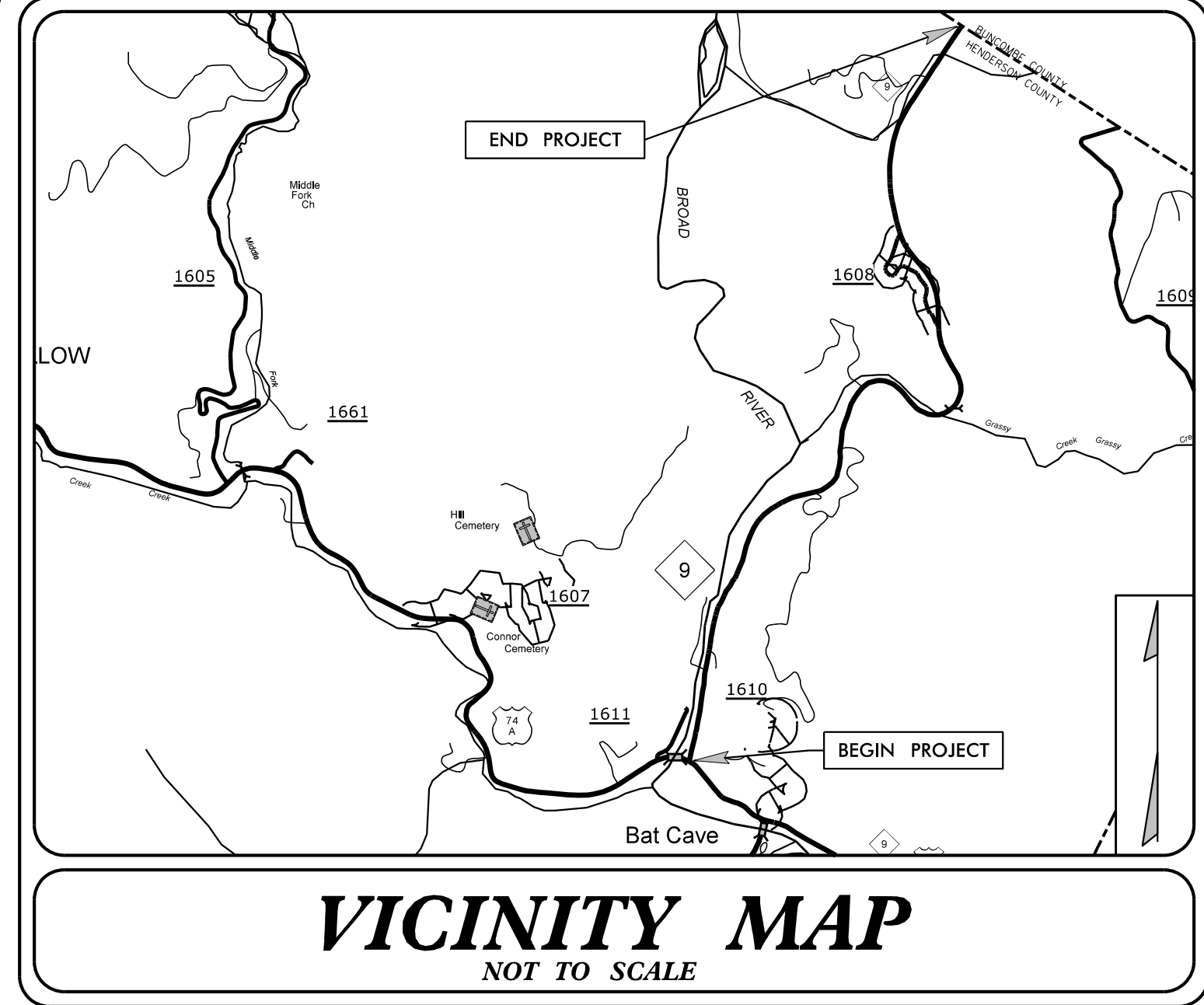


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	NC-9	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
18314.1045061	329		
18314.1045035	330		
18314.1045063	331		
18314.1045062	332		
18314.1045074	333		
18314.1045073	334		
18314.11045135	560		

TIP PROJECT: NC-9



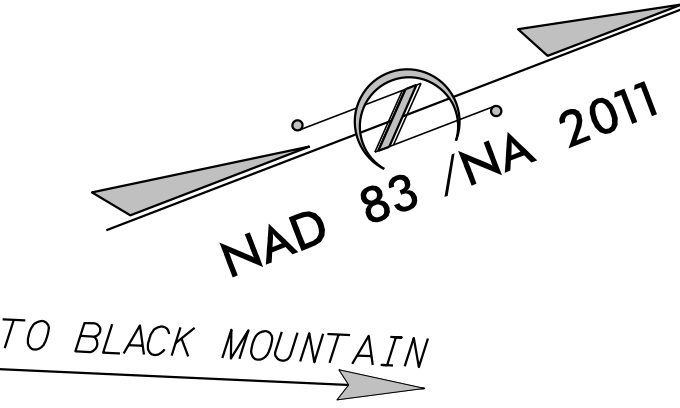
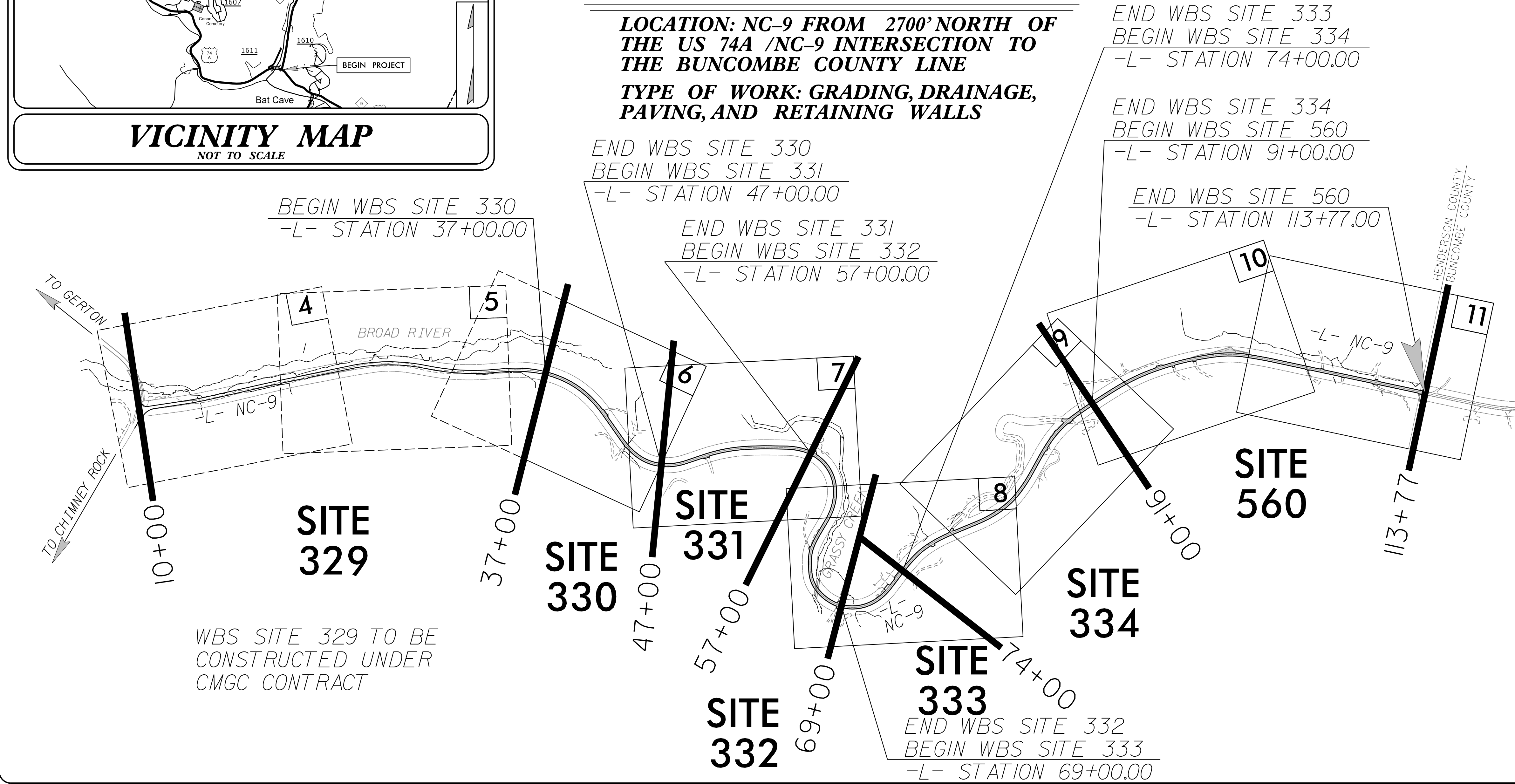
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

