

VADNAIS BLVD.

From

RICE ST

To

Centerville Rd.

VADNAIS BLVD

From Rice St. to the  
Centerville Road.

4/58

Refer to Road Map survey  
of 1928 with certain revisions  
as per instructions.



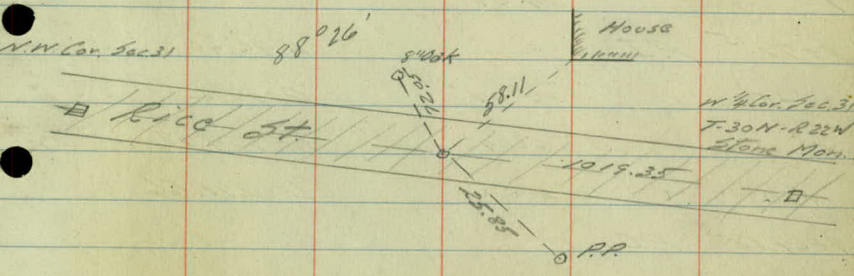
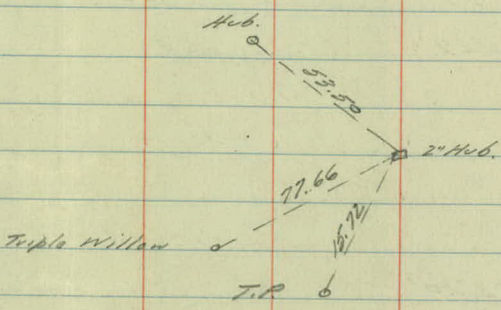
Angle.

Sta. Point Left. Right

|                         |      |       |                       |                 |
|-------------------------|------|-------|-----------------------|-----------------|
| 6+27.14 <sup>17</sup> ✓ | P.T. | 27.31 | 18°01 $\frac{1}{2}$ ' |                 |
| 6+00                    |      |       | 14°54'                |                 |
| 5+52° <sup>1</sup>      | P.I. |       |                       | $\Delta$ 36°03' |
| +50                     |      |       | 9°09'                 | D=23°R'         |
| 5+00                    |      | 50.25 | 3°24'                 | T=81.60✓        |
| 4+70.4 <sup>1</sup>     | P.C. | 29.78 | 0°00'                 | L=156.74✓       |
|                         |      |       |                       | R=250.766       |

0+00 - Drilled Hole in Pavement

10 m. Tangents



Angle.

Sta. Point Left Right

17+12.04 ✓ P.T. 3°36'

17 3°29'

+50 2°59'

16 2°29'

+50 1°59'

15+32.3 ✓ P.I. Δ 7°12'

15 1°29'

D=2°L

+50 0°59'

T=180.26 ✓

14+00 0°29'

L=360.00 ✓

13+52.04 ✓ P.C.

R=2805.151

10+15.84 ✓ P.T. 23°20'

15.89

10 22°04'

+50 50.12 18°04'

9 14°04'

8+79.15 P.I. Δ 46°40'

+50 10°04'

D=16°L

8 6°04'

T=154.97 ✓

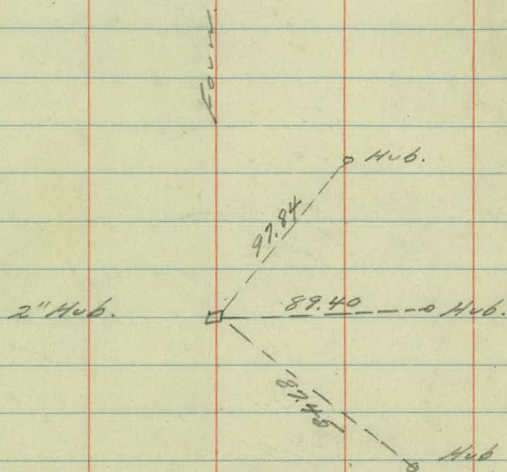
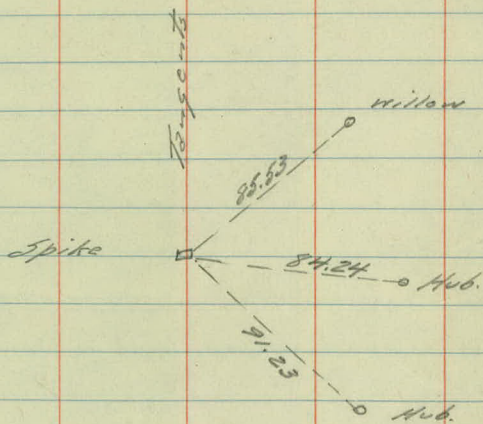
+50 2°04'

L=291.66 ✓

7+24.18 ✓ 25.90 P.C.

R=359.261





Angle.

Sta. Point Left Right

73.15

99.9

24+26.85<sup>85</sup> P.T. 26.98 16°43'

24+00 14°02'

+50 50.19 9°02'

23+46.15 P.T.  $\Delta$  33°26' R.

23 4°02' D=20°00'

22+59.69<sup>69</sup> P.C. 40.48 0°00' T=86.46<sup>✓</sup>L=167.16<sup>✓</sup>

R=287.882

21+02.67

21+02.33<sup>✓</sup> P.T. 6°22'4"

21 6°14'

+50 50.01 5°14'

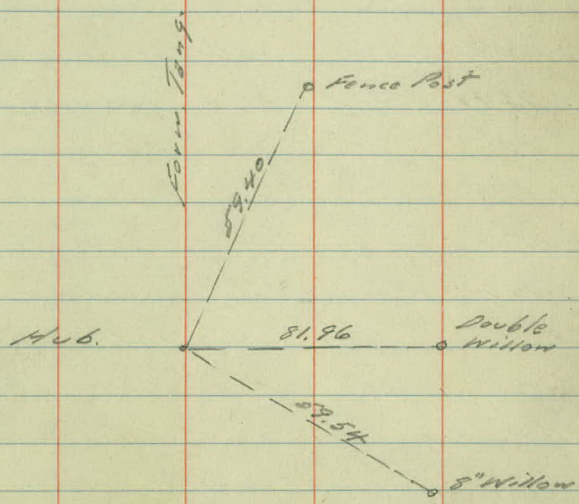
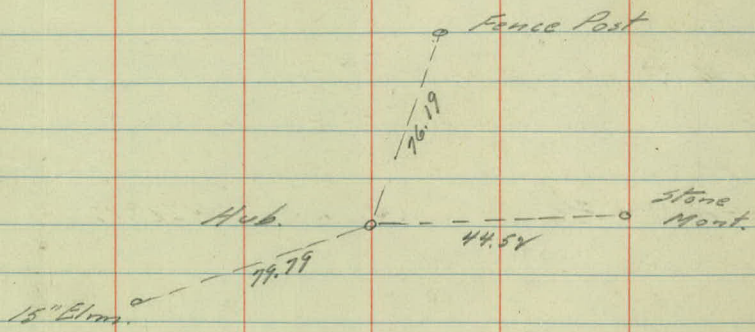
20 4°14'

+50 3°14'

19+48.63 P.T.  $\Delta$  12°45' Lt.

19 2°14' D=4°

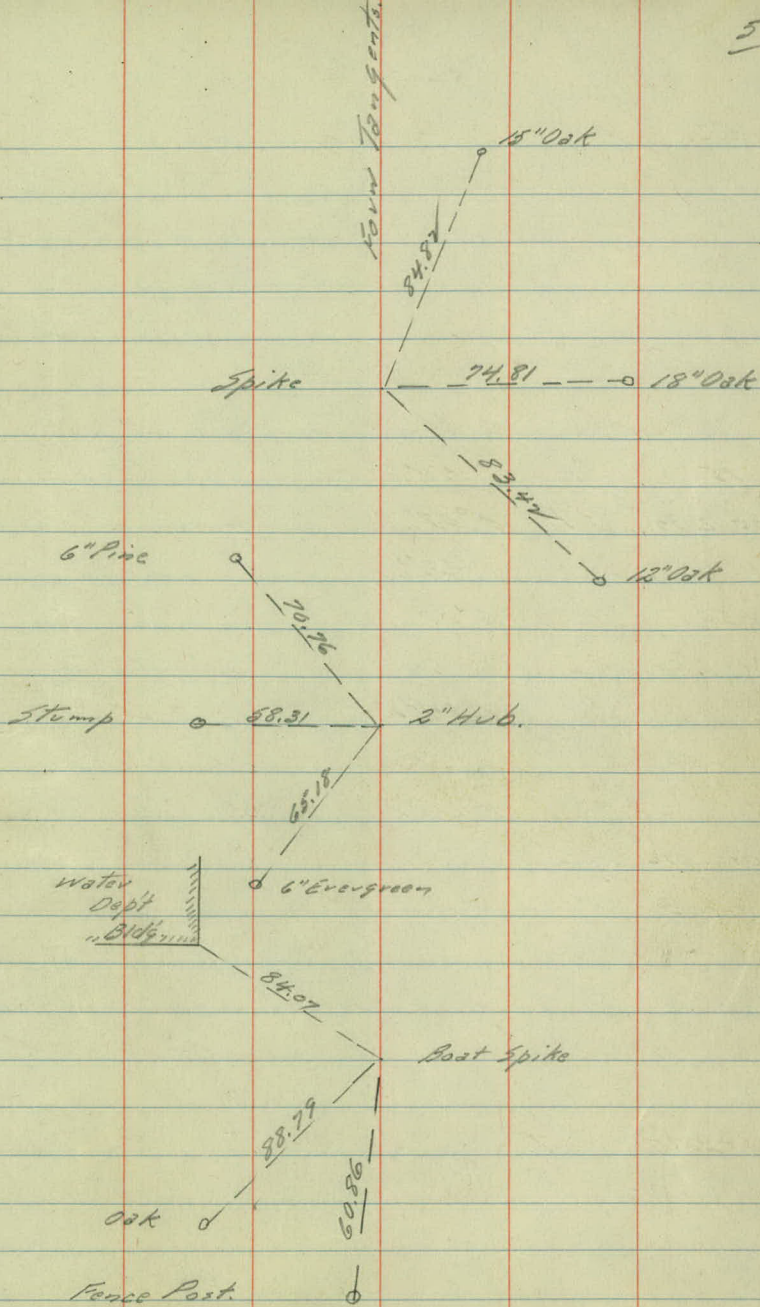
+50 1°14' T=160.05<sup>✓</sup>18 0°14' L=318.75<sup>✓</sup>17+88.58<sup>✓</sup> 11.42 P.C. 0°00' L=1432.52





Angle

| Sta.       | Point                                                   | Left         | Right        |
|------------|---------------------------------------------------------|--------------|--------------|
| 37+59.54 ✓ | P.T.                                                    | 9°58'        |              |
| +50        |                                                         | 9°35'        |              |
| 37         |                                                         | 7°35'        |              |
| +50        |                                                         | 5°35'        |              |
| 36+26.33   | P.I. = (37+17.9 Road Map.)                              | Δ 19°56' Lt. |              |
| 36         |                                                         | 3°35'        | D = 8°00'    |
| +50        |                                                         | 1°35'        | T = 125.96 ✓ |
| 35+10.37 ✓ | P.C.                                                    |              | L = 249.17 ✓ |
|            |                                                         |              | R = 716.793  |
| 31+94.0    | P.O.T. = <u>P.I. 32+79.10 Road Map (See Survey Map)</u> |              |              |
| 29+73.44 ✓ | P.T.                                                    | 23°48 1/2'   |              |
| +50        |                                                         | 22°10'       |              |
| 29         |                                                         | 18°40'       |              |
| +50        |                                                         | 15°10'       |              |
| 28+14.34   | P.I.                                                    |              | Δ 47°37' Rt. |
| 28         |                                                         | 11°40'       | D = 14°      |
| +50        |                                                         | 8°10'        | T = 181.04 ✓ |
| 27         |                                                         | 4°40'        | L = 340.12 ✓ |
| +50        |                                                         | 1°10'        | R = 410.311  |
| 26+33.30 ✓ | P.C.                                                    | 0°00'        |              |



Angle.

Sta. Point Left Right

43+42.34 P.T. 9°53'

43 8°24'

+50 6°39'

42+02.66 P.I. 19°46'

$\Delta 19°46'$

42 4°54'

$D = 7° Lt.$

+50 3°09'

$T = 142.70 \checkmark$

41 1°24'

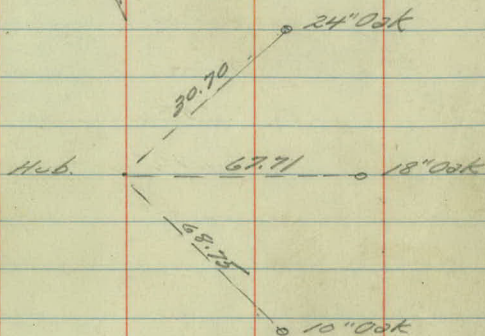
$L = 282.38 \checkmark$

40+59.96 P.C.

$R = 819.041$

38+38.52 P.O.T.

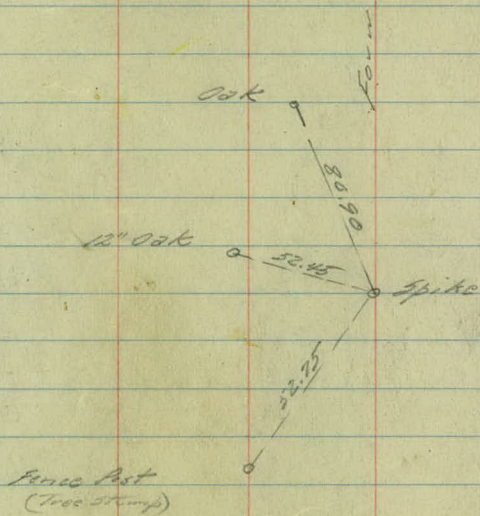
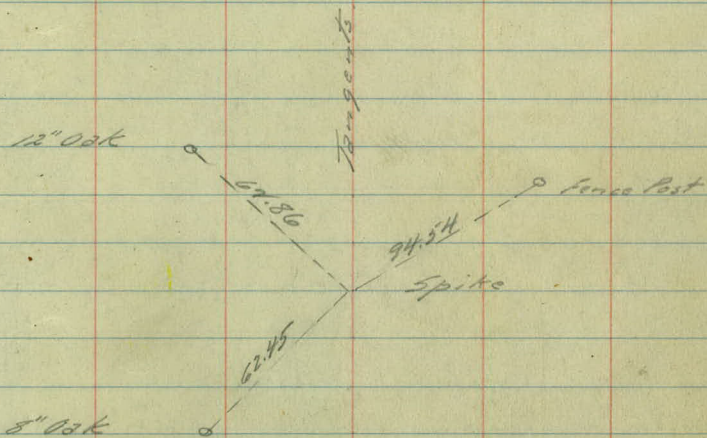
For. Tang.





# Angle:

| Sta.          | Point | Left                     | Right             |
|---------------|-------|--------------------------|-------------------|
| ✓<br>49+57.72 | P.T.  | 4°26'                    |                   |
| +50           |       | 4°14 $\frac{1}{4}$ '     |                   |
| 49            |       | 2°59 $\frac{1}{4}$ '     |                   |
| 48+69.26      | P.I.  | 8°52' = (50+13.624/1940) | $\Delta$ 8°52' ✓  |
| +50           |       | 1°44 $\frac{1}{2}$ '     | $D$ = 5°00' ✓     |
| 48            |       | 0°29 $\frac{1}{4}$ '     | $T$ = 88.87 ✓     |
| ✓<br>47+80.39 | P.C.  |                          | $L$ = 177.33 ✓    |
| 70.63         |       |                          | $R$ = 1146.258 .. |
| 976           |       |                          |                   |
| ✓<br>47+72.63 | P.T.  | 19°11 $\frac{1}{4}$ '    |                   |
| +50           |       | 17°50'                   |                   |
| 47            |       | 14°50'                   |                   |
| +50           |       | 11°50'                   | $\Delta$ 38°23' R |
| 46+119.27     | P.I.  | 38°23'                   | $D$ = 12°00' ✓    |
| 46            |       | 8°50'                    | $T$ = 166.50 ✓    |
| +50           |       | 5°50'                    | $L$ = 319.86 ✓    |
| 45            |       | 2°50'                    | $R$ = 478.347 ✓   |
| ✓<br>44+52.77 | P.C.  |                          |                   |

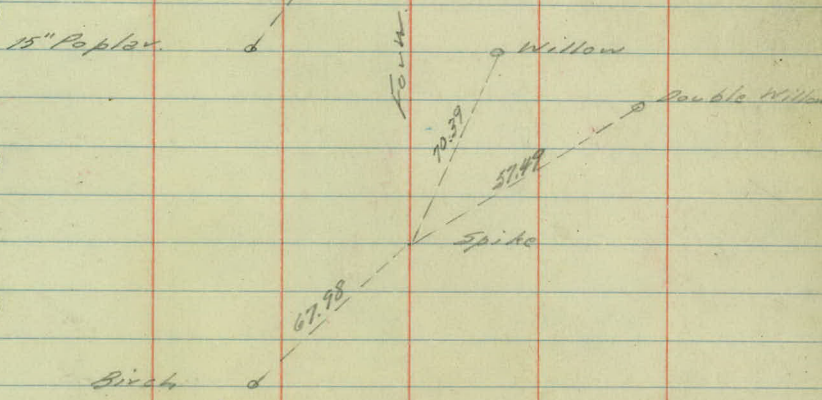
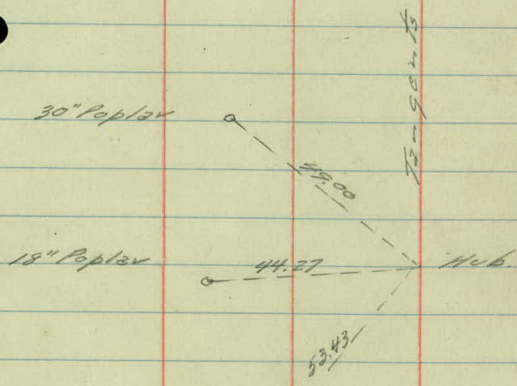
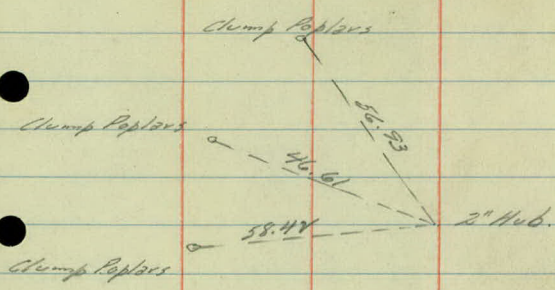


# Angle.

| Sta.                     | Point | Left        | Right        |
|--------------------------|-------|-------------|--------------|
| 58+86.79 ✓               | P.T.  | 26°39' 1/4" |              |
| +75                      |       | 20°33' 1/4" |              |
| 58+55.05                 | P.I.  | 53°19'      | Δ 53°19'     |
| +50                      |       | 13°33' 1/2" | D = 56°41'   |
| +25                      |       | 6°33' 1/4"  | T = 53.47 ✓  |
| 58+01.58 ✓               | P.C.  |             | L = 95.21 ✓  |
| 57+36.18 ✓               | P.T.  | 14°9' 1/4"  |              |
| 57                       |       | 9°49'       |              |
| 56+78.85                 | P.I.  | 28°18'      | Δ 28°18' Rt. |
| (P.I. 58+22 = Road Stop) |       |             | D = 34°      |
| +50                      |       | 3°49'       | T = 60.66 ✓  |
| 56+18.19 ✓               | P.C.  |             | L = 117.99 ✓ |
| 53+15.76 ✓               | P.T.  | 5°17' 1/4"  |              |
| 53                       |       | 4°49'       |              |
| +50                      |       | 3°19'       |              |
| 52+27.86                 | P.I.  | 10°35'      | Δ 10°35'     |
| 52                       |       | 1°49'       | D = 6°       |
| +50                      |       | 0°19'       | T = 88.49 ✓  |
| 51+27.37                 | P.C.  |             | L = 176.39 ✓ |

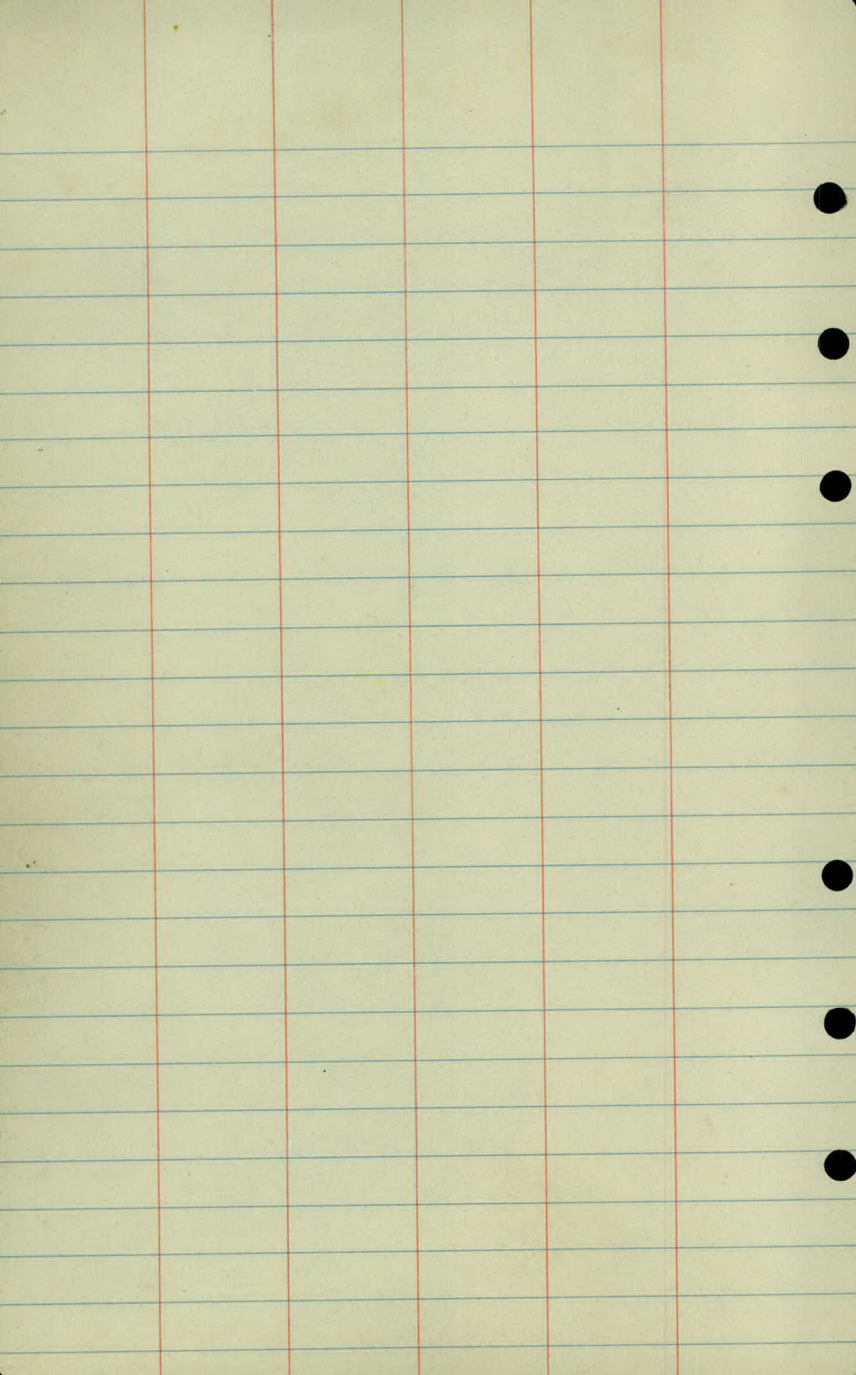
See Pages 40 To 50 For New





Alignment From Here On





2  
Vadso's Blvd.

Rice to Edgerton. 4/38

Note: As we have found several  
pts. of the original survey no  
additional section lines are made.

6.

Black Top.

2

5 9.5

5

8 8

4

8 7

3

9 9

2

9 10

1

9 10

0



+38 T.P. 26'

Lowland wet

Lowland - wet

+67 T.P. 16'

+67 Box Gd. Rl. 11'

+42-18"x22" C.M. 21.5

+86 Box Gd. Rl. 10.5

Hillside

Hillside

+61 Rd. Sgn. 19'

+55-12" Box 22'

+33-15" Box 22'

+08 T.P. 18.5

+38-10" Oak 43'

+90 Dm. 1 1/2 S.E.

+53 T.P. 20'

+48 Box Sgn. 18'

43



Chick wire fencing  
Chicken yard.



Chicken Coop

Privy +06 Privy



46.5

45.5

38



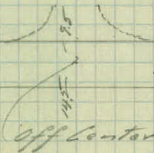
Dm. 1 1/2 S.E.

35

+44 Dwelling  
+30-10" Oak 29'

Rice St.

24' Conc. Pdv.





Black Top  
2  
11 8

14

13

9 8.5

12

8 8.5

11

8.5 8.5

10

12.5 5

9

14.5 3

8

13 6

7

9 6

100

125 Popin Bush

+20 T.P. 21°  
12100 Rd. Sep. 18'

+43 T.P. 23'

Low - not Adjacent Lake Vadnois

+69 T.P. 21'

Low - not Adjacent Lake Vadnois

+100 T.P. 16'  
6284 End. G.R. 11. 10'

102 End. G.R. 12'

21

Black Top

4

16 3

20

15 4

19

13 6.5

18

10 7

17

10 8

16

10 7

15

9.5 8

14



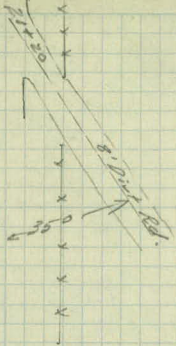
+68 Sec. 16, 28'

+35 End 16, 28'

+49-6" Willow 24'

+31 Reg. Fence 28'

+78 T.P. 22'



Lake Williams

28' } +10  
Scattered Small Willows

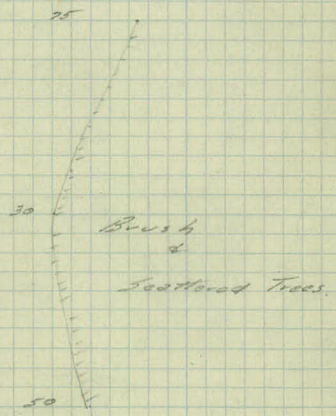
28' } +63      +63 Rd. 14'

+81-24" x 88' 17-12" x 6' Conc. H.W.  
+72 T.P. 18'



Low - Apparent

+88 T.P. 16'



+84 T.P. 22'

25



28 Black Top.  
46-27 2

450 25-8

27 14 2

26 10 6

25 8. 6

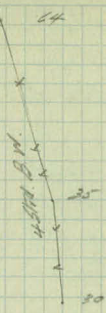
24 7.9  
65.50  
PI. 23+46.15 44.52 Stone Man.  
45.0  
23 12.6

22 19 1

21

Scattered  
Trees

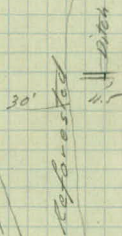
+47 Begin Fc.



Reforested

Reforested

24+00 - Stone Spillway  
12' x 3'  
Water Road  
to water works



Reforested

Fc. 56'

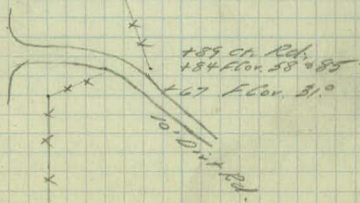
130 F.C. 32'

Rgh. Land  
in grass

+85



21+30



35

<sup>2</sup>  
Blicktop  
11 9

34

9 9

33

9 10

32

21 0

31

65 - 40

30

114 - 94

150

121 - 98

29

102 - 84

28



14

Refers To

H.B.W. - wood ports @ 12.

4 B. W. - wood post 13'

referred

 $+64 = 15^{\circ} 02' 27''$ 
$$+ 94 = 24'' \text{ or } 17'$$
$$+30 = 24^{\circ}02' \pm 5'$$

Referred

Refers to d

Block 10p.  
2  
2 17

41 2-23

40 20-39

39 27-48

38 18-40

37 1-23

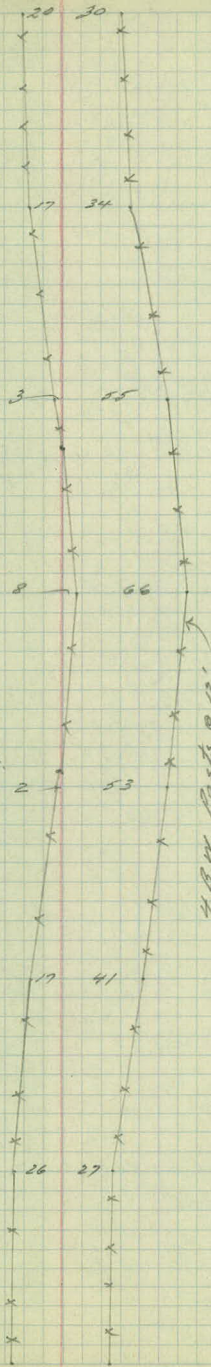
36 10 10

35

Reforced Top

108 P.C. 12'

4 B.W. Posts @ 12'



4 B.W. Posts @ 12'

Reforced



49

Blacktop.  
2  
14 50

48

17 3

47

29-7

450

43-21

46

63-41

450

28-55

45

20-45

450

47-19

44

19 2

450

4 17

43

0 -18

42

100 ft  
100 ft

Oak - Birch & Mich. Trees.

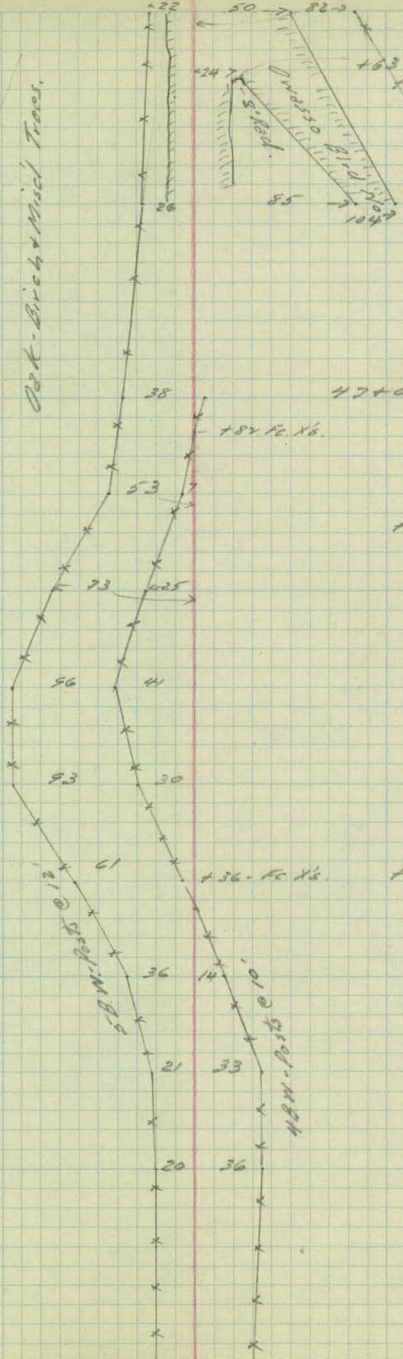
+50  
+40 Rd Syn. 17

+50  
+45-15" Oak 35'

+50

+50

Reforested



Reforested

26

Close Top  
2 22For Shoulders  
refer to X-Sec.

55

7 13

For Lake Shore  
refer to X-Sec.

54

9 8

53

13 10

52

11 12

51

9 10

50

11 20

150

13 34

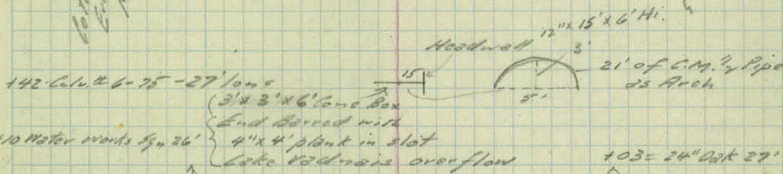
49

14 50



Cottonwood,  
Corymbus &  
Willow Trees.

Conifer  
Cottonwood Millions



Oaks, Small Evergreens  
& Maple Trees.

+38 End Fc. 34'  
+32 = 10' Dirt Road  
+15 = 14' from Gate.

104 End Fc. 29'

Cottonwood Oaks - Birch & Maple Trees.



Oak - Willow - Birch & Maple Trees.

Re-forested.

Block 104  
E

+176.80 E.C.

11 7

+150

13 6

58

8 9

57

0-24

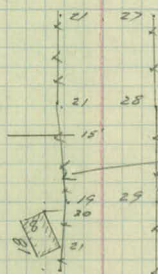
56

150

+33 Shovel Ditch 18" x 24"

+77 Shed - corr. 21'  
+66 Begin Fence 21'

Millions  
to  
Cottonwoods



+47 T.P. 19'

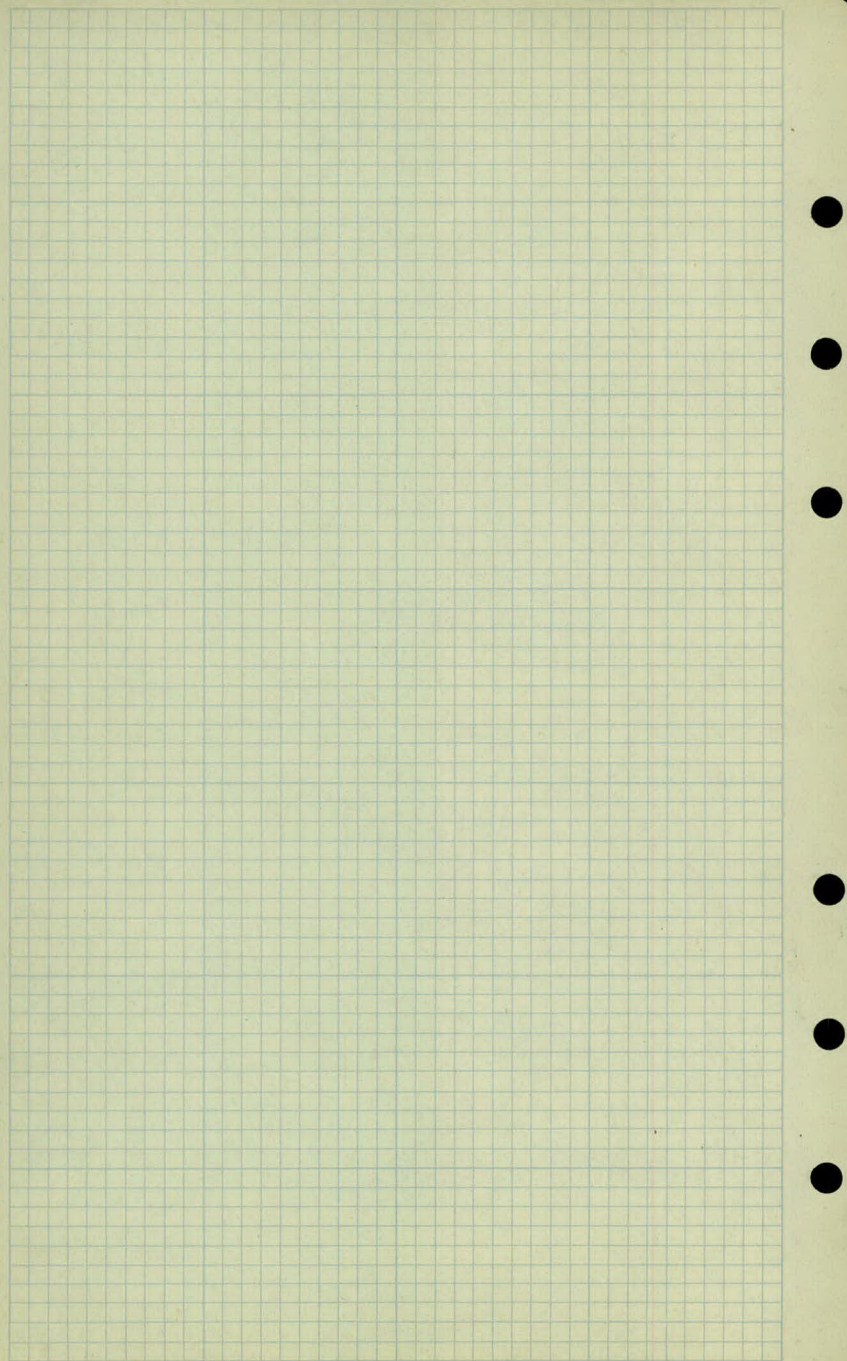
Fencing Rt. & Lt. 15'  
Ornamental 100' 5'  
high, woven wire mesh  
iron posts @ 8'

B.W. Fence

+34 Begin Fc. 28'

Down wet  
toward millions





Kadnais Blvd.

Bench Levels

4/14/38

| Sta. | +     | -      | -     | Elev.  |
|------|-------|--------|-------|--------|
| B.M. | 4.57  | 929.70 |       | 925.13 |
| T.P. | 2.59  | 930.29 | 2.00  | 927.70 |
| B.M. | 2.39  | 930.29 | 2.39  | 927.90 |
| T.P. | 0.33  | 917.56 | 13.06 | 917.23 |
| T.P. | 0.31  | 904.79 | 13.08 | 904.48 |
| T.P. | 0.29  | 892.73 | 12.35 | 892.44 |
| T.P. | 4.99  | 890.85 | 6.87  | 885.86 |
| B.M. | 8.68  | 890.85 | 8.68  | 882.17 |
| T.P. | 7.11  | 891.53 | 6.43  | 884.42 |
| B.M. | 7.63  | 891.53 | 7.63  | 883.90 |
| T.P. | 12.56 | 903.03 | 1.06  | 890.47 |
| T.P. | 12.87 | 915.50 | 0.40  | 902.63 |
| T.P. | 13.12 | 928.14 | 0.48  | 915.02 |
| B.M. | 5.26  | 928.14 | 5.26  | 922.88 |
| T.P. | 1.38  | 928.47 | 1.05  | 927.09 |
| T.P. | 0.17  | 916.00 | 12.64 | 915.83 |
| B.M. | 6.34  | 916.00 | 6.34  | 909.68 |
| T.P. | 2.82  | 906.13 | 12.69 | 903.31 |
| T.P. | 0.68  | 899.06 | 7.75  | 898.38 |
| B.M. | 5.88  | 899.06 | 5.88  | 893.18 |
| B.M. | 6.20  | 894.48 | 10.78 | 888.28 |
| T.P. | 13.55 | 907.70 | 0.33  | 894.15 |
| T.P. | 9.72  | 917.06 | 0.36  | 907.34 |
| B.M. | 1.58  | 917.06 | 1.58  | 915.48 |
| T.P. | 0.37  | 904.07 | 13.36 | 903.70 |

End present survey

↓



Spike in P.P. No. West Cor. Rice + Onasso Blvd. No.

Sta. 0+00, drill hole in pavement Rice + Kadnais

Spike in Willow 170' Rt. Sta. 14+00.

