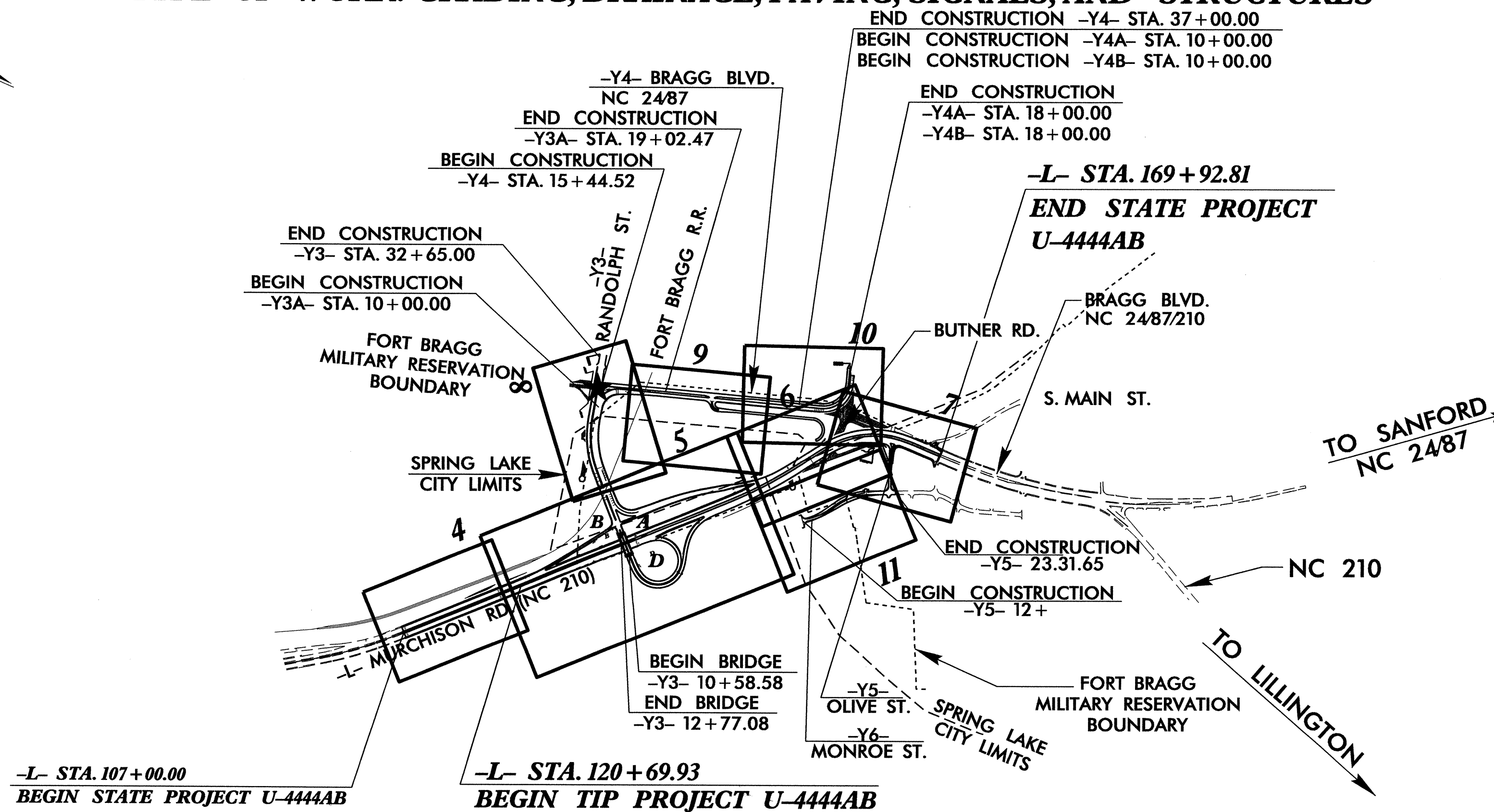
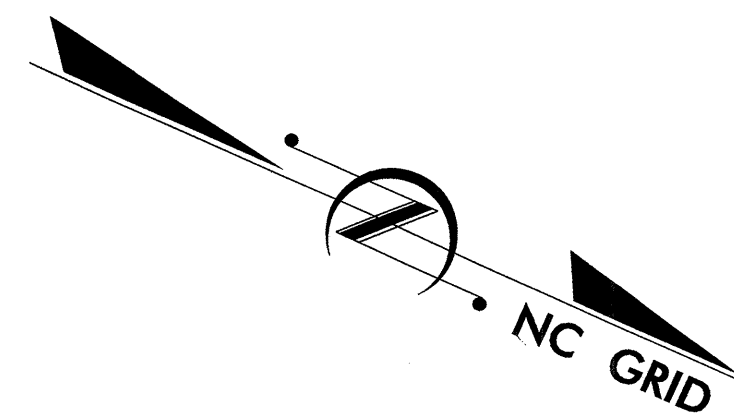


**TIP PROJECT: U-4444AB**

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

**LOCATION: NC 210 (MURCHISON ROAD) FROM SR 1613 (HONEYCUTT ROAD)  
TO FT. BRAGG BOUNDARY**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, AND STRUCTURES**



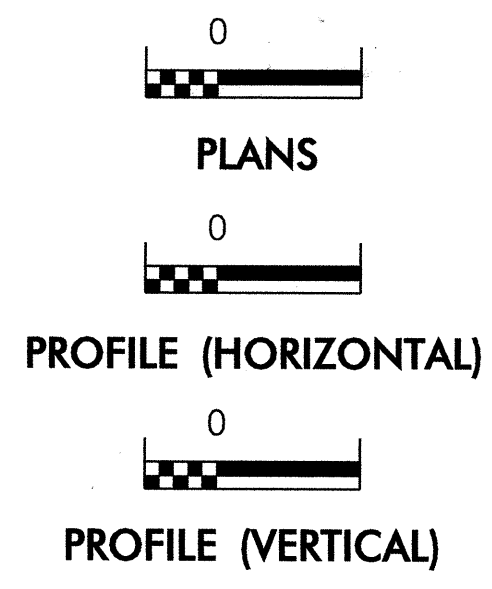
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4444AB	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III
1606.01	Special Sediment Control Fence	III
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RS
1633.02	Temporary Rock Silt Check Type-B	RS
	Wattle / Coir Fiber Wattle	W
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	W
1634.01	Temporary Rock Sediment Dam Type-A	RD
1634.02	Temporary Rock Sediment Dam Type-B	RD
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPI
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPI
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SK
	Tiered Skimmer Basin	SK
	Infiltration Basin	IB

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

**GRAPHIC SCALE**



ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY  
WITH THE REGULATIONS SET FORTH BY THE  
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011  
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND  
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:  
**ROADSIDE ENVIRONMENTAL UNIT**  
1 South Wilmington St.  
Raleigh, NC 27611  
**2012 STANDARD SPECIFICATIONS**

Roadway Standard Drawings

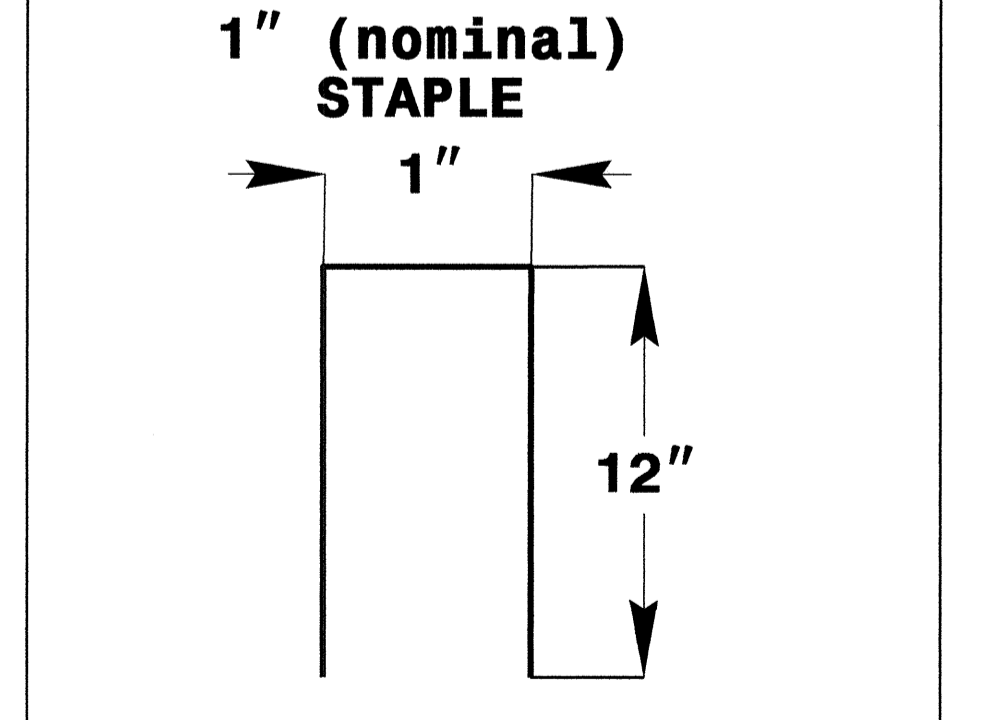
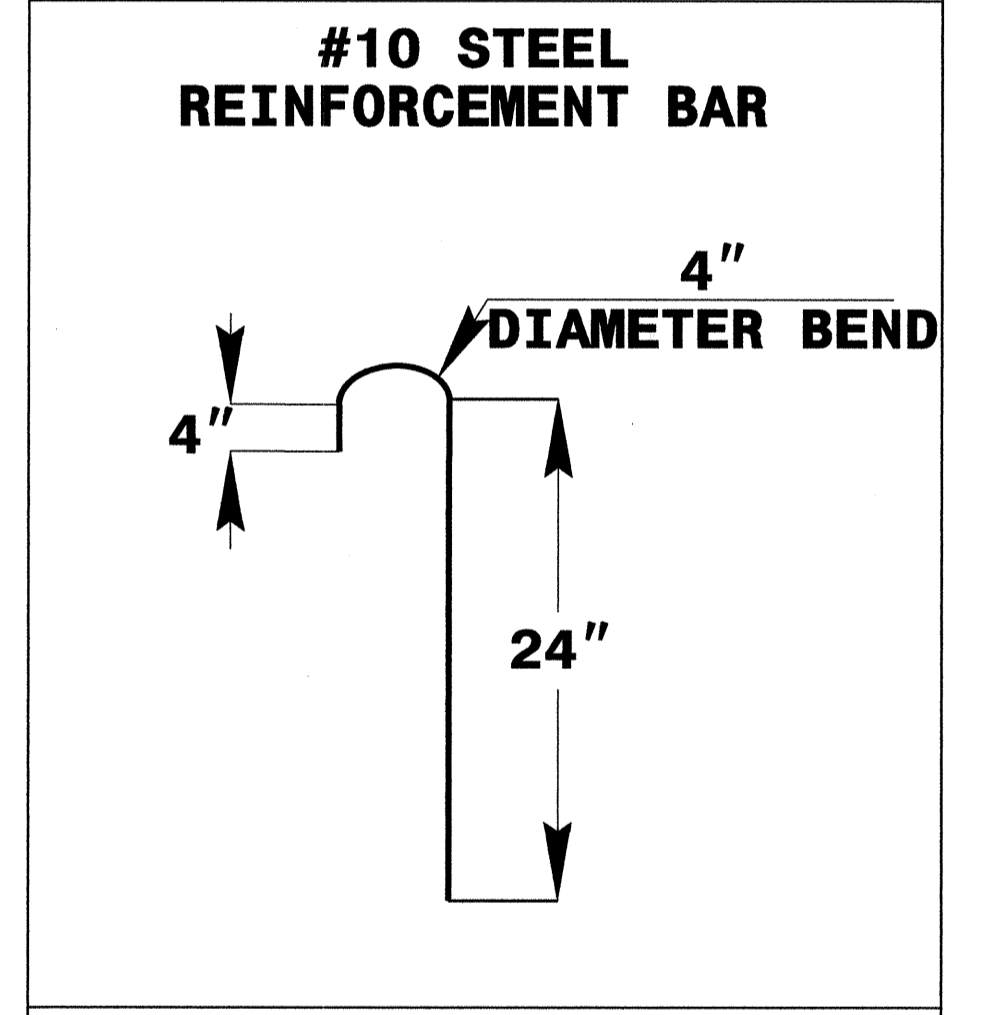
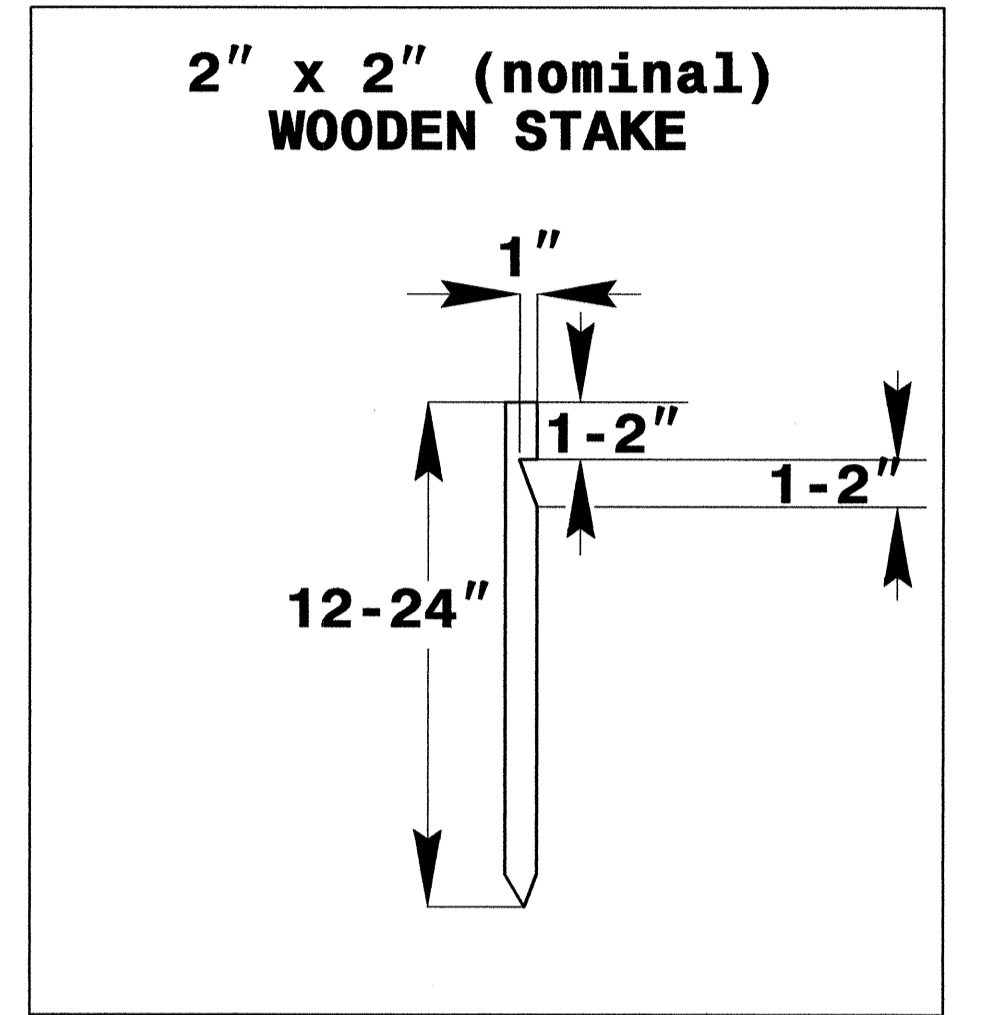
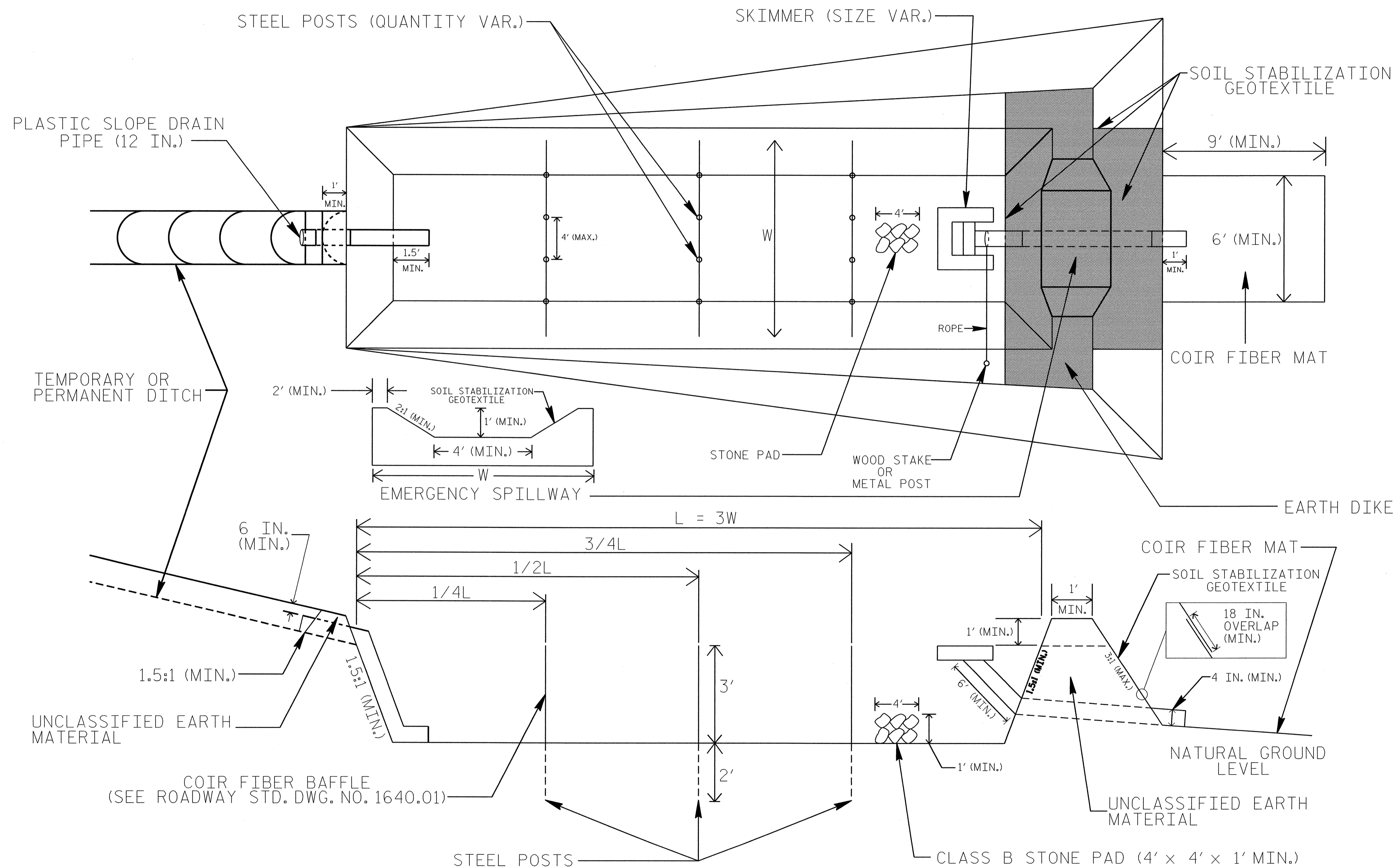
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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 Silt 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	

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PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



