



# DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

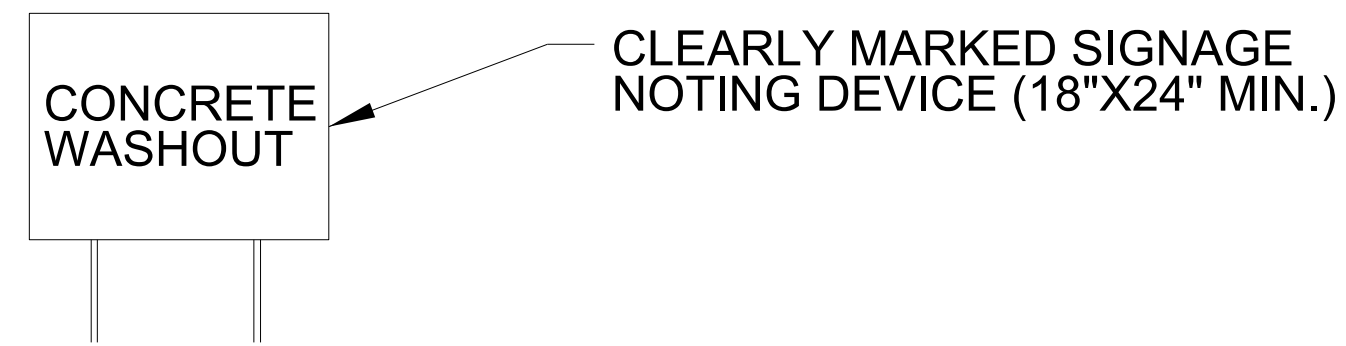
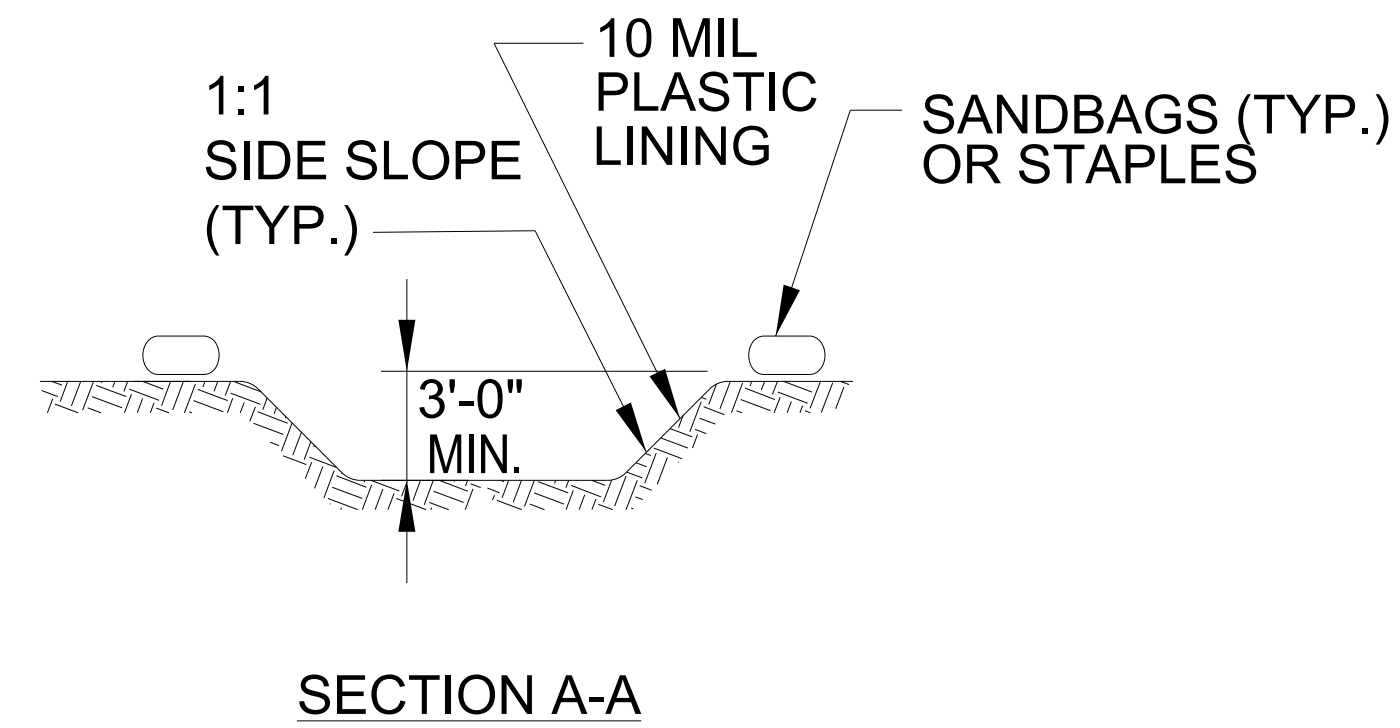
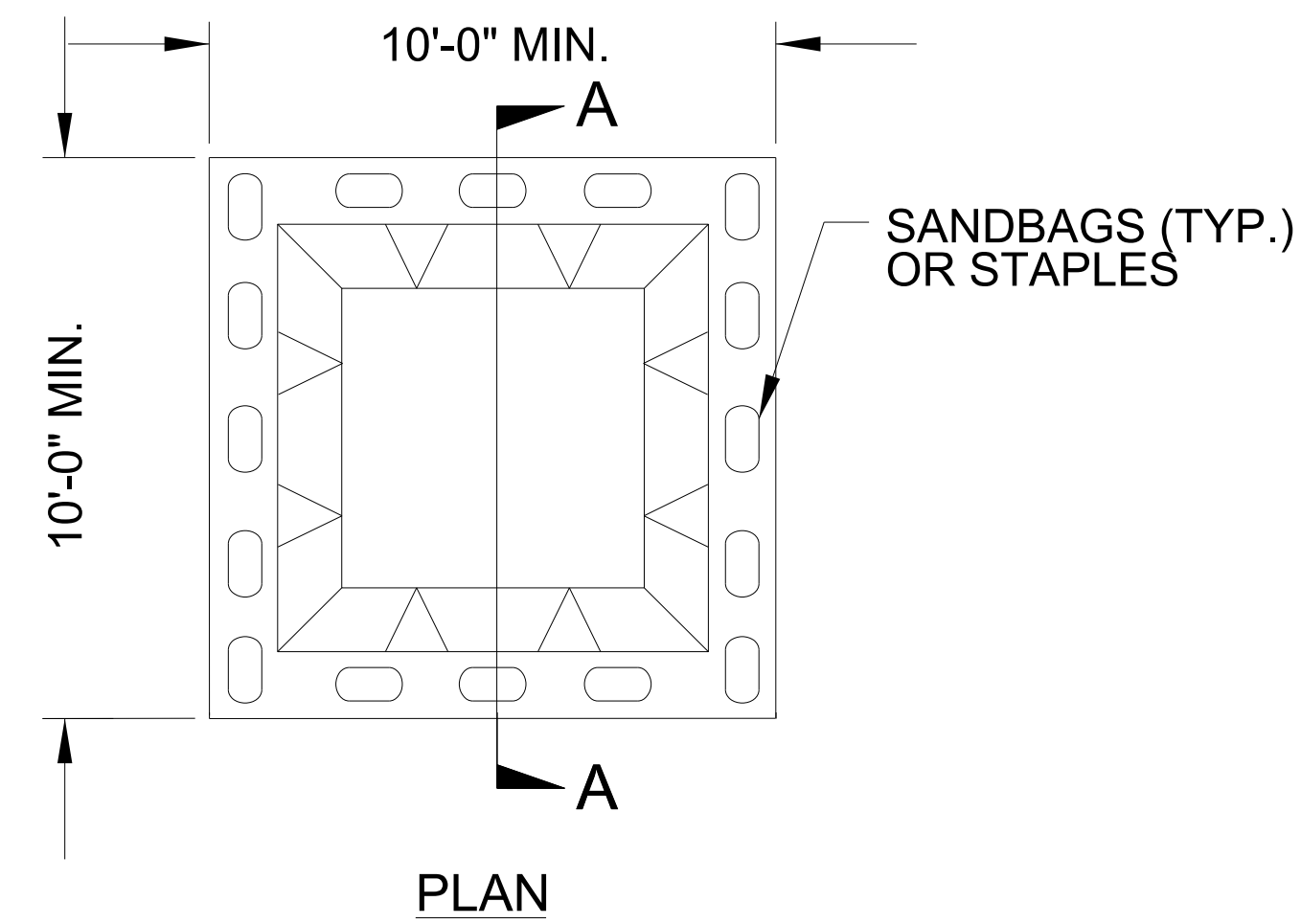
PROJECT REFERENCE NO. <b>U-6020</b>	SHEET NO. <b>EC-2</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

## EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.02	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

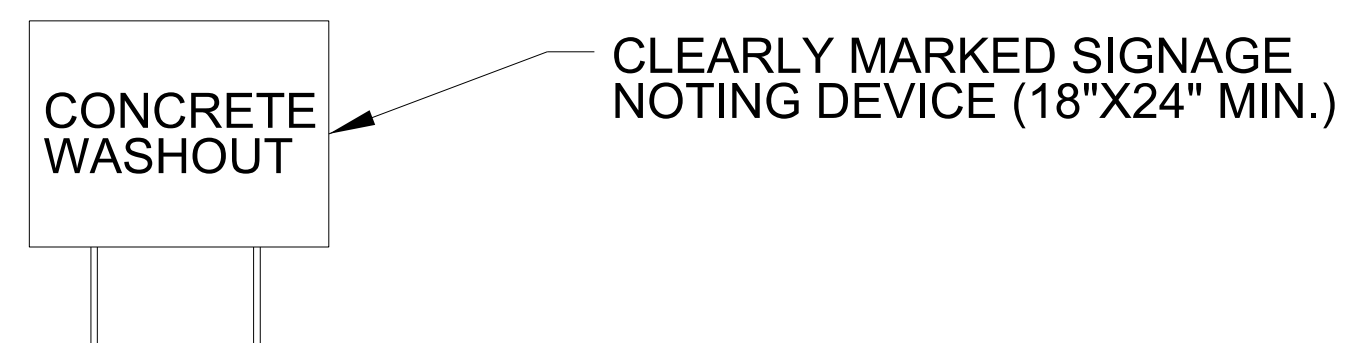
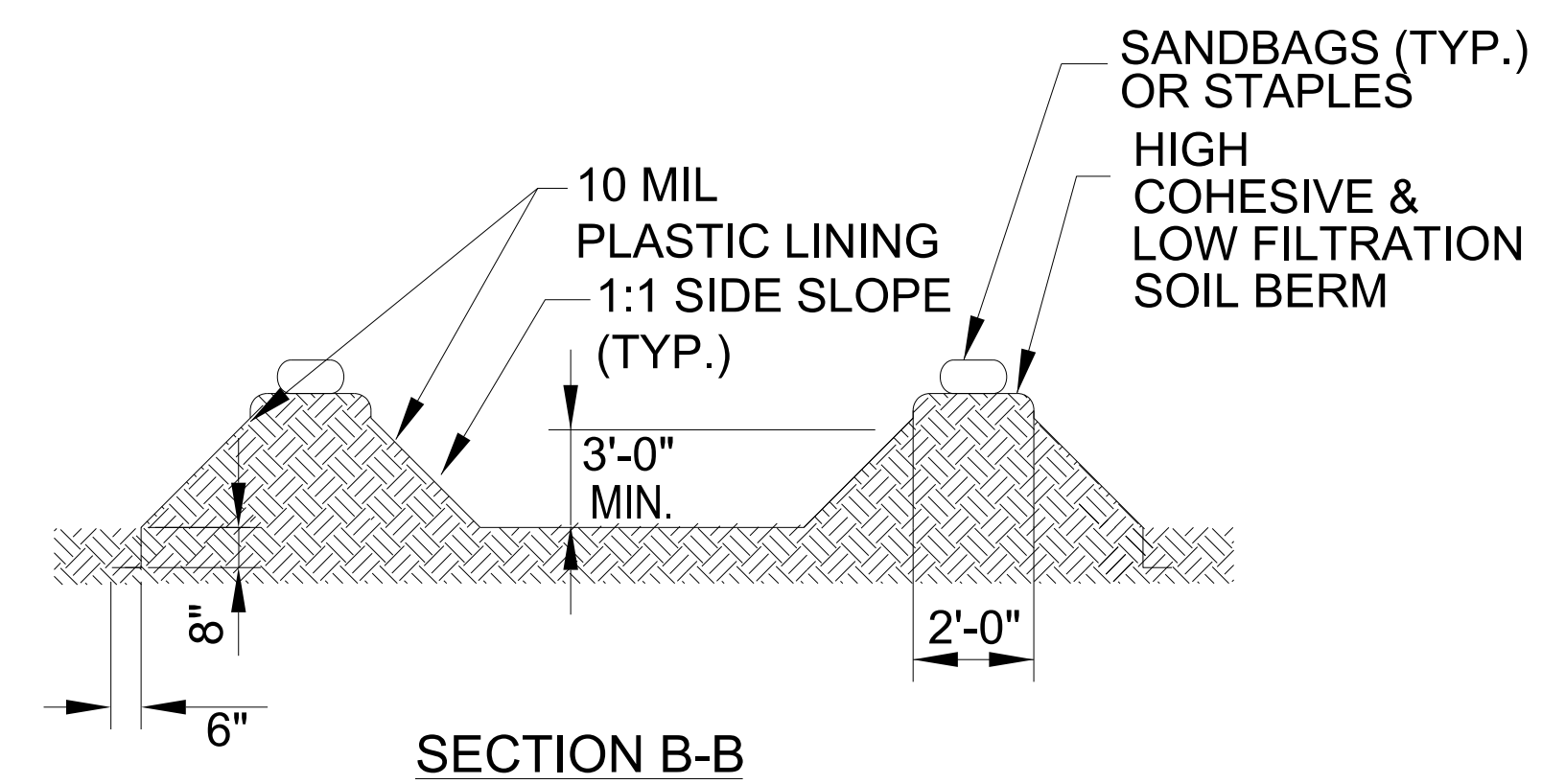
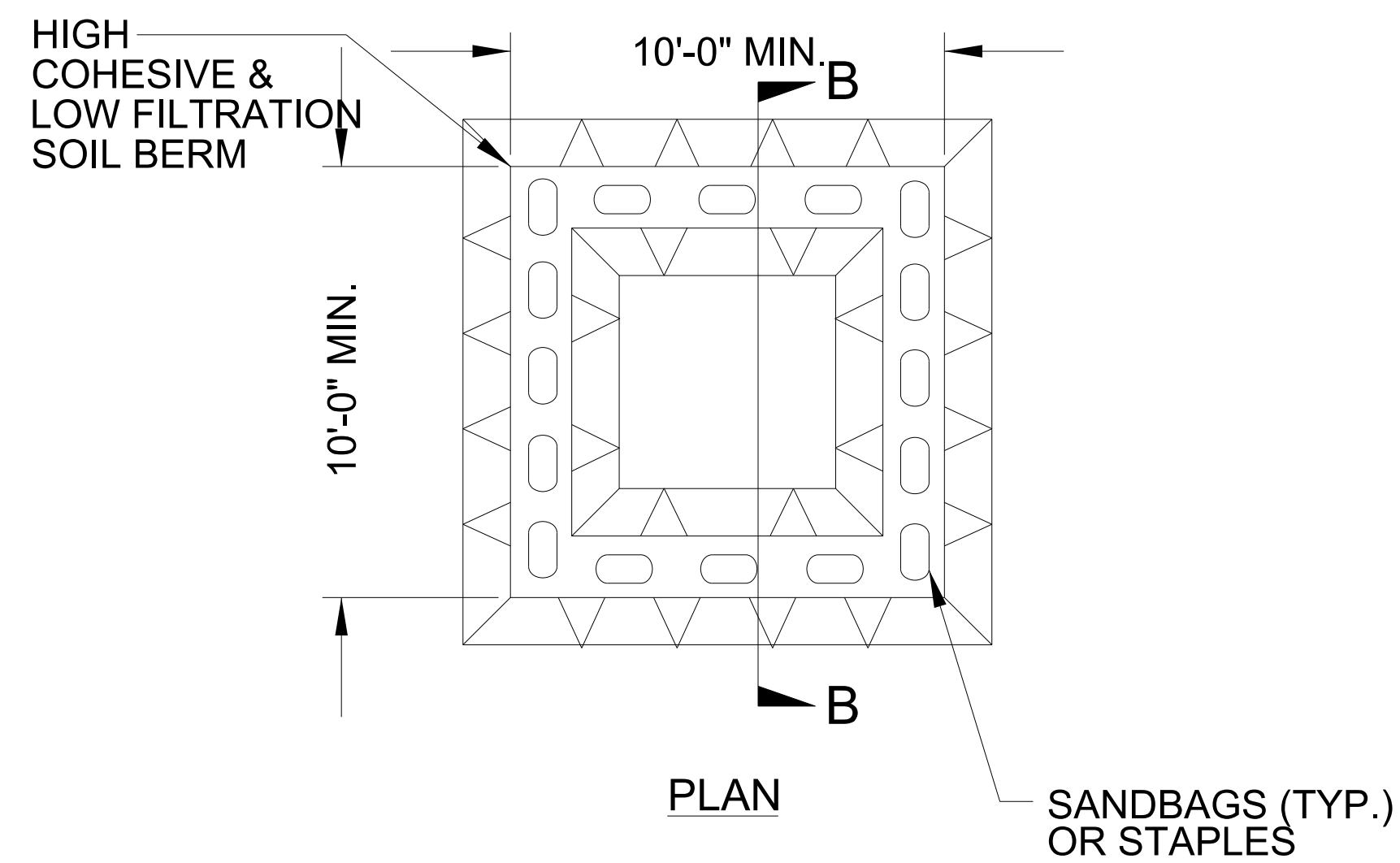
PROJECT REFERENCE NO.	SHEET NO.
U-6020	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



