

### EARTHWORK SUMMARY IN CUBIC YARDS

| LOCATION                | UNCL. EXCAV | EMBT + % | BORROW | WASTE |
|-------------------------|-------------|----------|--------|-------|
| -L- 11+00 TO 13+50      | 210         | 324      | 172    | 0     |
| -DRV- 10+25 TO 10+81.35 | 2           | 2        | 0      | 0     |
| -Y- 19+00 TO 22+00      | 1230        | 0        | 0      | 1230  |
| SUMMARIES SUBTOTAL      | 1442        | 326      | 172    | 1230  |
| SHOULDER BORROW         |             |          | 10     |       |
| LOSS DUE TO CLR & GRUB  | -150        |          | 150    |       |
| ADJUST FOR ROCK WASTE   |             |          |        | 308   |
| PROJECT TOTAL           | 1292        | 326      | 332    | 1538  |
| 5% FOR TOPSOIL ON PIT   |             |          | 17     |       |
| GRAND TOTAL             | 1292        |          | 349    | 1538  |
| SAY                     | 1300        |          | 350    | 1550  |
| CONTINGENCY UNDERCUT    | 200         |          |        |       |

### PAVEMENT REMOVAL SUMMARY IN SQUARE YARDS

| STA TO STA         | LOCATION | AREA |
|--------------------|----------|------|
| -Y- 17+98 TO 18+52 | RT       | 50   |
| -L- 10+61 TO 11+29 | RT       | 140  |
|                    |          |      |
|                    |          |      |
|                    |          |      |
|                    | TOTAL    | 190  |
|                    | SAY      | 200  |

APPROXIMATE QUANTITIES ONLY. BORROW EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR 'GRADING'.

### LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

| STATION      | STA | THICKNESS OR GAUGE | LOCATION (L, RT, OR CL) | STRUCTURE NO. | TOP ELEVATION | INVERT ELEVATION | SLOPE CRITICAL | CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) |     |     |     |     |     |     |     | BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) |     |     |     |     |     |     |     | ENDWALLS<br>STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) | QUANTITIES FOR STRUCTURES<br>* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') | FRAME, GRATES AND HOOD STANDARD 840.03 | D.I. FRAME WITH 2 GRATES STD. 840.29 | T.B.D.I. STD. 840.35 | CORR. STEEL ELBOWS NO. & SIZE | CONC. COLLARS CL. "B" C.Y. STD 840.72 | PERFORMED SCOUR HOLE, EACH | PIPE REMOVAL LIN. FT. | ABBREVIATIONS |        |        |                         | REMARKS |                 |                 |   |   |   |      |        |
|--------------|-----|--------------------|-------------------------|---------------|---------------|------------------|----------------|--|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|---|---|--|--------------------------------------|----------------------|-------------------------------|---------------------------------------|----------------------------|-----------------------|---------------|--------|--------|-------------------------|---------|-----------------|-----------------|---|---|---|------|--------|
|              |     |                    |                         |               |               |                  |                | 12"  | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 12"   | 15" | 18" | 24" | 30" | 36" | 42" | 48" |   |   |  |                                      |                      |                               |                                       |                            |                       | CU. YDS.      | R.C.P. | C.S.P. | PER EACH (0' THRU 5.0') |         | 5.0' THRU 10.0' | 10.0' AND ABOVE | E | F | G | C.B. | N.D.I. |
| -L- 10+23.02 | LT  | 1                  |                         |               | 2706.60       |                  |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |
| -L- 10+23.02 | LT  | 1                  |                         | 2             |               | 2703.85          |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |
| -L- 11+35.30 | LT  | 3                  |                         |               | 2711.85       |                  |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |
| -L- 11+35.30 | LT  | 3                  |                         | 4             |               | 2709.10          |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |
| -L- 11+36.83 | RT  | 5                  |                         |               | 2712.30       | 2704.40          |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |
| TOTAL        |     |                    |                         |               |               |                  |                |  |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |   |   |  |                                      |                      |                               |                                       |                            |                       |               |        |        |                         |         |                 |                 |   |   |   |      |        |

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.  
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.  
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.  
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.  
 G = GATING IMPACT ATTENUATOR TYPE 350  
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

### GUARDRAIL SUMMARY

| SURVEY LINE | BEG. STA.     | END STA.         | LOCATION              | LENGTH                 |             |              | WARRANT POINT    |              | "N" DIST. FROM E.O.L. | TOTAL SHOULDER WIDTH | FLARE LENGTH |              | W            |              | ANCHORS  |     |                | IMPACT ATTENUATOR TYPE 350 |           |    | REMOVE EXISTING GUARDRAIL | REMARKS |        |
|-------------|---------------|------------------|-----------------------|------------------------|-------------|--------------|------------------|--------------|-----------------------|----------------------|--------------|--------------|--------------|--------------|----------|-----|----------------|----------------------------|-----------|----|---------------------------|---------|--------|
|             |               |                  |                       | STRAIGHT               | SHOP CURVED | DOUBLE FACED | APPROACH END     | TRAILING END |                       |                      | APPROACH END | TRAILING END | APPROACH END | TRAILING END | GRAU 350 | III | GRAU (SPECIAL) | NO.                        | PERMITTED | NG |                           |         |        |
| -Y-         | -Y- STA 17+66 | -L- STA 10+21.51 | RT                    | 88.26                  | 18.75       |              | -L- STA 10+21.51 |              | 5                     | 7                    |              |              |              |              |          | 1   |                |                            |           |    |                           |         |        |
| -L-         | 10+29.28      | -Y- STA 19+69.48 | RT                    | 56.05                  | 18.75       |              | -L- STA 10+29.28 |              | 4                     | 7                    | 56.05        |              |              |              |          | 1   |                |                            |           |    |                           |         | 38.77  |
| -L-         | 10+98.52      | 11+54.27         | RT                    | 55.75                  |             |              | -L- STA 10+98.52 |              | 2                     | 7                    |              |              |              |              |          | 1   |                | 1                          |           |    |                           |         | 122.45 |
| -L-         | 11+06.29      | 12+28.29         | LT                    | 122                    |             |              | -L- STA 11+06.29 |              | 5                     | 7                    | 50           |              |              |              |          | 1   |                |                            |           |    |                           |         | 86.75  |
|             |               |                  | SUBTOTAL              | 322.06                 | 37.5        |              |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  | DEDUCTION FOR ANCHORS | -150                   |             |              |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  | TOTAL                 | 172.06                 | 37.5        |              |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  | SAY                   | 175                    | 50          |              |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       | ANCHOR DEDUCTIONS:     |             |              |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       | 1 GRAU-350 @ 50'       |             | = 50'        |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       | 4 TYPE III @ 18.75'    |             | = 75'        |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       | 1 GRAU (SPECIAL) @ 25' |             | = 25'        |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       | TOTAL                  |             | = 150'       |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       |                        |             | 1 4 1        |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       |                        |             | 247.97       |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |
|             |               |                  |                       |                        |             | 250          |                  |              |                       |                      |              |              |              |              |          |     |                |                            |           |    |                           |         |        |

ADDITIONAL POSTS = 5 EA