

**SHOULDER BERM GUTTER SUMMARY**

**SUMMARY OF INCIDENTAL MILLING**

| SURVEY LINE | STATION  | STATION  | YD <sup>2</sup> |
|-------------|----------|----------|-----------------|
| -L-         | 18+25.00 | 19+50.00 | 277.8           |
| -L-         | 24+00.00 | 24+75.00 | 166.7           |
|             |          | TOTAL:   | 444.5           |
|             |          | SAY:     | 450             |

| SURVEY LINE | STATION  | STATION  | LENGTH |
|-------------|----------|----------|--------|
| -L- LT      | 20+99.00 | 23+50.00 | 251.00 |
| -L- RT      | 20+50.00 | 22+00.00 | 150.00 |
|             |          | TOTAL:   | 401.00 |
|             |          | SAY:     | 401    |

**PAVEMENT REMOVAL SUMMARY**

| SURVEY LINE | STATION  | STATION  | LOCATION LT/RT/CL | YD <sup>2</sup> |
|-------------|----------|----------|-------------------|-----------------|
| -L-         | 20+00.00 | 21+17.33 | CL                | 261.88          |
| -L-         | 22+18.18 | 24+00.00 | CL                | 409.40          |
|             |          | TOTAL:   |                   | 671.28          |
|             |          | SAY:     |                   | 672             |

**SUMMARY OF EARTHWORK**

| STATION                      | STATION         | UNCL EXCAV. | EMBANK. +% | BORROW | WASTE |
|------------------------------|-----------------|-------------|------------|--------|-------|
| -L- 18+25.00                 | -L- 21+66.00    | 45          | 720        | 675    |       |
| -DRV1- 10+30.00              | -DRV1- 10+50.00 | 5           |            |        | 5     |
| -DRV2- 10+30.00              | -DRV2- 10+50.00 | 5           |            |        | 5     |
|                              | SUBTOTAL NO. 1  | 55          | 720        | 675    | 10    |
| -L- 21+66.00                 | -L- 24+75.00    | 11          | 1,300      | 1,289  |       |
|                              | SUBTOTAL NO. 2  | 11          | 1,300      | 1,289  |       |
| PROJECT SUBTOTALS:           |                 | 66          | 2,019      | 1,963  | 10    |
| WASTE IN LIEU OF BORROW      |                 |             |            | -10    | -10   |
| PROJECT TOTALS:              |                 | 66          | 2,019      | 1,953  |       |
| REPLACE TOP SOIL BORROW PITS |                 |             |            | 98     |       |
| GRAND TOTALS:                |                 | 66          | 2,019      | 2,051  |       |
| SAY:                         |                 | 100         |            | 2100   |       |

UNDERCUT EXCAVATION: 100 CY  
 SELECT GRANULAR MATERIAL: 100 CY  
 SHALLOW UNDERCUT: 100 CY  
 CLASS IV SUBGRADE STAB: 190 TONS

