

PROJECT: WA-1156

Revised 07/23/12

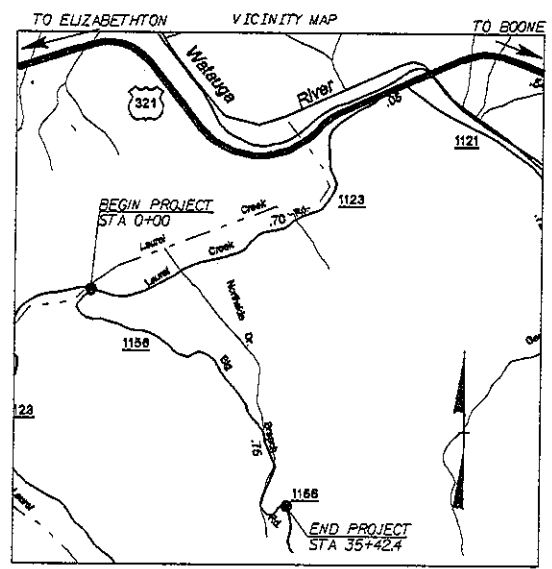
EROSION CONTROL SCHEDULE
 Silt Basin Type B's will be constructed to the dimension of 3 feet by 3 feet unless otherwise noted on the plans.
 Where slope protection treatment is required, Section 875 and Section 1042 of the 2012 Standard Specifications for Roads and Structures will be followed. Any material obtained from this project must be clean before being placed.
 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 Fence and Temporary Silt Ditches shall be installed after clearing and before grading.
 C. Temporary Stone Ditch Checks shall be installed as soon as ditches are established.
 D. Pipe Outlets and Inlet Protection will be done as soon as the pipe is installed.
 E. Seeding and other permanent erosion control measures are to be implemented as soon as practicable.

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

PLAN FOR PROPOSED HIGHWAY EROSION CONTROL

STATE	STATE PROJECT REFERENCE NO.	SHEET	TOTAL
N.C.	WBS 11C-095100	EC-1	9
ROUTE NUMBER	LAVERGNE	SECTION	



Porous Baffle Spacing
 *Baffles in Silt Basins at drainage turnouts and all other temporary rock sediment dams-Type B:
 -if basin length=10' or less; 1 baffle
 -if basin length=11' to 20'; 2 baffles
 -if basin length=20' or more; 3 baffles
 equally spaced in basin

NOTE:
 PERMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

**PIPE INSTALLATION
BMP 4.2 PIPE/CULVERT INSTALLATION**

Erosion Control
 1. Prior to installing Erosion Control, identify permit conditions of project area limits. Contact the Division Environmental Officer (DEO) for information on permit drawings or supplemental areas.
 2. Install temporary silt basins as well as silt fence to treat runoff from the work area or isolate the work area from the jurisdictional stream, such as wetland or riparian buffers (See Section 5.1).
 3. Install Temporary Rock Silt Check Type "A" or Temporary Sediment Dam Type "B" in each line to contain sediment prior to discharge into the watercourse. (See Section 5.3).
Managing the Water Course
 4. On larger streams, flow diversion may be used to isolate the work area using bypass pumping, piped diversions, or fibroline diversions (See Section 5.5). On smaller streams, or at low flow conditions, an impervious silt mat may be used to temporarily enclose the work area within the stream channel (See Section 5.5).
 5. Temporary stream crossings may be utilized in order to provide spot-drainage, particularly by portable bridges so that the flows may be evenly removed. (See Section 5.6).
Managing the Work Area
 6. Erosion control devices are typically needed to keep the work area dry (see Section 5.6). The permit conditions and the amount of available space and length of pipe replacement or protected flows will determine the type of diverting device to be used. Every effort should be made to maintain the entry of the stream to be diverted and the length of time the site is diverted.
 7. Install the pipe/culvert per the NCDOT standards and specifications, and any specified permit conditions. Note that pipes and culverts shall be buried a minimum depth below the existing streambed as defined below, in order to allow for aquatic organism passage during low flow conditions. Variations may be obtained by the DEO to allow for deviations in site local depths due to landfills, steep gradients, in the stream channel, existing headworks, potential for drainage of stream water into the work area.
 8. Stream pattern, direction and profile shall be maintained by appropriate installation.
 9. Install the steeper shoulder slope and outlet protection on upstream and downstream channels where indicated on the permit drawings (See Section 5.6). Do not exceed approved limits in the permit. Contact the DEO if the permit or permit drawings are not clear.
 10. Remove temporary flow diversion or diverting device and reconstructed streambed before allowing stream flow to resume through the new pipe or culvert.
 11. Stream reconstruction can occur within approved permit impact limits. Minimal slope or even angles in stream channels wherever possible. Remove channel portion, dimension and profile should be maintained similar to the upstream and downstream stream reach.
 12. Erosion control techniques may be used to stabilize streambanks where feasible.
 13. Basin bankline construction, intermediate erosion and sedimentation control BMPs shall be installed prior to the final operation to provide containment between the work area and the watercourse.
 14. If the pipe/culvert is part of a larger roadway project, enough headloss should be allowed to allow for the removal of the temporary stream crossing. If no temporary stream crossing is required then enough headloss should be placed to prevent a washout during a minor storm event.
Ground Stabilization
 15. Upon completion of headloss operations, prepare slope and other disturbed areas and stabilize (See Section 5.6).
 16. Maintain erosion and sedimentation control measures until ground vegetation is well established.
Site Closure
 17. Upon establishment of vegetation, remove remaining erosion and sedimentation control BMPs, sediments and materials remaining disturbed areas to proper grade, such as buffers, wetlands, and water.

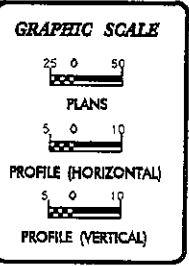
EROSION AND SEDIMENT CONTROL MEASURES

Sheet	Description	Symbol
1630.05	Temporary Silt Ditch	
1630.06	Temporary Diversion	
1606.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1635.01	Temporary Rock Silt Check Type A	
	Temporary Rock Silt Check Type A with Matting and Polysulfonamide (PAM)	
1635.02	Temporary Rock Silt Check Type B	
	Wattle/Cole Fiber Wattle	
	Wattle/Cole Fiber Wattle with Polysulfonamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1634.01	Rock Pipe Inlet Sediment Trap Type A	
1634.02	Rock Pipe Inlet Sediment Trap Type B	
1630.04	Stilling Basins	
1630.06	Special Stilling Basins	
	Rock Inlet Sediment Trap	
1622.01	Type A	
1622.02	Type B	
1622.03	Type C	
	Skimmer Basins	
	Tiered Skimmer Basins	
	Infiltration Basins	

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

**ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT**
 Refer To X.C. Special Provisions
for Special Considerations.

Level III-A Cert # 391
 Level III-B Cert # 382



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-02000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2001
 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 1468, BOONE, NC 28607

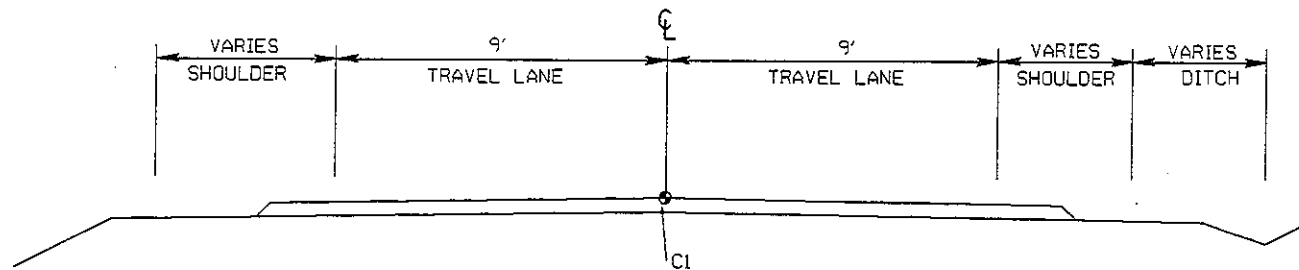
2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

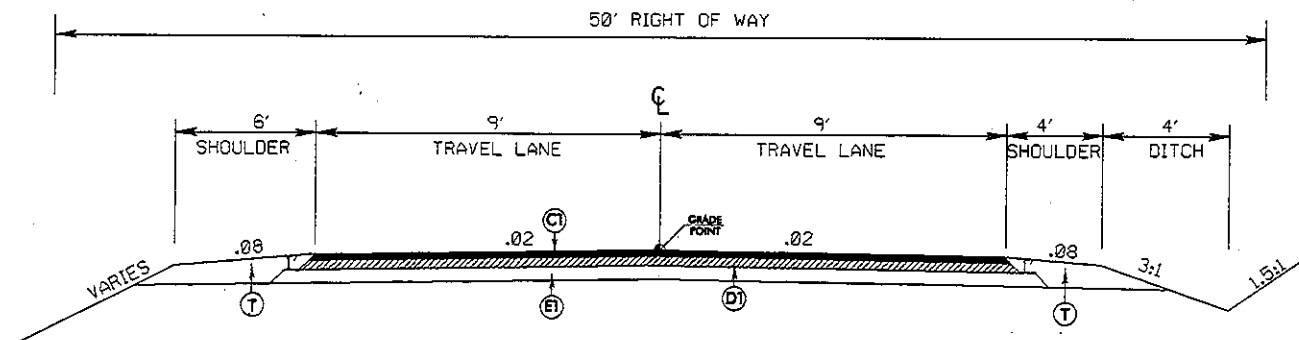
The following roadway standard drawings as appear in "Roadway Standard Drawings" Roadway Design Unit - X, C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest version drawings are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Roadway Erosion Control Detail	1621.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1621.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1621.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1634.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1634.02	Temporary Rock Silt Check Type B
1630.01	Silt Basin	1634.03	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.04	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1634.05	Temporary Rock Sediment Dam Type C
1630.04	Stilling Basins	1634.06	Rock Pipe Inlet Sediment Trap Type A
1630.05	Temporary Diversion	1634.07	Rock Pipe Inlet Sediment Trap Type B
1630.06	Special Stilling Basins	1640.01	Cole Fiber Basins
1631.01	Matting Installation	1640.02	Temporary Berms Grading

PROJECT REFERENCE NO. WA-1156	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



18' EXISTING TYPICAL SECTION



32' PROPOSED TYPICAL SECTION

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. WA-156	SHEET NO. EC-38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

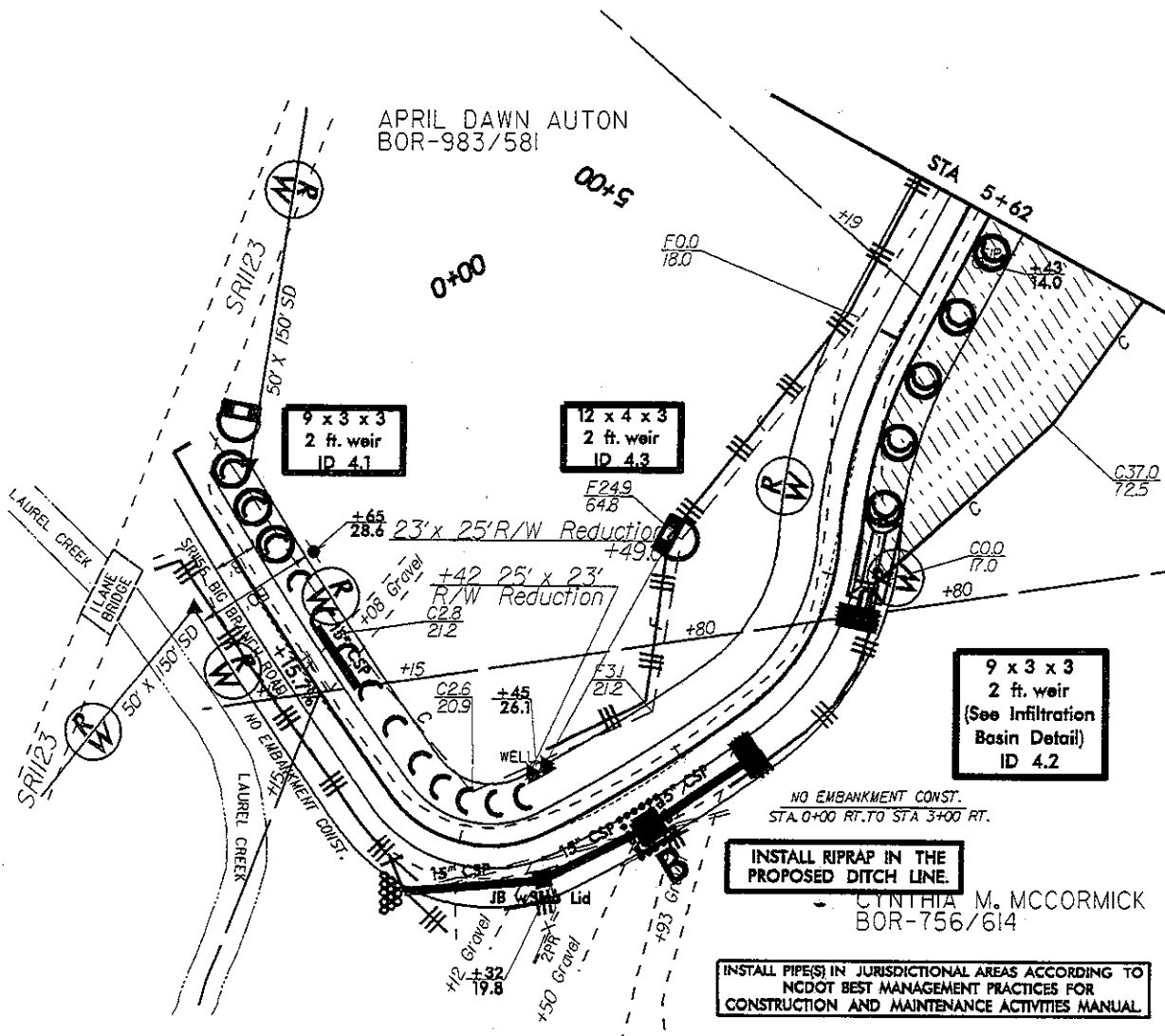
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES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

PROJECT REFERENCE NO. WA1156	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICE ENGINEER

