Book # 105 - Dy # 8

RAMSEY COUNTY RECREATIONS GRDS.

Book # 2

9-22-30

2-22-50

ON O# 1A.
ON O# 1B.
ON O# 1C.
ON O# 1D.
ON O# 1E.

ON O# 1F.
SPK IN STUMP.

ON O# 1G.
ON O# 1H.

ON O# 1I.

ON O 1 J.
ON O# 1K
ON O# 1L
ON O# 1M.
ON O# 1N.
ON O# 1O
ON O# 1P.

ON O# 1Q
ON O# 1R.

		916.79			
	1.64	911.57	6.86	907.94	
	0.21	901.97	9.81	901.76	
B.M.			13.43	888.54	888.52

B.M.	5.52	874.04		888.52	
O # 1A.			7.20	886.84	
O # 1B.	3.80	890.35	7.49	886.55	
O # 1C.	0.80	881.70	9.45	880.90	
O # 1D.	4.15	873.90	11.95	869.75	
O # 1E.			8.41	865.49	
	13.21	886.22	0.87	873.01	
	8.73	893.45	1.50	884.72	
O # 1F.			6.57	886.88	
B.M.	12.42	898.18	7.69	885.76	885.76
	10.56	907.25	1.47	896.69	
O # 1G.			2.09	905.16	
O # 1H	0.29	901.94	5.60	901.65	
	6.76	876.49	12.21	887.73	
O # 1I.			10.54	885.95	
	11.20	906.16	1.53	894.96	
	13.34	917.70	1.82	904.34	
O # 1J.			7.76	909.94	
O # 1K.	8.26	924.18	1.78	915.52	915.92
O # 1L.			5.14	919.04	
O # 1M.	2.35	925.85	0.68	923.50	
O # 1N.	0.79	914.42	12.22	913.63	
O # 1O.			5.74	908.68	
O # 1P.			5.90	908.52	
	5.44	918.00	1.86	912.56	
O # 1Q.			3.88	914.12	
O # 1R.	9.12	916.79	10.33	907.67	

ON TOP OF MNT. STR. #18 LARP. O.H. 1.

O.H. 2 M. SPUR.

O.H. 2 B. SPUR.

ON O.H. 3.

ON O.H. 2

ON O.H. 4.

ON O.H. 5

ON O.H. 6

ON O.H. 7

ON O.H. 9

ON O.H. 8

		868.46			
B.M.	4.51	868.13	4.82	863.64	863.62
O # 9A			5.05	63.08	
	4.32	866.74	5.71	862.42	
O # 10			6.01	860.73	
O # 11	12.62	271.41	7.95	858.79	
	13.37	284.52	0.26	271.15	
O # 12			4.14	880.38	
O # 13	9.85	893.03	1.34	883.18	
O # 14			5.18	87.85	
	2.14	882.45	12.72	880.31	
O # 15	8.45	882.40	8.50	873.95	
O # 9E			4.07		
	12.70	893.88	1.22	881.18	
	7.64	900.41	1.13	892.75	
O # 9D			2.16	898.25	
	0.74	888.16	12.99	887.42	
	1.09	877.00	12.25	875.91	
B.M.	4.34	867.96	13.38	863.62	863.62
O # 9B			4.89	863.07	
O # 9C			4.45	63.51	
B.M.			4.34	863.62	

SPK IN FOR L. POLE #58 INT FROST FREE PAMPLEN PAY

ON H 9 F.

ON # 10.

ON O# 11

ON O# 12

ON O# 13.

ON O# 14

ON O# 15.

ON O# 9E

ON O# 9 D.

ON O# 9 B.

ON O# 9 C.

B.M.	2.69	914.18		911.49	
	0.60	912.46	12.52	901.86	
	1.99	895.28	9.17	893.29	
B.M.	1.25	889.77	6.64	888.44	888.52
	7.66	888.86	8.57	881.20	
O # 1			11.79	877.07	
O # 2A	1.24	889.46	0.64	888.22	
	1.08	878.09	12.45	877.01	
	2.07	869.63	10.53	867.56	
O # 2B.			12.34	857.29	
	7.59	869.45	7.77	861.86	
O # 3			12.08	857.37	
	12.76	881.21	1.00	868.45	
	7.35	887.94	0.62	880.59	
O # 2			0.12	887.82	
	0.83	881.42	7.35	880.59	
	5.03	874.28	12.17	869.25	
O # 4	11.55	884.93	0.90	873.38	
	7.43	889.98	2.38	882.55	
O # 5			2.15	887.83	
	2.30	881.26	11.02	878.96	
O # 6			4.90	876.36	
O # 7	1.00	881.40	0.86	880.40	
	3.95	876.86	8.49	872.91	
O # 9			4.84	872.02	
	3.88	868.46	12.28	864.58	
O # 8			11.17	857.29	

At HOLE 1. 180° 0

CENTER GREEN. 21.5 RAD. 225° 10 575

S.E. COR. TEE. 8' × 10' 209° 0 448

NE " " 208° 30 458

Page 1 Transit 449 19 Obs. Crane Line

Date 1-31-30 Rec.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
NEEDLE 9°-30'									
882.42									
AT O.H. 1 H.I. MEASURED 5.35	NORTH = 180° ℄ ARCADE AT LANE								
TO O.H. 2	251°-33'	542							
1 ℄ ARCADE	180°-00'	210					4.7	-4.7	77.7
2 TOP OF HILL	270°-04'	520		+	0°-12'		5.0	-1.2	81.2
3 SHOULDER NE ARCADE	133°-12'	210					4.5	-4.5	77.9
4 HILLSIDE SLOPE WEST	270°-00'	455					7.3	-7.3	75.1
5 TOE OF SHOULDER ARCADE	187°-50'	210					7.4	-9.4	73.0
6 TOE OF SOUTH SLOPE	270°-30'	382		−	1°-50'		10.0	-22.2	60.2
7 TOE OF E. SLOPE	197°-45'	225		−	1°-53'		6.0	-13.4	69.0
8 TOE OF W. SLOPE	209°-10'	244		−	1°-30'		7.0	-15.8	66.6
9 TOE OF E. SLOPE	270°-30'	245		−	1°-10'		14.0	-25.3	57.1
10 HILL SIDE SLOPE EAST	271°-00'	215		−	1°-47'		10.0	-16.7	65.7
11 TOP OF HILL	270°-31'	160					7.0	-7.0	75.4
12 TOE OF E. SLOPE	221°-00'	190		−	1°-26'		5.0	-16.5	65.9
13 TOP OF HILL	270°-00'	118					5.2	-5.2	77.2
14 E. SLOPE	209°-00'	160		−	1°-45'		7.0	-13.9	68.5

Page 2 Transit Obs. CRANE Line

Date Rec.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUGEL CONT 882.42									
#15 TOP OF HILL	270°-00'	94					7.4		75.0
#16 TOE OF HILL & SHOULDER	270°-00'	90'					12.0		70.4
#17 TOE OF SHOULDER	192°-15'	140'					10.0		72.4
#18 E. TOE OF SHOULDER	270°-00	60'					12.0		70.4
#19 ON SHOULDER	270°-00	36'					6.1		76.3
#20 ON SHOULDER	185°-35'	138'					4.9		77.5
#21 ℄ ARCADE	180°-00	150					5.15		77.2
#22 GEN. ELEV	229°-15'	65'					9.7		72.7
#23 TOE OF SHOULDER	202°-10	80'					9.5		72.9
#24 ℄ SMALL DRAW N.E.	243°-10'	79'					13.2		69.2
#25 GEN ELEV.	235°-12'	135					14.0		68.4
#26 GEN	226°-00'	135'		−	1°-35'		11.0	-14.7	67.7
#27 W. SHORE OF POND.	255°-40'	242		−	3°-08'		11.0	-24.2	58.2
#28 GEN ELEV.	219°-35'	142		−	2°-54'		6.0	-12.7	69.7
#29 N.W. COR OF POND.	243°-45'	285		−	3°-00'		9.0	-23.4	59.0
#30 GEN ELEV.	224°-45'	185		−	2°-52'		8.0	-26.4	56.0
#31 N. END OF POND	247°-00	310'		−	2°-47		9.0	-24.0	58.4

Page 3 Transit Obs. CRANE Line

Date 1-31-30 Rec.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
⊙/ Cont 882.42									
#32 ON S.W. SLOPE	228°-20	255		−	2°-41		4.0	-16.1	66.3
#33 E. SHORE OF POND	254°-30	340		−	2°-22		10.0	-24.0	58.4
#34 ON S.W SLOPE	230°-12	320		−	2°-02		3.0	-14.4	68.0
#35 ON BASE 24" OAK	257°-12	408					12.0		70.4
#36 ON S.W. SLOPE	231°-00	394					7.0		75.4
#37 ON BASE OF 18" OAK	247°-40	420					5.2		77.2
38 S.W. Slope	230-58	470					3.6		78.8
39. Base 14" Oak.	244-31	390					9.8		72.6
40 Crown of Hill (Ridge)	230-28	580					1.3		81.1
41 Base 12" Oak.	244-17	400					7.2		75.2
~~Base~~	~~230-28~~	~~580~~					~~1.2~~		
42 Crown in Saddle.	235-06	570					4.3		78.1
43 Base 24" Oak.	239-52	410					4.9		77.5
44 " " "	240-40	420					3.8		78.6
45 " 18 "	238-28	430					3.1		79.3
46 " 18 "	238-07	450					2.3		80.1

Page 4 Transit Obs. Crane Line

Date 1-31-30 Rec. L.J.L.

chk. Fr 09 Windmill 74-39'

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
AHOR 892.67 K = 4.85									
To 01	251-33	542							
To 03	253-58	518							
Spur To 02A	124-01	440							
1 Break to Shore of Pond	70-10	315		−	5°-09'		3.00	-31.2	61.5
2 " " " " "	78-34	290		−	5°-16'		4.00	-30.6	62.1
3 E. SHORE POND	299°-00	410		−	3°-40'		8.00	-34.8	57.9
4 TOP. ICE "	301°-35'	315		−	5°-55'		3.00	-35.3	57.4
5 W. SHORE "	313°-48'	255		−	6°-15'		5.00	-32.6	60.1
6. E. SLOPE	224°-43'	220		−	5°-05'		3.00	-22.4	70.3
7. TOP E SLOPE.	341°-46'	185					13.00		79.7
8. CROWN OF HILL RIDGE.	352°-16'	174					11.20		81.5
9 BASE OF TWIN OAK	360°-00	165					11.4		81.3
10 " " " "	356°-30'	123					9.4		83.3
11 " " 20" "	349°-22'	160					10.3		82.4
12 " " 24" "	347°-34'	150					9.8		82.9
13 " " 18 "	350°-18	161					10.2		82.5

Page 5 Transit Obs CIGNE Line

Date 1-31-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #2 - CONT. 892.67									
14 BASE OF 12" OAK.	344° 30'	175					11.5		81.2
15 14	314° 17'	222		-	6° 21'		4.00	-28.5	64.2
16 18	343° 07	180					12.1		80.6
17 15	308° 46'	210		-	6° 43'		4.00	-28.4	64.3
18 20	329° 25'	193		-	4° 27'		3.00	-18.0	74.7
19 10	305° 42'	203		-	7° 05'		4.00	-28.9	63.8
20 24	321° 43'	177		-	4° 10'		6.00	-18.8	73.9
21 10	304° 31'	200		-	6° 56'		5.00	-29.0	63.7
22 18	329° 54'	170		-	4° 22'		3.00	-15.9	76.8
23 12	307° 37'	175		-	6° 30'		4.00	-23.7	69.0
24 12	328° 18'	158		-	4° 00'		4.00	-15.0	77.7
25 12	308° 63'	179		-	6° 06'	-18.9	5.00	-23.9	68.8
26 12	315° 40'	180		-	5° 45'	-18.0	3.00	-21.0	71.7
27 14	309° 45'	171		-	6° 14'	-18.4	4.00	-22.4	70.3
28 24	311° 32'	173		-	6° 19'	-18.9	3.00	-21.9	70.8
29 18	313° 25'	152			6° 12'	-16.3	2.00	-18.3	74.4
30 15	316° 13'	154			5° 30'	-14.9	3.00	-17.9	74.8

Page 6 Transit Obs. Crane Line

Date 1-31-30 Rec. A.L.P.

OBJECT 892.67 HUB. # 2. CONT.		Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
31. BASE OF	15" OAK	320° 18'	136		−	4° 58'	-11.7	3.00	14.7	78.0
32	12"	330° 20'	140		−	4° 18'	-10.5	2.00	12.5	80.2
33	14"	338° 45'	115		−			9.00		83.7
34	12"	341° 00'	110					8.6		84.1
35	12"	344° 14'	120					8.8		83.9
36	12"	335° 25'	93					8.3		84.4
37	12"	331° 30'	100					8.9		83.8
38	12"	328° 35'	155					9.6		83.1
39	12"	329° 30'	110					9.8		82.9
40	12"	322° 35'	115					11.9		80.8
41	12"	315° 40'	124		−	5° 47'	-12.5	2.00	14.5	78.2
42	24"	318° 50'	131		−	5° 13'	-11.9	4.00	15.9	76.8
43	8"	316° 43'	142		−	5° 27'	-12.5	3.00	15.5	77.2
44	20"	295° 00'	180		−	6° 38'	-20.7	8.00	28.7	64.0
45	12"	295° 08'	146		−	6° 39'	-17.0	5.00	22.0	70.7
46	14"	310° 11'	112			5° 12'	-10.3	4.00	14.3	78.4
47	15"	297° 00'	136			6° 49'	-16.0	4.00	20.0	72.7

Page 7 Transit Obs. Crane Line

Date 1-31-30 Rec. F.L.P.

OBJECT 892.67 HUB #2. CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
48 BASE OF 10" OAK.	314° 14'	95					11.1		81.6
49 15"	297° 00	95					14.1		78.6
50 10"	314° 33'	91					10.6		82.1
51 10"	308° 38'	81					10.4		82.3
52 26"	331° 10'	55					7.1		85.6
53 10"	307° 10'	69					9.3		83.4
54 14"	307° 26'	48					7.8		84.9
55 18"	295° 38'	34					7.3		85.4
56 12"	307° 00	45					7.6		85.1
57 12"	274° 00	56					10.2		82.5
58 26"	286° 00	102		−	7° 59'	−14.0	2.00	16.0	76.7
59 12"	281° 00	86		−	8° 11'	−12.2	2.00	14.2	78.5
60 12"	287° 43'	150		−	8° 10'	−21.1	3.00	24.1	68.6
61 20"	281° 30'	95		−	8° 15'	−13.8	2.00	15.8	76.9
62 12"	280° 48'	143		−	8° 15'	−20.7	3.00	23.4	69.3
63 12"	275° 45'	155		−	8° 14'	−22.0	4.00	26.0	66.7
64 15"	275° 55	130		−	7° 46'	−17.4	4.00	21.4	71.3

Page 8 Transit Obs. Crane Line

Date 1-31-30 Rec. A.L.P.

OBJECT 892.67 HUB #2 CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
65 BASE OF 12" OAK	269° 57'	148		−	7° 37'	-19.4	5.00	-24.4	68.3
66 15"	270° 54'	99		−	8° 35'	-14.2	2.00	-16.2	76.5
67 8"	264° 40'	160		−	8° 49'	-24.3	2.00	-26.3	66.4
68 14"	261° 20'	70					12.6	-12.6	80.1
69 15"	258° 00	177		−	8° 16'	-25.3	3.00	-28.3	64.4
70 14"	252° 00	87		−	7° 49'	-11.7	3.00	-14.7	78.0
71 15"	256° 55'	163		−	7° 47'	-21.8	4.00	-25.8	66.9
72 18"	255° 15'	106		−	8° 53'	-16.2	3.00	-19.2	73.5
73 24"	262° 53'	150		−	7° 52'	-20.3	4.00	-24.3	68.4
74 20"	268° 28'	142		−	8° 46'	-21.4	4.00	-25.4	67.3
75 24"	265° 30'	135		−	7° 44'	-18.0	4.00	-22.0	70.7
76 18"	248° 15'	162		−	7° 22'	-20.5	4.00	-24.5	68.2
77 12"	248° 30'	187		−	7° 30'	-24.2	4.00	-28.2	64.5
78 16"	245° 05'	176		−	7° 21'	-22.4	4.00	-26.4	66.3
79 12"	248° 03'	184		−	7° 26'	-23.6	4.00	-27.6	65.1
80 24"	239° 50	133		−	7° 17'	-16.7	3.00	-19.7	73.0
81 12"	243° 40'	82		−	7° 32'	-10.7	3.00	-13.7	79.0

Page 9 Transit Obs. Crane Line

Date 1-31-30 Rec. F.L.P.

OBJECT 892.67 HUB #2 CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
82 BASE OF 24" OAK	232° 18'	95		−	7° 03'	-11.5	3.00	-14.5	78.2
83 12"	231° 46'	80		−	7° 31'	-10.4	2.00	12.4	80.3
84 22"	228° 08'	60					9.8		82.9
85 24"	224° 50'	59					9.3		83.4
86 12"	210° 00	50					8.2		84.5
87 18"	218° 40'	26					7.1		85.6
88 16"	189° 00	31					6.5		86.2
89 14"	184° 55'	60					8.0		84.7
90 14"	195° 00	75					9.0		83.7
91 12"	204° 00	112					13.8		78.9
92 14"	212° 12'	110		−	5° 34'	-10.6	4.00	14.6	78.1
93 12"	208° 45'	125		−	5° 22'	-11.6	4.00	15.6	77.1
94 22"	224° 00	116		−	6° 47'	-13.6	3.00	16.6	76.1
95 12"	220° 30'	125		−	6° 33'	-14.2	3.00	17.2	75.5
96 26"	213° 00	142		−	6° 00	-14.8	3.00	17.8	74.9
97 12"	235° 35'	143		−	5° 58'	-14.8	6.00	20.8	71.9
98 12"	209° 40	147		−	5° 50'	-14.9	3.00	17.9	74.8

Page 10 Transit Obs. Line

Date 1-31-30 Rec. A.L.P.

OBJECT 892.67 HUB #2 CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
99. BASE OF 12" OAK	211° 20'	155		−	5° 40'	-15.2	4.00	+19.2	73.5
100 18"	232° 05'	149		−	4° 19'	-11.2	10.0	21.2	71.5
101 14" TWIN	213° 46'	179		−	6° 11'	-19.2	3.00	22.2	70.5
102 24" "	227° 00'	146		−	5° 48'	-14.7	5.00	19.7	73.0
103 12" OAK	214° 10'	185		−	5° 36'	-18.0	5.00	23.0	69.7
104 12"	235° 00'	170		−	6° 25'	-18.9	5.00	23.9	68.8
105 15"	235° 00'	175		−	6° 06'	-18.5	6.00	24.5	68.2
106 22"	220° 20'	195		−	6° 10'	-20.8	5.00	25.8	66.9
107 18"	240° 00'	183		−	6° 22'	-20.2	6.00	26.2	66.5
108 15"	224° 00'	187		−	6° 50'	-22.1	3.00	25.1	67.6
109 12"	239° 30'	205		−	6° 45'	-23.8	5.00	28.8	63.9
110 16"	217° 40'	210		−	6° 47'	-24.6	4.00	28.6	64.1
111 18"	233° 30'	198		−	6° 34'	-22.5	5.00	27.6	65.1
112 18"	217° 00'	213		−	6° 35'	-24.3	5.00	29.6	63.1
113 15" "	231 30	135		−	6° 39'	-25.5	5.00	30.5	63.2
At ⊙2.									
TO ⊙1.	251° 33'	542							

Page 11 Transit Obs. Line

Date 2-1-30 Rec. A.L.P.

OBJECT 892.67 HUB-#2-CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
114. BASE OF 12" OAK	175° 51'	79					8.7		84.0
115 18" TWIN	182° 30'	109					11.0		81.7
116 12" OAK	193° 30'	120		−	1° 37'	-3.4	9.6	-13.0	79.7
117 18" "	199° 30'	142		−	1° 34'	-3.9	11.7	15.6	77.1
118 22" "	205° 30'	189		−	4° 40'	-15.3	6.0	21.3	71.4
119 10" TWIN	190° 45'	201		−	3° 18'	-11.6	5.0	16.3	76.4
120 20" OAK	190° 45'	150		−	3° 42'	-9.6	4.7	14.3	78.4
121 24" "	190° 30'	209		−	3° 38'	-13.2	6.0	19.2	73.5
122 10" "	188° 10'	142		−	3° 44'	-9.2	4.7	13.9	78.8
123 12" "	189° 40'	238		−	3° 32'	-14.6	9.2	23.8	68.9
124 12" "	189° 45'	169		−	3° 31'	-10.4	5.9	16.3	76.4
125 12" "	184° 40'	230			3° 34'	-14.3	3.2	17.5	75.2
126 16" "	179° 48'	155			3° 48'	-10.2	3.8	14.0	78.7
127 15" "	183° 43'	219			3° 33'	-13.6	3.1	16.7	76.0
128 12" "	179° 43'	143			3° 58'	-9.9	3.7	13.6	79.1
129 12" "	178° 13'	222			2° 50'	-10.9	3.1	14.0	78.7
130 24" "	174 38	140			3° 30'	-8.5	4.7	13.2	79.5

Page 12 Transit Obs. Line

Date 2-1-30 Rec. A.L.P.

OBJECT 892.67 HUB #2. CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
131 BASE OF 18" OAK.	180° 10'	244		−	3° 08'	-13.4	3.2	-16.6	76.1 ✓
132 14"	177° 10'	161		−	3° 24'	-9.5	4.8	14.3	78.4 ✓
133 12"	183° 00'	274		−	3° 32'	-16.9	10.4	27.3	65.4 ✓
134 18"	179° 30'	185		−	3° 33'	-11.5	2.9	14.4	78.3 ✓
135 12"	179° 35'	275		−	3° 16'	-15.7	8.4	24.1	68.6 ✓
136 14"	168° 43'	189		−	3° 01'	-9.9	3.00	12.9	79.8 ✓
137 14"	179° 00	278		−	2° 53'	-13.9	9.4	23.3	69.4 ✓
138 12"	171° 30'	194		−	2° 50'	-9.6	3.0	12.6	80.1 ✓
139 18"	178° 30'	264		−	3° 00	-13.8	4.3	18.1	74.6 ✓
140 12"	172° 07'	214					12.0		80.7 ✓
141 12"	175° 00	273		−	2° 23'	-11.4	5.4	16.8	75.9 ✓
142 22"	170° 17'	209					11.9		80.8 ✓
143 24"	168° 16'	277					12.1		80.6 ✓
144 14"	173° 47'	241					12.6		80.1 ✓
145 15"	167° 15'	257					10.8		81.9 ✓
146 12"	171° 30'	237					11.8		80.9 ✓
147 24"	168° 23'	234					11.0		81.7 ✓

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Date 2-1-30 Rec. A.L.P.

OBJECT 892.67 HUB # 2 - CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
148 BASE OF 10" OAK	167° 37'	222					11.1		81.6
149. E. SHOR LINE POND	52° 50'	200		−	7° 17'	-25.3	9.0	-34.3	58.4
150. HILL SIDE SLOPE WEST	175 50'	189		−	2° 01'	-6.6	4.9	11.5	81.2
151. " " " "	38° 45'	159		−	2° 04'	-5.7	3.8	9.5	83.2
152. " " " "	80° 36'	159		−	2° 04'	-5.7	11.8	7.5	75.2
153 TOP HILL SIDE SLOPE W.	07° 50'	125					11.8		80.9
154 " " " " "	94° 00'	95					11.9		80.8
155 CROWN OF HILL	341° 20'	46					7.9		84.8
156 TOP HILL SIDE SLOPE W	63° 00	47					8.5		84.2
157 " E. SLOPE.	334° 00	103					9.1		83.6
158 CROW OF HILL	343° 00	12					5.8		86.9
159 CENTER E. SLOPE	313° 00	144		−	4° 57'	-12.4	5.7	17.4	75.3
160 TOP E "	270° 00	33					8.0		84.7
161 HILL SIDE SLOPE E	298° 20'	194		−	2° 21'	-7.9	6.0	13.9	78.8
162 " " " "	260° 45'	168		−	7° 22'	-21.3	6.8	28.1	64.6
163 W. SHORE LINE POND	298° 45'	199		−	2° 32'	-8.7	6.0	14.7	78.0
164 " " " "	264° 07'	190			2° 30'	-8.3	8.0	16.3	76.4

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Date 2-1-30 Rec. A.L.P.

OBJECT 892.67 HUB #2 CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
165 CENTER POND	290° 38'	272		−	6° 31'	-30.6	4.4	-35.0	57.7
166 " "	260° 40'	273		−	6° 30'	-30.5	4.4	34.9	57.8
167 E. SHORE LINE POND	284° 30'	337		−	5° 05'	-29.6	5.7	35.3	57.4
168 " " " "	264° 00	360		−	4° 41'	-29.4	4.8	34.2	58.5
169 " " " "	275° 00	346		−	4° 50'	-29.9	5.7	35.6	57.1
170 TOE OF SPOIL BANK	245° 47'	305		−	4° 26'	-23.5	9.5	33.0	59.7
171 " " " "	216° 30'	263		−	6° 23'	-29.2	4.3	33.5	59.2
172 CENTER OF DRAW	224° 44'	270		−	6° 21'	-29.6	2.4	32.0	60.7
173 TOE E SLOPE	241° 43'	218		−	6° 16'	-23.8	7.1	30.9	61.8
174 " " "	210° 52'	229		−	6° 14'	-24.7	8.2	32.9	59.8
175 HILL SIDE SLOPE E	234° 10'	150		−	6° 29'	-16.8	4.8	21.6	71.1
176 " " " "	207° 07'	200		−	6° 18'	-21.8	2.0	23.8	68.9
177 TOP OF "	207° 30'	74		−	5° 57'	-7.8	2.4	10.2	82.5
178 IN SADDEL	181° 20'	175		−	4° 19'	-13.1	1.9	15.0	77.7
179 CROWN OF HILL	156° 00	63					7.3		85.4
180 TOP OF HILL SIDE SLOPE. E.	171° 00	269					12.3		80.4
181 HILL SIDE SLOPE. W.	105° 45'	363		−	0° 42'	-4.4	10.8	15.2	77.5

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Date 2-1-30 Rec. H.L.P.

OBJECT 892.67 HUB # 2. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
182 HILL SIDE SLOPE .W.	117° 55'	313					9.0		83.7
183 " " " .E	187° 40'	237		−	3° 56'	-16.7	5.2	21.4	71.3
184 TOP SLOPE .W.	129° 30'	297					6.7		86.0
185 CROWN OF HILL	141° 40'	262					7.9		84.8
186 " " "	157° 49'	255					8.9		83.8
CHK. AZ. 51° 02' TOP RED SILO.									
N. 02. A. 893.17 SPUR. H.I. 4.95									
TO. 02.	124° 01'	440							
1. BASE TRIPEL 12" OAK	345° 00	48					6.3		86.9
2 24" "	345° 20	73					7.5		85.7
3 12" "	355° 42'	62					7.5		85.7
4 TWIN OAK	365° 45'	125					13.1		80.1
5 20" "	8° 30'	50					7.5		85.7
6 18" "	4° 55'	160		−	5° 45'	-15.9	2.8	18.7	74.5
7 22" "	22° 15'	60					8.4		84.8
8 30" "	4° 12'	119		−	2° 50'	-5.9	7.6	13.5	79.7
9 12" "	37° 00	57					8.4		84.8

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Date 2-1-30 Rec. A.L.P.

OBJECT 893.17 HUB # 2 A. CONT. SPUR.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
10 BASE 14" OAK	37° 00'	45					7.0		86.2
11 30" "	13° 00	133		−	4° 28'	-10.3	5.7	16.0	77.2
12 30" "	27° 51'	114		−	4° 16'	-8.5	5.6	14.1	79.1
13 12" "	22° 53'	86					11.1		82.1
14 22" "	59° 34'	44					7.1		86.1
15 28" "	34° 20	86					11.6		81.6
16 24" "	80° 24'	50					7.0		86.2
17 30" "	59° 20'	125		−	5° 06'	-11.1	4.6	15.7	77.5
18 14" "	92° 00	109					10.8		82.4
19 24" "	66° 10'	93					11.8		81.4
20 18" "	92° 00	93					9.8		83.4
21 30" "	65° 18'	95					12.1		81.1
22 24" "	85° 38'	85					9.5		83.7
23 24" "	75° 08	89					10.9		82.3
At. 02 A. SPUR. H.I. 4.95									
To. 02	124° 01'	4.40							
24. 20" STONE	125° 35'	6.00					5.00		88.2

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HUB #2 A. SPUR. CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
25 BASE 14" OAK.	141° 50'	22					5.3		87.9
26 22" "	98° 04'	44					5.9		87.3
27 12" "	107° 36'	57					6.2		87.0
28 10 "	108° 40'	69					6.5		86.7
29 TWIN STUMP 12 "	110° 00	118					9.3		83.9
30 " 16" OAK	124° 26'	61					6.0		87.2
31 12" "	115° 45'	118					8.5		84.7
32 12" "	126° 40'	83					6.6		86.6
33 12" "	119° 24'	113					8.2		85.0
34 10" "	120° 00	82					6.5		86.7
35 12" "	117° 40'	103					7.6		85.6
36 12" "	118° 35'	84					6.6		86.6
37 14" "	124° 30'	100					7.6		85.6
38 12" "	119° 18'	94					7.0		86.2
39 12" "	139° 22'	58					5.6		87.6
40 10" "	125° 34'	92					7.0		86.2
41 12" "	143° 33'	53					5.6		87.6

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Date 2. 3. 30 Rec. A.L.P.

OBJECT 493.17 HUB # 2 A SPUR. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
42 12 OAK	143° 15'	50					5.5		87.7
43 TRIPEL 24" "	133° 40'	112					7.7		85.5
44 12" "	154° 50'	60					5.9		87.3
45 14" "	127° 40'	136					9.0		84.2
46 15" "	172° 10'	54					6.2		87.0
47 14" "	132° 30'	130					8.6		84.6
48 12" "	179° 45'	75					7.7		85.5
49 12" "	138° 55'	140					9.7		83.5
50 18" "	152° 40'	92					8.0		85.2
51 12	134° 00'	161					10.0		83.2
52 24	151° 47'	111					9.3		83.9
53 STUMP 14"	143° 30'	149					11.7		81.5
54 30" OAK	158° 35'	116					10.9		82.3
55 12 "	142° 10'	165					11.4		81.8
56 12 "	171° 25'	122					13.0		80.2
57 STUMP 24 "	142° 30'	175					11.5		81.7
58 8" "	179° 12'	119					13.1		80.1

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Date 2-3-30 Rec. A.L.P.

OBJECT 493.17 HOB # 24. SPOR. CONT		Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
59	14" OAK	143° 42'	187		−	2° 55'	-9.5	2.9	-12.4	80.8
60	8" "	173° 43'	130		−	2° 48'	-6.4	8.6	15.0	78.2
61 STUMP	12" "	147° 13'	207		−	2° 47'	-9.9	4.0	13.9	79.3
62	12" "	173° 40'	129		−	4° 46'	-10.7	3.7	14.4	78.8
63	14" "	146° 37'	195		−	3° 04'	-10.4	3.0	13.4	79.8
64	12" "	171° 26'	140		−	3° 16'	-7.9	8.7	16.6	76.6
65	14" "	148° 52'	185		−	3° 28'	-10.9	2.9	13.8	79.4
66	10" "	167° 00'	133		−	3° 24'	-7.8	6.7	14.5	78.7
67	8" "	148° 00'	165		−	3° 14'	-9.6	3.8	13.4	79.8
68	10" "	158° 48'	136		−	3° 21'	-7.9	5.7	13.6	79.6
69	14" "	151° 00'	162		−	3° 17'	-9.4	4.8	14.2	79.0
70	12" "	155° 35'	141		−	3° 18'	-8.1	5.7	13.8	79.4
71	12" "	151° 04'	147		−	3° 32'	-9.1	4.7	13.8	79.4
72	12" "	156° 25'	160		−	3° 35'	-9.9	5.8	15.7	77.5
73 TWIN	12" "	149° 10'	143		−	3° 44'	-9.3	2.7	12.0	81.2
74	14" "	163° 30'	160		−	3° 50'	-10.6	7.8	16.4	76.8
75	24" "	148° 10'	224		−	3° 00'	-11.7	2.1	13.8	79.4

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.77 HUB. # 2 A. SPOR CONT		Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
76	36" OAK	172° 08'	154		−	3° 23'	-9.0	11.8	20.8	872.4
77	14" "	149° 02'	219		−	3° 25'	-13.0	2.1	15.1	78.1
78	15" "	165° 23'	190		−	3° 42'	-12.2	11.0	23.1	70.7
79	12" "	151° 07'	231		−	2° 57'	-11.8	3.2	15.0	78.2
80	12" "	161° 24'	190		−	3° 03'	-10.1	10.9	21.0	72.2
81	10" "	152° 02'	241		−	1° 44'	-7.3	8.2	15.5	77.7
82	24" "	158° 15'	174		−	2° 51'	-8.6	8.9	17.5	75.7
83	20" "	152° 30'	260		−	1° 45'	-8.0	6.3	14.3	78.9
84	15"	152° 35'	261		−	1° 41'	-7.6	6.3	13.9	79.3
85	12"	153° 00'	192		−	1° 53'	-6.4	10.0	16.4	76.8
86	15"	154° 24'	262		−	1° 58'	-8.9	7.3	16.2	77.0
87	12"	152° 20'	198		−	2° 16'	-7.8	9.0	16.8	76.4
88	12"	156° 48'	255		−	3° 06'	-13.8	4.3	18.1	75.1
89	12"	154° 00'	206		−	3° 18'	-11.8	5.0	16.8	76.4
90	12	156° 04'	254		−	3° 25'	-15.1	6.3	21.4	71.8
91	12	154 18'	219		−	3° 25'	-13.0	4.1	17.1	76.1
92	14	159 00	235		−	3° 28'	-14.2	6.2	20.4	72.8

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HOB # 2 A. SPUR. CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
93 12" OAK.	156° 51'	201		−	3° 33'	-12.4	6.0	-18.4	74.8
94 12" "	159° 45'	216		−	3° 33'	-13.9	7.1	-20.5	72.7
95 10" "	160° 00'	203		−	3° 46'	-13.3	7.0	-20.4	72.8
96 12" "	167° 15'	225		−	4° 11'	-16.4	10.1	-26.5	66.7
97 12" "	164° 18'	209		−	4° 15'	-15.4	8.0	23.4	69.8
98 12" "	172° 00'	215		−	5° 01'	-18.8	11.1	29.9	63.3
99 8" "	174° 30'	195		−	5° 00'	-16.9	11.0	27.9	65.3
100 12" "	174° 00'	215		−	5° 01'	-18.8	11.1	29.9	63.3
101 10" "	176° 54'	207		−	5° 05'	-18.2	12.0	30.2	63.0
102 12" "	175° 16'	222		−	5° 08'	-19.7	11.2	30.9	62.3
103 TWIN 8" "	173° 10'	239		−	5° 04'	-21.0	11.2	32.2	61.0
104 12" "	168° 00'	247		−	4° 47'	-20.5	7.2	27.7	65.5
105 15" "	169° 56'	262		−	4° 45'	-21.5	8.3	29.8	63.4
106 12" "	163.03	268		−	4° 39'	-21.8	2.3	24.1	69.1
107 10" "	168° 00'	278		−	4° 42'	-22.7	5.4	28.1	65.1
108 16" "	159° 50'	272		−	3° 15'	-15.3	4.4	19.7	73.5
109 TWIN 12" "	163 15'	288		−	4° 18'	-21.6	2.4	24.0	69.2

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HUB #2 A. SPOR. CONT.		Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
110	16" ORK.	157° 43'	280		−	3° 14'	-15.7	2.4	-18.1	75.1
111	30" "	159° 39'	304		−	3° 14'	-17.1	2.5	19.6	73.6
112	12" "	157° 45'	285		−	3° 06'	-15.4	2.4	17.8	75.4
113	10" "	157° 15'	295		−	2° 47'	-14.2	2.5	16.7	76.5
114 STOMP	12" "	156° [illegible]	297		−	2° 20'	-12.0	3.5	15.5	77.7
115	12" "	284° 00'	21					5.0		88.2
116	16" "	308° 14'	24					5.1		88.1
117	12" "	326° 00'	69					6.3		86.9
118 TWIN	24" "	301° 43'	56					5.0		88.2
119	14" "	312° 10'	130					8.4		84.8
120	30" "	284° 30'	53					5.2		88.0
121 TRIPEL	15" "	315° 34'	169					11.1		82.1
222	12	271° 22'	45					5.3		87.9
223	30	301° 10'	176					8.8		84.4
224	30	299° 30'	207					10.2		83.0
225	15	295° 35'	183					8.4		84.8
226	30	296° 10'	240					12.7		80.5

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HUB. # 2A. SPOR. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
227 15" OAK	289° 44'	181					7.6		85.6
228 15" "	290° 05'	225					10.1		83.1
229 12" "	288° 05'	184					7.6		85.6
230 12" "	289° 00'	223					9.7		83.5
231 12" "	291° 23'	193					8.5		84.7
232 24" "	285° 23'	209					8.4		84.8
233 30" "	291° 10'	207					9.1		84.1
234 18" "	280° 35'	147					7.1		86.1
235 20"	291° 50'	160					7.1		86.1
236 TIMBER LINE 12" "	294° 16'	123					6.9		86.3
237 " 24" "	282° 06'	89					5.9		87.3
238 " 14" "	290° 05'	113					6.8		86.4
239 " 12" "	269° 37'	94					6.0		87.2
240 " 12" "	263° 06'	125					6.8		86.4
241 LONE 24" "	268° 20'	132					7.1		86.1
242 TIMBER LINE 20" "	262° 35'	165					7.6		85.6
243 " " 12" "	263° 10'	212					8.8		84.4

Page 24 Transit 44919 Obs. Line

Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HOB #2 A. SPUR CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
244 ON TIMBER LINE 8" OAK	266° 46'	236					8.6		84.6 ✓
245 " " " 24" "	264° 30'	245					9.3		83.9 ✓
246 " " " 12" "	259° 08'	221					9.3		83.9 ✓
247 " " TWIN 8" "	255° 17'	186					8.7		84.5 ✓
248 " " LINE 8" "	248° 41'	203					10.2		83.0 ✓
249 " " " 12" "	251° 48	263		−	1° 46'	-8.1	7.3	-15.4	77.8 ✓
250 " " " 12" "	256° 00	268		−	1° 48'	-8.4	5.3	13.7	79.5 ✓
251 " " " 12" "	256° 30'	290		−	1° 55'	-9.7	7.5	17.2	76.0 ✓
252 " " " 12" "	251° 42	310		−	2° 09'	-11.6	17.0	28.6	64.6 ✓
253 TOE SLOPE : S.	2° 00	200		−	4° 05'	-14.2	10.0	24.2	69.0 ✓
254 ℄ ARCADE ST.	47° 56'	198		−	3° 46'	-13.0	2.0	15.0	78.2 ✓
255 ELEV SLOPE S.	344° 07	195		−	3° 44'	-12.6	9.0	21.6	71.6 ✓
256 SHOLDER	45° 00	184		−	1° 46'	-5.7	8.9	14.6	78.6 ✓
257 ELEV SLOPE S	331° 05'	218		−	3° 08'	-12.0	10.1	22.1	71.1 ✓
258 TOE SHOLDER	39° 56'	170		−	4° 29'	-13.2	7.9	21.1	72.1 ✓
259 SLOPE S	6° 45'	135		−	4° 32'	-10.6	4.7	15.3	77.9 ✓
260 ℄ ARCADE. ST.	71° 58'	154		−	4° 41'	-12.6	1.9	14.4	78.8 ✓

Page 25 Transit 44919 Obs. Line

Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HUB #2 A. SPUR. CONT.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
261 ELEV SLOPE S.	331° 30'	149		−	3° 57'	-10.2	2.7	-12.9	80.3
262 SHOLDER	70° 16'	140		−	3° 47'	-9.2	4.7	13.9	79.3
263 ELEV SLOPE S.	210° 06'	203		−	2° 26'	-8.6	4.0	12.6	80.6
264 BOTTOM DITCH	68° 35'	128		−	3° 45'	-6.1	8.6	14.7	78.5
265 TOE SLOPE W	65° 06'	120		−	3° 43'	-7.8	7.6	15.4	77.8
266 ℄ ARCADE ST.	93° 35'	147		−	3° 39'	-7.3	4.7	12.0	81.2
267 ON SLOPE W	32° 44'	59					8.5		84.7
268 TOP "	338° 43'	50					6.4		86.8
269 SHOLDER.	93° 15'	129		−	2° 19'	-5.2	7.6	12.8	80.4
270 BOTTOM DITCH	93° 26'	121		−	2° 26'	-5.1	10.6	15.7	77.5
271 ELEV SLOPE W.	94° 00'	110		−	2° 23'	-4.5	6.5	11.0	82.2
272 TOP " S.	291° 08'	183					8.1		85.1
273 " " W.	94° 00'	44					6.2		87.0
274 ON CROWN	308° 42'	6					5.3		87.9
275 " "	267° 00'	109					6.8		86.4
276 " "	285° 30'	110					6.8		86.4
277 " "	273° 35'	226					8.3		84.9

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Date 2-3-30 Rec. A.L.P.

OBJECT 893.17 HUB # 2A. SPOR. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
278 ON CROWN	281° 15'	210					8.4		84.8
279 TOP E. SLOPE DRAW	285° 51'	260					11.6		81.6
280 ℄ ARCADE ST.	122° 30'	156					13.7		79.5
281 ℄ " "	131° 20'	194		−	2° 24'	− 8.1	5.0	−13.1	80.1
282 SHOULDER	113° 26'	143					12.7		80.5
283 "	131° 40'	175		−	2° 24'	− 7.3	4.9	12.2	81.0
284 BOTTOM DITCH.	114° 25'	135		−	3° 14'	− 7.6	6.7	14.3	78.9
285 " "	132° 54'	170		−	2° 56'	− 8.7	4.8	13.5	79.7
286 TOP SLOPE W.	112° 04'	125		−	2° 49'	− 6.3	2.6	8.9	84.3
287 " " "	136° 15'	169		−	2° 51'	− 8.7	1.8	10.5	82.7
288 ON CROWN	132° 10'	85					6.6		86.6
289 TOP OF N. SLOPE	149° 00'	134					12.2		81.0
290 ON CROWN	162° 30'	52					6.2		87.0
291 TOP OF SLOPE N	178° 26'	110					11.9		81.3
292 ON CROWN	228° 46'	77					6.6		86.6
293 TOP OF SLOPE N	212° 44'	130					12.3		80.9
294 ON CROWN	249° 46'	158					8.2		85.0

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Date 2-3-30 Rec. H.L.P.

OBJECT 893.17	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #2A. SPUR. CONT									
295 TOP OF N. SLOPE.	232° 37'	168					11.8		81.4
296 ON CROWN.	261° 41'	252					10.4		82.8
297 TOP OF N. SLOPE.	248° 08'	231		−	1° 34'	−6.3	7.2	13.5	79.7
298 ON CROWN	267° 37'	277					9.8		83.4
299 TOP OF N. SLOPE	255° 47'	282		−	1° 52'	9.1	6.4	15.5	77.7
At ⊙ 2A. SPUR.									
TO #2.	124° 01'	440							
TO HUB #2B. SPUR.	199° 21'	432							
At HUB #2B.									
TO HUB #2A. MEAS. 862.39 H.I. 5.10	199° 21'	432							
CHK. AZ. 210° 12'									
1 ON TIMBER LINE 12" OAK	343° 12'	287		+	2° 38'	+13.2	7.4	+5.8	68.2
2 " " " 8"	349° 30'	263		+	2° 35'	+11.8	7.3	+4.5	66.9
3 " " " 12"	354° 56'	255		+	2° 43'	+12.1	5.3	+6.8	69.2
4 LONE 10"	352° 24'	250		+	2° 40'	+11.6	9.2	+2.4	64.8
5 " 12"	6° 45'	252		+	2° 50'	+12.4	3.3	+9.1	71.5
6 " 10"	4° 30'	234		+	2° 51'	+11.6	10.2	+1.4	63.8

Page 28 Transit Obs. Line

Date 2-3-30 Rec. A.L.P.

