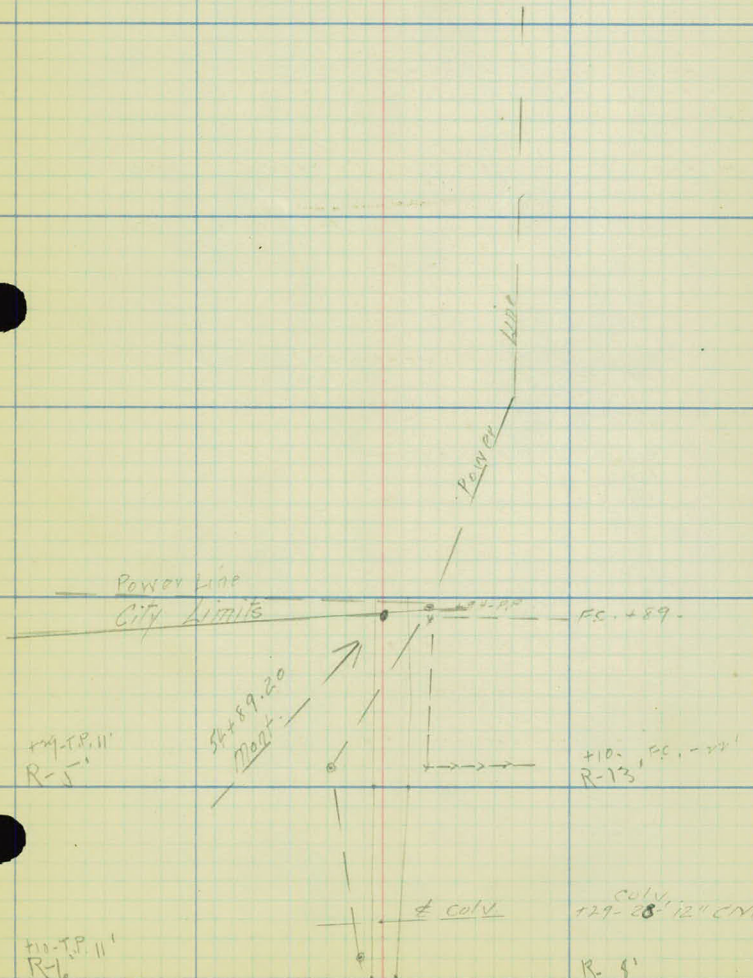
Cultivated

R-8

55+00

54+00

53+00



Power Line
City Limits

Power Line

FC + 89.

+11-T.P. II'
R-1'

ST + 89.20
Mont.

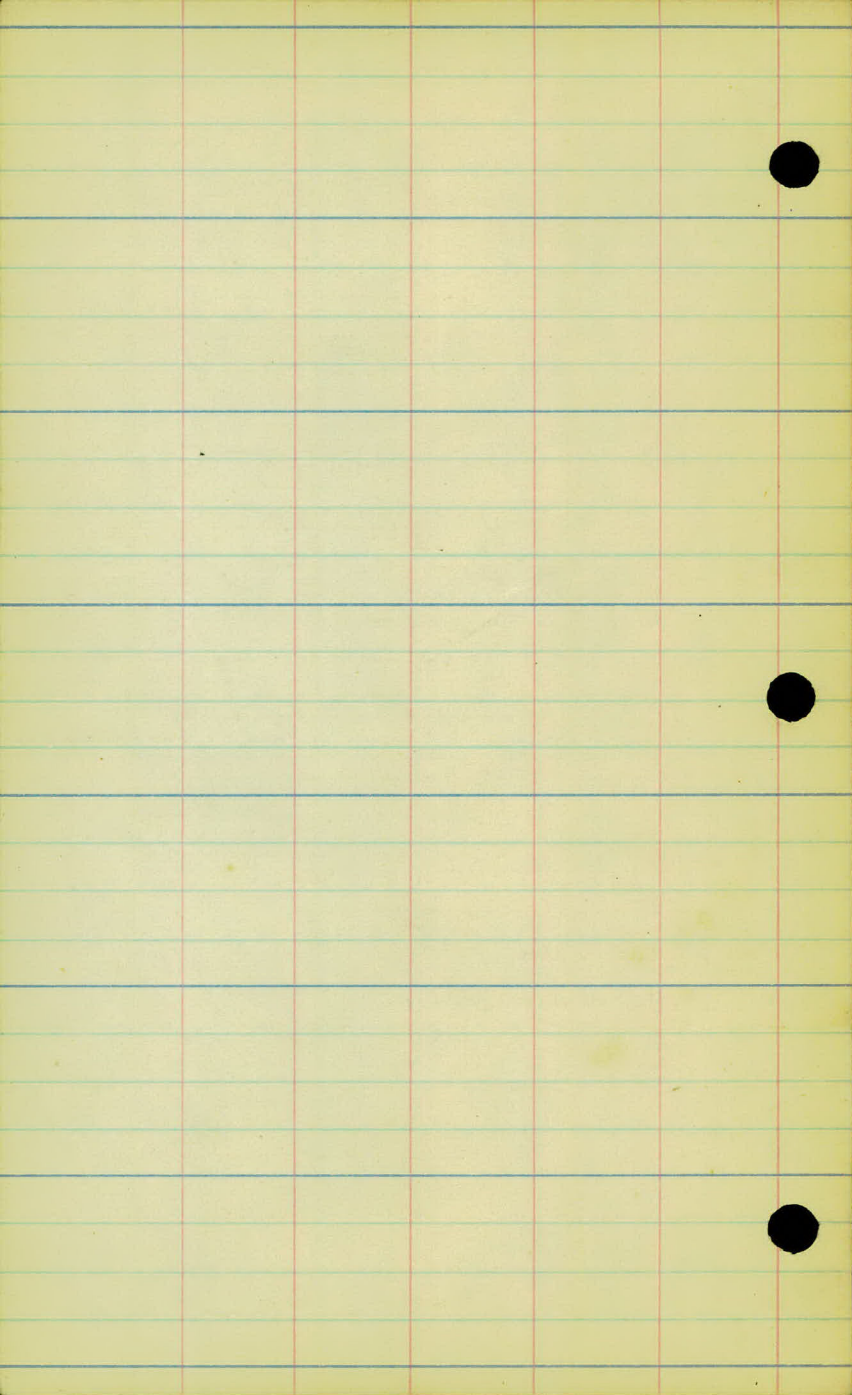
+10. FC - 20'
R-13'

+10-T.P. II'
R-1'

CULV.

+29-28' 12" C/V

R-1'



Project-25-55 B-Line

Lower apton Road

artificial Topography

Revision

From Sta 21+32.68 to Sta 26+77.09

26+82.35

Equation

Part

H. Wilshusen

H. B. Briggs

R. Pearson

M. Hackney

= 26+77.09

26+82.35 Equation P.T.

26+00

25+00

24+00

23+00

22+00

21+00

B-Line

Lt.

±

Rt

B-Line

R-6'

R-8' - F 20'

R-8'

F-19' R-6'

R-10'

F-19' R-6'

R-10'

F-18' R-6'

+31-100-29'
+22-EE
+06-100-19'
R-8'

FE
B
D

F-21' R-10'

R-8'

F-32' R-9'

+22-100-13

R-7'

F-52 R-10'

+66-M. by 9'
+22-100-12
R-7'

R-7'

F-90' R-9'

+60 ± Cul V.
+53-100-21

± Cul V.
B

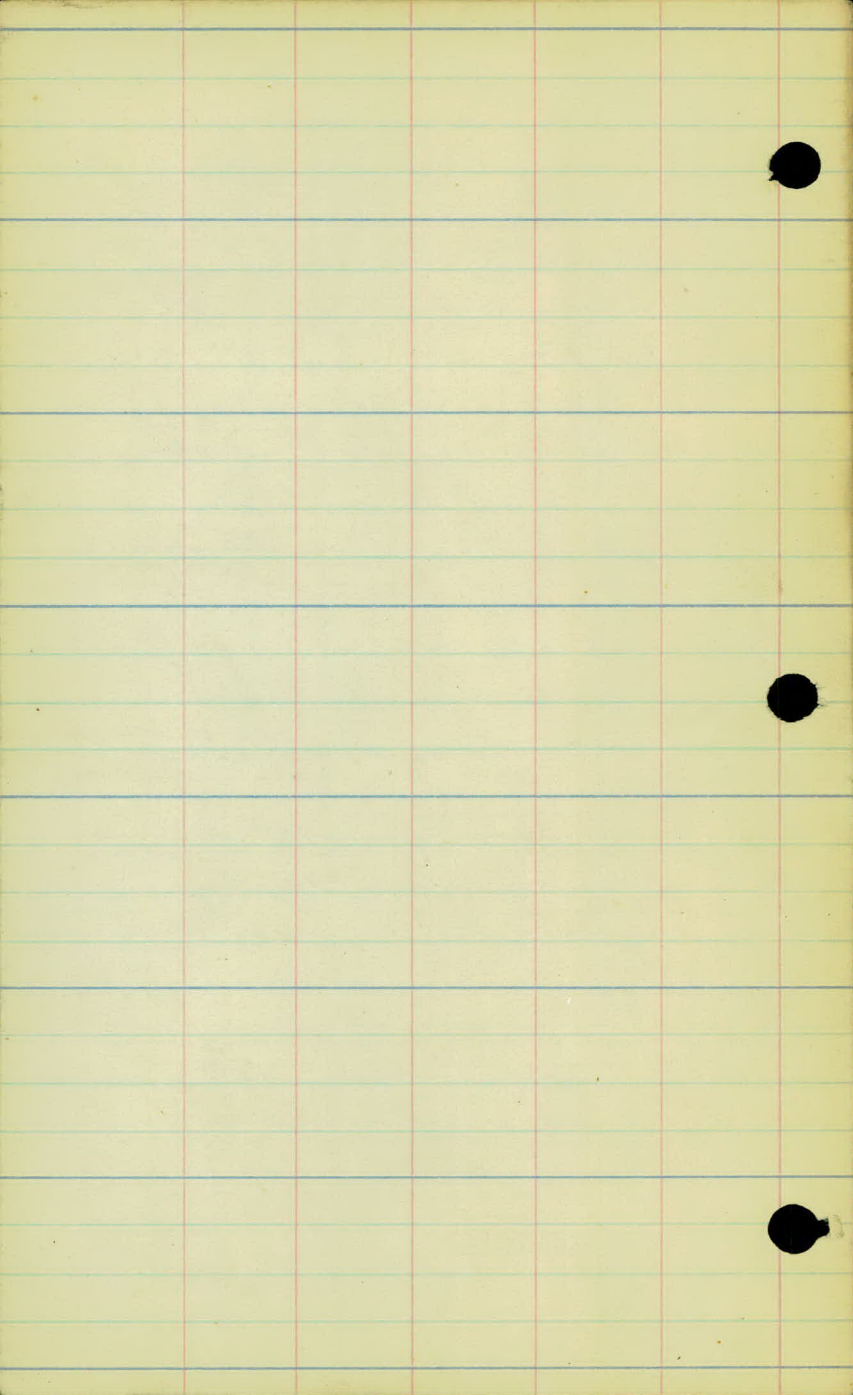
Meadow

Cultivated

Garden

Cultivated

Cultivated



A-Line

Project - 25-55

Lower Afton Road

± level's

From Sta 0+00 to Sta 54+89.20

From E. Coline to City limits

Party

H.V. Wilshusen

H.G. Briggs

R. Pearson

M. Hackney

assumed elevation

900.00 Spike on Tel. pole 18' Rt. 0+30

Sta.	t	H.I.	-	Elev.
		904.53	✓	
2+00			5.5	899.00 ✓
B.M.	v.v.1	902.21	✓	900.00
0+00			3.7	985 ✓
1+00			4.4	97.8 ✓
2+00			5.6	96.6 ✓
3+00			7.1	95.1 ✓
4+00			5.0	94.2 ✓
T.P.	1.07	895.23	✓	8.05 894.16 ✓
5+00			3.1	92.1 ✓
6+00			5.1	90.1 ✓
7+00			7.0	88.2 ✓
8+00			9.0	86.2 ✓
B.M.	0.31	885.48	✓	10.06 885.17 ✓
9+00			11	84.4 ✓
10+00			3.1	82.4 ✓
11+00			5.2	80.3 ✓

900.00 Spike on Tel. pole 18' Rt 0+30

885.17 Spike on Tel. pole 18' Rt 8+80

Sta.	+	H.I.	-	Elev.
		885.48 ✓		
12+00			7.0	78.5 ✓
14+87.72	P.C.		9.4	76.1 ✓
13+00			9.7	75.8 ✓
+50			11.3	74.2 ✓
T.P.	129	875.54 ✓	11.23	874.25 ✓
14+00			7.8	77.7 ✓
+50			4.2	71.3 ✓
15+00			5.2	70.3 ✓
+50			6.6	68.9 ✓
16+00			7.8	67.7 ✓
+31.47	P.T.		8.7	66.8 ✓
17+00			10.0	65.5 ✓
18+00			11.6	63.9 ✓
T.P.	2.15	866.11 ✓	11.58	863.96 ✓
+36.85	P.C.		2.5	63.6



Sta.	+	H.I.	-	Elev.
		866.11	✓	
19+00			3.3	62.8 ✓
+50			4.0	62.1 ✓
20+00			4.5	61.6 ✓
B.M.			5.12	860.99 ✓
+50			4.9	61.2 ✓
21+00			4.8	61.3 ✓
+32.68	P.T.		4.9	61.2 ✓
22+00			4.7	61.4 ✓
+75			5.4	60.7 ✓
23+00			4.4	61.7 ✓
T.P.	452	866.86	✓ 3.77	862.34 ✓
+48.39	P.C.		4.2	62.7 ✓
24+00			4.9	62.0 ✓
+14			5.4	61.5 ✓
+17			6.1	60.8 ✓

