

LOCATION & OWNERSHIP MAP

| SECTION | PARCEL | PROPERTY OWNER | ACRES |
|---------|--------|----------------|-------|
| 7       | A      | MARTIN RECNY   | 1.0   |
| 12      | B      | ALBERT STONE   | 1.5   |
| 12      | C      | OLLIE TOMPSON  | 1.5   |
| 12      | D      | ERSEL HEATH    | .5    |
| 12      | E      | DONALD DUDROW  | .5    |
| 12      | F      | EARL CARRY     | .5    |
| 12      | G      | RUSH MILLER    | .5    |
| 6       | H      | PAUL HALICEK   | .5    |

**LEGEND**

|                      |           |
|----------------------|-----------|
| PROPOSED IMPROVEMENT | == == ==  |
| HIGHWAYS             | ====      |
| PROPERTY LINE        | -----     |
| SECTION CENTER       | □         |
| WATERSHED            | ~~~~~     |
| SECTION CORNER       | ⊕         |
| ACRES OWNED          | 00 A.     |
| ACRES BENEFITED      | 00 A. →   |
| AT&T CABLE           | — — — — — |
| RIVER & DITCHES      | ~~~~~     |

**SUPPORTING DATA**

|                    |                         |
|--------------------|-------------------------|
| DRAINAGE AREA      | 207 ACRES               |
| LAND USE           | GENERAL & SPECIAL CROPS |
| SOIL TYPE          | HOYTVILLE-NAPPANEE      |
| LAND SLOPE         | 0-2 %                   |
| DESIGN COEFFICIENT | Q <sub>b</sub> CURVE    |
| TYPE DRAINAGE      | SURFACE & TILE          |

**BENCH MARK DESCRIPTION**

|       |                                                                                                                                         |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------|
| BM #1 | TOP OF SPIKE IN S.W. SIDE OF UTILITY POLE<br>E. SIDE NISSEN RD. 50' S. OF 0+00<br>M.S.L. ELEV. 612.92                                   |
| BM #2 | TOP OF "PAW" MARK S.E. END OF SIDE WALK<br>J. VALASEK BLDG AREA. STA. 9+68<br>M.S.L. ELEV. 611.80                                       |
| BM #3 | TOP OF SPIKE IN W. SIDE OF ELEC. POLE<br>W. SIDE OF DITCH 730' S. OF INTERSECTION OF<br>DENO RD. STA. 12+41<br>M.S.L. ELEV. 611.92      |
| BM #4 | TOP OF S. RIM OF MANHOLE COVER 35' W. OF<br>DITCH N.W. CORNER OF INTERSECTION OF<br>NISSEN & DENO RD. STA. 20+64<br>M.S.L. ELEV. 611.63 |
| BM #5 | TOP OF SPIKE IN W. SIDE OF POWER POLE<br>W. SIDE NISSEN RD. 1900' N. OF DENO RD.<br>STA. 38+96<br>M.S.L. ELEV. 611.45                   |
| BM #6 | X. CHISELED ON S. END OF BELL OF 18" CONCRETE<br>TILE W. SIDE OF NISSEN RD. 568' S. OF FULKURT<br>RD. STA. 56+64<br>M.S.L. ELEV. 605.63 |
| BM #7 | X. CHISELED ON TOP & CENTER OF S. HEADWALL<br>S.W. CORNER OF INTERSECTION OF NISSEN &<br>FULKERT RD. STA. 62+32<br>M.S.L. ELEV. 606.21  |

**CONSTRUCTION DATA**

| STATION | % GRADE | BOTTOM WIDTH | SIDE SLOPES | CUBIC YARDS | AVERAGE DEPTH |
|---------|---------|--------------|-------------|-------------|---------------|
| 56+54   | 0.10    | 3'           | 1 1/2 : 1   | 736         | 6'            |
| 46+00   | 0.07    | 3'           | 1 1/2 : 1   | 2,514       | 5'            |
| 19+73   | 0.15    | 3'           | 1 1/2 : 1   | 662         | 4.5'          |
| 10+57   | 0.70    | 3'           | 1 1/2 : 1   | 52          | 3.5'          |
| 8+16    | 0.08    | 3'           | 1 1/2 : 1   | 158         | 3'            |
|         |         |              |             | 4,122       |               |

