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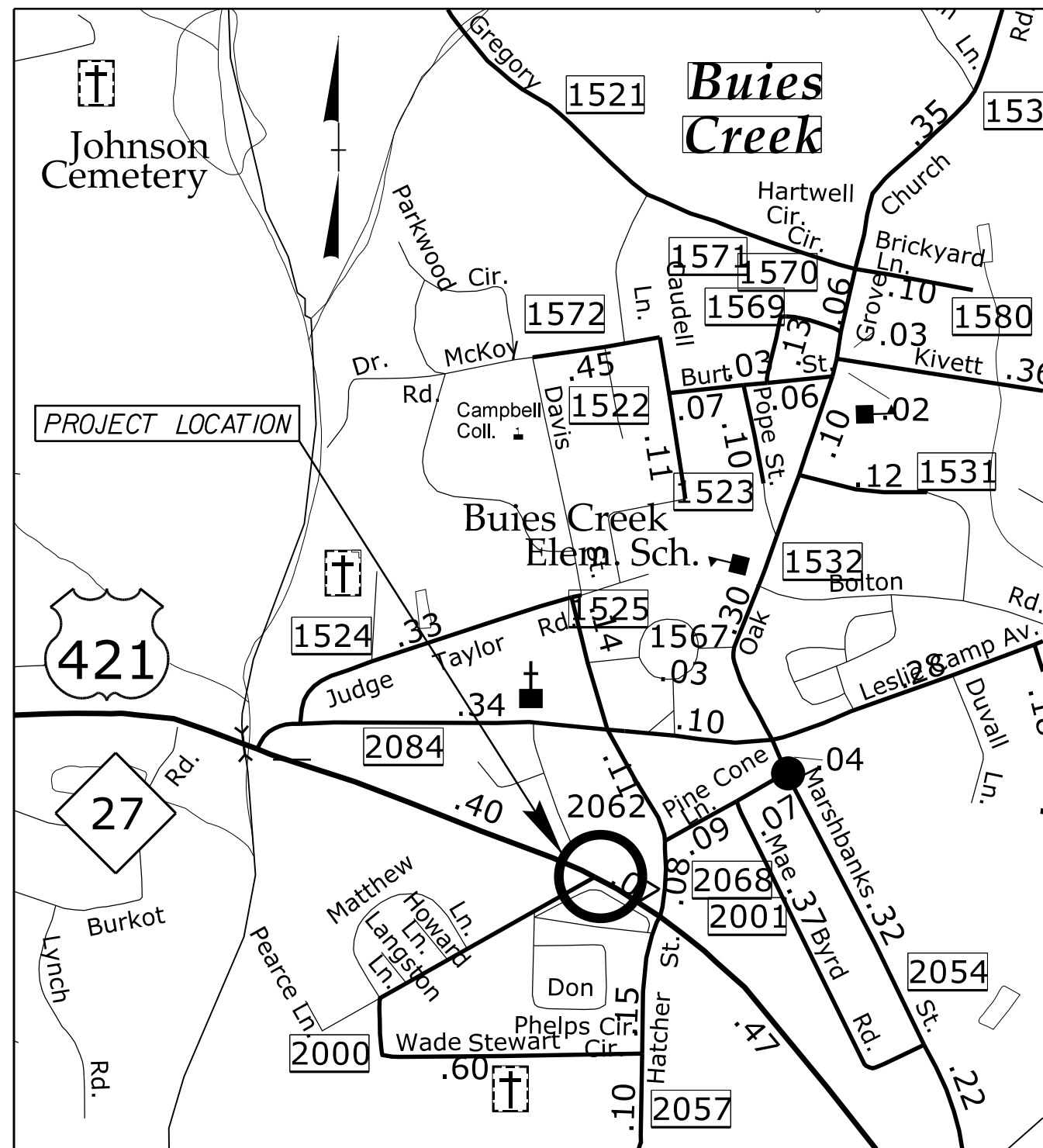
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09/08/09

TIP PROJECT: W-5206AG

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP (NOT TO SCALE)

PROJECT LENGTH
LENGTH ROADWAY TIP PROJECT W-5206AG = 0.22 MILES
LENGTH STRUCTURE TIP PROJECT W-5206AG = 0.11 MILES
TOTAL LENGTH OF TIP PROJECT W-5206AG = 0.33 MILES