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

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

| STATION        | SIZE | THICKNESS OR GAUGE | LOCATION (LT, RT, OR CL) | STRUCTURE NO. | TOP ELEVATION | INVERT ELEVATION | INVERT ELEVATION SLOPE CRITICAL | DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) |     |     |     |     |     |     |     | C.S. PIPE (UNLESS NOTED OTHERWISE) |     |     |     |     |     |     |     | CLASS IV R.C. PIPE (UNLESS OTHERWISE NOTED) |     |     |     |     |     |     |     | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS | FRAME, GRATES AND HOOD STANDARD 840.03 | CORR. STEEL ELBOWS NO. & SIZE | CONC. COLLARS CL. "B" C.Y. STD. 840.72 | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | PIPE REMOVAL LIN. FT. | ABBREVIATIONS |
|----------------|------|--------------------|--------------------------|---------------|---------------|------------------|---------------------------------|--|-----|-----|-----|-----|-----|-----|-----|------------------------------------|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|---------------------|---------------------|---------------------|----------|--|-------------------------------|--|---|-----------------------|---------------|
|                |      |                    |                          |               |               |                  |                                 | 12"  | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 12"                                | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 12"   | 15" | 18" | 24" | 30" | 36" | 42" | 48" |                     |                     |                     |          |  |                               |  |   |                       |               |
| -L- 21+71.66   | RT   | 401                |                          | 401           | 938.94'       | 935.77'          |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
|                | CL   | 401                | 402                      |               | 935.77'       | 935.52'          |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
| -L- 21+71.66   | LT   | 402                |                          |               | 938.94'       | 935.52'          |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
|                | LT   | 402                | 403                      |               |               | 935.52'          | 937.01'                         |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
|                | LT   | 402                | 404                      |               |               | 935.52'          | 935.20'                         |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
| -L- 20+99.99   | LT   | 403                |                          |               | 940.18'       | 937.01'          |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
|                | LT   | 403                | OUT                      |               |               | 937.01'          | 944.50'                         |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
| -L- 22+34.99   | LT   | 404                |                          |               | 944.72'       | 935.20'          |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
|                | LT   | 404                | OUT                      |               |               | 935.20'          | 926.30'                         |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
| PROJECT TOTALS |      |                    |                          |               |               |                  |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |
| SAY            |      |                    |                          |               |               |                  |                                 |  |     |     |     |     |     |     |     |                                    |     |     |     |     |     |     |     |   |     |     |     |     |     |     |     |                     |                     |                     |          |  |                               |  |   |                       |               |

"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 SHOUL. WIDTH | FLARE LENGTH |              | W      |  | ANCHORS  |       |      |       |        |     |      |    |   |    | IMPACT ATTENUATOR TYPE 350 |  |  | SINGLE FACED GUARDRAIL | REMOVE EXISTING GUARDRAIL | REMOVE AND STOCKPILE EXISTING GUARDRAIL | REMARKS |  |  |  |
|-------------|-----------|----------|------------------------|--------------------------------|-------------|--------------|---------------|--------------|-----------------------|--------------------|--------------|--------------|--------|--|----------|-------|------|-------|--------|-----|------|----|---|----|----------------------------|--|--|------------------------|---------------------------|---|---------|--|--|--|
|             |           |          |                        | STRAIGHT                       | SHOP CURVED | DOUBLE FACED | APPROACH END  | TRAILING END |                       |                    | APPROACH END | TRAILING END | XI MOD | XI   | GRAU 350 | M-350 | XIII | CAT-1 | VI MOD | BIC | AT-1 | EA | G | NG |                            |  |  |                        |                           |   |         |  |  |  |
| -L-         | 20+84.83  | 24+38.66 | LT                     | 339.01'                        | 40.53'      |              | 24+38.66      | 20+88.15     | 4'                    | 7'                 | 50'          | 1'           |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
| -L-         | 19+30.84  | 22+74.63 | RT                     | 327.92'                        | 29.33'      |              | 19+30.84      | 22+52.87     | 4'                    | 7'                 | 50'          | 1'           |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
|             |           |          | PROJECT SUBTOTALS      | 666.93'                        | 69.86'      |              |               |              |                       |                    |              |              |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
|             |           |          | DEDUCTIONS FOR ANCHORS | -100.00'                       | -12.50'     |              |               |              |                       |                    |              |              |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
|             |           |          | GRAND TOTALS           | 566.93'                        | 57.36'      |              |               |              |                       |                    |              |              |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
|             |           |          | SAY                    | 575.00'                        | 62.50'      |              |               |              |                       |                    |              |              |        |  |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |
|             |           |          |                        | ADDITIONAL GUARDRAIL POSTS = 5 |             |              |               |              |                       |                    |              |              |        | DEDUCTIONS FOR GUARDRAIL ANCHORS = 112.50' |          |       |      |       |        |     |      |    |   |    |                            |  |  |                        |                           |   |         |  |  |  |