## COIR FIBER MAT ANCHOR OPTIONS

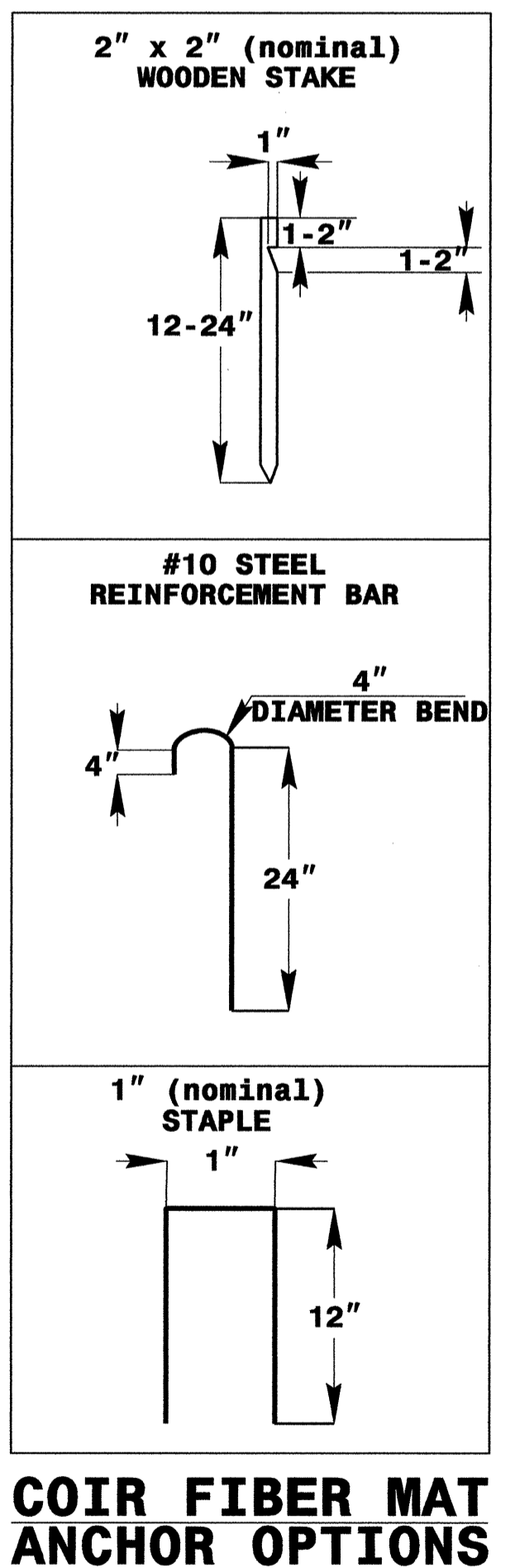
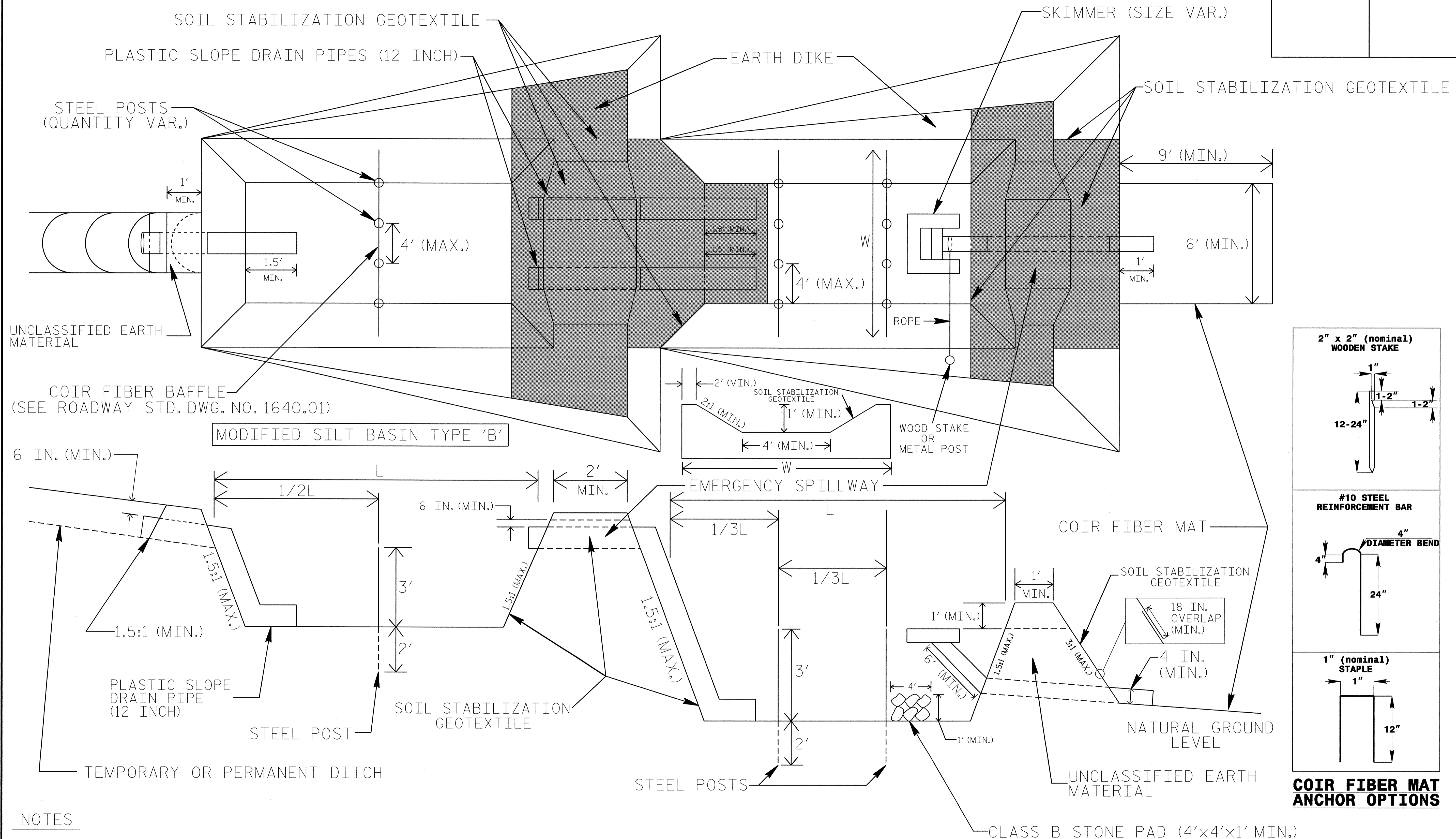
### NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

# TIERED SKIMMER BASIN DETAIL

PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



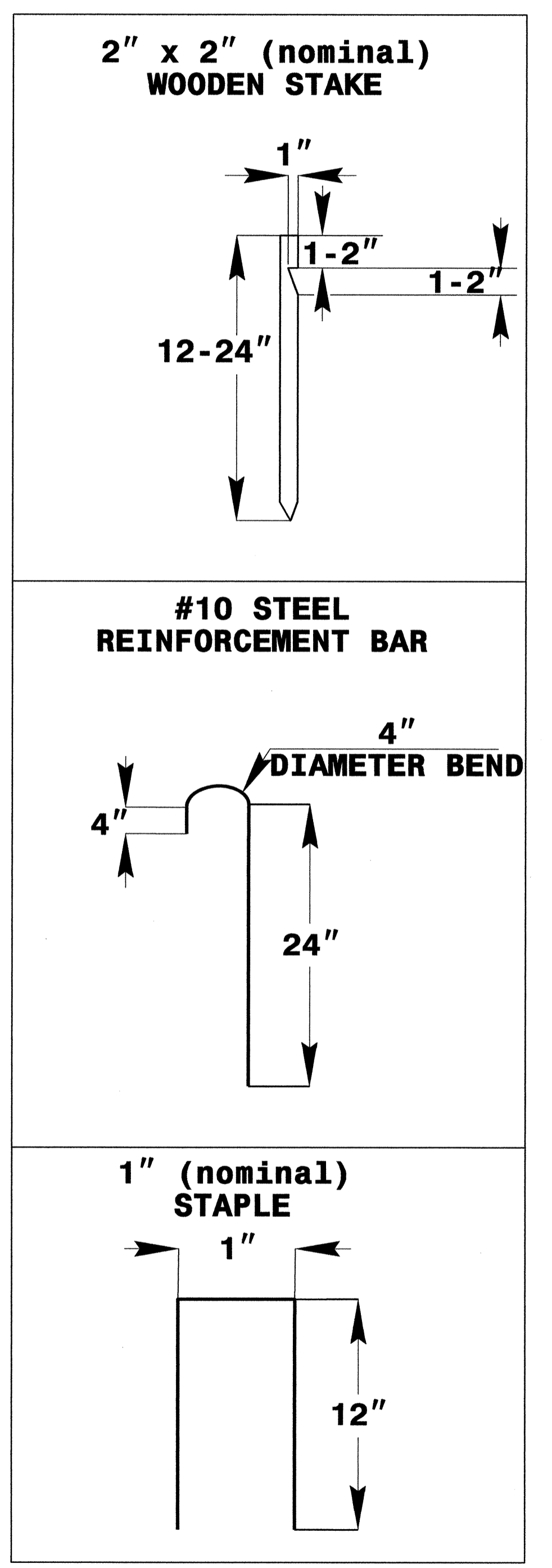
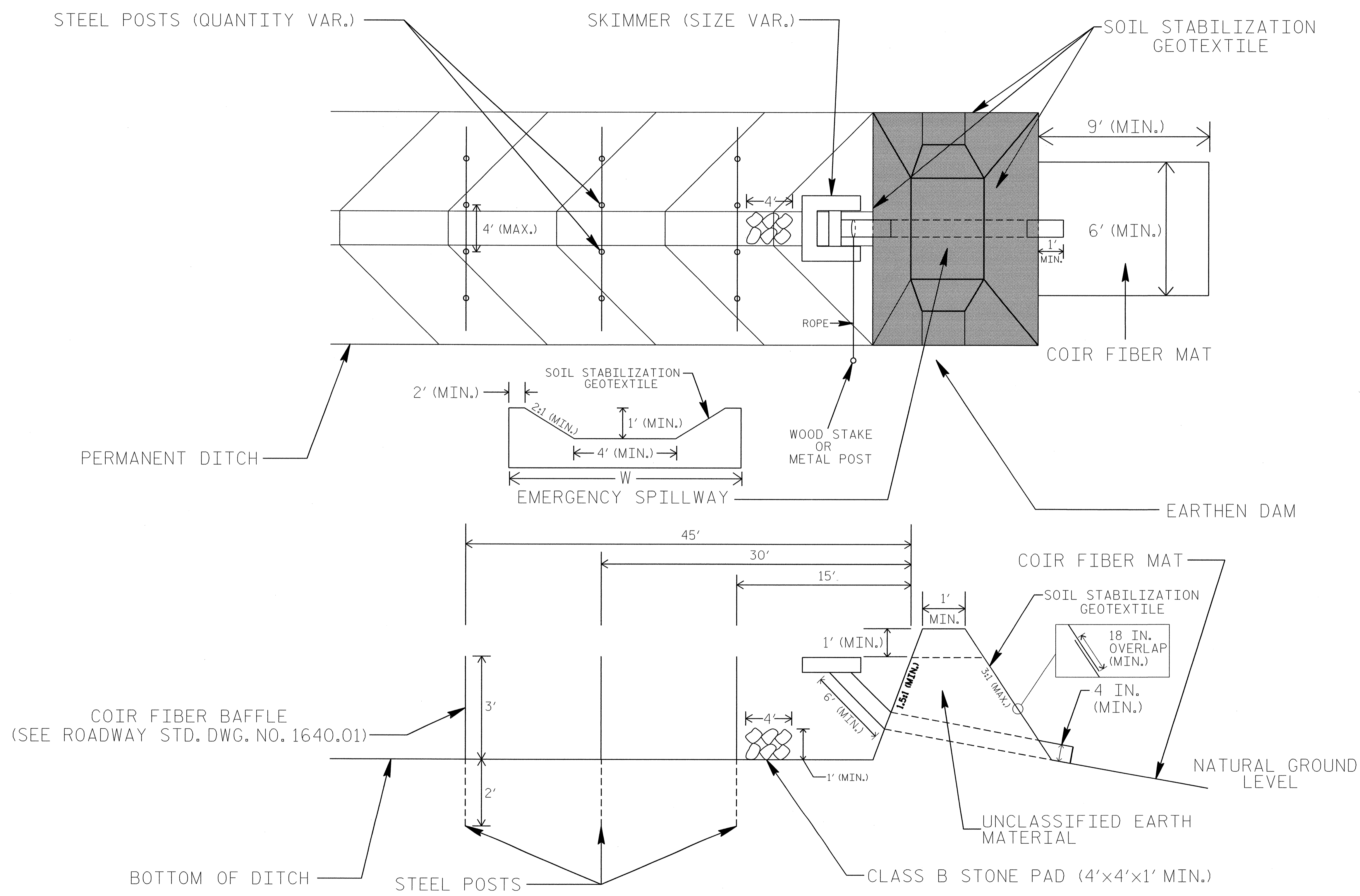
## NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3 FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# EARTHEN DAM WITH SKIMMER



## COIR FIBER MAT ANCHOR OPTIONS

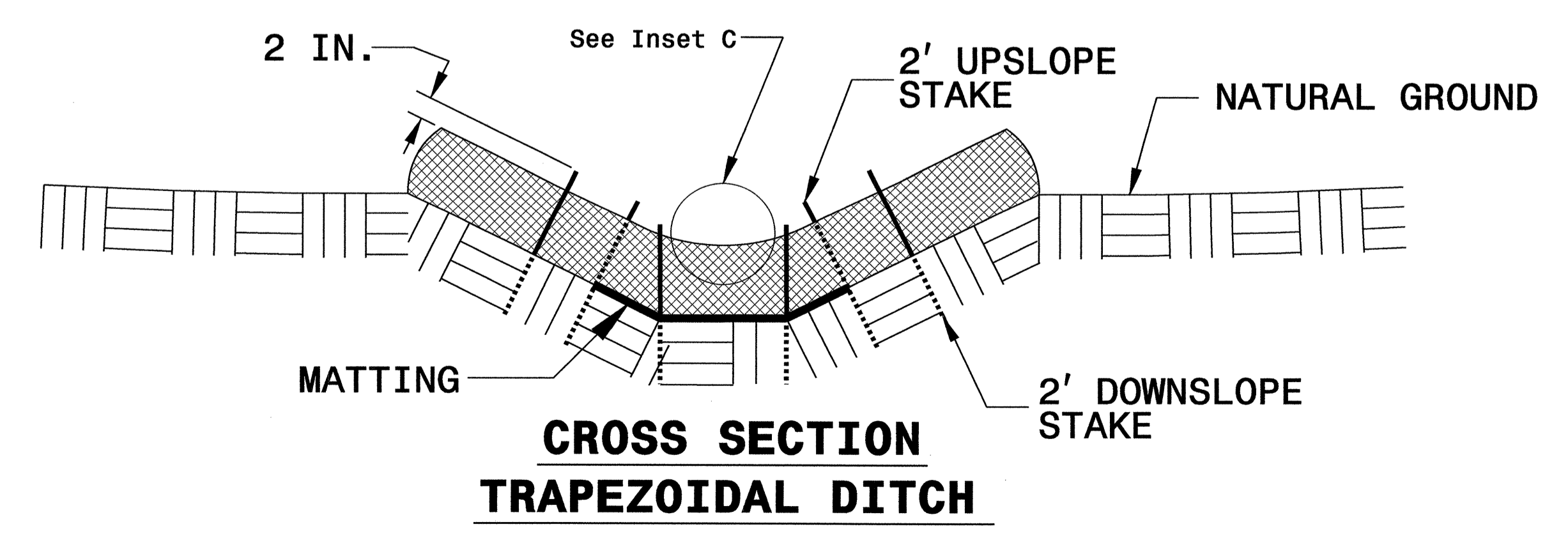
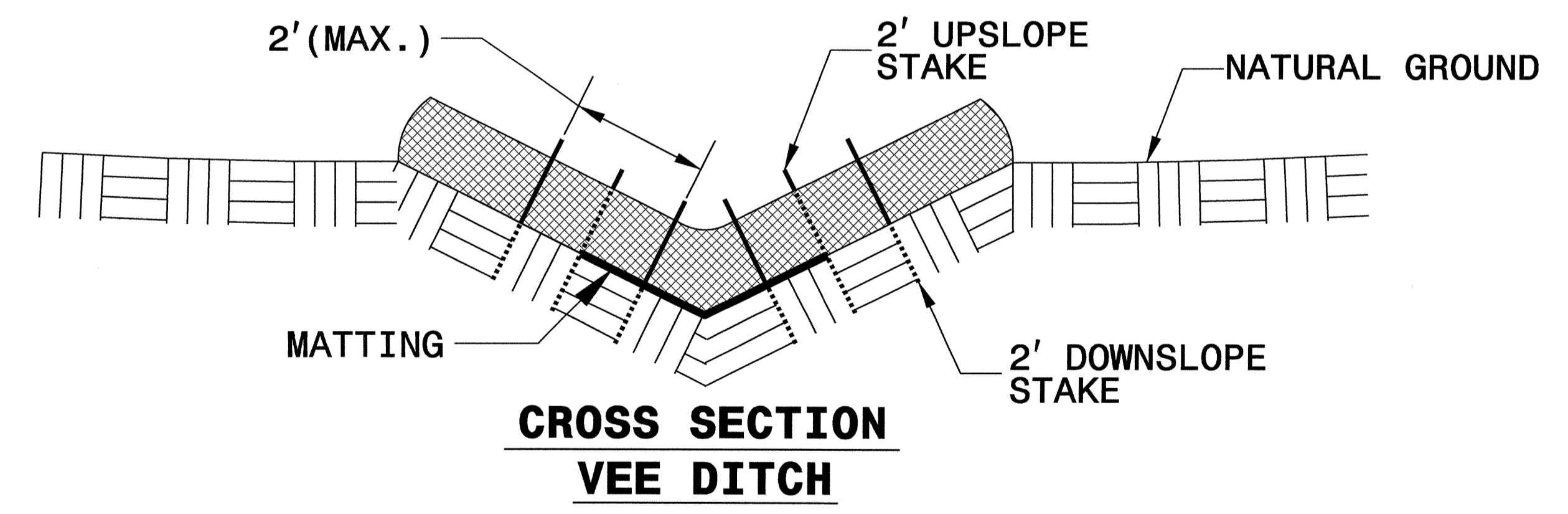
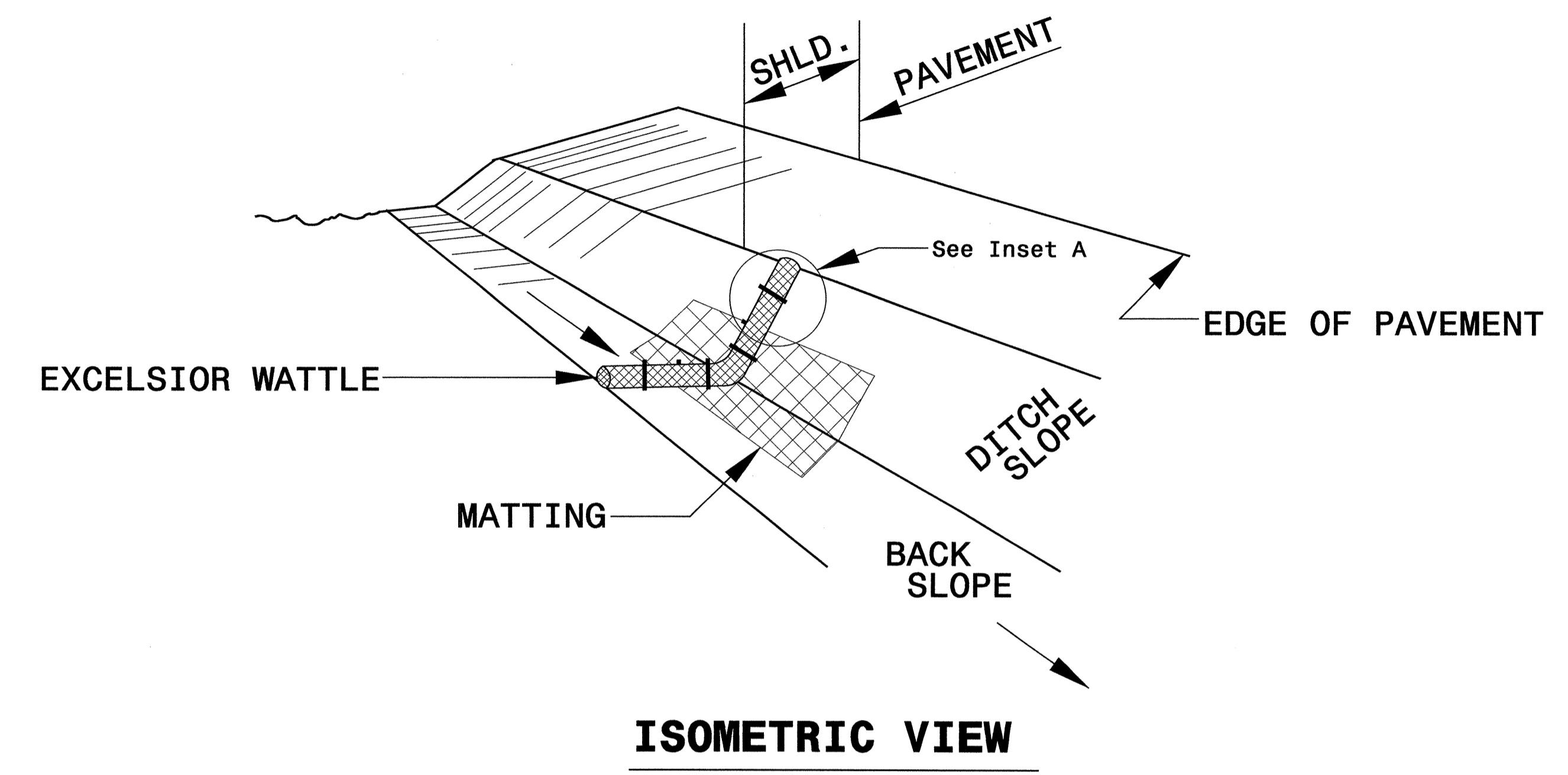
### NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

