

290

Final Cross Sections

536-05 - 630-00

W290

#  
290

290

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.
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*ENGINEERING and DRAFTING SUPPLIES*  
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**MICROFILMED**  
CHICAGO, ILL.

JAN 11 1965



O.R. - S.D. 2nd. Main Pipe Line.  
U.S.G.S. Datum.

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MICROFILMED

JAN 1 1982

O.R.S.D. 2nd. Main Pipe Line.  
 Final Cross Sections - Schedule I.  
 Sta. 536+05 to Sta. 630+00

Contd. from Book #289. Page #78  
 Standard 4.50 Trench.

| Sta.             | Grade | Elev. | Dist. | L.G. | ¢ | R.C. |
|------------------|-------|-------|-------|------|---|------|
| 536+05           | 308.4 | 314.8 |       | 6.4  |   |      |
| +20              | 306.8 | 313.1 |       | 6.3  |   |      |
| +34 <sup>9</sup> | 305.1 | 311.8 |       | 6.7  |   |      |
| +55              | 302.2 | 308.2 |       | 6.0  |   |      |
| +75              | 299.1 | 305.0 |       | 5.9  |   |      |

March 4, 1930  
 Cloudy & Cool.  
 Conterse - Notes  
 Hill - Grades  
 Elliott -  $\pi$   
 Simpson - Rod

1

End Areas    Av. End Areas    Cu. Yds

|       |       |  |
|-------|-------|--|
| 28.84 |       |  |
| 28.60 | 158.9 |  |
| 28.37 |       |  |
| 29.32 | 16.18 |  |
| 30.28 |       |  |
| 28.64 | 21.32 |  |
| 27.00 |       |  |
| 26.78 | 19.83 |  |
| 26.55 |       |  |
| 28.17 | 26.08 |  |

Compd. T.M.M.

Chd. W.M.B.

W.M.B.

V.R.C.L.

99.30



|     | End Area | Hv. End Areas | Cu. Yds             |
|-----|----------|---------------|---------------------|
| 537 | 295.4    | 302.0         | 6.6                 |
|     |          |               | 29.79               |
|     |          |               | 31.02 <sup>o</sup>  |
|     |          |               | 22.98 <sup>o</sup>  |
| +20 | 292.5    | 299.6         | 7.1                 |
|     |          |               | 32.26 <sup>o</sup>  |
|     |          |               | 31.27 <sup>o</sup>  |
|     |          |               | 17.37 <sup>o</sup>  |
| +35 | 290.2    | 296.9         | 6.7                 |
|     |          |               | 30.28 <sup>o</sup>  |
|     |          |               | 27.96 <sup>o</sup>  |
|     |          |               | 15.54 <sup>o</sup>  |
| +50 | 288.0    | 293.7         | 5.7                 |
|     |          |               | 25.65 <sup>o</sup>  |
|     |          |               | 25.20 <sup>o</sup>  |
|     |          |               | 23.33 <sup>o</sup>  |
| +75 | 285.6    | 291.1         | 5.5                 |
|     |          |               | 24.75 <sup>o</sup>  |
|     |          |               | 23.85 <sup>o</sup>  |
|     |          |               | 22.08 <sup>o</sup>  |
|     |          |               | 22.04 <sup>o</sup>  |
| 538 | 283.2    | 288.3         | 5.1                 |
|     |          |               | 22.95 <sup>o</sup>  |
|     |          |               | 24.08 <sup>o</sup>  |
|     |          |               | 22.30 <sup>o</sup>  |
|     |          |               | 22.25 <sup>o</sup>  |
|     |          |               | Completed. T.M.M.   |
|     |          |               | Chd. H.M.B.         |
|     |          |               | V.M.B.              |
|     |          |               | V.A.C.L.            |
|     |          |               | 123.60 <sup>o</sup> |

|     |       |       |     | End Area           | Avg. End Areas     | Cu. Yds             |
|-----|-------|-------|-----|--------------------|--------------------|---------------------|
| +25 | 280.8 | 286.4 | 5.6 | 25.20 <sup>✓</sup> | 25.88 <sup>✓</sup> | 23.95 <sup>✓</sup>  |
| +50 | 278.4 | 284.3 | 5.9 | 26.55 <sup>✓</sup> | 27.23 <sup>✓</sup> | 12.10 <sup>✓</sup>  |
| +67 | 277.2 | 283.4 | 6.2 | 27.91 <sup>✓</sup> | 27.68 <sup>✓</sup> | 13.33 <sup>✓</sup>  |
| +75 | 276.0 | 282.1 | 6.1 | 27.45 <sup>✓</sup> | 27.00 <sup>✓</sup> | 25.00 <sup>✓</sup>  |
| 539 | 273.6 | 279.5 | 5.9 | 26.55 <sup>✓</sup> | 26.78              | 24.79 <sup>✓</sup>  |
| +25 | 271.2 | 277.2 | 6.0 | 27.00 <sup>✓</sup> | 26.33 <sup>✓</sup> | 24.38 <sup>✓</sup>  |
|     |       |       |     |                    | 26.78              |                     |
|     |       |       |     | Comptd. M.M.       | W.M.B.             |                     |
|     |       |       |     | Chd. v. M.B.       | V.A.C.L.           |                     |
|     |       |       |     |                    |                    | 123.55 <sup>✓</sup> |



|     |       |       |     | End Area           | Hr. End Areas      | Cu. Yds                               |
|-----|-------|-------|-----|--------------------|--------------------|---------------------------------------|
| +50 | 268.8 | 274.5 | 5.7 | 25.65 <sup>v</sup> | 24.30 <sup>v</sup> | 9.00 <sup>v</sup>                     |
| +60 | 267.8 | 272.9 | 5.1 | 22.95 <sup>v</sup> | 24.30 <sup>v</sup> | 20.70 <sup>v</sup><br><del>9.79</del> |
| +83 | 265.6 | 271.3 | 5.7 | 25.65 <sup>v</sup> | 30.24 <sup>v</sup> | 19.04 <sup>v</sup>                    |
| 540 | 264.0 | 271.6 | 7.6 | 34.84 <sup>v</sup> | 30.24 <sup>v</sup> | 28.00 <sup>v</sup>                    |
| +25 | 263.5 | 269.2 | 5.7 | 25.65 <sup>v</sup> | 24.98 <sup>v</sup> | 23.12 <sup>v</sup>                    |
| +50 | 263.0 | 268.4 | 5.4 | 24.30 <sup>v</sup> | 24.75 <sup>v</sup> | 22.92 <sup>v</sup>                    |

Comptd. T.M.M.

Chd. v. M.B.

W.M.B.

P.A.C.L.

122.78

|     |       |       |     | End Area | Av. End Areas | Cu. Yds |
|-----|-------|-------|-----|----------|---------------|---------|
| +75 | 262.5 | 268.1 | 5.6 | 25.20    | 27.74         | 25.69   |
| 541 | 262.5 | 269.2 | 6.7 | 30.28    | 27.96         | 20.71   |
| +20 | 263.0 | 268.7 | 5.7 | 25.65    | 24.52         | 27.25   |
| +50 | 264.4 | 269.6 | 5.2 | 23.40    | 22.95         | 21.25   |
| +75 | 265.7 | 270.7 | 5.0 | 22.50    | 21.15         | 19.58   |
| 542 | 266.9 | 271.3 | 4.4 | 19.80    | 20.02         | 18.59   |

Comptd. P.M.M.

WMB

Chd. by M.B.

V.A.C.L.

133.02



+25 268.1 272.6 4.5

+50 269.3 275.2 5.9

+75 270.6 277.7 7.1

543 271.8 278.8 7.0

+25 273.0 279.8 6.8

+50 274.2 279.7 5.5

End Areas

AV. END  
AREAS

Cu. Yds

20.25

23.40 ✓ 21.67 ✓

26.55

29.40 ✓ 27.22 ✓  
~~27.27~~

32.26

32.00 ✓ 29.63 ✓

31.75

31.25 ✓ 28.94 ✓

30.76

27.75 ✓ 25.69 ✓

24.75

25.65 ✓ 23.75 ✓

Compld. T.M.M.

WMB

Chd. v. WMB

S.A.C.L. ✓  
156.90 ✓  
~~156.49~~



|     |       |       |     | End Area     | Avg. End Areas | Cu. Yds. |
|-----|-------|-------|-----|--------------|----------------|----------|
| +75 | 275.5 | 281.4 | 5.9 | 26.55        |                |          |
|     |       |       |     |              | 26.32          | 24.87    |
| 544 | 276.7 | 282.5 | 5.8 | 26.10        |                |          |
|     |       |       |     |              | 26.55          | 19.67    |
| +20 | 277.7 | 283.7 | 6.0 | 27.00        |                |          |
|     |       |       |     |              | 24.08          | 26.75    |
| +50 | 279.1 | 283.8 | 4.7 | 21.15        |                |          |
|     |       |       |     |              | 21.82          | 20.21    |
| +75 | 280.4 | 285.4 | 5.0 | 22.50        |                |          |
|     |       |       |     |              | 24.75          | 22.92    |
| 545 | 281.6 | 287.6 | 6.0 | 27.00        |                |          |
|     |       |       |     |              | 29.88          | 27.67    |
|     |       |       |     | Compld. M.M. | WMB            |          |
|     |       |       |     | Chd. v. WMB  | % A.C.L.       |          |
|     |       |       |     |              | 141.59         |          |



+25 281.5 288.7 7.2

+50 281.5 289.1 7.6

546 281.3 287.4 6.1

+25 281.2 287.6 6.4

+50 281.2 287.2 6.0

+75 281.1 287.6 6.5

End Area

Hr. End  
Hrcas

Cu. Yds

32.76<sup>✓</sup>

33.80 31.30

31.84<sup>✓</sup>

31.14 28.84

27.45<sup>✓</sup>

28.14 26.06

28.84<sup>✓</sup>

27.92 25.85

27.00<sup>✓</sup>

28.16 26.07

29.31<sup>✓</sup>

24.78 22.94

Compd. P.M.M.

YMB

Clid. YMB

2 A.C.L.

161.06<sup>✓</sup>



547      281.0    285.5                      4.5

End Area

20.25

Av. End  
Areas

Cu. Yds.

20.02    18.54 ✓

+25    280.9    285.3                      4.4

19.80

23.40    21.67 ✓

+50    280.9    286.9                      6.0

27.00

27.46    25.42 ✓

+75    280.8    287.0                      6.2

27.91

31.64    29.30 ✓

548      279.2    286.9                      7.7

35.38

32.58    30.17 ✓

+75    277.6    284.2                      6.6

29.79

28.17<sup>x</sup>    10.43<sup>m</sup>  
26.08

Comptd. T.M.M.

WMB

Chd. WMB

2A.C.L.

