TIP PROJECT: U-2519DA

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BOULEVARD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES, CULVERTS, SIGNING, WIDENING, RETAINING WALL

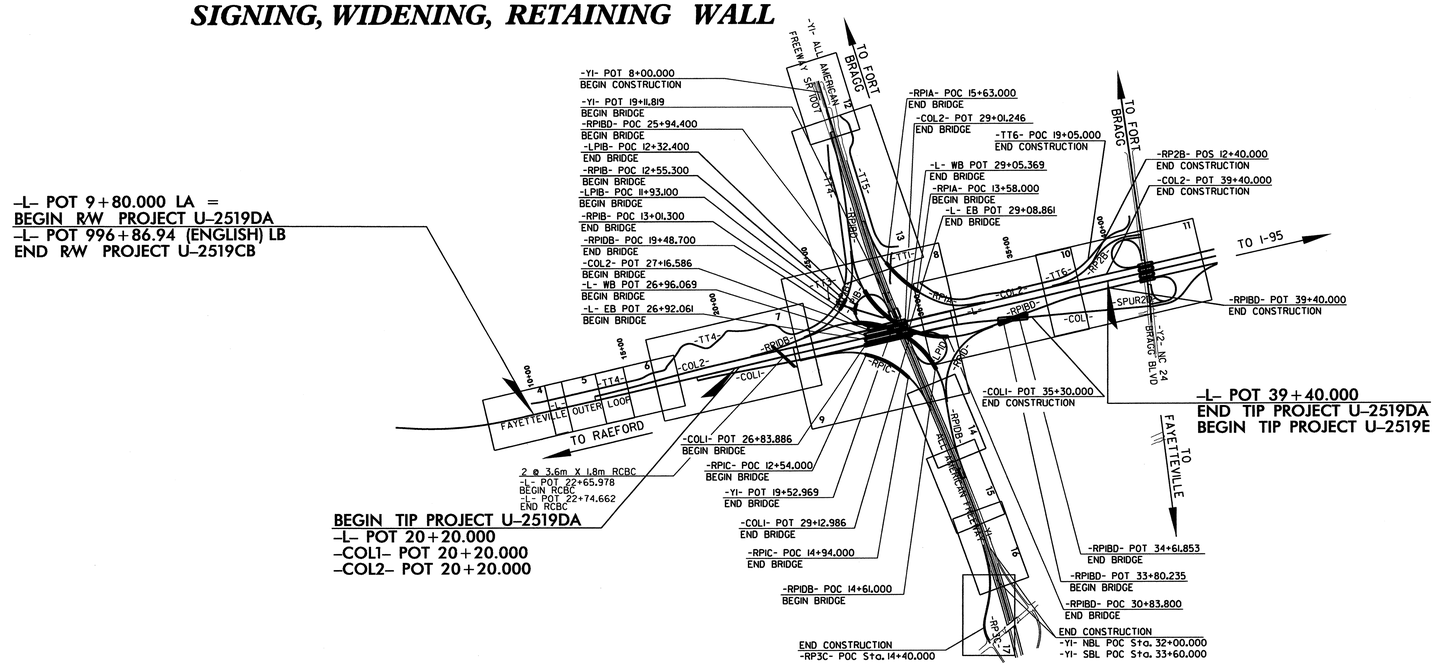
NAD 83

METRIC

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2519DA	EC-1	

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



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	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
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	SI
	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

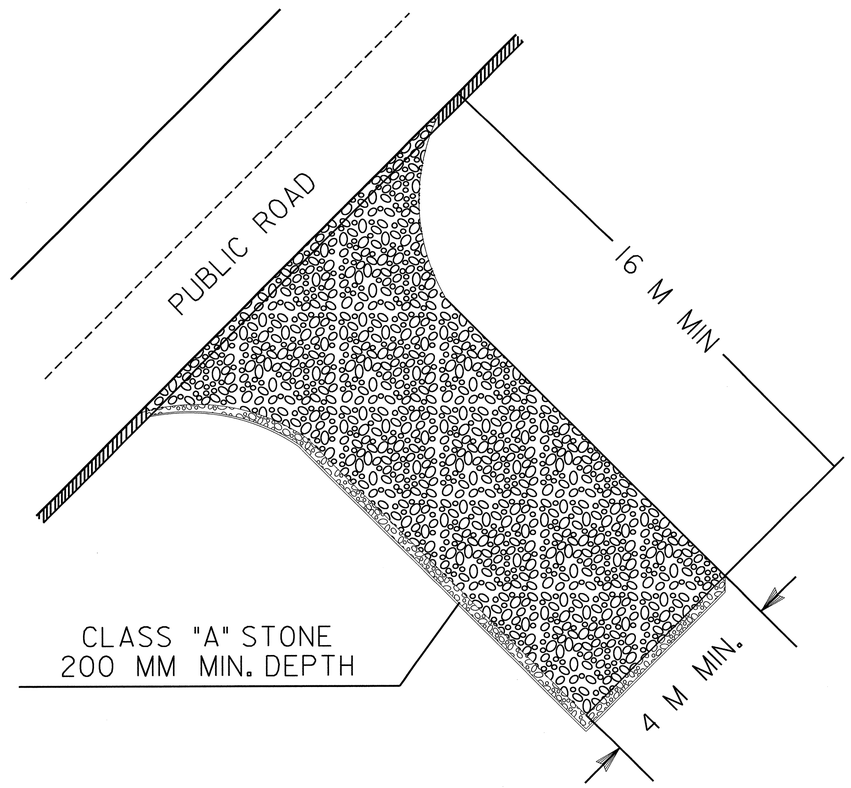
Roadway Standard Drawings

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	1633.01	Temporary Rock Silt Check Type A
1630.03	Temporary Silt Ditch	1633.02	Temporary Rock Silt Check Type B
1630.05	Temporary Diversion	1634.02	Temporary Rock Sediment Dam Type B
1632.01	Rock Inlet Sediment Trap Type A	1635.01	Rock Pipe Inlet Sediment Trap Type A
1632.02	Rock Inlet Sediment Trap Type B	1635.02	Rock Pipe Inlet Sediment Trap Type B

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



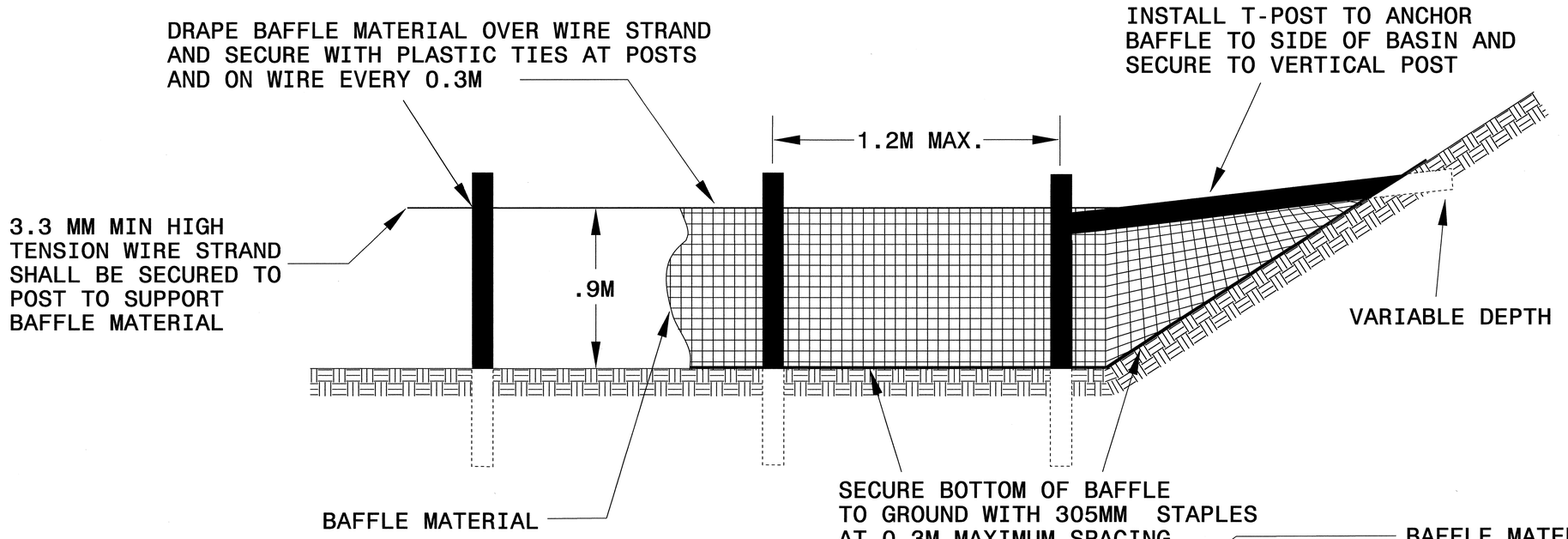
NOTES:

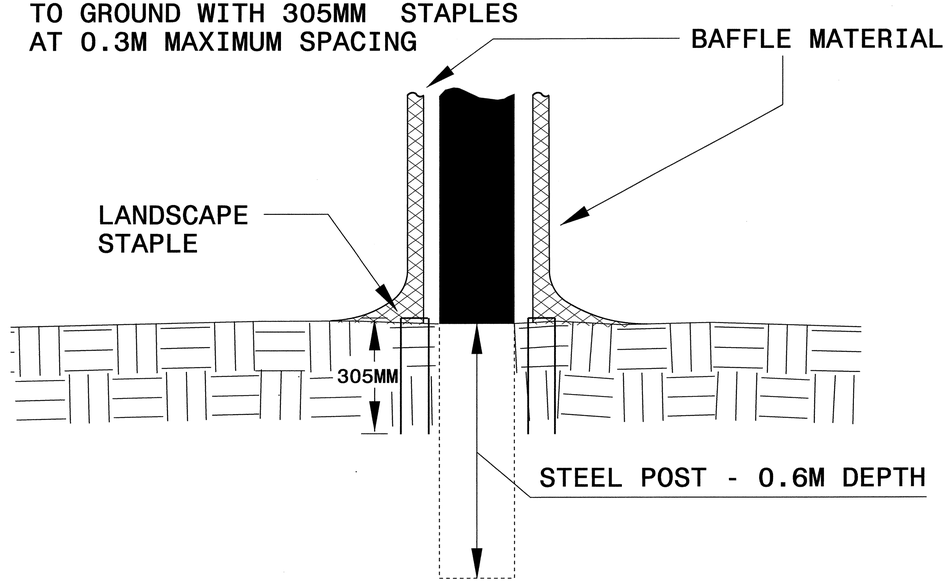
1. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
2. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL 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

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2A
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL





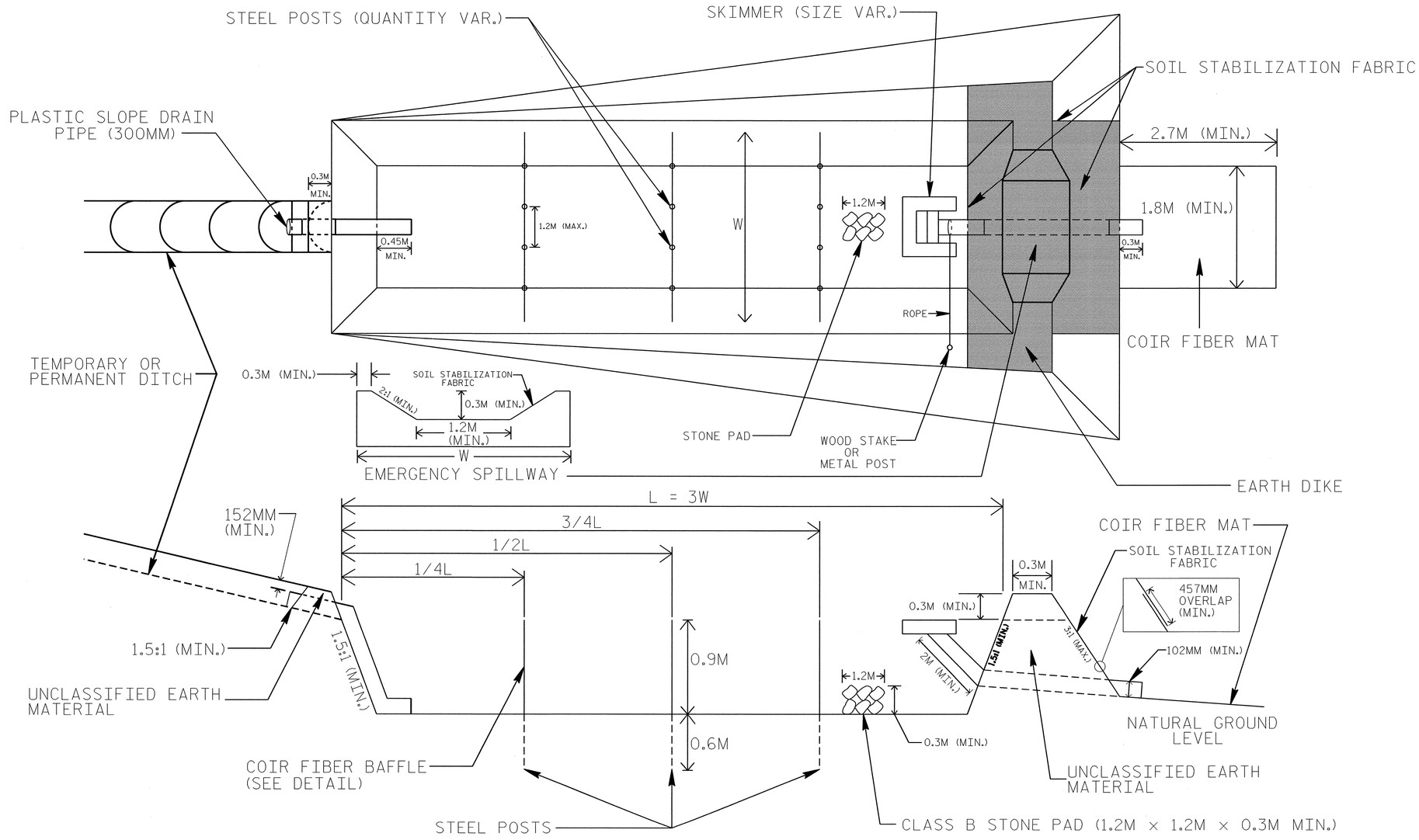
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 305MM LANDSCAPE STAPLES

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

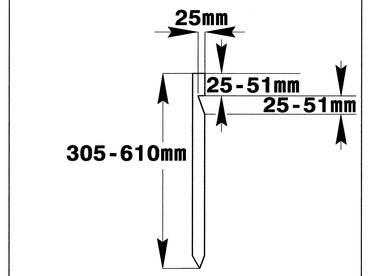
METRIC

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-2B
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

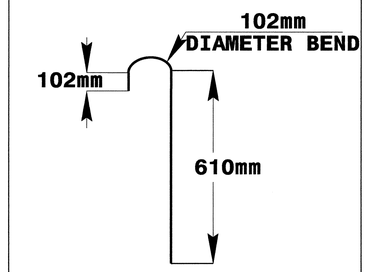
SKIMMER BASIN WITH BAFFLES DETAIL



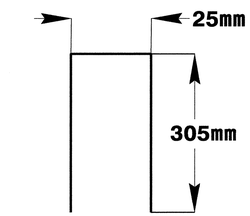
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOTES

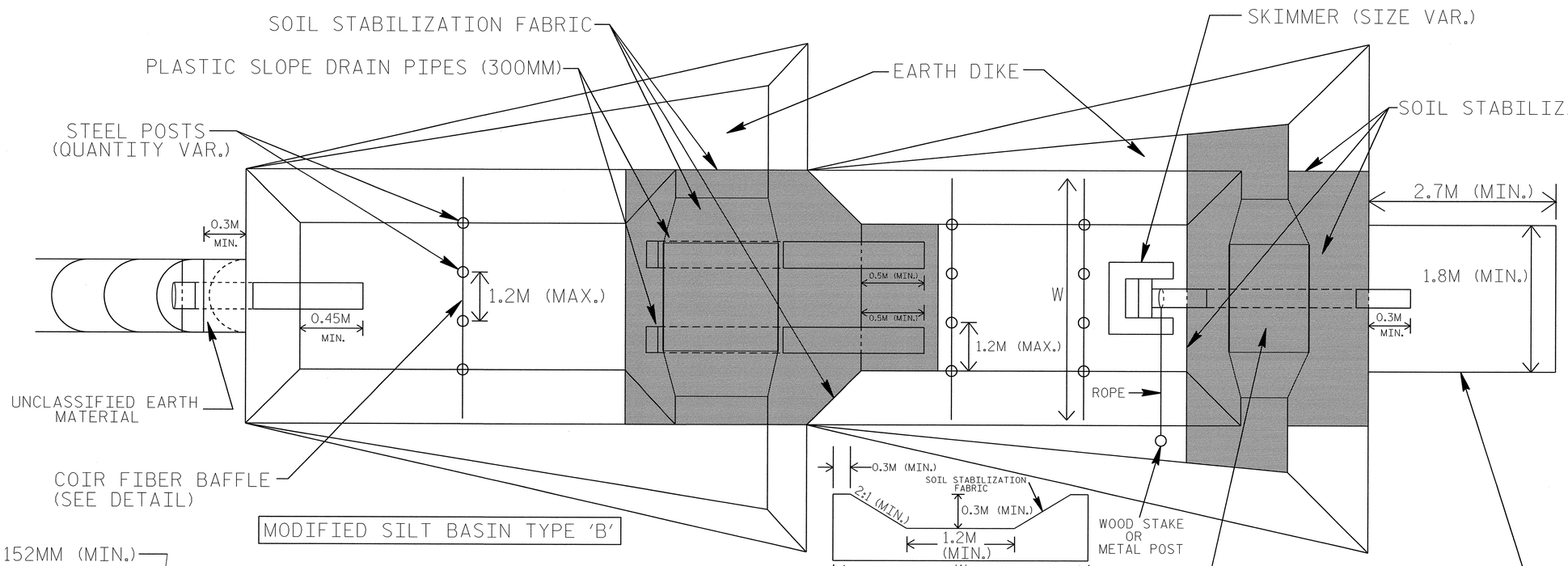
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 1.5M.
3. FOR BASIN DEPTH OF 1M, MINIMUM BASIN WIDTH SHALL BE 3M.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE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

NOT TO SCALE

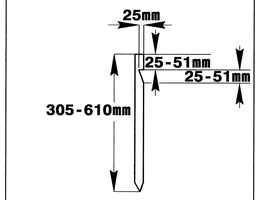
TIERED SKIMMER BASIN DETAIL

METRIC

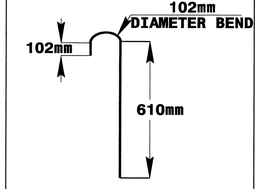
PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



