FINAL GRADE PLAN

NAD 83/NA 2011

CH ENGINEERING
3220 GLEN ROYAL RD. RALEIGH, NC 27617
TELE 919.788.0224 FAX 919.788.0232
NC LICENSE #P-0189

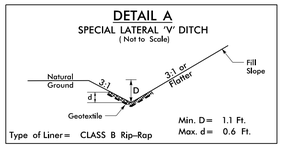
PROJECT REFERENCE NO.	SHEET NO.
17BP.8.R.123	EC-5/CONST.04
RICHMOND COUNTY BRIDGE #64	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS

8/17/99

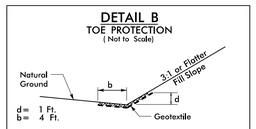
DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Type of Liner = CLASS B Rip-Rap

FROM STA. 16+30 TO 19+60 -L- LT.
40 TONS RIP RAP, 80 SY GEOTEXTILE

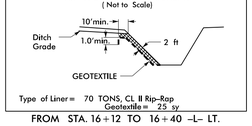
DETAIL B
TOE PROTECTION
(Not to Scale)



Type of Liner = CLASS B Rip-Rap

FROM STA. 13+25 T 14+00 -L- LT.
FROM STA. 12+25 T 13+25 -L- RT. (MIRRORED)

DETAIL D
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner = 70 TONS, CL II Rip-Rap
Geotextile = 25 sy

FROM STA. 16+12 TO 16+40 -L- LT.

PI Sta 13+46.01
Δ = 1° 00' 26.9" (LT)
D = 0° 17' 19.5"
L = 348.91'
T = 174.46'
R = 19,842.55'

PI Sta 17+23.01
Δ = 0° 39' 56.7" (LT)
D = 0° 30' 16.8"
L = 131.92'
T = 65.96'
R = 11,353.36'

-L- POC Sta. 12+00.00
BEGIN CONSTRUCTION

-L- POT Sta. 20+05.00
END CONSTRUCTION

-L- POT 10+00.00
-L- PC 11+71.55
-L- PT 15+20.46
-L- PC 16+57.05
-L- PT 17+88.97

COVINGTON FAMILY PROPERTIES, LLC
DB 1649 PG 600

JOE D RUSSELL
DB 1103 PG 429
PB 687 PG 1

WILLIAM E RUSSELL
DB 1103 PG 433
PB 687 PG 1

CECILIA R FRYE
DB 1103 PG 437
PB 687 PG 1

BEVERLY SHEPHARD
DB 1103 PG 441
PB 687 PG 1

ROBERT C
BEVERLY H RU
DB 1632 PG
PB 687 PG

ALICE R MOORE
DB 1504 PG 539

JAMES M & MARY C MABE
DB 736 PG 22

RIP RAP EMBANKMENT
SEE DETAIL 'D'

1 TON
CL B RIP RAP
5 SY GEOTEXTILE

TOE PROTECTION
SEE DETAIL 'B'

15" W/2
ELBOWS

SPECIAL LATERAL V DITCH
WITH RIP RAP
SEE DETAIL 'A'

+35.00
36.97' &
45.00'

REMOVE

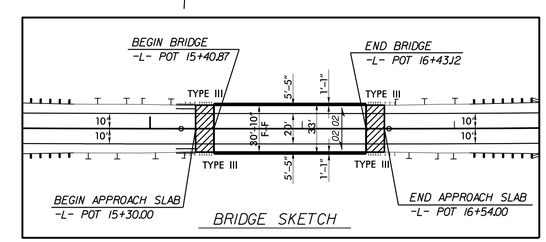
PROPOSED SBG
STA. 15+17 -L- TO
APPROACH SLAB
LT. & RT.

N 56°33'13" E
77.98'
EXISTING R/W
SR 1441 (GREEN LAKE RD)
SR 1424 (SANDHILL GAME MANAGEMENT RD) 20' BST
N 56° 33' 12.6" E
N 54° 52' 49.0" E
N 32° 45' 7" E
N 56°33'13" E
80.94'
GREU TL-3
TB 2
TB 2
BRIDGE
POND
WOODS
4' CHL
4' ELEC WIRE
0.12' EIP TO R/W
0.37' EIP TO R/W
N 66°44'02" E
240.01'
180.07'
138.41'
152.05'
CENTERLINE OF CREEK IS PROPERTY LINE
N 16°02'57" W CENTERLINE OF CREEK IS PROPERTY LINE
293.03'
N 35°02'29" W
142.55'
S 30°22'11" E
272.72'
30' ACCESS EASEMENT

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 12+00 to 15+30 -L- LT./RT.

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 16+50 to 20+05 -L- LT./RT.

FOR PROFILE, SEE SHEET 5



BRIDGE SKETCH

$$$$SYSTIME$$$$
$$$$USERNAME$$$$
$$$$DGN$$$$