EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning

Roadway 16 Ft. Wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

Levels from Contour Map

St 3910 – 4080 1" = 79

Cont. from F. Book # 368/79

E			N3910	
5190			604.1	✓
5200			02.4	✓
10			02.5	✓
20			598.1	✓
30			93.7	✓
40			93.0	✓
50			89.5	✓
60			85.3	✓
70			87.7	✓
80			92.6	✓
90			92.5	✓
5300			86.7	✓
10			80.6	✓
20			77.7	✓
30			84.3	✓
40		88.9	~~39.9~~	✓ ✓
50			90.1	✓
60			89.6	✓
70			95.0	✓
80			97.9	✓
90			99.9	✓
5400			600.1	✓
10			04.1	✓
20			05.7	✓
30			06.4	✓

All elevation used in this Book that are plotted on Dam Section ok EBH

B 338 - P 33

N3910

E	
5440	604.3 ✓
50	03.4 ✓
60	598.5 ✓
70	94.9 ✓
80	91.3 ✓
90	89.5 ✓
5500	86.7 ✓
10	84.9 ✓
20	88.5 ✓
30	92.7 ✓
40	96.2 ✓
50	99.9 ✓
60	603.9 ✓
70	04.9 ✓
80	04.4 ✓
90	04.8 ✓
5600	07.1 ✓
10	10.0 ✓
20	
30	
40	
50	
60	
70	
80	

E	N3920	
4440	577.8	✓ not on Dar Sec. H.
50	80.1	✓
60	81.3	✓
70	82.1	✓
80	82.9	✓
90	83.7	✓
4500	84.8	✓
10	87.0	✓
20	89.4	✓
30	92.2	✓
40	95.2	✓
50	98.0	✓
60	600.0	✓
70	04.3	✓
80	06.7	✓
90	10.6	✓
4600	14.4 ~~14.7~~	✓ ✓
10	17.4	✓
20	20.5	✓
30	24.2	✓
40	25.1	✓
50	28.6	✓
60	30.4	✓
70	32.0	✓
80	33.9	✓

N3920

E			
4690		35.4	✓
4700		37.7	✓
10		39.0	✓
20		40.1	✓
30	43.2	~~43.3~~	✓ ✓
40		46.3	✓
50		47.1	✓
60		48.5	✓
70		52.0	✓
80		55.7	✓
90		59.2	✓
4800		63.4	✓
10		65.4	✓
20		68.4	✓
30		72.6	✓
40		74.0	✓
50		74.5	✓
60		76.3	✓
70		74.8	✓
80		74.6	✓
90		73.4	✓
4900		73.0	✓
10		71.5	✓
20		68.9	✓
30		71.8	✓

B338 PG9

N3920

E		
4940	666.9	✓
50	65.4	✓
60	63.1	✓
70	60.8	✓
80	59.6	✓
90	59.2	✓
5000	57.0	✓
10	51.8	✓
20	47.9	✓
30	46.9	✓
40	46.3	✓
50	43.0	✓
60	35.1	✓
70	31.3	✓
80	28.3	✓
90	29.4	✓
5100	27.4	✓
10	24.2	✓
20	23.5	✓
30	19.3	✓
40	19.5	✓
50	19.3	✓
60	16.8	✓
70	14.2	✓
80	13.7	✓

✓

N3920

E	
5190	612.1 ✓
5290	09.4 ✓
10	08.2 ✓
20	05.3 ✓
30	01.4 ✓
40	597.8 ✓
50	94.2 ✓
60	88.6 ✓
70	93.4 ✓
80	97.5 ✓
90	96.5 ✓
5300	90.4 ✓
10	83.6 ✓
20	80.7 ✓
30	89.7 ✓
40	95.7 ✓
50	96.4 ✓
60	98.5 ✓
70	99.6 ✓
80	601.4 ✓
90	05.4 ✓
5400	07.2 ✓
10	08.4 ✓
20	09.3 ✓
30	09.8 ✓

N3920

E	
5440	608.8 ✓
50	06.1 ✓
60	01.9 ✓
70	599.2 ✓
80	95.7 ✓
90	93.4 ✓
5500	91.8 ✓
10	90.9 ✓
20	92.3 ✓
30	96.5 ✓
40	99.5 ✓
50	604.1 ✓
60	08.2 ✓
70	08.8 ✓
80	08.7 ✓
90	09.6 ✓
5600	11.2 ✓
10	12.8 ✓

N3930

E				
4440		576.0	✓	Not on Dam Sec. H.
50		77.9	✓	
60		81.8	✓	
70		82.8	✓	
80		83.8	✓	
90		84.9	✓	
4500		86.3	✓	
10		88.5	✓	
20		91.2	✓	
30		93.8	✓	
40		96.2	✓	
50		99.4	✓	
60		602.3	✓	
70		05.1	✓	
80		09.2	✓	
90		12.1	✓	
4600		15.4	✓	
10		19.0	✓	
20		22.2	✓	
30		25.5	✓	
40		27.9	✓	
50	31.5	~~31.9~~	✓	✓
60		33.4	✓	
70		36.0	✓	
80		39.0	✓	

✓

B 338 P 67

N3930

E		
4690	64.4	✓
4700	41.8	✓
10	43.5	✓
20	45.4	✓
30	48.7	✓
40	51.2	✓
50	53.4	✓
60	53.5	✓
70	58.0	✓
80	61.7	✓
90	65.2	✓
4800	68.2	✓
10	71.6	✓
20	75.4	✓
30	76.9	✓
40	78.6	✓
50	78.9	✓
60	82.0	✓
70	81.7	✓
80	81.7	✓
90	81.5	✓
4900	82.4	✓
10	78.8	✓
20	77.8	✓
30	77.1	✓

N3930

E				
4940		67.8	✓	
50		69.7	✓	
60		67.7	✓	
70		67.0	✓	
80		64.6	✓	
90		63.0	✓	
5000		62.4	✓	
10	58.2	~~68.2~~	✓	/
20	53.1	~~63.1~~	✓	✓
30	53.8	~~63.8~~	✓	/
40		49.8	✓	
50		46.8	✓	
60		41.2	✓	
70		40.4	✓	
80		37.0	✓	
90		35.6	✓	
5100		33.5	✓	
10		31.5	✓	
20		29.0	✓	
30		26.0	✓	
40		24.9	✓	
50		22.9	✓	
60		20.0	✓	
70		19.5	✓	
80		17.8	✓	

