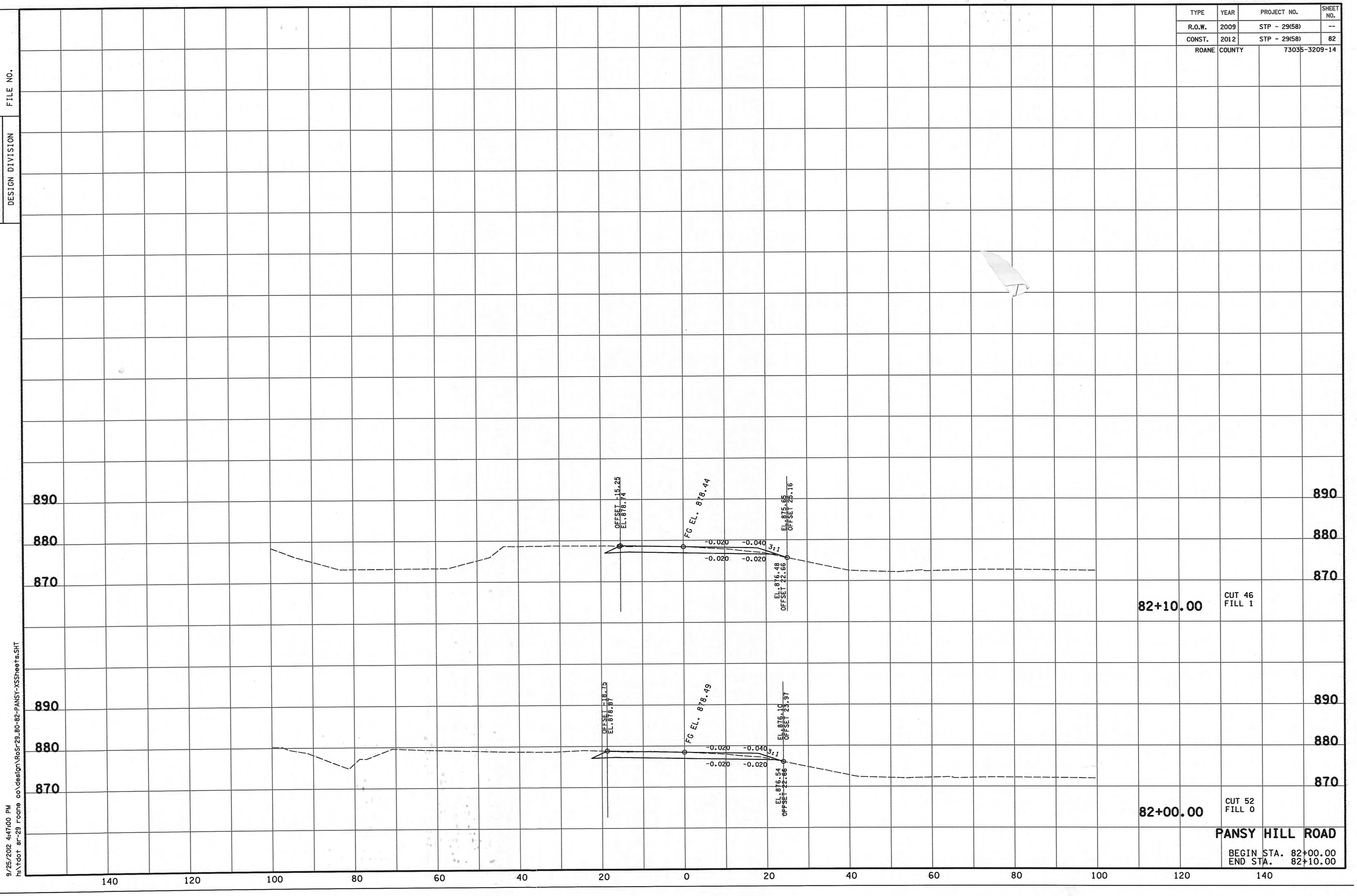
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	82
ROANE COUNTY		73035-3209-14	



PANSY HILL ROAD

BEGIN STA. 82+00.00
END STA. 82+10.00

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	2B1

ROANE COUNTY 73035-3209-14

REV. 02-04-14:
QUANTITY REVISIONS:
ADDED ITEM NOS. 795-11.01, 795-15.02, 795-15.05, 797-01.15, 797-05.01, 797-05.02, 797-05.03, 797-05.09, 797-05.10, 797-05.11, 797-05.41, 797-06.62, 797-06.89, 797-07.01, 797-07.56, 797-08.01, 797-10.19

REVISED ITEM NOS. 795-11.02, 795-13.01, 795-13.03, 797-05.51, 797-05.52, 797-05.53, 797-05.60, 797-06.64, 797-06.67, 797-06.90, 797-06.93, 797-07.04, 797-07.05, 797-07.06, 797-08.05, 797-08.08, 797-10.02, 797-10.03, 797-11.25

DELETED ITEM NOS. 797-07.02

ADDED FROM SHEET 2B: 795-10.03, 795-11.02, 795-13.01, 795-13.03, 797-05.51, 797-05.52, 797-05.53, 797-05.60, 797-06.64, 797-06.67

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	73035-3209-14 QUANTITY
795-10.03	1IN AUTO AIR RELEASE VALVE ASSEMBLY	EACH	4
795-11.01	BLOW-OFF ASSEMBLY	EACH	1
795-11.02	FIRE HYDRANT ASSEMBLY	EACH	6
795-13.01	DI FITTINGS	LB.	11800
795-13.03	PVC FITTINGS	LB.	150
795-15.02	12IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	65
795-15.05	20IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	30
797-01.15	10IN EPOXY COATED DIP FORCE MAIN	L.F.	45
797-05.01	8IN DIP GRAVITY SEWER 0FT-6FT DEPTH	L.F.	30
797-05.02	8IN DIP GRAVITY SEWER 6FT-12FT DEPTH	L.F.	230
797-05.03	8IN DIP GRAVITY SEWER 12FT-18FT DEPTH	L.F.	105
797-05.09	12IN DIP GRAVITY SEWER 0FT-6FT DEPTH	L.F.	45
797-05.10	12IN DIP GRAVITY SEWER 6FT-12FT DEPTH	L.F.	800
797-05.11	12IN DIP GRAVITY SEWER 12FT-18FT DEPTH	L.F.	165
797-05.41	6IN DIP SERVICE LATERAL	L.F.	730
797-05.51	8IN PVC GRAVITY SEWER 0FT-6FT DEPTH	L.F.	35
797-05.52	8IN PVC GRAVITY SEWER 6FT-12FT DEPTH	L.F.	1920
797-05.53	8IN PVC GRAVITY SEWER 12FT-18FT DEPTH	L.F.	515
797-05.60	12IN PVC GRAVITY SEWER 6FT-12FT DEPTH	L.F.	170
797-06.62	BORE/JACK 12IN STEEL CASING PIPE-UNCON.	L.F.	195
797-06.64	BORE/JACK 16IN STEEL CASING PIPE-UNCON.	L.F.	110
797-06.67	BORE/JACK 24IN STEEL CASING PIPE-UNCON.	L.F.	100
797-06.89	OPEN CUT 12IN STEEL CASING PIPE	L.F.	195
797-06.90	OPEN CUT 16IN STEEL CASING PIPE	L.F.	110
797-06.93	OPEN CUT 24IN STEEL CASING PIPE	L.F.	100
797-07.01	48IN MANHOLE 0FT-4FT DEPTH	EACH	1
797-07.03	48IN MANHOLE 6FT-8FT DEPTH	EACH	3
797-07.04	48IN MANHOLE 8FT-10FT DEPTH	EACH	9
797-07.05	48IN MANHOLE 10FT-12FT DEPTH	EACH	5
797-07.06	48IN MANHOLE 12FT-14FT DEPTH	EACH	5
797-07.56	MANHOLE DROP CONNECTION ASSEMBLY	EACH	1
797-08.01	DI FITTINGS	LB.	760
797-08.05	6" PVC PIPE FOR SERVICE LATERAL	L.F.	700
797-08.08	6" CLEAN OUT ASSEMBLY	EACH	16
797-10.02	CONNECT 8IN SEWER TO EXIST. MANHOLE	EACH	5
797-10.03	CONNECT 10-18IN SEWER TO EXIST. MANHOLE	EACH	3
797-10.19	CONNECT TO 10IN FORCE MAIN	EACH	2
797-11.15	48" MH ADJUSTMENT INCREASE HEIGHT	V.L.F.	1
797-11.25	RETIREIN PLACE 48" MANHOLE	EACH	14

FOOTNOTE:

SEE SHEET U1-1 FOR INDEX OF UTILITY SHEETS.
APPLICABLE FOOTNOTES FOR ESTIMATED UTILITIES QUANTITIES WILL BE ON THE UTILITY TABULATION BLOCKS.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED UTILITY QUANTITIES

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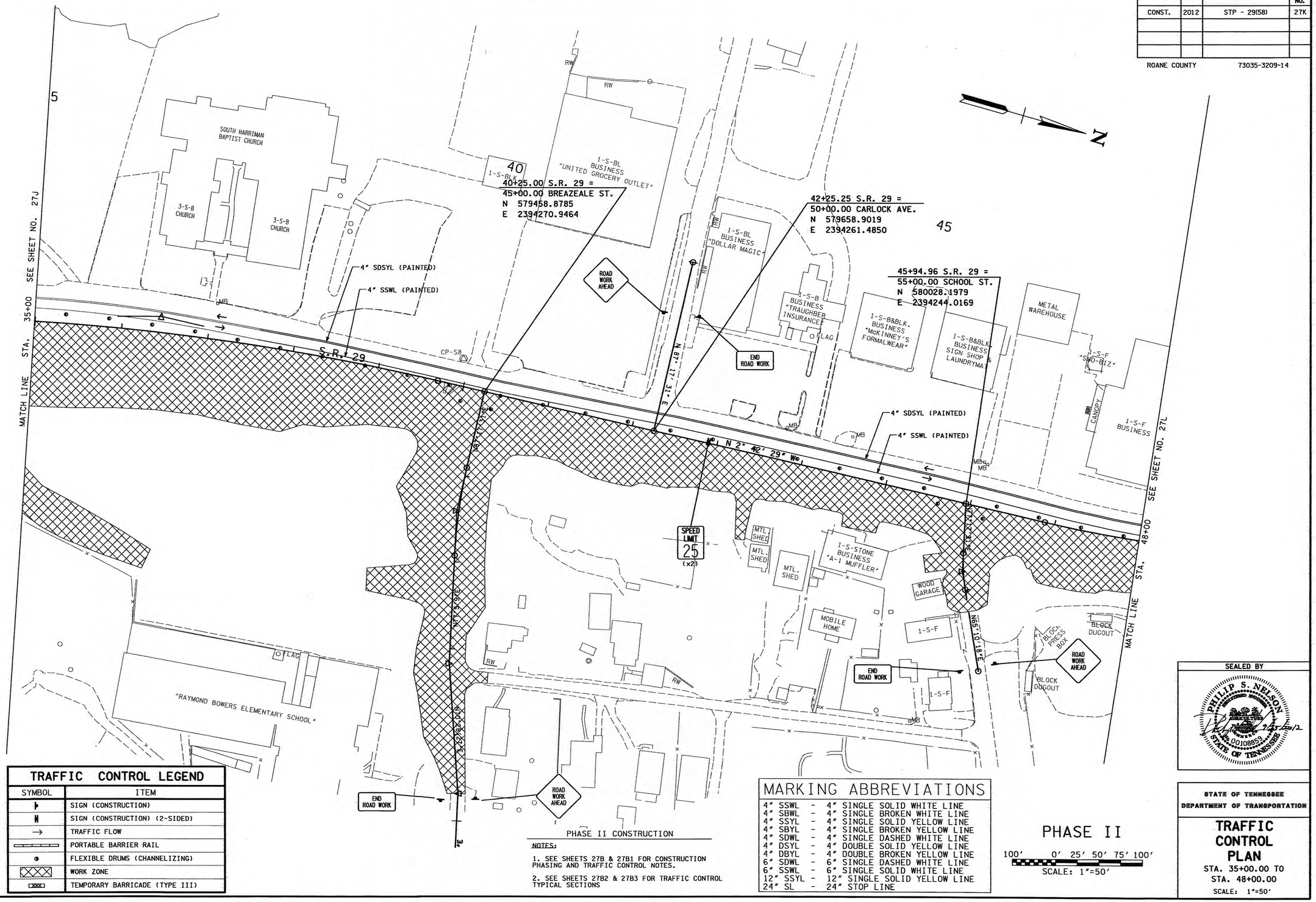
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27K

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE II CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE II

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 00108853
STATE OF TENNESSEE

2/5/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 35+00.00 TO
STA. 48+00.00

SCALE: 1"=50'

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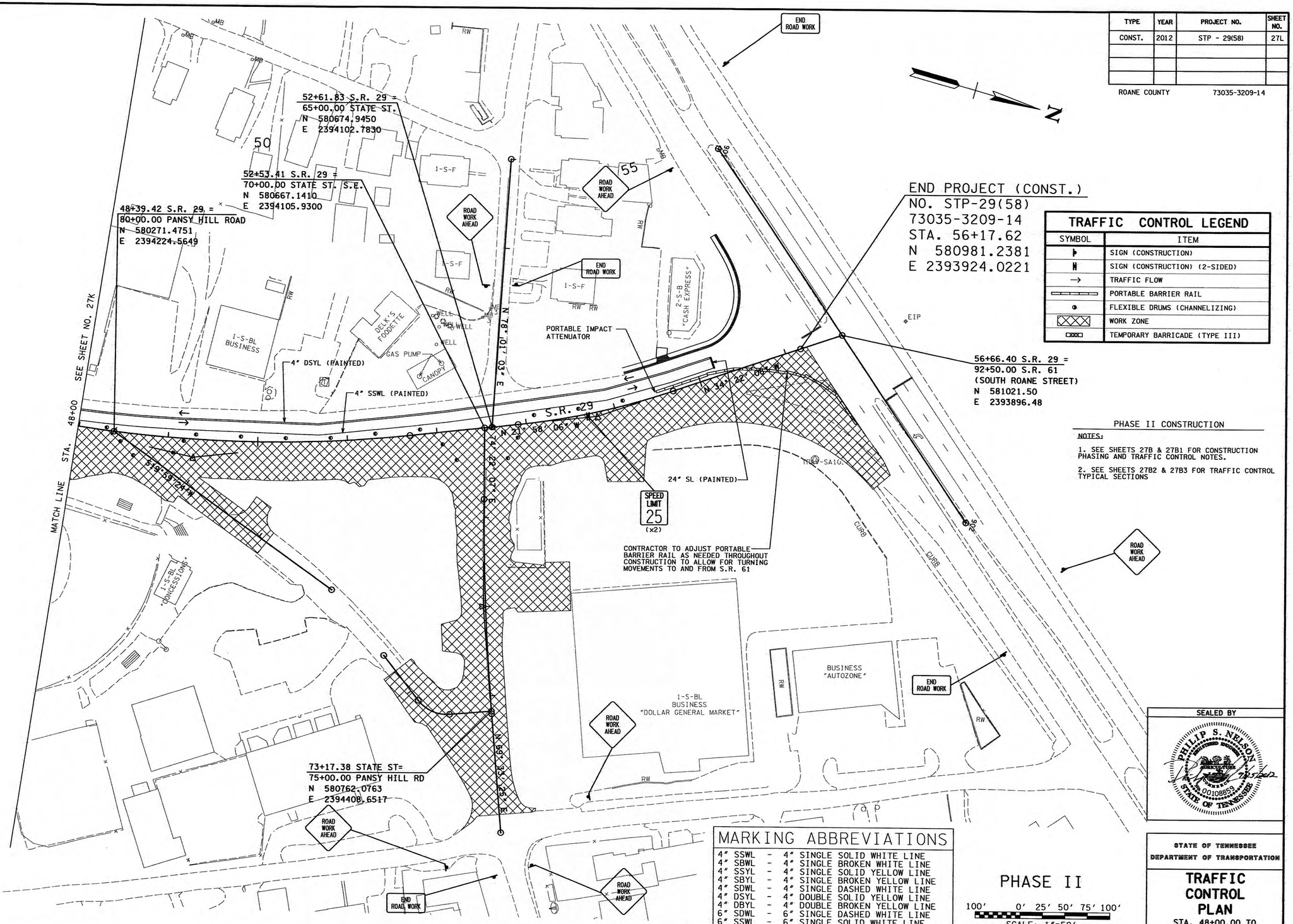
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27L

ROANE COUNTY 73035-3209-14



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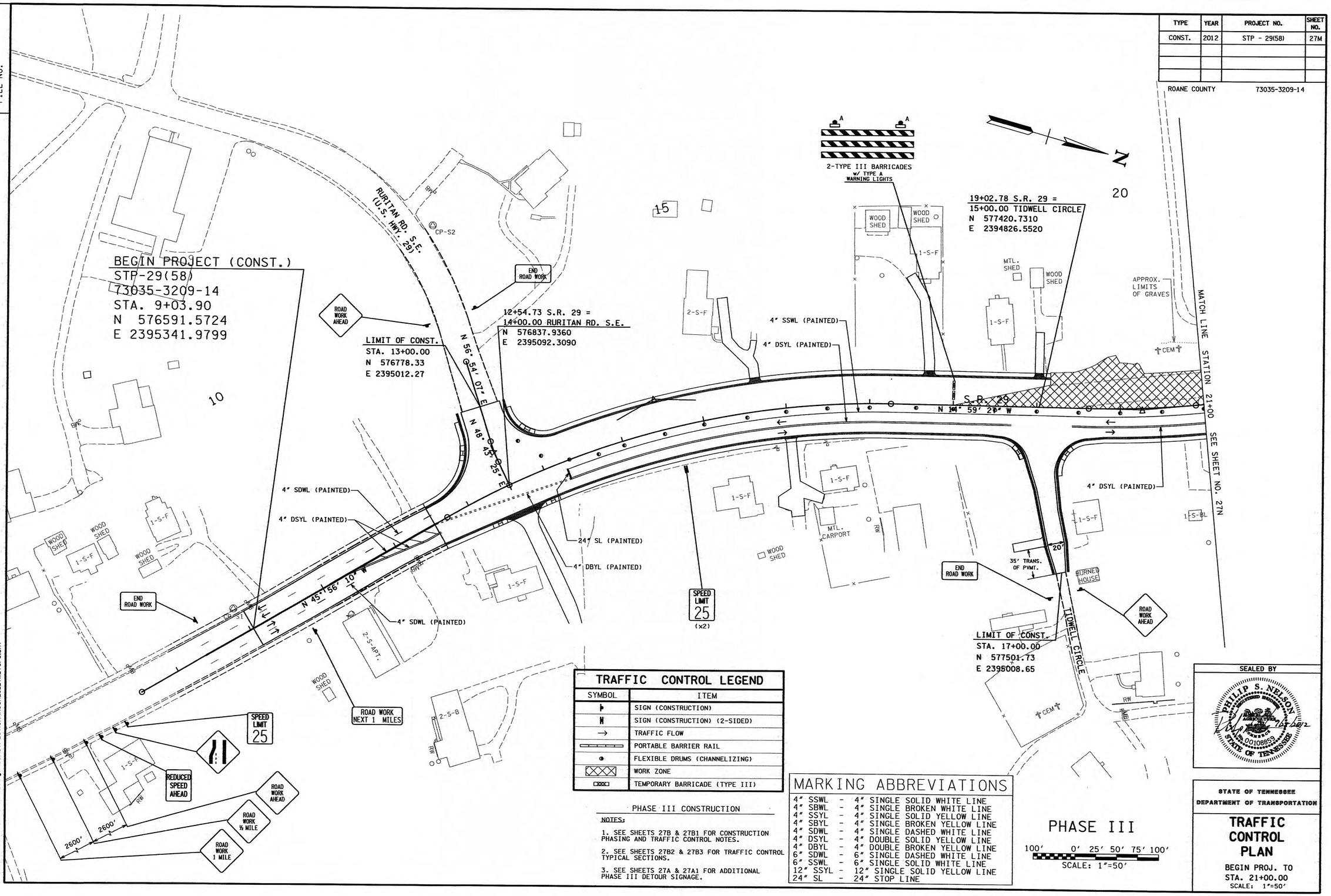
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27M

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE III CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEETS 27A & 27A1 FOR ADDITIONAL PHASE III DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL - 4" SINGLE SOLID WHITE LINE
4" SBWL - 4" SINGLE BROKEN WHITE LINE
4" SSYL - 4" SINGLE SOLID YELLOW LINE
4" SBYL - 4" SINGLE BROKEN YELLOW LINE
4" SDWL - 4" SINGLE DASHED WHITE LINE
4" DSYL - 4" DOUBLE SOLID YELLOW LINE
4" DBYL - 4" DOUBLE BROKEN YELLOW LINE
6" SDWL - 6" SINGLE DASHED WHITE LINE
6" SSWL - 6" SINGLE SOLID WHITE LINE
12" SSYL - 12" SINGLE SOLID YELLOW LINE
24" SL - 24" STOP LINE

PHASE III

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY
PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
7/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

BEGIN PROJ. TO
STA. 21+00.00
SCALE: 1"=50'

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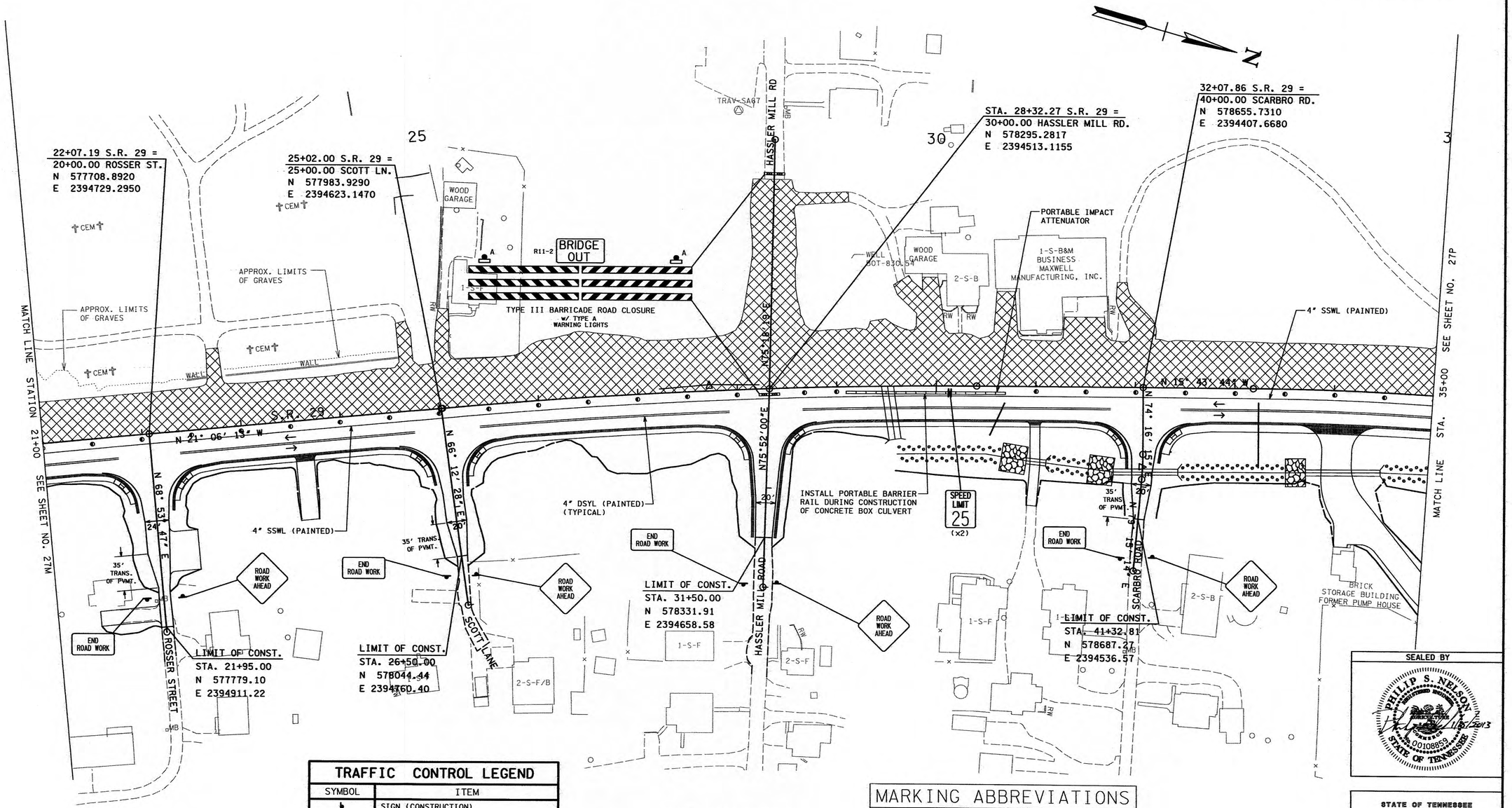
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27N

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED WORKZONE AT STA. 32+07.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE III CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEETS 27A & 27A1 FOR ADDITIONAL PHASE III DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE III

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
1/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"=50'

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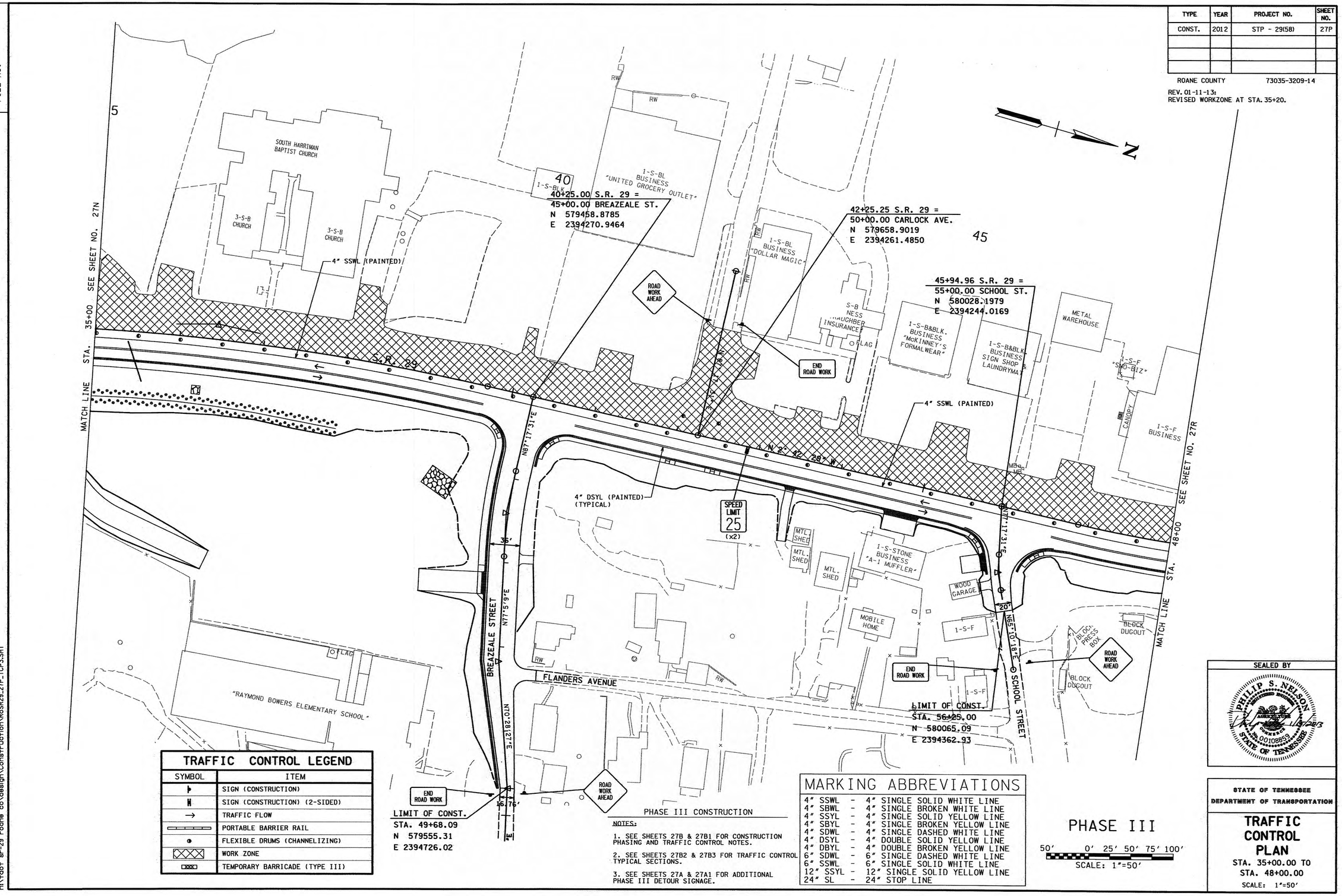
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27P

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED WORKZONE AT STA. 35+20.



LIMIT OF CONST.
STA. 49+68.09
N 579555.31
E 2394726.02

LIMIT OF CONST.
STA. 56+25.00
N 580065.09
E 2394362.93

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE III CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEETS 27A & 27A1 FOR ADDITIONAL PHASE III DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
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6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE III

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
00108859
STATE OF TENNESSEE
1/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 35+00.00 TO
STA. 48+00.00

SCALE: 1"=50'

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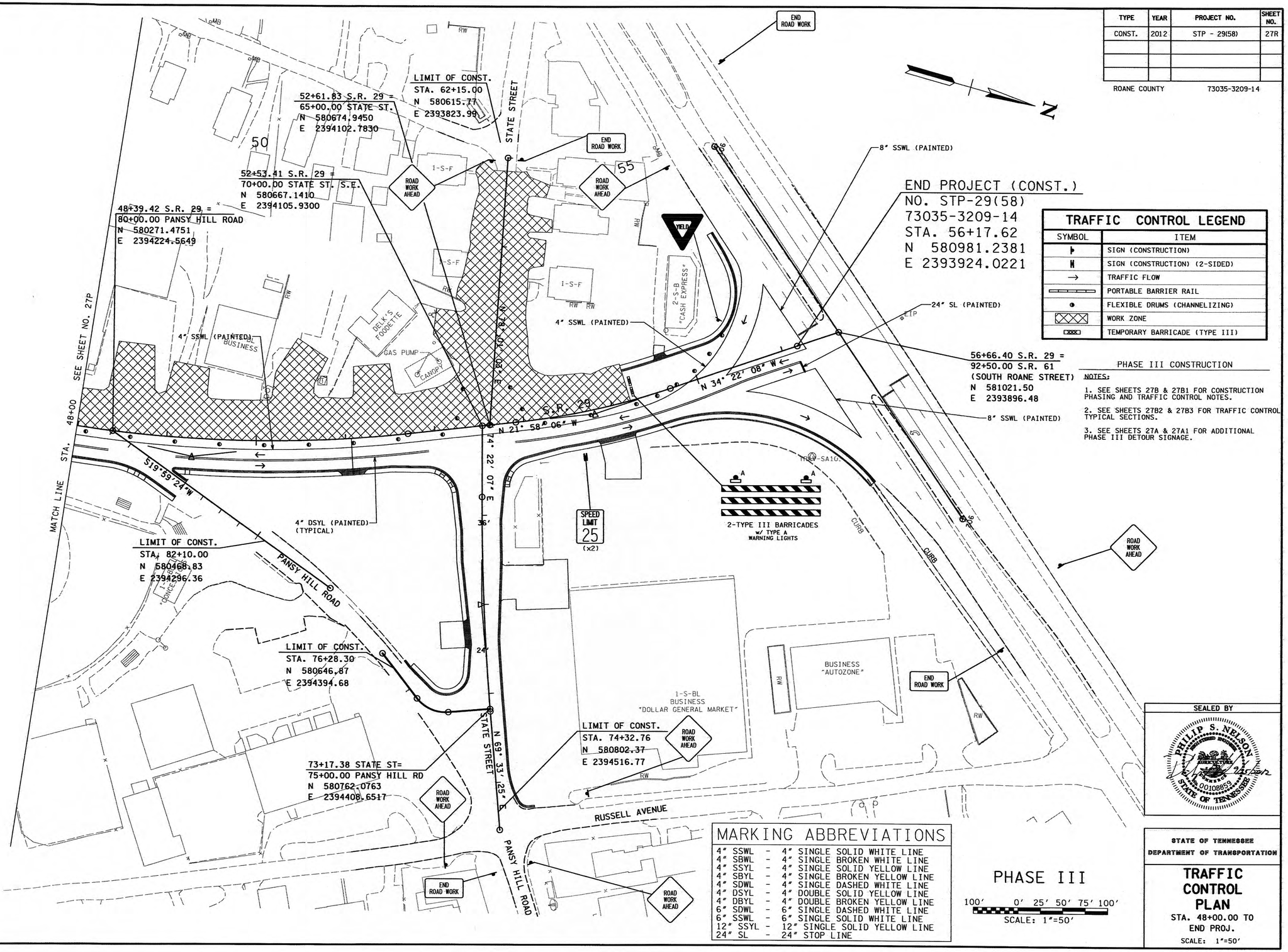
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27R

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE III CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEETS 27A & 27A1 FOR ADDITIONAL PHASE III DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE III

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 0010895
STATE OF TENNESSEE
9/24/12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 48+00.00 TO END PROJ.

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	28

ROANE COUNTY 73035-3209-14

BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
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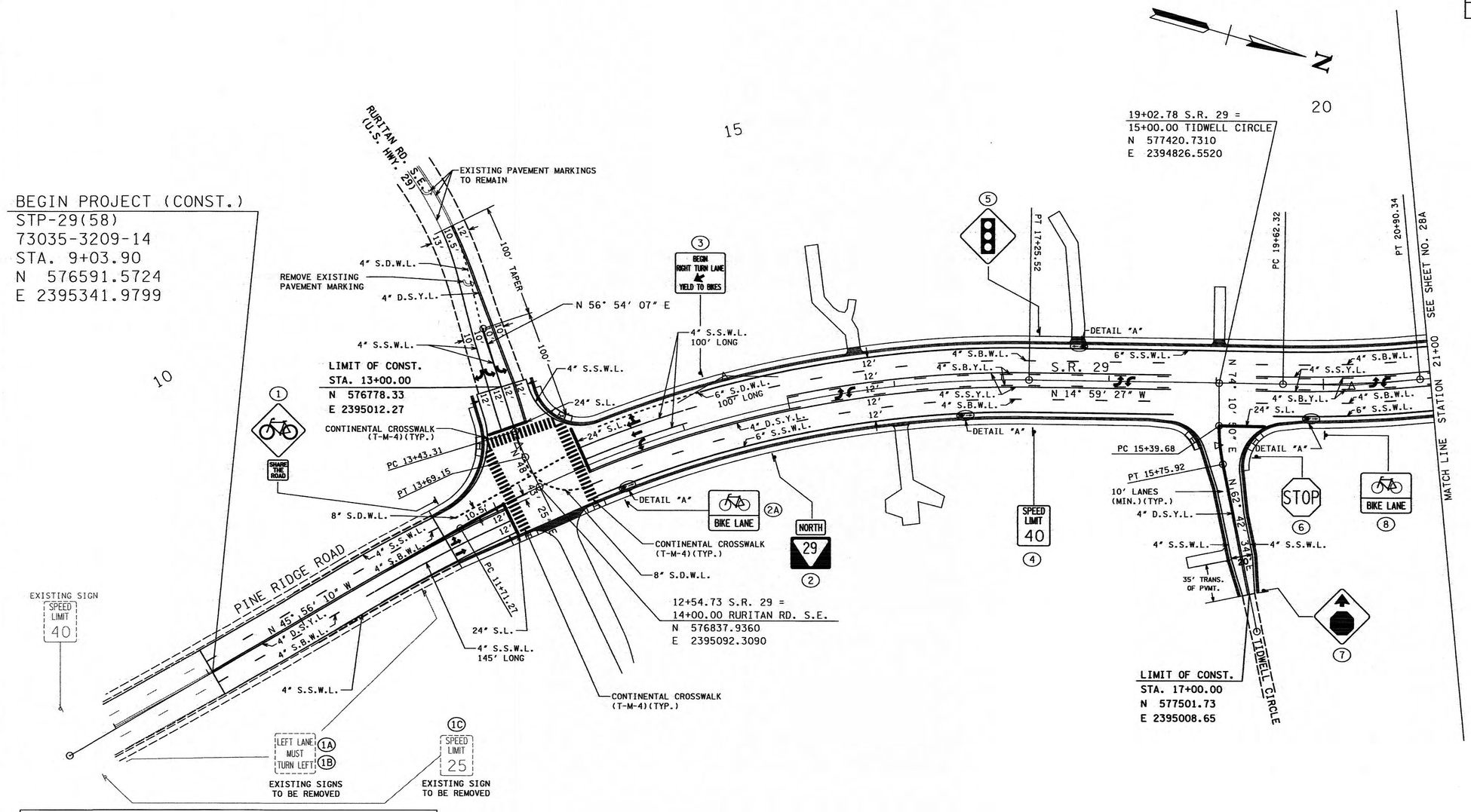
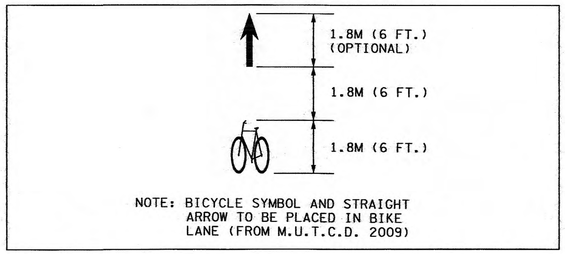
E 2395341.9799





BIKE LANE PAVEMENT MARKING DETAIL "A"
NOT TO SCALE

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

MARKING ABBREVIATIONS

4" S.S.W.L.	-	4" SINGLE SOLID WHITE LINE
4" S.B.W.L.	-	4" SINGLE BROKEN WHITE LINE
4" S.S.Y.L.	-	4" SINGLE SOLID YELLOW LINE
4" S.B.Y.L.	-	4" SINGLE BROKEN YELLOW LINE
4" S.D.W.L.	-	4" SINGLE DASHED WHITE LINE
4" D.S.Y.L.	-	4" DOUBLE SOLID YELLOW LINE
6" S.D.W.L.	-	6" SINGLE DASHED WHITE LINE
6" S.S.W.L.	-	6" SINGLE SOLID WHITE LINE
12" S.S.Y.L.	-	12" SINGLE SOLID YELLOW LINE
24" S.L.	-	24" STOP LINE

SEALED BY
PHILIP S. NELSON
REGISTERED
00108853
STATE OF TENNESSEE
2/27/12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

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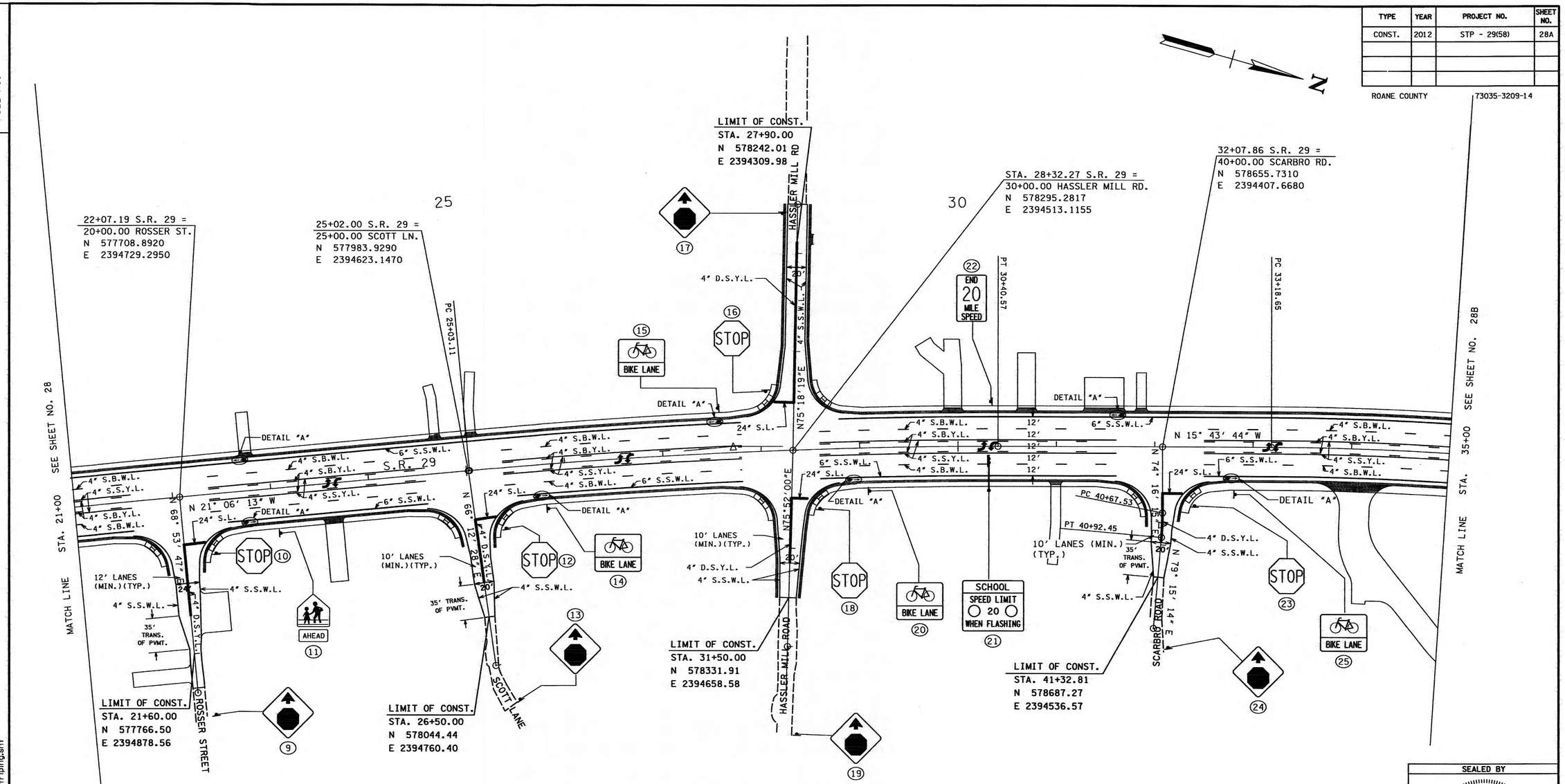
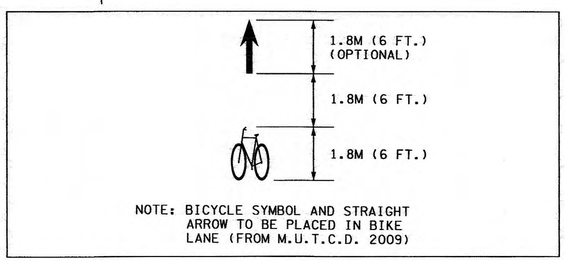
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	28A

ROANE COUNTY 73035-3209-14

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.