BEGIN TIP PROJECT W-5206AG
POT STA. -L- 23+12.00

END TIP PROJECT W-5206AG
POT STA. -L- 34+65.71

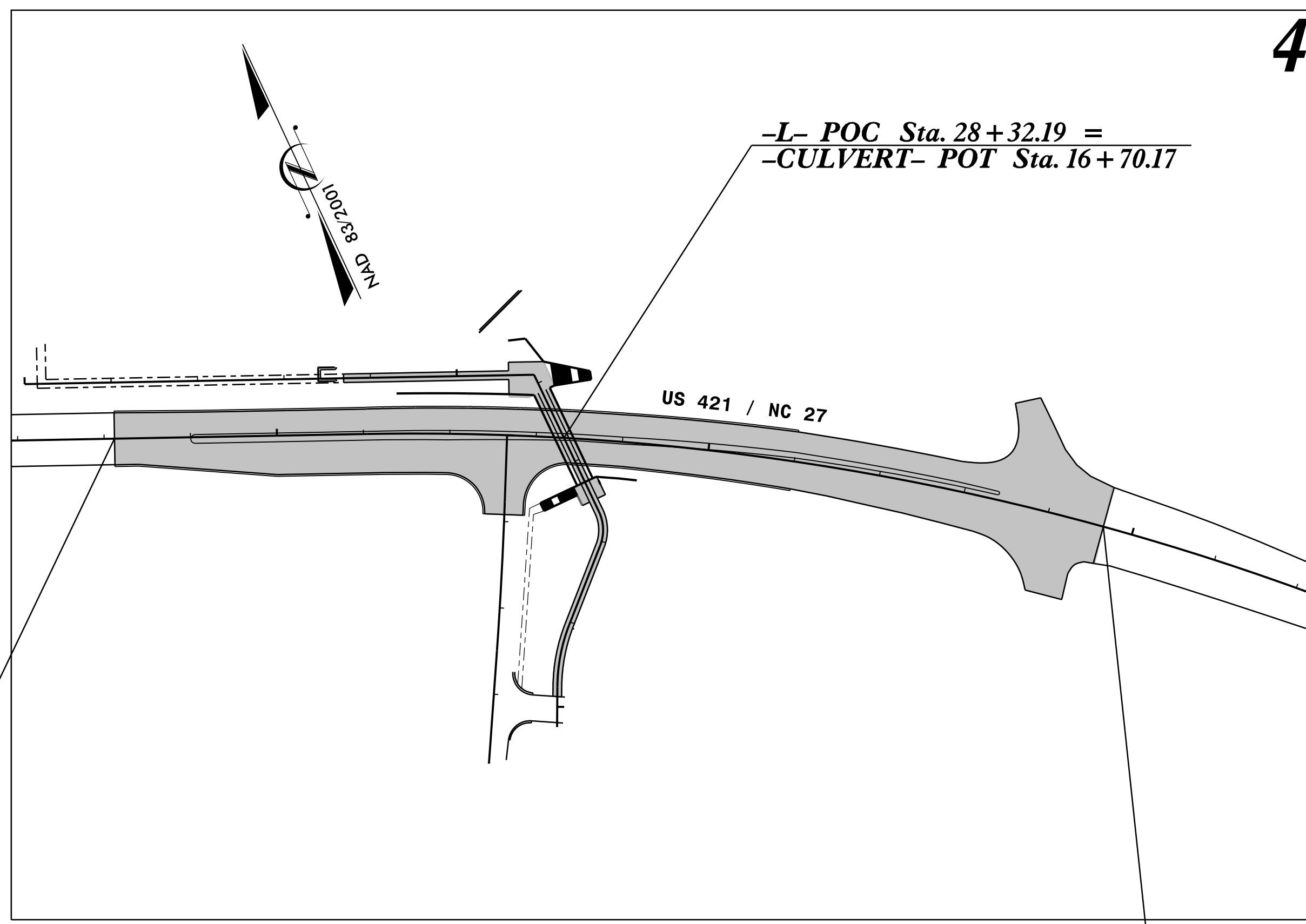
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HARNETT COUNTY

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

**LOCATION: CAMPBELL UNIVERSITY PEDESTRIAN TUNNEL
UNDER US 421/NC 27 IN BUIES CREEK**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, EXISTING SIGNAL
FLASHER REMOVAL, RETAINING WALLS, AND CULVERT.**



4

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5206AG	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45336.1.FR33	HSIP-0421(79)	P.E.	
45336.2.FR33	HSIP-0421(79)	R.O.W./UTILITY	
45336.3.FR33	HSIP-0421(79)	CONSTR.	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1650.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---X---
1622.01	Temporary Berms and Slope Drains	---X---
1650.02	Silt Basin Type B	---X---
1633.01	Temporary Rock Silt Check Type-A	---X---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	---X---
1633.02	Temporary Rock Silt Check Type-B	---X---
	Wattle / Coir Fiber Wattle	---X---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---X---
1634.01	Temporary Rock Sediment Dam Type-A	---X---
1634.02	Temporary Rock Sediment Dam Type-B	---X---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	---X---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	---X---
1630.04	Stilling Basin	---X---
1630.06	Special Stilling Basin	---X---
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	---X---
	Tiered Skimmer Basin	---X---
	Infiltration Basin	---X---

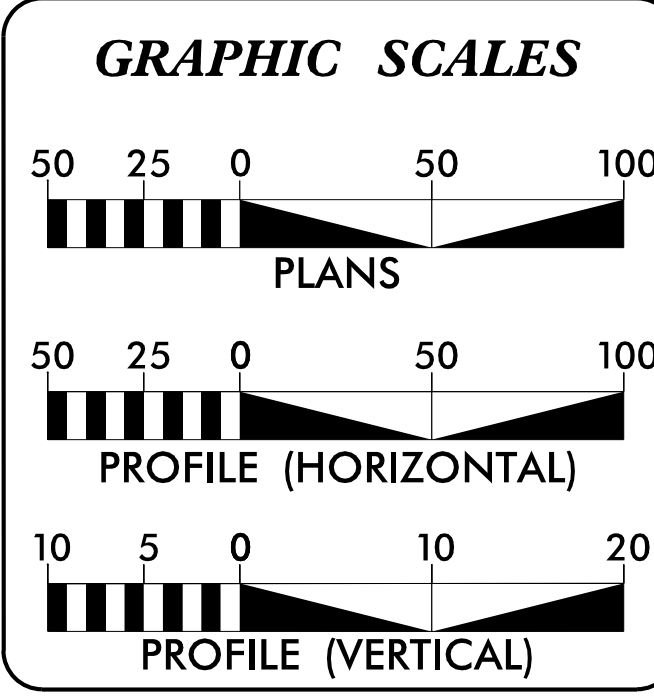
**THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.**

RANDAL C. HOWARD, EI, PLS
LEVEL III NAME

3491
LEVEL III CERTIFICATION NO.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared for the North Carolina Department
of Transportation in the office of:

SUNGATE DESIGN GROUP, P.A.
915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-8258
ENG FIRM LICENSE NO. C-890

Roadway Standard Drawings

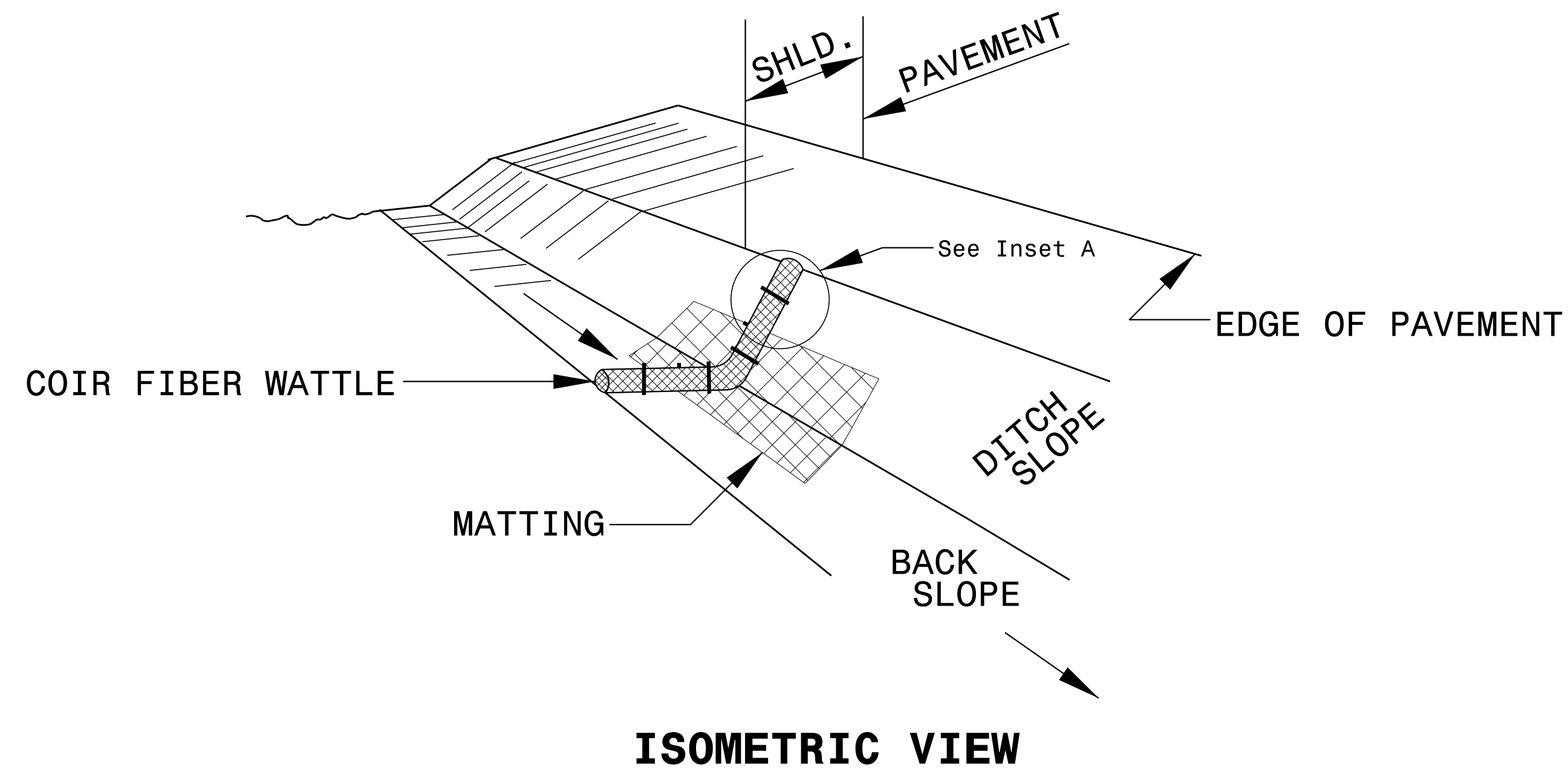
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

02-MAR-2015 14:07
J:\W-5206AG_Dr\img\Sungate Erosion ControlFiles 10-29-2014\W-5206AG-EC_PSH_01.dgn
\$\$\$\$\$SERVNAME\$\$\$\$\$

PROJECT REFERENCE NO. W-5206AG	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