135.53 ✓







|        |       |       |     |
|--------|-------|-------|-----|
| +72.0  | 274.3 | 274.3 | 0.0 |
| +94.5  | 274.4 | 275.0 | 0.6 |
| 550+15 | 276.7 | 279.8 | 3.1 |
| +24.3  | 277.9 | 281.5 | 3.6 |
| +53.8  | 283.5 | 288.1 | 4.6 |
| +82.8  | 291.3 | 297.6 | 6.3 |

| End Area       | Am End Areas | Cu. Yds |
|----------------|--------------|---------|
| 0              |              |         |
| 1.35           |              | 1.25    |
| 2.70           |              |         |
| 8.32           |              | 6.32    |
| 13.95          |              |         |
| 15.08          |              | 5.19    |
| 16.20          |              |         |
| 18.45          |              | 20.16   |
| 20.70          |              |         |
| 24.53          |              | 26.35   |
| 28.37          |              |         |
| 28.60          |              | 18.22   |
| Compld. T.M.M. |              | WMB     |
| Chd. WMB       |              | A.C.L.  |
|                |              | 77.49   |



|       |       |       |     |  | End Area           | Ar End<br>ARCOs | Ar. Yds                              |
|-------|-------|-------|-----|--|--------------------|-----------------|--------------------------------------|
| 551   | 296.3 | 302.7 | 6.4 |  | 28.84              |                 |                                      |
|       |       |       |     |  |                    | 30.05           | 14.47 <sup>o</sup>                   |
| +13   | 300.3 | 307.2 | 6.9 |  | 31.26 <sup>v</sup> |                 |                                      |
|       |       |       |     |  |                    | 30.05           | 9.24 <sup>v</sup><br><del>9.34</del> |
| +21.3 | 303.2 | 309.6 | 6.4 |  | 28.84 <sup>v</sup> |                 |                                      |
|       |       |       |     |  |                    | 30.30           | 16.49 <sup>o</sup>                   |
| +36   | 307.2 | 314.2 | 7.0 |  | 31.75 <sup>v</sup> |                 |                                      |
|       |       |       |     |  |                    | 30.77           | 16.18 <sup>o</sup>                   |
| +50.2 | 311.1 | 317.7 | 6.6 |  | 29.79 <sup>v</sup> |                 |                                      |
|       |       |       |     |  |                    | 29.08           | 15.94 <sup>o</sup>                   |
| +65   | 314.3 | 320.6 | 6.3 |  | 28.37 <sup>v</sup> |                 |                                      |
|       |       |       |     |  |                    | 27.91           | 15.09 <sup>o</sup>                   |

Compta. P.M.M.

V.M.B

Ord. V.M.B

A.C.L.

87.41<sup>v</sup>



|       |       |       |     | End Area           | Ave. End Areas      | Cum. Yds.          |
|-------|-------|-------|-----|--------------------|---------------------|--------------------|
| +79.6 | 317.3 | 323.4 | 6.1 | 27.45 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 25.42               | 19.21 <sup>o</sup> |
| 552   | 321.0 | 326.2 | 5.2 | 23.40 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 23.62               | 21.87 <sup>o</sup> |
| +25   | 325.5 | 330.8 | 5.3 | 23.85 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 24.30               | 22.50 <sup>o</sup> |
| +50   | 330.0 | 335.5 | 5.5 | 24.75 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 25.42               | 23.54 <sup>o</sup> |
| +75   | 333.0 | 338.8 | 5.8 | 26.10 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 22.72               | 21.04 <sup>o</sup> |
| 553   | 336.0 | 340.3 | 4.3 | 19.35 <sup>v</sup> |                     |                    |
|       |       |       |     |                    | 15.52               | 14.37 <sup>o</sup> |
|       |       |       |     | Compld. T.M.M.     | WMB                 |                    |
|       |       |       |     | Chd. W.M.O.        | P.A.C.L.            |                    |
|       |       |       |     |                    | 122.53 <sup>!</sup> |                    |



|     |       |       |     | End Area      | Avg. End Areas | Cu. Yds                                |
|-----|-------|-------|-----|---------------|----------------|--|
| +25 | 339.1 | 341.7 | 2.6 | 11.70 ✓       |                |  |
|     |       |       |     |               | 15.75          | 14.58 ✓ <sup>o</sup>                   |
| +50 | 342.1 | 346.5 | 4.4 | 19.80 ✓       |                |  |
|     |       |       |     |               | 25.77          | 28.64 ✓ <sup>o</sup>                   |
| +80 | 345.7 | 352.7 | 7.0 | 31.75 ✓       |                |  |
|     |       |       |     |               | 32.77          | 24.27 ✓ <sup>o</sup>                   |
| 564 | 348.1 | 355.5 | 7.4 | 33.79 ✓       |                |  |
|     |       |       |     |               | 34.58          | 38.43 ✓ <sup>o</sup>                   |
| +30 | 351.8 | 359.5 | 7.7 | 35.38 ✓       |                |  |
|     |       |       |     |               | 31.19          | 23.16 ✓ <sup>o</sup>                   |
| +50 | 354.2 | 360.2 | 6.0 | 27.00 ✓       |                |  |
|     |       |       |     |               | 27.00          | 25.00 ✓ <sup>o</sup>                   |
|     |       |       |     | Compd. T.M.M. | WMB            | <del>Sub total to here this work</del> |
|     |       |       |     | Chd. WMB      | 2 A.C.L.       | <del>100.00</del>                      |
|     |       |       |     |               | 154.00 ✓       |  |



|     |       |       |     | <u>End Area</u> | <u>Av. End Areas</u> | <u>Cu. Yds</u> |
|-----|-------|-------|-----|-----------------|----------------------|----------------|
| +75 | 356.0 | 362.0 | 6.0 | 27.00 ✓         | 20.92                | 19.37 ✓        |
| 555 | 357.8 | 361.1 | 3.3 | 14.85 ✓         | 13.27                | 12.29 ✓        |
| +25 | 359.5 | 362.1 | 2.6 | 11.70 ✓         | 13.72                | 12.71 ✓        |
| +50 | 361.3 | 364.8 | 3.5 | 15.75 ✓         | 20.47                | 18.96 ✓        |
| +75 | 363.1 | 368.7 | 5.6 | 25.20 ✓         | 31.94                | 29.57 ✓        |
| 556 | 365.0 | 373.3 | 8.3 | 38.68 ✓         | 36.23                | 26.84 ✓        |

Comptd. T.M.M.

WMB

Chd. WMB

✓ P.C.L.

119.74 ✓



|       |       |       |     | <u>End Area</u> | <u>Pr End Areas</u> | <u>Cu. Yds</u> |
|-------|-------|-------|-----|-----------------|---------------------|----------------|
| +20   | 366.4 | 373.8 | 7.4 | 33.79           |                     |                |
|       |       |       |     |                 | 31.55               | 17.53 ✓        |
| +35   | 367.0 | 373.5 | 6.5 | 29.31           |                     |                |
|       |       |       |     |                 | 25.90               | 14.39 ✓        |
| +50   | 367.6 | 372.6 | 5.0 | 22.50           |                     |                |
|       |       |       |     |                 | 20.70               | 23.00 ✓        |
| +80   | 366.6 | 370.8 | 4.2 | 18.90           |                     |                |
|       |       |       |     |                 | 18.90               | 6.65 ✓         |
| +89.5 | 366.0 | 370.8 | 4.2 | 18.90           |                     |                |
|       |       |       |     |                 | 21.37               | 8.31 ✓         |
| 557   | 364.5 | 369.8 | 5.3 | 23.85           |                     |                |
|       |       |       |     |                 | 22.95               | 16.49 ✓        |
|       |       |       |     | Comptd. T.M.M.  | WMB                 |                |
|       |       |       |     | Chd. WMB        | 2 A.C.L.            |                |
|       |       |       |     |                 | 86.37 ✓             |                |



|          |       |       |     | End Area           | Av. End Areas       | Cu. Ft.                     |
|----------|-------|-------|-----|--------------------|---------------------|-----------------------------|
| +19.4    | 362.8 | 367.7 | 4.9 | 22.05 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 25.44               | 27.71 <sup>o</sup>          |
| +48.8    | 357.0 | 363.4 | 6.4 | 28.84 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 33.20               | 19.92 <sup>o</sup>          |
| +65      | 352.3 | 360.4 | 8.1 | 37.56 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 35.67               | 16.65 <sup>v</sup><br>16.48 |
| +72.6    | 348.7 | 356.1 | 7.4 | 33.79 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 28.37               | 29.53 <sup>o</sup>          |
| 558+05.7 | 338.1 | 343.2 | 5.1 | 22.95 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 22.28               | 20.05 <sup>o</sup>          |
| +30      | 327.6 | 332.4 | 4.8 | 21.60 <sup>v</sup> |                     |                             |
|          |       |       |     |                    | 18.67               | 13.83 <sup>o</sup>          |
|          |       |       |     | Comptd. T.M.M.     | WMB                 |                             |
|          |       |       |     | Chd. W.M.B.        | % A.C.L.            |                             |
|          |       |       |     |                    | 127.69 <sup>v</sup> |                             |



|     |       |       |     | End Area | Av. End Areas | Cu. Yds.                    |
|-----|-------|-------|-----|----------|---------------|-----------------------------|
| +50 | 319.0 | 322.5 | 3.5 | 15.75    |               |                             |
|     |       |       |     |          | 17.32         | 16.04 ✓                     |
| +75 | 308.2 | 312.4 | 4.2 | 18.90    |               |                             |
|     |       |       |     |          | 22.05         | 20.42 ✓                     |
| 559 | 297.5 | 303.1 | 5.6 | 25.20    |               |                             |
|     |       |       |     |          | 23.17         | 25.75 ✓                     |
| +30 | 286.7 | 291.4 | 4.7 | 21.15    |               |                             |
|     |       |       |     |          | 22.27         | 16.50 ✓                     |
| +50 | 279.5 | 284.7 | 5.2 | 23.40    |               |                             |
|     |       |       |     |          | 26.58         | 12.80 ✓<br><del>13.28</del> |
| +60 | 275.7 | 282.3 | 6.6 | 29.79    |               |                             |
|     |       |       |     |          | 29.55         | 8.75 ✓                      |

Comptd. M.M.

Chd. WMB

WMB

P.A.C.L.

100.26 ✓



|                  |       |       |     |  | <u>End Area</u>    | <u>Av. End Areas</u> | <u>Cu. Yds</u>                               |
|------------------|-------|-------|-----|--|--------------------|----------------------|--|
| +71              | 273.4 | 279.9 | 6.5 |  | 29.31 <sup>v</sup> |                      |  |
|                  |       |       |     |  |                    | 27.70                | 14.88 <sup>v</sup>                           |
| +85.5            | 269.8 | 275.6 | 5.8 |  | 26.10 <sup>v</sup> |                      |  |
|                  |       |       |     |  |                    | 24.07                | 12.93 <sup>v</sup>                           |
| 560              | 267.3 | 272.2 | 4.9 |  | 22.05 <sup>v</sup> |                      |  |
|                  |       |       |     |  |                    | 18.22                | 10.26 <sup>v</sup>                           |
| +15.2            | 266.0 | 269.2 | 3.2 |  | 14.40 <sup>v</sup> |                      |  |
|                  |       |       |     |  |                    | 7.20                 | <u>4.21</u> <sup>v</sup><br><del>42.13</del> |
| +31 <sup>o</sup> | 265.9 | 265.9 | 0.0 |  | 0 <sup>v</sup>     |                      |  |
|                  |       |       |     |  |                    | 0.0                  | 0.0 <sup>v</sup>                             |
| +70              | 267.1 | 267.1 | 0.0 |  | 0 <sup>v</sup>     |                      |  |
|                  |       |       |     |  |                    | 6.75                 | 3.75 <sup>v</sup>                            |
|                  |       |       |     |  | Comptd. MM         | WMB                  |  |
|                  |       |       |     |  | Chd. WMB           | P.C.L                |  |
|                  |       |       |     |  |                    | 46.03 <sup>v</sup>   |  |



|     |       |       |     | End Area           | Avg. End Areas      | Cu. Yds.           |
|-----|-------|-------|-----|--------------------|---------------------|--------------------|
| +85 | 267.6 | 270.6 | 3.0 | 13.50 <sup>✓</sup> | 20.25               | 11.25 <sup>✓</sup> |
| 561 | 268.0 | 274.0 | 6.0 | 27.00 <sup>✓</sup> | 27.92               | 25.85 <sup>✓</sup> |
| +25 | 270.8 | 277.2 | 6.4 | 28.84 <sup>✓</sup> | 26.57               | 24.60 <sup>✓</sup> |
| +50 | 273.6 | 279.0 | 5.4 | 24.30 <sup>✓</sup> | 22.95               | 21.25 <sup>✓</sup> |
| +75 | 276.4 | 281.2 | 4.8 | 21.60 <sup>✓</sup> | 18.90               | 17.50 <sup>✓</sup> |
| 562 | 279.2 | 283.8 | 3.6 | 16.20 <sup>✓</sup> | 19.35               | 21.50 <sup>✓</sup> |
|     |       |       |     | Comptd. T.M.M.     | W.M.B.              |                    |
|     |       |       |     | Chd. W.M.B.        | % A.C.L.            |                    |
|     |       |       |     |                    | W. 9.5 <sup>✓</sup> |                    |