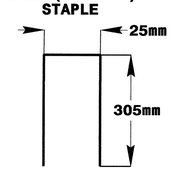
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

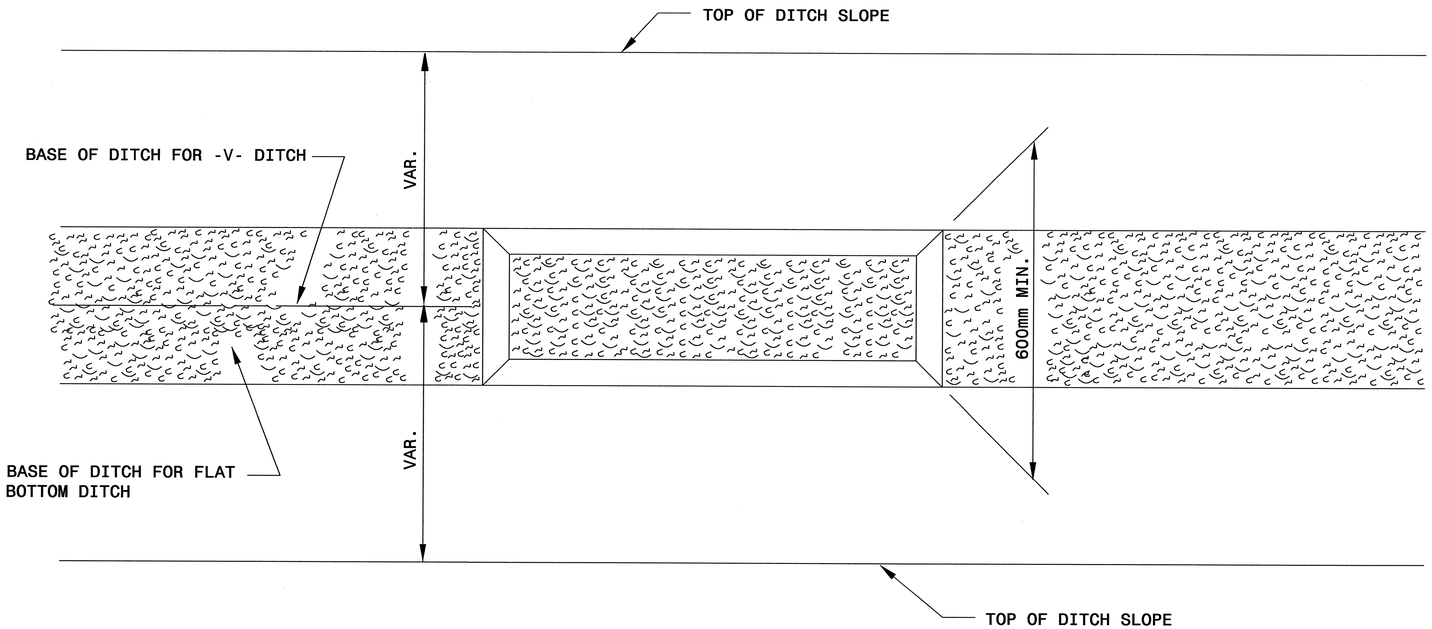
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES 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. SOIL STABILIZATION FABRIC FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 457MM (MIN.).

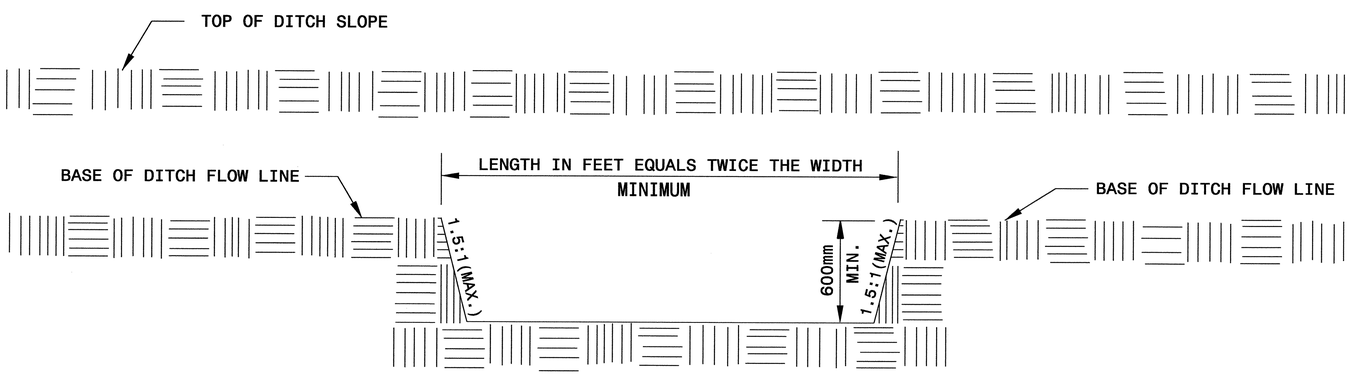
NOT TO SCALE

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2D
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



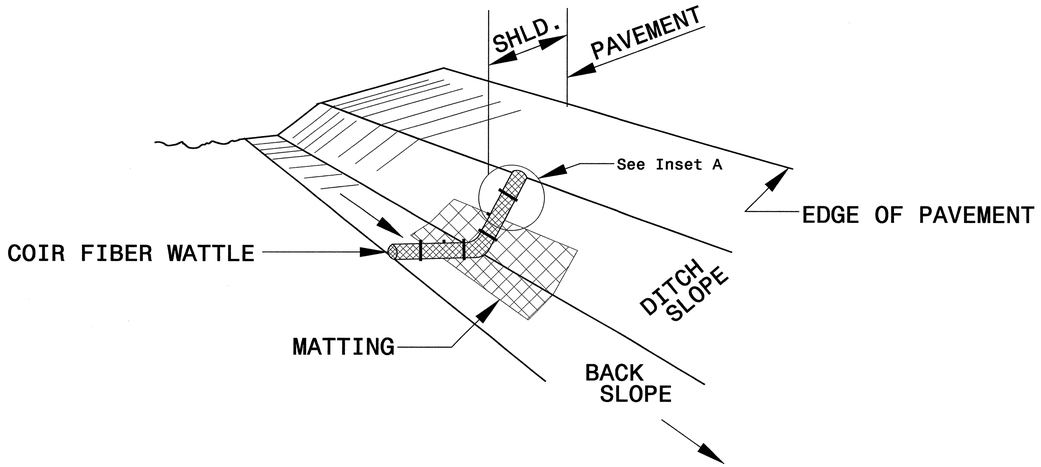
PLAN



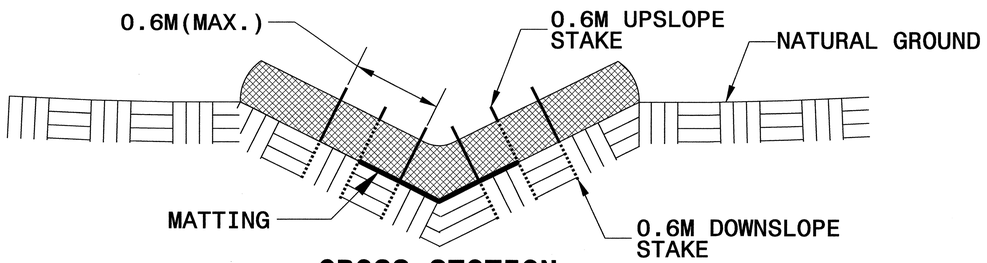
ELEVATION

COIR FIBER WATTLE DETAIL

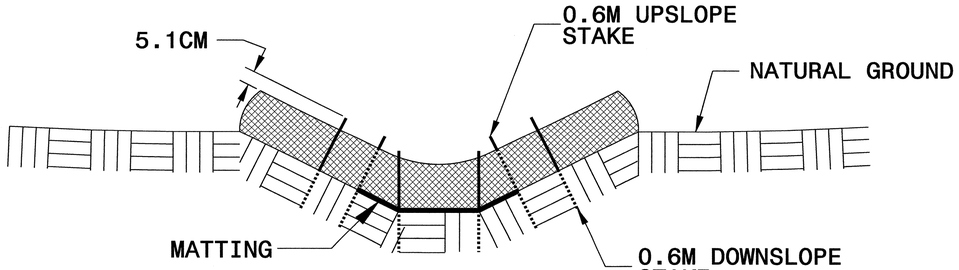
PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-2E
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 305 MM DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

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

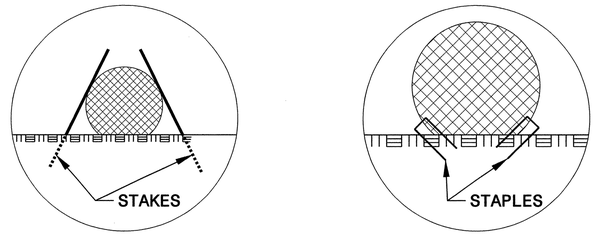
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

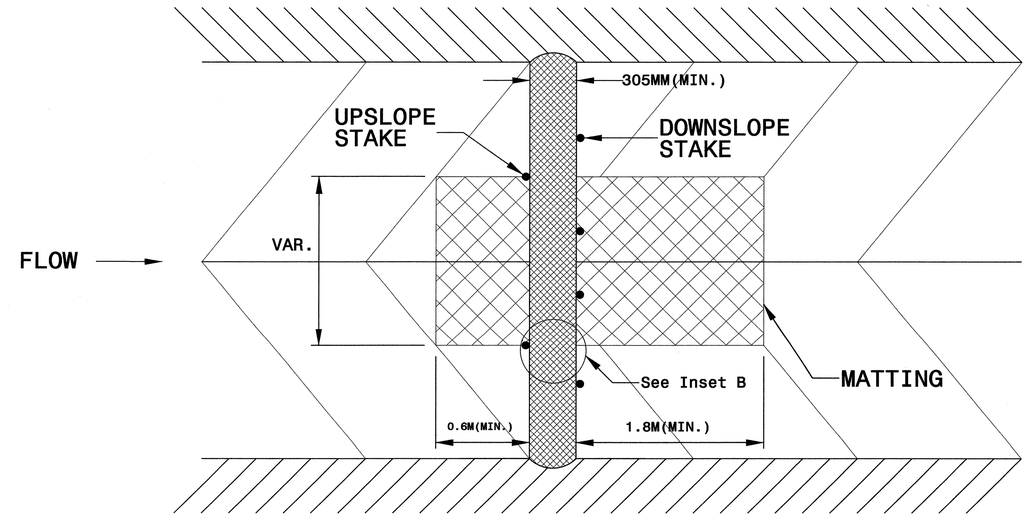
PROVIDE STAPLES MADE OF 3 MM DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 305 MM IN LENGTH.

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.



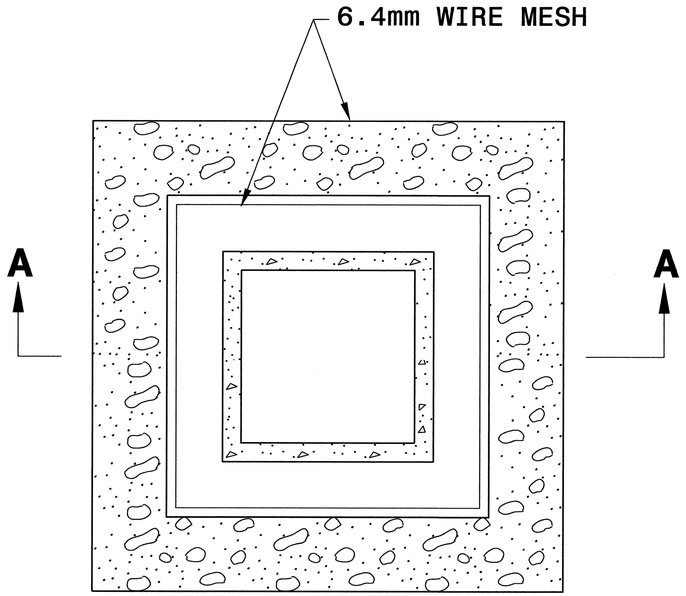
INSET A INSET B

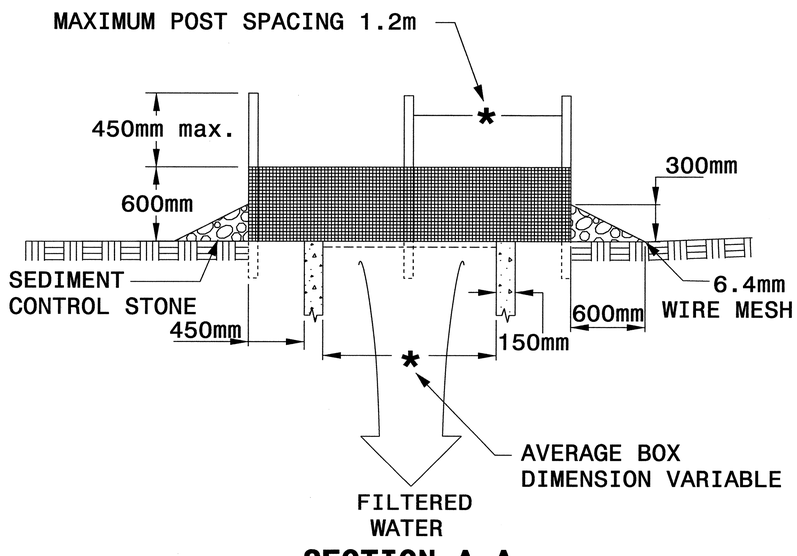


TOP VIEW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2F
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

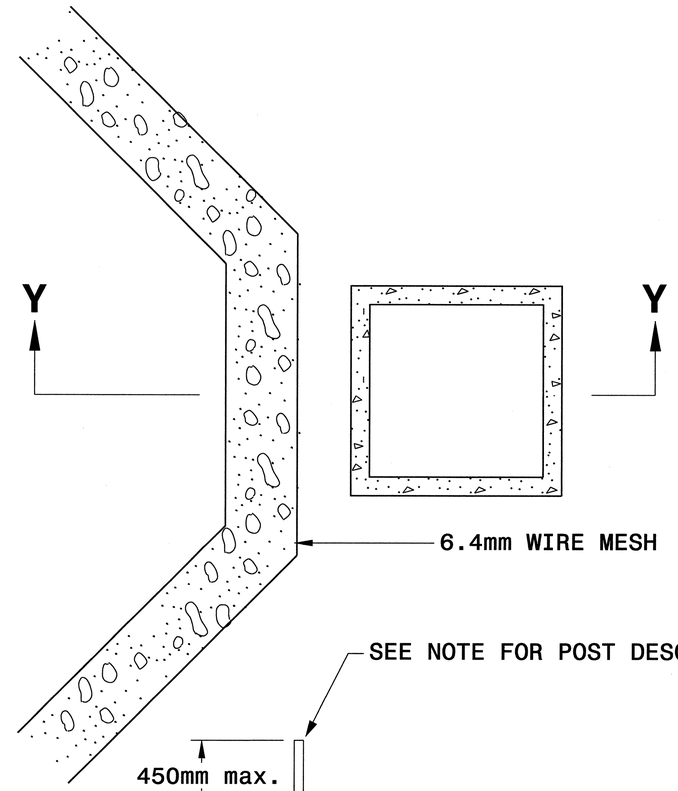
ROCK INLET SEDIMENT TRAP TYPE 'C' DETAIL

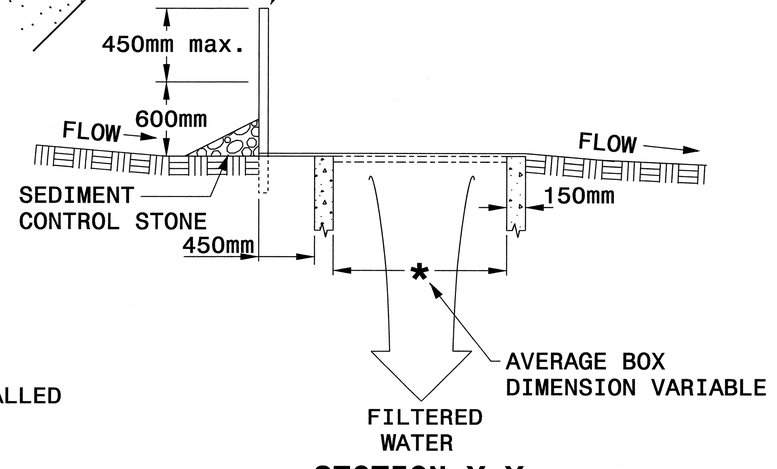




SECTION A-A

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.