Spike in 18" Poplar 150' Lt. Sta. 23+25

Spike in 18" Oak 150' Lt. Sta. 29+70

Spike in 18" Oak 90' Rt. Sta. 39+40

Spike in Twin Willow 60' Rt. Sta. 52+60

Spike in 24" Cottonwood 23' Lt. Sta. 57+26

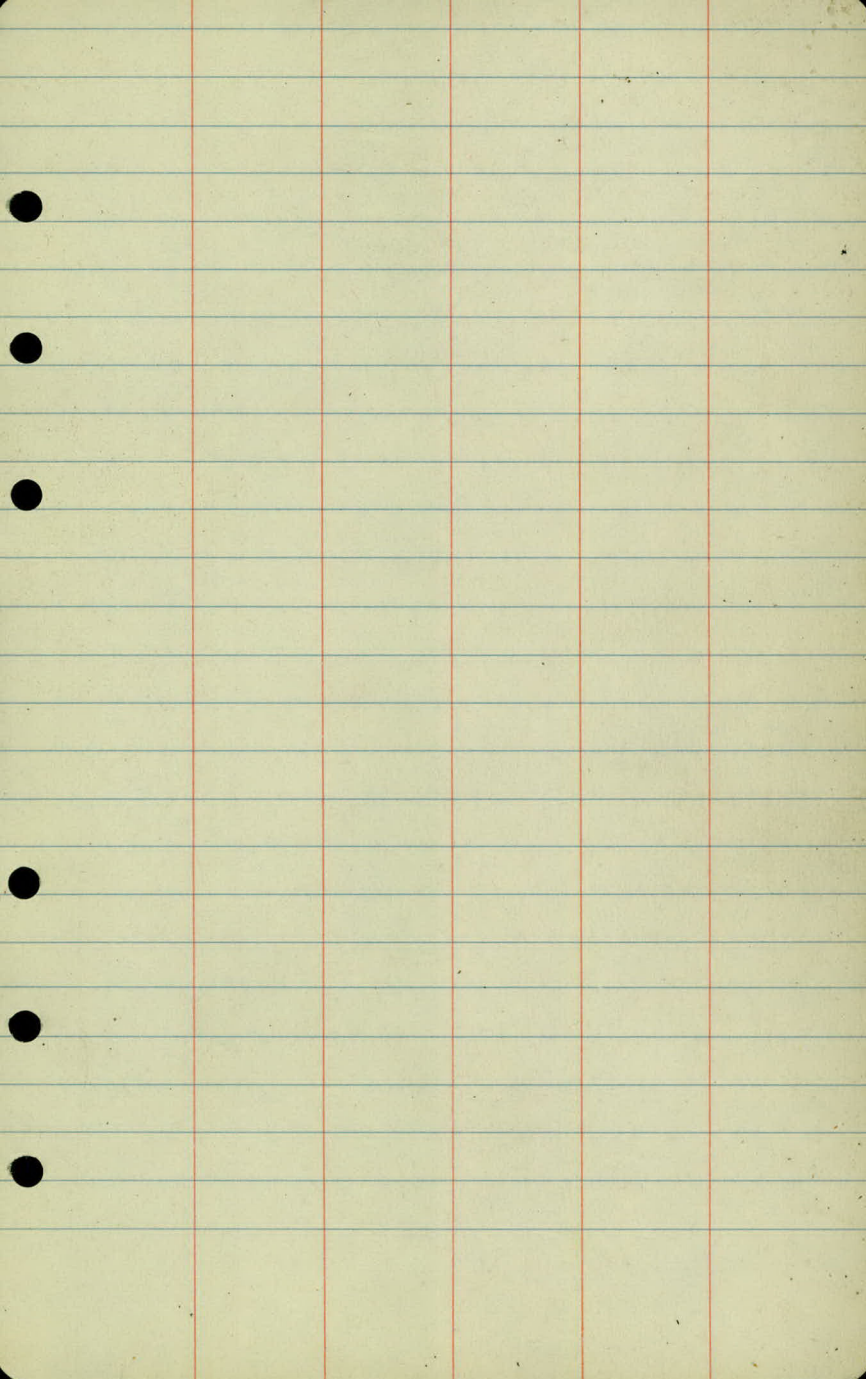
Spike in 12" Oak 75' Rt. Sta.

| Sta. | + | $\pi$ | - | Elev. |
|------|---|-------|---|-------|
|------|---|-------|---|-------|

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | 904.07 |  |  |
|--|--|--------|--|--|

|      |      |        |       |        |
|------|------|--------|-------|--------|
| T.P. | 7.68 | 900.27 | 11.48 | 892.59 |
|------|------|--------|-------|--------|

|      |  |  |      |        |
|------|--|--|------|--------|
| B.M. |  |  | 1.79 | 898.48 |
|------|--|--|------|--------|





Spike in 20" Elm 75' Pt. Sta.

Vedra's Blvd.

Cross-Sections

4/38

| Sta. | +    | K                   | - | Elev.  |
|------|------|---------------------|---|--------|
| B.M. | 3.25 | 931.15 <sup>✓</sup> |   | 927.90 |

|      |  |            |  |       |
|------|--|------------|--|-------|
| 0+00 |  | E Rice St. |  | 928.0 |
|------|--|------------|--|-------|

|     |  |                   |  |      |
|-----|--|-------------------|--|------|
| +15 |  | Shoulder Rice St. |  | 27.5 |
|-----|--|-------------------|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +25 |  |  |  | 26.6 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 24.7 |
|-----|--|--|--|------|

|      |  |  |  |      |
|------|--|--|--|------|
| 1+00 |  |  |  | 21.1 |
|------|--|--|--|------|

|     |  |  |  |                   |
|-----|--|--|--|-------------------|
| +80 |  |  |  | 18.0 <sup>✓</sup> |
|-----|--|--|--|-------------------|

|      |      |                     |       |                     |
|------|------|---------------------|-------|---------------------|
| T.P. | 2.71 | 940.63 <sup>✓</sup> | 12.23 | 917.94 <sup>✓</sup> |
|------|------|---------------------|-------|---------------------|

|   |  |  |  |      |
|---|--|--|--|------|
| ✓ |  |  |  | 15.0 |
|---|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +80 |  |  |  | 12.5 |
|-----|--|--|--|------|



Lt.

E

Rt

23

Drill Hole in pavement - Rice & Kodanis Blvd. =  
Sta 0+00

$$\frac{3.1}{100}$$

$$3.2$$

$$\frac{3.6}{100}$$

$$\frac{3.5}{50}$$

$$\frac{3.8}{33}$$

$$\frac{3.8}{28}$$

$$\frac{3.7}{50}$$

$$\frac{4.0}{45}$$

$$\frac{3.9}{50}$$

$$\frac{4.2}{50}$$

$$\frac{4.6}{35}$$

$$\frac{5.4}{30}$$

$$\frac{4.7}{24}$$

$$\frac{4.6}{50}$$

$$\frac{4.4}{10}$$

$$\frac{5.0}{27}$$

$$\frac{4.9}{33}$$

$$\frac{5.3}{39}$$

$$\frac{5.3}{50}$$

$$\frac{4.9}{50}$$

$$\frac{5.5}{29}$$

$$\frac{8.0}{24}$$

$$\frac{8.1}{17}$$

$$\frac{7.3}{13}$$

$$\frac{6.5}{50}$$

$$\frac{6.7}{12}$$

$$\frac{2.0}{14}$$

$$\frac{2.1}{21}$$

$$\frac{6.1}{24}$$

$$\frac{5.7}{37}$$

$$\frac{6.5}{50}$$

$$\frac{6.6}{33}$$

$$\frac{11.1}{23}$$

$$\frac{11.3}{15}$$

$$\frac{10.5}{12}$$

$$\frac{10.1}{50}$$

$$\frac{10.7}{12}$$

$$\frac{11.1}{14}$$

$$\frac{10.2}{24}$$

$$\frac{2.4}{30}$$

$$\frac{2.2}{50}$$

$$\frac{2.6}{50}$$

$$\frac{2.8}{25}$$

$$\frac{13.7}{22}$$

$$\frac{14.6}{15}$$

$$\frac{13.7}{11}$$

$$\frac{13.2}{50}$$

$$\frac{13.8}{12}$$

$$\frac{15.0}{19}$$

$$\frac{15.3}{26}$$

$$\frac{8.6}{37}$$

$$\frac{8.5}{50}$$

$$\frac{0.0}{50}$$

$$\frac{0.0}{26}$$

$$\frac{5.5}{24}$$

$$\frac{6.6}{16}$$

$$\frac{6.0}{10}$$

$$\frac{5.6}{50}$$

$$\frac{5.9}{14}$$

$$\frac{7.2}{18}$$

$$\frac{7.2}{26}$$

$$\frac{0.2}{38}$$

$$\frac{0.0}{50}$$

$$\frac{2.4}{50}$$

$$\frac{2.9}{36}$$

$$\frac{8.6}{23}$$

$$\frac{9.4}{11}$$

$$\frac{8.7}{11}$$

$$\frac{8.1}{14}$$

$$\frac{9.6}{14}$$

$$\frac{9.7}{21}$$

$$\frac{8.1}{30}$$

$$\frac{3.6}{37}$$

$$\frac{4.4}{50}$$

| Sta. | +    | K ✓      | -     | Elev.    |
|------|------|----------|-------|----------|
|      |      | 990.63   |       |          |
| 3+00 |      |          |       | 909.6 ✓  |
| T.P. | 1.01 | 909.43 ✓ | 12.21 | 908.42 ✓ |
| +28  |      |          |       | 07.8     |
| +60  |      |          |       | 05.4     |
| 4+00 |      |          |       | 03.4     |
| T.P. | 0.70 | 900.87 ✓ | 9.26  | 900.17 ✓ |
| +80  |      |          |       | 900.0    |
| 5+00 |      |          |       | 896.1    |
| T.P. | 1.26 | 892.84 ✓ | 8.29  | 891.58 ✓ |
| +80  |      |          |       | 92.4     |
| 6    |      |          |       | 89.6     |

Lt.

E

Et.

24

$$\frac{77}{50} \quad \frac{75}{35} \quad \frac{107}{29} \quad \frac{124}{23} \quad \frac{125}{18} \quad \frac{114}{11} \quad \frac{110}{11} \quad \frac{113}{11} \quad \frac{124}{21} \quad \frac{124}{27} \quad \frac{96}{31} \quad \frac{99}{50}$$

$$\frac{00}{50} \quad \frac{03}{41} \quad \frac{00}{25} \quad \frac{15}{26} \quad \frac{34}{21} \quad \frac{28}{17} \quad \frac{21}{11} \quad \frac{16}{19} \quad \frac{27}{16} \quad \frac{36}{20} \quad \frac{38}{25} \quad \frac{28}{31} \quad \frac{25}{50}$$

$$\frac{34}{50} \quad \frac{44}{34} \quad \frac{68}{26} \quad \frac{59}{17} \quad \frac{40}{10} \quad \frac{44}{11} \quad \frac{50}{15} \quad \frac{90}{35} \quad \frac{90}{31} \quad \frac{87}{50}$$

$$\frac{110}{50} \quad \frac{115}{39} \quad \frac{115}{19} \quad \frac{63}{10} \quad \frac{60}{10} \quad \frac{138}{24} \quad \frac{143}{50}$$

$$\frac{100}{50} \quad \frac{82}{21} \quad \frac{15}{17} \quad \frac{11}{10} \quad \frac{09}{11} \quad \frac{14}{24} \quad \frac{94}{28} \quad \frac{103}{28} \quad \frac{118}{50}$$

$$\frac{153}{50} \quad \frac{153}{41} \quad \frac{120}{22} \quad \frac{50}{11} \quad \frac{48}{10} \quad \frac{53}{20} \quad \frac{114}{20} \quad \frac{134}{29} \quad \frac{154}{41} \quad \frac{163}{50}$$

$$\frac{115}{50} \quad \frac{114}{41} \quad \frac{77}{29} \quad \frac{64}{18} \quad \frac{16}{10} \quad \frac{14}{10} \quad \frac{19}{26} \quad \frac{99}{26} \quad \frac{118}{40} \quad \frac{120}{50}$$

$$\frac{131}{50} \quad \frac{114}{26} \quad \frac{109}{24} \quad \frac{42}{10} \quad \frac{42}{13} \quad \frac{114}{27} \quad \frac{127}{39} \quad \frac{128}{50}$$

$$\begin{array}{r} 881.69 \\ 12.5 \\ \hline 100 \end{array}$$

$$\begin{array}{r} 881.14 \\ 12.7 \\ \hline 100 \end{array}$$



Sta.      +       $\pi$       -      Elev.

893.84

6+50

888.0

7

86.7

+50

86.0

T.P.

4.66

890.65 ✓

7.85

885.99

8+00.

85.9

+50

86.0

9+00

85.9

+50

86.0

10+00

86.0

27.

28

29.

$\frac{13^4}{50}$     $\frac{12^7}{36}$     $\frac{12^1}{22}$     $\frac{5^9}{9}$    58    $\frac{6^0}{11}$     $\frac{9^6}{19}$     $\frac{10^5}{23}$     $\frac{12^1}{37}$     $\frac{12^4}{50}$

$\frac{13^7}{50}$     $\frac{12^8}{23}$     $\frac{11^0}{17}$     $\frac{7^5}{10}$    71    $\frac{7^7}{13}$     $\frac{10^8}{21}$     $\frac{11^9}{27}$     $\frac{12^4}{29}$     $\frac{10^6}{37}$     $\frac{12^3}{50}$

$\frac{13^6}{50}$     $\frac{12^5}{19}$     $\frac{9^0}{14}$    78    $\frac{8^1}{17}$     $\frac{11^2}{20}$     $\frac{11^6}{27}$     $\frac{9^5}{37}$     $\frac{10^1}{44}$     $\frac{11^1}{50}$

$\frac{10^5}{50}$     $\frac{9^6}{20}$     $\frac{6^7}{14}$    48    $\frac{5^1}{13}$     $\frac{8^4}{23}$     $\frac{9^1}{37}$     $\frac{7^5}{35}$     $\frac{7^7}{50}$

$\frac{10^6}{50}$     $\frac{5^9}{28}$     $\frac{8^0}{21}$     $\frac{6^6}{17}$    47    $\frac{4^9}{9}$     $\frac{5^6}{13}$     $\frac{6^8}{17}$     $\frac{7^4}{21}$     $\frac{8^4}{24}$     $\frac{8^8}{34}$     $\frac{7^7}{37}$     $\frac{8^1}{50}$

$\frac{10^4}{50}$     $\frac{10^7}{35}$     $\frac{8^6}{27}$     $\frac{6^2}{17}$     $\frac{5^4}{10}$    48    $\frac{5^5}{11}$     $\frac{7^5}{15}$     $\frac{8^1}{27}$     $\frac{7^6}{29}$     $\frac{8^1}{45}$     $\frac{5^0}{50}$

$\frac{10^8}{50}$     $\frac{9^7}{30}$     $\frac{8^6}{24}$     $\frac{7^7}{19}$     $\frac{5^9}{17}$     $\frac{5^1}{8}$    47    $\frac{5^0}{8}$     $\frac{7^8}{14}$     $\frac{8^6}{21}$     $\frac{8^6}{24}$     $\frac{7^7}{26}$     $\frac{8^2}{31}$     $\frac{10^0}{37}$     $\frac{10^5}{50}$

$\frac{10^1}{50}$     $\frac{9^4}{34}$     $\frac{8^3}{20}$     $\frac{5^6}{14}$    47    $\frac{5^3}{11}$     $\frac{7^8}{18}$     $\frac{8^8}{35}$     $\frac{8^1}{38}$     $\frac{9^3}{37}$     $\frac{9^6}{50}$

Sta.      +       $\pi$       -      Elev.

890.65

10+50

885.9

11+00

885.9

B.M.

8.34

890.51

8.48

882.17

+50

885.9

12+00

885.9

+50

86.0

13+00

86.2

+50

86.2

14+00

86.1



Lt.

E

Rt.

26

|                  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{100}{50}$ | $\frac{84}{39}$ | $\frac{83}{34}$ | $\frac{93}{30}$ | $\frac{90}{24}$ | $\frac{82}{20}$ | $\frac{54}{12}$ | $\frac{48}{12}$ | $\frac{50}{11}$ | $\frac{83}{18}$ | $\frac{93}{23}$ | $\frac{84}{27}$ | $\frac{92}{33}$ | $\frac{96}{50}$ |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{85}{50}$ | $\frac{81}{38}$ | $\frac{83}{24}$ | $\frac{56}{16}$ | $\frac{51}{12}$ | $\frac{48}{12}$ | $\frac{51}{11}$ | $\frac{51}{21}$ | $\frac{54}{24}$ | $\frac{79}{28}$ | $\frac{88}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

Spikes in Willow 170' Rt. 5th. 14+00

|                 |                 |                 |                 |                 |                |                |                |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{75}{50}$ | $\frac{80}{45}$ | $\frac{88}{24}$ | $\frac{82}{20}$ | $\frac{52}{13}$ | $\frac{48}{9}$ | $\frac{46}{9}$ | $\frac{51}{8}$ | $\frac{58}{14}$ | $\frac{81}{20}$ | $\frac{87}{35}$ | $\frac{78}{28}$ | $\frac{84}{32}$ | $\frac{94}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                |                |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{94}{50}$ | $\frac{83}{44}$ | $\frac{82}{37}$ | $\frac{86}{23}$ | $\frac{52}{14}$ | $\frac{49}{8}$ | $\frac{46}{8}$ | $\frac{50}{10}$ | $\frac{55}{14}$ | $\frac{88}{21}$ | $\frac{82}{24}$ | $\frac{83}{27}$ | $\frac{82}{31}$ | $\frac{93}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                 |                |                |                |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{94}{50}$ | $\frac{93}{45}$ | $\frac{78}{40}$ | $\frac{50}{33}$ | $\frac{50}{25}$ | $\frac{52}{13}$ | $\frac{48}{9}$ | $\frac{45}{9}$ | $\frac{49}{8}$ | $\frac{57}{15}$ | $\frac{70}{17}$ | $\frac{82}{24}$ | $\frac{93}{28}$ | $\frac{95}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                 |                |                |                |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| $\frac{92}{50}$ | $\frac{89}{47}$ | $\frac{96}{38}$ | $\frac{76}{30}$ | $\frac{80}{23}$ | $\frac{49}{14}$ | $\frac{46}{9}$ | $\frac{43}{8}$ | $\frac{47}{8}$ | $\frac{53}{13}$ | $\frac{88}{24}$ | $\frac{86}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|

|                  |                 |                  |                 |                 |                 |                 |                |                |                |                 |                 |                 |
|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| $\frac{100}{50}$ | $\frac{95}{47}$ | $\frac{104}{45}$ | $\frac{95}{31}$ | $\frac{72}{24}$ | $\frac{62}{16}$ | $\frac{48}{13}$ | $\frac{46}{9}$ | $\frac{43}{9}$ | $\frac{47}{9}$ | $\frac{53}{14}$ | $\frac{85}{23}$ | $\frac{98}{50}$ |
|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|

|                  |                  |                 |                 |                 |                |                |                |                 |                 |                 |                  |
|------------------|------------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|------------------|
| $\frac{106}{50}$ | $\frac{105}{39}$ | $\frac{93}{28}$ | $\frac{71}{18}$ | $\frac{53}{13}$ | $\frac{48}{9}$ | $\frac{44}{9}$ | $\frac{46}{9}$ | $\frac{51}{13}$ | $\frac{82}{20}$ | $\frac{97}{33}$ | $\frac{103}{50}$ |
|------------------|------------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|------------------|

| Sta | + | $\pi$    | - | Elev. |
|-----|---|----------|---|-------|
|     |   | 890.51 ✓ |   |       |

|       |  |  |  |       |
|-------|--|--|--|-------|
| 14+50 |  |  |  | 886.0 |
|-------|--|--|--|-------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 15+00 |  |  |  | 85.7 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 85.8 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 16+00 |  |  |  | 85.5 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 85.5 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 17+00 |  |  |  | 85.3 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 84.8 |
|-----|--|--|--|------|

|                |  |  |  |  |
|----------------|--|--|--|--|
| +82 = 24" C.M. |  |  |  |  |
|----------------|--|--|--|--|

|    |  |  |  |      |
|----|--|--|--|------|
| 18 |  |  |  | 84.2 |
|----|--|--|--|------|

Lt.

E

Rt.

27

$$\frac{10.9}{50} \quad \frac{10.2}{30} \quad \frac{8.8}{19} \quad \frac{5.0}{14} \quad \frac{4.5}{9} \quad \frac{4.7}{9} \quad \frac{5.4}{14} \quad \frac{8.1}{20} \quad \frac{9.1}{25} \quad \frac{9.9}{50}$$

$$\frac{10.9}{50} \quad \frac{9.5}{21} \quad \frac{5.4}{13}$$

$$\frac{4.6}{8} \quad \frac{4.7}{8} \quad \frac{5.2}{13} \quad \frac{8.0}{21} \quad \frac{9.2}{50}$$

$$\frac{11.0}{50} \quad \frac{9.9}{34} \quad \frac{9.3}{20} \quad \frac{5.5}{13} \quad \frac{5.1}{10} \quad \frac{4.7}{14} \quad \frac{5.4}{19} \quad \frac{8.6}{20} \quad \frac{9.3}{30} \quad \frac{9.9}{50}$$

$$\frac{11.1}{50} \quad \frac{10.1}{31} \quad \frac{9.2}{19} \quad \frac{5.8}{14} \quad \frac{5.2}{9} \quad \frac{5.0}{7} \quad \frac{5.2}{7} \quad \frac{5.5}{11} \quad \frac{9.3}{18} \quad \frac{9.6}{34} \quad \frac{9.8}{50}$$

$$\frac{11.3}{50} \quad \frac{10.1}{30} \quad \frac{8.8}{18} \quad \frac{5.6}{14} \quad \frac{5.3}{9} \quad \frac{5.0}{7} \quad \frac{5.4}{11} \quad \frac{10.3}{21} \quad \frac{11.4}{50}$$

$$\frac{11.1}{50} \quad \frac{10.3}{34} \quad \frac{10.4}{25} \quad \frac{8.8}{17} \quad \frac{5.8}{14} \quad \frac{5.2}{8} \quad \frac{5.6}{8} \quad \frac{6.3}{14} \quad \frac{10.5}{19} \quad \frac{12.0}{29} \quad \frac{12.2}{50}$$

$$\frac{10.9}{50} \quad \frac{10.2}{30} \quad \frac{9.0}{17} \quad \frac{6.4}{14} \quad \frac{6.0}{7} \quad \frac{5.7}{8} \quad \frac{6.0}{8} \quad \frac{6.5}{11} \quad \frac{11.6}{20} \quad \frac{12.6}{33} \quad \frac{13.0}{50}$$

879.61

12.45  
10.90

878.06

12.45  
12.45

$$\frac{11.0}{50} \quad \frac{10.7}{33} \quad \frac{9.9}{17} \quad \frac{6.5}{14} \quad \frac{6.3}{7} \quad \frac{6.7}{7} \quad \frac{7.2}{14} \quad \frac{12.0}{19} \quad \frac{13.0}{28} \quad \frac{13.3}{50}$$



| Sta.  | +   | $\pi$    | -    | Elev.    |
|-------|-----|----------|------|----------|
|       |     | 890.51   |      |          |
| 18+50 |     |          |      | 884.2    |
| T.P.  | 660 | 890.63 ✓ | 6.48 | 884.03 ✓ |

|       |  |  |  |      |
|-------|--|--|--|------|
| 19+00 |  |  |  | 84.4 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 84.8 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 20+00 |  |  |  | 85.0 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 85.1 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 21+00 |  |  |  | 85.3 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 85.5 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 24+00 |  |  |  | 86.1 |
|-------|--|--|--|------|

Culvert 17+82  
Depth 5.2'  
flow S

L+

E

R+

28

$$\frac{11^1}{50} \quad \frac{107}{37} \quad \frac{105}{20} \quad \frac{68}{14} \quad \frac{65}{7} \quad \frac{63}{7} \quad \frac{67}{7} \quad \frac{75}{10} \quad \frac{122}{18} \quad \frac{132}{26} \quad \frac{134}{50}$$

$$\frac{110}{50} \quad \frac{102}{20} \quad \frac{67}{13} \quad \frac{63}{7} \quad \frac{62}{4} \quad \frac{65}{4} \quad \frac{70}{11} \quad \frac{105}{17} \quad \frac{107}{29} \quad \frac{79}{50}$$

$$\frac{110}{50} \quad \frac{94}{22} \quad \frac{86}{19} \quad \frac{62}{15} \quad \frac{59}{9} \quad \frac{58}{5} \quad \frac{61}{5} \quad \frac{64}{9} \quad \frac{73}{13} \quad \frac{73}{28} \quad \frac{65}{50}$$

$$\frac{108}{50} \quad \frac{99}{34} \quad \frac{84}{22} \quad \frac{60}{17} \quad \frac{56}{8} \quad \frac{56}{8} \quad \frac{61}{10} \quad \frac{63}{30} \quad \frac{64}{50}$$

$$\frac{96}{50} \quad \frac{87}{42} \quad \frac{78}{39} \quad \frac{70}{21} \quad \frac{59}{18} \quad \frac{56}{10} \quad \frac{55}{15} \quad \frac{58}{15} \quad \frac{64}{50}$$

$$\frac{71}{20} \quad \frac{69}{25} \quad \frac{64}{20} \quad \frac{59}{17} \quad \frac{54}{9} \quad \frac{53}{9} \quad \frac{55}{13} \quad \frac{59}{20} \quad \frac{63}{50}$$

$$\frac{76}{50} \quad \frac{65}{28} \quad \frac{65}{22} \quad \frac{61}{14} \quad \frac{61}{15} \quad \frac{63}{15} \quad \frac{57}{20} \quad \frac{58}{43} \quad \frac{68}{50}$$

$$\frac{74}{50} \quad \frac{58}{40} \quad \frac{55}{33} \quad \frac{49}{29} \quad \frac{44}{16} \quad \frac{43}{6} \quad \frac{45}{16} \quad \frac{46}{16} \quad \frac{50}{43} \quad \frac{40}{50}$$

| Sta.   | +     | $\Sigma$ | -    | Elev.    |
|--------|-------|----------|------|----------|
|        |       | 890.63 ✓ |      |          |
| 22+50  |       |          |      | 886.9 ✓  |
| B.M.   | 6.73  | 890.63 ✓ | 6.73 | 883.90 ✓ |
| T.P.   | 10.20 | 900.68 ✓ | 0.15 | 890.48 ✓ |
| 23+00  |       |          |      | 89.0 ✓   |
| +50    |       |          |      | 92.1 ✓   |
| 24+00  |       |          |      | 94.7 ✓   |
| +50    |       |          |      | 97.4 ✓   |
| T.P.   | 10.24 | 908.76 ✓ | 2.16 | 898.5 ✓  |
| 25+00  |       |          |      | 900.0 ✓  |
| +50    |       |          |      | 02.4 ✓   |
| T.P.   | 8.83  | 915.58 ✓ | 2.01 | 906.75 ✓ |
| 26 +00 |       |          |      | 05.0 ✓   |



Lt.

E

Rt.

29

$\frac{64}{50}$   $\frac{59}{46}$   $\frac{40}{33}$   $\frac{36}{20}$   $\frac{34}{8}$   $\frac{37}{8}$   $\frac{34}{9}$   $\frac{31}{41}$   $\frac{18}{50}$

Spike in 18" Poplar 150' Lt. of 512. 23+35

$\frac{154}{50}$   $\frac{150}{42}$   $\frac{139}{31}$   $\frac{113}{21}$   $\frac{115}{15}$   $\frac{116}{11}$   $\frac{117}{8}$   $\frac{121}{8}$   $\frac{113}{16}$   $\frac{118}{22}$   $\frac{109}{21}$   $\frac{78}{37}$   $\frac{75}{40}$   $\frac{121}{46}$   $\frac{11}{50}$   
 $\frac{18}{25}$

$\frac{165}{50}$   $\frac{153}{38}$   $\frac{85}{20}$   $\frac{84}{14}$   $\frac{90}{13}$   $\frac{86}{8}$   $\frac{92}{8}$   $\frac{90}{14}$   $\frac{28}{22}$   $\frac{14}{31}$   $\frac{12}{43}$   $\frac{17}{50}$   $\frac{10}{75}$

$\frac{151}{50}$   $\frac{126}{43}$   $\frac{114}{34}$   $\frac{58}{18}$   $\frac{60}{15}$   $\frac{67}{14}$   $\frac{67}{14}$   $\frac{60}{11}$   $\frac{60}{9}$   $\frac{57}{8}$   $\frac{60}{6}$   $\frac{70}{15}$   $\frac{63}{16}$   $\frac{62}{19}$   $\frac{40}{23}$   $\frac{36}{27}$   $\frac{17}{80}$   $\frac{06}{50}$   $\frac{105}{75}$

$\frac{110}{50}$   $\frac{33}{25}$   $\frac{23}{17}$   $\frac{44}{15}$   $\frac{44}{13}$   $\frac{37}{11}$   $\frac{33}{11}$   $\frac{34}{11}$   $\frac{45}{14}$   $\frac{36}{17}$   $\frac{38}{22}$   $\frac{108}{32}$   $\frac{118}{50}$

$\frac{120}{50}$   $\frac{80}{31}$   $\frac{86}{18}$   $\frac{101}{17}$   $\frac{101}{15}$   $\frac{91}{13}$   $\frac{91}{9}$   $\frac{88}{8}$   $\frac{89}{7}$   $\frac{93}{11}$   $\frac{104}{14}$   $\frac{94}{18}$   $\frac{57}{24}$   $\frac{41}{50}$

$\frac{60}{50}$   $\frac{64}{24}$   $\frac{69}{18}$   $\frac{24}{17}$   $\frac{24}{15}$   $\frac{69}{15}$   $\frac{65}{10}$   $\frac{62}{6}$   $\frac{65}{10}$   $\frac{27}{13}$   $\frac{27}{15}$   $\frac{75}{18}$   $\frac{32}{24}$   $\frac{24}{37}$   $\frac{15}{50}$

$\frac{110}{50}$   $\frac{110}{9}$   $\frac{106}{8}$   $\frac{107}{11}$   $\frac{111}{11}$   $\frac{117}{19}$   $\frac{68}{26}$   $\frac{58}{60}$

| Sta. | + | $\pi$    | - | Elev. |
|------|---|----------|---|-------|
|      |   | 915.58 ✓ |   |       |

|       |  |  |  |       |
|-------|--|--|--|-------|
| 26+19 |  |  |  | 906.0 |
|-------|--|--|--|-------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 07.8 |
|-----|--|--|--|------|

|       |       |          |      |          |
|-------|-------|----------|------|----------|
| 27+00 |       |          |      | 10.2     |
| T.P.  | 12.78 | 925.73 ✓ | 2.63 | 914.95 ✓ |

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 12.8 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +74 |  |  |  | 17.3 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 28+00 |  |  |  | 19.6 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 21.2 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 29+00 |  |  |  | 22.6 |
|-------|--|--|--|------|

LH

E

RT

30

$$\frac{10.8}{50} \quad \frac{10.1}{34} \quad \frac{9.8}{18} \quad \frac{10.6}{17} \quad \frac{10.6}{15} \quad \frac{10.1}{13} \quad \frac{9.6}{9} \quad \frac{10.3}{21} \quad \frac{5.9}{27} \quad \frac{5.2}{50}$$

$$\frac{3.7}{50} \quad \frac{4.1}{26} \quad \frac{8.1}{18} \quad \frac{9.2}{17} \quad \frac{9.2}{15} \quad \frac{8.4}{14} \quad \frac{8.2}{9} \quad \frac{7.8}{10} \quad \frac{8.1}{14} \quad \frac{8.7}{20} \quad \frac{8.7}{27} \quad \frac{3.6}{27} \quad \frac{2.8}{50}$$

$$\frac{1.7}{50} \quad \frac{1.6}{31} \quad \frac{5.0}{21} \quad \frac{5.2}{16}$$

$$\frac{5.4}{3} \quad \frac{5.4}{8} \quad \frac{5.9}{14} \quad \frac{5.6}{19} \quad \frac{1.4}{19} \quad \frac{0.4}{50}$$

$$\frac{7.5}{50} \quad \frac{8.0}{44} \quad \frac{11.7}{33} \quad \frac{12.8}{29} \quad \frac{12.8}{26} \quad \frac{12.6}{16} \quad \frac{13.0}{9} \quad \frac{13.6}{5} \quad \frac{12.9}{8} \quad \frac{9.8}{8} \quad \frac{9.7}{24} \quad \frac{9.1}{50}$$

$$\frac{6.7}{50} \quad \frac{5.6}{44} \quad \frac{11.5}{38} \quad \frac{11.4}{26} \quad \frac{11.7}{17} \quad \frac{12.4}{14} \quad \frac{12.1}{10} \quad \frac{9.0}{3} \quad \frac{8.4}{16} \quad \frac{8.2}{16} \quad \frac{7.6}{50}$$

$$\frac{9.3}{50} \quad \frac{9.4}{39} \quad \frac{10.2}{27} \quad \frac{10.8}{23} \quad \frac{9.9}{18} \quad \frac{6.0}{10} \quad \frac{6.1}{23} \quad \frac{6.2}{23} \quad \frac{7.0}{50}$$

$$\frac{7.3}{50} \quad \frac{7.7}{48} \quad \frac{7.6}{44} \quad \frac{5.0}{36} \quad \frac{4.4}{18} \quad \frac{4.5}{18} \quad \frac{5.2}{50}$$

$$\frac{4.0}{50} \quad \frac{3.6}{26} \quad \frac{3.1}{26} \quad \frac{4.0}{50}$$



| Sta.  | +    | K      | - | Elev.  |
|-------|------|--------|---|--------|
|       |      | 925.73 | ✓ |        |
| 29+50 |      |        |   | 923.4  |
| B.M.  | 8.41 | 931.29 | ✓ | 922.88 |
| 30+00 |      |        |   | 23.1   |
| +50   |      |        |   | 22.7   |
| 31+00 |      |        |   | 25.7   |
| +3V   |      |        |   | 27.8   |
| +6V   |      |        |   | 25.9   |
| 3V+00 |      |        |   | 26.9   |
| +50   |      |        |   | 27.3   |

Lt.

E

Rt.

31

$$\frac{18}{50}$$

$$\frac{18}{37}$$

$$\frac{23}{50}$$

$$\frac{26}{50}$$

Spike in 18" oak 150' Lt. 5/2. 29+70

$$\frac{77}{50}$$

$$\frac{79}{26}$$

$$\frac{82}{50}$$

$$\frac{81}{50}$$

$$\frac{76}{50}$$

$$\frac{82}{17}$$

$$\frac{86}{50}$$

$$\frac{83}{50}$$

$$\frac{56}{50}$$

$$\frac{54}{43}$$

$$\frac{57}{35}$$

$$\frac{56}{50}$$

$$\frac{56}{50}$$

$$\frac{61}{50}$$

$$\frac{62}{45}$$

$$\frac{52}{35}$$

$$\frac{50}{24}$$

$$\frac{56}{14}$$

$$\frac{40}{10}$$

$$\frac{35}{50}$$

$$\frac{31}{6}$$

$$\frac{25}{50}$$

$$\frac{56}{50}$$

$$\frac{55}{35}$$

$$\frac{53}{33}$$

$$\frac{48}{21}$$

$$\frac{47}{12}$$

$$\frac{55}{3}$$

$$\frac{54}{50}$$

$$\frac{40}{4}$$

$$\frac{24}{50}$$

$$\frac{52}{50}$$

$$\frac{50}{39}$$

$$\frac{50}{24}$$

$$\frac{52}{22}$$

$$\frac{44}{12}$$

$$\frac{44}{50}$$

$$\frac{47}{8}$$

$$\frac{42}{17}$$

$$\frac{35}{50}$$

$$\frac{40}{50}$$

$$\frac{33}{37}$$

$$\frac{30}{19}$$

$$\frac{46}{14}$$

$$\frac{41}{5}$$

$$\frac{40}{50}$$

$$\frac{42}{8}$$

$$\frac{47}{16}$$

$$\frac{24}{21}$$

$$\frac{18}{50}$$

| Sta.  | + | $\pi$  | - | Elev. |
|-------|---|--------|---|-------|
|       |   | 921.29 |   |       |
| 33+00 |   |        |   | 926.7 |

|      |      |          |      |          |
|------|------|----------|------|----------|
| +50  |      |          |      | 25.6     |
| T.P. | 3.82 | 928.35 ✓ | 6.76 | 924.53 ✓ |

|       |  |  |  |      |
|-------|--|--|--|------|
| 34+00 |  |  |  | 24.6 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 23.6 |
|-----|--|--|--|------|

|       |  |  |  |      |
|-------|--|--|--|------|
| 35+00 |  |  |  | 22.5 |
|-------|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 21.6 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 36 |  |  |  | 20.5 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 18.6 |
|-----|--|--|--|------|

|      |      |          |      |          |
|------|------|----------|------|----------|
| T.P. | 0.08 | 923.25 ✓ | 5.18 | 923.17 ✓ |
|------|------|----------|------|----------|

Lt.

E

Rt.

32

$$\frac{55}{50} \quad \frac{36}{29} \quad \frac{30}{18} \quad \frac{52}{17} \quad \frac{46}{17} \quad \frac{48}{17} \quad \frac{30}{18} \quad \frac{09}{24} \quad \frac{08}{50}$$

$$\frac{84}{50} \quad \frac{67}{29} \quad \frac{63}{13} \quad \frac{57}{15} \quad \frac{58}{15} \quad \frac{39}{22} \quad \frac{33}{31} \quad \frac{10}{50}$$

$$\frac{61}{50} \quad \frac{53}{27} \quad \frac{45}{17} \quad \frac{41}{8} \quad \frac{38}{7} \quad \frac{38}{7} \quad \frac{42}{17} \quad \frac{41}{36} \quad \frac{33}{50}$$

$$\frac{77}{50} \quad \frac{70}{29} \quad \frac{63}{18} \quad \frac{55}{14} \quad \frac{49}{6} \quad \frac{48}{8} \quad \frac{50}{8} \quad \frac{55}{17} \quad \frac{55}{25} \quad \frac{51}{50}$$

$$\frac{98}{50} \quad \frac{84}{30} \quad \frac{84}{21} \quad \frac{72}{17} \quad \frac{60}{14} \quad \frac{62}{6} \quad \frac{59}{8} \quad \frac{62}{8} \quad \frac{66}{15} \quad \frac{63}{24} \quad \frac{48}{50}$$

$$\frac{111}{50} \quad \frac{100}{38} \quad \frac{91}{28} \quad \frac{83}{18} \quad \frac{75}{15} \quad \frac{69}{7} \quad \frac{68}{11} \quad \frac{72}{11} \quad \frac{68}{16} \quad \frac{62}{21} \quad \frac{47}{50}$$

$$\frac{148}{50} \quad \frac{113}{33} \quad \frac{110}{27} \quad \frac{102}{14} \quad \frac{87}{10} \quad \frac{82}{5} \quad \frac{79}{8} \quad \frac{80}{8} \quad \frac{84}{16} \quad \frac{72}{19} \quad \frac{62}{28} \quad \frac{43}{50}$$

$$\frac{164}{50} \quad \frac{155}{43} \quad \frac{164}{33} \quad \frac{155}{23} \quad \frac{141}{16} \quad \frac{110}{8} \quad \frac{98}{8} \quad \frac{92}{8} \quad \frac{94}{19} \quad \frac{96}{24} \quad \frac{83}{27} \quad \frac{76}{33} \quad \frac{66}{50}$$



Sta. +  $\pi$  - Elev.

923.25

37+00

917.3

+50

15.8

38+00

17.4

+50

17.0

39+00

16.5

B.M.

5.75

915.43

13.57

909.68

+50

12.7

40+00

09.1

+50

05.3

Lt.

E

Rt.

