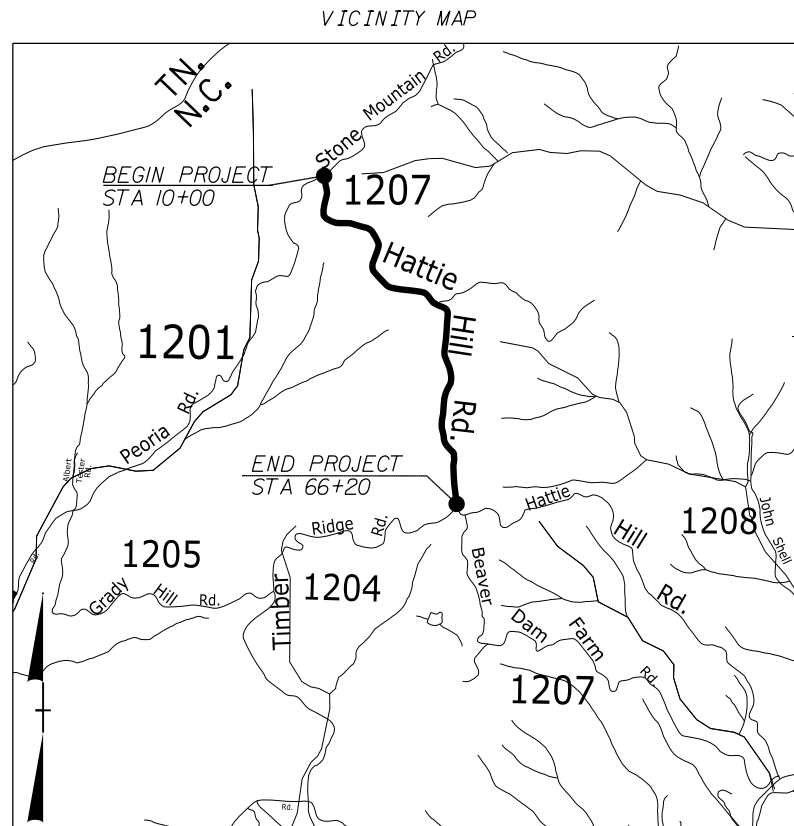


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WATAUGA COUNTY**

**LOCATION: SR 1207B HATTIE HILL RD  
FROM NC 1201 TO NC 1204  
STA 10+00 TO E.O.P. 66+20 -L-**

**TYPE OF WORK: GRADING, DRAINAGE, BASE  
AND PAVING - 1.07 MILES**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	11C.095112	EC-1	15
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.05	Temporary Silt Ditch	TD
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	SBS
1633.01	Temporary Rock Silt Check Type-A	TRSCA
1633.02	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA/PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
1633.02	Wattle / Coir Fiber Wattle	WCFW
1633.02	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	TRSDA
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRA
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
1632.01	Rock Inlet Sediment Trap: Type A	RA
1632.02	Type B	RB
1632.03	Type C	RC
1630.04	Skimmer Basin	SB
1630.04	Tiered Skimmer Basin	TSB
1630.04	Infiltration Basin	IB

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

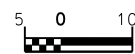
ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT

**REVISION:**

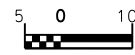
**GRAPHIC SCALE**



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

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:

**DIVISION OF HIGHWAYS**  
DIVISION 11, DISTRICT 2 BOONE  
P.O. BOX 1460, BOONE, N.C. 28607  
**2018 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 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 Wattle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

# EROSION CONTROL & PIPE INSTALLATION SCHEDULE

## TROUT BUFFER ZONE SEQUENCE

### GENERAL E&SC NOTES

### GROUND STABILIZATION CHART

#### Erosion Control Schedule and Notes

1. Generally, the order of installation of the erosion control measures will be as follows:
  - A. Temporary silt basins shall be installed before clearing and grubbing begins.
  - B. Silt fences and temporary silt ditches shall be installed after clearing and before grading.
  - C. Temporary stone ditch checks with PAM or wattles with PAM shall be installed in all disturbed areas as soon as the disturbance begins.
  - D. Final stone ditch checks or wattles shall be installed as soon as ditch line is established.
  - E. Pipe outlet and inlet protection will be done as soon as the pipe is installed.
  - F. Other permanent erosion control measures are to be implemented as soon as practical.
2. Temporary rock silt checks, type B will be spaced by percent grade as shown in the erosion control plan.
3. No. 5 stone, or equivalent, will be used in conjunction with the temporary rock silt checks in locations where water is leaving the project or entering a pipe.
4. All devices are to be cleaned out when half full.
5. Establish permanent vegetation per ground stabilization chart.

**Notes:**

For silt basin size see the attached erosion control plans.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

#### Wet Pipe Installation Schedule and Notes

1. Prior to installing any E&SC measures identify permit conditions and impact area limits.
2. Install erosion control devices.
3. Manage the water course. The pipe must be placed in the dry. Install dewatering measures.
4. Remove material and existing pipe while limiting material and sediment from entering stream and escaping the project.
5. Excavation of stream channel shall not exceed 10' on either side of new pipe or culvert unless indicated on permit.
6. Per permit conditions for Corps of Engineers and the Wildlife Resources Commission, all pipes in streams 48" or greater must be buried 12" below streambed elevation. Pipes less than 48" must be buried with 20% of the diameter below streambed elevation.
7. Place the new pipe and compact backfill.
8. Install slope protection on the outlet and inlet ends of the pipe. Also complete installation of erosion control measures and perform maintenance as needed on existing measures.
9. Establish permanent vegetation per ground stabilization chart.
10. More information on wet pipe installation can be found in the BMP manual section 4.2 "Pipe & Culvert installation"

#### General Erosion Control Sequence & Notes for NC DOT Projects in Trout Buffer Zones

1. Prior to installing any E&SC measures identify permit conditions and impact area limits. Review trout buffer variance approval conditions for any special provisions.
2. All materials should be on the hand before work is commenced.
3. Install EC devices
4. Work within the buffer zone should be sequenced to minimize the length of time that disturbed areas are exposed. Stream bank stabilization, which includes the area from the edge of water to the top of bank, should be phased so that each day's work is a completed work, including provision of adequate ground cover.
5. Graded slopes and fills within the trout buffer zone will within 7 calendar days of completion of any phase of grading be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion.
6. Graded slopes and fills within the trout buffer zone (excluding road shoulders) shall be protected with rolled erosion control product, bonded fiber matrix, or flexible growth medium after seeding.

