

284-F

3

W284F

Our Leather Bound Engineers Note Books are carried in the following rulings:

- No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.
- No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.
- No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.
- No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

In ordering Fabri-Hide covered books, add the letter "F" to catalog number.

THE FREDERICK POST CO.
ENGINEERING and DRAFTING SUPPLIES
IRVING PARK STATION
CHICAGO, ILL.

MICROFILMED

JAN 11 1965

80
 11.71
 52.11
 52.25
 63.50
 81.9
 28.32
 10.62
 67.95
 6.35
 1.60 B.M.

Finish stakes,

Sta 449 to 656

MICROFILMED

JAN 11 1982

Continued From Book #2
Finish Grades

656+25 363.16 see Book #2 For This H.I. 356.90

656+00 3.76 359.40

655+75 12.74 T.P. - 0.20 362.96
-10.00 375.70 361.90

655+50 ✓ X 11.30 364.40

+20 365.90
655+00 366.90

+85 8.05 367.65

654+50 ✓ X 6.30 369.40

6/16/30
Simpson
Sober
Remmer

clear and warm

654+00	375.70	T.P. → 6.26	369.44
	12.71		382.15
653+50 ✓		12.67	369.48
653+25		12.65	369.50
		11.65	370.50 = C-1 st set in Side Bank
653+00 ✓			369.52
+75		12.61	369.54
		2.61	379.54 = C-10 th set in Side Bank
652+50	00		369.56
+48 ⁹⁰	0	T.P. 0.71	381.44
	8.75		390.19
652+25	2.23	T.P. 11.62	378.57
	1		380.80
		11.22	369.58
		9.22	371.58 = C-2 nd Set in Side Bank
652+00		11.20	369.60
+75		11.18	369.62
651+50 ✓		11.16	369.64
651+25 ✓	X	11.14	369.66

6/16/30
Simpson
Sober
Remmen

Clear and Warm

380.80

651+00	8.01	376.36	T.P.	12.44	368.36
650+75				9.30	367.06
650+50					365.76
650+20	✓	X			364.20
650+00	✓				364.65
649+75	✓			11.16	365.20
+50	✓			10.60	365.76
649+25	✓			10.04	366.32
649+00				9.48	366.88
648+75	✓	X		8.92	367.44
648+50			T.P.	8.92	367.44
648+00	1.98	369.42			
648+00	✓	X		1.98	367.44