**HYDRAULIC CALCULATION**

CHANNEL FLOW  $V = 1.486 \frac{Q}{N}$  R<sup>2/3</sup> S<sup>1/2</sup>

| REACH                      | TO STA. | 0+00      | 8+16      | 10+57     | 20+09     | 46+00     | 56+64 |
|----------------------------|---------|-----------|-----------|-----------|-----------|-----------|-------|
| DRAINAGE AREA              |         | 51        | 61        | 114       | 192       | 207       |       |
| Q <sub>b</sub> FLOW C.F.S. |         | 8.5       | 10.       | 19.       | 32        | 35        |       |
| "N"                        |         | .04       | .04       | .04       | .04       | .04       |       |
| SLOPE FT./FT.              |         | .0008     | .0070     | .0015     | .0007     | .0010     |       |
| S 1/2                      |         | .0283     | .0837     | .0387     | .0266     | .0316     |       |
| Q/S <sup>1/2</sup> = KD    |         | 300       | 119       | 492       | 1203      | 1108      |       |
| KD VALUE USED              |         | 3.19      | 1.29      | 4.98      | 1.241     | 1.158     |       |
| SIDE SLOPE                 |         | 1 1/2 : 1 | 1 1/2 : 1 | 1 1/2 : 1 | 1 1/2 : 1 | 1 1/2 : 1 |       |
| BOTTOM WIDTH               |         | 3'        | 3'        | 3'        | 3'        | 3'        |       |
| DEPTH                      |         | 1.6'      | 1.0'      | 2.0'      | 3.1'      | 3.0'      |       |
| AREA SQ.FT.                |         | 8.64      | 4.50      | 12.00     | 23.71     | 22.50     |       |
| VELOCITY F.P.S.            |         | .98       | 2.22      | 1.58      | 1.35      | 1.55      |       |

**HEADLOSS IN CULVERT**  $H = \frac{V^2}{2g} (1 + KE + KPL)$

| STATION                    | 6+46 | 8+16 | 19+73 | 33+96 | 56+64 |
|----------------------------|------|------|-------|-------|-------|
| DRAINAGE AREA              | 51   | 56   | 114   | 150   | 207   |
| Q <sub>b</sub> FLOW C.F.S. | 8.5  | 9.5  | 19.   | 26    | 35    |
| DIAMETER IN.               | 24"  | 24"  | 33"   | 36"   | 36"   |
| TYPE                       | R/C. | R/C. | R/C.  | R/C.  | R/C.  |
| "N"                        | .013 | .013 | .013  | .013  | .013  |
| LENGTH FT.                 | 20'  | 45'  | 36'   | 20'   | 654'  |
| X SEC. AREA SQ.FT.         | 3.14 | 3.14 | 5.94  | 7.07  | 7.07  |
| KP                         | .012 | .012 | .0080 | .0072 | .0072 |
| KPL                        | .24  | .54  | .29   | .14   | 4.71  |
| KE                         | .50  | .50  | .50   | .50   | .50   |
| VELOCITY F.P.S.            | 2.7  | 3.0  | 3.2   | 3.7   | 4.95  |
| HEADLOSS FT.               | .20  | .29  | .28   | .35   |       |

Inlet Control  
HW = 2.85 ft

THIS DITCH PLAN HAS BEEN APPROVED BY  
*John G. Papcun*  
OTTAWA COUNTY ENGINEER 7/1/68 DATE

LOCATION - E. 1/2 OF N.E. 1/4 OF SEC. 12  
E. 1/2 OF S.E. 1/4 - E. 1/2 OF S.E. 1/4 OF  
N.E. 1/4 OF SEC. 1 T-6N R-15E.  
CLAY TOWNSHIP, OTTAWA COUNTY, OHIO.