**Notes:**

Silt fence backed by woven wire, with a post spacing of 6 feet, shall be used instead of standard silt fence in trout buffer zone. Special sediment control fence shall be used in areas where bedrock is encountered which prohibits the proper anchoring of fabric, and in low points of the silt fence in 3-foot sections to allow for concentrated flows.

The disturbed areas within the stream buffer shall be restored to native vegetation characteristic of an undisturbed buffer to the extent practical upon completion of construction.

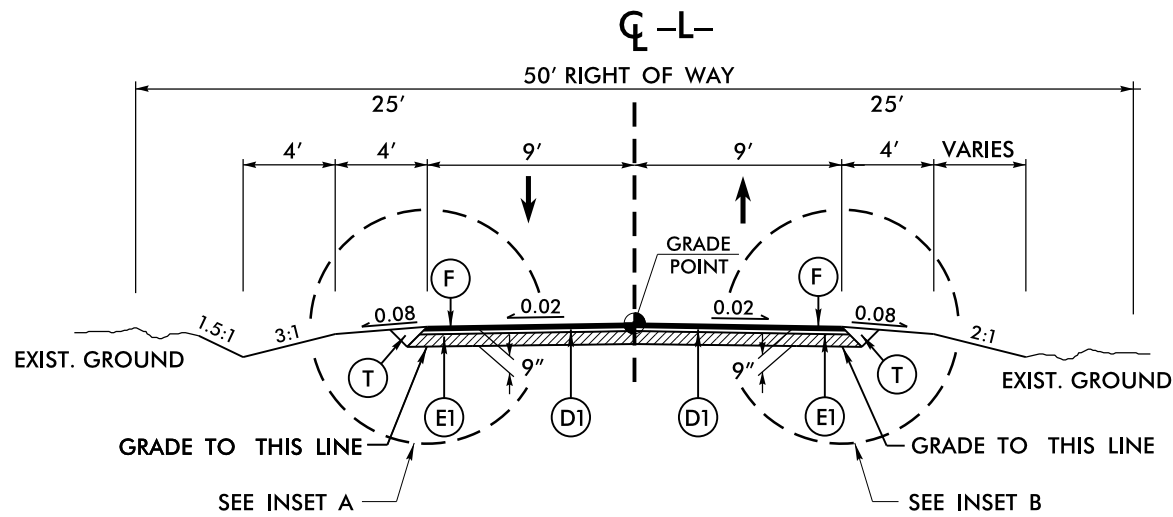
Flyrock protection such as blast mats should be provided for blasting in close proximity to streams.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

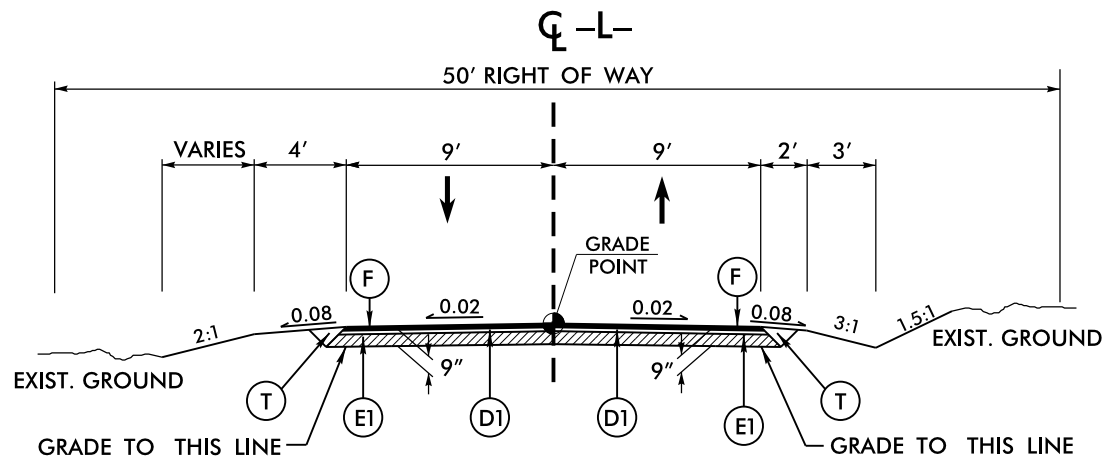
#### GROUND STABILIZATION CHART

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10 ft. 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 flatter than 4:1	14 days	None (except for perimeters and HQW zones)

PROJECT REFERENCE NO. <b>IIC.095112</b>	SHEET NO. <b>2</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



