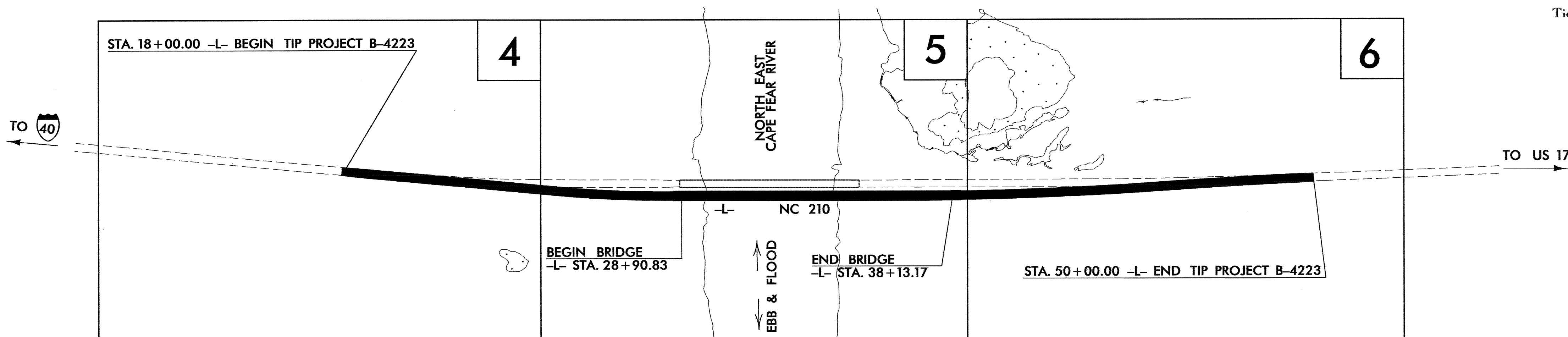
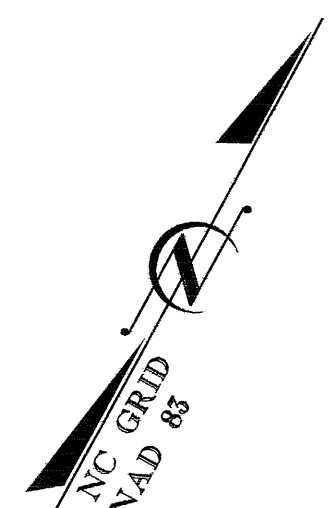


TIP PROJECT: B-4223

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

**LOCATION: BRIDGE NO. 21 ON NC 210 OVER
 NORTHEAST CAPE FEAR RIVER
 TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE**



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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4223	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
	Streambank Reforestation.....	
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.....	
1630.01	Riser Basin.....	
1630.02	Silt Basin Type B.....	
1633.01	Temporary Rock Silt Check Type-A.....	
	Temporary Rock Silt Check Type-B.....	
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.....	
	Rock Inlet Sediment Trap:	
	Type A.....	
1632.01	Type B.....	
1632.02	Type C.....	
1632.03	Type C.....	
	Skimmer Basin.....	
	Tiered Skimmer Basin.....	

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2006 STANDARD SPECIFICATIONS

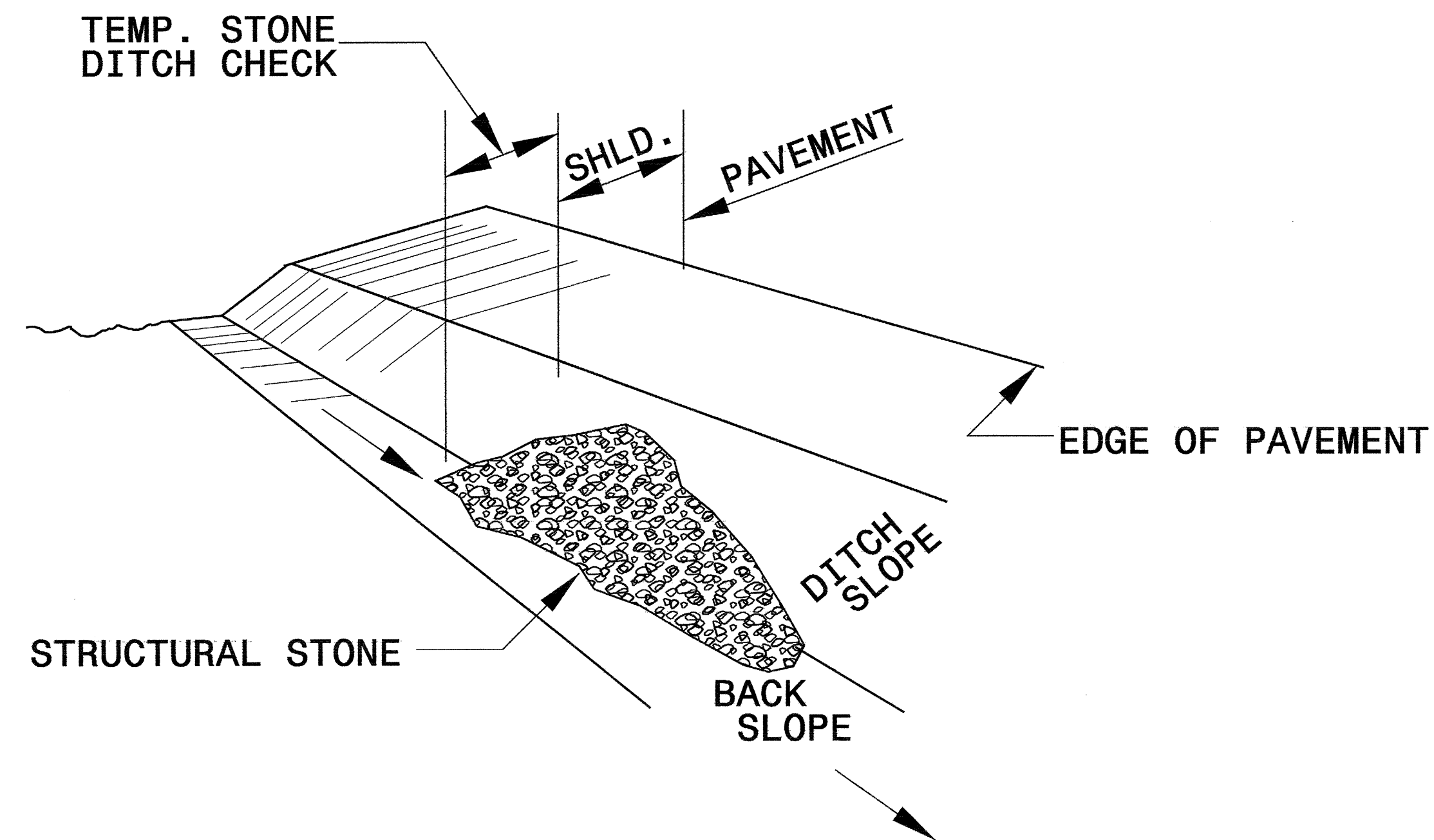
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.06 Special Stilling Basin
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	1634.02 Temporary Rock Sediment Dam Type B
1630.05 Temporary Diversion	

PROJECT REFERENCE NO. B-4223	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

