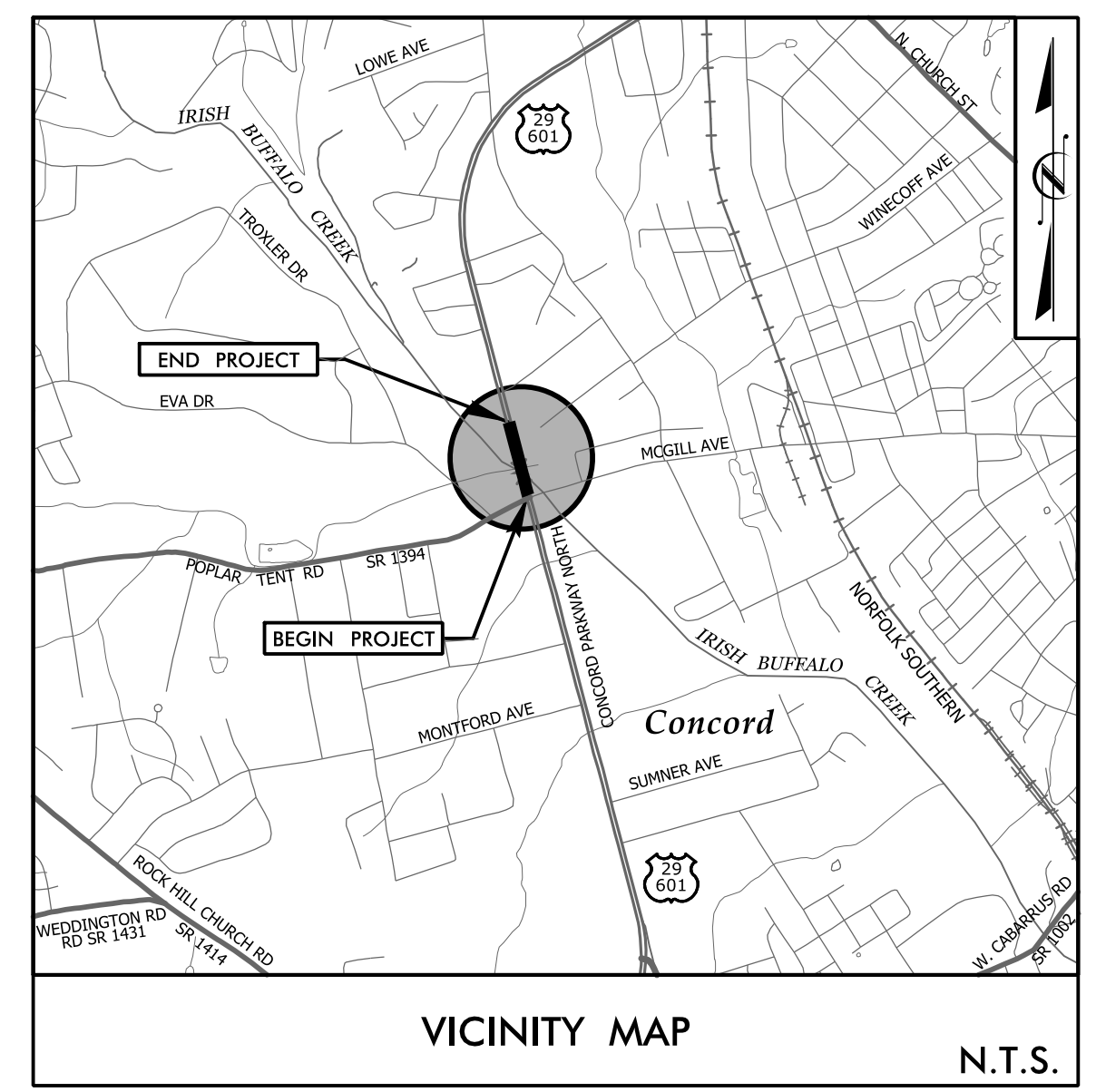


TIP PROJECT: B-5808

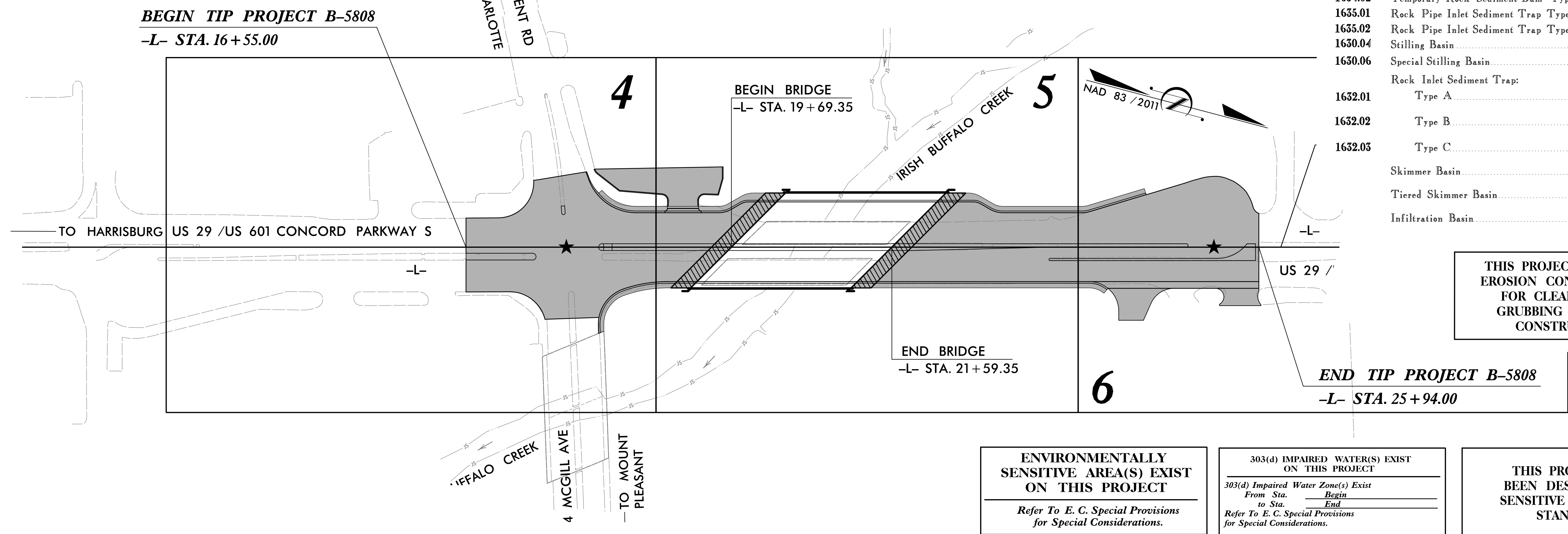
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
CABARRUS COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5808	EC-1	EC-9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



EROSION CONTROL PLANS

**LOCATION: BRIDGES #057 & #059 OVER IRISH BUFFALO CREEK
ON US 29 / US 601**
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE & SIGNALS



EROSION AND SEDIMENT CONTROL MEASURES

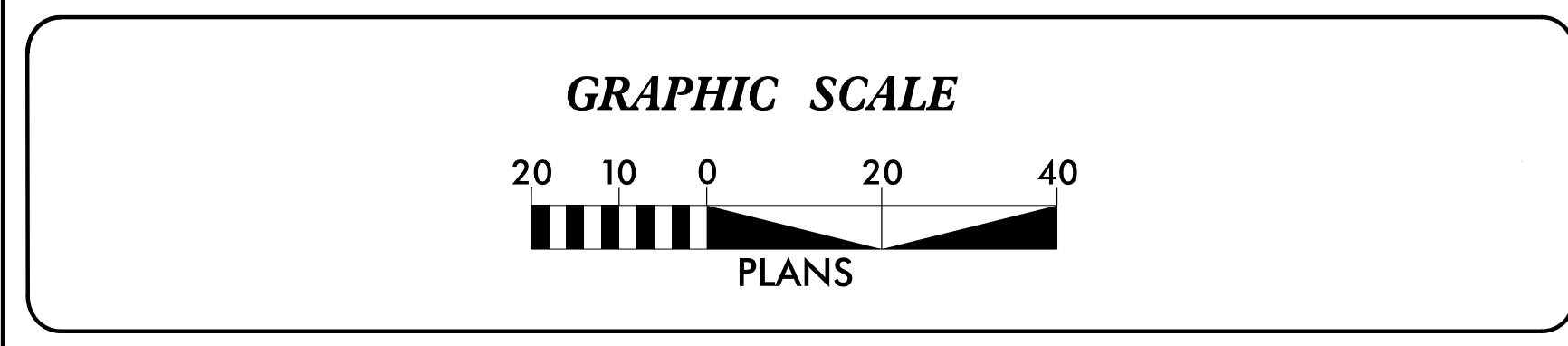
Sed. #	Description	Symbol
1630.05	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	WCFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SB
	Tiered Skimmer Basin	TSB
	Infiltration Basin	IB

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

**ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT**
*Refer To E. C. Special Provisions
for Special Considerations.*

**303(d) IMPAIRED WATER(S) EXIST
ON THIS PROJECT**
*303(d) Impaired Water Zone(s) Exist
From Sta. _____ Begin
to Sta. _____ End
Refer To E. C. Special Provisions
for Special Considerations.*

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



**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:
STV ENGINEERS, INC.
900 WEST TRADE STREET, SUITE 715
CHARLOTTE, NC 28202

Designed by:
SHIRSHANT SHARMA **4208**
NAME LEVEL III CERTIFICATION NO.