HENDERSON COUNTY

**LOCATION: NC-9 FROM 2700' NORTH OF
THE US 74A /NC-9 INTERSECTION TO
THE BUNCOMBE COUNTY LINE**

**TYPE OF WORK: GRADING, DRAINAGE,
PAVING, AND RETAINING WALLS**

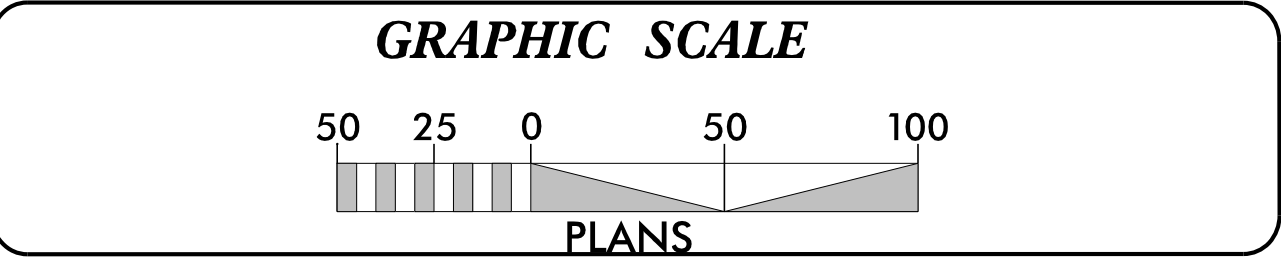


THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

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 REGULATIONS SET FORTH BY THE NCG 010000
GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE
NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

Prepared in the Office of:

SUNGATE DESIGN GROUP, P.A.

905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243
ENG FIRM LICENSE NO. C-890

2024 STANDARD SPECIFICATIONS

Designed by:

MATTHEW C. EDWARDS, PE 3992

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.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

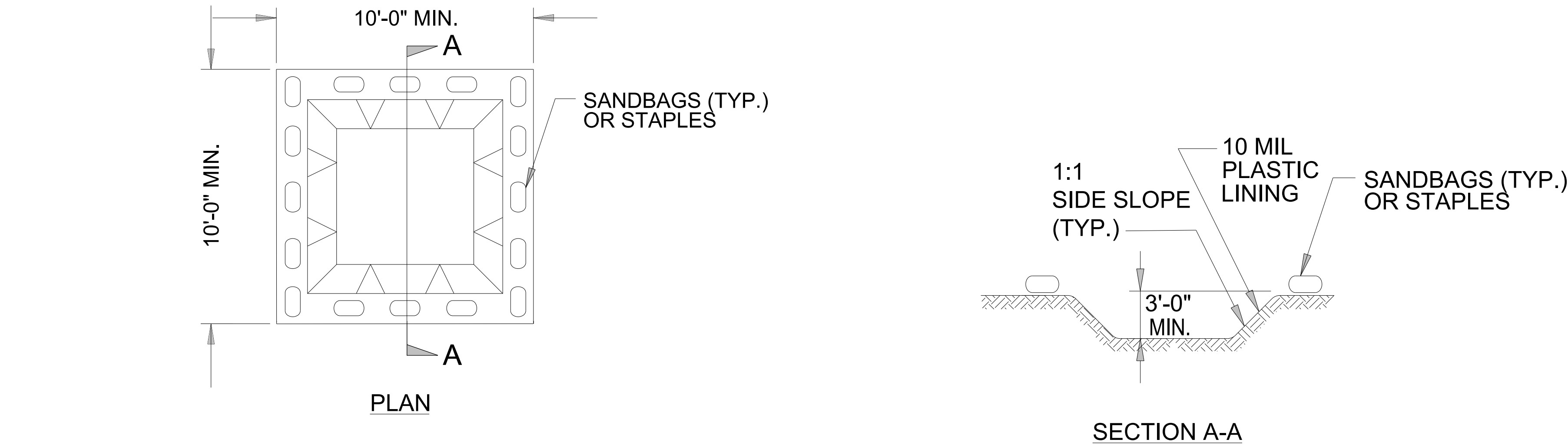
PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-02

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	
1630.04	Stilling Basin	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	

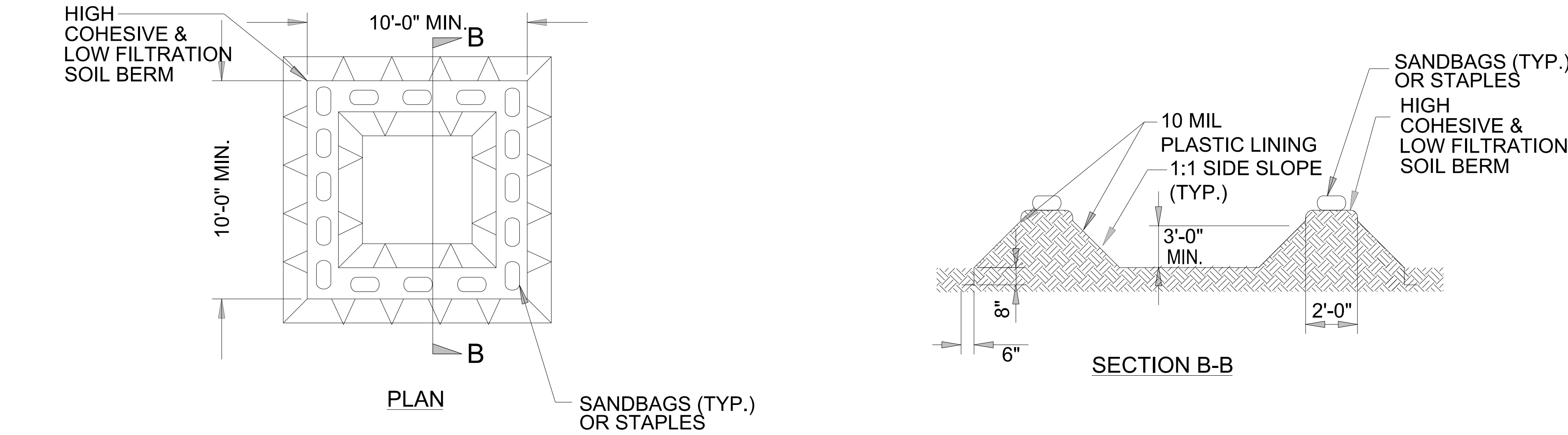
Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	
1635.02	Rock Pipe Inlet Sediment Trap Type B	
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	
	Silt Fence Coir Fiber Wattle Break	
1636.03	Excelsior Wattle Barrier	
1636.03	Coir Fiber Wattle Barrier	

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



- 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.