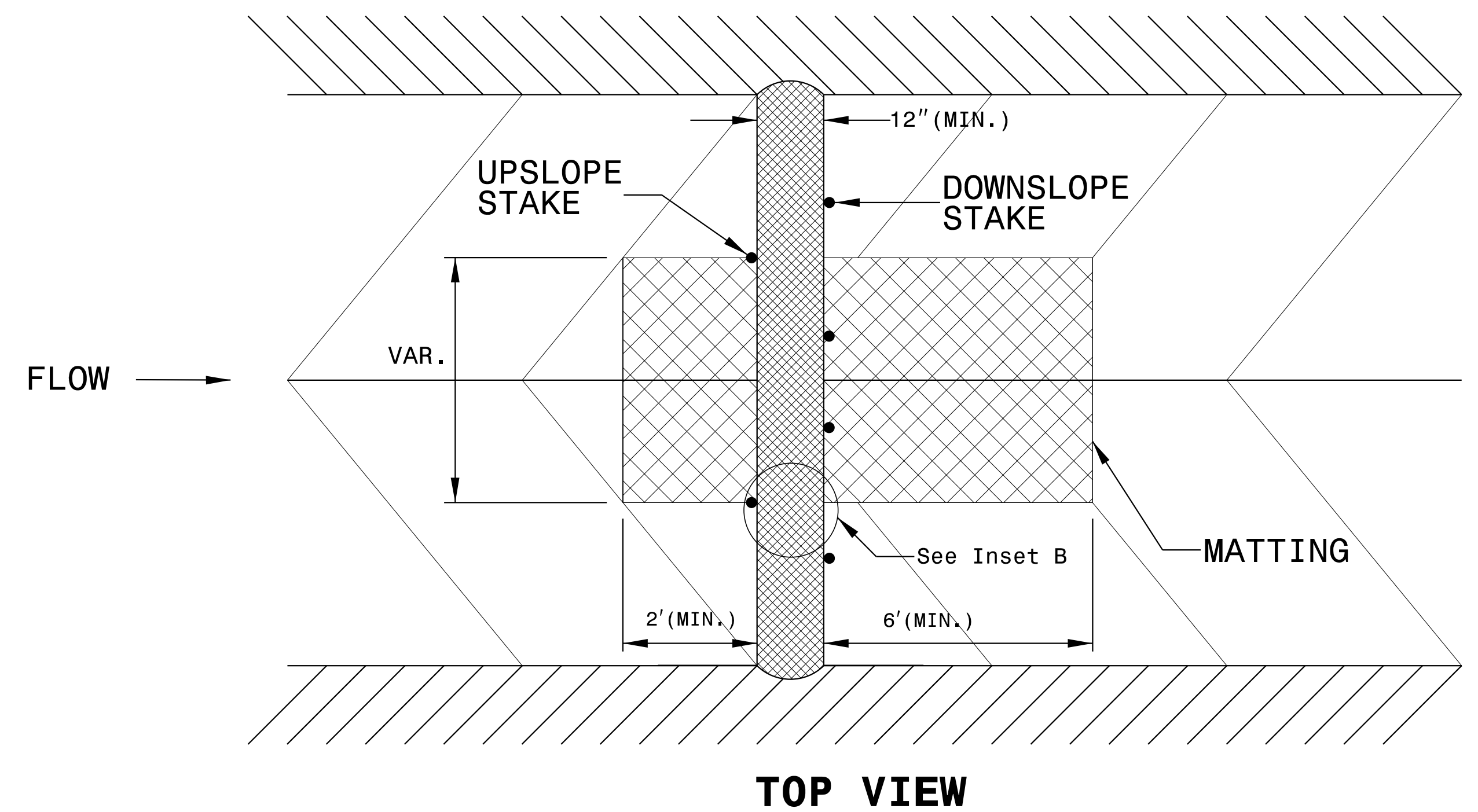
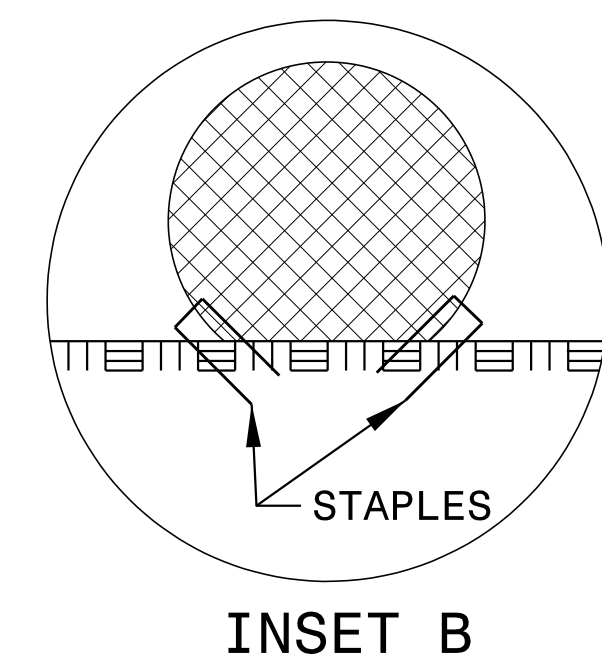
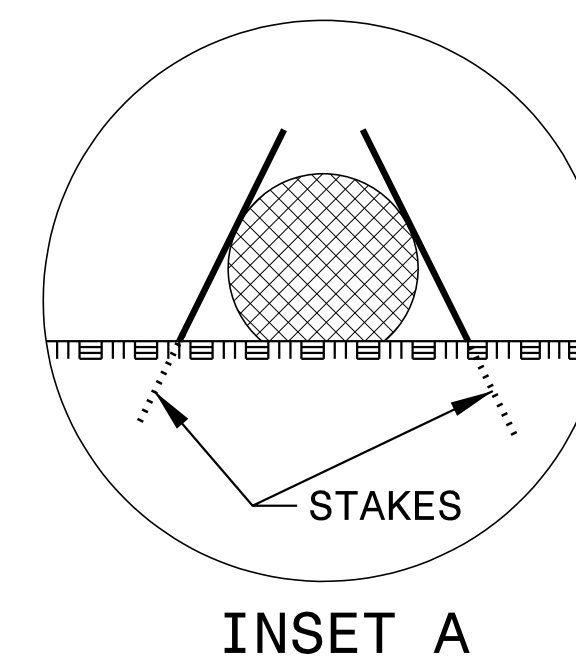
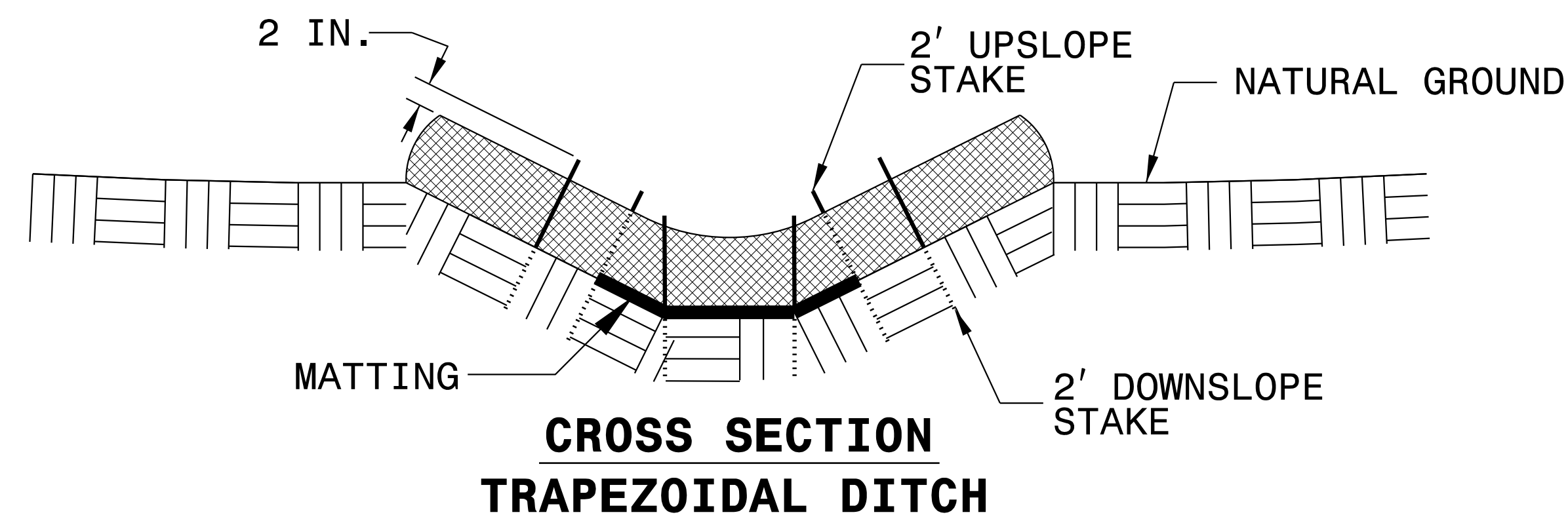
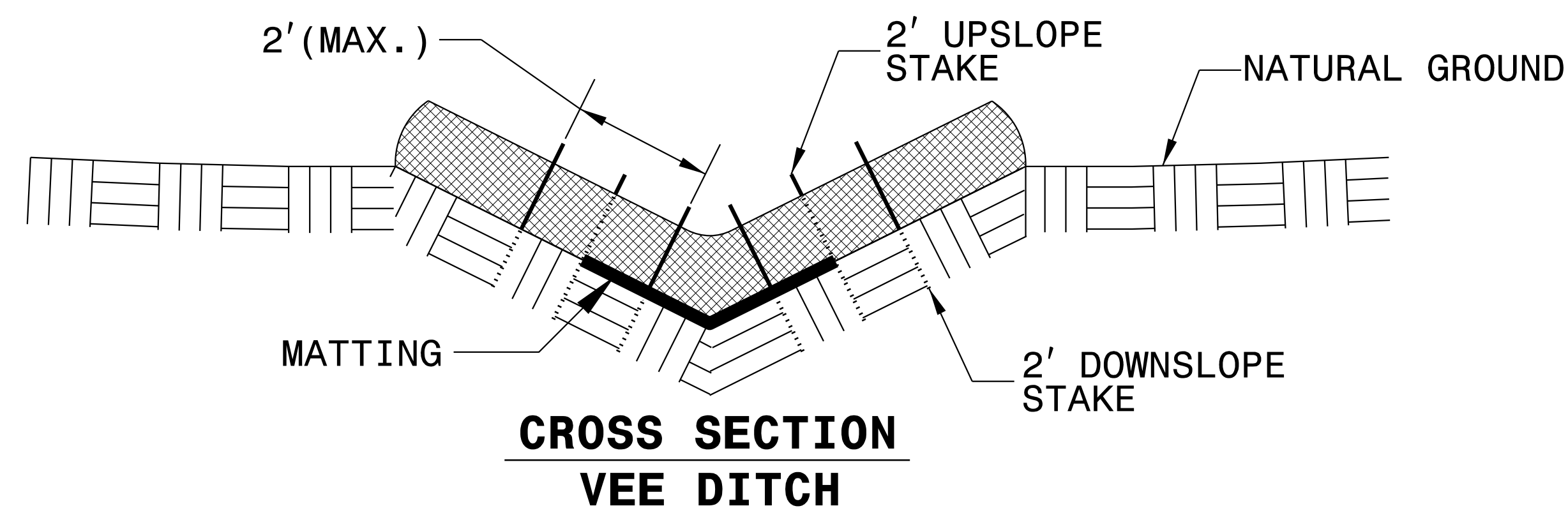
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT 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.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
<i>W-5206AG</i>	<i>EC-03</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PROJECT REFERENCE NO. W-5206AG	SHEET NO. EC-04/CONST.04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