338 PGZ

B 338 PGI

B 238 PGI

N3930

E		
5190	615.9	✓
5200	13.7	✓
10	10.9	✓
20	09.0 ~~09.2~~	✓
30	04.8	✓
40	01.4	✓
50	596.2	✓
60	95.7	✓
70	600.1	✓
80	01.6	✓
90	600.2	✓
5300	594.3	✓
10	88.3	✓
20	84.9	✓
30	90.7	✓
40	98.8	✓
50	99.3	✓
60	600.7	✓
70	02.2	✓
80	03.8	✓
90	07.1	✓
5400	08.9	✓
10	10.7	✓
20	12.0	✓
30	13.4	✓

B 338 P 42

N3930

E		
5440	612.9	✓
50	09.3	✓
60	06.3	✓
70	03.0	✓
80	599.7	✓
90	96.7	✓
5500	93.0	✓
10	92.7	✓
20	94.8	✓
30	99.2	✓
~~40~~	~~42.2~~	
40	602.8	✓
50	07.7	✓
60	11.2	✓
70	12.9	✓
80	12.9	✓
90	12.9	✓
5600	14.2	✓
10	16.1	✓
20		
30		
40		
50		
60		
70		
80		

Set on Base Sec. 4.

N3940

E		
4440	578.5	✓
50	76.8	✓
60	78.0	✓
70	83.5	✓
80	84.7	✓
90	85.9	✓
4500	87.4	✓
10	89.8	✓
20	92.7	✓
30	95.4	✓
40	97.2	✓
50	600.7	✓
60	04.3	✓
70	05.8	✓
80	09.6	✓
90	12.2	✓
4600	16.5	✓
10	19.9	✓
20	23.8	✓
30	27.1	✓
40	30.9	✓
50	34.1	✓
60	37.1	✓
70	40.8	✓
80	43.3	✓

Not on Dam Sec. H.

N 3940

E		
4690	645.1	✓
4700	45.9	✓
10	49.4	✓
20	50.1	✓
30	52.7	✓
40	55.6	✓
50	57.6	✓
60	59.0	✓
70	62.7	✓
80	64.9	✓
90	70.8	✓
4800	73.9	✓
10	77.6	✓
20	81.3	✓
30	82.9	✓
40	84.4	✓
50	87.6	✓
60	84.8	✓
70	86.8	✓
80	85.8	✓
90	88.9	✓
4900	87.1	✓
10	84.6	✓
20	85.5	✓
30	81.8	✓

N3940

E	
4940	678.2 ✓
50	73.9 ✓
60	71.7 ✓
70	69.6 ✓
80	68.8 ✓
90	67.5 ✓
5000	65.6 ✓
10	63.5 ✓
20	60.2 ✓
30	58.0 ✓
40	53.9 ✓
50	51.7 ✓
60	48.2 ✓
70	44.9 ✓
80	42.2 ✓
90	39.4 ✓
5100	37.1 ✓
10	34.8 ✓
20	31.9 ✓
30	29.8 ✓
40	27.8 ✓
50	25.9 ✓
60	23.8 ✓
70	22.9 ✓
80	21.1 ✓

N3940

E		
5190	619.1	✓
5200	16.4	✓
10	13.8	✓
20	11.2	✓
30	06.9	✓
40	03.4	✓
50	597.7	✓
60	602.4	✓
70	04.3	✓
80	04.4	✓
90	03.4	✓
5300	598.2	✓
10	92.3	✓
20	89.2	✓
30	89.1	✓
40	600.4	✓
50	02.6	✓
60	04.0	✓
70	04.6	✓
80	06.0	✓
90	08.4	✓
5400	10.8	✓
10	13.0	✓
20	14.4	✓
30	15.5	✓

N3940

E		
5440	614.5	✓
50	12.1	✓
60	09.7	✓
70	05.8	✓
80	03.1	✓
90	599.0	✓
5500	95.6	✓
10	96.0	✓
20	99.4	✓
30	603.8	✓
40	06.9	✓
50	10.9	✓
60	14.6	✓
70	15.8	✓
80	16.0	✓
90	17.4	✓
5600	17.7	✓
10	19.8	✓
20		
30		
40		
50		
60		
70		
80		

V

Not on Dam Sec H.

N3950

E		
4440	580.5	✓
50	75.2	✓
60	78.8	✓
70	83.6	✓
80	85.3	✓
90	86.7	✓
4500	88.5	✓
10	90.3	✓
20	93.5	✓
30	96.1	✓
40	98.1	✓
50	601.0	✓
60	04.8	✓
70	06.9	✓
80	09.9	✓
90	13.5	✓
4600	17.5	✓
10	21.0	✓
20	25.3	✓
30	28.1	✓
40	32.4	✓
50	37.3	✓
60	39.5	✓
70	43.6	✓
80	46.9	✓

Not on Dam Sec. H.

N39.50

E			
4690		64.90	✓
4700		50.0	✓
10		54.6	✓
20		55.5	✓
30		58.8	✓
40		59.0	✓
50		64.3	✓
60		64.7	✓
70		67.5	✓
80		72.8	✓
90		76.3	✓
4800		78.8	✓
10		84.1	✓
20		87.1	✓
30		89.4	✓
40		93.7	✓
50		90.9	✓
60		89.7	✓
70		90.0	✓
80		94.2	✓
90		97.2	✓
4900		97.3	✓
10		94.5	✓
20		93.2	✓
30		91.2	✓

N39.50

E			
4940		686.7	✓
50		82.3	✓
60		83.3	✓
70	78.3	~~78.8~~	✓ ✓
80		76.5	✓
90		73.3	✓
5000		71.8	✓
10		69.5	✓
20		65.7	✓
30		63.8	✓
40		58.1	✓
50		55.7	✓
60		52.3	✓
70		49.0	✓
80		46.4	✓
90		44.0	✓
5100		41.1	✓
10		39.6	✓
20		37.1	✓
30		33.9	✓
40		31.0	✓
50		28.6	✓
60		27.1	✓
70		26.2	✓
80		24.5	✓

B 338 - P 79

→ Used this Elv. as G95

N 29.50

E			
5190		621.9	✓
5200		20.1	✓
10		16.5	✓
20		13.5	✓
30		09.2	✓
40		04.8	✓
50		05.4	✓
60		06.9	✓
70		07.4	✓
80		07.2	✓
90		07.7	✓
5300		03.5	✓
10		598.8	✓
20	96.2	~~96.3~~	✓ ✓
30		92.6	✓
40		602.2	✓
50		05.9	✓
60		06.9	✓
70		07.5	–
80		09.4	✓
90		11.0	✓
5400		12.9	✓
10		15.8	✓
20		17.8	✓
30		17.9	✓