APRIL DAWN AUTON
BOR-983/581

MARK N. IVEY
BOR-1062/865

CYNTHIA M. MCCORMICK
BOR-756/614



30 DAY OPTION
THIS SECTION MUST BE PERMANENTLY STABILIZED WITHIN 30 DAYS FROM THE TIME CLEARING & GRUBBING BEGINS



REGAN D. SPENCER
BOR-1161/304

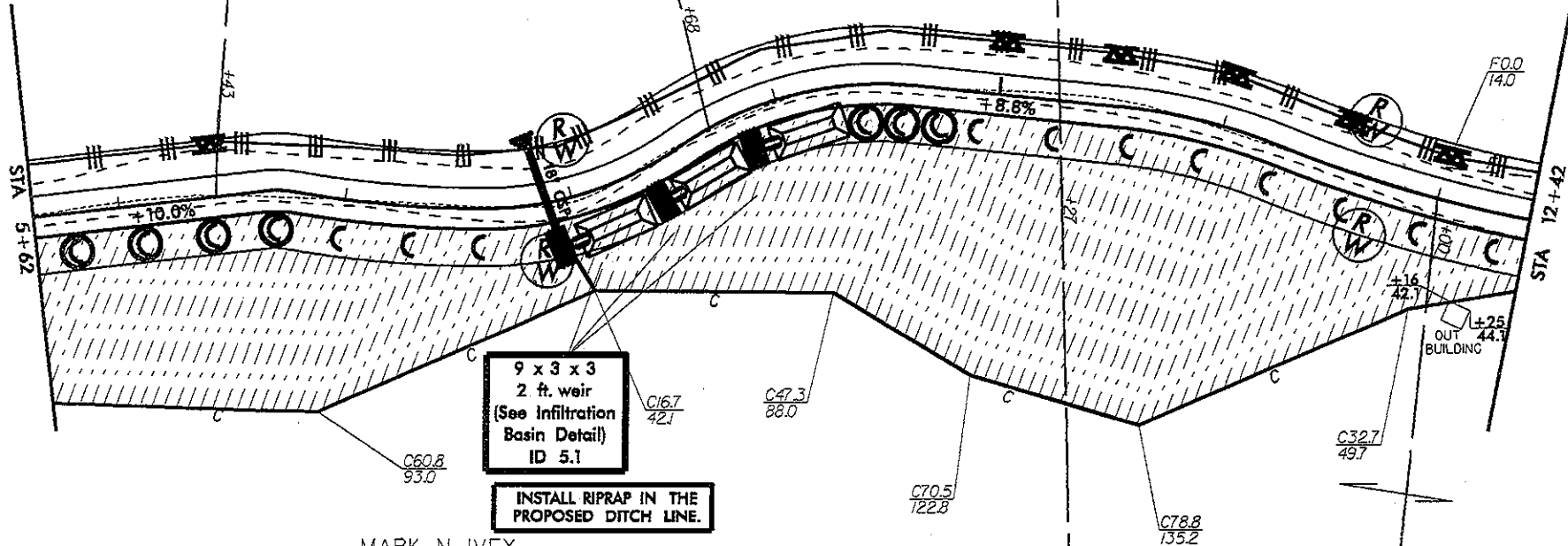
MATHEW D. SPENCER
BOR-732/567

MARTIN DUGAN
BOR-264/441

WILLIAM BLAINE WARD
DB-075*035

NO EMBANKMENT CONST.
STA. 5+00 LT. TO STA 12+00 LT.

PROJECT REFERENCE NO. WAT156	SHEET NO. 5
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



9 x 3 x 3
2 ft weir
(See Infiltration
Basin Detail)
ID 5.1

INSTALL RIPRAP IN THE
PROPOSED DITCH LINE.

MARK N. IVEY
BOR-1062/865

ARTHUR BLAINE WARD
BOR-1057/117

30 DAY OPTION
THIS SECTION MUST BE PERMANENTLY
STABILIZED WITHIN 30 DAYS
FROM THE TIME CLEARING & GRUBBING
BEGINS

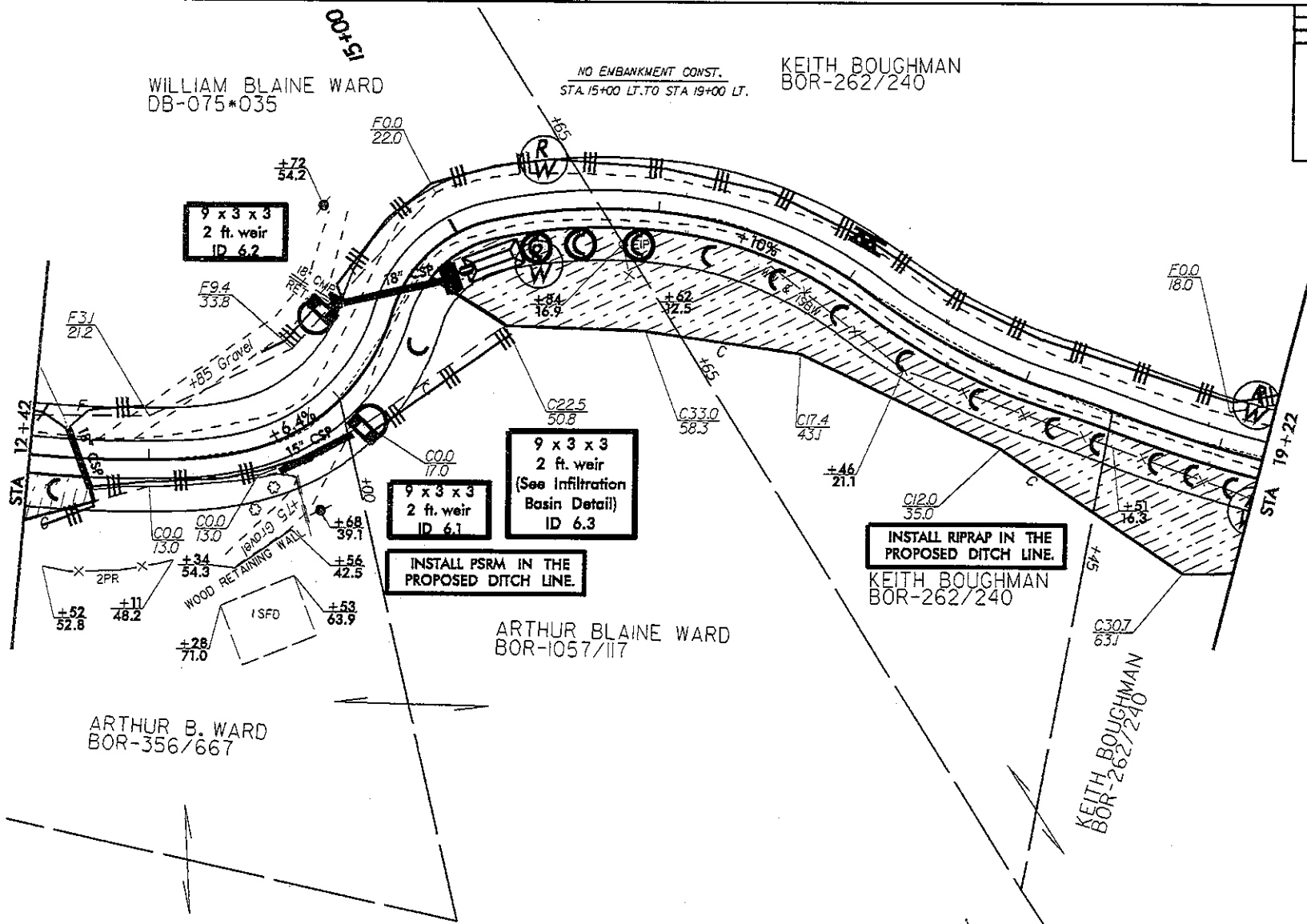
INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO
NCDOT BEST MANAGEMENT PRACTICES FOR
CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
W1156	6
BY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WILLIAM BLAINE WARD
DB-075*035

NO EMBANKMENT CONST.
STA. 15+00 LT. TO STA. 19+00 LT.

KEITH BOUGHMAN
BOR-262/240



9 x 3 x 3
2 ft. weir
ID 6.1

9 x 3 x 3
2 ft. weir
(See Infiltration
Basin Detail)
ID 6.3

INSTALL PSRM IN THE
PROPOSED DITCH LINE.

INSTALL RIPRAP IN THE
PROPOSED DITCH LINE.
KEITH BOUGHMAN
BOR-262/240

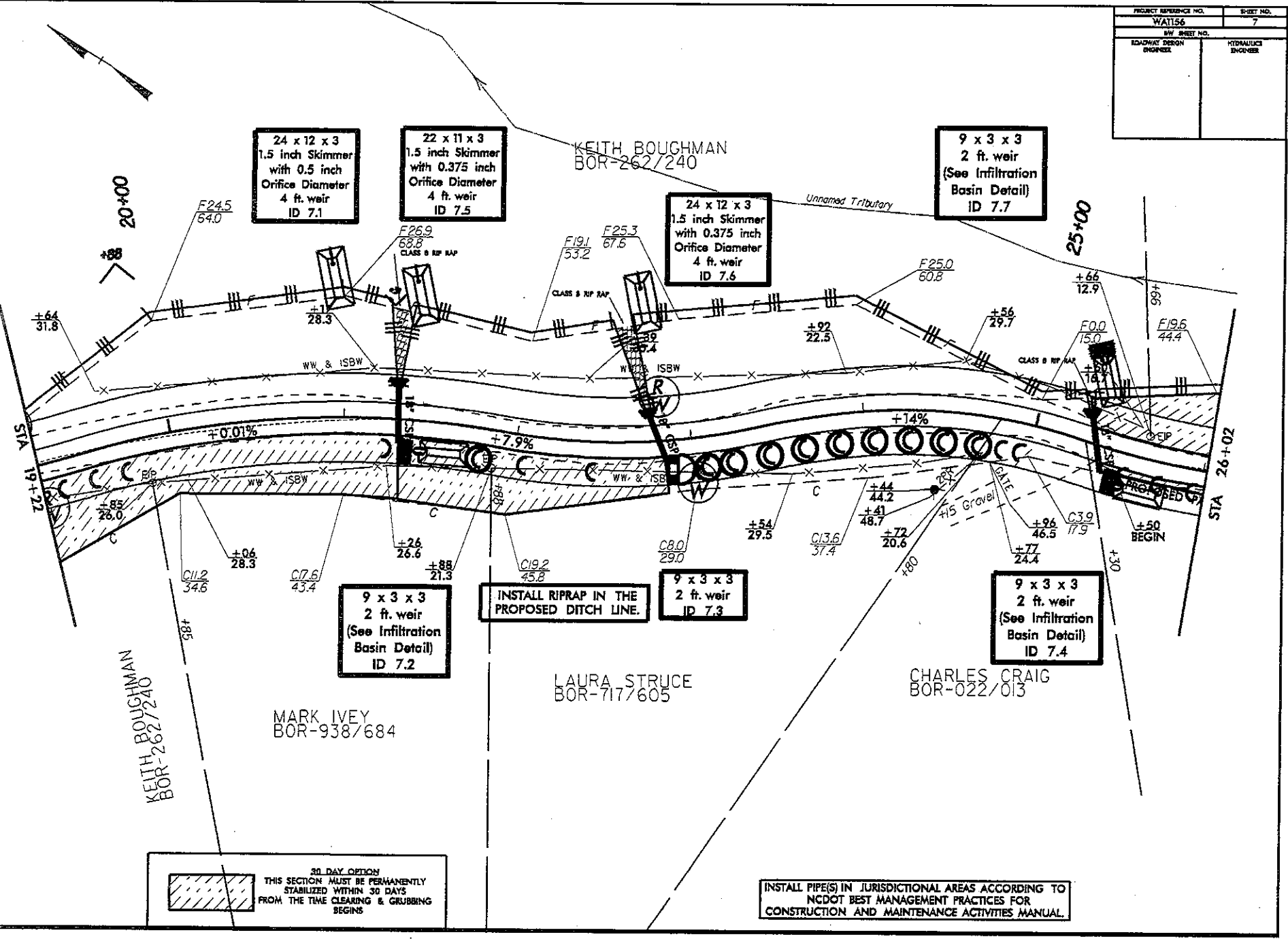
ARTHUR BLAINE WARD
BOR-1057/117

ARTHUR B. WARD
BOR-356/667

30 DAY OPTION
THIS SECTION MUST BE PERMANENTLY
STABILIZED WITHIN 30 DAYS
FROM THE TIME CLEARING & GRUBBING
BEGINS

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO
NCDOT BEST MANAGEMENT PRACTICES FOR
CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL

PROJECT REFERENCE NO.	SHEET NO.
WAT156	7
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



24 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 7.1

22 x 11 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 7.5

24 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 7.6

9 x 3 x 3
2 ft. weir
(See Infiltration
Basin Detail)
ID 7.7

9 x 3 x 3
2 ft. weir
(See Infiltration
Basin Detail)
ID 7.2

INSTALL RIPRAP IN THE
PROPOSED DITCH LINE.

9 x 3 x 3
2 ft. weir
ID 7.3

9 x 3 x 3
2 ft. weir
(See Infiltration
Basin Detail)
ID 7.4

30 DAY OPTION
THIS SECTION MUST BE PERMANENTLY
STABILIZED WITHIN 30 DAYS
FROM THE TIME CLEARING & GRUBBING
BEGINS

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO
NCDOT BEST MANAGEMENT PRACTICES FOR
CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

KEITH BOUGHMAN
BOR-262/240

LAURA STRUCE
BOR-717/605

CHARLES CRAIG
BOR-022/013

MARK IVEY
BOR-938/684

20+00

25+00

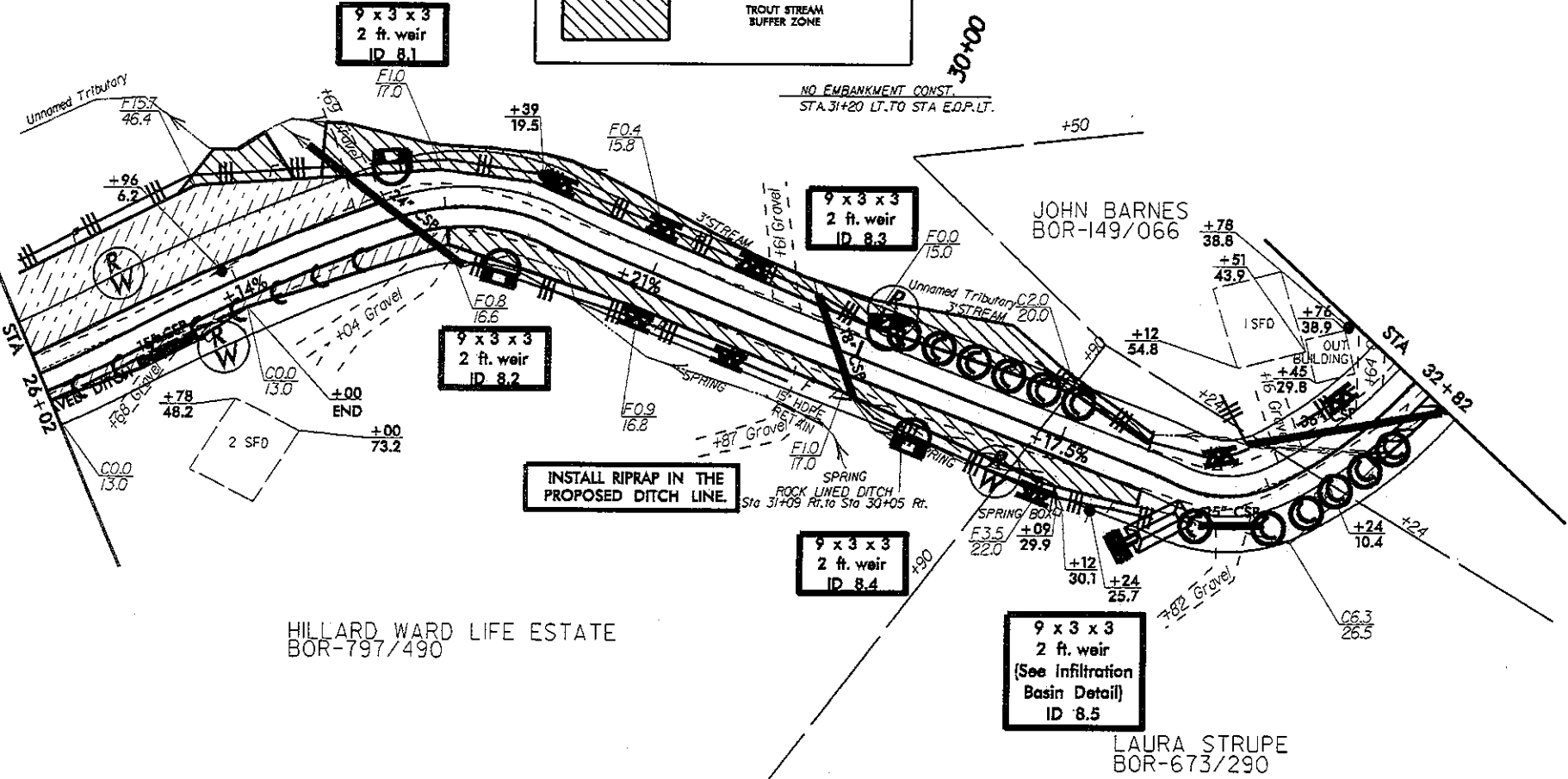
STA 19+72.2

STA 26+02

KEITH BOUGHMAN
BOR-262/240

PROJECT REFERENCE NO. W1156	SHEET NO. 8
DWG SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HILLARD WARD LIFE ESTATE
BOR-797/490