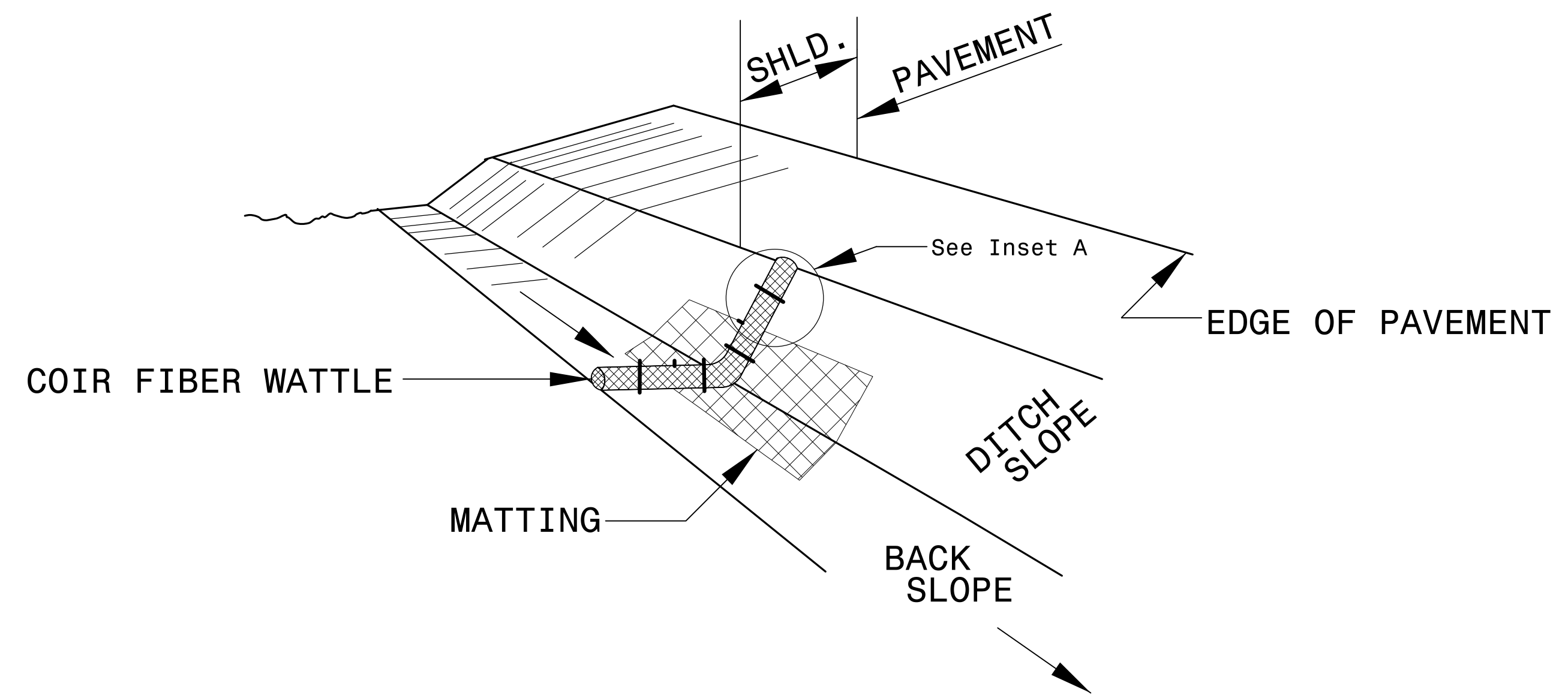
Roadway Standard Drawings

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

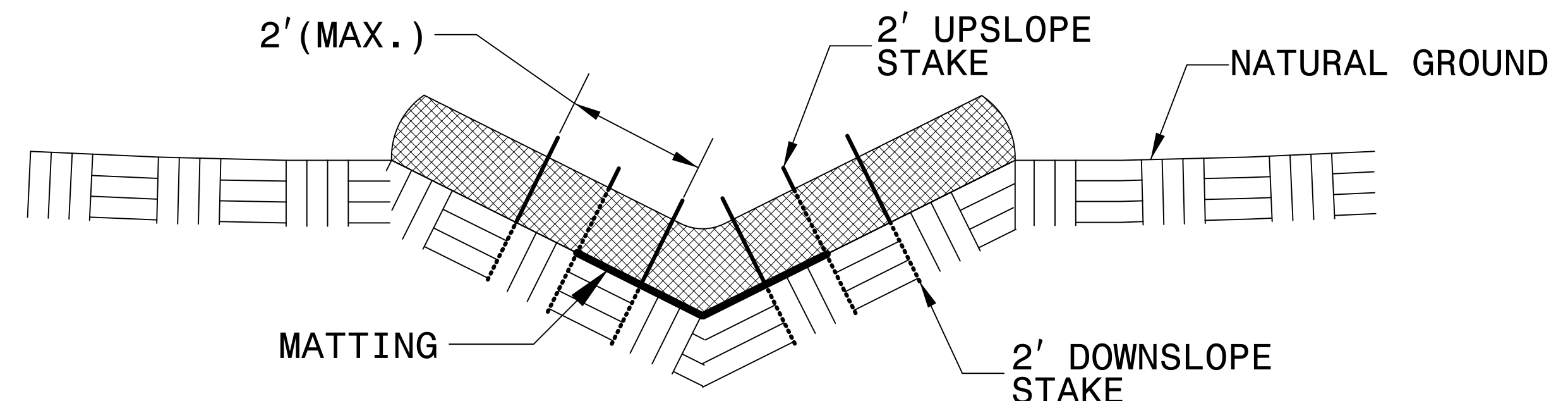
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type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

2/16/2023 Environmental\Design\EC Sheets\B5808_EC_EC_15101.dgn

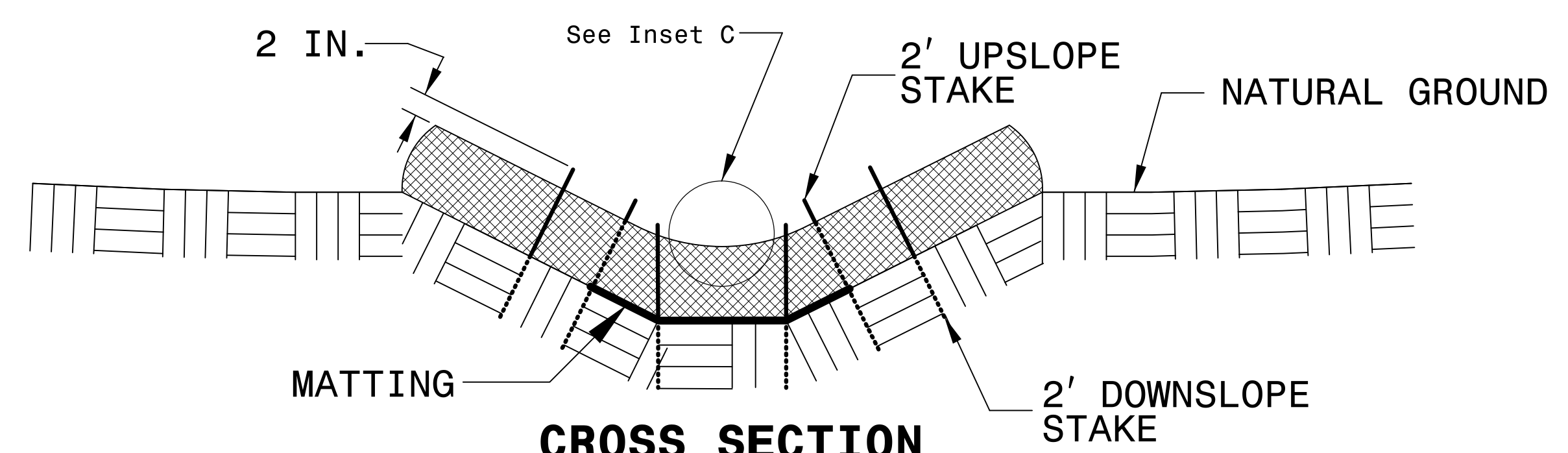
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW

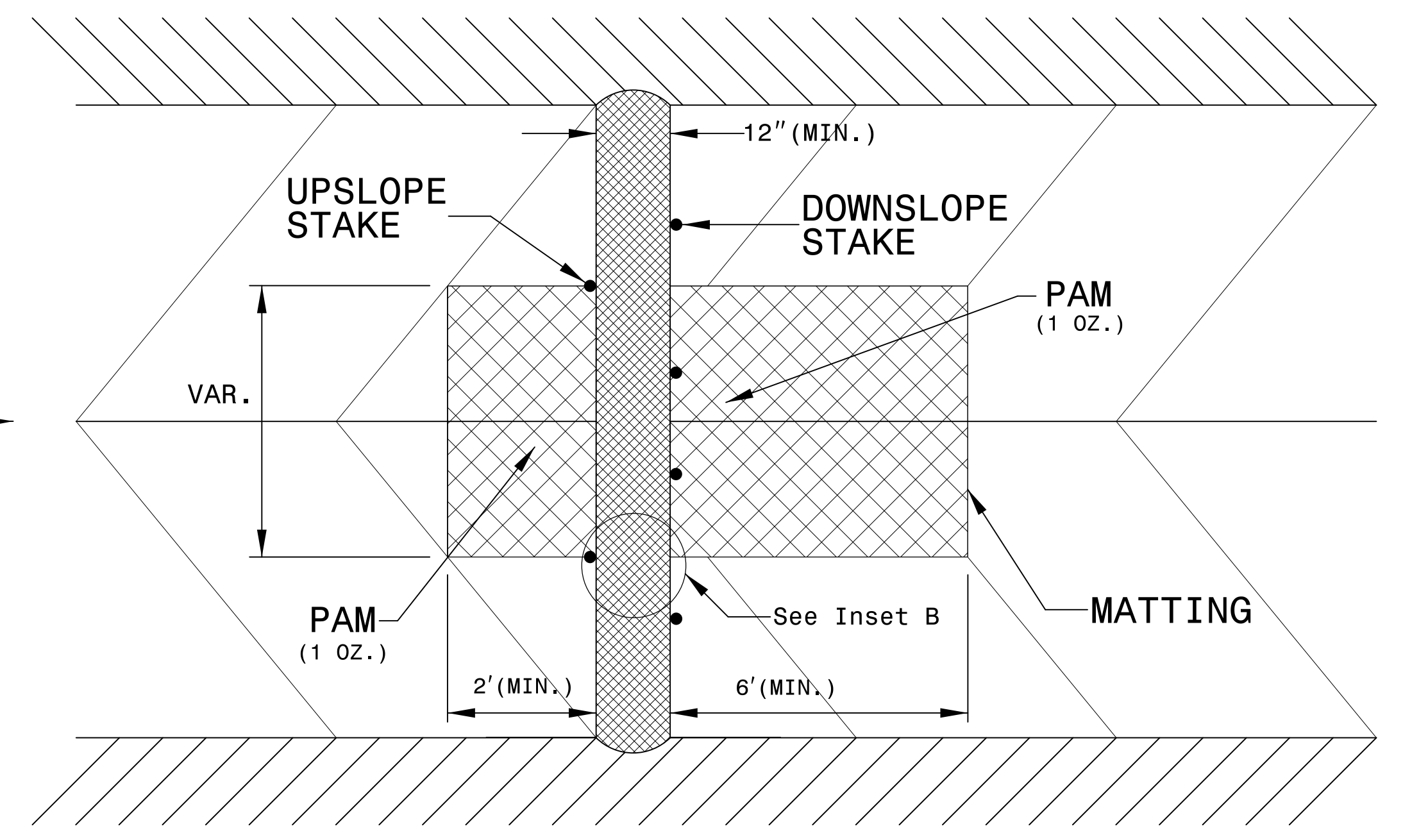
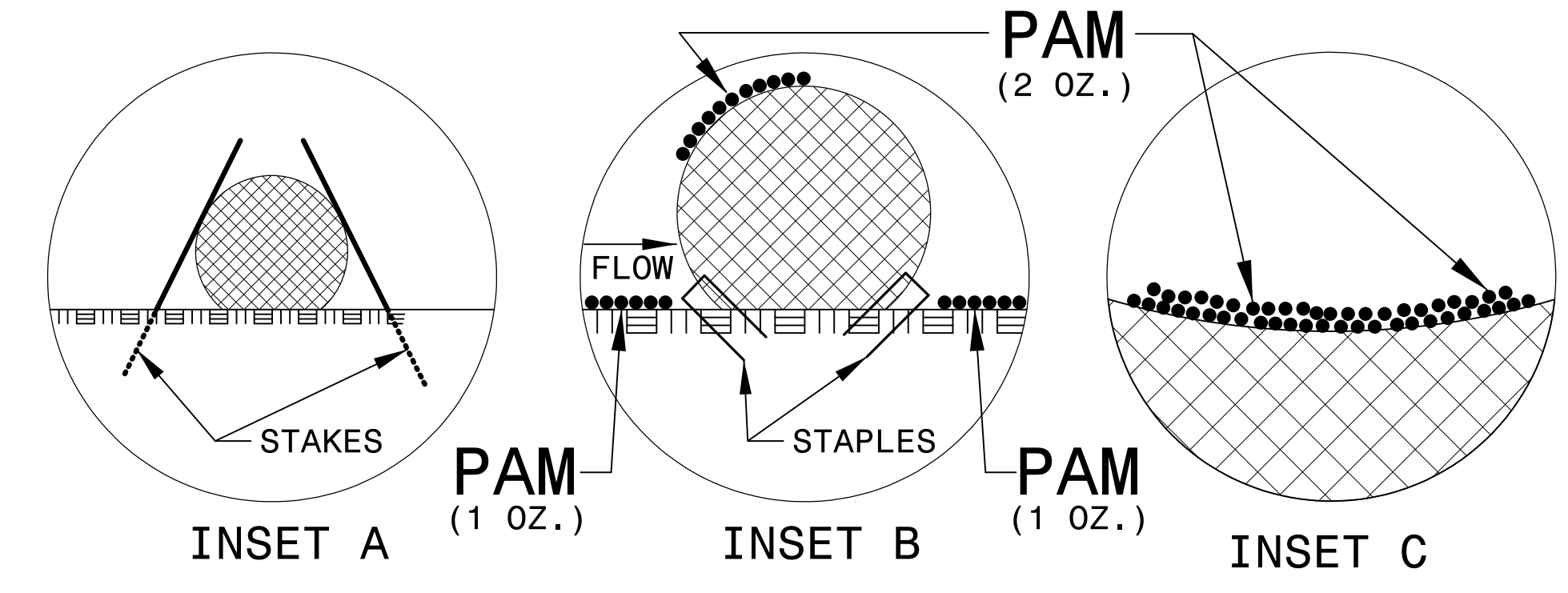


CROSS SECTION VEE DITCH



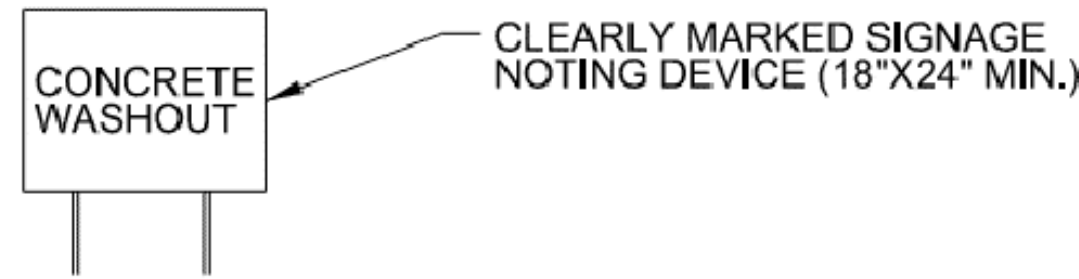
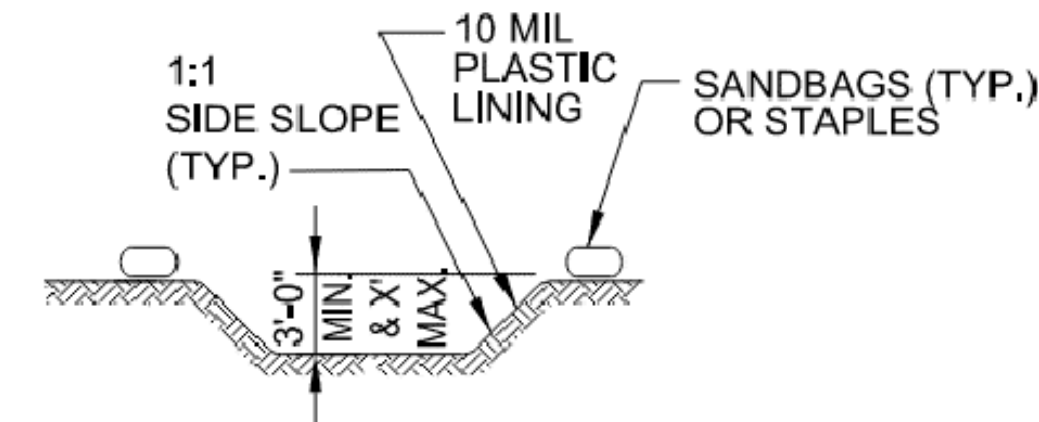
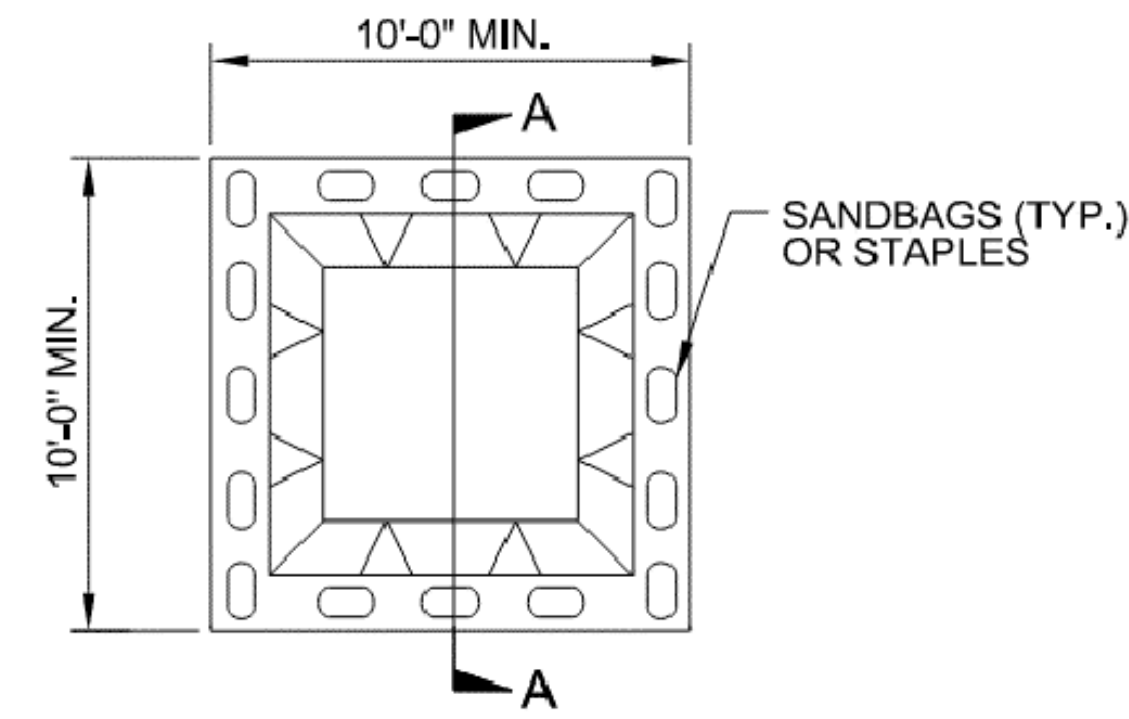
CROSS SECTION TRAPEZOIDAL DITCH

