OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Plan ..... Survey

WESTERN AVE.

From Co. Rd. C. To Owasso Blvd. S.

Road Acc't. No. 51

Date Filed 12-31-29 File 30-51

PROJ. 30-51

PROJ # 30-51

WESTERN AVE.

ALIGNMENT FROM CO. ROAD "C"

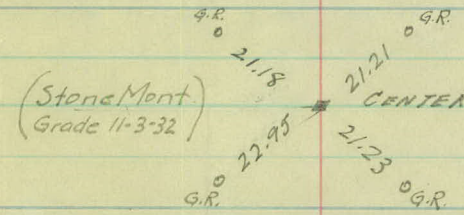
TO OWASSO BLVD. SOUTH.

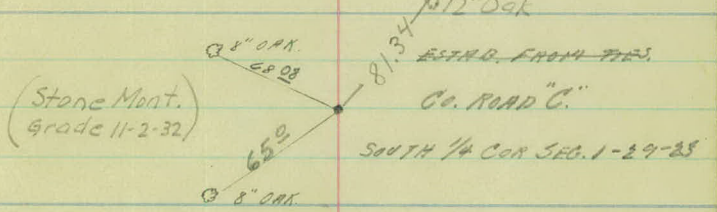
STA	POINT	Δ LT.	Δ RT.
29+55.12	P.O.T.		
26+09.1	P.I.	0°-02'	
17+20.18	P.O.T.		
5+25.45	P.O.T.		
0+00			

N00°-02'W.

N.00°-00'E.

12-11-29


G.R.
21.18
21.21
G.R.
(Stone Mont.
Grade 11-3-32)
CENTER SEC. 1.
22.95
21.23
G.R.
G.R.


12" Oak
8" OAK.
68 08
81.34
ESTAB. FROM TIES.
(Stone Mont.
Grade 11-2-32)
Co. ROAD "C"
65°
SOUTH 1/4 COR SEC. 1-29-28
8" OAK.

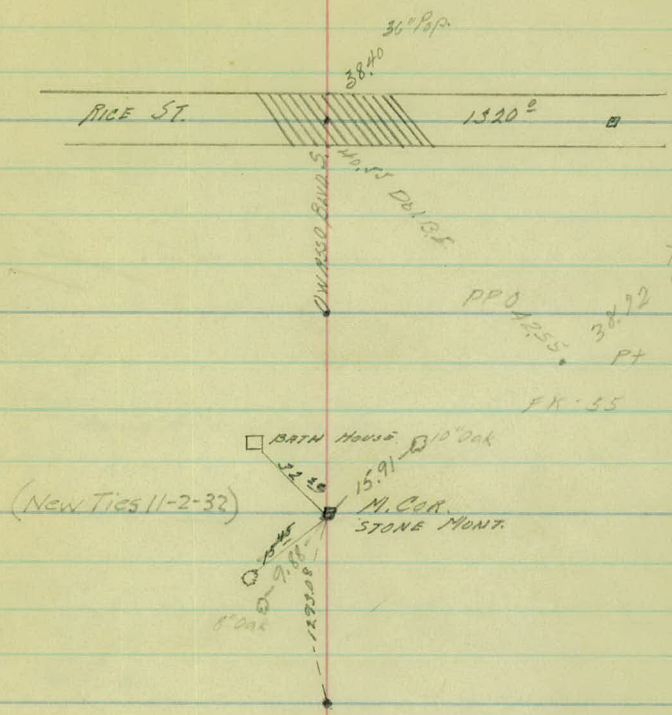
STA.	POINT	Δ Lt.	Δ Rt.
	P.O.T.		
45+14.3	P.O.T.		
40+91.17	P.T.	44°-53.5'	
+50		40°-46.5'	
40		35°-46.5'	
+50		30°-46.5'	
39+29.3	P.I.		
39		25°-46.5'	
+50		20°-46.5'	
38		15°-46.5'	
+50		10°-46.5'	
37		5°-46.5'	
+50		0°-46.5'	
36+42.85	P.C.	0°-00'	

N. 89°-45' E.

Δ-89°-47'
D.-20°-R.
T.-286.85
L.-448.92
R.-287.24

N. 0°-02' W.

12-11-29


36" Pap.
38.40
RICE ST.
1320'
OWINGS BRANCH
Mons Dd. Ctr
T.P. 0
PP 0
1.25'
38.72
Pt
FK - 55
BATH HOUSE
10" Oak
15.91
(New Ties 11-2-32)
N. COR.
STONE MONT.
8" Oak

PROJ # 30-51
WESTERN AVE
ART. TOPOC FROM CO. ROAD C
TO ONWASSO BLVD SOUTH.

Ramsey County
Engineer's Department.

5

4

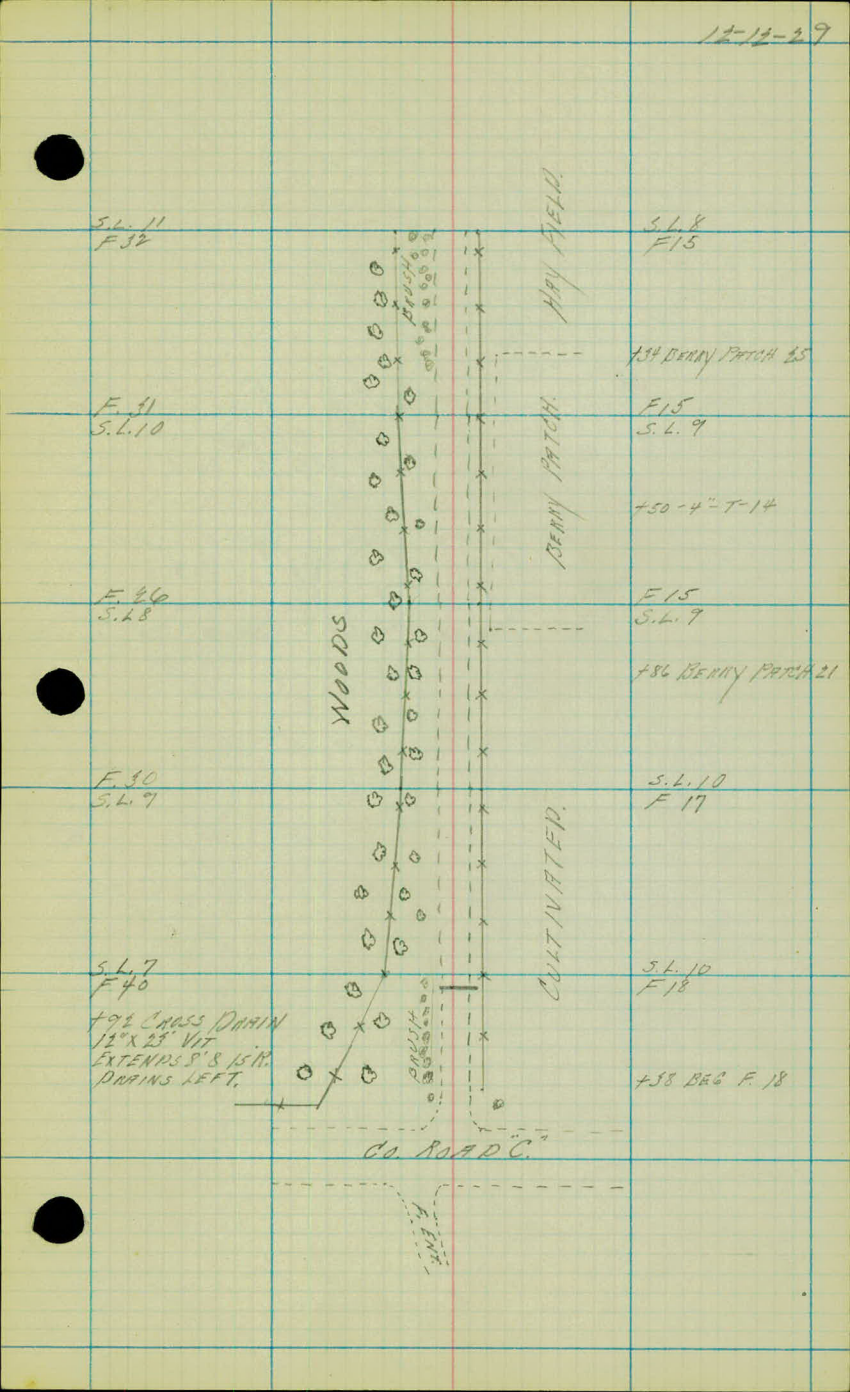
3

2

1

0+00

12-12-29


S.L. 11
F 32
F. 31
S.L. 10
F. 26
S.L. 8
F. 30
S.L. 9
S.L. 7
F 40
+92 CROSS DRAIN
12"x 23' VIT
EXTENDS 5'8 15 R.
DRAINS LEFT.
S.L. 8
F 15
+34 DENNY PATCH 25
F 15
S.L. 9
+50 - 4" - T - 14
F 15
S.L. 9
+86 DENNY PATCH 21
S.L. 10
F 17
S.L. 10
F 18
+38 BEG F. 18
WOODS
DENNY PATCH
CULTIVATED
DITCH
DITCH
Co. ROAD "C"
FENCE