|       |       |       |     |  | End Area           | Fr. End<br>Areas | Cor. Yds.                   |
|-------|-------|-------|-----|--|--------------------|------------------|-----------------------------|
| +30   | 282.6 | 287.6 | 5.0 |  | 22.50              |                  |                             |
|       |       |       |     |  |                    | 22.95            | 17.00 ✓                     |
| +50   | 284.8 | 290.0 | 5.2 |  | 23.40 <sup>v</sup> |                  |                             |
|       |       |       |     |  |                    | 22.72            | 25.25 ✓                     |
| +80   | 289.9 | 294.8 | 4.9 |  | 22.05 <sup>v</sup> |                  |                             |
|       |       |       |     |  |                    | 20.70            | 15.33 ✓                     |
| 563   | 293.3 | 297.6 | 4.3 |  | 19.35 <sup>v</sup> |                  |                             |
|       |       |       |     |  |                    | 22.50            | 41.67 ✓                     |
| +50   | 301.8 | 307.5 | 5.7 |  | 25.65 <sup>v</sup> |                  |                             |
|       |       |       |     |  |                    | 26.78            | 20.23 ✓<br><del>10.93</del> |
| +70.4 | 305.3 | 311.5 | 6.2 |  | 27.91 <sup>v</sup> |                  |                             |
|       |       |       |     |  |                    | 29.83            | 19.44 ✓                     |
|       |       |       |     |  | Comptd. M.M.       | WMB              |                             |
|       |       |       |     |  | Chd. WMB           | S.A.C.L.         |                             |
|       |       |       |     |  |                    | 128.9            | ✓                           |



|          |       |       |     |                    | End Area | Av. End<br>Areas    | Cu. Yds. |                                |
|----------|-------|-------|-----|--------------------|----------|---------------------|----------|--------------------------------|
| +88      | 307.6 | 314.6 | 7.0 | 31.75 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 32.77    | 14.20               | ✓        |                                |
| +99.7    | 311.4 | 318.8 | 7.4 | 33.79 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 33.53    | 15.28               | ✓        |                                |
| 564 + 12 | 315.0 | 322.3 | 7.3 | 33.28 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 31.53    | 19.27               | ✓        |                                |
| +285     | 319.8 | 326.4 | 6.6 | 29.79 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 33.39    | 14.22               | ✓        |                                |
| +40      | 323.6 | 331.6 | 8.0 | 37.00 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 36.73    | 13.60               | ✓        |                                |
|          |       |       |     |                    |          | 11.75               |          |                                |
| +50      | 327.1 | 335.0 | 7.9 | 36.47 <sup>✓</sup> |          |                     |          |                                |
|          |       |       |     |                    | 37.02    | 27.42               | ✓        |                                |
|          |       |       |     |                    |          |                     |          | <del>14.15</del>               |
|          |       |       |     |                    |          |                     |          | <del>will take this back</del> |
|          |       |       |     |                    |          |                     |          | <del>254.44</del>              |
|          |       |       |     | Comptd. M.M.       |          | WMB                 |          |                                |
|          |       |       |     | Chd. WMB           |          | 2 A.C.L.            |          |                                |
|          |       |       |     |                    |          | 103.99 <sup>✓</sup> |          |                                |



|       |       |       |     | End Area           | H. End Areas | Av. Yds            |
|-------|-------|-------|-----|--------------------|--------------|--------------------|
| +70   | 333.4 | 341.5 | 8.1 | 37.56 <sup>v</sup> |              |                    |
|       |       |       |     |                    | 34.65        | 20.15 <sup>v</sup> |
| +85.7 | 338.8 | 345.8 | 7.0 | 31.75 <sup>v</sup> |              |                    |
|       |       |       |     |                    | 29.38        | 15.56 <sup>v</sup> |
| 565   | 342.9 | 348.9 | 6.0 | 27.00 <sup>v</sup> |              |                    |
|       |       |       |     |                    | 25.42        | 13.93 <sup>v</sup> |
|       |       |       |     |                    |              | 7.53               |
| +14.8 | 346.0 | 351.3 | 5.3 | 23.85 <sup>v</sup> |              |                    |
|       |       |       |     |                    | 20.48        | 7.73 <sup>v</sup>  |
| +25   | 347.6 | 351.4 | 3.8 | 17.10 <sup>v</sup> |              |                    |
|       |       |       |     |                    | 12.60        | 13.91 <sup>v</sup> |
|       |       |       |     |                    |              | 8.39               |
| +54.8 | 351.3 | 353.1 | 1.8 | 8.10 <sup>v</sup>  |              |                    |
|       |       |       |     |                    | 19.92        | 22.07 <sup>v</sup> |

Compld. M.M.

WMB

Chd. WMB

 2 A.C.L.  
 9335<sup>v</sup>  
 73.32



End Area  
Hr. End  
Hrcas

Cu. Yds

+84.7 352.6 359.6

7.0

31.75<sup>v</sup>

45.17 25.60<sup>v</sup>

566 352.0 363.4

11.4

58.59<sup>v</sup>

51.59 28.09<sup>v</sup>  
~~29.83~~

+14.7 351.5 360.8

9.3

44.59<sup>v</sup>

35.79 39.90<sup>v</sup>

+44.8 348.1 354.1

6.0

27.00<sup>v</sup>

22.50 24.25<sup>v</sup>

+73.9 342.3 346.3

4.0

18.00<sup>v</sup>

18.67 4.91<sup>v</sup>  
~~49.11~~

+81.0 340.6 344.9

4.3

19.35<sup>v</sup>

18.45 9.57<sup>v</sup>

Comptd. T.M.M.

WMB

Chd. WMB

V.A.C.L.

132.32<sup>v</sup>



|     |       |       |     |
|-----|-------|-------|-----|
| +95 | 338.6 | 342.5 | 3.9 |
|-----|-------|-------|-----|

|          |       |       |     |
|----------|-------|-------|-----|
| 567+10.5 | 334.7 | 338.2 | 3.5 |
|----------|-------|-------|-----|

|       |       |       |     |
|-------|-------|-------|-----|
| +27.5 | 332.7 | 332.7 | 0.0 |
|-------|-------|-------|-----|

|       |       |       |     |
|-------|-------|-------|-----|
| +77.2 | 330.0 | 330.0 | 0.0 |
|-------|-------|-------|-----|

|     |       |       |     |
|-----|-------|-------|-----|
| 568 | 330.0 | 331.3 | 1.3 |
|-----|-------|-------|-----|

|     |       |       |     |
|-----|-------|-------|-----|
| +20 | 330.0 | 332.6 | 2.6 |
|-----|-------|-------|-----|

| End Areas | Avg. End Areas | Cu. Yds |
|-----------|----------------|---------|
|-----------|----------------|---------|

17.55<sup>v</sup>16.65 9.56<sup>o</sup>15.75<sup>v</sup>7.87 4.96<sup>o</sup>0<sup>v</sup>00 00<sup>o</sup>0<sup>v</sup>2.92 2.47<sup>o</sup>5.85<sup>v</sup>8.77 6.50<sup>o</sup>11.70<sup>v</sup>9.67 10.75<sup>o</sup>

Complete T.M.M.

WMB

Chd. v. M.B.

+ A.C.L.

34.44<sup>v</sup>



|     |       |       |     | End Area           | Av. End Areas       | Cu. Yds.           |
|-----|-------|-------|-----|--------------------|---------------------|--------------------|
| +50 | 330.0 | 331.7 | 1.7 | 7.65 <sup>v</sup>  |                     |                    |
|     |       |       |     |                    | 14.40               | 13.33 <sup>o</sup> |
| +75 | 330.0 | 334.7 | 4.7 | 21.15 <sup>v</sup> |                     |                    |
|     |       |       |     |                    | 26.95               | 24.96 <sup>o</sup> |
| 569 | 330.0 | 337.2 | 7.2 | 32.76 <sup>v</sup> |                     |                    |
|     |       |       |     |                    | 37.16               | 20.65 <sup>o</sup> |
| +15 | 330.0 | 338.8 | 8.8 | 41.56 <sup>v</sup> |                     |                    |
|     |       |       |     |                    | 43.37               | 24.10 <sup>o</sup> |
| +30 | 330.0 | 339.4 | 9.4 | 45.19 <sup>v</sup> |                     |                    |
|     |       |       |     |                    | 40.28               | 29.84 <sup>o</sup> |
| +50 | 330.0 | 337.7 | 7.7 | 35.38 <sup>v</sup> |                     |                    |
|     |       |       |     |                    | 34.33               | 25.30 <sup>o</sup> |
|     |       |       |     | Comptd. T.M.M.     | WMB                 |                    |
|     |       |       |     | Chd. WMB           | 2 A.G.L.            |                    |
|     |       |       |     |                    | 138.18 <sup>v</sup> |                    |

+69.9 330.0 337.3 7.3

End Area

Av. End  
Areas

Cu. Yds

33.28 ✓

32.51 12.16 ✓

+80 329.6 336.6 7.0

31.75 ✓

26.45 19.49 ✓

+99.9 328.8 333.5 4.7

21.15 ✓

21.82 9.78 ✓

+12 327.4 332.4 5.0

22.50 ✓

21.60 14.16 ✓

+29.7 325.2 329.8 4.6

20.70 ✓

20.92 7.98 ✓

+40 323.6 328.3 4.7

21.15 ✓

20.70 11.81 ✓  
~~12.09~~

Computed. T.M.M.

v.m.B

Chd. v.m.B

P.A.C.L.

75.38 ✓



|       |       |       |  |     | End Area | Pr. End Areas | Cu. Yds. |
|-------|-------|-------|--|-----|----------|---------------|----------|
| +55.4 | 321.1 | 325.6 |  | 4.5 | 20.25    |               |          |
|       |       |       |  |     |          | 16.92         | 18.13 ✓  |
| +85.2 | 317.5 | 320.3 |  | 2.8 | 12.60 ✓  |               |          |
|       |       |       |  |     |          | 6.30          | 3.45 ✓   |
| 571   | 316.7 | 316.7 |  | 0.0 | 0 ✓      |               |          |
|       |       |       |  |     |          | 00            | 00 ✓     |
| +30   | 316.4 | 316.4 |  | 0.0 | 0 ✓      |               |          |
|       |       |       |  |     |          | 11.02         | 6.17 ✓   |
| +45.1 | 316.7 | 321.6 |  | 4.9 | 22.05 ✓  |               |          |
|       |       |       |  |     |          | 21.15         | 23.42 ✓  |
| +75   | 318.5 | 323.0 |  | 4.5 | 20.25 ✓  |               |          |
|       |       |       |  |     |          | 21.60         | 20.00 ✓  |

Comptd. T.M.M.

Chd. W.M.B.

W.M.B.

P.A.C.L.

11.17 ✓



572 320.0 325.1

5.1

End Area

22.95 ✓

Ar. End  
Areas

Cm. Yds

25.20 23.34 ✓

+25 321.5 327.6

6.1

27.45 ✓

24.07 26.66 ✓

+54.9 323.3 327.9

4.6

20.70 ✓

19.57 21.68 ✓

+84.8 326.0 330.1

4.1

18.45 ✓

17.78 10.01 ✓

573 328.5 332.3

3.8

17.10 ✓

20.70 11.04 ✓

+14.4 330.8 336.2

5.4

24.30 ✓

28.58 ✓

26.34

~~28.56~~

Comptd. T.M. M.