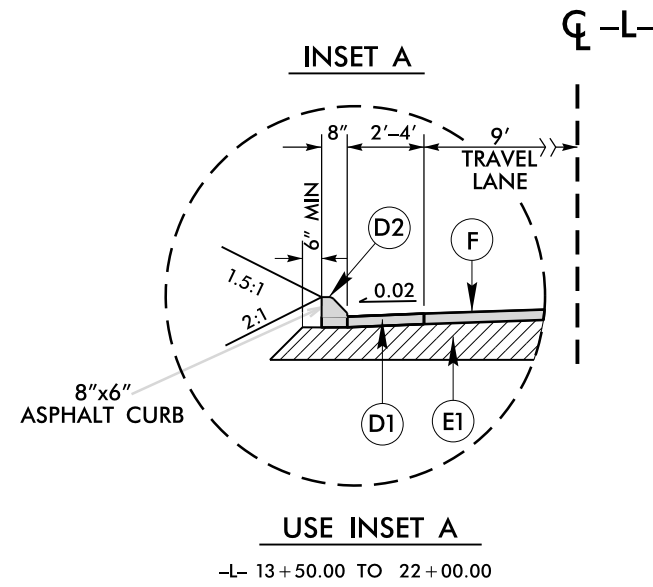
**30' TYPICAL SECTION NO. 1**



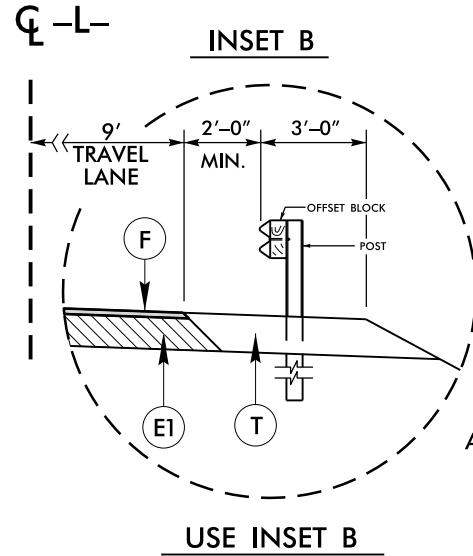
**27' TYPICAL SECTION NO. 2**

NOTE: CONSTRUCT EXTRA WIDENEING IN CURVES AS DIRECTED BY ENGINEER  
ALL CUT SLOPES ARE TO 1.5:1 AND ALL FILL SLOPES VARY 2:1 TO 3:1

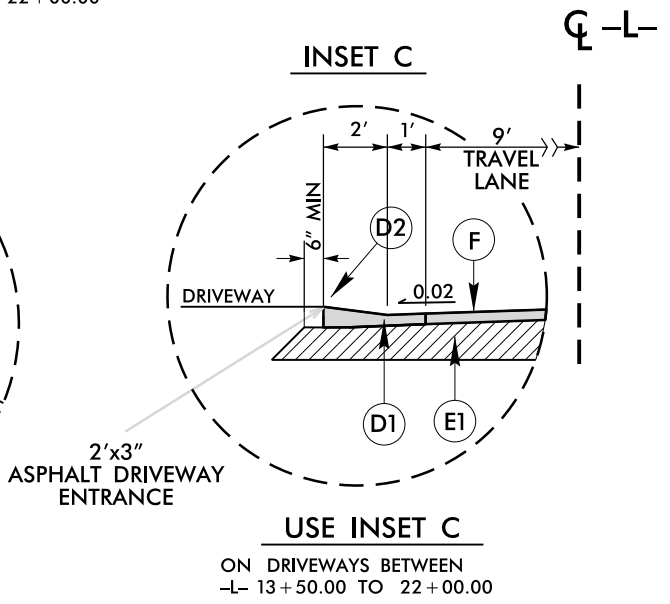
**USE TYPICAL SECTION NO. 1**  
-L- STA. 10+10.53 (BEGIN PROJECT) TO -L- STA. 57+00  
-L- STA. 58+00.00 TO -L- STA. 66+33.09 (END PROJECT)



**USE INSET A**  
-L- 13+50.00 TO 22+00.00



**USE INSET B**



**USE INSET C**  
ON DRIVEWAYS BETWEEN  
-L- 13+50.00 TO 22+00.00

PAVEMENT SCHEDULE	
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	VARIABLE DEPTH I19.0C
E1	PROP. APPROX. 6" ABC
F	ASPHALT SURFACE TREATMENT, (AST) TRIPLE SEAL
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

NOTE: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-3B
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.
11C.095112	EC-4
R/W SHEET NO.	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