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE



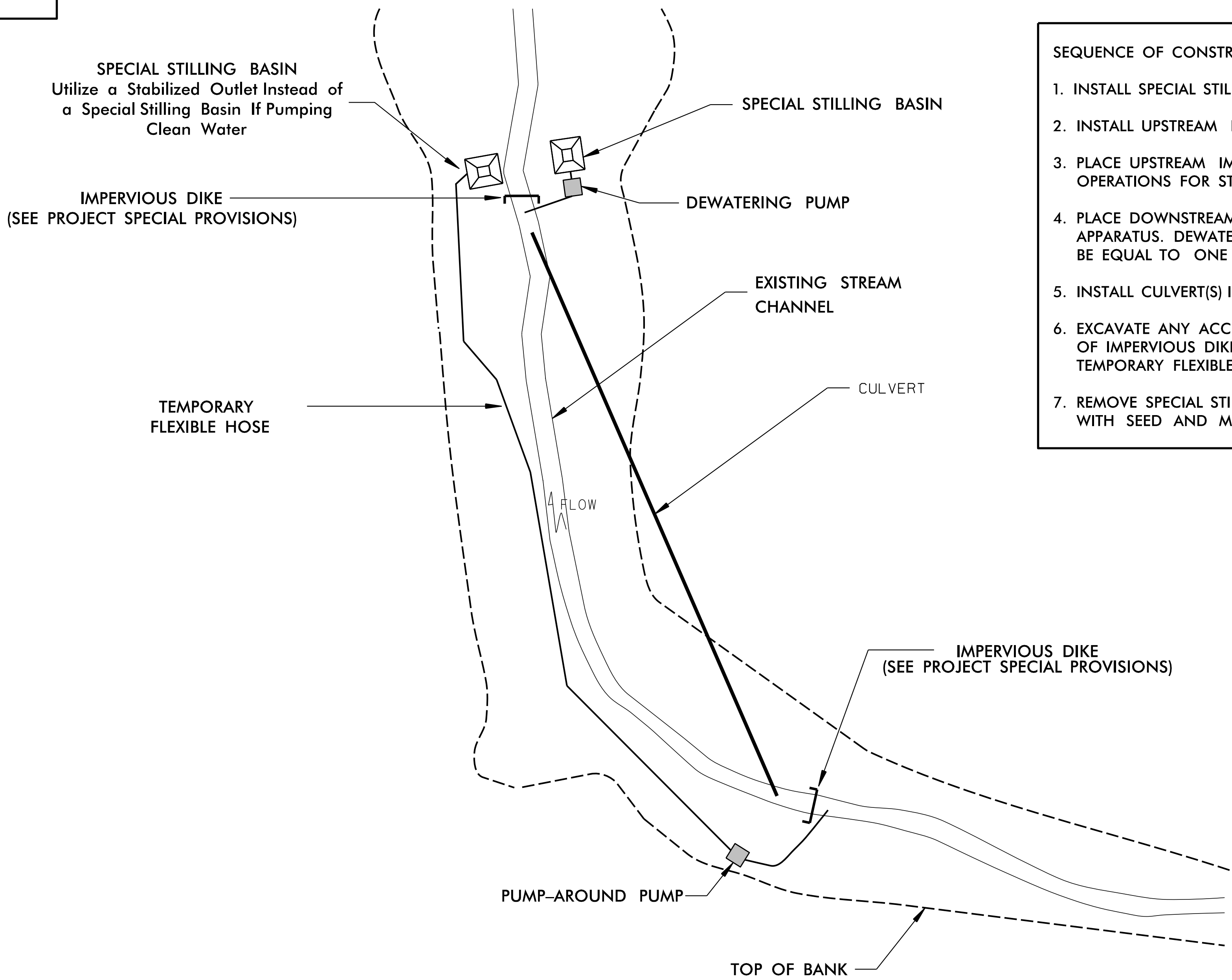
- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED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

ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 4) Pumps and hoses shall be of sufficient size and quantity to dewater the work area and maintain stream bypass flow.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

STRAW MATTING FOR EROSION CONTROL

[illegible]

EXCELSIOR MATTING FOR EROSION CONTROL

[illegible]

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

STRAW MATTING FOR EROSION CONTROL (SLOPES)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	-L-	57+26	58+00	LT	120
8	-L-	69+50	70+50	LT	275
8	-L-	78+50	80+00	LT	305
9	-L-	80+00	81+00	LT	630

STRAW MATTING FOR EROSION CONTROL (SLOPES)

[illegible]

7/2/99

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-06/CONST.06
RW SHEET NO.	

NOTE: FOR -L- PROFILE SEE SHEET 12

NOTE:
E&SC MEASURES TO PRESERVE WATER QUALITY FOR
INSTREAM CONSTRUCTION ACTIVITIES WILL INCLUDE
FLOATING TURBIDITY CURTAIN AND/OR IMPERVIOUS
DIKES AS DIRECTED BY THE ENGINEER.

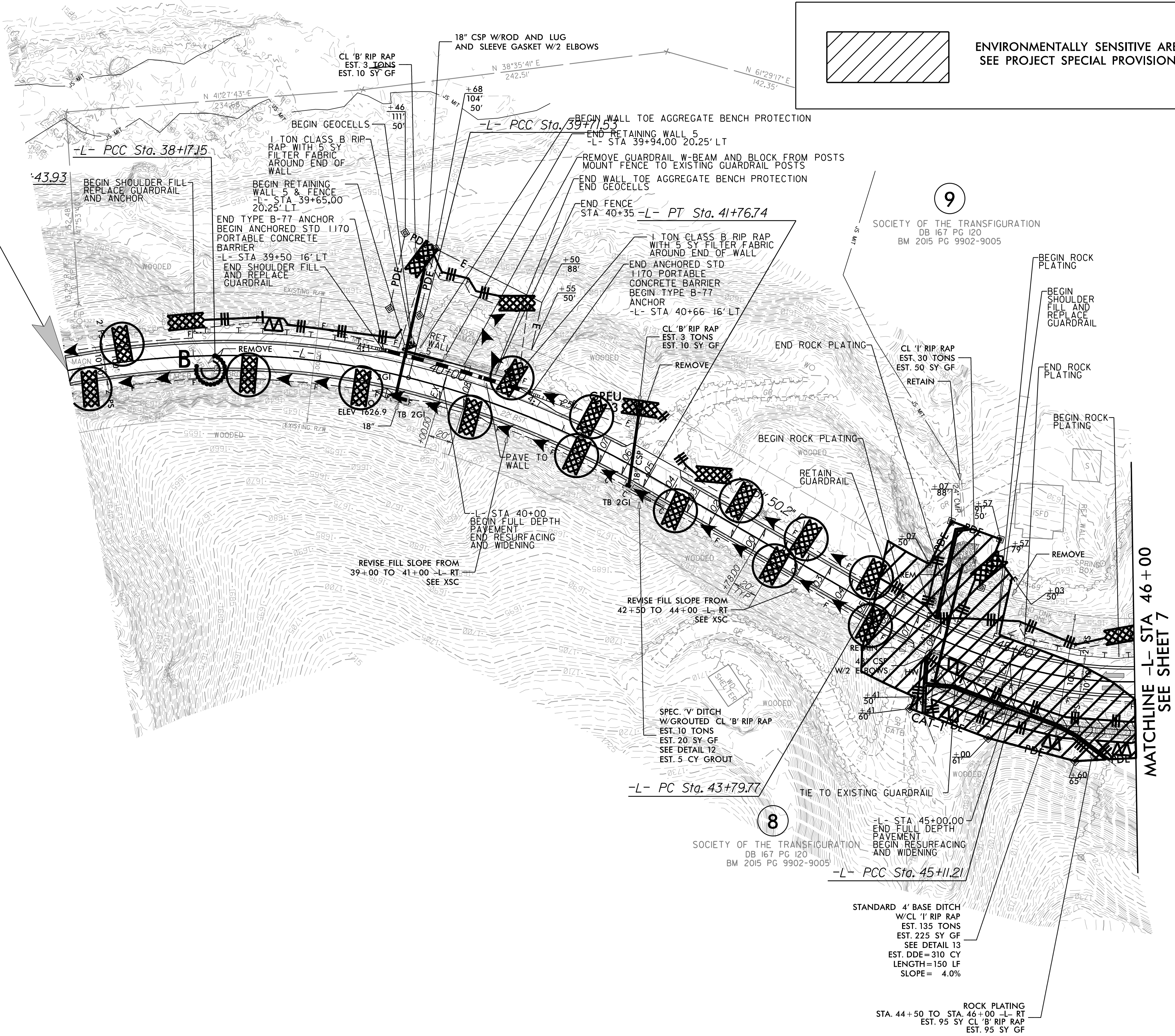
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL
AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 06