**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

- 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.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>U-6020</i>	SHEET NO. <i>EC-3</i>

# SOIL STABILIZATION TIMEFRAMES

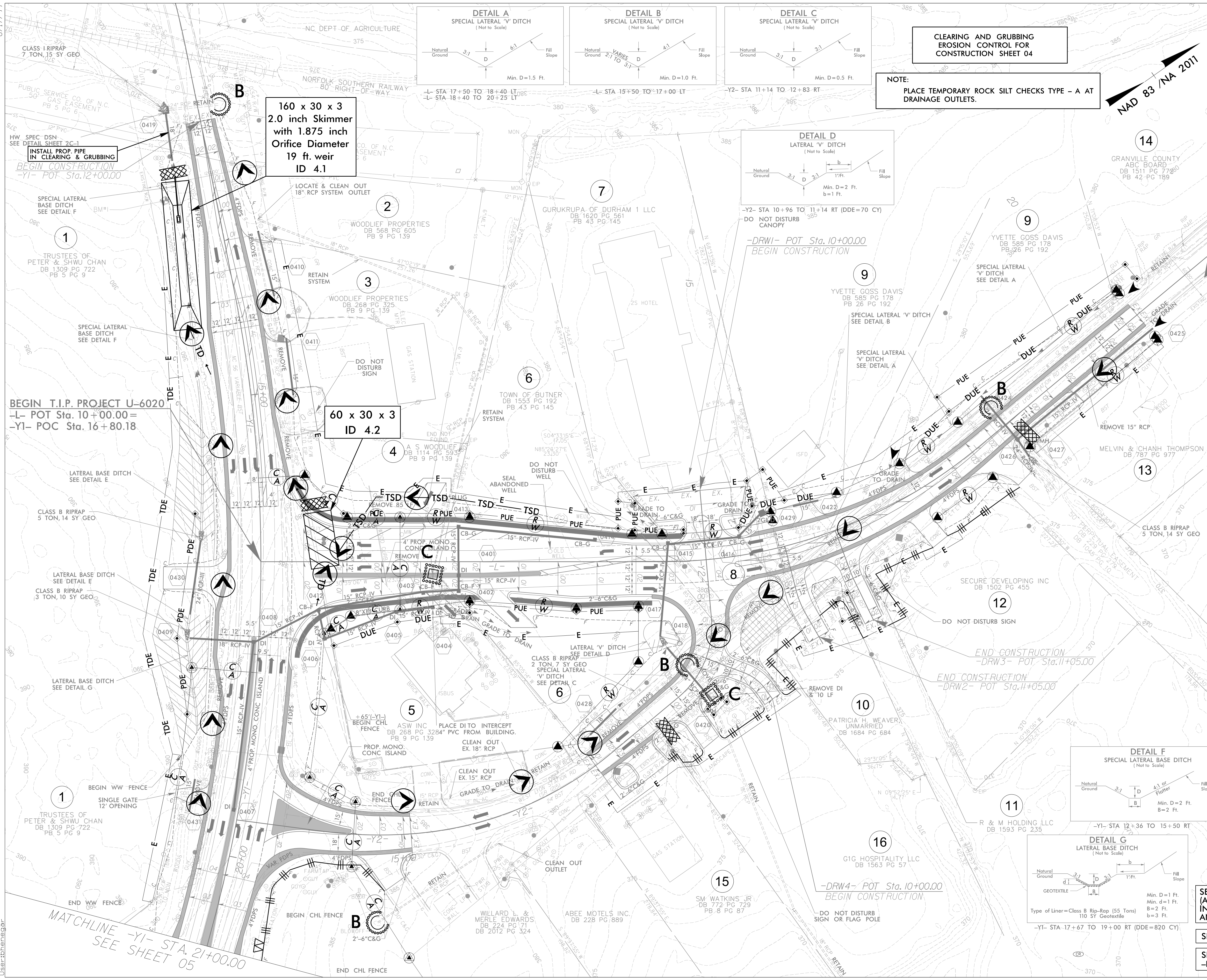
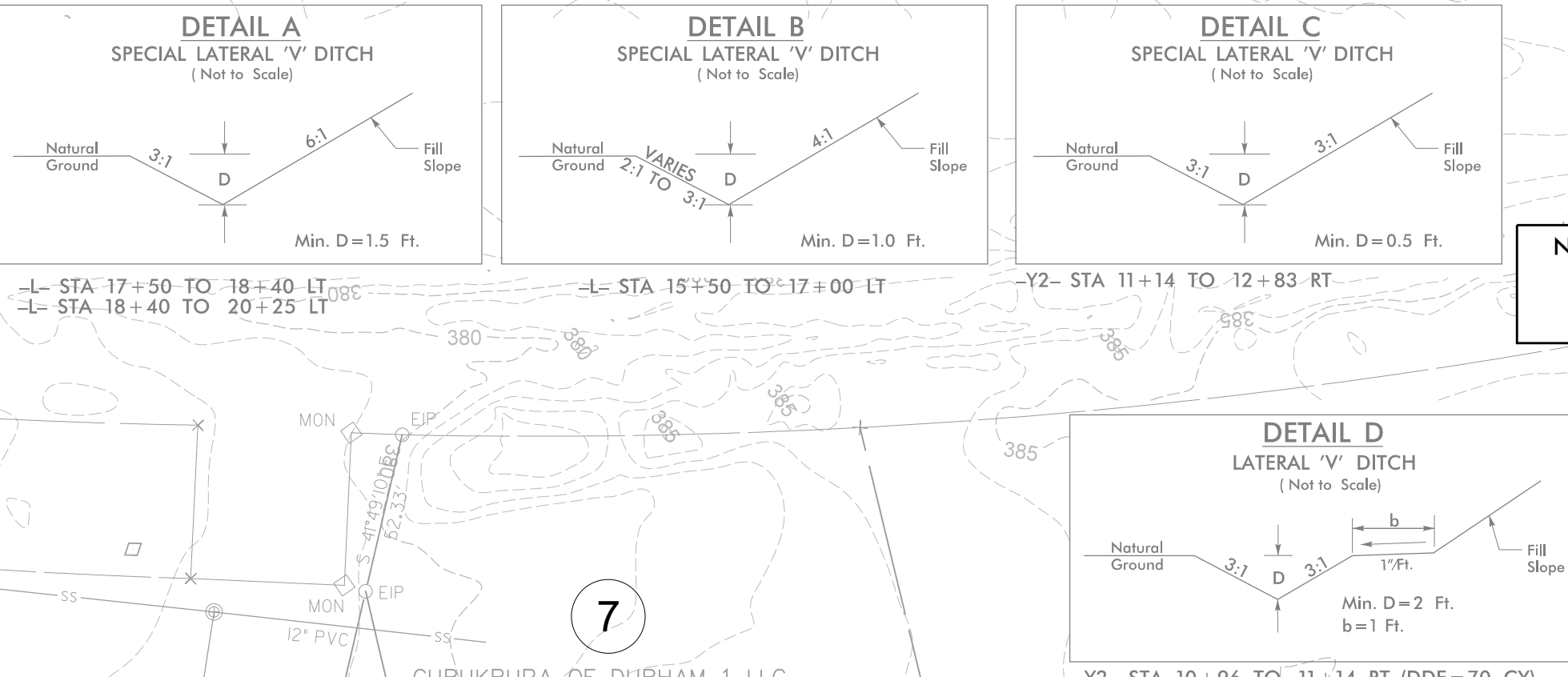
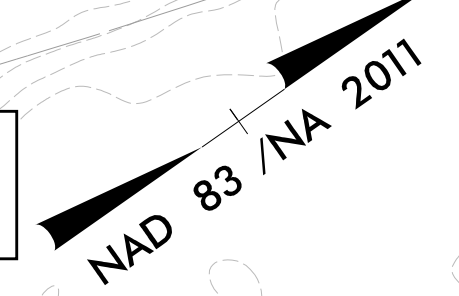
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
<i>PERIMETER DIKES, SWALES, DITCHES AND SLOPES</i>	<i>7 DAYS</i>	<i>NONE</i>
<i>HIGH QUALITY WATER (HQW) ZONES</i>	<i>7 DAYS</i>	<i>NONE</i>
<i>SLOPES STEEPER THAN 3:1</i>	<i>7 DAYS</i>	<i>IF SLOPES ARE 10' OR LESS IN LENGTH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