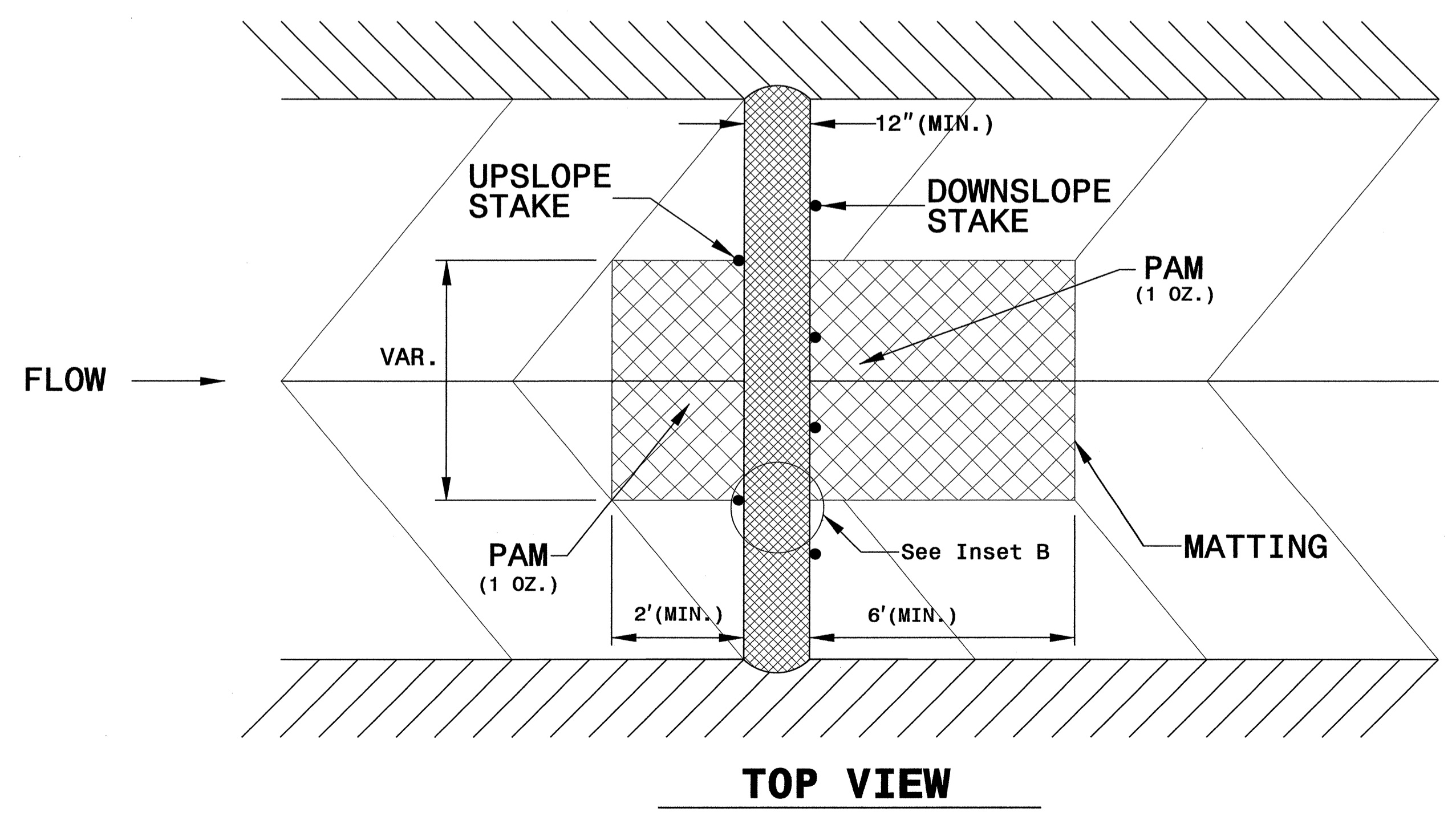
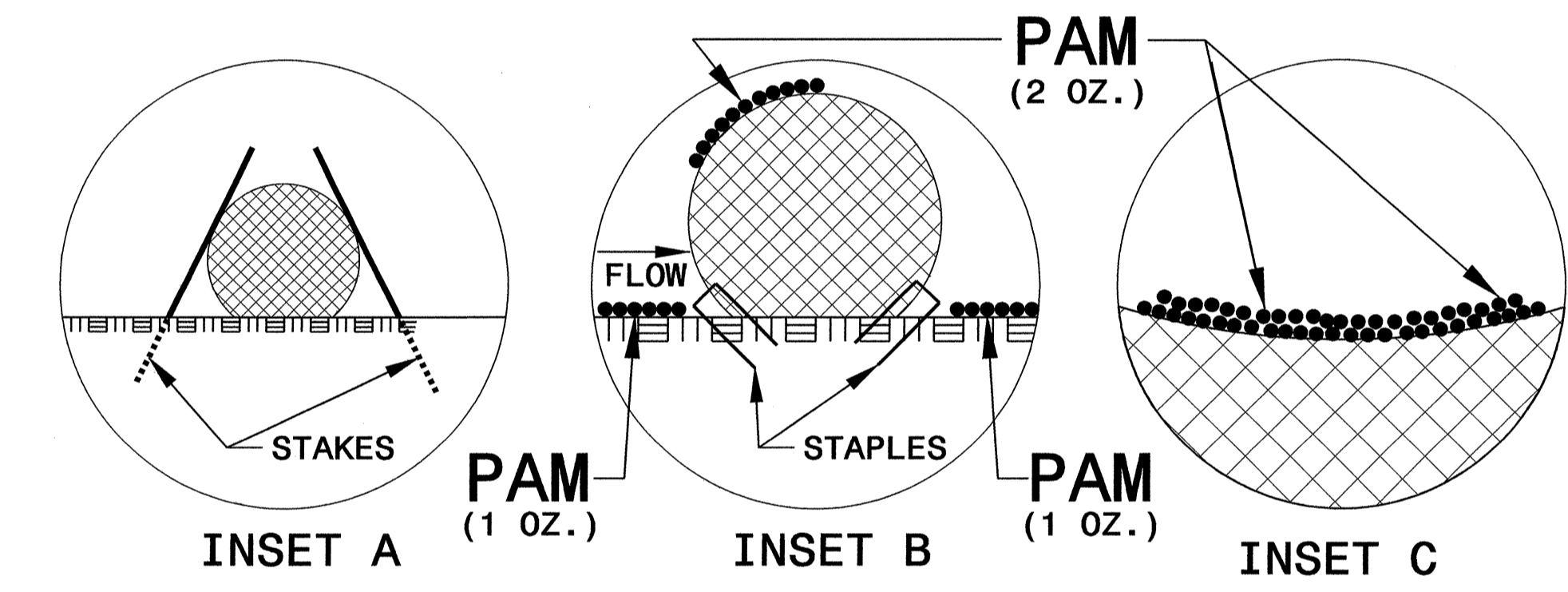
NOT TO SCALE

PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

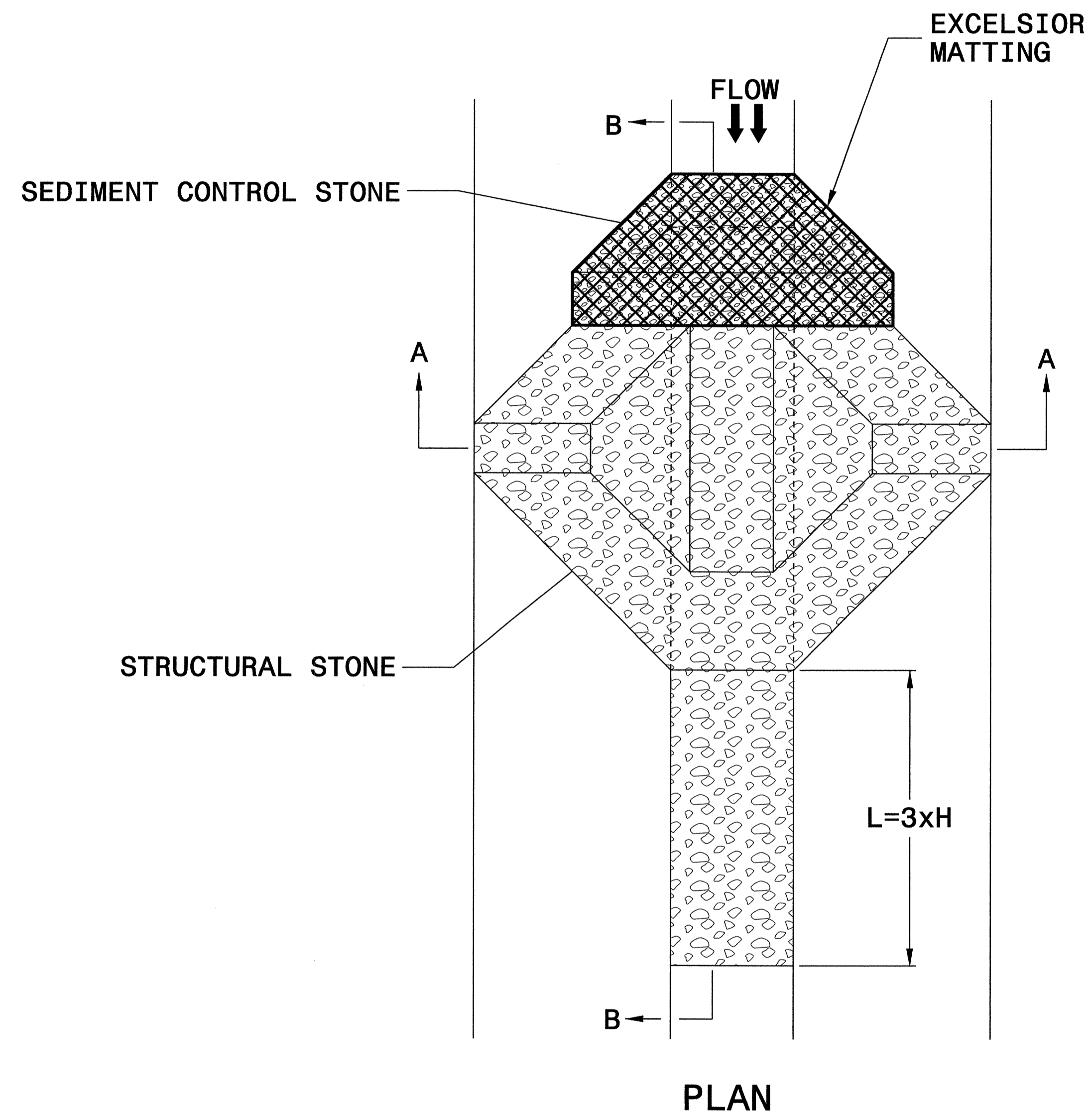


- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY** INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 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.



PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)

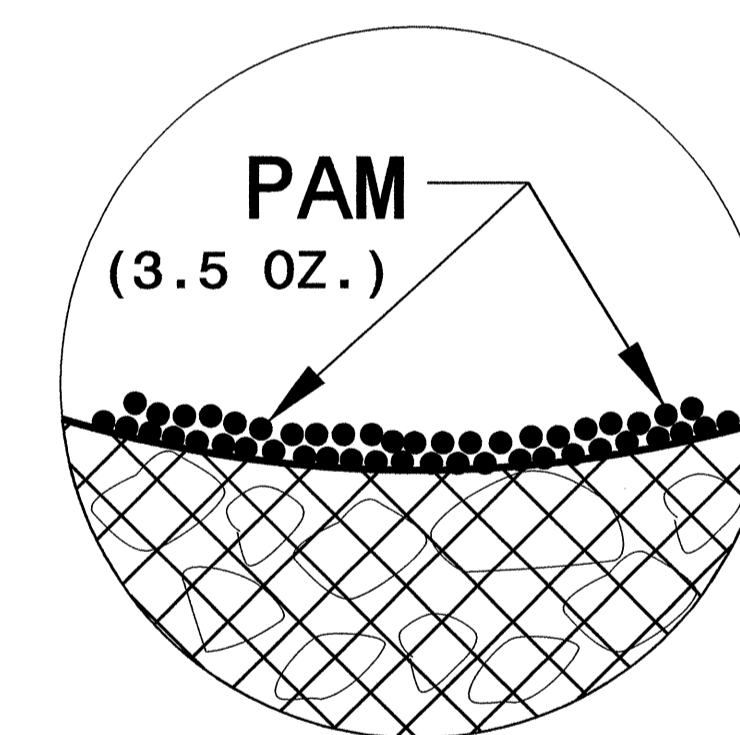


## NOTES

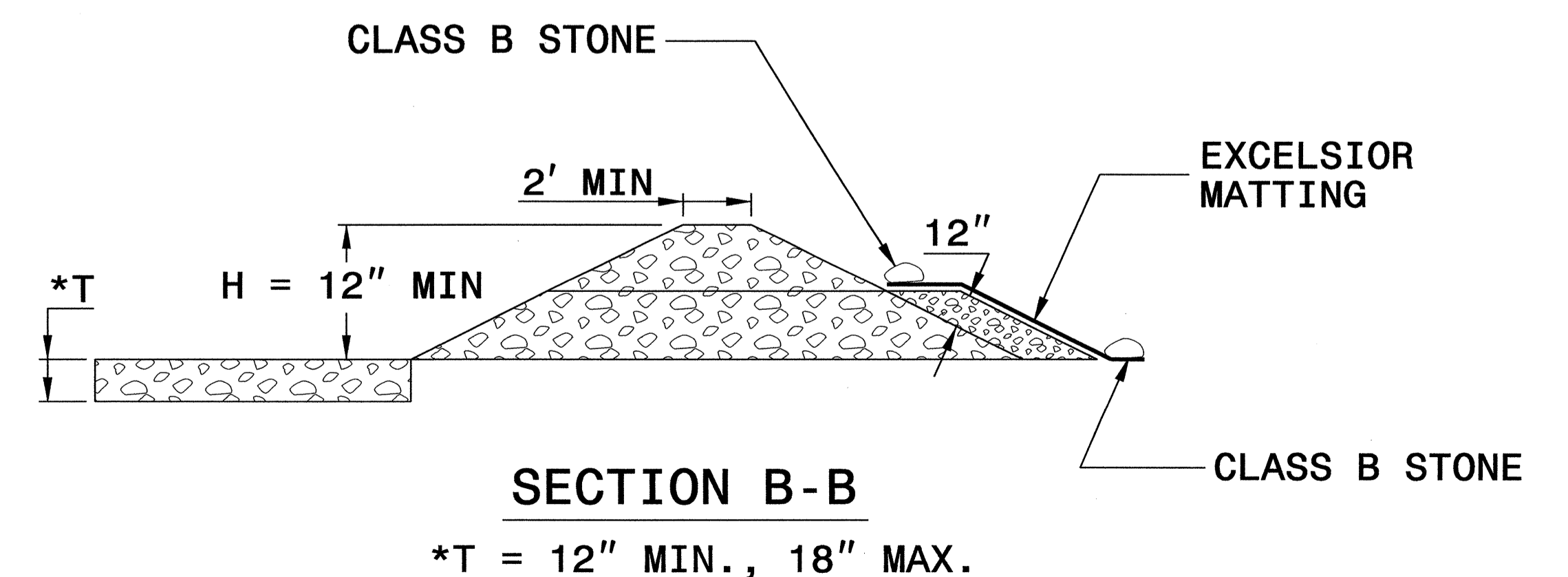
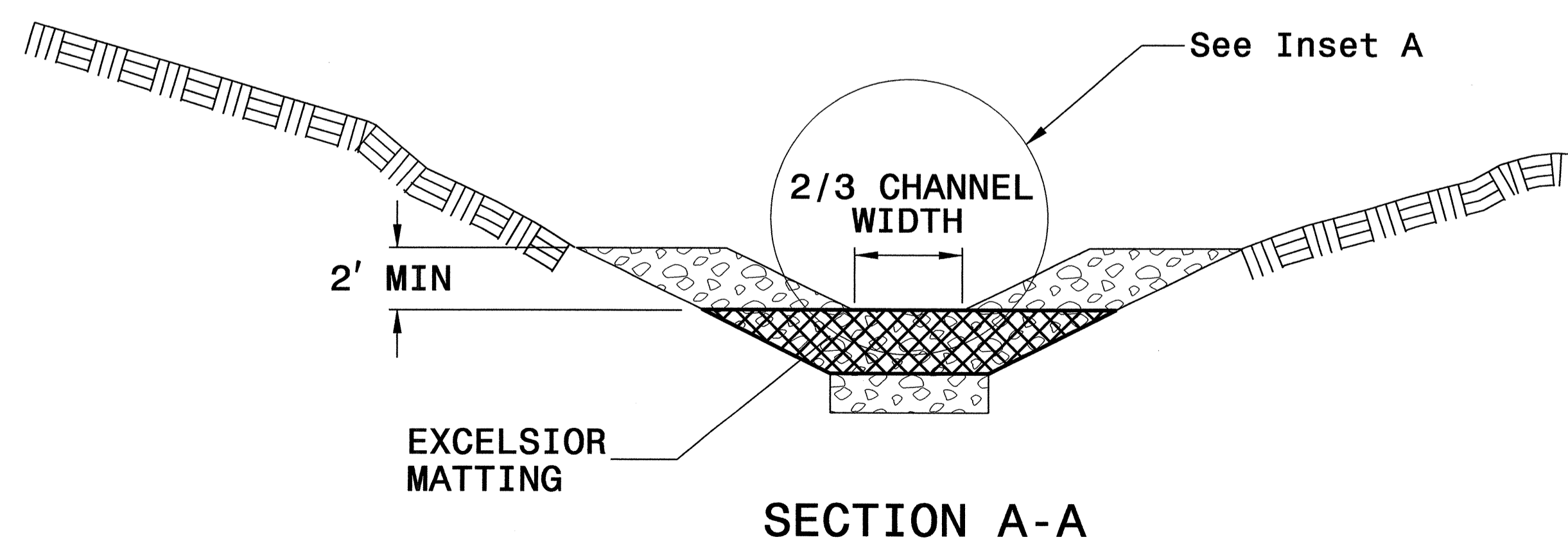
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 ROCK SILT CHECK.

INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



NOT TO SCALE

# BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**GENERAL NOTES:**

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING  $V = 8.0203 * Q * T$ , WHERE V IS VOLUME (FT<sup>3</sup>), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1060-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

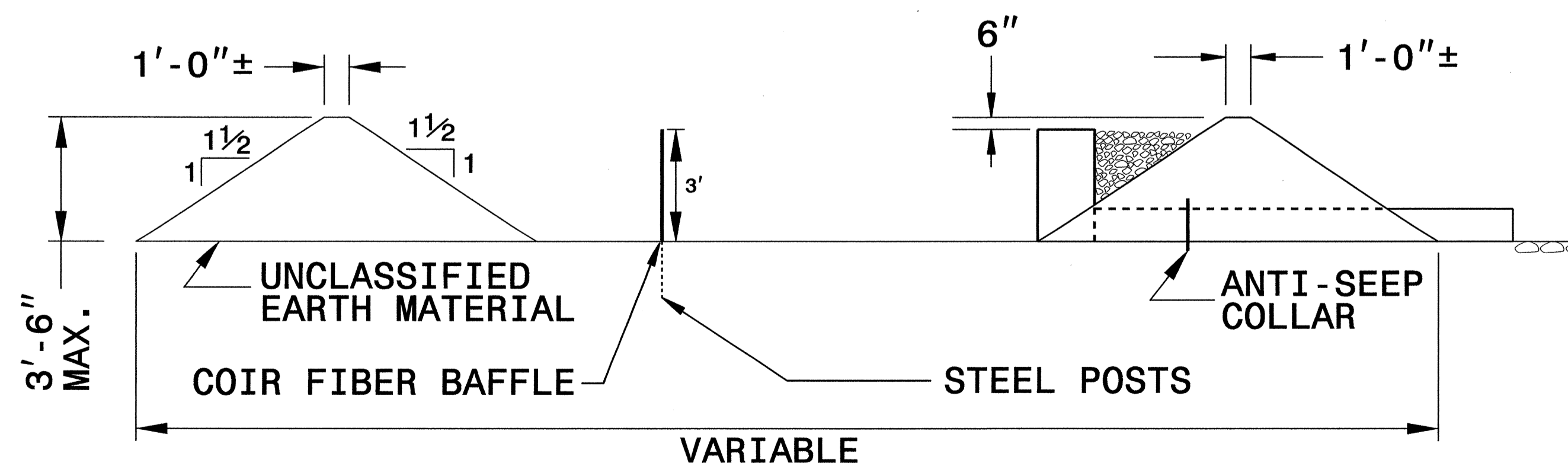
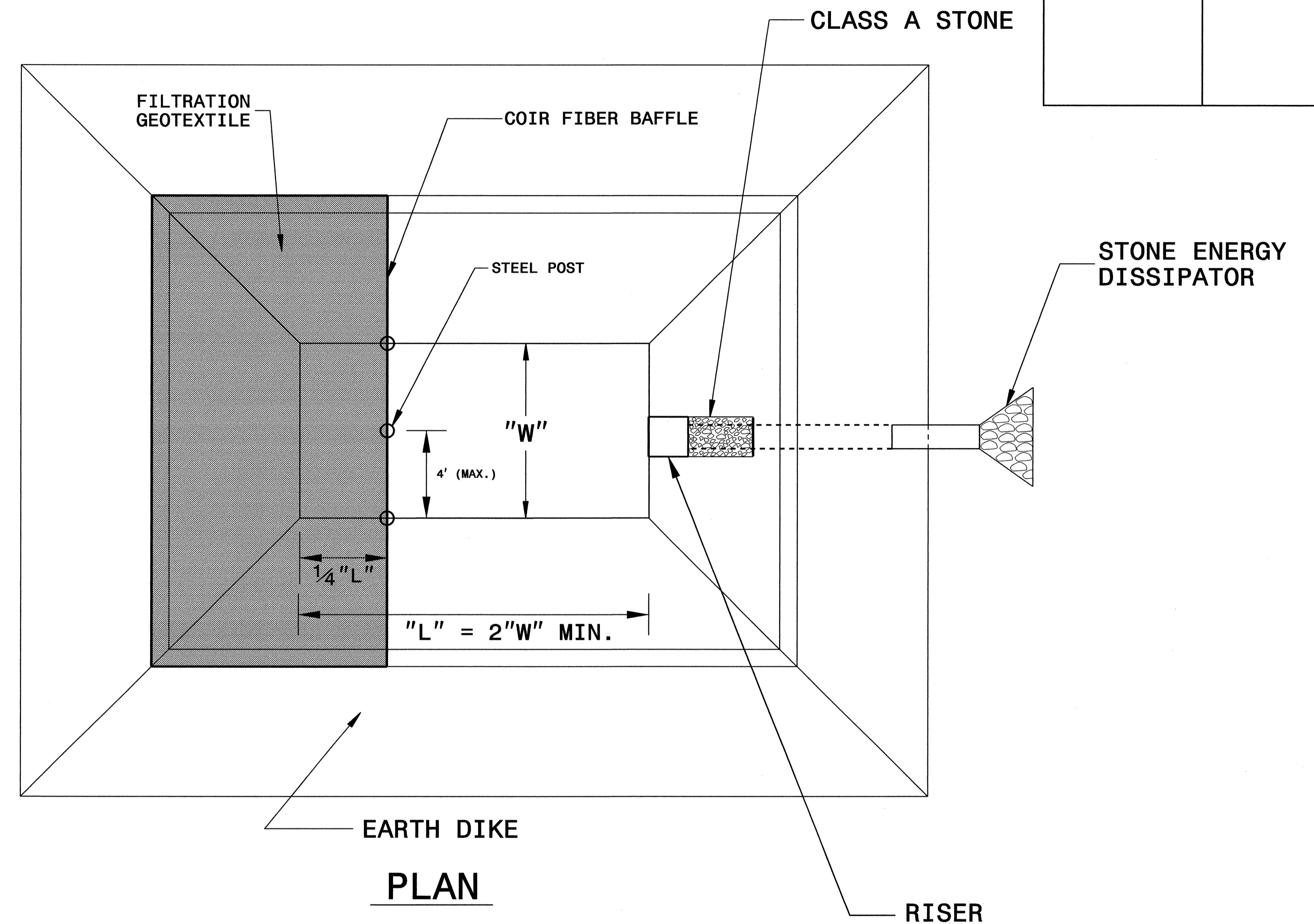
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



**TYPICAL SECTION VIEW**

NOT TO SCALE

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. U-4444AB	SHEET NO. EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL**

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	L	111+00	114+50	RT	940
4	L	111+50	117+00	LT	1660
5	L	124+00	128+00	RT	1225
5	L	126+50	128+18	LT	565
5	L	133+50	136+00	LT	1125
5	L	138+00	143+00	LT	1210
5	L	138+50	139+00	RT	120
5	L	139+50	140+50	RT	285
5	Y3RPA	19+00	22+00	RT	745
5	Y3RPD*M	11+75	14+50	LT	165
5	Y3RPD*M	14+50	17+00	LT	150
6	Y3RPA	12+00	14+50	RT	810
8	Y3	19+00	22+09	LT	250
8	Y3	27+27	31+50	LT	1290
8	Y3	29+00	29+50	RT	115
10	Y4SRREV	17+00	19+50	LT	565
10	Y4SRREV	17+00	19+00	RT	565
			SUBTOTAL		11785
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				47965
				TOTAL	59750
				SAY	60000

**PERMANENT SOIL REINFORCEMENT MAT**

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	L	103+50	107+50	RT	325
5	L	128+18	128+50	RT	45
5	L	128+50	132+00	LT	1650
5	L	137+00	138+50	RT	340
5	L	143+00	145+00	LT	1205
5	Y3RPA	14+99	18+50	RT	965
			SUBTOTAL		4530
			ADDITIONAL PERM TO BE INSTALLED		850
			TOTAL		5380
			SAY		5500



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>U-4444AB</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

## ***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.

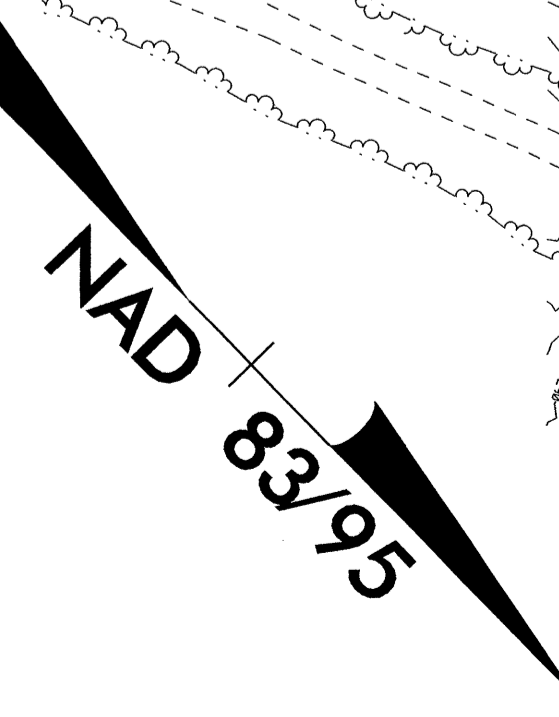
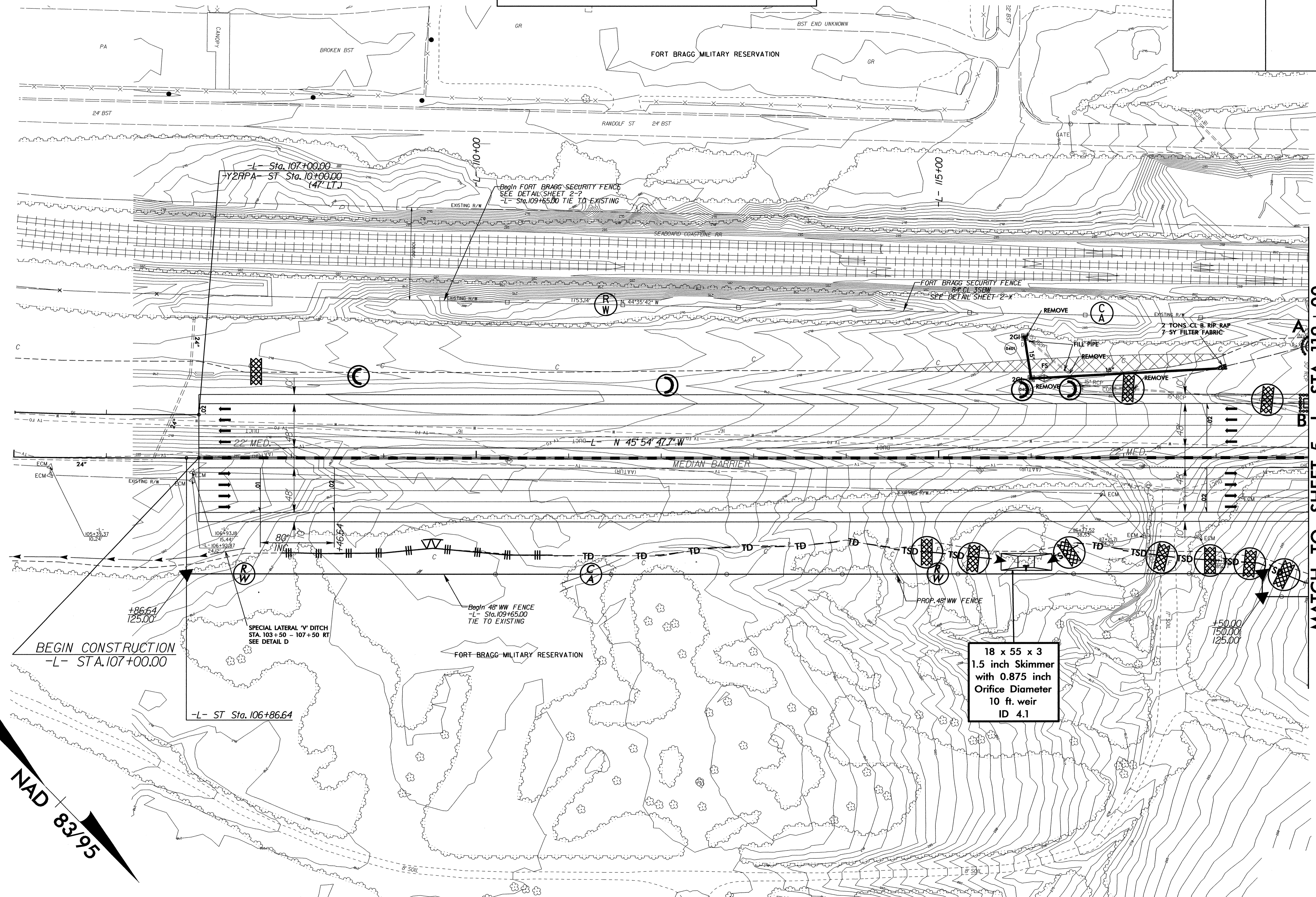
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-04/CONST.04
U-4444A RW SHEET NO.	10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 04

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 ROCK INLET  
SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE:  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



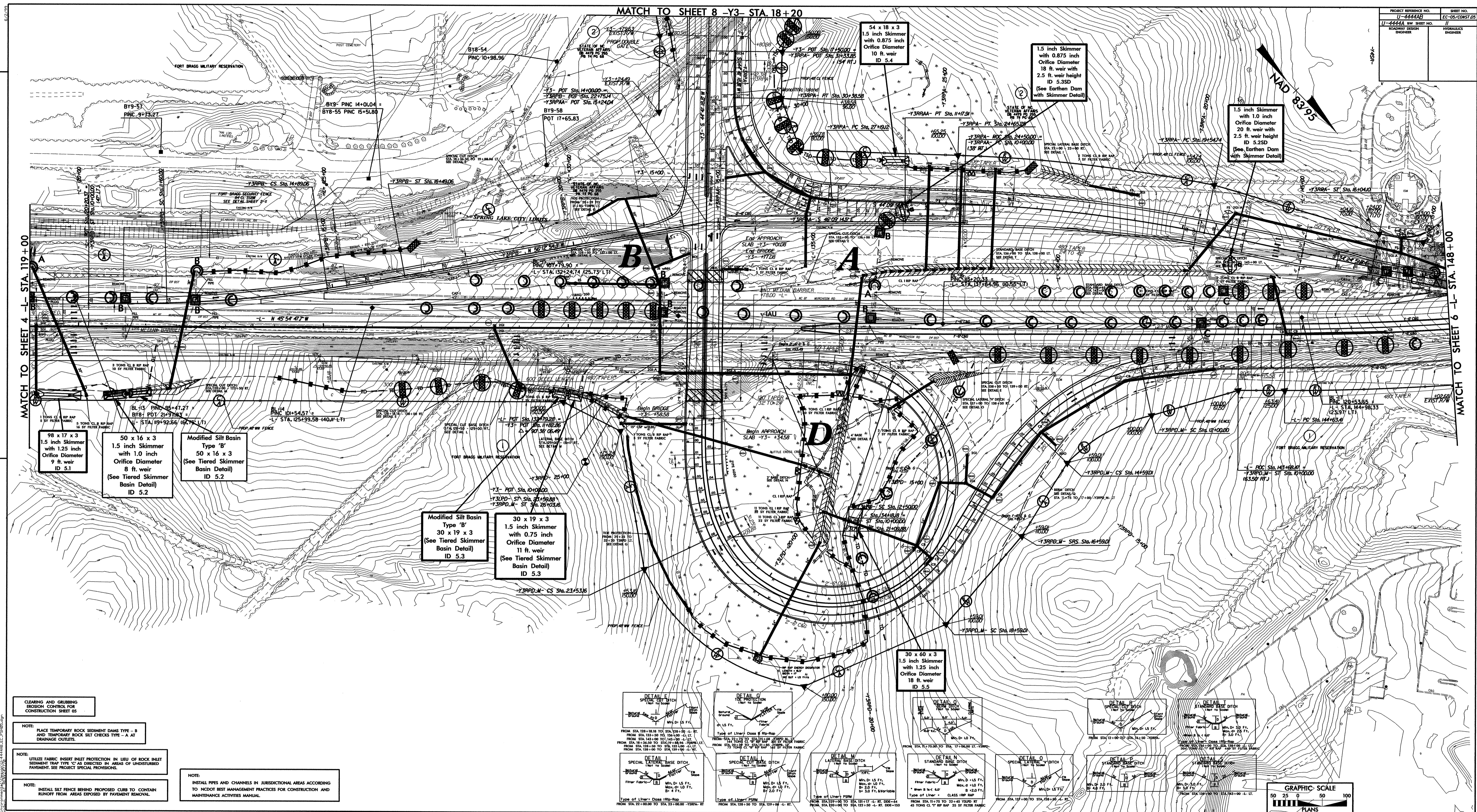
18 x 55 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
10 ft. weir  
ID 4.1

REVISIONS

MATCH TO SHEET 5 -L- STA. 119+00

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PROJECT REFERENCE NO.	SHEET NO.
U-4444A	EC-28/CONST-25
U-4444A HW SHEET NO.	II
ROADWAY DESIGN	HYDRAULICS
ENGINEER	ENGINEER



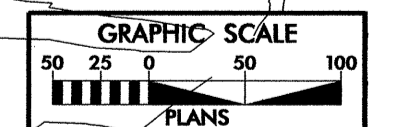
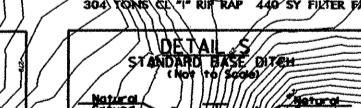
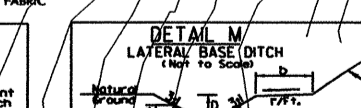
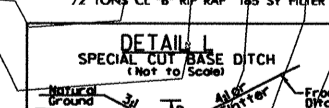
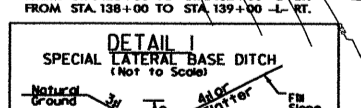
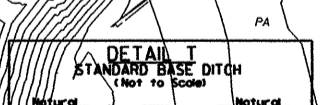
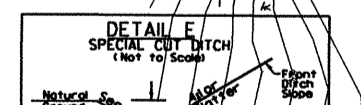
CLEANING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05

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 ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE: INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

NOTE: INSTALL PIPES AND CHANNELS IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



MATCH TO SHEET 8 - Y3 - STA. 18+20  
 MATCH TO SHEET 4 - L - STA. 119+00  
 MATCH TO SHEET 6 - L - STA. 148+00  
 WINDROWS  
 Right-of-way Revision: 06/19/10, Added Right-of-way along -Y3- right end -L- left end -Y5- (PARCEL 2).  
 EC-28/CONST-25  
 U-4444A  
 II  
 ROADWAY DESIGN  
 HYDRAULICS  
 ENGINEER  
 ENGINEER

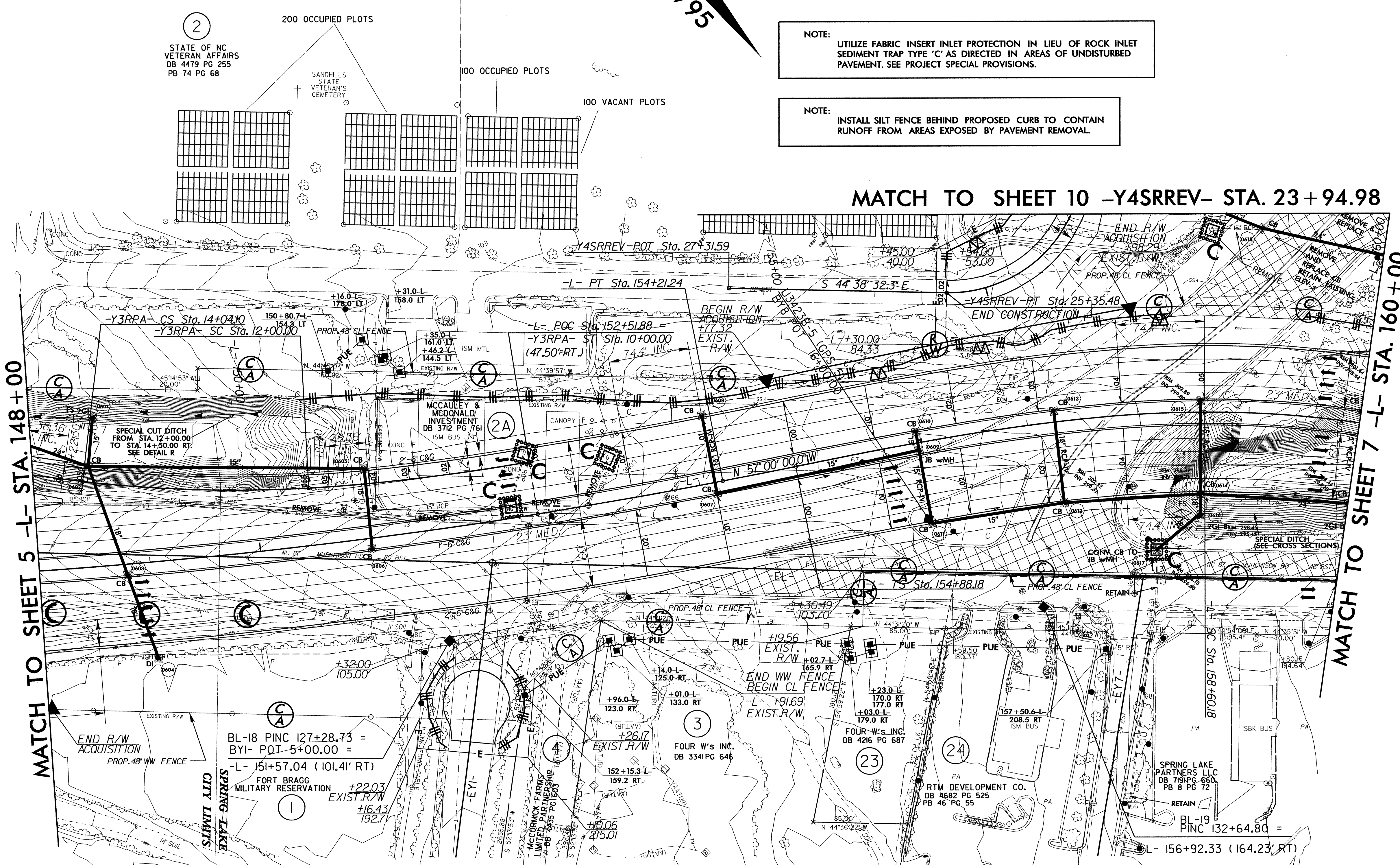
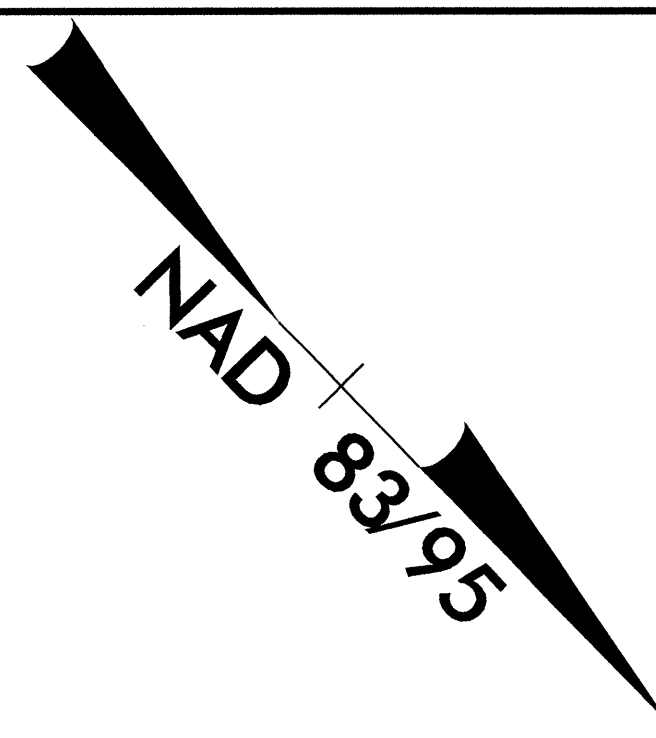
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-06/CONST.06
U-4444A RW SHEET NO.	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

NOTE:  
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET  
SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE:  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



REVISIONS  
Right-of-way Revision 06-18-10. Added Right-of-way and construction easement along -L-. Added parcels 2 and 3.  
Right-of-way Revision 07-06-10. Updated Easement on Parcel 2 due to cul-de-sac redesign and added parcel 2A.  
Right-of-way Revision 07-06-11. Added Utility Easement on Parcel 3, 23, and 24. (New Claims parcel 23 and 24)  
Right-of-way Revision 07-28-11. Changed construction Easement on Parcel 2.