VIRGINIA DARE GREENE  
DB 109 PG 178

NC 1201 STONE MOUNTAIN RD

①  
ASHLEY D. TIPTON  
DB 1615 PG 411

③  
THOMAS NERI  
DB 1532 PG 221

④  
ROBERT O. JOHNSON  
STEPHANIE J. JOHNSON  
DB 1202 PG 755

⑤  
THOMAS J. McCOY  
LEIGHANN K. McCOY  
DB 1416 PG 40

②  
ROBERT O. JOHNSON  
STEPHANIE J. JOHNSON  
DB 552 PG 277

⑥  
OTIS WILLIAM MYERS, JR.  
KATHY M. MYERS  
DB 510 PG 38

BEGIN CONST  
-L- STA 10+10.53

12 x 4 x 3  
3 ft. weir  
ID 4.3

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 4.1

INSTALL RIP RAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

R.I.S.T.  
Type C  
ID 4.4

BEGIN ASPHALT CURB  
STA. 13+50.00

-L- 11+19.23 BK=  
-L2- 11+19.23 AH=

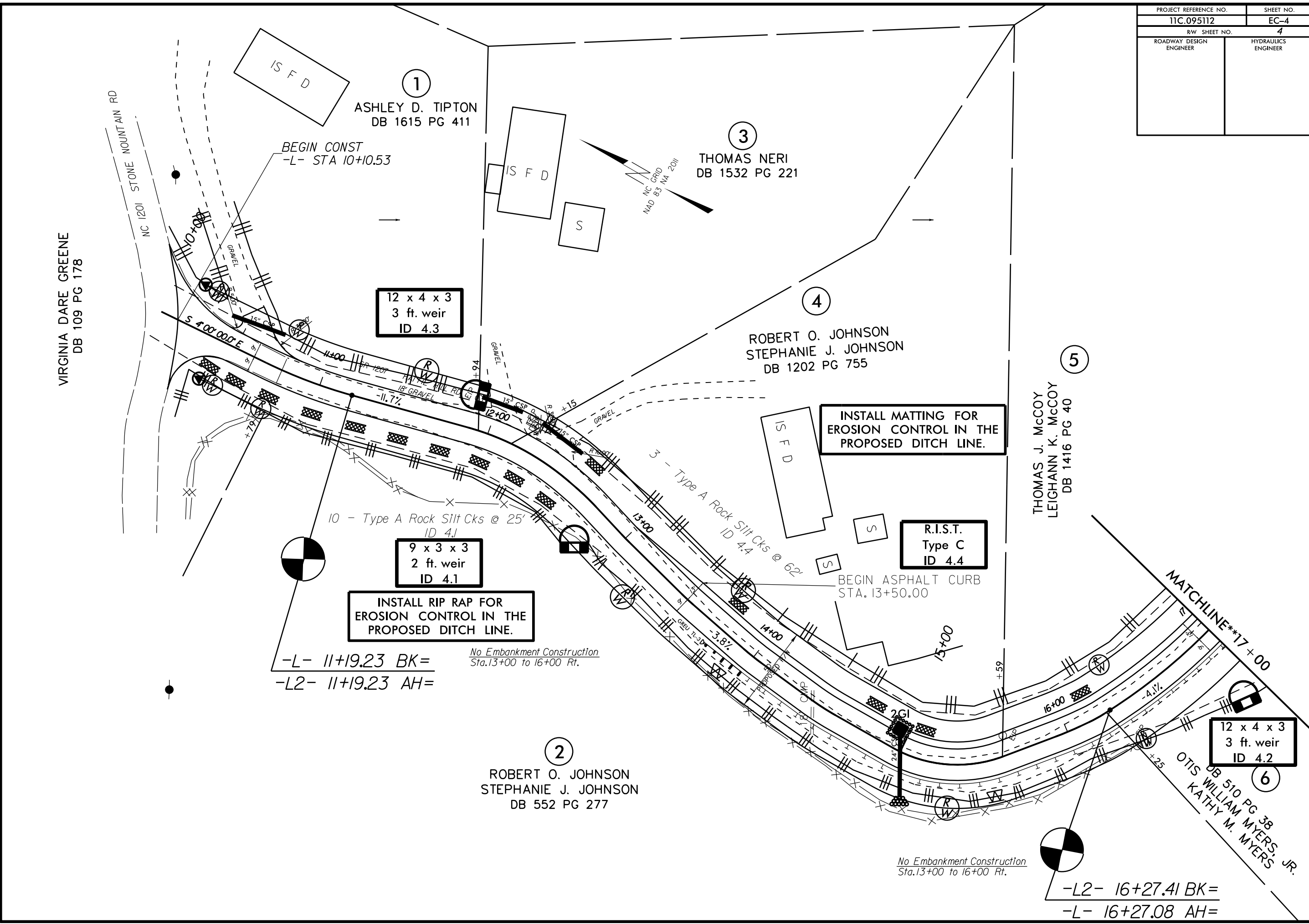
