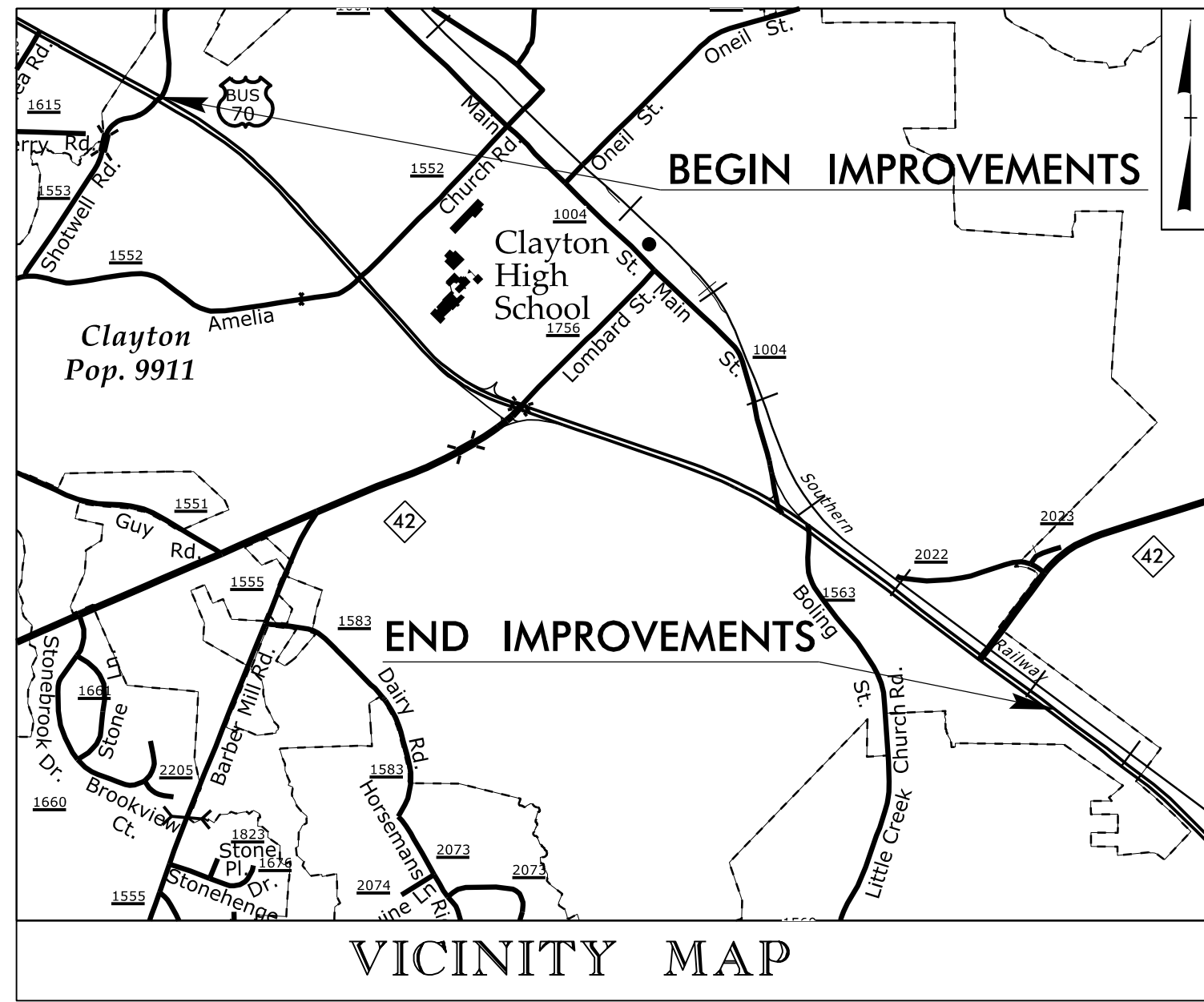


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**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

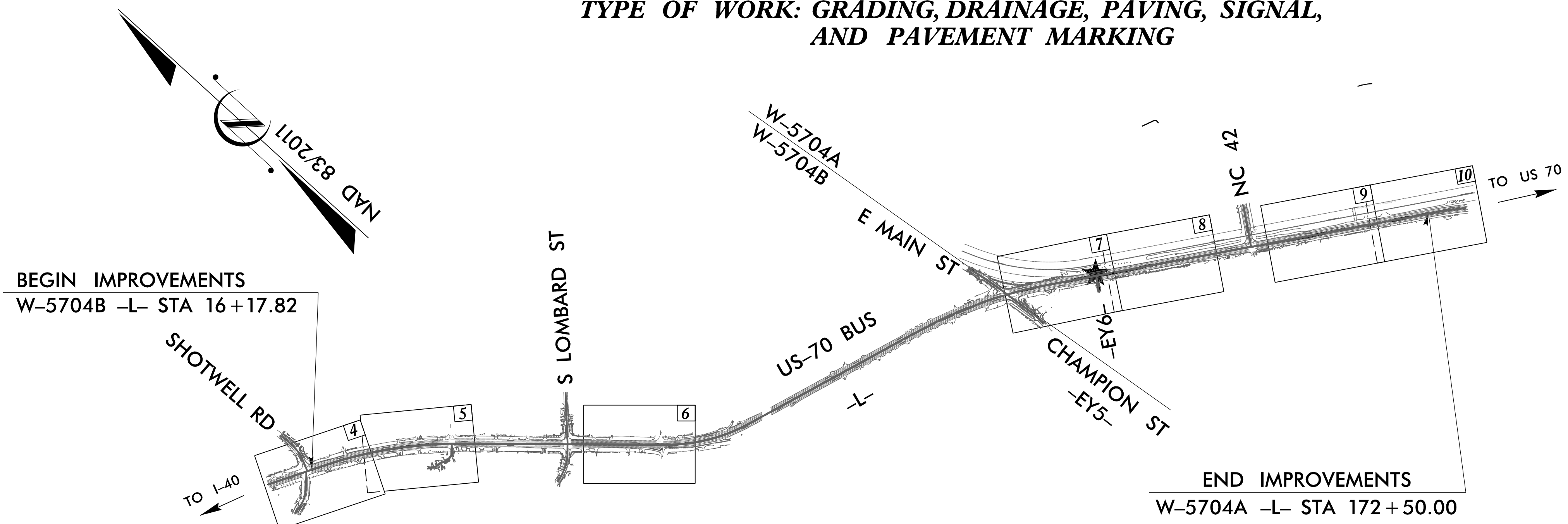
**This file or an individual page
shall not be considered a certified document.**

TIP PROJECT: W-5704A&B



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
JOHNSTON COUNTY

**LOCATION: US-70 BUSINESS FROM SR 1553 (SHOTWELL ROAD)
TO WILDWOOD DRIVE**
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNAL,
AND PAVEMENT MARKING**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5704A&B	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
W-5704A	44850.1.1	N/A	PE
	44850.3.1	N/A	CONST.
W-5704B	44850.1.2	N/A	PE
	44850.3.2	N/A	CONST.

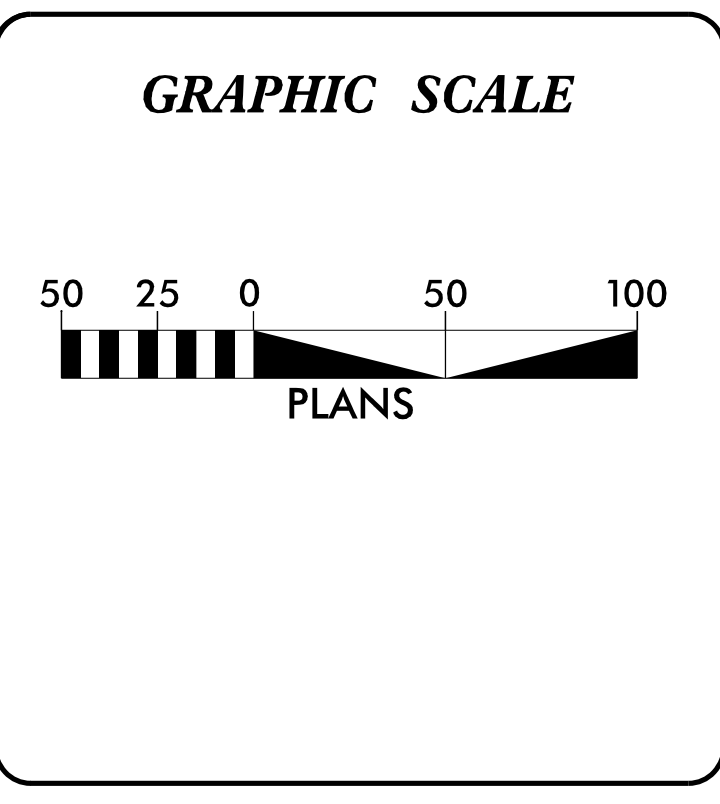
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SCF
1622.01	Temporary Berms and Slope Drains	TBD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	W/CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	W/CFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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

**THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.**

**ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT**
*Refer To E. C. Special Provisions
for Special Considerations.*



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:

SEPI
ENGINEERING & CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

Designed by:

ANDREW M. HOWELL, PE 3105
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

Reviewed by:

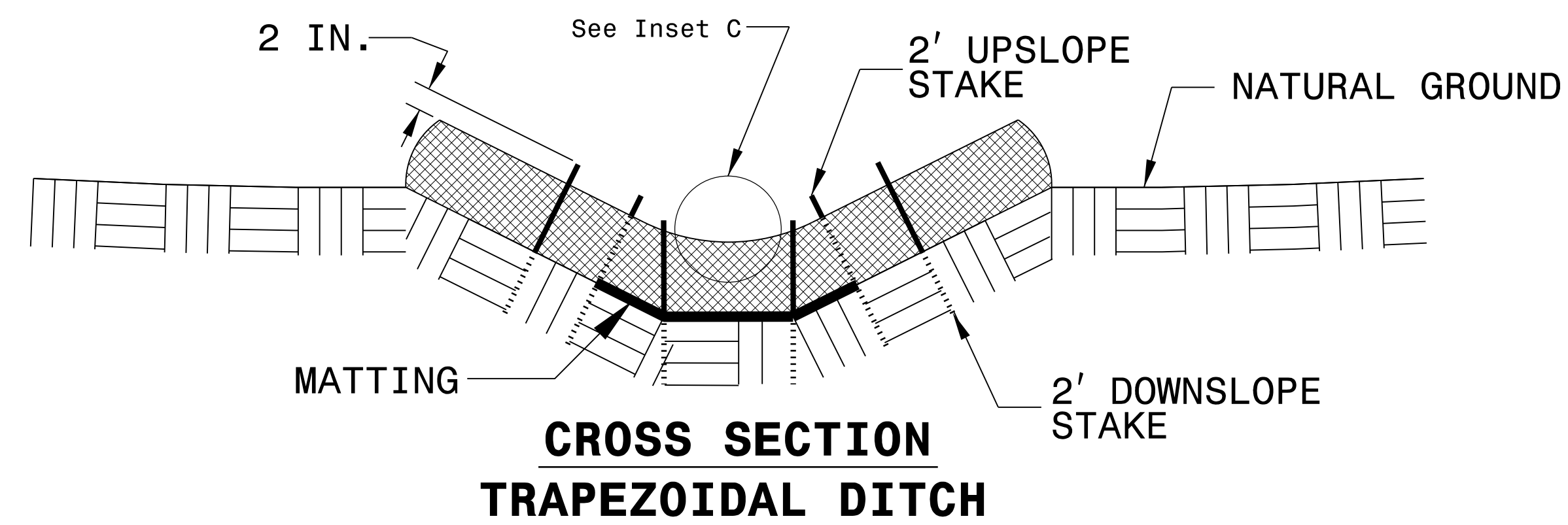
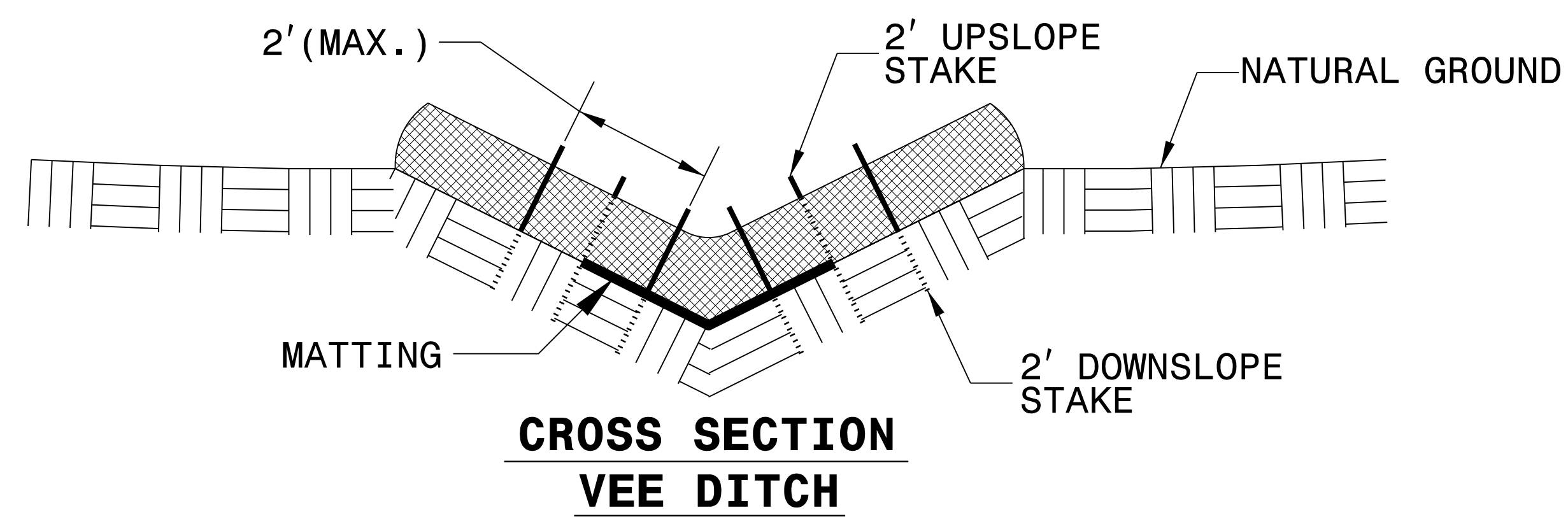
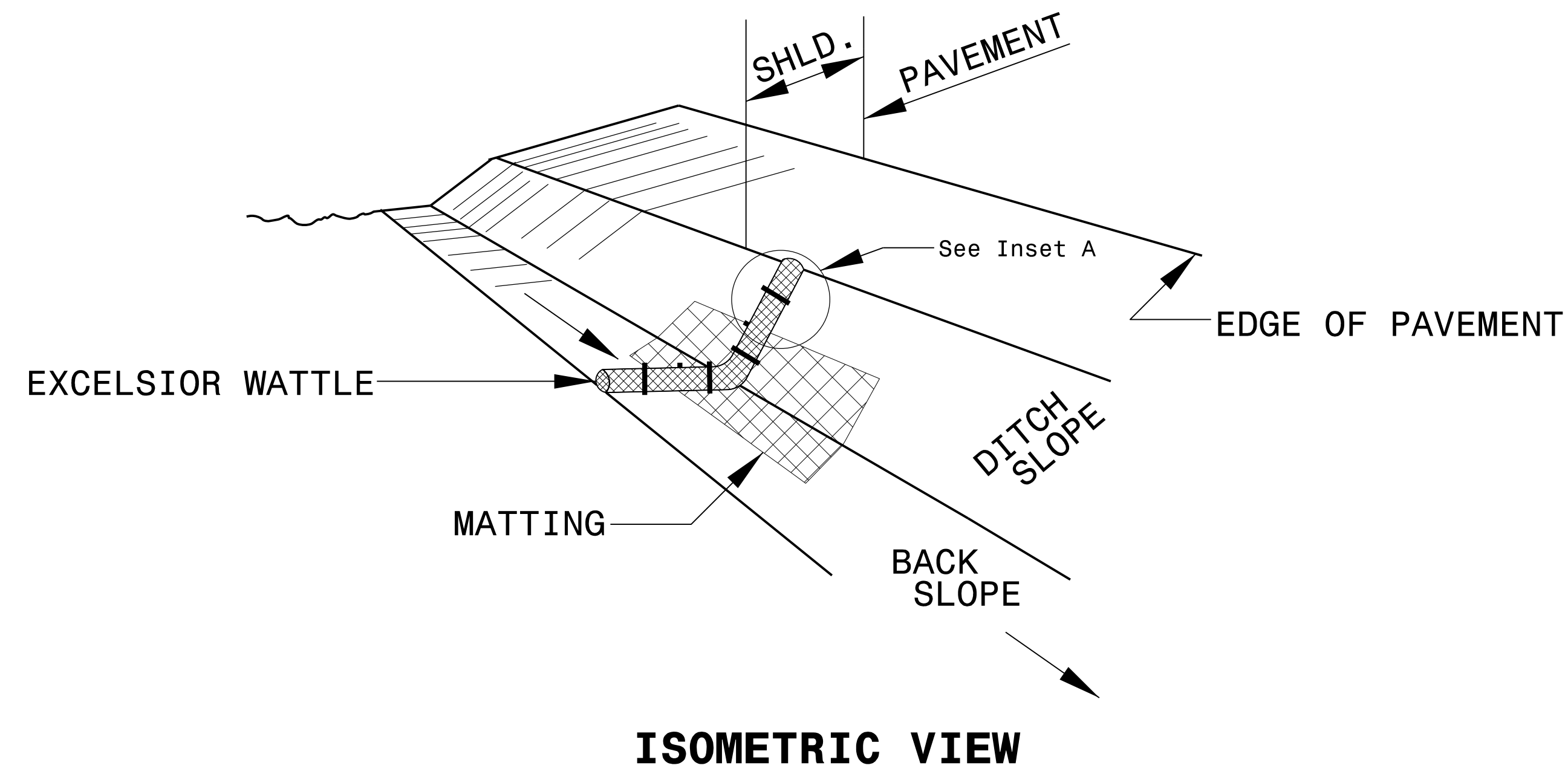
DONALD R. PEARSON, CPESC

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.

