DocuSign Envelope ID: FEC680E6-CB45-4C69-A809-6B6D3CC7F073

PROJECT REFERENCE NO.	SHEET NO.
A-0009CA	EC-36/CONST J7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
201 W. MARION ST–STE 200
SHELBY, NC 28150
PH (704) 476–0003
CORP. LICENSE NO.: C–0275

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

SAFETY FENCE

MATCH LINE STA –L– 166+00.00
MATCH TO SHEET NO. 16

MATCH LINE STA –L– 180+00.00
MATCH TO SHEET NO. 18

*1 PLACE GUARDRAIL END UNIT FACE ALONG FACE OF SBG (DO NOT FLARE)

BEGIN CONSTRUCTION
–DR1A– STA. 10+05.00

PROP. RETAINING WALL #4
BEGIN –L– STA. 167+75
END –L– STA. 171+75

CULVERT INLET CHANNEL
SEE DETAIL 17L
CL 'II' RIP–RAP
EST. 105 TONS

PIPE OUTLET CHANNEL
SEE DETAIL 17F
S=8.0%
L=22'
EST. 15 CY DDE
CL 'II' RIP–RAP
EST. 25 TONS

BANK STABILIZATION
SEE DETAIL 17A
CL. 'II' RIP–RAP
EST. 105 TONS

PROP. RETAINING WALL #4
BEGIN –L– STA. 167+75
END –L– STA. 171+75
SEE DETAIL SHTS W4–1
THRU W4–5

CULVERT OUTLET CHANNEL
SEE DETAIL 17M
CL. 'II' RIP–RAP
EST. 165 TONS

STANDARD BASE DITCH
SEE DETAIL 17I
S=8.7%
L=23'
EST. 10 CY DDE
CL 'II' RIP–RAP
EST. 15 TONS
GEOTEXTILE
EST. 25 SY

SHOULDER BERM GUTTER
–L– STA. 169+85
TO 173+90, LT

PIPE OUTLET CHANNEL
SEE DETAIL 17D
S=1.5%
L=20'
EST. 15 CY DDE
CL 'I' RIP–RAP
EST. 25 TONS

CL 'I' RIP–RAP
EST. 3 TON
GEOTEXTILE
EST. 7 SY

ORANGE SAFETY FENCE

ORANGE SAFETY FENCE

ORANGE SAFETY FENCE

15 x 24 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 17.3

150 x 25 x 3
2 inch Skimmer
with 1.75 inch
Orifice Diameter
14 ft. weir
ID 17.2

78 x 13 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 17.1

84 x 14 x 2
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 17.1F

TOE PROTECTION
SEE DETAIL 17B
CL. 'II' RIP–RAP
EST. 105 TONS

LATERAL BASE DITCH
SEE DETAIL 17G
CL 'I' RIP–RAP
EST. 100 TONS
GEOTEXTILE
EST. 200 SY

SPECIAL LATERAL BASE DITCH
SEE DETAIL 17H
CL 'I' RIP–RAP
EST. 40 TONS
GEOTEXTILE
EST. 80 SY

SPECIAL LATERAL BASE DITCH
SEE DETAIL 17C

SPECIAL LATERAL BASE DITCH
SEE DETAIL 17J
CL 'I' RIP–RAP
EST. 260 TONS
GEOTEXTILE
EST. 440 SY

CONC. DITCH BEHIND RETAINING WALL
SEE DETAIL 17K

SHOULDER BERM GUTTER
–L– STA. 174+51
TO 175+35, RT

SHOULDER BERM GUTTER
–L– STA. 176+65
TO 178+00, RT

SINGLE FACED CONCRETE BARRIER

PROP. RETAINING WALL #5
W/CONCRETE DITCH
BEGIN –L– STA. 175+35±
END –L– STA. 176+65±
SEE DETAIL SHTS W5–1
& W5–2

PLACE GUARDRAIL END UNIT FACE ALONG FACE OF SBG (DO NOT FLARE)

FALSE SUMP
SEE DETAIL 17E
18" RCP–III

REMOVE 20 LF EXIST. 30" CMP

REMOVE 45 LF EXIST. 30" CMP

REMOVE 3@84" CSP

1@16'x9' RCBC BURIED 1.0'

2GI–A MIN DEPTH

ROD AND LUG WITH GASKETS (ELBOWS)