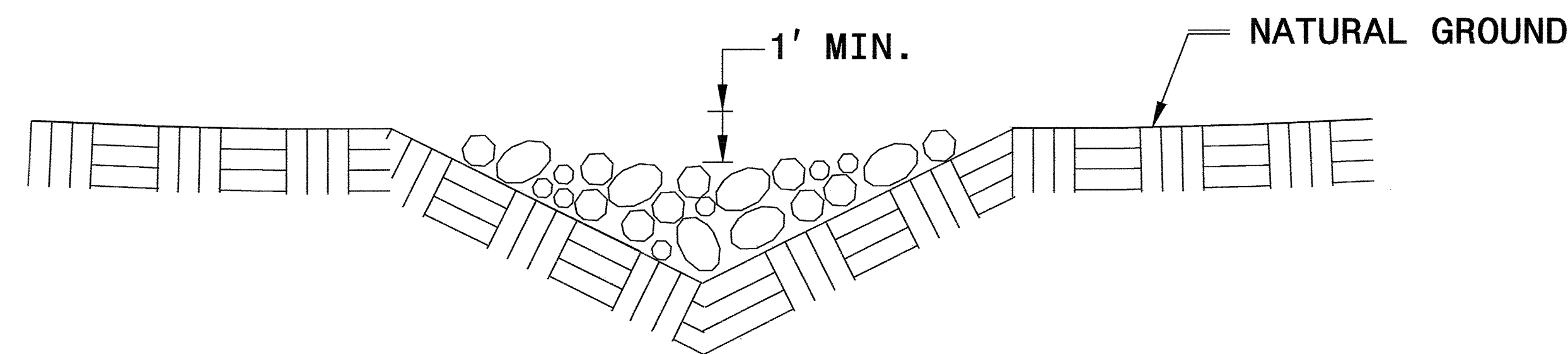


ISOMETRIC VIEW

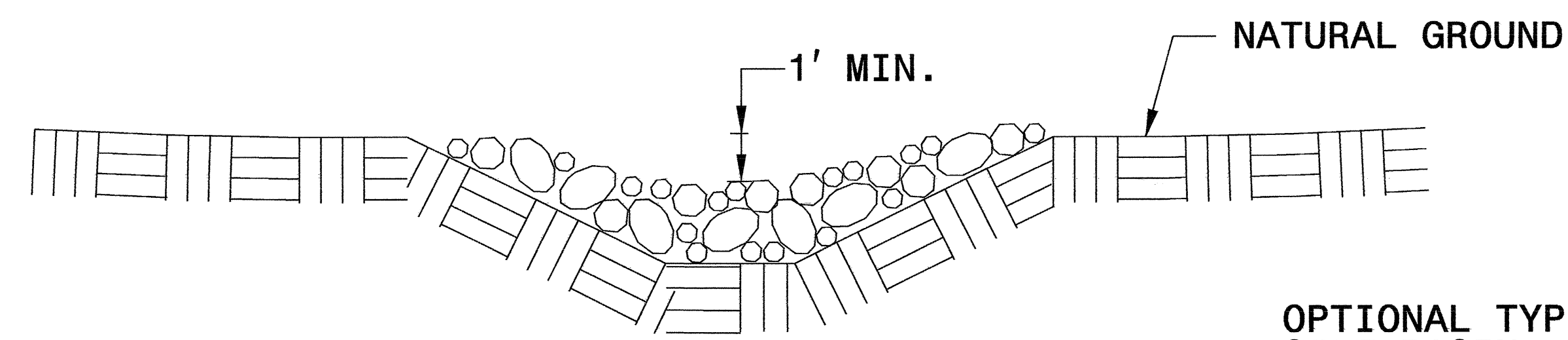
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

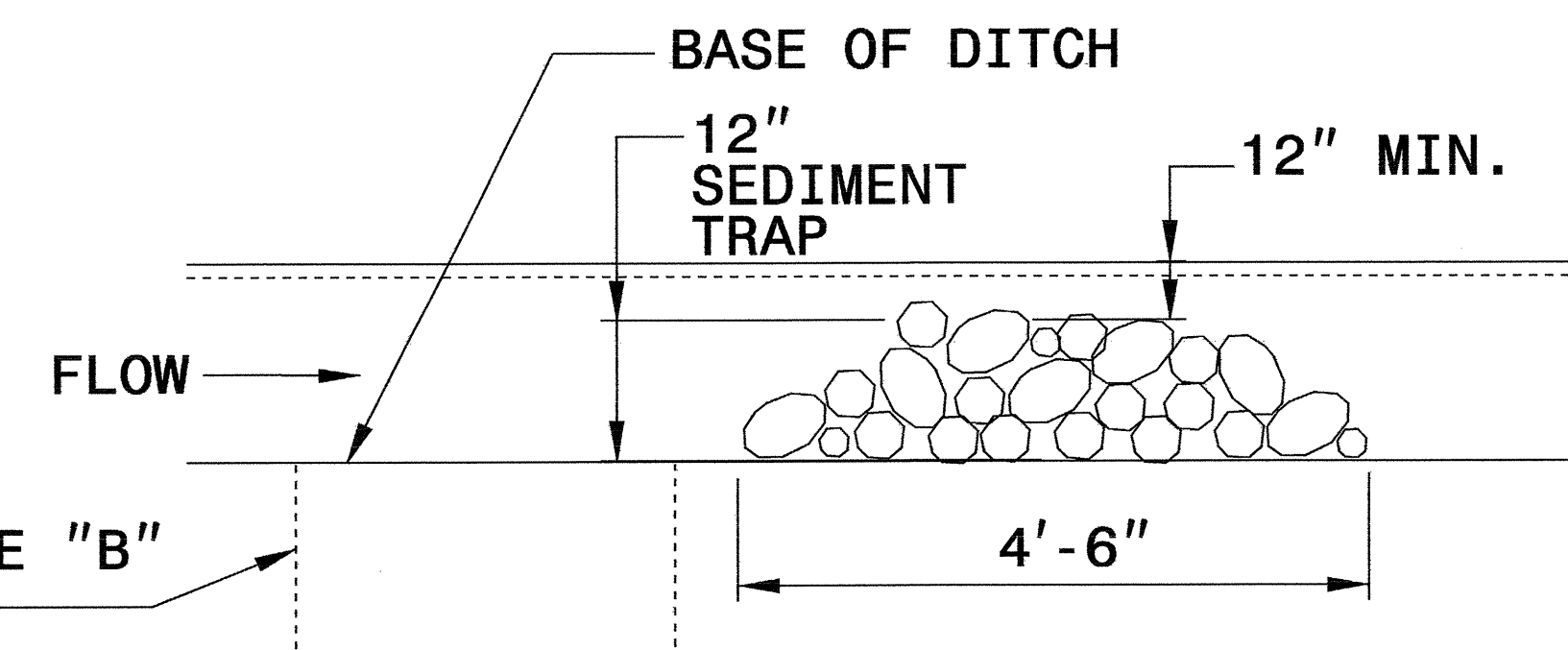
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



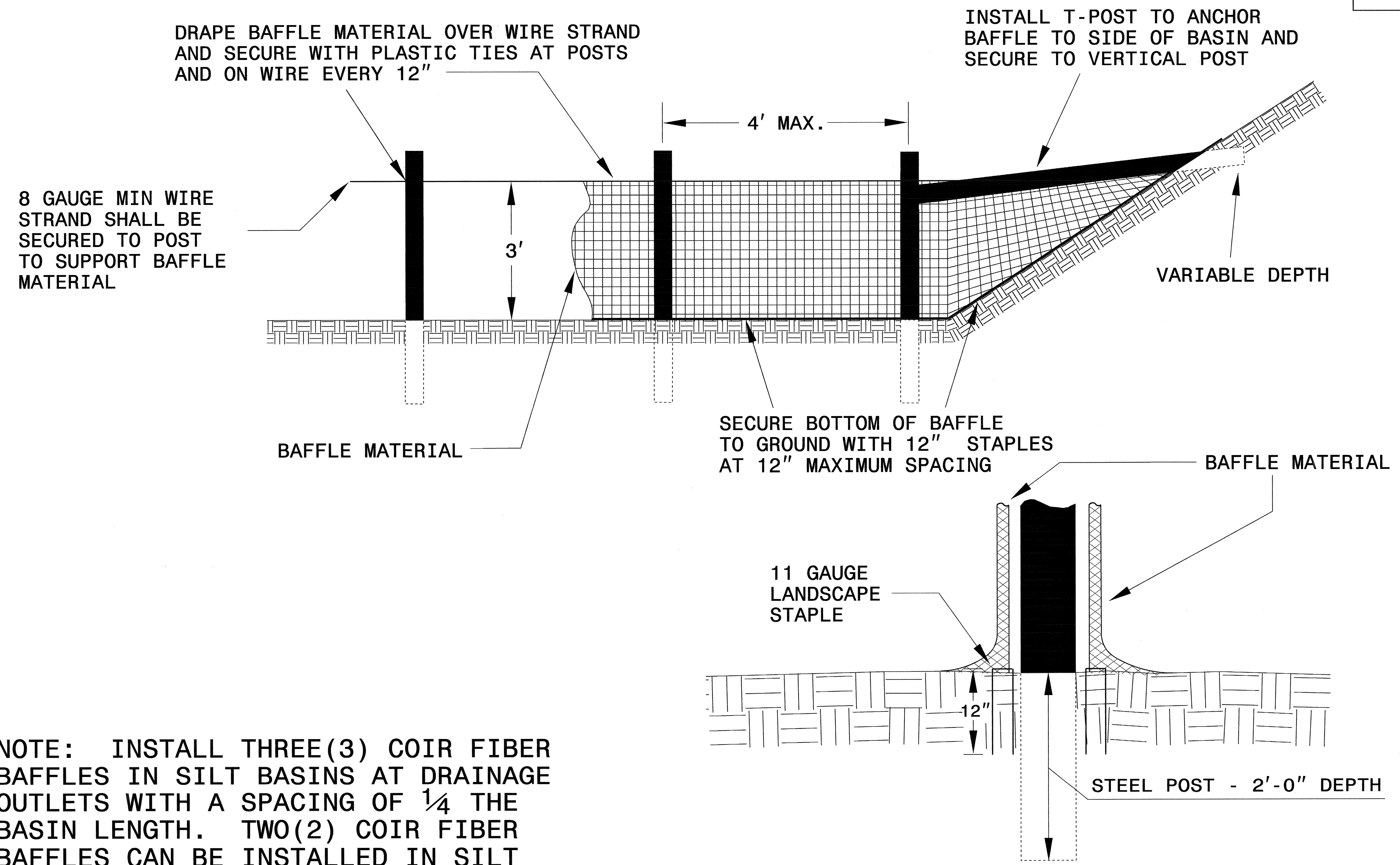
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