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



TOP VIEW

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



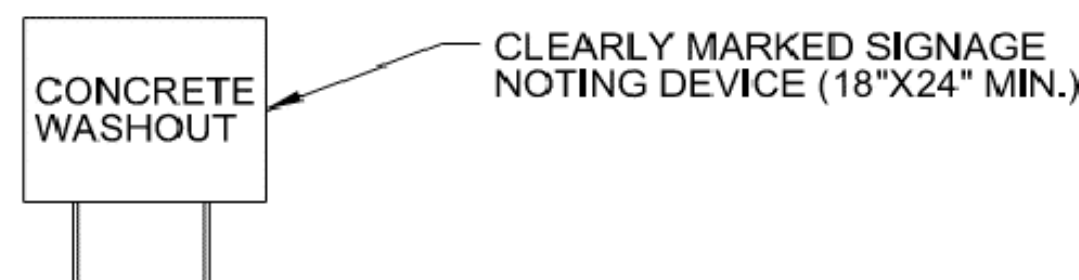
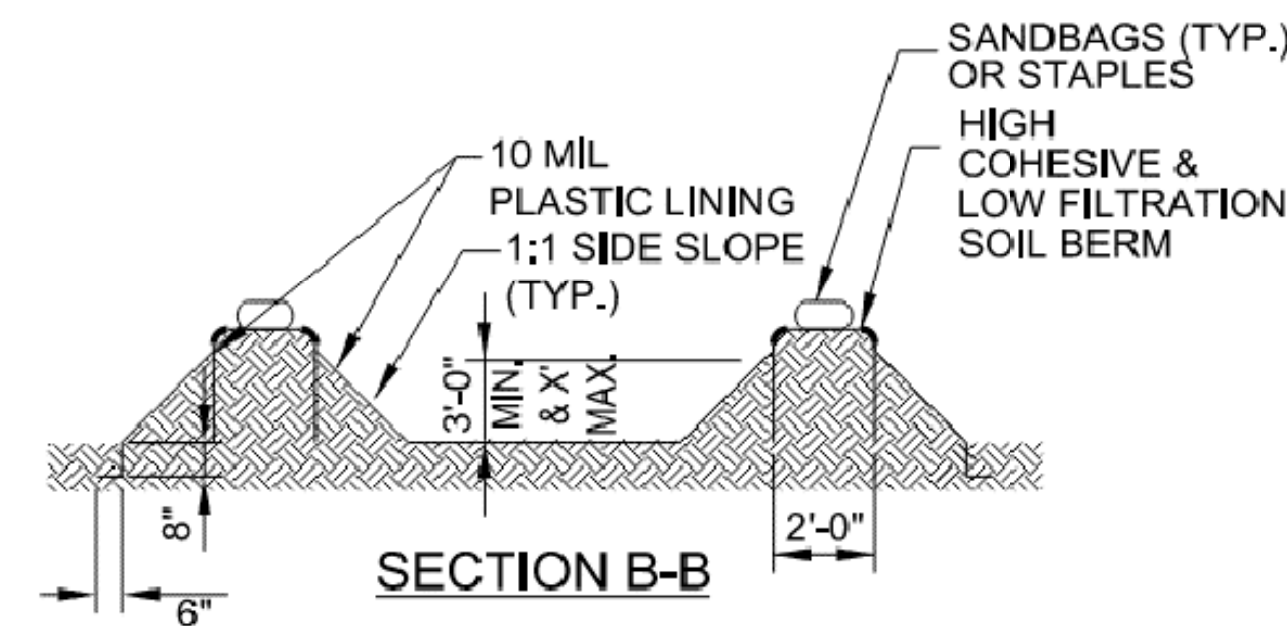
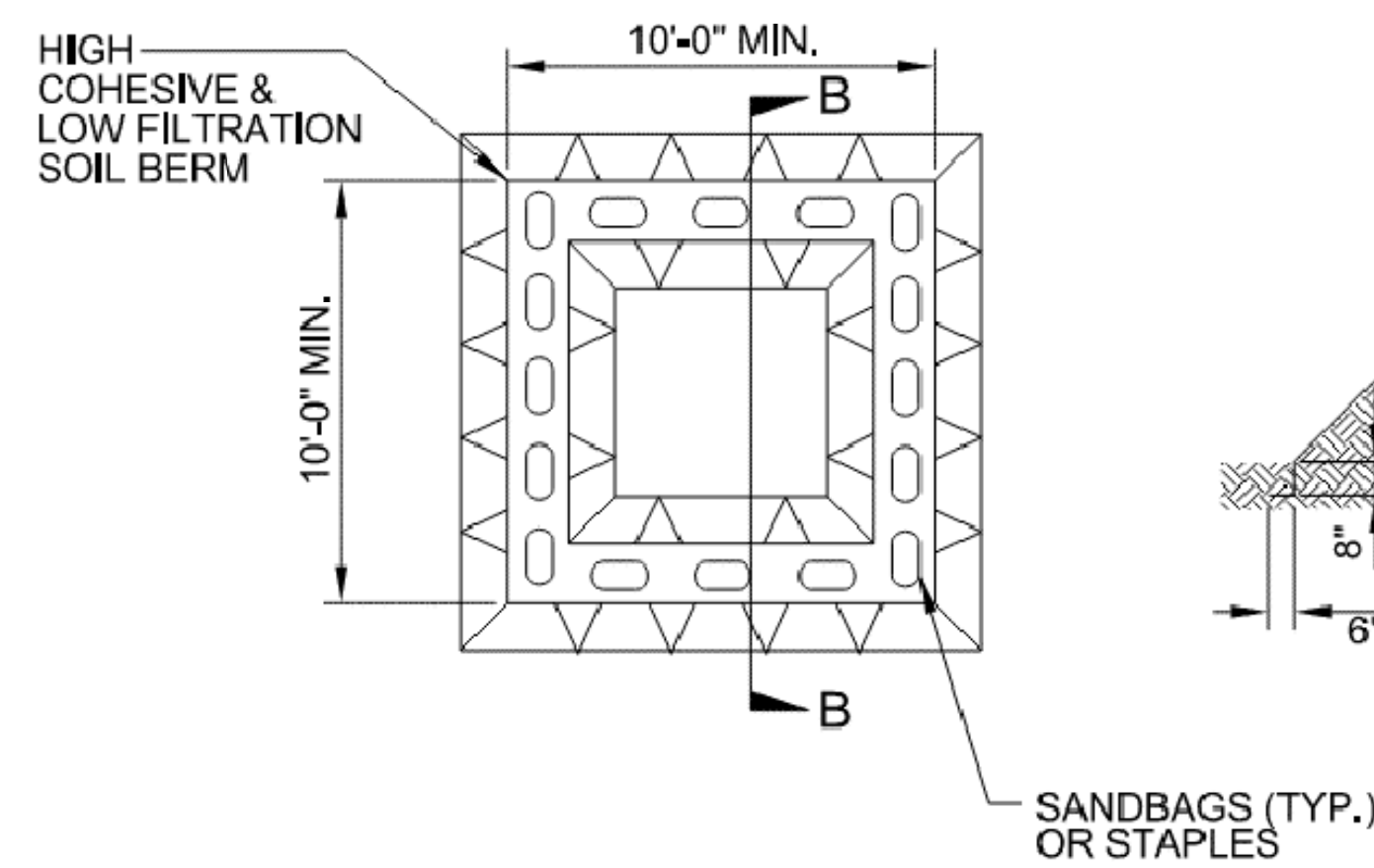
SECTION A-A

- 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



SECTION B-B

- 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



STV Engineers, Inc.
800 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. <i>B-5808</i>	SHEET NO. <i>EC-3A</i>
RW SHEET NO.	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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.