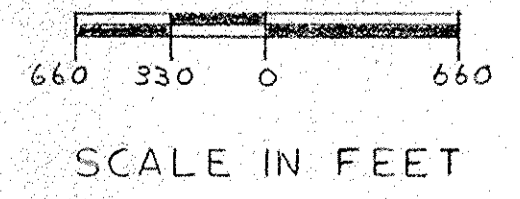
SURVEYED - 12-19-67 D. OFFER  
E. CAMPBELL  
D. SOMMER

REFERENCE - FIELD NOTES ON FILE IN  
OTTAWA SOIL & WATER CONSERVATION OFFICE  
149 CHURCH STREET, OAK HARBOR OHIO.  
JOB CLASS III GROUP # 34

**DITCH IMPROVEMENT**  
SCHOTT DITCH  
CLAY TOWNSHIP  
OTTAWA COUNTY, OHIO.

**U. S. DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

|                                       |       |                                    |
|---------------------------------------|-------|------------------------------------|
| Designed by <i>Donald Offer</i> 12/67 | Date  | Approved by <i>Russell K. Rowe</i> |
| Drawn <i>Donald Offer</i> 2/68        | Title | <i>Coon Ditch</i>                  |
| Traced                                | Sheet | Drawing No.                        |
| Checked <i>R.K. Rowe</i> 7/2/68       | No. 1 | 34-01-83-68-1                      |