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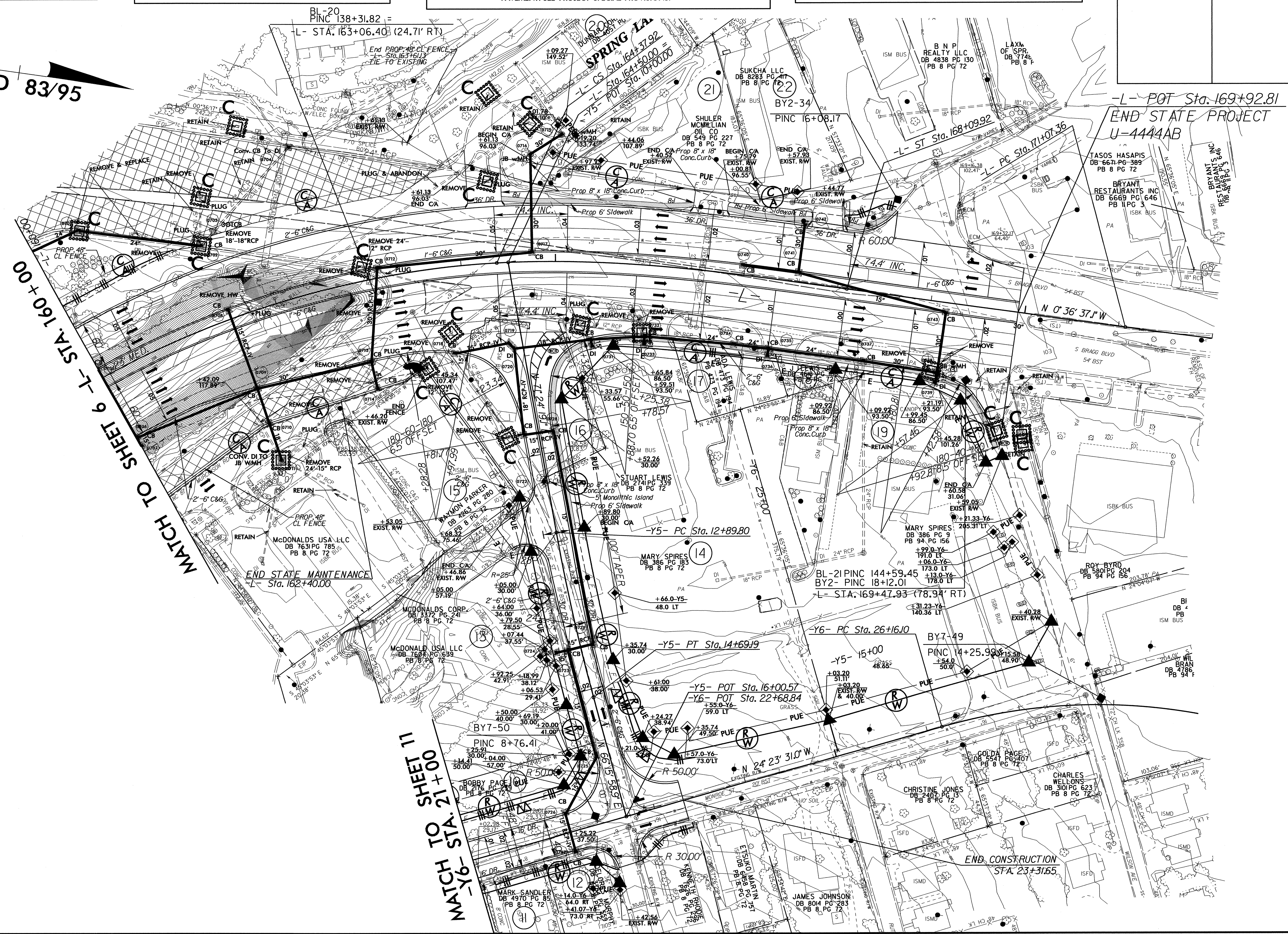
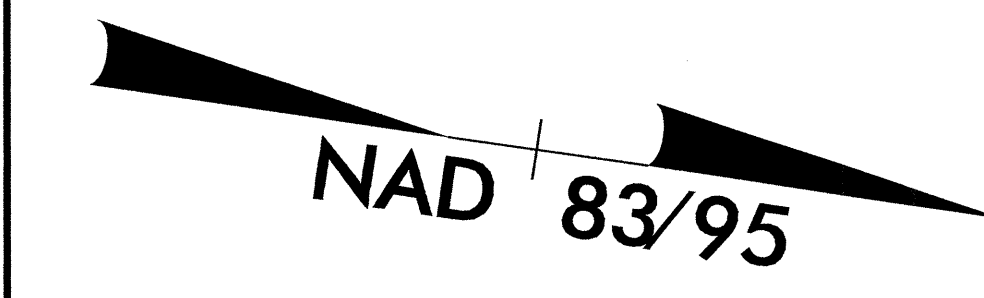
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-07/CONST.07
U-4444A RW SHEET NO.	12A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 07

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 ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE: INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



REVISIONS  
 Right-of-Way Revision - 06-18-10, Added L- Right-of-way and construction easement on the right between -Y5- and Wilson Ave. (Parcels 15,16,17,18 and 19)  
 Right-of-Way Revision - 07-06-10, Added Right-of-way and permanent drainage easement to U-4444A. (Parcels 10,11,12,13 and 14)  
 Right-of-Way Revision - 07-06-11, Updated utility easement on parcels 12, 14, and 19.  
 Right-of-Way Revision - 09-08-11, Adjusted property line and CA on parcel 22.

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 8/17/99  
 61 RENW27770

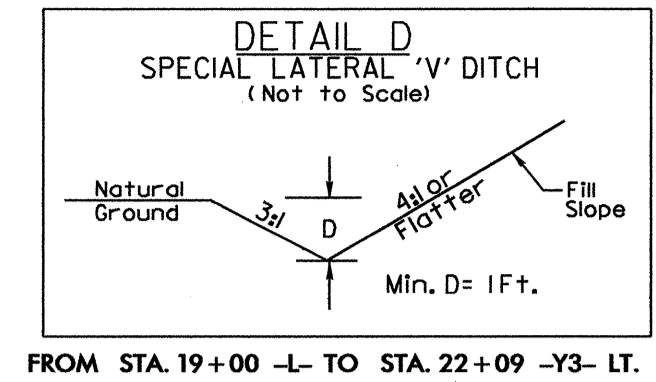
END CONSTRUCTION  
 STA. 23+31.65

END STATE MAINTENANCE  
 L- Sta. 162+40.00

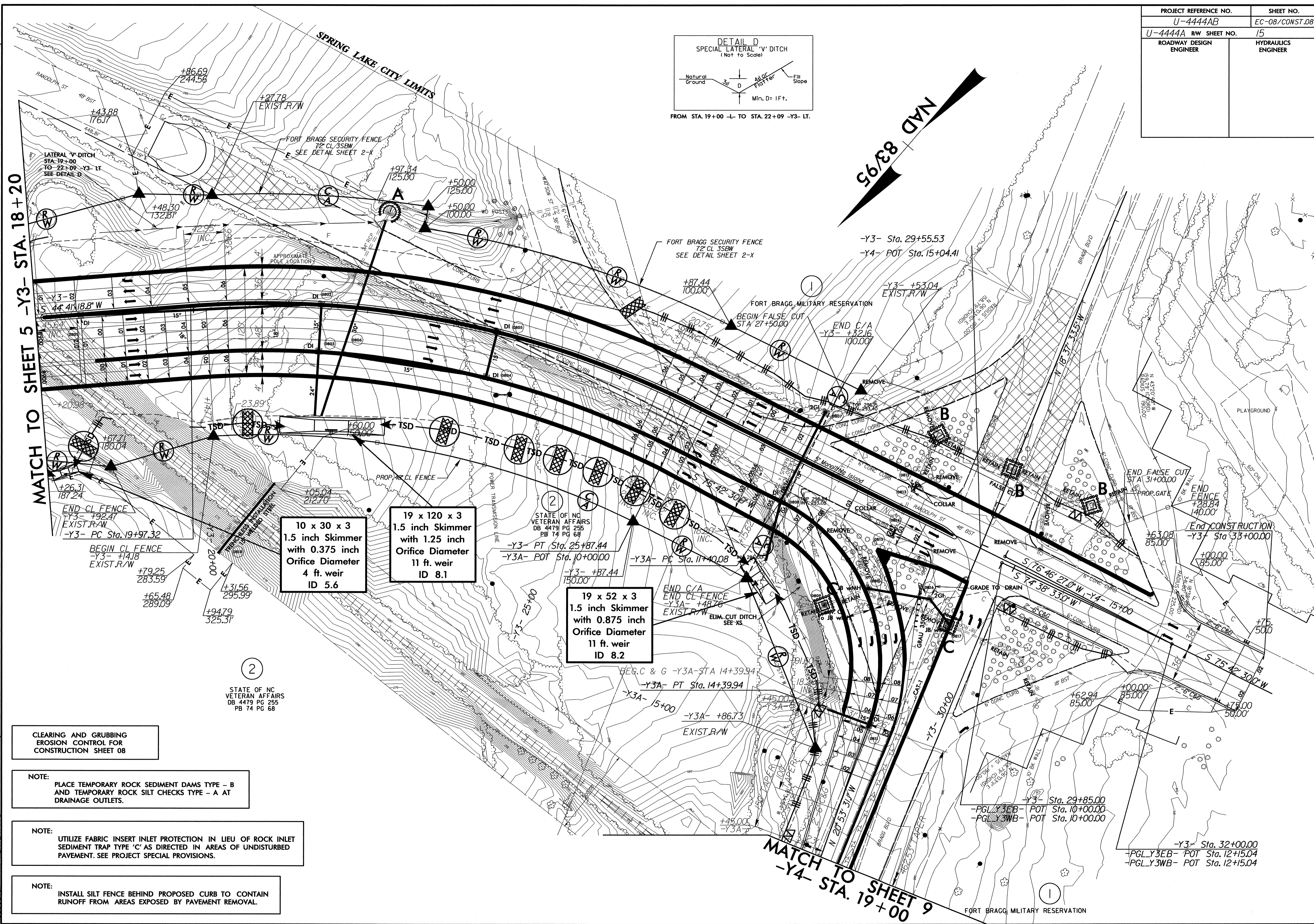
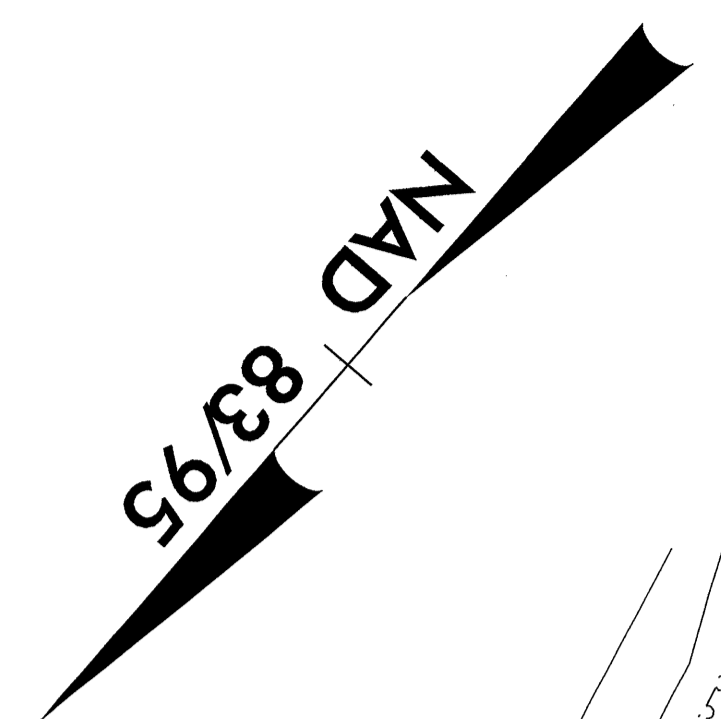
MATCH TO SHEET 11  
 -Y6- STA. 21+00

MATCH TO SHEET 9 - L- STA. 160+00

PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-08/CONST.08
U-4444A RW SHEET NO.	15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



FROM STA. 19+00 -L- TO STA. 22+09 -Y3- LT.



MATCH TO SHEET 5 -Y3- STA. 18+20

MATCH TO SHEET 9 -Y4- STA. 19+00

10 x 30 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 5.6

19 x 120 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
11 ft. weir  
ID 8.1

19 x 52 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
11 ft. weir  
ID 8.2

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:  
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET  
SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE:  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

Right-of-Way Revision 06-18-10 - Added Right-of-Way and construction easment for -Y3- and -Y4- on U-4444A. (Parcel 2)

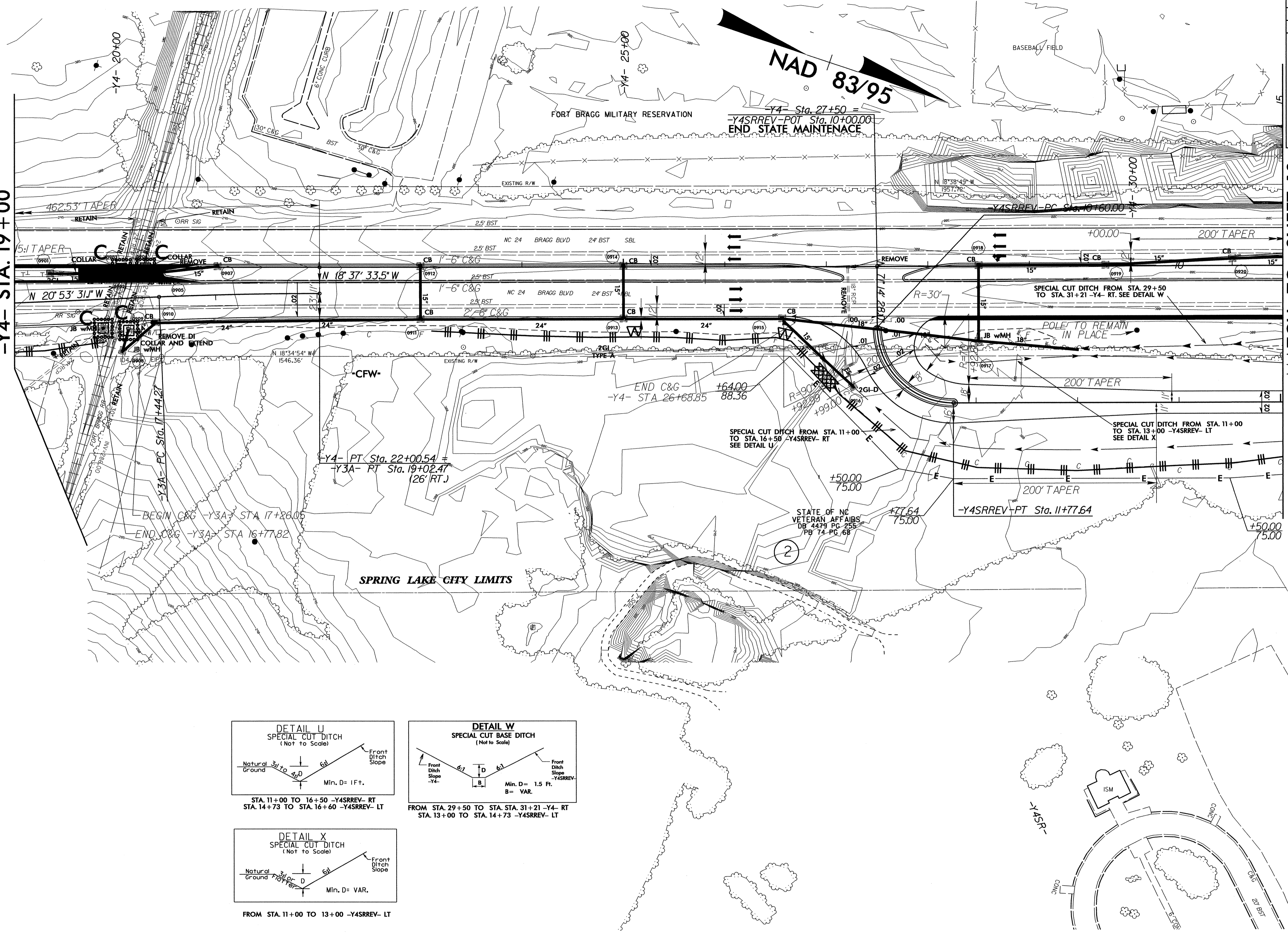
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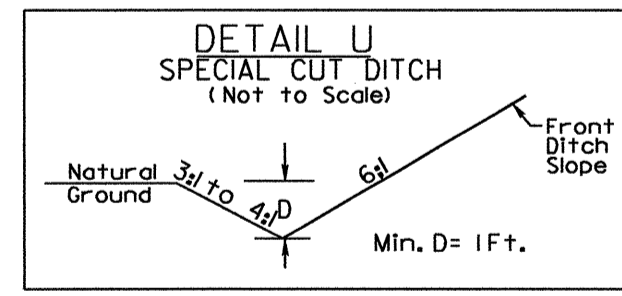
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-09/CONST.09
U-4444A RW SHEET NO.	16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH TO SHEET 8  
-Y4- STA. 19+00

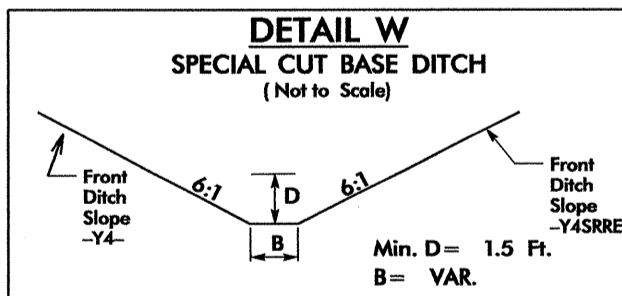
MATCH TO SHEET 10  
-Y4- STA. 31+50



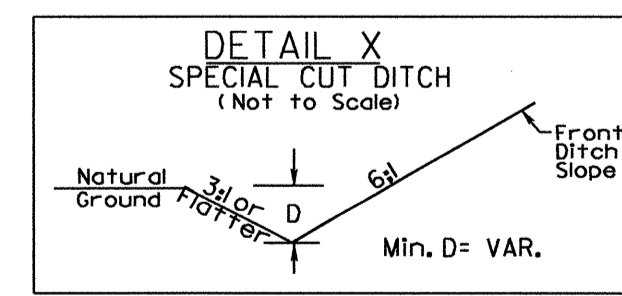
REVISIONS  
 Right-of-Way Revision 06-18-10 -- Added right-of-way and construction easement for -Y4SR- to U-4444A.  
 Right-of-Way Revision 10-07-10 -- Added utility easement on parcel 2.  
 Right-of-Way Revision 07-28-11 -- Changed right-of-way and easement on parcel 2.



