

STATE OF VERMONT  
AGENCY OF TRANSPORTATION

# EARTHWORKS



|         |      | TOTAL EXCAVATION EARTH AND ROCK |                | ROCK EXCAVATION |                | EMBANKMENT     |                | COMMON EXCAVATION |                |         |      | TOTAL EXCAVATION EARTH AND ROCK |                | ROCK EXCAVATION |                | EMBANKMENT     |                | COMMON EXCAVATION |                |                       |      | SUMMARY AND BALANCES |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|---------|------|---------------------------------|----------------|-----------------|----------------|----------------|----------------|-------------------|----------------|---------|------|---------------------------------|----------------|-----------------|----------------|----------------|----------------|-------------------|----------------|-----------------------|------|----------------------|----------------|----------------|----------------|--------|--------|--------------------|-----------------------|-----------------|------------|----------|-----|-----------------------|--|--|--|--|
| STATION | DIST | AREA                            | VOLUME         | AREA            | VOLUME         | AREA           | VOLUME         | AREA              | VOLUME         | STATION | DIST | AREA                            | VOLUME         | AREA            | VOLUME         | AREA           | VOLUME         | AREA              | VOLUME         | STATION               | DIST | AREA                 | VOLUME         | AREA           | VOLUME         | AREA   | VOLUME | STATION TO STATION | TOTAL EXC. EARTH+ROCK | ROCK EXCAVATION | EMBANKMENT | EXCESSES |     | ACCUMULATIVE EXCESSES |  |  |  |  |
| km + m  | m    | m <sup>2</sup>                  | m <sup>3</sup> | m <sup>2</sup>  | m <sup>3</sup> | m <sup>2</sup> | m <sup>3</sup> | m <sup>2</sup>    | m <sup>3</sup> | km + m  | m    | m <sup>2</sup>                  | m <sup>3</sup> | m <sup>2</sup>  | m <sup>3</sup> | m <sup>2</sup> | m <sup>3</sup> | m <sup>2</sup>    | m <sup>3</sup> | km + m                | m    | m <sup>2</sup>       | m <sup>3</sup> | m <sup>2</sup> | m <sup>3</sup> | km + m | km + m | m <sup>3</sup>     | m <sup>3</sup>        | m <sup>3</sup>  | CUT        | FILL     | CUT | FILL                  |  |  |  |  |
|         |      |                                 |                |                 |                |                |                |                   |                |         |      |                                 |                |                 |                |                |                |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+000   |      |                                 |                |                 |                | 0.00           | 0.00           |                   |                | 1+280   | 3    |                                 |                |                 |                | 0.00           | 0.00           | 19.51             |                | 2+000                 |      |                      |                |                |                | 0.00   |        | 16.94              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 0              |                   | 0              |         | 20   |                                 |                |                 |                |                | 0              |                   | 374            |                       | 10   |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+020   |      |                                 |                |                 |                | 0.00           | 0.00           |                   |                | 1+300   |      |                                 |                |                 |                | 0.00           | 0.00           | 17.90             |                | 2+010                 |      |                      |                |                |                | 0.85   |        | 14.99              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 4              |                   | 44             |         | 3    |                                 |                |                 |                |                | 0              |                   | 53             |                       | 5    |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+040   |      |                                 |                |                 |                | 0.37           | 4.41           |                   |                | 1+303   |      |                                 |                |                 |                | 0.00           | 0.00           | 17.53             |                | 2+015                 |      |                      |                |                |                | 0.85   |        | 14.99              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 13   |                                 |                |                 |                |                | 2              |                   | 74             |         | 17   |                                 |                |                 |                |                | 34             |                   | 314            |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+053   |      |                                 |                |                 |                | 0.00           | 7.00           |                   |                | 1+320   |      |                                 |                |                 |                | 3.95           | 19.46          |                   |                | ROUTE 15 INTERSECTION |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|         | 7    |                                 |                |                 |                |                | 1              |                   | 48             |         | 20   |                                 |                |                 |                | 49             |                | 383               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+060   |      |                                 |                |                 |                | 0.13           | 6.74           |                   |                | 1+340   |      |                                 |                |                 |                | 0.96           | 18.85          |                   |                | 2+028                 |      |                      |                |                |                | 9.03   |        | 1.19               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 16   |                                 |                |                 |                |                | 1              |                   | 109            |         | 14   |                                 |                |                 |                | 11             |                | 260               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+076   |      |                                 |                |                 |                | 0.00           | 6.84           |                   |                | 1+354   |      |                                 |                |                 |                | 0.57           | 18.23          |                   |                | 2+034                 |      |                      |                |                |                | 9.03   |        | 1.19               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 4    |                                 |                |                 |                |                | 1              |                   | 27             |         | 6    |                                 |                |                 |                | 4              |                | 110               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+080   |      |                                 |                |                 |                | 0.30           | 6.66           |                   |                | 1+360   |      |                                 |                |                 |                | 0.61           | 18.56          |                   |                | 2+040                 |      |                      |                |                |                | 11.99  |        | 0.35               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 6    |                                 |                |                 |                |                | 2              |                   | 40             |         | 20   |                                 |                |                 |                | 12             |                | 367               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+086   |      |                                 |                |                 |                | 0.34           | 6.50           |                   |                | 1+380   |      |                                 |                |                 |                | 0.63           | 18.09          |                   |                | 2+060                 |      |                      |                |                |                | 5.70   |        | 2.46               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 14   |                                 |                |                 |                |                | 4              |                   | 89             |         | 20   |                                 |                |                 |                | 11             |                | 381               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+100   |      |                                 |                |                 |                | 0.23           | 6.27           |                   |                | 1+400   |      |                                 |                |                 |                | 0.43           | 20.05          |                   |                | 2+080                 |      |                      |                |                |                | 3.56   |        | 4.80               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 5              |                   | 135            |         | 10   |                                 |                |                 |                | 5              |                | 194               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+120   |      |                                 |                |                 |                | 0.24           | 7.25           |                   |                | 1+410   |      |                                 |                |                 |                | 0.50           | 18.73          |                   |                | 2+100                 |      |                      |                |                |                | 2.81   |        | 8.12               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 10             |                   | 228            |         | 10   |                                 |                |                 |                | 6              |                | 176               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+140   |      |                                 |                |                 |                | 0.77           | 15.53          |                   |                | 1+420   |      |                                 |                |                 |                | 0.73           | 16.46          |                   |                | 2+120                 |      |                      |                |                |                | 0.66   |        | 0.52               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 25             |                   | 305            |         | 13   |                                 |                |                 |                | 5              |                | 210               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+160   |      |                                 |                |                 |                | 1.74           | 14.93          |                   |                | 1+433   |      |                                 |                |                 |                | 0.02           | 15.79          |                   |                | 2+136                 |      |                      |                |                |                | 0.53   |        | 12.91              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 41             |                   | 302            |         | 7    |                                 |                |                 |                | 1              |                | 108               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+180   |      |                                 |                |                 |                | 2.41           | 15.28          |                   |                | 1+440   |      |                                 |                |                 |                | 0.14           | 14.94          |                   |                | 2+140                 |      |                      |                |                |                | 0.49   |        | 2.96               |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 45             |                   | 301            |         | 5    |                                 |                |                 |                | 1              |                | 77                |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+200   |      |                                 |                |                 |                | 2.04           | 14.77          |                   |                | 1+445   |      |                                 |                |                 |                | 0.13           | 15.86          |                   |                | 2+145                 |      |                      |                |                |                | 0.55   |        | 12.84              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 16   |                                 |                |                 |                |                | 29             |                   | 237            |         | 15   |                                 |                |                 |                | 1              |                | 224               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+216   |      |                                 |                |                 |                | 1.63           | 14.89          |                   |                | 1+460   |      |                                 |                |                 |                | 0.00           | 14.03          |                   |                | 2+160                 |      |                      |                |                |                | 0.41   |        | 12.76              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 4    |                                 |                |                 |                |                | 5              |                   | 60             |         | 7    |                                 |                |                 |                | 0              |                | 98                |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+220   |      |                                 |                |                 |                | 0.79           | 15.18          |                   |                | 1+467   |      |                                 |                |                 |                | 0.00           | 13.87          |                   |                | 2+172                 |      |                      |                |                |                | 0      |        | 12.76              |                       |                 |            |          |     |                       |  |  |  |  |
|         | 5    |                                 |                |                 |                |                | 5              |                   | 80             |         | 13   |                                 |                |                 |                | 0              |                | 174               |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+225   |      |                                 |                |                 |                | 1.01           | 16.87          |                   |                | 1+480   |      |                                 |                |                 |                | 0.04           | 12.94          |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|         | 15   |                                 |                |                 |                |                | 22             |                   | 253            |         | 2    |                                 |                |                 |                | 0              |                | 26                |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+240   |      |                                 |                |                 |                | 1.97           | 16.86          |                   |                | 1+482   |      |                                 |                |                 |                | 0.00           | 12.94          |                   |                | AREA 1 (SEE SHEET 25) |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|         | 20   |                                 |                |                 |                |                | 22             |                   | 332            |         |      |                                 |                |                 |                |                |                |                   |                | AREA 2 (SEE SHEET 25) |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+260   |      |                                 |                |                 |                | 0.25           | 16.34          |                   |                |         |      |                                 |                |                 |                |                |                |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|         | 17   |                                 |                |                 |                |                | 2              |                   | 302            |         |      |                                 |                |                 |                |                |                |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| 1+277   |      |                                 |                |                 |                | 0.01           | 19.21          |                   |                |         |      |                                 |                |                 |                |                |                |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
| TOTALS  |      |                                 |                |                 |                |                | 226            |                   | 2966           |         |      |                                 |                |                 |                | 140            |                | 3587              |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |
|         |      |                                 |                |                 |                |                |                |                   |                |         |      |                                 |                |                 |                |                |                |                   |                |                       |      |                      |                |                |                |        |        |                    |                       |                 |            |          |     |                       |  |  |  |  |