860.99 SPIKE ON 12' OOK 50' LT. 20+N

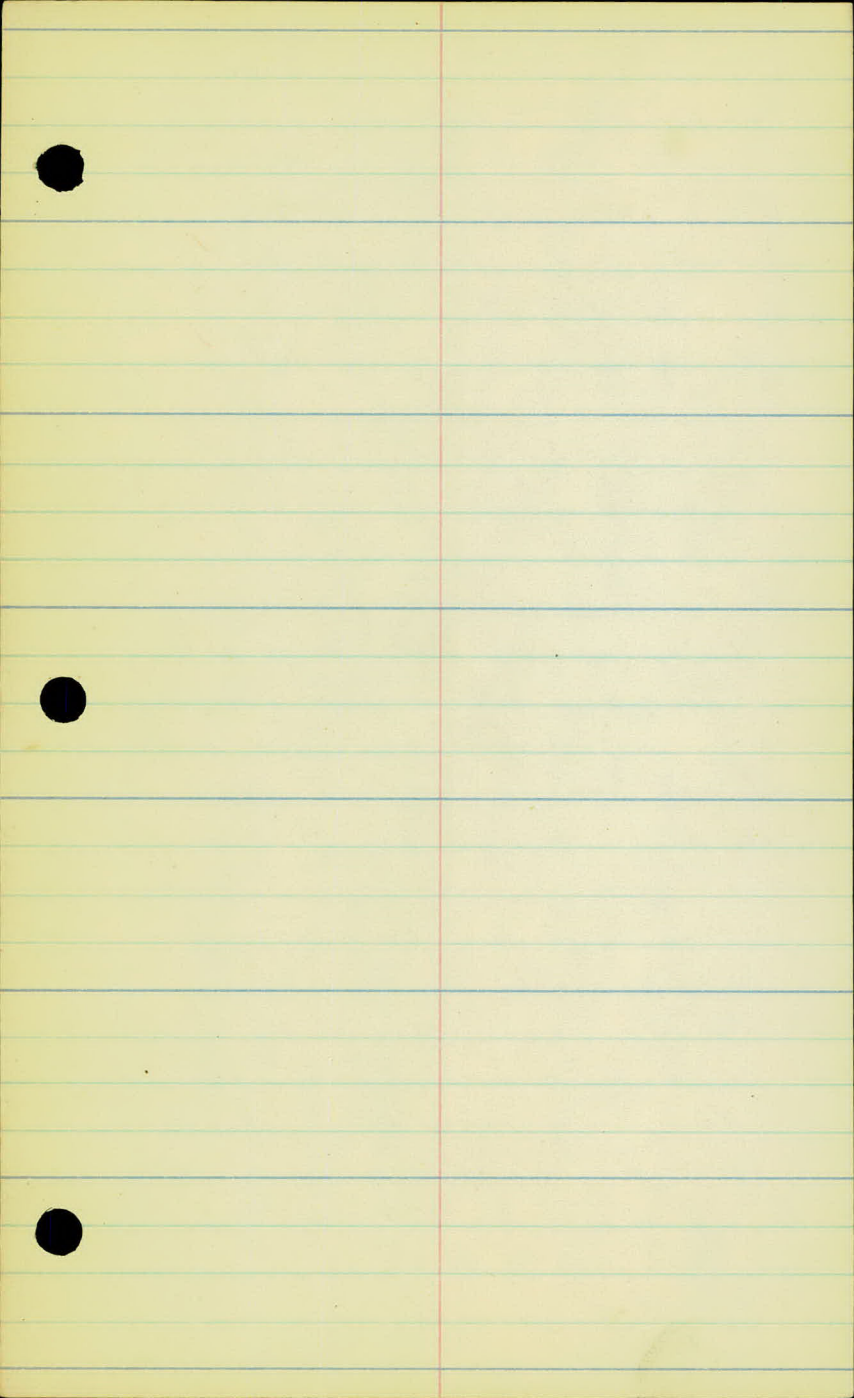
Sta.	+	H.I.	-	Elev.
		866.86 ✓		
+50			6.4	60.5 ✓
25+00			8.0	58.9 ✓
+50			8.0	58.9 ✓
26+00			8.2	58.7 ✓
+50			8.6	58.3 ✓
+77.05	P.T.		8.9	58.0 ✓
T.P.	3.71	866.74 ✓	8.83	858.03 ✓
27+00			3.9	57.8 ✓
+50			3.7	58.0 ✓
28+00			3.6	58.1 ✓
+50			3.2	58.5 ✓
29+00			3.5	58.2 ✓
+50			3.7	58.0 ✓
30+00			3.9	57.8 ✓



Sta.	+	H.I.	-	Elev.
		861.74 ✓		
+50			4.8	56.9 ✓
31+00			5.5	56.2 ✓
+50			6.1	55.6 ✓
32+00			7.0	54.7 ✓
T.P.	153	852.26	7.01	854.73
+50			7.3	54.0 ✓
33+00			3.2	53.1 ✓
+50			4.6	51.7 ✓
34+00			6.4	49.9 ✓
+50			7.9	48.4 ✓
35+00			9.5	46.8 ✓
+50			11.2	45.1 ✓
B.M.			10.20	846.06 ✓
T.P.	163	846.11 ✓	11.78	844.48 ✓
36+00			3.1	43.0 ✓

846_06 Spike on T. Pole 18' Lt 35+66

Sta.	+	H.I.	-	Elev.
		846.11 ✓		
+50			5.2	840.90 ✓
37+00			7.5	38.6 ✓
+50			9.3	36.8 ✓
38+00			10.7	35.4 ✓
T.P.	0.42	835.06 ✓	11.47	834.64 ✓
+50			1.4	33.7 ✓
39+00			3.3	31.8 ✓
+50			4.9	30.2 ✓
40+00			6.1	29.0 ✓
+50			6.5	28.6 ✓
41+00			6.8	28.3 ✓
+50			7.1	28.0 ✓
42+00			7.2	27.9 ✓
+50			6.5	28.6 ✓

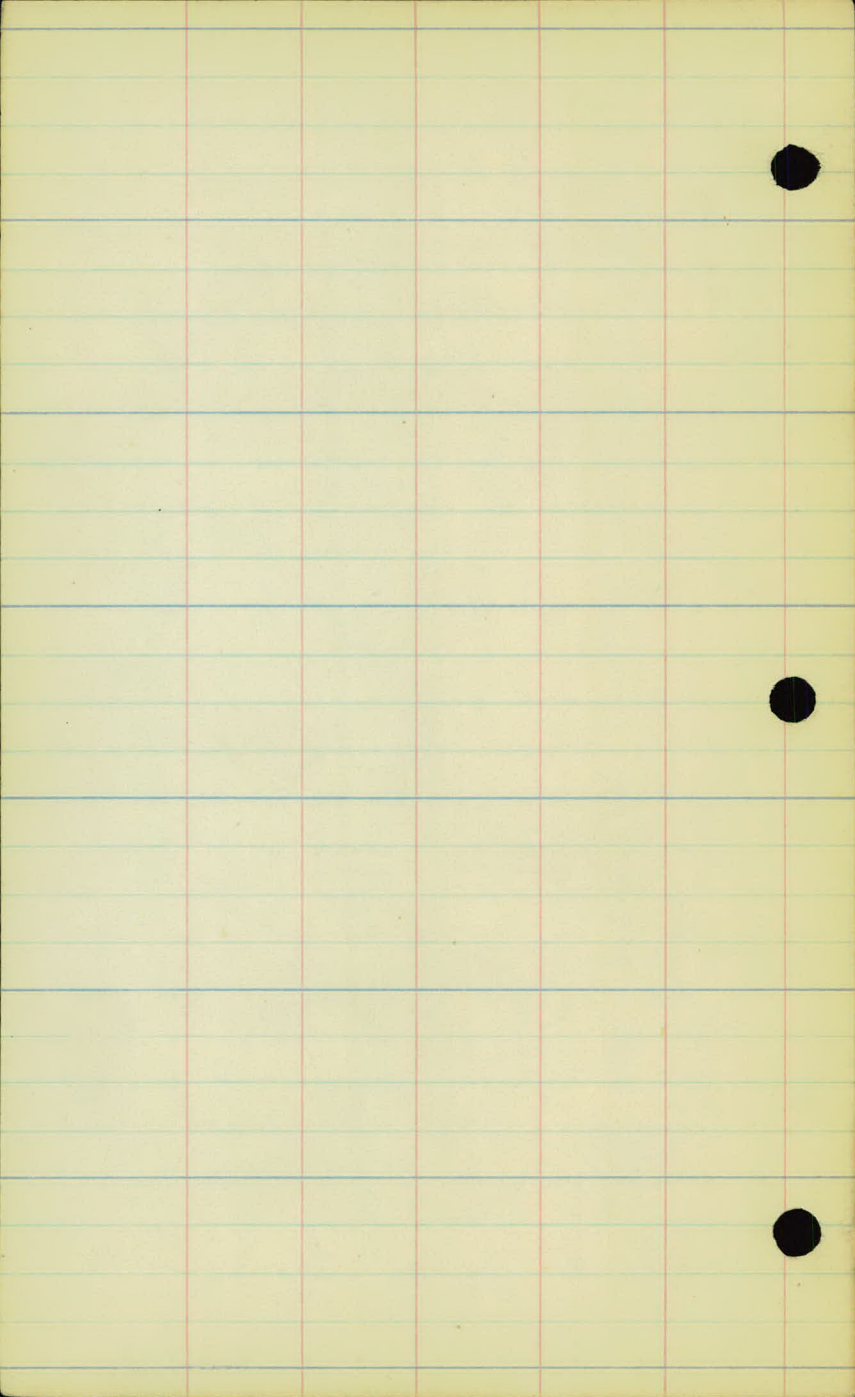


Sta.	+	H.I.	-	Elev.
		835.06 ✓		
43+00			5.5	829.60 ✓
+50			4.2	30.9 ✓
44+00			3.4	31.7 ✓
+50			2.5	32.6 ✓
45+00			1.9	33.2 ✓
+50			1.4	33.7 ✓
T.P.	5.67	839.39 ✓	1.34	833.72 ✓
46+00			5.2	34.2 ✓
+50			4.9	34.5 ✓
47+00			4.6	34.8 ✓
B.M.			4.60	834.79 ✓
+50			4.5	34.9 ✓
48+00			4.6	34.8 ✓
+50			4.9	34.5 ✓
49+00			5.5	33.9 ✓

834.79 spike on 12" By elder 25' Lt. 47+12

Sta.	+	H.I	-	Elev.
		839.39		
+50			6.7	833.20 ✓
50+00			6.9	37.5 ✓
T.P.	0.19	837.72 ✓	6.86	832.53 ✓
+50			0.9	31.8 ✓
51+00			7.1	30.6 ✓
+50			3.2	79.5 ✓
52+00			4.1	78.6 ✓
+50			4.5	78.2 ✓
53+00			5.0	77.7 ✓
+50			5.0	77.7 ✓
54+00			4.7	78.0 ✓
+50			4.8	77.9 ✓
+89.20			3.9	78.8 ✓
B.M.			5.17	82.7.55 ✓

82755 Spire on 15" OOK 35' Rt 54+89



Date 8-29-24

B-Line

Project 25-55

Revision 1011 Equation

= 26 + 77.09

From sta. 21 + 32.68 to Sta. 26 + 82.35

4 levels

Party

H.L. Wilshusen

H.G. Briggs

R. Pearson

M. Hackney

Sta	+	HI	-	Elev.
B.M.	464	865.63 ✓		860.99 ✓
21+46.02	P.C.		4.5	861.10 ✓
22+00			4.3	61.30 ✓
+50			4.0	61.60 ✓
+66.02	P.T.		4.1	61.50 ✓
23+00			4.2	61.40 ✓
+22.88	P.C.		4.5	61.10 ✓
+50			4.6	61.00 ✓
24+00			4.7	60.90 ✓
T.P.	361	864.77 ✓	4.47	861.16 ✓
+50			4.2	860.60 ✓
25+00.25	P.T.		4.6	60.20 ✓
+50			5.4	59.40 ✓
26+00			6.0	58.80 ✓

860.99 Spike on 12" OAK 50' 4-20+15

Sta. + H.I. - Elev.

864.77 ✓

+50

6.4

58.40 ✓

= 26 + 77.09

P.T.

26 + 82.35

Equation

6.6

58.20 ✓

T.P.

4.56

865.72 ✓

361

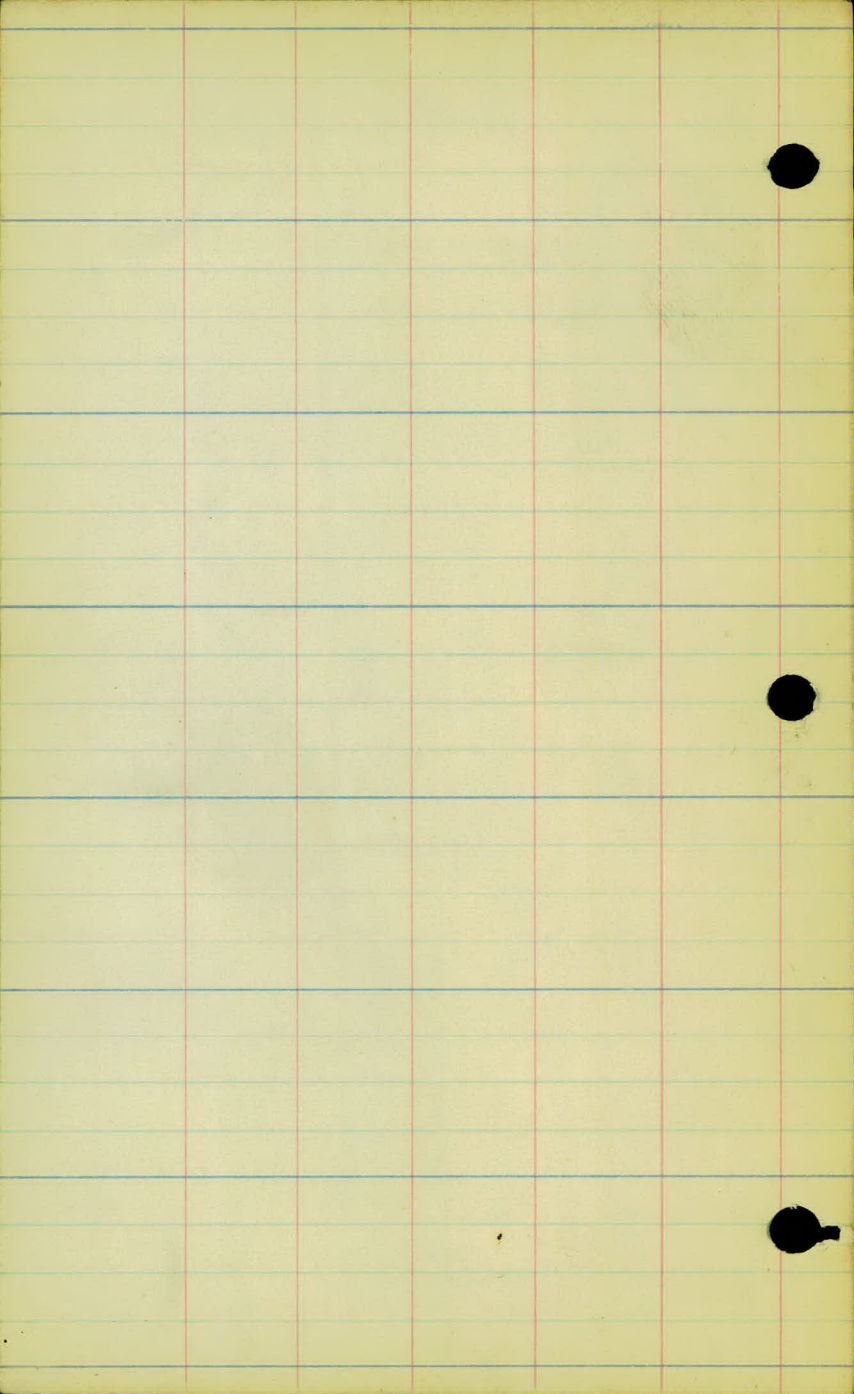
861.16 ✓

B.M.