11

10

9

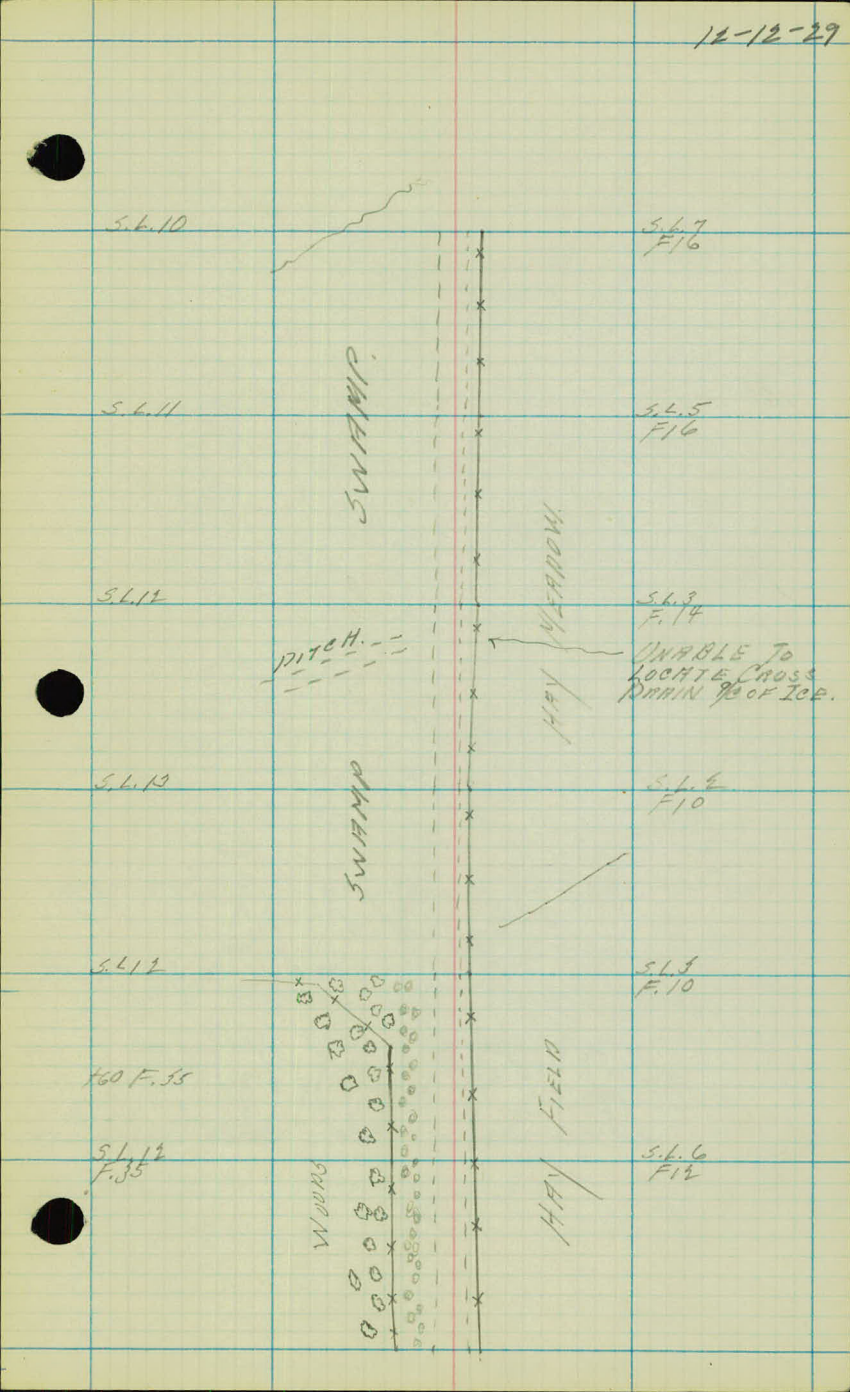
8

7

6

5

12-12-29


S.L.10
S.L.7 F16
SWAMP
S.L.11
S.L.5 F16
S.L.12
S.L.3 F.14
DITCH
UNABLE TO LOCATE CROSS DRAIN 9/12 OF ICE.
HAY MEADOW
S.L.13
SWAMP
S.L.6 F10
S.L.1
S.L.1 F.10
F60 F.35
S.L.12 F.35
WOODS
HAY FIELD
S.L.6 F12

17

16

15

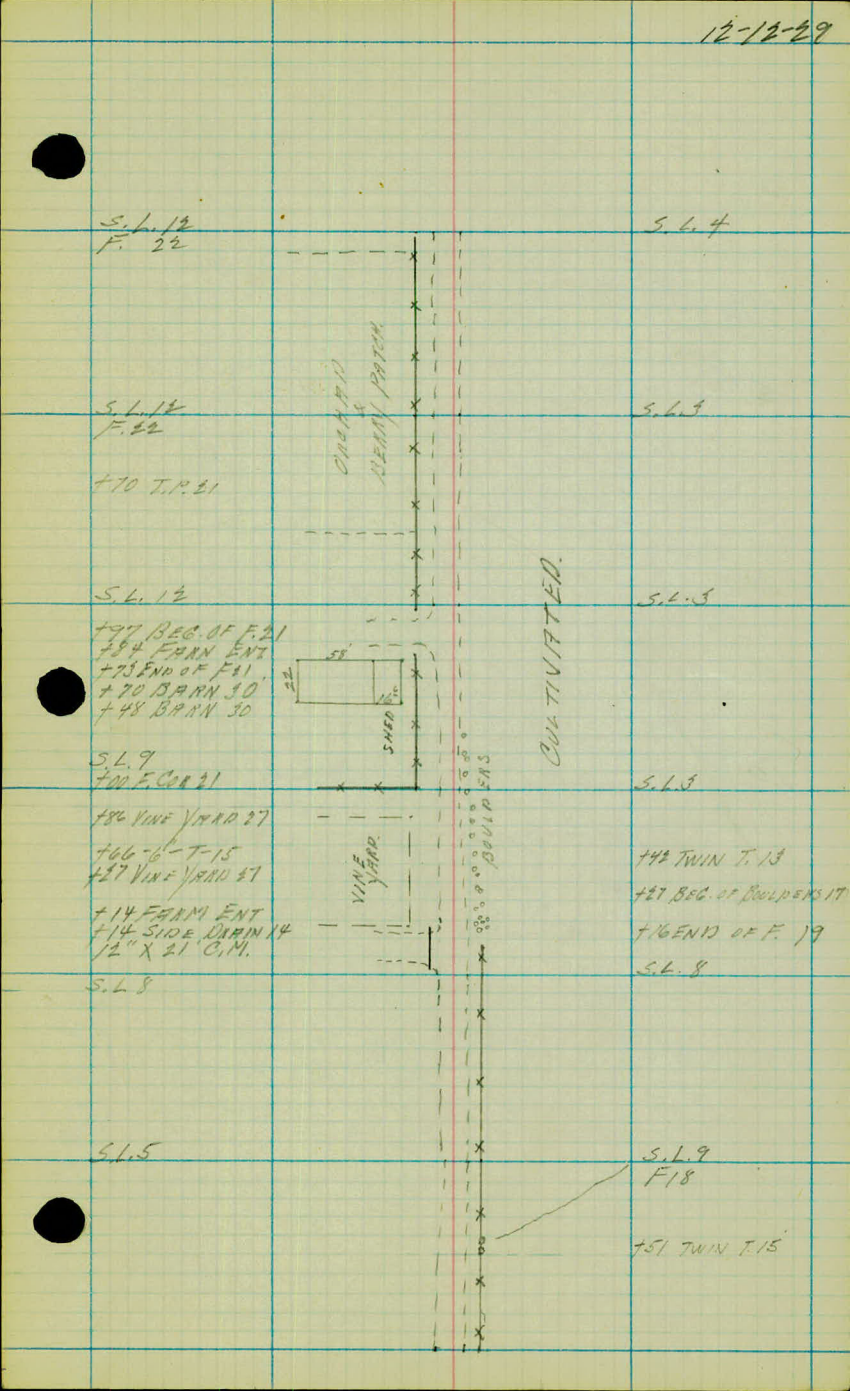
14

13

12

11

12-12-29


S. L. 12
F. 22
S. L. 4
CHURCH
KEARNY PATCH
S. L. 12
F. 22
S. L. 3
+10 T. P. 21
S. L. 12
S. L. 3
+97 BEG. OF F. 21
+84 FARM ENT
+73 END OF F. 21
+70 BARN 30'
+48 BARN 30'
58'
32'
16'
SHED
CULTIVATED
S. L. 9
+00 E. Cor 21
S. L. 3
+86 VINE YARD 27
+66 -6"- T-15
+27 VINE YARD 27
VINE YARD
BOULDERS
+42 TWIN T. 13
+27 BEG. OF BOULDERS IT
+16 END OF F. 19
+14 FARM ENT
+14 SIDE DRAIN 14
12" X 21' C.M.
S. L. 8
S. L. 8
S. L. 5
S. L. 9
F 18
+51 TWIN T. 15