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

END CMGC PROJECT NC-9
WBS SECTION 329
BEGIN PROJECT NC-9
WBS SECTION 330
-L- STA 37+00.00



MATCHLINE -L- STA 46+00
SEE SHEET 7

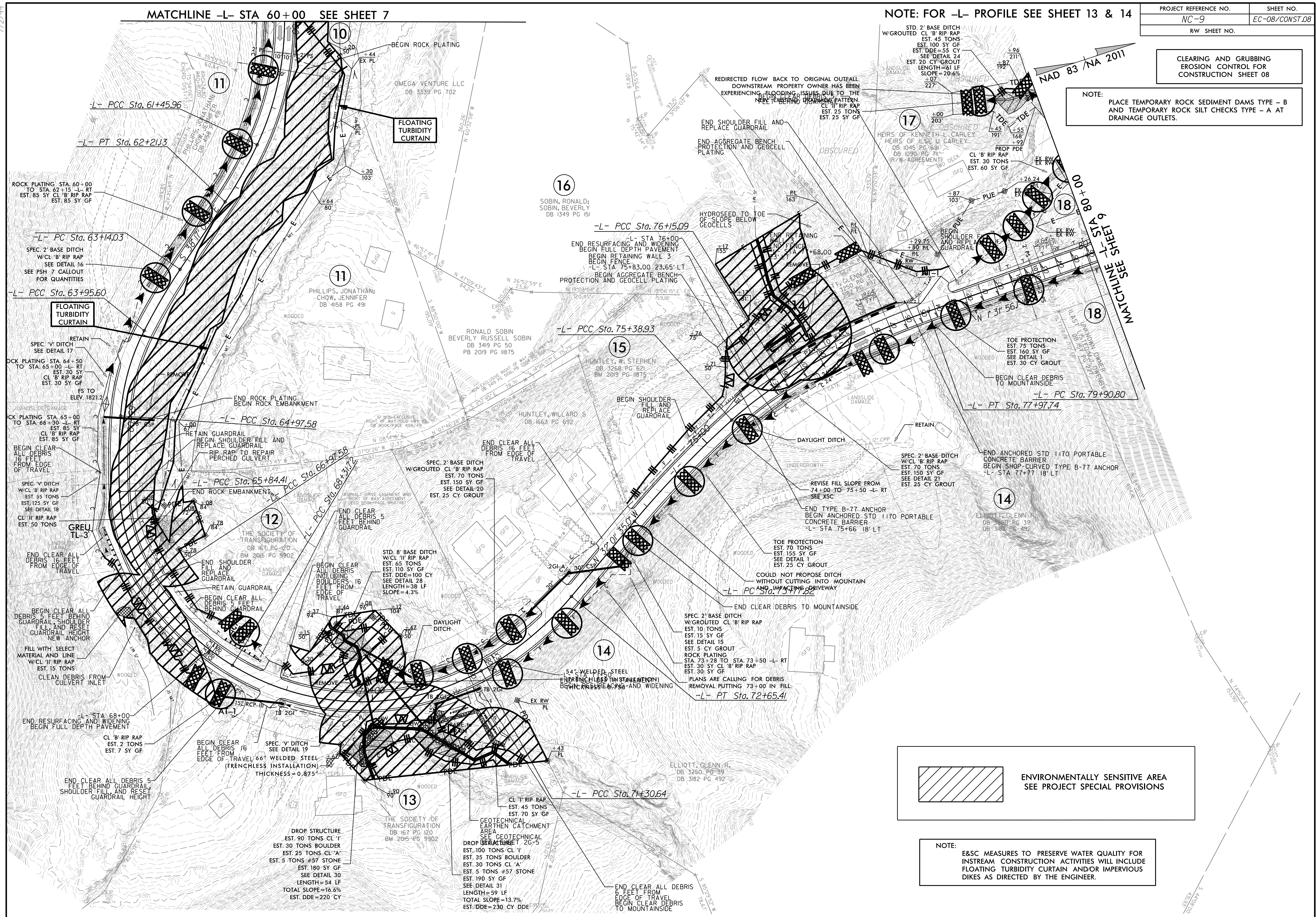
PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-08/CONST.08
RW SHEET NO.	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 08

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

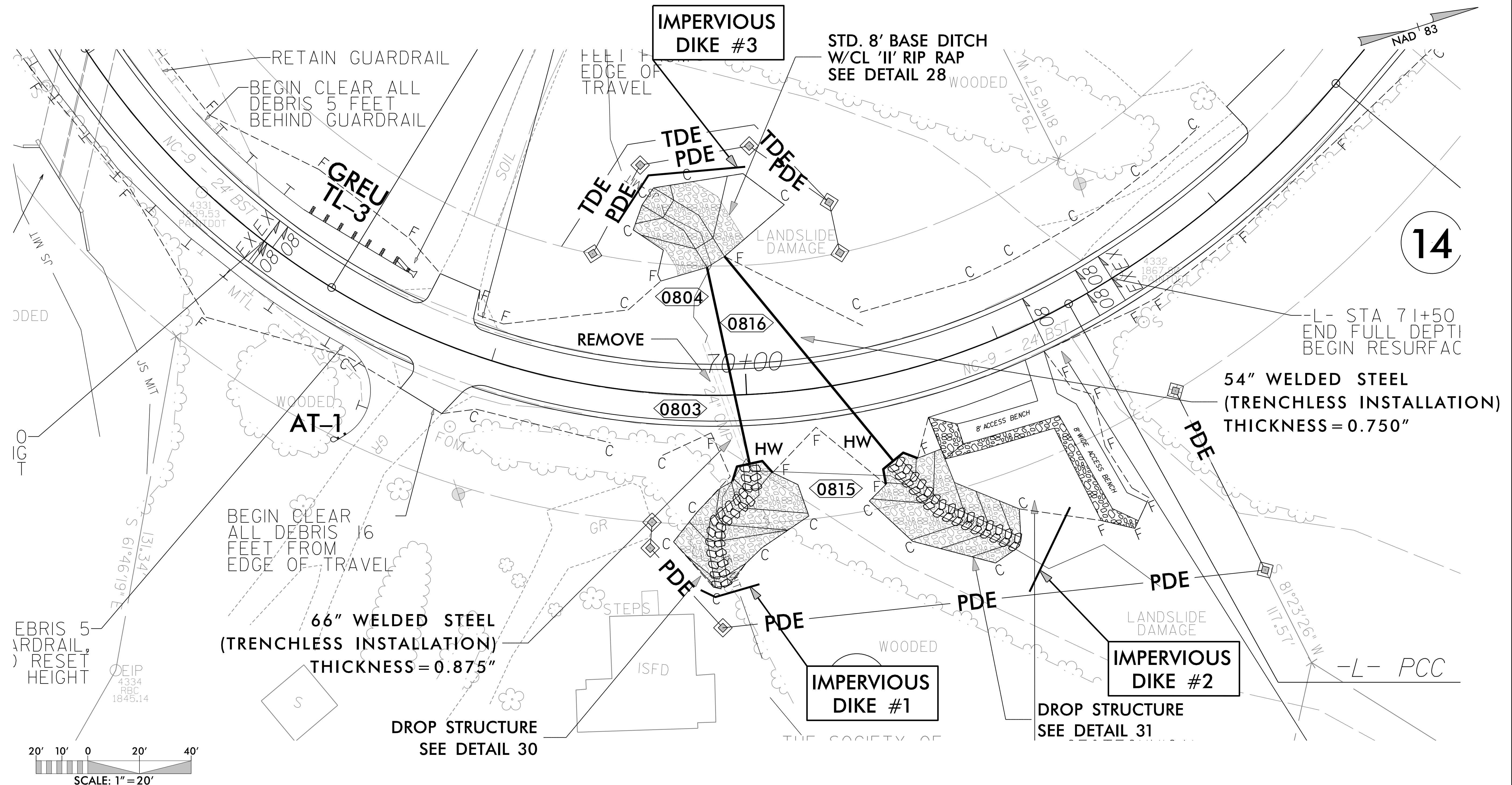
NOTE: E&SC MEASURES TO PRESERVE WATER QUALITY FOR INSTREAM CONSTRUCTION ACTIVITIES WILL INCLUDE FLOATING TURBIDITY CURTAIN AND/OR IMPERVIOUS DIKES AS DIRECTED BY THE ENGINEER.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS



PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-08A/CONST.08
R/W SHEET NO.	