475

860.97 ✓

860.99 SPIRE ON 12" OAK 50' LT 20+15



A-Line

Project - 25-55

Lower after Road

From E. Co. Line to City Limits

Sta 0+00 to Sta 54+89.20

Check levels

H. L. Wilshusen

H. C. Briggs

R. Pearson

M. Hackney

Sta.	+	H.I.	-	Elev
B.M.	5.11	837.66		827.55
T.P.	8.84	837.00	4.50	828.16
T.P.	4.30	839.10	4.20	834.80
B.M.			4.33	834.77
T.P.	7.57	835.21	6.46	827.64
T.P.	7.44	835.17	7.48	827.73
T.P.	9.53	843.99	0.71	834.46
T.P.	10.01	852.67	1.33	842.66
B.M.			6.65	846.02
T.P.	7.59	859.85	0.41	852.26
T.P.	4.73	862.70	1.88	857.97
T.P.	4.54	865.50	1.74	860.96
B.M.			4.54	860.96
T.P.	7.44	869.39	3.55	861.95
T.P.	9.72	878.58	0.53	868.86
T.P.	8.72	885.43	1.87	876.71
T.P.	7.54	891.06	1.91	883.52
B.M.			5.94	885.12
T.P.	7.16	896.83	1.39	889.67
T.P.	7.46	902.25	2.04	894.79
B.M.			2.31	899.94

827.55 Spike on 15" Oak 35' Rt. 54+89

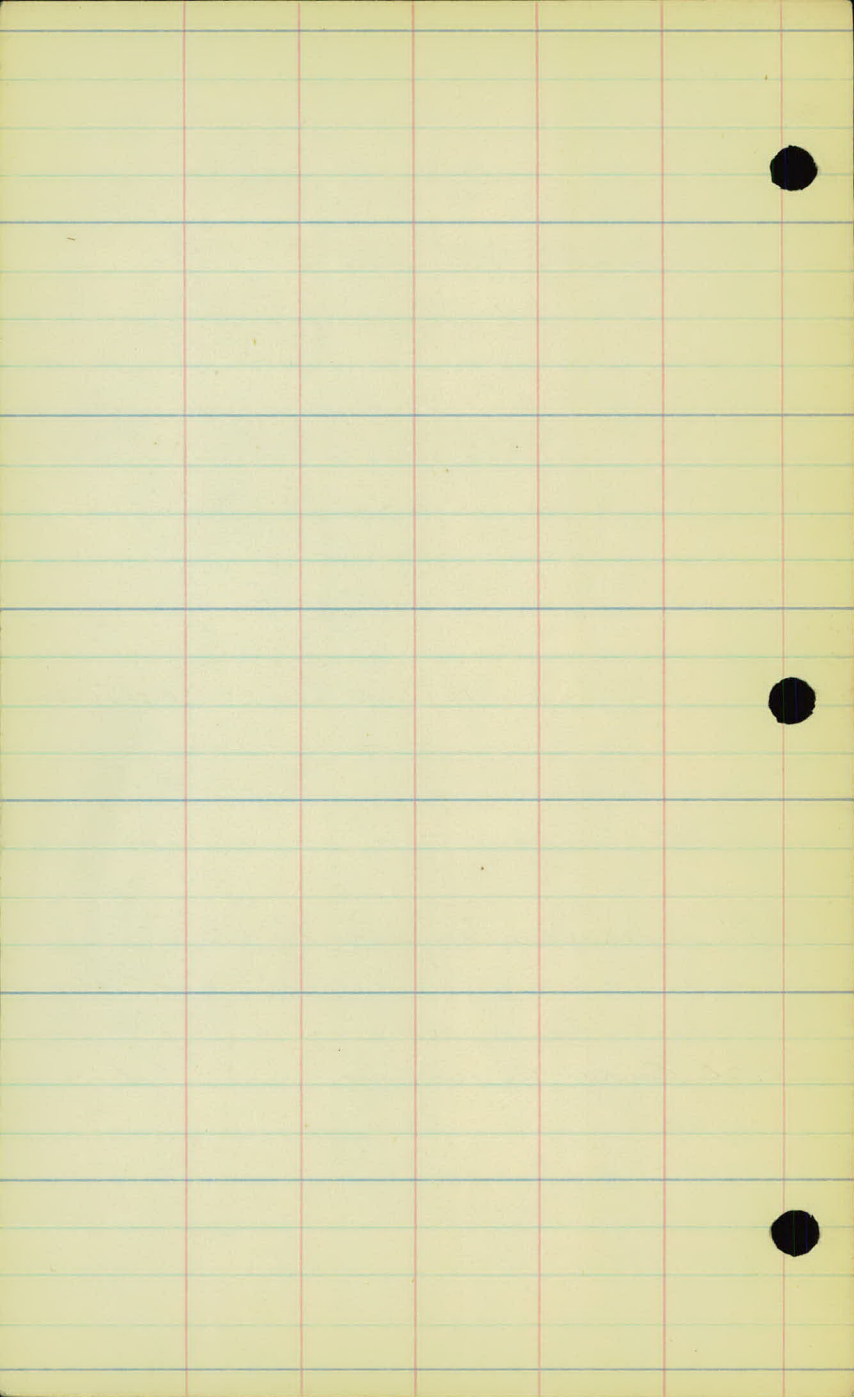
834.79 Spike on 12" By. elder 25' Lt. 47+12

846.06 Spike on Tel. pole. 18' Lt. 35+66

860.99 Spike on 12" Oak 50' Lt. 20+15

885.17 Spike on Tel. pole 18' Rt. 8+80

900.00 Spike on Tel. Pole. 18' Rt. 0+30



Date
8-29-24

A-Line

Project-25-55

Lower apton Road

From E. Co. Line to City Limits

Sta 0+00 to Sta. 54+89.20

Level Notes.

Cross Sections

& Levels

Check Levels

Drainage Notes

part
H.L. Wikhusen

H.G. Briggs

R. Pearson

M. Hackney

Sta.	+	H.I.	-	Elev.
B.M.	2.40	902.40	✓	
0+00				898.5
+22				98.5
+24				98.5
1+00				97.8
T.P.	5.58	902.43	✓	896.85 ✓
+50				97.1
+400				96.6
+50				95.7
3+00				95.1
+50				94.5
4+00				94.2
+50				93.5
5+00				92.2
T.P.	5.53	896.01	✓	892.48 ✓

Lt.

±

Rt.

900.00 Spike on Tel. Pole 18' Rt 0+30

Elevation assumed

			39		21		
			00		33		
67	51	48	39	37	40	38	
33	19	13	00	6	20	33	

67	51	48	39	38	41	32	17
33	17	12	00	7	18	20	33

57	57	56	54	46	48	43	37	33	27
33	31	15	11	20	8	8	10	21	33

61	61	63	53	56	50	42	26	24
33	30	13	00	7	11	21	30	33

76	73	72	68	61	58	64	58	43	41
33	21	14	13	9	00	10	18	29	33

96	93	88	79	69	67	70	75	81	76	67
33	19	15	14	8	00	6	10	12	19	33

107	101	89	79	73	85	88	84	82
33	17	15	10	00	11	12	21	33

114	106	86	79	89	92	90
33	16	11	00	11	12	33

107	104	91	86	82	93	95	92	90
33	16	13	11	00	11	13	16	29

105	104	98	94	89	94	97	94	89
33	16	14	11	00	11	12	16	33

106	107	112	106	102	100	93	88
33	23	14	12	00	12	25	33

Sta.	+	H.I.	-	Elev
		896.01 ✓		
+50				91.1
6+00				90.1
+50				89.3
+81				88.6
+56				88.5
7+00				88.3
+50				87.1
8+00				86.3
B.M.			10.83	885.18 ✓
B.M.	1.26	886.43 ✓		
+50				85.4
9+00				84.4
+50				83.3
10+00				82.3

Lt.

4

Rt.

4.4	5.5	5.5	5.7	5.2	4.9	5.3	2.7	1.7
33	26	18	13	11	16	12	18	33

5.5	5.4	4.7	6.5	6.3	5.9	6.3	3.0	2.1
33	29	19	15	11	20	12	19	33

6.7	7.0	7.3	7.1	6.7	7.3	6.7	4.3	4.0
33	24	13	10	00	10	12	7.8	33

7.8	7.4	7.4	7.5	8.5	6.5	5.8
33	9	20	5	9	16	33

7.6	7.8	7.5	8.1	8.3	8.2	6.5
33	15	20	6	16	11	33

8.2	8.9	8.8	8.2	7.7	8.4	7.9	7.0
33	20	16	11	00	10	16	33

10.0	10.0	10.3	9.9	9.1	8.9	9.3	9.7	9.0	8.2
33	23	16	15	10	00	7	11	20	33

10.6	11.1	10.4	9.9	9.1	10.4	10.0
33	15	14	9	00	11	33

885.17 - Spike on Tel. Pole - 18' Rt. 8+50

895.17 spike on Tel. Pole - 18' Rt. 8+50

1.4	2.2	2.6	2.7	1.9	1.3	1.0	1.5	1.8	1.3
33	18	17	16	14	7	00	7	12	33

2.4	3.6	3.0	2.2	2.0	2.5	3.1	3.0	1.9
33	15	14	8	00	7	12	18	33

3.1	4.6	4.1	3.4	3.1	3.9	4.3	4.0	3.2
33	15	13	7	00	8	12	18	33

4.8	5.8	5.2	4.2	4.1	4.7	5.7	5.2	5.0
33	15	14	6	00	9	12	27	33

Sta	+	H.I.	-	Elev.
		886.43 ✓		
+50				81.3
11+00				80.3
+50				79.3
12+00				78.4
+50				77.0
+87.85	P.C.			76.0
T.P.	3.87	879.91 ✓	10.39	876.04 ✓
13+00				75.8
+50				74.1
+61				73.9
+83				73.4
14+00				72.7
+50				71.4
T.P.	5.84	876.02 ✓	9.73	870.18 ✓

Sta	+	H.I.	-	Elev
15+00		876.02 ✓		70.3
+50				68.9
T.P.	6.70	874.70 ✓	7.52	868.50 ✓
16+00				67.7
+316	P.T.			66.8
+50				66.5
T.P.	3.55	869.93 ✓	8.32	866.38 ✓
17+00				65.5
+50				64.8
T.P.	3.34	866.74 ✓	6.53	863.40 ✓
18+00				63.9
B.M.			5.76	860.95 ✓
+36.85	P.C.			63.5
19+00				62.7
+50				62.1
20+00				61.6

Lt. £ Rt.

$\begin{array}{r} 9.0 \\ 33 \end{array}$
 $\begin{array}{r} 8.1 \\ 23 \end{array}$
 $\begin{array}{r} 7.0 \\ 16 \end{array}$
 $\begin{array}{r} 6.5 \\ 8 \end{array}$
 $\begin{array}{r} 5.7 \\ 00 \end{array}$
 $\begin{array}{r} 5.7 \\ 9 \end{array}$
 $\begin{array}{r} 6.3 \\ 14 \end{array}$
 $\begin{array}{r} 6.3 \\ 17 \end{array}$
 $\begin{array}{r} 5.4 \\ 18 \end{array}$
 $\begin{array}{r} 2.7 \\ 27 \end{array}$
 $\begin{array}{r} 2.7 \\ 26 \end{array}$

$\begin{array}{r} 9.2 \\ 33 \end{array}$
 $\begin{array}{r} 8.4 \\ 22 \end{array}$
 $\begin{array}{r} 7.5 \\ 12 \end{array}$
 $\begin{array}{r} 7.1 \\ 00 \end{array}$
 $\begin{array}{r} 7.4 \\ 6 \end{array}$
 $\begin{array}{r} 8.5 \\ 10 \end{array}$
 $\begin{array}{r} 8.6 \\ 13 \end{array}$
 $\begin{array}{r} 3.7 \\ 16 \end{array}$
 $\begin{array}{r} 2.5 \\ 33 \end{array}$

$\begin{array}{r} 9.0 \\ 33 \end{array}$
 $\begin{array}{r} 8.8 \\ 23 \end{array}$
 $\begin{array}{r} 7.4 \\ 12 \end{array}$
 $\begin{array}{r} 7.0 \\ 10 \end{array}$
 $\begin{array}{r} 7.3 \\ 6 \end{array}$
 $\begin{array}{r} 7.7 \\ 11 \end{array}$
 $\begin{array}{r} 5.2 \\ 16 \end{array}$
 $\begin{array}{r} 3.8 \\ 33 \end{array}$

$\begin{array}{r} 10.4 \\ 33 \end{array}$
 $\begin{array}{r} 9.4 \\ 17 \end{array}$
 $\begin{array}{r} 8.2 \\ 12 \end{array}$
 $\begin{array}{r} 7.9 \\ 00 \end{array}$
 $\begin{array}{r} 8.2 \\ 6 \end{array}$
 $\begin{array}{r} 9.0 \\ 9 \end{array}$
 $\begin{array}{r} 9.2 \\ 10 \end{array}$
 $\begin{array}{r} 8.5 \\ 12 \end{array}$
 $\begin{array}{r} 7.4 \\ 16 \end{array}$
 $\begin{array}{r} 6.3 \\ 27 \end{array}$
 $\begin{array}{r} 6.1 \\ 33 \end{array}$

$\begin{array}{r} 11.3 \\ 33 \end{array}$
 $\begin{array}{r} 7.8 \\ 15 \end{array}$
 $\begin{array}{r} 8.3 \\ 9 \end{array}$
 $\begin{array}{r} 8.2 \\ 20 \end{array}$
 $\begin{array}{r} 8.6 \\ 7 \end{array}$
 $\begin{array}{r} 9.1 \\ 9 \end{array}$
 $\begin{array}{r} 9.3 \\ 13 \end{array}$
 $\begin{array}{r} 7.8 \\ 17 \end{array}$
 $\begin{array}{r} 7.2 \\ 33 \end{array}$

$\begin{array}{r} 6.8 \\ 33 \end{array}$
 $\begin{array}{r} 6.4 \\ 23 \end{array}$
 $\begin{array}{r} 5.8 \\ 14 \end{array}$
 $\begin{array}{r} 4.7 \\ 8 \end{array}$
 $\begin{array}{r} 4.4 \\ 06 \end{array}$
 $\begin{array}{r} 4.8 \\ 9 \end{array}$
 $\begin{array}{r} 5.7 \\ 13 \end{array}$
 $\begin{array}{r} 5.9 \\ 22 \end{array}$
 $\begin{array}{r} 6.7 \\ 33 \end{array}$

$\begin{array}{r} 6.6 \\ 33 \end{array}$
 $\begin{array}{r} 6.3 \\ 23 \end{array}$
 $\begin{array}{r} 6.8 \\ 16 \end{array}$
 $\begin{array}{r} 6.2 \\ 12 \end{array}$
 $\begin{array}{r} 5.4 \\ 7 \end{array}$
 $\begin{array}{r} 5.1 \\ 00 \end{array}$
 $\begin{array}{r} 5.5 \\ 7 \end{array}$
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 $\begin{array}{r} 8.5 \\ 25 \end{array}$
 $\begin{array}{r} 9.5 \\ 33 \end{array}$

$\begin{array}{r} 4.5 \\ 33 \end{array}$
 $\begin{array}{r} 4.0 \\ 17 \end{array}$
 $\begin{array}{r} 3.8 \\ 12 \end{array}$
 $\begin{array}{r} 3.1 \\ 7 \end{array}$
 $\begin{array}{r} 2.8 \\ 00 \end{array}$
 $\begin{array}{r} 3.3 \\ 9 \end{array}$
 $\begin{array}{r} 4.0 \\ 14 \end{array}$
 $\begin{array}{r} 5.7 \\ 17 \end{array}$
 $\begin{array}{r} 7.4 \\ 33 \end{array}$

86099 Spike on 12" oak 50' Lt. 20+15

$\begin{array}{r} 4.0 \\ 33 \end{array}$
 $\begin{array}{r} 4.3 \\ 20 \end{array}$
 $\begin{array}{r} 5.2 \\ 18 \end{array}$
 $\begin{array}{r} 5.0 \\ 14 \end{array}$
 $\begin{array}{r} 4.4 \\ 12 \end{array}$
 $\begin{array}{r} 3.6 \\ 8 \end{array}$
 $\begin{array}{r} 3.2 \\ 00 \end{array}$
 $\begin{array}{r} 3.5 \\ 9 \end{array}$
 $\begin{array}{r} 4.2 \\ 4 \end{array}$
 $\begin{array}{r} 6.3 \\ 17 \end{array}$
 $\begin{array}{r} 7.9 \\ 33 \end{array}$

$\begin{array}{r} 5.4 \\ 33 \end{array}$
 $\begin{array}{r} 5.9 \\ 4 \end{array}$
 $\begin{array}{r} 5.5 \\ 16 \end{array}$
 $\begin{array}{r} 4.6 \\ 14 \end{array}$
 $\begin{array}{r} 4.2 \\ 8 \end{array}$
 $\begin{array}{r} 4.0 \\ 00 \end{array}$
 $\begin{array}{r} 4.5 \\ 9 \end{array}$
 $\begin{array}{r} 5.5 \\ 15 \end{array}$
 $\begin{array}{r} 9.9 \\ 24 \end{array}$
 $\begin{array}{r} 9.9 \\ 33 \end{array}$

$\begin{array}{r} 6.5 \\ 33 \end{array}$
 $\begin{array}{r} 5.7 \\ 18 \end{array}$
 $\begin{array}{r} 4.5 \\ 9 \end{array}$
 $\begin{array}{r} 4.6 \\ 00 \end{array}$
 $\begin{array}{r} 5.1 \\ 7 \end{array}$
 $\begin{array}{r} 6.7 \\ 13 \end{array}$
 $\begin{array}{r} 10.6 \\ 23 \end{array}$
 $\begin{array}{r} 11.3 \\ 32 \end{array}$
 $\begin{array}{r} 10.0 \\ 33 \end{array}$
 $\begin{array}{r} 10.0 \\ 36 \end{array}$

44

$\begin{array}{r} 4.3 \\ 33 \end{array}$
 $\begin{array}{r} 5.7 \\ 29 \end{array}$
 $\begin{array}{r} 5.5 \\ 23 \end{array}$
 $\begin{array}{r} 6.2 \\ 21 \end{array}$
 $\begin{array}{r} 5.8 \\ 18 \end{array}$
 $\begin{array}{r} 4.9 \\ 11 \end{array}$
 $\begin{array}{r} 5.1 \\ 00 \end{array}$
 $\begin{array}{r} 5.7 \\ 6 \end{array}$
 $\begin{array}{r} 7.2 \\ 10 \end{array}$
 $\begin{array}{r} 10.7 \\ 18 \end{array}$
 $\begin{array}{r} 11.2 \\ 22 \end{array}$
 $\begin{array}{r} 11.4 \\ 27 \end{array}$
 $\begin{array}{r} 10.1 \\ 29 \end{array}$
 $\begin{array}{r} 10.2 \\ 35 \end{array}$

Sta. + H.I. - Elev

866.74 ✓

+50

61.1

21+00

T.P.

