| COMPUTED BY: | D.R.Ethridge | DATE: | 5/3/2022 |
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| CHECKED BY: | D.R.Ethridge | DATE: | 5/3/2022 |

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
## DIVISION OF HIGHWAYS

| PROJECT NO. | SHEET NO. |
|---|---|
| U-6223 | 3B-1 |

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 (LF) | | | WARRANT POINT | | "N" DIST. FROM E.O.L. | TOTAL SHOULDER WIDTH | FLARE LENGTH | | W | | ANCHORS | | | | | | | | | IMPACT ATTENUATOR TYPE 350 | | SINGLE FACED CONCRETE BARRIER | REMOVE EXISTING GUARDRAIL | REMOVE & STOCKPILE EXISTING GUARDRAIL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | STRAIGHT | SHOP CURVED | DOUBLE FACED | APPROACH END | TRAILING END | | | APPROACH END | TRAILING END | APPROACH END | TRAILING END | XI MOD | XI | GREU TL-3 | M-350 | XIII | CAT-1 | VI MOD | BIC | III | G | NG | | | | |
| -L- | 52+70.00 | 56+01.25 | RT | 331.25' | | | 55+14.00 | 55+30.00 | 10' | 13' | 1' | | 50' | | | | 1 | | | 1 | | | | | | | | | |
| -L- | 50+95.00 | 56+42.59 | LT | | | | | | 10' | 13' | | | | | | | | | | | | | | | | 547.59 | | | |
| -L- | 56+42.59 | 58+23.84 | LT | 181.25' | | | 56+42.59 | 56+42.59 | VAR 10.75'-10' | 13' | 1' | | 50' | | | | 1 | | | | | | 1 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SUBTOTAL | | 512.50' | | | | | | | | | | | | | 2 | | | 1 | | | 1 | | | 547.59 | | | |
| | LESS ANCHOR DEDUCTIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | GREU TL-3 | 2 @ 50' | = | 100.00' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CAT-1 | 1 @ 6.25' | = | 6.25' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | III | 1 @ 18.75' | = | 18.75' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | TOTAL | | 387.50' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SAY | | 387.50' | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 ADDITIONAL GUARDRAIL POSTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

## SUMMARY OF EARTHWORK
### Volumes in Cubic Yards

| STATION TO STATION | Uncl. Excav. | Undercut | Embank +% | Borrow | Waste |
|---|---|---|---|---|---|
| -L- 11+00.00 TO 25+00.00 | 2306 | | 610 | | 1696 |
| -Y1- 10+34.00 TO 16+50.00 | 1937 | 1200 | 1573 | 848 | 2412 |
| SUBTOTAL | 4243 | 1200 | 2183 | 848 | 4108 |
| | | | | | |
| -L- 40+10.00 TO 48+30.00 | 2107 | | 764 | | 1343 |
| -Y2- 10+00.00 TO 15+65.00 | 597 | 800 | 2220 | 2085 | 1262 |
| SUBTOTAL | 2704 | 800 | 2984 | 2085 | 2605 |
| | | | | | |
| -L- 48+30.00 TO 63+65.41 | 2893 | 4000 | 21633 | 21055 | 6315 |
| -Y4- 10+40.00 TO 12+20.00 | 46 | | 283 | 237 | |
| SUBTOTAL | 2939 | 4000 | 21916 | 21292 | 6315 |
| | | | | | |
| TOTAL | 9886 | 6000 | 27083 | 24225 | 13028 |
| | | | | | |
| ADDITIONAL UNDERCUT EXCAVATION | | 400 | 500 | 500 | 400 |
| SELECT GRANULAR MATERIAL IN LIEU OF BORROW | | | -8000 | -8000 | |
| MATERIAL FOR SHOULDER CONSTRUCTION | | | 1500 | 1500 | |
| LOSS DUE TO CLEARING & GRUBBING | -1300 | | | 1300 | |
| WASTE TO REPLACE BORROW | | | | -2696 | -2696 |
| PROJECT TOTAL | 8586 | 6400 | 21083 | 16829 | 10732 |
| | | | | | |
| ESTIMATE TO REPLACE TOPSOIL ON BORROW PIT | | | | 841 | |
| GRAND TOTAL | 8586 | 6400 | 21083 | 17670 | 10732 |
| SAY | 8600 | 6400 | | 17700 | |

-L-, -Y1-, -Y2- AND -Y4- PAVEMENT STRUCTURE VOLUME = 2880 CY

ESTIMATED SELECT GRANULAR MATERIAL = 6400 CY

ESTIMATED GEOTEXTILE FOR SOIL STABILIZATION = 10400 SY

ESTIMATED SHALLOW UNDERCUT = 1300 CY

ESTIMATED CLASS IV SUBGRADE STABILIZATION = 2650 TON

EARTHWORK QUANTITIES ARE CALCULATED BY DIVISION FOUR DDC BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT

QUANTITIES ARE APPROXIMATE ONLY. THE RESIDENT ENGINEER WILL RECROSS-SECTION THE WORK ACCURATELY WHEN THE PROJECT IS STAKED OUT. THESE CROSS-SECTION NOTES WILL BE USED IN COMPUTING THE FINAL QUANTITIES FOR WHICH THE CONTRACTOR WILL BE PAID.