✓

B 338 P 32

E	N 39.50	
5440		617.1 ✓
50		15.5 ✓
60		13.9 ✓
70		10.9 ✓
80		06.7 ✓
90	01.7	~~01.2~~ ✓ ✓
5500		599.6 ✓
10		99.0 ✓
20		603.9 ✓
30		610.0 ✓
40		12.2 ✓
50		16.0 ✓
60		17.9 ✓
70		19.2 ✓
80		20.2 ~~22.0~~ ✓ ✓
90		21.2 ✓
5600		21.0 ✓
10		22.4 ✓
20		
30		
40		
50		
60		
70		
80		

Not on Base Sec. 4

B 338 P 36

N3960

E	
4440	582.6 ✓
50	77.5 ✓
60	80.6 ✓
70	84.4 ~~81.4~~ ✓ ✓
80	86.1 ✓
90	87.8 ✓
4500	89.3 ✓
10	91.7 ✓
20	94.4 ✓
30	96.7 ✓
40	98.5 ✓
50	601.7 ✓
60	04.7 ✓
70	07.9 ✓
80	11.2 ✓
90	14.6 ✓
4600	18.5 ✓
10	21.4 ✓
20	26.1 ✓
30	29.7 ✓
40	34.5 ✓
50	39.3 ✓
60	43.2 ✓
70	45.9 ✓
80	50.0 ✓

Not on Base Sec. 11

N3960

E				
4690			652.7	✓
4700			54.9	✓
10			57.9	✓
20			62.4	✓
30			63.2	✓
40			65.8	✓
50			69.6	✓
60			71.2	✓
70			73.5	✓
80			76.3	✓
90			80.4	✓
4800			84.2	✓
10			89.1	✓
20			96.0	✓
30			97.2	✓
40			98.2	✓
50			704.8	✓
60			08.3	✓
70			08.8	✓
80			06.6	✓
90			06.0	✓
4900			06.6	✓
10			04.3	✓
20			02.7	✓
30			700.8	✓

✓

N3960

E			
4940		690.5	✓
50		87.8	✓
60		87.4	✓
70		83.8	✓
80		81.3	✓
90		78.5	✓
5000		76.1	✓
10		72.9	✓
20		67.9	✓
30		66.5	✓
40		63.0	✓
50		59.5	✓
60	57.1	~~57.1~~	✓ ✓
70		53.1	✓
80		51.4	✓
90		47.3	✓
5100		44.8	✓
10		42.4	✓
20		40.3	✓
30		37.3	✓
40		33.7	✓
50		31.6	✓
60		31.2	✓
70		30.2	✓
80		28.0	✓

✓

B 338 PG1

E	13960	
5190	625.2	✓
5200	22.6	✓
10	18.8	✓
20	15.9	✓
30	10.3	✓
40	10.6	✓
50	12.5	✓
60	13.2	✓
70	12.0	✓
80	10.4	✓
90	09.4	✓
5300	08.7	✓
10	02.2	✓
20	599.9	✓
30	99.2	✓
40	606.3	✓
50	08.1	✓
60	09.3	✓
70	10.5	✓
80	12.1	✓
90	13.1	✓
5400	16.8	✓
10	17.6	✓
20	20.3	✓
30	20.9	✓

N3960

E	
5440	620.1 ✓
50	18.4 ✓
60	16.7 ✓
70	14.9 ✓
80	09.7 ✓
90	03.9 ✓
5500	02.1 ✓
10	01.4 ✓
20	

E	N2970	
4440	583.7	✓
50	79.2	✓
60	72.0	✓
70	85.2	✓
80	86.9	✓
90	88.5	✓
4500	90.1	✓
10	93.1	✓
20	95.3	✓
30	97.6	✓
40	600.2	✓
50	03.0	✓
60	05.8	✓
70	09.0	✓
80	12.4	✓
90	15.8	✓
4600	19.6 ~~19.8~~	✓
10	22.1	✓
20	28.0	✓
30	33.1	✓
40	37.1	✓
50	42.5	✓
60	45.3	✓
70	49.0	✓
80	53.4	✓

Not on Dam Sec. A.

N3970

E		
4690	657.3	✓
4700	59.7	✓
10	62.2	✓
20	65.7	✓
30	68.6	✓
40	70.8	✓
50	74.8	✓
60	75.0	✓
70	77.8	✓
80	81.3	✓
90	85.6	✓
4800	89.8	✓
10	94.1	✓
20	97.7	✓
30	702.3	✓
40	03.0	✓
50	06.8	✓
60	12.0	✓
70	17.4	✓
80	12.3	✓
90	12.2	✓
4900	12.1	✓
10	09.3	✓
20	07.9	✓
30	706.3	✓

N 3970

E			
4940	98.1	~~98.3~~	✓ ✓
50		97.7	✓
60		92.7	✓
70		92.5	✓
80		88.5	✓
90		84.8	✓
5000		82.4	✓
10	79.6	~~89.6~~	✓ ✓
20		74.2	✓
30		72.7	✓
40		67.9	✓
50		64.9	✓
60		61.6	✓
70		57.4	✓
80		53.6	✓
90		51.0	✓
5100		48.4	✓
10		47.0	✓
20		43.5	✓
30		41.0	✓
40		37.1	✓
50		35.8	✓
60		34.9	✓
70		32.8	✓
80		31.9	✓

B 339 - P 1

B 339 P 17

N3970

E			
5190		628.3	✓
5200		24.9	✓
10		21.5	✓
20		16.9	✓
30		13.7	✓
40	15.6	~~13.6~~	✓ ✓
50		18.1	✓
60		17.3	✓
70		16.8	✓
80		13.6	✓
90		13.0	✓
5300		10.9	✓
10		08.9	✓
20		04.7	✓
30		00.6	✓
40		07.7	✓
50		11.4	✓
60		11.6	✓
70		13.3	✓
80		14.9	✓
90		16.4	✓
5400		18.7	✓
10		20.3	✓
20		22.7	✓
30		23.6	✓ not on Dam Sec. H.