NOTE: BICYCLE SYMBOL AND STRAIGHT ARROW TO BE PLACED IN BIKE LANE (FROM M.U.T.C.D. 2009)

BIKE LANE PAVEMENT MARKING DETAIL "A"

NOT TO SCALE

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE

MARKING ABBREVIATIONS

4" S.S.W.L.	-	4" SINGLE SOLID WHITE LINE
4" S.B.W.L.	-	4" SINGLE BROKEN WHITE LINE
4" S.S.Y.L.	-	4" SINGLE SOLID YELLOW LINE
4" S.B.Y.L.	-	4" SINGLE BROKEN YELLOW LINE
4" S.D.W.L.	-	4" SINGLE DASHED WHITE LINE
4" D.S.Y.L.	-	4" DOUBLE SOLID YELLOW LINE
6" S.D.W.L.	-	6" SINGLE DASHED WHITE LINE
6" S.S.W.L.	-	6" SINGLE SOLID WHITE LINE
12" S.S.Y.L.	-	12" SINGLE SOLID YELLOW LINE
24" S.L.	-	24" STOP LINE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

STA. 21+00 TO STA. 35+00

SCALE: 1"=50'

9/25/2012 11:47:16 AM
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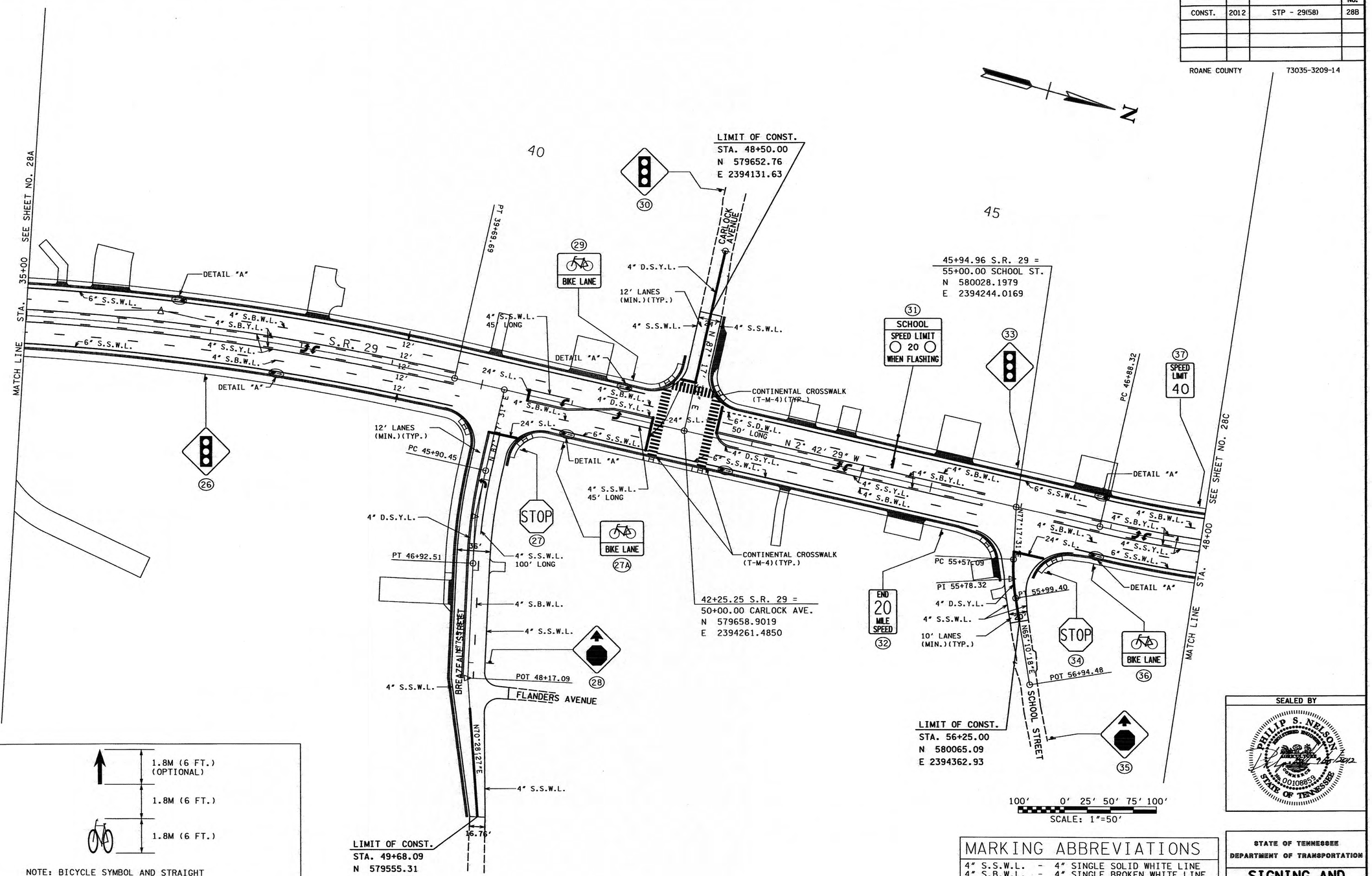
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	28B

ROANE COUNTY 73035-3209-14



BIKE LANE PAVEMENT MARKING DETAIL "A"
NOT TO SCALE

MARKING ABBREVIATIONS

4" S.S.W.L.	-	4" SINGLE SOLID WHITE LINE
4" S.B.W.L.	-	4" SINGLE BROKEN WHITE LINE
4" S.S.Y.L.	-	4" SINGLE SOLID YELLOW LINE
4" S.B.Y.L.	-	4" SINGLE BROKEN YELLOW LINE
4" S.D.W.L.	-	4" SINGLE DASHED WHITE LINE
4" D.S.Y.L.	-	4" DOUBLE SOLID YELLOW LINE
6" S.D.W.L.	-	6" SINGLE DASHED WHITE LINE
6" S.S.W.L.	-	6" SINGLE SOLID WHITE LINE
12" S.S.Y.L.	-	12" SINGLE SOLID YELLOW LINE
24" S.L.	-	24" STOP LINE

SEALED BY

PHILIP S. NELSON — REGISTERED ENGINEER — 00108859 — STATE OF TENNESSEE — 7-25-2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

STA.35+00 TO STA.48+00

SCALE: 1"=50'

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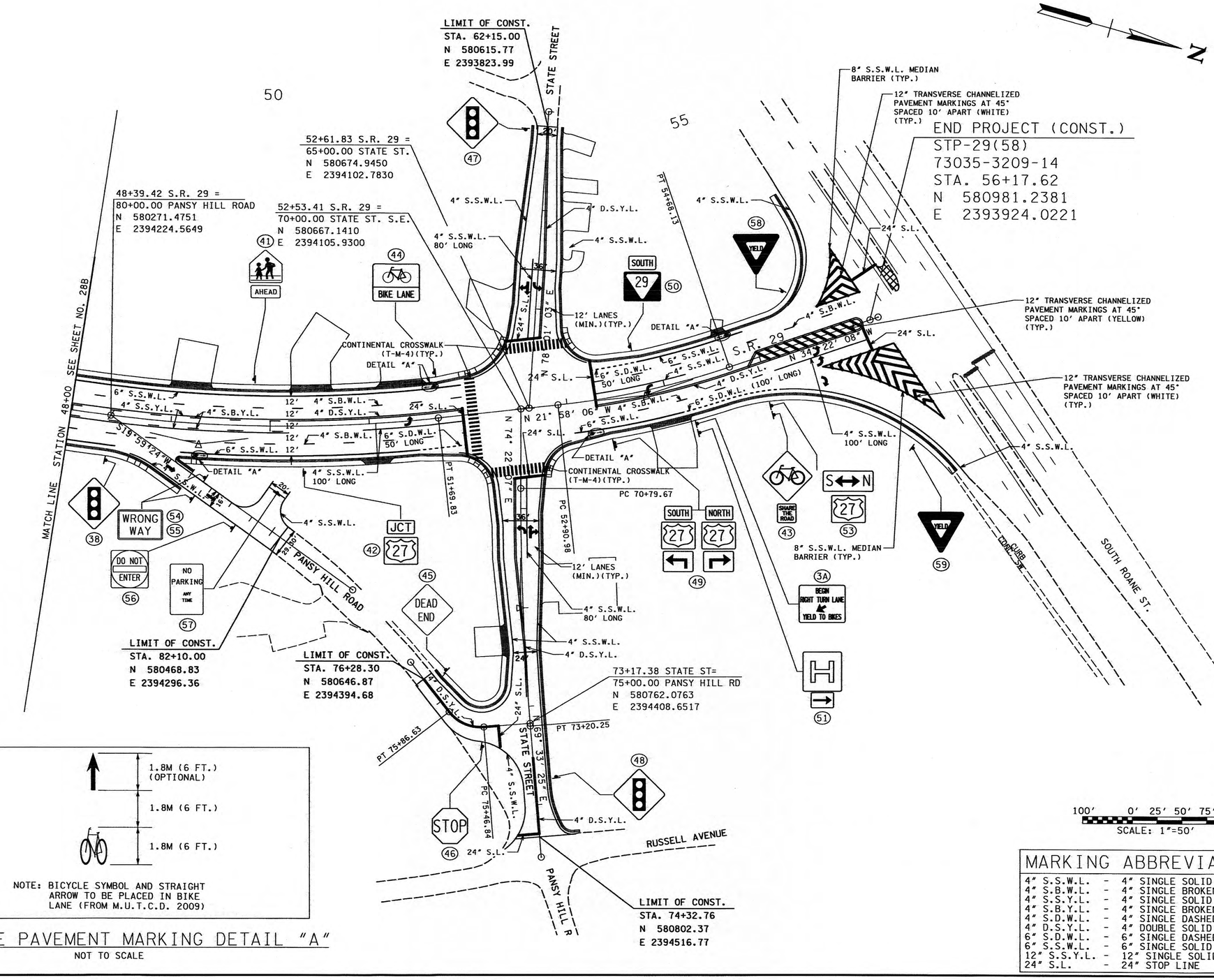
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	28C

ROANE COUNTY 73035-3209-14



BIKE LANE PAVEMENT MARKING DETAIL "A"
NOT TO SCALE

MARKING ABBREVIATIONS

4" S.S.W.L.	-	4" SINGLE SOLID WHITE LINE
4" S.B.W.L.	-	4" SINGLE BROKEN WHITE LINE
4" S.S.Y.L.	-	4" SINGLE SOLID YELLOW LINE
4" S.B.Y.L.	-	4" SINGLE BROKEN YELLOW LINE
4" S.D.W.L.	-	4" SINGLE DASHED WHITE LINE
4" D.S.Y.L.	-	4" DOUBLE SOLID YELLOW LINE
6" S.D.W.L.	-	6" SINGLE DASHED WHITE LINE
6" S.S.W.L.	-	6" SINGLE SOLID WHITE LINE
12" S.S.Y.L.	-	12" SINGLE SOLID YELLOW LINE
24" S.L.	-	24" STOP LINE

SEALED BY
PHILIP S. NELSON
REGISTERED
No. 0010859
STATE OF TENNESSEE
9/25/12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

STA. 48+00 TO END PROJ.

SCALE: 1" = 50'

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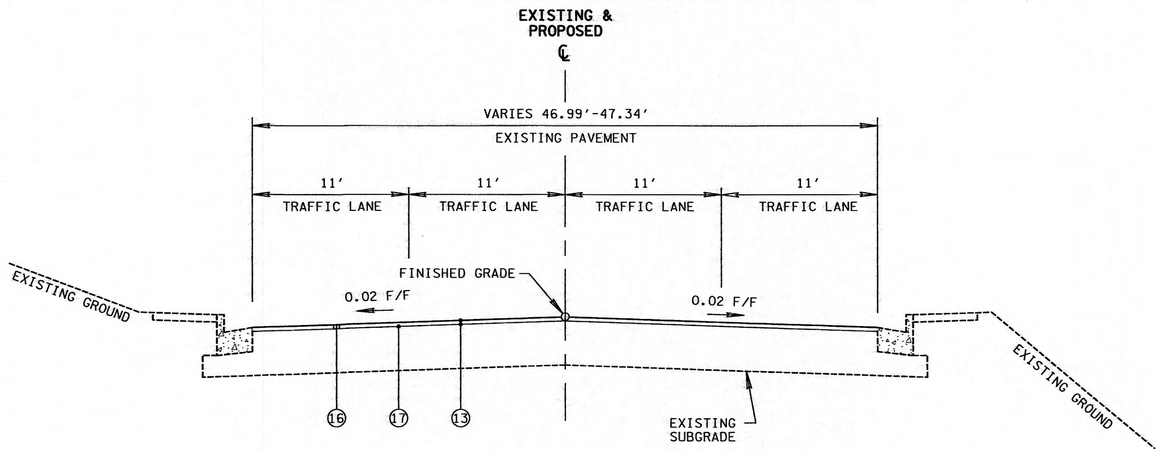
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

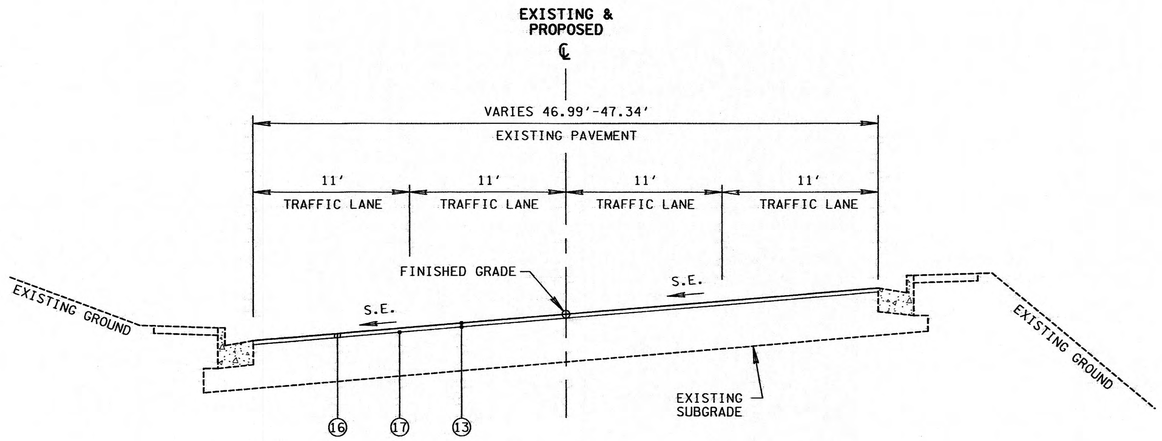
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	2
CONST.	2012	STP-29(58)	2C
ROANE COUNTY		73035-3209-14	



S.R. 29
PROPOSED TYPICAL TANGENT CURB AND GUTTER OVERLAY SECTION

BASED ON STD. DWG. RD01-TS-6

STA. 9+03.90 TO STA. 10+73.77



S.R. 29
PROPOSED TYPICAL SUPERELEVATED CURB AND GUTTER OVERLAY SECTION

BASED ON STD. DWG. RD01-TS-6

STA. 10+73.77 TO STA. 11+53.90

(A) SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 F/F

(B) 8' SIDEWALK TO BE USED ON S.R. 29 FROM STA. 32+07.86 TO STA. 40+25.00 AND ON BREAZEALE ST. FROM STA. 45+00.00 TO STA. 49+68.09

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
CERTIFICATE
No. 00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.		
6	STOP R1-1	28	36"	36"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	P8	12'-6"				7'-0"	
10		28A																				
12		28A																				
16		28A																				
18		28A																				
23		28A																				
27		28B																				
34		28B																				
46		28C																				
58	YIELD R1-2	28C											WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	P1	12'-6"				7'-0"	
59		28C																				
4	SPEED LIMIT 40 R2-1	28	30"	36"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	13'-0"				7'-0"	
37		28B																				
2A	BIKE LANE R3-17	28	30"	24"									BLACK (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	12'-0"				7'-0"	
8		28																				
14		28A																				
15		28A																				
20		28A																				
25		28A																				
27A		28B																				
29		28B																				
36		28B																				
44		28C																				
3	BEGIN RIGHT TURN LANE YIELD TO BIKES R4-4	28	36"	30"									BLACK (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	12'-6"				7'-0"	
3A		28																				
7	W3-1A	28	36"	36"									(ARROW) BLACK (STOP) RED (REF.)	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	13'-6"				7'-0"	
9		28A																				
13		28A																				
17		28A																				
19		28A																				
24		28A																				
28		28B																				
35		28B																				
5	W3-3	28	36"	36"									(SIGNAL) BLACK (TOP CIRCLE) RED (MIDDLE CIRCLE) YELLOW (BOTTOM CIRCLE) GREEN (REF.)	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	13'-6"				7'-0"	
26		28B																				
30		28B																				
33		28B																				
38		28C																				
47		28C																				
48		28C																				
1	W11-1	28	30"	30"									BLACK (REF.)	YELLOW	0.080" SHEET ALUMINUM	P8	14'-6"				7'-0"	
43		28C																				
	SHARE THE ROAD W16-1		18"	24"																		

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	29

ROANE COUNTY 73035-3209-14

SEALED BY

PHILIP S. NELSON REGISTERED LANDSCAPE ARCHITECT 0010885 STATE OF TENNESSEE 9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.		
45	DEAD END W14-1	28C	36"	36"									BLACK (REF.)	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	13'-6"				7'-0"	
11 41	S1-1 / AHEAD W16-9p	28A 28C	36" 24"	36" 12"									BLACK (REF.)	YELLOW (REF.)	0.080" SHEET ALUMINUM	P8	14'-0"				7'-0"	
21 31	SCHOOL / SPEED LIMIT ○ 20 ○ / WHEN FLASHING S5-1 (TN-8-OH)	28A 28B	48"	36"									BLACK (REF.)	YELLOW (REF.) WHITE (REF.)	0.100" SHEET ALUMINUM	*		*				* SIGN PAID FOR UNDER ITEM NO. 730-01.08 AND SUPPORT AND FOOTING PAID FOR UNDER ITEM 730-23.40. SEE FOOTNOTES FOR ITEM NOS. 730-01.08 AND 730-23.40.
22 32	END 20 MILE SPEED TN-9	28A 28B	24"	30"									BLACK (REF.)	WHITE (REF.)	0.100" SHEET ALUMINUM	U3	12'-6"				7'-0"	
51	D9-2 / M6-1R	28C	24" 21"	24" 15"									WHITE (REF.)	BLUE (REF.)	0.100" SHEET ALUMINUM	P8	13'-0"				7'-0"	
2	NORTH M3-1 / 29 TN-6B	28	24" 24"	12" 24"									BLACK (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	13'-0"				7'-0"	
42	M2-1 JCT / M1-4 27	28C	21" 24"	15" 24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	13'-6"				7'-0"	
49	M3-3 SOUTH 27 M1-4 / M5-1L ; NORTH 27 M3-1 M1-4 / M5-1R	28C	24" 24" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	P8	h_1 = 14'-6" h_2 = 15'-0"				7'-0"	
50	SOUTH M3-3 / 29 TN-6B	28C	24" 24"	12" 24"									BLACK (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	13'-0"				7'-0"	
53	TN-39 S↔N / M1-4 27	28C	30" 24"	15" 24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	P8	13'-6"				7'-0"	
56	DO NOT ENTER R5-1	28C	30"	30"									(CIRCLE) RED (TEXT AND BAR) WHITE (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	12'-6"				7'-0"	••• SIGN POST TO HAVE 2" WIDE RETROFLECTIVE MATERIAL IN ACCORDANCE WITH PARAGRAPH 2A.21
54 55	WRONG WAY R5-1A	28C 28C	36"	24"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	P8 •••	12'-0"				7'-0"	••• SIGN POST TO HAVE 2" WIDE RETROFLECTIVE MATERIAL IN ACCORDANCE WITH PARAGRAPH 2A.21
57	NO PARKING ANY TIME R7-1	28C	12"	18"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U1	11'-6"				7'-0"	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	29A

ROANE COUNTY 73035-3209-14

SEALED BY

PHILIP S. NELSON — REGISTERED ENGINEER — AGRICULTURE — 00108959 — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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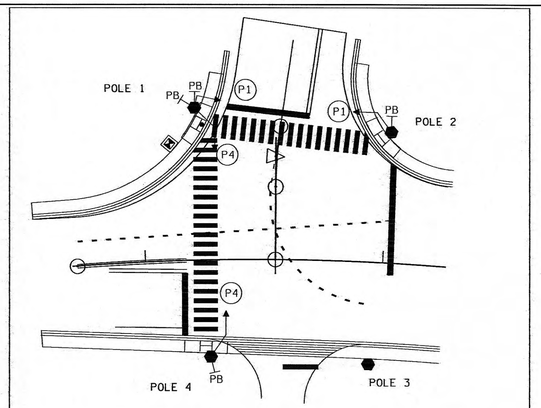
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

SIGNAL SUPPORT POLE DATA						
POLE NO.	NORTHING	EASTING	GROUND ELEV. @ POLE	POLE TO POLE	ATTACHMENT HEIGHT	ATTACHMENT ELEV.
1	576769.561	2395066.834	852.61	1 TO 2	26.20'	879.45
2	576838.668	2395019.407	852.05	2 TO 3	26.90'	878.20
3	576896.449	2395099.561	850.92	3 TO 4	25.30'	876.20
4	576844.864	2395141.144	851.45	4 TO 1	27.30'	879.88

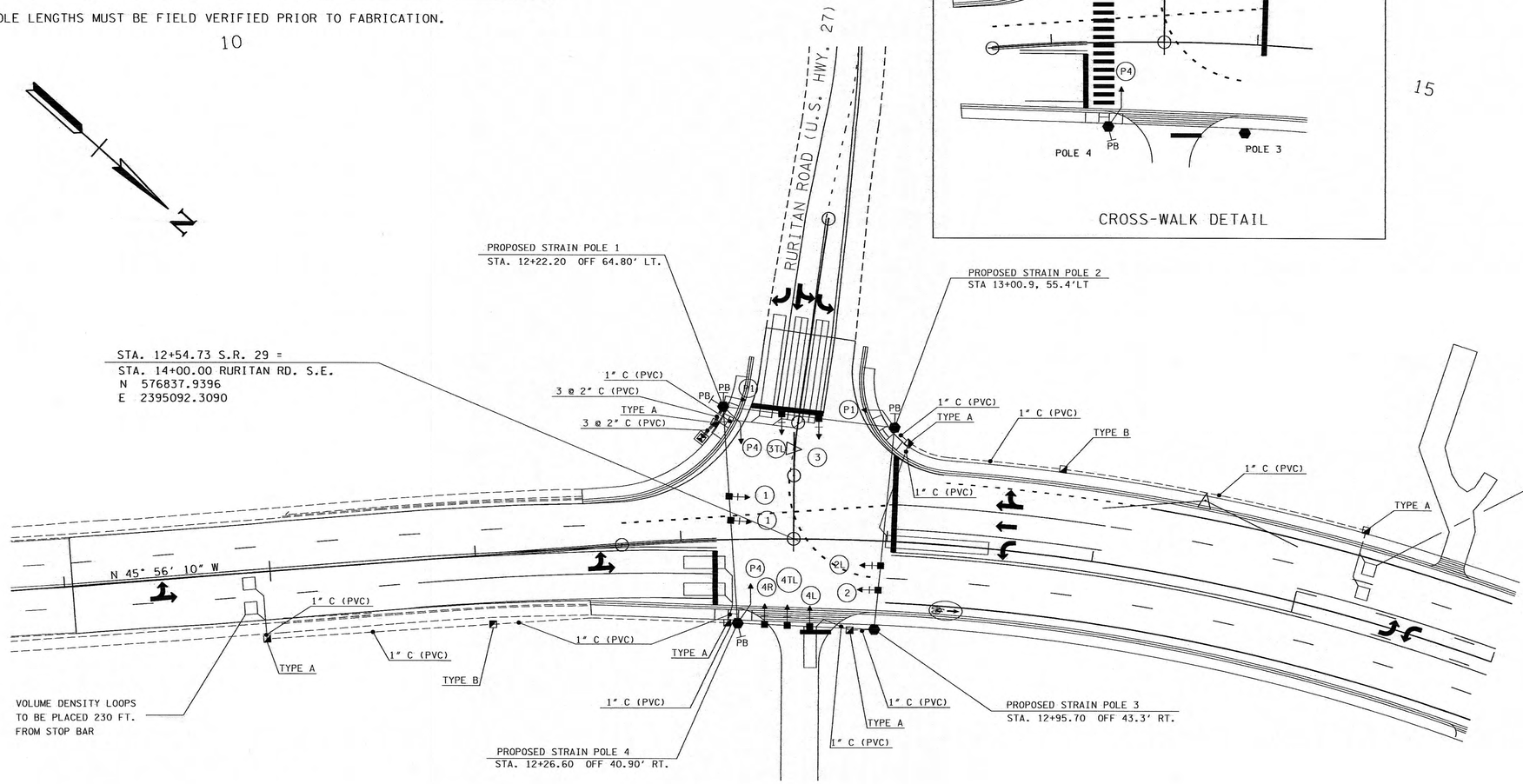
NOTE: POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.

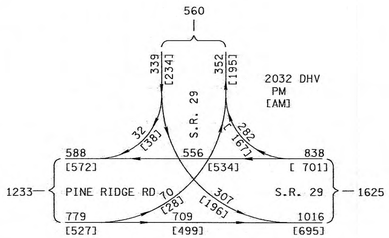
10

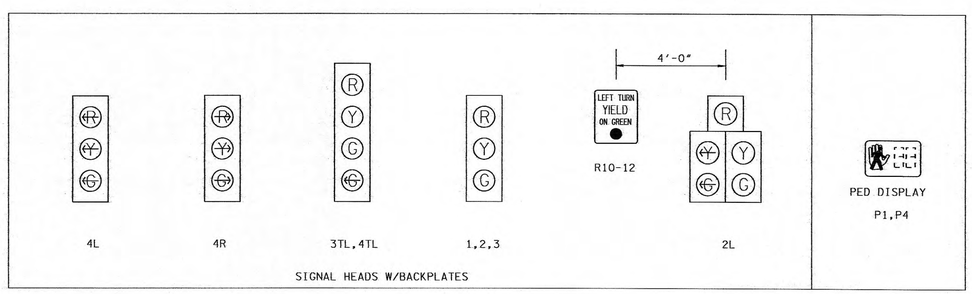


CROSS-WALK DETAIL

15







SIGNAL HEADS W/BACKPLATES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	30

ROANE COUNTY 73075-3209-14

REV. 2-4-2014: DELETED ATTACHMENT HEIGHT DIAGRAM, REVISED POLE DATA TABLE AND ADDED FOOTNOTE.

LOCATION #1

SEALED BY

PETER FALKENBERG
REGISTERED ENGINEER
No. 013708
STATE OF TENNESSEE

02/12/2014

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00009 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT
INTERSECTION OF RURITAN ROAD WITH S.R.29

SCALE: 1"=30 '

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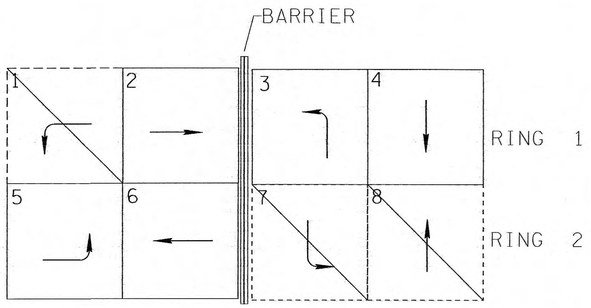
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2012	STP--29(58)	30A

ROANE COUNTY 73075-3209-14

THE CONTRACTOR SHALL CONTACT STANLEY A. TRICE, TDOT SIGNAL DESIGN, AT (615) 741-2106 A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.



NEMA EIGHT PHASE DESIGNATIONS

ACTIVE PHASE

INACTIVE PHASE (NOT USED)

- OPERATION IS DUAL ENTRY MODE, FULL SKIP CAPABILITY
- SINGLE DIRECTION, LAGGING LEFT TURN PHASES ARE NOT ALLOWED
- ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- SPECIAL SEQUENCING
  SPLIT PHASING: PHASE 3 & 4

BASIC OR SEMI - ACTUATED TIMING (SECS)

PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)	LEFT TURN OPERATION (2)
					YELLOW	ALL RED	WALK	FLASHING DONT WALK			

(1) NL = NONLOCK
L = LOCK

(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

VOLUME - DENSITY TIMING (SECS)

PHASE	INITIAL INTERVAL	ADDED INITIAL PER ACTUATION	PASSAGE TIME	MINIMUM GAP	TIME BEFORE REDUCTION	TIME TO REDUCE	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
									YELLOW	ALL RED	WALK	FLASHING DONT WALK		
													-	
													-	

THESE TIMINGS ARE INITIAL AND MAY BE ADJUSTED BY THE CONTRACTOR BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

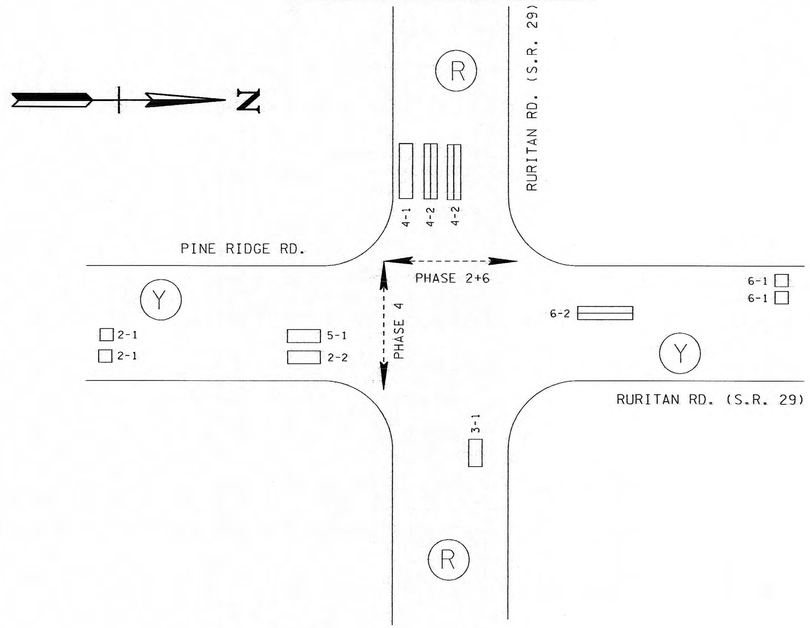
LOOP AND AMP ASSIGNMENTS

LOOP #	VEHICLE DETECT #	LOOP LENGTH	AMP MODE	AMP. FEATURE TIMING(SEC)	ASSOC. Ø
2-1	1	2@6'	PULSE		2
2-2	1	1@20'	PRES		2
4-1	2	1@50'	PRES	5 SEC. DELAY	4
*4-2	2	2@50'	PRES		4
5-1	1	1@20'	PRES		5
6-1	2	2@6'	PULSE		6
*6-2	2	1@50'	PRES		6
3-1	1	1@20'	PRES	5 SEC. DELAY	3

*QUADRAPOLE LOOPS

- ALL LOOPS ARE 6' IN WIDTH, CENTERED IN TRAFFIC LANE.
- LOOP WIRE CONNECTIONS SHALL BE WIRED TO PROVIDE THE APPROPRIATE INDUCTANCE AS REQUIRED BY STD. DWG. T-SG-3.

DETECTION LOOP DIAGRAM



FLASHING OPERATION (R) (Y)

DETECTION ZONE NUMBERING

EIGHT PHASE

LOCATION #1

SEALED BY

ROLAND LEE JONES
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 17640
STATE OF TENNESSEE
10-02-12

INTERSECTION OF SR-29 AND RURITAN ROAD

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

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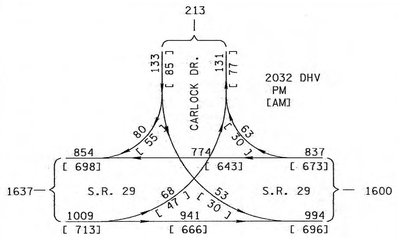
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	30B

ROANE COUNTY 73075-3209-14

REV. 2-4-2014: DELETED ATTACHMENT HEIGHT DIAGRAM, REVISED POLE DATA TABLE AND ADDED FOOTNOTE.



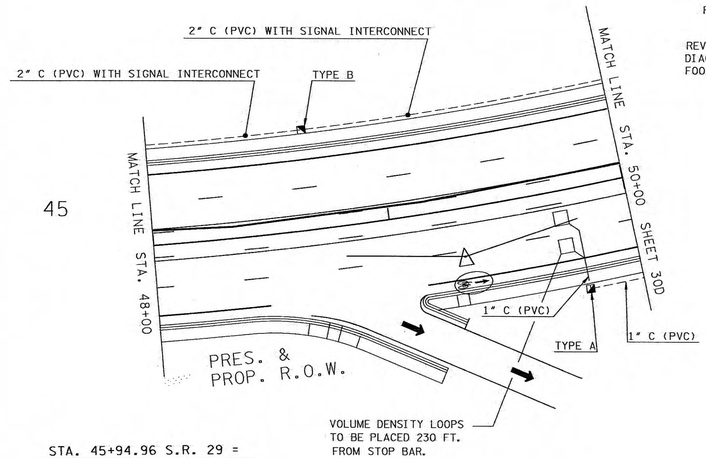
SIGNAL SUPPORT POLE DATA

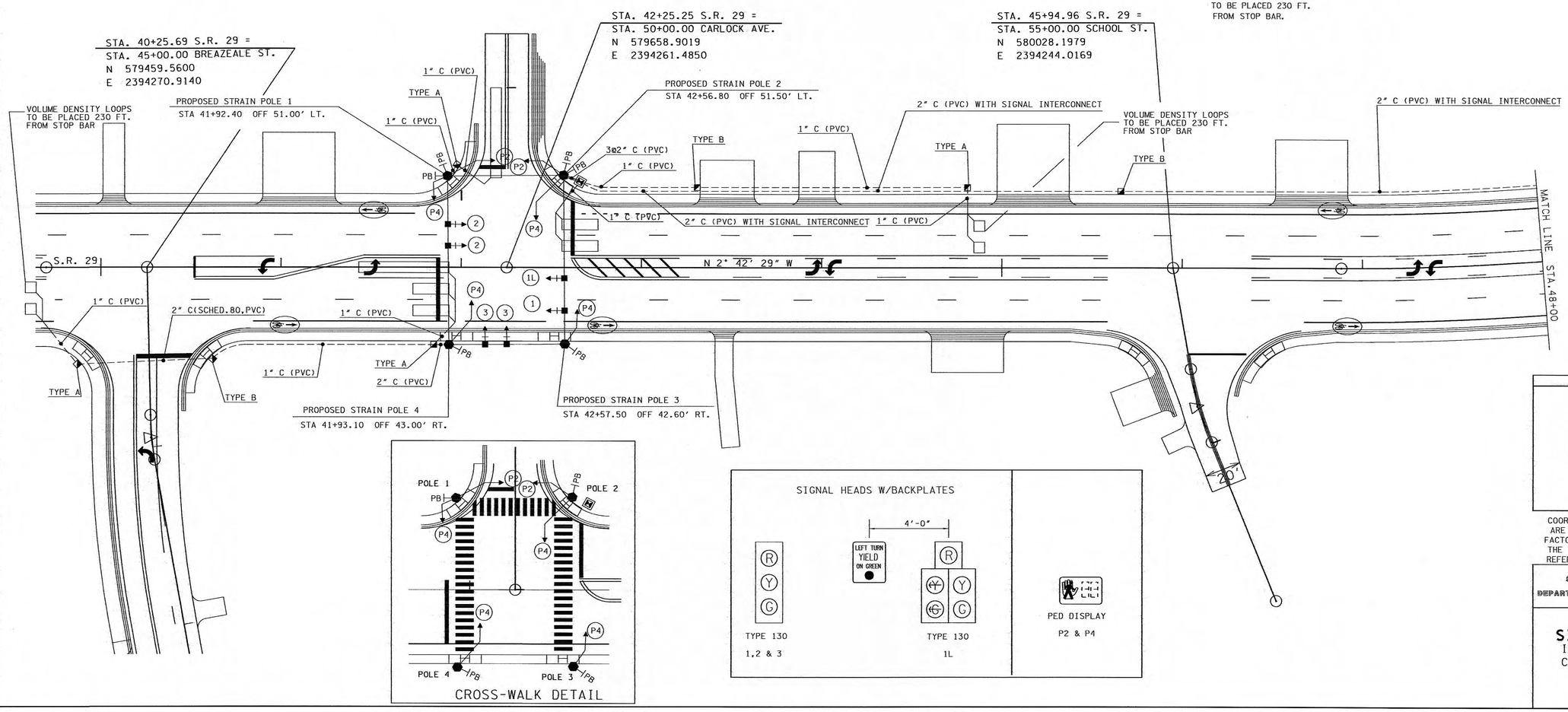
POLE NO.	NORTHING	EASTING	GROUND ELEV. @ POLE	POLE TO POLE	ATTACHMENT HEIGHT	ATTACHMENT ELEV.
1	579623.676	2394212.094	868.95	1 TO 2	25.20'	893.69
2	579687.981	2394208.552	868.89	2 TO 3	26.70'	896.92
3	579693.126	2394302.514	869.71	3 TO 4	25.20'	894.19
4	579628.817	2394305.956	868.28	4 TO 1	26.70'	895.63

NOTE: POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.

40

45





SEALED BY

PETER FALKENBERG REGISTERED ENGINEER No. 013708 STATE OF TENNESSEE

02/12/2014

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00009 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT
INTERSECTION OF CARLOCK AVENUE WITH S.R.29

SCALE: 1"=30 '

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

2/11/2014 1:21:42 PM
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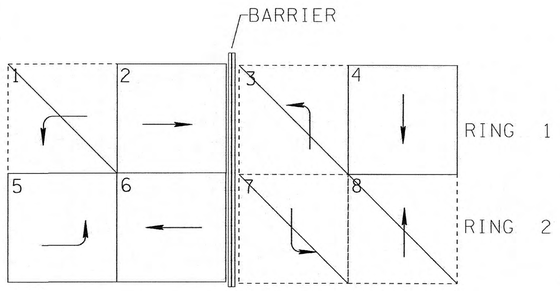
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

THE CONTRACTOR SHALL CONTACT STANLEY A. TRICE, TDOT SIGNAL DESIGN, AT (615) 741-2106 A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	30C

ROANE COUNTY 73075-3209-14



NEMA EIGHT PHASE DESIGNATIONS

ACTIVE PHASE

INACTIVE PHASE (NOT USED)

- OPERATION IS DUAL ENTRY MODE, FULL SKIP CAPABILITY
- SINGLE DIRECTION, LAGGING LEFT TURN PHASES ARE NOT ALLOWED
- ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

BASIC OR SEMI - ACTUATED TIMING (SECS)

PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)	LEFT TURN OPERATION (2)
					YELLOW	ALL RED	WALK	FLASHING DONT WALK			

(1) NL = NONLOCK
L = LOCK

(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

VOLUME - DENSITY TIMING (SECS)

PHASE	INITIAL INTERVAL	ADDED INITIAL PER ACTUATION	PASSAGE TIME	MINIMUM GAP	TIME BEFORE REDUCTION	TIME TO REDUCE	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
									YELLOW	ALL RED	WALK	FLASHING DONT WALK		
													-	
													-	

THESE TIMINGS ARE INITIAL AND MAY BE ADJUSTED BY THE CONTRACTOR BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

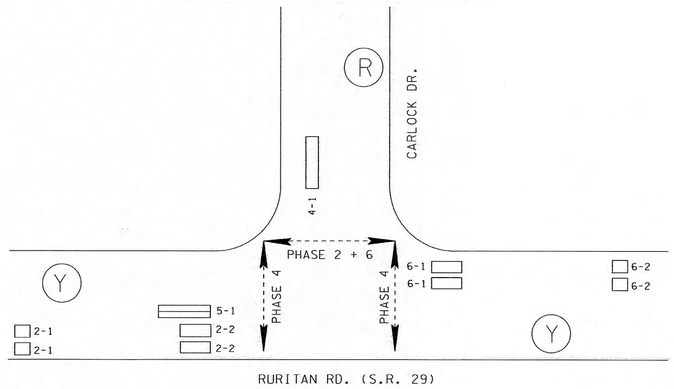
LOOP AND AMP ASSIGNMENTS

LOOP #	VEHICLE DETECT #	LOOP LENGTH	AMP MODE	AMP. FEATURE TIMING(SEC)	ASSOC. Ø
2-1	1	2Ø6'	PULSE		2
2-2	1	2Ø2Ø'	PRES		2
4-1	2	1Ø5Ø'	PRES		4
*5-1	2	1Ø5Ø'	PRES		5
6-1	1	2Ø6'	PULSE		6
6-2	1	2Ø5Ø'	PRES		6

*QUADRAPOLE LOOPS

- ALL LOOPS ARE 6' IN WIDTH, CENTERED IN TRAFFIC LANE.
- LOOP WIRE CONNECTIONS SHALL BE WIRED TO PROVIDE THE APPROPRIATE INDUCTANCE AS REQUIRED BY STD. DWG. T-SG-3.

DETECTION LOOP DIAGRAM



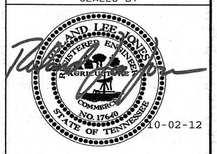
FLASHING OPERATION (R) (Y)

DETECTION ZONE NUMBERING

EIGHT PHASE

LOCATION #2

SEALED BY



INTERSECTION OF SR-29 AND CARLOCK DR.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

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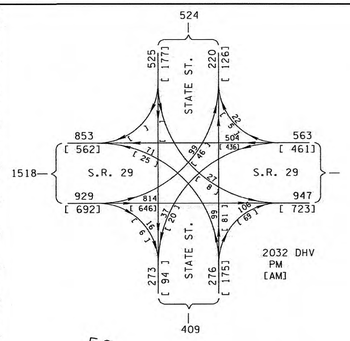
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	30D

ROANE COUNTY 73075-3209-14

REV.2-04-14: REVISED SIGNAL SUPPORT POLE DATA TABLE AND ADDED FOOTNOTE. DELETED ATTACHMENT HEIGHT DIAGRAMS FOR LOCATIONS 3 AND 4.



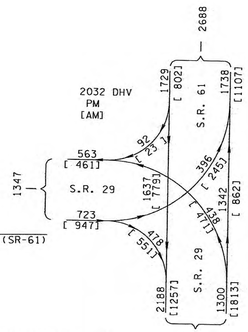
50

STA. 52+61.83 S.R. 29 =
STA. 65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

STA. 52+53.41 S.R. 29 =
STA. 70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

N 78° 01' 03" E
STATE STREET
20'
36'

2" C (PVC) W/INTERCONNECT CABLE
PROPOSED SIGNAL POLE # 3
STA. 52+20.00 OFF 52.30' LT.
PROPOSED PEDESTAL POLE #6
STA. 52+35.00 OFF 65.40' LT.
PROPOSED PEDESTAL POLE #5
STA. 52+02.80 OFF 45.70' LT.
TYPE B
2" C (PVC)
1" C (PVC)
PB
P1
P2
SEE SHEET NO. 30C
STA. 50+00
2" C (SCHED. 80, PVC) W/INTERCONNECT CABLE
MATCH LINE
PROPOSED PEDESTAL POLE #4
STA.52+00.40 OFF 53.10' RT.
PROPOSED SIGNAL POLE # 2
STA.52+04.50 OFF 59.20' RT.
PROPOSED PEDESTAL POLE #3
STA.52+08.10 OFF 63.50' RT.
N 11° 27' 07" E
36'
PROPOSED PEDESTAL POLE #7
STA.53+14.10 OFF 63.50' LT.
PROPOSED SIGNAL POLE #4
STA.53+20.30 OFF 55.50' LT.
PROPOSED SIGNAL POLE #2A
STA. 55+53.30 OFF 61.50' LT.
PROPOSED PEDESTAL POLE #8
STA.53+26.10 OFF 49.90' LT.
IPB
2" C (PVC)
2" C (SCHED. 80, PVC) W/INTERCONNECT CABLE
2ø3" C (PVC)
PROPOSED SIGNAL POLE # 1
STA.52+86.40 OFF 55.20 'RT.
PROPOSED PEDESTAL POLE #2
STA.52+79.90 OFF 63.60' RT.
PROPOSED PEDESTAL POLE #1
STA.52+96.20 OFF 48.50' RT.
N 21° 58' 06" W
S.R. 29
VOLUME DENSITY LOOPS TO BE PLACED 230 FT. FROM STOP BAR
VOLUME DENSITY LOOPS TO BE PLACED 285 FT. FROM STOP BAR
INCLUDES 135 LF OF 1"CONDUIT AND SHIELDED DETECTOR CABLE
TYPE A
55
1" C (PVC)
TYPE B
2" C (SCHED. 80,PVC) W/INTERCONNECT CABLE
2ø2" C (PVC)
PROPOSED SIGNAL POLE #1A
STA. 55+75.00 OFF 89.0' RT.
1A
1LA
N 34° 22' 08" W
PROPOSED SIGNAL POLE #3A
STA. 92+05.63 OFF 73.94' LT (SR-61)
N 581035.6891
E 2393811.4276
3LA
PROPOSED SIGNAL POLE #4A
STA. 93+44.37 OFF 75.68' LT. (SR-61)
N 581142.4191
E 2393900.0882
2A
INCLUDES 150 LF OF 1"CONDUIT AND SHIELDED DETECTOR CABLE
SOUTH ROANE ST.
CURB CONC. SW
VOLUME DENSITY LOOPS TO BE PLACED 285 FT. FROM STOP BAR



LOCATION #4

STA. 56+66.40 S.R. 29 =
STA. 92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

LOCATION #3

SIGNAL SUPPORT POLE DATA						
POLE NO.	NORTHING	EASTING	GROUND ELEV. @ POLE	POLE TO POLE	ATTACHMENT HEIGHT	ATTACHMENT ELEV.
1	580718.385	2394144.781	883.28	1 TO 2	26.10'	907.98
2	580643.928	2394179.129	881.54	2 TO 3	27.60'	909.76
3	580616.591	2394069.927	880.87	3 TO 4	26.90'	908.50
4	580706.379	2394029.730	882.19	4 TO 1	27.80'	912.46
1A	580996.301	2394021.544	892.57	1A TO 2A	29.60'	919.74
2A	5808933.429	2393909.569	889.35	2A TO 3A	30.60'	920.28
3A	581035.6891	2393811.428	896.06	3A TO 4A	28.90'	919.96
4A	581142.4191	2393900.088	898.80	4A TO 1A	31.50'	923.89

NOTE:POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION

R Y G — 1,1A,2,2A, 1LA,3LA
PROPOSED SIGNAL HEADS W/ BACKPLATES

P1,P2
PROPOSED COUNTDOWN PEDESTRIAN SIGNAL HEADS

SEALED BY

PETER FALKENBERG REGISTERED ENGINEER 013706 STATE OF TENNESSEE

02/12/2014

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00009 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT

INTERSECTIONS OF STATE STREET AND SR-61 AT SR -29

SCALE: 1"=30 '

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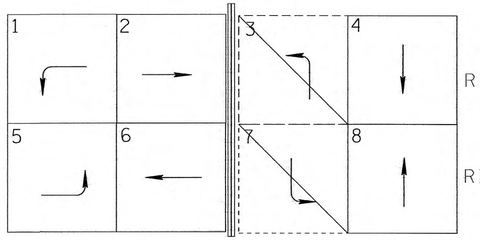
TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2012	STP--29(58)	30E

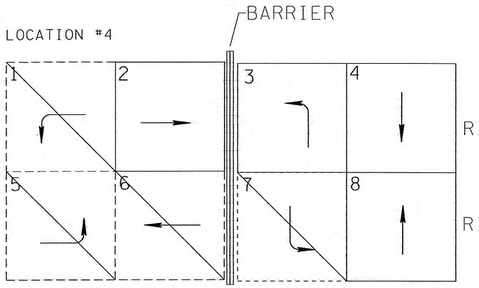
ROANE COUNTY 73075-3209-14

THE CONTRACTOR SHALL CONTACT STANLEY A. TRICE, TDOT SIGNAL DESIGN, AT (615) 741-2106 A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.