SECTION Y-Y

MULTI-DIRECTIONAL FLOW

SINGLE-DIRECTIONAL FLOW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2G
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL SEDIMENT CONTROL FENCE DETAIL

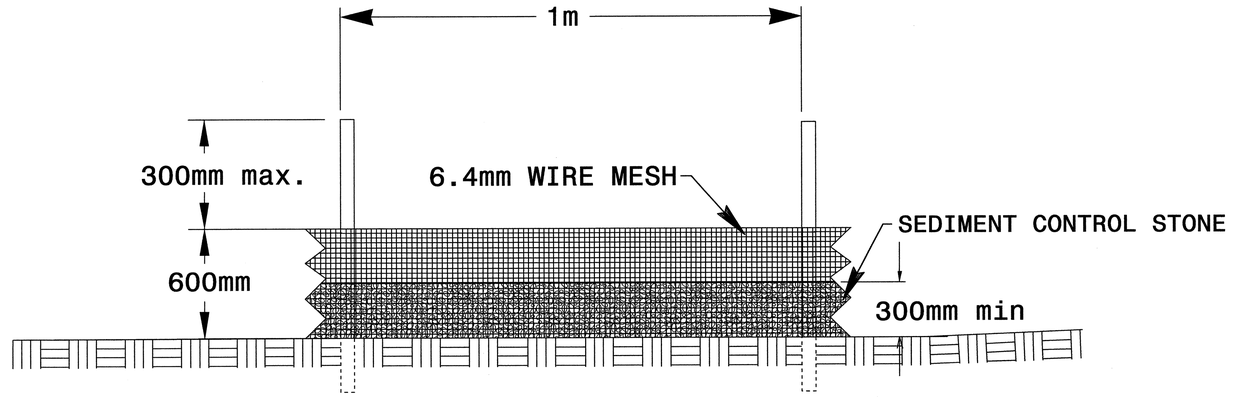
GENERAL NOTES:

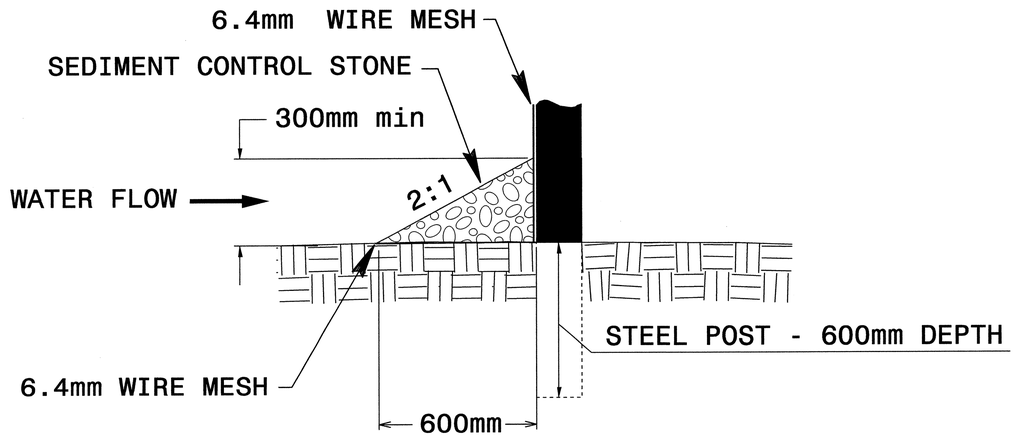
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

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

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

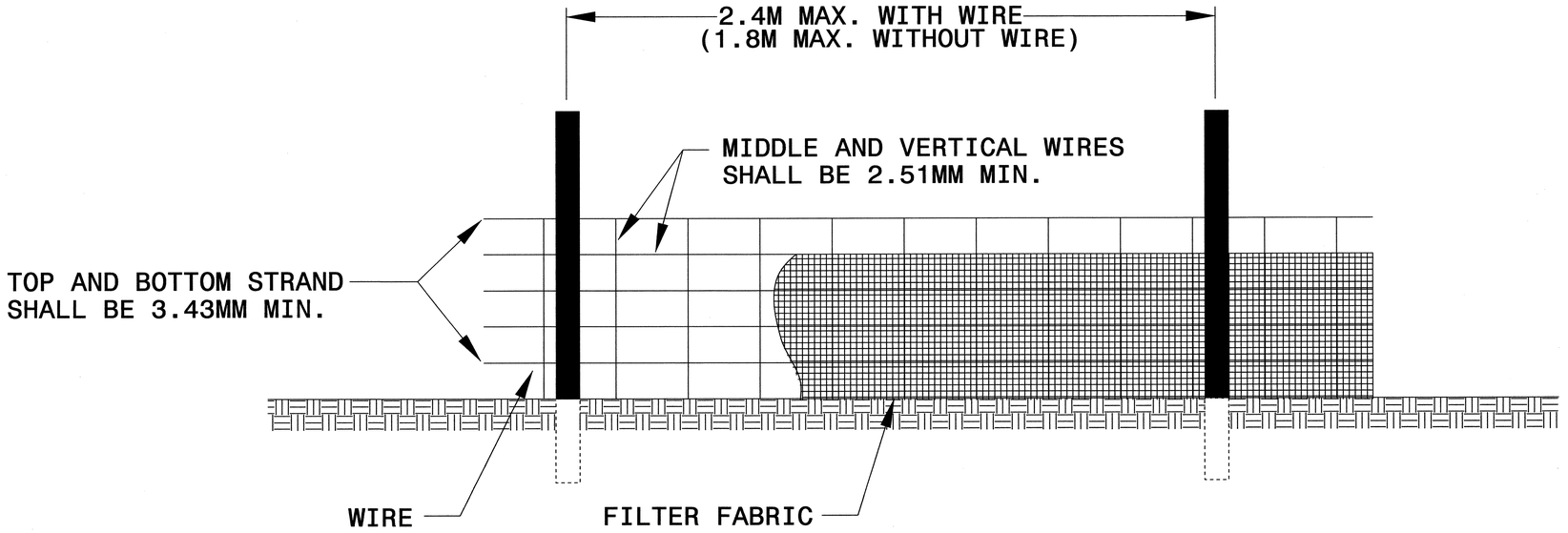
SPACE POST A MAXIMUM OF 1m.





METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2H
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY SILT FENCE DETAIL

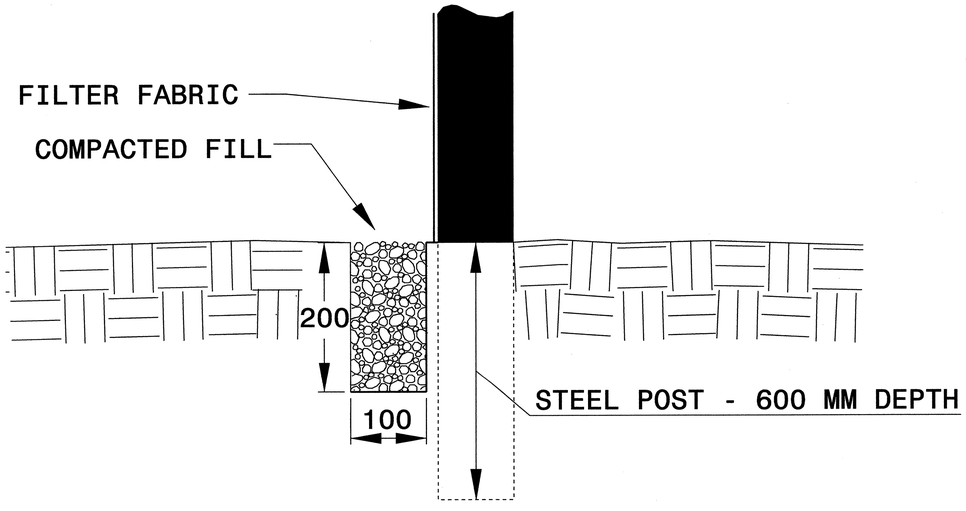


NOTES

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.
	U-2519DA	EC-21
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STILLING BASIN

GENERAL NOTES:
CONSTRUCT THE COIR FIBER BAFFLES 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 STILLING BASIN WITH 12″ STAPLES.

INSTALL THE TOP OF THE COIR FIBER BAFFLE A MINIMUM OF 300MM LOWER THAN THE TOP OF THE STILLING BASIN BERMS.

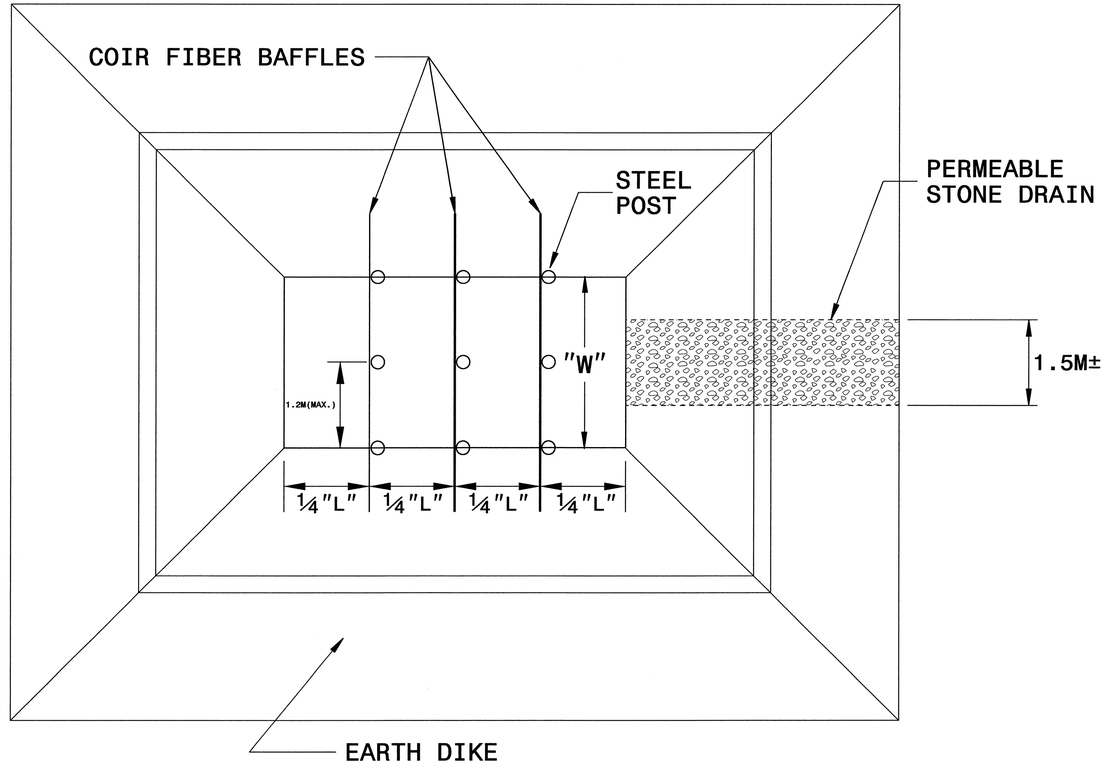
USE THE TYPICAL SECTION SHOWN FOR THE STILLING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A PERMEABLE STONE DRAIN.

DO NOT EXCEED 1.5M IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR STILLING BASINS. ADDITIONAL DEPTHS MAY BE ATTAINED BY EXCAVATING BELOW THE NATURAL GROUND LEVEL.

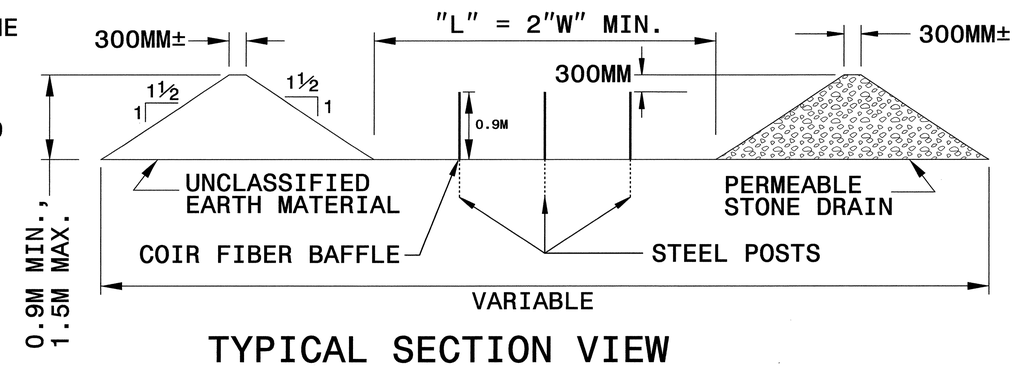
THE STILLING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND PERMEABLE STONE DRAIN MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE STILLING BASIN TO A MAXIMUM DEPTH OF 0.9 METERS.



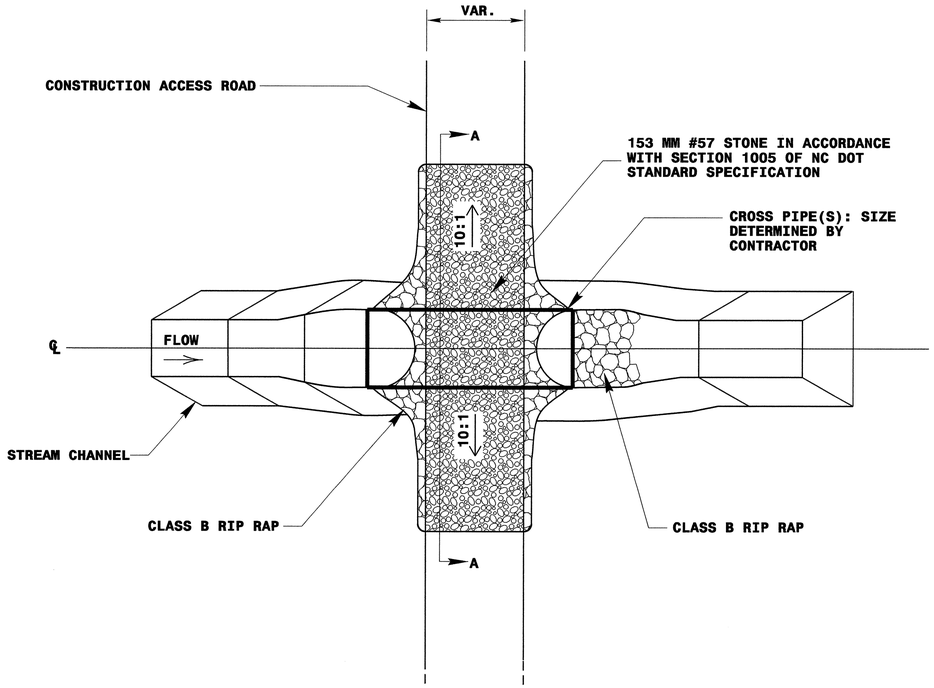
PLAN



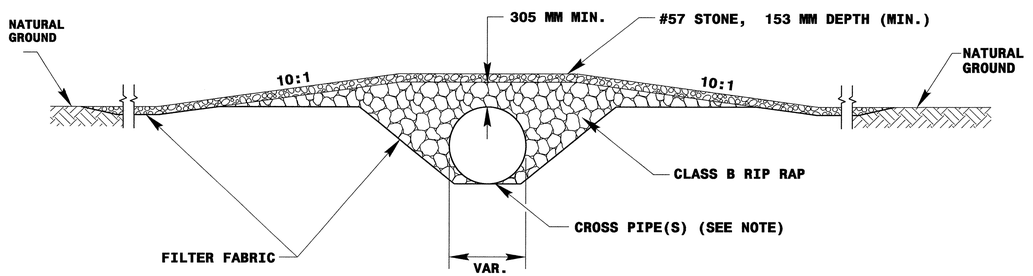
TYPICAL SECTION VIEW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2J
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY STREAM CROSSING



PLAN VIEW



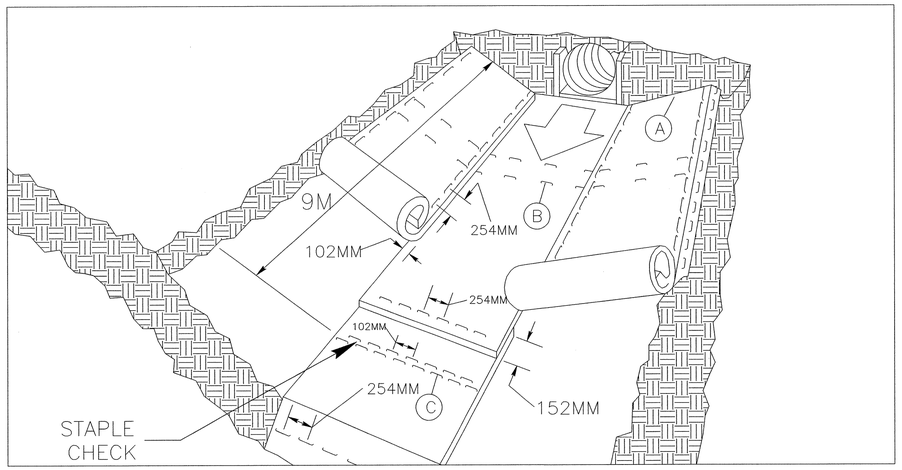
SECTION A-A

NOT TO SCALE

NOTE: PIPE(S) FOR TEMPORARY STREAM CROSSING SHALL BE DESIGNED TO PASS THE PEAK OR BANKFULL FLOW, WHICHEVER IS LESS, FROM A 2-YEAR PEAK STORM, WITHOUT OVER TOPPING.

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-2K
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

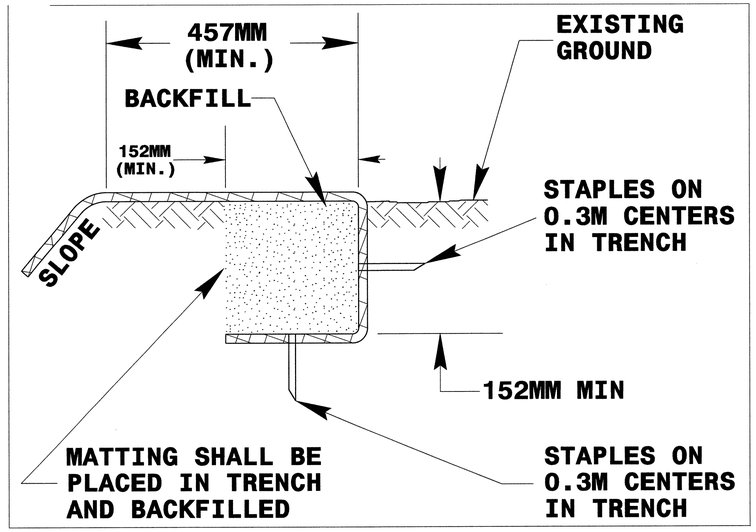
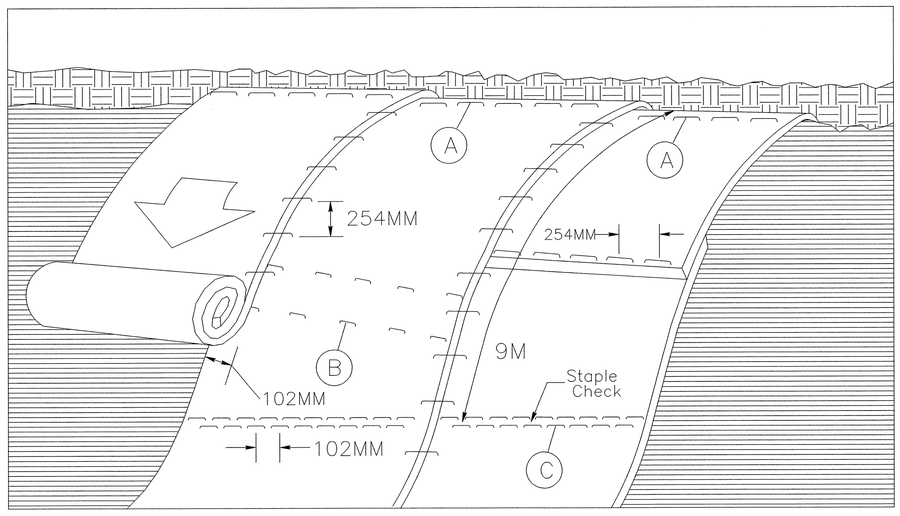


DIAGRAM (A)



MATTING ON SLOPES

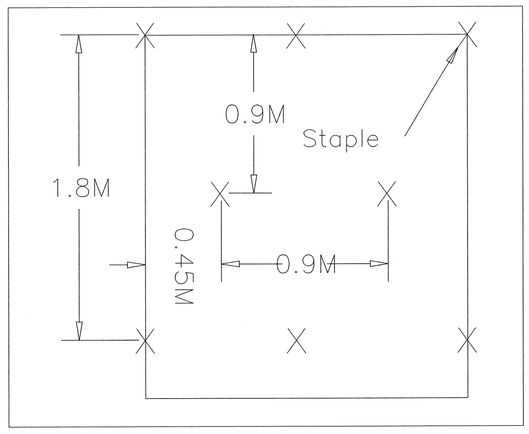


DIAGRAM (B)