15" RCP–IV

48" CSP & JB wMH w/ Weir Wall

30" HDPE

FLOWABLE FILL

PROP. DRIVE

720' TAPER

150' TAPER

36' TYP

–L– STA 169+62.00=
–DR1A–POT 11+25.00

–L– POT 179+34.29 =
–DR1– POT 11+89.39

–DR1A– POT 10+00.00

–L– PT 171+83.07

KENNETH CODY, TRUSTEE, ET AL

GLENDA ODOM, ET AL

J. C. PAYNE

RICHARD C. GRINDSTAFF

PAM FINCHER, ET AL

RELOCATE FENCE (BY OWNER)

DO NOT DISTRURB LANDSCAPED TREES INSIDE HPB.

TEMP. PROTECTIVE FENCING REQUIRED TO PROTECT EXIST. RETAINING WALLS DURING CONSTRUCTION

TEMP. PROTECTIVE FENCING REQUIRED TO PROTECT EXIST. RETAINING WALLS DURING CONSTRUCTION

DETAIL 17A
BANK STABILIZATION
(Not to Scale)
Type of Liner= CL 'II' Rip–Rap (Keyed–In)
FROM STA.167+15 TO STA.167+80–L– LT

DETAIL 17B
TOE PROTECTION
(Not to Scale)
Type of Liner= CL 'II' RIP–RAP
FROM STA.167+75 TO STA.169+15–L– LT
FROM STA.170+10 TO STA.171+20–L– LT

DETAIL 17C
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D=1.5 Ft.
B=2.0 Ft.
FROM STA.174+00 TO STA.174+30–L– RT.

DETAIL 17D
PIPE OUTLET CHANNEL
(Not to Scale)
CHANNEL BED (B)
Min. D= 2.0 Ft.
Max. d= 2.0 Ft.
B= 4.0 Ft.
Type of Liner= CL 'I' Rip–Rap (Keyed–In)
STA. 177+60–L– LT.

DETAIL 17E
FALSE SUMP
(Not to Scale)
S=Ditch Slope
℄ Proposed Ditch
STA.173+88–L– RT.

DETAIL 17F
PIPE OUTLET CHANNEL
(Not to Scale)
CHANNEL BED (B)
Min. D=VARIES
Max. d=VARIES
B=4.0 Ft.
Type of Liner= CL 'II' Rip–Rap (Keyed–In)
STA. 167+30–L– LT.

DETAIL 17G
LATERAL BASE DITCH
(Not to Scale)
*When B is < 6.0'
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
Type of Liner= CL 'I' Rip–Rap
FROM STA.171+50 TO STA.173+00–L– RT.

DETAIL 17L
CULVERT INLET CHANNEL
(Looking Downstream, Not to Scale)
CLASS II RIP–RAP BANK STABILIZATION KEYED–IN (TYP.)
1@14'x10' RCBC
BURY INVERT 1.0' AND BACKFILL CULVERT WITH NATIVE MATERIAL
Length=See Plan View
Min. d=8 Ft.
STA.169+00–L– LT.

DETAIL 17M
CULVERT OUTLET CHANNEL
(Looking Downstream, Not to Scale)
CLASS II RIP–RAP BANK STABILIZATION KEYED–IN (TYP.)
1@14'x10' RCBC
FILL SCOUR HOLE WITH CLASS II RIPRAP UP TO ELEV 2146' (FILL VOIDS WITH NATIVE MATERIAL)
BURY INVERT 1.0' AND BACKFILL CULVERT WITH NATIVE MATERIAL
Length=See Plan View
Min. d=8 Ft.
STA.170+00–L– LT.

DETAIL 17H
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
Type of Liner= CL 'I' Rip–Rap
FROM STA.173+00 TO STA.173+50–L– RT.

DETAIL 17I
STANDARD BASE DITCH
(Not to Scale)
Min. D= VARIES
Max. d= VARIES
B= 3.0 Ft.
Type of Liner= CL 'II' Rip–Rap
STA.171+50–L– LT.

DETAIL 17J
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 3.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
Type of Liner= CL 'I' Rip–Rap
FROM STA.178+00 TO STA.180+00–L– RT.

DETAIL 17K
CONCRETE DITCH
BEHIND RETAINING WALL
(Not to Scale)
D= 1.0'
B= 1.0'
FROM STA.175+35 TO STA.176+65–L– RT