No Embankment Construction  
Sta. 13+00 to 16+00 Rt.

No Embankment Construction  
Sta. 13+00 to 16+00 Rt.

-L2- 16+27.41 BK=  
-L- 16+27.08 AH=

REVISIONS

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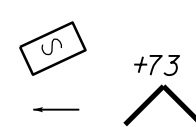
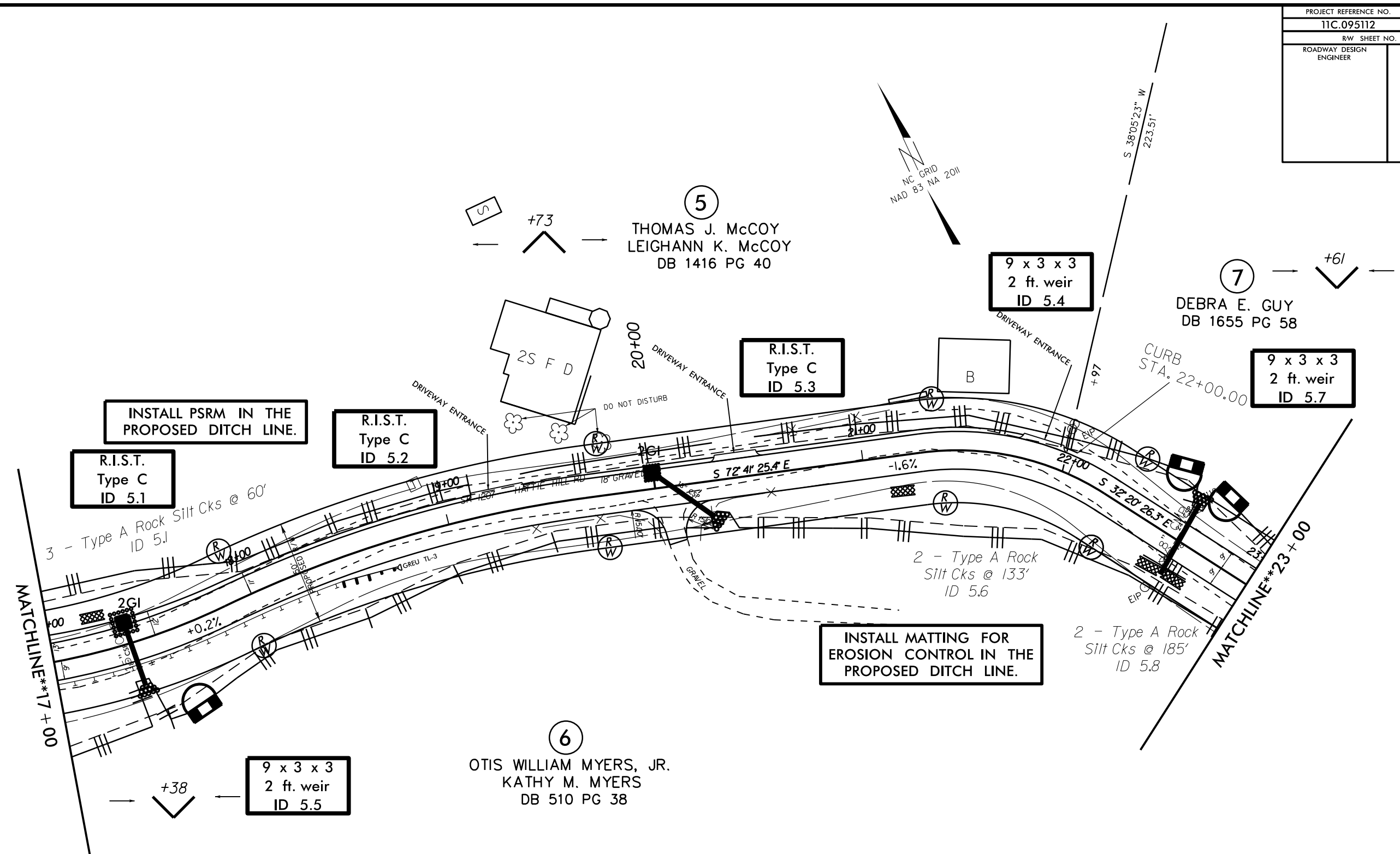


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11C.095112	EC-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

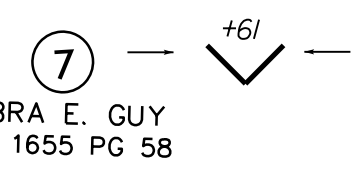
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5  
THOMAS J. McCOY  
LEIGHANN K. McCOY  
DB 1416 PG 40

9 x 3 x 3  
2 ft. weir  
ID 5.4



7  
DEBRA E. GUY  
DB 1655 PG 58

R.I.S.T.  
Type C  
ID 5.3

9 x 3 x 3  
2 ft. weir  
ID 5.7

INSTALL PSRM IN THE  
PROPOSED DITCH LINE.