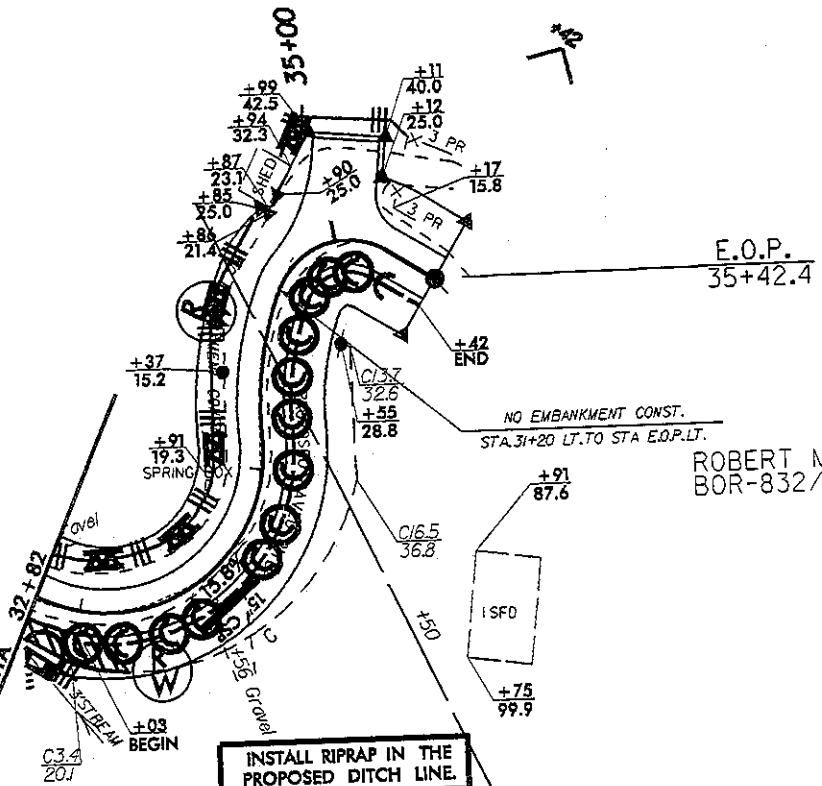


INSTALL RIPRAP IN THE
PROPOSED DITCH LINE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO
NCDOT BEST MANAGEMENT PRACTICES FOR
CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

30 DAY OPTION
THIS SECTION MUST BE PERMANENTLY
STABILIZED WITHIN 30 DAYS
FROM THE TIME CLEARING & GRUBBING
BEGINS

PROJECT REFERENCE NO.	SHEET NO.
WA1156	9
BY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



E.O.P.
35+42.4

NO EMBANKMENT CONST.
STA. 31+20 LT. TO STA. E.O.P. LT.

ROBERT MAX MCGUIRE
BOR-832/001

INSTALL RIPRAP IN THE
PROPOSED DITCH LINE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO
NCDOT BEST MANAGEMENT PRACTICES FOR
CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

9 x 3 x 3
3 ft. weir
ID 9.1

JOHN BARNES
BOR-149/066

TROUT STREAM
BUFFER ZONE

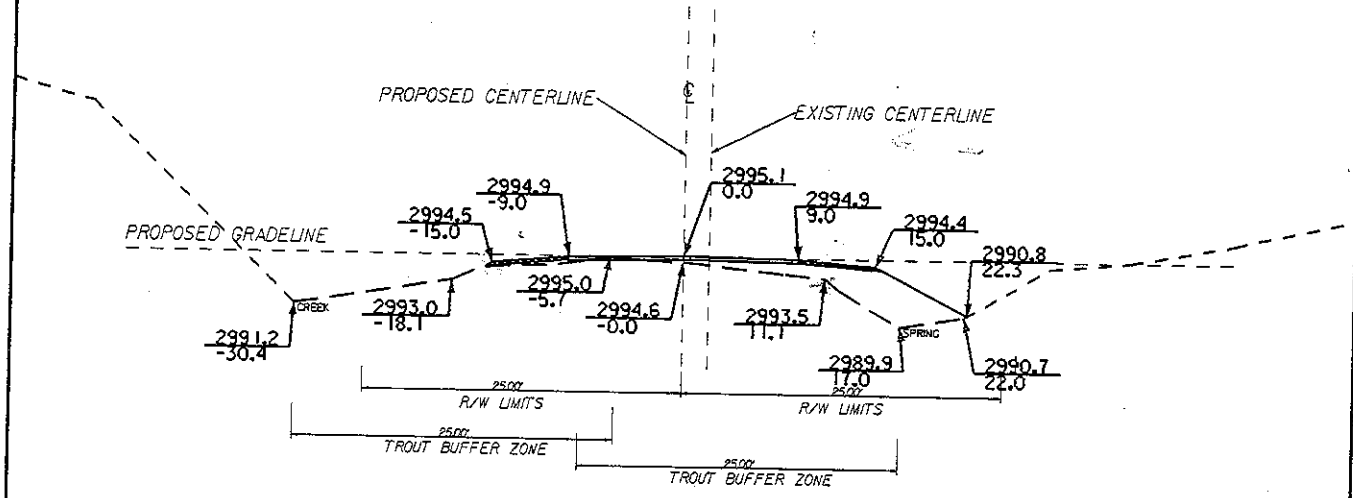


PROJECT REFERENCE NO.	DSBY NO.
SR 1156	X57
ROADWAY DESIGN ENGINEER	PAYMENT DESIGN ENGINEER

PROJECT:	11C.095100 (R/W)
	(CONST)
ROAD:	SR 1156 BIG BRANCH ROAD
COUNTY:	WATAUGA - UNNAMED TRIBUTARY
TYPE:	X-SECTION STA. 28+50
1"=10'	SHEET 1 OF 2 DATE: 01/19/12

NOTE- THIS CROSS-SECTION IS TYPICAL OF ALL AREAS NEEDING TROUT BUFFER VARIANCE STATIONS THAT ENCROACH WITHIN THE TROUT BUFFER ZONE:

STATION 27+00 TO 28+00 LT
STATION 28+00 TO 31+50 RT & LT



NOTE- PROPOSED CENTERLINE IS 2+/-' LT OF EXISTING CENTERLINE

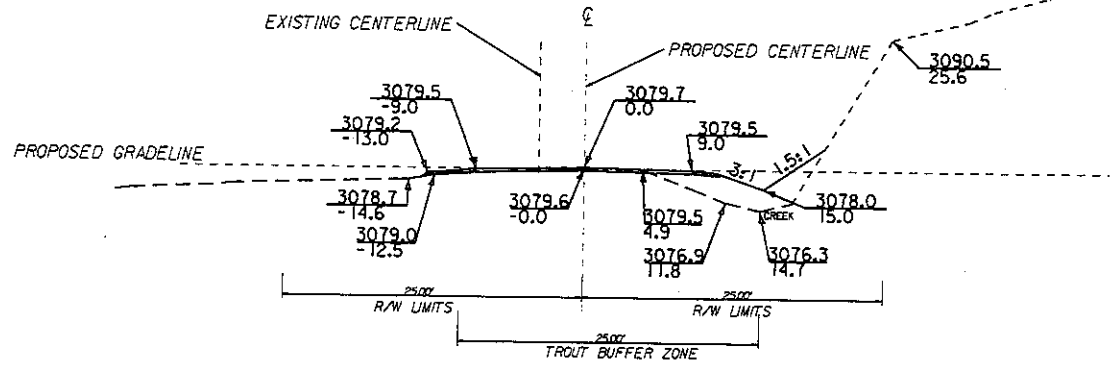
NOTE- TEMPORARY SILT FENCE WILL BE INSTALLED & MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT
NOTE- EXISTING ROADWAY LIES WITHIN THE 25' BUFFER ZONE.

8/2/12

PROJECT REFERENCE NO. SR 1156	SHEET NO. 152
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PROJECT:	11C095100 (R/W)
	(CONST)
ROAD:	SR 1156 BIG BRANCH ROAD
COUNTY:	WATAUGA - UNNAMED TRIBUTARY
TYPE:	X-SECTION STA. 32+75
T=10'	SHEET 2 OF 2 DATE: 01/19/12

NOTE- THIS CROSS-SECTION IS TYPICAL OF ALL AREAS NEEDING TROUT BUFFER VARIANCE STATIONS THAT ENCR OACH WITHIN THE TROUT BUFFER ZONE:
STATION 32+45 TO 33+47 RT









NOTE- PROPOSED CENTERLINE IS 4' RT OF EXISTING CENTERLINE

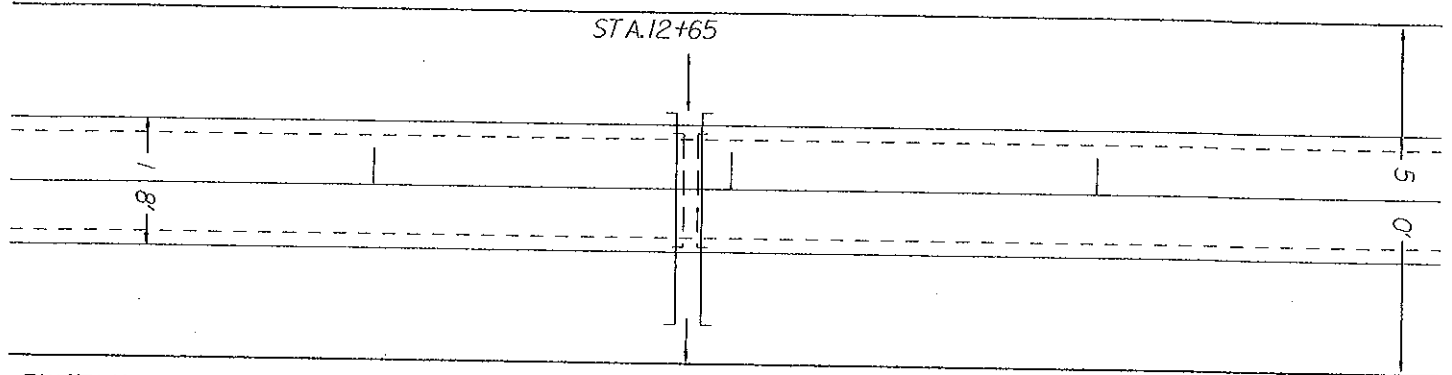
NOTE- TEMPORARY SILT FENCE WILL BE INSTALLED & MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT
NOTE- EXISTING ROADWAY LIES WITHIN THE 25' BUFFER ZONE.

I:\Projects\1156\Secondary\Maine\SR1156_Big_Branch\1156_R15_152.dgn
 11/15/11 11:57 AM
 Secondary\Maine\SR1156_Big_Branch\1156_R15_152.dgn

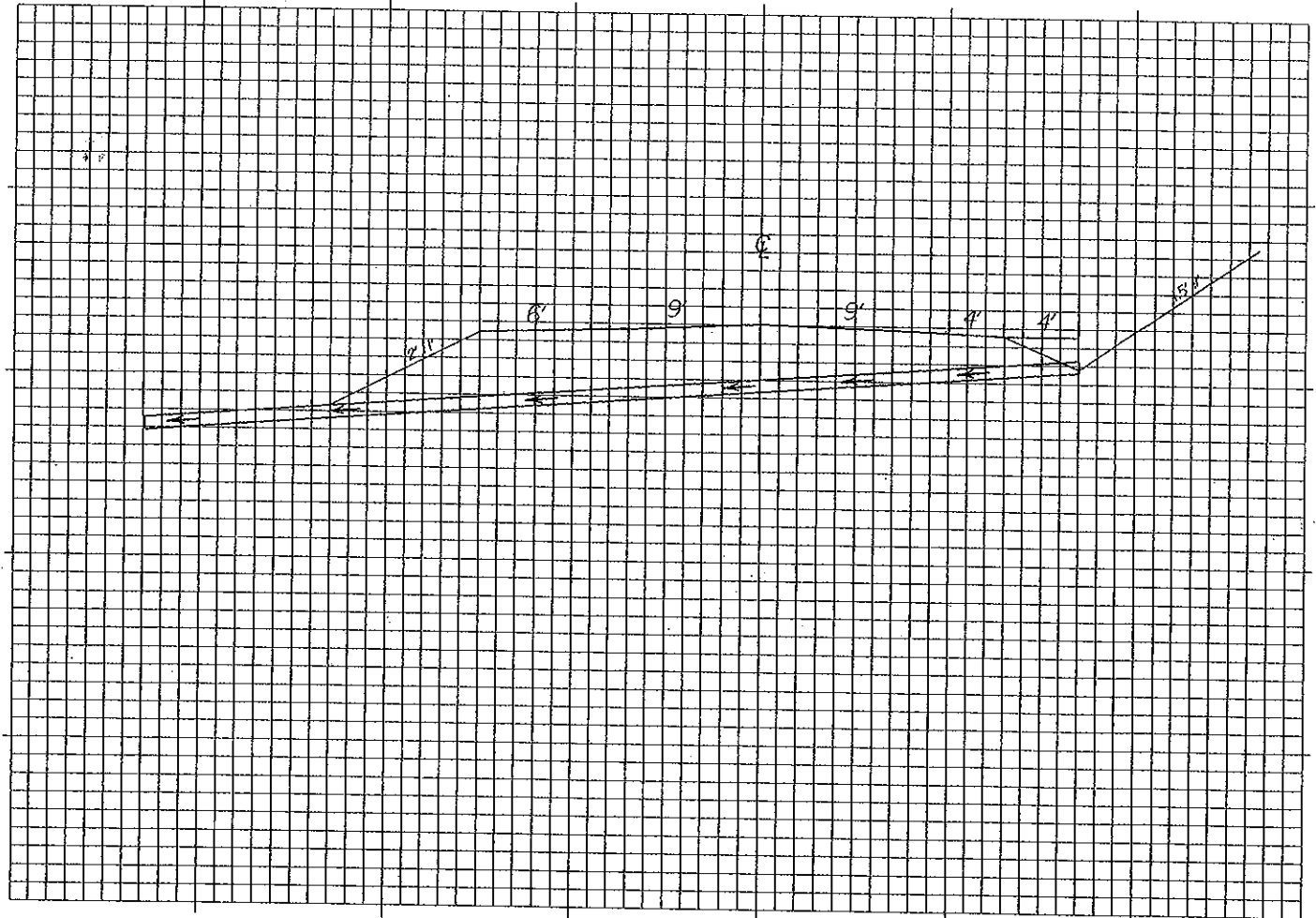
(CONST)		
ROAD:	SR 1156 BIG BRANCH ROAD	
COUNTY:	WATAUGA	
TYPE:	WET PIPE SURVEY STA. 12+65	
SCALE: 1" = 10'	SHEET 1 OF 4	DATE: 1-20-12