+5.20%

-2.23%

0.00%

~~~~~

~~~~~

~~~~~

Net Set 6/16/30

↑  
6/16/30  
Simpson  
Soper  
Remmen

6/17/30  
Simpson  
Soper  
Remmen  
↓

cloudy and cool

647+50 369.42 3.78 365.64

647+00 ✓ +3.60% 5.58 363.84

646+60 ✓ ✓ 7.02 362.40  
+30 0.0% 7.02 362.40

646+00 ✓ ✓ 7.02 362.40

645+50 -5.60% 5.22 364.20

645+00 ✓ ✓ 3.42 366.00

B.M. #103 El. 373.17  
Sta. 644+89

6/17/30  
Simpson  
Saber  
Remmen

|          |        |      |               |
|----------|--------|------|---------------|
|          | 369.42 |      |               |
| 644+25 ✓ | X      | 3.42 | 366.00        |
| 0.69     | 366.67 |      | 365.98 = B.M. |

|        |  |      |        |
|--------|--|------|--------|
| 644+00 |  | 2.67 | 364.00 |
|--------|--|------|--------|

|        |  |  |        |
|--------|--|--|--------|
| 643+75 |  |  | 362.00 |
|--------|--|--|--------|

|          |   |      |        |
|----------|---|------|--------|
| 643+50 ✓ | X | 6.67 | 360.00 |
|----------|---|------|--------|

|           |  |      |        |
|-----------|--|------|--------|
| 643+135 ✓ |  | 8.20 | 358.47 |
|-----------|--|------|--------|

|        |  |      |        |
|--------|--|------|--------|
| 643+00 |  | 8.77 | 357.90 |
|--------|--|------|--------|

|     |  |      |        |
|-----|--|------|--------|
| +75 |  | 9.82 | 356.85 |
|-----|--|------|--------|

|          |  |  |        |
|----------|--|--|--------|
| 642+50 ✓ |  |  | 355.80 |
|----------|--|--|--------|

|        |  |       |        |
|--------|--|-------|--------|
| 642+25 |  | 11.92 | 354.75 |
|--------|--|-------|--------|

6/17/30  
 Simpson  
 Soper  
 Remmen  
 cloudy and cool



642+00 ✓

+4.28

366.67

\*

T.F. → 12.97 353.70

0.43

354.13

641+75

351.65

641+50

4.53 349.60

641+25

347.55

+8.20%

641+00 ✓

8.63 345.50

640+75

343.45

640+50 ✓

+5.4%

\*

T.F. → 12.73 341.40

6/17/30  
Simpson  
Soper  
Remmen

cloudy and cool

640+00 1.04 342.44 341.40  
3.74 338.70

639+50 ✓  
+5.40  
X 6.44 336.00

639+00 ✓ 7.66 334.78

638+50 ✓  
+2.44 070  
8.22 333.56

638+00 ✓ 10.10 332.34

T.P. 10.11 332.33

198 334.31

637+50 3.19 331.12

6/17/30  
Simpson  
Soper  
Remmen

cloudy and cool

|                      |   |       |        |      |       |                              |
|----------------------|---|-------|--------|------|-------|------------------------------|
| 637+00               |   |       | 334.31 |      | 4.41  | 329.90                       |
|                      |   |       |        |      |       |                              |
| 636+65 <sup>01</sup> | ✓ |       |        |      | 5.26  | 329.05                       |
|                      |   |       |        |      |       |                              |
| 636+35 <sup>02</sup> | ✓ |       |        |      | 4.64  | 329.67                       |
|                      |   |       |        |      |       |                              |
| 636+00               | ✓ |       |        | T.F. | 2.43  | 331.88                       |
|                      |   | 13.07 | 344.95 |      |       |                              |
| 635+50               | ✓ |       |        |      | 9.92  | 335.03                       |
|                      |   |       |        |      |       |                              |
| +25                  |   |       |        |      | 8.34  | 336.61                       |
|                      |   |       |        |      | 7.34  | 337.61 = C. 1° set in Bottom |
| 635+00               | ✓ |       |        |      |       | 338.18                       |
|                      |   |       |        |      |       |                              |
|                      |   | 6.69  | 351.43 | T.F. | 0.21  | 344.74                       |
|                      |   | 3.45  | 351.45 |      | 3.45  | 347.98 = check on 348.00     |
| 634+64 <sup>98</sup> | X |       |        |      | 11.06 | 340.39                       |

↑  
6/17/30  
Simpson  
Sober  
Remmen  
cloudy and cool

B.M. #102 AV. = El. = 348.00

6/18/30  
Simpson  
Sober  
Remmen  
↓  
clear and warm.

634+34 ✓

99 ✓

↑  
40  
X

351.45

10.52 340.93

634+00 ✓

11.57 339.88

+75

12.32 339.13  
T.P. - 12.33 339.12

1.40 340.52

633+50 ✓

2.19 338.38

+25

2.89 337.63

633+00 ✓

7/2  
+ 3.00  
X

3.64 336.88

632+50 ✓

5.14 335.38

632+00 ✓

6.64 333.88

6/18/30  
Simpson  
Safer  
Remmen

clear and warm

340.52  
631+50  
+48<sup>2</sup>  
332.38  
8.19 332.33

631+00 ✓  
9.64 330.88

+31.076  
630+50 ✓  
11.14 329.38

630+00 ✓  
630+00  
1.06  
T.P. 12.64  
335.06  
327.88 = City Datum  
334.00 = 4.5.G.S.  
↑  
↓

629+50 ✓  
4.96 330.10

+7.8076  
629+00  
8.86 326.20 set in side  
Bank

6/18/30  
Simpson  
Soller  
Remmen

clear and warm,

change Here to 4.5.G.S. Datum

628+50 ✓      335.06  
T.P. - 12.76    322.30  
0.21    322.51

628+00 ✓      \*      4.11    318.40

627+75      315.08

627+50 ✓      10.75    311.76  
T.P.    12.92    309.59  
0.77    310.36

627+25      308.43

627+00 ✓      5.85    305.11

6/18/30  
Simpson  
Sober  
Remmen

clear and warm

626+75 310.36 301.78

626+50 ✓ + 13.27% 11.91 298.45  
T.P. - 13.03 297.33  
0.68 298.01

626+25 ✓ \* 2.88 295.13

626+00 ✓ 7.08 290.93

625+75 + 16.81% 11.28 286.73  
T.P. 13.06 284.95  
0.35 285.30

625+50 ✓ 2.77 282.53

6/18/30  
Simpson  
Sober  
Rem men

dear and warm

285.30  
625+25 6.98 278.32

625+00 ✓  
11.18 274.12  
T.F. 12.65 272.65  
0.11 272.76

624+75 2.84 269.92

624+50 ✓  
+16.8/010  
7.04 265.72

624+25  
11.24 261.52  
T.F. 12.98 259.78  
0.00 259.78

624+00 ✓ 2.47 257.31

623+75 ✓ ✕ 6.69 253.09

6/18/30  
Simpson  
sober  
Remmen

clear and warm



623+50

8.74 251.04

623+25

249.00

623+00 ✓

0.18

12.82 246.96

T.P. - 12.84 246.94

5.07 + 252.01

+

622+75

244.92

622+50 ✓

✗

242.87

622+45

9.14 242.87

11.37

Trestle

251.08

239.71 = B.M. # 101

620+16<sup>67</sup> ✓

✗

8.21 242.87

5.21 245.87 = cut 3' set  
in side bank

o.k. to Here with S.

↑  
6/18/30Simpson  
Sober  
Remmer

clear and warm.

6/20/30

Simpson  
Sober  
Remmer

↓

B.M. # 101 - El. = 239.71

on B.O. Valve N.E. Cor.

cloudy and cool

251.02  
620+00 ✓ 3.88 247.70  
2.88 248.20 = cut 12 set 14  
Bottom

619+75 12.55 363.33 T.F. 0.30 250.78  
9.63 253.70

619+50 ✓ 3.13 260.20  
T.F. 0.01 363.32  
12.65 375.97

619+25 9.27 266.70  
-26.0%

619+00 ✓ 2.77 273.20  
T.F. 0.22 375.75  
13.15 388.90

618+75 9.20 279.70

618+50 ✓ \* 2.70 286.20  
T.F. 0.14 388.76

6/20/30  
Simpson  
Seper  
Remmen

cloudy and cool

|        |       |        |      |        |
|--------|-------|--------|------|--------|
|        | 12.74 | 301.50 |      | 388.76 |
| 618+25 |       |        | 6.80 | 294.70 |
|        |       | T.P.   | 0.11 | 301.39 |