OBJECT 462.39 HUB # 2 B. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
7 TREE ON TIMBERLINE 10"	16° 02'	251		+	3° 02'	+13.1	6.3	+6.8	69.2
8 " " " 12"	24° 20'	252		+	2° 38'	+11.6	7.3	+4.3	66.7
9 " " " 12"	28° 43'	240		+	0° 52'	+3.6	4.2	−0.6	61.8
10 " TWIN 10"	35° 00'	243		+	1° 00'	+4.3	4.2	+0.1	62.5
11 S. SHORE LINE RD LAKE	320° 17'	360					4.0		58.4
12 TOP OF SPOIL BK.	320° 35'	361					2.7		59.7
13 △ IN RD. LAKE FENCE.	320° 35'	361					2.7		59.7
14 ALSO BEG. WILLOWS SPOIL BK									
15 TOE OF SPOIL BK.	323° 35'	371		+	1° 10'	+7.6	10.8	−3.2	59.2
16 " " SLOPE. N.	326° 52'	374		+	1° 14'	+8.1	9.8	−1.7	60.7
17 ON N. SLOPE.	331° 44'	380		+	2° 15'	+14.9	10.9	+4.0	66.4
18 TOE " "	334° 15'	364		+	2° 00'	+12.7	5.8	+6.9	69.3
19 S. SHORE LINE	320° 54'	324					4.4	−4.4	58.0
20 TOP OF SPOIL BK	323° 30'	327					2.8	−2.8	59.6
21 TOE OF " "	326° 10'	315		+	0° 16'	+1.5	4.6	−3.1	59.3
22 " " SLOPE N	331° 46'	343		+	1° 38'	+9.8	9.7	+0.1	62.5
23 ON N. SLOPE	337° 16'	338		+	2° 44'	+16.1	5.7	+10.4	72.8

Page 29 Transit Obs. Line 8

Date 2-3-30 Rec. A.L.P. Paul Crane

OBJECT HUB # 2 B. CONT. 462.39	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
24. S. SHORE RD LAKE	325° 38'	264					4.4	-4.4	58.0
25. TOP. OF BK.	328° 17'	271		+	1° 24'	+6.6	7.3	-0.7	61.7
26 TOE OF SPOIL BK.	331° 51'	270		+	1° 30'	+7.1	9.3	-2.2	60.2
27 TOE OF SLOPE N.	334° 16'	320		+	1° 48'	+10.0	10.6	-0.6	61.8
28 S. SHORE RD LAKE	333° 30'	215					4.5	-4.5	57.9
29 TOP OF SPOIL BK.	335° 54'	224		+	0° 41'	+2.8	2.1	+0.7	63.1
30 TOE " " "	338° 22'	239		+	1° 05'	+4.5	6.2	-1.7	60.7
31 ON SLOPE N.	348° 20'	290		+	3° 25'	+17.3	5.4	+11.9	74.3
32 TOE OF SLOPE N.	347° 23'	258		+	2° 01'	+9.1	10.3	-1.2	61.4
33 S. SHORE RD. LAKE	352° 00'	158					4.3	-4.3	58.1
34 TOP OF SPOIL BK.	353° 42'	174		+	1° 30'	+4.6	5.9	-1.3	61.1
35 TOE " " "	353° 58'	184		+	1° 31'	+4.9	8.9	-4.0	58.4
36 ON SLOPE N	8° 38'	248		+	2° 25'	+10.5	4.2	+6.3	68.7
37 TOE OF SLOPE N.	9° 00'	229		+	2° 15'	+9.0	11.2	-2.2	60.2
38 S. SHORE LINE RD. LAKE	11° 14'	137					4.5	-4.5	57.9
39 TOP OF SPOIL BK END OF WILLOWS	11° 34'	152					2.4	-2.4	60.0
40 TOE OF SPOIL BK.	11° 37'	162		+	0° 19'	+0.8	3.8	-3.0	59.4

Page 30 Transit 44919 Obs. Line

Date 2-3-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 2 B. CONT. 862.4									
41 TOP OF SLOPE N.	39° 00'	347		+	3° 30'	+21.0	3.7	+17.3	79.7
42 Δ RD. LAKE FENCE + TOE SLOPE	38° 23'	231		+	1° 22'	+1.5	8.2	-6.7	55.7
43 SW. SHORE LINE RD. LAKE	34° 12'	120					4.9	-4.9	57.5
44 ℄ ARCADE St.	58° 35'	340		+	3° 58'	+23.5	4.7	+18.8	81.2
45 SHOULDER	58° 33'	321		+	3° 59'	+22.2	2.6	+19.6	82.0
46 TOE OF SHOULDER	58° 20'	310		+	3° 57'	+21.4	5.6	+15.8	78.2
47 TOE OF SLOPE . E.	49° 00'	225		+	1° 10'	+4.5	7.1	-2.6	59.8
48 " " " . N.	29° 35'	236		+	1° 13'	+5.0	7.2	-2.2	60.2
49 ℄ ARCADE St	71° 05'	307		+	4° 30'	+24.0	4.5	+19.5	81.9
50 SHOULDER LINE.	74° 10'	283		+	4° 28'	+22.0	2.4	+19.6	82.0
51 TOE " "	75° 06'	271		+	3° 49'	+18.0	4.3	+13.7	76.1
52 TOE OF SLOPE . E.	73° 12'	207		+	0° 57'	+3.4	5.0	-1.6	60.8
53 SW. SHORE LINE. RD. LAKE	69° 36'	95					4.9	-4.9	57.5
54 ℄ ARCADE St	93° 43'	290		+	4° 56'	+24.9	4.4	+20.5	82.9
55 SHOULDER LINE	93° 49'	272		+	4° 58'	+23.4	3.4	+20.0	82.4
56 TOE "	93° 53'	258		+	4° 52'	+21.9	8.3	+13.6	76.0
57 ON SLOPE . E.	93° 61'	221		+	2° 39'	+10.2	5.1	+5.1	67.5

Page 31 Transit Obs. Line

Date 2-3-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
4624									
58 TOE OF SLOPE . E.	93° 46'	198		+	1° 01'	+3.5	5.0	-1.5	60.9
59 Δ. RD LAKE FENCE	93° 00	181		+	0° 55'	+2.9	5.9	-3.0	59.4
60 CENTER LOW LAND	92° 35'	150		+	0° 48'	+2.0	5.8	-3.8	58.6
61 W. SHORE LINE. RD. LAKE	90° 6'	98					4.8	-4.8	57.6
62 ℄ ARCADE. ST.	114° 36'	320		+	5° 13'	+29.0	5.6	+23.4	85.8
63 SHOULDER LINE	114° 28	300		+	5° 07'	+26.6	3.5	+23.1	85.5
64 TOE " "	121° 04'	301		+	4° 13'	+22.1	3.5	+18.6	81.0
65 " SLOPE .E.	128° 08'	253		+	2° 27'	+10.7	3.3	+7.4	69.8
66 " " .E.	131° 28'	222		+	1° 36'	+6.2	8.1	-1.9	60.5
67 W. SHORE LINE. RD LAKE	128° 36'	116					4.9	-4.9	57.5
68 N.W. " " "	152° 36'	148					4.8	-4.8	57.6
69 Δ. IN FENCE	151° 36'	225					3.4	-3.4	59.0
70 TINBER LINE 12" OAK	62° 18'	223		+	1° 10'	+4.5	5.1	-0.6	61.8
71 20" "	75° 47'	211		+	1° 16'	+4.7	4.0	+0.7	63.1
72 24" "	85° 21	218		+	1° 42'	+6.5	2.1	+4.4	66.8
73 12" "	98° 26'	219		+	1° 38'	+7.5	2.1	+5.4	67.8
74 14" "	109° 11'	213		+	1° 32'	+5.7	4.1	+1.6	64.0

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Date 2-3-30 Rec. A.L.P.

OBJECT 862.4 HUB # 2 B. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
75. ON TIMBER LINE 10" OAK	113° 00'	228		+	1° 51'	+7.4	2.1	+5.3	67.7
76 " " 14" OAK	118° 36'	220		+	1° 32'	+5.9	4.1	+1.8	64.2
77 " " 12"	126° 11'	220		+	1° 13'	+5.0	5.1	-0.1	62.3
78 " " 12"	67° 26'	267		+	3° 25'	+15.8	4.3	+11.5	73.9
79 " " 12"	77° 02'	261		+	3° 25'	+15.5	2.3	+13.2	75.6
80 " " 12"	87° 02'	268		+	3° 41'	+17.2	2.3	+14.9	77.3
81 " " 12"	87° 46'	270		+	4° 12'	+19.6	2.4	+17.2	79.6
82 " " 24"	95° 13'	262		+	4° 10'	+18.9	2.3	+16.6	79.0
83 " " 24"	104° 47'	276		+	4° 33'	+21.7	3.4	+18.3	80.7
84 " " 12"	110° 40'	290		+	5° 54'	+29.7	8.5	+21.2	83.6
85 " " 18"	114° 00'	281		+	4° 06'	+20.0	4.4	+15.6	78.0
86 " " 12	118° 05'	295		+	4° 33'	+23.2	4.4	+18.8	81.2
87 TOE SLOPE . E.	143° 30'	240		+	0° 30'	+2.1	4.2	-2.1	60.3
88 N.W. SHORE LINE	152° 42'	151					4.8	-4.8	57.6
89 ON HILL SIDE SLOPE . E.	141° 47'	263		+	1° 40'	+7.7	2.3	+5.4	57.0
90 N.W. SHORE LINE	169° 30'	195					4.7	-4.7	56.7
91 TOE SLOPE . E.	159° 00'	289		+	1° 14'	+6.2	7.4	-1.2	61.2

Page 33 Transit Obs. Line

Date 2-3-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. #2B. CONT. 862.4									
92 HILL SIDE SLOPE . E.	157° 20'	321		+	1° 56'	+10.8	3.6	-7.2	55.2
93 N. SHORE LINE	183° 04'	218					4.9	-4.9	57.5
94 TOE SLOPE E	172° 09'	331		+	0° 54'	+5.2	6.6	-1.4	61.0
AT ⊙ #3 862.42 MES. H.I. 5.05'									
TO ⊙ #2	253° 58'	518							
TO #4.	333° 57'	308							
CHK. AZ. 177° 57'									
1. S. SHORE RD. LAKE	110° 56'	418					4.2	-4.2	58.2
2 TOP SPOIL BK.	109° 55'	439		+	0° 55'	+6.8	8.2	-1.4	61.0
3 TOE " "	109° 00'	440		+	0° 55'	+7.0	10.2	-3.0	59.4
4 TOE SLOPE . E.	106° 00'	478		+	0° 50'	+7.0	9.4	-2.4	60.0
5 S. SHORE RD	104° 35'	336					4.0	-4.0	58.4
6 BEG. WILLOWS TOP SPOIL BK	111° 20'	473		+	0° 30'	+6.9	7.4	-0.5	61.9
7 ⊠ RD LAKE. FENCE	103° 34'	338		+	0° 41'	+4.0	5.7	-1.7	60.7
8 TOP SPOIL BK.	103° 19'	342		+	1° 01'	+6.0	6.7	-0.7	61.7
9 S. SHORE LINE	96° 22'	231					4.6	-4.6	57.8
10 TOP SPOIL BK	93° 18'	244		+	1° 28'	+6.3	6.2	+0.1	62.5

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Date 2-4-30 Rec. A.L.P.

OBJECT 862.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
H013 - #3. CONT									
11. S. SHORE LINE	86° 16'	164					4.5		57.9
12 TOP SPOIL BK.	85° 44'	195		+	1° 16'	+4.3	4.0	+0.3	62.7
13 " " "	82° 10'	180		+	2° 21'	+7.4	3.9	+3.5	65.9
14 S. SHORE LINE	47° 35'	94					4.5		57.9
15 TOP SPOIL BK.	42° 35'	116		+	4° 04'	+8.2	12.6	+5.6 (−4.4)	68.0 (5816)
16 N.W. COR. CHANEL. RD. LAKE	133° 38'	97					4.8		57.6
17 N.E. " " " "	6° 00'	107					4.6		57.8
18 A RD. LAKE Fence	3° 13'	110					3.4		59.0
19 W. SHORE CHANEL	30° 19'	226					4.5		57.9
20 TOP SPOIL BK. W. SHORE CHANEL	30° 40'	247		+	0° 54'	+3.9	5.2	-1.3	61.1
21 S. SHORE RD.	338° 52'	80					4.6		57.8
22 A. RD. FENCE	337° 36'	85					3.6		58.8
23 W. SHORE CHANEL	19° 50'	312					4.6		57.8
24 TOP SPOIL. BK. CHANEL	21° 27'	326		+	1° 09'	+6.4	6.6	-0.2	62.2
25 E. SHORE LINE. RD. LAKE	296° 54'	92					4.7		57.5
26 A. RD. LAKE FENCE.	299° 30'	100					3.1		59.3
27 E. SHORE LINE CHANEL	15° 42'	174					4.6		57.8

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Date 2-4-30 Rec. A.L.P.

OBJECT 462.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 3 CONT									
28 TOP SPOIL BK. E SIDE CHANEL	09° 30'	173		+	1° 51'	+5.6	4.9	+0.7	63.1
29 S.E. SHORE LINE. RD. L.	280° 30	144					4.7		57.7
30 TOP. SPOIL BK. E. CHANEL	359° 12'	124		+	6° 45'	+14.4	10.6	+3.8	66.2
31 TOP SPOIL BK. S. RD. LAKE	339° 54'	103		+	4° 49'	+8.6	4.5	+4.1	66.5
32 " " " " " "	312° 09'	103		+	3° 43'	+6.7	7.5	-0.8	61.6
33 " " " " "	295° 05'	122		+	4° 00	+8.5	7.6	+0.9	63.3
34 END SPOIL BK. S. RD. L. END. WILLOWS	285° 04'	156		+	2° 29'	+6.7	8.8	-2.1	60.3
35 S.E. RD. SHORE LAKE	273° 32'	202					4.8		57.6
36 " " "	265° 43'	293					5.2		57.2
37 A SE. SHORELINE.	269° 42'	306		+	1° 32'	+8.2	10.5	-2.3	60.1
38 TOE SLOPE N.	277° 10'	360		+	1° 21'	+8.5	10.8	-2.3	60.1
39 ON S. BK. LAKE	209° 06'	306		+	1° 20'	+7.1	9.5	-2.4	60.0
40 TOE SLOPE. N.	286° 34'	293		+	1° 48'	+8.8	10.5	-1.7	60.7
41 TWIN WILLOW 12"	373° 57'	308		+	1° 10'	+6.3	8.6	-2.3	60.1
42 " " 12	373° 55'	300		+	1° 10'	+6.0	8.5	-2.5	59.9
43 TOE SLOPE N.	292° 17'	333		+	2° 28	+14.4	11.2	+3.2	65.6
44 TOP. BK. S. SIDE L.	274° 04'	241		+	1° 03	+4.4	7.2	-2.8	65.2

Page 36 Transit Obs. Line

Date 2-4-30 Rec. A.L.P. Paul Crane

OBJECT 862.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. # 3. CONT									
45 WILLOW 12"	287° 04'	189		+	2°20'	+7.7	10.0	-2.3	60.1
46 " 10"	282° 13'	252		+	2°06'	+5.6	11.2	-5.6	56.8
47 " TWIN 12"	294° 39'	163		+	1°54'	+11.0	6.8	+4.2	66.6
Ht. ⊙ 4. 878.53 NES. II. 5.15									
TO. ⊙ 3	333° 54'	308							
CHK. AZ. ON TP. 187° 46'									
1. TOE SPOIL BK. E. SIDE CHANEL.	136 00	185		−	0°25'	-1.4	2.9	-4.3	74.2
2 TOP SPOIL BK. W.S. SIDE CHAN.	80° 00	254		−	3°27'	-15.4	2.3	-17.7	60.8
3 TOE SLOPE W.	141° 21'	172		−	4°09'	-14.8	1.9	-16.7	61.8
4 W. SHORE LINE CHANEL.	79° 36'	242		−	4°06'	-17.2	3.2	-20.4	58.1
5 BN. KNOL.	156° 58'	151		−	4°08'	-10.9	1.8	-12.7	65.8
6 E. SHORELINE CHAN.	76° 09'	177		−	4°08'	-12.8	7.9	-20.7	57.8
7 TOE KNOL. N.	158° 12'	200		−	4°11'	-14.5	3.0	-17.5	61.0
8 TOP SPOIL BK. E.	74° 48'	160		−	4°06'	-11.4	2.8	-14.2	64.3
9 TOE SPOIL BK. ROL. S.	173° 26'	216		−	3°48'	-14.3	3.1	-17.4	61.1
10 " "	72° 26'	130		−	3°54'	-8.8	8.7	-17.5	61.0
11 CENTER DRAW	177 14	142		−	3°55'	-9.7	5.7	-15.4	63.1

Page 37 Transit Obs. Line

Date 2-4-30 Rec. A.L.P. Paul Crane

OBJECT 478.5 HUB #4. CONT	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
12 SLOPE HILL NORTH	193° 10'	166		−	3°45'	-10.8	1.8	12.6	65.9
13 " " W.	44° 39'	55					7.8		70.7
14 " " N.	213° 50'	190					5.9		72.6
15 HILL SIDE SLOPE W.	298° 00	80					2.6		75.9
16 " " " N.	225° 52'	230		+	1°10'	+4.7	10.2	-5.5	73.0
17 TOP " " W.	280° 49'	170		+	2°10	+6.4	2.9	3.5	75.0
18 " " N.	236° 55'	204		+	2°06'	+7.5	2.0	5.5	73.0
19 HILL SIDE SLOPE. E.	231° 46'	141		±	0°49'	+2.0	1.7	+0.3	78.8
20 CENTER DRAW	184° 15'	80					12.8	12.8	65.7
21 SHORELINE E SIDE CHAN.	102° 22'	186		−	3°33'	-11.5	8.9	20.4	58.4
22 TOP KNOL	145° 19'	98		−	3°46'	-6.9	5.5	11.9	66.6
23 TOP. SPOIL BK. E. CHAN.	102° 21'	171		−	3°43'	-11.1	2.9	14.0	64.5
24 TOE SLOPE W.	123° 18'	140		−	5°48'	-14.2	4.7	18.3	60.2
25 " SPOIL BK.	102° 26'	152		−	5°56'	-15.6	2.8	18.4	60.1
26 " " "	112° 20'	168		−	4°39'	-13.6	4.8	18.4	60.1
27 " HILL SIDE SLOPE. W	104° 19'	113		−	4°56'	-9.7	7.6	17.3	61.2
28 TOP SPOIL BK	116 08	184		−	2°07'	-6.7	7.9	14.6	63.9

Page 38 Transit Obs. Line

Date 2-4-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HOB. #4. CONT 878.5									
29 HILL SIDE SLOPE. E	118° 00'	38					6.8		71.7
30 " " " W.	179° 00'	18					6.1		72.4
31 " " " W	250° 38'	55					4.8		73.7
32 " " " W.	257° 00'	131		+	2° 09'	+ 4.9	2.7	+2.2	80.7
33 TOE SPOIL BK. W. SHORE CHAN	46° 16'	241		−	3° 53'	-16.2	3.2	-19.4	69.1
34 TOP SLOPE W	252° 14'	220		+	3° 10'	+12.2	2.1	+10.1	88.6
35 " SPOIL BK. W. SHORE CHAN	45° 42'	230		−	3° 58'	-15.8	3.2	-19.0	69.5
36 TOP. SLOPE S.	264° 32'	240		+	3° 18'	+13.8	3.2	+10.6	89.1
37 W. SHORE CHAN.	49° 26'	215		−	5° 06'	-19.1	2.1	-21.2	59.3
38 TOP. SLOPE. E.	253° 41'	267		+	3° 11'	+14.7	3.3	+11.4	89.9
39 E. SHORE LINE CHAN.	48° 00'	188		−	4° 35'	-15.0	6.0	-21.0	57.5
40 ON CROWN.	250° 26'	252		+	4° 38'	+20.3	8.3	+12.0	90.5
41 TOP HILL SIDE SLOPE. S.	246° 40'	252		+	3° 32'	+15.4	4.2	+11.2	89.7
42 " " " " "	245° 51'	226		+	3° 36'	+14.1	4.1	+10.0	88.5
43 TOP BK. E. CHAN.	33° 27'	174		−	4° 55'	-14.8	2.9	-17.7	60.8
44 TOE HILL SIDE SLOPE W	11° 18'	125		−	4.55	-10.6	4.6	-15.2	63.3
45 TOP " " " "	336° 47'	113					6.2	-6.2	72.3

Page 39 Transit Obs. Line

Date 2-4-30 Rec. A.L.P. Paul Crane

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #4 CONT 878.5									
46, TOP SLOPE W	298° 48'	169		+	1° 12'	+3.5	1.8	+1.7	80.2
47 " "	298° 23'	192		+	1° 09'	+3.9	3.0	+0.9	79.4
48 WILLOWS S. END ON SPOIL BK	91° 00'	158		−	4° 13'	-11.6	2.8	-14.4	64.1
49 " N " " " "	110° 04'	175		−	4° 22'	-13.2	2.9	-16.1	62.4
50 ON TIMBER LINE 12" POP.	25° 00'	169		−	5° 21'	-15.7	1.8	-17.5	61.0
51 " " " 18" OAK	39° 32'	157		−	5° 22'	14.6	1.8	-16.4	62.1
52 " " " 24" "	43° 48'	74					10.1	-10.1	68.4
53 LONE 12" "	65° 33'	215		−	6° 44'	-25.0	1.6	-26.6	51.9
54 " 14" "	68° 51'	117		−	6° 32'	-13.4	1.6	-15.0	63.5
55 ON TIMBER LINE 15" "	81° 56'	65					8.9	8.9	69.6
56 " " " 16" "	90° 13'	81					11.1	11.1	67.4
57 " " " 16" "	111° 03'	99		−	7° 07'	-12.2	1.5	13.7	64.8
58 " " " 15" "	144° 13'	93		−	6° 12'	-10.0	1.5	11.5	67.6
59 " " " 16" "	146° 38'	138		−	5° 21'	-12.8	1.7	14.5	64.0
60 " " " 24" "	157° 21'	175		−	4° 00'	-12.2	1.9	14.1	64.4
61 " " " 18" "	177° 44'	175		−	4° 11'	-12.7	3.9	16.6	61.9
62 " " " 12"	163° 57'	98		−	4° 24'	-7.5	5.5	13.0	65.5

Page 40 Transit ..... Obs. ..... Line .....

Date 2-4-30 Rec. A.L.P. Paul Crane II

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #4 CONT 878.5									
63 ON TIMBER LINE 14" OAK	151° 30'	61					10.1		68.4
64 " " " 10" "	178° 13'	53					10.1		68.4
65 " " " 12" "	187° 42'	86		−	6° 14'	-9.0	3.4	12.4	66.1
66 " " " 20" "	197° 48'	183		−	3° 23'	-10.8	3.9	14.7	63.8
67 " " " 14" "	200° 51'	198		−	2° 30'	-8.6	8.0	16.6	67.9
68 " " " 12" "	213° 03'	215					11.8		66.7
At ⊙ #4									
to ⊙ #3.	333° 54'	308							
to ⊙ 5.	257° 20'	240							
At # 5 893.0 MEAS. H.I. 5.2									
to # 4.	257° 20'	240							
to # 6.	226° 09'	357							
HUB # 5.									
1 CENTER DRAW	74° 15'	87					11.9		81.1
2 TOP BANK.	15° 30'	160		−	2° 33'	-7.1	9.9	16.0	77.0
3 CENTER DRAW	25° 47'	68		−	2° 11'	-2.6	11.4	14.0	79.0

Page 41 Transit Obs. Line

Date 2-4-30 Rec. A.L.P. Paul Crane T.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 5 893.0									
4 END DRAW - E	346° 26'	87		−	2° 53'	-4.3	6.5	10.8	82.2
5 SHOULDER - PHALEN PKY.	11° 32'	168		−	3° 45'	-11.0	9.8	20.8	72.2
6 " " "	344° 18'	98		−	6° 32	-11.0	10.5	21.5	71.5
7 ℄ PHALEN PKY	4° 57'	170		−	5° 37	-16.8	4.8	21.6	71.4
8 " " "	341° 47'	119		−	5° 49	-12.0	10.6	22.6	71.4
9 HILL SIDE SLOPE S.	327° 13'	51		−	5° 12'	-4.5	8.3	12.8	80.2
10 TOP SLOPE N.	248° 43	67		−	1° 28'	-1.7	6.8	8.5	84.5
11 " " N.	261° 35	144					9.0		84.0
12 " " S.	274° 30'	73					10.4		82.6
13 ON CROWN	266° 06'	145					7.8		85.2
14 TOE SLOPE S.	305° 03'	110		−	9° 22'	-17.5	4.6	22.1	70.9
15 " "	271° 30'	143					8.5		84.5
16 ℄ PHALEN PKY.	303° 09	138		−	6° 13'	-14.8	8.7	23.5	69.5
17 ON SLOPE S.	286° 21	147		−	5° 38	-14.3	1.7	16.0	77.0
18 SHOULDER	293° 31	153		−	5° 26	-14.4	8.8	23.2	69.8
19 ℄ PHALEN PKY.	296° 23	165		−	5° 18'	-15.2	8.8	24.0	69.0
20 TOP SLOPE S	280° 43	193		−	1° 05	-3.7	16.0	14.7	78.3

Page 42 Transit ..... Obs. ..... Line .....

Date 2-4-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 5 893.0									
21 ON SLOPE S.	284° 49'	284		−	3° 18'	-16.4	4.4	20.8	72.2
22 SHOULDER LINE	287° 41'	193		−	4° 28	-15.0	9.0	24.0	69.0
23 ℄ PHALEN PKY	292° 21	198		−	3° 37	-12.5	12.0	24.5	68.5
24 SHOULDER PKY.	286° 23	285		−	3° 41	-18.2	6.4	24.6	68.4
25 ℄ PHALEN PKY	289° 28	293		−	3° 41	-18.8	6.5	25.3	67.7
26 TIMBER LINE 14" OAK	12° 46	140		−	4° 01	-9.8	5.7	15.5	77.5
27 ON PHALEN PKY 12" "	8° 00	102		−	4° 04	-7.2	7.5	14.7	78.3
28 P.P.	355° 06	111		−	4° 7	-7.9	12.6	20.5	72.5
29 TREE 12" OAK	5° 46	61		−	3° 46	-4.0	10.3	14.3	78.7
30 P.P.	319° 08	85	81	−	12° 00'	-17.2	1.4	18.6	74.4
31 TWIN 14" OAK	303° 51	109		−	9° 21	-12.5	4.5	22.0	71.0
32 TREE 15" "	293° 46	111		−	6.54	-13.4	4.6	18.0	75.0
33 12"	282° 20	171		−	4° 20	-12.9	1.9	14.8	78.2
34 14" "	285° 07	227		−	1° 58	-7.8	8.1	15.9	77.1
35 P.P	285° 42	215		−	3° 42	-13.8	9.1	22.9	70.1
36 TREE. 14" "	281. 30	307		−	2° 43	-14.6	8.5	23.1	69.9
37 EVER GREE TREES	226° 25	24					3 2	3.2	89.8

Page 43. Transit ..... Obs. ..... Line .....

Date 2-4-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #5 493.0									
38 EVER GREEN TREES	130° 30'	28					4.2		88.8
39 " "	122° 25'	39					5.0		88.0
40 " "	131° 10'	52					4.9		88.1
41 " "	152° 00	39					3.5		89.5
42 " "	145° 00	65					6.1		86.9
43 " "	165° 48'	47					3.5		89.5
44 " "	158° 00'	59					5.0		88.0
45 " "	194° 14'	50					3.4		89.6
46 " "	246° 06	31					4.7		88.3
47 " "	279° 30'	70					10.9		82.1
48 " "	280° 30'	82					11.7		81.3
49 " "	271° 38'	83					10.0		83.0
50 " "	276° 15'	98					10.6		82.4
51 " "	267° 30	106					8.6		84.4
52 " "	278° 41'	111					11.4		81.6
53 " "	260° 13'	128					9.5		83.5
54 " "	273° 30'	116					9.4		83.6

Page 44 Transit Obs. Line

Date 2-4-30 Rec. H.L.P. Paul Crane

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #5 493.0									
55 EVERGREEN TREES.	267° 12'	125					8.1		84.9
56 " "	275° 00	132					9.8		83.2
57 " "	263° 30'	139					8.0		85.0
58 " "	276° 45'	144					10.9		82.1
59 " "	261° 12'	151					9.7		83.3
60 " "	270° 10'	135					7.5		85.5
61 " "	267° 00	150					7.7		85.3
62 " "	272° 16'	148					8.5		84.5
63 " "	265° 00	160					8.4		84.6
64 " "	270° 40'	155					8.5		84.5
65 " "	262° 43'	176					9.6		83.4
66 " "	273° 30'	167					10.4		82.6
	265° 28	172					9.0		84.0
AT ⊙ #6. MEAS. H.I. 6.25 881.6									
TO ⊙ #5	226° 09'	357							
TO ⊙ #7	182° 49'	335							
℄ OF PAVE ON SEC LINE (CITY LIMITS)	343° 44'	348							

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

Page 45 Transit Obs. Line

Date 2-4-30 Rec. F.L.P. Paul Crane

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 6 881.6									
1 EVERGREEN TREES	12° 00'	241		+	1° 16'	+5.3	3.2	+2.1	83.7
2 " "	15° 30'	218		+	0° 05'	+0.0	2.1	-2.1	79.5
3 " "	15° 45'	230		+	0° 51'	+3.4	3.2	+0.2	81.8
4 " "	14° 50'	258		+	0° 58'	+4.4	3.2	+1.2	82.8
5 " "	15° 00'	245		+	0° 56'	+8.2	2.2	+6.0	87.6
6 " "	11° 07'	249		+	1° 53'	+8.2	8.3	-0.1	81.5
7 " "	13° 14'	241		+	1° 04'	+4.5	4.2	+0.3	81.9
8 " "	9° 22'	246		+	1° 48'	+7.7	8.2	-0.5	81.1
9 " "	10° 44'	235		+	1° 41'	+6.9	7.2	-0.3	81.3
10 " "	6° 56'	236		+	1° 39'	+6.8	9.2	-2.4	79.2
11 ON TIMBER LINE 12	349° 22'	269					10.5	-10.5	71.1
12 + WIN 12"	349° 25'	248		−	2° 48'	-12.6	3.2	-9.4	72.2
13 ON TIMBER LINE 30"	343° 06'	170		−	4° 34'	-13.4	1.8	-11.6	70.0
14 " " 14	348° 55'	150					12.2		69.4
15 " " 24	6° 06'	143					5.1		76.5
16 " " 12	20° 20'	146					5.5		76.1
17 " " 20	32° 43'	82					9.7		71.9

Page 46 Transit Obs. Line

Date 2-4-30 Rec.

OBJECT HOB #6 881.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
18 ON TIMBER LINE 12"	62° 00'	72					10.5		71.1
19 " " 14" OFF	67° 52'	156					9.3		72.3
20 " " 14" "	70° 14'	182					9.2		72.4
21 " " 8" "	69° 00'	242		−	2°21'	-9.9	2.2	12.1	69.5
22 " " 20" "	71° 28'	294		−	2°28'	-12.8	3.5	16.3	65.3
23 " " 20" "	72° 15'	330		−	2°30'	-14.4	3.7	18.1	63.5
24 LONE 12" "	79° 00'	181		−	2°11'	-6.9	3.9	10.8	70.8
25 " 14" "	84° 00'	162					10.6		71.0
26 " 12" "	84° 00'	120					9.0		72.6
27 TWIN 15" "	92° 38'	120					9.1		72.5
28 LONE 12" "	88° 37'	109					8.8		72.8
29 " 12" "	103° 26'	99					9.6		73.0
30 " 30" "	82° 00'	73					9.4		72.2
31 " 24" "	118° 06'	117					10.2		71.4
32 " 12" "	91° 05'	76					9.1		72.5
33 " 14" "	125° 39'	117					9.5		72.1
34 " 12	338° 54'	94					12.8		68.8

Page 47 Transit Obs. Line

Date 2-4-30 Rec. Paul Crane T

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. # 6 881.6									
35 LONE 8" OAK	328° 03	120		−	4° 39'	-9.6	8.6	18.2	63.4
36 12"	326° 04	95		−	8° 00	-6.6	7.5	14.1	67.5
37 30"	321° 54	105		−	3° 25	-6.2	10.5	16.7	64.9
38 12"	320° 52	90		−	3° 46	-5.9	7.5	13.4	68.2
39 12"	306° 00'	85		−	6° 07	-8.8	7.4	16.2	65.4
40 30"	303° 32	83		−	5° 49	-8.3	7.4	15.7	65.9
41 14"	289° 51	83		−	6° 19	-9.1	9.4	18.5	63.1
42 12"	292° 20'	80		−	4° 39	-6.9	8.4	15.3	66.3
43 12"	281° 32'	65					11.7		69.9
44 14	272° 41'	65					11.0		70.6
45 14	265° 30'	70					12.5		69.1
46 24	276° 40'	52					7.0		74.6
47 14	246° 21	70					9.4		72.2
48 EVERGREEN TREE	322° 22	28					5.0		76.6
49 " "	290° 10	22					5.0		76.6
50 10" OAK	245° 00	74					9.9		71.7
51 14" "	220° 12	13					4.7		76.9

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Date 2-4-30 Rec.

OBJECT		Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 6 881.6										
52	14" OAK	242° 35'	74					10.0		71.6
53	15	230° 39'	65					7.5		74.1
54	24	213° 13'	68					7.4		74.2
55	10	227° 30'	121		−	4° 21'	-9.2	6.6	15.8	65.8
56	12	190° 40'	59					6.4		75.2
57	24	233° 29'	107		−	5° 38'	-10.6	7.5	18.1	63.5
58	12	167° 08'	60					7.2		74.4
59	14	209° 08'	103					11.5		70.1
60	15	197° 18'	78					7.8		73.8
61	12	198° 30'	86					9.1		72.5
62	30"	195 27	100		−	3° 35'	-6.2	4.5	10.7	70.9
63 STUMP	36"	193 42	133		−	3° 43'	-8.6	3.7	12.3	69.3
64	14" OAK	177° 44	137		−	3° 46'	-9.0	2.7	11.7	69.9
65	15" "	176° 21	156					10.6		71.0
66	14"	168° 24	162					10.3		71.3
67	10	158° 31	173		−	2° 31'	-7.6	5.9	13.5	68.1
68	12	158° 11	160		−	2° 20'	6.5	5.8	12.3	69.3

Page 49 Transit Obs. Line

Date 2-4-30 Rec.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HGB #6 881.6									
69 18" OAK	159° 15'	178		−	2° 16'	-7.0	7.9	14.9	66.7
70 10" "	150° 07	168		−	2° 22'	-6.9	7.8	14.7	66.9
71 12" "	153° 16	181		−	3° 43'	-11.7	3.9	15.6	66.0
72 12" "	151° 57	186		−	3° 55'	-12.7	3.8	16.5	65.1
73 16" "	161° 00	141		−	3° 36'	-8.8	1.7	10.5	71.1
74 18" "	161° 05	113		−	3° 28'	-6.8	3.6	10.4	71.2
75 TWIN 14" "	165° 45	91					9.8		71.8
76 30" "	144° 37	83					8.8		72.8
77 14" "	170° 20	89					9.9		71.7
At ⊙#6 Meas HI 5.20 886.6									
To ⊙#5	226° 09	357							
To ⊙#7	182° 49	335							
78 Base 24" Oak	208° 19	140		−	4° 54	-11.9	5.7	17.6	64.0
79 18" Stump	212-11	170		−	2° 19	-6.9	11.9	18.8	62.8
80 14" Oak	209° 55	191			2° 26	-8.1	10.0	18.1	63.5
81 20" "	193° 12	179			5° 08	-16.0	1.9	17.9	63.7

Page 50 Transit 44919 Obs. PC Line

Date 2-5-30 Rec. HAW. PAUL CRANE

	OBJECT 481.6 Hub #6 Cont.	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
82	Base 24" Oak	183°15	188		−	3°32	-11.5	2-0	13.5	68.1
83	" 24" "	178°53	174		−	3°09	-9.5	1-9	11.4	70.2
84	" 10" "	173°30	184		−	2°40	-8.5	1-9	10.4	71.2
85	" 10" "	166°26	195		−	3°03	-10.4	3-0	13.4	68.2
86	" 10" "	164°42	195		−	2°51	-9.7	4-0	13.7	67.9
87	" 12" "	162°44	186		−	3°24	-11.0	2-9	13.9	67.7
88	" 12" "	159°14	201		−	3°41	-12.9	4-0	16.9	64.7
89	" 12" "	156°09	215		−	3°51	-14.4	5-1	19.5	62.1
90	" 10" "	162°45	212		−	3°32	-12.9	4-1	17.0	64.6
91	" 12" "	164°05	215		−	3°24	-12.7	4-1	16.8	64.8
92	Twin Willow 14"	137°16	175		−	3°41	-11.2	7-9	19.1	62.5
93	Beg. Willows near Fence	111°00	239		−	3°46	-15.7	6-2	21.9	59.7
94	Cont. " " "	135°04	240		−	3°43	-15.6	7-2	22.8	58.8
95	End " " "	152°32	306		−	1°51	-9.9	11-9	21.8	59.8
96	ON Hillside Slope Ea.	357°52	288					6-4	6.4	75.2
97	Top of Bank	352°00	313					12-0	12.0	69.6
98	Shoulder Line	350°30	323		−	1°29	-8.3	7-6	15.9	65.7

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Date 2-5-30 Rec. HAW. PAUL CRANE

OBJECT Hub #6 Cont. 881.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
99 On Pave. Pha. Parkway	348°-34	330		−	2°08	-12.3	3-7	16.0	65.6
100 " " " "	344°00	295		−	2°58	-15.3	2-5	17.8	63.8
101 Shoulder Line	345°-03	285		−	3°00	-14.9	3-4	18.3	63.2
102 Top of Bank	347°-13	281		−	2°02	-9.8	4-4	14.2	67.4
103 Hillside Slope E	1°51	255				-	7-0	7.0	74.6
104 Top of Bank	346°-06	241		−	3°10	-13.7	2-2	15.4	66.2
105 Shoulder Line	342°50	243		−	3°39	-15.5	3-2	18.7	62.9
106 Center of Pave.	339°-34	255		−	3°39	-16.2	2-3	18.5	63.1
107 " " "	335°33	200		−	3°39	-12.7	6-0	18.7	62.9
108 Shoulder Line	339°-55	195		−	3°51	-13.0	6-0	19.0	62.6
109 Toe of Slope E.	342°13	193		−	4°06	-13.8	4-0	17.8	63.8
110 Hillside " E	345°32	189		−	3°05	-10.2	3-0	13.2	68.4
111 " " "	355°15	191					6-2		75.4
112 " " "	10°32	214					2-0		79.6
113 Top of South Slope	18°30	237		+	1°09	+4.7	3-2	+1.5	83.1
114 Crown " "	18°34	251		+	1°19	+5.8	3-2	+2.6	84.2
115 Hillside Slope S	16°20	212					3-0		78.6

Page 51 Transit [illegible] Obs. [illegible] Line

Date 2-5-30 Rec. [illegible] Paul Crane

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hole #6 Cont 881.6									
116 Slope South	37°21	215		−	3°56	-14.7	2-1	16.8	64.8
117 Toe OF Slope S	43°13	110		−	3°53	-7.3	6-1	13.4	68.2
118 " " " "	51°36	231		−	3°57	-15.8	4-2	20.0	61.6
119 Hillside Slope "	59°36	265		−	1°46	-8.2	2-3	10.5	71.1
120 " " "	64°21	276		−	1°14	-5.9	4-4	10.3	71.3
121 " " "	70°00	351		−	1°35	-9.8	3-8	13.6	68.0
122 " " "	69°35	273		−	2°16	-10.8	3-1	13.9	67.7
123 Top of Bank	93°44	282		−	3°45	-18.4	3-4	21.8	59.8
124 Toe of Slope W	81°02	237		−	2°55	-12.0	8-2	20.2	61.4
125 On Slope W.	78°30	233		−	2°46	-11.2	6-2	17.4	64.2
126 Crown of Slope W	69°35	208		−	2°26	-8.8	2-0	10.8	70.8
127 Top of " S.E	62°48	192		−	2°20	-7.8	4-0	11.8	69.8
128 Toe " " "	49°30	181		−	5°28	-17.2	1-9	19.1	62.5
129 " " " SW	39°36	175		−	5°13	-15.8	2-9	18.7	62.9
130 Top " " SW	21°41	169		−	1°25	-7.1	1-9	9.0	72.6
131 Crown " " S	12°53	162					3-7		77.9
132 On Hillside E	356°16	152					8-7		72.9

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Date 2-5-30 Rec. HW Paul Crane

OBJECT 881.6 Hub #6 Cont.	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
133 Center of Pave	327° 05	154		−	6° 00'	-16.0	2-8	18.8	62.8
134 Shoulder Line	331° 22	142		−	1° 12'	-3.0	3-7	6.7	74.9
135 Hillside Slope E	340° 55	127		−	5° 44'	-12.6	4-6	17.3	64.3
136 Top " "	356° 34	104		−	4° 12'	-7.6	2-5	10.1	71.5
137 Crown " "	10° 08	99					8-3		73.3
138 Top Slope W	26° 08	101					10-1		71.5
139 Toe Slope, W	51° 00	115		−	3° 17	-6.5	9-6	16.1	65.5
140 Top Slope E	65° 48	140		−	4° 04	-9.9	1-7	11.6	70.0
141 Crown	75° 55	156					8-9		72.7
142 Top Slope W	82° 41	174					11-9		69.7
143 On Slope W	87° 19	187		−	2° 12	-7.1	8-9	16.0	65.6
144 Toe Slope "	89° 38	192		−	2° 20	-7.8	12-0	19.8	61.8
145 Top of Bank	102° 28	252		−	2° 22	-10.3	11-3	21.3	60.3
146 " " "	112° 18	231		−	2° 24	-9.7	12-2	21.9	59.7
147 Toe of Slope W	107° 12	162		−	2° 39	-7.5	11-8	19.3	62.3
148 Top of Bank	107° 53	152		−	2° 45	-7.3	7-8	15.1	66.5
149 Top of Slope	94° 14	119					9-5		72.1

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Date 2-5-30 Rec. HW Paul Crane

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #6 Crat 881.6									
150 Hillside W	80°18	51					9-4		72.2
151 Top of Slope W	42°32	15					5-7		75.9
152 Crown of Hill	314°10	21					5-0		76.6
153 Top of Slope NE	322°56	53					7-0		74.6
154 " " " E	297°00	57					7-9		73.7
155 Hillside " E	291°09	72		−	5°30'	-6.9	6-4	13.3	68.3
156 Toe of Slope E	288°51	79		−	1°04'	-1.5	9-4	10.9	70.7
157 Shoulder Line	285°33	85		−	3°14'	-4.8	10-4	15.2	66.4
158 Center Pave	284°24	100		−	5°30'	-10.2	8-5	18.7	62.9
159 " "	251°47	110		−	5°47'	-11.0	7-5	17.5	64.1
160 Shoulder	247°18	97		−	5°34'	-9.4	9-5	18.9	62.7
161 Toe of Slope	243°38	91		−	3°18'	-8.4	9-5	17.9	63.7
162 Top of " E	238°18	87		−	3°01'	-4.6	9-4	14.0	67.6
163 On "	235°32	75					9-2		72.4
164 Crown "	208°42	52					6-4		75.2
165 " "	184°52	52					6-3		75.3
166 Hillside Slope W	146°03	69					8-6		73.0

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Date 2-5-30 Rec. H.W. Paul Crane T.

OBJECT 881.6 Hub #6 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
167 Top of Slope W	131°32	106					10-2		71.4
168 Top of Bank W	126°48	140		−	2°37	-6.3	6-7	13.0	68.6
169 Toe " Slope	127°35	165		−	2°44	-7.9	10-8	18.7	62.9
170 Top of Bank At Fence	124°02	217		−	2°47	-10.4	11-1	21.5	60.1
171 " " " "	138°56	216		−	4°30	-5.7	4-1	9.8	71.8
172 Toe of Slope W	147°00	175		−	4°37	-14.2	3-9	18.1	63.5
173 On " W	147°19	161		−	4°37	-12.9	1-8	14.7	66.9
174 Top of Slope W	148°08	120					11-6		70.0
175 Top " " W	182°23	104					10-7		70.9
176 On " E	197°53	121					13-8		67.8
177 " " " E	208°27	124		−	5°04	-10.9	4-6	14.9	66.7
178 On " E	216°46	136		−	2°49	-6.7	10-7	17.0	64.6
179 Shoulder	223°35	145		−	5°10	-13.0	5-7	18.7	62.9
180 Toe Slope	224°46	133		−	5°00	-11.6	6-7	18.3	63.3
181 Center Pave.	228°28	153		−	4°48	-12.8	5-8	18.6	63.0
182 " "	212°07	205		−	1°47	-6.4	12-0	18.4	63.2
183 Shoulder Line	211°52	206		−	1°53	-6.8	12.0	18.8	62.8

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Date 2-5-30 Rec. H.W.

OBJECT 881.6 Hub # 6 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
184 Top of Slope	208° 45	197		−	4° 48	-16.6	2.0	18.6	63.0 ✓
185 Toe " "	205° 04	193		−	4° 51	-16.2	6.0	22.2	59.4 ✓
186 " " Slope N	207° 30	161		−	4° 56	-13.8	7.8	21.6	60.0 ✓
187 Top " " N	215° 41	145		−	2° 30	-6.3	11.7	18.0	63.6 ✓
188 On " N	197° 48	188		−	2° 44	-9.0	12.0	21.0	60.6 ✓
189 " " N	182° 15	180		−	2° 37	-8.1	4.9	13.0	68.6 ✓
190 Crown	174° 26	182		−	2° 42	-8.5	1.9	10.4	71.2 ✓
191 On Slope W	166° 58	190		−	2° 40	-8.8	4.0	12.8	68.8 ✓
192 Toe "	153° 56	215		−	3° 30	-13.0	7.1	20.1	61.5 ✓
193 Center Pave	207° 08	280		−	3° 17	-16.0	2.4	18.4	63.2 ✓
194 Edge Pave "	204° 23	273		−	3° 25	-16.2	2.4	18.6	63.0 ✓
195 Shoulder Line	202° 20	270		−	3° 20	-15.6	3.4	19.0	62.6 ✓
196 On Slope	200° 08	265		−	3° 16	-15.1	3.3	18.4	63.2 ✓
197 " "	191° 14	250		−	1° 10	-5.1	12.3	17.4	64.2 ✓
198 " "	186° 19	248		−	1° 30	-6.5	8.3	14.8	66.8 ✓
199 Crown "	179° 34	243		−	1° 42	-7.2	5.2	12.4	69.2 ✓
200 East Shore Round Lake	107° 22	260		−	3° 10	-14.4	9.3	23.7	57.9 ✓

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Date 2-5-30 Rec. H.W. Paul Crane

OBJECT 881.6 Hub #6 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
201 Top of Bank	106°18	244		−	2°53	-12.2	9.2	21.4	60.2
202 Shore East	118°33	247		−	2°59	-12.8	11.3	24.1	57.5
203 Top of Bank	118°30	230		−	3°05	-12.4	9.2	21.6	60.0
204 Shore Line E.	138°52	260		−	2°47	-12.5	11.3	23.8	57.8
205 Top of Bank	139°06	244		−	2°43	-11.6	10.2	21.8	59.8
206 Angle Round Lake Fence	139°00	217		−	4°44	-17.8	3.1	20.9	60.7
207 " " " "	158°39	240		−	4°16	-17.9	3.2	21.1	60.5
208 S.E Cor. Feed Shed 6.7x6.7	140°01	224		−	4°22	-17.0	4.1	21.1	60.5
209 N.E " " " "	141°38	225		−	4°22	-17.0	4.1	21.1	60.5
210 S.E. Cor. Garage 9.X16.3	129°19	179		−	3°30	-10.9	8.9	19.8	61.8
211 N.E. Cor Garage 9X16.3	134°34	181		−	3°26	-10.8	8.9	19.7	61.9
212 SE Out Ho. 4X4	133°31	175		−	4°33	-13.8	4.9	18.7	62.9
213 N.E Out Ho. 4X4	134°51	176		−	3°25	-10.4	8.9	19.3	62.3
214 SE Cor. Stor. Shed 10.2X10.4	123°49	178		−	4°23	-13.5	5.9	19.4	62.2
215 NE " " " "	127°08	177		−	4°29	-13.8	5.9	19.7	61.9
216 Group 5" Willows	202°52	225		−	2°52	-11.2	9.1	20.3	61.3
217 Base 14" Oak	206°44	218		−	3°00	-11.4	7.1	18.5	63.1

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Date 2-5-30 Rec. H.W.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #7									
AT O #7									
To O #6	182°-49'	535'							
To O #8	165°-04'	420'							
Check A3 to Water Tank	257°-41								
Measured H.I. 5.10	885.5								
1 Base 14" Oak	354°-06	113		−	7°-08	-13.9	4.6	18.5	67.0
2 " 16" "	348°-09	102		−	7°-25	-13.0	6.5	19.5	66.0
3 " 20" "	350°-35	94		−	7°-43	-12.6	6.5	19.1	66.4
4 " 12" "	7°-11	105		−	7°-38	-13.9	2.5	16.4	69.1
5 " 12" "	14°-11	90		−	6°-03	-9.3	6.5	15.8	69.7
6 " 12" "	18°-11	105		−	6°-16	-11.4	5.5	16.9	68.6
7 " 12 "	23°-10	103		−	6°-12	-11.1	6.5	17.6	67.9
8 " 12" "	34°-54	104		−	6°-05	-10.9	8.5	19.4	66.1
9 " 10" "	40°-00	92		−	8°-01	-12.7	5.5	18.2	67.3
10 Twin 12"	49°-55	86		−	7°-55	-11.7	5.4	17.1	68.4
11 20" "	55°-12	104		−	8°-00	-14.3	6.5	20.8	64.7
12 12" "	63°-24	107		−	8°-13	-15.1	7.5	22.6	62.9

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Date 2-5-30 Rec. H.W. Paul Crane

	OBJECT 885.5 Hub #7 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
13	Base 10" OaK	68°41	78		−	7°58	-10.7	4.4	15.1	70.4
14	" 16" "	42°45	45					9.7		75.8
15	" 10" "	56°54	27					7.1		78.4
16	" 12" "	4°38	37					8.1		77.4
17	" 12" "	352°00	54					11.2		74.3
18	" 12" "	355°13	54					11.3		74.2
19	" 16" "	312°13	90		−	7°03	-10.9	5.4	16.3	69.2
20	" 16" "	312°30	99		−	6°48	-11.7	6.5	18.2	67.3
21	" 16" "	297°49	74					12.5		73.0
22	" 24" "	238°30	60	58	−	11°38	-11.8	6.3	18.1	67.4
23	" 12" "	228°05	73	70	−	11°11	-13.2	8.4	21.6	65.9
24	" 12" "	207°07	55	53	−	11°52	-10.7	5.3	16.0	69.0
25	" 10" "	186°36	68	65	−	12°06	-14.0	5.3	19.3	66.2
26	" 10" "	158°48	60		−	9°26	-9.5	2.3	11.8	73.7
27	" 10" "	155°00	82		−	9°20	-13.3	4.4	17.7	67.8
28	" 5" "	128°00	81		−	2°51	-4.0	9.4	13.4	72.1
29	" 10" "	121°00	69					10.9		74.6

Page 59 Transit 44910 Obs. P.C. Line

Date 2-5-20 Rec. H.W. Paul Crane O.P.

