

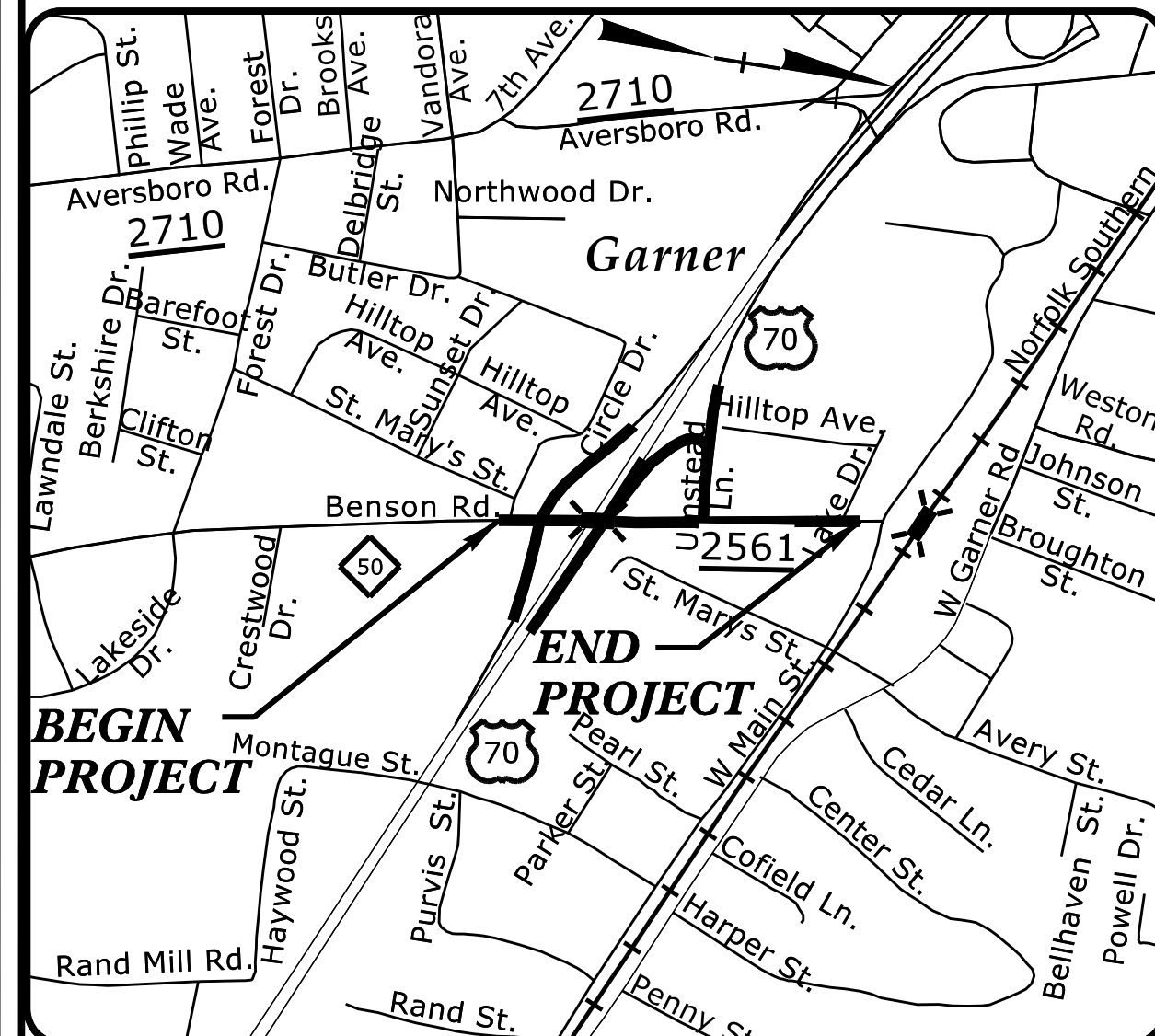
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4654	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38454.1.2		PE	
38454.2.1		RW & UTILITIES	
38454.3.1	0070241	CONSTRUCTION	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

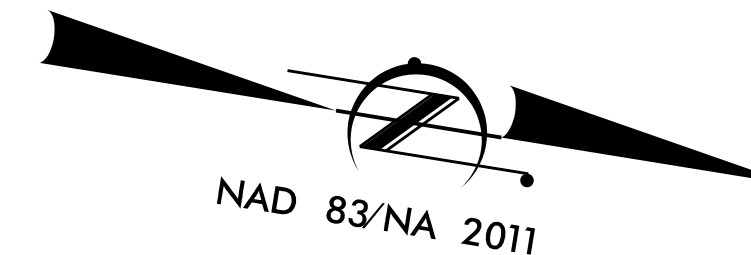
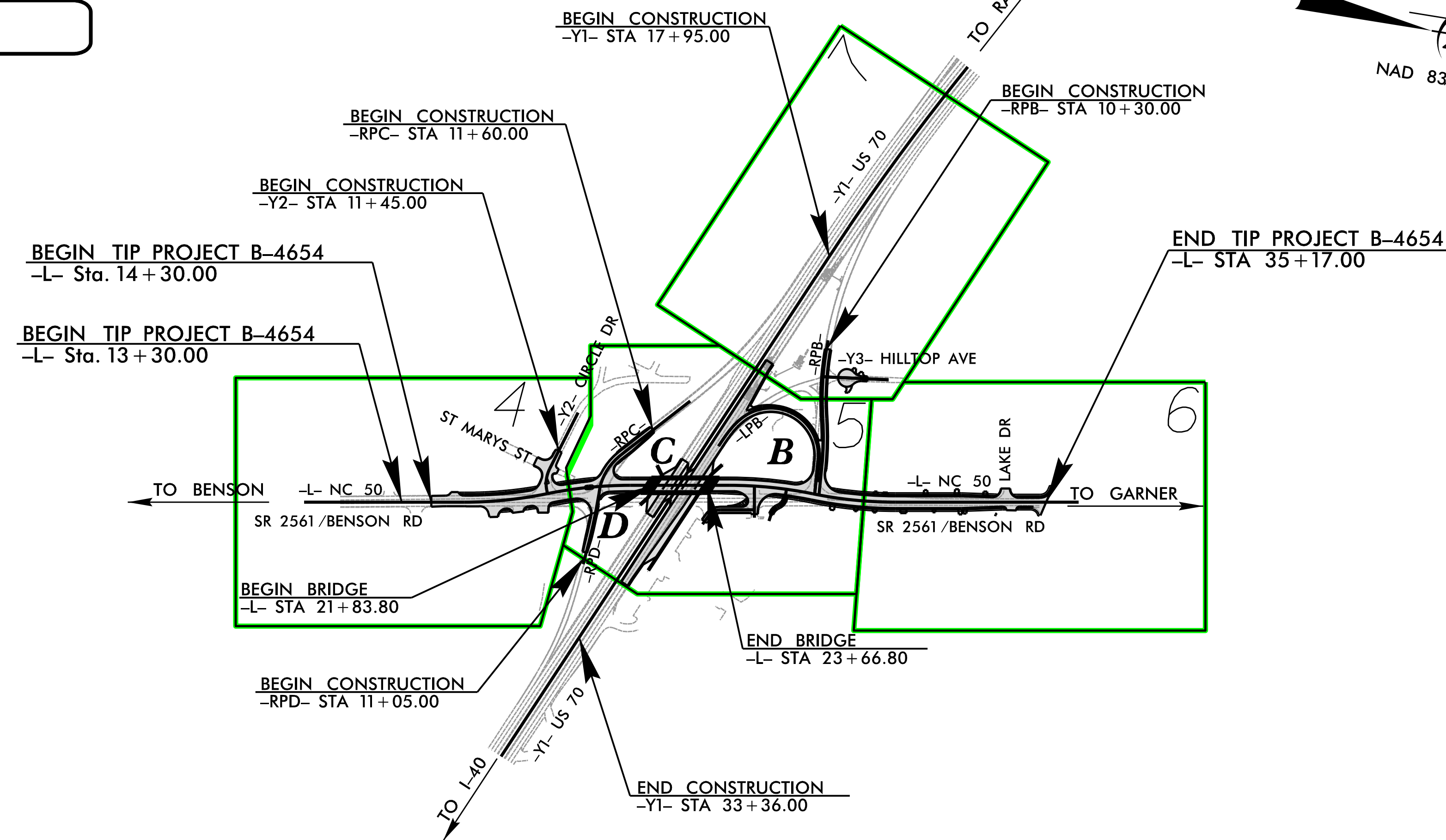
LOCATION: REPLACE BRIDGE 69 OVER US 70 ON NC 50 (BENSON ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RETAINING WALLS & STRUCTURES



VICINITY MAP
NOT TO SCALE

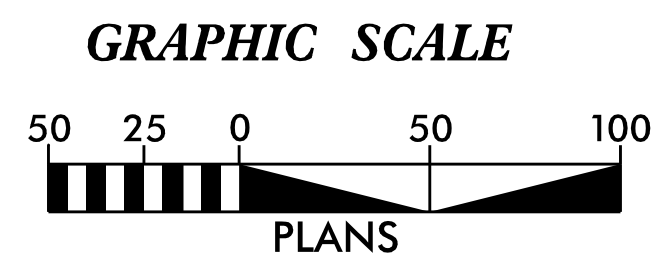
See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



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 APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:
AECOM
Firm License No. F-0342
5438 Wade Park Boulevard, Suite 200
Raleigh NC 27607
+1-919-461-1100