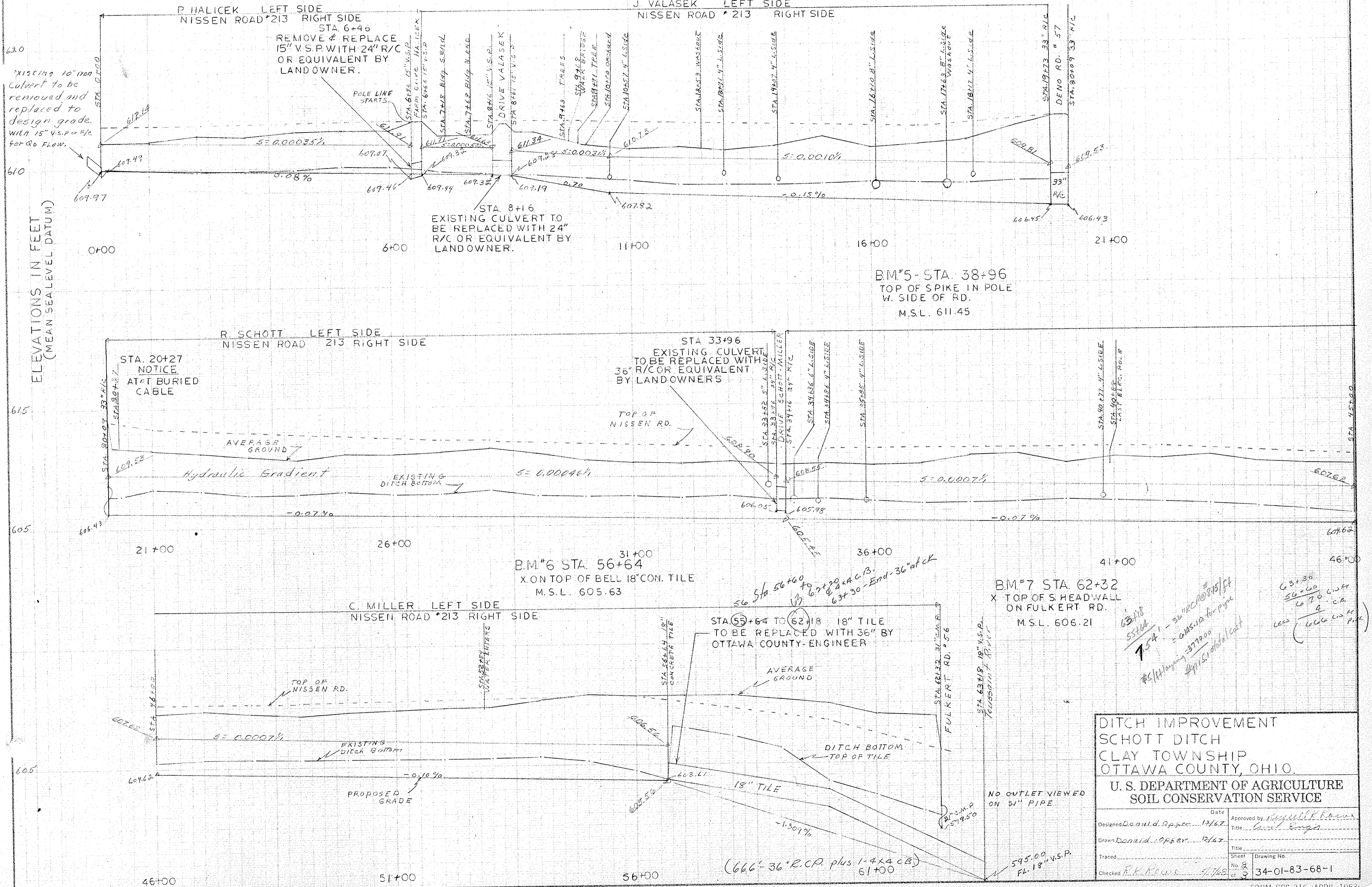


B.M.#1 STA. -0+50  
SPIKE IN POLE E. SIDE  
RD. 50' S. 0+00  
M.S.L. 612.92

B.M.#2 STA. 9+68  
S.E. END OF CONCRETE WALK  
J. VALASEK BLDG AREA  
M.S.L. 611.80

B.M.#3 STA. 12+41  
SPIKE IN POLE W. SIDE RD.  
250' N. J. VALASEK BLDG AREA.  
M.S.L. 611.92

B.M.#4 STA. 20+64  
TOP OF S. RIM OF MANHOLE COVER  
50' N.W. OF INTERSECTION.  
M.S.L. 611.63



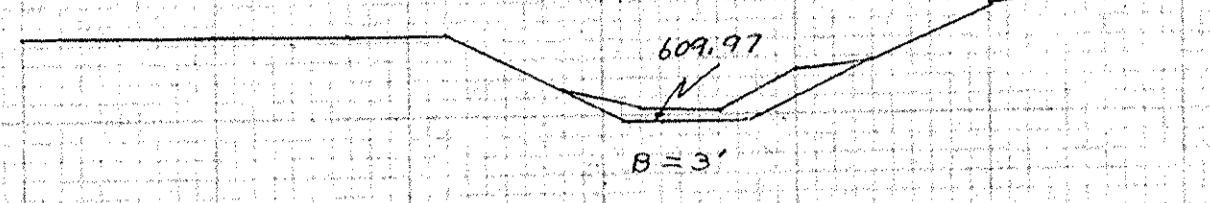
**DITCH IMPROVEMENT  
SCHOTT DITCH  
CLAY TOWNSHIP  
OTTAWA COUNTY, OHIO.**

**U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE**

|                                |                         |                                    |
|--------------------------------|-------------------------|------------------------------------|
| Designed <i>Donald R. Papp</i> | Date <i>12/67</i>       | Approved by <i>Russell K. Rowe</i> |
| Drawn <i>Donald R. Papp</i>    | Title <i>Gen'l Engr</i> |                                    |
| Traced                         | Sheet                   | Drawing No.                        |
| Checked <i>R.K. Rowe</i>       | No. <i>2</i>            | 34-01-83-68-1                      |

FORM SCS-316 (APRIL 1963)

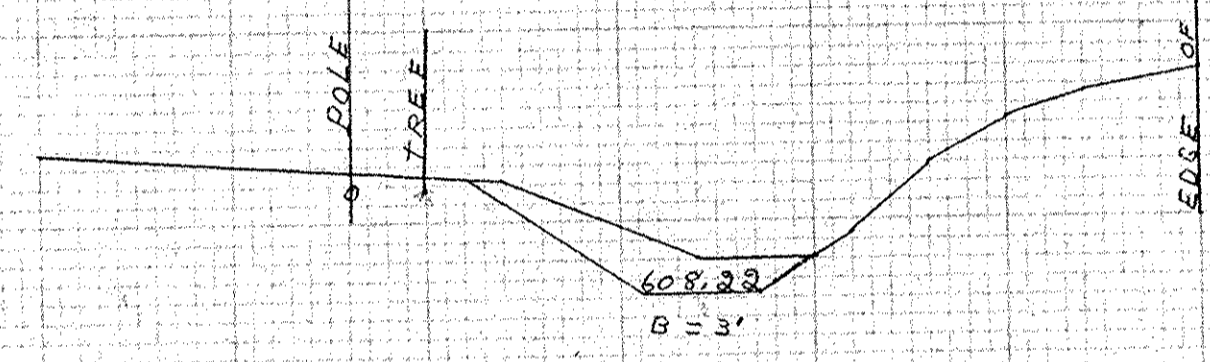
CROSS SECTION 0+00  
 112 SQ. IN. X .93 = .11 cu. yds. LIN. FT.