OBJECT 885.5 Hub #7 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
30 Base 8" Oak	111°00	84		−	3°48	-5.6	10.4	16.0	69.5
31 " 12" "	106°57	83		−	3°54	-5.6	10.4	16.0	69.5
32 " 12" "	107°51	78		−	3°48	-5.2	9.4	14.6	74.9
33 " 6" "	89°18	68					12.9		72.6
34 Bush "	96°00	41					8.1		77.4
35 Twin Willow 10"	146°04	184		−	6°16	-20.0	4.9	24.9	60.6
36 " " 10"	156°00	208		−	5°44	-20.8	4.5	25.3	60.2
37 Maple " 10"	156°42	265		−	4°13	-19.5	3.3	22.8	62.7
38 " " 10"	169°08	310		−	3°24	-18.3	4.6	22.9	62.6
39 Twin " 10"	172°07	320		−	3°13	-18.0	5.6	23.6	61.9
40 " " 8"	173°30	317		−	2°56	-16.2	5.6	21.8	63.7
41 " " 14"	175°35	316		−	2°30	-13.8	6.6	20.4	65.1
42 3-" 10"	173°30	300		−	2°30	-13.1	5.6	18.7	66.8
43 4-" 10"	175°05	290		−	2°25	-12.2	4.5	16.7	68.8
44 Angle in Fence	154°19	263		−	3°34	-16.4	8.3	24.7	60.8
45 " " "	119°17	128		−	7°39	-16.8	8.6	25.4	60.1
46 Willow 10"	67°50	128		−	7°48	-17.2	7.6	24.8	60.7

Page 60 Transit 44919 Obs. PC Line

Date 2-5-30 Rec. HW Paul Crane OBS.

OBJECT 885.5 Hob #7 Cont		Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
47	Willow 6"	45°30	211		−	4°49	-17.6	7.1	19.7	865.8
48	" 6"	60°06	158		−	7°45	-21.2	4.8	26.0	59.5
49	" 8"	66°43	143		−	7°33	-18.7	6.7	25.4	60.1
50	Twin " 6"	70°08	141		−	9°18	-22.5	2.7	25.2	60.3
51	" 8"	124°14	173		−	8°02	-23.9	1.9	25.8	59.7
52	" " 6"	146°35	244		−	4°54	-20.7	4.2	24.9	60.8
53	" " 6"	142°50	237		−	5°07	-21.0	4.2	25.2	60.3
54	" 6"	139°42	229		−	5°02	-20.0	5.2	25.2	60.3
55	" 6"	133°22	225		−	6°14	-24.2	2.1	26.3	59.2
56	S.E Refuge Coup 41×21	75°00	135		−	8°21	-19.4	5.7	25.1	60.4
57	N.E " "	91°42	126		−	9°06	-19.6	5.6	25.2	60.3
58	Shoreline E.	75°44	181		−	7°19	-22.7	4.9	27.6	57.9
59	Top of Bank	75°36	163		−	7°16	-20.4	4.8	25.2	60.3
60	Shoreline E	108°55	190		−	7°15	-23.8	4.0	27.8	57.7
61	Top of Bank	109°48	179		−	7°06	-21.9	3.9	25.8	59.7
62	Shoreline E	129°56	230		−	6°08	-24.3	3.2	27.5	58.0
63	Top of Bank	131°16	222		−	6°13	-23.9	2.1	26.0	59.5

Page 61 Transit 44919 Obs. PC Line

Date 2-5-30 Rec. HW

OBJECT 885.5 Hub #7 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
64 Shoreline E	153°20	283		−	4°39	-24.5	3.4	27.9	57.6 ✓
65 Top of Bank	153°31	264		−	4°46	-22.0	3.3	25.3	60.2 ✓
66 Shoreline E	144°25	262		−	4°52	-22.0	5.3	27.3	58.2 ✓
67 Top of Bank	144°26	252		−	4°51	-21.2	4.3	25.5	60.0 ✓
68 Shoreline E RD.L	154°22	281		−	3°33	-17.4	10.4	27.8	57.7 ✓
69 Top of Bank	155°07	265		−	3°27	-15.9	9.3	25.2	60.3 ✓
70 Shoreline Chan. S.	162°45	305		−	3°28	-18.4	9.5	27.9	57.6 ✓
71 Top of Bank	163°51	292		−	3°31	-17.8	7.5	25.3	60.2 ✓
72 Shoreline Chan S	169°45	327		−	3°33	-20.2	7.7	27.9	57.6 ✓
73 Top of BANK	170°26	314		−	3°27	-18.8	5.6	24.4	61.1 ✓
74 "	174°05	324		−	2°34	-14.5	9.6	24.1	61.4 ✓
" 885.5	176°18	324		−	2°22	-13.3	10.6	23.9	61.6 ✓
Ft # 7.									
to # 6 NEAS. HZ. 610	182°49	335			5°10	-30.0	8.6	38.6	46.9
75 N.E COR. HOUSE 26'4" X 24'	14°14	115		−	4°38	-9.3	8.6	17.9	67.6 ✓
76 N.W. " PORCH 7 X 14		120							
77 ℄ PIX.	279.05	103		−	8°06	-14.4	6.5	20.9	64.6 ✓

Page 62 Transit Obs. Line

Date 2-6-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB - #7 885.5									
78 TOE SLOPE E.	284° 00'	81		−	7°-39	-10.4	10.4	20.8	64.7
79 TOP " E	285 44	66					11.7	11.7	73.8
80 " KNOL	286° 04	43					7.1	7.1	78.4
81 " "	205° 00	26					7.7	7.7	77.8
82 " "	134° 18'	49					7.8	7.8	77.7
83 " "	33° 00	29					7.2	7.2	78.3
84 ON CROWN KNOL	304° 47	6					5.0	5.0	80.5
85 SHOULDER LINE RKT.	310° 05	123		−	5°-23	11.5	5.6	17.1	68.4
86 " " "	236° 16	75		−	7°-50	10.1	11.4	21.5	64.0
87 TOE SLOPE S	314° 04	115		−	7°-54	15.6	5.6	21.2	64.3
88 " " E	236° 24	68		−	9°-13'	10.4	11.4	21.8	63.7
89 " " N.	194° 41	80		−	9°-08	12.6	11.4	24.0	61.5
90 " " N.	330° 00	97		−	7°-39	12.8	8.5	21.3	64.2
91 N	157° 00	99		−	7°-28	12.8	11.5	24.3	61.2
92 S	35° 03	90		−	7.26	11.6	7.5	19.1	66.4
93 NW	126 08	109		−	7°-30	14.1	10.6	24.7	60.8
94 ON SLOPE S	11° 55	92		−	7°20	11.6	4.5	16.1	69.4

Page 63 Transit Obs. Line

Date 2-6-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #7 885.5									
95 TOE SLOPE W	91° 51	105		−	9°23	16.9	7.5	24.5	61.0
96 " " S	29° 26	102		−	9°13	16.1	2.5	18.6	66.9
97 " " SW	59° 02	120		−	9°13	19.0	2.7	21.7	63.8
98 " " SW.	39° 00	133		−	9°01	20.6	2.7	23.3	62.2
99 ON SLOPE SW.	59° 00	93		−	8°50	14.2	4.5	18.7	66.8
100 " " W	52° 49	165		−	7°50	22.3	2.8	25.1	60.4
101 " " N.W.	116 30	85		−	8°03	11.8	3.4	15.2	70.3
102 ℄ PKS.	186° 00	205		−	4°18	15.4	3.0	18.4	67.1
103 BEG. BRIDGE ℄ PKS.	180° 05	311					13.0	13.0	72.5
104 SHOULDER LINE	180° 20	200		−	4.51	16.8	2.0	18.8	66.7
105 " "	177° 10	306		−	1°47	9.5	3.5	13.0	72.5
106 TOE SLOPE W.	174 04	197		−	6°31	22.2	3.0	25.2	50.3
107 " " W.	168 02	297		−	3°54	20.0	3.5	23.5	62.0
108 ON " W.	161 50	196		−	3.59	13.6	12.0	25.6	59.9
109 " " W	161 18	287		−	4.00	20.0	5.4	25.4	60.1
110 " " W	148 07	213		−	4°41	17.3	7.1	24.4	61.1
111 34 " " W	154 18	265		−	3°20	15.4	9.8	25.2	60.3

Page 64 Transit ..... Obs. ..... Line .....

Date 2-6-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 7. 885.5									
112 TOP BRIDGE ℄	179° 19'	340					16.0		74.4 ✓
113 " " ℄	179° 00	370					11.0		74.5 ✓
114 END " ℄	178° 45	398		−	0°21	-2.4	7.0	-9.4	76.1 ✓
115 SHORE LINE RD. LAKE N	152° 44	410		−	2°52	-20.5	7.0	-27.5	58.0 ✓
116 TOP SPOIL BK	152° 55	430		−	1°30'	-11.9	3.2	-15.1	70.4 ✓
117 " " " N	146° 30	430		−	1°41	12.6	11.1	-23.7	61.8 ✓
118 RD LAKE SHORE N	135° 49	443		−	2°53	-22.5	5.2	-27.7	57.8 ✓
119 TOP SPOIL BK N.	138° 40	448		−	1°41	-13.2	10.3	-23.5	62.0 ✓
120 RD-LAKE FENCE N	136° 08	448		−	2°03	-16.0	10.2	-26.2	59.3 ✓
121 TOP SPOIL BK	136° 40	464		−	1°44	-14.0	5.3	-19.3	66.2 ✓
122 SHORE LINE N	131° 30	498		−	2°06	-18.2	9.5	-27.7	57.8 ✓
123 TOP. SPOIL BK	133° 00	520		−	1°37	-14.7	4.6	-19.3	66.2 ✓
124 RD. LAKE FENCE	132° 04	500		−	1°54	-16.6	9.5	-26.1	59.4 ✓
AT. ⊙ 8 462.5									
to ⊙ 7	165° 04	420							
to ⊙ 9	190° 27	415							
CHK. AZ. 150° 45' on TP									

Page 65 Transit Obs. Line

Date 2-6-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 8 462.5									
1 S. SHORE CHAN.	310° 42'	112					5.0		57.5
2 Δ. IN FENCE	63° 40'	85					3.7		58.8
3 S. SHORE CHAN.	291° 43'	89					5.0		57.5
4 N.W. " "	62° 51'	79					4.8		57.7
5 N. SHORE LINE	281° 56'	126		+	1°39	+3.6	8.6	−5.0	57.5
6 W " "	84° 38'	49					4.7		57.8
7 W " "	136° 15'	75					4.8		57.7
8 NE " "	291° 11'	85					5.0		57.5
9 E " "	284° 30'	58					4.9		57.6
10 E " "	253° 47'	46					4.8		57.7
11 E " "	208° 00'	60					4.8		57.7
12 TOP SPOIL BK W. OF CHAN.	90° 38'	70		+	6°22	+7.6	1.4	+6.2	68.7
13 " " " W " "	118° 48'	91		+	7°06	+9.9	1.4	+8.5	71.0
14 " " " W " "	127° 45'	98		+	2°27	+4.2	2.5	+1.7	62.2
15 SHOULDER LINE E "	275° 07'	85		+	8°14	+12.0	2.4	+9.6	72.1
16 ℄ PKY.	225° 36'	111		+	4°20	+8.4	4.6	+3.8	76.3
17 ℄ "	199° 50'	151		+	1°39	+4.3	2.8	+1.5	64.0

Page 66 Transit Obs. Line

Date 2-6-30 Rec. W.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. #8 862.5									
18 SHOULDER LINE PKY	220° 15'	93					1.5		61.0
19 " " "	195° 30	136		+	2° 58	+7.0	5.7	+1.3	63.8
20 TOP BK	214° 55	78		+	1° 47	+2.4	1.4	+1.0	63.5
21 " "	189° 00	123					1.7		64.2
22 SHORE LINE E. CHAN.	183° 10	115					4.7		67.2
23 WILLOW 18"	282° 37	78		+	1° 24	+1.9	1.4	+0.5	63.0
24 " 6" TWIN	271° 06	62		+	1° 52	+2.0	1.3	+0.7	63.2
25 "	255° 20	55		+	2° 07	+2.0	2.3	−0.3	62.2
26 CENTER 4-10" WILLOWS	196° 58	111		+	1° 50	+3.5	4.5	−1.0	61.5
27 12" WILLOWS	192° 06	119					1.4	−1.4	61.1
28 4-12" "	187° 32	149		+	5° 35	+14.4	1.8	+12.6	75.1
At ⊙ #9 MEAS. HI. 5.30	877.3								
TO ⊙ #8	190° 27'	415							
TO ⊙ #9A	123° 49'	410							
TO ⊙ #10	251° 38	273							
1 TOP SBK. N. END BK.	46° 35'	583		−	0° 42'	−7.1	6.9	−14.0	63.3
2 " " N. " "	39° 00	610		−	0° 42'	−7.5	6.2	−13.7	63.6

Page 67 Transit Obs. P. Crane Line

Date 2-6-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9 577.3									
3 TOE SPOIL NORTH BK	57° 45'	590		−	0° 53'	-9.1	8.9	-18.0	59.3
4 " " " "	45° 26'	563		−	0° 58'	-1.9	8.7	-10.6	66.7
5 " " " "	37° 35'	560		−	0° 49'	-0.8	9.8	-10.6	66.7
6 " " " "	29° 10'	525		−	0° 53'	-1.7	9.6	-11.3	66.0
7 " " " "	27° 30'	434		−	1° 08'	-0.9	9.3	-10.2	67.1
8 " " " "	27° 16'	395		−	1° 36'	-1.1	6.0	-7.1	70.2
9 " " " "	27° 37'	435		−	0° 52'	-0.7	7.1	-7.8	69.5
10 ℄ PALEN PKY.	23° 28'	193		−	1° 02'	-0.3	10.0	-10.3	67.0
11 ℄ " "	53° 54'	161		−	0° 58'	-0.6	10.8	-11.4	65.9
12 SHOULDER LINE	26° 30'	211		−	2° 57'	-10.8	3.1	-13.9	63.4
13 " "	56° 46'	180		−	3° 07'	-9.7	3.9	-13.6	63.7
14 TOP OF BK.	30° 06'	233		−	3° 06'	-17.6	4.2	-16.8	60.5
15 " " "	57° 36'	200		−	3° 07'	-10.8	5.0	-15.8	61.5
16 E. SHORE CHAN.	31° 18'	242		−	3° 05'	-12.9	6.2	-19.1	58.2
17 E " "	57° 39'	211		−	3° 06'	-11.4	8.1	-19.5	57.8
18 W " "	37° 50'	313		−	3° 06'	-17.0	2.6	-19.6	57.7
19 W " "	56° 37'	281		−	3° 07'	-15.2	4.4	-19.6	57.7

Page 68 Transit ..... Obs. ..... Line .....

Date 2-6-30 Rec. H.L.P.

	OBJECT HOB #9 877.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
20	TOP SPOIL BK.	40° 05	327		−	2°04	-11.7	3.6	-15.3	62.0 ✓
21	" " "	56° 07	290		−	2°09	-10.8	6.5	-17.3	60.0 ✓
22	" " "	57° 03	313		−	2°08	-11.7	4.6	-16.3	61.0 ✓
23	TOE " "	41° 26	344		−	2°10	-13.0	4.7	-17.7	59.6 ✓
24	" " "	57° 31	322		−	2°08	-12.0	6.6	-18.6	58.7 ✓
25	IN SWAMP	43 40	445		−	1°32	-11.9	6.2	-18.1	59.2 ✓
26	" "	57° 16	437		−	1°30	-11.4	7.2	-19.1	58.2 ✓
27	" "	47 10	515		−	1°11	-10.6	7.6	18.2	59.1 ✓
28	" "	67 47	520		−	1°14	-11.2	7.6	18.8	58.5 ✓
29	℄ Phalen Pky	87° 00	186		−	2°58	-9.6	3.9	13.5	63.8 ✓
30	" " "	110° 38	277		−	1°57	-9.4	4.4	13.8	63.5 ✓
31	Shoulder Line	84° 00	205		−	1°55	-6.8	7.0	13.8	63.5 ✓
32	" "	107° 18	290		−	1°53	-9.5	4.5	14.0	63.3 ✓
33	Top of Bank	82° 20	114		−	1°57	-3.9	8.1	12.0	65.3 ✓
34	" " "	105° 18	301		−	1°53	-9.8	5.5	15.3	62.0 ✓
35	Shore E Chan	80° 08	222		−	3°13	-12.4	7.1	19.5	57.8 ✓
36	" " "	103° 20	306		−	2°28	-13.2	6.5	19.7	57.6 ✓

Page 69 Transit 44919 Obs. P.C. Line

Date 2-6-30 Rec. HAW

	OBJECT 877.3 Hub #9 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
37	W. Shore Line Chain	74°30	288		−	2°56	-14.8	7.4	22.2	55.1 ✓
38	" " " "	92°24	360		−	2°30	-15.7	3.8	19.5	57.8 ✓
39	Top Spoil Bank	74°00	296		−	2°35	-13.4	3.5	16.9	60.4 ✓
40	" "	98°18	374		−	2°06	-13.7	2.9	16.6	60.7 ✓
41	" " "	72°53	316		−	2°10	-11.9	4.6	16.5	60.8 ✓
42	Edge of Swamp	87°36	355		−	1°48	-11.2	5.8	17.0	60.3 ✓
43	Toe Spoil Bank	72°30	325		−	2°00	-11.4	6.6	18.0	59.3 ✓
44	Edge of Swamp	86°30	455		−	1°32	-12.0	5.3	17.3	60.0 ✓
45	In "	68°20	440		−	1°26	-11.0	7.2	18.2	59.1 ✓
46	Edge "	83°00	523		−	1°14	-11.2	5.6	16.8	60.5 ✓
47	In "	65°42	554		−	1°04	-10.3	7.8	18.1	59.2 ✓
48	Twin 10" Willows	32°54	216		−	2°57	-11.0	5.1	16.1	61.2 ✓
49	" " " "	34°18	217		−	2°53	-10.8	6.1	16.9	60.4 ✓
50	" 12 "	39°06	209		−	2°56	-10.7	6.0	16.7	60.6 ✓
51	10" "	34°00	224		−	2°58	-11.6	6.1	17.7	59.6 ✓
52	3 6" "	40°15	200		−	3°02	-10.5	6.0	16.5	60.8 ✓
53	Twin 8 "	34°18	210		−	2°50	-10.4	6.1	16.5	60.8 ✓

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

Page 70 Transit 44219 Obs. P. C. Line

Date 2-6-30 Rec. 144

OBJECT 877.3 Hub #9 Const	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
54 6" Willow	42°23	201		−	2°46	-9.7	7.0	16.7	60.6
55 6-6" "	50°08	198		−	2°57	-10.1	6.0	16.1	61.2
56 Power Pole	7°50	190		−	3°04	-10.1	3.0	13.1	64.2
57 " "	53°35	145		−	3°06	-7.8	5.7	13.5	63.8
58 12" Willow	51°21	129		−	5°25	-12.1	4.6	16.7	60.6
59 Lt Pole	328°05	126		−	5°30	-12.0	1.6	13.6	63.7
60 12" Oak	92°15	67		−	5°53	-6.8	7.3	14.1	63.2
61 12" "	322°25	123		−	5°04	-10.8	2.6	13.4	63.9
62 10" "	140°00	56		−	9°21	-9.0	4.3	13.3	64.0
63 12" "	321°00	120		−	5°37	-12.0	1.6	13.6	63.7
64 " "	237°32	82		−	5°27	-7.8	6.4	14.2	63.1
65 " "	339°52	84		−	5°22	-6.8	6.4	13.2	64.1
66 16" "	242°56	88		−	5°10	-7.9	6.5	14.4	62.9
67 10" "	348°34	84		−	5°26	-7.9	6.4	14.3	63.0
68 24" "	253°26	91		−	5°12	-8.2	6.5	14.7	62.6
69 10" "	1°00	98		−	5°35	-9.5	6.5	16.0	61.3
70 10" "	279°30	136		−	5°40	-13.4	1.7	15.1	62.2

Page 71 Transit 44919 Obs. PC Line

Date 2-6-30 Rec. HW

OBJECT 877.3 Hub #9 Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
71 Base 12" Oak	33°-30	59		−	3°10	-3.3	11.2	14.5	62.8
72 " " "	283°-33	139		−	3°20	-8.1	6.7	14.8	62.5
73 " " "	358°-40	67					13.3	13.3	64.0
74 " " "	271°-18	160		−	2°33	7.0	7.8	14.8	62.5
75 " " "	336°-18	63					12.9	12.9	64.4
76 Po. Pole	278°-14	177		−	3°25	-10.0	2.9	12.9	64.4
77 12" Oak	318°-02	49					12.1	12.1	65.2
78 14" "	297°-22	70		−	7°27	-9.0	6.4	15.4	61.9
79 12" "	358°-20	47					10.0	10.0	67.3
80 14" "	294°-30	65		−	11°00	-12.0	2.3	14.3	63.0
81 12" "	358°-16	40					8.7	8.7	68.6
82 14" "	282°-51	33					8.9	8.9	68.4
83 12" "	297°-57	33					8.9	8.9	68.4
84 12" "	247°-00	44					7.3	7.3	70.0
85 Shoulder Line	55°-49	141		−	0°47	-2.0	11.7	13.7	63.6
86 " "	23°-15	172		−	0°54	-3.0	11.9	14.9	62.4
87 Toe of Shoulder	55°-36	135		−	1°43	-4.0	11.7	15.7	61.6

Page 72 Transit 44919 Obs. P.C. Line

Date 2-6-30 Rec. HW

	OBJECT Hub #9 877.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
88	Toe of Shoulder	21° 18'	165		−	1° 45'	-5.0	11.8	-16.8	60.5
89	" "	54° 40'	109		−	3° 26'	-6.0	11.5	17.5	59.8
90	" "	4° 45'	125		−	5° 42'	-12.0	5.6	17.6	59.7
	At HUB #9 MEAS. AZ. 530									
	to " #8. CHK. AZ. on SUN 124°37'	190° 27'	415							
1	TOE KNOL	55° 54'	75		−	2° 53'	-3.0	12.4	15.4	61.9
2	TOP "	84° 47'	40					7.5		69.8
3	" "	347° 26'	32					6.2		71.1
4	" "	247° 45'	38					6.2		71.1
5	" "	156° 36'	24					6.6		70.7
6	CENTER "	170° 10'	04					5.1		72.2
7	TOE "	98° 30'	70		−	3° 50'	-5.0	10.4	15.4	61.9
8	" "	152° 35'	63		−	3° 50'	-4.0	12.3	16.3	61.0
9	" "	209° 00'	65		−	4° 02'	-5.0	11.3	16.3	61.0
10	" "	245° 27'	80		−	4° 10'	-6.0	8.4	14.4	62.9
11	" "	287° 27'	60		−	4° 05'	-4.0	18.3	22.3	55.0
12	" "	331° 44'	66		−	3° 56'	-5.0	9.3	14.3	63.9

Page 73 Transit Obs. Line

Date 2-7-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9 - CONT 8773									
13 TOE KNOL	352° 15	94		−	3° 49	-6.0	9.5	-15.5	61.8
14 " "	10° 55	73		−	3° 02	-4.0	11.4	15.4	61.9
15 ON PHALEN PKY. PAVE.	359° 50	270		−	1° 47	-8.0	4.3	12.3	65.0
16 ON PHALEN PKY. PAVE.	334° 11	161		−	1° 52	-5.0	7.8	12.8	64.5
17 " " " "	359° 46	199		−	1° 45	-6.0	7.0	13.0	64.3
18 ON SHOULDER	335° 10	140		−	1° 43	-4.0	8.7	12.7	64.6
19 " "	0° 10	182		−	1° 46	-6.0	7.9	13.9	63.4
20 TOE SLOPE N.	334° 34	105		−	2° 06	-4.0	11.5	15.5	61.8
21 " " "	1° 51	146		−	3° 03	-8.0	7.7	15.7	61.6
22 CENTER PHALEN - PKY.	300° 00	155		−	3° 08	-8.0	4.8	12.8	64.5
23 " " "	280° 40	204		−	3° 14	-11.0	2.0	13.0	64.3
24 ON SHOULDER	299° 18	132		−	3° 32	-8.0	5.7	13.7	63.6
25 " "	275° 00	200		−	2° 49	-10.0	4.0	14.0	63.3
26 TOE "	291° 31	125		−	6° 22	-14.0	1.6	15.6	61.7
27 " "	269° 10	186		−	2° 35	-8.0	6.9	14.9	62.4
28 ELEV. ON PK. GR.	280° 44	105		−	2° 38	-5.0	11.5	16.5	60.8
29 " " " "	251° 46	168		−	2° 37	-8.0	8.8	16.8	60.5

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Date 2-7-30 Rec. A.L.P.

OBJECT HUB # 9 877.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
30 N. END. PK. GR.	195° 08	133		−	2°44	-6.0	8.7	14.7	62.6
31 S. LINE SWAMP	198° 25	137		−	2°39	-6.0	11.7	17.7	59.6
32 OUT HOUSE. NW. COR	203° 33	118		−	4°11	-8.0	6.6	14.6	62.7
33 OUT HOUSE SW. COR. 7.5 x 18.	207° 10	118		−	4°25	-9.0	6.6	15.6	61.6
34 PUMP.	233° 42	74		−	4°36	-6.0	7.4	13.4	63.9
35 IN SWAMP	145° 00	91		−	4°30	-7.0	10.5	17.5	59.8
36 WEST LINE "	96° 26	153		−	4°38	-12.0	5.8	17.8	59.5
37 SHOULDER LINE	99° 00	192		−	3°36	-12.0	2.0	14.0	63.3
38 " "	114° 36	278		−	2°01	-10.0	4.4	14.4	62.9
39 " " TOE	101° 56	185		−	2°03	-7.0	11.9	18.9	58.4
40 " " "	116° 41	269		−	2°07	-10.0	8.3	18.3	59.0
41 P. POLE	99° 00	193		−	2°06	-7.0	7.0	14.0	63.3
42 IN SWAMP	139° 00	232		−	2°20	-9.0	9.2	18.2	59.1
43 " "	167° 57	237		−	2°18	-10.0	9.2	19.2	58.1
44 " "	191° 47	280		−	2°20	-11.0	7.4	18.4	58.9
45 " "	203° 50	387		−	1°26	-7.0	8.9	15.9	61.4
46 E. LINE SWAMP	213° 18	520					8.6	8.6	68.7

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Date 2-7-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 10 - 866.1									
At HUB # 10. H.I. 5.4	251° 38	273							
TO " # 9.									
TO " # 11. CHK. AZ ON SIGN 114°	166° 06	456							
1. N. LINE PK. GR.	117° 42	165					4.1		62.0
2 S. " SWAMP	119° 30	170					7.0		59.1
3 IN " "	125° 33	212					7.4		58.7
4 ℄ PHALEN PKY.	343° 18	100					2.6		63.5
5 ℄ " "	302° 40	150					2.9		63.2
6 SHOULDER LINE	346° 00	80					2.5		63.6
7 " "	298° 46	132					2.8		63.3
8 " TOE	348° 36	60					3.9		62.2
9 " "	283° 14	105					4.4		61.7
10 ON PKY. GR.	95° 55	15					5.4		60.7
11 " " "	230° 02	80					5.4		60.7
12 N. LINE PKY "	143° 03	130					4.2		61.9
13 " " " "	186° 02	139					4.1		61.4
14 S " SWAMP.	143° 11	138					7.0		59.1

Page 76 Transit Obs. Line

Date 2-7-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #10 866.1									
15 S. LINE SWAMP	184° 17	147					7.1		59.0
16 IN. "	147° 12	186					7.4		58.7
17 " "	175° 26	198					7.2		58.9
18 ℄ PHALEN PKY.	291° 25	205					2.8		63.3
19 ℄ " "	286° 20	288					2.7		63.4
20 SHOULDER LINE	286° 18	206					2.9		63.2
21 " "	282° 32	290					2.8		63.3
22 TOE SHOULDER	281° 30	201					4.8		61.3
23 " "	280° 21	287					4.8		61.3
24 TOE SLOPE W.	268° 10	190					4.2		61.9
25 " " S.	274° 30	285					4.3		61.8
26 ON " W.	270° 00	235		+	1° 00	+4.0	2.2	+1.8	67.9
27 TOP " S.	265° 35	294		+	2° 45	+14.0	2.5	+11.5	77.6
28 " " W.	262° 36	263		+	3° 00	+14.0	2.3	+11.7	77.8
29 ON CROWN	263° 38	297		+	3° 07	+16.0	3.5	+12.5	78.6
30 ON "	271° 46	350		+	2° 35	+16.0	3.8	+11.2	77.3
31 TOP "	259° 43	293		+	3° 57	+20.0	3.5	+16.5	82.6

Page 77 Transit Obs. Line

Date 2-7-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB: #10. 466.1									
32 ON CROWN.	278° 43	435		+	1° 30	+11.0	4.2	+6.8	72.9
33 TOE SLOPE	280° 00	460		+	2° 00	+16.0	8.8	+7.7	73.8
34 ℄ PAVE. PKY.	284° 10	376					2.7		63.4
35 ℄ " "	283° 50	448					2.6		63.5
36 TOE SLOPE	280° 40	373					2.5		63.6
37 " "	281° 27	440					2.1		64.0
38 ON SLOPE S.	278° 12	374		+	1° 12	+8.0	2.9	+5.1	71.2
39 TOE "	280° 00	403		+	0° 22	+3.0	4.0	-1.0	65.1
40 " " W	237° 55	195					5.6		60.5
41 " " W.	218° 32	240					4.9		61.2
42 " "	236° 53	253		+	1° 54	+8.0	3.3	+4.7	70.8
43 TOP "	219 57	293		+	2° 14	+11.0	2.5	+8.5	74.6
44 ON CROWN	236° 50	294		+	2° 13	+11.0	3.5	+7.5	73.6
45 " "	220° 08	327		+	2° 56	+17.0	2.6	+14.4	80.5
46 NE. COR. PK. GR.	208° 12	248					3.5		62.6
47 " " SWAMP.	204° 43	256					5.8		60.3
48 TOE SLOPE W	196° 00	280					5.5		60.6

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Date 2-7-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB - # 10 866.1									
49 ON SLOPE W	185° 56	353		+	0°-25	+3.0	2.8	+0.2	66.3
50 " " "	197° 14	288		+	0°-42	+3.0	2.4	+0.6	66.7
51 " " "	193° 37	393		+	3°-07	+21.0	4.0	+17.0	83.1
52 " " "	202° 10	334		+	3°-05	+18.0	2.7	+15.3	81.4
53 TOP CROWN	197° 20	440		+	3°-51	+30.0	5.2	+24.8	90.9
54 " SLOPE	203° 54	376		+	4°-24	+29.0	6.9	+22.1	88.2
55 ON CROWN	203° 48	400		+	4°-27	+31.0	8.0	+23.0	89.1
56 6" OAK ON TIMBER LINE	185° 27	356		+	0°-25	+3.0	2.8	+0.2	66.3
57 6" TWIN " "	190° 55	316		+	0°-49	+5.0	2.6	+2.4	68.5
58 12" " " "	199° 54	300		+	1° 36	+8.0	2.5	+5.5	71.6
59 20" " " "	205° 30	265		+	0°-18	+1.0	2.3	-1.3	64.8
60 N.W. COR COTTAGE 12' X 24'	212° 00	251					3.6		62.5
61 SW " "	214° 33	245					4.3		61.8
62 6" OAK ON TIMBER LINE	210° 50	255					3.0		63.1
63 8" " " "	214° 35	241					4.9		61.2
64 16" STUMP	222° 39	243					3.1		63.0
65 P.P.	226° 12	221					5.1		61.0

Page 79 Transit ..... Obs. ..... Line .....

Date 2-7-30 Rec. ALP

OBJECT HOB # 10. 866.1	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
66 6" OAK ON TIMBER LINE	229°-30	222					4.5		61.6
67 6" " " "	241°-08	189					4.6		61.5
68 16" " " "	256°-30	182					3.8		62.3
69 P.P	268°-13	175					4.3		61.8
70 14" OAK TIMBER LINE	269°-22	222					2.1		64.0
71 BASE 8" OAK	275°-30	213					3.0		63.1
72 8" "	279°-18	188					3.7		62.4
73 12" "	279°-21	167					2.1		64.0
74 36" POP.	285°-18	196					4.0		62.1
75 12" OAK	273°-43	141					4.6		61.5
76 P.P.	288°-36	182					2.9		63.2
77 12" OAK	283°-00	120					3.6		62.5
78 12" "	290°-20	439?					3.4		62.7
79 10" "	287°-00	103					3.9		62.2
80 8" "	293°-20	130					3.4		62.7
81 12" "	290°-20	93					3.7		62.4
82 12" TWIN "	296°-40	135					2.7		63.4

Page 80 Transit ..... Obs. ..... Line .....

Date 2-7-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB. #10 866.1									
83	BASE 12" OAK	335° 00	92 ?						2.4	63.7
84	" 8" "	307° 45	108 ?						2.7	63.4
85	P.P.	323° 14	86						2.7	63.4
86	" 12" OAK	357° 00	72						2.7	63.4
87	" 8" "	22° 43	81						3.5	62.6
88	S.E. COR. DANCE HALL. 72'x42'	78° 05	102						5.2	60.9
89	NE " " "	99° 07	116						4.7	61.4
90	SE " GARGE. 14'x18	80° 07	83						5.2	60.9
91	NE " "	89° 24	87						5.5	60.6
	At HUB. #11. HI. 5.43	166° 06	456	864.2						
	to " #10									
	to " # 12 ON BRIDGE OAK 47.190° 38	136° 58	480							
1	ON CROWN of HILL.	258° 38	187		+	6° 22	+ 21.0	2.9	+18.1	882.3
2	" " " "	224° 27	182		+	6° 08	+ 19.0	4.9	+14.1	878.3
3	TOP SLOPE W.	259° 30	153		+	6° 16	+ 17.0	2.8	+14.2	78.4
4	" " "	224° 00	149		+	6° 16	+ 16.0	4.7	+11.3	75.5
5	" SLOPE W & E LINE SWAMP	260° 30	100					4.2	4.2	60.0

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Date 2-7-30 Rec. F.L.P.

	OBJECT HUB # 11. 884.2	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
6	TOE SLOPE W	216° 46	100					3.6		60.6
7	IN SWAMP	11° 02	19					5.2		59.0
8	" "	119° 15	55					5.5		58.7
9	" "	45° 45	176					5.7		58.5
10	" " + SE COR. BRUSH	76° 28	163					5.7		58.5
11	" "	99° 53	228		+	1° 40	+ 7.0	12.1	-5.1	59.1
12	" " + NEND BRUSH	114° 05	285		+	1° 00	+ 5.0	10.4	-5.4	58.8
13	" " + E. " "	102° 18	191		+	1° 01	+ 3.4	9.0	-5.6	58.6
14	" "	138° 54	146					5.5		58.7
15	" "	138° 50	223					5.4		58.8
16	E. LINE "	181° 00	170					4.2		60.0
17	" " "	171° 10	240					4.4		59.8
18	TOP SLOPE	193° 02	188		+	2° 55	+ 10.0	3.0	+7.0	71.2
19	" "	179° 30	270		+	2° 10	+ 10.0	2.3	+7.7	71.9
20	ON CROWN	197° 48	215		+	3° 88	+ 13.0	4.1	+8.9	73.1
21	" "	180° 48	289		+	2° 16	+ 8.0	3.4	+4.6	68.8
22	" "	170° 00	357		+	2° 12	+ 14.0	7.8	+6.2	70.4

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Date 2-7-30 Rec. A.L.P.

OBJECT 86.2 HUB # 11	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
23 ON CROWN	166° 00	386		+	2° 08	+14.0	6.0	+8.0	92.2
24 TOE SLOPE	162° 00	345					3.8		60.4
25 " SHOULDER	163° 37	368		+	0° 26	+3.0	2.8	+0.2	84.4
26 IN SWAMP	162° 00	347					3.8		60.4
27 TOE SHOULDER + N LINE SWAMP	145° 43	355					5.0		59.2
28 " " " "	128° 25	378					5.0		59.2
29 P.P.	132° 10	370					5.4		58.8
30 P.P.	162° 08	366		+	0° 41	+4.0	4.8	-0.8	63.4
31 12" OAK	163° 09	362		+	0° 37	+4.0	4.8	-0.8	63.4
32 12" TWIN "	164° 30	357		+	0° 06	+1.0	3.8	-2.8	61.4
33 12" OAK	167° 00	340		+	0° 36	+4.0	2.7	+1.3	65.5
34 ON TIMBER LINE 18" OAK	169° 50	281					1.1		63.1
35 16" "	174° 00	254					0.5		63.7
36 12" "	182° 52	227		+	1° 08	+4.0	2.1	+1.9	66.1
37 20" "	185° 25	164					2.3		61.9
38 10" "	194° 44	150		+	1° 22	+4.0	1.7	+2.3	66.5
39 16" "	200° 20	122					1.8		62.4

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Date 2-7-30 Rec. A.L.P.

OBJECT HUB #11. 864.2	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
40 ON TIMBER LINE 10" CHK	220° 24'	102					1.5		62.7
41 " " " 8" "	253° 00'	100					2.4		61.8
42 " " " 8" "	277° 14'	112					2.6		61.6
At HUB # 12 - H.I. 6.25	885.63								
TO HUB # 11.	136° 58'	480							
TO HUB # 13. CHK. AZ. 199° 09'	155° 31'	395							
1. BEG. G. RAIL - S. SIDE FROST AVE	264° 48'	223		−	1° 45'	-7.0	6.1	13.1	72.5
2 " " N. " " "	256° 58'	229		−	1° 42'	-7.0	6.1	13.1	72.5
3 SHOULDER S. " " "	262° 00'	209		−	1° 45'	-6.0	7.1	13.1	72.5
4 " S. " " "	298° 14'	110		−	3° 14'	-6.0	11.5	17.5	58.1
5 ℄ PAVE " "	263° 09'	205		−	3° 18'	-12.0	2.0	14.0	71.6
6 " " " "	295° 18'	98		−	3° 25'	-6.0	11.5	17.5	68.1
7 SHOULDER N. SIDE " "	259° 32'	198		−	3° 23'	-12.0	2.0	14.0	71.6
8 " S " " "	291° 07'	86		−	3° 24'	-5.0	11.4	16.4	69.2
9 TOE SHOULDER	256° 15'	194		−	3° 30'	-11.0	7.0	18.0	67.6
10 " "	282° 30'	75	71	−	13° 05'	-16.0	8.4	24.4	61.2
11 G. POLE	255° 10'	191		−	4° 13'	-14.0	5.0	19.0	66.6

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Date 2-7-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #12. 885.6									
12 R.R. R.O.W. FENCE	254° 24	191		−	4° 33	-15.0	4.0	19.0	66.6
13 TOE R.R. SLOPE S.	277° 22	69	65	−	14° 16	-15.0	8.3	23.3	62.3
14 " R.R. " S.	250° 00	188		−	4° 30	-15.0	2.9	17.9	67.7
15 T. POLE	264° 22	138		−	7° 00	-17.0	3.7	20.7	64.9
16 T. "	346° 00	66		−	9° 18	-11.0	12.3	23.3	62.3
17 G "	342° 20	57	54	−	12° 22	11.0	13.3	24.3	61.3
18 TOE SHOULDER S. SIDE FROST AV.	11° 24	186		−	5° 18	-17.0	8.9	25.9	59.7
19 " LINES " "	347° 47	110		−	5° 32	-11.0	9.6	20.6	65.0
20 " " " "	11° 55	190		−	5° 35	-18.0	3.0	21.0	64.6
21 ℄ FROST AV.	351° 18	95		−	4° 26	-7.0	12.5	19.5	66.1
22 " " "	20° 18	180		−	4° 22	-14.0	7.9	21.9	63.7
23 SHOULDER-N-SIDE FROST. AV.	355° 54	83		−	4° 22	-6.0	12.4	18.4	67.2
24 TOE SHOUL. N. " "	24° 06	175		−	5° 00	-15.0	7.9	22.9	62.7
25 " " N. " "	2° 39	71	68	−	11° 54	-14.0	11.4	25.4	60.2
26 TOP BK.	34° 07	158		−	5° 09	-14.0	8.8	22.8	62.8
27 TOE "	36° 00	160		−	5° 23	-15.0	10.8	25.8	59.8
28 T.P	35° 23	154		−	5° 32	-15.0	10.8	25.8	59.8

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Date 2-7-30 Rec. A.L.P

OBJECT HOB 12 885.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
29 TOE R.R SLOPE. 6.	12° 20	59	56	−	13° 53	-13.0	11.3	24.3	61.3
30 " " " "	43° 30	150		−	7° 08	-18.0	6.8	24.8	60.8
31 R.R. R.O.W. FENCE	13° 10	70	67	−	11° 52	-14.0	11.3	25.3	60.3
32 P. POLE	20° 30	267		−	4° 06	-19.0	6.3	25.3	60.3
33 TOE SHOUL. S. SIDE FROST AV	22° 14	267		−	4° 12	-19.0	5.3	24.3	61.3
34 " " " "	24° 12	266		−	4° 00	-19.0	3.4	22.4	63.2
35 ℄ "	27° 08	261		−	4° 00	-18.0	3.3	21.3	64.3
36 SHOUL. LINE. S. SIDE "	30° 18	258		−	3° 57	-18.0	3.3	21.3	64.3
37 TOE SHOUL. N. SIDE "	32° 33	257		−	3° 57	-17.0	7.3	24.3	61.3
38 G. POLE	33° 44	251		−	4° 02	-17.0	7.3	24.3	61.3
39 TOE BK	34° 30	257		−	4° 06	-18.0	6.3	24.3	61.3
40 TOP. "	39° 18	243		−	4° 06	-17.0	4.2	21.3	64.3
41 " " N. SIDE	42° 30	238		−	4° 14	-18.0	4.2	22.2	63.4
42 TOE "	43° 30	238		−	4° 16	-18.0	6.2	24.2	61.4
43 R.R. R.O.W. FENCE	47° 00	240		−	4° 30	-19.0	4.2	23.2	62.4
44 T.P.	46° 17	270		−	3° 51	-18.0	2.3	20.3	65.3
45 ON SLOPE	48° 05	227		−	3° 50	-15.0	8.1	23.1	62.5

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Date 2-7-30 Rec. A.L.P.

OBJECT HOB # 12 885.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
46 TOE R.R. SLOPE -S-	50° 50	226		−	3°-47	-15.0	6.1	21.1	64.5
47 TOP. R.R " -S-	57° 08	227					6.4		79.2
48 " " " N.	60° 52	225					6.4		79.2
49 " " " S.	51° 17	141					6.2		79.4
50 " " " N.	61° 34	148					6.3		79.3
51 " " " S.	47° 00	32					5.9		79.7
52 " " " N	72° 00	30					5.8		79.8
53 " " " S	243° 30	92					5.2		80.4
54 " " " N	234° 30	91					5.2		80.4
55 " " " S	243° 10	193					5.0		80.6
56 " " " N	237° 00	200					3.8		81.8
57 TOP. N. RAIL.	238° 32	196					2.9		82.7
58 " " "	237° 26	90					4.1		81.5
59 " " "	235° 18	40					4.5		81.1
60 " " "	62° 30	38					5.0		80.6
61 " " "	60° 00	141					5.3		80.3
62 " " "	59° 40	224					5.2		80.4

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Date 2-7-30 Rec. H.L.P.

OBJECT HUB # 12 845.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
63 TOE R.R. SLOPE N. SIDE	230° 44	210		−	2° 07	-8.0	9.0	17.0	68.6
64 " " SLOPE N "	219° 31	106		−	6° 15	-11.0	9.5	20.5	65.1
65 T.P.	231° 34	211		−	2° 08	-8.0	8.0	16.0	69.6
66 T.P.	221° 32	93		−	4° 32	-7.0	10.5	17.5	68.1
67 R.R. R.O.W. FENCE	224° 36	205		−	4° 33	-16.0	4.0	20.0	65.6
68 " " "	209° 35	103		−	7° 46	-14.0	10.5	24.5	61.1
69 TOE R.R. SLOPE N. SIDE	186° 56	48		−	12° 20	-10.0	13.3	23.3	62.2
70 " " " " "	87° 06	74		−	10° 16	-13.0	8.4	21.4	64.2
71 TOP DITCH	182° 18	51		−	12° 10	-11.0	12.3	23.3	62.3
72 " "	88° 15	75	72	−	11° 30	-14.0	6.4	20.4	65.2
73 Bot. "	178° 52	55	53	−	11° 50	-11.0	13.3	24.3	61.3
74 " "	91° 05	79	75	−	11° 52	-15.0	8.4	23.4	62.2
75 TOP "	96° 35	81	77	−	11° 49	-16.0	2.4	18.4	67.2
76 R.R. R.O.W. FENCE	97° 40	81	77	−	11° 34	-15.0	2.4	17.4	68.2
77 T.P.	82° 14	73		−	9° 34	-12.0	6.4	18.4	67.2
78 TOE R.R. SLOPE N. SIDE	72° 37	145		−	6° 15	-16.0	5.7	21.7	63.9
79 " " " N. "	68° 22	228		−	3° 54	-16.0	7.1	23.1	62.5

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Date 2-7-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 12 885.6									
80 T.P.	66° 00	230		−	2° 34	-10.0	91	-19.1	66.5 ✓
81 TOP. DITCH.	75° 30	144		−	4° 28	-11.0	10.7	21.7	63.9 ✓
82 BOT "	77° 13	146		−	4° 50	-12.0	12.7	24.7	60.9 ✓
83 TOP "	78° 47	146		−	5° 00	-13.0	9.7	22.7	62.9 ✓
84 TOE R.R. SLOPE N.	64° 45	335		−	2° 30	-10.0	6.7	16.7	68.9 ✓
85. INTAKE 24" C.I.P. UNDER. R.R.	71° 00	184		−	4° 42	-15.0	10.2	25.2	60.4 ✓
86 TOE SLOPE - E.	69° 40	340		−	3° 12	-20.0	5.7	25.7	59.9 ✓
87 IN SWAMP	72° 55	272		−	3° 15	-15.0	10.4	25.4	60.2 ✓
88 OUTLET 24" C.I.P. UNDER R.R	48° 20	197		−	4° 23	-15.0	11.0	26.0	59.6 ✓
89 E. LINE SWAMP	80° 00	181		−	5° 05	-16.0	8.9	24.9	60.7 ✓
90 TOE SLOPE - W.	81° 35	170		−	6° 33	-19.0	4.9	23.9	61.7 ✓
At. HUB # 12. H.I. 5.2									
TO HUB # 11.	136° 58	480							
TO HUB # 13	155° 31	395							
91 ON SLOPE W.	92° 00	110		−	8° 26	-16.0	1.6	17.6	68.0
92 TOP CROWN	119° 57	91		−	7° 06	-11.0	1.5	12.5	73.1
93 N.END 18" C.M	42° 07	206		−	6° 00	-21.0	4.1	25.1	60.5

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Date 2-8-30 Rec. A.L.P.

