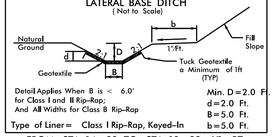
Docusign Envelope ID: 46E53E53-73A2-4860-8283-8D2EC4E9C9C0

5/26/20

DRAINAGE DETAILS

(NOT TO SCALE)

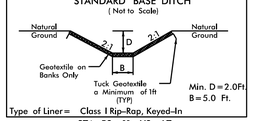
DETAIL 1
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 5.0 Ft. b = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 14 + 92 TO STA. 19 + 32 –Y1– RT

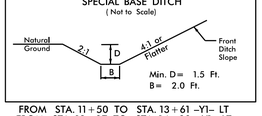
DETAIL 2
STANDARD BASE DITCH
(Not to Scale)



Min. D = 2.0Ft. B = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

STA. 52 + 11 –Y2– LT
STA. 20 + 92 –RPD–LT

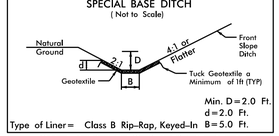
DETAIL 3
SPECIAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2.0 Ft.

FROM STA. 11 + 50 TO STA. 13 + 61 –Y1– LT
FROM STA. 13 + 97 TO STA. 14 + 38 –Y1– LT
FROM STA. 22 + 94 TO STA. 25 + 52 –Y2– LT

DETAIL 4
SPECIAL BASE DITCH
(Not to Scale)



Min. D = 2.0 Ft.
d = 2.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In B = 5.0 Ft.

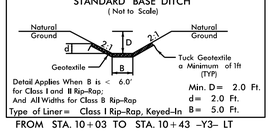
FROM STA. 14 + 85 TO STA. 16 + 43 –Y1– LT

DETAIL 5
CUT DITCH
(Not to Scale)

Min. D = 1.5 Ft.

FROM STA. 14 + 00 TO STA. 14 + 57 –Y1– RT

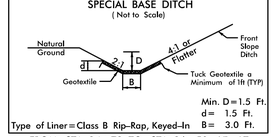
DETAIL 6
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 10 + 03 TO STA. 10 + 43 –Y3– LT

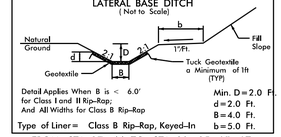
DETAIL 7
SPECIAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
d = 1.5 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In B = 3.0 Ft.

FROM STA. 24 + 73 TO STA. 26 + 50 –Y1– LT

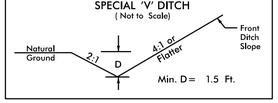
DETAIL 8
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 4.0 Ft. b = 5.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In

FROM STA. 27 + 66 TO STA. 30 + 25 –Y1– LT

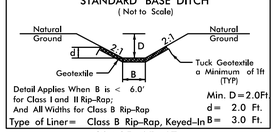
DETAIL 9
SPECIAL 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.

FROM STA. 25 + 75 TO STA. 26 + 86 –Y1– RT
FROM STA. 27 + 20 TO STA. 28 + 19 –Y1– RT
FROM STA. 20 + 26 TO STA. 21 + 59 –Y4– LT
FROM STA. 21 + 38 TO STA. 22 + 21 –Y4– RT

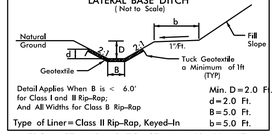
DETAIL 10
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0Ft. d = 2.0 Ft. B = 3.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In

30 + 25 –Y1– LT

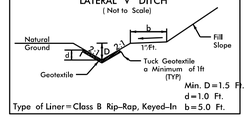
DETAIL 11
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 5.0 Ft. b = 5.0 Ft.
Type of Liner = Class II Rip-Rap, Keyed-In

FROM STA. 13 + 13 TO STA. 14 + 58 –Y4– LT
FROM STA. 23 + 90 TO STA. 24 + 22 –L– LT
FROM STA. 29 + 01 TO STA. 31 + 90 –Y2– LT

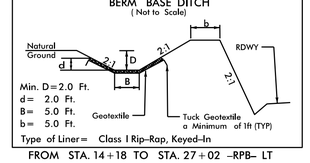
DETAIL 12
LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.
d = 1.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In b = 5.0 Ft.

