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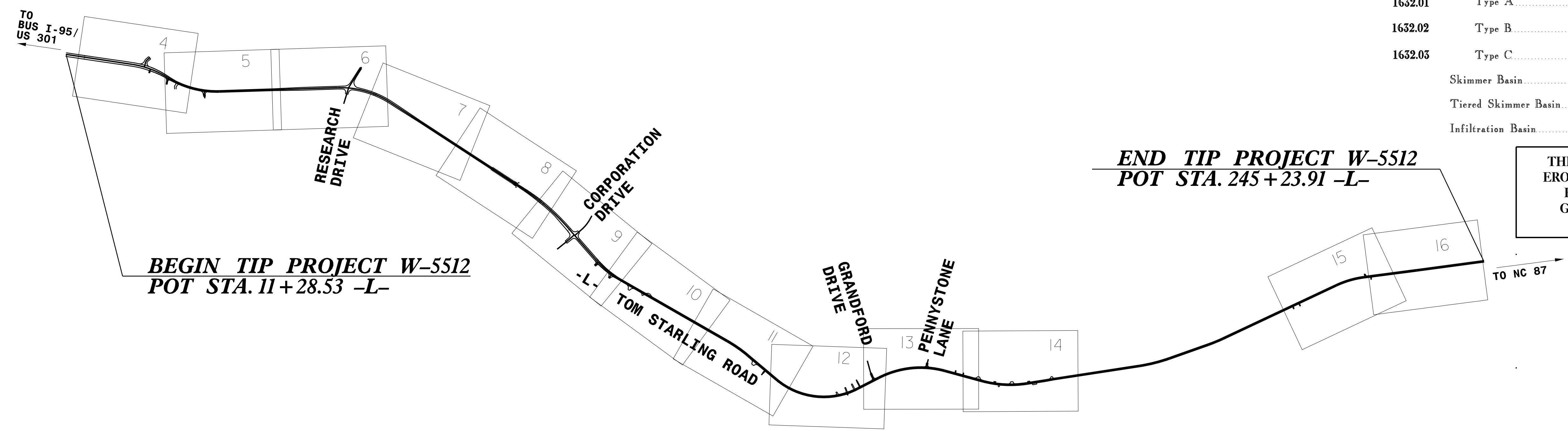
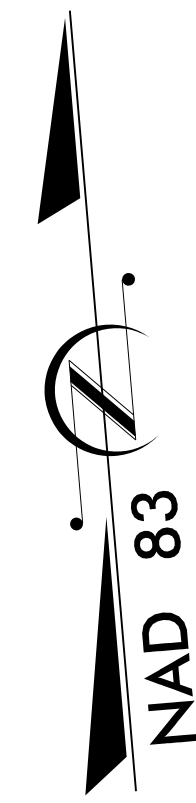
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5512	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**TIP PROJECT: W-5512**

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

**LOCATION: SR 2220 (TOM STARLING ROAD) FROM US 301  
TO NC 87.**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING,  
TRAFFIC CONTROL, AND PAVEMENT MARKING.**



**BEGIN TIP PROJECT W-5512  
POT STA. 11+28.53 -L-**

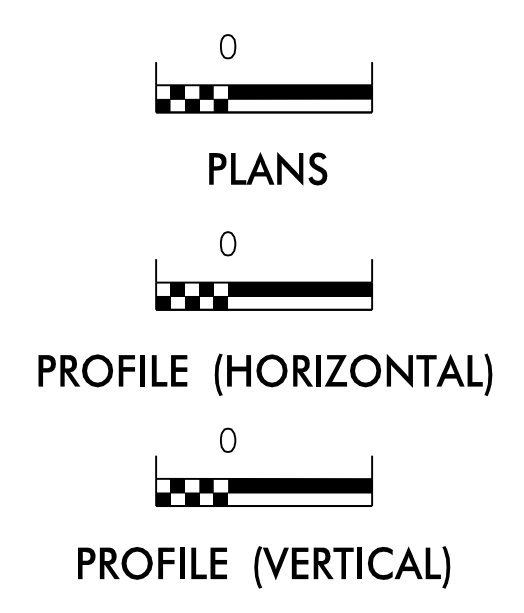
**END TIP PROJECT W-5512  
POT STA. 245+23.91 -L-**

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

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	X X X X X X
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RS
1633.02	Temporary Rock Silt Check Type-B	RS
	Wattle/Coir Fiber Wattle	W
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	W
1634.01	Temporary Rock Sediment Dam Type-A	RD
1634.02	Temporary Rock Sediment Dam Type-B	RD
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPI
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPI
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SK
	Tiered Skimmer Basin	SK
	Infiltration Basin	IB

**GRAPHIC SCALE**



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

Prepared in the Office of:  
**MI-ENGINEERING**  
1011 SCHAUB DRIVE, SUITE 100  
RALEIGH, NC 27606  
**2012 STANDARD SPECIFICATIONS**

Designed by:  
**MELANIE NGUYEN** 3223  
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:  
**JEREMY GOODWIN**

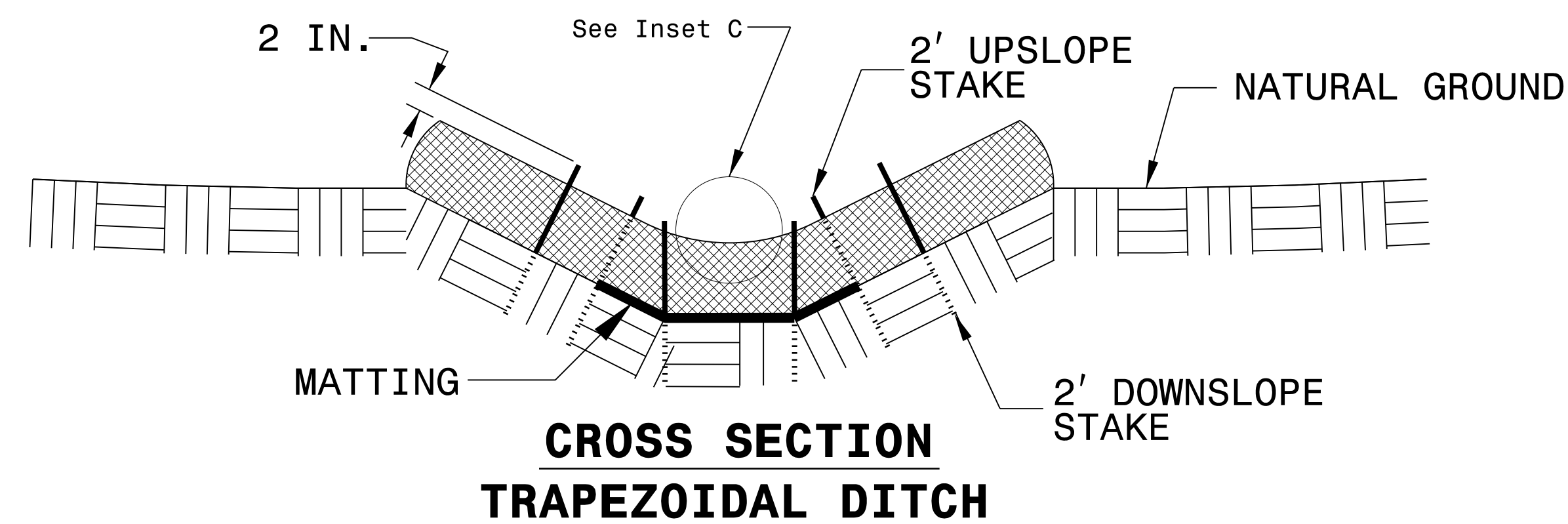
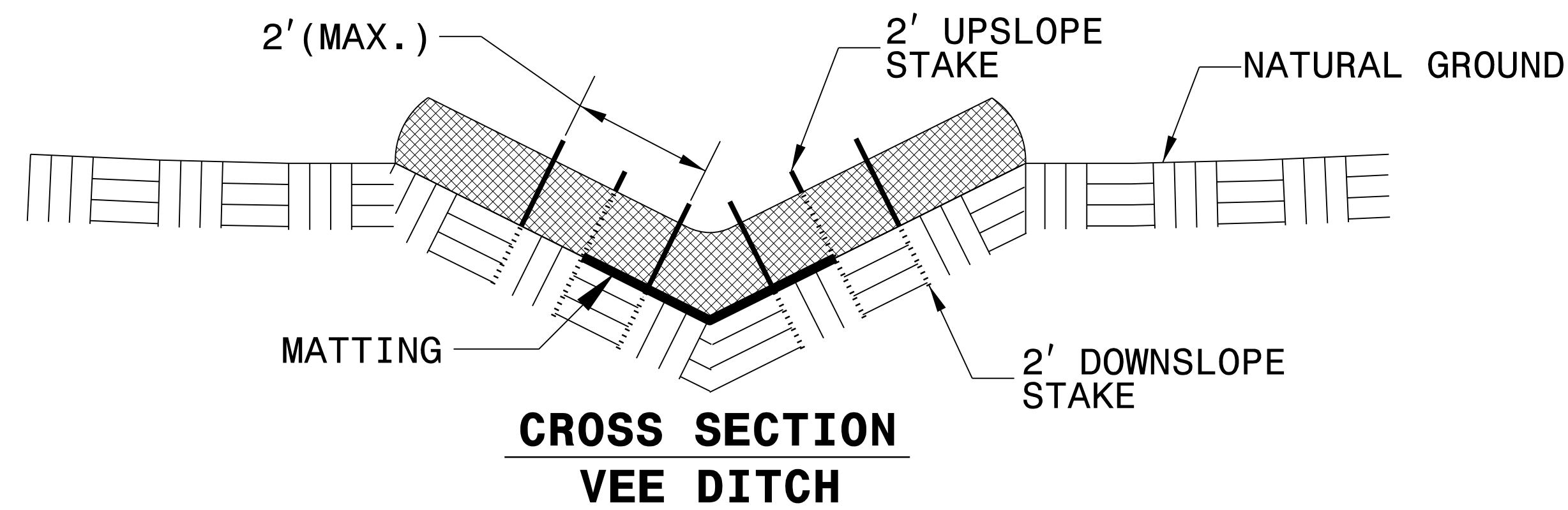
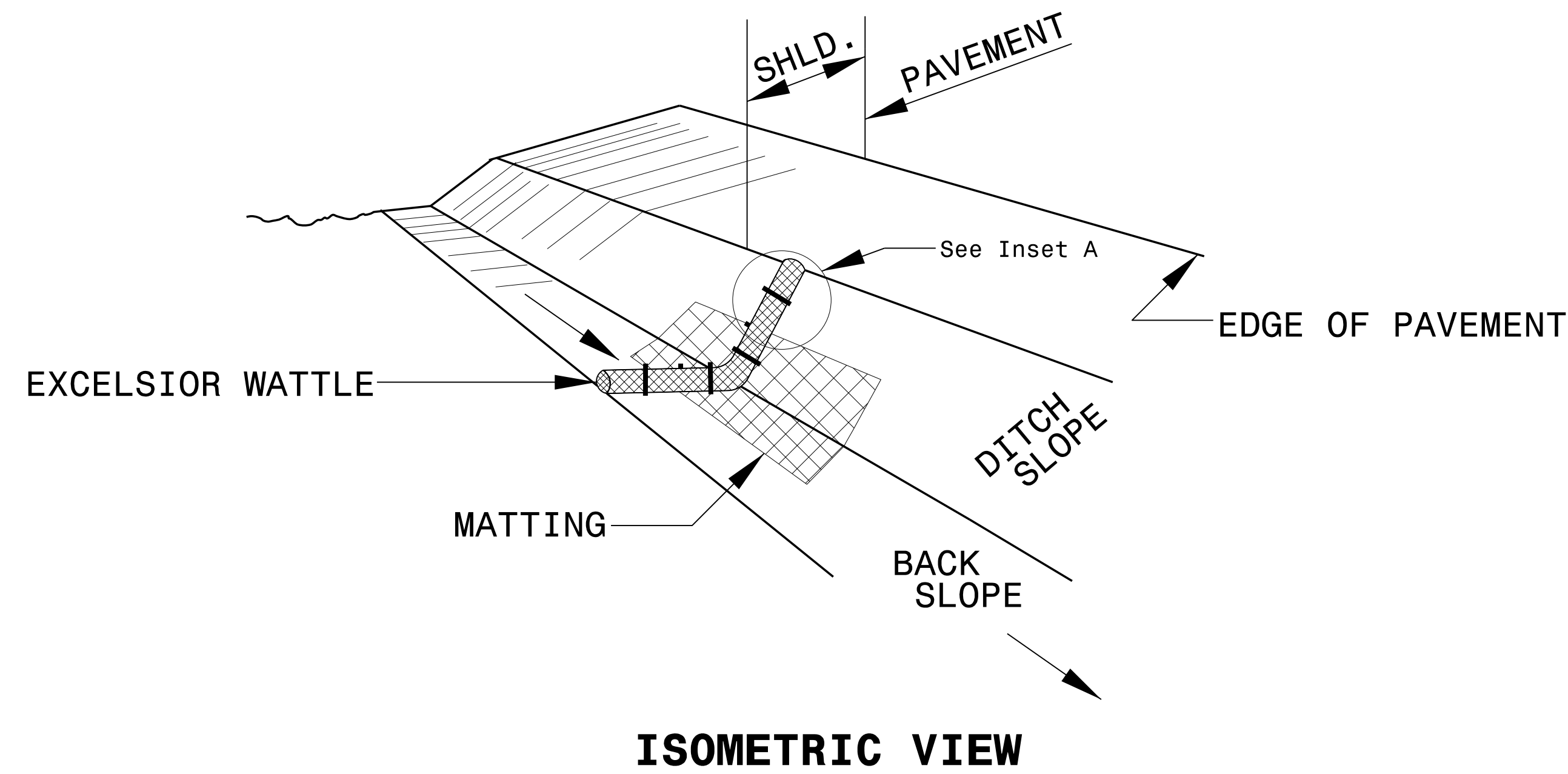
Roadway Standard Drawings

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	

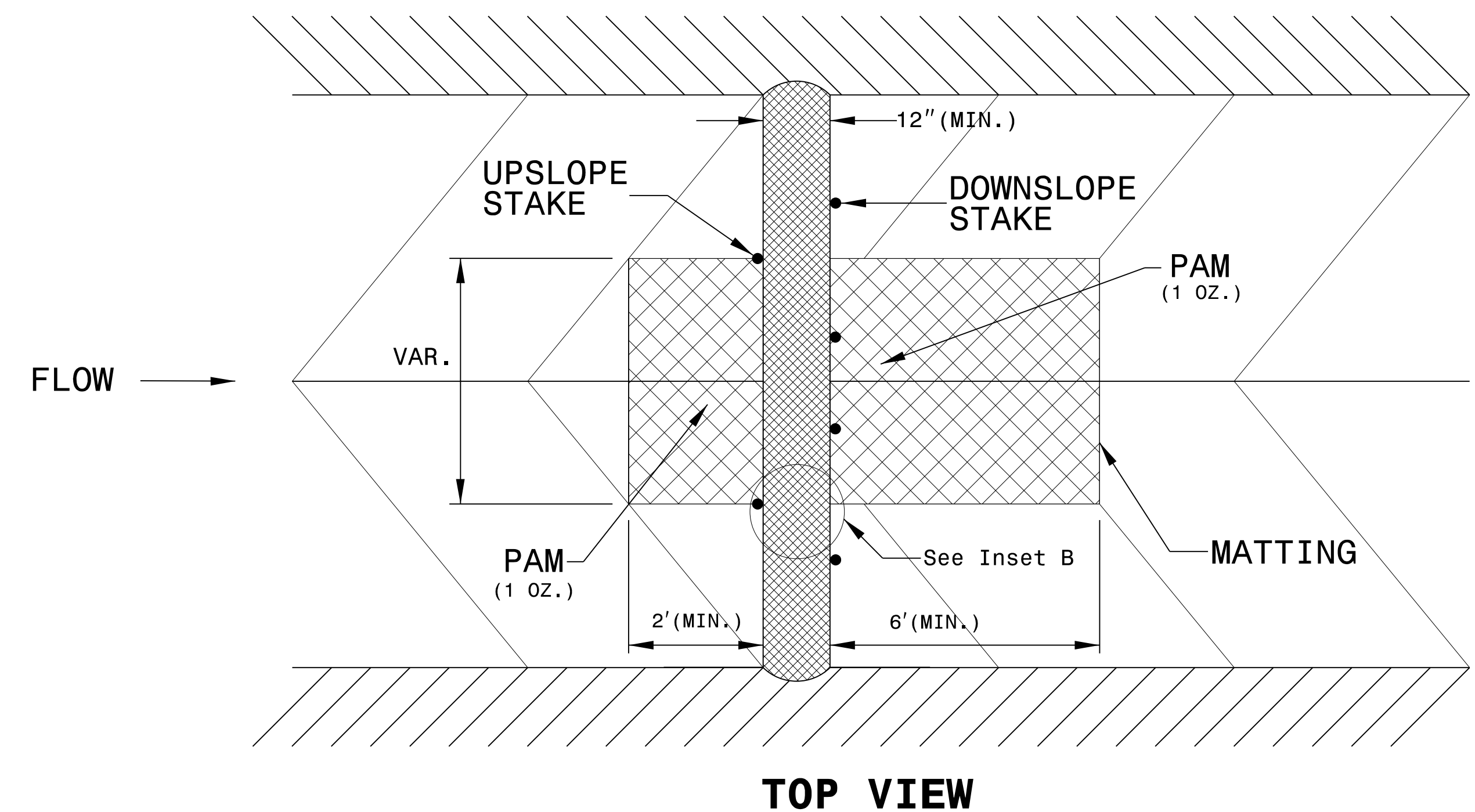
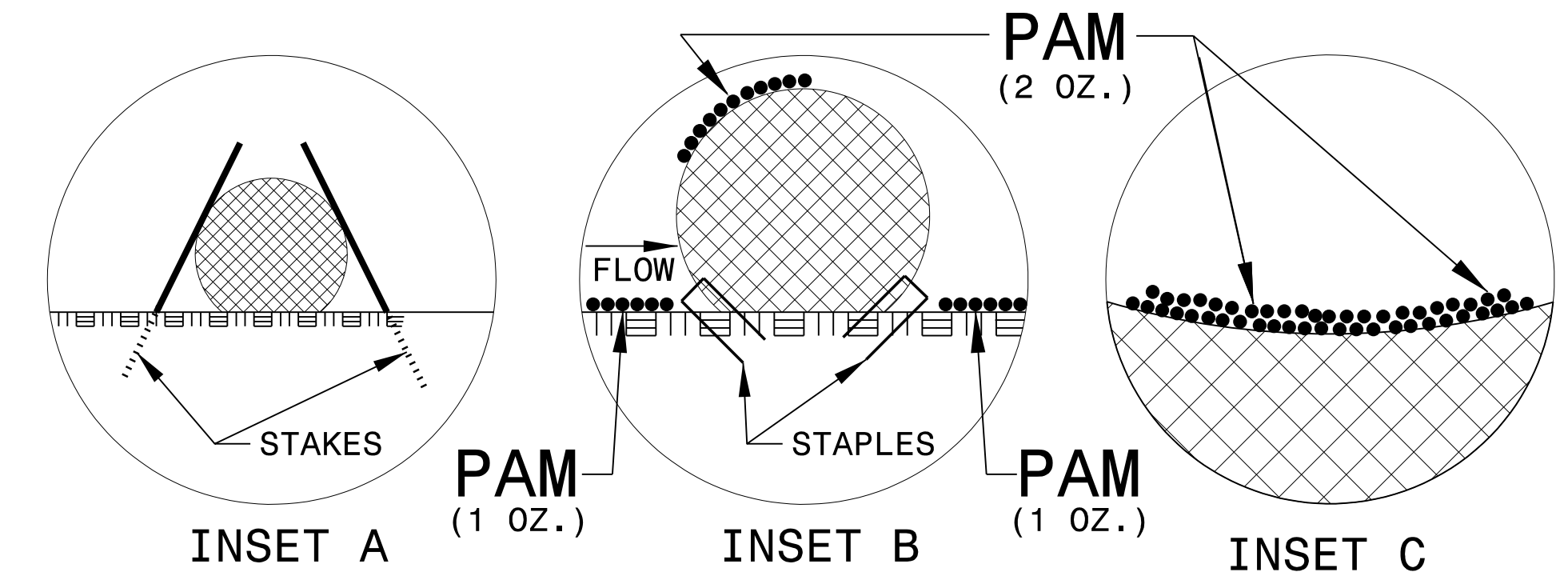
PROJECT REFERENCE NO. W-5512	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



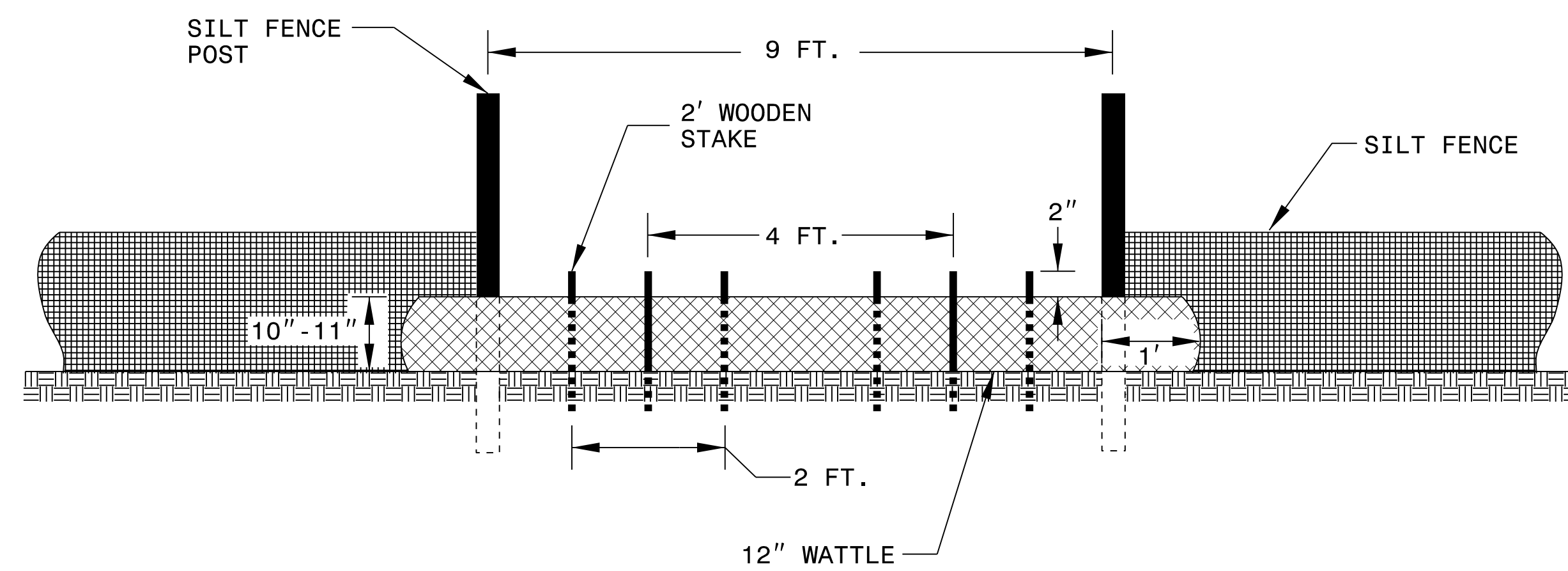
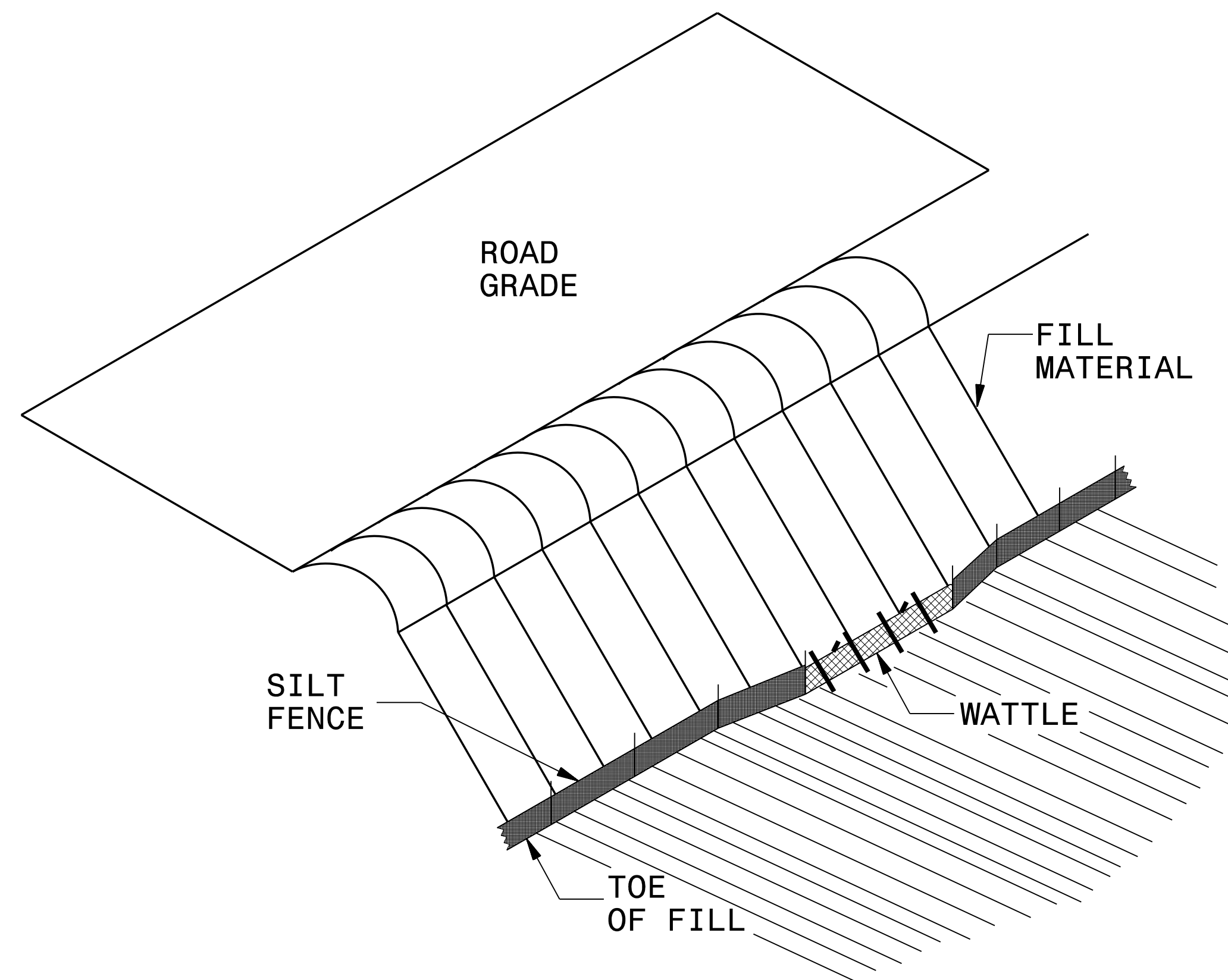
**NOTES:**

- 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.



