PROJECT: B-3421

TIP #

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

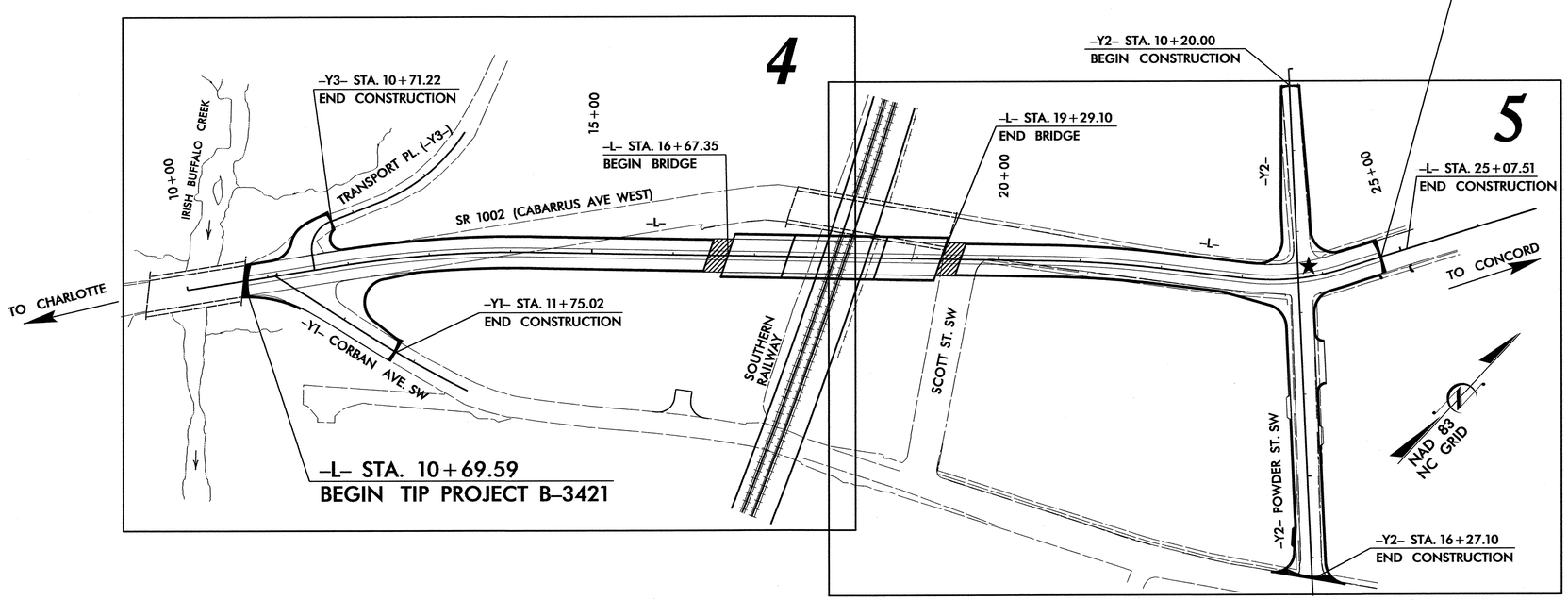
CABARRUS COUNTY

LOCATION: BRIDGE NO. 266 OVER SOUTHERN RAILWAY ON SR 1002 IN CONCORD

TYPE OF WORK: STRUCTURE, DRAINAGE, GRADING, PAVING, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3421	EC-1	

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



EROSION AND SEDIMENT CONTROL MEASURES

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

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

GRAPHIC SCALE

0
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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

Prepared In the Office of:

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

2012 STANDARD SPECIFICATIONS

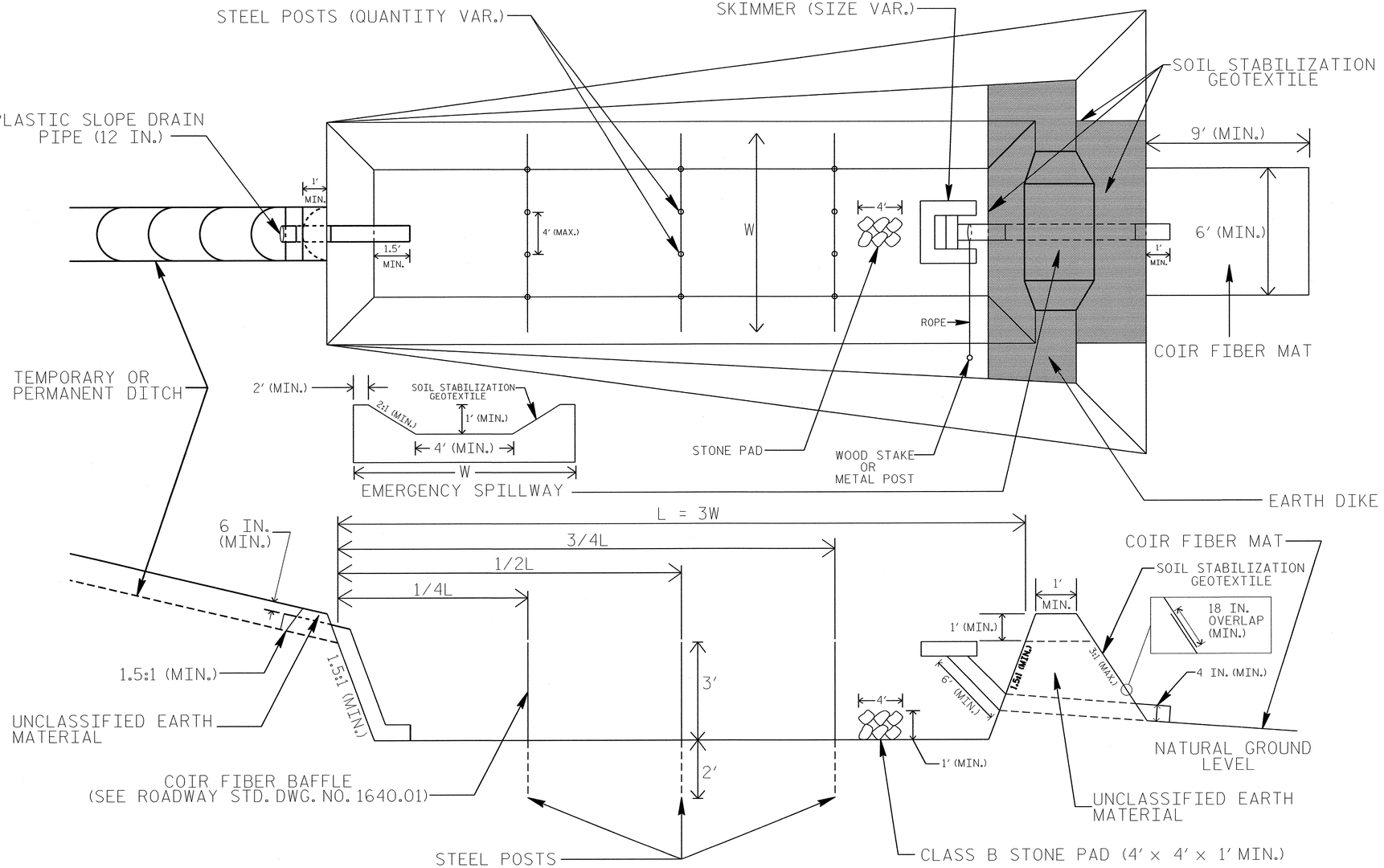
Roadway Standard Drawings

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 revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

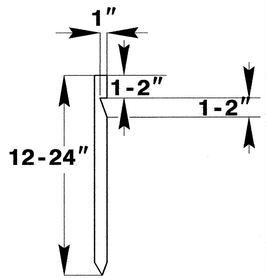
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type 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.	SHEET NO.
B-3421	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

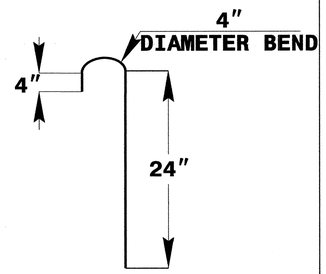
SKIMMER BASIN WITH BAFFLES DETAIL



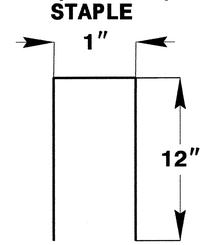
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

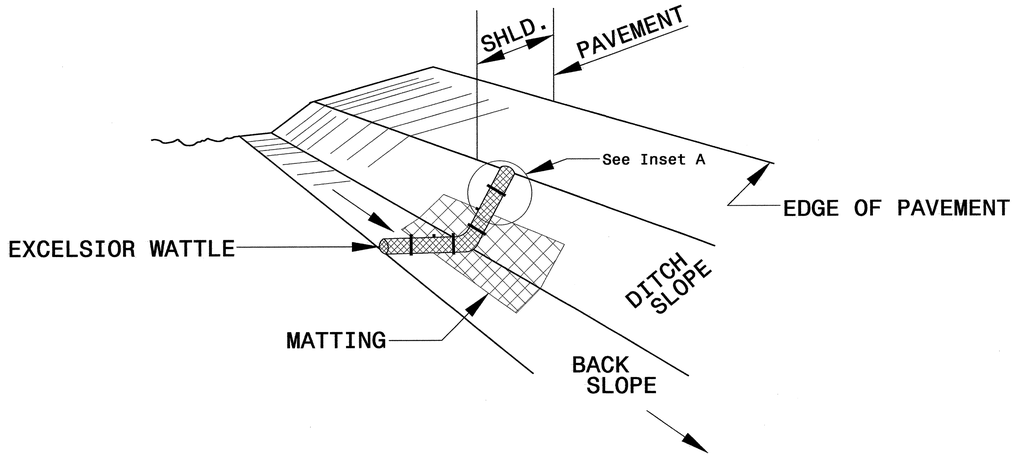
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

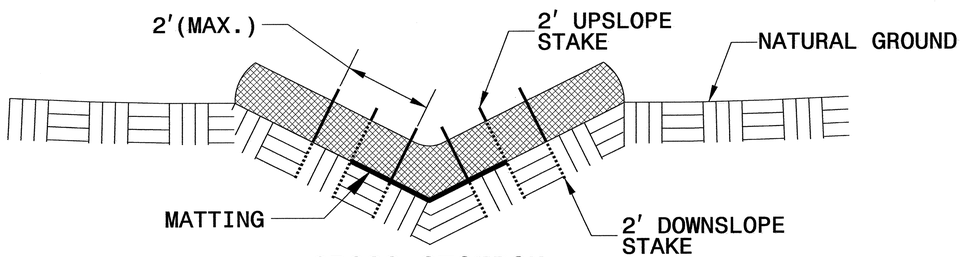
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3421	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

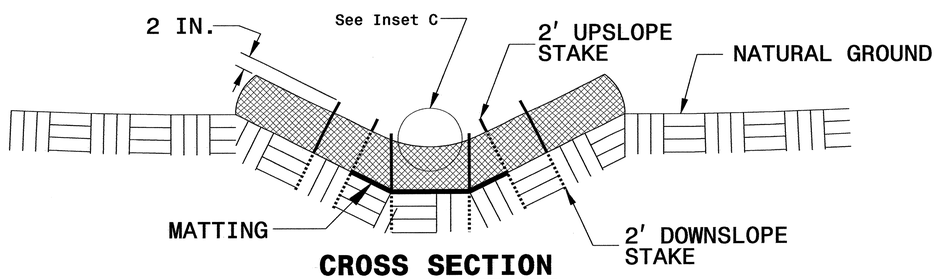
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

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.

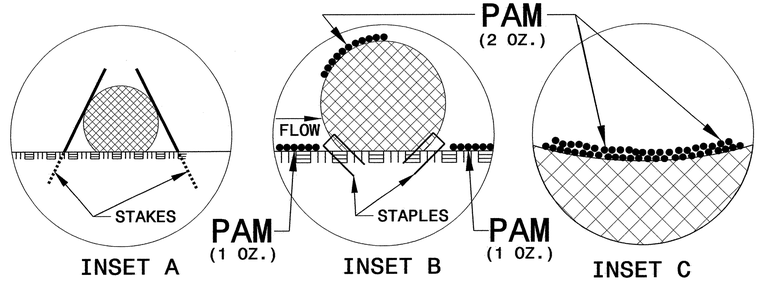
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

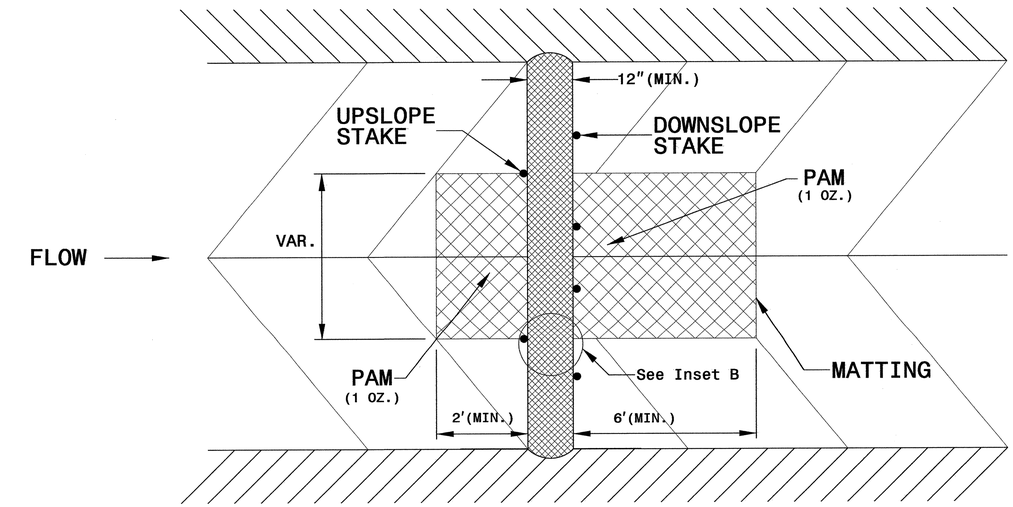
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

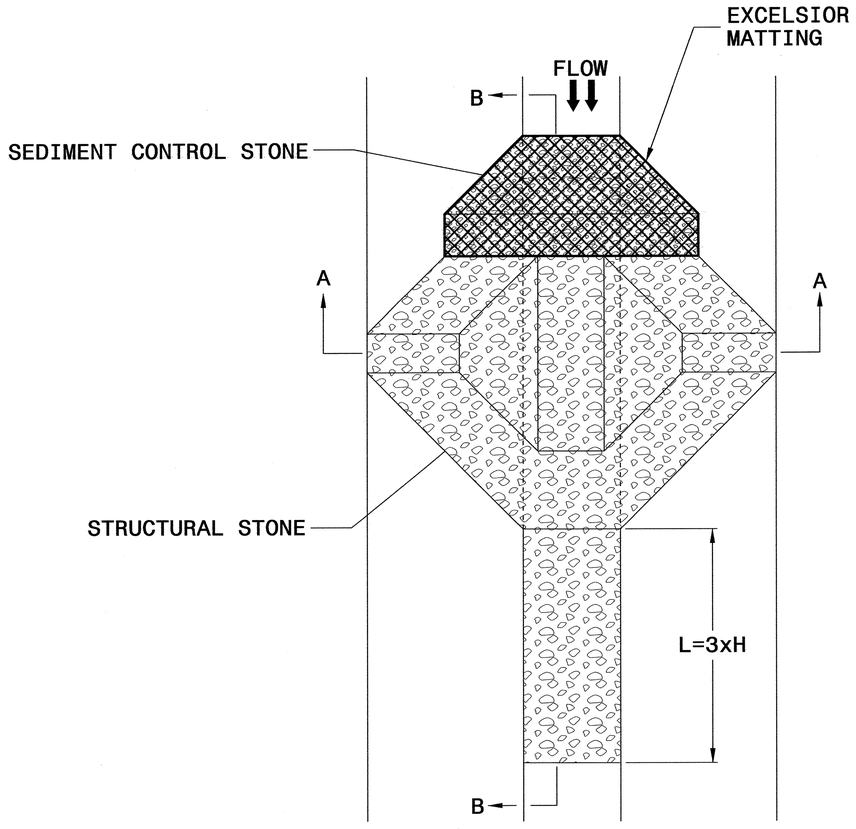




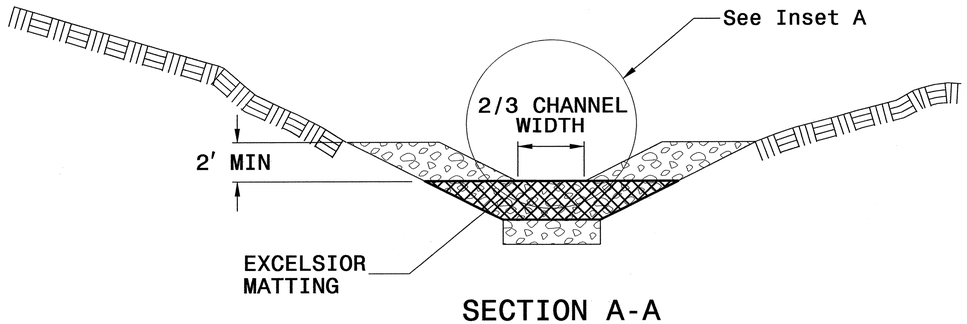
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3421	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



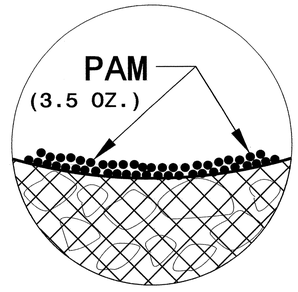
SECTION A-A

NOTES

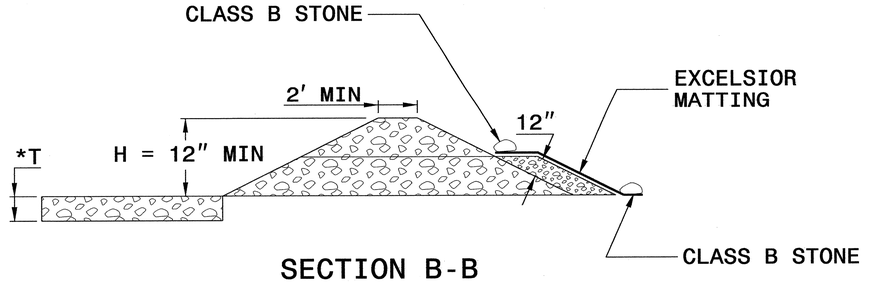
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3421	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.
B-3421	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

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

DETAIL A
TOE PROTECTION
(Not to Scale)

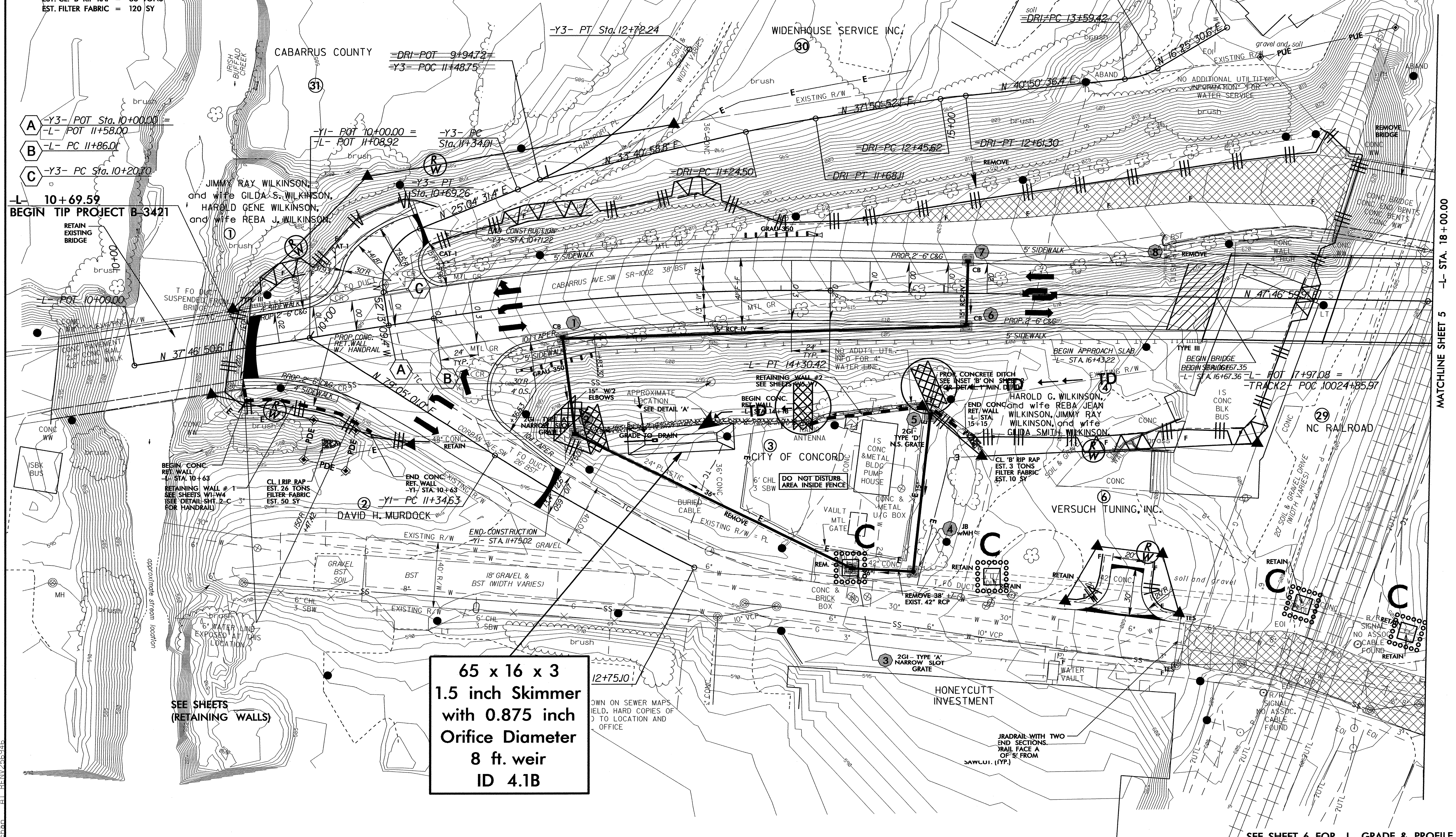
Fill Slope — 2:1 — Natural Ground — Filter Fabric — d

d= 0.50 Ft.

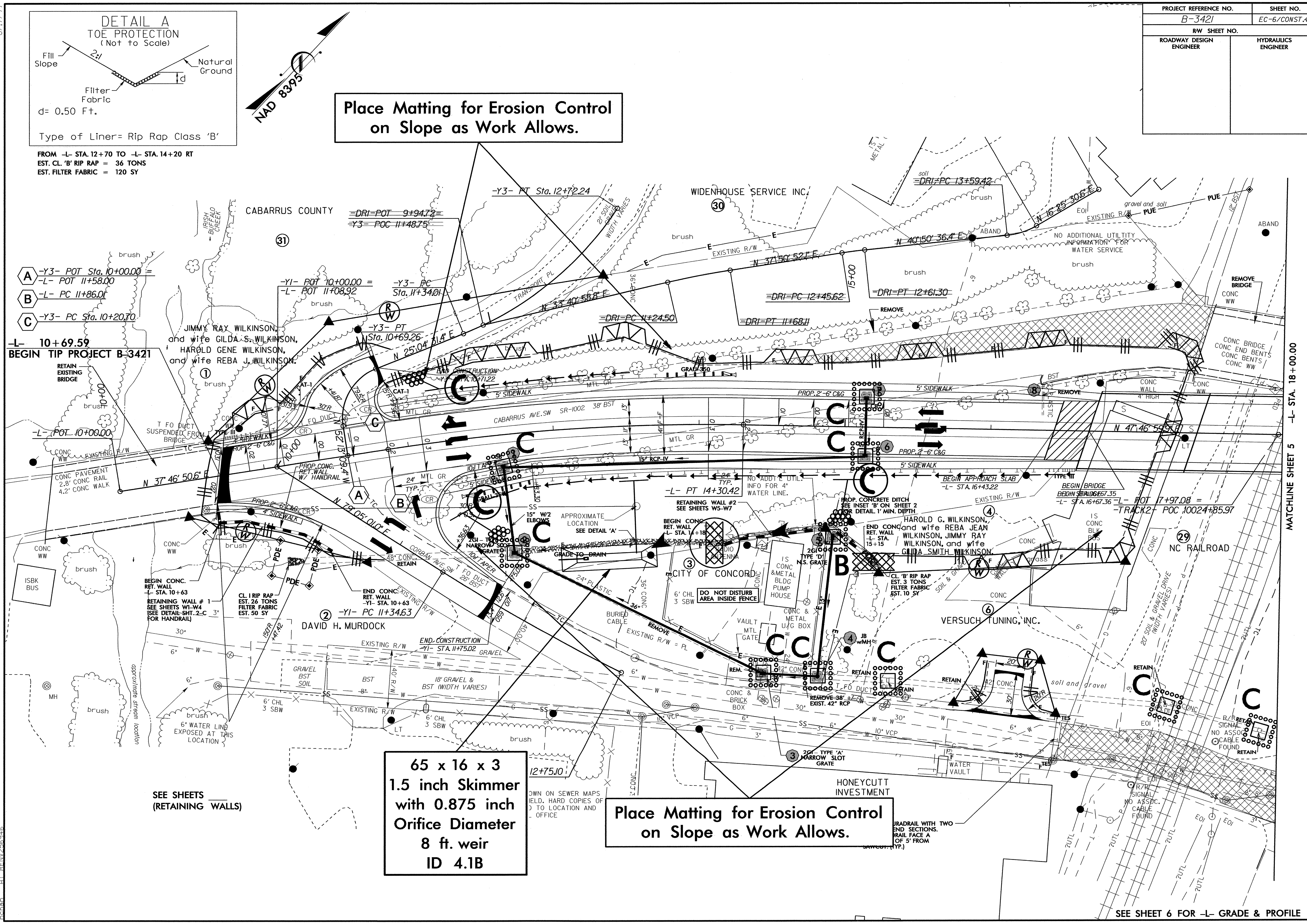
Type of Liner= Rip Rap Class 'B'

NAD 83/95

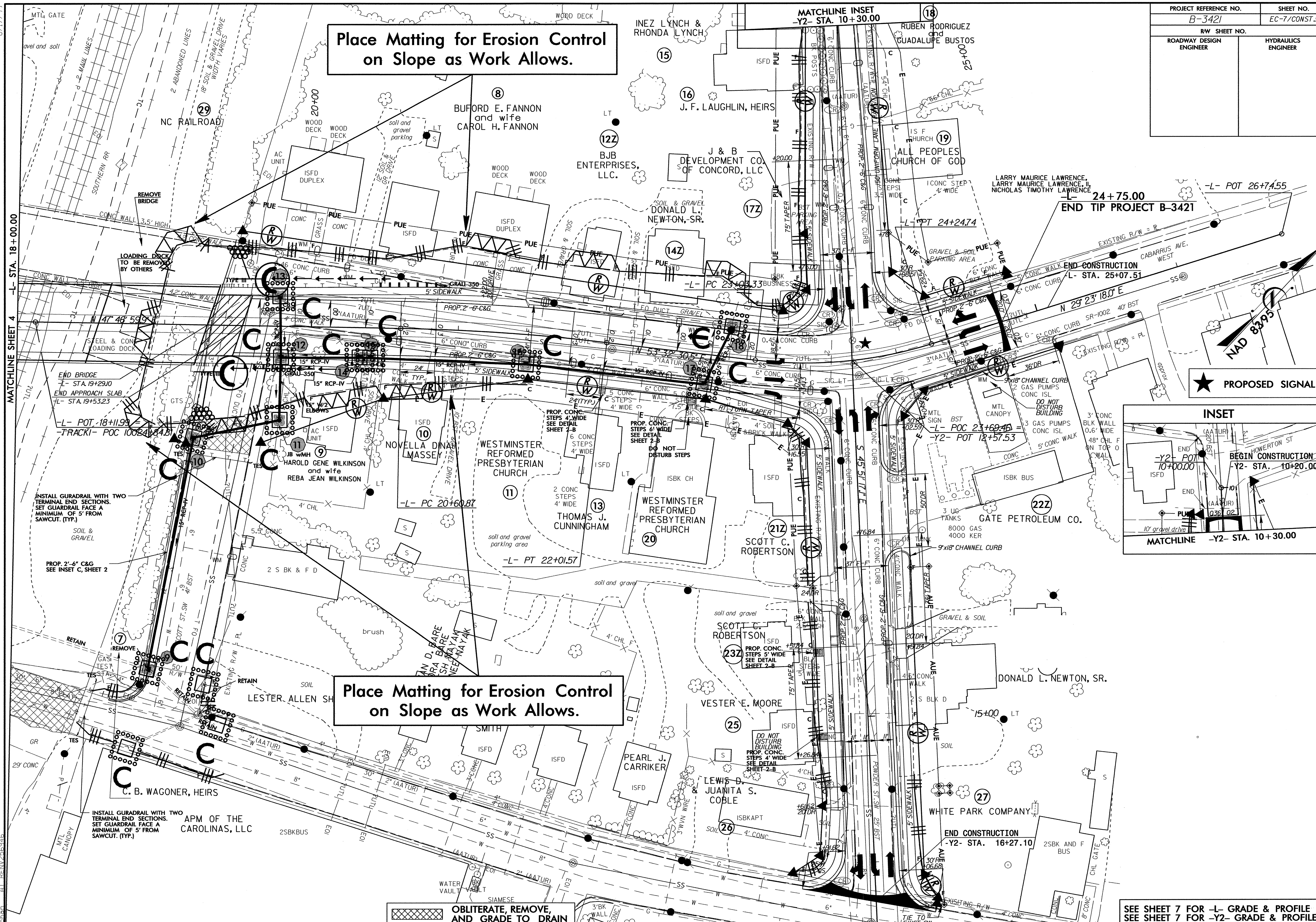
FROM -L- STA. 12+70 TO -L- STA. 14+20 RT
EST. CL. 'B' RIP RAP = 36 TONS
EST. FILTER FABRIC = 120 SY



PROJECT REFERENCE NO.
B-3421
SHEET NO.
EC-5/CONST.5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
MATCHLINE INSET -Y2- STA. 10+30.00
MATCHLINE SHEET 4 -L- STA. 18+00.00
-L- 24+75.00
END TIP PROJECT B-3421
END CONSTRUCTION -L- STA. 25+07.51
CABARRUS AVE. WEST
N 29° 23' 18.0" E
NAD 83/95
PROPOSED SIGNAL
INSET
BEGIN CONSTRUCTION -Y2- STA. 10+20.00
MATCHLINE -Y2- STA. 10+30.00
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B
AND TEMPORARY ROCK SILT CHECKS TYPE – A AT
DRAINAGE OUTLETS.
END CONSTRUCTION -Y2- STA. 16+27.10
OBLITERATE, REMOVE, AND GRADE TO DRAIN
SEE SHEET 7 FOR -L- GRADE & PROFILE
SEE SHEET 7 FOR -Y2- GRADE & PROFILE
INSTALL GUARDRAIL WITH TWO TERMINAL END SECTIONS. SET GUARDRAIL FACE A MINIMUM OF 5' FROM SAWCUT. (TYP.)
PROP. 2'-6" C&G SEE INSET C, SHEET 2
REMOVE BRIDGE
LOADING DOCK TO BE REMOVED BY OTHERS
END BRIDGE -L- STA. 19+29.10
END APPROACH SLAB -L- STA. 19+53.23
-L- POT 18+11.99 = -TRACK- POC 10024+84.52
NC RAILROAD
BUFORD E. FANNON and wife CAROL H. FANNON
INEZ LYNCH & RHONDA LYNCH
RUBEN RODRIGUEZ and GUADALUPE BUSTOS
J. F. LAUCHLIN, HEIRS
BJB ENTERPRISES, LLC.
J & B DEVELOPMENT CO. OF CONCORD, LLC
ALL PEOPLES CHURCH OF GOD
LARRY MAURICE LAWRENCE, LARRY MAURICE LAWRENCE, II, NICHOLAS TIMOTHY LAWRENCE
DONALD L. NEWTON, SR.
-L- POT 26+74.55
-L- PT 24+24.74
-L- PC 23+03.33
N 53° 32' 30.5" E
N 47° 46' 59.9"
HAROLD GENE WILKINSON and wife REBA JEAN WILKINSON
NOVELLA DINAH MASSEY
WESTMINSTER REFORMED PRESBYTERIAN CHURCH
THOMAS J. CUNNINGHAM
SCOTT C. ROBERTSON
GATE PETROLEUM CO.
-L- POC 23+69.46 = -Y2- POT 12+57.53
-L- PC 20+60.87
-L- PT 22+01.57
S 45° 51' 17" E
LESTER ALLEN SH
SMITH
PEARL J. CARRIKER
VESTER E. MOORE
LEWIS D. & JUANITA S. COBLE
WHITE PARK COMPANY
C. B. WAGONER, HEIRS
APM OF THE CAROLINAS, LLC
POWDER ST. SW



PROJECT REFERENCE NO.
B-3421
SHEET NO.
EC-6/CONST.4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DETAIL A
TOE PROTECTION
(Not to Scale)
Fill Slope
2:1
Natural Ground
d
Filter Fabric
d= 0.50 Ft.
Type of Liner= Rip Rap Class 'B'
FROM -L- STA. 12+70 TO -L- STA. 14+20 RT
EST. CL. 'B' RIP RAP = 36 TONS
EST. FILTER FABRIC = 120 SY
NAD 83/95
Place Matting for Erosion Control on Slope as Work Allows.
CABARRUS COUNTY
WIDENHOUSE SERVICE INC.
A -Y3- POT Sta. 10+00.00 = -L- POT 11+58.00
B -L- PC 11+86.01
C -Y3- PC Sta. 10+20.70
-L- 10+69.59
BEGIN TIP PROJECT B-3421
RETAIN EXISTING BRIDGE
JIMMY RAY WILKINSON, and wife GILDA S. WILKINSON, HAROLD GENE WILKINSON, and wife REBA J. WILKINSON
-Y1- POT 10+00.00 = -L- POT 11+08.92
-Y3- PC Sta. 11+34.01
-Y3- PT Sta. 10+69.26
-Y3- PT Sta. 12+72.24
=DRI=POT 9+94.72=
-Y3- POC 11+48.75
=DRI=PC 11+24.50
=DRI=PC 12+45.62
=DRI=PT 11+68.11
=DRI=PT 12+61.30
=DRI=PC 13+59.42
CABARRUS AVE. SW SR-1002 38' BST
-L- POT 10+00.00
N 37° 46' 50.6" E
-L- PT 14+30.42
N 47° 46' 59.9" E
BEGIN APPROACH SLAB -L- STA. 16+43.22
BEGIN BRIDGE -L- STA. 16+67.36
-L- POT 17+97.08 = -TRACK2- POC 10024+85.97
HAROLD G. WILKINSON, and wife REBA JEAN WILKINSON, JIMMY RAY WILKINSON, and wife GILDA SMITH WILKINSON
CITY OF CONCORD
DO NOT DISTURB AREA INSIDE FENCE
VERSUCH TUNING, INC.
NC RAILROAD
DAVID H. MURDOCK
-Y1- PC 11+34.63
END CONSTRUCTION -Y1- STA. 11+75.02
RETAINING WALL # 1 SEE SHEETS W1-W4
RETAINING WALL #2 SEE SHEETS W5-W7
CL. I RIP RAP EST. 26 TONS FILTER FABRIC EST. 50 SY
CL. 'B' RIP RAP EST. 3 TONS FILTER FABRIC EST. 10 SY
65 x 16 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
8 ft. weir
ID 4.1B
HONEYCUTT INVESTMENT
MATCHLINE SHEET 5 -L- STA. 18+00.00
SEE SHEETS ___ (RETAINING WALLS)
SEE SHEET 6 FOR -L- GRADE & PROFILE



PROJECT REFERENCE NO.
B-3421
SHEET NO.
EC-7/CONST.5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
Place Matting for Erosion Control on Slope as Work Allows.
MATCHLINE INSET -Y2- STA. 10+30.00
MATCHLINE SHEET 4 -L- STA. 18+00.00
BUFORD E. FANNON and wife CAROL H. FANNON
NC RAILROAD
SOUTHERN RR
INEZ LYNCH & RHONDA LYNCH
J. F. LAUGHLIN, HEIRS
RUBEN RODRIGUEZ and GUADALUPE BUSTOS
BJB ENTERPRISES, LLC.
J & B DEVELOPMENT CO. OF CONCORD, LLC
ALL PEOPLES CHURCH OF GOD
DONALD L. NEWTON, SR.
LARRY MAURICE LAWRENCE, LARRY MAURICE LAWRENCE, II, NICHOLAS TIMOTHY LAWRENCE
-L- 24+75.00 END TIP PROJECT B-3421
-L- POT 26+74.55
END CONSTRUCTION -L- STA. 25+07.51
CABARRUS AVE. WEST
N 29°23'18.0" E
NAD 83/95
PROPOSED SIGNAL
REMOVE BRIDGE
LOADING DOCK TO BE REMOVED BY OTHERS
END BRIDGE -L- STA. 19+29.10
END APPROACH SLAB -L- STA. 19+53.23
-L- POT 18+11.99 = -TRACK- POC 10024+84.8
N 47°46'59.9" E
N 53°32'30.5" E
-L- PC 23+03.33
-L- PT 24+24.74
-L- POC 23+69.46 = -Y2- POT 12+57.53
HAROLD GENE WILKINSON and wife REBA JEAN WILKINSON
NOVELLA DINAH MASSEY
WESTMINSTER REFORMED PRESBYTERIAN CHURCH
THOMAS J. CUNNINGHAM
-L- PC 20+60.87
-L- PT 22+01.57
SCOTT C. ROBERTSON
GATE PETROLEUM CO.
INSET
BEGIN CONSTRUCTION -Y2- STA. 10+20.00
-Y2- POT 10+00.00
MATCHLINE -Y2- STA. 10+30.00
HOWERTON ST
INSTALL GUARDRAIL WITH TWO TERMINAL END SECTIONS. SET GUARDRAIL FACE A MINIMUM OF 5' FROM SAWCUT. (TYP.)
PROP. 2'-6" C&G SEE INSET C, SHEET 2
LESTER ALLEN SHUE
VESTER E. MOORE
PEARL J. CARRIKER
LEWIS D. & JUANITA S. COBLE
C. B. WAGONER, HEIRS
APM OF THE CAROLINAS, LLC
S 45°51'17.1" E
WHITE PARK COMPANY
END CONSTRUCTION -Y2- STA. 16+27.10
OBLITERATE, REMOVE, AND GRADE TO DRAIN
SEE SHEET 7 FOR -L- GRADE & PROFILE
SEE SHEET 7 FOR -Y2- GRADE & PROFILE