Staple Check Pattern

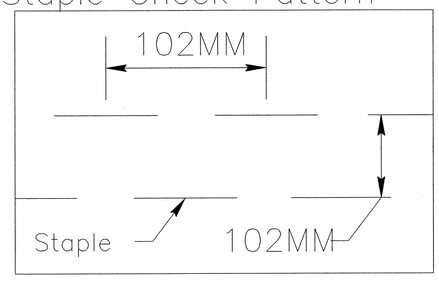


DIAGRAM (C)

NOTES:

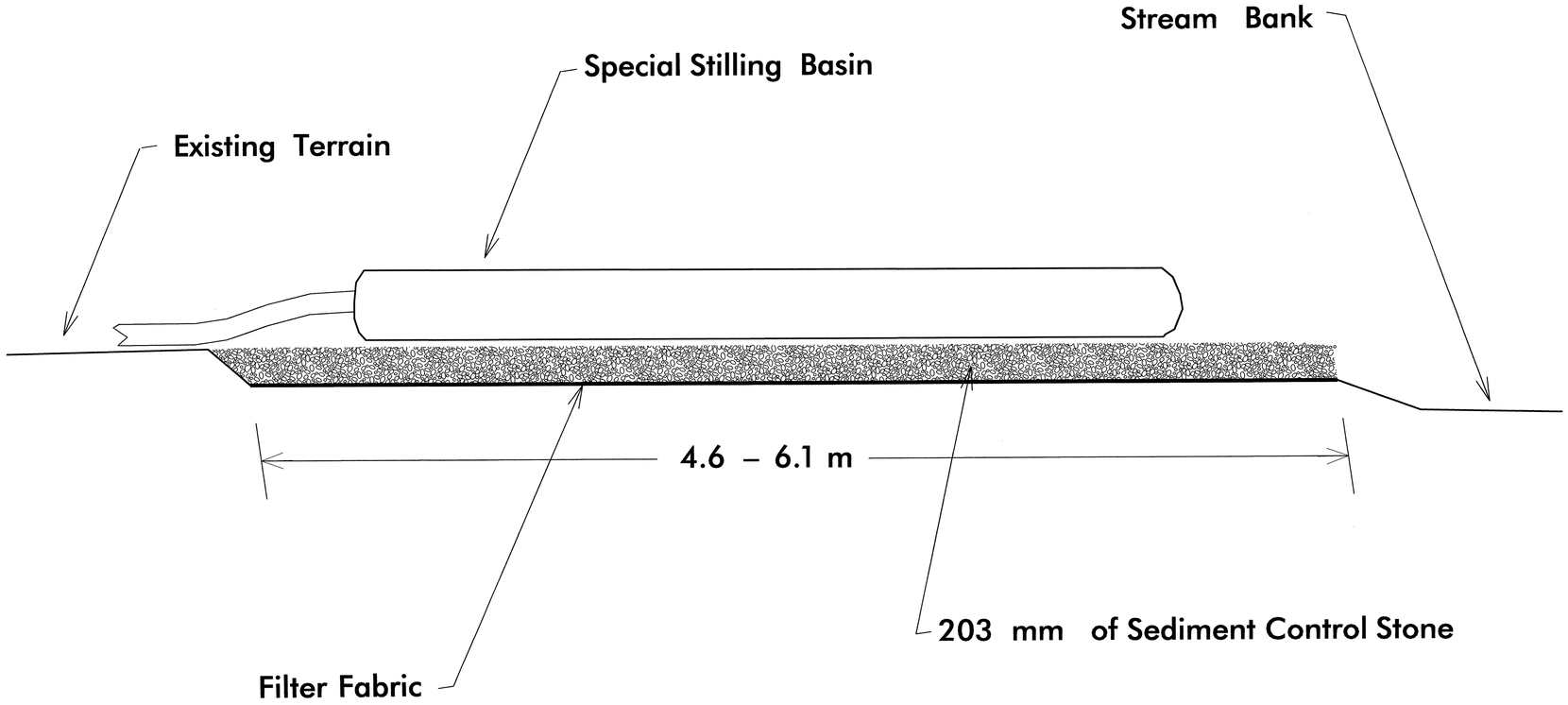
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

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.
	U-2519DA	EC-2L
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL STILLING BASIN WITH ROCK PAD

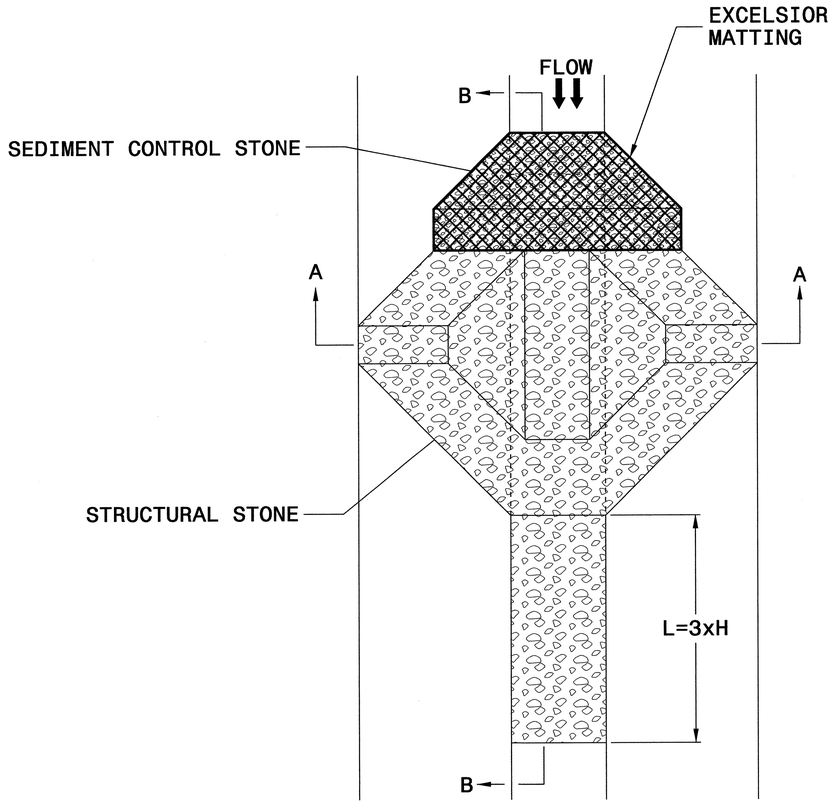


Not To Scale

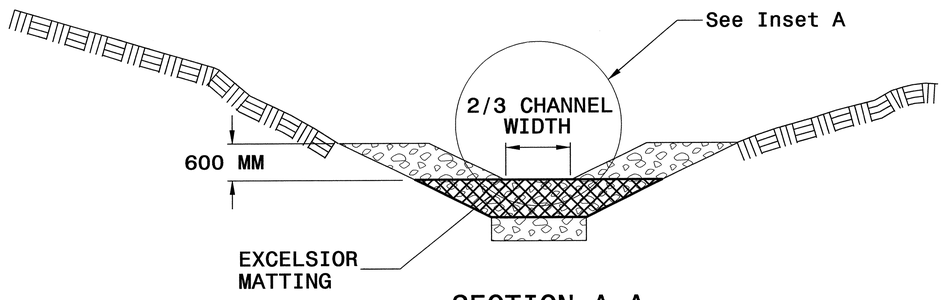
Note: Provide Stabilized Outlet to Streambank

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2M
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



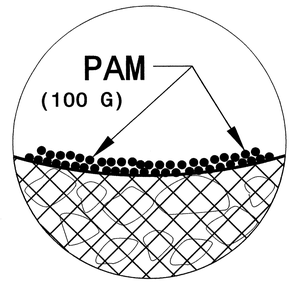
SECTION A-A

NOTES

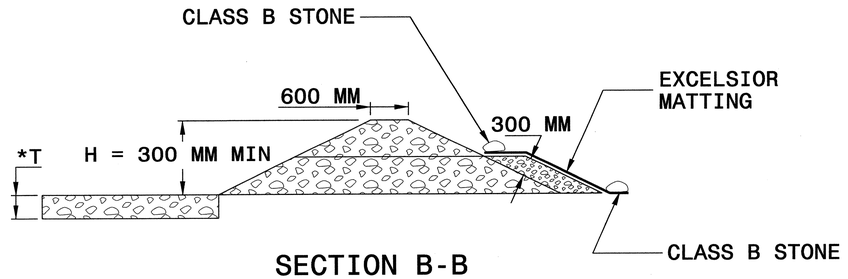
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-2N
	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.

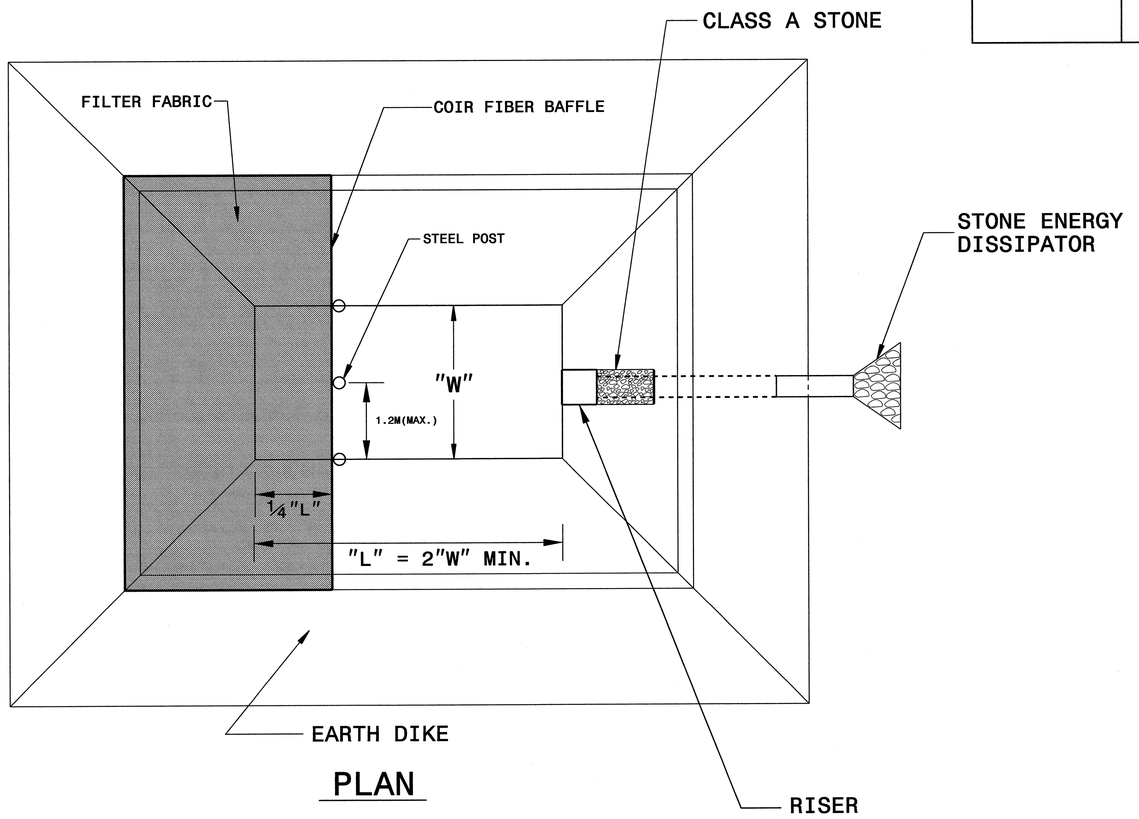
DO NOT EXCEED 1.1M IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

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

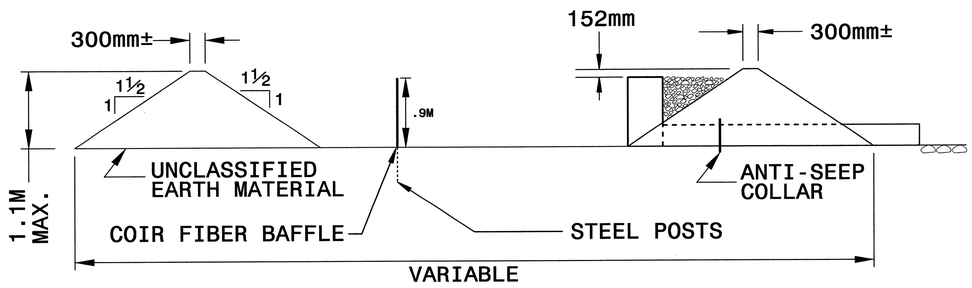
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

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.
U-2519DA	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)
7	-L-	20+20	22+00	LT	605
7	-COL1-	20+20	21+59	RT	1695
7	-L-	22+18	22+30	INLET	135
8	-COL2-	22+80	26+80	LT	6380
8	-L-	29+50	30+00	OUTLET	345
8	-RP1DD-	22+25	24+72	RT	1505
8	-RP1DD-	22+45	24+50	LT	1250
8	-RP1D-	11+20	11+86	LT	1610
8	-RP1D-	10+98	12+73	RT	2130
8	-RP1D-	12+09	12+48	LT	195
8	-RP1D-	13+50	14+15	LT	1330
8	-LP1D-	11+80	12+85	LT	895
8	-LP1D-	12+38	12+85	RT	405
8	-LP1D-	13+18	13+40	LT	165
8	-LP1D-	14+00	14+60	RT	400
8	-TT1-	10+20	10+80	LT	135
8	-TT1-	10+20	11+40	RT	270
8	-TT3-	12+90	13+00	OUTLET	115
9	-L-	23+40	26+80	LT	1145
9	-L-	29+20	39+40	LT	3725
9	-L-	23+20	26+80	MEDIAN	5805
9	-L-	29+20	33+00	MEDIAN	6130
9	-L-	23+40	26+00	RT	875
9	-L-	29+20	32+60	RT	1145
9	-LP1D-	12+24	12+87	LT	295
9	-Y1-	22+20	22+40	LT	125
9	-Y1-	22+80	23+00	LT	75
9	-RP1DB-	13+60	13+80	LT	120
9	-RP1DB-	14+55	14+65	OUTLET	40
10	-L-	33+00	39+40	MEDIAN	10320

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
10	-COL2-	34+20	35+40	LT	2920
10	-COL1-	33+80	34+18	LT	465
10	-COL1-	34+38	35+47	RT	595
11	-L-	34+00	39+40	RT	3285
11	-COL2-	37+80	38+80	LT	2280
11	-COL1-	35+47	36+48	RT	1230
11	-COL1-	36+07	36+48	LT	1000
11	-RP1DD-	36+40	37+30	RT	595
13	-RP1DD-	21+58	22+45	LT	220
13	-Y1-	10+40	13+00	RT	1900
13	-TT5-	16+00	16+40	RT	390
13	-TT6-	10+43	11+30	RT	555
14	-RP1DB-	11+35	12+53	RT	720
14	-RP1DB-	12+70	13+31	RT	120
14	-RP1D-	10+60	11+63	RT	200
14	-Y1-	23+63	25+40	LT	1655
14	-Y1-	26+40	26+70	BERM	190
14	-Y1-	26+40	27+00	BERM	380
14	-RP1DB-	13+50	13+60	OUTLET	70
14	-Y1-	26+80	26+90	OUTLET	70
17	-RP3C-	11+82	12+00	LT	110
			SUBTOTAL		68315
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					38175
				TOTAL	106490
				SAY	107000

METRIC

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-3A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

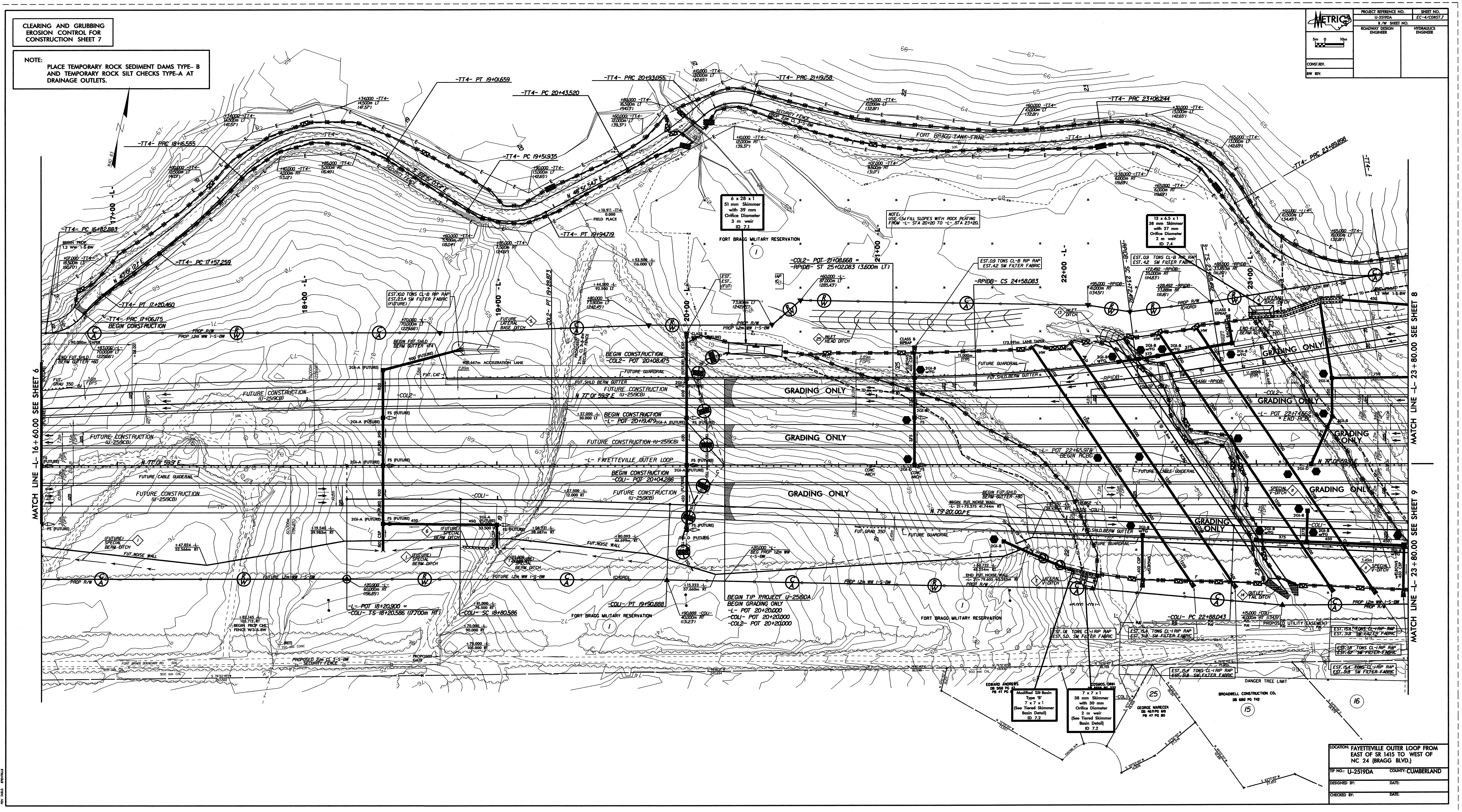
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
8	-RP1A-	11+55	12+60	LT	435
8	-TT3-	10+60	12+80	LT	815
8	-TT3-	10+60	12+80	RT	815
8	-TT4-	26+80	27+00	LT	80
9	-RP1DB-	13+79	14+23	RT	225
9	-RP1C-	11+70	12+29	LT	245
9	-RP1C-	15+31	15+71	RT	225
9	-RP1D-	13+00	13+80	LT	330
9	-LP1D-	11+00	11+30	LT	185
10	-L-	33+80	34+00	RT	75
10	-COL1-	35+26	35+87	LT	135
13	-RP1A-	16+09	16+28	RT	90
13	-Y1-	15+40	15+60	LT	95
13	-TT5-	12+04	12+22	LT	70
				SUBTOTAL	3820
				ADDITIONAL PSRM TO BE INSTALLED	0
				TOTAL	3820
				SAY	3850

PERMANENT SOIL REINFORCEMENT MAT

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

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.



PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-4/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5m 0 10m

CONST.REV.

R/W REV.

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)

TIP NO.: U-2519DA COUNTY: CUMBERLAND

DESIGNED BY: DATE:

CHECKED BY: DATE:

03/10/08 – ADDED PARCELS #13, 14, 15 & 16

04/09/08 – PARCELs #1, 13, 14, 15 & 16 ADDED
PROPOSED PUE AND DANGER TREE LIMIT

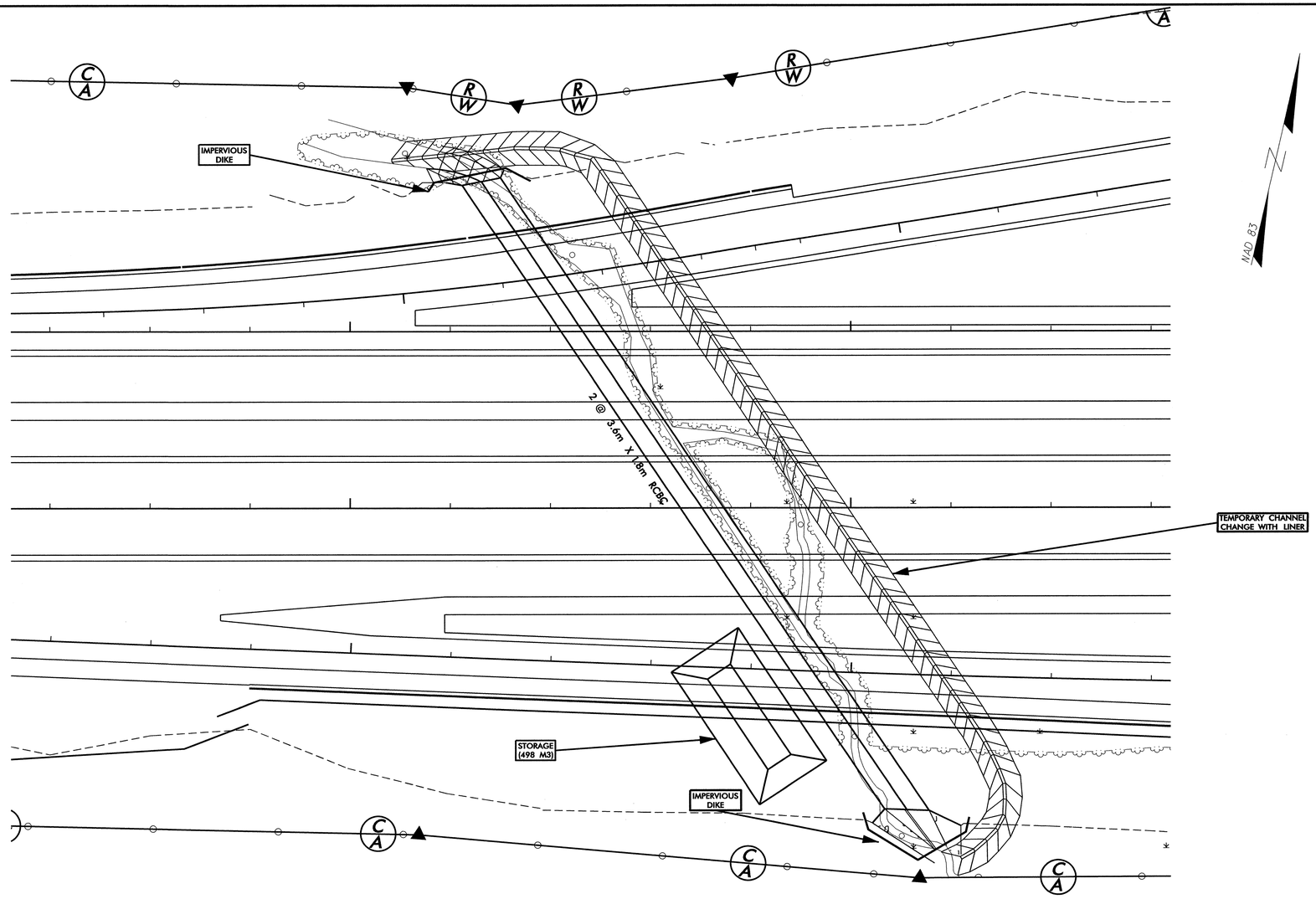
04/17/08 – REVISED GOERGE MARECEK PARCEL FROM
PARCEL #14 TO PARCEL #25

FILE: $FILEL$
DATE: $DATE$ $TIME$
PLOT DRIVER: $PLTDRVL$
PEN TABLE: $PENTBLL$

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2519DA	EC-5/CONST.7
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 22 + 66 –L–

1. CONSTRUCT STILLING BASIN (498 M3).
2. CONSTRUCT IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGE WITH LINER (0.6M BASE, 0.6M DEEP, 3:1 SIDE SLOPES). DIVERT FLOW.
3. CONSTRUCT PROPOSED CULVERT AND INLET/OUTLET CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGE.
5. COMPLETE INLET/OUTLET IMPROVEMENTS.
6. REMOVE STILLING BASIN AND COMPLETE ROADWAY.



NOTE:
UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

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 8

METRIC

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-6/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.	
RW REV.	

SEE SHEETS 30-37 FOR -L- PROFILE.

MATCH LINE -Y1- 16+60.00 SEE SHEET 13

MATCH LINE -L- 23+80.00 SEE SHEET 7

MATCH LINE -Y1- 20+16.038 SEE SHEET 9

MATCH LINE -L- 31+00.00 SEE SHEET 10

FORT BRAGG MILITARY RESERVATION

FORT BRAGG TANK TRAIL

GRADING ONLY

BUFFER ZONE

ENDANGERED SPECIES HABITAT

-L- FAYETTEVILLE OUTER LOOP

-Y1- PT 11+61.707 END CONSTRUCTION EST.410 TONS CL-B RIP RAP, EST.45 SM FILTER FABRIC

-TT1- PC 11+40.423

-TT2- POT 10+00.000 BERM CONSTRUCTION

-TT3- 2:1 END SLOPES W/ROCK/ SHORING

-TT4- PCC 25+88.777

-TT4- PC 25+27.454

-TT3- POT 10+62.339 = -TT4- POC 27+30.501

-RPIB- POC 12+47.909

-RPIBD- POT 12+17.268 = -RPIB- ST 11+39.350 (13.600m RT)

-RPIBD- ST 21+23.586

-RPIBD- CS 14+87.350

-RPIBD- CS 20+77.586

-RPIBD- POT 13+27.722 = -LPIB- POC 11+36.348

-LPIB- SC 11+20.000

-COL2- POT 27+09.282 END; GRADING, BEGIN PAVING

-RPIBD- POT 19+48.700

-RPIBD- POC 19+56.615

-LPIB- POC 11+85.815

-RPIBD- POC 13+08.603

-RPIBD- POT 12+13.976

-LPIB- POC 12+32.400

-RPIBD- POT 12+25.985

-RPIBD- POC 12+19.400

-RPIBD- CS 13+78.808

-RPIBD- POT 12+10.929 = -RPIB- ST 11+51.516

-TT3- PT 13+13.244

-TT3- PC 12+98.283

-COL2- POT 13+25.057

-COL2- POT 30+01.243

-RPIBD- ST 10+40.000 (3.6m LT) = -COL2- POT 30+57.243 END; GRADING, BEGIN PAVING

-RPIBD- POC 10+20.012

-RPIBD- POT 28+98.516 = -RPIBD- POC 29+72.626

-L- POT 29+05.369 10.500m LT.

END APPROACH SLAB -L- POT 29+12.680 10.500m LT.

-RPIA- POT 15+34.402 = -TT1- POT 6+80.754

-RPIA- POC 15+58.000

-RPIA- POT 13+20.559

-Y1- PT 18+76.401

-Y1- POT 16+15.641 = -LPIB- ST 14+68.808 (17.700m RT)

-L- POT 29+02.246

-COL2- POT 29+01.246

-COL2- POT 35+08.557

-L- 29+77.320 (40.086m LT)

-TT6- POT 10+76.749

-TT6- PC 10+76.749

-RPIA- SC 12+47.143

-RPIA- POT 6+80.754

-RPIA- POC 15+34.402

-RPIA- POT 15+58.000

-RPIA- POT 13+20.559

-Y1- PT 18+76.401

-Y1- POT 16+15.641 = -LPIB- ST 14+68.808 (17.700m RT)

-L- POT 29+02.246

-COL2- POT 29+01.246

-COL2- POT 35+08.557

-L- 29+77.320 (40.086m LT)

-TT6- POT 10+76.749

-TT6- PC 10+76.749

-RPIA- SC 12+47.143

BEGIN APPROACH SLAB -L- POT 26+88.754 10.500m LT.

BEGIN BRIDGE -L- POT 26+96.069 10.500m LT.

BEGIN BRIDGE -L- POT

BEGIN APPROACH SLAB -L- POT

END BRIDGE -L- POT

END APPROACH SLAB -L- POT

END APPROACH SLAB -RPIA- POT 15+

END BRIDGE -RPIA- POT 15+

BEGIN APPROACH SLAB -RPIA- POT 13+

BEGIN BRIDGE -RPIA- POC 13+58.000

END APPROACH SLAB -RPIA- POT 13+20.559

END APPROACH SLAB -COL2- POT 27+09.282

BEGIN APPROACH SLAB -COL2- POT 27+05.282

END BRIDGE -LPIB- POC 12+32.400

END APPROACH SLAB -RPIB- POC 12+39.376

BEGIN APPROACH SLAB -RPIBD- POT 12+25.985

BEGIN BRIDGE -RPIBD- POC 12+19.400

BEGIN APPROACH SLAB -RPIBD- POC 13+08.603

BEGIN BRIDGE -LPIB- POC 11+93.100

BEG. APPROACH SLAB -LPIB- POC 11+85.815

END BRIDGE -RPIBD- POC 19+56.615

END APPROACH SLAB -RPIBD- POT 19+48.700

BEGIN APPROACH SLAB -LPIB- POT 10+85.146

BEGIN BRIDGE -LPIB- POT 10+87.380

END APPROACH SLAB -RPIB- POT 12+47.909

END BRIDGE -LPIB- POT 11+93.100

8 x 16 x 1 3 m weir ID 8.3

11 x 3 x 1 38 mm Skimmer with 12 mm Orifice Diameter 1.5 m weir ID 8.1

8 x 4 x 1 38 mm Skimmer with 17 mm Orifice Diameter 2 m weir ID 8.2

15 x 7 x 1 38 mm Skimmer with 33 mm Orifice Diameter 2 m weir ID 8.9

10 x 5 x 1 38 mm Skimmer with 21 mm Orifice Diameter 2 m weir ID 8.6

18 x 7.5 x 1 38 mm Skimmer with 33 mm Orifice Diameter 3 m weir ID 8.5

15 x 25 x 1 64 mm Skimmer with 60 mm Orifice Diameter 5 m weir ID 8.8

16 x 37 x 1 76 mm Skimmer with 72 mm Orifice Diameter 5 m weir ID 8.4

23 x 11.2 x 1 51 mm Skimmer with 48 mm Orifice Diameter 4 m weir ID 8.9

EST. 69 TONS CL-B RIP RAP, EST. 42 SM FILTER FABRIC

EST. 129 TONS CL-B RIP RAP, EST. 42 SM FILTER FABRIC

EST. 73 TONS CL-B RIP RAP, EST. 11.6 SM FILTER FABRIC

EST. 45 TONS CL-B RIP RAP, EST. 8.4 SM FILTER FABRIC

EST. 18 TONS CL-B RIP RAP, EST. 5.9 SM FILTER FABRIC

EST. 410 TONS CL-B RIP RAP, EST. 45 SM FILTER FABRIC

EST. 60 TONS CL-B RIP RAP, EST. 12 SM FILTER FABRIC

EST. 45 TONS CL-B RIP RAP, EST. 8.4 SM FILTER FABRIC

EST. 70 TONS CL-B RIP RAP, EST. 12 SM FILTER FABRIC

EST. 18 TONS CL-B RIP RAP, EST. 5.9 SM FILTER FABRIC

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)

TIP NO.: U-2519DA COUNTY: CUMBERLAND

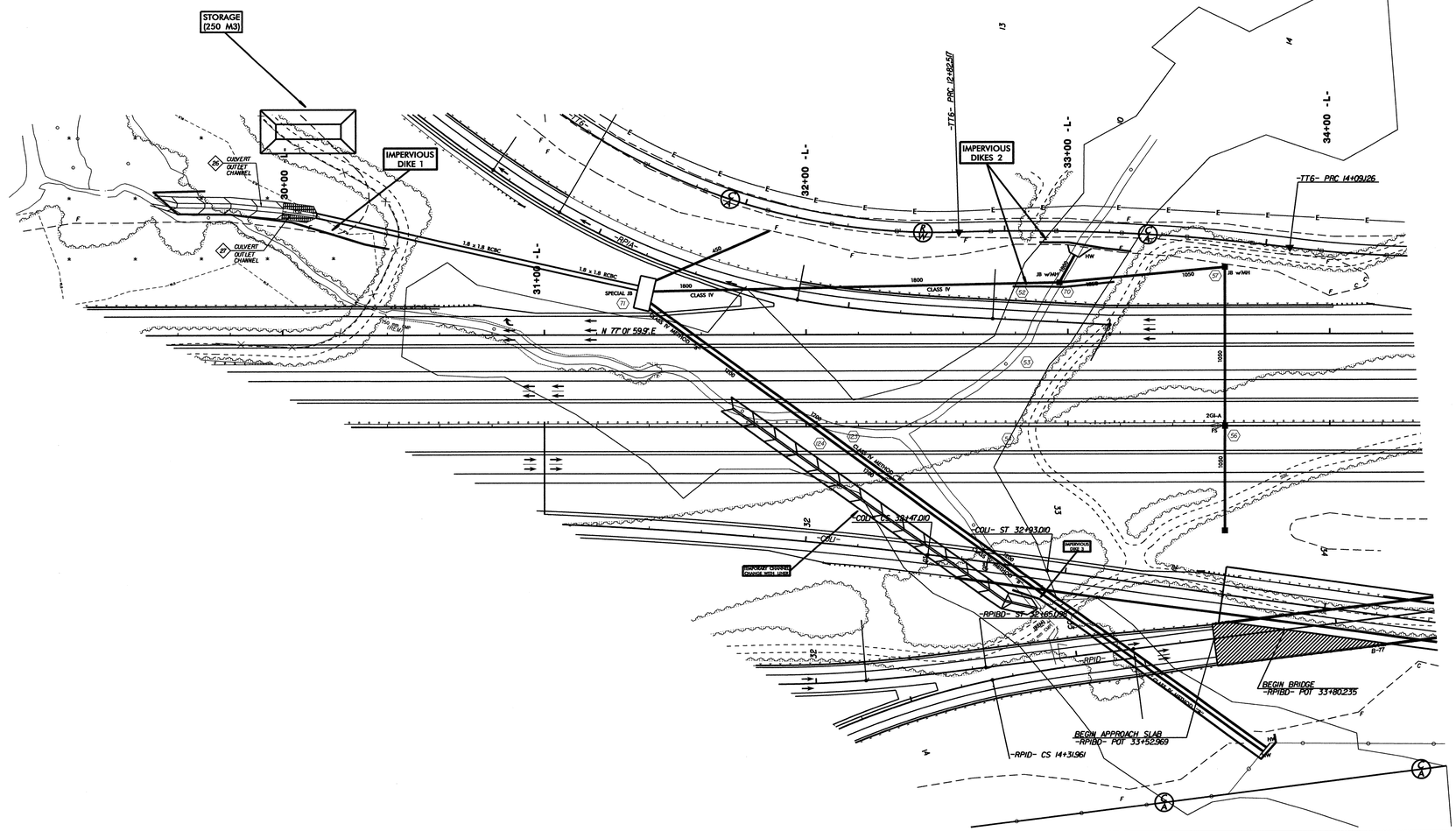
DESIGNED BY: DATE:

CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-07/CONST.08
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 30+80 –L–

1. CONSTRUCT STILLING BASIN (250 M3).
2. CONSTRUCT IMPERVIOUS DIKE 1.
3. CONSTRUCT 1.8M X 1.8M RCBC, SPECIAL JUNCTION BOX, AND AS MUCH OF OUTLET CHANNEL AS POSSIBLE.
4. INSTALL 1800MM PIPE BETWEEN JUNCTION BOXES.
5. CONSTRUCT IMPERVIOUS DIKES 2 AND COMPLETE INSTALLATION OF 1800MM PIPE, HEADWALL, AND JUNCTION BOX, UTILIZING "BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES".
6. REMOVE IMPERVIOUS DIKES 1 AND 2, COMPLETE OUTLET CHANNEL, AND ALLOW FLOW THROUGH 1800MM PIPE AND RCBC.
7. CONSTRUCT TEMPORARY CHANNEL CHANGE WITH LINER (0.6M BASE, 1.0M DEEP, 3:1 SIDE SLOPES) AND IMPERVIOUS DIKE 3, DIVERTING FLOW.
8. INSTALL 1200MM PIPES AND HEADWALL.
9. REMOVE TEMPORARY CHANNEL CHANGE AND IMPERVIOUS DIKE 3, ALLOWING FLOW THROUGH 1200MM PIPES.
10. REMOVE STILLING BASIN, AND COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-8/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.	
R/W REV.	