LOCATION #3



LOCATION #4



NEMA EIGHT PHASE DESIGNATIONS

ACTIVE PHASE

INACTIVE PHASE (NOT USED)

- OPERATION IS DUAL ENTRY MODE, FULL SKIP CAPABILITY
- SINGLE DIRECTION, LAGGING LEFT TURN PHASES ARE NOT ALLOWED
- ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

LOOP AND AMP ASSIGNMENTS

	LOOP #	VEHICLE DETECT #	LOOP LENGTH	AMP MODE	AMP. FEATURE TIMING(SEC)	ASSOC. Ø
LOC.#3	*1-1	3	1@50'	PRES.		1
	2-1	1	2@6'	PULSE		2
	2-2	1	2@20'	PRES		2
	4-1	2	1@50'	PRES.		4
	*4-2	2	1@50'	PRES.		4
	*5-1	3	1@50'	PRES.		5
	6-1	1	2@6'	PULSE		6
	6-2	1	2@20'	PRES.		6
	8-1	2	1@50'	PRES.		8
	*8-2	2	1@50'	PRES.		8
LOC.#4	2-1A	1	2@6'	PULSE		2
	2-2A	1	2@20'	PRES.		2
	*3-1A	2	1@50'	PRES.		3
	4-1A	2	2@6'	PULSE		4
	4-2A	2	2@20'	PRES.		4
	8-1A	2	2@6'	PULSE		8

*QUADRAPOLE LOOPS

- ALL LOOPS ARE 6' IN WIDTH, CENTERED IN TRAFFIC LANE.
- LOOP WIRE CONNECTIONS SHALL BE WIRED TO PROVIDE THE APPROPRIATE INDUCTANCE AS REQUIRED BY STD. DWG. T-SG-3.

BASIC OR SEMI - ACTUATED TIMING (SECS)

PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)	LEFT TURN OPERATION (2)
					YELLOW	ALL RED	WALK	FLASHING DONT WALK			

(1) NL = NONLOCK
L = LOCK

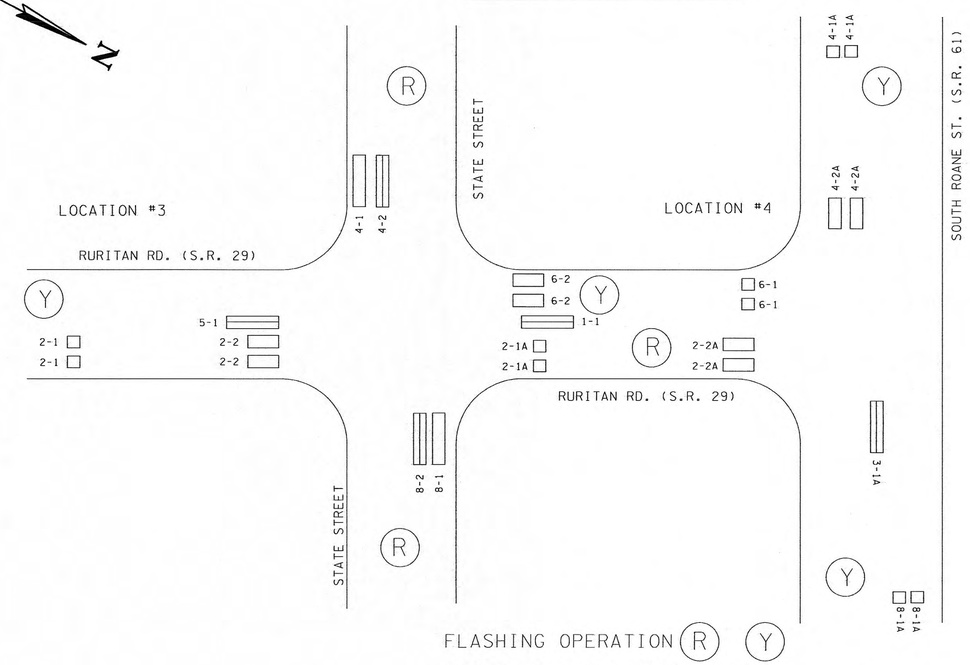
(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

VOLUME - DENSITY TIMING (SECS)

PHASE	INITIAL INTERVAL	ADDED INITIAL PER ACTUATION	PASSAGE TIME	MINIMUM GAP	TIME BEFORE REDUCTION	TIME TO REDUCE	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
									YELLOW	ALL RED	WALK	FLASHING DONT WALK		
													-	
													-	

THESE TIMINGS ARE INITIAL AND MAY BE ADJUSTED BY THE CONTRACTOR BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

DETECTION LOOP DIAGRAM



FLASHING OPERATION (R) (Y)

DETECTION ZONE NUMBERING

LOCATION #3 & #4

SEALED BY

ROLAND LEE JONES
REGISTERED ENGINEER
AGENT OF RECORD
COMMISSION NO. 101,618
STATE OF TENNESSEE
10-02-12

INTERSECTIONS OF STATE STREET AND SR-61 AT SR-29

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

EIGHT PHASE

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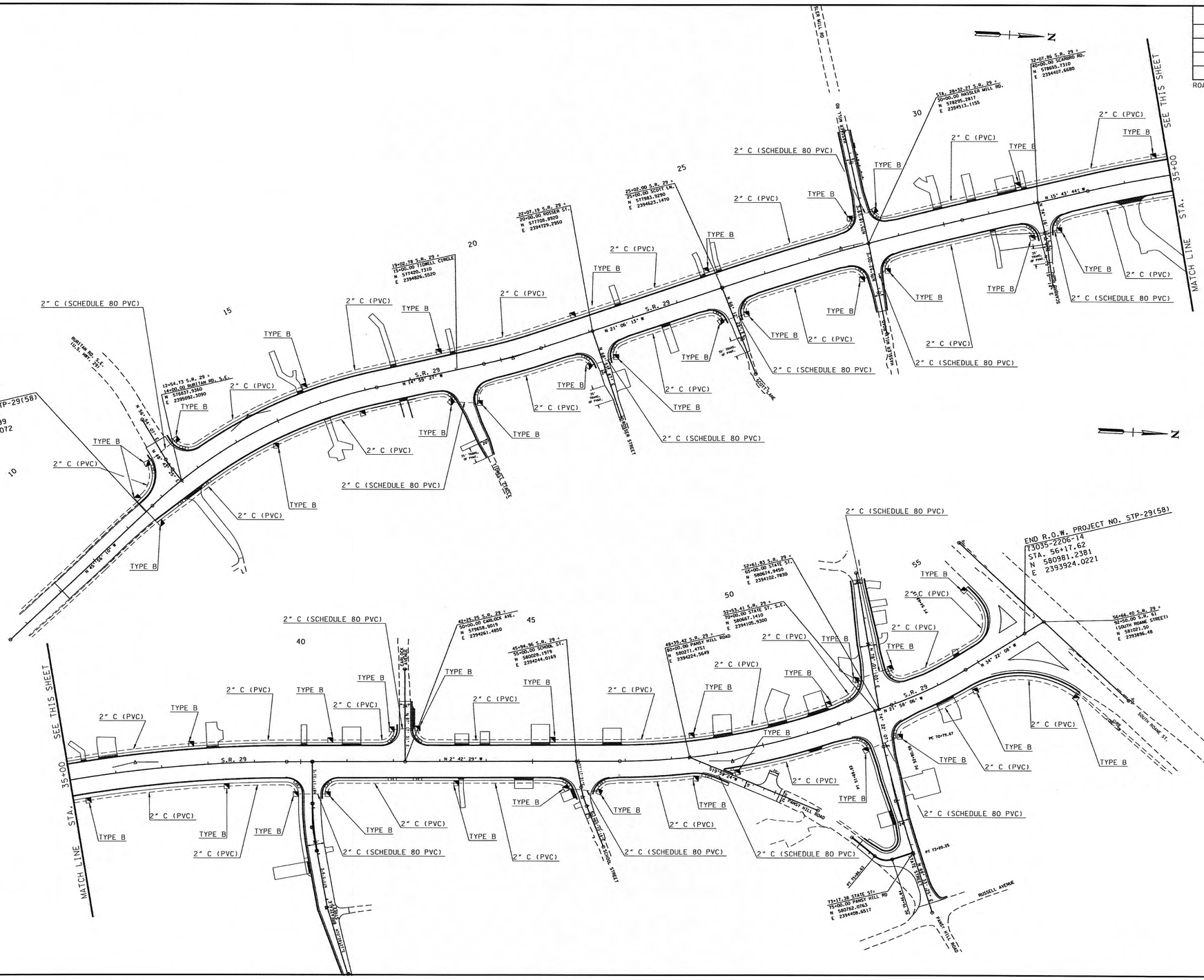
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	30F

ROANE COUNTY 73075-3209-14



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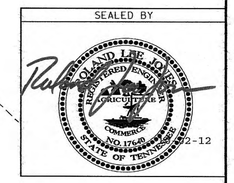

2-12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LIGHTING CONDUIT DETAILS

SCALE: 1"=100'

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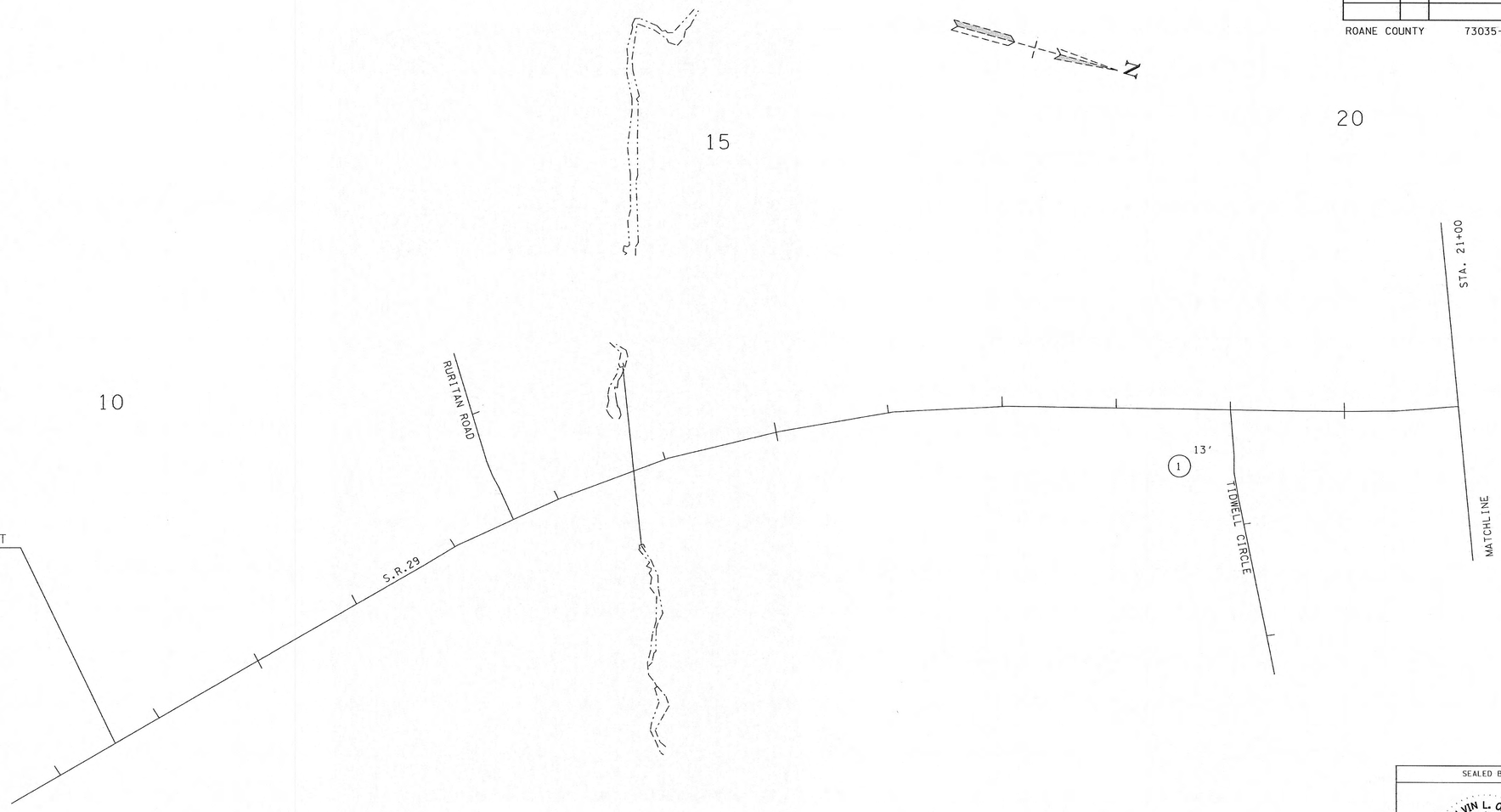
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	31

ROANE COUNTY 73035-3209-14



SAMPLE NO.	DESCRIPTION	DENSITY	OPTIMUM MOISTURE	MOISTURE RANGE	IN-SITU MOISTURE	LL	PI	AASHTO CLASS	USCS CLASS	CBR
1	CLAY - reddish brown, mod. firm, sl. moist	94.3	24.0	18.1-29.0		53.0	28	A7-6(23)	CH	

SEALED BY

MELVIN L. OLIVER REGISTERED ENGINEER AGRICULTURE No.016959 STATE OF TENNESSEE

Melvin L. Oliver 09/17/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS

S.R. 29 (RURITAN RD)
FROM PINE RIDGE RD.
TO S.R.61 IN HARRIMAN

ROANE COUNTY

9/17/2012
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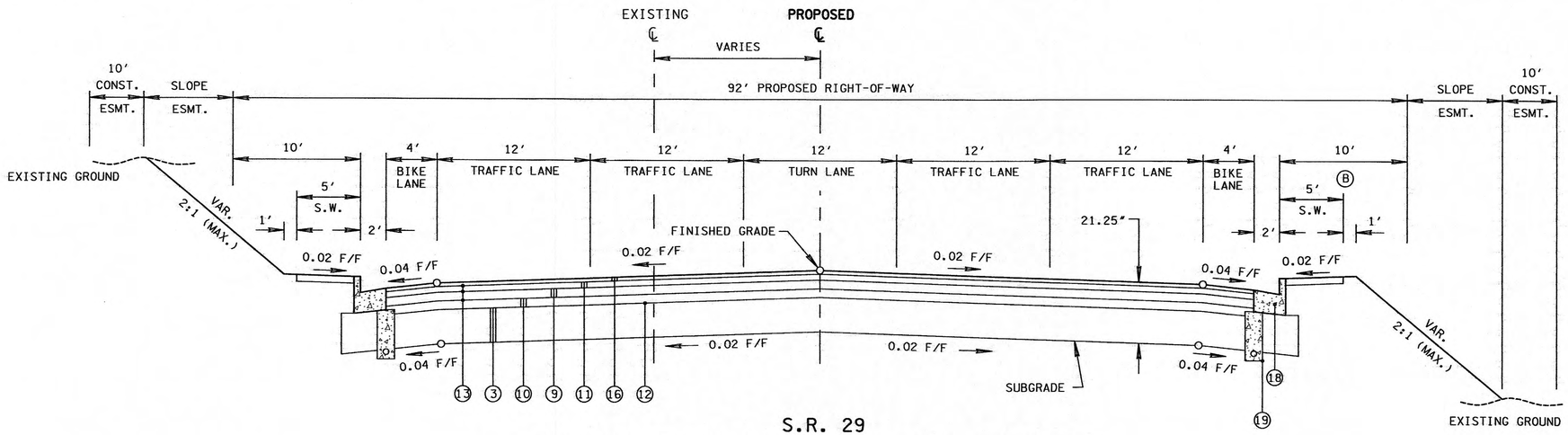
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	2A
CONST.	2012	STP-29(58)	2C1

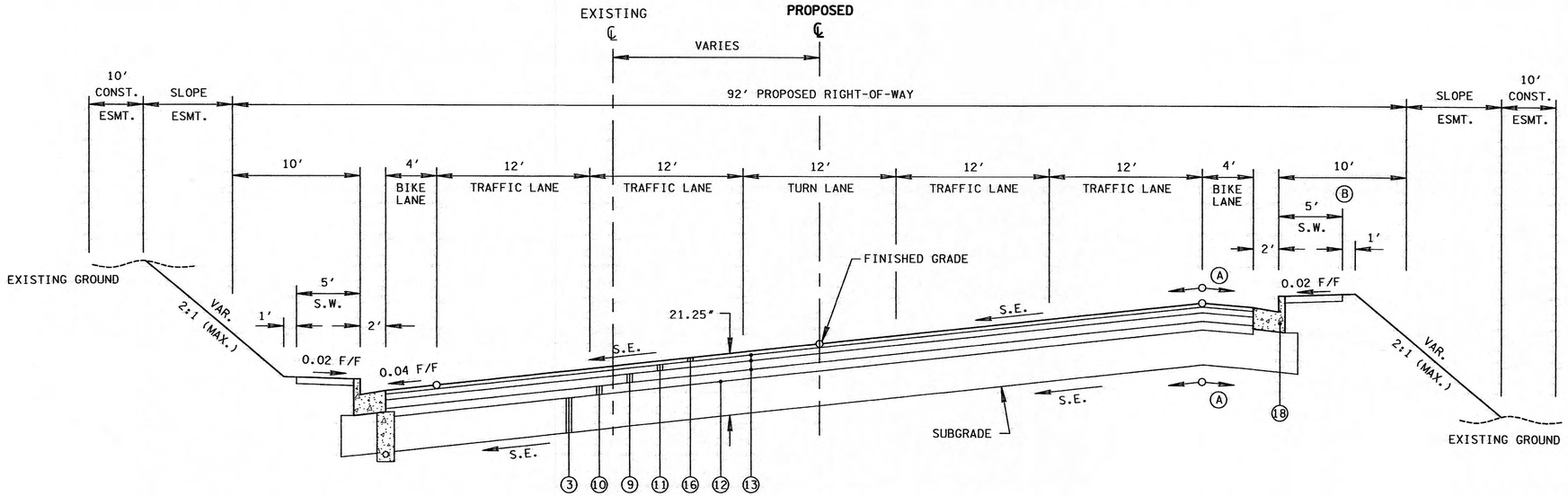
ROANE COUNTY 73035-3209-14



S.R. 29
PROPOSED TYPICAL TANGENT CURB AND GUTTER SECTION

BASED ON STD. DWG. RD01-TS-6

STA. 18+23.02	TO	STA. 18+35.08	STA. 40+46.78	TO	STA. 45+97.07
STA. 22+17.58	TO	STA. 24+33.11	STA. 52+12.73	TO	STA. 52+25.40
STA. 31+10.57	TO	STA. 32+41.56	STA. 55+82.05	TO	STA. 56+17.62



S.R. 29
PROPOSED TYPICAL SUPERELEVATED CURB AND GUTTER SECTION

BASED ON STD. DWG. RD01-TS-6

STA. 11+53.90	TO	STA. 18+23.02	STA. 32+41.56	TO	STA. 40+46.78
STA. 18+35.08	TO	STA. 22+17.58	STA. 45+97.07	TO	STA. 52+12.73
STA. 24+33.11	TO	STA. 31+10.57	STA. 52+25.40	TO	STA. 55+82.05

(A) SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 F/F

(B) 8' SIDEWALK TO BE USED ON S.R. 29 FROM STA. 32+07.86 TO STA. 40+25.00 AND ON BREAZEALE ST. FROM STA. 45+00.00 TO STA. 49+68.09

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

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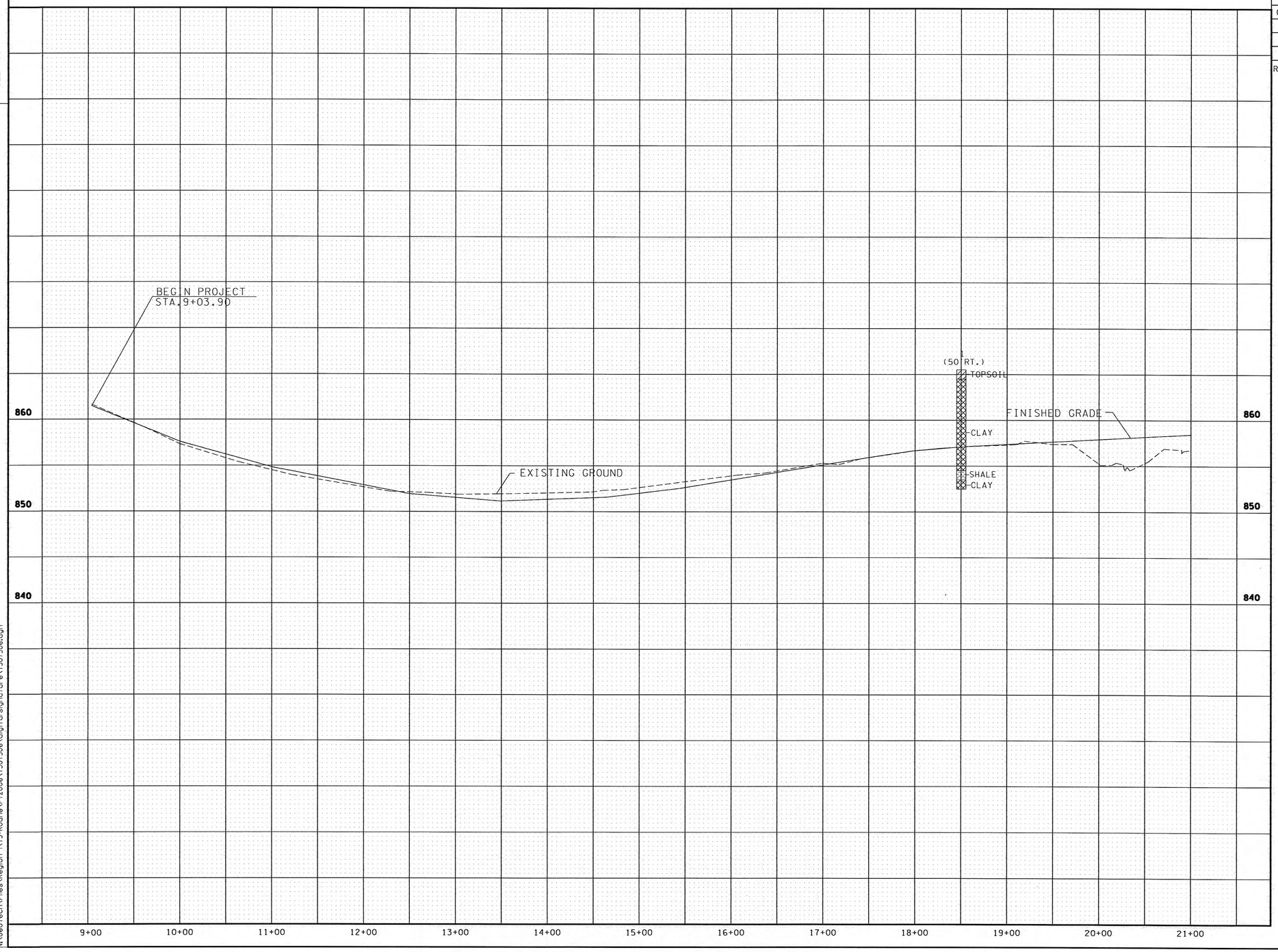
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	31A

ROANE COUNTY 73035-3209-14



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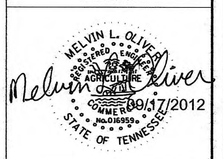

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS

S.R. 29 (RURITAN RD)
FROM PINE RIDGE RD.
TO S.R.61 IN HARRIMAN

ROANE COUNTY

9/17/2012
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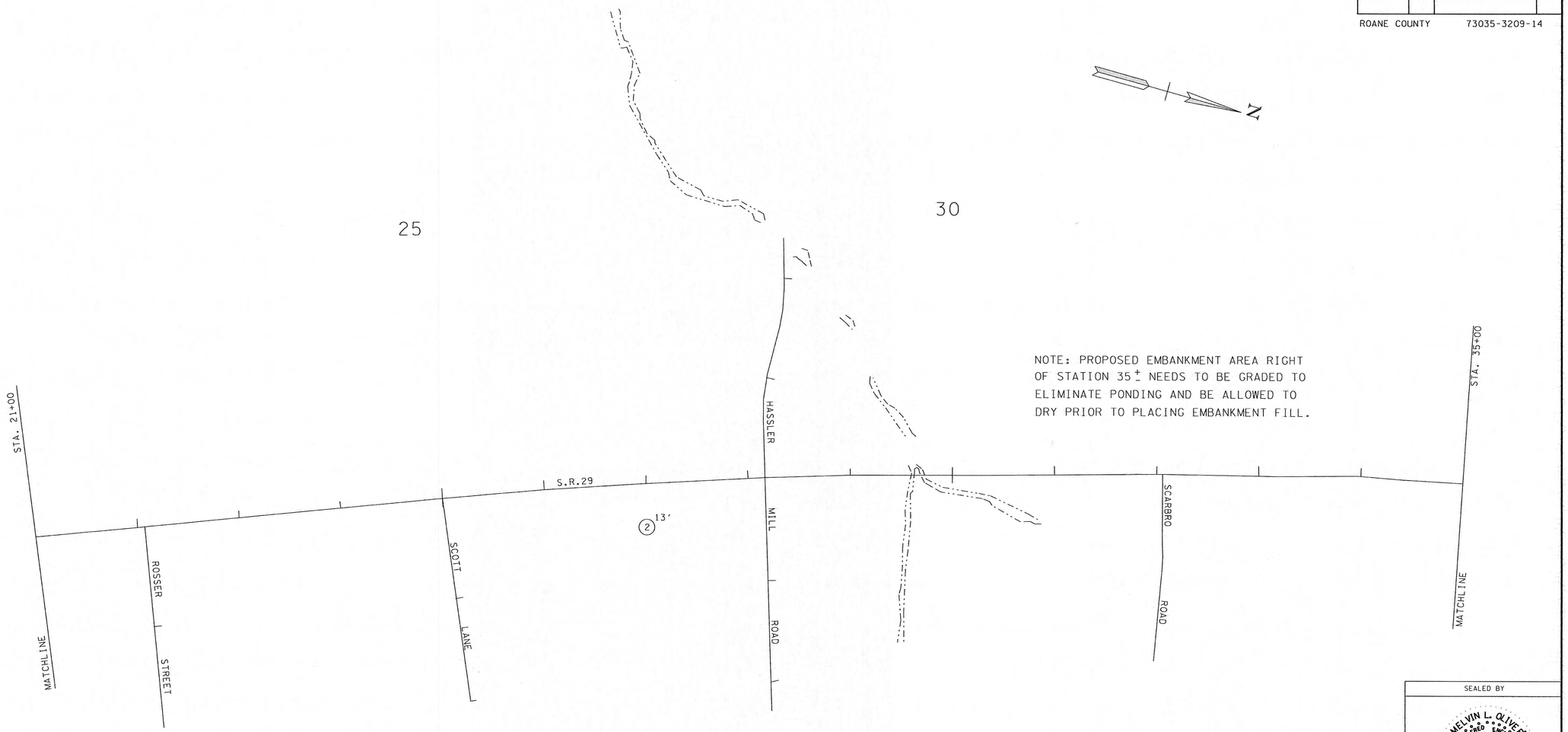
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	31B

ROANE COUNTY 73035-3209-14



SAMPLE NO.	DESCRIPTION	DENSITY	OPTIMUM MOISTURE	MOISTURE RANGE	IN-SITU MOISTURE	LL	PI	AASHTO CLASS	USCS CLASS	CBR
1-A	CLAY - Yellowish-brown , firm, slightly moist	93.6	24.1	16.5-31.0		52.0	25	A7-6(22)	CH	3.0

SEALED BY

MELVIN L. OLIVER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No.019559
STATE OF TENNESSEE

Melvin Oliver 8/17/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS

S.R. 29 (RURITAN RD)
FROM PINE RIDGE RD.
TO S.R.61 IN HARRIMAN

ROANE COUNTY

8/17/2012
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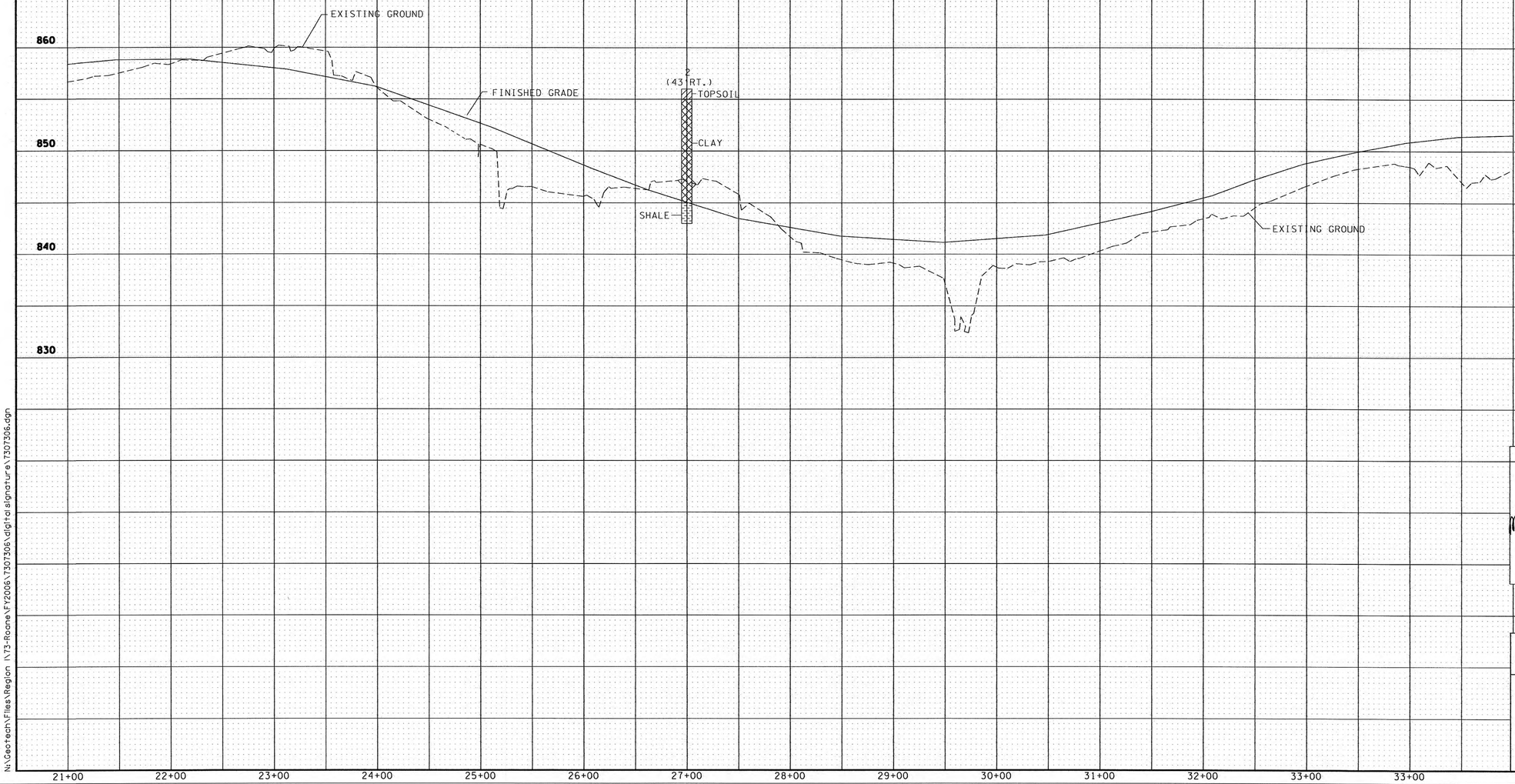
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	31C

ROANE COUNTY 73035-3209-14



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MELVIN L. OLIVER
REGISTERED ENGINEER
AGRICULTURE
No. 016959
STATE OF TENNESSEE

09/12/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS

S.R. 29 (RURITAN RD)
FROM PINE RIDGE RD.
TO S.R.61 IN HARRIMAN

ROANE COUNTY

9/17/202
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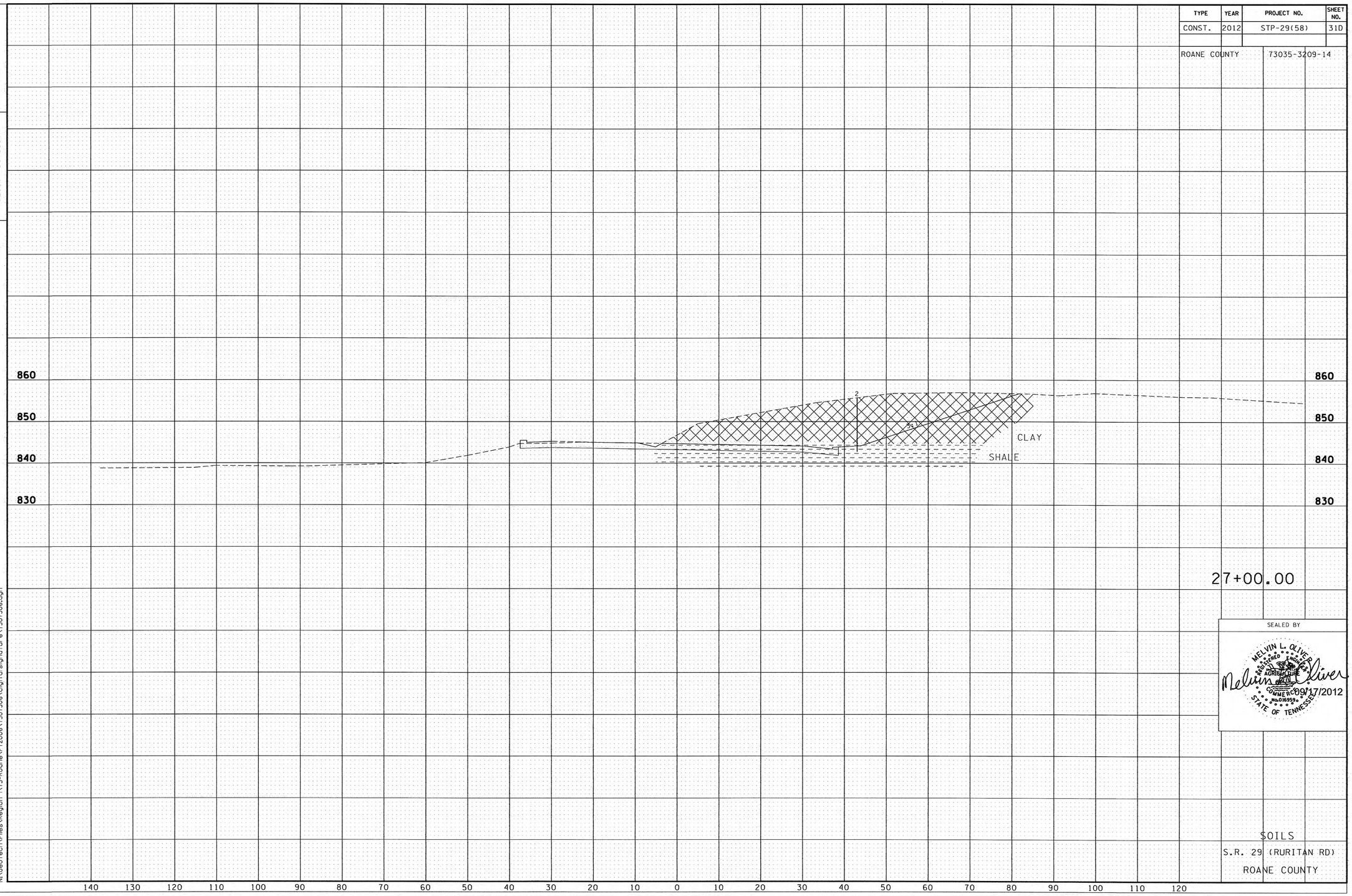
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	31D
ROANE COUNTY		73035-3209-14	



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MELVIN L. OLIVER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 018959
STATE OF TENNESSEE

Melvin L. Oliver 9/17/2012

SOILS
S.R. 29 (RURITAN RD)
ROANE COUNTY

9/17/2012
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
UTILITIES INDEX, AND UTILITY OWNERS	U1-1
UTILITY LAYOUTS	U1-2 THRU U1-6
UTILITY LAYOUT - HARRIMAN UTILITY BOARD (WATER)	U2-1 THRU U2-7
UTILITY LAYOUT - HARRIMAN UTILITY BOARD (SEWER)	U3-1 THRU U3-9
UTILITY LAYOUT - HARRIMAN UTILITY BOARD (GAS)	U4-1 THRU U4-7
UTILITY LAYOUT - HARRIMAN UTILITY BOARD (POWER)	U5-1 THRU U5-11
UTILITY LAYOUT - AT&T TENNESSEE (TELEPHONE)	U6-1 THRU U6-5
UTILITY LAYOUT - ROCKWOOD WATER, SEWER & GAS (GAS)	U7-1 THRU U7-3

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-1

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)

UTILITIES NOT IN ROADWAY CONTRACT

FIBER OPTIC - SPRINT COMMUNICATIONS CO. (NO CONFLICT)
411 HUGER STREET
COLUMBIA, SC 29201
STEVE THOMPSON 678-852-2726

WATER - ROCKWOOD WATER, SEWER & GAS (NO CONFLICT)
110 NORTH CHAMBERLAIN AVENUE
ROCKWOOD , TN. 37854
KIM RAMSEY (865) 354-0163

SEWER - ROCKWOOD WATER, SEWER & GAS (NO CONFLICT)
110 NORTH CHAMBERLAIN AVENUE
ROCKWOOD , TN. 37854
KIM RAMSEY (865) 354-0163

CABLE - XFINITY/COMCAST (NO CONFLICT)
5720 ASHEVILLE HIGHWAY
KNOXVILLE, TN 37924
CONTACT PERSON: JT POPE (865)862-5060

UTILITIES IN ROADWAY CONTRACT

POWER - HARRIMAN UTILITY BOARD
P.O. BOX 434
HARRIMAN, TN. 37748
JAMES BURNHAM (865) 285-1022

WATER - HARRIMAN UTILITY BOARD
P.O. BOX 434
HARRIMAN, TN. 37748
JAMES BURNHAM (865) 285-1022

SEWER - HARRIMAN UTILITY BOARD
P.O. BOX 434
HARRIMAN, TN. 37748
JAMES BURNHAM (865) 285-1022

GAS - HARRIMAN UTILITY BOARD
P.O. BOX 434
HARRIMAN, TN. 37748
JAMES BURNHAM (865) 285-1022

GAS - ROCKWOOD WATER, SEWER & GAS
110 NORTH CHAMBERLAIN AVENUE
ROCKWOOD , TN. 37854
KIM RAMSEY (865) 354-0163

PHONE - AT&T TENNESSEE
9733 PARKSIDE DRIVE
KNOXVILLE, TN. 37922
DAVID OVERMAN 865-539-8579
EMAIL: DAVID.OVERMAN@ATT.COM

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITIES INDEX
UTILITY OWNERS

7/17/2013
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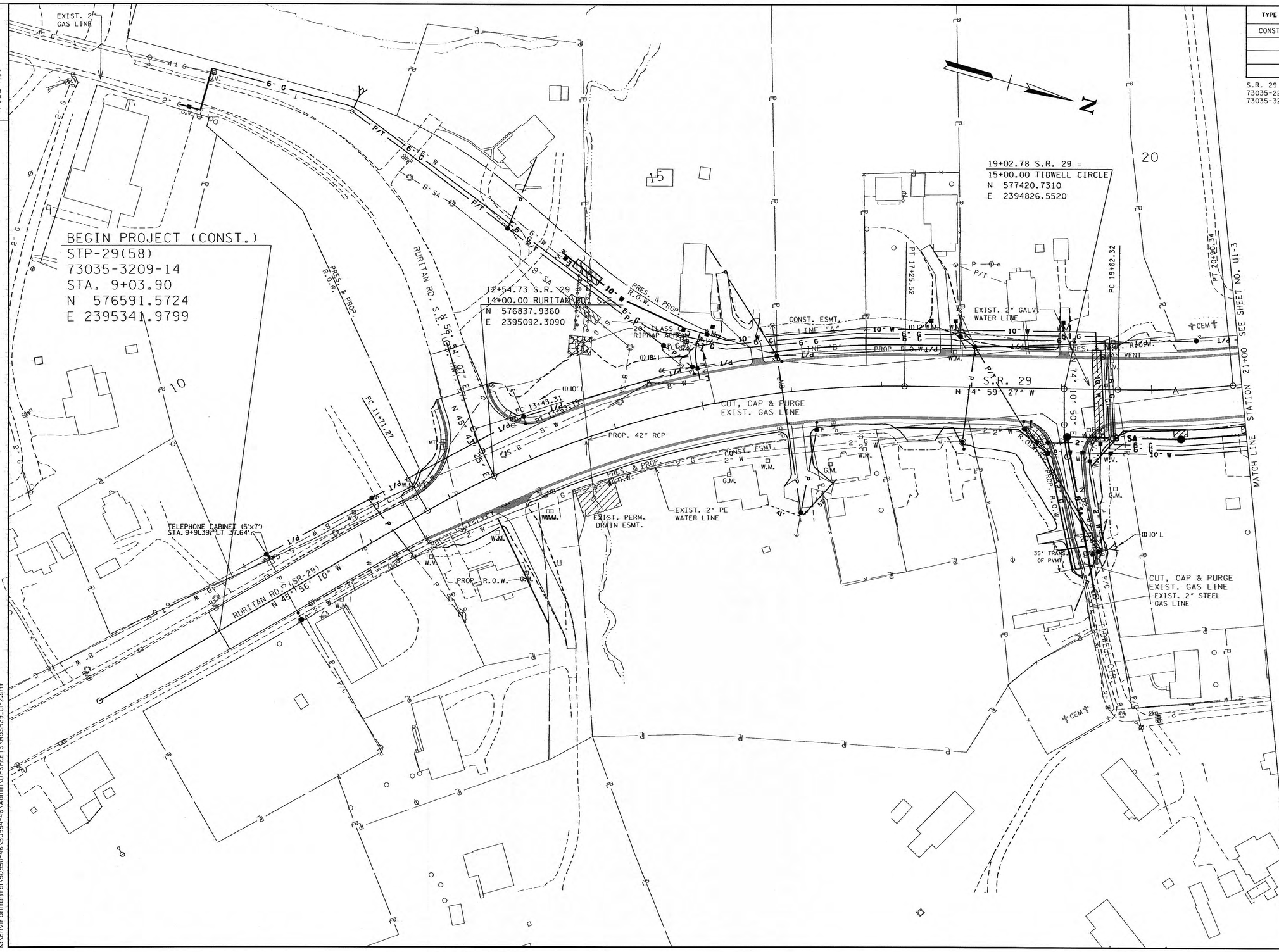
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-2

