

W332A

332-A

FIELD BOOK

585 F

MICROFILMED 32-A
JAN 14 1965

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ENGINEERING and DRAFTING SUPPLIES
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Index.
Field Notes of Coordinate Cross Sections
of El Capitan Dam Site. 1932.

Jan. 28 to Feb. 8. 1932.

Converse

Gottschling

Simpson

Elliott

Jan. 28-32

P.O.G.

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Cross-section of Dam site

South end of Axis Co-ord.		N ³⁰⁰⁰ E 5000	765.815	BM on	Hub
N ³⁰⁰⁰	11.355	777.170			
E 4990		8.8	768.4	✓	V
N ³⁰⁰⁰		8.0	769.2	✓	V
E 4980		6.1	771.1	✓	V
N ³⁰⁰⁰		4.7	772.5	✓	V
E 4960		5.0	772.2	✓	V
N ³⁰⁰⁰		4.0	773.2	✓	V
E 4940					
N ³⁰⁰⁰	12.61	789.200	0.58	776.590	✓
E 4930		12.0	777.2	✓	
N ³⁰⁰⁰		8.4	780.8	✓	V
E 4920		6.9	782.3	✓	V
N ³⁰⁰⁰		3.73	785.47	✓	on hub
E 4900					
N ³⁰¹⁰	3.135	779.745	12.59	776.61	✓
E 4900		0.5	779.2	✓	V
N ³⁰¹⁰		3.4	776.3	✓	V
E 4910		7.0	772.7	✓	V
N ³⁰¹⁰		13.40	766.3	✓	V
E 4920		10.30	769.4	✓	V
N ³⁰²⁰		7.9	771.8	✓	V
E 4900					
N ³⁰²⁰	0.380	767.415	12.71	767.035	
E 4920		3.19	764.225	= 764.22	BM
N ³⁰¹⁰		3.1	764.3	✓	V
E 4930		+3.4	770.8	✓	V
N ³⁰²⁰		5.1	762.3	✓	V
E 4940					

✓ u.t.e.

Cross-section contin

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P. O. C.

N 30 10	767.41				
E 4940		+0.3	767.7	✓	✓
N 30 20				✓	
E 4950		6.6	760.8	✓	✓
N 30 10				✓	
E 4950		0.0	767.4	✓	✓
N 30 20				✓	
E 4960		7.7	759.7	✓	✓
N 30 10				✓	
E 4960		2.0	765.4	✓	✓
N 30 20				✓	
E 4970		11.0	756.4	✓	✓
N 30 10				✓	
E 4970		3.5	763.9	✓	✓
N 30 20				✓	
E 4980		13.2	754.2	✓	✓
N 30 10				✓	
E 4980		2.9	764.5	✓	✓
N 30 10				✓	
E 4990		6.1	761.3	✓	✓
N 30 10				✓	
E 5000		9.8	757.6	✓	✓
N 3000	1.00	766.81	1.600	765.81	= 765.815
E 5010			1.8	765.0	✓
N 3000				✓	
E 5020			2.9	763.9	✓
N 3000				✓	
E 5030			4.5	762.3	✓
N 3000				✓	
E 5040			9.2	757.6	✓
N 3040				✓	
E 5000	11.345	757.795		776.450	✓
N 3030				✓	
E 5000			5.8	752.0	✓
N 30 20				✓	
E 5000			5.5	752.3	✓
N 30 40				✓	
E 5010			13.0	744.8	✓
N 30 30				✓	
E 5010			6.8	751.0	✓
N 30 20				✓	
E 5010			5.7	752.1	✓
N 30 20				✓	
E 5020			5.3	752.5	✓
N 30 30				✓	
E 5020			7.0	750.8	✓
N 30 20				✓	
E 5030			5.5	752.3	✓

✓ 4/16.

P.O.G.

N 30 20	757.795			
E 50 40		5.5	752.3	✓
N 30 10				✓
E 50 40		5.2	752.6	✓
N 30 30				✓
E 50 40		11.8	746.0	✓
N 30 30				✓
E 50 50		15.0	742.8	✓
N 30 20				✓
E 50 50		8.6	749.2	✓
N 30 10				✓
E 50 50		5.3	752.5	✓
N 30 20				✓
E 50 60		11.1	746.7	✓
N 30 10				✓
E 50 60		5.7	752.1	✓
N 30 10				✓
E 50 80		8.0	749.2	✓
N 30 00				✓
E 50 80		5.5	752.3	✓
N 30 10				✓
E 50 10		6.6	751.2	✓
N 30 00				✓
E 50 90		5.5	752.3	✓
N 30 00				✓
E 51 00		5.5	752.3	✓
N 30 10				✓
E 51 00		9.7	748.1	✓
N 30 10				✓
E 50 90		9.1	748.7	✓
N 30 00				✓
E 51 10		5.7	752.1	✓
N 30 10				✓
E 51 10		10.1	747.7	✓
N 30 10				✓
E 51 20		11.5	746.3	✓
N 30 00				✓
E 51 20		5.795	752.000	✓
N 30 00				✓
E 50 50		4.5	753.3	✓
N 30 00				✓
E 50 60		5.1	752.7	✓
N 30 00				✓
E 50 70		5.0	752.8	✓
N 30 10				✓
E 50 30		5.1	752.7	✓
N 30 10				✓
E 50 20		5.0	752.8	✓
N 30 10				✓
E 50 10		4.0	753.8	✓
			✓ wks.	

Cross-section contin.

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P.O.G

N3020	757.795			
E4990	5.0	752.8	✓	✓
N3030			✓	✓
E4990	5.8	752.0	✓	✓
N3030			✓	✓
E4980	5.7	752.1	✓	✓
N3030			✓	✓
E4970	4.9	752.9	✓	✓
N3030			✓	✓
E4960	5.1	752.7	✓	✓
N3030			✓	✓
E4950	5.0	752.8	✓	✓
N3030			✓	✓
E4940	2.3	758.5	✓	✓
N3030			✓	✓
E4930	0.0	757.8	✓	✓
N3040			✓	✓
E4920	5.1	752.7	✓	✓
K3030		761.9	✓	✓
E4920	+3.4	768.2	✓	✓
N3040			✓	✓
E4910	4.5	753.3	✓	✓
N3030		764.2	✓	✓
E4910	+6.4	763.2	✓	✓
N3040			✓	✓
E4900	0.2	757.6	✓	✓
N3040			✓	✓
E4890	+1.3	759.1	✓	✓
N3040			✓	✓
E4880	+3.7	761.5	✓	✓
N3040			✓	✓
E4870	+3.5	761.3	✓	✓
N3040			✓	✓
E4860	+2.4	761.2	✓	✓
N3050			✓	✓
E4860	5.2	752.6	✓	✓
N3050			✓	✓
E4840	5.5	752.3	✓	✓
N3060			✓	✓
E4840	7.420	750.375	on hub ✓	✓
N3070			✓	✓
E4840	13.4	744.4	✓	✓
N3060			✓	✓
E4850	16.1	751.7	✓	✓
N3070			✓	✓
E4850	12.0	745.8	✓	✓
N3050			✓	✓
E4850	5.4	752.4	✓	✓
N3060			✓	✓
E4860	6.1	751.7	✓	✓

M.D.E.

Cross-section contin.

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757.795

N3050					
E4860	5.5	752.3	✓	✓	
N3070					
E4860	9.0	748.8	✓	✓	
N3080					
E4860	13.9	743.9	✓	✓	on Boulder
N3080					
E4870	16.4	741.4	✓	✓	
N3080					
E4880	15.0	742.8	✓	✓	
N3070					
E4880	9.5	748.3	✓	✓	
N3060					
E4880	6.0	751.8	✓	✓	
N3060					
E4870	5.8	752.0	✓	✓	
N3070					
E4870	9.4	748.4	✓	✓	
N3050					
E4870	5.3	752.5	✓	✓	
N3050					
E4880	5.4	752.4	✓	✓	
N3050					
E4890	5.3	752.5	✓	✓	
N3060					
E4890	5.8	752.0	✓	✓	
N3070					
E4890	10.3	747.5	✓	✓	
N3050					
E4900	5.3	752.5	✓	✓	
N3060					
E4900	6.0	751.8	✓	✓	
N3070					
E4900	11.6	746.2	✓	✓	
N3050					
E4910	5.3	752.5	✓	✓	
N3060					
E4910	6.4	751.4	✓	✓	
N3070					
E4910	13.7	744.1	✓	✓	
N3060					
E4920	9.5	748.3	✓	✓	
N3050					
E4920	5.4	752.4	✓	✓	
N3040					
E4930	5.4	752.4	✓	✓	
N3050					
E4930	6.3	751.5	✓	✓	
N3060					
E4930	11.0	746.8	✓	✓	
		750.8			

P.O.G.

	757.795				
N 3060					
E 4940		12.9	744.9	✓	✓
N 3040					
E 4940		7.5	750.3	✓	✓
N 3040					
E 4940		5.5	752.3	✓	✓
N 3040					
E 4950		5.6	752.2	✓	✓
N 3050					
E 4950		9.5	748.3	✓	✓
N 3040					
E 4960		6.5	751.3	✓	✓
N 3050					
E 4960		12.7	745.1	✓	✓ ←
N 3040					
E 4970		8.4	749.4	✓	✓
N 3040					
E 4980		9.4	748.4	✓	✓
N 3040					
E 4990		11.0	746.8	✓	✓
	1165	747.615	14345	746.450	
N 3040					
E 5020		5.2	742.4	✓	✓
N 3040					
E 5030		6.1	741.5	✓	✓
N 3030					
E 5030		10.7	748.3	✓	✓
N 3020					
E 5070		3.5	744.1	✓	✓
N 3020					
E 5080		4.5	743.1	✓	✓
N 3020					
E 5090		6.3	742.3	✓	✓
N 3020					
E 5100		5.0	742.6	✓	✓
N 3020					
E 5110		7.3	740.3	✓	✓
N 3020					
E 5120		8.6	739.8	✓	✓
N 3020					
E 5130		8.9	738.7	✓	✓
N 3020					
E 5140		9.8	737.8	✓	✓
N 3020					
E 5150		8.5	739.1	✓	✓
N 3020					
E 5160		8.8	739.135	on hub ✓	✓
N 3080					
E 5160		13.7	733.9	✓	✓

Cross-section contin.

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P.O.G.

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N 3030	747.615			
E 5150 N 3030	15.9	731.7	✓	✓
E 5140 N 3030	15.2	732.4	✓	✓
E 5130 N 3030	14.6	733.0	✓	✓
E 5120 N 3030	13.9	733.7	✓	✓
E 5110 N 3030	13.2	734.4	✓	✓
E 5100 N 3030	11.7	735.9	✓	✓
E 5090 N 3030	10.8	736.8	✓	✓
E 5080 N 3030	9.7	737.9	✓	✓
E 5070 N 3030	9.3	738.3	✓	✓
E 5060 N 3040	7.9	739.7	✓	✓
E 5050 N 3040	13.7	733.9	✓	✓
E 5050 N 3040	11.6	736.0	✓	✓
E 5040 N 3050	8.7	738.9	✓	✓
E 5040 N 3050	14.2	733.4	✓	✓
E 5030 N 3050	12.8	734.8	✓	✓
E 5020 N 3050	12.0	735.6	✓	✓
E 5010 N 3050	9.5	738.1	✓	✓
E 5000 N 3050	8.2	739.4	✓	✓
E 4990 N 3050	7.7	739.9 737.9	✓	✓
E 4980 N 3050	7.4	740.2	✓	✓
E 4970 N 3060	5.4	742.2	✓	✓
E 4960 N 3050	8.7	738.9	✓	✓
E 4960 N 3070	2.9	744.7	✓	✓
E 4960 N 3070	13.2	734.4	✓	✓
E 4950	10.4	736.9	✓	✓

741.0.8

Cross-section Contin.

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P.O.G.

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	747.6N			
N3060				
E4950		5.3	742.3	✓
N3060				
E4940		2.7	744.9	✓
N3070				
E4940		8.7	738.9	✓
N3070				
E4960		13.1	734.5	✓
N3070				
E4950		10.6	737.0	✓
N3070				
E4930		7.2	740.4	✓
N3070				
E4920		5.7	741.9	✓
N3080				
E4920		12.1	735.5	✓
N3080				
E4910		10.3	737.3	✓
N3080				
E4900		8.9	738.7	✓
N3080				
E4890		2.1	739.5	✓
N3080				
E4850		8.6	739.0	✓
N3080				
E4840		9.7	737.9	✓
N3080				
E4830		11.1	736.5	✓
N3080				
E4820		12.6	735.0	✓
N3080				
E4810		13.1	734.5	✓
N3080				
E4800	2.415	737.380	734.765	on rack ✓
		3.6	733.8	✓
N3090				
E4800		6.7	730.7	✓
N3100				
E4780		13.5	723.9	✓
N3100				
E4790		12.7	724.7	✓
N3100			726.5	
E4800		10.9	726.5	✓
N3100				
E4810		10.6	726.8	✓
N3090				
E4810		6.6	730.8	✓
N3090				
E4820		6.9	730.5	✓

near hub

747.6N

Cross-section contini

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737.380

N3100			
E4820	11.0	726.4	✓
N3100			
E4830	11.0	726.4	✓
N3090			
E4830	6.9	730.5	✓
N3090			
E4840	5.3	732.1	✓
N3100			
E4840	10.5	726.9	✓
N3100			
E4850	9.2	728.2	✓
N3090			
E4850	4.0	733.4	✓
N3100			
E4860	9.0	728.4	✓
N3090			
E4860	4.8	732.6	✓
N3100			
E4870	10.1	727.3	✓
N3090			
E4870	4.0	732.8	✓
N3100			
E4880	10.0	727.4	✓
N3090			
E4880	4.6	732.8	✓
N3100			
E4890	11.4	726.0	✓
N3090			
E4890	3.8	733.6	✓
N3090			
E4900	4.1	733.3	✓
N3100			
E4900	11.7	725.7	✓
N3100			
E4910	11.7	725.7	✓
N3090			
E4910	8.2	729.4 ²	✓
N3100			
E4920	12.1	725.3	✓
N3090			
E4920	6.9	730.5	✓
N3100			
E4930	14.7	722.7	✓
N3090			
E4930	8.9	729.0	✓
N3090			
E4930	3.5	733.9	✓
N3080			
E4940	5.3	732.1	✓

737.380

737380

N 3090				
E 4940	10.3	727.1	✓	
N 3080				
E 4950	6.3	731.1	✓	
N 3090				
E 4950	13.1	729.3	✓	
N 3080				
E 4960	10.3	727.1	✓	
N 3080		724.4	✓	
E 4970	13.0	727.4	✓	
N 3060				
E 4970	2.4	735.0	✓	
N 3070				
E 4970	7.7	729.7	✓	
N 3060				
E 4980	4.7	732.7	✓	
N 3070				
E 4980	10.7	726.7	✓	
N 3070				
E 4990	11.4	726.0	✓	
N 3060				
E 5000	4.28	733.100	733.11	
N 3070				
E 5000	9.9	727.5	✓	
N 3060				
E 4990	4.5	732.9	✓	
N 3060				
E 5010	5.2	732.2	✓	
N 3070				
E 5010	10.0	727.4	✓	
N 3060				
E 5020	7.7	729.7	✓	
N 3070				
E 5020	11.7	725.7	✓	
N 3070				
E 5030	15.2	722.4	✓	
N 3060				
E 5030	9.4	728.0	✓	
N 3060				
E 5040	11.6	725.8	✓	
N 3060				
E 5050	13.2	724.2	✓	
N 3060				
E 5060	14.1	723.3	✓	
N 3040				
E 5070	4.5	732.9	✓	
N 3050				
E 5070	10.1	727.3	✓	
N 3040				
E 5080	5.5	731.9	✓	
				m. 0.8

Cross-section contin.