4.73

866.17 ✓

530

861.44 ✓

61.2

+32.68

61.2

See Revision

+50

61.2

22+00

61.4

+50

T.P.

6.14

867.42 ✓

489

861.78 ✓

62.2

+75

60.5

23+00

61.6

+48.43

P.C.

62.7

24+00

61.9

+17

60.7

+50

60.4

25+00

58.9

Sta	+	H.I.	-	Elev
		867.42		
+50				58.8
T.P.	3.80	862.64	8.58	858.84
26+00				58.6
T.B.M.	5.77	867.59	5.82	856.82
+50				58.3

From Revision to here

+77.05	P.T.			58.0
27+00				57.9
+50				58.0
28+00				58.1
+50				58.4
29+00				58.2
+50				58.0
30+00				57.8
+50				56.9

Sta.	+	H.I.	-	Elev
31+00		867.59		56.1
+50				55.6
32+00				54.6
+50				53.8
T.P.	3.04	857.81	7.82	854.79
33+00				53.1
+50				51.6
34+00				49.8
+50				48.3
T.P.	5.81	852.50	11.12	846.69
B.M.			6.50	846.00
35+00				46.6
+50				45.0
+87				43.4
+90				43.3

Stg.		H.I.		Elev.
36+00		852.50		42.9
+00				42.7
+50				40.8
B.M.	1.51	847.57		
37+00				38.7
+50				36.8
T.P.	1.95	837.32	17.20	825.37
38+00				35.4
+50				33.6
39+00				31.8
+50				30.1
T.P.	5.57	833.86	9.03	828.29
40+00				29.2
+50				28.6
T.P.	4.01	832.30	5.57	828.29
+75				28.5

LT

♀

RT

63	67	86	96
40	31	15	00

24	42	52	66	76	87	98	97	101	101	92	86	82	37
40	33	31	23	21	13	00	11	15	16	19	26	27	33

3.9
20

3.7	9.8	9.9	12.1	12.0	12.6	12.9	11.8	11.7	11.6	12.3	11.0	8.9	5.0	4.4
30	22	17	13	9	8	5	3	00	6	15	24	25	34	30

846.06 SPIKE on Tel. Pole 15' LT 35+266

10	21	67	70	77	81	75	97	70	89	89	98	89	87	80	75	24
40	31	26	24	23	15	13	11	8	00	5	12	16	15	24	27	33

123	121	115	122	123	119	109	108	108	112	103	92	81	74	84
17	15	13	12	11	8	6	00	9	21	24	27	29	32	34

51	57	53	63	47	23	19	21	32	7.8	75	78
32	27	18	18	15	9	00	7	15	25	33	40

110	109	76	50	40	37	40	52	123	125
40	33	19	12	7	00	8	13	27	40

13.6	13.3	12.2	71	56	55	60	14.6	15.0
40	25	19	12	7	00	10	24	40

14.6	13.8	71	72	76	83	16.3	16.2	16.2
40	19	7	00	7	12	28	33	40

10.6	11.5	10.9	60	48	47	51	62	64	11.9	12.1
40	33	19	12	7	20	7	14	22	30	40

8.6	8.2	11.0	10.5	64	56	53	5.7	6.4	9.0	9.1
35	26	22	18	11	7	00	8	11	17	33

70	63	92	87	47	42	3.8	4.1	4.4	6.0	6.1	4.9	5.0
36	26	21	18	12	7	00	8	10	15	16	19	33

Sta.	+	H.I.	-	Elev.
		832.30		
41+00				28.3
+50				28.0
42+00				28.0
T.B.M.	824	835.60	494	827.36
+50				28.6
+77				29.7
43+00				30.3
+50				30.9
T.P.	1021	841.85	396	831.64
44+00				31.8
+50				32.6
45+00				33.3
+50				33.7
46+00				34.2

Lt.

Rt.

Rt.

9.0	7.4	9.3	7.1	4.9	4.0	4.2	5.1	6.2	6.7	5.8	5.4
33	26	23	18	11	20	7	14	14	18	23	33

Note
Water

10.3	5.3	4.3	4.8	5.6	5.6	6.7	8.9	7.5
17	10	20	7	12	17	25	29	35

Water

9.2	5.1	4.3	4.7	5.7	6.0	5.6	5.3	5.8	8.7	9.1
16	10	20	9	13	16	17	21	18	33	40

82736 Nail on F Post 16' Rt 42+10

Water

12.3	9.4	7.3	7.0	7.3	8.0	7.4	6.9	7.7	9.5	10.0
18	11	6	20	10	14	16	22	27	31	33

Water

12.5	12.1	7.7	6.5	5.9	6.8	7.1	7.4	7.4
27	22	16	11	20	11	20	27	33

12.0	11.7	9.6	8.0	7.9	6.6	5.3	5.6	5.6	5.7	5.2	5.1	4.3	4.5
33	29	20	18	16	15	20	9	11	17	19	26	29	33

7.9	4.7	4.7	6.0	5.7	4.8	4.7	4.7	5.0	5.3	2.6
32	31	15	12	10	6	20	7	10	18	23

5.1	4.4	3.8	7.1	10.9	11.0	10.6	10.1	10.4	10.5
40	33	26	16	13	11	8	20	7	16

3.6	2.4	8.4	9.8	10.1	9.5	7.3	7.6	9.2	7.9
40	27	16	14	11	7	20	8	7	17

4.7	2.7	9.0	9.4	9.0	8.6	8.9	8.4	7.4
40	26	16	11	9	20	8	9	17

6.7	5.2	5.6	8.6	9.0	8.7	9.2	8.6	8.4	7.4
40	28	21	16	14	11	20	8	9	18

7.4	8.9	7.1	8.2	8.4	7.9	7.7	8.4	8.2	7.4
40	35	19	16	14	12	20	9	7	15

Sta.	+	H.I.	-	Elev.
		841.85		
+50				34.6
T.P.	478	839.62	6.95	834.90
B.M.			4.81	134.81
T.B.M.	14.27	839.63		
43+50				
T.P.	194	850.48	1.09	838.54
44+00				
+50				
45+00				
+50				
46+00				
T.P.	403	843.55	10.96	839.52
B.M.			8.74	834.81
B.M.	8.74	843.53		
47+00				34.7
+34				34.9
+50				34.8

Lt.

♀

Rt.

82	81	78	73	88	67	45
<u>33</u>	<u>17</u>	<u>7</u>	<u>00</u>	<u>7</u>	<u>22</u>	<u>40</u>

83479 Spike on 12" Bx. elder 25' Lt. 47+12

82736 Nail on E. Post 16' Rt 43+10

(87)

31	36
<u>58</u>	<u>50</u>

(187)

65	73
<u>35</u>	<u>50</u>

(179)

26	28
<u>38</u>	<u>50</u>

(172)

16	11
<u>37</u>	<u>50</u>

(168)

17	15
<u>36</u>	<u>50</u>

(163)

56	49
<u>33</u>	<u>50</u>

Note: These are
high readings.

834.79 Spike on 12" Bx. elder 25' Lt + 7+12

834.79 Spike on 12" Bx. elder 25' Lt 47+12

74	89	94	88	88	94	104	111
<u>33</u>	<u>15</u>	<u>14</u>	<u>6</u>	<u>20</u>	<u>11</u>	<u>24</u>	<u>33</u>

75	82	93	90	96	92	95	112
<u>35</u>	<u>16</u>	<u>14</u>	<u>9</u>	<u>00</u>	<u>11</u>	<u>15</u>	<u>35</u>

43	43	91	98	90	87	94	96	95
<u>33</u>	<u>24</u>	<u>14</u>	<u>10</u>	<u>7</u>	<u>00</u>	<u>11</u>	<u>14</u>	<u>35</u>

Sta.	+/-	H.I.	-	Elev.
48+00		843.53 ✓		34.7
+50				34.5
+60				34.3
+69				34.2
+89				34.0
49+00				33.9
T.P.	5.13	838.22 ✓	10.44	833.09 ✓
+50				33.2
+84				32.9
+86				32.7
50+00				32.5
+50				31.7
51+00				30.4

LH

E

RH

2.2	2.4	2.7	2.9	2.2	2.8	2.3	2.4	2.2	2.0
33	26	13	11	9	30	10	15	30	35

1.3	1.6	3.0	10.0	10.1	9.6	9.0	9.5	8.8	3.3	2.9
40	35	28	13	10	7	00	12	15	33	40

3.7	5.3	7.8	10.0	9.6	9.2	9.7	8.8	3.9	3.2
34	23	13	9	8	00	11	15	31	40

1.8	2.1	3.4	4.4	10.0	10.2	9.5	9.2	9.8	9.1	4.1	3.7
40	33	31	25	13	10	8	30	11	16	33	40

2.7	2.0	10.3	10.3	9.8	9.5	10.0	9.4	6.0	5.3
40	26	12	10	7	00	9	15	30	40

3.2	3.6	10.1	10.5	10.1	9.7	9.6	10.2	9.7	6.8	6.2
40	23	13	10	7	4	00	10	14	28	40

2.7	1.8	6.0	6.1	5.5	5.0	5.5	5.1	3.4
33	19	12	9	7	00	11	13	33

3.7	3.7	4.1	3.4	5.5	5.5	6.2	4.6
35	23	23	19	14	00	11	33

4.0	4.2	5.0	5.5	6.1	4.7
35	25	17	00	11	33

4.2	4.8	5.8	5.7	6.5	5.0
33	20	4	00	12	35

6.0	6.2	7.3	6.6	6.5	7.4	7.3	6.5
33	22	11	6	00	13	23	35

9.4	9.0	9.6	9.0	7.5	8.2	7.5	8.0
33	11	10	6	00	12	22	35

Sta		HI	✓	-	Elev.
+50		83832			29.5
52+00					28.6
T.P.	2.50	831.56	✓	4.56	829.36
+50					28.1
5+00					21.8
53+00					27.6
+50					27.8
54+00					28.1
+50					27.9
B.M.				4.31	827.55 ✓
13 M	10.01	837.56			827.55
					28.8

Lt.

±

Rt.

9.1	7.2	7.5	7.4	8.7	9.6	9.5
33	28	13	9	00	14	33

9.2	10.0	9.5	7.6	10.4	10.2
33	14	10	00	17	33

9.7	10.5	9.8	10.1	10.8	11.1
33	13	9	00	14	33

3.3	4.3	4.1	4.3	4.4	4.4
33	12	5	00	15	33

3.1	4.2	4.1	4.6	4.7
33	5	00	16	33

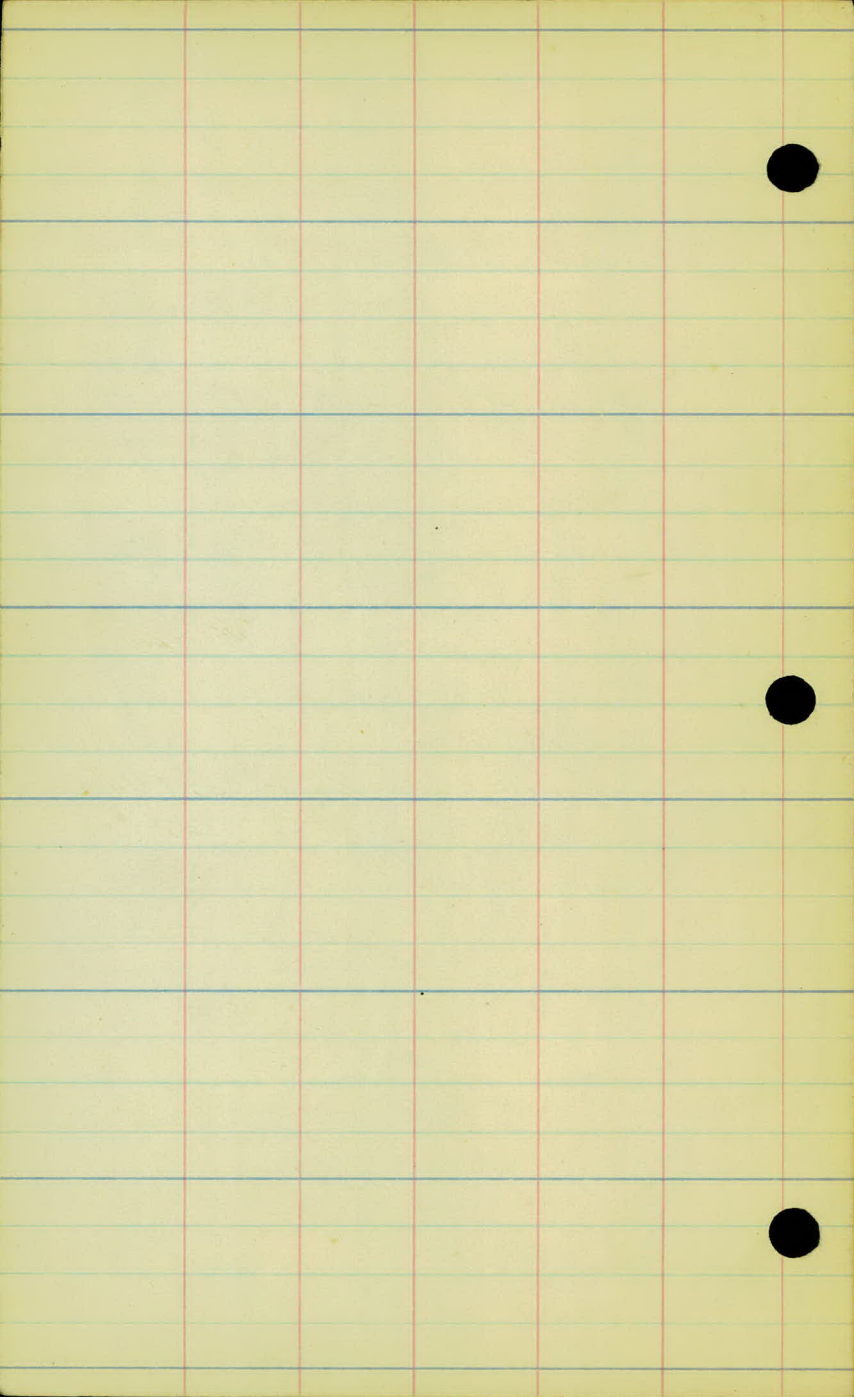
8.9	3.2	3.8	3.8	4.4	4.7
33	22	5	00	15	33

2.6	3.2	4.0	4.1	4.2
33	13	00	16	33

827.55 Spike on 15" oak 35' Rt. 54+89.20

827.55 Spike on 15" oak 35' Rt. 54+89.2

City Limits Road	6.5	3.5	6.5	8.2	8.8	9.6	10.0
	150	100	50	22	00	22	33



Date 8-29-24

B. Line

Project 25-55

Lever after Road

From Sta 21+32.68 to

Sta. 26+82.35 = 25+77.09

Cross Sections Equation

H. Wilshusen

H. B. Briggs

R. Pearson

C. Weitz

Sta.	+	H.I.	-	Elev
B.M.	4.75	865.74 ✓		
V1+46.22	P.C.			61.1
V2+00				61.3
+50				61.6
+66.02	P.T.			61.5
T.P.	6.98	868.32 ✓	4.40	861.34 ✓
V3+00				61.4
+72.88	P.C.			61.1
+50				61.1
V4+00				61.0
+50				60.6
V5+00.25	P.T.			60.2
T.P.	6.20	865.71 ✓	8.81	859.51 ✓
+50				59.4

LT.