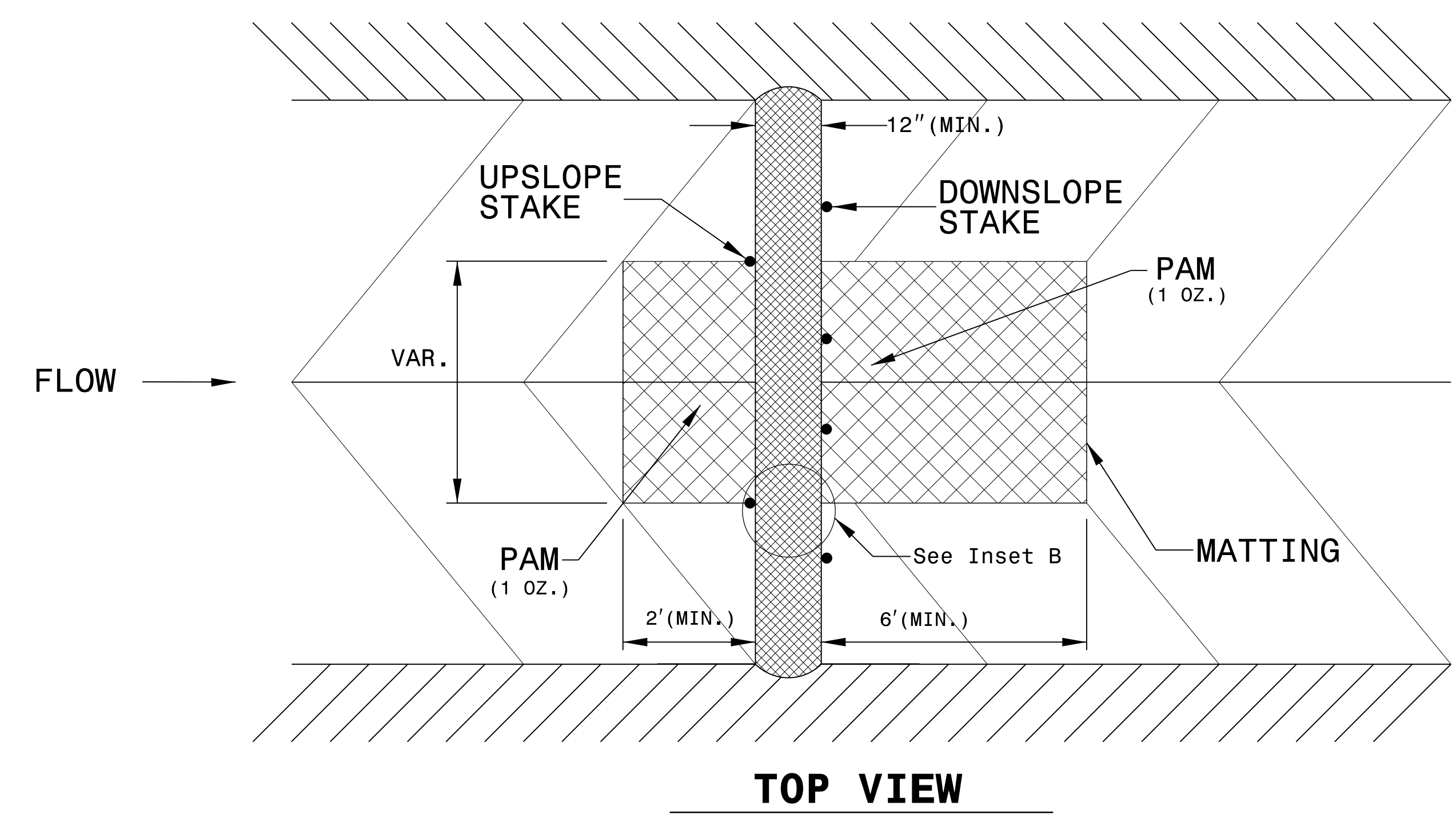
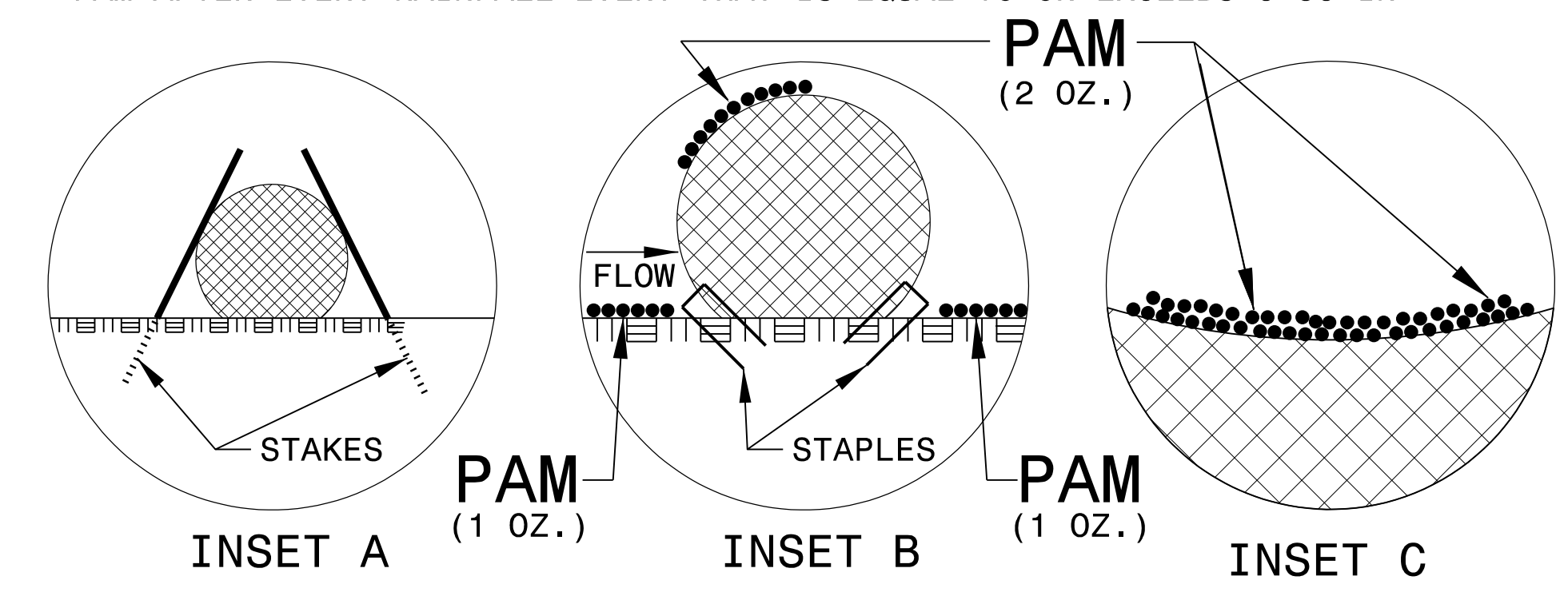
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type 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	

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR 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.
- 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 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



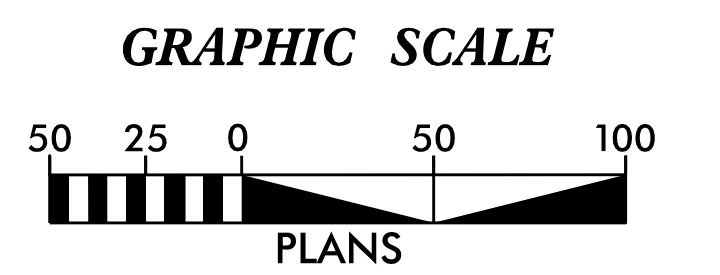
8/17/99

9/18/2017
15704A_B_rev.EC-02.DTL.dgn
[User Name]

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.