23

22

21

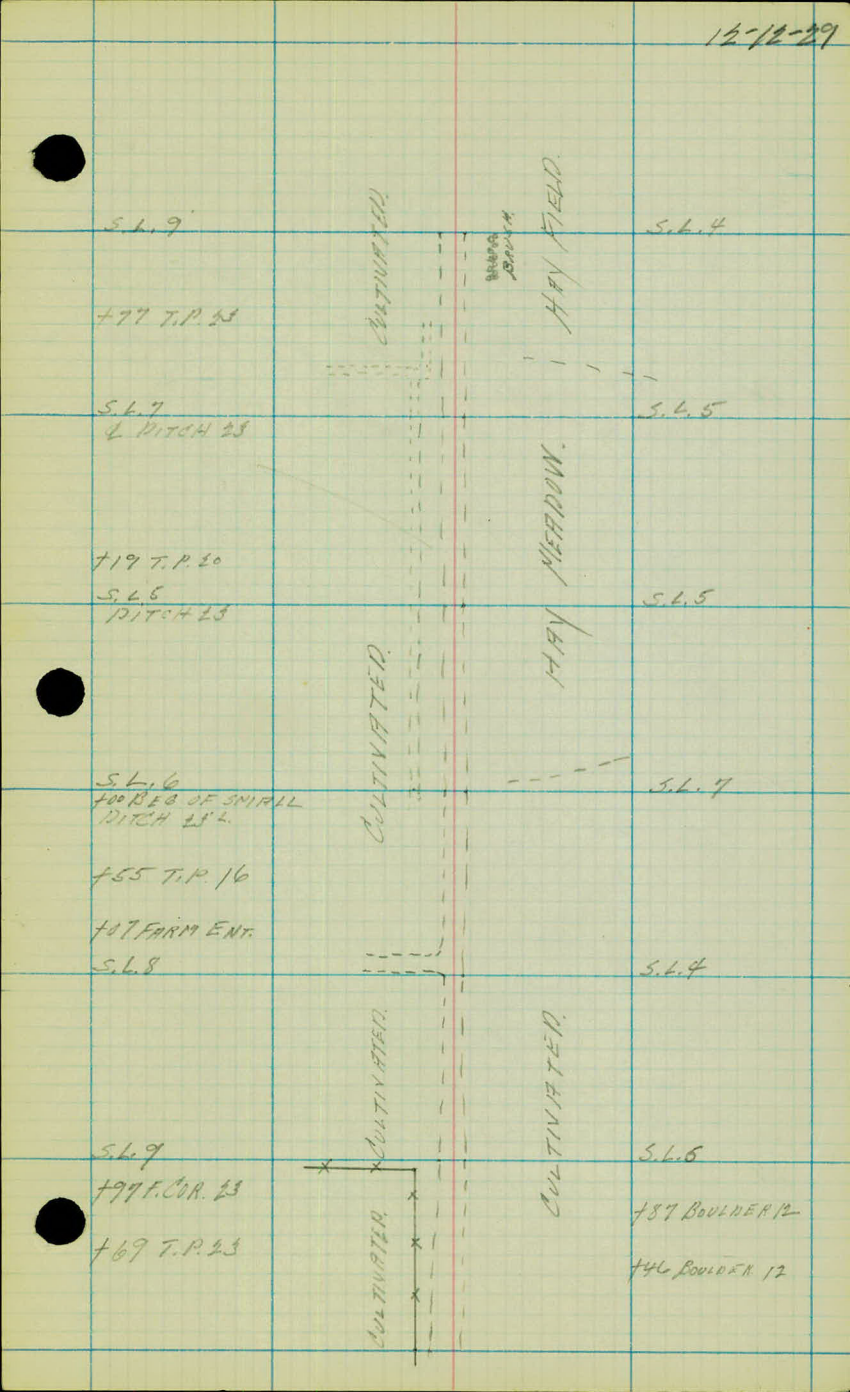
20

19

18

17

15-12-29


S.L. 9
+77 T.P. 23
S.L. 7
L DITCH 23
+19 T.P. 20
S.L. 6
DITCH 23
S.L. 6
+00 REG OF SMALL DITCH 23 L.
+55 T.P. 16
+87 FARM ENT.
S.L. 8
S.L. 9
+99 F.COR. 23
+69 T.P. 23
CULTIVATED
CULTIVATED
CULTIVATED
CULTIVATED
MEADOW
HAY FIELD
HAY FIELD
S.L. 4
S.L. 5
S.L. 5
S.L. 7
S.L. 4
S.L. 6
+87 BOULDER 12
+46 BOULDER 12

29

28

27

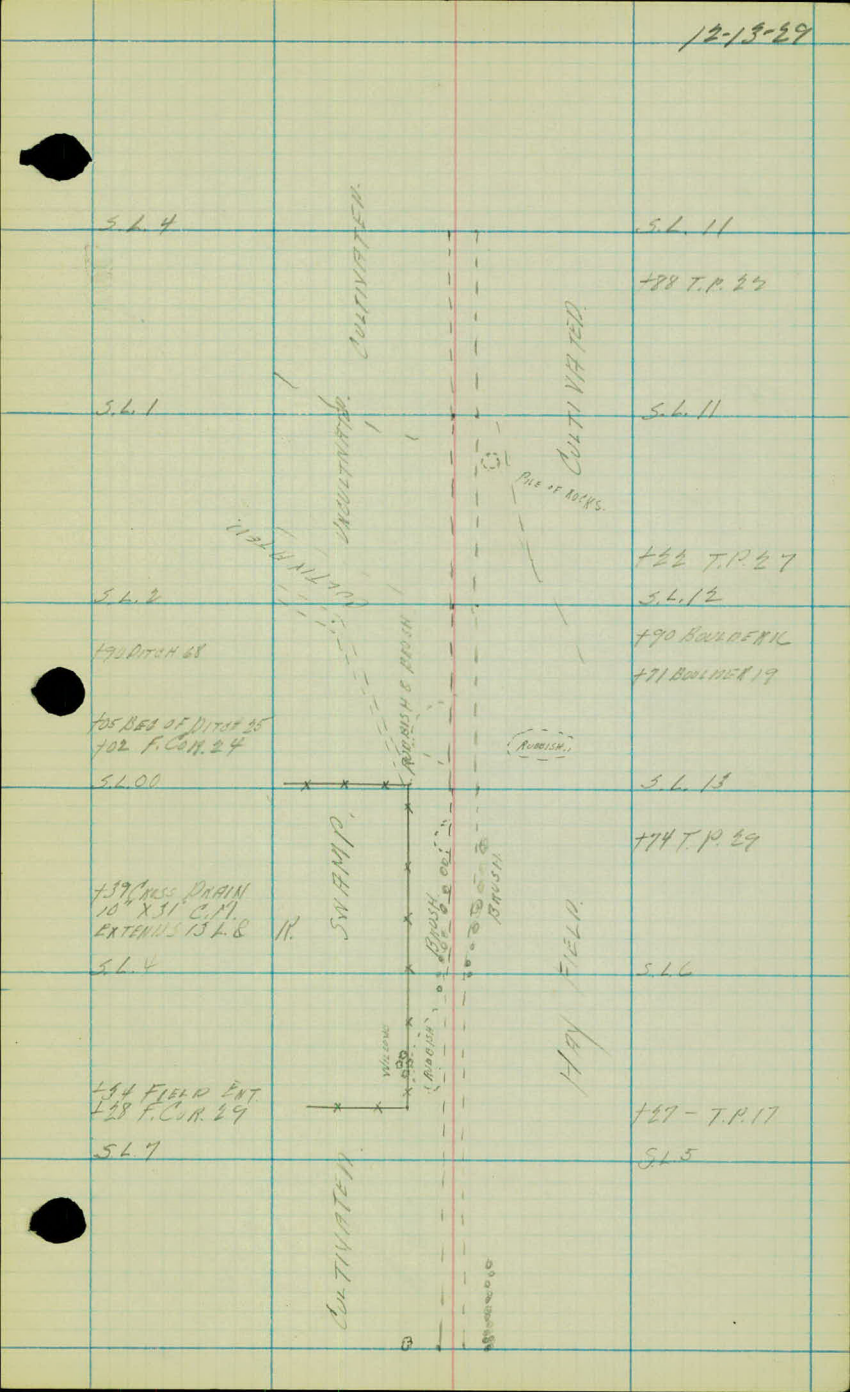
26

25

24

23

12-13-29


S.L. 4
S.L. 11
+88 T.P. 22
S.L. 1
S.L. 11
CULTIVATED
UNCULTIVATED
CULTIVATED
PILE OF ROCKS.
+22 T.P. 27
S.L. 12
+90 BOULDER IN
+71 BOULDER 19
+90 DITCH 68
+85 BED OF DITCH 25
+82 F. COR. 24
S.L. 00
(RUBBISH)
S.L. 13
+74 T.P. 29
+39 CROSS DRAIN 10" X 31' C.P. EXTENDS TO S.L. 8
S.L. 4
S.L. 6
+94 FIELD ENT. +28 F. COR. 29
S.L. 7
+27 - T.P. 17
S.L. 5
CULTIVATED
FIELD