OBJECT HUB # 12 885.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
94 S. END - 18' C.M.	32° 05	222		−	5°43	-22.0	4.1	26.1	59.5
95 N. " 24' P.3.	30° 52	225		−	5°45	-22.0	4.3	26.3	59.3
96 S. " 24' "	19° 16	237		−	4°57	-20.0	6.9	26.9	58.7
97 TOE SLOPE . E.	163° 24	80		−	9°16	-13.0	9.4	22.4	63.2
98 " " . E.	175° 00	85		−	8°55	-13.0	10.4	23.4	62.2
99 ON LOW LAND	200° 38	122		−	8°45	-18.0	5.6	23.6	62.0
100 TOE SLOPE . W.	215° 49	188		−	6°24	-21.0	2.0	23.0	62.6
101 ON " "	216° 14	231		−	5°00	-20.0	2.2	22.2	63.4
102 TOE " "	214° 00	303		−	3°24	-18.0	3.5	21.5	64.1
103 ON POND	198° 14	251		−	3°00	-13.0	11.3	24.3	61.3
104 E. EDGE "	194° 03	322		−	3°42	-21.0	2.6	23.6	62.0
105 W " "	188° 00	162		−	4°21	-12.0	11.8	23.8	61.8
106. CENTER WATER FOUNTAIN	193° 10	260		−	4°20	-19.0	2.3	21.3	64.3
107 TOE SLOPE . E	178° 30	133		−	4°47	-11.0	11.7	22.7	62.9
108 N. EDGE POND	183° 11	294		−	4°15	-22.0	2.5	24.5	61.1
109 TOP SLOPE E	152° 56	144		−	5°15	-13.0	2.7	15.7	69.9
110 ON " . W	137° 15	155		−	5°24	-15.0	3.8	18.8	66.8

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Date 2-8-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 12 885.6									
111 S. EDGE POND	207° 54	158		−	5° 33	-15.0	8.8	23.8	61.8
112 TOE SLOPE W	122° 20	160		−	5° 38	-16.0	5.8	21.8	63.8
113 " " "	112° 18	148		−	6° 27	-17.0	4.8	21.8	63.8
114 E. EDGE POND	207° 57	256		−	4° 41	-21.0	3.3	24.3	61.3
115 " " SWAMP	110° 16	201		−	5° 42	-20.0	4.0	24.0	61.6
116 W " POND	182° 39	235		−	5° 23	-22.0	2.2	24.2	61.4
117 TOE SLOPE N	177° 00	223		−	5° 08	-20.0	4.2	24.2	61.4
118 " " W	96° 32	162		−	6° 57	-19.0	2.8	21.8	68.8
119 ON CROWN	154° 00	199		−	3° 43	-13.0	2.0	15.0	70.6
120 " SLOPE	131° 20	203		−	5° 12	-18.0	2.0	20.0	65.6
121 TOP RIDGE	118° 10	229		−	3° 30	-14.0	5.1	19.1	66.5
122 " SLOPE E.	114° 02	190		−	5° 46	-19.0	3.0	22.0	63.6
123 E. EDGE SWA	116° 30	257		−	4° 30	-20.0	4.3	24.3	61.3
124 ON TIMBER LINE 10"	109° 58	230		−	5° 08	-21.0	2.1	23.1	62.5
125 " " 16" OAK	112° 07	160		−	6° 35	-18.0	3.8	21.8	63.8
126 16" "	87° 25	163		−	6° 44	-19.0	2.8	21.8	63.8
127 12" "	85° 10	125		−	8° 00	-17.0	2.6	19.6	66.0

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Date 2-8-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 12 885.6									
128 ON TIMBER LINE 10"	99° 15'	91		-	7°58'	-12.0	4.5	16.5	69.1
129 " " 10" OAK	138° 15'	64		-	8°14'	-9.0	1.3	10.3	75.3
130 " " 12" "	165° 35'	101	97	-	11°13'	-19.0	1.8	20.5	65.1
131 " " 12" "	177° 00'	144		-	7°00'	-17.0	4.7	21.7	63.9
132 " " 12" "	176° 48'	202		-	5°40'	-20.0	2.0	22.0	63.6
At HUB # 13 - H.I. 5.25	888.4								
to HUB # 12.	155° 31'	395							
to HUB # 14.	99° 41'	206							
1 N.E. COR. TEE. #6	299° 22'	39					7.2		81.2
2 S.E " " "	312° 30'	52					7.1		81.3
3 N.W. " " "	343° 12'	21					6.7		81.7
4 SW " " "	348° 00'	49					6.7		81.7
5 TOE N.E COR TEE # 6	295° 50'	47					9.0		79.4
6 " SE " " "	315° 00'	64					11.5		76.9
7 " SW " " "	350° 31'	48					10.4		78.0
8. TOP. NE. COR TEE #6	25° 55'	66					8.2		80.2
9 TOP. SE " " "	17° 45'	87					8.0		80.4

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Date 2-8-30 Rec. A.L.P.

OBJECT HUB # 13. 488.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
10 TOP. NW. COR. TEE #6	48° 49	96					8.3		80.1
11 TOP. SW. " " "	37° 20	113					8.6		79.8
12 TOE SLOPE E	306° 00	168		−	6° 03	-18.0	6.8	24.8	63.6
13 TOP " E	327° 44	158		−	4° 47	-13.0	2.8	25.8	62.6
14 TOE " E	286° 51	160		−	4° 46	-13.0	10.8	23.8	64.6
15 ON CROWN	335° 37	152		−	4° 47	-13.0	2.8	15.8	72.6
16 " SLOPE S	262° 25	125		−	4° 55	-11.0	4.6	15.6	72.8
17 " " S	344° 32	152		−	4° 56	-13.0	3.8	16.8	71.8
18 TOP. " W	284° 48	95					11.8		76.6
19 ON " S	346° 48	123		−	2° 57	-6.0	10.6	16.6	71.8
20 E. EDGE GREEN #5	248° 00	95					8.9		79.5
21 ON SLOPE S	353° 24	95		−	3° 33	-6.0	9.4	15.4	73.0
22 NE COR. GREEN.	217° 23	92					7.0		81.4
23 ON SLOPE W	338° 47	89					13.4		75.0
24 " " S	184° 51	140		+	0° 20'	+1.0	2.7	-1.7	86.7
25 " " S	330° 40	111		−	1° 30'	-3.0	10.6	13.6	74.8
26 " " E	315° 08	122		−	1° 49	-4.0	11.6	15.6	72.8

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Date 2-8-30 Rec. A.L.P.

OBJECT HUB # 13 - 888.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
27 S. SHOL. LINE # 1.	171° 00	240		+	1° 23	+ 6.0	4.2	+1.8	90.2
28 ℄ T.H. # 1.	171° 00	260		+	1° 18	+ 6.0	4.3	+1.7	90.1
29 N. LINE STONE WALL AT # 1.	171° 15'	205		+	1° 05'	+ 4.0	3.0	+1.0	89.4
30 ON SLOPE SE.	299° 48	121		−	4° 04	− 9.0	8.6	−17.6	70.8
31 ℄ T.H # 1	149° 43	234		+	2° 25'	+ 10.0	9.2	+0.8	89.2
32 SHOL. L. # 1	150° 05	215		+	2° 22	+ 9.0	8.1	+0.9	89.3
33 TOP BK	149° 50	193		+	2° 18	+ 8.0	5.0	+3.0	91.4
34 N. L STONE WALL	149° 48	183		+	2° 26	+ 8.0	4.9	+3.1	91.5
35 TOP SLOPE	149 30	162		+	2° 24	+ 7.0	2.8	+4.2	92.6
36 ON CROWN	149 13	136		+	2° 13	+ 5.0	1.7	+3.3	91.7
37 TOP SLOPE S	149 08	110		+	1° 52	+ 4.0	1.6	+2.4	90.8
38 ON " S.	140 30	50					4.4	−4.4	84.0
39 NW. COR GREEN # 5	190 11	43					6.2	−6.2	82.2
40 ON SLOPE S.	0° 47	88					7.4	−7.4	81.0
41 ON GREEN # 5	276° 30	19					5.4	−5.4	83.0
42 " SLOPE S	11° 00	57					10.3	−10.3	78.1
43 " " "	36° 45'	38					6.5	−6.5	81.9

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Date 2-8-30 Rec. A.L.P.

OBJECT 888.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
44 SE. END. WATER TANK	91° 00	89					1.5	1.5	86.9
45 NW. " " "	94° 22	110		+	3° 33	+ 7.0	8.5	1.5	86.9
AT HUB # 13. HI. 5.20									
TO HUB # 12.	155° 31	395							
TO HUB # 14.	99° 41	206							
46 ℄ T.H. #1.	138° 22	235		+	2° 18	+ 10.0	9.2	+0.8	89.2
47 " " #1.	125° 58	255		+	2° 11	+ 10.0	10.3	−0.3	88.1
48 SHOUL. LINE	136° 51	215		+	2° 17	+ 9.0	8.1	+0.9	89.3
49 " "	123° 17	235		+	2° 31	+ 10.0	10.2	−0.2	88.2
50 BOT. DITCH.	136° 38	209		+	2° 31	+ 9.0	9.0		88.4
51 " "	122° 25	229		+	2° 32	+ 10.0	11.1	−1.1	87.3
52 TOP. BK.	135° 07	192		+	2° 40	+ 9.0	6.0	+3.0	91.4
53 " "	120° 32	208		+	2° 40	+ 10.0	7.1	+2.9	91.3
54 N. LINE - WALL	120° 32	208		+	2° 40	+ 10.0	7.1	+2.9	91.3
55 " " "	133° 52	187		+	2° 46	+ 9.0	5.9	+6.1	94.5
56 TOP. SLOPE W	118° 55	207		+	2° 36	+ 9.0	7.0	+2.0	90.4
57 ON " S.	125° 28	114		+	2° 47	+ 6.0	4.6	+1.4	89.8

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #13 488.4									
58 ON SLOPE S.	98° 35	80					1.8	-1.8	86.6
59 " " S	102° 35	155		+	1° 05	+3.0	2.8	+0.2	88.6
60 " " S	93° 25	55					4.2	-4.2	84.2
61 " " S	94° 56	163		+	3° 04	+9.0	10.8	-1.8	86.6
62 " " S	54° 18	79					4.5		83.9
63 TOP " W	89° 07	225					1.9		86.5
64 ON " E	45° 15	121					8.5		79.9
65 " " S.	80° 48	113					1.8		86.8
66 " " S	34° 38	160		−	1° 40	-5.0	8.8	13.8	74.6
67 " " S	15° 12	153		−	4° 16	-11.0	8.8	19.8	68.6
68 " " S	15° 20	110		−	4° 28	-9.0	7.6	16.6	71.8
69 " " S	84° 40	179					3.3		85.1
70 " " S	54° 08	136					6.9		81.5
71 " " S	77° 38	163					5.6		82.8
72 " " S	41° 38	163		−	2° 00	-6.0	5.8	11.8	76.6
73 " " S	70° 43	140					5.1		83.3
74 " " S	30° 05	204		−	3° 51	-14.0	6.0	20.0	68.4

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #13 888.4									
75 ON TIMBER LINE 24" OAK	321° 47	192		−	5° 48	−19.0	2.0	21.0	67.0 ✓
76 " " " 30" "	320° 00	151		−	6° 02	−16.0	1.7	17.7	70.7 ✓
77 " " " 15" "	315° 53	131		−	6° 00	−14.0	2.7	16.7	71.7 ✓
78 " " " 24" "	332° 20	126		−	3° 21	−7.0	6.6	13.6	74.8 ✓
79 " " TWIN " 20" "	352° 00	119		−	7° 24	−15.0	1.6	16.6	71.8 ✓
80 " " " 30" "	50° 36	116		−	6° 56	−14.0	3.6	17.6	70.8 ✓
81 " " " 16" "	14° 30	97		−	4° 28	−8.0	5.5	13.5	74.9 ✓
82 " " " 24" "	34° 00	121		−	3° 30	−7.0	3.6	10.6	77.8 ✓
83 " " 16" "	41° 43	110					8.4		80.0 ✓
84 " " 18" "	59° 34	109					4.6		83.8 ✓
85 " " 12" "	61° 20	95					3.8		84.6 ✓
86 " " 16" "	57° 35	79					3.9		84.9 ✓
87 " " 24" "	96° 08	69					2.8		85.6 ✓
88 " " 10" "	114° 12	66					3.0		85.7 ✓
89 " " 18" "	146° 28	85		+	0° 52	+1.0	1.4	−0.4	88.0 ✓
90 " " 24" "	162° 46	109		+	1° 20	+3.0	1.5	+1.5	89.9 ✓
91 " " 20" "	181° 15	115					2.6		85.8 ✓

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #13 888.4									
92 ON TIMBER LINE 10" OAK	196° 30	151					1.0		87.4 ✓
93 " " " 24" "	211° 10	152					1.4		87.0 ✓
94 " " " 24" "	216° 45	159					1.6		86.8 ✓
95 LONE 15" "	191° 18	98					3.9		84.5 ✓
96 " 36" "	180° 08	49					5.3		83.1 ✓
97 " 12" "	168° 18	31					5.0		83.4 ✓
98 " 30" "	165° 52	20					4.8		83.6 ✓
99 " 8" "	113° 15	40					4.1		84.3 ✓
100 " 30" "	303° 16	30					6.9		81.5 ✓
101 " 12" "	56° 10	52					4.5		87.9 ✓
102 " 20" "	12° 10	29					6.4		82.0 ✓
103 " 18" "	43° 15	72					6.0		82.4 ✓
104 " 16" "	1° 40	41					8.3		80.1 ✓
105 " 18" "	43° 30	57					6.2		82.2 ✓
106 " 14" "	33° 00	45					7.0		81.4 ✓

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Date 2-10-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 14 887.9									
At HUB # 14 H.I. 5.30									
TO HUB # 13	99° 41	206							
TO HUB # 15	56° 56	292							
1 ON TIMBER LINE 18" OAK	228° 00	257					4.0		83.9
2 " " " 30" "	227° 42	228					4.3		83.6
3 " " " 18" "	228° 18	183					2.8		85.1
4 " " " 24" "	223° 10	173					1.7		86.2
5 " " " 10" "	219° 52	119					1.2		86.7
6 " " " 12" "	211° 16	90					1.2		86.7
7 " " " 18" "	189° 52	52					3.5		84.5
8 " " " 20" "	163° 21	23					4.5		83.4
9 " " " 12" "	99° 00	12					4.9		83.0
10 " " " 16" "	90° 22	23					6.0		81.9
11 " " " 24" "	71° 05	55					13.9		74.0
12 " " " 12" "	82° 40	65		−	5° 43	− 7.0	8.3	15.3	72.6
13 " " " 16" "	93° 10	99		−	9° 30	− 16.0	3.5	19.5	68.4
14 " " " 6" "	101° 18	122		−	5° 40	− 12.0	2.6	14.6	63.3

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB - # 14 887.9									
15 ON TIMBER LINE 24" oak	102° 45'	141		−	5° 05'	−12.0	1.7	13.7	74.2
16 " " " 20"	98° 14'	165		−	4° 30'	−13.0	1.8	14.8	73.1
17 LONE 15" OAK	106° 47'	140					10.5		77.4
18 " 30" "	117° 55'	115					8.8		79.1
19 " 12" "	128° 41'	72					9.0		78.9
20 " 10" "	211° 17'	110		+	0° 56'	+2.0	3.6	−1.6	86.3
21 " 18" "	203° 20'	76					1.4		86.5
22 " 24" "	215° 30'	123					2.6		85.3
23 " 10" "	215° 00'	147		+	0° 31'	+13.0	3.7	+9.3	97.2
24 " 12" "	218° 37'	165		+	0° 47'	+2.0	3.8	−1.8	86.1
25 " 24" "	221° 04'	241		+	0° 50'	+4.0	6.2	−2.2	85.7
26 T. POLE	219° 45'	242		+	0° 43'	+3.0	6.2	−3.2	84.7
27 P. P.	216° 05'	190		+	0° 54'	+3.0	7.0	−4.0	83.9
28 T. P.	204° 30'	121		+	1° 00'	+2.0	6.6	−4.6	83.3
29 P. P.	177° 00'	83					5.7		82.2
30 Δ STONE WALL	201° 48'	78					1.8		86.1
31 " " "	146° 21'	59					6.6		81.3

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Date 2-10-30 Rec. F.L.P

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 14 887.9									
32 STONE WALL	114° 36	100					12.6		75.3
33 T.P.	159° 30	82					5.8		82.1
34 T.P	121° 00	137					8.3		79.6
35 P.P.	119° 46	143					8.0		79.9
36 ℄ T.H. #1.	147° 45	114					6.3		81.6
37 ℄ " #1	130° 25	140					7.0		80.9
38 SHOUL. LINE	144° 20	98					5.5		82.4
39 " "	125° 20	126					6.9		81.0
40 BOT. DITCH	142° 09	88					6.9		81.0
41 " "	120° 30	131					8.7		79.2
42 TOP BK.	140° 30	83					5.8		82.1
43 " "	118° 30	128					7.5		80.4
44 TOP W. SLOPE	135° 43	55					7.8		80.1
45 " SLOPE S	116° 05	122					8.7		79.2
46 " " W.	104° 00	20					5.4		82.5
47 " " S.	127° 45	104					6.5		81.4
48 ON " W.	63° 04	75		−	6° 25	− 8.0	9.4	−17.4	70.5

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #14 887.9									
49 ON SLOPE S	117° 00	87					12.9		75.0
50 " " W	81° 40	44		−	5° 13	−4.0	7.2	11.2	76.7
50 " " S	92° 15	99		−	9° 33	−16.0	3.5	19.5	68.4
51 " " W	39° 50	45		−	4° 05	−3.0	10.2	13.2	74.7
52 TOE " S	69° 46	145		−	10° 30	−26.0	3.7	29.7	58.2
53 NE. COR SWAMP	60° 21	158		−	10° 24	−28.0	3.8	31.8	56.1
54 TOE SLOPE W	56° 33	133		−	10° 12	−23.0	7.7	30.7	57.2
55 E. LINE SWAMP.	48° 39	138	132	−	11° 56	−27.0	1.7	28.7	59.2
56 TOP SLOPE W	355° 54	14					5.8		82.1
57 " " W	335° 03	43					6.6		81.3
58 P.P.	251° 06	47					3.4		84.5
59 ON SLOPE W	10° 14	76		−	6° 57	−9.0	7.4	16.4	71.5
60 TOE " W	24° 22	130		−	10° 54	−24.0	6.6	30.6	57.3
61 E LINE SWAMP	25° 00	143	136	−	11° 00	−26.0	5.7	31.7	56.2
62 TOP SLOPE W	328° 13	95					11.3		76.6
63 " " W	323 16	130					11.6		76.3
64 ON " W	353 30	117		−	7° 55	−16.0	4.6	20.6	67.3

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Date 2-10-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #14 887.9									
65 ON SLOPE W	345° 00	145		−	6°51	-17.0	1.7	18.7	69.2
66 TOE " W.	10° 30	155		−	10°33	-28.0	3.8	31.8	56.1
67 " " W	0° 12	180		−	9°28	-29.0	1.9	30.9	57.0
68 E. LINE SWAMP	1° 00	186		−	9°26	-30.0	1.9	31.9	56.0
69 ON SLOPE S.	320° 38	278		−	3°47	-18.0	8.4	26.4	61.5
70 " " W.	343° 04	208		−	6°10	-22.0	4.0	26.0	61.9
71 TOP " W	331° 06	235		−	4°42	-19.0	4.2	23.2	64.7
72 " " W	330° 30	292		−	4°03	-21.0	3.5	24.5	63.4
73 ON " W	338° 21	246		−	5°27	-23.0	3.2	26.2	61.7
74 TOP " W	335° 35	296		−	4°26	-33.0	2.5	35.5	52.4
75 TOE " W	343° 50	265		−	6°18	-29.0	2.3	31.3	66.6
76 " " W	338° 37	312		−	5°02	-27.0	2.6	29.6	58.3
77 E LINE SWAMP	347° 04	252		−	6°25	-28.0	4.3	32.3	55.6
78 " " "	342° 00	309		−	5°18	-29.0	3.6	32.6	55.3
79 ON TIMBER LINE 14" OAK	336° 44	316		−	4°48	-27.0	2.6	29.6	58.3
80 " " " 18" "	339° 33	282		−	5°10	-25.0	2.4	27.4	60.5
81 " " " 12 "	343° 18	234		−	6°23	-26.0	2.2	28.2	59.7

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Date 2-10-30 Rec. F.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 14 887.9									
82 ON TIMBER LINE 12" OAK	349° 09	209		−	7° 30	−27.0	2.0	29.0	58.9
83 " " " 14" "	355° 40	177		−	8° 26	−26.0	2.9	28.9	59.0
84 " " " 12" "	3° 00	155		−	8° 32	−23.0	5.8	28.8	59.1
85 " " " 20" "	6° 04	132		−	10° 00	−23.0	3.7	26.7	61.2
86 " " " 12" "	9° 17	102		−	9° 57	−17.0	4.5	21.5	66.4
87 " " " 20" "	34° 30	97	94	−	13° 35	−22.0	1.5	23.5	64.4
88 LONE 10" "	39° 10	126	119	−	13° 23	−27.0	1.6	28.6	59.3
89 ON TIMBER LINE 14" "	44° 40	86	81	−	13° 08	−16.0	1.4	19.4	58.5
90 " " " 12" "	65° 12	131	126	−	11° 24	−24.0	3.7	25.7	62.7
91 " " "									
AT HUB # 9A. H.I. 5.35	868.4								
TO HUB # 9.	128° 48	410							
TO HUB # 9B	132° 01	320							
1 ℄ PHALEN PKY.	335° 00	65					5.2		63.2
2 ℄ " "	107° 35	37					5.1		63.3
3 SHOULD LINE E SIDE PKY	320° 15	63					5.5		62.9
4 " " " " "	139° 17	29					5.5		62.9

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9A 868.4									
5 TOE SHOUL. PHR. PKY	311° 43	63					9.3		59.1 ✓
6 " " " "	153° 33	33					9.2		59.2 ✓
7 IN SWAMP	269° 00	106					9.7		58.7 ✓
8 " "	209° 17	88					9.5		58.9 ✓
9 " "	248° 18	230					9.5		58.9 ✓
10 " "	223° 40	224					9.6		58.8 ✓
11 " "	243° 37	320					9.8		58.6 ✓
12 " "	228° 30	320					9.8		58.6 ✓
13 " "	207° 12	262					9.7		58.7 ✓
14 " "	211° 08	343					9.8		58.6 ✓
15 " "	184° 15	175					9.6		58.8 ✓
16 " "	168° 15	157					10.5		57.9 ✓
17 TOE SHOUL. E SIDE	141° 30	156					8.5		59.9 ✓
18 " LINE E "	138° 20	157					5.3		63.1 ✓
19 ℄ PHALEN PKY	131° 23	158					5.4		63.0 ✓
20 ℄ FROST AVE.	181° 48	387					4.8		63.6 ✓
21 ℄ " "	167° 30	305					4.8		63.6 ✓

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.4 8684									
22 SHOUL. LINE S. SIDE FROST AVE	183° 19	376					4.6		63.8
23 " " " " " "	168° 52	293					4.9		63.5
24 TOE SHOUL. S	184° 30	369					8.5		59.9
25 " " S	169° 47	287					7.7		60.7
26 IN SWAMP	191° 14	325					9.2		59.2
27 " "	177° 48	253					8.8		59.6
28 LONE 12" OAK	166° 27	260					6.1		62.3
29 P.P.	164° 40	242					7.8		60.6
30 END. G.B. S. SIDE FROST AVE	143° 20	233					5.0		63.4
31 ℄ FROST AVE	146° 56	256					5.1		63.3
32 INT. FROST AVE + PHALEN PKY	133° 48	247					5.2		63.2
33 SHOUL. LINE FROST AVE. S.	147° 46	240					5.2		63.2
34 " " " " "	140° 00	219					5.7		62.7
35 TOE SHOULDER	148° 16	230					8.9		59.5
36 " "	144° 00	202					8.5		59.9
37 IN SWAMP	155° 24	183					9.7		58.7
38 P.P.	138° 32	162					5.2		63.2

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

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Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.A 868.4									
33 P.P.	139° 25	30					5.4		63.0
34 P.P.	318° 51	103					5.6		62.8
35 6. 5" WILLOWS.	318° 00	110					7.1		61.3
36 8" "	319° 20	134					5.7		62.7
37 10" "	332° 24	276					6.3		62.1
38 10" "	333° 17	265					6.2		62.2
39. 6" TWIN WILLOW	334° 50	225					6.3		62.1
40. 5. 8" WILLOWS	337° 00	113					6.7		61.7
41 8" WILLOW	336° 35	235					7.5		60.9
42. 5 6" WILLOWS.	348° 00	122					8.8		59.6
43 SHOUL. PHALEN PKY.	351° 42	72					5.2		63.2
44 " " "	46° 15	38					5.2		63.2
45 TOP BK.	356° 43	78					5.9		62.5
46 " "	47° 25	48					6.4		62.0
47 E SHORE LINE CHANEL	1° 52	85					10.5		57.9
48 " " " "	46° 47	55					10.7		57.7
49 W " " "	24° 30	132					10.8		57.6

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Date 2-10-30 Rec. A.L.P

OBJECT HUB 9.A 868.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
50 W. SHORE LINE CHANEL	51° 53	115					10.9		57.5
51 TOP BK.	25° 54	140					7.9		60.5
52 " "	51° 52	122					8.5		59.9
53 TOE SLOPE E	27° 48	147					7.4		61.0
54 " " "	51° 08	140					7.7		60.7
55 TOP " "	32° 30	188		+	1° 42'	+ 6.0	2.0	+4.0	72.4
56 " " "	49° 13	187		+	2° 51'	+ 10.0	1.9	+8.1	76.5
57 " " "	21° 00	198		+	0° 15'	+ 1.0	2.0	-1.0	67.4
58 ON " "	16° 35	176					4.3		64.1
59 TOE " "	15° 37	172					7.0		61.4
60 " " S.	6° 30	213					7.7		60.4
61 G. POLE	124° 35	150					5.2		63.2
62 BEC ORNA G.R	126° 39	180					5.1		63.3
63 SHOUL. LINE W SIDE. PHA. PKS	115° 26	100					5.3		63.1
64 " " " " " "	125° 49	162					5.2		63.2
65 TOP. BK	111° 33	102					7.1		61.3
66 " "	122° 45	169					7.1		61.3

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Date 2-10-30 Rec. A.L.P.

OBJECT HUB #9.A 868.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
67 E. SHORE LINE CHANEL	108° 05	108					10.8		57.6
68 " " " "	120° 50	171					10.7		57.7
69 W " " "	89° 05	141					10.9		57.5
70 " " "	108° 06	194					10.7		57.7
71 TOP BK	87° 43	146					8.5		59.9
72 " "	107° 08	197					9.2		59.2
73 TOE SLOPE E	81° 40	152					7.5		60.9
74 " " "	105° 50	201					8.6		59.8
75 " " "	96° 07	170					8.7		59.7
76 ON " "	105° 36	201					6.1		62.3
77 TOP " "	80° 31	205		+	4° 27	+ 16.0	5.0	+11.0	79.4
78 " " "	101° 11	217		+	1° 51	+ 7.0	2.1	+4.9	73.3
79 " " "	66° 12	193		+	3° 25	+ 11.0	3.0	+8.0	76.4
80 TOE " "	96° 30	239		+	4° 15	+ 18.0	11.2	+6.8	75.2
81 ON " "	95° 05	245		+	3° 07	+ 13.0	4.2	+8.8	77.2
82 TOP " "	93° 50	251		+	3° 58	+ 17.0	3.2	+13.8	82.2
83. BOT. HOLLOW. N. END.	97° 42	257		+	2° 39	+ 12.0	3.3	+8.7	79.1

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Date 2-10-30 Rec. A.L.P

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. 9.A 868.4									
84 BOT. HOLLOW S END	92° 18	231		+	3° 10	+13.0	5.2	+7.8	76.2
85 ON SLOPE E	94° 41	213		+	3° 00	+11.0	5.1	+5.9	74.3
86 " " "	103° 53	232		+	3° 00	+12.0	6.2	+5.8	74.2
87 TOP HOLLOW . NW.	97° 25	270		+	3° 58	+19.0	3.4	+15.6	84.0
88 " " . SW.	89° 57	235		+	3° 48	+16.0	3.2	+19.2	87.6
89 18" OAK	98° 37	183					5.3		63.1
90 24" "	85° 13	169					5.0		63.4
91 30" "	76° 40	146					7.4		61.0
92 24" "	56° 23	147					5.6		62.8
93 20" "	51° 52	168		+	2° 17	+7.0	2.8	+4.2	72.6
94 24" "	35° 30	163		+	0° 24	+1.0	2.8	−1.8	80.2
95 12" "	24° 46	155					6.0		62.4
At HUB 9.B HI. 5.43 868.0									
to HUB 9.A	132° 01	320							
to HUB 9.C	122° 06	297							
1. END-GR. N. SIDE FROST AVE	233° 17	296					4.5		64.0
2. SHOUL. LINE N SIDE FROST AVE	233° 17	296					4.5		64.0

Page 109 Transit ..... Obs. ..... Line .....

Date 2-10-30 Rec. R.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.B 868.5									
3 SHOUL. LINE N. SIDE FROST AVE	236° 30	226					4.8		63.7
4 BOT. DITCH.	231° 00	295					7.8		60.7
5 " "	234° 11	221					7.3		61.2
6 TOP "	229° 53	292					6.2		62.3
7 " "	231° 50	220					5.2		63.3
8 TOE SLOPE S	218° 26	294					5.3		63.2
9 " " "	212° 48	225					3.9		64.6
10 TOP " "	216° 38	300		+	0° 53	+ 5.0	4.5	-0.5	68.0
11 " " "	207° 30	228		+	2° 49	+ 11.0	3.2	+7.8	76.3
12 TOE R.R. SLOPE S	211° 00	306		+	2° 40	+ 14.0	11.5	+2.5	74.0
13 " " " "	200° 32	242		+	4° 41	+ 20.0	9.2	+10.8	79.3
14 TOP. " " "	208° 00	313		+	3° 10	+ 17.0	6.6	+10.4	78.9
15 " " " "	198° 31	250		+	4° 51	+ 21.0	9.2	+11.8	80.3
16 " N. RAIL.	206° 26	319		+	3° 34	+ 20.0	7.6	+12.4	80.9
17 " " "	196° 28	253		+	5° 12	+ 23.0	10.3	+12.7	81.2
18 " R.R. SLOPE N	205° 47	322		+	3° 28	+ 19.0	7.6	+11.4	79.9
19 " " " "	195° 53	256		+	5° 03	+ 23.0	11.3	+11.7	80.2

Page 110 Transit ..... Obs. ..... Line .....

Date 2-10-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.B 468.5									
20 TOE RR. SLOPE S	192° 24	246		+	5° 05	+22.0	10.2	+12.2	80.7
21 12" OAK.	213° 00	330		+	0° 45	+4.0	6.6	-2.6	65.9
22 12" "	215° 00	293		+	1° 25	+7.0	5.5	+1.5	70.0
23 12" "	223° 04	273					3.2		65.3
24 8" "	223° 33	267					2.5		66.0
25 15	224° 08	263					2.3		66.2
26 T.P.	198° 46	180		+	4° 13	+13.0	2.9	+10.1	78.6
27 G.P.	232° 05	89					6.6		62.4
28 T.P.	176° 28	163		+	5° 47	+16.0	3.8	+12.2	80.7
29 G.P.	169° 17	65					5.3		63.2
30 P.P.	263° 38	30					5.6		62.9
At HUB #9.B H.I. 5.25	468.3								
to HUB #9.A	132° 01	320							
to HUB #9.C	122° 06	297							
31 SLOW SIGN	139° 24	143					5.3		63.0
32 IRON RD. SIGN	275° 38	51					5.4		62.9
33 SHOUL. LINE N. SIDE FROST AVE	242° 52	159					5.00		63.3

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Date 2-14-30 Rec. AHP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9 B 868.3									
34 SHOUL LINE N SIDE FROST AVE	254° 46	105					4.9		63.4
35 N. END X DRAIN	250° 58	105					7.9		60.4
36 S. " " "	266° 45	130					9.6		58.7
37 TOE SHOULDER	240° 24	155					6.9		61.4
38 " "	251° 00	102					7.0		61.0
39 ON SLOPE, S	223° 44	148					6.0		62.3
40 " " "	221° 05	93					6.3		62.0
41 TOE " "	203° 49	167					2.3		66.0
42 ON " "	188° 87	123					3.1		65.2
43 TOE " "	184° 53	135					0.9		67.4
44 TOP " "	197° 00	183		+	5° 07	+16.0	1.9	+14.1	82.4
45 " " "	173° 49	144		+	5° 52	+15.0	1.7	+13.3	81.6
46 " " N.	191° 30	205		+	5° 23	+19.0	3.0	+16.0	84.3
47 " " "	170° 44	166		+	5° 10	+15.0	3.8	+11.2	79.5
48 TOE " "	189° 25	210		+	6° 05	+22.0	10.1	+11.9	80.2
49 " " "	170° 12	170		+	6° 13	+18.0	5.9	+12.1	80.4
50 TOP N. RAIL	187° 03	217		+	6° 07	+23.0	10.1	+12.9	81.2

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Date 2-14-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9.B 8683									
51 TOP N-RAIL.	168°47	184		+	6°06	+20.0	5.9	+14.1	82.4
52 TOE SLOPE S	185°50	225		+	6°02	+23.0	11.1	+11.9	80.2
53 " " "	168°20	190		+	6°00	+20.0	7.0	+13.0	81.3
54 ON CROWN	183°00	174		+	5°52	+18.0	4.9	+13.1	81.4
55 " "	193°30	179		+	5°56	+18.0	5.9	+12.1	80.4
56 " "	182°54	173		+	5°51	+18.0	4.9	+13.1	81.4
57 TOE SLOPE S.	166°35	89					4.9		63.4
58 " " "	166°30	116					2.1		66.2
59 " " "	142°10	120					5.1		63.2
60 " " "	157°53	100					4.9		63.4
61 ON " "	142°06	142		+	1°23	+3.0	2.7	+0.3	68.6
62 " " "	160°45	114		+	2°12	+4.0	1.6	+2.4	70.7
63 " " "	153°34	150		+	4°02	+11.0	2.7	+8.3	76.6
64 " " "	160°37	137		+	5°11	+12.0	4.2	+7.8	76.1
65 S. SHOUL R.R.	144°30	168		+	5°52	+17.0	3.9	+13.1	81.4
66 " " "	156°54	160		+	5°50	+16.0	3.8	+12.2	80.5
67 TOP N RAIL.	156°57	175		+	5°48	+18.0	3.9	+14.1	82.4

Page 113 Transit Obs. Line

Date 2-14-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9. B 868.3									
68 TOP N RAIL.	129° 50	183		+	5°-36	+18.0	3.9	+14.1	82.4
69 R.R. R.O.W. FENCE	197° 53	185		+	5°-30	+18.0	3.9	+14.1	82.4
70 " " "	187° 30	167		+	5°-18	+15.0	2.8	+12.2	80.5
71 R.R. SHOUL. LINE - S -	127° 08	177		+	5°-4	+16.0	2.9	+13.1	81.4
72 END - RR. ROW. FENCE	128° 45	146					0.7		67.6
73 TOE RR. SLOPE S	129° 00	136					4.0		64.3
74 4. 10" OAKS	141° 08	122					4.8		63.5
75 12" OAK	147° 18	116					3.2		65.1
76 15" "	156° 40	110					0.7		67.6
77 10	161° 40	97					5.3		63.0
78 24	162° 30	100					3.7		64.6
79 SHOUL. LINE KELLER - PKY.	272° 30	55					5.2		63.1
80 " " " "	196° 30	14					5.0		62.8
81 " " " "	131° 22	59					5.3		65.0
82 " " " "	126° 30	132					4.7		63.3
83 ℄ " "	40° 50	3					5.2		63.1
84 SHOUL. LINE " " W.	320° 00	70					5.0		63.3

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Date 2-14-30 Rec. A.L.P.

OBJECT HUB # 9.B 8683	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
85 SHOUL LINE KELLER PKY. W	28° 20	18					5.0		63.3
86 TOP BK.	331° 36	73					8.0		60.3
87 " "	33° 05	28					7.5		60.8
88 E SHORE OF CHANEL	334° 05	75					10.5		57.5
89 E " " "	32° 35	34					10.7		57.6
90 W " " "	358° 45	100					10.7		57.6
91 " " " "	33° 50	71					10.8		57.5
92 TOP BK.	358° 45	105					9.0		59.3
93 " "	33° 30	77					9.1		59.2
94 TOE SLOPE E	1° 05	109					7.6		60.7
95 " " "	35° 30	83					8.6		59.7
96 ON " "	2° 10	112					3.5		64.8
97 " " "	35° 19	90					1.9		66.4
98 " " "	8° 00	132		+	5° 38	+13.0	3.7	+9.3	77.6
99 TOP " "	34° 32	128		+	7° 08	+16.0	1.6	+14.4	82.7
100 " " "	13° 10	153		+	6° 56	+18.0	2.8	+15.2	83.5
101 ℄ KELLER PKY	115° 54	73					5.3		63.0

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Date 2-14-30 Rec. ALP

H.I. 886.30 OBJECT HUB # 9.B 886.30	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
102 ℄ KELLER PKY	118° 10	138					5.4		62.9
103 W. SHOUL LINE KELLER PKY.	102° 30	77					5.5		62.8
104 " " " " "	109° 51	143					5.6		62.7
105 E. SHORE CHANEL.	95° 30	79					10.3		58.0
106 " " "	106° 30	147					10.5		57.8
107 W " "	76° 30	111					10.7		57.6
108 " " "	95° 00	162					10.7		57.6
109 TOP BK.	74° 65	114					8.8		59.5
110 " "	93° 33	164					8.4		59.9
111 TOE SLOPE E.	70° 53	120					8.1		60.2
112 " " "	86° 35	177					4.9		63.4
113 ON " "	65° 15	140		+	5° 30	+13.4	6.7	+6.7	75.0
114 " " "	82° 15	185					0.0		68.3
115 TOP " "	60° 22	158		+	8° 15	+22.4	5.8	+16.6	84.9
116 ON " "	8° 40	193		+	3° 08	+10.6	2.0	+8.0	76.3
117 TOP " "	75° 07	207		+	5° 34	+20.0	3.0	+17.0	85.3
118 R.R. ROW. FENCE	97° 16	196					6.0		62.3

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Date 2-14-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9 B									
119 TOE R.R. SLOPE S.	97° 16	196					6.0		867.3
120 ON " " "	99° 47	204					2.6		65.7
121 SE. COR BRIDGE	126° 13	171					5.5		67.8
122 S. SHOULDER R.R.	108° 35	216		+	4° 10	+15.6	2.1	+13.5	81.8
123 TOP N RAIL	109° 31	223		+	4° 14	+16.5	2.1	+14.4	82.7
124 " " "	95° 36	288		+	4° 02	+20.0	5.4	+14.6	82.9
125 SHOULDER LINE S. RR	95° 00	272		+	3° 58	+19.0	5.4	+13.6	81.9
126 TOE R.R. SLOPE N	91° 30	274		+	4° 06	+20.0	6.4	+13.6	81.9
127 TOP " " "	89° 30	269		+	5° 14	+24.0	5.3	+18.7	87.0
128 " " " E	84° 40	248		+	5° 15	+23.0	4.2	+18.8	87.1
129 ON " " S.	95° 30	236		+	1° 06	+5.0	3.2	+1.8	70.1
130 TOE " " E	91° 45	210					2.7		65.6
131 ℄ KELLER PKY.	121° 30	178					5.3		63.0
132 SHOULDER " " W.	116° 30	187					5.5		67.8
133 E SHORE CHAN.	114° 36	193					10.6		57.7
134 W " "	108° 08	209					10.8		57.5
135 " " "	99° 51	184					10.7		57.6

Page 117 Transit ..... Obs. ..... Line .....

Date 2-14-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB. # 9 B										
136 TOP BK	100° 06	189					8.0		860.3	✓
137 SW. COR. BRIDGE	108° 03	209					8.7		59.6	✓
138 TIMBER LINE 10" OAK	89° 20	220					0.3		68.0	✓
139 8" "	84° 06	196		+	0° 47	+3.0	2.0	+1.0	69.3	✓
140 26" "	72° 00	172		+	2° 36	+8.0	5.9	+2.1	70.4	✓
141 12" "	70° 13	130					1.6		66.7	✓
142 12" "	64° 00	110					4.3		64.0	✓
143 12" "	41° 10	90					1.8		66.5	✓
144 6" "	10° 24	102					2.6		65.7	✓
145 20" "	357° 42	129					0.7		67.6	✓
146 4. 6" WILLOWS.	333° 50	70					7.9		60.4	✓
At HUB #9 e 868.76 BM 5.25										
TO HUB #9 B	122° 06	297								
TO HUB #9 D	235° 54	229								
1 NE COR BRIDGE	290° 51	109					5.9		62.9	✓
2 NW " "	331° 01	85					8.8		60.0	
3 ℄ KELLER PKY.	299° 32	99					5.8		63.0	

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Date 2-17-30 Rec. H.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
	HUB # 9.e										
4	℄ KELLER PKY.	268° 21	72					5.8		863.0	✓
5	SHOUL. W. SIDE KELLER PKY	307° 13	90					6.2		62.6	✓
6	" " " "	272° 22	53					5.9		62.9	✓
7	E. SHORE OF CHAN.	313° 16	88					11.0		57.8	✓
8	" " " "	275° 07	46					10.8		58.0	✓
9	W. " " "	328° 02	85					11.3		57.5	✓
10		304° 10	19					11.1		57.7	✓
11	TOP BK.	324° 10	17					6.4		62.4	✓
12	" "	334° 02	65					7.7		61.1	✓
13	TOE SLOPE E	16° 04	20					3.8		65.0	✓
14	ON " E	345° 14	66		+	0° 40	+1.0	1.3	-0.3	68.5	✓
15	TOP. " E	36° 40	41	39	+	10° 14	+9.0	1.2	+7.8	76.6	✓
16	" " "	355° 25	72		+	9° 51	+12.0	6.4	+5.6	74.0	✓
17	BEG. R.R. ROW. FENCE	341° 36	73		+	3° 28	+4.0	1.4	+2.6	71.4	✓
18	℄ KELLER PKY.	229° 30	83					5.6		63.2	✓
19	" "	210° 18	126					5.7		63.1	✓
20	W. SHOUL. LINE "	222° 44	66					5.8		63.0	✓

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Date 2-17-30 Rec. F.L.P.