F

RT.

B-Line

P60.99 Spike on 12' 09K 50' Lt. 20+15

91	73	58	56	52	52	48	46	48	54	70	83	5.8
33	25	21	20	19	16	10	20	3	8	15	25	33

5.8	5.1	4.6	4.4	4.9	5.7	7.6	9.2
33	15	9	20	6	11	14	33

4.8	4.6	5.2	5.2	4.6	4.4	4.1	5.0	5.6	6.9	8.1
33	14	13	11	9	8	20	9	15	18	33

2.5	4.6	5.1	5.2	4.9	4.2	4.9	5.8	6.0	5.4	6.6	7.6
33	13	11	10	7	20	10	15	17	18	23	33

1.7	7.6	5.8	8.0	8.0	7.4	6.9	7.4	8.3	7.4	7.2
40	31	14	10	8	6	20	9	16	18	33

2.0	5.1	5.6	8.2	7.7	7.2	7.6	8.4	8.3	10.4
40	23	16	11	6	20	9	16	17	33

3.7	4.6	5.7	7.5	8.0	7.2	7.6	10.7
40	33	17	13	8	20	9	33

5.8	6.3	6.3	8.0	7.9	7.3	7.6	8.8	7.8	8.7	9.1
40	33	17	12	9	20	8	18	21	25	33

7.5	8.7	8.1	7.7	7.9	8.4	6.0	6.8
33	13	10	20	6	15	16	33

7.7	9.4	8.8	8.1	8.2	9.4	8.0	8.2
40	13	9	20	6	16	17	33

7.8	7.5	7.3	6.8	6.3	6.6	7.5	9.4	7.6
33	29	10	9	20	7	12	19	33

Sta. + HI - Elev

965.71 ✓

58.9

76+00

58.4

+50

58.0

= 26+77.09
26+82.35

P.T.
Equation

T.P.

4.93

866.01

4.63

861.08 ✓

B.M.

5.01

861.00 ✓

LT

E

RT

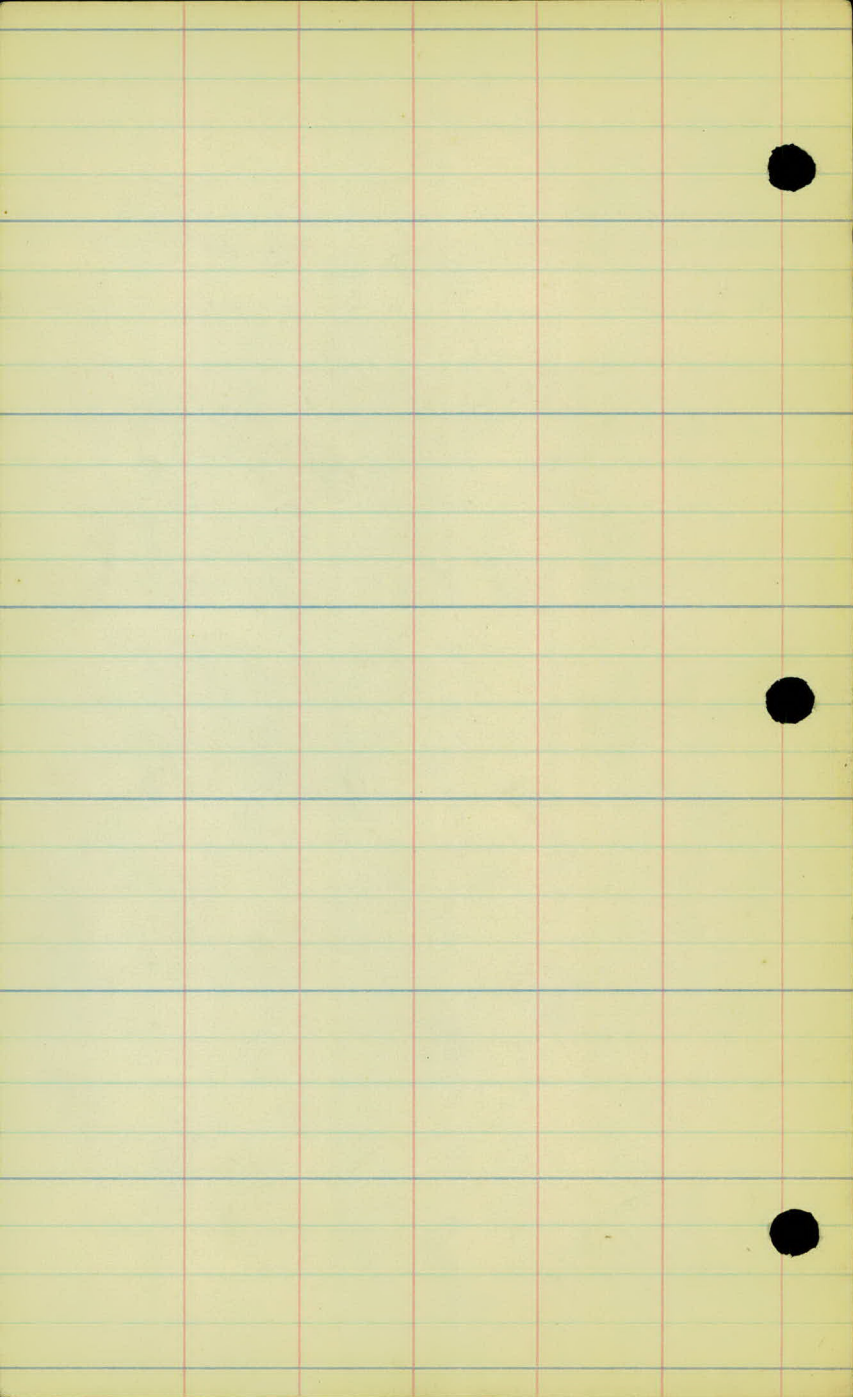
B. Line

$\frac{75}{33}$	$\frac{78}{14}$	$\frac{77}{6}$	$\frac{18}{00}$	$\frac{72}{8}$	$\frac{85}{15}$	$\frac{104}{19}$	$\frac{115}{33}$
-----------------	-----------------	----------------	-----------------	----------------	-----------------	------------------	------------------

$\frac{78}{33}$	$\frac{83}{13}$	$\frac{75}{6}$	$\frac{73}{00}$	$\frac{79}{9}$	$\frac{103}{17}$	$\frac{117}{33}$
-----------------	-----------------	----------------	-----------------	----------------	------------------	------------------

$\frac{89}{33}$	$\frac{85}{14}$	$\frac{78}{6}$	$\frac{77}{00}$	$\frac{81}{8}$	$\frac{94}{13}$	$\frac{111}{18}$	$\frac{123}{33}$
-----------------	-----------------	----------------	-----------------	----------------	-----------------	------------------	------------------

860.99 SPIKE ON 12" OAK 50' LT. 20+15



A Line
Project 25-55
Lower gaton Rd.
From Sta 0+00 to 54+89.20
Drainage notes

Party

H. Wilshusen

H.C. Briggs

R. Pearson

M. Hackney

Sta	Size	Kind	Length	Location	
				P.E.	P.E.
0+120	24"	C.M.	40'		±
4+90	12"	C.M.	24'		RT.
6+85	12"	C.M.	24'	Lt.	
6+93	12"	C.M.	16"		
13+60	12"	C.M.	30'		±
13+69	12"	C.M.	48'	Lt.	RT.
21+60	15"	V.P.	35'		±
29+77	12"	C.M.	24'		RT.
36+00	12"	C.M.	26'	Lt.	
39+64	15"	V.P.	46'		±

REMARKS

about this amount is required here

" " " " " " " "

" " " " " " " "

Condition - very poor

Condition good

about this amount is required here

Condition - good

about this amount required here

Condition - Poor.

Condition - good.

Sta.	Size	Kind	Length	Location	
				FE	FE
43+42	12"	C.M.	24'	LT.	
47+70	14"	V.P.	24'	LT.	
50+00	12"	C.M.	24'	LT.	
53+29	12"	C.M.	28'		±
71+60					
B.M.	440	865.43			860.99

39+64					
T.B.M.	570	833.06			827.36
T.P.	6.09	834.65	450		828.56

Remarks

about this amount required here

Condition - good.

about this amount required

Condition poor

Lt. Rod Readings Rt.

86099 Spike on 12" Oak 50' Lt 20+15
 8.9 8.9 8.1 7.0 7.7 10.5 10.3 10.3
 100 75 50 22 12 19 36 50
 Bottom Pipe Bottom Pipe

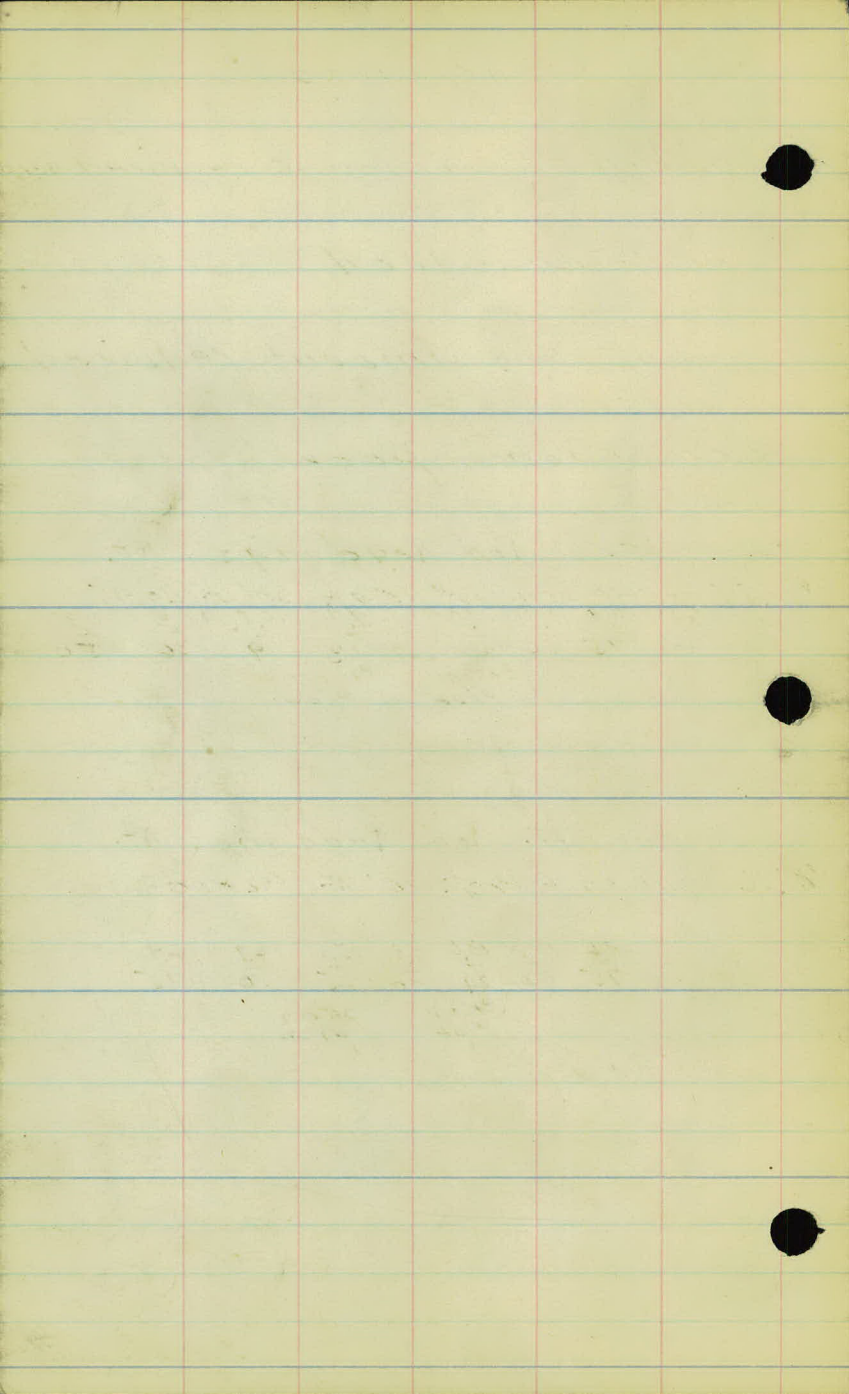
855.7

Lt. Rod Readings Rt.

82736 Nail on F. Post. 16' Rt. 42+10

11.6 12.2 13.6 48 15.3 14.7 14.9
 75 40 21 00 25 50 75
 Bottom Pipe Bottom Pipe

819.4



Proj. 25-55

4+90

F.E.R. P 15" C.M.

X

6+89

F.E.R. YL. P. 2. 15" C.M.

+

2 pc. 12" x 15' imp. remove - poor cond

13+65

F.E.R. P. 12" x 30' form

13+60

X

13+60

12" x 30' C.M. imp. remove X

pl. 13+65 F.E.R. +

14+70 - 17+30 - R.

12 trees Cl. & Gr. 0.05 A. Br. X

16+70 - 18+00 L.

11 trees Cl. & Gr. 0.05 A. Cl. Br. X

18+00 - 19+30 L.

7 trees Cl. & Gr

X

20+70 - 21+50

17 trees Cl. & Gr. X

21+60 - 15" x 35 V.P. imp. form.

Pl. 24" C.M. Culv. Class A. X

24+27 F.E.L. P. 15" C.M.

X

22+50 - L 1 tree. Cl. & Gr. X

Northwestern Telephone Co. - St. Paul X

23+90 F.E.R. No. Culv. reqd. X

23+00 - 23-50 L 0.05 A. Cl. Br.

X

29+76 F.E.R. P. 15" C.M. X

36+00 F.E.L. 12" x 26' C.M. imp

Cond. poor, rem.

P. 15" x 30' C.M. X

38+50 - 39+50 R.

0.05 A, Cl. Br. X

39+50 - 41+00 R.

10 trees Cl. & Gr. X

39+64 15" x 46' V.P. imp, remove.

P. 24" C.M. Class 'A' X

41+50 - 42+50

Cl. Br. 0.05 A. X

Gr. 4 stumps

42+25 F.E.R.

P. 15" C.M. X

43+45 F.E.L.

P. 15" C.M. X

44+45 - 46+30 RYL

0.05 A, Cl. Br. X

47+20 F.E.L.

12" x 24' V.P. imp Cond. OK. X

47+30 - 49+80 R.