35

34

33

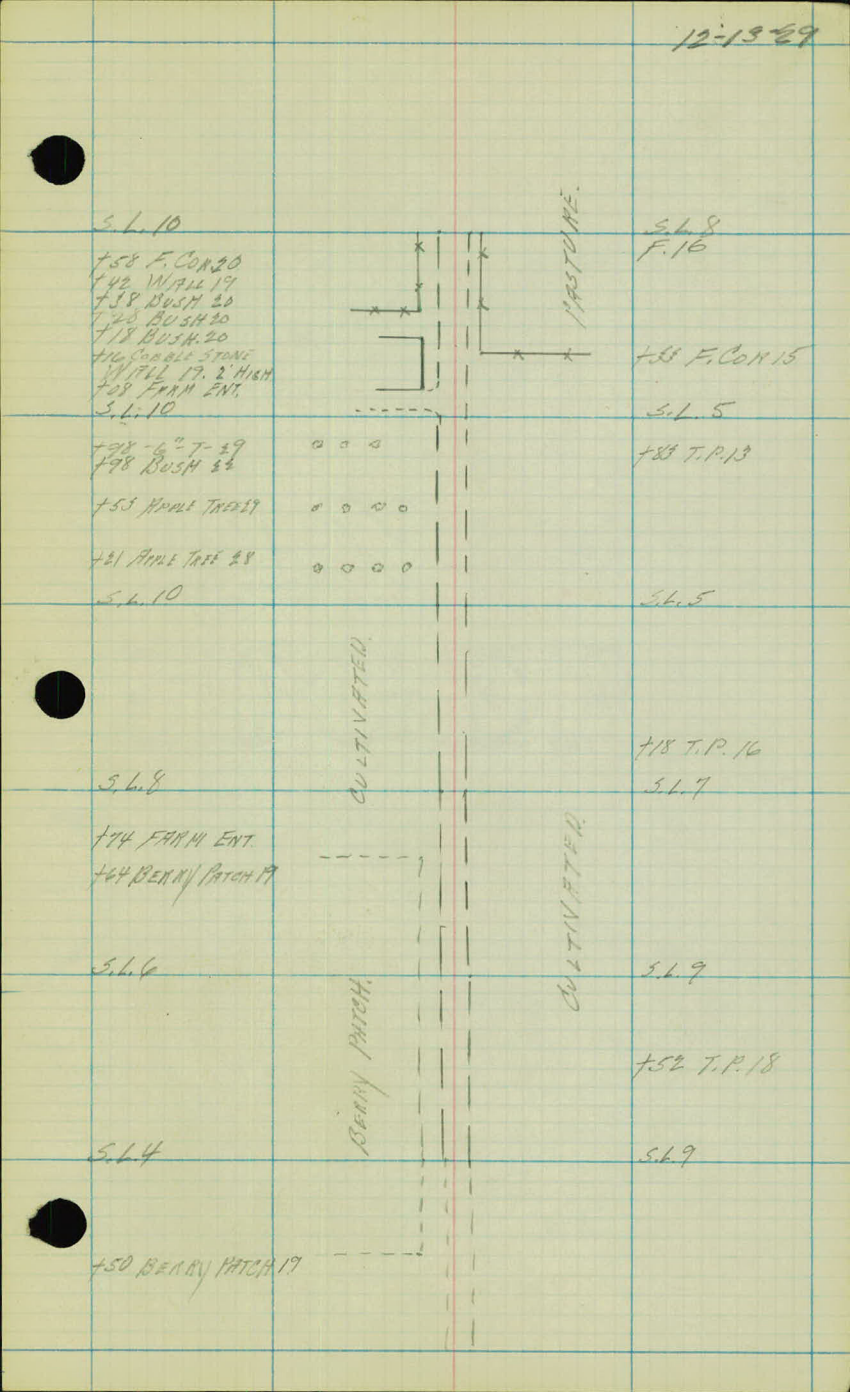
32

31

30

29

12-13-29


S.L. 10
+58 F. Com 20
+42 Wall 19
+38 Bush 20
+25 Bush 20
+18 Bush. 20
Hig Cobble Stone Wall 17. 2' High
+08 Farm Ent.
S.L. 10
+98 - 6" T - 29
+98 Bush 29
+53 Apple Trees 29
+81 Apple Tree 28
S.L. 10
S.L. 8
+74 Farm Ent.
+64 Berry Patch 19
S.L. 6
+50 Berry Patch 19
Berry Patch
Cultivated
Cultivated
Pasture
S.L. 8
F. 16
+58 F. Com 15
S.L. 5
+88 T.P. 13
S.L. 5
+18 T.P. 16
S.L. 7
S.L. 9
+52 T.P. 18
S.L. 9

41

40

39

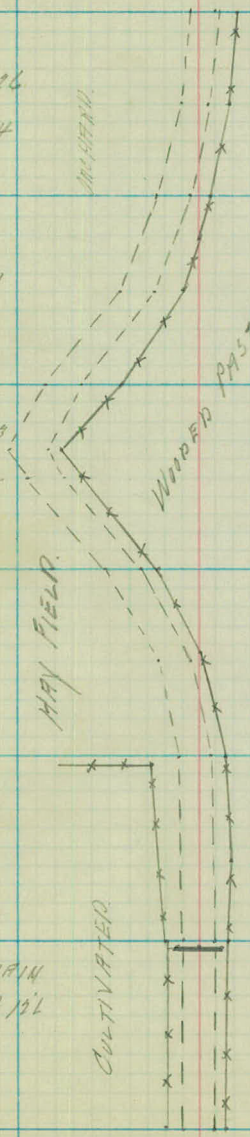
38

37

36

35

12-19-29



S.L. 4

+64 APPLE TR 26
+50 S.L. 10
+24 APPLE TR 24
+04 APPLE TR 29
S.L. 5 & 23

+78 X.F.
+50 S.L. 27 & 49
+50 F. 10
+15 T.P. 41
S.L. 658 86
F 43

+65 S.L. 84 & 103
+65 F. 77
+50 F. 46
+50 S.L. 74 & 95
+40 T.P. 57
S.L. 38 & 52
F 24

+50 S.L. 53 & 54

S.L. 11
+96 F. COR 28

+42 F 19
+42 S.L. 7
F. 20
S.L. 9

+98 CROSS PRAIRIE
10" X 26" C.N.
EXTENDS 14 R 2 1/2 L

S.L. 10
F. 21

+50 F 19
+50 S.L. 7
+43 T.P. 16
F. 7

+78 LARGE BOULDER
12 R.

+55 X.F.
+15 T.P. 10
S.L. 7
F. 16

+42 F 19
+42 S.L. 10

S.L. 9
F 18

+46 T.P. 15

47

46

45

44

43

42

41

12-13-29

S. L. 6

+16 P.P. 15

+05 FARM ENT.
+05 S. DRAIN 19
12" X 20' C.M.
S. L. 5

+15 P.P. 13

S. L. 4
F. 14

+50 S. L. 4
+27 F. 14

+09 P.P. 14

+04 F. 21

+88 S. DRAIN 40

41+70

+47 S. DRAIN 39
12" X 42' P.
+30 P.P. 15

MAIN MEADOW

PASTURE

S. L. 14
F. 26

+76 T.P. 18

36'

+26 CROSS DRAIN
24" (37) P.
EXTENDS 20 FT. 17 L

+07 X. F. 26

S. L. 14

+22 T.P. 21

S. L. 15
F. 27

+50 S. L. 16

+00 F. COR. 26

+77 FARM ENT.
+77 SIDE DRAIN 19
18" X 28' C.M.
+59 T.P. 25
+52 F. COR. 25

PROJ. # 30-51

WESTERN AVE

LINE REVISION

ALLIGNMENT FROM STA.

35+47 52 TO STA. 44+74 4.

STA.	POINT	Δ Lt.	Δ Rt.		
44+74	P.O.T.				
41+46.28	P.T.		44°-53.5		
41			41°-26	✓	
+50			37°-41	✓	
40			33°-56	✓	
+50			30°-11	✓	
39+29.1	P.I.				Δ-89°-47'
39			26°-26	✓	D-15°-R
+50			22°-41	✓	T-381.58
38		Void	18°-56	✓	L-598.56
+50			15°-11	✓	R-383.06
37			11°-26	✓	
+50			7°-41	✓	
36			3°-56	✓	
+50			0°-11	✓	
35+47.5.2	P.C.		0°-00		
29+55.12	P.O.T.				

12-19-27

PROJ # 30-51.

WESTERN AVE.

LINE REVISION.

CROSS SECTIONS FROM STA.

36+00 TO STA. 44+75.

STA.	+	H.I.	−	ELEV
B.M.	4.37	930.46		926.09
36				23.5
+50				23.6
37				23.7
+50				19.6
38				18.7
+50				
39				
	2.28	932.02	12.72	919.74
36				
36+50				
37				
37+50				
38				
38+50				15.0

12-19-29

N. E. Cor of Conc. Step Lt 5719. 34+30.

24 39 50 67 68 64 74
73 55 42 20 17 14 70 7

19 27 53 56 52 59 62
43 34 30 24 23 12 2 69

46 42 51 45 48
43 30 14 13 11 68

43 41 75
43 38 15 10.7

59 64 88
43 28 12 11.8

68 83 110
43 28 15

80 89 130
43 29 43

18 38 65 85
16 26 29 43

08 45 87
19 15 43

0.0 41 100
15 25 43

2.9 7.9 12.9
9 24 43

5.4 9.1 14.8
12 23 43

9.1 13.2
5.0 13 25

STA.	+	H.I.	−	ELEV.
		920.02		
39				10.1
39+50				
	1.79	909.30	12.51	907.51
38+50				
39				
39+50				04.6
40				99.5
40+21				97.9
40+50				00.6
	3.31	910.70	11.71	907.59
41				97.6
41+16				96.5
41+37				95.3
41+60				94.4
42				93.2

12-19-29

$\frac{12.8}{7}$ 9.9

$\frac{73}{43}$ $\frac{56}{37}$ $\frac{70}{33}$ $\frac{12.8}{12}$

$\frac{6.7}{43}$

$\frac{3.7}{15}$ $\frac{6.8}{27}$ $\frac{8.7}{43}$

$\frac{7.3}{28}$ $\frac{10.0}{28}$ $\frac{11.3}{43}$ 4.7 11

$\frac{2.6}{43}$ $\frac{1.9}{37}$ $\frac{2.4}{41}$ $\frac{2.9}{17}$ $\frac{6.9}{10}$ $\frac{7.1}{6}$ 9.8 $\frac{11.7}{20}$ $\frac{12.3}{43}$

$\frac{79}{43}$ $\frac{79}{34}$ $\frac{4.3}{29}$ $\frac{4.6}{12}$ $\frac{5.4}{9}$ 11.4 $\frac{12.6}{14}$ $\frac{13.2}{29}$ $\frac{13.1}{43}$