Jan. 29-32

P.O.G

11^①

Point	Distance	Elevation	Notes
N 3050	737.380		
E 5080	11.9	725.5	✓
N 3040			
E 5090	6.5	730.9	✓
N 3050			
E 5070	12.2	725.2	✓
N 3040			
E 5100	8.2	729.2	✓
N 3050			
E 5100	12.5	724.9	✓
N 3040			
E 5110	9.1	728.3	✓
N 3050			
E 5110	12.0	725.4	✓
N 3040			
E 5120	8.8	728.6	✓
N 3050			
E 5120	13.7	723.7	✓
N 3040			
E 5130	9.3	728.1	✓
N 3050			
E 5130	15.1	722.3	✓
N 3050			
E 5140	15.5	721.9	✓
N 3040			
E 5140	10.0	727.4	✓
N 3040			
E 5150	10.4	727.0	✓
N 3050			
E 5150	16.2	721.2	✓
N 3050			
E 5160	15.1	721.3	✓
N 3040			
E 5160	10.065	727.315	on hub
	12.995	724.385	on rock
N 3050	1.50	734.61	733.11 BM at
E 5050			
N 3050			
E 5060			
	0.22	724.605	724.385
		733.33	733.11
N 3060			
E 5180	9.85	714.755	✓
N 3070			
E 5180	13.7	710.9	✓
N 3070			
E 5170	13.7	710.9	✓

N 3600
E 5000

Feb. 1-32 raining! 3rd day

m.o.s.

Cross-section contin.

729.65
733.23

N 30 60				
E 5170	10.2	714.4	✓	✓
N 3060				
E 5160	8.6	716.0	✓	
N 3070				
E 5160	13.8	710.8	✓	
N 3070				
E 5150	8.4	716.2	✓	
N 3060				
E 5140	8.3	716.3	✓	
N 3070				
E 5140	13.7	711.4	✓	
N 3070				
E 5130	13.1	711.5	✓	
N 3060				
E 5130	2.0	716.6	✓	
N 3060				
E 5120	6.7	717.9	✓	
N 3070				
E 5120	12.7	711.9	✓	
N 3070				
E 5110	11.4	713.2	✓	
N 3060				
E 5110	6.3	718.3	✓	
N 3060				
E 5100	5.1	719.5	✓	
N 3070				
E 5100	10.5	714.1	✓	
N 3070				
E 5090	11.3	713.3	✓	
N 3060				
E 5090	5.2	719.4	✓	
N 3060				
E 5080	5.2	719.4	✓	
N 3070				
E 5080	9.7	714.9	✓	
N 3070				
E 5070	7.7	716.9	✓	
N 3060				
E 5070	3.0	721.6	✓	
N 3070				
E 5060	5.1	719.5	✓	
N 3080				
E 5060	11.3	713.3	✓	
N 3080				
E 5050	10.8	713.8	✓	
N 3070				
E 5050	4.7	720.0	✓	
N 3070				
E 5040	4.2	720.4	✓	✓
			✓	M.R.S

Feb. 1 - 32

Rainy!

12

(12)

P.O.G.
J. Salgado
A. Remmen

Cross-sections contin.

Feb. 1-32

13 (13)

P.O.G.

724.60
722.73

N3080				
E5040	9.2	715.4	✓	✓
N3080				
E5030	6.6	718.0	✓	
N3090				
E5030	12.4	712.2	✓	
N3080				
E5020	4.0	720.6	✓	
N3090				
E5020	10.0	714.6	✓	
N3090				
E5010	8.8	715.8	✓	
N3080				
E5010	2.8	721.8	✓	
N3080		720.615	720.615	
E5000	3.99	724.34	on hill	
N3090				
E5000	10.2	714.4	✓	on Tunnel portal run
N3090				
E4990	10.3	714.3	✓	
N3080				
E4990	5.2	719.4	✓	
N3080				
E4980	4.3	720.3	✓	
N3090				
E4980	9.0	715.6	✓	
N3100				
E4980	13.0	711.6	✓	
N3090				
E4970	6.5	718.1	✓	
N3090				
E4960	2.5	722.1	✓	
N3100	7.7			
E4960	11.7	716.9	✓	
N3100				
E4970	8.8	715.8	✓	
N3110				
E4960	12.7	711.9	✓	
N3100				
E4950	6.0	718.6	✓	
N3110				
E4950	10.7	713.9	✓	
N3100				
E4940	4.4	720.2	✓	
N3110				
E4940	9.4	715.2	✓	
N3120				
E4940	13.2	711.4	✓	
N3110				
E4930	7.0	717.6	✓	✓
		m.o.s.		

206.

	724.605		
N 3120			
E 4930	12.0	712.6	✓
N 3120			
E 4920	10.6	714.0	✓
N 3110			
E 4920	5.5	719.1	✓
N 3110			
E 4910	4.9	719.7	✓
N 3120			
E 4910	8.6	716.0	✓
N 3130			
E 4910	12.8	711.8	✓
N 3120			
E 4900	12.8	711.8	✓
N 3120			
E 4900	8.0	716.6	✓
N 3110			
E 4900	3.6	721.0	✓
N 3110			
E 4890	2.6	722.0	✓
N 3120			
E 4890	6.5	718.1	✓
N 3130			
E 4890	11.6	713.0	✓
N 3110			
E 4880	1.1	723.5	✓
N 3120			
E 4880	5.7	718.9	✓
N 3130			
E 4880	10.6	714.0	✓
N 3110			
E 4870	0.8	723.8	✓
N 3120			
E 4870	4.5	720.1	✓
N 3130			
E 4870	6.1	718.5	✓
N 3130			
E 4860	7.6	717.0	✓
N 3120			
E 4860	4.0	720.6	✓
N 3110			
E 4860	2.2	722.4	✓
N 3110			
E 4850	2.5	722.1	✓
N 3120			
E 4850	4.6	720.0	✓
N 3130			
E 4850	7.9	716.7	✓
N 3110			
E 4840	2.5	722.1	✓
		11.0.8	✓

Cross-section - continue

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raining

15

P.O.C.

724.605

N3120					
E4840	5.4	719.2	✓	✓	
N3130					
E4840	13.2	711.4	✓	✓	
N3110					
E4830	3.8	720.8	✓	✓	
N3120					
E4830	8.0	716.6	✓	✓	
N3130					
E4830	13.0	711.6	✓	✓	
N3130					
E4820	14.2	710.4	✓	✓	
N3120					
E4820	9.7	714.7 713.9	✓	✓	
N3110					
E4820	4.9	719.7	✓	✓	
N3110					
E4810	5.7	718.9	✓	✓	
N3120					
E4810	10.3	714.3	✓	✓	
N3130					
E4810	15.2	709.4	✓	✓	
N3130					
E4810	16.7	707.7	✓	✓	
N3120					
E4800	10.6	714.0	✓	✓	
N3110					
E4800	4.9	717.7	✓	✓	
N3110					
E4790	6.0	718.6	✓	✓	
N3120					
E4790	10.9	713.7	✓	✓	
N3130					
E4790	16.3	708.3	✓	✓	
N3120					
E4780	10.96	713.645	✓	✓	
N3110					
E4780	6.4	718.2	✓	✓	

N3140	0.53	712.475	12.660	711.945	m. 9.6	
E4760			12.90	699.575	02.12.6	
N3130						
E4760			8.6	703.9	✓	✓
N3140						
E4770			11.0	701.5	✓	✓
N3130						
E4770			6.4	706.1	✓	✓
N3130						
E4780			4.8	707.7	✓	✓
				6.12.6		

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cross-section confirm.

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P.O.C.

	712.475				
N3140					
E4780	7.5	705.0	✓	✓	
N3150	8.6				
E4780	11.3	701.2	✓	✓	
N3140					
E4790	9.3	703.2	✓	✓	
N3150					
E4790	12.7	699.8	✓	✓	
N3150					
E4800	13.4	699.1	✓	✓	
N3140					
E4800	9.5	703.0	✓	✓	
N3140					
E4810	8.5	704.0	✓	✓	
N3150					
E4810	13.7	698.8	✓	✓	
N3140					
E4820	7.1	705.4	✓	✓	
N3150					
E4820	12.1	700.4	✓	✓	
N3140					
E4830	7.1	705.4	✓	✓	
N3150					
E4830	10.3	702.3	✓	✓	
N3140					
E4840	6.0	706.5	✓	✓	
N3150					
E4840	9.1	703.4	✓	✓	
N3140					
E4850	5.8	706.7	✓	✓	
N3150					
E4850	9.1	703.4	✓	✓	
N3140					
E4860	4.6	707.9	✓	✓	
N3150					
E4860	8.1	704.4	✓	✓	
N3140					
E4870	3.2	709.3	✓	✓	
N3150					
E4870	6.5	706.0	✓	✓	
N3160					
E4870	11.9	700.6	✓	✓	
N3160					
E4880	13.7	698.8	✓	✓	
N3150					
E4880	5.4	707.1	✓	✓	
N3140					
E4880	3.8	708.7	✓	✓	
N3140					
E4890	3.5	709.0	✓	✓	
		✓ 6.W.C.			

N 3150	712.475				
E 4890	7.9	704.6	✓	✓	
N 3160					
E 4890	17.45	705.025 = 701.014			
	17.5	698.0	✓		
N 3160					
E 4900	14.6	697.9	✓	✓	
N 3150					
E 4900	8.9	703.6	✓	✓	
N 3140					
E 4920	4.3	708.2	✓	✓	
N 3140					
E 4910	5.1	707.4	✓	✓	
N 3150					
E 4910	10.6	701.9	✓	✓	
N 3140					
E 4920	4.0	708.5	✓	✓	
N 3150					
E 4920	12.5	700.0	✓	✓	
N 3130					
E 4920	1.8	710.7	✓	✓	
N 3130					
E 4930	4.8	707.7	✓	✓	
N 3140					
E 4930	8.3	704.2	✓	✓	
N 3150					
E 4930	13.0	699.5	✓	✓	
N 3140					
E 4940	9.5	703.0	✓	✓	
N 3130					
E 4930 E 4940	5.4	707.1	✓	✓	
N 3120					
E 4950	4.5	708.0	✓	✓	
N 3130					
E 4950	8.2	704.3	✓	✓	
N 3140					
E 4950	12.11	700.4	✓	✓	
N 3120					
E 4960	6.5	706.0	✓	✓	
N 3130					
E 4960	10.7	701.8	✓	✓	
N 3110					
E 4970	3.8	708.7	✓	✓	
N 3120					
E 4970	7.9	704.6	✓	✓	
N 3130					
E 4970	12.9	699.6	✓	✓	
N 3110					
E 4980	6.1	706.2	✓	✓	
		6.14.6			

Cross-section - continue

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P.O.G.

712.475

N3120					
E4980	8.9	703.6	✓	✓	
N3120			✓	✓	
E4980	15.2	697.3			
N3100			✓	✓	
E4990	3.0	709.5			
N3110			✓	✓	
E4990	6.8	705.7			
N3120			✓	✓	
E4990	13.5	699.0			
N3120			✓	✓	
E5000		699.35			
N3110			✓	✓	
E5000	12.4	700.1			Tunnel grade
	7.9	704.6			average ground
E5000			✓	✓	
N3100	12.4	700.1			
N3100			✓	✓	
E5010	3.5	709.0			
	3.6	708.9			
N3110			✓	✓	
E5010	8.5	704.0			
N3120			✓	✓	
E5010	15.2	697.3			
N3120			✓	✓	
E5020	15.5	697.0			
N3120			✓	✓	
E5020	9.4	703.1			
N3100			✓	✓	
E5020	4.0	708.5			
N3100			✓	✓	
E5030	4.0	708.5			
N3110			✓	✓	
E5030	9.5	703.0			
N3090			✓	✓	
E5040	16	710.9			
N3100			✓	✓	
E5040	7.0	705.5			
N3100 3110			✓	✓	
E5040 5040	11.9	700.6			
N3100			✓	✓	
E5050	8.7	703.8			
N3090			✓	✓	
E5050	2.9	709.6			
N3110			✓	✓	
E5050	13.7	698.8			
N3090			✓	✓	
E5060	5.3	707.2			
		✓ 6.W.G.			

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712.475

N 3100					
E 5060	9.8	702.7	✓	✓	
N 3110					
E 5060	16.0	696.5	✓		
N 3080					
E 5070	11.4	711.1	✓		
N 3090					
E 5070	6.0	706.5	✓		
N 3100					
E 5070	10.7	701.8	✓		
N 3080					
E 5080	3.3	709.2	✓		
N 3090					
E 5080	8.5	704.0	✓		
N 3100					
E 5080	13.2	699.3	✓		
N 3080					
E 5090	4.7	707.8	✓		
N 3090					
E 5090	10.0	702.5	✓		
N 3080					
E 5110	2.9	708.6	✓		
N 3090					
E 5100	9.5	703.0	✓		
N 3080					
E 5110	4.5	708.0	✓		
N 3090					
E 5110	9.9	702.6	✓		
N 3080					
E 5120	6.1	706.4	✓		
N 3090					
E 5120	10.5	701.9	✓		
N 3080					
E 5130	6.7	706.1	✓		
N 3090					
E 5130	11.4	701.1	✓		
N 3080					
E 5140	7.0	705.5	✓		
N 3090					
E 5140	11.9	700.6	✓		
N 3080					
E 5150	6.5	706.0	✓		
N 3090					
E 5150	11.6	700.9	✓		
N 3080					
E 5160	6.9	705.6	✓		
N 3090					
E 5160	11.4	701.1	✓		
N 3080					
E 5170	7.3	705.2	✓	✓	
		G.W.C.			

Cross-section curtain

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P.P.C

20

712.475

↓

N 3090					
E 5170		10.5	702.0	✓	✓
N 3080		7.7			
E 5180		8.8	704.8	✓	
N 3090					
E 5180		11.0	701.5	✓	
N 3080					
E 5190		6.1	706.4	✓	
N 3090					
E 5190		12.1	700.4	✓	
N 3080					
E 5200		5.8	706.7	✓	
N 3090					
E 5200		12.0	700.5	✓	
N 3080					
E 5210		7.2	705.3	✓	
N 3090					
E 5210		11.6	700.9	✓	
N 3080					
E 5220		7.95	704.525 on hub	✓	
N 3090					
E 5220		12.2	700.3	✓	

126.45 699.830 G.M.G. ✓

B.M. 5.75 705.10

699.35 B.M.

T.P. 3.73 696.90

11.93 693.17

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5060

Converse Chief
Elliott Notes
Simpson level
Louden Rod

Feb 4-32

N 3120					
E 5030		1.8	95.1	✓	✓
N 3120					
E 5040		2.7	94.2	✓	
N 3130					
E 5040		5.1	91.8	✓	
N 3140					
E 5040		11.6	85.3	✓	
N 3140					
E 5030		10.2	86.7	✓	
N 3130					
E 5030		6.1	90.8	✓	
N 3120					
E 5050		3.8	93.1	✓	
N 3130					
E 5050		7.7	89.2	✓	
N 3140					
E 5050		12.5	84.4	✓	
N 3140					
E 5060		14.2	82.7	✓	✓

W.H.S.