8 trees Cl. & Gr. X

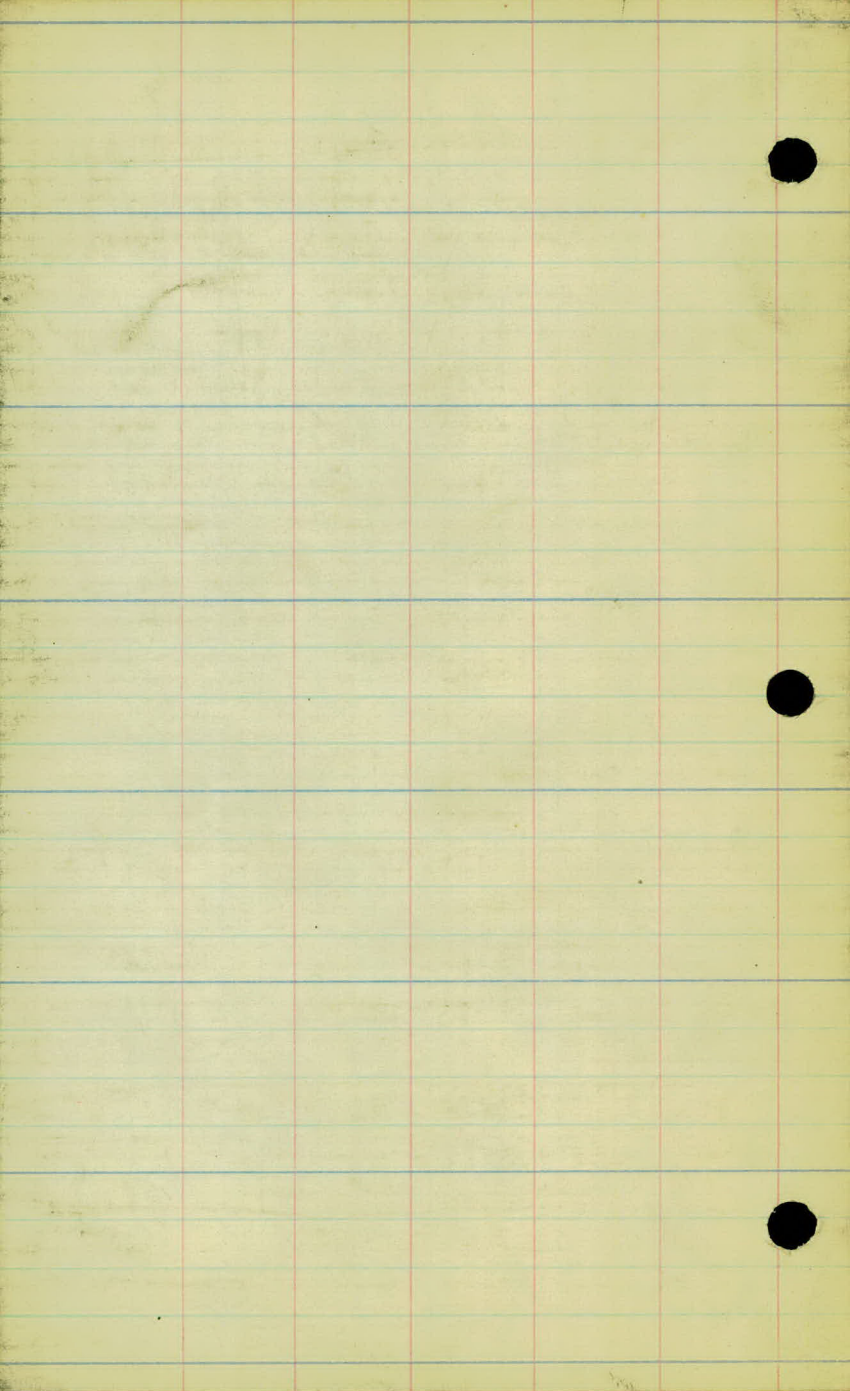
49+95 F.E.L.

P. 15" C.M. X

52+30 P. 24" C.M. Class 'A' X

53+29

12" x 28' C.M. imp. Cond. poor f
Leave imp. & bury it.



Date 9-4-24

Road # 71

Alignment Notes

Lower of two Road

From city limits to S.H. No 3

Sta. 54+89.20 to Sta. 105+00.05

Traverse line

Party

H.L. Weiskusen

H.G. Briggs

R. Pearson

Waits

Sta. Point Lt Δ Rt. Bearing Ext.
N-20°-58'W

69+03.4 P.I. 49°-38' 16'

N-70°-36'W

66+81.85 P.I. 8°-12' 4'

N-62°-24'W

63+83.7 P.I. 28°-10' 20'

S-89°-26'W

55+71.7 P.I. 31°-50' 6'

N-58°-44'W

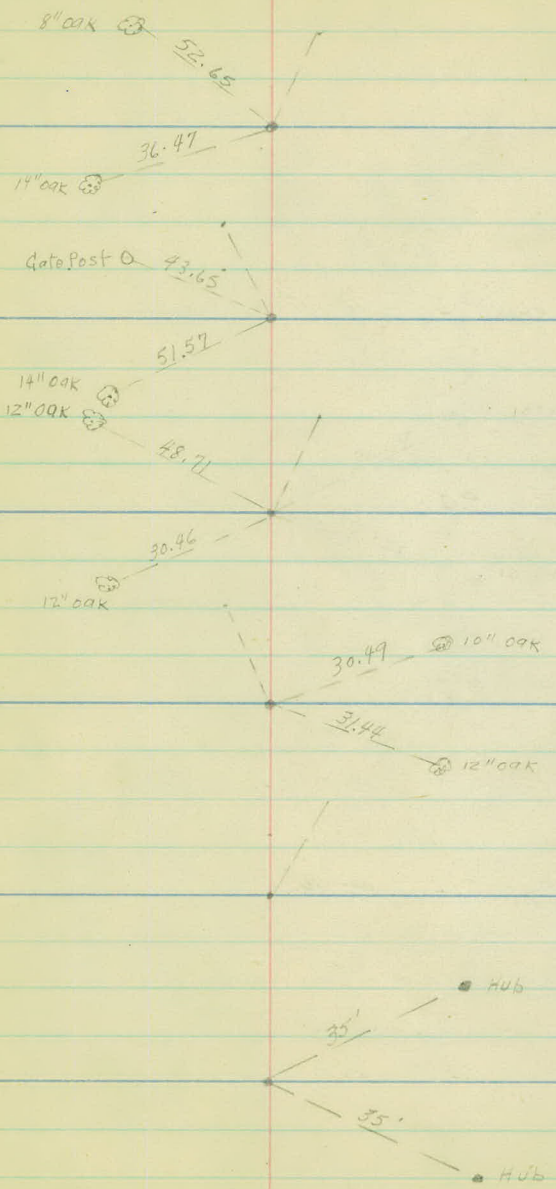
54+89.20 ^{Mont} P.I. 32°-30' 15'

S-88°-46'W

33+54.4 P.O.T

Lt.

Rt.



Sta. Point Lt. Δ Rt. Bearing Ext.

566°30'N

5-66°-20'W

88+24.45 P.I. 21°-12' 10'

S-45°-18'W

85+43.56 P.I. 70°-18' 34'

84+80.5 P.O.T

N-67°-27'W

82+26.50 P.I. 80°-55' 52'

51+44.80 P.I. 37°-22' S-34°-41'W

78+07.0 P.I. 64°-16' 42'

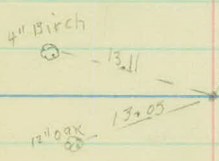
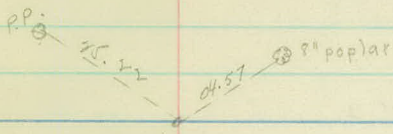
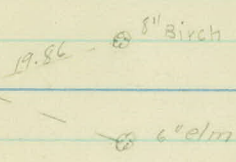
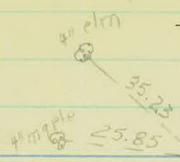
N-81°-03'W

73+43.0 P.I. 60°-05' 47'

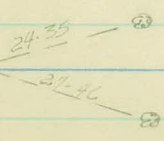
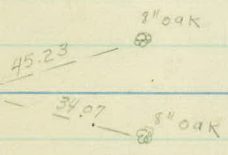
N-20°-58'W

17.

RT.



Road to the Boys Farm



Sta. Point. Lt. Δ Rt. Bearing Ext.

105+09.85 $87^{\circ}-12'$ **1128-57'W**

563-51'W

5-63^o-41'W

101+77.9 P.I. $19^{\circ}-31'$ 9'

583-22'W

5-83^o-12'W

100+53.10 P.I. $10^{\circ}-56'$ 2'

572-26'W

5-72^o-26'W

96+93.0 P.I. $17^{\circ}-56'$ 5'

554-20'W

5-54^o-20'W

95+49.7 P.I. $18^{\circ}-43'$ 6'

573-13'W

5-73^o-03'W

93+86.85 P.I. $6^{\circ}-43'$ 2'

566-20'W

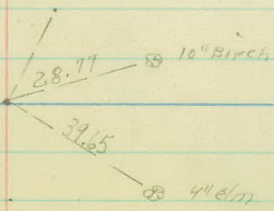
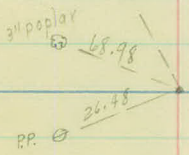
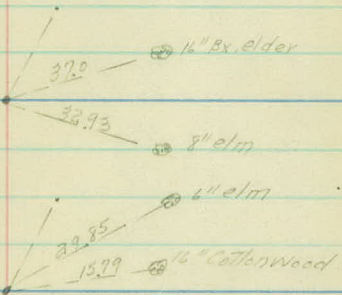
5-66^o-20'W

L.
3" Bx elder

Rf.

Pavement
Point Douglas Road

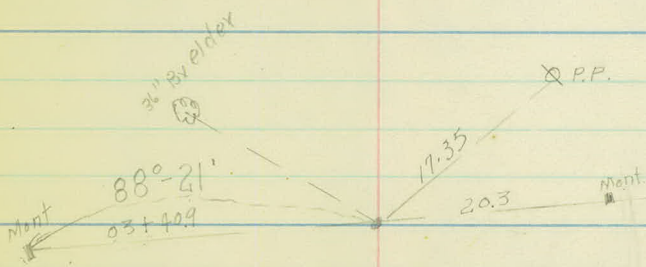
87°-12'

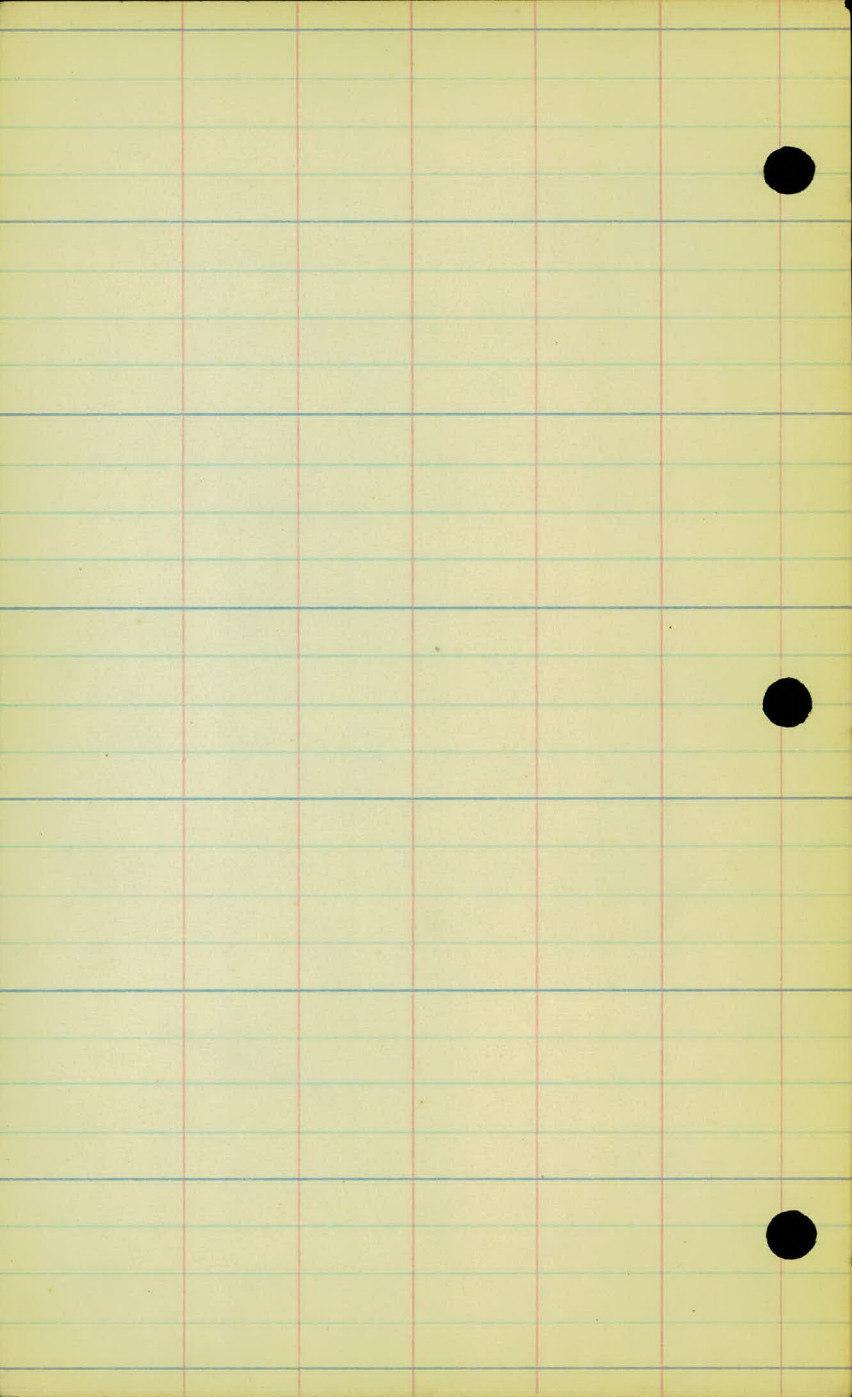


Sto	Point.	Lt.	Δ	Rt	Bearing
-----	--------	-----	---	----	---------

105 + N.S.V

88°-21'





Date - 9-9-24

Road #71

Lower after Road
From city limits to S. H. No. 3
Sta. 54+89.20 to Sta. 105+09.80
artificial Topography

Party

W. Wilson

H. Briggs

R. Pearson

C. White

60

59

58

57

56

55

54+89.2

Note
C-Creek

R-7

R-10

R-11

R-8

R-9'

R-7'

R-8

R-5

R-10

R-6

R-17-3' +11.7 PI

R-3'

R-18

Bishes

Berry

Woods

Woods

66

65

64

63

62

61

60

R-13'

R-6'

R-9'

R-9'

Woods

Woods

+83.7

R-5-R-25
R-11-R-30 +837
PI

R-3

R-17'

R-6

R-13

Woods

Woods

R-9'

R-10

R-9

R-10

72

71

70

69

68

67

66

R-13

R-7

R-7'

R-8

Woods

Woods

R-6'

R-11'

R-2' + 50

R-14' + 50

H.S. R-2' R.

