| COMPUTED BY: D. PETRY | DATE: 02-11-05 |
|---|---|
| CHECKED BY: M. COPPLE | DATE: 02-11-05 |

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| B-4039 | 3-A |

## ASPHALT PAVEMENT REMOVAL SUMMARY

| STATION TO STATION | SQUARE YARDS |
|---|---|
| -L- STA. 11+45.00 LT. TO -L- STA. 13+57.47 LT. | 286.00 |
| -L- STA. 14+26.75 LT. TO -L- STA. 16+11.63 LT. | 195.62 |
| PROJECT TOTAL | 481.62 |
| SAY | 485 |

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

## SUMMARY OF EARTHWORK

| STATION TO STATION | UNCLASIFIED EXCAVATION (cu. yds) | UNDERCUT (cu. yds) | ROADWAY EMBANKMENT (cu. yds) +% | BORROW (cu. yds) | WASTE (cu. yds) |
|---|---|---|---|---|---|
| SUMMARY #1 | | | | | |
| -L- STA. 10+00.00 -L- STA. 13+52.00 (BEGIN BRIDGE) | 172 | | 419 | 247 | |
| SUMMARY #2 | | | | | |
| -L- STA. 14+72.00 (END BRIDGE) -L- STA. 19+00.00 | 56 | | 1,570 | 1,514 | |
| SUBTOTAL (SUMMARIES 1-2) | 228 | | 1,989 | 1,761 | |
| ESTIMATED LOSS DUE TO CLEARING & GRUBBING | -10 | | | 10 | |
| PROJECT SUBTOTALS | 218 | | 1,989 | 1,771 | |
| EST. 5% FOR REPLACING TOPSOIL ON BORROW PITS | | | | 89 | |
| GRAND TOTAL | 218 | | 1,989 | 1,860 | |
| SAY | 220 | | | 1,860 | |

FABRIC FOR SOIL STABILIZATION = 500 SY
ESTIMATED GRADE POINT UNDERCUT = 100 CY.
ESTIMATED SELECT GRANULAR MATERIAL CL. II & III = 500 CY.
ESTIMATED SUBGRADE STABILIZATION MATERIAL CL. IV = 500 TNS.
ESTIMATED PAVEMENT STRUCTURE VOLUME = 409 CY.

"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.

## GUARDRAIL SUMMARY

| SURVEY LINE | BEG. STA. | END STA. | LOCATION | LENGTH STRAIGHT | LENGTH SHOP CURVED | LENGTH DOUBLE FACED | WARRANT POINT APPROACH END | WARRANT POINT TRAILING END | "N" DIST. FROM E.O.L. | TOTAL SHOUL. WIDTH | FLARE LENGTH APPROACH END | FLARE LENGTH TRAILING END | W APPROACH END | W TRAILING END | ANCHORS X | XI | GRAU 350 | M-350 | XIII | AT-1 | VI MOD | BIC | TYPE III | IMPACT ATTENUATOR TYPE 350 | SINGLE FACED GUARDRAIL | REMOVE EXISTING GUARDRAIL | REMOVE AND STOCKPILE EXISTING GUARDRAIL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -L- | 11+20.18 | 13+45.18 | RT. | 225.00' | | | | 13+45.18 | 5' | 11' | | 206.25' | | 4.07' | | | 1 | | | | | | 1 | | | | | |
| -L- | 12+35.58 | 13+35.58 | LT. | 100.00' | | | 13+35.58 | | 5' | 11' | 81.25' | | 5.00' | | | | 1 | | | | | | 1 | | | | | |
| -L- | 14+89.21 | 16+79.72 | RT. | 150.00' | 62.50' | | 14+89.21 | | 5' | 11' | 131.25' | | 6.25' | | | | | | | 1 | | | 1 | | | | | |
| -L- | 14+79.60 | 15+92.10 | LT. | 112.50' | | | | 14+79.60 | 5' | 11' | | 93.75' | | 5.45' | | | 1 | | | | | | 1 | | | | | |
| -L- | 16+97.89 | 18+60.39 | RT. | 162.50' | | | 16+97.89 | | 8' | 11' | | | | | | | 2 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | 5 | | | 1 | | | 4 | | | | | |
| | | | | | | | DEDUCTION FOR ANCHOR UNITS: | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTAL | | | | 750.00' | 62.50' | | 5 GRAU-350 @ 50.00' = 250.00' | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 4 TYPE III @ 18.75' = 75.00' | | | ADDITIONAL GUARDRAIL POSTS ..... 5 EA. | | | | | | | | | | | | | | | | | | |
| DEDUCTIONS FOR ANCHOR UNITS: | | | | 325.00' | 6.25' | | 1 TYPE AT-1 @ 6.25' = 6.25' | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 331.25' | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | 425.00' | 56.25' | | | | | | | | | | | | | | | | | | | | | | | |
| | | | SAY | 425.00' | 62.50' | | | | | | | | | | | | | | | | | | | | | | | |

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

| STATION | SIZE / THICKNESS OR GAUGE | LOCATION (LT,RT, OR CL) | STRUCTURE NO. FROM | STRUCTURE NO. TO | TOP ELEVATION | INVERT ELEVATION | INVERT ELEVATION | SLOPE CRITICAL | CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P. | C.S.P. | QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') PER EACH (0' THRU 5.0') | LIN. *FT. A 5.0' THRU 10.0' | B 10.0' AND ABOVE | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E | F | G | 12" FUNNEL DRAIN PIPE | 12" FUNNEL DRAIN PIPE ELBOWS | PIPE REMOVAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -L- 13+15 | | RT. | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8' | 1-12" | | |
| -L- 14+80 | | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | 40 | | | | | | | | | | | | | | | | |
| -L- 16+33 | | LT. | 3 | | | | | | | | | | | | | | | | | | | | | | 32 | | | | | | | | | | | | | | | | | |
| TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | 32 | 40 | | | | | | | | | | | | 8' | 1-12" | | |

ABBREVIATIONS

| | |
|---|---|
| C.B. | CATCH BASIN |
| N.D.I. | NARROW DROP INLET |
| D.I. | DROP INLET |
| M.D.I. | MEDIAN DROP INLET |
| M.D.I. (N.S.) | MEDIAN DROP INLET (NARROW SLOT) |
| J.B. | JUNCTION BOX |
| M.H. | MANHOLE |
| T.B.D.I. | TRAFFIC BEARING DROP INLET |
| T.B.J.B. | TRAFFIC BEARING JUCTION BOX |

Ramey Kemp & Associates, Inc.
Transportation Consulting Engineers
4928-A Windy Hill Drive Raleigh, North Carolina 27609
(919) 872-5115 fax (919) 878-5416