TIP PROJECT: X-0002BC

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	X-0002BC	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

METRIC

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

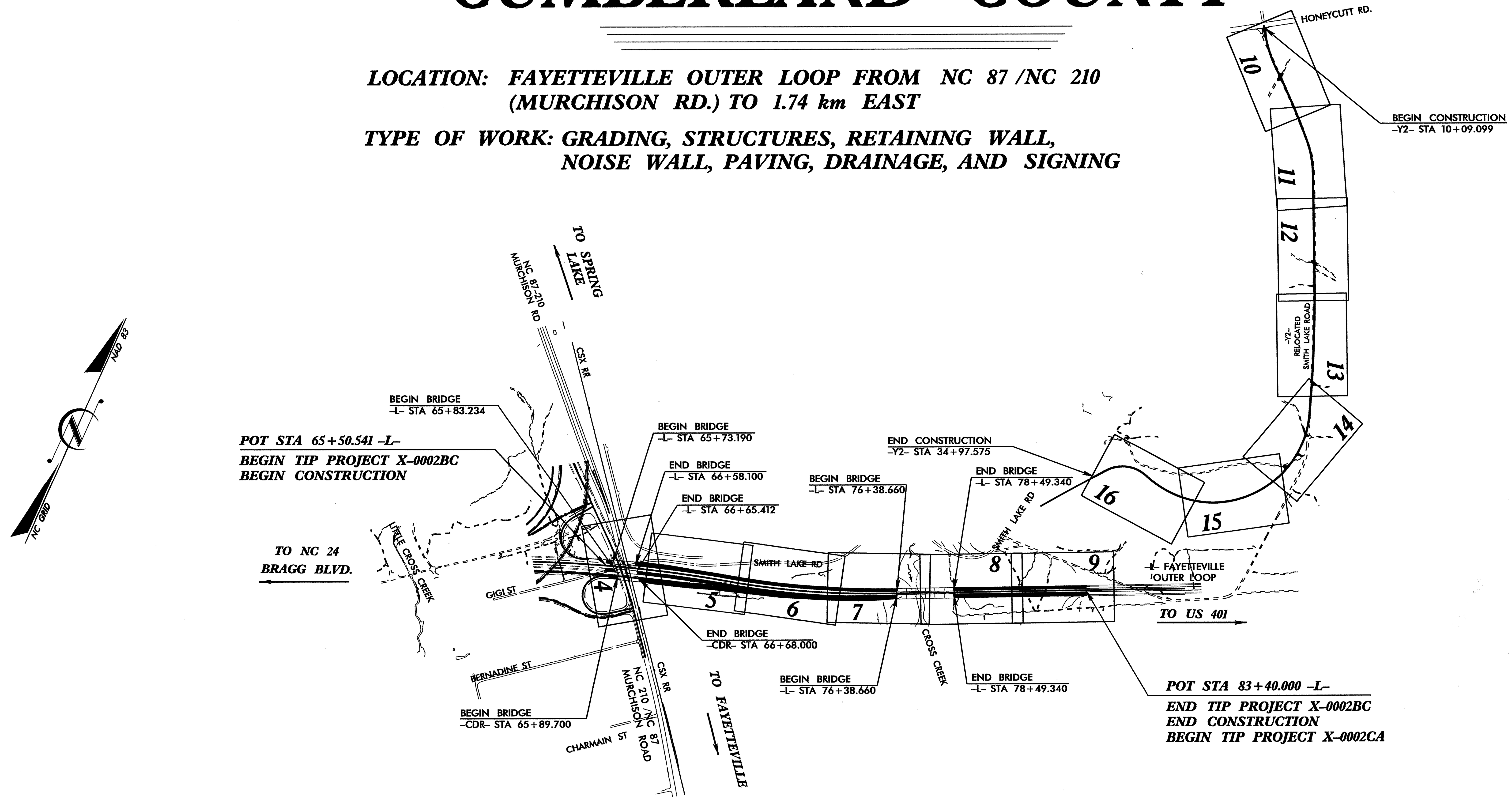
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

CUMBERLAND COUNTY

LOCATION:* *FAYETTEVILLE OUTER LOOP FROM NC 87 /NC 210 (MURCHISON RD.) TO 1.74 km EAST

TYPE OF WORK:* *GRADING, STRUCTURES, RETAINING WALL, NOISE WALL, PAVING, DRAINAGE, AND SIGNING



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
	Temporary Silt Fence	
	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/ Coir Fiber Wattle	
	Wattle/ Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
	Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2006 STANDARD SPECIFICATIONS

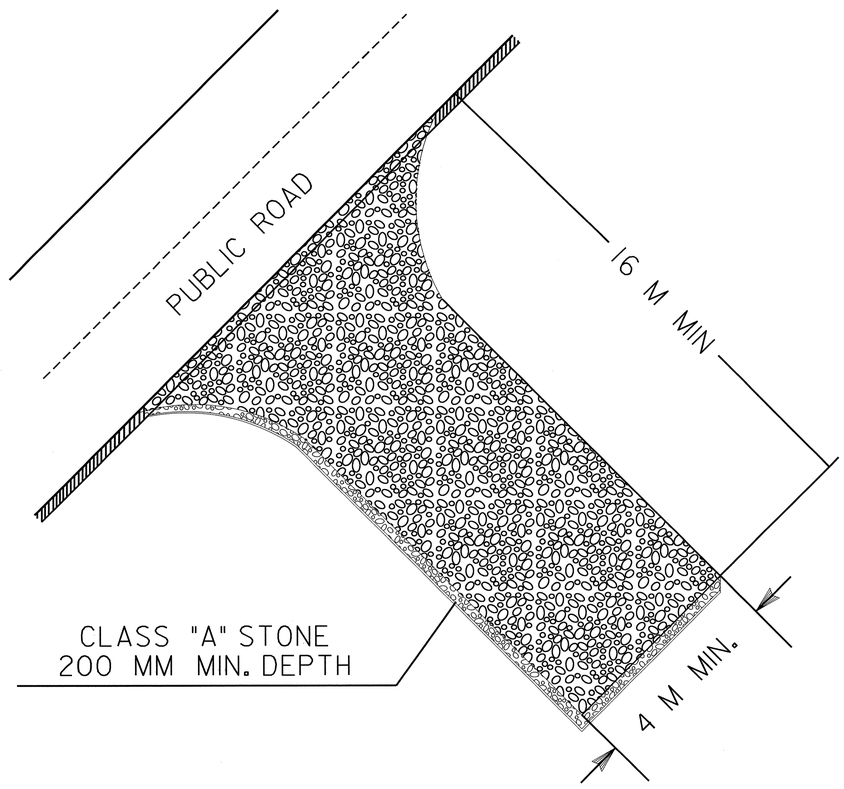
Roadway Standard Drawings

The following roadway metric standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated July 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1622.01 Temporary Berms and Slope Drains
1630.03 Temporary Silt Ditch
1630.05 Temporary Diversion
1632.01 Rock Inlet Sediment Trap Type A
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
1634.02 Temporary Rock Sediment Dam Type B
1635.01 Rock Pipe Inlet Sediment Trap Type A
1635.02 Rock Pipe Inlet Sediment Trap Type B

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



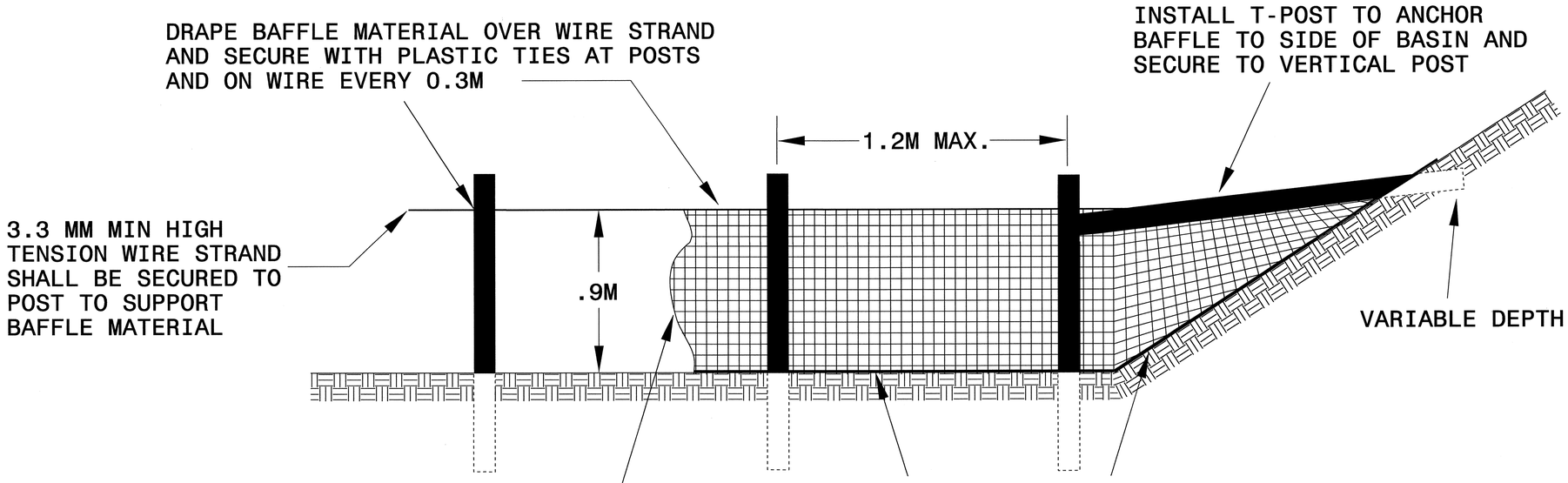
NOTES:

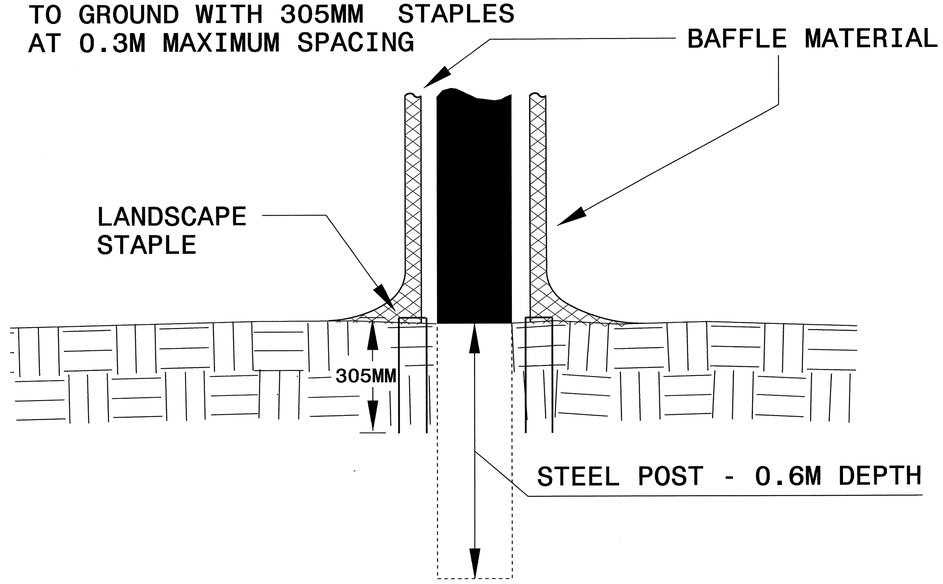
1. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
2. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
4. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
5. GRAVEL CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.
6. NUMBER AND LOCATION OF CONSTRUCTION ENTRANCES TO BE DETERMINED BY THE ENGINEER

NOTE: FILTER FABRIC TO BE PLACED BENEATH STONE

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-2A
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL





BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 305MM LANDSCAPE STAPLES

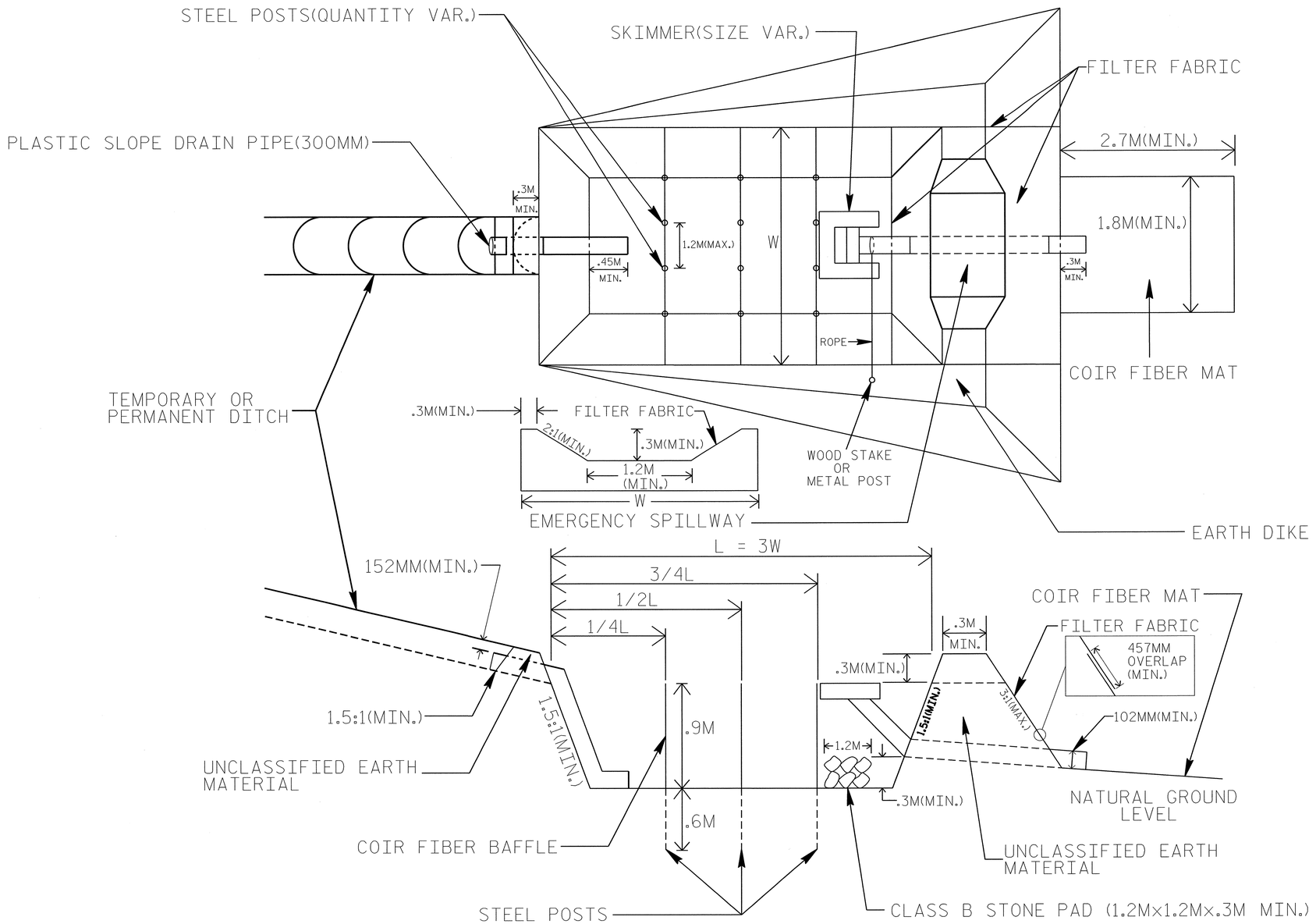
1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH.

2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 6 M IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

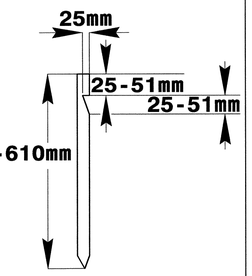
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

SKIMMER BASIN WITH BAFFLES DETAIL

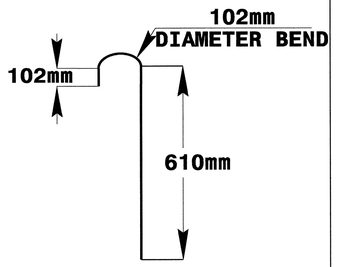
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2B
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



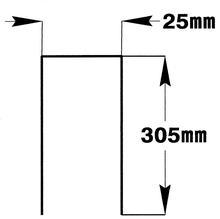
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOTES

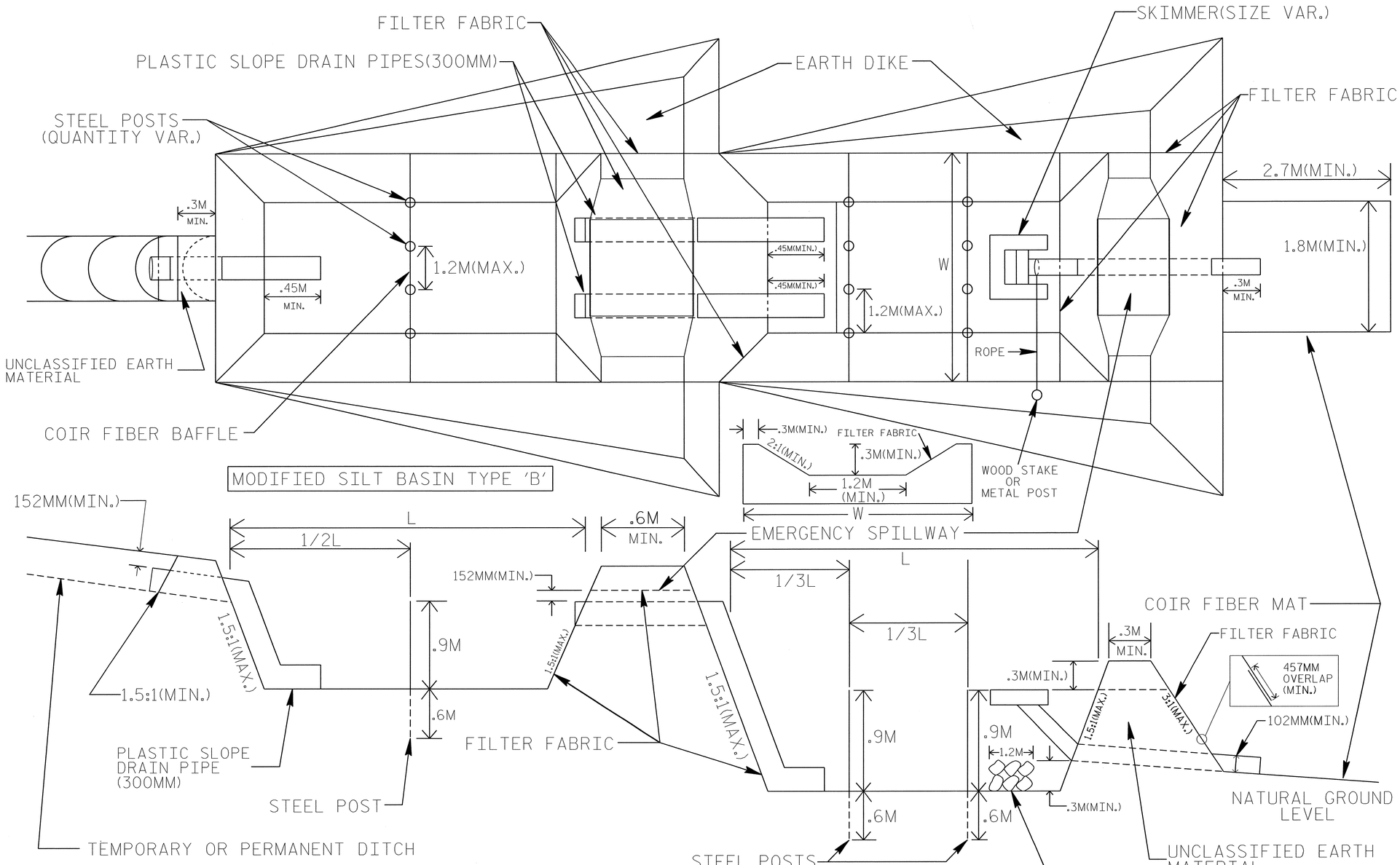
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 1.5M.
3. FOR BASIN DEPTH OF 1M, MINIMUM BASIN WIDTH SHALL BE 3M.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTER FABRIC AS DIRECTED.
6. FILTER FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 457MM (MIN.) AS SHOWN.

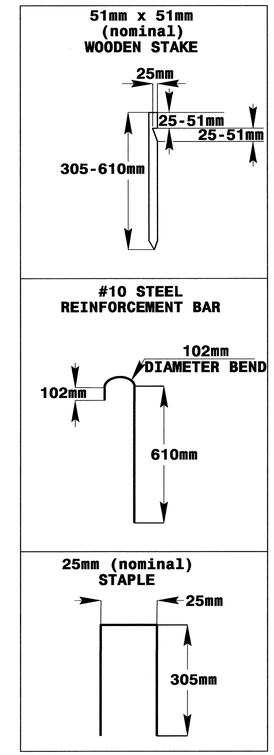
NOT TO SCALE

TIERED SKIMMER BASIN DETAIL

METRIC

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-2C
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





COIR FIBER MAT ANCHOR OPTIONS

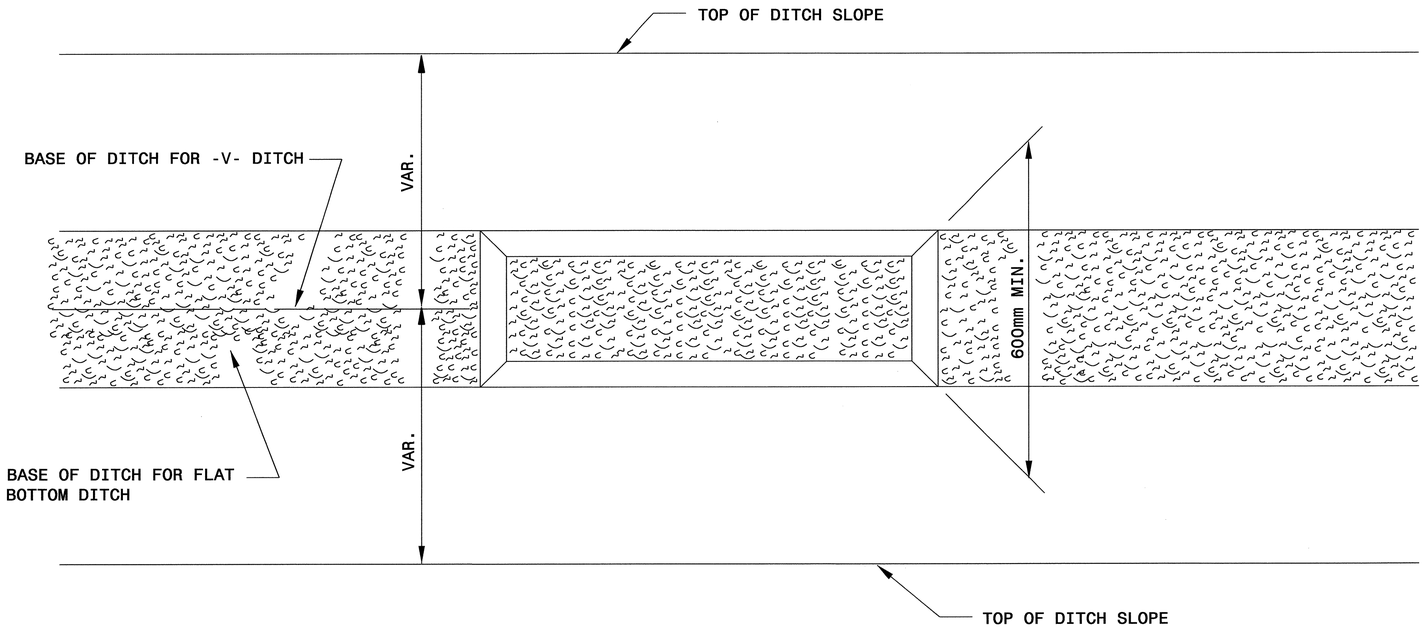
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 1.5M.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 1M, THE MINIMUM BASIN WIDTHS SHALL BE 3M.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO UPPER BASIN.
6. FILTER FABRIC FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 457MM AS SHOWN.