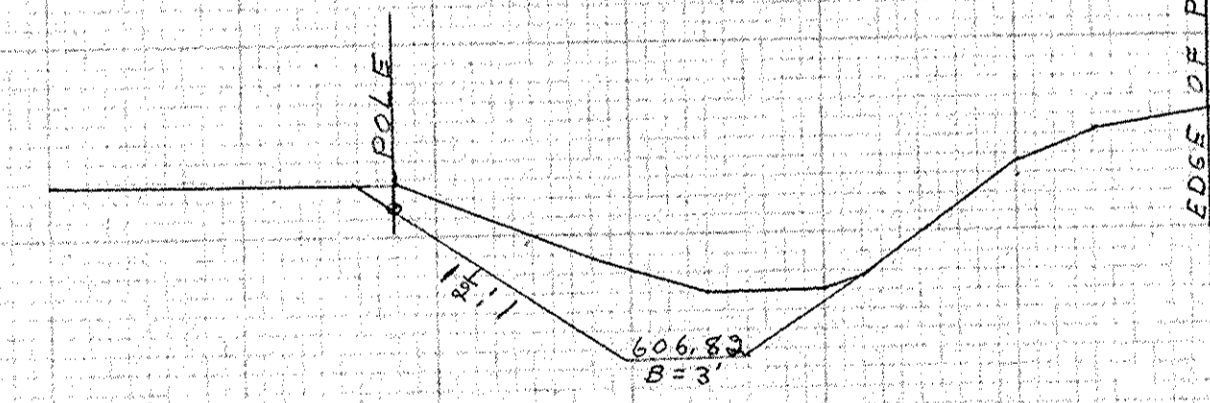
CROSS SECTION 5+00  
 225 SQ. IN. X .93 = .20 cu. yds. LIN. FT.



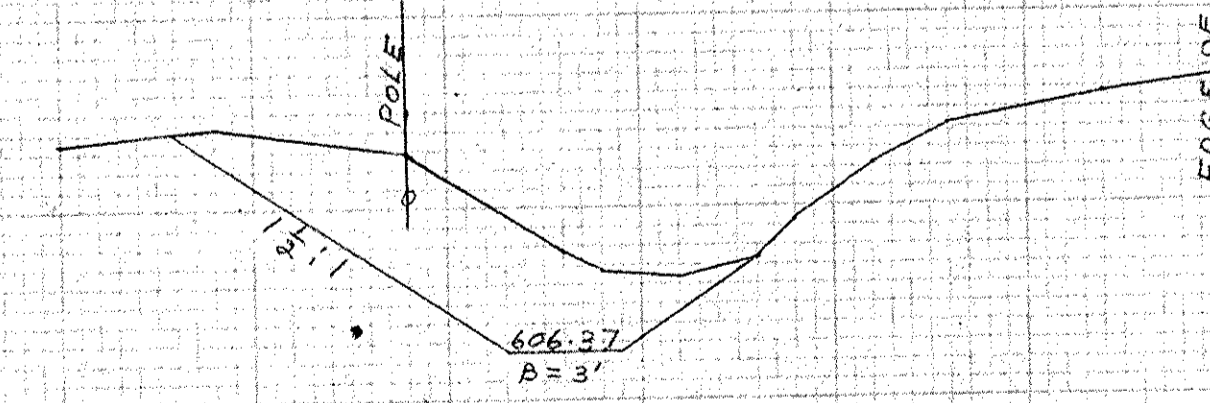
CROSS SECTION 10+00  
 345 SQ. IN. X .93 = .32 cu. yds. LIN. FT.