R-8 - R-25

R-15' + 75

R-7

R-7

Woods

Woods

R-6

R-9

+91.85 PI-13-R

+81.55 PI R=2

R-13

R-6

78

77

76

75

74

73

72

R-31 - R-04

R-4 - R-25' + 50

R-11

R-7

R-7'

Woods

Woods

R-13

R-8'

R-12

R-11' - R-33'

Woods

Woods

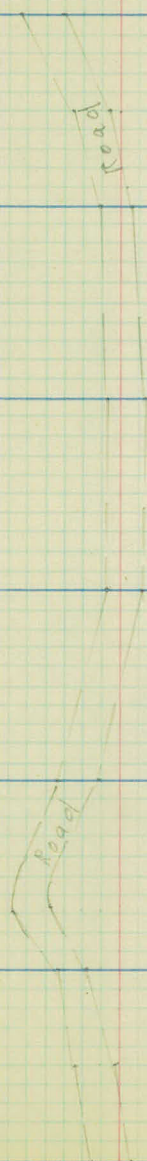
R-13 - R-38 - R-38

R-18 - R-34

R-19 - R-22 - R-22

R-13

R-7'



84

83

82

81

80

79

78

R-3-R-17-50

R-9

R-6

+40-R-7

+40-R-10

Woods

Woods

Bell's Field

R-5-R-19

Road

R-47-R-62 + 265 RJ

R-35-R-63

R-7 + 44.5

R-19 + 44.5

R-7

R-10

R-13

R-7

Woods

Woods

R-14

R-5

+50 R-9-R-27

Road

R-31-R-54

90

89

88

87

86

85

84

+50-C-16

R-2'

R-10' C-31'

R-9'

Woods

CREEK

Woods

R-6' C-23

R-4'

+24.4 RE-R-15-C-40

R-14' C-35

+50-C-18'

R-8'

Woods

Creek

Woods

R-6' -C-27'

R-2-R-18

C-28'

R-26-R-41 ^{PI.} - 245-56

245.66 -C-8
45.

R-11-R-22

C-8'

R-3-R-17

R-9'

R-6' -C-66'

96

95

94

93

92+

91

90

R-8'

R-5' - C-46'

+49-7-R-13'

+497-R-2-C27'

R-8'

R-7' - C 45'

Woods

Woods

Creek

+43-C-100'

R-6

R-8'

R-5' +86.55 PI

R-8' - +86.85 C-38

R-7'

R-7' - C-37'

R-6'

R-8' - C-38

Woods

Woods

Creek

R-9'

R-7' - C-22'

+50-C-16

R-2'

R-10'

102

Bridge 24x15

101

Walls 21" x 6"

100

99

98

97

96

R-12

+77.9 R-15-C-65

R-1'

+77.9-PJ-R-2

R-5'

E Creek +17

R-6'

+53' PJ-L

Woods

+53' PJ-R 7'

R-6'

R-7' C-55

R-6'

R-6' C-110

R-6'

R-6' C-45'-00

Woods

Creek

Woods

+93-PJ R-0

+93 R-12-C-27

R-8

R-5-C-46'

105 + 00

104 + 00

103 + 00

102 + 00

→ To St. Paul

4 Point Douglas Rd - 5-4-13

122 Edge Prov.

197-8 Edge Pavilion

R-7'

R-7'

R-8' - C-103'

Brush

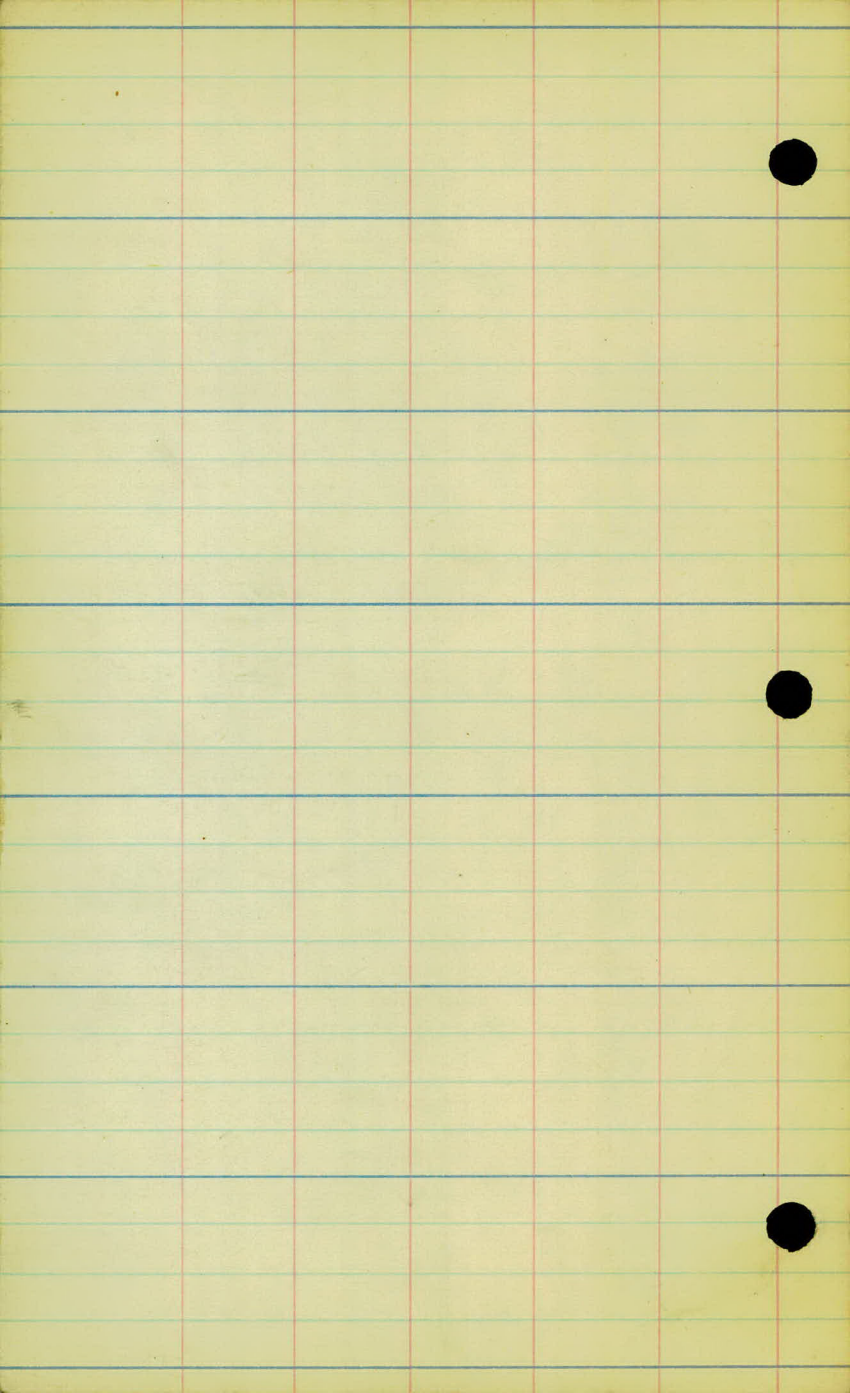
R-7'

Brush

R-12'

CREAK

R-11'



Date 9-6-24

Road #71

Lower after Road

From city limits to S.-H. No. 3

- Sta. 54+89.20 to Sta. 105+09.85

& levels

Party

H. Wilshusen

H. G. Briggs

R. Pearson

G. Waits

579	+	H.I. ✓	-	Elev ✓	4' 6" N.E.
B.M.	4.91	837.46		827.55	
54+89.20			3.7	828.8	4'
55+00			4.0	828.1	4'
55+71.7			5.0	827.5	4'
56+00			5.3	827.2	3'
57+00			5.9	826.6	4'
58+00			6.0	826.5	4'
T.P.	3.92	831.10 ✓	5.28	827.18	
59+00			4.1	827.0	4'
450			4.2	826.9	4'
60+00			3.7	827.4	4'
450			3.0	828.1	4'
61+00			3.0	828.1	4'
450			3.2	827.9	4'
T.P.	2.92	830.52 ✓	3.50	827.60	

827.55 Spike on 12" oak 30' Rt. 54+89

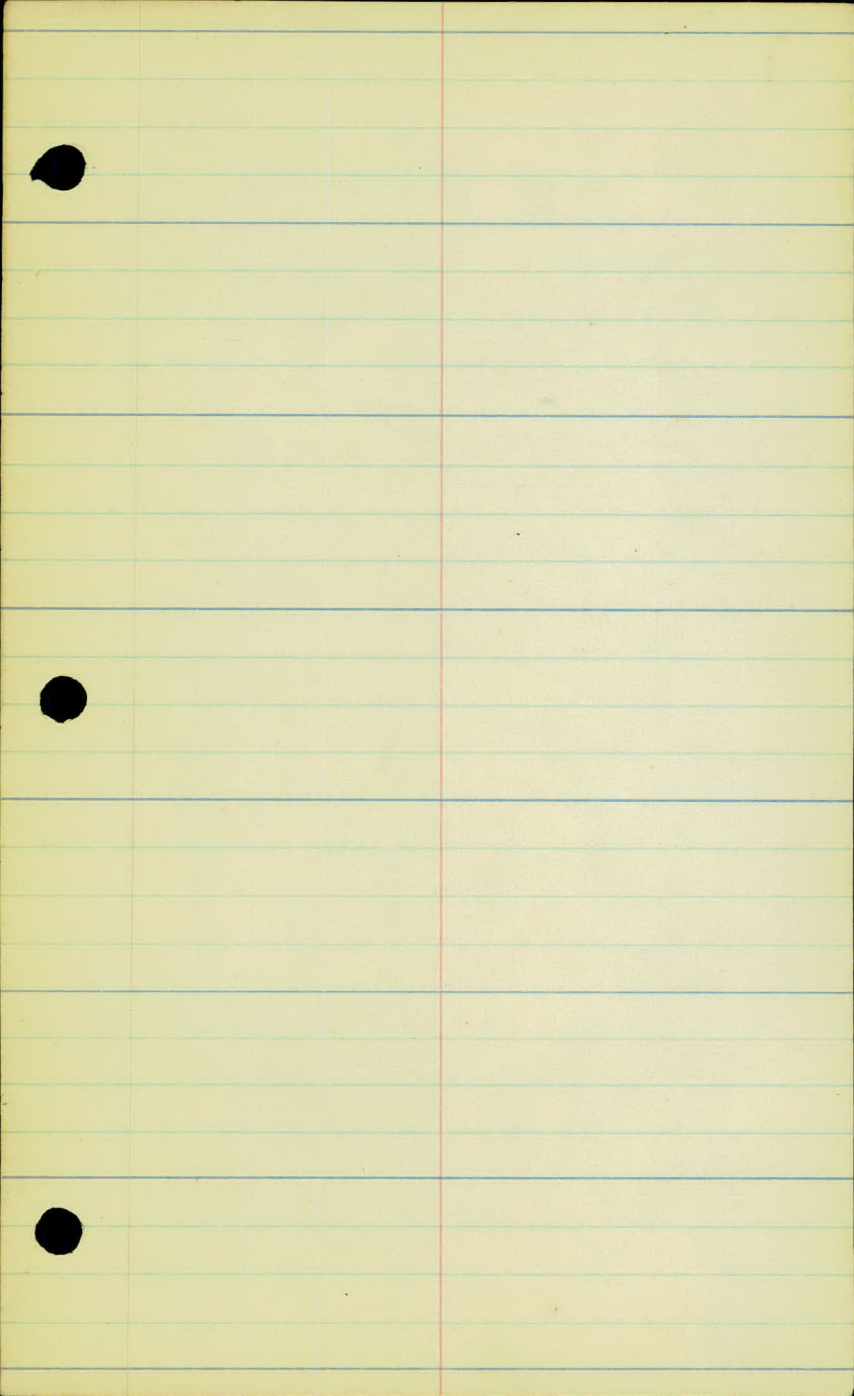
Note

Readings taken
in the \perp of the
present old road
and off set distances
given from the
traverse line.

Sta.		H		Elev.	L.S. & T.P.
		831.52			
62+00			2.2	828.3	4'
+63			1.6	78.9	6'
63+00			2.9	276	8'
+50			5.5	250	13'
63+83.7	P.I.		6.7	238	70'
64+00			7.2	23.3	16'
+50			9.2	21.3	4'
65+00			12.1	18.4	4'
T.P.	1.22	817.71	11.83	815.69	
+50			6.2	13.7	3'
66+00			10.7	09.2	4'
T.P.	1.29	809.00	12.20	807.71	
+50			4.5	04.5	3'
13 M.			344		
66+81.85	P.I.		6.7	02.3	4'
67+00			7.9	01.1	3'

80556 Spike on P. Pole 8' Rt. 66+52

Sta	+	HI	-	Elev.	±
		809.00			
+50			10.3	798.7	±
68+00			17.3	96.7	±
T.P.	1.43	798.68	11.95	797.75	
+50			3.6	95.1	±
69+00			5.8	92.9	16'
69+03.4	PI		6.1	92.6	18'
+50			8.0	90.7	5.1
70+00			10.7	88.0	2.0'
T.P.	0.57	787.44	11.81	786.87	
+50			3.0	84.4	±
71+00			7.2	80.2	±
+50			12.0	75.4	±
T.P.	2.14	776.66	11.92	775.52	
72+00			5.8	770.9	2.0'
+50			10.2	66.5	7.0'
T.P.	0.80	765.68	11.78	764.98	
73+00			3.5	762.22	2.6'



374	+	45.	-	Flav.	11.4 104
		76568	✓	75850	
73+00	PI		7.2		29'
74+00			11.7	54.0	44'
B.M.	0.18	758.35	7.51	758.17	
+50			8.1	750.3	7'
75+00			11.2	47.2	4
T.P.	0.73	748.33	10.75	747.60	
+50			3.4	744.9	2'
76+00			5.1	43.2	3'
+50			6.8	41.5	2'
77+00			7.3	39.0	3'
+50			12.4	35.9	16'
T.P.	1.53	737.65	12.21	736.12	
78+00			4.1	733.6	35'
+07.0	P.I.		4.5	733.2	42'
+50			5.8	31.9	22'
79+00			8.0	29.7	4'