FROM STA. 18 + 00 TO STA. 18 + 60 –L– RT
FROM STA. 19 + 34 TO STA. 20 + 72 –L– LT
FROM STA. 10 + 49 TO STA. 10 + 95 –Y4– RT
FROM STA. 21 + 94 TO STA. 23 + 98 –RPD– RT

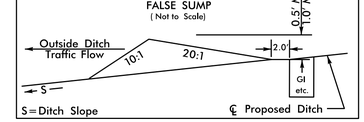
DETAIL 13
BERM BASE DITCH
(Not to Scale)



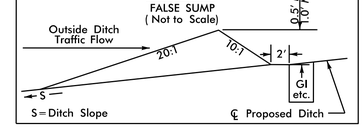
Min. D = 2.0 Ft.
d = 2.0 Ft.
B = 5.0 Ft.
b = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 14 + 18 TO STA. 27 + 02 –RPB– LT

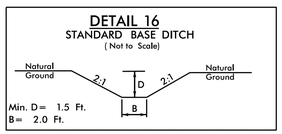
DETAIL 14
FALSE SUMP
(Not to Scale)



DETAIL 15
FALSE SUMP
(Not to Scale)



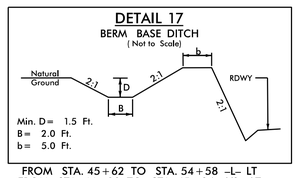
DETAIL 16
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2.0 Ft.

FROM STA. 10 + 90 TO STA. 13 + 45 –LPB– RT

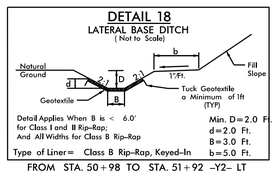
DETAIL 17
BERM BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

FROM STA. 45 + 62 TO STA. 54 + 58 –L– LT
FROM STA. 44 + 23 TO STA. 45 + 94 –Y2– LT
FROM STA. 47 + 28 TO STA. 49 + 01 –Y2– LT

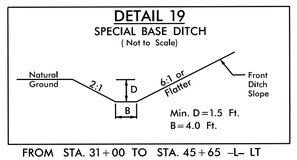
DETAIL 18
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 3.0 Ft. b = 5.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In

FROM STA. 50 + 98 TO STA. 51 + 92 –Y2– LT

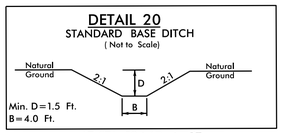
DETAIL 19
SPECIAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 4.0 Ft.

FROM STA. 31 + 00 TO STA. 45 + 65 –L– LT

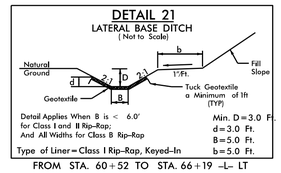
DETAIL 20
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 4.0 Ft.

AT STA. 50 + 47 –L– RT
AT STA. 54 + 41 –L– RT

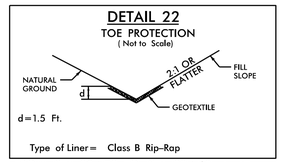
DETAIL 21
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 3.0 Ft. d = 3.0 Ft. B = 5.0 Ft. b = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 60 + 52 TO STA. 66 + 19 –L– LT

DETAIL 22
TOE PROTECTION
(Not to Scale)

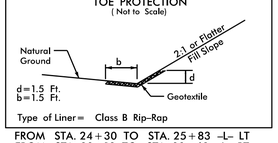


d = 1.5 Ft.

Type of Liner = Class B Rip-Rap

FROM STA. 20 + 73 TO STA. 22 + 60 –L– LT
FROM STA. 62 + 75 TO STA. 64 + 58 –L– RT

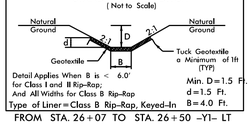
DETAIL 23
TOE PROTECTION
(Not to Scale)



d = 1.5 Ft.
b = 1.5 Ft.
Type of Liner = Class B Rip-Rap

FROM STA. 24 + 30 TO STA. 25 + 83 –L– LT
FROM STA. 33 + 18 TO STA. 33 + 62 –L– RT
FROM STA. 66 + 39 TO STA. 66 + 98 –L– LT
FROM STA. 22 + 62 TO STA. 24 + 93 –RPC– RT

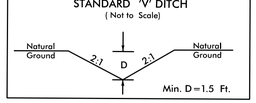
DETAIL 24
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 1.5 Ft. d = 1.5 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In B = 4.0 Ft.

FROM STA. 26 + 07 TO STA. 26 + 50 –Y1– LT

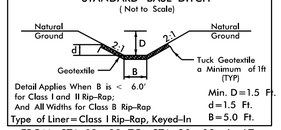
DETAIL 25
STANDARD 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.