OBJECT HUB #9 c	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
21 W. SHOUL. LINE KELLER PKY.	223° 04	116					5.7		863.1	✓
22 E SHORELINE CHAN.	218° 15	59					11.1		57.7	✓
23 " " " "	199° 15	110					10.9		57.9	✓
24 W " " "	188° 25	38					11.1		57.7	✓
25 " " " "	181° 31	102					11.2		57.6	✓
26 TOP BK.	174° 48	36					5.8		63.0	✓
27 " "	177° 16	103					6.8		62.0	✓
28 TOE SLOPE E.	153° 51	39					5.1		63.7	✓
29 " " "	166° 31	102					5.6		63.2	✓
30 ON " "	134° 12	49		+	8° 10	+8.0	1.2	+6.8	75.6	✓
31 " " "	141° 57	113	108	+	11° 54	+22.0	10.6	+11.4	80.2	✓
32 " " "	91° 30	83	71	+	21° 06	+24.0	2.4	+21.6	90.4	✓
33 " " "	108° 05	104	93	+	18° 14	+28.0	4.5	+23.5	92.3	✓
34 ON TIMBER LINE 10" OAK	165° 40	115					6.1		62.7	✓
35 " " 10"	159° 05	77					0.4		68.4	✓
36 " " 20	156° 35	47					4.8		64.0	✓
37 " " 24	100° 25	20					0.1		68.7	✓

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Date 2-17-30 Rec. HLP

OBJECT HUB 9 ℄	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
38 8" OAK ON TIMBER LINE	31° 48	46	42	+	11° 05	+8.0	2.2	+5.8	87.4.6
39 14 " " " "	56° 16	68	61	+	18° 20	+18.0	3.4	+14.6	83.4
40 12 LONE OAK	27° 10	70		+	9° 31	+12.0	5.4	+6.6	75.4
41 10 "	27° 52	83		+	10° 0	+14.0	4.4	+9.6	78.4
42 P. P.	299° 26	73					6.4		62.4
43 SLOW SIGN	218° 80	70					6.1		62.7
44 END ORN. G.R.	203° 08	116					5.5		63.3
45 P.P.	199° 08	141					5.8		63.0
46 END. RR. ROW. FENCE	274° 30	105					1.7		71.1
47 E. SHOUL. LINE KELLER PKY	271° 51	90					5.8		63.0
48 " " " " "	241° 13	100					6.0		62.8
49 TOE CUT. " "	266° 20	107					3.7		65.1
50 " " " "	244° 36	123					5.4		63.4
51 TOP. " " "	266° 45	120		+	4° 28	+9.0	2.6	+6.4	75.2
52 " " " "	246° 34	143		+	4° 26	+11.0	1.7	+9.3	78.1
53 " " " "	244° 50	158		+	4° 47	+13.0	1.8	+11.2	79.9
54 T.P.	247° 63	163		+	5° 04	+14.0	1.8	+12.2	80.9

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Date 2-17-30 Rec. H.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB 9.c										
55 ON SLOPE W.	263°50	157		+	5°03	+14.0	1.8	+12.2	88.1.0	✓
56 TOP. CUT W.	252°47	133		+	5°17	+12.0	1.7	+10.3	79.1	✓
57 TOE SLOPE W.	261°30	188		+	5°19	+17.0	4.9	+12.1	80.9	✓
58 " " "	256°08	176		+	5°17	+16.0	3.9	+12.1	80.9	✓
59 " " S.	263°17	210		+	5°35	+20.0	8.1	+11.9	80.7	✓
60 T.P.	267°38	140		+	5°33	+14.0	3.7	+10.3	79.1	✓
61 N. SHOUL. LINE R.R.	272°06	160		+	5°25	+15.0	2.8	+12.2	81.0	✓
62 " " " "	290°57	113		+	7°35	+15.0	2.6	+12.4	81.2	✓
63 " " " "	332°08	91		+	9°51	+15.0	2.5	+12.5	81.3	✓
64 TOE RR. SLOPE	271°50	140		+	4°09	+10.0	1.7	+8.3	77.1	✓
65 " " "	275°10	115		+	2°06	+4.0	1.6	+2.4	71.2	✓
66 " " "	273°15	102					3.2		65.6	✓
67 E. SHOUL. LINE KELLER PKY.	226°21	121					5.6		63.2	✓
68 " " " " "	210°10	178					5.3		63.5	✓
69 TOE SLOPE W	236°31	153					4.4		64.4	✓
70 " " E	222°48	211					0.5		68.3	✓
71 ON " W.	241°50	182		+	6°33	+21.0	1.9	+18.1	86.9	✓

Page 122 Transit Obs. Line

Date 2-17-30 Rec. H.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
	HUB #9.C										
72	T.P	226° 05'	190					2.2		86.6	✓
73	ON SLOPE W	233° 37	210		+	5° 37	+21.0	2.0	+19.0	87.8	✓
74	" " "	227° 09	217		+	5° 04	+19.0	2.1	+16.9	85.7	✓
	At. HUB #9.D 903.35 Ht 5.10										
	to HUB #9.C	235° 54	229								
	to HUB #9E	162° 48	266							—	
1	TOP SLOPE S.	352° 07	83					12.2		91.2	✓
2	" " "	338° 05	76					8.5		94.9	✓
3	" " "	324° 44	72					7.7		95.7	✓
4	" " "	315° 26	73					8.3		95.1	✓
5	" " "	295° 05	101		−	2° 43	+5.0	11.5	-6.5	96.9	✓
6	T.P.	327° 49	79					11.3		92.1	✓
7	TOP SLOPE W.	129° 06	33					5.5		97.9	✓
8	" " "	65° 20	19					6.6		96.8	✓
9	" " "	31° 45	46					11.0		92.4	✓
10	" " "	31° 44	60		−	2° 26	+3.0	11.3	-8.3	95.1	✓
11	" "	16° 17	70		−	1° 51	+2.0	11.4	-9.4	94.0	✓

Page 123 Transit Obs. Line

Date 2-17-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9.P									
12 TOP SLOPE W.	357°18	80					12.6		890.8
13 " " N.	135°23	36					6.4		97.0
14 " " "	136°40	30					5.2		98.2
15 "	159°38	15					4.9		98.5
16 " " "	232°07	16					7.3		96.1
17 " " "	223°00	38		−	5°03	-20.0	11.2	-31.2	72.2
18 " " W.	13°20	14					5.2		98.2
19 " " "	347°44	48					6.1		97.3
20 R.R. ROW. FENCE	325°20	59					6.7		96.7
21 ON CROWN	326°15	41					5.4		98.0
22 " "	318°0	7					5.2		98.2
23 TOP SLOPE. E.	306°0	47					7.5		95.9
24 " " "	217°30	16					7.1		96.3
25 ON " "	272°34	77		−	8°08	-11.0	8.4	-19.4	84.0
26 " " "	257°57	50		−	7°47	-7.0	11.3	-18.3	85.1
27 " " "	245°46	100	94	−	15°02	-25.0	8.5	-26.5	76.9
28 TOE " "	257°53	150	135	−	15°02	-34.0	2.7	-36.7	66.7

Page 124 Transit ..... Obs. ..... Line ..... Wyl

Date 2-17-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9 D									
29 TOE SLOPE E	240° 06	145	135	−	15° 35	-37.0	4.7	-41.7	861.7
30 ON " "	259° 48	103	97	−	14° 18	-23.0	2.5	-25.5	77.9
31 W. SHORELINE SWAMP	240° 49	153	143	−	15° 38	-37.0	2.8	-39.8	63.6
32 IN SWAMP.	237° 56	213	205	−	11° 19	-39.0	2.1	-41.1	62.3
33 TOP SLOPE E	219 35	43		−	4° 45	-15.0	12.2	-27.2	76.2
34 " " "	194° 45	66		−	5° 05	-6.0	11.3	-17.3	86.1
35 " " "	227° 36	80	77	−	11° 24	-15.0	11.4	-26.4	77.0
36 " " "	207° 35	95	91	−	11° 01	-17.0	11.5	-28.5	74.9
37 TOE " "	226° 04	126	122	−	14° 11	-29.0	11.6	-40.6	62.8
38 " " "	211° 57	128	121	−	13° 34	-24.0	11.6	-35.6	67.8
39 W. SHORE SWAMP.	226° 27	133	126	−	13° 52	-28.0	11.7	-39.7	63.7
40 " " "	212° 11	133	126	−	13° 49	-29.0	11.7	-40.7	62.7
41 IN "	212° 48	220		−	9° 03	-34.0	8.1	-42.1	61.3
42 TOP SLOPE E.	177° 06	127		−	4° 8	-9.0	11.6	-20.6	92.8
43 " " "	172° 04	169		−	2° 45	-8.0	11.9	-19.9	83.5
44 " " "	175° 26	145		−	3° 28	-9.0	11.7	-20.7	82.7
45 " " "	191 28	140	137	−	10° 24	-25.0	5.7	-30.7	72.7

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

Page 125 Transit ..... Obs. ..... Line .....

Date 2-17-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.D									
46 ON SLOPE E	181° 01	184		−	4°50	-16.0	11.0	-27.0	87.4
47 TOE " "	201° 11	160	154	−	11°43	-30.0	9.8	-39.8	63.6
48 " " "	190° 40	214	202	−	10°13	-35.0	4.1	-39.1	64.3
49 ON " "	188° 06	200		−	8°18	-28.0	7.0	-35.0	68.4
50 W. SHORE SWAMP	202° 43	163	156	−	11°38	-31.0	9.8	-40.8	62.6
51 " " "	191° 20	219	211	−	10°18	-37.0	4.1	-41.1	62.3
52 IN "	196° 55	272		−	8°22	-39.0	3.4	-42.4	61.0
53 ON TIMBER LINE 12"	188° 13	203		−	7°46	-27.0	10.0	-37.0	66.4
54 " " " 12"	194° 32	185	177	−	11°08	-33.0	3.9	-36.9	66.5
55 " " " 8"	200° 30	167	159	−	12°44	-34.0	5.8	-39.8	63.8
56 " " " 12"	199° 44	148	141	−	12°48	-31.0	5.7	-36.7	66.7
57 " " " 6"	216° 16	115	105	−	17°24	-29.0	4.6	-33.6	69.8
58 " " " 10"	234 18	113	104	−	17°15	-29.0	2.6	-31.6	71.8
59 " " " 12"	245 0	142	130	−	15°54	-34.0	2.7	-36.7	66.7
60 " " " 10"	258° 33	146	137	−	14°0	-32.0	3.7	-35.7	67.7
61 " " " 12"	264 0	130	120	−	12°18	-25.0	4.6	-29.6	73.8
62 " " " 24"	276 45	93	88	−	18°10	-15.0	3.5	-18.5	84.9

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Date 9-17-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB 9.D										
126 ON TIMBER LINE 12"	285°30	72		−	4°20	−5.0	8.7	−13.7	889.7	✓
127 " " " 12"	317°52	63					7.4		96.0	✓
128 " " " 10"	311°45	11					5.3		98.1	✓
129 " " " 8"	265°45	33					10.5		92.9	✓
130 " " " 10"	214°06	48		−	4°14	−4.0	12.2	−16.2	87.2	✓
131 " " " 10"	202°15	68		−	6°30	−8.0	11.3	−19.3	84.1	✓
132 TWIN " 12	192°22	125	119	−	10°44	−22.0	5.6	−27.6	75.8	✓
133 12"	180°0	155			5°52	−16.0	6.8	−22.8	80.6	✓
134 LONE 12	87°0	8					5.0		98.4	✓
135 " 10	348°04	54					6.6		96.8	✓
136 SCRUB OAK	40°0	30					8.1		95.3	✓
137 " "	7°50	47					8.4		95.0	✓
138 " "	24°00	3.5					7.9		95.5	✓
139 " "	10°40	53					9.7		93.7	✓
At HUB #9.E HI. 5.20 (882.58)										
to HUB #9.D	162°48	266								
to HUB #9.F = HUB #15	153°22	150								

Page 127 Transit ..... Obs. ..... Line .....

Date 2-18-30 Rec. HLP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #9 E 483.6									
1 TOP SLOPE E	314° 0	58					3.3		80.3
2 " " "	302° 45	17					5.0		78.6
3 " " "	26° 04	5					4.7		78.9
4 ON " "	298° 16	61					7.2		76.4
5 " " "	273° 42	25					7.3		76.3
6 " " "	282° 16	74		−	5° 49	-8.0	8.4	-16.4	67.1
7 " " "	251° 25	65		−	5° 34	-6.0	13.3	-19.3	64.3
8 " " "	251° 32	73		−	8° 44	-10.0	9.4	-19.4	64.1
9 TOE " "	273° 24	88		−	10° 22	-16.0	6.4	-22.4	61.1
10 " " "	251° 14	77		−	10° 24	-14.0	8.4	-22.4	61.1
11 W. SHORELINE SWAMP	272° 13	91		−	10° 14	-16.0	6.5	-22.5	61.1
12 " " " "	251° 09	82		−	10° 22	-15.0	8.4	-23.4	60.1
13 IN "	247° 56	137		−	5° 42	-14.0	9.7	-23.7	59.9
14 TOP SLOPE E	160° 09	23					4.7		78.9
15 ON " "	159° 26	39					5.4		78.1
16 " " "	205° 17	33					8.7		74.9
17 " " "	182° 0	45					9.3		74.3

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Date 2-18-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB-9.E 483.6									
18 ON SLOPE E	221° 27	49	47	−	11° 32	-10.0	4.3	-14.3	69.3
19 " " "	201° 33	58		−	5° 29	-6.0	8.3	-14.3	69.3
20 " " "	227° 49	66	63	−	11° 23	-12.0	5.3	-17.3	66.3
21 " " "	213° 13	77	75	−	10° 17	-14.0	2.4	-16.3	67.3
22 " " "	217° 56	64		−	9° 51	-11.0	4.3	-15.3	68.3
23 TOE " "	227° 45	77	74	−	11° 33	-15.0	6.4	-21.4	62.2
24 " " "	214° 49	89	86	−	10° 52	-16.0	5.4	-21.4	62.2
25 W. SHORE LINE SWAMP	214° 45	94	92	−	10° 33	-17.0	5.5	-22.5	62.1
26 TOP SLOPE E	163° 33	75					7.7		75.9
27 ON " "	177° 42	85		−	4° 12	-6.0	7.4	-13.4	70.2
28 " " "	189° 52	94		−	1° 31	-3.0	12.5	-15.5	68.1
29 " " "	194° 24	99		−	3° 08	-5.0	11.5	-16.5	67.1
30 " " "	200° 0	89		−	4° 02	-6.0	9.4	-15.4	68.2
31 TOE " "	204° 55	102		−	8° 43	-16.0	6.5	-22.5	61.1
32 " " "	198° 17	109		−	8° 45	-16.0	4.5	-20.5	63.1
33 W. SHORE LINE SWAMP	201° 11	114		−	6° 42	-13.0	9.6	-22.6	61.0
34 IN "	210° 18	160		−	7° 08	-20.0	3.8	-23.8	59.8

Page 129 Transit Obs. Line

Date 2-18-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.E 683.6									
35 ON TIMBER LINE 14" OAK	211° 54	87		−	9° 19	-14.0	6.4	-20.4	63.2
36 " " " 8"	229° 13	57	54	−	11° 37	-2.0	5.3	-7.3	76.3
37 " " " 10"	255° 22	64	61	−	11° 52	-12.0	5.3	-17.3	66.3
38 " " " 12"	279° 52	90		−	9° 40	-15.0	5.5	-20.5	63.1
39 " " " 14"	296° 0	118		−	2° 14	-5.0	11.6	-16.6	67.0
40 " " " 12"	303° 04	145		−	2° 41	-7.0	12.7	-19.7	63.9
41 " " " 15"	311° 52	97					4.6		79.0
42 " " " 12"	291° 10	68					10.0		73.6
43 " " " 6"	277° 0	33					7.9		75.7
44 " " " 10"	238° 40	21					7.1		76.5
45 " " " 12"	219° 0	34					10.5		73.1
46 " " " 14"	204° 10	55		−	9° 15	-10.0	4.3	-14.3	69.3
47 ℄ KELLER PKY.	10° 32	205		−	2° 14	-8.0	12.0	-20.0	63.6
48 " " "	12° 52	156		−	3° 06	-9.0	10.8	-19.8	63.8
49 SHOULDER LINE E.	5° 15	205		−	3° 10	-11.0	8.0	-19.0	64.6
50 " "	6° 20	152		−	3° 14	-9.0	9.8	-18.8	64.8
51 ON SLOPE W	4° 0	203		−	3° 15	-8.0	7.0	-15.0	68.6

Page 130 Transit ..... Obs. ..... Line .....

Date 2-18-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9 E 483.6									
35 ON SLOPE W.	4° 55	152		−	3° 01	-8.0	9.8	-17.8	65.8
36 " " "	356° 0	202		−	2° 55	-10.0	7.0	-17.0	66.6
37 " " "	351° 38	141		−	2° 45	-7.0	8.7	-15.7	67.9
38 " " "	344° 24	204		−	2° 35	-9.0	5.0	-14.0	69.6
39 " " "	346° 27	167		−	2° 36	-7.0	7.8	-14.8	68.8
40 " " "	342° 19	205		−	1° 32	-5.0	6.0	-11.0	72.6
41 " " "	344° 0	164		−	1° 35	-5.0	7.8	-12.8	70.8
42 " " "	350° 30	138		−	1° 31	-4.0	9.7	-13.7	69.9
43 TOE " N.	345° 0	212					10.4		73.2
44 " " "	348° 21	228					8.5		75.1
45 " " "	340° 0	235					8.6		75.0
46 ON " "	341° 40	244					3.6		80.0
47 TOE " "	337° 30	235					9.1		74.5
48 ON " "	338° 10	245					3.2		80.4
49 " " "	335° 30	245					3.5		80.1
50 " "	339° 0	259		+	2° 0	+9.0	3.3	+5.7	89.3
51 TOE " W	335° 34	234					9.3		74.3

Page 131 Transit ..... Obs. ..... Line .....

Date 2-18-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9.E 883.6									
52 TOE SLOPE W	335° 0	225					11.4		873.2
53 ON " "	337° 08	223					11.9		72.7
54 " " "	337° 52	222					11.0		72.6
55 " " "	333° 0	223		+	1° 14	+5.0	12.1	-7.1	76.5
56 " " "	336° 12	202					10.2		73.4
57 " " "	333° 16	200		+	1° 40	+6.0	10.0	-4.0	73.6
58 " " "	334° 0	173					4.8		78.8
59 TOE " "	338° 05	165					10.5		72.7
60 " " "	333° 39	140					10.5		72.7
61 ON " "	330° 13	140					5.0		78.6
62 ℄ KELLER PKY.	16° 57	107		−	4° 38	-9.0	9.5	-18.5	65.1
63 " " "	47° 57	43		−	5° 14	-4.0	11.2	-15.2	68.4
64 E. SHOUL. LINE "	9° 15	100		−	3° 17	-6.0	11.5	-17.5	66.1
65 " " " "	33° 55	32		−	7° 05	-3.0	11.2	-14.2	69.4
66 ON SLOPE W	5° 53	97		−	1° 43	-3.0	12.5	-15.5	68.1
67 " " "	29° 0	30		−	7° 57	-4.0	10.1	-14.1	69.5
68 " " "	349° 14	96					13.9		69.7

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Date 2-18-30 Rec. ALP

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB 9 E 883.6									
69	TOE SLOPE W.	334° 38	100					12.4		871.2
70	" " "	332° 38	73					13.0		70.6
71	" " "	324° 48	51					13.1		70.5
72	" " "	330° 20	28					13.7		69.9
73	" " "	21° 38	6					11.4		72.2
74	" " "	309° 43	25					10.8		72.8
75	ON " "	330° 24	102					8.1		75.5
76	" " "	325° 27	79					9.1		74.5
77	℄ KELLER PKY	74° 26	33		−	3° 45	-2.0	12.2	-14.2	69.4
78	" " "	128° 0	50					13.0		70.6
79	E. SHOUL. LINE "	71° 20	21		−	3° 20	-1.0	13.1	-14.1	69.5
80	" " " "	143° 17	43					13.1		70.5
81	ON SLOPE W.	69° 45	16					13.8		69.8
82	TOE " "	64° 24	10					12.2		71.4
83	" " "	148° 24	43					11.8		71.8
84	℄ KELLER PKY.	144° 50	78					11.9		71.7
85	E. SHOUL. LINE "	155° 20	76					11.7		71.9

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Date 2-18-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9 E 883.6									
86 TOE SLOPE W	159° 08	75					10.7		872.9
87 T.P.	141° 51	38					12.6		71.0
88 T.P.	0° 25	92		−	1° 38	−3.0	11.5	−14.5	69.1
89 ROAD SIGN.	124° 15	23					13.0		70.6
90 ℄ KELLER PKY. LOWER.	30° 38	126		−	4° 06	−9.0	10.6	−19.6	64.0
91 W. SHOUL. LINE KELLER PKY.	17° 38	212		−	4° 06	−8.0	5.1	−13.1	70.5
92 " "	35° 10	139		−	4° 0	−10.0	10.7	−20.7	62.9
93 E SHORE OF CHANEL.	20° 30	215		−	4° 07	−15.0	10.1	−25.1	58.5
94 " " " "	39° 0	155		−	5° 49	−16.0	9.8	−25.8	57.8
95 W " " "	28° 0	240		−	5° 26	−23.0	3.2	−26.2	57.4
96 " " " "	45° 55	191		−	5° 20	−18.0	8.0	−26.0	57.6
97 TOE OF BK.	28° 36	240		−	5° 22	−22.0	2.2	−24.2	59.4
98 ON "	46° 44	195		−	5° 30	−19.0	5.0	−24.0	59.6
99 TOP. " "	29° 40	244		−	4° 05	−17.0	3.2	−20.2	63.4
100 " "	45° 47	202		−	4° 04	−14.0	6.0	−20.0	63.6
101 ON "	46° 45	214		−	4° 05	−15.0	4.1	−19.1	64.5
102 TOE "	47° 49	205		−	5° 27	−19.0	3.0	−22.0	61.6

Page 134 Transit ..... Obs. ..... Line .....

Date 2-18-30 Rec. ALP

OBJECT HUB 9 E 483.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
103 TOP OF BK	48° 20	213		−	4°28	-16.0	31	-19.1	864.5	✓
104 TOE SLOPE E	34° 15	260		−	1°27	-7.0	10.3	-17.3	66.3	✓
105 ON " "	49° 22	240		−	1°51	-8.0	10.2	-18.2	65.4	✓
106 " " "	37° 15	277		−	0°25	-2.0	6.4	-8.4	75.2	✓
107 " " "	50° 03	267		−	1°02	-5.0	2.3	-7.3	76.3	✓
108 " " "	39° 55	297		+	1°55	+10.0	9.5	-19.5	64.1	✓
109 " " "	51° 42	295		+	1°54	+10.0	6.5	-16.5	67.1	✓
110 W. SHOULDER LINE KELLER PKY.	27 16	103		−	4°03	-7.0	11.5	-18.5	65.1	✓
111 TOE " " " "	28 45	104		−	4°13	-8.0	11.5	-19.5	64.1	✓
112 END KELLER PKY. PAVEMENT	39° 0	112		−	4°17	-8.0	11.6	-19.6	64.0	✓
113 ℄ " "	31° 25	59		−	4°30	-5.0	11.3	-16.3	67.3	✓
114 " " "	99° 43	35		−	4°13	-3.0	11.2	-14.2	69.4	✓
115 W. SHOUL. " "	41° 0	70		−	4°32	-6.0	10.4	-16.4	67.2	✓
116 " " " "	91° 35	50		−	4°18	-4.0	10.3	-14.3	69.3	✓
117 TOE SHOULDER.	45° 08	78		−	7°08	-10.0	10.4	-20.4	63.2	✓
118 " "	91° 05	62		−	9°22	-10.0	10.6	-20.6	63.0	✓
119 E. SHOUL. LINE KELLER PKY	47° 22	85		−	6°20	-10.0	11.4	-21.4	62.2	✓

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Date 2-18-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 9 E 883.6									
120 E. SHOULLINE KELLER PKY	89° 46	76		—	6° 38	-8.0	12.4	-20.4	863.2
121 ℄ " "	51° 26	98		—	9° 47	-16.0	4.5	-20.5	63.1
122 ℄	88° 38	87		—	9° 52	-15.0	6.5	-21.5	62.1
123 W " " " "	53° 33	109	103	—	10° 02	-18.0	2.6	-20.6	63.0
124 " " " " "	87° 41	100	94	—	10° 02	-16.0	4.5	-20.5	63.1
125 TOP BK.	86° 30	108	103	—	9° 53	-17.0	2.5	-19.5	64.1
126 " "	56° 16	125		—	6° 51	-15.0	6.6	-21.6	62.0
127 " "	82° 30	140		—	6° 45	-16.0	3.7	-19.7	63.9
128 " "	56° 03	135		—	6° 45	-16.0	6.7	-22.7	60.9
129 E SHORE OF CHANEL	56° 04	141		—	8° 10	-20.0	4.7	-24.7	58.9
130 " " " "	79° 04	155		—	7° 39	-21.0	4.8	-25.8	57.8
AT HUB # 9 E HI 5.13 883.51									
TO HUB # 9 D	162° 48	266							
TO HUB # 9 F = HUB 15	153° 22	150							
1 W. SHORE OF CHANEL	57° 14	187		—	7° 0	-23.0	3.0	-26.0	57.5
2 " " " "	75° 0	201		—	6° 47	-24.0	2.0	-26.0	57.5
3 TOP BK	57° 13	190		—	6° 15	-21.0	3.0	-24.0	59.5

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Date 2-18-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9E 883.5									
4 TOP BK.	74° 32	205		−	5° 39	-20.0	3.0	-23.0	60.5
5 TOE "	57° 11	202		−	5° 18	-19.0	4.0	-23.0	60.5
6 " "	73° 30	214		−	5° 0	-19.0	4.1	-23.1	60.4
7 TOP "	56° 50	207		−	4° 0	-14.0	6.0	-20.0	63.5
8 " "	73° 0	218		−	4° 3	-16.0	4.1	-20.1	63.4
9 " "	57° 13	233		−	1° 55	-8.0	11.2	-19.1	64.4
10 " "	72° 30	255		−	2° 01	-9.0	10.3	-19.4	64.1
11 TOE SLOPE E	56° 52	240		−	2° 03	-9.0	11.2	-20.2	63.3
12 " " "	69° 37	260		−	2° 40	-12.0	9.3	-21.3	62.2
13 ON " "	56° 15	271					9.0		74.5
14 " " "	67° 18	290					9.6		73.9
15 " " "	56° 30	294		+	1° 16	-7.0	5.3	-12.3	71.2
16 " " "	68° 05	328		+	1° 41	-10.0	4.6	-14.6	68.9
17 BEG. ORNT. G.R	29° 30	103		−	4° 10	-7.0	11.5	-18.5	65.0
18 Δ " "	27° 50	102		−	4° 05	-7.0	11.5	-18.5	65.0
19 Δ " "	29° 12	94		−	3° 53	-6.0	11.5	-17.5	66.0
20 END " "	157° 16	267					5.4		78.1

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Date 2-18-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 9 E 883.5									
21 P.P.	36° 0	90		−	8°17	-13.0	6.5	-19.5	64.0
22 P.P.	126° 32	100		−	8°23	-15.0	6.5	-21.5	62.0
At HUB # 15 HI 5.30 879.3									
to HUB 9E	153°22	150							
to HUB 14	236°57	290							
1 ℄ KELLER PKY	338° 45	35					6.5		72.8
2 E " "	226° 03	5					5.2		74.1
3 E. SHOULDER LINE PKY.	314° 30	42					6.1		73.2
4 " " " "	247° 49	22					5.0		74.3
5 TOP SLOPE E	305° 45	45					5.2		74.1
6 TOE " "	253° 54	36					8.9		70.4
7 " " "	291° 04	59					10.5		68.8
8 TOP " "	249° 57	71					10.7		68.6
9 ON " "	287° 40	65					9.0		70.3
10 TOP " "	278° 14	85		−	3°18	-5.0	6.4	-11.4	67.9
11 TOE " "	249° 30	89		−	4°04	-6.0	11.4	-17.4	61.9
12 " " "	272° 51	101		−	5°38	-10.0	8.5	-18.5	60.8
13 W SHORE LINE SWAMP	249° 21	93		−	4°15	-7.0	11.5	-18.5	60.8

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Date 2-18-30 Rec. H.L.P.

OBJECT HUB #15 379.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
14 IN SWAMP	252° 26	131		−	4°22	-10.0	8.6	-18.6	60.7	✓
15 ℄ KELLER PKY.	173° 10	39					3.9		75.4	✓
16 ℄ " "	171° 0	81					2.4		76.9	✓
17 E. SHOULDER "	198° 07	43					4.0		75.3	✓
18 " " "	181° 55	84					2.8		76.5	✓
19 TOE "	214° 20	45					10.4		68.9	✓
20 " "	190° 47	92		−	1°22	-2.0	7.5	-9.5	69.8	✓
21 ON SLOPE E	227° 0	61		−	5°32	-6.0	7.3	-13.3	66.0	✓
22 " " "	199° 38	102		−	3°53	-7.0	5.5	-12.5	66.8	✓
23 " " "	235° 06	86		−	6°24	-10.0	7.4	-17.4	61.9	✓
24 " " "	212° 41	124		−	5°30	-12.0	3.6	-15.6	63.7	✓
25 W. LINE SWAMP.	234° 48	95		−	5°50	-10.0	8.5	-18.5	60.8	✓
26 ON SLOPE	216° 18	139		−	5°50	-14.0	1.7	-15.7	63.6	✓
27 N. END SWAMP	230° 40	121		−	6° 0	-13.0	5.6	-18.6	60.7	✓
28 ℄ KELLER PKY.	169° 37	137					0.6		78.7	✓
29 " "	169° 0	193		−	1° 0	-3.0	2.0	-5.0	74.3	✓
30 SHOULDER LINE "	176° 33	138		+	0.20	-1.0	1.7	-2.7	76.6	✓

Page 139 Transit ..... Obs. ..... Line .....

Date 2-18-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 15 879.3									
31 SHOULDER LINE PKY	174° 15	195		+	1° 03	+4.0	2.0	+2.0	81.3
32 TOE "	181° 19	141		+	0° 56	+2.0	6.7	+4.7	84.0
33 ON SLOPE S	180° 10	194		+	0° 55	+3.0	3.0	0.0	79.3
34 " " "	190° 40	148		−	1° 41	-4.0	2.7	-6.7	72.6
35 " " "	185° 36	193		+	0° 55	+3.0	4.0	-1.0	78.3
36 " " "	204° 30	170		−	2° 14	-7.0	1.9	-8.9	70.4
37 INTER. #1 AND KELLER PKY	168° 38	247		+	1° 23	+6.0	3.2	+2.8	82.1
38 ℄ #1.	182° 55	245		+	1° 38	+7.0	3.2	+3.8	83.1
39 SHOULDER LINE #1.	175° 56	218		+	1° 43	+7.0	3.1	+3.9	83.2
40 " " #1.	183° 06	230		+	1° 33	+6.0	2.2	+3.8	83.1
41 BLINKER CENTE #1.	169° 06	228		+	1° 28	+6.0	3.2	+2.8	82.1
42 T.P.	183° 30	222		+	1° 23	+5.0	2.1	+3.9	83.2
43 T.P.	174° 32	214		+	1° 16	+5.0	2.1	+2.9	82.2
44 P.P.	176° 56	222		+	1° 27	+6.0	2.1	+5.9	83.2
45 T.P.	178° 30	136					2.0		77.3
46 STOP SIGN	174° 03	201		+	1° 08	+4.0	2.0	+2.0	81.3
47 T.P.	229° 0	24					4.6		74.7

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Date 2-18-30 Rec. ALP

OBJECT HUB # 15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
48 END STONE WALL	180° 40	193		+	0°48	+3.0	3.0	0.0	79.3
49 12" OAK	180° 0	200		+	1°08	+4.0	3.0	+1.0	80.3
50 14" "	182° 10	206		+	0°59	+7.0	2.0	+5.0	84.3
51 16" "	194° 48	212		+	1°58	+7.0	5.1	+1.9	81.2
52 ON TIMBER LINE 12" OAK	188° 30	188		+	0°15	+1.0	2.9	-1.9	77.4
53 " " " 16"	179° 15	190		+	1°20	+4.0	4.0	0.0	79.3
54 " " " 8"	184° 0	148					4.4		74.9
55 " " " 14"	186° 23	110					8.3		71.0
56 " " " 8"	195° 0	91					10.4		68.9
57 " " " 10"	211° 54	45					9.3		70.0
58 " " " 10"	293° 30	39					6.1		73.2
59 " " " 12"	312° 05	62					5.8		73.5
60 " " " 12"	316° 30	92					6.1		73.2
61 " " " 6"	290° 30	58					10.0		69.3
62 " " " 10"	269° 0	45					10.2		69.1
63 " " " 8"	224° 45	50					12.1		67.2
64 " " " 10"	228° 40	70		−	7°03	−9.0	6.3	−2.7	76.6

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Date 2-18-30 Rec. A.L.P.

OBJECT HUB #15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
65 12" OAK ON TIMBER LINE	220° 15	130		—	6°38	-15.0	1.6	-16.6	62.7
66 SHOULDER LINE	356° 40	67					8.1		71.2
67 " "	44° 30	13					5.5		73.8
68 TOE " "	9° 40	71		—	4°40	-6.0	10.4	-16.4	62.9
69 " " "	60° 40	34		—	8°55	-5.0	11.2	-16.2	63.1
70 " "	16° 32	79		—	6°27	-9.0	8.4	-17.4	61.9
71 " "	63° 13	48		—	7°09	-7.0	11.2	-18.2	61.1
72 ℄ KELLER PKY.	20° 53	85		—	7°20	-11.0	6.4	-17.4	61.9
73 " "	63° 51	60		—	7°45	-8.0	9.3	-17.3	62.0
74 SHOULDER LINE	25° 37	91		—	5°39	-9.0	8.5	-17.5	61.8
75 " "	64° 19	70		—	5°59	-8.0	10.4	-18.4	60.9
76 TOP BK	33° 0	96		—	5°45	-10.0	6.5	-16.5	62.8
77 " "	65° 28	80		—	5°49	-8.0	8.4	-16.4	62.9
78 ON "	42° 40	126		—	6°05	-13.0	2.6	-15.6	63.7
79 " "	65° 26	123		—	6°03	-13.0	3.6	-16.6	62.7
80 " "	46° 48	164		—	5°01	-14.0	2.8	-16.8	62.5
81 " "	65° 00	160		—	5°0	-14.0	2.8		76.5

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Date 2-18-30 Rec. ALP

OBJECT HUB #15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
82 TOP BK.	47° 25	172		−	5° 10	-16.0	3.8	-19.8	59.5	✓
83 " "	65° 12	168		−	5° 03	-15.0	2.8	-17.8	61.5	✓
84 E SHORELINE CHAN.	47° 20	172		−	5° 13	-16.0	5.9	-21.9	57.4	✓
85 " " " "	64° 55	174		−	5° 08	-16.0	5.9	-21.9	57.4	✓
86 W " " "	50° 36	215		−	4° 56	-18.0	3.1	-21.1	58.2	✓
87 " " " "	65° 0	215		−	4° 56	-18.0	3.1	-21.1	58.2	✓
88 TOP BK.	50° 33	220		−	4° 22	-17.0	2.1	-19.1	60.2	✓
89 " "	64° 48	222		−	4° 24	-17.0	2.1	-19.1	60.2	✓
90 TOE "	50° 40	234		−	3° 43	-15.0	3.2	-18.2	61.1	✓
91 " "	66° 03	236		−	3° 35	-15.0	3.2	-18.2	61.1	✓
92 TOP "	50° 48	240		−	2° 55	-12.0	3.2	-15.2	64.1	✓
93 " "	65° 35	244		−	2° 30	-11.0	4.2	-15.2	64.1	✓
94 " "	53° 0	264		−	1° 45	-8.0	6.3	-14.3	65.0	✓
95 " "	66° 0	265		−	1° 43	-8.0	6.3	-14.3	65.0	✓
96 TOE "	53° 0	270		−	1° 48	-8.0	9.4	-17.4	61.9	✓
97 " "	66° 05	272		−	2° 0	-10.0	7.4	-17.4	61.9	✓
98 " SLOPE E	52° 57	278		−	2° 10	-10.0	6.4	-16.4	62.9	✓

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Date 2-18-30 Rec. ALP

OBJECT HUB #15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
99 ON SLOPE E	65° 30	283		−	2° 18	-11.0	5.4	-16.4	62.9
100 " " "	52° 53	307		−	0° 57	-5.0	3.6	-8.6	70.7
101 " " "	66° 08	320		−	0° 30	-3.0	4.6	-7.6	71.7
102 " " "	66° 30	347		+	1° 09	+7.0	4.7	+2.3	81.6
103 SHOULDER LINE W. SIDE. PKY.	154° 08	45					3.8		75.5
104 " " " "	161° 45	110		+	2° 10	+4.0	5.5	-1.5	77.8
105 ON SLOPE W.	154° 06	113					4.6		74.7
106 " " "	140° 30	120					10.1		69.2
107 TOE " "	113° 30	52		−	7° 10	-7.0	10.3	-17.3	62.0
108 " " "	129° 53	127		−	5° 35	-12.0	5.6	-17.6	61.7
109 SHOULDER LINE	100° 33	66		−	10° 52	-12.0	5.3	-17.3	62.0
110 " "	123° 10	132		−	4° 32	-11.0	7.7	-18.7	60.6
111 & KELLER PKY.	100° 0	78		−	4° 36	-6.0	11.4	-17.4	61.9
112 " "	118° 34	144		−	4° 50	-12.0	5.7	-17.7	61.6
113 SHOULDER LINE	95° 0	89		−	5° 0	-8.0	10.5	-18.5	60.8
114 " "	115° 0	151		−	5° 08	-14.0	4.8	-18.8	60.5
115 TOP BK.	92° 45	98		−	4° 58	-8.0	9.5	-17.5	61.8

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Date 2-18-30 Rec. ALP.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 15 479.3									
116	ON BK	107° 15	172		−	5° 11	-16.0	2.9	-18.9	60.4
117	" "	83° 16	130		−	5° 0	-11.0	5.6	-16.6	62.7
118	" "	107° 18	172		−	5° 11	-16.0	2.9	-18.9	60.4
119	" "	82° 35	172		−	3° 36	-11.0	5.9	-16.9	62.4
120	" "	102° 30	208		−	3° 38	-13.0	4.1	-17.1	62.2
121	" "	82° 13	179		−	3° 43	-12.0	5.9	-17.9	61.4
122	" "	101° 35	214		−	3° 44	-14.0	5.1	-19.1	60.2
123	E SHORELINE CHAN	81° 42	186		−	3° 54	-12.0	8.9	-20.9	58.4
124	" " " "	100° 50	217		−	3° 50	-14.0	7.1	-21.1	58.2
125	W " " "	78° 32	224		−	3° 57	-15.0	6.1	-21.1	58.2
126	" " " "	93° 51	250		−	3° 57	-17.0	4.3	-21.1	58.2
127	TOP BK.	78° 08	227		−	4° 0	-16.0	3.1	-19.1	60.2
128	" "	93° 35	255		−	3° 20	-15.0	3.3	-18.3	61.0
129	TOE "	76° 0	254		−	2° 15	-10.0	7.3	-17.3	62.0
130	" SLOPE E	85° 52	310		−	1° 09	-6.0	10.5	-16.5	62.8
131	TOP BK.	74° 24	255		−	1° 0	-4.0	9.3	-13.3	66.0
132	" "	74° 54	269		−	0° 43	-3.0	9.3	-12.3	67.0

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Date 2-18-30 Rec. ALP

OBJECT HUB #15 8793	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
133 TOE BK.	74° 52	277		−	1° 03	−5.0	11.4	−16.4	62.9
134 " "	80° 25	285		−	1° 11	−6.0	10.4	−16.4	62.9
135 " "	81° 30	281		−	1° 04	−5.0	11.4	−16.4	62.9
136 " "	80° 23	270		−	1° 06	−5.0	11.4	−16.4	62.9
137 ON BK.	77° 30	274		−	1° 0	−5.0	8.3	−13.3	66.0
138 TOE SLOPE E	74° 55	300		−	1° 18	−7.0	9.5	−16.5	62.8
139 ON " "	73° 30	311					13.8	−13.8	65.5
140 " " "	83° 25	327		−	1° 14	−7.0	6.6	−13.6	65.7
141 " " "	72° 30	335		+	0° 02	+1.0	5.7	−4.7	74.6
142 " " "	85° 36	357		−	0° 40	−4.0	3.8	−7.8	71.5
143 " " "	71° 51	374		+	3° 15	+21.0	9.9	+11.1	90.4
144 " " "	80° 30	383		+	1° 47	+12.0	5.9	+6.1	85.4
145 W. SHOUL. LINE KELLER PKY.	163° 45	151		+	1° 10	+3.0	1.7	+1.3	80.6
146 " " " " "	164° 26	195		+	1° 0	+3.0	2.0	+1.0	80.3
147 TOE " " " "	160° 55	152		+	1° 10	+3.0	4.8	−1.8	77.5
148 " BK.	158° 18	154		+	1° 20	+4.0	4.8	−0.8	78.5
149 " "	160° 47	192		+	1° 19	+4.0	3.0	+1.0	80.3

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Date 2-19-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. #15 879.3									
150 TOP BK.	157° 0	155		+	1° 20	+4.0	2.8	+1.2	80.5
151 " "	159° 41	193		+	1° 43	+6.0	2.0	+4.0	83.3
152 ON SLOPE W	150° 30	160					1.7		77.6
153 " " "	150° 49	198		+	1° 08	+4.0	3.0	+1.0	80.3
154 " " "	137° 24	166					10.8		68.5
155 " " "	143° 06	209					5.2		74.1
156 " " "	134° 15	215		—	1° 52	-7.0	8.1	-15.1	64.2
157 TOE " "	129° 20	182		—	3° 12	-10.0	7.9	-17.9	61.4
158 " " "	130° 31	221		—	3° 05	-12.0	6.1	-18.1	61.2
159 SHOUL. LINE PKY	126° 02	189		—	3° 06	-10.0	8.0	-18.0	61.3
160 " " "	128° 0	235		—	2° 58	-12.0	6.2	-18.2	61.1
161 ℄ " "	122° 15	193		—	2° 58	-10.0	8.0	-18.0	61.3
162 " " "	123° 32	245		—	2° 56	-13.0	5.2	-18.2	61.1
163 SHOUL. " "	118° 30	202		—	2° 27	-9.0	8.0	-17.0	62.3
164 " " "	120° 16	252		—	2° 55	-13.0	5.2	-18.2	61.1
165 ON BK	112° 30	218		—	3° 04	-12.0	6.1	-18.1	61.2
166 TOP "	109° 04	235		—	2° 50	-12.0	6.2	-18.2	61.1

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Date 2-19-30 Rec. FLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #15 879.3									
167 TOP BK.	116° 27	287		—	2° 47	-14.0	4.5	-18.5	60.8
168 E. SHORE OF CHANEL.	107° 41	242		—	3° 52	-16.0	5.2	-21.2	58.1
169 " " " "	115° 22	290		—	3° 21	-17.0	4.5	-21.5	57.8
170 W " " "	102° 08	276		—	3° 22	-16.0	5.4	-21.4	57.9
171 TOE OF BK	109° 15	316		—	3° 17	-18.0	3.6	-21.6	57.7
172 " " "	101° 52	278		—	3° 17	-16.0	4.4	-20.4	58.9
173 TOP " "	101° 32	282		—	3° 15	-16.0	2.4	-18.4	60.9
174 " " "	108° 58	319		—	2° 31	-14.0	4.6	-18.6	60.7
175 ON "	97° 33	308		—	1° 28	-8.0	9.5	-17.5	60.8
176 " "	105° 17	346		—	1° 56	-12.0	6.8	-18.8	60.5
177 TOE SLOPE E	95° 0	350		—	1° 0	-6.0	10.7	-16.7	62.6
178 " " "	102° 39	380		—	1° 0	-7.0	10.9	-17.9	61.4
179 ON " "	93° 37	370					8.5		70.8
180 " " "	100° 37	397					7.5		71.8
181 " " "	92° 55	407		+	0° 57	+7.0	5.1	+1.9	81.2
182 " " "	99° 26	433		+	1° 15	+9.0	6.2	+2.8	82.1
183 " " "	91° 20	445		+	2° 55	+23.0	11.2	+11.8	91.1

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Date 2-19-30 Rec. HLP

OBJECT HUB # 15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
184 ON SLOPE E	97° 37	470		+	2° 17	+19.0	3.4	+15.6	94.9
185 ℄ S.T.H #1.	155° 19	263		+	1° 50	+5.0	6.3	-1.3	78.0
186 SHOUL. LINE S.T.H #1	163° 0	221		+	1° 40	+6.0	4.1	+1.9	81.2
187 TOE SHOULDER.	153° 35	251		−	1° 20	+6.0	5.3	+0.7	80.0
188 " BK.	153° 06	245		+	1° 54	+8.0	7.2	+0.8	80.1
189 " "	157° 41	205		+	1° 41	+6.0	5.0	+1.0	80.3
190 " "	152° 0	225		+	1° 53	+7.0	7.1	-0.1	79.2
191 " "	157° 14	203		+	1° 49	+6.0	3.0	+3.0	82.3
192 " "	151° 07	223		+	2° 40	+10.0	9.1	+0.9	80.2
193 ℄ S.T.H # 1	146° 44	285		+	1° 06	+5.0	3.4	+1.6	80.9
194 " " # 1.	139° 49	310		+	1° 01	+6.0	3.5	+2.5	81.8
195 SHOUL. LINE	146° 48	266		+	1° 03	+5.0	2.3	+2.7	82.0
196 " "	137° 46	299		+	0° 55	+5.0	2.5	+2.5	81.8
197 " "	134° 35	313		+	0° 51	+5.0	2.6	+2.4	81.7
198 TOE SHOULDER	146° 48	256		+	0° 15	+1.0	2.3	-1.3	78.0
199 ON SLOPE - W.	146° 47	243		+	0° 28	+2.0	4.2	-2.2	77.1
200 " " - S.	135° 16	279					10.0		69.3

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Date 2-19-30 Rec. FLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #15 879.3									
201 ON SLOPE W	140° 46	250					7.9		71.4
202 TOE "	130° 0	270		—	2° 03	-10.0	8.4	-18.4	60.9
203 " "	128° 38	293		—	2° 0	-10.0	8.5	-18.5	60.8
204 " "	128° 30	322		—	2° 02	-11.0	6.6	-17.6	61.7
205 " "	129° 39	346		—	1° 15	-8.0	10.7	-15.7	63.6
206 ON " W	131° 16	337		—	0° 33	-3.0	7.7	-10.7	68.6
207 SHOUL. LINE KEL. PKY. E	127° 33	272		—	2° 28	-12.0	6.4	-18.4	60.9
208 " " " " W	121° 45	280		—	2° 24	-12.0	6.4	-18.4	60.9
209 " " " " E	127° 53	320		—	2° 25	-14.0	4.6	-18.6	60.7
210 " " " " W	123° 40	323		—	2° 24	-14.0	4.6	-18.6	60.7
211 " " " " E	129° 22	349		—	1° 33	-9.0	8.7	-17.7	61.6
212 " " " " W	126° 16	366		—	2° 12	-14.0	3.8	-17.8	61.5
213 E KEL. PKY.	124° 56	306		—	2° 50	-15.0	2.5	-17.5	61.8
214 " " "	124° 16	273		—	3° 0	-14.0	3.4	-17.4	61.9
215 " " "	127° 47	358		—	1° 15	-8.0	9.8	-17.8	61.5
216 TOP. BK.	120° 12	324		—	2° 27	-14.0	4.6	-18.6	60.7
217 " "	122° 30	353		—	2° 18	-14.0	3.8	-17.8	61.5

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Date 2-19-30 Rec. ALP.

	OBJECT HUB # 15879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
118	TOP. BK.	125° 36	375		—	2°26	-16.0	2.9	-18.9	60.4
119	E. SHORE CHANEL.	119° 10	326		—	2°26	-14.0	7.6	-21.6	57.7
120	" " "	122° 0	365		—	2°25	-16.0	5.8	-21.8	57.5
121	" " "	125° 0	392		—	2°23	-17.0	5.9	-22.9	56.4
122	W. " "	113° 41	350		—	2°54	-17.0	3.7	-20.7	58.6
123	" " "	117° 0	377		—	2°32	-17.0	4.9	-21.9	57.4
124	" " "	122° 45	404		—	2°22	-17.0	5.0	-22.0	57.3
125	TOP BK	113° 53	357		—	2°20	-14.0	3.8	-17.8	61.5
126	" "	117° 55	395		—	2°10	-15.0	4.0	-19.0	60.3
127	" "	115° 42	377		—	2°14	-15.0	3.9	-18.9	60.4
128	" "	122° 18	412		—	2°02	-14.0	4.0	-18.0	61.3
129	℄ S.T.H #1.	121° 23	450		+	1°22	+11.0	8.2	+2.8	82.1
130	" " #1.	119° 09	477		+	1°11	+10.0	7.4	+2.6	81.9
131	" " #1.	117° 0	513		+	1°02	+9.0	6.5	+2.5	81.8
132	SHOUL. LINE S.T.H #1	117° 45	470		+	1° 0	+8.0	5.4	+2.6	81.9
133	" " " "	120° 08	537		+	1° 0	+9.0	5.2	+3.8	83.1
134	ON SLOPE -S.	118° 07	435					5.6	-5.6	73.7

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Date 2-19-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #15 ~~419.3~~									
135 ON SLOPE S	118° 36	423					9.0		70.3
136 " " "	116° 10	466					0.9		78.4
137 TOE " "	117° 15	403		—	1°57	-14.0	4.0	-18.0	61.3
138 " " "	115° 12	415		—	1°48	-13.0	3.1	-16.1	63.2
139 " " E	112° 30	438		—	1°02	-8.0	6.2	-14.2	65.1
140 " " "	110° 37	424		—	0°53	-7.0	8.1	-15.1	64.2
141 " " "	117° 08	404		—	1°40	-12.0	6.0	-18.0	61.3
142 ON BK.	111° 23	380		—	1°45	-12.0	5.9	-17.9	61.4
143 S.W. COR BRIDGE ON STA #1.	120° 26	433		+	1°04	+8.0	6.2	+1.8	81.1
144 SE. " " " " "	132° 48	325		+	1°15	+7.0	5.6	+1.4	80.7
145 NW. " " " " "	123° 40	450		+	1°10	+9.0	7.2	+1.8	81.1
146 NE. " " " " "	136° 18	347		+	1°53	+11.0	9.7	+1.3	80.6
147 W. END BRIDGE ON ℄	121° 59	442		+	1°14	+9.0	7.2	+1.8	81.1
148 E. " " " "	134° 32	335		+	0°50	+5.0	2.7	+2.3	81.6
149 P.P.	118° 18	455		+	0°49	+7.0	4.3	+2.7	82.0
150 P.P.	133° 20	322		+	1°06	+6.0	6.7	-0.7	78.6
151 P.P.	151 0	253		+	2°20	+10.0	8.3	+1.7	81.0

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Date 2-19-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 15 819.3									
152 P.P.	127° 50	230		—	3° 34	-14.0	4.2	-18.2	61.1
153 P.P.	123° 43	357		—	2° 05	-13.0	4.7	-17.7	61.6
154 12" OAK	114° 48	460		—	0° 12	-2.0	3.3	-5.3	74.0
155 30" WILLOW	113° 0	400		—	1° 34	-11.0	6.0	-17.0	62.3
156 ON TIMBER LINE 12" OAK	106° 15	427		—	0° 16	-2.0	3.2	-5.2	74.1
157 " " " 10"	105° 04	405		—	0° 38	-5.0	9.0	-14.0	65.3
158 " " " 10"	98° 55	380		—	0° 27	-3.0	8.8	-11.8	67.5
159 " " " 14"	88° 12	320		—	2° 10	-12.0	4.6	-16.6	62.7
160 " " " 10"	81° 35	306		—	1° 08	-6.0	8.6	-14.6	64.7
161 " " " 12"	76° 17	303		—	1° 45	-9.0	5.5	-14.5	64.8
162 " " " 12"	70° 30	300		—	2° 04	-11.0	3.5	-14.5	64.8
163 " " " 12"	62° 45	284		—	2° 20	-11.0	4.4	-15.4	63.9
164 " " " 15"	54° 43	384		—	2° 03	-14.0	4.4	-18.4	60.9
165 " " " 10"	46° 0	301		—	1° 40	-9.0	2.5	-11.5	67.8
166 " " " 10"	303° 51	300		—	1° 37	-8.0	4.5	-12.5	66.8
167 " " " 12"	28° 40	300		—	1° 39	-9.0	6.4	-15.4	63.9
168 " " " 16"	22° 47	325					8.4	-8.4	70.9

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Date 2-19-30 Rec. ALP. .....