## MATTING FOR EROSION CONTROL

<i>CONST SHEET NO.</i>	<i>LINE</i>	<i>FROM STATION</i>	<i>TO STATION</i>	<i>SIDE</i>	<i>ESTIMATE (SY)</i>
<i>4</i>	<i>-L- DITCH</i>	<i>17+50</i>	<i>18+40</i>	<i>LT</i>	<i>95</i>
<i>4</i>	<i>-Y1- DITCH</i>	<i>12+50</i>	<i>13+28</i>	<i>LT</i>	<i>110</i>
<i>4</i>	<i>-Y1- DITCH</i>	<i>14+00</i>	<i>14+45</i>	<i>LT</i>	<i>70</i>
<i>4</i>	<i>-Y1- DITCH</i>	<i>12+36</i>	<i>15+50</i>	<i>RT</i>	<i>575</i>
<i>4</i>	<i>-Y1- DITCH</i>	<i>19+00</i>	<i>21+00</i>	<i>RT</i>	<i>270</i>
<i>4</i>	<i>-Y2- DITCH</i>	<i>12+83</i>	<i>11+14</i>	<i>RT</i>	<i>70</i>
<i>SUBTOTAL</i>					<i>1,190</i>
<i>MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER</i>					<i>800</i>
<i>TOTAL</i>					<i>1,990</i>
<i>SAY</i>					<i>2,000</i>