PROJECT REFERENCE NO. B-4223	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL

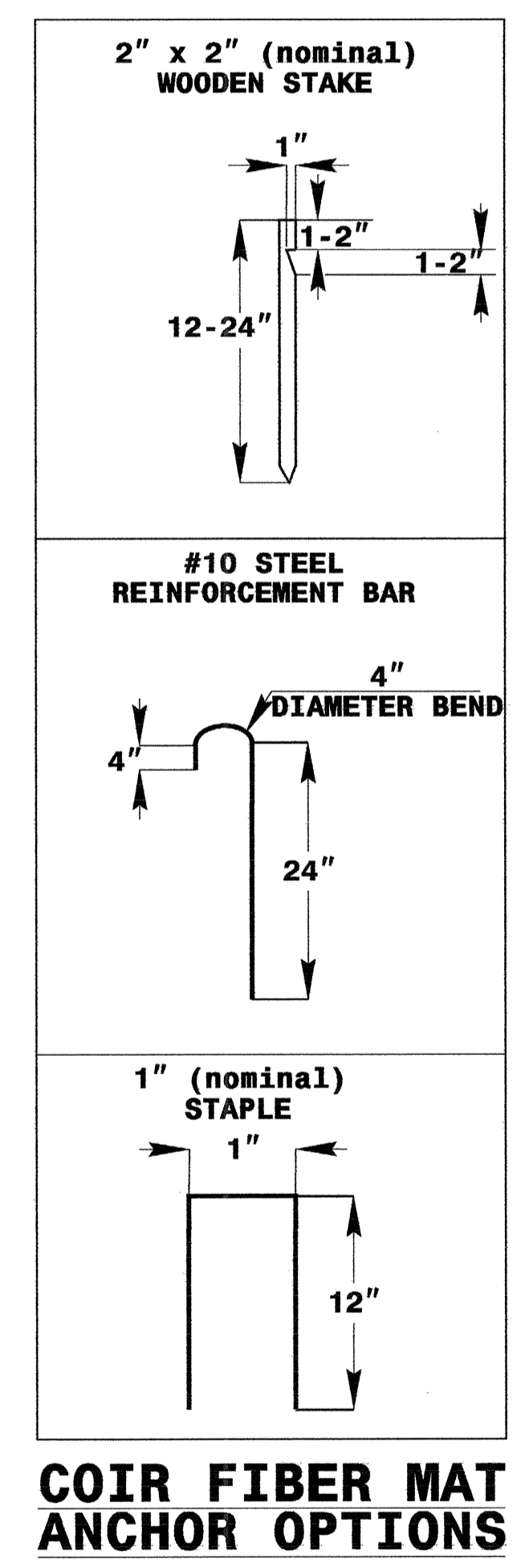
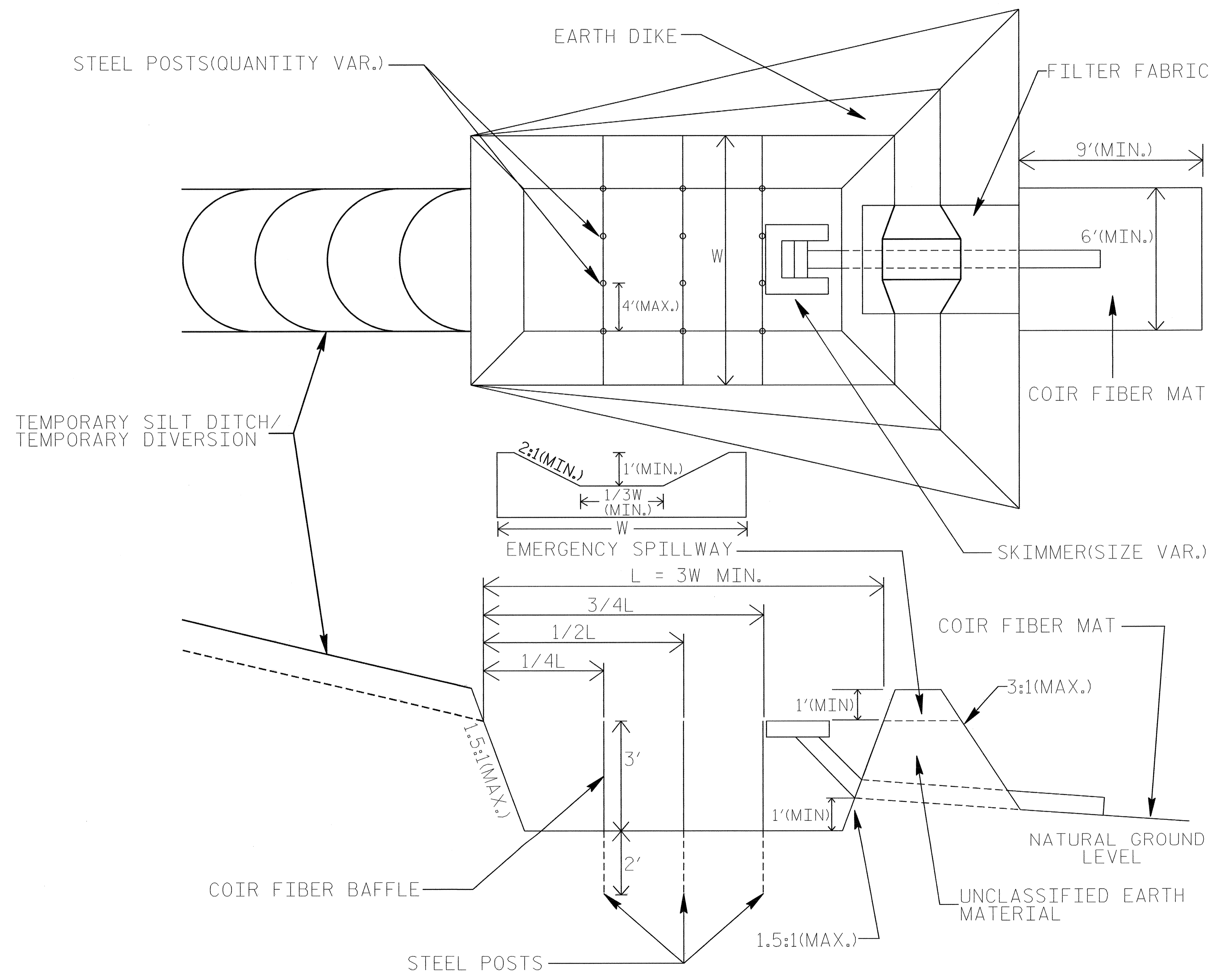