758.17 Spike on P.P. 35' Lt. 73+60

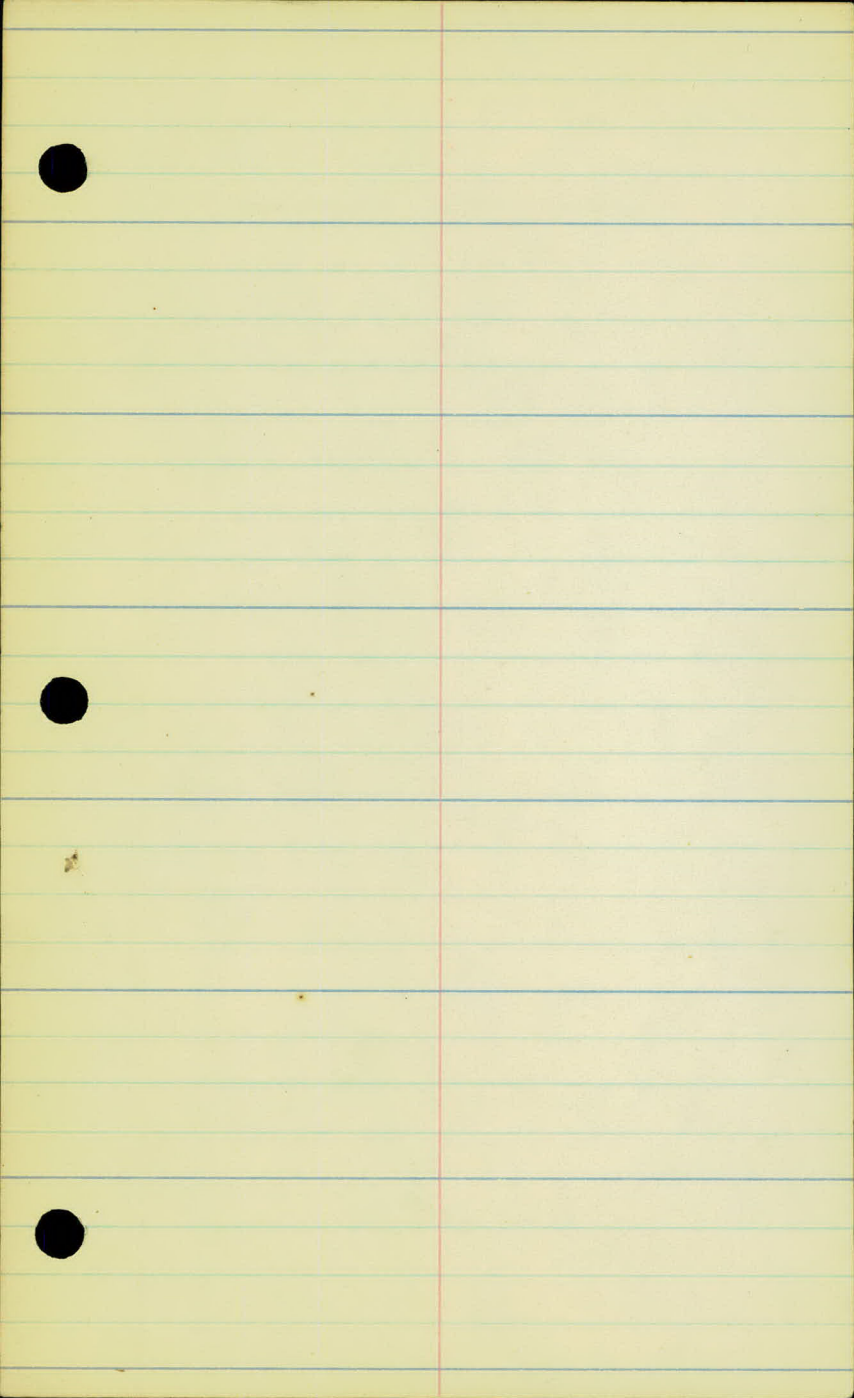
Sta.	+	H.I.	-	Elev.	H. & H.
		737.65 ✓			
T.P.	1.43	727.68 ✓	11.40	716.25 ✓	
+50			2.6	725.1 ✓	±
80+00			8.3	19.4 ✓	±
T.P.	0.80	716.46 ✓	12.02	715.66 ✓	
+50			3.7	717.80 ✓	±
81+00			8.7	07.8 ✓	±
B.M.	1.42	707.44 ✓	10.44	706.02 ✓	
+50			4.2	03.2 ✓	10'
82+00			8.5	698.9 ✓	37'
82+26.5			7.6	97.8 ✓	52'
+50			10.2	97.20 ✓	37'
T.P.	0.34	696.32 ✓	11.46	695.98 ✓	
83+00			2.0	694.30 ✓	10'
84+50			5.2	.911 ✓	±
84+00			8.8	875 ✓	±
+50			12.2	84.1 ✓	2'
T.P.	1.50	685.51 ✓	12.31	684.01 ✓	

Spine on R. Polo 11' Lt 91445

Sta	+ P.I.	H.I.	-	Elev.	H & R
		685.51 ✓			
85+00			3.8	681.7	15'
+43.56	P.I.		5.8	79.7	34'
86+00			8.0	77.5	8'
+50			10.4	75.1	±
87+00			12.4	73.1	2'
T.P.	0.60	673.82 ✓	12.29	673.22	
+50			2.2	671.6	±
88+00			3.9	69.9	5'
+24.45	P.I.		4.7	69.1	
+50			5.4	68.4	4'
B.M.			5.45	168.37	
89+00			6.9	66.9	±
+50			8.5	65.3	±
90+00			11.7	62.1	2'

66837 Spike on P Pole 12' Lt. 88+75

Sta	+	H.I	-	Elev. H	±
		673.82 ✓			
T.P.	0.24	661.82 ✓	13.24	661.58	
+50			1.9	659.9	±
91+00			3.5	58.3	±
+50			4.7	57.1	±
92+00			5.8	56.0	±
+50			6.9	54.9	±
93+00			7.5	54.0	±
+50			8.2	53.6	±
86.85	P.I.		8.8	53.0	
94+00			9.1	52.7	±
T.P.	3.00	655.74 ✓	9.08	652.74	2'
+50			3.6	652.10	±
95+00			5.4	50.3	±
+497	P.I.		7.1	486	5'
96+00			10.6	45.1	2'



Sta		H.I.	-	Elev.	H. ± ft.
		655.74			
T.P.	0.65	644.14	14.28	643.46	
+50			1.8	642.30	±
+93.0	PI.		3.3	40.8	4'
97+00			3.5	40.6	4'
+50			5.1	39.0	±
98+00			7.3	36.8	±
+50			9.9	34.2	±
T.P.	0.36	637.96	11.54	637.60	
99+00			2.1	630.9	±
+50			4.9	28.1	±
100+00			7.2	25.8	±
+53.0	PI.		8.9	24.1	2'
101			9.8	23.2	
B.M.			9.99	623.17	

3 PIKE on P. Pole 14' at 101 + 00

Stg.	+	+I	-	Elev.	H. of Pt.
		632.96			
T.P.	3.75	626.22	10.49	627.47	
+50			3.8	627.40	2'
+77.9	P.I.		3.9	22.3	6'
102+00			3.9	22.3	6'
+50			4.4	21.8	3'
103+00			4.9	21.3	±
+50			5.7	20.5	±
104+00			7.4	18.8	±
+30			8.3	17.9	±
+50			9.5	16.7	±
B.M.	2.54	619.29	9.47	616.75	
+97.8			5.7	613.6	±
105+09.85			5.7	13.6	

Lt.

±

Rt.

616.75 Spike on P. Pole. 11' Lt 104 + 57
Edge of Pavement.

± of Pavement

Sta.	+	HI	-	Elev.
		619.29		
			ht of ξ	
0+50			6.2	613.10
1+00			6.7	12.6
1+50			7.2	12.1
2+00			7.8	11.5
			ht. of ξ	
0+50			5.2	614.10
1+00			4.6	14.7
1+50			4.1	15.2
2+00			3.7	15.6

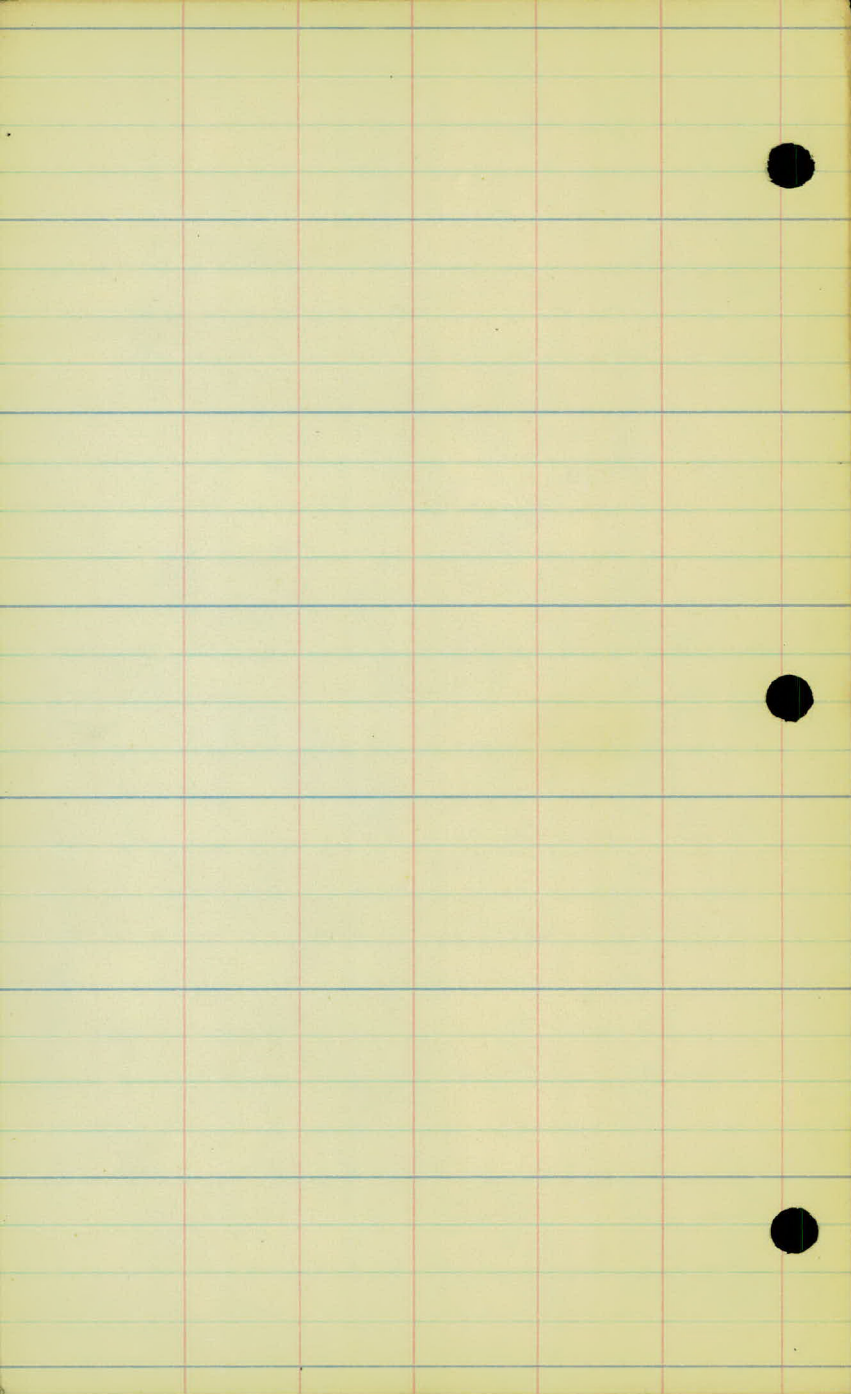
Note ---

Top of Pavement readings

Point Douglas Road

State Highway No 3

Lt and Rt. of ϕ



Date - 9-9-24

Road #71

Lower Cotton Road

Levels

Boys Farm Road

From Sta ^{= 0+00} 91+44.8 to Sta. 2+00

Party

H.L. Witherson

H.G. Briggs

R. Pearson

G. Waits

Sto. + HE - Elev.

B. M.

10.19

71621 ✓

Lt. of Φ

= 0 + 00
81 + 448

11.8 704.40

+50

9.5 06.7

1+00

6.3 09.9

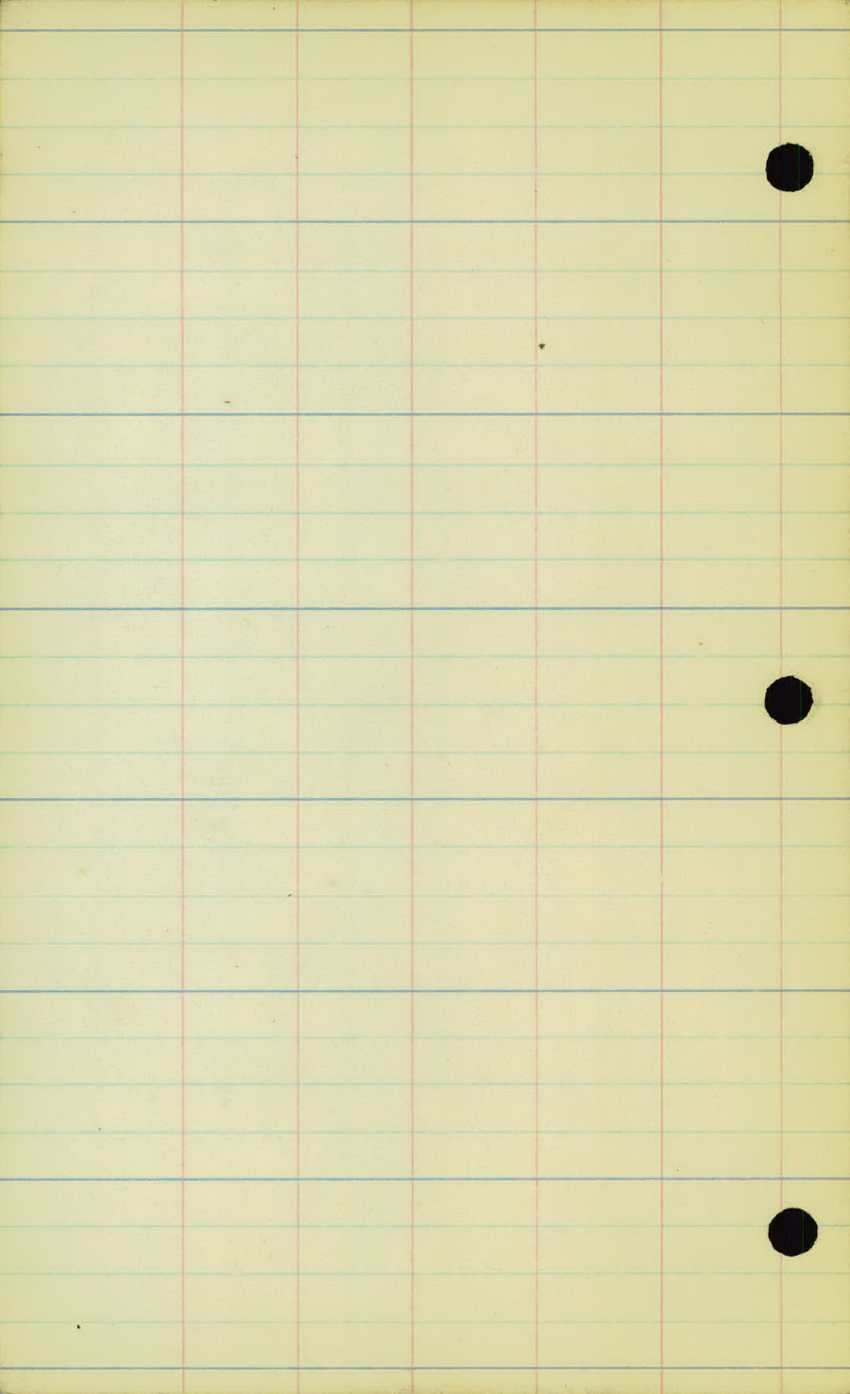
+50

3.9 12.3

2+00

1.7 14.5

706.02 Spike on R Pole 11' Lt. S1+45



Date 9-9-24

Road # 71

Lower of the Road

From City limits to S.H. No 3
Sta. 54+89.20 to 105+09.25
Check levels

Party

H. W. W. Shusen

H. C. Briggs

R. P. Pearson

G. Waits

Sta	+	H.I.	-	Elev.
B.M.	950	676.75		616.75
T.P.	10.43	633.50	3.18	643.07
B.M.			10.33	623.17
T.P.	11.07	644.27	0.30	633.20
T.P.	11.41	655.49	0.19	644.08
T.P.	964	663.71	1.42	654.07
T.P.	10.50	673.90	0.31	663.40
B.M.			5.57	668.33
T.P.	11.21	684.88	0.23	673.67
T.P.	11.24	695.91	0.21	684.67
T.P.	12.19	707.57	0.53	695.38
B.M.			.161	705.96
T.P.	12.31	719.30	0.58	706.99
T.P.	11.53	730.41	0.42	718.88
T.P.	9.96	739.63	0.74	729.67
T.P.	11.64	751.11	0.16	739.87
T.P.	12.23	762.80	0.54	750.57
B.M.			4.73	758.07
T.P.	11.90	773.82	0.88	761.92
T.P.	11.80	784.68	0.94	772.88
T.P.	11.93	796.22	0.39	784.29
T.P.	11.38	807.11	0.49	795.73
B.M.			1.67	805.44
T.P.	11.98	818.28	0.81	806.30
T.P.	11.18	829.16	0.30	817.98

9/9/24

416.75 Spike on P. Pole 11' Lt. 104+57

623.17 Spike on P. Pole. 14' Lt. 101+00

668.37 Spike on P. Pole 12' Lt. 88+75

706.02 Spike on P.P. 11' Lt. 81+45

758.17 Spike on P. Pole 35' Lt. 73+60

805.56 Spike on P.P. 8' Rt. 66+52

9/9-24

82755 Spike on 12" oak 30' Rt. 54+89

v2480