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)



SEALED BY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY RELOCATION

BEGIN PROJ. TO
STA. 21+00.00
SCALE: 1"=50'

7/17/2013
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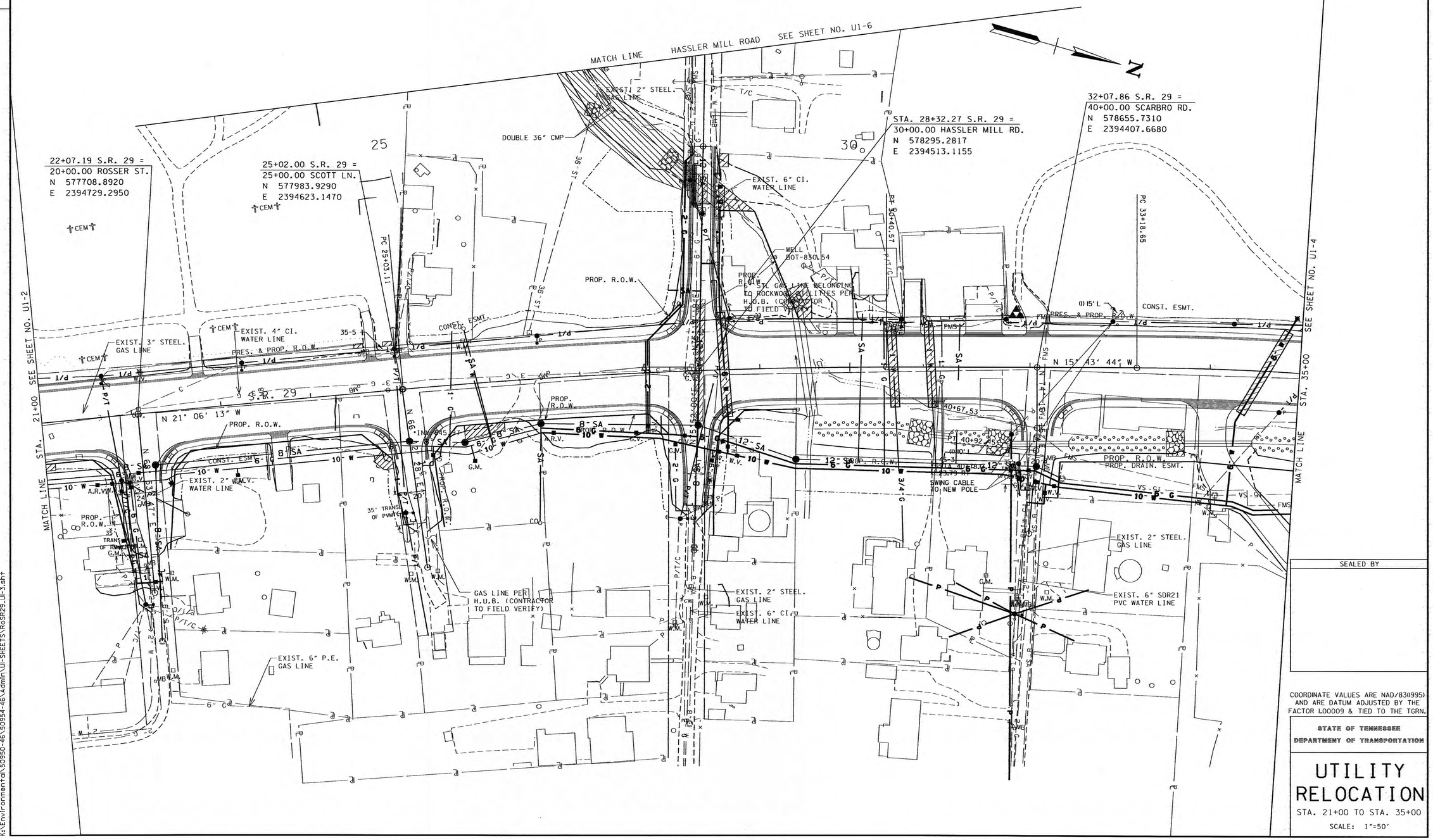
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-3

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)



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COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY RELOCATION

STA. 21+00 TO STA. 35+00

SCALE: 1"=50'

7/17/2013
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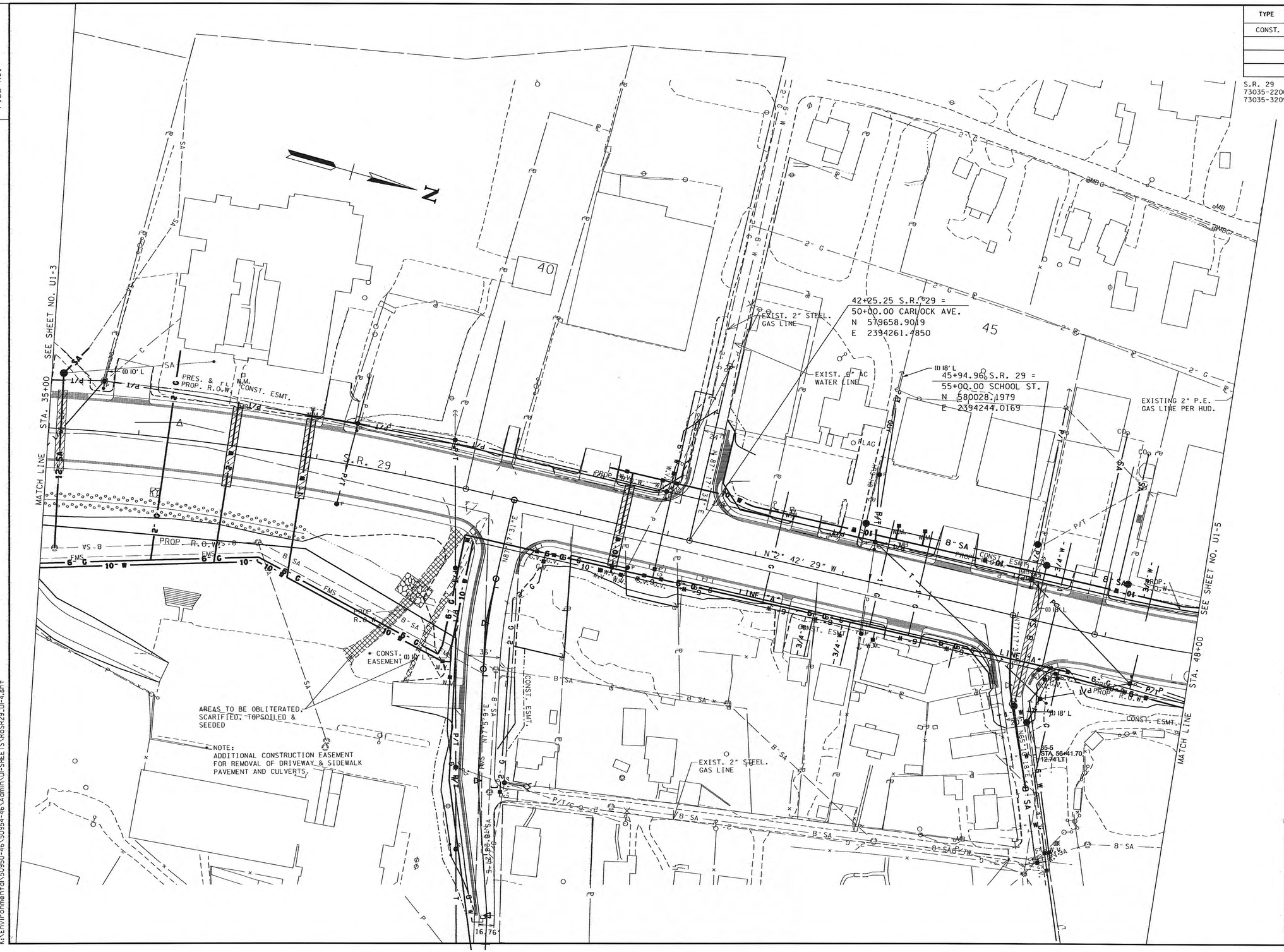
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-4

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)



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COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY RELOCATION

STA. 35+00 TO STA. 48+00

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-5

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)

EXISTING F.H. PER H.U.B. (CONTRACTOR TO FIELD VERIFY)

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

EXISTING 6" C.I. WATER LINE AND VALVE PER H.U.B. (CONTRACTOR TO FIELD VERIFY)

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

EXIST. 2" P.E. GAS LINE

EXIST. 6" C.I. WATER LINE

EXIST. 10" C.I. WATER LINE

END R.O.W. PROJECT NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

MATCH LINE STATION 48+00 SEE SHEET NO. U1-4

PROP. R.O.W.

CONST. ESMT.

PRES. & PROP. R.O.W.

PC 70+79.67

24' ST

CATCH BASIN
TOP-887.74
INV-884.44
BOT-884.44

CATCH BASIN
TOP-887.57
INV-885.01
BOT-884.97

CURB

EXISTING 6" VALVE PER H.U.B. (CONTRACTOR TO FIELD VERIFY)

73+20.25

PT 75+86.63

73+17.38 STATE ST=
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

EXISTING 3" P.E. GAS VALVE PER H.U.B. (CONTRACTOR TO FIELD VERIFY)

N 34° 22' 08" W

N 21° 58' 06" W

N 74° 22' 07" E

N 69° 33' 25" E

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COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY RELOCATION

STA.48+00 TO END OF PROJ.

SCALE: 1"=50'

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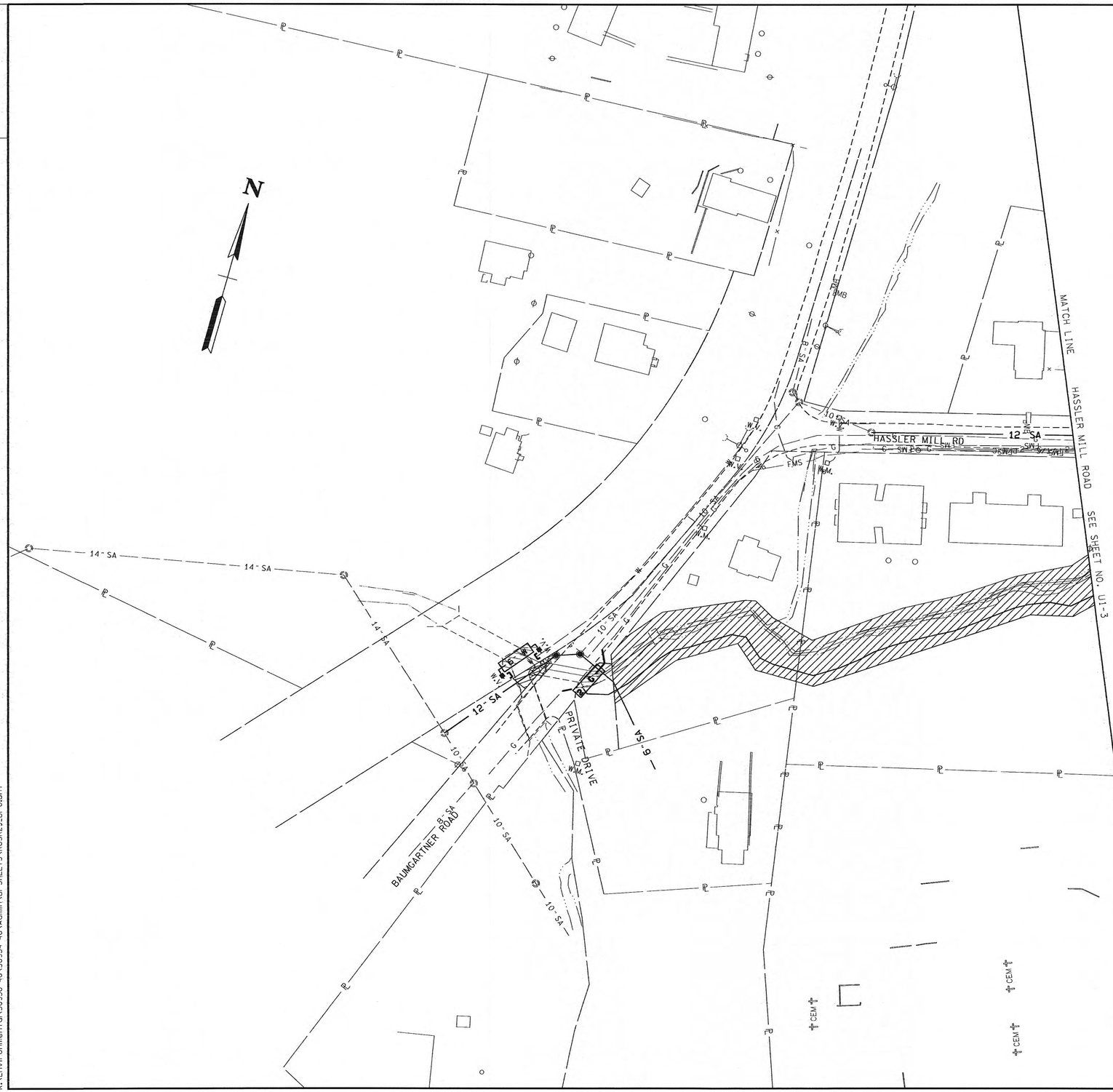
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U1-6

S.R. 29 ROANE COUNTY
73035-2206-14 (R.O.W.)
73035-3209-14 (CONST.)



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COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY RELOCATION

HASSLER MILL ROAD AND BAUMGARTNER ROAD

SCALE: 1"=50'

7/17/2013
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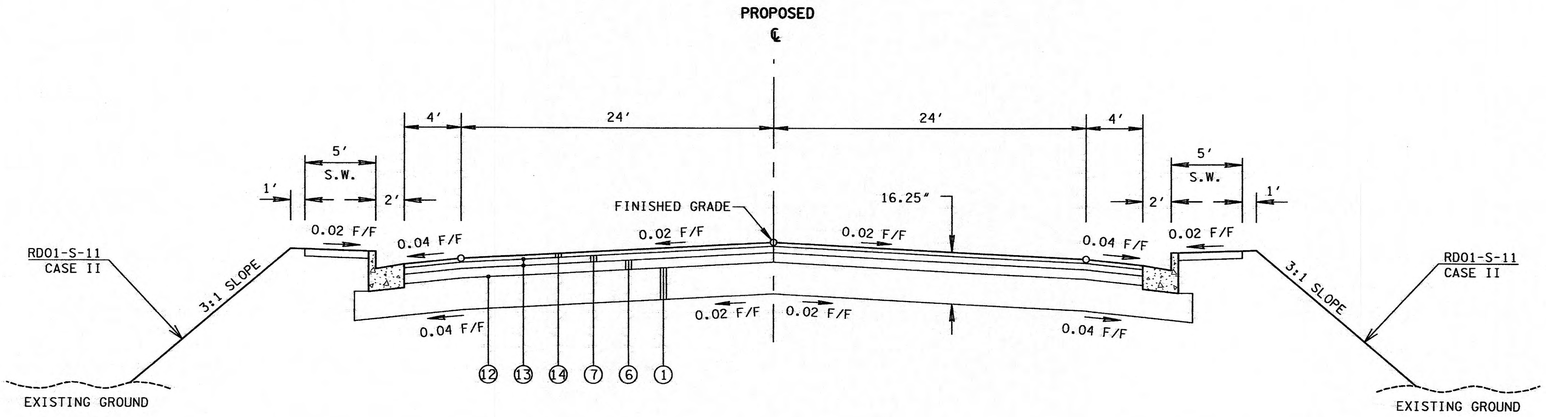
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	2B
CONST.	2012	STP-29(58)	2C2

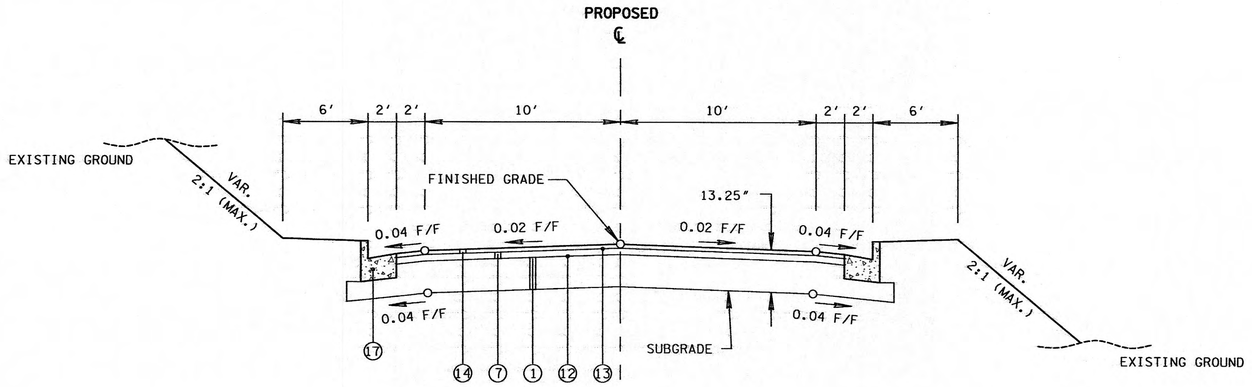
ROANE COUNTY 73035-3209-14



TYPICAL TANGENT SIDEROAD SECTION

BASED ON STD. DWG. RD01-TS-1

RURITAN ROAD OLD S.R. 29, STA. 13+00.00 TO STA. 13+66.00



TYPICAL TANGENT CURB & GUTTER SIDEROAD SECTION

BASED ON STD. DWG. RD01-TS-1

TIDWELL CIRCLE, STA. 15+34.00 TO STA 17+00.00
HASSLER MILL ROAD, STA. 27+90.00 TO STA. 29+66.00
HASSLER MILL ROAD, STA. 30+34.00 TO STA. 31+50.00

(A) SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 F/F

(B) 8' SIDEWALK TO BE USED ON S.R. 29 FROM STA. 32+07.86 TO STA. 40+25.00 AND ON BREAZEALE ST. FROM STA. 45+00.00 TO STA. 49+68.09

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U2-1
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 8" DIA.
WATER LINE.

INDEX OF DRAWINGS

SHT. NUMBER	SHT. NAME
U2-1	ESTIMATED QUANTITIES (WATER)
U2-2	UTILITY RELOCATION PLAN (WATER)
U2-3	UTILITY RELOCATION PLAN (WATER)
U2-4	UTILITY RELOCATION PLAN (WATER)
U2-5	UTILITY RELOCATION PLAN (WATER)
U2-6	UTILITY RELOCATION PLAN (WATER)
U2-7	TYPICAL WATER DETAILS

REV. 12-23-13:
REVISED QUANTITIES TO
ADD 8" DIA. WATER LINE.

NOTES	ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
⑨ ①	795-01.03	6IN DIP RESTRAINED JOINT WATER LINE	L.F.	295	19%	81%
⑩ ①	795-01.04	6IN DIP SLIP JOINT WATER LINE	L.F.	2,460	19%	81%
⑩ ①	795-01.06	8IN DIP SLIP JOINT WATER LINE	L.F.	205	0%	100%
⑨ ①	795-01.07	10IN DIP RESTRAINED JOINT WATER LINE	L.F.	370	21%	79%
⑩ ①	795-01.08	10IN DIP SLIP JOINT WATER LINE	L.F.	4,490	21%	79%
⑩ ①	795-03.02	2IN PVC WATER LINE	L.F.	833	0%	100%
②	795-05.53	BORE/JACK 12IN STEEL CASING PIPE-UNCON.	L.F.	230	19%	81%
②	795-05.57	BORE/JACK 20IN STEEL CASING PIPE-UNCON.	L.F.	340	21%	79%
②	795-05.91	2IN PVC CASING PIPE OPEN CUT	L.F.	355	0%	100%
②	795-05.92	4IN PVC CASING PIPE OPEN CUT	L.F.	90	20%	80%
③	795-06.01	CONNECT TO 2IN WATER LINE	EACH	5	0%	100%
③	795-06.04	CONNECT TO 6IN WATER LINE	EACH	8	0%	100%
③	795-06.05	CONNECT TO 8IN WATER LINE	EACH	2	0%	100%
④	795-07.03	6IN X 6IN TAPPING SLEEVE AND VALVE	EACH	4	0%	100%
④	795-07.10	10IN X 10IN TAPPING SLEEVE AND VALVE	EACH	1	100%	0%
⑤	795-08.01	2IN GATE VALVE ASSEMBLY	EACH	5	0%	100%
⑤	795-08.04	6IN GATE VALVE ASSEMBLY	EACH	9	19%	81%
⑤	795-08.05	8IN GATE VALVE ASSEMBLY	EACH	2	0%	100%
⑤	795-08.06	10IN GATE VALVE ASSEMBLY	EACH	21	21%	79%
⑥	795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EACH	29	0%	100%
⑥	795-09.02	1IN WATER SERVICE METER ASSEMBLY	EACH	9	0%	100%
⑦	795-09.28	3/4IN COPPER SERVICE PIPE	L.F.	615	0%	100%
⑦	795-09.29	1IN COPPER SERVICE PIPE	L.F.	875	0%	100%
⑥	795-10.03	1IN AUTO AIR RELEASE VALVE ASSEMBLY	EACH	4	0%	100%
⑥	795-11.01	BLOW-OFF ASSEMBLY	EACH	1	0%	100%
⑥	795-11.02	FIRE HYDRANT ASSEMBLY	EACH	6	0%	100%
⑧	795-13.01	DI FITTINGS	LBS	11,800	0%	100%
⑧	795-13.03	PVC FITTINGS	LBS	150	0%	100%
②	795-15.02	12IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	65	19%	81%
②	795-15.05	20IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	30	21%	79%

FOOTNOTES:

① INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, MATERIALS, EQUIPMENT, EXCAVATION IN BOTH UNCONSOLIDATED AND ROCK, REMOVAL AND REPLACEMENT OF UNSUITABLE SOIL, ENVELOPE/BEDDING MATERIAL, BACKFILLING, FLOWABLE FILL, THRUST BLOCKING CONCRETE DEADMAN, PIPE FUSION, TRACER WIRE, WARNING TAPE, APPURTENANCES, TEMPORARY/PERMANENT SHORING, MAINTAINING THE TRENCH, TESTING, FLUSHING, DISINFECTION, BACTERIOLOGICAL SAMPLING, TEMPORARY/PERMANENT SURFACE RESTORATION, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

② INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, FITTINGS, TRACER WIRE, WARNING TAPE, UTILITY LINE MARKERS AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

③ INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR CONNECTING TO AN EXISTING WATER LINE INCLUDING TRAFFIC CONTROL.

④ INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT INCLUDING BUT NOT LIMITED TO TAPPING SLEEVE, VALVE, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING AND RESTRAINT, TAP OF EXISTING LINE, AND TRAFFIC CONTROL.

⑤ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO FITTINGS, VALVE, VALVE STEM EXTENSIONS, VALVE BOX AND COVER, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING, AND TRAFFIC CONTROL.

⑥ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS EXCEPT FOR SERVICE LINE WHICH IS PAID SEPERATELY FOR EACH FOOT INSTALLED.

⑦ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION OF SERVICE LINE OR CASING FOR SERVICE LINE ON LONG SIDE AND SHORT SIDE OF MAIN.

⑧ INCLUDES FITTINGS, GLANDS AND RESTRAINT DEVICES DESCRIBED IN POUNDS.

⑨ RESTRAINED JOINT WATER LINE ITEMS SHALL BE PAID FOR CARRIER PIPE INSIDE STEEL CASING ONLY.

⑩ RESTRAINING GASKETS REQUIRED ON SLIP JOINT PIPE AS A RESULT OF VALVES OR FITTINGS SHALL BE INCLUDED IN THE UNIT ITEM FOR SLIP JOINT WATER LINE. MECHANICAL RESTRAINED JOINT FITTINGS SHALL BE PAID BY POUND ACCORDING TO THE UNIT PRICE FOR DI OR PVC FITTINGS.

GENERAL NOTES:

1. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.
2. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES.
3. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO NOTIFY THEM OF WORK IN THE AREA AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY. NOTIFICATION SHALL BE GIVEN AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
4. UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, AT 811.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
6. THE STONE BEDDING AND BACKFILL SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE UTILITIES SPECIFICATIONS.
7. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITIES SPECIFICATIONS.
8. WATER MAIN PIPE SHALL BE PRESSURE CLASS 350 D.I.P. OR SDR 17 PVC PER UTILITIES SPECIFICATIONS.
9. CONTRACTOR TO INSTALL WATER LINES AT A POSITIVE GRADE BETWEEN DESIGNATED HIGH AND LOW POINTS TO PREVENT TRAPPING OF AIR.
10. PROPOSED 1" AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE PROPOSED WATER LINE, AND SHALL BE FIELD LOCATED BY THE RESIDENT PROJECT REPRESENATIVE.
11. CONTRACTOR TO COORDINATE FIELD LOCATIONS OF PROPOSED FIRE HYDRANTS, WATER SERVICES AND METERS WITH RESIDENT PROJECT REPRESENTATIVE.
12. NO VALVES SHALL BE INSTALLED UNDER AREAS TO RECEIVE ASPHALT PAVEMENT UNLESS APPROVED BY RESIDENT PROJECT REPRESENTATIVE.
13. VALVES, HYDRANTS AND METER ASSEMBLIES SHALL BE ORIENTED SO AS TO ASSURE WATER LINE APPURTENANCES ARE NOT LOCATED WITHIN SIDEWALK AND/OR CURB/CURB & GUTTER AREAS.
14. CONTRACTOR SHALL USE RESTRAINED JOINT FITTINGS FOR ALL WATER PIPE FITTINGS, EXCEPT FOR FITTINGS AT TIE-IN CONNECTIONS WHICH SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
15. CONTRACTOR SHALL INSTALL DETECTION WIRE AND WARNING TAPE PER UTILITY SPECIFICATIONS.
16. WATER LINE CROSSINGS UNDER S.R. 29 SHALL BE ENCASED WITH STEEL CASING AND BE INSTALLED BY OPEN CUT OR BORE AND JACK METHOD PER STATE RESIDENT PROJECT REPRESENTATIVE'S DISCRETION.
17. WATER MAIN MIN. COVER SHALL BE 30", MAX. COVER SHALL BE 54" UNLESS OTHERWISE APPROVED BY UTILITY OWNER.
18. ALL INCIDENTAL WORK, INCLUDING LABOR AND MATERIALS, NECESSARY TO COMPLETE THE PROJECT AS SHOWN IN THE CONTRACT DOCUMENTS, FOR WHICH A SEPERATE PAY ITEM IS NOT SHOWN SHALL BE PERFORMED BY THE CONTRACTOR AND NO ADDITIONAL PAYMENT SHALL BE MADE. THE COST OF THIS WORK SHALL BE MERGED INTO THE UNIT PRICES BID FOR THE BID ITEMS SHOWN.

LEGEND

- PROPOSED CENTERLINE
- PROP/EXIST. R.O.W.
- W — PROPOSED WATER LINE
- PROPOSED STORM SEWER
- PROPERTY LINE
- 8" SA — EXIST. SANITARY SEWER
- 8" W — EXIST. WATER LINE
- P/T — EXIST. POWER LINE
- 3" G — EXIST. NATURAL GAS
- EXIST. STORM SEWER
- EXIST. STREAM
- W.M. EXIST. WATER METER
- G.M. EXIST. GAS METER
- MB EXIST. MAILBOX

UTILITY INFORMATION

UTILITY TITLE ADDRESS	HARRIMAN UTILITY BOARD P.O. BOX 434 HARRIMAN, TN. 37748
CONTACT PERSON PHONE	FRANKIE DAVIS (865) 882-3242

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
12-23-13

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

ESTIMATED QUANTITIES

Survey & Design Section

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U2-2
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 8" DIA.
WATER LINE.

BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799

LIMIT OF CONST.
STA. 12+50.00
N 576750.11
E 2394970.98

INSTALL (1) 8" M.J. 22.5 DEG. BEND

INSTALL APPROX. 147 L.F. 8" D.I.P. WATER LINE

INSTALL (1)-8" M.J. 22.5 DEG. BEND

STA. 0+00 BEGIN LINE "C" INSTALL (1) 6" x 6" TAPPING SLEEVE & VALVE ON EXIST. 6" WATER LINE.

12+54.73 S.R. 29 = 14+00.00 RURITAN RD. S.E.
N 576837.9380
E 2395092.4090

INSTALL (1) 10" x 6" M.J. TEE, (1) 10" GATE VALVE & BOX AND (1) 10" M.J. PLUG.

CUT AND CAP EXIST. 6" WATER LINE

STA. 0+17 LINE "C" INSTALL (1) 10" x 8" M.J. TEE.

STREAM CROSSING SEE DETAIL SHEET U2-6

REV. 12-23-13:
REVISED TO ADD 8" DIA.
WATER LINE.

STA. 0+00 BEGIN LINE "A"= STA. 1+80 E.O.L. LINE "C"

STA. 0+64 LINE "A" INSTALL (1) FIRE HYDRANT ASSEMBLY

19+02.78 S.R. 29 = 15+00.00 TIDWELL CIRCLE
N 577420.7310
E 2394826.5520

STA. 4+65 LINE "A" INSTALL (1)-10" M.J. 90 DEG. BEND

INSTALL 98 L.F. OF 20" STEEL CASING

STA. 6+00 LINE "A", INSTALL (1)-10"x10" TEE, (2)-10" GATE VALVES, (1) 10" x 2" CAP W/ 2" THREADED OPENING

INSTALL APPROX. 30 L.F. 20" STEEL CASING BENEATH STREAM. MIN. 24" COVER.

CUT AND CAP EXIST. 8" WATER LINE

CUT IN (1) 8" x 8" M.J. TEE, (1) 8" GATE VALVE & BOX, AND (1) 8" M.J. PLUG

SLEEVE CONNECTION TO EXIST. 2" WATER LINE

INSTALL (1)-2" PVC 45 DEG. BEND

EXIST. 2" BLOW-OFF VALVE (TO BE ABANDONED)

INSTALL APPROX. 75 L.F. 2" PVC WATER LINE

CUT AND CAP EXIST. 2" WATER LINE

INSTALL (1) 2"x2" PVC TEE AND (2) 2" GATE VALVE & BOX

INSTALL APPROX. 123 L.F. 2" PVC WATER LINE

SLEEVE CONNECTION TO EXIST. 2" PVC WATER LINE AT EXIST. 45 DEG. BEND

LIMIT OF CONST.
STA. 17+00.00
N 577501.73
E 2396008.65

MATCH LINE STATION 21+00 SEE SHEET NO. U2-3

LINE "A"

NEW PERMANENT UTILITY EASEMENT (TYP.)

RURITAN RD. (U.S. HWY. 29) S.E.

CLEAN OUT
TOP-847.27
INV-843.93

CLEAN OUT
TOP-846.60
INV-845.39

EXIST. PERM. DRAIN. ESMT.

EXIST. 2" PE WATER LINE

EXIST. 6" P.E. GAS LINE

EXIST. 2" GALV. WATER LINE

EXIST. 2" P.E. GAS LINE

EXIST. 2" STEEL GAS LINE

PROP. R.O.W.

CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.4073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106899
STATE OF TENNESSEE
12-23-13

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

Nashville Army Corps of Engineers Survey & Design Section

2/24/2013 10:11:00 AM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
REBECCA A. BROWN (839 RURITAN ROAD)	CONTACT BECKY BROWN 2 WEEKS PRIOR TO WORKING ON PROPERTY. TRY TO WORK ON PROPERTY DURING TIMES THE BUSINESS IS CLOSED (JANUARY - FEBRUARY OR JULY - AUGUST). BE CAREFULL NOT TO DAMAGE FRENCH DRAINNEAR NEW PROPERTY LINE. NO EQUIPMENT IS TO BE DRIVEN ON CONCRETE PARKING AREA OUTSIDE OF EASEMENT.
NEW WILLARD PARK CEMETARY (RURITAN ROAD)	CARE MUST BE TAKEN TO ENSURE THAT NO GRAVES WILL BE DISTURBED.
GEORGE D. & HELEN W. WHALEY (814 RURITAN ROAD)	MAINTAIN ACCESS TO DRIVEWAY (RENTAL PROPERTY)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U2-3
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.

SR 29-CURVE C3
PI 27+72.03
N 578,235.8480
E 2,394,525.9210
Δ 5° 22' 29" (RT)
D 1° 00' 00"
R 5,729.58
L 537.46
T 268.93
SE RC
DESIGN SPEED 45 MPH
TRANS. LENGTH 140

MATCH LINE HASSLER MILL RD SEE SHEET NO. U2-6

LIMIT OF CONST.
STA. 27+50.00
N 578231.86
E 2394271.29

22+07.19 S.R. 29 =
20+00.00 ROSSER ST.
N 577708.8920
E 2394729.2950

25+02.00 S.R. 29 =
25+00.00 SCOTT LN.
N 577983.9290
E 2394623.1470

STA. 28+32.27 S.R. 29 =
30+00.00 HASSLER MILL RD.
N 578295.2817
E 2394513.1155

32+07.86 S.R. 29 =
40+00.00 SCARBRO RD.
N 578655.7310
E 2394407.6680

SLEEVE CONNECTION TO EXISTING 6" WATER LINE

CUT AND CAP EXIST. 6" WATER LINE

INSTALL APPROX. 35 L.F. 12" STEEL CASING BENEATH PROPOSED BOX CULVERTS. MAX CROWN ELEVATION 826.5'.

CONTRACTOR TO USE SPECIAL PRECAUTION IN THIS ARE TO AVOID CONCRETE BASEMENT OF DEMOLISHED BUILDING. WATER LINE SHOULD AVOID THIS STRUCTURE UNLESS OTHERWISE PERMITTED BY STATE RESIDENT PROJECT REPRESENTATION.

INSTALL 125 L.F. OF 12" STEEL CASING

STA. 18+81
INSTALL (1)-10"x6" TEE, (2)-10" GATE VALVES, (1)-6" GATE VALVE

INSTALL NEW 1" SERVICE LINE IN 2" PVC CASING UNDER ROADWAY

INSTALL (1) FIRE HYDRANT ASSEMBLY

INSTALL NEW 1" SERVICE LINE IN 2" PVC CASING UNDER ROADWAY

STA. 12+32 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND

STA. 11+90 LINE "A"
INSTALL (1) 10" M.J. 11.25 DEG BEND

INSTALL APPROX. 310 L.F. 6" D.I. WATER LINE

NEW PERMANENT UTILITY EASEMENT, (TYP.)

STA. 8+18 LINE "A"
INSTALL (1) AIR-RELEASE VALVE

STA. 8+48 LINE "A"
INSTALL (1)-10"x10" M.J. TEE, (2) 10" M.J. GATE VALVES & BOXES, (1) 10"x2" TAP PLUG W/ (1) 2" GATE VALVE & BOX

STA. 8+95 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND

STA. 8+98 LINE "A"
INSTALL (1) FIRE HYDRANT ASSEMBLY

STA. 9+08.28 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND

INSTALL APPROX. 88 L.F. 1" WATER LINE

INSTALL APPROX. 160 L.F. 2" PVC WATER LINE

INSTALL NEW SERVICE LINE AND METER, (TYP.)

CUT AND CAP EXIST. 2" WATER LINE

INSTALL (2) 2" 45 DEG BENDS

SLEEVE CONNECTION TO EXIST. 2" WATER LINE

INSTALL (1) 1" 90 DEG BEND

CUT AND CAP EXIST. 1" WATER LINE

INSTALL 10" D.I. WATER LINE

CUT IN (1)- 1" 90 DEG BEND TO EXIST. 1" WATER LINE

STA. 13+17 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND

STA. 13+30 LINE "A"
INSTALL (1) AIR-RELEASE VALVE

STA. 15+09 LINE "A"
INSTALL (1)-10"x6" M.J. TEE W/ (1) 6" M.J. GATE VALVE & BOX

INSTALL APPROX 89 L.F. 6" D.I. WATER LINE

CUT AND CAP EXIST. 6" WATER LINE

CUT IN (1)- 6" M.J. 45 DEG BEND ON EXISTING 6" WATER LINE

INSTALL (1) FIRE HYDRANT ASSEMBLY

STA. 15+25 LINE "A"
INSTALL (1)-10"x6" M.J. TEE W/ (2) 10" M.J. GATE VALVES & BOXES AND (1) 6" M.J. GATE VALVE & BOX

INSTALL (1)-6" M.J. 45 DEG. BEND

STA. 16+01 LINE "A"
INSTALL (1) 10" M.J. 11.25 DEG BEND

CUT AND CAP EXIST. 6" WATER LINE

CUT IN (1)- 6" M.J. 90 DEG. BEND ON EXISTING 6" WATER LINE

INSTALL 10" D.I. WATER LINE

INSTALL 228 L.F. 6" D.I. FOR FIRE HYDRANT ASSEMBLY. APPROX. 105 L.F. 12" STL. CASING UNDER ROADWAY.

INSTALL 228 L.F. 6" D.I. FOR FIRE HYDRANT ASSEMBLY. APPROX. 105 L.F. 12" STL. CASING UNDER ROADWAY.

INSTALL APPROX. 30 L.F. 6" D.I. WATER LINE

INSTALL (1)-6" M.J. 90 DEG. BEND

STA. 20+89 LINE "A"
INSTALL (1) 10" M.J. 11.25 DEG. BEND.

STA. 21+14 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND.

SEE SHEET NO. U2-4

MATCH LINE STA. 35+00

STA. 21+00 SEE SHEET NO. U2-2

10+00

15+00

20+00

LINE "A"

HASSLER MILL ROAD

SCOTT LANE

SCARBRO ROAD

LIMIT OF CONST.
STA. 21+95.00
N 577779.10
E 2394911.22

LIMIT OF CONST.
STA. 26+50.00
N 578044.44
E 2394760.40

LIMIT OF CONST.
STA. 41+32.81
N 578687.57
E 2394536.57

PROPOSED 10" WATER LINE
5.0'
5.0'
PROPOSED 12" SEWER LINE
PROPOSED 6" GAS LINE
UTILITY LINE SPACING DETAIL

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
7-12-13

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

STA. 21+00.00 TO STA. 35+00.00
SCALE: 1"=50'

Survey & Design Division

7/15/2013 10:46:58 AM
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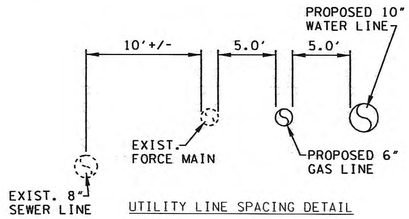
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
MARION KITTRELL (411 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION (MUFFLER SHOP)
LANN DAVID & MILDRED F. WEBB (316 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION. NO EQUIPMENT ON PROPERTY OUSIDE EASEMENT.
ROANE COUNTY BOARD OF EDUCATION (RURITAN ROAD)	CONTACT ROBERT JONES OR GARY AYTES PRIOR TO BEGINNING CONSTRUCTION ON SCHOOL PROPERTY. MAINTAIN WATER, SEWER, AND GAS UTILITIES DURING OPERATING HOURS.



UTILITY LINE SPACING DETAIL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U2-4
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T.
ROADWAY REVISION

INSTALL NEW 2" SERVICE LINE IN 4" STL. CASING UNDER ROADWAY

INSTALL NEW 1" SERVICE LINE IN 2" PVC CASING UNDER ROADWAY

CUT IN (1)- 6" M.J. 45 DEG BEND ON EXISTING 6" WATER LINE

INSTALL APPROX. 104 L.F. 6" D.I. WATER LINE

INSTALL (1)-6" M.J. 45 DEG. BEND

STA. 30+96 LINE "B" INSTALL (1) 10"x6" M.J. TEE, (2) 10" GATE VALVES AND BOXES AND (1) 6" GATE VALVE & BOX

CUT AND CAP EXIST. 6" WATER LINE

STA. 31+62 LINE "A" INSTALL (1) 10" M.J. 11.25 DEG BEND

INSTALL NEW ¾" SERVICE LINE AND METER, (TYP.)

STA. 31+91 LINE "A" INSTALL (1) 10" M.J. 11.25 DEG BEND

INSTALL 10" D.I. WATER LINE

STA. 4+98 LINE "B" INSTALL (1)-6"x6" M.J. TEE AND (3) 6" GATE VALVES & BOXES

INSTALL 6" D.I. WATER LINE

INSTALL 6 L.F. 10" DIP AND (1) 10" CAP

STA. 27+80 LINE "A" INSTALL (1) 10"x10" M.J. TEE W/ (1) 10"x6" M.J. REDUCER FOR HYDRANT CONNECTION. INSTALL (1) FIRE HYDRANT ASSEMBLY.

STA. 30+51 LINE "A" INSTALL (1)-10"x10" M.J. TEE (1) 10" M.J. GATE VALVE & BOX.

STA. 23+99 LINE "A" INSTALL (1) 10" M.J. 22.5 DEG BEND.

STA. 26+33 LINE "A" INSTALL (1) 10" M.J. 22.5 DEG BEND.

STA 26+42 LINE "A" INSTALL (1)-10"x10" M.J. TEE, (1)-10" M.J GATE VALVE & BOX, (1) 10"x6" M.J. REDUCER AND (1) 6" GATE VALVE & BOX

INSTALL APPROX. 304 L.F. 6" D.I. WATER LINE

STA. 29+37 LINE "A"= STA. 0+00 LINE "B" INSTALL (1) 10"x10" M.J. TEE, (3) 10" GATE VALVES AND (1) 10" X 6" REDUCER

INSTALL 90 L.F. OF 20" STEEL CASING

INSTALL 6" D.I. WATER LINE

INSTALL APPROX. 220 L.F. 6" D.I. WATER LINE

INSTALL (1)-6" M.J. 22.5 DEG. BEND

INSTALL (1)-6" M.J. 45 DEG. BEND

CUT AND CAP EXIST. 6" WATER LINE

RE-CONNECT EXISTING F.H. TO PROPOSED WATER LINE

CUT IN (1)- 6"x6" M.J. TEE W/ (1) 6" GATE VALVE & BOX ON EXISTING 6" WATER LINE

INSTALL (1)-6" M.J. 90 DEG. BEND

CUT AND CAP EXIST. 6" WATER LINE

CUT IN (1)- 6" M.J. 90 DEG BEND ON EXISTING 6" WATER LINE

NEW PERMANENT UTILITY EASEMENT, (TYP.)

LIMIT OF CONST. STA. 48+70.00 N 579652.76 E 2394141.53

LIMIT OF CONST. STA. 56+05.00 N 580065.09 E 2394362.93

40+25.00 S.R. 29 = 45+00.00 CARLOCK AVE. N 579458.9019 E 2394261.4850

42+25.25 S.R. 29 = 50+00.00 CARLOCK AVE. N 579658.9019 E 2394261.4850

45+94.96 S.R. 29 = 55+00.00 SCHOOL ST. N 580028.1979 E 2394244.0169

CARLOCK AVENUE

BREAZEALE STREET

FLANDERS AVENUE

SCHOOL STREET

RURITAN ROAD

LINE "A"

LINE "B"

MATCH LINE STA. 35+00 SEE SHEET NO. U2-3

MATCH LINE STA. 48+00 SEE SHEET NO. U2-5

EXISTING 6" WATER LINE PER H.U.B. (CONTRACTOR

EXISTING 2" P.E. GAS LINE PER HUD.

N

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

STA. 35+00.00 TO STA. 48+00.00
SCALE: 1"=50'

TIMOTHY F. TUCKER REGISTERED ENGINEER AGRICULTURE 7-12-13 No. 106898 STATE OF TENNESSEE

Survey & Design Division

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
ANN MCKINNEY & SHELBY SIKES (107 PANSY HILL RD)	BEAUTY SHOP IS CLOSED ON SATURDAYS, SUNDAYS, AND MONDAYS. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS BEFORE BEGINNING WORK IN FRONT OF THE SALON SO THEY CAN DIRECT CUSTOMERS WHERE TO PARK (TUESDAY - FRIDAY).
HASKELL HILL (230 RURITAN ROAD)	CONTRACTOR TO ENSURE TENANTS HAVE ACCESS TO THE BACK OF THE BUILDING DURING CONSTRUCTION.
DONALD & PRECILLA LOMBARD (182 STATE STREET)	CONTRACTOR TO MAINTAIN ACCESS TO BARBER SHOP AND PARKING LOT DURING CONSTRUCTION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U2-5
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T.
ROADWAY REVISION

STA. 47+01 LINE "A" E.O.L.
INSTALL (1) 10" x 10" TAPPING SLEEVE AND VALVE ON EXISTING 10" WATER LINE

INSTALL 85 L.F. OF 20" STEEL CASING PIPE

STA. 45+86 LINE "A"
INSTALL (1)-10" M.J. 45 DEG. BEND

INSTALL APPROX. 38 L.F. 6" D.I. WATER LINE

INSTALL 6X6 TAPPING SLEEVE W/ 6" GATE VALVE AND BOX

STA. 44+61 LINE "A"
INSTALL (1)-10"x6" M.J. TEE AND (2) 10" GATE VALVES

INSTALL 10" D.I. WATER LINE

CUT AND CAP EXIST. 6" WATER LINE

INSTALL 2" BLOW OFF ASSEMBLY 8' PAST SERVICE TIE-IN.