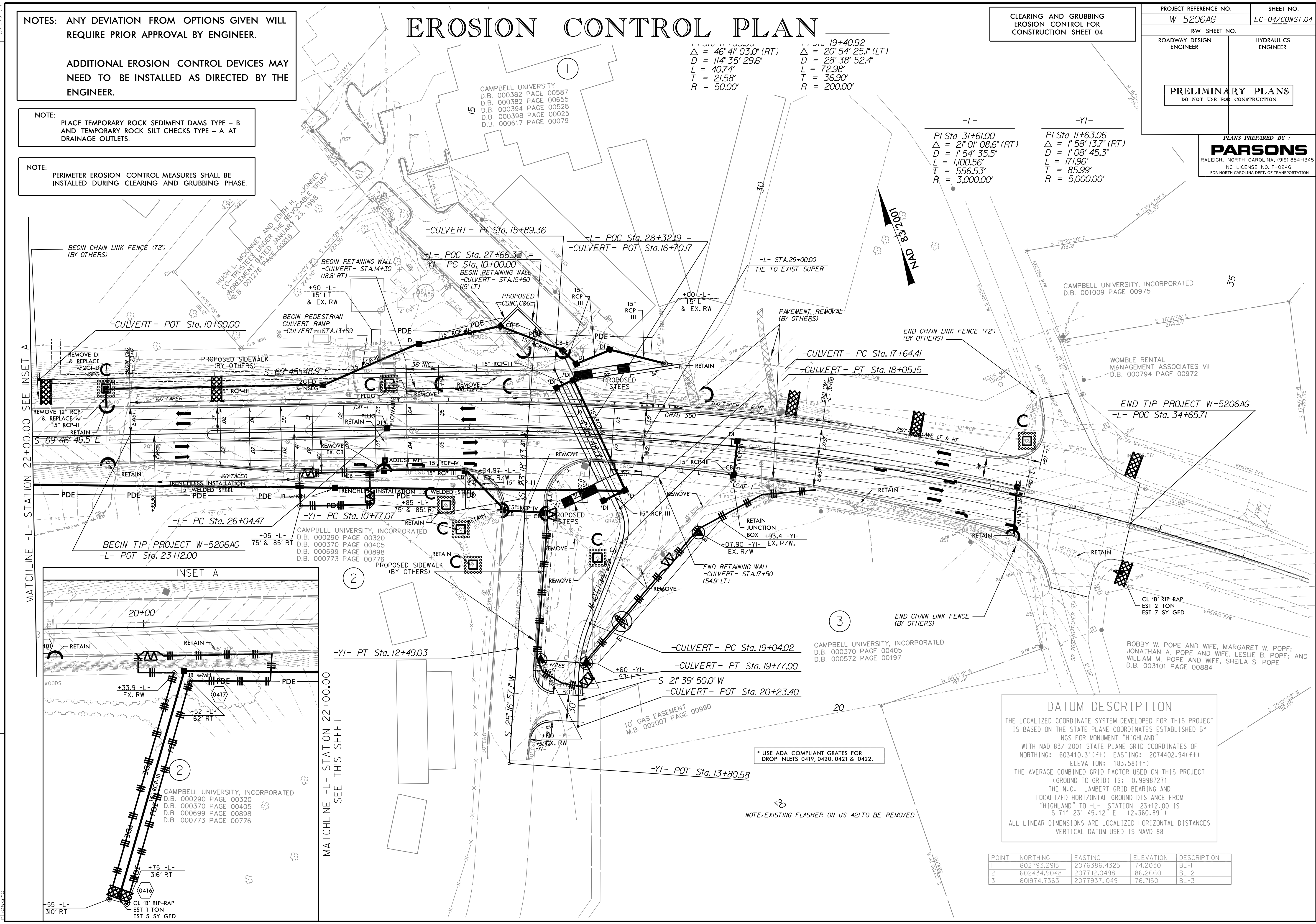
PLANS PREPARED BY:
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