33

|                 |                 |                 |                |                |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{86}{50}$ | $\frac{87}{50}$ | $\frac{78}{17}$ | $\frac{72}{5}$ | $\frac{60}{3}$ | $\frac{60}{60}$ | $\frac{53}{10}$ | $\frac{53}{21}$ | $\frac{56}{26}$ | $\frac{60}{21}$ | $\frac{56}{34}$ | $\frac{60}{41}$ | $\frac{60}{50}$ |
|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                |                 |                |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{55}{50}$ | $\frac{58}{10}$ | $\frac{62}{3}$ | $\frac{75}{75}$ | $\frac{66}{5}$ | $\frac{63}{12}$ | $\frac{60}{20}$ | $\frac{66}{31}$ | $\frac{76}{58}$ | $\frac{81}{47}$ | $\frac{85}{50}$ |
|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                |                 |                |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{64}{50}$ | $\frac{68}{25}$ | $\frac{57}{5}$ | $\frac{57}{57}$ | $\frac{61}{7}$ | $\frac{74}{10}$ | $\frac{75}{15}$ | $\frac{70}{24}$ | $\frac{21}{33}$ | $\frac{29}{43}$ | $\frac{89}{50}$ |
|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{64}{50}$ | $\frac{63}{18}$ | $\frac{63}{63}$ | $\frac{68}{15}$ | $\frac{82}{19}$ | $\frac{87}{22}$ | $\frac{82}{33}$ | $\frac{87}{42}$ | $\frac{92}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                 |                 |                 |                |                 |                |                 |                  |                  |                 |                  |
|-----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|------------------|------------------|-----------------|------------------|
| $\frac{74}{50}$ | $\frac{69}{41}$ | $\frac{66}{21}$ | $\frac{67}{8}$ | $\frac{68}{68}$ | $\frac{69}{7}$ | $\frac{76}{18}$ | $\frac{102}{25}$ | $\frac{101}{29}$ | $\frac{89}{37}$ | $\frac{104}{50}$ |
|-----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|------------------|------------------|-----------------|------------------|

Spoke in 15" Oak 80' Rt. 513. 39+40

|                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{23}{50}$ | $\frac{27}{27}$ | $\frac{27}{12}$ | $\frac{27}{27}$ | $\frac{34}{18}$ | $\frac{49}{24}$ | $\frac{44}{36}$ | $\frac{47}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                  |                 |                |                 |                 |                 |                 |                 |                 |
|------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{100}{50}$ | $\frac{92}{38}$ | $\frac{66}{8}$ | $\frac{63}{63}$ | $\frac{61}{15}$ | $\frac{69}{78}$ | $\frac{67}{31}$ | $\frac{66}{43}$ | $\frac{80}{50}$ |
|------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

|                  |                  |                  |                   |                |                 |                 |                 |                  |                  |                  |
|------------------|------------------|------------------|-------------------|----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| $\frac{145}{50}$ | $\frac{127}{38}$ | $\frac{110}{12}$ | $\frac{101}{101}$ | $\frac{94}{6}$ | $\frac{90}{11}$ | $\frac{85}{22}$ | $\frac{89}{34}$ | $\frac{114}{39}$ | $\frac{135}{45}$ | $\frac{127}{50}$ |
|------------------|------------------|------------------|-------------------|----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|

Sta. +  $\pi$  - Elev.

915.43

41+00

904.5

+50

03.8

42+00

03.3

+50

03.0

T.P.

8.24

911.47 ✓

12.18

903.25 ✓

43+00

02.4

+50

02.6

T.P.

3.43

906.68 ✓

8.44

903.25 ✓

44+00

02.5

+20

02.0

Lt.

L

Lt.

34

|                  |                  |                  |                 |                 |                  |                  |                  |                  |                  |
|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| $\frac{146}{50}$ | $\frac{128}{33}$ | $\frac{120}{16}$ | $\frac{115}{2}$ | $\frac{109}{1}$ | $\frac{102}{13}$ | $\frac{108}{26}$ | $\frac{127}{29}$ | $\frac{142}{37}$ | $\frac{160}{50}$ |
|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|

|                  |                  |                  |                  |                 |                 |                 |                  |                  |                  |                  |                  |
|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| $\frac{165}{50}$ | $\frac{151}{33}$ | $\frac{140}{19}$ | $\frac{133}{11}$ | $\frac{128}{7}$ | $\frac{122}{5}$ | $\frac{116}{1}$ | $\frac{112}{10}$ | $\frac{117}{22}$ | $\frac{127}{27}$ | $\frac{137}{37}$ | $\frac{150}{50}$ |
|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|

|                  |                  |                  |                 |                 |                 |                 |                  |                  |                  |                  |                  |
|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| $\frac{168}{50}$ | $\frac{158}{38}$ | $\frac{142}{19}$ | $\frac{140}{9}$ | $\frac{126}{6}$ | $\frac{121}{1}$ | $\frac{118}{9}$ | $\frac{122}{18}$ | $\frac{126}{21}$ | $\frac{138}{23}$ | $\frac{146}{30}$ | $\frac{142}{30}$ |
|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|

|                  |                  |                  |                  |                 |                 |                  |                  |                  |                  |                  |
|------------------|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| $\frac{100}{50}$ | $\frac{108}{29}$ | $\frac{118}{14}$ | $\frac{131}{10}$ | $\frac{129}{5}$ | $\frac{124}{1}$ | $\frac{119}{11}$ | $\frac{122}{21}$ | $\frac{138}{24}$ | $\frac{150}{31}$ | $\frac{159}{50}$ |
|------------------|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|

|                 |                 |                 |                |                 |                 |                 |                  |                  |                  |
|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| $\frac{23}{50}$ | $\frac{45}{18}$ | $\frac{85}{10}$ | $\frac{89}{1}$ | $\frac{83}{11}$ | $\frac{88}{23}$ | $\frac{84}{28}$ | $\frac{103}{35}$ | $\frac{112}{41}$ | $\frac{120}{50}$ |
|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|

|                 |                 |                 |                 |                |                |                 |                 |                 |                 |                  |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| $\frac{28}{50}$ | $\frac{34}{40}$ | $\frac{44}{19}$ | $\frac{87}{13}$ | $\frac{89}{1}$ | $\frac{85}{9}$ | $\frac{90}{22}$ | $\frac{83}{26}$ | $\frac{88}{33}$ | $\frac{92}{35}$ | $\frac{112}{50}$ |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|

|                 |                 |                 |                 |                 |                 |                |                |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|
| $\frac{27}{50}$ | $\frac{29}{23}$ | $\frac{47}{29}$ | $\frac{47}{26}$ | $\frac{43}{23}$ | $\frac{41}{10}$ | $\frac{42}{1}$ | $\frac{46}{9}$ | $\frac{45}{14}$ | $\frac{51}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|

|                 |                 |                 |                 |                 |                 |                |                |                |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|
| $\frac{31}{50}$ | $\frac{36}{37}$ | $\frac{48}{34}$ | $\frac{48}{32}$ | $\frac{44}{30}$ | $\frac{42}{15}$ | $\frac{43}{7}$ | $\frac{47}{1}$ | $\frac{45}{7}$ | $\frac{48}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|



Sta. +  $\pi$  - Elev.

906.68

44+50

903.2

45+00

03.7

T.P.

2.52

904.72

5.48

901.20

+50

03.1

46+00

03.3

+50

02.6

47+00

00.8

+50

00.5

48

00.3

Lt.

E

Et.

35

$$\frac{44}{50} \quad \frac{43}{33} \quad \frac{49}{16} \quad \frac{39}{14} \quad \frac{30}{10} \quad \frac{35}{10} \quad \frac{32}{10} \quad \frac{31}{38} \quad \frac{35}{50}$$

$$\frac{45}{50} \quad \frac{50}{40} \quad \frac{34}{37} \quad \frac{30}{34} \quad \frac{30}{30} \quad \frac{28}{19} \quad \frac{36}{50}$$

$$\frac{29}{50} \quad \frac{15}{48} \quad \frac{15}{48} \quad \frac{16}{48} \quad \frac{26}{30} \quad \frac{36}{50}$$

$$\frac{32}{50} \quad \frac{36}{39} \quad \frac{23}{34} \quad \frac{20}{30} \quad \frac{18}{10} \quad \frac{14}{14} \quad \frac{17}{26} \quad \frac{32}{50}$$

$$\frac{44}{50} \quad \frac{41}{47} \quad \frac{35}{31} \quad \frac{40}{19} \quad \frac{31}{15} \quad \frac{28}{9} \quad \frac{21}{21} \quad \frac{21}{28} \quad \frac{26}{50}$$

L.S. = Gate Shore

$$\frac{23^{\circ}}{81} \quad \frac{13^{\circ}}{60} \quad \frac{105}{54} \quad \frac{67}{38} \quad \frac{46}{31} \quad \frac{38}{17} \quad \frac{43}{5} \quad \frac{39}{3} \quad \frac{25}{3} \quad \frac{26}{17} \quad \frac{20}{50}$$

L.S.

$$\frac{23^{\circ}}{67} \quad \frac{22^{\circ}}{60} \quad \frac{130}{44} \quad \frac{60}{34} \quad \frac{46}{23} \quad \frac{29}{9} \quad \frac{42}{42} \quad \frac{42}{7} \quad \frac{52}{5} \quad \frac{52}{5} \quad \frac{30}{12} \quad \frac{24}{50}$$

L.S.

$$\frac{23^{\circ}}{66} \quad \frac{22^{\circ}}{52} \quad \frac{107}{30} \quad \frac{50}{20} \quad \frac{42}{7} \quad \frac{44}{7} \quad \frac{46}{7} \quad \frac{53}{9} \quad \frac{53}{11} \quad \frac{29}{15} \quad \frac{26}{50}$$

| Sta. | + | $\pi$ | - | Elev. |
|------|---|-------|---|-------|
|------|---|-------|---|-------|

904.74

48+50

900.0

TP

366

902.83 ✓

5.55

899.17 ✓

49+00

899.4

+50

98.9

50+00

98.4

+50

98.0

51+00

97.6

+50

97.2

52+00

96.5

17.

27

Et.

36

45.

$\frac{23^\circ}{68}$      $\frac{21}{47}$      $\frac{13^\circ}{30}$      $\frac{53}{18}$      $\frac{47}{12}$      $\frac{51}{14}$      $\frac{55}{16}$      $\frac{55}{15}$      $\frac{33}{41}$      $\frac{39}{44}$      $\frac{46}{46}$      $\frac{46}{48}$      $\frac{38}{48}$   
 $\frac{38}{10}$      $\frac{35}{66}$

L.S.

|                   |                   |                   |                  |                  |                  |                  |                 |                 |                  |                  |                  |
|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|
| $\frac{21^0}{58}$ | $\frac{20^8}{48}$ | $\frac{13^0}{38}$ | $\frac{8.9}{20}$ | $\frac{6.3}{23}$ | $\frac{4.2}{20}$ | $\frac{4.2}{16}$ | $\frac{3.4}{3}$ | $\frac{2.6}{8}$ | $\frac{2.5}{29}$ | $\frac{3.0}{38}$ | $\frac{3.0}{50}$ |
|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|

45.

$\begin{array}{r} 21^\circ 20' 94'' \frac{78}{61} \\ 54 \end{array}$ 
 $\begin{array}{r} 62 47 43 \\ 24 22 17 \end{array}$ 
 $\begin{array}{r} 46 41 \\ 15 8 \end{array}$ 
 $\begin{array}{r} 39 \\ 14 \end{array}$ 
 $\begin{array}{r} 36 40 \\ 37 \end{array}$ 
 $\begin{array}{r} 54 56 \\ 41 46 \end{array}$ 
 $\begin{array}{r} 38 \\ 50 \end{array}$

45.

|     |     |    |    |    |    |    |    |    |    |    |    |    |
|-----|-----|----|----|----|----|----|----|----|----|----|----|----|
| 210 | 102 | 66 | 47 | 44 | 50 | 46 | 44 | 49 | 61 | 62 | 46 | 46 |
| 58  | 45  | 25 | 23 | 16 | 14 | 9  | 44 | 20 | 25 | 29 | 34 | 58 |

4.5

21.0    9.1   6.3   4.8   4.5   5.4   4.9   5.2   6.1   6.4   4.9   4.3  
55    47   27   21   16   14   5   4   15   19   25   29   50

43.

|     |      |     |     |     |     |     |     |     |     |     |     |
|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 210 | 11.4 | 6.6 | 4.6 | 4.7 | 5.6 | 2.2 | 8.5 | 6.4 | 6.1 | 3.1 | 2.9 |
| 58  | 47   | 39  | 29  | 17  | 12  | 2   | 13  | 16  | 20  | 26  | 50  |

4.5

|                   |                  |                 |                 |                 |                 |                 |                 |                  |                  |
|-------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| $\frac{21.0}{54}$ | $\frac{4.5}{35}$ | $\frac{47}{17}$ | $\frac{60}{12}$ | $\frac{56}{14}$ | $\frac{58}{16}$ | $\frac{65}{20}$ | $\frac{65}{27}$ | $\frac{0.2}{27}$ | $\frac{1.0}{50}$ |
|-------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|

45

|                   |                  |                  |                  |                  |                  |                  |                  |                   |                  |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|
| $\frac{21.0}{55}$ | $\frac{5.1}{35}$ | $\frac{5.1}{14}$ | $\frac{6.8}{12}$ | $\frac{6.3}{63}$ | $\frac{6.4}{19}$ | $\frac{6.8}{18}$ | $\frac{6.9}{21}$ | $\frac{+1.1}{33}$ | $\frac{0.0}{50}$ |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|



Sta.      +      K      -      Elev.

904.83

57+25

896.0

T.P.

1.21

896.86 ✓

7.18

895.65 ✓

B.M.

3.68

896.86 ✓

3.68

893.18

+50

95.2

53+00

92.9

+50

90.6

54+00

88.5

T.P.

2.06

888.48 ✓

10.44

886.42 ✓

+44

Section thru culvert

86.6

+60

86.0

55+00

85.2

Lt.

E

Rt.

37

L.S.

|                  |                 |                 |                 |                |                 |                 |                 |                 |                  |                 |
|------------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|
| $\frac{210}{52}$ | $\frac{60}{33}$ | $\frac{66}{15}$ | $\frac{75}{13}$ | $\frac{68}{/}$ | $\frac{71}{16}$ | $\frac{71}{22}$ | $\frac{40}{28}$ | $\frac{20}{32}$ | $\frac{+15}{40}$ | $\frac{20}{50}$ |
|------------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|

Spike in Twin Willow 60' Rt. Sta. 52+60

L.S.

|                  |                 |                 |                 |                |                |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{152}{54}$ | $\frac{10}{39}$ | $\frac{15}{16}$ | $\frac{23}{14}$ | $\frac{17}{/}$ | $\frac{19}{7}$ | $\frac{23}{15}$ | $\frac{32}{32}$ | $\frac{42}{40}$ | $\frac{57}{50}$ |
|------------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|

L.S.

|                  |                 |                 |                 |                |                 |                 |                 |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{152}{53}$ | $\frac{28}{40}$ | $\frac{40}{17}$ | $\frac{44}{13}$ | $\frac{40}{/}$ | $\frac{44}{14}$ | $\frac{50}{16}$ | $\frac{50}{18}$ | $\frac{35}{22}$ | $\frac{40}{24}$ | $\frac{64}{41}$ | $\frac{80}{50}$ |
|------------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

L.S.

|                  |                 |                 |                 |                 |                |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{152}{47}$ | $\frac{46}{38}$ | $\frac{51}{32}$ | $\frac{57}{17}$ | $\frac{68}{14}$ | $\frac{63}{/}$ | $\frac{68}{13}$ | $\frac{75}{21}$ | $\frac{58}{27}$ | $\frac{43}{50}$ |
|------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|

L.S.

|                  |                 |                 |                 |                 |                |                 |                  |                 |                 |                  |                  |                  |
|------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|------------------|-----------------|-----------------|------------------|------------------|------------------|
| $\frac{152}{47}$ | $\frac{91}{25}$ | $\frac{81}{31}$ | $\frac{82}{16}$ | $\frac{87}{14}$ | $\frac{84}{/}$ | $\frac{88}{13}$ | $\frac{100}{20}$ | $\frac{88}{24}$ | $\frac{92}{28}$ | $\frac{108}{37}$ | $\frac{123}{44}$ | $\frac{128}{50}$ |
|------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|------------------|-----------------|-----------------|------------------|------------------|------------------|

L.S.

|                 |                 |                 |                 |                 |                 |                |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{68}{34}$ | $\frac{52}{22}$ | $\frac{27}{22}$ | $\frac{18}{20}$ | $\frac{15}{14}$ | $\frac{21}{12}$ | $\frac{19}{/}$ | $\frac{14}{11}$ | $\frac{24}{18}$ | $\frac{26}{15}$ | $\frac{86}{32}$ | $\frac{90}{50}$ |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

L.S.

|                 |                 |                 |                 |                |                |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{68}{31}$ | $\frac{21}{24}$ | $\frac{20}{13}$ | $\frac{25}{11}$ | $\frac{26}{7}$ | $\frac{25}{/}$ | $\frac{28}{14}$ | $\frac{27}{21}$ | $\frac{92}{39}$ | $\frac{90}{50}$ |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|

L.S.

|                 |                 |                 |                 |                |                 |                  |                  |
|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|------------------|------------------|
| $\frac{68}{28}$ | $\frac{23}{23}$ | $\frac{23}{14}$ | $\frac{33}{12}$ | $\frac{33}{/}$ | $\frac{34}{26}$ | $\frac{101}{48}$ | $\frac{104}{50}$ |
|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|------------------|------------------|

| Sta. | + | $\pi$ | - | Elev. |
|------|---|-------|---|-------|
|------|---|-------|---|-------|

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | 888.48 |  |  |
|--|--|--------|--|--|

|       |  |  |  |  |
|-------|--|--|--|--|
| 55+50 |  |  |  |  |
|-------|--|--|--|--|

|  |  |  |  |       |
|--|--|--|--|-------|
|  |  |  |  | 884.5 |
|--|--|--|--|-------|

|       |  |  |  |  |
|-------|--|--|--|--|
| 56+00 |  |  |  |  |
|-------|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 84.2 |
|--|--|--|--|------|

|     |  |  |  |  |
|-----|--|--|--|--|
| +50 |  |  |  |  |
|-----|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 84.2 |
|--|--|--|--|------|

|       |  |  |  |  |
|-------|--|--|--|--|
| 57+00 |  |  |  |  |
|-------|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 84.1 |
|--|--|--|--|------|

|     |  |  |  |  |
|-----|--|--|--|--|
| +36 |  |  |  |  |
|-----|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 84.0 |
|--|--|--|--|------|

|     |  |  |  |  |
|-----|--|--|--|--|
| +50 |  |  |  |  |
|-----|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 83.9 |
|--|--|--|--|------|

|      |  |  |  |  |
|------|--|--|--|--|
| T.P. |  |  |  |  |
|------|--|--|--|--|

|  |      |  |  |  |
|--|------|--|--|--|
|  | 4.74 |  |  |  |
|--|------|--|--|--|

|  |  |                     |  |  |
|--|--|---------------------|--|--|
|  |  | 888.44 <sup>✓</sup> |  |  |
|--|--|---------------------|--|--|

|  |  |  |      |  |
|--|--|--|------|--|
|  |  |  | 4.78 |  |
|--|--|--|------|--|

|  |  |  |  |                     |
|--|--|--|--|---------------------|
|  |  |  |  | 883.20 <sup>✓</sup> |
|--|--|--|--|---------------------|

|       |  |  |  |  |
|-------|--|--|--|--|
| 58+00 |  |  |  |  |
|-------|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 83.6 |
|--|--|--|--|------|

|     |  |  |  |  |
|-----|--|--|--|--|
| +50 |  |  |  |  |
|-----|--|--|--|--|

|  |  |  |  |      |
|--|--|--|--|------|
|  |  |  |  | 83.9 |
|--|--|--|--|------|

Lt.

Et

Et.

L.S.

|     |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|
| 6.8 | 26 | 25 | 40 | 40 | 47 | 84 | 91 |
| 34  | 28 | 16 | 13 | 40 | 33 | 47 | 80 |

L.S.

|     |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|
| 6.8 | 24 | 28 | 50 | 43 | 48 | 80 | 96 |
| 40  | 34 | 20 | 16 | 43 | 40 | 50 | 60 |

L.S.

|     |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|
| 6.8 | 22 | 28 | 60 | 59 | 49 | 43 | 50 | 76 | 86 |
| 80  | 45 | 29 | 23 | 18 | 16 | 43 | 43 | 50 | 60 |

L.S.

|     |    |    |    |    |    |    |    |    |     |
|-----|----|----|----|----|----|----|----|----|-----|
| 6.8 | 65 | 20 | 27 | 63 | 63 | 44 | 54 | 88 | 108 |
| 87  | 50 | 43 | 28 | 22 | 19 | 16 | 44 | 38 | 50  |

L.S.

|     |    |    |    |    |    |    |    |    |    |     |     |
|-----|----|----|----|----|----|----|----|----|----|-----|-----|
| 6.8 | 60 | 25 | 32 | 58 | 57 | 47 | 45 | 54 | 92 | 102 | 108 |
| 86  | 44 | 38 | 22 | 17 | 16 | 13 | 45 | 20 | 28 | 39  | 50  |

L.S.

|     |    |    |    |    |    |    |    |    |    |    |     |
|-----|----|----|----|----|----|----|----|----|----|----|-----|
| 6.8 | 63 | 30 | 35 | 51 | 53 | 49 | 46 | 54 | 89 | 98 | 108 |
| 88  | 42 | 35 | 21 | 17 | 15 | 13 | 46 | 22 | 26 | 31 | 50  |

L.S.

|     |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|
| 6.8 | 59 | 40 | 36 | 30 | 50 | 52 | 48 | 51 | 93 | 96 | 96 |
| 40  | 39 | 34 | 30 | 17 | 15 | 14 | 48 | 17 | 24 | 31 | 50 |

L.S.

|     |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|
| 6.8 | 62 | 35 | 31 | 55 | 45 | 53 | 92 | 90 | 92 |
| 47  | 48 | 40 | 19 | 16 | 45 | 13 | 21 | 32 | 50 |

Notes: Ground below Lake level.



Sta.      +       $\pi$       -      Elev.

888.44 ✓

58+98.50 PT.

884.4

B.M.

0.16

888.28 ✓

Lt.

E

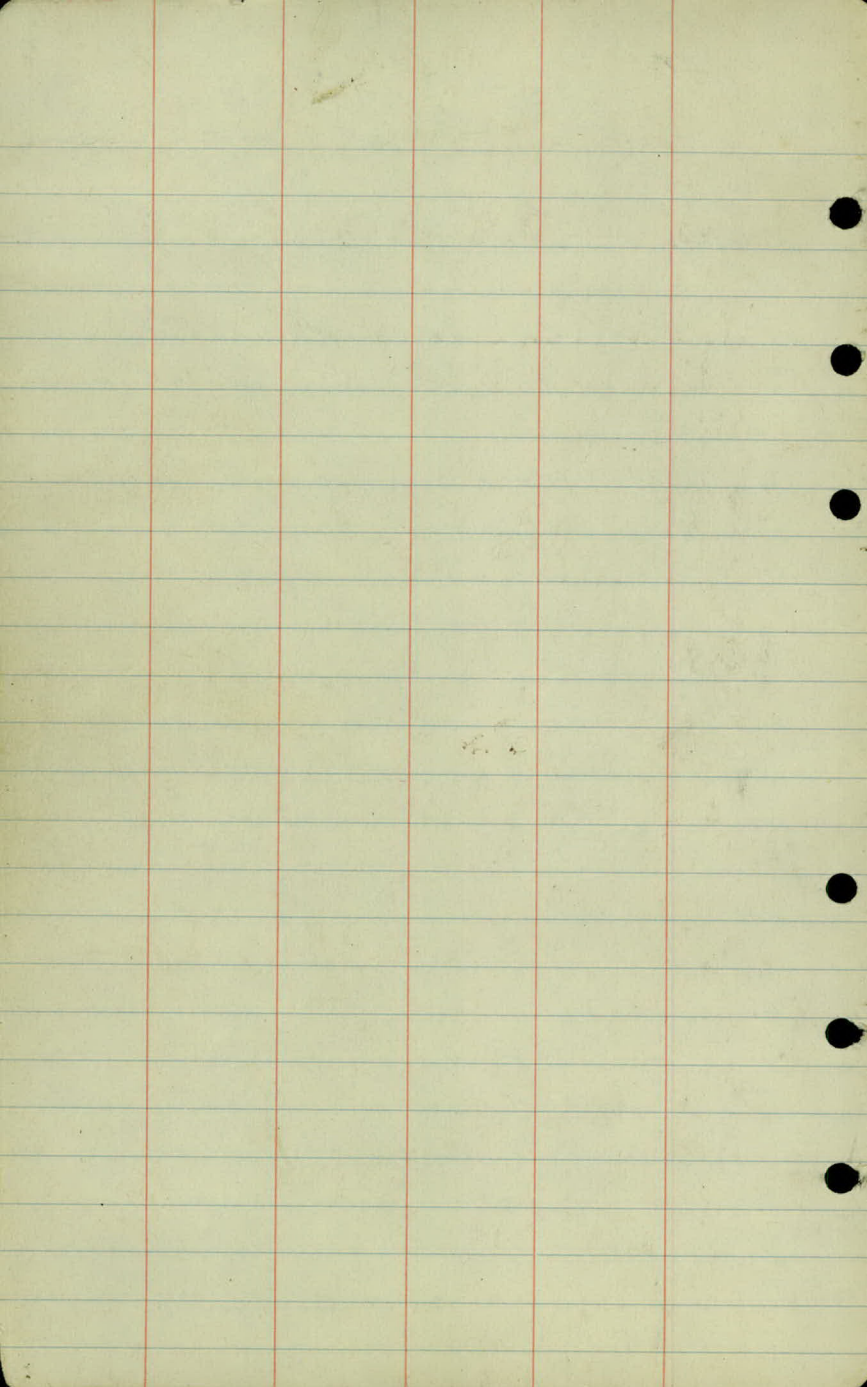
Rt.

39

L.S.

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 68 | 53 | 32 | 26 | 47 |    | 45 | 82 | 87 | 85 |
| 45 | 43 | 37 | 19 | 14 | 40 | 17 | 23 | 23 | 50 |

Spike in 24" Cottonwood. 23' Lt. Sta. 57 + 26



4  
Vedrais Blvd.



Angle

Defl.

Sta. Point Lt. Rt.

53+91.15 E.C.

1°38'

+50

1°26'

53

1°11'

+50

0°56'

52+27.86

P.I. 3°16'

D=10

T=163.38

L=386.67

R=5729.662

52

0°41'

+50

0°26'

51

0°11'

50+64.48 BC

Line change.

3" Spruce

21.88

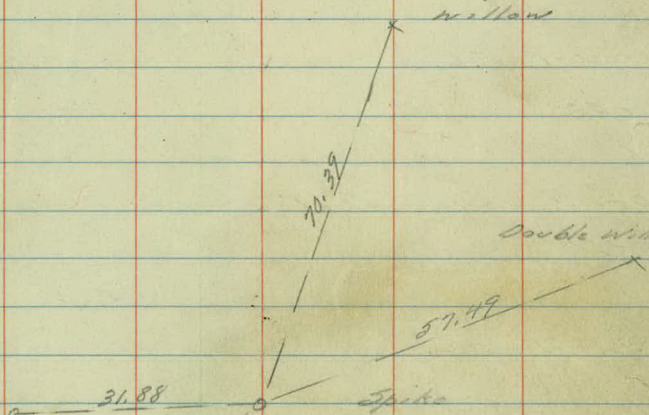
70.39

Willow

Double Willow

57.49

Spike



Angle.

Defl.

Sta. Point Lt. Rt.

61+81.84 E.C.

+50

61

60+9.53 P.I. 29°37'

+50

60

59+96.71 B.C.

130.67 E.C.

+25

59

58+77.30 P.I. 38°24'

+75

+50

+25

58+17.73 B.C.

14°48'

12°16'

8°16' D=16°

T=94.96

4°16' L=185.11

0°16' R=359.198

19°12'

18°14'

13°59' D=34°

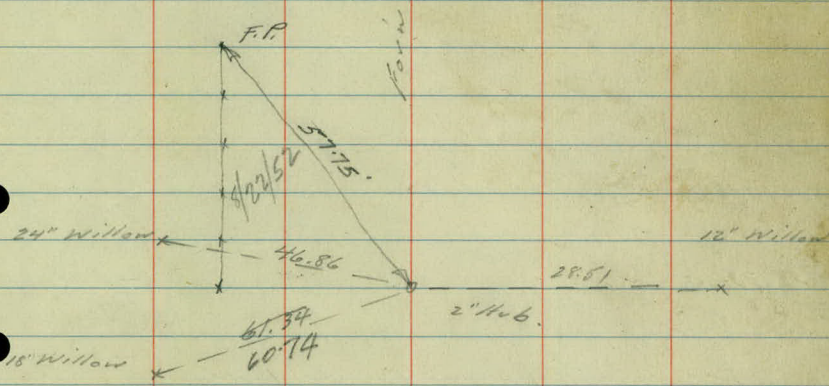
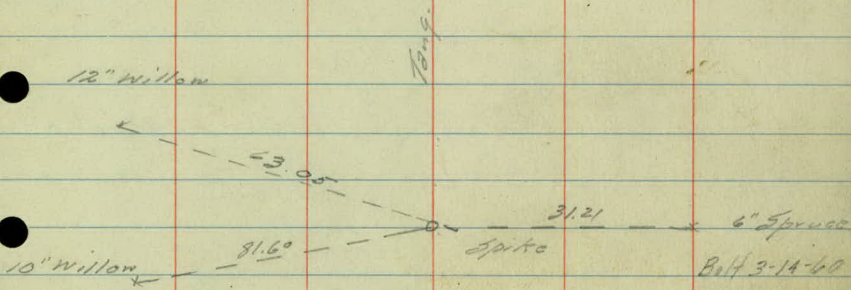
T=52.57

9°44' L=112.94

5°29' R=171.061

1°14'

Line Change.





Angle.

Defl.

Sta. Point Lt. Rt.

65+33.60 P.I.

See Pages 49A to 49C. For line  
revision for Align. from here to  
Edgerton St.

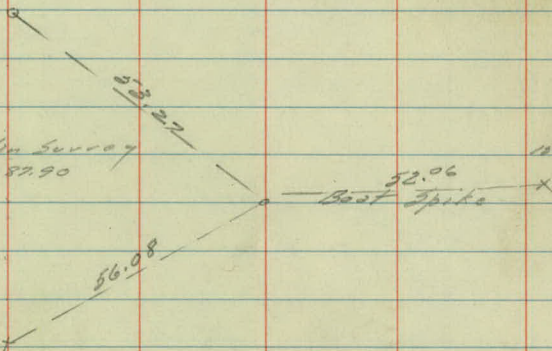
12" Oak

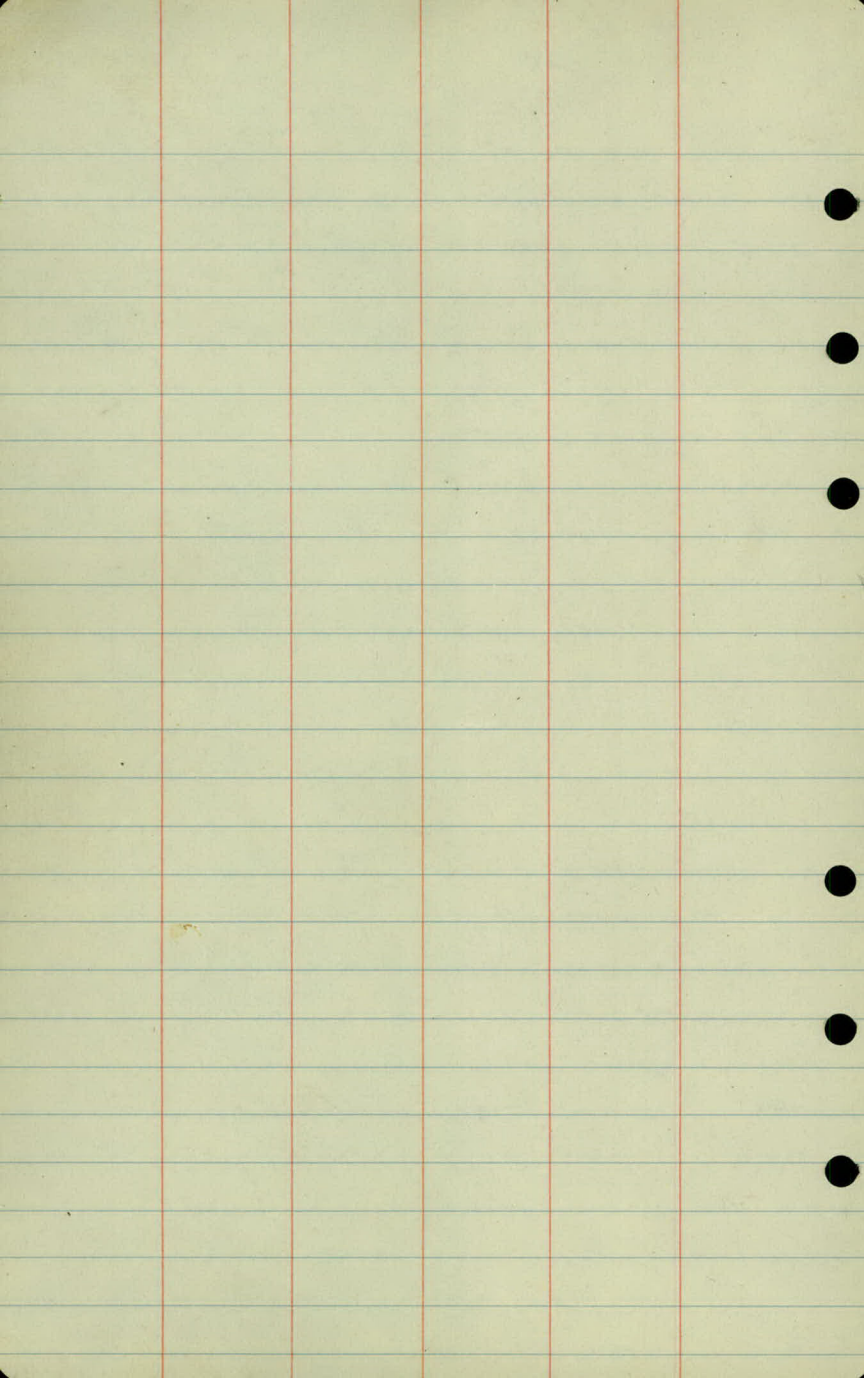
Original Plan Survey  
Pl. Sta. 661 82.90

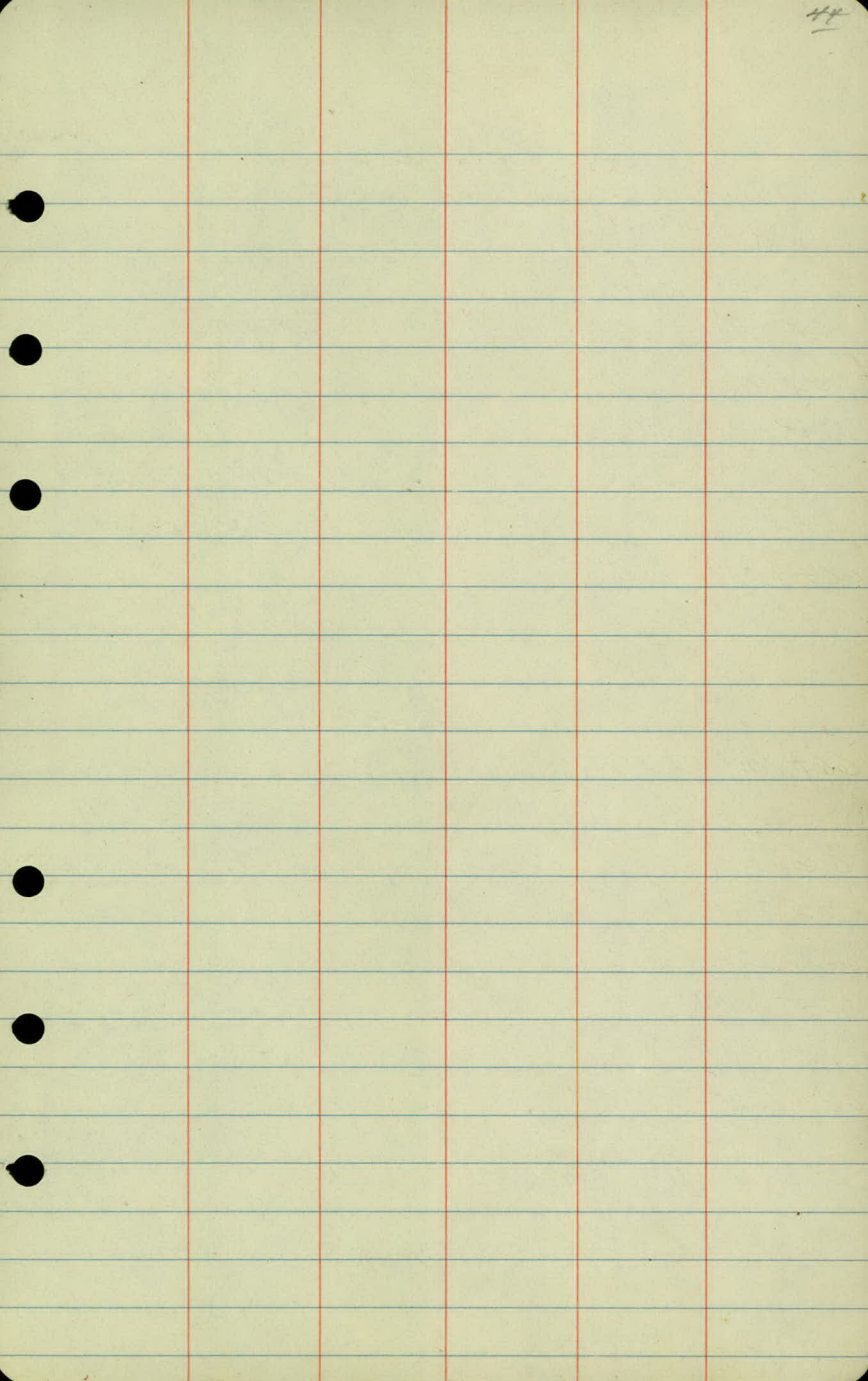
18" Oak

12" Birch

52.06  
Best Spike



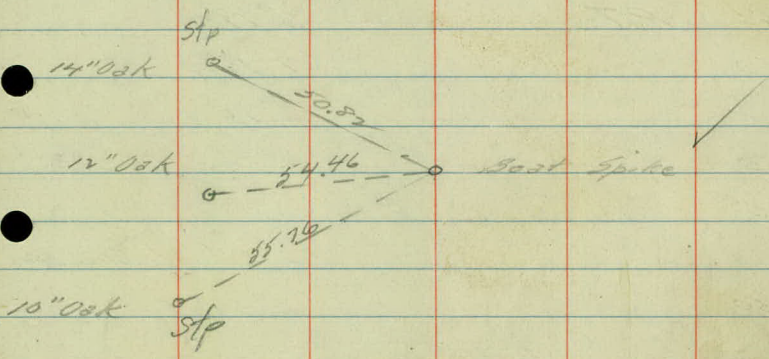






Angle

| Sta.     | Point | Lt. | Rt.    | Defl.              |
|----------|-------|-----|--------|--------------------|
| 68+44.87 | P.T.  |     |        | 5°30' 1/2          |
| 68       |       |     |        | 4°16' 1/2          |
| +50      |       |     |        | 2°54'              |
| 67+48.05 | P.I.  |     | 11°01' | D=5°30'            |
| 67       |       |     |        | 1°31' 1/2 T=100.48 |
| +50      |       |     |        | 0°09' L=200.30     |
| 66+44.87 | P.C.  |     |        |                    |
| 66+10.75 | P.T.  |     |        | 6°12'              |
|          |       |     |        | D=8                |
| 66       |       |     |        | 5°46' T=77.85      |
| +50      |       |     |        | 3°46' L=155.00     |
| 65+33.6  | P.I.  |     | 12°24' |                    |
| 65       |       |     |        | 1°46'              |
| +50      |       |     |        |                    |
| 64+55.75 | P.C.  |     |        |                    |