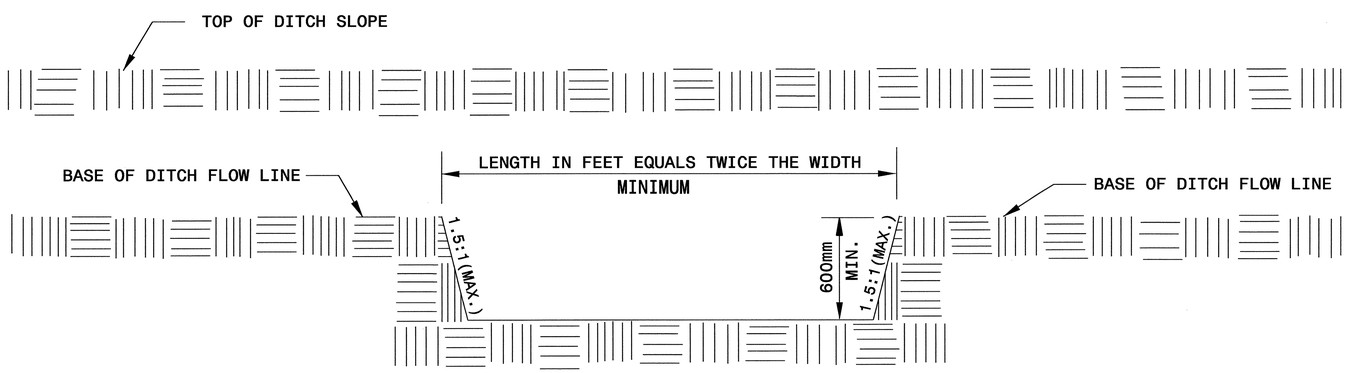
NOT TO SCALE

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2D
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



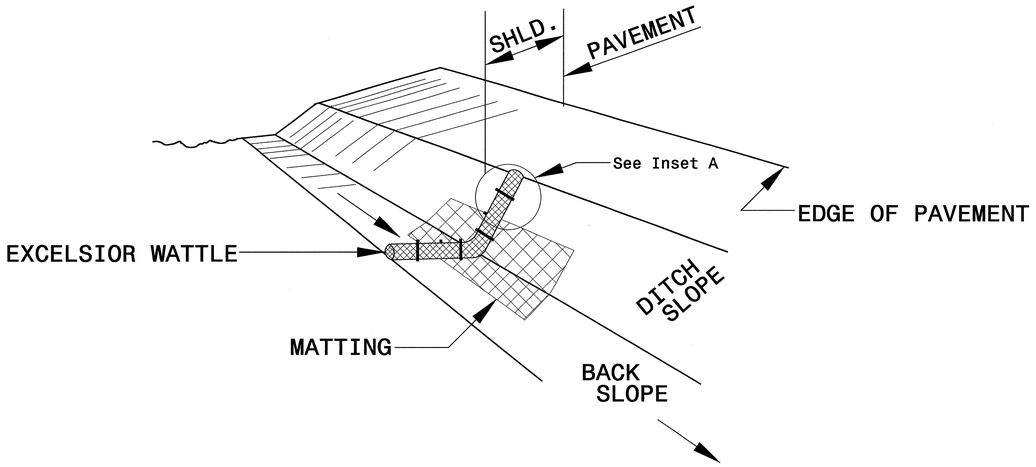
PLAN



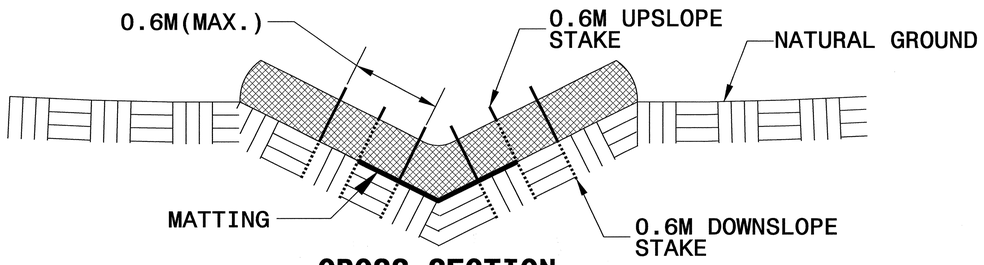
ELEVATION

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

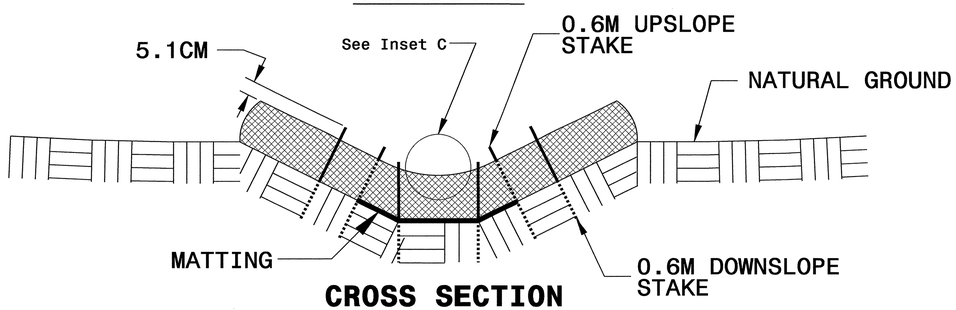
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2E
	R /W SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 305 MM DIAMETER EXCELSIOR WATTLE.

USE 0.6 M WOODEN STAKES WITH A 5.1 CM BY 5.1 CM NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

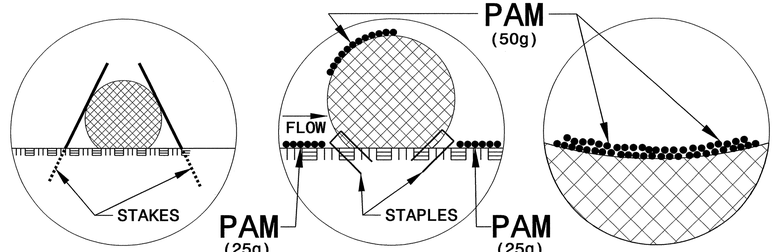
PROVIDE STAPLES MADE OF 3 MM DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 305 MM IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 0.3 LINEAR METER ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

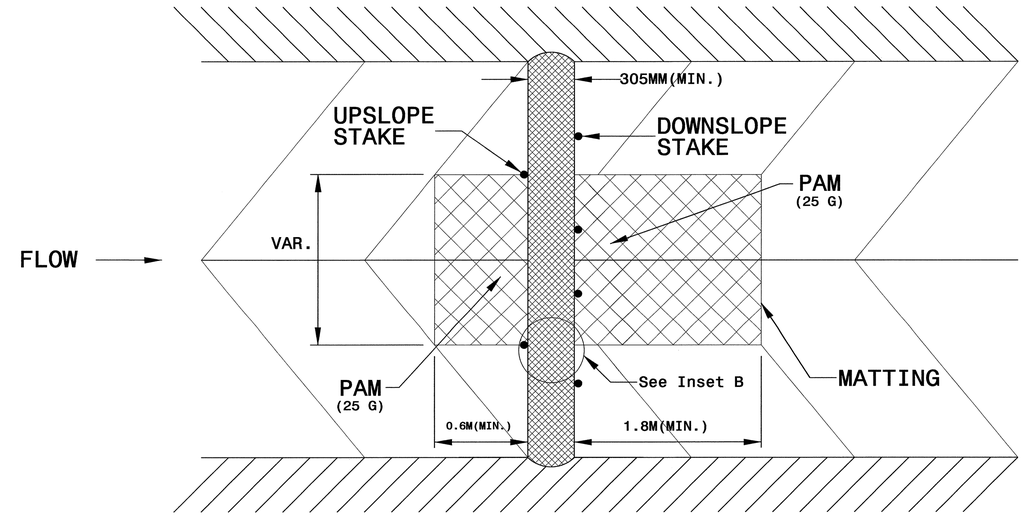
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 50 GRAMS OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 25 GRAMS ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 12 MM.



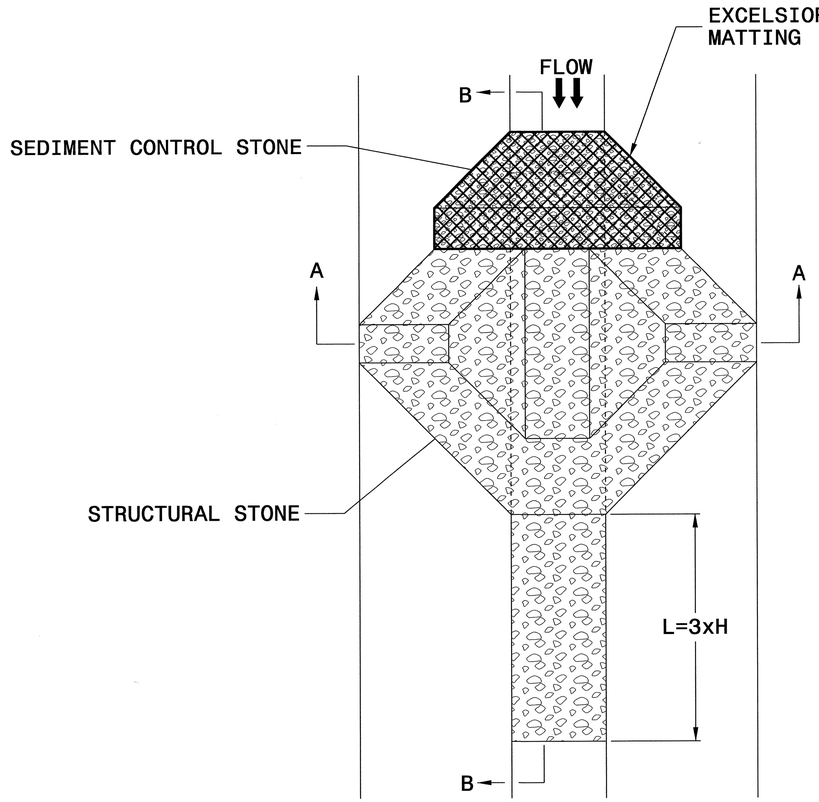
INSET A INSET B INSET C



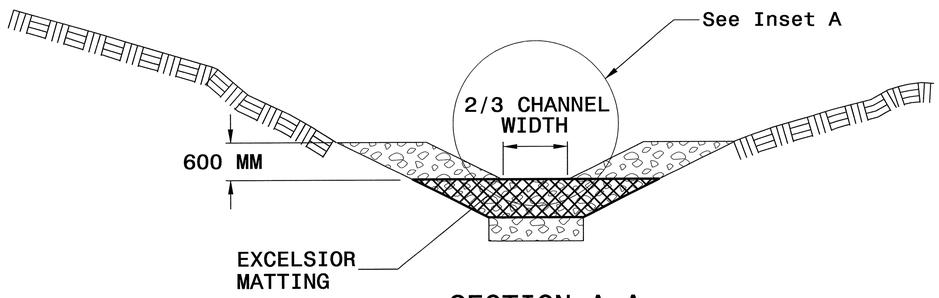
TOP VIEW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2F
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



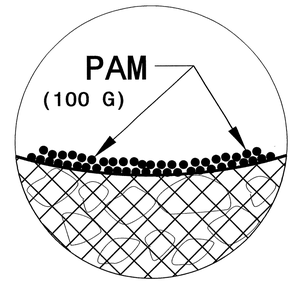
SECTION A-A

NOTES

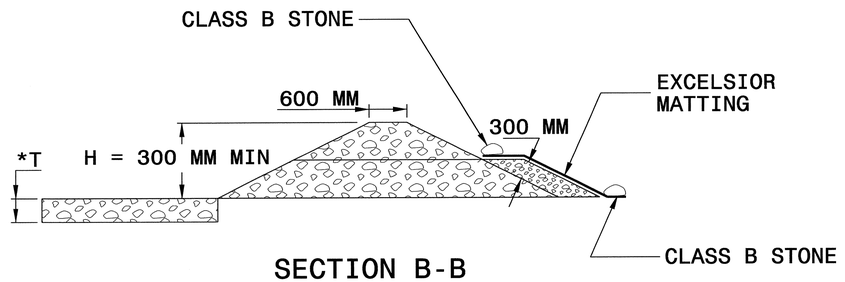
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 100 GRAMS OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 12 MM.



INSET A



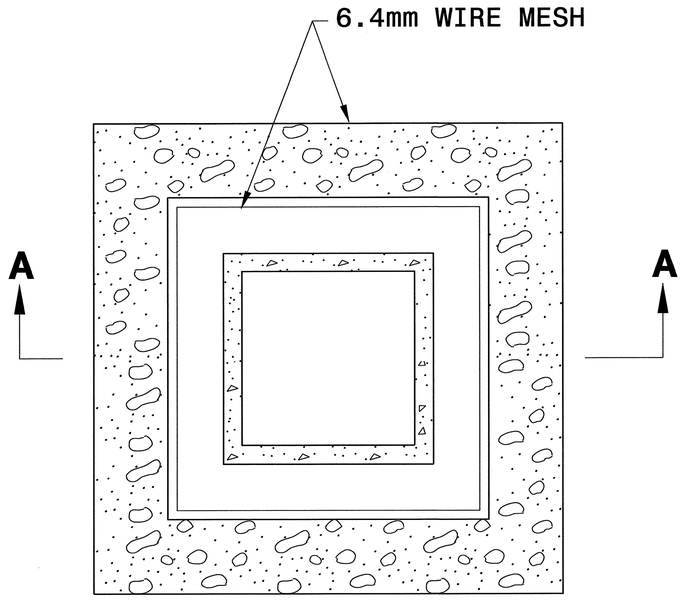
SECTION B-B

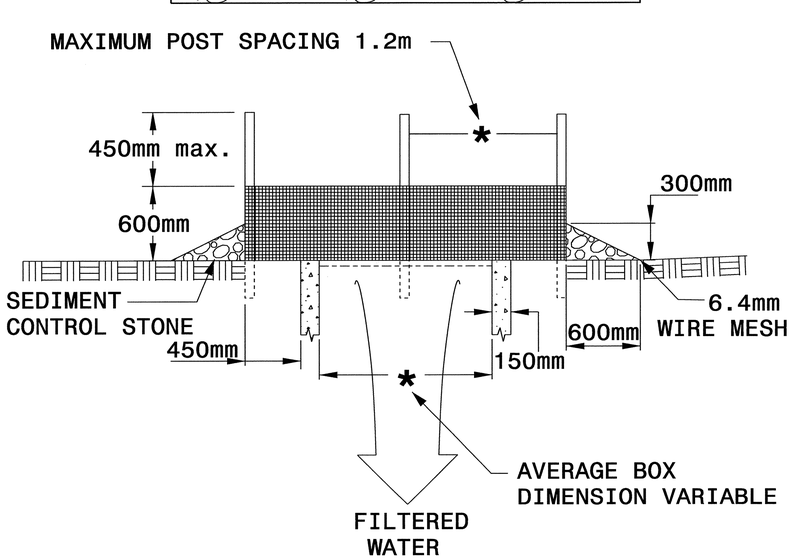
*T = 300 MM MIN., 450 MM MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-2G
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ROCK INLET SEDIMENT TRAP TYPE 'C' DETAIL

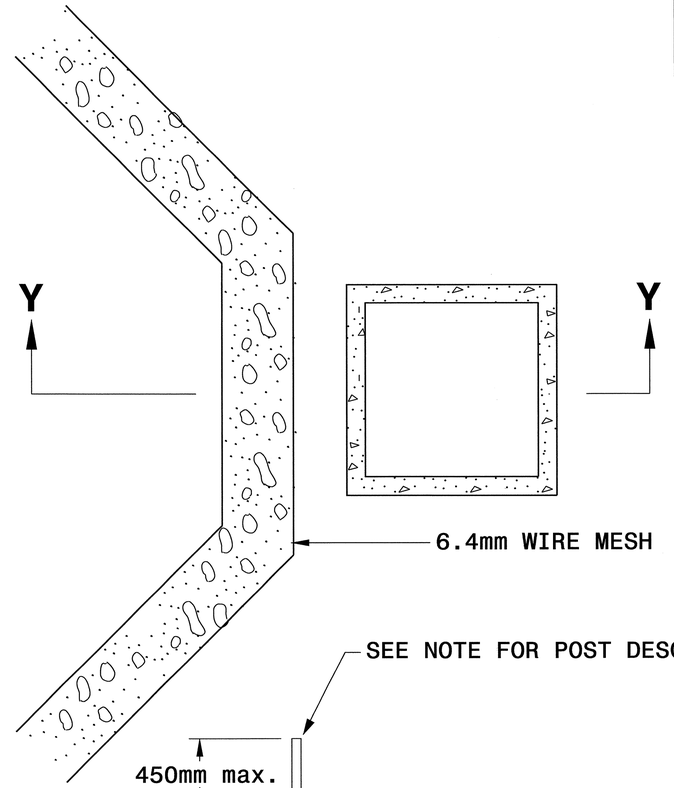


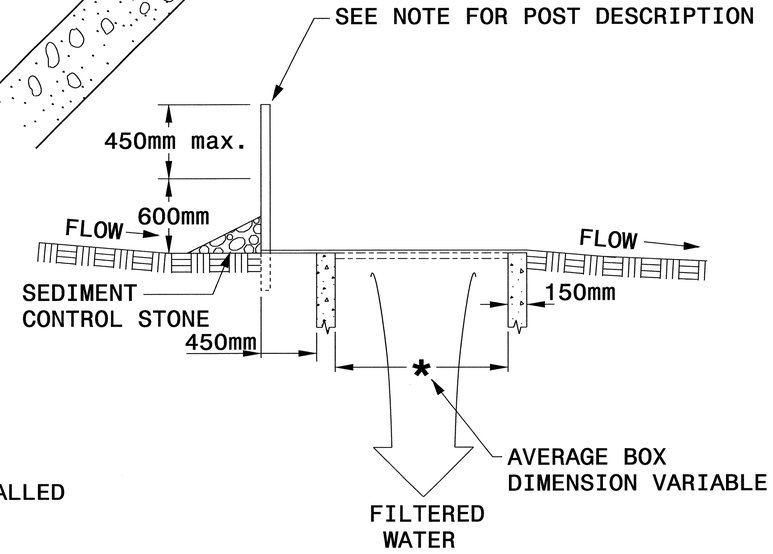


SECTION A-A

NOTE
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.
USE HARDWARE CLOTH 0.65mm WIRE MESH WITH 6.4mm MESH OPENINGS.
PLACE TOP OF WIRE MESH A MINIMUM OF 300mm BELOW THE SHOULDER OR ANY DIVERSION POINT.
INSTALL WIRE MESH UNDER SEDIMENT CONTROL STONE.
USE 1.5m STEEL POST, INSTALLED 450mm DEEP MINIMUM, AND OF THE SELF-FASTENER ANGLE STEEL TYPE.
SPACE POST A MAXIMUM OF 1.2m.

MULTI-DIRECTIONAL FLOW



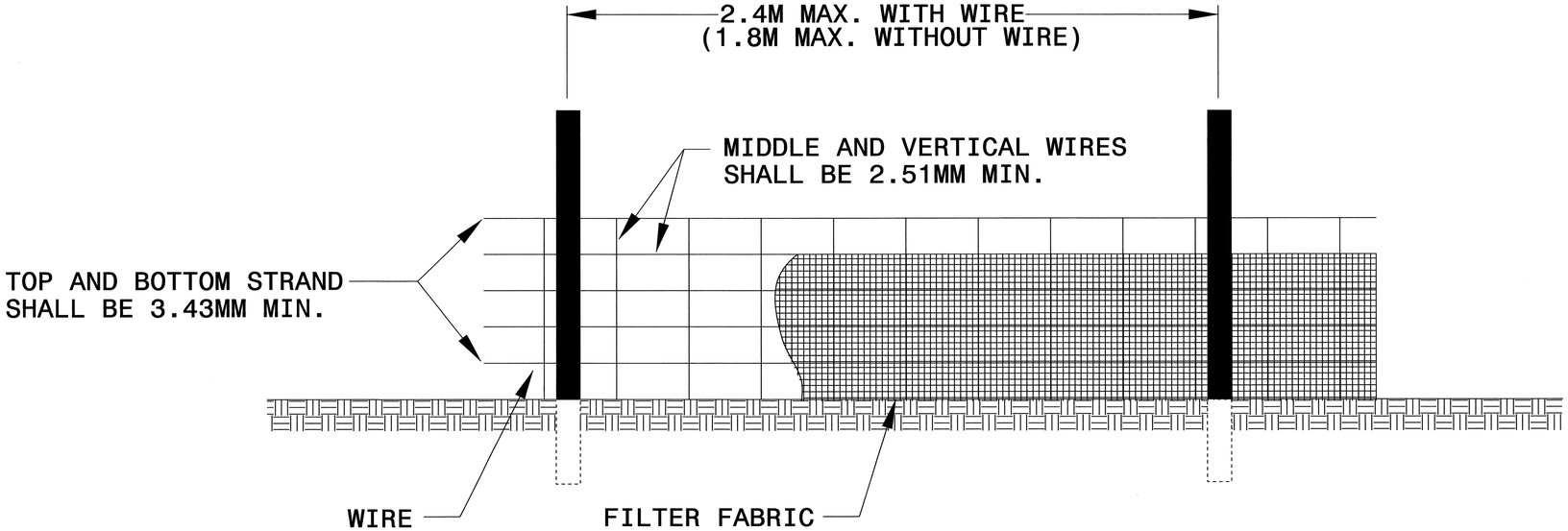


SECTION Y-Y

SINGLE-DIRECTIONAL FLOW

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-2H
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY SILT FENCE DETAIL

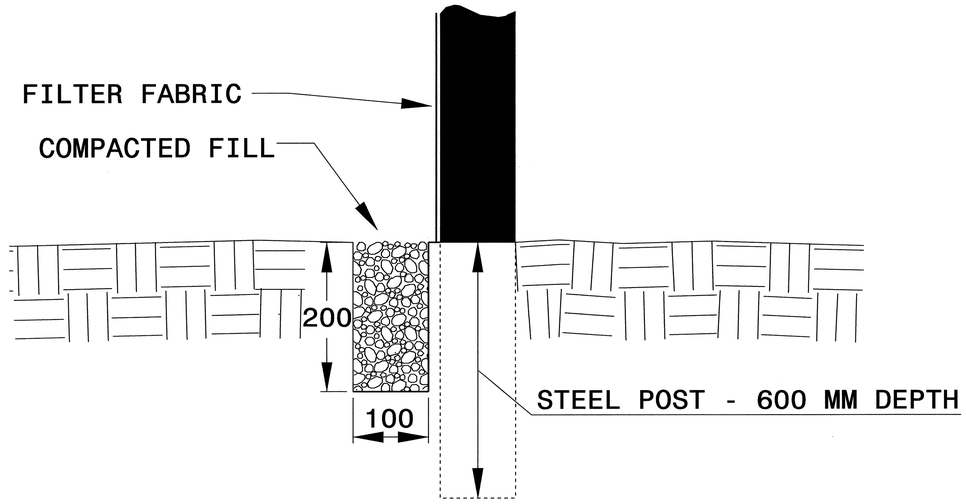


NOTES

USE WIRE A MINIMUM OF 800MM IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 300MM STAY SPACING.

USE FILTER FABRIC A MINIMUM OF 900MM IN WIDTH AND FASTEN ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER.

PROVIDE 1.5M STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE. ANGLE STEEL TYPE.



EXTENSION OF FABRIC AND WIRE INTO TRENCH

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-21
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL SEDIMENT CONTROL FENCE DETAIL

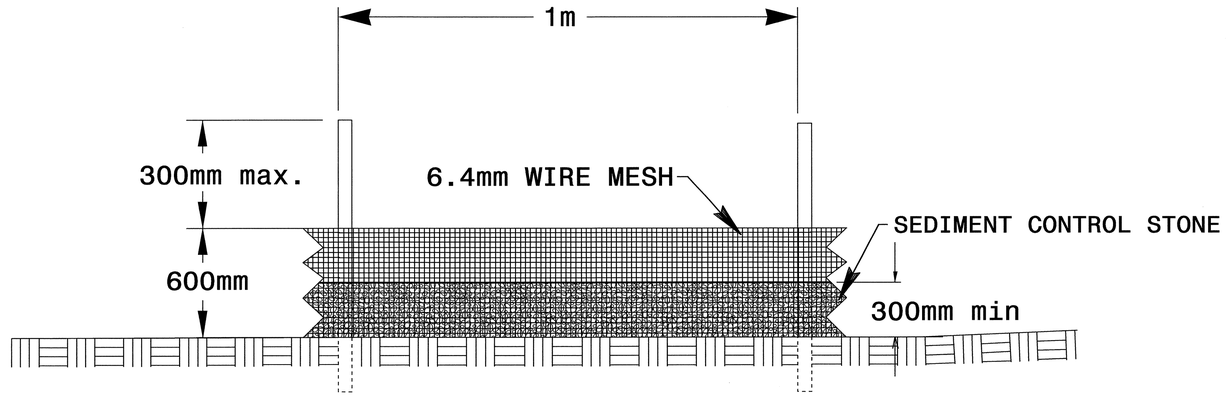
GENERAL NOTES:

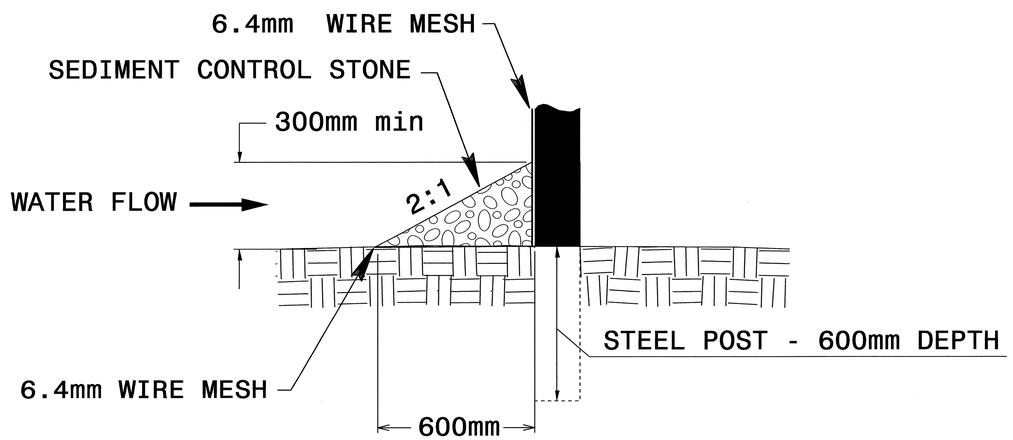
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

USE 0.65mm HARDWARE CLOTH WIRE MESH WITH 6.4 mm MESH OPENINGS.