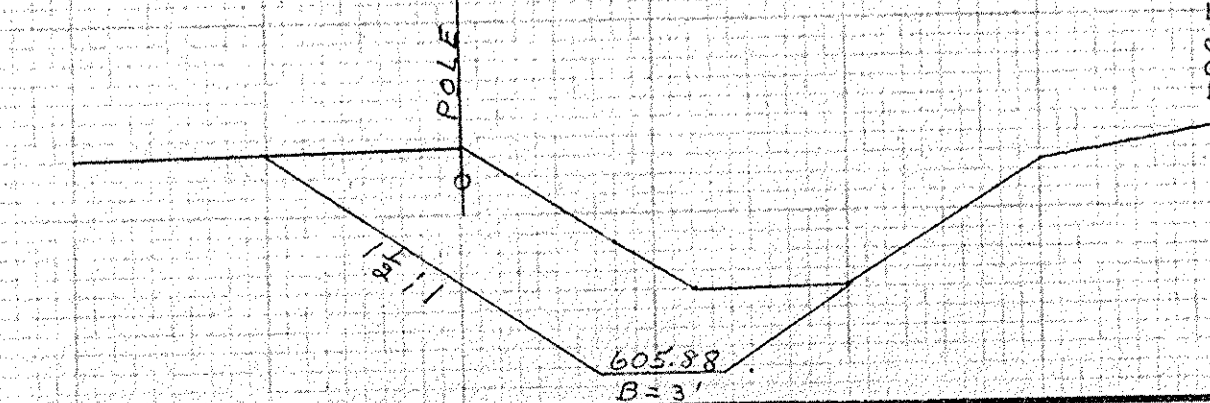
CROSS SECTION 16+00  
 71 SQ. IN. X .93 = .66 cu. yds. LIN. FT.



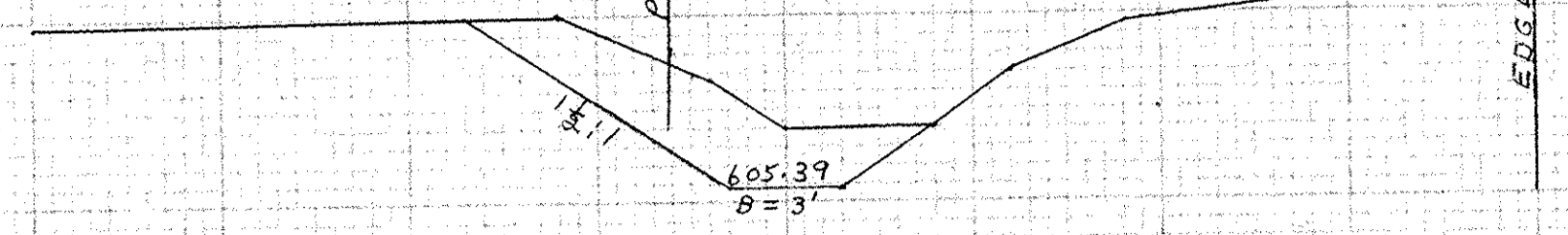
CROSS SECTION 21+00  
 127 SQ. IN. X .93 = 1.18 cu. yds. LIN. FT.



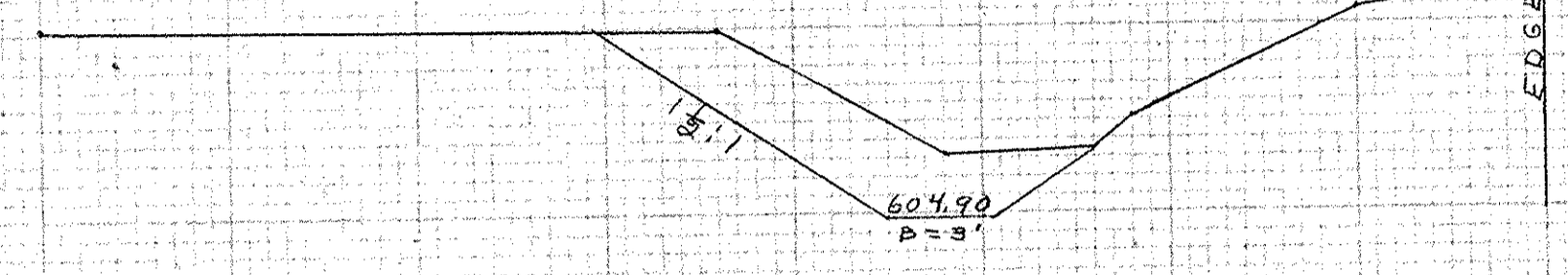
CROSS SECTION 28+00  
 143 SQ. IN. X .93 = 1.32 cu. yds. LIN. FT.