-  CENTER LINE
-  PROPOSED R/W
-  NEW EDGE PAVEMENT
-  EXISTING EDGE ROADWAY
-  NEW PIPE
-  EXISTING PIPE

STREAM NAME: UNNAMED TRIBUTARY TO LAUREL CREEK
 RATING: C-TR.
 6" AVERAGE STREAM WIDTH









EXISTING PIPE SIZE: 30' x 18" CMP
 NEW PIPE SIZE: 50' x 18" PIPE TO BE LAID ON A 90° SKEW WITH 6% FALL



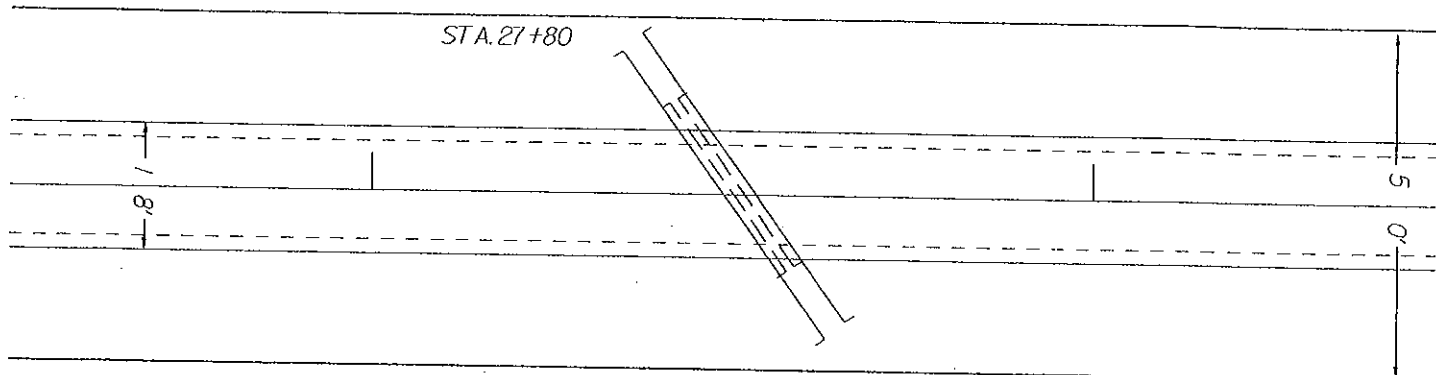
NOTE: TEMPORARY EROSION CONTROL DEVICES NOT SHOWN.
 DRAWING NOT TO SCALE

SURVEY DATE: 9-6-06

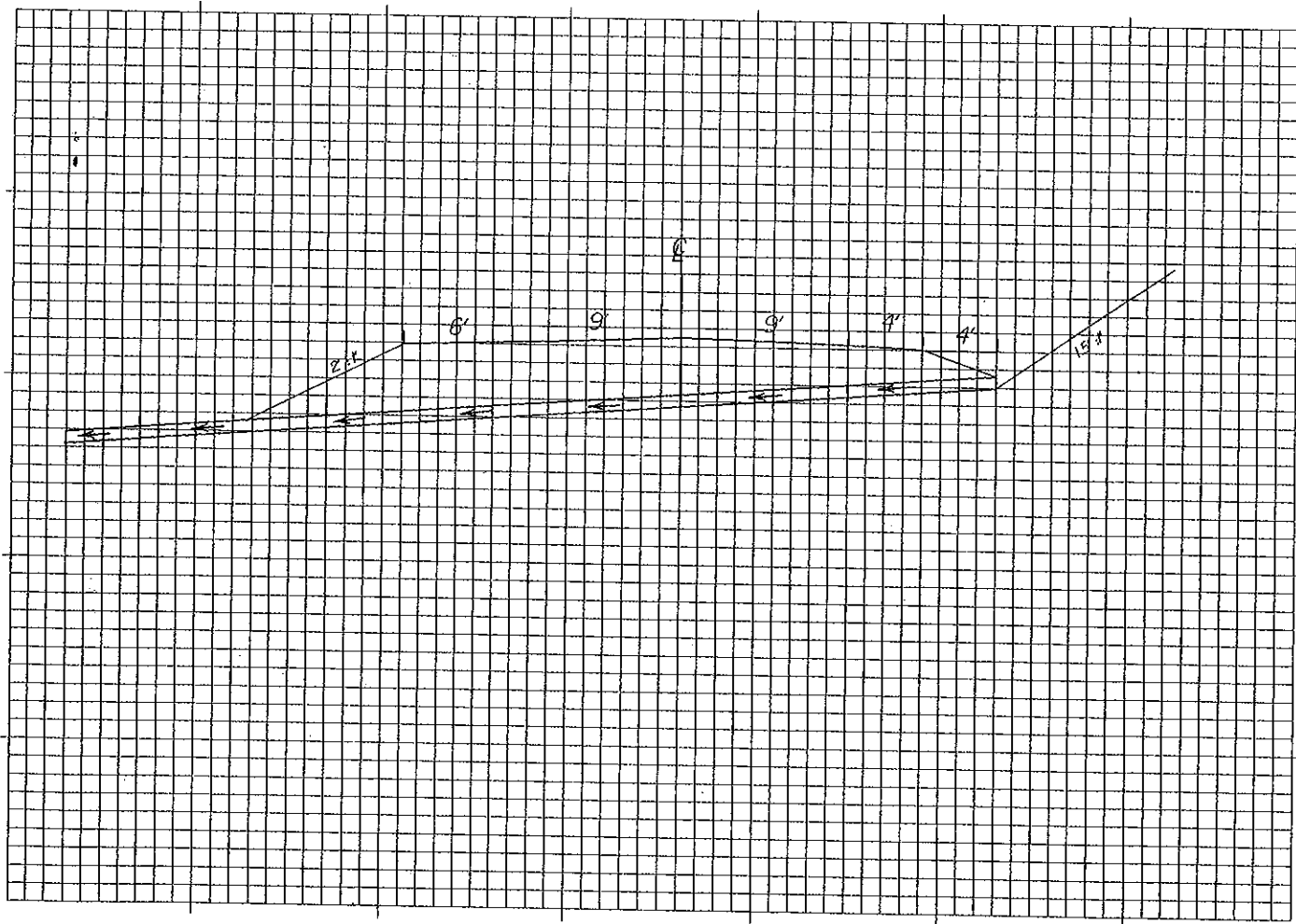
ROAD:	SR 1156 BIG BRANCH RD.
COUNTY:	WATAUGA
TYPE:	WET PIPE SURVEY STA. 27+80
SHEET 2 OF 4 DATE: 1-20-12	

-  CENTER LINE
-  PROPOSED R/W
-  NEW EDGE PAVEMENT
-  EXISTING EDGE ROADWAY
-  NEW PIPE
-  EXISTING PIPE

STREAM NAME: UNNAMED TRIBUTARY TO LAUREL CREEK
 RATING: C-TR.
 5" AVERAGE STREAM









EXISTING PIPE SIZE: 90' X 24" CMP
 NEW PIPE SIZE: 90' X 24" CMP PIPE TO BE LAID ON A 55° SKEW WITH 6% FALL



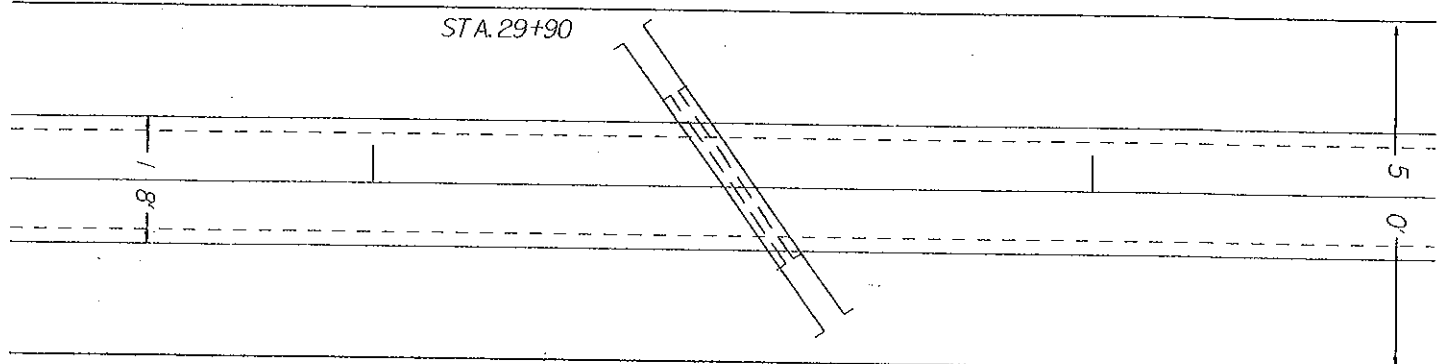
NOTE: TEMPORARY EROSION CONTROL DEVICES NOT SHOWN.
 DRAWING NOT TO SCALE

SURVEY DATE: 9-6-06

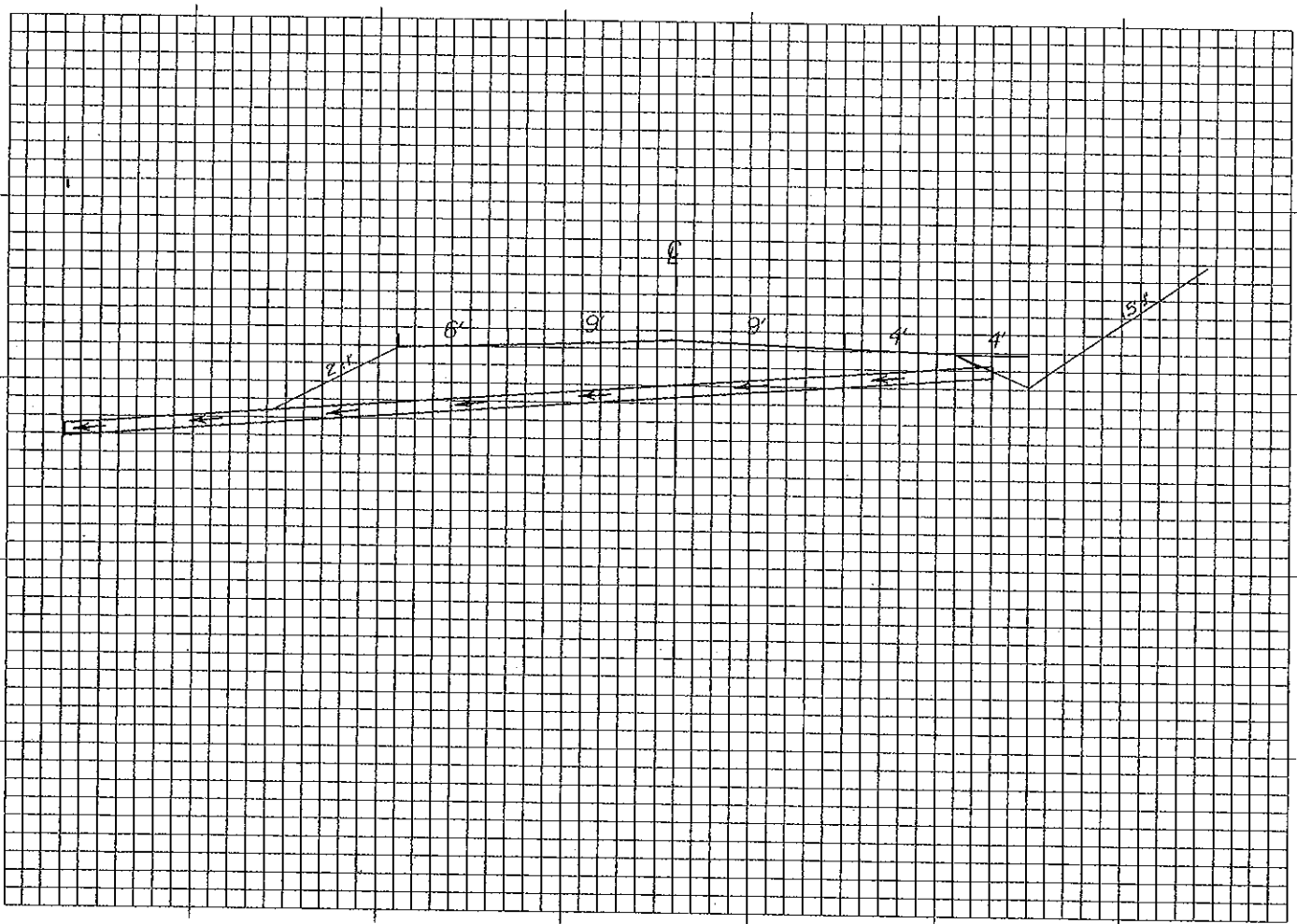
ROAD:	SR 1156 BIG BRANCH RD.	
COUNTY:	WATAUGA	
TYPE:	WET PIPE SURVEY STA. 29+90	
	SHEET 3 OF 4	DATE: 1-20-12