Cross-section curtain

Feb. 2-32

P.P.C

20

712.475

↓

N 3090					
E 170		10.5	702.0	✓	✓
N 3080		7.7			
E 120		8.8	704.8	✓	
N 3090					
E 5720		11.0	701.5	✓	
N 3080					
E 190		6.1	706.4	✓	
N 3080					
E 5790		12.1	700.4	✓	
N 3080					
E 5200		5.8	706.7	✓	
N 3090					
E 5200		12.0	700.5	✓	
N 3080					
E 5210		7.2	705.3	✓	
N 3090					
E 5210		11.6	700.9	✓	
N 3080					
E 5220		7.95	704.525 on hub	✓	
N 3090					
E 5220		12.2	700.3	✓	

126.45 699.830 G.M.G. ✓

B.M. 5.25 705.10

699.35 B.M.

T.P. 11.93 693.17 Page 3120 5060

3.73 696.90

Converse Chief
Elliott Notes
Simpson level
Louden Rod

Feb 4-32

N 3120					
E 5030		1.8	95.1	✓	✓
N 3120					
E 5040		2.7	94.2	✓	
N 3130					
E 5040		5.1	91.8	✓	
N 3140					
E 5040		11.6	85.3	✓	
N 3140					
E 5030		10.2	86.7	✓	
N 3130					
E 5030		6.1	90.8	✓	
N 3120					
E 5050		3.8	93.1	✓	
N 3130					
E 5050		7.7	89.2	✓	
N 3140					
E 5050		12.5	84.4	✓	
N 3140					
E 5060		14.2	82.7	✓	✓

696.90

N. 3130		
E 5060	10.4	686.5 ✓ ✓
N. 3120	4.1	92.8 ✓
E 5060		
N. 3120	5.0	91.9 ✓
E 5070		
N. 3130	11.2	85.7 ✓
E 5070		
N. 3110	1.3	95.6 ✓
E 5070		
N. 3110	1.8	95.1 ✓
E 5080		
N. 3120	7.2	89.7 ✓
E 5080		
N. 3130	11.9	85.0 ✓
E 5080		
N. 3120	8.2	88.7 ✓
E 5090		
N. 3130	11.9	85.0 ✓
E 5090		
N. 3110	4.2	92.7 ✓
E 5090		
N. 3100	+ 0.8	97.7 ✓
E 5090		
N. 3100	10.7	97.6 ✓
E 5100		
N. 3110	4.3	92.6 ✓
E 5100		
N. 3120	9.0	87.9 ✓
E 5100		
N. 3130	12.9	84.0 ✓
E 5100		
N. 3130	13.8	83.1 ✓
E 5110		
N. 3120	9.4	87.5 ✓
E 5110		
N. 3110	4.0	92.9 ✓
E 5110		
N. 3100	+ 0.4	97.3 ✓
E 5110		
N. 3100	+ 0.6	97.5 ✓
E 5120		
N. 3110	5.4	91.5 ✓
E 5120		
N. 3120	9.9	87.0 ✓
E 5120		
N. 3130	14.0	682.9 ✓ ✓
E 5120		

	696.90			
N 3120		10.5	686.4	✓ ✓
E 5210				
N 3110		5.1	91.8	✓
E 5210				
N 3100		0.1	96.8	✓
E 5210				
N 3100		1.0	95.9	✓
E 5220				
N 3110		5.1	91.8	✓ ✓
E 5220				
N 3120		10.3	86.6	✓ ✓
E 5220				
N 3120		11.4	85.5	✓
E 5230				
N 3110		5.0	91.9	✓
E 5230				
N 3100		1.0	95.9	✓
E 5230				
N 3100		2.0	94.9	✓
E 5240				
N 3110		6.2	90.7	✓
E 5240				
N 3120		12.3	84.6	✓
E 5240				
N 3120		13.5	83.4	✓
E 5250				
N 3110		7.1	89.8	✓
E 5250				
N 3100		3.2	93.7	✓
E 5250				
N 3100		5.0	91.9	✓
E 5260				
N 3110		9.5	87.4	✓
E 5260				
N 3120		14.1	82.8	✓
E 5260				
T.P.	1.04	685.89	12.05	684.85
N 3130			4.4	81.5
E 5300				
N 3140			6.6	79.3
E 5300				
N 3150			7.4	78.5
E 5300				
N 3160			7.30	676.59 Hub
E 5300				
N 3170			7.3	78.6
E 5300				
3180				

	696.90			
N 3120		10.5	686.4	✓ ✓
E 5210				
N 3110		5.1	91.8	✓
E 5210				
N 3100		0.1	96.8	✓
E 5210				
N 3100		1.0	95.9	✓
E 5220				
N 3110		5.1	91.8	✓ ✓
E 5220				
N 3120		10.3	86.6	✓
E 5220				
N 3120		11.4	85.5	✓
E 5230				
N 3110		5.0	91.9	✓
E 5230				
N 3100		1.0	95.9	✓
E 5230				
N 3100		2.0	94.9	✓
E 5240				
N 3110		6.2	90.7	✓
E 5240				
N 3120		12.3	84.6	✓
E 5240				
N 3120		13.5	83.4	✓
E 5250				
N 3110		7.1	89.8	✓
E 5250				
N 3100		3.2	93.7	✓
E 5250				
N 3100		5.0	91.9	✓
E 5260				
N 3110		9.5	87.4	✓
E 5260				
N 3120		14.1	82.8	✓
E 5260				
T.P.	1.04	685.89	12.05	684.85
N 3130			4.4	81.5
E 5300				
N 3140			6.6	79.3
E 5300				
N 3150			7.4	78.5
E 5300				
N 3160			7.30	676.59 Hub
E 5300				
N 3170			7.3	78.6
E 5300				

685.89

N 3130				
E 5290		9.2	676.7	✓ ✓ ✓
N 3140				
E 5290		10.5	75.4	✓ ✓
N 3150				
E 5290		12.0	73.9	✓
N 3130				
E 5280		12.1	73.8	✓
N 3140				
E 5270		14.8	71.1	✓ ✓
N 3130				
E 5270		9.5	76.4	✓ ✓
N 3130				
E 5260		8.6	77.3	✓
N 3140				
E 5260		13.3	72.6	✓
N 3130				
E 5250		7.5	78.4	✓ ✓
N 3140				
E 5250		12.1	73.8	✓
N 3130				
E 5240		6.9	79.0	✓ ✓
N 3140				
E 5240		10.8	75.1	✓ ✓
N 3130				
E 5230		5.3	80.6	✓ ✓
N 3140				
E 5230		10.1	75.8	✓
N 3130				
E 5220		5.1	80.8	✓ ✓
N 3140				
E 5220		9.9	76.0	✓
N 3130				
E 5210		4.6	81.3	✓ ✓
N 3140				
E 5210		9.0	76.9	✓
N 3130				
E 5200		4.5	81.4	✓ ✓
N 3140				
E 5200		9.5	76.4	✓ ✓
N 3130				
E 5190		4.3	81.6	✓ ✓
N 3140				
E 5190		9.9	76.0	✓ ✓
N 3140				
E 5180		9.4	76.5	✓ ✓
N 3130				
E 5180		4.3	81.6	✓ ✓ ✓

N 3140 E 5170	685.89	5.3	680.6	✓ ✓
N 3130 E 5170		5.5	80.4	✓
N 3130 E 5160		5.7	80.2	✓
N 3140 E 5160		10.0	75.9	✓
N 3140 E 5150		10.0	75.9	✓
N 3130 E 5150		5.3	80.6	✓
N 3130 E 5140		4.9	81.0	✓
N 3140 E 5140		9.9	76.0	✓
N 3140 E 5130		9.3	76.6	✓
N 3130 E 5130		4.2	81.7	✓
N 3140 E 5120		8.7	77.2	✓
N 3140 E 5110		7.4	78.5	✓
N 3140 E 5100		7.0	78.9	✓
N 3140 E 5090		6.0	79.9	✓
N 3150 E 5090		10.5	75.4	✓
N 3150 E 5080		10.1	75.8	✓
N 3140 E 5080		5.8	80.1	✓
N 3140 E 5070		5.0	80.9	✓
N 3150 E 5070		8.2	77.7	✓
N 3150 E 5060		7.4	78.5	✓
N 3140 E 5060		3.1	82.9	✓
N 3150 E 5050		7.2	78.7	✓
N 3150 E 5040		7.7	78.2	✓
N 3150 E 5030		6.4	679.5	✓ ✓

685.89

N 3150			6.0	679.9	✓	✓
E 5020						
N 3160			10.5	75.4	✓	✓
E 5020						
N 3160			12.5	73.4	✓	✓
E 5030						
N 3160			12.4	73.4 ⁵	✓	✓
E 5040						
N 3160			11.7	74.2	✓	✓
E 5050						
N 3160			12.9	73.0	✓	✓
E 5060						
N 3160			9.1	76.8	✓	✓
E 5010						
N 3150			4.7	81.2	✓	✓
E 5010						
N 3150			2.7	83.2	✓	✓
E 5000						
N 3160			8.4	77.5	✓	✓
E 5000						

8.43 685.85

8.43 677.46 ^{677.42} Hub

N 3160			7.1	78.8	✓	✓
E 4990						
N 3170			7.7	78.2	✓	✓
E 5000						
N 3170			9.9	76.0	✓	✓
E 4990						
N 3150			1.5	84.4	✓	✓
E 4990						
N 3160			4.2	81.7	✓	✓
E 4980						

T.P.

13.00 698.06

0.79 685.06

N 3130			7.1	91.0	✓	✓
E 5020						
N 3140			14.6	83.5	✓	✓
E 5020						
N 3140			9.9	88.2	✓	✓
E 5010						
N 3130			2.8	95.3	✓	✓
E 5010						
N 3130			1.3	96.8	✓	✓
E 5000						
N 3140			9.1	89.0	✓	✓
E 5000						
N 3140			9.8	88.3	✓	✓
E 4990						
N 3130			4.6	693.5	✓	✓
E 4990						

N.H.S. ✓

698.06

N 3140					
E 4980	7.6	690.5	✓	✓	
N 3150					
E 4980	10.8	87.3	✓	✓	
N 3140					
E 4970	5.0	93.1	✓	✓	
N 3150					
E 4970	8.9	89.2	✓	✓	
N 3140					
E 4960	1.8	96.3	✓	✓	
N 3150					
E 4960	6.3	91.8	✓	✓	
N 3160					
E 4960	12.0	86.1	✓		
N 3160					
E 4970	13.7	84.4	✓		
N 3160					
E 4950	10.7	87.4	✓		
N 3150					
E 4950	3.3	94.8	✓		
N 3160					
E 4940	7.8	90.3	✓		
N 3170					
E 4940	13.8	84.3	✓		
N 3160					
E 4930	4.7	93.4	✓		
N 3170					
E 4930	12.9	85.2	✓		
3170					
4920	11.1	87.0	✓		
N 3160					
E 4920	5.1	93.0	✓		
N 3160					
N 4910	2.2	95.9	✓		
N 3170					
E 4910	8.7	89.4	✓		
N 3170					
E 4900	5.1	93.0	✓		
N 3160					
E 4900	0.3	97.8	✓		
N 3180					
E 4900	8.2	89.9	✓		
N 3180					
E 4890	8.6	89.5	✓		
N 3170					
E 4890	5.5	92.6	✓		
N 3170					
E 4880	4.5	93.6	✓		
N 3180					
E 4880	8.1	690.0	✓	W.H.S. ✓	

698.06

N 3180			8.0	690.1	✓	✓
E 4870						
N 3170			4.0	94.1	✓	✓
E 4870						
N 3160			+1.8	99.9	✓	✓
E 4860						
N 3170			4.8	93.3	✓	✓
E 4860						
N 3180			8.9	89.2	✓	✓
E 4860						
N 3190			11.1	87.0	✓	✓
E 4860						
N 3190			11.1	87.0	✓	✓
E 4870						
N 3190			12.3	85.8	✓	✓
E 4880						
N 3190			12.6	85.5	✓	✓
E 4850						
N 3180			8.1	90.0	✓	✓
E 4850						
N 3170			3.5	94.6	✓	✓
E 4850						
N 3160			+1.1	99.2	✓	✓
E 4850						
T. P.	2.36	696.08	4.34	693.72		
N 3190			7.5	88.6	✓	✓
E 4840						
N 3180			7.2	88.9	✓	✓
E 4840						
N 3170			2.4	93.7	✓	✓
E 4840						
N 3160			+1.9	98.0	✓	✓
E 4840						
N 3160			+1.3	97.4	✓	✓
E 4830						
N 3170			2.6	93.5	✓	✓
E 4830						
N 3180			8.1	88.0	✓	✓
E 4830						
N 3190			10.2	85.9	✓	✓
E 4830						
N 3190			13.1	83.0	✓	✓
E 4820						
N 3180			10.1	86.0	✓	✓
E 4820						
N 3170			2.9	93.2	✓	✓
E 4820						
N 3160			0.4	695.7	✓	✓
E 4820						W.H.S.

69608

N 3160 E 4810			0.7	695.4	✓ ✓ ✓
N 3170 E 4810			5.1	91.0	✓ ✓
N 3180 E 4810			11.6	84.5	✓ ✓
N 3180 E 4800			12.1	84.0	✓ ✓
N 3170 E 4800			7.4	88.7	✓ ✓
N 3160 E 4800			2.3	93.8	✓ ✓
N 3160 E 4790			2.0	94.1	✓ ✓
N 3170 E 4790			8.7	87.4	✓ ✓
N 3180 E 4790			13.9	82.2	✓ ✓
N 3180 E 4780			12.9	83.2	✓ ✓
N 3170 E 4780			6.3	87.8	✓ ✓
N 3160 E 4780			0.9	95.2	✓ /
N 3160 E 4770			1.5	94.6	✓ /
N 3170 E 4770			7.2	88.9	✓ /
N 3160 E 4760			3.31	692.77	✓ Hub
N 3170 E 4760			7.9	88.2	✓ ✓
N 3180 E 4760			14.2	81.9	✓ /
N 3180 E 4770			14.2	81.9	✓ /
T.P.	1.26	686.43	10.91	685.17	
3180 4750			5.9	80.5	✓ ✓
3170 4750			1.0	85.4	✓ ✓
3170 4740			4.1	82.3	✓ ✓
3180 4740			7.5	78.9	✓ ✓
3180 4730			11.2	75.2	✓ ✓
3170 4730			7.0	679.4	✓ W.H.S. ✓

N 3170					
E 4720			10.8	675.6	✓ ✓
T.P.	6.20	680.07	12.56	673.87	
N 3180					
E 4720			9.0	71.1	✓
N 3190					
E 4720			13.7	66.4	✓
N 3180					
E 4710			12.2	67.9	✓
N 3170					
E 4710			8.1	72.0	✓
N 3170					
E 4700			10.7	69.4	✓
N 3180					
E 4700			14.8	65.3	✓
N 3180					
E 4690			13.4	66.7	✓
N 3170					
E 4690			10.8	69.3	✓
N 3170					
E 4680			10.8	69.3	✓
N 3180					
E 4680			13.2	66.9	✓
N 3180					
E 4670			12.5	67.6	✓
N 3170					
E 4670			11.3	68.8	✓
N 3170					
E 4660			8.2	71.9	✓
N 3180					
E 4660			8.9	71.2	✓
N 3180					
E 4650			3.7	76.4	✓
N 3190					
E 4650			7.9	72.2	✓
N 3200					
E 4650			10.7	69.4	✓
N 3190					
E 4730			9.4	70.7	✓
N 3190					
E 4740			5.6	74.5	✓
N 3200					
E 4740			12.5	67.6	✓
N 3200					
E 4750			9.1	71.0	✓
N 3190					
E 4750			2.6	77.5	✓
N 3190					
E 4760			0.8	679.3	W.H.S. ✓

680.07

N 3200			
E 4760	5.6	674.5	✓ ✓
N 3200			
E 4770	6.7	73.4	✓
N 3190			
E 4770	0.1	80.0	✓
N 3190			
E 4780	1.0	79.1	✓
N 3200			
E 4780	7.8	72.3	✓
N 3210			
E 4780	12.6	67.5	✓
N 3190			
E 4790	1.4	78.7	✓
N 3200			
E 4790	5.1	75.0	✓
N 3210			
E 4790	6.7	73.4	✓
N 3210			
E 4800	7.9	72.2	✓
N 3200			
E 4800	4.5	75.6	✓
N 3190			
E 4800	1.0	79.1	✓
N 3190			
E 4810	+ 1.4	81.5	✓
N 3200			
E 4810	2.8	77.3	✓
N 3210			
E 4810	7.1	73.0	✓
N 3220			
E 4810	11.1	69.0	✓
N 3220			
E 4800	13.1	67.0	✓
N 3220			
E 4820	9.0	71.1	✓
N 3210			
E 4820	6.8	73.3	✓
N 3200			
E 4820	2.2	77.9	✓
N 3200			
E 4830	0.1	80.0	✓
N 3210			
E 4830	4.1	76.0	✓
N 3220			
E 4830	6.7	73.4	✓
N 3220			
E 4840	8.1	672.0	✓ ✓

W.H.S.