$\frac{11.2}{43}$ $\frac{11.3}{25}$ $\frac{7.8}{18}$ $\frac{7.6}{10}$ $\frac{7.9}{2}$ 8.7 $\frac{13.3}{8}$ $\frac{13.6}{28}$ $\frac{13.3}{43}$

$\frac{5.4}{30}$ $\frac{6.3}{36}$ $\frac{6.0}{20}$ $\frac{4.2}{14}$ $\frac{3.7}{12}$ 3.3 $\frac{2.5}{10}$ $\frac{5.4}{14}$ $\frac{6.0}{16}$ $\frac{3.8}{17}$ $\frac{4.2}{36}$ $\frac{1.5}{43}$

$\frac{6.3}{100}$ $\frac{5.7}{50}$ $\frac{4.7}{10}$ 4.4 $\frac{4.7}{11}$ $\frac{5.5}{13}$ $\frac{6.5}{17}$ $\frac{5.1}{19}$ $\frac{3.5}{20}$ $\frac{2.7}{30}$ $\frac{1.8}{43}$

$\frac{6.9}{43}$ $\frac{6.6}{31}$ $\frac{5.9}{14}$ 5.6 $\frac{5.4}{14}$ $\frac{4.0}{50}$

$\frac{11.7}{43}$ $\frac{11.4}{40}$ $\frac{9.5}{24}$ $\frac{7.9}{17}$ 6.5 $\frac{6.4}{15}$ $\frac{7.3}{20}$ $\frac{7.3}{22}$ $\frac{6.2}{24}$ $\frac{4.9}{43}$

$\frac{12.9}{43}$ $\frac{12.6}{22}$ $\frac{11.0}{10}$ $\frac{7.9}{5}$ 7.7 $\frac{7.6}{18}$ $\frac{8.5}{19}$ $\frac{8.9}{24}$ $\frac{8.1}{36}$ $\frac{6.2}{43}$

STA.	+	H. I.	−	ELEV.	
		900.90 ✓			
42+50				93.0	
43				92.7	
43+64				92.3	
44				92.0	
44+75				(10.4)	90.5
B.M.	2.99	902.✓ 892.29	11.54	89.31	889.30
T.P.	4.28	896 ✓ 886.93	9.64	882.65	892 ✓
+50					91.9
45					90.8
46					
47					
48					
49					

12-19-29

12.4 12.4 9.9 9.2 8.0 7.9 7.8 8.4 9.4 9.4 9.0 6.0 5.4
43 34 10 7 5 7 7 16 19 21 25 35 43

0.8 0.8 2.4 2.5 5.2 7.1 8.5 8.8 8.3 8.2 8.0 8.5 9.2 8.9 2.5 43
45 38 36 29 19 13 11 9 8 5 15 18 19 26

8.8 8.4 7.9 8.4 8.7 8.6 8.8 10.2 10.6 10.1 11.8
43 30 19 15 7 16 19 25 24 43

12.6 12.4 12.7 9.2 8.9 9.6 12.3 13.1 13.3 14.3 16.5 13.3
43 26 15 11 15 21 25 28 29 30 31 13.0
43

5PX IN 8"OFX 90 RT. 57 17.41+00

9.2 9.2 9.2 5.2 5.0 5.5 8.4 9.4 9.4 12.2 12.7 9.4 9.2
43 23 15 7 14 19 23 26 27 28 26 43

10.0 10.0 9.8 6.2 6.1 6.6 8.9 9.7 9.7 11.7 11.7 10.1 9.8
43 25 14 6 15 18 21 27 28 29 30 43

7.2

6.5

5.7

5.6

PROD. # 30-51

WESTERN AVE

CHECK LEVELS FROM 500. LINE BRIDGE ON RICE ST. TO CO. ROAD "C" AND WESTERN AVE.

STA.	+	H.I.	−	ELEV.
B.M.	6.74	931.34		924.60
	3.75	930.29	4.80	926.54
B.M.	4.11	927.58	4.82	923.47
	1.63	920.77	10.44	919.14
	0.87	908.12	13.52	907.25
T.P.	0.23	897.11	11.24	896.88
	3.20	894.87	5.44	891.67
	11.94	904.60	2.21	892.66
B.M.			5.30	899.30
	11.69	916.07	0.22	904.38
	13.36	928.79	0.64	915.43
	5.39	931.33	2.85	925.94
B.M.			5.24	926.09
	1.20	923.13	9.40	921.93
	5.63	915.66	13.10	910.03
B.M.			1.49	914.17
	12.81	924.86	0.61	915.05
	6.08	933.78	0.16	927.70
B.M.			3.71	930.07
	0.61	922.09	12.30	921.48
	5.48	914.24	13.33	908.76
	12.52	926.46	0.30	913.94
	10.52	929.18	7.70	918.66
B.M.			9.52	919.66

12-13-29

C.S. IRON PIPE ON E SIDE OF RICE ST. S. OF N.P. RY. X'ING.

SPK IN 36" COTTONWOOD S.E. COR. INT RICE ST & OWASSO BLVD. SO.

SPK IN 8" OAK 90' R. OF STA. 41+00

N.E. COR OF CONC. STEP LT STA. 34+80.

SPK IN 12" OAK 100' RT STA. 20+50.

BOTTOM STONE OF COBBLE STONE FOUNDATION LT. STA. 14+70

SPK IN 18" OAK 60' LT. STA. 0+30.

B.M.	0.62	879.92		879.30	
	4.13	875.82	2.23	877.69	
	10.95	902.32	4.45	891.37	
	11.26	913.37	0.79	902.53	
	12.27	924.56	1.10	912.29	
	6.14	929.88	0.84	923.72	
B.M.			4.39	925.49	925.47
	4.71	931.32	3.27	926.61	
B.M.			6.70	924.62	924.60

PROJ. # 30-51

WESTERN AVE.

CROSS SECTIONS FROM Co.

ROAD "C" TO OWASSO BLVD SOUTH

STA.	+	H.I.	-	ELEV
B.M.	8.02	727.58		719.56
0+00				24.0
+17				23.2
+25				22.7
	CROSS DRAIN			
1+00				19.2
	7.58	726.74	8.02	719.56
	2.8'	722.87	6.92	720.02
+50				18.4
+70				18.1
2+00				17.7
+30				17.6
+80				17.8
3+00				18.6
	6.93	726.33	3.79	719.40
+50				20.4
4+00				21.1

12-16-29

LEFT

RIGHT

SPR IN 12" OAK 60 LT. STR. OF 30.

5.8	4.6									2.6	1.5								
43	24	3.6								26	43								
6.1	5.4	5.2								4.2	3.4	2.8							
43	29	14	4.4							15	32	43							
11.3	10.7	10.1	5.6							5.1	8.4	9.1	8.3	8.2					
43	31	17	11	4.9						11	15	19	33	43					
	13.25												11.95						
16.0	15.6	14.7	9.0							8.7	11.5	11.4	11.1						
43	36	15	8	8.4						16	15	31	43						
8.7	7.1	4.8	6.5	6.3	5.1					4.7	4.7	5.1	5.7	2.6	2.1	1.8			
43	33	16	13	11	8	4.5				7	14	16	19	21	24	43			
6.9	3.7	2.5	6.3	6.2	5.4					4.9	5.6	5.6	1.6	1.3					
43	30	16	14	12	9	4.8				14	16	17	20	43					
4.9	2.8	2.7	6.4	5.4						5.5	5.5	6.4	6.2	3.6	3.2	2.7			
43	29	19	14	9	5.2					8	12	15	16	19	22	43			
12.7	9.6	7.2	5.9							5.8	6.6	7.1	6.1	5.8	4.9				
43	28	13	9	5.3						9	13	15	19	33	43				
15.4	13.0	10.8	5.4							7.2	6.6	6.6	5.9						
43	30	16	8	5.1						9	13	26	43						
13.3	11.8	9.2	4.7							4.6	6.0	5.9	5.7						
43	29	15	9	4.3						10	13	24	43						
9.2	6.0	4.2	5.1	6.4						6.4	6.6	5.3	4.4	4.9	4.6				
43	28	16	12	10	5.9					8	10	11	13	21	43				
6.7	4.3	2.4	4.4	5.6						5.6	2.5	3.0	3.5						
43	29	17	14	11	5.2					9	13	24	43						

STA.	+	H.I.	−	ELEV.
		926.39		
4+50				21.7
	9.10	931.72	3.51	922.82
5+00				21.9
4+50				21.5
6+00				19.0
	1.32	920.80	12.44	919.48
4+50				16.4
7+00				13.3
	0.54	914.49	6.85	913.95
4+50				10.1
8+00				07.5
4+50	6.86			06.0
	4.76	912.80	8.45	906.04
9+00				05.1
4+50				06.0
10+00				05.3
4+50				06.1

12-16-29

1.7	1.7	1.5	3.5	5.4		5.4	3.8	3.2	1.5	1.7	2.1
43	31	18	14	12	4.6	7	12	17	21	33	43

5.0	5.8	10.3		10.1	5.4	5.1		
43	18	13	10.0	7	20	43		

2.8	3.4	4.6	8.9	10.6		11.0	8.9	6.5	6.5
43	33	19	15	13	10.4	8	11	16	43

9.0	9.1	9.2	12.4	13.2		13.4	12.6	11.9	11.1
43	33	20	15	13	12.9	7	9	14	43

3.8	3.3	3.3	5.0		4.8	4.8	3.7	4.0
43	36	20	14	4.4	6	9	12	43

10.0	9.3	8.0		7.8	8.1	7.2	
43	18	14	7.5	5	13	43	

7.9	7.6	7.2	4.7		4.7	6.4	6.6	6.2
43	29	16	13	4.4	7	7	16	43

8.5	8.7	9.2	7.5	6.7		7.4	7.8	8.3	8.0
43	30	17	13	6	7.0	4	6	18	43

9.0	9.0	10.0	10.2	8.8		8.7	10.2	10.2	9.1	8.8	8.6
43	27	15	14	13	8.5	4	6	13	14	26	43