INSTALL 1.5m SELF FASTENER ANGLE STEEL POST 600mm DEEP MINIMUM.

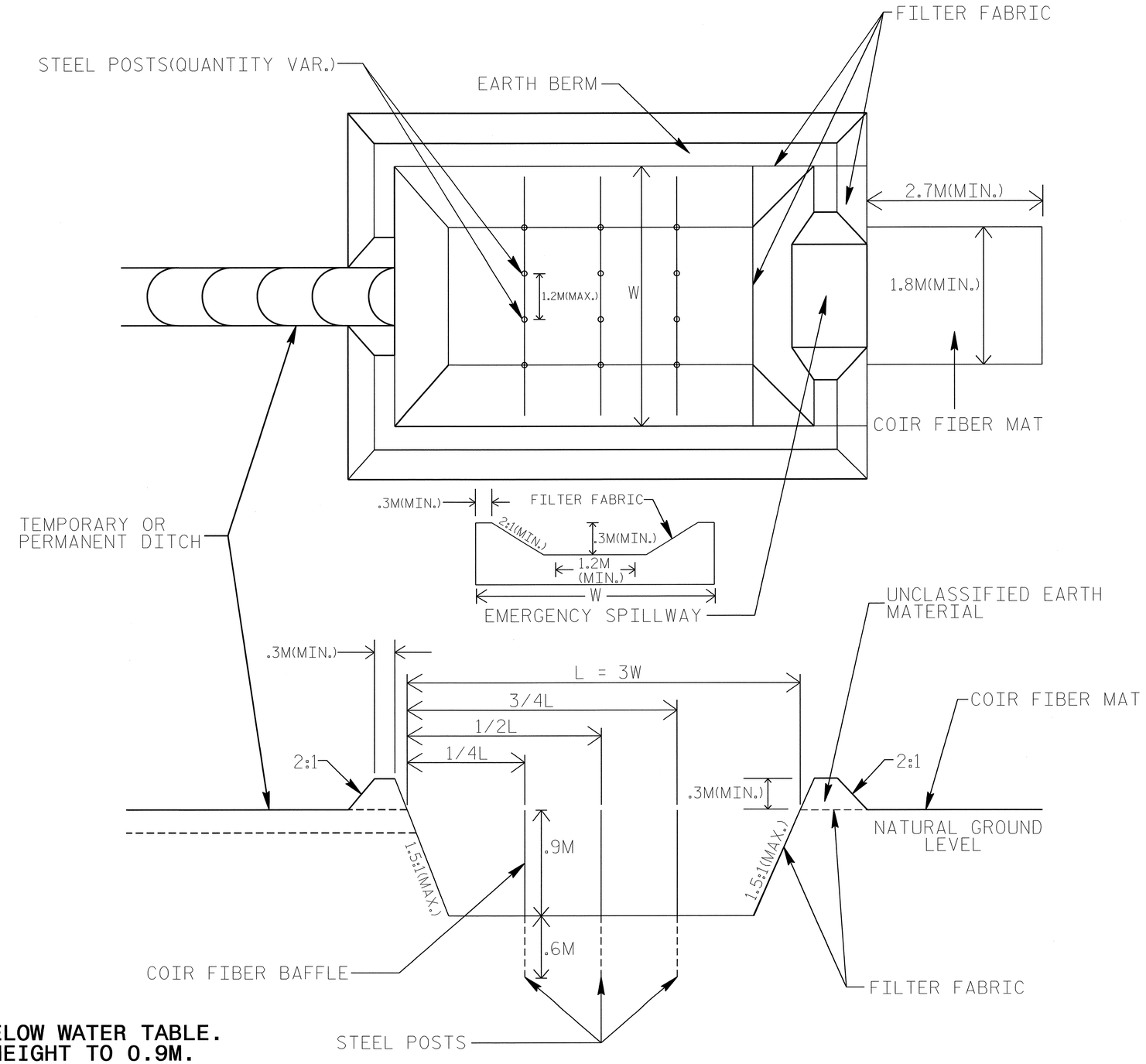
SPACE POST A MAXIMUM OF 1m.



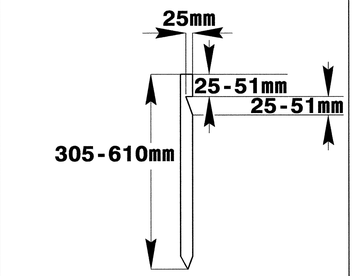


INFILTRATION BASIN WITH BAFFLES DETAIL

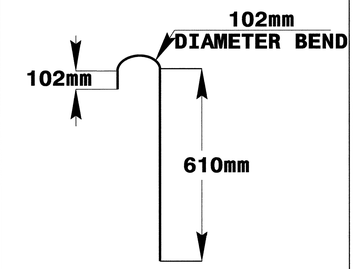
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2J
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



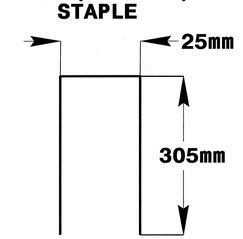
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



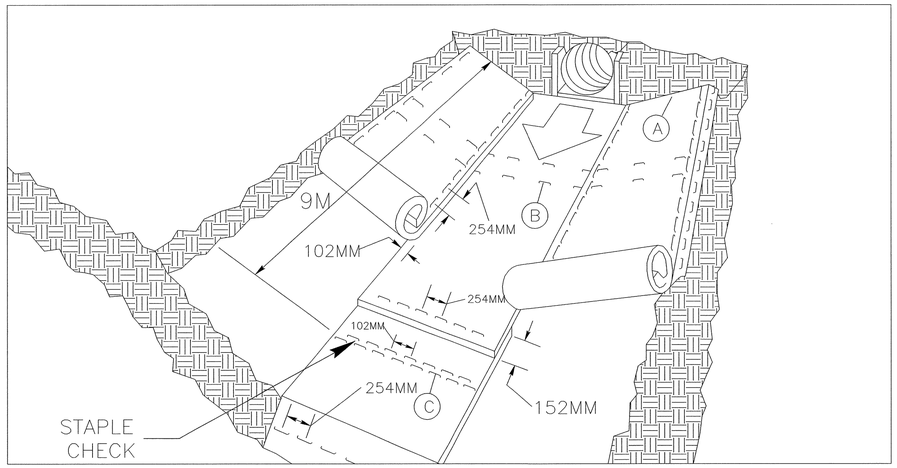
COIR FIBER MAT ANCHOR OPTIONS

NOTES

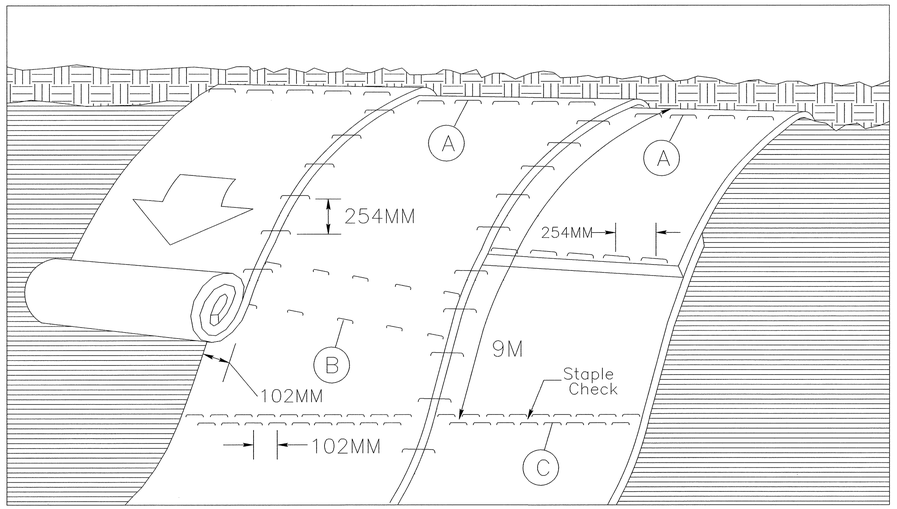
1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 0.9M.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 1M, MINIMUM BASIN WIDTH SHALL BE 3M.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO BASIN.

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2K
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES



MATTING ON SLOPES

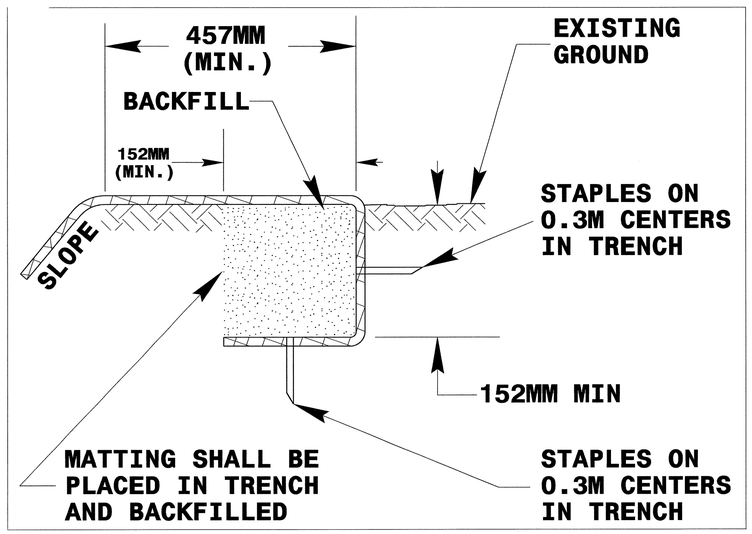


DIAGRAM (A)

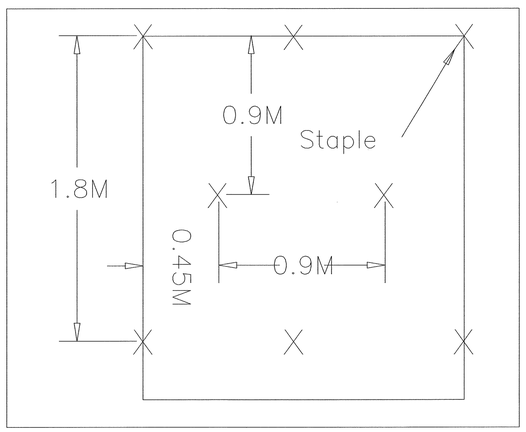


DIAGRAM (B)

Staple Check Pattern

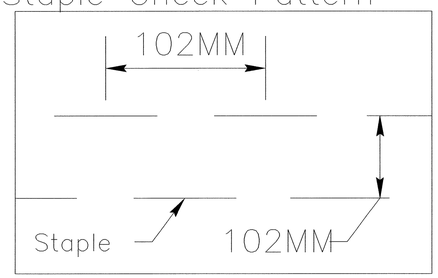


DIAGRAM (C)

NOTES:

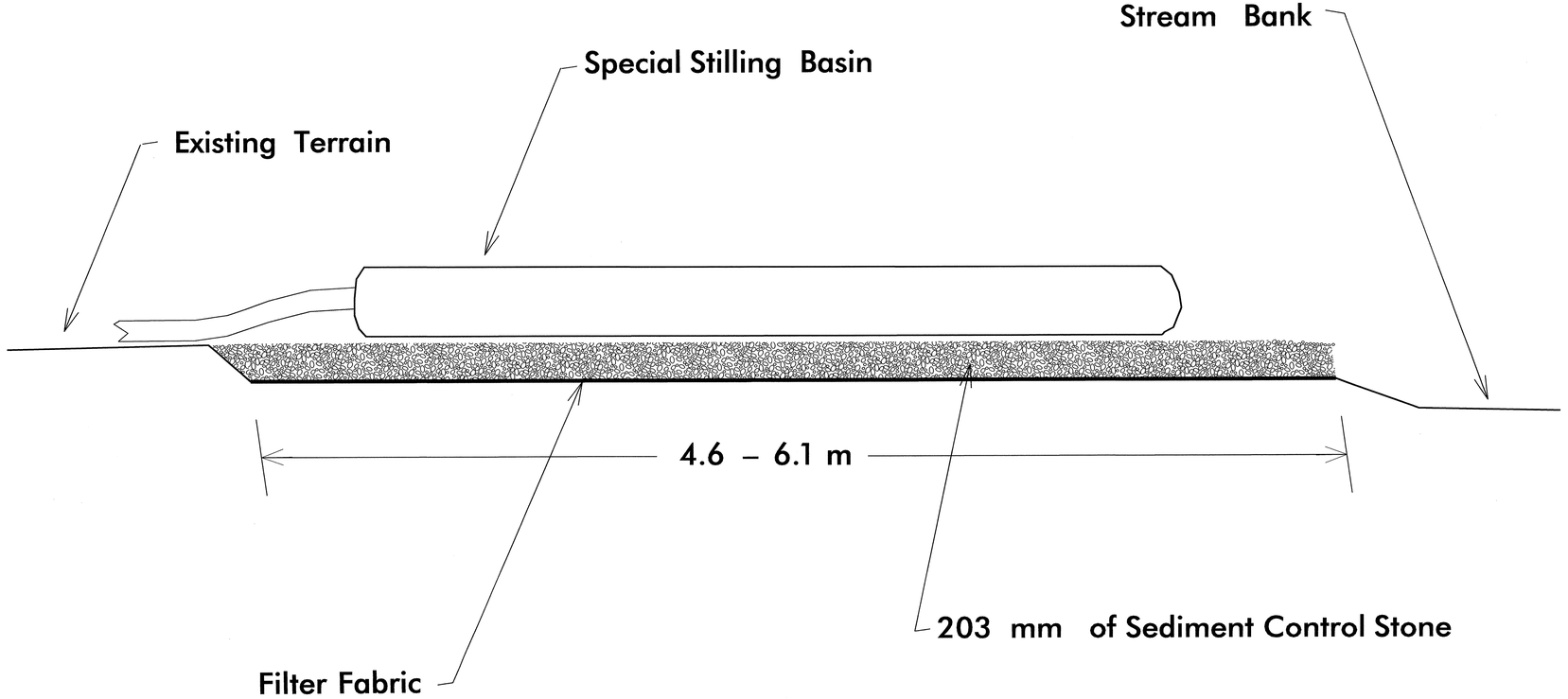
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 25MM AND NOT LESS THAN 152MM IN LENGTH.

NOT TO SCALE

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2L
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL STILLING BASIN WITH ROCK PAD



Not To Scale

Note: Provide Stabilized Outlet to Streambank

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002BC	EC-2M
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BORROW PIT DEWATERING BASIN DETAIL

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING V = 8.0203 * Q * T, WHERE V IS VOLUME (FT^3), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE WITH A MATERIAL THAT MEETS THE SPECIFICATIONS OF THE COIR FIBER MAT SPECIAL PROVISION PROVIDED IN THE CONTRACT.

PROVIDE 1.5M STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 0.9M OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 300mm STAPLES.

INSTALL TYPE 2 FILTER FABRIC ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

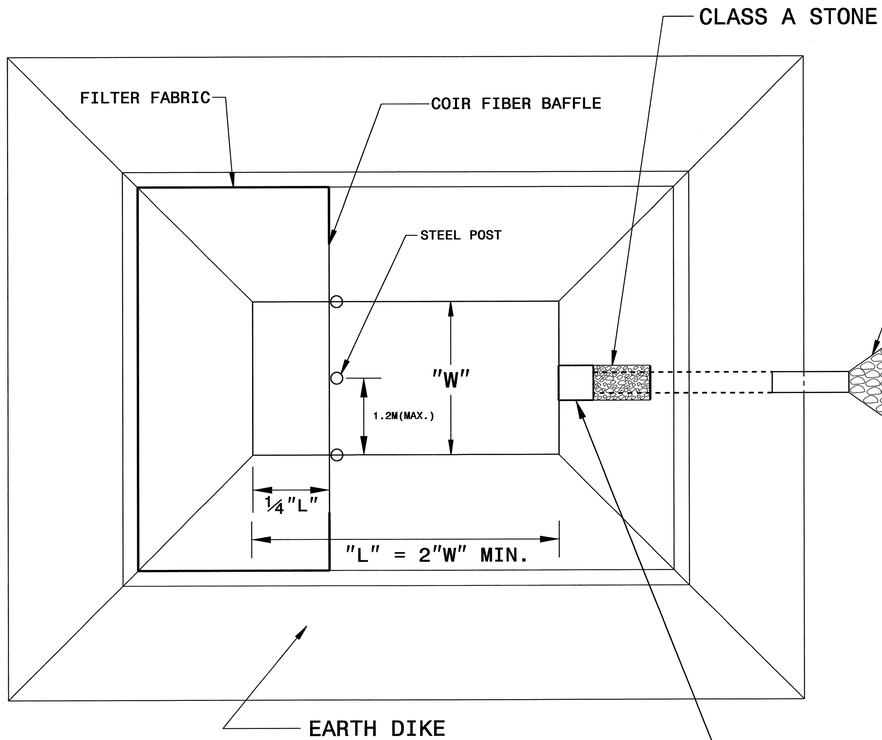
DO NOT EXCEED 1.1M IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

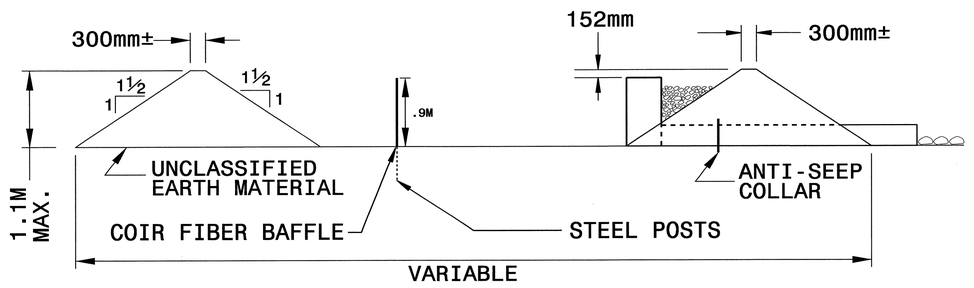
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 152mm BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



PLAN



TYPICAL SECTION VIEW

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-3
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
5	-CDR-	69+90	71+73	RT	630
5	-L-	66+80	69+40	RT	1155
6	-L-	69+60	73+80	LT	4775
6	-L-	66+80	76+20	MEDIAN	15160
8	-L-	79+00	79+20	RT	75
10	-Y2-	10+30	10+40	RT	25
10	-Y2-	10+30	10+39	RT	35
11	-Y2-	15+60	17+80	LT	1255
12	-Y2-	18+80	19+60	RT	510
12	-Y2-	18+80	19+80	LT	760
16	-Y2-	30+00	34+80	RT	3160
16	-Y2-	32+00	34+80	LT	1775
				SUBTOTAL	29315
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					40585
				TOTAL	69900
				SAY	70000

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-3A
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
10	-L-	72+00	72+60	RT	115
12	-L-	78+49	78+60	LT	25
12	-L-	79+00	81+20	LT	420
12	-L-	78+62	78+94	RT	110
13	-L-	82+60	83+40	LT	155
13	-L-	82+20	83+00	RT	155
13	-L-	83+20	83+40	RT	80
				SUBTOTAL	1060
		ADDITIONAL	PSRM TO BE	INSTALLED	675
				TOTAL	1735
				SAY	1750

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-4/CONST.4
R/W SHEET NO.	X-0002B 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

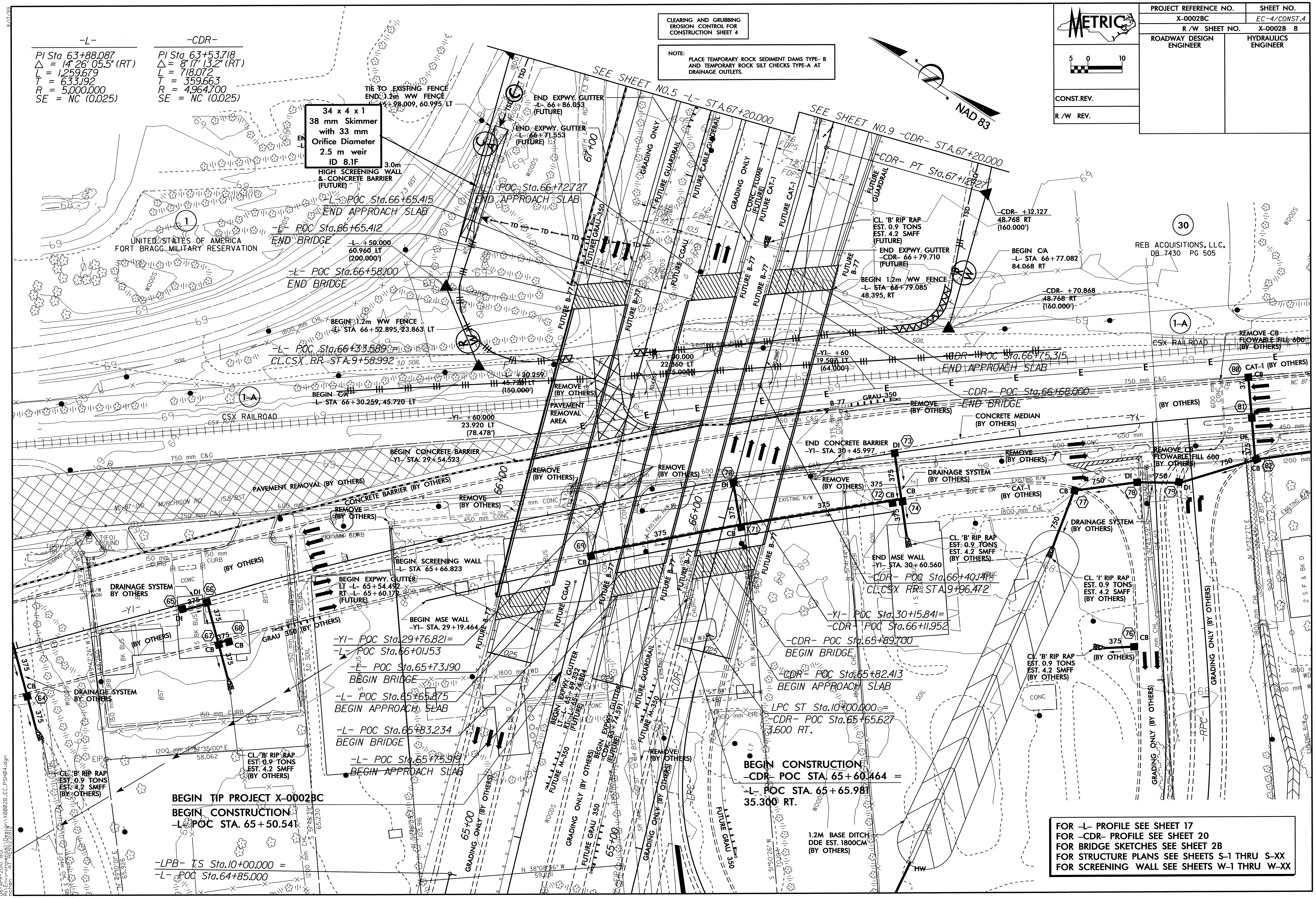
METRIC

CONST.REV.

R/W REV.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.



FOR -L- PROFILE SEE SHEET 17
FOR -CDR- PROFILE SEE SHEET 20
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-5/CONST.5
R /W SHEET NO.	X-0002B 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV.