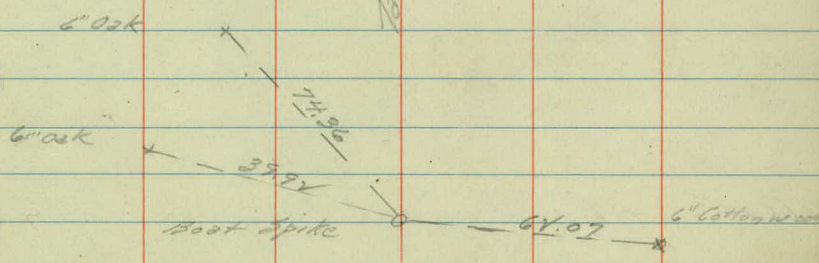
6.7 - 8  
6.1  
3  
11  
1001

Angle

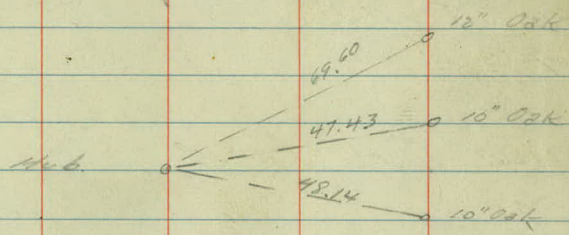
Defl.

| Sta.                | Point | Lt.     | Rt. |                               |
|---------------------|-------|---------|-----|-------------------------------|
| 74+76 <sup>17</sup> | P.T.  |         |     | 8° 19'                        |
| +50                 |       |         |     | 7° 35 <sup>14</sup> '         |
| 74                  |       |         |     | 6° 13'                        |
| +50                 |       |         |     | 4° 50 <sup>4</sup> ' D=5° 30" |
| 73+26 <sup>10</sup> | P.I.  | 16° 38' |     | T=152.35                      |
| 73                  |       |         |     | 3° 28' L=302.42               |
| +50                 |       |         |     | 2° 51'                        |
| 72                  |       |         |     | 0° 43'                        |
| 71+73 <sup>75</sup> | P.C.  |         |     |                               |
| 70+41.93            | P.T.  |         |     | 1° 38'                        |
| 70                  |       |         |     | 1° 13' D=2° 00'               |
| 69+60 <sup>30</sup> | P.I.  | 3° 16'  |     | T=81.70                       |
| +50                 |       |         |     | 0° 43' L=163.33               |
| 69                  |       |         |     | 8° 13'                        |
| 68+78 <sup>60</sup> | P.C.  |         |     |                               |

Long



For





# Angle

| Sta. | Point | Lt. | Rt. | Defl. |
|------|-------|-----|-----|-------|
|------|-------|-----|-----|-------|

|          |      |  |  |  |
|----------|------|--|--|--|
| 87+59.75 | P.I. |  |  |  |
|----------|------|--|--|--|

|          |      |  |  |  |
|----------|------|--|--|--|
| 81+26.35 | P.T. |  |  |  |
|----------|------|--|--|--|

|    |  |  |  |        |
|----|--|--|--|--------|
| 81 |  |  |  | 29°14' |
|----|--|--|--|--------|

+50

19°06' D-26°00'

|         |      |        |  |  |
|---------|------|--------|--|--|
| 80+26.4 | P.I. | 58°03' |  |  |
|---------|------|--------|--|--|

T. 123.34

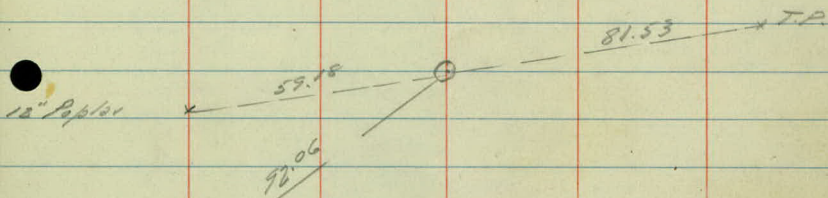
80

12°36' L. 223.27

+50

6°06'

|          |      |  |  |  |
|----------|------|--|--|--|
| 79+03.08 | P.C. |  |  |  |
|----------|------|--|--|--|



$12'' \text{ Oak}$



$4'' \text{ Ash}$

$54.94$   
 $10.11$

Angle

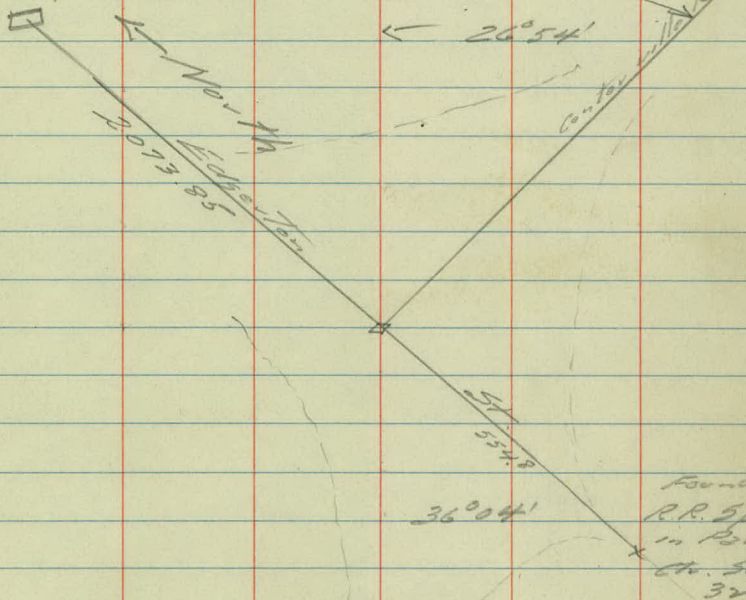
| Sta. | Point | Lt. | Rt. | Defl. |
|------|-------|-----|-----|-------|
|------|-------|-----|-----|-------|

|          |     |  |  |  |
|----------|-----|--|--|--|
| 82138.75 | P1. |  |  |  |
|----------|-----|--|--|--|

|  |  |  |        |  |
|--|--|--|--------|--|
|  |  |  | 26°54' |  |
|--|--|--|--------|--|

Stone Mon.

N  $\frac{1}{4}$  Cor Sec. 37

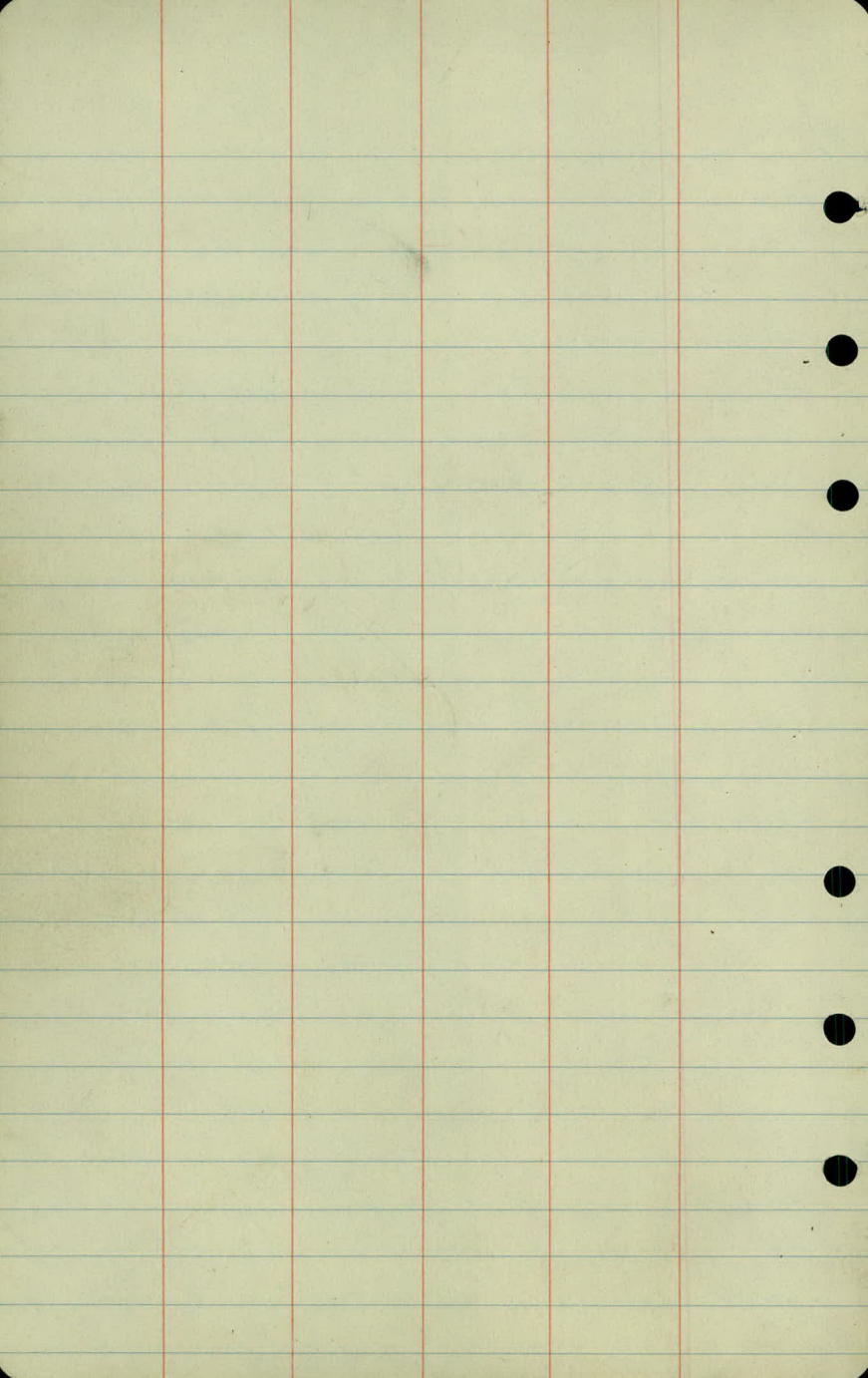


36° 04'

Found  
R.R. Spike  
in Sec.  
37

Estab. Cor.





4

P.I. 58+77.30

Stone Mon.  
S.E. Cor. Sec  
#31

Dist.  
not verified  
Acct. Timber  
Lake.

54°48'

Ken Pipes St

1+03.70

P.O.T. 57+40.25

0+00

3+00.10

4+28.20

Stone Mon.

M.C.

5+58.75

5+79.78

6+59.54

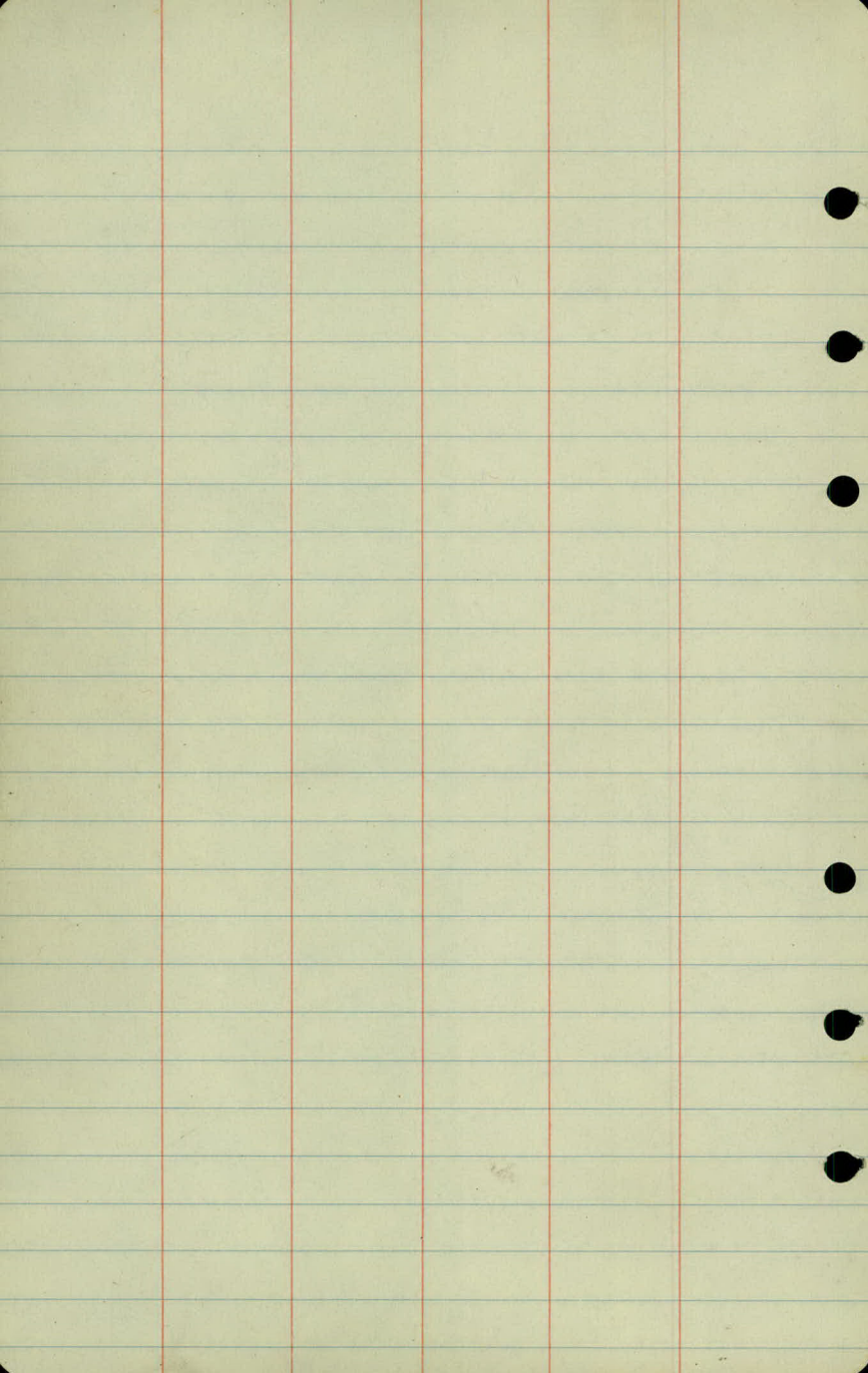
6+89.40

North

7+48.53

120.39

P.I. 82+27.56



Vadnais Blvd

Line Revision

Sta. 64+71.01 to Sta. 87+56.45

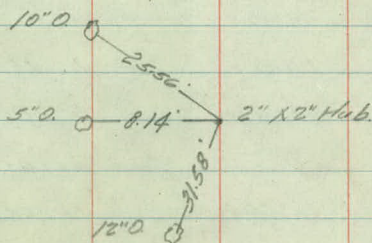
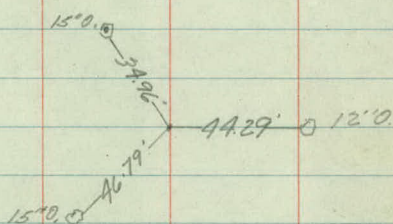
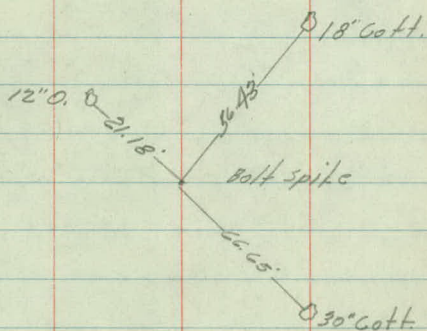


| Sta       | Point  | $\Delta L$ | $\Delta R$                            |
|-----------|--------|------------|---------------------------------------|
| +9402     | P.T.   |            | $7^{\circ}26.0'$                      |
| +50       |        |            | $6^{\circ}13.4' \Delta-14^{\circ}52'$ |
| 74        |        |            | $4^{\circ}50.9' D-5^{\circ}30'$       |
| +5969     | P.I.   |            | $T-135.97$                            |
| +50       |        |            | $3^{\circ}28.4' L-270.30$             |
| 73        |        |            | $2^{\circ}05.9' R=1042.164$           |
| +50       |        |            | $0^{\circ}43.4'$                      |
| 72 +2372  | P.C.   |            | $0^{\circ}00'$                        |
| 70 +60.97 | P.O.T. |            |                                       |
| +8750     | P.T.   |            | $11^{\circ}04.5'$                     |
| +50       |        |            | $9^{\circ}45.8'$                      |
| 67        |        |            | $8^{\circ}00.8' \Delta-22^{\circ}09'$ |
| +50       |        |            | $6^{\circ}15.8' D-70-$                |
| 66 +3138  | P.I.   |            | $T-160.31'$                           |
| 66        |        |            | $4^{\circ}30.8' L-316.43'$            |
| +50       |        |            | $2^{\circ}45.8' R=818.998$            |
| 65        |        |            | $1^{\circ}00.8'$                      |
| 64 +71.07 | P.C.   |            | $0^{\circ}00'$                        |

Cold & Windy

7-7-91  
K.A.  
L.G.  
C.M.

49B



| Sta. | Point | $\Delta L$ | $\Delta R$ |
|------|-------|------------|------------|
|------|-------|------------|------------|

|    |             |                 |                 |
|----|-------------|-----------------|-----------------|
| 87 | +56.45 P.I. | $36^{\circ}10'$ | $26^{\circ}42'$ |
|----|-------------|-----------------|-----------------|

|        |      |                   |  |
|--------|------|-------------------|--|
| 144.42 | P.T. | $29^{\circ}03.5'$ |  |
| +25    |      | $26^{\circ}55.4'$ |  |
| 81     |      | $24^{\circ}10.4'$ |  |

|     |  |                   |                          |
|-----|--|-------------------|--------------------------|
| 175 |  | $21^{\circ}25.4'$ | $\Delta = 58^{\circ}07'$ |
|-----|--|-------------------|--------------------------|

|     |  |                   |                    |
|-----|--|-------------------|--------------------|
| +50 |  | $18^{\circ}40.4'$ | $D = 22^{\circ} -$ |
|-----|--|-------------------|--------------------|

|        |      |  |              |
|--------|------|--|--------------|
| +25.85 | P.I. |  | $T = 145.60$ |
|--------|------|--|--------------|

|     |  |                   |              |
|-----|--|-------------------|--------------|
| +25 |  | $15^{\circ}55.4'$ | $L = 264.17$ |
|-----|--|-------------------|--------------|

|    |  |                   |               |
|----|--|-------------------|---------------|
| 80 |  | $13^{\circ}10.4'$ | $P = 262.04'$ |
|----|--|-------------------|---------------|

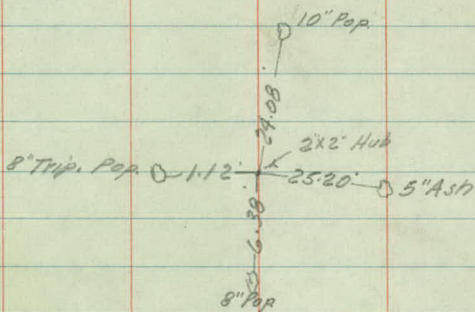
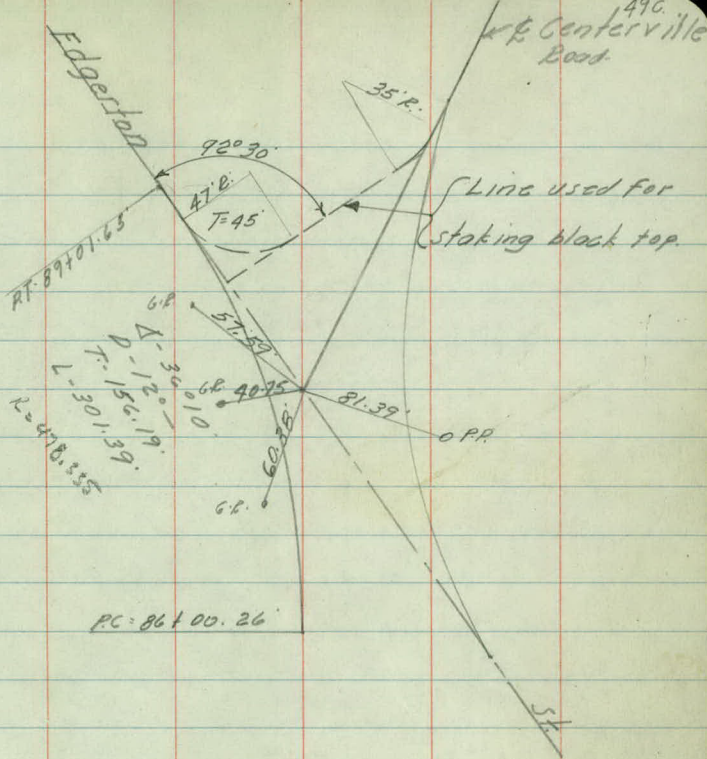
|     |  |                   |  |
|-----|--|-------------------|--|
| 175 |  | $10^{\circ}25.4'$ |  |
|-----|--|-------------------|--|

|     |  |                  |  |
|-----|--|------------------|--|
| +50 |  | $7^{\circ}40.4'$ |  |
|-----|--|------------------|--|

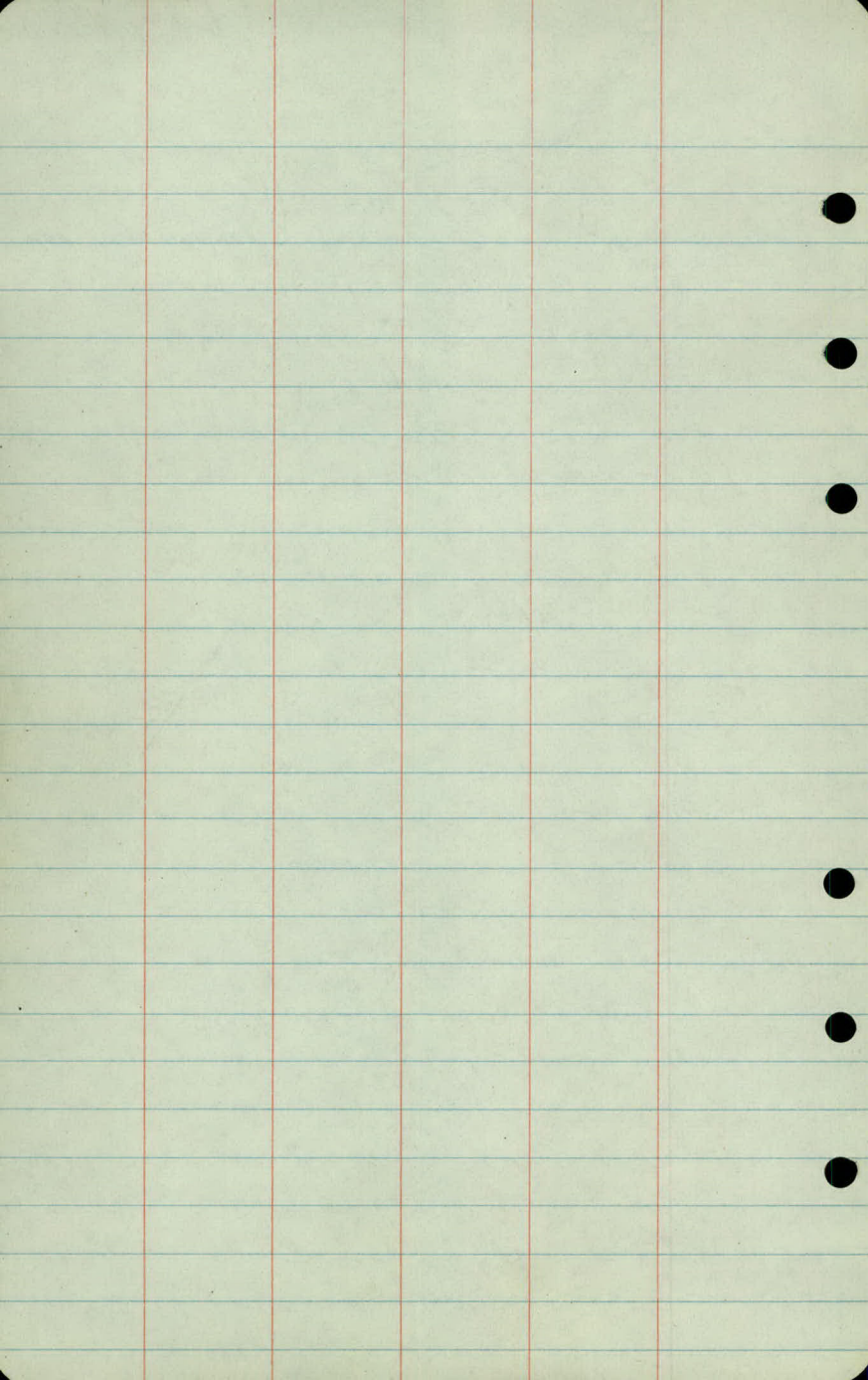
|     |  |                  |  |
|-----|--|------------------|--|
| +25 |  | $4^{\circ}55.4'$ |  |
|-----|--|------------------|--|

|    |  |                  |  |
|----|--|------------------|--|
| 79 |  | $2^{\circ}10.4'$ |  |
|----|--|------------------|--|

|    |             |                |  |
|----|-------------|----------------|--|
| 78 | +80.25 P.G. | $0^{\circ}00'$ |  |
|----|-------------|----------------|--|









56

50-23

55

44-21

54

31-14

53

52

11 14

51

12 13

+64.48

11 13

50



Volcanos

Thos

+186 Rd. Sgn. 10.0

+43 Cul. 12'



+109 Sgn. Water Dept. 48.0

8100

Culc

+29 Rd. Sgn. 20

+141 End Pc. 21.0  
+125 Entr. 10' wide  
+166 Gate 14' long



Brush

+105 End Pc. 29



+114 Rd. Sgn. 19



63 11 8

62 14 8

+50 15 8

61 14 11

+50 14 10

60 14 8

+50 15 5

59 18 4

+50 18 4

58 21 00

57 50-22

52

Fencing 48" W. W.  
with 1 1/4" Iron Pipe  
posts. 1 strid. B. W.  
on Top.

+96 = 18" Cottonwood 17

+73 = 18" Oak 17

+20 = 15" Oak 24

End FC + 10 25

+87 = 17" Oak 28

+66 = 12" Elm 28

+10 30

+92 28

+81 24 1/2 Cotton woods

+72 27

+51 27

+28 24 out

+90 End FC.

+77 = 12" Oak 21

+32 T.P. 21

22 X

24 X

29 X

28 X

24 X

23 X

21 X

25 X

18 X

126

Brush

+77 T.P. 28

+37 Reflect 5 1/2"

+52 T.P. 16"

+41 T.P. 16"

Dead Hard Trees

Lake

+67

+21

+45

+95

71

Black top  
11 10

70

14 10

69

13 7

68

13 8

67

11 8

66

13 7

65

13 8

64

14 8



127 Rd. 3/21/19

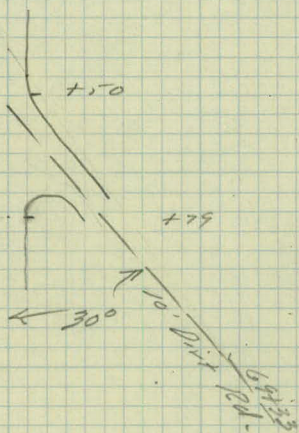
Lake

Wooded

134 Rd. 3/21/21

Volcanic

from Road shoulder to Lake



Woods

and

Brush



Blacktop.  
2

78

11 9

77

13 8

76

11 8

75

11 10

74

11 11

73

9 10

72

10 12

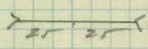
1000 2015

to Lake

Brush

+45 Rd Syn. 13

+21 12" x 50' C.M.



Lake

Wooded from shoulder

with

Wooded

85

Blacktop.  
2  
11 9

84

10 10

83

13 10

82

15 11

81

14 9

+50

16 6

80

20 3

+50

19 3

79

14 5

78



Vermont

wooded from shoulder to lake

+50

+50

lake

17

17

17

16

17

24

24

18

+40 End Woods

+47 Rd Syn 18

+50 Beg. Woods

+59 Rd Syn 14

+60 Rd Syn 19

Dirt Road +28 10'

80x00

+10

↑ End Woods

+29 Beg. Pt. G.D.R. 18°



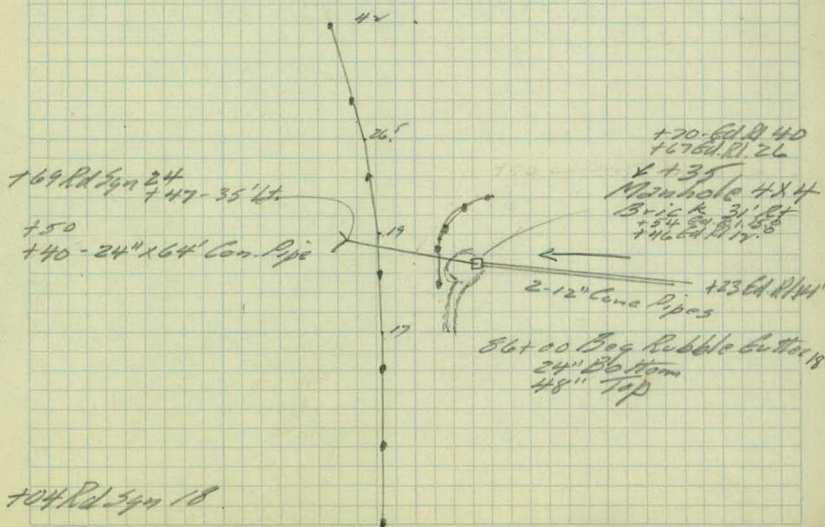
Blocktop  
£

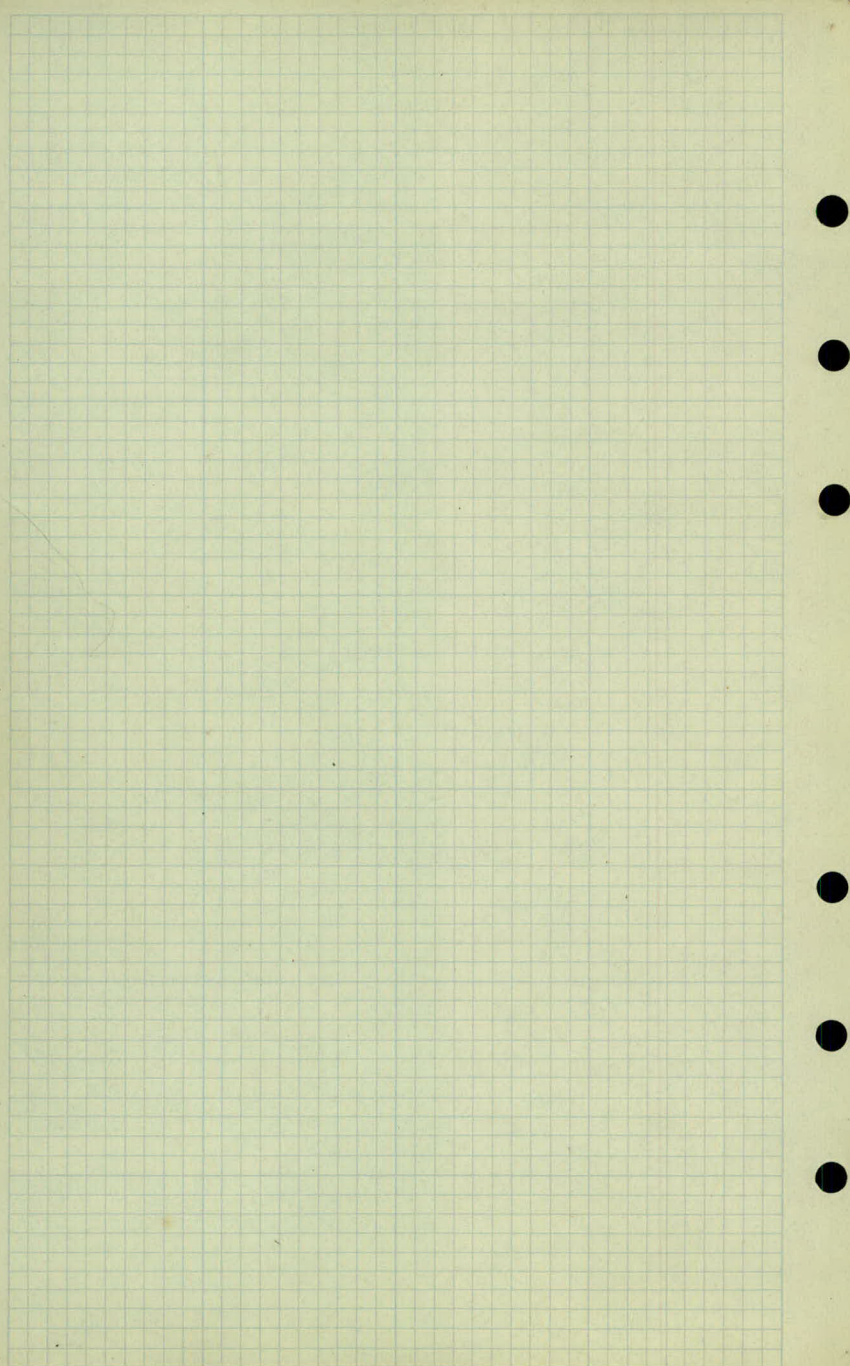
+59.75 P.O.T. Edgerton St  
23 40 Edge Paring

|     |                     |
|-----|---------------------|
| 87  | 18 50 = Edge Paring |
| +78 | 36                  |
| +75 | 15 27               |
| +50 | 14 10               |

86 13 6

85







53  
Vadnais Blvd



| Sta. | +     | K      | - | Elev.  |
|------|-------|--------|---|--------|
| B.M. | 10.17 | 903.35 |   | 893.18 |

|    |  |  |  |      |
|----|--|--|--|------|
| 51 |  |  |  | 97.7 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 97.2 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 52 |  |  |  | 96.6 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +23 |  |  |  | 96.2 |
|-----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| T.P. | 2.81 | 898.00 | 8.16 | 895.19 |
|------|------|--------|------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 95.2 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 53 |  |  |  | 92.7 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +30 |  |  |  | 90.9 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 89.9 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +78 |  |  |  | 87.9 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 54 |  |  |  | 87.4 |
|----|--|--|--|------|

|      |      |        |       |        |
|------|------|--------|-------|--------|
| T.P. | 3.15 | 889.93 | 11.22 | 886.78 |
|------|------|--------|-------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +35 |  |  |  | 82.9 |
|-----|--|--|--|------|

24

24

24

Lower to  
Late 103 60 50 51 61 57 62 70 21 37 37 40  
45 35 30 17 13 62 13 16 20 26 50 76

"

117 51 53 64 62 66 71 70 05 21  
40 34 18 13 16 18 20 27 77

"

108 57 62 74 68 68 71 76 76 +10 00 23 30  
40 34 16 14 11 16 18 20 30 30 78 90

"

110 64 72 80 72 74 80 72 48 14 00 +12 07 38  
40 35 17 14 9 17 21 23 31 36 38 54 81

"

24 2.6 35 29 28 53 36 43 65  
41 21 17 9 13 14 29 50

"

42 44 48 51 58 50 53 56 61 61 51 50 79 97  
50 41 29 26 24 10 7 8 10 13 28 35 50

"

46 61 74 74 71 65 71 73 69 80 108  
50 30 27 26 24 10 5 10 22 50

"

63 72 80 80 77 74 76 81 86 68 60 60 50 72  
50 31 29 27 26 15 7 10 14 21 31 39 60

"

76 82 92 88 88 85 91 88 101 100 85 86 82 98 114  
50 35 33 31 30 18 6 4 8 8 10 23 24 44 52

"

94 94 100 95 102 110 106 101 105 120 152 164  
57 37 35 24 17 11 14 11 21 20 25 50

"

26 26 33 30 36 52 10 90 106  
54 41 41 26 13 10 24 50

| Sta.  | +    | $\Sigma$ | -    | Elev.  |
|-------|------|----------|------|--------|
|       |      | 889.93   |      |        |
| 54145 |      |          |      | 79.9   |
| +58   |      |          |      | 82.1   |
| 55    |      |          |      | 82.9   |
| +50   |      |          |      | 81.7   |
| 56    |      |          |      | 81.5   |
| +50   |      |          |      | 81.4   |
| 57    |      |          |      | 79.8   |
| +25   |      |          |      | 78.5   |
| +51   |      |          |      | 79.3   |
| +70   |      |          |      | 83.2   |
| T.P.  | 5.48 | 889.19   | 6.22 | 883.71 |
| 58    |      |          |      | 83.8   |

4

8

24

66

22

|    |       |       |       |       |       |       |     |     |     |
|----|-------|-------|-------|-------|-------|-------|-----|-----|-----|
| 20 | 887.9 |       |       |       |       |       |     |     |     |
| 50 | 886.9 | 886.0 |       |       |       |       |     |     |     |
| 30 | 39    | 35    | 32    | 38    | 31    | 879.9 |     |     |     |
| 47 | 41    | 40    | 29    | 14    | 14    | 100   | 103 | 104 | 114 |
|    |       |       |       |       |       |       | 18  | 40  | 50  |
|    | 886.3 | 886.3 | 886.0 | 886.1 | 885.7 | 885.6 |     |     |     |
| 36 | 36    | 35    | 38    | 42    | 43    | 882.1 |     |     |     |
| 53 | 43    | 41    | 29    | 18    | 9     | 78    | 100 | 111 | 114 |
|    |       |       |       |       |       |       | 5   | 27  | 50  |
|    | 881.3 | 885.8 | 886.1 | 885.0 | 885.1 | 885.0 |     |     |     |
| 86 | 41    | 38    | 49    | 48    | 49    | 884.9 |     |     |     |
| 65 | 41    | 49    | 46    | 31    | 9     | 70    | 54  | 124 | 119 |
|    |       |       |       |       |       |       | 6   | 13  | 50  |
|    | 881.8 | 885.9 | 885.9 | 884.5 | 884.4 | 884.3 |     |     |     |
| 81 | 40    | 40    | 54    | 55    | 56    | 63    |     |     |     |
| 73 | 71    | 29    | 54    | 50    | 19    | 6     | 82  | 89  | 109 |
|    |       |       |       |       |       |       | 4   | 15  | 50  |

|       |       |       |     |     |
|-------|-------|-------|-----|-----|
| 884.1 | 883.5 | 881.5 |     |     |
| 58    | 64    | 84    | 105 | 115 |
| 50    | 7     | 6     | 21  | 50  |

|       |       |       |     |     |
|-------|-------|-------|-----|-----|
| 884.1 | 883.4 | 881.4 |     |     |
| 58    | 65    | 85    | 103 | 113 |
| 50    | 8     | 8     |     | 50  |

|       |       |       |     |     |
|-------|-------|-------|-----|-----|
| 884.1 | 884.8 | 879.8 |     |     |
| 58    | 71    | 101   | 121 | 118 |
| 50    | 10    | 11    |     | 50  |

|       |       |       |       |     |
|-------|-------|-------|-------|-----|
| 883.9 | 883.1 | 879.5 | 878.5 |     |
| 60    | 68    | 104   | 124   | 117 |
| 50    | 17    | 9     | 16    | 50  |

|       |       |       |       |       |       |       |     |     |
|-------|-------|-------|-------|-------|-------|-------|-----|-----|
| 885.2 | 884.7 | 883.1 | 883.1 | 883.6 | 883.2 | 879.3 |     |     |
| 47    | 5     | 68    | 68    | 63    | 67    | 106   | 117 | 117 |
| 50    | 48    | 43    | 41    | 38    | 8     | 6     | 18  | 50  |

|       |       |       |       |       |       |     |     |     |
|-------|-------|-------|-------|-------|-------|-----|-----|-----|
| 884.6 | 884.6 | 883.1 | 883.5 | 883.5 | 883.2 |     |     |     |
| 53    | 53    | 68    | 64    | 64    | 67    | 107 | 111 | 111 |
| 50    | 39    | 34    | 31    | 18    | 6     | 6   | 34  | 50  |

|       |       |       |       |       |       |    |    |     |
|-------|-------|-------|-------|-------|-------|----|----|-----|
| 881.5 | 884.5 | 884.9 | 883.2 | 883.6 | 883.8 |    |    |     |
| 77    | 47    | 43    | 60    | 56    | 54    | 62 | 96 | 102 |
| 50    | 43    | 28    | 23    | 14    | 64    | 6  | 13 | 18  |
|       |       |       |       |       |       |    |    | 33  |
|       |       |       |       |       |       |    |    | 50  |



| Sta. | + | X | - | Elev. |
|------|---|---|---|-------|
|------|---|---|---|-------|