METRIC 5m 0 10m

03/1008 – ADDED PARCELS #16, 17, 18, 19, 20, 21, 22 & 23
040908 – PARCELS #1, 2, 3, 4, 5, 6, 7, 9A, 10, 16, 17, 18, 19, 20, 21, 22 & 23 ADDED PROPOSED PUE AND DANGER TREE LIMIT
041708 – REVISED KENNETH STEINHOFF PARCEL FROM PARCEL #17 TO PARCEL #26 AND REVISED ARLENE WINDERMILLER PARCEL FROM PARCEL #19 TO PARCEL #24

Plan sheet revised as noted by date provided

MATCH LINE –Y1– 20+16.038 SEE SHEET 8

MATCH LINE –L– 23+80.00 SEE SHEET 7

MATCH LINE –L– 31+00.00 SEE SHEET 10

MATCH LINE –Y1– 23+60.00 SEE SHEET 14

–L– FAYETTEVILLE OUTTER LOOP

24+00 –L– | 25+00 –L– | 26+00 –L– | 27+00 –L– | 28+00 –L– | 29+00 –L– | 30+00 –L–

BEGIN APPROACH SLAB –L– POT 26+84.746 10.500m RT.

BEGIN BRIDGE –L– POT 26+92.106 10.500m RT.

–L– POT 28+72.615 = –Y1– POT 20+16.038

–RPIDB– POC 7+39.497 = –L– POT 28+46.443

–L– POT 28+98.516 = –RPIDB– POC 28+72.525

END BRIDGE –L– POT 29+08.261 10.500m RT.

END APPROACH SLAB –L– POT 29+16.172 10.500m RT.

END BRIDGE –COU– POT 29+12.386

END APPROACH SLAB –COU– POT 29+20.297

–RPIDB– POC 29+35.752 = –COU– POT 29+50.792

–RPIDB– POC 29+43.265 = –LPID– POS 10+19.328

N 79° 19' 59.9" E

N 77° 01' 59.9" E

GRADING ONLY

FUTURE

FUT. B-77

FUT. B-77 (MOD.)

FUT. B-77 (MOD.) WIDEN

FUT. B-77 (MOD.) CONST. MEDIAN

FUTURE GUARDRAIL

FUT. IMPACT ATTENUATOR

FUT. SHLD BERM GUTTER

FUT. NOISE WALL

ENDBENT NOISE WALL –L– 24+43.973 LT

PROP 10ft RW

PROPOSED UTILITY EASEMENT

EST.03 TONS CL-B RIP RAP FILTER FABRIC

EST.08 TONS CL-B RIP RAP EST. 525 SM FILTER FABRIC

EST.09 TONS CL-B RIP RAP EST. 42 SM FILTER FABRIC

EST.18 TONS CL-B RIP RAP EST.59 SM FILTER FABRIC

EST.09 TONS CL-B RIP RAP EST.42 SM FILTER FABRIC

EST.09 TONS CL-B RIP RAP EST.42 SM FILTER FABRIC

EST.09 TONS CL-B RIP RAP EST.42 SM FILTER FABRIC

–COU– TS 30+05.973

–COU– SC 30+51.973

–LPID– SC 11+20.000

–RPIDB– POC 30+58.716 = –LPID– POC 11+39.482

–COU– POT 29+37.991 = –LPID– TS 10+00.000 (3.5m RT)

–RPIDB– POC 16+99.274 = –COU– POT 28+78.086 = –Y1– POT 20+51.203

–RPIDB– POC 16+16.182 = –COU– POT 28+55.555

–Y1– POT 21+16.– = –LPID– ST 14+68.808 (17.700m LT)

–LPID– CS 13+78.808

–LPID– POS 13+91.449

–RPIDB– POC 14+83.329 = –LPID– POT 13+15.329

BEGIN BRIDGE –RPIDB– POC 14+61.000

BEGIN APPROACH SLAB –RPIDB– POC 14+53.285

END GRADING

BEGIN FENCE 7+94.000 –RPIC–

BEGIN APPROACH SLAB –RPIC– POC 15+01.315

BEGIN APPROACH SLAB –RPIC– POC 12+46.285

END APPROACH SLAB –RPIDB– POC 30+59.015

–RPIC– TS 10+54.948

–RPIC– SC 11+00.948

–RPIC– POT NO 20.000 -13.6m RT.

–RPIC– POT 24+98.345 = –FOU– PT 24+98.345

L= 218.00

–RPIC– 15+54.000

–RPIC– 15+88.064 = –RPIB– POC 0+21.936

–RPIC– 16+00.000

–RPIC– 16+88.064 = –RPIB– POC 1+10.000

–RPIC– 17+94.000

–RPIC– 18+00.000

–RPIC– 18+88.064 = –RPIB– POC 2+81.936

–RPIC– 19+88.064 = –RPIB– POC 3+81.936

–RPIC– 20+88.064 = –RPIB– POC 4+81.936

–RPIC– 21+88.064 = –RPIB– POC 5+81.936

–RPIC– 22+88.064 = –RPIB– POC 6+81.936

–RPIC– 23+88.064 = –RPIB– POC 7+81.936

–RPIC–

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

MATCH LINE -L- 31+00.00 SEE SHEET 8

MATCH LINE -L- 36+80.00 SEE SHEET 11

MATCH LINE -L- 31+00.00 SEE SHEET 9

INSET A-A – SEE SHEET NO. 9

NOTE: CONTRACTOR SHALL CONSTRUCT RETAINING WALL TO STA 35+87.500 -RPIBD-. COORDINATE CONSTRUCTION OF RETAINING WALL WITH WORK UNDER CONSTRUCTION IN PROJECT U-2519E.

08/2306 - ADDED PARCEL #911 AND EDITED PROPERTY NAME
08/2306 - EXISTING HOUSE TRAILERS ON PARCEL #911 REMOVED
04/09/08 - PARCELS #9A, 10 & 911 ADDED PROPOSED PUE AND DANGER TREE LIMIT

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-9/CONST.10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.	
R/W REV.	

LOCATION:	FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)
TIP NO.: U-2519DA	COUNTY: CUMBERLAND
DESIGNED BY:	DATE:
CHECKED BY:	DATE:

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-10/CONST.11
CONST.REV.	R/W SHEET NO.	
R/W REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

03/1008 – PARCELS #1 & 911 ADDED PROPOSED PUE AND TREE LIMIT
082306 – ADDED PARCEL #911 AND EDITED PROPERTY NAME
082306 – EXISTING HOUSE TRAILERS ON PARCEL #911 REMOVED
082306 – ADDED PROPOSED DRAINAGE EASEMENT TO PARCELS #911, #98 AND #12
080708 – CHANGED PARCEL #12 TO WACHOVIA BANK ET AL

ALL ELEV. FIELD VERIFIED BY R/W SURVEY PRIOR

MATCH LINE -L- 36+80.00 SEE SHEET 10

GRADING ONLY

GRADING ONLY

INSET B-B

INSET B-B

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)

TIP NO. U-2519DA COUNTY: CUMBERLAND

DESIGNED BY: DATE:

CHECKED BY: DATE:

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 13

METRIC
5m 0 10m
CONST.REV.
R/W REV.

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-11/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE -Y1- 9+50.00 SEE SHEET 12

MATCH LINE -Y1- 16+60.00 SEE SHEET 8

-TT5- PT 10+76.749
-TT5- PC 11+26.475
-TT5- S 16°58'38.5" E
-TT5- POC 11+90.000 BEGIN CONSTRUCTION
-TT5- PT 12+25.000
-TT5- POT 14+89.776 END CONSTRUCTION
-TT5- PT 17+40.947
-TT5- PC 16+68.598
-TT5- PT 16+55.637
-TT5- PC 16+18.043
-TT5- S 17°07'24.5" E
-TT5- PT 10+25.505
-TT5-
-TT4- PT 34+54.275
-TT4- PC 34+24.768
-TT4- PT 32+90.710
-TT4- PC 32+69.146
-TT4- PT 29+91.325
-TT4- PCC 29+08.104 L.B. =
-TT4- PCC 29+29.758 L.A.
-Y1- POT 14+40.076
-RPIA- ST 18+07.437 (1700ft LT)
-RPIA- CS 17+62.437
-RPIA-
-Y1- PC 15+46.409
-Y1- ALI AMERICAN FREEWAY
-RPIB- TS 10+41.862
-RPIB- POS 10+88.762 END TYPING BEGIN GRADING
-RPIB- SC 10+93.862
-RPIB- TS 83+74.709
-RPIB- POT 10+00.000 (1500m RT)
Δ=2°-18'-00.0"
-RPIB- SC 24+20.709
-RPIBD- SC 16+18.399
-RPIBD- CS 20+71.723
-RPIBD- ST 21+17.723
-RPIBD- SC 24+20.709
-RPIBD-
-RPIB-
-Y1- 15+05.205 40.9m LT
-Y1- 10+00.000 10.84m LT, RETAIN
-Y1- 10+00.000 10.84m RT
-Y1- 15+22.369 10.38m RT
-Y1- 16+62.369 10.38m RT
-Y1- 17+62.369 10.38m RT
-Y1- S 16°59'36.2" E
-Y1- S 17°11'38.2" E
-Y1- S 17°53'38.2" E
-Y1- S 17°45'38.2" E
-Y1- S 17°39'38.2" E
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-Y1- S 62°09'38.2" W
-Y1- S 62°15'38.2" W
-Y1- S 62°21'38.2" W
-Y1- S 62°27'38.2" W
-Y1- S 62°33'38.2" W
-Y1- S 62°39'38.2" W
-Y1- S 62°45'38.2" W
-Y1- S 62°51'38.2" W
-Y1- S 62°57'38.2" W
-Y1- S 63°03'38.2" W
-Y1- S 63°09'38.2" W
-Y1- S 63°15'38.2" W
-Y1- S 63°21'38.2" W
-Y1- S 63°27'38.2" W
-Y1- S 63°33'38.2" W
-Y1- S 63°39'38.2" W
-Y1- S 63°45'38.2" W
-Y1- S 63°51'38.2" W
-Y1- S 63°57'38.2" W
-Y1- S 64°03'38.2" W
-Y1- S 64°09'38.2" W
-Y1- S 64°15'38.2" W
-Y1- S 64°21'38.2" W
-Y1- S 64°27'38.2" W
-Y1- S 64°33'38.2" W
-Y1- S 64°39'38.2" W
-Y1- S 64°45'38.2" W
-Y1- S 64°51'38.2" W
-Y1- S 64°57'38.2" W
-Y1- S 65°03'38.2" W
-Y1- S 65°09'38.2" W
-Y1- S 65°15'38.2" W
-Y1- S 65°21'38.2" W
-Y1- S 65°27'38.2" W
-Y1- S 65°33'38.2" W
-Y1- S 65°39'38.2" W
-Y1- S 65°45'38.2" W
-Y1- S 65°51'38.2" W
-Y1- S 65°57'38.2" W
-Y1- S 66°03'38.2" W
-Y1- S 66°09'38.2" W
-Y1- S 66°15'38.2" W
-Y1- S 66°21'38.2" W
-Y1- S 66°27'38.2" W
-Y1- S 66°33'38.2" W
-Y1- S 66°39'38.2" W
-Y1- S 66°45'38.2" W
-Y1- S 66°51'38.2" W
-Y1- S 66°57'38.2" W
-Y1- S 67°03'38.2" W
-Y1- S 67°09'38.2" W
-Y1- S 67°15'38.2" W
-Y1- S 67°21'38.2" W
-Y1- S 67°27'38.2" W
-Y1- S 67°33'38.2" W
-Y1- S 67°39'38.2" W
-Y1- S 67°45'38.2" W
-Y1- S 67°51'38.2" W
-Y1- S 67°57'38.2" W
-Y1- S 68°03'38.2" W
-Y1- S 68°09'38.2" W
-Y1- S 68°15'38.2" W
-Y1- S 68°21'38.2" W
-Y1- S 68°27'38.2" W
-Y1- S 68°33'38.2" W
-Y1- S 68°39'38.2" W
-Y1- S 68°45'38.2" W
-Y1- S 68°51'38.2" W
-Y1- S 68°57'38.2" W
-Y1- S 69°03'38.2" W
-Y1- S 69°09'38.2" W
-Y1- S 69°15'38.2" W
-Y1- S 69°21'38.2" W
-Y1- S 69°27'38.2" W
-Y1- S 69°33'38.2" W
-Y1- S 69°39'38.2" W
-Y1- S 69°45'38.2" W
-Y1- S 69

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-12/CONST.14
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.	
R/W REV.	

METRIC

5m 0 10m

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.

MATCH LINE -Y1- 23+60.00 SEE SHEET 9

MATCH LINE -Y1- 27+00.00 SEE SHEET 15

04/9/08 – PARCEL #9A ADDED PROPOSED PUE AND DANGER TREE LIMIT

FILE: STILES
DGN: ETHER
PLOT DRIVER: STXTDRVS
PEN TABLE: STPENTBLS

20 x 4 x 1
38 mm Skimmer
with 24 mm
Orifice Diameter
2 m weir
ID 14.2

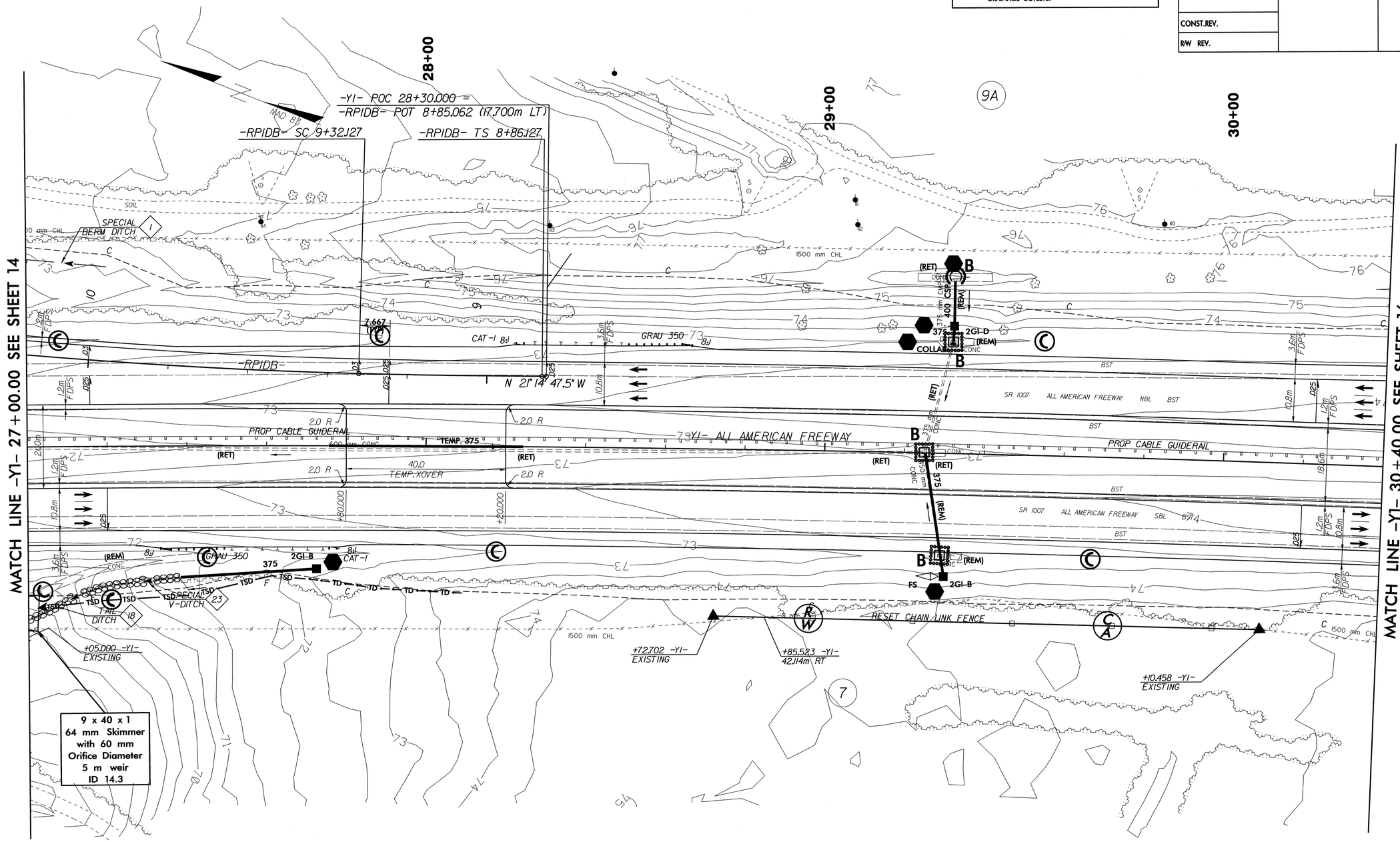
10 x 38 x 1
64 mm Skimmer
with 57 mm
Orifice Diameter
4 m weir
ID 14.1

9 x 40 x 1
64 mm Skimmer
with 60 mm
Orifice Diameter
5 m weir
ID 14.3

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-13/CONST.15
	R /W SHEET NO.	
CONST.REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R/W REV.		

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.



FILE: $FILE$ STAGES
DGN: DGN LEVELS
PLOT DRIVER: $PLTDRVR$
PEN TABLE: $PENTBL$

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

5m 0 10m

CONST.REV.

R/W REV.

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-14/CONST.16
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83

31+00

32+00

33+00

MATCH LINE -Y1- 30+40.00 SEE SHEET 15

MATCH LINE -RP3C- 11+90.00 SEE SHEET 17

1500 mm CHL

SOIL

109

9A

7

END CONSTRUCTION
-Y1- NBL POC Sta.32+00.000

END CONSTRUCTION
-Y1- SBL POC Sta.33+60.000

750 mm CONC

(RET) CONC

B

CAT-I 8:1

GRAU 350

3.6m FDPS

1.2m FDPS

0.25

BST

SR 1007 ALL AMERICAN FREEWAY NBL BST

SR 1007 ALL AMERICAN FREEWAY SBL BST

-Y1- ALL AMERICAN FREEWAY

PROP CABLE GUIDERAIL

18.6m

10.8m

8:1

15.000m (TYP)

GRADE TO DRAIN

-Y1- POC 31+75.716 =
-RP3C- ST 10+00.000 (17.000m RT)

-RP3C- SC 10+60.000

-RP3C-

+30.989 -Y1-

+54.647 -RP3C-

TSD

19 x 9 x 1
51 mm Skimmer
with 39 mm
Orifice Diameter
4 m weir
ID 16.1

FILE: XFILES
DATE: 6/16/2015 STIMES
PLOT DRIVER: $PLTDRV$
PEN TABLE: $PENTBLS

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-15/CONST.17
	R /W SHEET NO.	
CONST.REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R/W REV.		