WMB

Chd. WMB

A.C.L.

121.31 ✓



|       |       |       |     |  | End Area | Hr. End<br>Areas          | Cu. Yds                 |
|-------|-------|-------|-----|--|----------|---------------------------|-------------------------|
| +43.7 | 337.4 | 343.7 | 6.3 |  | 28.37    |                           |                         |
|       |       |       |     |  |          | 28.37                     | 2847 ✓                  |
| +70.8 | 344.4 | 350.7 | 6.3 |  | 28.37 ✓  |                           |                         |
|       |       |       |     |  |          | 25.88                     | <del>1404</del> 13.99 ✓ |
| +85.4 | 347.7 | 352.9 | 5.2 |  | 23.40 ✓  |                           |                         |
|       |       |       |     |  |          | 25.20                     | 13.63 ✓                 |
| 574   | 350.1 | 356.1 | 6.0 |  | 27.00 ✓  |                           |                         |
|       |       |       |     |  |          | 28.15                     | 8.34 ✓                  |
| +08   | 350.9 | 357.4 | 6.5 |  | 29.31 ✓  |                           |                         |
|       |       |       |     |  |          | 22.53                     | 6.01 ✓                  |
| +15.7 | 351.5 | 355.0 | 3.5 |  | 15.75 ✓  | 11.70<br><del>12.20</del> | 0.78 ✓                  |

Comptd. T.M.M.

Chd. M.M.B.

WMB

P.A.C.L.

71.22 ✓



|       |       |       |     | End Area           | Av. End Areas             | Cum. Yds.          |
|-------|-------|-------|-----|--------------------|---------------------------|--------------------|
| +17   | 351.6 | 353.3 | 1.7 | 7.65 <sup>v</sup>  | 16.65                     | 4.93 <sup>o</sup>  |
| +25   | 351.8 | 357.5 | 5.7 | 25.65 <sup>v</sup> | 26.55                     | 5.11 <sup>o</sup>  |
| +30.2 | 352.0 | 358.1 | 6.1 | 27.45 <sup>v</sup> | 27.00                     | 7.80 <sup>o</sup>  |
| +38   | 352.0 | 357.9 | 5.9 | 26.55 <sup>v</sup> | 19.80                     | 10.27 <sup>o</sup> |
| +52   | 352.0 | 354.9 | 2.9 | 13.05 <sup>v</sup> | 18.00                     | 18.53 <sup>o</sup> |
| +79.8 | 352.0 | 357.1 | 5.1 | 22.95 <sup>v</sup> | 28.37<br><del>28.87</del> | 31.52 <sup>o</sup> |

Computed. T.M.M. 9/22/63

Chd. N.P.B.

WMB

2 P.C.L.

18.16<sup>v</sup>



575+09.8 350.9 358.3 7.4

End Area  
Av. End  
Areas

33.79 ✓

35.40 19.93 ✓

+25 349.3 357.3 8.0

37.00 ✓

34.63  
~~27.63~~ 18.73 ✓

+39.6 347.7 354.8 7.1

32.26 ✓

31.76 18.11 ✓

+55 344.9 351.8 6.9

31.26 ✓

29.59 15.45 ✓

+69.1 342.3 348.5 6.2

27.91 ✓

28.61  
~~24.4~~ 14.73 ✓

+83 339.2 345.7 6.5

29.31 ✓

26.13 ✓  
~~21.63~~ 16.45 ✓

Compld. T.M.M. ~~WMB~~

WMB

~~substituted to here this book~~

Chd. WMB

27.7.1

~~3433.19~~

103.40 ✓



|       |       |       |     |                    | End Area   | Ht. End<br>Areas | Cu. Yds.            |
|-------|-------|-------|-----|--------------------|------------|------------------|---------------------|
| 576   | 335.5 | 340.6 | 5.1 | 22.95 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 25.66            | 28.51 <sup>v</sup>  |
| +30   | 329.1 | 335.4 | 6.3 | 28.37 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 28.14            |                     |
|       |       |       |     |                    |            | <del>28.37</del> | 37.42 <sup>v</sup>  |
| +65.9 | 321.0 | 327.2 | 6.2 | 27.91 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 28.37            |                     |
|       |       |       |     |                    |            | <del>28.61</del> | 11.67 <sup>v</sup>  |
| +77   | 321.0 | 327.4 | 6.4 | 28.84 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 30.80            | 18.14 <sup>v</sup>  |
| +92.9 | 321.0 | 328.2 | 7.2 | 32.76 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 31.28            | 8.22 <sup>v</sup>   |
| 577   | 323.0 | 329.6 | 6.6 | 29.79 <sup>v</sup> |            |                  |                     |
|       |       |       |     |                    |            | 31.79            | 21.19 <sup>v</sup>  |
|       |       |       |     |                    | Comp. M.M. | 92.92 B          | WMB                 |
|       |       |       |     |                    | Chd. WMB   |                  | 2 A.C.L.            |
|       |       |       |     |                    |            |                  | 125.15 <sup>v</sup> |



|       |       |       |     | End Area        | Avg. End Areas | Cu. Yds.            |
|-------|-------|-------|-----|-----------------|----------------|---------------------|
| +18   | 328.0 | 335.4 | 7.4 | 33.79           |                |                     |
|       |       |       |     |                 | 32.77          | 16.99 <sup>ox</sup> |
| +32   | 332.0 | 339.0 | 7.0 | 31.75           |                |                     |
|       |       |       |     |                 | 31.02          | 20.67 <sup>g</sup>  |
| +50   | 337.0 | 343.7 | 6.7 | 30.28           |                |                     |
|       |       |       |     |                 | 30.77          | 39.88 <sup>g</sup>  |
| +85   | 346.8 | 353.7 | 6.9 | 31.26           |                |                     |
|       |       |       |     |                 | 30.05          | 16.70 <sup>g</sup>  |
| 578   | 351.0 | 357.4 | 6.4 | 28.84           |                |                     |
|       |       |       |     |                 | 27.70          | 17.23 <sup>g</sup>  |
| +16.8 | 355.7 | 361.6 | 5.9 | 26.55           |                |                     |
|       |       |       |     |                 | 29.65          | 22.18 <sup>g</sup>  |
|       |       |       |     |                 |                | <del>22.08</del>    |
|       |       |       |     | Comptd. T.M. To | WMB            | WMB                 |
|       |       |       |     | Ad. WMB         |                | 2 A.C.L.            |
|       |       |       |     |                 |                | 133.65 <sup>g</sup> |



|          |       |       |      | End Area              | Avg. End Areas   | Cum. Yds |
|----------|-------|-------|------|-----------------------|------------------|----------|
| +37      | 360.6 | 367.8 | 7.2  | 32.76                 |                  |          |
|          |       |       |      |                       | 31.27            |          |
|          |       |       |      |                       | <del>29.16</del> | 10.31 ✓  |
| +45.9    | 362.7 | 369.3 | 6.6  | 29.79                 |                  |          |
|          |       |       |      |                       | 33.68            | 11.35 ✓  |
|          |       |       |      |                       | <del>35.16</del> | 12.35    |
| +55      | 364.1 | 372.2 | 8.1  | 37.56                 |                  |          |
|          |       |       |      |                       | 42.64            | 32.53 ✓  |
| +75.6    | 367.4 | 377.2 | 9.8  | 47.71                 |                  |          |
|          |       |       |      |                       | 53.88            | 28.73 ✓  |
| +90      | 368.5 | 380.1 | 11.6 | 60.04                 |                  |          |
|          |       |       |      |                       | 60.42            | 34.69 ✓  |
|          |       |       |      |                       | <del>34.24</del> |          |
| 579+05.5 | 369.9 | 381.6 | 11.7 | 60.80                 |                  |          |
|          |       |       |      |                       | 58.28            | 31.30 ✓  |
|          |       |       |      | Comptd. Th. M. 229703 | WMB              |          |
|          |       |       |      | Chd. WMB              | % A.C.L.         |          |
|          |       |       |      |                       | 148.91 ✓         |          |



|       |       |       |      |  | End Area.          | Av. End<br>Areas   | Cu. Yds.                    |
|-------|-------|-------|------|--|--------------------|--------------------|-----------------------------|
| +20   | 370.0 | 381.0 | 11.0 |  | 55.75 <sup>v</sup> |                    |                             |
|       |       |       |      |  |                    | 51.10              | 29.33 <sup>v</sup>          |
| +35.5 | 370.0 | 379.6 | 9.6  |  | 46.44 <sup>v</sup> |                    |                             |
|       |       |       |      |  |                    | 33.80 <sup>v</sup> | 36.93 <sup>v</sup><br>37.42 |
| +65   | 369.1 | 373.8 | 4.7  |  | 21.15 <sup>v</sup> |                    |                             |
|       |       |       |      |  |                    | 15.75              | 20.42 <sup>v</sup>          |
| 580   | 368.0 | 370.3 | 2.3  |  | 10.35 <sup>v</sup> |                    |                             |
|       |       |       |      |  |                    | 10.13              | 5.63 <sup>v</sup>           |
| +15   | 367.5 | 369.7 | 2.2  |  | 9.90 <sup>v</sup>  |                    |                             |
|       |       |       |      |  |                    | 4.95               | 2.75 <sup>v</sup>           |
| +30   | 367.0 | 367.0 | 0.0  |  | 0 <sup>v</sup>     |                    |                             |
|       |       |       |      |  |                    | 2.48               | 1.83 <sup>v</sup>           |

Comptd. P.M.M. 9/29/23

WMB

Chd. WMB

P.A.C.L.

96.89



|       |       |       |     | End Area              | Fr. End Areas | Cu. Yds. |
|-------|-------|-------|-----|-----------------------|---------------|----------|
| +50   | 366.4 | 367.5 | 1.1 | 4.95                  |               |          |
|       |       |       |     |                       | 11.48         | 21.25 ✓  |
| 581   | 364.8 | 368.8 | 4.0 | 18.00 ✓               |               |          |
|       |       |       |     |                       | 26.42         | 34.25 ✓  |
| +35   | 363.7 | 371.3 | 7.6 | 34.84 ✓               |               |          |
|       |       |       |     |                       | 37.62         | 20.90 ✓  |
| +50   | 363.2 | 371.8 | 8.6 | 40.39 ✓               |               |          |
|       |       |       |     |                       | 41.88         | 23.27 ✓  |
| +65   | 362.7 | 371.8 | 9.1 | 43.37 ✓               |               |          |
|       |       |       |     |                       | 41.31         | 53.54 ✓  |
| 582 ✓ | 361.6 | 370.0 | 8.4 | 39.24 ✓               |               |          |
|       |       |       |     |                       | 34.76         | 32.19 ✓  |
|       |       |       |     | Comptd. T.M.M. 92.9MB | WMB           |          |
|       |       |       |     | Chd. WMB              | ✓ A.C.L.      |          |
|       |       |       |     |                       | 185.40 ✓      |          |



|     |       |       |     | End Area           | Av. End Areas | Cu. Yds.           |
|-----|-------|-------|-----|--------------------|---------------|--------------------|
| +25 | 360.8 | 367.5 | 6.7 | 30.28 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 25.04         | 23.19 <sup>v</sup> |
| +50 | 360.0 | 364.4 | 4.4 | 19.80 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 16.20         | 15.00 <sup>v</sup> |
| +75 | 359.2 | 363.0 | 2.8 | 12.60 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 17.10         | 9.50 <sup>v</sup>  |
| +90 | 358.7 | 363.5 | 4.8 | 21.60 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 22.28         | 8.25 <sup>v</sup>  |
| 583 | 358.4 | 363.5 | 5.1 | 22.95 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 23.17         | 12.88 <sup>v</sup> |
| +15 | 357.9 | 363.1 | 5.2 | 23.40 <sup>v</sup> |               |                    |
|     |       |       |     |                    | 21.38         | 7.92 <sup>v</sup>  |

Computed. T.M.M. WMB

Chd. WMB

WMB

2 A.C.L.

16.74<sup>v</sup>



|     |       |       |     | End Area           | Pr. End<br>Areas | Cu. Yds.            |
|-----|-------|-------|-----|--------------------|------------------|---------------------|
| +25 | 357.6 | 361.9 | 4.3 | 19.35 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 20.48            | 18.96 <sup>10</sup> |
| +50 | 357.6 | 362.4 | 4.8 | 21.60 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 22.28            | 20.63 <sup>10</sup> |
| +75 | 357.6 | 362.7 | 5.1 | 22.95 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 22.50            | 20.84 <sup>10</sup> |
| 584 | 357.6 | 362.5 | 4.9 | 22.05 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 25.45            | 28.27 <sup>10</sup> |
| +30 | 358.6 | 365.0 | 6.4 | 28.84 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 27.92            | 20.68 <sup>10</sup> |
| +50 | 359.2 | 365.2 | 6.0 | 27.00 <sup>v</sup> |                  |                     |
|     |       |       |     |                    | 28.40            | 31.55 <sup>10</sup> |

Comptd. P.M.M. 9/27/13

WMB

Chd. WMB

P.A.C.L.