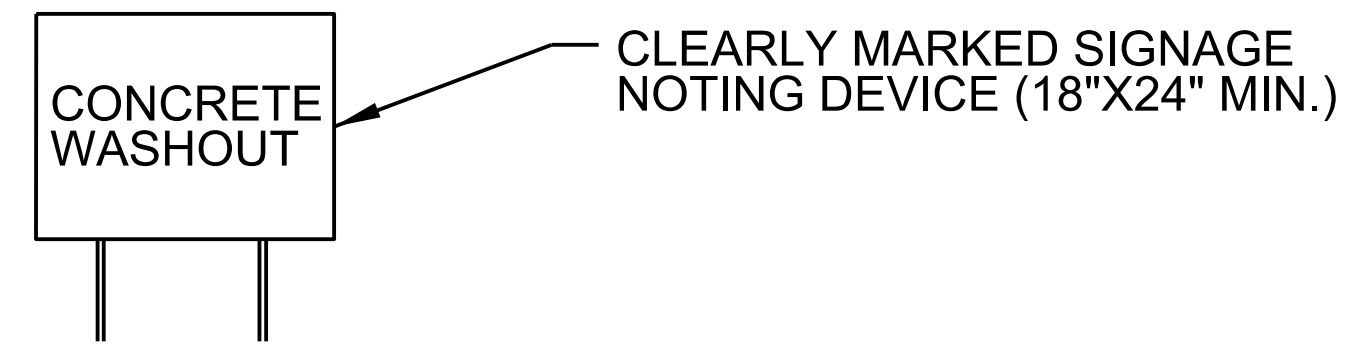
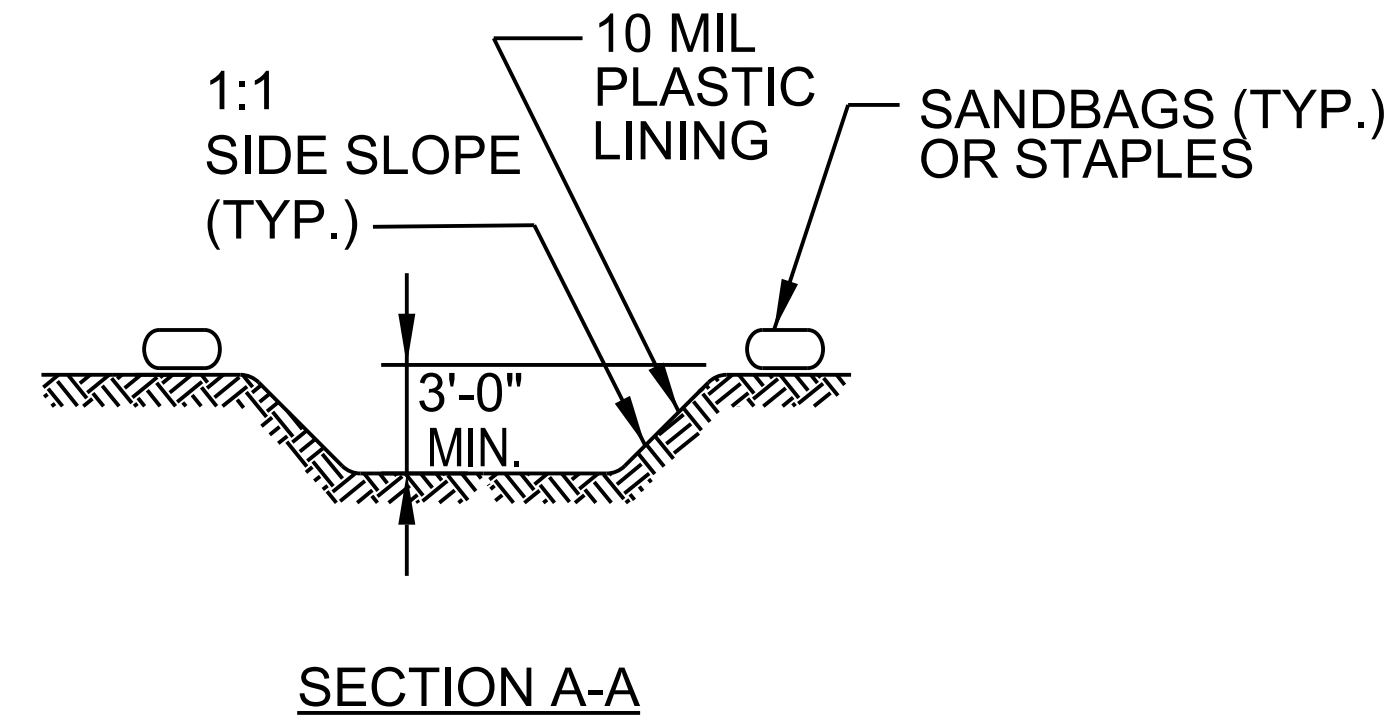
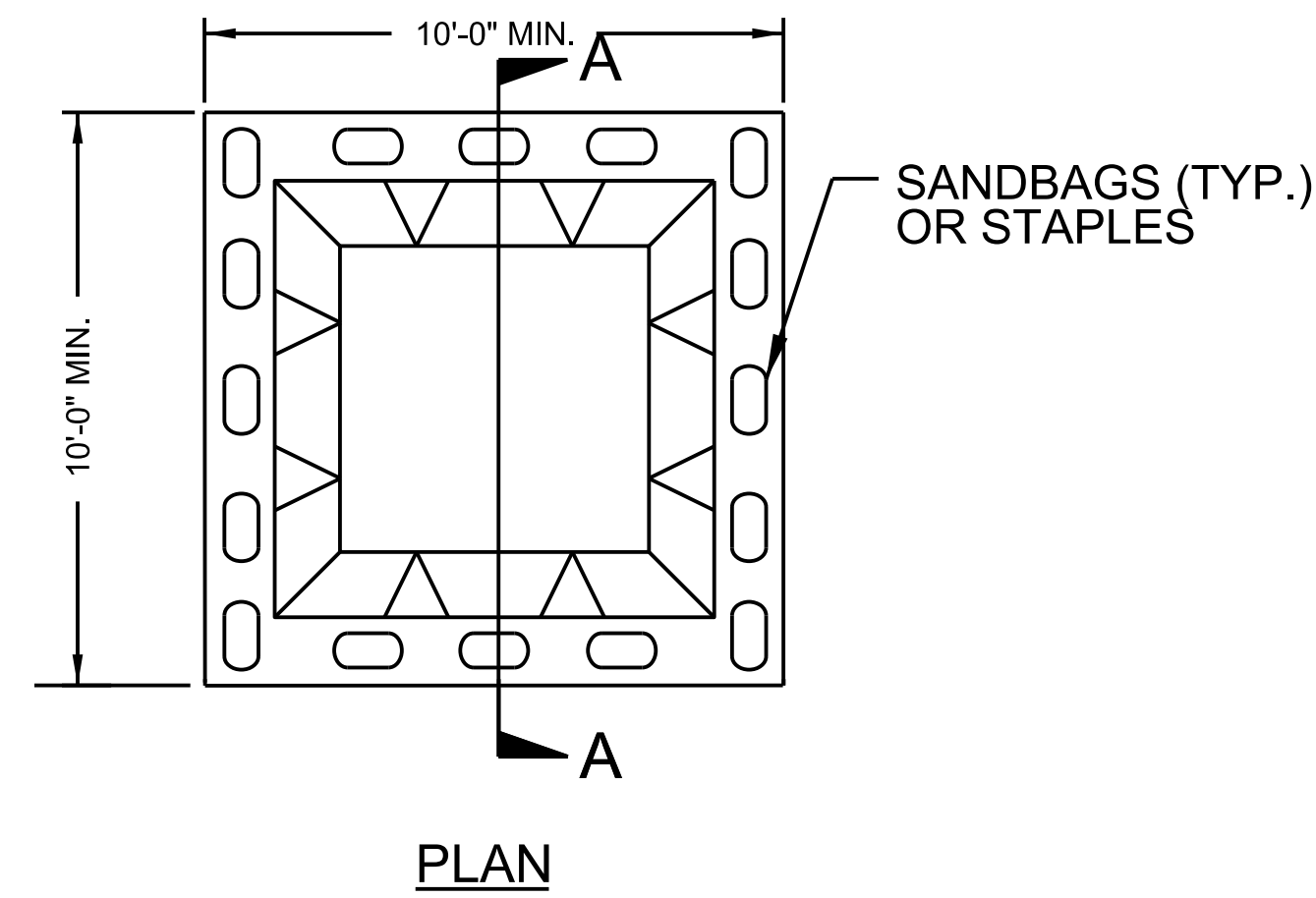
Designed by:
RENE REMY, CPESC, CPSWQ 3125
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings
The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

CONTRACT: C204410 TIP PROJECT: B-4654

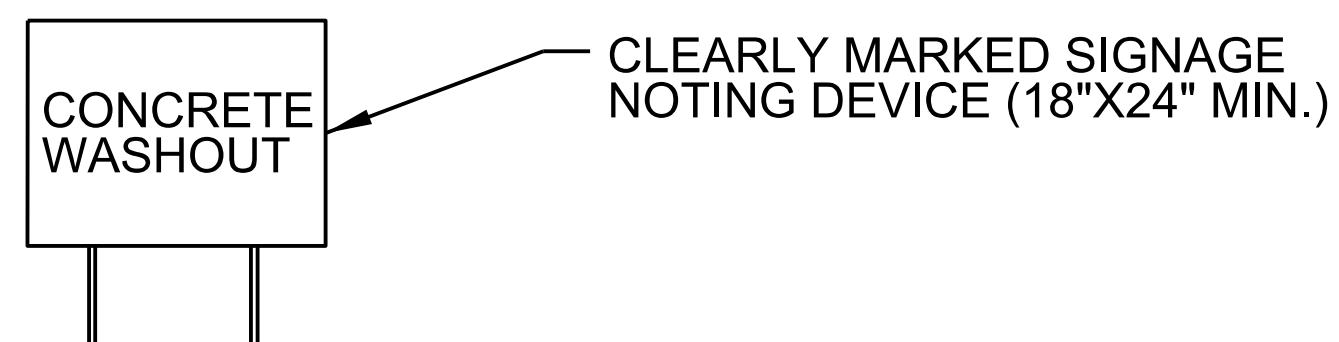
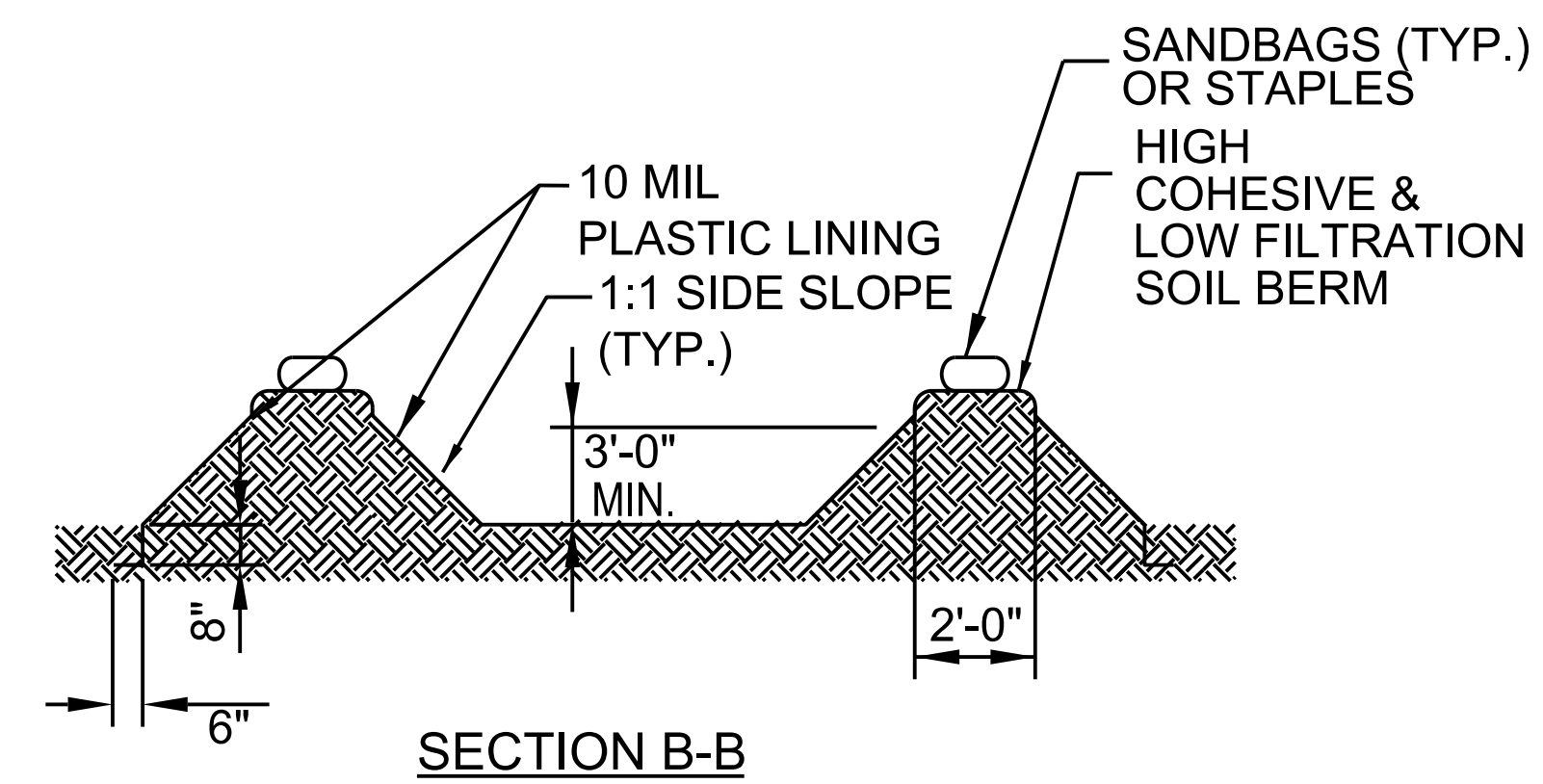
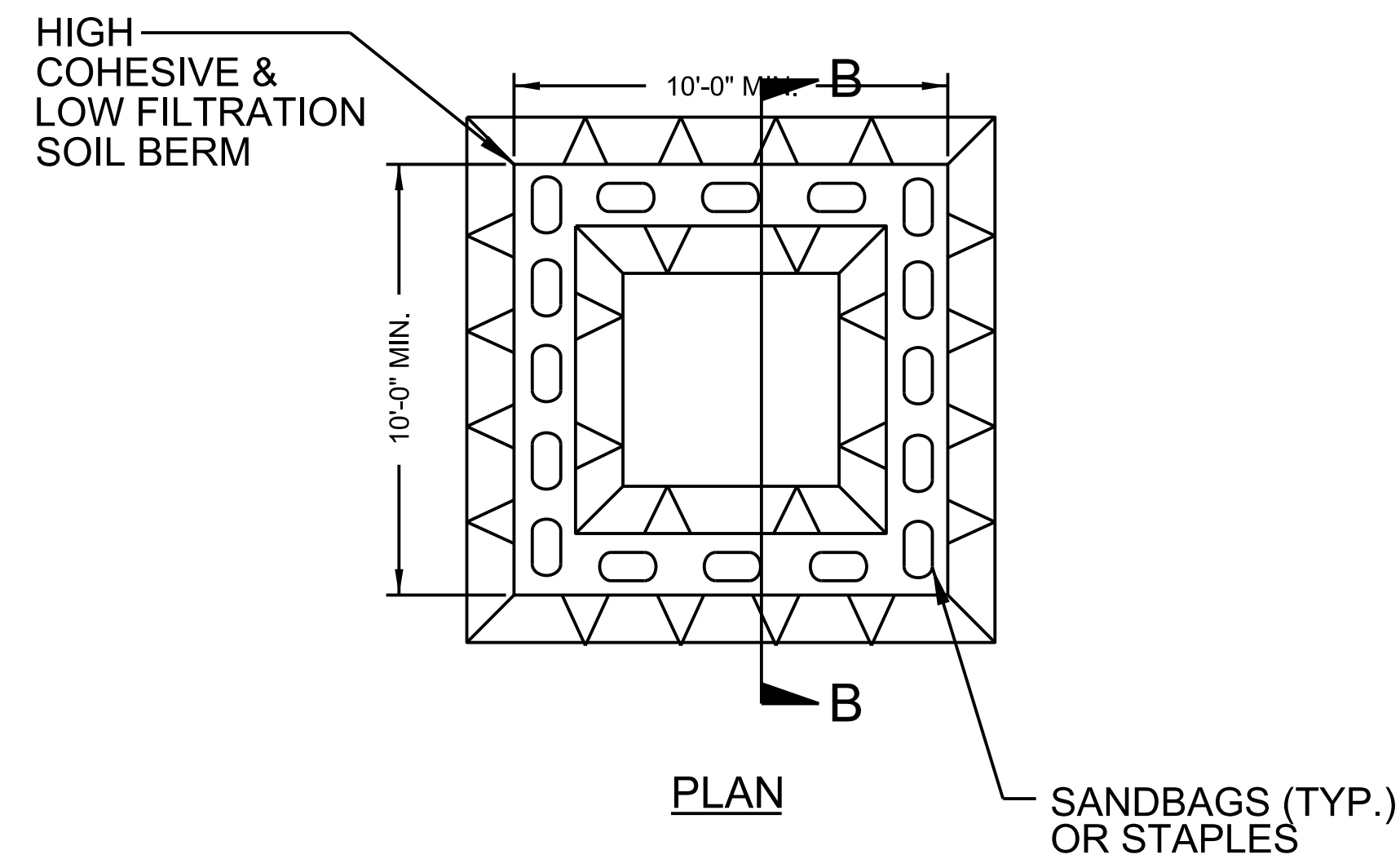
PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-02A
RW SHEET NO.	
Prepared in the Office of:	NC FIRM LICENSE No. F-0342 AECOM 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 +1-919-461-1000

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

5/14/99

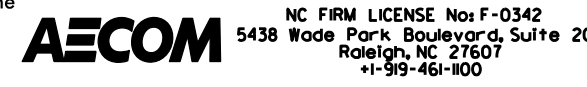

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 5/14/99

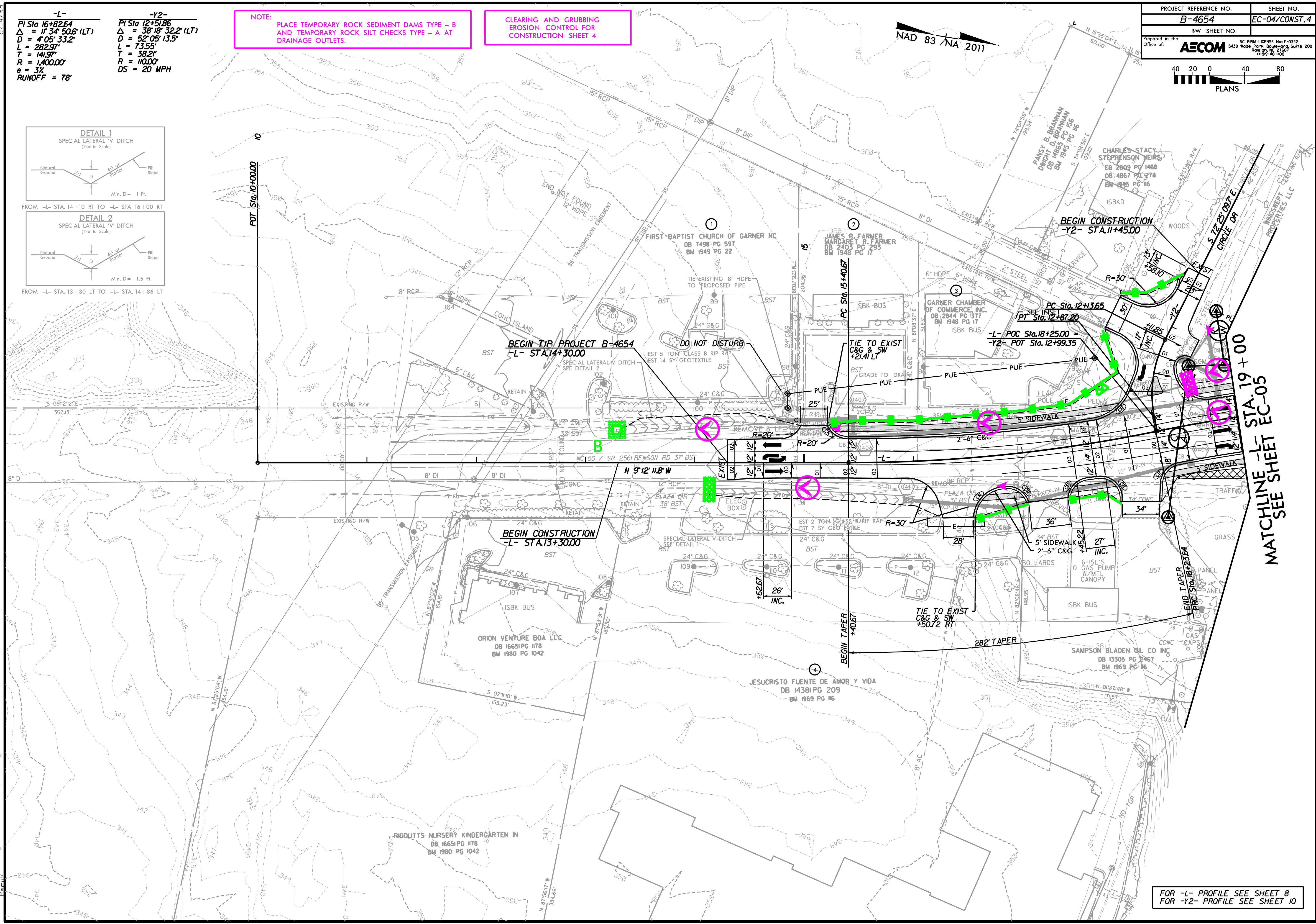
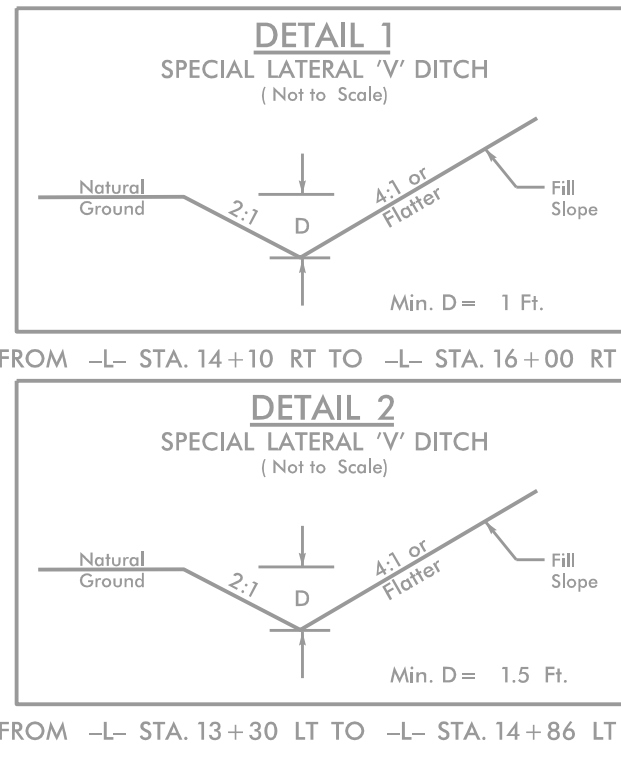
-L-
 PI Sta 16+82.64
 $\Delta = 17' 34" 50.6' (LT)$
 $D = 4' 05" 33.2'$
 $L = 282.97'$
 $T = 141.97'$
 $R = 1,400.00'$
 $e = 3\%$
 RUNOFF = 78'

-Y2-
 PI Sta 12+51.86
 $\Delta = 38' 18" 32.2' (LT)$
 $D = 52' 05" 13.5'$
 $L = 73.55'$
 $T = 38.21'$
 $R = 110.00'$
 $DS = 20 MPH$

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

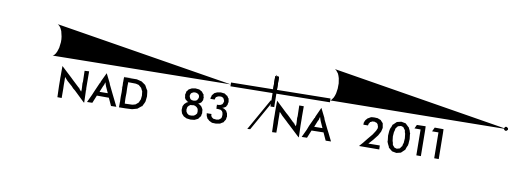
CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4

PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-04/CONST.4
RW SHEET NO.	
Prepared in the Office of:	
	
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PLANS	



FOR -L- PROFILE SEE SHEET 8
 FOR -Y2- PROFILE SEE SHEET 10

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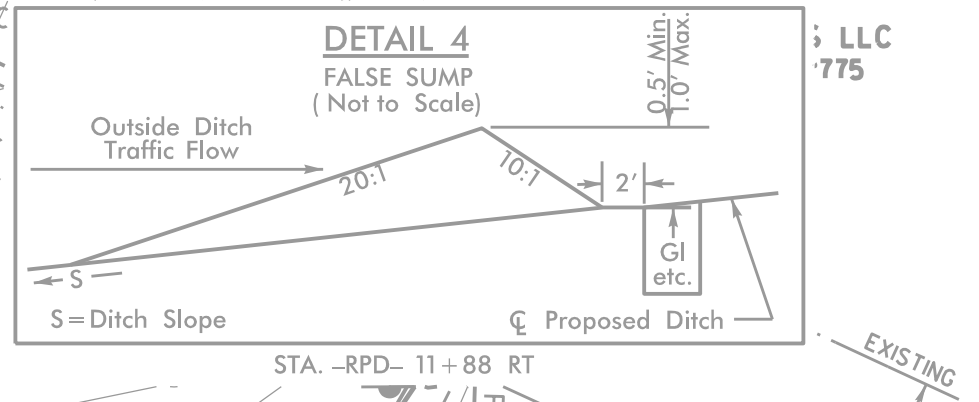
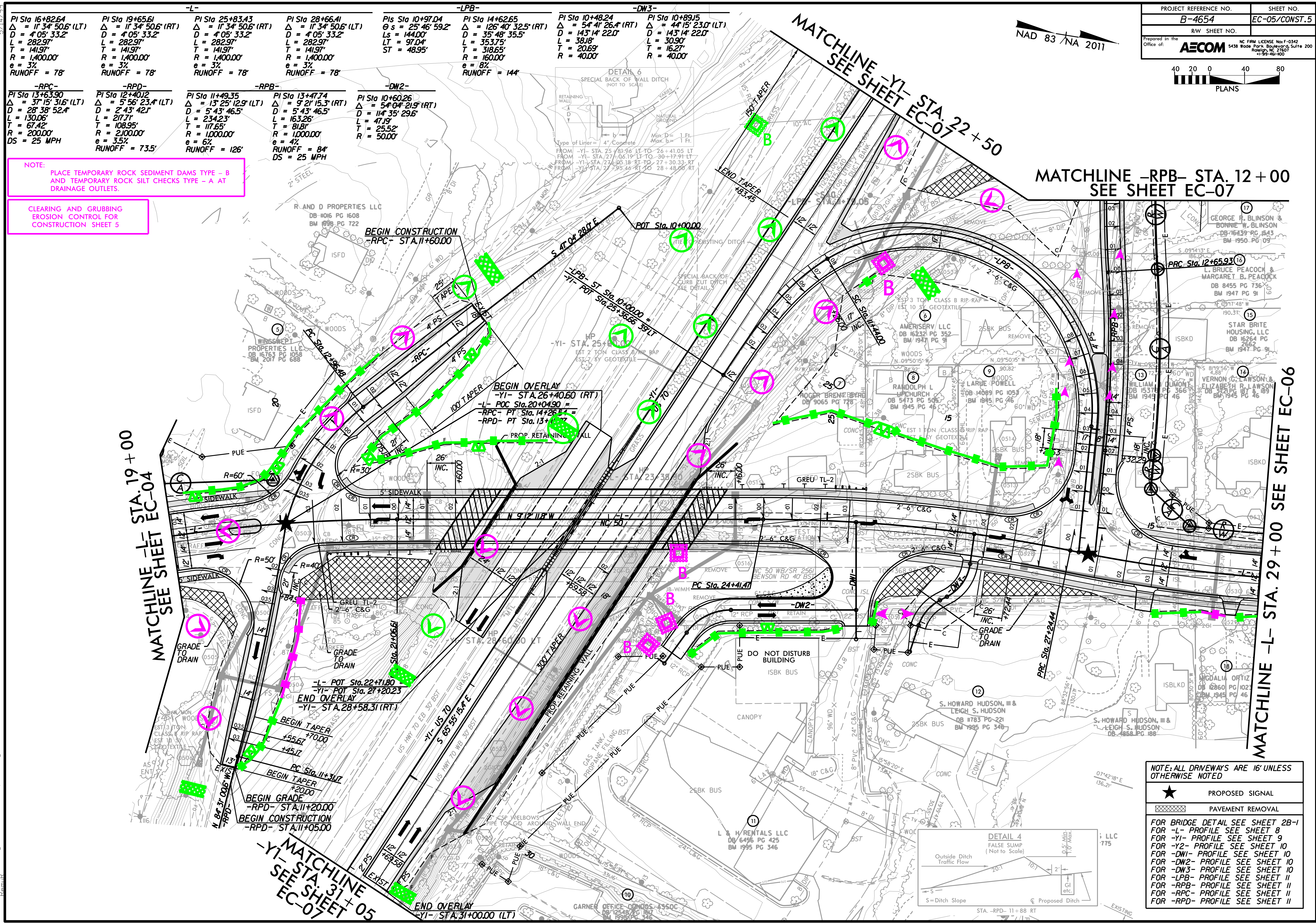


-L-		-LPB-		-DW2-		-DW3-	
PI Sta 16+82.64 Δ = 11°34'50.6" (LT) D = 4'05" 33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 19+65.61 Δ = 11°34'50.6" (RT) D = 4'05" 33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 25+83.43 Δ = 11°34'50.6" (RT) D = 4'05" 33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 28+66.41 Δ = 11°34'50.6" (LT) D = 4'05" 33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PIs Sta 10+97.04 Δs = 25°46'59.2" Ls = 144.00' LT = 97.04' ST = 48.95'	PI Sta 14+62.65 Δ = 126°40'32.5" (RT) D = 35'48" 35.5" L = 38.375' T = 38.65' R = 150.00' e = 8% RUNOFF = 144'	PI Sta 10+48.24 Δ = 54°41'26.4" (RT) D = 143'14" 22.0" L = 38.8' T = 20.69' R = 40.00'	PI Sta 10+89.15 Δ = 44°15'23.0" (LT) D = 143'14" 22.0" L = 30.90' T = 16.27' R = 40.00'

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 5

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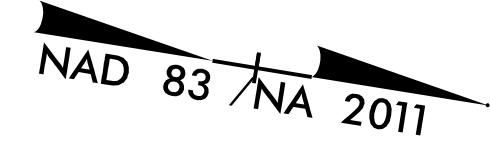
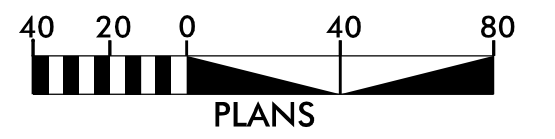
NOTE: ALL DRIVEWAYS ARE 16' UNLESS OTHERWISE NOTED

★ PROPOSED SIGNAL

PAVEMENT REMOVAL

FOR BRIDGE DETAIL SEE SHEET 2B-1
 FOR -L- PROFILE SEE SHEET 8
 FOR -Y1- PROFILE SEE SHEET 9
 FOR -Y2- PROFILE SEE SHEET 10
 FOR -DW1- PROFILE SEE SHEET 10
 FOR -DW2- PROFILE SEE SHEET 10
 FOR -DW3- PROFILE SEE SHEET 10
 FOR -LPB- PROFILE SEE SHEET 11
 FOR -RPB- PROFILE SEE SHEET 11
 FOR -RPC- PROFILE SEE SHEET 11
 FOR -RPD- PROFILE SEE SHEET 11

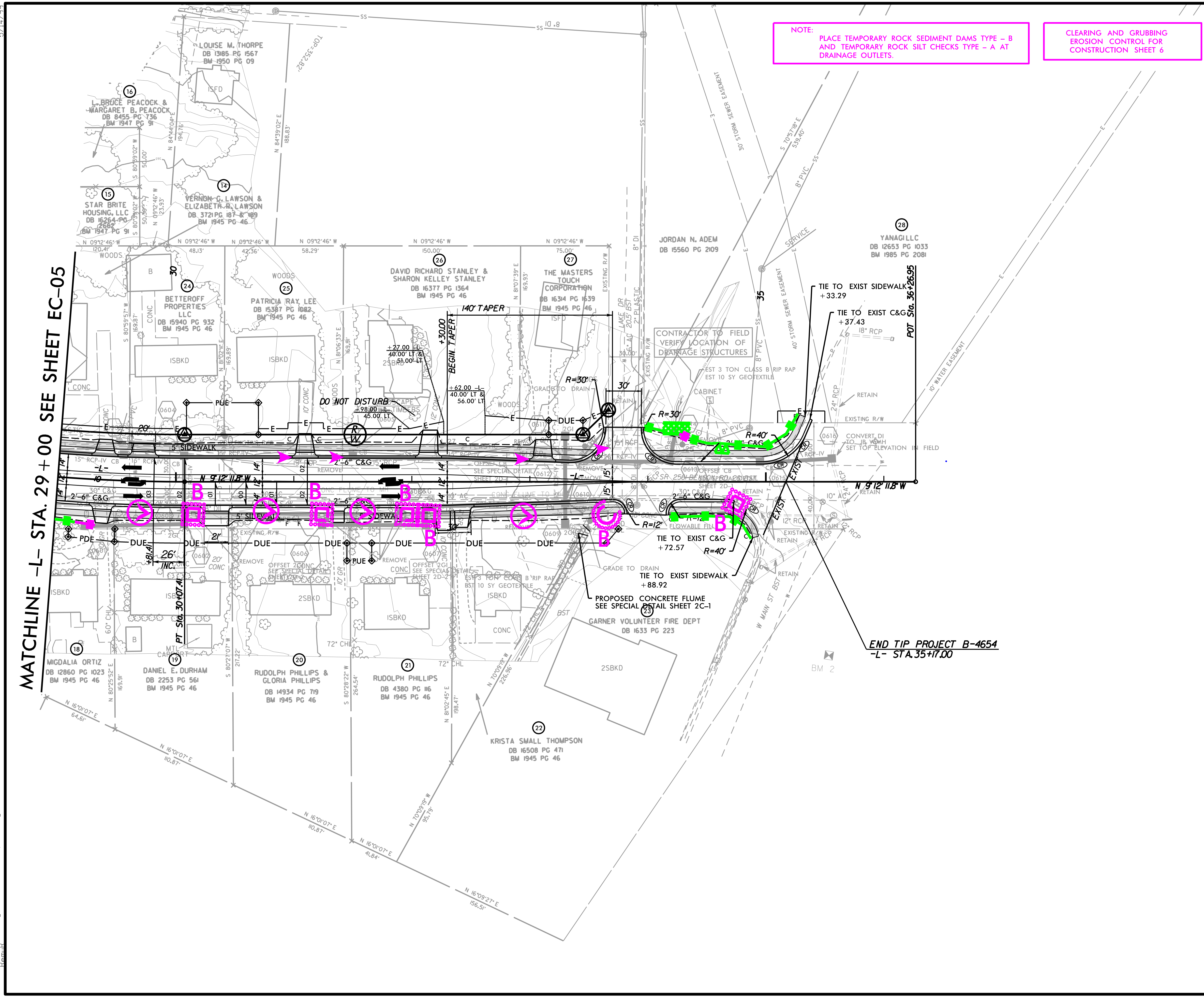
PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-06/CONST.6
RW SHEET NO.	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 +1-919-461-0000	



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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

MATCHLINE -L- STA. 29 + 00 SEE SHEET EC-05



CONTRACTOR TO FIELD VERIFY LOCATION OF DRAINAGE STRUCTURES

END TIP PROJECT B-4654
-L- STA. 35 + 17.00

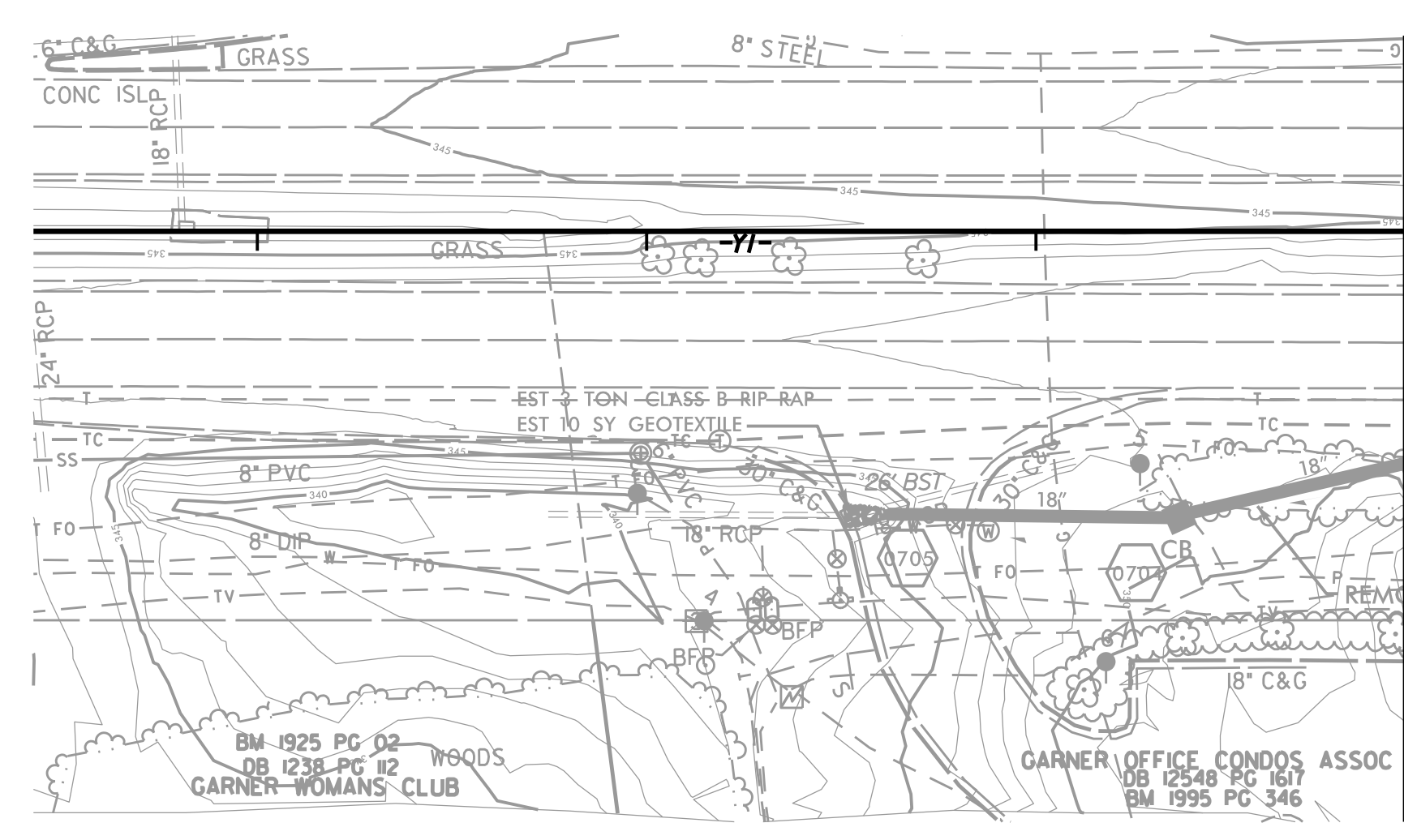
NOTE: ALL DRIVEWAYS ARE 16' UNLESS OTHERWISE NOTED
FOR -L- PROFILE SEE SHEET 8

5/14/2017
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MATCHLINE -Y1- STA. 22 + 50
SEE SHEET EC-05

MATCHLINE -Y1- STA. 12 + 00
SEE SHEET EC-05

MATCHLINE -Y1- STA. 31 + 05
SEE SHEET EC-05



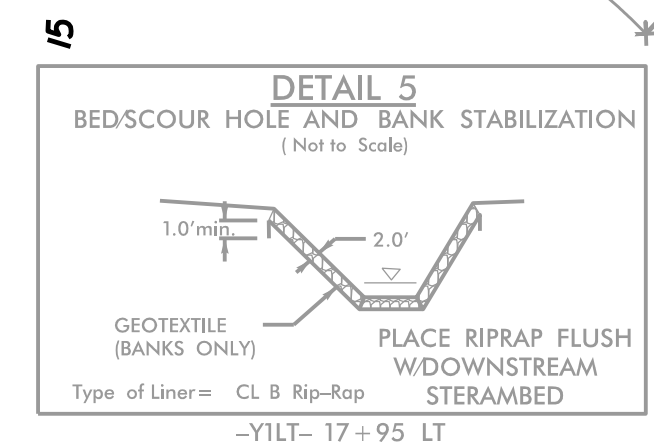
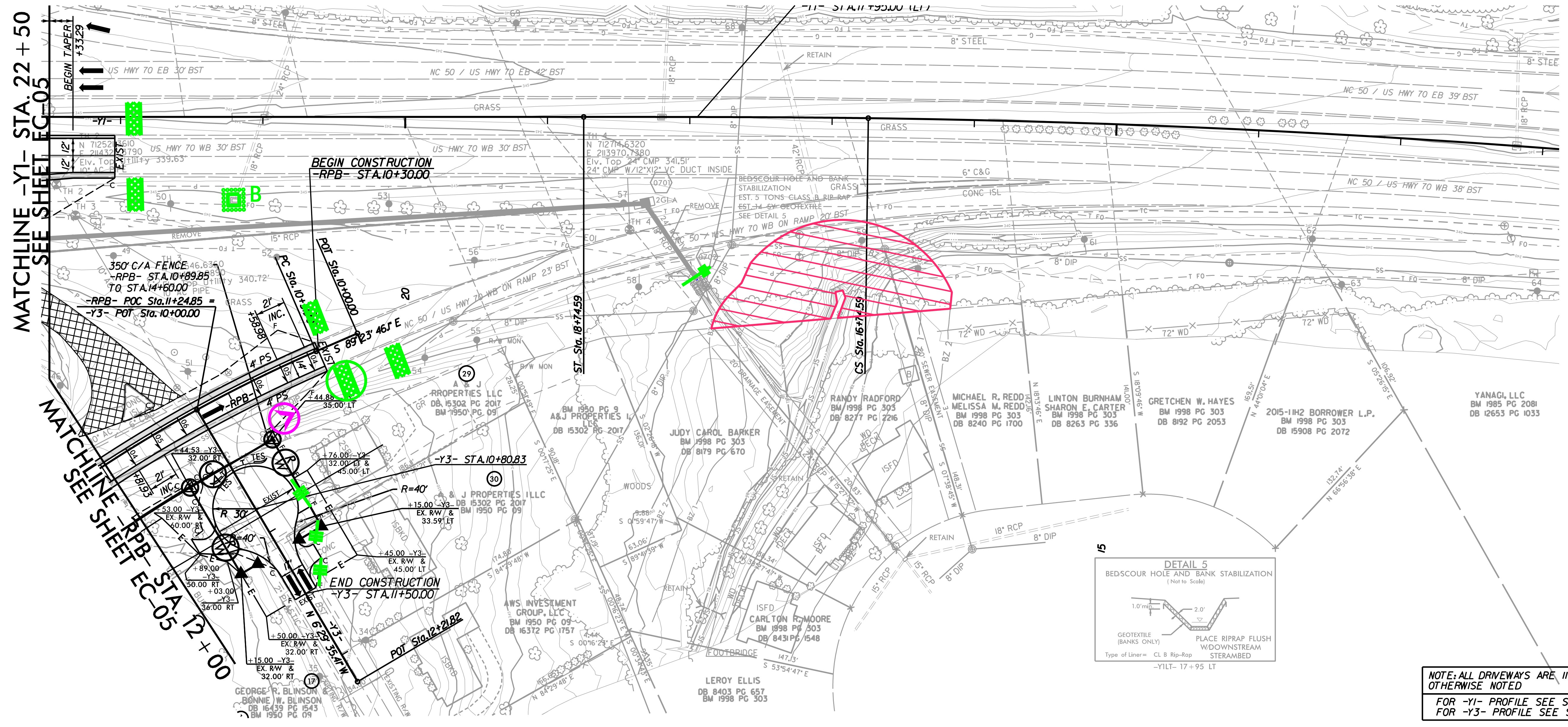
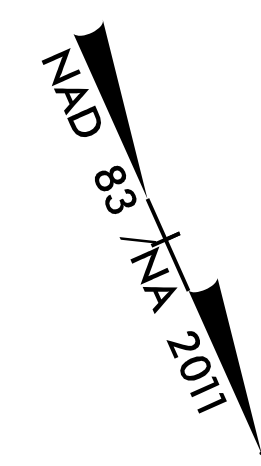
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

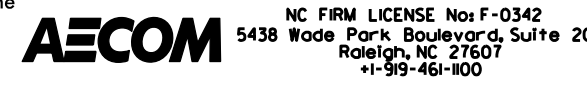
PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-07/CONST.7
RW SHEET NO.	
Prepared in the Office of: AECOM NC FIRM LICENSE No. F-0342 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 +1-919-461-0000	
40 20 0 40 80 PLANS	



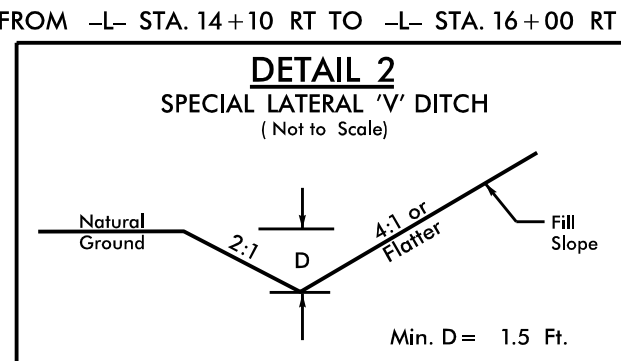
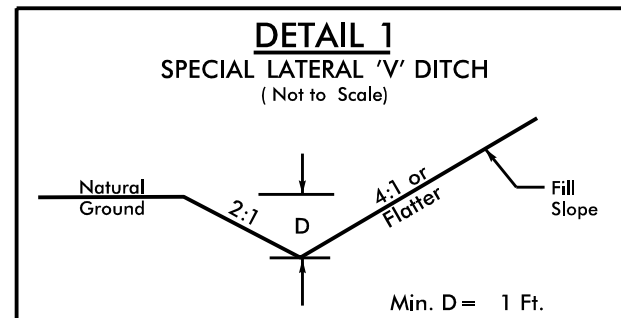
NOTE: ALL DRIVEWAYS ARE 11' UNLESS OTHERWISE NOTED
FOR -Y1- PROFILE SEE SHEET 9
FOR -Y3- PROFILE SEE SHEET 10

-L-
 PI Sta 16+82.64
 $\Delta = 17' 34" 50.6' (LT)$
 $D = 4' 05" 33.2'$
 $L = 282.97'$
 $T = 141.97'$
 $R = 1,400.00'$
 $e = 3\%$
 RUNOFF = 78'

-Y2-
 PI Sta 12+51.86
 $\Delta = 38' 18" 32.2' (LT)$
 $D = 52' 05" 13.5'$
 $L = 73.55'$
 $T = 38.21'$
 $R = 110.00'$
 DS = 20 MPH

PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-08/CONST.4
R/W SHEET NO.	
Prepared in the Office of:	
	
<small>NC FIRM LICENSE No F-0342 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 +1-919-461-0000</small>	

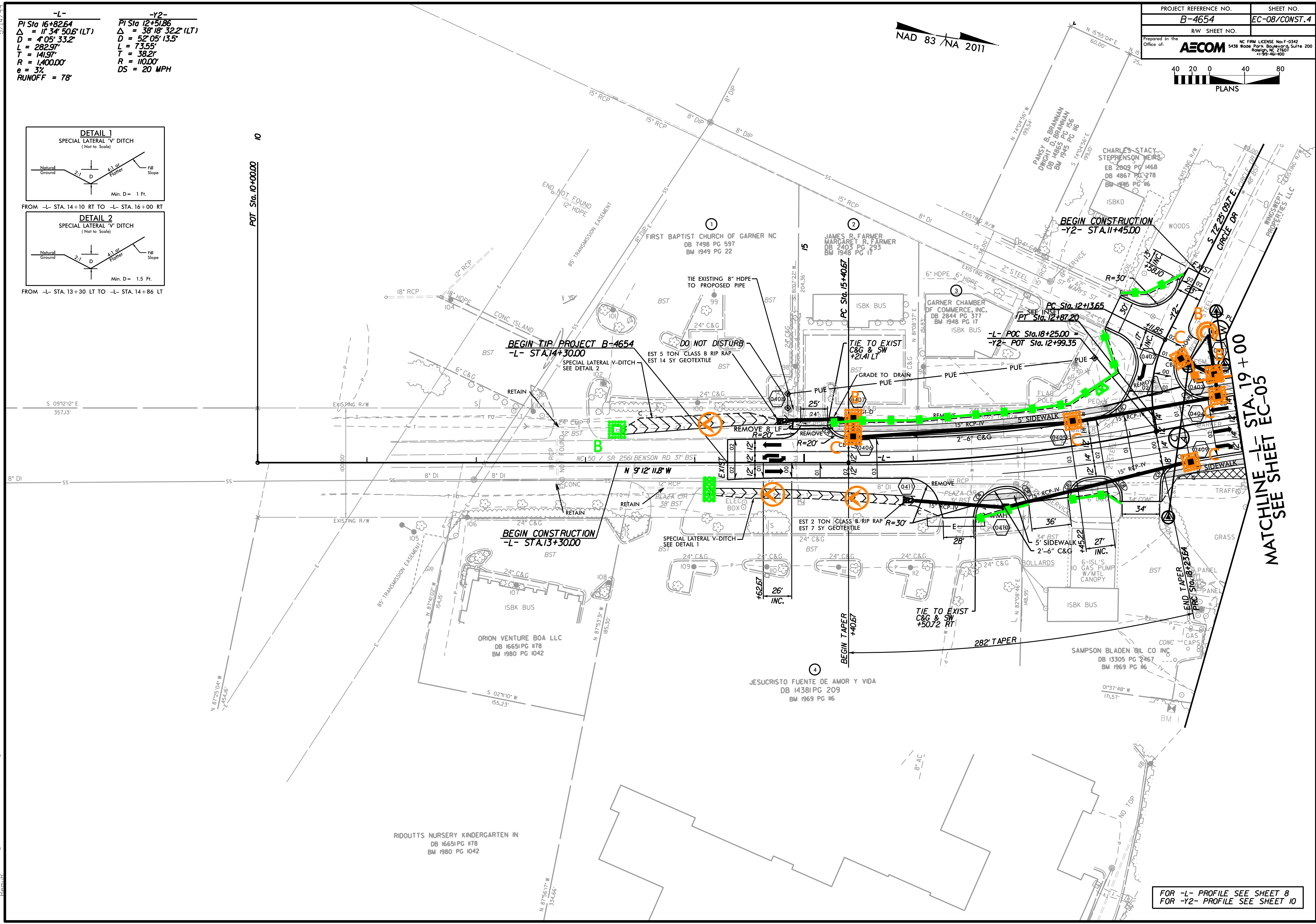
40 20 0 40 80
 PLANS



FROM -L- STA. 14+10 RT TO -L- STA. 16+00 RT

FROM -L- STA. 13+30 LT TO -L- STA. 14+86 LT

POT Sta. 10+00.00 10



MATCHLINE -L- STA. 19+00
 EC-05
 SHEET

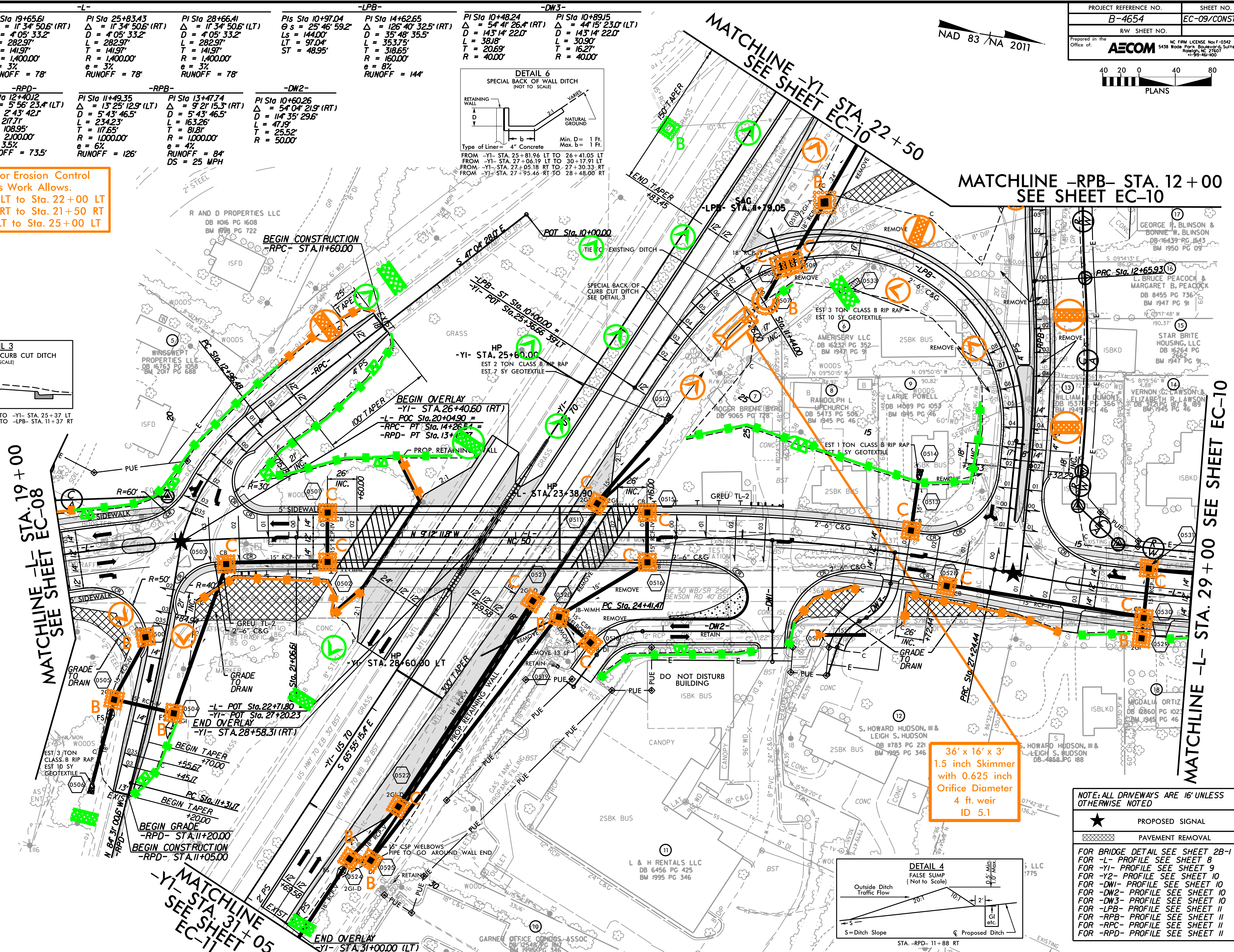
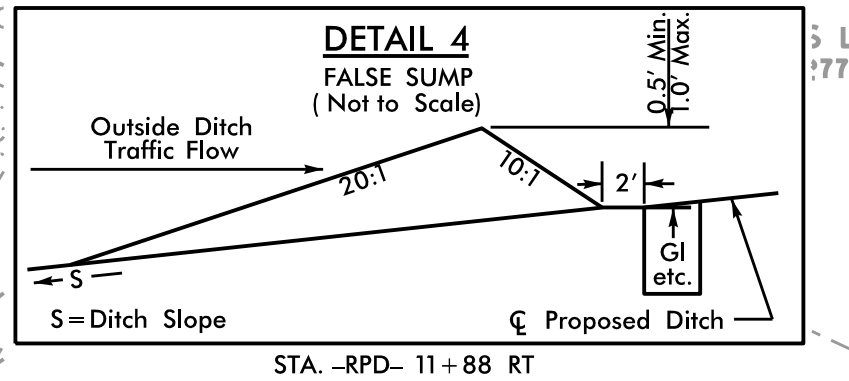
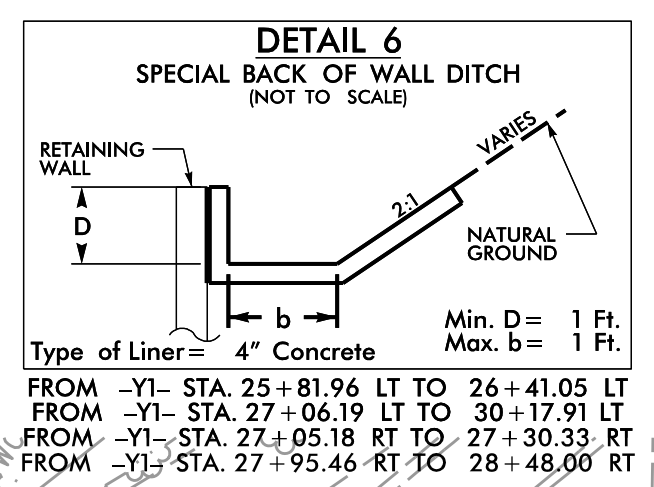
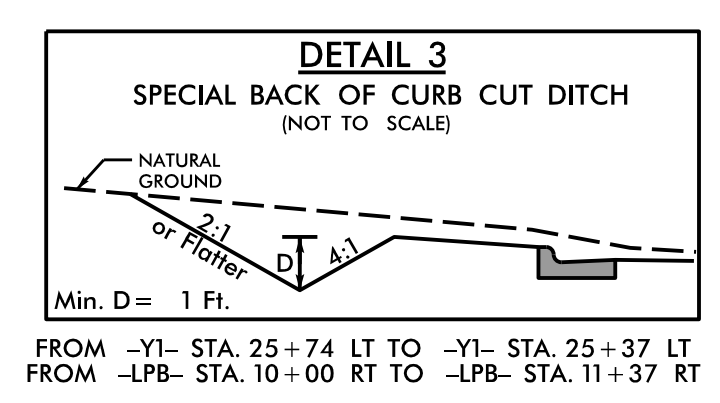
FOR -L- PROFILE SEE SHEET 8
 FOR -Y2- PROFILE SEE SHEET 10

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-L-		-LPB-		-DW3-	
PI Sta 16+82.64 Δ = 11°34'50.6" (LT) D = 4°05'33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 19+65.61 Δ = 11°34'50.6" (RT) D = 4°05'33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 25+83.43 Δ = 11°34'50.6" (RT) D = 4°05'33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PI Sta 28+66.41 Δ = 11°34'50.6" (LT) D = 4°05'33.2" L = 282.97' T = 141.97' R = 1,400.00' e = 3% RUNOFF = 78'	PIs Sta 10+97.04 θ s = 25°46'59.2" Ls = 144.00' LT = 97.04' ST = 48.95'	PI Sta 14+62.65 Δ = 126°40'32.5" (RT) D = 35°48'35.5" L = 38.375' T = 318.65' R = 160.00' e = 8% RUNOFF = 144'
-RPC-		-RPD-		-DW2-	
PI Sta 13+63.90 Δ = 37°15'31.6" (LT) D = 28°38'52.4" L = 130.06' T = 67.42' R = 200.00' DS = 25 MPH	PI Sta 12+40.12 Δ = 5°56'23.4" (LT) D = 2°43'42.1" L = 217.71' T = 108.95' R = 2,100.00' e = 3.5% RUNOFF = 73.5'	PI Sta 11+49.35 Δ = 13°25'12.9" (LT) D = 5°43'46.5" L = 234.23' T = 117.65' R = 1,000.00' e = 6% RUNOFF = 126'	PI Sta 13+47.74 Δ = 9°21'15.3" (RT) D = 5°43'46.5" L = 163.26' T = 81.81' R = 1,000.00' e = 4% RUNOFF = 84' DS = 25 MPH	PI Sta 10+60.26 Δ = 54°04'21.9" (RT) D = 114°35'29.6" L = 47.19' T = 25.52' R = 50.00'	PI Sta 10+48.24 Δ = 54°41'26.4" (RT) D = 143°14'22.0" L = 38.18' T = 206.9' R = 40.00'

Place Matting for Erosion Control on Slope as Work Allows.
 -L- Sta. 20+70 LT to Sta. 22+00 LT
 -L- Sta. 21+00 RT to Sta. 21+50 RT
 -L- Sta. 24+20 LT to Sta. 25+00 LT



36' x 16' x 3'
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 4 ft. weir
 ID 5.1

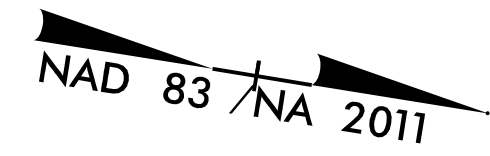
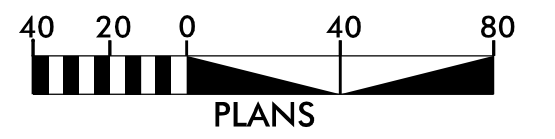
NOTE: ALL DRIVEWAYS ARE 16' UNLESS OTHERWISE NOTED

★ PROPOSED SIGNAL

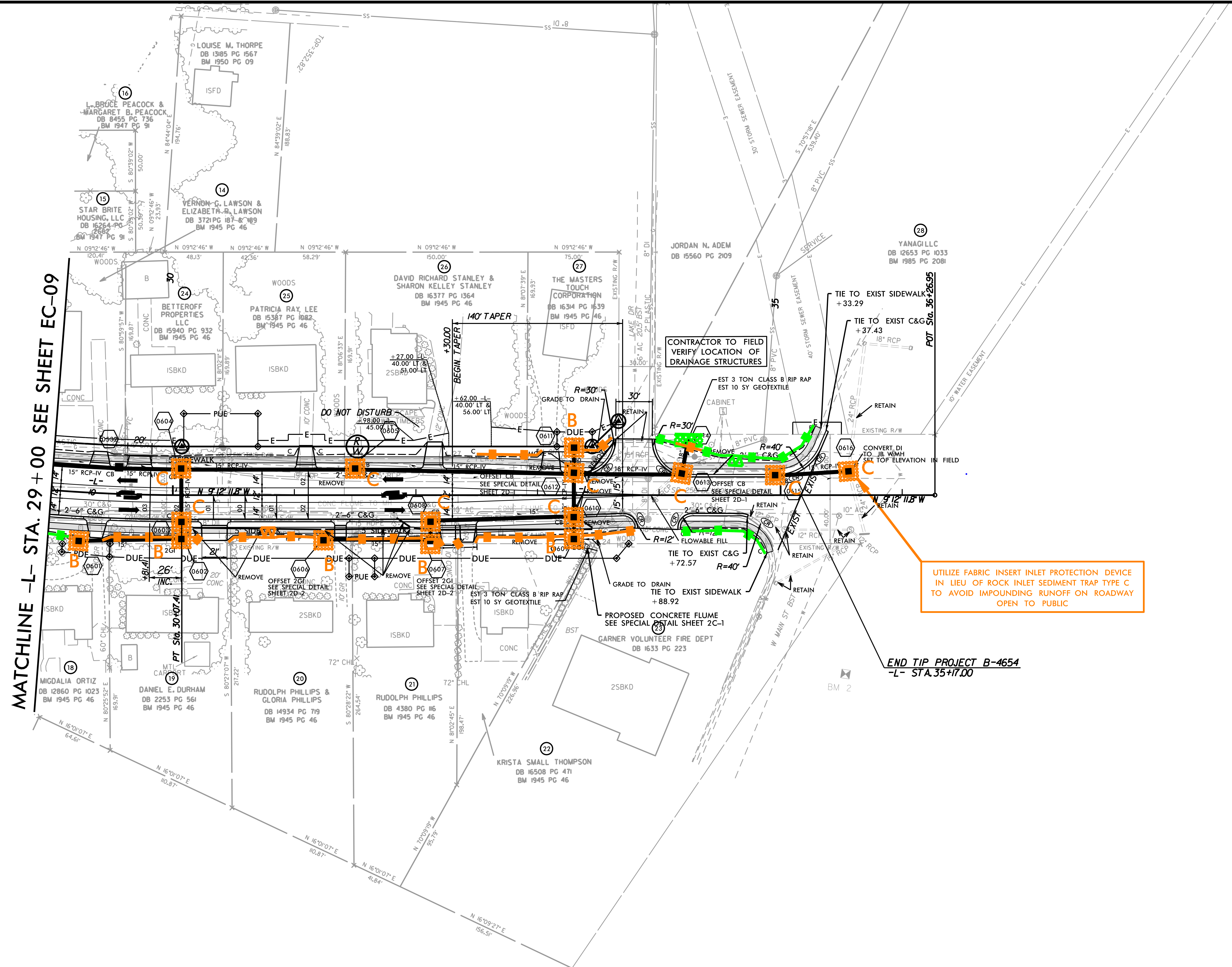
PAVEMENT REMOVAL

FOR BRIDGE DETAIL SEE SHEET 2B-1
 FOR -L- PROFILE SEE SHEET 8
 FOR -YI- PROFILE SEE SHEET 9
 FOR -Y2- PROFILE SEE SHEET 10
 FOR -DW1- PROFILE SEE SHEET 10
 FOR -DW2- PROFILE SEE SHEET 10
 FOR -DW3- PROFILE SEE SHEET 10
 FOR -LPB- PROFILE SEE SHEET 11
 FOR -RPB- PROFILE SEE SHEET 11
 FOR -RPC- PROFILE SEE SHEET 11
 FOR -RPD- PROFILE SEE SHEET 11

PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-10/CONST.6
RW SHEET NO.	
Prepared in the Office of: AECOM <small>NC FIRM LICENSE No F-0342 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 +1-919-461-0000</small>	



MATCHLINE -L- STA. 29 + 00 SEE SHEET EC-09



UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO AVOID IMPOUNDING RUNOFF ON ROADWAY OPEN TO PUBLIC

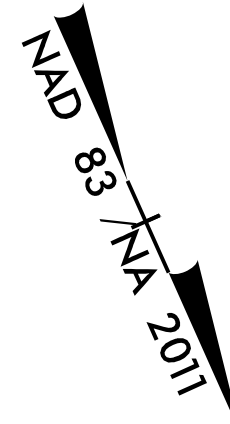
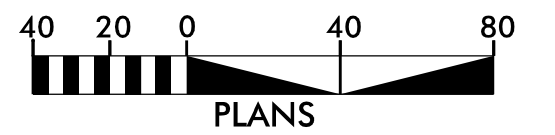
END TIP PROJECT B-4654
-L- STA. 35 + 17.00

NOTE: ALL DRIVEWAYS ARE 16' UNLESS OTHERWISE NOTED
FOR -L- PROFILE SEE SHEET 8

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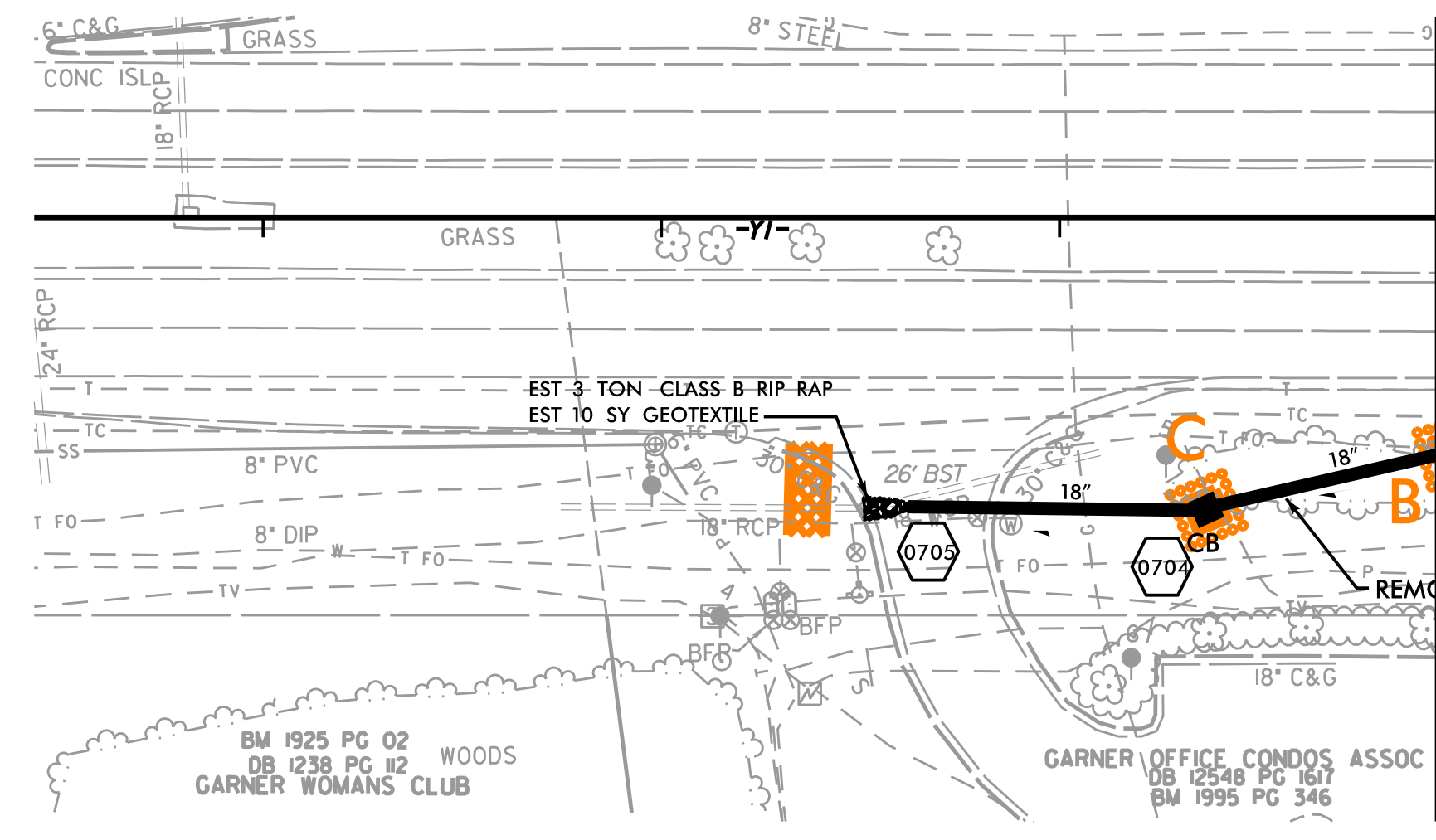
PROJECT REFERENCE NO.	SHEET NO.
B-4654	EC-II/CONST.7
R/W SHEET NO.	

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 Raleigh, NC 27607
 +1-919-461-0000



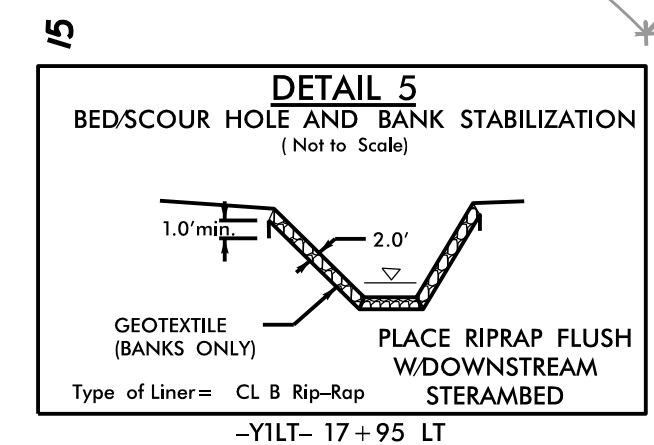
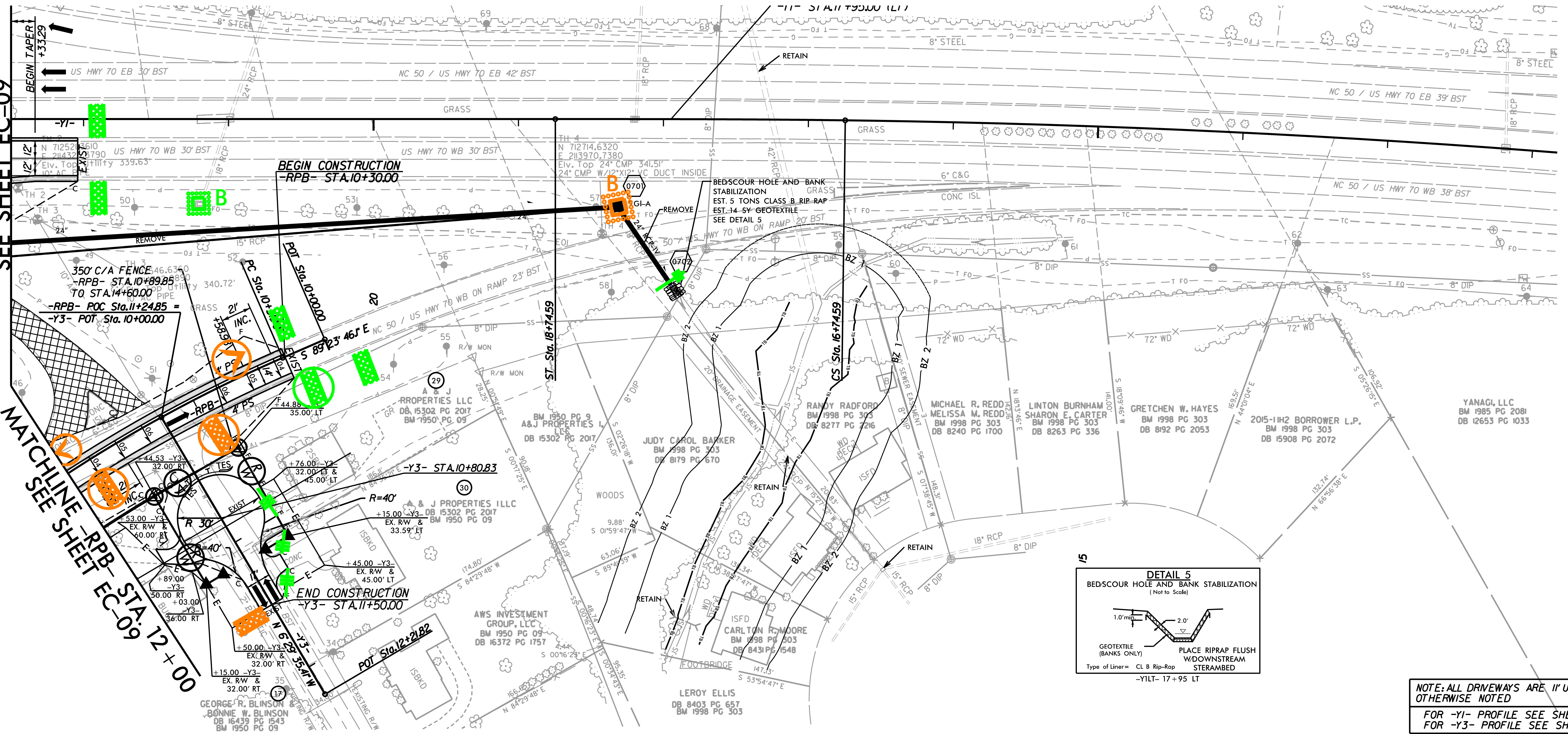
NOTE:
 UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

MATCHLINE -Y1- STA. 31 + 05
 SEE SHEET EC-09



MATCHLINE -Y1- STA. 22 + 50
 SEE SHEET EC-09

MATCHLINE -RPB- STA. 12 + 00
 SEE SHEET EC-09



NOTE: ALL DRIVEWAYS ARE 11' UNLESS OTHERWISE NOTED
 FOR -Y1- PROFILE SEE SHEET 9
 FOR -Y3- PROFILE SEE SHEET 10

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