**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 04**

**NOTE:**  
PLACE TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

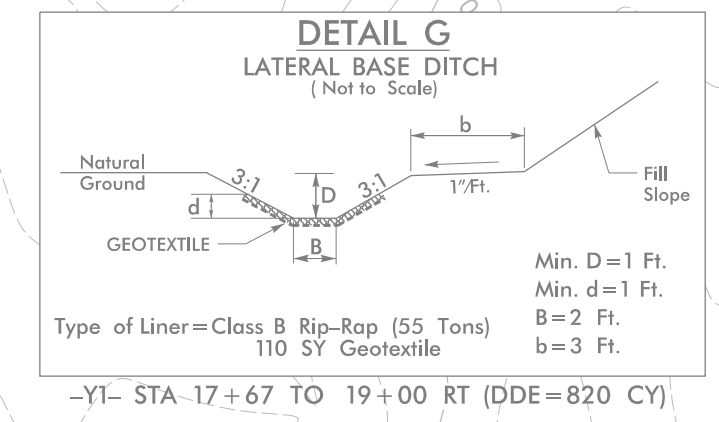
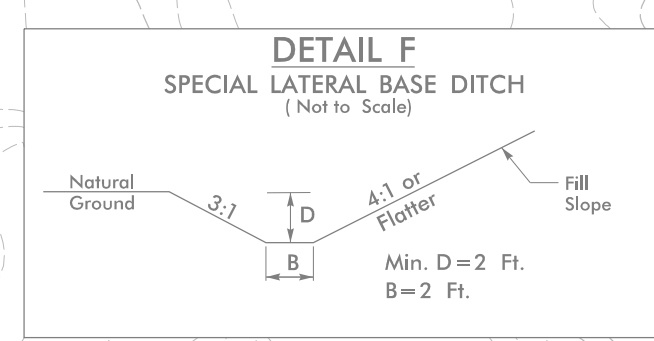
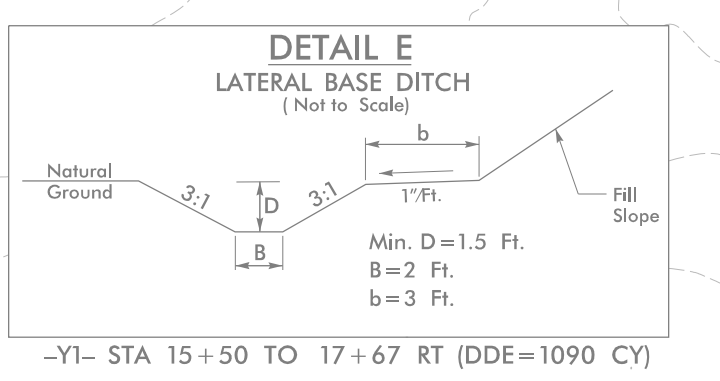


**160 x 30 x 3  
2.0 inch Skimmer  
with 1.875 inch  
Orifice Diameter  
19 ft. weir  
ID 4.1**

**60 x 30 x 3  
ID 4.2**

**END T.I.P. PROJECT U-6020  
-L- POT Sta. 21+25.00**

**BEGIN T.I.P. PROJECT U-6020  
-L- POT Sta. 10+00.00  
-Y1- POC Sta. 12+80.18**



**SEE SHEET 2B-1 FOR DESIGN DETAILS  
(ALIGNMENT DETAILS, SUPERELEVATION  
INCREMENT LABELS, TAPER DETAILS,  
AND OTHER DESIGN DETAILS)**

**SEE SHEET 06 FOR -L- & -Y1- PROFILES**

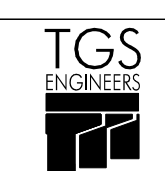
**SEE SHEET 07 FOR -Y2-, -DRW1-, -DRW2-,  
-DRW3-, & -DRW4- PROFILES**

**6 = TOWN OF BUTNER  
DB 1553 PG 192  
PB 43 PG 145**

**8 = TOWN OF BUTNER  
DB 1553 PG 192  
PB 43 PG 145**

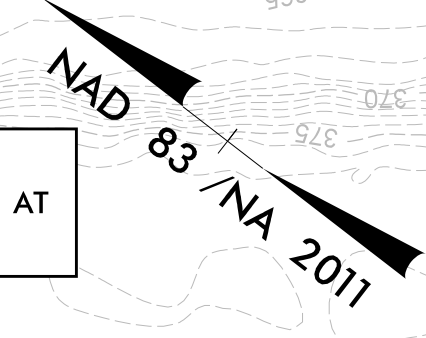
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 User: bhanagar

8/17/99

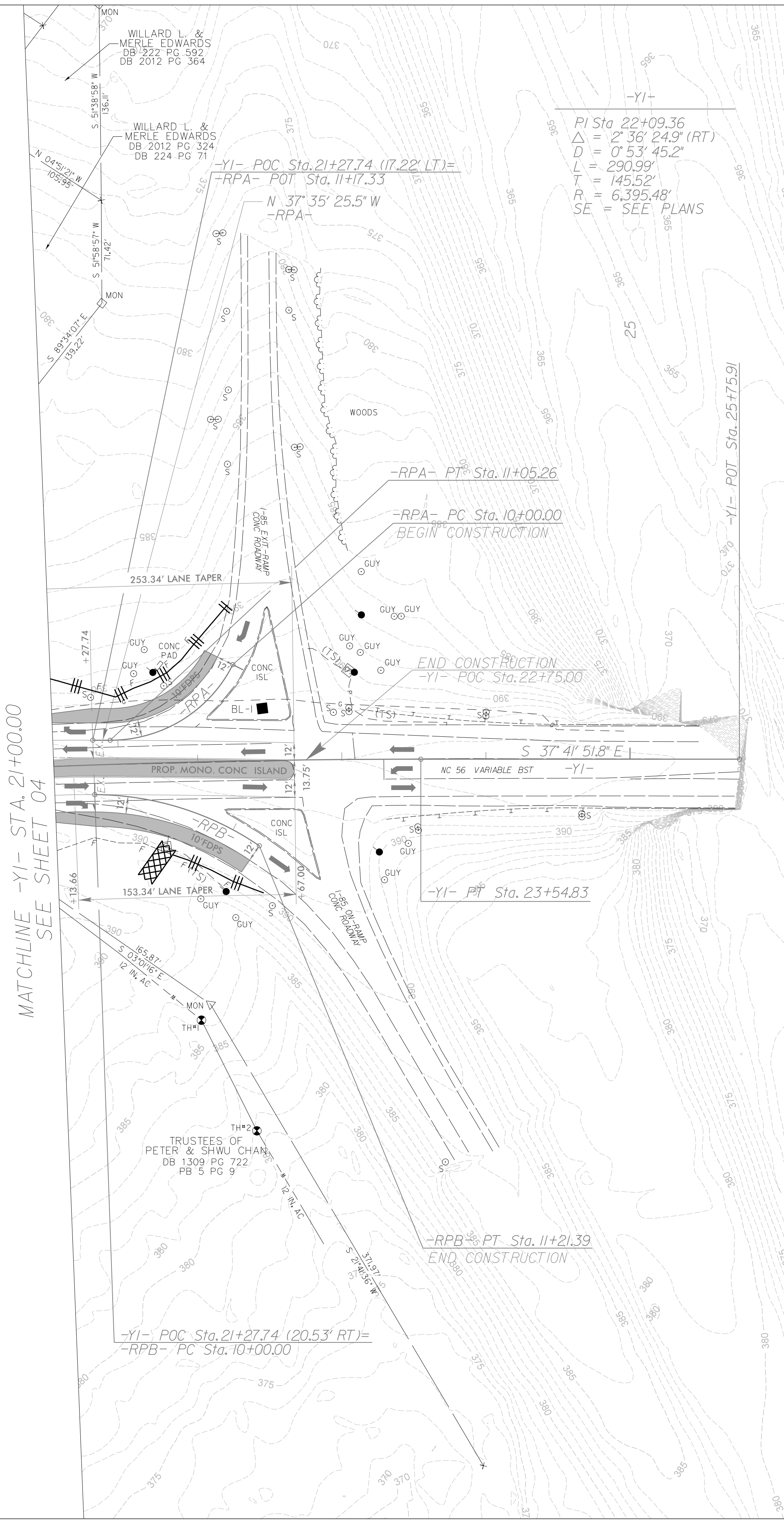
PROJECT REFERENCE NO.	SHEET NO.
U-6020	EC-05/CONST.05
RW SHEET NO.	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 04**