# SILT FENCE COIR FIBER WATTLE BREAK DETAIL

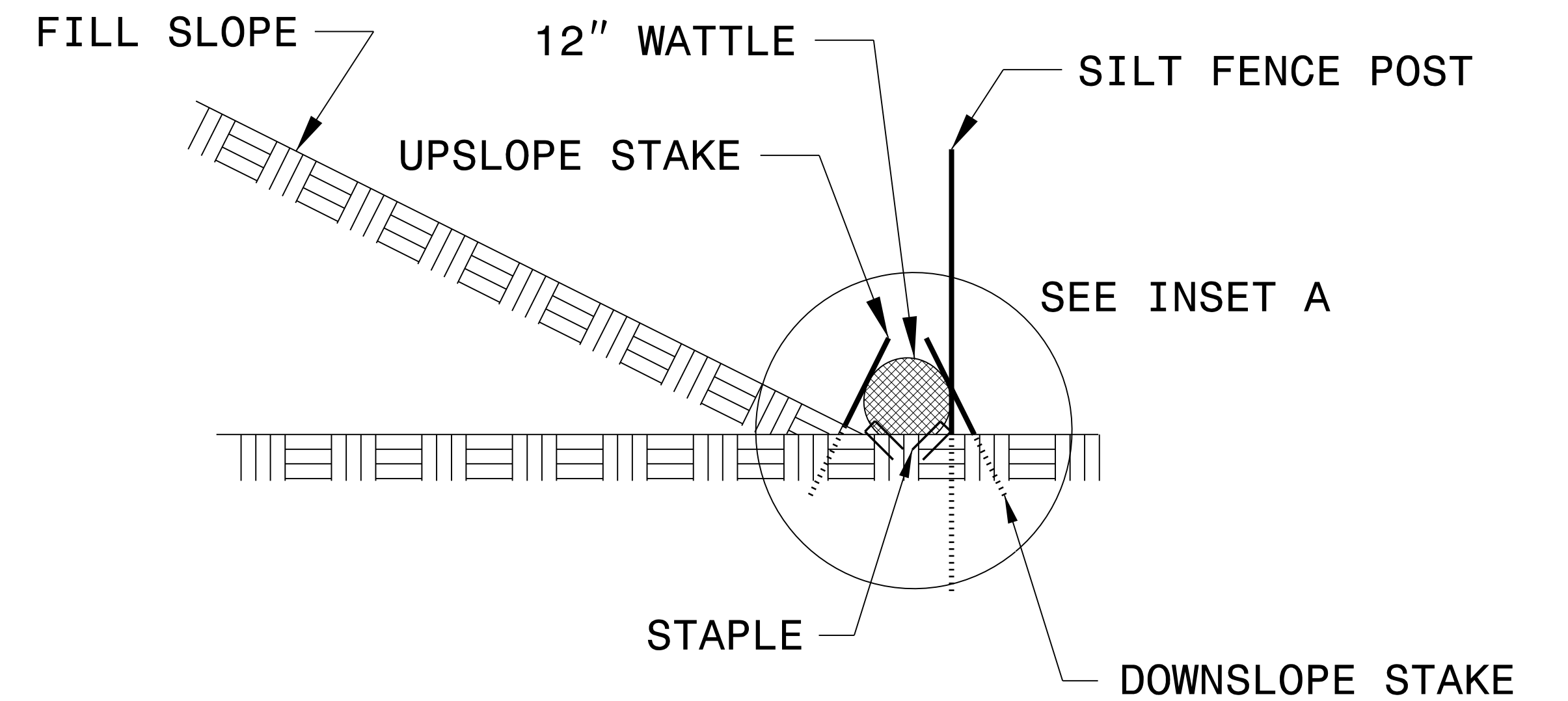
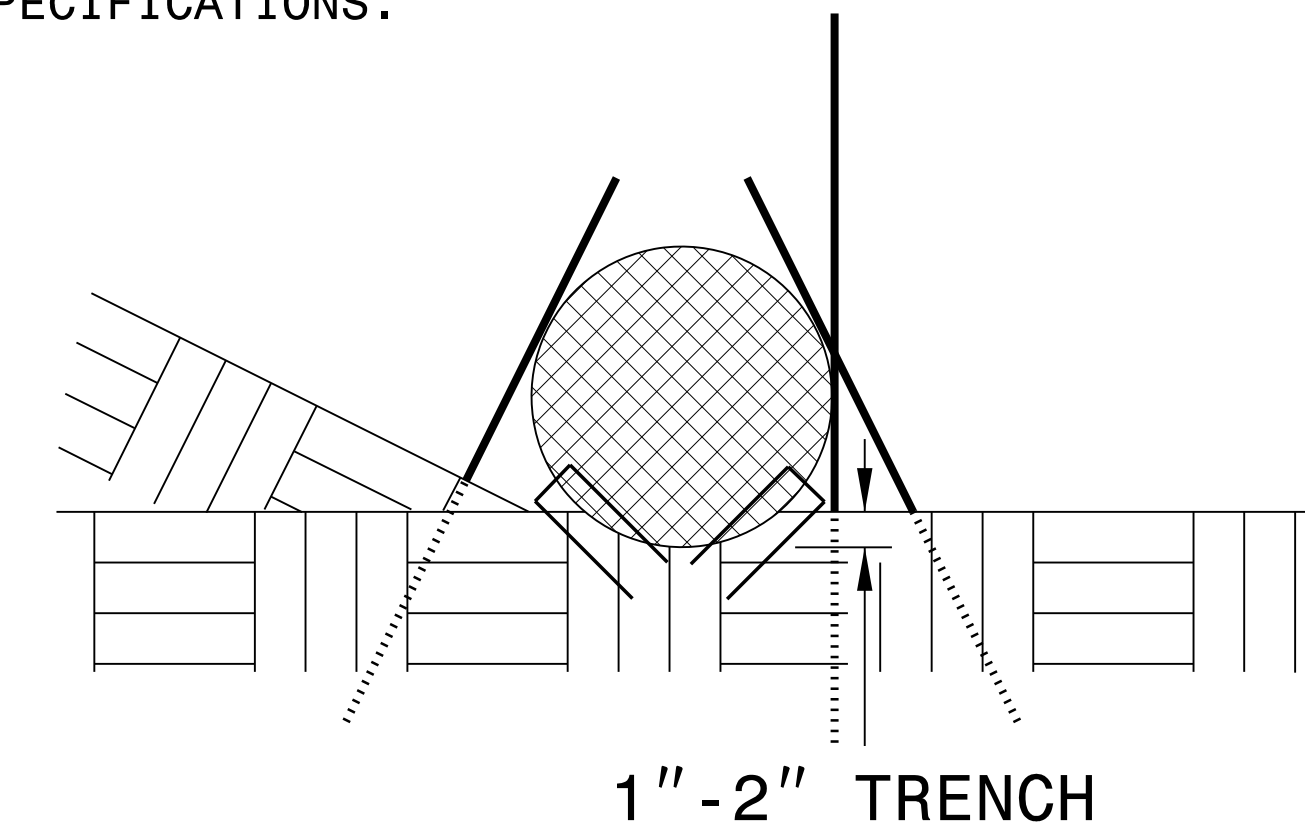
PROJECT REFERENCE NO. <i>W-5512</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**NOTES:**

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- 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.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

**INSET A**



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO.	SHEET NO.
<i>W-5512</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.

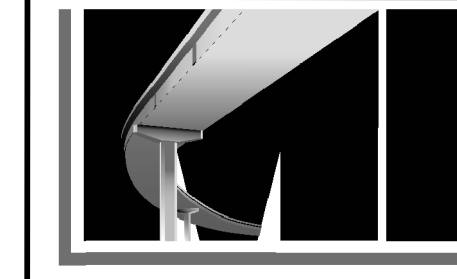




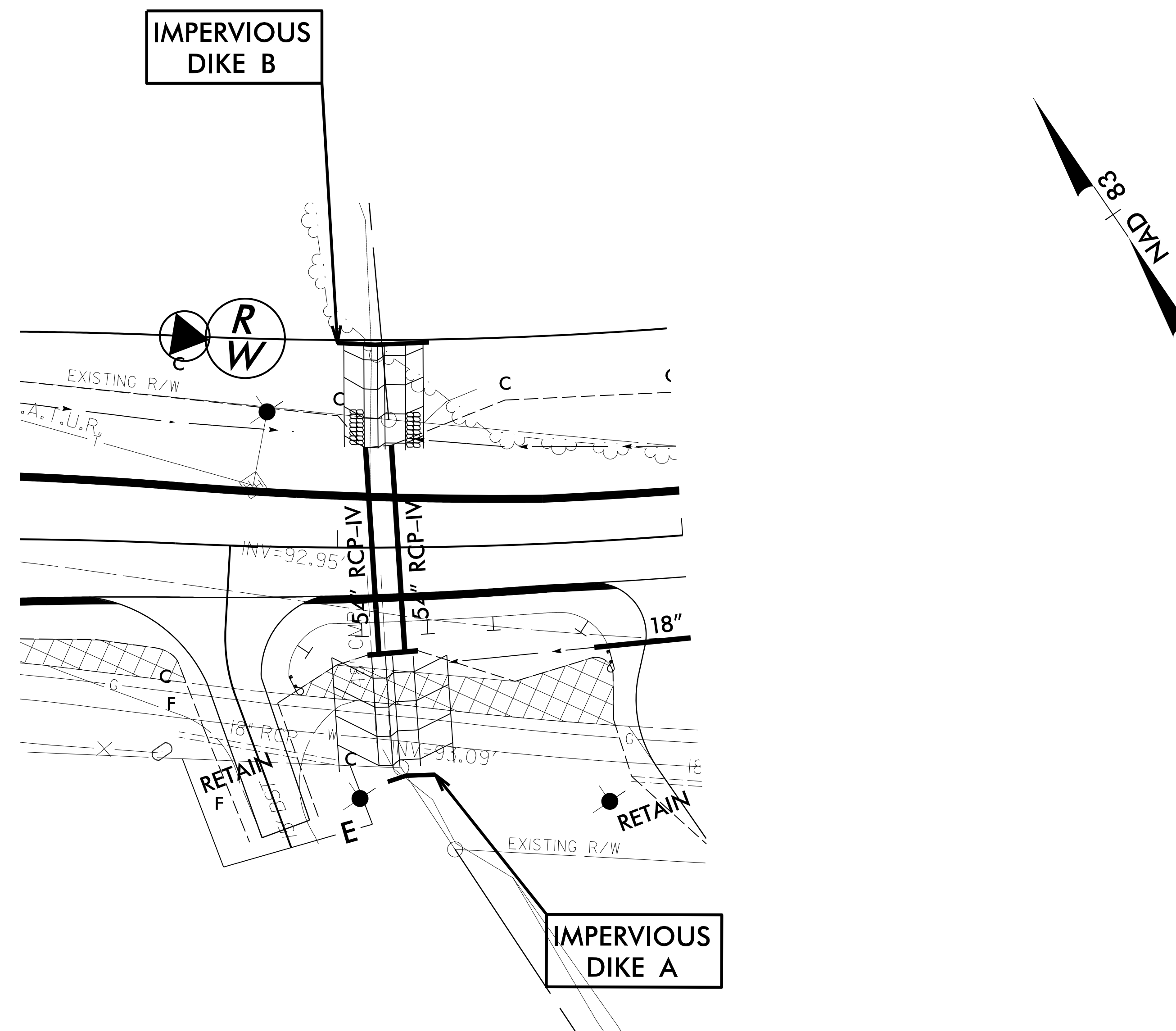
PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-4A/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# CULVERT CONSTRUCTION SEQUENCE STA. 37+10 -L-

1. UTILIZE SPECIAL STILLING BASIN (S) DURING CULVERT CONSTRUCTION AS NEEDED.
2. CONSTRUCT IMPERVIOUS DIKES A & B
3. UTILIZE PUMP AS NEEDED TO DISCHARGE HEADWATERS DOWNSTREAM OF PROJECT LIMITS.
4. REMOVE EXISTING 48" CMP, CONSTRUCT PROPOSED 2@54" RCP-IV PIPE AND INLET AND OUTLET CHANNEL IMPROVEMENT.
5. REMOVE IMPERVIOUS DIKES A AND B AND ANY REMAINING SPECIAL STILLING BASINS.
6. COMPLETE ROADWAY



MI ENGINEERING  
 1011 SCHAUB DRIVE, SUITE 100  
 RALEIGH, NC 27606  
 (919) 851-6606  
 FIRM PE NUMBER : P-0671



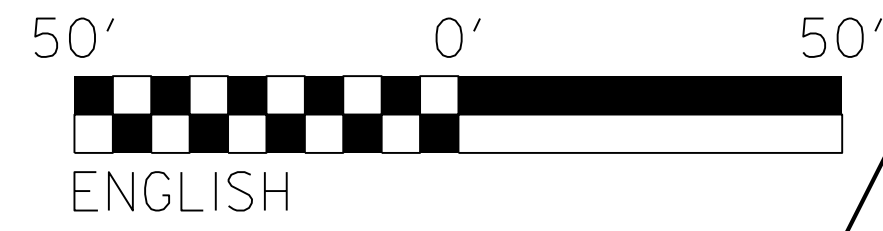


8.17.99

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.

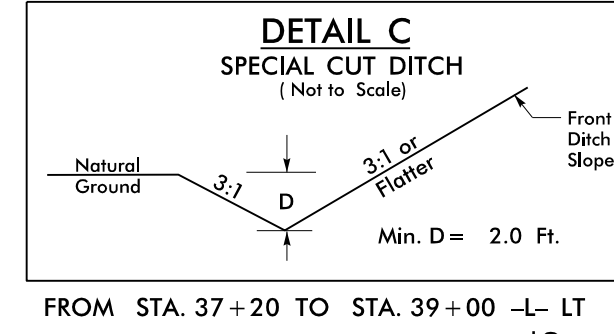
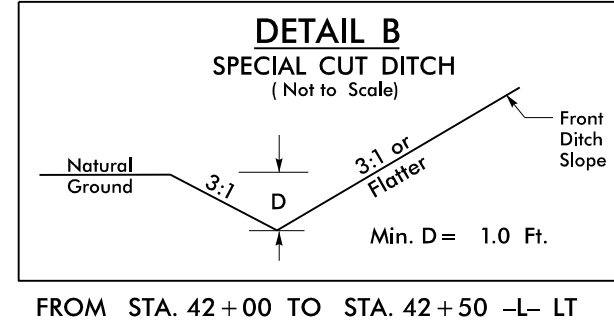
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05



-L-	-DRIVE 4-
PI Sta 34+10.96	PI Sta 40+18.60
$\Delta = 23^{\circ} 27' 35.8''$ (RT)	$\Delta = 33^{\circ} 52' 34.8''$ (LT)
D = 4' 46" 28.7"	D = 4' 46" 28.7"
L = 491.34'	L = 709.50'
T = 249.16'	T = 365.46'
R = 1,200.00'	R = 1,200.00'
R.O. = 220.00'	R.O. = 220.00'
S.E. = .08	S.E. = .08

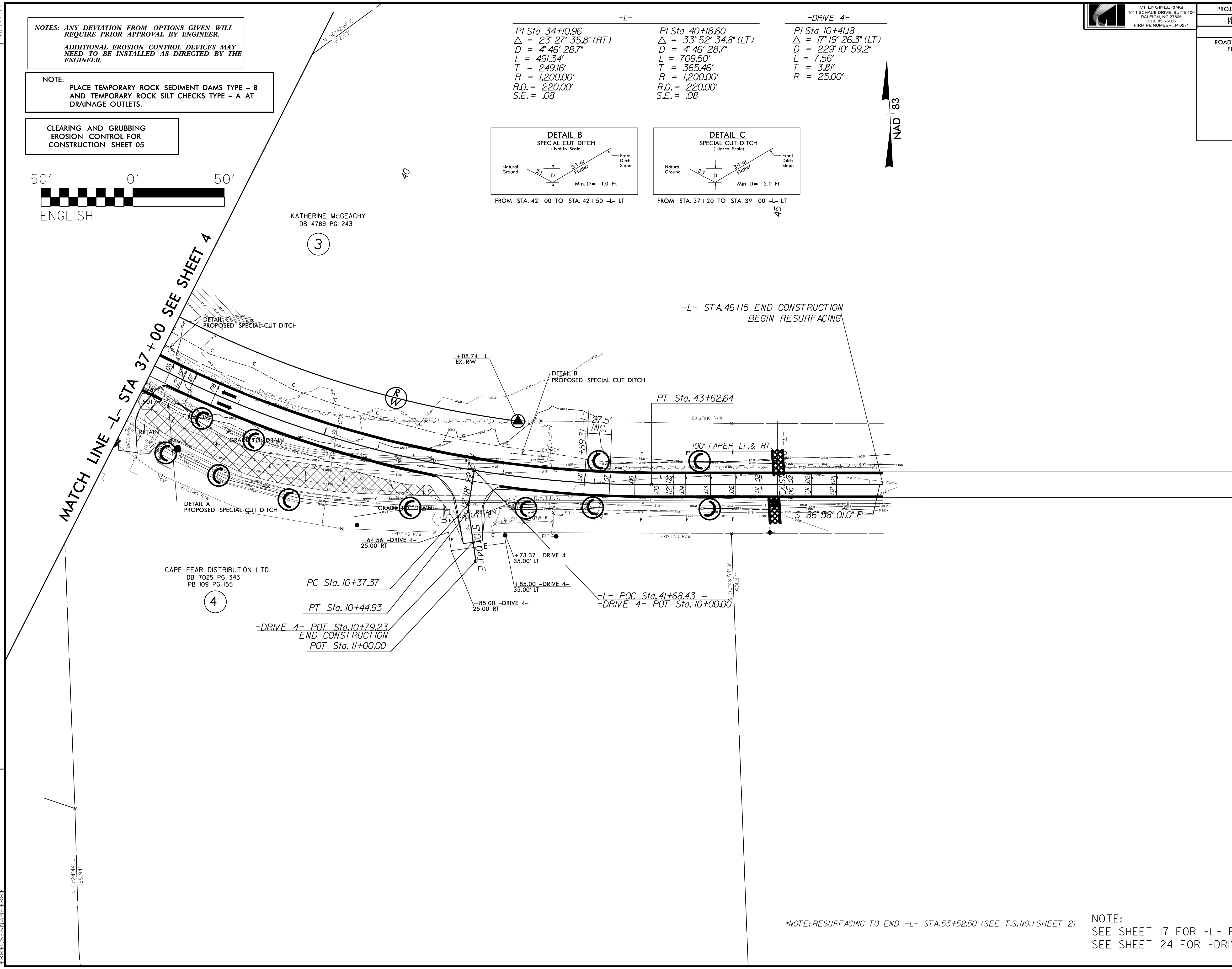
NAD 83



PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-05/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

MATCH LINE -L- STA 37+00 SEE SHEET 4



KATHERINE McGEACHY DB 4789 PG 243

CAPE FEAR DISTRIBUTION LTD DB 7025 PG 343 PB 109 PG 155

-L- STA.46+15 END CONSTRUCTION BEGIN RESURFACING

-DRIVE 4- POT Sta.10+79.23 END CONSTRUCTION POT Sta.11+00.00

\*NOTE: RESURFACING TO END -L- STA.53+52.50 (SEE T.S.NO.1 SHEET 2)

NOTE: SEE SHEET 17 FOR -L- PROFILE SEE SHEET 24 FOR -DRIVE 4- PROFILE

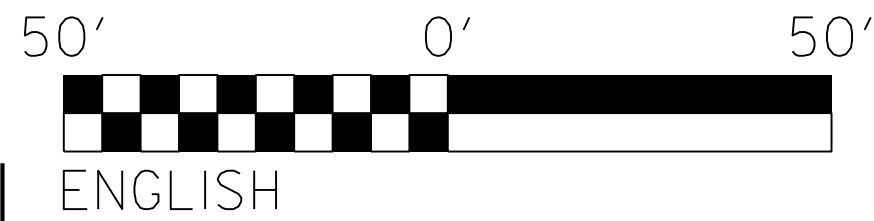
MATCH LINE -L- STA 51+00 SEE SHEET 6

8.17.99

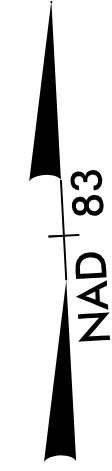
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.  
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 06



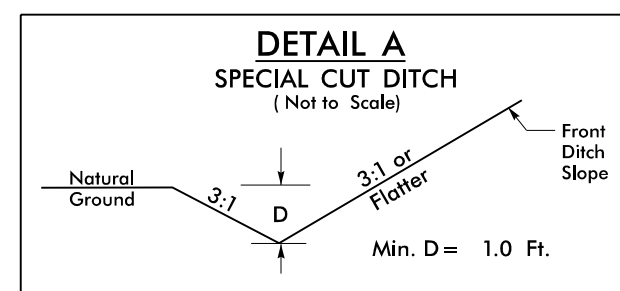
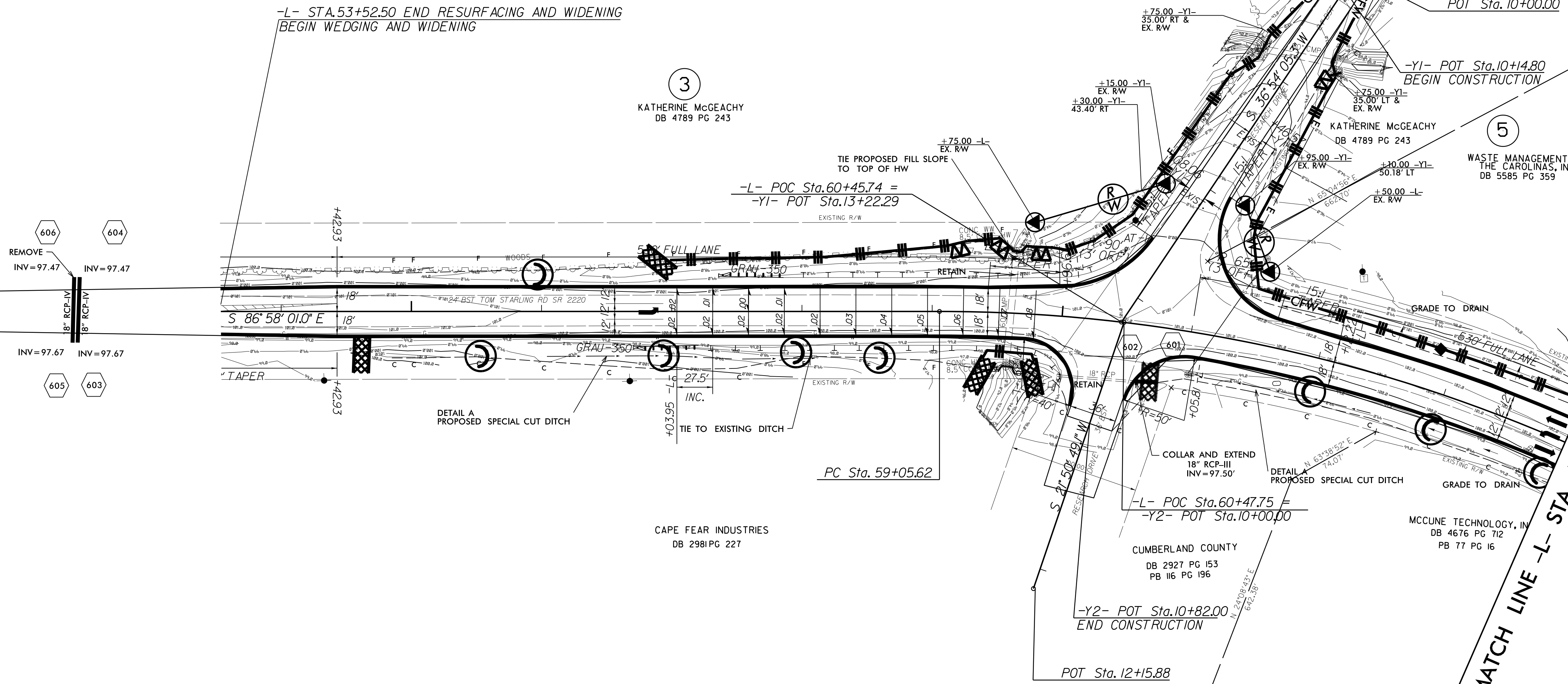
-L-  
PI Sta. 62+83.16  
Δ = 34° 55' 46.1" (RT)  
D = 4' 46" 28.7"  
L = 731.56'  
T = 377.55'  
R = 1,200.00'  
R.O. = 220'  
SE = 0.08



PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-06/CONST.06
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE -L- STA 51+00 SEE SHEET 5

MATCH LINE -L- STA 64+00 SEE SHEET 7



\*NOTE: RESURFACING TO BEGIN -L- STA. 46+15 (SEE T.S.NO.1 SHEET 2)

FROM STA. 54+00 TO STA. 57+50 -L- RT  
FROM STA. 61+00 TO STA. 62+50 -L- RT

NOTE:  
SEE SHEETS 17 & 18 FOR -L- PROFILE  
SEE SHEET 23 FOR -Y1- & -Y2- PROFILE

REVISIONS

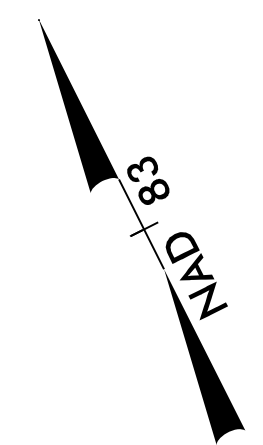
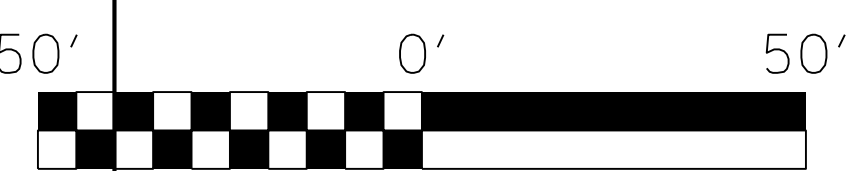
PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-07/CONST.07
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 07

-L-  
 PI Sta 62+83.16  
 $\Delta = 34^{\circ} 55' 46.1''$  (RT)  
 $D = 4^{\circ} 46' 28.7''$   
 $L = 731.56'$   
 $T = 377.55'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$

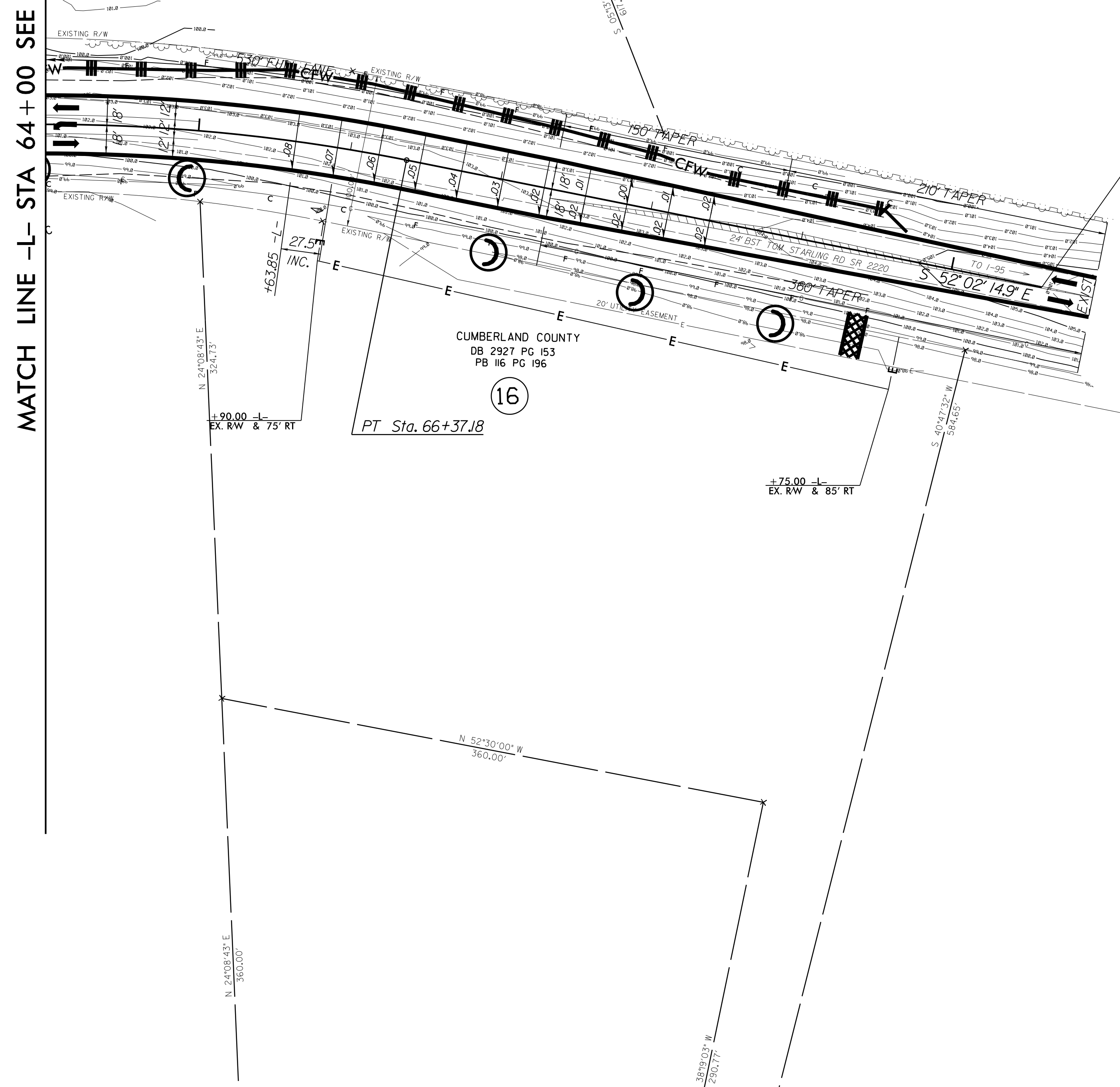


ENGLISH

MATCH LINE -L- STA 64+00 SEE SHEET 6

5  
 WASTE MANAGEMENT OF THE CAROLINAS, INC  
 DB 5585 PG 359

-L- STA.70+60 END WEDGING BEGIN RESURFACING



16  
 CUMBERLAND COUNTY  
 DB 2927 PG 153  
 PB 116 PG 196

MATCH LINE -L- STA 77+00 SEE SHEET 8

REVISIONS

\*NOTE: RESURFACING TO END -L- STA.84+95.14 (SEE T.S.NO.1 SHEET 2)