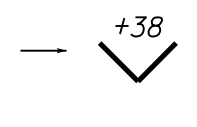
R.I.S.T.  
Type C  
ID 5.1

R.I.S.T.  
Type C  
ID 5.2

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

6  
OTIS WILLIAM MYERS, JR.  
KATHY M. MYERS  
DB 510 PG 38

9 x 3 x 3  
2 ft. weir  
ID 5.5



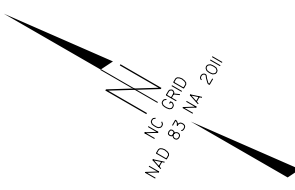
MATCHLINE\*\*17+00

MATCHLINE\*\*23+00



PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

7  
DEBRA E. GUY  
DB 1655 PG 58



9 x 3 x 3  
2 ft. weir  
ID 6.5

9 x 3 x 3  
2 ft. weir  
ID 6.6

9 x 3 x 3  
2 ft. weir  
ID 6.7

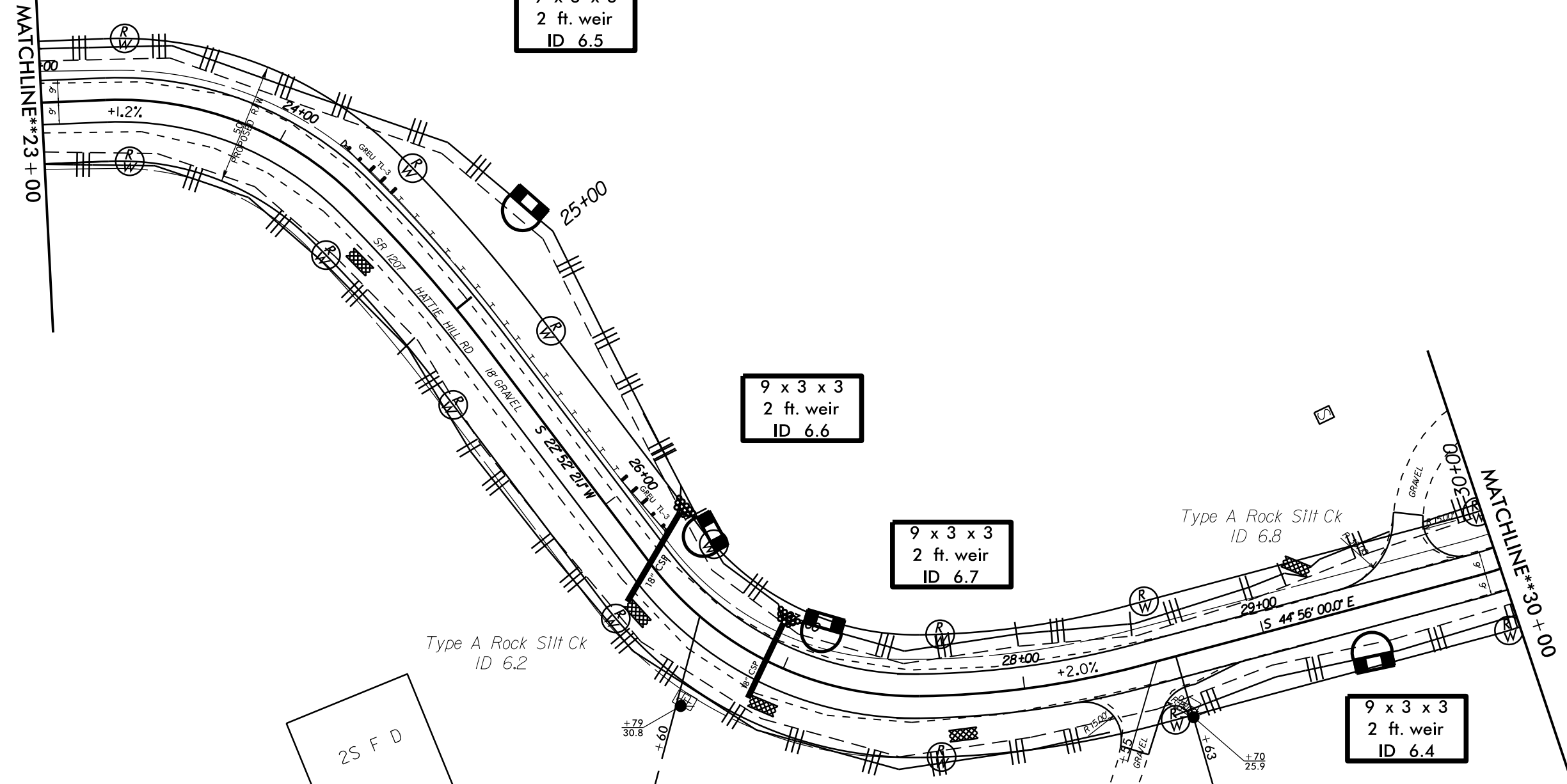
9 x 3 x 3  
2 ft. weir  
ID 6.4

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

6  
OTIS WILLIAM MYERS, JR.  
KATHY M. MYERS  
DB 510 PG 38

8  
DOUGLAS S. ASANO  
ALEXI ASANO  
DB 1787 PG 368

9  
HUSTON H. YOUNCE, TRUSTEE  
DB 1836 PG 534



REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

10  
DEBRA E. GUY LOVE  
DB 392 PG 266

12  
FLOYD ELIGA HICKS, ET AL  
DB 629 PG 121

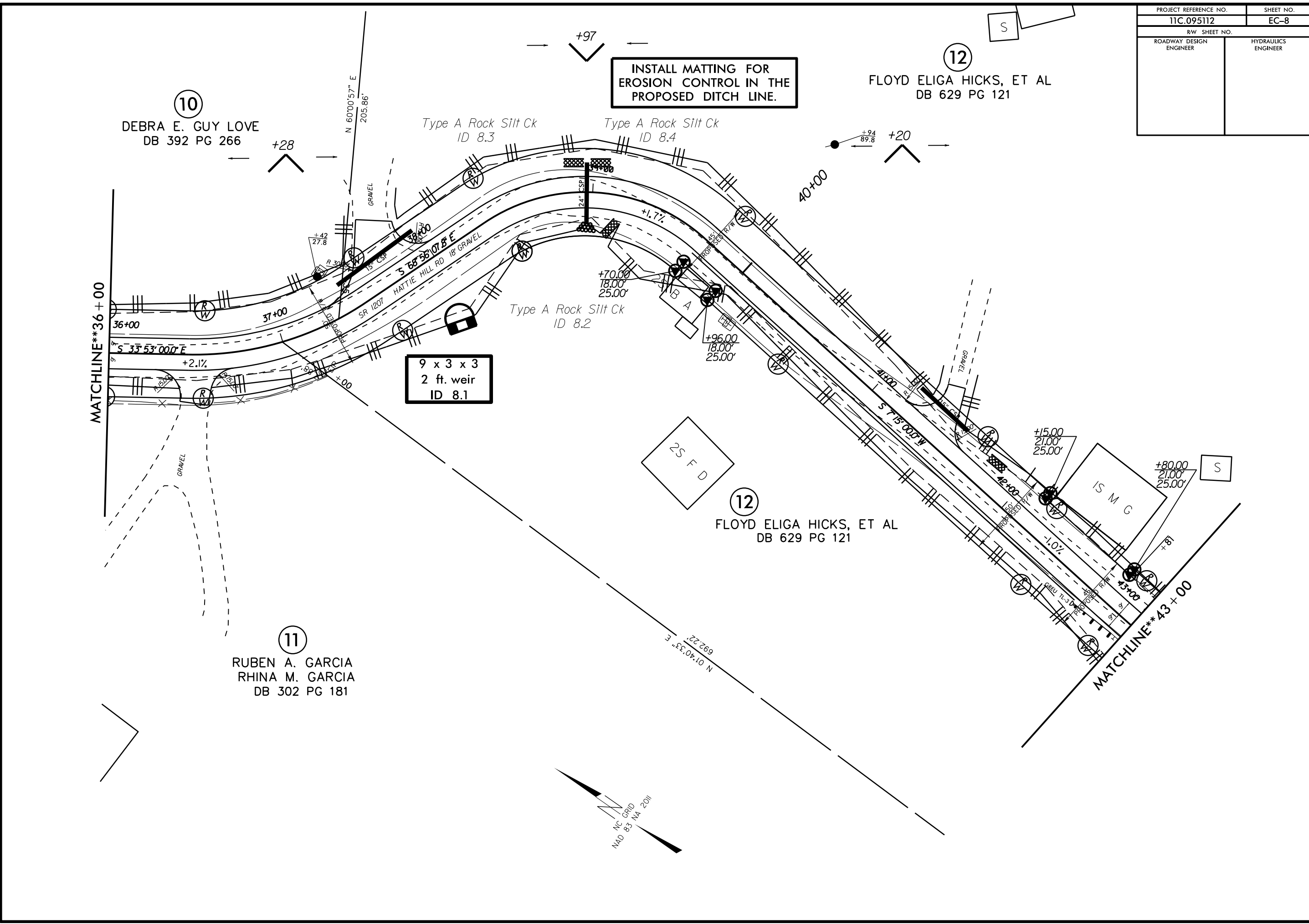
11  
RUBEN A. GARCIA  
RHINA M. GARCIA  
DB 302 PG 181