8/17/99

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

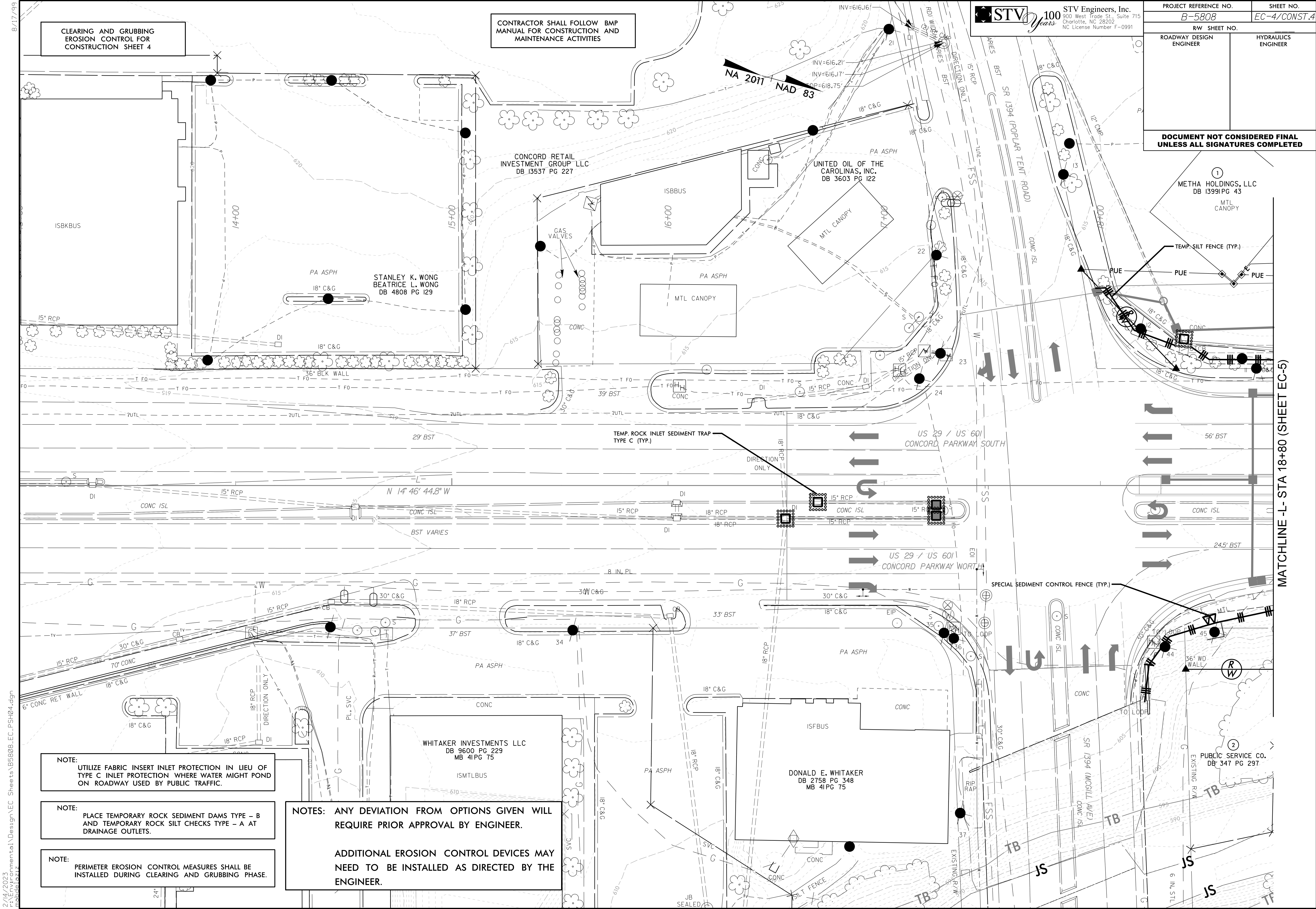
CONTRACTOR SHALL FOLLOW BMP
MANUAL FOR CONSTRUCTION AND
MAINTENANCE ACTIVITIES

STV 100 years STV Engineers, Inc.
300 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. <i>B-5808</i>	SHEET NO. <i>EC-4/CONST.4</i>
--	----------------------------------

RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF
TYPE C INLET PROTECTION WHERE WATER MIGHT POND
ON ROADWAY USED BY PUBLIC TRAFFIC.

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.

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.

MATCHLINE - L- STA 18+80 (SHEET EC-5)

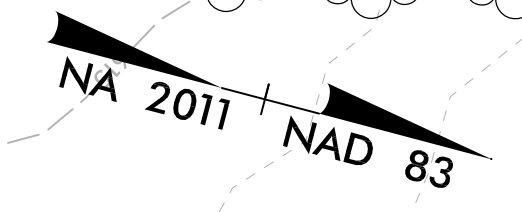
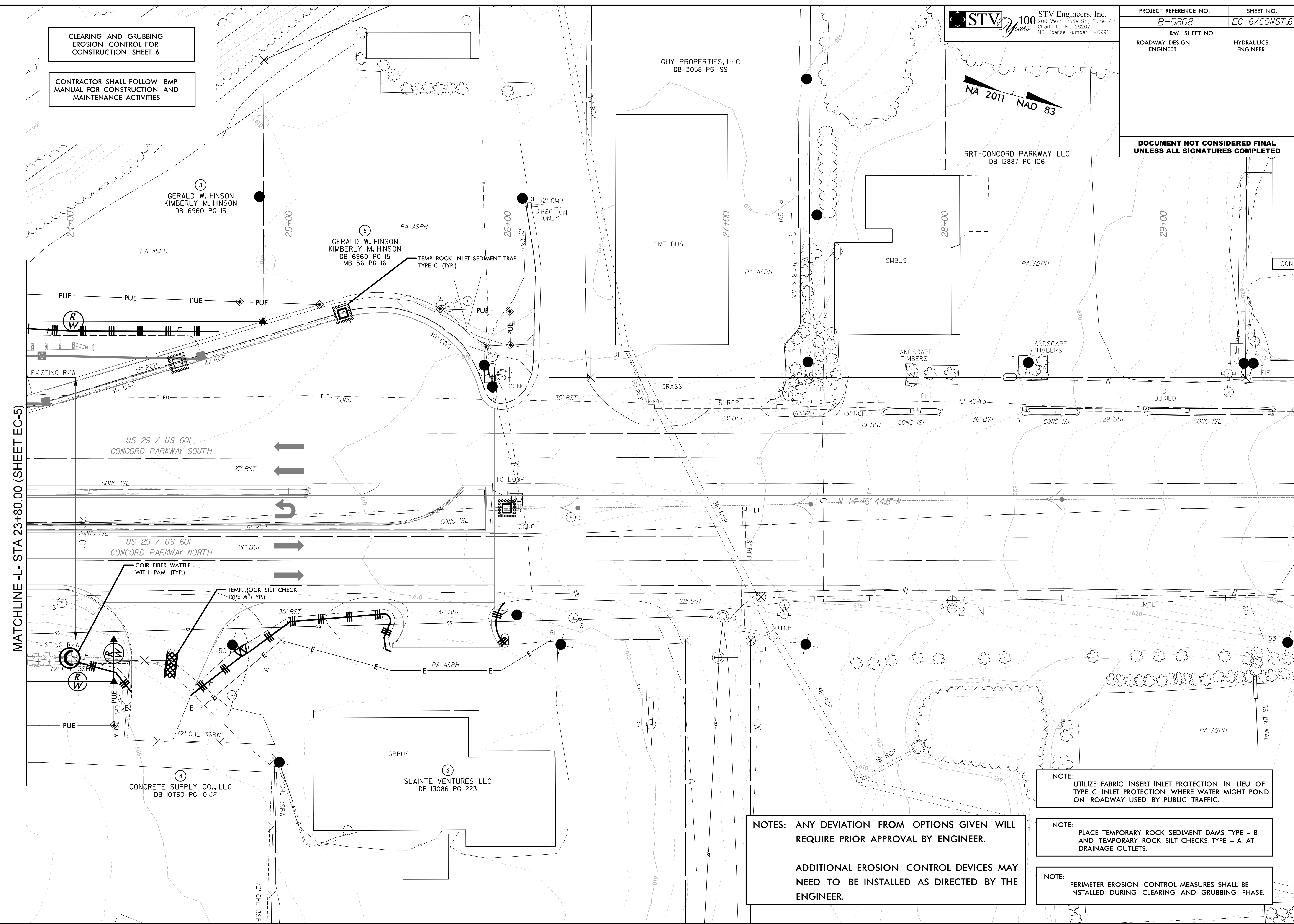
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PROJECT REFERENCE NO. <i>B-5808</i>	SHEET NO. <i>EC-6/CONST.6</i>
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 6

CONTRACTOR SHALL FOLLOW BMP
 MANUAL FOR CONSTRUCTION AND
 MAINTENANCE ACTIVITIES

MATCHLINE -L- STA 23+80.00 (SHEET EC-5)



NOTE:
 UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF
 TYPE C INLET PROTECTION WHERE WATER MIGHT POND
 ON ROADWAY USED BY PUBLIC TRAFFIC.