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 15 8793									
169	ON TIMBER LINE 14" OAK	20° 30	327					9.0		70.3
170	" " " 8" "	14° 27	357		—	0° 35	-4.0	6.7	-10.7	68.6
171	10" WILLOW	6° 40	230		—	3° 20	-13.0	5.2	-18.2	61.1
172	10" "	8° 0	226		—	3° 20	-13.0	5.1	-18.1	61.2
173	6" "	12° 05	206		—	3° 12	-11.0	7.0	-18.1	61.2
174	6" "	9° 35	196		—	3° 24	-12.0	6.0	-18.0	61.3
175	6" "	12° 55	199		—	3° 32	-12.0	6.0	-18.0	61.3
176	6" "	13° 35	189		—	3° 45	-12.0	5.0	-17.0	62.3
177	6" "	18° 24	189		-	4° 02	-13.0	5.9	-18.9	60.4
178	8" "	24° 27	181		—	3° 58	-12.0	6.9	-18.9	60.4
179	10" "	28° 16	171		—	3° 56	-12.0	6.9	-18.9	60.4
180	6" "	30° 31	166		—	4° 59	-14.0	2.8	-16.8	62.5
181	8" "	30° 31	171		—	4° 24	-13.0	3.9	-16.9	62.4
182	6" "	15° 0	140		—	5° 05	-12.0	4.7	-16.7	62.6
183	8" "	16° 18	133		—	5° 21	-12.0	4.7	-16.7	62.6
184	6" TWIN WILLOW	29° 0	99		—	5° 39	-10.0	7.5	-17.5	61.8
185	6" " POP.	49° 55	80		—	5° 22	-7.0	9.4	-16.4	62.9

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Date 2-19-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #15 879.3									
186 10" POP.	63° 44	7.8		−	5° 42	-8.0	9.4	-17.4	61.9
187 8" "	110° 0	35		−	6° 22	-9.0	10.2	-14.2	65.1
188 2" ELM LONE	12° 0	169		−	4° 52	-14.0	2.8	-16.8	62.5
189 2" " "	22° 10	155		−	5° 01	-14.0	2.8	-16.8	62.5
190 2" " "	24° 24	118		−	5° 0	-10.0	5.6	-15.6	63.7
191 2" " "	35° 42	158		−	4° 57	-14.0	2.8	-16.8	62.5
192 2" " "	38° 0	95		−	6° 36	-11.0	5.5	-16.5	62.8
193 2" " "	42° 15	133		−	6° 12	-14.0	1.7	-15.7	63.6
194 2" " "	52° 08	108		−	6° 06	-12.0	4.5	-16.5	62.8
195 2" " "	49° 50	156		−	4° 24	-12.0	4.8	-16.8	62.5
196 2" " "	64° 39	92		−	4° 17	-7.0	9.5	-16.5	62.8
197 2" " "	58° 33	150		−	4° 10	-11.0	5.8	-16.8	62.5
198 2" " "	67° 48	112		−	4° 05	-8.0	8.6	-16.6	62.7
199 2" " "	62° 0	130		−	4° 21	-10.0	6.7	-16.7	62.6
200 2" " "	84° 22	150		−	4° 17	-11.0	5.8	-16.8	62.5
201 2" " "	69° 41	161		−	4° 25	-12.0	4.8	-16.8	62.5
202 2" " "	79° 35	165		−	4° 32	-13.0	3.8	-16.8	62.5

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Date 2-19-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 15 879.3									
203 2" LON ELM	95° 0	147		−	4°45	-12.0	5.7	-17.7	61.6
204 " " "	88° 42	180		−	4°50	-15.0	1.9	-16.9	62.4
205 " " "	103° 42	164		−	4°40	-13.0	4.8	-17.8	61.5
206 " " "	97° 0	177		−	4°36	-14.0	2.9	-16.9	62.4
207 " " "	110° 06	192		−	4°33	-15.0	3.0	-18.0	61.3
208 " " "	98° 0	193		−	4°32	-15.0	2.0	-17.0	62.3
209 " " "	106° 52	205		−	4°34	-16.0	2.0	-18.0	61.3
210 " " "	104° 06	207		−	4°12	-16.0	2.0	-18.0	61.3
211 " " "	119° 16	240		−	3°19	-14.0	2.2	-16.2	63.1
212 " " "	110° 14	226		−	3°43	-15.0	3.1	-18.1	61.2
213 " " "	119° 14	240		−	3°48	-16.0	2.2	-18.2	61.1
214 " " "	114° 0	253		−	3°35	-16.0	2.3	-18.3	61.0
215 " " "	118° 20	291		−	2°22	-12.0	3.5	-15.5	63.8
216 ON TIMBERLINE 12" OAK	139° 30	245					8.5		70.8
217 " " " 12"	135° 0	235		−	2°41	-11.0	4.2	-15.2	64.1
218 " " " 15"	133° 04	208		−	2°54	-11.0	6.0	-17.0	62.3
219 " " " 12"	133° 0	159		−	3°06	-9.0	5.8	-14.8	64.5

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Date 2-19-30 Rec. HLP

OBJECT HUB # 15 879.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
220 ON TIMBER LINE 12"	135° 0	137					12.1		67.2
221 " " " 12"	140° 10	123					9.6		69.7
222 " " " 12"	146° 0	85					8.2		71.1
223 " " " 12"	139° 07	48					8.6		70.7
224 " " " 12"	144° 30	44					6.7		72.6
225 " " " 14"	151° 31	95					6.0		73.3
226 " " " 10"	153° 04	117					4.1		75.2
227 " " " 12"	146° 10	145					5.3		74.0
228 " " " 14"	147° 24	185					1.9		77.4
229 " " " 18"	147° 30	235					2.3		77.0
230 " " 12"	143° 50	247					6.3		73.0
231 LONE 15"	158° 06	177		+	1° 41	+5.0	1.9	+3.1	82.1
232 " 12"	155° 55	155		+	1° 28	+4.0	2.8	+1.2	80.5
233 " 12"	128° 0	107		—	5° 40	-5.0	7.5	-12.5	66.8

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Date 2-19-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.A									
At HUB #1.A H.I. 5.30 892.1									
to HUB #1.	180° 0	988.3							
to HUB #1.B	210° 16	295							
1 ℄ STH #1.	180° 0	37					4.2		87.9 ✓
2 " " #1.	180° 0	105					2.2		89.9 ✓
3 SHOUL. LINE STH #1.	203° 24	41					4.1		88.0 ✓
4 " " " #1.	188° 0	108					2.1		90.0 ✓
5 TOE " " " "	220° 30	45					7.9		84.2 ✓
6 " " " " "	192° 08	109					4.0		88.1 ✓
7 ON SLOPE E	196° 30	114					5.5		86.6 ✓
8 TOP " S	210° 0	127					7.1		85.0 ✓
9 ℄ STH #1	180° 0	166					0.5		91.6 ✓
10 ℄ STH #1	180° 0	227		+	1° 0	+4.0	2.1	+1.9	94.0 ✓
11 SHOULDER LINE	185° 38	168		+	1° 05	+3.0	2.8	+0.2	92.3 ✓
12 " "	184° 20	227		+	1° 08	+5.0	2.1	+2.9	95.0 ✓
13 TOE "	189° 0	168					2.0		90.1 ✓
14 " "	186° 0	229		+	0° 35	+2.0	2.1	−0.1	92.0 ✓

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Date 2-19-30 Rec. ALP.

	OBJECT HUB #1 A 892.1	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
15	ON SLOPE E	198° 30	173					5.0		87.1
16	" " "	192° 22	234					1.0		91.1
17	" " "	200° 13	241					3.3		88.8
18	" " "	202° 50	241					4.7		87.4
19	℄ S.T.H #1	180° 0	285		+	1° 25	+7.0	2.4	+4.6	97.1
20	" " #1	180° 0	349		+	1° 40	+10.0	2.8	+7.2	99.3
21	SHOULDER LINE	183° 30	285		+	1° 44	+9.0	3.4	+5.6	97.7
22	" "	182° 46	349		+	1° 45	+11.0	2.8	+8.2	900.3
23	TOE "	185° 21	287		+	0° 57	+5.0	3.4	+1.6	93.7
24	" "	185° 16	354		+	0° 56	+6.0	4.8	+1.2	93.3
25	ON SLOPE E	193° 14	294		+	0° 54	+5.0	3.5	+1.5	93.6
26	" " "	191° 37	360		+	0° 50	+5.0	4.8	+0.2	92.3
27	℄ S.T.H #1	180° 0	418		+	1° 56	+14.0	3.1	+10.9	903.0
28	" " #1	180° 0	488		+	2° 08	+18.0	3.4	+14.6	906.7
29	SHOULDER LINE	182° 15	420		+	2° 08	+16.0	4.1	+11.9	04.0
30	" "	182° 07	485		+	2° 06	+18.0	3.4	+14.6	06.7
31	TOE "	185° 35	425		+	1° 12	+9.0	10.1	+1.1	93.2

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Date 2-19-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.4 892.1									
32 ON SLOPE E	183° 40	486		+	1° 40	+14.0	5.4	+8.6	900.7
33 TOE SHOULDER	185° 47	485		+	0° 50	+7.0	10.4	+3.4	895.5
34 ON SLOPE W	187° 04	421		+	1° 08	+8.0	10.1	+2.1	94.2
35 " " "	190° 10	422		+	0° 56	+7.0	7.1	-0.1	92.0
36 " " "	189° 48	362		+	0° 56	+6.0	5.8	+0.2	92.3
37 T.P.	182° 42	486		+	2° 12	+18.0	5.4	+12.6	04.7
38 T.P.	184° 0	322		+	1° 32	+9.0	3.6	+5.4	97.5
39 T.P.	187° 30	160					0.3		91.8
40 T.P.	254° 46	20					5.7		86.4
41 TOE SHOULDER	196° 0	90					4.7		86.4
42 ON SLOPE SE	201° 41	95					5.5		86.6
43 " " "	204° 22	95					6.7		85.4
44 " " "	210° 30	97					7.1		85.0
45 " " "	227° 48	55					10.2		81.9
46 " " "	221° 40	103					10.5		81.6
47 " " "	236° 43	63					11.5		80.8
48 " " "	228° 0	105		−	5° 0	+9.0	4.5	+4.5	96.6

Page 160 Transit Obs. Line

Date 2-19-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 1 A 892.1									
49	ON SLOPE - SE	232° 16	110		−	4° 45	-7.0	5.6	-14.6	77.5
50	" " "	258° 18	87		−	4° 40	-7.0	11.4	-18.4	73.7
51	" " "	245° 18	124		−	5° 35	-12.0	8.6	-20.6	71.5
52	" " "	263° 03	113		−	8° 02	-16.0	8.6	-24.6	67.5
53	TOE " "	257° 08	154		−	8° 30	-23.0	8.8	-31.8	60.3
54	" " "	268° 18	136		−	9° 46	-23.0	8.7	-31.7	59.4
55	Δ IN RD. LAKE FENCE	260° 0	187		−	9° 40	-31.0	1.9	-32.9	58.2
56	SHOULDER LINE	244° 30	18					5.0		87.1
57	TOE "	248° 0	26					8.8		83.3
58	ON SLOPE E	264° 06	41					12.8		79.3
59	" " "	277° 13	80	74	−	12° 04	-15.0	2.4	-17.4	64.7
60	TOE " "	282° 35	128	121	−	12° 08	-25.0	5.6	-30.6	60.5
61	ON TIMBER LINE 12"	313° 30	39					11.2		80.9
62	24"	247° 04	45					11.2		80.9
63	10"	227° 0	53					9.9		82.2
64	12"	225° 0	90		−	4° 30	-7.0	3.4	-10.4	81.7
65	24"	223° 0	133		−	4° 39	-11.0	1.9	-12.9	79.2

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Date 2-19-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB 1.A 492.1									
66 ON TIMBER LINE 14"	219° 0	187		−	3° 18	−11.0	1.9	−12.9	79.2
67 LONE 10"	215° 0	124		−	3° 30	−8.0	2.6	−10.6	81.5
68 " 36"	214° 30	53					5.2		86.9
69 ON TIMBER LINE 12"	189° 20	172					1.7		90.4
70 " " " 12"	192° 53	202					2.2		89.9
71 " " " 10"	189° 15	257		−	0° 40	−3.0	2.3	−5.3	86.8
72 " " " 12"	186° 30	317		+	0° 57	−5.0	3.6	−8.6	83.5
73 " " " 14"	185° 50	348		+	0° 57	−6.0	4.7	−10.7	81.4
74 " " " 10"	185° 0	427		+	0° 58	−7.0	6.1	−13.1	79.0
75 " " " 12"	185° 25	475		+	0° 55	+8.0	8.4	−~~7.~~4	91.7
76 " " " 10"	289° 0	120	113	−	12° 25	−24.0	4.6	−28.6	63.5
77 " " " 8"	268° 45	120	113	−	12° 0	−23.0	2.6	−25.6	66.5
78 " " " 12"	255° 0	135		−	9° 30	−22.0	2.7	−24.7	67.4
At HUB 1.B H.I. 5.00 491.6									
to HUB 1.A	210° 16	295							
to HUB 1.C	219° 35	364							
1. ON TIMBER LINE 10"	53° 20	133					2.6		89.5

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Date 2-19-30 Rec. HLP

	OBJECT HUB #1 B 891.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
2	ON TIMBER LINE 30"	58° 43	97					2.5		89.1
3	" " " 14"	87° 13	65					0.7		90.9
4	" " " 24"	110° 20	37					2.1		89.5
5	" " " 20"	173° 30	55					2.3		89.3
6	" " " 12"	193° 10	97					2.1		89.5
7	" " " 10"	199° 45	130					1.8		89.8
8	" " " 36"	205° 0	175					2.8		88.8
9	" " " 15"	222° 10	153					8.8		82.8
10	" " " 12"	230° 50	98					10.2		81.4
11	" " " 12"	248° 16	53					11.0		80.6
12	" " " 18"	306° 30	47		−	3° 44	−3.0	11.2	−14.2	77.4
13	" " " 12"	11° 40	51					9.7		81.9
14	" " " 12"	23° 0	85					8.9		82.7
15	" " " 16"	355° 48	169		−	8° 12	−24.0	2.8	−26.8	64.8
16	" " " 12"	341° 20	147		−	9° 50	−25.0	4.7	−29.7	61.9
17	" " " 14"	320° 0	116		−	9° 46		7.6	−19.0	72.6
18	" " " 12"	301° 0	127		−	10° 43		5.6	−30.0	61.6

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Date 2-19-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. #1 B 891.6									
19 ON TIMBER LINE 8"	282° 47	167		−	9° 12	−26.0	3.8	−29.8	61.8
20 " " " 12"	267° 54	206		−	7° 22	−26.0	3.0	−29.0	62.6
21 ℄ OF TRAIL	32° 25	248					3.2		88.4
22 " " "	32° 19	223					5.3		86.3
23 " " "	32° 25	187					6.4		85.2
24 " " "	35° 23	102					6.2		85.4
25 " " "	188° 30	22.					5.2		86.4
26 " " "	212° 40	103					5.2		86.4
27 " " "	215° 16	172					6.5		85.1
28 TOE SLOPE W	158° 23	245		+	0° 56	+4.0	7.2	−3.2	88.4
29 " " "	161° 30	273		+	1° 20	+6.0	10.4	−4.4	87.2
30 ON " N	168° 0	280		+	1° 28	+7.0	9.4	−2.4	89.2
31 " " "	177 30	290		+	1° 40	+8.0	7.4	+0.6	92.2
32 " " "	166 10	241		+	1° 36	+7.0	6.2	+0.8	92.4
33 " " "	178 0	250		+	1° 40	+7.0	4.2	+2.8	94.4
34 TOP " S	163 24	200		+	1° 24	+5.0	3.0	+2.0	93.6
35 " " "	178 14	197		+	1° 31	+5.0	2.0	+3.0	94.6

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Date 2-20-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.B 491.6									
36 ON SLOPE S	158° 07	155		+	1° 25	+4.0	2.8	+1.2	92.8
37 " " "	178° 04	160		+	1° 26	+4.0	1.8	+2.2	93.8
38 " " "	152° 15	129		+	1° 28	+3.0	2.6	+0.4	92.0
39 " " "	179° 10	103					0.6		91.0
40 " " "	138° 57	101		+	1° 36	+3.0	1.5	+1.5	93.1
41 " " "	181° 41	60					2.9		94.5
42 " " "	104° 0	80		+	2° 37	+4.0	2.4	+1.6	93.2
43 " " "	69° 38	89					1.5		90.1
44 " " "	52° 25	93					4.1		87.5
45 " " "	73° 03	50					3.1		88.5
46 " " "	136° 21	33					2.9		88.7
47 " " "	193° 53	82					3.3		88.3
48 " " "	178° 25	95					0.8		90.8
49 " " "	169° 40	120		+	0° 46	+2.0	1.6	+0.4	92.0
50 " " N	185° 0	303		+	1° 24	+7.0	6.5	+0.5	92.1
51 " " "	185° 12	260		+	1° 28	+7.0	4.3	+2.7	94.3
52 TOP " S.	186° 30	230		+	1° 40	+7.0	4.1	+2.9	94.5

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Date 2-20-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1-B 891.6									
53 TOP SLOPE S.	188° 08	185		+	1° 28	+5.0	2.9	+2.1	93.7
54 ON " "	192° 48	148		+	0° 39	+2.0	1.7	+0.3	91.9
55 " " "	200° 50	111					3.0		88.6
56 " " "	205° 30	160					3.2		88.4
57 IN DITCH	39° 0	162					6.3		85.3
58 " "	41° 40	121					6.8		84.8
59 N. SLOUL. L.	35° 34	160					5.9		85.7
60 " " "	37° 45	120					6.2		85.4
61 S. " "	30° 47	161					6.4		85.2
62 " " "	31° 22	118					6.6		85.0
63 ON " S.	27° 43	161					8.4		83.2
64 " " "	29° 42	119					7.4		84.2
65 " " "	14 16	164		−	3° 30	−10.0	5.8	−15.8	75.8
66 " " "	13 16	123		−	3° 35	−8.0	5.6	−13.6	78.0
67 " " "	12 17	171		−	4° 21	−13.0	1.9	−14.9	76.7
68 " " "	2° 51	133		−	5° 0	−12.0	7.7	−19.7	71.9
69 " " "	358 45	135		−	5° 15	−12.0	7.7	−19.7	71.9

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Date 2-20-30 Rec. HLP

	OBJECT HUB #1.B 891.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
70	TOE SLOPE S.	354° 51	192		−	8° 15	-27.0	3.0	-30.0	61.6
71	" " "	346° 04	157		−	9° 37	-26.0	3.8	-29.8	61.8
72	ON " "	346° 32	215		−	7° 46	-29.0	3.1	-32.1	59.5
73	" " "	335° 0	195		−	8° 40	-29.0	3.0	-32.0	59.6
74	IN DITCH	116° 0	15					5.4		86.2
75	" SHOUL. L	203° 18	82					5.9		85.7
76	ON SHOUL. L N	110° 0	11					4.9		86.7
77	" " " "	206° 19	87					5.3		86.3
78	" " " S	343° 30	4					5.5		86.1
79	" " " "	218° 0	80					6.8		85.8
80	" SLOPE "	318° 30	12					8.1		83.5
81	" " "	223° 45	79					7.8		83.8
82	" " "	311° 30	49		−	3° 0	-3.0	12.2	-15.2	76.4
83	" " "	256° 0	89		−	3° 17	-5.0	11.5	-16.5	75.1
84	" " "	308° 50	90		−	7° 20	-11.0	11.5	-22.5	69.1
85	" " "	277° 30	128		−	7° 28	-16.0	9.6	-25.6	66.0
86	" " "	308° 47	102	96	−	10° 37	-17.0	6.5	-23.5	68.1

Page 167 Transit ..... Obs. ..... Line .....

Date 2-20-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1-B 891.6									
87 ON SLOPE S.	277° 56	138	132	—	10° 30	-23.0	1.7	-24.7	66.9
88 " " "	307° 20	112	106	—	10° 41	-20.0	5.6	-25.6	66.0
89 " " "	307° 45	114	108	—	10° 52	-20.0	5.6	-25.6	66.0
90 " " "	296° 48	115	108	—	11° 0	-20.0	4.6	-24.6	67.0
91 " " "	295° 20	132	125	—	11° 04	-24.0	4.7	-28.7	62.9
92 TOE " "	296° 17	150	142	—	11° 16	-27.0	2.7	-29.7	61.9
93 " " "	305° 24	150	142	—	11° 10	-27.0	2.7	-29.7	61.9
94 " " "	282° 53	155	149	—	10° 12	-26.0	2.8	-28.8	62.8
95 ON " "	308° 14	184		—	9° 07	-29.0	3.9	-32.9	58.7
96 " " "	290° 10	200		—	7° 52	-27.0	5.0	-32.0	59.6
97 " " "	308° 44	233		—	7° 52	-32.0	2.2	-34.2	57.4
98 " " "	295° 30	257		—	6° 35	-29.0	4.3	-33.3	58.3
99 TOE OF BK.	297° 10	330		—	4° 10	-24.0	9.7	-33.7	57.9
100 TOP " "	297° 05	337		—	4° 08	-24.0	8.7	-32.7	58.9
101 N. SHORE L. RD LAKE	330° 0	262		—	5° 51	-27.0	7.3	-34.3	57.3
102 " " " " "	310° 10	296		—	4° 47	-25.0	9.5	-34.5	57.1
103 " " " " "	297 10	362		—	4° 17	-27.0	6.8	-33.8	57.8

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Date 2-20-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1 B 891.6									
104 N. SHORE L. RD. L	289° 51	386		—	3° 58	-27.0	6.9	-33.9	57.7
105 TOP. BK.	295° 18	345		—	4° 02	-24.0	7.7	-31.7	59.9
106 " "	287° 50	373		—	3° 35	-23.0	7.9	-30.9	60.7
107 TOE "	277° 40	410		—	3° 40	-27.0	7.0	-34.0	57.6
108 ON SLOPE - S	276° 50	304		—	5° 40	-30.0	3.5	-33.5	58.1
109 " " "	271° 10	252		—	6° 37	-29.0	3.3	-32.3	59.3
110 TOE " "	257° 36	183		—	6° 22	-20.0	5.9	-25.9	65.7
111 ON " "	245° 20	150		—	6° 24	-17.0	2.7	-19.7	71.9
112 " " "	221° 16	119					8.0		83.6
113 SHOUL. L. - S	217° 32	120					6.7		85.9
114 " " - N	210° 30	121					5.1		86.5
115 IN DITCH	208° 30	121					5.6		86.0
AT HUB # 1 C H.I. 5.10 886.0									
to HUB # 1 B	219° 35	364							
to HUB # 1 D	267° 37	314							
1 ON TIMBER LINE 18" OAK	57° 27	174		+	1° 40	+5.0	1.9	+3.1	89.1
2 " " " 15" "	65° 0	116		+	1° 35	+3.0	2.6	+0.4	86.4

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Date 2-20-30 Rec. ALP

OBJECT HUB # 1.c 886.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
3 ON TIMBER LINE 12" OAK	73° 40	84					2.2		83.8
4 " " " 18"	92° 40	38					7.1		78.9
5 " " " 20"	149° 15	24					6.0		80.0
6 " " " 15"	195° 17	69					1.1		84.9
7 " " " 24"	208° 0	110		+	2° 01	+4.0	2.6	+1.4	87.4
8 " " " 15"	210° 35	155		+	2° 25	+7.0	1.8	+5.2	91.2
9 " " " 12"	216° 0	210		+	2° 15	+8.0	2.1	+5.9	91.9
10 " " " 18"	216° 0	285		+	2° 18	+11.0	3.4	+7.6	93.6
11 " " " 12"	227° 13	291		+	0° 46	+4.0	3.5	+0.5	86.5
12 " " " 14"	226° 40	257		+	0° 45	+3.0	2.3	+0.7	86.7
13 " " " 18"	227° 40	202		+	0° 46	+3.0	3.0	0.0	86.0
14 " " " 15"	230° 20	142					2.8		83.2
15 " " " 16"	238° 16	72					6.5		79.5
16 " " " 15"	251° 15	45					8.4		77.6
17 " " " 14"	329° 0	25					10.7		75.3
18 " " " 12"	24° 30	60					9.0		77.0
19 " " " 10"	32° 30	89					7.1		78.9

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Date 2-20-30 Rec. FLP

	OBJECT HUB # 1 e 846.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
20	ON TIMBER LINE 12"	36° 33	171					3.8		82.2
21	" " " 14"	5° 33	273		−	4° 10	−20.0	4.4	−24.4	61.6
22	" " " 14"	0° 55	238		−	5° 10	−21.0	2.2	−23.2	62.8
23	" " " 15"	350° 30	195		−	6° 35	−22.0	2.0	−24.0	62.0
24	" " " 30"	343° 30	158		−	6° 35	−18.0	5.8	−23.8	62.2
25	" " " 15"	333° 14	128		−	7° 38	−17.0	5.6	−22.6	63.4
26	" " " 24"	320° 35	131		−	9° 52	−22.0	1.7	−23.7	62.3
27	" " " 12"	301° 10	141		−	8° 52	−22.0	2.7	−24.7	61.3
28	" " " 30"	288° 30	157		−	8° 02	−22.0	1.8	−23.8	62.2
29	" " " 15"	260° 40	174		−	4° 52	−15.0	1.9	−16.9	69.1
30	" " " 15"	257° 0	180		−	4° 27	−14.0	1.9	−15.9	70.1
31	" " " 15"	242° 0	217		−	2° 12	−8.0	2.1	−10.1	75.9
32	" " " 24"	232° 0	275		−	0° 10	−1.0	3.4	−4.4	81.6
33	" " " 9"	226° 05	310		+	1° 05	+6.0	3.6	+2.4	88.4
34	ON SLOPE - E.	85° 30	138		+	1° 45	+4.0	1.7	+2.3	88.3
35	" " "	100° 0	195		+	1° 58	+7.0	2.0	+5.0	91.0
36	" " "	102° 0	94					5.2		80.8

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Date 2-20-30 Rec. HLP

OBJECT HUB # 1 886.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
37 ON SLOPE E	109° 40	160					1.1		84.9
38 TOE " "	115° 33	78					9.0		77.0
39 " " "	124° 30	93					10.8		75.2
40 " " "	126° 36	130					11.1		74.9
41 " " W	133° 15	122					12.2		73.8
42 ON " "	136° 25	70					7.6		78.4
43 " " "	139° 05	120					11.1		74.9
44 " " "	173° 55	82					2.3		83.7
45 " " "	155° 10	115					6.1		79.9
46 " " "	184° 16	97					1.1		84.9
47 " " "	175° 0	129		+	0° 50	+2.0	1.6	+0.4	86.4
48 " " "	189° 04	107		+	1° 28	+3.0	1.5	+1.5	87.5
49 " " "	187° 30	148		+	3° 15	+8.0	3.7	+4.3	90.3
50 " " "	201° 18	145		+	3° 08	+8.0	2.7	+5.3	91.3
51 " " "	198° 0	179		+	3° 05	+10.0	1.9	+8.1	94.1
52 " " "	209° 14	189		+	2° 55	+9.0	2.9	+6.1	92.1
53 " " "	206° 0	220		+	3° 25	+13.0	4.1	+8.9	94.9

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Date 2-20-30 Rec. PLP

	OBJECT HUB #1 e 886.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
54	ON SLOPE E	58° 10	104					1.5		84.5
55	" " "	62° 0	73					4.0		82.0
56	TOE " "	70° 10	50					7.0		79.0
57	" " W	82° 23	36					7.5		78.5
58	" " "	172° 03	26					6.1		79.9
59	" " "	201° 17	63					2.6		83.4
60	" " "	210° 50	115		+	1° 12	+2.0	1.6	+0.4	86.4
61	" " "	215° 05	160		+	1° 46	+5.0	1.8	+3.2	89.2
62	" " "	217° 13	195		+	1° 58	+7.0	2.0	+5.0	91.0
63	IN DITCH	45° 56	216		+	0° 26	+2.0	2.1	−0.1	85.9
64	" "	48° 15	153					2.0		84.0
65	" "	53° 30	81					5.2		80.8
66	SHOUL. LINE N.	44° 31	214		+	0° 50	+3.0	3.1	−1.1	84.9
67	" " "	46° 53	153					2.0		84.0
68	" " "	50° 0	80					4.5		81.5
69	" " S	41° 10	151					2.1		83.9
70	" " "	40° 0	79					4.8		81.2

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Date 2-20-30 Rec. HLP .....

	OBJECT HUB #1 c 486.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
71	ON SLOPE S.	38° 35	151					3.7		82.3
72	" " "	32° 06	79					7.9		78.1
73	" " "	22° 04	155					11.4		74.6
74	" " "	8° 47	93					13.4		72.6
75	" " "	6° 18	171		−	5° 30	-16.0	2.9	-18.9	67.1
76	" " "	350° 51	127		−	5° 42	-13.0	7.6	-20.6	65.4
77	TOE " "	355° 50	193		−	5° 30	-18.0	5.0	-23.0	63.0
78	" " "	342° 17	163		−	7° 21	-21.0	3.8	-24.8	61.2
79	ON " "	343° 20	242		−	5° 12	-22.0	4.2	-26.2	59.8
80	" " "	331° 35	223		−	6° 20	-24.0	2.1	-26.1	59.9
81	TOE SHOUL. N	74° 04	33					7.7		78.3
82	IN DITCH	198° 35	38					5.5		80.5
83	SHOUL. L. N.	63° 05	29					5.4		80.6
84	" " "	205° 45	36					4.6		81.4
85	" " S	37° 33	27					5.6		80.4
86	" " "	220° 40	35					4.7		81.3
87	ON SLOPE "	10° 15	32					10.1		75.9

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Date 2-20-30 Rec. ALP.

	OBJECT HUB #1 c 886.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
88	ON SLOPE S	233° 06	36					5.1		80.9
89	" " "	249° 23	39					7.7		78.3
90	" " "	275° 49	59					12.3		73.7
91	" " "	336° 18	64		−	8° 56	−10.0	5.3	−15.3	70.7
92	" " "	290° 30	92		−	8° 45	−14.0	3.5	−17.5	68.5
93	TOE " "	325° 16	131		−	8° 40	−20.0	4.7	−24.7	61.3
94	" " "	297° 30	140		−	8° 52	−21.0	2.7	−23.7	62.3
95	ON " "	321° 50	179		−	7° 39	−23.0	2.9	−25.9	60.1
96	" " "	303° 0	185		−	6° 46	−22.0	4.9	−26.9	59.1
97	" " "	321° 30	217		−	6° 05	−23.0	4.1	−27.1	58.9
98	" " "	306° 05	217		−	6° 34	−25.0	2.1	−27.1	58.9
99	IN DITCH	216° 26	116					2.0		84.0
100	" "	218 56	184		+	1° 05	+3.0	1.9	+1.1	87.1
101	ON SHOUL. L. N	218 20	117					2.1		83.9
102	" " " "	220 30	184		+	1° 0	+3.0	1.9	+1.1	87.1
103	" " " S	226 24	116					1.8		84.2
104	" " " "	225° 30	184		+	0° 50	+3.0	1.9	+1.1	87.1

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Date 2-20-30 Rec. ALP

OBJECT HUB #1 c 886.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
105 ON SLOPE S	232°47	115					4.5		81.5 c
106 " " "	228°36	185					2.3		83.7 c
107 " " "	253°25	130					2.7		83.3 c
108 " " "	240°20	190					9.4		76.6 c
109 " " "	266°05	153		−	4°50	-13.0	4.8	-17.8	68.2 c
110 " " "	253°55	206		−	3°24	-12.0	3.0	-15.0	71.0 c
111 " " "	271°45	273		−	5°37	-27.0	2.9	-29.9	56.1 c
112 TOE " "	259°15	220		−	3°40	-14.0	2.1	-16.1	69.9 c
113 ON " "	277°45	193		−	6°05	-20.0	2.0	-22.0	64.0 c
114 TOE " "	284°12	217		−	6°12	-23.0	2.1	-25.1	60.9 c
115 ON " - W -	266°15	237		−	3°30	-14.0	2.2	-26.2	59.8 c
116 " " - S -	289°25	237		−	8°30	-15.0	12.2	-17.2	58.8 c
117 ℄ TRAIL	269°23	231		−	3°34	-14.0	3.1	-17.1	58.9 c
118 " "	268°43	193		−	3°30	-12.0	8.0	-20.0	66.0 c
119 " "	267°34	131		−	3°32	-8.0	8.7	-16.7	69.3 c
120 " "	269°30	69					12.5		73.5 c
121 " "	281°40	20					8.8		77.2 c

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Date 2-20-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.C 886.0									
122 INT. OF TRAILS	52° 20	31					5.2		80.8
123 ℄ " TRAIL	44° 51	130					3.2		82.8
124 " " "	46° 0	78					4.6		81.4
125 " " "	215° 54	40					4.6		81.4
126 " " "	221° 48	102					2.6		83.4
127 " " "	223° 0	144					0.9		85.1
128 " " "	223° 0	206		+	1° 10	+4.0	2.0	+2.0	88.0
At HUB #1.D. H.I. 5.10	874.9								
to HUB #1.C	267° 37	314							
to HUB #1.E	285° 39	298							
1 ON SLOPE S.	140° 50	373		+	4° 45	+31.0	2.4	+28.6	93.5
2 " " "	154° 15	275		+	4° 55	+24.0	2.4	+21.6	96.5
3 " " "	140° 22	244		+	4° 40	+20.0	2.2	+21.8	96.7
4 " " "	155° 24	260		+	4° 36	+21.0	2.3	+18.7	93.6
5 IN DITCH	140° 25	235		+	4° 28	+18.0	3.2	+14.8	89.7
6 " "	155° 0	253		+	4° 29	+20.0	3.3	+16.7	91.6
7 SHOUL. L. N.	140° 23	228		+	4° 24	+17.0	2.1	+14.9	89.8

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Date 2-20-30 Rec. ALP

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB #1 D 874.9									
8	SHOUL. L. -N-	155° 06	244		+	4° 24	+19.0	2.2	+16.8	91.7
9	℄ TRAIL.	140° 10	221		+	4° 28	+19.0	2.1	+14.9	89.8
10	" "	155° 0	237		+	4° 28	+18.0	2.2	+15.8	90.7
11	SHOUL. L. -S-	140° 08	214		+	4° 30	+19.0	2.1	+14.9	89.8
12	" " "	154° 48	227		+	4° 30	+18.0	2.1	+15.9	88.8
13	ON SLOPE "	140° 08	208		+	4° 02	+15.0	2.0	+13.0	87.9
14	" " "	155° 05	217		+	3° 59	+15.0	2.1	+12.9	87.8
15	" " "	140° 05	165		+	1° 50	+5.0	1.8	+3.2	78.1
16	" " "	155° 06	182		+	2° 34	+8.0	1.9	+6.1	81.0
17	" " "	140° 0	135					1.5		73.4
18	" " "	156° 27	138					1.9		73.0
19	TOE " "	140° 41	93					5.8		69.1
20	" " "	164° 32	76					6.4		68.5
21	ON " -W-	194° 05	192		+	1° 11	+4.0	2.0	+2.0	76.9
22	" " "	214° 04	173					3.0		71.9
23	" " "	188° 55	141					4.2		70.7
24	" " "	210° 31	121					7.5		67.4

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Date 9-20-30 Rec. 174P

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB #1 P 874.9									
25	ON SLOPE W	185° 0	117					7.3		67.6
26	" " "	199° 45	66					7.3		67.6
27	" " "	166° 10	73					8.4		66.5
28	" " "	175° 30	41					7.1		67.8
29	" " "	136° 35	90					7.1		67.8
30	" " "	141° 40	41					7.1		67.8
31	" " "	140° 08	60					7.3		67.6
32	" " "	133° 24	62					6.0		68.9
33	" " "	70° 0	25					4.6		70.3
34	" " "	104° 14	64					4.0		70.9
35	" " "	59° 0	50					6.0		68.9
36	" " "	74° 0	86					7.5		67.4
37	" " "	62° 43	85					12.3		62.6
38	TOE " "	60° 10	100					13.1		61.8
39	" " "	48° 45	106		−	1° 08	−1.0	12.5	−13.5	61.4
40	ON " "	228° 33	161					5.0		69.9
41	" " "	241° 30	168					5.6		69.3

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Date 2-20-30 Rec. HIP

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 1. D 874.9									
42	ON SLOPE W	231° 41	113					5.9		69.0
43	" " "	249° 0	124					6.1		68.8
44	" " "	237° 26	82					5.2		69.7
45	" " "	251° 55	50					4.3		70.6
46	" " "	262° 36	95					5.2		69.7
47	" " "	295° 52	29					4.8		70.1
48	" " "	301 35	70					5.5		69.4
49	" " "	6° 0	54					6.0		68.9
50	" " "	331° 22	80					7.9		67.0
51	" " "	16° 50	78					11.7		63.2
52	" " "	347° 16	102					13.2		61.7
53	TOE " "	21° 12	98		—	1° 40	-3.0	12.5	-15.5	59.4
54	" " "	352° 27	119		—	2° 04	-4.0	11.6	-15.6	59.3
55	ON " "	24° 18	118		—	2° 08	-4.0	11.6	-15.6	59.3
56	" " "	358° 07	141		—	2° 22	-6.0	10.7	-16.7	58.2
57	Δ. IN. RD. L. FENCE	43° 49	120		—	4° 13	-9.0	6.6	-15.6	59.3
58	℄ TRAIL	55° 06	41					5.5		

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Date 2-20-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB #1 D 874.9									
59	℄ TRAIL.	324° 40	28					4.6		70.3
60	" "	267° 33	92					5.6		69.3
61	" " END	266° 50	256					7.0		67.9
62	LONE 18" OAK	95° 46	74					5.2		69.7
63	" 24" "	72° 16	90					8.2		66.7
64	" 24"	103 12	71					4.8		70.1
65	" 24"	61° 28	125		−	4° 46	−10.0	2.6	−12.6	62.3
66	" 24"	65° 05	150		−	3° 53	−10.0	2.8	−12.8	62.1
67	" 24"	117° 07	67					5.3		69.6
68	" 30"	166° 30	88					6.1		68.8
69	" 30"	178° 37	110					5.3		69.6
70	" 24"	193° 36	193		+	1° 37	+5.0	4.0	+1.0	75.9
71	" 24" "	194° 07	205		+	1° 43	+6.0	3.0	+3.0	77.9
72	SHORE LINE RD. L. -N-	14° 07	354		−	1° 45	−11.0	6.8	−17.8	57.1
73	TOP. SPOIL, BK	15° 25	347		−	1° 35	−10.0	6.7	−16.7	58.2
74	TOE " "	16° 45	337		−	1° 40	−10.0	7.7	−17.7	57.8
75	ON SLOPE S	26° 0	295		−	1° 44	−9.0	8.5	−17.5	57.4

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Date 2-21-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.D 874.9									
76 ON SLOPE S.	36° 05	263		—	1° 47	-8.0	8.3	-16.3	58.6 ✓
77 " " "	23° 30	163		—	1° 57	-6.0	10.8	-16.8	58.1 ✓
78 " " "	11° 56	210		—	2° 08	-4.0	9.1	-13.1	61.8 ✓
79 " " "	5° 50	265		—	2° 02	-9.0	8.3	-17.3	57.6 ✓
80 N. SHORE RD LAKE.	3° 24	312		—	2° 06	-11.0	6.6	-17.6	57.3 ✓
81 END SPOIL BK.	3° 15	305		—	2° 08	-11.0	6.5	-17.5	57.4 ✓
82 N. SHORE RD. LAKE.	353° 24	301		—	2° 12	-11.0	6.5	-17.5	57.4 ✓
83 " " " "	343° 12	330		—	2° 02	-12.0	6.6	-18.6	56.3 ✓
84 BEG. SPOIL BK.	352° 43	294		—	2° 02	-10.0	7.5	-17.5	57.4 ✓
85 TOP " "	342° 11	317		—	2° 08	-12.0	5.6	-17.6	57.3 ✓
86 TOE " "	341° 26	307		—	2° 16	-12.0	5.5	-17.5	57.4 ✓
87 ON SLOPE S	352° 36	260		—	2° 21	-11.0	7.3	-18.3	56.6 ✓
88 " " "	341° 14	277		—	2° 20	-11.0	6.4	-17.4	57.5 ✓
89 " " "	353° 30	215		—	2° 23	-9.0	8.1	-17.1	57.8 ✓
90 " " "	340° 25	230		—	2° 24	-10.0	7.1	-17.1	57.8 ✓
91 E. SHORE RD. L.	332° 56	367		—	1° 42	-11.0	7.8	-18.8	56.1 ✓
92 " " " "	327° 0	390		—	1° 31	-10.0	8.0	-18.0	56.9 ✓

CAK 42-297°07

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Date 2-21-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.D 474.9									
93 TOP. SPOIL BK	332° 0	351		−	1° 35	−10.0	7.8	−17.8	57.1
94 " " "	325° 43	387		−	1° 35	−11.0	6.9	−17.9	57.0
95 TOE " "	331° 21	344		−	1° 32	−9.0	8.7	−17.7	57.2
96 " " "	324° 30	383		−	1° 32	−10.0	7.9	−17.9	57.0
97 IN SWAMP.	330° 20	330		−	1° 30	−9.0	9.6	−18.6	56.3
98 " "	320° 57	370		−	1° 26	−9.0	7.9	−16.9	58.0
AT. HUB # 1.E - HI. 5.15	870.64								
TO HUB # 1.D	285° 39	298							
to HUB # 1.F	174° 23	339.							
1 E. SHORE L. RD - L.	6° 11	260					12.8		57.8
2 " " " " "	353 47	291					13.0		57.6
3 TOP. BK.	5° 38	257					12.5		58.1
4 TOE "	350 55	280					12.4		58.2
5 " "	4° 35	251					12.6		58.0
6 " "	353° 07	272					12.5		58.1
7 IN SWAMP.	2° 45	234					12.3		58.3
8 " "	352° 07	267					12.5		58.1

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Date 2-21-30 Rec. ALP.

OBJECT HUB # 1.E 870.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
9 END SPOIL BK.	348° 10	296					12.6		58.0
10 E. SHORE RD. L.	346° 14	299					12.8		57.8
11 " " " "	340° 30	311					13.0		57.6
12 Δ RD. L. FENCE	343° 57	307					12.2		58.4
13 E. SHORE RD. L.	338° 10	365					12.9		57.7
14 " " " "	334° 40	422					12.9		57.7
15 " " " "	331° 55	464					12.9		57.7
16 " " " "	329° 50	500					12.9		57.7
17 TOE SPOIL BK.	329° 35	494					11.5		59.1
18 Δ - IN FENCE	329° 47	486					10.3		60.3
19 TOE SPOIL BK.	332° 43	434					11.5		59.1
20 " " "	338° 14	348					11.5		59.1
21 " " "	343° 15	298					11.4		59.2
22 " " "	343° 05	280					11.0		59.6
23 " " "	337° 0	290					11.2		59.4
24 ON CROWN OF HILL	181° 03	301		+	3° 26	+18.0	2.5	+15.5	86.1
25 " " " "	189° 05	256		+	5° 37	+16.0	4.3	+11.7	82.3

Page 184 Transit Obs. Line

Date 9-21-30 Rec. AHP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1. E 870.6									
26 TOP SLOPE W	179° 0	292		+	3° 26	+17.0	2.5	+14.5	85.1
27 " " "	188° 0	252		+	3° 21	+15.0	2.3	+12.7	83.3
28 ON " "	176° 45	278		+	2° 49	+14.0	2.4	+11.6	82.2
29 " " "	183° 50	234		+	3° 0	+12.0	2.2	+9.8	80.4
30 " " "	173° 30	266		+	2° 18	+11.0	2.3	+8.7	79.3
31 " " "	182° 16	226		+	2° 40	+11.0	2.1	+8.9	79.5
32 " " "	167° 22	244		+	1° 14	+5.0	2.2	+2.8	73.4
33 " " "	173° 52	200		+	1° 20	+5.0	3.0	+2.0	72.6
34 " " "	171° 08	227					0.6		70.0
35 " " "	164° 38	182					1.4		69.2
36 " " "	149° 0	209					2.0		68.6
37 " " "	145° 11	163					2.4		68.2
38 " " "	139° 20	212					1.3		69.3
39 " " "	120° 14	168					2.7		67.9
40 " " "	103° 0	192					4.0		66.6
41 " " "	93° 30	215					4.3		66.3
42 " " "	88° 0	236					5.7		64.9

Page 185 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.E 870.6									
43 TOE SLOPE. S LINE	81° 30	265					10.8		59.8
44 TOP. SLOPE. E	202° 25	219		+	3° 54	+15.0	4.1	+10.9	81.7
45 " " "	212° 55	202		+	3° 40	+13.0	4.0	+9.0	79.6
46 CROWN HILL	200° 45	205		+	4° 0	+14.0	3.0	+11.0	81.6
47 " "	211° 27	186		+	3° 52	+12.0	2.9	+9.1	79.7
48 TOP SLOPE W	198° 20	188		+	3° 48	+12.0	2.0	+10.0	80.6
49 " " "	209° 55	173		+	3° 34	+11.0	1.9	+9.1	79.7
50 ON " "	194° 07	167		+	2° 17	+7.0	1.8	+5.2	75.8
51 " " "	206° 08	147		+	2° 12	+6.0	1.7	+4.3	74.9
52 " " "	181° 25	126					1.4		69.2
53 " " "	197° 33	106					1.8		68.8
54 " " "	156° 10	95					3.1		67.5
55 " " "	173° 30	61					4.1		66.5
56 " " "	119° 50	94					4.8		65.8
57 " " "	110° 22	53					5.2		65.4
58 " " "	82° 45	157					5.5		65.1
59 " " "	65° 37	130					5.3		65.3

Page 186 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.E 870.6									
60 ON SLOPE W.	75° 20	192					7.7		62.9
61 " " "	59° 10	172					7.6		63.0
62 " "	73° 42	212					10.2		60.4
63 " "	58° 30	179					9.2		61.4
64 " " "	57° 43	186					9.5		61.1
65 TOE " S. LINE "	70° 17	215					10.7		59.9
66 " " " " "	57° 33	192					10.7		59.9
67 IN SWAMP	67° 43	247					11.5		59.1
68 " "	55° 0	218					11.2		59.4
69 TOP SLOPE, E	219 54	194		+	3° 0	+10.0	3.0	+7.0	77.6
70 ON CROWN	234 47	203		+	2° 20	+8.0	4.0	+4.0	74.6
71 " "	219 40	181		+	3° 0	+9.0	1.9	+7.1	77.7
72 " "	237 25	190		+	1° 54	+6.0	2.0	+4.0	74.6
73 " "	238 05	163		+	1° 45	+5.0	1.8	+3.2	73.8
74 " "	232° 05	181		+	2° 40	+9.0	3.9	+5.1	75.7
75 IN HOLE	237° 08	179		+	2° 0	+6.0	4.9	+1.1	71.7
76 ON CROWN.	233° 48	167		+	2° 30	+7.0	2.8	+4.2	74.8

Page 187 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. .....