1.) UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT PIPE INSTALLATION. 2.) INSTALL DEWATERING PUMPS, TEMPORARY FLEXIBLE HOSE, AND SPECIAL STILLING BASIN(S), SEE EXAMPLE PUMP-AROUND OPERATION ON EC-2B. 3.) INSTALL IMPERVIOUS DIKES #1, #2, AND #3 AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION. 4.) DEWATER CONSTRUCTION AREA, UTILIZING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT. 5.) REMOVE EXISTING 24" CMP.	6.) TRENCHLESS INSTALL 66" WSP AND 54" WSP. CONSTRUCT ASSOCIATED HEADWALLS. 7.) CONSTRUCT DROP STRUCTURES AND STD. 8' BASE DITCH W/CL '11' RIP RAP. 8.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. 9.) REMOVE ANY REMAINING SPECIAL STILLING BASIN(S), IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. 10.) COMPLETE ROADWAY.
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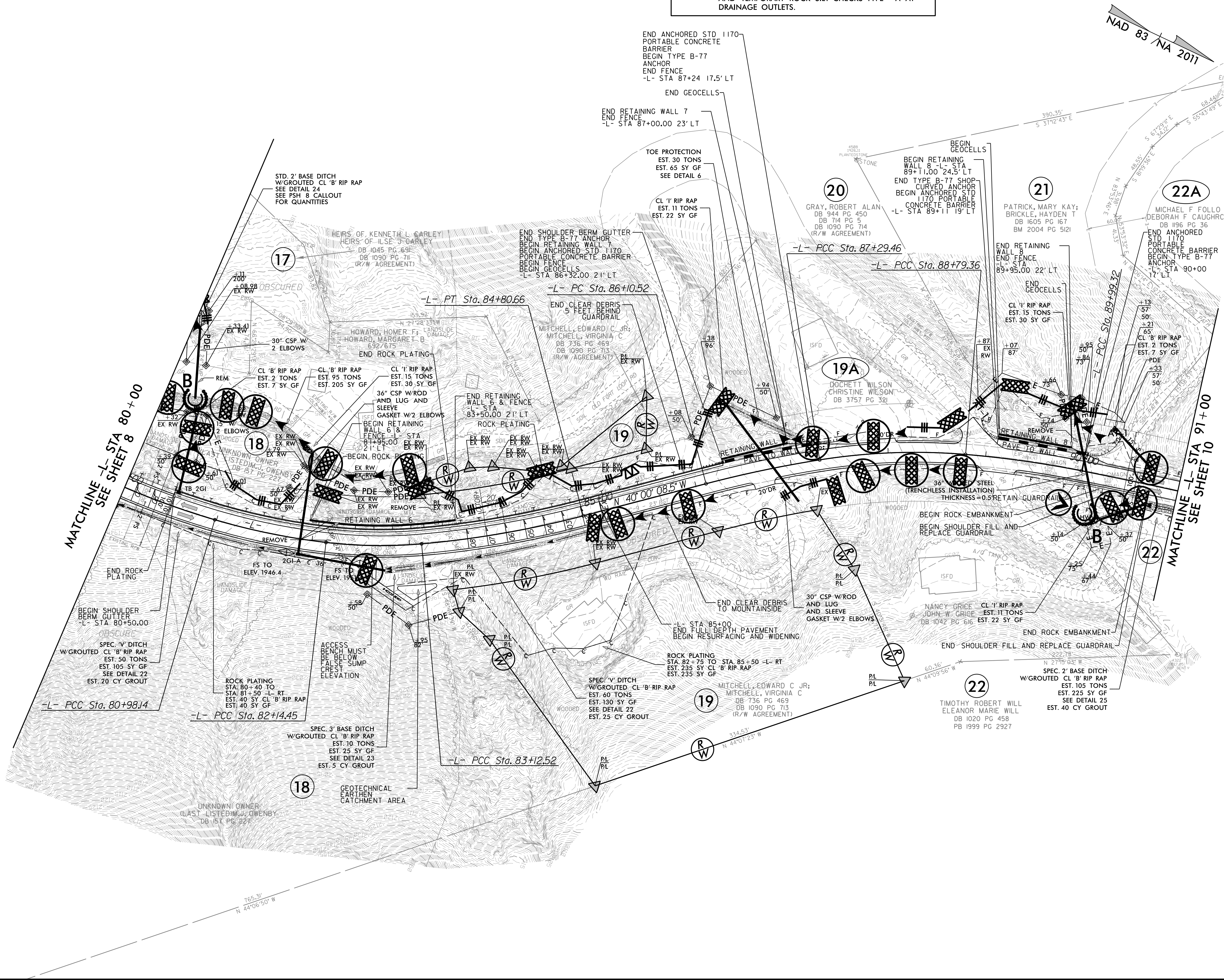


NOTE: FOR -L- PROFILE SEE SHEET 14

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

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-09/CONST.09
RW SHEET NO.	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 09



7/2/99

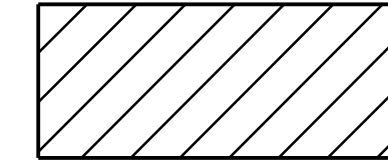
NOTE: FOR -L- PROFILE SEE SHEET 14 & 15

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-10/CONST.10
RW SHEET NO.	