B 338 P42

N39 70

E			
5940		622.7	✓
50		20.8	✓
60		19.5	✓
70		17.5	✓
80		12.6	✓
90		06.3	✓
5500		04.1	✓
10			

N3980

E			
4440		585.5	✓
50		80.7	✓
60		77.1	✓
70		85.4	✓
80		87.7	✓
90		89.3	✓
4500		91.5	✓
10		94.1	✓
20		96.2	✓
30		98.6	✓
40		601.1	✓
50		04.0	✓
60		06.9	✓
70		11.4	✓
80		13.9	✓
90		17.5	✓
4600		21.4	✓
10		24.8	✓
20		29.4	✓
30		34.0	✓
40		38.7	✓
50		43.1	✓
60		48.0	✓
70		52.4	✓
80		56.7	✓

Not on Dam Sec. H.

N3980

E	
4690	660.0 ✓
4700	64.5 ✓
10	69.8 ✓
20	71.6 ✓
30	73.9 ✓
40	77.4 ✓
50	78.5 ✓
60	80.4 ✓
70	82.7 ✓
80	85.9 ✓
90	89.0 ✓
4800	94.7 ✓
10	98.7 ✓
20	702.2 ✓
30	08.5 ✓
40	10,8 ✓
50	13.3 ✓
60	13.2 ✓
70	18.3 ✓
80	24.1 ✓
90	20.1 ✓
4900	19.0 ✓
10	15.7 ✓
20	12.6 ✓
30	11.0 ✓

N3980

E	
4940	702.2 ✓
50	02.2 ✓
60	698.4 ✓
70	95.5 ✓
80	94.9 ✓
90	89.7 ✓
5000	85.7 ✓
10	83.8 ✓
20	80.6 ✓
30	76.9 ✓
40	71.9 ✓
50	67.6 ✓
60	65.0 ✓
70	61.8 ✓
80	58.0 ✓
90	56.5 ✓
5100	52.4 ✓
10	50.5 ✓
20	46.9 ✓
30	43.6 ✓
40	41.4 ✓
50	39.9 ✓
60	38.2 ✓
70	36.0 ✓
80	33.6 ✓

N3980

E			
5190		631.0	✓
5200		27.1	✓
10		24.9	✓
20		18.0	✓
30		17.7	✓
40		20.4	✓
50		23.2	✓
60		21.7	✓
70		19.9	✓
80		17.8	✓
90		16.9	✓
5300		14.5	✓
10		13.0	✓
20	07.9	~~07.7~~	✓ ✓
30		03.9	✓
40		07.7	✓
50		14.5	✓
60		15.7	✓
70		16.5	✓
80		18.0	✓
90		19.4	✓
5400		21.4	✓
10		23.2	✓
20		24.7	✓
30		26.4	✓ not on Dam See H.

B338 P41

N3980

E

5940	626.3	✓
50	24.9	✓
60	22.1	✓
70	19.7	✓

N3990

E		
4440	585.6	✓
50	81.8	✓
60	77.9	✓
70	86.5	✓
80	88.3	✓
90	90.2	✓
4500	92.1	✓
10	94.4	✓
20	97.1	✓
30	99.2	✓
40	602.1	✓
50	05.3	✓
60	08.2	✓
70	11.9	✓
80	14.5	✓
90	18.4	✓
4600	22.9	✓
10	26.2	✓
20	30.9	✓
30	35.9	✓
40	40.4	✓
50	44.9	✓
60	51.6	✓
70	56.4	✓
80	59.0	✓

Not on Base Sec. 4

N3990

E	
4690	665.7
4700	69.9
10	72.8
20	76.6
30	79.8
40	81.2
50	83.5
60	84.8
70	88.4
80	91.8
90	95.6
4800	98.9
10	702.4
20	08.8
30	13.1
40	17.3
50	19.0
60	23.0
70	27.2
80	26.5
90	25.0
4900	23.1
10	20.3
20	24.0
30	15.7

N2990

E		
4940	707.5	✓
50	07.9	✓
60	06.9	✓
70	04.2	✓
80	~~51.9~~ 01.2	✓
90	698.3	✓
5000	91.7	✓
10	89.2	✓
20	84.4	✓
30	80.9	✓
40	77.3	✓
50	74.0	✓
60	68.2	✓
70	68.8	✓
80	62.9	✓
90	59.7	✓
5100	55.5	✓
10	54.0	✓
20	50.9	✓
30	48.0	✓
40	45.2	✓
50	45.1	✓
60	42.9	✓
70	40.7	✓
80	36.1	✓

✓

N 3990

E		
5190	633.0	✓
5200	29.8	✓
10	25.5	✓
20	18.9	✓
30	23.6	✓
40	26.6	✓
50	26.6	✓
60	25.5	✓
70	22.2	✓
80	20.6	✓
90	19.4	✓
5300	18.8	✓
10	16.6	✓
20	11.3	✓
30	07.7	✓
40	11.8	✓
50	17.7	✓
60	18.6	✓
70	19.9	✓
80	21.5	✓
90	22.9	✓
5400	25.3	✓ ✓
10	26.6	✓
20	28.2	✓ not on Dam
30	30.2	✓ See H.

N3990

5440	630.2	✓
50	27.6	✓
60	25.3	✓
70		
80		
90		
5500		

	N 4000		
E			
4440	588.8	✓	
50	83.3	✓	
60	78.5	✓	
70	87.2	✓	
80	88.8	✓	
90	90.7	✓	
4500	92.9	✓	
10	95.1	✓	
20	97.8	✓	
30	600.1	✓	
40	02.7	✓	
50	06.0	✓	
60	09.1	✓	
70	13.0	✓	
80	15.6	✓	
90	19.2	✓	
4600	23.1	✓	
10	27.6	✓	
20	32.4	✓	
30	37.1	✓	
40	42.1	✓	
50	47.1	✓	
60	53.8	✓	
70	59.0	✓	
80	64.7	✓	

Not on Dam Sec. H.