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | 889.19 |  |  |
|--|--|--------|--|--|

|       |  |  |  |      |
|-------|--|--|--|------|
| 58+50 |  |  |  | 84.1 |
|-------|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 59 |  |  |  | 84.6 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 84.8 |
|-----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| T.P. | 5.83 | 890.64 | 4.38 | 884.81 |
|------|------|--------|------|--------|

|    |  |     |  |      |
|----|--|-----|--|------|
| 60 |  | 853 |  | 84.9 |
|----|--|-----|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +30 |  |  |  | 84.9 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 85.1 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 61 |  |  |  | 86.0 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 87.5 |
|-----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| T.P. | 8.78 | 896.44 | 2.98 | 887.66 |
|------|------|--------|------|--------|

|    |  |  |  |      |
|----|--|--|--|------|
| 62 |  |  |  | 88.8 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 90.3 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 63 |  |  |  | 91.8 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 93.6 |
|-----|--|--|--|------|



| Sta. | +    | K      | -     | Elev.  |
|------|------|--------|-------|--------|
|      |      | 896.44 |       |        |
| T.P. | 0.00 | 896.76 | 0.24  | 896.76 |
| T.P. | 3.83 | 888.78 | 11.25 | 884.95 |
| B.M. |      |        | 0.48  | 888.30 |
|      |      |        |       | 888.28 |

|      |      |        |  |        |
|------|------|--------|--|--------|
| T.P. | 5.49 | 901.69 |  | 896.20 |
| 64   |      |        |  | 95.5   |

+50 97.4

65 99.0

T.P. 9.49 909.58 1.60 900.09

+50 00.5

66 02.4

+50 04.4

+80 05.6

67 06.4

T.P. 10.16 918.16 1.58 908.00

+50 08.4



Nail in Birch 21' Rt Sta. 63+25

Spike in 24" Cottonwood Lt. Sta. 57+20

L.S. - Lake Shore

|     |     |     |     |    |    |    |    |    |    |    |     |      |
|-----|-----|-----|-----|----|----|----|----|----|----|----|-----|------|
| 216 | 20° | 181 | 120 | 97 | 72 | 68 | 62 | 65 | 62 | 81 | +62 | +110 |
| 58  | 44  | 39  | 33  | 25 | 19 | 13 | 61 | 8  | 18 | 24 | 53  | 75   |

L.S.

|     |     |     |    |    |    |    |    |    |    |     |     |      |      |
|-----|-----|-----|----|----|----|----|----|----|----|-----|-----|------|------|
| 216 | 195 | 105 | 88 | 49 | 49 | 43 | 46 | 46 | 35 | +32 | +63 | +105 | +118 |
| 56  | 41  | 34  | 27 | 20 | 13 | 4  | 10 | 15 | 20 | 30  | 43  | 63   | 75   |

L.S.

|     |     |     |     |    |    |    |    |    |    |    |     |     |      |      |
|-----|-----|-----|-----|----|----|----|----|----|----|----|-----|-----|------|------|
| 216 | 20° | 187 | 10° | 36 | 31 | 38 | 33 | 27 | 31 | 31 | +37 | +78 | +122 | +131 |
| 63  | 49  | 45  | 37  | 28 | 19 | 16 | 13 | 2  | 10 | 16 | 29  | 43  | 64   | 75   |

L.S.

|     |     |     |     |     |     |    |    |    |    |    |     |
|-----|-----|-----|-----|-----|-----|----|----|----|----|----|-----|
| 291 | 268 | 185 | 130 | 106 | 103 | 98 | 91 | 83 | 43 | 30 | +53 |
| 67  | 51  | 44  | 34  | 28  | 18  | 16 | 9  | 15 | 21 | 30 | 25  |

|     |     |     |    |    |    |    |    |     |     |     |
|-----|-----|-----|----|----|----|----|----|-----|-----|-----|
| 158 | 154 | 131 | 86 | 75 | 72 | 74 | 48 | +11 | +56 | +62 |
| 53  | 41  | 30  | 22 | 13 | 7  | 13 | 17 | 25  | 26  | 25  |

|     |     |     |    |    |    |    |    |     |     |     |
|-----|-----|-----|----|----|----|----|----|-----|-----|-----|
| 156 | 144 | 105 | 83 | 82 | 56 | 52 | 54 | +14 | +44 | +58 |
| 57  | 50  | 29  | 22 | 16 | 14 | 2  | 14 | 25  | 24  | 25  |

|     |     |     |    |    |    |    |    |     |     |     |
|-----|-----|-----|----|----|----|----|----|-----|-----|-----|
| 167 | 139 | 100 | 47 | 47 | 40 | 42 | 15 | +33 | +50 | +60 |
| 64  | 58  | 39  | 21 | 16 | 4  | 14 | 18 | 26  | 34  | 25  |

|     |     |    |    |    |    |    |    |     |     |     |
|-----|-----|----|----|----|----|----|----|-----|-----|-----|
| 170 | 101 | 61 | 21 | 37 | 31 | 32 | 33 | +35 | +55 | +51 |
| 69  | 46  | 34 | 19 | 16 | 14 | 3  | 15 | 26  | 54  | 25  |

|     |    |     |     |    |     |     |    |    |
|-----|----|-----|-----|----|-----|-----|----|----|
| 148 | 80 | 106 | 103 | 98 | 103 | 100 | 35 | 33 |
| 50  | 23 | 17  | 11  | 9  | 14  | 24  | 17 |    |



| Sta. | + | $\pi$  | - | Elev. |
|------|---|--------|---|-------|
|      |   | 918.16 |   |       |

|    |  |  |  |      |
|----|--|--|--|------|
| 68 |  |  |  | 10.2 |
|----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| B.M. | 8.51 | 918.16 | 8.51 | 909.65 |
|------|------|--------|------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 12.1 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +78 |  |  |  | 12.9 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 69 |  |  |  | 13.3 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +80 |  |  |  | 13.1 |
|-----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| T.P. | 4.41 | 916.99 | 5.58 | 912.58 |
|------|------|--------|------|--------|

|    |  |  |  |      |
|----|--|--|--|------|
| 70 |  |  |  | 12.6 |
|----|--|--|--|------|

12

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 12.6 |
|-----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +82 |  |  |  | 12.5 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 71 |  |  |  | 12.4 |
|----|--|--|--|------|

|      |      |        |      |        |
|------|------|--------|------|--------|
| T.P. | 6.24 | 917.64 | 5.59 | 911.40 |
|------|------|--------|------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| +50 |  |  |  | 11.5 |
|-----|--|--|--|------|

|    |  |  |  |     |
|----|--|--|--|-----|
| 72 |  |  |  | 9.7 |
|----|--|--|--|-----|

4.

2

12.

$\frac{101}{50}$   $\frac{85}{45}$   $\frac{53}{24}$   $\frac{85}{19}$   $\frac{85}{15}$   $\frac{82}{12}$   $\frac{80}{10}$   $\frac{83}{10}$   $\frac{84}{14}$   $\frac{46}{19}$   $\frac{34}{30}$   $\frac{27}{75}$

Top of brass plug in Concrete 45' Lt. Sta 68+08  
(water Dept. 8.11.7) 1"

$\frac{111}{50}$   $\frac{101}{46}$   $\frac{28}{39}$   $\frac{55}{21}$   $\frac{67}{17}$   $\frac{66}{14}$   $\frac{61}{8}$   $\frac{64}{8}$   $\frac{64}{14}$   $\frac{33}{19}$   $\frac{32}{50}$   $\frac{22}{75}$

$\frac{123}{50}$   $\frac{85}{34}$   $\frac{58}{18}$   $\frac{60}{17}$   $\frac{65}{10}$   $\frac{53}{14}$   $\frac{55}{14}$   $\frac{36}{17}$   $\frac{44}{23}$   $\frac{38}{45}$   $\frac{32}{50}$

$\frac{149}{50}$   $\frac{130}{36}$   $\frac{76}{24}$   $\frac{59}{17}$   $\frac{52}{9}$   $\frac{49}{10}$   $\frac{48}{10}$   $\frac{46}{33}$   $\frac{33}{36}$   $\frac{34}{50}$

$\frac{147}{50}$   $\frac{84}{29}$   $\frac{59}{15}$   $\frac{52}{7}$   $\frac{51}{13}$   $\frac{56}{13}$   $\frac{43}{15}$   $\frac{27}{50}$

$\frac{158}{50}$   $\frac{116}{38}$   $\frac{21}{19}$   $\frac{51}{14}$   $\frac{46}{8}$   $\frac{44}{10}$   $\frac{48}{10}$   $\frac{46}{15}$   $\frac{33}{18}$   $\frac{24}{29}$   $\frac{17}{50}$

$\frac{165}{50}$   $\frac{126}{37}$   $\frac{110}{32}$   $\frac{81}{20}$   $\frac{51}{13}$   $\frac{45}{6}$   $\frac{44}{14}$   $\frac{51}{14}$   $\frac{40}{18}$   $\frac{26}{34}$   $\frac{25}{50}$

$\frac{301}{69}$   $\frac{244}{58}$   $\frac{207}{50}$   $\frac{153}{40}$   $\frac{118}{30}$   $\frac{71}{24}$   $\frac{62}{18}$   $\frac{54}{14}$   $\frac{45}{10}$   $\frac{50}{10}$   $\frac{52}{14}$   $\frac{34}{19}$   $\frac{26}{50}$

$\frac{213}{52}$   $\frac{158}{48}$   $\frac{140}{40}$   $\frac{94}{35}$   $\frac{71}{28}$   $\frac{53}{16}$   $\frac{46}{12}$   $\frac{52}{12}$   $\frac{53}{14}$   $\frac{33}{19}$   $\frac{26}{50}$

$\frac{193}{50}$   $\frac{100}{37}$   $\frac{84}{30}$   $\frac{66}{17}$   $\frac{68}{11}$   $\frac{66}{11}$   $\frac{61}{10}$   $\frac{63}{10}$   $\frac{66}{16}$   $\frac{40}{21}$   $\frac{44}{50}$

$\frac{374}{19}$   $\frac{360}{68}$   $\frac{294}{61}$   $\frac{294}{60}$   $\frac{146}{50}$   $\frac{140}{40}$   $\frac{93}{29}$   $\frac{70}{18}$   $\frac{81}{13}$   $\frac{82}{19}$   $\frac{79}{10}$   $\frac{82}{10}$   $\frac{86}{14}$   $\frac{82}{18}$   $\frac{43}{43}$   $\frac{50}{46}$   $\frac{66}{50}$

Sta.      +       $\pi$       -      Elev.

917.64

72+50

07.4

T.P.      3.23      908.45      11.44      906.22

+77

06.2

73

05.2

+50

02.6

T.P.      1.22      900.93      2.74      899.71

74

99.7

+50

97.3

75

95.1

T.P.      2.60      896.46      2.07      893.86

+50

93.3

76

92.1

+21 = Elev. t.

+50

91.7

77

91.9

B.M.      9.87      899.78      6.55      889.91

L.S.

$$\frac{374}{61} \quad \frac{358}{49}$$

$$\frac{280}{41} \quad \frac{228}{37} \quad \frac{188}{33} \quad \frac{128}{28} \quad \frac{104}{24} \quad \frac{87}{18} \quad \frac{107}{13} \quad \frac{106}{9} \quad \frac{102}{10} \quad \frac{107}{10} \quad \frac{113}{14} \quad \frac{105}{17} \quad \frac{61}{25} \quad \frac{88}{49} \quad \frac{121}{50}$$

L.S.

$$\frac{287}{61} \quad \frac{274}{48} \quad \frac{210}{43} \quad \frac{53}{28} \quad \frac{12}{19} \quad \frac{34}{12} \quad \frac{35}{9} \quad \frac{33}{11} \quad \frac{38}{15} \quad \frac{43}{18} \quad \frac{34}{24} \quad \frac{30}{36} \quad \frac{17}{49} \quad \frac{134}{50}$$

L.S.

$$\frac{287}{60} \quad \frac{274}{50} \quad \frac{140}{35} \quad \frac{83}{23} \quad \frac{45}{26} \quad \frac{19}{18} \quad \frac{46}{13} \quad \frac{43}{7} \quad \frac{46}{10} \quad \frac{51}{15} \quad \frac{55}{20} \quad \frac{119}{40} \quad \frac{141}{45} \quad \frac{163}{50}$$

L.S.

$$\frac{287}{63} \quad \frac{278}{55} \quad \frac{185}{45} \quad \frac{127}{36} \quad \frac{54}{20} \quad \frac{64}{18} \quad \frac{67}{14} \quad \frac{24}{13} \quad \frac{20}{7} \quad \frac{9}{14} \quad \frac{28}{25} \quad \frac{183}{43} \quad \frac{164}{50}$$

L.S.

$$\frac{207}{41} \quad \frac{187}{41} \quad \frac{157}{46} \quad \frac{137}{43} \quad \frac{115}{40} \quad \frac{64}{32} \quad \frac{15}{19} \quad \frac{20}{17} \quad \frac{19}{14} \quad \frac{12}{11} \quad \frac{18}{11} \quad \frac{20}{14} \quad \frac{81}{25} \quad \frac{88}{38} \quad \frac{100}{50}$$

L.S. = Lake Shore

$$\frac{207}{38} \quad \frac{180}{42} \quad \frac{140}{36} \quad \frac{113}{34} \quad \frac{58}{20} \quad \frac{44}{14} \quad \frac{41}{11} \quad \frac{36}{14} \quad \frac{47}{24} \quad \frac{103}{31} \quad \frac{110}{34} \quad \frac{104}{50}$$

L.S.

$$\frac{207}{56} \quad \frac{180}{38} \quad \frac{140}{33} \quad \frac{111}{25} \quad \frac{50}{19} \quad \frac{67}{14} \quad \frac{60}{9} \quad \frac{58}{11} \quad \frac{66}{20} \quad \frac{106}{24} \quad \frac{132}{30} \quad \frac{136}{33} \quad \frac{110}{50}$$

L.S.

$$\frac{159}{62} \quad \frac{133}{37} \quad \frac{107}{34} \quad \frac{84}{27} \quad \frac{67}{19} \quad \frac{37}{13} \quad \frac{35}{10} \quad \frac{32}{7} \quad \frac{36}{9} \quad \frac{43}{12} \quad \frac{81}{18} \quad \frac{100}{21} \quad \frac{108}{29} \quad \frac{84}{31} \quad \frac{88}{50}$$

L.S.

$$\frac{159}{71} \quad \frac{146}{42} \quad \frac{132}{33} \quad \frac{80}{26} \quad \frac{67}{17} \quad \frac{50}{14} \quad \frac{47}{10} \quad \frac{44}{6} \quad \frac{48}{11} \quad \frac{55}{19} \quad \frac{107}{27} \quad \frac{112}{41} \quad \frac{120}{50}$$

$$\frac{136}{136} 82.9$$

$$\frac{136}{133} 83.2$$

$$\frac{159}{80} \quad \frac{137}{40} \quad \frac{96}{37} \quad \frac{79}{27} \quad \frac{74}{18} \quad \frac{57}{14} \quad \frac{54}{11} \quad \frac{48}{11} \quad \frac{51}{7} \quad \frac{56}{13} \quad \frac{100}{21} \quad \frac{104}{30} \quad \frac{80}{33} \quad \frac{76}{50}$$

$$\frac{159}{71} \quad \frac{142}{40} \quad \frac{88}{37} \quad \frac{29}{33} \quad \frac{62}{21} \quad \frac{49}{13} \quad \frac{44}{11} \quad \frac{50}{9} \quad \frac{53}{12} \quad \frac{57}{20} \quad \frac{97}{29} \quad \frac{71}{31} \quad \frac{67}{50}$$

Spike in 30" Cottonwood 75' Rt. 76+50



| Sta.  | +    | $\pi$  | -    | Elev.  |
|-------|------|--------|------|--------|
|       |      | 899.78 |      |        |
| 77+50 |      |        |      | 92.4   |
| 78    |      |        |      | 93.4   |
| +50   |      |        |      | 94.6   |
| 79    |      |        |      | 95.8   |
| +50   |      |        |      | 96.5   |
| 80    |      |        |      | 96.6   |
| T.P.  | 5.21 | 901.90 | 309  | 896.69 |
| +50   |      |        |      | 96.6   |
| 81    |      |        |      | 96.4   |
| +50   |      |        |      | 96.0   |
| 82    |      |        |      | 95.9   |
| +50   |      |        |      | 95.6   |
| T.P.  | 4.06 | 899.06 | 6.90 | 895.00 |
| 83    |      |        |      | 95.1   |

LT.

ET

RT.

L.S. - 22th Shore

193 178 136 88 83 78 74 27 80 116 123 92 88  
57 38 31 21 17 10 8 17 19 29 34 50

L.S.  
193

57 171 117 75 69 64 70 101 103 79 76  
34 25 17 14 12 20 30 36 50

L.S.

193 175 130 114 88 61 55 52 56 59 55 5.8  
58 47 39 37 30 20 11 8 16 20 50

L.S.

193 174 149 105 55 46 42 40 42 44 47  
61 48 38 30 23 16 9 7 22 50

L.S.

193 172 114 53 46 37 33 34 39 40  
64 49 38 29 21 10 11 19 50

L.S. 178 143 54 46 3.7 2.9 3.6 28 3.0  
193 57 44 27 17 8 3.2 24 26 44 50  
54

L.S.

214 182 123 77 67 60 53 50 40 63 63 53 52  
70 44 34 26 15 9 11 21 25 30 32 50

L.S.

214 193 165 129 75 L.4  
72 53 46 33 23 12 5.5 54 55 69 71 57 44  
5.5 11 18 20 27 29 50

174 146 110 74 68 64 5.9 5.9 5.8 21 70 57 48  
50 36 26 18 14 8 13 17 21 25 28 50

188 145 78 68 62 60 65 67 81 81 66 50  
50 37 21 15 7 11 16 20 25 27 50

173 148 79 68 63 70 89 80 69 38  
10 43 21 13 13 14 23 26 50

147 132 53 44 4.0 4.5 50 70 60 1.8 1.4  
50 34 20 13 9 16 21 25 39 50

Sta.      +       $\pi$       -      Elev.

899.06

83+50

94.6

84

94.1

+50

93.7

+65

93.6

85

93.4

+50

93.3

86

92.7

+50

91.5

+78

91.3

87

91.1

+59<sup>75</sup>

POT

91.1

L.

E

R.

$$\begin{array}{r} 14.7 \\ 50 \end{array} \quad \begin{array}{r} 13.7 \\ 21 \end{array} \quad \begin{array}{r} 6.6 \\ 21 \end{array} \quad \begin{array}{r} 5.1 \\ 15 \end{array} \quad \begin{array}{r} 4.7 \\ 8 \end{array} \quad \begin{array}{r} 4.5 \\ 9 \end{array} \quad \begin{array}{r} 4.8 \\ 13 \end{array} \quad \begin{array}{r} 5.1 \\ 15 \end{array} \quad \begin{array}{r} 6.1 \\ 23 \end{array} \quad \begin{array}{r} 7.8 \\ 31 \end{array} \quad \begin{array}{r} 6.7 \\ 43 \end{array} \quad \begin{array}{r} 2.7 \\ 43 \end{array} \quad \begin{array}{r} 2.0 \\ 50 \end{array}$$

$$\begin{array}{r} 14.7 \\ 50 \end{array} \quad \begin{array}{r} 14.7 \\ 43 \end{array} \quad \begin{array}{r} 12.6 \\ 31 \end{array} \quad \begin{array}{r} 6.2 \\ 19 \end{array} \quad \begin{array}{r} 5.2 \\ 8 \end{array} \quad \begin{array}{r} 5.0 \\ 11 \end{array} \quad \begin{array}{r} 5.4 \\ 17 \end{array} \quad \begin{array}{r} 5.7 \\ 20 \end{array} \quad \begin{array}{r} 6.6 \\ 23 \end{array} \quad \begin{array}{r} 6.9 \\ 24 \end{array} \quad \begin{array}{r} 5.8 \\ 24 \end{array} \quad \begin{array}{r} 1.0 \\ 42 \end{array} \quad \begin{array}{r} 1.0 \\ 50 \end{array}$$

$$\begin{array}{r} 15.1 \\ 50 \end{array} \quad \begin{array}{r} 14.2 \\ 31 \end{array} \quad \begin{array}{r} 6.9 \\ 20 \end{array} \quad \begin{array}{r} 5.9 \\ 13 \end{array} \quad \begin{array}{r} 5.4 \\ 17 \end{array} \quad \begin{array}{r} 5.8 \\ 20 \end{array} \quad \begin{array}{r} 6.8 \\ 25 \end{array} \quad \begin{array}{r} 7.1 \\ 27 \end{array} \quad \begin{array}{r} 5.5 \\ 27 \end{array} \quad \begin{array}{r} 3.3 \\ 39 \end{array} \quad \begin{array}{r} 1.5 \\ 50 \end{array}$$

$$\begin{array}{r} 15.0 \\ 50 \end{array} \quad \begin{array}{r} 14.0 \\ 34 \end{array} \quad \begin{array}{r} 7.1 \\ 20 \end{array} \quad \begin{array}{r} 6.0 \\ 13 \end{array} \quad \begin{array}{r} 5.5 \\ 12 \end{array} \quad \begin{array}{r} 5.8 \\ 17 \end{array} \quad \begin{array}{r} 6.1 \\ 19 \end{array} \quad \begin{array}{r} 7.0 \\ 23 \end{array} \quad \begin{array}{r} 6.7 \\ 26 \end{array} \quad \begin{array}{r} 5.0 \\ 26 \end{array} \quad \begin{array}{r} 5.5 \\ 50 \end{array}$$

$$\begin{array}{r} 15.2 \\ 50 \end{array} \quad \begin{array}{r} 12.5 \\ 31 \end{array} \quad \begin{array}{r} 7.4 \\ 21 \end{array} \quad \begin{array}{r} 6.3 \\ 17 \end{array} \quad \begin{array}{r} 5.7 \\ 6 \end{array} \quad \begin{array}{r} 5.9 \\ 17 \end{array} \quad \begin{array}{r} 6.3 \\ 19 \end{array} \quad \begin{array}{r} 7.2 \\ 21 \end{array} \quad \begin{array}{r} 7.2 \\ 22 \end{array} \quad \begin{array}{r} 6.1 \\ 22 \end{array} \quad \begin{array}{r} 7.4 \\ 50 \end{array}$$

$$\begin{array}{r} 15.2 \\ 50 \end{array} \quad \begin{array}{r} 13.8 \\ 35 \end{array} \quad \begin{array}{r} 7.5 \\ 22 \end{array} \quad \begin{array}{r} 6.5 \\ 15 \end{array} \quad \begin{array}{r} 6.0 \\ 9 \end{array} \quad \begin{array}{r} 5.8 \\ 11 \end{array} \quad \begin{array}{r} 6.2 \\ 17 \end{array} \quad \begin{array}{r} 7.5 \\ 19 \end{array} \quad \begin{array}{r} 7.6 \\ 21 \end{array} \quad \begin{array}{r} 6.4 \\ 21 \end{array} \quad \begin{array}{r} 8.2 \\ 50 \end{array}$$

$$\begin{array}{r} 15.4 \\ 50 \end{array} \quad \begin{array}{r} 14.4 \\ 34 \end{array} \quad \begin{array}{r} 7.8 \\ 21 \end{array} \quad \begin{array}{r} 6.7 \\ 14 \end{array} \quad \begin{array}{r} 6.4 \\ 8 \end{array} \quad \begin{array}{r} 6.4 \\ 14 \end{array} \quad \begin{array}{r} 7.0 \\ 17 \end{array} \quad \begin{array}{r} 8.0 \\ 19 \end{array} \quad \begin{array}{r} 7.8 \\ 20 \end{array} \quad \begin{array}{r} 7.6 \\ 29 \end{array} \quad \begin{array}{r} 7.6 \\ 50 \end{array}$$

$$\begin{array}{r} 13.9 \\ 50 \end{array} \quad \begin{array}{r} 14.3 \\ 31 \end{array} \quad \begin{array}{r} 8.3 \\ 22 \end{array} \quad \begin{array}{r} 7.9 \\ 17 \end{array} \quad \begin{array}{r} 7.5 \\ 8 \end{array} \quad \begin{array}{r} 7.6 \\ 13 \end{array} \quad \begin{array}{r} 7.8 \\ 13 \end{array} \quad \begin{array}{r} 11.2 \\ 50 \end{array}$$

$$\begin{array}{r} 14.7 \\ 50 \end{array} \quad \begin{array}{r} 13.4 \\ 36 \end{array} \quad \begin{array}{r} 9.4 \\ 29 \end{array} \quad \begin{array}{r} 8.2 \\ 24 \end{array} \quad \begin{array}{r} 7.6 \\ 7 \end{array} \quad \begin{array}{r} 7.8 \\ 7 \end{array} \quad \begin{array}{r} 8.3 \\ 13 \end{array} \quad \begin{array}{r} 8.9 \\ 13 \end{array} \quad \begin{array}{r} 12.0 \\ 36 \end{array} \quad \begin{array}{r} 12.6 \\ 50 \end{array} \quad \begin{array}{r} 12.7 \\ 60 \end{array} \quad \text{Paving}$$

$$\begin{array}{r} 14.6 \\ 50 \end{array} \quad \begin{array}{r} 13.9 \\ 45 \end{array} \quad \begin{array}{r} 8.9 \\ 35 \end{array} \quad \begin{array}{r} 8.1 \\ 8 \end{array} \quad \begin{array}{r} 7.7 \\ 8 \end{array} \quad \begin{array}{r} 8.0 \\ 11 \end{array} \quad \begin{array}{r} 8.7 \\ 11 \end{array} \quad \begin{array}{r} 11.6 \\ 43 \end{array} \quad \begin{array}{r} 12.4 \\ 53 \end{array} \quad \text{Paving}$$

$$\begin{array}{r} 9.0 \\ 48 \end{array} \quad \begin{array}{r} 8.2 \\ 34 \end{array} \quad \begin{array}{r} 7.7 \\ 19 \end{array} \quad \begin{array}{r} 8.0 \\ 14 \end{array} \quad \begin{array}{r} 8.7 \\ 14 \end{array} \quad \begin{array}{r} 9.4 \\ 27 \end{array} \quad \begin{array}{r} 10.2 \\ 39 \end{array} \quad \text{Paving}$$



Sta.      +       $\pi$       -      Elev.  
899.06

86+40      Culvert & Manhole

B.M.      0.57      898.49      898.48

Lt.

E

Rt.

$$\begin{array}{r} \text{Inv.} \\ 177 \end{array} 81.4$$

$$\begin{array}{r} \text{Inv.} \\ 124 \\ 81.7 \end{array} \quad \begin{array}{r} \text{Top Manhole} \\ 10.2 \end{array} 88.9$$

Spike in 24" Elm 75' Rt Sta. 83+60

Sta.

+

$\pi$

-

Elev.

Alma. P. Mitchell  
9<sup>1</sup>/<sub>2</sub> acres.

Alma P. Mitchell  
6<sup>3</sup>/<sub>8</sub> ac.

N 320 ft of S 1831 ft of W 867 ft

Sec 32 - 6,387

1450 ft of W 867 ft + N 33 ft  
above des



City of St Paul

That part of Gov lots 3 & 4

Sec 32 W of Centerville Rd + N  
of a line 2264.5 ft N from &  
~~parallel~~ with S line of Sec 32

Vadnais Bluff

Vaduzis Blvd.

Slope Stakes

Plan April 1938

| Sta. | +    | x      | -     | E<br>Grade | widening |
|------|------|--------|-------|------------|----------|
| B.M. | 1.96 | 929.86 |       | 927.90     |          |
| 0+50 |      |        |       | 25.6       |          |
| 1    |      |        |       | 22.3       |          |
| +50  |      |        |       | 19.1       |          |
| T.P. | 5.40 | 923.02 | 12.24 | 917.62     |          |
| 2    |      |        |       | 15.8       |          |
| +50  |      |        |       | 12.5       |          |
| T.P. | 2.67 | 913.93 | 11.78 | 911.24     |          |
| 3    |      |        |       | 09.3       |          |
| +28  |      |        |       | 07.5       |          |
| +60  |      |        |       | 05.4       |          |



4  
Grade  
Road.

Ditch  
Road.

4.

4

4.

2  
68

Hole in Br. @ Rice St.

4.3 5.8

$$\begin{array}{r} 58 \\ 87 \\ \hline 25.7 \end{array}$$

$$\begin{array}{r} 43 \\ 87 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 52 \\ 87 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 43 \\ 87 \\ \hline 15 \end{array}$$

7.6 9.1

$$\begin{array}{r} 91 \\ 90.00 \\ \hline 24.6 \end{array}$$

$$\begin{array}{r} 88 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 81 \\ 87 \\ \hline 20 \end{array}$$

10.8 12.3

$$\begin{array}{r} 123 \\ 90.00 \\ \hline 22.7 \end{array}$$

$$\begin{array}{r} 120 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 138 \\ 87 \\ \hline 24 \end{array}$$

7.4 8.7

$$\begin{array}{r} 20 \\ 90.67 \\ \hline 36.9 \end{array}$$

$$\begin{array}{r} 87 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 78 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 99 \\ 87 \\ \hline 23.1 \end{array}$$

10.5 14.0

$$\begin{array}{r} 52 \\ 90.68 \\ \hline 37.1 \end{array}$$

$$\begin{array}{r} 87 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 10.5 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 121 \\ 87 \\ \hline 19.8 \end{array}$$

4.6 6.1

$$\begin{array}{r} 25 \\ 90.36 \\ \hline 30.7 \end{array}$$

$$\begin{array}{r} 87 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 42 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 55 \\ 87 \\ \hline 25.3 \end{array}$$

6.4 7.9

not OK

$$\begin{array}{r} 55 \\ 90.24 \\ \hline 29.0 \end{array}$$

$$\begin{array}{r} 61 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 61 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 81 \\ 87 \\ \hline 20.1 \end{array}$$

8.5 10.0

Not bet  
Rec'd Sand Pile

$$\begin{array}{r} 82 \\ 87 \\ \hline 1.2 \end{array}$$

$$\begin{array}{r} 133 \\ 87 \\ \hline 24.6 \end{array}$$

2

Mildred

Sta. + T. - Grade

T.P. 0.53 913.93 906.71 7.75 906.18

4 02.8

T.P. 3.45 904.88 7.08 899.63

+50 99.5 0.7

+70 BC

T.P. 3.70 899.81 6.77 896.11

5 96.3 3.5

T.P. 2.25 894.86 7.20 892.61

+50 93.4 3.5

T.P. 1.53 891.44 4.97 889.89

6 90.9 3.3

122 BC

+50 88.9 0.5

7 87.6 0.4

124 BC

+50 86.8 2.6

| Increment |      | E         |     | Rod |                              | Lt.                | E                            | Rt. | 3<br>69 |
|-----------|------|-----------|-----|-----|------------------------------|--------------------|------------------------------|-----|---------|
| Grade     |      | Grade     |     | Rod |                              |                    |                              |     |         |
| Lt.       | Rt.  | Lt.       | Rt. | Lt. | Rt.                          |                    |                              |     |         |
| 0.24      | 0.24 | 3.9       | 3.7 | 4.1 | $\frac{90}{F.5.3}$<br>25.6   | $\frac{33}{6.06}$  | $\frac{116}{F.7.5}$<br>30.0  |     |         |
| 0.5       | 0.5  | 3.4       | 2.9 | 3.9 | $\frac{113}{F.8.4}$<br>31.8  | $\frac{30}{6.04}$  | $\frac{128}{F.8.9}$<br>33.5  |     |         |
| 1.0       | 1.0  | 3.5       | 2.5 | 4.5 | $\frac{134}{F.10.9}$<br>36.8 | $\frac{37}{F.0.9}$ | $\frac{143}{F.9.8}$<br>38.1  |     |         |
| 1.0       | 1.0  | 1.5       | 0.5 | 2.5 | $\frac{115}{F.11.0}$<br>37.0 | $\frac{24}{F.0.9}$ | $\frac{127}{F.10.2}$<br>38.9 |     |         |
| 0.8       | 0.8  | 0.5 + 0.3 | 1.3 |     | $\frac{94}{F.9.7}$<br>34.4   | $\frac{16}{F.1.1}$ | $\frac{102}{F.8.9}$<br>36.1  |     |         |
| 0.3       | 0.3  | 1.5       | 1.1 | 2.8 | $\frac{104}{F.8.2}$<br>31.4  | $\frac{34}{F.0.9}$ | $\frac{84}{F.6.6}$<br>26.7   |     |         |
| None      | 3.8  | —         |     |     | $\frac{108}{F.2.0}$<br>25.4  | $\frac{46}{F.0.8}$ | $\frac{55}{F.5.7}$<br>26.4   |     |         |
| 0.4       | 0.4  | 4.6       | 5.0 | 4.2 | $\frac{110}{F.6.0}$<br>29.6  | $\frac{53}{F.0.7}$ | $\frac{92}{F.4.9}$<br>24.8   |     |         |

Widening

£

|         |      |        |      |        |     |
|---------|------|--------|------|--------|-----|
| 5 1/2   | +    | π      | -    | Grade  |     |
|         |      | 891.42 |      |        |     |
| 8       |      |        |      | 86.4   | 3.0 |
| +50     |      |        |      | 86.4   | 3.0 |
| 9       |      |        |      | 86.3   | 3.0 |
| +50     |      |        |      | 86.3   | 3.0 |
| 10      |      |        |      | 86.2   | 2.4 |
| in E.C. |      |        |      |        |     |
| T.P.    | 5.09 | 890.33 | 6.18 | 885.24 |     |
| +50     |      |        |      | 86.2   | 0.4 |
| 11      |      |        |      | 86.1   |     |
| +50     |      |        |      | 86.1   |     |



Increment

Grade  
Rolls

Lt.

E

Rt.

4  
70

L Lt. Rt.

1.0 5.0 6.0 4.0

10.7  
F4.7  
27.4

5.5  
F0.5

8.5  
F5.5  
26.0

1.0 5.0 6.0 4.0

10.5  
F4.5  
27.0

5.5  
F0.5

9.2  
F5.2  
25.4

1.0 5.1 6.1 4.1

10.0  
F3.9  
25.8

5.5  
F0.4

8.1  
F5.0  
25.0

1.0 5.1 6.1 4.1

10.0  
F3.9  
25.8

5.4  
F0.3

8.9  
F4.8  
24.6

0.7 5.2 5.9 4.5

9.5  
F3.6  
24.4

5.4  
F0.2

8.4  
F4.9  
24.8

0.3 4.1 4.4 3.8

8.6  
F4.2  
23.6

4.5  
F0.4

8.8  
F5.0  
25.0

4.2

6.4  
F1.2  
19.4

4.4  
F0.1

8.8  
F4.6  
24.2

4.2

8.5  
F4.3  
23.6

4.4  
F0.2

8.4  
F4.2  
23.4

2

Sta. +  $\pi$  - Grade

890.33

12 86.0

+50 86.0

13 85.9

+50 85.9

15 v. B.C.

14 85.8

~~8.47~~

882.17

+50 85.8

15 85.7

+50 85.7

T.P. 3.78 888.89 4.74 885.61

Grade  
Rod.

4.

2

4

5  
71

4.3

$$\begin{array}{r} 84 \\ \hline F.41 \\ \hline 23.2 \end{array}$$

$$\begin{array}{r} 44 \\ \hline F.01 \\ \hline \end{array}$$

$$\begin{array}{r} 8.9 \\ \hline F.46 \\ \hline 24.2 \end{array}$$

4.3.

$$\begin{array}{r} 84 \\ \hline F.41 \\ \hline 23.2 \end{array}$$

$$\begin{array}{r} 43 \\ \hline C.00 \\ \hline \end{array}$$

$$\begin{array}{r} 2.7 \\ \hline F.34 \\ \hline 21.8 \end{array}$$

4.4

$$\begin{array}{r} 74 \\ \hline F.30 \\ \hline 21.0 \end{array}$$

$$\begin{array}{r} 41 \\ \hline C.03 \\ \hline \end{array}$$

$$\begin{array}{r} 85 \\ \hline F.41 \\ \hline 23.2 \end{array}$$

4.4

$$\begin{array}{r} 64 \\ \hline F.20 \\ \hline 19.0 \end{array}$$

$$\begin{array}{r} 41 \\ \hline C.03 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ \hline F.40 \\ \hline 23.0 \end{array}$$

4.5

$$\begin{array}{r} 72 \\ \hline F.32 \\ \hline 21.4 \end{array}$$

$$\begin{array}{r} 42 \\ \hline C.03 \\ \hline \end{array}$$

$$\begin{array}{r} 85 \\ \hline F.40 \\ \hline 23.0 \end{array}$$

~~170' Rt. Sta 14+00 - Bone-Tree Fallow~~

4.5

$$\begin{array}{r} 92 \\ \hline F.42 \\ \hline 24.4 \end{array}$$

$$\begin{array}{r} 43 \\ \hline C.02 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ \hline F.41 \\ \hline 23.2 \end{array}$$

4.6

$$\begin{array}{r} 98 \\ \hline F.52 \\ \hline 25.4 \end{array}$$

$$\begin{array}{r} 44 \\ \hline C.02 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ \hline F.30 \\ \hline 21.0 \end{array}$$

4.6

$$\begin{array}{r} 93 \\ \hline F.47 \\ \hline 24.4 \end{array}$$

$$\begin{array}{r} 46 \\ \hline C.00 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ \hline F.41 \\ \hline 23.2 \end{array}$$

£

5/12. +  $\pi$  - Evade

888.89

16 85.6

+50 85.6

17 85.5

+14 E.C.

