Instructions for use of NE-ENG-15

1. Station where both the original ground line and completed grade of the practice is known.  (This is usually determined by survey.)

2. Area occupied between the original ground line and the completed practice in sq. inches.  Where (3) is determined mathematically, this will not be needed.

3. (2) x conversion factor (sq. inches per sq. ft.) or determined mathematically.

4. Previous (3) + following (3)

5. Distance between stations

6. (4) x (5)

7. (6) divided by 54

8. Sum of all (7) from one end of project to the other

This is the same process used to figure yardage where the Average End Areas are used.  It should be noted that this is the same process that is used to Figure Reservoir Capacities.  In this case, the cross sections are in a vertical plane and the stationing is horizontal.  Cross sections for reservoir capacity are horizontal, and the stationing (elevations) is vertical.

One quick check to avoid some errors is that the sum of distances in (5) should equal the difference between the end stations in (1).  Example: 16 + 34 + 50 + 20 + 16 = (1 + 36) – (0 + 00).

Column (6) can also be added for all stations and divided by 54 instead of dividing each value in (6) by 54.

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