N 3210 E 4840	680.07		2.5	677.6	✓	✓
N 3200 E 4840			+1.4	81.5	✓	
N 3200 E 4850			+1.5	81.6	✓	
N 3210 E 4850			1.6	78.5	✓	
N 3220 E 4850			8.2	71.9	✓	
N 3220 E 4860			8.9	71.2	✓	
N 3210 E 4860			3.4	76.7	✓	
T. P.	5.63	684.67	1.03	679.04		
N 3200 E 4860			2.9	81.8	✓	
N 3200 E 4870			2.4	82.3	✓	
N 3210 E 4870			8.7	76.0	✓	
N 3210 E 4880			10.8	73.9	✓	
N 3200 E 4880			5.6	79.1	✓	
N 3200 E 4890			5.8	78.9	✓	
N 3190 E 4890			1.5	83.2	✓	
N 3210 E 4890			14.4	70.3	✓	
N 3200 E 4900			10.1	74.6	✓	
N 3190 E 4900			4.2	80.5	✓	
N 3200 E 4910			9.4	75.3	✓	
N 3190 E 4910			5.1	79.6	✓	
N 3180 E 4910			0.5	84.2	✓	
N 3180 E 4920			3.3	81.4	✓	
N 3190 E 4920			6.9	77.8	✓	
N 3200 E 4920			11.6	73.1	✓	
N 3200 E 4930			13.9	670.8	✓	W.H.S. ✓

684.67

N 3190 E 4930		8.8	675.9 ✓	✓
N 3180 E 4930		5.4	79.3 ✓	
N 3180 E 4940		5.7	79.0 ✓	
N 3190 E 4940		10.9	73.8 ✓	
N 3180 E 4950		6.2	78.5 ✓	
N 3190 E 4950		11.7	73.0 ✓	
N 3170 E 4950		2.3	82.4 ✓	
N 3170 E 4960		2.4	82.3 ✓	
N 3180 E 4960		11.2	73.5 ✓	
N 3160 E 4970		0.4	84.3 ✓	
N 3170 E 4970		6.1	78.6 ✓	
N 3180 E 4970		11.7	73.0 ✓	
N 3180 E 4980		11.9	72.8 ✓	
N 3170 E 4980		7.8	77.2 ✓	
N 3180 E 4990		13.2	71.5 ✓	
		7.26	677.41 ✓	677.42 11.6
T.P.	0.83	674.95	10.55	674.12
N 3180 E 5000		5.0	70.0 ✓	✓
N 3190 E 5000		10.0	65.0 ✓	✓
N 3190 E 4990		9.6	65.4 ✓	✓
N 3190 E 4980		6.6	68.4 ✓	✓
N 3190 E 4970		6.6	68.4 ✓	✓
N 3190 E 4960		5.4	69.6 ✓	✓
N 3190 E 5010		10.7	64.3 ✓	✓
N 3180 E 5010		5.7	669.3 ✓	w.H.S. ✓

674.95

N 3170	2.7	672.3 ✓ ✓
E 5010		
N 3170	3.5	671.5 ✓
E 5020		
N 3180	7.4	67.6 ✓
E 5020		
N 3190	12.5	62.5 ✓
E 5020		
N 3190	13.9	61.1 ✓
E 5030		
N 3180	9.2	65.8 ✓
E 5030		
N 3170	4.5	70.5 ✓
E 5030		
N 3170	5.2	69.8 ✓
E 5040		
N 3180	9.0	66.0 ✓
E 5040		
N 3190	14.9	60.1 ✓
E 5040		
N 3180	10.4	64.6 ✓
E 5050		63.6 ✓
N 3170	5.8	69.2 ✓
E 5050		
N 3170	6.2	68.8 ✓
E 5060		
N 3180	11.2	63.8 ✓
E 5060		
N 3180	13.0	62.0 ✓
E 5070		
N 3170	7.2	67.8 ✓
E 5070		
N 3160	3.3	71.7 ✓
E 5070		
N 3160	3.9	71.1 ✓
E 5080		
N 3170	9.0	66.0 ✓
E 5080		
N 3180	13.4	61.6 ✓
E 5080		
N 3160	5.5	69.5 ✓
E 5090		
N 3170	11.2	63.8 ✓
E 5090		
N 3170	11.6	63.4 ✓
E 5100		
N 3160	7.5	67.5 ✓
E 5100		
N 3150	2.0	673.0 ✓ ✓
E 5100		W.H.S. ✓

674.95

N 3150			
E 5110	2.0	673.0	✓ ✓
N 3160			
E 5110	7.2	67.8	✓
N 3170			
E 5110	11.5	63.5	✓
N 3170			
E 5120	12.1	62.9	✓
N 3160			
E 5120	7.4	67.6	✓
N 3150			
E 5120	2.6	72.4	✓
N 3150			
E 5130	3.4	71.6	✓
N 3160			
E 5130	7.5	67.5	✓
N 3170			
E 5130	11.3	63.7	✓
N 3170			
E 5140	11.6	63.4	✓
N 3160			
E 5140	7.6	67.4	✓
N 3150			
E 5140	3.6	71.4	✓
N 3150			
E 5150	4.1	70.9	✓
N 3160			
E 5150	8.7	66.3	✓
N 3170			
E 5150	12.8	62.2	✓
N 3170			
E 5160	12.8	62.2	✓
N 3160			
E 5160	9.4	65.6	✓
N 3150			
E 5160	4.0	71.0	✓
N 3150			
E 5170	3.8	71.2	✓
N 3160			
E 5170	9.4	65.6	✓
N 3170			
E 5170	14.0	61.0	✓
N 3170			
E 5180	13.5	61.5	✓
N 3160			
E 5180	8.7	66.3	✓
N 3150			
E 5180	2.4	672.6	✓ ✓
N			
E			

674.95

N 3150 E 5190	2.6	672.4	✓	✓
N 3160 E 5190	8.2	66.8	✓	✓
N 3170 E 5190	13.0	62.0	✓	✓
N 3170 E 5200	12.4	62.6	✓	✓
N 3160 E 5200	7.4	67.6	✓	✓
N 3150 E 5200	3.5	71.5	✓	✓
N 3150 E 5210	3.3	71.7	✓	✓
N 3160 E 5210	7.5	67.5	✓	✓
N 3170 E 5210	11.7	63.3	✓	✓
N 3170 E 5220	10.6	64.4	✓	✓
N 3160 E 5220	7.2	67.8	✓	✓
N 3150 E 5220	3.8	71.2	✓	✓
N 3150 E 5230	4.2	70.8	✓	✓
N 3160 E 5230	7.7	67.3	✓	✓
N 3170 E 5230	11.6	63.4	✓	✓
N 3160 E 5240	10.5	64.5	✓	✓
N 3150 E 5240	5.7	69.3	✓	✓
N 3160 E 5250	12.9	62.1	✓	✓
N 3150 E 5250	7.9	67.1	✓	✓
N 3150 E 5260	9.2	65.8	✓	✓
N 3160 E 5260	13.8	61.2	✓	✓
N 3150 E 5270	9.8	65.2	✓	✓
N 3160 E 5270	10.4	64.6	✓	✓
N 3170 E 5270	11.5	63.5	✓	✓
N 3180 E 5270	12.7	662.3	✓	W.H.S. ✓

674.95

N 3200			
E 5280	11.9	663.1	✓ ✓
N 3190			
E 5280	11.1	63.9	✓ ✓
N 3180			
E 5280	10.1	64.9	✓
N 3170			
E 5280	8.0	67.0	✓
N 3160			
E 5280	6.7	68.3	✓
N 3150			
E 5280	5.7	69.3	✓
N 3140			
E 5280	4.5	70.5	✓
N 3160			
E 5290	2.9	72.1	✓
N 3170			
E 5290	4.4	70. ⁶ / ₈	✓
N 3180			
E 5290	7.0	68.0	✓
N 3190			
E 5290	7.7	67.3	✓
N 3200			
E 5290	10.4	64.6	✓
N 3210			
E 5290	13.2	61.8	✓
N 3210			
E 5300	11.5	63.5	✓
N 3200			
E 5300	8.5	66.5	✓
N 3190			
E 5300	4.4	70. ⁶ / ₈ 71.6	✓
N 3180			
E 5300	3.31	671.64	✓ Hub
N 3190			
E 5310	2.3	72.7	✓
N 3200			
E 5310	5.0	70.0	✓
N 3210			
E 5310	8.8	66.2	✓
N 3220			
E 5310	10.6	64.4	✓
N 3230			
E 5310	13.4	61.6	✓
N 3240			
E 5320	14.8	60.2	✓
N 3230			
E 5320	12.2	62.8	✓
N 3220			
E 5320	9.2	665.8	✓ W.H.S.

674.95

N 3210
E 5320
N 3200
E 5320

4.4 670.6 ✓ ✓
0.5 74.5 ✓ ✓

662

678.26

671.64

N 3180
E 5300
Hub

N 3200
E 5330

2.9 75.4 ✓ ✓

N 3210
E 5330

4.3 74.0 ✓ ✓

N 3200
E 5340

2.0 76.3 ✓ ✓

N 3210
E 5340

2.8 75.5 ✓ ✓

N 3200
E 5350

0.6 77.7 ✓ ✓

N 3210
E 5350

2.5 75.8 ✓ ✓

N 3200
E 5360

0.52 677.74 ✓ Hub

N 3210
E 5360

2.0 76.3 ✓ ✓

N 3220
E 5360

4.6 73.7 ✓ ✓

N 3230
E 5360

7.1 71.2 ✓ ✓

N 3220
E 5350

6.0 72.3 ✓ ✓

N 3230
E 5350

8.3 70.0 ✓ ✓

N 3240
E 5350

12.4 65.9 ✓ ✓

N 3220
E 5340

5.3 73.0 ✓ ✓

N 3230
E 5340

11.5 66.8 ✓ ✓

N 3220
E 5330

7.2 71.1 ✓ ✓

N 3230
E 5330

13.6 64.7 ✓ ✓

N
E T.P.

1.81 667.25

12.82 665.44

N 3240
E 5330

5.9 61.3 ✓ ✓

N 3250
E 5320

11.1 56.1 ✓ ✓

N 3250
E 5330

9.2 658.0 ✓ ✓ W.N.S.

667.25

N 3260						
E 5340			9.6	657.8 ⁶	✓	✓
N 3250						
E 5340			6.2	61.0	✓	✓
N 3240						
E 5340			3.9	63.3	✓	✓
N 3250						
E 5350			8.0	59.2	✓	✓
N 3260						
E 5350			10.1	57.1	✓	✓
N N3260						
E 5360			8.3	58.9 58.0	✓	✓
N 3250						
E 5360			7.0	60.2	✓	✓
N 3250						
E 5370			4.3	62.9	✓	✓
N 3260						
E 5370			8.5	58.7	✓	✓
N 3270						
E 5370			11.4	55.8	✓	✓
N 3270						
E 5380			12.1	55.1	✓	✓
N 3260						
E 5380			8.6	58.6	✓	✓
N 3260						
E 5390			8.0	59.2	✓	✓
N 3270						
E 5390			12.5	54.7	✓	✓
N 3270						
E 5400			12.1	55.1	✓	✓
N 3260						
E 5400			8.5	58.7	✓	✓
N 3270						
E 5410			12.0	55.2	✓	✓
B.M. T.P.	0.54	659.06	8.75	658.50	#5-8 658.52	
N 3280						
E 5360			7.1	52.0	✓	✓
N 3270						
E 5360			4.1	55.0	✓	✓
N 3280						
E 5350			11.2	47.9	✓	✓
N 3270						
E 5350			6.5	52.6	✓	✓
N 3280						
E 5340			11.5	47.6	✓	✓
N 3270						
E 5340			8.1	51.0	✓	✓
N 3280						
E 5330			13.0	64.6	✓ W.H.S.	✓

659.06

N 3270				
E 5330		9.9	649.2	✓ ✓
N 3260				
E 5330		4.6	54.5	✓ ✓
N 3260				
E 5320		7.3	51.8	✓ ✓
N 3270				
E 5320		11.1	48.0	✓ ✓
N 3280				
E 5320		14.7	44.4	✓ ✓
N 3270				
E 5310		13.7	45.4	✓ ✓
N 3260				
E 5310		8.9	50.2	✓ ✓
N 3250				
E 5310		4.8	54.3	✓ ✓
N 3240				
E 5310		1.1	58.0	✓ ✓
N 3260				
E 5300		11.2	47.9	✓ ✓
N 3250				
E 5300		7.6	51.5	✓ ✓
N 3240				
E 5300		4.2	54.9	✓ ✓
N 3230				
E 5300		1.1	58.0	✓ ✓
N 3220				
E 5300		+ 1.8	60.9	✓ ✓
N 3220				
E 5290		0.9	58.2	✓ ✓
N 3230				
E 5290		3.2	55.9	✓ ✓
N 3240				
E 5290		7.6	51.5	✓ ✓
N 3250				
E 5290		10.3	48.8	✓ ✓
N 3260				
E 5290		13.8	45.3	✓ ✓
N 3250				
E 5280		12.1	47.0	✓ ✓
N 3240				
E 5280		10.5	48.6	✓ ✓
N 3230				
E 5280		5.4	53.7	✓ ✓
N 3220				
E 5280		2.5	56.6	✓ ✓
N 3210				
E 5280		+ 1.8	60.9	✓ ✓
N 3190				
E 5270		+ 1.5	660.6	W.H.S. ✓

Converse Chief
Elliott Notes
Simpson T
Louden Road

Feb 4-32

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659.06

N 3200					
E 5270			1.5	657.6	✓ ✓
N 3210					
E 5270			2.0	57.1	✓ ✓
N 3220					
E 5270			6.0	53.1	✓ ✓
N 3230					
E 5270			8.3	50.8	✓ ✓
N 3240					
E 5270			13.1	46.0	✓ ✓