|        | 12.87 | 314.26 |      |        |

|          |  |  |       |        |
|----------|--|--|-------|--------|
| 618+00 ✓ |  |  | 11.06 | 303.20 |
|----------|--|--|-------|--------|

|        |       |         |      |        |
|--------|-------|---------|------|--------|
|        |       | -34.00% |      |        |
| 617+75 |       |         | 2.56 | 311.70 |
|        |       |         | 0.08 | 314.18 |
|        | 12.84 | 327.02  |      |        |

|          |       |        |      |        |
|----------|-------|--------|------|--------|
| 617+50 ✓ | X     |        | 6.82 | 320.20 |
|          |       | T.P.   | 0.09 | 326.93 |
|          | 12.98 | 339.91 |      |        |

|        |       |        |      |        |
|--------|-------|--------|------|--------|
| 617+25 |       |        | 9.69 | 320.22 |
|        |       | T.P.   | 0.07 | 339.84 |
|        | 13.07 | 352.91 |      |        |

|        |  |  |       |                              |
|--------|--|--|-------|------------------------------|
| 617+00 |  |  | 12.67 | 340.24                       |
|        |  |  |       | set to grade<br>in side Bank |

6/20/30  
Simpson  
Sober  
Remmen

cloudy and cool

616+75 352.91 2.65 350.26

13.01 -40.09%  
T.P. 0.09 352.82  
365.83

616+53<sup>17</sup> ✓ X 6.81 359.02

10.42 -32.46%  
T.P. 0.12 365.71  
376.13

616+25<sup>54</sup> ✓ X 8.14 367.99

7.8%

615+94<sup>64</sup> ✓ X 5.73 370.40  
5.99 370.14

615+50 5.67 370.49  
5.90 370.23

615+40 ✓ 370.51

615+00 5.54 370.59  
5.82 370.31

Revision ↑  
↓

A.V. 610+85 381.80

Strike in Trestle 608+15 = 332.95

6/20/30  
Simpson  
Soper  
Remmer

|                        |             |             |                                                                                         |
|------------------------|-------------|-------------|-----------------------------------------------------------------------------------------|
| 614+50 ✓               | 376.13      | 5.73        | 370.69<br>370.40                                                                        |
| +29 <sup>6</sup> ✓     |             | 5.66        | 370.73<br>370.47                                                                        |
| 614+00 ✓               |             | 5.60        | 370.77<br>370.53                                                                        |
| +75 ✓                  | 6.92 377.46 | 1.11 → 5.59 | 370.54                                                                                  |
|                        |             | 6.82        | 370.84<br>370.64 set 1 <sup>st</sup> cut                                                |
| 613+50 ✓               |             | 6.84        | 370.89<br>370.62                                                                        |
| +25                    |             | 6.67        | 370.94<br>370.77                                                                        |
|                        |             |             | revision<br>= set 2 <sup>nd</sup> cut.                                                  |
| 613+00 ✓               |             | 6.59        | 370.99<br>370.87                                                                        |
| +75                    |             | 6.42        | 371.04 set 2 <sup>nd</sup> cut                                                          |
|                        |             | 6.37        | 371.09                                                                                  |
| 612+50 ✓               |             | 8.22        | 369.24 = check on Hub 2 <sup>nd</sup> below grade at Pier #1; Trestle #3 Elev. = 369.22 |
| +25                    |             |             | 371.14                                                                                  |
| 612+00                 |             |             | 371.19                                                                                  |
|                        | 4.56 377.10 |             | 372.54 = B.M. on old Trestle                                                            |
| 611+67 <sup>50</sup> ✓ | *           | 5.85        | 371.25                                                                                  |
|                        |             | 4.85        | 372.25 cut 1 <sup>st</sup> set on to                                                    |

B.M. #100 EL = 379.43

A.V. 614+70

↑  
6/20/30  
Simpson  
Soper  
Remmen

clear and warm

6/24/30  
Simpson  
Butzine  
Remmen

clear and hot

↓

|                      |      |        |            |                                             |
|----------------------|------|--------|------------|---------------------------------------------|
|                      |      | 377.10 |            |                                             |
| 611+50               |      |        | 4.46       | 372.64                                      |
|                      |      |        |            |                                             |
| 611+25               | ✓    |        | 2.47       | 374.63                                      |
|                      |      |        |            |                                             |
|                      | 6.42 | 383.14 | 0.38       | 376.72                                      |
| 610+95 <sup>37</sup> | ✓    |        | 6.14       | 377.00                                      |
|                      |      |        | 5.14       | 378.00 = C-1 <sup>st</sup> set in Side Bank |
| +75                  |      |        | 6.14       | 378.00 = C-1 <sup>st</sup> set in Side Bank |
|                      |      |        | 5.14       |                                             |
| 610+25 <sup>37</sup> | ✓    |        | 6.14       | 377.00                                      |
|                      |      |        |            |                                             |
| 610+05 <sup>37</sup> | ✓    |        | 7.14       | 376.00                                      |
|                      |      |        |            |                                             |
| 609+75 <sup>37</sup> | ✓    |        | 10.14      | 373.00                                      |
|                      |      |        | 9.14       | 374.00 = C-1 <sup>st</sup> set in Side Bank |
|                      |      |        | T.F. 12.35 | 370.77                                      |
|                      | 0.96 | 371.75 |            |                                             |

6/24/30  
Simpson  
Butzine  
Remmen

clean and Hot

609+45 <sup>25</sup> ✓ 371.75 5.73 366.02

✓

609+16 <sup>27</sup> ✓ ✗ 10.67 361.08

