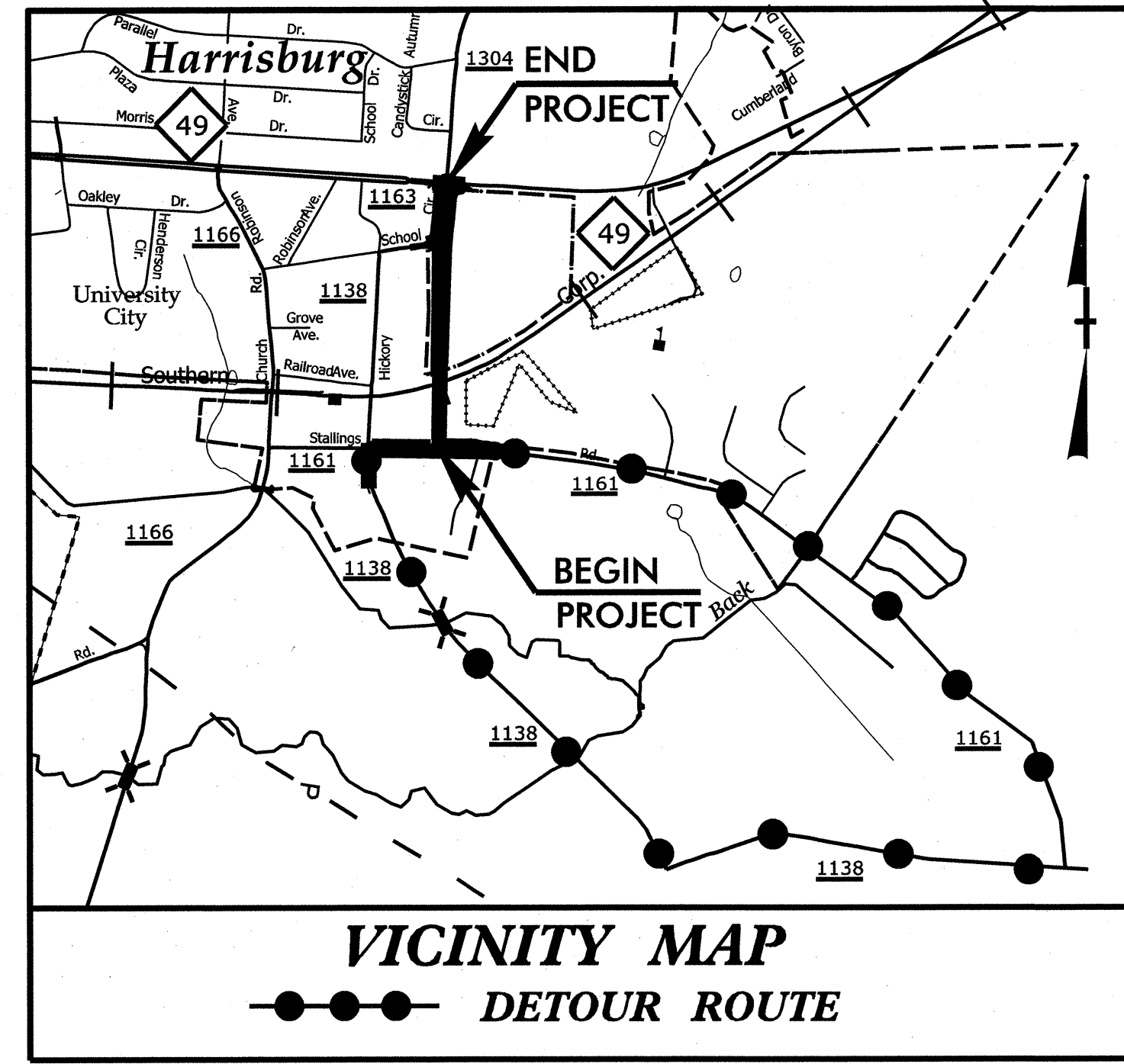


0077DEL_P10a4

TIP PROJECT: P-5208D



STATE OF NORTH CAROLINA
RAIL DIVISIONS
CABARRUS COUNTY
STATE OF NORTH CAROLINA
HIGHWAY EROSION CONTROL



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208D	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50000.LSTR.09T1B		P.E. UTILITIES P.E.	
50000.LSTR.10T3		P.E. UTILITIES P.E.	
43219.2.STR.09P5208		RIGHT OF WAY	
50000.3.STR.04T4E		UTIL. CONST.	

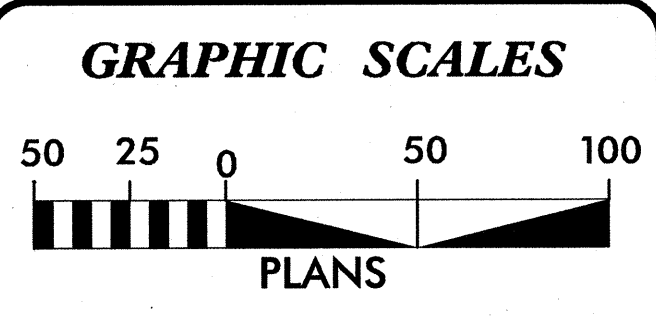
EROSION AND SEDIMENT CONTROL MEASURES

Sta. #	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	ZZZZZZ
1622.01	Temporary Berms and Slope Drains	T
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RC
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RC-PAM
1633.02	Temporary Rock Silt Check Type-B	RC
	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	RP
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RP
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

BEGIN TIP PROJECT P-5208D
-L- STA. 10+00.00 =
-Y1- STA. 16+40.18

END TIP PROJECT P-5208D
-L- STA. 34+79.02 =
-Y4- STA. 17+61.91

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.



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PLANS PREPARED BY:

WSP
Transportation & Infrastructure
15401 Weston Parkway Suite 100
Cary, NC 27513 - 919.678.0035
www.wspells.com
LICENSE NO. F-0891

2012 STANDARD SPECIFICATIONS

PLANS PREPARED FOR:

NCDOT RAIL DIVISION
SANDRA A. STEPNEY, PE
SENIOR PROJECT ENGINEER

ANDREW M. HOWELL
LEVEL IIIA NAME

3105
LEVEL IIIA CERTIFICATION NO.

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	

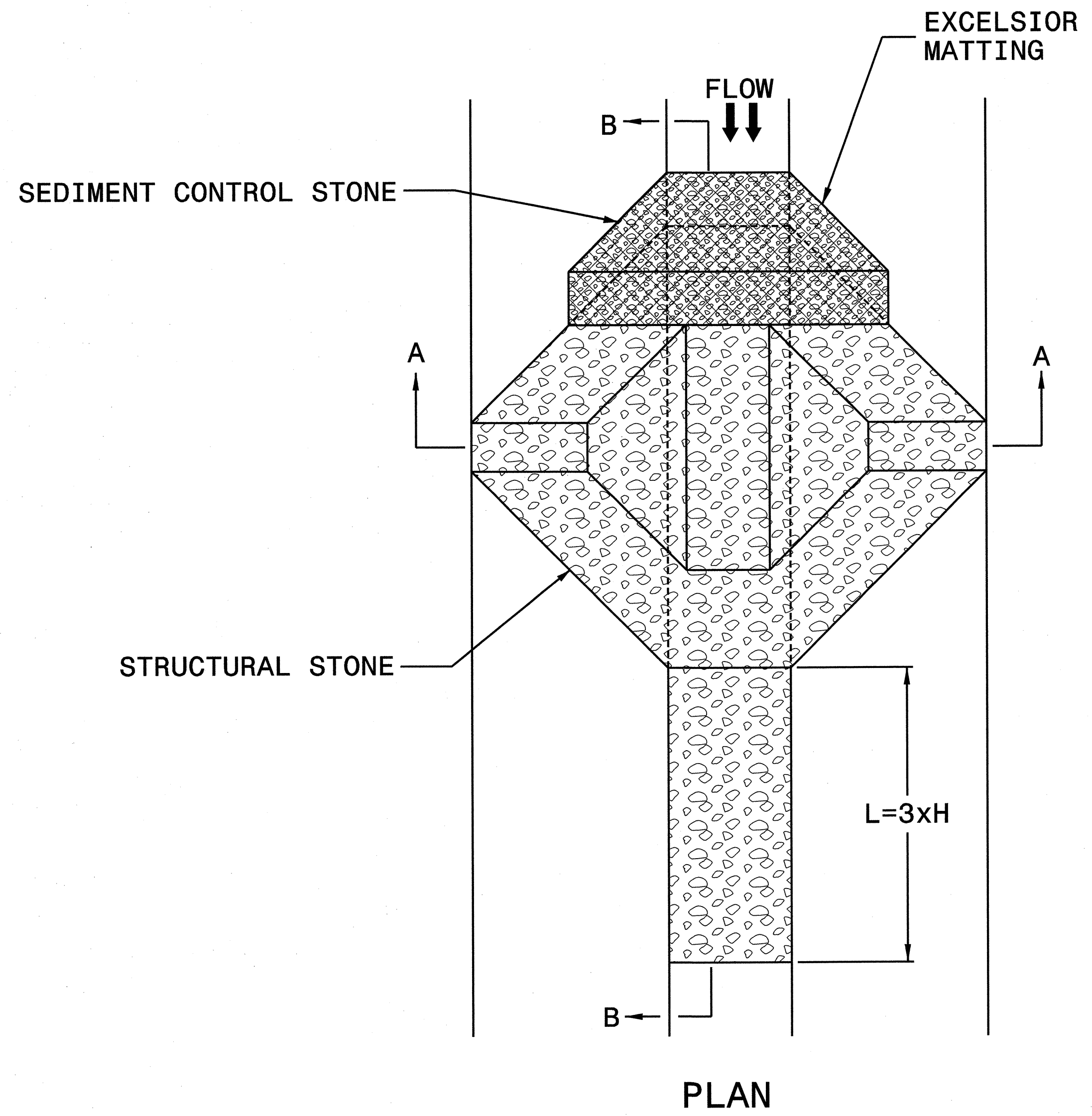
NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT

2/15/2013 R:\P5208D\Drainage\P5208D_hyd_tsh.dgn usmo0428

CONTRACT:

0077DEL_P10c4

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

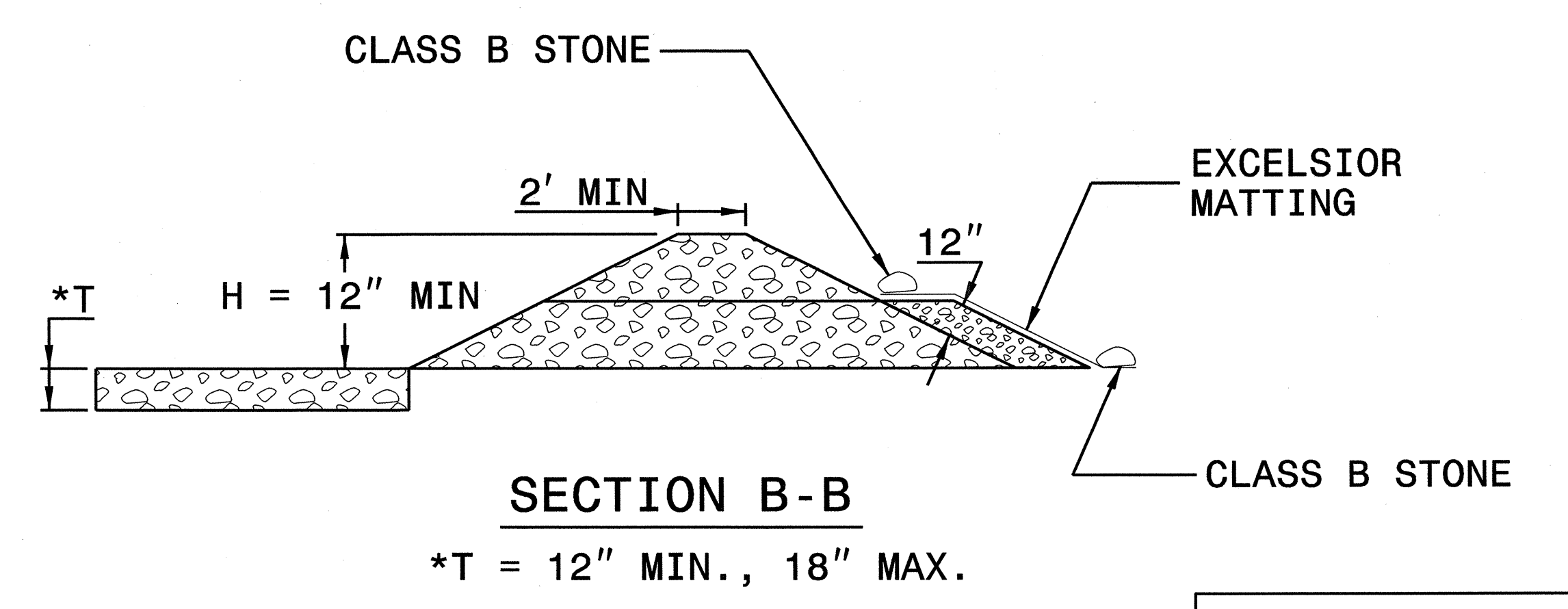
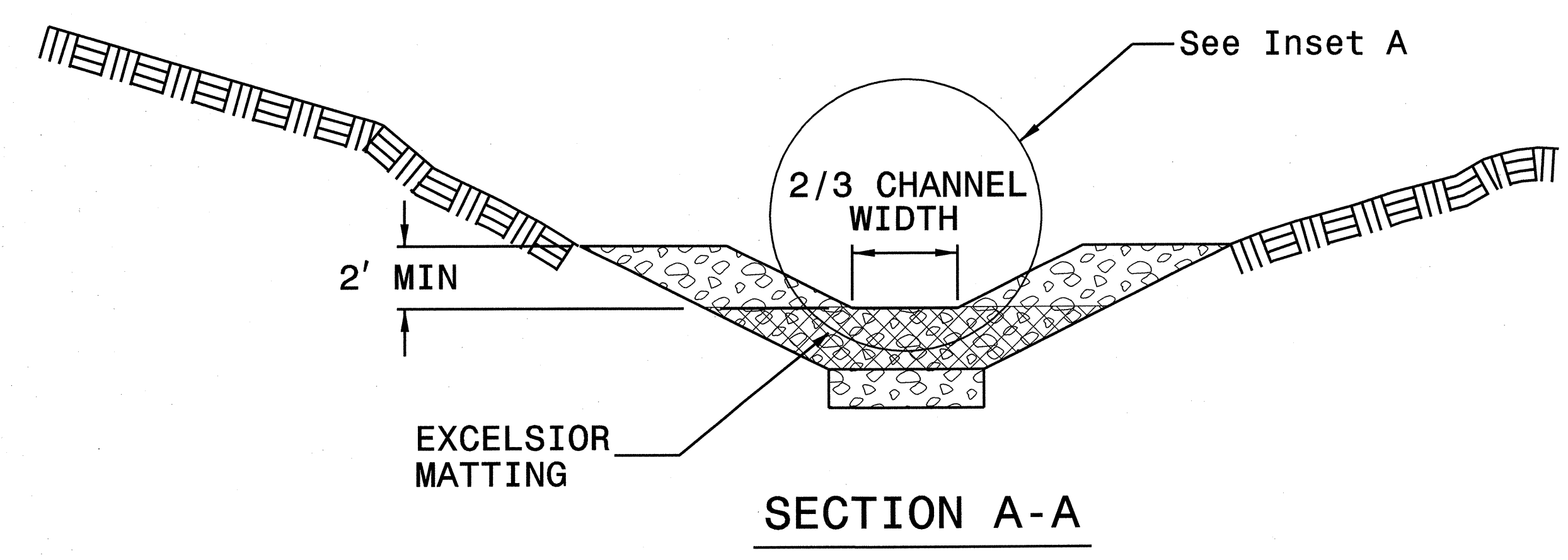
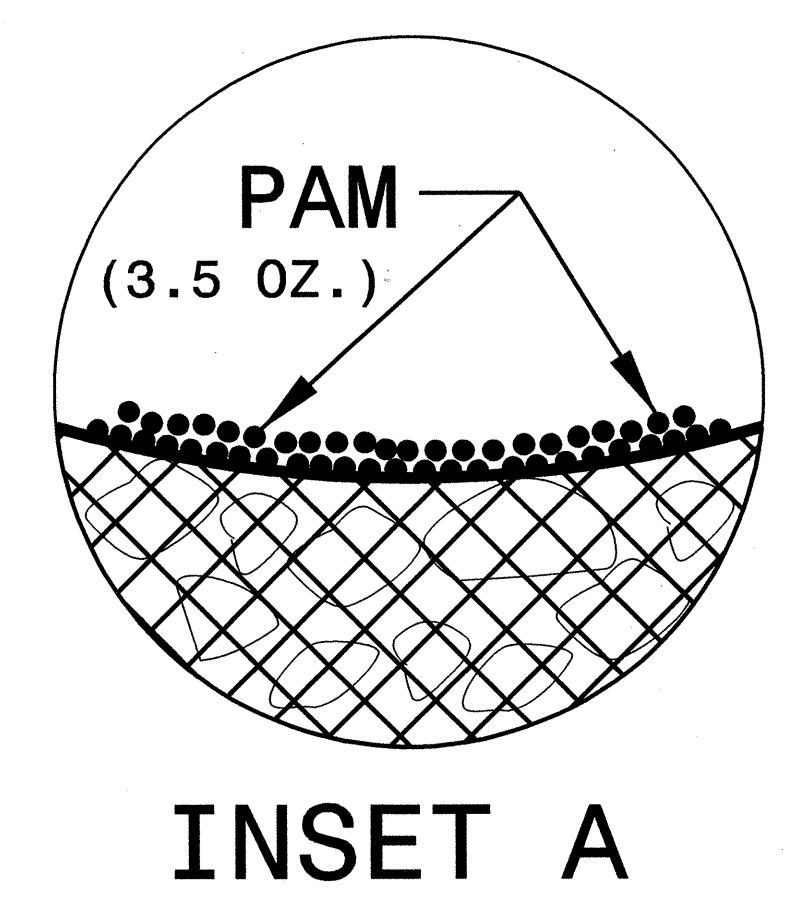


NOTES

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.



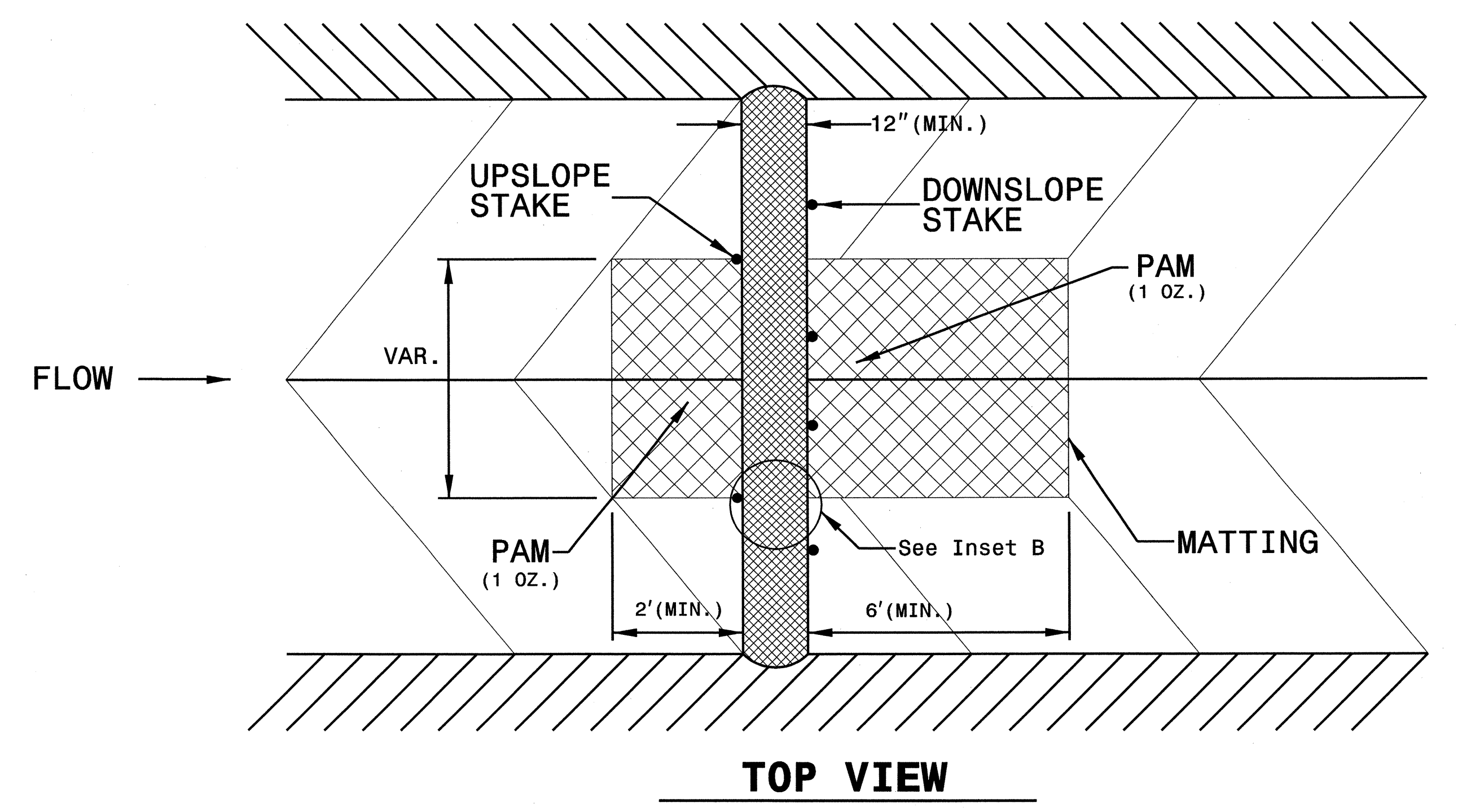
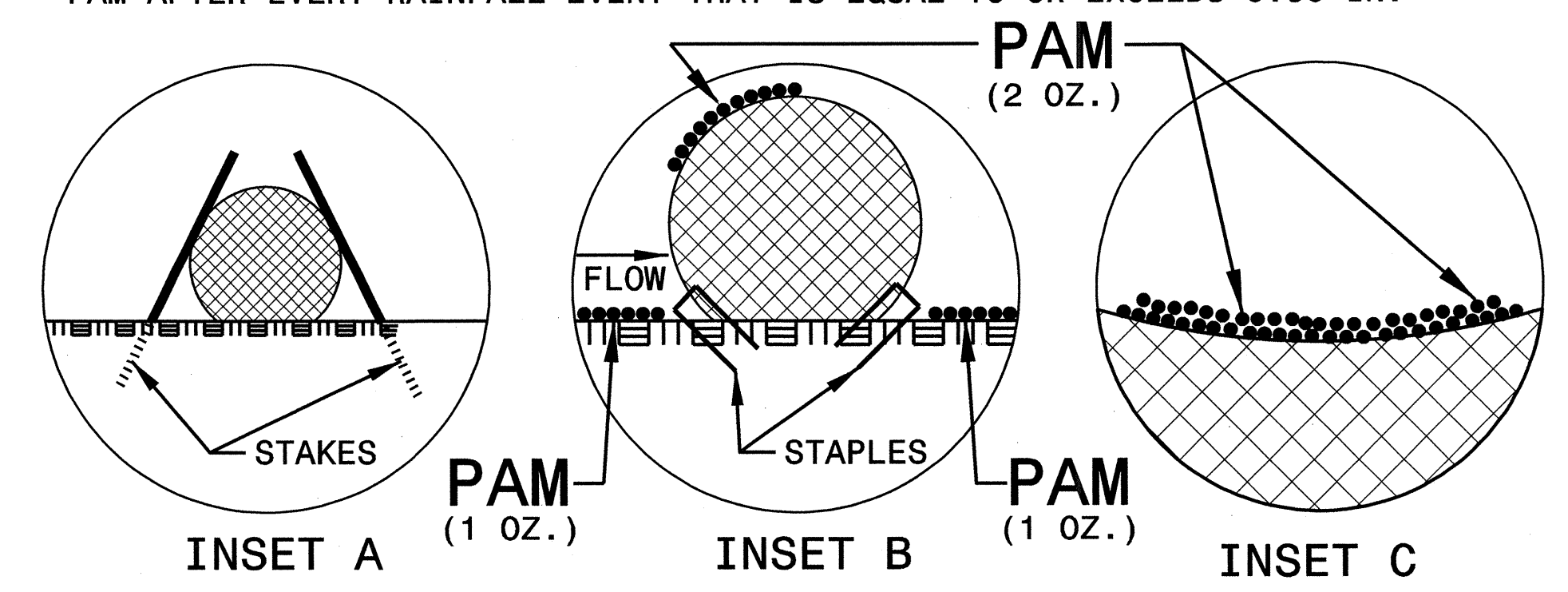
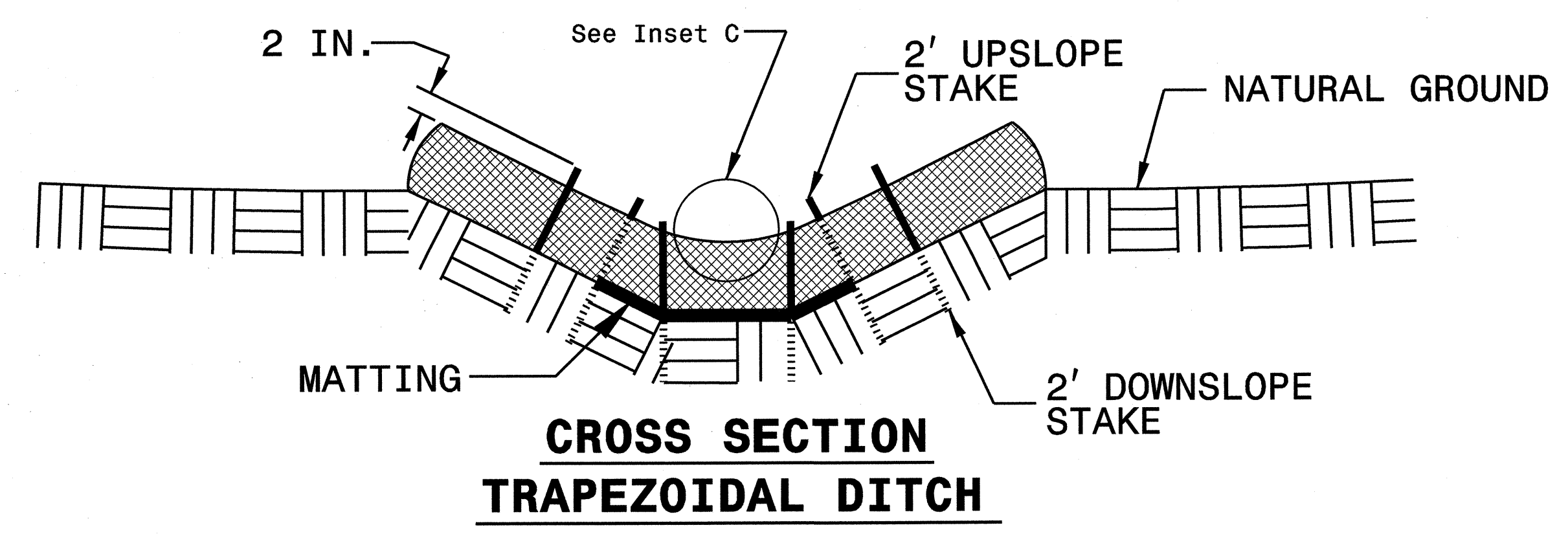
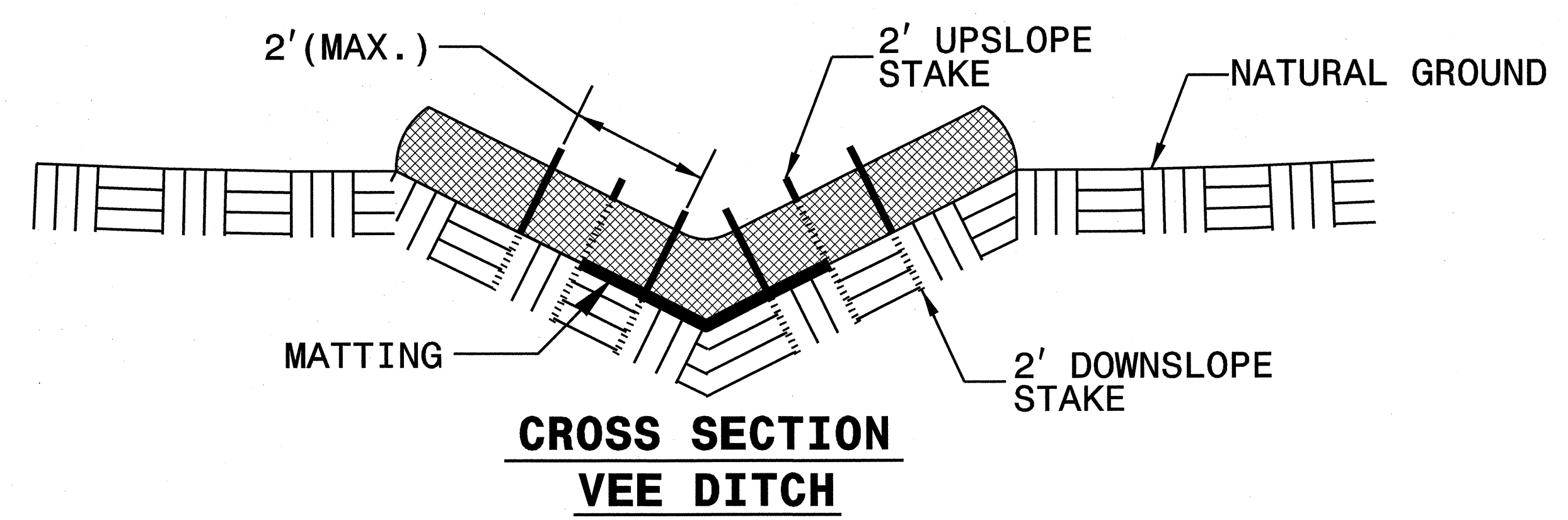
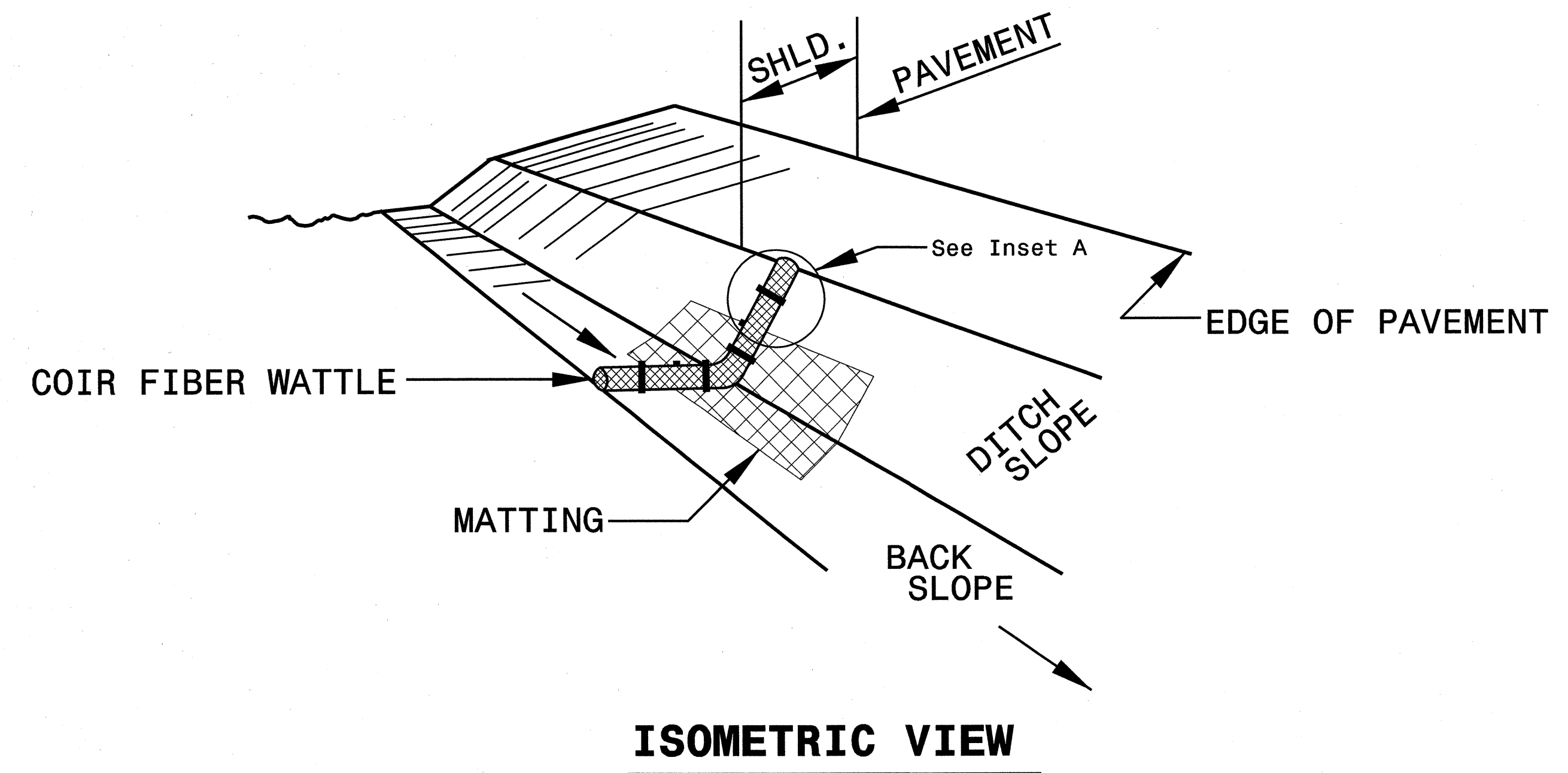
NOT TO SCALE

0077DEL_P10a4

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

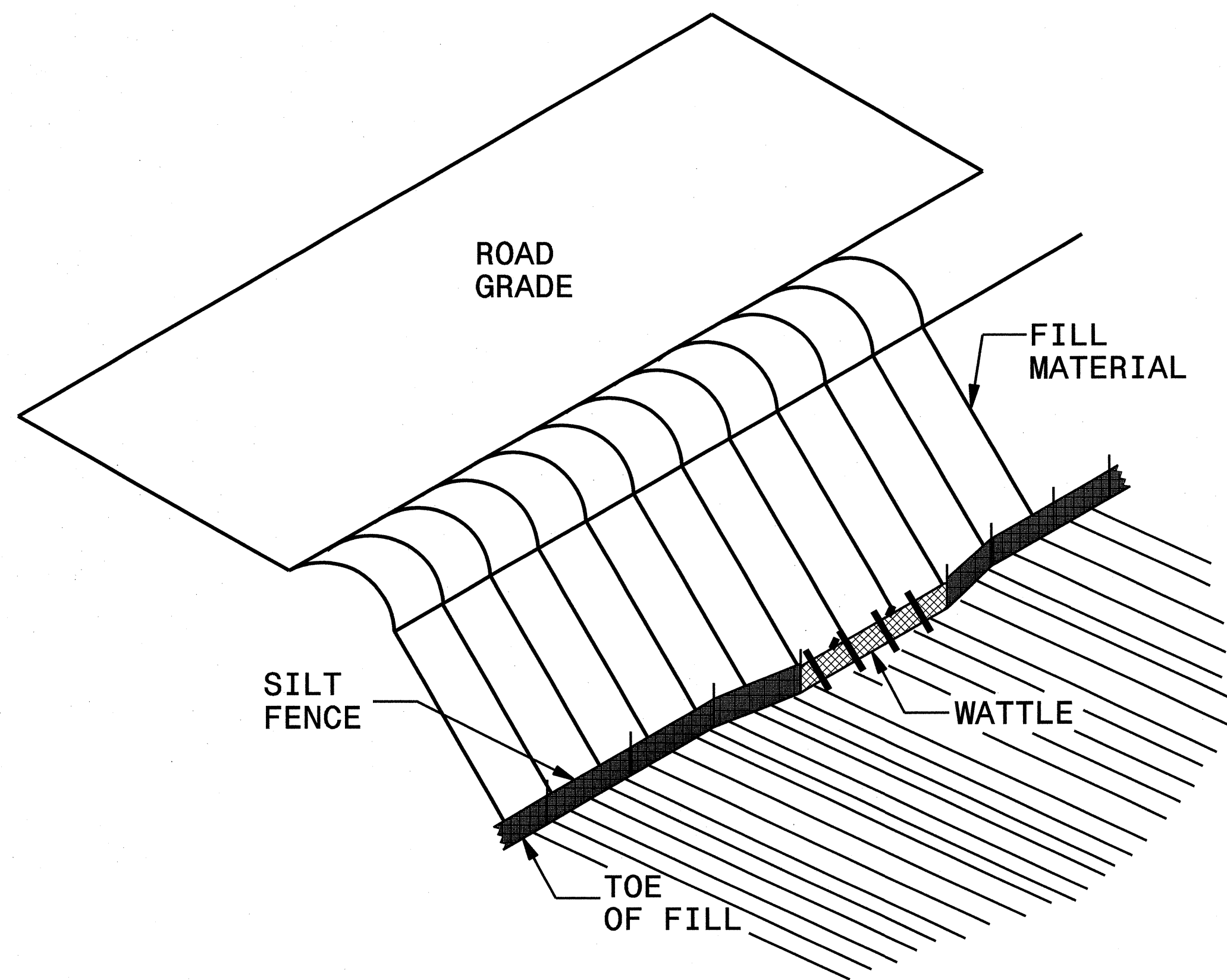
NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- 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.

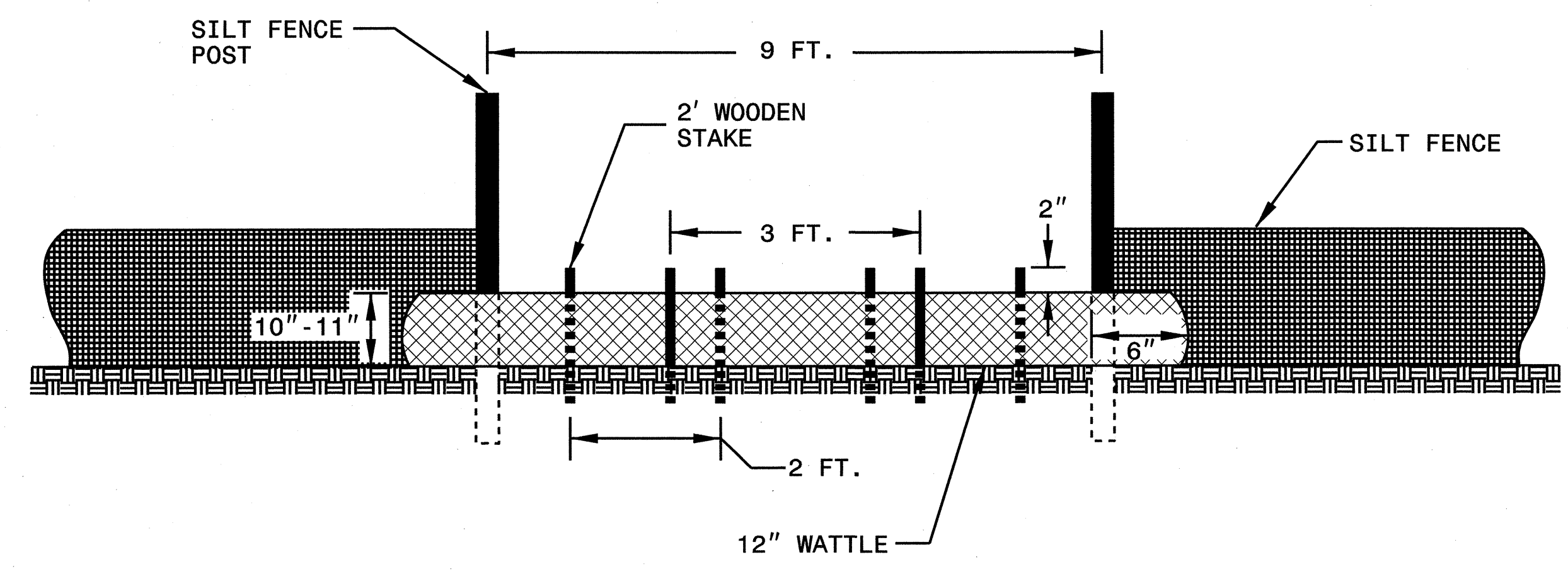


0077DEL_P10a4

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

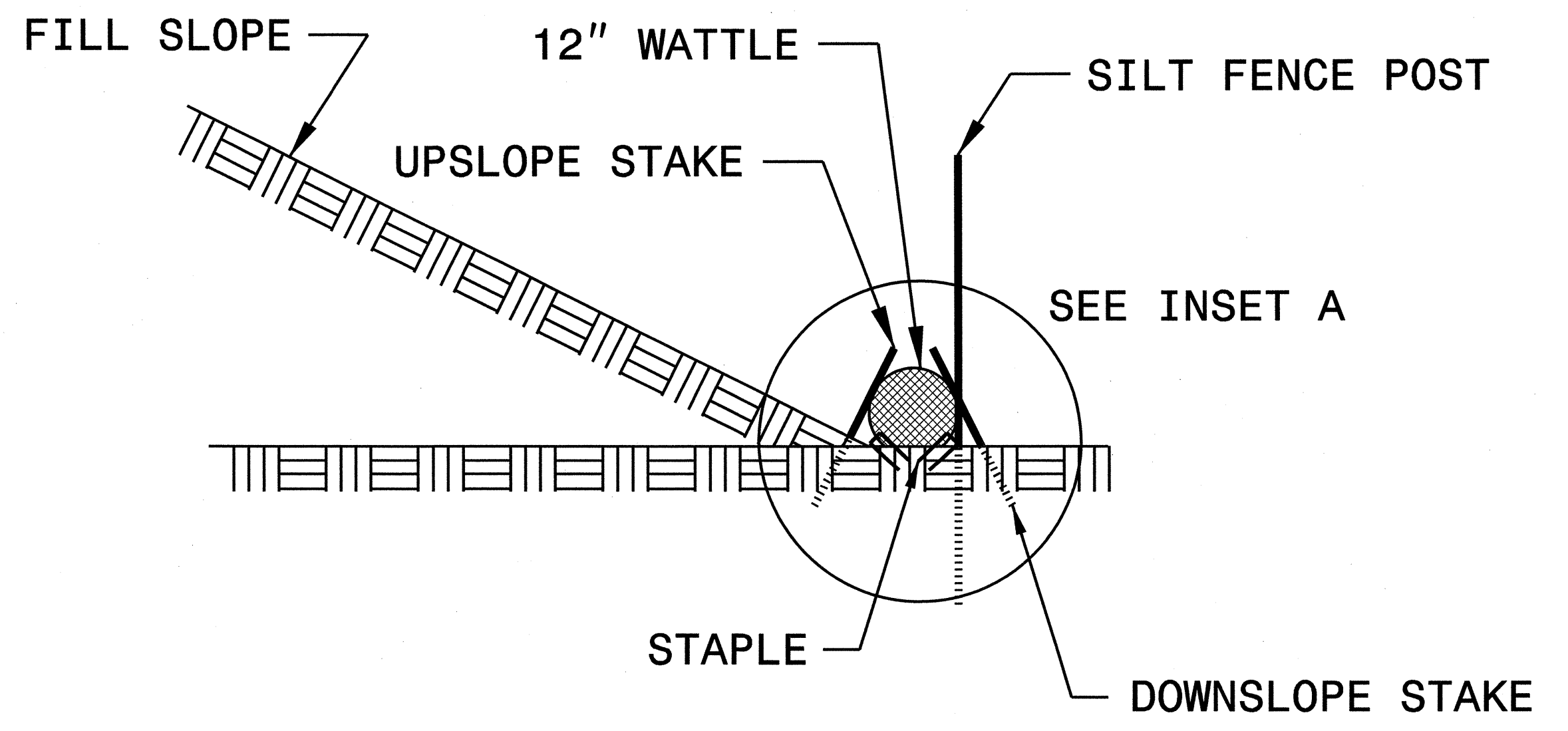
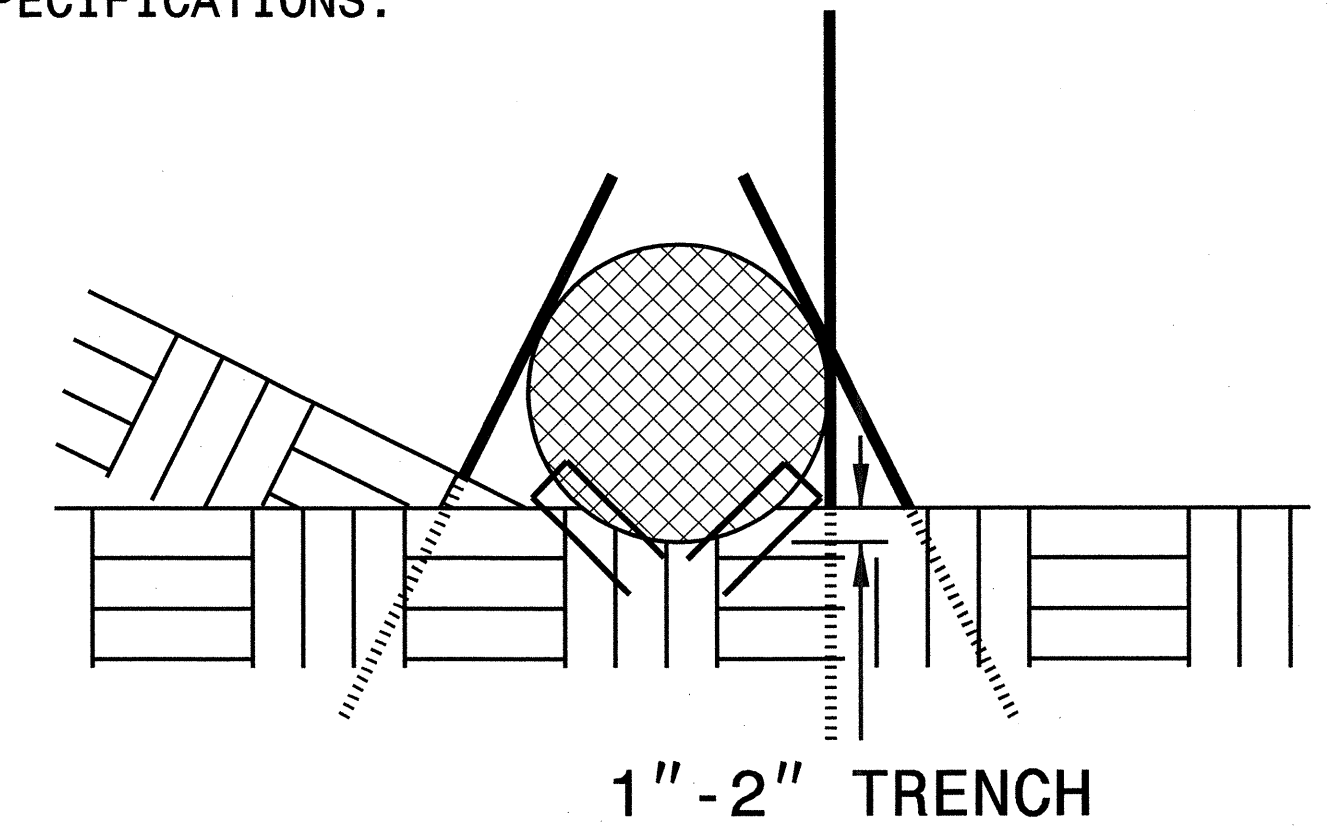


VIEW FROM SLOPE

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



SIDE VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

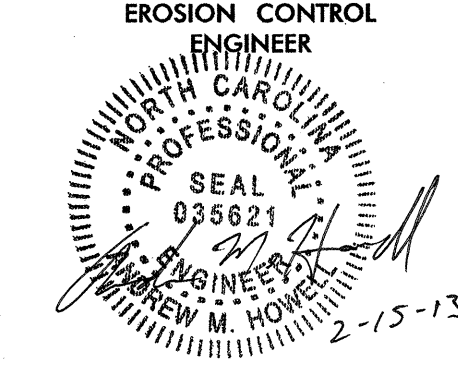
0077DEL_P10c4

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.

0077DEL_P10a4

WSP
 Transportation & Infrastructure
 15401 Weston Parkway Suite 100
 Cary, NC 27513 - 919.678.0035
 www.wspells.com
 LICENSE NO. F-0891

PROJECT REFERENCE NO. **P-5208D** SHEET NO. **EC-4/CONST. 4**
 RAW SHEET NO. _____
 EROSION CONTROL ENGINEER


NOTE:
 NO EROSION CONTROL MEASURES TO BE INSTALLED WITHIN THE RAILROAD RIGHT-OF-WAY UNTIL TRACK WORK IS COMPLETED.

MATCH LINE SEE SHEET NO.6
 -YI- STA. 15+00.00

Place Matting for Erosion Control on Slope as Work Allows.
 From Sta. 13+00 to Sta. 16+00 -L- LT

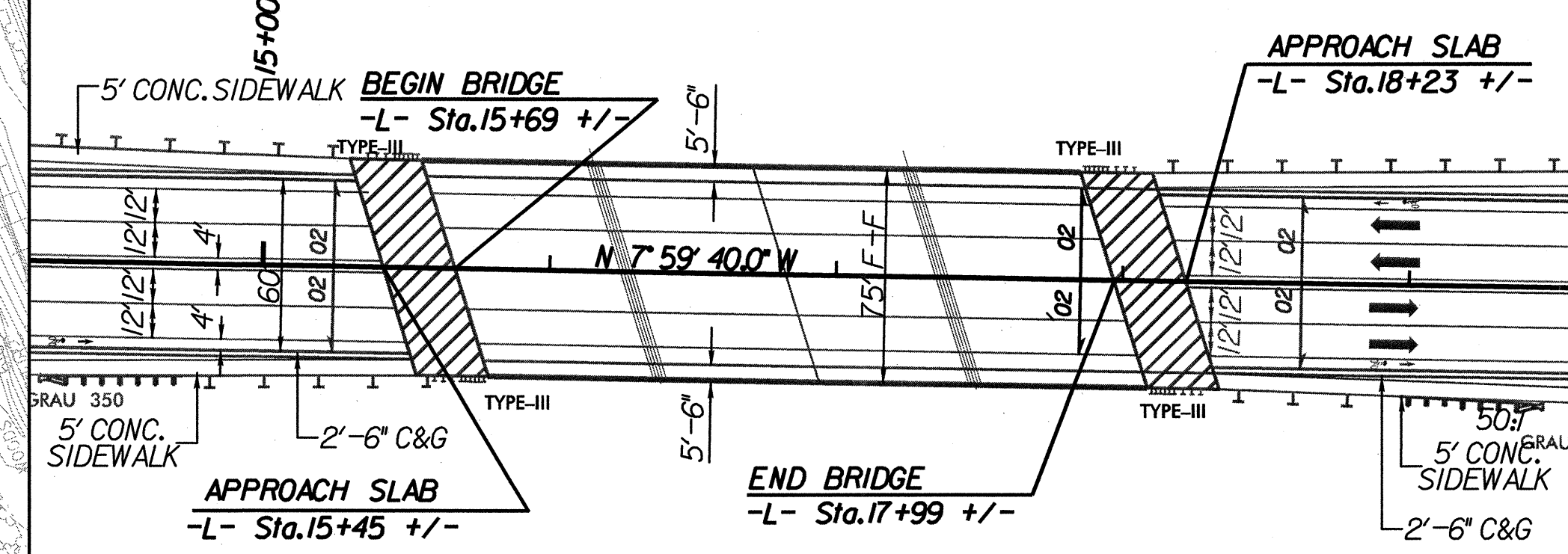
-L- Sta. 17+08.99 =
 -TRK 2- Sta. 10424+58.30
 Place Matting for Erosion Control on Slope as Work Allows.
 From Sta. 17+50 to Sta. 20+00 -L- LT

Place Matting for Erosion Control on Slope as Work Allows.
 From Sta. 11+00 to Sta. 16+00 -L- RT

Place Matting for Erosion Control on Slope as Work Allows.
 From Sta. 18+00 to Sta. 20+00 -L- RT

BEGIN TIP PROJECT P-5208D
 -L- POT STA. 10+00.00 =
 -YI- POT STA. 16+40.18

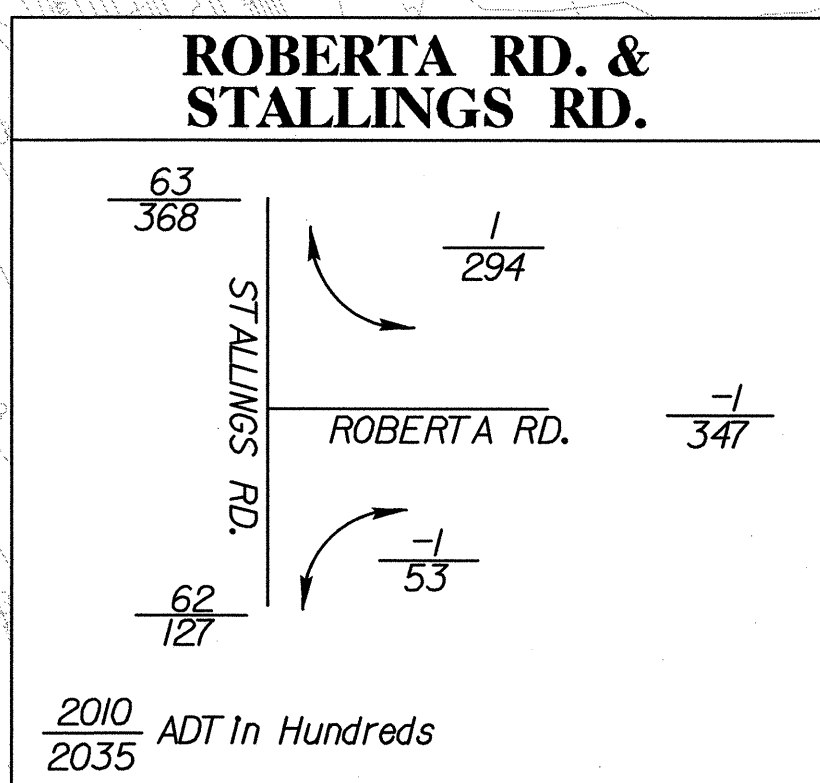
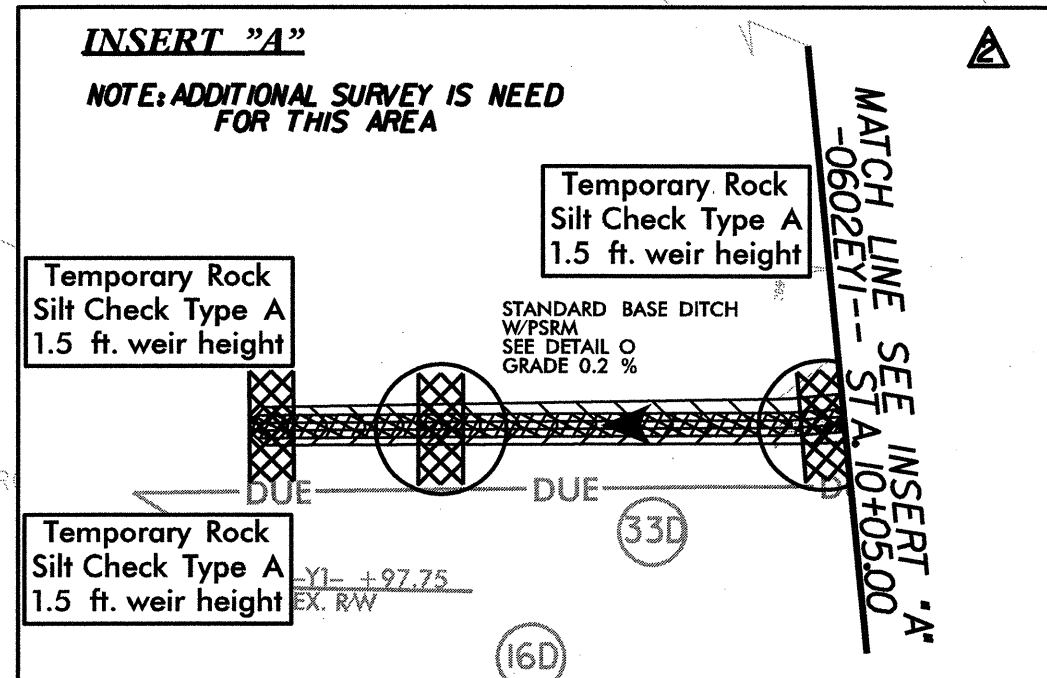
BRIDGE PAVEMENT RELATIONSHIP SKETCH



-YI-
 PI Sta 20+89.14
 $\Delta = 4' 58" 28.9" (RT)$
 $D = 1' 47" 25.8"$
 $L = 277.84'$
 $T = 139.0'$
 $R = 3,200.00'$
 $D_s = 40 \text{ MPH}$
 $SE = 2.5\%$

MATCH LINE SEE INSERT "A"
 -S/A- STA. 10+05.00

Temporary Rock Silt Check Type A
 1.5 ft. weir height



PAVEMENT STRIPING

FOR -L- PROFILE SEE SHEET 8
 FOR -YI- PROFILE SEE SHEET 9

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

REVISIONS
 07/09/2012 - ADDED R/W FOR PARCELS 90,140,150,160,170,280,290,REVISED POE FOR PARCELS 150,140 AND 150.
 10/22/2012 - ADDED INSERT TO SHOW EXTENDED OUT FALL DITCH ON "0602E1".

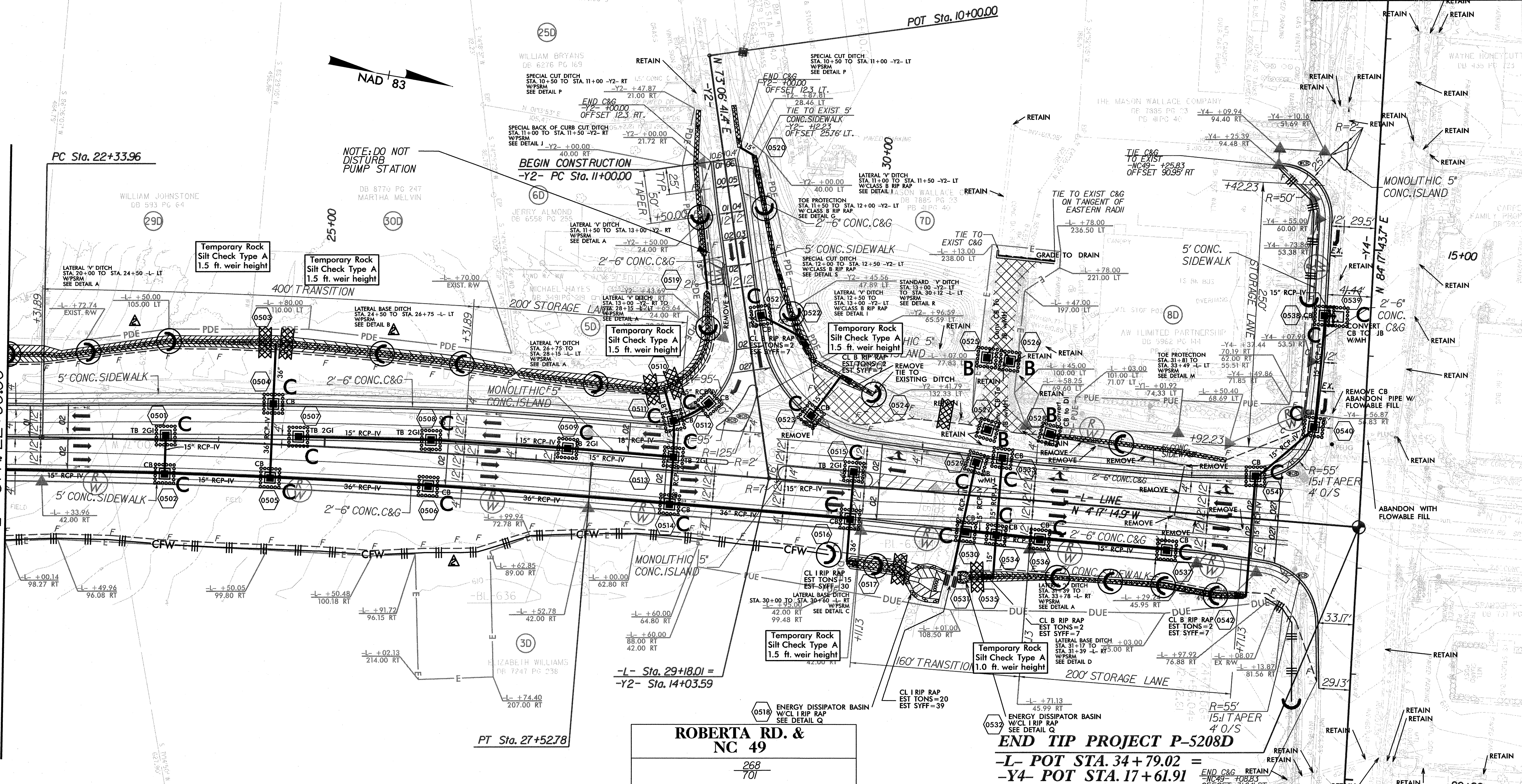
MATCH LINE SEE SHEET NO.5
 -L- STA. 22+00.00

Dr:\magn\p5208d_ec.pst_04.dgn
 10/22/2012 10:02:00 AM

-L- LINE
 PI Sta 24+93.46
 $\Delta = 3^{\circ} 42' 33.4" (RT)$
 $D = 0^{\circ} 42' 53.8"$
 $L = 518.82'$
 $T = 259.50'$
 $R = 8,014.00'$
 $D_s = 40 MPH$
 $SE = RC$
 $RUNOFF = 72'$

-Y2-
 PI Sta 12+72.25
 $\Delta = 12^{\circ} 36' 03.8" (RT)$
 $D = 11^{\circ} 27' 33.0"$
 $L = 109.96'$
 $T = 55.21'$
 $R = 500.00'$
 $D_s = 40 MPH$
 $SE = 4\%$

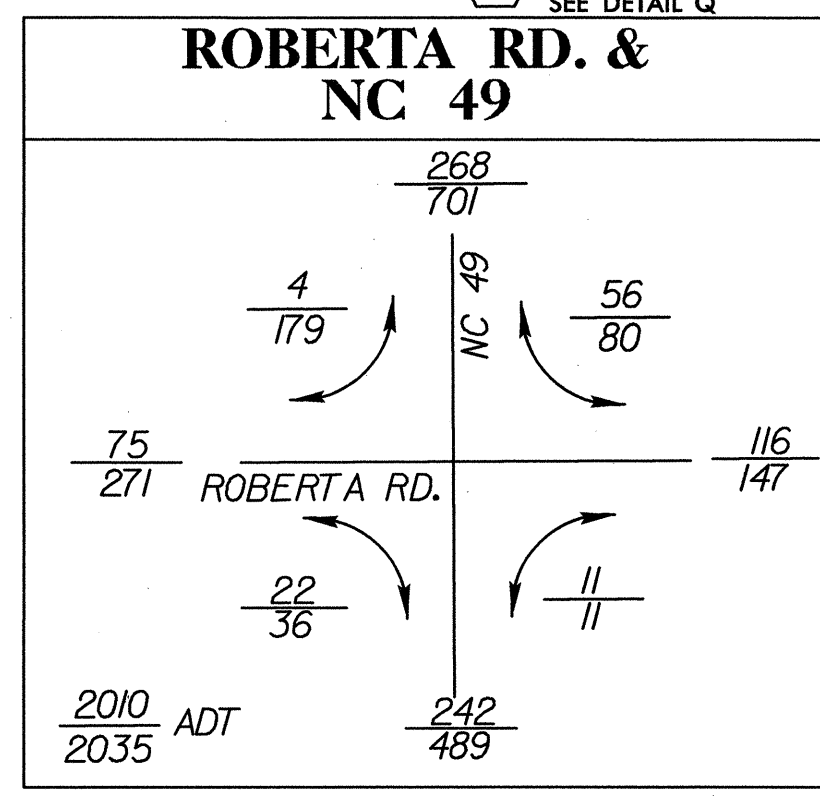
MATCH LINE SEE SHEET NO. 4
 -L- STA. 22+00.00



REVISIONS
 07/09/2012 - ADDED PUE ON PARCEL 30, REVISED TCE ON PARCEL 30, ADDED TCE ON PARCEL 30.
 10/22/2012 - ADDED PUE ON PARCEL 29D AND 30D, REVISED TCE ON PARCEL 30, REVISED TCE ON PARCEL 30.

NOTE: CONCRETE TRANSITION SECTION FOR D.I. AT LOCATIONS WHERE G.I.'S ARE PLACED IN MONOLITHIC ISLAND.

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

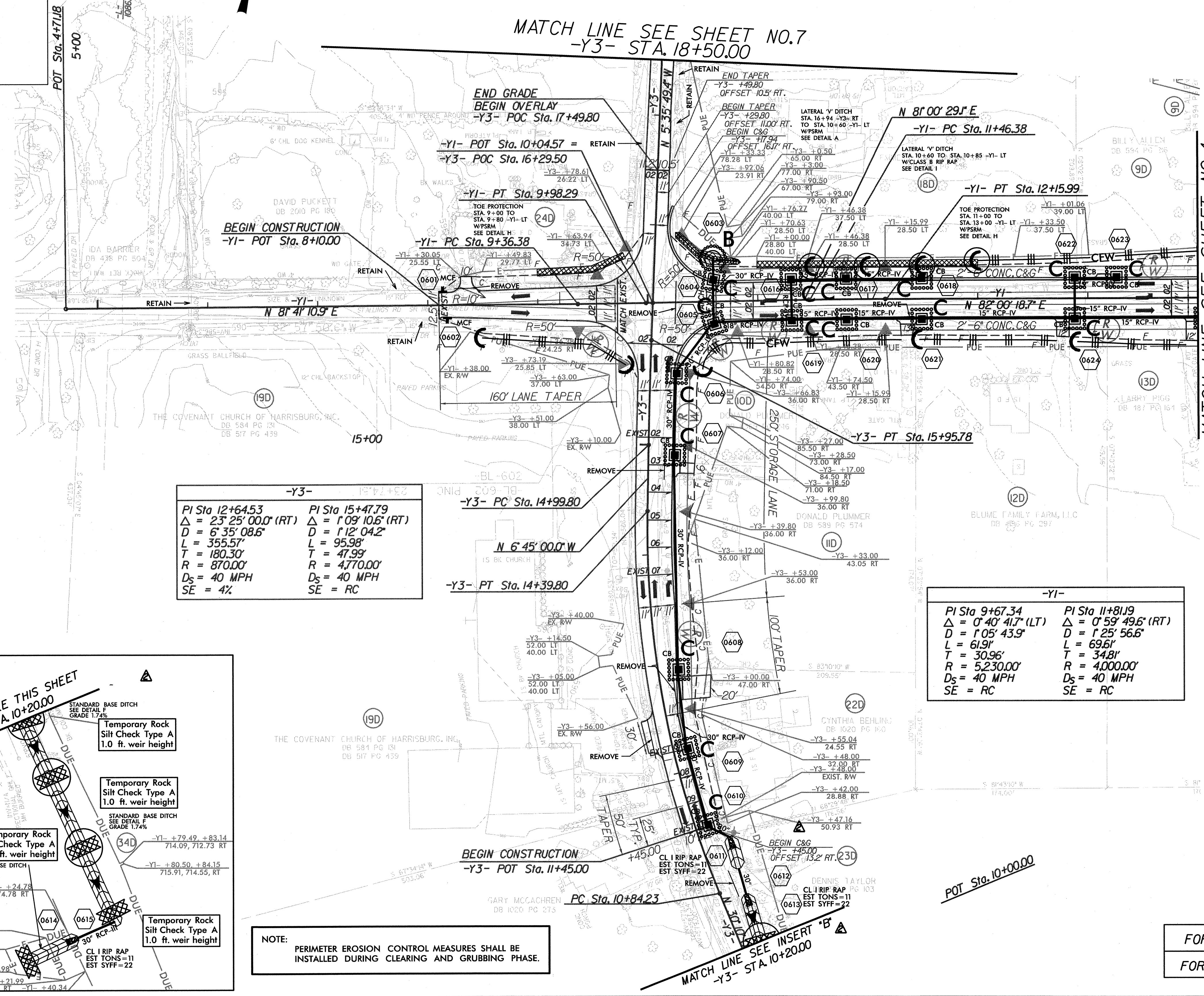
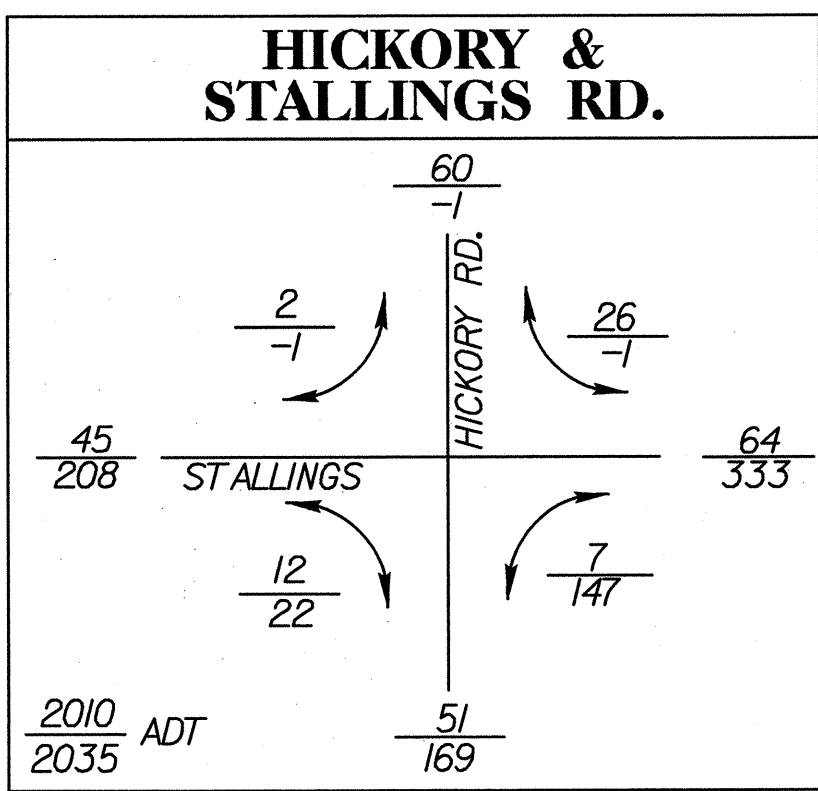


END TIP PROJECT P-5208D
 -L- POT STA. 34+79.02 =
 -Y4- POT STA. 17+61.91

PAVEMENT REMOVAL

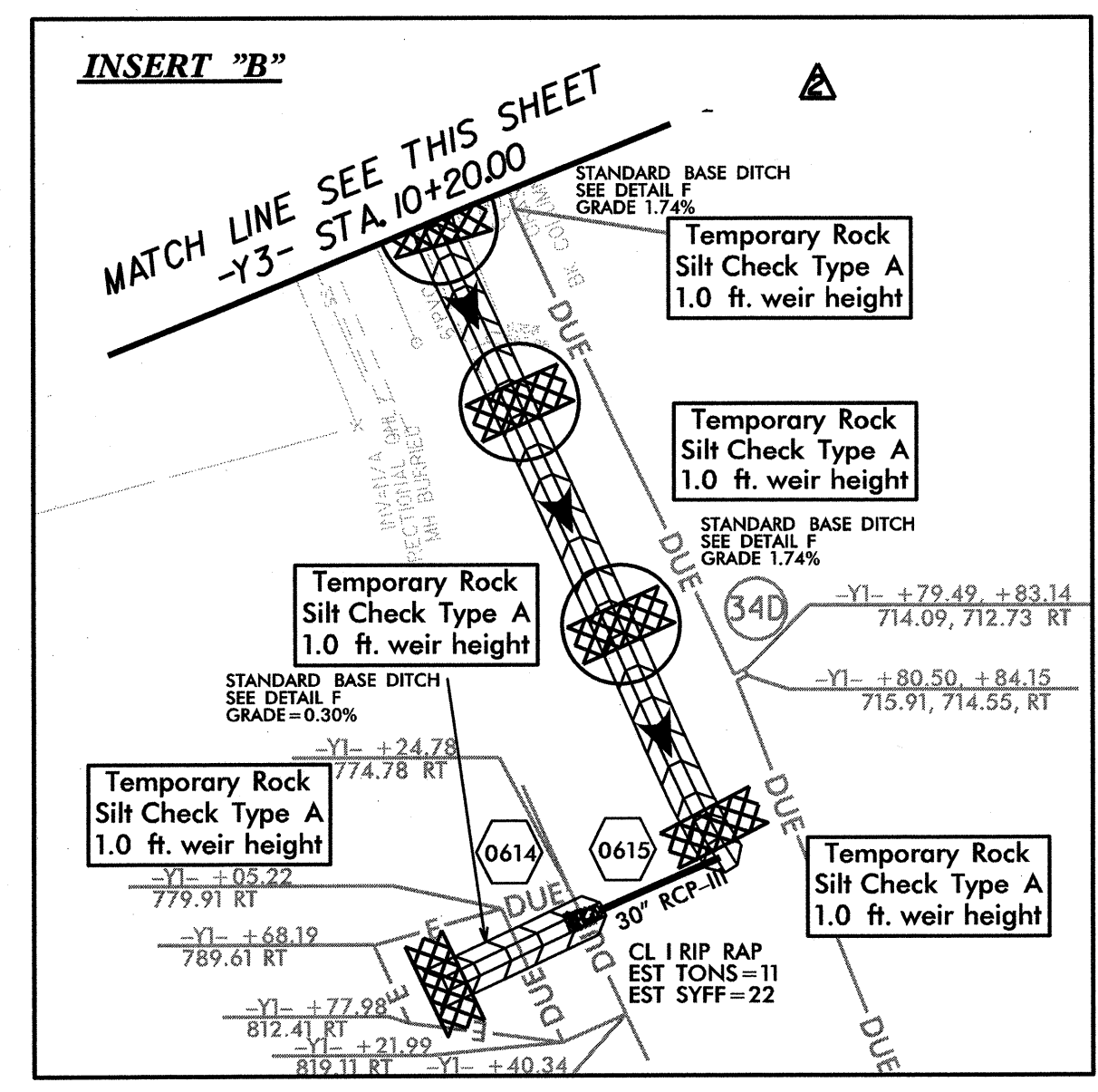
FOR -L- PROFILE SEE SHEET 8

FOR -Y2- PROFILE SEE SHEET 9



-Y3-	
PI Sta 12+64.53	PI Sta 15+47.79
$\Delta = 23^{\circ} 25' 00.0''$ (RT)	$\Delta = 1^{\circ} 09' 10.6''$ (RT)
D = 6' 35' 08.6"	D = 1' 12' 04.2"
L = 355.57'	L = 95.98'
T = 180.30'	T = 47.99'
R = 870.00'	R = 4770.00'
D _s = 40 MPH	D _s = 40 MPH
SE = 4%	SE = RC

-Y1-	
PI Sta 9+67.34	PI Sta 11+81.19
$\Delta = 0^{\circ} 40' 41.7''$ (LT)	$\Delta = 0^{\circ} 59' 49.6''$ (RT)
D = 1' 05' 43.9"	D = 1' 25' 56.6"
L = 61.91'	L = 69.61'
T = 30.96'	T = 34.81'
R = 5,230.00'	R = 4,000.00'
D _s = 40 MPH	D _s = 40 MPH
SE = RC	SE = RC



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


FOR -Y1- PROFILE SEE SHEET 9
 FOR -Y3- PROFILE SEE SHEET 10

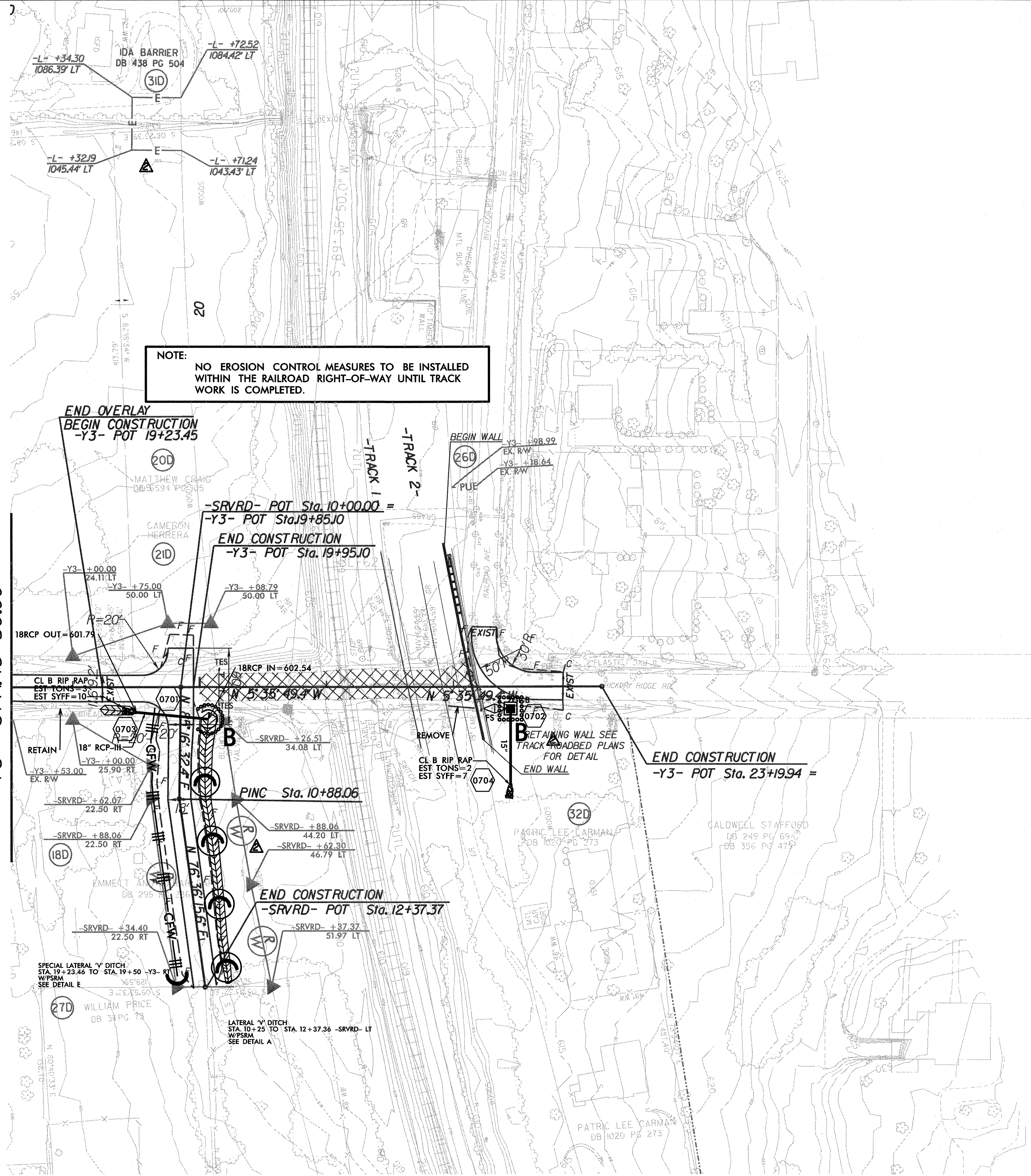
REVISIONS
 07/09/2012 - ADDED PUE FOR PARCELS 100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000

0077DEL_P10a4

0077DEL_P10c4

WSP
Transportation & Infrastructure
15401 Weston Parkway Suite 100
Cary, NC 27513 - 919.678.0035
www.wspells.com
LICENSE NO. F-0891

PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-7/CONST. 7
RW SHEET NO. EROSION CONTROL ENGINEER	
	



NOTE:
NO EROSION CONTROL MEASURES TO BE INSTALLED WITHIN THE RAILROAD RIGHT-OF-WAY UNTIL TRACK WORK IS COMPLETED.

MATCH LINE SEE SHEET NO. 6
-Y3- STA. 18+50.00

REVISIONS
 07/09/2012 - ADDED PUE ON PARCEL 26D.
 10/22/2012 - ADDED TCE ON PARCEL 20D, 21D AND CHANGED PUE TO TCE ON PARCEL 31D, ADD PUE ON PARCEL 18D AND 32D.

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

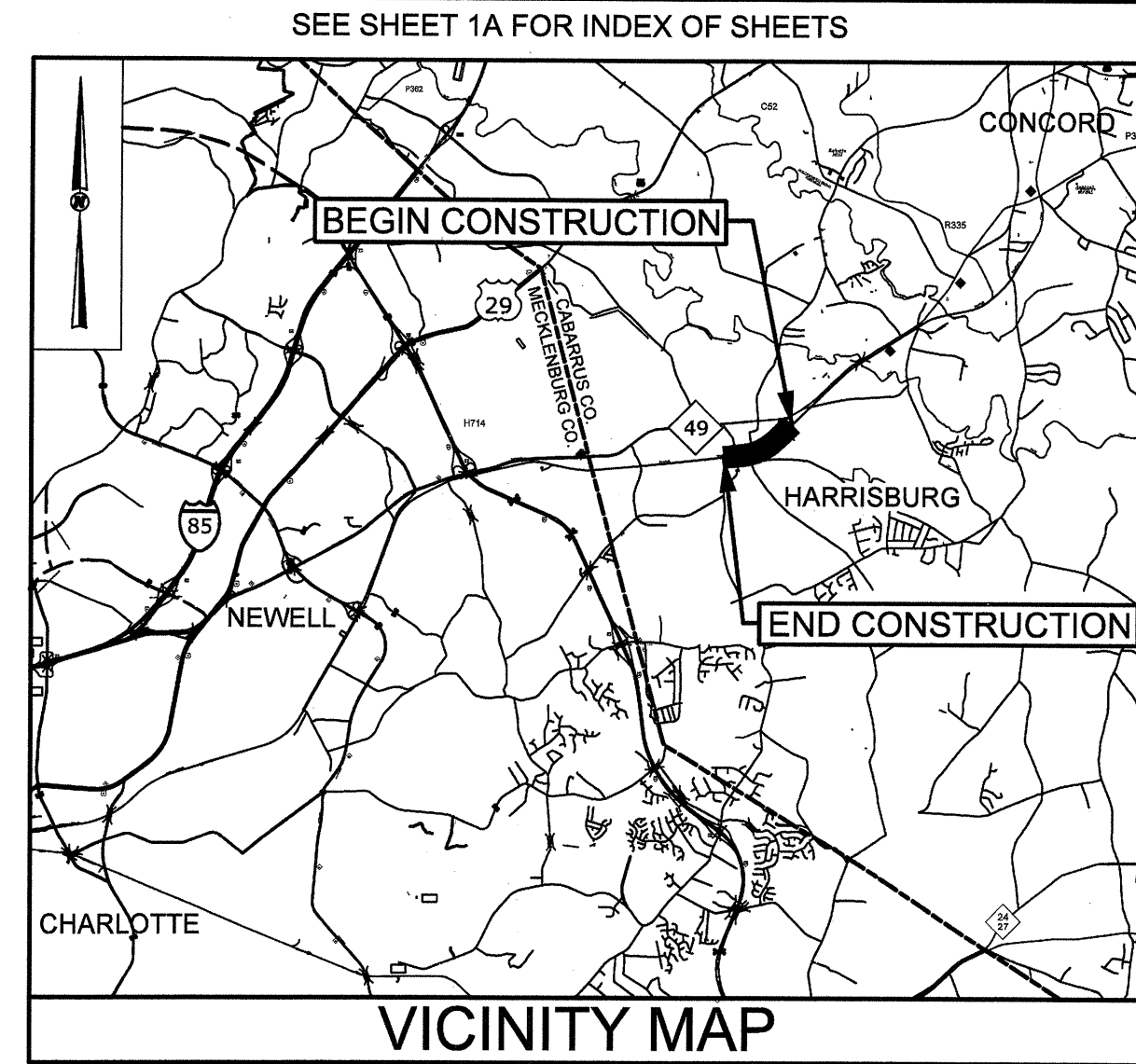
 PAVEMENT REMOVAL

FOR -Y3- SEE PROFILE SHEET 10
FOR -SRVD- SEE PROFILE SHEET 10

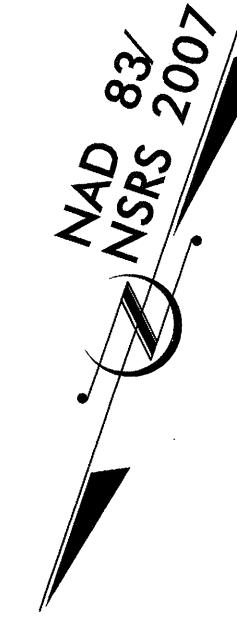
2/15/2013
 D:\arimage\p5208D_ec_psh_07.dgn
 10/22/2012

0077DEL P10a4

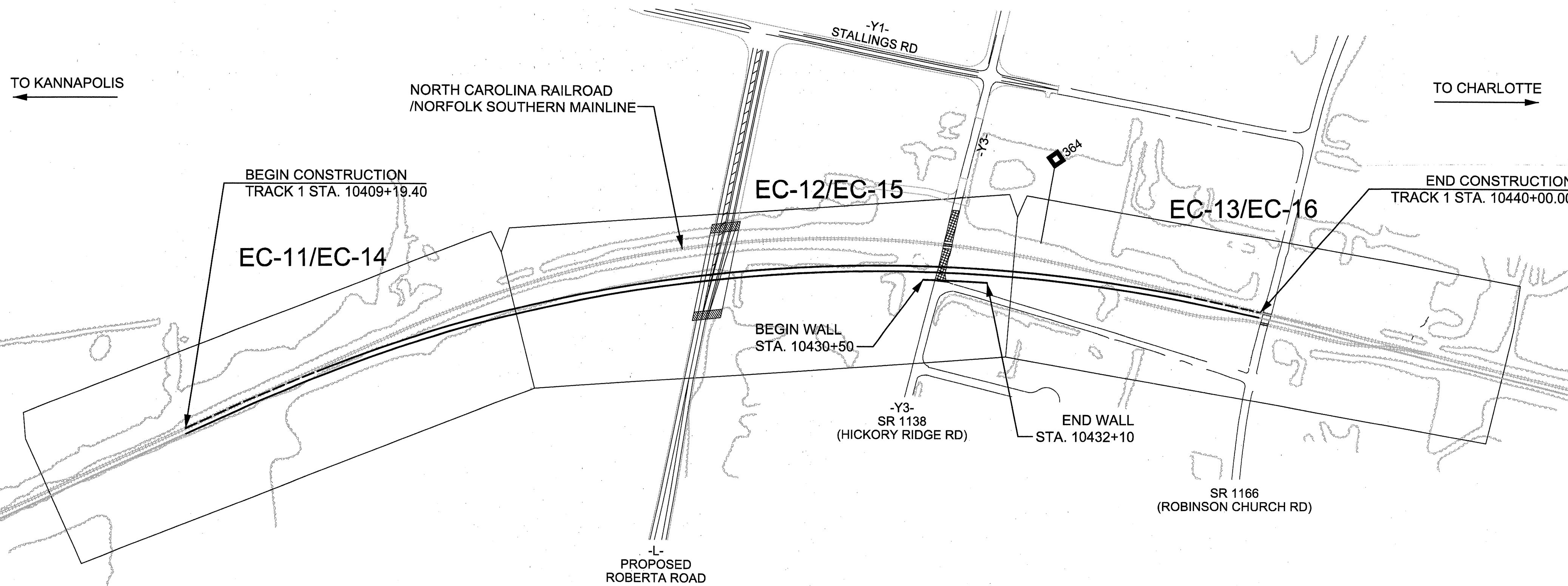
TIP PROJECT: P-5208D



STATE OF NORTH CAROLINA
RAIL DIVISION
PLAN FOR PROPOSED
RAILROAD EROSION CONTROL
CABARRUS COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208D	EC-08	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
50000.1.STR09T1B		P.E./UTIL. P.E.	
50000.1.STR10T3		P.E./UTIL. P.E.	
43219.2.STR09P5208		R.O.W.	
50000.3.STR04T4E		CONST./UTIL. CONST.	



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1607.01	Temp. Gravel Const. Entrance	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
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	
Rock Inlet Sediment Trap:		
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

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

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:
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
2012 STANDARD SPECIFICATIONS

EROSION CONTROL
LEVEL III
CERTIFICATION #3185
RICARDO A. CINTRON, P.E.

Roadway Standard Drawings

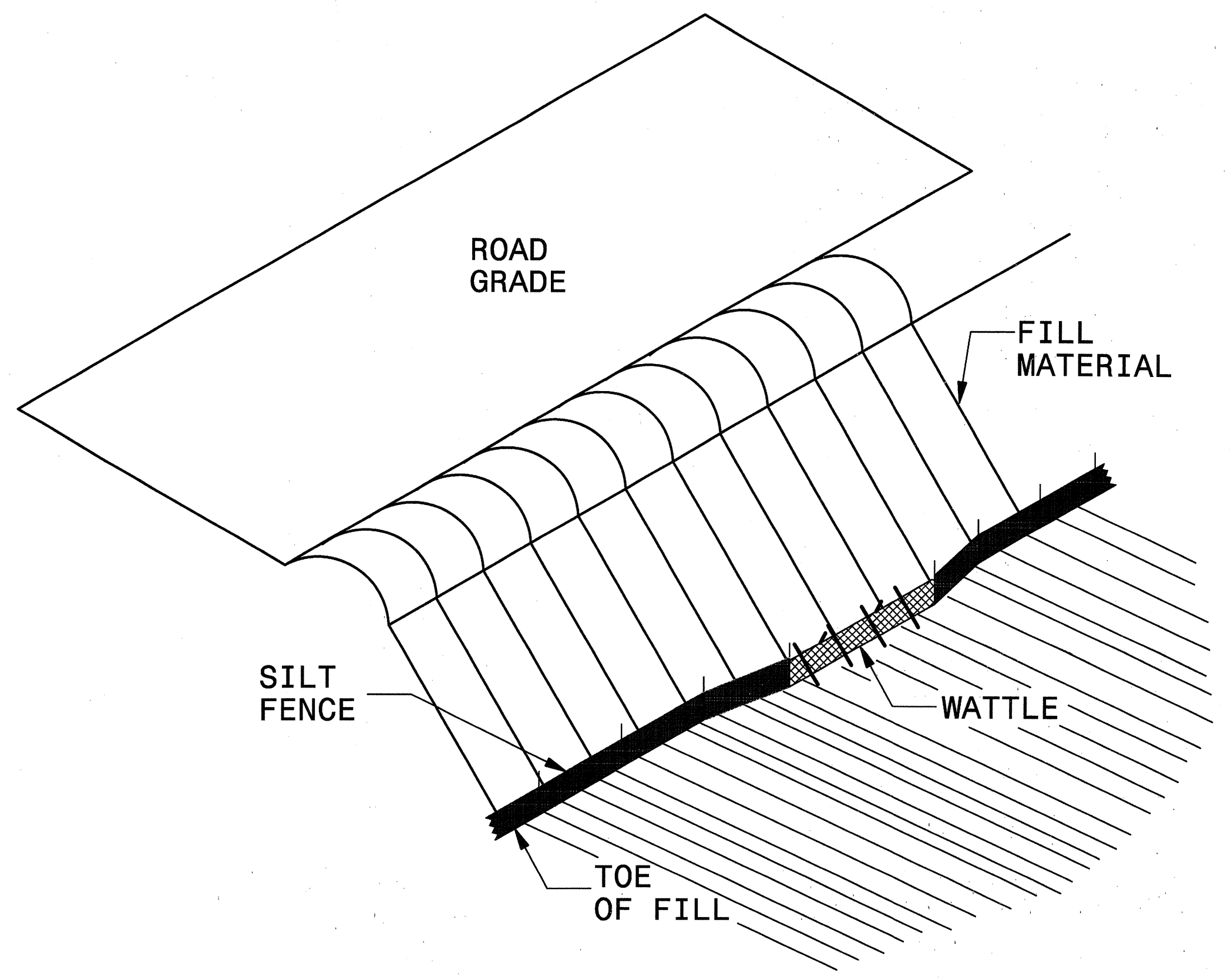
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

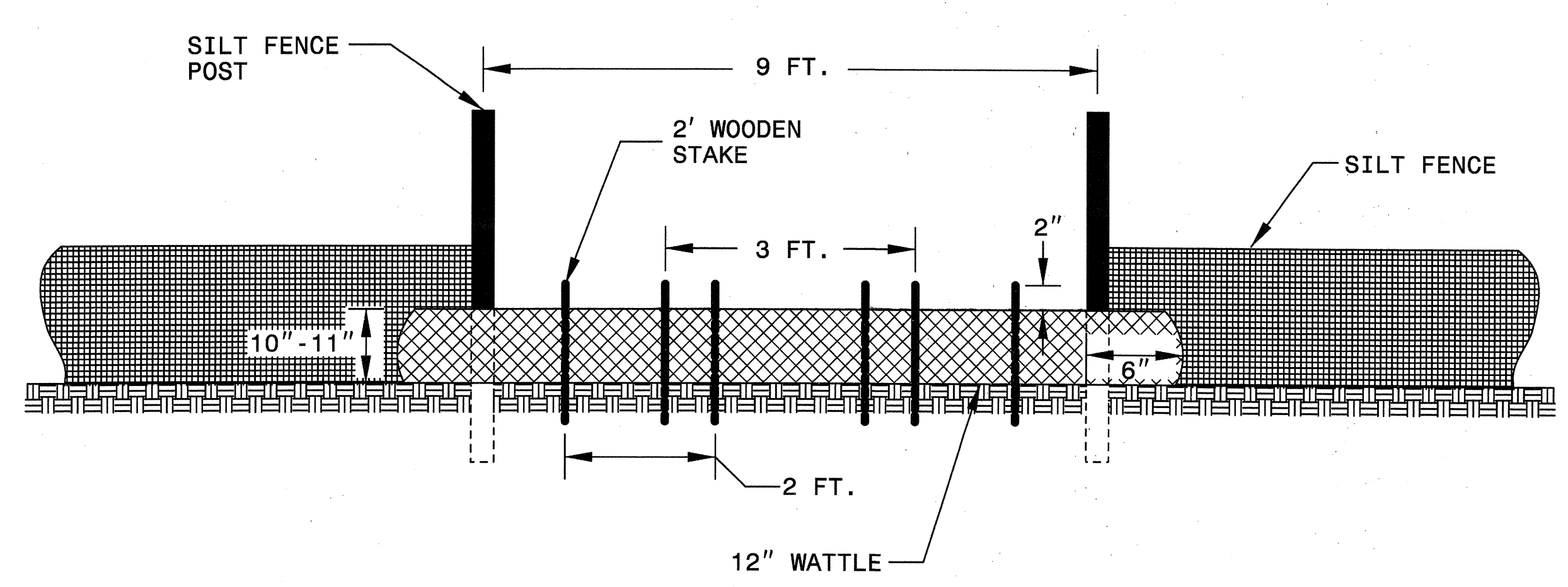
3/16/09 PM 10:44 CC: part_01.dgn

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-9
	RW SHEET NO.	
DATE: FEBRUARY 12, 2013	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

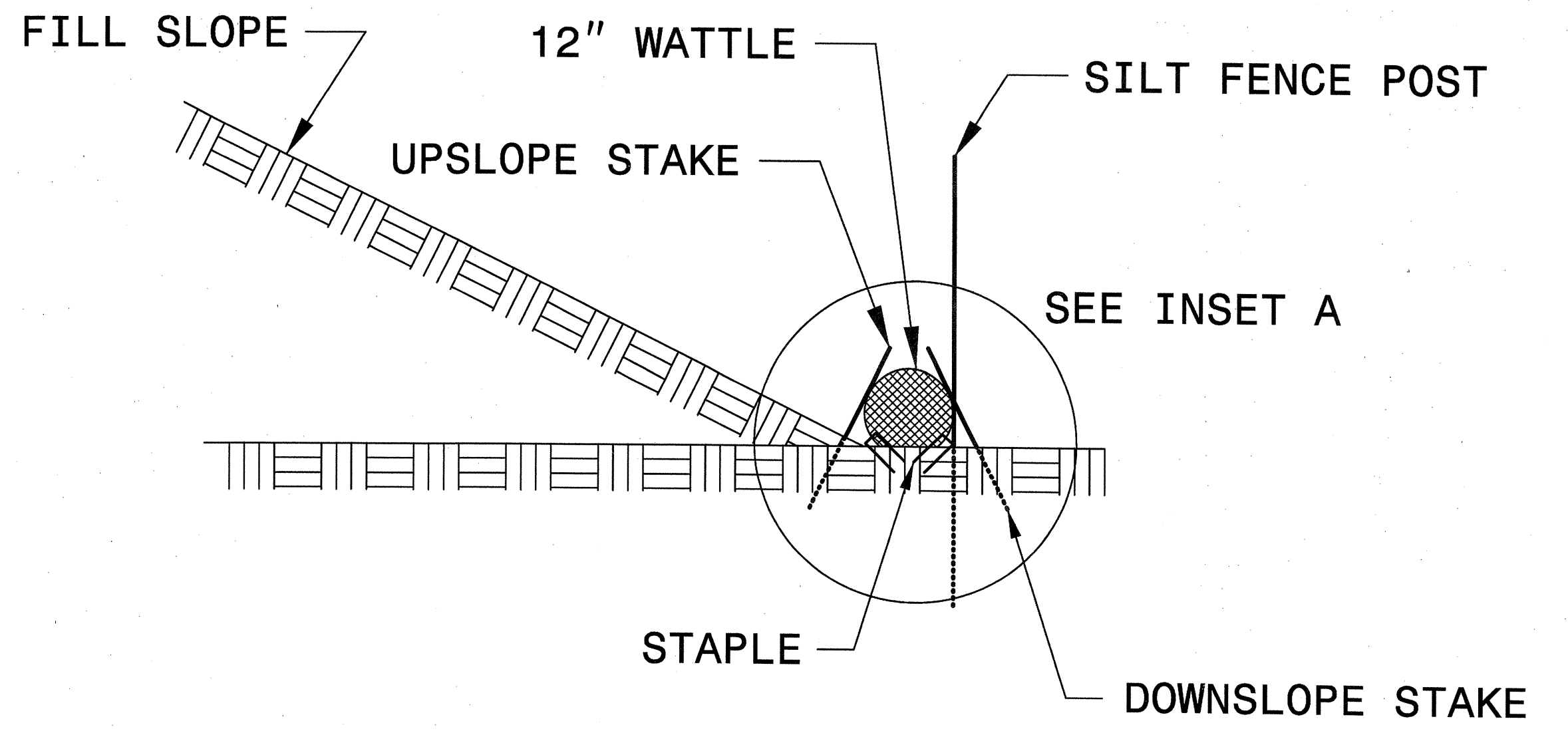
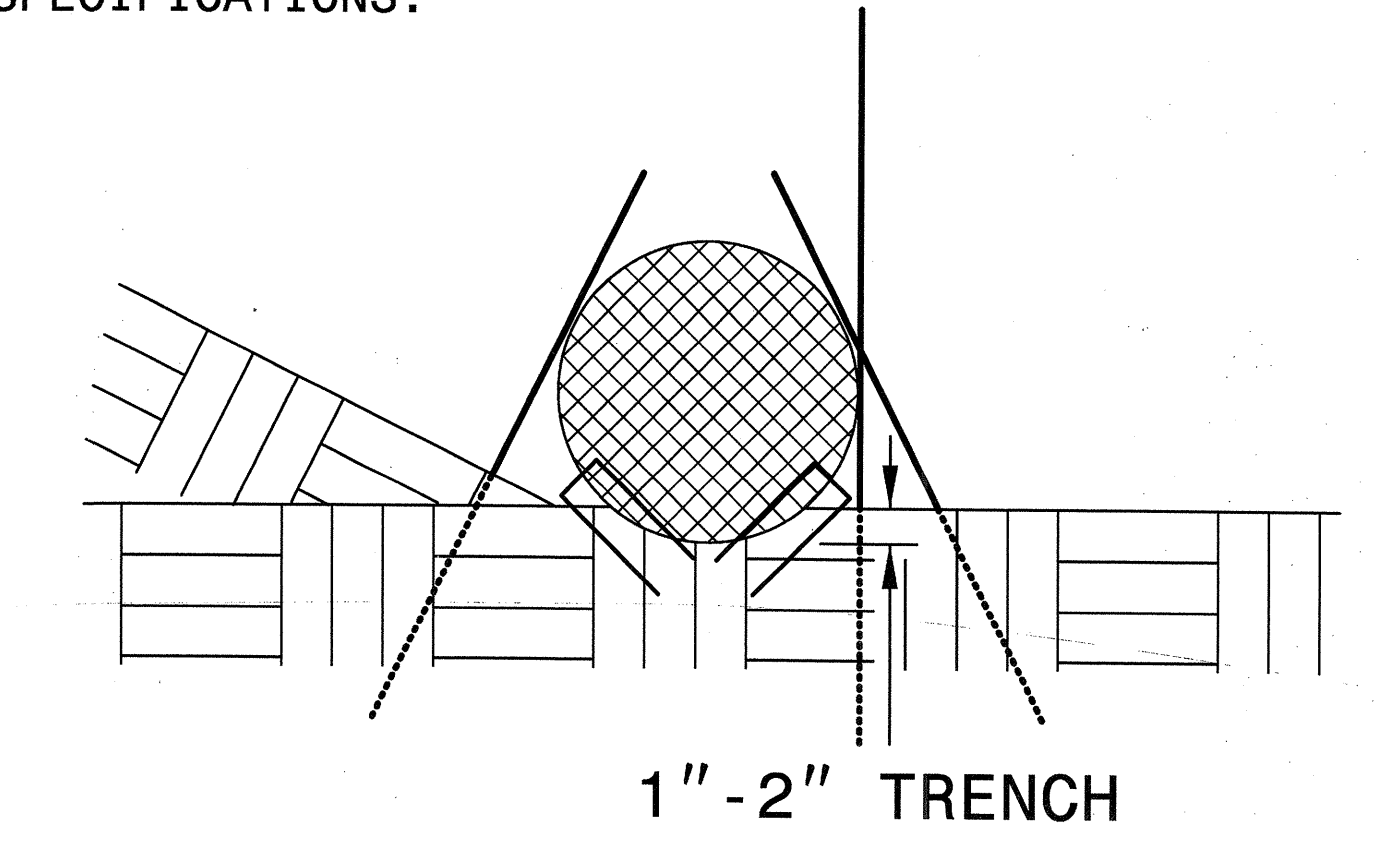


VIEW FROM SLOPE

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



SIDE VIEW

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-9A
	DATE: FEBRUARY 12, 2013	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

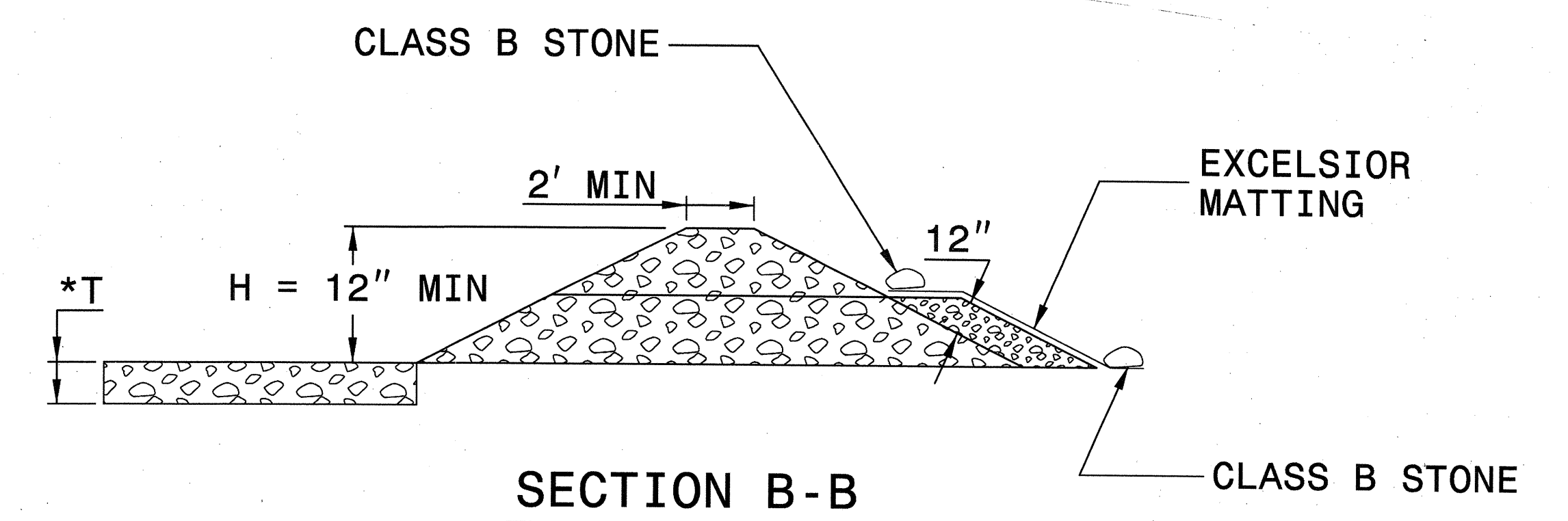
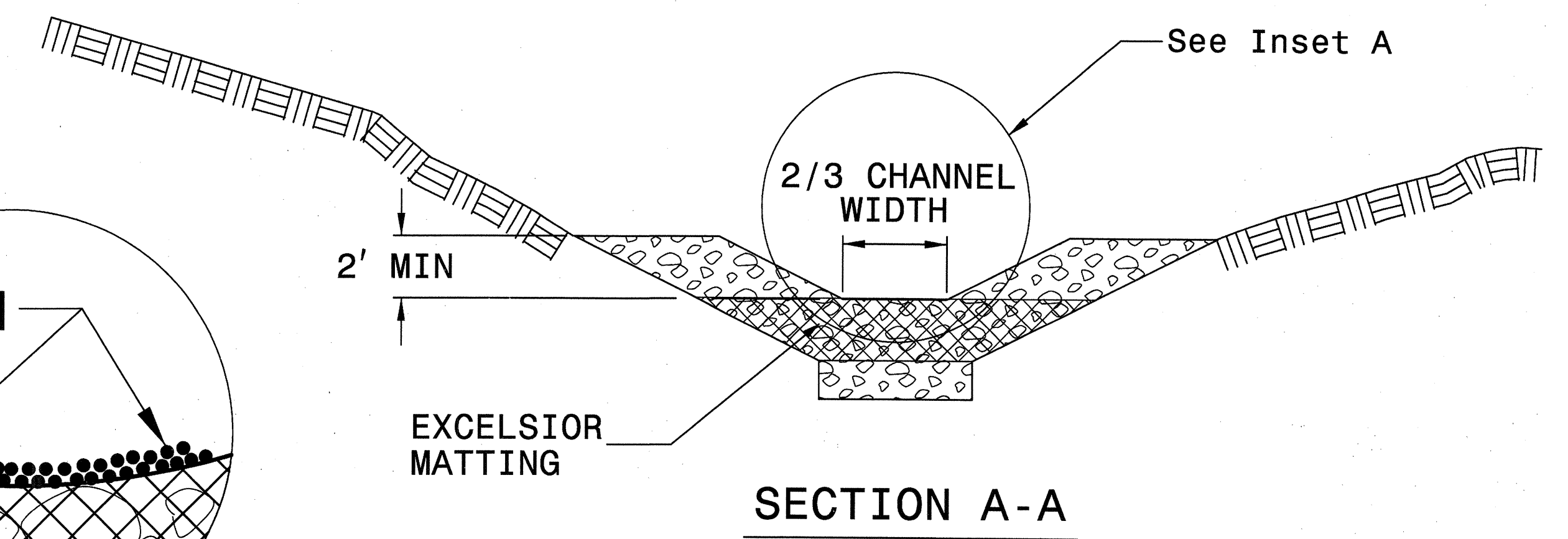
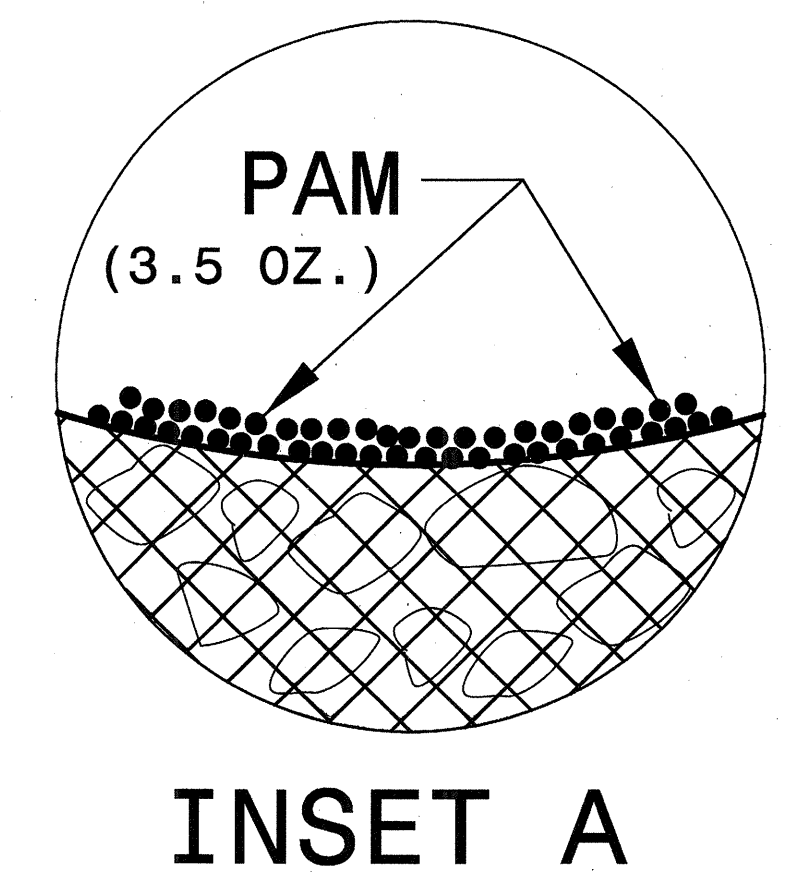
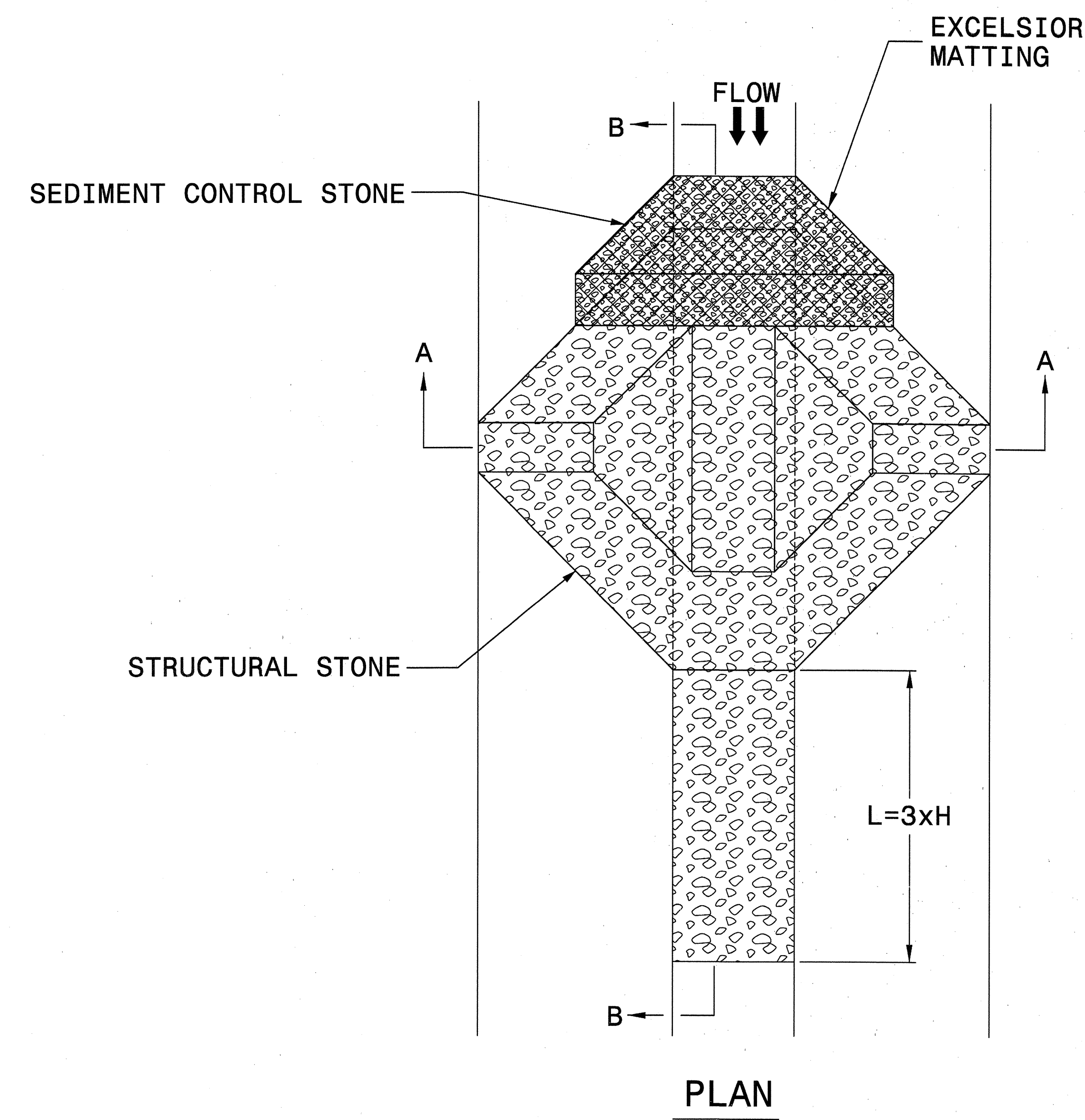
TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM) STD. 1633.01

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.

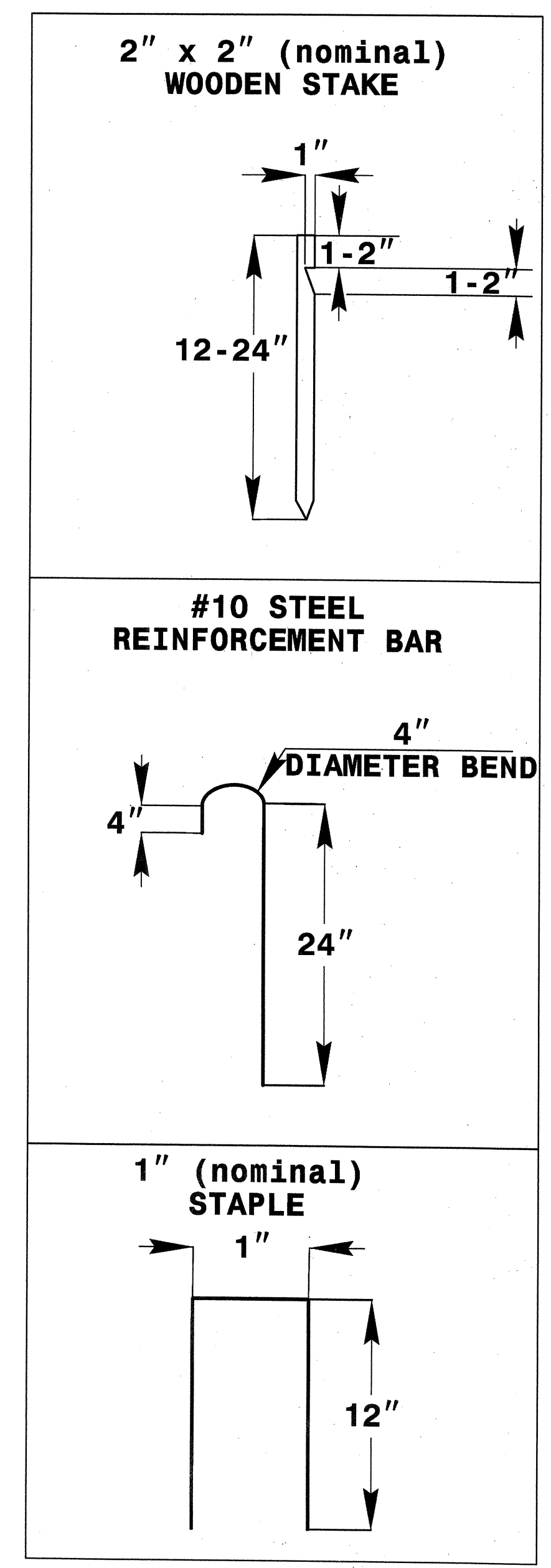
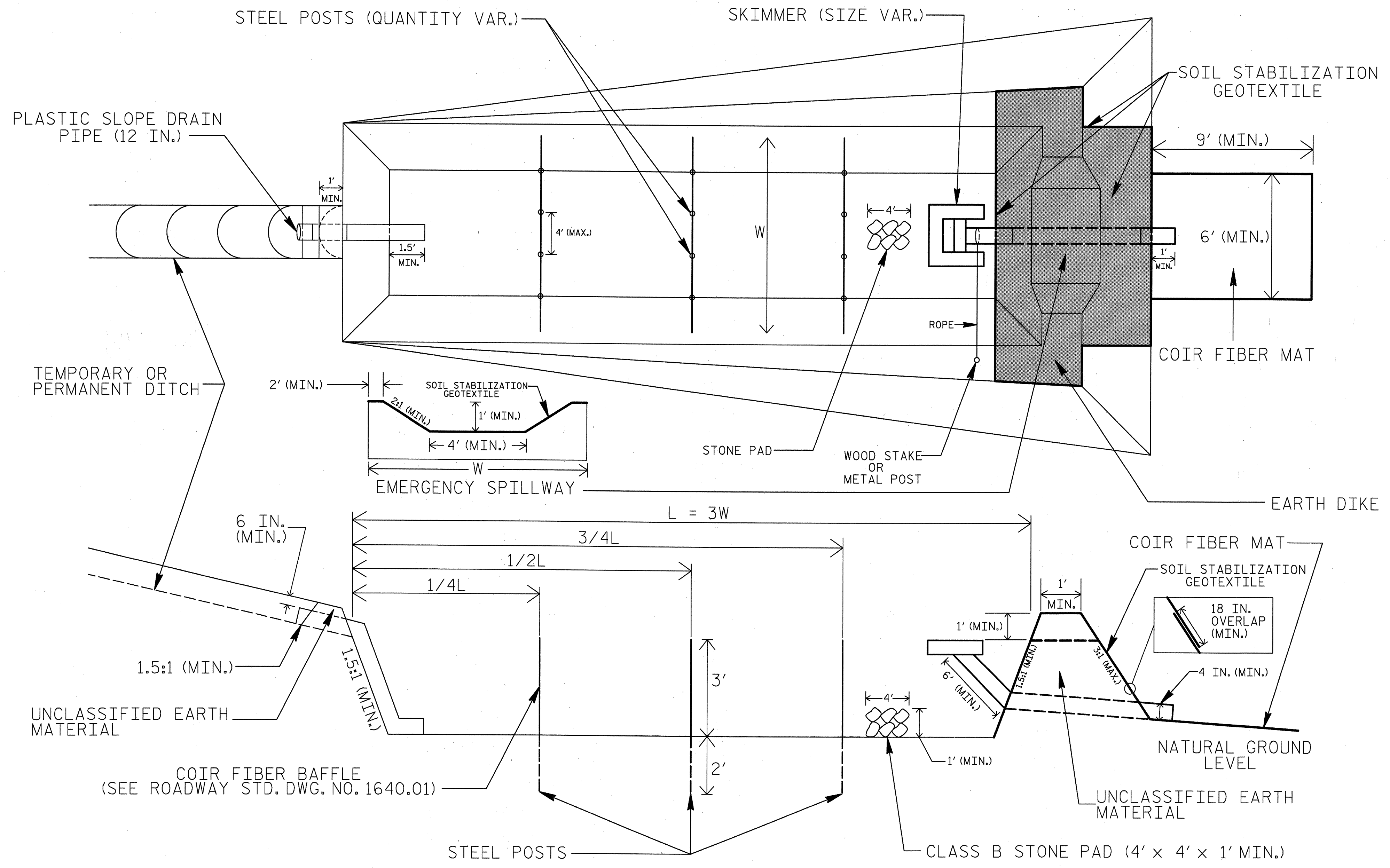


*T = 12" MIN., 18" MAX.

NOT TO SCALE

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No. C-1554	PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-9B
	RW SHEET NO.	
DATE: FEBRUARY 12, 2013	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



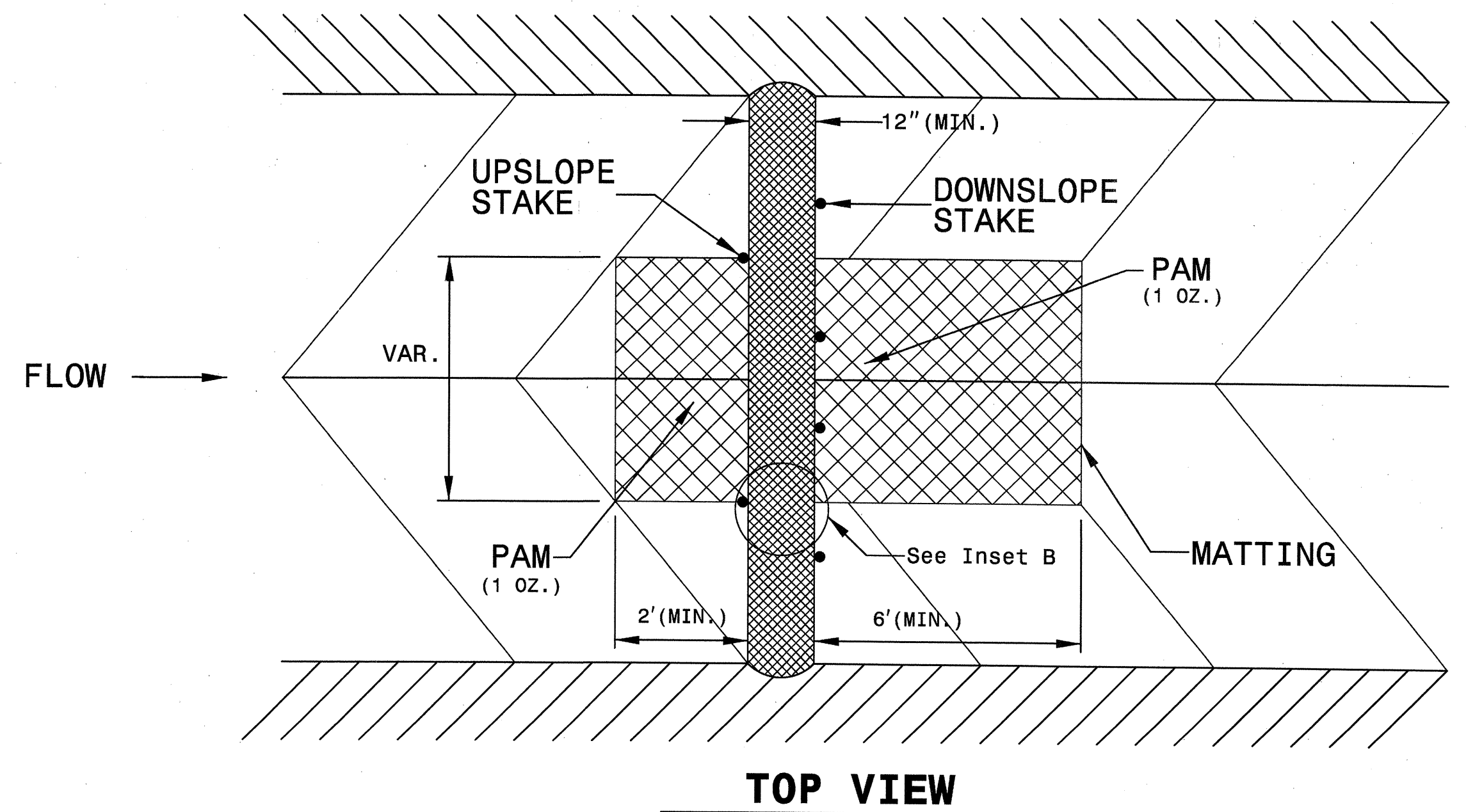
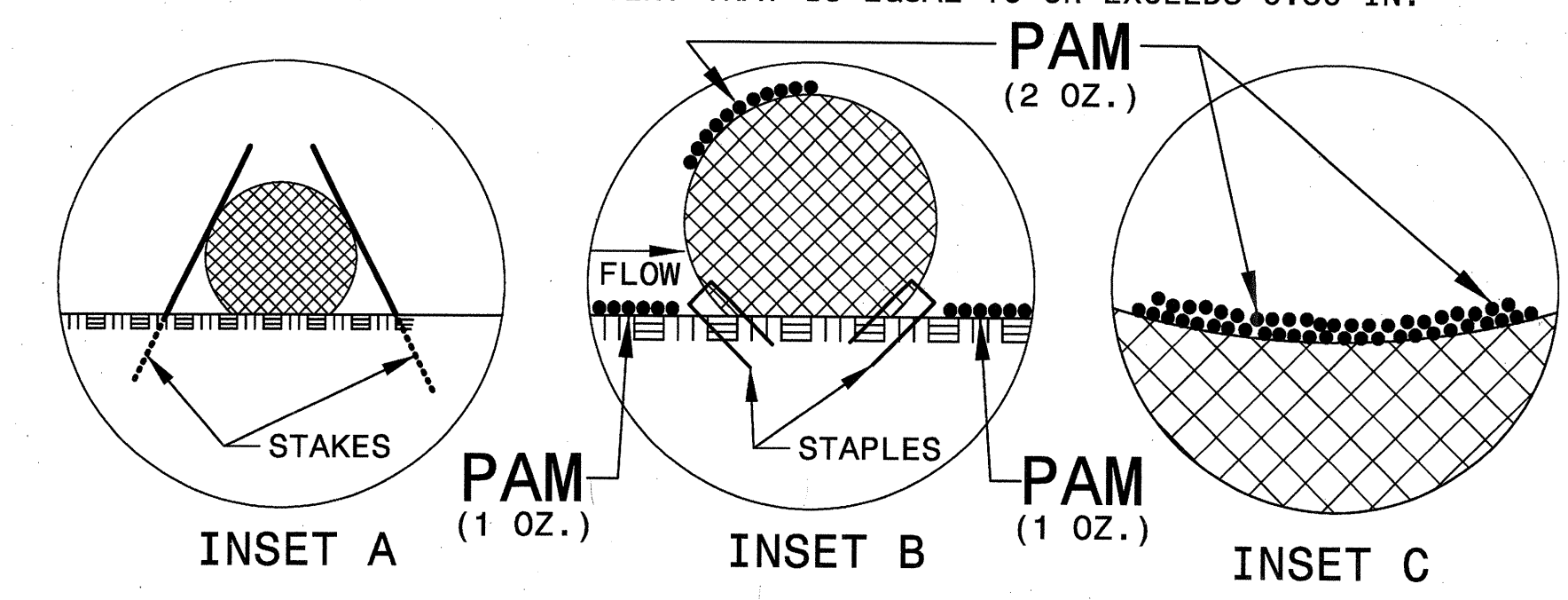
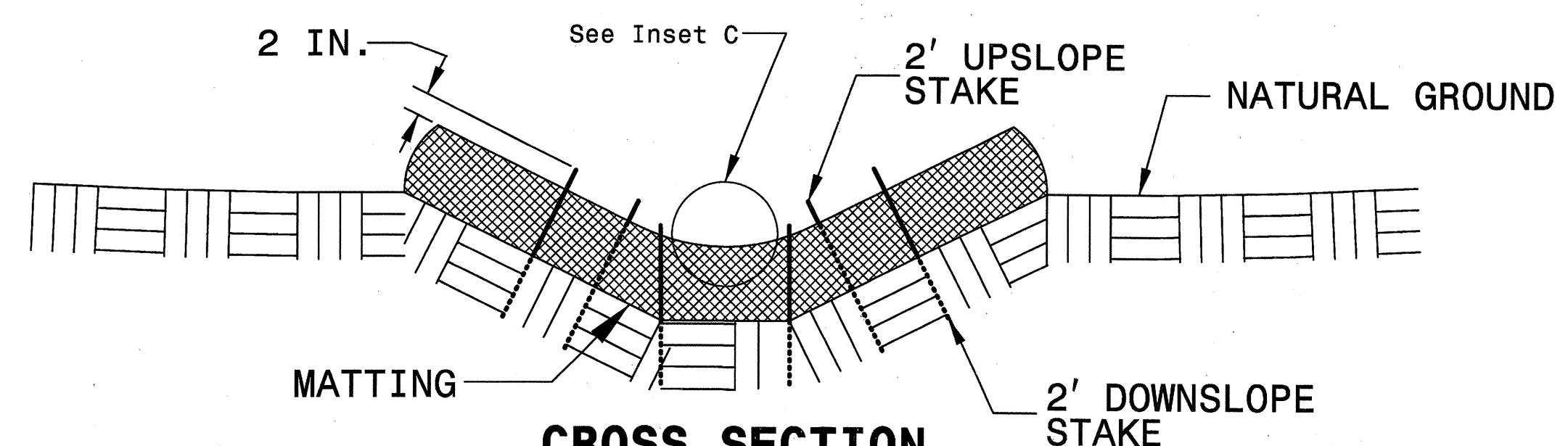
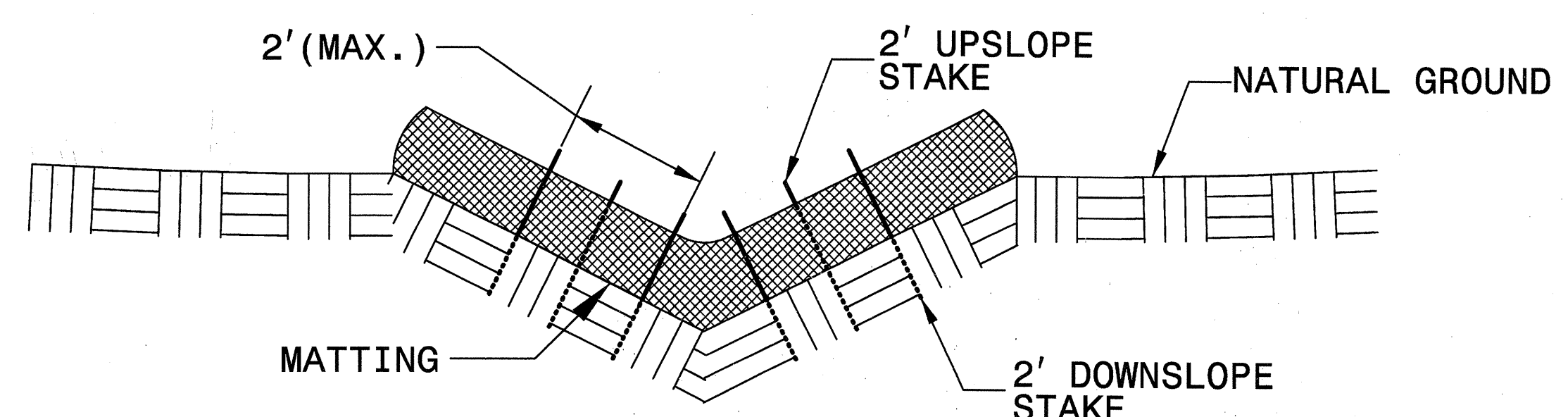
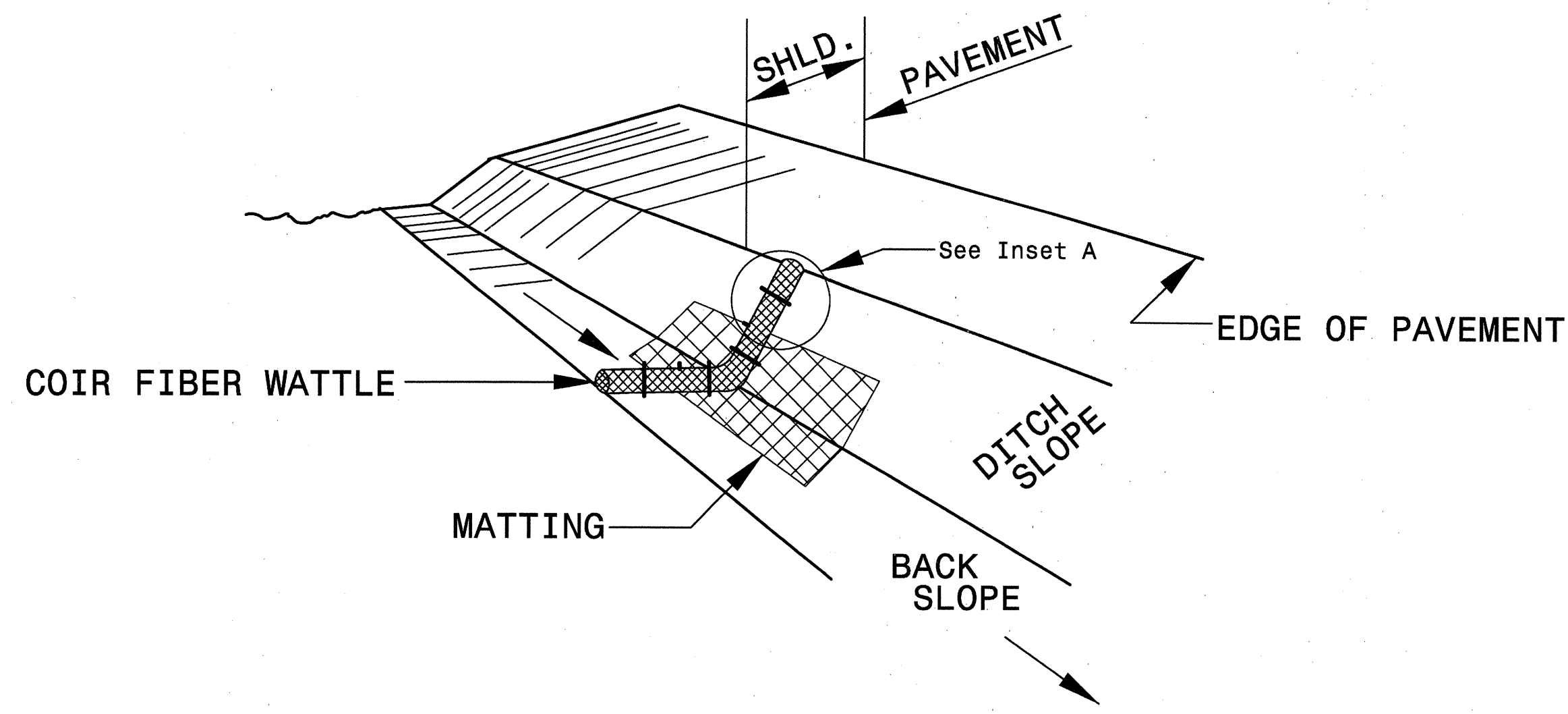
COIR FIBER MAT ANCHOR OPTIONS

- 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

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
	P-5208D	EC-9C
DATE: FEBRUARY 12, 2013	RW SHEET NO.	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

- NOTES:**
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
 - 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.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

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

0077DEL_P10a4
0001ADD_P10a

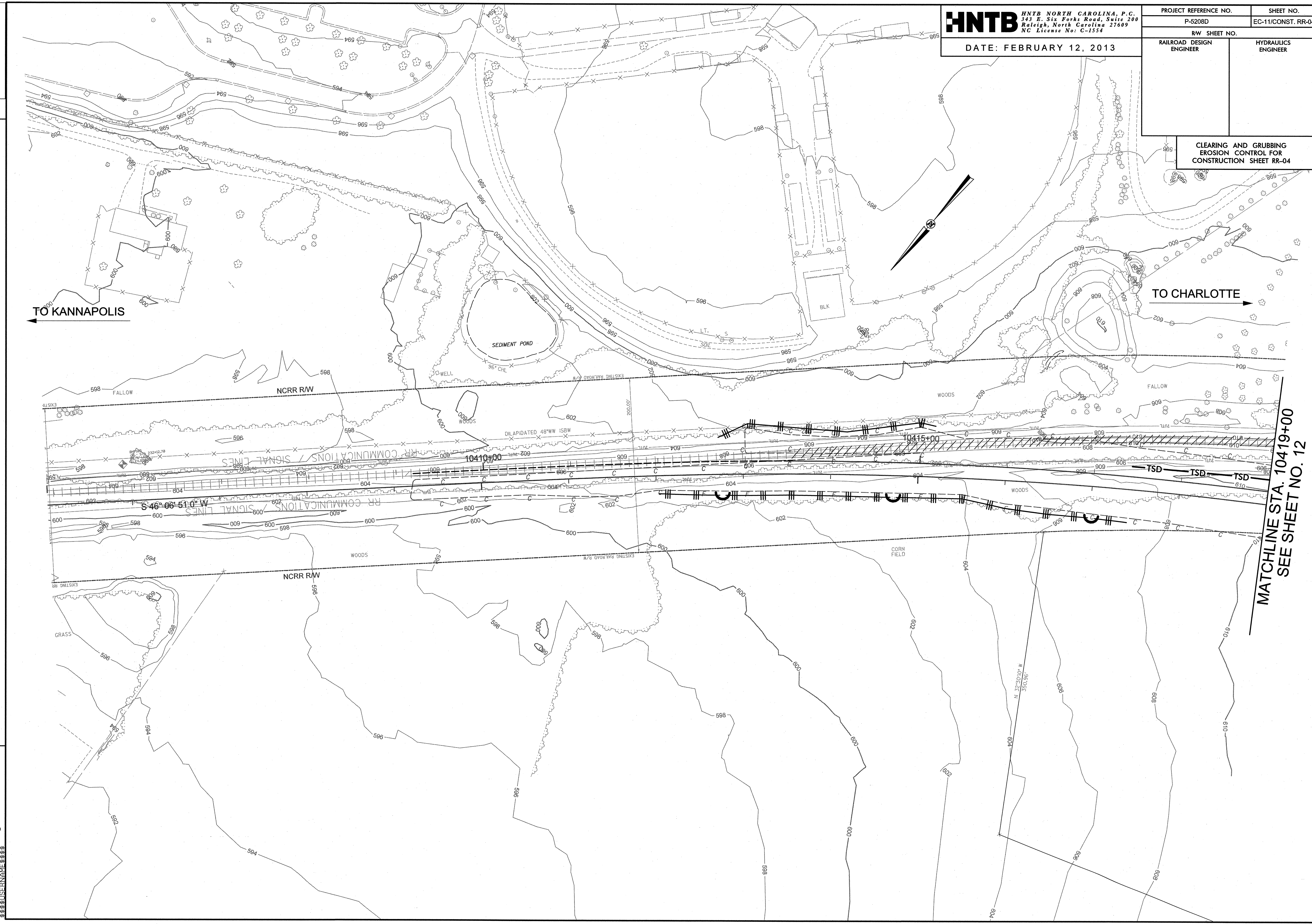
REVISIONS
REVISION #1 (3/25/2013): REVISED TO ACCOMODATE GRADING CHANGES IN TWO LOCATIONS.

2013.04.24 PM 1:44 CC: pch.04.dgn
USER: NAVEEN

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
DATE: FEBRUARY 12, 2013

PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-11/CONST. RR-04
RW SHEET NO.	HYDRAULICS ENGINEER
RAILROAD DESIGN ENGINEER	

CLEARING AND GRUBBING
EROSION CONTROL SHEET FOR
CONSTRUCTION SHEET RR-04



MATCHLINE STA. 10419+00
SEE SHEET NO. 12

0077DEL_P10a4
0001ADD_P10a

REVISIONS
REVISION #1 (9/25/2013): REVISED TO ACCOMMODATE CHANGED PIPE AND DITCH ALIGNMENT AT STA. 10430+00 LT.

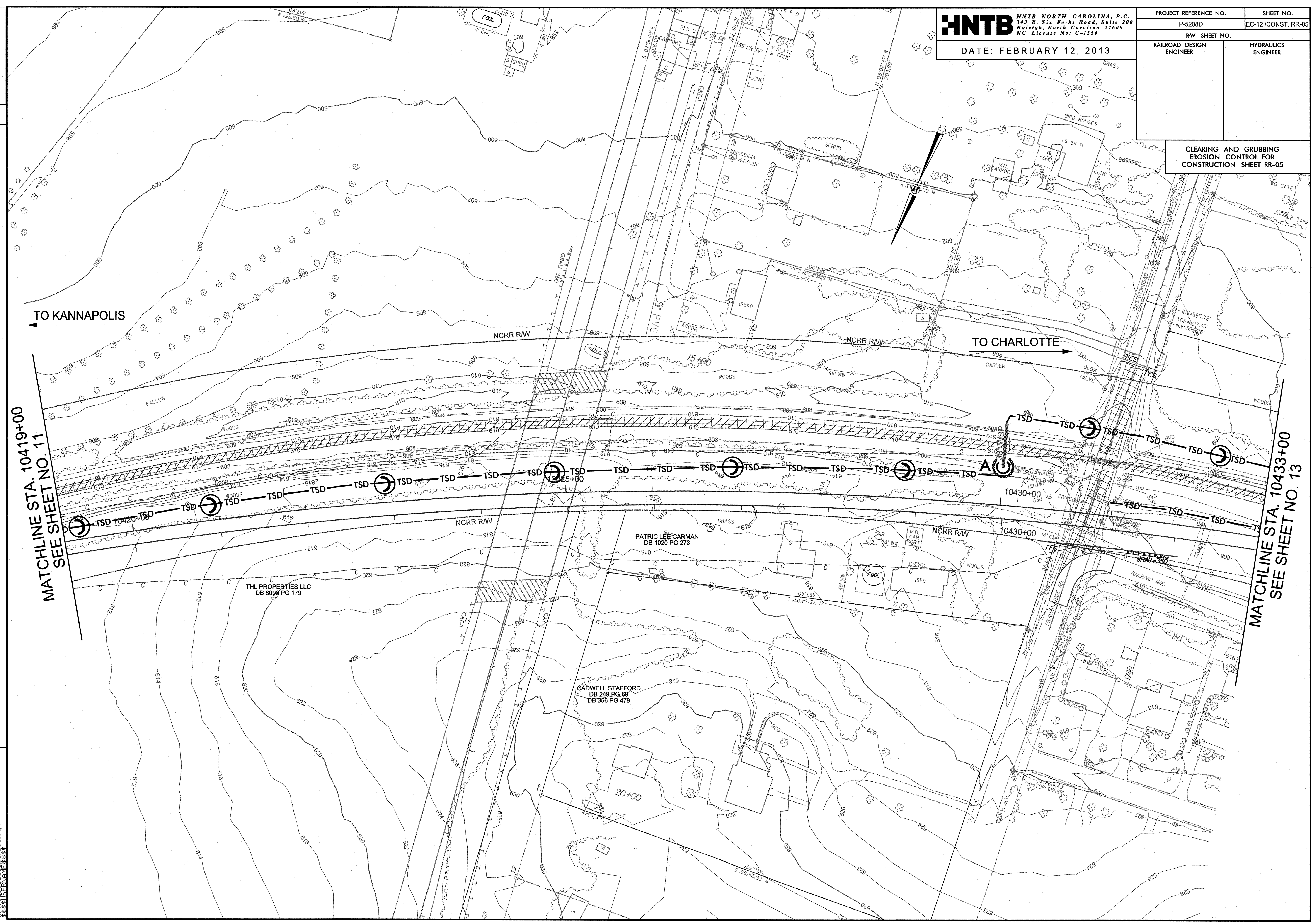
2:06:05 PM CC
3/3/2013
3/3/2013

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: FEBRUARY 12, 2013

PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-12/CONST. RR-05
RW SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET RR-05



MATCHLINE STA. 10419+00
SEE SHEET NO. 11

MATCHLINE STA. 10433+00
SEE SHEET NO. 13

TO KANNAPOLIS

TO CHARLOTTE

NCRW RW

NCRW RW

NCRW RW

NCRW RW

THL PROPERTIES LLC
DB 8098 PG 179

PATRIC LEE CARMAN
DB 1020 PG 273

CADWELL STAFFORD
DB 249 PG 69
DB 356 PG 479

MATCHLINE STA. 10419+00
SEE SHEET NO. 11

MATCHLINE STA. 10433+00
SEE SHEET NO. 13

TO KANNAPOLIS

TO CHARLOTTE

NCRW RW

NCRW RW

NCRW RW

NCRW RW

THL PROPERTIES LLC
DB 8098 PG 179

PATRIC LEE CARMAN
DB 1020 PG 273

CADWELL STAFFORD
DB 249 PG 69
DB 356 PG 479

0077DEL_P10a4
0002ADD_P10a

REVISIONS
REVISION #1 (4/4/2013): REVISED EROSION CONTROL TO ACCOMMODATE DITCH CHANGE.

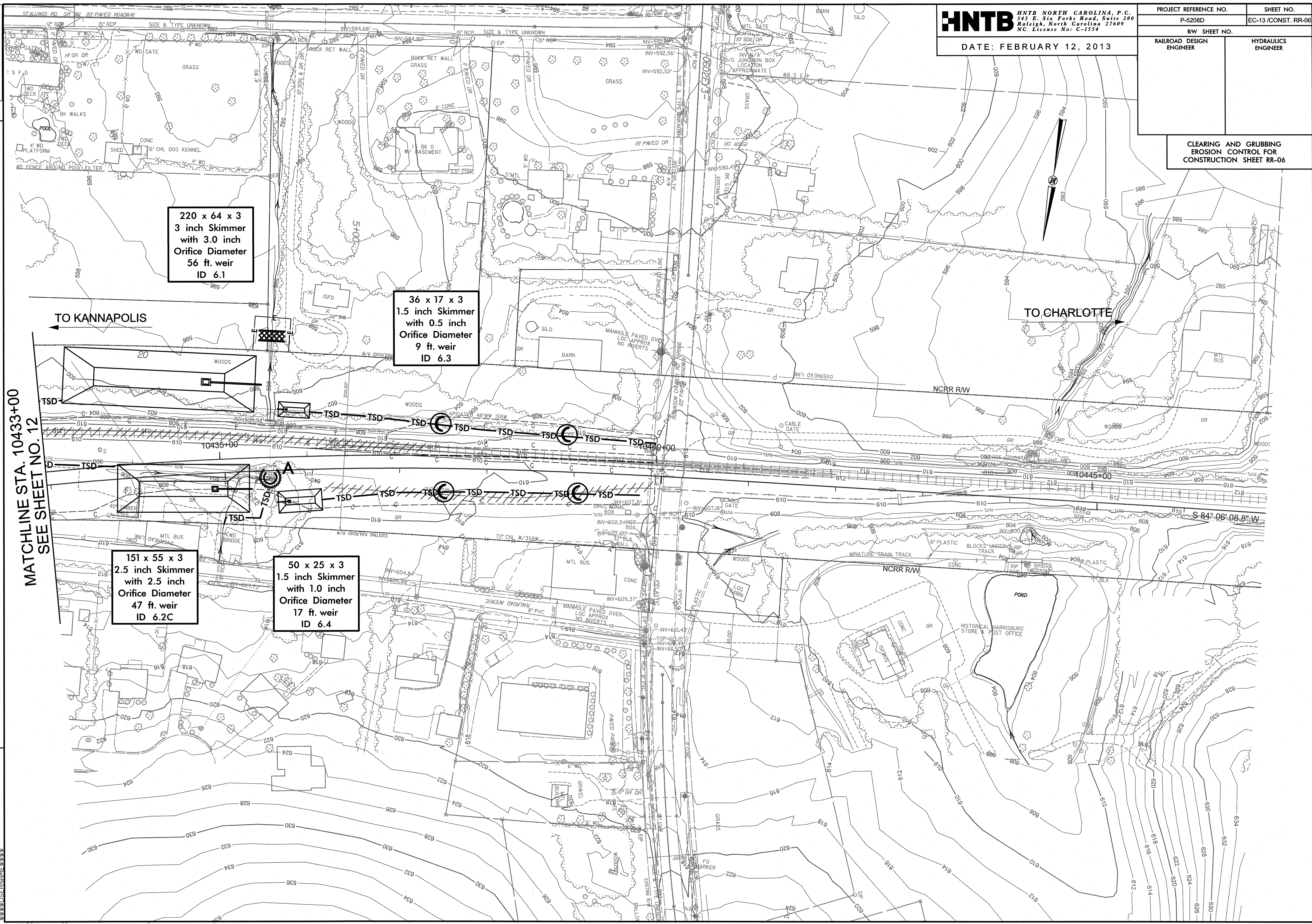
11/20/22 AM
CG psk.06.dgn

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: FEBRUARY 12, 2013

PROJECT REFERENCE NO. P-5208D	SHEET NO. EC-13 /CONST. RR-06
RW SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET RR-06



MATCHLINE STA. 10433+00
SEE SHEET NO. 12

TO KANNAPOLIS

TO CHARLOTTE

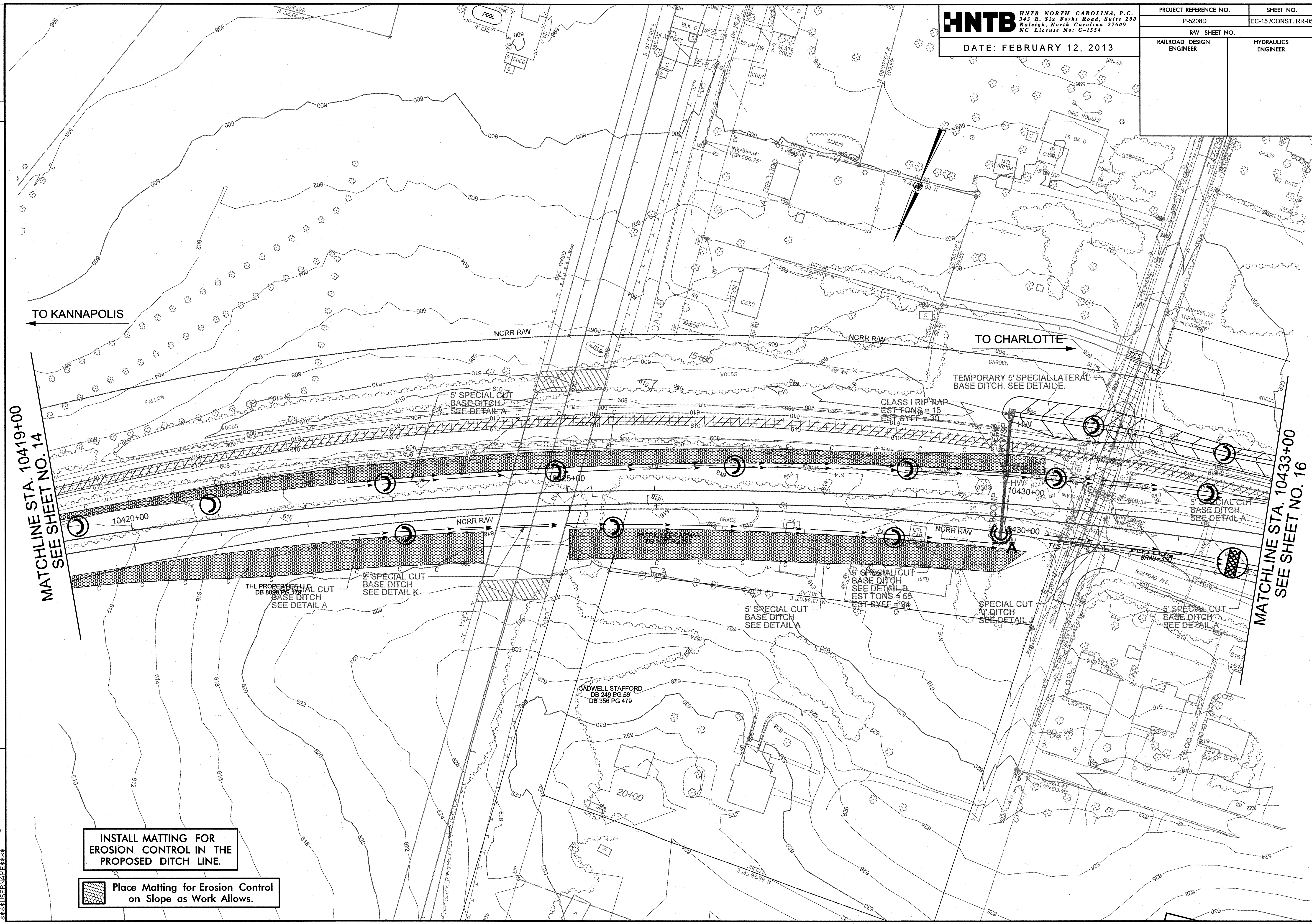
0077DEL_P10a4
0001ADD_P10a

REVISIONS
REVISION #1 (3/25/2013): REVISED TO ACCOMMODATE CHANGED PIPE AND DITCH ALIGNMENT AT STA. 10430+00 LT.

2/11/13, JPV, JEC, pch, 05.dgn
3/25/13, JPV, JEC, pch, 05.dgn

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
DATE: FEBRUARY 12, 2013

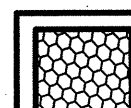
PROJECT REFERENCE NO.	SHEET NO.
P-5208D	EC-15/CONST. RR-05
RW SHEET NO.	HYDRAULICS ENGINEER
RAILROAD DESIGN ENGINEER	



MATCHLINE STA. 10419+00
SEE SHEET NO. 14

MATCHLINE STA. 10433+00
SEE SHEET NO. 16

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.

 Place Matting for Erosion Control
on Slope as Work Allows.

GADWELL STAFFORD
DB 249 PG.69
DB 356 PG.479

5' SPECIAL CUT
BASE DITCH
SEE DETAIL B
EST TONS = 55
EST SYFT = 94

SPECIAL CUT
BASE DITCH
SEE DETAIL J

5' SPECIAL CUT
BASE DITCH
SEE DETAIL A

CLASS I RIP/RAP
EST TONS = 15
EST SYFT = 30

TEMPORARY 5' SPECIAL LATERAL
BASE DITCH. SEE DETAIL E.

TO KANNAPOLIS

TO CHARLOTTE

0077DEL_P10a4
0001ADD_P10a
0002ADD_P10a

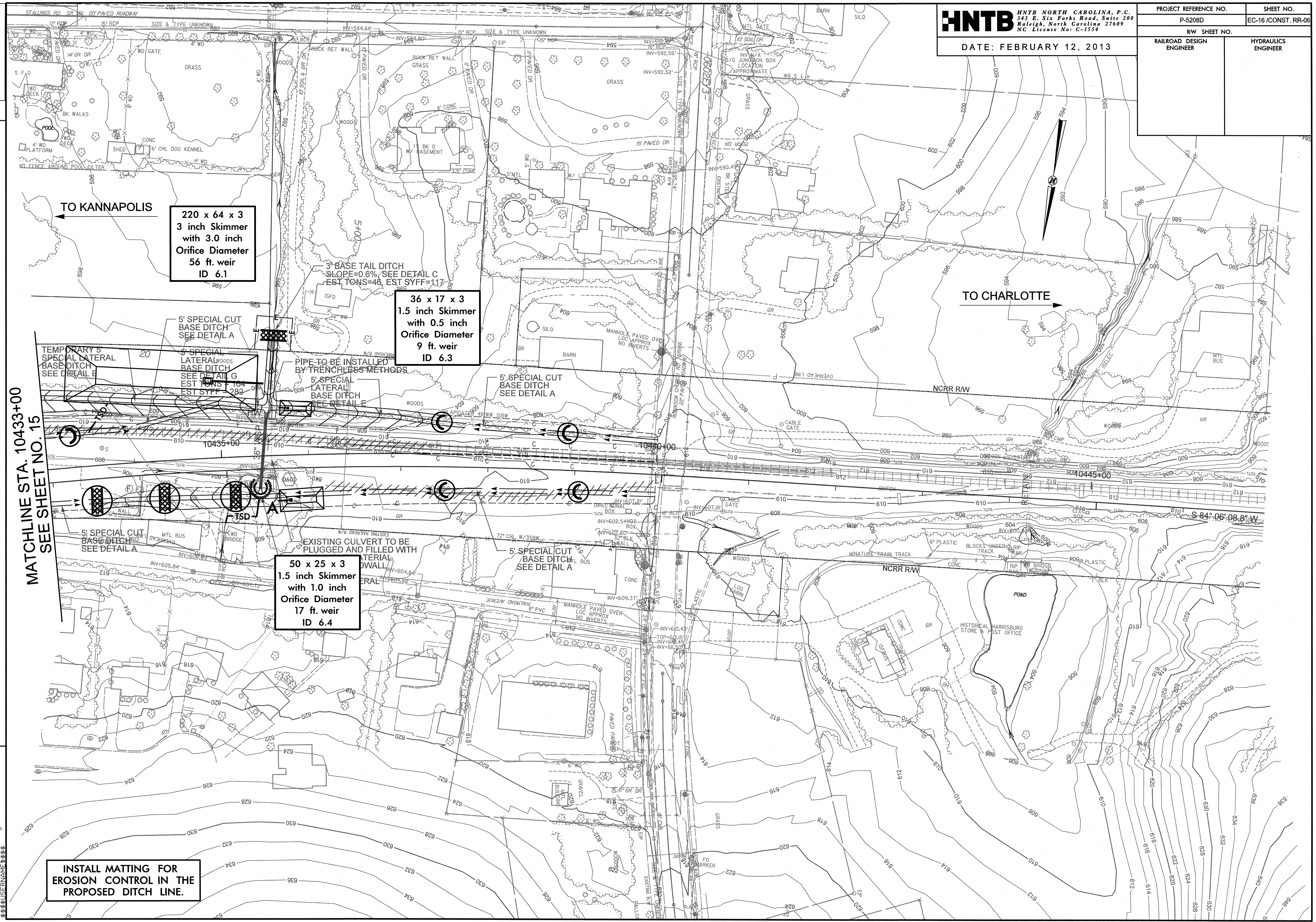
REVISIONS
REVISION #1 (3/25/2013): REVISED TO MATCH CHANGED DITCH ALIGNMENT.
REVISION #2 (4/2/2013): REVISED EROSION CONTROL TO ACCOMMODATE DITCH CHANGE.

11:27:52 AM EC.dwg
3/25/2013
USER:NAME

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: FEBRUARY 12, 2013

PROJECT REFERENCE NO.	SHEET NO.
P-5208D	EC-16/CONST. RR-06
RW SHEET NO.	HYDRAULICS ENGINEER
RAILROAD DESIGN ENGINEER	



INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.