B.M. 11.58 661.58 9.06 650.00 650.00

N 3220					
E 5260			12.7	48.9	✓ ✓
N 3210					
E 5260			10.4	51.2	✓ ✓
N 3200					
E 5260			9.0	52.6	✓ ✓
N 3190					
E 5260			6.3	55.3	✓ ✓
N 3180					
E 5260			2.9	58.7	✓ ✓
N 3170					
E 5260			2.5	59.1	✓ ✓
N 3170					
E 5250			5.7	55.9	✓ ✓
N 3180					
E 5250			9.7	51.9	✓ ✓
N 3190					
E 5250			13.1	48.5	✓ ✓
N 3190					
E 5240			12.0	49.6	✓ ✓
N 3180					
E 5240			7.6	54.0	✓ ✓
N 3170					
E 5240			2.8	58.8	✓ ✓
N 3180					
E 5230			4.7	56.9	✓ ✓
N 3190					
E 5230			9.8	51.8	✓ ✓
N 3200					
E 5230			13.9	47.7	✓ ✓
N 3200					
E 5220			12.1	49.5	✓ ✓
N 3190					
E 5220			7.2	54.4	✓ ✓
N 3180					
E 5220			2.0	59.6	✓ ✓
N 3180					
E 5210			1.7	659.9	✓ ✓ w.n.s. ✓

Same Party

Feb 5-1932

N 3190	661.58		
E 5210		6.4	655.2 ✓ ✓
N 3200		11.4	50.2 ✓ ✓
E 5210			
N 3200		10.9	50.7 ✓
E 5200			
N 3190		6.6	55.0 ✓
E 5200			
N 3180		2.1	59.5 ✓
E 5200			
N 3180		3.2	58.4 ✓
E 5190			
N 3190		7.8	53.8 ✓
E 5190			
N 3200		11.3	50.3 ✓
E 5190			
N 3200		12.5	49.1 ✓
E 5180			
N 3190		8.2	53.4 ✓
E 5180			
N 3180		4.3	57.3 ✓
E 5180			
N 3180		3.6	58.0 ✓
E 5170			
N 3190		8.5	53.1 ✓
E 5170			
N 3200		12.7	48.9 ✓
E 5170			
N 3200		12.4	49.2 ✓
E 5160			
N 3190		8.0	53.6 ✓
E 5160			
N 3180		2.1	59.5 ✓
E 5160			
N 3180		3.7	57.9 ✓
E 5150			
N 3190		8.6	53.0 ✓
E 5150			
N 3200		12.2	49.4 ✓
E 5150			
N 3200		11.2	50.4 ✓
E 5140			
N 3190		8.0	53.6 ✓
E 5140			
N 3180		2.5	59.1 ✓
E 5140			
N 3180		2.5	59.1 ✓
E 5130			
N 3190		8.2	653.4 ✓
E 5130			W.H.S. ✓

661.58

N 3200 E 5130	12.1	649.5	✓	✓
N 3200 E 5120	12.7	48.9	✓	
N 3190 E 5120	7.5	54.1	✓	
N 3180 E 5120	3.3	58.3	✓	
N 3180 E 5110	2.8	58.8	✓	
N 3190 E 5110	6.6	55.0	✓	
N 3200 E 5110	11.9	49.7	✓	
N 3200 E 5100	10.1	51.5	✓	
N 3190 E 5100	5.2	56.4	✓	
N 3180 E 5100	2.2	59.4	✓	
N 3180 E 5090	1.3	60.3	✓	
N 3190 E 5090	4.2	57.4	✓	
N 3200 E 5090	8.5	53.1	✓	
N 3210 E 5090	12.2	49.4	✓	
N 3210 E 5080	11.6	50.0	✓	
N 3200 E 5080	8.1	53.5	✓	
N 3190 E 5080	3.6	58.0	✓	
N 3180 E 5080	0.0	61.6	✓	
N 3190 E 5070	2.5	59.1	✓	
N 3200 E 5070	7.2	54.4	✓	
N 3210 E 5070	11.8	49.8	✓	
N 3210 E 5060	12.3	49.3	✓	
N 3200 E 5060	7.9	53.7	✓	
N 3190 E 5060	2.3	59.3	✓	
N 3190 E 5050	2.5	659.1	✓	W.H.E. ✓

66,58

N	3200					
E	5050		6.7	654.9	✓	✓
N	3210					
E	5050		11.6	50.0	✓	✓
N	3210					
E	5040		9.2	52.4	✓	
N	3200					
E	5040		5.6	56.0	✓	✓
N	3200					
E	5030		5.2	56.4	✓	✓
N	3210					
E	5030		7.6	54.0	✓	✓
N	3220					
E	5030		12.7	48.9	✓	✓
N	3220					
E	5020		12.1	49.5	✓	✓
N	3210					
E	5020		6.7	54.9	✓	✓
N	3200					
E	5020		3.8	57.8	✓	✓
N	3200					
E	5010		4.1	57.5	✓	✓
N	3210					
E	5010		7.3	54.3	✓	✓
N	3220					
E	5010		13.2	48.4	✓	✓
N	3220					
E	5000	T.P. 1.43	651.045	11.99	649.59	649.615 Hub
N	3210					
E	5000		+ 2.6	653.6	✓	✓
N	3200					
E	5000		+ 7.6	658.6	✓	✓
N	3230					
E	5000		3.4	47.6	✓	✓
N	3240					
E	5000		10.9	40.1	✓	✓
N	3240					
E	5010		11.3	39.7	✓	✓
N	3230					
E	5010		4.4	46.6	✓	✓
N	3220					
E	5010		2.1	48.9	✓	✓
N	3230					
E	5020		8.9	42.1	✓	✓
N	3240					
E	5020		13.2	37.8	✓	✓
N	3240					
E	5030		14.5	36.5	✓	✓
N	3230					
E	5030		8.2	642.8	✓	W.H.S. ✓

		651,045		
N	T.P.	1,630	645,595	7.08 643,965
N	3250			
E	5000			
N	3250			10.6 35.0 ✓ ✓
E	5010			
N	3250			11.1 34.5 ✓ ✓
E	5020			
N	3250			12.2 33.4 ✓ ✓
E	5030			
N	3250			13.2 32.4 ✓ ✓
E	5040			
N	3240			14.0 31.6 ✓ ✓
E	5040			
N	3230			8.5 37.1 ✓ ✓
E	5040			
N	3220			4.2 41.4 ✓ ✓
E	5040			
N	3220			+1.2 46.8 ✓ ✓
E	5050			
N	3230			0.3 45.3 ✓ ✓
E	5050			
N	3240			3.5 42.1 ✓ ✓
E	5050			
N	3250			8.8 36.8 ✓ ✓
E	5050			
N	3250			13.5 32.1 ✓ ✓
E	5060			
N	3240			14.4 31.2 ✓ ✓
E	5060			
N	3230			10.1 35.5 ✓ ✓
E	5060			
N	3220			4.8 40.8 ✓ ✓
E	5060			
N	3220			0.6 45.0 ✓ ✓
E	5070			
N	3230			+0.4 46.0 ✓ ✓
E	5070			
N	3240			3.1 42.5 ✓ ✓
E	5070			
N	3240			11.2 34.4 ✓ ✓
E	5080			
N	3230			9.7 35.9 ✓ ✓
E	5080			
N	3220			4.0 41.6 ✓ ✓
E	5080			
N	3220			+0.6 46.2 ✓ ✓
E	5090			
N	3230			0.1 45.5 ✓ ✓
E	5090			
				5.9 639.7 ✓ ✓ W.H.S.

N	3240			
E	5090			
		645.595		
N	3240	9.3	636.3	✓ ✓ ✓
E	5100			
N	3240	12.4	33.2	✓
E	5100			
N	3230	8.3	37.3	✓ ✓
E	5100			
N	3220	2.8	42.8	✓
E	5100			
N	3210	+ 0.6	46.2	✓
E	5110			
N	3210	0.3	45.3	✓
E	5110			
N	3220	4.9	40.7	✓
E	5110			
N	3230	10.3	35.3	✓
E	5110			
N	3240	14.7	30.9	✓
E	5110			
N	3240	15.1	30.5	✓
E	5120			
N	3230	10.5	35.1	✓
E	5120			
N	3220	5.8	39.8	✓
E	5120			
N	3210	0.9	44.7	✓
E	5120			
N	3210	+ 0.1	45.7	✓
E	5130			
N	3220	8.2	40.4	✓
E	5130			
N	3230	9.6	36.0	✓
E	5130			
N	3240	14.1	31.5	✓
E	5130			
N	3240	13.4	32.2	✓
E	5140			
N	3230	9.5	36.1	✓
E	5140			
N	3220	4.0	41.6	✓
E	5140			
N	3210	+ 0.6	46.2	✓
E	5140			
N	3210	+ 0.5	46.1	✓
E	5150			
N	3220	2.8	42.8	✓
E	5150			
N	3230	8.1	37.5	✓
E	5150			
N	3240	12.2	633.4	✓
E	5150			
				W.H.S. ✓

		645.595			
N	3240		11.0	634.6	✓✓✓
E	5160				
N	3230		7.2	38.4	✓
E	5160				
N	3220		3.2	42.4	✓✓
E	5160				
N	3210		0.4	45.2	✓
E	5160				
N	3210		0.5	45.1	✓
E	5170				
N	3220		3.5	42.1	✓
E	5170				
N	3230		6.6	39.0	✓✓
E	5170				
N	3240		11.0	34.6	✓
E	5170				
N	3240		10.2	35.4	✓
E	5180				
N	3230		6.6	39.0	✓
E	5180				
N	3220		2.9	42.7	✓
E	5180				
N	3210		0.0	45.6	✓
E	5180				
N	3210		+2.0	47.6	✓
E	5190				
N	3220		2.6	43.0	✓
E	5190				
N	3230		6.6	39.0	✓
E	5190				
N	3240		10.5	35.1	✓
E	5190				
N	3240		11.1	34.5	✓
E	5200				
N	3230		6.7	38.9	✓
E	5200				
N	3220		2.9	42.7	✓
E	5200				
N	3210		+1.5	47.1	✓✓
E	5200				
N	3210		+0.7	46.3	✓✓
E	5210				
N	3220		3.5	42.1	✓
E	5210				
N	3230		7.5	38.1	✓✓
E	5210				
N	3240		12.0	33.6	✓✓
E	5210				
N	3240		13.6	632.0	✓ W.N.S.
E	5220				

		645.595		
N	3230			
E	5220	9.0	636.6	✓ ✓
N	3220			
E	5220	4.6	41.0	✓
N	3210			
E	5220	0.2	45.4	✓
N	3210			
E	5230	2.2	43.4	✓
N	3220			
E	5230	6.1	39.5	✓
N	3230			
E	5230	10.9	34.7	✓
N	3240			
E	5230	15.9	29.7	✓
N	3240			
E	5240	13.2	32.4	✓
N	3230			
E	5240	12.7	32.9	✓
N	3220			
E	5240	7.6	38.0	✓
N	3210			
E	5240	3.8	41.8	✓
N	3200			
E	5240	70.3	45.9	✓
N	3200			
E	5250	70.5	46.1	✓
N	3210			
E	5250	1.3	44.3	✓
N	3220			
E	5250	1.9	43.7	✓
N	3230			
E	5250	6.0	39.6	✓
N	3240			
E	5250	7.3	38.3	✓ ✓
N	3250			
E	5250	9.0	36.6	✓ ✓
N	3260			
E	5250	11.6	34.0	✓ ✓
N	3270			
E	5250	13.5	32.1	✓ ✓
N	3280			
E	5260	14.2	31.4	✓ ✓
N	3270			
E	5260	11.6	34.0	✓ ✓
N	3260			
E	5260	7.9	37.7	✓ ✓
N	3250			
E	5260	6.3	39.3	✓ ✓
N	3240			
E	5260	3.5	642.1	W.H.S. ✓

645.595

N 3230				
E 5260	0.8	644.8	✓	✓
N 3250				
E 5270	2.1	43.5	✓	✓
N 3260				
E 5270	5.0	40.6	✓	✓
N 3270				
E 5270	8.5	37.1	✓	✓
N 3280				
E 5270	11.1	34.5	✓	✓
N 3290				
E 5270	13.9	31.7	✓	✓
N 3300				
E 5280	13.2	32.4	✓	✓
N 3290				
E 5280	10.8	34.8	✓	✓
N 3280				
E 5280	9.3	36.3	✓	✓
N 3270				
E 5280	6.3	39.3	✓	✓
N 3260				
E 5280	3.3	42.3	✓	✓
N 3250				
E 5280	+2.2	47.8	✓	✓
N 3270				
E 5290	3.7	41.9	✓	✓
N 3280				
E 5290	7.2	38.4	✓	✓
N 3290				
E 5290	8.9	36.7	✓	✓
N 3300				
E 5290	11.0	34.6	✓	✓
N 3300				
E 5300	11.0	34.6	✓	✓
N 3290				
E 5300	7.9	37.7	✓	✓
N 3280				
E 5300	5.2	40.4	✓	✓
N 3270				
E 5300	1.3	44.3	✓	✓
N 3280				
E 5310	3.6	42.0	✓	✓
N 3290				
E 5310	6.7	38.9	✓	✓
N 3300				
E 5310	9.8	35.8	✓	✓
N 3310				
E 5310	13.8	631.8	✓	✓

645.595

N 3310					
E 5320	12.5	633.1	✓	✓	✓
N 3300					
E 5320	9.2	36.4	✓	✓	✓
N 3290					
E 5320	4.5	41.1	✓	✓	✓
N 3290					
E 5330	3.3	42.3	✓	✓	✓
N 3300					
E 5330	7.5	38.1	✓	✓	✓
N 3310					
E 5330	12.1	33.5	✓	✓	✓
N 3310					
E 5340	11.3	34.3	✓	✓	✓
N 3300					
E 5340	5.9	39.7	✓	✓	✓
N 3290					
E 5340	4.3	41.3	✓	✓	✓
N 3290					
E 5350	1.7	43.9	✓	✓	✓
N 3300					
E 5350	5.7	39.9	✓	✓	✓
N 3310					
E 5350	9.8	35.8	✓	✓	✓
N 3310					
E 5360	9.5	36.1	✓	✓	✓
N 3300					
E 5360	5.0	40.6	✓	✓	✓

12.96 632.63 $\frac{1}{2}$ Rock

T.P.	10.84	652.49 $\frac{1}{2}$	3.94	641.65 $\frac{1}{2}$		
N 3290						
E 5360			7.3	45.2	✓	✓
N 3280						
E 5370			2.8	49.7	✓	✓
N 3290						
E 5370			5.8	46.7	✓	✓
N 3300						
E 5370			11.1	41.4	✓	✓
N 3310						
E 5370			15.3	37.2	✓	✓
N 3310						
E 5380			14.9	37.6 21.6	✓	✓
N 3300						
E 5380			9.4	43.1	✓	✓
N 3290						
E 5380			5.0	47.5	✓	✓
N 3280						
E 5380			2.1	650.4	✓	W.H.S. ✓