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.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
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 ENGINEER.

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PROJECT REFERENCE NO. B-5808 SHEET NO. EC-7/CONST.4

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

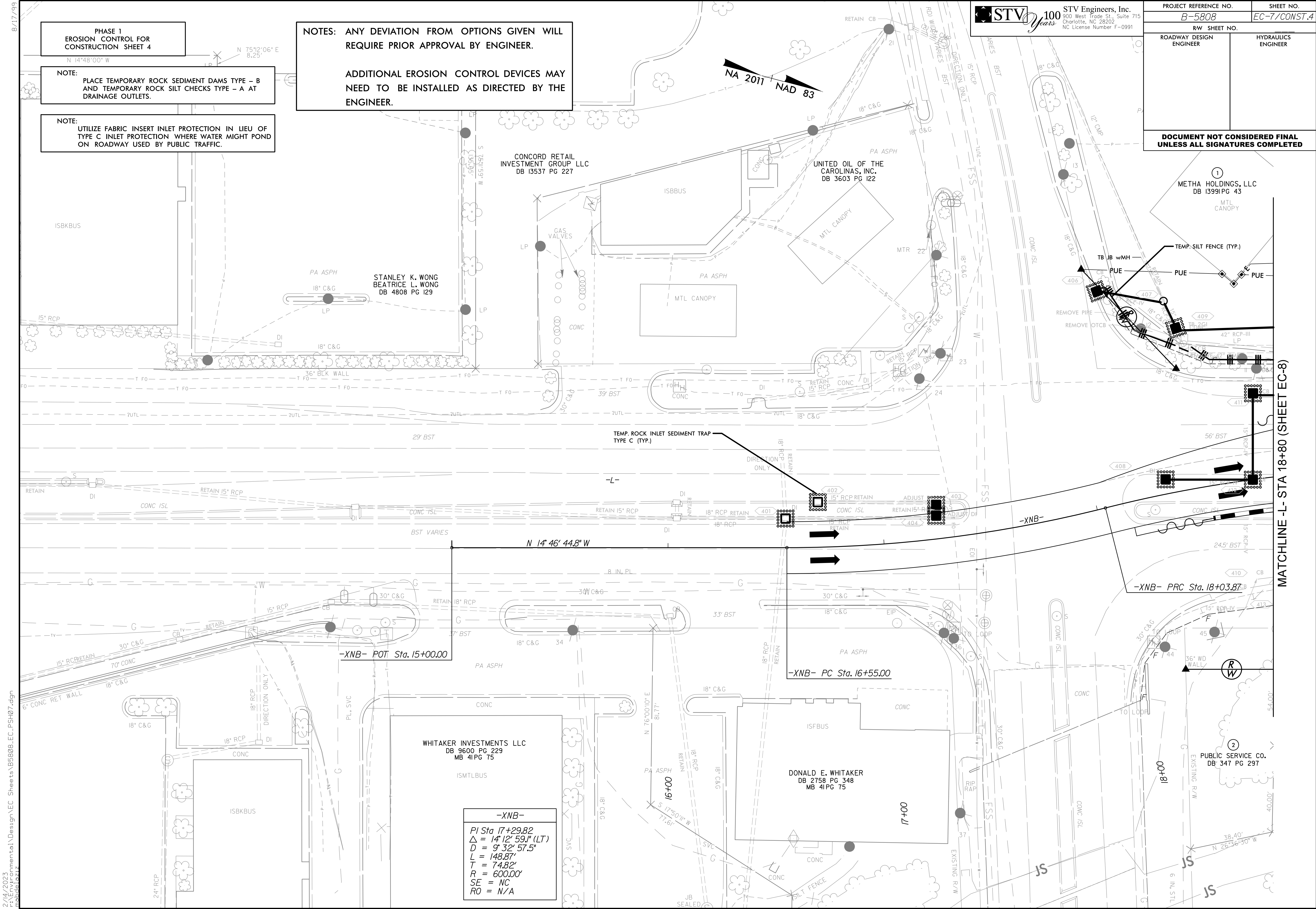
PHASE 1 EROSION CONTROL FOR CONSTRUCTION SHEET 4

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

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF TYPE C INLET PROTECTION WHERE WATER MIGHT POND ON ROADWAY USED BY PUBLIC TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

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MATCHLINE L- STA 18+80 (SHEET EC-8)

-XNB- PI Sta 17+29.82 Δ = 14° 12' 59.1" (LT) D = 9' 32" 57.5" L = 148.87' T = 74.82' R = 600.00' SE = NC RO = N/A

METHA HOLDINGS, LLC DB 13991 PG 43 MTL CANOPY

PUBLIC SERVICE CO. DB 347 PG 297

CONCORD RETAIL INVESTMENT GROUP LLC DB 13537 PG 227

UNITED OIL OF THE CAROLINAS, INC. DB 3603 PG 122

STANLEY K. WONG BEATRICE L. WONG DB 4808 PG 129

WHITAKER INVESTMENTS LLC DB 9600 PG 229 MB 41PG 75

DONALD E. WHITAKER DB 2758 PG 348 MB 41PG 75

TEMP. ROCK INLET SEDIMENT TRAP TYPE C (TYP.)

TEMP. SILT FENCE (TYP.)

PUE

REMOVE PIRE

REMOVE OTCB

42" RCP-III LP

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8/17/99



PROJECT REFERENCE NO. B-5808 SHEET NO. EC-8/CONST.5

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE 1 EROSION CONTROL FOR CONSTRUCTION SHEET 5

METHA HOLDINGS, LLC DB 13991 PG 43

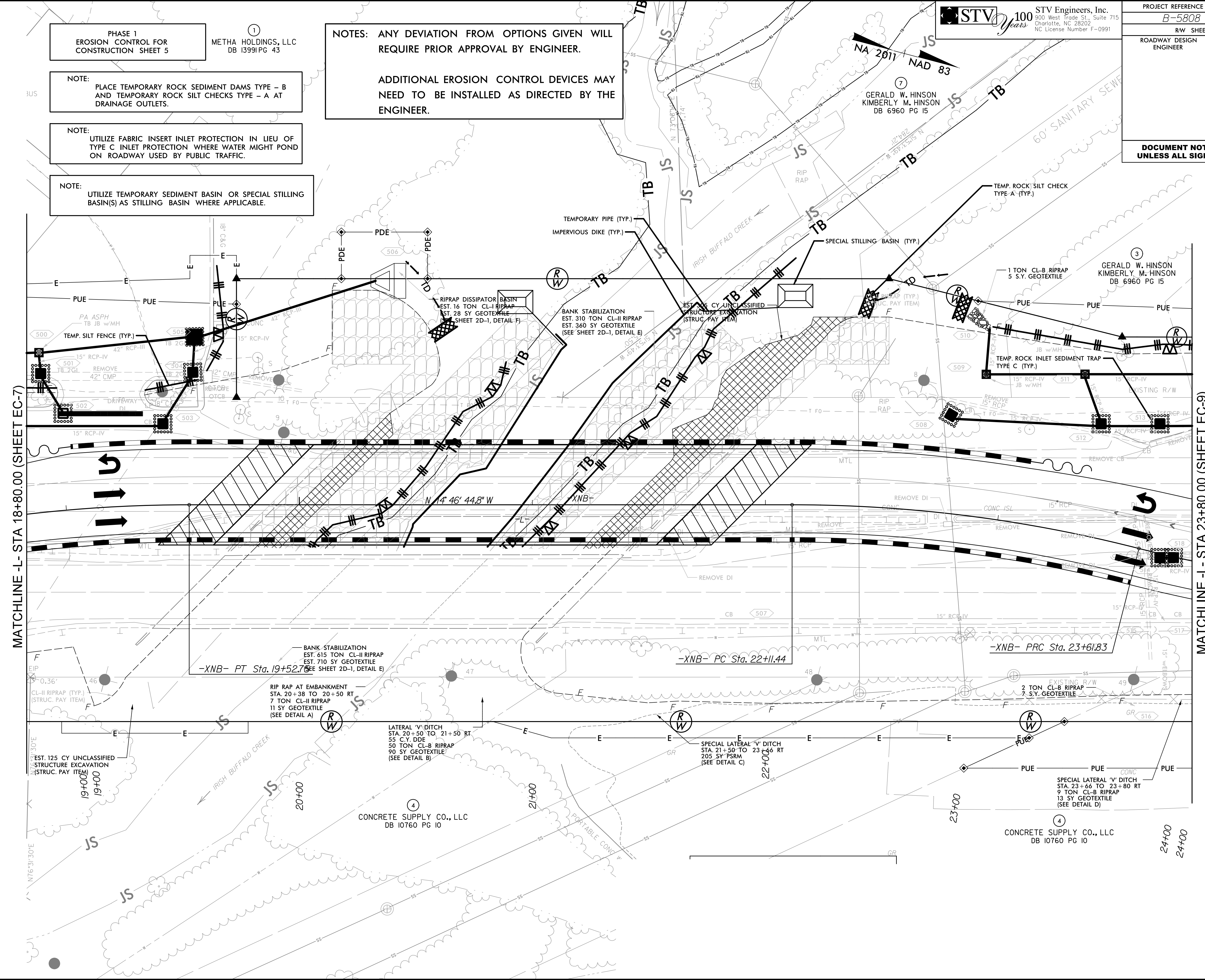
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

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.