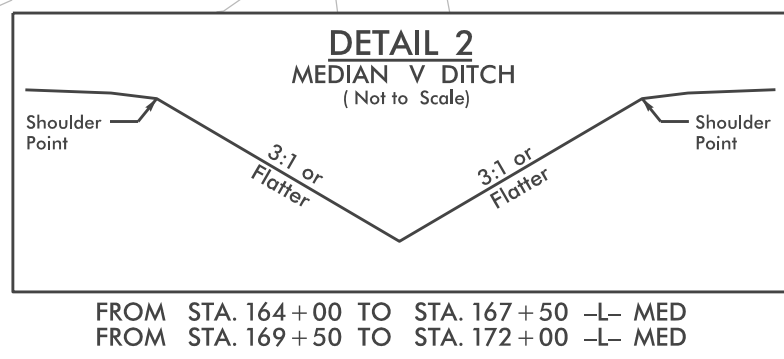
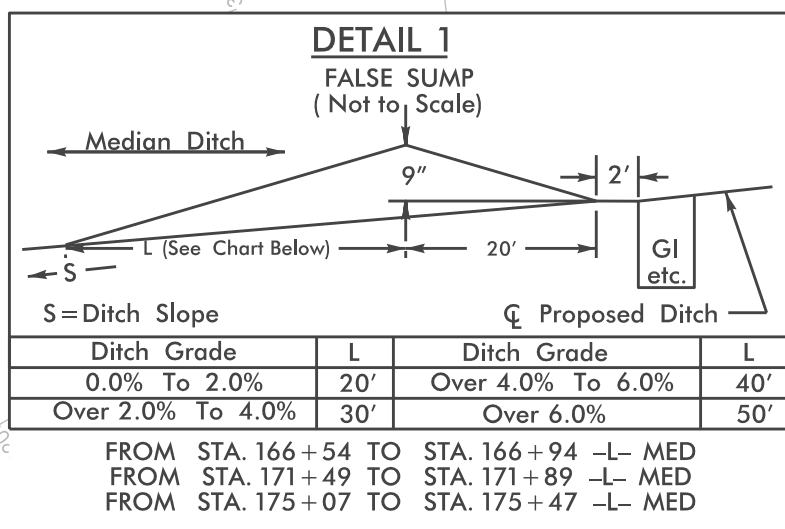
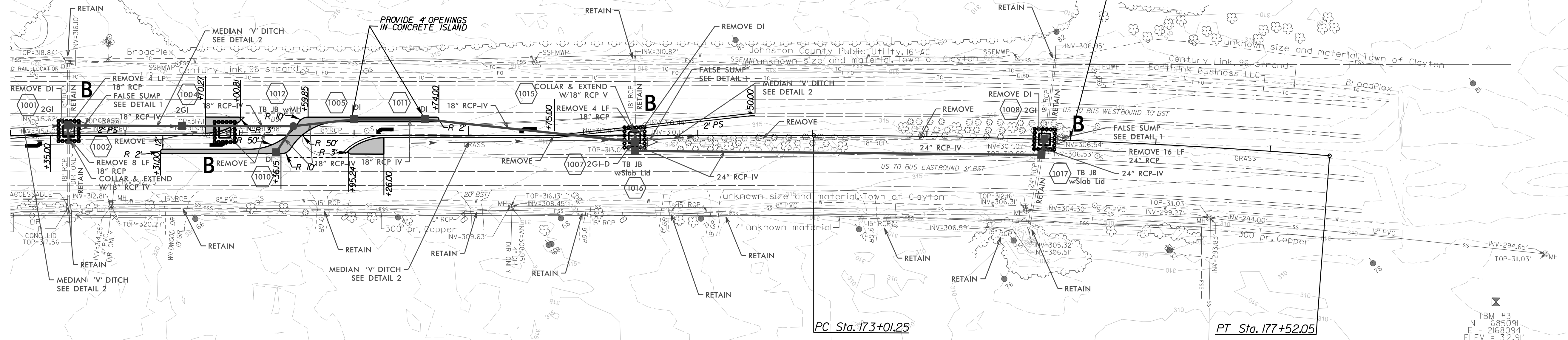
EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

INLET PROTECTION TYPE TO BE DETERMINED BY ENGINEER

-L-
 PI Sta 175+26.76
 $\Delta = 4' 30" 28.8" (RT)$
 $D = 1' 00" 00.0"$
 $L = 450.80'$
 $T = 225.52'$
 $R = 5,729.58'$

Property Maps of the North Carolina Railroad Company Prepared in 1851 Under the Direction of Walter Gwynn, Chief Engineer, Showing Centerline Information and a 200-Foot Wide Corridor, Typical
 See Charter of The North Carolina Railroad Company 1848-49, N.C. Laws Ch LXXXII (January 27, 1849) Incorporating the North Carolina Railroad Company.

END PROJ W-5704A
 IMPROVEMENTS
 -L- POC STA 175+25.00



CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 10

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

REVISIONS

8/17/99

8/17/99

-L-

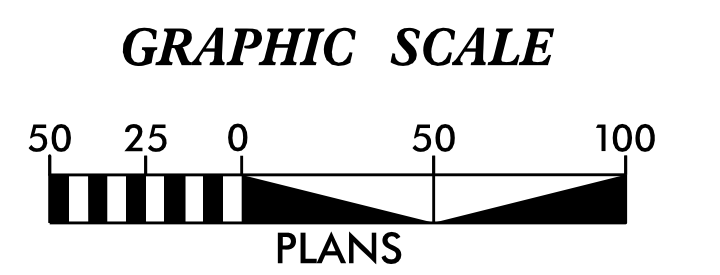
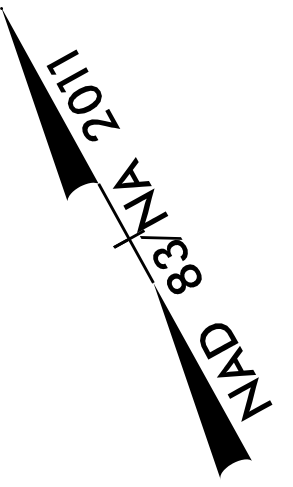
PI Sta 27+34.76
 $\Delta = 18^{\circ} 58' 02.4" (RT)$
 $D = 1^{\circ} 00' 00.0"$
 $L = 1,896.73'$
 $T = 957.12'$
 $R = 5,729.58'$

PROJECT REFERENCE NO. SHEET NO.
W-5704A&B EC-II/ CONST.4

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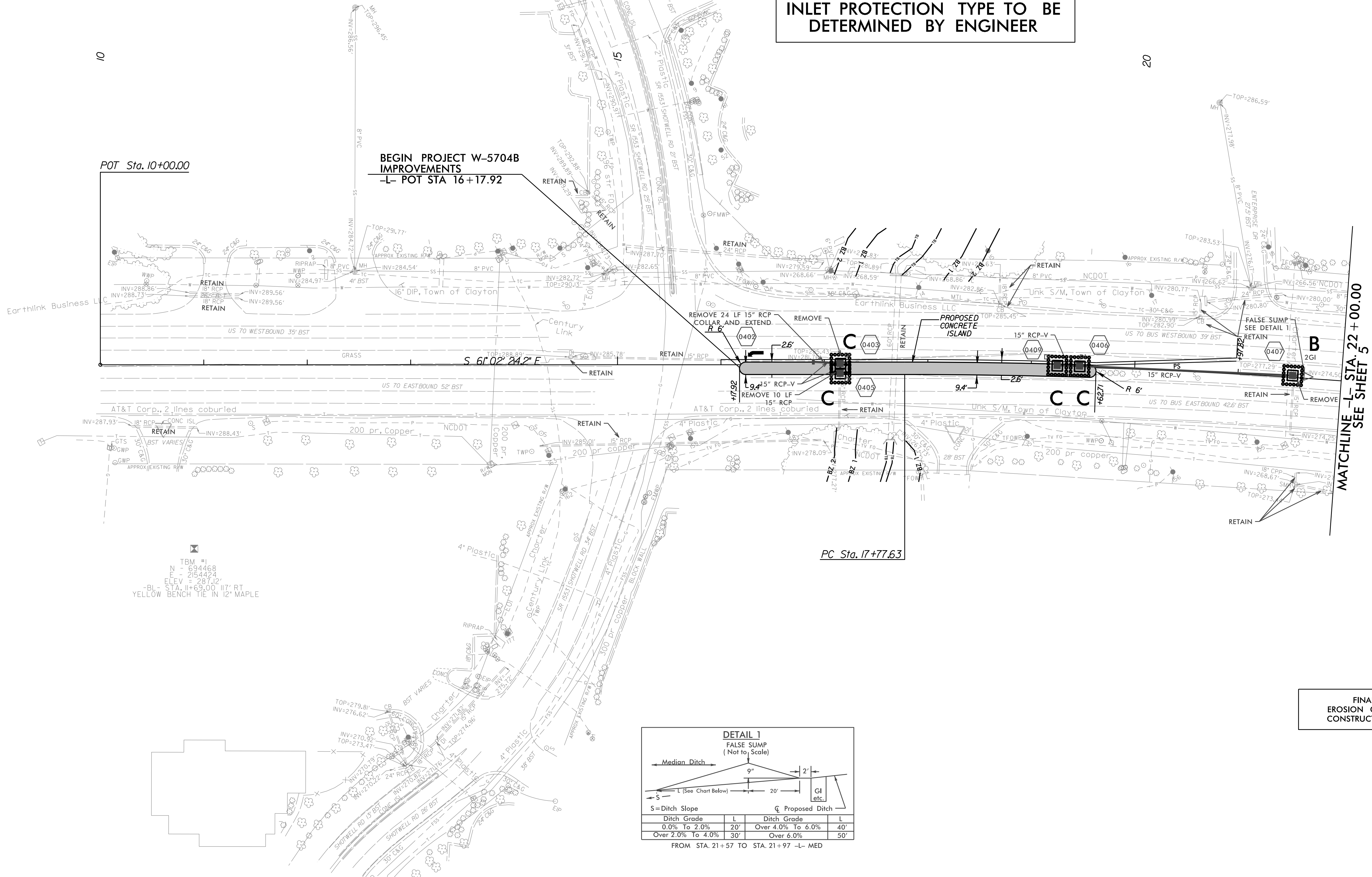
EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY



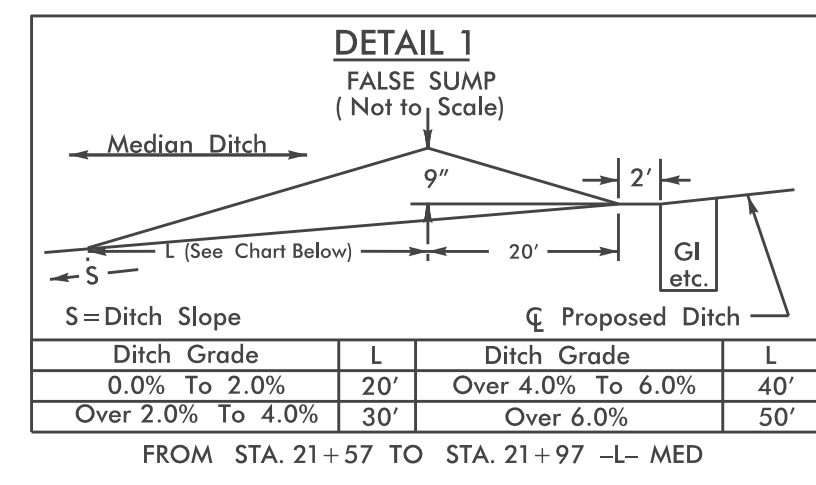
INLET PROTECTION TYPE TO BE
DETERMINED BY ENGINEER

POT Sta. 10+00.00

BEGIN PROJECT W-5704B
IMPROVEMENTS
-L- POT STA 16+17.92



PC Sta. 17+77.63



FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

REVISIONS

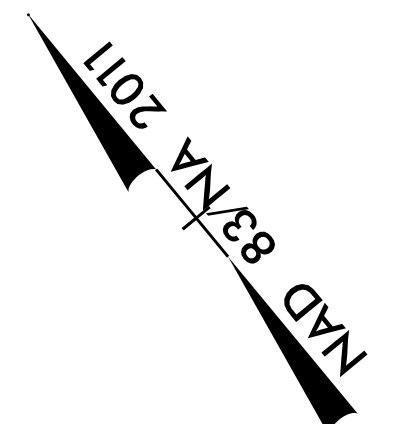
CYCLING *****

8/17/99

-L-

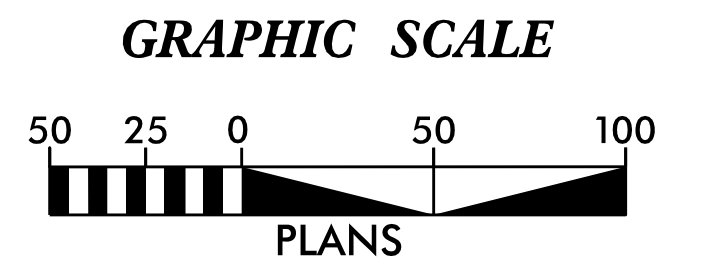
PI Sta 27+34.76
 $\Delta = 18^\circ 58' 02.4''$ (RT)
 $D = 1'00'' 00.0''$
 $L = 1,896.73'$
 $T = 957.12'$
 $R = 5,729.58'$

EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY



PROJECT REFERENCE NO. W-5704A&B
 SHEET NO. EC-12/ CONST.5

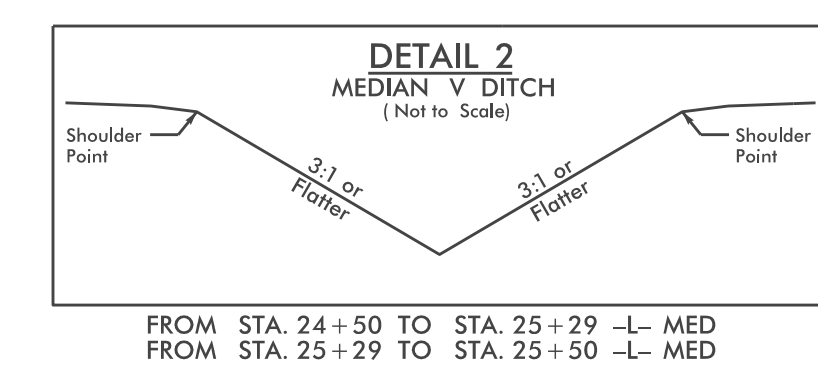
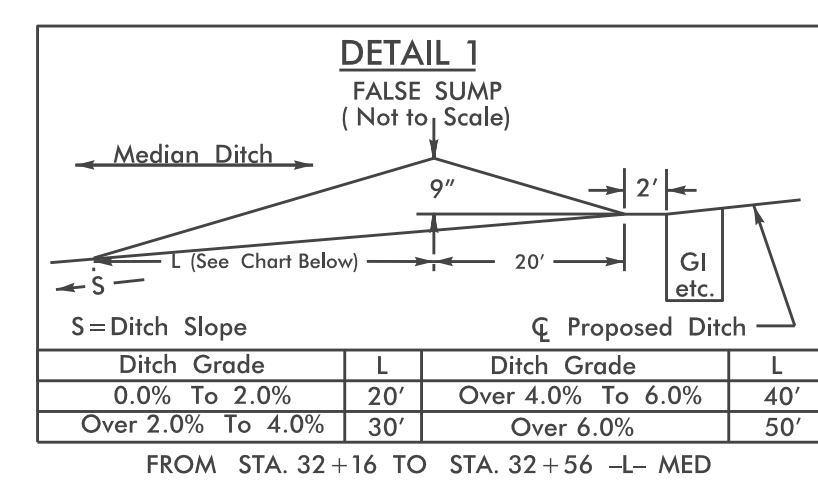
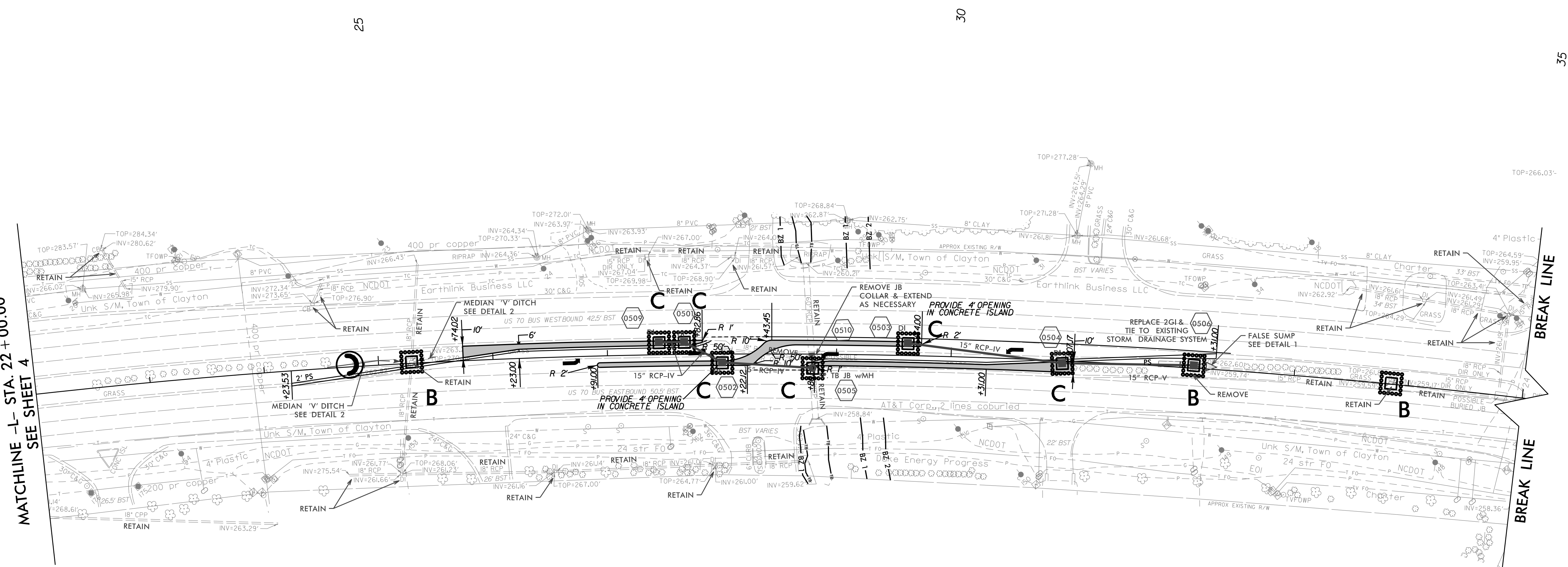
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 Raleigh, NC 27605
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 License: C-2197



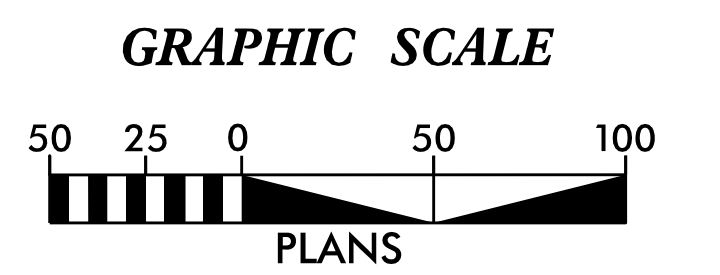
INLET PROTECTION TYPE TO BE DETERMINED BY ENGINEER