		652.49½			
N	3280		2.0	650.5	✓ ✓
E	5390				
N	3290		5.2	47.3	✓ ✓
E	5390				
N	3300		9.7	42.8	✓ ✓
E	5390				
N	3310		12.6	39.9	✓ ✓
E	5390				
N	3310		12.6	39.9	✓ ✓
E	5400				
N	3300		8.9	43.6	✓ ✓
E	5400				
N	3290		5.7	46	✓ ✓
E	5400				
N	3280		0.4	52.1	✓ ✓
E	5400				
N	3280		0.7	51.8	✓ ✓
E	5410				
N	3290		5.1	47.4	✓ ✓
E	5410				
N	3300		8.5	44.0	✓ ✓
E	5410				
N	3310		10.6	41.9	✓ ✓
E	5410				
N	3310		8.4	44.1	✓ ✓
E	5420				
N	3300		6.7	45.8	✓ ✓
E	5420			46.8	Hub ✓
N	3290		4.2	48.3	✓ ✓
E	5420				
N	3280		1.46	651.03½	Hub ✓
E	5420				
	0.36	632.99½		632.63½	Page 50 Rock
N	3310		1.9	31.1	✓ ✓
E	5300				
N	3310		1.9	31.1	✓ ✓
E	5290				
N	3310		3.1	29.9	✓ ✓
E	5280				
N	3300		3.9	29.1	✓ ✓
E	5270				
N	3310		5.8	27.2	✓ ✓
E	5270				
N	3310		8.3	24.7	✓ ✓
E	5260				
N	3300		6.4	26.6	✓ ✓
E	5260				
N	3290		4.2	628.8	W.H.S. ✓
E	5260				

632.992

N 3280				
E 5250	4.0	629.0	✓	✓
N 3290				
E 5250	6.9	26.1	✓	✓
N 3300				
E 5250	9.0	24.0	✓	✓
N 3310				
E 5250	9.9	23.1	✓	✓
N 3310				
E 5240	13.5	^{19.5} 18.5	✓	✓
N 3300				
E 5240	11.3	21.7	✓	✓
N 3290				
E 5240	9.6	23.4	✓	✓
N 3280				
E 5240	7.3	25.7	✓	✓
N 3270				
E 5240	5.6	27.4	✓	✓
N 3260				
E 5240	4.1	28.9	✓	✓
N 3250				
E 5240	2.4	30.6	✓	✓
N 3250				
E 5230	5.4	27.6	✓	✓
N 3260				
E 5230	7.2	25.8	✓	✓
N 3270				
E 5230	9.5	23.5	✓	✓
N 3280				
E 5230	10.7	22.3	✓	✓
N 3290				
E 5230	11.6	21.4	✓	✓
N 3300				
E 5230	13.5	19.5	✓	✓
N 3300				
E 5220	14.5	18.5	✓	✓
N 3290				
E 5220	14.3	18.7	✓	✓
N 3280				
E 5220	13.3	19.7	✓	✓
N 3270				
E 5220	11.4	21.6	✓	✓
N 3260				
E 5220	8.6	24.4	✓	✓
N 3250				
E 5220	4.8	28.2	✓	✓
N 3250				
E 5210	3.1	29.9	✓	✓
N 3260				
E 5210	7.6	625.4	✓	W.H.S. ✓

632.99

N	3270				
E	5210	11.2	621.8	✓	✓
N	3280				
E	5210	14.3	18.7	✓	✓
N	3280				
E	5200	14.2	18.8	✓	✓
N	3270				
E	5200	10.6	22.4	✓	✓
N	3260				
E	5200	5.9	27.1	✓	✓
N	3250				
E	5200	2.4	30.6	✓	✓
N	3250				
E	5190	2.3	30.7	✓	✓
N	3260				
E	5190	5.0	28.0	✓	✓
N	3270				
E	5190	9.3	23.7	✓	✓
N	3280				
E	5190	13.8	19.2	✓	✓
N	3280				
E	5180	12.0	21.0	✓	✓
N	3270				
E	5180	7.5	25.5	✓	✓
N	3260				
E	5180	4.9	28.1	✓	✓
N	3250				
E	5180	1.8	31.2	✓	✓
N	3250				
E	5170	1.5	31.5	✓	✓
N	3260				
E	5170	5.2	27.8	✓	✓
N	3270				
E	5170	8.4	24.6	✓	✓
N	3280				
E	5170	12.0	21.0	✓	✓
N	3280				
E	5160	13.5	19.5	✓	✓
N	3270				
E	5160	9.9	23.1	✓	✓
N	3260				
E	5160	7.0	26.0	✓	✓
N	3250				
E	5160	3.1	29.9	✓	✓
N	3250				
E	5150	4.3	28.7	✓	✓
N	3260				
E	5150	7.7	25.3	✓	✓
N	3270				
E	5150	11.1	621.9	✓	✓

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632.99

N 3280				
E 5150	13.8	619.2	✓	✓
N 3280				
E 5140	13.6	19.4	✓	✓
N 3270		22.0	✓	✓
E 5140	11.0	22.0	✓	✓
N 3260				
E 5140	8.3	24.7	✓	✓
N 3250				
E 5140	4.9	28.1	✓	✓
N 3250				
E 5130	7.1	25.9	✓	✓
N 3260				
E 5130	10.1	22.9	✓	✓
N 3270				
E 5130	12.5	20.5	✓	✓
N 3260				
E 5120	10.5	22.5	✓	✓
N 3250				
E 5120	6.7	26.3	✓	✓
N 3250				
E 5110	6.1	26.9	✓	✓
N 3260				
E 5110	11.1	21.9	✓	✓
N 3260				
E 5100	9.7	23.3	✓	✓
N 3250				
E 5100	3.7	29.3	✓	✓
N 3250				
E 5090	3.3	29.7	✓	✓
N 3260				
E 5090	8.3	24.7	✓	✓
N 3270				
E 5090	14.0	19.0	✓	✓
N 3270				
E 5080	13.2	19.8	✓	✓
N 3260				
E 5080	8.9	24.1	✓	✓
N 3250				
E 5080	3.7	29.3	✓	✓
N 3250				
E 5070	3.0	30.0	✓	✓
N 3260				
E 5070	6.7	26.3	✓	✓
N 3270				
E 5070	12.2	20.8	✓	✓
N 3270		21.6	✓	✓
E 5060	11.4	27.6	✓	✓
N 3260				
E 5060	6.9	626.1	✓	✓

632.99

N 3260					
E 5050	6.4	626.6	✓	✓	✓
N 3270					
E 5050	10.3	22.7	✓	✓	✓
N 3280					
E 5050	13.8	19.2	✓	✓	✓
N 3280					
E 5040	12.7	20.3	✓	✓	✓
N 3270					
E 5040	9.3	23.7	✓	✓	✓
N 3260					
E 5040	5.7	27.3	✓	✓	✓
N 3260					
E 5030	5.0	28.0	✓	✓	✓
N 3270					
E 5030	6.8	26.2	✓	✓	✓
N 3280					
E 5030	11.8	21.2	✓	✓	✓
N 3280					
E 5020	11.9	21.1	✓	✓	✓
N 3270					
E 5020	6.5	26.5	✓	✓	✓
N 3280					
E 5010	12.4	20.6	✓	✓	✓
N 3280					
E 5000	11.78	621.21	✓	✓	✓

12.29 633.49

N 3260					
E 5000	2.4	31.1	✓	✓	✓
N 3260					
E 5010	2.8	30.7	✓	✓	✓
N 3260					
E 5020	3.2	30.3	✓	✓	✓
N 3270					
E 5010	5.3	28.2	✓	✓	✓
N 3270					
E 5000	7.7	25.8	✓	✓	✓

1.40 671.26

N 3200					
E 4990		669.86			
N 3200	11.2	60.1	✓	✓	✓
E 4980	9.8	61.5	✓	✓	✓
N 3210					
E 4980	12.8	58.5	✓	✓	✓
N 3200					
E 4970	7.6	63.7	✓	✓	✓
N 3210					
E 4970	12.7	658.6	✓	✓	✓

N3180
E5000
Flock

671.26

N 3210					
E 4960			11.4	659.9	✓ ✓ ✓
N 3200					
E 4960			7.3	64.0	✓ ✓
N 3200					
E 4950			4.8	66.5	✓ ✓
N 3210					
E 4950			8.6	62.7	✓ ✓
N 3210					
E 4940			7.4	63.9	✓ ✓
N 3200					
E 4940			2.6	68.7	✓ ✓
N 3210					
E 4930			6.6	64.7	✓ ✓
N 3220					
E 4930			11.3	60.0	✓ ✓
N 3220					
E 4920			11.4	59.9	✓ ✓
N 3210					
E 4920			3.7	67.6	✓ ✓
N 3210					
E 4910			2.4	68.9	✓ ✓
N 3220					
E 4910			10.2	61.1	✓ ✓
N 3220					
E 4900			11.9	59.4	✓ ✓
N 3210					
E 4900			4.4	66.9	✓ ✓
N 3220					
E 4890			10.5	60.8	✓ ✓
N 3220					
E 4880			6.5	64.8	✓ ✓
N 3220					
E 4870			3.2	68.1	✓ ✓
N 3230					
E 4880			14.2	57.1	✓ ✓
N 3230					
E 4870			9.1	62.2	✓ ✓
T.P.	1.02	667.55	4.73	666.53	
N 3230					
E 4860			2.5	65.1	✓ ✓
N 3240					
E 4860			9.5	58.1	✓ ✓
N 3240					
E 4850			8.2	59.4	✓ ✓
N 3250					
E 4850			12.1	53.5	✓ ✓
N 3230					
E 4850			1.0	667.6	✓ ✓ ✓

667.55

N 3230			
E 4840		0.0	667.6 ✓✓
N 3240			
E 4840		6.8	60.8 ✓
N 3250			
E 4840		12.5	55.1 ✓
N 3250			
E 4830		15.2	52.4 ✓
N 3240			
E 4830		5.3	62.3 ✓
N 3230			
E 4830		1.7	65.9 ✓
N 3230			
E 4820		1.7	65.9 ✓
N 3240			
E 4820		6.1	61.5 ✓
N 3250			
E 4820		15.0	52.6 ✓
N 3250			
E 4810		13.3	54.3 ✓
N 3240			
E 4810		7.6	60.0 ✓
N 3230			
E 4810		1.2	66.4 ✓
N 3230			
E 4800		4.5	63.1 ✓
N 3240			
E 4800	667.6	9.7	57.9 ✓
N 3240			
E 4790		11.2	56.4 ✓
N 3230			
E 4790		7.2	60.4 ✓
N 3220			
E 4790		1.3	66.3 ✓
N 3220			
E 4780		4.9	62.7 ✓
N 3230			
E 4780		9.2	58.4 ✓
N 3240			
E 4780		11.5	56.1 ✓
N 3240			
E 4770		13.9	53.8 ✓
N 3230			
E 4770		11.1	56.5 ✓
N 3220			
E 4770		4.8	62.8 ✓
N 3210			
E 4770		1.7	65.9 ✓
N 3210			
E 4760		2.5	66.5 ✓

	667.55		
N 3220			
E 4760	5.3	662.3	✓ ✓
N 3230			
E 4760	12.7	54.9	✓
N 3230			
E 4750	11.9	55.7	✓
N 3220			
E 4750	8.1	59.5	✓
N 3210			
E 4750	2.9	64.7	✓
N 3210			
E 4740	5.0	62.6	✓
N 3220			
E 4740	11.3	56.3	✓
N 3230			
E 4740	15.0	52.6	✓
N 3220			
E 4730	16.2	51.4	✓
N 3210			
E 4730	7.2	60.4	✓
N 3200			
E 4730	1.2	66.4	✓
N 3200			
E 4720	3.8	63.8	✓
N 3210			
E 4720	8.0	59.6	✓
N 3190			
E 4710	667.6 5.8	61.8	✓
N 3200			
E 4710	6.5	61.1	✓
N 3210			
E 4710	Top of 10.0	57.6	✓
N 3190	The Boulders		
E 4700	7.1	60.5	✓
N 3200			
E 4700	6.9	60.7	✓
N 3210			
E 4700	13.0	54.6	✓
N 3190			
E 4690	4.7	62.9	✓
N 3200			
E 4690	2.1	65.5	✓
N 3210			
E 4690	10.4	57.2	✓
N 3190			
E 4680	4.3	63.3	✓
N 3200			
E 4680	9.6	58.0	✓
N 3190			
E 4670	1.8	665.8	✓ ✓

667.55

N	3200					
E	4670		8.5	659.1	✓	✓
N	3210					
E	4670		12.3	55.3	✓	
N	3210					
E	4680	OK	14.8	52.8	✓	
N	3190					
E	4660		0.0	67.6	✓	
N	3200					
E	4660		3.7	63.9	✓	
N	3210					
E	4660		4.2	63.4	✓	
N	3220					
E	4660		11.2	56.4	✓	
N	3220					
E	4670		14.4	53.2	✓	
N	3220					
E	4650		8.6	59.0	✓	
N	3230					
E	4650		12.1	55.5	✓	
	T.P.	3.89	658.85	12.59	654.96	
N	T.P. B.M.	9.50	658.87	9.50	649.35	649.37
N	3240					
E	4650		7.8	51.1	Hub	
N	3250					
E	4650		11.6	47.3	✓	
N	3250					
E	4640		12.4	46.5	✓	
N	3240					
E	4660		9.9	49.0	✓	
N	3230					
E	4660		6.5	52.4	✓	
N	3250					
E	4660		13.6	45.3	✓	
N	3240					
E	4670		12.7	46.2	✓	
N	3230					
E	4670		7.7	51.2	✓	
N	3220					
E	4680		10.4	48.5	✓	
N	3230					
E	4680		11.2	47.7	✓	
N	3220					
E	4690		13.8	45.1	✓	
N	3220					
E	4720		11.6	47.3	✓	
N	3230					
E	4730		11.5	647.4	✓	✓

658.87

N 3230					
E 4740			4.4	654.81	✓
N 3240					
E 4750			10.9	48.01	✓
N 3240					
E 4760			7.2	51.71	✓
N 3250					
E 4760			11.6	47.31	✓
N 3250					
E 4770			11.6	47.31	✓
N 3250					
E 4780			9.8	49.11	✓
N 3250					
E 4790			10.1	48.81	✓
N 3250					
E 4800			8.3	50.61	✓
T.P.	0.78	647.51	12.14	646.73	Rock
N 3260					
E 4600			4.1	43.41	✓
N 3270					
E 4600			10.6	36.91	✓
N 3260					
E 4610			4.6	42.91	✓
N 3270					
E 4610			7.2	40.31	✓
N 3270					
E 4620			13.1	34.41	✓
N 3260					
E 4620			7.0	40.51	✓
N 3260					
E 4630			7.5	40.01	✓
N 3270					
E 4630			11.9	35.61	✓
N 3270					
E 4640			11.3	36.21	✓
N 3260					
E 4640			4.9	42.61	✓
N 3260					
E 4650			5.9	41.61	✓
N 3270					
E 4650			11.5	36.01	✓
N 3270					
E 4660			11.9	35.61	✓
N 3260					
E 4660			7.2	40.31	✓
N 3250					
E 4670			5.5	42.01	✓
N 3260					
E 4670			9.2	638.31	✓