R /W REV.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

NAD 83

-L-
PI Sta 63+88.087
Δ = 14° 26' 05.5" (RT)
L = 1,259.679
T = 633.192
R = 5,000.000
SE = NC (0.025)

PI Sta 72+99.113
Δ = 10° 50' 10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC (0.025)
RUNOFF = 70.000

1 UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION

-L- +20.000
60.960 LT
(200.000')

TIE TO EXISTING FENCE
BEGIN 1.2m WW FENCE
-L- STA. 67+88.14

1.2m WW FENCE

-L- +00.000
42.672 LT
(140.000')

-L- +60.000
47.854 LT
(157.000')

PAVEMENT REMOVAL AREA

CL. 'I' RIP RAP
EST. 6.4 TONS
EST. 12.5 SMFF

0.6M LAT. BASE DITCH
SEE DETAIL 11
DDE EST. 657CM

PROPOSED 3.0m HIGH SCREENING WALL & CONCRETE BARRIER (FUTURE)

FUTURE CABLE GUIDERAIL

FUTURE GUARDRAIL

GRADING ONLY

REB ACQUISITIONS, LLC,
DB 7430 PG 513
30

REB ACQUISITIONS, LLC,
DB 7430 PG 505
30

4.0 x 17 x 1
38 mm Skimmer
with 24 mm
Orifice Diameter
2 m weir
ID 9.1F

-CDR- +30.000
38.100 RT
(125.000')

-CDR- +30.000
56.998 RT
(187.000')

-CDR- +65.000
50.292 RT
(165.000')

-CDR- +90.000
64.008 RT
(210.000')

TOE PROTECTION
EST. 218 TONS
EST. 455 SMFF
SEE DETAIL 14

LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 147CM

-L- PRC Sta.70+14.573

SEE SHEET NO.4 -CDR- STA.67+20.000

SEE SHEET NO.4 -L- STA.67+20.000

SEE SHEET NO.6 -CDR- STA.70+60.000

SEE SHEET NO.6 -L- STA.70+60.000

FOR -L- PROFILE SEE SHEET 17
FOR -CDR- PROFILE SEE SHEET 20
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX

8/17/09

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mahon AT HENV23812

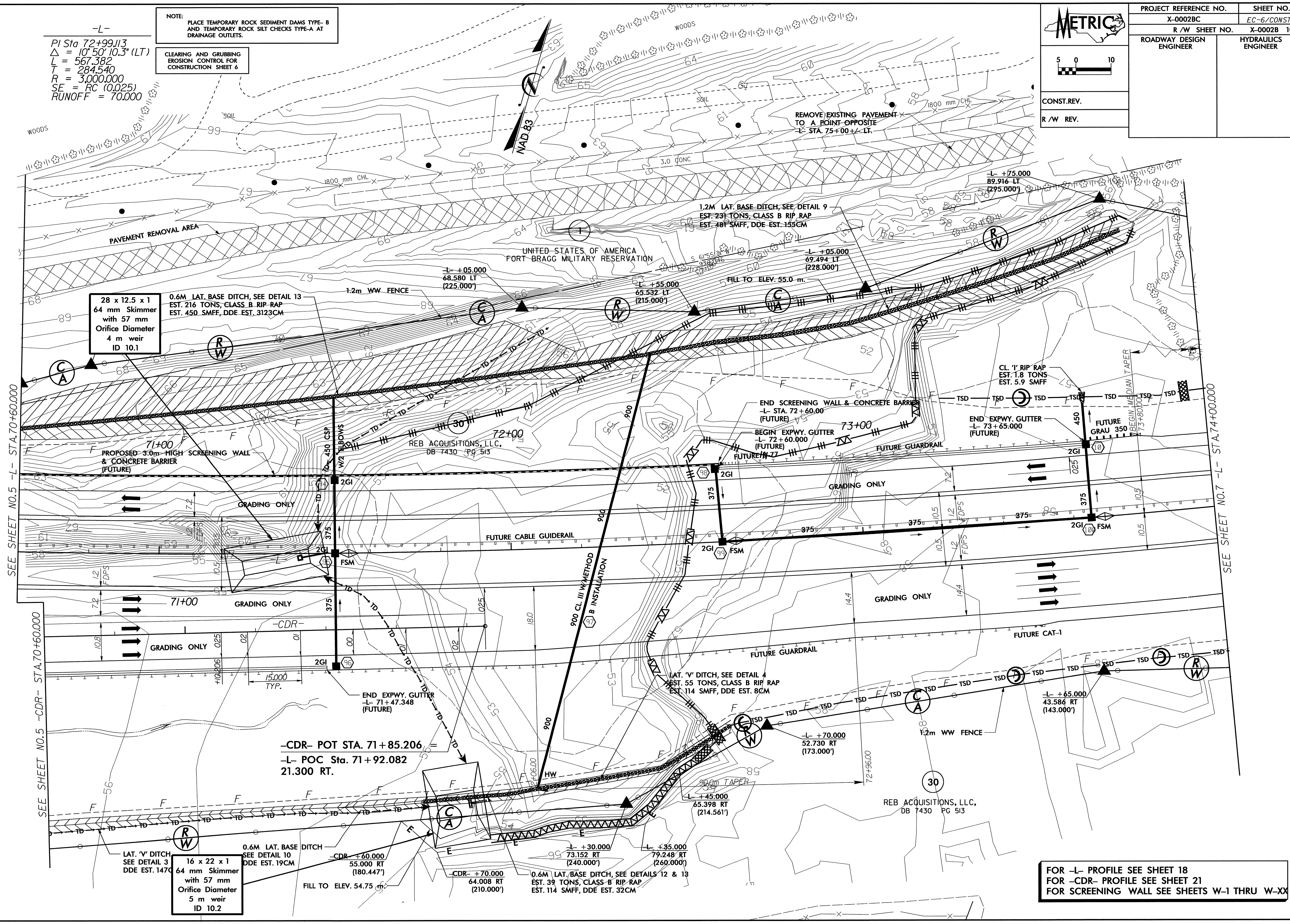
PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-6/CONST.6
R/W SHEET NO.	X-0002B 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST.REV.

R/W REV.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6



METRIC
-L-
PI Sta 72+99.113
Δ = 10°50'10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC (0.025)
RUNOFF = 70.000
NAD 83
WOODS
PAVEMENT REMOVAL AREA
REMOVE EXISTING PAVEMENT TO A POINT OPPOSITE -L- STA. 75+00 +/- LT.
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
REB ACQUISITIONS, LLC.
DB 7430 PG 513
28 x 12.5 x 1
64 mm Skimmer
with 57 mm
Orifice Diameter
4 m weir
ID 10.1
0.6M LAT. BASE DITCH, SEE DETAIL 13
EST. 216 TONS, CLASS B RIP RAP
EST. 450 SMFF, DDE EST. 3123CM
1.2M LAT. BASE DITCH, SEE DETAIL 9
EST. 231 TONS, CLASS B RIP RAP
EST. 481 SMFF, DDE EST. 155CM
-L- +75.000
89.916 LT
(295.000')
-L- +05.000
69.494 LT
(228.000')
-L- +05.000
68.580 LT
(225.000')
-L- +55.000
65.532 LT
(215.000')
FILL TO ELEV. 55.0 m.
1.2m WW FENCE
PROPOSED 3.0m HIGH SCREENING WALL & CONCRETE BARRIER (FUTURE)
END SCREENING WALL & CONCRETE BARRIER -L- STA. 72+60.00 (FUTURE)
BEGIN EXPWY. GUTTER -L- 72+60.000 (FUTURE)
END EXPWY. GUTTER -L- 73+65.000 (FUTURE)
CL. 'I' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
FUTURE GRAU 350
BEGIN MEDIAN TAPER
FUTURE GUARDRAIL
FUTURE CABLE GUIDERAIL
FUTURE CAT-1
GRADING ONLY
900 CL. III W/METHOD B INSTALLATION
SEE SHEET NO.5 -L- STA.70+60.000
SEE SHEET NO.5 -CDR- STA.70+60.000
SEE SHEET NO.7 -L- STA.74+00.000
-CDR-
END EXPWY. GUTTER -L- 71+47.348 (FUTURE)
-CDR- POT STA. 71+85.206 =
-L- POC Sta. 71+92.082
21.300 RT.
LAT. 'V' DITCH, SEE DETAIL 4
EST. 55 TONS, CLASS B RIP RAP
EST. 114 SMFF, DDE EST. 8CM
-L- +70.000
52.730 RT
(173.000')
-L- +65.000
43.586 RT
(143.000')
-L- +45.000
65.398 RT
(214.561')
90.0m TAPER
LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 147CM
16 x 22 x 1
64 mm Skimmer
with 57 mm
Orifice Diameter
5 m weir
ID 10.2
0.6M LAT. BASE DITCH
SEE DETAIL 10
DDE EST. 19CM
-CDR- +60.000
55.000 RT
(180.447')
-CDR- +70.000
64.008 RT
(210.000')
FILL TO ELEV. 54.75 m
-L- +30.000
73.152 RT
(240.000')
-L- +35.000
79.248 RT
(260.000')
0.6M LAT. BASE DITCH, SEE DETAILS 12 & 13
EST. 39 TONS, CLASS B RIP RAP
EST. 114 SMFF, DDE EST. 32CM

FOR -L- PROFILE SEE SHEET 18
FOR -CDR- PROFILE SEE SHEET 21
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX

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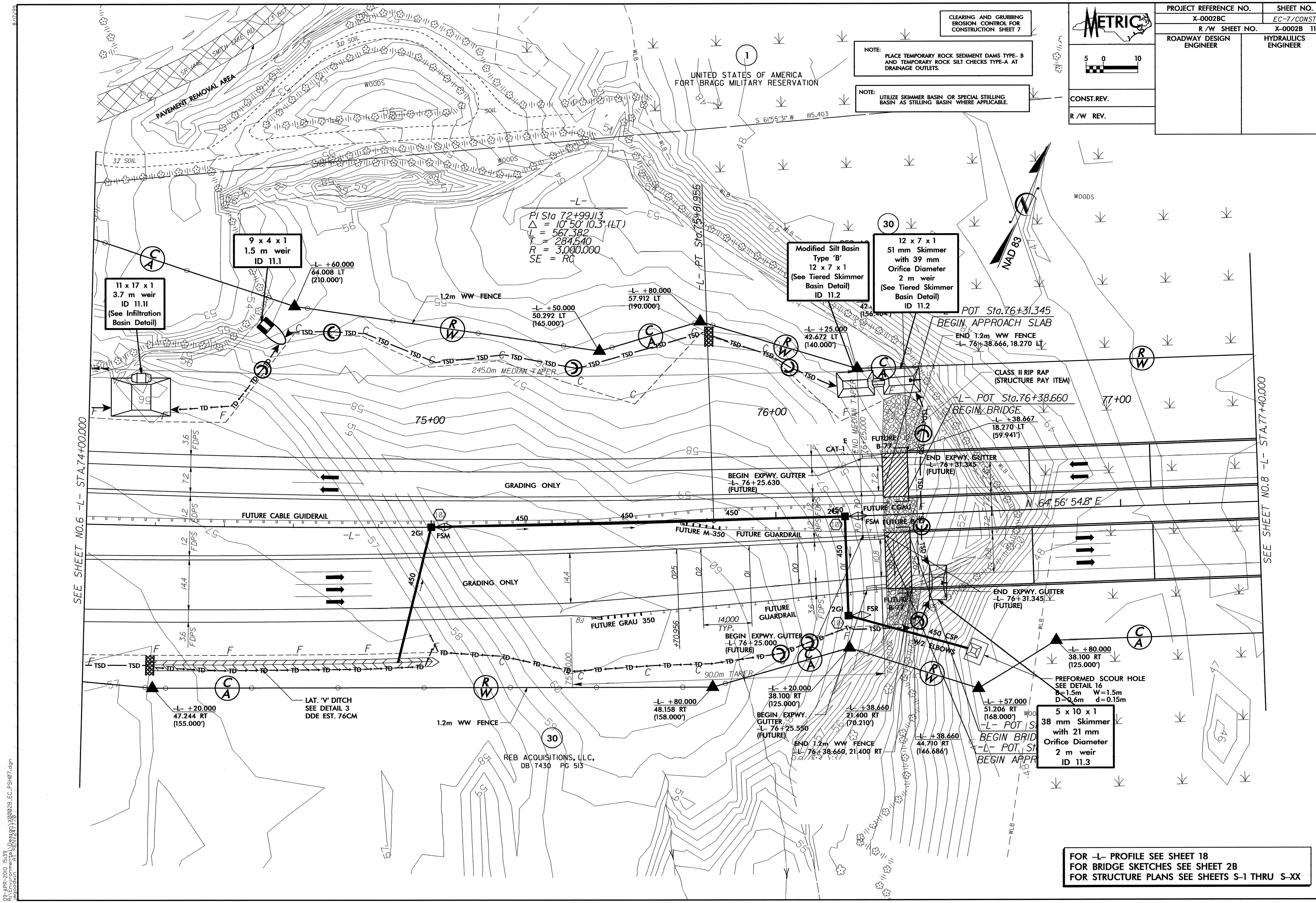

PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-7/CONST.7
R/W SHEET NO. X-0002B 11
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
NOTE: UTILIZE SKIMMER BASIN OR SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
S 61°55'31" W 115.403
PAVEMENT REMOVAL AREA
SMITH LAKE RD
WOODS
-L-
PI Sta 72+99.113
△ = 10°50'10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC
-L- PT Sta.75+81.956
9 x 4 x 1
1.5 m weir
ID 11.1
11 x 17 x 1
3.7 m weir
ID 11.11
(See Infiltration Basin Detail)
Modified Silt Basin Type 'B'
12 x 7 x 1
(See Tiered Skimmer Basin Detail)
ID 11.2
12 x 7 x 1
51 mm Skimmer
with 39 mm Orifice Diameter
2 m weir
(See Tiered Skimmer Basin Detail)
ID 11.2
NAD 83
-L- POT Sta.76+31.345
BEGIN APPROACH SLAB
END 1.2m WW FENCE -L- 76+38.666, 18.270 LT
CLASS II RIP RAP (STRUCTURE PAY ITEM)
-L- POT Sta.76+38.660
BEGIN BRIDGE
1.2m WW FENCE
245.0m MEDIAN TAPER
75+00
76+00
77+00
GRADING ONLY
FUTURE CABLE GUIDERAIL
FUTURE M-350
FUTURE GUARDRAIL
FUTURE GRAU 350
N 64°56'54.8" E
END EXPWY. GUTTER -L- 76+31.345 (FUTURE)
BEGIN EXPWY. GUTTER -L- 76+25.630 (FUTURE)
BEGIN EXPWY. GUTTER -L- 76+25.000 (FUTURE)
BEGIN EXPWY. GUTTER -L- 76+25.550 (FUTURE)
END 1.2m WW FENCE -L- 76+38.660, 21.400 RT
SEE SHEET NO.6 -L- STA.74+00.000
SEE SHEET NO.8 -L- STA.77+40.000
LAT. 'V' DITCH SEE DETAIL 3 DDE EST. 76CM
90.0m TAPER
PREFORMED SCOUR HOLE SEE DETAIL 16 B=1.5m W=1.5m D=0.6m d=0.15m
5 x 10 x 1
38 mm Skimmer
with 21 mm Orifice Diameter
2 m weir
ID 11.3
REB ACQUISITIONS, LLC. DB 7430 PG 513
FOR -L- PROFILE SEE SHEET 18
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-8/CONST.8
R/W SHEET NO.	X-0002B 12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

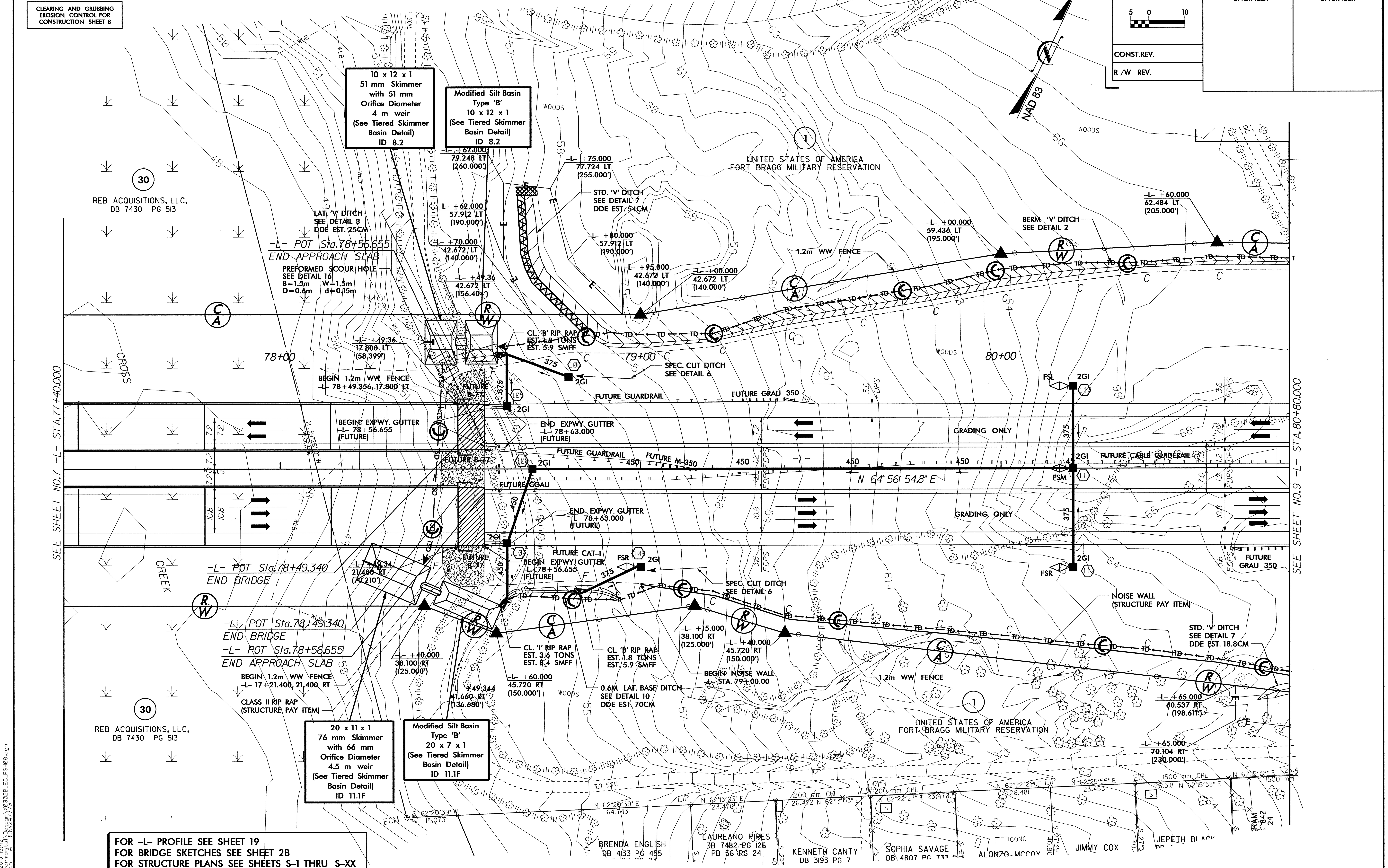
CONST.REV.

R/W REV.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE-B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

NOTE: UTILIZE TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8



METRIC
NAD 83
10 x 12 x 1
51 mm Skimmer
with 51 mm
Orifice Diameter
4 m weir
(See Tiered Skimmer Basin Detail)
ID 8.2
Modified Silt Basin Type 'B' 10 x 12 x 1 (See Tiered Skimmer Basin Detail) ID 8.2
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
REB ACQUISITIONS, LLC, DB 7430 PG 513
LAT. 'V' DITCH SEE DETAIL 3 DDE EST. 25CM
STD. 'V' DITCH SEE DETAIL 7 DDE EST. 54CM
BERM 'V' DITCH SEE DETAIL 2
-L- POT Sta.78+56.655 END APPROACH SLAB
PREFORMED SCOUR HOLE SEE DETAIL 16 B=1.5m W=1.5m D=0.6m d=0.15m
1.2m WW FENCE
CL. 'B' RIP RAP EST. 3.8 TONS EST. 5.9 SMFF
SPEC. CUT DITCH SEE DETAIL 6
BEGIN 1.2m WW FENCE -L- 78+49.356, 17.800 LT
FUTURE GUARDRAIL
FUTURE GRAU 350
BEGIN EXPWY. GUTTER -L- 78+56.655 (FUTURE)
END EXPWY. GUTTER -L- 78+63.000 (FUTURE)
GRADING ONLY
FUTURE CABLE GUIDERAIL
N 64°56'54.8" E
FUTURE CGAU
FUTURE CAT-1
SEE SHEET NO.7 -L- STA.77+40.000
SEE SHEET NO.9 -L- STA.80+80.000
-L- POT Sta.78+49.340 END BRIDGE
-L- POT Sta.78+56.655 END APPROACH SLAB
NOISE WALL (STRUCTURE PAY ITEM)
BEGIN NOISE WALL -L- STA. 79+00.00
CL. 'I' RIP RAP EST. 3.6 TONS EST. 8.4 SMFF
CL. 'B' RIP RAP EST. 1.8 TONS EST. 5.9 SMFF
0.6M LAT. BASE DITCH SEE DETAIL 10 DDE EST. 70CM
STD. 'V' DITCH SEE DETAIL 7 DDE EST. 18.8CM
BEGIN 1.2m WW FENCE -L- 17+21.400, 21.400 RT
CLASS II RIP RAP (STRUCTURE PAY ITEM)
20 x 11 x 1
76 mm Skimmer
with 66 mm
Orifice Diameter
4.5 m weir
(See Tiered Skimmer Basin Detail)
ID 11.1F
Modified Silt Basin Type 'B' 20 x 7 x 1 (See Tiered Skimmer Basin Detail) ID 11.1F
BRENDA ENGLISH DB 4133 PG 455
LAUREANO PIRES DB 7482 PG 126 PB 56 PG 24
KENNETH CANTY DB 3193 PG 7
SOPHIA SAVAGE DB 4807 PG 733
ALONZO MCCOY
JIMMY COX
JEPETH BLACK
WOODS
CROSS CREEK

FOR -L- PROFILE SEE SHEET 19
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5 0 10	X-0002BC	EC-9/CONST.9
	R /W SHEET NO.	X-0002B 13
CONST.REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R /W REV.		

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 9

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

NAD 83

SEE SHEET NO.8 -L- STA.80+80.000

WOODS

SOIL

1 UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION

1.2m WW FENCE

-L- +80.000
60.960 LT
(200.000')

-L- +60.000
56.388 LT
(185.000')

BERM 'V' DITCH SEE DETAIL 2

EXISTING ROW MONUMENT (X-0002C)
END WW FENCE
-L- 83+40.000
55.00 LT
(180.446')

END CA
-L- 83+40.000
42.672 LT
(140.000')

NOTE: TIE TEMPORARY DIVERSION IN WITH TEMPORARY DIVERSION ON X-0002CA PROJECT.

END TIP PROJECT X-0002BC
END CONSTRUCTION
-L- POT STA 83+40.000
BEGIN TIP PROJECT X-0002CA

81+00 82+00 83+00 84+00

FSL 2GI FSM 2GI-A FSR 2GI

GRADING ONLY

FUTURE CABLE GUIDERAIL

N 64°56'54.8" E

FUTURE GUARDRAIL FUTURE CAT-1

BEGIN CONCRETE BARRIER
-L- STA 82+82.110, 22.096 RT
(FUTURE)

FUTURE GRAU 350 FUTURE B-77

BERM 'V' DITCH
SEE DETAIL 1
EST. 19 TONS
EST. 38 SMFF

END CONCRETE BARRIER
-L- STA 83+40.002, 22.000 RT
(FUTURE)

0.6M LAT. BASE DITCH
SEE DETAIL 12
EST. 34 TONS
EST. 70 SMFF
DDE EST. 150CM

STD. 'V' DITCH
SEE DETAIL 7
DDE EST. 18.8CM

NOISE WALL
(STRUCTURE PAY ITEM)

BERM 'V' DITCH
SEE DETAIL 2

-L- +00.000
42.672 RT
(140.000')

-L- +10.000
65.871 RT
(216.111')

-L- +20.000
67.056 RT
(220.000')

-L- +40.000
65.532 RT
(215.000')

-L- +10.000
76.200 RT
(250.000')

1.2m WW FENCE

NOTE: TIE IN MODIFIED SILT BASIN TYPE-B WITH 25 x 8 x 1 SKIMMER BASIN (4.1C) FROM X-0002CA PROJECT.