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF TYPE C INLET PROTECTION WHERE WATER MIGHT POND ON ROADWAY USED BY PUBLIC TRAFFIC.

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



MATCHLINE -L- STA 18+80.00 (SHEET EC-7)

MATCHLINE -L- STA 23+80.00 (SHEET EC-9)

Technical specifications for riprap, ditches, and sediment basins, including quantities and material types.

CONCRETE SUPPLY CO., LLC DB 10760 PG 10

CONCRETE SUPPLY CO., LLC DB 10760 PG 10

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PROJECT REFERENCE NO. B-5808 SHEET NO. EC-9/CONST.6

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE 1 EROSION CONTROL FOR CONSTRUCTION SHEET 6

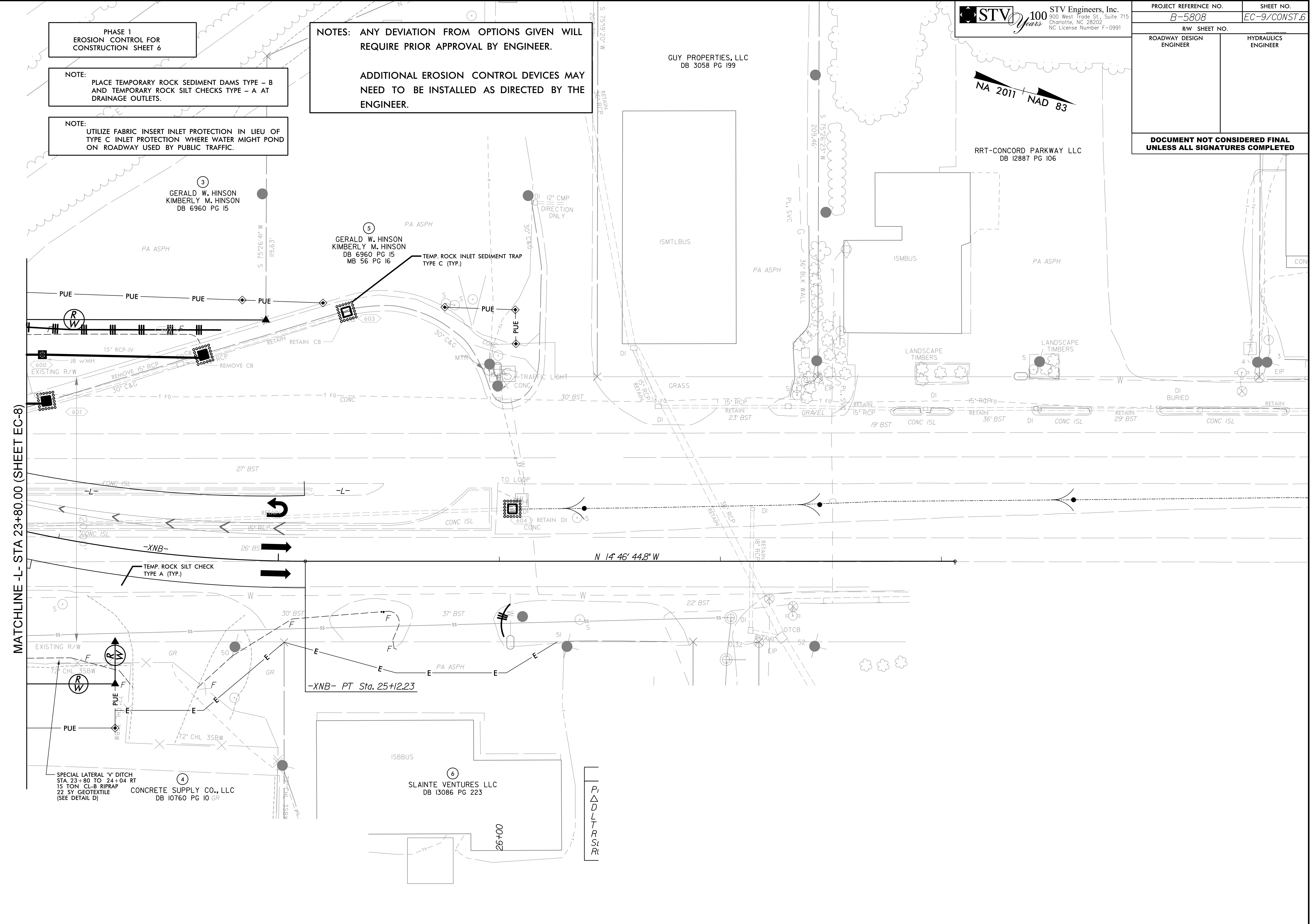
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

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MATCHLINE -L- STA 23+80.00 (SHEET EC-8)



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8/17/99

PROJECT REFERENCE NO. <i>B-5808</i>	SHEET NO. <i>EC-10/CONST.4</i>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

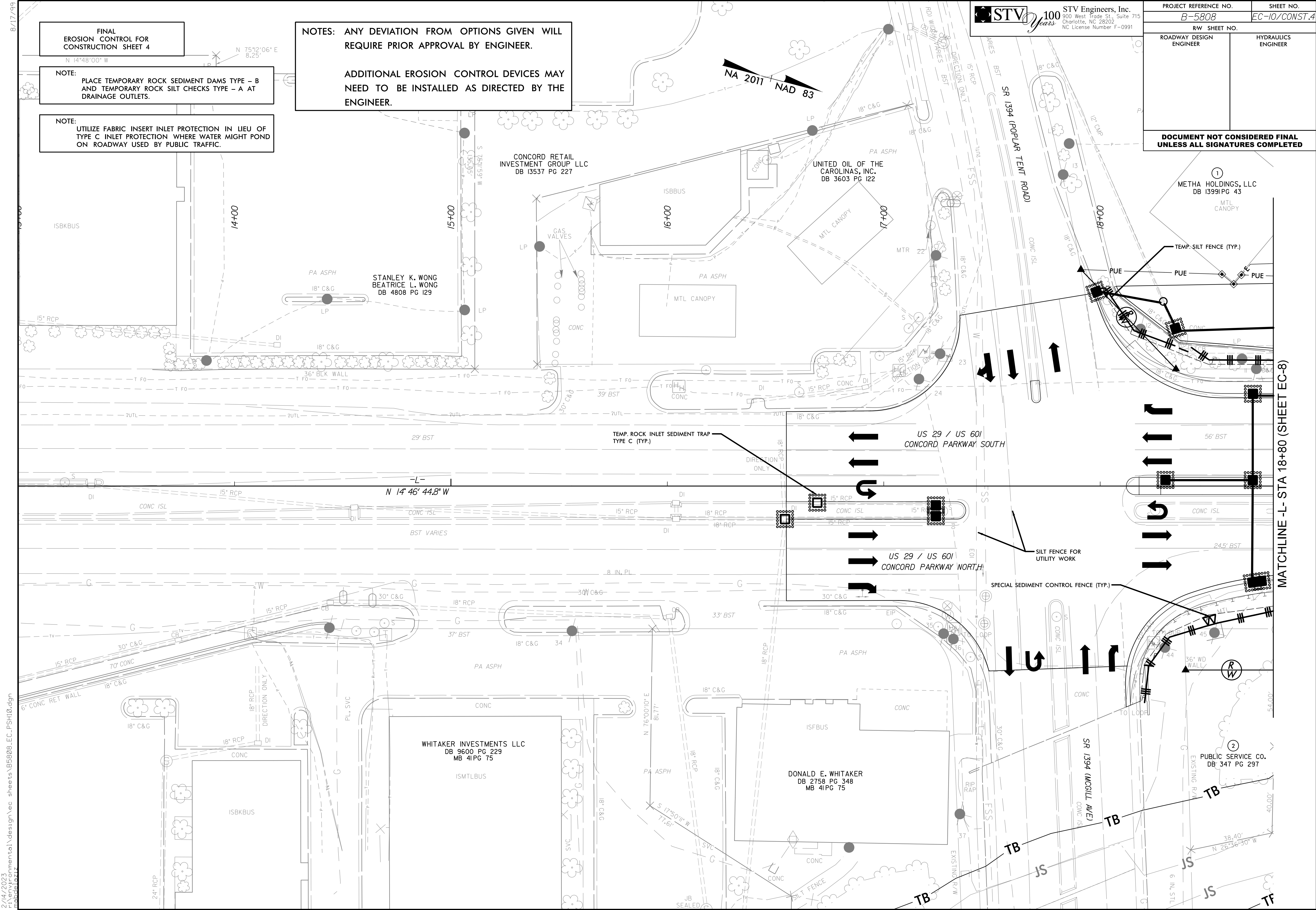
FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4