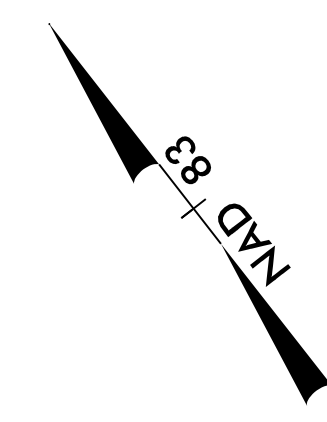
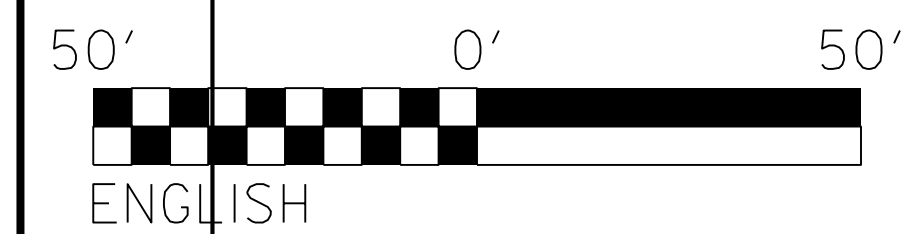
NOTE: SEE SHEET 18 FOR -L- PROFILE

PROJECT REFERENCE NO. <i>W-5512</i>	SHEET NO. <i>EC-08/CONST.08</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

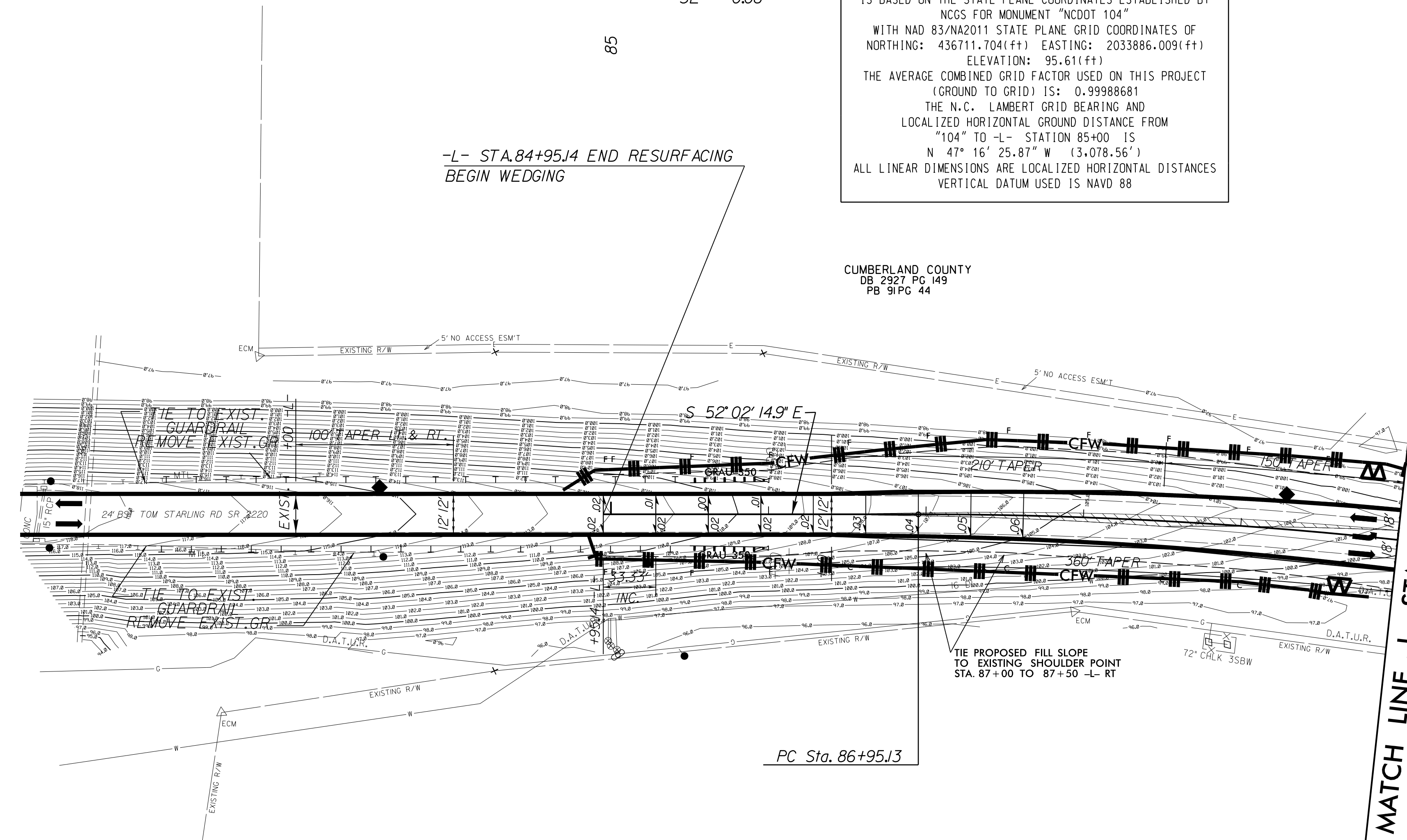
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 08



-L-  
PI Sta 90+89.36  
 $\Delta = 15^{\circ} 40' 10.6''$  (RT)  
 $D = 1^{\circ} 59' 59.5''$   
 $L = 783.54'$   
 $T = 394.23'$   
 $R = 2,865.00'$   
 $R.O. = 200'$   
 $SE = 0.06$

**DATUM DESCRIPTION**  
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "NCDOT 104" WITH NAD 83/NA2011 STATE PLANE GRID COORDINATES OF NORTHING: 436711.704(ft) EASTING: 2033886.009(ft) ELEVATION: 95.61(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988681 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "104" TO -L- STATION 85+00 IS N 47° 16' 25.87" W (3,078.56') ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

CUMBERLAND COUNTY  
DB 2927 PG 149  
PB 91 PG 44



MATCH LINE -L- STA 77+00 SEE SHEET 7

MATCH LINE -L- STA 90+00 SEE SHEET 9

EXETER 4800 CORPORATION LLC  
DB 8679 PG 810  
PB 92 PG 103

\*NOTE: RESURFACING TO BEGIN -L- STA.70+60 (SEE T.S.NO.1 SHEET 2)

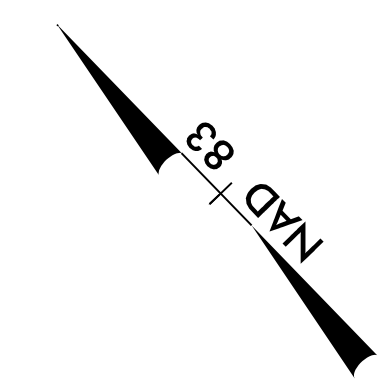
NOTE: SEE SHEETS 18 & 19 FOR -L- PROFILE

REVISIONS

8.17.99

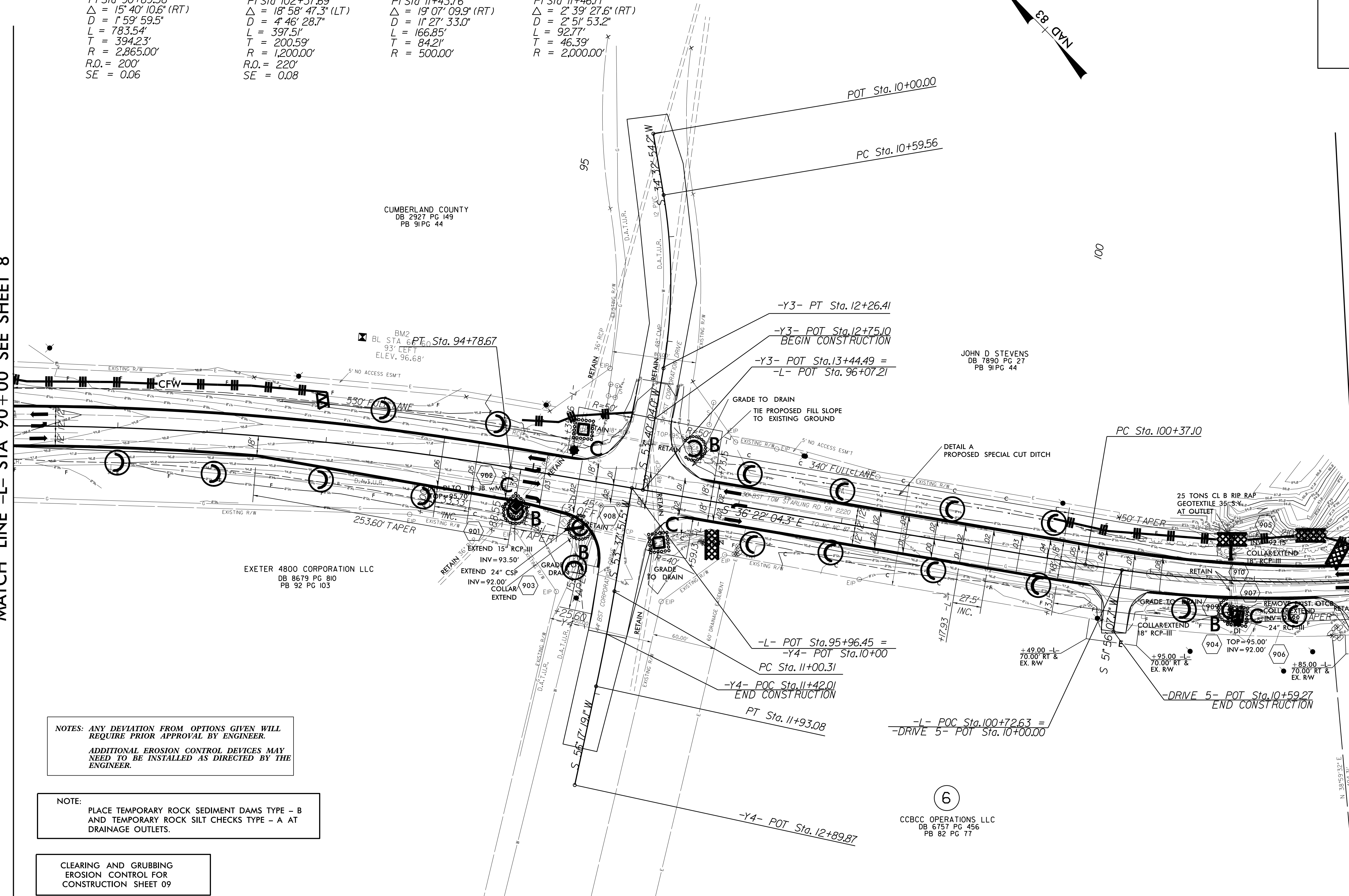
PROJECT REFERENCE NO. <i>W-5512</i>	SHEET NO. <i>EC-09/CONST.09</i>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

-L-	-Y3-	-Y4-
PI Sta 90+89.36	PI Sta 102+37.69	PI Sta 11+43.76
$\Delta = 15^\circ 40' 10.6" (RT)$	$\Delta = 18^\circ 58' 47.3" (LT)$	$\Delta = 19^\circ 07' 09.9" (RT)$
$D = 1^\circ 59' 59.5"$	$D = 4^\circ 46' 28.7"$	$D = 1^\circ 27' 33.0"$
$L = 783.54'$	$L = 397.51'$	$L = 166.85'$
$T = 394.23'$	$T = 200.59'$	$T = 84.21'$
$R = 2,865.00'$	$R = 1,200.00'$	$R = 500.00'$
$R.O. = 200'$	$R.O. = 220'$	$R = 2,000.00'$
$SE = 0.06$	$SE = 0.08$	



MATCH LINE -L- STA 90+00 SEE SHEET 8

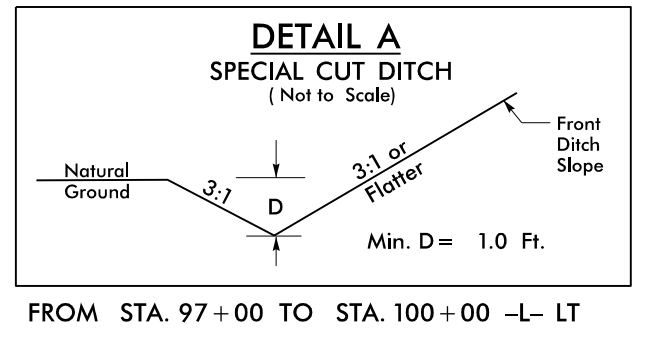
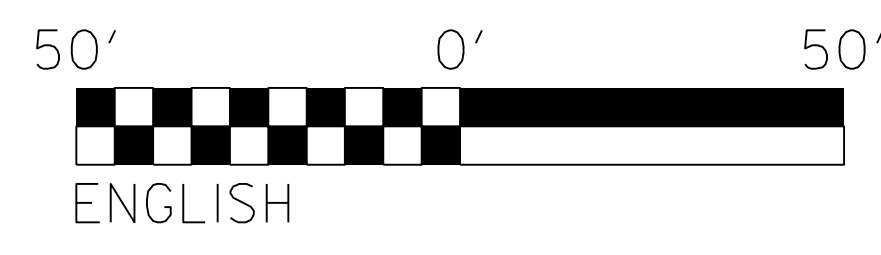
MATCH LINE -L- STA 103+00 SEE SHEET 10



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.

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 09



NOTE:  
SEE SHEET 19 FOR -L- PROFILE  
SEE SHEET 24 FOR -DRIVE 5- PROFILE

REVISIONS

8.17.09

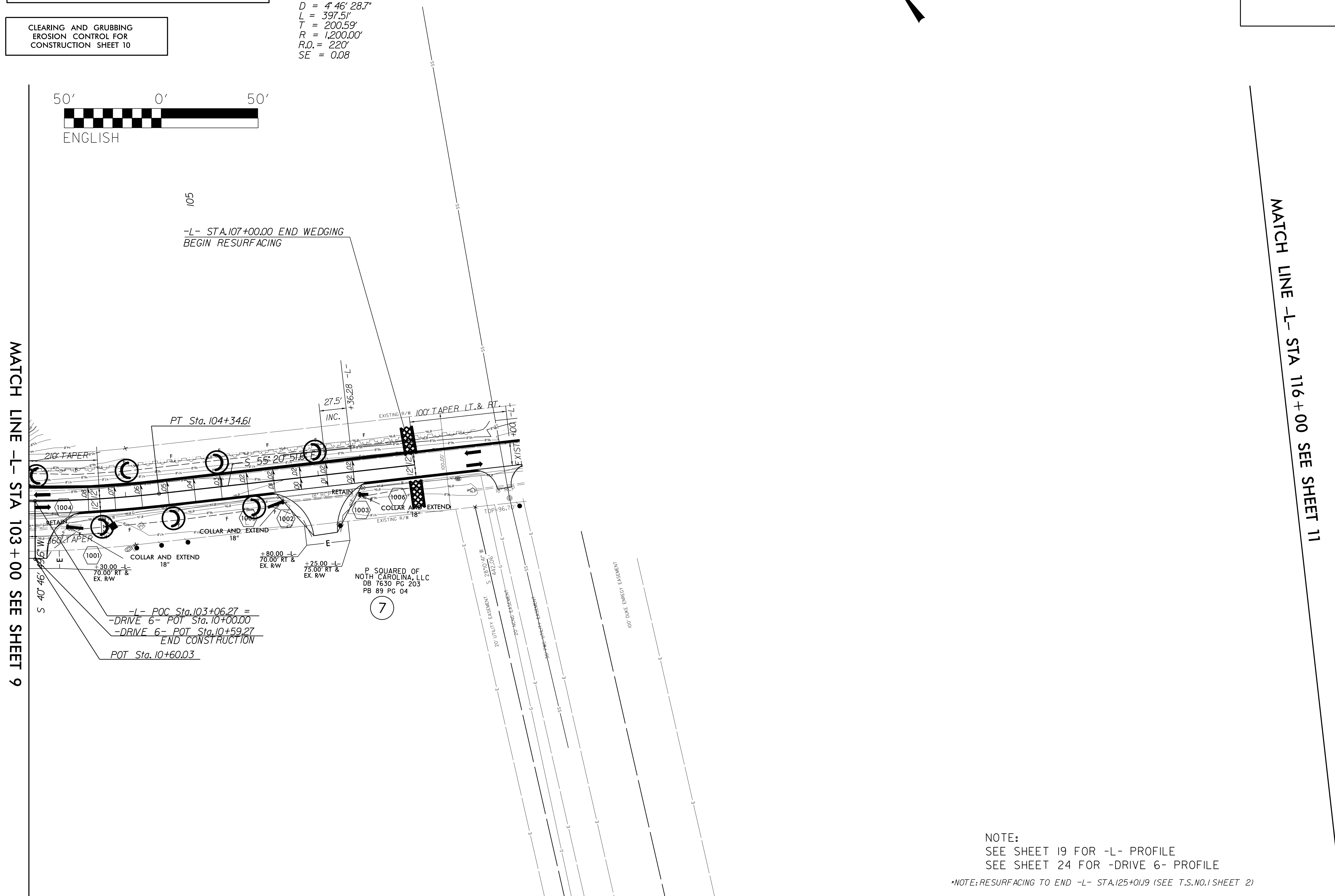
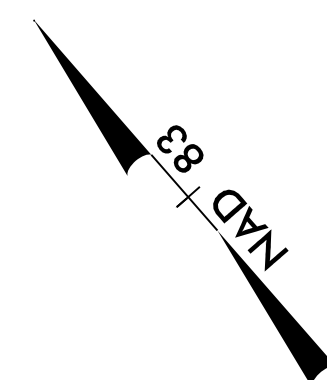
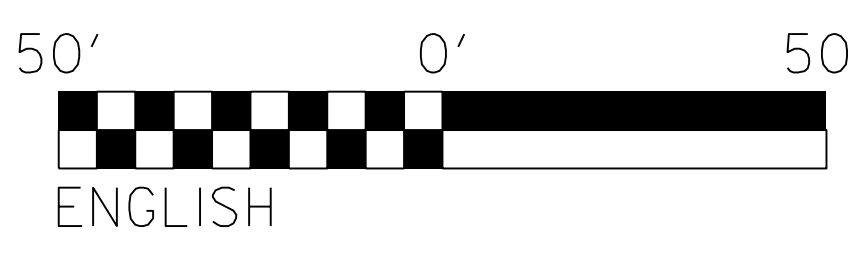
PROJECT REFERENCE NO. W-5512	SHEET NO. EC-10/CONST.10
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

-L-  
 PI Sta 102+37.69  
 $\Delta = 18^{\circ} 58' 47.3" (LT)$   
 $D = 4' 46" 28.7"$   
 $L = 397.5'$   
 $T = 200.59'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



REVISIONS

NOTE:  
 SEE SHEET 19 FOR -L- PROFILE  
 SEE SHEET 24 FOR -DRIVE 6- PROFILE  
 \*NOTE: RESURFACING TO END -L- STA. 125+01.19 (SEE T.S. NO. 1 SHEET 2)

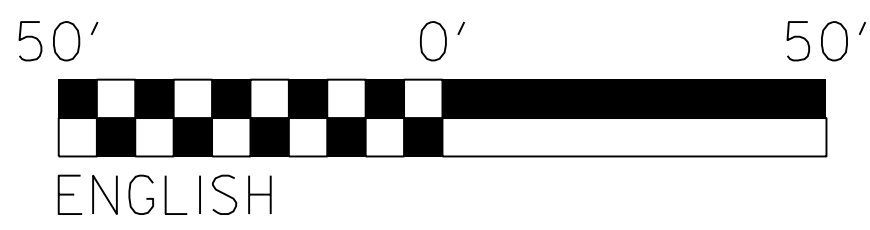
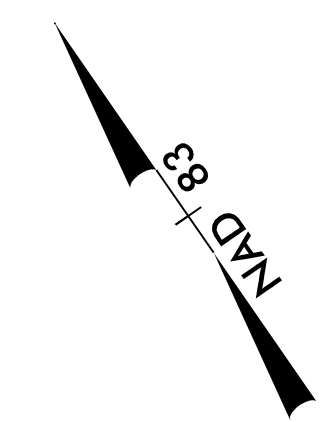
PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-II/CONST.11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

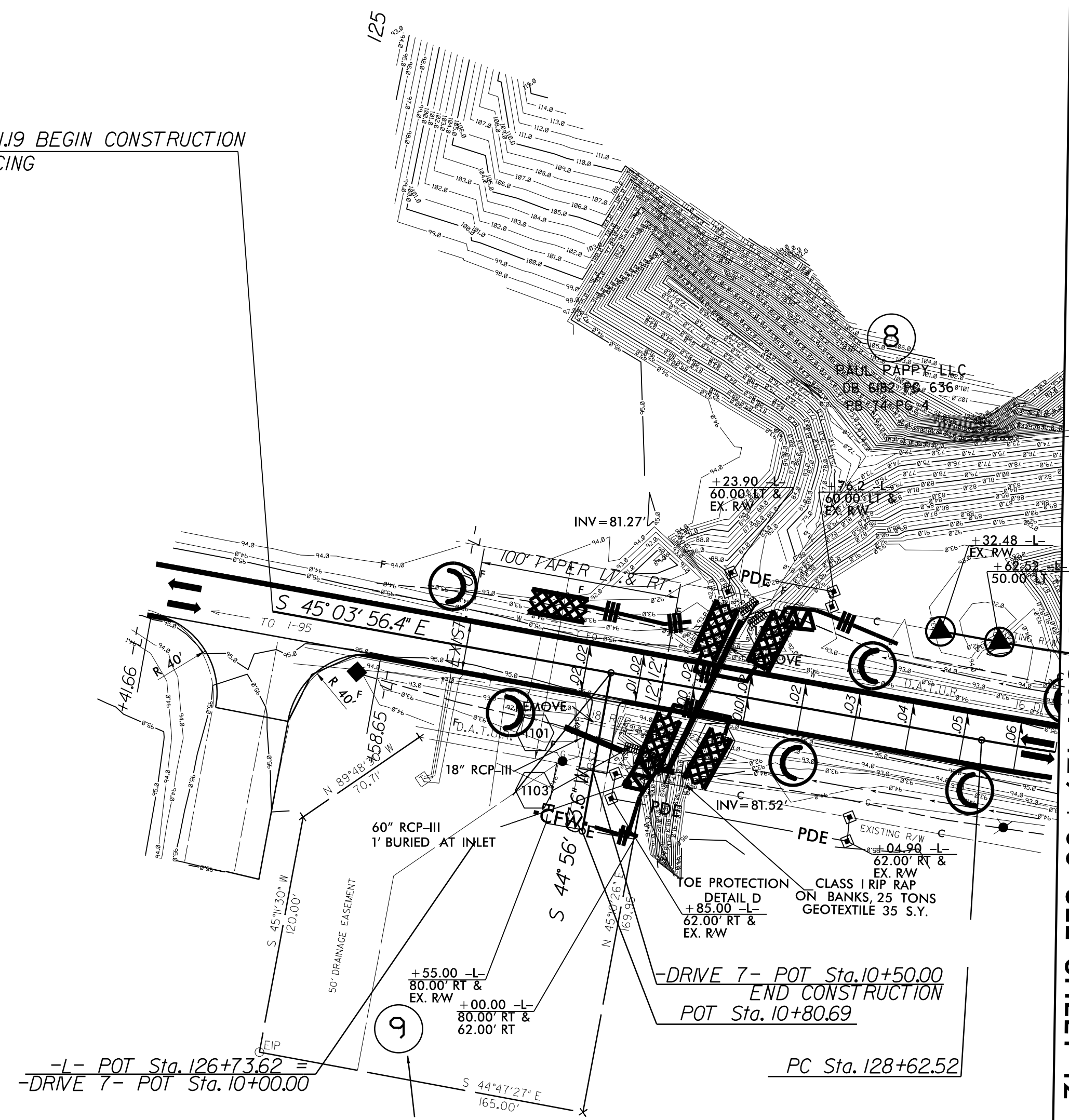
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11

-L-  
 PI Sta 135+01.19  
 $\Delta = 67^{\circ}16'10.3" (LT)$   
 $D = 4'46"28.7"$   
 $L = 1,408.89'$   
 $T = 798.33'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$

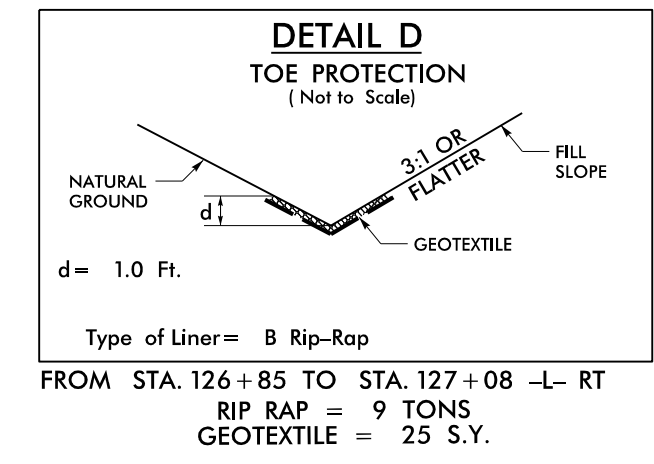
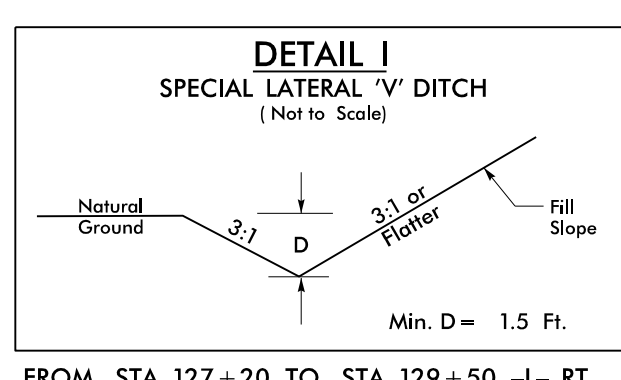


MATCH LINE -L- STA 116+00 SEE SHEET 10

-L- STA.125+01.9 BEGIN CONSTRUCTION  
 END RESURFACING



MATCH LINE -L- STA 129+00 SEE SHEET 12



**DATUM DESCRIPTION**  
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "NCDOT 104"  
 WITH NAD 83/NA2011 STATE PLANE GRID COORDINATES OF  
 NORTHING: 436711.704(ft) EASTING: 2033886.0091(ft)  
 ELEVATION: 95.61(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988681  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "104" TO -L- STATION 126+00 IS  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

10  
 NITTA GELATIN USA INC  
 DB 6883 PG 222  
 PB 98 PG 64

NOTE:  
 SEE SHEET 20 FOR -L- PROFILE  
 SEE SHEET 25 FOR -DRIVE 7- PROFILE

\*NOTE: RESURFACING TO BEGIN -L- STA.107+00 (SEE T.S.NO.1 SHEET 2)