0.23 T.P. 12.89 358.86  
359.09

609+00 ✓ 2.59 356.50

608+75 9.42 349.67

0.18 T.P. 12.88 346.21  
346.39

608+50 ✓ 3.55 342.89

13.41 332.98 = B.M. on old Trestle  
332.95 = Rec. E.I.

608+25 336.01

+20 334.63

608+10 ✓ ✗ 331.90

4/24/30  
Simpson  
Butzine  
Reimert

clear and hot.

↓

607+75

330.02

607+25

327.34

+ 51.36 970

332.95 = B.M. # 98

0.59

333.54

607+00 ✓

X

7.54 326.00

+ 80

326.24

606+50

6.94 326.60

+ 10

- 1.20 970

6.46 327.08

606+00 ✓

327.20

605+78<sup>53</sup> ✓

X

327.46

B.M. # 98 El. 332.95

spike in Trestle sta. 608+15

6/24/30

clear

Simpson

Butzine

Remmert



605+48<sup>56</sup> ✓

333.54

4.61 328.93

605+18<sup>77</sup> ✓

KC

0.90 332.64

T.P. 0.54 333.00

12.56 345.56

604+89<sup>38</sup> ✓ ✓

X

7.01 338.55

-2400

604+79<sup>21</sup> ✓ ✓

X

4.56 341.00

T.P. 0.45 345.11

12.28 357.39

604+49<sup>86</sup> ✓ ✓

KC

10.17 347.22

604+20<sup>22</sup> ✓ ✓

5.52 351.87

|          |        |           |        |
|----------|--------|-----------|--------|
|          |        | 357.39    |        |
| 604+00 ✓ |        | 2.89      | 354.50 |
|          |        | T.P. 0.29 | 357.10 |
|          | 11.81  | 368.91    |        |
|          | -13.00 |           |        |
| 603+75   |        |           | 357.75 |
| 603+50 ✓ | *      | 7.91      | 361.00 |
| 603+25   |        |           | 363.08 |
| 603+00 ✓ |        | 3.74      | 365.17 |
| 602+75   |        |           | 367.26 |
|          |        | T.P. 0.29 | 368.62 |
|          | 11.79  | 380.36    |        |

B.M. #97 E.L. 391.53

AX. 603+00

6/24/30  
Simpson  
Butzine  
Remington

clear and Hot.

380.26

602+50 ✓

11.02 369.34

602+25

8.94 371.42

602+00 ✓

- 8.34%

373.51

601+84<sup>97</sup> ✓ ✓

\*

5.59 374.77

4.10.43 369.93

12.91 382.84

1.37

381.47 = check on B.M.  
381.53 = Record El.

#91 - Rt. Sta. 603+00

601+55<sup>03</sup> ✓

4.33

379.16

2.85

374.83 = grade sub Sta.  
601+85

376.31

KC,

601+25<sup>03</sup> ✓

3.22 375.94

↑  
6/24/30  
Simpson  
Butzine  
Remmen

clear and hot

6/25/30  
Simpson  
Butzine  
Remmen  
↓

clear and warm

600+95<sup>12</sup> ✓ \* 379.16 5.49 373.67

600+50 ✓ 10.36 368.80  
T.F. 12.63 366.53  
0.29 366.82

600+00 ✓ 3.42 363.40

599+50 ✓ \* 8.82 358.00

599+15 T.F. 12.60 354.22

599+00 ✓ 0.25 354.47 352.60

598+85<sup>30</sup> 3.45 351.02

598+60 ✓ 248.28

598+50 7.27 347.20

6/25/30  
Simpson  
Butzine  
Remmen

Clear and Warren

598+14 <sup>35</sup> ✓ \* 354.47 11.06 343.41

0.21 342.32 T.P. 12.36 342.11

40.

597+85 <sup>39</sup> ✓ ✓ \* 4.02 338.30

597+50 ✓ 12.51 329.81

T.P. 13.00 329.32

0.23 329.55

597+25 + 24.09/0 5.74 323.81

597+00 ✓ 11.74 317.81

T.P. 12.70 316.85

0.08 316.93

596+75 5.12 311.81

6/25/30

Simpson

Butzine

Remmen

clear and warm

316.93  
596+50 11.12 305.81  
T.P. 12.56 304.37  
0.19 304.56

596+25 4.75 299.81

596+00 ✓ 10.75 293.81  
T.P. 12.84 291.72  
0.41 292.13  
+ 24.0  
x

595+75 4.32 287.81

595+50 ✓ 10.32 281.81  
T.P. 13.04 279.09  
0.37 279.46

595+14<sup>63</sup> ✓ x 6.15 273.31

6/25/30 clear and warm  
Simpson  
Batzine  
Remmen

B.m. # 96 Fl. 263.75  
B.O. Valve Trestle #36 uppermost Bolt head

279.46  
594+85<sup>02</sup> ✓ \* 10.99 268.47  
T.P. 12.71 266.75  
0.56 267.31

594+50 ✓ 1.95 265.36

594+00 ✓ + 8.878% 6.39 260.92

593+89<sup>96</sup> ✓ \* 7.28 260.03

593+59<sup>98</sup> ✓ \* K.C. 8.40 258.91

+ 40 8.12 259.19

593+00 ✓ - 1.4% 259.75

592+95 7.49 259.82

6/25/30  
Simpson  
Butzine  
Remmen

clear and work

267.31  
592+75 ✓ X T.P. - 7.21 260.10

4.34 264.44

0.72 264.47  
0.0% Trastle

0.72 263.72 = check on B.M. # 96  
263.75 = Record E.

592+10<sup>46</sup> ✓ ✓ X 7.37 260.10

591+80<sup>48</sup> ✓ ✓ 3.26 261.21

T.P. 0.39 264.08

12.99 277.07

591+50<sup>66</sup> ✓ ✓ V.C. 12.55 264.52

591+21<sup>17</sup> ✓ ✓ 7.05 270.02

T.P. 0.26 276.81

12.63 289.44

590+92<sup>16</sup> ✓ ✓ X 11.76 277.68

6/25/30  
Simpson  
Butzine  
Remmen

clear and warm

26.0  
69  
235  
56.2



289.44

0.57 288.87

12.90 301.77

590+50

✓

X

11.27 290.50

T.P.

0.28 301.49

12.89 314.38

-58.33%

590+20

✓

✓

X

12.38 302.00

590+00

✓

4.49 309.89

T.P.

0.34 314.04

12.14 326.78

589+75

-39.46%

7.02 319.76

T.P.

0.19 326.59

13.06 339.65

589+50

✓

10.03 329.62

T.P.

0.22 339.43

13.02 352.45

589+17<sup>61</sup>

✓

X

10.25 342.40

6/25/30

clear and warm

Simpson

Butzine

Remmer

589+00 352.45  
12.48 <sup>39.20</sup> 364.88  
T.P. 3.15 349.30  
T.P. 0.05 352.40

588+67 <sup>71</sup> ✓ ✓ ✗  
12.45 377.06  
T.P. 2.92 361.96  
T.P. 0.27 364.61

588+53 <sup>55</sup> ✓ ✓  
10.14 366.92

588+39 <sup>07</sup> ✓ ✓  
V.C.  
6.23 370.83

588+24 <sup>34</sup> ✓ ✓  
3.39 373.67

588+09 <sup>44</sup> ✓ ✓  
4.70 380.11  
T.P. 1.64 375.42  
T.P. 1.65 375.41

10.24 380.09  
10.24 369.87 = check on B.M. # 95  
369.85 = Record E

6/25/30  
Simpson  
Butzine  
Remmen

clear and warm

587+94<sup>45</sup> ✓✓ 380.09 4.01 376.08

V.C.

587+79<sup>46</sup> ✓✓ ✗ 4.46 375.63

587+50 6.40 373.69

587+35 ✓ 372.70

587+00 ✓ + 6.60% 9.70 370.39

T.P. 10.38 369.71

0.40 370.11

586+50 ✓ 3.02 367.09

586+06<sup>30</sup> ✓✓ ✗ 5.91 364.20

6/25/30  
Simpson  
Butzine  
Remmen

clear and warm

370.11

585+75  
585+50 ✓ 6.91 363.20  
362.40

585+25 8.51 361.60

585+00 ✓ 360.80

584+75 10.11 360.00

584+50 ✓ T.P. 10.10 360.01  
359.20

2.52 362.53

584+25 4.13 358.40

584+00 ✓ \* 4.93 357.60

583+75 4.93 357.60

583+50 4.93 357.60

583+25 ✓ \* 4.93 357.60

583+00 -3.2% 4.13 358.40

T.P. 3.70 358.83  
8.35 367.18

6/25/30  
Simpson  
Butzine  
Remmen

Clear and warm

582+75 367.18 7.98 359.20

582+50 ✓ 7.18 360.00

582+25 ✓ 6.38 360.80

582+00 ✓ 5.58 361.60

3.20%

581+77<sup>84</sup> ✓  
4.87 362.31  
3.87 363.31 = C.P. set  
in side

T.P. 1.60 365.58  
12.81 378.39

581+50 0.77 377.62 = Check  
377.64 = Record El.  
363.20

1.44 379.08

11.54 367.54

6.06 373.60

on B.M. # 99

↑  
6/25/30  
Simpson  
Butzine  
Remmen

clear and warm

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm

↓

581+00 373.60  
8.80 364.80

580+50 ✓ 7.20 366.40

+15 6.40 367.20

580+00 ✓ 368.00

+75 4.80 368.80

+70 368.96

579+50 369.60

579+35<sup>46</sup> ✓  
3.55 370.05

2.55 371.05 set 1<sup>st</sup> cut  
in side bank

579+05<sup>46</sup> ✓  
3.63 369.97

2.63 370.97 = set 1<sup>st</sup> cut  
in side bank

B.M. # El. 377.64

579+15

7/1/30

Simpson

Butzine

Remmen

clear and wait

578+75<sup>66</sup> ✓

373.60

6.20 367.40  
5.20 368.40 = set 1<sup>st</sup> cut  
in side Bank

578+95<sup>94</sup> ✓

10.93 362.67

0.16 360.77  
T.P. 12.99 360.61

578+16<sup>26</sup> ✓

5.08 355.69

578+00 ✓

9.66 351.11

0.29 348.18  
T.P. 12.88 347.89

577+75

+ 28.16%

4.11 344.07

577+50 ✓

11.15 337.03

2.13 335.25  
T.P. 13.06 335.12