19+40.92
 $\Delta = 46' 41" 03.0'$ (RT)
 $D = 114' 35" 29.6'$
 $L = 40.74'$
 $T = 21.58'$
 $R = 50.00'$

20' 54' 25.1" (LT)
 $D = 28' 38" 52.4'$
 $L = 72.98'$
 $T = 36.90'$
 $R = 200.00'$

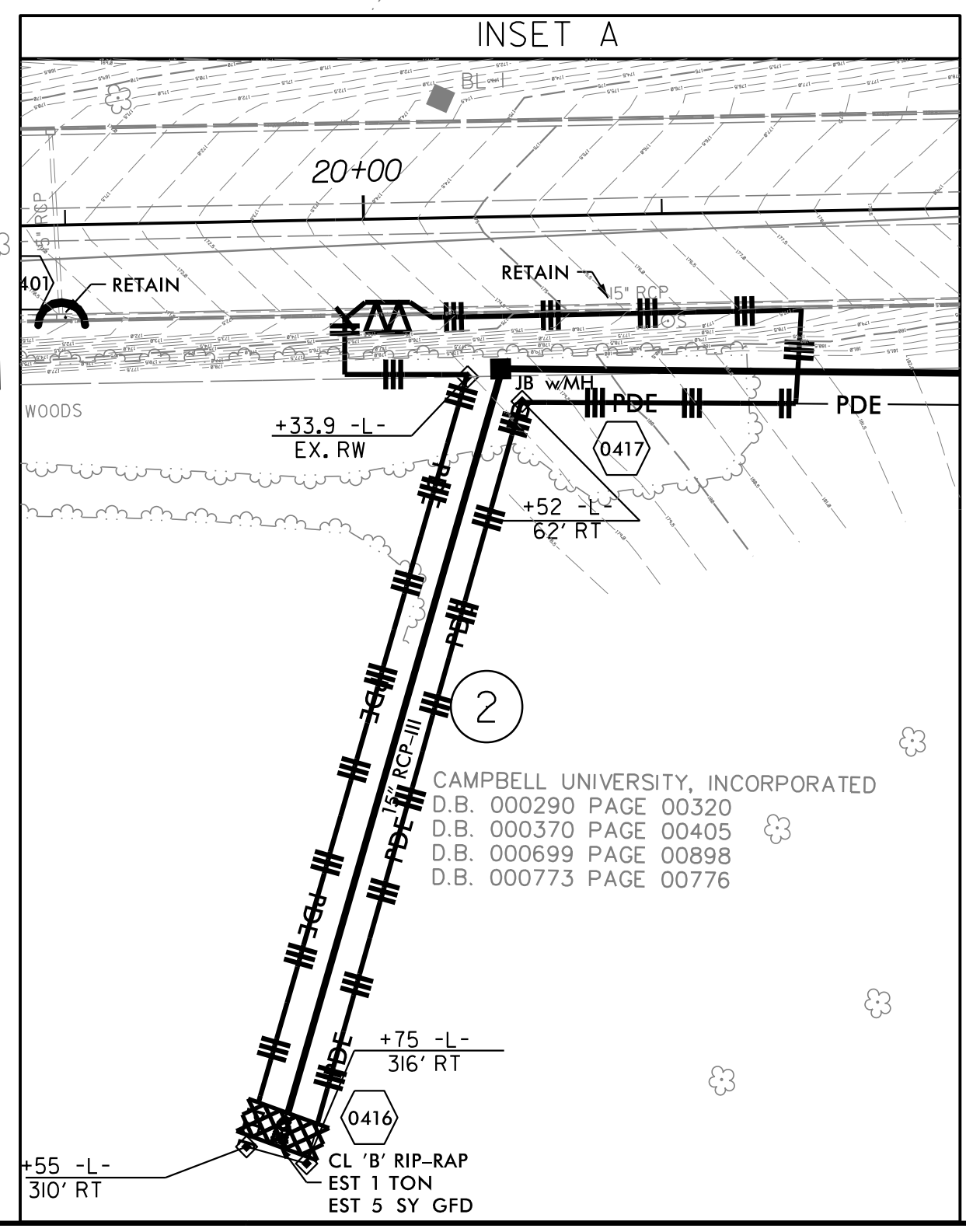
-L-
 PI Sta 31+61.00
 $\Delta = 2' 01" 08.6'$ (RT)
 $D = 1' 54" 35.5'$
 $L = 1,000.56'$
 $T = 556.53'$
 $R = 3,000.00'$