**NOTE:**  
PLACE TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.



<p><b>-YI-</b></p> <p>PI Sta 22+09.36  <math>\Delta = 2^\circ 36' 24.9" (RT)</math>  <math>D = 0' 53' 45.2"</math>  <math>L = 290.99'</math>  <math>T = 145.52'</math>  <math>R = 6,395.48'</math>          SE = SEE PLANS</p>	<p><b>-RPA-</b></p> <p>PI Sta 10+58.77  <math>\Delta = 63^\circ 29' 09.5" (RT)</math>  <math>D = 60' 18' 40.8"</math>  <math>L = 105.26'</math>  <math>T = 58.77'</math>  <math>R = 95.00'</math>          SE = EXIST.</p>	<p><b>-RPB-</b></p> <p>PI Sta 10+62.53  <math>\Delta = 33^\circ 55' 38.6" (RT)</math>  <math>D = 27' 56' 57.0"</math>  <math>L = 121.39'</math>  <math>T_s = 62.53'</math>  <math>R_s = 205.00'</math>          SE = EXIST.</p>
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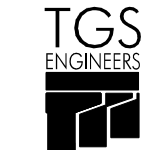


REVISIONS

2/2/2024 U-6020-Drainage Erosion Control\U6020\_cg\_psh\_05.dgn  
 User:shenagar

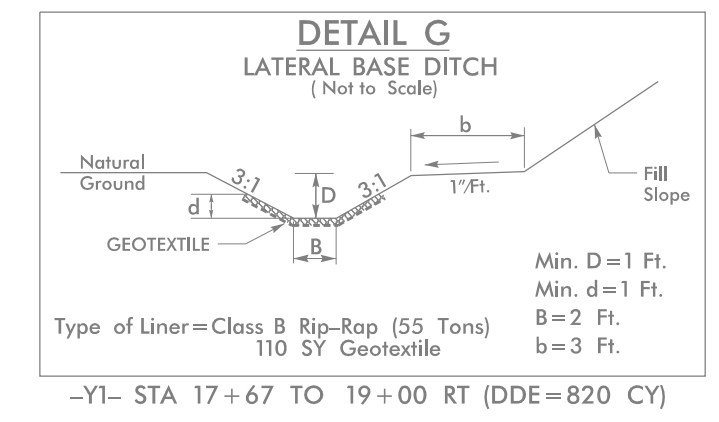
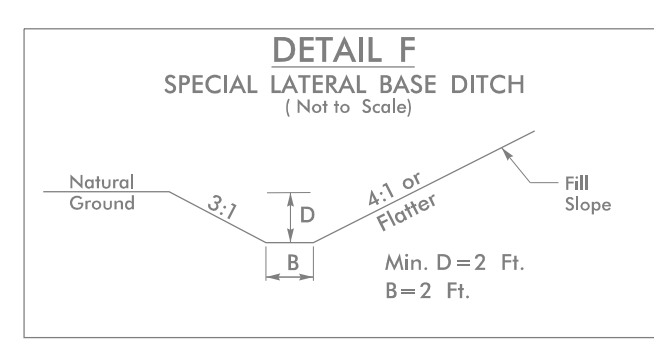
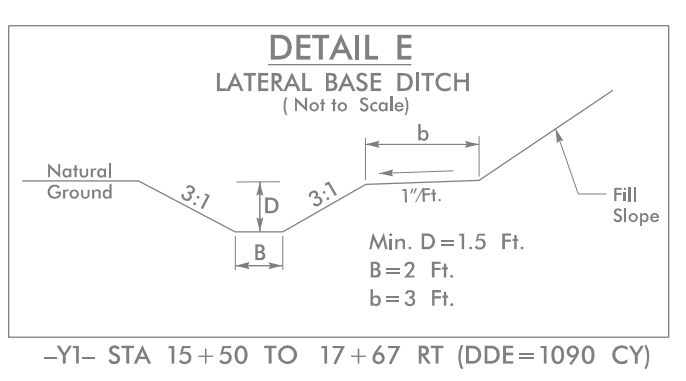
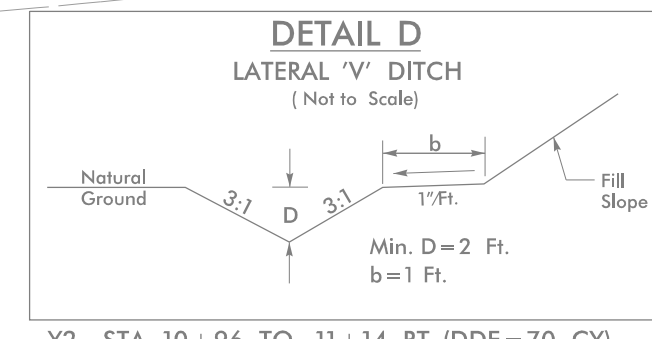
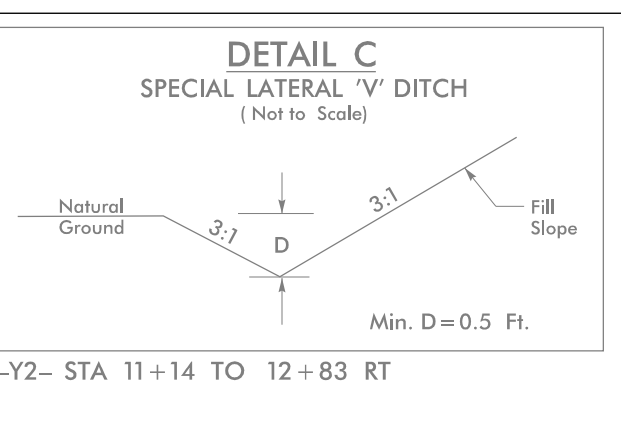
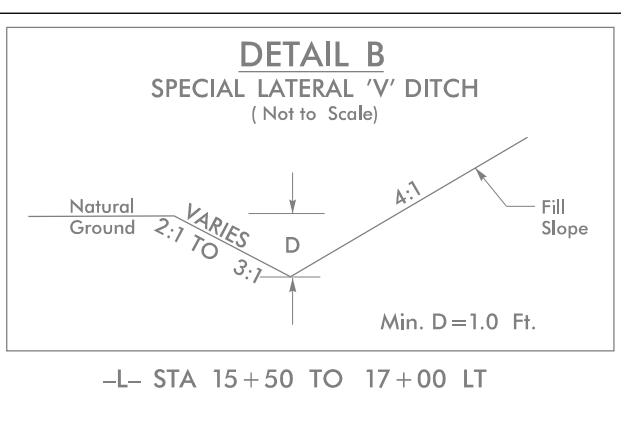
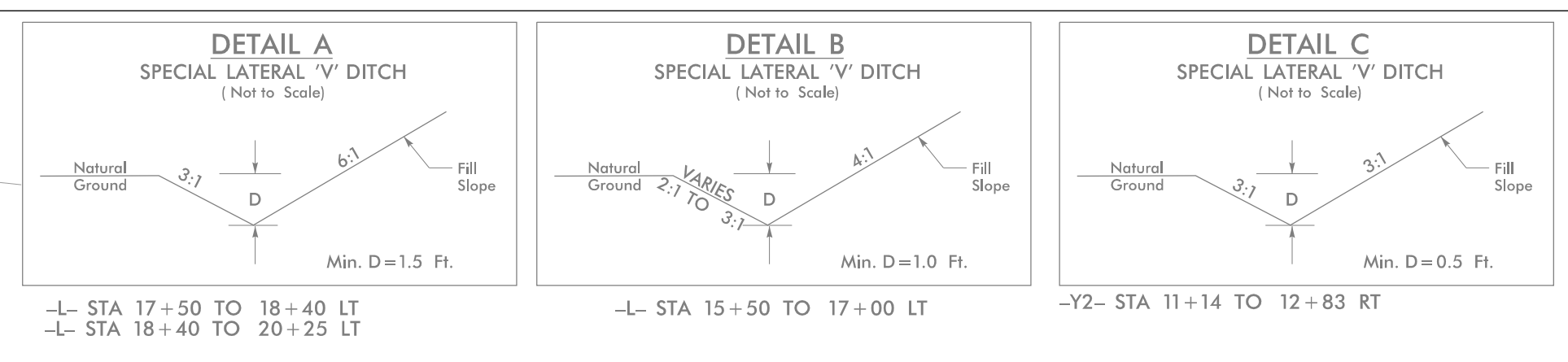
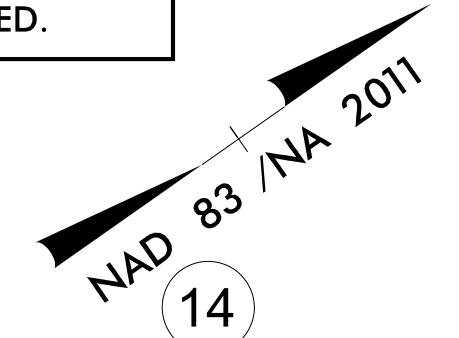
SEE SHEET 06 FOR -YI- PROFILE