7.4	7.9	7.5	7.5	8.7	8.0	7.5		7.8	9.2	8.6	7.6	7.5	7.2
43	24	24	17	14	13	6	7.7	5	6	13	14	27	43

7.4	8.3	9.0	9.4	9.0	8.0	7.5		8.0	9.0	9.3	9.0	8.3	7.7	7.2
43	25	24	20	17	14	5	7.8	4	5	9	13	14	21	43

9.2	7.9	8.3	8.3	7.6	7.2		7.7	8.7	8.6	7.4	7.1	7.2
43	22	20	15	11	5	7.5	6	8	14	16	36	43

7.1	7.2	7.6	7.7	7.2	6.6		7.1	8.1	7.8	7.4	7.0
43	24	15	14	14	3	6.7	7	11	18	23	43

STA.	+	H T	−	ELEV.	
		912.80			
11+00				08.3	
+50				11.5	
	11.24	922.84	1.20	911.60	
12+00				16.1	
12+50				18.0	
	9.98	931.46	1.36	921.48	
12+50					
13+00				21.0	
13+50				22.8	
14+00				23.6	
14+50				25.4	
B.M.			1.38	930.08	930.07

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6.0	6.4	6.1	4.8		5.0	6.6	6.9	7.0	6.8
43	37	15	10	4.5	7	11	15	21	43

1.4	1.9	1.0	1.9	1.0	1.7	4.4	5.6	6.3	6.6
43	22	14	11	10	1.3	8	12	16	30	43

0.0	2.0	6.9	7.9	7.7	8.1	8.4	9.6	11.5	12.1
43	31	16	14	6	7.7	12	19	22	37	43

4.4	5.9	6.1	4.8		5.4	3.5	1.1	1.1	2.3	3.3	5.4
19	14	11	10	4.8	11	15	18	21	23	35	43

4.7	7.8
43	30

13.0

6.6	7.3	11.1	12.1	12.1	10.6		11.0	3.5	8.5	8.6
43	30	14	16	18	9	10.5	13	17	24	43

6.7	8.0	9.0			8.6	7.4	6.9	7.5	8.0
43	19	15	8.7		10	12	18	20	43

6.9	7.5	8.4	7.9		8.0	10.0	9.5	8.9	8.6
43	30	15	10	7.9	6	9	18	30	43

4.5	5.0	6.1		6.5	6.8	6.5	5.9
43	25	14	6.1	11	15	24	43

BOTTOM STONE OF COBBLE STONE FOUNDATION 17 STA 14+70

STA.	+	H.I.	−	ELEV.	
B.M.	4.46	934.53		930.07	
15+00				28.7	
+65				30.6	
16+00				29.6	
+50				29.3	
17+00				29.1	
+80				28.6	
18+00				24.8	
	1.17	925.52	10.18	924.35	
+37				22.6	
+62				20.9	
19+00				17.9	
+50				13.9	
	3.30	916.05	12.77	912.75	
20+00				11.9	
+50				11.3	
B.M.	1.86	916.03	1.86	914.19	914.17

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BOTTOM STONE OF COBBLE STONE FOUNDATION Lt. STA. 14+70

		2.2	2.7	4.8	5.6		5.8	5.3	5.1	4.6	4.9
43	21	18	13	5.8	4	7	28	37	43		

3.9	4.0	3.1	3.1	3.5	4.0		3.9	3.4	4.3	6.4	
43	27	23	20	18	13	3.9	3	5	12	43	

5.8		5.3	5.0	5.0	4.6		4.7	4.6	4.4	5.3	
43		16	23	17	5	4.9	6	12	34	43	

	7.0	6.0	5.6	5.7	5.1		5.3	4.0	3.5	4.8	
43	27	25	16	5	5.2	4	9	36	43		

	3.4	3.7	5.4	5.2			5.7	4.5	5.2	4.4	
43	19	17	4	5.4	6	11	17	43			

3.4	3.0	3.1	5.4	5.8	5.6		6.0	3.8	4.4	3.8	4.1
43	37	19	17	12	5	5.9	7	10	16	38	43

	7.4	9.2	10.1	9.6			7.9	9.4	7.0	7.5	5.8	5.8
43	19	17	4	9.7	6	9	15	16	37	43		

	2.5	2.5	3.8	2.7	3.2		3.3	2.6	1.1	+0.4	+1.5
43	19	15	13	5	2.9	5	10	12	35	43	

	3.0	3.2	4.3	4.8			4.9	4.4	2.3	1.7	0.9
43	18	14	4	4.6	6	10	14	37	43		

	8.8	7.7	8.2				7.8	7.4	5.7	4.5	3.5
43	16	9	7.6	6	11	13	17	43			

15.1	14.0	14.8	14.0	13.3	11.9		11.2	10.8	10.1	9.0	7.5
43	23	22	21	12	9	11.6	7	11	14	21	43

6.2	6.5	6.9	6.9	6.5	6.0	4.9		4.3	4.7	3.7	3.0
43	23	22	21	20	11	6	4.2	7	16	23	43

6.5	6.5	7.2	7.2	6.5	6.4	5.2		5.2	5.8	5.8	
43	24	23	22	21	9	5	4.8	7	9	43	

SPK IN 12" OAK 100' RT STA. 20+50.

STA.	+	H.I.	−	EL. EV.
		716.03		
21+00				10.9
+50				10.8
22+00				10.9
+50				11.0
23+00				10.0
+50				07.5
24+00				04.6
	5.13	710.23	10.93	705.10
+50				02.6
25+00				01.8
	CROSS DRAIN.			
+50				02.0
26+00				03.1
+50				05.6
27+00				
	11.20	717.44	1.99	706.24

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6.3	6.5	7.3	7.3	6.5	6.4	5.6		5.9	6.1	6.3
43	24	23	22	21	9	7	5.1	6	9	43

6.2	6.7	7.3	7.3	6.2	6.2	5.7		5.4	5.7	6.2
43	25	24	22	21	9	7	5.2	6	8	43

6.3	6.7	7.4	7.4	6.7	6.1	5.7		5.6	6.3	6.2
43	27	24	24	23	9	7	5.1	4	9	43

5.5	5.7	7.5	7.5	5.9	5.4			5.5	5.6	7.6
43	21	19	17	15	11	5.0		8	17	43

2.6	3.5	5.3	7.1	8.0	8.0	6.7	5.8		5.6	7.0	5.2	4.5	4.8	4.0
43	25	23	19	18	17	15	3	6.0	9	16	18	22	27	43

5.3	6.3	9.1	9.5	8.3	8.8			8.1	9.8	7.2	5.8
43	24	20	17	12	6	8.5		9	17	21	43

11.9	12.0	12.0	11.0	11.6		11.4	10.4	9.0	
43	23	13	11	5	11.4	6	20	43	

10.9	9.3	9.4	8.1			7.4	7.8	6.3	5.3
43	30	11	7	7.6		7	11	28	43

11.7	11.5	11.0	9.0			8.4	9.7	9.4	7.5
43	25	9	5	8.4		7	10	35	43
10.9									10.1

11.4	11.5	11.2	8.9			7.9	8.3	9.7	7.8	9.4	8.2
43	24	6	3	8.2		5	10	12	27	39	46

11.9	11.5	10.9	9.6			6.8	6.6	7.3	7.5	6.6
43	24	9	3	7.1		1	11	20	35	43

11.0	10.6	11.4	11.2	9.9	4.7			4.3	4.0	3.6	2.3
43	34	33	13	9	1	4.6		8	22	35	43

9.0	8.0	4.9	11.0	+0.8
43	18	11		

Top of Wood

STA.	+	H.I.	−	ELEV.
		717.44		
27+00				11.0
27+50				16.9
	13.72	731.89	1.27	718.17
27+50				
28+00				20.7
28+50				23.8
29+00				26.5
29+50				28.3
30+00				28.9
30+50				29.0
31+00				29.4
31+50				28.5
32+00				27.2
	11.47	740.20	3.14	728.73
29+50				

12-16-29

8.7 / 3 8.4 | 8.0 / 7 | 8.2 / 15 | 7.2 / 16 | 6.7 / 20 | 4.3 / 26 | 2.5 / 36 | 1.0 / 43

7.2 / 43 | 7.1 / 39 | 3.0 / 13 | 2.2 / 3 | 2.5 | 2.8 / 13 | 2.3 / 15

(15.0)

10.1 / 20 | 8.0 / 29 | 6.1 / 43

8.6 / 43 | 7.0 / 23 | 7.0 / 8 | 10.4 / 4 | 11.2 | 11.3 / 13 | 9.8 / 14 | 6.1 / 20 | 4.0 / 21 | 2.7 / 26 | 2.2 / 43

7.8 / 43 | 6.4 / 27 | 5.7 / 8 | 7.7 / 4 | 8.1 | 5.2 / 12 | 2.6 / 21 | 1.6 / 39 | 1.6 / 43