N 4000

E		
4690	669.9	✓
4700	74.3	✓
10	77.6	✓
20	81.1	✓
30	81.6	✓
40	87.9	✓
50	87.7	✓
60	90.8	✓
70	92.9	✓
80	97.5	✓
90	700.9	✓
4800	02.8	✓
10	07.0	✓
20	12.3	✓
30	16.9	✓
40	20.5	✓
50	25.5	✓
60	28.9	✓
70	29.5	✓
80	28.9	✓
90	29.3	✓
4900	30.6	✓
10	30.2	✓
20	30.5	✓
30	22.4	✓

Not on Dam Sec. 11

N4000

E				
4940			714.2	✓
50			14.2	✓
60			12.7	✓
70			10.5	✓
80			05.9	✓
90			03.2	✓
5000			696.0	✓
10			92.5	✓
20			88.2	✓
30			84.9	✓
40			81.0	✓
50			78.5	✓
60			73.9	✓
70			70.1	✓
80			68.3	✓
90			63.0	✓
5100			59.4	✓
10			57.0	✓
20			55.6	✓
30			52.6	✓
40			50.0	✓
50			47.8	✓
60			44.4	✓
70			42.6	✓
80			38.9	✓

N4000

E.	
5190	635.8 ✓
5200	31.8 ✓
10	25.9 ✓
20	20.7 ✓
30	29.6 ✓
40	31.1 ✓
50	30.1 ✓
60	28.2 ✓
70	26.9 ✓
80	24.6 ✓
90	22.3 ✓
5300	22.1 ✓
10	20.5 ✓
20	14.5 ✓
30	09.4 ✓
40	15.6 ✓
50	21.4 ✓
60	22.6 ✓
70	23.1 ✓
80	24.4 ✓
90	27.2 ✓
5400	28.5 ✓
10	29.7 ✓
20	31.8 ✓ Hot on Dam See H.
30	33.9 ✓

N. 4000

E.

5440 633.6 ✓

50 30.3 ✓

N. 4010

E		
4440	5 90.1	✓
50	87.8	✓
60	82.1	✓
70	80.8	✓
80	89.5	✓
90	91.1	✓
45 00	93.4	✓
10	96.5	✓
20	98.4	✓
30	6 01.8	✓
40	03.9	✓
50	06.6	✓
60	10.0	✓
70	13.4	✓
80	16.5	✓
90	21.0	✓
4600	24.1	✓
10	28.3	✓
20	33.5	✓
30	39.7	✓
40	44.9	✓
50	49.3	✓
60	55.6	✓
70	62.1	✓
80	67.4	✓

Plot on Dam Sec. H

N. 4010

E			
4690	673.0	✓	
4700	77.0	✓	
10	82.2	✓	
20	84.2	✓	
30	87.4	✓	Baton Barn Sec. Hi.
40	90.9	✓	
50	91.9	✓	
60	94.2	✓	
70	96.1	✓	
80	702.8	✓	
90	03.6	✓	
4800	08.6	✓	
10	13.4	✓	
20	17.4	✓	
30	20.3	✓	
40	24.5	✓	
50	30.1	✓	
60	34.8	✓	
70	34.7	✓	
80	38.5	✓	
90	40.3	✓	
4900	40.0	✓	
10	40.3	✓	
20	37.8	✓	
30	31.0	✓	

N 4010

E		
4940	723.7	✓
50	21.8	✓
60	17.4	✓
70	16.7	✓
80	10.1	✓
90	07.1	✓
5000	00.3	✓
10	C97.2	✓
20	93.9	✓
30	90.7	✓
40	84.9	✓
50	83.5	✓
60	80.6	✓
70	76.6	✓
80	72.7	✓
90	67.7	✓
5100	64.2	✓
10	61.5	✓
20	59.2	✓
30	57.4	✓
40	54.2	✓
50	53.2	✓
60	48.6	✓
70	45.8	✓
80	41.9	✓

N4010

E		
5190	638.5	✓
5200	33.9	✓
10	29.1	✓
20	33.0	✓
30	36.1	✓
40	35.1	✓
50	33.3	✓
60	31.5	✓
70	29.6	✓
80	29.2	✓
90	27.3	✓
5300	26.6	✓
10	23.6	✓
20	18.8	✓
30	13.3	✓
40	18.9	✓
50	25.5	✓
60	26.4	✓
70	27.5	✓
80	29.6	✓
90	31.0	✓
5400	31.7	✓
10	34.4	✓
20	36.1	✓
30	37.4	✓
40	36.7	✓

hot on Dam
see H.

N4020

E		
4440	590.8	✓
50	89.7	✓
60	88.2	✓
70	83.7	✓
80	86.9	✓
90	91.4	✓
4500	93.7	✓
10	96.6	✓
20	99.2	✓
30	6026	✓
40	04.8	✓
50	07.3	✓
60	10.8	✓
70	14.0	✓
80	17.4	✓
90	21.0	✓
4600	25.0	✓
10	29.2	✓
20	35.1	✓
30	40.6	✓
40	46.3	✓
50	51.7	✓
60	56.7	✓
70	62.7	✓
80	69.4	✓

Sat on Dam See #.

N4020

E			
4690		676.0	✓
4700		79.9	✓
10		84.2	✓
20		86.6	✓
30		91.5	✓
40		94.6	✓
50		96.8	✓
60		98.2	✓
70		703.6	✓
80		06.6	✓
90		08.3	✓
4800		12.0	✓
10		16.5	✓
20		21.3	✓
30		25.4	✓
40		31.5	✓
50		36.9	✓
60		38.1	✓
70	40.4	~~38.4~~	✓ ✓
80	42.4	~~43.4~~	✓ ✓
90		43.5	✓
4900		45.4	✓
10		47.8	✓
20		44.0	✓
30		38.5	✓

Lot on Dam Sec. 4.

B 339 P5

N 4020

E	
4940	732.8 ✓
50	27.2 ✓
60	22.2 ✓
70	21.4 ✓
80	15.6 ✓
90	11.6 ✓
5000	04.5 ✓
10	02.0 ✓
20	697.4 ✓
30	94.5 ✓
40	89.9 ✓
50	85.7 ✓
60	84.5 ✓
70	81.2 ✓
80	77.3 ✓
90	74.7 ✓
5100	72.3 ✓
10	65.7 ✓
20	63.7 ✓
30	61.2 ✓
40	59.0 ✓
50	56.5 ✓
60	52.2 ✓
70	49.1 ✓
80	46.1 ✓

N4020

E	
5190	641.1 ✓
5200	36.3 ✓
10	35.9 ✓
20	39.7 ✓
30	40.3 ✓
40	38.9 ✓
50	36.9 ✓
60	34.9 ✓
70	32.8 ✓
80	31.9 ✓
90	31.9 ✓
5300	30.4 ✓
10	26.9 ✓
20	21.9 ✓
30	17.8 ✓
40	22.9 ✓
50	27.3 ✓
60	30.7 ✓
70	32.0 ✓
80	36.0 ✓
90	35.4 ✓
5400	35.9 ✓
10	38.3 ✓
20	39.4 ✓
30	40.9 ✓

not on Acm
see H.