SEE SHEET 08 FOR -RPA- & -RPB- PROFILES

PROJECT REFERENCE NO.	SHEET NO.
U-6020	EC-06/CONST.04
RW SHEET NO.	
	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' TO AVOID IMPOUNDING RUNOFF ON ROADWAY OPEN TO PUBLIC AND AS DIRECTED.

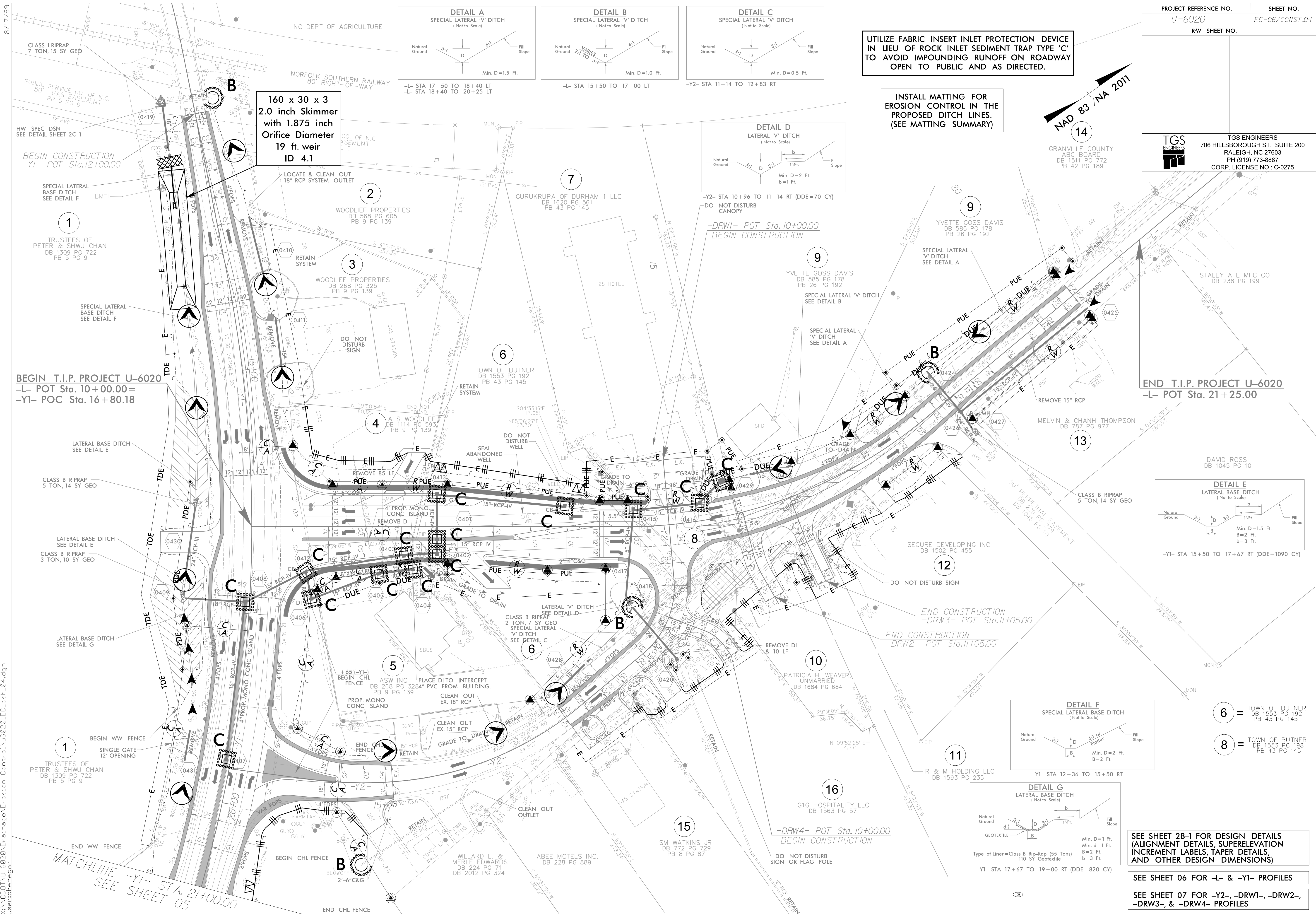
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINES. (SEE MATTING SUMMARY)