7.1 / 43 | 5.2 / 22 | 4.3 / 8 | 5.6 / 6 | 5.4 | 5.4 / 12 | 4.5 / 16 | 1.6 / 20 | 0.4 / 30 | 0.7 / 43

5.4 / 43 | 4.2 / 26 | 3.1 / 7 | 3.6 / 6 | 3.6 | 3.3 / 11 | 2.5 / 15

6.5 / 43 | 4.9 / 11 | 3.9 / 6 | 3.0 | 2.6 / 10 | 1.8 / 17

7.3 / 43 | 5.0 / 10 | 3.6 / 6 | 2.9 | 2.3 / 11 | 1.4 / 17

7.8 / 43 | 6.0 / 24 | 4.5 / 10 | 2.7 / 7 | 2.5 | 2.2 / 10 | 1.6 / 16

9.1 / 43 | 7.6 / 24 | 5.9 / 11 | 3.9 / 6 | 3.4 | 3.0 / 11 | 2.4 / 16

9.7 / 43 | 8.2 / 20 | 7.0 / 15 | 5.2 / 9 | 4.7 | 4.3 / 9 | 3.5 / 13 | 1.9 / 19

(11.9)

9.7 / 16 | 7.4 / 20 | 6.4 / 27 | 6.4 / 43

STA.	+	H.I.	−	ELEV.
		940.20		
30+00				
30+50				
31+00				
31+50				
32+00				
	0.27	927.00	11.47	928.73
32+50				26.4
33+00				24.7
33+50				23.5
34+00				23.3
B.M.			2.70	926.10 926.07
34+50				23.7
35+00				23.9
35+50				23.3
	Cross Drain			
36+00				23.7

12-16-29

(11.3)

87 71 58
20 25 43

(11.2)

73 47 41 35
20 26 40 43

(10.8)

58 35 26
21 44 43

(11.7)

72 67 52
19 23 43

(12.0)

97 85
29 43

58 45 30 25 12 02 +13
43 20 11 26 7 11 26 43

57 50 51 41 43 55 25 15
43 23 20 11 43 9 15 32 43

66 65 71 74 66 63 55 48 49
43 42 20 19 13 12 55 7 15 43

54 55 56 58 58 60
44 25 13 57 7 18 41

N.E. COR. OF CONC. STEP. LT STA. 84+30.

45 48 50 54 61 62 55
43 23 11 53 9 10 27 44

41 30 54 47 50 63 67 51 60 66
43 18 16 11 51 8 10 12 14 27 43

09 19 34 51 53 58 77 94 102 112 122 128
23 19 18 13 12 57 8 16 19 29 35 41 43

5.85 7.75

14 32 43 56 47 58 101 118 158
43 17 17 12 10 53 10 18 23 43

STA.	+	H.I.	−	ELEV.
		927.00		
36+50				24.7
T.P.	6.47	732.41	3.06	735.94
37+00				26.0
37+50				26.8
38+00				25.2
	1.13	925.87	7.67	924.74
38+50				23.6
39+00				22.9
39+50				17.4
40+00				
	1.97	914.81	13.05	912.84
39+50				
40+00				09.9
	4.74	907.41	12.14	902.67
40+50				05.7
B.M.			8.09	899.32
41+00				900.5
755				96.5
	2.86	900.76	2.51	897.90

12-16-29

+0.2 1.4 2.2 3.7 4.2 3.7 4.7 8.7 13.9
43 19 16 15 12 10 4.3 12 24 43

0.2 2.0 3.9 7.0 8.0 6.8 7.2 6.7 8.2 11.9 14.0
43 27 26 19 15 13 6.4 13 14 25 36 43

+1.5 0.2 2.8 6.4 5.9 5.2 5.4 6.0 6.9 9.6 12.5 15.1
43 38 36 30 26 15 5 3 5.6 7 21 33 43

5.0 5.4 6.4 8.4 10.9 13.8 15.6
43 30 9 7.2 12 26 38 43

0.4 0.8 1.4 3.1 4.9 7.0 9.5
43 34 17 2.3 12 26 35 43

0.8 1.6 2.4 5.3 7.9 11.1 14.3
43 23 9 3.0 14 23 33 43

10.8 10.8 11.6 11.3 6.2
43 38 22 19 12 8.5

8.0 8.0 13.0 13.6 14.1 15.6 15.4 (16.0)
43 43 38 28 25 22 13

(+2.6) 0.4 3.5 10.2
11 22 43

4.9 7.6 9.0 11.0 14.1
4.9 7 15 26 43

3.8 5.5 5.0 2.0 1.9 2.8 8.3 8.5 9.2
43 36 14 10 1.7 6 11 18 29 43

11.0 11.1 11.1 7.9 7.5 7.1 6.9 11.2 12.0 11.6 11.6
43 30 30 9 9 4 6.7 12 20 22 38 43

13.1 13.0 12.5 12.1 11.3 11.3 12.5 15.5 10.0 8.4
43 35 30 23 12 10.9 3 17 20 22 43

STA.	+	H.I.	−	ELEV	
		900.76 ✓			
42+25					95.3
42+00					94.7
42+50					93.3
43+00					92.9
43+50					92.8
44+00					92.7
44+50				8.8	92.0
45+00				9.9	90.9
B.M.	2.99	902.29	1.43	899.13 ✓	899.30
T.P.	4.28	896.93	9.64	92.65	
					91.9
					90.8

12-16-29

6.8 6.9 5.7 5.2 4.2
43 39 15 5.5 15 43

11.0 10.4 8.9 7.8 6.2 6.7 7.3 6.2 4.7
43 30 21 17 6.5 15 17 22 14 43

12.7 12.2 10.6 7.8 7.4 7.5 8.3 8.9 8.3 5.7
43 19 10 6 7.5 8 17 17 23 35 43

10.2 7.8 8.5 9.0 7.9 7.7 8.4 9.4 9.2 5.7 5.4
43 14 11 8 4 7.9 7 16 19 4 25 43

10.6 10.6 1.9 2.0 3.4 6.8 8.3 7.9 8.8 7.2 2.5 4.8
43 38 36 28 26 14 12 8.0 6 17 21 25 43

7.4 5.8 7.9 8.2 8.6 8.5 10.0 10.2 9.6 10.8
43 32 25 13 5 8.4 13 17 21 23 43

SPK IN 8" OPX 90 KT STA. 41+00

9.2/43 9.3/23 9.2/15 5.2/7 5.0 5.5/14 8.4/19 9.4/23 9.4/26 12.2/27 12.2/28 9.4/36 9.2/43

10.0/43 10.0/22 9.8/14 6.2/6 6.1 6.4/15 8.9/18 9.7/21 9.7/27 11.7/28 11.7/29 10.1/30 9.8/43

SURVEY NOTES

OF

INTERSECTION

OWASSO BLVD & WESTERN

5

4

+51.5 P.O.T.

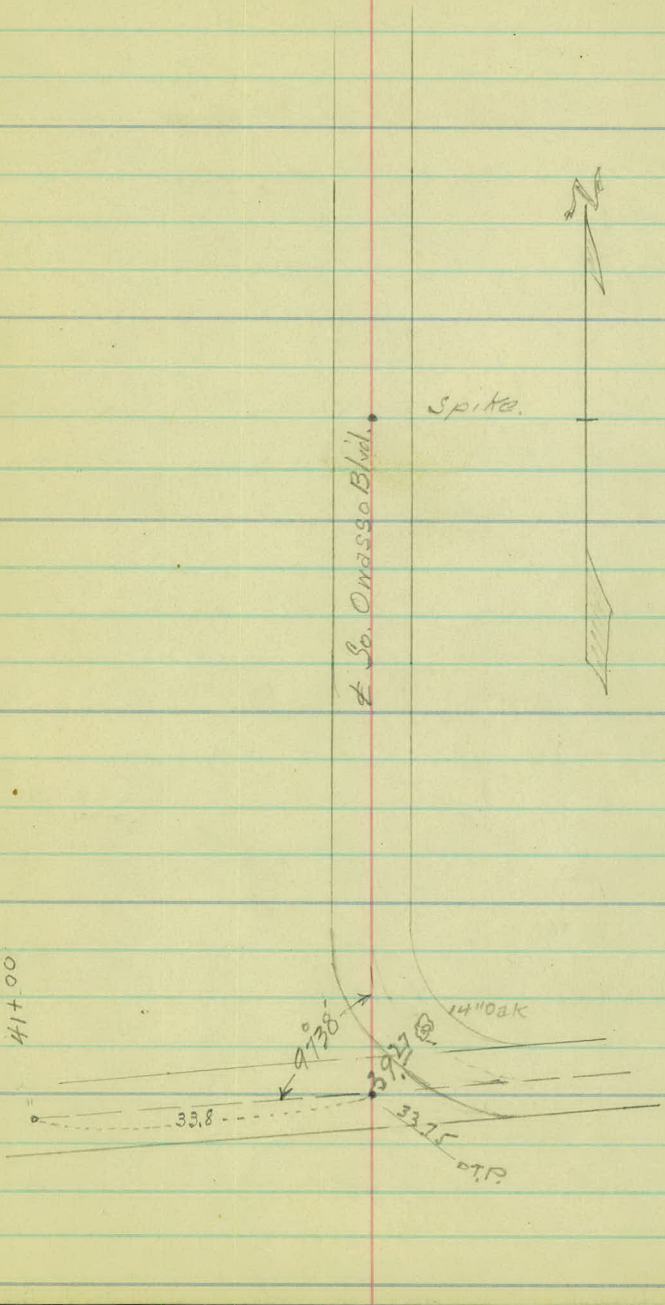
3

2

1

0+00 = 41+33.8 on 20° Curve line
Western Ave survey.