-  CENTER LINE
-  PROPOSED R/W
-  NEW EDGE PAVEMENT
-  EXISTING EDGE ROADWAY
-  NEW PIPE
-  EXISTING PIPE

STREAM NAME: UNNAMED TRIBUTARY TO LAUREL CREEK
 RATING: C-TR.
 1' AVERAGE STREAM









EXISTING PIPE SIZE: 50' X 18" CMP
 NEW PIPE SIZE: 50' X 18" CMP PIPE TO BE LAID ON A 50° SKEW WITH 6% FALL



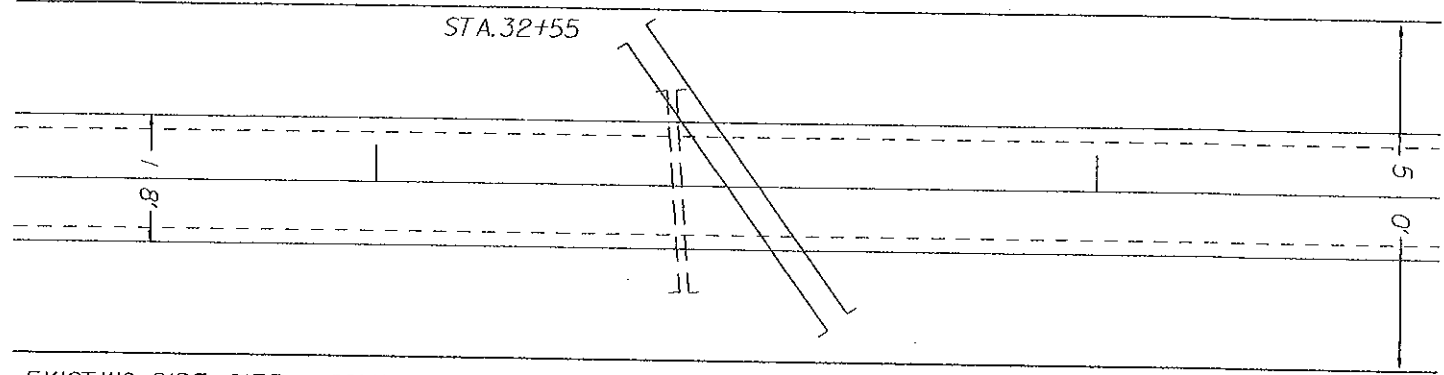
NOTE: TEMPORARY EROSION CONTROL DEVICES NOT SHOWN.
 DRAWING NOT TO SCALE

SURVEY DATE: 9-6-06

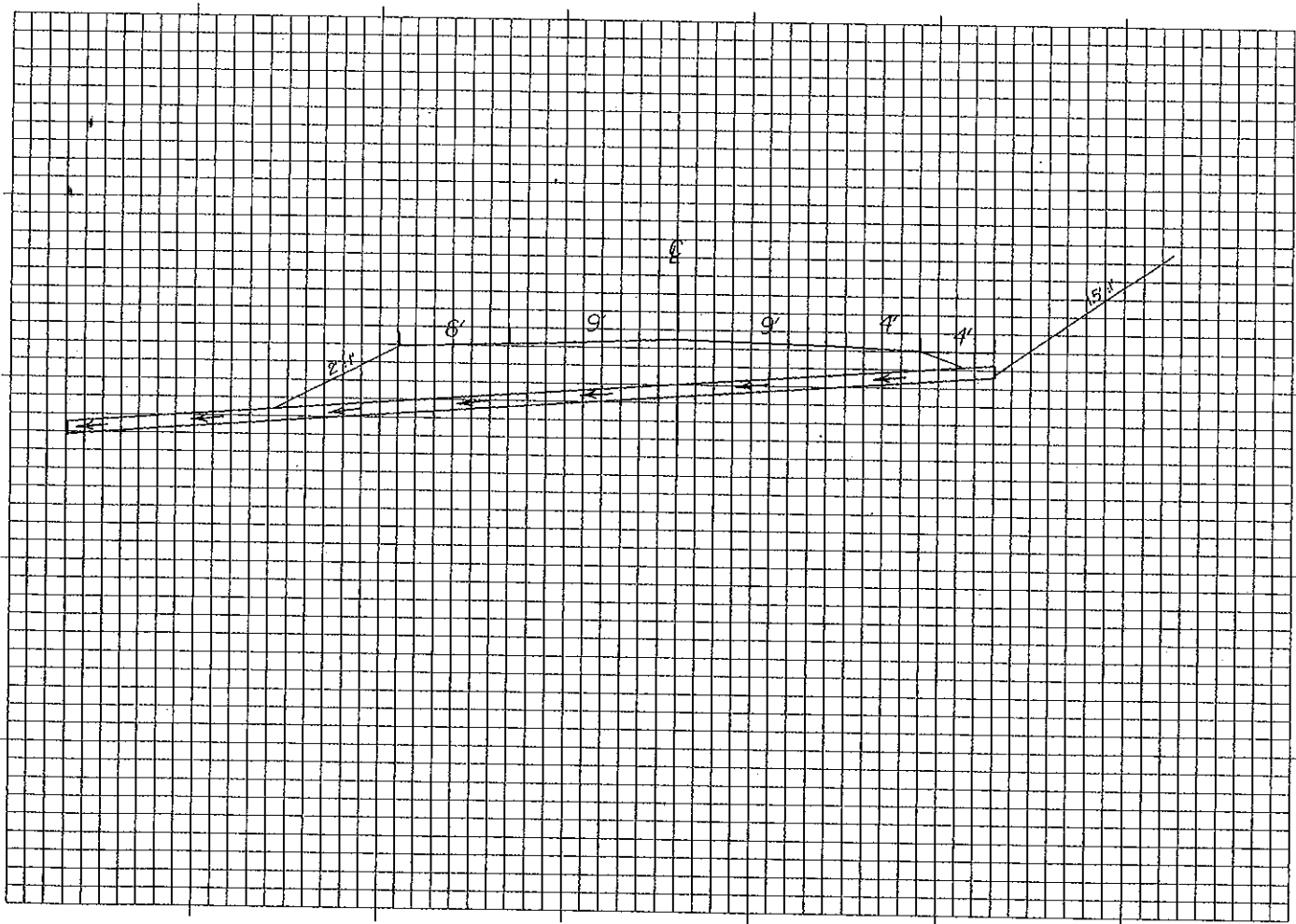
(CONST)		
ROAD:	SR 1156 BIG BRANCH RD.	
COUNTY:	WATAUGA	
TYPE:	WET PIPE SURVEY STA. 32+55	
	SHEET 4 OF 4	DATE: 1-20-12

-  CENTER LINE
-  PROPOSED R/W
-  NEW EDGE PAVEMENT
-  EXISTING EDGE ROADWAY
-  NEW PIPE
-  EXISTING PIPE

STREAM NAME: UNNAMED TRIBUTARY TO LAUREL CREEK
 RATING: C-TR.
 3' AVERAGE STREAM



EXISTING PIPE SIZE: 60' X 24" CMP
 NEW PIPE SIZE: 90' X 24" CMP PIPE TO BE LAID ON A 30° SKEW WITH 6% FALL



NOTE: TEMPORARY EROSION CONTROL DEVICES NOT SHOWN.
 DRAWING NOT TO SCALE

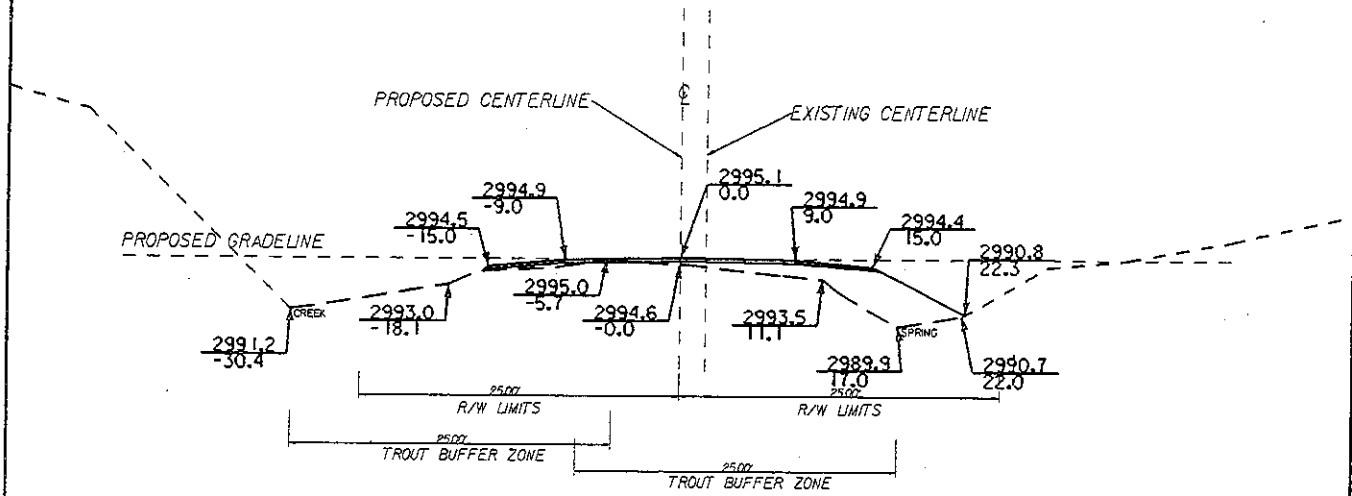
SURVEY DATE: 9-6-06

PROJECT REFERENCE NO. SR 1156	SHEET NO. 357
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

PROJECT:	11C.095100 (R/W)
	(CONST)
ROAD:	SR 1156 BIG BRANCH ROAD
COUNTY:	WATAUGA - UNNAMED TRIBUTARY
TYPE:	X-SECTION STA. 28+50
1"=10'	SHEET 1 OF 2 DATE: 01/19/12

NOTE- THIS CROSS-SECTION IS TYPICAL OF ALL AREAS NEEDING TROUT BUFFER VARIANCE STATIONS THAT ENCR OACH WITHIN THE TROUT BUFFER ZONE:

STATION 27+00 TO 28+00 LT
STATION 28+00 TO 31+50 RT & LT



NOTE- PROPOSED CENTERLINE IS 2'+/- LT OF EXISTING CENTERLINE

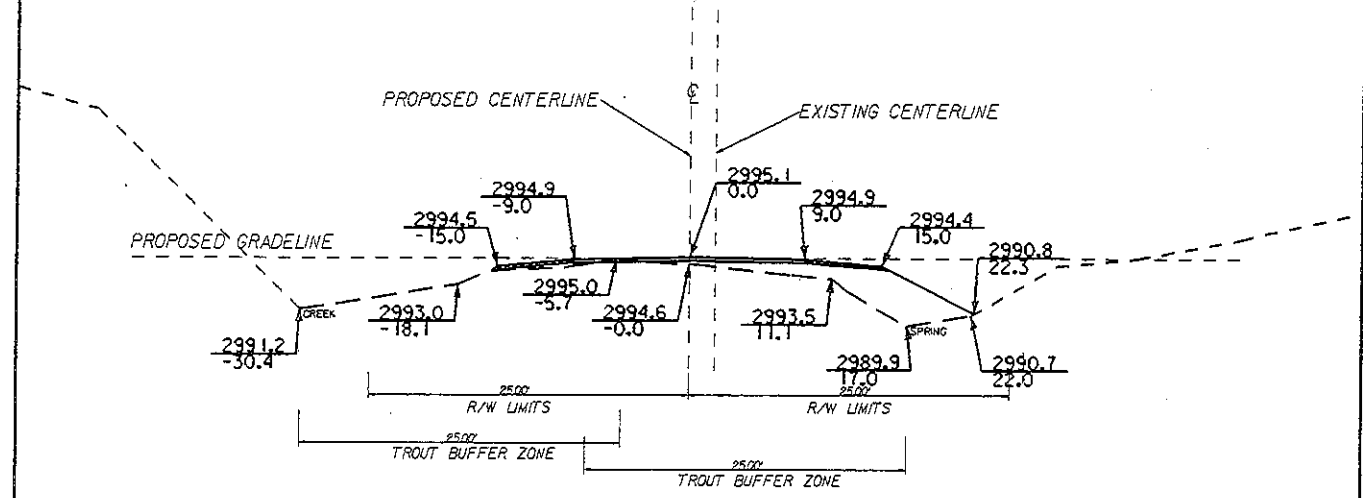
NOTE- TEMPORARY SILT FENCE WILL BE INSTALLED & MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT
NOTE- EXISTING ROADWAY LIES WITHIN THE 25' BUFFER ZONE.

PROJECT REFERENCE NO.	SHEET NO.
SR 1156	X5/
ROADWAY DESIGN ENGINEER	PAYMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PROJECT:	11C.095100 (R/W)
	(CONST)
ROAD:	SR 1156 BIG BRANCH ROAD
COUNTY:	WATAUGA - UNNAMED TRIBUTARY
TYPE:	X-SECTION STA.28+50
1"=10'	SHEET 1 OF 2 DATE: 01/19/12

NOTE- THIS CROSS-SECTION IS TYPICAL OF ALL AREAS NEEDING TROUT BUFFER VARIANCE STATIONS THAT ENCROACH WITHIN THE TROUT BUFFER ZONE:

STATION 27+00 TO 28+00 LT
STATION 28+00 TO 31+50 RT & LT



NOTE- PROPOSED CENTERLINE IS 2'+/- LT OF EXISTING CENTERLINE

NOTE- TEMPORARY SILT FENCE WILL BE INSTALLED & MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT
NOTE- EXISTING ROADWAY LIES WITHIN THE 25' BUFFER ZONE.

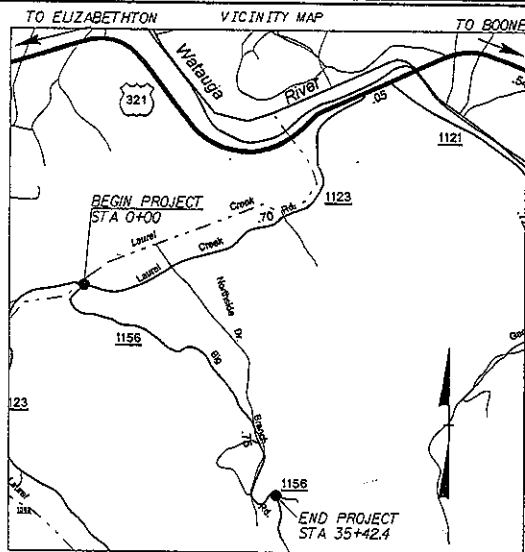
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT EXPERIENCE NO.	
WA-1155	
ROADWAY DESIGN ENGINEER	PFD 124

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 (HOW) 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 HOW ZONE.