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1 E 410.6									
77 ON SLOPE W	219°24	160		+	2°40	+8.0	1.8	+6.2	76.8
78 " " "	237°41	163		+	1°47	+5.0	1.8	+3.2	73.8
79 " " "	218°48	123		+	0°58	+2.0	1.6	+0.4	71.0
80 " " "	242°51	133					2.1		68.5
81 " " "	223°05	79					4.1		66.5
82 " " "	251°35	99					6.6		64.0
83 " " "	236°37	18					5.2		65.4
84 " " "	252°46	97					7.6		63.0
85 " " "	30°0	29					6.1		64.5
86 " " "	280°30	62					8.1		62.5
87 " " "	300°0	54					7.2		63.4
88 " " "	35°30	75					6.7		63.9
89 " " "	357°40	82					9.0		61.6
90 " " "	39°0	111					7.3		63.3
91 " " "	5°40	103					9.5		61.1
92 TOE " S. LINE "	38°10	144					10.0		60.6
93 " " " " "	8°08	115					10.7		59.9

Page 188 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB. #1 E 870.6									
94 IN SWAMP.	38° 30	185					11.3		59.3
95 " "	13° 36	187					11.7		58.9
96 TOP SLOPE W	253° 24	230					3.0		67.6
97 " " "	247° 35	205		+	0°-51	+3.0	2.0	+1.0	71.6
98 " " "	258° 47	216					7.0		63.6
99 " " "	252° 35	178					3.0		67.6
100 TOE " "	264° 10	209					10.2		60.4
101 ON " "	263° 0	148					8.6		62.0
102 " " "	274° 06	130					9.5		61.1
103 " " "	289° 40	114					10.1		60.5
104 TOE " S. LINE	334° 12	123					10.8		59.8
105 " " " "	268° 22	202					11.4		59.2
106 SWAMP LINE	286° 24	152					11.0		59.6
107 IN SWAMP.	357° 18	178					11.1		59.5
108 " "	298° 48	235					11.3		59.3
109 " "	341° 0	241					11.5		59.1
110 " "	313° 10	230					11.1		59.5

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

Page 189 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. FLP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1 E 870.6									
111 IN SWAMP.	284°30	253					11.6		59.0
112 " LINE	266°15	265					11.2		59.4
113 10" WILLOW	281°43	205					10.7		59.9
114 10" "	282°15	200					10.5		60.1
115 8" "	271°0	255					11.3		59.3
116 12" "	267°30	205					10.4		60.2
117 24" OAK	257°0	222					6.3		64.3
118 24" "	252°37	209					2.9		67.7
119 12" "	254°0	200					3.0		67.6
120 12" "	255°0	195					3.7		66.9
121 16 "	259°14	175					6.8		63.8
122 16" "	262°0	170					8.7		61.9
123 24" "	255°0	144					5.1		65.5
124 18" "	261°15	134					7.6		63.0
125 20" "	249°40	151					3.3		67.3
126 16 "	235°42	103					3.9		66.7
127 18 "	238°36	137					0.2		70.4

CKW - AZ 228°24

Page 190 Transit Obs. Line

Date 2-21-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.E 870.6									
128 12" OAK	231° 30	148		+	1° 20	+3.0	1.7	+1.3	71.9
129 18" "	227° 23	119					0.8		71.4
130 12" "	230° 30	117					1.6		69.8
131 12 "	233° 18	102					3.2		67.4
At HUB # 1.F									
to HUB # 1.E	174° 23	339							
to HUB # 9.B	214° 13	165							
At HUB # 9B									
to HUB # 1.F	214° 13	164							
to HUB # 9.C	122° 08 = 122° 06								
At HUB # 1.F HI 5.20 892.1									
to HUB # 1.E	174° 23	339							
to HUB # 1.G	114° 07	355							
1 TOP SLOPE S.	91° 58	348		+	1° 25	+9.0	4.8	+4.2	96.3
2 " " "	95° 22	324		+	1° 24	+8.0	3.6	+4.4	96.5
3 ON " "	90° 23	344		+	1° 01	+6.0	3.7	+4.3	96.4

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

Page 191 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. MLP .....

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.F 892.1									
4 ON SLOPE S.	93° 32	325		+	1°04	+6.0	3.6	+2.4	94.5 ✓
5 TOE " "	89° 05	340					1.0		91.1 ✓
6 " " "	93° 27	315		+	1°0	+5.0	6.6	-1.6	90.5 ✓
7 ON SHOL. L "	84° 51	321					2.1		90.0 ✓
8 " " " "	89° 45	295		+	1°05	+6.0	4.5	+1.5	93.6 ✓
9 " " " "	88° 36	285					2.0		90.1 ✓
10 ON SLOPE "	81° 05	315					6.4		85.7 ✓
11 " " "	85° 23	272					5.7		86.4 ✓
12 " " "	72° 20	290		−	2°30	−13.0	8.5	−16.5	85.6 ✓
13 " " "	78° 05	252					12.1		80.0 ✓
14 " " "	66° 30	282		−	4°25	−22.0	3.4	−25.4	66.7 ✓
15 TOP " "	72° 41	235		−	3°11	−13.0	3.2	−16.2	75.9 ✓
16 TOP " "	96° 0	259		+	1°21	+6.0	2.3	+3.7	95.8 ✓
17 ON " "	102° 02	239		+	1°57	+8.0	2.2	+5.8	97.9 ✓
18 " " "	94° 30	251		+	1°18	+6.0	3.3	+2.7	94.8 ✓
19 " " "	100° 31	226		+	1°41	+7.0	2.1	+4.9	97.0 ✓
20 " " "	97° 40	212		+	1°12	+4.0	2.1	+1.9	94.0 ✓

Page 192 Transit Obs. Line

Date 9-21-30 Rec. ALP

	OBJECT HUB # 1.F 892.1	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
21	ON SLOPE S	91° 40	240		+	0° 51	+3.0	2.2	+0.8	92.9
22	" " "	95° 50	204		+	0° 36	+2.0	2.0	0.0	92.1
23	" " "	93° 43	201					0.5		91.6
24	" " "	87° 0	226					4.6		87.5
25	" " "	89° 15	190					4.5		87.6
26	" " "	82° 18	214					9.1		83.0
27	" " "	87° 46	186					6.5		85.6
28	" " "	76° 13	202					13.2		78.9
29	" " "	84° 0	173					8.5		83.6
30	TOP SLOPE S	108° 30	230		+	1° 51	+7.0	2.2	+4.8	96.9
31	" " "	119° 25	225		+	0° 59	+4.0	3.1	+0.9	93.0
32	ON " "	106° 07	201		+	1° 24	+5.0	2.0	+3.0	95.1
33	" " "	116° 0	199		+	1° 04	+4.0	3.0	+1.0	93.1
34	" " "	103° 15	177		+	1° 09	+4.0	2.9	+1.1	93.2
35	" " "	111° 50	168					0.6		91.5
36	" " "	99° 23	152					2.0		90.1
37	" " "	108° 52	140					1.9		90.2

Page 193 Transit ..... Obs. ..... Line .....

Date 2-21-30 Rec. FLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.F 892.1									
38 ON SLOPE -S-	97° 43	146					3.1		89.0 ✓
39 " " "	95° 06	141					3.5		88.6 ✓
40 TOP " E	125° 46	222					4.5		87.6 ✓
41 " " "	124° 33	209					2.5		89.6 ✓
42 " " "	123° 25	188					2.8		89.3 ✓
43 " " "	122° 53	157					4.9		87.2 ✓
44 " " "	125° 09	145					6.7		85.4 ✓
45 " " "	126° 05	106					5.3		86.8 ✓
46 " " "	127° 04	100					4.4		87.7 ✓
47 " " "	132° 24	81					3.5		88.6 ✓
48 " " "	135° 0	75					6.0		86.1 ✓
49 ON " "	118° 20	139					3.8		88.3 ✓
50 " " "	126° 15	77					3.3		88.8 ✓
51 " " "	122° 10	93					3.3		88.8 ✓
52 " CROWN.	109° 15	135					1.9		90.2 ✓
53 " "	110° 30	87					2.9		89.2 ✓
54 " "	111° 45	72					3.1		89.0 ✓

Page 194 Transit Obs. Line

Date 2-21-30 Rec. ALP

	OBJECT HUB # 1.F 892.1	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
55	CENTER OF HOLE.	118° 24	80					6.7		85.4
56	TOP SLOPE W	98° 16	140					2.9		89.2
57	ON " "	100° 52	82					3.3		88.8
58	" " "	95° 0	144					3.4		88.7
59	" " "	94° 23	88					5.0		87.1
60	" " "	89 16	90					4.9		87.2
61	" " "	87 33	153					6.5		85.6
62	" " "	83 10	102					8.0		84.1
63	" " "	84 18	158					8.5		83.6
64	" " "	77 16	114					9.5		82.6
65	" " "	77° 30	183					12.4		79.7
66	" " "	67° 32	139		−	2° 10	-5.0	9.7	-14.7	77.4
67	" " "	72° 30	200		−	2° 08	-7.0	8.0	-15.0	77.1
68	" " "	60° 52	167		−	2° 22	-7.0	10.8	-17.8	74.3
69	TOP. " E	152° 26	54					8.2		83.9
70	" " "	222° 08	24					7.7		84.4
71	ON CROWN.	133° 24	41					4.5		87.6

Page 195 Transit Obs. Line

Date 2-21-30 Rec. HHP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB 1.F 892.1										
72 ON CROWN	335° 0	6					8.2		86.9	✓
73 ON SLOPE W	110° 0	42					3.3		88.8	✓
74 " " "	91° 0	50					4.0		88.1	✓
75 " " "	85° 0	51					5.4		86.7	✓
76 " " "	22° 10	19					6.2		85.9	✓
77 " " "	23° 37	26					6.6		85.5	✓
78 " " "	78° 30	55					5.6		86.5	✓
79 " " "	72 35	60					7.0		85.1	✓
80 " " "	28 14	36					8.2		83.9	✓
81 " " "	70 35	63					8.2		83.9	✓
82 " " "	28 0	41					9.9		82.2	✓
83 " " "	59 14	83					11.6		80.5	✓
84 " " "	29 18	68					13.4		78.7	✓
85 " " "	52 16	108		—	3° 55	−7.0	8.5	−15.5	76.6	✓
86 " " "	29 30	100		—	3° 55	−7.0	11.5	−18.5	73.6	✓
87 " " "	46 52	137		—	3° 53	−9.0	10.7	−19.7	72.4	✓
88 " " "	31 13	136		—	4° 22	−10.0	11.7	−21.7	70.4	✓

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Date 9-21-30 Rec. HLP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1 E 492.1									
89 ℄ TRAIL	89° 08	290					1.9		90.2
90 " "	93° 06	237		+	1° 14	+5.0	3.2	+1.8	93.9
91 " "	95° 22	192		+	0° 15	+1.0	2.0	−1.0	91.1
92 " "	96° 47	137					3.5		88.6
93 " "	91° 51	84					5.2		86.9
94 " "	359° 50	23					6.2		85.9
95 " "	324° 08	5.3					6.4		85.7
96 " "	319° 38	143					10.4		81.7
97 " "	321° 06	221					12.4		79.7
98 " "	317° 40	344		−	2° 25	−15.0	6.7	−21.7	70.4
99 SMALL EVERGREENS	322° 30	247					14.0		78.1
100 " "	319° 45	223					12.8		79.3
101 " "	329° 0	236		−	1° 0	−4.0	11.2	−15.2	76.9
102 " "	332° 03	241		−	1° 54	−8.0	9.2	−17.2	74.9
103 " "	320° 0	212					12.2		79.9
104 " "	326° 46	192					10.8		81.3
105 " "	326° 47	155					11.0		81.1

Page 197 Transit Obs. Line

Date 2-21-30 Rec. ALP

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 1.F 492.1									
106	SMALL EVERGREENS	316°35	213		—	1°37	-6.0	8.1	-14.1	78.0
107	" "	312°48	207		—	1°51	-7.0	10.0	-17.0	75.1
108	" "	310°0	183		—	2°03	-7.0	9.9	-16.9	75.2
109	" "	310°20	170		—	0°57	-3.0	11.9	-14.9	77.2
110	" "	302°0	145		—	2°32	-6.0	9.7	-15.7	76.4
111	" "	311°0	101					9.7		82.4
112	" "	322°06	77					8.0		84.1
113	" "	309°51	80					8.5		83.6
114	" "	340°20	58					9.3		82.8
115	" "	307°0	70					7.6		84.5
116	" "	349°0	43					8.6		83.5
117	" "	287°12	79					11.6		80.5
118	" "	279°45	75					12.7		79.4
119	" "	287°52	67					9.8		82.3
120	" "	297°55	35					5.8		86.3
121	" "	282°30	31					6.5		85.6
122	" "	224°10	15					5.5		86.6

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Date 9-21-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.F 892.1									
123 SMALL EVERGREENS	273° 0	8					5.8		86.3
124 " "	221° 0	40					12.2		79.9
125 " "	192° 40	31					9.2		82.9
126 " "	191° 18	43					12.7		79.4
127 " "	175° 54	31					7.8		84.3
128 " "	164° 53	22					6.3		85.8
129 " "	119° 16	22					4.2		87.9
130 " "	69° 30	20					5.3		86.9
131 " "	87° 0	30					4.5		87.6
132 " "	83° 14	39					5.1		87.0
133 10" OAK	110° 24	148					1.3		90.8
134 18" "	94° 04	149					3.3		88.8
135 20" "	88° 10	163					6.4		85.7
136 10" "	118° 0	177					1.1		91.0
137 10" "	118 05	192		−	0° 32	−2.0	2.0	−4.0	88.1
138 20" "	90 0	252		+	0° 40	−3.0	3.3	−6.3	85.8
139 12" "	113 44	210		+	1° 37	−6.0	3.0	−9.0	83.1

Page 199 Transit ..... Obs. ..... Line .....

Date 2-21-31 Rec. HLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1F 892.1	—	—							
140 12" OAK	100° 10	205		+	1° 32	+5.0	3.0	+2.0	94.1
141 10" "	102° 51	194		+	1° 28	+5.0	3.0	+2.0	94.1
142 ON TIMBE LINE 12"	125° 30	193					3.6		95.7
143 " " " 10"	128° 0	170					8.7		900.8
144 " " " 18"	128° 0	148					8.2		00.3
145 " POP. " 20"	132° 30	94					5.7		97.8
146 " " " 14"	164° 30	56					11.5		03.6
147 " " " 12"	199 10	26					7.7		99.8
148 " " " 12	255 16	58		−	4° 56	−5.0	9.3	−14.3	77.8
149 " " " 18	265 04	96		−	8° 08	−13.0	9.5	−22.5	69.6
AT HUB #1G HI. 4.95 910.11									
TO HUB #1F	114° 07	355							
TO HUB #1.H	57° 02	269							
1 TOE SLOPE N.	271° 06'	148		−	5° 42	−19.0	8.7	−23.7	86.4
2 " " "	274° 48'	133		−	8° 14	−19.0	7.7	−26.7	83.4
3 " " "	284° 40'	118		−	8° 26	−17.0	8.6	−25.6	84.5
4 " " "	307° 56'	108		−	8° 25	−16.0	7.6	−23.6	86.5

Page 200 Transit Obs. Line

Date 2-22-30 Rec. HLP

	OBJECT HUB # 1.6 910.11	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
5	TOE SLOPE N.	326°45	121		−	8°30	-18.0	3.7	-21.7	88.4
6	" " "	348°33	144		−	7°06	-18.0	1.7	-19.7	90.4
7	ON " "	269°22	132		−	7°06	-16.0	11.7	-27.7	82.4
8	" " "	279°55	106		−	9°32	-17.0	7.5	-24.5	85.6
9	" " "	295°51	90		−	9°34	-15.0	9.5	-24.5	85.6
10	" " "	314°30	91		−	9°45	-15.0	7.5	-22.5	87.6
11	TOE " S	319°0	99		−	9.47	-17.0	6.5	-23.5	86.6
12	" " "	331°14	103		−	9°30	-17.0	4.5	-21.5	88.6
13	" " "	350°36	116		−	7°15	-15.0	4.6	-19.6	90.5
14	TOP " N.	359°47	111		−	2°45	-5.0	8.6	-13.6	96.5
15	" " "	352°35	99		−	2 27	-4.0	10.5	-14.5	95.6
16	" " "	340°09	94		−	5°25	-9.0	8.5	-17.5	92.6
17	" " "	323°32	90		−	8°15	-13.0	8.5	-21.5	88.6
18	ON " "	302°20	80	73	−	12°15	-15.0	9.4	-24.4	85.7
19	" " "	324°33	79	73	−	12°44	-16.0	9.4	-25.4	84.7
20	" " "	321°24	76	70	−	13°43	-16.0	3.4	-19.4	90.7
21	" " "	352°21	86	79	−	15°58	-21.0	2.4	-23.4	86.7

Page 201 Transit Obs. Line 1

Date 2-22-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.G 910.11									
22 ON SLOPE N	348° 64'	79	71	−	16° 09	-19.0	4.4	-23.4	86.7
23 TOE R.R. " "	4° 0	86	80	−	16° 21	-21.0	3.4	-24.4	85.7
24 " " " "	8° 18	107	97	−	13° 53	-22.0	1.5	-23.5	86.6
25 " " " "	21° 36'	135	127	−	11° 22	-24.0	1.7	-25.7	84.4
26 " " " "	24° 52	161		−	9° 0	-25.0	2.8	-27.8	82.3
27 " " " "	33° 45	209		−	6° 17	-23.0	6.0	-29.0	81.1
28 TOE R.R. SHOUL. S	39° 20	205		−	6° 11	-22.0	6.0	-28.0	82.1
29 " " " "	32° 0	151		−	8° 57	-23.0	4.8	-27.8	82.3
30 " " " "	18° 0	108	100	−	12° 43	-22.0	5.6	-27.6	82.5
31 " " " "	4° 30	82	75	−	12° 54	-16.0	9.4	-25.4	84.7
32 " " " "	342° 10	72	62	−	20° 30	-20.0	3.4	-23.4	86.7
33 " " " "	306° 21	76	66	−	20° 28	-22.0	2.4	-24.4	85.7
34 " " " "	285° 30	93	87	−	15° 40	-23.0	3.5	-26.5	83.6
35 " " " "	271° 45	123	117	−	11° 52	-24.0	2.6	-26.6	83.5
36 " " " "	266° 48	143	135	−	10° 17	-24.0	2.7	-26.7	83.4
37 R.R. SHOUL. LINE S	266° 08	140	133	−	10° 27	-23.0	2.7	-25.7	84.4
38 " " " "	285° 0	88	80	−	15° 53	-21.0	3.4	-24.4	85.7

Page 202 Transit ..... Obs. ..... Line .....

Date 2-22-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.6 9,10,11									
39 R.R. SHOUL. LINE S	340° 10	70	60	−	20° 51	-20.0	3.4	-23.4	86.7
40 " " " "	16° 05	95	89	−	15° 18	-23.0	2.5	-25.5	84.6
41 " " " "	32° 25	142		−	9° 44	-24.0	2.7	-26.7	83.4
42 " " " "	41° 03	200		−	5° 51	-21.0	6.0	-27.0	83.1
43 TOP N-RAIL.	43° 33	197		−	6° 48	-23.0	2.0	-25.0	85.1
44 " " "	36° 58	142		−	9° 46	-24.0	1.7	-25.7	84.4
45 " " "	22° 20	91	84	−	15° 01	-21.0	2.5	-23.5	86.6
46 " " "	324° 37	60	51	−	22° 41	-18.0	4.3	-22.3	87.8
47 " " "	274° 22	96	88	−	14° 53	-22.0	2.5	-24.5	85.6
48 " " "	259° 52	150		−	9° 44	-25.0	1.8	-26.8	83.3
49 " " "	253° 30	211		−	6° 52	-25.0	2.1	-27.1	83.0
50 R.R. SHOUL. LINE - N -	252° 45	211		−	6° 52	-25.0	3.1	-28.1	82.0
51 " " " "	260 18	135		−	10° 46	-25.0	2.7	-27.7	82.4
52 " " " "	173° 11	90	81	−	13° 55	-19.0	6.4	-25.4	84.7
53 " " " "	329° 0	58	51	−	24° 43	-19.0	4.3	-23.3	86.8
54 " " " "	24° 32	93	86	−	14° 05	-20.0	4.5	-24.5	85.6
55 " " " "	37° 18	135	136	−	10° 11	-24.0	2.7	-26.7	83.4

Page 203 Transit ..... Obs. ..... Line .....

Date 2-22-30 Rec. HLP

OBJECT HUB #1.6 910.11	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
56 R.R. SHOUL. LINE - N	44° 30	196		−	7° 05	-24.0	2.0	-26.0	84.1	✓
57 TOE R.R. " - N.	45° 45	195		−	7° 02	-24.0	3.0	-27.0	83.1	✓
58 " " "	39° 37	136		−	9° 34	-22.0	4.7	-26.7	83.4	✓
59 " " "	26° 34	90	82	−	15° 44	-22.0	3.5	-25.5	84.6	✓
60 " " "	351° 45	54	47	−	24° 26	-18.0	6.3	-24.3	85.9	✓
61 " " "	297° 30	58	51	−	23° 05	-18.0	6.3	-24.3	85.9	✓
62 " " "	268° 0	95	87	−	16° 30	-24.0	2.5	-26.5	83.7	✓
63 " " "	258° 15	130	123	−	10° 17	-22.0	5.7	-27.7	82.5	✓
64 " " "	253° 41	160		−	9° 35	-26.0	3.8	-29.8	80.4	✓
65 " " "	251° 24	172		−	9° 47	-29.0	6.9	-35.9	74.2	✓
66 " " "	248° 45	187		−	8° 45	-27.0	7.9	-34.9	75.2	✓
67 " " "	247° 01	197		−	9° 58	-33.0	5.0	-38.0	72.1	✓
68 R.R. R.O.W FENCE - S.	276° 0	169		−	7° 30	-22.0	5.9	-27.9	82.2	✓
69 " " " "	292° 43	124		−	6° 04	-13.0	2.6	-15.6	94.5	✓
70 " " " "	334° 30	103		−	6° 15	-11.0	9.5	-20.5	89.6	✓
71 " " " "	10° 43	138		−	4° 19	-10.0	3.7	-13.7	96.4	✓
72 " " " "	27° 40	206		−	1° 38	-6.0	10.0	-16.0	94.1	✓

Page 204 Transit ..... Obs. ..... Line .....

Date 2-22-30 Rec. ALP

OBJECT HUB #1.3 910.1	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
73 RR - SIGN -	306° 20	91	87	−	13° 03	-19.0	3.5	-22.5	87.6
74 " "	249° 32	382		−	3° 34	-24.0	4.9	-28.9	81.2
75 T.P.	248° 0	165		−	9° 10	-26.0	5.8	-31.8	78.3
76 "	260° 53	72	65	−	13° 16	-15.0	5.4	-20.4	89.7
77 "	37° 55	73	67	−	13° 0	-15.0	7.4	-22.4	87.7
78 "	51° 25	193		−	6° 09	-21.0	2.0	-23.0	87.1
79 TOE R.R. SLOPE W	49° 55	192		−	6° 15	-21.0	5.0	-26.0	84.1
80 " " " "	45° 32	137		−	8° 23	-20.0	5.7	-25.7	84.4
81 " " " "	39° 49	99	92	−	13° 05	-21.0	2.5	-23.5	86.6
82 " " " "	37° 08	82	75	−	14° 01	-18.0	5.4	-23.4	86.7
83 " " " "	33° 21	66	58	−	20° 30	-19.0	1.4	-20.4	89.7
84 " " " "	15° 26	51	42	−	25° 14	-16.0	4.3	-20.3	89.8
85 " " " "	356° 08	41	35	−	27° 15	-14.0	5.2	-19.2	90.9
86 " " " "	325° 10	38	31	−	27° 02	-13.0	5.2	-18.2	91.9
87 " " " "	339° 02	43	36	−	25° 55	-14.0	6.2	-20.2	89.9
88 " " " "	6° 32	55	47	−	26° 08	-19.0	2.3	-21.3	88.8
89 " " " "	24 35	71	65	−	19° 15	-20.0	2.4	-22.4	87.7

Page 205 Transit Obs. P. Sraus Line

Date 2-22-30 Rec. H.W.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.G 910.1									
90 TOE R.R. SLOPE - S	35° 0	99	91	−	14°0	-21.0	3.5	-24.5	85.6
AT Hub #1G HI 4.95 910.1									
To Hub #1F	114° 07	355							
To Hub #1H	57° 02	269							
91 Beg R.R. R.O.W. Fence	247° 44	204	188	−	10°05	-32.0	3.0	-35.0	75.1
92 " " " "	244° 50	170	158	−	10°08	-27.0	3.9	-30.9	79.2
93 " " " "	240° 42	109	102	−	10°00	-17.0	6.6	-23.6	86.5
94 " " " "	237° 00	75	69	−	10°00	-12.0	5.4	-27.4	82.7
95 " " " "	70° 10	22					1.9		08.2
96 On Slope N.	247° 17	179		−	8°55	-27.0	7.9	-34.9	75.2
97 " " "	250° 30	177		−	8°45	-27.0	7.9	-34.9	75.2
98 " " "	247° 47	185		−	8°38	-27.0	8.9	-35.9	74.2
99 " " "	246° 10	173		−	8°30	-25.0	7.9	-32.9	77.2
100 " " "	250° 45	166		−	8°25	-24.0	6.8	-30.8	79.3
101 " " S.	221° 41	188		−	6°18	-21.0	9.0	-30.0	80.1
102 " " "	229° 30	168		−	9°12	-26.0	3.8	-29.8	80.3
103 " " "	234° 20	164	158	−	10°21	-28.0	5.8	-33.8	76.3

Page 206 Transit 44719 Obs. P. Crane Line

Date 2-24-30 Rec. HW

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #16 Cont 910.1									
104 On Slope South	244° 12'	158	150	−	10° 21	-26.0	7.8	33.8	76.3
105 " " "	246° 46'	159	150	−	10° 21	-26.0	4.8	30.8	79.3
106 " " "	252° 24'	156		−	9° 57	-26.0	2.8	28.8	81.3
107 " " "	220° 16'	174		−	6° 31	-20.0	3.9	23.9	86.2
108 " " "	226° 30	156		−	8° 35	-23.0	2.8	25.8	84.3
109 " " "	237° 20	139		−	8° 58	-21.0	8.7	29.7	80.4
110 " " "	241° 10	144	137	−	11° 17	-26.0	6.7	32.7	77.4
111 " " "	244° 17	143	136	−	11° 17	-26.0	7.7	33.7	76.4
112 " " "	250° 31	139	131	−	11° 02	-25.0	2.7	27.7	82.4
113 " " "	253° 35	137	130	−	10° 05	-23.0	3.7	26.7	83.4
114 " " "	214° 05	145		−	3° 53	-10.0	4.7	14.7	95.4
115 " " "	222° 45	131		−	6° 11	-14.0	5.7	19.7	90.4
116 " " "	233° 13	122		−	9° 36	-20.0	5.6	25.6	84.5
117 " " "	242° 45	116		−	9° 42	-19.0	7.6	26.6	83.5
118 " " "	245° 07	116	110	−	10° 30	-20.0	7.6	27.6	82.5
119 " " "	249° 50	116	110	−	10° 10	-19.0	7.6	26.6	83.5
120 " " "	256° 56	115	109	−	10° 04	-19.0	6.6	25.6	84.5

Page 207 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. H.W.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #16 Cont 910.1									
121 On Slope So.	245° 22	109	102	−	11° 14	−21.0	6.6	−27.6	82.5
122 " " "	196° 27	144					4.8	−4.8	05.3
123 " " "	206° 55	117					8.1	−8.1	02.0
124 " " "	217° 15	102					13.1	−13.1	97.0
125 " " "	234° 25	92		−	9° 15	−15.0	5.5	−20.5	89.6
126 " " "	245° 00	96		−	9° 15	−15.0	7.5	−22.5	87.6
127 " " "	254° 05	92	84	−	11° 43	−17.0	5.5	−22.5	87.6
128 " " "	259° 41	93	85	−	11° 25	−17.0	8.5	−25.5	84.6
129 " " "	262° 33	94	87	−	11° 42	−17.0	7.5	−24.5	85.6
130 " " "	177° 30	130		+	1° 09	+2.0	1.7	+0.3	10.4
131 " " "	187° 10	96					2.8	−2.8	07.3
132 " " "	202° 01	75					8.2	−8.2	01.8
133 " " "	233° 43	49	44	−	11° 10	−10.0	5.2	−15.2	94.9
134 " " "	254° 21	50	47	−	11° 32	−9.0	8.2	−17.2	92.9
135 " " "	269° 02	57	51	−	11° 41	−10.0	8.3	−18.3	91.8
136 " " "	263° 46	72	65	−	11° 32	−13.0	8.4	−21.4	88.7
137 " " "	269° 30	74	68	−	11° 58	−14.0	10.4	−24.4	85.7

Page 208 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. HW

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #16 Const 910.1									
138 On Slope S	156° 02	138		+	5° 07	+12.0	4.7	+7.3	17.4
139 " " "	156° 00	116		+	5° 16	+11.0	3.6	+7.4	17.5
140 " " "	156° 00	116		+	5° 20	+11.0	4.5	+6.5	16.6
141 " " "	156° 43	71					0.1		10.0
142 " " "	157° 30	28					3.3		06.8
143 Top " " RR	295° 55	18					8.6		01.4
144 On " "	142° 26	152		+	4° 32	+12.0	1.8	+10.2	20.3
145 " " "	138° 50	115		+	4° 09	+8.0	2.6	+5.4	15.5
146 " " "	134° 40	82		+	1° 43	+2.0	1.4	+0.6	10.7
147 " " "	125° 04	49					1.8		08.3
148 " " "	104° 28	28					2.3		07.8
149 Top RR " S	64° 43	22					1.9		08.2
150 On Slope "	132° 00	163		+	4° 48	+14.0	2.8	+9.2	19.3
151 " " "	127° 00	139		+	4° 44	+11.0	3.7	+7.3	17.4
152 " " "	122° 00	117		+	2° 38	+5.0	1.6	+3.4	13.5
153 " " "	116° 10	101		+	2° 22	+4.0	3.5	+0.5	10.6
154 " " "	108° 36	88					2.3		07.8

Page 208 Transit 44919 Obs. P. Grane & Line

Date 2-24-30 Rec. H.W. Cloudy

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
Hub #16 Cont 910.1										
155 On Slope S	112° 20	70					2.0		08.1	✓
156 " " "	95° 08	75					5.0		05.1	✓
157 " " "	87° 00	67					4.5		05.6	✓
158 Top RR " "	68° 06	56					0.9		09.2	✓
159 On Slope S	117° 25	182		+	3° 18	+10.0	1.9	+8.1	18.2	✓
160 " " "	113° 30	160		+	3° 08	+9.0	1.8	+7.2	17.3	✓
161 " " "	102° 19	133		+	1° 35	+4.0	1.7	+2.3	12.4	✓
162 " " "	96° 21	124		+	2° 15	+5.0	4.6	+0.4	10.5	✓
163 " " "	86° 12	111		+	2° 02	+4.0	3.6	+0.4	10.5	✓
164 " " "	74° 05	104		+	2° 00	+4.0	3.5	+0.5	10.6	✓
165 Top RR Slope S	63° 30	103		+	1° 43	+3.0	4.5	−1.5	08.6	✓
166 On Slope S.	109° 22	199		+	3° 14	+11.0	3.0	+8.0	18.1	✓
167 " " "	105° 38	183		+	3° 09	+10.0	2.9	+7.1	17.2	✓
168 " " "	96° 45	167		+	1° 54	+6.0	2.8	+3.2	13.3	✓
169 " " "	93° 00	160		+	1° 51	+5.0	3.8	+1.2	11.3	✓
170 " " "	87° 18	152		+	1° 50	+5.0	1.8	+3.2	13.3	✓
171 " " "	76° 47	141		+	2° 05	+5.0	2.7	+2.3	12.4	✓

Page 209 Transit 44919 Obs. P.C. Zane Line

Date 2-24-30 Rec. HW

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
Hub #1G Cont. 910.1										
172 Top RR Slope	62° 30	133		+	0°43	+2.0	3.7	-1.7	08.4	✓
173 Timber Line 12" Oak	63° 48	172		+	2°15	+7.0	8.9	-1.9	08.2	✓
174 " " 10" "	63° 53	154		+	0°30	+1.0	3.8	-2.8	07.3	✓
175 " " 12" "	65° 12	97					1.1		09.0	✓
176 " " 10" "	67° 12	68					1.7		08.4	✓
177 " " 12" "	81° 33	47					2.0		08.1	✓
178 " " 12" "	153° 30	13					3.7		06.4	✓
179 " " 12" "	228° 10	41					12.1		98.0	✓
180 " " 14" "	224° 42	75		−	6°40	−9.0	5.4	-14.4	95.7	✓
181 " " 12"	223° 40	109		−	6°44	−13.0	4.5	-17.5	92.6	✓
182 " " 6"	239° 07	144	138	−	11°05	−26.0	3.7	-29.7	80.4	✓
183 " " 6"	232° 03	177	165	−	9°50	−28.0	4.9	-32.9	77.2	✓
At Hub #1H HI 4.7	906.4									
To Hub #16	57°-02	269								
To Hub #1I	50°-28	258								
1 R.R. R.O.W. Fence So. Side	332°-49	101					12.2	-12.2	94.2	✓
2 " " " "	10° 22	137		−	6°06	−14.0	4.7	-18.7	85.7	✓

Page 210 Transit 44919 Obs. P Crane Line

Date 2-24-30 Rec. HW

OBJECT Hub # 1 H Cont 906.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
3 RR R.O.W Fence So Side	26° 23	189		−	7° 19	−29.0	5.0	−29.0	77.4
4 Top R.R. Slope No	314° 13'	103					11.5		94.9
5 " " " "	339° 30	97					12.4		94.0
6 " " " "	356° 19	106		−	3° 30	−6.0	7.5	−13.5	92.9
7 " " " "	15° 18	117		−	7° 05	−14.0	3.6	−17.6	88.8
8 Toe " " "	28° 35	135		−	7° 15	−17.0	5.7	−22.7	83.7
9 " " " "	27° 00	128		−	7° 13	−16.0	6.7	−22.7	83.7
10 " " " "	14° 50	107		−	7° 29	−14.0	10.5	−24.5	81.9
11 " " " "	357° 58	89	82	−	13° 14	−18.0	4.4	−22.4	84.0
12 " " " "	310° 38	89	82	−	13° 24	−19.0	4.4	−23.4	83.0
13 " " Shoulder S.	301° 17	67	62	−	13° 53	−15.0	7.3	−22.3	84.1
14 " " " "	346° 05	66	60	−	19° 08	−19.0	3.3	−22.3	84.1
15 " " " "	11° 40	82	75	−	13° 43	−17.0	4.4	−21.4	85.0
16 " " " "	28° 31	115	107	−	10° 18	−19.0	2.6	−21.6	84.8
17 " " " "	32° 49	127		−	8° 45	−19.0	2.6	−21.6	84.8
18 Shoulder Line R.R. S	35° 07	130		−	8° 43	−20.0	1.6	−21.6	84.8
19 " " "	21° 20	86		−	9° 07	−13.0	8.4	−21.4	85.0

Page 211 Transit 44919 Obs. P Crane Line

Date 2-24-30 Rec. HW

OBJECT Hub #1 H Cont 906.4	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
20 Shoulder Line	352°-52	63	57	−	18°-23	-17.0	3.3	-20.3	86.1
21 " "	290°-13	73	67	−	16°-30	-18.0	2.4	-20.4	86.0
22 Top North Rail	284°-08	65	60	−	16°-36	-16.0	3.3	-19.3	87.1
23 " " "	354°-45	50	46	−	16°-18	-12.0	7.3	-19.3	87.1
24 " " "	27°-02	84	78	−	12°-57	-17.0	2.4	-19.4	87.0
25 " " "	40°-25	133		−	8°-14	-19.0	1.7	-20.7	85.7
26 Toe Shoulder	43°-00	125		−	8°-02	-17.0	4.6	-21.6	84.8
27 " "	24°-52	65	60	−	14°-10	-14.0	6.3	-20.3	86.1
28 " "	328°-46	40	45	−	20°-56	-15.0	9.4	-24.4	82.0
29 " "	281°-44	59	55	−	21°-00	-18.0	2.3	-20.3	86.1
30 Top Bank No	261°-43	84	80	−	13°-11	-18.0	3.4	-21.4	85.0
31 " " "	274°-43	53	50	−	13°-14	-11.0	8.3	-19.3	87.1
32 " " "	305°-30	40	35	−	21°-48	-12.0	4.2	-16.2	90.2
33 " " "	30°-13	66	61	−	12°-30	-13.0	6.3	-19.3	87.1
34 " " "	44°-36	121		−	8°-16	-17.0	3.6	-20.6	85.8
35 Toe R.R Slope S	47°-31	123		−	8°-28	-18.0	3.6	-15.6	90.8
36 " " "	39°-27	73	68	−	10°-24	-12.0	7.4	-19.4	87.0

Page 212 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. H.W.

OBJECT 906.4 Hub #1 H Cont	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
37 Toe R.R Slope S	24° 30	56		−	4°35	−4.0	6.3	−10.3	96.1
38 " " " "	337° 25	31	27	−	20°38	−10.0	10.2	−20.2	86.2
39 " " " "	275° 50	35	31	−	17°54	−10.0	8.2	−18.2	88.2
40 " " " "	259° 45	67	62	−	15°40	−16.0	3.3	−19.3	87.1
41 RR. Row. Fence No	81° 00	38					7.1	−7.1	99.3
42 " " " "	65° 30	143		−	6°00	−15.0	10.7	−25.7	80.7
43 Timber Line 14" Oak	69° 00	160		−	7°23	−20.0	5.8	−25.8	80.6
44 " " 14" "	69° 41	98		−	7°13	−12.0	5.5	−17.5	888.9
45 " " 8" "	98° 32	44					5.5		900.9
46 " " 10" "	131° 24	27					2.6		03.8
47 " " 8" "	216° 05	36					2.1		04.3
48 " " 10" "	225° 55	101		+	2°13	+4.0	2.5	+1.5	07.9
49 " " 14" "	232° 32	173		+	2°08	+7.0	3.9	+3.1	09.5
50 Top RR Slope S	231° 51	103		+	0°44	+1.0	1.5	−0.5	05.9
51 " " " S	234° 36	75					2.2		04.2
52 " " " "	229° 27	52					2.1		04.3
53 " " " "	215° 00	35					2.1		04.3

Page 213 Transit 44919 Obs. P. Crane Line

Date 8-24-30 Rec. H.W.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub # 1 H Cait 906.4									
54 Top R.R Slope S	236°10	20					4.2		902.2
55 " " " "	249°00	5					5.6		900.8
56 " " " "	42°18	42					9.0		897.8
57 " " " "	47°15	79		−	5°22	−7.0	7.4	−14.4	92.0
58 " " " "	47°35	105		−	5°39	−10.0	8.5	−18.5	87.9
59 " " " "	48°16	123		−	5°32	−12.0	9.6	−21.6	884.8
60 On Slope So	184°04	197		+	3°47	+13.0	5.0	+8.0	914.4
61 " " "	187°53	171		+	3°30	+10.0	4.9	+5.1	911.5
62 " " "	192°30	168		+	3°37	+11.0	4.8	+6.2	12.6
63 " " "	195°49	144		+	3°28	+9.0	2.7	+6.3	12.7
64 " " "	205°13	120		+	3°29	+7.0	1.6	+5.4	11.8
65 " " "	214°30	109		+	3°40	+7.0	3.6	+3.4	09.8
66 " " "	224°40	97		+	1°57	+3.0	2.5	+0.5	06.9
67 " " "	175°52	184		+	4°04	+13.0	7.9	+5.1	11.5
68 " " "	180°50	147		+	3°50	+10.0	5.7	+4.3	10.7
69 " " "	185°38	118		+	4°01	+8.0	4.6	+3.4	09.8
70 " " "	191°37	95		+	3°56	+7.0	4.5	+2.5	08.9

Page 214 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. HW

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #1 H Cont 906.4									
71 On Slope So.	203°14	72		+	3°35	+4.0	4.4	-0.4	906.0
72 " " "	212°45	61					1.4		05.0
73 " " "	217°11	62					1.0		05.4
74 On " "	167°30	182		+	4°37	+15.0	7.9	+7.1	13.5
75 " " "	168°05	145		+	4°22	+11.0	4.7	+6.3	12.7
76 " " "	170°05	118		+	4°11	+9.0	1.6	+7.4	13.8
77 " " "	173°05	90		+	4°26	+7.0	1.5	+5.5	11.9
78 " " "	179°52	61		+	4°17	+5.0	3.3	+1.7	08.1
79 " " "	158°48	184		+	5°42	+18.0	9.9	+8.1	14.5
80 " " "	158°45	162		+	5°41	+16.0	7.8	+8.2	14.6
81 " " "	158°12	137		+	5°43	+14.0	4.7	+9.3	15.7
82 " " "	157°49	102		+	5°28	+10.0	2.5	+7.5	13.9
83 " " "	156°38	58		+	3°32	+4.0	1.3	+2.7	09.1
84 " " "	155°30	23					2.8		03.6
85 " " "	143°24	162		+	4°52	+14.0	4.8	+9.2	15.6
86 " " "	141°41	123		+	4°56	+11.0	3.6	+7.4	13.8
87 " " "	140°11	94		+	4°38	+8.0	2.5	+5.5	11.9

Page 215 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. H. Wilke Cloudy

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #1H Cont 906.4									
88 On Slope So	133°53	58		+	1°29	+2.0	1.3	+0.7	907.1
89 " " "	124°30	33					3.1		033
90 " " "	100°00	17					4.8		01.6
91 " " "	132°51	185		+	4°35	+15.0	3.9	+11.1	17.5
92 " " "	128°24	154		+	4°20	+12.0	3.8	+8.2	14.6
93 " " "	124°27	115		+	1°42	+3.0	1.6	+1.4	07.8
94 " " "	111°52	77					3.8		902.6
95 " " "	94°30	54					7.3		899.1
96 " " "	74°22	44					8.4		898.0
97 " " "	128°10	227		+	4°08	+16.0	6.1	+9.9	916.3
98 " " "	126°14	204		+	4°10	+15.0	4.0	+11.0	17.4
99 " " "	124°30	190		+	3°58	+13.0	3.0	+10.0	16.4
100 " " "	120°25	160		+	3°30	+10.0	3.8	+6.2	12.4
101 " " "	114°02	132					0.2		906.2
102 " " "	115°42	110					6.8		899.6
103 " " "	92°30	87					11.3		895.1
104 " " "	75°30	76		−	2°38	−4.0	10.4	−14.4	92.0

Page 216 Transit 44919 Obs. P. Grange Line

Date 2-24-30 Rec. H.W.Ike

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hob #1H Cont + 906.4									
105 On Slope 50	60°23	70		−	2°27	−3.0	10.3	−13.3	893.1
106 T. Pole	37°31	44					11.8		894.6
107 On Slope 50	121°06	250		+	3°34	+15.0	3.3	+11.7	928.1
108 " " "	112°53	221		+	3°50	+15.0	4.1	+10.9	27.3
109 " " "	110°19	195		+	3°05	+10.0	5.0	+5.0	11.4
110 " " "	110°18	171		+	2°39	+8.0	7.9	+0.1	06.5
111 " " "	100°24	170					4.3		902.1
112 " " "	101°37	154					7.6		898.8
113 " " "	87°17	152		−	5°02	−13.0	4.8	−17.8	88.6
114 " " "	76°05	139		−	5°00	−12.0	10.7	−22.7	837
115 " " "	83°37	128		−	5°07	−11.0	7.6	−18.6	87.8
116 " " "	66°37	132		−	8°10	−19.0	5.7	−24.7	81.7
117 " " "	60°20	126		−	8°03	−18.0	5.6	−23.6	82.8
118 " " "	52°24	125		−	8°00	−17.0	4.6	−21.6	884.8
119 " " "	120°32	269		+	3°38	+17.0	3.3	+13.7	920.1
120 " " "	117°28	263		+	3°38	+17.0	3.3	+13.7	20.1
121 " " "	115°04	145		+	3°40	+9.0	3.2	+5.8	12.2

Page 217 Transit 44919 Obs. P. Crane Line

Date 2-24-30 Rec. H. Wilke

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
Hub #1 H Cont 90614									
122 On Slope So	112°28	235		+	3°45	+15.0	4.2	+12.8	919.2
123 " " "	106°01	213		+	2°10	+8.0	2.1	+5.9	123
124 " " "	101°05	202		+	1°01	+4.0	2.0	+2.0	08.4
125 " " "	95°44	187					4.6		901.8
126 " " "	85°15	171		−	3°51	−17.0	1.9	−18.9	887.5
127 " " "	77°15	166		−	5°54	−17.0	7.8	−24.8	81.6
128 " " "	66°30	158		−	8°08	−22.0	4.8	−26.8	79.6
129 " " "	60°25	158		−	8°16	−23.0	4.8	−27.8	78.6
130 " " "	54°17	157		−	8°08	−22.0	3.8	−25.8	80.6
131 Toe R.R. Slope No	51°27	157		−	8°08	−22.0	3.8	−25.8	80.6
132 Top RR " "	47°45	158		−	7°16	−20.0	1.8	−21.8	84.6
AT Hub #1 I H.I. 5.0	491.0								
To Hub #1 H	50°28	257							
To Hub #1 J	87°25	203							
1 R.R. R.O.W. FENCE	330°23	56					6.1		884.9
2 " " "	21°41	88		+	2°27	+4.0	2.4	+1.6	92.6
3 " " "	41 30	139		+	2°22	+6.0	5.7	+0.3	91.3

Page 218 Transit 44919 Obs. P Crane Line

Date 2-24-30 Rec. H Wilke

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB # 1.I 891.0										
4 END RR. RON- FENCE	49° 57	200					2.9		888.1	✓
5 ON TIMBER LINE 14"	48° 30	185					4.5		86.5	✓
6 " 10"	43° 05	147		+	1° 43	+4.0	4.7	-0.7	90.3	✓
7 " 8"	35° 30	130		+	2 45	+6.0	4.6	+1.4	92.4	✓
8 " 12"	14° 55	89		+	2° 21	+4.0	2.5	+1.5	92.5	✓
9 " 10"	357° 10	66					1.7		89.3	✓
10 " 10"	317° 23	70					8.8		82.2	✓
11 " 10"	308° 30	95					11.7		79.3	✓
12 " 20"	301° 32	153					12.4		78.6	X
13 " 24"	289° 44	136					12.3		78.7	✓
14 " 30"	271° 48	134					10.6		80.4	✓
15 " 15"	264° 30	182					3.6		87.4	✓
16 " 12"	258 40	147		+	1° 23	+4.0	4.2	-0.2	90.8	✓
17 " 12	256° 18	300		+	1° 52	+10.0	7.5	+2.5	93.5	✓
18 LONE 12	30° 35	87		+	2° 39	+4.0	2.4	+1.5	92.5	✓
19 " 10	28° 28	93		+	2° 46	+5.0	2.5	+2.5	93.5	✓
20 TOE R.R. SHOUL S.	250° 0	137					7.6		83.4	✓

Page 219 Transit Obs. Line

Date 2-25-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1 I 891.0									
21 TOE R.R. SLOPE 8	253.45	109					10.9		880.1
22 " " "	257°56	85					13.8		77.2
23 " " "	269°30	55		−	1°00	-2.0	12.3	-14.3	76.7
24 " " "	284°35	26					9.7		81.3
25 " " "	333°10	10					5.9		85.1
26 ON SLOPE E	278°18	55		−	3°28	-3.0	11.3	-14.3	76.7
27 " " W	265°12	91		−	3°24	-5.0	9.5	-14.5	76.5
28 " " E	348°45	14					5.0		86.0
29 " " "	11°17	46					3.8		87.2
30 " " "	10°20	49					1.8		89.2
31 " " "	334°06	39					5.7		85.3
32 " " "	43°26	63					2.4		88.6
33 " " "	42°12	64					0.8		90.2
34 " " "	22°47	20					5.7		85.2
35 " " "	39°30	38					3.3		87.7
36 TOP " N	48 24	58					3.3		87.7
37 " " "	37 42	75		+	1°46	+2.0	2H	-0.4	90.6

Page 220 Transit Obs. Line

Date 2-25-30 Rec. HP

	OBJECT 891.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
38	TOP SLOPE N	43° 18	93		+	1° 38	+4.0	2.5	+1.5	892.5
39	" " "	44° 50	102					0.8		90.2
40	" " "	57° 0	114					3.5		87.5
41	TOE " "	51° 14	64					4.5		86.5
42	"	44° 24	79					5.0		86.0
43	" " "	48° 12	105					5.7		85.3
44	" " "	52° 18	111					6.4		84.6
45	" " "	57° 42	110					4.6		86.4
46	ON " W	49° 0	134					2.5		88.5
47	" " N	44° 22	208		×	1° 0	+4.0	7.0	-3.0	88.0
48	" " "	48° 08	190					4.6		86.4
49	" " "	52° 46	176					5.6		85.4
50	" " "	60° 0	159					7.0		84.0
51	TOE SHOUL. S	60° 40	176					6.4		84.6
52	TOP SLOPE E	47° 47	279		+	2° 55	+12.0	3.2	+8.8	99.8
53	ON " "	52° 26	213		+	1° 31	+6.0	3.0	+3.0	94.0
54	" " N.	57° 12	199					1.8		89.2

Page 221 Transit Obs. Line

Date 9-25-32 Rec.