140.93<sup>v</sup>



|          |       |       |     | End Area.      | Av. End Areas | Cu. Yds          |
|----------|-------|-------|-----|----------------|---------------|------------------|
| +80      | 360.2 | 366.8 | 6.6 | 29.79          | 20.98 ✓       | <del>21.77</del> |
| 585      | 360.8 | 367.2 | 6.4 | 28.84          | 28.61         | 26.49 ✓          |
| +25      | 361.6 | 367.9 | 6.3 | 28.37          | 26.11         | 24.18 ✓          |
| +50      | 362.4 | 367.7 | 5.3 | 23.85          | 25.43         | 23.54 ✓          |
| +75      | 363.2 | 369.2 | 6.0 | 27.00          | 25.20         | 29.21 ✓          |
| 586+06.3 | 364.2 | 369.4 | 5.2 | 23.40          | 22.95         | 15.89 ✓          |
|          |       |       |     | Compld. T.M.M. | 929 MB        | WMB              |
|          |       |       |     | Chd. WMB       | ✓ A.C.L.      | 140.29 ✓         |



|       |       |       |                    |     |                    | End Area | Av. End Areas | Cu. Yds. |
|-------|-------|-------|--------------------|-----|--------------------|----------|---------------|----------|
| +25   | 365.4 | 370.4 |                    |     | 5.0                | 22.50    |               |          |
|       |       |       |                    |     |                    |          | 23.18         | 21.46 ✓  |
| +50   | 367.0 | 372.3 |                    |     | 5.3                | 23.85    |               |          |
|       |       |       |                    |     |                    |          | 28.95         | 26.81 ✓  |
| +75   | 367.4 | 374.7 | $\frac{8.6}{2.9}$  | 7.3 | $\frac{6.6}{2.4}$  | 34.05    |               |          |
|       |       |       |                    |     |                    |          | 32.90         | 30.47 ✓  |
| 587   | 369.1 | 376.1 | $\frac{8.0}{2.75}$ | 7.0 | $\frac{6.0}{2.25}$ | 31.75    |               |          |
|       |       |       |                    |     |                    |          | 34.24         | 38.05 ✓  |
| +30   | 371.1 | 379.1 | $\frac{8.0}{3.0}$  | 8.0 | $\frac{6.8}{2.45}$ | 36.73    |               |          |
|       |       |       |                    |     |                    |          | 29.28         | 53.68 ✓  |
| +79.5 | 375.6 | 380.4 | $\frac{5.8}{2.25}$ | 4.8 | $\frac{4.0}{2.25}$ | 21.83    |               |          |
|       |       |       |                    |     |                    |          | 20.59         | 11.86 ✓  |

Completed by M. W. M. B.

WMB

Chd. WMB

A.C.L.

181.93 ✓



|          |       |       |  |     | End Area | Av. End<br>#FCAS | W. Yds        |
|----------|-------|-------|--|-----|----------|------------------|---------------|
| +94.4    | 376.1 | 380.4 |  | 4.3 | 19.35    | ✓                |               |
|          |       |       |  |     |          |                  | 18.68 10.38 ✓ |
| 588+09.4 | 375.4 | 379.4 |  | 4.0 | 18.00    | ✓                |               |
|          |       |       |  |     |          |                  | 20.48 11.30 ✓ |
| +243     | 373.7 | 378.8 |  | 5.1 | 22.95    | ✓                |               |
|          |       |       |  |     |          |                  | 22.73 12.46 ✓ |
| +39.1    | 370.8 | 375.8 |  | 5.0 | 22.50    | ✓                |               |
|          |       |       |  |     |          |                  | 21.15 11.36 ✓ |
| +53.6    | 366.9 | 371.3 |  | 4.4 | 19.80    | ✓                |               |
|          |       |       |  |     |          |                  | 18.68 9.75 ✓  |
| +67.7    | 362.0 | 365.9 |  | 3.9 | 17.55    | ✓                |               |
|          |       |       |  |     |          |                  | 23.67 15.17 ✓ |

Comptd. T.M.M. 9/27/13 WMB

Chd. WMB

✓ A.C.L.

10.42 ✓



|       |       |       |     |                    | End Area        | Average<br>Area | Cu. Yds.            |
|-------|-------|-------|-----|--------------------|-----------------|-----------------|---------------------|
| +85   | 355.2 | 361.8 | 6.6 | 29.79 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 29.32           | 16.29 <sup>✓</sup>  |
| 5589  | 349.3 | 355.7 | 6.4 | 28.84 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 29.80           | 19.43 <sup>✓</sup>  |
| +17.6 | 342.4 | 349.2 | 6.8 | 30.76 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 28.88           | 14.33 <sup>✓</sup>  |
| +31   | 337.1 | 343.1 | 6.0 | 27.00 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 30.40           | 21.39 <sup>✓</sup>  |
| +50   | 329.6 | 337.0 | 7.4 | 33.79 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 30.85           | 57.13 <sup>✓</sup>  |
| 890   | 309.9 | 316.1 | 6.2 | 27.91 <sup>✓</sup> |                 |                 |                     |
|       |       |       |     |                    |                 | 27.68           | 20.51 <sup>✓</sup>  |
|       |       |       |     |                    | Comptd. Min. m. | 9990 B          | WMB                 |
|       |       |       |     |                    | Chd. WMB        |                 | 17.04               |
|       |       |       |     |                    |                 |                 | 149.08 <sup>✓</sup> |



|          |       |       |     | End Area          | Av. End Areas | Cu. Yds.           |
|----------|-------|-------|-----|-------------------|---------------|--------------------|
| +20      | 302.0 | 308.1 | 6.1 | 27.45 ✓           |               |                    |
|          |       |       |     |                   |               | 30.50 <sup>w</sup> |
|          |       |       |     |                   | 27.45         | 28.28              |
| +50      | 290.5 | 296.6 | 6.1 | 27.45 ✓           |               |                    |
|          |       |       |     |                   | 28.38         | 44.86 <sup>o</sup> |
| +92.2    | 277.7 | 284.2 | 6.5 | 29.31 ✓           |               |                    |
|          |       |       |     |                   |               | 32.79 <sup>w</sup> |
|          |       |       |     |                   | 30.53         | 21.49              |
| 591+21.2 | 270.0 | 277.0 | 7.0 | 31.75 ✓           |               |                    |
|          |       |       |     |                   | 33.83         | 36.96 <sup>o</sup> |
| +50.7    | 264.5 | 272.3 | 7.8 | 35.91 ✓           |               |                    |
|          |       |       |     |                   | 33.59         | 17.79 <sup>o</sup> |
| +65      | 262.9 | 269.8 | 6.9 | 31.26 ✓           |               |                    |
|          |       |       |     |                   | 26.43         | 15.17 <sup>o</sup> |
|          |       |       |     | Comptd. M.M. 99MB |               | WMB                |
|          |       |       |     | Chd. WMB          |               | 1/17.51 ✓          |



|       |       |       |     |  | End Area             | Av. End Areas | Cu. Yds.                    |
|-------|-------|-------|-----|--|----------------------|---------------|-----------------------------|
| +80.5 | 261.2 | 266.0 | 4.8 |  | 21.60 ✓              |               |                             |
|       |       |       |     |  |                      | 11.48         | 8.29 ✓                      |
| 592   | 260.5 | 260.8 | 0.3 |  | 1.35 ✓               |               |                             |
|       |       |       |     |  |                      | 0.68          | 0.41 ✓                      |
| +15.2 | 260.1 | 260.1 | 0.0 |  | 0 ✓                  |               |                             |
| 46    |       |       |     |  |                      | 0.2           | 0.2 ✓                       |
| +63.7 | 260.1 | 260.1 | 0.0 |  | 0 ✓                  |               |                             |
|       |       |       |     |  |                      | 3.38          | 1.41 ✓                      |
| +75   | 260.1 | 261.6 | 1.5 |  | 6.75 ✓               |               |                             |
|       |       |       |     |  |                      | 17.56         | 16.26 ✓                     |
| 593   | 259.7 | 266.0 | 6.3 |  | 28.37 ✓              |               |                             |
|       |       |       |     |  |                      | 28.84         | 21.36 ✓                     |
|       |       |       |     |  | Comptd. T.M.M. W.M.B | W.M.B         | Sub. Tol. to here this book |
|       |       |       |     |  | Chd. W.M.B           | ✓ A.C.L.      | 5077.29                     |
|       |       |       |     |  |                      | 47.70 ✓       | (5107.75) A.C.L.            |
|       |       |       |     |  |                      |               | 5107.73 ✓                   |

6/27/30 P.B.



|        |       |       |      |  | <u>End Area</u> | <u>Av. End Areas</u> | <u>Cu. Yds</u>               |
|--------|-------|-------|------|--|-----------------|----------------------|------------------------------|
| +20    | 259.5 | 266.0 | 6.5  |  | 29.31 ✓         |                      |                              |
|        |       |       |      |  |                 | 27.71                | 41.05 ✓                      |
| +60    | 258.9 | 264.7 | 5.8  |  | 26.10 ✓         |                      |                              |
|        |       |       |      |  |                 | 31.29                | 34.76 ✓                      |
| +90    | 260.0 | 267.9 | 7.9  |  | 36.47 ✓         |                      |                              |
|        |       |       |      |  |                 | 39.92                | 36.97 ✓                      |
| 594+15 | 261.7 | 270.8 | 9.1  |  | 43.37 ✓         |                      |                              |
|        |       |       |      |  |                 | 45.87                | 59.46 <sup>w.</sup><br>25.99 |
| +50    | 264.1 | 274.0 | 9.9  |  | 48.37 ✓         |                      |                              |
|        |       |       |      |  |                 | 49.68                | 36.80 ✓                      |
| +70    | 265.5 | 275.8 | 10.3 |  | 50.99 ✓         |                      |                              |
|        |       |       |      |  |                 | 50.65                | 28.14 ✓                      |
|        |       |       |      |  | Compd. T.M.M.   | W.M.B                |                              |
|        |       |       |      |  | Chd. W.M.B      | W.A.C.L              |                              |
|        |       |       |      |  |                 |                      | 237.18 ✓                     |

Shovel Road. ↑



|       |       |       |      | End Area           | Ay. End<br>Hrcus | Cu. Yds.           |
|-------|-------|-------|------|--------------------|------------------|--------------------|
| +85   | 266.5 | 276.7 | 10.2 | 50.31 <sup>v</sup> | 39.34            | 21.86 <sup>v</sup> |
| 595   | 270.0 | 276.3 | 6.3  | 28.37 <sup>v</sup> | 17.79.           | 9.62 <sup>v</sup>  |
| +14.6 | 273.3 | 274.9 | 1.6  | 7.20 <sup>v</sup>  | 11.48            | 44.20 <sup>v</sup> |
| +25   | 275.8 | 279.3 | 3.5  | 15.75 <sup>v</sup> | 16.43            | 7.91 <sup>v</sup>  |
| +38   | 278.9 | 282.7 | 3.8  | 17.10 <sup>v</sup> | 20.02            | 8.90 <sup>m</sup>  |
|       |       |       |      |                    | <del>40.03</del> |                    |
| +50   | 281.8 | 286.9 | 5.1  | 22.95 <sup>v</sup> | 29.71            | 22.01 <sup>v</sup> |

Comptd. T.M.M. Y.M.B. Y.M.B.