EXISTING ROW MONUMENT (X-0002C)
END WW FENCE
-L- 83+40.000
55.00 RT
(180.446')

Modified Silt Basin
Type 'B'
12.5 x 8 x 1
(See Tiered Skimmer
Basin Detail)
3 m weir

WILLIAM EMMERSON
DB 3628 PG 628
PB 56 PG 24

GEORGE BEARD
DB 3899 PG 752
PB 56 PG 24

BRUCE CARMAIN
DB 3705 PG 761
PB 56 PG 24

GENE JACKSON
DB 3679 PG 486
PB 56 PG 24

RICHARD ELLIS
DB 5003 PG 831
PB 56 PG 24

MELVIN GOODE
DB 3095 PG 833
PB 56 PG 24

LESLIE HUNTLEY
DB 3405 PG 135
PB 56 PG 24

LACINDA MCBRYDE
DB 4787 PG 201
PB 56 PG 24

FOR -L- PROFILE SEE SHEET 19

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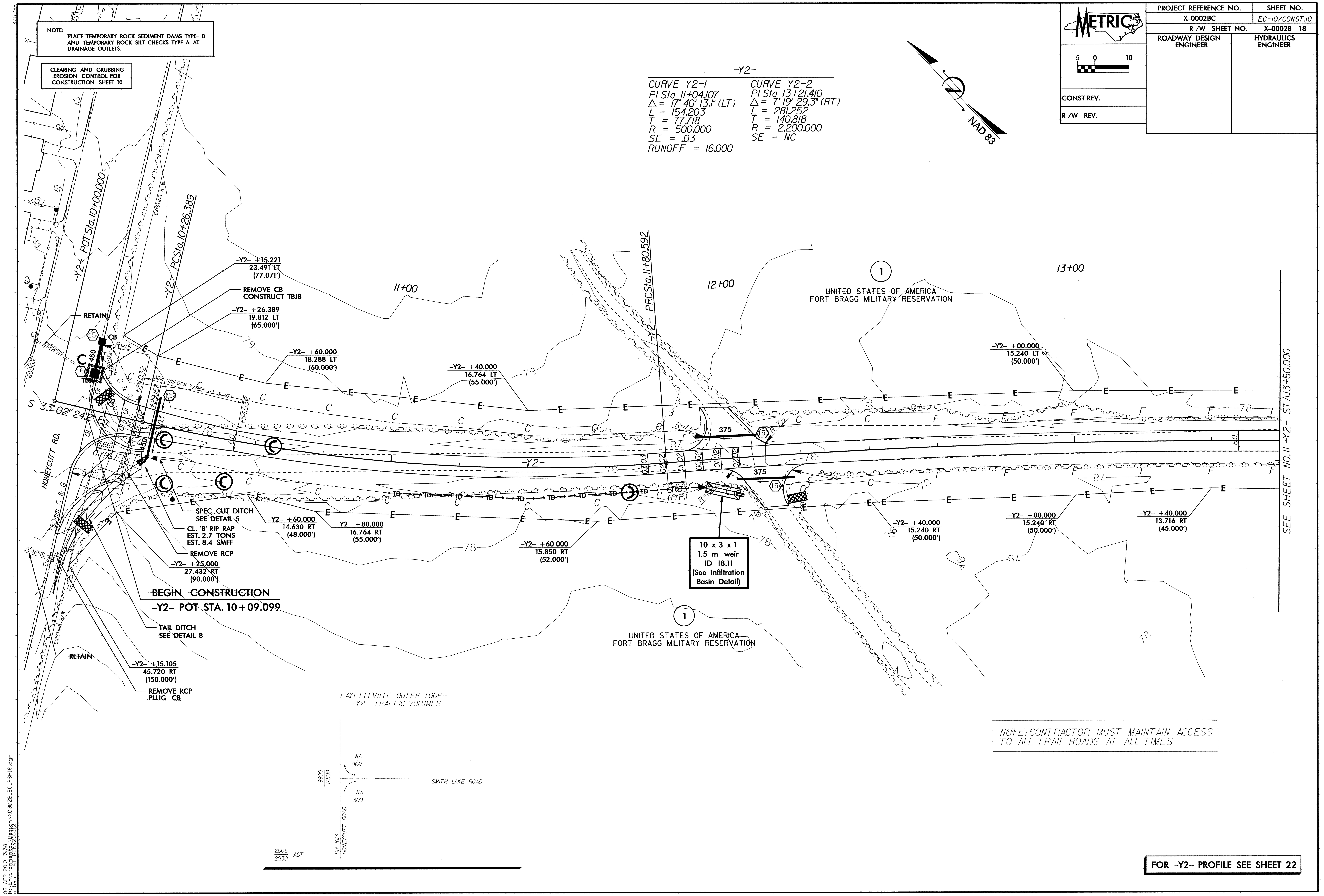
R:\Environmental\Projects\X0002B.EC.PSH01.dgn


PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-10/CONST.10
R/W SHEET NO. X-0002B 18
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
5 0 10
CONST.REV.
R/W REV.
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10
-Y2-
CURVE Y2-1
PI Sta 11+04.107
Δ = 17° 40' 13.1" (LT)
L = 154.203
T = 77.718
R = 500.000
SE = .03
RUNOFF = 16.000
CURVE Y2-2
PI Sta 13+21.410
Δ = 7° 19' 29.3" (RT)
L = 281.252
T = 140.818
R = 2,200.000
SE = NC
NAD 83
-Y2- POT Sta. 10+00.000
-Y2- PCSta. 10+26.389
-Y2- PRCSta. 11+80.592
11+00
12+00
13+00
UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION
-Y2- +15.221 23.491 LT (77.071')
REMOVE CB CONSTRUCT TBJB
-Y2- +26.389 19.812 LT (65.000')
-Y2- +60.000 18.288 LT (60.000')
-Y2- +40.000 16.764 LT (55.000')
-Y2- +00.000 15.240 LT (50.000')
RETAIN
CB
HONEYCUTT RD.
S 33°02' 24.2" E
-Y2-
375
SPEC. CUT DITCH SEE DETAIL 5
CL. 'B' RIP RAP EST. 2.7 TONS EST. 8.4 SMFF
REMOVE RCP
-Y2- +25.000 27.432 RT (90.000')
-Y2- +60.000 14.630 RT (48.000')
-Y2- +80.000 16.764 RT (55.000')
-Y2- +60.000 15.850 RT (52.000')
10 x 3 x 1 1.5 m weir ID 18.11 (See Infiltration Basin Detail)
-Y2- +40.000 15.240 RT (50.000')
-Y2- +00.000 15.240 RT (50.000')
-Y2- +40.000 13.716 RT (45.000')
SEE SHEET NO.11 -Y2- STA.13+60.000
BEGIN CONSTRUCTION
-Y2- POT STA. 10+09.099
TAIL DITCH SEE DETAIL 8
RETAIN
-Y2- +15.105 45.720 RT (150.000')
REMOVE RCP PLUG CB
FAYETTEVILLE OUTER LOOP- -Y2- TRAFFIC VOLUMES
NA 200
NA 300
9900 17800
SMITH LAKE ROAD
SR 1613 HONEYCUTT ROAD
2005 2030 ADT
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
FOR -Y2- PROFILE SEE SHEET 22

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-11/CONST.11
R/W SHEET NO.	X-0002B 19

METRIC

ROADWAY DESIGN ENGINEER

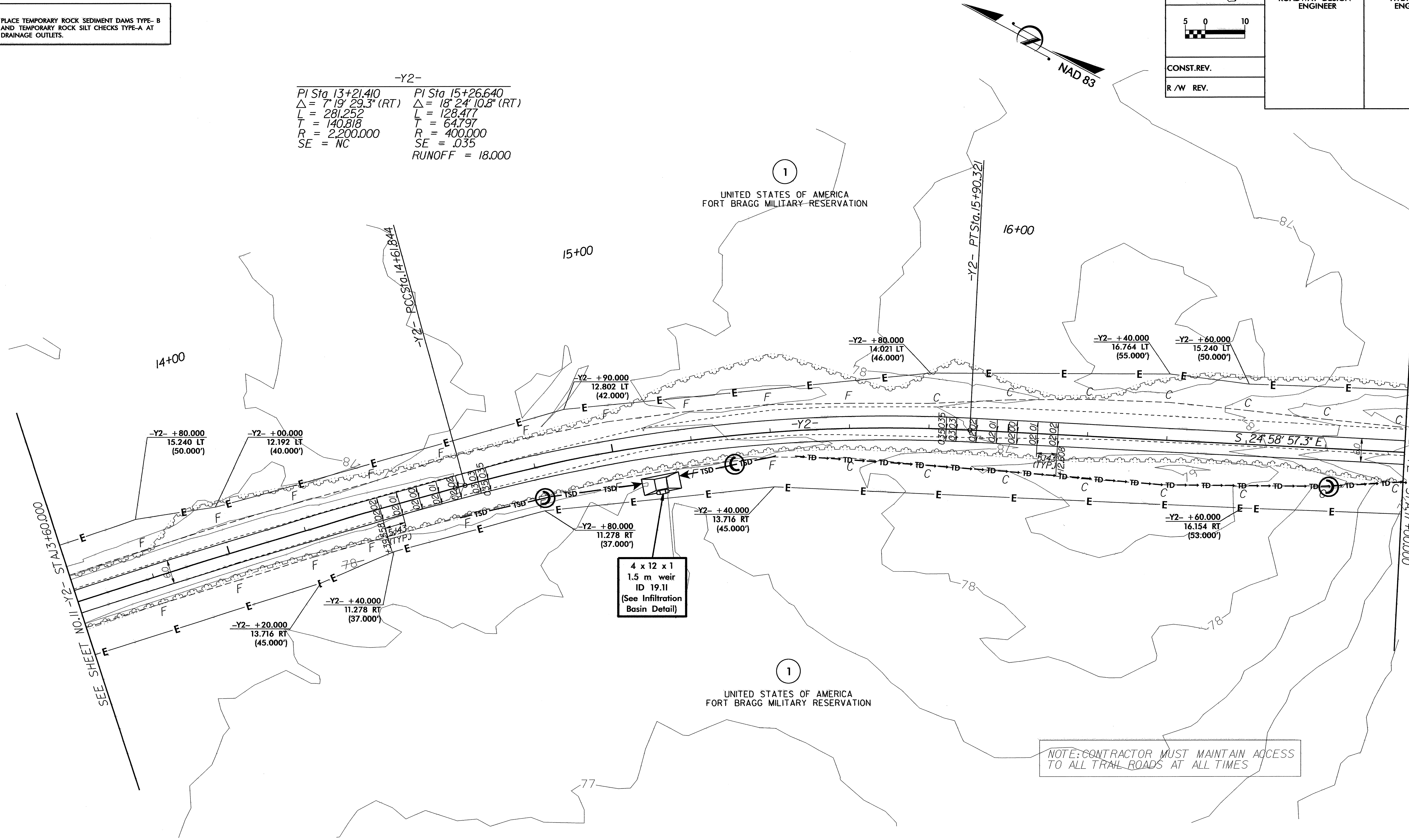
HYDRAULICS ENGINEER

CONST.REV.

R/W REV.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE-B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.



FOR -Y2- PROFILE SEE SHEET 22

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CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-12/CONST.12
R /W SHEET NO.	X-0002B 20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

5 0 10

CONST.REV.

R /W REV.

-Y2-
PI Sta 22+24.60
△ = 5° 47' 03.6" (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC

NAD 83

SEE SHEET NO.11 -Y2- STA.17+00.000

SEE SHEET NO.13 -Y2- STA.20+40.000

-Y2- PCSta.19+69.472

18+00

19+00

20+00

1
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION

3.5 x 15 x 1
1.5 m weir
ID 20.2I
(See Infiltration Basin Detail)

-Y2- +20.000
16.154 LT
(53.000')

-Y2- +60.000
12.192 LT
(40.000')

-Y2- +60.000
11.278 LT
(37.000')

-Y2- +80.000
15.240 LT
(50.000')

-Y2- +40.000
18.288 LT
(60.000')

-Y2- +60.000
14.326 LT
(47.000')

6 x 3 x 1
1.5 m weir
ID 20.3I
(See Infiltration Basin Detail)

6 x 3 x 1
1.5 m weir
ID 20.4I
(See Infiltration Basin Detail)

TOE PROTECTION
SEE DETAIL 15
EST. 23.0 TONS,
CLASS B RIP RAP
EST. 48.0 SMFF

-Y2- +00.400
13.685 LT
(44.897')

-Y2- +40.000
12.192 LT
(40.000')

-Y2- +20.000
12.192 LT
(40.000')

-Y2-
S 24° 58' 57.3" E

375

-Y2- +80.000
14.630 RT
(48.000')

-Y2- +00.000
12.192 RT
(40.000')

-Y2- +40.000
12.192 RT
(40.000')

-Y2- +60.000
11.278 RT
(37.000')

4 x 13 x 1
1.5 m weir
ID 20.1I
(See Infiltration Basin Detail)

-Y2- +20.000
18.288 RT
(60.000')

-Y2- +60.000
15.240 RT
(50.000')

-Y2- +10.000
21.336 RT
(70.000')

-Y2- +80.000
12.192 RT
(40.000')

CL 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF

3 x 13 x 1
38 mm Skimmer
with 12 mm
Orifice Diameter
2 m weir
ID 20.4F

Modified Silt Basin
Type 'B'
7.5 x 4.5 x 1
(See Tiered Skimmer
Basin Detail)
ID 20.1F

7.5 x 4.5 x 1
38 mm Skimmer
with 27 mm
Orifice Diameter
2 m weir
(See Tiered Skimmer
Basin Detail)
ID 20.1F

1
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION

NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES

FOR -Y2- PROFILE SEE SHEET 23

06-APR-2010 13:58
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pchan AT REV:23812

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-13/CONST.13
R/W SHEET NO.	X-0002B 21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

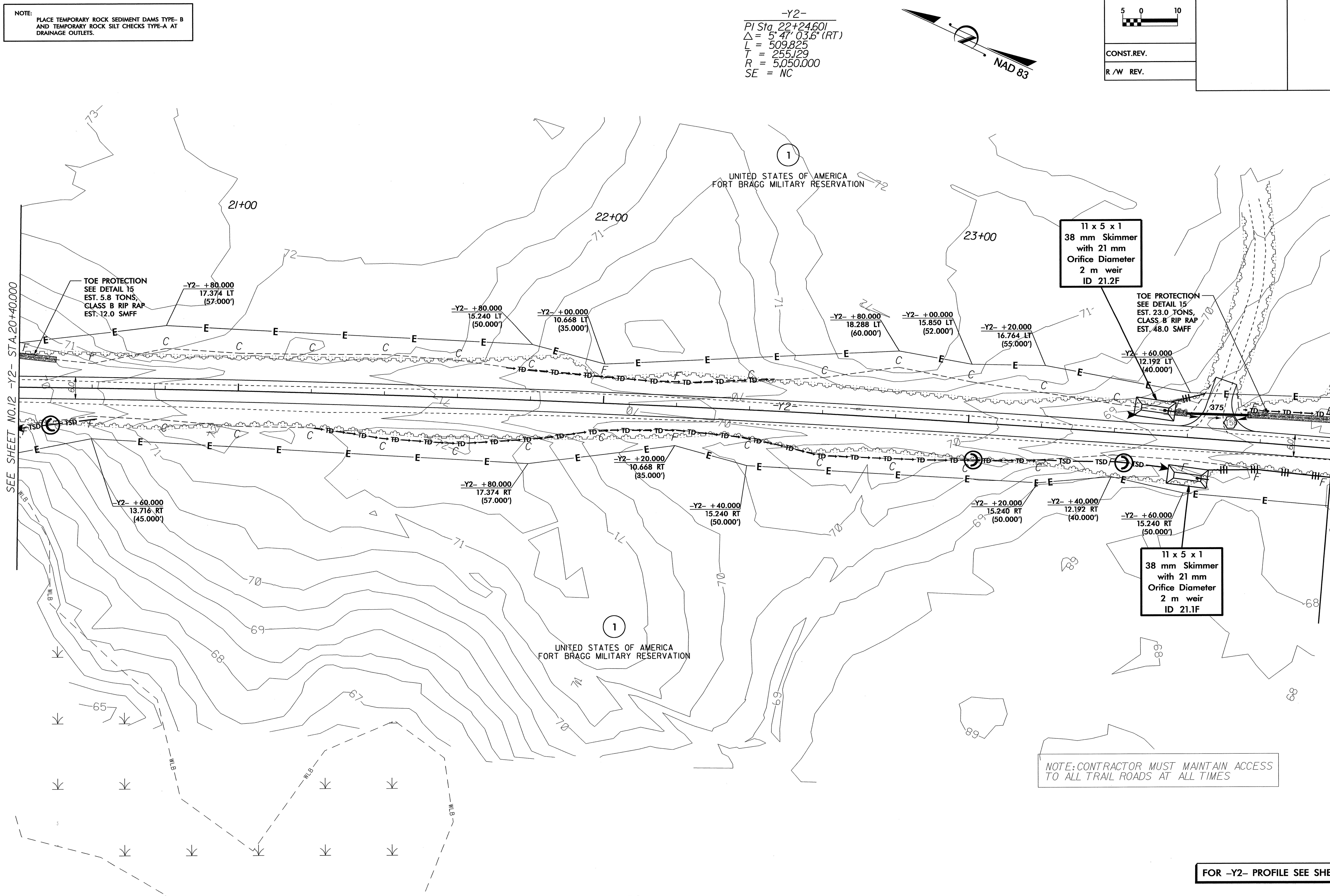
CONST.REV.

R/W REV.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

-Y2-
PI Sta 22+24.601
△ = 5° 47′ 03.6″ (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC