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm

335.25

577+25

5.25 330.00

T.F. 12.79 322.96

9.05 331.51

577+00 ✓

28.16 0%

17.00 322.96

576+92 <sup>86</sup> ✓

X

10.51 321.00

9.51 322.00 = cut 10 set  
in Side Bank

0.0 0%

576+65 <sup>91</sup> ✓

X

10.51 321.00

576+50

324.50

+ 35

- 22.0 0%

317.80

+ 30

2.61 328.90

576+25

330.00

T.F. 0.29 331.22

12.65 343.87

7/1/30

clear and warm

Simpson

Butzine

Remmen



343.87

576+00

8.37 335.50

7/1/30

clear and warm

Simpson  
Butzine  
Remmer

575+75

RR.0%

341.00

575+69

13 ✓

X

1.57 342.30

T.P. 0.18 343.69

12.33 356.02

575+39

01 ✓

8.34 347.68

575+09

79 ✓

KG

5.10 350.92

574+79

81 ✓

X

7.02 352.00

← 0.0%

574 + 30 <sup>17</sup> ✓

X

0.00

356.02

7.02 352.00 ✓

574 + 15 <sup>18</sup> ✓

9.50 351.52 ✓

574 + 00 <sup>25</sup> ✓

5.93 350.09 ✓

573 + 85 <sup>44</sup> ✓

8.31 347.71 ✓

573 + 70 <sup>81</sup> ✓

X

11.61 344.41

T.P. 12.75 343.27

0.19 343.46

573 + 43 <sup>70</sup> ✓

X

6.10 337.36

7/1/30  
Simpson  
Butzine  
Remmen

Clear and warm

573+14 <sup>41</sup> ✓ 343.46  
12.70 330.76  
T.F. 12.68 330.78  
0.13 330.91

572+84 <sup>80</sup> ✓ V.C. 4.85 326.06

572+54 <sup>93</sup> ✓ X- 7.61 323.30

572+25 9.41 321.50

572+00 ✓ X 6.00 320.00

571+75 12.41 318.50  
T.F. 12.39 318.52  
7.59 316.11

B.M. #92 El. 373.82

573+20

Nail in stringer of trestle #34

7/1/30

clear and warm

Simpson  
Butzine  
Kerimen

571+45 ✓

\*

16.0% →

326.11

9.40 316.71

571+15<sup>12</sup> ✓

316.00

571+00

9.37 316.74

570+85<sup>16</sup> ✓

VC

8.63 317.48

570+55<sup>38</sup> ✓

\*

4.97 321.14

570+29<sup>70</sup> ✓

\*

16.0% →

0.86 325.25

T.P. 0.87 325.24

9.27 334.51

569+99<sup>91</sup> ✓

VC

5.70 328.81

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm

569+69<sup>93</sup> ✓  
\* 334.51  
4.51 330.00

B.M. # 91 - El = 354<sup>77</sup>  
60' Rt. 569+50 - A.V.

569+50 4.51 330.00

7/1/30  
Simpson  
Butzine  
Remmen  
clear and warm

569+15<sup>34</sup> 4.51 330.00

568+50 0.0 910  
4.51 330.00

568+00 330.00

567+70<sup>27</sup> ✓  
\* 330.00

567+40<sup>24</sup> ✓

331.18

12.05 343.05

3.31.00 = Grade Hub  
1° Above Grade  
at Pier #4

567+10<sup>45</sup> ✓

V.G.

8.35 334.70

566+81<sup>03</sup> ✓

\*

2.49 340.56

566+73<sup>93</sup> ✓

0.79 342.26

T.P. 0.77 342.28

12.23 354.51

↓

566+44<sup>50</sup> ✓

6.43 348.08

5.43 349.08 = Cut 1° set  
in Side Bank

566+14<sup>70</sup> ✓

2.96 351.55

B.M. #90 - El. = 364<sup>12</sup>

60' Rt 566+10 - A.V.

7/1/30

Simpson

Butzine

Remmen

clear and warm

565+84<sup>72</sup> ✓

354.51

1.88 352.63

565+54<sup>75</sup> ✓

✓

3.19 351.32

565+24<sup>98</sup> ✓

✗

6.89 347.62

565+14<sup>83</sup> ✓

✗

8.56 345.95

565+00<sup>14</sup> ✓

✓

11.59 342.92

T.P. 12.82 341.69

0.12 341.81

564+85<sup>73</sup> ✓

✗

3.05 338.76

7/1/30

clear and warm

Simpson  
Butzine  
Remmen

564+50 0.47 341.81  
329.34 T.P. - 12.94 328.87  
2.44 326.90

+ 331.2 %

564+28  $\frac{53}{\checkmark}$  \* 9.57 319.77  
T.P. 12.93 316.41  
0.31 216.72

563+99  $\frac{72}{\checkmark}$  \* 5.31 311.41

V.C.

563+70  $\frac{36}{\checkmark}$  \* 11.46 305.26  
T.P. 12.81 303.91  
0.32 304.23

563+50  $\checkmark$  2.43 301.80

+ 170 %

563+25 297.55

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm



clear and warm

7/1/30  
Simpson  
Butzine  
Remmen

563+00 304.23 10.93 293.30

T.P. 12.77 291.46

0.18 291.64

+ 17.0%

562+75 289.05

562+50 ✓ \* 6.84 284.80

562+00 ✓ T.P. 12.44 279.20

0.75 279.95

+ 11.70%

561+50 ✓ \* 6.35 273.60

561+00 ✓ \* 11.95 268.00

10.95 269.00

sc-1<sup>st</sup> set  
in side  
Bank

7.13 270.82 ← check on B.M. #89 - El. = 270<sup>81</sup>

|                        |       |        |                                     |
|------------------------|-------|--------|-------------------------------------|
|                        | 3.98  | 274.79 | 270.81                              |
| 560+50                 |       |        | 266.50                              |
| 560+30 <sup>24</sup> ✓ | *     | 8.88   | 265.91                              |
| 560+15 <sup>25</sup> ✓ |       | 8.74   | 266.05                              |
| 560+00 <sup>31</sup> ✓ | KC    | 7.94   | 267.35                              |
|                        |       | 5.44   | 269.35 = cut 2" set<br>in side bank |
| 559+85 <sup>51</sup> ✓ |       | 4.97   | 269.82                              |
| 559+70 <sup>95</sup> ✓ | *     | 1.36   | 273.43                              |
|                        |       | T.P.   | 0.55                                |
|                        | 12.56 | 286.80 |                                     |

B.M. # 89 - E1 = 270.81

60' Rt. 560+70 - Nail in side of  
Valve Box

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm

7/1/30  
 Simpson  
 Butzine  
 Remmen  
 clear and warrant

286.80  
 559+50 v \* 7.30 299.50  
 T.P. 0.08 186.72  
 12.55 299.27

559+25  
 0%  
 -36.0  
 288.50

559+00 v \* 1.77 297.50  
 T.P. 0.13 299.14  
 12.73 311.87

T.P. 0.06 311.81  
 558+75 308.25  
 12.75 324.56

558+50 v -43.0 5.56 319.00  
 T.P. 0.00 324.56  
 12.32 336.88

558+25 329.75  
 T.P. 0.00 336.88  
 12.49 349.37

558+05<sup>67</sup> ✓

43.010  
X

349.37

11.31 338.06

557+77<sup>63</sup> ✓

0.64 348.73

T.P. 0.11 349.26

12.840 362.10  
✓

557+48<sup>79</sup> ✓

5.12 356.98

T.P. 0.46 361.64

9.89 371.53

557+19<sup>35</sup> ✓

8.78 362.75 ✓

556+89<sup>53</sup> \*

5.54 365.99

556+80<sup>2</sup> ✓

X

4.91 366.62

556+50<sup>01</sup> ✓

K.C.

3.97 367.56

7/1/30  
Simpson  
Remmen  
Butzine

clear and warm

556+20<sup>03</sup> ✓

KC.  
\* X

371.53

5.09 366.44

556+00 ✓

6.55 364.98

555+75 ✓

8.35 363.18 ✓

555+50 ✓

7/28/30  
+

10.15 361.38

555+25 ✓

11.95 359.58

12.04 381.97

T.P. 160

369.93

0.36

381.61 = check on B.M.

Rt. 561+

↑  
7/1/30  
Simpson  
Butzine  
Remmen

clear and want

~~555+00 ✓~~

~~359.78~~

↓

0.36 359.74

359.58 = Grade Hub Sta. 555+25

7/3/30  
Simpson  
Butzine  
Price  
↓

clear and Hot

555+00

2.16 357.78

554+75 ✓ 359.94 355.98

+ 7.2%

554+50 ✓ ~~X~~ 5.74 354.20

+ 10<sup>65</sup> ✓  
554+00 ✓ 11.79 349.44  
348.15

T.P. 12.63 347.31

0.66 347.97

553+50 ✓ 5.87 342.10

+ 12.1%

553+00 ✓ 11.92 336.05

T.P. 12.93 335.04

0.13 335.17

552+50 ✓ ~~X~~ 5.17 330.00

T.P. 12.92 322.25

0.64 322.89

7/3/30  
Simpson  
Butzine  
Price

clear and hot.

322.89

552+25

325.50

7/3/30  
Simpson  
Butzine  
Price

Clear and Hat.

552+00 ✓

+ 18.00%

1.89 321.00

551+79<sup>56</sup> ✓

\* X

5.57 317.32

551+50<sup>21</sup> ✓

U

11.77 311.12

T.P. 12.69 310.20

0.69 310.89

551+21<sup>29</sup> ✓

\* X

7.73 303.16

6.73 304.16 = Cut 1<sup>st</sup> set in  
Side Bank

T.P. 12.93 297.96