N 3270	647.51				
E 4670		13.2	634.3	✓	✓
N 3260					
E 4680		13.1	34.4	✓	✓
N 3250					
E 4680		10.8	36.7	✓	✓
N 3240					
E 4680		9.2	38.3	✓	✓
N 3230					
E 4690		11.9	35.6	✓	✓
N 3240					
E 4690		16.4	31.1	✓	✓
N 3220					
E 4700		9.7	37.8	✓	✓
N 3230					
E 4700		11.1	36.4	✓	✓
N 3240					
E 4700		14.0	33.5	✓	✓
N 3240					
E 4710		11.3	36.2	✓	✓
N 3230					
E 4710		8.9	38.6	✓	✓
N 3220					
E 4710	647.5	6.4	41.1	✓	✓
N 3230					
E 4720		5.4	42.1	✓	✓
N 3240					
E 4720		8.8	38.7	✓	✓
N 3250					
E 4720		13.1	34.4	✓	✓
N 3260					
E 4730		10.9	36.6	✓	✓
N 3270					
E 4730		12.9	34.6	✓	✓
N 3250					
E 4730		8.9	38.6	✓	✓
N 3240					
E 4730		6.6	40.9	✓	✓
N 3240					
E 4740		5.1	42.4	✓	✓
N 3250					
E 4740		6.9	40.6	✓	✓
N 3260					
E 4740		8.7	38.8	✓	✓
N 3270					
E 4740		13.1	34.4	✓	✓
N 3270					
E 4750		12.1	35.4	✓	✓
N 3260					
E 4750		7.5	640.0	✓	✓

647.51

N 3250					
E 4750		3.4	644.1	✓	✓
N 3260					
E 4760		7.2	40.3	✓	✓
N 3270					
E 4760		12.2	35.3	✓	✓
N 3260					
E 4770		7.1	40.4	✓	✓
N 3270					
E 4770		11.3	36.2	✓	✓
N 3270					
E 4780		10.7	36.8	✓	✓
N 3260					
E 4780		6.1	41.4	✓	✓
N 3260			43.7		
E 4790		3.8	46.7	✓	✓
N 3270			38.0		
E 4790		9.5	50.0	✓	✓
N 3270					
E 4800		7.1	40.4	✓	✓
T.P.	4.53	651.26	646.73	See page 60	Flock
N 3260					
E 4800		6.1	45.2	✓	✓
N 3260					
E 4810		5.0	46.3	✓	✓
N 3270					
E 4810		10.6	40.7	✓	✓
N 3270					
E 4820		10.1	41.2	✓	✓
N 3260					
E 4820		6.0	45.3	✓	✓
N 3260					
E 4830		5.1	46.1	✓	✓
N 3270					
E 4830		11.6	39.7	✓	✓
N 3260					
E 4840		6.0	45.3	✓	✓
N 3270					
E 4840		12.1	39.2	✓	✓
N 3260					
E 4850		13.2	38.1	✓	✓
N 3270					
E 4850		omit	28.9	✓	
N 3270		Interpolate			
E 4860		16.3	35.0	✓	✓
N 3260					
E 4860		9.4	41.9	✓	✓
N 3250					
E 4860		2.7	648.6	✓	✓

N 3260	651.26			
E 4870		12.4	638.9 ✓	✓
N 3250				
E 4870		5.4	45.9 ✓	✓
N 3240				
E 4870		+0.7	52.0 ✓	✓
N 3240				
E 4880		3.0	48.3 ✓	✓
N 3250				
E 4880		8.2	43.1 ✓	✓
N 3260				
E 4880		13.1	38.2 ✓	✓
N 3260				
E 4890		14.5	36.8 ✓	✓
N 3250				
E 4890		8.9	42.4 ✓	✓
N 3240				
E 4890		3.2	48.1 ✓	✓
N 3230				
E 4890		+3.4	54.7 ✓	✓
N 3230				
E 4900		0.5	50.8 ✓	✓
N 3240				
E 4900	651.3	1.7	49.6 ✓	✓
N 3250				
E 4900		8.7	42.6 ✓	✓
N 3260				
E 4900		14.3	37.0 ✓	✓
N 3260				
E 4910		14.9	36.4 ✓	✓
N 3250				
E 4910		9.7	41.6 ✓	✓
N 3240				
E 4910		4.0	47.3 ✓	✓
N 3230				
E 4910		1.1	50.2 ✓	✓
N 3230				
E 4920		0.7	50.6 ✓	✓
N 3240				
E 4920		4.7	46.6 ✓	✓
N 3250				
E 4920		10.7	40.6 ✓	✓
N 3260				
E 4920		15.5	35.8 ✓	✓
N 3260				
E 4930		16.6	34.7 ✓	✓
N 3250				
E 4930		9.5	41.8 ✓	✓
N 3240				
E 4930		4.8	646.5 ✓	✓

N 3230		651.26			
E 4930			+1.2	652.5 ✓	✓
T.P.	12.44	661.53	2.17	649.09	
N 3220					
E 4940			2.8	58.7 ✓	✓
N 3230				50.6	
E 4940			10.9	40.6 ✓	✓
N 3230					
E 4950			10.3	51.2 ✓	✓
N 3220					
E 4950			5.2	56.3 ✓	✓
N 3220					
E 4960			5.6	55.7 ✓	✓
N 3230					
E 4960			10.1	51.4 ✓	✓
N 3220					
E 4970	661.5		6.4	55.1 ✓	✓
N 3230					
E 4970			11.5	50.0 ✓	✓
N 3230					
E 4980			14.8	46.7 ✓	✓
N 3220					
E 4980			9.2	52.3 ✓	✓
N 3210					
E 4990			7.5	54.0 ✓	✓
N 3220					
E 4990			11.3	50.2 ✓	✓
			11.92	649.61	N 3220 E 5000 Hub 649.455
B.M.	5.44	645.56		640.12	N 3240 E 5000 Hub
N 3230					
E 4990			1.1	44.5 ✓	✓
N 3240					
E 4990			6.2	39.4 ✓	✓
N 3250					
E 4990			10.5	35.1 ✓	✓
N 3250					
E 4980			10.4	35.2 ✓	✓
N 3240					
E 4980			4.1	41.5 ✓	✓
N 3240					
E 4970			10.7	46.3 ✓	✓
N 3250					
E 4970			4.5	641.1 ✓	✓

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	645.56			
N 3250 E 4960		4.7	640.9	✓ ✓
N 3260 E 4960		12.3	33.3	✓ ✓
N 3240 E 4960		+ 0.7	46.3	✓ ✓
N 3240 E 4950		+ 1.8	47.4	✓ ✓
N 3250 E 4950		5.1	40.5	✓ ✓
N 3260 E 4950		9.2	36.4	✓ ✓
N 3260 E 4940		9.3	36.3	✓ ✓
N 3250 E 4940		4.8	40.8	✓ ✓
N 3240 E 4940		+ 0.2	45.8	✓ ✓
B.M.	7.87	629.07	621.20	^{N 3280} ^{E 4990} Hub
N 3260 E 4970		+ 1.4	30.5	✓ ✓
N 3260 E 4980		+ 1.3	30.4	✓ ✓
N 3270 E 4970		3.1	26.0	✓ ✓
N 3280 E 4990		7.8	21.3	✓ ✓
N 3290 E 4990		12.8	16.3	✓ ✓
N 3290 E 4980		12.6	16.5	✓ ✓
N 3280 E 4980		7.3	21.8	✓ ✓
N 3270 E 4980		3.2	25.9	✓ ✓
N 3260 E 4970		+ 2.6	31.7	✓ ✓
N 3270 E 4970		2.9	26.2	✓ ✓
N 3280 E 4970		6.7	22.4	✓ ✓
N 3290 E 4970		11.4	17.7	✓ ✓
N 3290 E 4960		10.8	18.3	✓ ✓
N 3280 E 4960		7.0	22.1	✓ ✓
N 3270 E 4960		1.5	627.6	✓ ✓

629.07

N 3270 E 4950	+ 0.2	629.3	✓	✓	✓
N 3280 E 4950	6.0	23.1	✓	✓	✓
N 3290 E 4950	10.8	18.3	✓	✓	✓
N 3290 E 4940	8.0	21.1	✓	✓	✓
N 3280 E 4940	5.0	24.1	✓	✓	✓
N 3270 E 4940	+ 0.3	29.4	✓	✓	✓
N 3270 E 4930	+ 0.4	29.5	✓	✓	✓
N 3280 E 4930	4.0	25.1	✓	✓	✓
N 3290 E 4930	9.7	19.4	✓	✓	✓
N 3290 E 4920	11.6	17.5	✓	✓	✓
N 3280 E 4920	5.1	24.0	✓	✓	✓
N 3270 E 4920	+ 0.8	29.9	✓	✓	✓
N 3270 E 4910	+ 1.6	30.7	✓	✓	✓
N 3280 E 4910	5.2	23.9	✓	✓	✓
N 3290 E 4910	11.3	17.8	✓	✓	✓
N 3290 E 4900	9.4	19.7	✓	✓	✓
N 3280 E 4900	3.6	25.5	✓	✓	✓
N 3270 E 4900	+ 1.8	30.9	✓	✓	✓
N 3270 E 4890	+ 2.7	31.8	✓	✓	✓
N 3280 E 4890	3.0	26.1	✓	✓	✓
N 3290 E 4890	8.3	20.8	✓	✓	✓
N 3290 E 4880	6.2	22.9	✓	✓	✓
N 3280 E 4880	3.0	26.1	✓	✓	✓
N 3270 E 4880	+ 4.5	33.6	✓	✓	✓
N 3270 E 4870	+ 2.1	631.2	✓	✓	✓

		629.07				
N 3280	E 4870		2.9	626.2	✓	✓
N 3290	E 4870		10.0	19.1	✓	✓
N 3290	E 4860		8.6	20.5	✓	✓
N 3280	E 4860		2.5	26.6	✓	✓
N 3290	E 4850		8.9	20.2	✓	✓
N 3290	E 4840		9.0	20.1	✓	✓
N T.P.	9.06	635.08	3.05	626.02		
N 3280	E 4850		10.7	24.4	✓	✓
N 3280	E 4840		6.2	28.9	✓	✓
N 3280	E 4830		1.4	33.7	✓	✓
N 3290	E 4830		9.8	25.3	✓	✓
N 3290	E 4820		6.0	29.1	✓	✓
N 3280	E 4820		+0.4	35.5	✓	✓
N 3280	E 4810		+2.9	38.0	✓	✓
N 3290	E 4810		5.0	30.1	✓	✓
N 3290	E 4800		4.2	30.9	✓	✓
N 3280	E 4800		+0.8	35.9	✓	✓
N 3280	E 4790		1.7	33.4	✓	✓
N 3290	E 4790		7.7	27.4	✓	✓
N 3300	E 4790		15.6	19.5	✓	✓
N 3300	E 4780		13.2	21.9	✓	✓
N 3290	E 4780		7.1	28.0	✓	✓
N 3280	E 4780		2.9	32.2	✓	✓
N 3280	E 4770		3.6	31.5	✓	✓
N 3290	E 4770		7.7	627.4	✓	✓

635.08

N 3300			15.1	620.0	✓	✓
E 4770						
N 3300			14.7	20.4	✓	✓
E 4760						
N 3290			7.4	27.7	✓	✓
E 4760						
N 3280			3.7	31.4	✓	✓
E 4760						
N 3280			3.4	31.7	✓	✓
E 4750						
N 3290			9.1	26.0	✓	✓
E 4750						
N 3300			13.7	21.4	✓	✓
E 4750						
N 3300			12.7	22.4	✓	✓
E 4740						
N 3290			10.1	25.0	✓	✓
E 4740						
N 3280			4.2	30.9	✓	✓
E 4740						
N 3280			5.1	30.0	✓	✓
E 4730						
N 3290			9.4	25.7	✓	✓
E 4730						
N 3300			12.4	22.7	✓	✓
E 4730						
N 3300			12.4	22.7	✓	✓
E 4720						
N 3290			10.1	25.0	✓	✓
E 4720						
N 3280			9.3	25.8	✓	✓
E 4720						
N 3270			4.0	31.1	✓	✓
E 4720						
N 3260			3.8	31.3	✓	✓
E 4720						
T.P.	2.06	634.92	2.22	632.86		
N 3250			4.9	30.0	✓	✓
E 4710						
N 3260			7.4	27.5	✓	✓
E 4710						
N 3270			9.1	25.8	✓	✓
E 4710						
N 3280			9.7	25.2	✓	✓
E 4710						
N 3290			10.7	24.2	✓	✓
E 4710						
N 3300			12.9	622.0	✓	✓
E 4710						

N 3300	634.92			
E 4700		13.1	621.8	✓ ✓
N 3290				
E 4700		12.2	22.7	✓ ✓
N 3280				
E 4700		11.4	23.5	✓ ✓
N 3270				
E 4700		9.9	25.0	✓ ✓
N 3260				
E 4700		8.2	26.7	✓ ✓
N 3250				
E 4700		6.8	28.1	✓ ✓
N 3250				
E 4690		4.0	30.9	✓ ✓
N 3260				
E 4690		6.4	28.5	✓ ✓
N 3270				
E 4690		8.9	26.0	✓ ✓
N 3280				
E 4690		11.5	23.4	✓ ✓
N 3280				
E 4680	634.9	10.4	24.5	✓ ✓
N 3270				
E 4680		4.1	30.8	✓ ✓
N 3280				
E 4670		5.7	29.2	✓ ✓
N 3290				
E 4670		10.0	24.9	✓ ✓
N 3290				
E 4660		9.1	25.8	✓ ✓
N 3280				
E 4660		3.1	31.8	✓ ✓
N 3280				
E 4650		2.8	32.1	✓ ✓
N 3290				
E 4650		10.1	24.8	✓ ✓
N 3290				
E 4640		11.1	23.8	✓ ✓
N 3280				
E 4640		6.2	28.7	✓ ✓
N 3280				
E 4630		6.2	29.7	✓ ✓
N 3290				
E 4630		13.8	21.1	✓ ✓
N 3290				
E 4620		13.7	21.2	✓ ✓
N 3280				
E 4620		7.1	27.8	✓ ✓
N 3280				
E 4610		6.5	628.4	✓ ✓

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634.92

N 3290			12.1	622.8	✓	✓
E 4610						
N 3290			12.2	22.7	✓	✓
E 4600						
N 3280			2.6	32.3	✓	✓
E 4600						
N 3280			4.23	630.67	✓	✓
E 4590						
N 3290			10.3	24.6	✓	✓
E 4590						
N 3290			9.3	25.6	✓	✓
E 4580						
N						
E T.P.	1.33	624.03	12.22	622.70		
N 3290			+1.9	25.9	✓	✓
E 4560						
N 3300			1.6	22.4	✓	✓
E 4560						
N 3310			6.2	17.8	✓	✓
E 4560						
N 3320			11.0	13.0	✓	✓
E 4560						
N 3320			14.1	09.9	✓	✓
E 4570						
N 3310			7.5	16.5	✓	✓
E 4570						
N 3300			1.9	22.1	✓	✓
E 4570						
N 3290			+2.1	26.1	✓	✓
E 4570						
N 3300			3.1	20.9	✓	✓
E 4580						
N 3310			8.5	15.5	✓	✓
E 4580						
N 3320			12.5	11.5	✓	✓
E 4580						
N 3320			13.6	10.4	✓	✓
E 4590						
N 3310			9.0	15.0	✓	✓
E 4590						
N 3300			5.2	18.8	✓	✓
E 4590						
N 3300			5.9	18.1	✓	✓
E 4600						
N 3310			9.1	14.9	✓	✓
E 4600						
N 3320			15.0	09.0	✓	✓
E 4600						
N 3320			15.6	608.4	✓	✓
E 4610						