+50 85.5

+88 AC

18 85.4

+50 85.4

19 85.3

B.M. 10.85 894.75 4.96 883.93 883.90

+50 85.3



Grade  
Roll

LT

CE

RT

6  
71

3.3

$$\begin{array}{r} 8.2 \\ F.4.9 \\ \hline 24.8 \end{array}$$

$$\begin{array}{r} 3.3 \\ C.0.0 \\ \hline \end{array}$$

$$\begin{array}{r} 8.1 \\ F.4.8 \\ \hline 24.6 \end{array}$$

3.3

$$\begin{array}{r} 7.9 \\ F.4.6 \\ \hline 24.2 \end{array}$$

$$\begin{array}{r} 3.3 \\ C.0.0 \\ \hline \end{array}$$

$$\begin{array}{r} 7.2 \\ F.5.9 \\ \hline 26.8 \end{array}$$

3.4

$$\begin{array}{r} 8.8 \\ F.5.4 \\ \hline 25.8 \end{array}$$

$$\begin{array}{r} 3.5 \\ F.0.1 \\ \hline \end{array}$$

$$\begin{array}{r} 10.3 \\ F.6.9 \\ \hline 28.8 \end{array}$$

3.4

$$\begin{array}{r} 8.4 \\ F.5.0 \\ \hline 25.0 \end{array}$$

$$\begin{array}{r} 4.1 \\ F.0.7 \\ \hline \end{array}$$

$$\begin{array}{r} 10.8 \\ F.7.4 \\ \hline 29.8 \end{array}$$

3.5

$$\begin{array}{r} 9.0 \\ F.5.5 \\ \hline 26.0 \end{array}$$

$$\begin{array}{r} 4.6 \\ F.1.1 \\ \hline \end{array}$$

$$\begin{array}{r} 11.4 \\ F.7.9 \\ \hline 30.8 \end{array}$$

3.5

$$\begin{array}{r} 9.0 \\ F.5.5 \\ \hline 26.0 \end{array}$$

$$\begin{array}{r} 4.7 \\ F.1.2 \\ \hline \end{array}$$

$$\begin{array}{r} 11.7 \\ F.8.2 \\ \hline 31.4 \end{array}$$

3.6

$$\begin{array}{r} 8.3 \\ F.4.7 \\ \hline 24.4 \end{array}$$

$$\begin{array}{r} 4.4 \\ F.0.8 \\ \hline \end{array}$$

$$\begin{array}{r} 9.6 \\ F.6.0 \\ \hline 27.0 \end{array}$$

9.5

$$\begin{array}{r} 12.7 \\ F.4.2 \\ \hline 23.4 \end{array}$$

$$\begin{array}{r} 9.9 \\ F.0.4 \\ \hline \end{array}$$

$$\begin{array}{r} 11.3 \\ F.1.8 \\ \hline 18.6 \end{array}$$

Mikemini

2

5/2. +  $\pi$  - Grade

894.75

20 85.2

+50 85.2

21 85.3

+07 BC

+50 86.0

22 86.9 00

+50 88.4 1.1

+60 BC

23 90.2 3.4

BM. 883.90

+50 92.5 3.4

| Incr<br>ment | Plate<br>Rods.                          |                                                         |                         | Lt. | E | Rt.                                        | 7<br>73 |
|--------------|-----------------------------------------|---------------------------------------------------------|-------------------------|-----|---|--------------------------------------------|---------|
|              | Lt.                                     | E                                                       | Rt.                     |     |   |                                            |         |
|              | <sup>15</sup><br>9.6<br><sub>11.1</sub> | <sup>13.4</sup><br>F3.8<br><u>26.4</u>                  | <sup>9.7</sup><br>F0.1  |     |   | <sup>10.6</sup><br>D.C.C.5<br><u>25.0</u>  |         |
|              | <sup>15</sup><br>9.6<br><sub>11.1</sub> | <sup>11.1</sup><br>D.C.C.0<br><u>21.0</u><br>Right 21.0 | <sup>9.6</sup><br>C.C.0 |     |   | <sup>10.3</sup><br>D.C.C.8<br><u>21.9</u>  |         |
|              | <sup>15</sup><br>9.5<br><sub>11.0</sub> | <sup>11.0</sup><br>D.C.C.0<br><u>23.5</u>               | <sup>9.5</sup><br>C.C.0 |     |   | <sup>9.9</sup><br>D.C.C.1.1<br><u>26.8</u> |         |
|              | 0.1 10.2 8.8 10.4                       | <sup>10.2</sup><br>D.C.C.0<br><u>26.0</u><br>Right 26.0 | <sup>9.2</sup><br>F0.4  |     |   | <sup>9.7</sup><br>D.C.C.7<br><u>25.6</u>   |         |
|              | 0.4 7.5 7.9 9.8                         | <sup>9.0</sup><br>F1.5<br><u>19.5</u>                   | <sup>8.6</sup><br>F0.7  |     |   | <sup>8.9</sup><br>D.C.C.9<br><u>26.7</u>   |         |
|              | 0.8 5.6 6.4 8.7                         | <sup>2.8</sup><br>F2.2<br><u>21.6</u>                   | <sup>7.9</sup><br>F1.5  |     |   | <sup>7.3</sup><br>D.C.C.4<br><u>28.8</u>   |         |
|              | 1.0 3.6 4.6                             | <sup>5.3</sup><br>F1.7<br><u>20.1</u>                   | <sup>5.8</sup><br>/     |     |   |                                            |         |
|              | 18" Poplar 50' Lt. 21.2 23+35           |                                                         |                         |     |   |                                            |         |
|              | 1.0 1.3 2.3                             | <sup>5.5</sup><br>F4.2<br><u>27.6</u>                   | <sup>2.7</sup><br>F0.4  |     |   |                                            |         |

Σ

widening

Sta. + π - Grade  
894.75

24 95.0 3.1  
+27 EC  
+1 T.P. 11.20 905.79 0.16 894.59  
+50 97.5 0.5

25 900.0 0.0  
T.P. 17.00 914.28 3.51 908.78  
+50 02.5 0.0

26 05.0 0.7  
+19 06.0 0.7

+33 BC  
+50 07.5 2.0

T.P. 11.40 923.90 1.78 912.50

27 10.0 2.8



Increment

Grade  
Rods.

Lt.

C

Rt.

8/  
74

Lt. C Rt.

1.0 11.1 10.2

$$\begin{array}{r} 00 \\ \text{F.I.V} \\ 18.6 \end{array}$$

$$\begin{array}{r} 00 \\ \text{F.O.V} \end{array}$$

0.6 9.7 8.3 10.4

$$\begin{array}{r} 9.2 \\ \text{D.C. 00} \\ \text{Daylight } 30.1 \end{array}$$

$$\begin{array}{r} 8.3 \\ \text{C. 00} \end{array}$$

$$\begin{array}{r} 3.9 \\ \text{D.C. 6.5} \\ 43.5 \end{array}$$

0.3 7.0 5.8 7.6

$$\begin{array}{r} 5.0 \\ \text{D.C. 10} \\ 29.5 \end{array}$$

$$\begin{array}{r} 5.8 \\ \text{C. 00} \end{array}$$

$$\begin{array}{r} 1.8 \\ \text{D.C. 5.8} \\ 40.9 \end{array}$$

0.3 13.0 11.8 13.6

$$\begin{array}{r} 11.8 \\ \text{D.C. 1.2} \\ 27.1 \end{array}$$

$$\begin{array}{r} 11.8 \\ \text{C. 00} \end{array}$$

$$\begin{array}{r} 8.0 \\ \text{D.C. 5.6} \\ 40.3 \end{array}$$

0.7 10.1 9.3 11.5

$$\begin{array}{r} 9.8 \\ \text{D.C. 0.3} \\ 24.4 \end{array}$$

$$\begin{array}{r} 9.3 \\ \text{C. 00} \end{array}$$

$$\begin{array}{r} 5.2 \\ \text{D.C. 6.3} \\ 47.6 \end{array}$$

0.8 9.0 8.3 10.6

$$\begin{array}{r} 9.0 \\ \text{D.C. 00} \\ \text{Daylight } 37.0 \end{array}$$

$$\begin{array}{r} 8.3 \\ \text{C. 00} \end{array}$$

$$\begin{array}{r} 3.9 \\ \text{D.C. 6.7} \\ 44.3 \end{array}$$

1.0 7.3 6.8 9.3

$$\begin{array}{r} 2.0 \\ \text{D.C. 5.3} \\ 39.4 \end{array}$$

$$\begin{array}{r} 6.5 \\ \text{C. 0.3} \end{array}$$

$$\begin{array}{r} 1.4 \\ \text{D.C. 2.9} \\ 49.1 \end{array}$$

1.0 14.4 13.9 16.4

$$\begin{array}{r} 9.2 \\ \text{D.C. 5.2} \\ 39.1 \end{array}$$

$$\begin{array}{r} 13.6 \\ \text{C. 0.3} \end{array}$$

$$\begin{array}{r} 8.0 \\ \text{D.C. 2.4} \\ 48.5 \end{array}$$

M. J. J. J.

Sta.      +      K      -      Grade

923.90

27450      12.5      2.8

+77      13.6      2.8

28      15.0      2.8

+50      17.3      2.8

T.P.      13.40      933.14      4.16      919.74

29      19.4      2.8

+50      21.1      2.3

B.M.      10.78      933.14      10.28      911.86      922.88

173.60.

30      22.5      0.3

+50      23.5      0.0

| Grade Rods                  |      |      |      | Lt.                                                                | £                                                     | Rt.                                                         | 9/75                   |
|-----------------------------|------|------|------|--------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|------------------------|
|                             |      |      |      | Lt.                                                                | £                                                     | Rt.                                                         |                        |
| 1.0                         | 11.9 | 11.4 | 13.9 | $\begin{array}{r} 10.9 \\ 26.10 \\ \hline 26.5 \end{array}$        | $\begin{array}{r} 11.1 \\ 60.3 \\ \hline \end{array}$ | $\begin{array}{r} 7.4 \\ 46.65 \\ \hline 45.8 \end{array}$  |                        |
| 1.0                         | 10.8 | 10.3 | 17.8 | $\begin{array}{r} 10.2 \\ 60.333 \\ \hline 62.1147 \end{array}$    | $\begin{array}{r} 7.1 \\ 63.2 \\ \hline \end{array}$  | $\begin{array}{r} 5.9 \\ 46.69 \\ \hline 47.0 \end{array}$  | met old Road           |
| 1.0                         | 9.4  | 8.9  | 11.4 | $\begin{array}{r} B.T. \\ 9.4 \\ 26.00 \\ \hline 23.5 \end{array}$ | $\begin{array}{r} 4.3 \\ 64.6 \\ \hline \end{array}$  | $\begin{array}{r} 4.6 \\ 46.69 \\ \hline 46.7 \end{array}$  | 3 to met old Road      |
| 1.0                         | 7.1  | 6.6  | 9.1  | $\begin{array}{r} 6.2 \\ 60.0 \\ \hline 46.0 \end{array}$          | $\begin{array}{r} 2.7 \\ 63.7 \\ \hline \end{array}$  | $\begin{array}{r} 2.9 \\ 46.62 \\ \hline 44.9 \end{array}$  | Revised 19 to met Road |
| 1.0                         | 14.4 | 13.7 | 16.4 | $\begin{array}{r} 11.1 \\ 26.31 \\ \hline 37.8 \end{array}$        | $\begin{array}{r} 10.5 \\ 63.2 \\ \hline \end{array}$ | $\begin{array}{r} 11.1 \\ 46.51 \\ \hline 41.6 \end{array}$ |                        |
| 1.0                         | 14.5 | 14.0 | 14.5 | $\begin{array}{r} 7.4 \\ 26.31 \\ \hline 37.8 \end{array}$         | $\begin{array}{r} 10.0 \\ 62.0 \\ \hline \end{array}$ | $\begin{array}{r} 9.9 \\ 46.46 \\ \hline 39.6 \end{array}$  |                        |
| Spk. 18" Oak 150' Lt. 25170 |      |      |      |                                                                    |                                                       |                                                             |                        |
| 0.6                         | 11.5 | 10.6 | 12.7 | $\begin{array}{r} 9.8 \\ 26.17 \\ \hline 28.6 \end{array}$         | $\begin{array}{r} 10.2 \\ 60.4 \\ \hline \end{array}$ | $\begin{array}{r} 10.1 \\ 46.46 \\ \hline 31.6 \end{array}$ |                        |
| 0.2                         | 10.9 | 9.6  | 11.3 | $\begin{array}{r} 10.0 \\ 26.09 \\ \hline 26.4 \end{array}$        | $\begin{array}{r} 10.1 \\ 60.9 \\ \hline \end{array}$ | $\begin{array}{r} 10.4 \\ 46.09 \\ \hline 26.2 \end{array}$ |                        |

Widening

Sta.      +       $\pi$       -      Grade

933.14

31      24.3

+32      24.6

+62      24.7

32      24.8

+50      24.5

T.P.      9.16      936.10      6.20      926.94

33      24.0

+50      23.3

34      22.6

T.P.      3.87      927.76      12.21      923.89



Increment +

Grade Rods.

10 / 76

4. 2 21.

Lt. 2 Rt.

00 10.3 8.8 10.3

$\frac{76}{DC 2.7}$   
31.6

$\frac{84}{C 0.4}$

$\frac{85}{DC 1.8}$   
28.9

10.0 8.5 10.0

$\frac{70}{DC 3.0}$   
31.5

$\frac{53}{C 3.7}$

$\frac{46}{DC 5.4}$   
39.7

9.9 8.4 9.9

$\frac{73}{DC 2.6}$   
31.3

$\frac{72}{C 1.2}$

$\frac{48}{DC 5.1}$   
38.8

9.8 8.3 9.8

$\frac{71}{DC 2.7}$   
31.6

$\frac{63}{C 2.0}$

$\frac{55}{DC 4.3}$   
36.4

10.1 8.6 10.1

$\frac{56}{DC 4.5}$   
37.0

$\frac{58}{C 2.8}$

$\frac{37}{DC 6.4}$   
42.7

13.6 12.1 13.6

$\frac{81}{DC 4.5}$   
37.0

$\frac{94}{C 2.7}$

$\frac{58}{DC 7.8}$   
46.9

14.3 12.8 14.3

$\frac{117}{DC 2.6}$   
31.3

$\frac{105}{C 2.3}$

$\frac{68}{DC 2.5}$   
46.0

00 15.0 13.5 15.0

$\frac{131}{DC 1.9}$   
29.2

$\frac{115}{C 2.0}$

$\frac{172}{DC 7.8}$   
31.9

Sta.      +      x      -      Grade

927.76

34+50      21.8      0.0

35      20.9      0.7

+10 B.C.

+50      19.9      2.0

36      18.8      2.1

+50      17.5      2.1

37      16.1      2.1

+50      14.6      1.4

+60 E.C.

T.P.      6.90      922.79      11.87      915.89

38      13.0      0.9

Widening

Increment.

Grade Rods.

| 0   |    | 0   |
|-----|----|-----|
| Lt. | C. | Rt. |

Lt.

C.

Rt.

11  
77

0.5 8.0 6.0 7.0

$\frac{6.4}{D.C. 1.6}$   
28.3

$\frac{4.3}{C. 1.7}$

$\frac{4.7}{D.C. 2.3}$   
30.4

0.9 9.3 6.9 7.5

$\frac{7.7}{D.C. 1.6}$   
29.0

$\frac{5.4}{C. 1.5}$

$\frac{5.3}{D.C. 2.2}$   
30.1

1.0 10.4 7.9 8.4

$\frac{8.8}{D.C. 1.6}$   
30.3

$\frac{6.2}{C. 1.7}$

$\frac{4.8}{D.C. 3.6}$   
34.3

1.0 11.5 9.0 9.5

Daylight  $\frac{11.5}{D.C. 0.0}$   
29.0

$\frac{7.4}{C. 1.6}$

$\frac{5.4}{D.C. 4.1}$   
35.8

1.0 11.3 10.3 10.8

$\frac{12.4}{F. 4.1}$   
29.4

$\frac{9.2}{C. 1.1}$

$\frac{7.2}{D.C. 3.6}$   
34.3

1.0 14.7 11.7 11.7

$\frac{13.1}{D.C. 1.1}$   
28.9

$\frac{10.6}{C. 1.1}$

$\frac{10.5}{D.C. 1.7}$   
28.6

1.0 15.7 13.7 13.7

$\frac{10.6}{D.C. 5.1}$   
40.7

$\frac{12.1}{C. 1.1}$

$\frac{11.1}{D.C. 2.6}$   
31.3

~~2.7 11.0 9.8 9.6~~

~~$\frac{5.2}{D.C. 5.8}$   
43.0~~

~~$\frac{5.3}{C. 1.5}$~~

~~$\frac{6.7}{D.C. 2.9}$   
37.7~~

~~41.0 34.9~~

Nideering

| Sta.   | +     | K      | -     | Grade  |        |
|--------|-------|--------|-------|--------|--------|
|        |       | 922.79 |       |        |        |
| 38+50  |       |        |       | 11.3   | 00     |
| 39     |       |        |       | 08.6   |        |
| B.M.   | 13.15 | 922.79 | 13.15 | 909.64 | 909.68 |
| +50    |       |        |       | 08.0   |        |
| T.P.   | 5.42  | 915.10 | 13.11 | 909.68 |        |
| 40     |       |        |       | 06.7   | 00     |
| +50    |       |        |       | 05.6   | 0.6    |
| +60.80 |       |        |       |        |        |
| 41     |       |        |       | 04.7   | 1.9    |
| T.P.   | 2.81  | 912.49 | 5.42  | 909.68 |        |
| +50    |       |        |       | 04.0   | 2.0    |
| 42     |       |        |       | 03.6   | 2.0    |



| Increment                   | Grade Rods. |      |      |          | Lt. E Rt.                     |                       |                                                       | 72<br>78                     |
|-----------------------------|-------------|------|------|----------|-------------------------------|-----------------------|-------------------------------------------------------|------------------------------|
|                             | Lt.         | E    | Rt.  |          |                               |                       |                                                       |                              |
| 0.2                         | 13.2        | 11.5 | 14.8 |          | $\frac{5.6}{DC 7.6}$<br>46.3  | $\frac{5.9}{C 5.6}$   | $\frac{8.0}{DC 4.8}$<br>37.9                          |                              |
| 0.0                         | 14.7        | 13.2 | 14.7 |          | $\frac{6.8}{DC 7.9}$<br>47.4  | $\frac{6.4}{C 6.8}$   | $\frac{9.5}{DC 5.2}$<br>39.1                          |                              |
| Spot 18" Post 90' Rt. 39+40 |             |      |      |          |                               |                       |                                                       |                              |
| 0.0                         | 16.3        | 14.8 | 16.3 |          | $\frac{10.5}{DC 5.8}$<br>40.9 | $\frac{10.1}{C 4.7}$  | $\frac{11.6}{DC 4.7}$<br>37.6                         |                              |
| 0.2                         | 10.1        | 8.4  | 9.7  |          | $\frac{7.8}{DC 2.3}$<br>30.4  | $\frac{5.5}{C 2.9}$   | $\frac{6.2}{DC 3.5}$<br>34.0                          |                              |
| 0.4                         | 11.4        | 9.5  | 10.6 | Daylight | $\frac{11.4}{DC 0.0}$<br>30.0 | $\frac{9.8}{F.O. 3}$  | $\frac{10.6}{DC 0.0}$<br>37.0                         | Day Light                    |
| 0.5                         | 12.4        | 10.4 | 9.9  | Daylight | $\frac{12.4}{DC 0.0}$<br>33.0 | $\frac{10.6}{F.O. 2}$ | $\frac{8.9}{BT. 11}$<br>$\frac{11.4}{DC 0.0}$<br>27.3 | Day Light                    |
| 0.7                         | 9.2         | 8.5  | 7.8  |          | $\frac{12.8}{F 3.4}$<br>27.8  | $\frac{8.7}{F.O. 2}$  | $\frac{8.5}{F.O. 7}$<br>17.1                          | $\frac{9.3}{DC 0.0}$<br>25.9 |
| 0.7                         | 11.1        | 8.9  | 8.2  | Daylight | $\frac{11.1}{DC 0.0}$<br>28.1 | $\frac{9.2}{F.O. 3}$  | $\frac{11.0}{F.O. 8}$<br>23.4                         |                              |

Widening

Sta. + K - Grade

912.49

42+50 03.3 2.0

43 03.0 1.9

T.P. 10.09 913.08 9.50 902.99

+42 E.C.

+50 02.7 0.6

T.P. 6.47 909.05 10.50 902.58

44 02.4 0.0

+20 02.3 0.2

+50 02.1 1.1

+13 B.C.

45 01.8 2.4

+50 01.5 2.6

Increment

Grade  
Rods.

13  
79

Lt. E Rt.

Lt.

E.

Rt.

0.7 11.4 9.2 8.5

$\frac{28}{26.36}$   
 $\frac{36.3}{36.3}$

$\frac{9.5}{F0.3}$

$\frac{91}{F0.6}$   
 $\frac{16.8}{16.8}$

0.5 11.5 9.5 9.0

about  
2 to 1  $\frac{35}{26.80}$   
bed two  $\frac{39.6}{36.6}$

$\frac{10.0}{F0.5}$

$\frac{94}{F0.4}$   
 $\frac{16.2}{16.2}$

0.2 12.1 10.4 11.7

about  
2 to 1  $\frac{4.9}{26.72}$   
 $\frac{36.8}{36.8}$

$\frac{10.5}{F0.1}$   $\frac{2.7}{10.2}$   
 $\frac{15}{15}$

$\frac{11.7}{26.00}$   $\frac{10.4}{11.4}$   
 $\frac{41.6}{41.6}$

0.0 8.2 6.7 8.2

$\frac{2.1}{26.11}$   
 $\frac{26.8}{26.8}$

$\frac{6.5}{C0.2}$

$\frac{7.1}{26.11}$   
 $\frac{26.8}{26.8}$

0.0 8.3 6.8 8.3

must  
old  
with  $\frac{2.1}{31.5}$   
 $\frac{C0.0}{C0.0}$

$\frac{6.8}{C0.0}$

$\frac{6.8}{26.15}$   
 $\frac{28.2}{28.2}$

0.2 8.3 7.0 8.7

Hope  
to meet  
known  $\frac{C.00}{36}$

$\frac{6.0}{C1.0}$

$\frac{5.6}{26.31}$   
 $\frac{33.9}{33.9}$

0.4 7.3 7.3 9.2

see  
H. X. L.  $\frac{2.3}{C0.0}$   
 $\frac{41.5}{41.5}$

$\frac{5.4}{C1.9}$

$\frac{5.6}{26.36}$   
 $\frac{36.7}{36.7}$

0.6 8.5 7.6 9.7

$\frac{7.9}{C0.0}$   
dog print  
 $\frac{21.8}{21.8}$

$\frac{6.6}{C1.0}$

$\frac{7.0}{26.27}$   
 $\frac{34.2}{34.2}$

Midway

Sta. +  $\pi$  - Grade

909.05

46 01.2 2.6

T.P. 6.21 907.13 8.13 900.97

+50 00.9 2.6

47 00.6 2.6

+50 00.3 0.6

+73 EC

48 900.00 0.0

+50 99.7

49 99.4

T.P. 0.53 899.66 8.00 899.13

B.M. 6.48 893.18 893.18



| Increment | Grade Rods |     |      | Lt.          | E                                   | Rt.                  | 14<br>80                                              |
|-----------|------------|-----|------|--------------|-------------------------------------|----------------------|-------------------------------------------------------|
|           | Lt.        | E   | Rt.  |              |                                     |                      |                                                       |
| 0.6       | 8.8        | 7.9 | 10.0 | free<br>plan | $\frac{8.0}{C.O. 40.0}$<br>Daylight | $\frac{5.7}{C.V. 7}$ | $\frac{6.8}{C.C. 3.2}$<br>35.7                        |
| 0.5       | 5.7        | 6.7 | 8.7  |              | $\frac{5.7}{B.T. 15}$               | $\frac{4.7}{C. 1.5}$ | $\frac{4.7}{C.C. 3.5}$<br>36.6                        |
| 0.3       | 4.7        | 6.5 | 8.3  |              | $\frac{6.2}{B.T. 15}$               | $\frac{6.5}{C.O.O}$  | <del><math>\frac{5.0}{C.C. 3.3}</math><br/>36.0</del> |
| 0.1       | 6.7        | 6.8 | 8.4  |              | $\frac{6.7}{B.T. 15}$               | $\frac{6.7}{C.O. 1}$ | <del><math>\frac{5.2}{C.C. 3.2}</math><br/>33.7</del> |
| 0.0       | 7.1        | 7.1 | 8.6  |              | $\frac{7.1}{B.T. 15}$               | $\frac{6.7}{C.O. 4}$ | <del><math>\frac{5.3}{C.C. 3.3}</math><br/>33.4</del> |
|           | 7.4        | 7.4 | 8.9  |              | $\frac{7.4}{B.T. 15}$               | $\frac{7.1}{C.O. 3}$ | <del><math>\frac{5.4}{C.C. 3.5}</math><br/>34.0</del> |
|           | 7.7        |     |      |              |                                     |                      |                                                       |

Spt. Turn Willow 60' Rt. 52+60

Wildenring

5/2. +  $\pi$  - Brode

T.P. #1 11.70 905.79 894.59

23 90.7 3.4

150 97.5 3.4

24 95.0 3.1

---

| Increase<br>ment | Grade<br>Roads | Lt   | £ | Rt. | 15<br>81                                                     |
|------------------|----------------|------|---|-----|--------------------------------------------------------------|
|                  | £              | Rt.  |   |     |                                                              |
| 1.0              | 15.6           | 18.1 |   |     | $\begin{array}{r} 6.7 \\ 26.11.4 \\ \hline 61.1 \end{array}$ |
| 1.0              | 13.3           | 15.8 |   |     | $\begin{array}{r} 6.0 \\ 26.98 \\ \hline 36.3 \end{array}$   |
| 1.0              | 10.8           | 13.3 |   |     | $\begin{array}{r} 5.8 \\ 26.75 \\ \hline 49.1 \end{array}$   |

# Special Ditch

on Rt.

Ditch

Sta + K - Grade

B.M. 8.22 901.40 893.18

T.P. 2.91 907.04 2.27 899.13

47 w.v. 98.8  
p.

+50 w.v. 99.0 8.0

48 99.2 7.5

+50 99.5 7.5



2

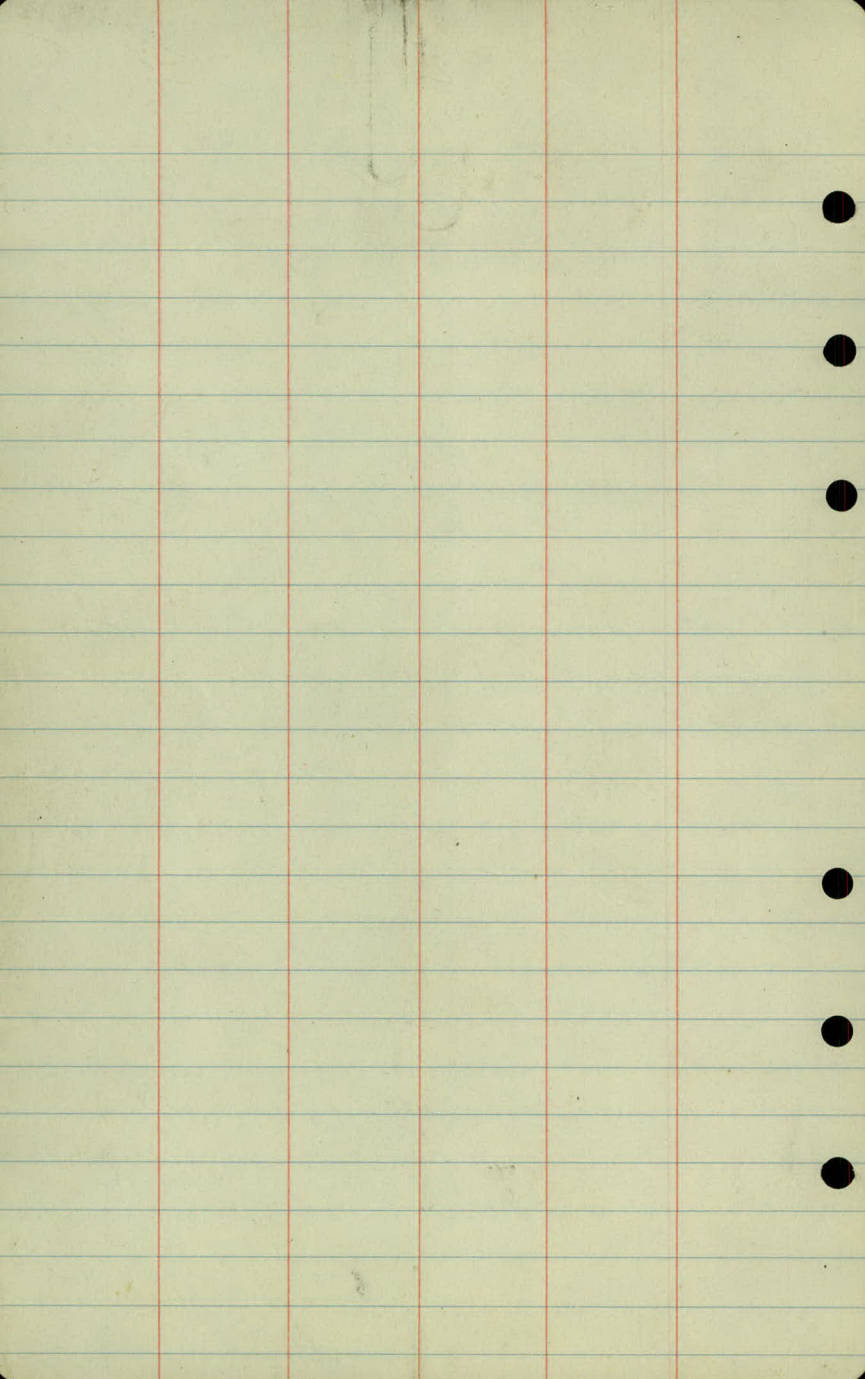
87.

16  
82

$$\begin{array}{r} 5.1 \\ DC.7.9 \\ \hline 31.8 \end{array}$$

$$\begin{array}{r} 5.1 \\ DC.2.7 \\ \hline 31.6 \end{array}$$

$$\begin{array}{r} 5.2 \\ DC.2.3 \\ \hline 30.4 \end{array}$$



Slope stakes

Vadnais Blvd.

Sta 49 to 63

| Sta  | +     | X      | - | Grade    |
|------|-------|--------|---|----------|
| B.M. | 13.13 | 906.31 |   | (893.18) |

|    |  |  |  |      |
|----|--|--|--|------|
| 49 |  |  |  | 99.4 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 150 |  |  |  | 98.6 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 50 |  |  |  | 97.7 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 150 |  |  |  | 96.8 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 51 |  |  |  | 95.8 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 150 |  |  |  | 94.7 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 52 |  |  |  | 93.5 |
|----|--|--|--|------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 123 |  |  |  | 92.9 |
|-----|--|--|--|------|

|      |      |        |       |        |
|------|------|--------|-------|--------|
| B.M. | 5.30 | 898.18 | 13.13 | 893.18 |
|------|------|--------|-------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 150 |  |  |  | 92.3 |
|-----|--|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 53 |  |  |  | 90.5 |
|----|--|--|--|------|

|      |  |  |      |        |
|------|--|--|------|--------|
| B.M. |  |  | 9.12 | 889.36 |
|------|--|--|------|--------|

|     |  |  |  |      |
|-----|--|--|--|------|
| 120 |  |  |  | 89.9 |
|-----|--|--|--|------|



6/29/59  
K.A.  
L.G.  
L.B.H.  
R.A.

84

Gr. Rod. Lt. L Rt.

Spk. in Willow 60' Rt. 52160

6.9  $\frac{203}{20.0} \frac{84}{20.0} \frac{6.9}{20.0}$

7.7  $\frac{231}{20.0} \frac{92}{20.0} \frac{7.7}{20.3}$

8.6  $\frac{259}{20.0} \frac{101}{20.0} \frac{7.7}{20.9}$

9.5  $\frac{28.11}{26.8} \frac{310}{20.0} \frac{110}{20.0} \frac{8.2}{21.3} \frac{7.9}{21.6} \frac{1.9}{21.9}$

10.5  $\frac{41.2}{31.6} \frac{41.9}{20.0} \frac{120}{20.0} \frac{8.7}{21.8} \frac{6.9}{22.2} \frac{1.9}{22.2}$

11.6  $\frac{42.4}{35.2} \frac{291}{20.0} \frac{131}{20.0} \frac{9.2}{22.9} \frac{5.0}{26.6} \frac{1.9}{23.3}$

12.8  $\frac{42.6}{35.8} \frac{406}{20.0} \frac{14.8}{20.0} \frac{9.8}{23.0} \frac{7.6}{25.2} \frac{1.0}{20.2}$

13.4  $\frac{411}{20.0} \frac{14.9}{20.0} \frac{10.2}{23.2} \frac{9.2}{24.2} \frac{1.9}{24.6}$

6.2  $\frac{38.2}{23.4} \frac{2.8}{23.4} \frac{3.3}{22.9} \frac{2.7}{23.0} \frac{1.9}{23.5}$

7.7  $\frac{35.5}{23.5} \frac{5.2}{23.5} \frac{3.8}{21.9} \frac{11.2}{20.0} \frac{1.9}{25.8}$

Spk. in 15" Triple Poplar - 65' Rt. 52188

8.6  $\frac{34.9}{22.3} \frac{6.3}{22.3} \frac{7.5}{21.1} \frac{121}{20.0} \frac{1.9}{21.2}$

| Sta  | +    | $\pi$  | -    | Grade  |
|------|------|--------|------|--------|
|      |      | 878.48 |      |        |
| 53   | +50  |        |      | 89.5   |
|      | +78  |        |      | 88.8   |
| 54   |      |        |      | 88.3   |
| T.P. | 1.02 | 890.35 | 1121 | 887.27 |
|      | +25  |        |      | 87.6   |
|      | +95  |        |      | 87.5   |
|      | +58  |        |      | 87.2   |
| 55   |      |        |      | 86.7   |
|      | +50  |        |      | 86.2   |
| 56   |      |        |      | 85.6   |
|      | +50  |        |      | 85.8   |
| 57   |      |        |      | 85.8   |

Gr. Rod.

L.F.

4

R.F.

9.0

$$\frac{28.6}{+0.2} / \frac{8.8}{+0.2}$$

$$\frac{8.6}{+0.4}$$

$$\frac{12.5}{2.00} / 71.0$$

9.7

$$\frac{28.3}{+0.1} / \frac{9.6}{+0.1}$$

$$\frac{10.7}{-1.0}$$

$$\frac{12.1}{18.00} / 53.9$$

10.2

$$\frac{28.0}{+0.0} / \frac{10.2}{+0.0}$$

$$\frac{11.0}{-0.8}$$

$$\frac{13.7}{20.0} / 23.0$$

2.8

$$\frac{25.3}{2.0.9} / \frac{3.4}{2.0.9}$$

$$\frac{7.9}{-4.6}$$

$$\frac{9.4}{2.6} / 28.2$$

2.9

$$\frac{10.9}{-7.5}$$

$$\frac{10.7}{-7.8} / 10.6$$

3.2

$$\frac{24.1}{2.0.2} / \frac{4.5}{2.0.2}$$

$$\frac{7.8}{-4.6}$$

$$\frac{11.2}{8.0} / 31.0$$

3.7

$$\frac{23.6}{22.00} / \frac{5.2}{22.00}$$

$$\frac{7.5}{-3.8}$$

$$\frac{12.9}{-7.2} / 33.4$$

4.2

$$\frac{18.6}{-1.8} / \frac{6.0}{-1.8}$$

$$\frac{8.7}{-4.5}$$

$$\frac{12.0}{-7.8} / 30.6$$

4.6

$$\frac{18.6}{-1.8} / \frac{6.4}{-1.8}$$

$$\frac{9.3}{-4.7}$$

$$\frac{11.8}{-7.2} / 29.4$$

4.6

$$\frac{19.9}{-2.2} / \frac{6.8}{-2.2}$$

$$\frac{9.3}{-4.7}$$

$$\frac{11.3}{-6.7} / 28.4$$

4.6

$$\frac{20.0}{-2.5} / \frac{7.1}{-2.5}$$

$$\frac{10.4}{-5.1}$$

$$\frac{12.1}{-7.5} / 30.0$$

| Sta  | +    | $\Sigma$ | -    | Grade  |        |
|------|------|----------|------|--------|--------|
|      |      | 890.85   |      |        |        |
| 57   | +25  |          |      | 85.9   |        |
|      | +51  |          |      | 86.0   |        |
| B.M. | 0.44 | 889.72   | 2.06 | 888.29 | 888.28 |
|      | +70  |          |      | 86.1   |        |
| 58   |      |          |      | 86.2   |        |
|      | +50  |          |      | 86.4   |        |
| 59   |      |          |      | 86.6   |        |
|      | +50  |          |      | 86.8   |        |
| 60   |      |          |      | 87.0   |        |
|      | +30  |          |      | 87.1   |        |
|      | +50  |          |      | 87.3   |        |
| T.P. | 8.55 | 895.95   | 2.62 | 896.10 |        |
| 61   |      |          |      | 87.8   |        |



Gr. Rod.

Lt.

E.

Rt.

4.5

$$20.9 \frac{70}{-45}$$

$$\frac{11.9}{-7.4}$$

$$\frac{12.6}{-5.1/31.2}$$

4.4

$$19.4 \frac{67}{-23}$$

$$\frac{10.9}{-6.5}$$

$$\frac{11.7}{-7.3/27.6'}$$

Spk. in 28" Galt Lt. 5.7.150

2.6

2.5

$$20.9 \frac{5.2}{-27}$$

$$\frac{5.1}{-2.6}$$

$$\frac{10.1}{-7.6/30.2}$$

2.3

$$20.9 \frac{5.0}{-27}$$

$$\frac{4.8}{-2.5}$$

$$\frac{10.5}{-7.2/24.0}$$

2.1

$$20.9 \frac{4.6}{-25}$$

$$\frac{4.1}{-2.0}$$

$$\frac{8.9}{-6.8/21.0}$$

1.9

$$20.9 \frac{4.5}{-25}$$

$$\frac{3.9}{-2.0}$$

$$\frac{8.5}{-6.4/23.2}$$

1.7

$$18.8 \frac{3.6}{-1.9}$$

$$\frac{3.8}{-2.1}$$

$$\frac{7.8}{-6.1/23.9}$$

1.6

$$20.9 \frac{4.1}{-25}$$

$$\frac{3.7}{-2.1}$$

$$\frac{6.9}{-4.8/24.6}$$

1.4

$$21.0 \frac{4.4}{-2.0}$$

$$\frac{3.6}{-2.2}$$

$$\frac{3.5}{-2.1/19.2}$$

Q. 61

7.7

$$22.4 \frac{11.5}{-3.8}$$

$$\frac{8.9}{-1.7}$$

$$\frac{9.3}{-1.6/15.2}$$

| Sta | + | T      | - | Grade |
|-----|---|--------|---|-------|
|     |   | 895.45 |   |       |

|    |     |  |  |      |
|----|-----|--|--|------|
| 61 | +50 |  |  | 88.4 |
|----|-----|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 62 |  |  |  | 89.3 |
|----|--|--|--|------|

|  |     |  |  |      |
|--|-----|--|--|------|
|  | +50 |  |  | 90.3 |
|--|-----|--|--|------|

|    |  |  |  |      |
|----|--|--|--|------|
| 63 |  |  |  | 91.5 |
|----|--|--|--|------|

|      |  |  |      |        |
|------|--|--|------|--------|
| B.M. |  |  | 3.43 | 892.02 |
|------|--|--|------|--------|

|      |      |        |       |        |
|------|------|--------|-------|--------|
| T.P. | 9.78 | 888.74 | 10.49 | 889.26 |
|------|------|--------|-------|--------|

|      |  |  |      |        |
|------|--|--|------|--------|
| B.M. |  |  | 0.46 | 888.28 |
|------|--|--|------|--------|

888.28

Gr Rod.