N4030

E				
4440		592.1	✓	
50		92.3	✓	
60		91.4	✓	
70		89.8	✓	
80		85.5	✓	
90		91.4	✓	
4500		94.4	✓	
10		96.6	✓	Pat on dam Sta. 44
20		99.7	✓	
30		602.3	✓	
40		05.4	✓	
50		08.0	✓	
60		11.4	✓	
70		14.5	✓	
80		18.2	✓	
90		21.9	✓	
4600		26.2	✓	
10		30.6	✓	
20		35.9	✓	
30		42.9	✓	
40		47.9	✓	
50		52.8	✓	
60		59.3	✓	
70		64.8	✓	
80		72.8	✓	

N 40 30

E				
46 90			676.9	✓
4700			81.4	✓
10			87.1	✓
20			91.4	✓
30			94.5	✓
40			97.2	✓
50			99.7	✓
60			702.8	✓
70			07.3	✓
80			11.1	✓
90			12.7	✓
4800			15.8	✓
10			25.5	✓
20			29.6	✓
30			30.3	✓
40			36.1	✓
50			40.7	✓
60			40.9	✓
70			47.0	✓
80			49.3	✓
90			50.6	✓
4900			51.6	✓
10			53.0	✓
20			51.0	✓
30			41.8	✓

Not on Base Map.

E	N 4030	
4940	710.6	✓
50	29.2	✓
60	28.1	✓
70	23.7	✓
80	20.2	✓
90	17.8	✓
5000	10.1	✓
10	04.4	✓
20	01.0	✓
30	698.3	✓
40	95.5	✓
50	90.8	✓
60	89.2	✓
70	87.7	✓
80	83.0	✓
90	79.7	✓
5100	75.2	✓
10	72.1	✓
20	67.5	✓
30	65.5	✓
40	62.5	✓
50	59.8	✓
60	55.5	✓
70	53.4	✓
80	49.5	✓

N4030

E		
5190	646.3	✓
5200	39.7	✓
10	42.6	✓
20	45.2	✓
30	43.4	✓
40	42.0	✓
50	41.3	✓
60	39.1	✓
70	36.5	✓
80	35.9	✓
90	35.7	✓
5300	35.8	✓
10	30.8	✓
20	24.4	✓
30	21.2	✓
40	28.6	✓
50	31.2	✓
60	33.9	✓
70	35.7	✓
80	38.9	✓
90	39.9	✓
5400	39.7	✓
10	41.9	✓
20	44.2	✓
30		

N4040

E		
4440	593.5	✓
50	92.9	✓
60	93.1	✓
70	88.5	✓
80	90.3	✓
90	85.5	✓
4500	94.7	✓
10	97.6	✓
20	600.4	✓
30	02.8	✓
40	05.7	✓
50	08.5	✓
60	12.0	✓
70	14.8	✓
80	18.8	✓
90	22.6	✓
4600	27.1	✓
10	33.2	✓
20	37.4	✓
30	44.4	✓
40	49.2	✓
50	54.2	✓
60	59.9	✓
70	65.7	✓
80	72.7	✓

Not on Dam See H.

N4040

E		
4690	677.2	✓
4700	83.1	✓
10	92.7	✓
20	95.0	✓
30	98.7	✓
40	700.7	✓
50	03.8	✓
60	06.7	✓
70	11.2	✓
80	16.0	✓
90	19.7	✓
4800	23.0	✓
10	31.3	✓
20	36.7	✓
30	37.0	✓
40	41.1	✓
50	43.8	✓
60	48.2	✓
70	52.2	✓
80	53.9	✓
90	54.3	✓
4900	54.6	✓
10	54.6	✓
20	54.8	✓
30	49.2	✓

Not on Dam See Fi

N	E		
		N4040	
	4940	746.7	✓
	50	35.9	✓
	60	33.2	✓
	70	27.2	✓
	80	24.9	✓
	90	19.7	✓
	5000	13.7	✓
	10	09.1 ~~09.8~~	✓ ✓
	20	06.7	✓
	30	028	✓
	40	698.9	✓
	50	96.6	✓
	60	92.9	✓
	70	90.3	✓
	80	87.4	✓
	90	82.4	✓
	5100	79.9	✓
	10	78.0	✓
	20	74.6	✓
	30	71.2	✓
	40	66.8	✓
	50	62.2	✓
	60	53.6	✓
	70	56.4	✓
	80	53.1	✓

B 339 P 26

N4040

E			
5190		48.1	✓
5200		45.1	✓
10		49.6	✓
20		50.5	✓
30		48.1	✓
40		45.1	✓
50		44.8	✓
60		43.5	✓
70	42.5	~~42.7~~	✓ ✓
80		41.9	✓
90		40.6	✓
5300		38.4	✓
10		32.5	✓
20		27.1	✓
30		22.9	✓
40		31.0	✓
50		33.9	✓
60		37.0	✓
70	39.9	~~39.1~~	✓ ✓
80		41.9	✓
90		43.4	✓
5400		45.1	✓
10		47.3	✓

B 338 P 57

B 338 P 53

N4050

E		
4440	594.6	✓
50	94.3	✓
60	94.1	✓
70	94.1	✓
80	91.7	✓
90	91.4	✓
4500	91.8	✓
10	98.0	✓
20	601.0	✓
30	03.7	✓
40	06.3	✓
50	09.2	✓
60	12.4	✓
70	16.0	✓
80	19.8	✓
90	24.5	✓
4600	28.9	✓
10	33.5	✓
20	38.8	✓
30	44.4	✓
40	50.3	✓
50	55.3	✓
60	60.2	✓
70	66.3	✓
80	71.2	✓

Not on Base Sec. 14

N 4050

E		
4690	677.4	✓
4700	87.9	✓
10	95.6	✓
20	98.8	✓
30	700.9	✓
40	04.4	✓
50	11.2	✓
60	11.7	✓
70	17.9	✓
80	19.7	✓
90	23.9	✓
4800	33.2	✓
10	36.5	✓
20	40.2	✓
30	45.6	✓
40	44.7 ~~45.4~~	✓
50	50.8	✓
60	55.1	✓
70	55.6	✓
80	57.1	✓
90	58.6	✓
4900	58.3	✓
10	58.1	✓
20	58.6	✓
30	56.7	✓