03/08/99



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WATAUGA COUNTY

LOCATION: SR 1156 BIG BRANCH RD FROM
SR 1123 LAUREL CREEK RD TO DEAD END

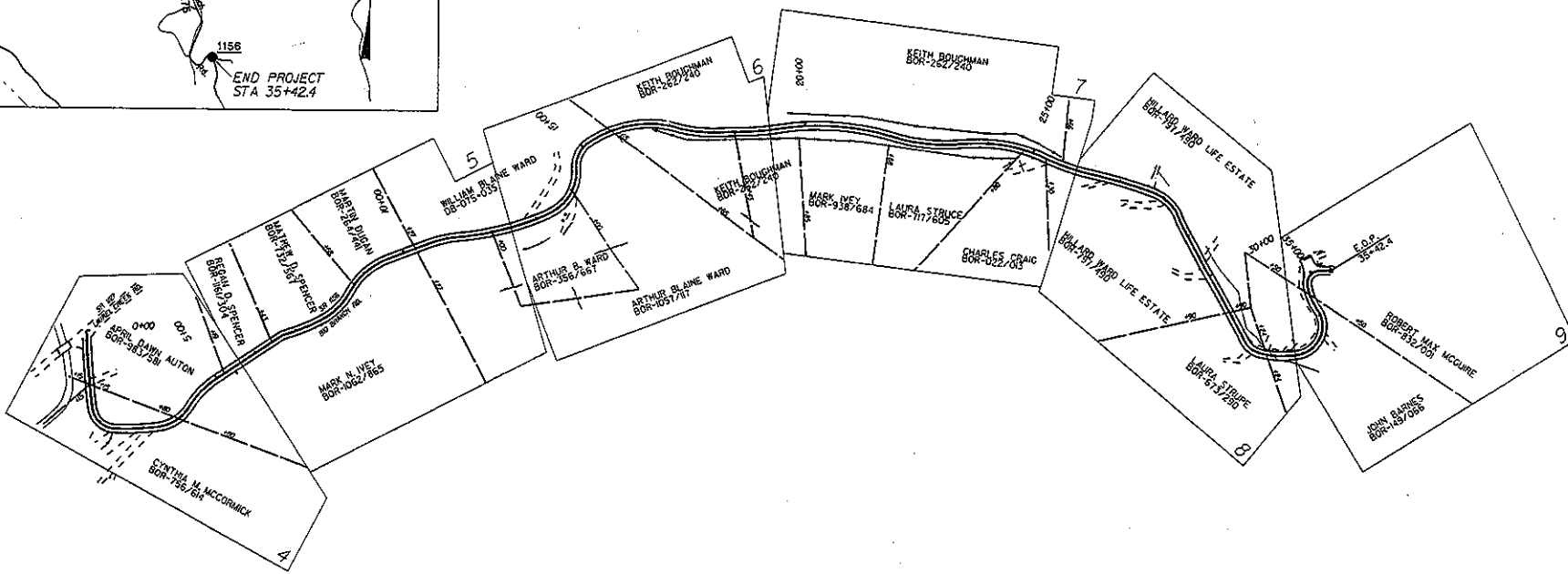
TYPE OF WORK: GRADING, DRAINAGE, BASE
AND PAVING - 0.67 MILES

BEGAN SURVEY: 07/31/06

END SURVEY: 09/06/06

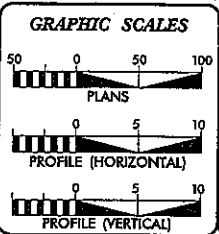
STATE	STATE PROJECT AGENCY NO.	SHEET NO.	TOTAL SHEETS
N.C.	WA-1156	1	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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CONTRACT:



DESIGN DATA

ADT =	
ADT =	
DHV =	%
D =	%
T =	%
V =	MPH
• TTST	DUAL

PROJECT LENGTH

Prepared in the Office of:
DIVISION OF HIGHWAYS
DIVISION II, DISTRICT 2 BOONE
P.O. BOX 1460, BOONE, N.C. 28607

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	M.A. PETTY/JOHN P.E. DIVISION ENGINEER
LETTING DATE:	N.K. TURNER P.E. DISTRICT ENGINEER

DIVISION ENGINEER

SIGNATURE: _____ P.E.

DISTRICT ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

8/17/79

GENERAL NOTES

PROJECT REFERENCE NO.	SHEET NO.
WA-1156	I-A
	ROADWAY DESIGN ENGINEER

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-C	SLOPE STAKE DATA
1-D	UTILITIES POLE DATA AND CENTER LINE SHIFT SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEEDING DETAILS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
3-B	RIGHT OF WAY DATA SHEET
3-C	DRAINAGE SUMMARY SHEET (48" AND UNDER)
4 THRU 9	PLAN SHEET PROFILE SHEET
EC-1 THRU EC-9	EROSION CONTROL PLANS
X-1 THRU X-	CROSS-SECTIONS

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DESIGNED BY: GE	DATE: 01/10/07
CHECKED BY: HK	DATE: 01/10/07
DATE:	REVISIONS:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
WA-1156	1-C

NOTE: ALL CUTS 1.5:1 & ALL FILLS 2:1 UNLESS NOTED

SLOPE STAKE DATA SHEET

LEFT	STATION	RIGHT	LEFT	STATION	RIGHT	LEFT	STATION	RIGHT	LEFT	STATION	RIGHT
C2.8 21.2	1+00	F0.0 16.0	F0.0 13.0	34+55	C13.7 32.6	12' SEC	69+00			103+00	
C2.6 20.1	2+00	F0.0 14.0	F0.0 13.0	35+00	C0.0 13.0	12' SEC	70+00			104+00	
F3.1 21.2	3+00	C0.0 17.0	EOP	35+24	EOP	12' SEC	71+00			105+00	
F24.9 64.8	4+00	C0.0 17.0		38+00			72+00			106+00	
F0.0 19.0	5+00	F37.0 72.5	5+10	39+00			73+00			107+00	
	6+00			40+00			74+00			108+00	
F0.0 18.0	7+00	C60.8 93.0	1.25:1 ROCK	41+00			75+00			109+00	
F0.0 17.0	8+00	C16.7 42.1		42+00			76+00			110+00	
F0.0 16.0	9+00	C47.3 88.0		43+00			77+00			111+00	
F0.0 16.0	10+00	C70.5 122.8		44+00			78+00			112+00	
F0.0 16.0	11+00	C78.8 135.2		45+00			79+00			113+00	
F0.0 13.0	12+00	C32.7 49.7	1:1 ROCK	46+00			80+00			114+00	
F3.1 21.2	13+00	C0.0 13.0		47+00			81+00			115+00	
F2.4 20.9	14+00	C0.0 17.0		48+00			82+00			116+00	
F0.0 22.0	15+00	C22.5 50.8		49+00			83+00			117+00	
F0.0 16.0	16+00	C33.0 58.3	1.25:1 ROCK	50+00			84+00			118+00	
F0.0 17.0	17+00	C17.4 43.1		51+00			85+00			119+00	
F0.0 18.0	18+00	C12.0 35.0		52+00			86+00			120+00	
F0.0 18.0	19+00	C30.7 63.1		53+00			87+00			121+00	
F24.5 64.0	20+00	C11.7 34.6		54+00			88+00			122+00	
F24.9 68.8	21+00	C17.6 43.4		55+00			89+00			123+00	
F19.1 53.2	22+00	C19.2 45.8		56+00			90+00			124+00	
F25.3 67.6	23+00	25.0 37.4		57+00			91+00			125+00	
F25.0 60.80	24+00	C13.6 37.4	1.75:1 CREEK	58+00			92+00			126+00	
F0.0 15.0	25+00	C3.0 17.9	13' SEC	59+00			93+00			127+00	
F19.4 44.4	26+00	F0.0 13.0	13' SEC	60+00			94+00			128+00	
F15.7 46.4	27+00	C0.0 13.0	13' SEC	61+00			95+00			129+00	
F1.0 17.0	28+00	F0.8 16.6		62+00			96+00			130+00	
F0.4 15.8	29+00	F0.9 16.8		63+00			97+00			131+00	
F0.0 15.0	30+00	F1.0 17.0		64+00			98+00			132+00	
F0.0 16.0	31+00	F3.5 22.0		65+00			99+00			133+00	
F0.0 13.0	32+00	C5.3 26.5		66+00			100+00			134+00	
F0.0 13.0	33+00	C3.4 20.2		67+00			101+00			135+00	
F0.0 13.0	34+00	C16.5 36.8	12' SEC	68+00			102+00			136+00	

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 1156.dwg
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DESIGNED BY: HE _____ DATE: 02/20/07
 CHECKED BY: GK _____ DATE: 01/20/07
 DATE: _____
 NETWORKS: _____

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. WA-1156
 SHEET NO. 1-0

POLE DATA SHEET

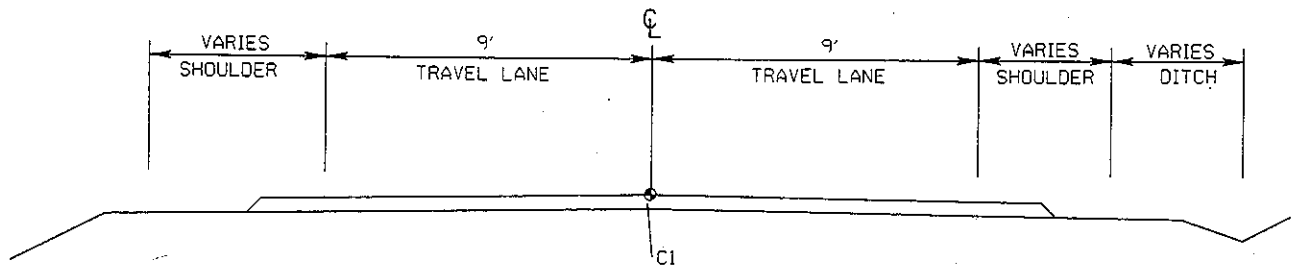
**CENTERLINE
SHIFT STA'S**

OWNER OF THE POLE LINE: BREMCO							OWNER OF THE POLE LINE: SKYLINE							STATION		STATION							
STATION	POLE NUMBER	DIST. FROM CENTER PRESENT ROAD		DIST. FROM CENTER PROJECT		DIST. FROM PROJECT AFTER MOVING		REMARKS	STATION	POLE NUMBER	DIST. FROM CENTER PRESENT ROAD		DIST. FROM CENTER PROJECT		DIST. FROM PROJECT AFTER MOVING		REMARKS	LEFT	RIGHT	LEFT	RIGHT		
		LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT				LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT							
26+96		9'		6'		25'		PP,4PW,2GW	26+96		9'		6'		25'		ITC	7' 4'	1+00 2+00	37+00 38+00			
34+37		8'		15'		25'		PP,2PW	28+39		25'		20'		25'		TP,2TC,2GW	6' 5'-00	3+00 4+00	39+00 40+00			
34+55			35'		29'			REMOVE FR CUT	31+24			27'		25'		25'	TP,1TC,2GW	6+00 7+00	5' 7'	41+00 42+00			
									34+37		8'		15'		25'		ITC	8+00 9+00	6' 5'	44+00 45+00			
									34+55			35'		29'			REMOVE FR CUT	10+00 11+00	6' 5'	46+00 47+00			
																		12+00 13+00	4' 0	48+00 49+00			
																		14+00 15+00	4' 8'	50+00 51+00			
																		16+00 17+00	6' 6'	52+00 53+00			
																		18+00 19+00	6' 5'	54+00 55+00			
																		20+00 21+00	0 0	56+00 57+00			
																		22+00 23+00	0 0	58+00 59+00			
																		24+00 25+00	0 0	60+00 61+00			
																		26+00 27+00	0 0	62+00 63+00			
																		4' 0	28+00 29+00		64+00 65+00		
																		0 1'	30+00 31+00		66+00 67+00		
																			32+00 33+00	6' 5'	68+00 69+00		
																			34+00 35+00	6' 7'	70+00 71+00		
																			EOP 35+42	6'	72+00		

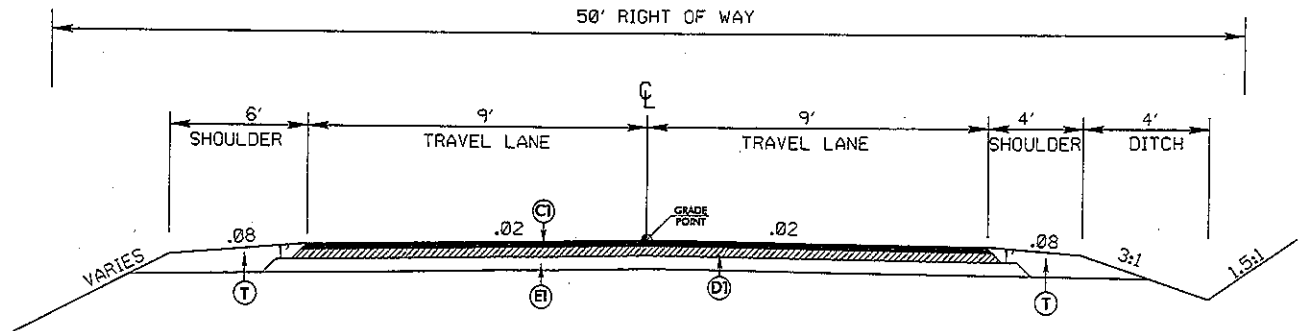
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PROJECT REFERENCE NO.	SHEET NO.
WA-1156	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