REVISIONS

MATCHLINE -L- STA. 22 + 00.00
SEE SHEET 4



FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 5



EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

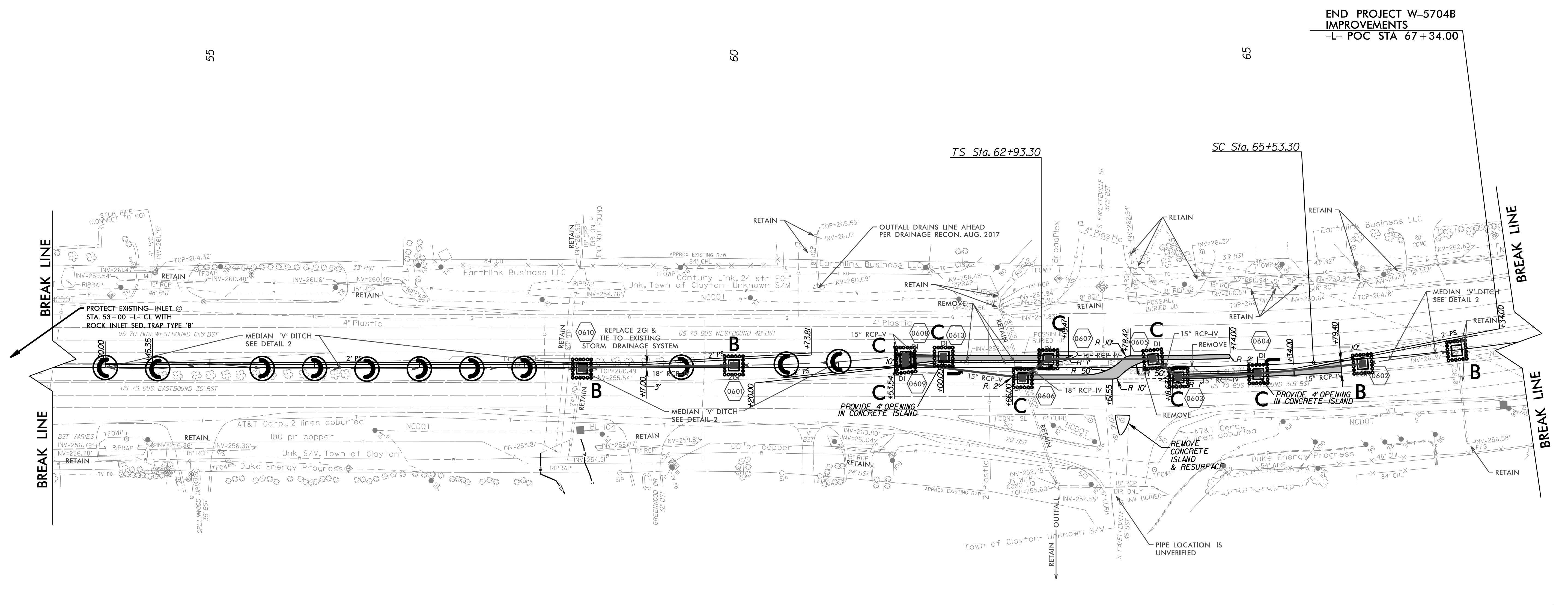
INLET PROTECTION TYPE TO BE
DETERMINED BY ENGINEER

-L-

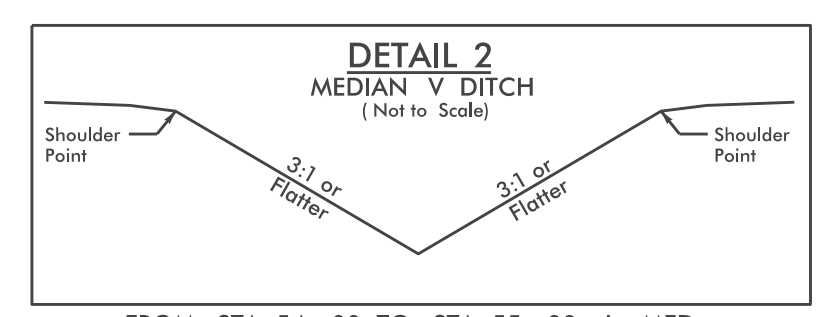
Pls Sta 64+66.66	PI Sta 70+08.87	Pls Sta 75+39.42
$\Theta_s = 3'15''00.0''$	$\Delta = 22'29''08.2''$ (LT)	$\Theta_s = 3'15''00.0''$
$L_s = 260.00'$	$D = 2'30''00.0''$	$L_s = 260.00'$
$LT = 173.36'$	$L = 899.42'$	$LT = 173.36'$
$ST = 86.69'$	$T = 455.57'$	$ST = 86.69'$
	$R = 2,291.83'$	

8/17/99

REVISIONS



END PROJECT W-5704B
IMPROVEMENTS
-L- POC STA 67+34.00



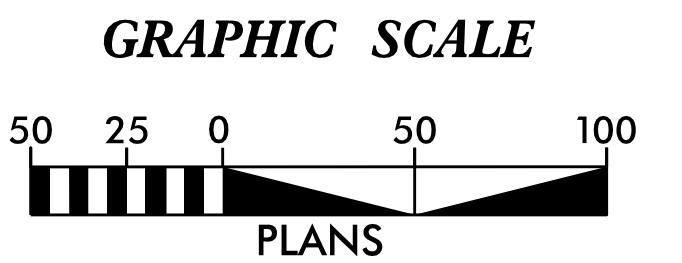
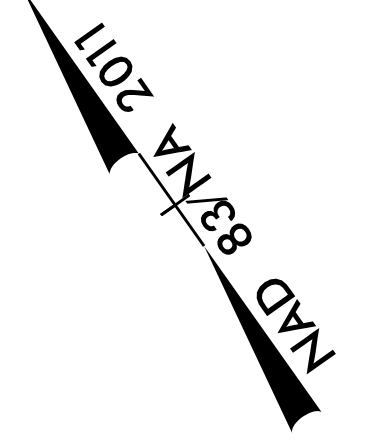
FROM STA. 54+00 TO STA. 55+00	-L- MED
FROM STA. 55+00 TO STA. 58+55	-L- MED
FROM STA. 58+55 TO STA. 59+00	-L- MED
FROM STA. 59+00 TO STA. 60+00	-L- MED
FROM STA. 60+00 TO STA. 61+50	-L- MED
FROM STA. 66+00 TO STA. 66+50	-L- MED
FROM STA. 66+50 TO STA. 66+90	-L- MED

FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

8/17/99

-L-	
PI Sta 111+03.35	PI Sta 118+19.72
Δ = 10° 53' 04.3" (RT)	Δ = 3° 55' 50.6" (RT)
D = 0° 54' 34.0"	D = 1° 41' 06.6"
L = 1,196.82'	L = 233.25'
T = 600.21'	T = 116.67'
R = 6,300.00'	R = 3,400.00'

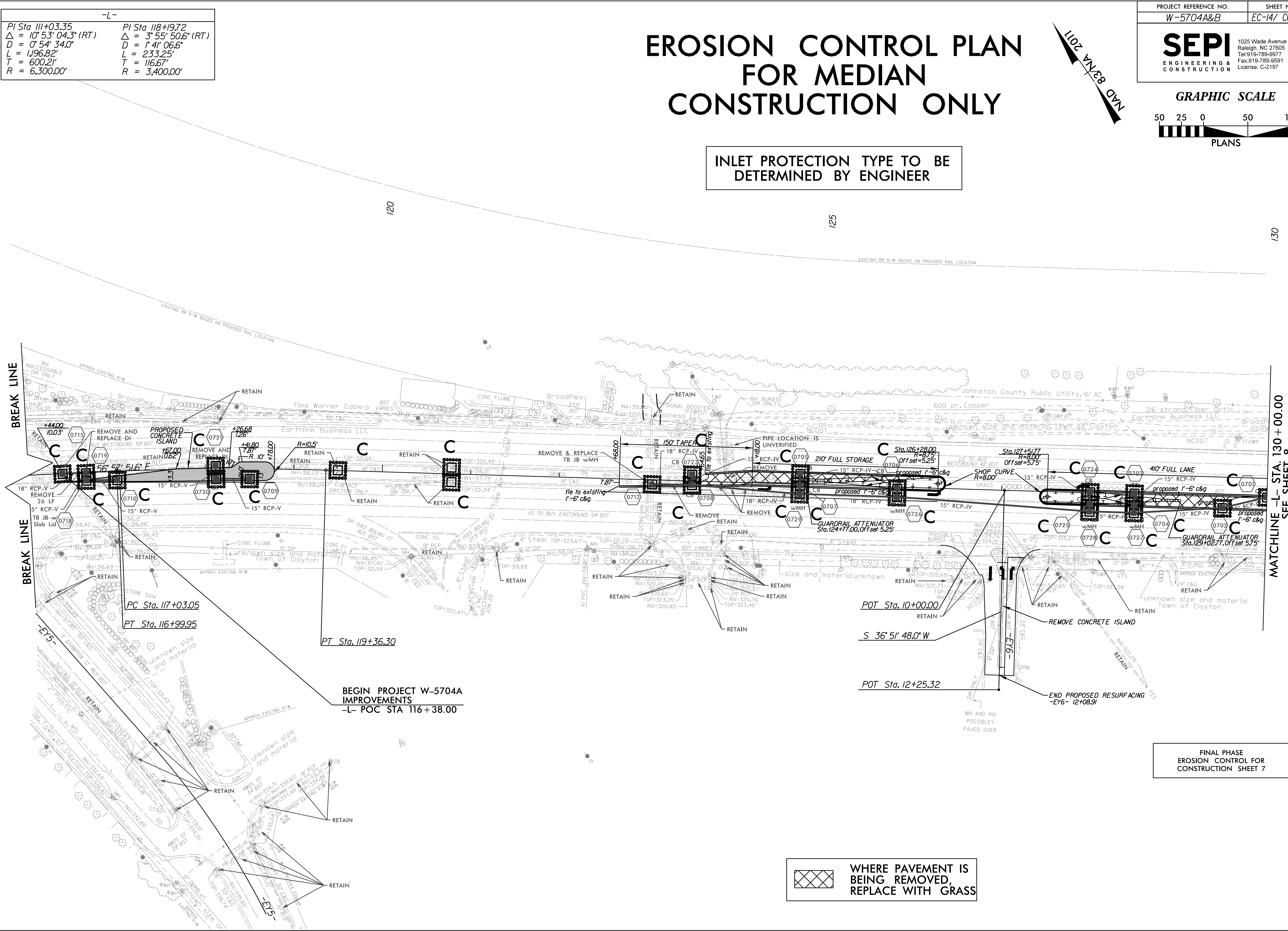
PROJECT REFERENCE NO.	SHEET NO.
W-5704A&B	EC-14/ CONST.7
SEPI	
ENGINEERING & CONSTRUCTION	
1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197	



EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

INLET PROTECTION TYPE TO BE
DETERMINED BY ENGINEER

REVISIONS



MATCHLINE -L- STA. 130 + 00.00
SEE SHEET 8

BEGIN PROJECT W-5704A
IMPROVEMENTS
-L- POC STA 116 + 38.00

WHERE PAVEMENT IS
BEING REMOVED,
REPLACE WITH GRASS

8/17/99

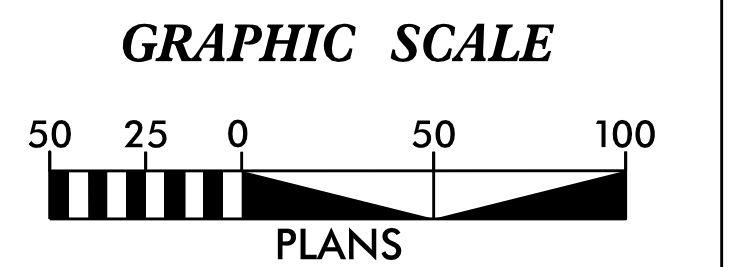
REVISIONS

SECTION
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DATE

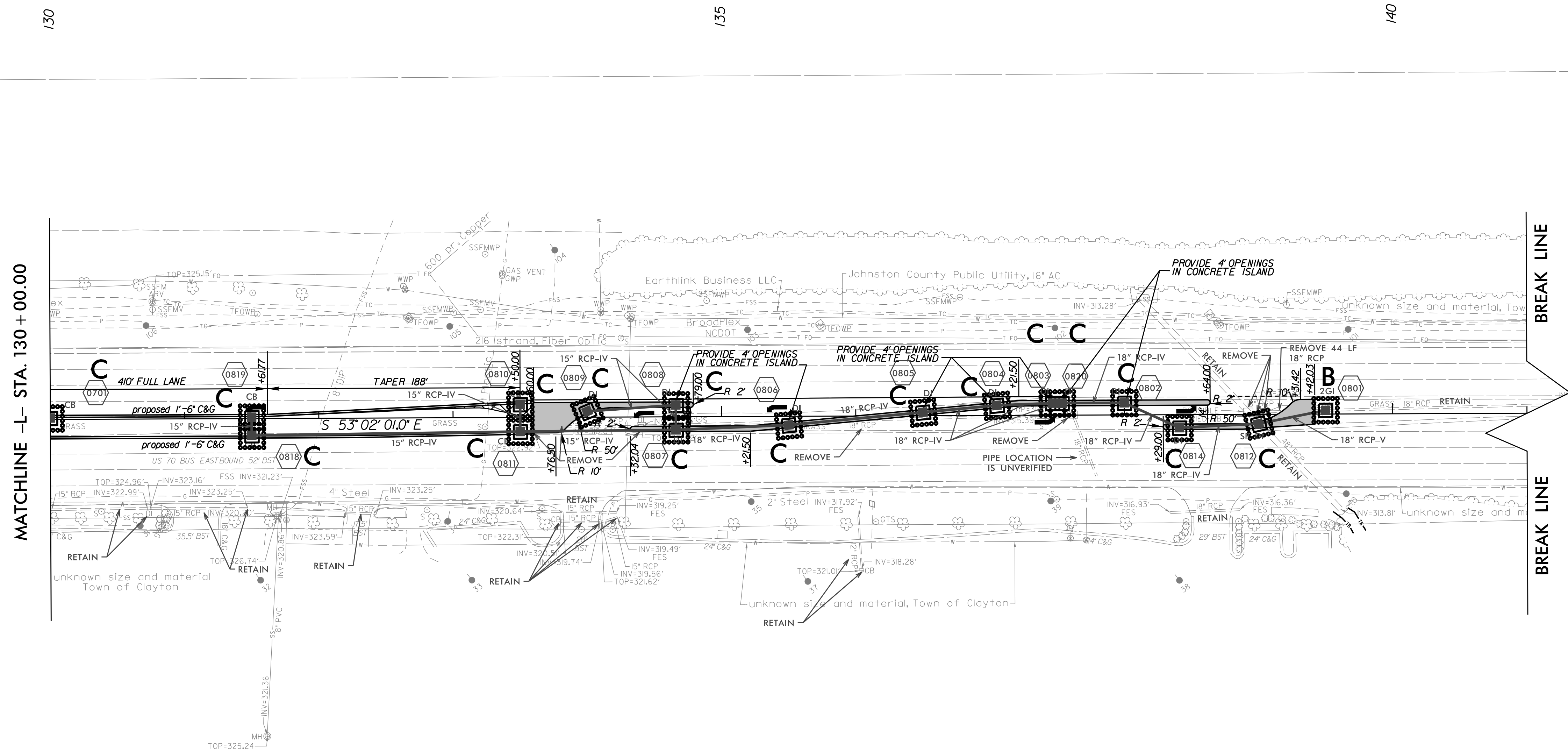
EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

PROJECT REFERENCE NO. SHEET NO.
W-5704A&B EC-15/ CONST.B

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INLET PROTECTION TYPE TO BE
DETERMINED BY ENGINEER



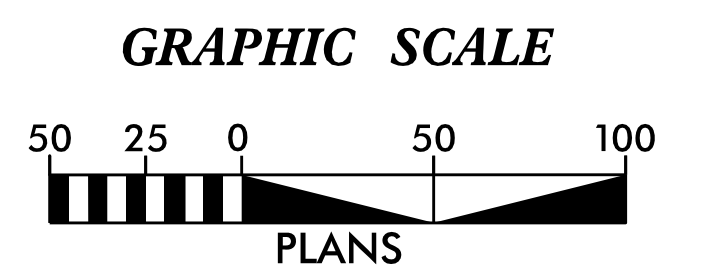
MATCHLINE -L- STA. 130 + 00.00

BREAK LINE

BREAK LINE

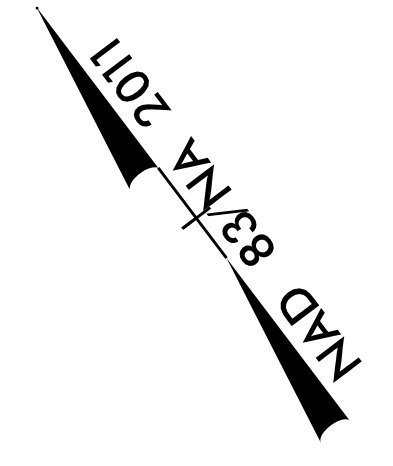
FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