1-4-30



	+	H.I.	−	Elev	
B.M.	0.62	89.92 ✓		89.30 ✓	
0+00					97.9
+33					94.6
+60					95.4
+67					95.2
1					94.7
+50					94.4
2					94.1
+50					94.3
3					94.2
+10					94.2
+42					94.2
4+00					94.4
			0.62	89.30 ✓	

1-6-30

Spike in 8" Oak 80' Rt Sta. 41+00

Lt ℄ Rt

20

4.2 / 33	4.7 / 20			5.3	4.7 / 10	4.8 / 29	6.5 / 52	9.3 / 62	10.8 / 80
Drive not in.					5.4				
2.4 / 33	3.9 / 17			4.5	5.0 / 18	5.7 / 33	8.8 / 40	10.4 / 50	11.3 / 60
0.8 / 33	0.6 / 26	2.0 / 10	4.7 / 6	4.7	5.2 / 16	5.8 / 36	9.0 / 38	10.4 / 50	11.2 / 60
					5.4				
+0.2 / 33	0.5 / 14	5.3 / 8		5.2	5.5 / 12	6.5 / 23	10.8 / 31	11.4 / 37	11.8 / 50
1.2 / 33	2.7 / 20	5.4 / 5.9 / 15	5.4 / 10	5.5	6.2 / 10	5.4 / 6.4 / 15	11.0 / 24	11.6 / 29	11.6 / 50
2.1 / 33	2.9 / 21	5.4 / 6.1 / 17	5.8 / 12	5.8	6.2 / 9	5.4 / 6.7 / 13	8.8 / 20	10.0 / 27	12.1 / 50
1.0 / 33	2.1 / 18	5.4 / 6.1 / 13	5.8 / 11	5.6	6.0 / 10	5.4 / 6.4 / 15	9.1 / 21	11.3 / 35	12.2 / 50
3.4 / 33	3.4 / 27	3.7 / 16	6.4 / 13	6.1 / 10	5.7	5.8 / 10	5.9 / 15	7.9 / 20	10.7 / 36	12.2 / 50
7.8 / 33	7.7 / 27	7.5 / 15	6.4 / 13		5.7	5.8 / 7	5.4 / 6.1 / 13	8.2 / 19	9.7 / 33	10.7 / 50
9.4 / 33	9.4 / 22	6.4 / 15	5.9 / 12		5.6	5.9 / 13	7.9 / 16	8.5 / 27	5.0 / 50	
9.5 / 33	9.5 / 23	6.6 / 17	5.8 / 12		5.5	5.7 / 17	5.6 / 33	5.1 / 50		

Spike in 8" Oak 80' Rt. Sta. 41+00

WESTERN AVE.

3-17-30
O.R.V.K.
W.S.M.

- 0+92 - Rem. - P-24" P_3 - 60'
- 0+40 to 7+00 - Lt. - Cl. - 18' wide. 0.27 ac.
- 2+50 to 4+00 Lt. - Gr. - 18" " . 0.06 ac.
- 5+50 to 7+00 Lt - Gr. - 18" " . 0.06 ac.
- 7+00 - Lt. - Drive. - P-15"x20' C.M.
- 7+00 - Rt. - " - " "
- 8+50 - P-24" - P_3-60' H.D. - 8+00 to 10+50
- 13+14 - Lt. - Remove - P-15"x20' C.M.
- 11+00 to 12+00 - Cl. + Gr. 2 T - Rt.
- 13+00 to 14+00 - Cl. 2 T. - Gr 3 T. - Rt + Lt.
- 14+84 Lt. - P-15"x20' C.M.
- 14+84 - Rt. - " "
- 19+07 - Lt. - " "
- 20+00 - Rt " "
- 23+00 to 26+00 - Cl. 5 - Gr. 2 - Rt + Lt.
- 24+34 - Lt. - P-18"x20' C.M.
- 24+50 - P-24" P_3-48' H.D - 10 C.Y.
- 25+39 - Remove.
- 26+00 to 27+00 - Place rubbish from Rt. side in fill on Lt. side - #25.00
- 31+74 - Lt. - 1½ culv. req.
- 34+08 - Lt. - P-15"x20' C.M.
- 34+08 - Rt. - " "
- 35+98 - Remove - 1½ culv. req.
- 37+50 to 41+00 - Cl. 33 T. Gr. 33 T.
- 41+30 - Lt. - Remove - P-24" P_3 x 48'
- 41+71 - Lt. - Rep. 12" x 42' P_3 from 41+70 Lt. ✓ Remove C.M. inp.
- 44+05 - Lt. - Rem. + Rep.

6-18-30

922.99

9		13.7	09.3
	+50	13.2	09.8
8		12.2	10.8
	+50	11.0	12.0
7	+00	9.9	13.1
	+50	8.7	14.3
T.P.		1.94 921.05	921.04

	4.05	934.12		930.07	
	0.70	933.42	11.40	922.72	
20				10.1	13.3
+50				7.5	15.9
19				5.0	18.4
+50				2.5	20.9
	11.42	934.14	0.70	922.72	
18				10.7	23.4
+50				9.1	25.0
17				7.6	26.5
+50				6.9	27.2
16				6.8	27.3
+50				7.3	26.8
15				8.8	25.3
+50				10.1	24.0
14				11.5	22.6
+50				13.6	20.5
	1.94	922.99	13.09	921.05	
13				4.5	18.5
+50				6.6	16.4
12				8.9	14.1
+50				11.2	11.8
11				12.5	10.7
+50				12.7	10.5
10				13.8	09.2
+50				13.8	09.2

ON ROCK.

Prod #30-51

STA.	+	H.I.	−	ELEV	
B.M.	6.82	926.38		919.56	
	0.54	919.78	7.14	919.24	
6					
+50					
7					
+50					
8					
+50					
9					
+50					
	11.95	930.31	11.42	908.36	
10					
+50					
11					
+50					
12					
+50					
13					
	11.53	931.42	0.42	919.89	
+50					
14					
+50					
15					
B.M.	1.34	931.33	1.54	930.08	930.01
+50					
16					
+50					

6-30-30

13 LT.	℄	13 RT.
	(5.2)	
4.7	4.6	4.7
	(14.3)	
5.5	5.5	5.7
	(13.3)	
6.6	6.5	6.5
	(11.9)	
8.0	7.9	7.8
	(10.3)	
9.3	9.5	9.4
	(09.1)	
10.8	10.7	10.9
	(08.2)	
11.3	11.6	11.5
	(08.3)	
11.6	11.5	11.5
	(08.2)	
11.7	12.1	12.3
	(09.4)	
10.2	10.9	10.8
	(10.6)	
9.9	9.7	9.9
	(11.7)	
8.3	8.6	8.5
	(14.0)	
6.3	6.3	6.8
	(16.4)	
4.7	5.0	4.5
	(18.5)	
2.3	1.8	2.5
	(20.7)	
11.0	10.7	11.0
	(22.5)	
9.0	8.9	9.3
	(24.2)	
7.1	7.2	7.4
	(25.6)	
5.9	5.8	6.4
	(26.2)	
5.2	5.2	5.3
	(26.6)	
5.0	4.8	5.1
	(26.5)	
5.0	4.9	5.0

		931.35 ✓			
17					
	+50				
18					
	+50				
19					
	1.17	919.34 ✓	12.18	918.17 ✓	
	+50				
20					
	+50				
21					
	+50				
	4.85	915.14 ✓	9.05	910.29 ✓	
13.N1,	1.07	915.25 ✓	1.07	914.07 ✓	914.18 ✓
22					
	+50				
23					
	+50				
24					
	+50				
25					
	9.62	918.43 ✓	6.44	908.81 ✓	
	+50				
26					
	+50				
27					
	+50				

13 LT.		13 RT.
	05.8	
5.8	5.6	5.9
	24.7	
6.9	6.7	6.9
	22.8	
8.7	8.6	8.8
	20.9	
10.7	10.5	10.7
	18.5	
13.4	12.9	13.2
	16.2	
3.3	3.1	3.0
	14.5	
4.8	4.8	4.6
	13.1	
6.1	6.2	5.9
	11.8	
7.7	7.5	7.7
	10.5	
8.4	8.8	8.9
	09.8	
5.9	5.5	5.4
	09.3	
6.2	6.0	6.2
	08.4	
7.0	6.9	6.6
	08.0	
7.4	7.3	7.6
	07.7	
7.5	7.6	7.7
	08.0	
7.5	7.3	7.3
	08.3	
7.1	7.0	6.8
	09.0	
9.3	9.4	9.2
	10.1	
8.5	8.3	7.9
	11.1	
7.4	7.3	7.0
	12.9	
5.9	5.5	5.4
	15.4	
5.4	5.0	5.0

		918.43 ✓		
28				
	12.52	930.22 ✓	0.23	917.70 ✓
	+50			
29				
	+50			
30				
	+50			
31				
	+50			
32				
	+50			
33				
B.M.			4.19	926.03 ✓ 926.07 ✓

13' LT.		13' RT.
	17.6	
1.0	0.8	0.9
	20.9	
10.3	10.2	10.4
	22.0	
8.4	8.2	8.2
	24.0	
6.2	6.2	6.4
	25.8	
4.3	4.4	4.3
	27.1	
3.2	3.1	2.8
	27.9	
2.6	2.3	2.5
	27.6	
2.6	2.6	2.5
	27.8	
2.5	2.4	2.4
	27.2	
3.1	3.0	3.2
	26.7	
3.6	3.5	3.6