STA. 11+00 TO 16+50 -Y4SRREV- RT  
STA. 14+73 TO STA. 16+60 -Y4SRREV- LT



FROM STA. 29+50 TO STA. STA. 31+21 -Y4- RT  
STA. 13+00 TO STA. 14+73 -Y4SRREV- LT



FROM STA. 11+00 TO 13+00 -Y4SRREV- LT

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 09

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

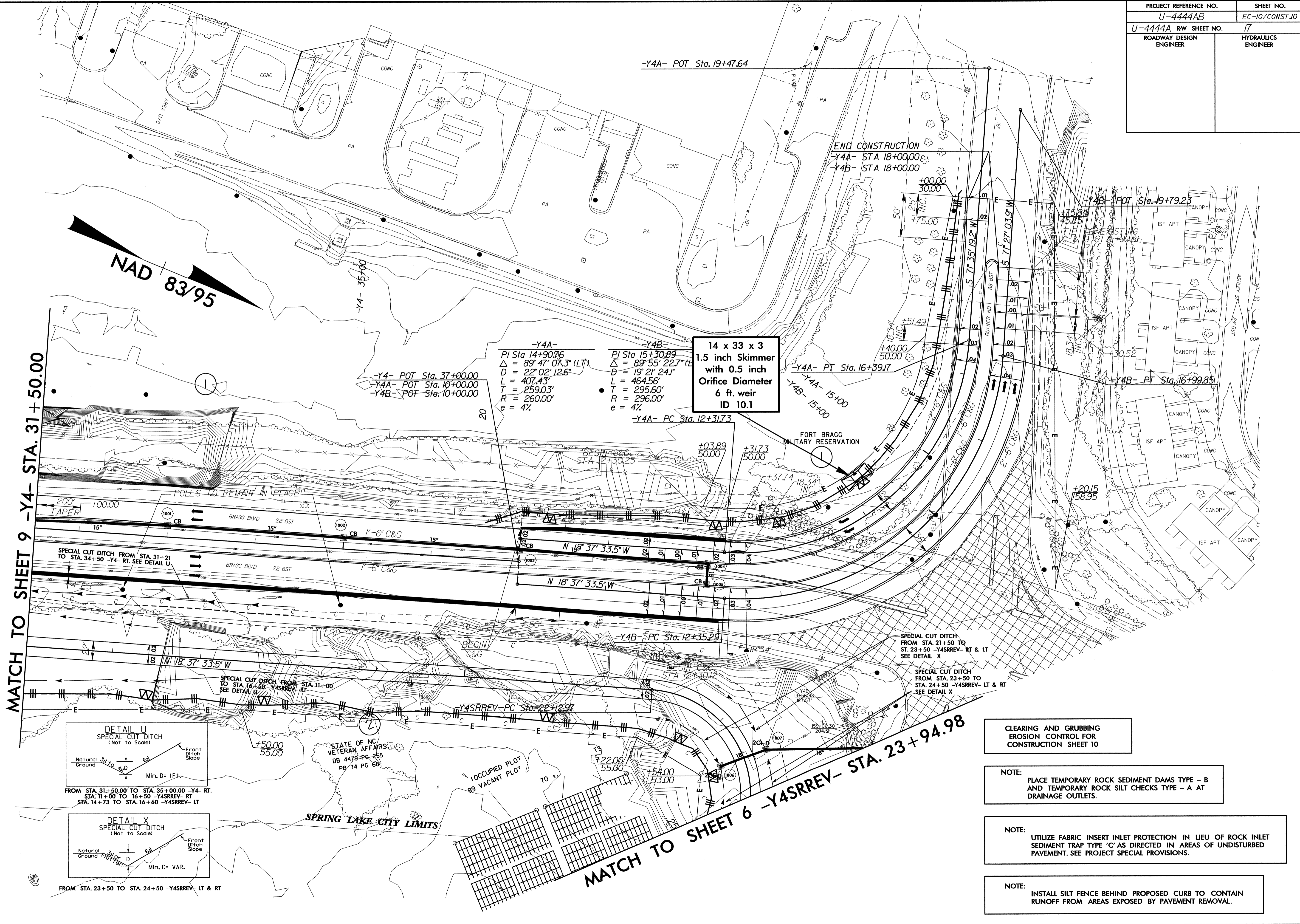
NOTE:  
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SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE:  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

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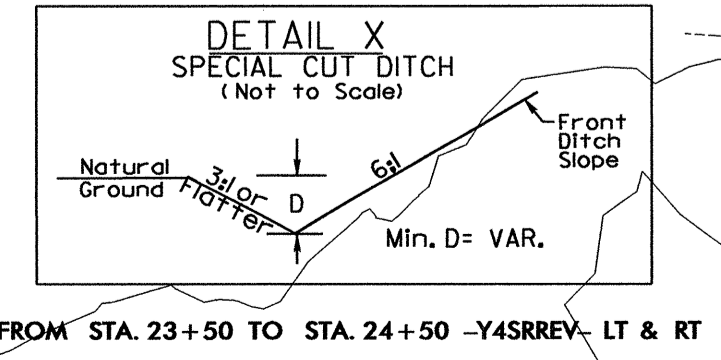
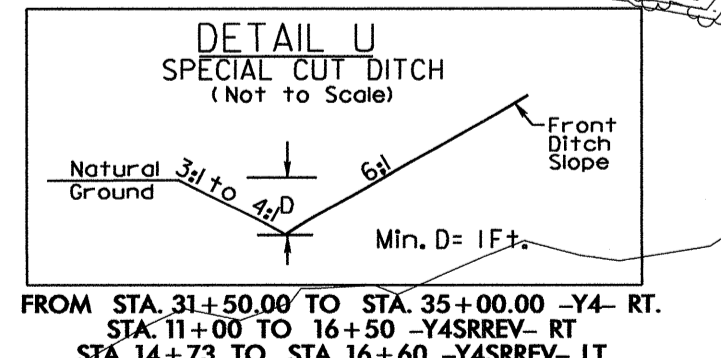
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-10/CONST.10
U-4444A RW SHEET NO.	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
 REVISIONS  
 Right-of-way Revision 04-09-10 - Added construction revision along -Y4A- left for U-4444A.  
 Right-of-way Revision 10-07-10 - Added utility easement on parcel 2.  
 Right-of-way Revision 07-28-11 - Changed construction easement on parcel 2.  
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MATCH TO SHEET 9 -Y4- STA. 31+50.00

MATCH TO SHEET 6 -Y4SRREV- STA. 23+94.98



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.

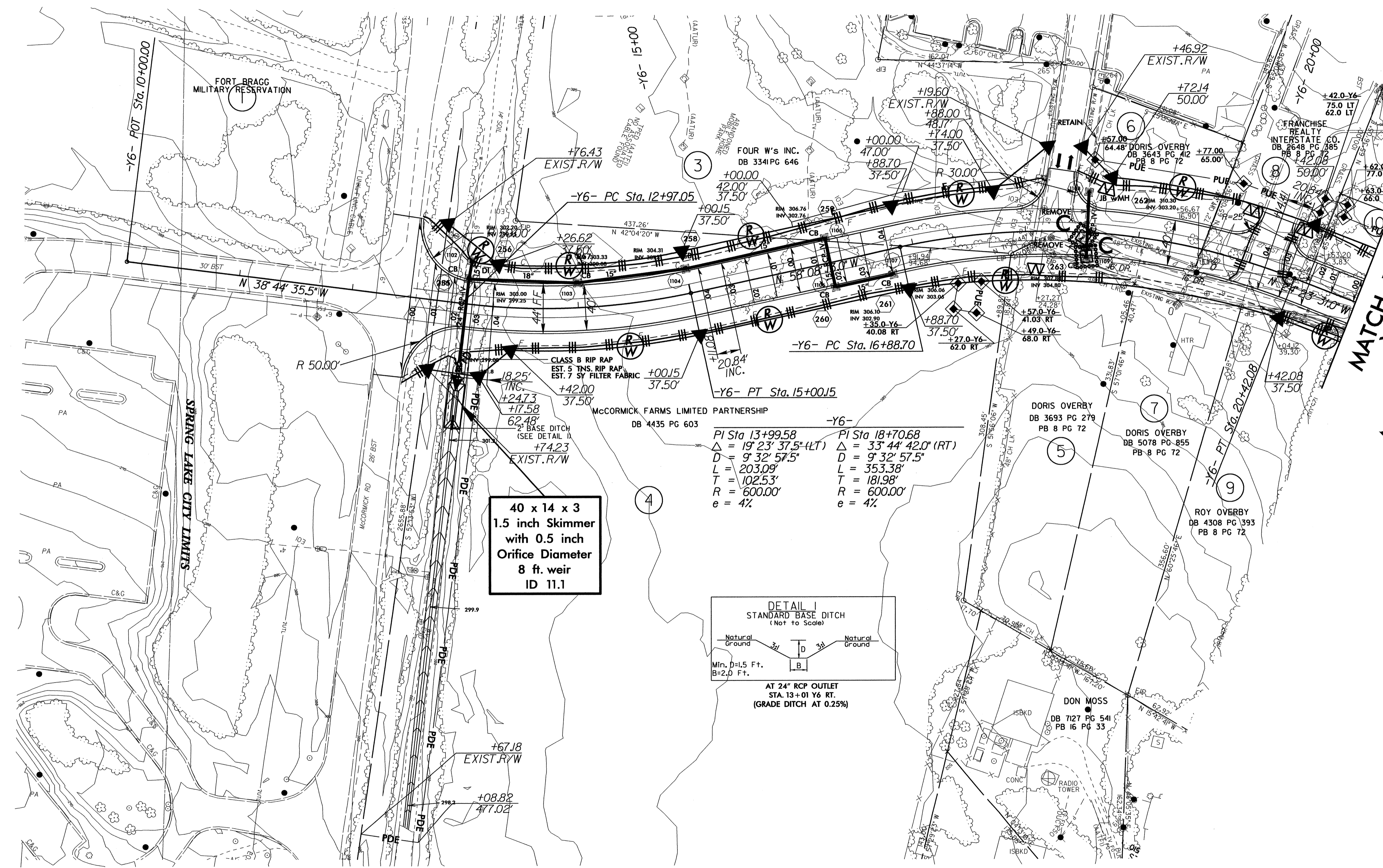
NOTE:  
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NOTE:  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

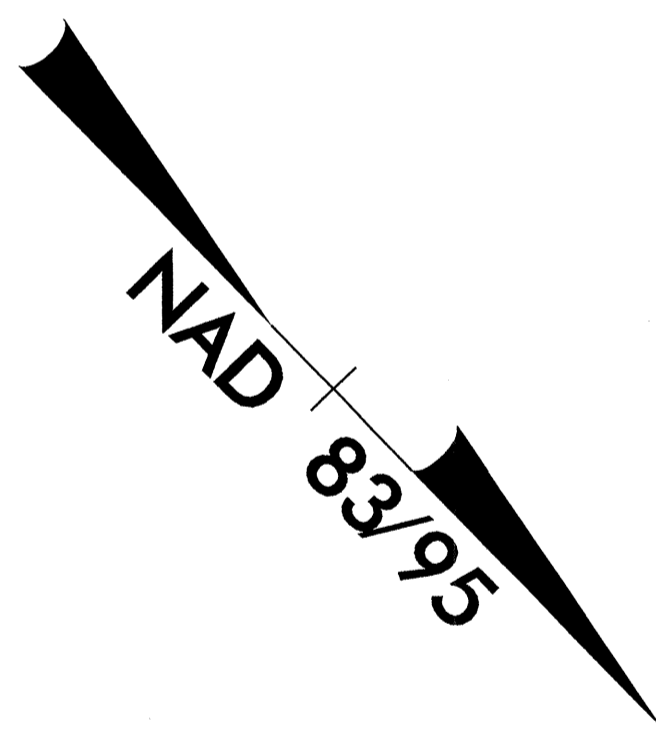


PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-II/CONST.II
U-4444A RW SHEET NO.	12B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

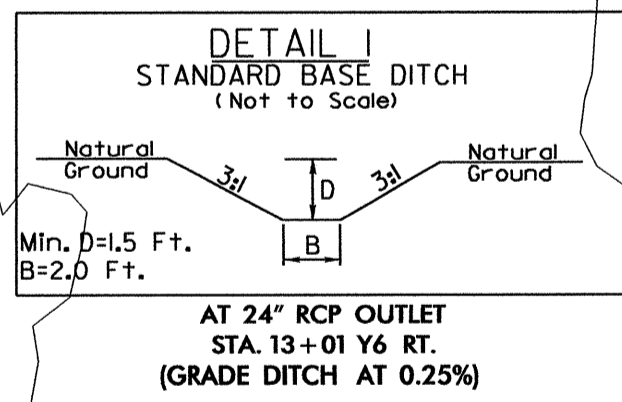
REVISIONS  
 Right-of-way Revision 06-18-10. Added Right-of-way and permanent drainage easement for -Y6- and McCormick Rd. on U-4444A. (Parcels 3,4,5,6,7,8,9 and 10)  
 Right-of-way Revision 07-06-11. Updated utility easements on parcels 4, 8, and 10.



MATCH TO SHEET 7  
 -Y6- STA. 21+00



40 x 14 x 3  
 1.5 inch Skimmer  
 with 0.5 inch  
 Orifice Diameter  
 8 ft. weir  
 ID 11.1



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.

NOTE:  
 UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET  
 SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
 PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

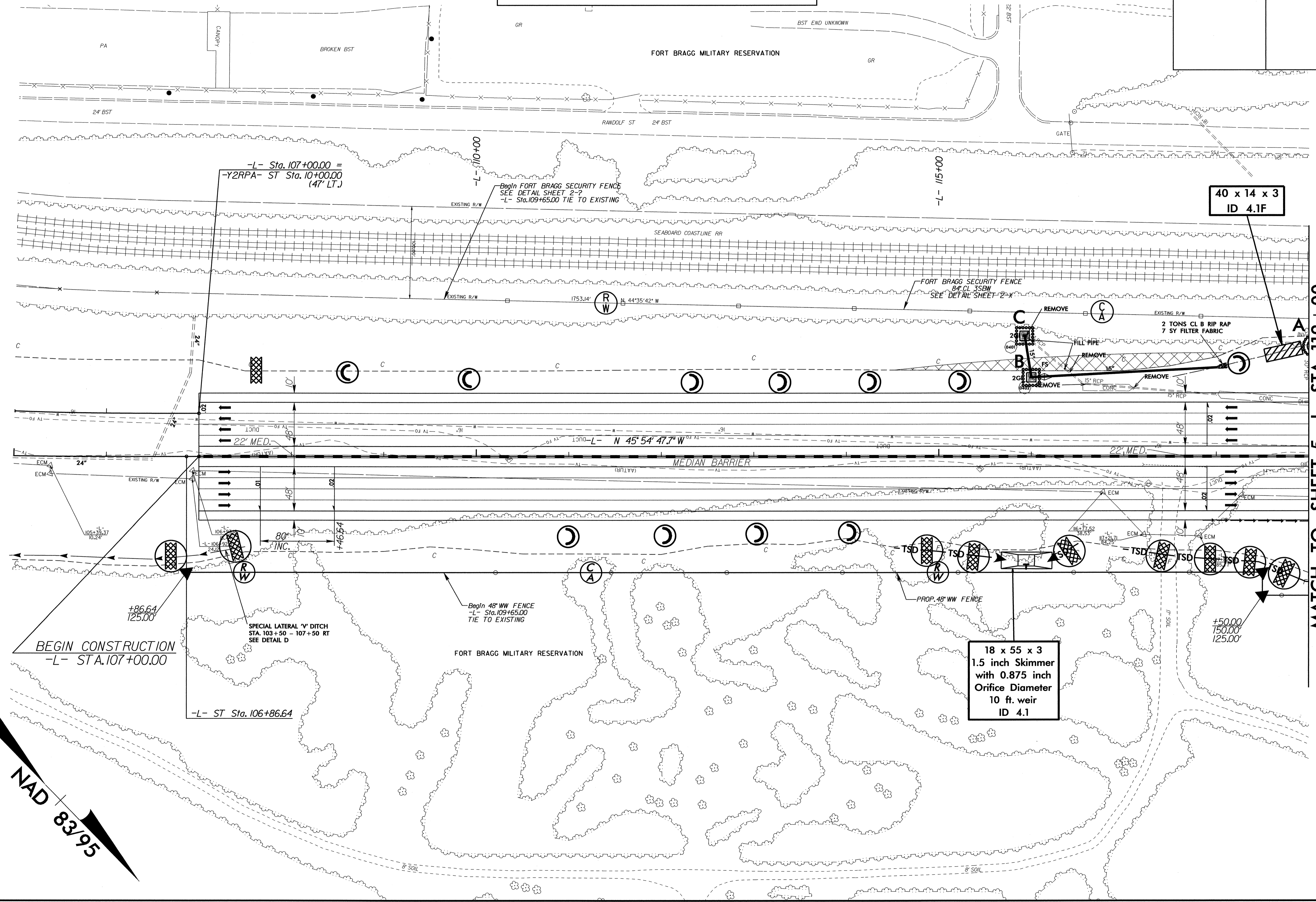
NOTE:  
 INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
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PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-12/CONST.04
U-4444A RW SHEET NO.	10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

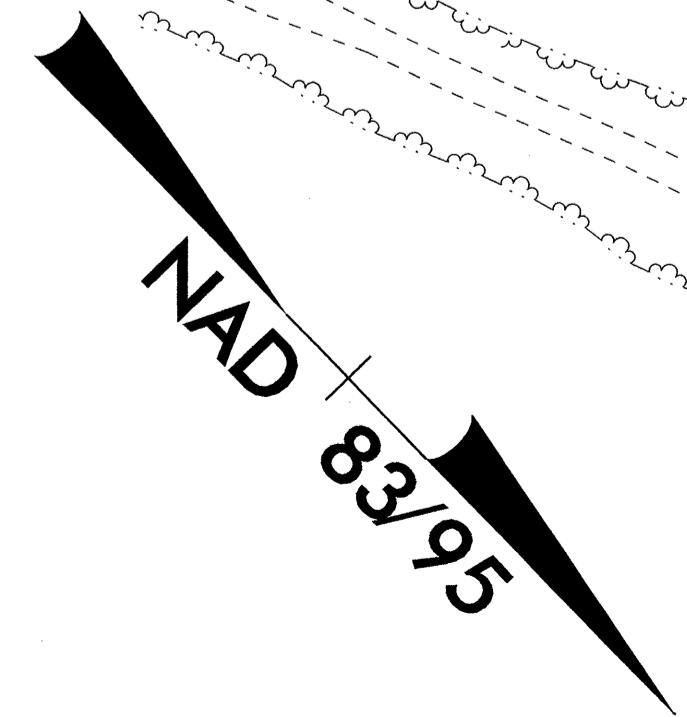
NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE: INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



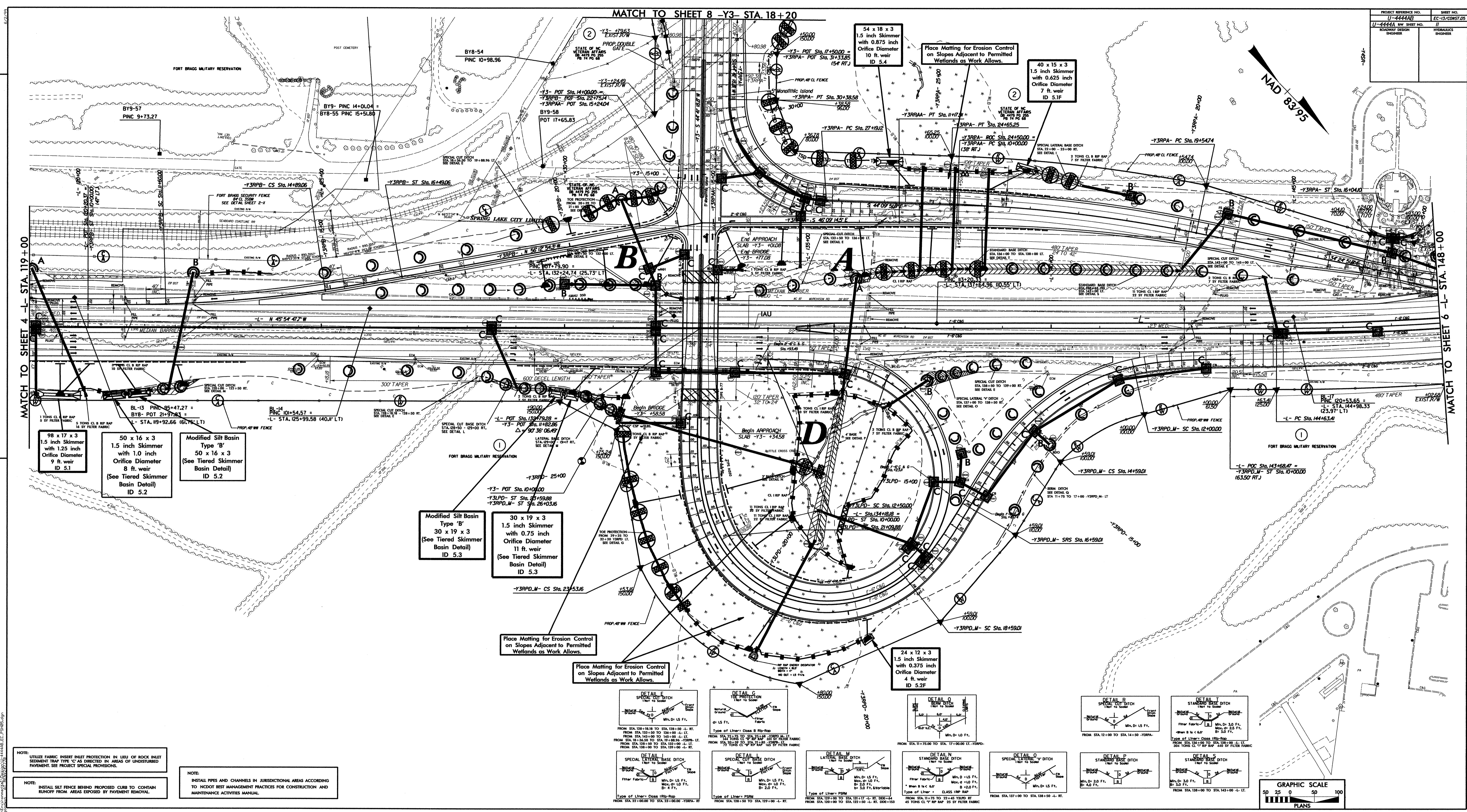
REVISIONS

MATCH TO SHEET 5 -L- STA. 119+00



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03-MAR-2012 11:58  
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AL PENN27710

PROJECT REFERENCE NO.	SHEET NO.
U-4444A	EC-13/CONST.05
U-4444A RW SHEET NO.	II
HYDRAULIC ENGINEER	HYDRAULIC ENGINEER



Right-of-way boundary shown 50/100 ft. Added Right-of-way along -Y3- right and -L- left part -Y3- (PARCEL 2).