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

SKIMMER BASIN WITH BAFFLES DETAIL

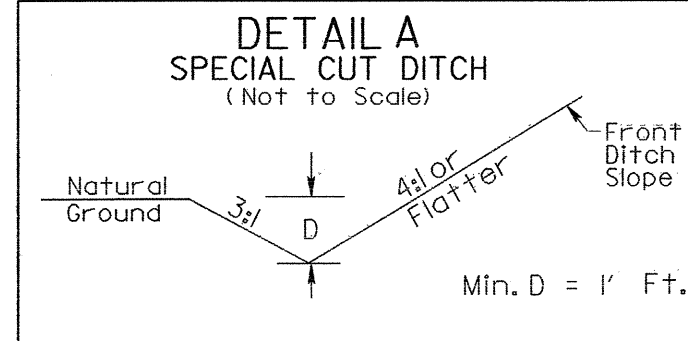
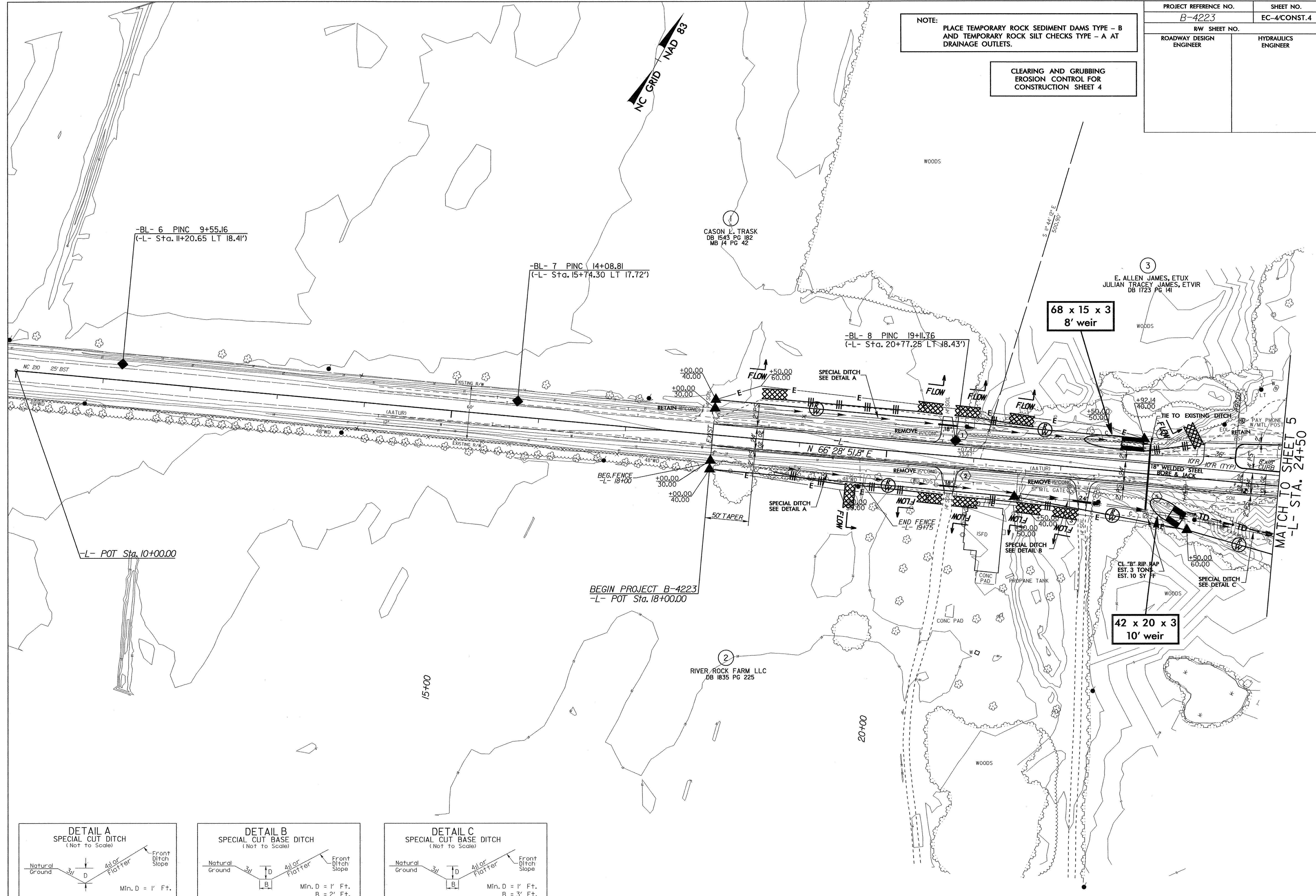
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



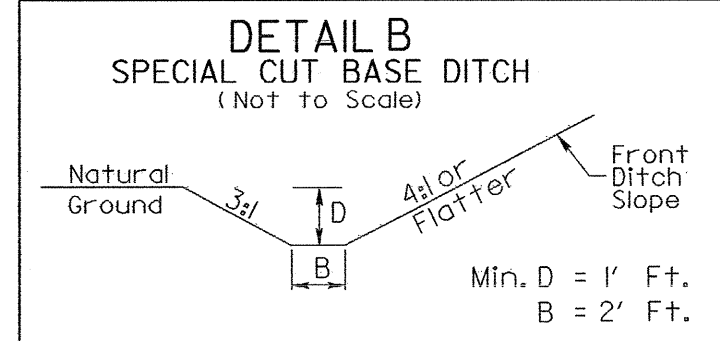
PROJECT REFERENCE NO.	SHEET NO.
B-4223	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

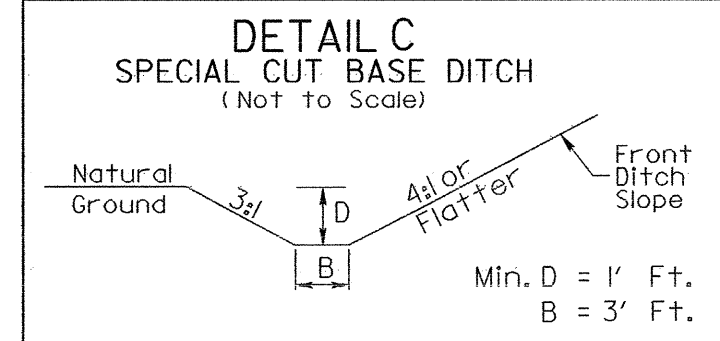
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4



-L- STA 18+50 TO 21+50 RT
-L- STA 18+50 TO 23+00 LT



-L- STA 21+50 TO 23+00 RT



-L- STA 23+00 TO 24+50 RT

MATCH TO SHEET 5
-L- STA. 24+50

FOR -L- PROFILE SEE SHEET 7

PROJECT REFERENCE NO.	SHEET NO.
B-4223	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-
 PI Sta 26+88.46 Δ = 5° 16' 18.7" (LT)
 D = 1' 41" 06.6"
 L = 312.84'
 T = 156.53'
 R = 3,400.00'
 SE = 04
 V = 60 mph

PI Sta 40+41.84 Δ = 3° 42' 50.0" (LT)
 D = 0' 28" 38.9"
 L = 777.84'
 T = 389.05'
 R = 12,000.00'
 SE = 02
 V = 60 mph

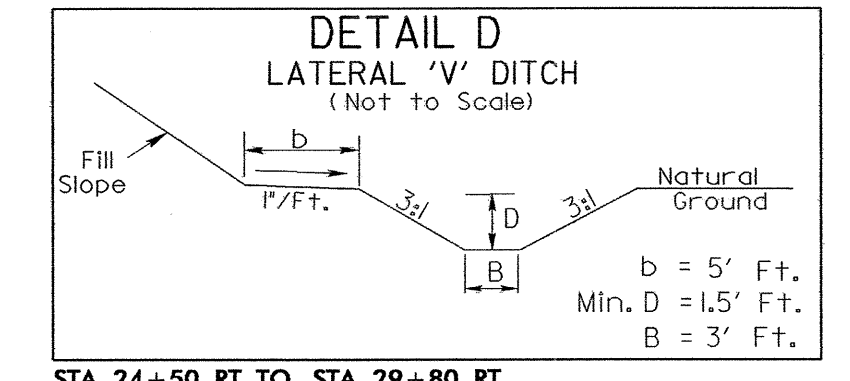
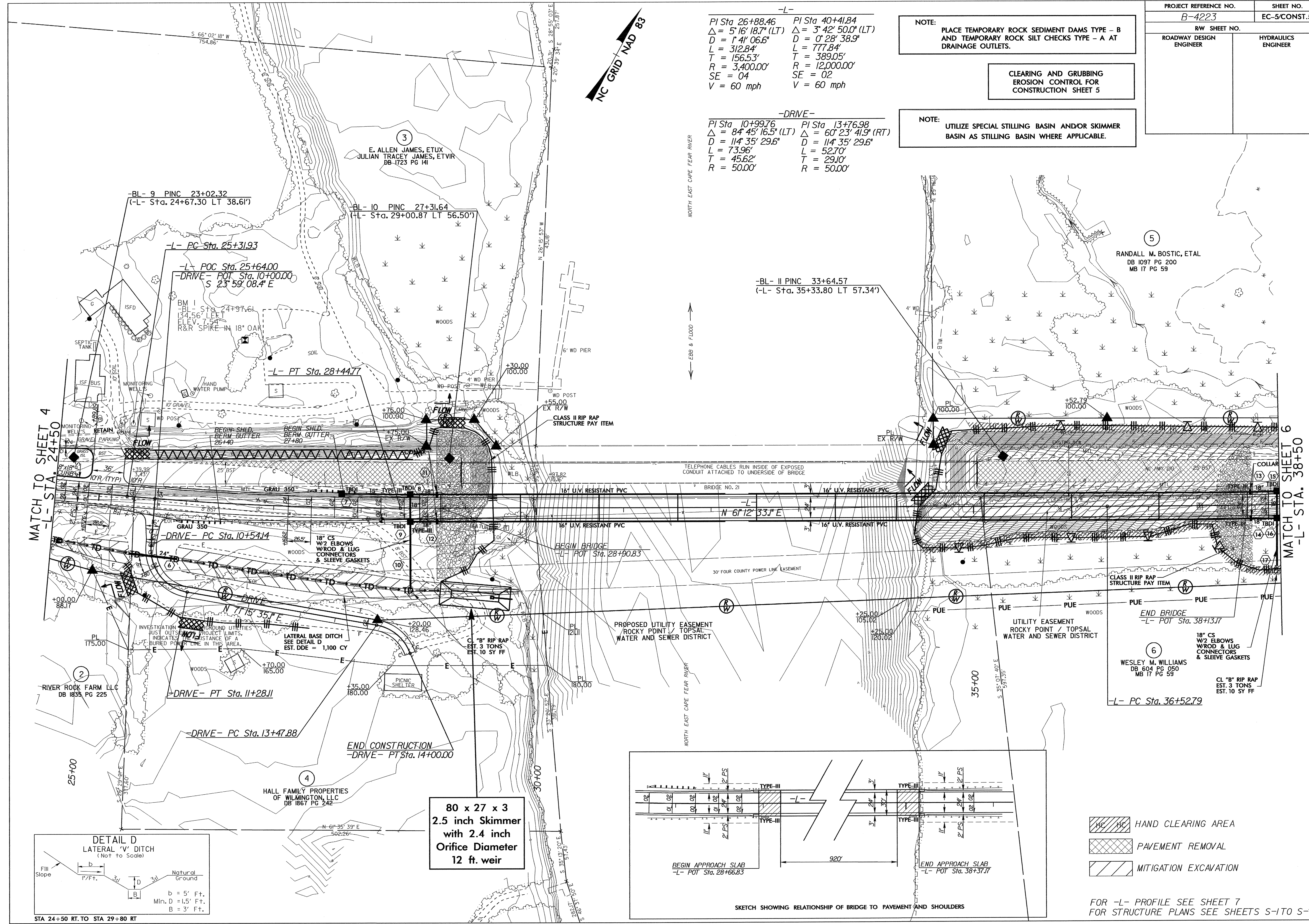
NOTE:
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