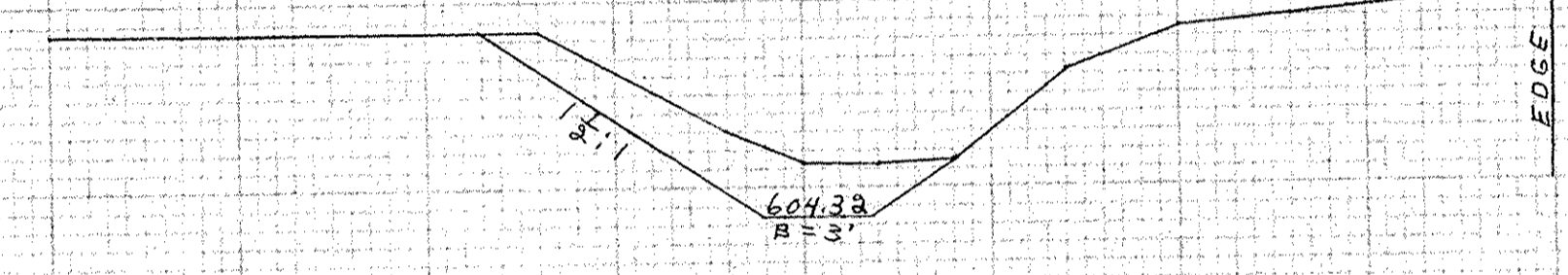
CROSS SECTION 35+00  
 80 SQ. IN. X .93 = .74 cu. yds. LIN. FT.



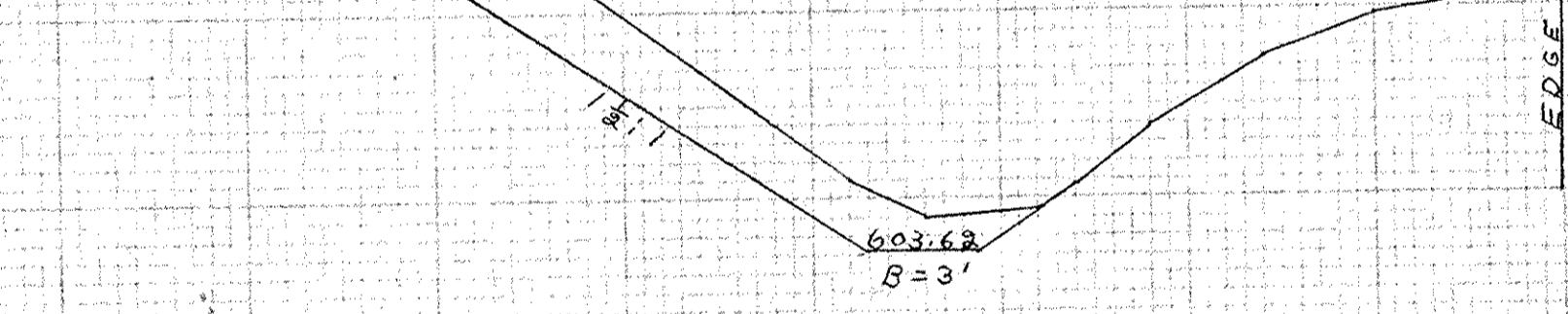
CROSS SECTION 42+00  
 90 SQ. IN. X .93 = .81 cu. yds. LIN. FT.



CROSS SECTION 49+00  
 63 SQ. IN. X .93 = .59 cu. yds. LIN. FT.



CROSS SECTION 56+64  
 83 SQ. IN. X .93 = .77 cu. yds. LIN. FT.