NAD 83

MATCH LINE -RP3C- 11+90.00 SEE SHEET 16

-YI- ALL AMERICAN FREEWAY

TO FAYETTEVILLE

SANTA FE DRIVE

-YI- PT 35+80.000
AH = S 13° 05' 56" E

-RP3C-

SPECIAL V-DITCH 10

2GI-A (REMOVE)

B

13 x 5 x 1
2 m weir
ID 17.1

4 x 10 x 1
2 m weir
ID 16.2

-RP3C- CS 12+89.18

-RP3C- SRS 13+49.18

-RP3C- SC 14+09.18

-END CONSTRUCTION
-RP3C- POC 14+40.000

-RP3C- POT 15+07.685

S 26° 53' 46.9" E

-RP3C- PT 14+77.547

SR 1437 SANTA FE DR

1500 mm CML

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 17

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

SEE SHEET 50 FOR -RP3C- PROFILE
SEE SHEET 58 FOR -YI- PROFILE

FILE: $FILE$
USER: $USER$ $ETIME$
PLOT DRIVER: $PLTDRVR$
PEN TABLE: $PENTBLE$

	PROJECT REFERENCE NO.	SHEET NO.
METRIC	U-2519DA	EC-16/CONST.7
5m 0 10m	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.		
R/W REV.		

03/10/08 – ADDED PARCELS #13, 14, 15 & 16
04/09/08 – PARCELS #1, 13, 14, 15 & 16 ADDED PROPOSED PUE AND DANGER TREE LIMIT
04/17/08 – REVISED GORGE MARECEK PARCEL FROM PARCEL #14 TO PARCEL #25

FILE: 2519DA_ETJ.dgn
DATE: 4/17/2008
PROJECT REFERENCE NO.: U-2519DA

-TT4- PT I9+01.659
-TT4- PC 20+43.520
-TT4- PRC 20+93.055
-TT4- PRC 21+59.158
-TT4- PRC 23+06.244
-TT4- PRC I8+16.555
-TT4- PC I9+51.935
-TT4- PT I9+94.719
-TT4- PC I6+82.883
-TT4- PC I7+57.259
-TT4- PT I7+20.460
-TT4- PRC I7+06.175
BEGIN CONSTRUCTION
-TT4- PC 22+89.898
-TT4- PT 23+89.898
-TT4- PC 22+88.043
-TT4- PT 24+26.552
-TT4- PRC 24+26.552

-L- 17+00
-L- 18+00
-L- 19+00
-L- 20+00
-L- 21+00
-L- 22+00
-L- 23+00
-L- 24+00

FORT BRAGG-LAWN-J TRAIL
FORT BRAGG MILITARY RESERVATION
SECURITY FENCE
FIELD PLACE
NOTE: USE 1.5H FILL SLOPES WITH ROCK PLATING FROM -L- STA 20+20.70 TO -L- STA 23+80.

6 x 28 x 1 51 mm Skimmer with 39 mm Orifice Diameter 3 m weir ID 7.1
16 x 12 x 1 102 mm Skimmer with 81 mm Orifice Diameter 4 m weir (See Tiered Skimmer Basin Detail) ID 7.4
Modified Silt Basin Type 'B' 16 x 12 x 1 (See Tiered Skimmer Basin Detail) ID 7.4
6 x 2 x 0.6 ID 7.2E
6 x 2 x 0.6 ID 7.2F
6 x 2 x 0.6 ID 7.3
6 x 2 x 0.6 ID 7.4
7 x 7 x 1 38 mm Skimmer with 30 mm Orifice Diameter 2 m weir (See Tiered Skimmer Basin Detail) ID 7.3
Modified Silt Basin Type 'B' 7 x 7 x 1 (See Tiered Skimmer Basin Detail) ID 7.2

EST.100 TONS CL-B RIP RAP EST.23.4 SM FILTER FABRIC (FUTURE)
EST.09 TONS CL-B RIP RAP EST.42 SM FILTER FABRIC
EST.42 SM FILTER FABRIC
-RPIDB- CS 24+58.083
-RPIDB- ST 25+02.083 (3.600m LT)
-COL2- POT 20+08.475
-COL2- POT 21+08.668 = -RPIDB- ST 25+02.083 (3.600m LT)
-COL2- PT 19+28.873
-COL2-
-COL-
-COLU-
-L- POT 18+20.900 = -COLU- TS 18+20.586 (17.700m RT)
-COLU- SC 18+80.586
-COLU- PT 19+90.888
-COLU- PC 22+88.043
-L- POT 20+19.479
-L- POT 20+20.000
-COLU- POT 20+20.000
-COL2- POT 20+20.000
-L- POT 22+65.918
-L- POT 23+65.898
-L- FAYETTEVILLE OUTER LOOP
BEGIN CONSTRUCTION -COL2- POT 20+08.475
BEGIN CONSTRUCTION -L- POT 20+19.479
BEGIN CONSTRUCTION -COLU- POT 20+04.286
BEGIN TIP PROJECT U-2519DA
BEGIN GRADING ONLY
-L- POT 20+20.000
-COLU- POT 20+20.000
-COL2- POT 20+20.000
FUTURE CONSTRUCTION (U-2519CB)
FUTURE CABLE GUIDERAIL
FUTURE GUARDRAIL
FUT.SHLD.BERM GUTTER
FUT.NOISE WALL
FUT.GRAU 350
GRADING ONLY
PROPOSED UTILITY EASEMENT
DANGER TREE LIMIT
EDWARD ANDREWS DB 5958 PG 61 PB 47 PG 6
COSMOS DRH DB 4585 PG 530
GEORGE MARECEK DB 4678 PG 695 PB 47 PG 80
BROADWELL CONSTRUCTION CO. DB 6812 PG 742
(15) (16) (25)

MATCH LINE -L- 16+60.00 SEE SHEET 6
MATCH LINE -L- 23+80.00 SEE SHEET 9

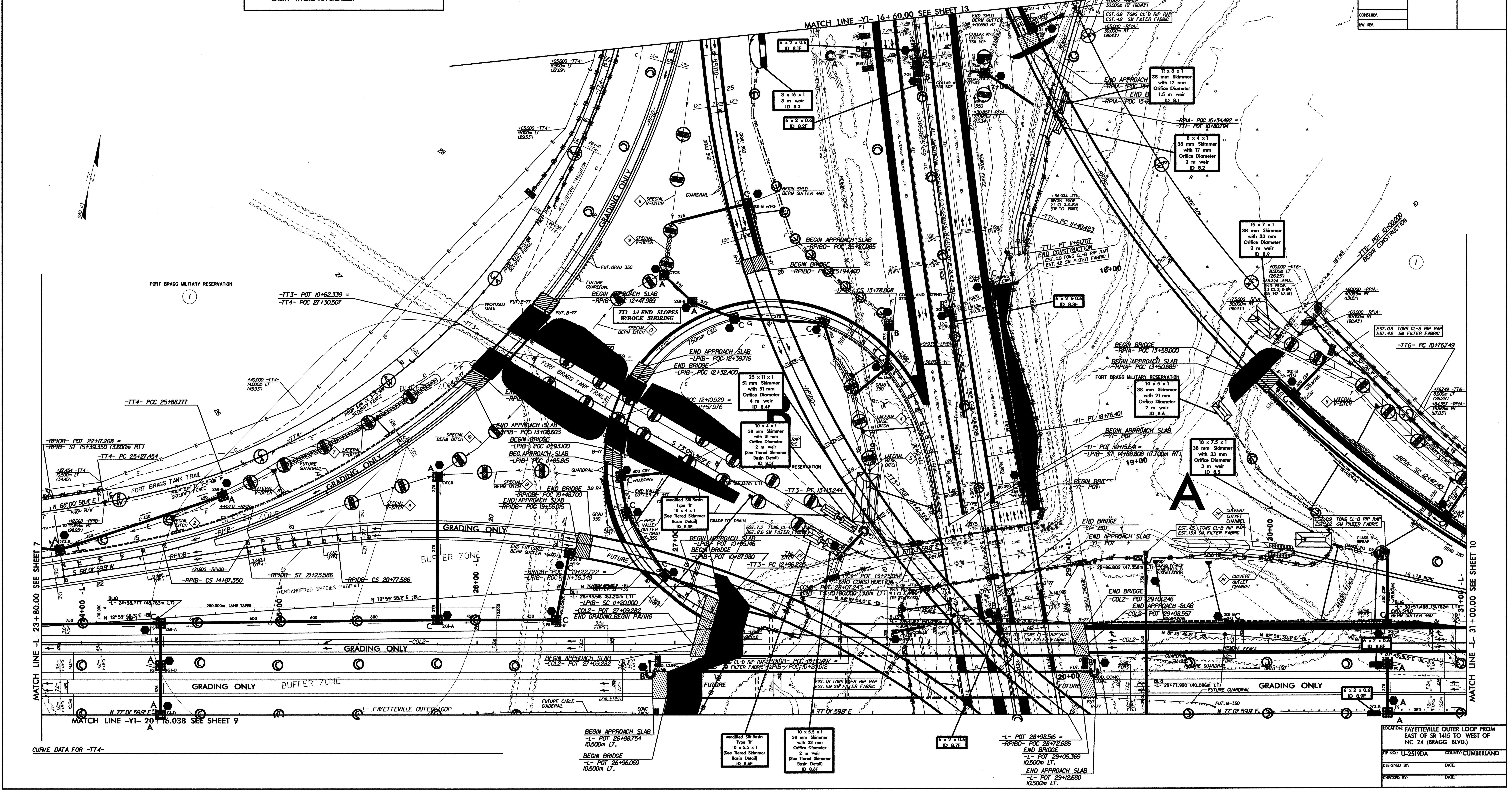
LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)
TIP NO.: U-2519DA COUNTY: CUMBERLAND
DESIGNED BY: DATE:
CHECKED BY: DATE:

NOTE:
UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-17/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST.REV.

R/W REV.



LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)

TIP NO.: U-2519DA COUNTY: CUMBERLAND

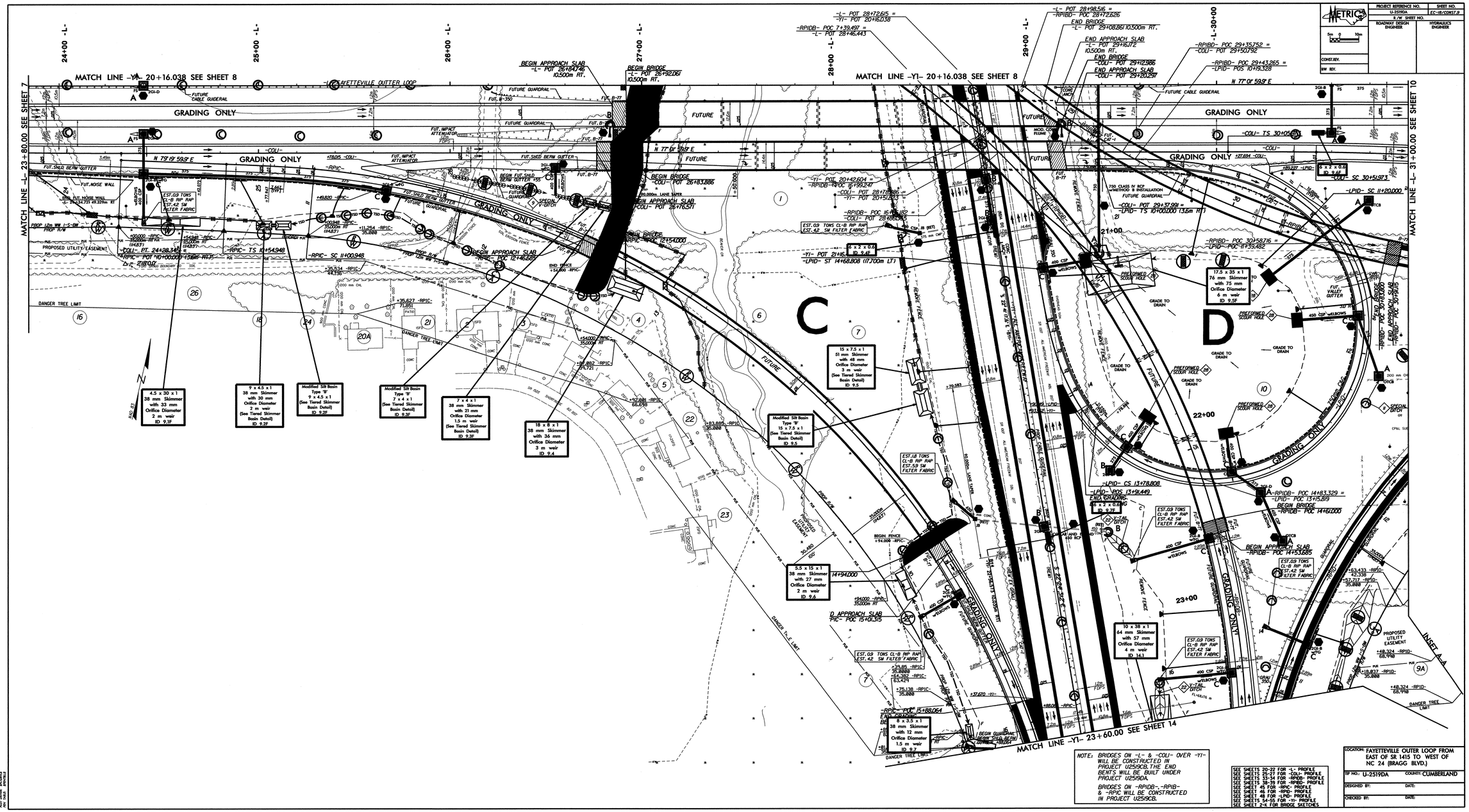
DESIGNED BY: DATE:

CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-18/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST.REV.

R/W REV.



NOTE: BRIDGES ON -L- & -COLI- OVER -YI- WILL BE CONSTRUCTED IN PROJECT U2519CB. THE END BENTS WILL BE BUILT UNDER PROJECT U2519DA.

BRIDGES ON -RPIDB-, -RPIB- & -RPIC WILL BE CONSTRUCTED IN PROJECT U2519CB.

SEE SHEETS 20-22 FOR -L- PROFILE
SEE SHEETS 25-27 FOR -COLI- PROFILE
SEE SHEETS 33-34 FOR -RPIDB- PROFILE
SEE SHEETS 38-39 FOR -RPIBD- PROFILE
SEE SHEET 45 FOR -RPIC- PROFILE
SEE SHEET 46 FOR -RPID- PROFILE
SEE SHEET 48 FOR -LPID- PROFILE
SEE SHEETS 54-55 FOR -YI- PROFILE
SEE SHEET 2-K FOR BRIDGE SKETCHES

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)	
TIP NO.: U-2519DA	COUNTY: CUMBERLAND
DESIGNED BY:	DATE:
CHECKED BY:	DATE:

03/10/08 – ADDED PARCELS #16, 17, 18, 19, 20, 21, 22 & 23

04/09/08 – PARCELS #1, 2, 3, 4, 5, 6, 7, 9A, 10, 16, 17, 18, 19, 20, 21, 22 & 23
ADDED PROPOSED PUE AND DANGER TREE LIMIT

04/17/08 – REVISED KENNETH STEINHOFF PARCEL FROM PARCEL #17 TO PARCEL #26 AND
REVISED ARLENE WINDERMILLER PARCEL FROM PARCEL #19 TO PARCEL #24

FILE: $FILEL$
DATE: $DATE$ $TIME$
PLOT DRIVER: $PLTDRVL$
PEN TABLE: $PENTBL$

	PROJECT REFERENCE NO.	SHEET NO.
METRIC	U-2519DA	EC-19/CONST.10
5m 0 10m	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.		
R/W REV.		

MATCH LINE -L- 31+00.00 SEE SHEET 8

MATCH LINE -L- 36+80.00 SEE SHEET 11

SEE SHEET 9

MATCH LINE -L- 31+00.00 SEE SHEET 10

-L- FAYETTEVILLE OUTER LOOP

-RPIA- CS 12+41.143

-TT6- PRC 12+82.257

-TT6- PRC 14+09.126

-TT6- PT 14+63.552

-TT6- PC 16+89.272

-COL2- POT 36+61.696 = -RP2B- ST 10+00.000 (3.6m LT)

-RPIA- SC 11+19.732

-RPIA- TS 10+44.732

-RPIA- POT 10+00.000 (3.6m LT)

-COL2- POT 33+05.872 = -RPIA- POT 10+00.000 (3.6m LT)

-COU- CS 32+47.010

-COU- ST 32+93.010

-COU- POT 34+25.491 = -RPIBD- POT 34+21.044

-RPIBD- CS 32+49.098

-RPIBD- ST 32+65.098

-RPIBD- POT 33+29.938 = -RPID- ST 14+86.534 (3.6m RT)

-RPID- CS 14+31.961

-RPIBD- POT 34+61.853

-RPIBD- POT 35+06.964

-RPIBD- TS 36+47.380

-COU- POT 35+30.000 END CONSTRUCTION END GRADING ONLY

BEGIN BRIDGE -RPIBD- POT 33+02.235

BEGIN APPROACH SLAB -RPIBD- POT 33+52.969

END BRIDGE -RPIBD- POT 34+61.853

END APPROACH SLAB -RPIBD- POT 35+06.964

GRADING ONLY

FUTURE CABLE GUIDERAIL

PROP 2m CL 1-S-BW SECURITY FENCE

PROP GUARDRAIL

SHLD BERM GUTTER

END SHLD BERM GUTTER

FUT GRAU 350

FUT CAT-1

FUT B-TT

FUT GUARDRAIL

PROP 12m RW

PROP R/W

PROPOSED UTILITY EASEMENT

DANGER TREE LIMIT

CONC BARRIER

CONC ANCH

SPECIAL V-DITCH

SPECIAL OUT GRASSED SWALE

TOE PROTECTION

END RETAINING WALL 34+87.130 -COU- (7.680m RT)

BEG RETAINING WALL 34+21.684 -COU- (7.680m LT)

BEG RETAINING WALL 32+28.400 -COU- (7.680m RT)

END RETAINING WALL 34+87.500 -COU- (7.680m RT)

6 x 2 x 0.6 ID 10.2F

6 x 2 x 0.6 ID 10.3F

6 x 2 x 0.6 ID 10.4F

6 x 2 x 0.6 ID 10.5F

6 x 2 x 0.6 ID 10.6F

6 x 2 x 0.6 ID 10.7F

6 x 2 x 0.6 ID 10.8F

6 x 2 x 0.6 ID 10.9F

6 x 2 x 0.6 ID 10.10F

6 x 2 x 0.6 ID 10.11F

6 x 2 x 0.6 ID 10.12F

6 x 2 x 0.6 ID 10.13F

6 x 2 x 0.6 ID 10.14F

6 x 2 x 0.6 ID 10.15F

6 x 2 x 0.6 ID 10.16F

12 x 4 x 1 38 mm Skimmer with 18 mm Orifice Diameter 2 m weir ID 10.18F

9 x 4 x 1 38 mm Skimmer with 15 mm Orifice Diameter 2 m weir ID 10.17F

22 x 6 x 1 38 mm Skimmer with 36 mm Orifice Diameter 2 m weir ID 10.19F

Modified Silt Basin Type 'B' 11 x 8 x 1 (See Tiered Skimmer Basin Detail) ID 10.1F

11 x 6 x 1 51 mm Skimmer with 42 mm Orifice Diameter 3 m weir (See Tiered Skimmer Basin Detail) ID 10.1F

26 x 9 x 1 51 mm Skimmer with 48 mm Orifice Diameter 4 m weir ID 10.8F

12 x 3.5 x 1 2 m weir ID 10.19F

10 x 3 x 1 1.5 m weir ID 10.9F

14 x 7 x 1 38 mm Skimmer with 30 mm Orifice Diameter 2 m weir ID 10.7

28 x 12 x 1 64 mm Skimmer with 54 mm Orifice Diameter 4 m weir ID 10.20F

EST. 09 TONS CL-B RIP RAP EST. 42 SW FILTER FABRIC

INSET A-A – SEE SHEET NO. 9

NOTE: CONTRACTOR SHALL CONSTRUCT RETAINING WALL TO STA 35+87.500 -RPIBD-. COORDINATE CONSTRUCTION OF RETAINING WALL WITH WORK UNDER CONSTRUCTION IN PROJECT U-2519E.