SEE SHEET 2B-1 FOR DESIGN DETAILS (ALIGNMENT DETAILS, SUPERELEVATION INCREMENT LABELS, TAPER DETAILS, AND OTHER DESIGN DETAILS)

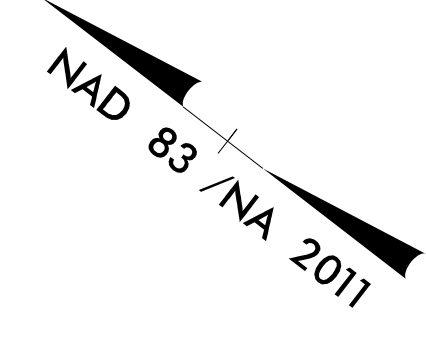
SEE SHEET 06 FOR -L- & -Y1- PROFILES

SEE SHEET 07 FOR -Y2-, -DRW1-, -DRW2-, -DRW3-, & -DRW4- PROFILES

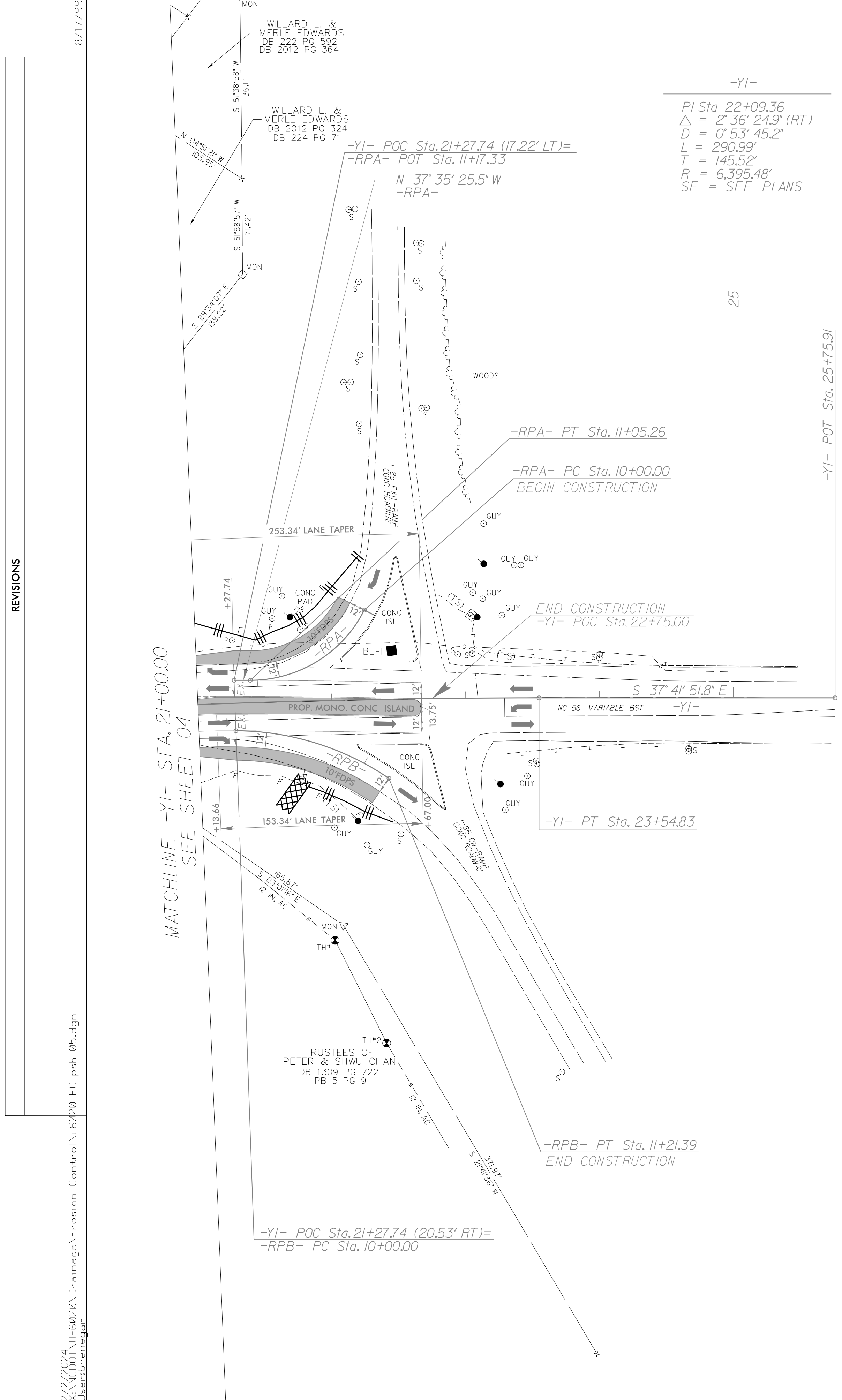


2/2/2024 U-6020 U-Drainage Erosion Control\U6020\_EC\_psh\_04.dgn  
 User: bhanagar

PROJECT REFERENCE NO.	SHEET NO.
U-6020	EC-07/CONST.05
RW SHEET NO.	
TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



-YI-	-RPA-	-RPB-
PI Sta 22+09.36	PI Sta 10+58.77	PI Sta 10+62.53
$\Delta = 2^{\circ} 36' 24.9" (RT)$	$\Delta = 63^{\circ} 29' 09.5" (RT)$	$\Delta = 33^{\circ} 55' 38.6" (RT)$
$D = 0^{\circ} 53' 45.2"$	$D = 60^{\circ} 18' 40.8"$	$D = 27^{\circ} 56' 57.0"$
$L = 290.99'$	$L = 105.26'$	$L = 121.39'$
$T = 145.52'$	$T = 58.77'$	$T = 62.53'$
$R = 6,395.48'$	$R = 95.00'$	$R = 205.00'$
SE = SEE PLANS	SE = EXIST.	SE = EXIST.



REVISIONS

8/17/99  
 2/2/2024 U-6020\Drawings\Erosion Control\U6020\_EC\_psh\_05.dgn  
 User:shwanagar

SEE SHEET 06 FOR -YI- PROFILE  
 SEE SHEET 08 FOR -RPA- & -RPB- PROFILES