CUT AND CAP EXIST. 2" WATER LINE

STA. 41+58 LINE "A"
INSTALL (1) 10" M.J. 90 DEG BEND

STA. 41+34 LINE "A"
INSTALL (1) 10" M.J. 45 DEG BEND

STA. 42+49 LINE "A"
INSTALL (1) AIR-RELEASE VALVE

STA. 39+17 LINE "A"
INSTALL FIRE HYDRANT ASSY.

INSTALL 65 L.F. OF 20" STEEL CASING

INSTALL 2" M.J. 90° BEND

INSTALL APPROX. 295 L.F. 2" PVC WATER SERVICE LINE

STA. 42+29 LINE "A"
INSTALL (1) 10"x10" M.J. TEE, (2) 10" GATE VALVES, (1)-10"x2" PLUG W/ 2" THREADED TAP AND (1) 2" GATE VALVE & BOX

STA. 7+57 LINE "B"
INSTALL (1) 6" M.J. 22.5 DEG BEND

STA. 40+49 LINE "A"
INSTALL (1) 10" M.J. 11.25 DEG BEND

STA. 40+98 LINE "A"
INSTALL (1) 10" M.J. 22.5 DEG BEND

RE-CONNECT WATER SERVICES. (TYP.)

STA. 7+25 LINE "B"
INSTALL (1) AIR-RELEASE VALVE

INSTALL 6" D.I. WATER LINE

STA. 12+79 LINE "B"
INSTALL (1) 6" M.J. 22.5 DEG BEND

CUT AND CAP EXIST. 4" WATER LINE

CUT AND CAP EXIST. 6" WATER LINE

SLEEVE CONNECTION TO EXISTING 6" WATER LINE

STA. 12+85 LINE "B"
INSTALL (1) 6" x 6" M.J. TEE

STA. 12+90 LINE "B"
INSTALL (1) 6" x 6" M.J. TEE, (1) 6" x 2" PLUG W/ 2" THREADED TAP AND (1) 2" GATE VALVE & BOX

SLEEVE CONNECTION TO EXIST. 2" WATER LINE

STA. 12+96 LINE "B"
INSTALL (1) 6" M.J. 45 DEG BEND

STA. 13+17LINE "B" (E.O.L.)
INSTALL (1) 6" M.J. 45 DEG BEND. SLEEVE CONNECTION TO EXISTING 6" WATER LINE.

INSTALL APPROX. 35 L.F. 6" D.I. WATER LINE

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

52+61.83 S.R. 29 =
65+00.00 STATE ST. S.E.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

LIMIT OF CONST.
STA. 82+10.00
N 580468.83
E 2394296.36

LIMIT OF CONST.
STA. 76+28.30
N 580646.87
E 2394394.68

LIMIT OF CONST.
STA. 74+32.76
N 580802.37
E 2394516.77

MATCH LINE STATION 48+00 SEE SHEET NO. U2-4

STATE STREET

PANSY HILL ROAD

RUSSELL AVENUE

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

STA. 48+00.00 TO END OF PROJ.
SCALE: 1"=50'

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
7-12-13

Survey & Design Bureau

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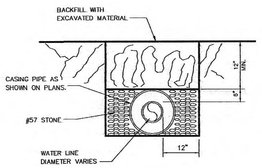
TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

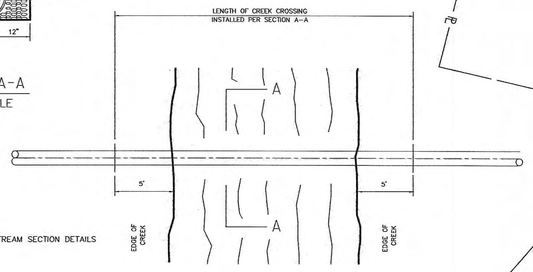
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U2-6
		73035-3209-14	

ROANE CO.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.



SECTION A-A
NOT TO SCALE



TYPICAL CREEK CROSSING
NOT TO SCALE

NOTE:
1. SEE SHEET 2F OF ROADWAY PLANS FOR STREAM SECTION DETAILS

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT #100 - TENNESSEE VALLEY AUTHORITY (TVA)



HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

HASSLER MILL ROAD AND BAUMGARTNER ROAD
SCALE: 1"=50'

7/15/2013 8:19:56 AM
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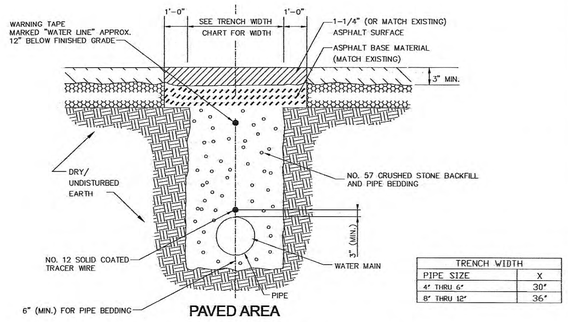
TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.



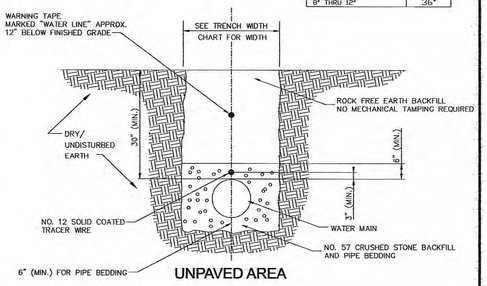
TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"

PAVED AREA

TYPICAL BACKFILL & BEDDING METHOD

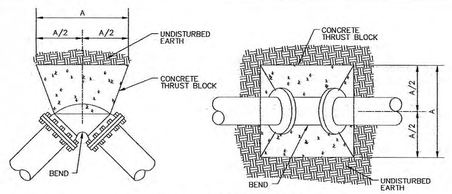
NOTES:

1. EDGE TO BE SAWED WITH A CONCRETE SAW TO A NEAT SQUARED EDGE. BROOMED CLEAN OF DUST BEFORE TACK COAT IS APPLIED.
2. EDGES TO BE TACKED WITH EMULSIFIED ASPHALT TACK CRS-1 OR CRS-11
3. CUTTING AND REPAIRING EXISTING PAVEMENT CONCRETE OR GRAVEL SHALL BE IN ACCORDANCE WITH OWNER'S REQUIREMENTS



TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"

UNPAVED AREA



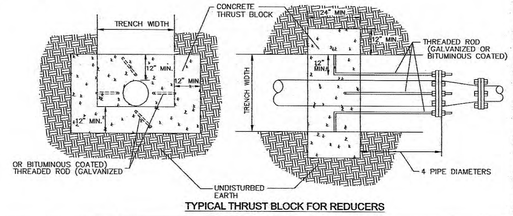
TYPICAL THRUST BLOCK FOR BENDS

NOTES:

1. FITTING JOINTS SHALL NOT BE POURED IN CONCRETE OR HAVE CONCRETE SPILLED ON THE BOLTS OR NUTS. THE FITTING SHALL BE WRAPPED IN A LAYER OF POLYETHYLENE PLASTIC PRIOR TO POURING THE THRUST BLOCK.
2. ROD AND EYE BOLT DIAMETER SHALL BE A MINIMUM OF 3/4" AND SHALL MATCH THE SIZE OF THE BOLT PROVIDED WITH THE FITTING.
3. CONTRACTOR SHALL REPLACE FITTING BOLTS WITH THREADED ROD FOR 1/2 OF THE BOLTS SUPPLIED WITH EACH FITTING. RODS SHALL BE EQUALLY SPACED.

SIZE	TYPE 11-1/4° BEND	22-1/2° BEND	45° BEND	90° BEND
2-8	12	12	12	16
8	12	12	16	22
10	12	14	20	28

THRUST BLOCK DIMENSION "A"
NOT TO SCALE



TYPICAL THRUST BLOCK FOR REDUCERS

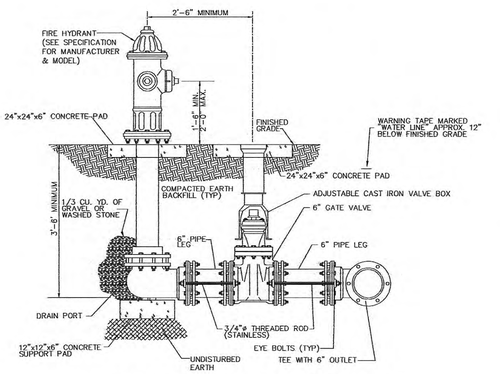
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U2-7
		73035-3209-14	

ROANE CO.

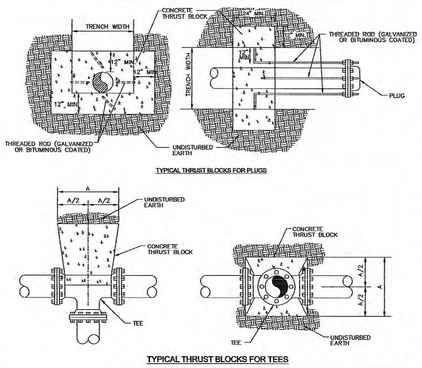
REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.



TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



TYPICAL THRUST BLOCKS FOR PLUGS

TYPICAL THRUST BLOCKS FOR TEES

NOTES:

1. FITTING JOINTS SHALL NOT BE POURED IN CONCRETE OR HAVE CONCRETE SPILLED ON THE BOLTS OR NUTS. THE FITTING SHALL BE WRAPPED IN A LAYER OF POLYETHYLENE PLASTIC PRIOR TO POURING THE THRUST BLOCK.
2. ROD AND EYE BOLT DIAMETER SHALL BE A MINIMUM OF 3/4" AND SHALL MATCH THE SIZE OF THE BOLT PROVIDED WITH THE FITTING.
3. CONTRACTOR SHALL REPLACE FITTING BOLTS WITH THREADED ROD FOR 1/2 OF THE BOLTS SUPPLIED WITH EACH FITTING. RODS SHALL BE EQUALLY SPACED.

SIZE	TEE	PLUG
2-6	16	16
8	22	22
10	28	28
12	36	36
14	42	42
16	48	48
18	54	54
20	60	60
24	72	72
30	90	90
36	108	108
48	124	124

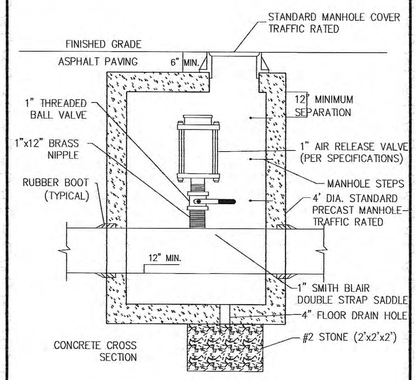
THRUST BLOCK DIMENSION "A"
NOT TO SCALE

Pipe Size (inches)			
Fitting/Valve Type	2	6	8 OR 10
Minimum Restrained Length (Feet)			
Plug	50	75	105
Inline Valve	50	75	105
Tee	20	20	20
90° Bend	16	20	32
45° Bend	16	20	20
22.5° Bend	16	20	20
11.25° Bend	16	20	20
5° Bend	16	20	20

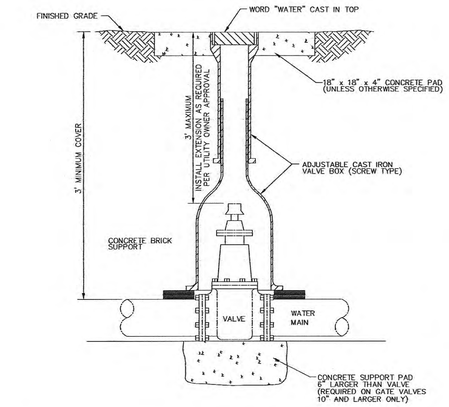
NOTES:

1. CONTRACTOR SHALL USE RESTRAINED JOINT FITTINGS OR REACTION BLOCKING FOR EACH FITTING INSTALLED ON THE PROJECT. REACTION BLOCKING SHALL ONLY BE USED FOR FITTINGS AT TIE-IN CONNECTIONS.
2. WHERE RESTRAINED JOINT FITTINGS ARE REQUIRED BY THE PLANS OR SPECIFICATIONS, RESTRAINED JOINT FITTINGS MUST BE INSTALLED AS REQUIRED BY THE TABLES AND NOTES FOUND WITHIN THE PLANS AND SPECIFICATIONS.
3. MECHANICAL RESTRAINED JOINT FITTINGS SHALL BE "MEGALUG" AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL
4. CONTRACTOR SHALL INSTALL RESTRAINING GASKES FOR PUSH-ON JOINT PIPE A MINIMUM DISTANCE FROM EACH VALVE OR FITTING AS REQUIRED IN THE ABOVE TABLE.
5. RESTRAINING GASKETS FOR PUSH-ON JOINT PIPE SHALL BE UTILITY OWNER SPECIFICATIONS.

THRUST RESTRAINT JOINT TABLE

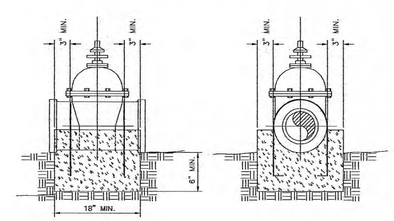


STANDARD AIR RELEASE VALVE

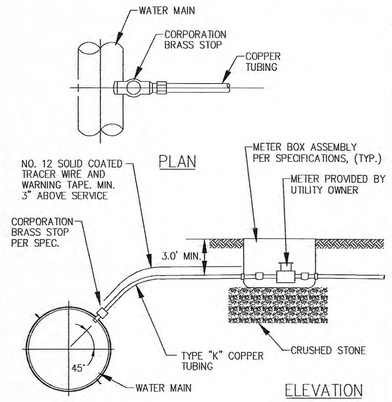


TYPICAL VERTICAL GATE VALVE INSTALLATION

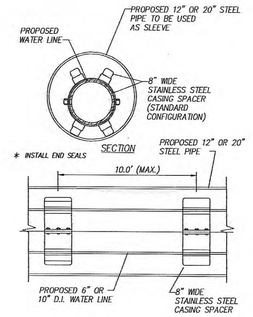
SIZE OF VALVE	CONCRETE CU. FT.
2"& 2 1/4"	1.0
3"& 4"	1.0
6"	1.3
8"	1.5
10"	1.8



CONCRETE BLOCKING FOR VALVES
N.T.S.



WATER SERVICE DETAIL
N.T.S.



NOTES:

1. ACCEPTABLE MANUFACTURERS OF BOTH SPACERS AND END SEALS FOR CASING PIPE AS FOLLOWS:
   PIPELINE SEAL AND INSULATORS, INC. (PSI), HOUSTON, TX.
   ADVANCE PRODUCTS AND SYSTEMS, INC. LAFAYETTE, LA.
   CASCADE WATERWORKS MFG. CO., YORKVILLE, IL.

SPACER DETAIL
N.T.S.

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
7-12-13

HARRIMAN UTILITY BOARD

WATER LINE RELOCATION

TYPICAL DETAILS
SCALE: AS SHOWN

Sherry A. Dodge
Sherry A. Dodge

7/5/2013 8:20:29 AM
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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-1
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED QUANTITIES TO ADD 8" DIA. SAN SEWER LINES J, K, AND L, 12" STEEL CASING, ADDED SHEET U3-9.

REV. 12-23-13:
REVISED QUANTITIES TO ADD 8" DIA. SANITARY SEWER LINES J, K, AND L, 12" STEEL CASING, REFLECT MATERIAL CHANGES 6", 8", AND 12" PVC TO DIP.

INDEX OF DRAWINGS

SHT. NUMBER	SHT. NAME
U3-1	ESTIMATED QUANTITIES (SEWER)
U3-2	UTILITY RELOCATION PLAN (SEWER)
U3-3	UTILITY RELOCATION PLAN (SEWER)
U3-4	UTILITY RELOCATION PLAN (SEWER)
U3-5	UTILITY RELOCATION PLAN (SEWER)
U3-6	UTILITY RELOCATION PLAN (SEWER)
U3-7	UTILITY RELOCATION PROFILE (SEWER)
U3-8	UTILITY RELOCATION PROFILE (SEWER)
U3-9	UTILITY RELOCATION PROFILE (SEWER)
U3-10	TYPICAL SEWER DETAILS

REV. 12-23-13:
REVISED TO ADD SHEET.

NOTES	ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
①	737-01.15	10IN EPOXY COATED DIP FORCE MAIN	L.F.	45	0%	100%
①	737-05.01	8IN DIP GRAVITY SEWER 0FT-6FT DEPTH	L.F.	30	0%	100%
①	737-05.02	8IN DIP GRAVITY SEWER 6FT-12FT DEPTH	L.F.	230	0%	100%
①	737-05.03	8IN DIP GRAVITY SEWER 12FT-18FT DEPTH	L.F.	105	0%	100%
①	737-05.09	12IN DIP GRAVITY SEWER 0FT-6FT DEPTH	L.F.	45	3.7%	96.3%
①	737-05.10	12IN DIP GRAVITY SEWER 6FT-12FT DEPTH	L.F.	800	7.3%	92.7%
①	737-05.11	12IN DIP GRAVITY SEWER 12FT-18FT DEPTH	L.F.	165	12.5%	87.5%
①	737-05.41	6IN DIP SERVICE LATERAL	L.F.	730	0%	100%
①	737-05.51	8IN PVC GRAVITY SEWER 0FT-6FT DEPTH	L.F.	35	0%	100%
①	737-05.52	8IN PVC GRAVITY SEWER 6FT-12FT DEPTH	L.F.	1920	0%	100%
①	737-05.53	8IN PVC GRAVITY SEWER 12FT-18FT DEPTH	L.F.	515	0%	100%
①	737-05.68	12IN PVC GRAVITY SEWER 6FT-12FT DEPTH	L.F.	170	6.8%	93.2%
②	737-06.62	BORE/JACK 12IN STEEL CASING PIPE-UNCON.	L.F.	195	0%	100%
②	737-06.64	BORE/JACK 16IN STEEL CASING PIPE-UNCON.	L.F.	110	0%	100%
②	737-06.67	BORE/JACK 24IN STEEL CASING PIPE-UNCON.	L.F.	100	0%	100%
③	737-06.89	OPEN CUT 12IN STEEL CASING PIPE	L.F.	195	0%	100%
③	737-06.90	OPEN CUT 16IN STEEL CASING PIPE	L.F.	110	0%	100%
③	737-06.93	OPEN CUT 24IN STEEL CASING PIPE	L.F.	100	0%	100%
④	737-07.01	48IN MANHOLE 0FT-4FT DEPTH	EACH	1	0%	100%
④	737-07.03	48IN MANHOLE 6FT-8FT DEPTH	EACH	3	0%	100%
④	737-07.04	48IN MANHOLE 8FT-10FT DEPTH	EACH	9	0%	100%
④	737-07.05	48IN MANHOLE 10FT-12FT DEPTH	EACH	5	0%	100%
④	737-07.06	48IN MANHOLE 12FT-14FT DEPTH	EACH	5	0%	100%
⑤	737-07.56	MANHOLE DROP CONNECTION ASSEMBLY	EACH	1	0%	100%
⑥	737-08.01	DI FITTINGS	LB.	760	0%	100%
①	737-08.05	6" PVC PIPE FOR SERVICE LATERAL	L.F.	700	0%	100%
⑤	737-08.08	6" CLEAN OUT ASSEMBLY	EACH	16	0%	100%
⑦	737-12.02	CONNECT 8IN SEWER TO EXIST. MANHOLE	EACH	5	0%	100%
⑦	737-12.03	CONNECT 10-18IN SEWER TO EXIST. MANHOLE	EACH	3	0%	100%
⑦	737-12.19	CONNECT TO 10IN FORCE MAIN	EACH	2	0%	100%
⑧	737-11.15	48" MH ADJUSTMENT INCREASE HEIGHT	V.L.F.	1	0%	100%
⑨	737-11.25	RETIRE IN PLACE 48" MANHOLE	EACH	14	0%	100%

FOOTNOTES:

① INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE EXCAVATION INCLUDING BUT NOT LIMITED TO BEDDING, BACKFILLING, THRUST BLOCKING, PIPE FUSION, APPUTENANCES, FLOWABLE FILL, MAINTAINING THE TRENCH, TESTING, CHECK DAMS, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE FOR GRAVITY SEWER LINES OR FORCE MAINS AS SPECIFIED ON THE PLANS. DUCTILE IRON PIPE GRAVITY SEWER LINES SHALL BE EPOXY LINED.

② INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, ANY OTHER APPURTENANCE TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS, AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

③ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, STONE BACKFILL, TEMPORARY PAVEMENT, AND ANY OTHER APPURTENANCE TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS, AND TRAFFIC CONTROL.

④ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR INSTALLATION OF PRECAST MANHOLE BOTH PREFORMED BASE OR OPEN BOTTOM (DOGHOUSE), INCLUDING BUT NOT LIMITED TO VENT ASSEMBLY (WHERE REQUIRED), CRUSHED STONE, PIPE TO MANHOLE CONNECTORS, EXCAVATION, BACKFILL, BUTYL RESIN GASKET, MANHOLE STEPS, ASPHALTIC WATERPROOFING, FRAME AND COVER, AND TRAFFIC CONTROL.

⑤ INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED AND DETAILED IN THE PLANS AND SPECS.

⑥ INCLUDES FITTINGS, GLANDS AND RESTRAINT DEVICES DESCRIBED IN POUNDS.

⑦ INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR CONNECTING TO AN EXISTING FORCE MAIN, SEWER LINE, PUMP STATION, OR MANHOLE AS SPECIFIED ON PLANS, INCLUDING TRAFFIC CONTROL.

⑧ INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR INCREASING OR DECREASING HEIGHT OF MANHOLE TO FINISHED ROAD GRADE, INCLUDING BUT NOT LIMITED TO ADDITION OR REMOVAL OF BARREL SECTIONS OR FRAME RINGS AND ADJUSTMENTS TO FRAME AND COVER.

⑨ INCLUDES ALL LABOR, EQUIPMENT, DISPOSAL OF WASTE MATERIAL, DRILLING HOLES IN BASE FOR PROPER DRAINAGE, REMOVAL OF NECESSARY BARREL SECTIONS FOR PROPER GRADE AND STONE BACKFILL.

GENERAL NOTES:

1. CONSTRUCTION OF THE SANITARY SEWER SHALL CONFORM TO THE UTILITY SPECIFICATIONS AND INFORMATION CONTAINED HEREIN.
2. ALL WORK SHALL BE PERFORMED BY A TENNESSEE LICENSED UTILITY CONTRACTOR.
3. UNDERGROUND UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, WATER, SEWER, GAS, STEAM PIPING/DUCT WORK, ELECTRIC, COMMUNICATION SERVICES, STREET LIGHTING AND TRAFFIC DETECTOR LOOPS. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL SUCH FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL SUCH FACILITIES THAT ARE DAMAGED DURING CONSTRUCTION. PAYMENT FOR LOCATING, PROTECTING, COORDINATING AND RE-PAIRING EXISTING FACILITIES WILL BE INCLUDED IN OTHER ITEMS OF WORK AND NO ADDITIONAL COMPENSATION WILL BE MADE. ALL REPAIRS SHALL BE DONE IN ACCORDANCE WITH STANDARDS AND REQUIREMENTS OF THE UTILITY'S OWNER. UTILITY SUPPORT METHODS WILL BE SUBMITTED PRIOR TO CONSTRUCTION FOR APPROVAL.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SUITABLE SIGNAGE, BARRICADES, AND LIGHTS FOR PROTECTION OF TRAFFIC. ANY EXISTING ROAD SIGN REMOVED FOR CONSTRUCTION SHALL BE REPLACED BY THE END OF THE WORKING DAY. TEMPORARY STOP SIGNS SHALL BE ERECTED PRIOR TO REMOVAL OF PERMANENT STOP SIGNS.
5. THE CONTRACTOR SHALL NOT CLOSE OR BLOCK ANY HIGHWAY, STREET, OR ROADWAY WITHOUT FIRST OBTAINING ALL REQUIRED PERMITS FROM THE GOVERNING ENTITY (TDOT, CITY, COUNTY, ETC...).
6. THE CONTRACTOR SHALL PROVIDE ACCESS TO UTILITY COMPANIES FOR MAINTENANCE AND WORK ON THEIR UTILITIES DURING THE COURSE OF WORK.
7. SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESET AS DIRECTED BY THE RESIDENT PROJECT REPRESENATIVE. PRIOR TO DISTURBANCE, CONTACT THE STATE RESIDENT PROJECT REPRESENATIVE FOR MONUMENT INFORMATION.
8. CONTRACTOR SHALL VERIFY WORK IN FIELD AND SHALL SATISFY HIMSELF AS TO THE ACCURACY BETWEEN WORK SET FORTH ON THESE PLANS AND THE WORK REQUIRED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT PROJECT REPRESENATIVE PRIOR TO THE START OF CONSTRUCTION.
9. THE EXISTING UTILITIES SHOWN AND INDICATED ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UNDERGROUND UTILITIES, ALL COSTS ASSOCIATED WITH POTHOLING WILL BE INCLUDED IN OTHER ITEMS OF WORK AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREFORE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR DISRUPTION OF UTILITY SERVICE DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES IN THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION.
10. THE CONTRACTOR SHALL PROVIDE SUPPORT OF EXISTING UTILITIES TO MAINTAIN SERVICE AND INTEGRITY.
11. THE CONTRACTOR SHALL NEATLY SAW CUT ALL ROADWAYS AND DRIVEWAYS PRIOR TO INSTALLING A PERMANENT PAVEMENT REPAIR.
12. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES DURING CONSTRUCTION.
13. INDICATED SCALES ARE BASED ON FULL SIZE DRAWINGS; IF DRAWINGS ARE REDUCED, SCALES MUST BE ADJUSTED ACCORDINGLY.
14. CONTRACTOR SHALL NOTIFY THE RESIDENT PROJECT REPRESENATIVE 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
15. LOCATION OF EXISTING RIGHT-OF-WAY (R.O.W.) LINES AND PROPERTY LINES ARE APPROXIMATE.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROJECT SITE RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES.
17. TREES THAT HAVE BEEN DAMAGED OR REMOVED, ASPHALT AND OTHER CONSTRUCTION DEBRIS SHALL BE REMOVED OFFSITE BY CONTRACTOR.
18. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO AND THROUGH EXISTING DRAINAGE FACILITIES. ANY CONSTRUCTION AROUND, THROUGH OR IN DRAINAGE PATHS SHALL NOT ALTER THE FLOW PATHS FROM EXISTING AFTER CONSTRUCTION IS COMPLETE.
19. CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR WORKING CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
20. WHEN EXCAVATION MUST OCCUR NEAR A UTILITY POLE, THE CONTRACTOR SHALL EMPLOY A LICENSED ELECTRICAL CONTRACTOR TO GUY, ANCHOR, BRACE, MECHANICALLYHOLD, ETC., THE POLE THROUGHOUT THE EXCAVATION PROCESS AND UNTIL THE AREA CAN BE PROPERLY BACKFILLED AND COMPACTED TO PREVENT THE MOVEMENT OF THE POLE. IF THE EXCAVATION AFFECTS AN ANCHOR, THE POLE WILL NEED TO BE STABILIZED IN A SIMILAR MANNER UNTIL THE ANCHOR CAN BE REINSTALLED IN THE EXACT LOCATION. CONTRACTOR SHALL NOTIFY THE UTILITY OWNER NOT LESS THAN SEVEN (7) CALENDAR DAYS PRIOR TO EXCAVATION WITHIN TWENTY (20) FEET OF ANY POLE AND SHALL PROVIDE INFORMATION TO THE UTILITY OWNER PERTAINING TO THE METHOD THAT IS TO BE USED TO STABILIZE THE POLE, AS WELL AS THE NAME OF THE ELECTRICAL CONTRACTOR RESPONSIBLE FOR THE PORTION OF THE WORK.
21. SEWER LINE CROSSINGS UNDER S.R. 29 SHALL BE ENCASED WITH STEEL CASING AND BE INSTALLED BY OPEN CUT OR BORE AND JACK METHOD PER STATE RESIDENT PROJECT REPRESENTATIVE'S DISCRETION.
22. ALL INCIDENTAL WORK, INCLUDING LABOR AND MATERIALS, NECESSARY TO COMPLETE THE PROJECT AS SHOWN IN THE CONTRACT DOCUMENTS, FOR WHICH A SEPERATE PAY ITEM IS NOT SHOWN SHALL BE PERFORMED BY THE CONTRACTOR AND NO ADDITIONAL PAYMENT SHALL BE MADE. THE COST OF THIS WORK SHALL BE MERGED INTO THE UNIT PRICES BID FOR THE BID ITEMS SHOWN.

LEGEND

- PROPOSED CENTERLINE
- PROP/EXIST. R.O.W.
- 8" SA — PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- ℄ — EXIST. PROPERTY LINE
- 8" SA — EXIST. SANITARY SEWER
- 8" W — EXIST. WATER LINE
- P/T — EXIST. POWER LINE
- 3" G — EXIST. NATURAL GAS
- EXIST. STORM SEWER
- EXIST. STREAM
- W.M. EXIST. WATER METER
- G.M. EXIST. GAS METER
- MB EXIST. MAILBOX
- EXIST. SEWER MANHOLE (TO BE RETIRED)

UTILITY INFORMATION

UTILITY TITLE	HARRIMAN UTILITY BOARD
ADDRESS	P.O. BOX 434 HARRIMAN, TN. 37748
CONTACT PERSON	FRANKIE DAVIS
PHONE	(865) 882-3242

TIMOTHY F. TUCKER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106895
STATE OF TENNESSEE
12-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

ESTIMATED QUANTITIES

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Survey & Design Division

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-2
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 8" DIA. SAN SEWER LINES J, K, AND L.

GAS LINE

EX. SAN. MANHOLE
STA. 0+00 BEGIN LINE "J"
36J-B124
TOP-842.82
INV(NE)-834.53
INV(SW)-834.53

SAN. MANHOLE
36J-B125
TOP-841.83
INV(NE)-834.70
INV(SW)-834.70

REV. 12-23-13:
REVISED TO ADD 8" DIA. SAN
SEWER LINES J, K, AND L.

CUT AND CAP
EXIST. SANITARY
SEWER LINE

REPLACE
EXIST. M.H.

53°09'47"

RETIRE M.H.
IN PLACE. (TYP.)

SAN. MANHOLE
36J-B126
TOP-845.81
INV(E)-836.21
INV(SW)-836.21

MH-21
STA. 1+86.66 END LINE "K"
TOP EL. 848.66
INV. OUT = 840.93

19+02.78 S.R. 29 =
15+00.00 TIDWELL CIRCLE
N 577420.7310
E 2394826.5520

MH-2
STA. 1+26.50 LINE "A" =
TOP EL. 858.47
INV. IN = 848.87
INV. OUT = 848.77
Δ = 05°20'59" RT. LINE "A"

MH-1
STA. 0+00 LINE "A" =
STA. 0+00 LINE "C"
TOP EL. 856.84
INV. IN = 849.60
INV. OUT = 849.50

BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799

LIMIT OF CONST.
STA. 12+50.00
N 576750.11
E 2395092.8090

12+54.73 S.R. 29 =
14+00.00 RURITAN RD. SW.

RETIRE M.H.
IN PLACE. (TYP.)

SAN. MANHOLE
36J-B127
TOP-849.06
INV(SE)-837.47
INV(W)-837.47

MH-18
STA. 2+63.70 LINE "J" =
STA. 0+00 LINE "K"
TOP EL. 852.18
INV. IN = 839.90
INV. OUT = 839.80
Δ = 49°26'10" RT. LINE "J"
Δ = 67°49'53" LT. LINE "K"

LINE "J"
8" SA

LINE "K"
8" SA

79°56'32"

EXIST. ELECTRIC POLE
(TO BE RELOCATED)

RETIRE M.H.
IN PLACE. (TYP.)

EX. SAN. MANHOLE
STA. 3+25.34 END LINE
36J-B127A
TOP-852.30
INV(SE)-842.18
INV(NW)-842.18

INSTALL 120 L.F.
12" STEEL
CASING PIPE

SAN. MANHOLE
36J-B129
TOP-855.89
INV(SE)-848.71
INV(NE)-848.61
INV(NW)-848.

NEW PERMANENT UTILITY EASEMENT

RETIRE M.H.
IN PLACE. (TYP.)

PROPOSED 6" D.I.P.
SEWER LATERAL W/
PROTECTO 401 LINING

EXIST. PERM.
MAIN ESMT.

MH-22
STA. 1+48.00 LINE "L"
TOP EL. 846.78
INV. OUT = 843.15

MH-20
STA. 0+77.85 LINE "K"
TOP EL. 851.64
INV. IN = 840.39
INV. OUT = 840.29
Δ = 26°03'26" LT. LINE "K"

EXIST. 2" STEEL
WATER LINE

194°52'52"

CLEAN OUT
TOP-847.27
INV-843.93

PROP. R.O.W.

RETIRE EXIST. 4"
SANITARY SEWER

PROPOSED 6" PVC
SEWER LATERAL

MH-19
STA. 3+73.13 END LINE "J"
TOP EL. 852.85
INV. IN = 844.84
INV. OUT = 844.74

CLEAN OUT
TOP-846.60
INV-845.39

PROPOSED SEWER
CLEANOUT (TIE-IN
TO EXIST. 4" PVC
SERVICE LINE
I.E. 844.42

EXIST. 6" P.E.
GAS LINE

EXIST. 3" STEEL.
GAS LINE

RETIRE M.H.
IN PLACE. (TYP.)

LINE "A"
8" SA

78°55'51"

PROPOSED 8" PVC
SANITARY SEWER

SAN. MANHOLE
36G-B35
BURRIED

EXIST. 2" STEEL
GAS LINE

SAN. MANHOLE
36G-B36
TOP-880.46
INV-873.91

CONNECT TO EXIST. M.H.
MANHOLE IS BURIED.
CONTRACTOR TO VERIFY
LOCATION & ELEVATIONS
PRIOR TO CONSTRUCTION

EX. M.H.

LIMIT OF CONST.
STA. 1+76.34 LINE "C" (E.O.L.)
N 577501.73
E 2395008.65

CURVE TIDWELL
PI 15+57.86
N 577,436.5050
E 2,394,882.2240
Δ 11° 28' 16" (LT)
D 31°
R 181.71
L 36.24
T 18.18
SE NC
DESIGN SPEED 25 MPH
TRANS. LENGTH 000

SEE SHEET NO. U3-3
STATION 21+00
MATCH LINE

CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.0073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

NOTE:
1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF PRIVATE SEWER LATERALS PRIOR TO CONSTRUCTION TO ENSURE PROPER GRADE & LOCATION OF SEWER LATERAL EXTENSION TO PROPOSED SEWER MAIN.
2. 40 L.F. SHALL BE CONTINUOUS OR WELDED. MIN. YIELD STRENGTH 42,000 PSI.

TIMOTHY F. TUCKER
REGISTERED ENGINEER
AGRICULTURE
12-23-13
106898
STATE OF TENNESSEE

HARRIMAN
UTILITY
BOARD

SANITARY
SEWER LINE
RELOCATION

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

NOTE:
1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF PRIVATE SEWER LATERALS PRIOR TO CONSTRUCTION TO ENSURE PROPER GRADE & LOCATION OF SEWER LATERAL EXTENSION TO PROPOSED SEWER MAIN. SEWER LATERALS THAT CROSS RURITAN ROAD SHALL BE DUCTILE IRON WITH PROTECTO 401 LINING.
2. CONTRACTOR TO VERIFY FORCE MAIN DEPTH BY POTHOLING PRIOR TO RELOCATION. IF CROWN OF FORCE MAIN IS BELOW 825.5', NO WORK SHALL BE DONE ON FORCE MAIN.

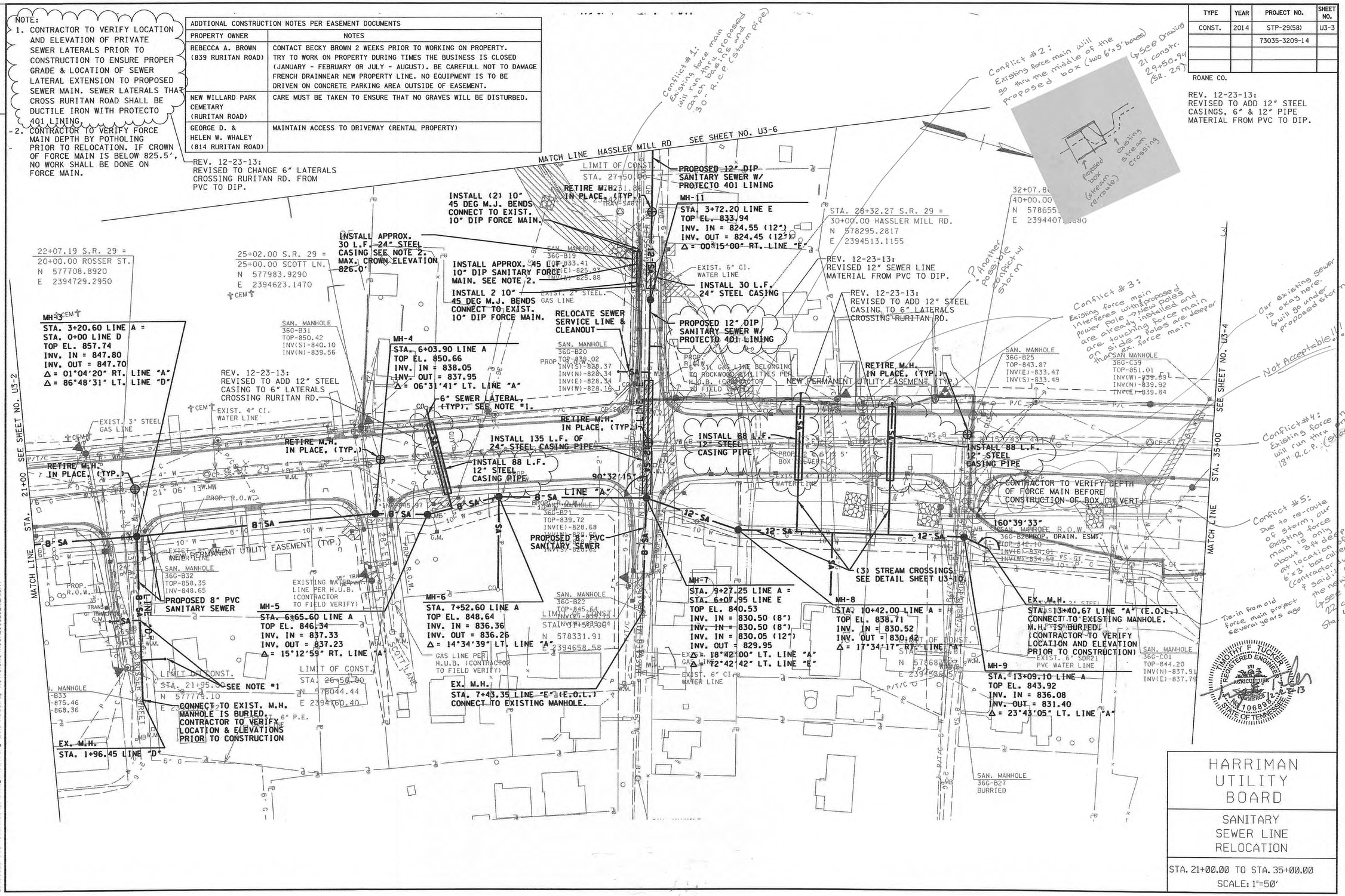
REV. 12-23-13:
REVISED TO CHANGE 6" LATERALS CROSSING RURITAN RD. FROM PVC TO DIP.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
REBECCA A. BROWN (839 RURITAN ROAD)	CONTACT BECKY BROWN 2 WEEKS PRIOR TO WORKING ON PROPERTY. TRY TO WORK ON PROPERTY DURING TIMES THE BUSINESS IS CLOSED (JANUARY - FEBRUARY OR JULY - AUGUST). BE CAREFULL NOT TO DAMAGE FRENCH DRAINNEAR NEW PROPERTY LINE. NO EQUIPMENT IS TO BE DRIVEN ON CONCRETE PARKING AREA OUTSIDE OF EASEMENT.
NEW WILLARD PARK CEMETARY (RURITAN ROAD)	CARE MUST BE TAKEN TO ENSURE THAT NO GRAVES WILL BE DISTURBED.
GEORGE D. & HELEN W. WHALEY (814 RURITAN ROAD)	MAINTAIN ACCESS TO DRIVEWAY (RENTAL PROPERTY)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-3
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 12" STEEL CASINGS, 6" & 12" PIPE MATERIAL FROM PVC TO DIP.



TIMOTHY F. TUCKER REGISTERED ENGINEER No. 106895 STATE OF TENNESSEE 12-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"=50'

Survey & Design Division

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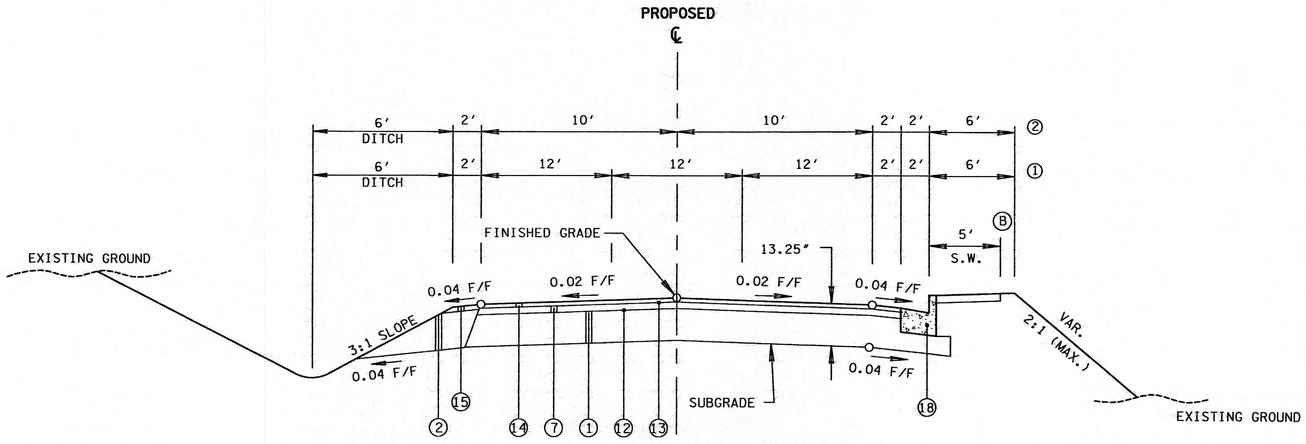
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2C3

ROANE COUNTY 73035-3209-14

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

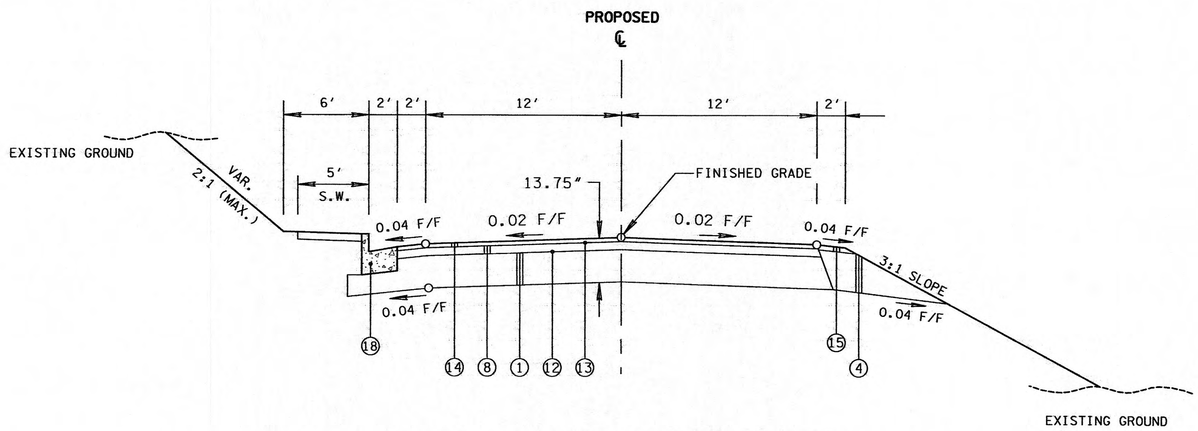


TYPICAL TANGENT SIDEROAD SECTION

BASED ON STD. DWG. RD01-TS-1

① BREAZEALE STREET, STA. 45+34.00 TO STA. 49+68.09

② PANSY HILL ROAD, STA. 75+12.00 TO STA. 76+28.30 (STATE ST.)