-YI-
 PI Sta 11+63.06
 $\Delta = 1' 58" 13.7'$ (RT)
 $D = 1' 08" 45.3'$
 $L = 171.96'$
 $T = 85.99'$
 $R = 5,000.00'$



MATCHLINE -L- STATION 22+00.00 SEE INSET A

MATCHLINE -L- STATION 22+00.00 SEE THIS SHEET



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NGS FOR MONUMENT "HIGHLAND" WITH NAD 83/ 2001 STATE PLANE GRID COORDINATES OF NORTHING: 603410.31(ft) EASTING: 2074402.94(ft) ELEVATION: 183.58(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987271

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "HIGHLAND" TO -L- STATION 23+12.00 IS S 71° 23' 45.12" E (2,360.89')

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	602793.2915	2076386.4325	174.2030	BL-1
2	602434.9048	207712.0498	186.2660	BL-2
3	601974.7363	2077937.1049	176.7150	BL-3

* USE ADA COMPLIANT GRATES FOR DROP INLETS 0419, 0420, 0421 & 0422.

NOTE: EXISTING FLASHER ON US 4210 TO BE REMOVED

REVISIONS

8/17/99

10/24/2014 W-5206AG-EC-PSH.04.dgn

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

EROSION CONTROL PLAN

19+40.92
 $\Delta = 46' 41" 03.0" (RT)$
 $D = 114' 35" 29.6"$
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 $R = 50.00'$

19+40.92
 $\Delta = 20' 54" 25.1" (LT)$
 $D = 28' 38" 52.4"$
 $L = 72.98'$
 $T = 36.90'$
 $R = 200.00'$

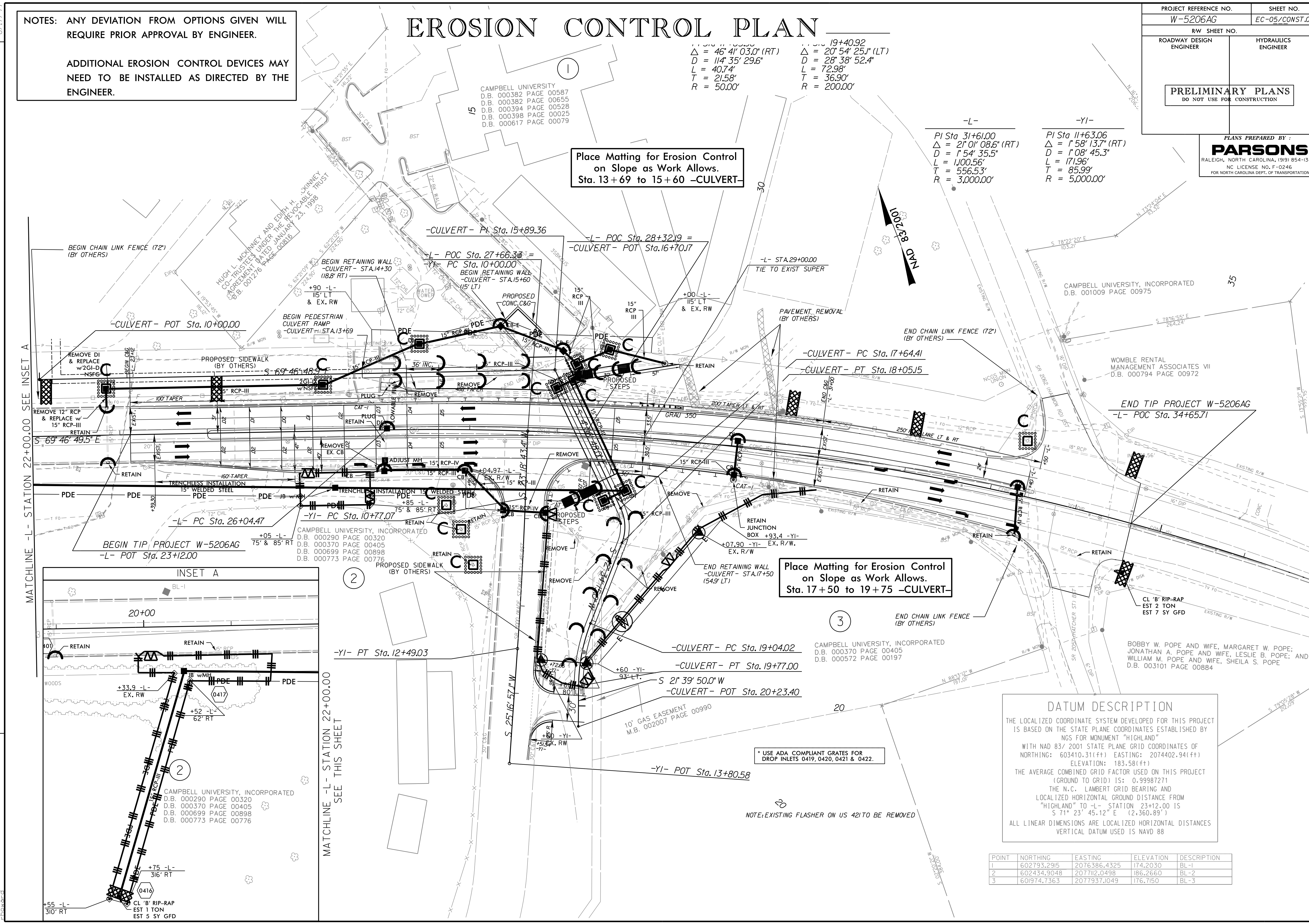
PROJECT REFERENCE NO. W-5206AG	SHEET NO. EC-05/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, (919) 854-1345
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