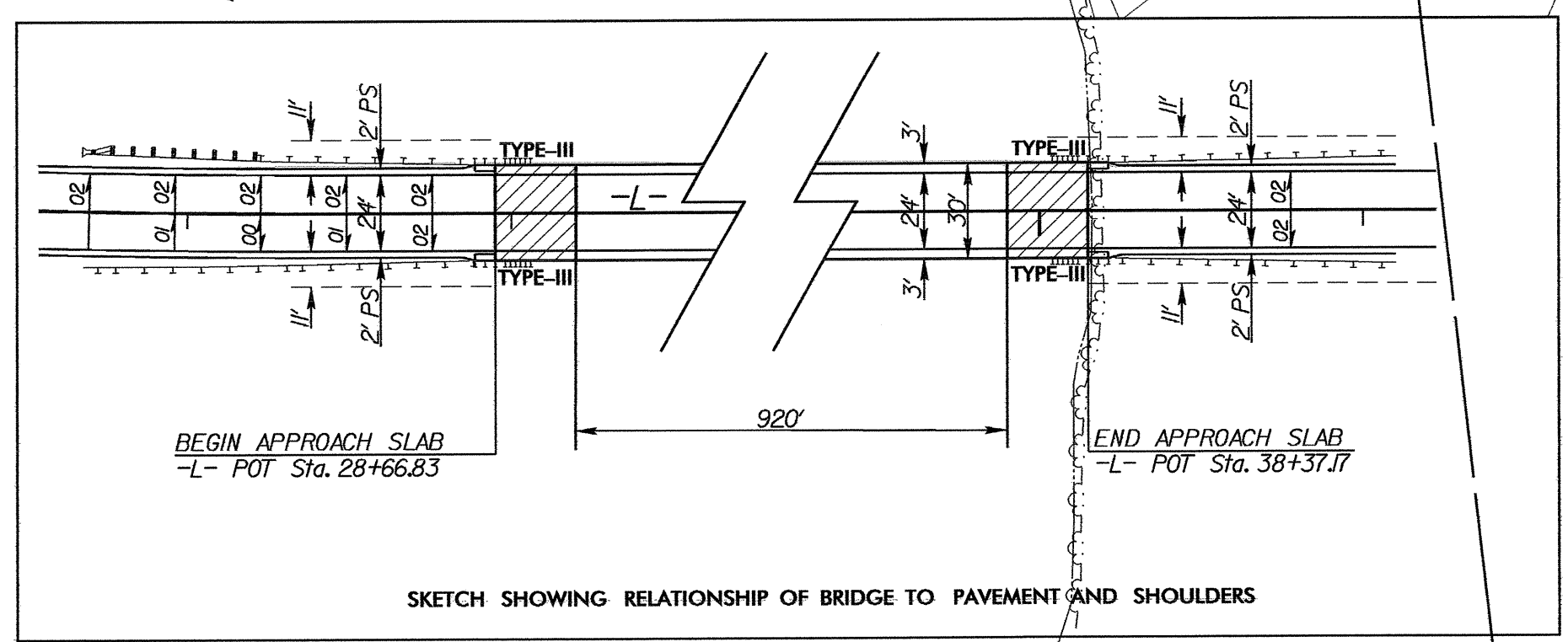
-DRIVE-
 PI Sta 10+99.76 Δ = 84° 45' 16.5" (LT)
 D = 114° 35' 29.6"
 L = 73.96'
 T = 45.62'
 R = 50.00'

PI Sta 13+76.98 Δ = 60° 23' 41.9" (RT)
 D = 114° 35' 29.6"
 L = 52.70'
 T = 29.10'
 R = 50.00'

NOTE:
 UTILIZE SPECIAL STILLING BASIN AND/OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.



80 x 27 x 3
 2.5 inch Skimmer
 with 2.4 inch
 Orifice Diameter
 12 ft. weir



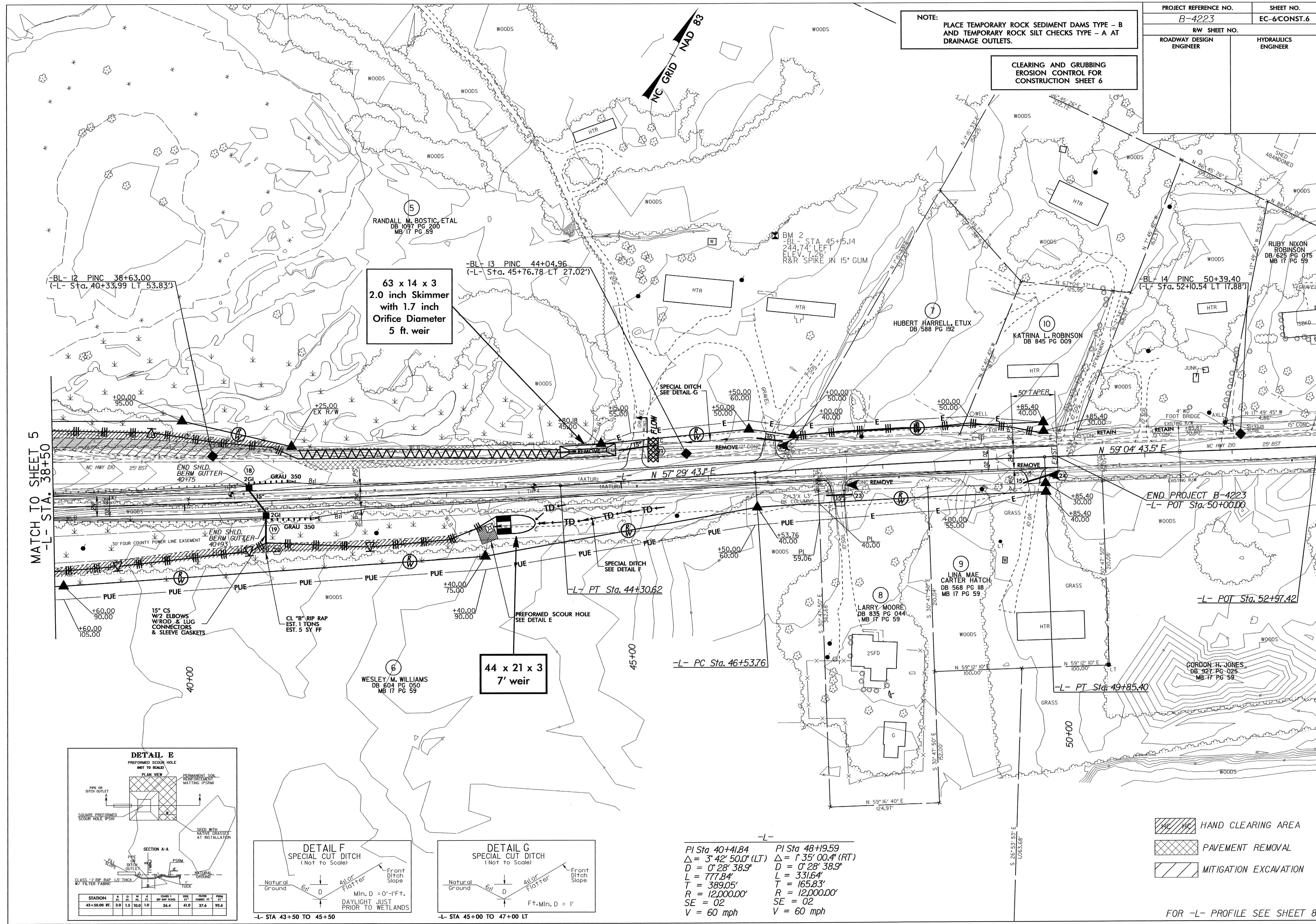
- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

FOR -L- PROFILE SEE SHEET 7
 FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-??