08/23/06 – ADDED PARCEL #911 AND EDITED PROPERTY NAME
08/23/06 – EXISTING HOUSE TRAILERS ON PARCEL #911 REMOVED
04/09/08 – PARCELS #9A, 10 & 911 ADDED PROPOSED PUE AND DANGER TREE LIMIT

PLOT SCALE = 50.000 '/ IN
PLOT DATE = 4/9/2008
FILE NAME = c:\projects\2519da\rw\sht\2519da_rw_sht_prop02.dgn

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)

TIP NO.: U-2519DA COUNTY: CUMBERLAND

DESIGNED BY: DATE:

CHECKED BY: DATE:

03/10/08 – PARCELS #1 & 911 ADDED PROPOSED PUE AND TREE LIMIT
08/23/06 – ADDED PARCEL #911 AND EDITED PROPERTY NAME
08/23/06 – EXISTING HOUSE TRAILERS ON PARCEL #911 REMOVED
08/23/06 – ADDED PROPOSED DRAINAGE EASEMENT TO PARCELS #911, #98 AND #12
08/07/08 – CHANGED PARCEL #12 TO WACHOVIA BANK ET AL

PLOT DATE: 2/7/2008
PLOT TIME: 8:19:19 AM
PLOTTED BY: KEITH BYNUM

PROJECT REFERENCE NO.	SHEET NO.
U-2519DA	EC-20/CONST.01
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST.REV.
R/W REV.

CURVE DATA FOR -TT6-
CURVE DATA FOR -LP2B-
CURVE DATA FOR -RP2B-
CURVE DATA FOR -Y2-
CURVE DATA FOR -RPIBD-
CURVE DATA FOR -LP2D-

-TT6- POC 18+48.673
END CONSTRUCTION

-RP2B- POS 12+40.000
END CONSTRUCTION

-COL2- POT 39+40.000
END CONSTRUCTION

-LP2B- SC 10+20.000
-COL2- POC 41+02.208 = (-LP2B- ST 10+00.000 13.6m LT)

-LP2B- ST 14+25.695 (15.300m LT)

-Y2- PC 16+75.296

-Y2- POC 16+37.281 =

-RPIBD- POT 41+69.049 =
-LP2D- TS 10+00.000 (3.600m RT)
-LP2D- SC 10+72.000

-Y2- POC 17+63.813 =
-LP2D- ST 13+55.607 (15.300m LT)

-RPIBD- CS 37+56.774

-RPIBD- ST 38+02.774

-L- POT 39+40.000 =
BEGIN TIP PROJECT U-2519EC
END TIP PROJECT U-2519DA
END CONSTRUCTION
END GRADING ONLY

MATCH LINE -L- 36+80.00 SEE SHEET 10

GRADING ONLY
GRADING ONLY
FUTURE CABLE GUIDERAIL
-L- FAYETTEVILLE OUTER LOOP
UNDER CONSTRUCTION (U-2519E)
FUTURE
PROP 2m CL 3-S-BW SECURITY FENCE
PROPOSED UTILITY EASEMENT
DANGER TREE LIMIT
INSET B-B
INSET B-B

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)
TIP NO.: U-2519DA
COUNTY: CUMBERLAND
DESIGNED BY:
DATE:
CHECKED BY:
DATE:

	PROJECT REFERENCE NO.	SHEET NO.
METRIC 5m 0 10m	U-2519DA	EC-B1/CONST.13
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.		
R/W REV.		

MATCH LINE -Y1- 9+50.00 SEE SHEET 12

MATCH LINE -Y1- 16+60.00 SEE SHEET 8

-TT5- PT 10+76.749

-TT5- PC 11+26.475

-TT5- S 16° 58' 38.5" E

-TT5- POC 11+90.000 BEGIN CONSTRUCTION

-TT5- PRC 11+75.79

-TT5- PT 12+25.000

EST. 18 TONS CL-B RIP RAP
EST. 59 SM FILTER FABRIC

-TT5- FORT BRAGG SECURITY ROAD

S 16° 58' 06.2" E

-TT5- PT 16+56.637

-TT5- PC 16+18.843

-TT5- PC 16+48.558

-TT5- POT 17+88.776 END CONSTRUCTION

-TT5- PT 17+41.847

-TT1- PC 10+00.000 BEGIN CONSTRUCTION

-TT1- PT 10+25.505

S 37° 01' 24.8" E

-Y1- POT 14+40.176 = -RPIA- ST 18+07.437 (17.700m LT)

-Y1- PC 15+46.109

-RPIA- CS 17+62.437

-Y1- ALL AMERICAN FREEWAY

S 16° 59' 38.2" E

-RPIBD- SC 18+18.399

-RPIBD- CS 20+11.723

-RPIBD- ST 21+17.723

S 7° 11' 38.2" E

-RPIBD- TS 23+14.709 = -RPIB- POT 10+00.000 (13.600m RT) Δ = 8° 49' 00.0"

-RPIBD- SC 24+20.709

-RPIB- TS 10+41.862

-RPIB- POS 10+82.862 END PAVING BEGIN GRADING

-RPIB- SC 10+93.862

S 7° 53' 38.2" E

-TT4- PT 29+91.325

-TT4- PCC 29+08.104 L.A. = -TT4- PCC 29+29.758 L.A.

-TT4- PT 32+90.760

-TT4- PC 32+69.146

-TT4- PT 34+54.875

-TT4- PC 34+24.768

-TT4- PT 35+99.869 END CONSTRUCTION

-TT4- PT 36+25.399 (11.700m RT)

FORT BRAGG MILITARY RESERVATION

FORT BRAGG SECURITY ROAD

SECURITY FENCE

PROP 2.1m CL 3-5-BW SECURITY FENCE

REMOVE FENCE

PROP CABLE GUIDERAIL

COLLAR AND EXTEND

COLLAR

GUARDRAIL

SPECIAL V-DITCH

RIB BASE FAL DITCH

131.860m LANE TAPER

67.819m SHLD TAPER

BEGIN PROP. 2.1 CL 3-5-BW (TIE TO EXIST)

8 x 4 x 1
38 mm Skimmer with 15 mm Orifice Diameter 1.5 m weir
ID 13.4

3.5 x 13 x 1
38 mm Skimmer with 18 mm Orifice Diameter 2 m weir
ID 13.5

8 x 4 x 1
38 mm Skimmer with 15 mm Orifice Diameter 1.5 m weir
ID 13.6

4 x 15 x 1
38 mm Skimmer with 21 mm Orifice Diameter 2 m weir
ID 13.7

13 x 5.5 x 1
38 mm Skimmer with 24 mm Orifice Diameter 2 m weir
ID 13.8

6 x 2 x 0.6
ID 13.2E

6 x 2 x 0.6
ID 13.5E

6 x 2 x 0.6
ID 13.4E

6 x 2 x 0.6
ID 13.3E

13 x 3.5 x 1
ID 13.1E

13 x 5 x 1
ID 13.7E

12 x 5 x 1
38 mm Skimmer with 21 mm Orifice Diameter 2 m weir
ID 13.9E

12 x 6.5 x 1
38 mm Skimmer with 27 mm Orifice Diameter 2 m weir
ID 13.6E

15 x 6 x 1
38 mm Skimmer with 30 mm Orifice Diameter 2 m weir
ID 13.10E

12 x 6 x 1
ID 13.8E

LOCATION:	FAYETTEVILLE OUTER LOOP FROM EAST OF SR 1415 TO WEST OF NC 24 (BRAGG BLVD.)
TIP NO.: U-2519DA	COUNTY: CUMBERLAND
DESIGNED BY:	DATE:
CHECKED BY:	DATE:

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-22/CONST.14
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.		
R/W REV.		

MATCH LINE -Y1- 23+60.00 SEE SHEET 9

MATCH LINE -Y1- 27+00.00 SEE SHEET 15

04/08 – PARCEL #9A ADDED PROPOSED PUE AND DANGER TREE LIMIT

FILE: SHEET
USER NAME: STIMES
PLOT DRIVER: PLTDRV16
PEN TABLE: STDPLTBL

DANGER TREE LIMIT

+95.000 -RPID- 35.000m RT (114.83')

+89.873 -RP1D- 35.000

+78.000 -RPID- 40.000m RT (131.23')

-RPID- SC 10+59.373

+59.373 -RPID- 35.000m RT (114.83')

-RPIDB- TS 12+86.775

-RPID- TS 10+04.373

-RPIDB- POT 12+80.000 = -RPID- POT 10+00.000 (3.6m RT)

+00.000 -RPID- 30.000m RT (98.43')

-RPIDB- ST 12+31.631

-RPIDB- CS 11+85.631

+85.631 -RPIDB- 30.000m RT (98.43')

+53.823 -RPIDB-

+74.553 -RPID-

SC 13+32.775

-RPIDB- POS 13+53.823

END PAVING / BEGIN GRADING

END GUARDRAIL

END SHLD BERM GUTTER +53.823

24+00

25+00

26+00

27+00

LATERAL V-DITCH 8

LATERAL V-DITCH 9

GUARDRAIL

SHLD BERM GUTTER

BEG SHLD BERM GUTTER LT +62

PROP 1.2m WW 1-S-BW

PROP R/W

(CHORD)

N 41° 21.0" W

N 84° 59' 21.0" W

15.333m (TYP.)

7.857 (TYP.)

7.667 (TYP.)

+02.107

GRAU 350

2GI-B w/FG

2GI-A

FS

375

450

400 CSP w/ELBOWS

1800 mm CONC (REM)

REMOVE FENCE

EST. 4.5 TONS CL-B RIP RAP
EST. 11.7 SM FILTER FABRIC

EST. 0.9 TONS CL-B RIP RAP
EST. 4.2 SM FILTER FABRIC

EST. 2.7 TONS CL-B RIP RAP
EST. 8.4 SM FILTER FABRIC

22 0.9m BASE TAIL DITCH

16 SPECIAL CUT GRASSED SWALE

SPECIAL V-DITCH 11

1 SPECIAL BERM DITCH

6 SPECIAL BERM DITCH

+85.386 -RPIDB-

+41.407 -Y1- 62.2642m LT (204.27')

+85.948 -Y1- EXISTING END FENCE TIE TO EXIST FENCE

+30.018 -Y1-

OVERHEAD SIGN

SR 1007 ALL AMERICAN FREEWAY NBL BST

SR 1007 ALL AMERICAN FREEWAY SBL BST

-Y1- ALL AMERICAN FREEWAY S 22° 24' 31.2" E

PLUG

6 x 2 x 0.6 ID 14.1F

6 x 2 x 0.6 ID 14.2F

Conv. DI To JB

PROP CABLE GUIDERAIL

30.0m UNIFORM TAPER

COLLAR AND EXTEND 375 RCP

2GF-D

-RPIC-

SHLD BERM GUTTER

CAT-1

+55.929 -RPIC- 35.000m RT (114.83')

SHLD BERM GUTTER +01.928

-Y1- PC 26+88.225

82.500 -Y1- EXISTING

EST. 10.0 TONS CL-B RIP RAP
EST. 23.4 SM FILTER FABRIC

+82.500 -Y1- 50.000m RT (164.04')

+95.000 -Y1- 50.000m RT (164.04')

0.9m TAIL DITCH 22

+30.000 -RPIC- 35.000m RT (114.83')

+38.000m RT (124.67')

20 x 4 x 1 38 mm Skimmer with 24 mm Orifice Diameter 2 m weir ID 14.2

10 x 38 x 1 64 mm Skimmer with 57 mm Orifice Diameter 4 m weir ID 14.1

9 x 40 x 1 64 mm Skimmer with 60 mm Orifice Diameter 5 m weir ID 14.3

-Y1- POT 24+51.380

-RPIC- ST 17+01.928

CURVE DATA FOR -RPIC-

7

NAD 83

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-23/CONST.15
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.		
R/W REV.		

28+00 29+00 30+00

9A

-YI- POC 28+30.000 =
-RPIDB- POT 8+85.062 (117.700m LT)

-RPIDB- SC 9+32.127 -RPIDB- TS 8+86.127

NAD 83

SOIL

SPECIAL BERM DITCH 1

1500 mm CHL

7.667 (TYP)

CAT-I 8:1 GRAU 350 8:1

-RPIDB-

N 21° 14' 47.5" W

-YI- ALL AMERICAN FREEWAY

SR 1007 ALL AMERICAN FREEWAY NBL BST

SR 1007 ALL AMERICAN FREEWAY SBL BST

PROP CABLE GUIDERAIL

TEMP. 375

40.0 TEMP.XOVER

2.0 R

+20.000

+80.000

1.2m FDPS

3.6m FDPS

10.8m

.025

.03

2.10m

16.66m

10.8m

B 375 2GI-D (REM) (RET) CONC

B 375 2GI-B (REM) (RET) CONC

B 375 2GI-B (REM) (RET) FS

B 375 CSP 3375 mm CMP (REM) (RET)

B 450 mm CONC (RET)

DI CONC

COLLAR

(REM) CONC 8:1 GRAU 350

8:1 CAT-I

SPECIAL V-DITCH 23

TAIL DITCH 18

RESET CHAIN LINK FENCE

+05.000 -YI- EXISTING

+72.702 -YI- EXISTING

+85.523 -YI- 42.14m RT

+10.458 -YI- EXISTING

9 x 40 x 1
64 mm Skimmer
with 60 mm
Orifice Diameter
5 m weir
ID 14.3

7

MATCH LINE -Y1- 27+00.00 SEE SHEET 14

MATCH LINE -Y1- 30+40.00 SEE SHEET 16

FILE: $FILES $STAGES
DATE: $DATES
PLOT DRIVER: $XTDRIVE
PEN TABLE: $PENTABLE

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-24/CONST.16
	R /W SHEET NO.	
CONST.REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R/W REV.		

NAD 83

31+00

32+00

33+00

MATCH LINE -Y1- 30+40.00 SEE SHEET 15

MATCH LINE -RP3C- 11+90.00 SEE SHEET 17

9A

SOIL

1500 mm CHL

109

END CONSTRUCTION
-Y1- NBL POC Sta.32+00.000

END CONSTRUCTION
-Y1- SBL POC Sta.33+60.000

-Y1- ALL AMERICAN FREEWAY

-RP3C-

750 mm CONC

(RET) CONC

B

3.6m FDPS

1.2m FDPS

.025

BST

SR 1007 ALL AMERICAN FREEWAY NBL BST

SR 1007 ALL AMERICAN FREEWAY SBL BST

PROP CABLE GUIDERAIL

18.60

10.8m

CAT -1

8:1

GRAU 350

GRADE TO DRAIN

15.000m (TYP)

+15.000

.025 .050 .050 .050 .050 .050

-Y1- POC 31+75.716 =
-RP3C- ST 10+00.000 (17.000m RT)

-RP3C- SC 10+60.000

+30.989 -Y1-

+54.647 -RP3C-

7.20m

TSD

7

19 x 9 x 1
51 mm Skimmer
with 39 mm
Orifice Diameter
4 m weir
ID 16.1

FILE: SFILES
DATE: SDATES
PLOT DRIVER: SPLTDRVS
PEN TABLE: SPENTBLS

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5m 0 10m	U-2519DA	EC-25/CONST.17
	R /W SHEET NO.	
CONST.REV.	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R/W REV.		

NAD 83

MATCH LINE -RP3C- 11+90.00 SEE SHEET 16

-YI- ALL AMERICAN FREEWAY

TO FAYETTEVILLE

-YI- PT 35+80.000
AH = S 15° 05' 56" E

SANTA FE DRIVE

-RP3C-

12 x 4 x 1
38 mm Skimmer
with 18 mm
Orifice Diameter
1.5 m weir
ID 17.1F

9 x 3.5 x 1
38 mm Skimmer
with 15 mm
Orifice Diameter
1.5 m weir
ID 17.2F

13 x 5 x 1
2 m weir
ID 17.1

4 x 10 x 1
2 m weir
ID 16.2

SPECIAL V-DITCH 10

12m FDPS

7.2m

10m (TYP)

7.5m (TYP)

(RET) CONC DI

450 mm CONC

750 mm CONC

900 mm RAIL

1500 mm CHL

SOIL

-RP3C- CS 12+89.18

-RP3C- SRS 13+49.18

-RP3C- SC 14+09.18

-END CONSTRUCTION
-RP3C- POC 14+40.000

-RP3C- PT 14+77.547

S 26° 53' 46.9" E

-RP3C- POT 15+07.685

SR 1457 SANTA FE DR BST

FILE: SHEET
DATE: 3/31/23
USER NAME: STOKES
PLOT DRIVER: $PLTDRVR$
PEN TABLE: $PENTBL$