0.02 297.98

+ 30.80%

551+00 ✓

1.38 296.60

0.38 297.60 = Cut 1<sup>st</sup>  
Set in side  
Bank

550+82<sup>77</sup> ✓

+ 30.8%

297.98

6.68 291.30

T.P. 12.96 285.02

a.06 285.08

550+53<sup>79</sup> ✓

1.55 283.53

550+24<sup>32</sup> ✓

V.C.

7.18 277.90

549+94<sup>52</sup> ✓

10.63 274.45  
9.63 275.75 = cut 1<sup>st</sup> set on E.

10.40 274.68 = Check on B.M. #87  
274.72

3.27 277.99

549+64<sup>55</sup> ✓

273.20

+ 35  
+ 30

+ 0.5%

273.06

4.96 273.03

549+00

X

5.11 272.88  
3.11 274.88 = cut 2<sup>nd</sup> set on Side Trench

8.09 T.P. 141 276.58  
284.67

-6.34%

7/3/30  
Simpson  
Butzine  
Price

clear and Hot

Bon. #87, El. = 274.72  
60' Rth. 549+25 - Nail in sill of Trestle



+69 284.67 275.16  
548+50 8.62 276.05  
6.62 278.05 = cut 2° set on

+40<sup>17</sup> 276.68

548+25 ✓ 7.03 277.64

548+00 ✓ -6.34% 5.75 279.22

547+75 ✓ X 3.87 280.80

547+50 ✓ -0.19% 3.80 280.87  
2.80 281.87 = cut 10 set in.  
Side Bank

547+25 ✓ 3.73 280.94

T.P. 3.61 281.06  
+69 285.75

7/3/30 • Clear and Hot  
Simpson  
Butzine  
Price

B.M. #86 - El. = 297.71  
60' Rt. Sta. 547+90

285.75

547+00 ✓

4.73 281.02

482

546+75

4.68 281.07 ✓

281.09

546+50 ✓

4.59 281.16 ✓

546+00 ✓

0.29 076  
1

4.44 281.31

545+50 ✓

4.30 281.45

545+00 ✓

X

4.15 281.60

7/3/30

Simpson

Butzine

Rice

Clear and Hot.

285.75

544+50 ✓

6.60 279.15

544+00 ✓

9.05 276.70

543+50 ✓

T.P.

11.50 274.25

0.44 274.69

+ 4.90%

543+00 ✓

2.89 271.80

542+50 ✓

5.34 269.35

542+00 ✓

7.79 266.90

7/3/30

Simpson  
Butzine  
Price

clear and Hot.

541+50 ✓ 274.69  
10.24 264.45

+ 4.90%

541+00 ✓ X 12.69 262.00

540+50 ✓ - 2.00% 11.69 263.00

540+00 ✓ X 10.69 264.00

539+60<sup>28</sup> ✓ - 267.81  
+50 5.89 268.80

- 9.60%

539+25 ✓ T.P. 3.49 271.20

12.53 283.73

7/3/30  
Simpson  
Butzine  
Kemmer

clear and hot

283.73

539+00

10.13 273.60

538+75

7.73 276.00

538+50

3.33 278.40

- 9.66 070

538+25

2.93 280.80

538+00

0.53 283.20

T.P.

0.54 283.19

12.49 295.68

537+75

10.08 285.60

537+50

7.68 288.00

- 14.97 X

7/3/30

Simpson  
Butzine  
Remmer

Clear and Hot

537+88<sup>83</sup>

289.67

295.68

537+00

T.P. 0.23 295.45

12.98

308.43

536+75

299.18

536+50

-14.90

5.53 302.90

536+34

87

X

3.28 305.15 ✓

536+05<sup>04</sup>

8.05 308.38

T.P. 0.07 308.36

2.08

310.44

535+75<sup>05</sup>

V.C.

1.16 309.28

535+45<sup>08</sup>

2.59 307.85

535+15<sup>32</sup>

X

6.35 304.09

7/3/30

Simpson

Remmen

Butzine.

clear and warm

B.M. #85 - El. = 320<sup>56</sup>

60' R/L sta 536+00 - A.V.

535+00 310.44  
8.86 301.58  
T.P. 12.80 297.64  
0.02 297.66

534+75 297.14

534+50 4.26 293.40

+ 16.37%

534+25 289.30

534+00 X T.P. - 12.46 285.20  
0.09 285.29

+ 19.2%

533+75 280.40

7/3/30  
Simpson  
Remmen  
Butzine

clear and warm

533+50 285.29 9.69 275.60

T.P. 12.93 272.36  
0.29 272.65

533+25 19.2%  
+ 19.2 270.80

533+00 X 6.65 266.00  
T.P. 12.99 259.66  
0.17 259.83

532+75 261.92

532+50 16.3%  
+ 16.3 257.85

532+25 253.78

7/3/30  
Simpson  
Butzine  
Remmen

Clear and Hot



259.83

532+00

10.13 249.70

T.P. 12.97 246.86

0.43 247.29

531+75

245.62

531+50

5.74 241.55

T.P. 12.96 234.33

0.13 234.46

531+25

+16.3%

237.48

531+00

1.06 233.40

530+75

229.32

7/3/30

Simpson  
Remmen  
Butzine

clear and wait

530+50 234.46 9.21 225.25

T.P. 12.84 221.62  
0.37 221.99

530+25 +16.3% 221.18

530+00 X 4.89 217.10

529+75 211.98

529+73<sup>97</sup> 10.23 211.76

T.P. 13.05 208.94

0.10 209.04  
529+50 +20.5% 2.19 206.85

529+25<sup>72</sup> 201.87

529+25 201.72

529+00 X 12.44 196.60

T.P. 12.88 196.16

7/3/30  
Simpson  
Remmon  
Butzine

Clear and warm

196.16  
0.16 196.32  
528+75 190.36

528+50 12.20 184.12

T.F. 12.90 183.92

0.45 183.87

528+28<sup>22</sup> 178.65

528+25 177.88

528+00 12.24 171.63

T.F. 12.92 170.95

0.29 171.24

165.39

527+75

527+48<sup>18</sup> X 12.47 158.77

T.F. 13.02 158.22

0.43 158.65

7/3/30  
Simpson  
Remmen  
Butzine

clear and warm

527+19<sup>18</sup>

158.65

6.32 152.33

526+89<sup>54</sup>

10.94 147.71

T.P. 12.26 146.39

10.07 156.46

526+59<sup>67</sup>

11.53 144.93

526+29<sup>68</sup>

12.46 144.00

525+90<sup>2</sup>

12.46 144.00

11.46 145.00 = Revision

525+50

11.38 145.08

10.38 146.08 = Revision

7/3/30  
Simpson  
Remmen  
Butzine

B.M. #84 - El. = 149.57

6' Rt. Sta. 526+10

on Inner Blow-off Flange

525+00 156.46  
10.03 146.43

524+90<sup>76</sup>  
X 9.78 146.68

524+60<sup>52</sup>  
7.82 148.64

7.01 149.45 = CHECK on B.M. #87  
149.54

524+30<sup>82</sup>  
7.01 156.55  
C 3.67 152.88

V T.P. 0.07 156.48  
12.57 169.05

524+01<sup>53</sup>  
9.67 159.38

523+72<sup>83</sup>  
X 0.95 168.10

13.04 182.07  
0.02 169.03  
-34.6%

40

100  
4.5  
5.00  
4.00  
26.00

62.5  
4.5  
21.25  
26.00  
29.125

7/3/30  
Simpson  
Butzine  
Remmen

clear and H of 00  
2 P.I.

30  
9.5  
15.0  
20  
1350

100.00  
10.00  
11.00  
109.00

84.2  
76  
22

|                      |          |        |                |
|----------------------|----------|--------|----------------|
|                      | ↑ -34.6% | 182.07 |                |
| 523+50               | X        | 6.07   | 176.00         |
|                      |          | T.P.   | 0.00           |
|                      | 12.49    | 194.56 | 182.07         |
|                      |          | T.P.   | 0.07           |
|                      | 12.70    | 207.19 | 174.49         |
| 523+25               |          |        | 192.00         |
|                      |          | 0.04   | 207.15         |
|                      | 13.02    | 320.17 |                |
| 523+00               | X        | 12.17  | 208.00         |
|                      |          | T.P.   | 0.15           |
|                      | 12.52    | 232.54 | 220.02         |
| 522+75               |          |        | 218.00         |
|                      | ↓ -40.0% |        |                |
| 522+50               |          | 4.52   | 228.00         |
|                      |          | T.P.   | 0.38           |
|                      | 11.44    | 243.60 | 232.16         |
| 522+35 <sup>00</sup> | X        | 9.60   | 234.00         |
|                      |          | 7.07   | 236.53 - Check |
|                      | ← 0.0%   |        |                |

↑  
7/3/30  
Simpson  
Butzine  
Remmen

---

7/7/30  
Simpson  
Remmen  
Butzine

↓

B.M. #83 - E1 = 236.52  
Rt. Sta. 522 +05 - A.V.

on B.M. #83

$\uparrow$   
 0.0%  
 243.60  
 522+20<sup>02</sup> X 9.60 234.00

K.C.  
 521+90<sup>02</sup> X 11.17 232.43  
 T.P. 12.88 230.72  
 0.54 231.26

521+50 3.05 228.21

521+00  
 +10.54%  
 8.32 222.94  
 T.P. 13.04 218.22  
 0.11 218.33

520+50 0.66 217.67