 WHERE PAVEMENT IS
BEING REMOVED,
REPLACE WITH GRASS



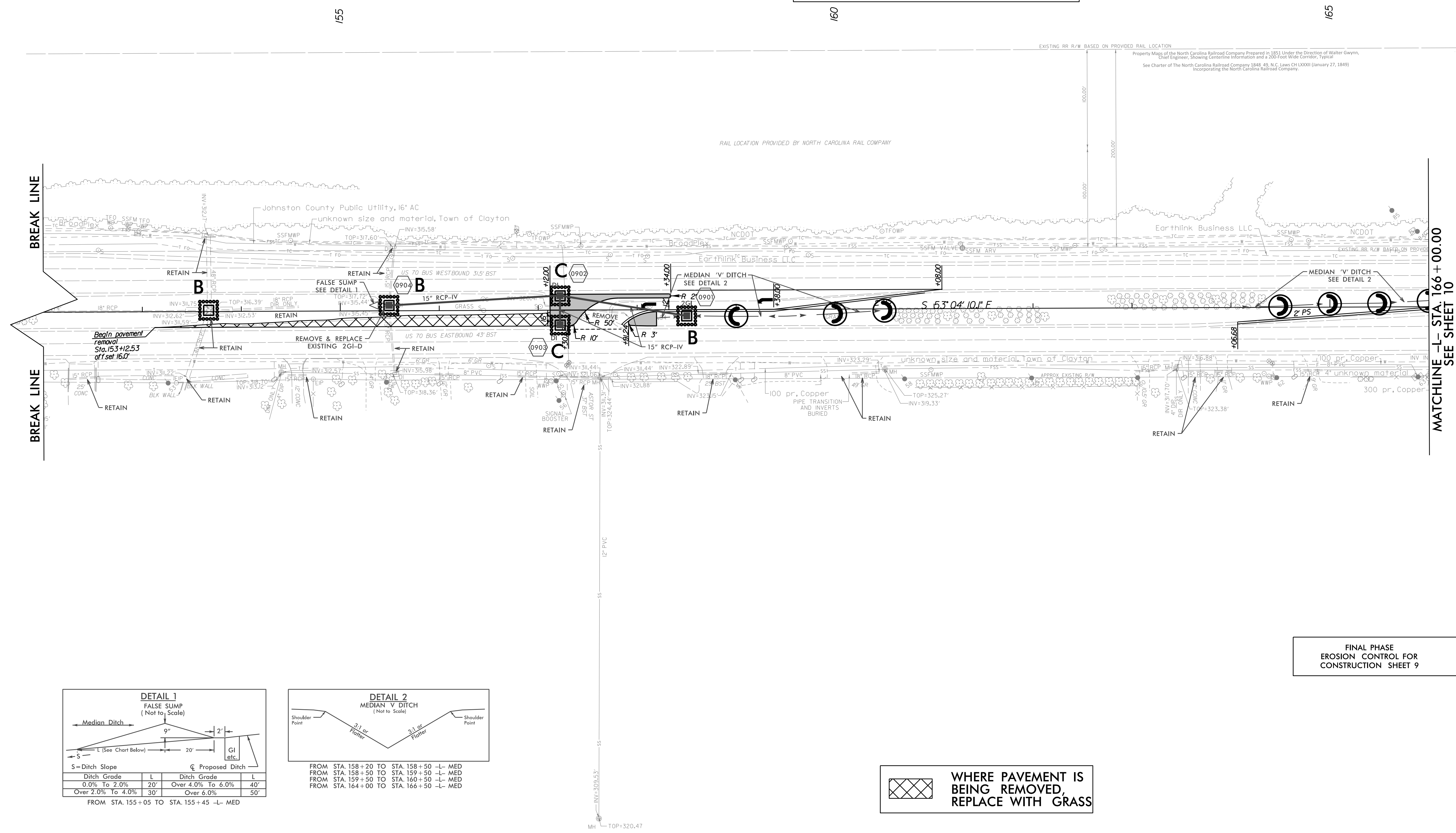
EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

INLET PROTECTION TYPE TO BE
DETERMINED BY ENGINEER



8/17/99

REVISIONS



**DETAIL 1
FALSE SUMP
(Not to Scale)**

S = Ditch Slope C = Proposed Ditch

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

FROM STA. 155+05 TO STA. 155+45 -L- MED

**DETAIL 2
MEDIAN V DITCH
(Not to Scale)**

FROM STA. 158+20 TO STA. 158+50	-L- MED
FROM STA. 158+50 TO STA. 159+50	-L- MED
FROM STA. 159+50 TO STA. 160+50	-L- MED
FROM STA. 164+00 TO STA. 166+50	-L- MED

WHERE PAVEMENT IS
BEING REMOVED,
REPLACE WITH GRASS

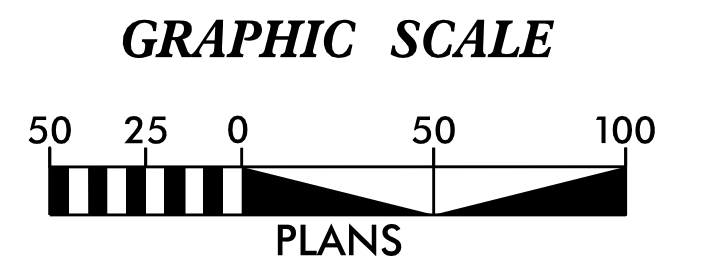
FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

MATCHLINE -L- STA. 166+00.00
SEE SHEET 10

-L-
 PI Sta 175+26.76
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 $D = 1' 00'' 00.0''$
 $L = 450.80'$
 $T = 225.52'$
 $R = 5,729.58'$

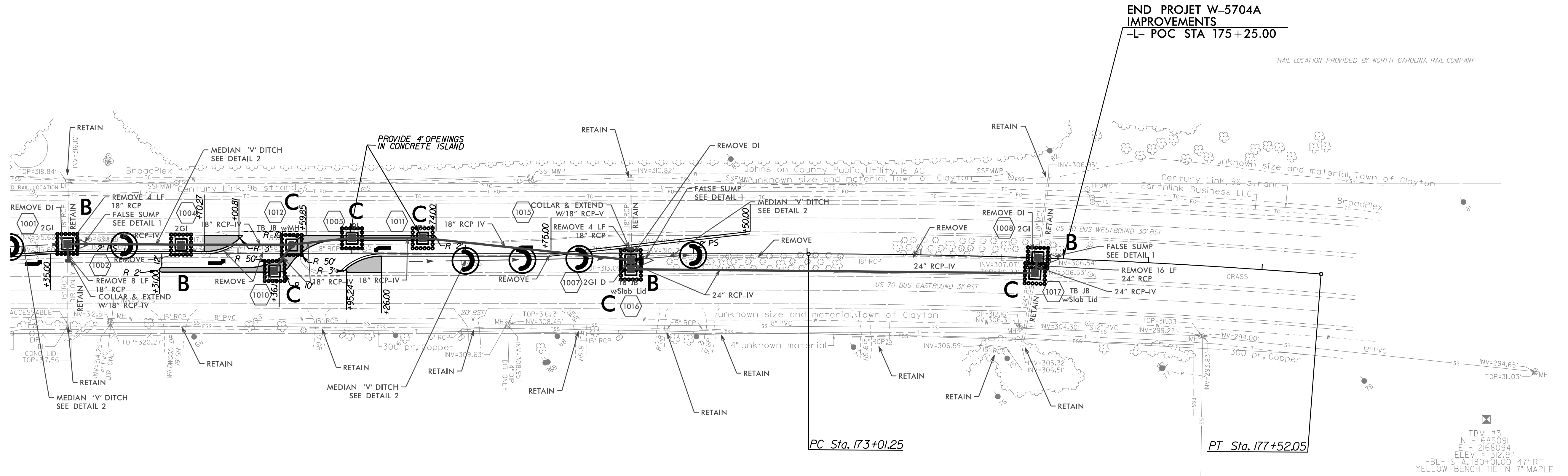
EROSION CONTROL PLAN FOR MEDIAN CONSTRUCTION ONLY

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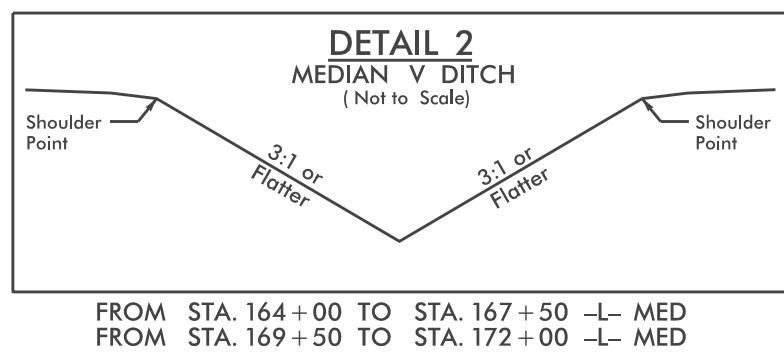
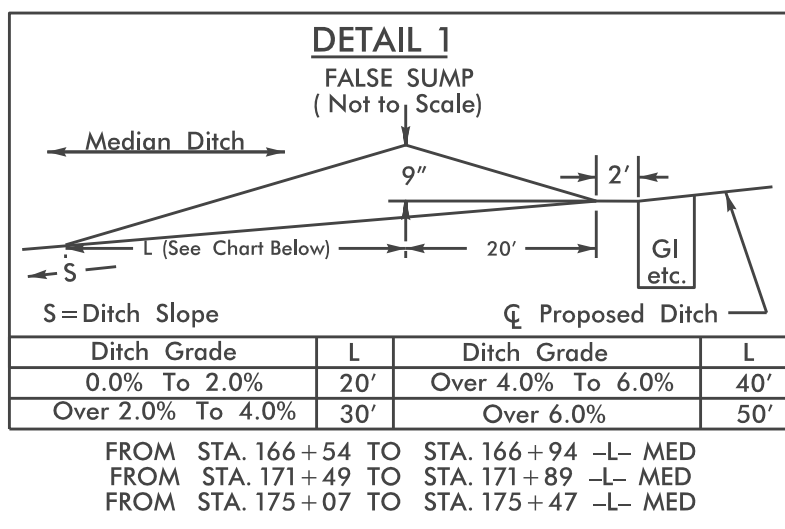
INLET PROTECTION TYPE TO BE DETERMINED BY ENGINEER

Property Maps of the North Carolina Railroad Company Prepared in 1851 Under the Direction of Walter Gwynn, Chief Engineer, Showing Centerline Information and a 200-Foot Wide Corridor, Typical
 See Charter of The North Carolina Railroad Company 1848, 49, N.C. Laws Ch LXXXII (January 27, 1849) Incorporating the North Carolina Railroad Company.



REVISIONS

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FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 10