PROJECT REFERENCE NO.	SHEET NO.
B-4223	EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

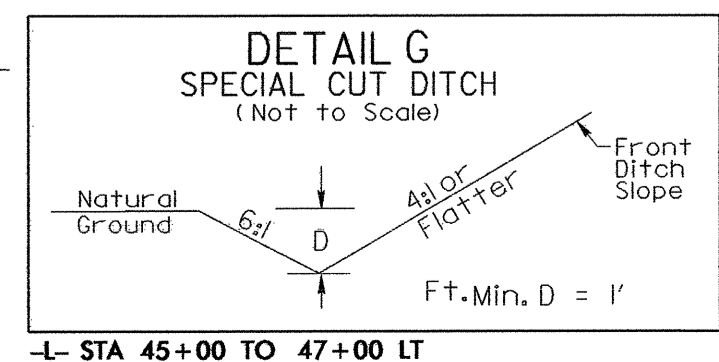
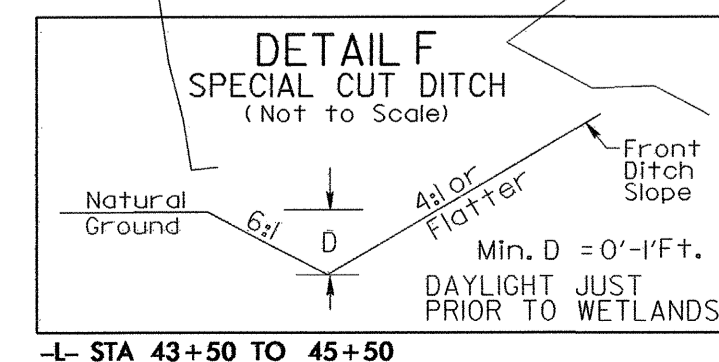
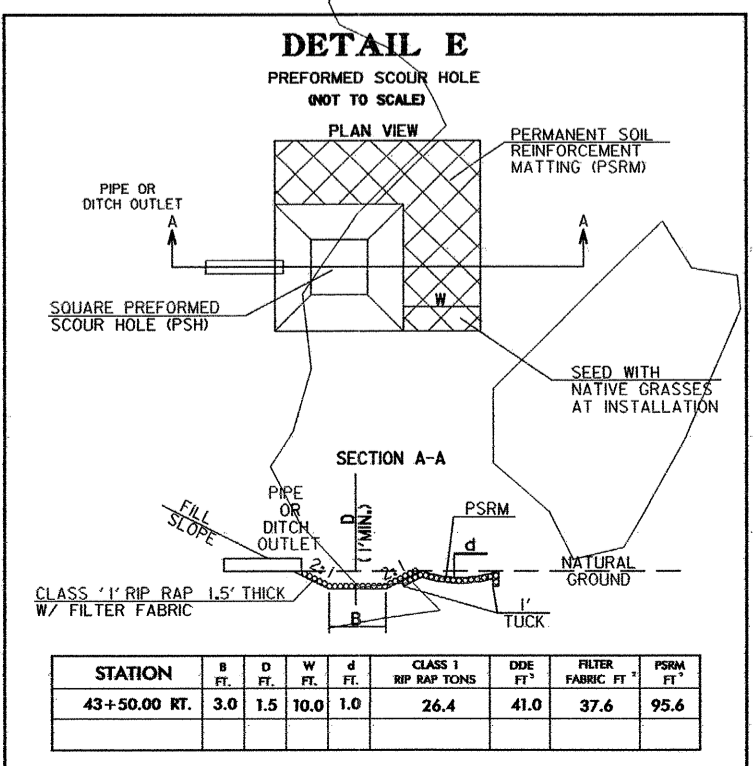
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6



MATCH TO SHEET 5
-L- STA. 38+50

END PROJECT B-4223
-L- POT Sta. 50+00.00

-L- POT Sta. 52+97.42



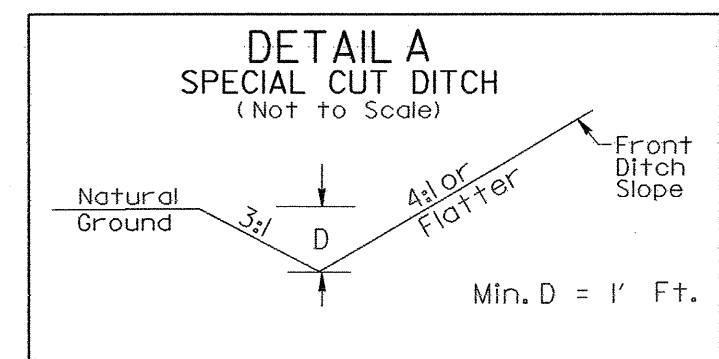
-L-

PI Sta 40+41.84	PI Sta 48+19.59
$\Delta = 3^{\circ} 42' 50.0''$ (LT)	$\Delta = 1^{\circ} 35' 00.4''$ (RT)
D = 0' 28' 38.9"	D = 0' 28' 38.9"
L = 777.84'	L = 331.64'
T = 389.05'	T = 165.83'
R = 12,000.00'	R = 12,000.00'
SE = 02	SE = 02
V = 60 mph	V = 60 mph

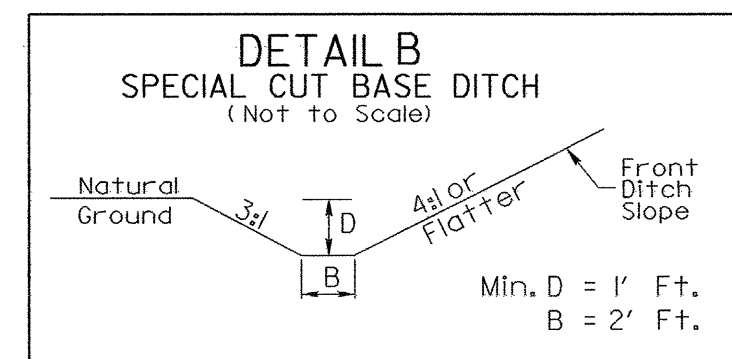
- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

FOR -L- PROFILE SEE SHEET 8

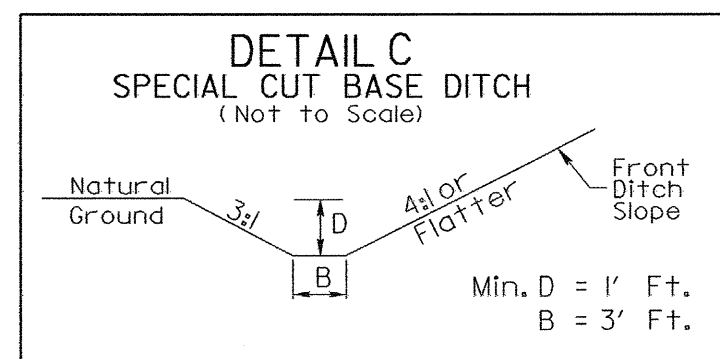
PROJECT REFERENCE NO.	SHEET NO.
B-4223	EC-7/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L- STA 18+50 TO 21+50 RT
-L- STA 18+50 TO 23+00 LT