520+29<sup>03</sup> 215.97

520+00 5.93 212.40

7/7/30  
 Simpson  
 Remmen  
 Butzine  
 Clear and Warm

|        |          |        |                                           |
|--------|----------|--------|-------------------------------------------|
|        |          | 218.33 |                                           |
| 519+50 |          | 11.20  | 207.13                                    |
|        | T.P.     | 12.77  | 205.54                                    |
|        | 0.31     | 205.85 |                                           |
|        | + 10.54% |        |                                           |
| 519+25 | X        | 0.35   | 204.50                                    |
|        |          |        | 205.50 = cut 1 <sup>st</sup> set on<br>B. |
| 519+00 |          | 5.66   | 200.19                                    |
|        | T.P.     | 12.95  | 192.90                                    |
|        | 0.26     | 193.16 |                                           |
| 518+75 |          |        | 195.88                                    |
|        | + 17.25% |        |                                           |
| 518+50 |          | 11.59  | 191.57                                    |
|        | 0.59     | 192.57 | = cut 1 <sup>st</sup> set<br>in Side Bank |
| 518+25 |          |        | 187.26                                    |

7/7/30

Simpson  
Remmen  
Butzine

clear and water



|                      |        |        |                                          |
|----------------------|--------|--------|------------------------------------------|
| 518+00               | 193.16 | 10.21  | 182.95                                   |
|                      | T.P.   | 13.10  | 180.06                                   |
|                      | 0.17   | 180.23 |                                          |
| 517+69 <sup>76</sup> | X      | 2.56   | 177.67                                   |
| 517+39 <sup>76</sup> |        | 6.82   | 173.41                                   |
| 517+09 <sup>87</sup> | 4.81   | 9.38   | 170.85                                   |
|                      | 180.16 | 4.81   | 175.72 = Check on<br>175.35 = Record El. |
| 516+92 <sup>88</sup> |        | 9.82   | 170.34                                   |
| 516+79 <sup>88</sup> | X      |        | 170.00                                   |
| 516+55 <sup>07</sup> | X      |        | 170.00                                   |
| 516+45               |        | 9.80   | 170.36                                   |

+172.570

V.C.

9090

7/7/30  
Simpson  
Remmen  
Butzine

B.M. # 82 - El. = 175.35  
60' Rt. Sta. 517+20 Nail in sill of  
old Trestle

B.M. # 82

4.81 180.16  
see Trestle Book

175.35 B.M.  
9.80 170.4 = Ground El. Pier 4  
9.82 170.34 set to Pipe  
Grade Pier 4  
12.0 168.2 = Ground El. Pier 3  
11.16 169.00 = set 12' below  
Pipe grade 3  
12.7 167.5 = Ground El. Pier 2  
11.16 169.00 = set 12' below  
Pipe grade 2  
10.2 170.0 = Ground El. Pier 1  
9.85 172.31 = set to Pipe  
Grade at Pier 1

|                        |        |        |       |        |
|------------------------|--------|--------|-------|--------|
| 516+25 <sup>09</sup>   | K.C.   | 180.16 | 9.09  | 171.07 |
| 515+95 <sup>26</sup> ✓ | X      |        | 5.88  | 174.28 |
|                        |        | T.F.   | 9.12  | 180.04 |
|                        |        | 12.48  |       | 192.52 |
| 515+50 ✓               |        |        | 11.77 | 180.75 |
| 515+00 ✓               |        |        | 4.62  | 187.90 |
|                        |        | T.F.   | 0.17  | 192.35 |
|                        |        | 12.19  |       | 204.54 |
| 514+50 ✓               | -14.3% |        | 9.49  | 195.05 |
| 514+00 ✓               |        |        | 2.34  | 202.20 |
|                        |        |        | 0.22  | 204.32 |
|                        |        | 12.92  |       | 217.24 |
| 513+50 ✓               |        |        | 7.89  | 209.35 |

7/7/30

Simpson  
Remmen  
Butzine

clear and warm

513+00 217.24  
 T.P. 0.74 216.50  
 0.91 239.19 233.28 = B.M. #81  
 1.63 223.24 T.P. 12.58 221.61  
 512+93 <sup>89</sup> ✓ 6.76 216.48 = check on  
 X 5.83 217.41

Top Av. Rt. Sta. 511+50

Grade Hub Sta. 513+00

7/7/30  
 Simpson  
 Remmen  
 Butzine

clear and warm

512+63 <sup>89</sup> ✓ 2.38 220.86

512+33 <sup>89</sup> ✓ 0.59 222.65

V.C.

512+03 <sup>89</sup> ✓ 0.46 222.78

511+73 <sup>93</sup> ✓ X 2.00 221.29

223.24

511+50 ✓

3.80 219.44

511+25

217.56

511+00 ✓

7.57 215.67

510+75

+ 7.53 %

213.79

+50 ✓

11.33 211.91

510+36<sup>49</sup>  
510+46<sup>33</sup> = Eq.

T.P. 12.35 210.89

1.81 212.70

510+00 ✓

5.33 207.37

509+80

\*

6.84 205.86

B.M. # 81 - E.I. = 233.28

60' Rt. sta. 511+50 (Top Air Valve)

7/7/30

Simpson  
Remmen  
Butzine

clear and warm

212.70  
509+50 ✓ 7.38 205.32

509+00  
508+93<sup>24</sup> 9.09 213.51 T.P. - 8.28 204.42  
9.21 204.30

+ 1.81%  
508+50 10.00 203.51  
+44<sup>7</sup> 203.42  
+25<sup>8</sup> ✓ 10.44 203.07

508+00 ✓ \* 10.91 202.60

507+75 202.43

+55<sup>25</sup>  
507+50 11.20 202.31  
202.27

+ 0.6666666666%

↑  
7/7/30  
Simpson  
Remmen  
Butzine

clear and warm

7/8/30  
Simpson  
Remmen  
Butzine

clear and warm

↓

212.51

507+25

202.10

+21<sup>8</sup>

11.92 202.09

507+00

201.93

+87<sup>2</sup>

J.P. 11.67 201.84

506+75

201.76

4.23 206.08

+53<sup>3</sup>

506+50

4.96 201.62

201.60

+0.6666

506+25

4.65 201.43

+15

201.36

505+90

\*

201.27 ✓  
4.88 201.20

7/8/30

clear and warm

Simpson

Remmen

Butzine

|                      |       |        |           |        |
|----------------------|-------|--------|-----------|--------|
| 505+79 <sup>37</sup> |       | 206.28 |           |        |
| 505+76 <sup>31</sup> |       |        | 4.08      | 202.00 |
| 505+52 <sup>48</sup> |       |        | T.P. 2.51 | 203.57 |
| +25                  | 11.18 | 214.75 | 9.59      | 205.16 |
| 505+00               |       |        |           | 206.61 |

|        |   |      |      |        |
|--------|---|------|------|--------|
| 504+75 | 1 | 5.80 | 6.69 | 208.06 |
|--------|---|------|------|--------|

|        |   |  |      |        |
|--------|---|--|------|--------|
| 504+45 | X |  | 4.95 | 209.80 |
|--------|---|--|------|--------|

|        |  |  |      |                 |
|--------|--|--|------|-----------------|
| 504+00 |  |  | 4.82 | 209.93          |
|        |  |  | 3.82 | 210.93 = cut 18 |
|        |  |  |      | Set on 4        |

|        |   |       |      |        |
|--------|---|-------|------|--------|
| 503+50 | - | 0.266 | 4.68 | 210.07 |
|--------|---|-------|------|--------|

7/8/30 clear and warm  
 Simpson  