FOR -Y2- PROFILE SEE SHEET 23

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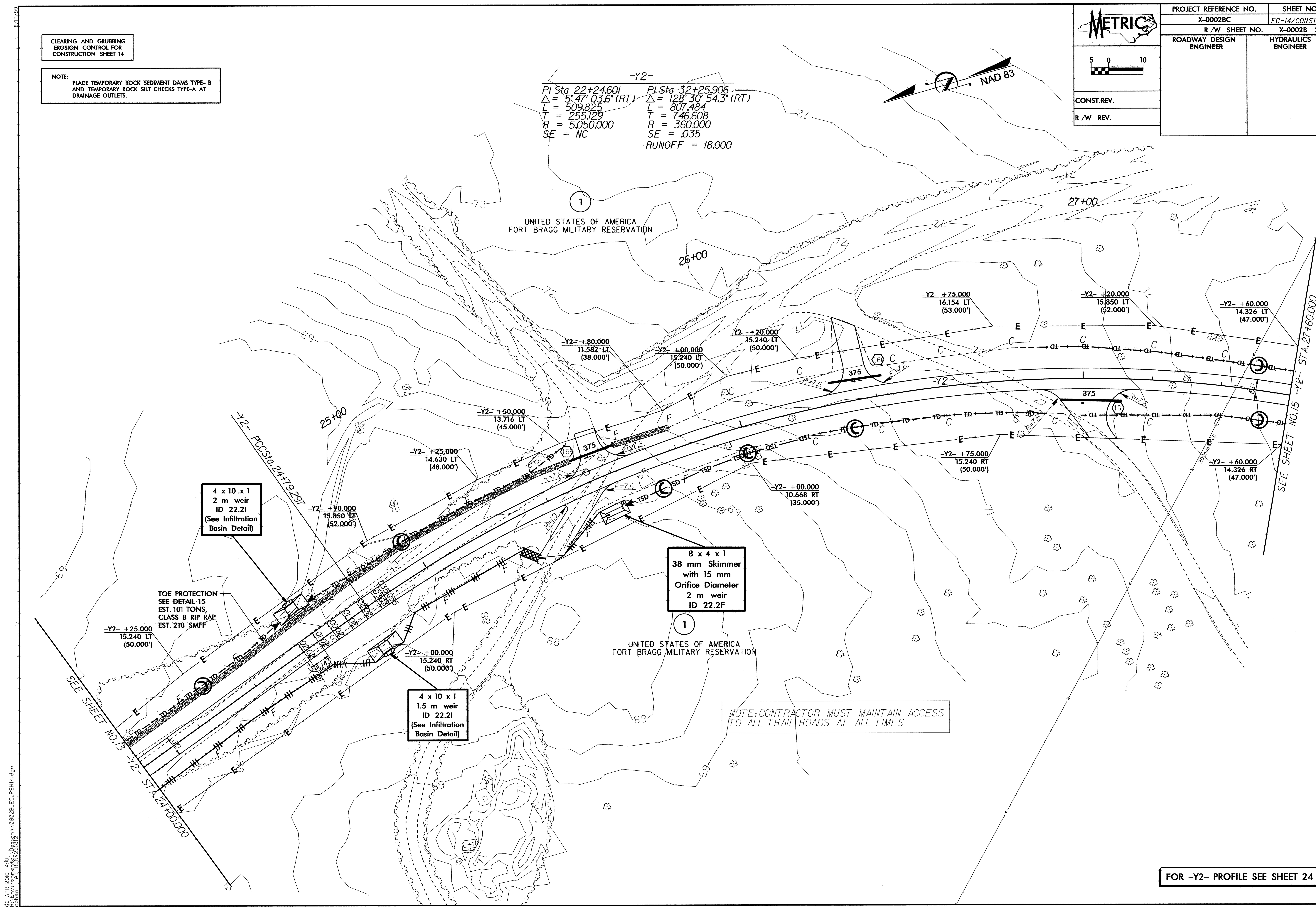
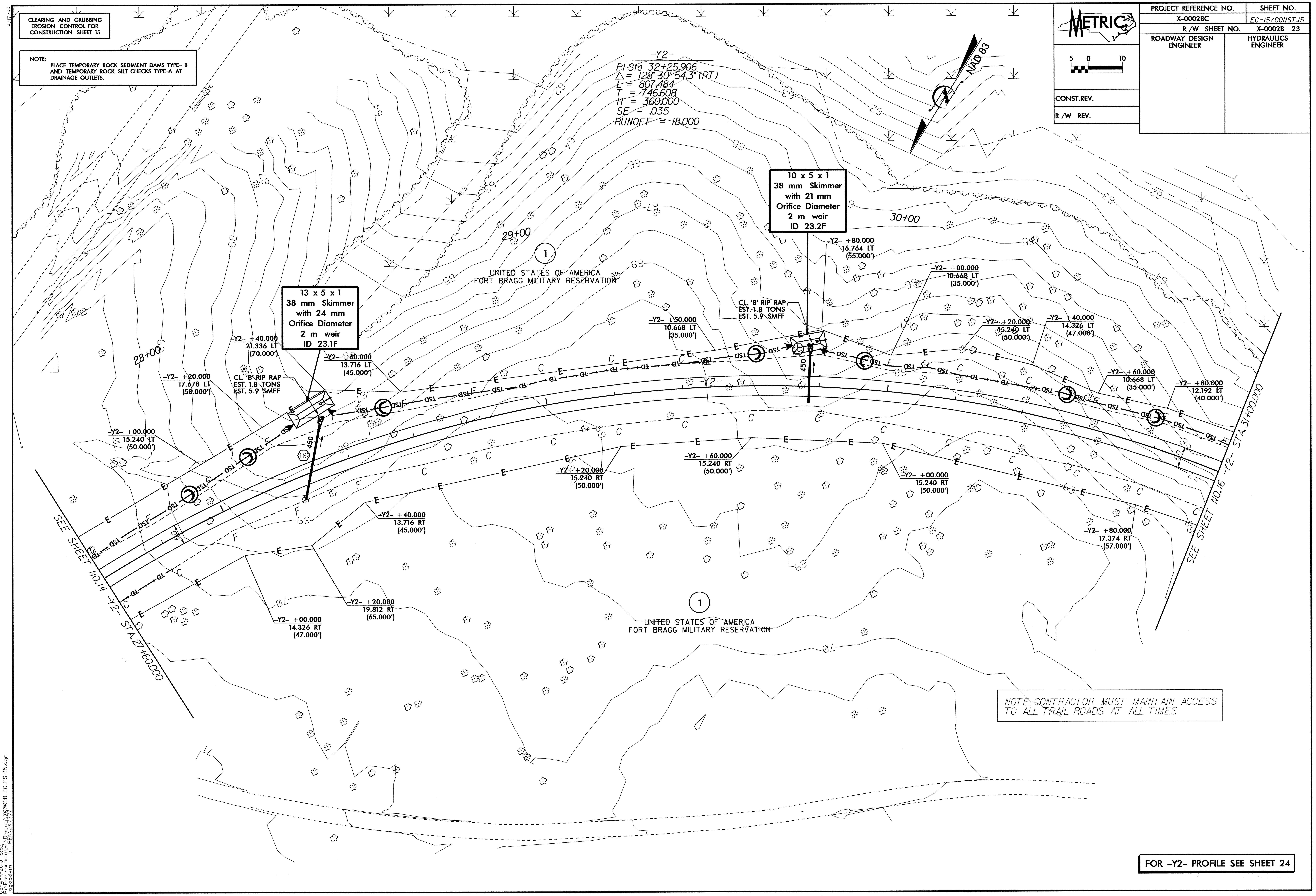
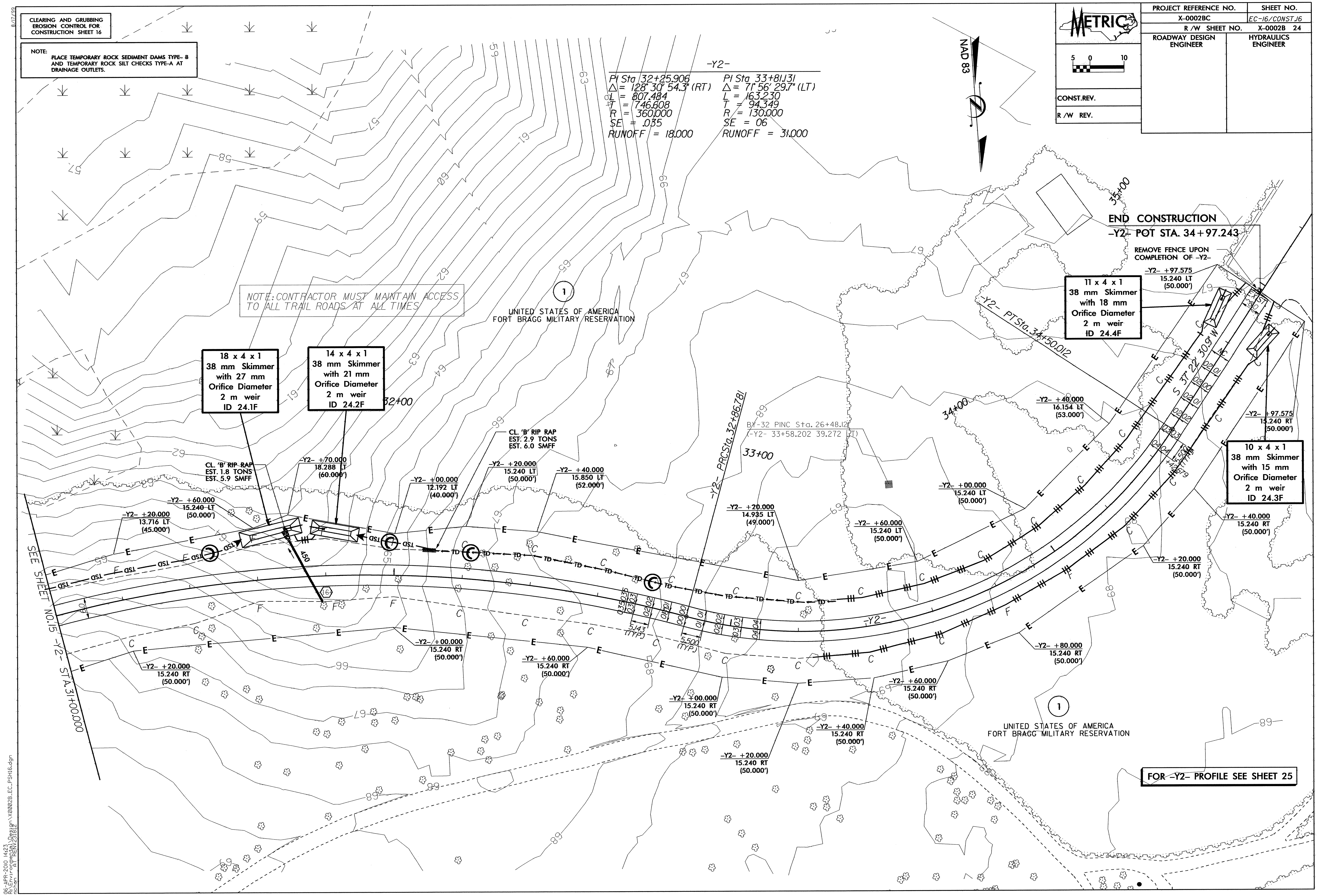
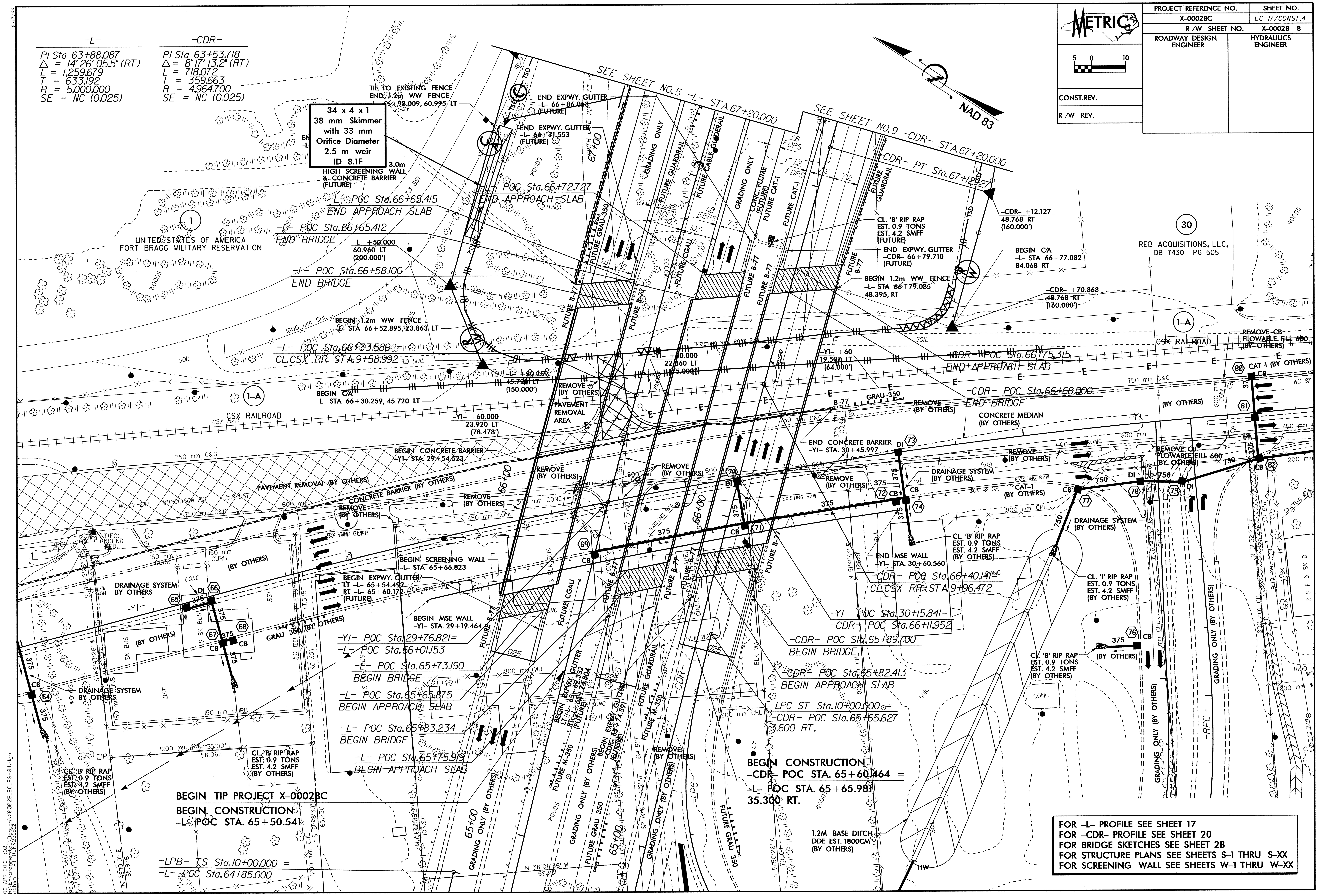
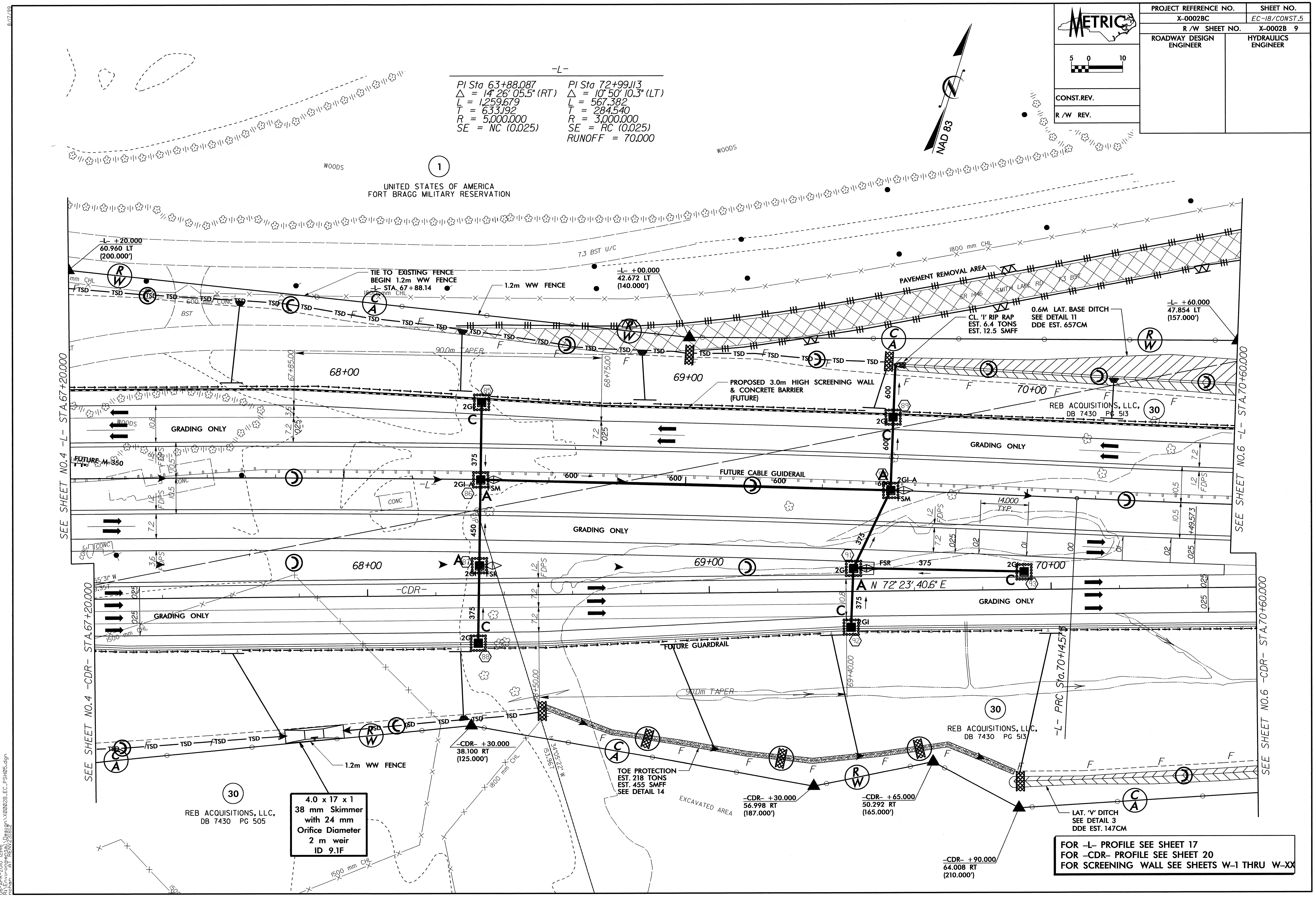

PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-14/CONST.14
R/W SHEET NO. X-0002B 22
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 14
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
-Y2-
PI Sta 22+24.601
Δ = 5° 47' 03.6" (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC
PI Sta 32+25.906
Δ = 128° 30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000
UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION
-Y2- PCCSta.24+79.297
4 x 10 x 1 2 m weir ID 22.21 (See Infiltration Basin Detail)
TOE PROTECTION SEE DETAIL 15 EST. 101 TONS, CLASS B RIP RAP EST. 210 SMFF
4 x 10 x 1 1.5 m weir ID 22.21 (See Infiltration Basin Detail)
8 x 4 x 1 38 mm Skimmer with 15 mm Orifice Diameter 2 m weir ID 22.2F
-Y2- +25.000 15.240 LT (50.000')
-Y2- +25.000 14.630 LT (48.000')
-Y2- +50.000 13.716 LT (45.000')
-Y2- +80.000 11.582 LT (38.000')
-Y2- +90.000 15.850 LT (52.000')
-Y2- +00.000 15.240 LT (50.000')
-Y2- +20.000 15.240 LT (50.000')
-Y2- +75.000 16.154 LT (53.000')
-Y2- +20.000 15.850 LT (52.000')
-Y2- +60.000 14.326 LT (47.000')
-Y2- +00.000 15.240 RT (50.000')
-Y2- +00.000 10.668 RT (35.000')
-Y2- +75.000 15.240 RT (50.000')
-Y2- +60.000 14.326 RT (47.000')
25+00
26+00
27+00
SEE SHEET NO.13 -Y2- STA.24+00.000
SEE SHEET NO.15 -Y2- STA.27+60.000
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
FOR -Y2- PROFILE SEE SHEET 24

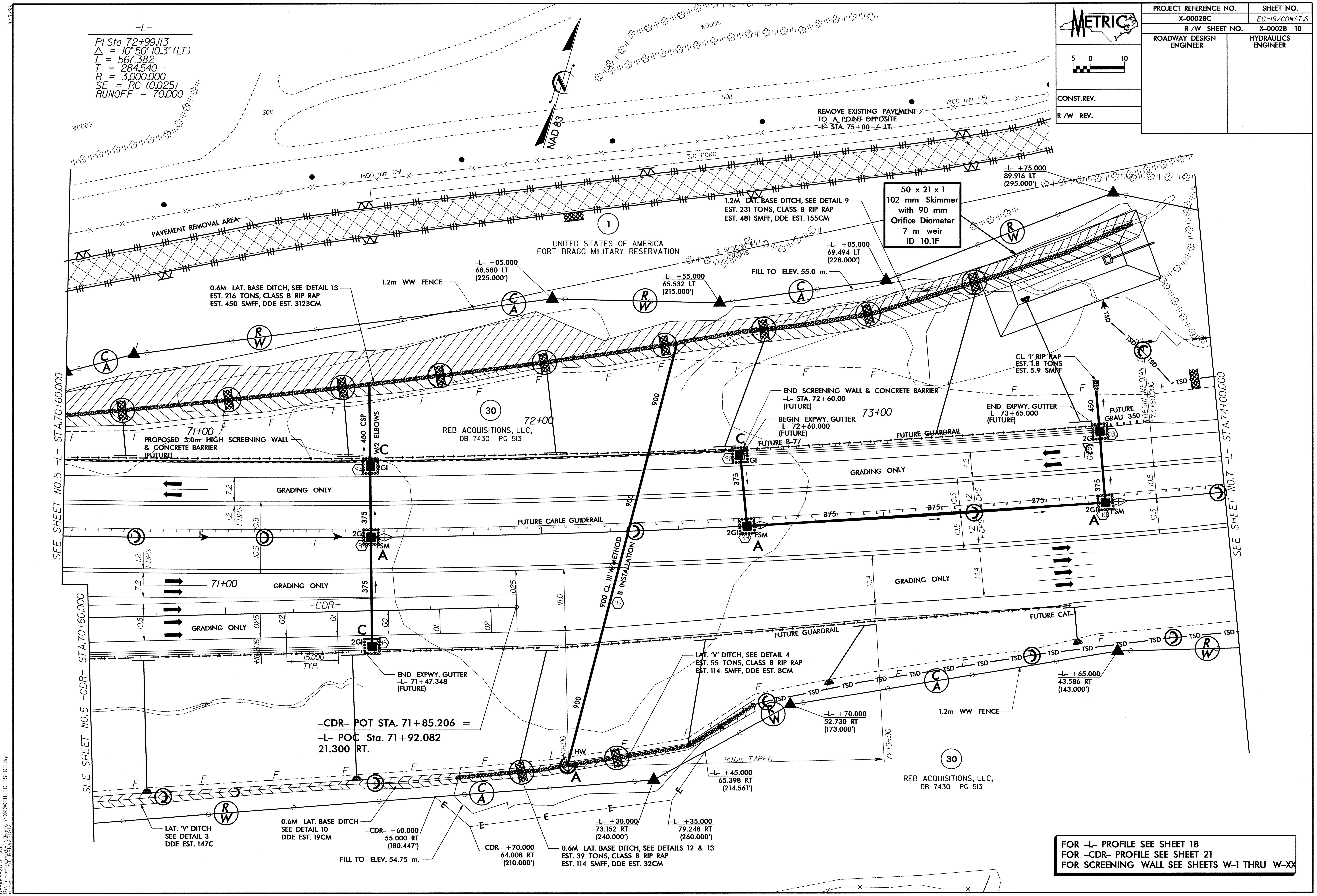

PROJECT REFERENCE NO.
SHEET NO.
X-0002BC
EC-15/CONST.15
R/W SHEET NO.
X-0002B 23
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
-Y2-
PI Sta 32+25.906
Δ = 128°30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000
10 x 5 x 1
38 mm Skimmer
with 21 mm
Orifice Diameter
2 m weir
ID 23.2F
13 x 5 x 1
38 mm Skimmer
with 24 mm
Orifice Diameter
2 m weir
ID 23.1F
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
28+00
29+00
30+00
SEE SHEET NO.14 -Y2- STA.27+60.000
SEE SHEET NO.16 -Y2- STA.31+00.000
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
FOR -Y2- PROFILE SEE SHEET 24



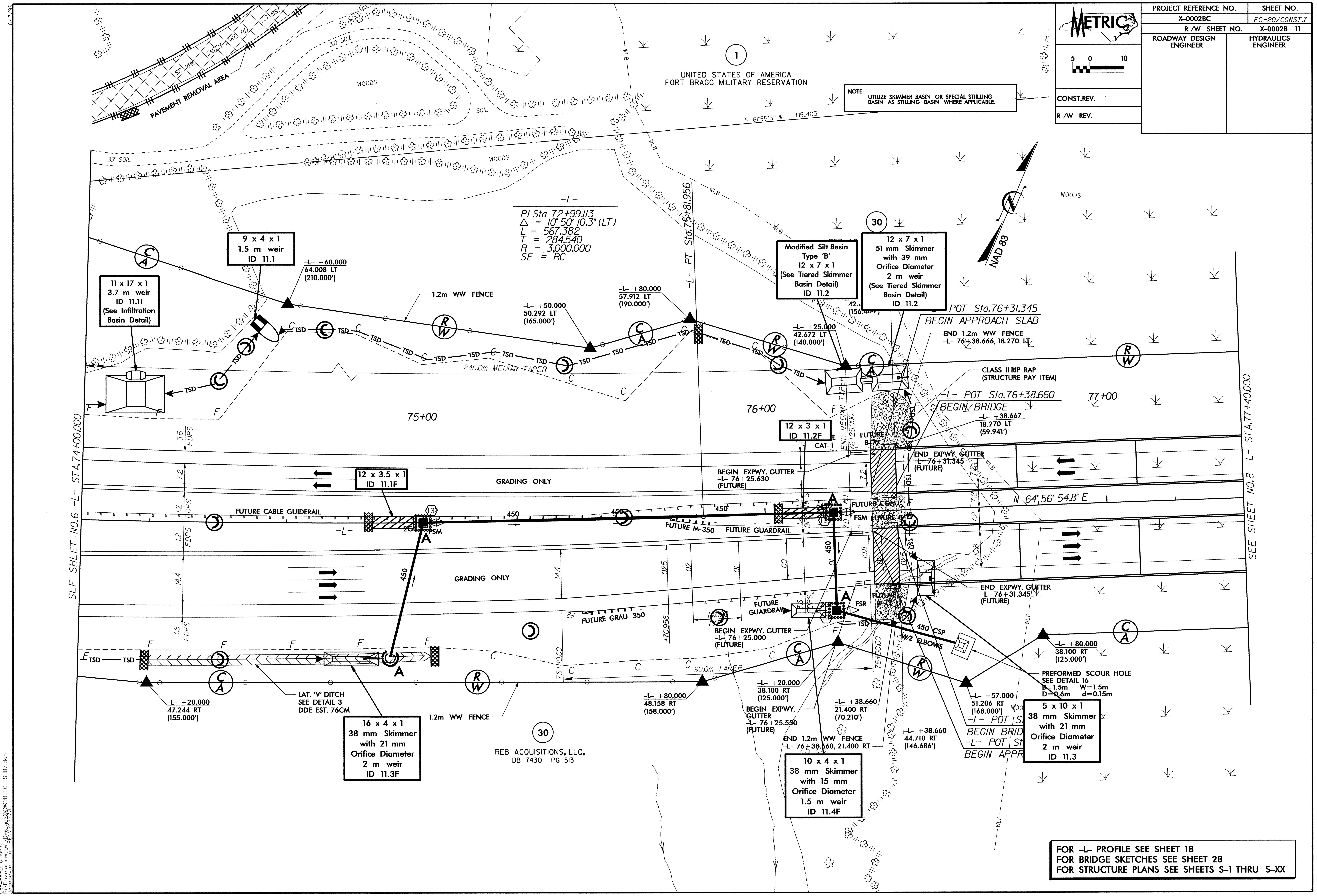
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
METRIC
PROJECT REFERENCE NO.
X-0002BC
SHEET NO.
EC-16/CONST.16
R/W SHEET NO.
X-0002B 24
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST.REV.
R/W REV.
NAD 83
-Y2-
PI Sta 32+25.906
Δ = 128° 30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000
PI Sta 33+81.131
Δ = 71° 56' 29.7" (LT)
L = 163.230
T = 94.349
R = 130.000
SE = .06
RUNOFF = 31.000
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
18 x 4 x 1
38 mm Skimmer
with 27 mm
Orifice Diameter
2 m weir
ID 24.1F
14 x 4 x 1
38 mm Skimmer
with 21 mm
Orifice Diameter
2 m weir
ID 24.2F
11 x 4 x 1
38 mm Skimmer
with 18 mm
Orifice Diameter
2 m weir
ID 24.4F
10 x 4 x 1
38 mm Skimmer
with 15 mm
Orifice Diameter
2 m weir
ID 24.3F
END CONSTRUCTION
-Y2- POT STA. 34+97.243
REMOVE FENCE UPON COMPLETION OF -Y2-
-Y2- PT Sta. 34+50.012
-Y2- PRC Sta. 32+86.781
BY-32 PINC Sta. 26+48.12
(-Y2- 33+58.202 39.272 LT)
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
CL. 'B' RIP RAP
EST. 2.9 TONS
EST. 6.0 SMFF
S 37° 22' 30.9" W
SEE SHEET NO. 15 -Y2- STA. 31+00.000
FOR -Y2- PROFILE SEE SHEET 25
32+00
33+00
34+00
35+00


PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-17/CONST.4
R/W SHEET NO. X-0002B 8
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
-L-
PI Sta 63+88.087
△ = 14° 26' 05.5" (RT)
L = 1,259.679
T = 633.192
R = 5,000.000
SE = NC (0.025)
-CDR-
PI Sta 63+53.718
△ = 8° 17' 13.2" (RT)
L = 718.072
T = 359.663
R = 4,964.700
SE = NC (0.025)
34 x 4 x 1
38 mm Skimmer
with 33 mm
Orifice Diameter
2.5 m weir
ID 8.1F
SEE SHEET NO.5 -L- STA.67+20.000
SEE SHEET NO.9 -CDR- STA.67+20.000
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
REB ACQUISITIONS, LLC.
DB 7430 PG 505
CSX RAILROAD
-L- POC Sta.66+65.415
END APPROACH SLAB
-L- POC Sta.66+65.412
END BRIDGE
-L- POC Sta.66+58.100
END BRIDGE
-L- POC Sta.66+72.727
END APPROACH SLAB
-L- POC Sta.66+33.589 =
CL.CSX RR STA.9+58.992
-CDR- PT Sta.67+12.127
-CDR- POC Sta.66+75.315
END APPROACH SLAB
-CDR- POC Sta.66+68.000
END BRIDGE
-CDR- POC Sta.66+40.141 =
CL.CSX RR STA.9+96.472
-YI- POC Sta.30+15.841 =
-CDR- POC Sta.66+11.952
-CDR- POC Sta.65+89.700
BEGIN BRIDGE
-CDR- POC Sta.65+82.413
BEGIN APPROACH SLAB
LPC ST Sta.10+00.000 =
-CDR- POC Sta.65+65.627
3.600 RT.
-YI- POC Sta.29+76.821 =
-L- POC Sta.66+01.153
-L- POC Sta.65+73.190
BEGIN BRIDGE
-L- POC Sta.65+65.875
BEGIN APPROACH SLAB
-L- POC Sta.65+83.234
BEGIN BRIDGE
-L- POC Sta.65+75.919
BEGIN APPROACH SLAB
BEGIN TIP PROJECT X-0002BC
BEGIN CONSTRUCTION
-L- POC STA. 65+50.541
BEGIN CONSTRUCTION
-CDR- POC STA. 65+60.464 =
-L- POC STA. 65+65.981
35.300 RT.
-LPB- TS Sta.10+00.000 =
-L- POC Sta.64+85.000
FOR -L- PROFILE SEE SHEET 17
FOR -CDR- PROFILE SEE SHEET 20
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX
REVISIONS