OBJECT		Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1-I 891.0										
55 ON SLOPE	N	51° 54	189					4.1		886.9
56 TOE "	E	47° 50	206					3.1		887.9
57 SHOUL. L	"	51° 40	236		+	5° 13	+21.0	5.2	+15.8	906.8
58 ON SLOPE	N.	50° 56	232		+	5° 12	+21.0	9.2	+11.8	902.8
59 " "	"	52° 43	225		+	2° 40	+11.0	4.1	+6.9	897.9
60 " "	"	53° 26	220		+	2° 10	+8.0	6.1	+1.9	892.9
61 " "	"	61° 20	207					3.8		87.2
62 " "	"	53° 43	239		+	1° 15	+5.0	3.2	+1.8	92.8
63 " "	"	57° 47	235		+	1° 22	+6.0	3.2	+2.8	93.8
64 " "	"	60° 17	234					1.6		89.4
65 " "	"	63° 16	226					4.3		86.7
66 SHOUL. L		65° 30	222					4.4		86.6
67 TOE SHOUL.		63° 50	162					4.9		86.1
68 " "		61° 55	105					5.0		86.0
69 " "		47° 0	22					0.4		85.6
70 TOP. N. RAIL		240° 13	54					5.0		86.0
71 " " "		82° 01	7					4.8		86.2

Page 222 Transit ..... Obs. ..... Line .....

Date 2-26-30 Rec. RLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB # 1.I 891.0										
72 TOP. N. RAIL	67° 15	74					4.6		86.4	✓
73 " " "	67° 10	144					4.4		86.6	✓
74 " " "	68° 0	120 ?					4.3		86.7	X
75 TOE SHOUL. N.	70° 08	190					5.6		85.4	✓
76 " " "	70° 11	148					6.1		84.9	✓
77 "	70° 23	111					5.9		85.1	✓
78 " " "	76° 08	41					6.0		85.0	✓
79 " " "	216° 51	21					6.3		84.7	✓
80 " " "	234° 53	58					6.6		84.4	✓
81 TOP. SLOPE - S-	172° 10	262		+	6° 30	+29.0	2.3	+26.7	17.7	✓
82 " " "	159° 53	236		+	6° 43	+28.0	4.2	+23.8	14.8	✓
83 ON " "	172° 48	226		+	6° 37	+26.0	3.1	+22.9	13.9	✓
84 " " "	157° 47	212		+	6° 54	+25.0	6.1	+18.9	19.9	✓
85 " " "	174° 22	198		+	5° 30	+19.0	2.0	+21.0	12.0	✓
86 " " "	157° 43	176		+	4° 18	+13.0	1.9	+11.1	02.1	✓
87 " " "	179° 30	140					3.2		87.8	✓
88 " " "	156° 53	146		+	1° 55	+5.0	2.7	+2.3	93.3	✓

Page 223 Transit Obs. Line

Date 2-26-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.I 891.0									
89 TOE SLOPE S	189° 30	100		−	1° 52	-3.0	10.5	-13.5	77.5
90 " " "	157° 0	83					12.8		78.7
91 ON " N	204° 44	78					11.4		79.6
92 " " "	167° 55	58					11.3		79.7
93 " " "	159° 23	56					10.3		80.7
94 TOE " "	218° 50	62					11.9		79.1
95 " " "	165° 0	28					10.0		81.0
96 TOP " "	229° 30	59					6.1		84.9
97 " " "	167° 0	14					4.9		86.1
98 TOP " S	148° 0	242		+	6° 46	+28.0	5.2	+22.8	113.8
99 " " "	136° 41	224		+	6° 08	+27.0	5.1	+21.9	112.9
100 ON " "	145° 42	215		+	7° 0	+26.0	6.1	+19.9	110.9
101 " " "	132° 15	189		+	7° 0	+23.0	7.0	+16.0	107.0
102 " " "	143° 06	174		+	4° 44	+14.0	2.9	+11.1	102.1
103 " " "	144° 43	150		+	3° 10	+8.0	4.8	+3.2	94.2
104 " " "	138° 40	181		+	6° 30	+20.0	5.9	+14.1	105.1
105 " " "	139° 10	151		+	2° 40	+7.0	1.8	+5.2	96.2

Page 227 Transit ..... Obs. ..... Line .....

Date 2-26-30 Rec. ALP

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB #1.I 891.0									
106	ON SLOPE S	127° 45	158		+	3° 06	+9.0	1.8	+7.2	98.2
107	" " "	137° 32	134		+	2° 40	+6.0	7.7	-1.7	89.3
108	" " "	120° 23	128					3.4		87.6
109	TOE " "	132° 02	97					10.1		80.9
110	" " "	118° 10	109					7.9		83.1
111	ON " N.	120° 08	70					9.7		81.3
112	" " "	99° 0	90					8.0		83.0
113	" " "	93° 42	45					5.8		85.2
114	TOP " "	82° 13	78					6.0		85.0
115	" " "	85° 10	43					4.5		86.5
116	" " "	76° 37	77					4.5		86.5
117	" " S.	144° 12	191		+	5° 05	+17.0	2.0	+15.0	06.0
118	ON " "	105° 10	157		+	1° 30	+4.0	1.8	+2.2	93.2
119	" " "	106° 12	126					6.6		85.4
120	" " "	88° 52	140					3.5		87.5
121	" " "	82° 08	158					1.2		89.8
122	" " "	76° 0	170					1.9		89.1

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Date 9-26-30 Rec. HLP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1 I 89.0									
123 ON SLOPE S	81° 37	183		+	2° 20	+7.0	1.9	+5.1	96.1
124 " "	81° 07	206		+	2° 22	+8.0	5.0	+3.0	94.0
125 " " "	78° 04	208		+	2° 25	+9.0	5.0	+4.0	95.0
126 " " "	79° 0	171		+	2° 10	+6.0	3.9	+2.1	93.1
127 " " "	78° 10	208		+	2° 10	+8.0	4.0	+4.0	95.0
128 TOE " "	69° 05	210					4.5		86.5
129 " " "	72° 40	185					1.9		89.1
130 TOP " "	73° 18	135					3.9		87.1
131 ON " "	83° 30	110					6.9		84.1
132 T.P. "	72° 53	211					1.2		89.8
133 TP.	86° 20	76					5.7		85.3
134 TP	219° 15	64					11.8		79.2
135 NE COR. BRIDG. ON T.H. #1	82° 22	183		+	3° 15	+10.0	3.9	+6.1	97.1
136 NW " " "	80° 10	225		+	2° 18	+9.0	3.1	+5.9	96.9
137 SW " " "	57° 07	264		+	1° 30	+10.0	3.3	+6.7	97.7
138 SE " " "	54° 28	222		+	1° 36	+6.0	3.1	+2.9	93.9
139 R.R. ROW. FENCE	178° 27	64							

Page 226 Transit Obs. Line

Date 2-26-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1 I 891.0									
140 END - RR ROW FENCE	90° 40	141					2.7		8883
141 ON TIMBER LINE 20"	109° 40	173							
142 " " " 20"	95° 24	140							
143 " " " 14"	98° 10	111							
144 " " " 8"	149° 0	67							
145 " " " 14"	175° 0	102							
AT HUB #1 J. HI. 5.3	915.2								
TO HUB #1.I	87° 25	204							
TO HUB #1.F	0° 00	631.8							
TO HUB #1.K	191° 02	235							
1. @ S.T.H #1.	0° 00	120					7.2		908.0
2 " " "	0° 00	83					4.9		10.3
3 " " "	0° 00	66					4.5		10.7
4 " " "	0° 00	38					5.1		10.1
5 " " "	0° 00	11					5.4		09.8
6 " " "	180° 0	9					5.2		10.0
7 " " "	180° 0	46					4.9		10.3

Page 227 Transit Obs. Line

Date 2-26-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB #1-J 915.2									
8	℄ S.T.H #1	180° 0	104					4.5		910.7
9	" " "	180° 0	163					4.0		911.2
10	IN DITCH.	187° 55	163					5.4		09.8
11	" "	193° 40	125					8.7		06.5
12	" "	193° 45	165					5.4		10.2
13	TOP. BK.	193° 10	163					2.2		13.0
14	" "	197° 57	128					5.7		09.5
15	G.P.	187° 0	165							
16	T.P.	201° 55	54					6.8		08.4
17	ON TIMBER LINE 12"	201° 30	135							
18	" " " 12"	193° 35	168							
	At HUB # 1-K H.I. 5.10	921.0								
	to HUB # 1-J	191° 02	235							
	to HUB # 1-L	222° 57	252							
1	℄ S.T.H #1.	52° 53	55					9.5		911.5
2	" " "	133° 01	61					9.0		12.0
3	" " "	156° 54	104					8.9		12.1

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Date 2-26-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB # 1 K. 921.0										
4 ℄ STH. # 1	167° 53	215					9.2		911.8	✓
5 IN DITCH.	172° 0	175					9.3		11.7	✓
6 " "	170° 55	134					10.4		10.6	✓
7 " "	173° 32	135					9.5		11.5	✓
8 " "	167° 0	102					9.2		11.8	✓
9 " "	161° 33	75					10.3		10.7	✓
10 " "	148° 23	43					10.5		10.5	✓
11 " "	56° 43	27					11.2		09.8	✓
12 " "	47° 02	16					11.2		09.8	X
13 " "	121° 46	17					10.3		10.7	X
14 " "	146° 54	26					8.9		12.1	✓
15 " "	169° 20	69					9.3		11.7	✓
16 TOP. BK.	4° 45	37					5.8		15.2	✓
17 " "	157° 30	12					4.5		16.5	
18 " "	264° 30	28					4.1		16.9	✓
19 " "	255° 0	55					4.5		16.5	✓
20 " "	231° 28	85					3.5		17.5	✓

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Date 2-26-30 Rec. A.L.P.

OBJECT HUB #1-K 921.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
21 TOP. BK.	224° 45'	103					1.9		919.1 ✓
22 " "	216° 0	98		+	1° 05'	+2.0	1.5	+0.5	921.5 ✓
23 " "	192° 45'	93		+	2° 03'	+3.0	1.5	+1.5	922.5 ✓
24 " "	175° 43'	93		+	2° 03'	+3.0	1.5	+1.5	922.5 ✓
25 " " "	170° 48'	52					6.3		914.7 ✓
26 TOE "	175° 15'	80					5.8		915.2 ✓
27 " "	197° 45'	82					7.2		913.8 ✓
28 " "	221° 44'	80					8.7		912.3 ✓
29 " "	245° 08'	60					9.5		911.5 ✓
30 " "	240° 45'	30					9.1		911.9 ✓
31 " "	206° 22'	30					8.6		912.4 ✓
32 " "	227° 30'	24					7.1		913.9 ✓
33 " "	221° 30'	14					5.6		915.4
34 " "	160° 46'	21					7.1		913.9 ✓
35 ON SLOPE S.	225° 40'	124					2.0		919.0 ✓
36 " " "	228° 37'	174					2.3		918.7 ✓
37 " " "	232° 24'	117					1.6		919.4 ✓

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Date 2-26-30 Rec. F.L.P.

	OBJECT HUB #1 K 921.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
38	ON SLOPE - 6 -	235° 10	117					3.8		917.2
39	" " "	235° 37	171					1.4		19.6
40	" " "	246° 16	113					3.4		17.6
41	" " "	243° 22	131					4.0		17.0
42	" " "	243° 32	135					1.4		19.6
43	" " "	253° 46	130					4.0		17.0
44	" " "	245° 06	187					4.3		16.7
45	" " "	235° 28	188					2.2		18.8
46	" " "	228° 55	190					2.4		18.6
47	ON TIMBER LINE 10"	351° 54	35					6.7		15.3
48	" " " 12"	164° 12	12					3.9		17.1
49	" " " 10"	261° 40	45					4.0		17.0
50	" " 18"	257° 30	73					4.9		16.1
51	" TWIN " 20"	233° 43	82					3.9		17.1
52	" " 12	210° 10	105							
53	" " 8"	204° 04	95							
54	" " 10"	181° 55	94							

Page 231 Transit Obs. Line

Date 2-26-30 Rec.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # 1.K 921.0									
55 ON TIMBER LINE 10"	181° 14	110							
56 " " " 12"	185° 50	145							
57 LONE 6" P.O.P.	174° 10	151							
58 T.P.	162° 15	83							
At HUB # 1.L HI. 5.0	924.0								
to HUB # 1.K	222° 57	252							
to HUB # 1.M	239° 57	294							
1 TOP. BK.	131° 06	233					8.7		915.3
2 " "	121° 51	207					2.8		21.2
3 " "	111° 0	193					3.2		20.8
4 " "	95° 30	176		+	1° 0	+3.0	1.9	+1.1	25.1
5 " "	79° 18	180					3.5		21.5
6 ON SLOPE - N -	136° 30	197					5.4		18.6
7 " " "	148° 18	177					7.1		16.9
8 " " "	125 55	165					2.5		21.5
9 " " "	141° 12	148					3.0		21.0
10 " " "	114° 18	147					3.0		21.0

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Date 2-26-30 Rec. H.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.4 924.0									
11 ON SLOPE N	123° 50	120					2.9		921.1
12 TOP " "	99° 42	138					0.0		24.0
13 " " "	110° 0	110					1.7		22.3
14 ON " - S.	86° 30	136					2.9		21.2
15 " " "	89° 30	102					6.1		17.9
16 " " "	79° 0	136					5.3		18.7
17 " " - N -	77° 46	105					8.5		15.5
18 " " "	65° 26	143					4.7		19.3
19 " " "	66° 30	100					9.9		14.1
20 " " "	65° 40	86					10.3		13.7
21 " " "	54° 0	100					8.8		15.2
22 " " "	42° 46	114					6.2		17.8
23 " " "	60° 34	67					9.8		14.2
24 " " S	79° 47	73					9.6		14.4
25 " " "	94° 46	72					8.0		16.0
26 " " N	158° 06	166					8.0		16.0
27 " " "	172° 41	157					8.5		15.5

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Date 2-26-30 Rec. A.L.P.

OBJECT HUB #1.2 924.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
28 TOP SLOPE N.	153° 18	129					4.5		919.5
29 " " "	169° 02	123					5.8		18.2
30 ON " S	143° 17	92					5.3		18.7
31 " " "	163° 0	73					6.5		17.3
32 " " "	140° 23	72					7.0		17.0
33 " " "	146° 20	28					5.5		18.5
34 " " "	119° 45	67					6.5		17.5
35 " " "	55° 07	17					5.3		18.7
36 " " "	83° 05	45					7.2		16.8
37 " " N	36° 0	52					5.9		18.1
38 " " "	32° 0	65					6.1		17.9
39 " " "	18° 30	70					5.1		18.9
40 " " "	347° 30	50					3.1		20.9
41 " " S	342° 45	107					6.5		17.5
42 " " "	342° 30	133					6.8		17.2
43 " " N	180° 34	156					8.7		15.3
44 " " "	195° 0	164					7.2		16.8

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Date 2-26-30 Rec. F.L.P.

OBJECT HUB # 14 924.0	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
45 ON SLOPE -N-	181° 15	156					6.7		17.3
46 " " "	209° 28	117					6.4		17.6
47 " " "	188° 46	77					6.7		17.4
48 " " "	215° 02	105					5.4		18.6
49 " " "	222° 33	35					5.9		18.1
50 " " S	239° 38	80					6.4		17.6
51 " " "	284° 35	34					7.1		16.9
52 " " "	262° 30	83					7.8		16.2
53 " " "	291° 55	107					7.4		16.6
54 " " "	286° 0	35					7.1		16.9
55 " " "	307° 50	150					9.5		14.5
56 " " "	313° 08	65					7.0		17.0
57 " " "	318° 30	98					8.1		15.9
58 " " "	196° 53	183					6.5		17.5
59 " " "	206° 10	192					6.5		17.5
60 " " "	204° 43	157					6.9		17.1
61 " " "	216° 55	173					6.3		17.7

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Date 2-26-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
	HUB # 1.L 928.0									
62	ON SLOPE -S-	226° 39	124					4.7		19.3
63	" " "	229° 18	160					4.4		19.6
64	" " "	256° 03	114					7.4		16.6
65	" " "	244° 45	155					5.2		18.8
66	" " "	273° 45	128					7.3		16.7
67	" " "	262° 25	153					7.9		16.1
68	" " "	284° 20	145					9.6		14.4
69	" " "	274° 46	160					9.9		14.1
70	" " "	283° 12	173					11.2		12.8
	At HUB #1 M. H.I. 5.10	928.6								
	to HUB #1.L	239° 57	294							
	to HUB #1.N.	159° 41	293							
1	ON SLOPE -W-	113° 12	248					13.7		14.9
2	" " "	111° 11	230					11.8		16.8
3	" " "	121° 30	214		−	1° 24	−5.0	9.1	−14.1	14.5
4	" " "	109° 53	191					10.9		17.7
5	" " "	128° 12	196		−	2° 30	−9.0	6.0	−15.0	13.0

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Date 2-26-30 Rec. A.L.P.

	OBJECT HUB #1 M 928.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
6	ON SLOPE -W-	118° 30	165					12.2		14.4
7	" " "	144° 0	179					11.9		16.7
8	" " "	124° 30	168					13.5		15.1
9	" " "	135° 03	140					12.6		16.0
10	TOP " "	152° 42	173					11.2		17.4
11	" " "	150° 16	131					10.7		17.9
12	" " E	160° 12	170					12.1		16.5
13	" " "	162° 30	128					11.2		17.4
14	ON " "	170° 06	174		−	2° 41	-8.0	6.9	-14.9	13.7
15	" " "	179° 22	137		−	3° 0	-7.0	9.7	-16.7	11.9
16	" " "	183° 15	191		−	5° 52	-20.0	4.0	-24.0	04.6
17	" " "	193° 0	162		−	6° 0	-17.0	6.8	-23.8	04.8
18	" " "	190° 52	207		−	7° 23	-26.0	7.0	-33.0	95.6
19	" " "	198° 0	184		−	7° 33	-24.0	6.9	-30.9	97.7
20	" " W	90° 30	135					10.7		17.9
21	" " "	78° 51	136					9.2		19.4
22	" " "	103° 25	115					11.1		17.5

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Date 2-26-30 Rec. F.L.P.

	OBJECT HUB #1.M 928.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
23	ON SLOPE W.	79° 35'	91					7.2		21.4
24	" " "	127° 33	91					10.7		17.9
25	" " "	79° 33'	52					4.9		23.7
26	TOP " "	152° 40	51					9.1		19.5
27	" " "	108° 48	26					4.8		23.8
28	ON " E	192° 38	53					11.5		17.1
29	" " "	225° 41	8					5.7		22.9
30	" " "	213° 55	74		−	3° 43	−5.0	10.4	−15.4	13.2
31	" " "	245° 53	38					8.7		19.9
32	" " "	164° 35	77					9.3		19.3
33	" " "	181° 0	88		−	4° 39	−7.0	4.4	−11.4	17.2
34	" " "	201° 24	124		−	7° 30	−16.0	6.6	−22.6	06.0
35	" " "	257° 0	104		−	7° 18	−13.0	6.5	−19.5	09.1
36	" " "	205° 30	168		−	7° 24	−22.0	7.8	−29.8	98.8
37	" " "	218° 40	127		−	7° 30	−16.0	9.6	−25.6	03.0
38	" " "	251° 22	141		−	7° 33	−18.0	8.7	−26.7	01.9
39	" " "	224° 51	175		−	10° 0	−30.0	3.9	−33.9	94.7

VALUABLE

RETURN TO State Department of Drainage and Waters, St. Paul, Minn.

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Date 2-26-30 Rec. ALP

	OBJECT #9 M 928.6		Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
40	ON SLOPE	E	251° 48	165		−	9° 45	-28.0	3.8	-31.8	96.8
41	" "	"	240° 0	204		−	9° 45	-34.0	6.0	-40.0	88.6
42	" "	"	252° 12	195		−	8° 23	-28.0	6.0	-34.0	94.6
43	" "	"	244° 10	184		−	8° 20	-26.0	8.9	-34.9	93.7
44	" "	"	252° 30	230		−	8° 15	-33.0	8.2	-41.2	87.4
45	" "	"	237° 03	133		−	8° 05	-19.0	7.7	-26.7	01.9
46	" "	"	259° 30	180		−	8° 10	-25.0	7.9	-32.9	95.7
47	" "	"	258° 13	143		−	8° 17	-20.0	7.7	-27.7	00.9
48	" "	"	234° 15	80		−	8° 25	-12.0	4.4	-16.4	12.2
49	" "	W	51° 30	137					10.1		18.5
50	" "	"	32° 50	181					13.8		14.8
51	" "	"	46° 18	106					9.0		19.6
52	" "	"	26° 18	155					12.6		16.0
53	TOP "	"	33° 30	66					4.7		23.9
54	" "	"	55° 08	55					4.8		23.8
55	ON "	"	14° 40	117					10.1		18.5
56	" "	"	3° 24	135					10.7		17.9

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Date 2-26-30 Rec. A.L.P.

	OBJECT HUB #1 M 928.6	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
57	ON SLOPE .W	351° 55	101					9.9		18.7
58	" " .E	13° 17	42					5.3		23.3
59	" " "	333° 40	100					9.4		19.2
60	" " "	316° 19	50					8.0		20.6
61	" " "	312° 15	118					13.6		15.0
62	" " "	282° 15	82					14.1		14.5
63	" " "	301° 19	138		−	4° 01	-10.0	7.7	-17.7	10.9
64	" " "	273° 40	117		−	5° 24	-11.0	10.6	-21.6	07.0
65	" " "	282° 38	122		−	5° 28	-12.0	10.6	-22.6	06.0
66	" " "	286° 26	156		−	6° 07	-16.0	9.8	-25.8	02.8
67	" " "	270° 30	148		−	6° 18	-16.0	10.8	-26.8	01.8
68	" " "	282° 17	190		−	6° 15	-21.0	10.0	-31.0	97.6
69	" " "	268° 54	184		−	8° 02	-25.0	6.9	-31.9	96.7
70	" " "	279° 0	218		−	7° 54	-30.0	7.1	-37.1	91.5
71	" " "	268° 40	220		−	8° 04	-30.0	10.1	-40.1	88.5
72	" " "	262° 25	227		−	9° 25	-37.0	6.2	-43.2	85.4
73	" " "	278° 13	267		−	8° 30	-39.0	2.8	-41.8	86.8

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Date 2-26-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
HUB # 1.M 928.6										
74 ON SLOPE -E	286° 56	250		−	7°25	-32.0	4.2	-36.2	97.4	✓
75 " " "	262° 40	199		−	7°23	-25.0	11.0	-36.0	92.6	✓
76 " " "	292° 01	191		−	5°12	-17.0	7.0	-24.0	04.6	✓
77 " " "	301° 32	171		−	5°15	-16.0	2.9	-18.9	09.7	
At HUB # 1.N. H.I. 5.10 918.7										
to HUB # 1.M.	159° 41	293								
to HUB # 1.O-	152° 30	176								
1 ON SLOPE -N-	49° 30	205					3.4		15.3	✓
2 " " "	59° 0	182					5.5		13.2	✓
3 " " "	48° 22	175					4.4		14.3	✓
4 " " "	58° 24	157					6.0		12.7	✓
5 " " "	49° 30	165					5.9		12.8	✓
6 " " "	58° 14	153					7.4		11.3	✓
7 " " "	48° 08	162					4.7		14.0	✓
8 " " "	54° 07	132					7.3		11.4	✓
9 " " "	53° 47	126					5.7		13.0	✓
10 " " "	40° 17	153					4.0		14.7	✓

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Date 2-26-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB # IN 918.7									
11 ON SLOPE -N-	50° 0	96					4.9		13.8
12 " " "	29° 41	115					3.3		15.4
13 " " "	38° 41	55					4.7		14.0
14 " " "	6° 53	83					2.8		15.9
15 " " "	20° 47	37					3.7		15.0
16 " " "	339° 30	75					3.5		15.2
17 TOP " E	299° 17	46					6.6		12.1
18 " " "	314° 15	81					7.0		11.7
19 ON " "	268° 18	99		−	7° 32	-13.0	9.5	-22.5	96.2
20 " " "	293° 04	109		−	7° 04	-13.0	3.5	-16.5	02.2
21 " " "	296° 0	145		−	6° 16	-16.0	7.7	-23.7	95.0
22 " " "	313° 31	118					8.9		09.8
23 " " N	73° 33	167		−	2° 14	-7.0	5.8	-12.8	05.9
24 " " "	85° 12	170		−	2° 46	-8.0	7.8	-15.8	02.9
25 " " "	75° 0	131					10.4		08.2
26 " " "	68° 41	132					9.5		09.2
27 " " "	69° 0	126					9.3		09.4

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Date 2-26-30 Rec. A.L.P.

	OBJECT HUB #1-N- 918.7	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum	
28	ON SLOPE N	95° 21	132					10.9		907.8	✓
29	" " "	75° 30	123					10.1		08.6	✓
30	" " "	111° 32	100					10.6		08.1	✓
31	" " "	84° 23	60					6.8		11.9	✓
32	" " "	108° 52	27					5.9		12.8	✓
33	" " "	139° 53	87					11.0		07.7	✓
34	TOP " E	205° 04	31					7.5		11.2	✓
35	" " "	159° 18	98					11.7		07.0	✓
36	ON " "	224° 55	66		−	5° 51	−7.0	10.3	−17.3	01.4	✓
37	" " "	177° 39	103		−	5 43	−10.0	6.5	−16.5	02.7	✓
38	" " "	229° 38	96					11.5		907.2	✓
39	" " "	192° 56	123		−	7° 32	−16.0	9.6	−25.6	893.1	✓
40	" " "	211° 08	100		−	9° 27	−16.0	10.5	−26.5	892.2	✓
41	" " "	185° 25	56					10.0		08.7	✓
42	" " "	134° 26	50					8.1		10.6	✓

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Date 2-26-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.0									
At HUB #1.0 H.I. 5.10	913.8								
to HUB #1. N	152° 30	176							
to HUB #1. P	82° 04	234							
1 ON SLOPE -W-	39° 40	174					10.7		903.1
2 " " "	51° 08	161					11.8		02.0
3 " " "	35° 23	137					6.1		07.7
4 " " "	51° 06	136					10.0		03.8
5 " " "	27° 44	94					4.0		09.8
6 " " "	51° 0	100					5.8		08.0
7 " " "	12° 50	63					5.3		08.5
8 " " "	50° 40	77					5.2		08.6
9 " " "	50° 35	58					7.3		06.5
10 " " "	50° 18	38					6.8		07.0
11 " " E	338° 11	46					5.3		08.5
12 " " "	28° 18	10					4.9		08.9
13 " " "	294° 0	58					12.3		01.5
14 " " "	270° 45	28					8.2		05.6

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Date 2-26-30 Rec. ALP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1 ○ 913.8									
15 ON SLOPE -E-	276° 0	76		−	7°02	-9.0	10.4	-19.4	894.4
16 " " "	252° 0	82		−	6°54	-10.0	10.4	-20.4	93.4
17 " " "	274° 0	104		−	8°20	-15.0	10.5	-25.5	88.3
18 " " "	261° 30	51					14.0		99.8
19 " " "	220° 07	37					9.2		04.6
20 " " "	207° 45	60					12.5		01.3
21 " " "	233° 37	74		−	4°56	-6.0	9.4	-15.4	98.4
22 " " "	202° 47	94		−	5°34	-9.0	10.5	-19.5	94.3
23 " " "	235° 05	110		−	6°45	-13.0	10.6	-23.6	90.2
24 " " "	215° 0	110		−	7°20	-14.0	6.6	-20.6	93.2
25 " " "	194° 30	133		−	7°06	-16.0	7.7	-23.7	90.1
26 " " "	224° 07	135		−	7°52	-18.0	8.7	-26.7	87.1
27 " " "	206° 34	163		−	7°45	-22.0	7.8	-29.8	84.0
28 " " "	225° 47	165		−	10°28	-30.0	6.9	-36.9	76.9
29 " " "	213° 09	185		−	8°53	-29.0	7.9	-36.9	76.9
30 " " "	216° 28	202		−	8°57	-30.0	12.0	-42.0	71.8
31 " " "	192° 25	183		−	7°34	-24.0	4.9	-28.9	84.9

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Date 2-26-30 Rec. A.L.P.

	OBJECT HUB #1 0 913.8	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
32	ON SLOPE E	199° 35	184		−	7° 44	−24.0	5.9	−29.9	883.9
33	" " "	207° 40	200		−	7° 48	−27.0	10.0	−37.0	76.8
34	" " "	200° 54	200		−	7° 53	−27.0	6.0	−33.0	80.8
35	IN DITCH	191° 20	192		−	7° 53	−26.0	6.0	−32.0	881.8
36	℄ S.T.H. #1.	191° 07	218		−	7° 20	−28.0	2.1	−30.1	83.7
37	" " "	173° 01	214		−	7° 33	−28.0	2.1	−30.1	83.7
38	" " "	164° 04	218		−	7° 07	−27.0	2.1	−29.1	84.7
39	IN DITCH	171° 52	190		−	7° 10	−24.0	7.0	−31.0	82.8
40	" "	161° 20	195		−	7° 14	−24.0	5.0	−29.0	84.8
41	ON SLOPE -N-	171° 24	182		−	7° 23	−23.0	4.9	−27.9	85.9
42	" " "	159° 12	170		−	7° 30	−22.0	3.8	−25.8	88.0
43	" " "	170° 51	152		−	7° 27	−20.0	3.8	−23.8	90.0
44	" " "	155° 20	145		−	7° 40	−19.0	2.7	−21.7	92.1
45	" " "	169° 42	93		−	7° 58	−13.0	5.5	−18.5	95.3
46	" " "	146° 32	99		−	3° 0	−5.0	11.5	−16.5	97.3
47	" " "	169° 30	34					8.7		05.1
48	" " "	122° 35	51					9.3		04.5

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Date 2-26-30 Rec. A.L.P.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1. @ 913.8									
49 ON SLOPE -N-	82° 10	54					8.1		05.7 ✓
50 " " "	58° 41	50					7.4		06.4 ✓
51 " " "	103° 30	70					10.2		03.6 ✓
52 " " S	63° 18	108					6.4		07.4 ✓
53 TOP " -N-	76° 04	100					6.4		07.4 ✓
54 ON " "	96° 31	95					10.0		03.8 ✓
55 " " "	117° 26	107		—	5° 24	-10.0	6.5	-16.5	97.3 ✓
56 " " "	133° 28	132		—	5° 26	-12.0	7.7	-19.7	94.1 ✓
57 " " "	143° 36	158		—	6° 45	-18.0	5.8	-23.8	90.0 ✓
58 IN DITCH	151° 05	196		—	6° 36	-22.0	8.0	-30.0	83.8 ✓
59 ℄ S.T.H #1.	154° 25	233		—	6° 22	-26.0	2.2	-23.8	90.0 ✓
Ht. HUB #1. @ HI. 5.30									
60 ON SLOPE -N-	86° 10	133					8.5		05.3 ✓
61 " " "	87° 45	175					8.9		04.9 ✓
62 " " "	98° 41	133					12.7		01.1 ✓
63 " " "	98° 45	174					6.9		06.9 ✓

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Date 2-27-30 Rec. ALP.

	OBJECT HUB #1. 0 913.8	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
64	ON SLOPE - N.	115° 55'	145		−	6° 14'	-16.0	5.7	-21.7	92.1
65	" " "	105° 28'	188		−	5° 48'	-19.0	3.0	-22.0	91.8
66	TOE " "	126° 44'	175		−	7° 08'	-21.0	6.9	-27.9	85.9
67	" " "	113° 07'	198		−	6° 45'	-23.0	4.0	-27.0	86.8
68	" " "	135° 0'	188		−	6° 52'	-22.0	6.9	-28.9	84.9
69	ON " S.	120° 20'	218		−	6° 0'	-23.0	5.1	-28.1	85.7
70	" " "	137° 40'	208		−	6° 10'	-22.0	8.0	-30.0	83.0
71	TOE SHOUL. LINE	140° 19'	217		−	6° 06'	-23.0	7.1	-30.1	83.7
72	" " "	127° 13'	235		−	5° 35'	-23.0	5.2	-28.2	85.6
73	& S.T.H # 1.	142° 0'	250		−	5° 30'	-24.0	2.3	-26.3	87.5
74	" " "	133° 10'	263		−	4° 51'	-22.0	2.3	-24.3	89.5
75	P.P.	135° 12'	236		−	4° 48'	-20.0	6.3	-26.3	87.5
76	P.P.	152° 37'	210		−	4° 55'	-18.0	10.0	-28.0	85.8
77	P.P.	191° 56'	197		−	6° 55'	-24.0	8.0	-32.0	81.8
78	ON TIMBER LINE 12"	232° 30'	169							
79	" " " 10"	227° 14'	148							
80	" " " 12"	216° 0'	101							

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Date 2-27-30 Rec. ALP.

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.2 913.8									
81 ON TIMBER LINE 12"	208° 48	82							
82 " " " 12"	175° 12	53							
83 " " " 8"	157° 48	66							
84 " " " 18"	121° 50	94							
85 " " " 20"	104° 15	139							
At HUB #1.P H.I. 5.40 913.9									
to HUB #1.0	82° 04	234							
to HUB #1.8	339° 29	296							
1 ON SLOPE -N-	214° 0	30					9.7		04.2
2 " " "	198° 20	58		−	11° 10	-11.0	5.3	16.3	97.7
3 TOE " "	188° 44	78		−	12° 08	-16.0	6.4	22.4	91.5
4 ON " E	188° 16	110		−	11° 26	-21.0	2.6	23.6	90.3
5 TOE SHOULDER	184° 36	139		−	8° 47	-21.0	4.7	25.7	88.2
6 P.P.	184° 50	155		−	5° 57	-16.0	5.8	21.8	92.1
7 & S.T.H #1.	184° 18	187		−	6° 0	-19.0	2.9	21.9	92.0
8 " " "	172° 05	153		−	6° 53	-18.0	1.8	19.8	94.1
9 TOE SHOUL.	170° 30	101		−	10° 43	-19.0	3.5	22.5	91.4

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Date 2-27-30 Rec. F.L.P.

OBJECT HUB #1. P 9139	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
10 IN DITCH	170° 0	93		−	10° 31	-17.0	5.5	-22.5	91.4
11 TOE SLOPE - N -	170° 50	76		−	13° 33	-17.0	3.4	-20.4	93.5
12 SEC-COR.	129° 37	72		−	3° 20	-4.0	10.4	-14.4	99.5
13 ℄ S.T.H #1	152° 16	103		−	5° 47	-10.0	6.5	-16.5	97.4
14 " " "	92° 14	55					12.9		01.0
15 " " "	40° 0	85					10.6		03.3
16 IN DITCH	21° 05	65					11.3		02.6
17 " "	32° 23	52		−	2° 40	-2.0	12.3	-14.3	99.6
18 " "	22° 17	46		−	2° 53	-2.0	12.2	-14.2	99.7
19 " "	70° 50	26		−	8° 01	-4.0	12.1	-16.1	97.8
20 " "	61° 16	22		−	7° 33	-3.0	12.1	-15.1	98.8
21 " "	153° 01	50		−	7° 02	-6.0	12.3	-18.3	95.6
22 " "	158° 51	50		−	9° 41	-9.0	10.2	-19.2	94.7
23 P.P.	162° 50	57					9.3		04.6
24 P.P.	69° 02	38							
25 T.P.	158° 0	74							
26 12" OAK.	154° 50	76							

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Date 2-27-30 Rec. A.L.P.

	OBJECT HUB. # 1. P 913.9	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
27	TOP. OF BK.	167° 30	30					10.6		903.3
28	" " "	134° 40	7					5.8		08.1
29	" " "	21° 30	22					5.8		08.1
30	" " "	10° 06	46					8.9		05.0
31	TOE SLOPE S	11° 35	68					12.0		01.9
32	ON CROWN	269° 0	69					6.3		07.6
33	" "	273° 30	33					5.9		08.0
34	" SLOPE - S -	286° 45	71					6.7		07.2
35	" " "	306° 25	43					7.0		06.9
36	" " "	303° 30	79					9.8		04.1
37	" " "	323° 10	60					10.5		03.4
38	TOE " "	311° 40	86					11.8		02.1
39	" " "	327° 0	70		−	1° 15	−2.0	10.4	−12.4	01.5
40	ON CROWN	271° 0	100					6.6		07.3
41	" SLOPE - S -	280° 14	103					8.2		05.7
42	TOE " "	302° 14	110					11.8		02.1
43	ON TIMBER LINE 6"	225° 20	100							

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Date 2-27-30 Rec. FLP

OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
HUB #1.P 913.9									
44 ON TIMBER LINE 8"	193° 40	83							
45 10"	168° 38	46							
46 14"	202° 35	26							
47 6"	27° 10	6							
48 12"	2° 30	44							
At. HUB #1.Q H.I. 5.20	919.3								
to HUB #1.P	339° 29	296							
to HUB #1.R	88° 50	160							
1 ℄ S.T.H #1.	54° 20	196					9.4		909.9
2 " " "	62° 54	180					10.1		09.2
3 " " "	81° 31	161					11.3		08.0
4 TOE SHOULDER.	59° 42	161					10.7		08.6
5 " "	75° 47	145					12.0		07.3
6 " SLOPE N	58° 18	155					10.6		08.7
7 " " "	71° 30	124					13.3		06.0
8 IN DITCH	73° 14	137					13.0		06.3
9 ON SLOPE N	57° 14	149					8.7		10.6

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Date 2-27-30 Rec. F.L.P.

	OBJECT HUB # 18 919.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
10	ON SLOPE N	66° 50	100					9.0		910.3 ✓
11	" " "	47° 42	122					4.3		15.0 ✓
12	" " "	60° 0	78					6.9		12.4 ✓
13	" " "	37° 42	100					2.8		16.5 ✓
14	" " "	43° 24	55					5.1		14.2 ✓
15	" " "	20° 0	78					5.0		14.3 ✓
16	" " "	358° 21	41					5.1		14.2 ✓
17	" " "	348° 0	83					6.6		12.7 ✓
18	" " "	352° 18	66					7.0		12.3 ✓
19	" " "	337° 05	63					7.3		12.0 ✓
20	" " "	335° 10	80					6.9		12.4 ✓
21	" " "	338° 48	89					6.5		12.8 ✓
22	" " "	314° 35	59					5.4		12.9 ✓
23	" " "	322° 07	120					3.5		15.8 ✓
24	" " "	301° 24	88					3.9		15.4 ✓
25	℄ S.T.H # 1.	98° 30	162					12.0		07.3 ✓
26	" " "	113° 05	173					12.8		06.5 ✓

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Date 2-27-30 Rec. ALP.

	OBJECT HUB #1 919.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
27	TOE SHOULDER.	97° 11	130		−	0° 50	−2.0	12.6	−14.6	904.7
28	" "	112° 35	147		−	1° 0	−3.0	11.7	−14.7	04.6
29	" SLOPE W	98° 40	106		−	0° 54	−2.0	12.5	−14.5	04.8
30	" " "	113° 17	130		−	1° 02	−2.0	11.7	−13.7	05.6
31	ON " "	106° 30	66					11.6		07.7
32	" " "	115° 30	118					12.8		06.5
33	" " "	114 50	115		−	1° 35	−3.0	10.6	−13.6	05.7
34	" " "	129° 0	32					7.7		11.6
35	" " "	138° 11	63					10.2		09.1
36	" " "	253° 20	14					4.5		14.8
37	" " "	176° 23	42					7.8		11.5
38	" " "	281° 13	54					4.2		15.1
39	" " "	227° 42	53					4.3		15.0
40	℄ S.T.H #1	125° 37	195		−	3° 25	−12.0	2.0	−14.0	05.3
41	" " "	135° 16	227		−	3° 10	−12.0	2.1	−14.1	05.2
42	TOE SHOUL.	128° 17	173		−	3° 12	−9.0	5.9	−14.9	04.4
43	" "	138° 44	210		−	3° 15	−12.0	5.0	−17.0	02.3

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Date 2-27-30 Rec. ALP

	OBJECT HUB #1.8 919.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
44	TOE SLOPE N.	135° 54	190		−	3° 20	−11.0	6.0	−17.0	02.3
45	" " "	142° 30	181		−	3° 22	−11.0	6.9	−17.9	01.4
47	" " "	151° 57	135		−	3 20	−8.0	9.7	−17.7	01.6
48		157° 28	98		−	3 35	−6.0	10.5	−16.5	02.8
49	" " "	187° 30	90		−	3 18	−5.0	10.5	−15.5	03.8
50	" " "	195° 23	132		−	3° 20	−8.0	9.7	−17.7	01.6
51	" " W	188° 0	154		−	3° 15	−9.0	8.8	−17.8	01.5
52	" " "	178° 55	177		−	3° 12	−10.0	7.9	−17.9	01.4
53	ON " N	130° 16	167		−	2° 48	−8.0	5.8	−13.8	05.5
54	" " "	134° 34	148					12.9		06.4
55	" " "	141° 32	109		−	1° 30	−3.0	11.6	−14.6	04.7
56	" " "	183° 21	54					9.1		10.2
57	" " "	209° 0	72					7.6		11.7
58	" " "	147° 37	160		−	2° 28	−7.0	9.8	−16.8	02.5
59	" " "	153° 46	185		−	2° 35	−8.0	8.9	−16.9	02.4
60	EDGE POT. HOLE	164° 04	114		−	2° 45	−5.0	12.6	−17.6	01.7
61	" " "	189° 45	140		−	2° 37	−6.0	11.7	−17.7	01.6

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Date 2-27-30 Rec. ALP.

	OBJECT HUB #1.8 919.3	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
62	EDGE POT. HOLE	159° 18	164		−	2° 32	−7.0	10.8	−17.8	01.5
63	ON TIMBER LINE 10"	174° 22	210		−	2° 31	−9.0	9.0	−18.0	01.3
64	" " " 24"	166° 30	249							
65	" " " 12"	176° 38	241							
66	" " " 12"	189° 0	206							
67	" " " 12"	191° 48	180							
68	" " " 12"	203° 15	113							
69	" " " 12"	235 40	131							
70	" " " 12"	251° 15	98							
71	" " " 14"	275° 35	142							
72	" " " 15"	292° 30	111							
73	" " " 16"	308° 10	105							
74	" " " 10"	328° 15	150							
75	" " " 20"	350° 10	144							
76	" " " 24"	5° 15	98							
77	" " " 14"	33° 0	97							
78	" " " 24'	39° 45	108							

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Date 2-27-30 Rec. A.L.P.

	OBJECT	Azimuth	Stadia	Distance	Intervals or Ver. Angle: Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
1	HUB # 1.8 919.3									
79	ON TIMBER LINE 10"	34° 20	132							
80	" " " 10"	43° 17	169							
81	T.P.	50° 35	184							
82	SIDE RD. SIGN.	49° 17	181							
83	TURN "	88° 18	140							
84	GROUP 8" WILLOWS.	77° 10	124							
85	" 6" "	94° 0	123							
86	15" OAK	125° 15	150							
87	T.P.	136° 0	200							
	At HUB # 1.R 912.9									
	to HUB # 1.8	88° 50	160							
	to HUB # 1.J	0° 00	683.18							
1	℄ S.T.H # 1.	0° 00	308					2.4		10.5
2	" " "	0° 00	230					1.2		11.7
3	" " "	0° 00	169					2.0		10.9
4	TOE BK.	355° 47	300					1.7		11.2
5	" "	355° 11	273					0.6		12.3

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Date 2-27-30 Rec. ALP.

	OBJECT HUB = 1. R 912.9	Azimuth	Stadia	Distance	Intervals or Ver. Angle Up + Down −	No. of Int. or Angle	Rod Equiv.	Read. on Rod	Diff. of Elev.	Elevation above Datum
6	TOE BK	354°30	223					1.1		11.8
7	" "	350°16	166					1.1		11.8
8	" "	346°40	117					2.0		10.9
9	ON TIMBER LINE 10"	346°55	195							
10	" " " 8"	347°52	255							
11	10" PAP. LINE	352°45	220							
12	TO SEC. COR.	180°0	327.40							
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										