TYPICAL TANGENT SIDEROAD SECTION

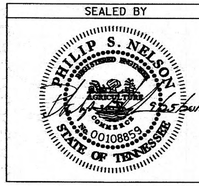
BASED ON STD. DWG. RD01-TS-1

CARLOCK AVENUE, STA. 48+50.00 TO STA. 49+66.00

Ⓐ SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 F/F

Ⓑ 8' SIDEWALK TO BE USED ON S.R. 29 FROM STA. 32+07.86 TO STA. 40+25.00 AND ON BREAZEALE ST. FROM STA. 45+00.00 TO STA. 49+68.09

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

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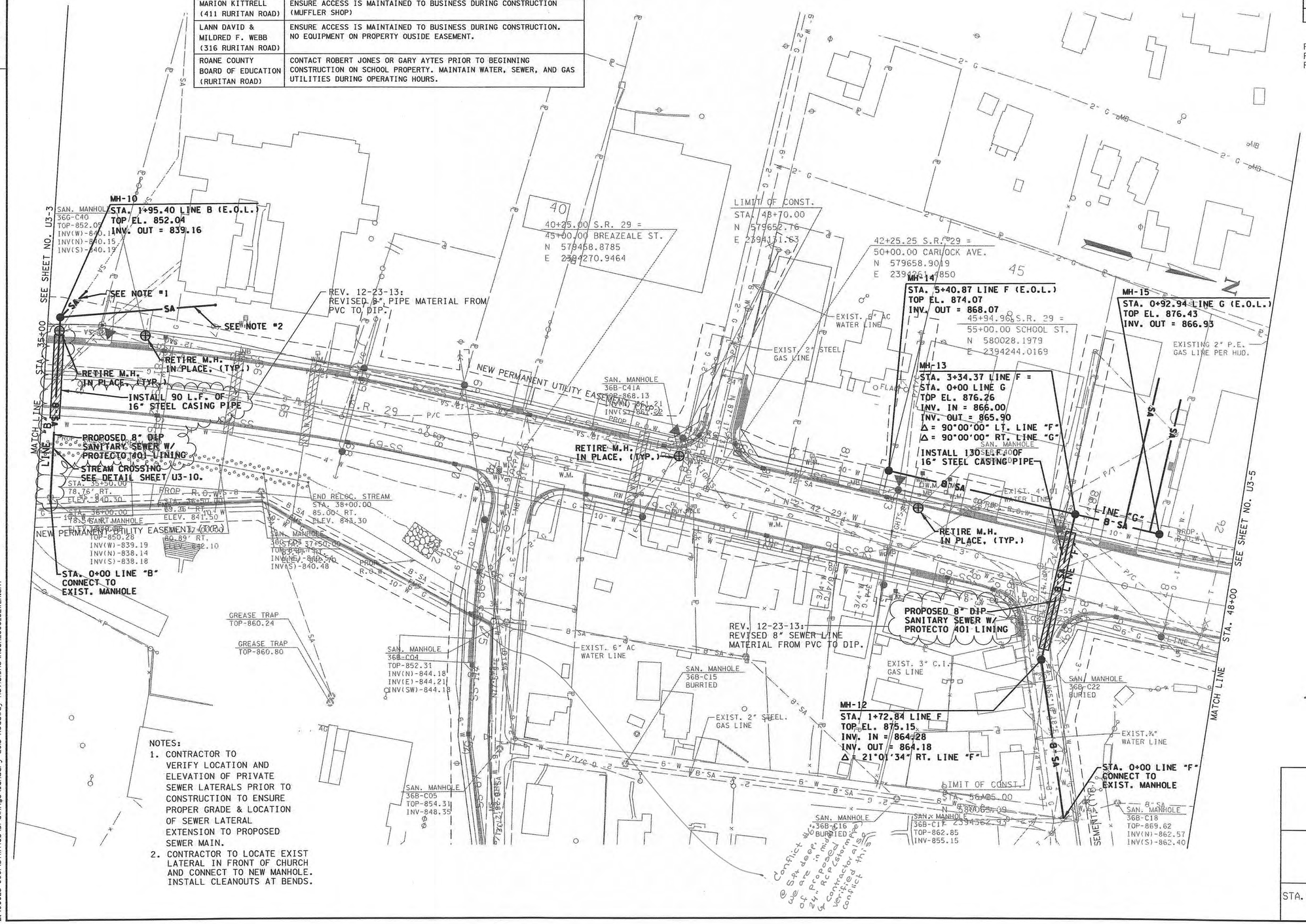
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
MARION KITTRELL (411 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION (MUFFLER SHOP)
LANN DAVID & MILDRED F. WEBB (316 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION. NO EQUIPMENT ON PROPERTY OUSIDE EASEMENT.
ROANE COUNTY BOARD OF EDUCATION (RURITAN ROAD)	CONTACT ROBERT JONES OR GARY AYTES PRIOR TO BEGINNING CONSTRUCTION ON SCHOOL PROPERTY. MAINTAIN WATER, SEWER, AND GAS UTILITIES DURING OPERATING HOURS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-4
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED 8" PIPE MATERIAL FROM PVC TO DIP.



TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
12-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

STA. 35+00.00 TO STA. 48+00.00
SCALE: 1"=50'

Source & Data Division

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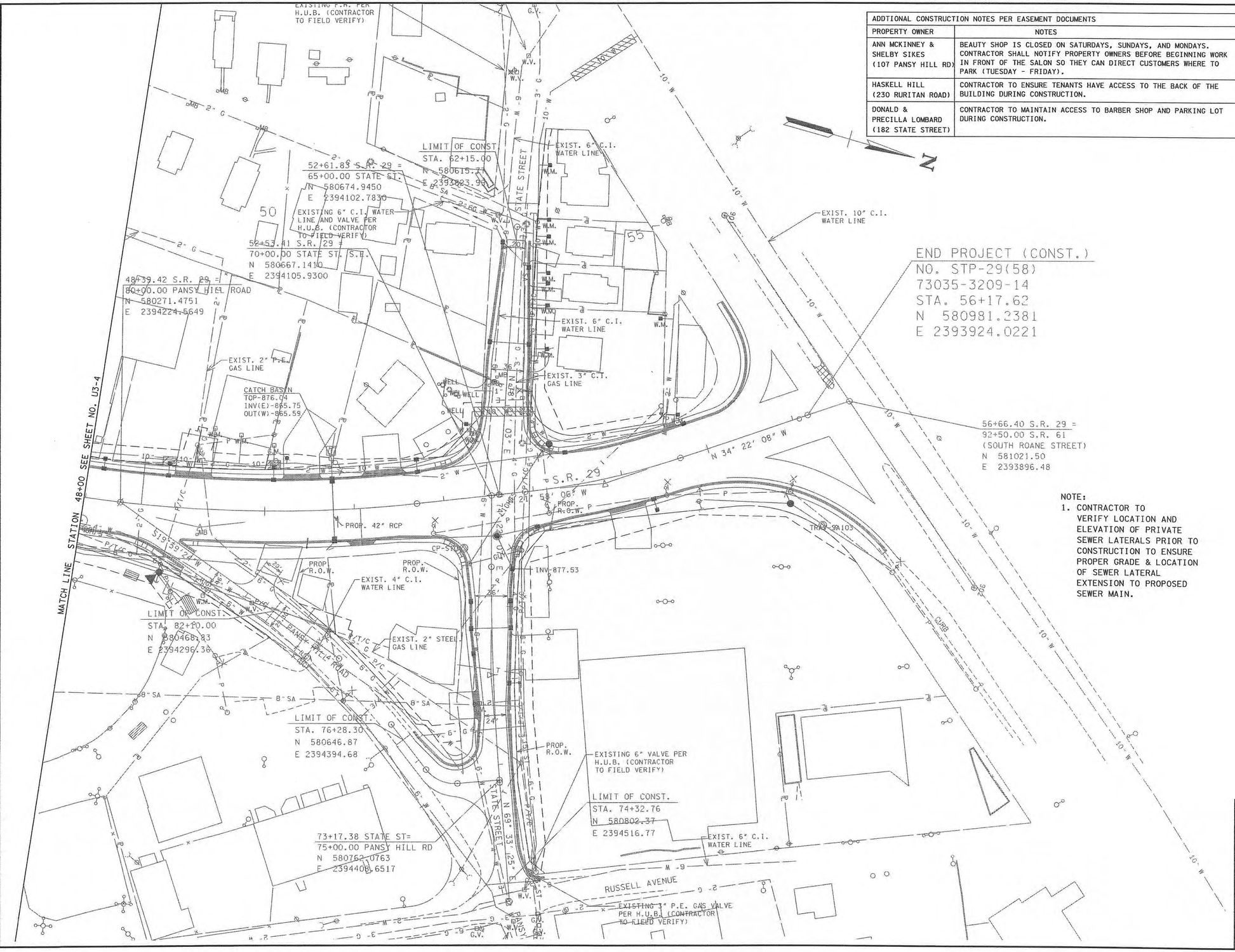
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
ANN MCKINNEY & SHELBY SIKES (107 PANSY HILL RD)	BEAUTY SHOP IS CLOSED ON SATURDAYS, SUNDAYS, AND MONDAYS. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS BEFORE BEGINNING WORK IN FRONT OF THE SALON SO THEY CAN DIRECT CUSTOMERS WHERE TO PARK (TUESDAY - FRIDAY).
HASKELL HILL (230 RURITAN ROAD)	CONTRACTOR TO ENSURE TENANTS HAVE ACCESS TO THE BACK OF THE BUILDING DURING CONSTRUCTION.
DONALD & PRECILLA LOMBARD (182 STATE STREET)	CONTRACTOR TO MAINTAIN ACCESS TO BARBER SHOP AND PARKING LOT DURING CONSTRUCTION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-5
		73035-3209-14	

ROANE CO.



NOTE:
1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF PRIVATE SEWER LATERALS PRIOR TO CONSTRUCTION TO ENSURE PROPER GRADE & LOCATION OF SEWER LATERAL EXTENSION TO PROPOSED SEWER MAIN.

TIMOTHY F. TUCKER REGISTERED ENGINEER No. 106898 STATE OF TENNESSEE AGRICULTURE ALUMINUM 12-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

STA. 48+00.00 TO END OF PROJ.
SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-6
		73035-3209-14	

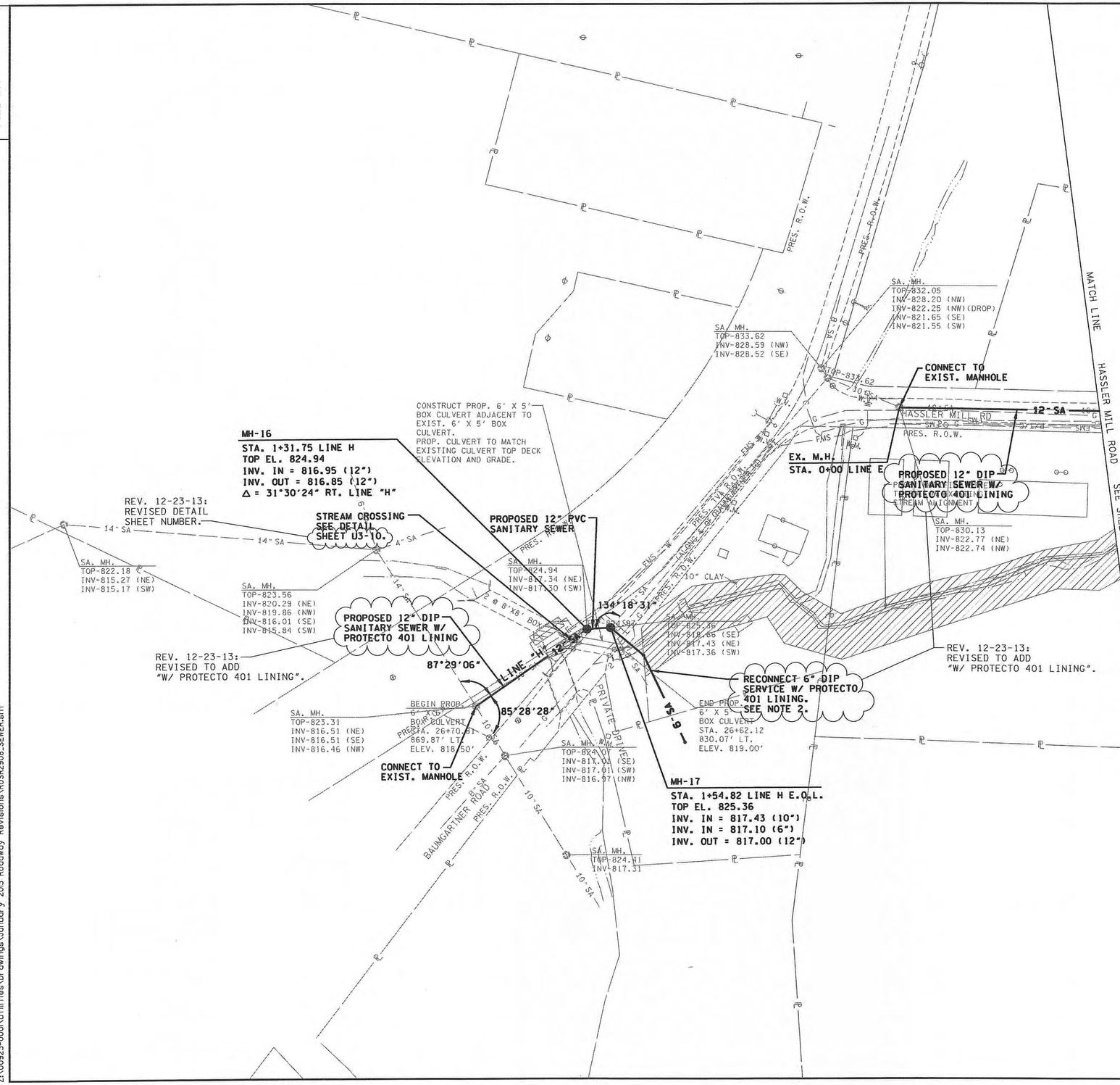
ROANE CO.

REV. 12-23-13:
REVISED DETAIL SHEET NUMBER, ADDED PROTECTO 401 LINING TO DIP.

N

NOTE:
1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF PRIVATE SEWER LATERALS PRIOR TO CONSTRUCTION TO ENSURE PROPER GRADE & LOCATION OF SEWER LATERAL EXTENSION TO PROPOSED SEWER MAIN.
2. CONTRACTOR TO REROUTE 6" DIP SERVICE LATERAL AROUND PROPOSED BOX CULVERT. INSTALL CLEANOUTS AT BENDS.

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT #100 - TENNESSEE VALLEY AUTHORITY (TVA)



TIMOTHY E. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
12-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

HASSLER MILL ROAD AND BAUMGARTNER ROAD
SCALE: 1"=50'

Survey & Design Division

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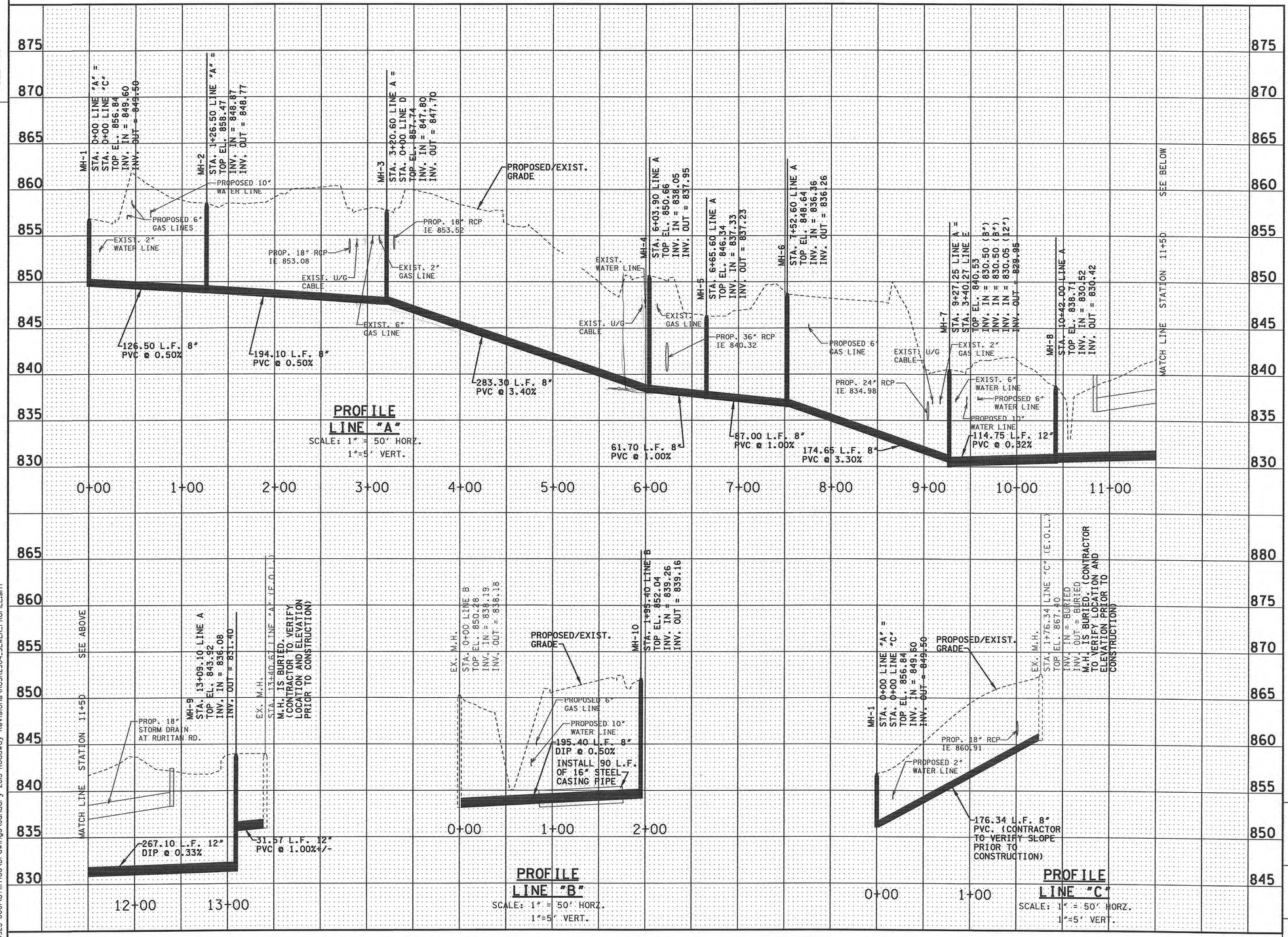
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-7
		73035-3209-14	

ROANE CO.



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TIMOTHY F. TUCKER
REGISTERED ENGINEER
AGRICULTURE
106898
STATE OF TENNESSEE
2-23-13

HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

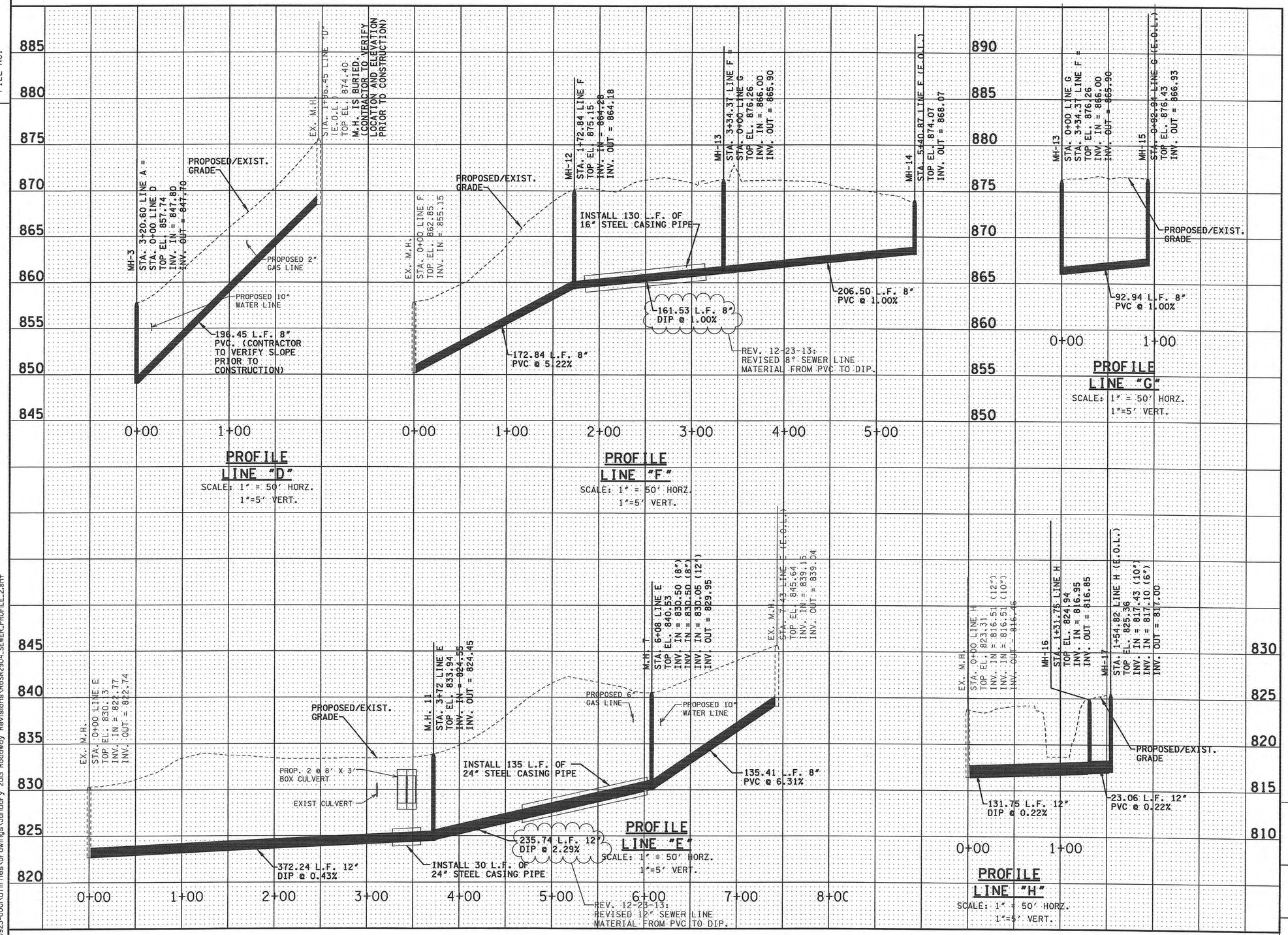
PROFILES
SCALE: AS SHOWN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-8
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED 8" AND 12" PIPE
MATERIALS FROM PVC TO DIP.



TIMOTHY F. TUCKER
REGISTERED ENGINEER
106898
STATE OF TENNESSEE
12-2-13

HARRIMAN
UTILITY
BOARD

SANITARY
SEWER LINE
RELOCATION

PROFILES
SCALE: AS SHOWN

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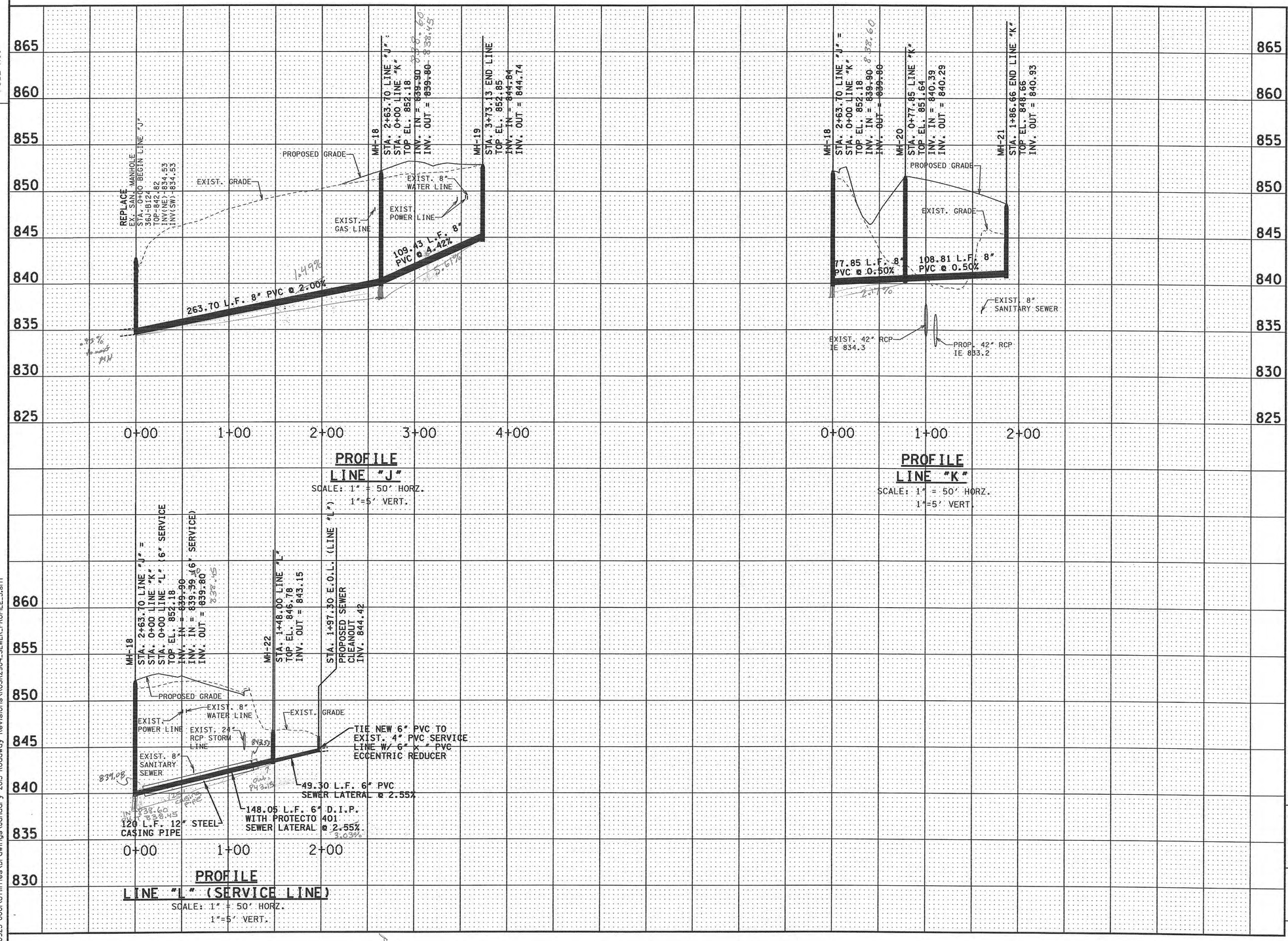
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-9
		73035-3209-14	

ROANE CO.



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839.90
838.22
1.68

Contractor missed elev. during base.

TIMOTHY F. TUCKER
REGISTERED ENGINEER
AGRICULTURE
No. 106898
STATE OF TENNESSEE
12-2-13

HARRIMAN UTILITY BOARD

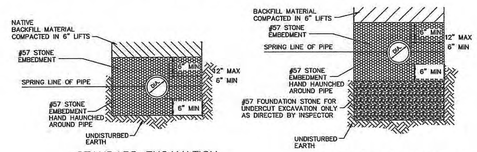
SANITARY SEWER LINE RELOCATION

PROFILES
SCALE: AS SHOWN

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

NOTES:
1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
2. THE BACKFILL MATERIAL SHALL CONSIST OF 100% #57 STONE IN AREAS UNDER PAVEMENT AND IN ROADWAYS.

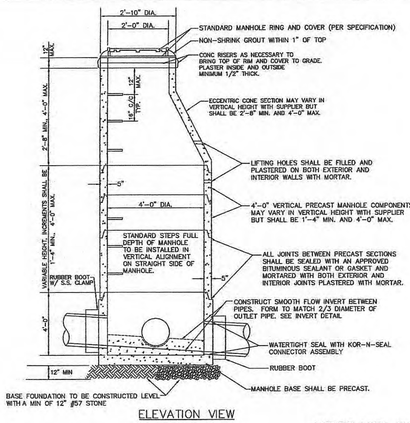
POLYVINYL CHLORIDE (PVC) SEWER PIPE



STANDARD EXCAVATION

UNDERCUT EXCAVATION IN UNSTABLE SOILS TYPES

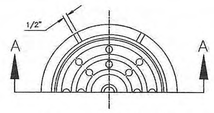
TYPICAL GRAVITY SEWER TRENCHING DETAILS
NOT TO SCALE



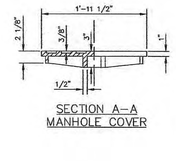
ELEVATION VIEW

PRECAST MANHOLE NOTES:
1. ALL PRECAST MANHOLE COMPONENTS SHALL MEET REQUIREMENTS OF ASTM C-478, LATEST REVISION.
2. ALL MANHOLES SHALL BE CONSTRUCTED PLUMB.
3. ALL MANHOLE GRADES SHOWN ON THE PLANS ARE FOR THE INVERT OF THE MANHOLE CENTER.
4. IF MANHOLE IS SET IN LOCATION OF HIGH WATER TABLE OR UNDERGROUND WATER IS ENCOUNTERED, THE CONTRACTOR SHALL INSTALL UNDERDRAINS AND STONE AS DIRECTED IN THE FIELD BY THE INSPECTOR.
5. STEPS SHALL BE INSTALLED ON STRAIGHT SIDE OF MANHOLE.

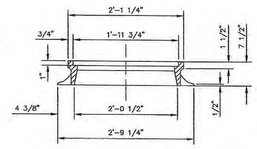
PRECAST CONCRETE MANHOLE
NOT TO SCALE



HALF PLAN OF MANHOLE RING AND COVER



SECTION A–A MANHOLE COVER



SECTION A–A MANHOLE RING

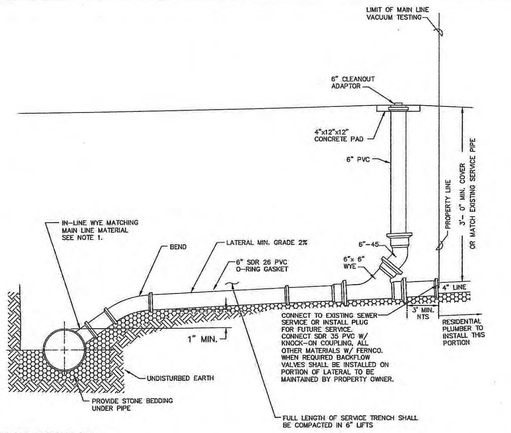
MANHOLE RING AND COVER
NOT TO SCALE

NOTE: TRAFFIC BEARING RING AND COVER. MINIMUM WEIGHT 365 POUNDS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U3-10
		73035-3209-14	

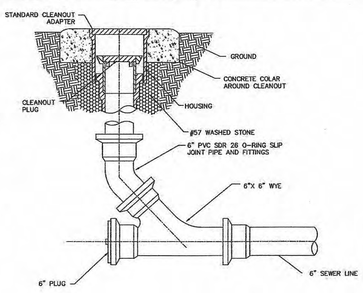
ROANE CO.

REV. 12-23-13:
REVISED DETAIL SHEET NUMBER.

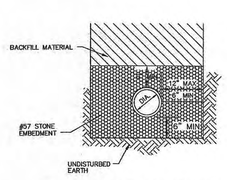


NOTE:
1. TAPPING SADDLES ARE APPROVED FOR CONNECTIONS TO EXISTING SEWER LINES ONLY
2. INTERMEDIATE CLEANOUTS SHALL BE INSTALLED EVERY 75 LINEAR FEET OF CUSTOMER'S SEWER SERVICE LATERAL AND AT ALL CHANGES IN DIRECTION.

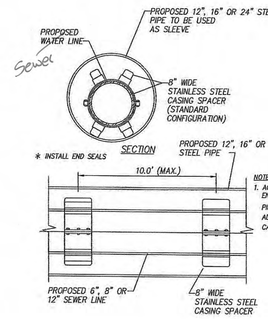
SANITARY SEWER SERVICE
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE

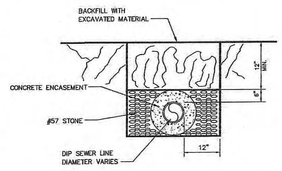


TYPICAL SEWER SERVICE LINE TRENCHING DETAIL
NOT TO SCALE

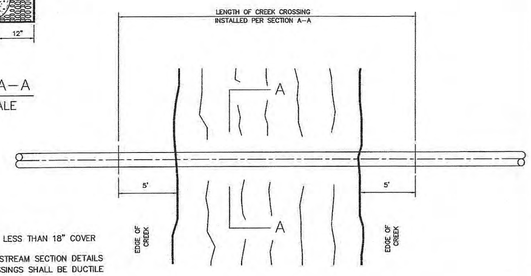


NOTES:
1. ACCEPTABLE MANUFACTURERS OF BOTH SPACERS AND END SEALS FOR CASING PIPE AS FOLLOWS:
PIPELINE SEAL AND INSULATORS, INC. (PSI), HOUSTON, TX.
ADVANCE PRODUCTS AND SYSTEMS, INC. LAFAYETTE, LA.
CASCADE WATERWORKS MFG. CO., YORKVILLE, IL.

SPACER DETAIL
NOT TO SCALE



SECTION A–A
NOT TO SCALE



NOTES:
1. PIPE SHALL BE ENCASED IN CONCRETE IF LESS THAN 18" COVER BENEATH NATURAL STREAM BED.
2. SEE SHEET 2F OF ROADWAY PLANS FOR STREAM SECTION DETAILS
3. SANITARY SEWER PIPE FOR STREAM CROSSINGS SHALL BE DUCTILE IRON WITH PROTECTO 401 LINING.

SANITARY SEWER TYPICAL STREAM CROSSING
NOT TO SCALE



HARRIMAN UTILITY BOARD

SANITARY SEWER LINE RELOCATION

TYPICAL DETAILS
SCALE: AS SHOWN

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U4-1
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 6" DIA.
GAS LINE.

INDEX OF DRAWINGS

SHT. NUMBER	SHT. NAME
U4-1	ESTIMATED QUANTITIES (GAS)
U4-2	UTILITY RELOCATION PLAN (GAS)
U4-3	UTILITY RELOCATION PLAN (GAS)
U4-4	UTILITY RELOCATION PLAN (GAS)
U4-5	UTILITY RELOCATION PLAN (GAS)
U4-6	UTILITY RELOCATION PLAN (GAS)
U4-7	TYPICAL GAS DETAILS

REV. 12-23-13:
REVISED QUANTITIES TO
ADD 6" DIA. GAS LINE.

NOTES	ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
(1)	791-02.02	2IN MDPE GAS MAIN	L.F.	1,624	0%	100%
(1)	791-02.03	3IN MDPE GAS MAIN	L.F.	530	77%	23%
(1)	791-02.06	6IN MDPE GAS MAIN	L.F.	5,790	26%	74%
(1)	791-03.05	6IN HDPE GAS MAIN	L.F.	985	0%	100%
(2)	791-04.05	HDD 6IN PE PIPE-UNCONSOLIDATED	L.F.	50	0%	100%
(3)	791-06.02	CONNECT TO 2IN EX. PE MAIN	EACH	5	0%	100%
(3)	791-06.04	CONNECT TO 6IN EX. PE MAIN	EACH	3	0%	100%
(3)	791-06.09	CONNECT TO 3IN EX. PE MAIN	EACH	1	0%	100%
(3)	791-06.18	CONNECT TO 2IN EX. STL MAIN	EACH	8	0%	100%
(3)	791-06.21	CONNECT TO 3IN EX. CI/DI MAIN	EACH	3	0%	100%
(4)	791-07.01	2IN PE GAS VALVE ASSEMBLY	EACH	13	0%	100%
(4)	791-07.03	6IN PE GAS VALVE ASSEMBLY	EACH	21	26%	74%
(4)	791-07.08	3IN PE GAS VALVE ASSEMBLY	EACH	3	67%	33%
(5)	791-8.02	3/4IN SERVICE ASSEMBLY	EACH	11	0%	100%
(5)	791-8.03	1IN SERVICE ASSEMBLY	EACH	9	0%	100%
(5)	791-8.05	2IN SERVICE ASSEMBLY	EACH	1	0%	100%
(5)	791-8.07	3/4IN PE SERVICE PIPE	L.F.	335	0%	100%
(5)	791-8.08	1IN PE SERVICE PIPE	L.F.	1,190	0%	100%
(5)	791-8.10	2IN PE SERVICE PIPE	L.F.	235	0%	100%
(6)	791-18.10	RETIRE GAS MAINS	LS	1	0%	100%

FOOTNOTES:

(1) INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP, COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

(2) INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, AND TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO FLUID CONTAINMENT FOR COMPLETE HORIZONTAL DIRECTIONAL DRILLING INSTALLATION OF CASING PIPE OR UNCASED CARRIER PIPE IN BOTH UNCONSOLIDATED SOIL OR ROCK. STEEL PIPE INCLUDES SPECIAL COATING AS SPECIFIED ON PLANS AND SPECS. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM PRICE.

(3) INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.

(4) INCLUDES TRANSITION FITTINGS, VALVES, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, COUPLINGS, FUSION TEES, TAP OF EXISTING LINE, AND ALL OTHER NECESSARY MATERIALS AND LABOR FOR COMPLETE INSTALLATION OF ASSEMBLY INCLUDING TRAFFIC CONTROL.

(5) INCLUDES ALL MATERIALS, PARTS, LABOR, EQUIPMENT, MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF GAS SERVICE ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS. INSTALLATION FOR LONG SIDE AND SHORT SIDE APPLICATIONS. SERVICE PIPE SHALL BE PAID PER LINEAR FOOT INSTALLED.

(6) INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO RETIRE THE SYSTEM INDICATED ON THE DRAWINGS INCLUDING BUT NOT LIMITED TO DISCONNECTING THE PIPING FROM THE GAS SUPPLY SOURCE, PURGING ALL GAS FROM THE EXISTING PIPING AND PERMANENTLY SEALING THE ENDS OF THE SYSTEM.

GENERAL NOTES:

1. CONSTRUCTION MATERIALS AND INSTALLATION MUST MEET HUB SPECIFICATIONS. MATERIAL SUBMITTALS MUST BE APPROVED BY HUB PRIOR TO CONSTRUCTION.
2. PRESENT WELDERS QUALIFICATION STATEMENTS & CERTIFICATES TO HUB PRIOR TO START OF CONSTRUCTION FOR EVERY WELDER THAT MAY WORK ON THIS PROJECT.
3. THE CONTRACTOR SHALL STAKE THE PROPOSED GAS MAIN LAYOUTS TO ALLOW AMPLE TIME FOR HUB'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT HUB FOR INSPECTION AT LEAST FIVE (5) DAYS PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR TO COORDINATE CONNECTIONS INTO EXISTING GAS MAINS WITH HUB'S CONNECTION CREWS PRIOR TO MAKING TAPS. HUB APPROVAL REQUIRED PRIOR TO TAPS.
5. CONTRACTOR TO STAKE CENTERLINE OF PROPOSED ROAD PRIOR TO GAS LINE INSTALLATION.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR POT HOLING EXISTING UTILITIES AND DETERMINING ELEVATION AND LOCATION. POT HOLING SHALL BE CONDUCTED WITH THE LEAST INTRUSIVE MEANS SUCH AS A VACTRON, HAND DIGGING, OR OTHER SIMILAR EQUIPMENT. PAVEMENT RESTORATION AT POTHOLE LOCATIONS SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL PHOTOGRAPH OR VIDEO EACH SITE WITHIN 24 HOURS OF BEGINNING WORK ON THE ASSOCIATED PROPERTY. THE CONTRACTOR SHALL PROVIDE ONE COPY OF SUCH PHOTOS OR VIDEO TO THE OWNER WITH-IN 48 HOURS OF BEGINNING WORK ON SAID PROPERTY. IN THE EVENT THE RESIDENT PROJECT REPRESENTATIVE (RPR) IS NOT PRESENT FOR THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR TAKING A PHOTOGRAPH OF THE EXCAVATED SERVICE BEFORE THE CONDEMNATION AND AFTER THE CONDEMNATION. FAILURE TO DOCUMENT THE WORK BY MEANS OF PHOTOGRAPHY WILL RESULT IN THE CONTRACTOR VERIFYING THE WORK BY MEANS OF RE-EXCAVATING THE SITE, AT THE EXPENSE OF THE CONTRACTOR.
8. THE CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPARTS E AND N RELATED TO NATURAL GAS WORK INCLUDING BUT NOT LIMITED TO DRUG AND ALCOHOL TESTING, OPERATOR QUALIFICATION, FUSION QUALIFICATION, WELDER CERTIFICATION, ETC. AS A PREREQUISITE REQUIREMENT TO THE OWNER EXECUTING A CONTRACT, THE CONTRACTOR SHALL FURNISH A LIST OF CREW MEMBERS THAT WILL BE SPECIFICALLY ASSIGNED TO THE WORK AND EVIDENCE OF THEIR QUALIFICATIONS UNDER THE REQUIRED PROGRAMS. UNQUALIFIED CREW MEMBERS WILL BE QUALIFIED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR MAY BE SUBJECT TO PENALTIES THAT COULD INCLUDE TERMINATION OF THE CONTRACT AS DETERMINED BY THE OWNER FOR HAVING CREW MEMBERS PERFORMING TASKS IN WHICH THEY ARE NOT QUALIFIED TO PERFORM.
9. IN ORDER FOR THE MOST CURRENT OPERATOR QUALIFICATION STATUS CHECKS OF CONTRACTOR OR CONTRACTOR EMPLOYEES TO BE PERFORMED, THE CONTRACTOR MUST COMPLY WITH 49 CFR PART 192, SUBPART N USING ONCE OF THE THREE OPTIONS LISTED BELOW:
   - 9.1. BE A SUBSCRIBER OF THE OQ PLAN PROVIDER THAT HUB CURRENTLY HAS A SUBSCRIPTION OR CONTRACT WITH,
   - 9.2. USE HIS OR HER OWN OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY HUB OR
   - 9.3. USE A THIRD-PARTY OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY HUB.
10. THE CONTRACTOR SHALL HAVE ALL DOCUMENTATION DEMONSTRATING THAT PERSONNEL PERFORMING COVERED OQ TASKS ARE QUALIFIED TO PERFORM SUCH TASKS AS WELL AS MEET THE DOT OQ STANDARDS AND HAVE THAT DOCUMENTATION ELECTRONICALLY ACCESSIBLE BY THE OWNER WITHIN 10 BUSINESS DAYS AFTER RECEIVING THE NOTICE OF AWARD. THE OWNER MAY CONSIDER THE CONTRACTOR IN DEFAULT IF THIS DOCUMENTATION IS NOT RECEIVED OR ELECTRONICALLY AVAILABLE WITHIN 10 BUSINESS DAYS AFTER THE CONTRACTOR RECEIVES THE NOTICE OF AWARD.
11. CONTRACTOR WILL BE REQUIRED TO HAVE THE FOLLOWING SAFETY EQUIPMENT ON-SITE AS THE WORK IS PERFORMED.
    - 11.1. FIRE EXTINGUISHER - CONTRACTORS WILL NEED TO POSSESS A 20 CUBIC FOOT OR GREATER EXTINGUISHER RATED AS ABC.
    - 11.2. A FIRE HOOD(S) FOR ALL PERSONNEL WORKING IN LIVE GAS WILL NEED TO PROVIDE COVERAGE FOR HEAD, FACE AND NECK AND BE CLASSIFIED AS FIRE RESISTANT.
    - 11.3. A FIRE SUIT(S) FOR ALL PERSONNEL WORKING DIRECTLY IN LIVE GAS WILL NEED TO BE - INSULATED FLAME RESISTANT ONE PIECE COVERALL.
12. EACH CONTRACTOR EMPLOYEE, PERFORMING OR PARTICIPATING IN THE PERFORMANCE OF A COVERED TASK, SHALL ADHERE TO THE FOLLOWING GUIDELINES FOR FIRE RETARDANT CLOTHING WHEN WORKING IN CONDITIONS AS STATED BELOW:
    - 12.1. INITIAL EXCAVATION ACTIVITIES - 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
    - 12.2. HAND EXCAVATION OF SERVICE TEE - 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
    - 12.3. SQUEEZE OFF OF PIPELINE - 100% COTTON CLOTHING PLUS HOODED FLAME RESISTANT 1 PIECE COVERALL, FLAME RESISTANT HEAD SOCK, + APPROPRIATE PPE FOR TASK.
    - 12.4. BLOWING GAS ENVIRONMENT - 100% COTTON CLOTHING PLUS HOODED INSULATED FLAME RESISTANT ONCE PIECE COVERALL, FLAME RESISTANT HEAD SOCK AND LEATHER GLOVES.
13. ALL INCIDENTAL WORK, INCLUDING LABOR AND MATERIALS, NECESSARY TO COMPLETE THE PROJECT AS SHOWN IN THE CONTRACT DOCUMENTS, FOR WHICH A SEPERATE PAY ITEM IS NOT SHOWN SHALL BE PERFORMED BY THE CONTRACTOR AND NO ADDITIONAL PAYMENT SHALL BE MADE. THE COST OF THIS WORK SHALL BE MERGED INTO THE UNIT PRICES BID FOR THE BID ITEMS SHOWN.