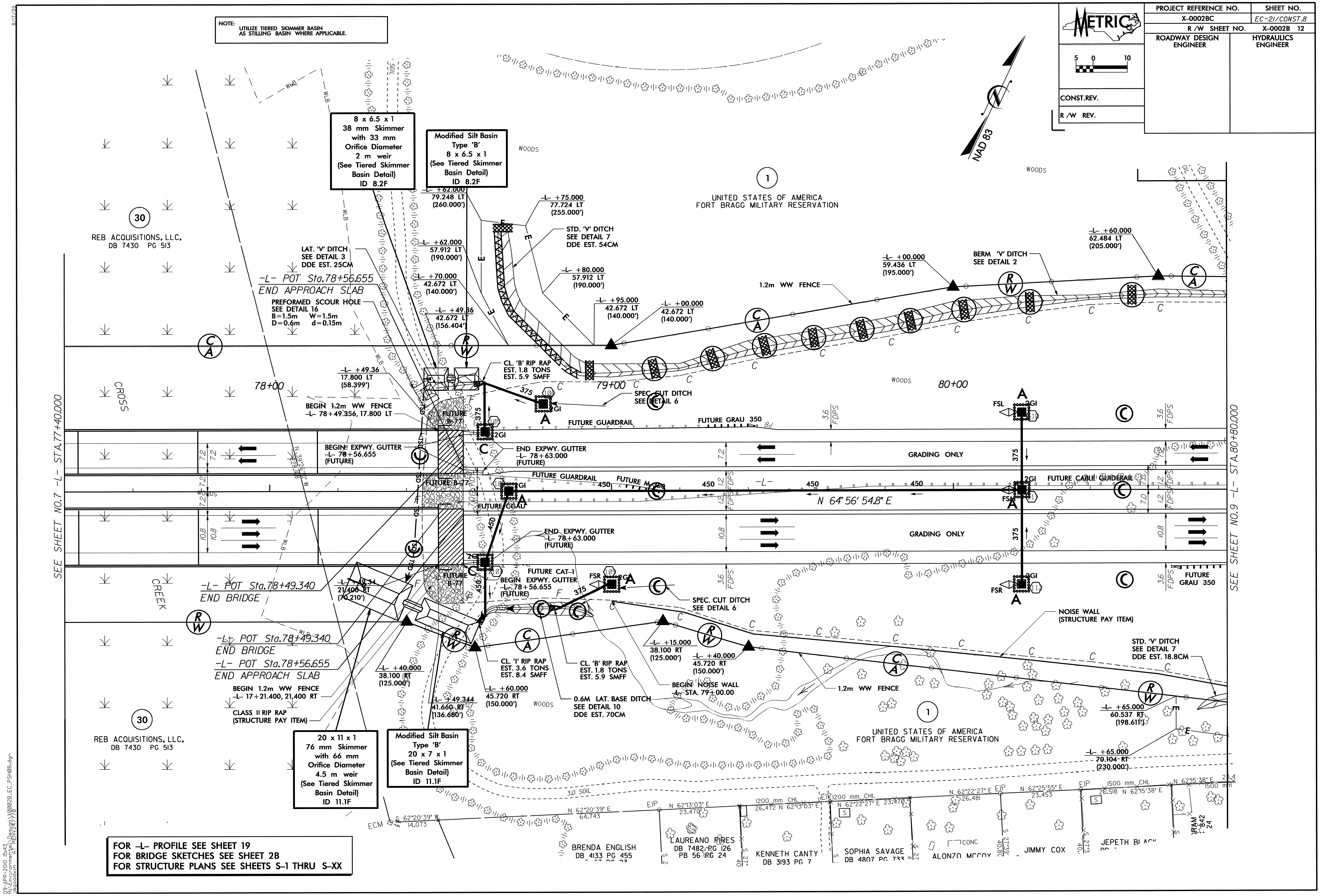

PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-1B/CONST.5
R/W SHEET NO. X-0002B 9
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
-L-
PI Sta 63+88.087
△ = 14° 26' 05.5" (RT)
L = 1,259.679
T = 633.192
R = 5,000.000
SE = NC (0.025)
PI Sta 72+99.113
△ = 10° 50' 10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC (0.025)
RUNOFF = 70.000
WOODS
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
TIE TO EXISTING FENCE
BEGIN 1.2m WW FENCE
-L- STA. 67+88.14
1.2m WW FENCE
PAVEMENT REMOVAL AREA
CL. 'I' RIP RAP
EST. 6.4 TONS
EST. 12.5 SMFF
0.6M LAT. BASE DITCH
SEE DETAIL 11
DDE EST. 657CM
PROPOSED 3.0m HIGH SCREENING WALL
& CONCRETE BARRIER
(FUTURE)
REB ACQUISITIONS, LLC.
DB 7430 PG 513
GRADING ONLY
FUTURE CABLE GUIDERAIL
FUTURE GUARDRAIL
N 72° 23' 40.6" E
-CDR-
SEE SHEET NO.4 -L- STA.67+20.000
SEE SHEET NO.4 -CDR- STA.67+20.000
SEE SHEET NO.6 -L- STA.70+60.000
SEE SHEET NO.6 -CDR- STA.70+60.000
-L- PRC Sta.70+14.578
90.0m TAPER
TOE PROTECTION
EST. 218 TONS
EST. 455 SMFF
SEE DETAIL 14
EXCAVATED AREA
1.2m WW FENCE
4.0 x 17 x 1
38 mm Skimmer
with 24 mm
Orifice Diameter
2 m weir
ID 9.1F
REB ACQUISITIONS, LLC.
DB 7430 PG 505
LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 147CM
FOR -L- PROFILE SEE SHEET 17
FOR -CDR- PROFILE SEE SHEET 20
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX
-L- +20.000 60.960 LT (200.000')
-L- +00.000 42.672 LT (140.000')
-L- +60.000 47.854 LT (157.000')
-CDR- +30.000 38.100 RT (125.000')
-CDR- +30.000 56.998 RT (187.000')
-CDR- +65.000 50.292 RT (165.000')
-CDR- +90.000 64.008 RT (210.000')
06-APR-2010 12:46



PROJECT REFERENCE NO.
X-0002BC
SHEET NO.
EC-19/CONST.6
R/W SHEET NO.
X-0002B 10
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
-L-
PI Sta 72+99.113
△ = 10° 50' 10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC (0.025)
RUNOFF = 70.000
NAD 83
WOODS
SOIL
1800 mm CHL
3.0 CONC
REMOVE EXISTING PAVEMENT TO A POINT OPPOSITE -L- STA. 75+00+/- LT.
PAVEMENT REMOVAL AREA
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
1.2M LAT. BASE DITCH, SEE DETAIL 9
EST. 231 TONS, CLASS B RIP RAP
EST. 481 SMFF, DDE EST. 155CM
50 x 21 x 1
102 mm Skimmer
with 90 mm
Orifice Diameter
7 m weir
ID 10.1F
-L- +75.000
89.916 LT
(295.000')
-L- +05.000
69.494 LT
(228.000')
FILL TO ELEV. 55.0 m.
-L- +55.000
65.532 LT
(215.000')
-L- +05.000
68.580 LT
(225.000')
0.6M LAT. BASE DITCH, SEE DETAIL 13
EST. 216 TONS, CLASS B RIP RAP
EST. 450 SMFF, DDE EST. 3123CM
1.2m WW FENCE
CL. 'I' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
END SCREENING WALL & CONCRETE BARRIER
-L- STA. 72+60.00
(FUTURE)
BEGIN EXPWY. GUTTER
-L- 72+60.000
(FUTURE)
END EXPWY. GUTTER
-L- 73+65.000
(FUTURE)
FUTURE GRAU 350
BEGIN MEDIAN
73+00
FUTURE GUARDRAIL
FUTURE B-77
REB ACQUISITIONS, LLC.
DB 7430 PG 513
PROPOSED 3.0m HIGH SCREENING WALL & CONCRETE BARRIER (FUTURE)
71+00
72+00
450 CSP W/2 ELBOWS
GRADING ONLY
FUTURE CABLE GUIDERAIL
-L-
900 CL. III W/METHOD B INSTALLATION
-CDR-
FUTURE CAT-1
FUTURE GUARDRAIL
15.000 TYP.
END EXPWY. GUTTER
-L- 71+47.348
(FUTURE)
LAT. 'V' DITCH, SEE DETAIL 4
EST. 55 TONS, CLASS B RIP RAP
EST. 114 SMFF, DDE EST. 8CM
-L- +65.000
43.586 RT
(143.000')
-L- +70.000
52.730 RT
(173.000')
1.2m WW FENCE
-CDR- POT STA. 71+85.206 =
-L- POC Sta. 71+92.082
21.300 RT.
90.0m TAPER
72+96.00
-L- +45.000
65.398 RT
(214.561')
REB ACQUISITIONS, LLC.
DB 7430 PG 513
LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 147C
0.6M LAT. BASE DITCH
SEE DETAIL 10
DDE EST. 19CM
-CDR- +60.000
55.000 RT
(180.447')
FILL TO ELEV. 54.75 m.
-CDR- +70.000
64.008 RT
(210.000')
-L- +30.000
73.152 RT
(240.000')
-L- +35.000
79.248 RT
(260.000')
0.6M LAT. BASE DITCH, SEE DETAILS 12 & 13
EST. 39 TONS, CLASS B RIP RAP
EST. 114 SMFF, DDE EST. 32CM
SEE SHEET NO.5 -L- STA.70+60.000
SEE SHEET NO.5 -CDR- STA.70+60.000
SEE SHEET NO.7 -L- STA.74+00.000
FOR -L- PROFILE SEE SHEET 18
FOR -CDR- PROFILE SEE SHEET 21
FOR SCREENING WALL SEE SHEETS W-1 THRU W-XX



PROJECT REFERENCE NO.
SHEET NO.
X-0002BC
EC-20/CONST.7
R/W SHEET NO.
X-0002B 11
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NOTE: UTILIZE SKIMMER BASIN OR SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
S 61°55'31" W 1115.403
PAVEMENT REMOVAL AREA
SR 1446 SMITH LAKE RD.
WOODS
SOIL
-L-
PI Sta 72+99.113
Δ = 10°50'10.3" (LT)
L = 567.382
T = 284.540
R = 3,000.000
SE = RC
-L- PT Sta.75+81.956
9 x 4 x 1
1.5 m weir
ID 11.1
11 x 17 x 1
3.7 m weir
ID 11.11
(See Infiltration Basin Detail)
-L- +60.000
64.008 LT
(210.000')
1.2m WW FENCE
-L- +50.000
50.292 LT
(165.000')
-L- +80.000
57.912 LT
(190.000')
Modified Silt Basin Type 'B'
12 x 7 x 1
(See Tiered Skimmer Basin Detail)
ID 11.2
12 x 7 x 1
51 mm Skimmer
with 39 mm Orifice Diameter
2 m weir
(See Tiered Skimmer Basin Detail)
ID 11.2
NAD 83
POT Sta.76+31.345
BEGIN APPROACH SLAB
END 1.2m WW FENCE
-L- 76+38.666, 18.270 LT
-L- +25.000
42.672 LT
(140.000')
245.0m MEDIAN TAPER
CLASS II RIP RAP
(STRUCTURE PAY ITEM)
-L- POT Sta.76+38.660
BEGIN BRIDGE
-L- +38.667
18.270 LT
(59.941')
75+00
76+00
77+00
12 x 3 x 1
ID 11.2F
END MEDIAN TAPER
CAT-1
FUTURE B-77
END EXPWY. GUTTER
-L- 76+31.345
(FUTURE)
BEGIN EXPWY. GUTTER
-L- 76+25.630
(FUTURE)
12 x 3.5 x 1
ID 11.1F
GRADING ONLY
FUTURE CABLE GUIDERAIL
FUTURE CGAU
FSM
FUTURE M-350
FUTURE GUARDRAIL
FSM FUTURE B-77
N 64°56'54.8" E
SEE SHEET NO.6 -L- STA.74+00.000
SEE SHEET NO.8 -L- STA.77+40.000
FDPS
FUTURE GRAU 350
FUTURE GUARDRAIL
FSR
BEGIN EXPWY. GUTTER
-L- 76+25.000
(FUTURE)
450 CSP W/2 ELBOWS
END EXPWY. GUTTER
-L- 76+31.345
(FUTURE)
-L- +80.000
38.100 RT
(125.000')
PREFORMED SCOUR HOLE
SEE DETAIL 16
B=1.5m W=1.5m
D=0.6m d=0.15m
90.0m TAPER
LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 76CM
-L- +20.000
47.244 RT
(155.000')
16 x 4 x 1
38 mm Skimmer
with 21 mm Orifice Diameter
2 m weir
ID 11.3F
1.2m WW FENCE
REB ACQUISITIONS, LLC.
DB 7430 PG 513
-L- +80.000
48.158 RT
(158.000')
-L- +20.000
38.100 RT
(125.000')
BEGIN EXPWY. GUTTER
-L- 76+25.550
(FUTURE)
-L- +38.660
21.400 RT
(70.210')
END 1.2m WW FENCE
-L- 76+38.660, 21.400 RT
-L- +38.660
44.710 RT
(146.686')
-L- +57.000
51.206 RT
(168.000')
-L- POT Sta.
BEGIN BRIDGE
-L- POT Sta.
BEGIN APPROACH SLAB
5 x 10 x 1
38 mm Skimmer
with 21 mm Orifice Diameter
2 m weir
ID 11.3
10 x 4 x 1
38 mm Skimmer
with 15 mm Orifice Diameter
1.5 m weir
ID 11.4F
FOR -L- PROFILE SEE SHEET 18
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX


PROJECT REFERENCE NO.
SHEET NO.
X-0002BC
EC-21/CONST.8
R/W SHEET NO.
X-0002B 12
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
NOTE: UTILIZE TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.
8 x 6.5 x 1
38 mm Skimmer with 33 mm Orifice Diameter
2 m weir
(See Tiered Skimmer Basin Detail)
ID 8.2F
Modified Silt Basin Type 'B'
8 x 6.5 x 1
(See Tiered Skimmer Basin Detail)
ID 8.2F
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
REB ACQUISITIONS, LLC.
DB 7430 PG 513
LAT. 'V' DITCH
SEE DETAIL 3
DDE EST. 25CM
-L- POT Sta.78+56.655
END APPROACH SLAB
PREFORMED SCOUR HOLE
SEE DETAIL 16
B=1.5m W=1.5m
D=0.6m d=0.15m
STD. 'V' DITCH
SEE DETAIL 7
DDE EST. 54CM
BERM 'V' DITCH
SEE DETAIL 2
1.2m WW FENCE
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
SPEC. CUT DITCH
SEE DETAIL 6
BEGIN 1.2m WW FENCE
-L- 78+49.356, 17.800 LT
FUTURE GUARDRAIL
FUTURE GRAU 350
BEGIN EXPWY. GUTTER
-L- 78+56.655
(FUTURE)
END EXPWY. GUTTER
-L- 78+63.000
(FUTURE)
GRADING ONLY
FUTURE CABLE GUIDERAIL
N 64° 56' 54.8" E
SEE SHEET NO.7 -L- STA.77+40.000
SEE SHEET NO.9 -L- STA.80+80.000
-L- POT Sta.78+49.340
END BRIDGE
FUTURE CAT-1
BEGIN EXPWY. GUTTER
-L- 78+56.655
(FUTURE)
NOISE WALL
(STRUCTURE PAY ITEM)
STD. 'V' DITCH
SEE DETAIL 7
DDE EST. 18.8CM
CL. 'I' RIP RAP
EST. 3.6 TONS
EST. 8.4 SMFF
BEGIN NOISE WALL
-L- STA. 79+00.00
0.6M LAT. BASE DITCH
SEE DETAIL 10
DDE EST. 70CM
BEGIN 1.2m WW FENCE
-L- 17+21.400, 21.400 RT
CLASS II RIP RAP
(STRUCTURE PAY ITEM)
20 x 11 x 1
76 mm Skimmer with 66 mm Orifice Diameter
4.5 m weir
(See Tiered Skimmer Basin Detail)
ID 11.1F
Modified Silt Basin Type 'B'
20 x 7 x 1
(See Tiered Skimmer Basin Detail)
ID 11.1F
BRENDA ENGLISH
DB 4133 PG 455
LAUREANO PIRES
DB 7482 PG 126
PB 56 PG 24
KENNETH CANTY
DB 3193 PG 7
SOPHIA SAVAGE
DB 4807 PG 733
ALONZO MCCOY
JIMMY COX
JEPETH BLACK
FOR -L- PROFILE SEE SHEET 19
FOR BRIDGE SKETCHES SEE SHEET 2B
FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-XX
WOODS
CROSS CREEK
78+00
79+00
80+00

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-22/CONST.9
R /W SHEET NO.	X-0002B 13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV.

R /W REV.

NAD 83

WOODS

SOIL

1.2m WW FENCE

–L– +80.000
60.960 LT
(200.000')

–L– +60.000
56.388 LT
(185.000')

BERM 'V' DITCH
SEE DETAIL 2

EXISTING ROW MONUMENT (X-0002C)
END WW FENCE
–L– 83+40.000
55.00 LT
(180.446')

END CA
–L– 83+40.000
42.672 LT
(140.000')

END TIP PROJECT X-0002BC
END CONSTRUCTION
–L– POT STA. 83+40.000

BEGIN TIP PROJECT X-0002CA

81+00 82+00 83+00 84+00

SEE SHEET NO.8 –L– STA.80+80.000

UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION

GRADING ONLY

FUTURE CABLE GUIDERAIL

N 64° 56' 54.8" E

–L–

FUTURE GUARDRAIL

FUTURE CAT-1

FUTURE GRAU 350

FUTURE B-77

BEGIN CONCRETE BARRIER
–L– STA 82+82.110, 22.096 RT
(FUTURE)

BERM 'V' DITCH
SEE DETAIL 1
EST. 19 TONS
EST. 38 SMFF

END CONCRETE BARRIER
–L– STA 83+40.002, 22.000 RT
(FUTURE)

0.6M LAT. BASE DITCH
SEE DETAIL 12
EST. 34 TONS
EST. 70 SMFF
DDE EST. 150CM

EXISTING R/W

STD. 'V' DITCH
SEE DETAIL 7
DDE EST. 18.8CM

NOISE WALL
(STRUCTURE PAY ITEM)

BERM 'V' DITCH
SEE DETAIL 2

–L– +10.000
65.871 RT
(216.111')

–L– +20.000
67.056 RT
(220.000')

–L– +40.000
65.532 RT
(215.000')

–L– +00.000
42.672 RT
(140.000')

–L– +10.000
76.200 RT
(250.000')

1.2m WW FENCE

NOTE:
TIE IN MODIFIED SILT BASIN TYPE-B WITH 25 x 8 x 1 SKIMMER BASIN (4.1C) FROM X-0002CA PROJECT.

EXISTING ROW MONUMENT (X-0002C)
END WW FENCE
–L– 83+40.000
55.00 RT
(180.446')

Modified Silt Basin
Type 'B'
12.5 x 8 x 1
(See Tiered Skimmer
Basin Detail)
3 m weir

WILLIAM EMMERSON
DB 3628 PG 628
PB 56 PG 24

LESLIE HUNTLEY
DB 3405 PG 135
PB 56 PG 24

LACINDA MCBRYDE
DB 4787 PG 201
PB 56 PG 24

GEORGE BEARD
DB 3899 PG 752
PB 56 PG 24

BRUCE CARMAIN
DB 3705 PG 761
PB 56 PG 24

GENE JACKSON
DB 3679 PG 486
PB 56 PG 24

RICHARD ELLIS
DB 5003 PG 831
PB 56 PG 24

MELVIN GOODE
DB 3095 PG 833
PB 56 PG 24

FOR –L– PROFILE SEE SHEET 19

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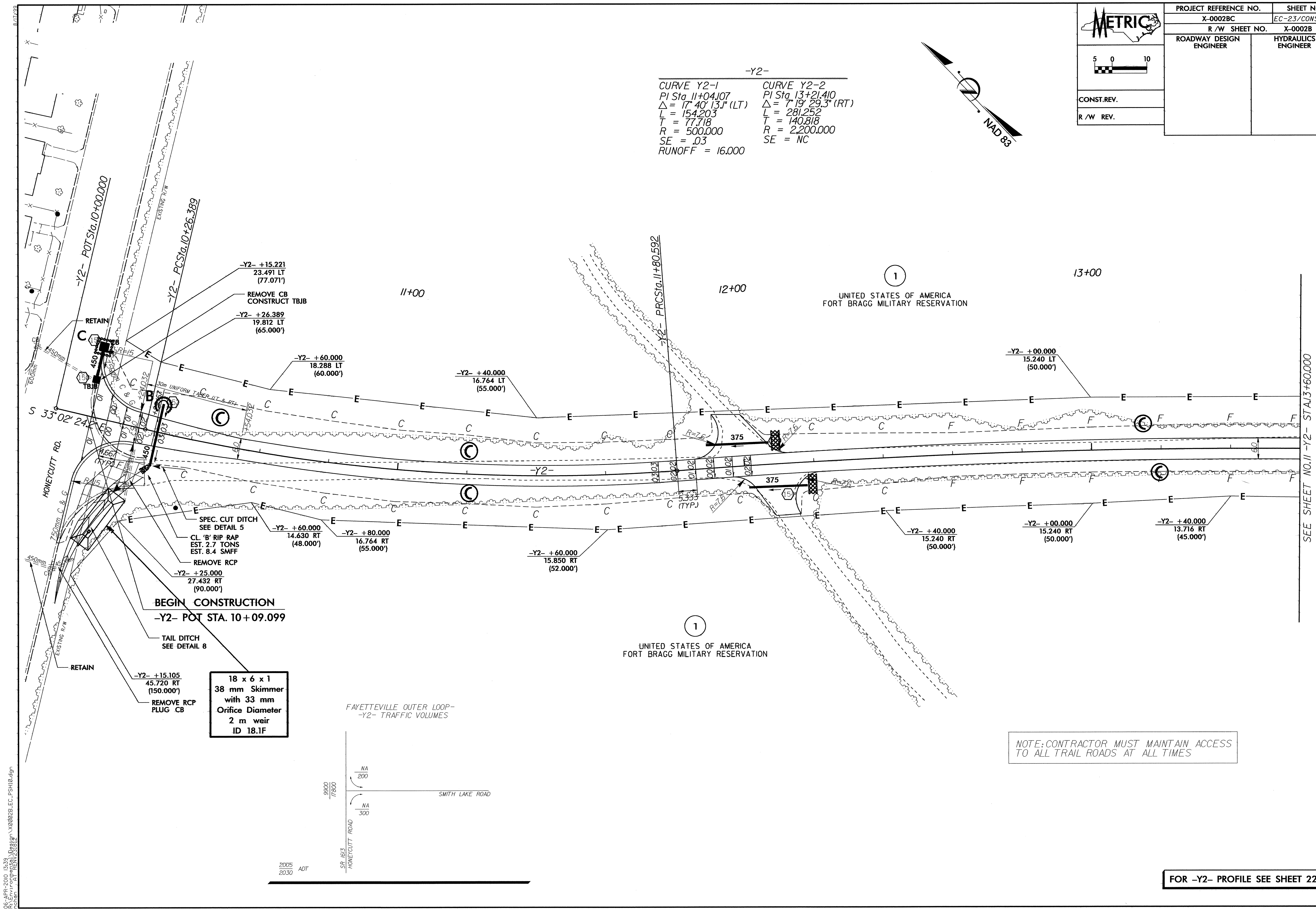
bgoodwin



METRIC
PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-23/CONST.10
R/W SHEET NO. X-0002B 18
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST. REV.
R/W REV.
5 0 10
NAD 83
-Y2-
CURVE Y2-1
PI Sta 11+04.107
Δ = 17° 40' 13.1" (LT)
L = 154.203
T = 77.718
R = 500.000
SE = .03
RUNOFF = 16.000
CURVE Y2-2
PI Sta 13+21.410
Δ = 7° 19' 29.3" (RT)
L = 281.252
T = 140.818
R = 2,200.000
SE = NC
-Y2- POT Sta. 10+00.000
-Y2- PC Sta. 10+26.389
-Y2- PRC Sta. 11+80.592
EXISTING R/W
11+00
12+00
13+00
-Y2- +15.221 23.491 LT (77.071')
REMOVE CB CONSTRUCT TBJB
-Y2- +26.389 19.812 LT (65.000')
-Y2- +60.000 18.288 LT (60.000')
-Y2- +40.000 16.764 LT (55.000')
-Y2- +00.000 15.240 LT (50.000')
UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION
RETAIN
30m UNIFORM TAPER (LT & RT)
S 33° 02' 24.2" E
HONEYCUTT RD.
375
-Y2-
5.333 (TYP.)
SEE SHEET NO. 11 -Y2- STA. 13+60.000
SPEC. CUT DITCH SEE DETAIL 5
CL. 'B' RIP RAP EST. 2.7 TONS EST. 8.4 SMFF
REMOVE RCP
-Y2- +25.000 27.432 RT (90.000')
-Y2- +60.000 14.630 RT (48.000')
-Y2- +80.000 16.764 RT (55.000')
-Y2- +60.000 15.850 RT (52.000')
-Y2- +40.000 15.240 RT (50.000')
-Y2- +00.000 15.240 RT (50.000')
-Y2- +40.000 13.716 RT (45.000')
BEGIN CONSTRUCTION
-Y2- POT STA. 10+09.099
TAIL DITCH SEE DETAIL 8
RETAIN
-Y2- +15.105 45.720 RT (150.000')
REMOVE RCP PLUG CB
18 x 6 x 1
38 mm Skimmer
with 33 mm
Orifice Diameter
2 m weir
ID 18.1F
UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION
FAYETTEVILLE OUTER LOOP-
-Y2- TRAFFIC VOLUMES
NA 200
NA 300
9900 17800
SMITH LAKE ROAD
SR 1613 HONEYCUTT ROAD
2005 2030 ADT
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
FOR -Y2- PROFILE SEE SHEET 22
06-APR-2010 13:39

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-24/CONST.11
R/W SHEET NO.	X-0002B 19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

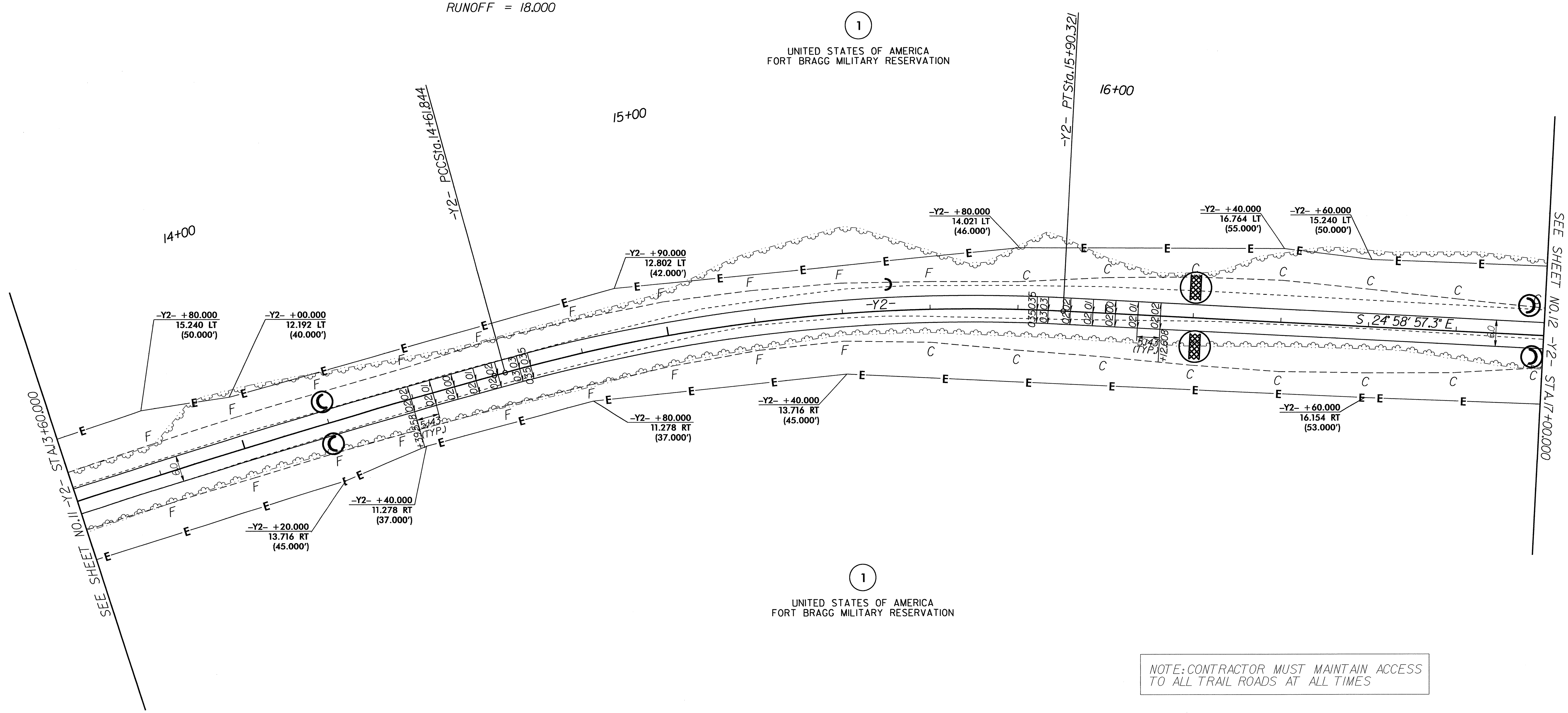
CONST.REV.