Chd. Y.M.B.

A.C.L.

114.50<sup>v</sup>



|     |       |       |     |  | End Area           | Av. End<br>Areas    | Cu. Yds            |
|-----|-------|-------|-----|--|--------------------|---------------------|--------------------|
| +70 | 286.6 | 294.5 | 7.9 |  | 36.47 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 33.62               | 37.35 <sup>o</sup> |
| 596 | 293.8 | 300.6 | 6.8 |  | 30.76 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 28.21               | 26.12 <sup>o</sup> |
| +25 | 299.8 | 305.5 | 5.7 |  | 25.65 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 24.98               | 23.13 <sup>o</sup> |
| +50 | 305.8 | 311.2 | 5.4 |  | 24.30 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 21.83               | 20.21 <sup>o</sup> |
| +75 | 311.8 | 316.1 | 4.3 |  | 19.35 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 19.35               | 17.92 <sup>o</sup> |
| 597 | 317.8 | 322.1 | 4.3 |  | 19.35 <sup>v</sup> |                     |                    |
|     |       |       |     |  |                    | 23.63               | 26.26 <sup>o</sup> |
|     |       |       |     |  | Comptd. Min. WMB   | WMB                 |                    |
|     |       |       |     |  | Chd. WMB           | % A.C.L.            |                    |
|     |       |       |     |  |                    | 150.99 <sup>v</sup> |                    |



|                       |       |       |     | End Area           | Av. End Areas | Cor. Yds                    |
|-----------------------|-------|-------|-----|--------------------|---------------|-----------------------------|
| +30                   | 325.0 | 331.2 | 6.2 | 27.91 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 27.46         | 20.34 <sup>✓</sup>          |
| +50                   | 329.8 | 335.8 | 6.0 | 27.00 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 27.46         | 36.00 <sup>✓</sup>          |
| +85.4                 | 338.3 | 344.5 | 6.2 | 27.91 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 25.88         | 28.37 <sup>✓</sup>          |
| 598+15                | 343.4 | 348.7 | 5.3 | 23.85 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 26.11         | 14.51 <sup>✓</sup>          |
| +30                   | 344.9 | 351.2 | 6.3 | 28.37 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 24.99         | 27.76 <sup>✓</sup>          |
| +60                   | 348.3 | 353.1 | 4.8 | 21.60 <sup>✓</sup> |               |                             |
|                       |       |       |     |                    | 22.95         | 17.00 <sup>✓</sup><br>18.70 |
| Comptd. T.M.M. W.M.B. |       |       |     |                    | W.M.B.        |                             |
| Chd. W.M.B.           |       |       |     |                    | 2 A.C.L.      |                             |
|                       |       |       |     |                    |               | 143.98 <sup>✓</sup>         |



|     |       |       |     | End Area           | Av. End Areas       | Cu. Yds.                               |
|-----|-------|-------|-----|--------------------|---------------------|--|
| +80 | 350.4 | 355.8 | 5.4 | 24.30 <sup>v</sup> |                     | ✓                                      |
|     |       |       |     |                    | 22.28 <sup>✓</sup>  | 16.51<br><del>20.95</del>              |
| 599 | 352.6 | 357.1 | 4.5 | 20.25 <sup>v</sup> |                     |  |
|     |       |       |     |                    | 17.55               | 16.25 <sup>✓</sup>                     |
| +25 | 355.3 | 358.6 | 3.3 | 14.85 <sup>v</sup> |                     |  |
|     |       |       |     |                    | 15.98 <sup>75</sup> | 14.78 <sup>✓</sup><br><del>14.93</del> |
| +50 | 358.0 | 361.8 | 3.8 | 17.10 <sup>✓</sup> |                     |  |
|     |       |       |     |                    | 17.78               | 23.04 <sup>✓</sup>                     |
| +85 | 361.8 | 365.9 | 4.1 | 18.45 <sup>v</sup> |                     |  |
|     |       |       |     |                    | 18.68               | 10.38 <sup>9</sup>                     |
| 600 | 363.4 | 367.6 | 4.2 | 18.90 <sup>✓</sup> |                     |  |
|     |       |       |     |                    | 23.64               | 43.77 <sup>9</sup>                     |

Computed. T.M.M. WMB

Chd. WMB

WMB

✓ A.C.L.

124.73<sup>✓</sup>



|                       |       |       |     |       | End Area | Av. End Areas  | Cu. Yds.                   |   |
|-----------------------|-------|-------|-----|-------|----------|----------------|----------------------------|---|
| +50                   | 368.8 | 375.1 | 6.3 | 28.37 |          |                |                            |   |
|                       |       |       |     |       |          | 29.82          | 27.61                      | 0 |
| +75                   | 371.5 | 378.4 | 6.9 | 31.26 |          |                |                            |   |
|                       |       |       |     |       |          | 30.53          | 22.72                      | 0 |
| +95.1                 | 373.7 | 380.3 | 6.6 | 29.79 |          |                |                            |   |
|                       |       |       |     |       |          | 28.40          | 31.44                      | 0 |
| 601 +25               | 375.9 | 381.9 | 6.0 | 27.00 |          |                |                            |   |
|                       |       |       |     |       |          | 25.20          | 28.00                      | 0 |
| +55                   | 376.3 | 381.5 | 5.2 | 23.40 |          |                |                            |   |
|                       |       |       |     |       |          | 20.93          | 23.25                      | 0 |
| +85                   | 374.8 | 378.9 | 4.1 | 18.45 |          |                |                            |   |
|                       |       |       |     |       |          | 18.45          | 10.25                      | 0 |
|                       |       |       |     |       |          |                | Sub Tot. to here this book |   |
| Comptd. T.M.M. W.M.B. |       |       |     |       | W.M.B.   | 6010.33 cu yds |                            |   |
| Chd. W.M.B.           |       |       |     |       | % A.C.L. | 6022.40 A.C.L. |                            |   |
|                       |       |       |     |       |          | .38            |                            |   |
|                       |       |       |     |       | 143.27   | ✓              |                            |   |



|     |       |       |     | End Area           | Av. End Cu. Yds.<br>Areas |                    |
|-----|-------|-------|-----|--------------------|---------------------------|--------------------|
| 602 | 373.5 | 377.6 | 4.1 | 18.45 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 21.83                     | 20.21 <sup>g</sup> |
| +25 | 371.4 | 377.0 | 5.6 | 25.20 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 24.30                     | 22.50 <sup>g</sup> |
| +50 | 369.3 | 374.5 | 5.2 | 23.40 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 27.33                     | 35.43 <sup>g</sup> |
| +85 | 366.4 | 373.3 | 6.9 | 31.26 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 27.33                     | 15.18 <sup>g</sup> |
| 603 | 365.2 | 370.4 | 5.2 | 23.40 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 24.98                     | 13.88 <sup>g</sup> |
| +15 | 363.9 | 369.8 | 5.9 | 26.55 <sup>v</sup> |                           |                    |
|     |       |       |     |                    | 24.30                     | 31.50 <sup>g</sup> |

Compld. T.M.M. W.M.B.

Chd. W.M.B.

W.M.B.

g A.C.L.

138.70<sup>v</sup>



|       |       |       |     |       | End Area | Av. End Areas | Cu. Yds. |
|-------|-------|-------|-----|-------|----------|---------------|----------|
| +50   | 361.0 | 365.9 | 4.9 | 22.05 |          |               |          |
|       |       |       |     |       | 25.45    | 23.56         | ✓        |
| +75   | 356.8 | 363.2 | 6.4 | 28.84 |          |               |          |
|       |       |       |     |       | 27.25    | 25.23         | ✓        |
| 604   | 354.5 | 360.2 | 5.7 | 25.65 |          |               |          |
|       |       |       |     |       | 26.10    | 9.67          | ✓        |
| +10   | 353.2 | 359.1 | 5.9 | 26.55 |          |               |          |
|       |       |       |     |       | 25.43    | 9.60          | ✓        |
| +20.2 | 351.9 | 357.3 | 5.4 | 24.30 |          |               |          |
|       |       |       |     |       | 26.11    | 28.72         | ✓        |
| +49.9 | 347.2 | 353.4 | 6.2 | 27.91 |          |               |          |
|       |       |       |     |       | 30.05    | 17.25         | ✓        |

Computed. T.M.M. 979713

Chd. WMB

WMB

27.1.1.

114.03 ✓



|       |       |       |     |  | End Area            | Avg. End Areas | Cu. Yds. |
|-------|-------|-------|-----|--|---------------------|----------------|----------|
| +65   | 344.0 | 351.4 | 7.4 |  | 33.79               |                |          |
|       |       |       |     |  |                     | 31.32          | 16.47 ✓  |
| +79.2 | 341.0 | 347.4 | 6.4 |  | 28.84 ✓             |                |          |
|       |       |       |     |  |                     | 28.15          | 10.63 ✓  |
| +89.4 | 338.5 | 344.6 | 6.1 |  | 27.45 ✓             |                |          |
|       |       |       |     |  |                     | 26.33          | 10.33 ✓  |
| 605   | 336.3 | 341.9 | 5.6 |  | 25.20 ✓             |                |          |
|       |       |       |     |  |                     | 22.50          | 15.67 ✓  |
| +18.8 | 332.6 | 337.0 | 4.4 |  | 19.80 ✓             |                |          |
|       |       |       |     |  |                     | 13.95          | 15.40 ✓  |
| +48.6 | 328.9 | 330.7 | 1.8 |  | 8.10 ✓              |                |          |
|       |       |       |     |  |                     | 4.05           | 3.21 ✓   |
|       |       |       |     |  | Completed. M.M. WMB | WMB            |          |
|       |       |       |     |  | Chd. WMB            | ° A.C.L.       |          |
|       |       |       |     |  |                     | 71.71 ✓        |          |







|     |       |       |      |  | <u>End Area</u>    | <u>Avg. End Areas</u> | <u>Cu. Yds.</u>    |
|-----|-------|-------|------|--|--------------------|-----------------------|--------------------|
| +50 | 326.6 | 336.8 | 10.2 |  | 50.31 <sup>v</sup> |                       |                    |
|     |       |       |      |  |                    | 53.03                 | 29.46 <sup>v</sup> |
| +65 | 326.4 | 337.4 | 11.0 |  | 55.75 <sup>v</sup> |                       |                    |
|     |       |       |      |  |                    | 44.01                 | 40.75 <sup>v</sup> |
| +90 | 326.1 | 333.2 | 7.1  |  | 32.26 <sup>v</sup> |                       |                    |
|     |       |       |      |  |                    | 23.33                 | 8.64 <sup>v</sup>  |
| 607 | 326.0 | 329.2 | 3.2  |  | 14.40 <sup>v</sup> |                       |                    |
|     |       |       |      |  |                    | 7.20                  | 1.33 <sup>v</sup>  |
| +05 | 326.3 | 326.3 | 0.0  |  | 0 <sup>v</sup>     |                       |                    |
|     |       |       |      |  |                    | 0.0                   | 0.0 <sup>v</sup>   |
| +21 | 327.3 | 327.3 | 0.0  |  | 0 <sup>v</sup>     |                       |                    |
|     |       |       |      |  |                    | 0.0                   | 0.0 <sup>v</sup>   |

Comptd. T.M.M. WMB WMB

Chd. WMB

° A.C.L.