Bottom Dam Sta. 44

B 339 - P 4

N4050

E		
4940	751.0	✓
50	45.1	✓
60	37.9	✓
70	31.7	✓
80	29.3	✓
90	26.2	✓
5000	19.9	✓
10	17.3	✓
20	10.0	✓
30	07.7	✓
40	03.5	✓
50	01.6	✓
60	698.8	✓
70	94.6	✓
80	90.3	✓
90	87.0	✓
5100	83.0	✓
10	81.5	✓
20	77.3	✓
30	74.5	✓
40	69.3	✓
50	67.3	✓
60	63.2	✓
70	59.5	✓
80	55.6	✓

✓

N4050

5150	6 50.0	✓
5200	51.4	✓
10	54.2	✓
20	55.0	✓
30	52.1	✓
40	49.8	✓
50	49.3	✓
60	48.1	✓
70	47.5	✓
80	47.0	✓
90	45.0	✓
5300	42.5	✓
10	36.3	✓
20	32.8	✓
30	28.3	✓
40	34.4	✓
50	36.9	✓
60	39.9	✓
70	42.5	✓
80	43.3	✓
90	48.3	✓
5400	48.3	✓
10		

N4060

E				
4440		595.8	✓	
50		95.6	✓	
60		95.4	✓	
70		95.0	✓	
80		93.4	✓	
90		93.4	✓	
4500		92.4	✓	
10		98.2 ~~[illegible]~~	✓ ✓	
20		601.8	✓	
30		04.2	✓	
40		06.6	✓	
50		10.7	✓	
60		13.2	✓	
70		16.8	✓	
80		20.6	✓	
90		25.6	✓	
4600		29.3	✓	
10		34.2	✓	
20		39.3	✓	
30		45.1	✓	
40		49.5	✓	
50		55.1	✓	
60		60.3	✓	
70		66.1	✓	
80		70.1	✓	

Not on Dam Sec. Ho

N4060

E		
4690	77.6	✓
4700	85.8	✓
10	96.3	✓
20	700.8	✓
30	05.6	✓
40	09.5	✓
50	14.0	✓
60	20.7	✓
70	22.5	✓
80	23.9	✓
90	27.5	✓
4800	37.2	✓
10	39.1	✓
20	41.7 ~~34.7~~	✓
30	48.5	✓
40	52.1	✓
50	56.9	✓
60	57.9	✓
70	58.3	✓
80	59.4	✓
90	60.7	✓
4900	62.2 ~~62.3~~	✓
10	62.3	✓
20	62.2	✓
30	59.0	✓

Not on Dam Sec. 4

B 339, P 7

N 4060

E	
4940	756.0 ✓
50	49.6 ✓
60	43.0 ✓
70	39.6 ✓
80	34.0 ✓
90	27.5 ✓
5000	25.8 ✓
10	18.7 ✓
20	15.7 ✓
30	10.5 ✓
40	07.9 ✓
50	05.4 ✓
60	01.9 ✓
70	698.6 ✓
80	95.6 ✓
90	91.6 ✓
5100	87.3 ✓
10	84.7 ✓
20	80.5 ✓
30	76.9 ✓
40	73.9 ✓
50	70.2 ✓
60	67.0 ✓
70	62.8 ✓
80	58.2 ✓

✓

N40C0

E:		
5190	653.5	✓
5200	56.5	✓
10	59.5	✓
20	58.2	✓
30	55.8	✓
40	53.9	✓
50	53.0	✓
60	52.2	✓
70	50.9	✓
80	49.8	✓
90	49.8	✓
5300	45.9	✓
10	40.9	✓
20	37.2	✓
30	30.7	✓
40	36.1	✓
50	39.9	✓
60	42.6	✓
70	46.1	✓
80	48.1	✓
90	51.1	✓
5400		
10		
20		
30		

N 4070

E		
4440	597.0	✓
50	96.7	✓
60	96.4	✓
70	96.2	✓
80	95.5	✓
90	92.0	✓
45 00	96.2	✓
10	99.9	✓
20	602.6	✓
30	04.9	✓
40	07.3	✓
50	10.5	✓
60	14.2	✓
70	17.6	✓
80	21.8	✓
90	25.6	✓
46 00	30.3	✓
10	34.3	✓
20	39.8	✓
30	44.9	✓
40	49.6	✓
50	55.9	✓
60	60.8	✓
70	65.8	✓
80	72.0	✓

Not on Dam Sec. H.

N. 4070

E.	
4690	679.2 ✓
4700	88.6 ✓
10	96.8 ✓
20	02.5 ✓
30	06.3 ✓
40	12.4 ✓
50	16.6 ✓
60	24.4 ✓
70	25.3 ✓
80	27.7 ✓
90	30.7 ✓
4800	38.4 ✓
10	42.3 ✓
20	48.3 ✓
30	54.0 ✓
40	56.9 ✓
50	58.1 ✓
60	61.3 ✓
70	61.7 ✓
80	63.5 ✓
90	64.9 ✓
4900	64.5 ✓
10	65.6 ✓
20	62.2 ✓
30	61.8 ✓

Not on Dam Sec. H

N. 4070

E.		
4940	659.7	✓
50	54.5	✓
60	50.5	✓
70	44.2	✓
80	40.5	✓
90	34.9	✓
50 00	28.0	✓
10	22.7	✓
20	20.3	✓
30	16.1	✓
40	13.8	✓
50	11.0	✓
60	06.8	✓
70	02.7	✓
80	5 99.5	✓
90	97.1	✓
51 00	93.3	✓
10	89.8	✓
20	85.0	✓
30	82.0	✓
40	77.9	✓
50	74.3	✓
60	70.2	✓
70	67.0	✓
80	60.4	✓

N. 4070

E.	
51 90	5° 56.9 ✓
52 00	62.1 ✓
10	64.1 ✓
20	62.5 ✓
30	59.7 ✓
40	58.1 ✓
50	57.4 ✓
60	55.9 ✓
70	54.5 ✓
80	53.8 ✓
90	53.4 ✓
53 00	49.4 ✓
10	45.5 ✓
20	40.7 ✓
30	36.3 ✓
40	38.4 ✓
50	43.4 ✓
60	46.2 ✓
70	48.1 ✓
80	51.6 ✓

N. 4080

E.		
4450	597.8	✓
60	97.5	✓
70	97.5	✓
80	97.1	✓
90	95.4	✓
4500	94.9	✓
10	600.3	✓
20	03.4	✓
30	05.6	✓
40	07.6	✓
50	11.1	✓
60	14.6	✓
70	17.6	✓
80	20.8	✓
90	25.5	✓
4600	32.0	✓
10	34.3	✓
20	37.4	✓
30	45.1	✓
40	50.4	✓
50	56.0	✓
60	61.3	✓
70	66.8	✓
80	70.6	✓
90	80.3	✓

Plot on Dam Sec. 4.