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

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MATCHLINE -L- STA 18+80 (SHEET EC-8)

MATCHLINE -R- STA 18+80 (SHEET EC-9)

8/17/99



PROJECT REFERENCE NO. B-5808	SHEET NO. EC-II/CONST.5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 5

① METHA HOLDINGS, LLC
DB 13991 PG 43

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

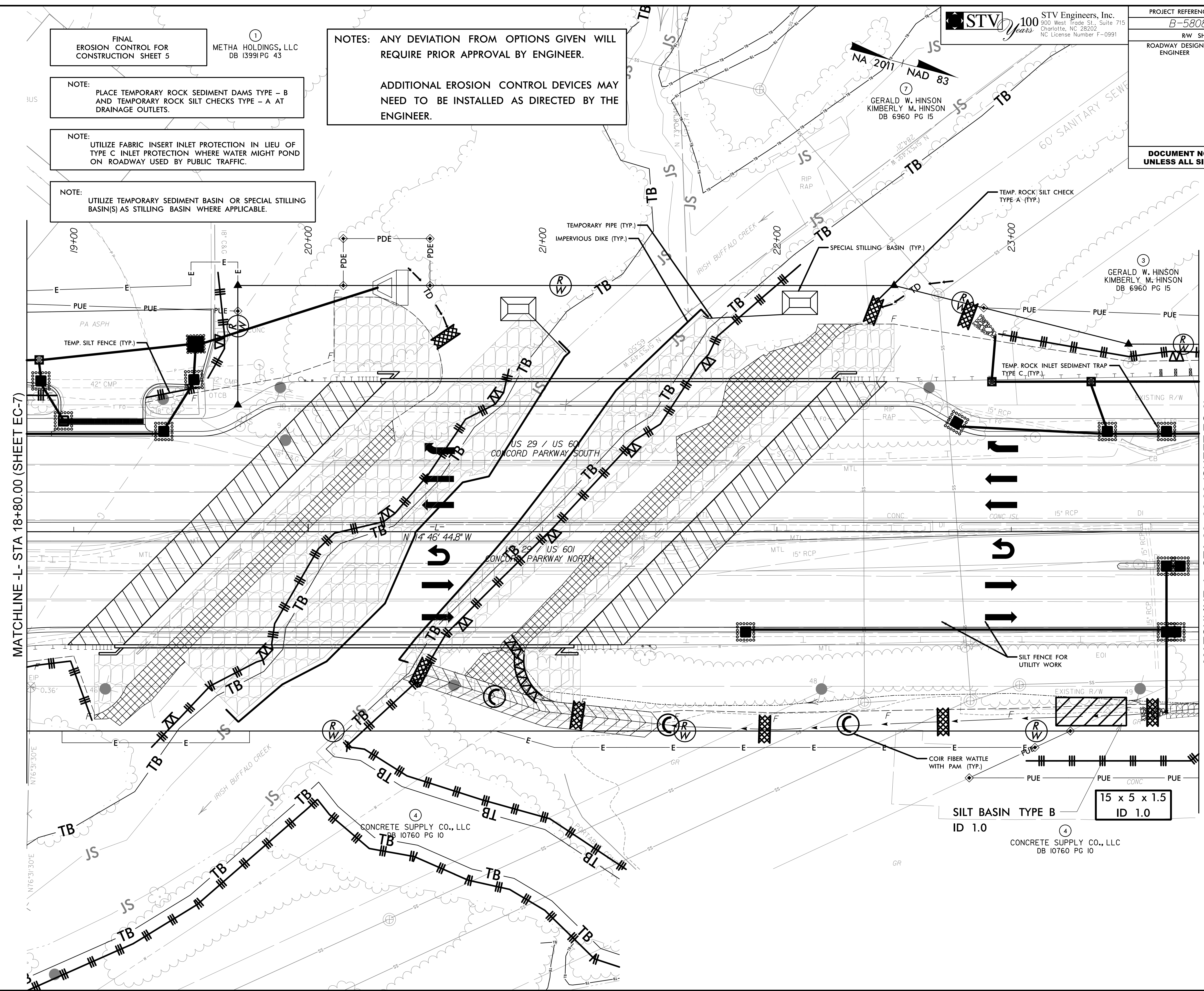
NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF TYPE C INLET PROTECTION WHERE WATER MIGHT POND ON ROADWAY USED BY PUBLIC TRAFFIC.

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ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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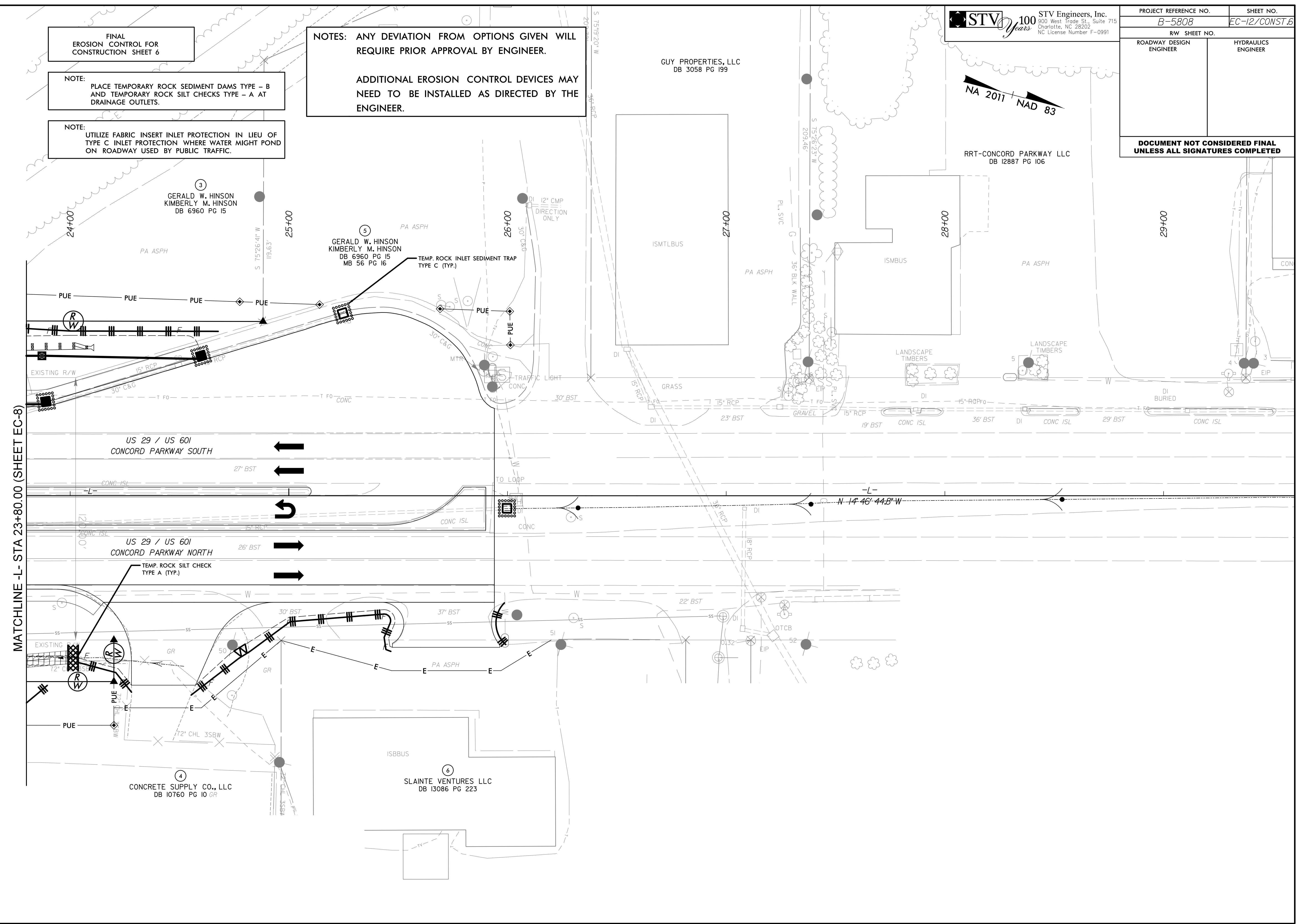
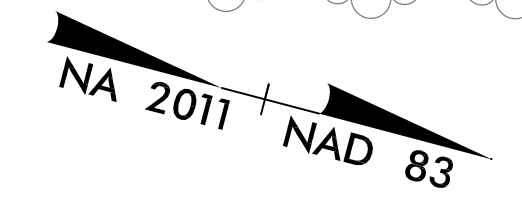
FINAL
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 6

NOTE:
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 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
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NOTE:
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ADDITIONAL EROSION CONTROL DEVICES MAY
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 ENGINEER.



2/14/2023
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