80.18<sup>v</sup>



|        |       |       |                    |     |                    | End Area           | Av. End Areas  | Cur. Yds.          |
|--------|-------|-------|--------------------|-----|--------------------|--------------------|----------------|--------------------|
| +30    | 327.9 | 327.9 |                    | 0.0 |                    | 0 <sup>v</sup>     |                |                    |
|        |       |       |                    |     |                    |                    | 0 <sup>v</sup> | 0 <sup>v</sup>     |
| 608+04 | 331.5 | 331.5 |                    | 0.0 |                    | 0 <sup>v</sup>     |                |                    |
|        |       |       |                    |     |                    |                    | 8.55           | 1.90 <sup>v</sup>  |
| +10    | 331.9 | 335.7 |                    | 3.8 |                    | 17.10 <sup>v</sup> |                |                    |
|        |       |       |                    |     |                    |                    | 21.60          | 8.00 <sup>v</sup>  |
| +20    | 334.6 | 340.4 | $\frac{5.8}{2.25}$ | 5.8 | $\frac{5.8}{2.25}$ | 26.10 <sup>v</sup> |                |                    |
|        |       |       |                    |     |                    |                    | 28.93          | 16.07 <sup>v</sup> |
| +35    | 338.7 | 345.8 | $\frac{7.2}{2.55}$ | 7.1 | $\frac{6.6}{2.40}$ | 31.75 <sup>v</sup> |                |                    |
|        |       |       |                    |     |                    |                    | 31.38          | 17.43 <sup>v</sup> |
| +50    | 342.8 | 349.7 | $\frac{7.2}{2.55}$ | 6.9 | $\frac{6.4}{2.35}$ | 31.01 <sup>v</sup> |                |                    |
|        |       |       |                    |     |                    |                    | 30.53          | 33.92 <sup>v</sup> |

Comptd. T.M.M. W.M.B.

Chd. W.M.B.

W.M.B.

P.A.C.L.

77.3<sup>v</sup>



|       |       |       |                    |     |                    | End Area | Av. End Areas | Cu. Yds.                |
|-------|-------|-------|--------------------|-----|--------------------|----------|---------------|-------------------------|
| +80   | 351.0 | 357.7 | $\frac{7.2}{2.55}$ | 6.7 | $\frac{6.0}{2.25}$ | 30.04    |               |                         |
|       |       |       |                    |     |                    |          | 29.92         | 22.16                   |
| 609   | 356.5 | 363.1 | $\frac{7.0}{2.50}$ | 6.6 | $\frac{6.2}{2.30}$ | 29.79    |               |                         |
|       |       |       |                    |     |                    |          | 31.28         | 19.46                   |
| +16.8 | 361.1 | 368.4 | $\frac{7.6}{2.65}$ | 7.3 | $\frac{6.6}{2.40}$ | 32.76    |               |                         |
|       |       |       |                    |     |                    |          | 29.39         | 31.78                   |
| +46   | 368.0 | 373.5 | $\frac{7.4}{2.60}$ | 5.5 | $\frac{4.8}{2.25}$ | 26.01    |               |                         |
|       |       |       |                    |     |                    |          | 29.26         | <del>8.40</del><br>8.67 |
| +54   | 369.4 | 376.5 | $\frac{7.8}{2.70}$ | 7.1 | $\frac{6.6}{2.40}$ | 32.51    |               |                         |
|       |       |       |                    |     |                    |          | 34.21         | 27.24                   |
| +75.5 | 373.0 | 380.8 | $\frac{8.6}{2.90}$ | 7.8 | $\frac{7.0}{2.50}$ | 35.91    |               |                         |
|       |       |       |                    |     |                    |          | 39.03         | 43.22                   |

Comptd. T.M.M. WMB

Chd. WMB

WMB

P.A.C.L.

152.53



|          |       |       |                     |      |                     | <u>End Area</u> | <u>Av. End Areas</u> | <u>Cu. Yds.</u> |
|----------|-------|-------|---------------------|------|---------------------|-----------------|----------------------|-----------------|
| 610+05.4 | 376.0 | 384.8 | $\frac{10.0}{3.25}$ | 8.8  | $\frac{8.0}{2.75}$  | 42.15           | 45.26                | 24.47 ✓         |
| +20      | 376.5 | 386.4 | $\frac{11.0}{3.5}$  | 9.9  | $\frac{8.8}{2.95}$  | 48.37 ✓         | 50.35                | 28.72 ✓         |
| +35.4    | 377.0 | 387.5 | $\frac{11.6}{3.65}$ | 10.5 | $\frac{9.4}{3.1}$   | 52.33 ✓         | 56.57                | 41.06 ✓         |
| +55      | 377.0 | 388.7 | $\frac{12.6}{3.9}$  | 11.7 | $\frac{10.8}{3.45}$ | 60.80 ✓         | 58.45                | 43.30 ✓         |
| +75      | 377.0 | 388.0 | $\frac{11.6}{3.65}$ | 11.0 | $\frac{10.6}{3.4}$  | 56.10 ✓         | 53.55                | 40.46 ✓         |
| +95.4    | 377.0 | 387.3 | $\frac{10.6}{3.4}$  | 10.3 | $\frac{10.0}{3.25}$ | 50.99 ✓         | 50.65                | 36.77 ✓         |

Computed T.P.M. WMB

Ord. WMB

WMB

2 A.C.L.

214.98 ✓



|           |       |       |                    |      |                    | End Area | Av. End Areas    | Cu. Yds.         |
|-----------|-------|-------|--------------------|------|--------------------|----------|------------------|------------------|
| 611 +15   | 375.4 | 385.6 | $\frac{10.2}{3.3}$ | 10.2 | $\frac{10.2}{3.3}$ | 50.31    | 41.03            | 30.40            |
| +35       | 373.8 | 380.8 | $\frac{7.0}{2.5}$  | 7.0  | $\frac{7.0}{2.5}$  | 31.75    | 25.55            | 14.20            |
| +50       | 372.6 | 376.9 |                    | 4.3  |                    | 19.35    | 12.60            | 8.17             |
|           |       |       |                    |      |                    |          | <del>25.60</del> | <del>17.89</del> |
| +67.5     | 371.2 | 372.5 |                    | 1.3  |                    | 5.85     | 2.93             | 0.29             |
|           |       |       |                    |      |                    |          | <del>2.92</del>  |                  |
| +70.2     | 371.2 | 371.2 |                    | 0.0  |                    | 0        | 0.0              | 0.0              |
|           |       |       |                    |      |                    |          | 0.0              | 0.0              |
| 612 +18.3 | 371.2 | 371.2 |                    | 0.0  |                    | 0        | 12.60            | 7.79             |

Computed. T.M. M. N.M.B.

Chd. N.M.B.

N.M.B.

✓ P.C.L.

60.85



|     |       |       |                    |      |                     | End Area. | Av. End Areas | Cu. Yds. |
|-----|-------|-------|--------------------|------|---------------------|-----------|---------------|----------|
| +35 | 371.1 | 376.7 | $\frac{5.6}{2.25}$ | 5.6  | $\frac{5.6}{2.25}$  | 25.20 ✓   |               |          |
|     |       |       |                    |      |                     |           | 27.26         | 15.14 ✓  |
| +50 | 371.1 | 377.5 | $\frac{6.0}{2.25}$ | 6.4  | $\frac{7.2}{2.55}$  | 29.31 ✓   |               |          |
|     |       |       |                    |      |                     |           | 38.83         | 24.45 ✓  |
| +67 | 371.0 | 380.8 | $\frac{8.4}{2.85}$ | 9.8  | $\frac{11.6}{3.65}$ | 48.35 ✓   |               |          |
|     |       |       |                    |      |                     |           | 50.32         | 14.90 ✓  |
| +75 | 371.0 | 381.2 | $\frac{9.4}{3.1}$  | 10.2 | $\frac{12.2}{3.8}$  | 52.29 ✓   |               |          |
|     |       |       |                    |      |                     |           | 52.98         | 49.06 ✓  |
| 613 | 371.0 | 380.6 | $\frac{9.6}{3.15}$ | 10.6 | $\frac{12.0}{3.75}$ | 53.67 ✓   |               |          |
|     |       |       |                    |      |                     |           | 52.00         | 48.15 ✓  |
| +25 | 371.0 | 380.3 | $\frac{9.2}{3.05}$ | 10.3 | $\frac{11.0}{3.5}$  | 50.32 ✓   |               |          |
|     |       |       |                    |      |                     |           | 46.85         | 43.38 ✓  |

Computed. T.M.M. W.M.B.

W.M.B.

Chd. W.M.B.

A.C.L.

195.08 ✓



|     |       |       |                    |     |                     | End Area       | Av. End Areas | Cu. Yds.                   |
|-----|-------|-------|--------------------|-----|---------------------|----------------|---------------|----------------------------|
| +50 | 370.9 | 380.0 | $\frac{8.2}{2.8}$  | 9.1 | $\frac{10.0}{3.25}$ | 43.37 ✓        |               |                            |
|     |       |       |                    |     |                     |                | 42.48         | 39.33 ✓                    |
| +75 | 370.9 | 379.6 | $\frac{7.6}{2.65}$ | 8.7 | $\frac{10.2}{3.3}$  | 41.58 ✓        |               |                            |
|     |       |       |                    |     |                     |                | 42.32         | 23.51 ✓                    |
| +90 | 370.8 | 380.0 | $\frac{7.8}{2.7}$  | 9.2 | $\frac{10.0}{3.25}$ | 43.05 ✓        |               |                            |
|     |       |       |                    |     |                     |                | 37.15         | 13.76 ✓                    |
| 614 | 370.8 | 377.6 | $\frac{6.0}{2.25}$ | 6.8 | $\frac{8.0}{2.75}$  | 31.25 ✓        |               |                            |
|     |       |       |                    |     |                     |                | 20.69         | 22.99 ✓                    |
| +30 | 370.7 | 372.9 | $\frac{2.0}{2.25}$ | 2.2 | $\frac{2.6}{2.25}$  | 10.13 ✓        |               |                            |
|     |       |       |                    |     |                     |                | 9.57          | 7.09 ✓                     |
| +50 | 370.7 | 372.7 |                    | 2.0 |                     | 9.00 ✓         |               |                            |
|     |       |       |                    |     |                     |                | 4.50          | 1.42 ✓                     |
|     |       |       |                    |     |                     |                |               | <del>2.75</del>            |
|     |       |       |                    |     |                     |                |               | 108.10 ✓                   |
|     |       |       |                    |     |                     | Comptd. T.M.M. | WMB           | Subtotal this book to here |
|     |       |       |                    |     |                     | Chd. WMB       | 2 A.C.L.      | 7325.16 cu yds             |
|     |       |       |                    |     |                     | Chkd M.D.E.    |               | 7330.83 A.C.L.             |
|     |       |       |                    |     |                     | 10/21/30       |               |                            |











|     |       |       |     | <u>End Area</u>    | <u>Av. End Areas</u> | <u>Cu. Yds.</u>    |
|-----|-------|-------|-----|--------------------|----------------------|--------------------|
| 617 | 340.3 | 346.0 | 5.7 | 25.65 <sup>✓</sup> | 26.33                | 24.38 <sup>✓</sup> |
| +25 | 330.3 | 336.3 | 6.0 | 27.00 <sup>✓</sup> | 26.10                | 24.17 <sup>✓</sup> |
| +50 | 320.2 | 325.8 | 5.6 | 25.20 <sup>✓</sup> | 25.88                | 23.96 <sup>✓</sup> |
| +75 | 311.7 | 317.6 | 5.9 | 26.55 <sup>✓</sup> | 26.10                | 24.17 <sup>✓</sup> |
| 618 | 303.2 | 308.9 | 5.7 | 25.65 <sup>✓</sup> | 25.20                | 23.33 <sup>✓</sup> |
|     |       |       |     |                    | 23.24                |                    |
| +25 | 294.7 | 300.2 | 5.5 | 24.75 <sup>✓</sup> | 23.63                | 21.88 <sup>✓</sup> |

Computed. T.M.M. W.M.B.  
Chd. W.M.B.