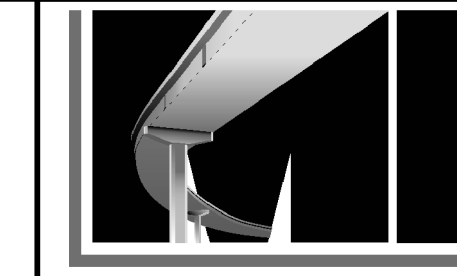
REVISIONS

8.17.17/99

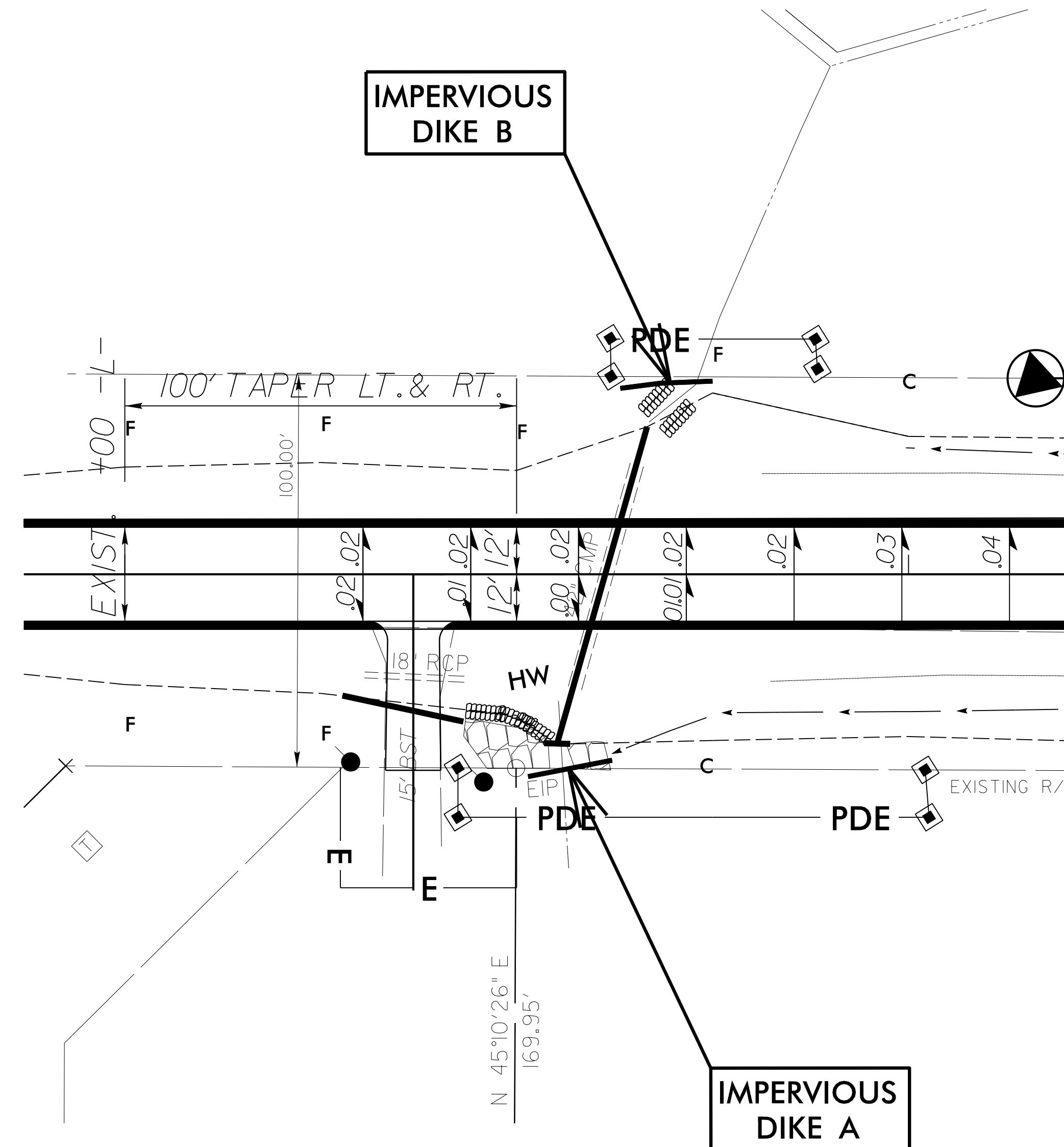
# CULVERT CONSTRUCTION SEQUENCE STA. 127+23 -L-

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-11A/CONST/11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. UTILIZE SPECIAL STILLING BASIN (S) DURING CULVERT CONSTRUCTION AS NEEDED.
2. CONSTRUCT IMPERVIOUS DIKES A & B
3. UTILIZE PUMP AS NEEDED TO DISCHARGE HEADWATERS DOWNSTREAM OF PIPE CONSTRUCTION.
4. REMOVE EXISTING 42" CMP, CONSTRUCT PROPOSED 60" RCP-III WITH HEADWALL.
5. REMOVE IMPERVIOUS DIKES A AND B AND ANY REMAINING SPECIAL STILLING BASINS.
6. COMPLETE ROADWAY



MI ENGINEERING  
 1011 SCHAUB DRIVE, SUITE 100  
 RALEIGH, NC 27606  
 (919) 851-6606  
 FIRM PE NUMBER : P-0671



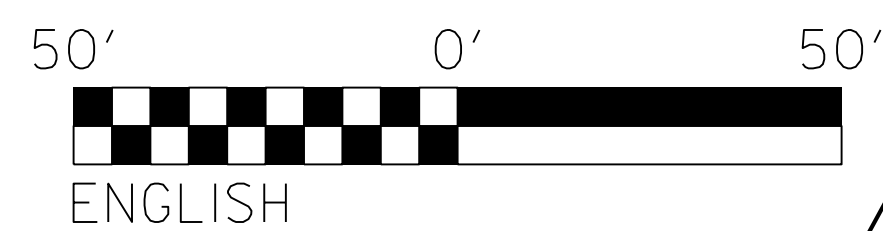


PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-12/CONST.12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

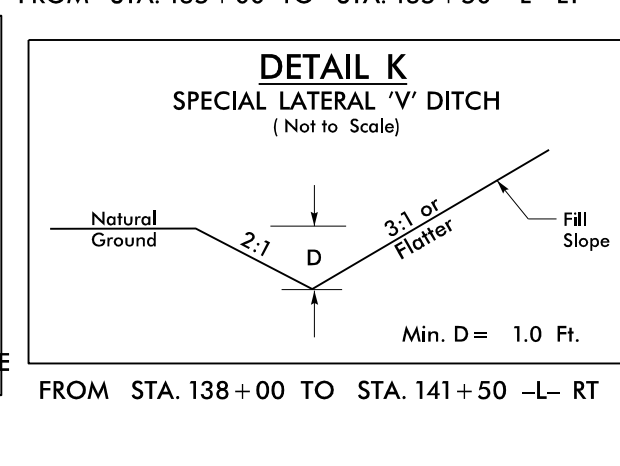
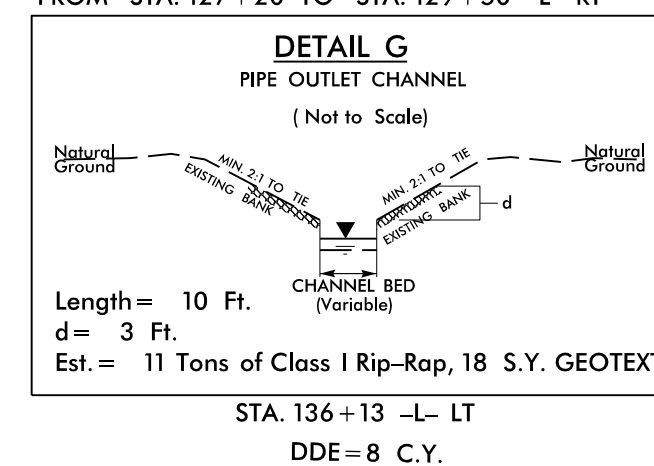
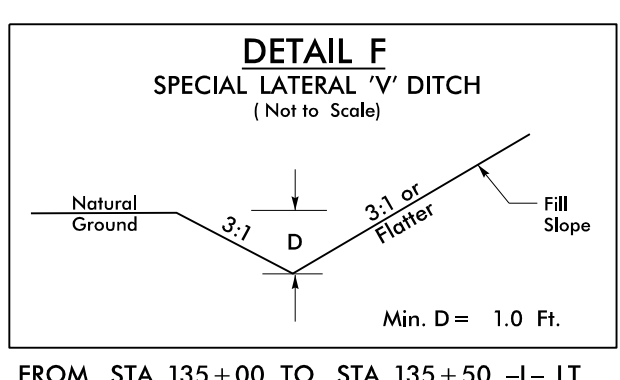
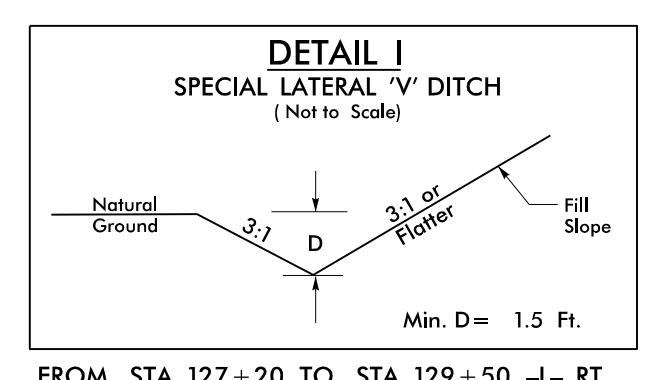
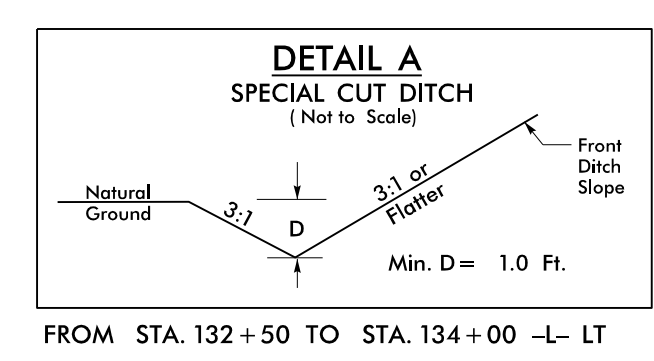
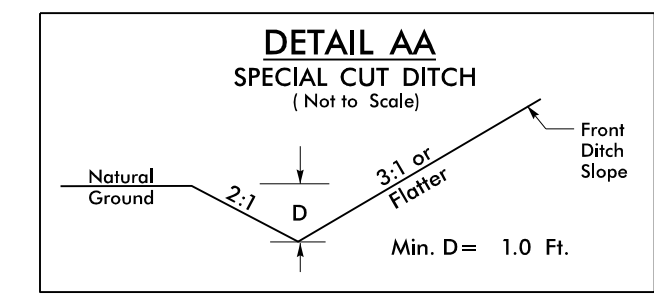
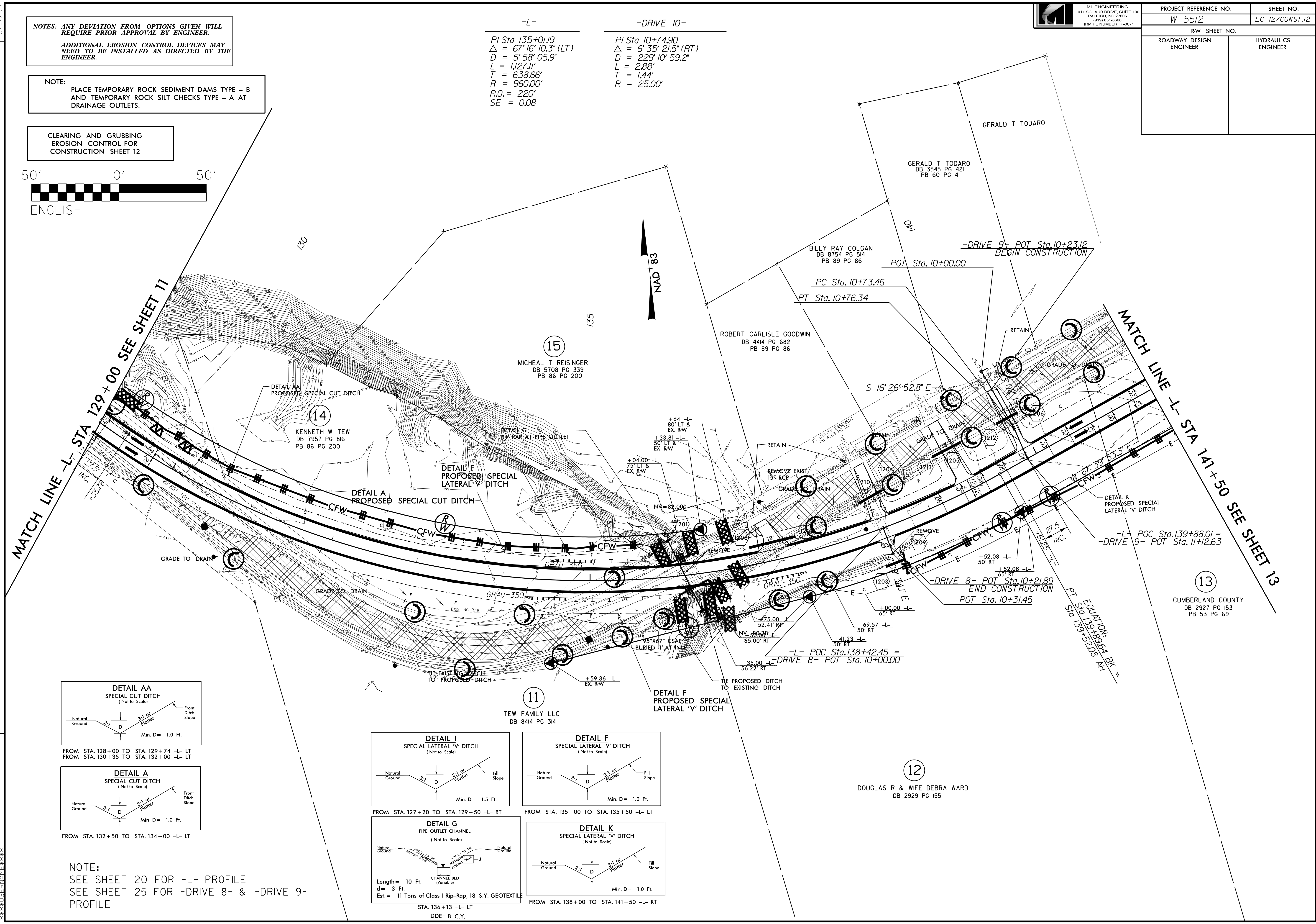
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12



-L-  
PI Sta 135+01.9  
Δ = 67°16'10.3" (LT)  
D = 5°58'05.9"  
L = 1127.11'  
T = 638.66'  
R = 960.00'  
R.O. = 220'  
SE = 0.08

-DRIVE 10-  
PI Sta 10+74.90  
Δ = 6°35'21.5" (RT)  
D = 229°10'59.2"  
L = 2.88'  
T = 1.44'  
R = 25.00'



NOTE:  
SEE SHEET 20 FOR -L- PROFILE  
SEE SHEET 25 FOR -DRIVE 8- & -DRIVE 9- PROFILE

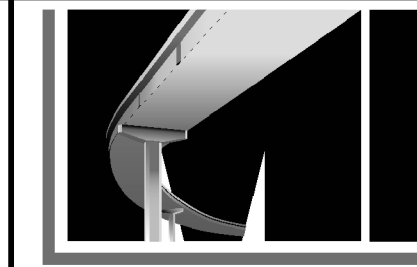
REVISIONS

8.17.99

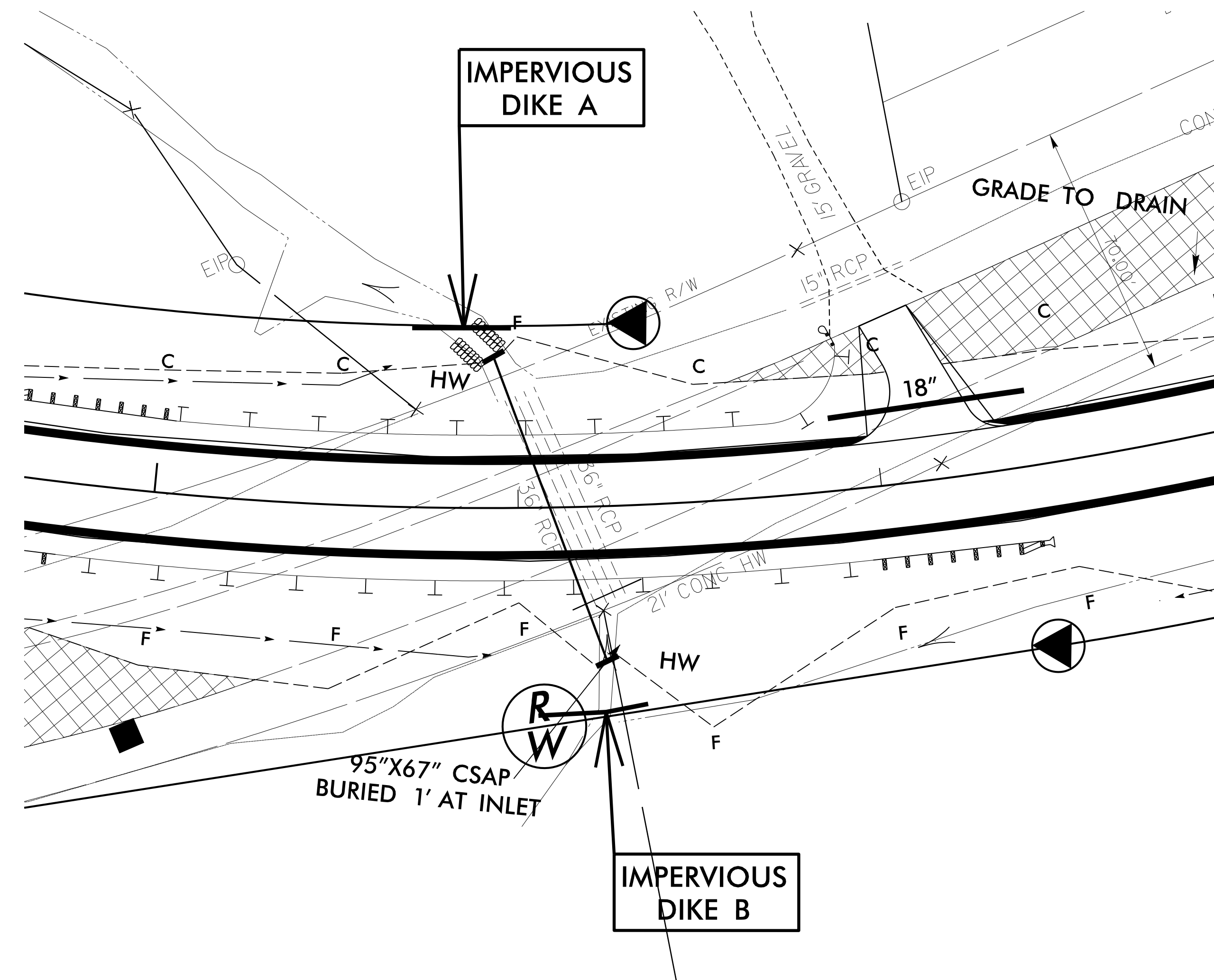
# CULVERT CONSTRUCTION SEQUENCE STA. 136+13 -L-

PROJECT REFERENCE NO. W-5512	SHEET NO. EC-12A/CONSTJ2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. UTILIZE SPECIAL STILLING BASIN (S) DURING CULVERT CONSTRUCTION AS NEEDED.
2. CONSTRUCT IMPERVIOUS DIKES A & B
3. UTILIZE PUMP AS NEEDED TO DISCHARGE HEADWATERS DOWNSTREAM OF PIPE CONSTRUCTION.
4. REMOVE EXISTING 2@36" RCP, CONSTRUCT PROPOSED 95"X67" CSAP WITH HEADWALLS.
5. REMOVE IMPERVIOUS DIKES A AND B AND ANY REMAINING SPECIAL STILLING BASINS.
6. COMPLETE ROADWAY



MI ENGINEERING  
1011 SCHAUB DRIVE, SUITE 100  
RALEIGH, NC 27606  
(919) 851-6606  
FIRM PE NUMBER : P-0671



PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-13/CONST.13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

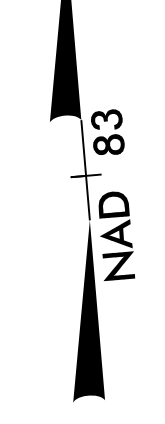
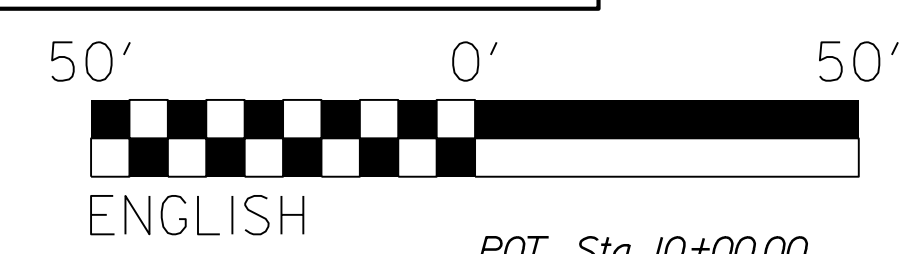
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13

-L-  
PI Sta 147+28.94  
 $\Delta = 42^\circ 25' 45.6" (RT)$   
D = 4' 46" 28.7"  
L = 888.64'  
T = 465.80'  
R = 1,200.00'  
R.O. = 220'  
SE = 0.08

-Y5-  
PI Sta 11+77.72  
 $\Delta = 11^\circ 59' 53.9" (LT)$   
D = 11' 27" 33.0"  
L = 104.70'  
T = 52.54'  
R = 500.00'

-Y6-  
PI Sta 10+65.65  
 $\Delta = 11^\circ 45' 20.1" (LT)$   
D = 28' 38" 52.4"  
L = 41.03'  
T = 20.59'  
R = 200.00'

-DRIVE 12-  
PI Sta 10+17.70  
 $\Delta = 5^\circ 29' 33.8" (RT)$   
D = 229' 10" 59.2"  
L = 2.40'  
T = 1.20'  
R = 25.00'

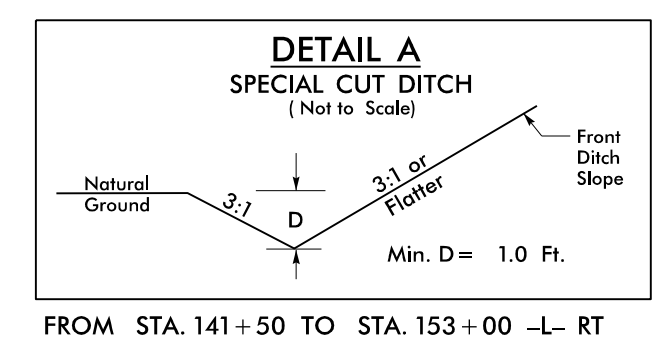
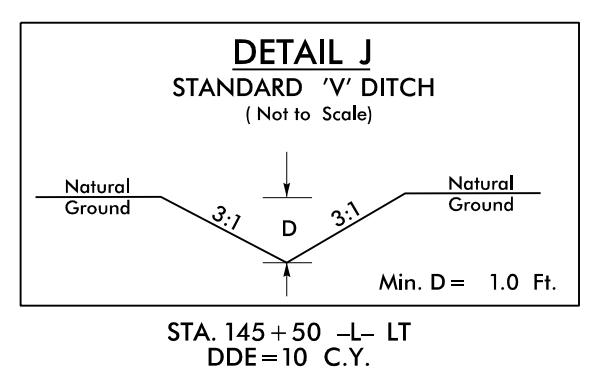
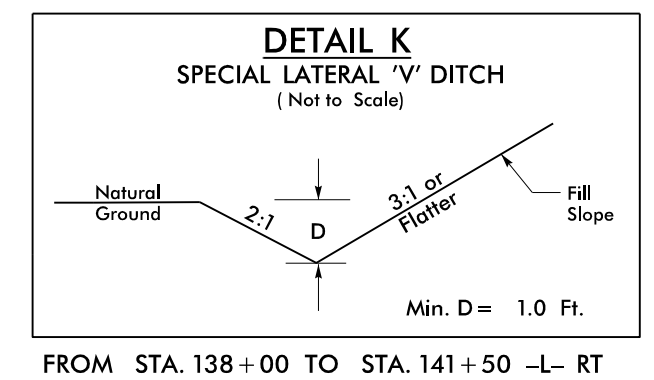
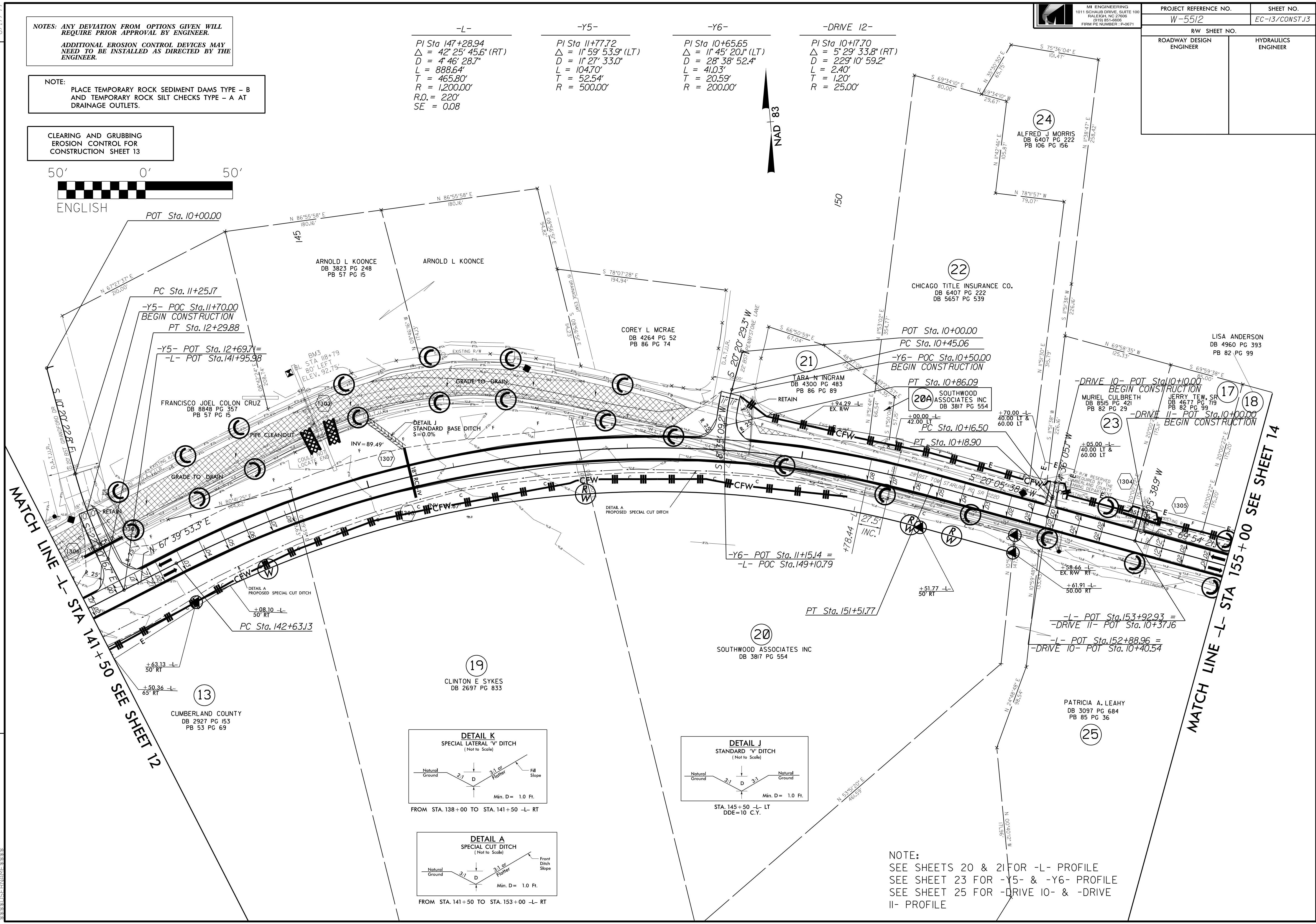


8.17.799

REVISIONS

MATCH LINE -L- STA 141+50 SEE SHEET 12

MATCH LINE -L- STA 155+00 SEE SHEET 14



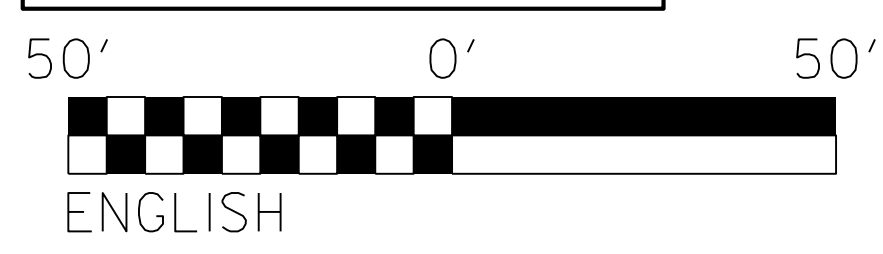
NOTE:  
SEE SHEETS 20 & 21 FOR -L- PROFILE  
SEE SHEET 23 FOR -Y5- & -Y6- PROFILE  
SEE SHEET 25 FOR -DRIVE 10- & -DRIVE 11- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-14/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