**SPECIFICATIONS**

- I. **EXCAVATION**  
 A. Bottom Width: The bottom width shall be THREE (3) feet between sta. 0+00 and sta. 56+64.  
 B. Bank Slopes: The ditch bank slopes are to be constructed to at least 1 1/2 foot horizontal to 1 foot vertical.  
 C. Alignment: The centerline of the improvement shall be approximately the centerline of the existing ditch unless otherwise indicated on the plan.  
 D. Total Excavation: The total excavation consists of 4,122 cubic yards of earth over 5664 lineal feet of ditch.  
 E. Excess Yardage: No extra compensation will be paid for such excavation in excess of yardage herein estimated. This estimate was made from cross-sections of the proposed ditch. The contractor should view the proposed work to his own satisfaction.
- II. **CLEARING**  
 All trees and/or brush which would interfere with the excavation operation must be cleared from the ditch right-of-way ahead of the construction operations. Stumps on the berm should be removed or cut as low as cutting tools permit. Cleared debris should be disposed of by burning or removed from the right-of-way.
- III. **BERM WIDTHS**  
 Unless otherwise noted the berms will have the following minimum widths: four (4) feet wide for ditches up to four (4) foot depths; six (6) feet wide for four to six foot depths; and ten (10) feet wide for ditches over six feet in depth.
- IV. **SPOIL BANKS**  
 Excavated material should be deposited and spread along the field side of the ditch, as determined, except where used for levees, and in overflow areas with timber or brush cover. Slope of the spoil after spreading should be at least 3:1 on the channel side and at least 4:1 on the field side. The height of the spoil should not exceed one foot above average ground level. Openings shall be provided for surface water to enter the ditch.
- V. **TILE OUTLETS**  
 Landowners shall protect their tile outlets with a section of continuous rigid pipe and flap-gates or grid to exclude rodents. For details of construction see your Soil Conservation Technician.
- VI. **SURFACE WATER OUTLETS**  
 Wherever a lateral or a surface ditch enters the main ditch at a higher elevation protection from erosion should be provided by drop structures, pipe drops, other suitable structure or grassed water way. For assistance on outlets see your Soil Conservation Technician.
- VII. **DITCH BANK SEEDING**  
 The ditch banks will be seeded, immediately after each day's work, to tall fescue (Kentucky 31 or Alta) at the rate of 25 lbs. per acre. A minimum of 50 lbs. of 10-10-10 fertilizer or equivalent will be applied. 1.5 acres of ditch bank seeding will be required.
- VIII. **CULVERTS**  
 Existing culverts will be cleaned and the inverts (flow line) lowered to correspond to the proposed ditch grade as indicated on the plan.

Station 6+46 - 6+66    Station 8+6 - 8+61    Station 9+73 - 20+09    Station 33+96 - 34+16    Station 56+64 - 63+18  
 20'-24" R/C OR 30" C.M.P.    45'-24" R/C OR 30" C.M.P.    36'-33" R/C    20'-36" R/C OR 36" EQUIVALENT IN CAPACITY    654' - R/C 36"

**YARDAGE**

| STATION | SQUARE INCHES | CU. YDS. LIN. FT. | AVERAGE CU. YDS. | DISTANCE | TOTAL YARDS |
|---------|---------------|-------------------|------------------|----------|-------------|
| 0+00    | .12           | .11               | .16              | 500      | 80          |
| 5+00    | .22           | .20               | .26              | 500      | 130         |
| 10+00   | .34           | .32               | .49              | 600      | 294         |
| 16+00   | .71           | .66               | .92              | 500      | 460         |
| 21+00   | 1.27          | 1.18              | 1.35             | 700      | 875         |
| 28+00   | 1.43          | 1.32              | 1.03             | 700      | 721         |
| 35+00   | .80           | .74               | .78              | 700      | 546         |
| 42+00   | .90           | .81               | .70              | 700      | 490         |
| 49+00   | .63           | .59               | .68              | 700      | 476         |
| 56+00   | .83           | .77               | .77              | 64       | 50          |
| 56+64   | .83           | .77               |                  |          |             |
|         |               |                   |                  |          | 4,122       |

**DITCH IMPROVEMENT**  
**SCHOTT DITCH**  
**CLAY TOWNSHIP**  
**OTTAWA COUNTY, OHIO.**

**U. S. DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

Designed RONALD GREER Date 12/67 Approved by Russell R. Rowe  
 Title Asst. Engr.  
 Drawn RONALD GREER 12/47  
 Title \_\_\_\_\_  
 Traced \_\_\_\_\_ Sheet No. 3 Drawing No. \_\_\_\_\_  
 of 3 34-01-83-68-1  
 Checked R. K. Rowe