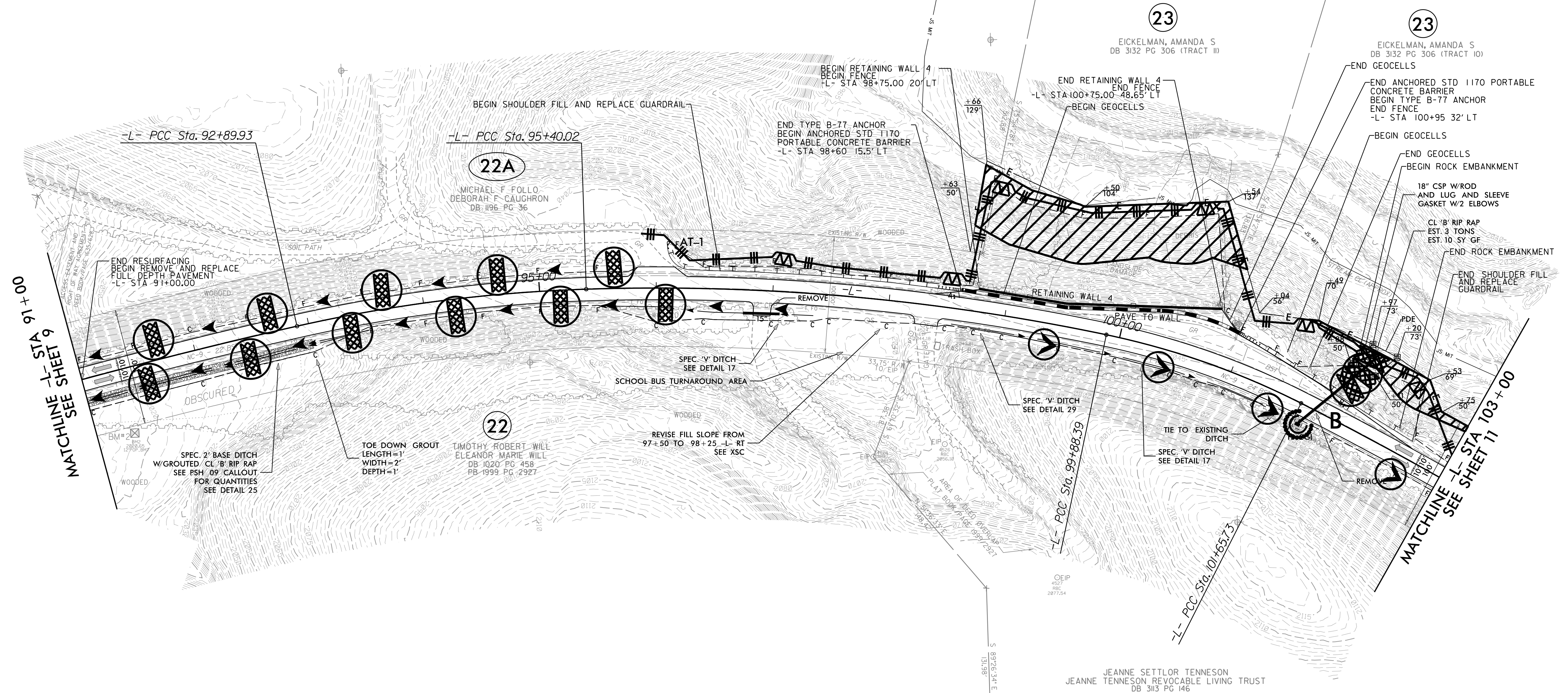
NAD 83 / NA 2011

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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