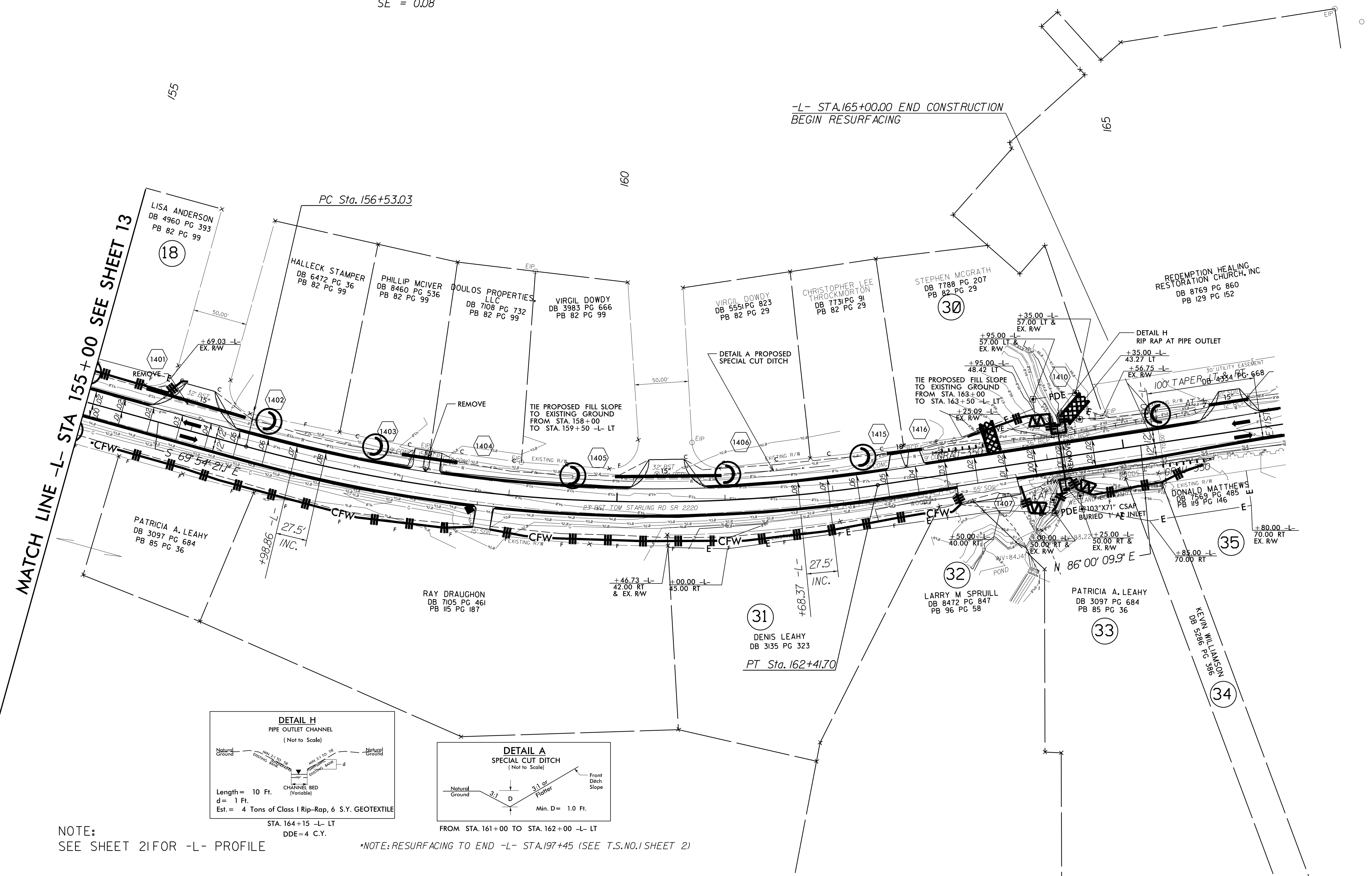
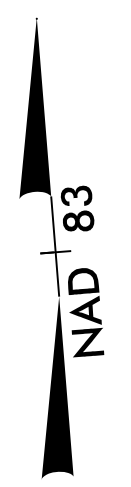
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.  
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 14

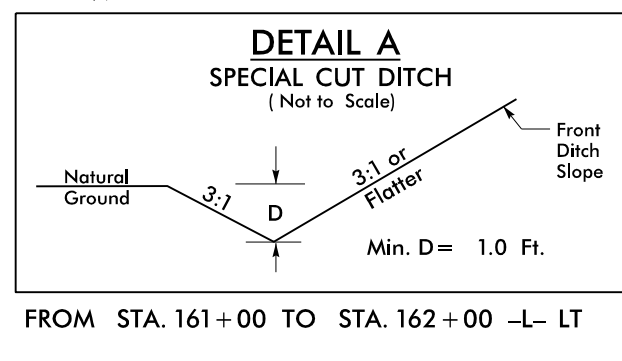
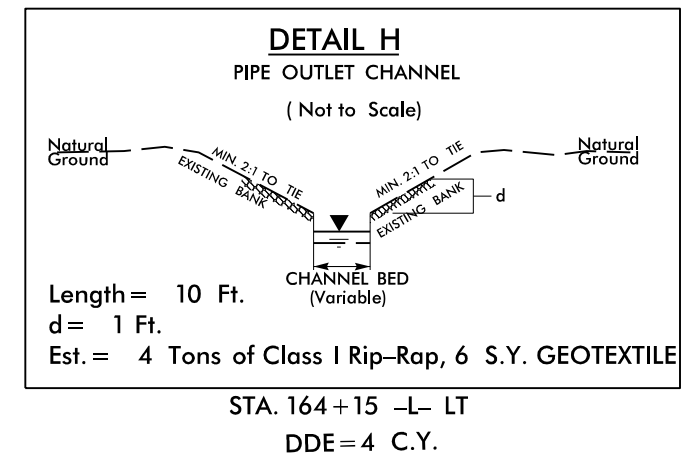


-L-  
PI Sta 159+51.78  
 $\Delta = 24' 05'' 29.0''$  (LT)  
 $D = 4' 05'' 33.2''$   
 $L = 588.66'$   
 $T = 298.75'$   
 $R = 1,400.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



MATCH LINE -L- STA 155+00 SEE SHEET 13

-L- STA.165+00.00 END CONSTRUCTION BEGIN RESURFACING



NOTE: SEE SHEET 21 FOR -L- PROFILE

\*NOTE: RESURFACING TO END -L- STA.197+45 (SEE T.S.NO.1 SHEET 2)

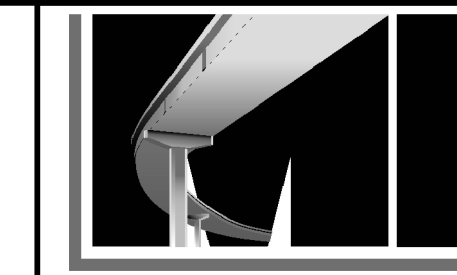
REVISIONS

8.17.99

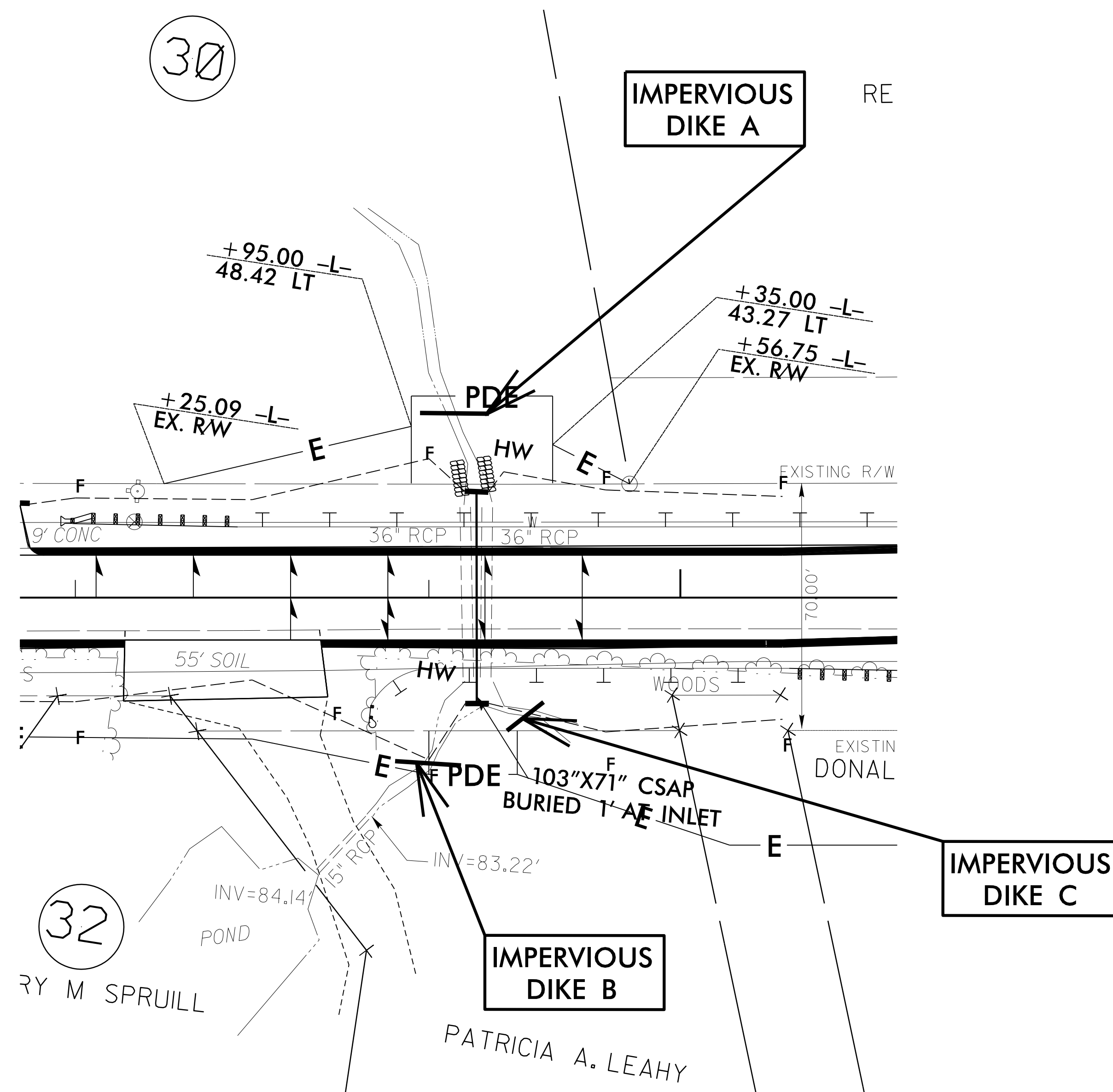
# CULVERT CONSTRUCTION SEQUENCE STA. 164+14 -L-

PROJECT REFERENCE NO. W-5512	SHEET NO. EC-14A/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. UTILIZE SPECIAL STILLING BASIN (S) DURING CULVERT CONSTRUCTION AS NEEDED.
2. CONSTRUCT IMPERVIOUS DIKES A, B & C
3. UTILIZE PUMP AS NEEDED TO DISCHARGE HEADWATERS DOWNSTREAM OF PIPE CONSTRUCTION.
4. REMOVE EXISTING 2@36" RCP, CONSTRUCT PROPOSED 103"X71" CSAP WITH HEADWALLS.
5. REMOVE IMPERVIOUS DIKES A, B AND C AND ANY REMAINING SPECIAL STILLING BASINS.
6. COMPLETE ROADWAY



MI ENGINEERING  
 1011 SCHAUB DRIVE, SUITE 100  
 RALEIGH, NC 27606  
 (919) 851-6606  
 FIRM PE NUMBER : P-0671

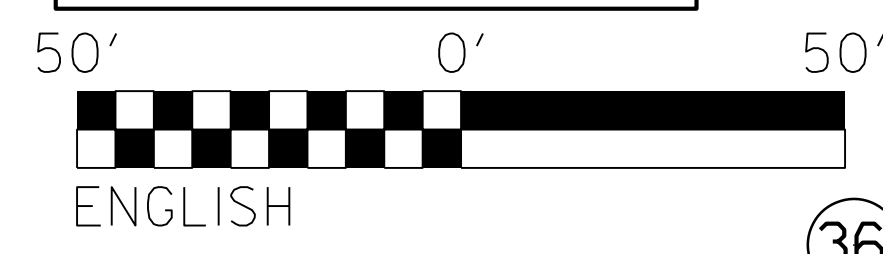


PROJECT REFERENCE NO. W-5512	SHEET NO. EC-15/CONST.15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

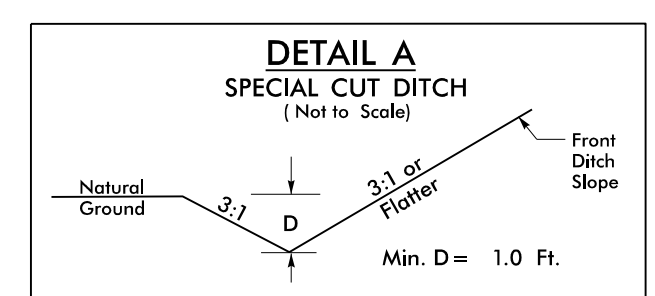
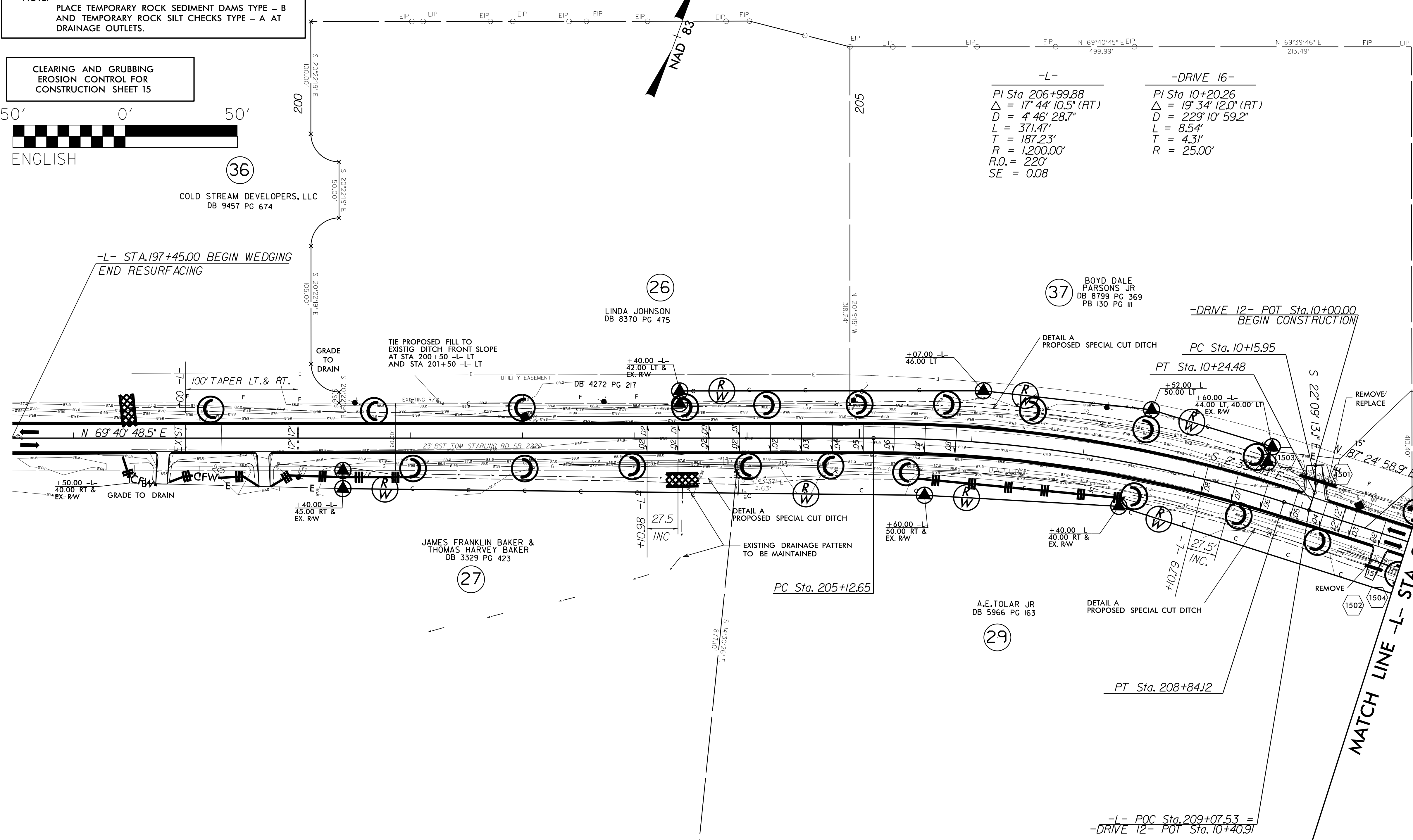
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15



**-L-**  
 PI Sta 206+99.88  
 $\Delta = 17^{\circ} 44' 10.5''$  (RT)  
 $D = 4' 46'' 28.7''$   
 $L = 371.47'$   
 $T = 187.23'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$

**-DRIVE 16-**  
 PI Sta 10+20.26  
 $\Delta = 19^{\circ} 34' 12.0''$  (RT)  
 $D = 229' 10'' 59.2''$   
 $L = 8.54'$   
 $T = 4.31'$   
 $R = 25.00'$



FROM STA. 203+50 TO STA. 208+50 -L- LT  
 FROM STA. 201+00 TO STA. 205+50 -L- RT  
 FROM STA. 207+50 TO STA. 213+00 -L- RT

NOTE: SEE SHEET 22 FOR -L- PROFILE \*NOTE: RESURFACING TO BEGIN -L- STA.165+00.00 (SEE T.S.NO.1 SHEET 2)  
 SEE SHEET 25 FOR -DRIVE 12- PROFILE

MATCH LINE -L- STA 210+00 SEE SHEET 16

REVISIONS

8.17.99

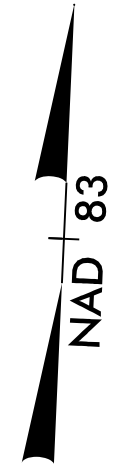
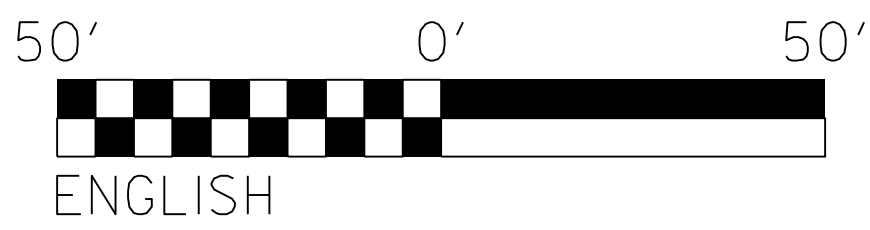
PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-16/CONST.16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

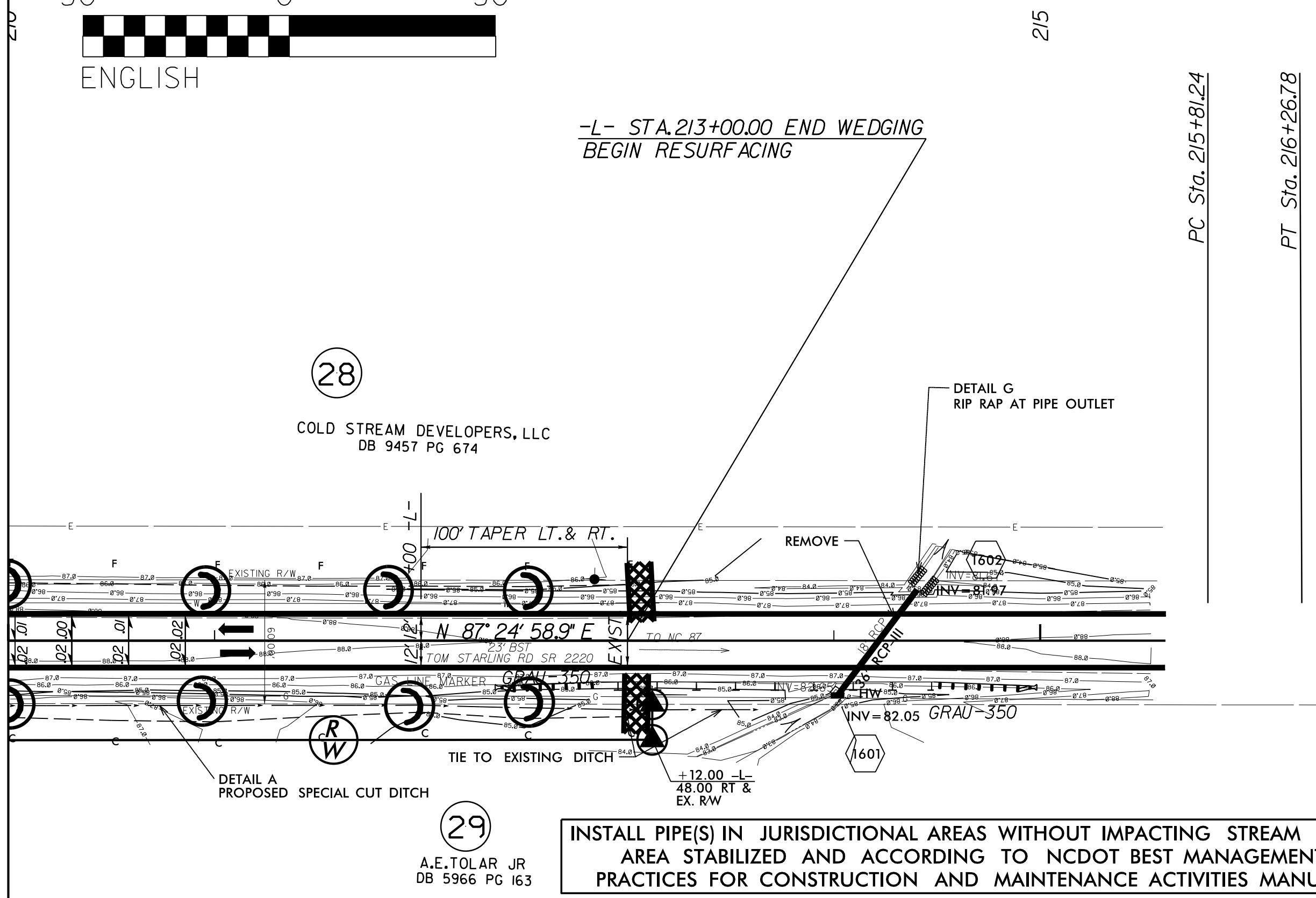
-L-  
 PI Sta 216+04.01  
 $\Delta = 0' 13' 02.6" (LT)$   
 $D = 0' 28' 38.9"$   
 $L = 45.53'$   
 $T = 22.77'$   
 $R = 12,000.00'$   
 SE = NC

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

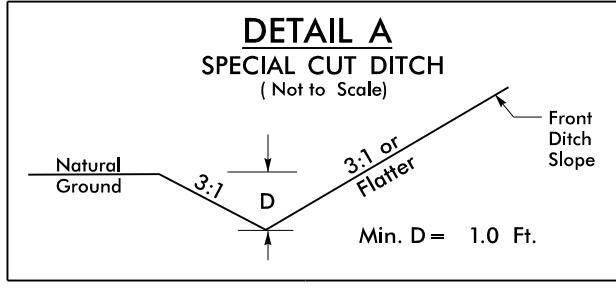
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 16



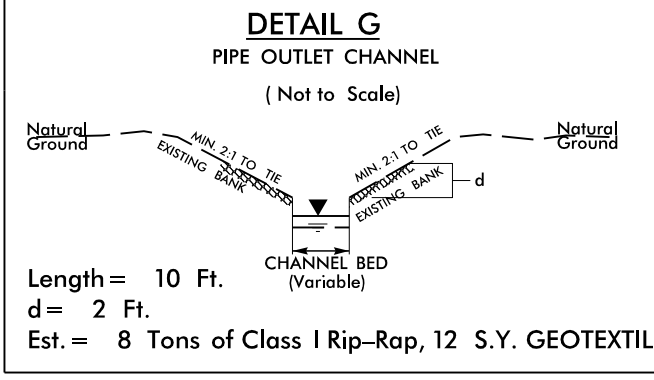
MATCH LINE -L- STA 210+00 SEE SHEET 16



INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



FROM STA. 207+50 TO STA. 213+00 -L- RT

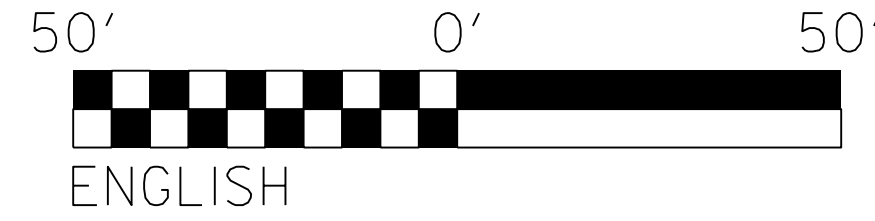


STA. 214+22 -L- LT  
 DDE=5 C.Y.

NOTE: SEE SHEET 22 FOR -L- PROFILE

\*NOTE: RESURFACING TO END -L- STA.245+23.91 (SEE T.S.NO.1 SHEET 2)

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.