Place Matting for Erosion Control on Slope as Work Allows.
 Sta. 13+69 to 15+60 -CULVERT-

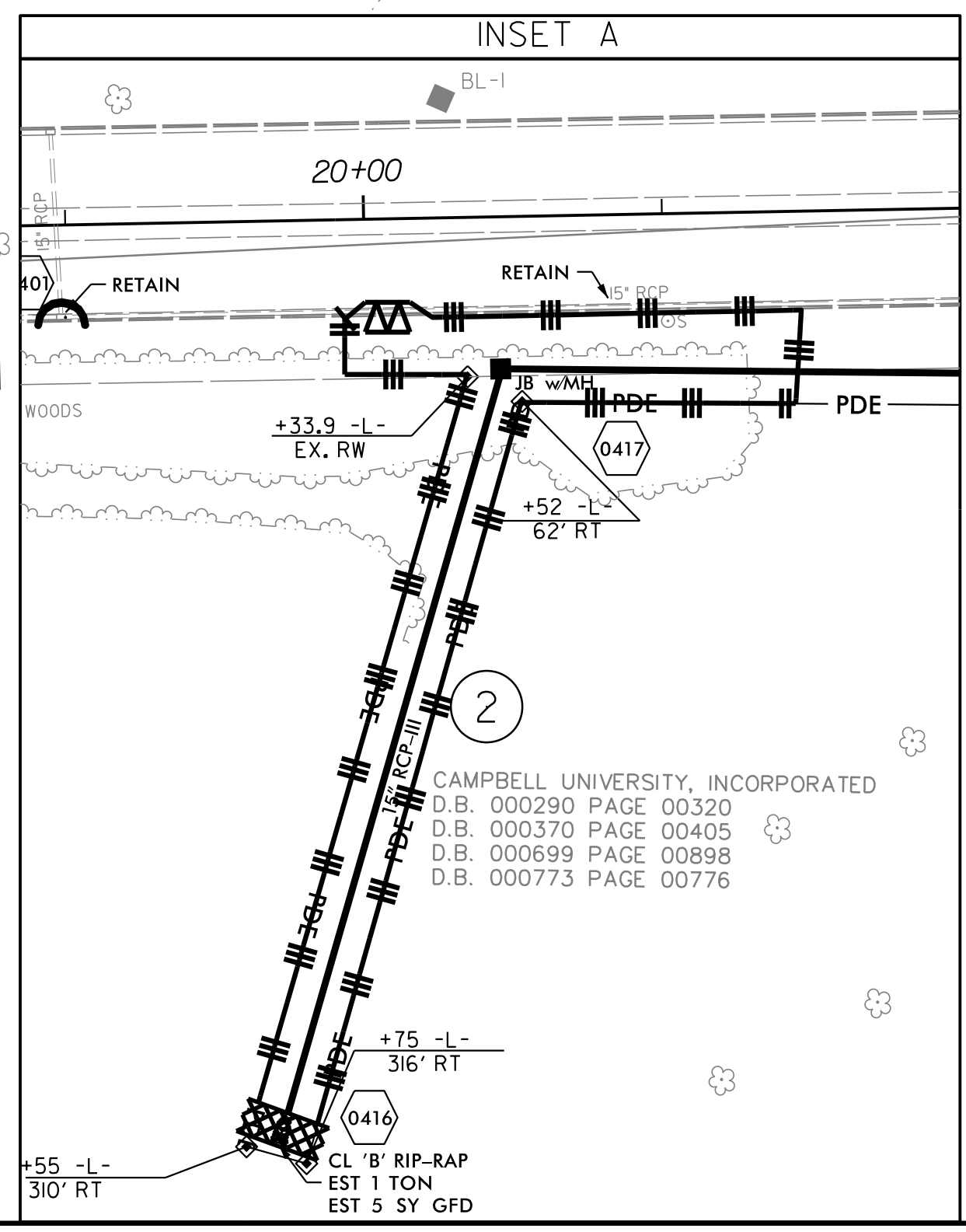
-L-
 PI Sta 31+61.00
 $\Delta = 2' 01' 08.6" (RT)$
 $D = 1' 54' 35.5"$
 $L = 1,00.56'$
 $T = 556.53'$
 $R = 3,000.00'$

-YI-
 PI Sta 11+63.06
 $\Delta = 1' 58' 13.7" (RT)$
 $D = 1' 08' 45.3"$
 $L = 171.96'$
 $T = 85.99'$
 $R = 5,000.00'$



MATCHLINE -L- STATION 22+00.00 SEE INSET A

MATCHLINE -L- STATION 22+00.00 SEE THIS SHEET



Place Matting for Erosion Control on Slope as Work Allows.
 Sta. 17+50 to 19+75 -CULVERT-

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NGS FOR MONUMENT "HIGHLAND" WITH NAD 83/ 2001 STATE PLANE GRID COORDINATES OF NORTHING: 603410.31(ft) EASTING: 2074402.94(ft) ELEVATION: 183.58(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998721
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "HIGHLAND" TO -L- STATION 23+12.00 IS S 71° 23' 45.12" E (2,360.89')
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

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* USE ADA COMPLIANT GRATES FOR DROP INLETS 0419, 0420, 0421 & 0422.

NOTE: EXISTING FLASHER ON US 4210 TO BE REMOVED

REVISIONS

8/17/99

10/24/2014 W-5206AG-EC-PSH.05.dgn