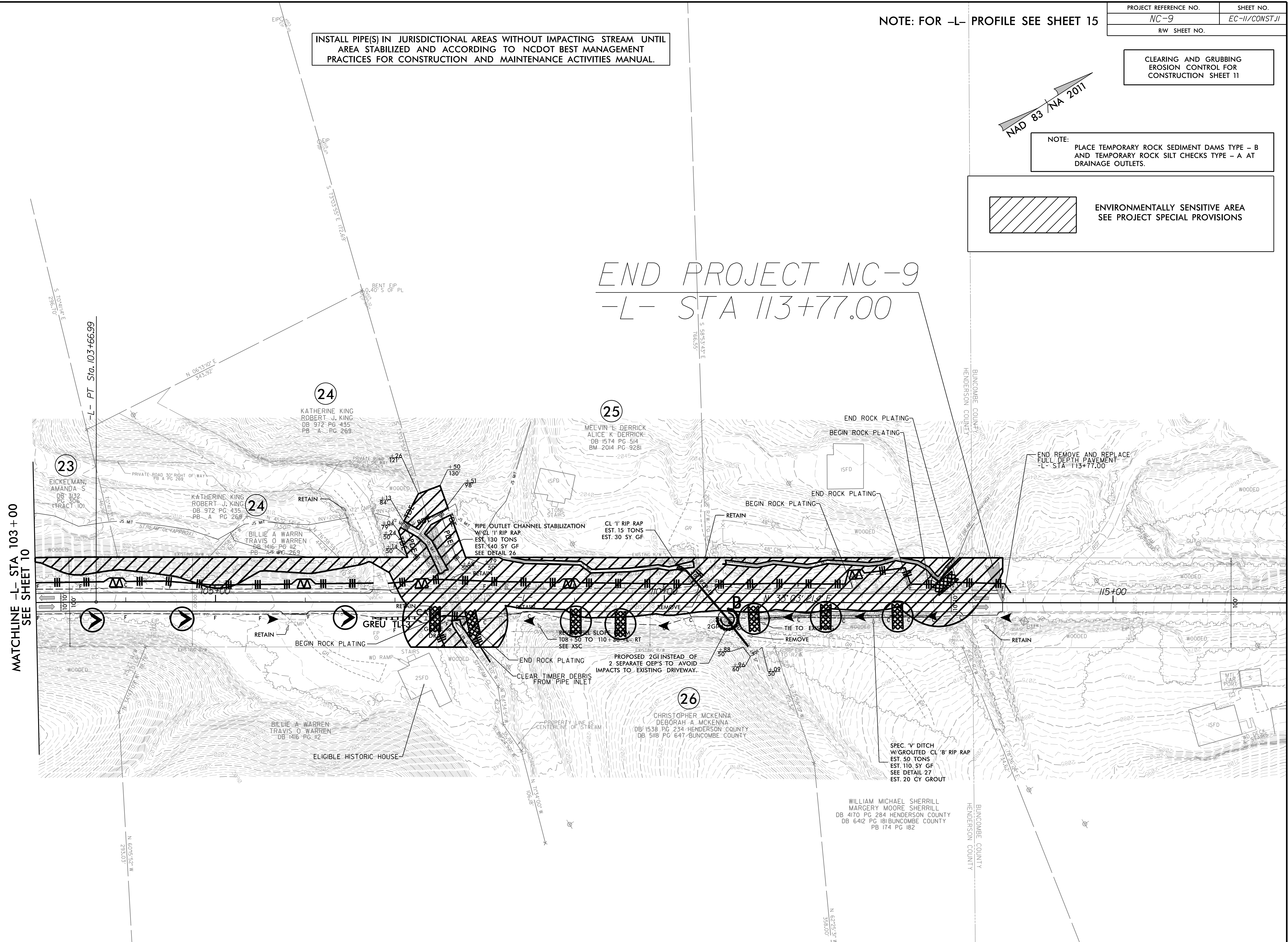
NOTE: FOR -L- PROFILE SEE SHEET 15

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

END PROJECT NC-9
-L- STA 113+77.00 \



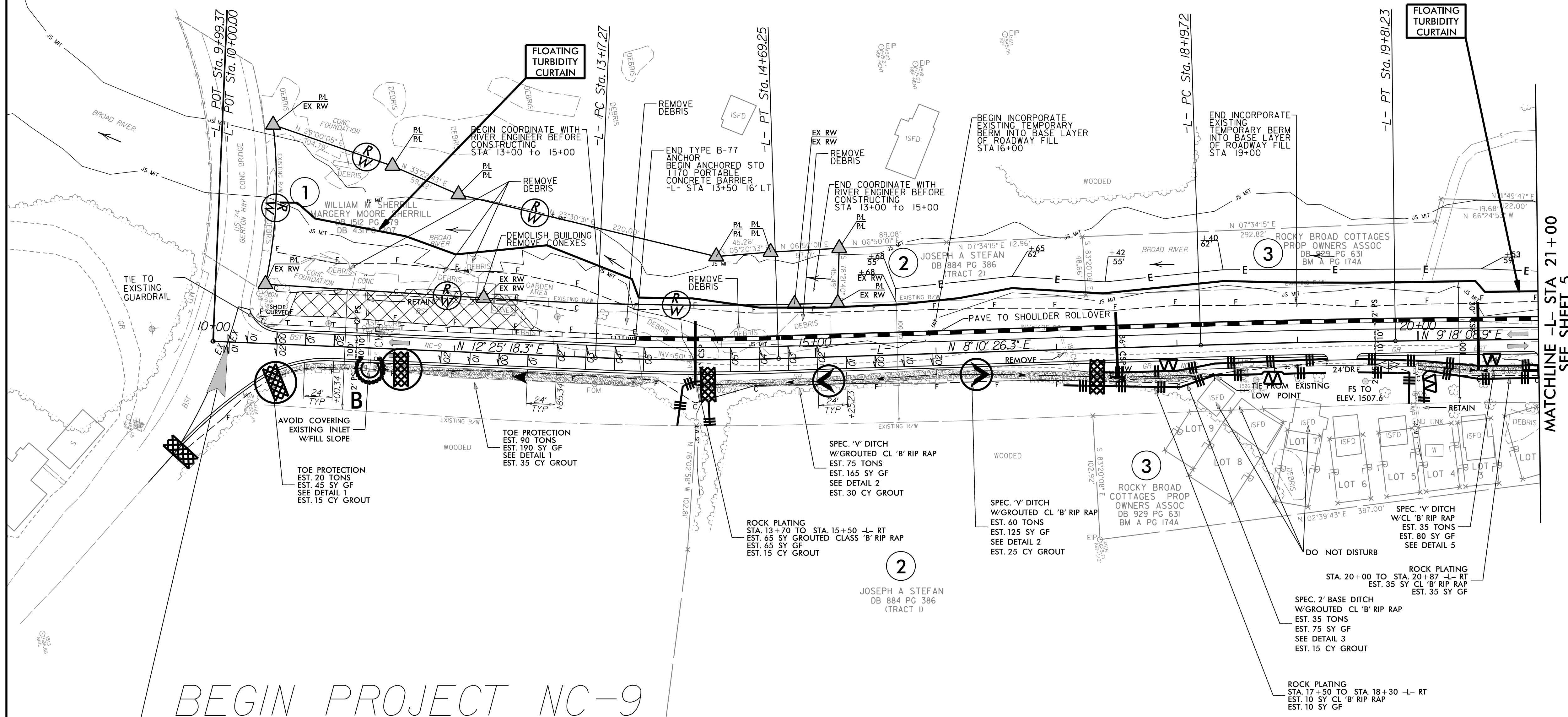
7/22/99

NOTE: FOR -L- PROFILE SEE SHEET 12

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-12/CONST.04
RW SHEET NO.	

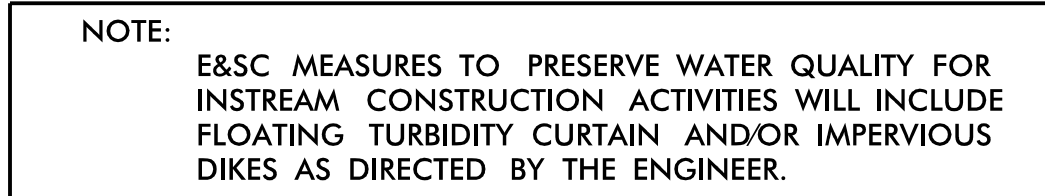
NAD 83 / NA 2011

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04



NOTE:
E&SC MEASURES TO PRESERVE WATER QUALITY FOR
INSTREAM CONSTRUCTION ACTIVITIES WILL INCLUDE
FLOATING TURBIDITY CURTAIN AND/OR IMPERVIOUS
DIKES AS DIRECTED BY THE ENGINEER.

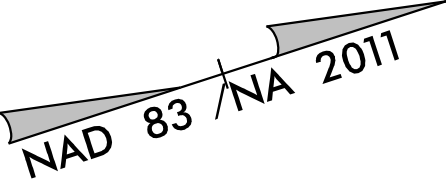
FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05



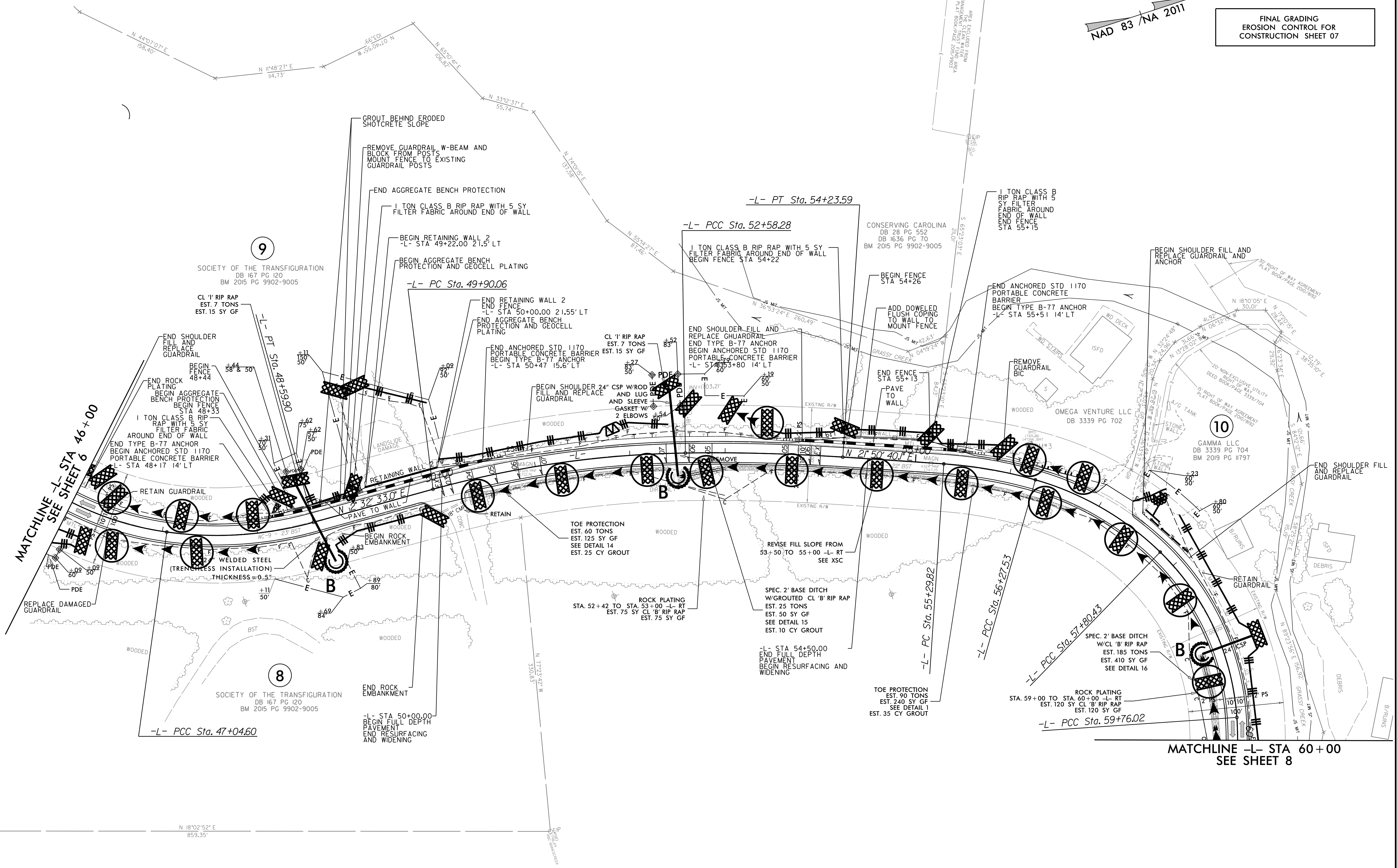
7/2/99

NOTE: FOR -L- PROFILE SEE SHEET 12 & 13

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-15/CONST.07
RW SHEET NO.	



FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 07



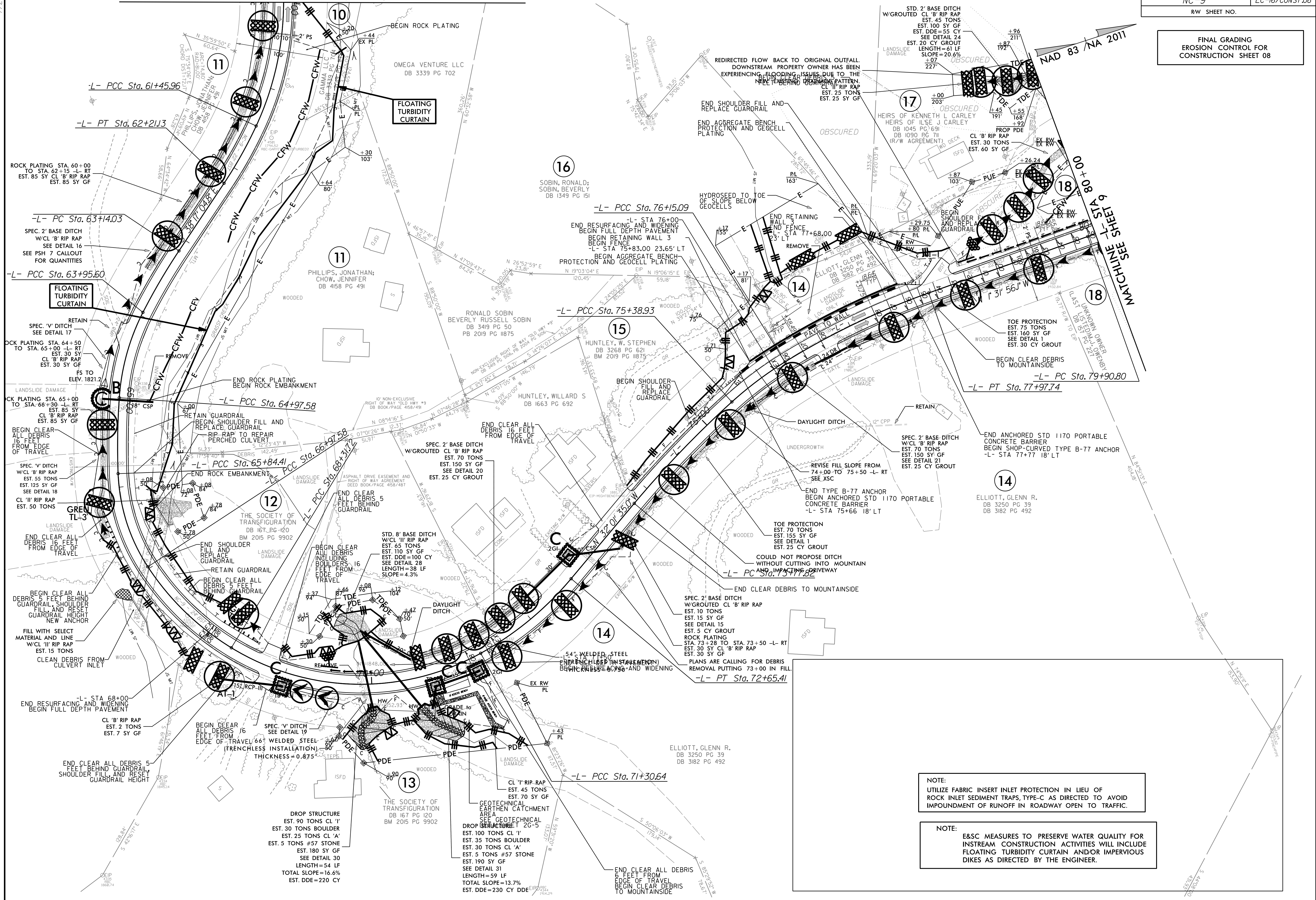
7/2/99

MATCHLINE -L- STA 60+00 SEE SHEET 7

NOTE: FOR -L- PROFILE SEE SHEET 13 & 14

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-16/CONST.08
RW SHEET NO.	

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 08



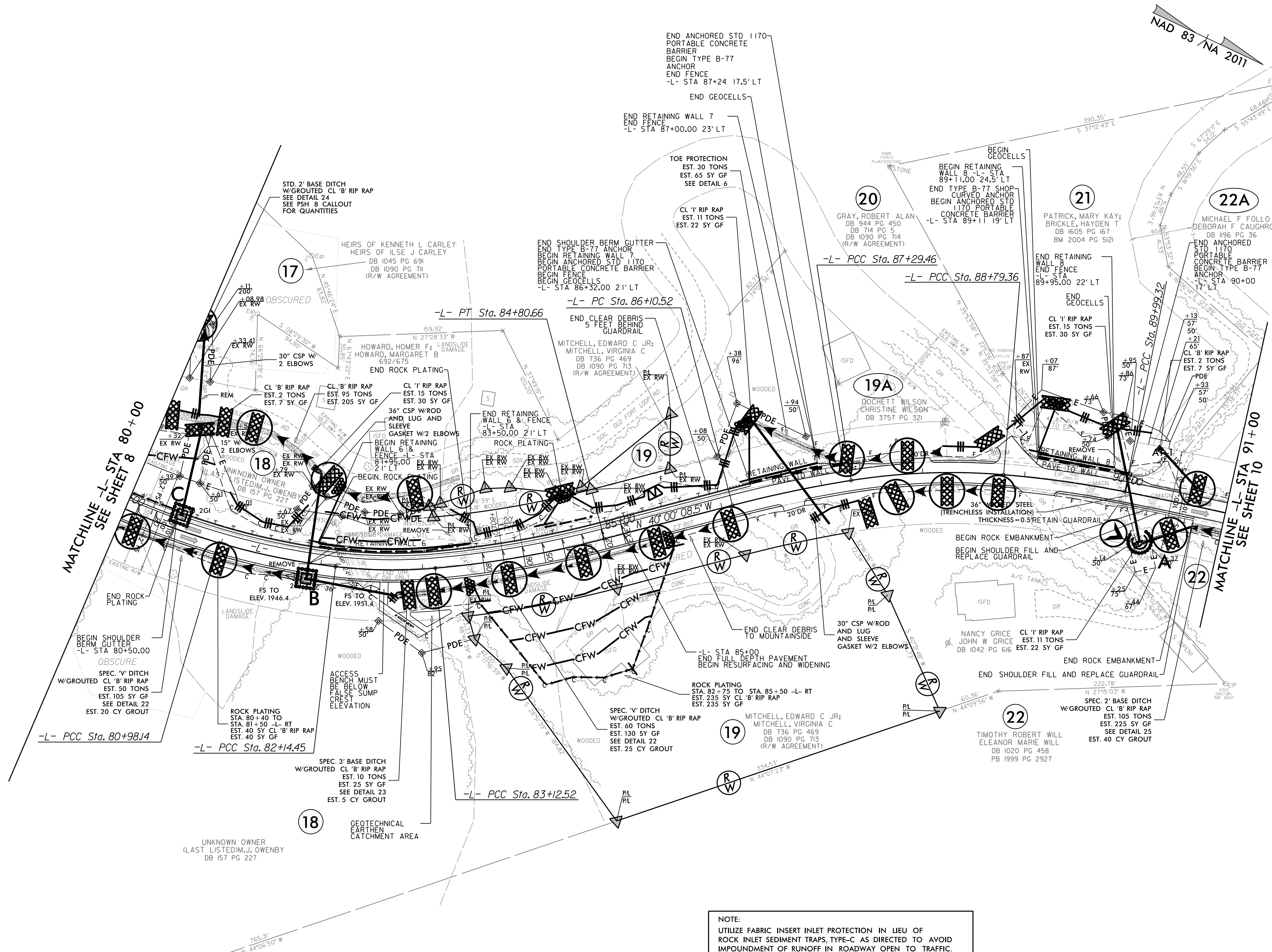
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF
ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID
IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTE:
E&SC MEASURES TO PRESERVE WATER QUALITY FOR
INSTREAM CONSTRUCTION ACTIVITIES WILL INCLUDE
FLOATING TURBIDITY CURTAIN AND/OR IMPERVIOUS
DIKES AS DIRECTED BY THE ENGINEER.

NOTE: FOR -L- PROFILE SEE SHEET 14

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-17/CONST.09
RW SHEET NO.	

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 09



7/22/99

NOTE: FOR -L- PROFILE SEE SHEET 14 & 15

PROJECT REFERENCE NO.	SHEET NO.
NC-9	EC-18/CONST.10
RW SHEET NO.	

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

NAD 83 / NA 2011