FROM STA. 23 + 87 TO STA. 26 + 31 –L– RT
FROM STA. 19 + 70 TO STA. 20 + 37 –RPD– RT
FROM STA. 33 + 50 TO STA. 34 + 28 –Y1– LT
FROM STA. 34 + 65 TO STA. 34 + 90 –Y1– LT
FROM STA. 35 + 28 TO STA. 37 + 35 –Y1– LT

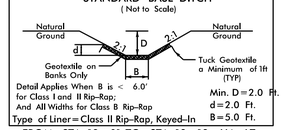
DETAIL 26
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 1.5 Ft. d = 1.5 Ft. B = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 18 + 80 TO STA. 20 + 09 –L– LT

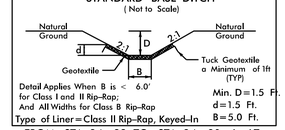
DETAIL 27
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 5.0 Ft.
Type of Liner = Class II Rip-Rap, Keyed-In

FROM STA. 13 + 01 TO STA. 13 + 13 –Y4– LT

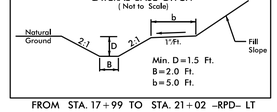
DETAIL 28
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 1.5 Ft. d = 1.5 Ft. B = 5.0 Ft.
Type of Liner = Class II Rip-Rap, Keyed-In

FROM STA. 24 + 22 TO STA. 24 + 90 –L– LT

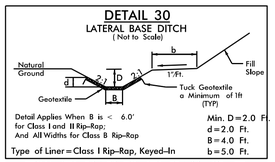
DETAIL 29
LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.

FROM STA. 17 + 99 TO STA. 21 + 02 –RPD– LT

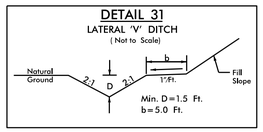
DETAIL 30
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 2.0 Ft. d = 2.0 Ft. B = 4.0 Ft. b = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 26 + 06 TO STA. 31 + 66 –Y2– RT

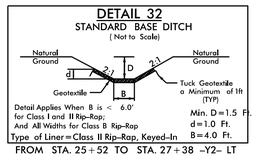
DETAIL 31
LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.5 Ft.
b = 5.0 Ft.

FROM STA. 19 + 58 TO STA. 24 + 61 –RPC– LT
FROM STA. 69 + 08 TO STA. 70 + 08 –L– LT
FROM STA. 20 + 37 TO STA. 21 + 94 –RPD– RT

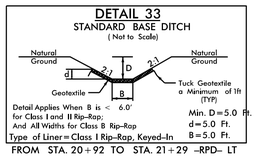
DETAIL 32
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 1.5 Ft. d = 1.0 Ft. B = 4.0 Ft.
Type of Liner = Class II Rip-Rap, Keyed-In

FROM STA. 25 + 52 TO STA. 27 + 38 –Y2– LT

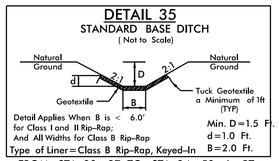
DETAIL 33
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 5.0 Ft. d = 5.0 Ft. B = 5.0 Ft.
Type of Liner = Class I Rip-Rap, Keyed-In

FROM STA. 20 + 92 TO STA. 21 + 29 –RPD– LT

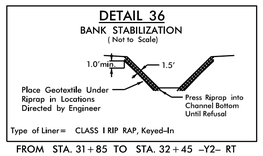
DETAIL 35
STANDARD BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Min. D = 1.5 Ft. d = 1.0 Ft. B = 2.0 Ft.
Type of Liner = Class B Rip-Rap, Keyed-In

FROM STA. 23 + 87 TO STA. 24 + 53 –L– RT
FROM STA. 24 + 53 TO STA. 26 + 31 –L– RT
FROM STA. 21 + 94 TO STA. 22 + 57 –RPD– RT
FROM STA. 13 + 92 TO STA. 14 + 24 –Y4– RT

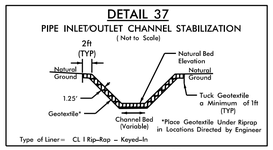
DETAIL 36
BANK STABILIZATION
(Not to Scale)



Type of Liner = CLASS I RIP RAP, Keyed-In

FROM STA. 31 + 85 TO STA. 32 + 45 –Y2– RT

DETAIL 37
PIPE INLET/OUTLET CHANNEL STABILIZATION
(Not to Scale)



Type of Liner = CL I Rip-Rap – Keyed-In

STA. 12 + 93 –Y4– RT
STA. 21 + 79 –L– RT
STA. 22 + 09 –L– LT

U-6187
FINAL | 2D-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DAVIE COUNTY

ROADWAY DESIGN UNIT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043870 ENGINEER REID B. ROBOL
DocuSigned by: Reid B. Robol
9/8/2020

PREPARED BY

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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED