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09/08/19

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

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

WAKE COUNTY

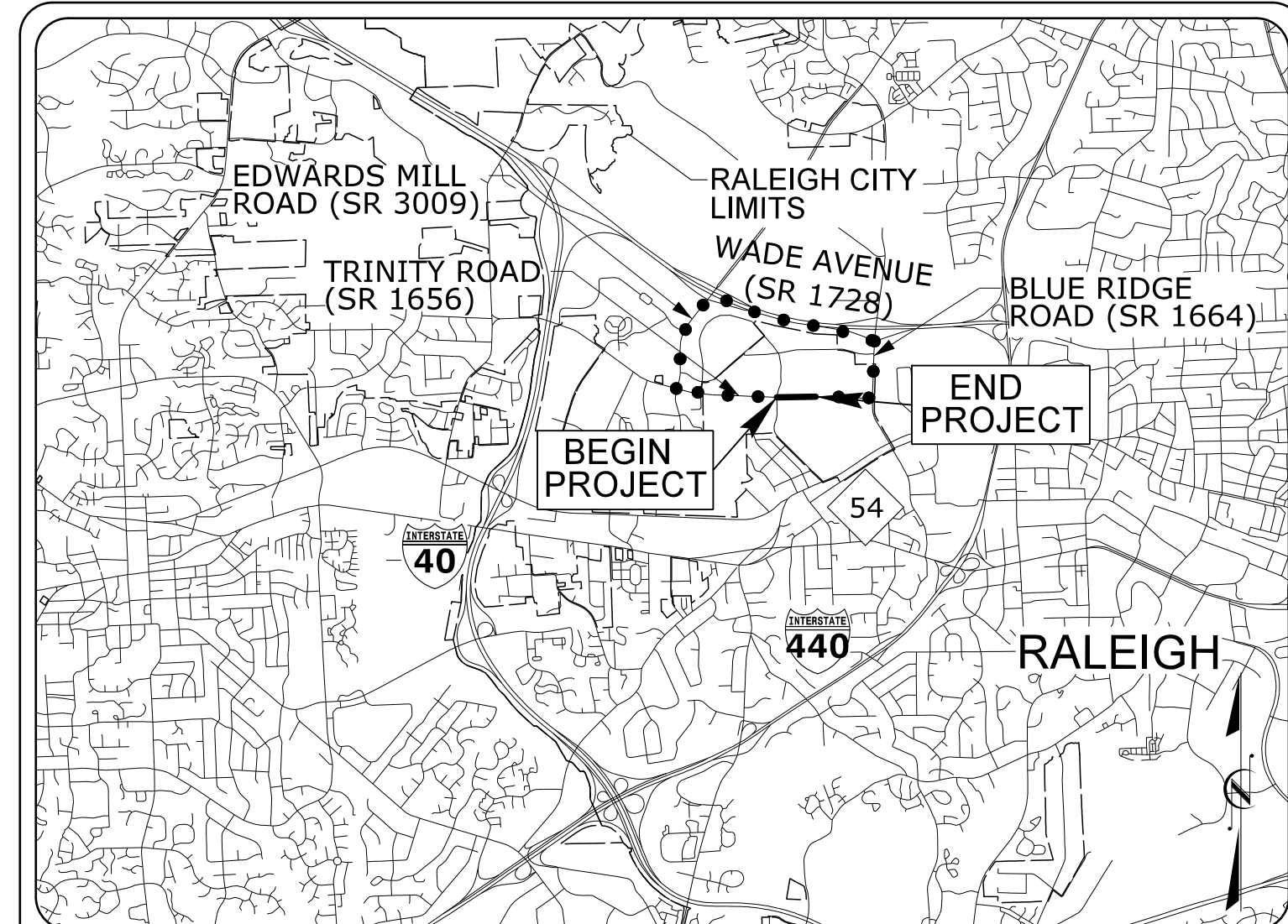
PLAN FOR PROPOSED HIGHWAY EROSION CONTROL

**LOCATION: SR 1656 (TRINITY ROAD) AT SR 1658 (YOUTH
CENTER DRIVE) INTERSECTION IN RALEIGH**

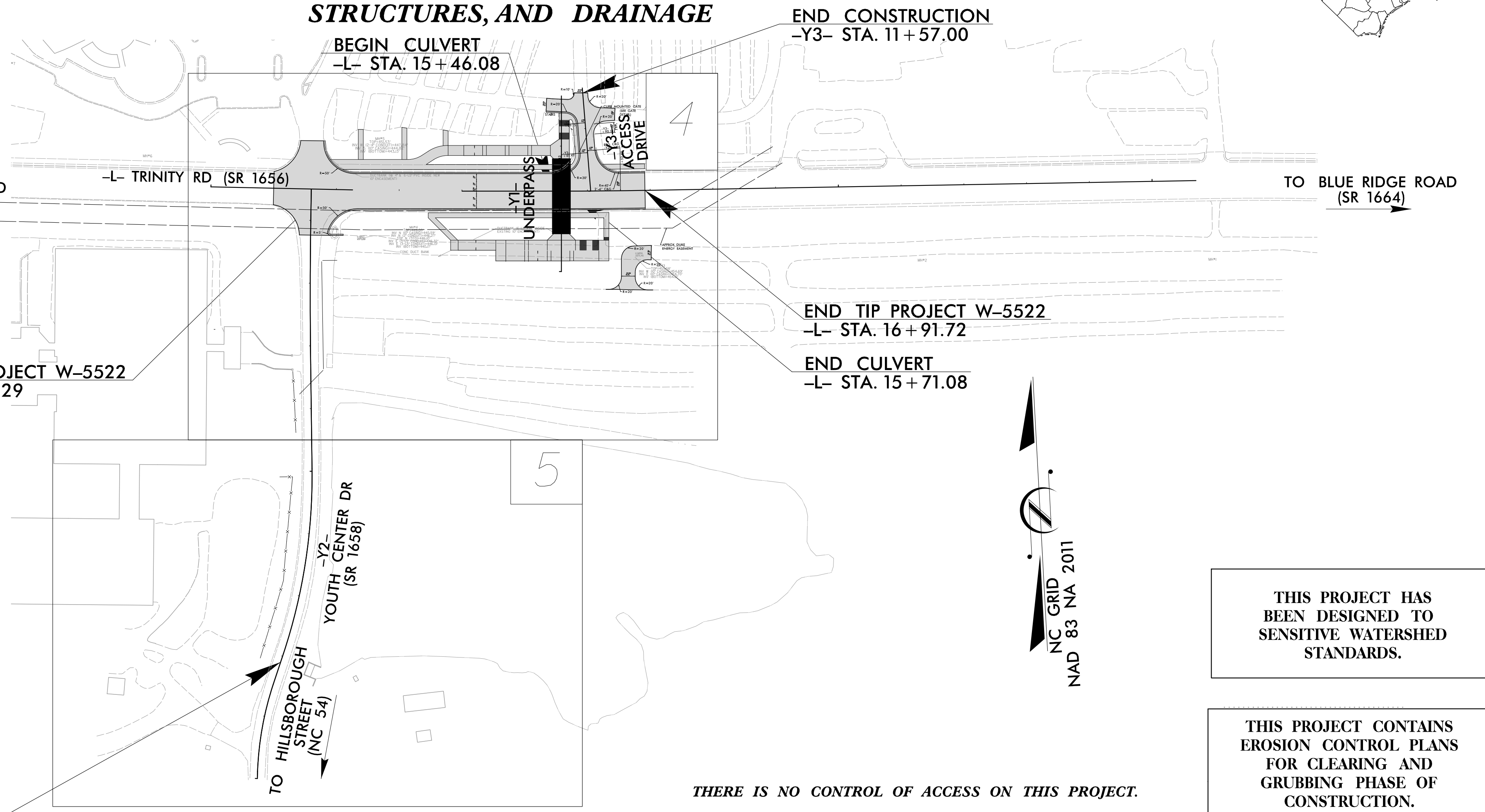
**TYPE OF WORK: PEDESTRIAN UNDERPASS, GRADING, PAVING,
STRUCTURES, AND DRAINAGE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5522	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50143.1.FD1	HSIP-1656(5)		

TIP PROJECT: W-5522



VICINITY MAP
NOT TO SCALE



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1650.05	Temporary Silt Ditch	
1650.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1650.02	Silt Basin Type B	
1653.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1653.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1654.01	Temporary Rock Sediment Dam Type-A	
1654.02	Temporary Rock Sediment Dam Type-B	
1655.01	Rock Pipe Inlet Sediment Trap Type-A	
1655.02	Rock Pipe Inlet Sediment Trap Type-B	
1652.01	Rock Inlet Sediment Trap:	
1652.01	Type A	
1652.02	Type B	
1652.03	Type C	
	Skimmer Basin	

BEGIN CONSTRUCTION
-Y2- STA. 11+90.00

**THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
THE PROJECT IS LOCATED WITHIN THE ETJ LIMITS OF
THE CITY OF RALEIGH.**

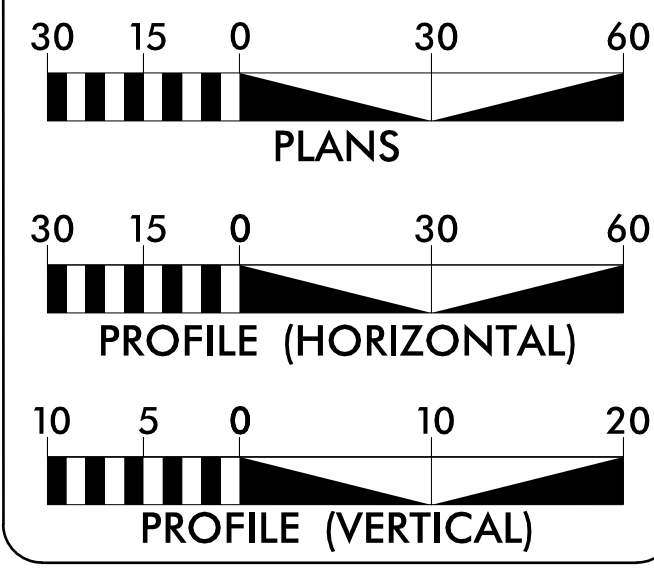
**CLEARING ON THIS PROJECT WILL BE PERFORMED
TO THE LIMITS ESTABLISHED BY NCDOT METHOD**

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

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

CONTRACT:

GRAPHIC SCALES



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

Prepared In the Office of:
AECOM
Firm License No. F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 (919) 854-6259 (Fax)

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

Reviewed In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:
WES CHANDLER, EI

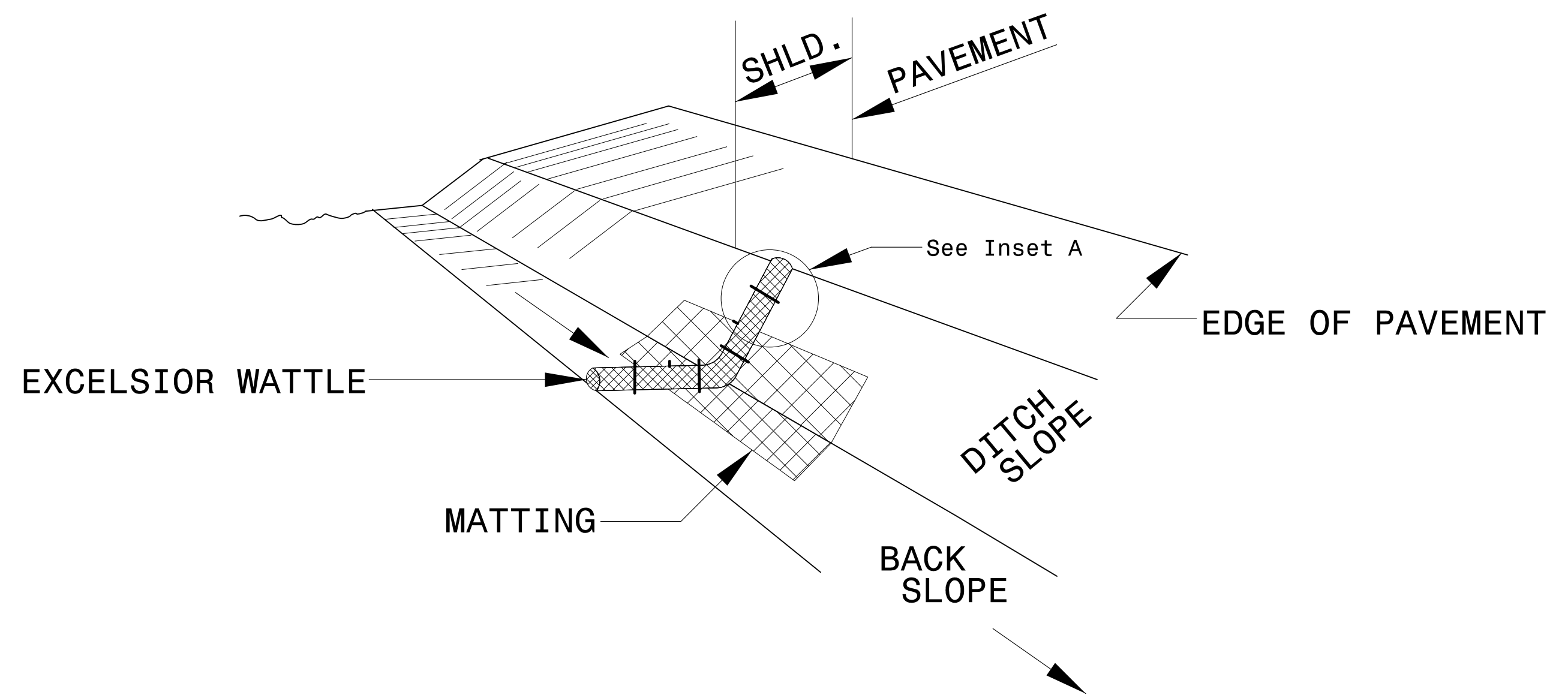
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

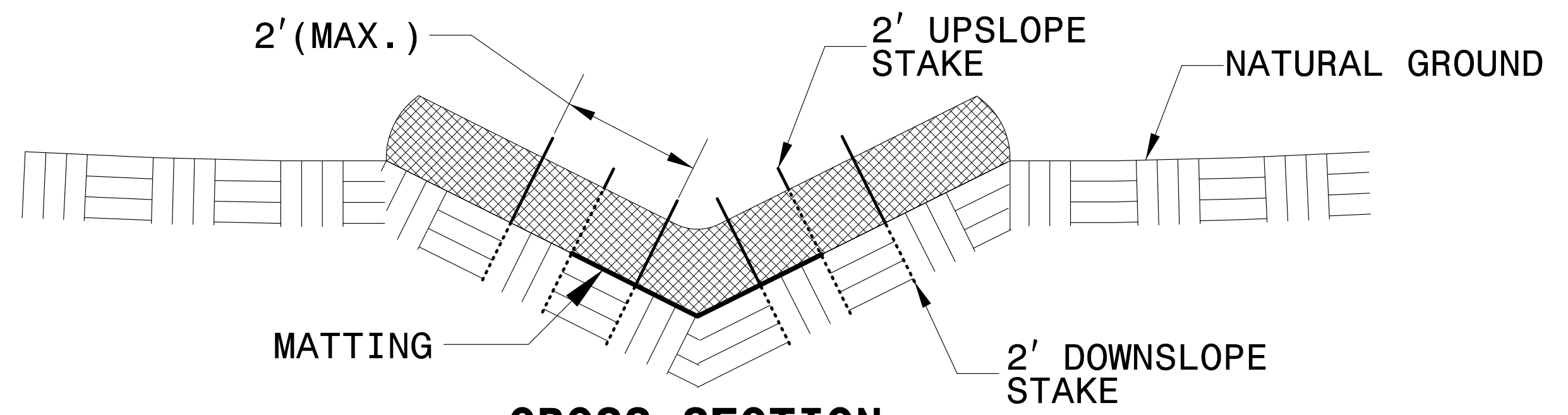
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type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

DATE/TIME: 3:03:42 PM
Dwg: R:\Environment\Design\W5522-Road\EC1.dwg

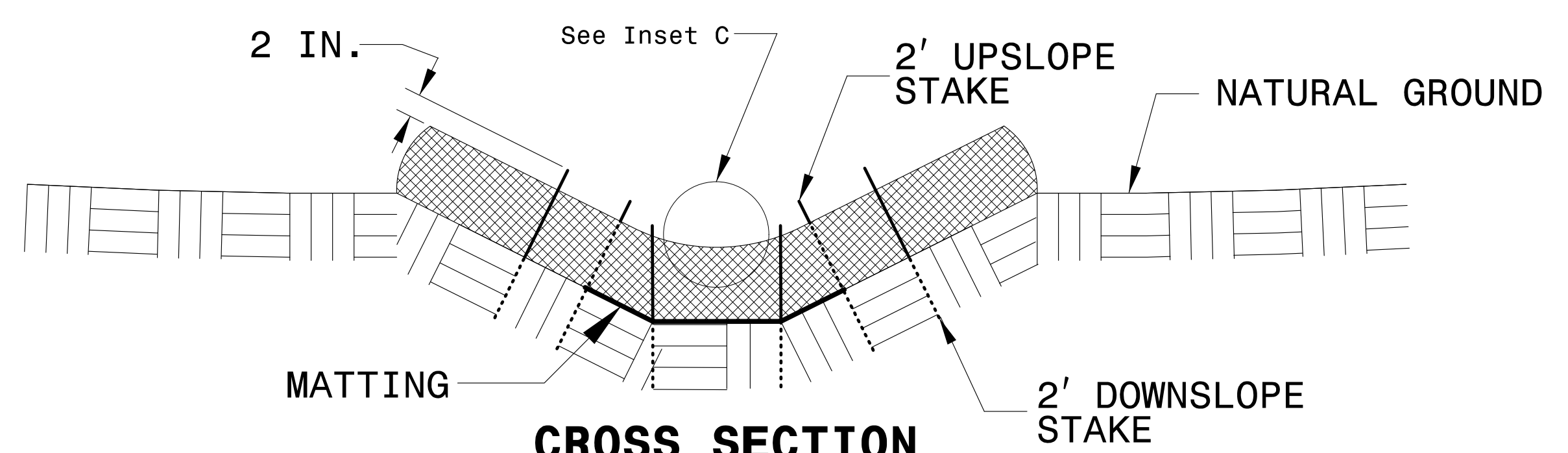
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



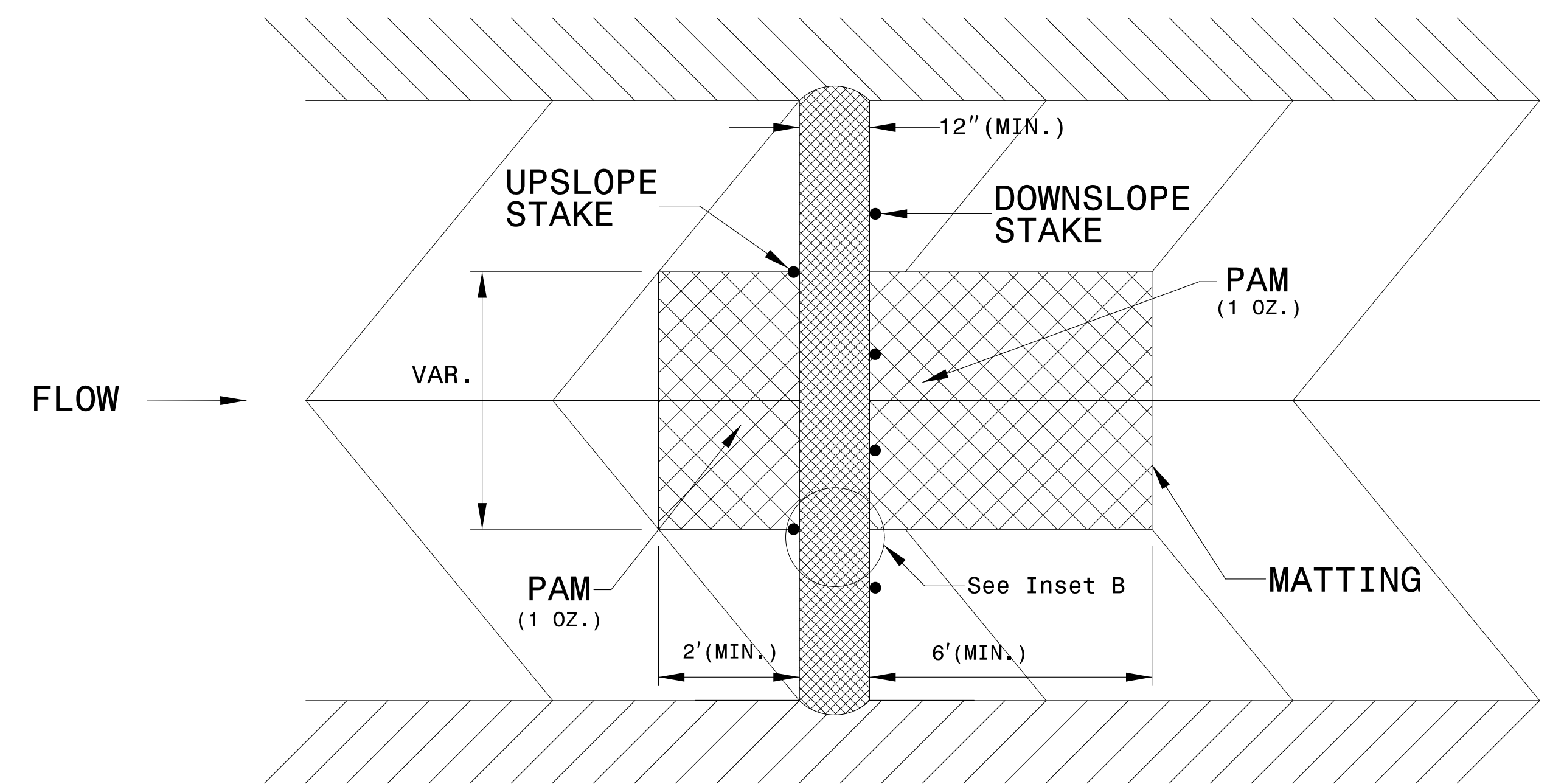
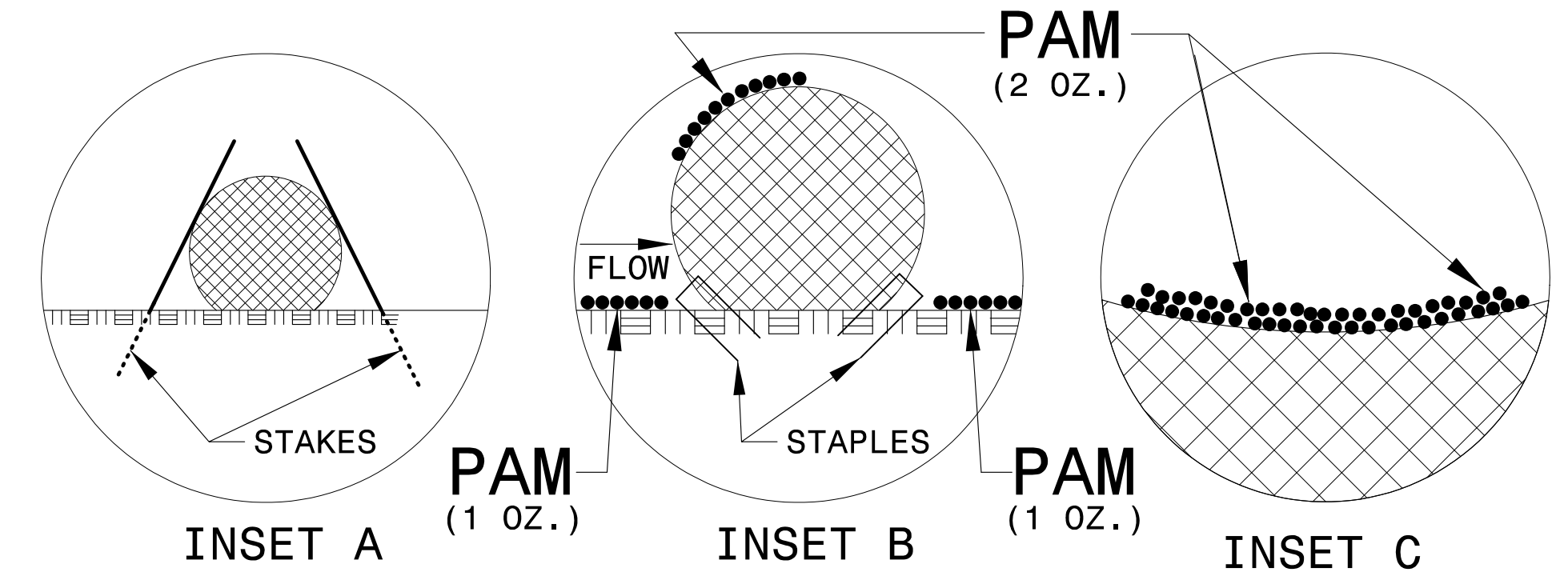
CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

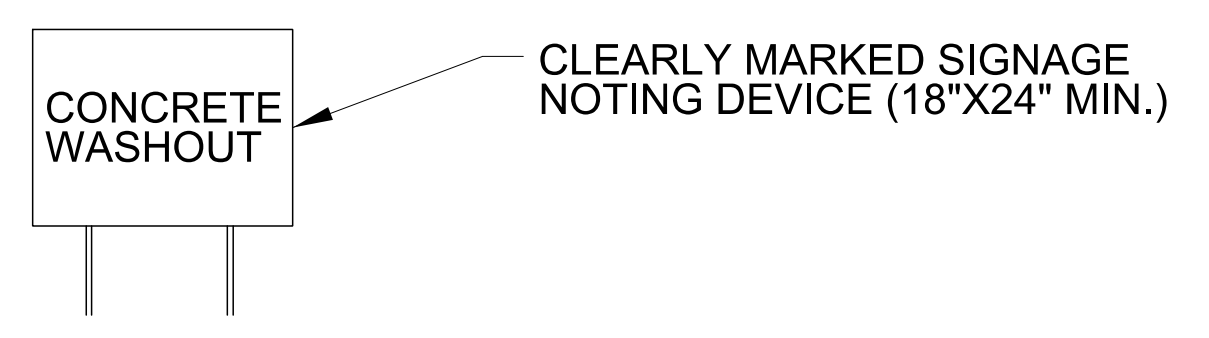
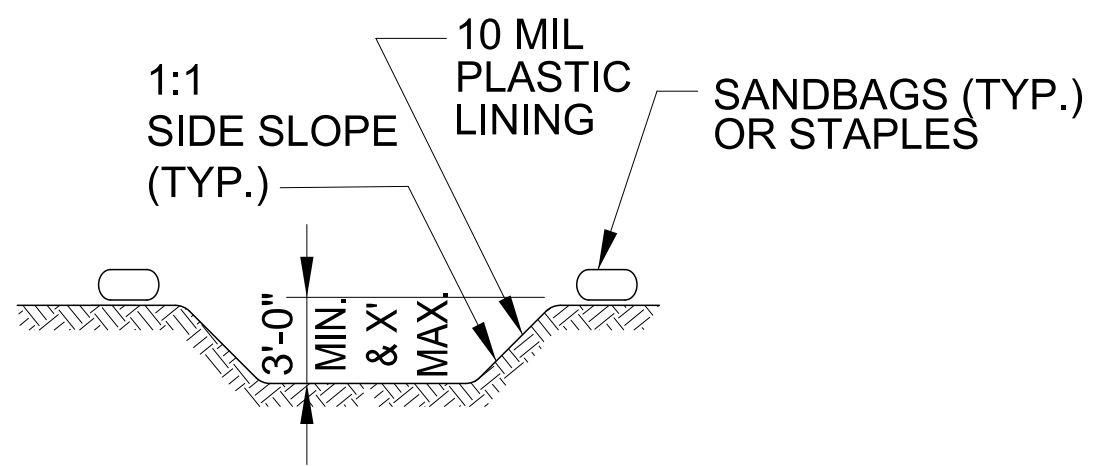
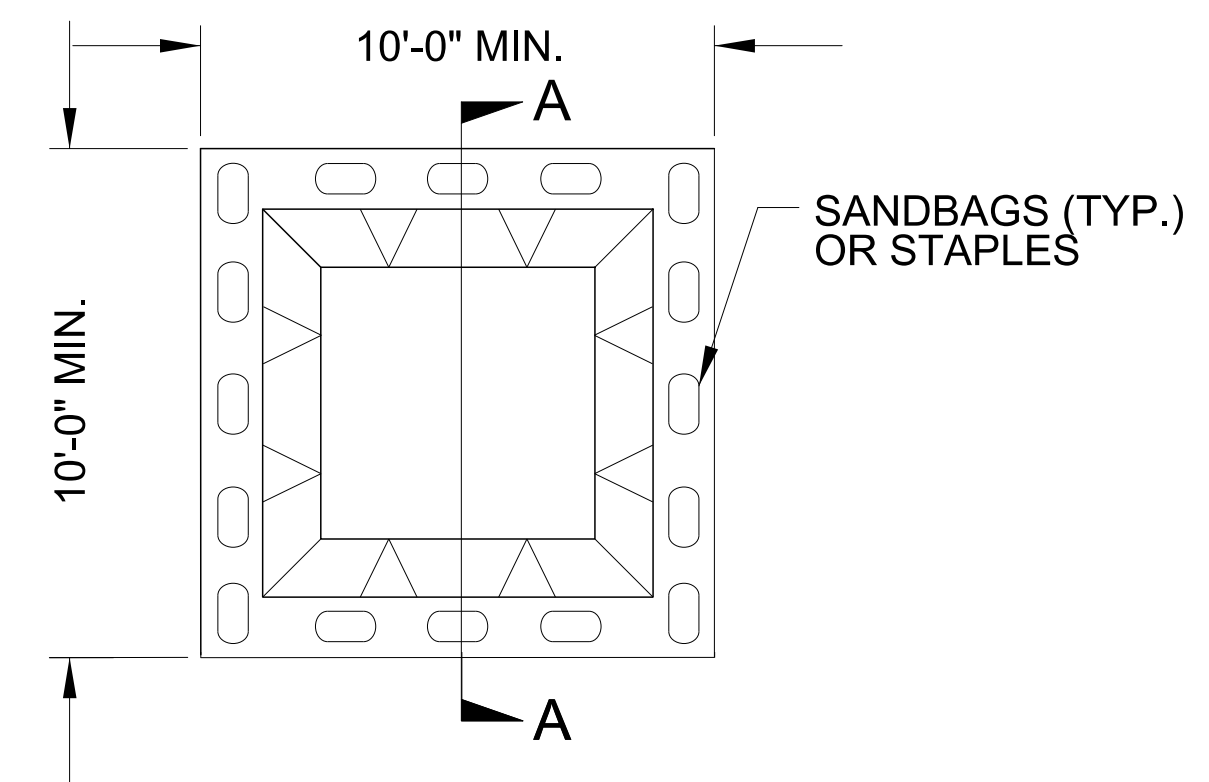
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES 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.
W-5522	EC-02A
RW SHEET NO.	
<small>Prepared in the Office of:</small> AECOM <small>NC FIRM LICENSE No. F-0342 101 Corporate Center Drive, Suite 475 Raleigh, NC 27603 (919) 854-6200 • (919) 854-6259(FAX)</small>	

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

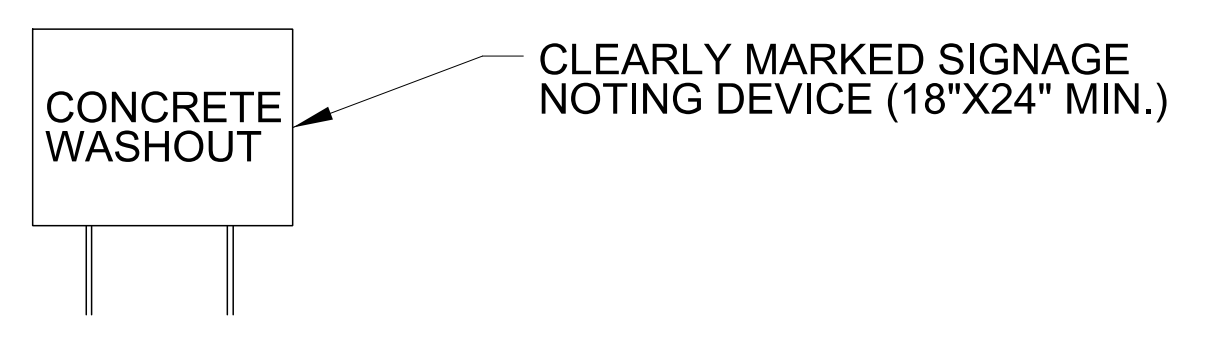
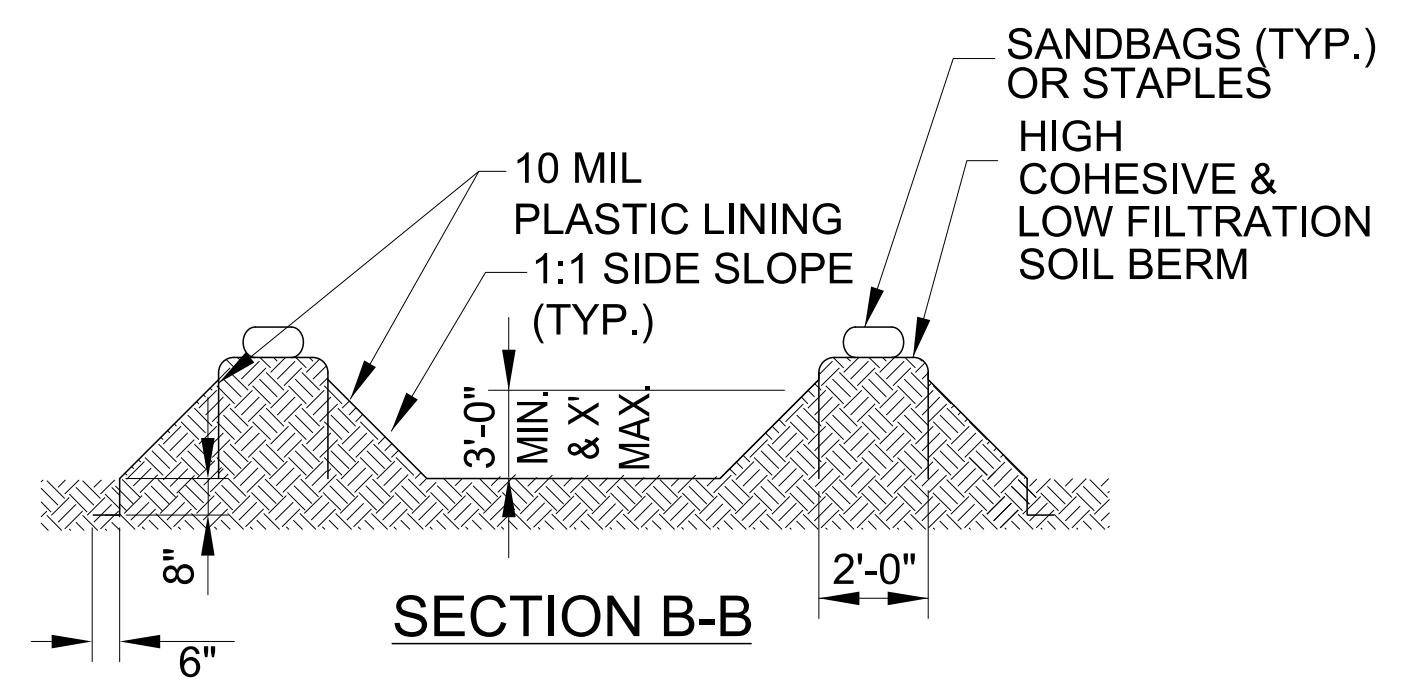
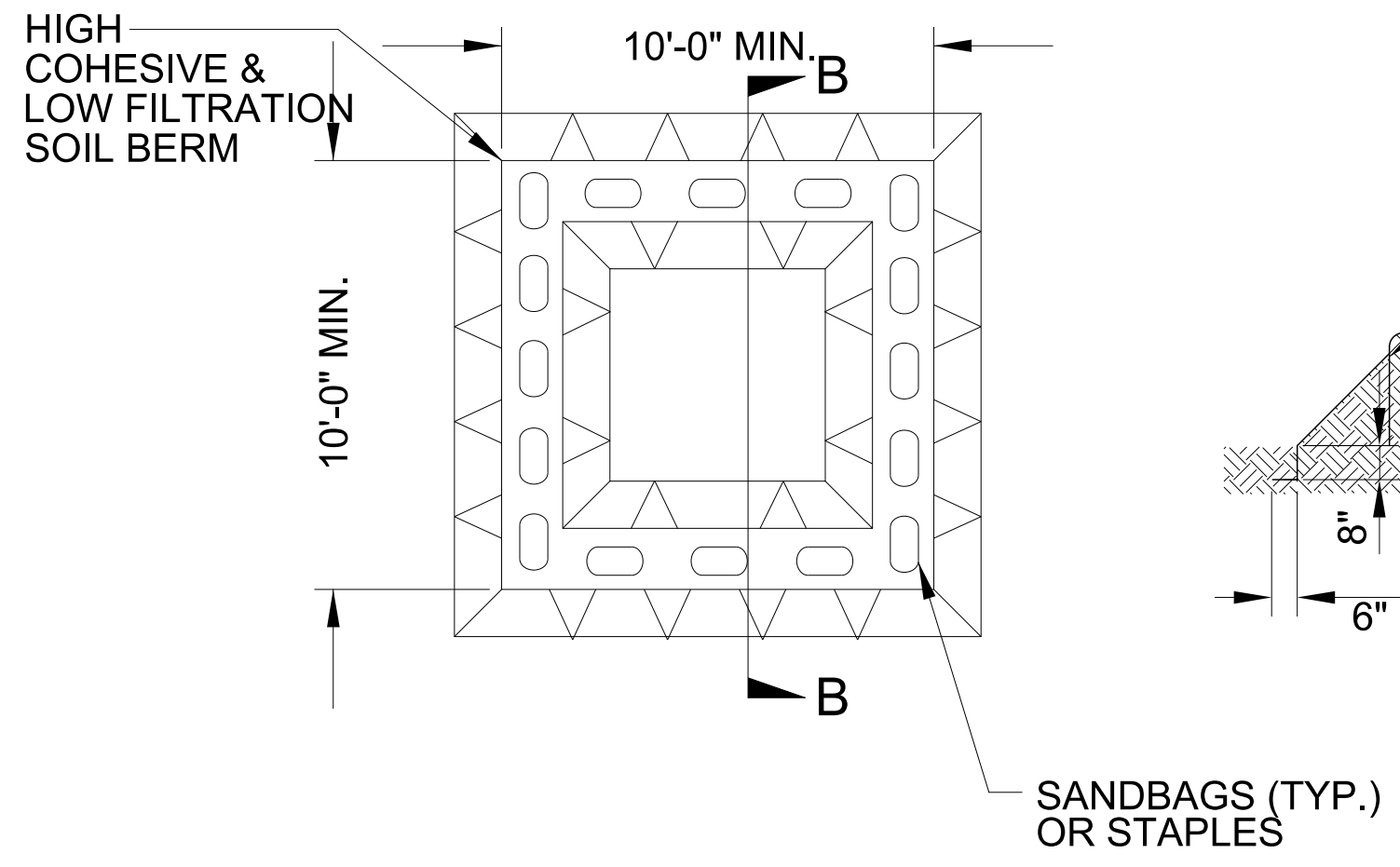


SECTION A-A

- 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.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

PLAN

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.

PLAN

ABOVE GRADE WASHOUT STRUCTURE NOT TO SCALE

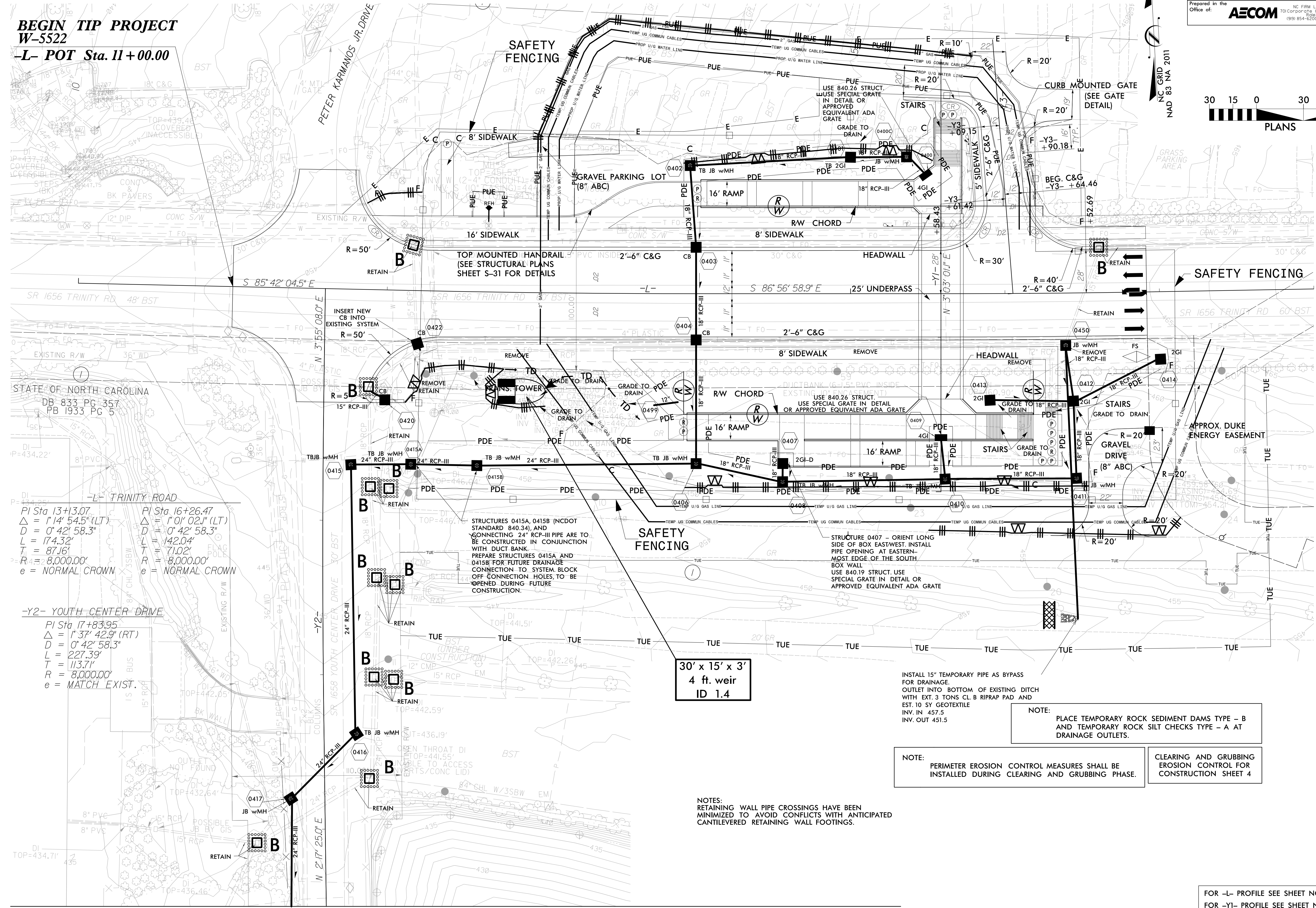
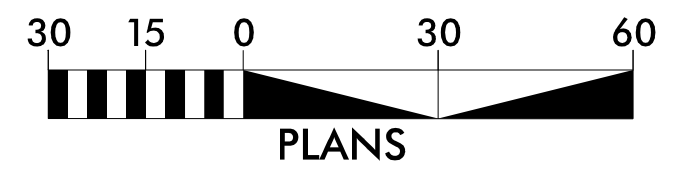
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.

**BEGIN TIP PROJECT
W-5522**
-L- POT Sta. 11+00.00

NC GRID
NAD 83 NA 2011



PI Sta 13+13.07
 $\Delta = 1^{\circ}14'54.5''$ (LT)
 $D = 0^{\circ}42'58.3''$
 $L = 174.32'$
 $T = 87.16'$
 $R = 8,000.00'$
 $e = \text{NORMAL CROWN}$

PI Sta 16+26.47
 $\Delta = 1^{\circ}01'02.1''$ (LT)
 $D = 0^{\circ}42'58.3''$
 $L = 142.04'$
 $T = 71.02'$
 $R = 8,000.00'$
 $e = \text{NORMAL CROWN}$

-Y2- YOUTH CENTER DRIVE
PI Sta 17+83.95
 $\Delta = 1^{\circ}37'42.9''$ (RT)
 $D = 0^{\circ}42'58.3''$
 $L = 227.39'$
 $T = 113.71'$
 $R = 8,000.00'$
 $e = \text{MATCH EXIST.}$

STRUCTURES 0415A, 0415B (NCDOT STANDARD 840.34), AND CONNECTING 24" RCP-III PIPE ARE TO BE CONSTRUCTED IN CONJUNCTION WITH DUCT BANK. PREPARE STRUCTURES 0415A AND 0415B FOR FUTURE DRAINAGE CONNECTION TO SYSTEM. BLOCK OFF CONNECTION HOLES, TO BE OPENED DURING FUTURE CONSTRUCTION.

STRUCTURE 0407 - ORIENT LONG SIDE OF BOX EASTWEST. INSTALL PIPE OPENING AT EASTERN MOST EDGE OF THE SOUTH BOX WALL. USE 840.26 STRUCT. USE SPECIAL GRATE IN DETAIL OR APPROVED EQUIVALENT ADA GRATE.

30' x 15' x 3'
4 ft. weir
ID 1.4

INSTALL 15" TEMPORARY PIPE AS BYPASS FOR DRAINAGE. OUTLET INTO BOTTOM OF EXISTING DITCH WITH EXT. 3 TONS CL. B RIPRAP PAD AND EST. 10 SY GEOTEXTILE. INV. IN 457.5. INV. OUT 451.5

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

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTES: RETAINING WALL PIPE CROSSINGS HAVE BEEN MINIMIZED TO AVOID CONFLICTS WITH ANTICIPATED CANTILEVERED RETAINING WALL FOOTINGS.

MATCHLINE -Y2- STA. 15+50.00 SEE SHEET EC-05

MATCHLINE -Y2- STA.15+50.00 SEE SHEET EC-04

PROJECT REFERENCE NO.	SHEET NO.
W-5522	EC-05/CONST.05
RW SHEET NO.	
Prepared in the Office of: AECOM	
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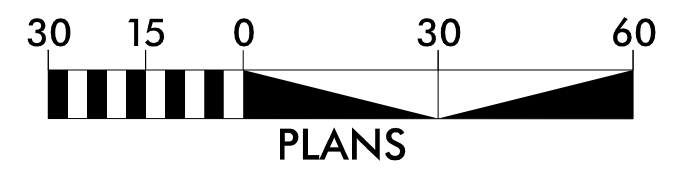


NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

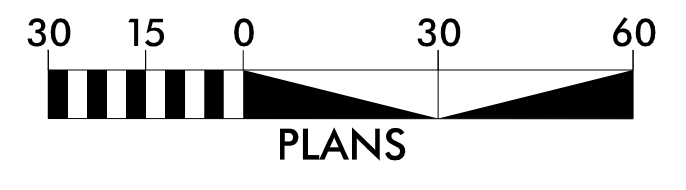
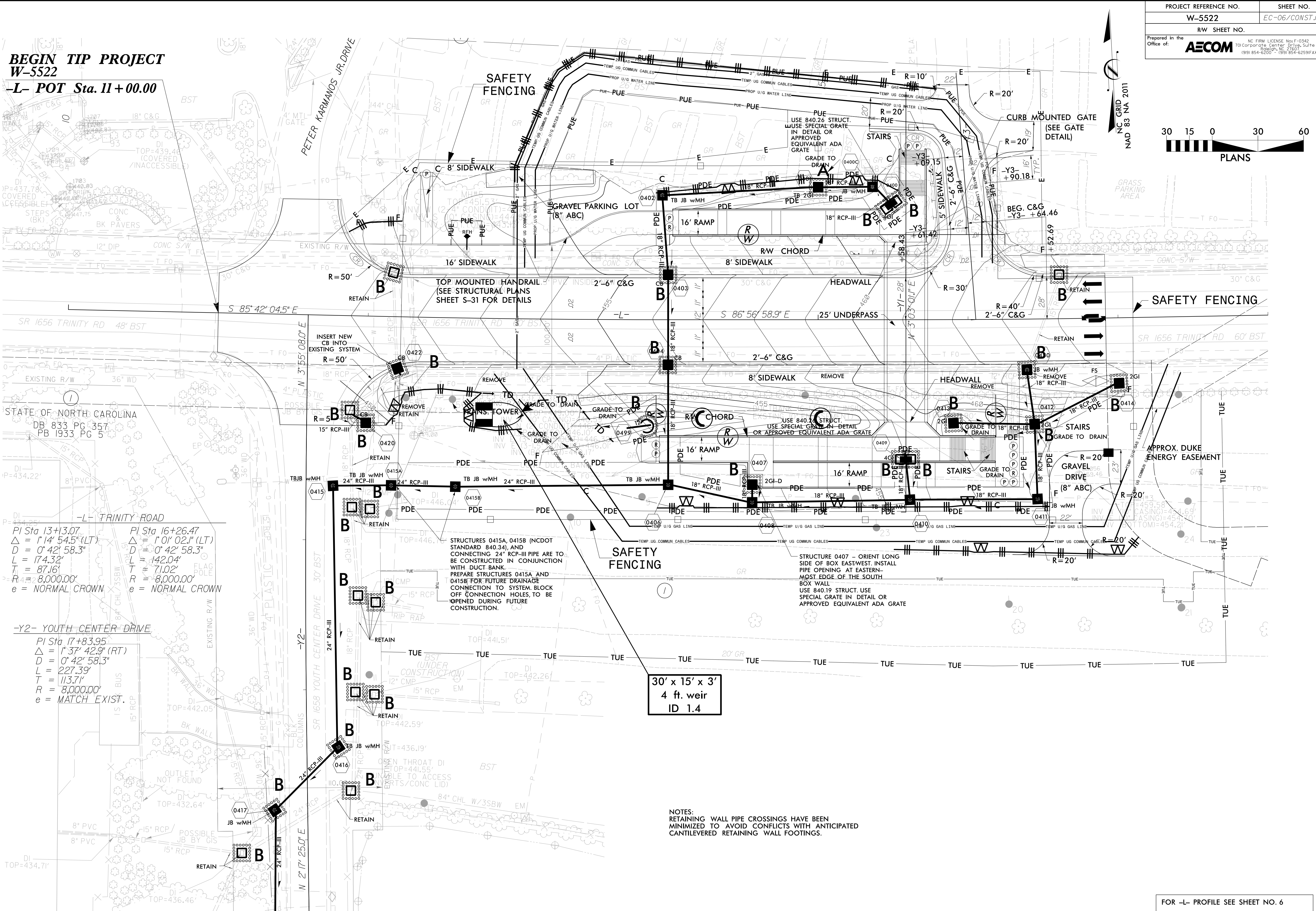
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

NC GRID
NAD 83 NA 2011



BEGIN TIP PROJECT
W-5522
-L- POT Sta. 11+00.00



PI Sta 13+13.07
 $\Delta = 1' 14' 54.5''$ (LT)
 $D = 0' 42' 58.3''$
 $L = 174.32'$
 $T = 87.16'$
 $R = 8,000.00'$
 $e = \text{NORMAL CROWN}$

PI Sta 16+26.47
 $\Delta = 1' 01' 02.1''$ (LT)
 $D = 0' 42' 58.3''$
 $L = 142.04'$
 $T = 71.02'$
 $R = 8,000.00'$
 $e = \text{NORMAL CROWN}$

-Y2- YOUTH CENTER DRIVE

PI Sta 17+83.95
 $\Delta = 1' 37' 42.9''$ (RT)
 $D = 0' 42' 58.3''$
 $L = 227.39'$
 $T = 113.71'$
 $R = 8,000.00'$
 $e = \text{MATCH EXIST.}$

30' x 15' x 3'
4 ft. weir
ID 1.4

NOTES:
RETAINING WALL PIPE CROSSINGS HAVE BEEN MINIMIZED TO AVOID CONFLICTS WITH ANTICIPATED CANTILEVERED RETAINING WALL FOOTINGS.

MATCHLINE -Y2- STA. 15+50.00 SEE SHEET EC-07

FOR -L- PROFILE SEE SHEET NO. 6
 FOR -Y1- PROFILE SEE SHEET NO. 6
 FOR -Y3- PROFILE SEE SHEET NO. 6
 FOR ROADWAY PLAN SEE SHEET 04

MATCHLINE -Y2- STA.15+50.00 SEE SHEET EC-06

PROJECT REFERENCE NO.	SHEET NO.
W-5522	EC-07/CONST.05
RW SHEET NO.	
Prepared in the Office of: AECOM	
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NC GRID
 NAD 83 NA 2011