**-L-**  
PI Sta 34+10.96  
 $\Delta = 23^\circ 27' 35.8''$  (RT)  
D = 4' 46" 28.7"  
L = 491.34'  
T = 249.16'  
R = 1,200.00'  
P.O. = 320'  
SE = 0.08

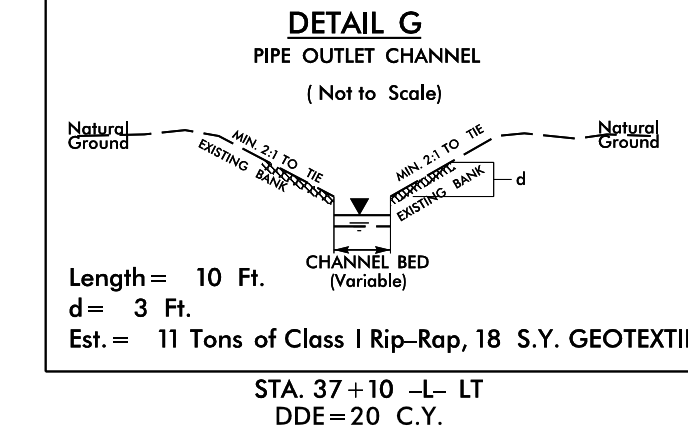
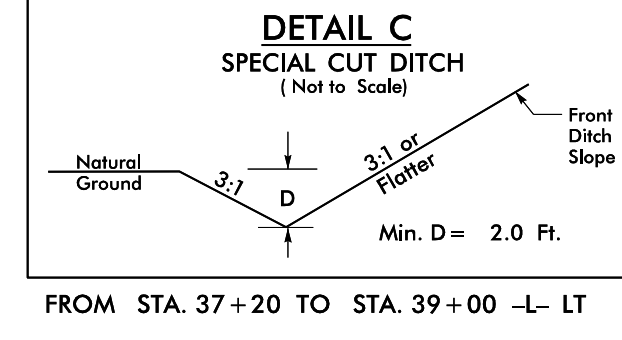
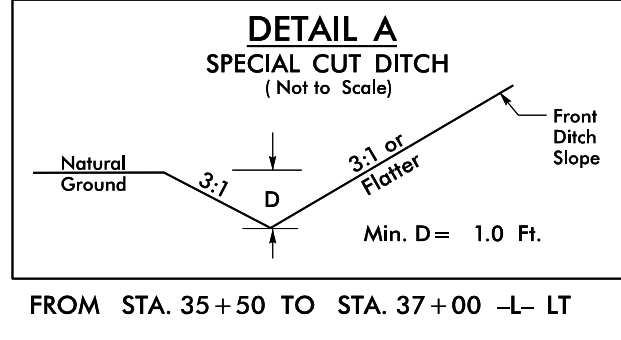
**-DRIVE 1-**  
PI Sta 10+64.07  
 $\Delta = 32^\circ 12' 21.2''$  (LT)  
D = 114' 35" 29.6"  
L = 28.10'  
T = 14.43'  
R = 50.00'

**-DRIVE 2-**  
PI Sta 10+33.95  
 $\Delta = 6^\circ 56' 10.0''$  (LT)  
D = 114' 35" 29.6"  
L = 6.05'  
T = 3.03'  
R = 50.00'

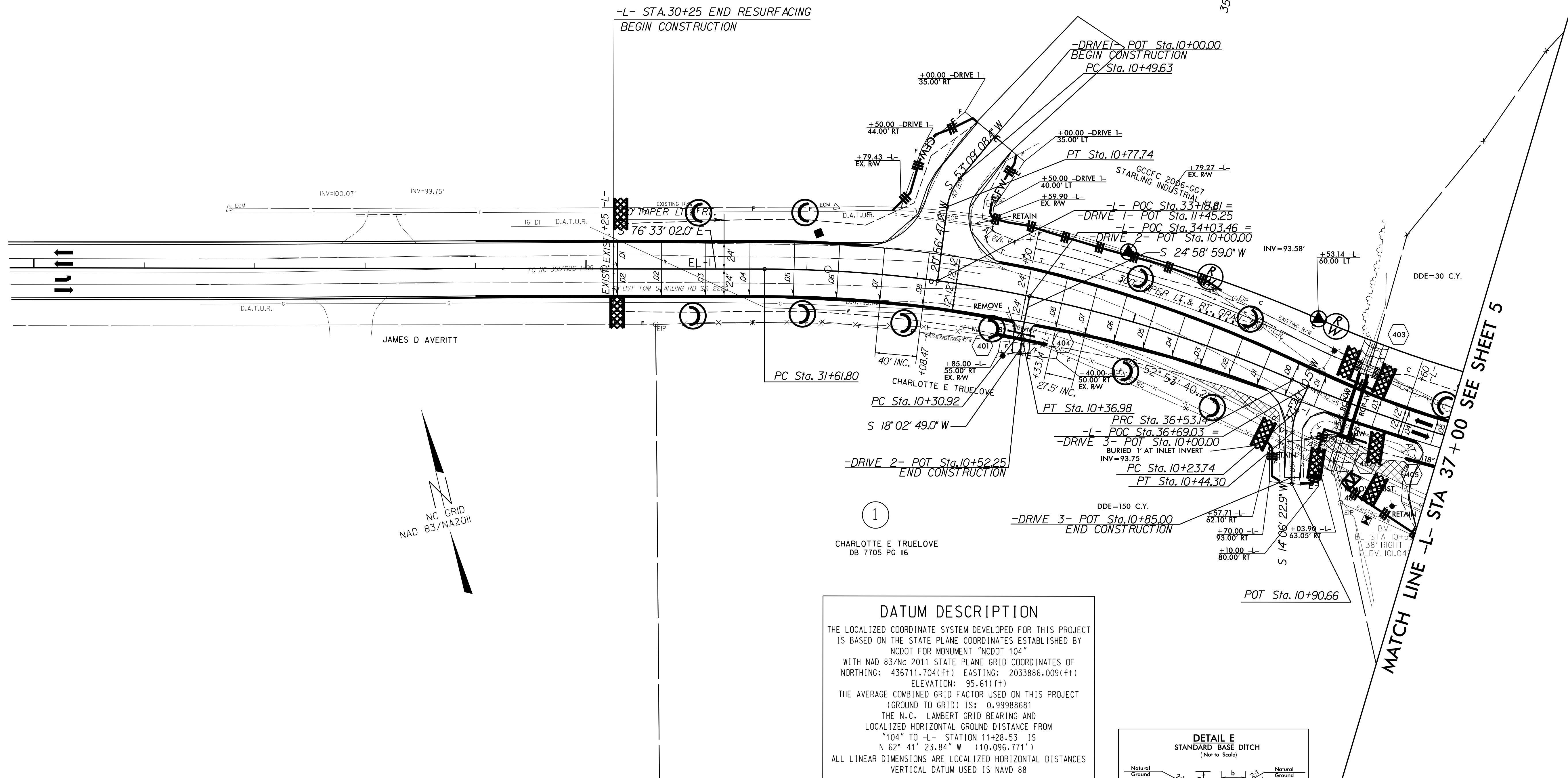
**-DRIVE 3-**  
PI Sta 10+34.7  
 $\Delta = 23^\circ 33' 47.7''$  (LT)  
D = 114' 35" 29.6"  
L = 20.56'  
T = 10.43'  
R = 50.00'

MI ENGINEERING  
1011 SCARLETT DRIVE, SUITE 100  
RALEIGH, NC 27609  
(919) 851-4806  
FIRM REG. NUMBER: P-0671

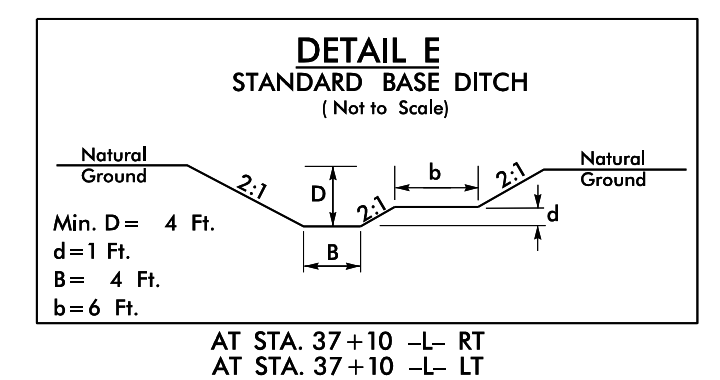
PROJECT REFERENCE NO.	SHEET NO.
	EC-17/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



GCCFC 2006-CG7  
STARLING INDUSTRIAL LLC  
DB 8956 PG 35  
PB 116 PG 32



**DATUM DESCRIPTION**  
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "NCDOT 104" WITH NAD 83/NO 2011 STATE PLANE GRID COORDINATES OF NORTHING: 436711.704(FT) EASTING: 2033886.009(FT) ELEVATION: 95.61(FT) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988681 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "104" TO -L- STATION 11+28.53 IS N 62° 41' 23.84" W (10,096.771') ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



NOTE: SEE SHEET 17 FOR -L- PROFILE SEE SHEET 24 FOR -DRIVE 1-, -DRIVE 2-, & -DRIVE 3- PROFILE

\*NOTE: RESURFACING TO BEGIN -L- STA. 11+28.53 (SEE T.S. NO. 1 SHEET 2)

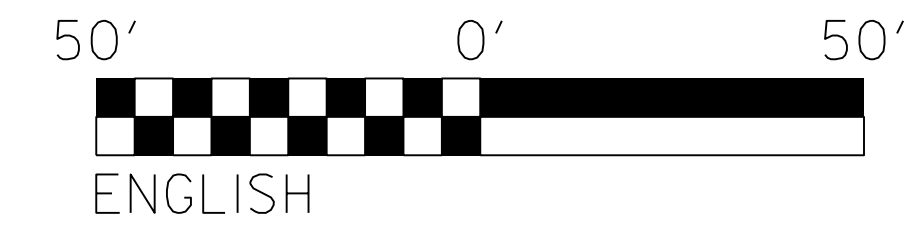
REVISIONS

8.17/99

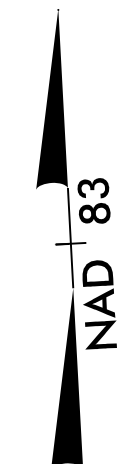
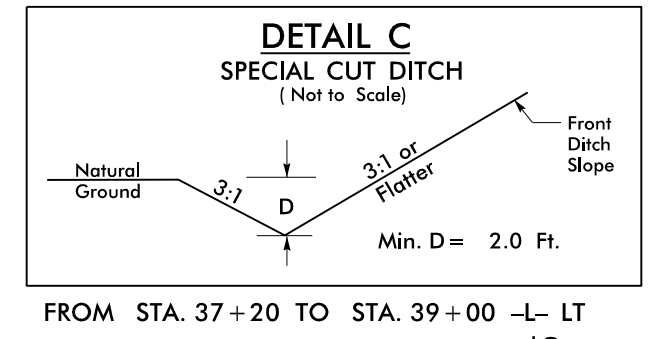
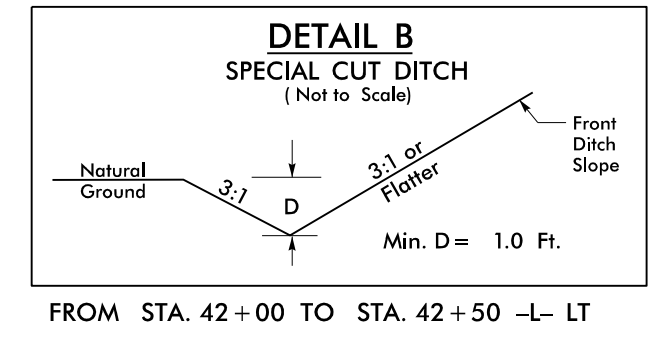


PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-18/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



-L-	-DRIVE 4-
PI Sta 34+10.96	PI Sta 10+41.8
$\Delta = 23^\circ 27' 35.8''$ (RT)	$\Delta = 17^\circ 19' 26.3''$ (LT)
D = 4' 46" 28.7"	D = 229' 10" 59.2"
L = 491.34'	L = 7.56'
T = 249.16'	T = 3.81'
R = 1,200.00'	R = 25.00'
R.O. = 220.00'	
S.E. = .08	



MATCH LINE -L- STA 37+00 SEE SHEET 4

KATHERINE McGEACHY  
 DB 4789 PG 243

CAPE FEAR DISTRIBUTION LTD  
 DB 7025 PG 343  
 PB 109 PG 155

PC Sta. 10+37.37  
 PT Sta. 10+44.93  
 -DRIVE 4- POT Sta. 10+79.23  
 END CONSTRUCTION  
 POT Sta. 11+00.00

-L- STA. 46+15 END CONSTRUCTION  
 BEGIN RESURFACING

PT Sta. 43+62.64

-L- POC Sta. 41+68.43 =  
 -DRIVE 4- POT Sta. 10+00.00

S 86° 58' 01.0" E

REVISIONS

8.17.99

N. 01°24'44" E.  
 155.94'

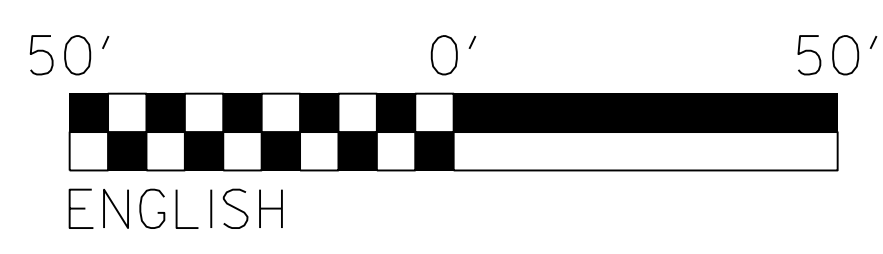
MATCH LINE -L- STA 51+00 SEE SHEET 6

\*NOTE: RESURFACING TO END -L- STA. 53+52.50 (SEE T.S. NO. 1 SHEET 2)

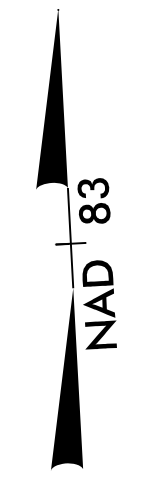
NOTE:  
 SEE SHEET 17 FOR -L- PROFILE  
 SEE SHEET 24 FOR -DRIVE 4- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-19/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

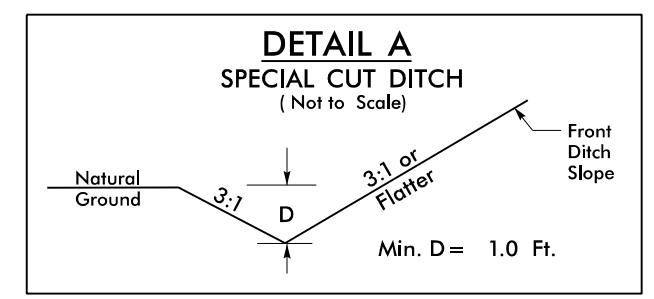
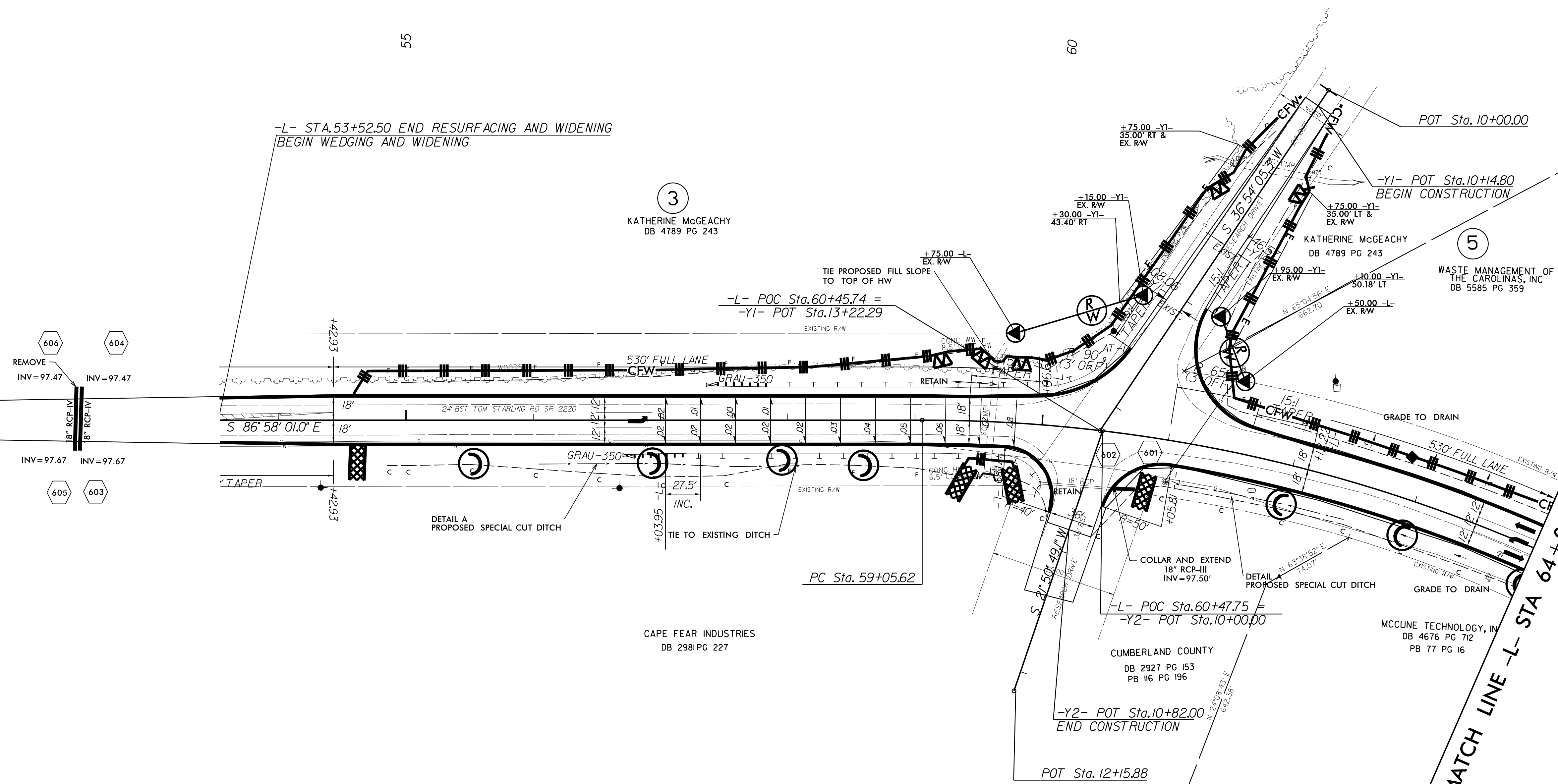


-L-  
PI Sta. 62+83.16  
 $\Delta = 34^{\circ}55'46.1''$  (RT)  
 $D = 4^{\circ}46'28.7''$   
 $L = 731.56'$   
 $T = 377.55'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



MATCH LINE -L- STA 51+00 SEE SHEET 5

MATCH LINE -L- STA 64+00 SEE SHEET 7



\*NOTE: RESURFACING TO BEGIN -L- STA.46+15 (SEE T.S.NO.1 SHEET 2)

FROM STA. 54+00 TO STA. 57+50 -L- RT  
FROM STA. 61+00 TO STA. 62+50 -L- RT

NOTE:  
SEE SHEETS 17 & 18 FOR -L- PROFILE  
SEE SHEET 23 FOR -Y1- & -Y2- PROFILE

REVISIONS

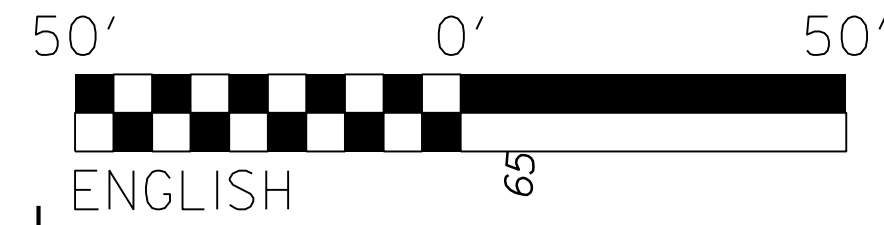
8.17.99

8/17/99

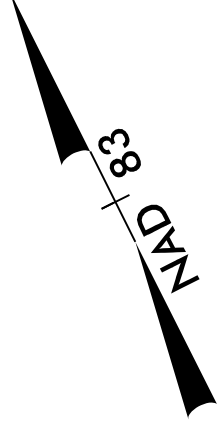
M ENGINEERING  
1011 SCHAUB DRIVE, SUITE 100  
RALEIGH, NC 27606  
(919) 851-6606  
FIRM PE NUMBER: P-0671

PROJECT REFERENCE NO.		SHEET NO.	
W-55/2		EC-20/CONST.07	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

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.



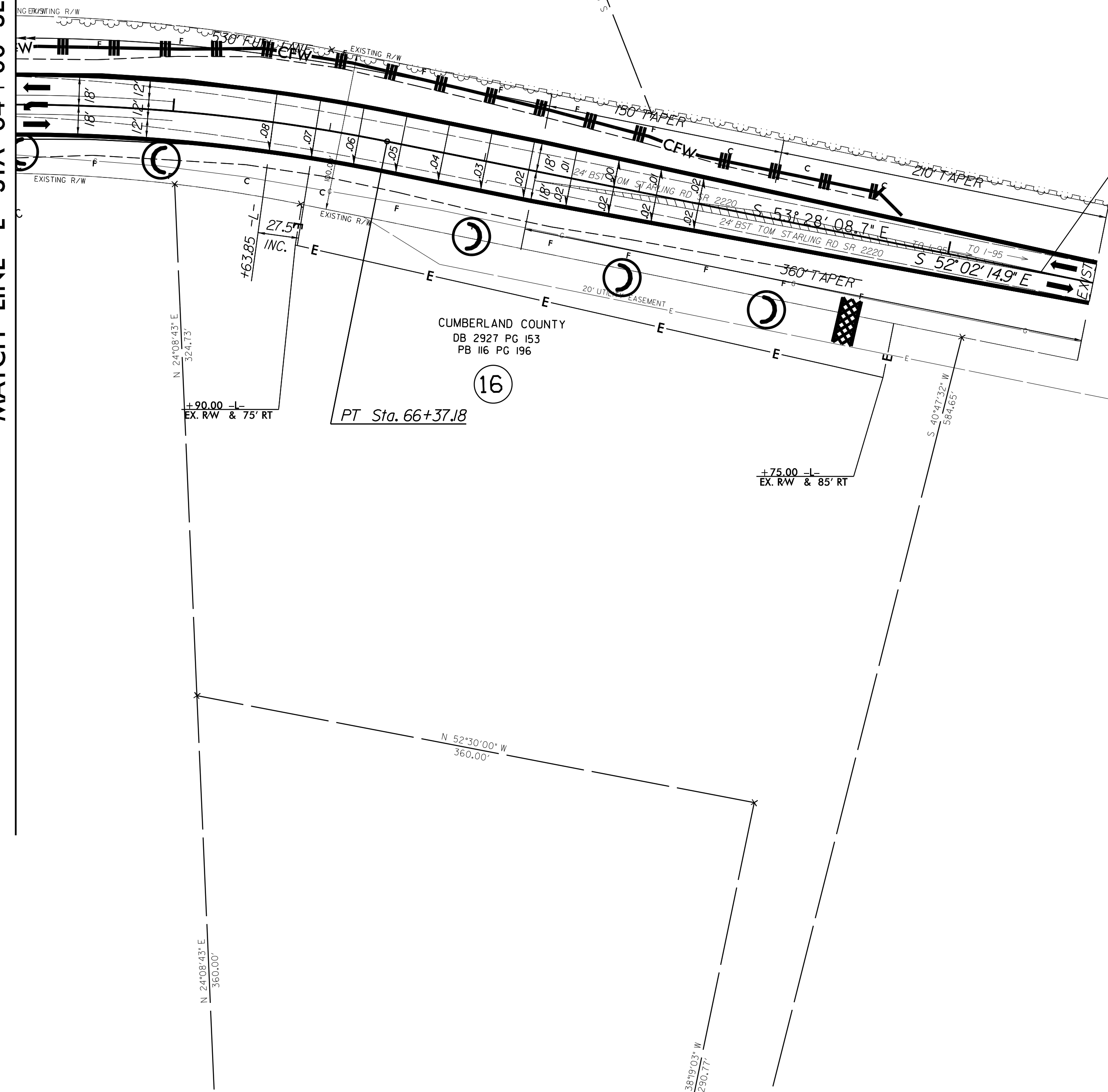
-L-  
 PI Sta 62+83.16  
 $\Delta = 34^{\circ} 55' 46.1''$  (RT)  
 $D = 4^{\circ} 46' 28.7''$   
 $L = 731.56'$   
 $T = 377.55'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



MATCH LINE -L- STA 64+00 SEE SHEET 6

5  
 WASTE MANAGEMENT OF THE CAROLINAS, INC  
 DB 5585 PG 359

-L- STA.70+60 END WEDGING BEGIN RESURFACING



CUMBERLAND COUNTY  
 DB 2927 PG 153  
 PB 116 PG 196

16  
 PT Sta. 66+37.18

REVISIONS

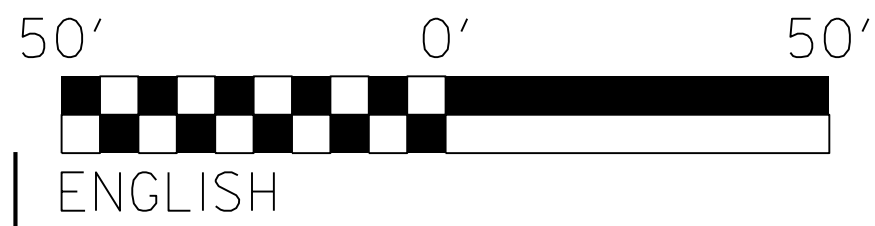
MATCH LINE -L- STA 77+00 SEE SHEET 8

\*NOTE: RESURFACING TO END -L- STA.84+95.14 (SEE T.S.NO.1 SHEET 2)

NOTE:  
SEE SHEET 18 FOR -L- PROFILE

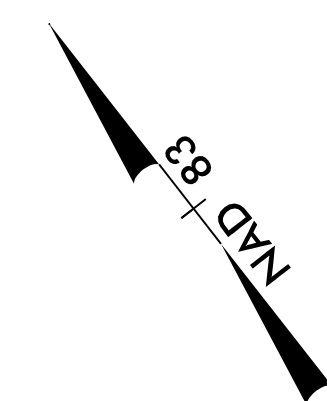
8.17/99

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.



MI ENGINEERING  
1011 SCARLETT DRIVE, SUITE 100  
RALEIGH, NC 27606  
(919) 851-4806  
FIRM PE NUMBER - P-0671

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-21/CONST.08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-  
PI Sta 90+89.36  
 $\Delta = 15^{\circ}40'10.6''$  (RT)  
D = 1'59'59.5"  
L = 783.54'  
T = 394.23'  
R = 2,865.00'  
R.O. = 200'  
SE = 0.06

Place Matting for Erosion Control on Slope as Work Allows. Sta. 87+00 to Sta. 89+00 -L- RT

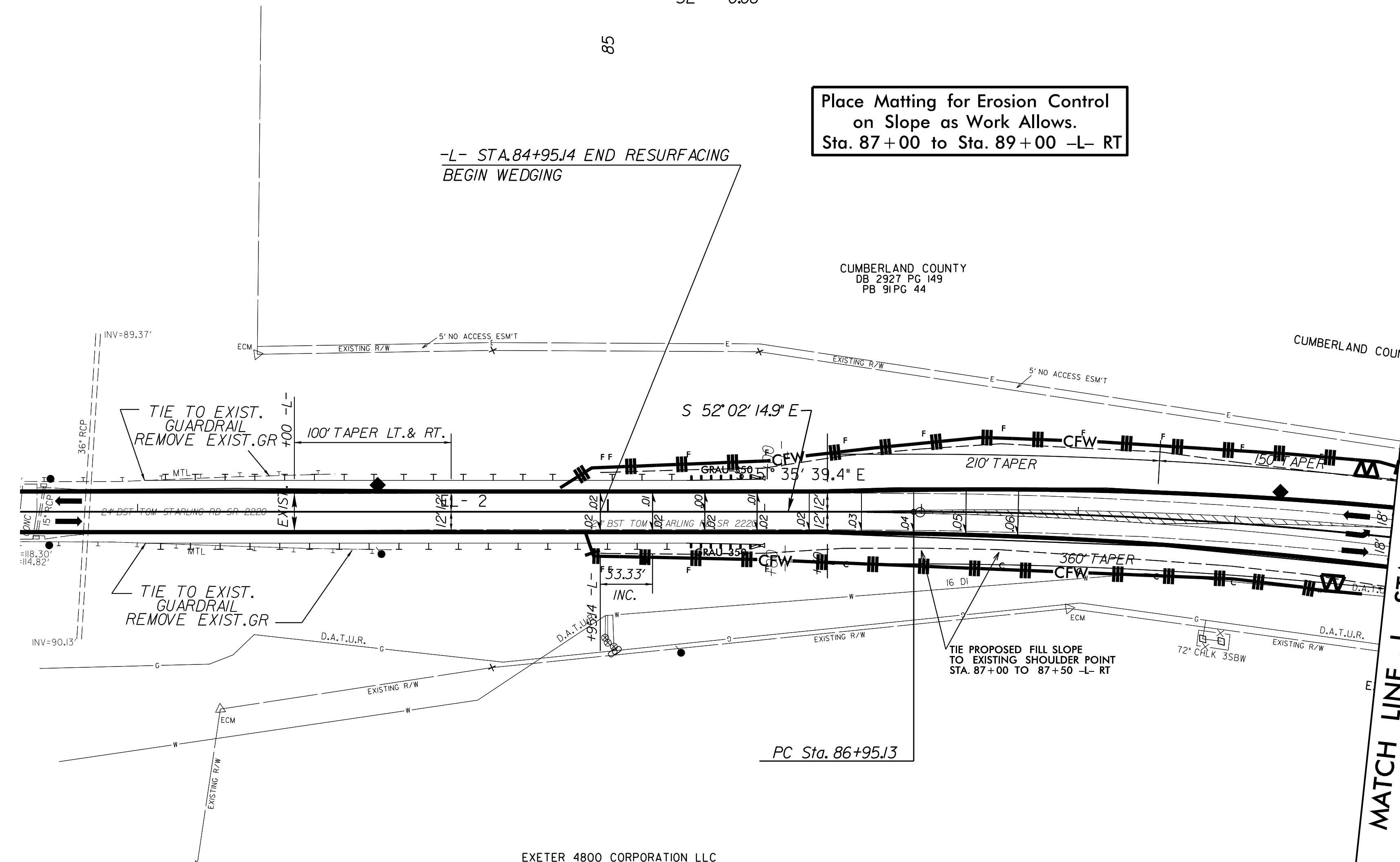
-L- STA.84+95J4 END RESURFACING BEGIN WEDGING

CUMBERLAND COUNTY  
DB 2927 PG 149  
PB 91PG 44

CUMBERLAND COUNTY

MATCH LINE -L- STA 77+00 SEE SHEET 7

MATCH LINE -L- STA 90+00 SEE SHEET 9



REVISIONS

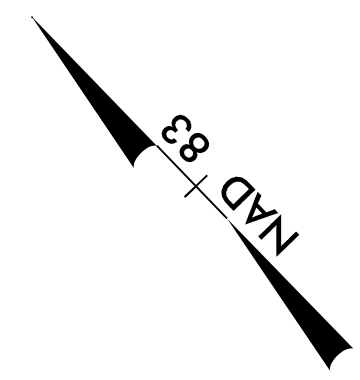
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\*NOTE: RESURFACING TO BEGIN -L- STA.70+60 (SEE T.S.NO.1 SHEET 2)

NOTE: SEE SHEETS 18 & 19 FOR -L- PROFILE

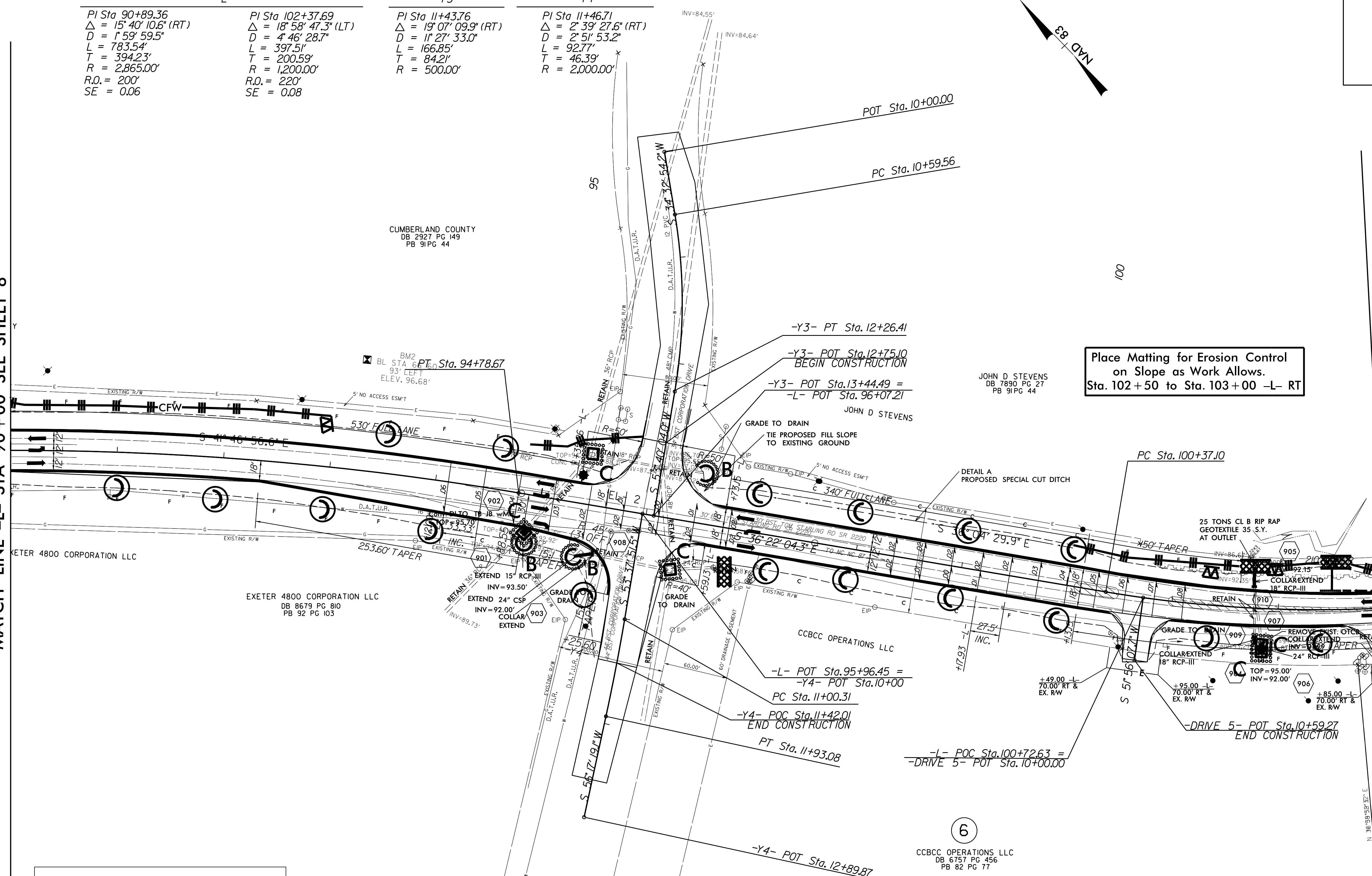
PROJECT REFERENCE NO. <i>W-5512</i>		SHEET NO. <i>EC-22/CONST.09</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

-L-	-Y3-	-Y4-
PI Sta 90+89.36 $\Delta = 15' 40'' 10.6''$ (RT) $D = 1' 59'' 59.5''$ $L = 783.54'$ $T = 394.23'$ $R = 2,865.00'$ $R.O. = 200'$ $SE = 0.06$	PI Sta 102+37.69 $\Delta = 18' 58'' 47.3''$ (LT) $D = 4' 46'' 28.7''$ $L = 397.51'$ $T = 200.59'$ $R = 1,200.00'$ $R.O. = 220'$ $SE = 0.08$	PI Sta 11+43.76 $\Delta = 19' 07'' 09.9''$ (RT) $D = 11' 27'' 33.0''$ $L = 166.85'$ $T = 84.21'$ $R = 500.00'$
		PI Sta 11+46.71 $\Delta = 2' 39'' 27.6''$ (RT) $D = 2' 51'' 53.2''$ $L = 92.77'$ $T = 46.39'$ $R = 2,000.00'$



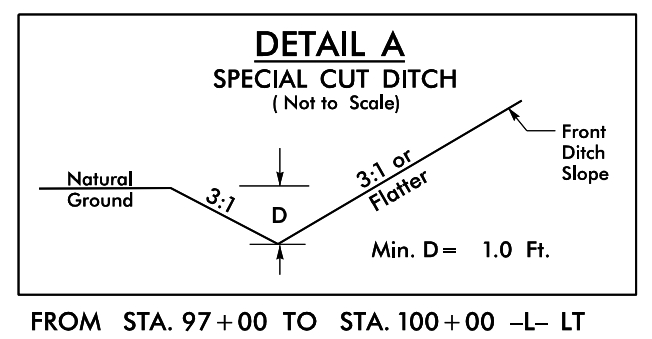
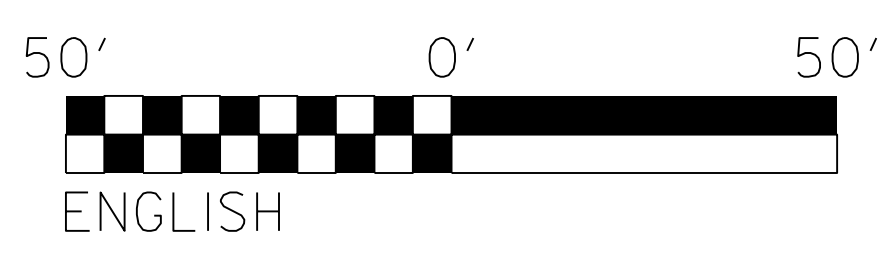
MATCH LINE -L- STA 90+00 SEE SHEET 8

MATCH LINE -L- STA 103+00 SEE SHEET 10



Place Matting for Erosion Control on Slope as Work Allows. Sta. 102+50 to Sta. 103+00 -L- RT

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.



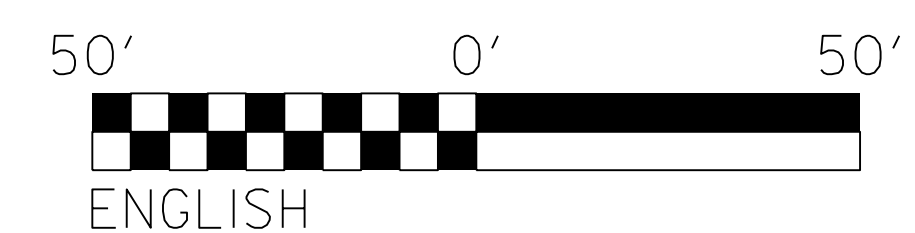
NOTE:  
SEE SHEET 19 FOR -L- PROFILE  
SEE SHEET 24 FOR -DRIVE 5- PROFILE

REVISIONS

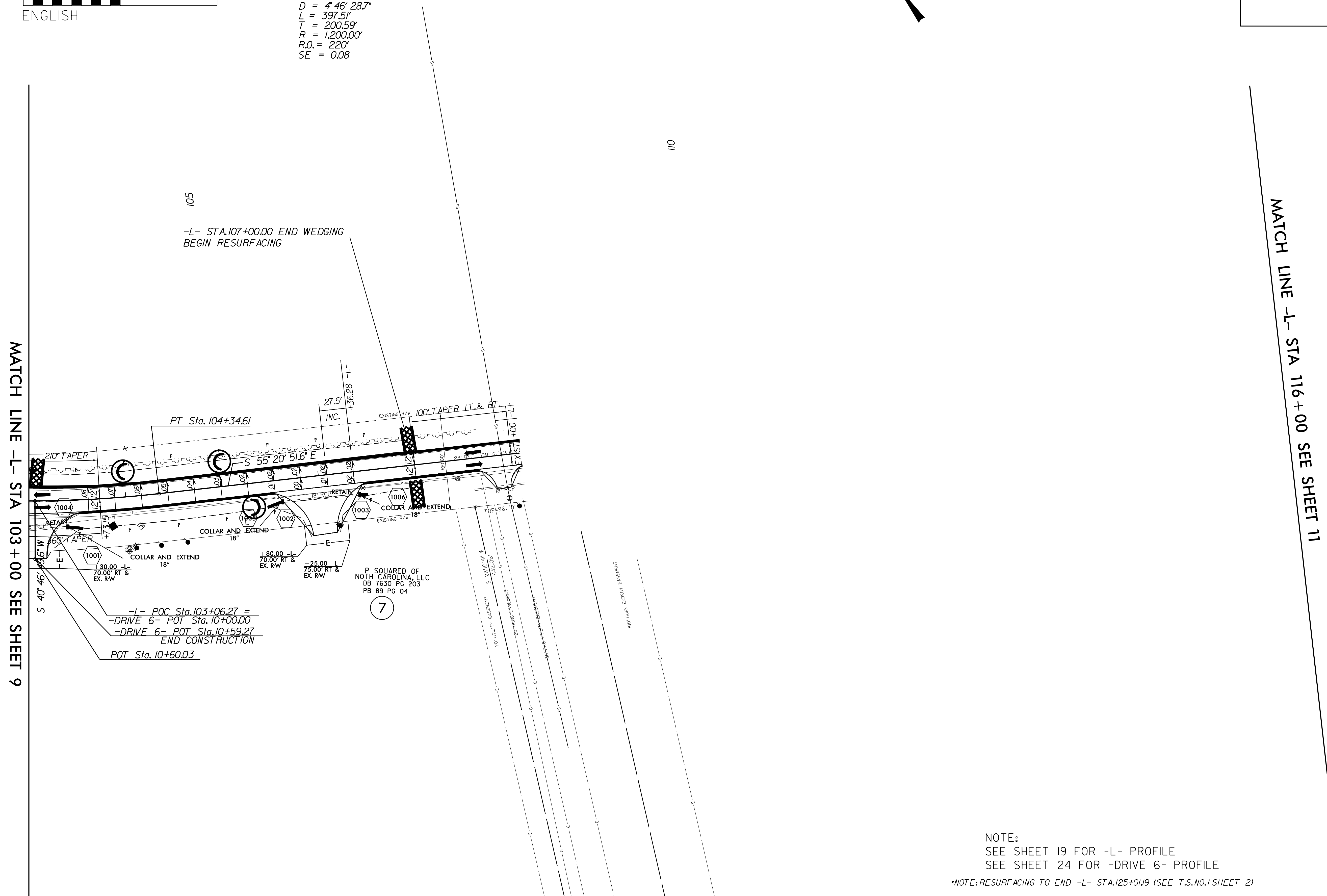
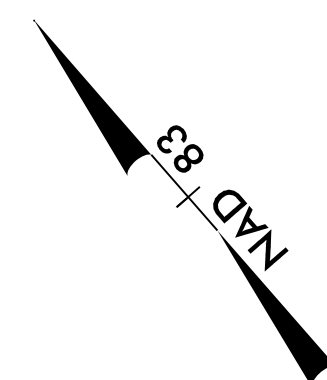
8/17/99  
SYSTEMS TIME  
DODD  
LUSKIN

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-23/CONST.10
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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.



-L-  
 PI Sta 102+37.69  
 $\Delta = 18^{\circ} 58' 47.3''$  (LT)  
 $D = 4' 46.287''$   
 $L = 397.51'$   
 $T = 200.59'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



REVISIONS

MATCH LINE -L- STA 103+00 SEE SHEET 9

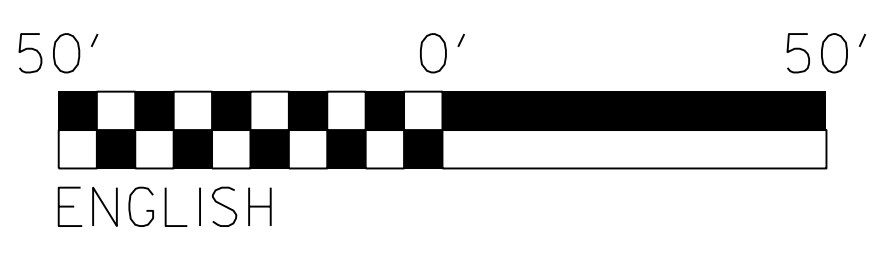
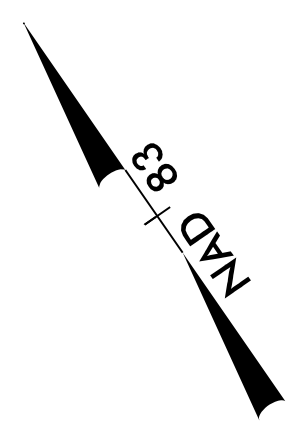
MATCH LINE -L- STA 116+00 SEE SHEET 11

NOTE:  
 SEE SHEET 19 FOR -L- PROFILE  
 SEE SHEET 24 FOR -DRIVE 6- PROFILE  
 \*NOTE: RESURFACING TO END -L- STA.125+01.9 (SEE T.S.NO.1 SHEET 2)

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-24/CONST.II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

-L-  
PI Sta 135+01.19  
 $\Delta = 67^{\circ} 16' 10.3" (LT)$   
 $D = 4' 46" 28.7"$   
 $L = 1,408.89'$   
 $T = 798.33'$   
 $R = 1,200.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



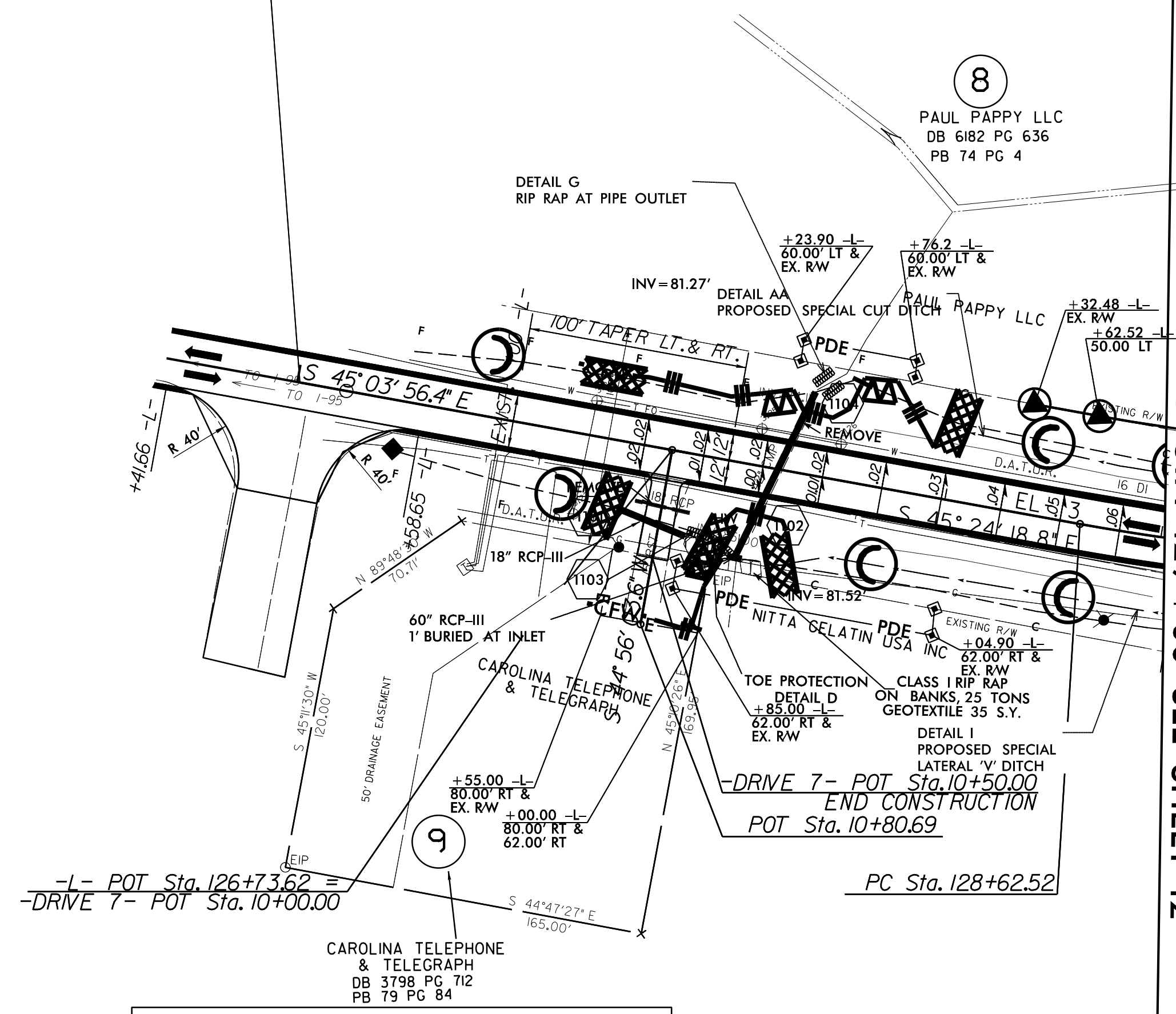
120

125

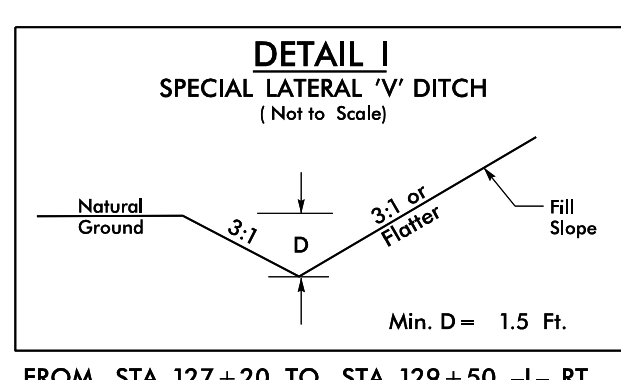
-L- STA.125+01.19 BEGIN CONSTRUCTION  
END RESURFACING

MATCH LINE -L- STA 116+00 SEE SHEET 10

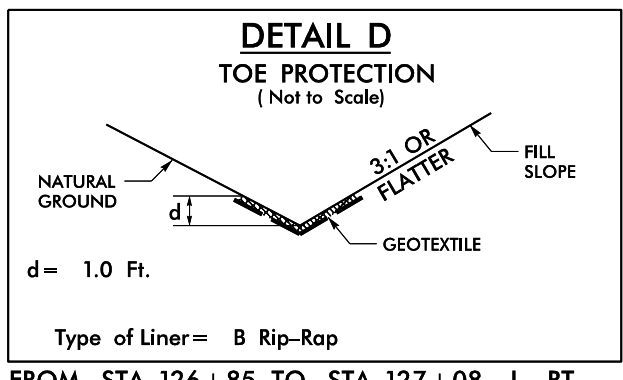
MATCH LINE -L- STA 129+00 SEE SHEET 12



**DATUM DESCRIPTION**  
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "NCDOT 104"  
WITH NAD 83/NA2011 STATE PLANE GRID COORDINATES OF  
NORTHING: 436711.704(ft) EASTING: 2033886.0091(ft)  
ELEVATION: 95.61(ft)  
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988681  
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "104" TO -L- STATION 126+00 IS  
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88



FROM STA. 127+20 TO STA. 129+50 -L- RT



FROM STA. 126+85 TO STA. 127+08 -L- RT  
RIP RAP = 9 TONS  
GEOTEXTILE = 25 S.Y.

NOTE:  
SEE SHEET 20 FOR -L- PROFILE  
SEE SHEET 25 FOR -DRIVE 7- PROFILE

\*NOTE: RESURFACING TO BEGIN -L- STA.107+00 (SEE T.S.NO.1 SHEET 2)

REVISIONS

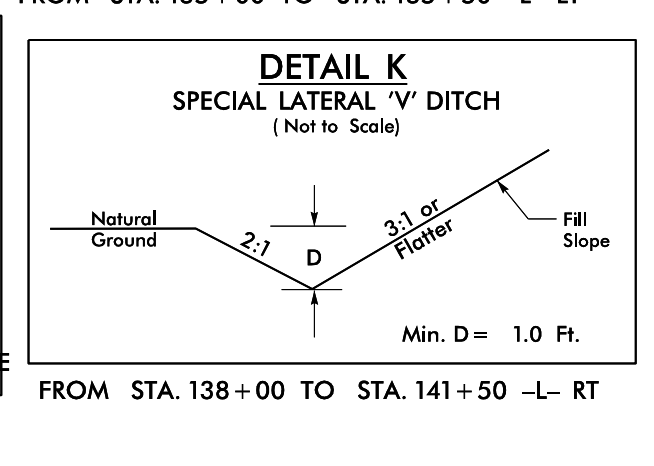
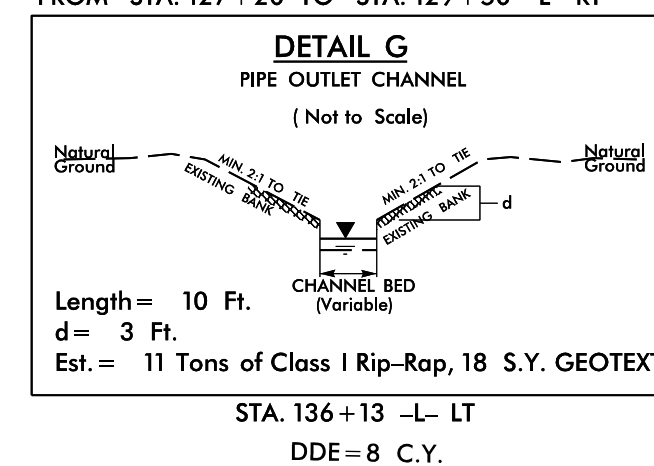
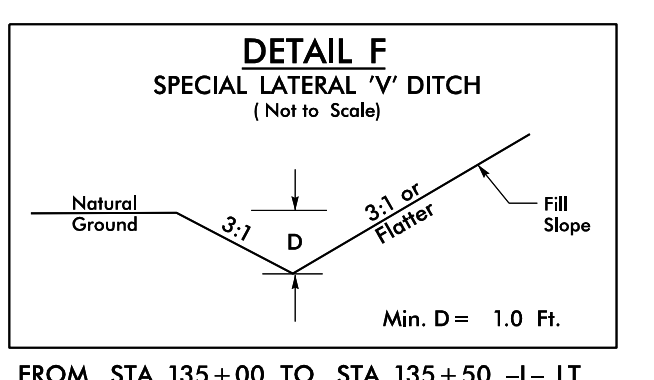
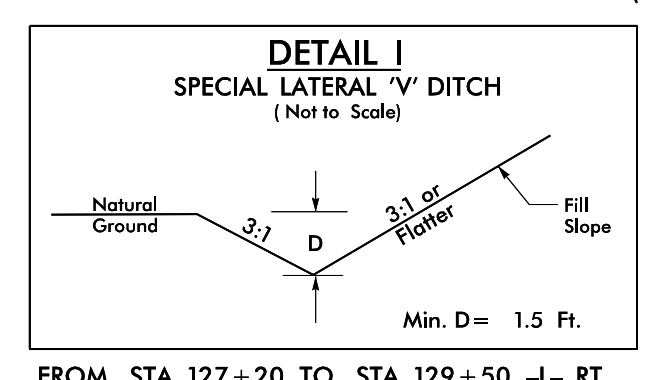
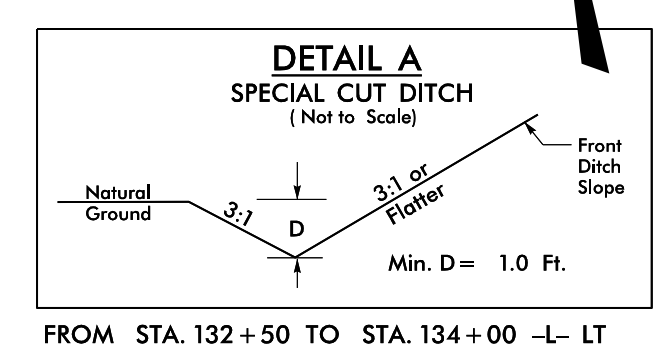
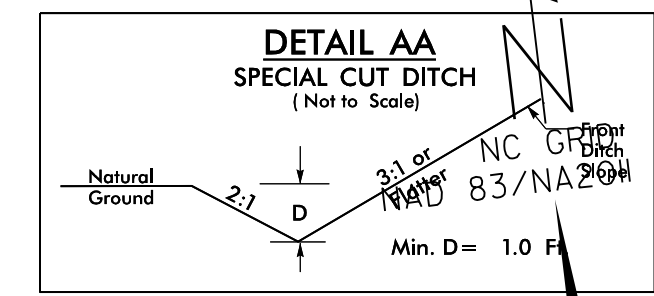
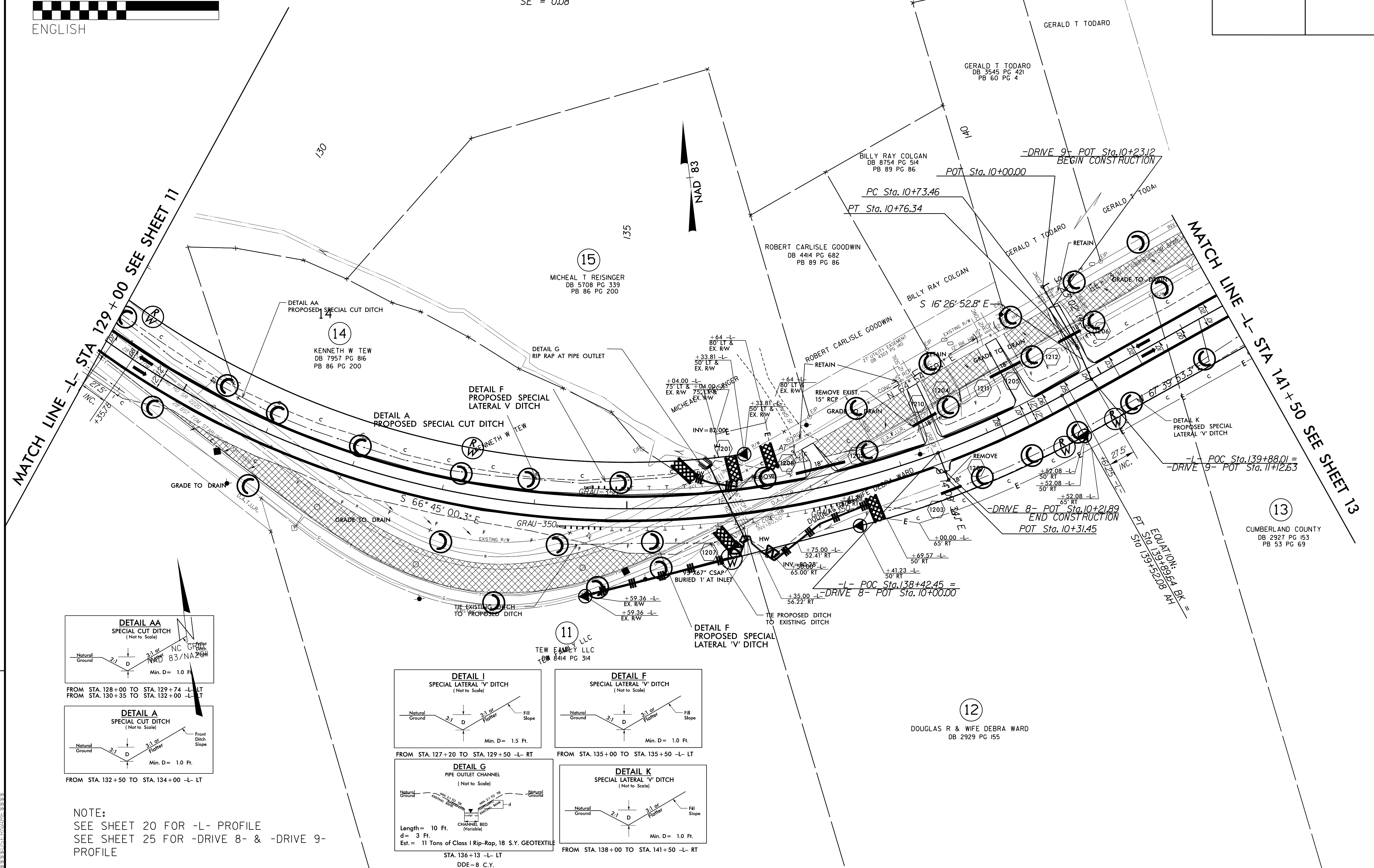
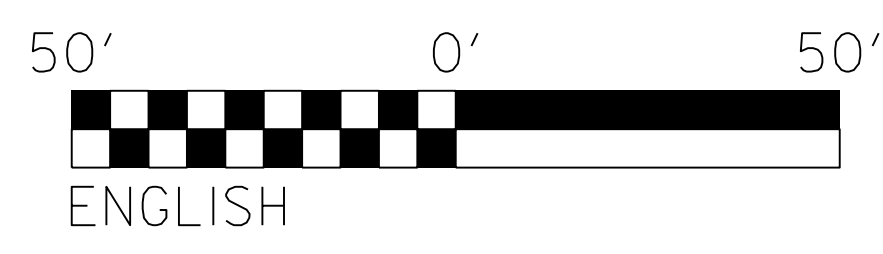
8.17.17/99

PROJECT REFERENCE NO. W-5512	SHEET NO. EC-25/CONST.12
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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.