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	624.03			
N 3310				
E 4610		10.5	613.5	✓ ✓
N 3300				
E 4610		6.7	17.3	✓ ✓
N 3300				
E 4620		7.7	16.3	✓ ✓ ✓
N 3310				
E 4620		9.8	14.2	✓ ✓ ✓
N 3320				
E 4620		15.1	08.9	✓ ✓ ✓
N 3320				
E 4630		14.4	09.6	✓ ✓ ✓
N 3310				
E 4630		10.4	13.6	✓ ✓ ✓
N 3300				
E 4630		6.5	17.5	✓ ✓ ✓
N 3300				
E 4640		3.9	20.1	✓ ✓ ✓
N 3310				
E 4640		8.6	15.4	✓ ✓ ✓
N 3320				
E 4640		13.4	10.6	✓ ✓ ✓
N 3320				
E 4650	624.0	10.7	13.3	✓ ✓ ✓
N 3310				
E 4650		8.0	16.0	✓ ✓ ✓
N 3300				
E 4650		3.7	20.3	✓ ✓ ✓
N 3300				
E 4660		3.5	20.5	✓ ✓ ✓
N 3310				
E 4660		8.7	15.3	✓ ✓ ✓
N 3320				
E 4660		10.1	13.9	✓ ✓ ✓
N 3330				
E 4660		10.9	13.1	✓ ✓ ✓
N 3340				
E 4660		12.1	11.9	✓ ✓ ✓
N 3340				
E 4670		12.2	11.8	✓ ✓ ✓
N 3330				
E 4670		10.5	13.5	✓ ✓ ✓
N 3320				
E 4670		9.3	14.7	✓ ✓ ✓
N 3310				
E 4670		8.4	15.6	✓ ✓ ✓
N 3300				
E 4670		5.9	18.1	✓ ✓ ✓
N 3300				
E 4680		7.6	616.4	✓ ✓ ✓

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Raining

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624.03

N 3290				
E 4680		4.1	619.9	✓
N 3310				
E 4680		6.7	17.3	✓
N 3320				
E 4680		8.2	15.8	✓
N 3330				
E 4680		10.6	13.4	✓
N 3340				
E 4680		12.5	11.5	✓
N 3340				
E 4690		12.3	11.7	✓
N 3330				
E 4690		9.1	14.9	✓
N 3320				
E 4690		8.3	15.7	✓
N 3310				
E 4690		4.2	19.8	✓
N 3300				
E 4690		3.8	20.2	✓
N 3290				
E 4690		3.7	20.3	✓

T.P.	4.87	624.91	3.99	620.04	
N 3310					
E 4700			4.2	20.7	✓
N 3320					
E 4700			7.4	17.5	✓
N 3330					
E 4700			9.2	15.7	✓
N 3340					
E 4700			11.5	13.4	✓
N 3350					
E 4700			12.1	12.8	✓
N 3340					
E 4710			11.6	13.3	✓
N 3330					
E 4710			8.5	16.4	✓
N 3320					
E 4710			6.8	18.1	✓
N 3310					
E 4710			4.4	20.5	✓
N 3310					
E 4720			4.2	20.7	✓
N 3320					
E 4720			6.9	18.0	✓
N 3330					
E 4720			10.4	14.5	✓
N 3340					
E 4720			12.9	612.0	✓

624.91

N 3340			
E 4730	13.5	611.4	✓ ✓
N 3330			
E 4730	10.4	14.5	✓ ✓
N 3320			
E 4730	8.9	16.0	✓ ✓
N 3310			
E 4730	6.1	18.8	✓ ✓
N 3310			
E 4740	7.1	17.8	✓ ✓
N 3320			
E 4740	7.5	15.4	✓ ✓
N 3330			
E 4740	10.8	14.1	✓ ✓
N 3340			
E 4740	13.5	11.4	✓ ✓
N 3340			
E 4750	13.9	11.0	✓ ✓
N 3330			
E 4750	11.2	13.7	✓ ✓
N 3320			
E 4750	10.5	14.4	✓ ✓
N 3310			
E 4750	7.5	17.4	✓ ✓
N 3310			
E 4760	8.8	16.1	✓ ✓
N 3320			
E 4760	11.8	13.1	✓ ✓
N 3330			
E 4760	13.1	11.8	✓ ✓
N 3320			
E 4770	13.7	11.2	✓ ✓
N 3310			
E 4770	9.3	15.6	✓ ✓
N 3310			
E 4780	10.7	14.2	✓ ✓
N 3320			
E 4780	14.2	10.7	✓ ✓
N 3310			
E 4790	10.3	14.6	✓ ✓
N 3300			
E 4800	8.0	16.9	✓ ✓
N 3310			
E 4800	11.7	13.2	✓ ✓
N 3310			
E 4810	12.2	12.7	✓ ✓
N 3310			
E 4820	12.5	12.4	✓ ✓
N 3300			
E 4820	6.8	618.1	✓ ✓

		624.91			
T.P.		1.40	614.23	12.08	612.83
N	3300				
E	4830			+2.5	16.7 ✓ ✓
N	3300				
E	4840			+1.6	15.8 ✓ ✓
N	3310				
E	4840			1.0	13.2 ✓ ✓
N	3320				
E	4840			7.6	06.6 ✓ ✓
N	3330				
E	4840			11.6	02.6 ✓ ✓
N	3320				
E	4850			9.4	04.8 ✓ ✓
N	3310				
E	4850			4.4	09.8 ✓ ✓
N	3300				
E	4850			+1.3	15.5 ✓ ✓
N	3310 O.N.				
E	4830			2.1	12.1 ✓ ✓
N	3300				
E	4860			+0.5	14.7 ✓ ✓
N	3310				
E	4860	614.2		5.3	08.9 ✓ ✓ ✓
N	3320				
E	4860			9.9	04.3 ✓ ✓ ✓
N	3320				
E	4870			10.8	03.4 ✓ ✓ ✓
N	3310				
E	4870			6.0	08.2 ✓ ✓ ✓
N	3300				
E	4870			0.8	13.4 ✓ ✓ ✓
N	3300				
E	4880			2.1	12.1 ✓ ✓ ✓
N	3310				
E	4880			6.9	07.3 ✓ ✓ ✓
N	3320				
E	4880			11.2	03.0 ✓ ✓ ✓
N	3320			9.4	
E	4890			10.4	04.8 ✓ ✓ ✓
N	3310				
E	4890			7.0	07.2 ✓ ✓ ✓
N	3300				
E	4890			4.0	10.2 ✓ ✓ ✓
N	3300				
E	4900			2.4	11.8 ✓ ✓ ✓
N	3310				
E	4900			8.0	06.2 ✓ ✓ ✓
N	3320				
E	4900			12.1	602.1 ✓ ✓ ✓

614.23

N 3320				
E 4910	12.1	602.1	✓	✓
N 3310				
E 4910	7.2	07.0	✓	✓
N 3300				
E 4910	3.0	11.2	✓	✓
N 3300				
E 4920	2.0	12.2	✓	✓
N 3310				
E 4920	6.0	08.2	✓	✓
N 3320				
E 4920	11.0	03.2	✓	✓
N 3320				
E 4930	10.4	03.8	✓	✓
N 3310				
E 4930	4.6	09.6	✓	✓
N 3300				
E 4930	1.6	12.6	✓	✓
N 3300				
E 4940	1.7	12.5	✓	✓
N 3310				
E 4940	5.4	08.8	✓	✓
N 3320				
E 4940	9.6	04.6	✓	✓
N 3320				
E 4950	11.1	03.1	✓	✓
N 3310				
E 4950	7.3	06.9	✓	✓
N 3300				
E 4950	1.1	13.1	✓	✓
N 3300				
E 4960	0.1	14.1	✓	✓
N 3310				
E 4960	7.1	12.1	✓	✓
N 3320				
E 4960	12.1	02.1	✓	✓
N 3320				
E 4970	12.5	01.7	✓	✓
N 3310				
E 4970	7.0	07.2	✓	✓
N 3300				
E 4970	1.3	12.9	✓	✓
N 3300				
E 4980	0.9	13.3	✓	✓
N 3310				
E 4980	7.4	606.8	✓	✓
N 3320				
E 4980	14.8	599.4	✓	✓
N 3320				
E 4990	13.7	600.5	✓	✓

N 3310					
E 4990			9.0	605.2	✓ ✓
N 3300					
E 4990			2.5	611.7	✓ ✓
N 3300					
E 5200	7.82	620.29	3.77	610.46	610.47 ✓
3290					
5000			5.3	15.0	✓ ✓
N 3290					
E 5010			5.3	15.0	✓ ✓
N 3300					
E 5010			9.6	10.7	✓ ✓
N 3310					
E 5010			15.1	05.2	✓ ✓
N 3310					
E 5020			14.0	06.3	✓ ✓
N 3300					
E 5020			9.3	11.0	✓ ✓
N 3290					
E 5020			4.4	15.9	✓ ✓
N 3290					
E 5030			3.8	16.5	✓ ✓
N 3300					
E 5030			7.3	13.0	✓ ✓
N 3310					
E 5030	620.3		14.0	06.3	✓ ✓
N 3300					
E 5040			10.1	10.2	✓ ✓
N 3290					
E 5040			3.8	16.5	✓ ✓
N 3290					
E 5050			4.6	15.7	✓ ✓
N 3300					
E 5050			10.3	10.0	✓ ✓
N 3300					
E 5060			10.5	09.8	✓ ✓
N 3290					
E 5060			6.0	14.3	✓ ✓
N 3280					
E 5060			2.8	17.5	✓ ✓
N 3280					
E 5070			3.4	16.9	✓ ✓
N 3290					
E 5070			7.2	13.1	✓ ✓
N 3300					
E 5010			9.9	10.4	✓ ✓
N 3300					
E 5080			11.0	09.3 608.3	✓ ✓

620.29

N 3290				
E 5080	7.8	612.5	✓	✓
N 3280				
E 5080	3.7	16.6	✓	✓
N 3280				
E 5090	5.4	14.9	✓	✓
N 3290				
E 5090	8.5	11.8	✓	✓
N 3300				
E 5090	12.2	08.1	✓	✓
N 3300				
E 5100	13.0	07.3	✓	✓
N 3290				
E 5100	9.6	10.7	✓	✓
N 3280				
E 5100	6.0	14.3	✓	✓
N 3270				
E 5100	1.9	18.4	✓	✓
N 3270				
E 5110	2.0	18.3	✓	✓
N 3280				
E 5110	6.5	13.8	✓	✓
N 3290				
E 5110	9.5	10.8	✓	✓
N 3300				
E 5110	12.7	07.6	✓	✓
N 3300				
E 5120	12.2	08.1	✓	✓
N 3290				
E 5120	9.1	11.2	✓	✓
N 3280				
E 5120	4.7	15.6	✓	✓
N 3270				
E 5120	1.9	18.4	✓	✓
N 3280				
E 5130	2.1	18.2	✓	✓
N 3290				
E 5130	6.5	13.8	✓	✓
N 3300				
E 5130	10.3	10.0	✓	✓
N 3310				
E 5130	11.9	08.4	✓	✓
N 3310				
E 5140	11.2	09.1	✓	✓
N 3300				
E 5140	8.5	11.8	✓	✓
N 3290				
E 5140	4.7	615.6	✓	✓

620.29

N 3290				
E 5150	4.3	616.0	✓	✓
N 3300				
E 5150	7.4	12.9	✓	✓
N 3310				
E 5150	9.8	10.5	✓	✓
N 3320				
E 5140	13.9	06.4	✓	✓
N 3320				
E 5150	14.2	06.1	✓	✓
N 3320				
E 5160	15.6	04.7	✓	✓
N 3310				
E 5160	9.9	10.4	✓	✓
N 3300				
E 5160	6.7	13.6	✓	✓
N 3290				
E 5160	4.0	16.3	✓	✓
N 3290				
E 5170	3.2	17.1	✓	✓
N 3300				
E 5170	6.6	13.7	✓	✓
N 3310				
E 5170	10.1	10.2	✓	✓
N 3320				
E 5170	12.4	07.9	✓	✓
N 3320				
E 5180	13.7	06.6	✓	✓
N 3310				
E 5180	10.0	10.3	✓	✓
N 3300				
E 5180	6.9	13.4	✓	✓
N 3290				
E 5180	4.5	15.8	✓	✓
N 3290				
E 5190	4.2	16.1	✓	✓
N 3300				
E 5190	7.4	12.9	✓	✓
N 3310				
E 5190	10.8	09.5	✓	✓
N 3320				
E 5190	14.6	05.7	✓	✓
N 3320				
E 5200	14.2	06.1	✓	✓
N 3310				
E 5200	11.0	09.3	✓	✓
N 3300				
E 5200	6.4	13.9	✓	✓
N 3290				
E 5200	3.9	616.4	✓	✓

620.29

N 3290				
E 5210	4.0	616.3	✓	✓
N 3300				
E 5210	5.6	14.7	✓	✓
N 3310				
E 5210	8.5	11.8	✓	✓
N 3320				
E 5210	12.5	07.8	✓	✓
N 3330				
E 5220	12.1	08.2	✓	✓
N 3320				
E 5220	9.7	10.6	✓	✓
N 3310				
E 5220	6.5	13.8	✓	✓
N 3310				
E 5230	2.9	17.4	✓	✓
N 3320				
E 5230	5.9	14.4	✓	✓
N 3330				
E 5230	8.7	11.6	✓	✓
N 3340				
E 5230	11.9	08.4	✓	✓
N 3350				
E 5240	12.2	08.1	✓	✓
N 3340				
E 5240	8.9	11.4	✓	✓
N 3330				
E 5240	6.2	14.1	✓	✓
N 3320				
E 5240	3.6	16.7	✓	✓
N 3320				
E 5250	0.0	20.3	✓	✓
N 3330				
E 5250	2.8	17.5	✓	✓
N 3340				
E 5250	6.4	13.9	✓	✓
N 3350				
E 5250	10.4	09.9	✓	✓
N 3360				
E 5260	11.9	08.4	✓	✓
N 3350				
E 5260	8.2	12.1	✓	✓
N 3340				
E 5260	5.0	15.3	✓	✓
N 3330				
E 5260	2.1	18.2	✓	✓
N 3320				
E 5260	+0.8	21.1	✓	✓
	4.17	616.12	✓	✓

Contd. in Book #333.

Top of Peg
3340
5260

End Feb 8-1932

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side of shoulder
taken for any width roadway, slope 1:2 to 1:1.
If ground is nearly level, the cut or fill at side
stake is located by the double entry method in
left column and top row. The number in bold

IMPROVED TABLES

AND

INFORMATION

TABLE No. 2.

To find Tangent and External for curve of
any other degree, divide by degree of curve and
add correction found in column of correction.
Degree of curve with a given L may be found
by dividing tangent (or external), opposite L by
given tangent (or external).
The distance from a point on the tangent to
the curve is very nearly the square of the tangent
length divided by twice the radius.

610.47
+ 3.77
614.24
- 1.40
612.84 = 613.03

+ 12.05
624.89
- 4.85
620.04 = 620.24
- 4.08
624.12
11.41

622.71 = 622.90 635.42
+ 12.71 4.73
635.42 630.69

- 2.55
632.87 = 633.06
+ 2.77

635.64
- 9.63

626.01 = 626.02

621.60
0.40
622.00
11.13
610.87

610.47
11.13
621.60
0.40
621.20

635.64
626.02
9.62

Checkel. N3280 621.20 Marked 621.60
E5000

777.2
764.3
1541.5
770.7

770.8
27.2
3.4