18' EXISTING TYPICAL SECTION



32' PROPOSED TYPICAL SECTION

12/05/09
 ENTERED BY: GSK DATE: 03/26/02
 CHECKED BY: BR DATE: 03/26/02
 DATE: _____ REVISIONS: _____

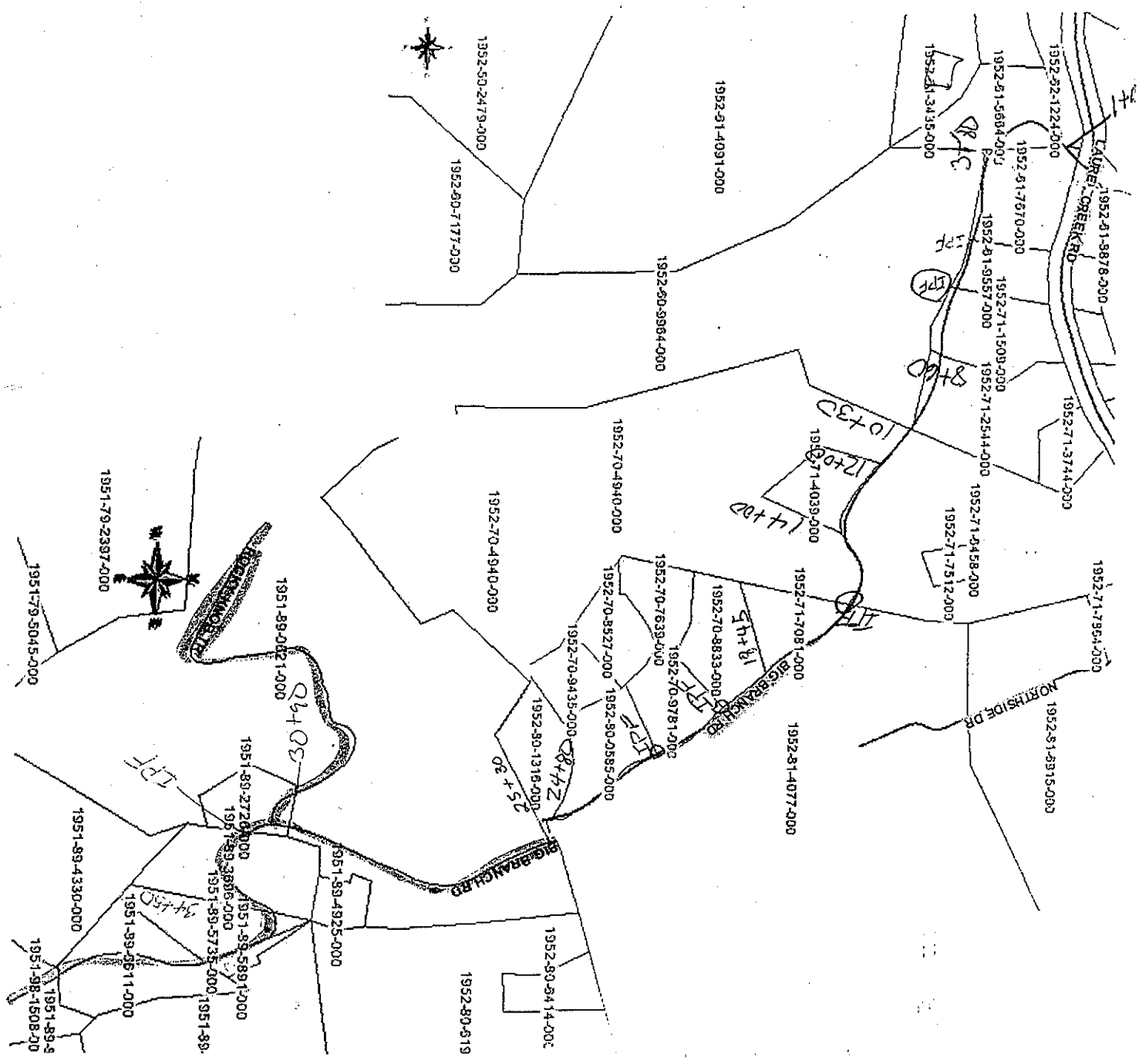
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. WA-1156
 SHEET NO. 3-B

RIGHT OF WAY DATA SHEET

PARCEL NO.	PROPERTY OWNERS NAME	ADDRESS	CITY	STATE	ZIP	DEED BOOK / PAGE	NCPIN	PARCEL NO.	PROPERTY OWNERS NAME	ADDRESS	CITY	STATE	ZIP	DEED BOOK / PAGE	NCPIN
	JOHNSON, CARL A AND LAURA	822 LAUREL CREEK RD	SUGAR GROVE	NC	28679-9513	203*027	1952-62-1224-000								
	MCCORMICK, CYNTHIA M	152 BIG BRANCH RD	SUGAR GROVE	NC	28679-0000	756614	1952-61-5664-000								
	AUTON, APRIL DAWN H	767 LAUREL CREEK RD	SUGAR GROVE	NC	28679-0000	983541	1952-61-7670-000								
	IVEY, MARK N III, ROSA M	120 LOGAN BLVD SOUTH	NAPLES	FL	34119-0000	1062865	1952-60-9964-000								
	SPENCER, REGAN D	709 LAUREL CREEK RD	SUGAR GROVE	NC	28679-0000	1161304	1952-61-9557-000								
	SPENCER, MATTHEW D & REGAN	1516 EAGLEVALE RD	DURHAM	NC	27701-0000	732567	1952-71-1509-000								
	DUGAN, MARTIN AND SARAH	711 LAUREL CREEK ROAD	SUGAR GROVE	NC	28679-9512	264441	1952-71-2544-000								
	WARD, WILLIAM BLAINE	138 NORTHSIDE DRIVE	SUGAR GROVE	NC	28679-9542	075*035	1952-71-6458-000								
	WARD, ARTHUR B	366 BIG BRANCH RD	SUGAR GROVE	NC	28679-9635	356667	1952-71-4039-000								
	" "	" "	SUGAR GROVE	NC	28679-9635	1057117	1952-70-4940-000								
	BOUGHMAN, KEITH & VALARIE	145 NORTH SIDE DR	SUGAR GROVE	NC	28679-0000	262240	1952-61-4077-000								
	BOUGHMAN, ROBERT KEITH	145 NORTH SIDE DR	SUGAR GROVE	NC	28679-0000	1157016	1952-71-7081-000								
	" "	" "	SUGAR GROVE	NC	28679-0000	1157016	1952-70-8833-000								
	IVEY, MARK N III, ROSA M	120 LOGAN BLVD SOUTH	NAPLES	FL	34119-0000	938684	1952-70-9781-000								
	STRUCE, LAURA RENEE	3049 KONNOAK DR	WINSTON SALEM	NC	27127-0000	717605	1952-80-0585-000								
	CRAIG, CHARLES R & KATHY	166 E. RHYNE ROAD	MOUNT HOLLY	NC	28120-0000	022013	1952-80-1316-000								
	WARD, HILLARD LIFE ESTATE	636 BIG BRANCH RD	SUGAR GROVE	NC	28679-0000	797490	1951-89-0621-000								
	STRUPE, LAURA & WALTER G	2301 COVE HUNTSVILLE RD	YADKINVILLE	NC	27055-0000	673290	1951-89-2726-000								
	BARNES, JOHN Q	1300 REECE RD APT 601	CHARLOTTE	NC	28209-2153	149066	1951-89-3696-000								
	MCGUIRE, ROBERT MAX	PO BOX 72	SUGAR GROVE	NC	28679-0000	832001	1951-89-5735-000								
	" "	" "	SUGAR GROVE	NC	28679-0000	1013089	1951-89-5891-000								

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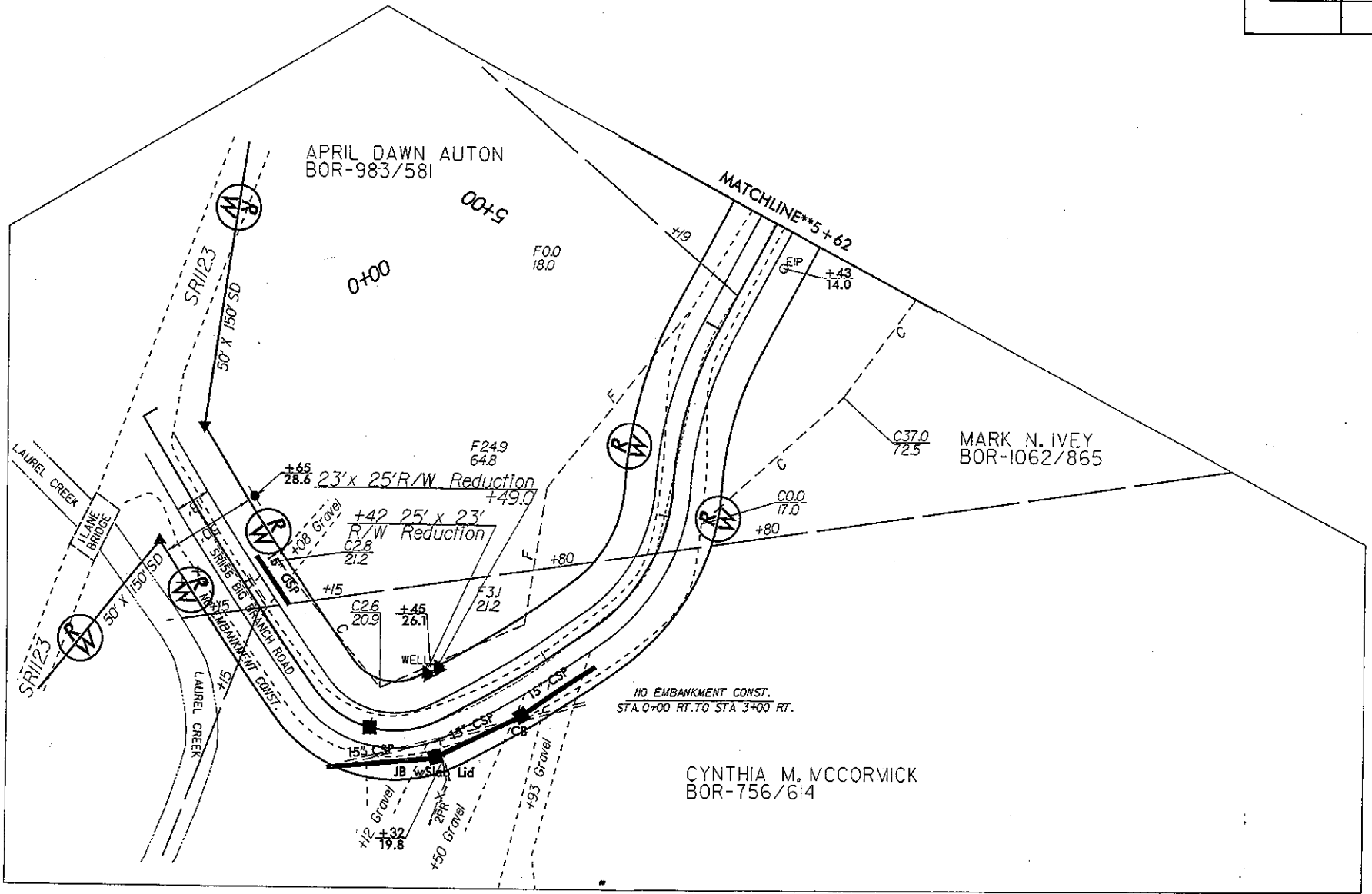


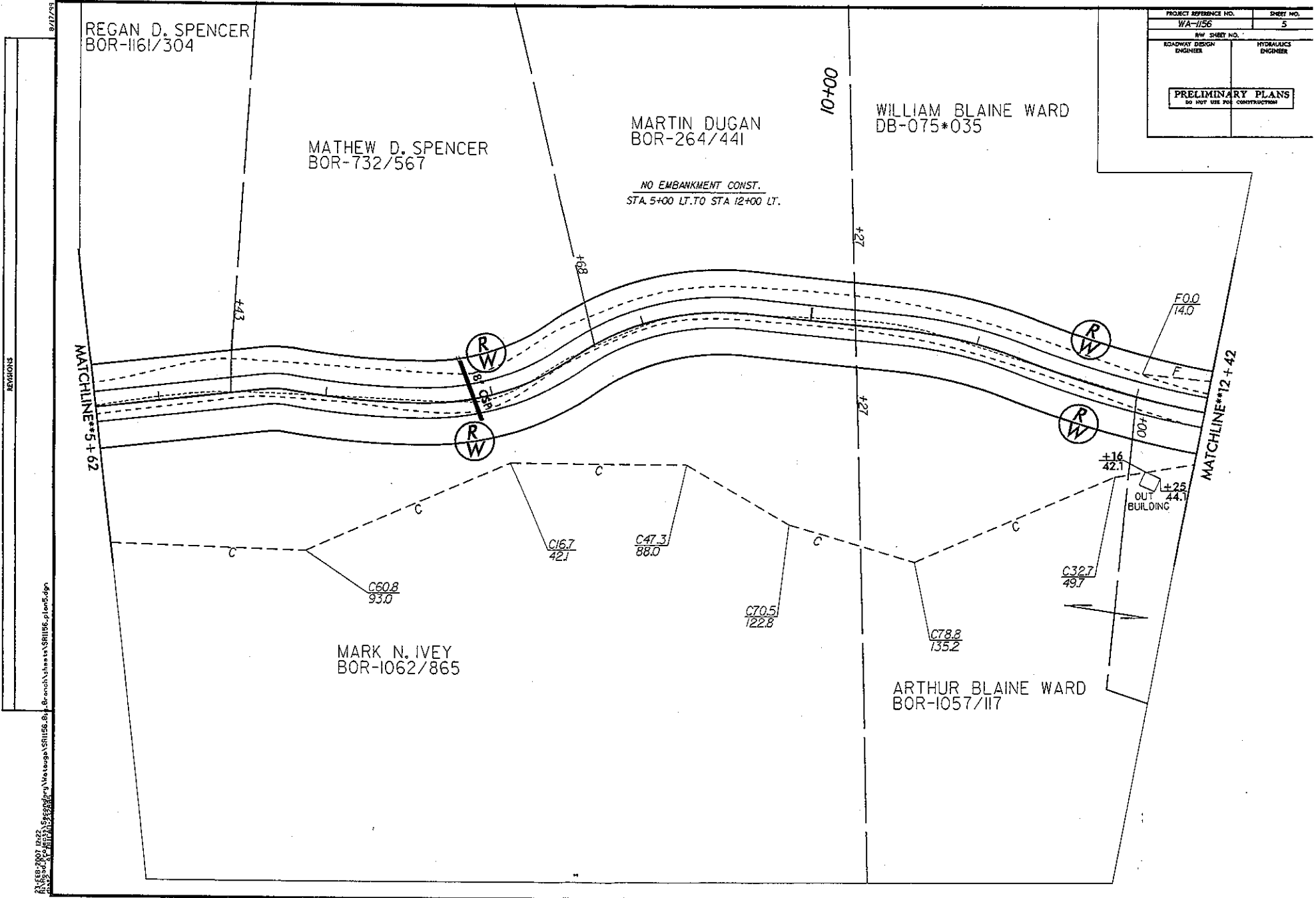
8/17/59

REVISIONS

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PROJECT REFERENCE NO. WA-155	SHEET NO. 4
BY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	





PROJECT REFERENCE NO. WA-1156	SHEET NO. 5
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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 REVISION
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PROJECT REFERENCE NO.	SHEET NO.
WA-1156	6
RHW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NO EMBANKMENT CONST.
STA. 15+00 LT. TO STA. 19+00 LT.