Lt

E

Pt

7.1

$$21.2 / \begin{array}{r} 10.2 \\ -51 \end{array}$$

$$\begin{array}{r} 80 \\ -09 \end{array}$$

$$\begin{array}{r} 77 \\ 12.07 / 20.6 \end{array}$$

6.2

$$19.8 / \begin{array}{r} 81 \\ -19 \end{array}$$

$$\begin{array}{r} 66 \\ -49 \end{array}$$

$$\begin{array}{r} 54 \\ 10.8 / 21.5 \end{array}$$

5.2

$$19.8 / \begin{array}{r} 67 \\ 12.00 \end{array}$$

$$\begin{array}{r} 52 \\ 10.0 \end{array}$$

$$\begin{array}{r} 33 \\ 11.9 / 23.6 \end{array}$$

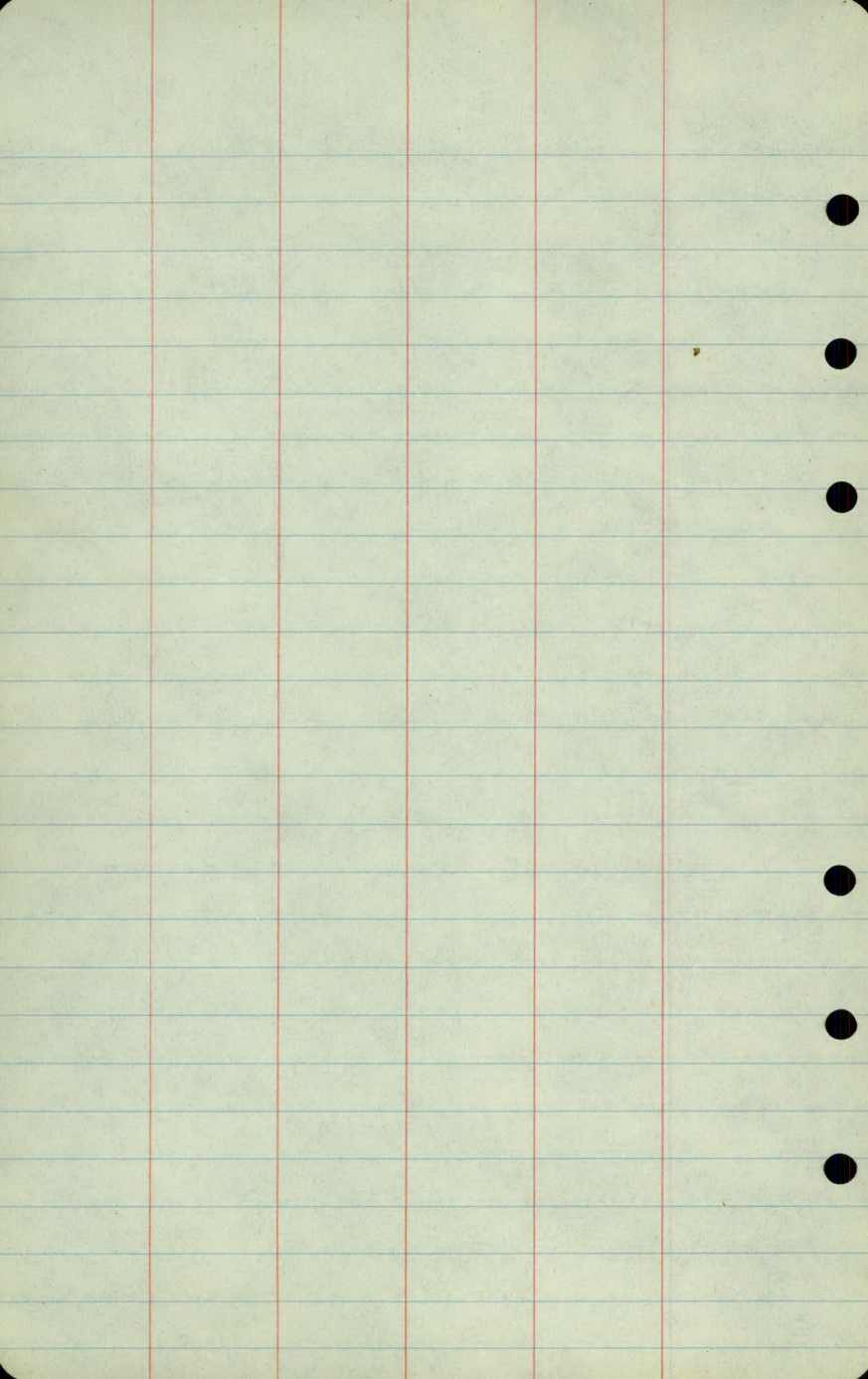
$$\begin{array}{r} 36 \\ 7.0 \end{array}$$

$$\begin{array}{r} 36 \end{array}$$

$$\begin{array}{r} 0.2 \\ 18.4 / 3.5 \end{array}$$

Sph. in 18" Coll. Lt. 62496

Sph. in 24" Coll. Lt. 57150





Vodna's Blvd.  
Slope Stakes  
Line Revision

|      |      |        |   | Grade  |
|------|------|--------|---|--------|
| Sta  | +    | $\pi$  | - | Lt Rt  |
| B.M. | 0.46 | 888.74 |   | 888.28 |

|    |  |  |  |           |
|----|--|--|--|-----------|
| 58 |  |  |  | 85.2 86.2 |
|----|--|--|--|-----------|

|     |  |  |  |           |
|-----|--|--|--|-----------|
| +50 |  |  |  | 84.4 86.4 |
|-----|--|--|--|-----------|

|    |  |  |  |           |
|----|--|--|--|-----------|
| 59 |  |  |  | 84.6 86.6 |
|----|--|--|--|-----------|

|     |  |  |  |           |
|-----|--|--|--|-----------|
| +50 |  |  |  | 85.8 86.8 |
|-----|--|--|--|-----------|

|    |  |  |  |           |
|----|--|--|--|-----------|
| 60 |  |  |  | 86.0 87.0 |
|----|--|--|--|-----------|

|     |      |        |      |        |
|-----|------|--------|------|--------|
| 1.1 | 8.01 | 872.75 | 4.00 | 884.74 |
|-----|------|--------|------|--------|

|     |  |  |  |           |
|-----|--|--|--|-----------|
| +30 |  |  |  | 84.1 87.1 |
|-----|--|--|--|-----------|

|     |  |  |  |           |
|-----|--|--|--|-----------|
| +50 |  |  |  | 86.3 87.3 |
|-----|--|--|--|-----------|

|    |  |  |  |           |
|----|--|--|--|-----------|
| 61 |  |  |  | 86.8 87.8 |
|----|--|--|--|-----------|

|     |  |  |  |           |
|-----|--|--|--|-----------|
| +50 |  |  |  | 87.4 88.4 |
|-----|--|--|--|-----------|

|    |  |  |  |           |
|----|--|--|--|-----------|
| 62 |  |  |  | 88.8 89.3 |
|----|--|--|--|-----------|

Grade Rod.

Lt. Rt.

Lt.

Rt.

Rt.

Change  
to 2:1

Spk. in 2d' Cott. Lt. Sta. 57+20

3.5

2.5

$$16.6 / \frac{5.3}{-1.8}$$

$$\frac{9.9}{-7.4} / 29.8$$

4.3

2.3

$$16.8 / \frac{5.2}{-0.9}$$

$$\frac{9.5}{-7.2} / 27.7$$

$$\frac{9.5}{-7.2} / 29.4$$

4.1

2.1

$$16.4 / \frac{4.5}{-0.7}$$

$$\frac{8.9}{-6.8} / 24.2$$

$$\frac{8.9}{-6.7} / 28.4$$

2.9

1.9

$$18.0 / \frac{4.4}{-1.5}$$

$$\frac{8.5}{-6.6} / 23.4$$

$$\frac{8.1}{-6.8} / 28.6$$

2.7

1.7

$$17.4 / \frac{3.9}{-1.2}$$

$$\frac{7.9}{-6.1} / 23.9$$

$$\frac{7.9}{-6.1} / 27.2$$

6.7

5.7

$$19.2 / \frac{8.8}{-2.1}$$

$$\frac{11.0}{-5.3} / 25.6$$

6.5

5.5

$$19.8 / \frac{8.9}{-2.4}$$

$$\frac{7.7}{-5.2} / 19.4$$

6.0

5.0

$$21.0 / \frac{9.0}{-3.0}$$

$$\frac{6.6}{-1.6} / 18.2$$

5.4

4.4

$$18.0 / \frac{6.9}{-1.5}$$

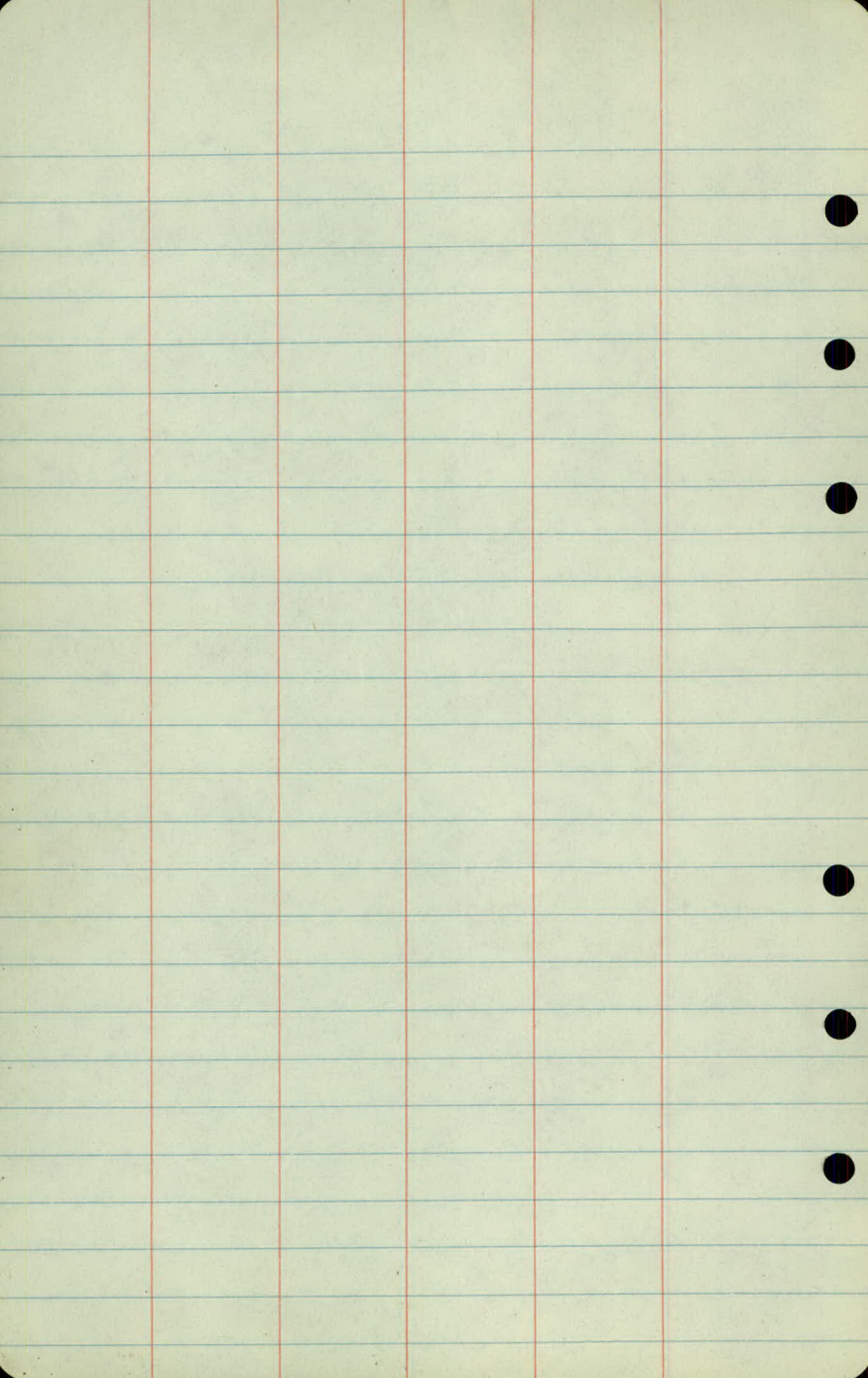
$$\frac{5.0}{-20.9} / 20.6$$

4.0

3.5

$$17.4 / \frac{5.2}{-1.2}$$

$$\frac{3.7}{-10.8} / 21.5$$





Vodna's Blvd.

Blue Tops.

| Sta  | +    | x      | - | Elev |
|------|------|--------|---|------|
| B.M. | 2.72 | 891.00 |   |      |

58

888.28  
2.72  
891.00

+25

+25

+50

+25

+75

+25

59

+25

+50

+75

60

+25

+50

+75

Lt.

Rt.

Gr. Rd

Grade to Grade

Gr. Rd

5 pk. in 24" Coth. Lt. 57+20

|                                     |                                       |      |      |
|-------------------------------------|---------------------------------------|------|------|
| 5.8✓                                | 85.2                                  | 86.2 | 4.8✓ |
| 6.2✓                                | 89.8                                  | 86.3 | 4.7✓ |
| 6.6✓                                | 89.9                                  | 86.4 | 4.6✓ |
| 6.5✓                                | 89.5                                  | 86.5 | 4.5✓ |
| 6.4✓                                | 89.6                                  | 86.6 | 4.4✓ |
| 5.8✓                                | 85.2                                  | 86.7 | 4.3✓ |
| 5.4 <sup>46</sup><br><del>5.2</del> | 85.5 <sup>55</sup><br><del>85.8</del> | 86.8 | 4.2✓ |
| 5.1✓                                | 85.9                                  | 86.9 | 4.1✓ |
| 5.0✓                                | 86.0                                  | 87.0 | 4.0✓ |
| 4.9✓                                | 86.1                                  | 87.1 | 3.9✓ |
| 4.7✓                                | 86.3                                  | 87.3 | 3.7✓ |
| 4.5✓                                | 86.5                                  | 87.5 | 3.5✓ |

| Sta | +    | $\pi$  | -    | Elev.  |
|-----|------|--------|------|--------|
|     |      | 891.00 |      |        |
|     | 5.62 | 893.09 | 3.53 | 887.47 |

61

+25

+50

+75

62

+50

2.8

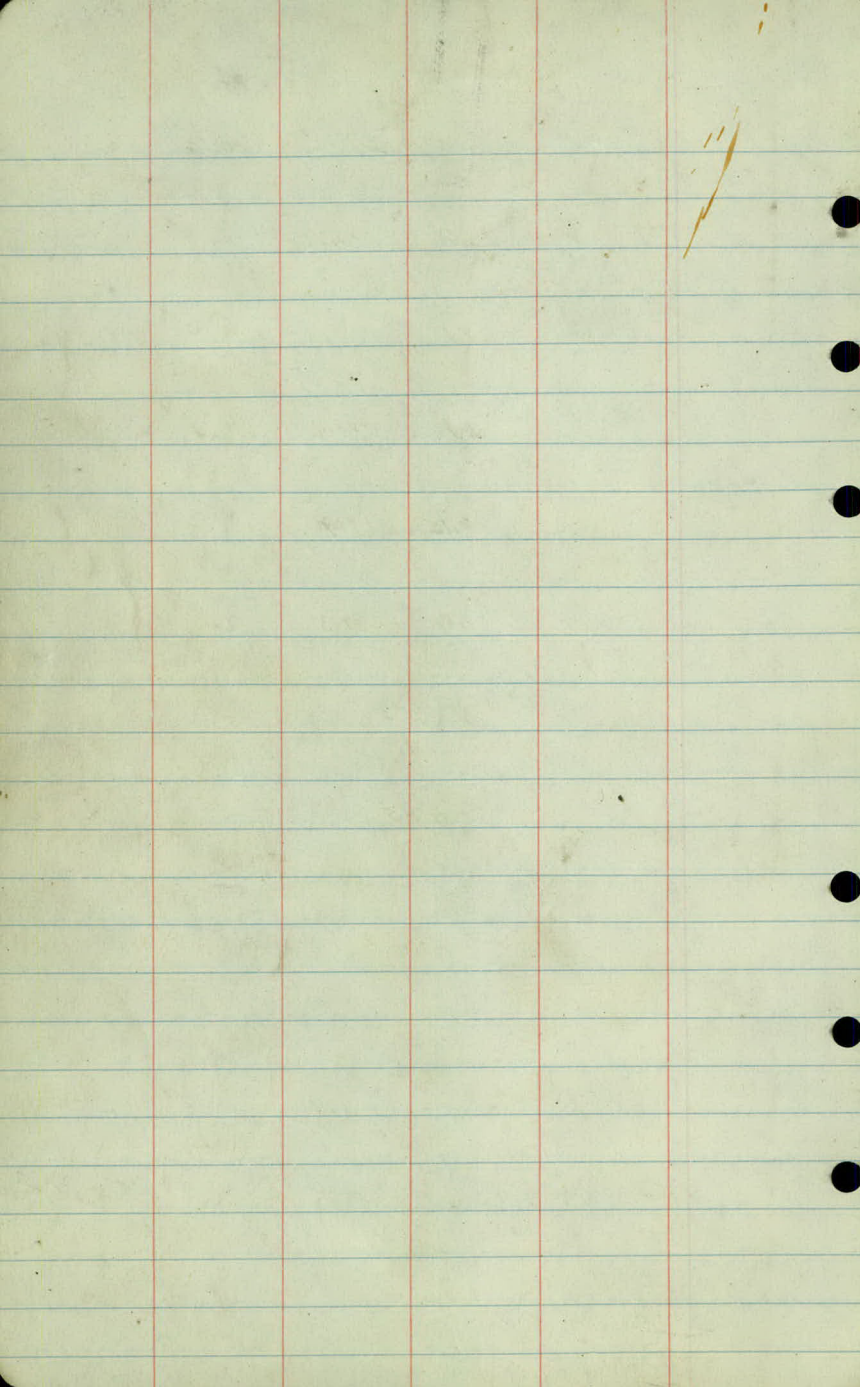
63



| Lt.    | Gr. Rod. | Grade | Grade | Rt.   |
|--------|----------|-------|-------|-------|
| 6.3 ✓  |          | 86.8  | 87.8  | 5.3 ✓ |
| 6.0 ✓  |          | 87.1  | 88.1  | 5.0 ✓ |
| 5.7 ✓  |          | 87.4  | 88.4  | 4.7 ✓ |
| 4.94 ✓ |          | 88.15 | 88.9  | 4.2 ✓ |
| 4.3 ✓  |          | 88.8  | 89.3  | 3.8 ✓ |

90.3

91.5



Plan Survey  
Vadna is Blvd  
Sta 56+00 to 63+00

| Index          | Pages   | Feb 29 - 44<br>Mar 1st 44 |
|----------------|---------|---------------------------|
| A Lign         | 1 to 4  | HAW                       |
| Topog          | 4 to 6  | AM                        |
| Bench Levels & | 6 to 8  | L. G.                     |
| Elev of Lake   |         |                           |
| X sections     | 8 to 10 |                           |

Handed in to office 3/1/44 WJB

| Sta      | Pt   | Def    | $\Delta L$ | $\Delta R$ |
|----------|------|--------|------------|------------|
| +30.67   | PT   | 19°12' |            |            |
| +25      |      | 18°14' |            |            |
| 59       |      | 13°59' |            |            |
| 58+77.30 | PI   |        | 38°24'     |            |
| +75      |      | 9°44'  | D 34°00'   |            |
| +50      |      | 5°29'  | T 59.57'   |            |
| +25      |      | 1°14'  | L 112.94   |            |
| 58+17.73 | P.C. | 0°00'  | R 171.015  |            |

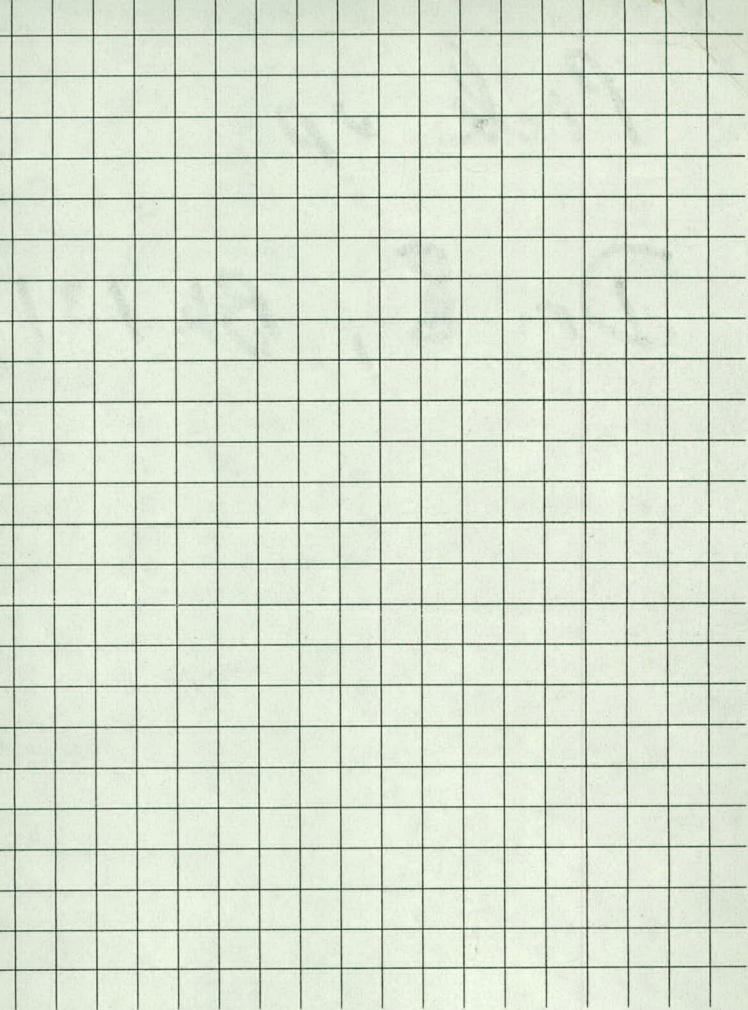
57+40.25 P.O.T.

52+27.86 PI 3°16'



Pick up

Dr. 8, Bk 131



March 16, 1960

1

VADNIAS BLVD.

Rice to Centerville

Rerun

Alinement of Mitchell

| Sta | Point | $\Delta L$ | $\Delta R$ |
|-----|-------|------------|------------|
|-----|-------|------------|------------|

|       |    |                 |                          |
|-------|----|-----------------|--------------------------|
| 50.45 | PT | $19^{\circ}12'$ | $\Delta = 38^{\circ}24'$ |
|-------|----|-----------------|--------------------------|

|    |  |                   |                  |
|----|--|-------------------|------------------|
| 59 |  | $12^{\circ}53.6'$ | $D = 25^{\circ}$ |
|----|--|-------------------|------------------|

|          |      |                 |              |
|----------|------|-----------------|--------------|
| 58+77.30 | P.I. | $38^{\circ}24'$ | $T = 80.45'$ |
|----------|------|-----------------|--------------|

|     |  |                  |              |
|-----|--|------------------|--------------|
| +50 |  | $6^{\circ}38.6'$ | $L = 153.60$ |
|-----|--|------------------|--------------|

|    |  |                  |              |
|----|--|------------------|--------------|
| 58 |  | $0^{\circ}23.6'$ | $R = 231.01$ |
|----|--|------------------|--------------|

|          |    |                |  |
|----------|----|----------------|--|
| 57+96.85 | PC | $0^{\circ}00'$ |  |
|----------|----|----------------|--|

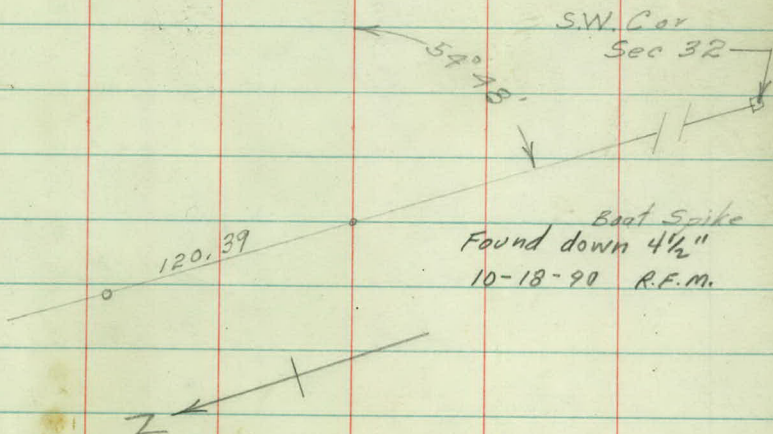
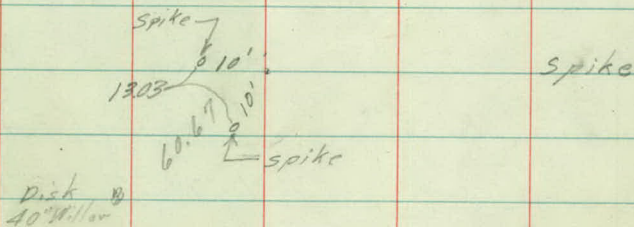
|          |        |  |  |
|----------|--------|--|--|
| 57+39.58 | P.O.T. |  |  |
|----------|--------|--|--|



JS  
JL  
JH

March 16, 1960  
Cold Windy 20°

2



| Sta | Point | $\Delta Lt.$ | $\Delta Rt.$ |
|-----|-------|--------------|--------------|
|-----|-------|--------------|--------------|

|        |    |  |  |
|--------|----|--|--|
| +09.68 | PT |  |  |
|--------|----|--|--|

|  |  |  |                |
|--|--|--|----------------|
|  |  |  | $6^{\circ}12'$ |
|--|--|--|----------------|

|    |  |  |  |
|----|--|--|--|
| 66 |  |  |  |
|----|--|--|--|

|  |  |                 |                          |
|--|--|-----------------|--------------------------|
|  |  | $5^{\circ}48.7$ | $\Delta = 12^{\circ}24'$ |
|--|--|-----------------|--------------------------|

|     |  |  |  |
|-----|--|--|--|
| +50 |  |  |  |
|-----|--|--|--|

|  |  |                 |                 |
|--|--|-----------------|-----------------|
|  |  | $3^{\circ}48.7$ | $D = 8^{\circ}$ |
|--|--|-----------------|-----------------|

|        |    |  |  |
|--------|----|--|--|
| +32.53 | PI |  |  |
|--------|----|--|--|

|  |  |  |             |
|--|--|--|-------------|
|  |  |  | $T = 77.85$ |
|--|--|--|-------------|

|    |  |  |  |
|----|--|--|--|
| 65 |  |  |  |
|----|--|--|--|

|  |  |                 |              |
|--|--|-----------------|--------------|
|  |  | $T^{\circ}48.7$ | $L = 155.00$ |
|--|--|-----------------|--------------|

|          |    |  |  |
|----------|----|--|--|
| 64+54.68 | PC |  |  |
|----------|----|--|--|

|  |  |  |              |
|--|--|--|--------------|
|  |  |  | $R = 716.78$ |
|--|--|--|--------------|

|        |  |  |  |
|--------|--|--|--|
| 77.85  |  |  |  |
| 132.53 |  |  |  |

|        |    |  |  |
|--------|----|--|--|
| +80.75 | PT |  |  |
|--------|----|--|--|

|  |  |  |                     |
|--|--|--|---------------------|
|  |  |  | $14^{\circ}48.1/2'$ |
|--|--|--|---------------------|

|     |  |  |  |
|-----|--|--|--|
| +50 |  |  |  |
|-----|--|--|--|

|  |  |  |                 |
|--|--|--|-----------------|
|  |  |  | $12^{\circ}21'$ |
|--|--|--|-----------------|

|  |  |  |                          |
|--|--|--|--------------------------|
|  |  |  | $\Delta = 29^{\circ}37'$ |
|--|--|--|--------------------------|

|    |  |  |  |
|----|--|--|--|
| 61 |  |  |  |
|----|--|--|--|

|  |  |  |                |
|--|--|--|----------------|
|  |  |  | $8^{\circ}21'$ |
|--|--|--|----------------|

|  |  |  |                  |
|--|--|--|------------------|
|  |  |  | $D = 16^{\circ}$ |
|--|--|--|------------------|

|          |      |  |  |
|----------|------|--|--|
| 60+90.64 | P.I. |  |  |
|----------|------|--|--|

|  |  |  |             |
|--|--|--|-------------|
|  |  |  | $T = 94.96$ |
|--|--|--|-------------|

|     |  |  |  |
|-----|--|--|--|
| +50 |  |  |  |
|-----|--|--|--|

|  |  |  |                |
|--|--|--|----------------|
|  |  |  | $4^{\circ}21'$ |
|--|--|--|----------------|

|  |  |  |              |
|--|--|--|--------------|
|  |  |  | $L = 185.11$ |
|--|--|--|--------------|

|    |  |  |  |
|----|--|--|--|
| 60 |  |  |  |
|----|--|--|--|

|  |  |  |                |
|--|--|--|----------------|
|  |  |  | $0^{\circ}21'$ |
|--|--|--|----------------|

|  |  |  |               |
|--|--|--|---------------|
|  |  |  | $R = 359.265$ |
|--|--|--|---------------|

|          |      |  |  |
|----------|------|--|--|
| 59+95.64 | P.C. |  |  |
|----------|------|--|--|

|  |  |  |                |
|--|--|--|----------------|
|  |  |  | $0^{\circ}00'$ |
|--|--|--|----------------|

|        |  |  |  |
|--------|--|--|--|
| -50.45 |  |  |  |
| 15.19  |  |  |  |

FK  
RG  
JS  
JL  
JH

March 16, 1960  
March 28, 1960

3

Disk  
24" O

50.82

Boat Spike

Disk  
30" O

55.95

14" Oak  
Disk

54.75

3 Twin 10" Birch  
Disk

30.56

N.E. Cor. Bolt

54.41

\* 10" Spruce  
Disk

3

Sta Point  $\Delta L$   $\Delta R$

+40.86 P.T.  $1^{\circ}38'$   $\Delta = 3^{\circ}16'$

70  $1^{\circ}13.5'$   $D = 2^{\circ}$

+59.23 P.I.  $T = 81.70$

+50  $0^{\circ}43.5'$   $L = 163.33$

69  $0^{\circ}13.5'$   $R = 2864.93$

68+77.53 P.C.  $0^{\circ}00'$

+43.80 P.T.  $5^{\circ}30\frac{1}{2}'$

68  $4^{\circ}18.2'$   $\Delta = 11^{\circ}01'$

+50  $2^{\circ}55.7'$   $D = 5^{\circ}30'$

67+44.98 P.I.  $T = 100.48$

67  $1^{\circ}33.2'$   $L = 200.30$

+50  $0^{\circ}10.7'$   $R = 1042.14$

66+43.50 P.C.  $0^{\circ}00'$



FN  
RG  
JS  
JL  
JH

± March 29, 1968

4

Disk  
22" Oak

36.32

Spike

20.85

Disk  
26" O

Disk 13.71  
14" Oak

Boat Spike

26.76

Disk  
18" Oak

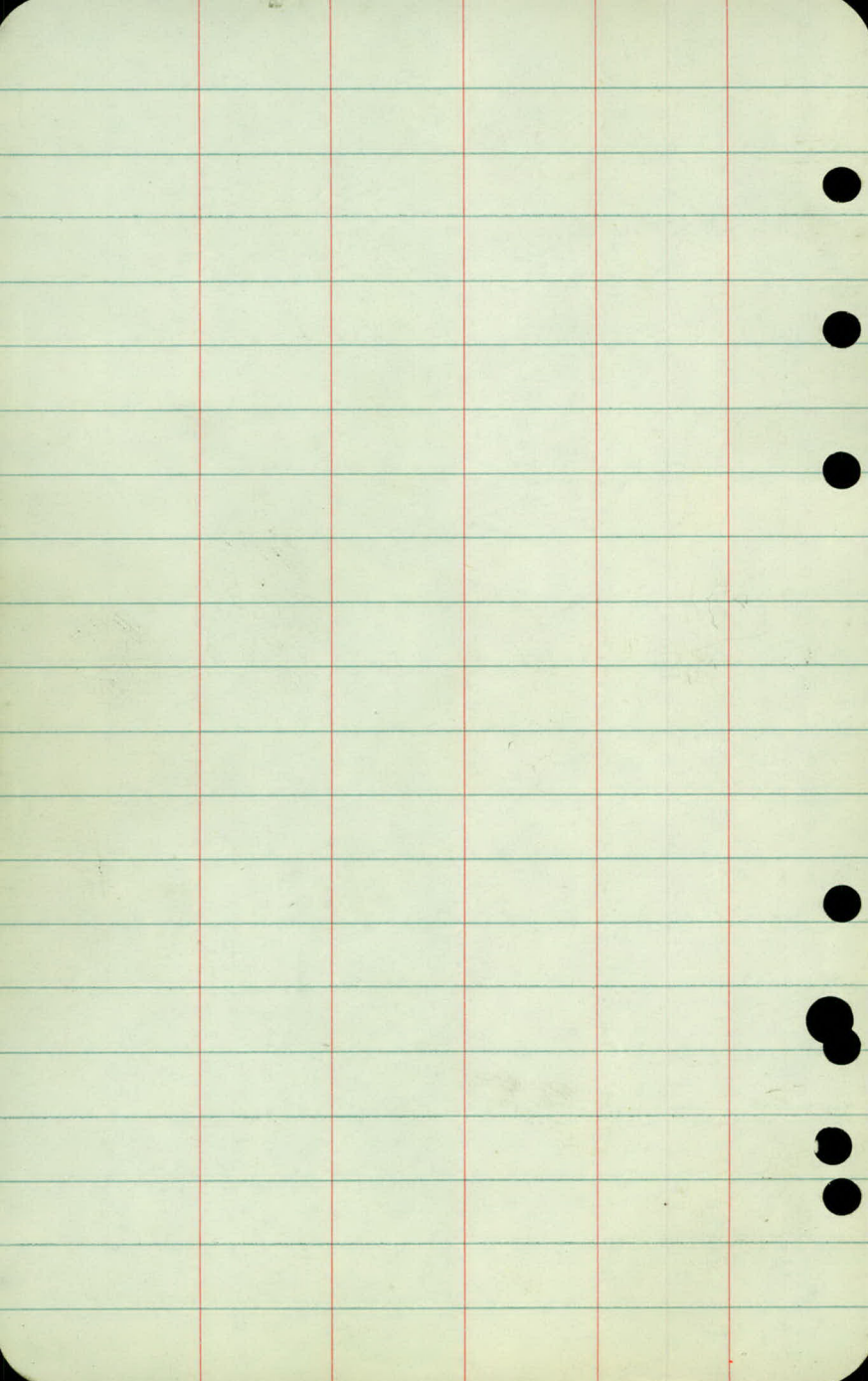
4

| Sta      | Point | $\Delta L$ | $\Delta R$                |
|----------|-------|------------|---------------------------|
| 74+75.10 | P.T.  |            | $8^{\circ}19'$            |
| +50      |       |            |                           |
| 74       |       |            | $6^{\circ}15'$            |
| +50      |       |            | $\Delta = 16^{\circ}38'$  |
| 73+25.03 | P.I.  |            | $D = 5^{\circ}30'$        |
| 73       |       |            | $T = 152.35$              |
| +50      |       |            | $L = 302.42$              |
| 72       |       |            | $2^{\circ}07\frac{1}{2}'$ |
| 71+72.68 | PC    |            | $R = 1042.14$             |
|          |       |            | $0^{\circ}45'$            |
|          |       |            | $0^{\circ}00'$            |

April 11, 1960

5

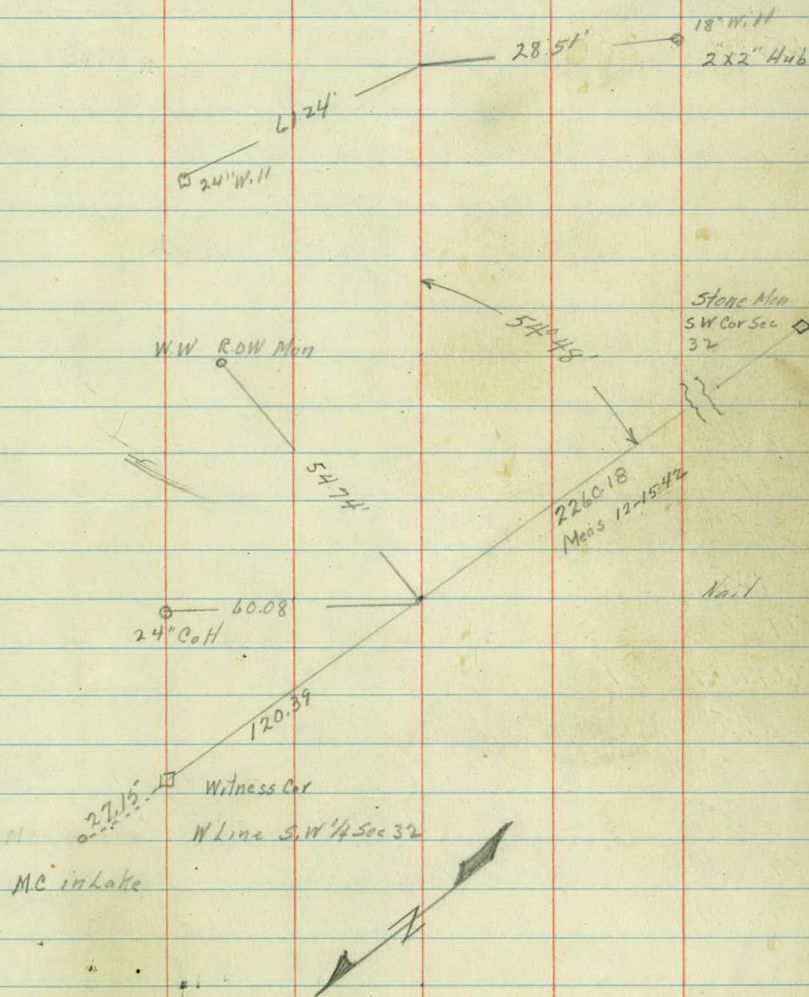
JK  
JS  
JL  
JH





# Description

See p 42 for ties



| Sta | Pt | Def | $\Delta L$ | $\Delta R$ |
|-----|----|-----|------------|------------|
|-----|----|-----|------------|------------|

|          |     |  |  |  |
|----------|-----|--|--|--|
| 65+33.60 | P.I |  |  |  |
|----------|-----|--|--|--|

|        |     |           |  |  |
|--------|-----|-----------|--|--|
| +81.82 | P.T | 14°48'30" |  |  |
|--------|-----|-----------|--|--|

|     |  |        |  |  |
|-----|--|--------|--|--|
| +75 |  | 14°16' |  |  |
|-----|--|--------|--|--|

|     |  |        |  |  |
|-----|--|--------|--|--|
| +50 |  | 12°16' |  |  |
|-----|--|--------|--|--|

|     |  |        |  |  |
|-----|--|--------|--|--|
| +25 |  | 10°16' |  |  |
|-----|--|--------|--|--|

|    |  |       |  |  |
|----|--|-------|--|--|
| 61 |  | 8°16' |  |  |
|----|--|-------|--|--|

|          |     |  |        |  |
|----------|-----|--|--------|--|
| 60+91.67 | P.I |  | 29°37' |  |
|----------|-----|--|--------|--|

|     |  |       |          |  |
|-----|--|-------|----------|--|
| +75 |  | 6°16' | D 16°00' |  |
|-----|--|-------|----------|--|