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 8.1

12  
FLOYD ELIGA HICKS, ET AL  
DB 629 PG 121

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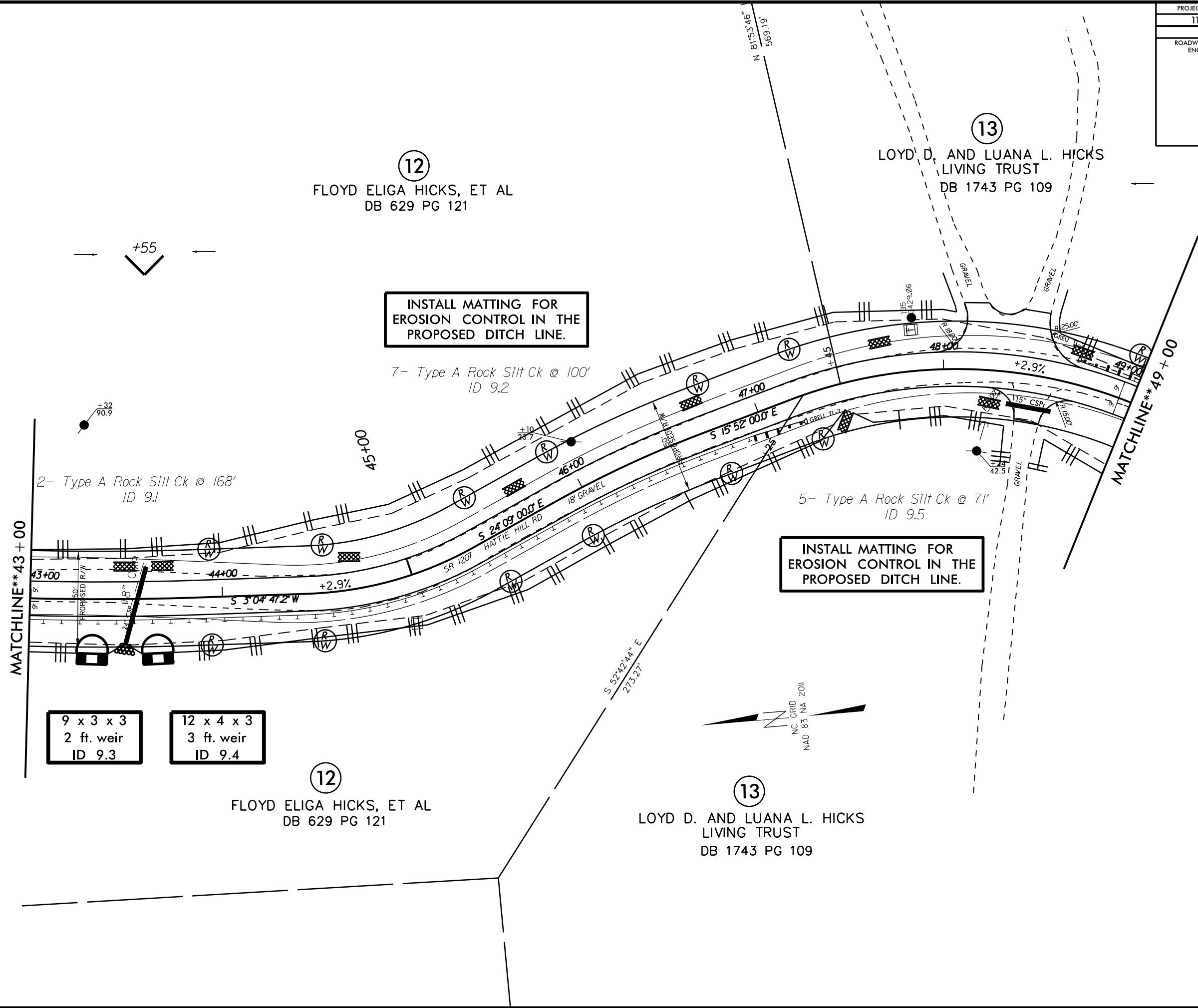


PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

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12  
FLOYD ELIGA HICKS, ET AL  
DB 629 PG 121

13  
LOYD D. AND LUANA L. HICKS  
LIVING TRUST  
DB 1743 PG 109

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

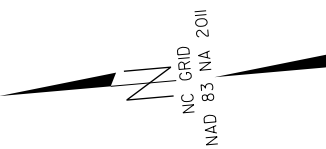
INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 9.3

12 x 4 x 3  
3 ft. weir  
ID 9.4

12  
FLOYD ELIGA HICKS, ET AL  
DB 629 PG 121

13  
LOYD D. AND LUANA L. HICKS  
LIVING TRUST  
DB 1743 PG 109



MATCHLINE\*\* 43+00

MATCHLINE\*\* 49+00

+55

+32  
90.9

2- Type A Rock Silt Ck @ 168'  
ID 9.1

7- Type A Rock Silt Ck @ 100'  
ID 9.2

5- Type A Rock Silt Ck @ 71'  
ID 9.5

43+00

44+00

45+00

46+00

47+00

48+00

49+00

9' 9"

160'

PROPOSED R/W

2' 38" 18"

S 3° 04' 42" W

+2.9%

S 24° 09' 00.0" E

HATTIE HILL RD

SR 1207

18" GRAVEL

S 15° 52' 00.0" E

GREY T-2

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

115' CSR

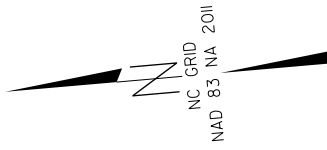
115' CSR

115' CSR

115' CSR

115' CSR

PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



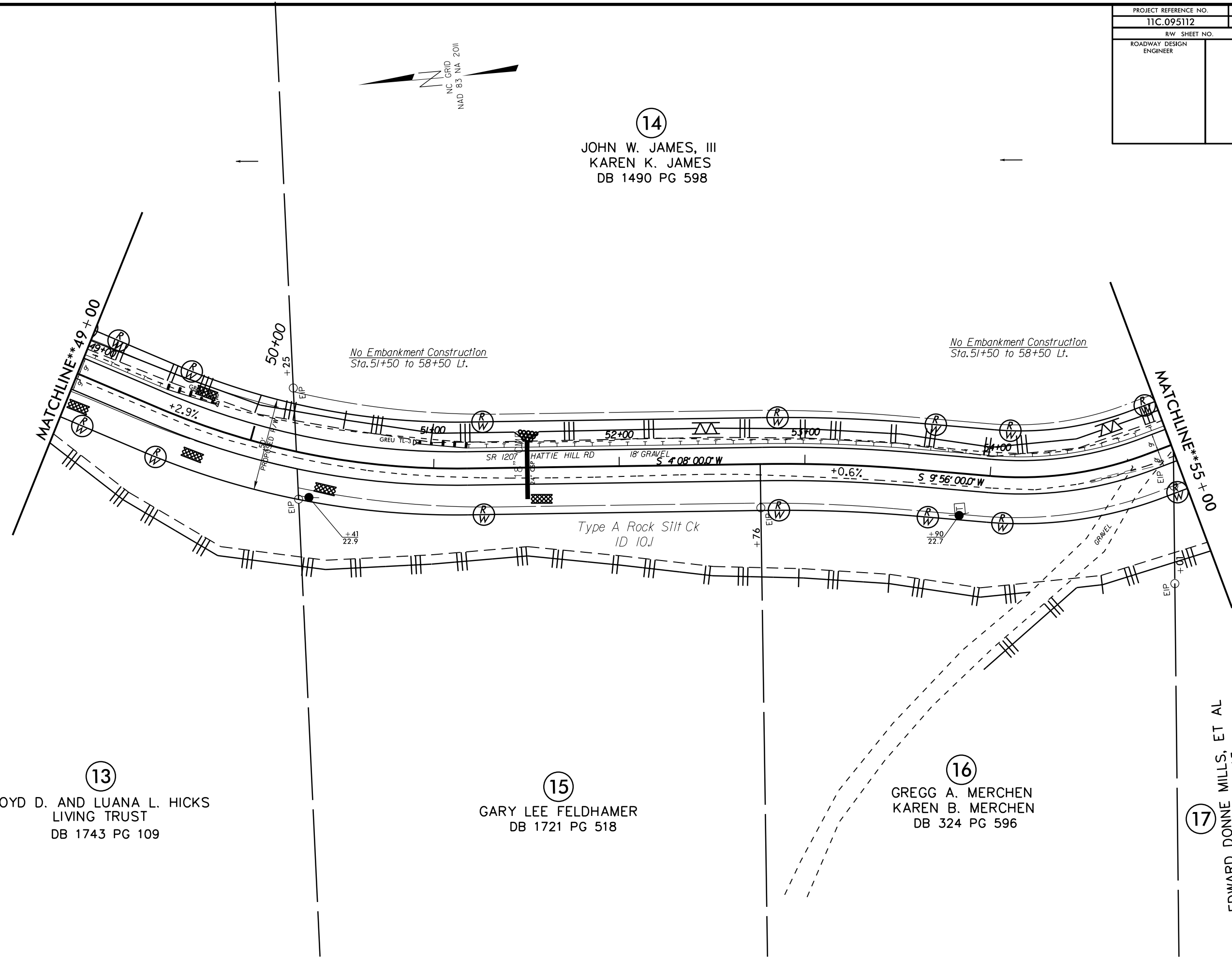
14  
 JOHN W. JAMES, III  
 KAREN K. JAMES  
 DB 1490 PG 598