R/W REV.

NAD 83

-Y2-

PI Sta 13+21.410	PI Sta 15+26.640
Δ = 7° 19' 29.3" (RT)	Δ = 18° 24' 10.8" (RT)
L = 281.252	L = 128.477
T = 140.818	T = 64.797
R = 2,200.000	R = 400.000
SE = NC	SE = .035
	RUNOFF = 18.000



NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES

FOR -Y2- PROFILE SEE SHEET 22

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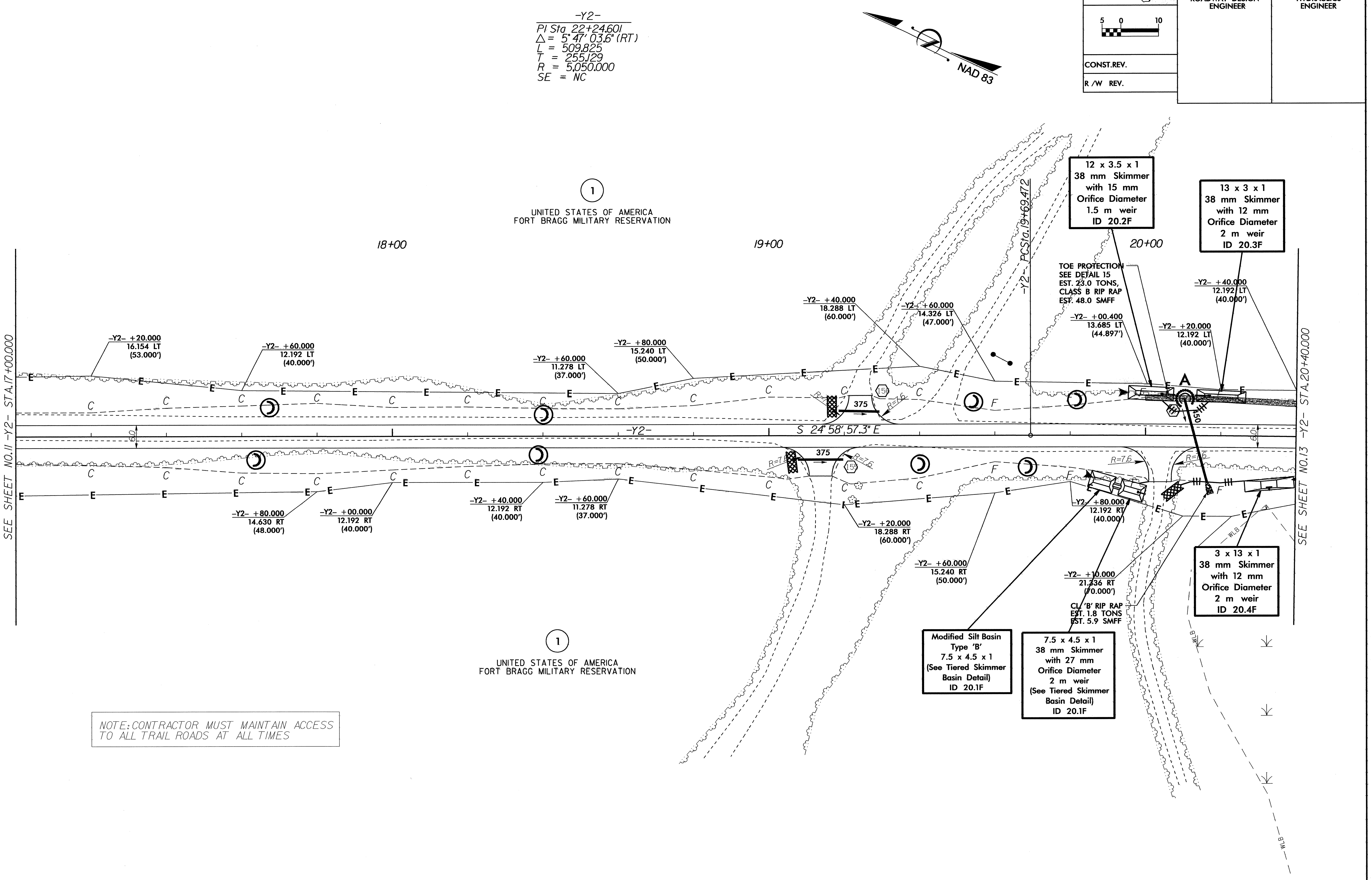
PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-25/CONSTJ2
R/W SHEET NO.	X-0002B 20

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

CONST.REV.

R/W REV.



METRIC
5 0 10
NAD 83
-Y2-
PI Sta 22+24.601
Δ = 5° 47' 03.6" (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC
1
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
18+00
19+00
20+00
-Y2- PCSta.19+69.472
12 x 3.5 x 1
38 mm Skimmer
with 15 mm
Orifice Diameter
1.5 m weir
ID 20.2F
13 x 3 x 1
38 mm Skimmer
with 12 mm
Orifice Diameter
2 m weir
ID 20.3F
TOE PROTECTION
SEE DETAIL 15
EST. 23.0 TONS,
CLASS B RIP RAP
EST. 48.0 SMFF
-Y2- +00.400
13.685 LT
(44.897')
-Y2- +40.000
12.192 LT
(40.000')
-Y2- +20.000
12.192 LT
(40.000')
-Y2- +40.000
18.288 LT
(60.000')
-Y2- +60.000
14.326 LT
(47.000')
-Y2- +80.000
15.240 LT
(50.000')
-Y2- +60.000
11.278 LT
(37.000')
-Y2- +60.000
12.192 LT
(40.000')
-Y2- +20.000
16.154 LT
(53.000')
SEE SHEET NO.11 -Y2- STA.17+00.000
SEE SHEET NO.13 -Y2- STA.20+40.000
-Y2-
S 24° 58' 57.3" E
375
375
R=7.6
A
150
-Y2- +80.000
14.630 RT
(48.000')
-Y2- +00.000
12.192 RT
(40.000')
-Y2- +40.000
12.192 RT
(40.000')
-Y2- +60.000
11.278 RT
(37.000')
-Y2- +20.000
18.288 RT
(60.000')
-Y2- +60.000
15.240 RT
(50.000')
-Y2- +80.000
12.192 RT
(40.000')
-Y2- +10.000
21.336 RT
(70.000')
CL 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
3 x 13 x 1
38 mm Skimmer
with 12 mm
Orifice Diameter
2 m weir
ID 20.4F
Modified Silt Basin
Type 'B'
7.5 x 4.5 x 1
(See Tiered Skimmer
Basin Detail)
ID 20.1F
7.5 x 4.5 x 1
38 mm Skimmer
with 27 mm
Orifice Diameter
2 m weir
(See Tiered Skimmer
Basin Detail)
ID 20.1F
1
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
NOTE: CONTRACTOR MUST MAINTAIN ACCESS
TO ALL TRAIL ROADS AT ALL TIMES

FOR -Y2- PROFILE SEE SHEET 23

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-26/CONST.13
R/W SHEET NO.	X-0002B 21

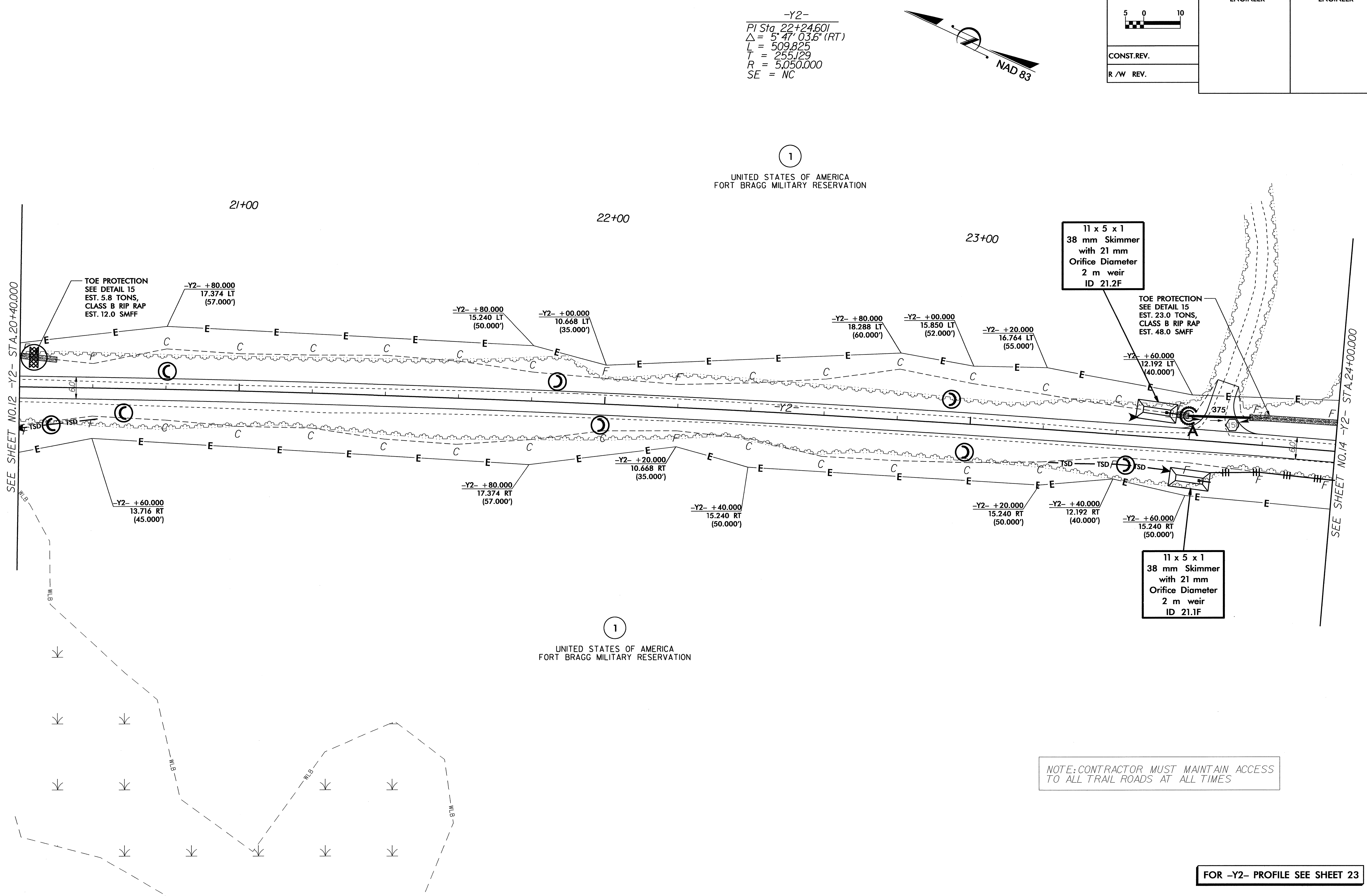
METRIC

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST.REV.

R/W REV.

-Y2-
PI Sta 22+24.601
Δ = 5° 47' 03.6" (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC



NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES

FOR -Y2- PROFILE SEE SHEET 23

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8/17/09

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-27/CONST.14
R /W SHEET NO.	X-0002B 22
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV.

R /W REV.

NAD 83

-Y2-

PI Sta 22+24.601
△ = 5° 47' 03.6" (RT)
L = 509.825
T = 255.129
R = 5,050.000
SE = NC

PI Sta 32+25.906
△ = 128° 30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000

1

UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION

25+00

26+00

27+00

-Y2- POCSta.24+79.297

-Y2- +80.000
11.582 LT
(38.000')

-Y2- +00.000
15.240 LT
(50.000')

-Y2- +20.000
15.240 LT
(50.000')

-Y2- +75.000
16.154 LT
(53.000')

-Y2- +20.000
15.850 LT
(52.000')

-Y2- +60.000
14.326 LT
(47.000')

-Y2- +50.000
13.716 LT
(45.000')

-Y2- +25.000
14.630 LT
(48.000')

-Y2- +90.000
15.850 LT
(52.000')

-Y2- +75.000
15.240 RT
(50.000')

-Y2- +00.000
10.668 RT
(35.000')

-Y2- +60.000
14.326 RT
(47.000')

4 x 10 x 1
2 m weir
ID 22.2I
(See Infiltration
Basin Detail)

TOE PROTECTION
SEE DETAIL 15
EST. 101 TONS,
CLASS B RIP RAP
EST. 210 SMFF

-Y2- +25.000
15.240 LT
(50.000')

-Y2- +00.000
15.240 RT
(50.000')

4 x 10 x 1
1.5 m weir
ID 22.2I
(See Infiltration
Basin Detail)

8 x 4 x 1
38 mm Skimmer
with 15 mm
Orifice Diameter
2 m weir
ID 22.2F

1

UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION

375 R=7.6

R=10

TSD

200mm RCP

SEE SHEET NO.13 -Y2- STA.24+00.000

SEE SHEET NO.15 -Y2- STA.27+60.000

NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES

FOR -Y2- PROFILE SEE SHEET 24

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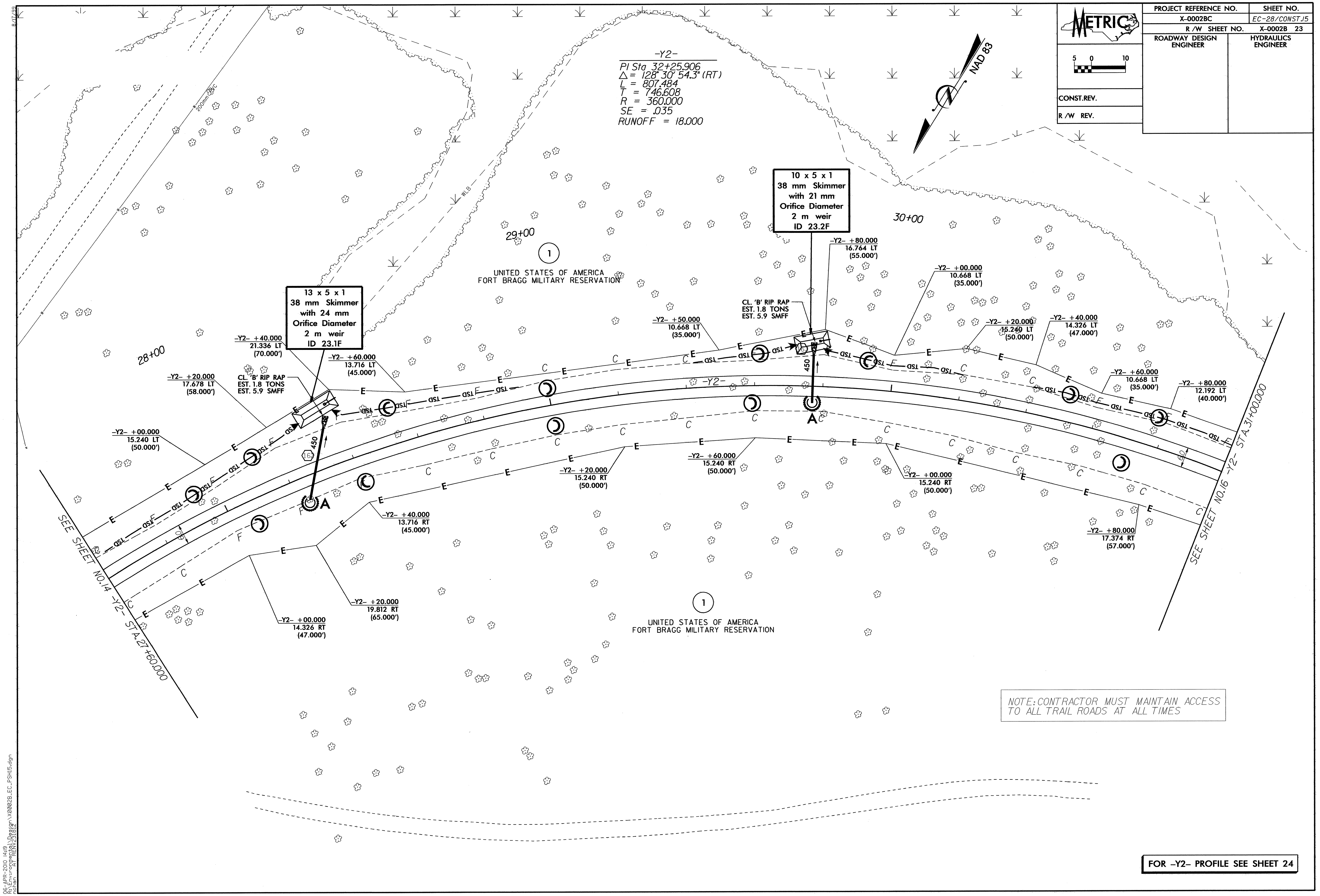
PROJECT REFERENCE NO. X-0002BC
SHEET NO. EC-28/CONST.15
R/W SHEET NO. X-0002B 23
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
NAD 83
-Y2-
PI Sta 32+25.906
Δ = 128° 30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000
13 x 5 x 1
38 mm Skimmer
with 24 mm
Orifice Diameter
2 m weir
ID 23.1F
10 x 5 x 1
38 mm Skimmer
with 21 mm
Orifice Diameter
2 m weir
ID 23.2F
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
UNITED STATES OF AMERICA
FORT BRAGG MILITARY RESERVATION
28+00
29+00
30+00
-Y2- +40.000 21.336 LT (70.000')
-Y2- +60.000 13.716 LT (45.000')
-Y2- +20.000 17.678 LT (58.000')
-Y2- +00.000 15.240 LT (50.000')
-Y2- +50.000 10.668 LT (35.000')
-Y2- +80.000 16.764 LT (55.000')
-Y2- +00.000 10.668 LT (35.000')
-Y2- +20.000 15.240 LT (50.000')
-Y2- +40.000 14.326 LT (47.000')
-Y2- +60.000 10.668 LT (35.000')
-Y2- +80.000 12.192 LT (40.000')
-Y2- +40.000 13.716 RT (45.000')
-Y2- +20.000 15.240 RT (50.000')
-Y2- +60.000 15.240 RT (50.000')
-Y2- +00.000 15.240 RT (50.000')
-Y2- +80.000 17.374 RT (57.000')
-Y2- +20.000 19.812 RT (65.000')
-Y2- +00.000 14.326 RT (47.000')
SEE SHEET NO.14 -Y2- STA.27+60.000
SEE SHEET NO.16 -Y2- STA.31+00.000
NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES
FOR -Y2- PROFILE SEE SHEET 24

PROJECT REFERENCE NO.	SHEET NO.
X-0002BC	EC-29/CONST.16
R /W SHEET NO.	X-0002B 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

5 0 10

CONST.REV.

R /W REV.

NAD 83

-Y2-

PI Sta. 32+25.906
△ = 128° 30' 54.3" (RT)
L = 807.484
T = 746.608
R = 360.000
SE = .035
RUNOFF = 18.000

PI Sta. 33+81.131
△ = 71° 56' 29.7" (LT)
L = 163.230
T = 94.349
R = 130.000
SE = .06
RUNOFF = 31.000

NOTE: CONTRACTOR MUST MAINTAIN ACCESS TO ALL TRAIL ROADS AT ALL TIMES

(1) UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION

18 x 4 x 1 38 mm Skimmer with 27 mm Orifice Diameter 2 m weir ID 24.1F

14 x 4 x 1 38 mm Skimmer with 21 mm Orifice Diameter 2 m weir ID 24.2F

32+00

CL. 'B' RIP RAP EST. 1.8 TONS EST. 5.9 SMFF

CL. 'B' RIP RAP EST. 2.9 TONS EST. 6.0 SMFF

-Y2- +70.000 18.288 LT (60.000')

-Y2- +00.000 12.192 LT (40.000')

-Y2- +20.000 15.240 LT (50.000')

-Y2- +40.000 15.850 LT (52.000')

-Y2- +60.000 15.240 LT (50.000')

-Y2- +20.000 13.716 LT (45.000')

SEE SHEET NO.15 -Y2- STA.31+00.000

-Y2- +00.000 15.240 RT (50.000')

-Y2- +60.000 15.240 RT (50.000')

-Y2- +20.000 15.240 RT (50.000')

-Y2- PRCS Sta. 32+86.781

BY-32 PINC Sta. 26+48.12
(-Y2- 33+58.202 39.272 LT)

33+00

-Y2- +20.000 14.935 LT (49.000')

-Y2- +60.000 15.240 LT (50.000')

-Y2- +00.000 15.240 LT (50.000')

-Y2- +00.000 15.240 RT (50.000')

-Y2- +60.000 15.240 RT (50.000')

-Y2- +20.000 15.240 RT (50.000')

-Y2- +40.000 15.240 RT (50.000')

-Y2- +80.000 15.240 RT (50.000')

END CONSTRUCTION
-Y2- POT STA. 34+97.243

REMOVE FENCE UPON COMPLETION OF -Y2-

-Y2- +97.575 15.240 LT (50.000')

11 x 4 x 1 38 mm Skimmer with 18 mm Orifice Diameter 2 m weir ID 24.4F

-Y2- PT Sta. 34+50.012

S 37° 22' 30.9" W

34+00

-Y2- +40.000 16.154 LT (53.000')

-Y2- +97.575 15.240 RT (50.000')

10 x 4 x 1 38 mm Skimmer with 15 mm Orifice Diameter 2 m weir ID 24.3F

35+00

-Y2- +40.000 15.240 RT (50.000')

-Y2- +20.000 15.240 RT (50.000')

(1) UNITED STATES OF AMERICA FORT BRAGG MILITARY RESERVATION

FOR -Y2- PROFILE SEE SHEET 25

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