-L- STA 21+50 TO 23+00 RT



-L- STA 23+00 TO 24+50 RT

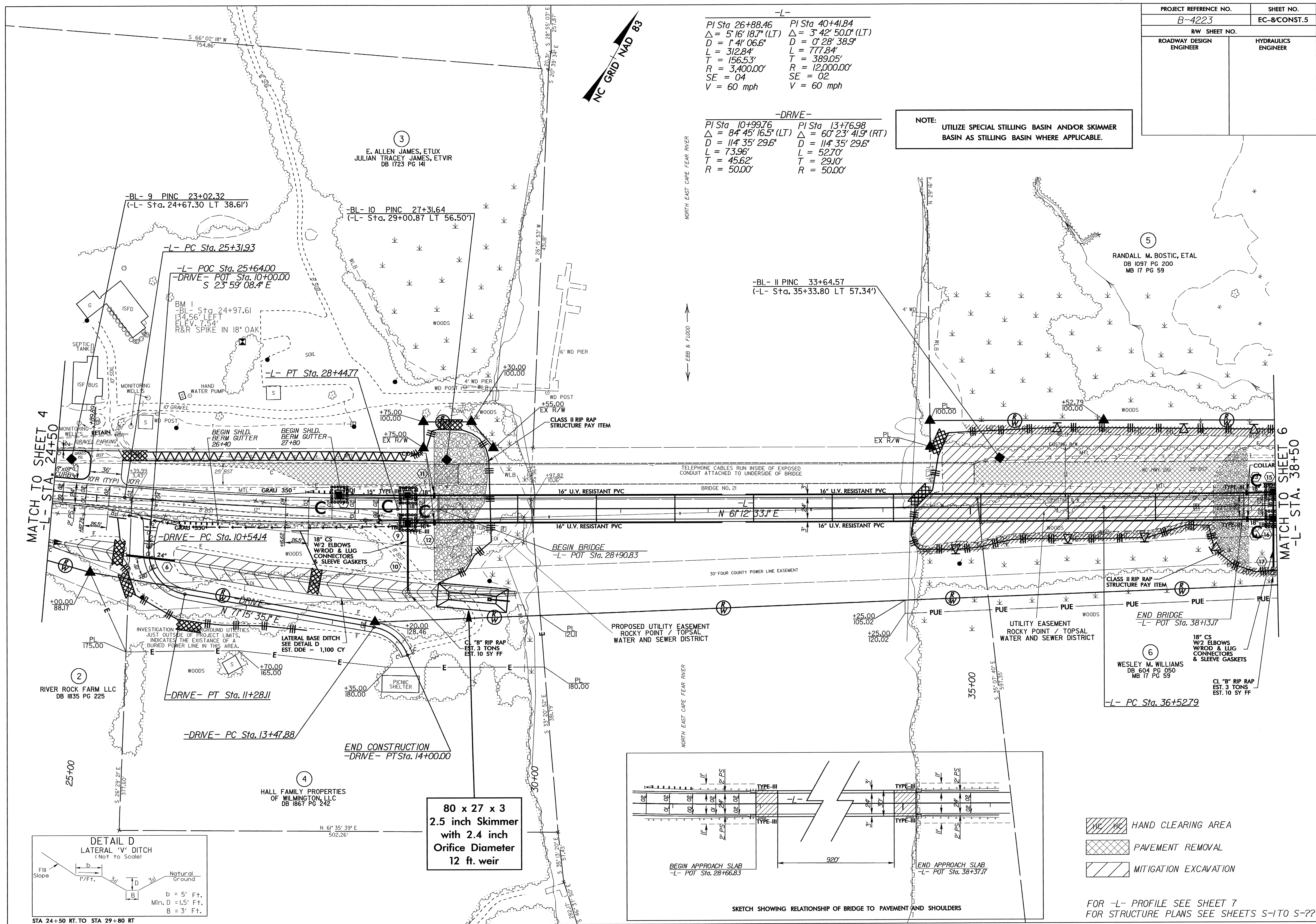
FOR -L- PROFILE SEE SHEET 7

PROJECT REFERENCE NO.	SHEET NO.
B-4223	EC-B/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-
 PI Sta 26+88.46 PI Sta 40+41.84
 $\Delta = 5' 16' 18.7''$ (LT) $\Delta = 3' 42' 50.0''$ (LT)
 $D = 1' 41' 06.6''$ $D = 0' 28' 38.9''$
 $L = 312.84'$ $L = 777.84'$
 $T = 156.53'$ $T = 389.05'$
 $R = 3,400.00'$ $R = 12,000.00'$
 $SE = 04$ $SE = 02$
 $V = 60$ mph $V = 60$ mph

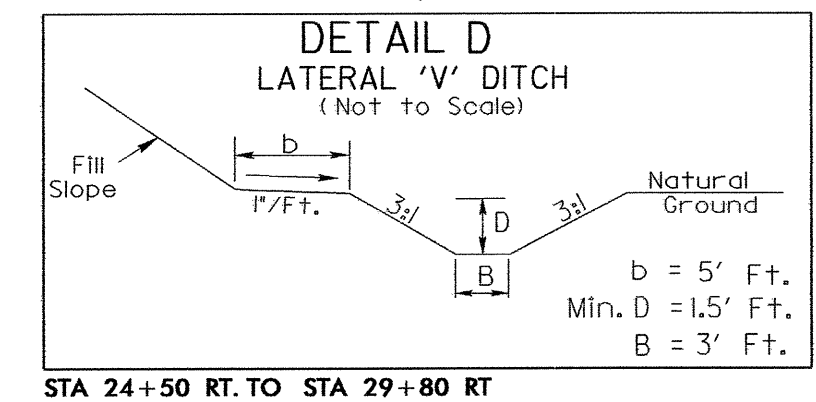
-DRIVE-
 PI Sta 10+99.76 PI Sta 13+76.98
 $\Delta = 84' 45' 16.5''$ (LT) $\Delta = 60' 23' 41.9''$ (RT)
 $D = 114' 35' 29.6''$ $D = 114' 35' 29.6''$
 $L = 73.96'$ $L = 52.70'$
 $T = 45.62'$ $T = 29.10'$
 $R = 50.00'$ $R = 50.00'$

NOTE: UTILIZE SPECIAL STILLING BASIN AND/OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