UTILITY INFORMATION

UTILITY TITLE	HARRIMAN UTILITY BOARD
ADDRESS	P.O. BOX 434 HARRIMAN, TN. 37748
CONTACT PERSON	FRANKIE DAVIS
PHONE	(865) 882-3242

LEGEND

———	PROPOSED CENTERLINE
———	PROP/EXIST. R.O.W.
——— G ———	PROPOSED GAS LINE
———	PROPOSED STORM SEWER
——— PL ———	EXIST. PROPERTY LINE
- - 8" SA - -	EXIST. SANITARY SEWER
- - 8" W - -	EXIST. WATER LINE
— — P/T — —	EXIST. POWER LINE
- - 3" G - -	EXIST. NATURAL GAS
- - - - - -	EXIST. STORM SEWER
——·——·——	EXIST. STREAM
□ W.M.	EXIST. WATER METER
□ G.M.	EXIST. GAS METER
▫MB	EXIST. MAILBOX

TIMOTHY F. TUCKER
REGISTERED ENGINEER
XVI
AGRICULTURE
ARCHITECTURE
COMMERCE
12-27-13
NO. 106898
STATE OF TENNESSEE

HARRIMAN UTILITY BOARD

GAS LINE RELOCATION

ESTIMATED QUANTITIES

Survey & Design Division

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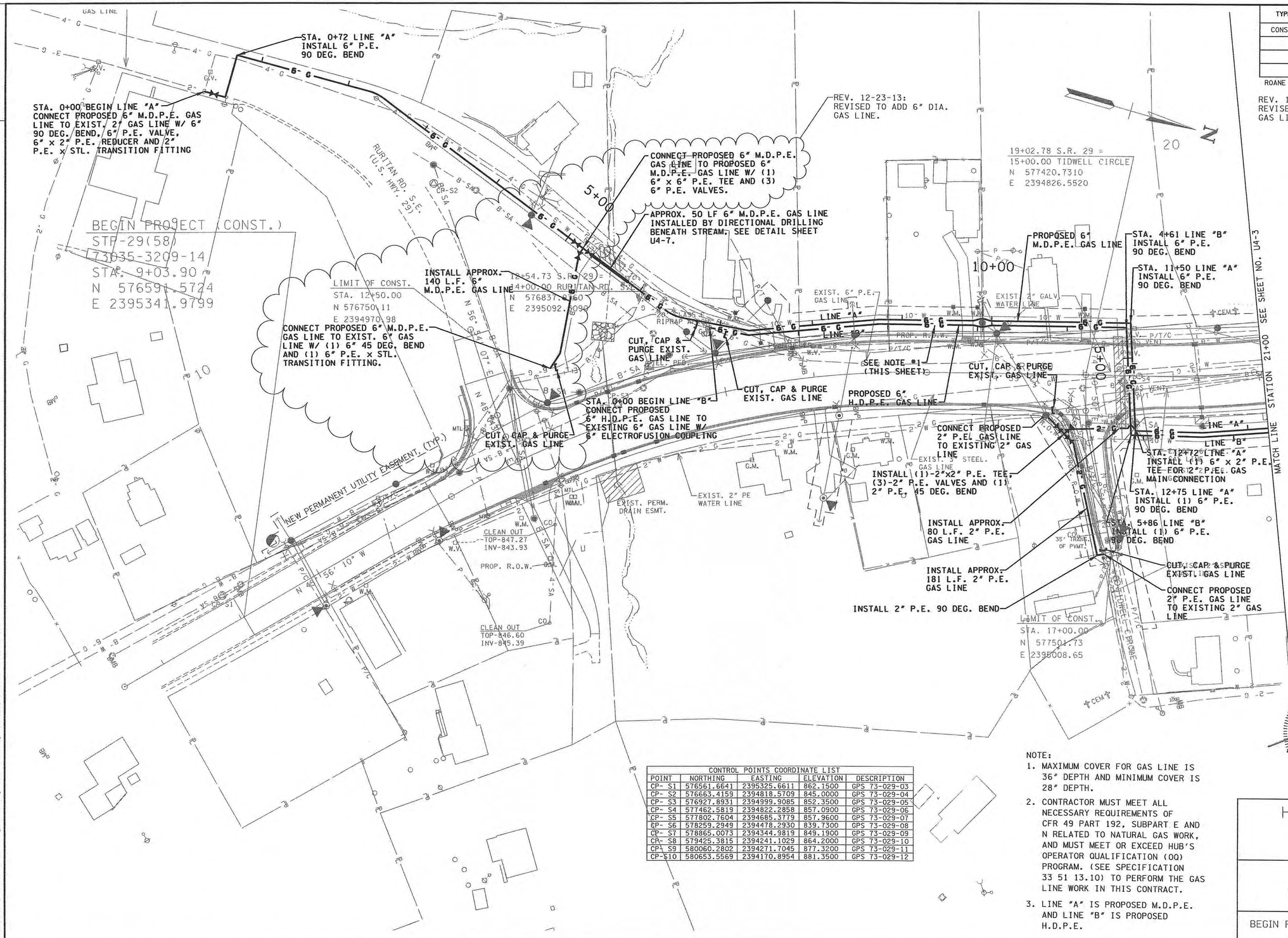
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-29(58)	U4-2
		73035-3209-14	

ROANE CO.

REV. 12-23-13:
REVISED TO ADD 6" DIA.
GAS LINE.



CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.0073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

NOTE:
1. MAXIMUM COVER FOR GAS LINE IS 36" DEPTH AND MINIMUM COVER IS 28" DEPTH.
2. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPART E AND N RELATED TO NATURAL GAS WORK, AND MUST MEET OR EXCEED HUB'S OPERATOR QUALIFICATION (OQ) PROGRAM. (SEE SPECIFICATION 33 51 13.10) TO PERFORM THE GAS LINE WORK IN THIS CONTRACT.
3. LINE "A" IS PROPOSED M.D.P.E. AND LINE "B" IS PROPOSED H.D.P.E.

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
12-23-13

HARRIMAN
UTILITY
BOARD

GAS LINE
RELOCATION

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

Survey & Design Division

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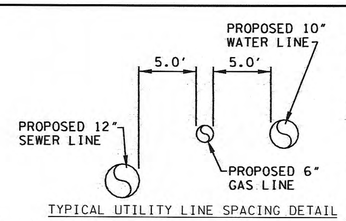
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

NOTE:
1. MAXIMUM COVER FOR GAS LINE IS 36" DEPTH AND MINIMUM COVER IS 28" DEPTH.
2. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPART E AND N RELATED TO NATURAL GAS WORK, AND MUST MEET OR EXCEED HUB'S OPERATOR QUALIFICATION (OQ) PROGRAM. (SEE SPECIFICATION 33 51 13.10) TO PERFORM THE GAS LINE WORK IN THIS CONTRACT.
3. LINE "A" IS PROPOSED M.D.P.E. AND LINE "B" IS PROPOSED H.D.P.E.

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
REBECCA A. BROWN (839 RURITAN ROAD)	CONTACT BECKY BROWN 2 WEEKS PRIOR TO WORKING ON PROPERTY. TRY TO WORK ON PROPERTY DURING TIMES THE BUSINESS IS CLOSED (JANUARY - FEBRUARY OR JULY - AUGUST). BE CAREFULL NOT TO DAMAGE FRENCH DRAINNEAR NEW PROPERTY LINE. NO EQUIPMENT IS TO BE DRIVEN ON CONCRETE PARKING AREA OUTSIDE OF EASEMENT.
NEW WILLARD PARK CEMETARY (RURITAN ROAD)	CARE MUST BE TAKEN TO ENSURE THAT NO GRAVES WILL BE DISTURBED.
GEORGE D. & HELEN W. WHALEY (814 RURITAN ROAD)	MAINTAIN ACCESS TO DRIVEWAY (RENTAL PROPERTY)



TYPICAL UTILITY LINE SPACING DETAIL

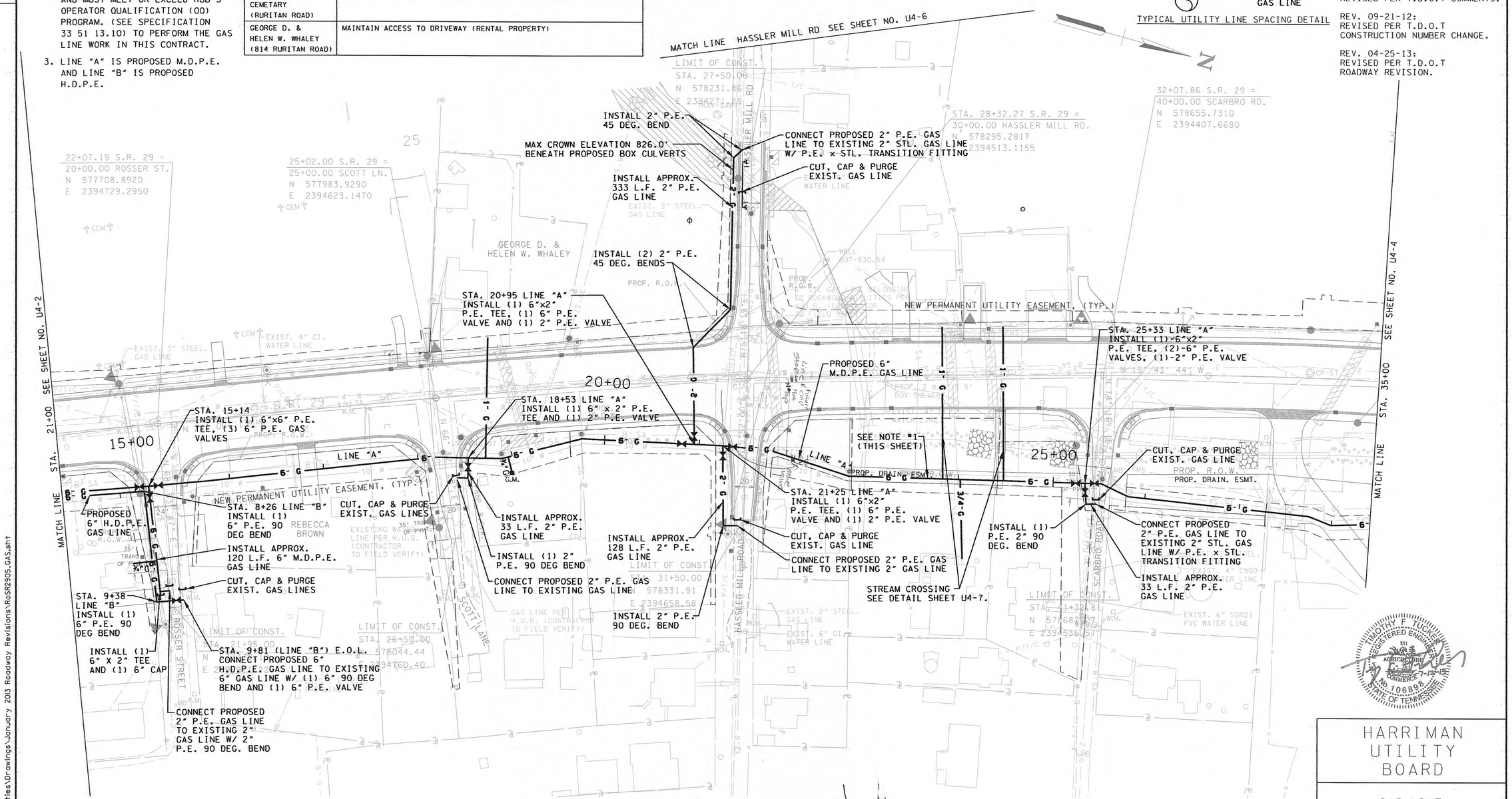
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U4-3
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T ROADWAY REVISION.



TIMOTHY F. TUCKER
REGISTERED ENGINEER
AGRICULTURE
ENVIRONMENT
COMMERCE
7-12-13
No. 106898
STATE OF TENNESSEE

HARRIMAN UTILITY BOARD

GAS LINE RELOCATION

STA. 21+00.00 TO STA. 35+00.00
SCALE: 1"=50'

Survey & Design Division

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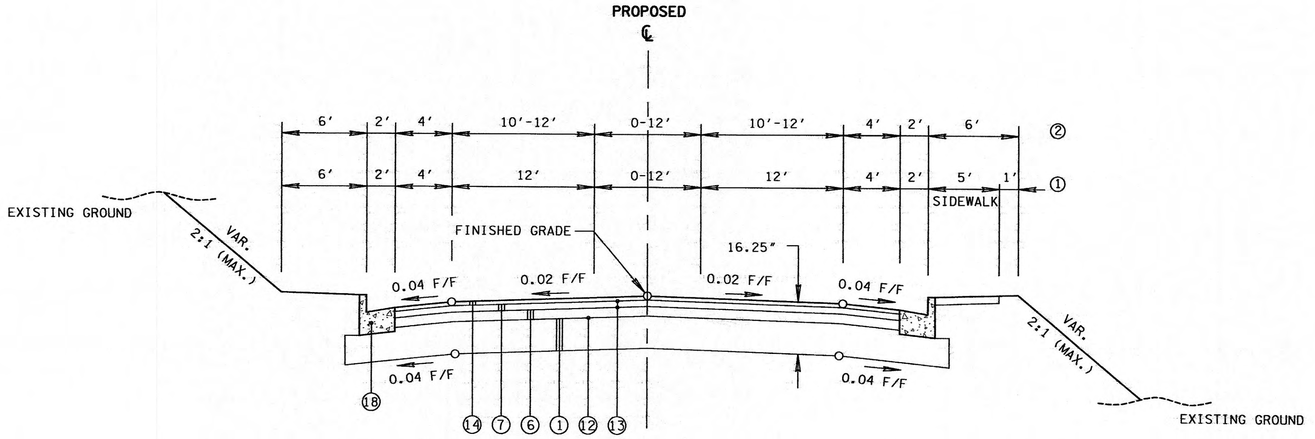
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2C4
ROANE COUNTY		73035-3209-14	

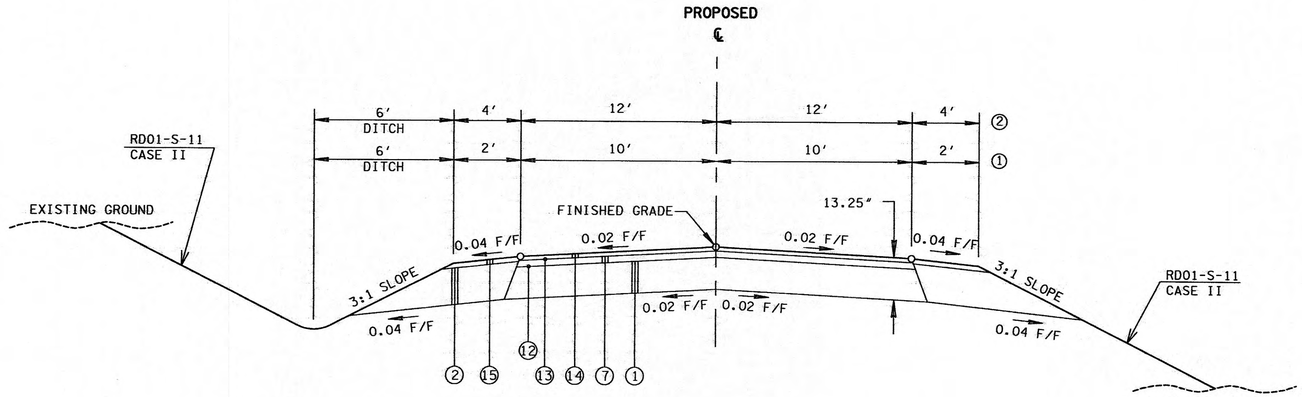
REV. 01-11-13:
CHANGED TYPICAL SECTION LIMIT FOR SCOTT LANE FROM 35+34.00 TO 25+34.00



TYPICAL TANGENT CURB & GUTTER SIDEROAD SECTION

BASED ON STD. DWG. RD01-TS-1

① STATE STREET S.E., STA. 70+34.00 TO STA. 73+17.38
② STATE STREET, STA. 62+15.00 TO STA. 64+66.00



TYPICAL TANGENT SIDEROAD SECTION

BASED ON STD. DWG. RD01-TS-1

② ROSSER STREET, STA. 20+34.00 TO STA. 21+95.00
① SCOTT LANE, STA. 25+34.00 TO STA. 26+50.00
② SCARBRO ROAD, STA. 40+34.00 TO STA. 41+32.81
① SCHOOL STREET, STA. 55+34.00 TO STA. 56+25.00

Ⓐ SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 F/F

Ⓑ 8′ SIDEWALK TO BE USED ON S.R. 29 FROM STA. 32+07.86 TO STA. 40+25.00 AND ON BREAZEALE ST. FROM STA. 45+00.00 TO STA. 49+68.09

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 00108859
STATE OF TENNESSEE
4/5/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

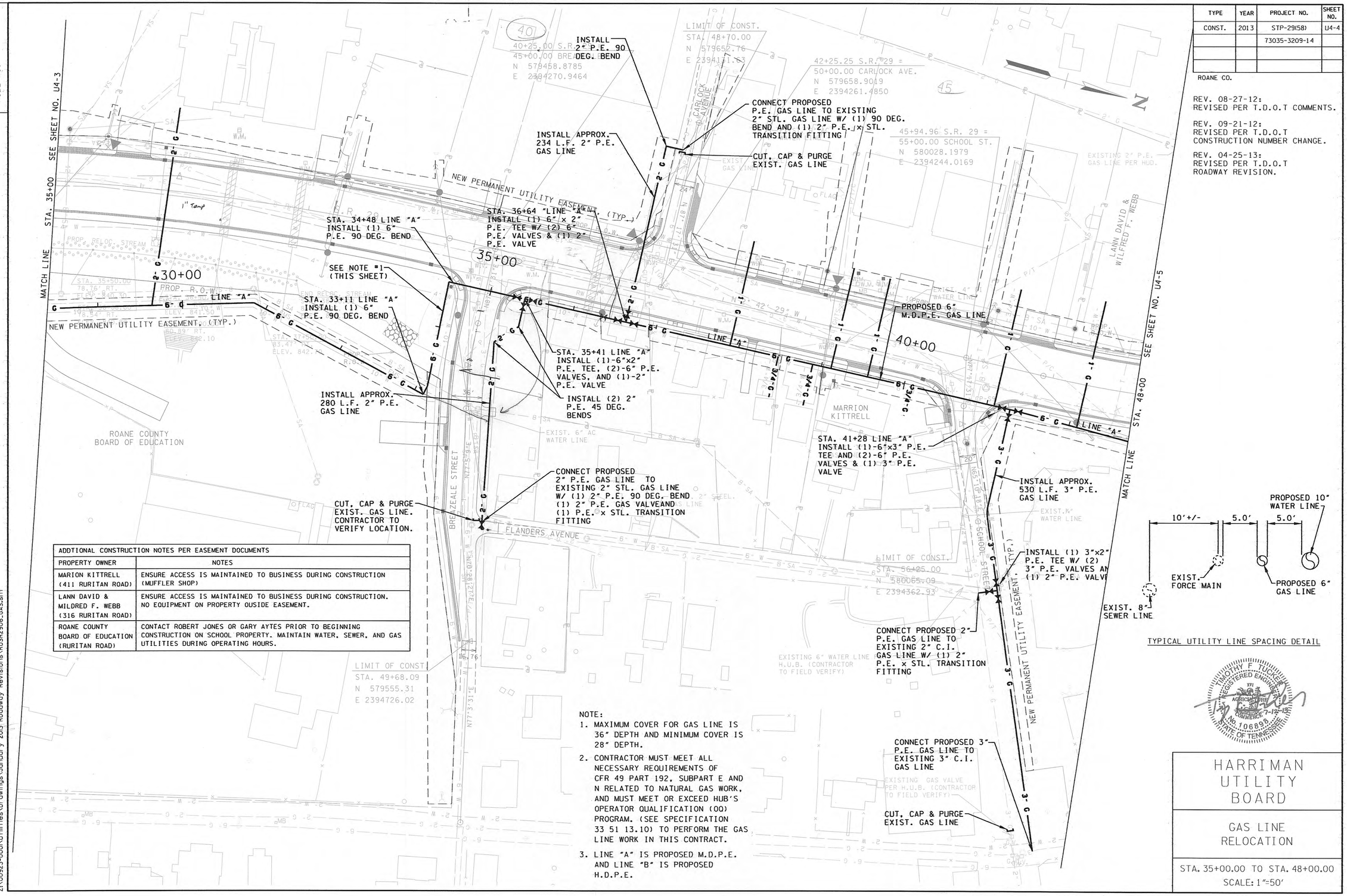
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U4-4
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.



ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
MARION KITTRELL (411 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION (MUFFLER SHOP)
LANN DAVID & MILDRED F. WEBB (316 RURITAN ROAD)	ENSURE ACCESS IS MAINTAINED TO BUSINESS DURING CONSTRUCTION. NO EQUIPMENT ON PROPERTY OUSIDE EASEMENT.
ROANE COUNTY BOARD OF EDUCATION (RURITAN ROAD)	CONTACT ROBERT JONES OR GARY AYTES PRIOR TO BEGINNING CONSTRUCTION ON SCHOOL PROPERTY. MAINTAIN WATER, SEWER, AND GAS UTILITIES DURING OPERATING HOURS.

NOTE:
1. MAXIMUM COVER FOR GAS LINE IS 36" DEPTH AND MINIMUM COVER IS 28" DEPTH.
2. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPART E AND N RELATED TO NATURAL GAS WORK, AND MUST MEET OR EXCEED HUB'S OPERATOR QUALIFICATION (OQ) PROGRAM. (SEE SPECIFICATION 33 51 13.10) TO PERFORM THE GAS LINE WORK IN THIS CONTRACT.
3. LINE "A" IS PROPOSED M.D.P.E. AND LINE "B" IS PROPOSED H.D.P.E.

TYPICAL UTILITY LINE SPACING DETAIL

TIMOTHY F. TUCKER REGISTERED ENGINEER No. 106898 STATE OF TENNESSEE 7-12-13

HARRIMAN UTILITY BOARD

GAS LINE RELOCATION

STA. 35+00.00 TO STA. 48+00.00
SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTE:
1. MAXIMUM COVER FOR GAS LINE IS 36" DEPTH AND MINIMUM COVER IS 28" DEPTH.
2. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPART E AND N RELATED TO NATURAL GAS WORK, AND MUST MEET OR EXCEED HUB'S OPERATOR QUALIFICATION (OQ) PROGRAM. (SEE SPECIFICATION 33 51 13.10) TO PERFORM THE GAS LINE WORK IN THIS CONTRACT.
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U4-5
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.

STA. 54+12 LINE "A" (E.O.L.)
CONNECT PROPOSED 6" P.E. GAS LINE TO EXISTING 3" C.I. GAS LINE W/ (1) 6" x 4" P.E. REDUCER, (1) 4" x 3" P.E. REDUCER, (1) 3" 90 DEG. BEND AND (1) 3" P.E. x CI. TRANSITION FITTING

54+01 LINE "A"
INSTALL 6" TEE
(2) 6" P.E. VALVES
& 6" CAP

CUT, CAP & PURGE
EXIST. GAS LINE

RECONNECT EXIST. ¾"
GAS SERVICE, (TYP.)

PROPOSED 6"
M.D.P.E. GAS LINE

CONNECT TO EXIST 2"
P.E. GAS LINE W/ (1)-2"x2"
P.E. TEE AND (1) 2" P.E.
VALVE.

CUT, CAP & PURGE
EXIST. 2" GAS LINE

INSTALL APPROX.
257 L.F. 2" P.E.
GAS LINE

INSTALL
2" P.E. 90
DEG. BEND

RECONNECT EXIST. ¾"
GAS SERVICE, (TYP.)

STA. 43+39 LINE "A"
INSTALL (1)-6"x2" P.E.
TEE W/ (1) 2" P.E. VALVE

STA. 44+50 LINE "A"
INSTALL (1) 6" P.E.
45 DEG. BEND

SEE NOTE #1
(THIS SHEET)

RECONNECT EXIST. ¾"
GAS SERVICE, (TYP.)

PROPOSED 6"
M.D.P.E. GAS LINE

STA. 47+35 LINE "A"
INSTALL (1) 6" P.E.
45 DEG. BEND

STA. 48+49 LINE "A"
INSTALL (1) P.E. 6"x6"
TEE & (1) 6" P.E. VALVE

INSTALL APPROX.
167 L.F. 6" P.E.
GAS LINE

INSTALL (1) 6" x 4" P.E. REDUCER
& (1) 4" x 3" P.E. REDUCER.
CONNECT PROPOSED 6" P.E. GAS
LINE TO EXISTING 3" PE GAS LINE
@ PE GAS VALVE. USE TRANSITION
FITTINGS AS REQUIRED.

CUT, CAP & PURGE
EXIST. GAS LINE

STA. 50+53 LINE "A"
INSTALL (1) 6" P.E.
22.5 DEG. BEND

STA. 50+32 LINE "A"
INSTALL (1) 6" P.E.
22.5 DEG. BEND

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

52+53.41 S.R. 29 =
70+00.00 STATE ST.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5

65+39.39 STATE ST.
N 580674.9450
E 2394102.7830

LIMIT OF CONST.
STA. 82+10.00
N 580468.83
E 2394296.36

LIMIT OF CONST.
STA. 76+28.30
N 580646.87
E 2394394.68

73+17.38 STATE ST=
75+00.00
N 580
E 2394

MATCH LINE STATION 48+00 SEE SHEET NO. U4-4

ADDTIONAL CONSTRUCTION NOTES PER EASEMENT DOCUMENTS	
PROPERTY OWNER	NOTES
ANN MCKINNEY & SHELBY SIKES (107 PANSY HILL RD)	BEAUTY SHOP IS CLOSED ON SATURDAYS, SUNDAYS, AND MONDAYS. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS BEFORE BEGINNING WORK IN FRONT OF THE SALON SO THEY CAN DIRECT CUSTOMERS WHERE TO PARK (TUESDAY - FRIDAY).
HASKELL HILL (230 RURITAN ROAD)	CONTRACTOR TO ENSURE TENANTS HAVE ACCESS TO THE BACK OF THE BUILDING DURING CONSTRUCTION.
DONALD & PRECILLA LOMBARD (182 STATE STREET)	CONTRACTOR TO MAINTAIN ACCESS TO BARBER SHOP AND PARKING LOT DURING CONSTRUCTION.

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106898
STATE OF TENNESSEE
7-12-13

HARRIMAN
UTILITY
BOARD

GAS LINE
RELOCATION

STA. 48+00.00 TO END OF PROJ.
SCALE: 1"=50'

Survey & Design Division

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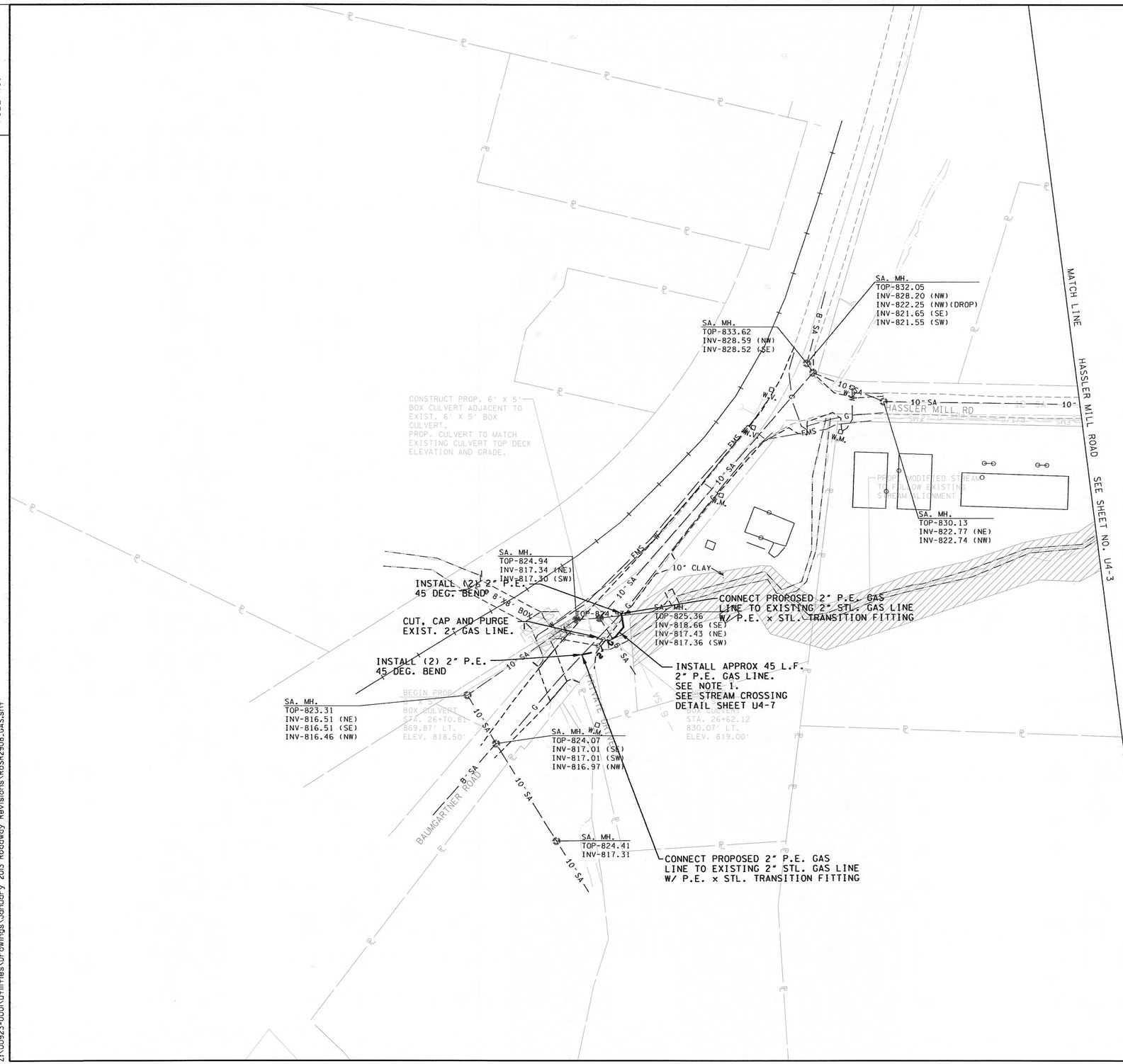
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U4-6
		73035-3209-14	

ROANE CO.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.



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NOTE:

1. CONTRACTOR TO VERIFY GAS LINE DEPTH BENEATH PROPOSED CULVERT BY POTHOLING PRIOR TO RELOCATION. IF CROWN OF GAS LINE IS BELOW 817', NO WORK SHALL BE DONE ON GAS LINE.
2. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49... (SEE NOTE 2 FROM PREVIOUS SHEETS).

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT #100 - TENNESSEE VALLEY AUTHORITY (TVA)

TIMOTHY F. TUCKER
REGISTERED ENGINEER
No. 106998
STATE OF TENNESSEE
7-12-13

HARRIMAN UTILITY BOARD

GAS LINE RELOCATION

HASSLER MILL ROAD AND BAUMGARTNER ROAD
SCALE: 1"=50'

Survey & Design Division

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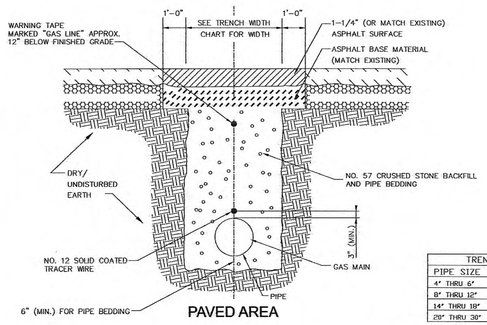
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

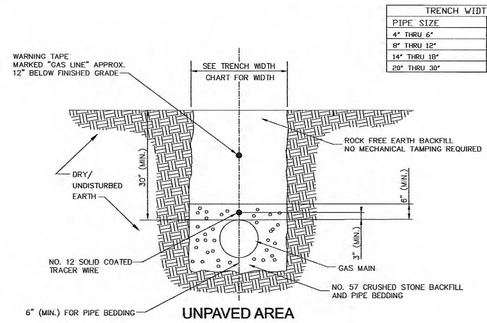


TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"
14" THRU 18"	42"
20" THRU 30"	54"

TYPICAL BACKFILL & BEDDING METHOD

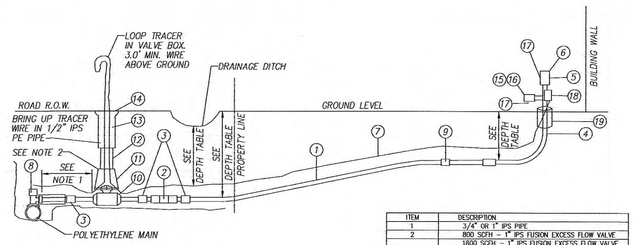
NOTES:

1. EDGE TO BE SAWED WITH A CONCRETE SAW TO A NEAT SQUARED EDGE. BROOMED CLEAN OF DUST BEFORE TACK COAT IS APPLIED.
2. EDGES TO BE TACKED WITH EMULSIFIED ASPHALT TACK CRS-1 OR CRS-1H
3. CUTTING AND REPAIRING EXISTING PAVEMENT CONCRETE OR GRAVEL SHALL BE IN ACCORDANCE WITH OWNER'S REQUIREMENTS



TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"
14" THRU 18"	42"
20" THRU 30"	54"

TYPICAL BACKFILL & BEDDING METHOD



ITEM	DESCRIPTION
1	3/4" OR 1" IPS PIPE
2	800 SCFH – 7" IPS FUSION EXCESS FLOW VALVE
	1600 SCFH – 1" IPS FUSION EXCESS FLOW VALVE
3	3/4" OR 1" IPS SOCKET FUSION COUPLING
4	1-1/4" ANODELESS SERVICE RISER W/ BYPASS
5	1-1/4" METER VALVE
6	1-1/4" PLUG
7	#12 COATED COPPER CLAD STEEL TRACER WIRE
8	2" x 1" OR (2" x 3/4") IPS TAPPING TEE
	6" x 1" OR (6" x 3/4") IPS TAPPING TEE
	1-1/4" x 1" (OR 1-1/4" x 3/4") REDUCER
9	1" OE 3/4" VALVE
10	1" IPS VALVE
11	VALVE BOX BASE
12	VALVE BOX MIDDLE SECTION #60-B
13	VALVE BOX TOP SECTION #54-B
14	VALVE BOX CAST IRON LID
15	1" BYPASS METER COCK
16	1" PLUG
17	METER VALVE LOCK
18	TRACER WIRE CLAMP FOR 1-1/4" SERVICE RISER
19	2" X 6" MDPE CASING PIPE (YELLOW)

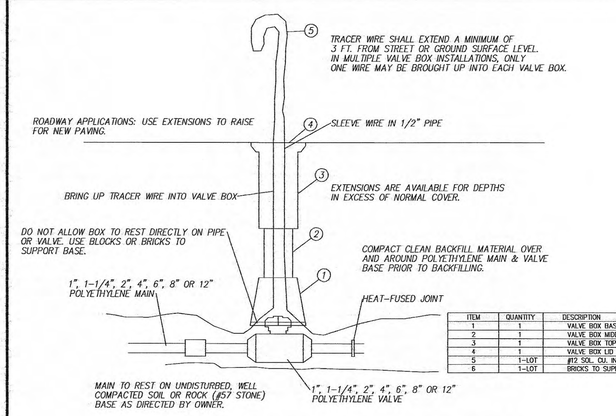
NOTES:

1. SERVICE LINES SHALL BE ENCASED IN THE PROTECTIVE SLEEVE (NEXT LARGER SIZE PLASTIC PIPE 12 TO 18 INCHES IN LENGTH) PROVIDED WITH THE SERVICE SADDLE AT THE CONNECTION OF THE SERVICE LINE TO THE SERVICE SADDLE. SERVICE LINE VALVE SHALL 24 INCHES FROM SERVICE CONNECTION TO MAIN.
2. DO NOT ALLOW BOX TO REST DIRECTLY ON PIPE OR VALVE. TO SUPPORT BOX, USE BLOCKS OR BRICKS PARALLEL TO PIPE, BUT NOT IN CONTACT WITH PIPE.
3. COMPACT SIDEFILLS AROUND AND UNDER TIE-IN.
4. TEST COMPLETE SERVICE LINE PRIOR TO TAPPING MAIN.
5. EFV TO BE INSTALLED OUTSIDE OF ASPHALT OR CONCRETE PAVEMENT

SERVICE CONNECTION

N.T.S.

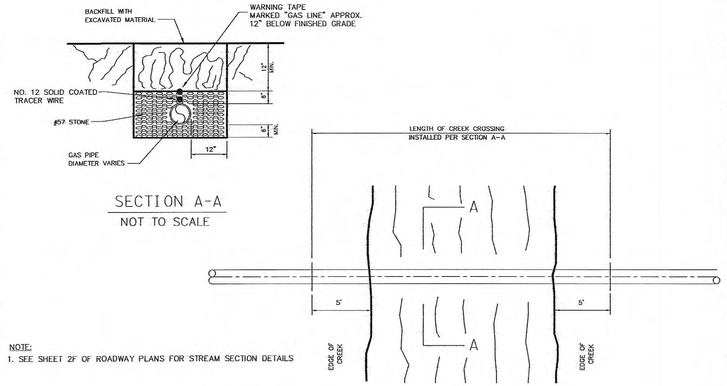
	STATE R.O.W.	CUSTOMER PROPERTY
STANDARD DEPTH	36"	24"
MINIMUM DEPTH	28"	18"
MAXIMUM DEPTH	60"	30"



ITEM	QUANTITY	DESCRIPTION
1	1	VALVE BOX BASE SECTION
2	1	VALVE BOX MIDDLE SECTION
3	1	VALVE BOX TOP SECTION
4	1	VALVE BOX LID
5	1-LOT	#12 SOL. CU. INSULATED TRACER WIRE
6	1-LOT	BRICKS TO SUPPORT VALVE BOX (NOT SHOWN)

TYPICAL VALVE SETTING

N.T.S.



NOTE:
1. SEE SHEET 2F OF ROADWAY PLANS FOR STREAM SECTION DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U4-7
		73035-3209-14	

ROANE CO.

REV. 08-27-12:
REVISED PER T.D.O.T COMMENTS.

REV. 09-21-12:
REVISED PER T.D.O.T
CONSTRUCTION NUMBER CHANGE.

REV. 04-25-13:
REVISED PER T.D.O.T
ROADWAY REVISION.

Survey & Design Division

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TIMOTHY F. TUCKER
REGISTERED ENGINEER
KY
AGRICULTURE
No. 106896
STATE OF TENNESSEE
7-12-13

HARRIMAN UTILITY BOARD

GAS LINE RELOCATION

TYPICAL DETAILS
SCALE: AS SHOWN

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-1
		73035-3209-14	

ROANE CO.

REV. 3-18-13: REVISED QUANTITIES FOR 790-04.07, 790-05.01, 790-05.05, 790-06.05, 790-20.01, 790-21.08, 790-25.01, 790-25.10, 790-25.21, 790-25.23, 790-27.01, 790-27.06, 790-30.04, 790-31.04, 790-31.11, 790-32.01, 790-32.07, 790-32.25, 790-40.02, 790-40.03, 790-42.08, 790-42.12, 790-60.01, 790-64.01, 790-70.04, 790-70.10 & 790-70.20. ADDED ITEM NUMBERS 790-27.10, 790-31.33, 790-41.01, 790-41.55, 790-43.47 AND ELIMINATED ITEM NUMBERS 790-03.03, 790-31.19, 790-40.05, 790-40.15, 790-40.18 & 790-58.06. UPDATED FOOT NOTES AND CONSTRUCTION YEAR.

REV. 4-22-13: REVISED QUANTITIES FOR 790-42.12, 790-98.01, 790-98.02 AND 790-98.03. REPLACED ITEM NUMBER 790-42.13 WITH 790-42.14. REVISED TDOT DESCRIPTIONS FOR 790-31.33, 790-32.25, 790-40.05, 790-42.12, 790-43.47, 790-70.20, 790-98.01, 790-98.03 AND 790-98.20. REVISED UNIT CALLOUT FOR ALL AND ADDED FOOT NOTE 17.