-L-  
 PI Sta 135+01.9  
 $\Delta = 67^{\circ}16'10.3''$  (LT)  
 $D = 5^{\circ}58'05.9''$   
 $L = 1127.11'$   
 $T = 638.66'$   
 $R = 960.00'$   
 $R.O. = 220'$   
 $SE = 0.08$

-DRIVE 10-  
 PI Sta 10+74.90  
 $\Delta = 6^{\circ}35'21.5''$  (RT)  
 $D = 229^{\circ}10'59.2''$   
 $L = 2.88'$   
 $T = 1.44'$   
 $R = 25.00'$



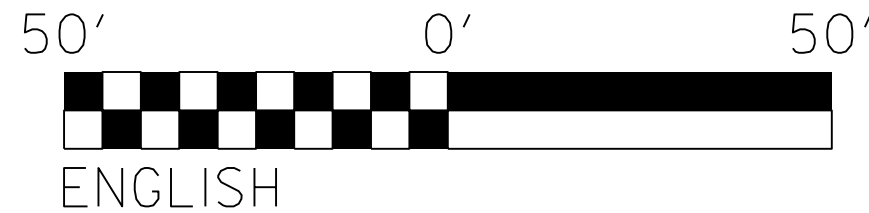
NOTE:  
 SEE SHEET 20 FOR -L- PROFILE  
 SEE SHEET 25 FOR -DRIVE 8- & -DRIVE 9- PROFILE

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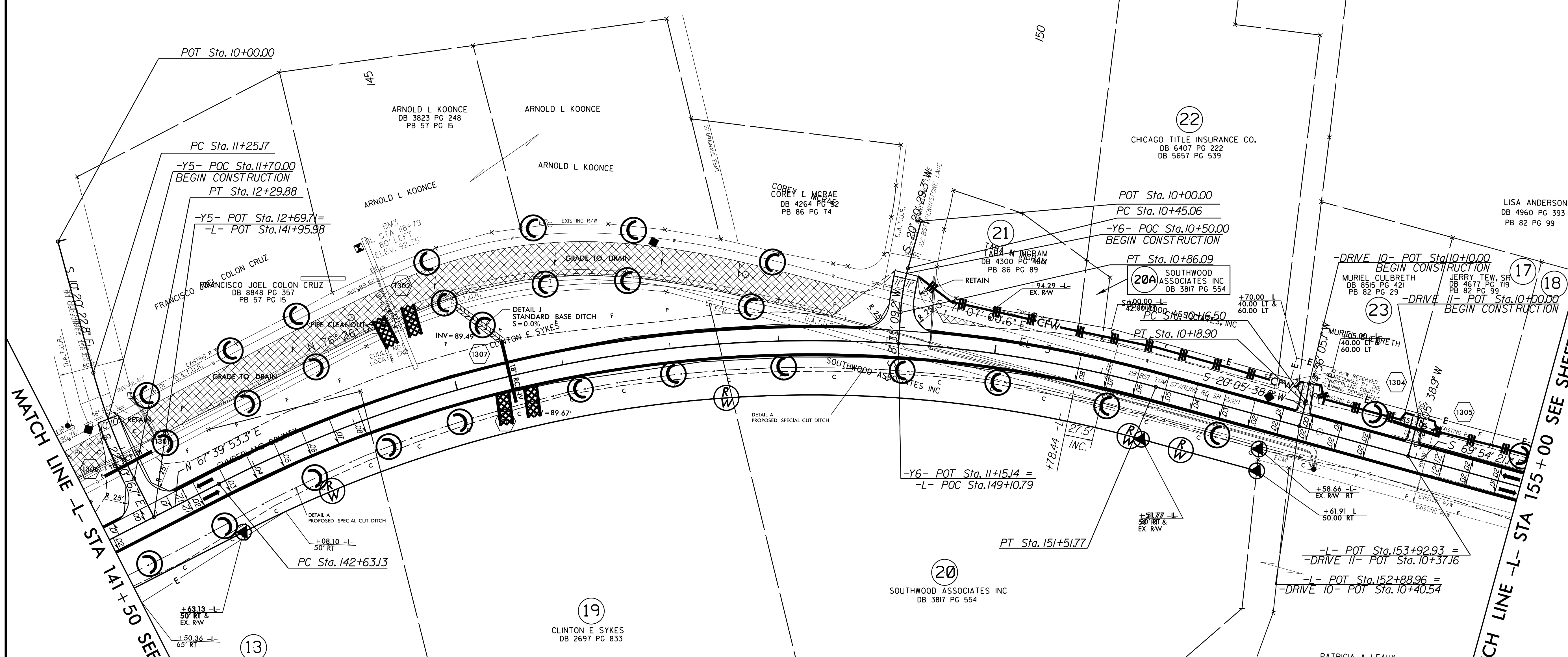


NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.  
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



-L-	-Y5-	-Y6-	-DRIVE 12-
PI Sta 147+28.94	PI Sta 11+77.72	PI Sta 10+65.65	PI Sta 10+17.70
$\Delta = 42' 25' 45.6''$ (RT)	$\Delta = 11' 59' 53.9''$ (LT)	$\Delta = 11' 45' 20.1''$ (LT)	$\Delta = 5' 29' 33.8''$ (RT)
D = 4' 46' 28.7"	D = 11' 27' 33.0"	D = 28' 38' 52.4"	D = 229' 10' 59.2"
L = 888.64'	L = 104.70'	L = 41.03'	L = 2.40'
T = 465.80'	T = 52.54'	T = 20.59'	T = 1.20'
R = 1,200.00'	R = 500.00'	R = 200.00'	R = 25.00'
R.O. = 220'			
SE = 0.08			

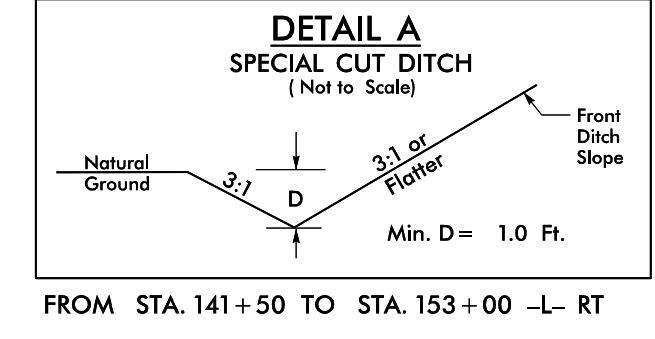
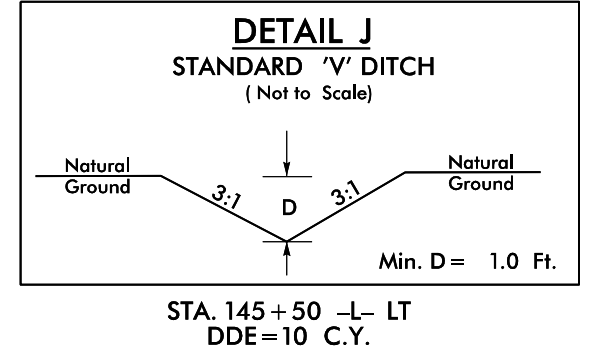
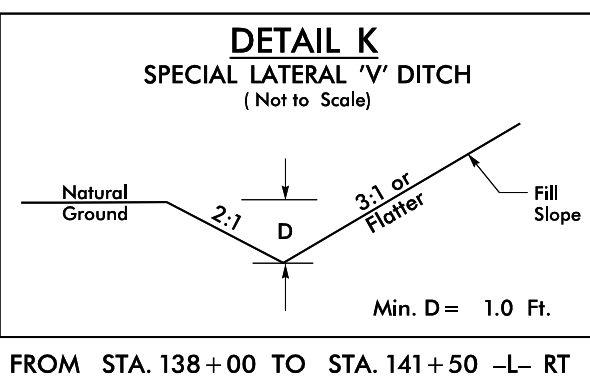
PROJECT REFERENCE NO. W-5512		SHEET NO. EC-26/CONST.13	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



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MATCH LINE -L- STA 141+50 SEE SHEET 12

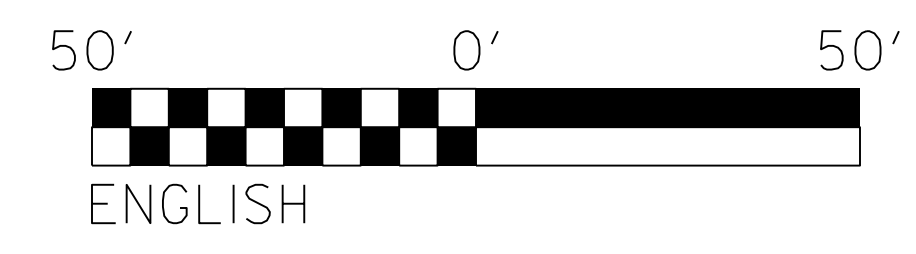
MATCH LINE -L- STA 155+00 SEE SHEET 14



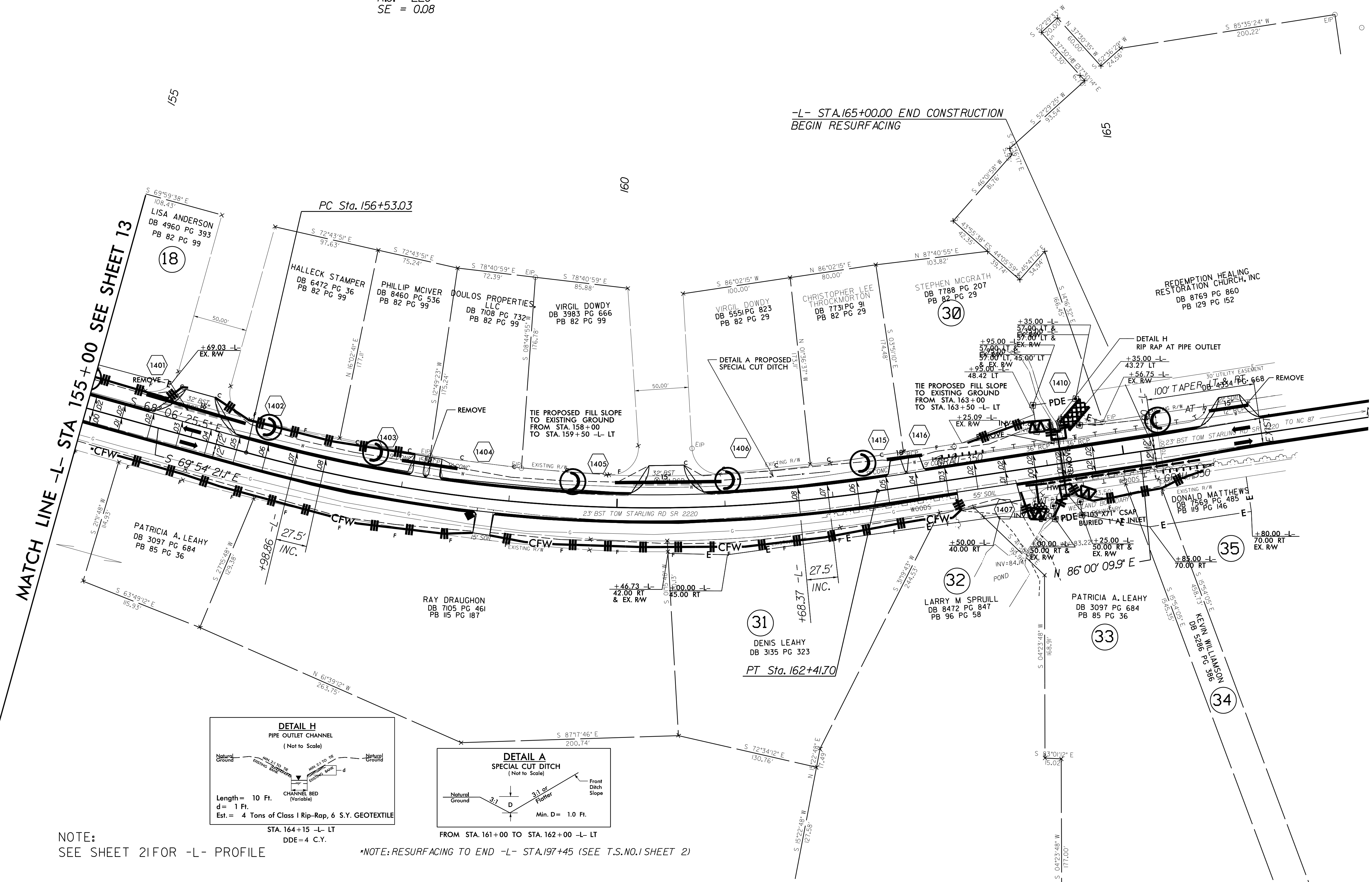
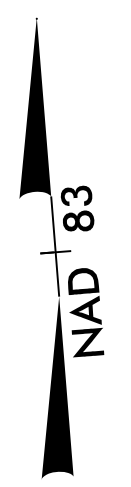
NOTE:  
 SEE SHEETS 20 & 21 FOR -L- PROFILE  
 SEE SHEET 23 FOR -Y5- & -Y6- PROFILE  
 SEE SHEET 25 FOR -DRIVE 10- & -DRIVE 11- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-27/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

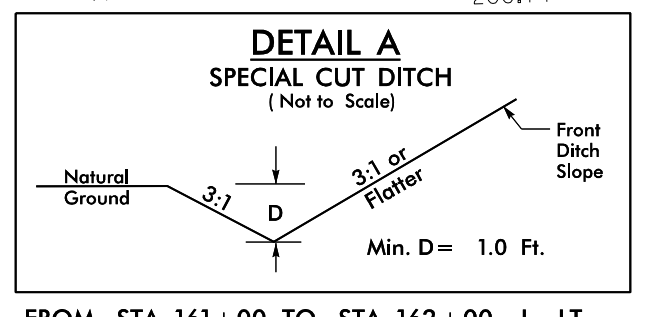
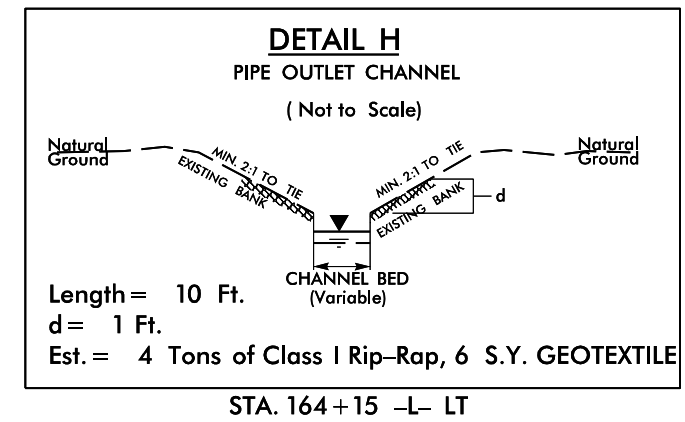
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.  
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



-L-  
 PI Sta 159+51.78  
 $\Delta = 24^{\circ}05'29.0''$  (LT)  
 $D = 4^{\circ}05'33.2''$   
 $L = 588.66'$   
 $T = 298.75'$   
 $R = 1,400.00'$   
 $R.O. = 220'$   
 $SE = 0.08$



MATCH LINE -L- STA 155+00 SEE SHEET 13



NOTE: SEE SHEET 21 FOR -L- PROFILE

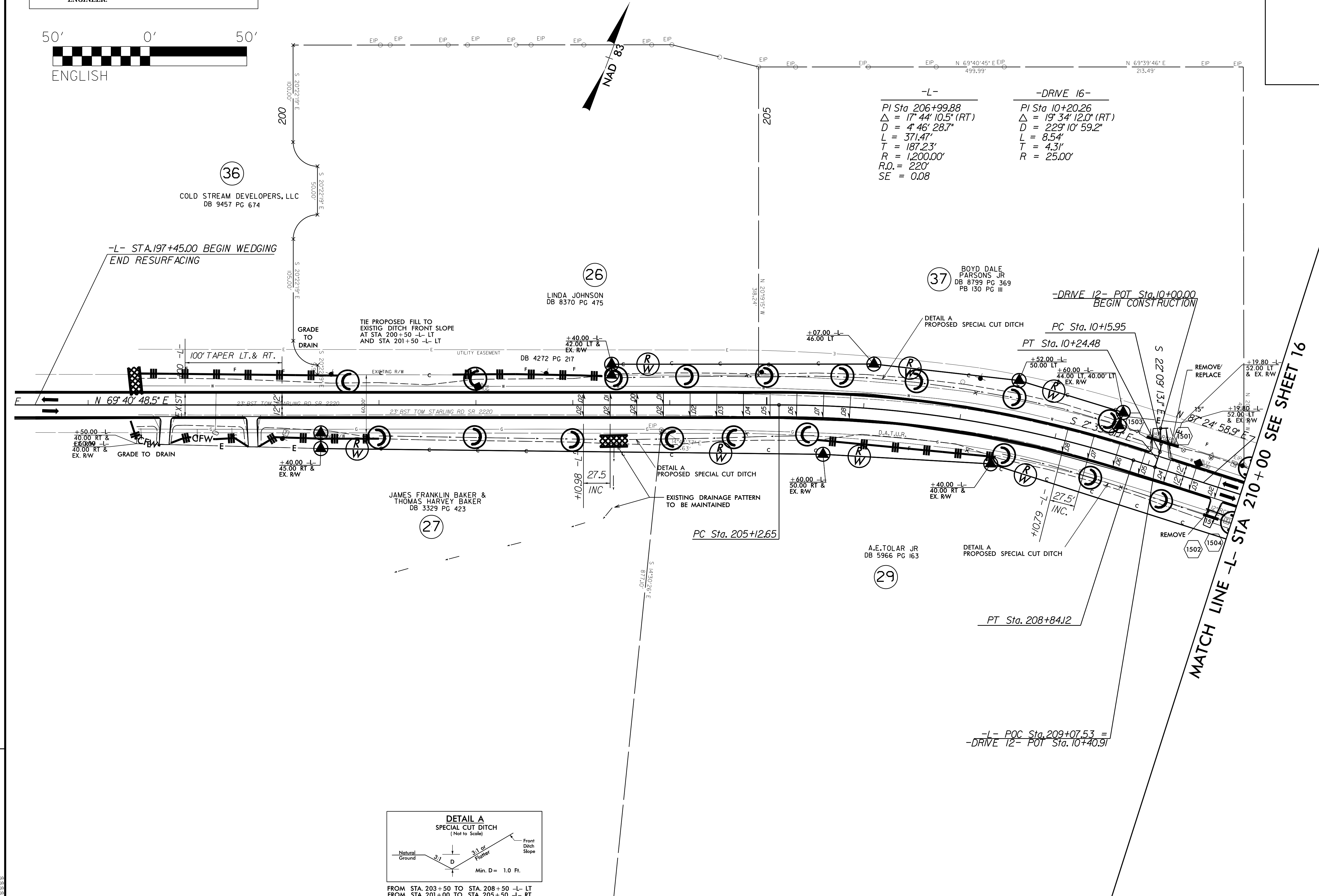
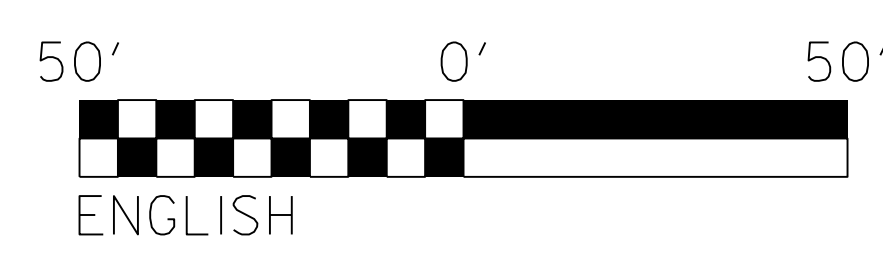
\*NOTE: RESURFACING TO END -L- STA.197+45 (SEE T.S.NO.1 SHEET 2)

REVISIONS

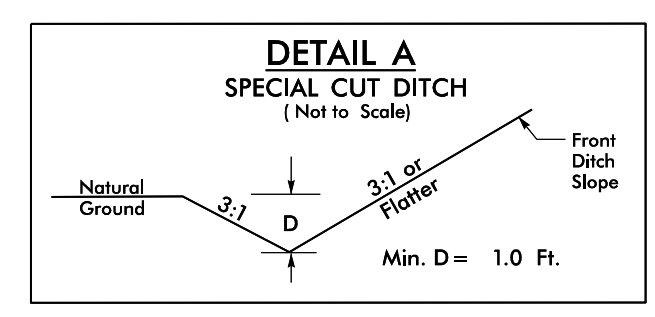
8.17.99

PROJECT REFERENCE NO.	SHEET NO.
W-5512	EC-28/CONST.15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



REVISIONS



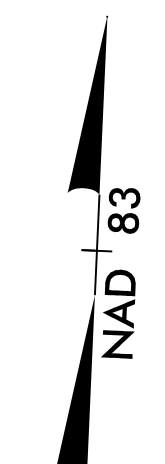
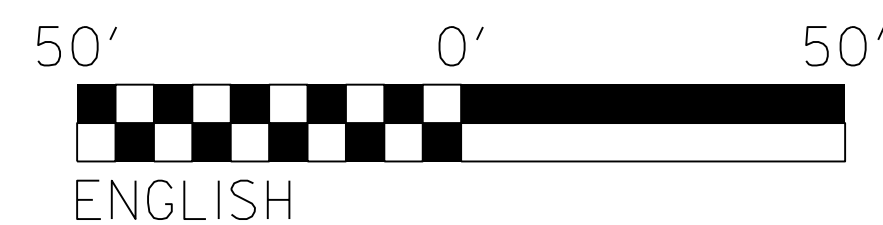
FROM STA. 203+50 TO STA. 208+50 -L- LT  
 FROM STA. 201+00 TO STA. 205+50 -L- RT  
 FROM STA. 207+50 TO STA. 213+00 -L- RT

NOTE:  
 SEE SHEET 22 FOR -L- PROFILE \*NOTE: RESURFACING TO BEGIN -L- STA.165+00.00 (SEE T.S.NO.1 SHEET 2)  
 SEE SHEET 25 FOR -DRIVE 12- PROFILE

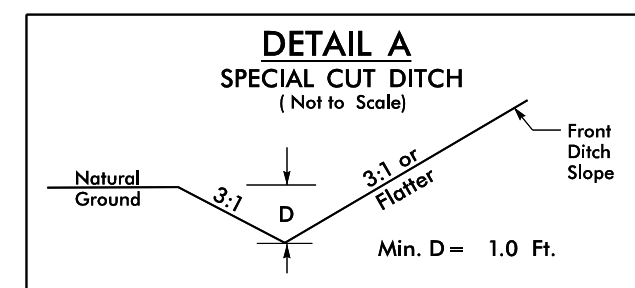
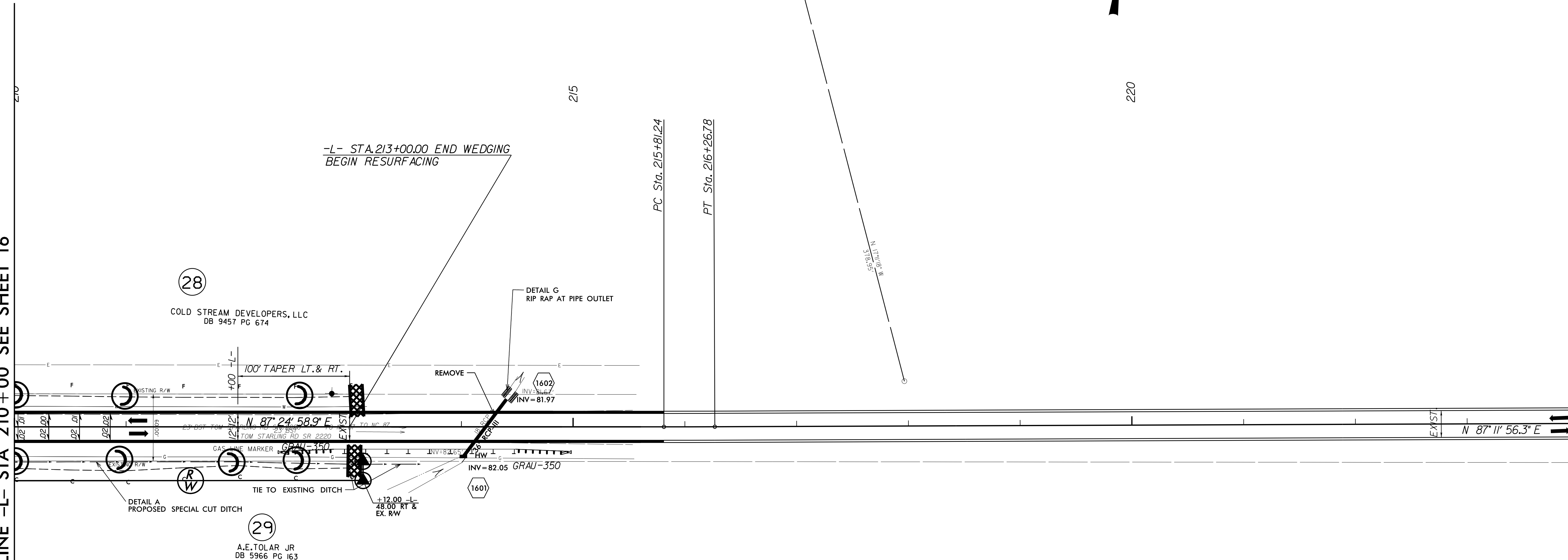
8.17.99

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.

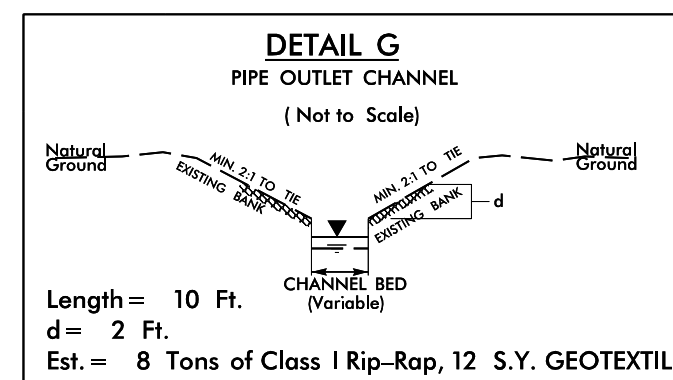
-L-  
PI Sta 216+04.01  
 $\Delta = 0^{\circ}13'02.6''$  (LT)  
 $D = 0^{\circ}28'38.9''$   
 $L = 45.53'$   
 $T = 22.77'$   
 $R = 12,000.00'$   
 $SE = NC$



MATCH LINE -L- STA 210+00 SEE SHEET 16



FROM STA. 207+50 TO STA. 213+00 -L- RT



STA. 214+22 -L- LT  
DDE=5 C.Y.

NOTE: SEE SHEET 22 FOR -L- PROFILE

\*NOTE: RESURFACING TO END -L- STA.245+23.91 (SEE T.S.NO.1 SHEET 2)

REVISIONS

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