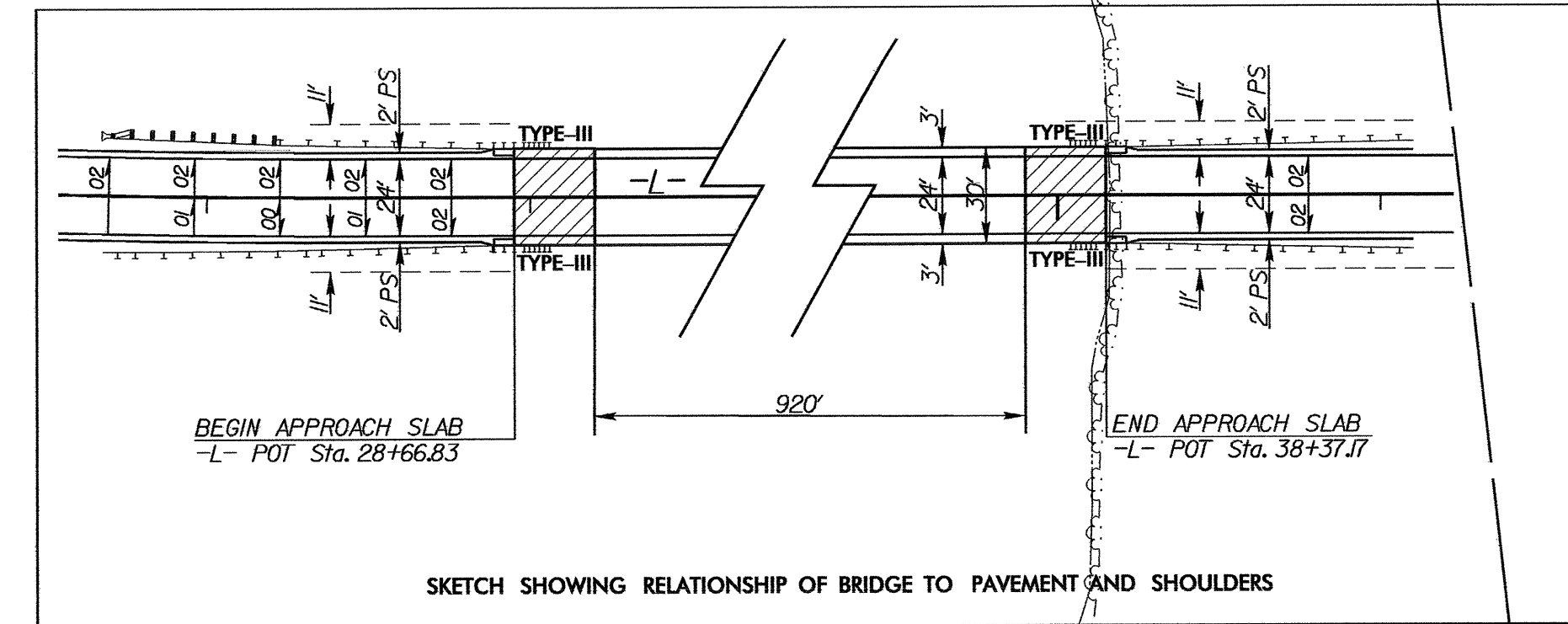


MATCH TO SHEET 4
-L- STA. 24+50

MATCH TO SHEET 6
-L- STA. 38+50



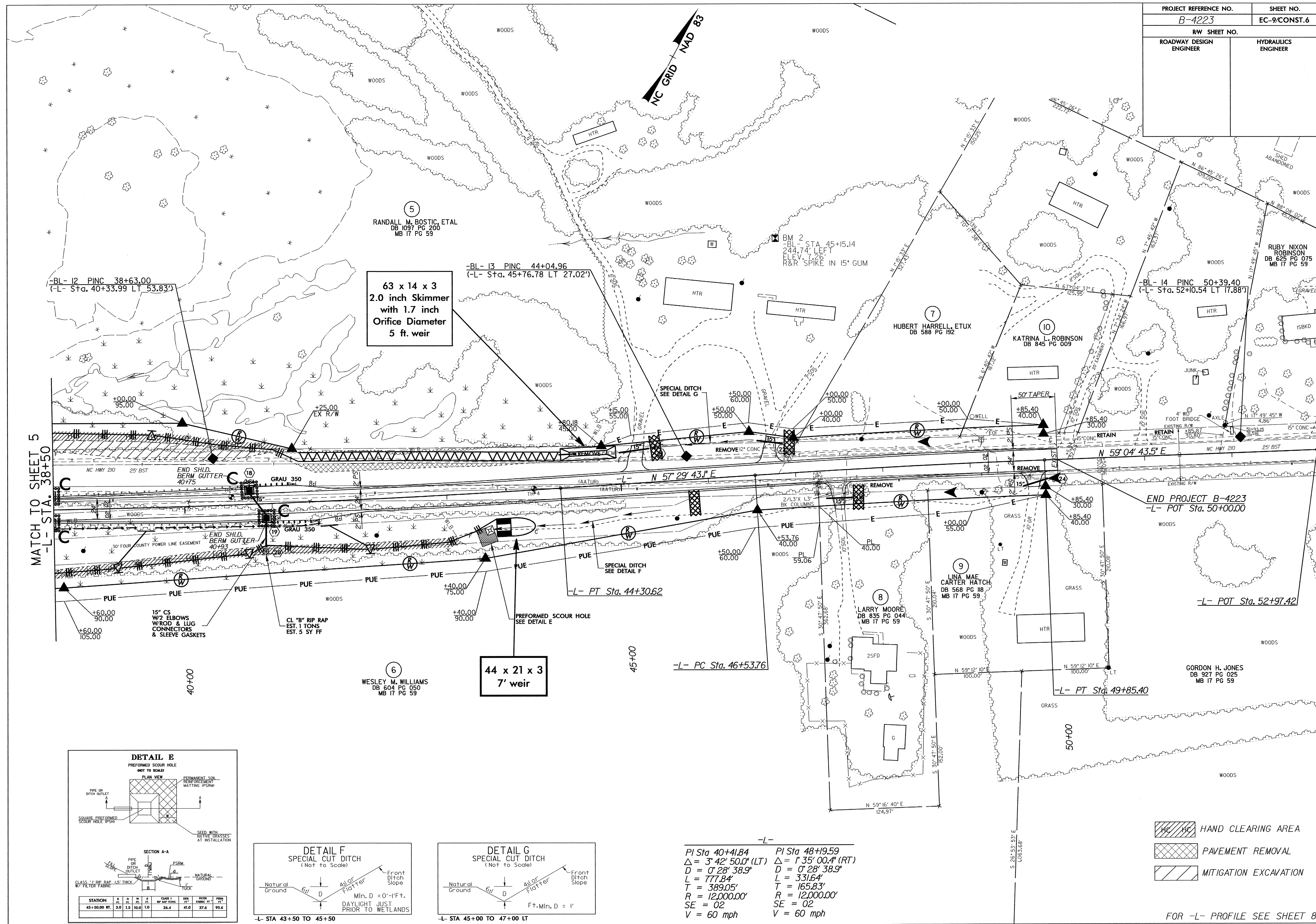
80 x 27 x 3
 2.5 inch Skimmer
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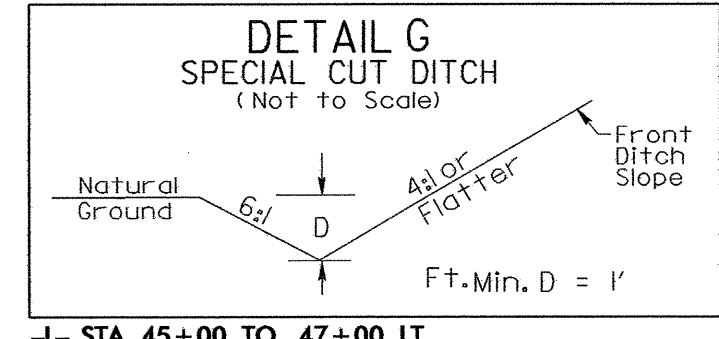
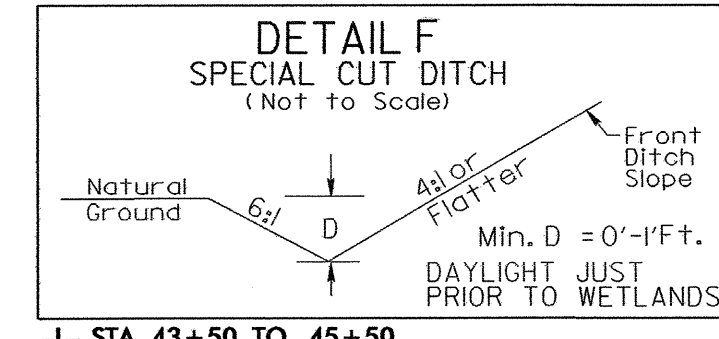
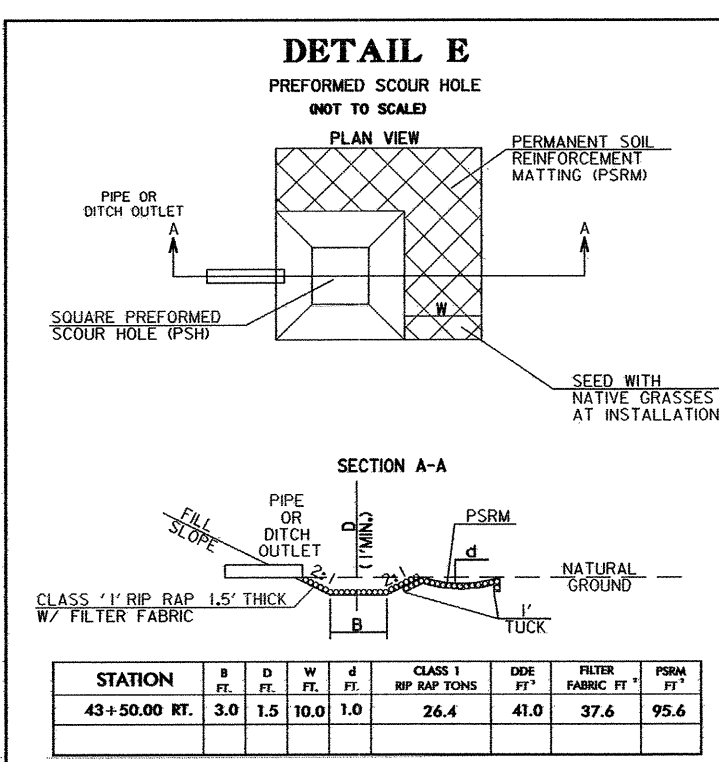
- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

FOR -L- PROFILE SEE SHEET 7
 FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-??

PROJECT REFERENCE NO.		SHEET NO.	
B-4223		EC-9/CONST.6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



MATCH TO SHEET 5
-L- STA. 38+50



-L-

PI Sta 40+41.84 Δ = 3° 42' 50.0" (LT) D = 0' 28' 38.9" L = 777.84' T = 389.05' R = 12,000.00' SE = 02 V = 60 mph	PI Sta 48+19.59 Δ = 1° 35' 00.4" (RT) D = 0' 28' 38.9" L = 331.64' T = 165.83' R = 12,000.00' SE = 02 V = 60 mph
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- HAND CLEARING AREA
- PAVEMENT REMOVAL
- MITIGATION EXCAVATION

FOR -L- PROFILE SEE SHEET 8