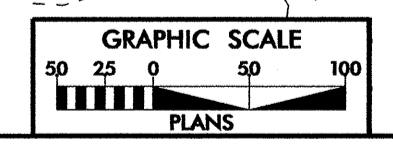
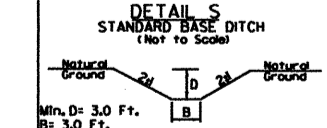
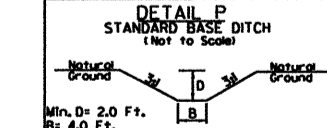
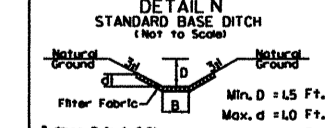
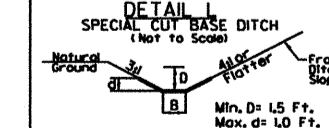
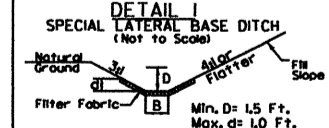
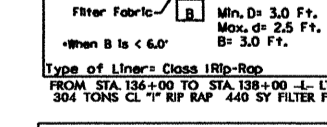
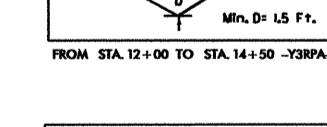
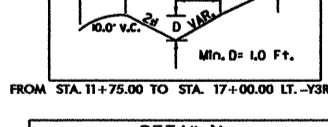
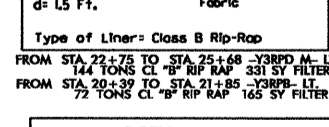
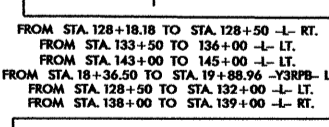
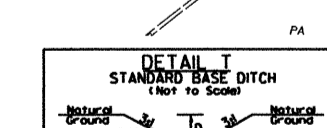
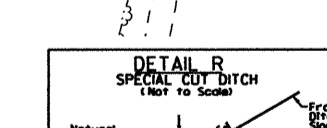
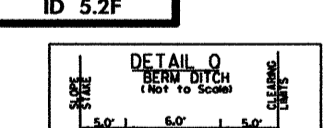
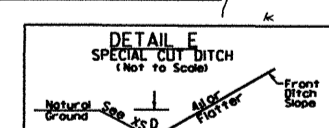
**NOTE:** UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAYMENT. SEE PROJECT SPECIAL PROVISIONS.

**NOTE:** INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

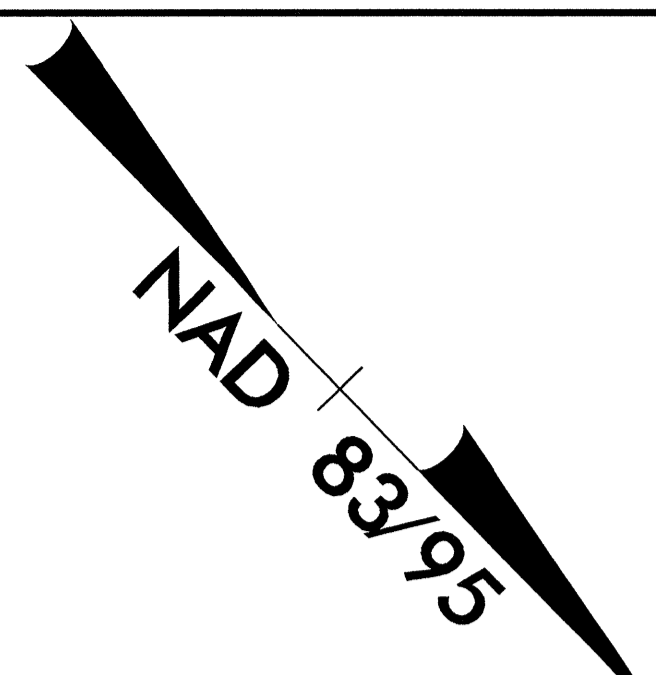
**NOTE:** INSTALL PIPES AND CHANNELS IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

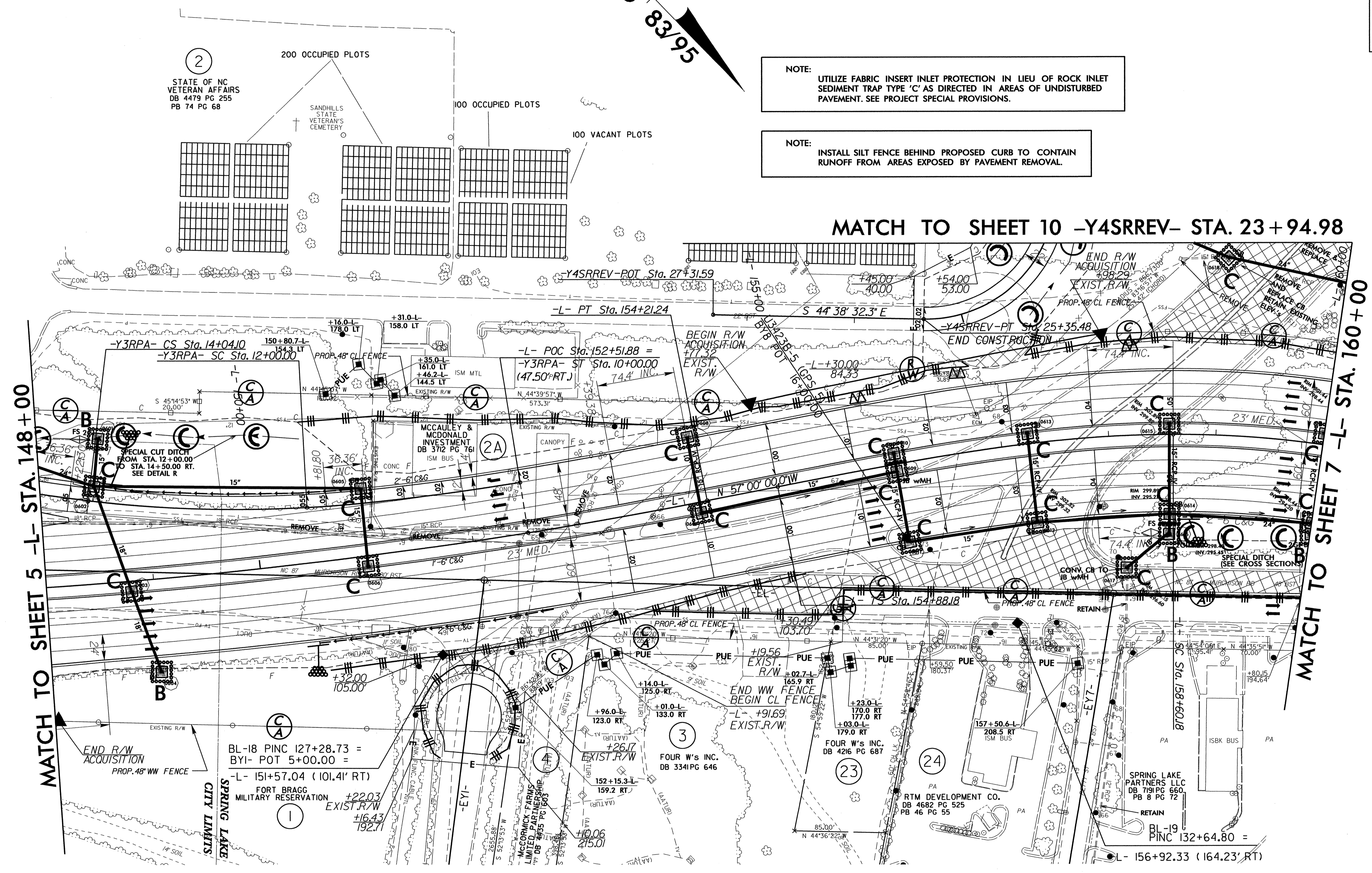


PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-14/CONST.06
U-4444A RW SHEET NO.	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE: INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



MATCH TO SHEET 10 -Y4SRREV- STA. 23+94.98

MATCH TO SHEET 5 -L- STA. 148+00

MATCH TO SHEET 7 -L- STA. 160+00

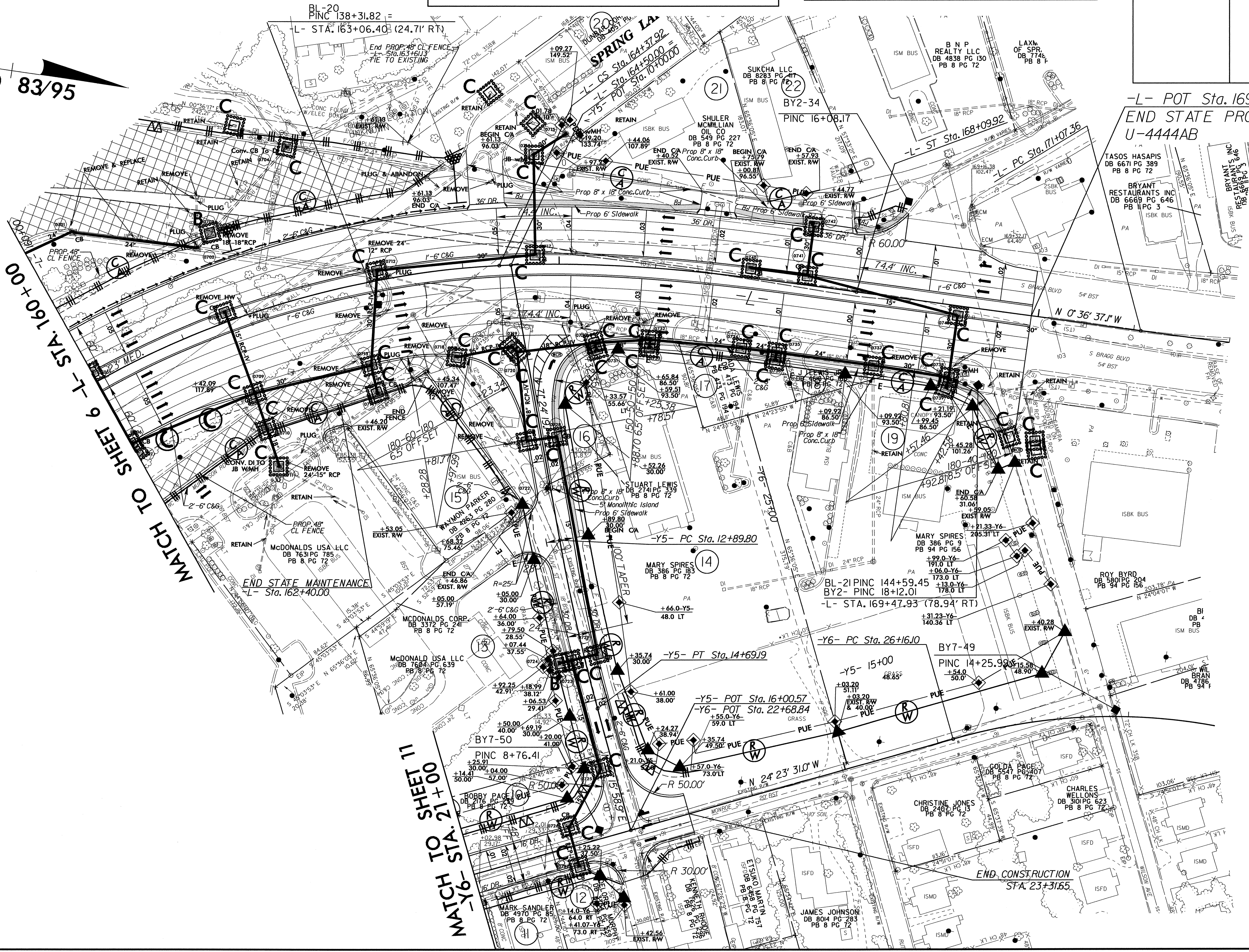
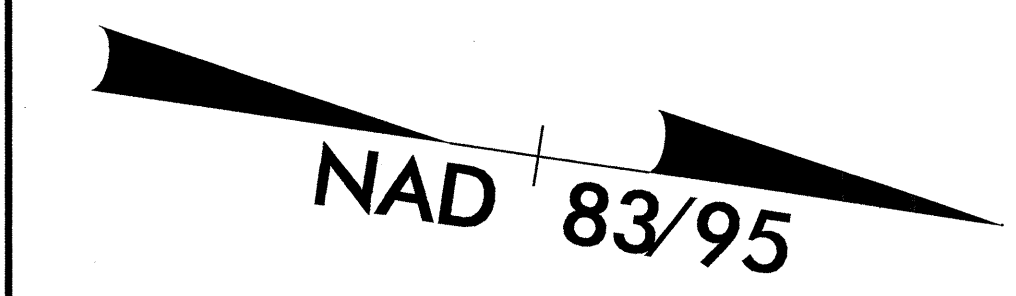
REVISIONS  
 Right-of-way Revision 06-18-10: Added Right-of-way and construction easement along -L-. Added parcels 2 and 3.  
 Right-of-way Revision 07-06-10: Updated Easement on Parcel 2 due to cul-de-sac redesign and added parcel 2A.  
 Right-of-way Revision 07-06-11: Added Utility Easement on Parcel 3, 23, and 24. (New Claims parcel 23 and 24)  
 Right-of-way Revision 07-28-11: Changed construction Easement on Parcel 2.

03-MAR-2012 12:18  
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PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-15/CONST.07
U-4444A RW SHEET NO.	12A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE: INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.



-L- POT Sta. 169+92.81  
END STATE PROJECT  
U-4444AB

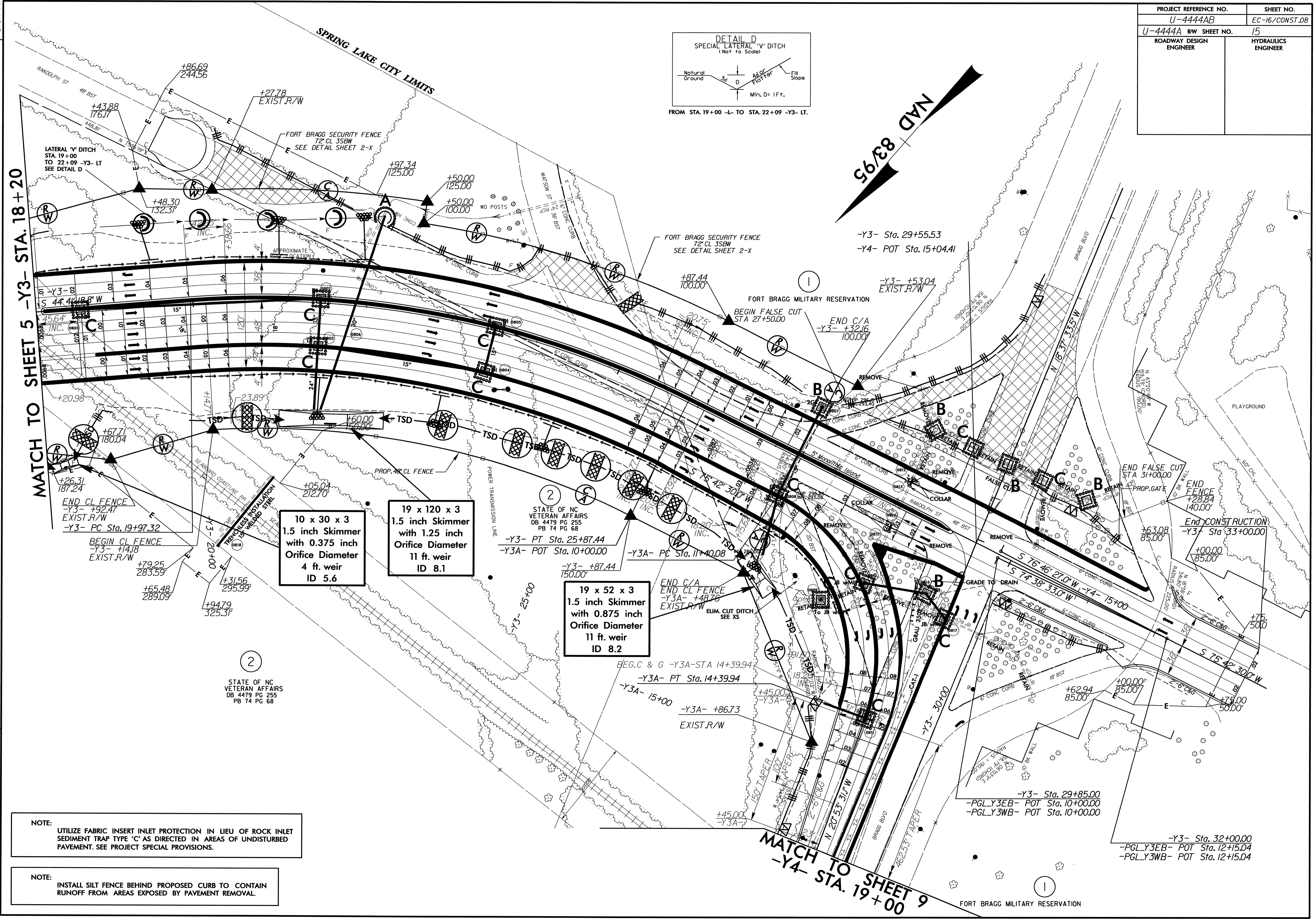
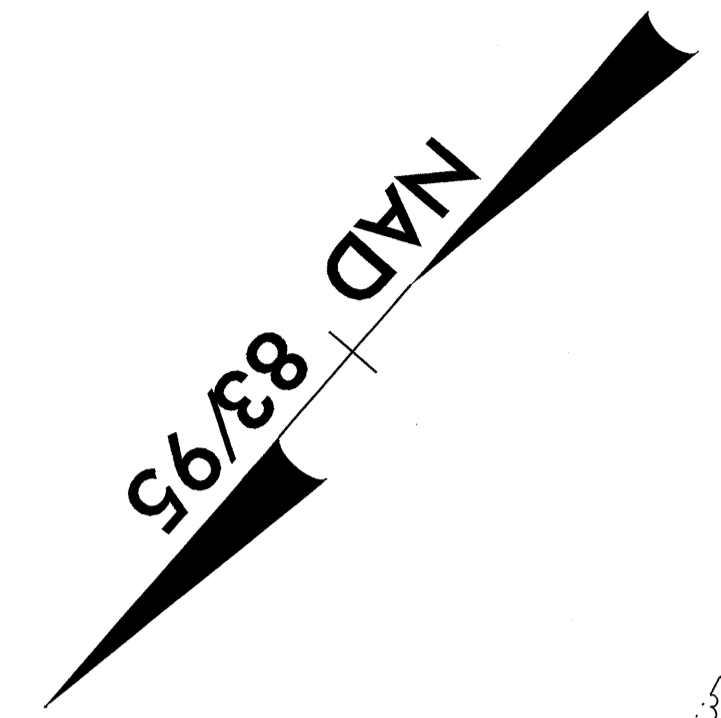
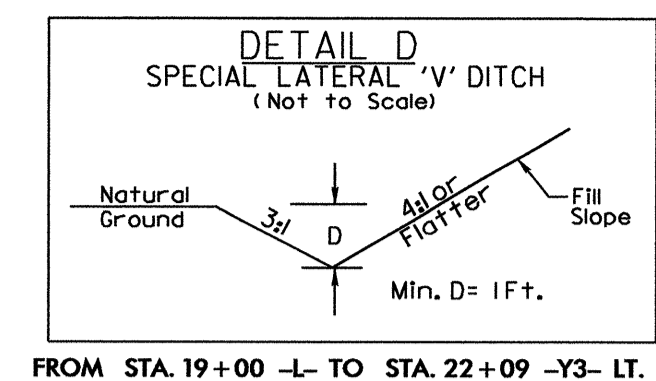
MATCH TO SHEET 9 -L- STA. 160+00

MATCH TO SHEET 11  
-Y6- STA. 21+00

REVISIONS  
 Right-of-Way Revision - 06-18-10 Added Right-of-way and construction easement on the right between -Y5- and Wilson Ave. (Parcels 15,16,17,18 and 19)  
 Right-of-Way Revision - 07-06-10 Added Right-of-way and construction easement on the right between -Y6- and Wilson Ave. (Parcels 10,11,12,13 and 14)  
 Right-of-Way Revision - 07-06-10 Added Temporary construction easement on parcels 12, 14 and 19.  
 Right-of-Way Revision - 07-04-11 Updated utility easement on parcels 12, 14 and 19.  
 Right-of-Way Revision - 09-08-11 Adjusted property line and CA on parcel 22.