| REMARKS   |      |
|---|------|
| EARTH AND ROCK EXCAVATION                                   | 8814 |
| SOLID ROCK EXCAVATION                                       | 0    |
| EARTH EXCAVATION  | 8814 |
| PLANIMETERED FILL   | 899  |
| LESS FACTORED SOLID ROCK                                    | 0    |
| LESS DISPLACEMENT OF ANY LARGE STRUCTURES                   | 0    |
| NET PLANIMETERED FILL                                       | 899  |
| FACTOR (15%)  | 135  |
| PLANIMETERED FILL INCLUDING FACTOR                          | 1034 |
| MATERIALS AVAILABLE FOR FILLS                               |      |
| EARTH EXCAVATION  | 8814 |
| TOTAL MATERIAL AVAILABLE FOR FILL                           | 8814 |
| TOTAL FILL INCLUDING FACTOR                                 | 1034 |
| TOTAL MATERIAL FOR FILL                                     | 8814 |
| BORROW  |      |
| EXCESS EXCAVATION   | 7780 |
| NOTE: ALL DIMENSIONS IN MILLIMETERS (mm) EXCEPT WHERE NOTED |      |

EARTHWORKS

PROJECT NAME: ESSEX  
PROJECT NUMBER: STP 030-1(17)S

PLOT FILE NAME: zstp030-1(17)slm.dgn  
L&D PROJECT NUMBER: 00-074  
DESIGNED BY: LAMOUREUX & DICKINSON  
CONSULTING ENGINEERS, INC.

DRAWN BY: PLC  
CHECKED BY: RJD  
SHEET 6 OF 42