13  
 LOYD D. AND LUANA L. HICKS  
 LIVING TRUST  
 DB 1743 PG 109

15  
 GARY LEE FELDHAMER  
 DB 1721 PG 518

16  
 GREGG A. MERCHEN  
 KAREN B. MERCHEN  
 DB 324 PG 596

17  
 EDWARD DONNE MILLS, ET AL  
 DB 895 PG 113



REVISIONS

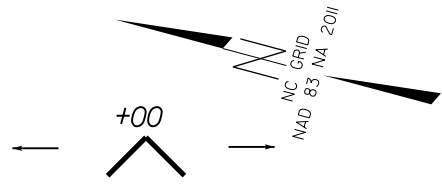
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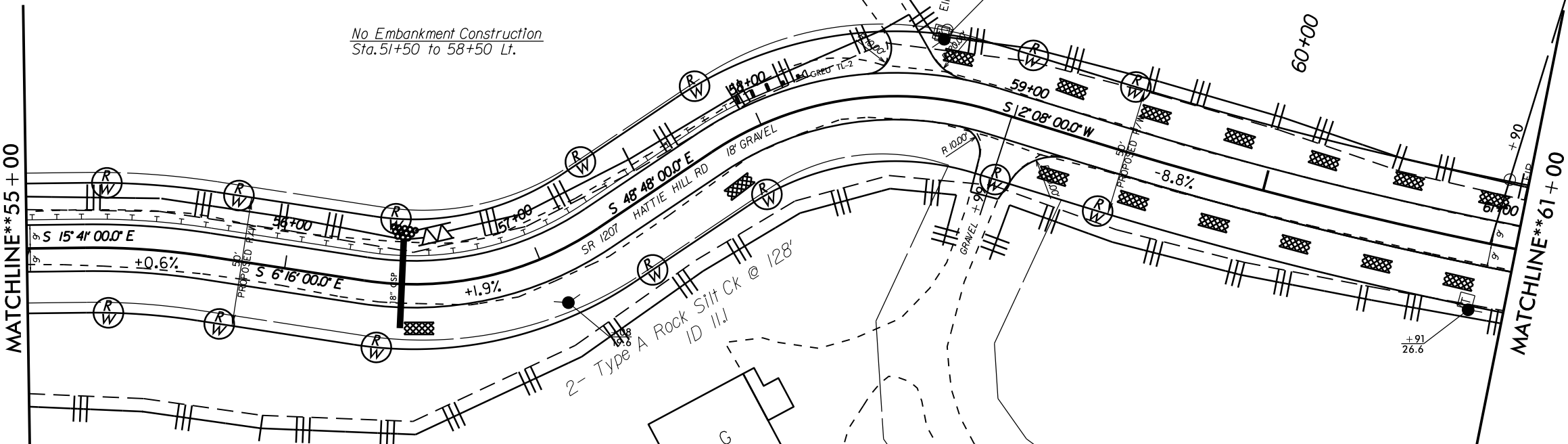
PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

14

JOHN W. JAMES, III  
KAREN K. JAMES  
DB 1490 PG 598



No Embankment Construction  
Sta. 51+50 to 58+50 Lt.



**INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.**

17

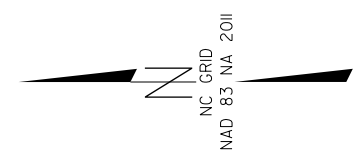
EDWARD DONNE MILLS, ET AL  
DB 895 PG 113

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
11C.095112	EC-12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS

MATCHLINE\*\*61+00

**18**  
HUSTON H. YOUNCE, TRUSTEE  
DB 1836 PG 534

INSTALL RIP RAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 12.1

11- Type A Rock Silt Ck @ 34'  
ID 12.1

INSTALL RIP RAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 12.2

6- Type A Rock Silt Ck @ 30'  
ID 12.2

INSTALL MATTING FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

Type A Rock Silt Ck  
ID 12.3

INSTALL PSRM IN THE  
PROPOSED DITCH LINE.

Type A Rock Silt Ck  
ID 12.4

END CONST  
-L- STA 66+20.00

**18**  
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DB 1836 PG 534

LAKE

10- Type A Rock Silt Ck @ 32'  
ID 12.5

INSTALL RIP RAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

12 x 4 x 3  
3 ft. weir  
ID 12.5

12 x 4 x 3  
3 ft. weir  
ID 12.6

GRADE TO DRAIN NEW DITCH  
INTO EX DITCH ON SR TIMBER RIDGE RD

6 x 3 x 3  
2 ft. weir  
ID 12.7

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SR 1204  
TIMBER RIDGE RD

GZ

8/17/99

S 875  
853.7

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