WILLIAM BLAINE WARD
DB-075*035

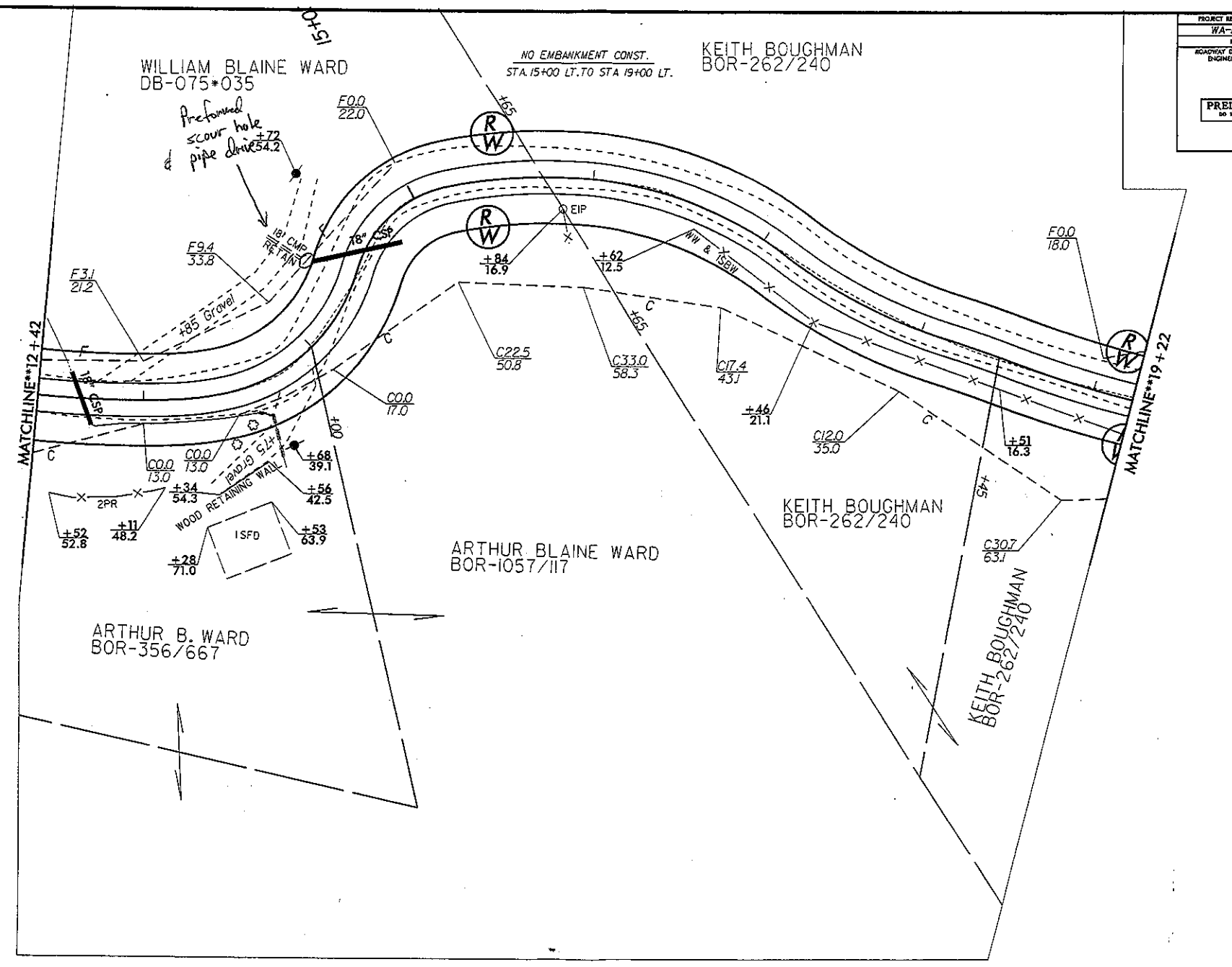
KEITH BOUGHMAN
BOR-262/240

ARTHUR BLAINE WARD
BOR-1057/117

ARTHUR B. WARD
BOR-356/667

KEITH BOUGHMAN
BOR-262/240

KEITH BOUGHMAN
BOR-262/240



REVISIONS

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8/17/93

8/17/99

PROJECT REFERENCE NO. WA-1156	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

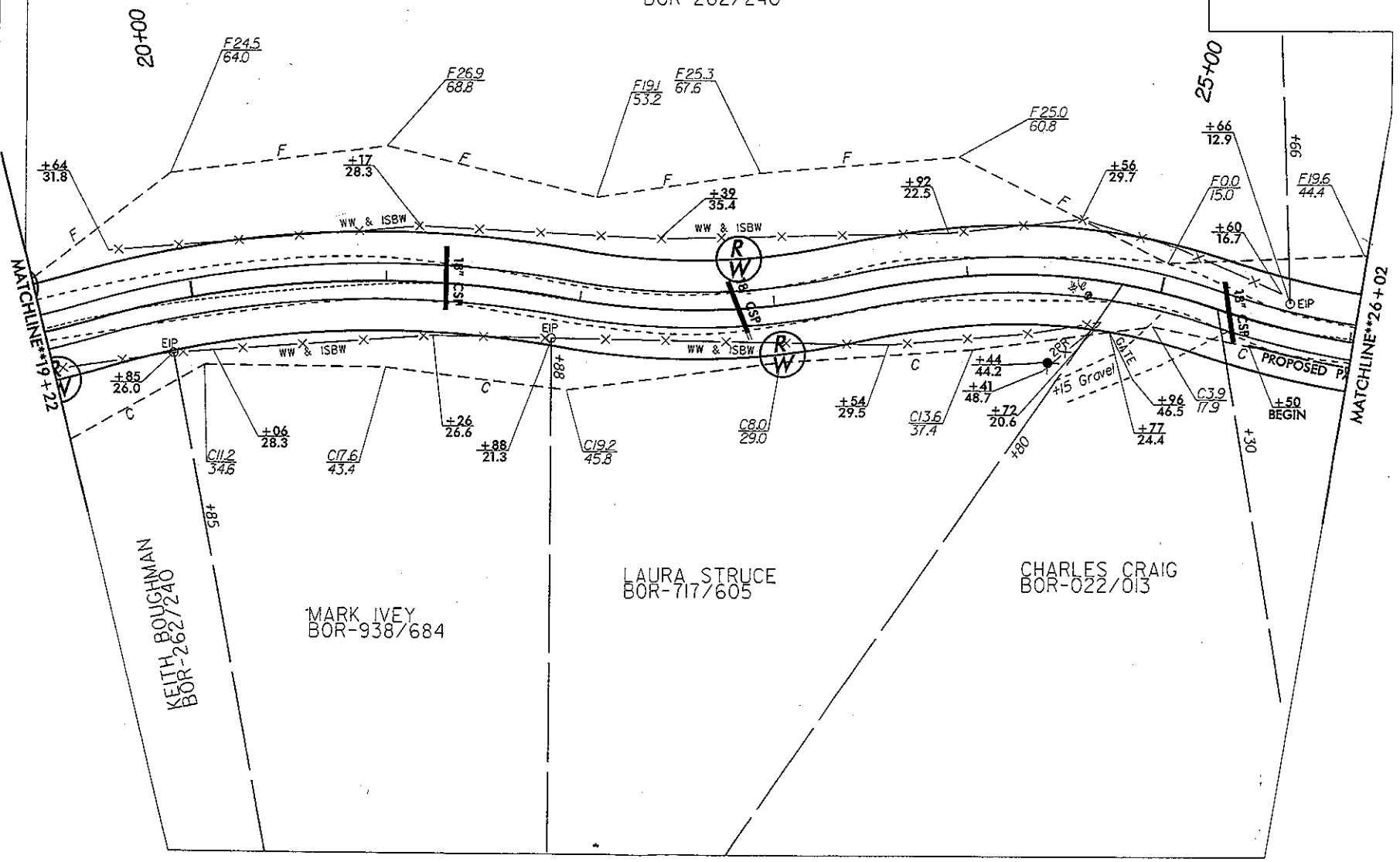
KEITH BOUGHMAN
BOR-262/240

LAURA STRUCE
BOR-717/605

CHARLES CRAIG
BOR-022/013

MARK IVEY
BOR-938/684

KEITH BOUGHMAN
BOR-262/240



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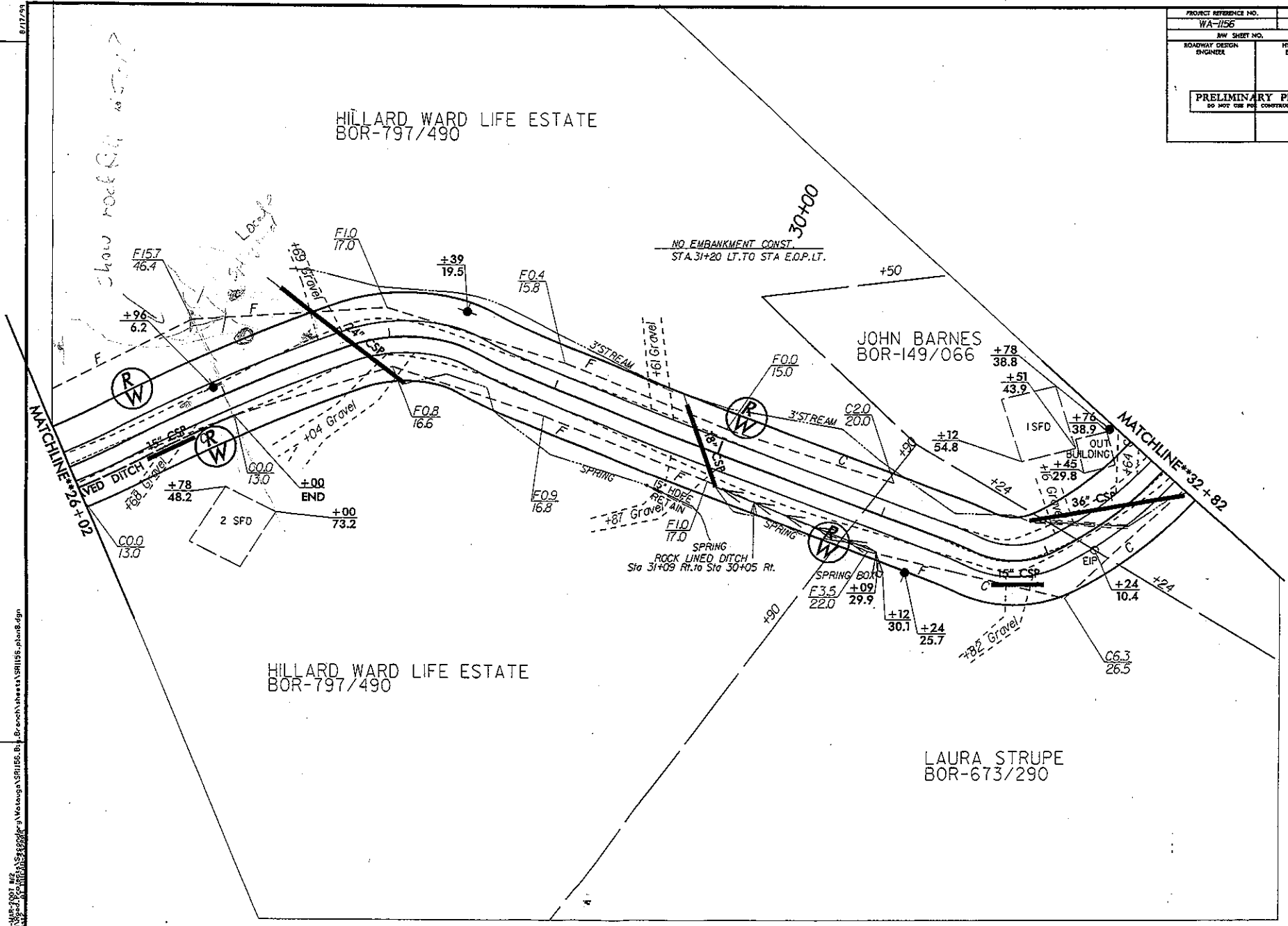
PROJECT REFERENCE NO. WA-1156	SHEET NO. 8
ROADWAY DESIGN ENGINEER DWY	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HILLARD WARD LIFE ESTATE
BOR-797/490

JOHN BARNES
BOR-149/066

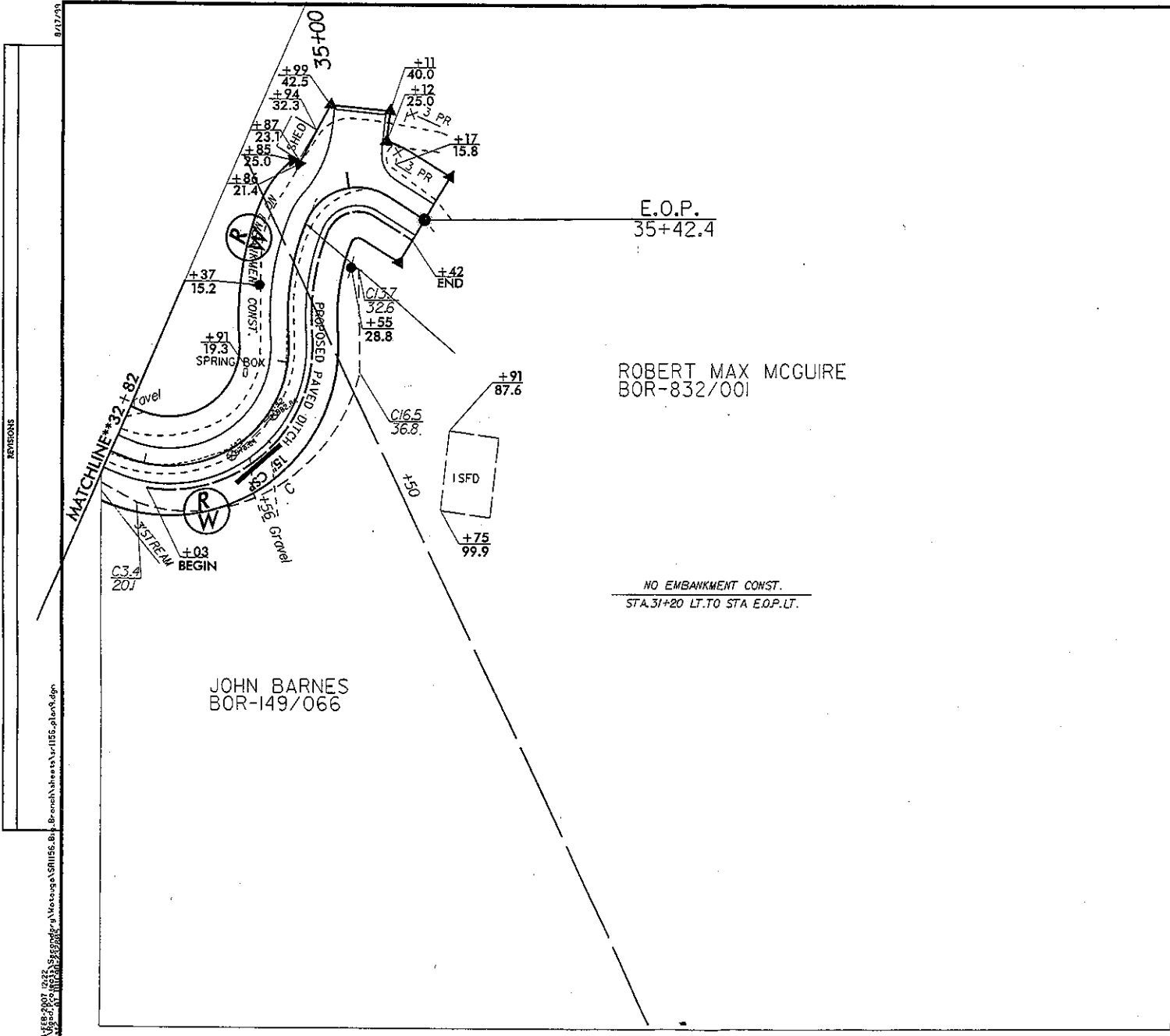
HILLARD WARD LIFE ESTATE
BOR-797/490

LAURA STRUPE
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PROJECT REFERENCE NO. WA-1156	SHEET NO. 9
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	



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