W.M.B.  
A.C.L.

141.89<sup>✓</sup>



|       |       |       |     | End Area         | Average Area | Cu. Yds.         |
|-------|-------|-------|-----|------------------|--------------|------------------|
| 450   | 286.2 | 291.2 | 5.0 | 22.50            |              |                  |
|       |       |       |     |                  | 23.40        | 43.33 ✓<br>21.67 |
| 619   | 273.2 | 278.6 | 5.4 | 24.30            |              |                  |
|       |       |       |     |                  | 25.88        | 19.17 ✓          |
| 420   | 268.0 | 274.1 | 6.1 | 27.45            |              |                  |
|       |       |       |     |                  | 27.91        | 31.01 ✓          |
| 450   | 260.2 | 266.5 | 6.3 | 28.37            |              |                  |
|       |       |       |     |                  | 27.01        | 50.02 ✓          |
| 620   | 247.2 | 252.9 | 5.7 | 25.65            |              |                  |
|       |       |       |     |                  | 28.21        | 17.44 ✓          |
| 416.7 | 242.9 | 249.7 | 6.8 | 30.76            |              |                  |
|       |       |       |     |                  | 24.38        | 30.07 ✓          |
|       |       |       |     | Comptd. M.M. WMB | WMB          |                  |
|       |       |       |     | Chd. WMB         | ✓ A.C.L.     |                  |
|       |       |       |     |                  | 191.04       |                  |



|       |       |       |     | End Area             | Av. End<br>Areas | Cu. Yds. |
|-------|-------|-------|-----|----------------------|------------------|----------|
| +50   | 242.9 | 246.9 | 4.0 | 18.00 ✓              |                  |          |
|       |       |       |     |                      | 16.65 ✓          | 30.83 ✓  |
| 6621  | 242.9 | 246.3 | 3.4 | 15.30 ✓              |                  |          |
|       |       |       |     |                      | 14.40 ✓          | 14.93 ✓  |
| +28   | 242.9 | 245.9 | 3.0 | 13.50 ✓              |                  |          |
|       |       |       |     |                      | 10.58 ✓          | 1.57 ✓   |
| +32   | 242.9 | 244.6 | 1.7 | 7.65 ✓               |                  |          |
|       |       |       |     |                      | 3.83 ✓           | 0.14 ✓   |
| 6 +33 | 242.9 | 242.9 | 0.0 | 0 ✓                  |                  |          |
|       |       |       |     |                      | 0.2 ✓            | 0.0 ✓    |
| +49.9 | 242.9 | 242.9 | 0.0 | 0 ✓                  |                  |          |
|       |       |       |     |                      | 3.38 ✓           | 0.14 ✓   |
|       |       |       |     |                      |                  | +37      |
|       |       |       |     | Computed. T.M.M. WMB | WMB              |          |
|       |       |       |     | Chd. WMB             | ✓ A.C.L.         |          |
|       |       |       |     |                      |                  | 47.61 ✓  |







March 11, 1930  
Clear + Warm

Converse - Notes  
Hill - Grades  
Elliott -  $\pi$   
Simpson - Rod

68

|      |       |       |     |
|------|-------|-------|-----|
| +510 | 242.9 | 244.4 | 1.5 |
| +80  | 242.9 | 249.0 | 6.1 |
| 622  | 242.9 | 248.7 | 5.8 |
| +18  | 242.9 | 248.6 | 5.7 |
| +27  | 242.9 | 247.3 | 4.4 |
| +37  | 242.9 | 249.4 | 6.5 |

| End Area | Av. End Areas      | Cu. Yds.           |
|----------|--------------------|--------------------|
| 6.75     |                    |                    |
|          | 17.10              | 18.37 <sup>9</sup> |
|          | 27.45 <sup>v</sup> |                    |
|          | 26.78              | 19.83 <sup>9</sup> |
|          | 26.10 <sup>v</sup> |                    |
|          | 25.88              | 17.25 <sup>9</sup> |
|          | 25.65 <sup>v</sup> |                    |
|          | 22.73              | 7.58 <sup>9</sup>  |
|          | 19.80 <sup>v</sup> |                    |
|          | 24.56              | 9.10 <sup>9</sup>  |
|          | 29.31 <sup>v</sup> |                    |
|          | 27.71              | 13.34 <sup>9</sup> |

Comptd. Th. M. WMB

Chd. WMB

WMB

A.C.L.

85.47<sup>v</sup>



|     |       |       |     |                    | Em Arca              | Av. End<br>Arca    | Ca. Yds.                               |
|-----|-------|-------|-----|--------------------|----------------------|--------------------|--|
| +50 | 242.9 | 248.7 | 5.8 | 26.10 <sup>v</sup> |                      | 25.43              | 7.53 <sup>g</sup>                      |
| +58 | 243.5 | 249.0 | 5.5 | 24.75 <sup>v</sup> |                      | 26.80              | 16.87 <sup>v</sup><br><del>18.86</del> |
| +75 | 244.9 | 251.3 | 6.4 | 28.84 <sup>v</sup> |                      | 27.02              | 25.02 <sup>g</sup>                     |
| 623 | 247.0 | 252.6 | 5.6 | 25.20 <sup>v</sup> |                      | 29.24              | 40.07 <sup>v</sup>                     |
| +37 | 250.0 | 257.3 | 7.3 | 33.28 <sup>v</sup> |                      | 29.92              | 19.94 <sup>g</sup>                     |
| +55 | 251.4 | 257.3 | 5.9 | 26.55 <sup>v</sup> |                      | 27.93              | 20.69 <sup>g</sup>                     |
|     |       |       |     |                    | Comptd. T.M.M. 9 WMB | WMB                |  |
|     |       |       |     |                    | Chd. WMB             | 1/2 A.C.L.         |  |
|     |       |       |     |                    |                      | 130.1 <sup>v</sup> |  |



|     |       |       |     | End Area.          | Av. End Cui. Yds.<br>Areas |                     |
|-----|-------|-------|-----|--------------------|----------------------------|---------------------|
| +75 | 253.1 | 259.6 | 6.5 | 29.31 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 28.38                      | 26.28 <sup>✓</sup>  |
| 624 | 257.3 | 263.4 | 6.1 | 27.45 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 26.33                      | 19.50 <sup>✓</sup>  |
| +20 | 260.6 | 266.2 | 5.6 | 25.20 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 24.53                      | 27.25 <sup>✓</sup>  |
| +50 | 265.7 | 271.0 | 5.3 | 23.85 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 25.43                      | 23.54 <sup>✓</sup>  |
| +75 | 269.9 | 275.9 | 6.0 | 27.00 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 26.10                      | 24.17 <sup>✓</sup>  |
| 625 | 274.1 | 279.7 | 5.6 | 25.20 <sup>✓</sup> |                            |                     |
|     |       |       |     |                    | 26.33                      | 9.75 <sup>✓</sup>   |
|     |       |       |     | Comptd. T.M.M.     | WMB                        | WMB                 |
|     |       |       |     | Chd. MMB           |                            | ✓ A.C.L.            |
|     |       |       |     |                    |                            | 130.49 <sup>✓</sup> |



End Area    Av. End Cu. Yds.  
Areas

|     |       |       |     |       |       |       |   |
|-----|-------|-------|-----|-------|-------|-------|---|
| +10 | 275.8 | 281.9 | 6.1 | 27.45 | 27.45 | 40.67 | ✓ |
| +50 | 282.5 | 288.6 | 6.1 | 27.45 | 27.91 | 20.68 | ✓ |
| +70 | 285.9 | 292.2 | 6.3 | 28.37 | 27.24 | 30.26 | ✓ |
| 626 | 290.9 | 296.7 | 5.8 | 26.10 | 26.78 | 14.88 | ✓ |
| +15 | 293.4 | 299.5 | 6.1 | 27.45 | 25.43 | 9.42  | ✓ |
| +25 | 295.1 | 300.3 | 5.2 | 23.40 | 22.95 | 21.25 | ✓ |

Comptd. P.M.M. WMB    WMB  
Chd. WMB    S.A.C.L.  
137.16 ✓



|     | End Area | Ay. End Areas | Cu. Yds. |
|-----|----------|---------------|----------|
| +50 | 298.4    | 303.4         | 5.0      |
|     |          |               | 22.50    |
|     |          |               | 25.44    |
|     |          |               | 37.68    |
| +90 | 303.8    | 310.1         | 6.3      |
|     |          |               | 28.37    |
|     |          |               | 28.14    |
|     |          |               | 10.42    |
| 627 | 305.1    | 311.3         | 6.2      |
|     |          |               | 27.91    |
|     |          |               | 28.85    |
|     |          |               | 39.47    |
| +36 | 309.9    | 316.5         | 6.6      |
|     |          |               | 29.79    |
|     |          |               | 30.28    |
|     |          |               | 15.70    |
| +50 | 311.7    | 317.5         | 6.8      |
|     |          |               | 30.76    |
|     |          |               | 27.31    |
|     |          |               | 10.11    |
| +60 | 313.0    | 318.3         | 5.3      |
|     |          |               | 23.85    |
|     |          |               | 24.97    |
|     |          |               | 23.11    |
|     |          |               | 24.73    |
|     |          |               | 23.13    |

Comptd. T.M.M. WMB

Chd. WMB

WMB

P.A.C.L.

13549

8558.98

Subtot. this book taken

~~8547.15~~~~8564.65~~



|     |       |       |     | End Area           | Ay. End Area     | Cu. Yds.           |
|-----|-------|-------|-----|--------------------|------------------|--------------------|
| +85 | 316.0 | 321.8 | 5.8 | 26.10 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 25.20            | 14.00 <sup>✓</sup> |
| 628 | 318.4 | 323.8 | 5.4 | 24.30 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 23.85            | 28.27 <sup>✓</sup> |
| +32 | 320.9 | 326.1 | 5.2 | 23.40 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 22.50            | 15.00 <sup>✓</sup> |
| +50 | 322.3 | 327.1 | 4.8 | 21.60 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 22.05            |                    |
|     |       |       |     |                    | <del>21.82</del> | 40.83 <sup>✓</sup> |
|     |       |       |     |                    | <del>22.05</del> | 38.98              |
| 679 | 326.2 | 331.2 | 5.0 | 22.50 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 22.50            | 41.67 <sup>✓</sup> |
| +50 | 330.1 | 335.1 | 5.0 | 22.50 <sup>✓</sup> |                  |                    |
|     |       |       |     |                    | 22.95            | 42.50 <sup>✓</sup> |

Completed T.M.M. 9/11/20 WMB Total this book

Ch. WMB Total 8741.25<sup>✓</sup> 1726.00 copy d

M.R.G. 10/2/30 Total this book → ~~8746.50~~ 1726.00

note 10/20/20 in the book  
see additional pages  
check check 9/11/20

18 2 27 1/2  
6/27/20 P.C.



630 334.00 339.2

5.2

| End Area. | Av. End<br>Areas. | Cor. Yds. |
|-----------|-------------------|-----------|
| 23.40     |                   |           |

Sta. 630+00 = End of U.S.G.S. Datum.

Contd. in Book #291. Page 1.

Compld. T.M.M.N.M.B. WMB

Ch. WMB















IMPROVED TABLES  
AND  
INFORMATION



DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder  
take 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

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**IMPROVED TABLES**  
**AND**  
**INFORMATION**

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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) 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.



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