03-MAR-2012 12:25  
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PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-16/CONST.08
U-4444A RW SHEET NO.	15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH TO SHEET 5 -Y3- STA. 18+20

MATCH TO SHEET 9 -Y4- STA. 19+00

Right-of-Way Revision 06-18-10 - Added Right-of-Way and construction easment for -Y3- and -Y4- on U-4444A. (Parcel 2)

**NOTE:**  
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

**NOTE:**  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

10 x 30 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 5.6

19 x 120 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
11 ft. weir  
ID 8.1

19 x 52 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
11 ft. weir  
ID 8.2

STATE OF NC  
VETERAN AFFAIRS  
DB 4479 PG 255  
PB 74 PG 68

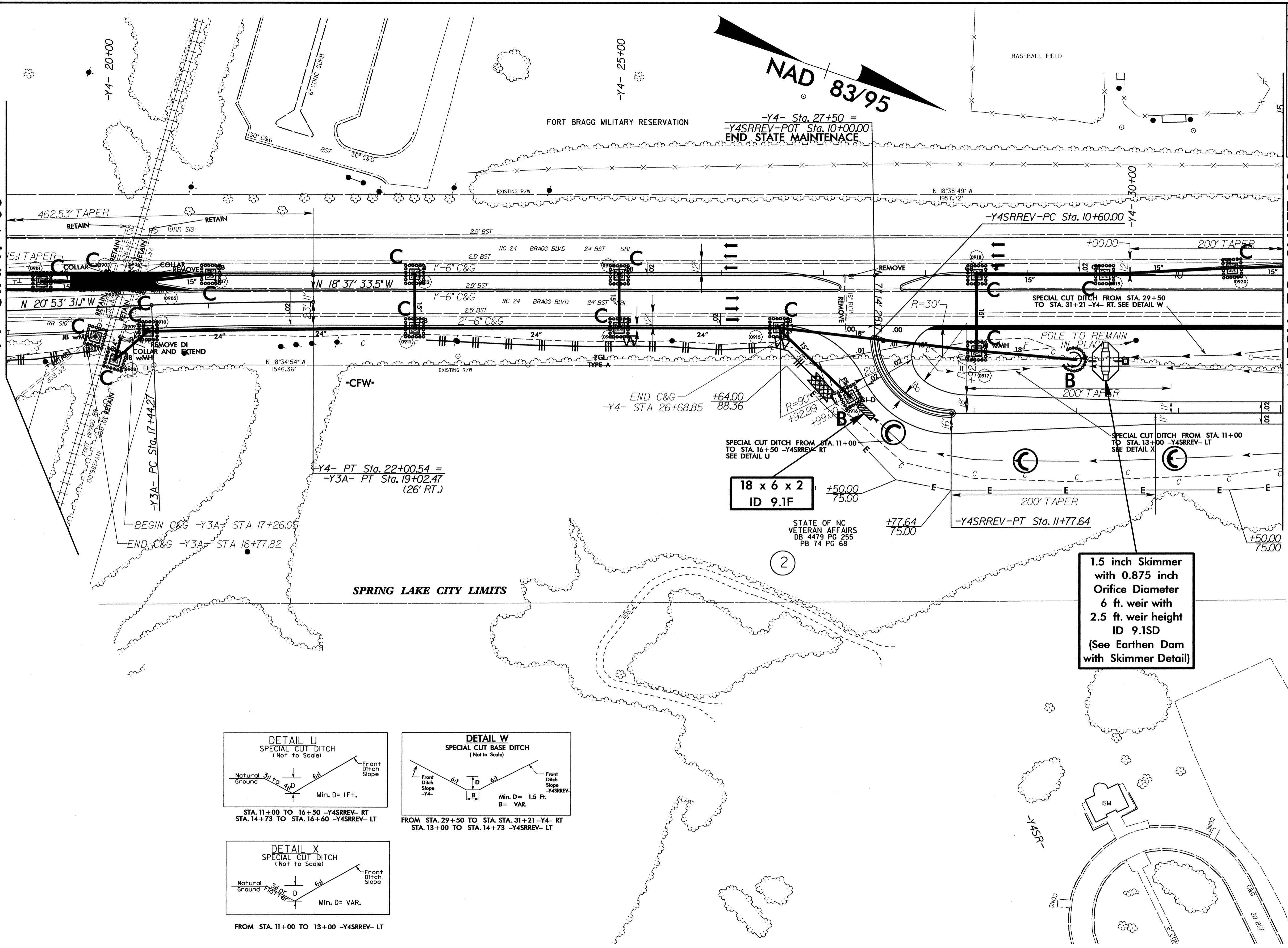
STATE OF NC  
VETERAN AFFAIRS  
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AL 2/27/20

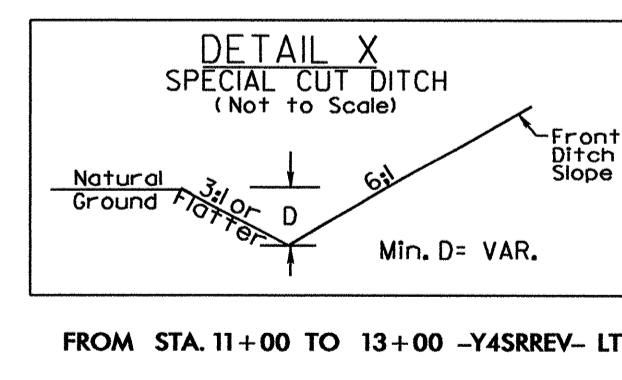
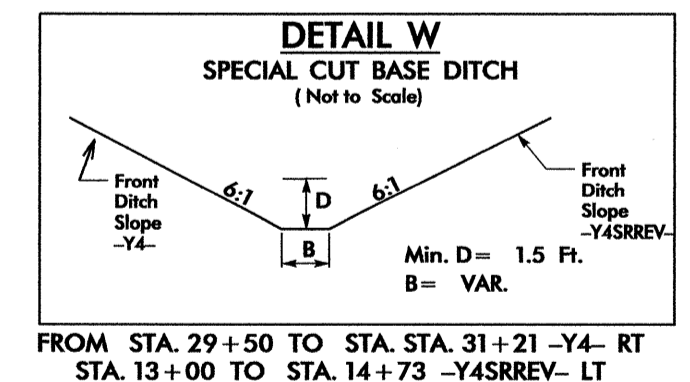
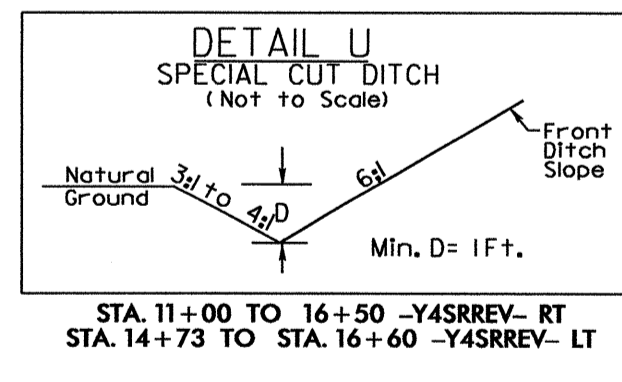
PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-17/CONST.09
U-4444A RW SHEET NO.	16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH TO SHEET 8  
-Y4- STA. 19+00

MATCH TO SHEET 10  
-Y4- STA. 31+50



REVISIONS  
 Right-of-Way Revision 06-18-10 - Added right-of-way and construction easement for -Y4SR- to U-4444A.  
 Right-of-Way Revision 10-07-10 - Added utility easement on parcel 2.  
 Right-of-Way Revision 07-28-11 - Changed right-of-way and easement on parcel 2.



**NOTE:**  
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

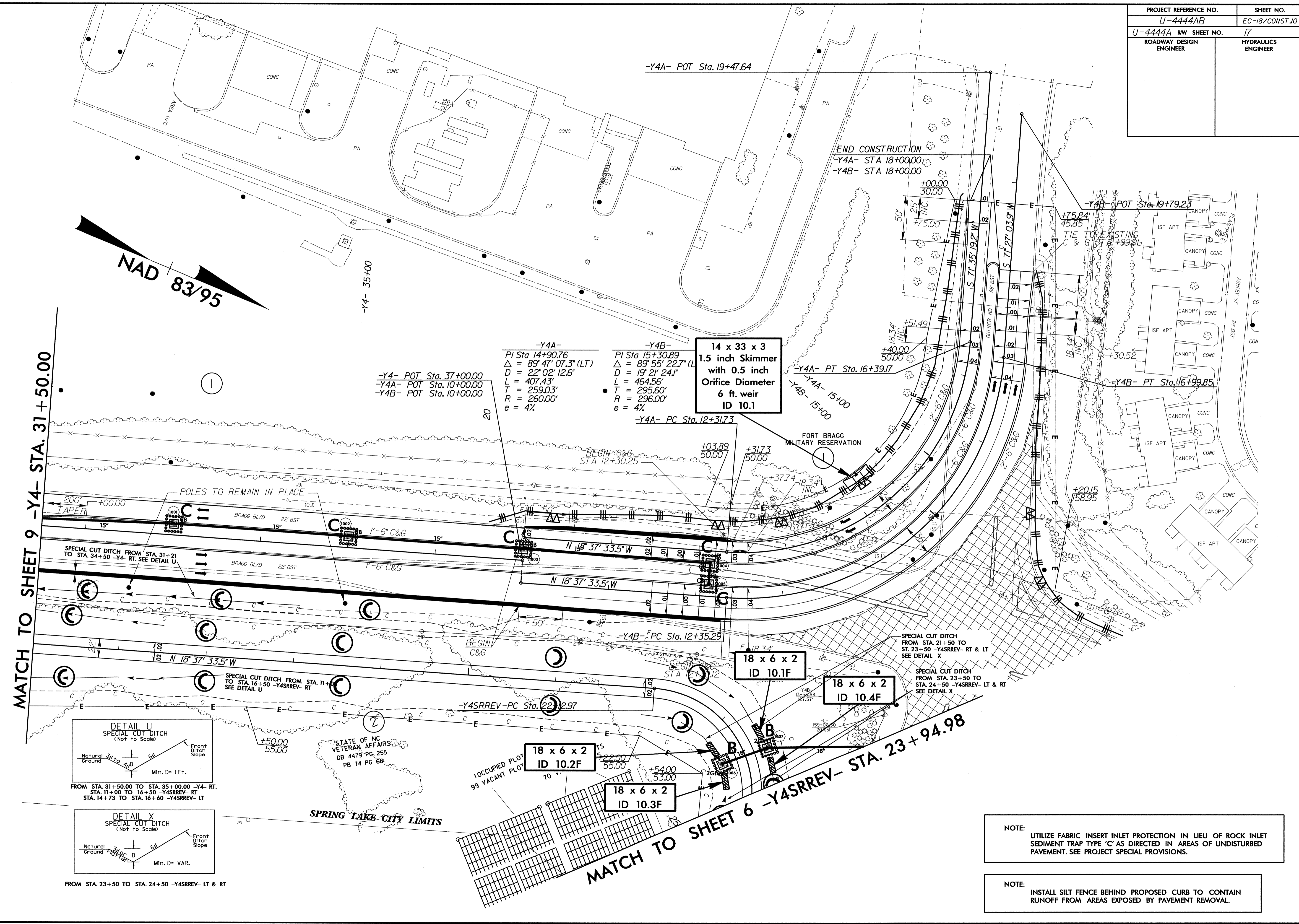
**NOTE:**  
INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

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AL REN24770

PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-18/CONST.10
U-4444A RW SHEET NO.	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

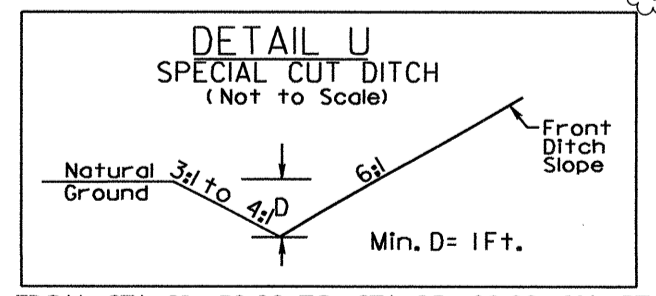
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**REVISIONS**  
 Right-of-way Revision 04-09-10 - Added construction revision along -Y4A- left for U-4444A.  
 Right-of-way Revision 10-07-10 - Added utility easement on parcel 2.  
 Right-of-way Revision 07-28-11 - Changed construction easement on parcel 2.

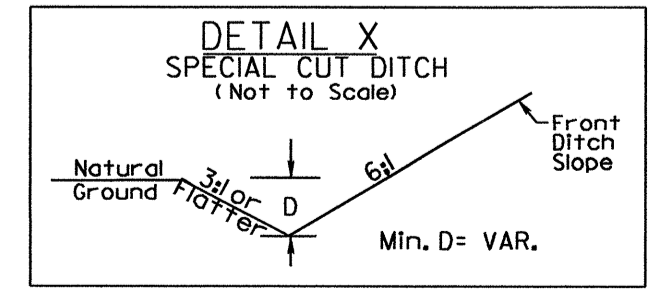


**MATCH TO SHEET 9 -Y4- STA. 31+50.00**

**MATCH TO SHEET 6 -Y4SRREV- STA. 23+94.98**



FROM STA. 31+50.00 TO STA. 35+00.00 -Y4- RT.  
 STA. 11+00 TO STA. 16+50 -Y4SRREV- RT  
 STA. 14+73 TO STA. 16+60 -Y4SRREV- LT



FROM STA. 23+50 TO STA. 24+50 -Y4SRREV- LT & RT

**-Y4A-**  
 PI Sta 14+90.76  
 $\Delta = 89^\circ 47' 07.3''$  (LT)  
 $D = 22^\circ 02' 12.6''$   
 $L = 407.43'$   
 $T = 259.03'$   
 $R = 260.00'$   
 $e = 4\%$

**-Y4B-**  
 PI Sta 15+30.89  
 $\Delta = 89^\circ 55' 22.7''$  (L)  
 $D = 19^\circ 21' 24.1''$   
 $L = 464.56'$   
 $T = 295.60'$   
 $R = 296.00'$   
 $e = 4\%$

**14 x 33 x 3**  
**1.5 inch Skimmer**  
**with 0.5 inch**  
**Orifice Diameter**  
**6 ft. weir**  
**ID 10.1**

**18 x 6 x 2**  
**ID 10.1F**

**18 x 6 x 2**  
**ID 10.4F**

**18 x 6 x 2**  
**ID 10.2F**

**18 x 6 x 2**  
**ID 10.3F**

**NOTE:** UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

**NOTE:** INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

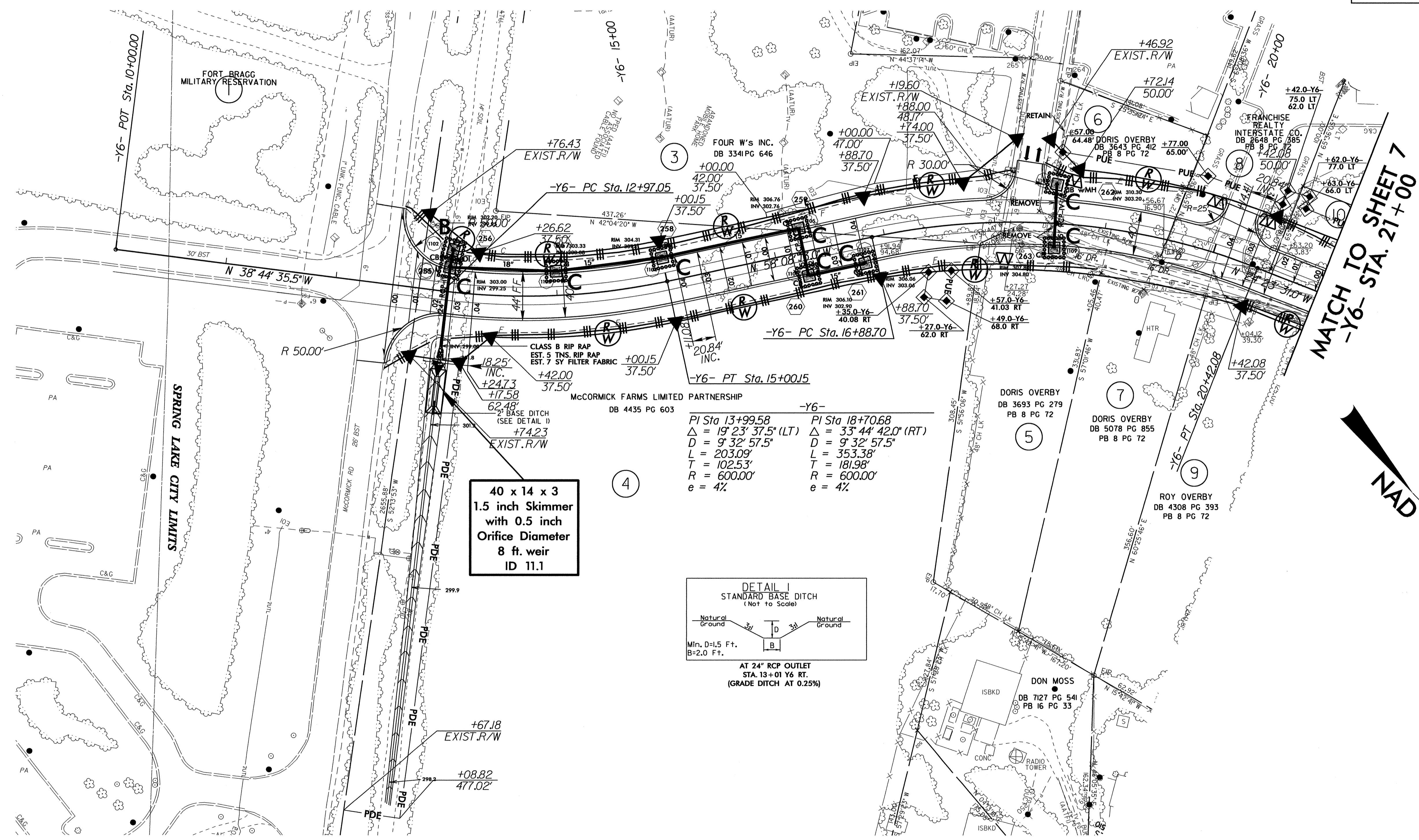


PROJECT REFERENCE NO.	SHEET NO.
U-4444AB	EC-19/CONST.II
U-4444A RW SHEET NO.	12B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

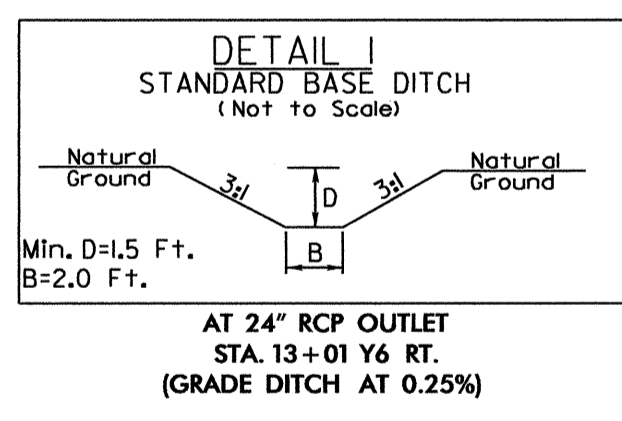
REVISIONS  
 Right-of-way Revision 06-18-10. Added Right-of-way and permanent drainage easement for -Y6- and McCormick Rd. on U-4444A. (Parcels 3,4,5,6,7,8,9 and 10)  
 Right-of-way Revision 07-06-11. Updated utility easements on parcels 4, 8, and 10.

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 AL RENW27770



40 x 14 x 3  
 1.5 inch Skimmer  
 with 0.5 inch  
 Orifice Diameter  
 8 ft. weir  
 ID 11.1



NOTE:  
 UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET  
 SEDIMENT TRAP TYPE 'C' AS DIRECTED IN AREAS OF UNDISTURBED  
 PAVEMENT. SEE PROJECT SPECIAL PROVISIONS.

NOTE:  
 INSTALL SILT FENCE BEHIND PROPOSED CURB TO CONTAIN  
 RUNOFF FROM AREAS EXPOSED BY PAVEMENT REMOVAL.

MATCH TO SHEET 7  
 -Y6- STA. 21+00