 Remmen  
 Butzine

503+00 214.75 4.55 210.20

502+50 T.P. 4.42 210.33  
12.33 222.66

2.20 222.82  
210.6 220.62 = check on B.M. #80  
220.62 = B.M.

502+00 12.35 210.47

501+50 12.22 210.60

501+00 12.09 210.73

500+50 T.P. 11.95 210.87  
11.92 222.79

— 0.266%

↑

7/8/30 clear and warm  
Simpson  
Remmen  
Butzine

7/10/30 clear and warm  
Simpson  
Remmen  
Butzine

↓

B.M. #80 - E.I. = 220.62

35' Rt. sta. 501+20 (Nail in Cor. Fence Post)



500+00

22.77

11.79 211.00

499+50

0.266%

11.66 211.13

499+20

X

11.59 211.20

7/10/30

Simpson  
Remmen  
Butzire

Clear and warm

see Book #A

## DIRECTIONS FOR USE OF TABLES

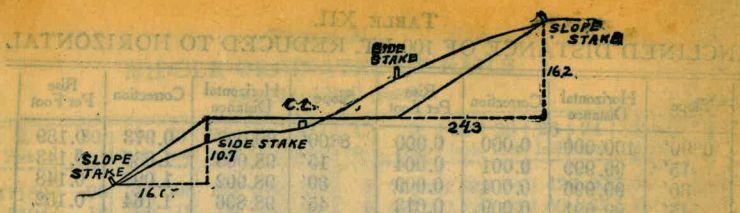
TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 1/2 to 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 body

## IMPROVED TABLES AND INFORMATION

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given I may be found by dividing tangent (or external), opposite I 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.



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

|    | 0     | .1    | .2    | .3    | .4    | .5    | .6    | .7    | .8    | .9    |    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0  | 0 00  | 0 15  | 0 30  | 0 45  | 0 60  | 0 75  | 0 90  | 1 05  | 1 20  | 1 35  | 0  |
| 1  | 1 50  | 1 05  | 1 20  | 1 35  | 1 50  | 1 65  | 1 80  | 1 95  | 2 10  | 2 25  | 1  |
| 2  | 3 00  | 3 15  | 3 30  | 3 45  | 3 60  | 3 75  | 3 90  | 4 05  | 4 20  | 4 35  | 2  |
| 3  | 4 50  | 4 65  | 4 80  | 4 95  | 5 10  | 5 25  | 5 40  | 5 55  | 5 70  | 5 85  | 3  |
| 4  | 6 00  | 6 15  | 6 30  | 6 45  | 6 60  | 6 75  | 6 90  | 7 05  | 7 20  | 7 35  | 4  |
| 5  | 7 50  | 7 65  | 7 80  | 7 95  | 8 10  | 8 25  | 8 40  | 8 55  | 8 70  | 8 85  | 5  |
| 6  | 9 00  | 9 15  | 9 30  | 9 45  | 9 60  | 9 75  | 9 90  | 10 05 | 10 20 | 10 35 | 6  |
| 7  | 10 50 | 10 65 | 10 80 | 10 95 | 11 10 | 11 25 | 11 40 | 11 55 | 11 70 | 11 85 | 7  |
| 8  | 12 00 | 12 15 | 12 30 | 12 45 | 12 60 | 12 75 | 12 90 | 13 05 | 13 20 | 13 35 | 8  |
| 9  | 13 50 | 13 65 | 13 80 | 13 95 | 14 10 | 14 25 | 14 40 | 14 55 | 14 70 | 14 85 | 9  |
| 10 | 15 00 | 15 15 | 15 30 | 15 45 | 15 60 | 15 75 | 15 90 | 16 05 | 16 20 | 16 35 | 10 |
| 11 | 16 50 | 16 65 | 16 80 | 16 95 | 17 10 | 17 25 | 17 40 | 17 55 | 17 70 | 17 85 | 11 |
| 12 | 18 00 | 18 15 | 18 30 | 18 45 | 18 60 | 18 75 | 18 90 | 19 05 | 19 20 | 19 35 | 12 |
| 13 | 19 50 | 19 65 | 19 80 | 19 95 | 20 10 | 20 25 | 20 40 | 20 55 | 20 70 | 20 85 | 13 |
| 14 | 21 00 | 21 15 | 21 30 | 21 45 | 21 60 | 21 75 | 21 90 | 22 05 | 22 20 | 22 35 | 14 |
| 15 | 22 50 | 22 65 | 22 80 | 22 95 | 23 10 | 23 25 | 23 40 | 23 55 | 23 70 | 23 85 | 15 |
| 16 | 24 00 | 24 15 | 24 30 | 24 45 | 24 60 | 24 75 | 24 90 | 25 05 | 25 20 | 25 35 | 16 |
| 17 | 25 50 | 25 65 | 25 80 | 25 95 | 26 10 | 26 25 | 26 40 | 26 55 | 26 70 | 26 85 | 17 |
| 18 | 27 00 | 27 15 | 27 30 | 27 45 | 27 60 | 27 75 | 27 90 | 28 05 | 28 20 | 28 35 | 18 |
| 19 | 28 50 | 28 65 | 28 80 | 28 95 | 29 10 | 29 25 | 29 40 | 29 55 | 29 70 | 29 85 | 19 |
| 20 | 30 00 | 30 15 | 30 30 | 30 45 | 30 60 | 30 75 | 30 90 | 31 05 | 31 20 | 31 35 | 20 |
| 21 | 31 50 | 31 65 | 31 80 | 31 95 | 32 10 | 32 25 | 32 40 | 32 55 | 32 70 | 32 85 | 21 |
| 22 | 33 00 | 33 15 | 33 30 | 33 45 | 33 60 | 33 75 | 33 90 | 34 05 | 34 20 | 34 35 | 22 |
| 23 | 34 50 | 34 65 | 34 80 | 34 95 | 35 10 | 35 25 | 35 40 | 35 55 | 35 70 | 35 85 | 23 |
| 24 | 36 00 | 36 15 | 36 30 | 36 45 | 36 60 | 36 75 | 36 90 | 37 05 | 37 20 | 37 35 | 24 |
| 25 | 37 50 | 37 65 | 37 80 | 37 95 | 38 10 | 38 25 | 38 40 | 38 55 | 38 70 | 38 85 | 25 |
| 26 | 39 00 | 39 15 | 39 30 | 39 45 | 39 60 | 39 75 | 39 90 | 40 05 | 40 20 | 40 35 | 26 |
| 27 | 40 50 | 40 65 | 40 80 | 40 95 | 41 10 | 41 25 | 41 40 | 41 55 | 41 70 | 41 85 | 27 |
| 28 | 42 00 | 42 15 | 42 30 | 42 45 | 42 60 | 42 75 | 42 90 | 43 05 | 43 20 | 43 35 | 28 |
| 29 | 43 50 | 43 65 | 43 80 | 43 95 | 44 10 | 44 25 | 44 40 | 44 55 | 44 70 | 44 85 | 29 |
| 30 | 45 00 | 45 15 | 45 30 | 45 45 | 45 60 | 45 75 | 45 90 | 46 05 | 46 20 | 46 35 | 30 |
| 31 | 46 50 | 46 65 | 46 80 | 46 95 | 47 10 | 47 25 | 47 40 | 47 55 | 47 70 | 47 85 | 31 |
| 32 | 48 00 | 48 15 | 48 30 | 48 45 | 48 60 | 48 75 | 48 90 | 49 05 | 49 20 | 49 35 | 32 |
| 33 | 49 50 | 49 65 | 49 80 | 49 95 | 50 10 | 50 25 | 50 40 | 50 55 | 50 70 | 50 85 | 33 |
| 34 | 51 00 | 51 15 | 51 30 | 51 45 | 51 60 | 51 75 | 51 90 | 52 05 | 52 20 | 52 35 | 34 |
| 35 | 52 50 | 52 65 | 52 80 | 52 95 | 53 10 | 53 25 | 53 40 | 53 55 | 53 70 | 53 85 | 35 |
| 36 | 54 00 | 54 15 | 54 30 | 54 45 | 54 60 | 54 75 | 54 90 | 55 05 | 55 20 | 55 35 | 36 |
| 37 | 55 50 | 55 65 | 55 80 | 55 95 | 56 10 | 56 25 | 56 40 | 56 55 | 56 70 | 56 85 | 37 |
| 38 | 57 00 | 57 15 | 57 30 | 57 45 | 57 60 | 57 75 | 57 90 | 58 05 | 58 20 | 58 35 | 38 |
| 39 | 58 50 | 58 65 | 58 80 | 58 95 | 59 10 | 59 25 | 59 40 | 59 55 | 59 70 | 59 85 | 39 |
| 40 | 60 00 | 60 15 | 60 30 | 60 45 | 60 60 | 60 75 | 60 90 | 61 05 | 61 20 | 61 35 | 40 |
| 41 | 61 50 | 61 65 | 61 80 | 61 95 | 62 10 | 62 25 | 62 40 | 62 55 | 62 70 | 62 85 | 41 |
| 42 | 63 00 | 63 15 | 63 30 | 63 45 | 63 60 | 63 75 | 63 90 | 64 05 | 64 20 | 64 35 | 42 |
| 43 | 64 50 | 64 65 | 64 80 | 64 95 | 65 10 | 65 25 | 65 40 | 65 55 | 65 70 | 65 85 | 43 |
| 44 | 66 00 | 66 15 | 66 30 | 66 45 | 66 60 | 66 75 | 66 90 | 67 05 | 67 20 | 67 35 | 44 |
| 45 | 67 50 | 67 65 | 67 80 | 67 95 | 68 10 | 68 25 | 68 40 | 68 55 | 68 70 | 68 85 | 45 |
| 46 | 69 00 | 69 15 | 69 30 | 69 45 | 69 60 | 69 75 | 69 90 | 70 05 | 70 20 | 70 35 | 46 |
| 47 | 70 50 | 70 65 | 70 80 | 70 95 | 71 10 | 71 25 | 71 40 | 71 55 | 71 70 | 71 85 | 47 |
| 48 | 72 00 | 72 15 | 72 30 | 72 45 | 72 60 | 72 75 | 72 90 | 73 05 | 73 20 | 73 35 | 48 |
| 49 | 73 50 | 73 65 | 73 80 | 73 95 | 74 10 | 74 25 | 74 40 | 74 55 | 74 70 | 74 85 | 49 |
| 50 | 75 00 | 75 15 | 75 30 | 75 45 | 75 60 | 75 75 | 75 90 | 76 05 | 76 20 | 76 35 | 50 |

Computed by L. Leland Locke.

56.59 = RM. #76  
 5.74  
 63.53  
 55.66  
 6.88

470 + 65 = 55.78 ✓  
 " + 80 = 55.77 ✓  
 " + 95 = 55.76 ✓  
 471 + 10 = 55.75 ✓  
 471 + 25 = 55.74 ✓  
 471 + 40 = 55.74 ✓  
 471 + 55 = 55.73 ✓  
 471 + 70 = 55.72 ✓  
 471 + 85 = 55.72 ✓  
 472 + 00 = 55.71 ✓  
 472 + 15 = 55.70 ✓  
 472 + 30 = 55.69 ✓  
 472 + 45 ✓  
 472 + 60 = 55.68 ✓  
 472 + 75 ✓  
 472 + 90 = 55.66 ✓  
 473 + 05 ✓  
 473 + 20 = 55.65 ✓

52.71  
 .035  
 52.675  
 3.10  
 55.775  
 .0075  
 55.7675  
 .0075  
 55.7600  
 .0075  
 55.7525  
 .0075  
 55.7450  
 .0075  
 55.7375  
 .0075  
 55.7300  
 .0075  
 55.7225  
 .0075  
 55.7150  
 .0075  
 55.7075  
 .0075  
 55.7000  
 .0075  
 55.6925  
 .015  
 55.6775 = 0.150  
 .015  
 55.6625  
 .015  
 55.6475

70  
 .05  
 .0250