## SUMMARY OF RIP RAP & GEOTEXTILE FOR DRAINAGE

| STR# | SHEET NO | LINE | STATION | LOC | RIP RAP CLASS B (TONS) | RIP RAP CLASS I (TONS) | GEOTEXTILE FOR DRAINAGE (SY) | NOTES |
|---|---|---|---|---|---|---|---|---|
| 401 | 4 | L | 13+34.55 | RT | 3 | | 10 | |
| 405 | 4 | L | 15+38.35 | RT | 5 | | 14 | |
| 416 | 4 | L | 17+50.00 | LT | 3 | | 10 | |
| 503 | 5 | L | 24+10.33 | LT | 3 | | 10 | |
| 501 | 5 | L | 36+90.07 | RT | | 15 | 30 | |
| 603 | 6 | L | 46+42.23 | LT | 5 | | 14 | |
| 602 | 6 | L | 50+49.17 | LT | 5 | | 14 | |
| 716 | 7 | L | 54+31.77 | LT | 2 | | 7 | |
| 410 | 4 | Y1 | 10+41.42 | LT | 3 | | 10 | |
| 411 | 4 | Y1 | 12+23.50 | LT | 3 | | 10 | |
| | | | | | | | | |
| | 6 | L | 47+05-47+45 | LT | 11 | | 25 | |
| | 6 | L | 48+00-48+60 | RT | 30 | | 65 | DETAIL G |
| | 7 | L | 54+25-56+50 | RT | 135 | | 290 | DETAIL E |
| | 7 | L | 55+00-56+90 | LT | 95 | | 210 | DETAIL E |
| | 7 | L | 55+22.00 | RT | | 35 | 50 | DETAIL D |
| FROM EROSION CONTROL | | | | | | | 450 | |
| TOTAL | | | | | 303 | 50 | 1219 | |
| SAY | | | | | 310 | 50 | 1220 | |

## PARCEL INDEX

| PARCEL NO. | SHEET NO. | PROPERTY OWNERS NAMES |
|---|---|---|
| 1 | 4 | BETTY M. LASSITER, ET UX |
| 2 | 4 | EDDIE LEE PHARR, ET UX |
| 3 | 4 | PRIVATE R/W |
| 4 | 4 | MICHAEL M. COTTEN, ET UX |
| 5 | 4 | DEVRA S. MASSEY,TRUSTEE OF THE DEVRA S. MASSEY TRUST |
| 6 | 4&5 | DEVRA S. MASSEY,TRUSTEE OF THE DEVRA S. MASSEY TRUST |
| 7 | 4 | ANDREA LYNN MASSEY, ET VIR |
| 8 | 4 | LARRY MILTON WATSON, ET UX |
| 9 | 4 | LARRY WATSON, ET UX |
| 10 | 4 | JOYCE WATSON |
| 11 | 4&5 | THE TOWN OF CLAYTON |
| 12 | 5 | TIM VANDERGRIFF, ET UX |
| 13 | 6 | REVIS BRIAN POUNDS |
| 14 | 6 | REVIS BRIAN POUNDS |
| 15 | 6 | REVIS BRIAN POUNDS |
| 16 | 6 | DANA WILLIAMS POUNDS, ET AL |
| 17 | 6 | CF PROPERTY MANAGEMENT,LLC |
| 18 | 6&7 | MARILYN P. WALL, ET VIR |
| 19 | 6&7 | BOLING TOWNES HOMEOWNERS ASSOCIATION |
| 20 | 7 | RALPH L. ISENHOUR, ET UX |
| 21 | 7 | RALPH L. ISENHOUR, ET UX |
| 22 | 7 | NICHOLAS J. FEREZ, ET UX |
| 23 | 7 | CLARENCE MICHAEL BENSON, ET UX |
| 24 | 7 | PTM, L.P |
| 25 | 7 | OZARK INVESTMENT CO. LLC |
| 26 | 7 | OZARK INVESTMENT CO. LLC |
| 27 | 4 | RILLA BANKS |
| 28 | 4 | HORACE CRAIG TOMLINSON |
| 29 | 4 | GERTRUDE BANKS BROWN |
| 30 | 6 | CHEDI CORP, LLC |
| 31 | 6 | JASON RALPH COX |

## REMOVAL OF EXISTING ASPHALT PAVEMENT

| STATION TO STATION | SY |
|---|---|
| -L- 24+05 TO -Y1- 14+91 | 2540 |
| -L- 43+86 TO -Y2- 12+31 | 990 |
| -L- 58+67 TO -L- 61+97 | 40 |
| -L- 60+75 TO -L- 62+25 | 160 |
| TOTAL | 3730 |
| SAY | 3800 |