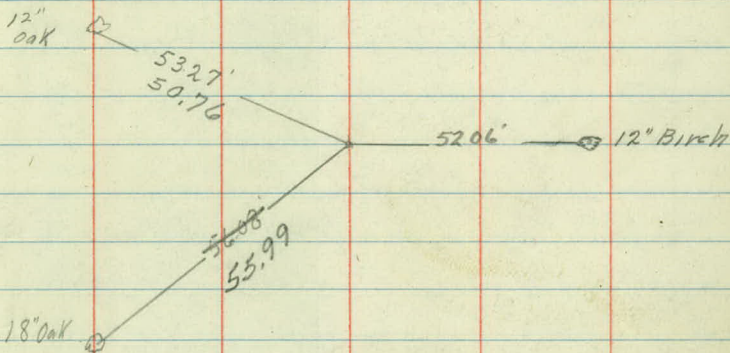
|     |  |       |          |  |
|-----|--|-------|----------|--|
| +50 |  | 4°16' | T 94.96' |  |
|-----|--|-------|----------|--|

|     |  |       |          |  |
|-----|--|-------|----------|--|
| +25 |  | 2°16' | L 185.11 |  |
|-----|--|-------|----------|--|

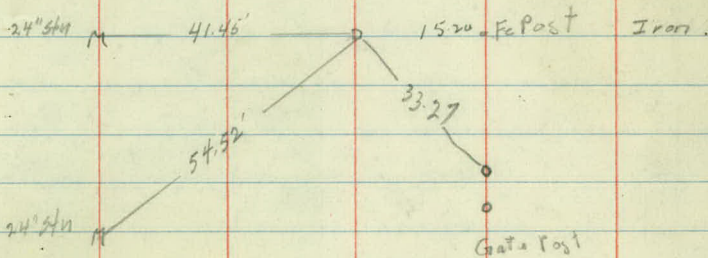
|    |  |       |             |  |
|----|--|-------|-------------|--|
| 59 |  | 0°16' | R. 359.265' |  |
|----|--|-------|-------------|--|

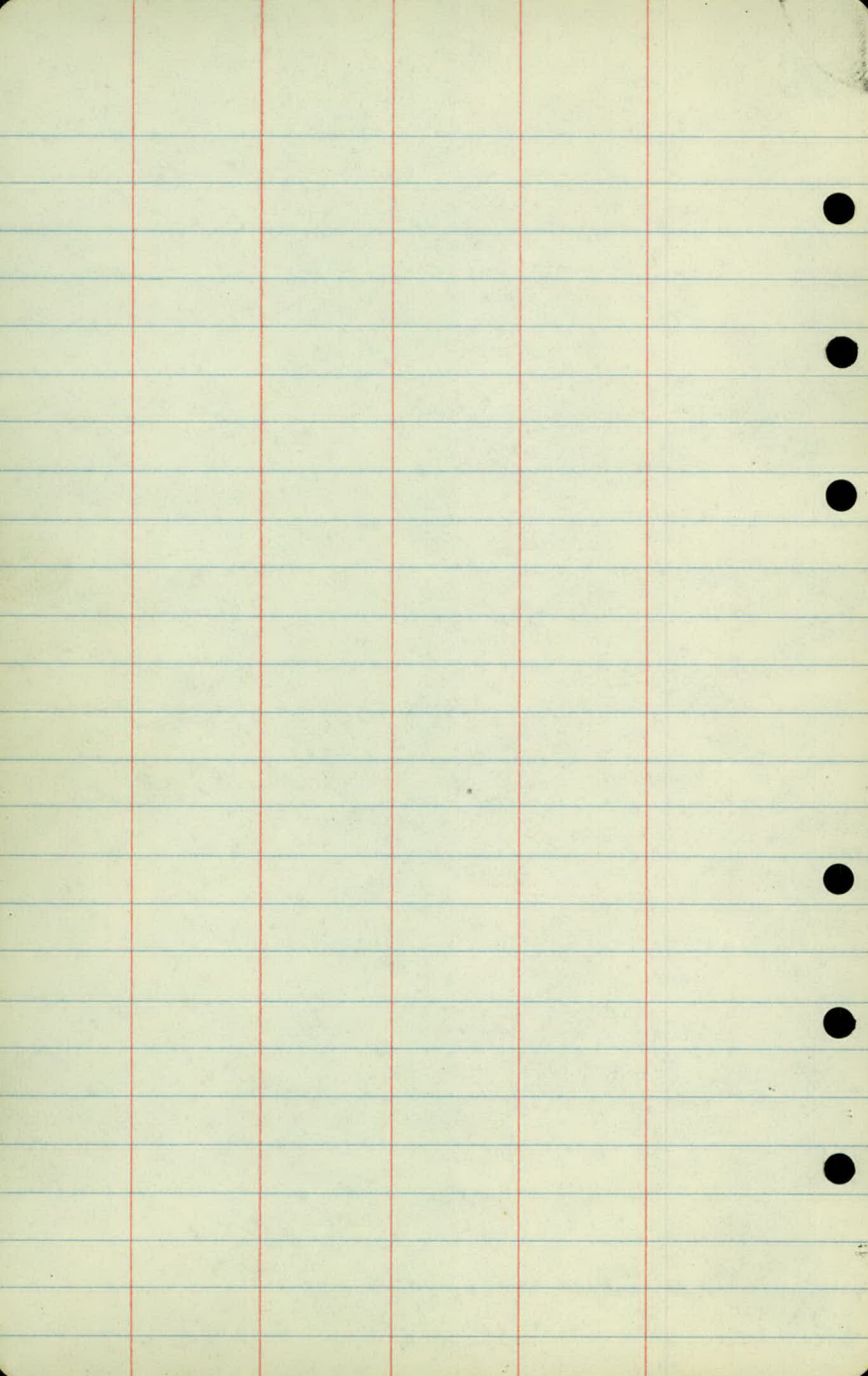
|          |      |       |  |  |
|----------|------|-------|--|--|
| 59+96.71 | P.C. | 0°00' |  |  |
|----------|------|-------|--|--|

# Description



$$\begin{array}{r}
 65 + 53.60 \\
 61 \quad 81.82 \\
 \hline
 3 \quad 51.78 \\
 94.96 \\
 \hline
 446.74
 \end{array}$$







Topography  
Vadnais Blvd  
Sta 56+00 To 63+00

|     | La <sub>1</sub> K <sub>2</sub> | Fe    | Rd    |
|-----|--------------------------------|-------|-------|
| 63  | 37'                            |       | 12'   |
| +75 | 39'                            |       |       |
| +50 | 37'                            |       | 11'   |
| 62  | 41'                            | 27'   | 11'   |
| +75 | 45'                            | 30    | 12'   |
| +50 | 51'                            | 31'   | 12'   |
| +25 | 56'                            | 31'   | 12'   |
| 61  | 53'                            | 31'   | 12'   |
| +75 | 54'                            | 29.5' | 10'   |
| +50 | 55'                            | 29'   | 11'   |
| +25 | 52'                            | 26'   | 11'   |
| 60  | 42'                            | 25'   | 10'   |
| +75 | 42'                            | 23'   | 10'   |
| +50 | 43'                            | 25'   | 11.5' |
| +25 | 51'                            | 27'   | 12'   |
| 59  | 50'                            | 27'   | 13'   |
| +75 | 50'                            | 25'   | 12'   |
| +50 | 49'                            | 25'   | 13'   |
| +25 | 47'                            | 27'   | 13'   |
| 58  | 48'                            | 29'   | 11'   |
| +75 | 52'                            |       |       |
| +25 | 85'                            |       |       |
| 57  | 91'                            | 33'   | 12'   |
| +50 | 102'                           |       |       |
| 56  | 87'                            | 33'   | 11'   |

+74 24" CoH 17  
 +53 12" Oak 34' +97 24" CoH 17.5  
 +49 54" 33' +85 Tw 6" Birch 36  
 +48 W. 11' 43'

+43 54" 46'  
 +21 18" Oak 28'  
 +15 3 54" 44'  
 +10 End Fe 26'  
 +95 54" 45'  
 +86 15" Oak 30'

+66 12" Oak 29'

+08 54" 31'

+100 54" 50'  
 +92 54" 29'  
 +81 54" 29'  
 +75 54" 51'  
 +73 54" 28'  
 +71 54" 51'  
 +52 54" 28'

+29 54" 26'

+71 54" 42'

+58 Tw. 54" 46'

+81 54" 39'  
 +67 3 54" 47'  
 +32 3 54" 41'  
 +32 24" W. 11' 37'  
 +22 18" W. 11' 39'  
 +20 Tw. 18" W. 11' 43'  
 +16 15" W. 11' 42'  
 +14 54" 45'  
 +08 Group 3 18" W. 11' 44'

+99 3E CoH Shed 44'

+61 End Bark Wire Fe 33 +88 54" 49'  
 +57 Triple 15" W. 11' 70' +88 End Fe 415  
 +41 Triple 15" W. 11' 80' +81 5N Cor Metal Shed 41'  
 +35 15" W. 11' 85' +78 Beg. Fe 35'  
 +32 24" CoH 60' +65 Beg. Woven Wire Fe 33'  
 +25 8" Ash 82'  
 +15 24" CoH 89'

+00 8" CoH 100'

+80 10" Ash 80'

+70 15" CoH 101'

+62 Group 3 W. 11' 102'

+80 Group 6 10" W. 11' 76'

+43 15" CoH 96'

+39 12" CoH 96'

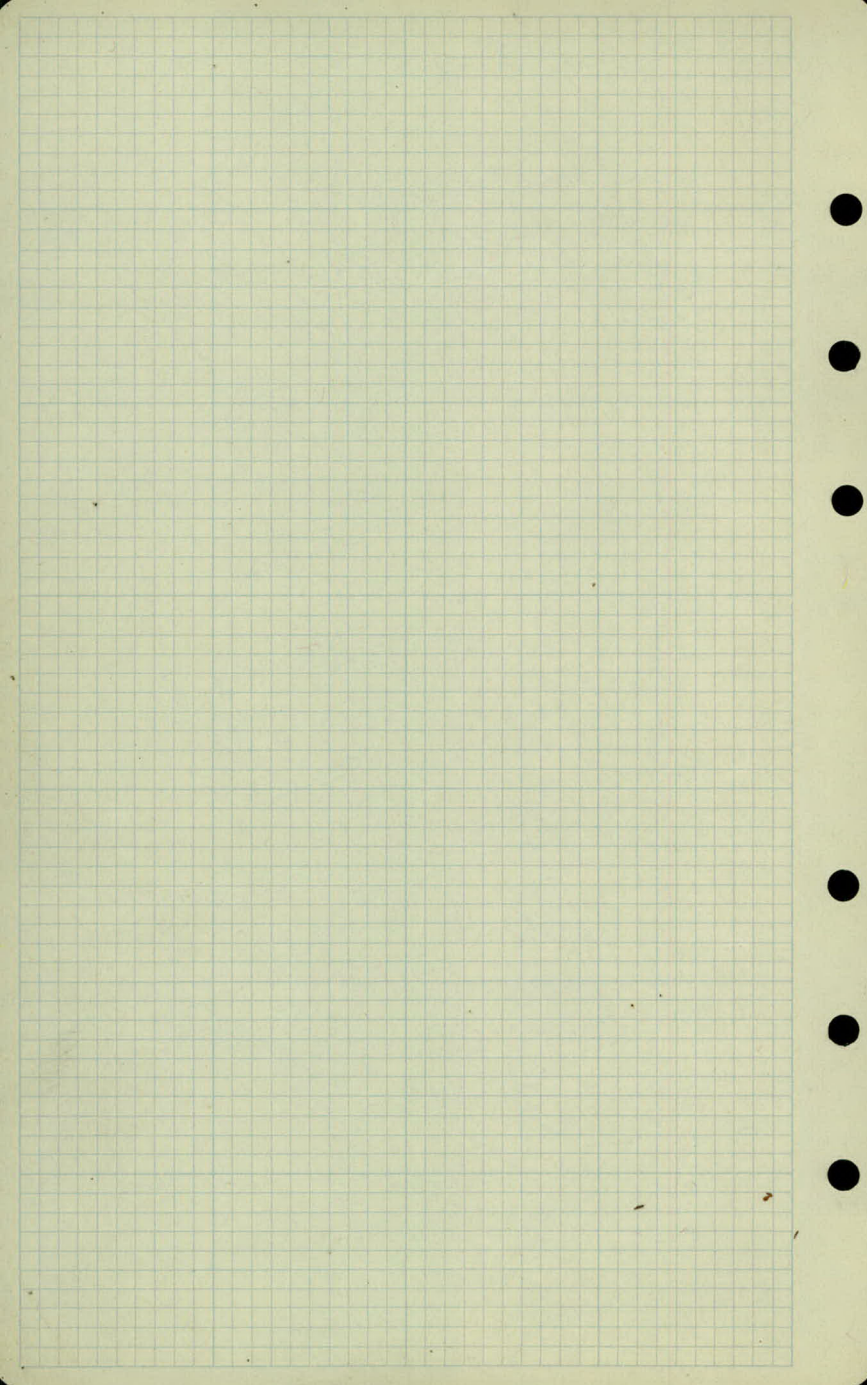
+09 24" CoH 70'

Vadnais Lake

Bark Wire

5" Strand Bark Wire







*Bench Levels*

| Sta | +     | $\Delta$ | -    | Elev     |
|-----|-------|----------|------|----------|
| B.M | 4.01  | 893.37   |      | 889.36   |
|     | 6.28  | 891.81   | 7.84 | 885.53   |
| B.M | 5.87  | 891.81   | 5.87 | 885.94   |
|     | 10.75 | 899.57   | 2.99 | 882.82   |
|     |       |          | 3.33 | 896.24 ✓ |
|     |       |          |      | 896.20 ✓ |

|     |      |        |      |        |
|-----|------|--------|------|--------|
| B.M | 4.56 | 890.40 |      | 885.94 |
|     |      |        | 7.72 | 882.68 |

## Description

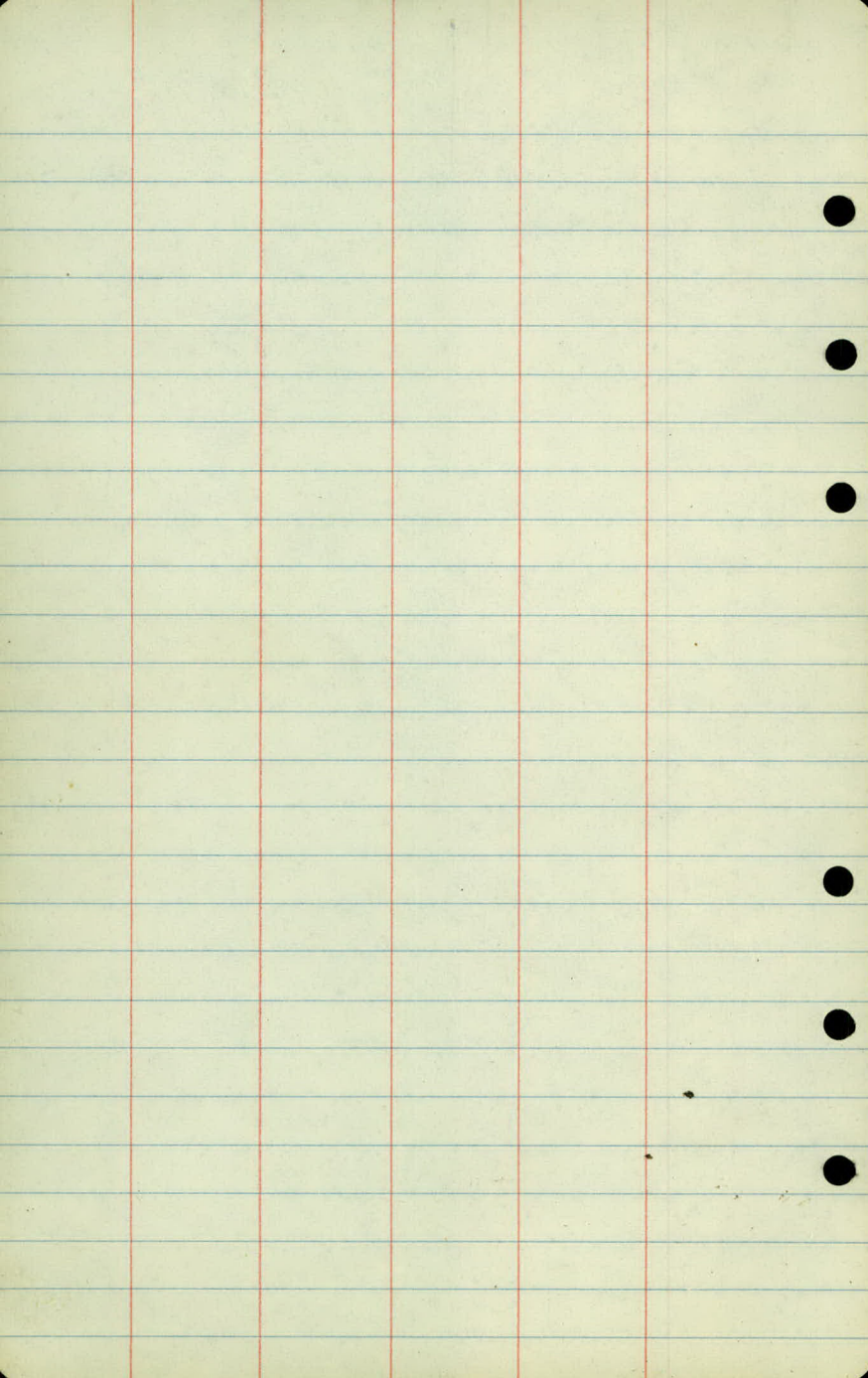
Sp K in Triple 15" W. flow

Triangulation Sta. "BALL"

Top W.W Prop Iron 416' So. of Witness Cor on W. Line  
Sec 3

W.W ROW Mon 16' So of Witness Cor

W. S Vadnais Lake March 1st 1944





X Sections  
Vadnais Blvd  
Sta 56+00 To Sta 63+00

| Sta | +    | X      | - | Elev   |
|-----|------|--------|---|--------|
| B.M | 4.85 | 890.79 |   | 885.94 |

56+00

+50

57

+25

+51

+70

58

+50

59

+50

60

|     |      |        |      |        |
|-----|------|--------|------|--------|
| T.P | 7.29 | 894.37 | 3.71 | 882.08 |
|-----|------|--------|------|--------|

+30

LL

R

Top W.W Prop Iron 16.19 50 MC West Line Sec 31 ✓

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 584.5 | 584.4 | 584.4 | 585.2 | 585.1 | 585.7 | 585.8 |       |
| 6.3   | 6.4   | 6.4   | 5.6   | 5.4   | 5.1   | 5.0   |       |
| 50    | 25    | 18    | 15    | 12    | 7     |       |       |
| 584.6 | 584.4 | 584.1 | 583.9 | 584.9 | 585.4 | 585.5 |       |
| 6.2   | 6.4   | 6.7   | 6.9   | 5.9   | 5.4   | 5.3   |       |
| 50    | 39    | 30    | 19    | 16    | 8     |       |       |
| 584.7 | 584.5 | 584.0 | 584.3 | 585.0 | 585.4 | 585.5 |       |
| 6.1   | 6.3   | 6.8   | 6.5   | 5.8   | 5.4   | 5.3   |       |
| 50    | 38    | 27    | 20    | 16    | 10    |       |       |
| 584.7 | 584.5 | 584.0 | 584.3 | 584.9 | 585.4 | 585.5 |       |
| 6.1   | 6.3   | 6.8   | 6.3   | 5.9   | 5.4   | 5.3   |       |
| 50    | 37    | 26    | 19    | 17    | 9     |       |       |
| 585.4 | 584.7 | 584.4 | 584.0 | 584.5 | 585.3 | 585.5 | 585.7 |
| 5.4   | 6.1   | 6.7   | 6.6   | 6.8   | 6.3   | 5.5   | 5.3   |
| 50    | 48    | 46    | 43    | 41    | 38    | 27    | 19    |
| 585.8 | 585.2 | 584.5 | 585.0 | 584.6 | 584.1 | 584.0 | 584.6 |
| 5.0   | 5.6   | 6.3   | 5.8   | 6.2   | 6.7   | 6.8   | 6.2   |
| 50    | 45    | 39    | 34    | 31    | 28    | 21    | 18    |
| 583.1 | 584.6 | 585.1 | 584.8 | 584.0 | 584.0 | 584.0 | 585.1 |
| 7.7   | 6.2   | 5.7   | 6.0   | 6.8   | 6.8   | 6.8   | 5.7   |
| 50    | 43    | 31    | 28    | 25    | 23    | 20    | 16    |
| 583.2 | 585.2 | 585.0 | 584.3 | 584.3 | 585.2 | 585.5 | 585.8 |
| 7.1   | 5.6   | 5.8   | 6.5   | 6.5   | 5.6   | 5.3   | 5.0   |
| 50    | 43    | 23    | 23    | 21    | 19    | 14    | 9     |
| 583.3 | 585.4 | 585.7 | 585.9 | 585.6 | 584.4 | 584.4 | 584.7 |
| 7.5   | 5.4   | 5.1   | 4.9   | 5.2   | 6.4   | 6.1   | 5.6   |
| 50    | 43    | 41    | 39    | 25    | 23    | 21    | 20    |
| 583.9 | 583.9 | 586.0 | 586.2 | 585.8 | 584.6 | 584.6 | 585.7 |
| 6.9   | 6.9   | 4.8   | 4.6   | 5.0   | 6.2   | 6.2   | 5.1   |
| 50    | 42    | 38    | 33    | 23    | 21    | 18    | 15    |
| 583.7 | 584.2 | 586.1 | 586.1 | 585.6 | 585.6 | 586.2 | 586.6 |
| 7.1   | 6.6   | 4.7   | 4.7   | 5.2   | 5.2   | 4.2   | 4.6   |
| 50    | 43    | 39    | 24    | 20    | 18    | 16    | 13    |
| 584.7 | 586.0 | 586.3 | 586.8 | 586.8 | 585.1 | 586.1 | 586.7 |
| 9.1   | 8.1   | 7.6   | 7.6   | 7.3   | 8.3   | 7.7   | 7.0   |
| 50    | 47    | 47    | 26    | 24    | 22    | 20    | 17    |



| Sta | + | $\pi$  | - | Elev |
|-----|---|--------|---|------|
|     |   | 894.37 |   |      |

60+50

61

+50

62

+58

63

|     |      |        |      |        |        |
|-----|------|--------|------|--------|--------|
| T.P | 5.97 | 897.95 | 239  | 891.98 |        |
|     |      |        | 1.71 | 896.24 | 896.24 |

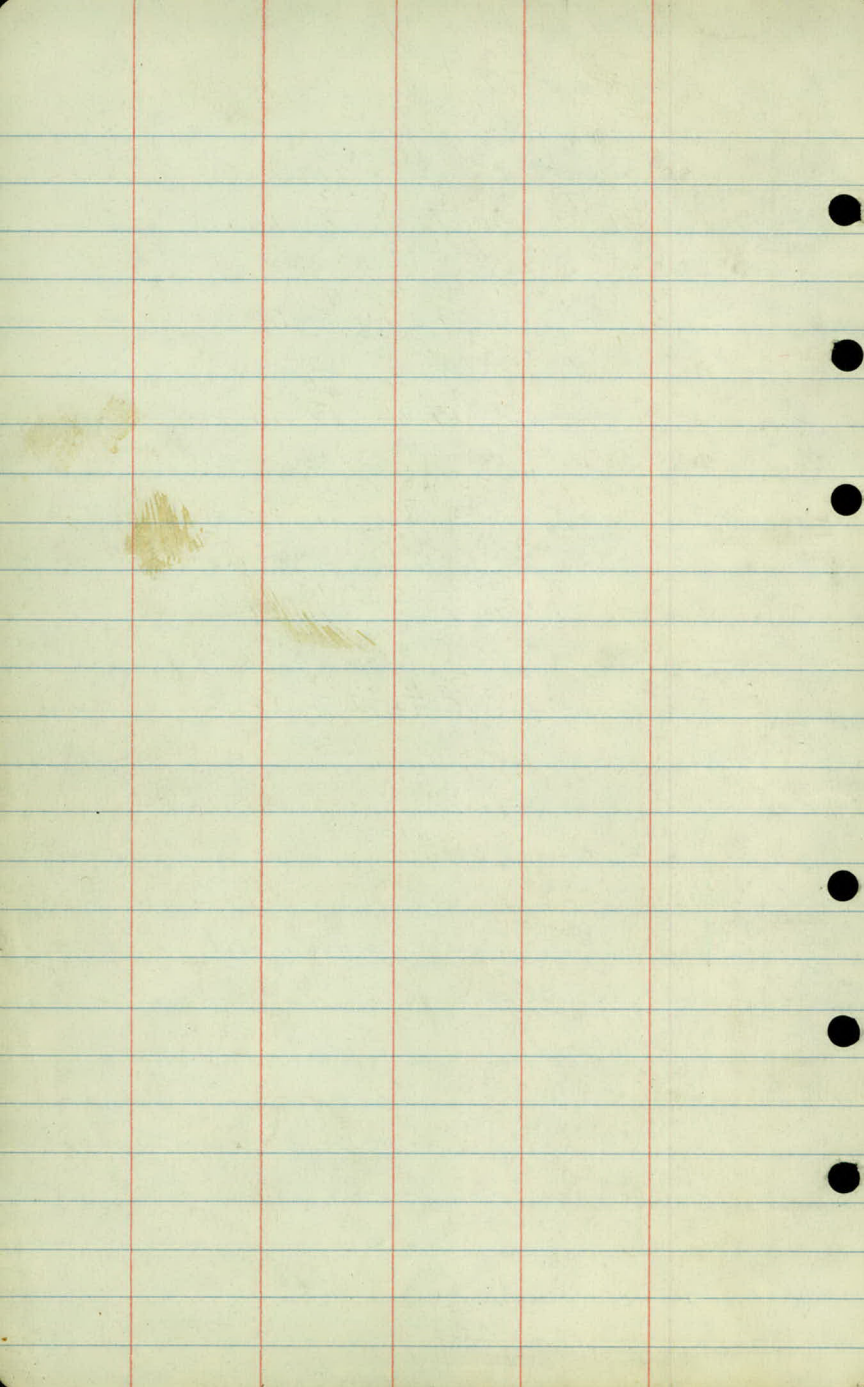


L+

2

|                      |                  |                  |                    |                    |                 |                 |                 |       |
|----------------------|------------------|------------------|--------------------|--------------------|-----------------|-----------------|-----------------|-------|
|                      | 885.8            | 886.4            | 886.8              | 885.0              | 885.6           | 886.3           | 886.9           | 887.5 |
|                      | $\frac{86}{50}$  | $\frac{82}{47}$  | $\frac{76}{28}$    | $\frac{94}{23-20}$ | $\frac{88}{18}$ | $\frac{81}{16}$ | $\frac{75}{10}$ | 6.9   |
| 884.3                | 886.5            | 886.6            | 885.1              | 885.3              | 886.5           | 886.8           | 887.3           | 886.0 |
| $\frac{101}{50}$     | $\frac{79}{45}$  | $\frac{78}{29}$  | $\frac{93}{25}$    | $\frac{91}{21}$    | $\frac{79}{17}$ | $\frac{76}{14}$ | $\frac{71}{10}$ | 6.4   |
| 884.0                | 886.6            | 886.2            | 885.7              | 885.9              | 887.4           | 887.8           | 888.5           |       |
| $\frac{104}{50}$     | $\frac{78}{45}$  | $\frac{82}{29}$  | $\frac{87}{26}$    | $\frac{85}{22}$    | $\frac{70}{16}$ | $\frac{66}{12}$ |                 | 5.9   |
| 883.6                | 883.9            | 886.8            | 886.9              | 887.9              | 888.2           | 888.6           | 889.2           |       |
| Ice $\frac{108}{53}$ | $\frac{105}{44}$ | $\frac{76}{39}$  | $\frac{75}{26-20}$ | $\frac{65}{18}$    | $\frac{62}{14}$ | $\frac{58}{11}$ |                 | 5.2   |
| 883.3                | 883.6            | 883.9            | 888.6              | 889.2              | 890.0           | 890.2           | 890.5           |       |
| Ice $\frac{111}{50}$ | $\frac{106}{40}$ | $\frac{105}{37}$ | $\frac{58}{29}$    | $\frac{52}{22}$    | $\frac{44}{13}$ | $\frac{42}{10}$ |                 | 3.9   |
| 883.5                | 884.0            | 885.3            | 887.2              | 890.3              | 891.5           | 891.7           | 892.0           |       |
| Ice $\frac{109}{43}$ | $\frac{104}{39}$ | $\frac{89}{33}$  | $\frac{72}{31}$    | $\frac{41}{24}$    | $\frac{29}{14}$ | $\frac{27}{11}$ |                 | 2.4   |

Spk in 8" Birch 21' Rt 5/9 63+25



VADNAIS BLVD

X Sections

Sta 57 to Sta 62

|      |      |                |   |        |
|------|------|----------------|---|--------|
| Sta  | +    | $\bar{\Delta}$ | - | Elev   |
| B.M. | 5.23 | 891.17         |   | 885.94 |

57

+25

+51

+70

58

+50

59

+50



7-19-44  
K.A. - A.B.  
C.F.  
B.S.

104

Lt.

E

Top W.W. Prop. Iron 16.19' So. W.C. West Line Sec. 31

884.4 884.1 884.0 884.2 884.7 885.2 885.4  
6.8 7.1 7.2 7.0 6.5 6.0 5.8  
50 38 27 20 15 10

884.2 884.2 883.9 884.3 884.7 885.2 885.4  
7.0 7.0 7.3 6.9 6.5 6.0 5.8  
50 37 26 19 17 9

884.8 884.1 883.5 883.9 883.8 883.9 883.8 884.3 885.1 885.3 885.5  
6.9 7.1 7.7 7.3 7.7 7.3 7.4 6.9 6.1 5.9 5.7  
50 48 46 43 41 38 27 19 12 8

885.4 884.8 884.2 884.5 884.3 883.8 883.8 884.3 884.7 885.3 885.6  
5.8 6.4 7.0 6.7 6.9 7.4 7.4 6.9 6.5 5.9 5.6  
50 45 39 34 31 28 21 18 16 11

882.9 884.1 884.7 885.1 885.1 884.5 883.8 883.6 883.5 884.8 885.1 885.8  
8.3 7.1 6.5 6.1 6.1 6.7 7.4 7.6 7.4 6.4 6.1 5.4  
50 44 43 31 29 28 25 23 20 16 12

882.6 883.4 885.1 885.5 884.3 884.2 884.2 884.8 885.2 885.6 886.1  
8.6 7.8 6.1 5.7 6.9 7.0 7.0 6.4 6.0 5.6 5.1  
50 45 43 25 22 21 20 19 14 9

881.9 883.9 884.7 885.3 885.8 885.8 884.4 884.5 884.6 885.0 885.3 886.0 886.4  
9.3 7.3 6.5 5.9 5.4 5.4 6.8 6.7 6.6 6.2 5.9 5.2 4.8  
50 45 43 41 29 25 23 21 20 19 15 10

880.8 882.9 883.3 883.9 885.8 886.1 885.8 884.5 884.7 885.4 885.6 886.2 886.7  
10.4 8.3 7.9 7.3 5.4 5.1 5.4 6.7 6.5 5.8 5.6 5.0 4.5  
52 50 42 38 38 33 23 21 18 17 15 8

Top Rip Pop

Sta +  $\pi$  - Elev  
 891.17<sup>✓</sup>

60

T.P. 3.15 ~~892.72~~ 892.74 1.58 889.59

+30

+50

61

+50

62

B.M. ~~6.79~~ ~~885.93~~

T.P. 7.24 ~~896.65~~ 896.67 3.31 ~~889.41~~ 889.43

B.M. 0.43 ~~896.22~~ 896.24

(896.24)

-20-44  
K.A.  
L.C.  
C.F.  
B.S.  
D.G.

105

L+

E

882.8 885.0 885.7 886.2 884.9 884.9 885.6 886.0 886.5 887.0  
8.4 6.2 5.5 5.0 6.3 6.3 5.6 5.2 4.7 4.2  
50 43 39 24 20 18 16 13 9

Top G.R. Post at 60' 105

883.9 885.3 885.8 886.8 886.4 885.1 884.9 885.6 886.5 887.2  
8.8 7.4 6.9 5.9 6.3 7.6 7.8 7.1 6.2 5.5  
51 49 47 26 24 22 20 17 10

883.9 885.6 886.1 886.5 886.1 884.9 885.0 885.3 885.9 886.6 887.3  
8.8 7.1 6.6 6.2 6.6 7.8 7.7 7.4 6.8 6.1 5.4  
50 47 34 28 26 23 20 18 18 10

Top of

bank should  
be at 50'

883.3 884.6 886.2 886.5 884.9 885.6 886.2 886.6 886.2 887.2 887.5  
9.4 8.1 6.5 6.2 7.8 7.1 6.5 6.1 6.5 5.5 4.9  
50 47 45 29 25 21 17 14 14 10

Wash out 25' 100g

883.0 886.2 886.1 885.5 885.8 887.2 887.7 888.4  
9.7 6.5 6.6 7.2 6.9 5.5 5.0 4.3  
50 45 29 26 22 16 12

881.9 883.0 886.5 886.7 887.0 887.7 888.1 888.1 888.5 889.2  
10.8 9.7 6.2 6.0 5.7 5.0 4.6 4.6 4.2 3.5  
53 44 39 26 23 18 14 14 11

Spt. in 8" Birch 21' Rt. str. 43+25



Sta.

+

$\pi$

-

Elev



(106)

X Sections

VADNIA'S Blvd.

Sta 56+00 to Sta 63+00

5-4-55

HAW

FK

L.P.

M.M

Sta +  $\pi$  - Elev.

BM 3.83 889.77

885.94

191.29 St. P. Datum

56

885.94

191.29

694.65 = Diff in Data.

+50

May 4, Vadnais Gauge = 177.09  
11.66

WS = 188.75 St. P. Datum

+

694.65

883.40 Rcy Datum

57

+25

+51

+70

HAW  
FK  
LC  
MMc

Lt.

\$ 2  
(107)

W.W. Prop. Iron 16.19 So. W.C. West Line Sec 31

50 25 18 15 12 7 1

884.4 884.2 884.1 884.3 884.9 885.5 885.6  
5.4 5.6 5.7 5.5 4.9 4.3 4.2 ✓  
50 39 30 19 16 8

884.6 884.2 884.0 884.3 884.7 885.5 885.5  
5.2 5.6 5.8 5.5 5.1 4.3 4.3 ✓  
50 38 27 20 15 10

884.3 884.0 883.8 884.3 884.4 885.4 885.6  
5.5 5.8 6.0 5.5 5.4 4.4 4.2 ✓  
50 37 26 19 17 9

884.8 884.3 883.7 883.8 883.8 883.9 884.4 885.2 885.6 885.7  
5.5 6.1 6.0 6.0 6.0 5.9 5.4 4.6 4.2 4.1 ✓  
48 46 43 41 38 27 19 12 8

885.3 884.5 884.2 884.4 884.3 883.8 884.3 884.5 884.8 885.4 885.7  
4.5 5.3 5.6 5.4 5.5 6.0 5.5 5.3 5.0 4.4 4.1 ✓  
50 45 39 34 31 28 21 18 16 11

885.0 883.5 T 882.6  
4.8 6.31 7.2  
59 63 WS 70

T 883.40 @ 63.5

Sta +  $\pi$  - Elev

889.77

883.4 @ 60.3

881.4

882.5

T

58

8.4

7.3

77

63

+50

6.48

9264

T.P.

~~5.48~~

891.64

3.61

886.16

880.4

59

12.4

63

+50

60

880.4

12.2

61

+30



LT

3

884.3  
5.51 884.4 884.4 885.1 884.7 883.9 883.9 884.4 884.9 885.5 885.9  
5.7 5.4 5.4 4.7 5.1 5.9 5.9 5.4 4.9 4.3 3.9 ✓  
50 43 31 28 25 23 20 16 12

883.4 47.8

881.1 882.6 T 885.1 884.5 884.9 885.1 885.4 885.9 886.3  
8.7 7.2 4.7 5.0 4.9 4.7 4.4 3.9 3.5 ✓  
63 50 43 23 23 21 19 14 9

883.4  
46.6 T

882.4 884.7 885.1 885.5 885.2 884.8 885.0 885.1 885.2 885.6 886.1 886.6  
10.4 7.9 7.5 6.8 7.4 7.8 7.6 7.5 7.4 7.0 6.5 6.0 ✓  
50 43 41 29 25 23 21 20 19 15 10

883.4  
40

879.9 881.9 882.0 T 883.8 886.0 885.9 885.2 885.3 885.7 886.4 886.9  
12.7 10.7 9.6 8.8 6.6 6.7 7.4 7.3 6.9 6.2 5.7  
60 50 42 38 33 23 21 18 15 8

883.4  
42.4

880.5 882.8 883.1 T 885.1 886.3 885.6 885.6 885.8 886.0 886.5 887.2  
12.1 9.8 9.5 7.5 6.3 7.0 7.0 6.8 6.6 6.1 5.4  
50 43 39 24 20 18 16 13 9

883.4  
51.6 T

880.7 883.6 885.0 885.5 886.9 886.4 885.5 885.6 885.9 886.7 887.4  
11.9 9.0 7.6 7.1 5.7 6.2 7.1 7.0 6.7 5.9 5.2  
59 51 49 47 26 24 22 20 17 10

880.1  
12.5  
72

| Sta | + | $\pi$ | - | Elev. |
|-----|---|-------|---|-------|
|-----|---|-------|---|-------|

892.64  
891.64

880.2  
880.6  
12.4 12.0  
72 65

60+50

61

+50

62

+50

63

897.90

92.18

T.P. 5.72 ~~896.90~~ 0.46 891.18

896.25

BM

1.65

895.25

896.24

883.4  
101.5

Lt

4  
(108)

882.4 T 883.5 885.3 886.5 885.3 885.7 885.9 886.0 886.9 887.6  
102 9.1 7.3 6.1 7.3 6.9 6.7 6.6 5.7 5.0  
56 50 47 28 23 20 18 16 10

883.4  
49.6

1.36 4.64

880.6 881.5 882.2 T 886.0 886.4 886.7 885.9 886.2 886.7 887.3 888.1  
120 11.1 9.4 6.6 6.2 6.9 6.7 6.4 5.9 5.3 4.5  
69 61 50 45 29 25 21 17 14 10

883.4  
46.9

1.148 1.22

880.6 881.2 882.9 883.2 T 885.9 886.4 886.7 886.2 886.3 887.2 887.9 888.7  
120 11.4 9.7 9.4 6.7 6.2 6.4 6.3 5.4 4.7 3.9  
69 62 50 47 45 29 26 22 16 12

883.4  
43.4

1.6 4.4

880.9 881.8 883.0 T 886.2 887.1 887.4 887.7 888.1 888.8 889.4  
11.7 10.8 9.6 6.4 5.5 5.2 4.9 4.5 3.8 3.2  
61 53 44 39 26 23 18 14 11

883.4  
42.6

7.4 2.6

880.9 881.7 T 884.0 885.0 888.4 889.2 889.9 890.4 890.6  
11.7 10.9 8.6 7.6 4.2 3.4 2.7 2.2 2.0  
58 50 40 37 29 22 13 10

883.4  
37.3

1.7 4.3

881.1 882.0 882.3 T 886.2 887.5 890.6 891.8 891.9 892.1  
11.5 10.6 10.3 6.4 5.1 2.0 0.8 0.7 0.5  
53 43 39 33 31 24 14 11

Spike in 8" Birch 21' Rt Sta 63+25