N 4080

E		
4700	690.2	✓
10	95.6	✓
20	702.2	✓
30	08.3	✓
40	12.5	✓
50	20.3	✓
60	25.3	✓
70	27.9	✓
80	30.4	✓
90	34.7	✓
4800	~~41.3 34.3~~	✓ ✓
10	46.4	✓
20	52.9	✓
30	56.6	✓
40	59.4	✓
50	61.4	✓
60	62.8	✓
70	66.2	✓
80	67.7	✓
90	67.9	✓
4900	67.9	✓
10	69.1	✓
20	66.8	✓
30	62.6	✓
40	61.5	✓

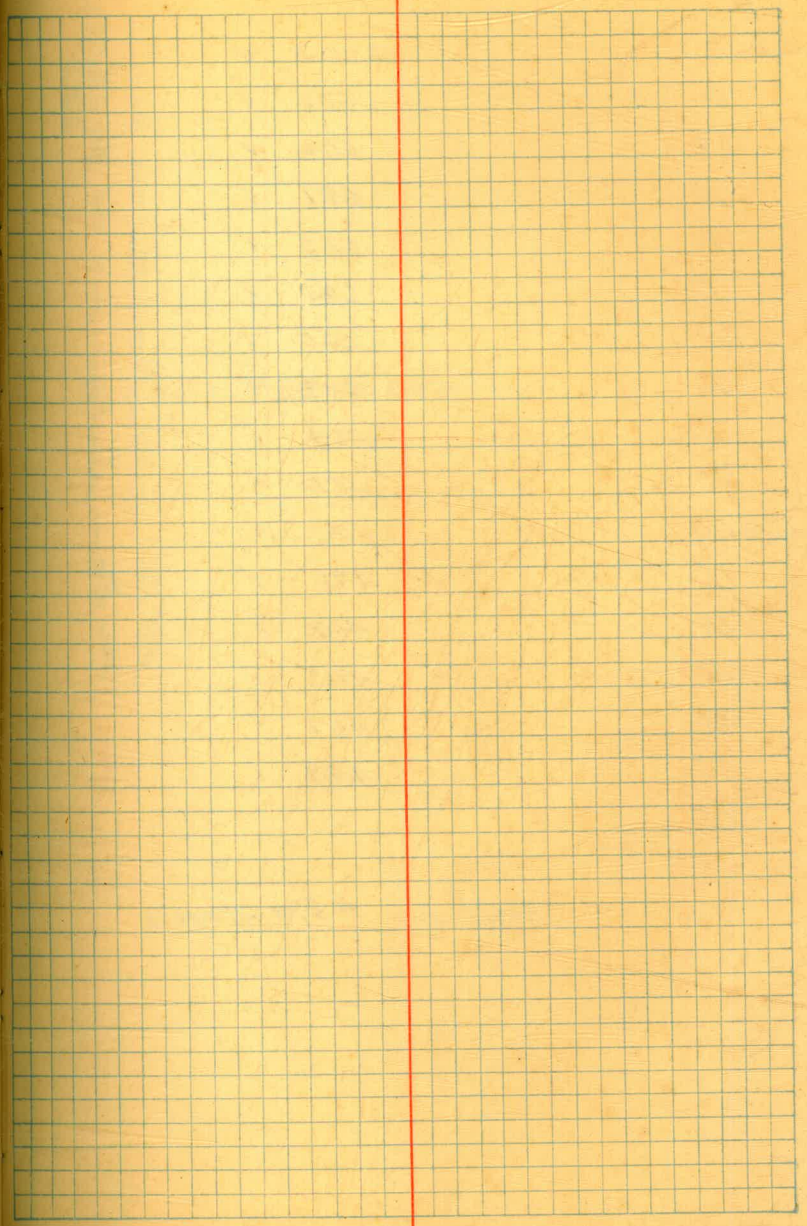
Not on Dam. See H.

1

1

N4080

E		
4950	758.3	✓
60	53.6	✓
70	47.0	✓
80	43.1	✓
90	39.3	✓
5000	34.5	✓
10	30.6	✓
20	25.9	✓
30	22.4	✓
40	18.7	✓
50	15.5	✓
60	11.0	✓
70	07.2	✓
80	03.4	✓
90	700.4	✓
5100	697.0	✓
10	94.4	✓
20	90.5	✓
30	86.7	✓
40	80.5	✓
50	78.1	✓
60	73.7	✓
70	69.0	✓
80	63.3	✓
90	63.2	✓



N4080

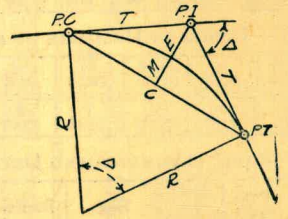
E		
5200	666.3	✓
10	67.2	✓
20	66.2	✓
30	64.1	✓
40	62.3	✓
50	61.5	✓
60	60.0	✓
70	58.3 ~~68.3~~	✓
80	56.4	✓
90	55.4	✓
5300	52.1	✓
10	47.7	✓
20	44.9	✓
30	42.5	✓
40	41.7	✓
50	44.9	✓
60		

All Ele in this Book that are given on Dam Section are ok for Plotting EBK ✓

Cont in #370 page 2

B 339 P. 22

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

Radius=R=$\frac{50}{\text{sin. } D/2}$ (1) Degree of Curve=D and sin. $\frac{D}{2}=\frac{50}{R}$ (2)

Tangent=T=R tan $\frac{\Delta}{2}$ (3) Length of Curve=L=$100\frac{\Delta}{D}$ (4)

Middle ordinate=M= R(1—cos. $\frac{\Delta}{2}$) (5) =R vers $\frac{\Delta}{2}$ (6)

External=E=T tan $\frac{\Delta}{4}$ (7) =R ÷ cos. $\frac{\Delta}{2}$ —R (8)=R exsec $\frac{\Delta}{2}$ (9)

Long Chord=C=2 R sin. $\frac{\Delta}{2}$ (10) Δ=Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161 +60.35 to find Sta. of P. C. and P. T. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C. +L=164 +91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 (54.50 ÷100)²=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus (54.50)² ÷(2 x 688.26)=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6 ÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose Δ=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.

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