INDEX OF DRAWINGS

DRAWING INDEX & ESTIMATED QUANTITIES	U5-1
VICINITY MAP, LEGEND, & GENERAL NOTES	U5-2
POLE LOCATIONS AND CONDUCTOR NOTES	U5-3
ELECTRIC UTILITY RELOCATION SHEET	U5-4 TO U5-7
ASSEMBLY DETAILS	U5-8 TO U5-11

	ITEM	DESCRIPTION	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
(1)	790-03.01	POLE 40FT CLASS 2 WOOD	INSTALL 40-2 WOOD POLE	EACH	4	0%	100%
	790-04.02	POLE 45FT CLASS 2 WOOD	INSTALL 45-2 WOOD POLE	EACH	5	0%	100%
	790-04.06	POLE 45FT CLASS 1 METAL	INSTALL 45-1 STEEL POLE	EACH	2	0%	100%
	790-04.07	POLE 45FT CLASS 2 METAL	INSTALL 45-2 STEEL POLE	EACH	9	0%	100%
	790-05.01	POLE 50FT CLASS 1 WOOD	INSTALL 50-1 WOOD POLE	EACH	2	0%	100%
	790-05.05	POLE 50FT CLASS 1 METAL	INSTALL 50-1 STEEL POLE	EACH	3	0%	100%
	790-06.05	POLE 55FT CLASS 1 METAL	INSTALL 55-1 STEEL POLE	EACH	24	0%	100%
	790-07.06	POLE 60FT CLASS 2 METAL	INSTALL 60-2 STEEL POLE	EACH	1	0%	100%
	790-20.01	POLE 40FT CLASS 4 METAL	INSTALL 40-4 STEEL POLE	EACH	3	0%	100%
(2)	790-21.01	1Ø SGL PRIMARY SUPPORT 15KV	INSTALL (A1)	EACH	2	0%	100%
	790-21.04	1Ø SGL SUPPORT 15KV	INSTALL (A1-1)	EACH	1	0%	100%
	790-21.07	1Ø PRIMARY LG ANGLE 15KV	INSTALL (A4)	EACH	1	0%	100%
	790-21.08	1Ø DEADEND 15KV	INSTALL (A5)	EACH	5	0%	100%
	790-21.09	1Ø PRIMARY TAP 15KV	INSTALL (A5-2)	EACH	10	0%	100%
	790-21.10	1Ø VERTICAL DDE 15KV	INSTALL (A6)	EACH	4	0%	100%
	790-25.01	3Ø CROSSARM SGL 15KV	INSTALL (C1)	EACH	5	0%	100%
	790-25.10	3Ø CROSSARM DBL DBL PRIM SUPPORT 15KV	INSTALL (C2)	EACH	2	0%	100%
	790-25.21	3Ø CROSSARM DEADEND SGL 15KV	INSTALL (C7)	EACH	7	0%	100%
	790-25.23	3Ø CROSSARM DDE 15KV	INSTALL (C8)	EACH	6	0%	100%
	790-27.01	DBL CKT XARM 15KV	INSTALL (DC-C1)	EACH	9	0%	100%
	790-27.06	DBL CKT DBL XARM SM ANG 15KV	INSTALL (DC-C2)	EACH	6	0%	100%
	790-27.10	DBL CKT CROSSARM DDE 15KV	INSTALL (DC-C8)	EACH	5	0%	100%
(10)	790-30.04	SECONDARY ASSEMBLIES MISC	INSTALL (SVC)	EACH	75	0%	100%
	790-31.04	SERVICE CONDUCTOR 6 AL DUPLEX	INSTALL (DUPLEX)	L.F.	2,000	0%	100%
	790-31.11	SERVICE CONDUCTOR 2 AL TRIPLEX	INSTALL (TRIPLEX)	L.F.	310	0%	100%
	790-31.33	SERVICE CONDUCTOR 336.4 MCM AL SGL COND	INSTALL (336 QPLEX)	L.F.	50	0%	100%
	790-32.01	DOWN GUY - THROUGH BOLT TYPE	INSTALL (E1-2)	EACH	70	0%	100%
	790-32.07	OH GUY - THROUGH BOLT TYPE	INSTALL (E2-2)	EACH	6	0%	100%
	790-32.25	ANCHOR (POWER INSTALLED HELIX SCREW ANCHOR)	INSTALL (FP-2)	EACH	45	0%	100%

	ITEM	DESCRIPTION	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
	790-40.02	OH COND 2 7/1 ACSR SPARATE	INSTALL (#2 ACSR)	L.F.	5,500	0%	100%
	790-40.03	OH COND 1/0 6/1 ACSR RAVEN	INSTALL (1/0 ACSR)	L.F.	1,720	0%	100%
	790-40.05	OH COND 3/0 6/1 ACSR PIGEON	INSTALL (3/0 ACSR)	L.F.	660	0%	100%
	790-40.09	OH COND 336.4 18/1 ACSR MERLIN	INSTALL (336 ACSR)	L.F.	3,030	0%	100%
(16)	790-41.01	UG PRI COND 2 AL 15KV	INSTALL (#2 AL URD)	L.F.	165	0%	100%
	790-41.45	UG SEC COND 2 AL TPLX	INSTALL (#2 AL URD TPLX)	L.F.	95	0%	100%
(14)	790-41.55	UG SEC COND 1/0 AL QPLX	INSTALL (1/0 URD)	L.F.	205	0%	100%
	790-42.08	2IN DIA PVC PIPE	INSTALL (2IN SCH 40 CNDUIT)	L.F.	60	0%	100%
	790-42.12	CONDUIT-POLE MTD-2FT SCH 80 PVC	INSTALL (SVC RISER)	L.F.	7	0%	100%
(17)	790-42.14	CONDUIT-POLE MTD-4FT SCH 80 PVC	INSTALL (TP3S)	L.F.	32	0%	100%
	790-43.46	SECONDARY PULLBOX LARGE	INSTALL (HANDHOLE)	EACH	1	0%	100%
(15)	790-43.47	PRIMARY PULLBOX	INSTALL (PULLBOX)	EACH	1	0%	100%
(3)	790-46.01	1Ø TRANSFORMER	INSTALL (1TR)	EACH	20	0%	100%
(4)	790-49.01	3Ø XFMR BNK POLE MTD NO FUSE/ARRESTERS	INSTALL (3TR)	EACH	1	0%	100%
	790-58.03	CUTOUT KNIFE SWITCH, SNGL LOADBREAK 15KV	INSTALL (SW-DISC)	EACH	2	0%	100%
	790-60.01	1Ø FUSE CUTOUT XARM MOUNT 15KV	INSTALL (1CO)	EACH	8	0%	100%
(5)	790-60.09	3Ø SECTIONALIZER OR RECL 15KV	INSTALL (RECLOSER)	EACH	1	0%	100%
	790-64.01	SEC MTG 1Ø 120/240 VOLTS	INSTALL (METER)	EACH	3	0%	100%
	790-65.03	LIGHTNING ARRESTER ARM MTD 9 KV	INSTALL (LA)	EACH	1	0%	100%
	790-68.10	MISCELLANEOUS ASSEMBLIES	INSTALL (BOLLARD)	EACH	2	0%	100%
(9)	790-69.28	EXTENTION LINK-EPOXY-6FT	INSTALL (INSLINK)	EACH	12	0%	100%
	790-70.04	STREET LIGHT W/ FRNG ANC BASE & MTL POLE	INSTALL (STL POLE)	EACH	5	0%	100%
(13)	790-70.10	FLOOD LIGHT	INSTALL (PLT)	EACH	3	0%	100%
(12)	790-70.20	STREET LIGHT (ALL)	INSTALL (SLT)	EACH	27	0%	100%
(6)	790-98.01	REMOVE WIRE	REMOVE CONDUCTORS	L.F.	14,431	0%	100%
(7)	790-98.02	REMOVE POLES	REMOVE POLES	EACH	72	0%	100%
(8)	790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	REMOVE ASSEMBLIES	EACH	395	0%	100%
(11)	790-98.20	TREE AND BRUSH REMOVAL OFF ROW	EASEMENT CLEARING	LS	1	0%	100%

FOOTNOTES

(1) INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, DIGGING HOLE, FILLING HOLE, BLASTING, BUTT WRAP OR SINGLE GROUND ROD, MGNV, NUMBERING POLE.

(2) ASSEMBLIES OF SIMILAR CONSTRUCTION BUT DIFFERING ONLY IN USE OF EPOXY VS. PORCELAIN INSULATORS OR FIBERGLASS VS. WOOD CROSSARM OR LACK OF NEUTRAL ASSEMBLY SHOULD BE GROUPED WITHIN THE SAME ITEM.

(3) USE WITH COMPLETE SELF PROTECTED, CONVENTIONAL TRANSFORMERS WITH TANK MOUNTED FUSE AND ARRESTER AND TRANSFORMER WITH DOUBLE CAP ARRESTER AND INTERNAL FUSE, 15KV AND 25KV. INCLUDES ALL MISCELLANEOUS MATERIALS EXCEPT TRANSFORMER.

(4) USE WITH ALL CLUSTER MOUNTED AND POLE MOUNTED THREE PHASE INSTALLATIONS, ALL CONNECTIONS, ALL SECONDARY VOLTAGES, FUSES AND ARRESTERS NOT INCLUDED, 15KV AND 25KV. INCLUDES ALL MISCELLANEOUS MATERIALS EXCEPT TRANSFORMERS.

(5) INCLUDES MISCELLANEOUS MATERIALS EXCEPT SECTIONALIZER AND RECLOSER-SECTIONALIZER OR RECLOSER CALLED OUT SEPARATELY.

(6) INCLUDES DROP WIRE, OH GUYS AND MAIN LINE WIRE.

(7) INCLUDES MAINLINE POLES, SERVICE POLES AND STUB POLES

(8) INCLUDES CROSSARMS, TRANSFORMERS, SWITCHES, ETC.

(9) FIBERGLASS STRAIN INSULATED GUY QUANITIES ARE APPROXIMATE. CONTRACTOR TO INSTALL FIBERGLASS STRAIN INSULATORS WHERE REQUIRED TO INSURE DOWN GUYS ARE CLEAR OF ENERGIZED CONDUCTORS AS REQUIRED BY THE NESC.

(10) UNIT INCLUDES LABOR AND MATERIALS TO INSTALL OR TRANSFER A SECONDARY CONNECTION INCLUDING ALL POLE HARDWARE AND CONDUCTORS OF VARIOUS SIZES AND NUMBER.

(11) INCLUDES CLEARING EASEMENTS FOR ELECTRIC LINES NOT COVERED BY TDOT PROJECT CLEARING.

(12) SLT (STREET LIGHT) INCLUDES ALL CONDUCTORS, CONNECTIONS, LUMENAIRE, AND LABOR TO INSTALL STREET LIGHT.

(13) PLT (PRIVATE LIGHT) INCLUDES ALL CONDUCTORS, CONNECTIONS, LUMENAIRE, AND LABOR TO INSTALL PRIVATE LIGHT.

(14) INCLUDES URD SERVICE SPLICE.

(15) PULLBOX TO BE 3'x5' H20 TRAFFIC RATED.

(16) INCLUDES SHEILDED CABLE, FULL NEUTRAL CABLE, 1/3 NEUTRAL CABLE, 100% AND 133% INSULATION LEVELS.

(17) POLE MOUNTED CONDUIT INCLUDES ALL LABOR AND MATERIAL INCLUDING TERMINATORS, BRACKETS, JUMBERS, CONNECTORS AND ARRESTERS TO COMPLETE ONE TP3S AS SHOWNIN PROJECT DETAILS.

UTILITY INFORMATION

Harriman Utility Board
300 N. Roane St.
Harriman, TN 37748
Contact: Steve Ladd
Phone: (865) 882-3242 x 235
Fax: (865) 285-1047
Email: sladd@hub-tn.com

JAMES N. CROWE REGISTERED PROFESSIONAL ENGINEER AGRICULTURE No. 021975 STATE OF TENNESSEE 07/23/2013

HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE	DATE
N.T.S.	03.18.2013

DRAWING INDEX & ESTIMATED QUANTITIES

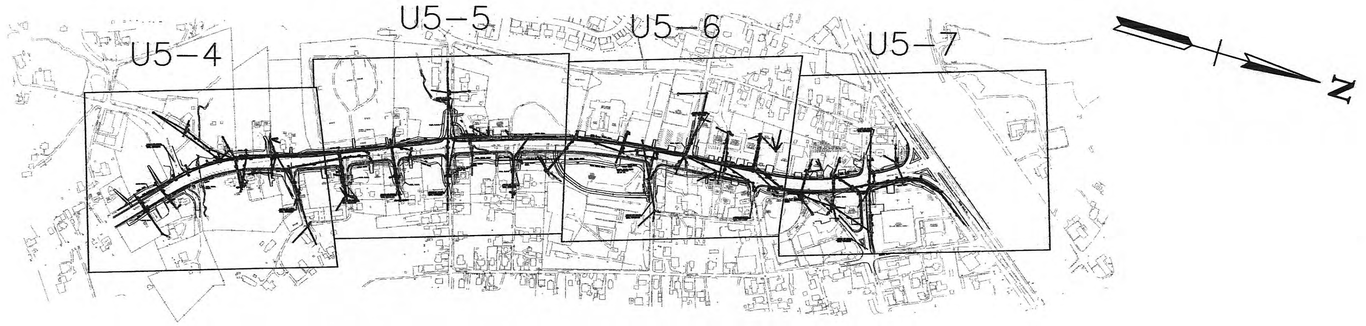
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-2
		73035-3209-14	

ROANE CO.

REV. 3-18-13: UPDATED LEGEND, CONSTRUCTION YEAR AND NOTE 28.

REV. 4-22-13: UPDATED PROJECT NUMBER AND REMOVED 04 FROM SHEET NUMBERING.

VICINITY MAP



GENERAL NOTES

1. IN GENERAL, THE CONTRACTOR SHALL BUILD AND INSTALL 13kV OVERHEAD DISTRIBUTION AND SECONDARY FACILITIES AS SHOWN ON THE DRAWINGS.

2. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL POTENTIALLY AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTORS OPERATIONS.

3. CONTRACTOR SHALL PROVIDE OWNER AND PROJECT ENGINEER WITH (1) SET OF CLEAN, CLEARLY MARKED AS-BUILT DRAWINGS AT END OF PROJECT. THESE DRAWINGS SHALL REFLECT ANY AND ALL CHANGES TO ELECTRONIC PLANS DURING CONSTRUCTION.

4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE UTILITY OWNER.

5. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REQUEST THE UTILITY OWNER TO PROPERLY LOCATE AND MARK THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS IN THE VICINITY OF THE UTILITY.

6. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES AND THE GENERAL PUBLIC FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.

7. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM INC. AT 811.

8. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE N.E.S.C., N.E.C., AND ANY AND ALL OTHER APPLICABLE LOCAL SAFETY CODES.

9. THESE DRAWINGS ARE NOT CONSIDERED A COMPLETE SET OF CONTRACT DOCUMENTS WITHOUT THE ACCOMPANYING TECHNICAL SPECIFICATIONS.

9. SEE TECHNICAL SPECIFICATIONS FOR ANY UNITS NOT SPECIFICALLY DETAILED IN THESE DRAWINGS.

10. THE ENGINEER WILL FURNISH DESIGN TENSION AND SAG DATA AS REQUIRED. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE ENGINEER PRIOR TO STRINGING CONDUCTORS FOR SAGGING AND STRINGING DATA.

11. ALL POLES SHALL INCLUDE GROUND RODS. GROUND RODS SHALL BE PAID FOR AS PART OF THE POLE AND ARE NOT A SEPARATE ITEM.

12. ALL NON-STEEL CROSSARMS ON THIS PROJECT ARE TO BE HEAVY DUTY BRACELESS FIBERGLASS UNLESS OTHERWISE SPECIFIED ON THE CONTRACT DRAWINGS.

13. THE UTILITY WILL FURNISH ALL TRANSFORMERS TO BE INSTALLED AS SHOWN ON PLAN DRAWINGS.

14. THE OWNER WILL PROVIDE TRANSFORMER INFORMATION SHEETS AND CONTRACTOR WILL BE REQUIRED TO COMPLETE AND RETURN A TRANSFORMER INFORMATION SHEET FOR EACH UNIT REMOVED OR INSTALLED ON THE PROJECT.

15. ALL EXISTING CONDUCTORS NOT TO BE REPLACED BUT INDICATED AS ATTACHED TO NEW POLES SHALL BE TRANSFERRED. THIS WORK IS CONSIDERED PART OF THE PROJECT AND IS NOT A SPECIFIC PAY ITEM.

16. WHERE CONDUCTORS ARE TOO SHORT TO BE PROPERLY SAGGED AT NEW POLE LOCATION, ADDITIONAL CONDUCTOR MAY BE SPLICED A MINIMUM OF 10' FROM POLE STRUCTURES.

17. CONTRACTOR TO TRANSFER EXISTING CONDUCTORS THAT ARE NOT BEING SPECIFICALLY REPLACED FROM REMOVED POLE TO NEW POLES AND RESAG ALL CONDUCTORS TO PROPER TENSIONS. SPLICE ADDITIONAL CONDUCTOR AS REQUIRED TO ACHIEVE PROPER SAG. NO SPLICE SHALL BE WITHIN 10' OF ANY POLE OR STRUCTURE.

18. CONTRACTOR TO ENSURE CORRECT CIRCUIT PHASING ON ALL CONDUCTORS IS MAINTAINED THROUGHOUT THE PROJECT.

19. CONTRACTOR TO COORDINATE ALL METER WORK WITH OWNER.

20. CONTRACTOR TO INSTALL ALL GUYS AT 3 TO 2 LEAD UNLESS OTHERWISE INDICATED ON PLAN DRAWINGS OR IN GUYING DETAILS.

21. ANY CONTRACTOR OR SUBCONTRACTOR WHO WILL BE PERFORMING THE WORK OF THE ELECTRIC UTILITY CONSTRUCTION SHALL SUBMIT QUALIFICATION REQUIREMENTS DIRECTLY TO TDOT FOR APPROVAL BY 30 DAYS PRIOR TO THE LETTING OF THE CONTRACT.

22. THE WORK OF ELECTRIC RELOCATION AS INDICATED WITHIN THESE CONTRACT DRAWINGS SHALL BE COVERED UNDER STANDARD SPECIFICATIONS FOR UTILITY CONSTRUCTION AS PART OF THE TDOT PROPOSAL CONTRACT.

23. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL ELECTRIC FACILITIES AT FINAL GRADE AS SHOWN. ANY TEMPORARY INSTALLATIONS OR GRADING ARE THE RESPONSIBILITY OF THE CONTRACTOR.

24. CONTRACTOR TO ENSURE THAT ANY STEEL POLES PLACED IN FILL AREAS SHALL HAVE SUFFICIENT ANTI-CORRISION COATING TO 18' ABOVE FINISHED GRADE.

25. THE UTILITY WILL PROVIDE STAKING DATA INCLUDING NORTHING, EASTING, AND STATION/OFFSET DATA AS REQUIRED OR SHOWN ON DRAWINGS.

26. REMOVAL POLES ARE CATEGORIZED AS: TYPE A = 35' AND BELOW TYPE B = 40' TO 60' TYPE C = 65' AND ABOVE

27. ALL UNDERGROUND CONDUCTOR TERMINATORS AND SPLICES ARE TO BE CONSIDERED PART OF THE PROJECT AND ARE NOT SPECIFIC PAY ITEMS UNLESS INDICATED OTHERWISE ON THE CONTRACT DRAWINGS.

28. ALL EXISTING POLES WITH REMOVED ELECTRIC FACILITIES ARE TO BE TOPPED 2' ABOVE HIGHEST COMMUNICATION ATTACHMENT IF COMMUNICATION CABLES ARE ATTACHED TO THE POLE. THIS IS NOT A PAY ITEM AND IS CONSIDERED PART OF THE PROJECT. POLE TOPING DOES NOT QUALIFY AS POLE REMOVAL.

29. ROCK MAY BE ENCOUNTERED THROUGHOUT THE PROJECT. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PERFORMING ANY INSTALLATIONS IN ROCK.

30. ON POLES WHERE TRANSFORMERS ARE BEING REMOVED AND INSTALLED, THE EXISTING TRANSFORMER MAY BE RE-USED IF IN GOOD CONDITION.

31. POLE STRUCTURES SET WITHIN 3' OF DITCHES SHALL BE BACKFILLED AND TAMPED WITH CRUSHED LIMESTONE. PLACE RIPRAP A MINIMUM OF 2' RADIUS FROM EDGE OF POLE TO A MINIMUM HEIGHT OF 8' ABOVE GRADE LEVEL.

32. RAIN WATER WHICH COLLECTS ON THE UTILITY TRENCH SHALL BE PUMPED INTO A TEMPORARY DEWATERING STRUCTURE OR FILTER BAG.

33. SILT FENCE TO BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES TO BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.

34. UTILITY CROSSING FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS, AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITIES IN THIS PROJECT IN REGARDS TO EROSION CONTROL. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS.

35. IT IS THE RESPONSIBILITY OF THE UTILITIES INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM HIS OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM HIS WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF HIS WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM HIS OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND BECOME WATERS OF THE STATE.

36. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY OF POSSIBLE, BUT NO LATER THAN 7 DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE TDOT ROW EROSION CONTROL MEASURES OR RECEIVE SEPARATE EROSION CONTROL MEASURES WILL BE INSTALLED UNTIL SUCH TIME THE TRENCH IS BACKFILLED.

37. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITIES IN THIS PROJECT IN REGARDS TO EROSION CONTROL. THE STATE CONTRACTOR IS ONLY RESPONSIBLE FOR EROSION CONTROL MEASURES FOR UTILITY CONSTRUCTION THAT IS INCLUDED IN THE STATE CONTRACT WORK.

38. ALL UNDERGROUND CONDUCTOR TERMINATORS AND SPLICES ARE TO BE CONSIDERED PART OF THE PROJECT AND ARE NOT SPECIFIC PAY ITEMS UNLESS INDICATED OTHERWISE ON THE CONTRACT DRAWINGS.

39. ALL UNDERGROUND HANDHOLES TO BE FLUSH MOUNTED AND HS-20-44 RATED. HANDHOLE LIDS TO BE PERMANENTLY MARKED AT "ELECTRIC".

40. ALL UNUSED UNDERGROUND CONDUCTORS TO BE ABANDONED IN PLACE.

LEGEND

- PROPOSED TDOT ROW
- 3 PHASE EXISTING
- SINGLE PHASE EXISTING
- 3 PHASE PROPOSED
- SINGLE PHASE PROPOSED
- UNDERGROUND
- EXISTING/PROPOSED DUPLEX
- EXISTING/PROPOSED TRIPLEX
- EXISTING/PROPOSED QUADRIPLEX
- TRAFFIC SIGNAL POLE
- EXISTING POLE
- PROPOSED POLE
- REPLACEMENT POLE
- EXISTING TRANSFORMER
- PROPOSED TRANSFORMER
- REMOVAL/EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- REMOVAL/EXISTING PRIVATE LIGHT
- PROPOSED PRIVATE LIGHT
- SPAN GUY
- PROPOSED ANCHOR
- REMOVAL ANCHOR
- EXISTING ANCHOR
- SW-GANG
- SW-DISC
- FUSE
- RECLOSER
- CAP BANK



HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC

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SCALE	DATE
N.T.S.	03.18.2013

VICINITY MAP , LEGEND, & GENERAL NOTES

PROPOSED STRUCTURE LOCATIONS				
POLE	STATION	OFFSET	NORTHING	EASTING
P1	9+91.89	−47.57	2395245.67	576618.58
P1−2	9+89.20	35.06	2395305.07	576676.09
P2	11+24.66	−43.35	2395153.08	576714.07
P2−2	11+34.83	35.76	2395201.02	576777.77
P3	13+8.62	−47.16	2395019.66	576851.66
P5	14+99.55	−44.53	2394915.74	577016.88
P5−1	14+74.57	−74.86	2394901.42	576979.53
P5−3	15+62.23	−91.56	2394843.63	577057.33
P5−5	13+64.22	−249.11	2394822.96	576777.65
P6	16+47.68	−43.46	2394854.19	577160.82
P6−2	16+25.25	45.04	2394945.42	577168.85
P6−4	16+2.21	135.34	2395039.03	577177.08
P7	18+3.06	−44.87	2394808.87	577312.77
P7−1	17+86.86	−56.18	2394802.17	577294.02
P7−2	17+90.36	61.08	2394914.44	577328.09
P7−4	18+59.05	45.44	2394881.61	577390.21
P7−6	19+42.18	181.23	2394991.00	577506.67
P8	20+52.52	−52.43	2394734.9	577547.18
P9	21+70.46	−45.81	2394699.79	577658.12
P9−2	21+82.14	71.97	2394805.46	577711.43
P9−4	21+96.03	211.96	2394931.06	577774.80
P10	23+27.34	−45.71	2394643.40	577804.52
P11	24+97.55	−45.56	2394582.24	577963.36
P11−2	24+93.11	136.92	2394754.08	578024.93
P12	26+55.53	−47.50	2394525.03	578111.90
P13	28+68.02	−57.01	2394447.96	578312.08
P13−1	28+29.29	−212.33	2394311.67	578228.12
P13−2	28+6.03	163.78	2394677.28	578319.93
P14	30+57.27	−53.10	2394397.40	578496.31
P15	31+73.23	−53.26	2394365.79	578607.96
P17	32+91.98	−51.20	2394335.59	578722.82
P17−2	31+79.35	74.62	2394487.22	578648.52
P17E	31+78.16	280.94	2394686.14	578703.31
P17A	34+24.47	−50.87	2394301.29	578853.21
P18	35+57.29	−56.64	2394266.99	578983.61
P18−2	34+78.46	45.00	2394382.45	578927.54
P19	38+37.98	−46.99	2394236.00	579268.08
P19−2	38+31.38	46.00	2394329.25	579268.77
P20	39+46.16	−50.75	2394224.10	579377.30
P20−1	39+85.85	126.14	2394398.74	579426.80
P20−2	40+28.74	305.61	2394576.04	579477.05
P20−3	40+86.88	307.86	2394575.54	579535.23
P20−4	40+49.50	394.70	2394664.05	579501.99
P20−5	40+77.52	514.95	2394782.84	579535.66
P21	41+88.21	−48.02	2394215.27	579619.63
P21−2	41+64.84	45.07	2394309.36	579600.69
P22	44+27.16	−45.28	2394206.72	579858.44
P22−1	44+14.66	−119.60	2394133.07	579842.45
P22−2	44+35.13	58.39	2394309.89	579871.30
P23	46+5.85	−43.28	2394200.27	580037.01
P24	47+36.90	45.38	2394281.68	580174.02
P25	48+90.94	73.64	2394288.47	580334.25
P29	53+26.63	−50.09	2394032.84	580712.71
P29−1	52+5.43	77.31	2394195.55	580651.64
P31	55+67.85	87.66	2394024.47	580989.64

PROPOSED CONDUCTOR NOTES					
	P1−2	P2−2	L1	L2	P5−1
INSTALL (336 ACSR)					120
INSTALL (#2 ACSR)	20	20			
INSTALL (1/0 ACSR)					
INSTALL (3/0 ACSR)					40
INSTALL (336 QPLEX)					
INSTALL (#2 TRIPLEX)					
INSTALL (#6 DUPLEX)	10		116	104	
INSTALL (#2 AL URD)					
INSTALL (1/0 URD)					

	P5−5	P6	P6−4	P7−2	P7−4
INSTALL (336 ACSR)	705				
INSTALL (#2 ACSR)			20		212
INSTALL (1/0 ACSR)					
INSTALL (3/0 ACSR)	235				
INSTALL (336 QPLEX)					
INSTALL (#2 TRIPLEX)				107	
INSTALL (#6 DUPLEX)		157			
INSTALL (#2 AL URD)					
INSTALL (1/0 URD)					

	P7−6	P9−2	P9−4	P9−2E	P13−1
INSTALL (336 ACSR)					
INSTALL (#2 ACSR)	320	236	282		
INSTALL (1/0 ACSR)					644
INSTALL (3/0 ACSR)					
INSTALL (336 QPLEX)					
INSTALL (#2 TRIPLEX)			141	21	
INSTALL (#6 DUPLEX)	160				
INSTALL (#2 AL URD)					
INSTALL (1/0 URD)					

	P13−2	P14	P15	P17E	P17−2
INSTALL (336 ACSR)					
INSTALL (#2 ACSR)				332	380
INSTALL (1/0 ACSR)	920				
INSTALL (3/0 ACSR)					
INSTALL (336 QPLEX)			44		
INSTALL (#2 TRIPLEX)					
INSTALL (#6 DUPLEX)		192		166	
INSTALL (#2 AL URD)					
INSTALL (1/0 URD)					

	P20	P20−1	P20−2	P20−3	P20−4
INSTALL (336 ACSR)					
INSTALL (#2 ACSR)		576	892	236	368
INSTALL (1/0 ACSR)					
INSTALL (3/0 ACSR)					
INSTALL (336 QPLEX)					
INSTALL (#2 TRIPLEX)					
INSTALL (#6 DUPLEX)				59	
INSTALL (#2 AL URD)					150
INSTALL (1/0 URD)	110				

PROPOSED CONDUCTOR NOTES						
	P20−5	P22−2	P23	P23E	P24	P24−1
INSTALL (336 ACSR)					960	
INSTALL (#2 ACSR)	496			80		
INSTALL (1/0 ACSR)						
INSTALL (3/0 ACSR)					160	
INSTALL (336 QPLEX)						
INSTALL (#2 TRIPLEX)	10					
INSTALL (#6 DUPLEX)		76	179			102
INSTALL (#2 AL URD)						
INSTALL (1/0 URD)						

	P25	P25E1	P29	P31	P31E
INSTALL (336 ACSR)	966				
INSTALL (#2 ACSR)		25			
INSTALL (1/0 ACSR)					
INSTALL (3/0 ACSR)	161				
INSTALL (336 QPLEX)					
INSTALL (#2 TRIPLEX)					
INSTALL (#6 DUPLEX)	161		64	101	137
INSTALL (#2 AL URD)					
INSTALL (1/0 URD)	76				

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	US-3
		73035-3209-14	

ROANE CO.

REV. 3-18-3: REVISED POLE LOCATIONS FOR P17-2, P17E, P20-1 AND P22-2. ADDED POLE LOCATIONS FOR P24-1 AND P30-1. UPDATED CONDUCTOR NOTES AND CONSTRUCTION YEAR.

REV. 4-22-13: UPDATED PROJECT NUMBER AND REMOVED 04 FROM SHEET NUMBERING.

NOTE: STATION AND OFFSET PROVIDED FOR REFERENCE ONLY.
DO NOT USE STATION AND OFFSET FOR STAKING.
NORTHING AND EASTING ARE PROVIDED FOR STAKING USE.

JAMES N. CROWDER REGISTERED AGRICULTURE No. 021979 STATE OF TENNESSEE 04/29/2013

HUB
Harriman Utility Board

JOB NUMBER: 81128
DESIGNED: CED
DRAWN: RKW
CHECKED: JNC

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE: N.T.S.
DATE: 03.18.2013

POLE LOCATIONS AND CONDUCTOR NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-4
		73035-3209-14	

ROANE CO.

REV. 3-18-13: UPDATED EXISTING AND PROPOSED ELECTRIC FACILITIES ON STRUCTURES P1, P1-2, P2, P3, P5, P6-2, P6-4, P7-1, P7-2, P8. UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

BEGIN R.O.W.
PROJECT NO. STP-29(58)
STA. 11+52.13
N 576764.2099
E 2395163.6072

RURITAN RD. S.E. (U.S. HWY. 27)

PRES. R.O.W.

GIBSON WAY

REMOVE: TYPE B POLE, C2, 1TR-15kVA(9098), (2)E1-2, FP-2, PLT, SVC

SWING EXISTING CONDUCTOR FROM POLE P5R3 TO POLE P5-5

INSTALL: 60-2 STEEL POLE, C8(336), (4)E1-2, (2)FP-2

REDUCE TENSION SPAN

INSTALL: 45-2 STEEL POLE, C8(336), 1TR-15kVA(9098), PLT, SVC

REMOVE: TYPE B POLE, C2, (2)E1-2, FP-2

INSTALL: 55-1 STEEL POLE, (2)C7(336), C2(336), (6)E1-2, (3)FP-2, SVC, SLT

REMOVE: TYPE B POLE, A5-2, (2)C2, 1TR-25kVA(9974), METER, E2-2, SLT, (2)SVC

INSTALL: 55-1 STEEL POLE, DC-C2(336), A5-2(#2ACSR), 1TR-25kVA(9974), TCO, (3)E1-2, (2)FP-2, SLT, (2)SVC

REMOVE: TYPE B POLE, DC-C1, 1TR-25kVA(9203), SLT, (2)SVC

REMOVE: TYPE B POLE, DC-C8, (2)SW-DISC

INSTALL: 55-1 STEEL POLE, DC-C8(336), (2)SW-DISC

INSTALL: 40-4 WOOD POLE, (2)SVC

INSTALL: 55-1 STEEL POLE, DC-C1(336), 1TR-25kVA(9203), A5-2(#2ACSR), TCO, (2)E1-2, FP-2, SLT, (2)SVC

INSTALL: 55-1 STEEL POLE, C2(336), 1TR-15kVA(9000), (2)E1-2, FP-2, (2)SVC, SLT

REMOVE: TYPE B POLE, E1-2, FP-2

REMOVE: TYPE B POLE, C1, A5-2

INSTALL: 55-1 STEEL POLE, C1(336), A5-2(#2ACSR)

REMOVE: TYPE B POLE, C1, SLT, (2)SVC

REMOVE: TYPE B POLE, C8, A5-2, RECLOSER, METER, SVC RISER, E1-2, FP-2, SLT, SVC

INSTALL: 55-1 STEEL POLE, C8(336), A5-2(#2ACSR), RECLOSER, METER, SVC RISER, (3)E1-2, (2)FP-2, SLT, SVC

EXISTING TO REMAIN

REMOVE: TYPE B POLE, A5, 1TR-15kVA(9944), SLT, (3)SVC, INSTALL: 45-2 STEEL POLE, A5(#2ACSR), 1TR-15kV(9944), SLT, (3)SVC

REMOVE: TYPE B POLE, A1, 1TR-50kVA(4167), SVC RISER, SVC

INSTALL: 45-2 STEEL POLE, A1(#2ACSR), 1TR-50kVA(4167), SVC RISER, SVC

REMOVE: TYPE A POLE, A5, (2)SVC, SVC RISER, E1-2, FP-2

INSTALL: 40-2 WOOD POLE, A5(#2ACSR), 1TR-15kVA(0000), (2)SVC, SVC RISER, (2)E1-2, FP-2,

REMOVE: TYPE B METAL POLE, SLT FOUNDATION, SLT, SVC

INSTALL: SLT POLE, SVC

REMOVE: TYPE A POLE, PLT, SVC RISER, (2)SVC

INSTALL: 40-2 WOOD POLE, PLT, SVC RISER, (2)SVC,

INSTALL: 50-1 STEEL POLE, A1-1(#2ACSR), SLT, SVC

REMOVE: TYPE B POLE, A4, E1-2, FP-2, SLT, PLT, (2)SVC,

REMOVE: TYPE B POLE, A1, 1TR-15kVA(8605), (3)SVC

INSTALL: 45-2 WOOD POLE, A6(#2ACSR), 1TR-15kVA(8605), E1-2, FP-2, (3)SVC

MATCHLINE STA. 21+00 SHEET NO. U5-5

PROP. 42" RCP

CONST. ESMT.

PRES. & PROP. R.O.W.

S.R. 29

RURITAN RD. (SR-29)

GIBSON CIRCLE

MUNICIPAL AIRPORT

JAMES N. CROWDER, REGISTERED ENGINEER, AGRICULTURE, No. 021978, STATE OF TENNESSEE, 04/24/2013

HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC
SCALE	1"=50'
DATE	03.18.2013

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ELECTRIC UTILITY RELOCATION
STA 000+00 TO STA 21+00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-5
		73035-3209-14	

ROANE CO.

REV. 3-18-13: UPDATED EXISTING AND PROPOSED ELECTRIC FACILITIES ON STRUCTURES P9, P9-2, P9R6, P11-2, P13, P13-2, P13R, P14, P15, P17, P17A, P17-2, P17E. UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

MATCHLINE STA. 21+00 SHEET NO. U5-4

MATCHLINE STA. 35+00 SHEET NO. U5-6

REMOVE: TYPE B POLE, (DC-C2, A5-2, E2-2 INSTALL: 55-1 STEEL POLE, DC-C2(336), A5-2(#2ACSR), 1TR-15kVA(XXXX), 1CO, SLT

REMOVE: TYPE B POLE, A4, A5-2, E2-2, E1-2, FP-2, (2)SLT, (2)SVC

REMOVE: TYPE B POLE, DC-C1, A5-2, 1TR-25kVA(9198), (2)SVC INSTALL: 55-1 STEEL POLE, DC-C1(336), 1TR-25kVA(9198) OF GRAVES A5-2(#2ACSR), 1CO, (2)E1-2, FP-2, SLT, (2)SVC,

REMOVE: TYPE B POLE, DC-C1, 1TR-25kVA(7010) SLT, (2)SVC INSTALL: 55-1 STEEL POLE, DC-C2(336), SLT

REMOVE: TYPE B POLE, SLT, (2)SVC

INSTALL: 45-2 STEEL POLE, A6(#2ACSR), (2)SVC

REMOVE: TYPE B POLE, A1, (4)SVC

REMOVE: TYPE B POLE, A5, 1TR-37.5kVA(8146), E1-2, FP-2, SLT, (5)SVC INSTALL: 40-2 WOOD POLE, A5(#2ACSR), 1TR-37.5kVA(8145), (2)E1-2, FP-2, SLT, (5)SVC

REMOVE: TYPE A POLE, E1-2, FP-2, SVC

REMOVE: TYPE B POLE, A5-2, 1TR-15kVA(9586), SLT, SVC INSTALL: 50-1 WOOD POLE, A5(#2ACSR), 1TR-15kVA(9586) (2)E1-2, (2)FP-2, SLT, SVC

INSTALL: 45-2 WOOD POLE, C8(1/0), (2)E1-2, FP-2

REMOVE: TYPE B POLE, C1

REMOVE: TYPE B POLE, C2, (2)C8, E1-2, FP-2

REMOVE: TYPE B POLE, DC-C1 INSTALL: 55-1 STEEL POLE, DC-C1(336), SLT, SVC

REMOVE: TYPE B POLE, C1-1, SLT, SVC

REMOVE: TYPE B POLE, SLT, (2)SVC

REMOVE: TYPE B POLE, C1 1TR-15kVA(9655), SLT, (2)SVC. INSTALL: 45-2 WOOD POLE, C8(1/0), 1TR-15kVA(9655), (2)E1-2, FP-2, SLT, SVC

INSTALL: 55-1 STEEL POLE, DC-C2(336), C8(1/0), (5)E1-2, (5)FP-2, (6)INSLINK, SLT, SVC

REMOVE: TYPE B POLE, DC-C1, 1TR-15kVA(10487), SLT, (3)SVC INSTALL: 55-1 STEEL POLE, DC-C1(336), 1TR-15kVA(10487), SLT, (4)SVC

REMOVE: TYPE B POLE, A2, SLT, SVC, E1-2, FP-2 INSTALL: 50-1 WOOD POLE, A4(#2ACSR), (2)E1-2, FP-2, SVC, SLT

REMOVE: TYPE B POLE, DC-C8, 3TR-75kVA(9998,9999,10000), SVC INSTALL: 55-1 STEEL POLE, DC-C8(336), 3TR-75kVA(9998,9999,10000), SVC

REMOVE: TYPE B POLE, DC-C1, A5-2 INSTALL: 55-1 STEEL POLE, DC-C1(336), A5-2(#2ACSR), 1CO, (2)E1-2, (2)FP-2

INSTALL: 55-1 STEEL POLE, DC-C1(336)

INSTALL: 45-2 STEEL POLE, A1(#2ACSR)

REMOVE: TYPE B POLE, A6, 1TR-37.5kVA(5507), E1-2, FP-2, SLT, (6)SVC INSTALL: 45-2 WOOD POLE, A6(#2ACSR), 1TR-37.5kVA(5507), E1-2, FP-2, SLT, (6)SVC

HASSLER MILL RD.

ASSLER MILL ROAD

SCARBORO ROAD

RURITAN RD. (SR-29)

PROP. R.O.W.

CONST. ESMT.

PRES. R.O.W.

PROP. GREENHOUSE

PROP. RELOC. DITCH

PROP. BELOW DITCH

PROP. 2 @ 6'x5' BOX CULVERT

WOOD GARAGE

MTL. CARPORT

BLOCK GARAGE

FRAME GARAGE

WOODEN SHED

BRICK PUMP HOUSE

I-S-B&M BUSINESS MAXWELL MANUFACTURING, INC.

I-S-F

I-S-BL

I-S-B

2-S-F

2-S-B

2-S-F/B

TEL. PED.

DRIVE-IN BANK

HAIR SALON

CAR WASH

12' ASPH.

18' ASPH.

JAMES N. CROWDER — REGISTERED ENGINEERING CONSULTANT — AGRICULTURE — 01/14/2013 — No. 021978 — STATE OF TENNESSEE

HUB

Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC

Allen&Hoshall

engineering since 1915

8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE	DATE
1"=50'	03.18.2013

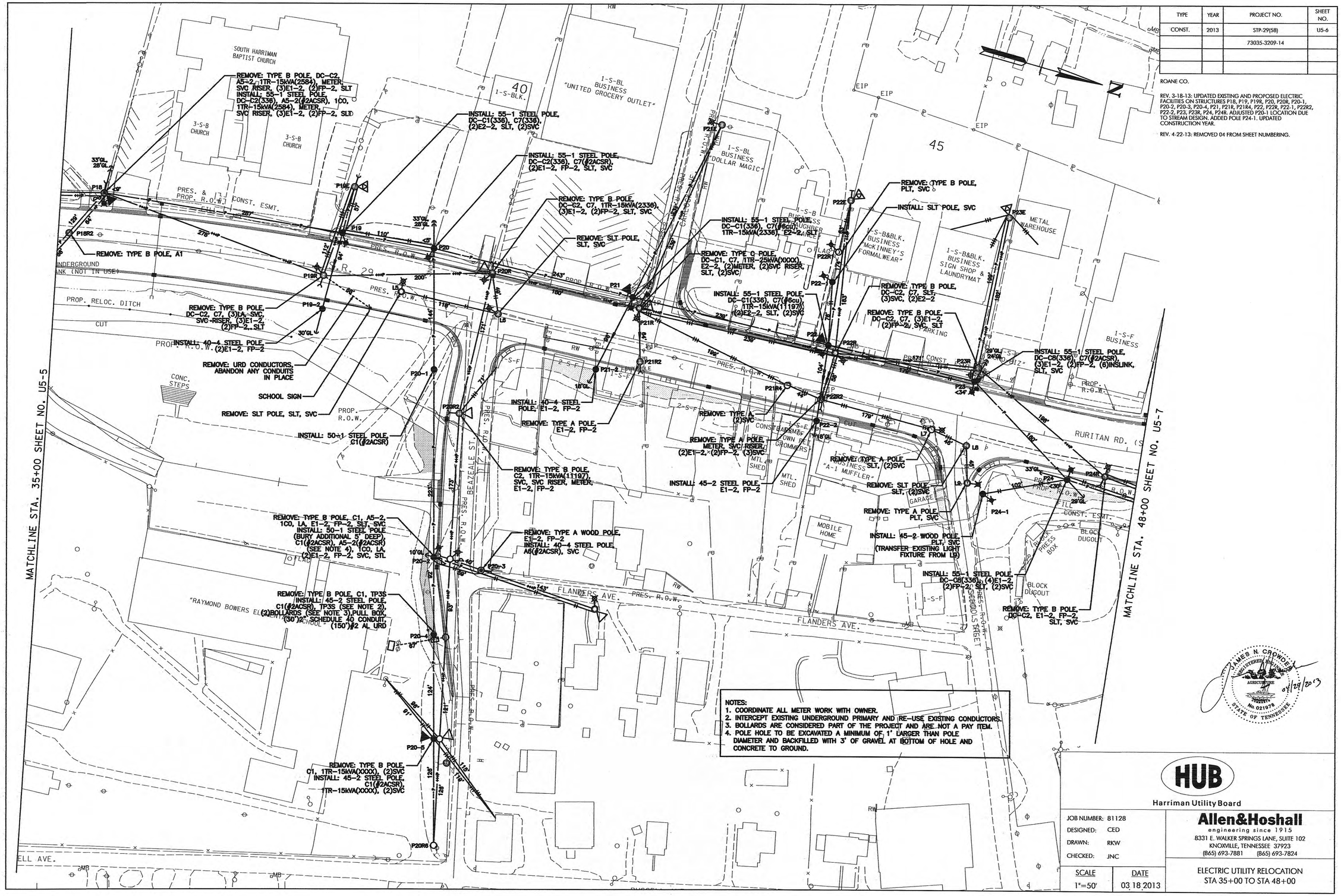
ELECTRIC UTILITY RELOCATION
STA 21+00 TO STA 35+00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-6
		73035-3209-14	

ROANE CO.

REV. 3-18-13: UPDATED EXISTING AND PROPOSED ELECTRIC FACILITIES ON STRUCTURES P18, P19, P19R, P20, P20R, P20-1, P20-2, P20-3, P20-4, P21, P21R, P21R4, P22, P22R, P22-1, P22R2, P22-2, P23, P23R, P24, P24R. ADJUSTED P20-1 LOCATION DUE TO STREAM DESIGN. ADDED POLE P24-1. UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.



JAMES N CROWDER REGISTERED ENGINEER AGRICULTURE No. 021978 STATE OF TENNESSEE 04/22/2013

HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
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KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE	DATE
1"=50'	03.18.2013

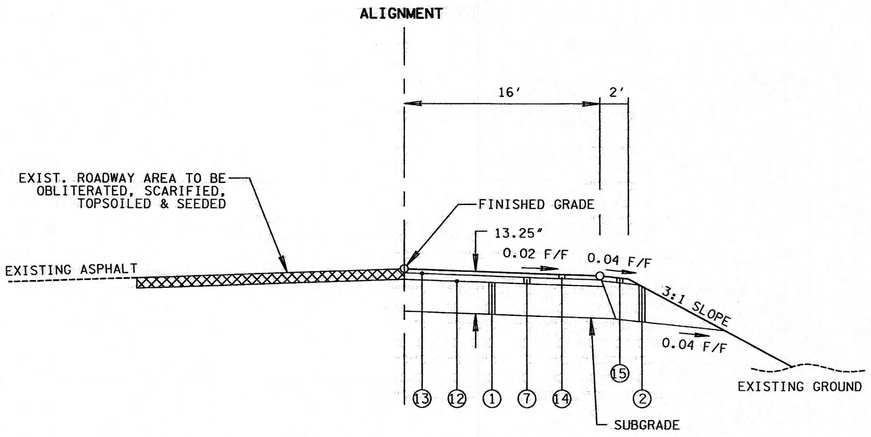
ELECTRIC UTILITY RELOCATION
STA 35+00 TO STA 48+00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2C5

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED TYPICAL SECTION FOR PANSY HILL ROAD FROM STA. 80+80.00 TO STA. 82+10.00

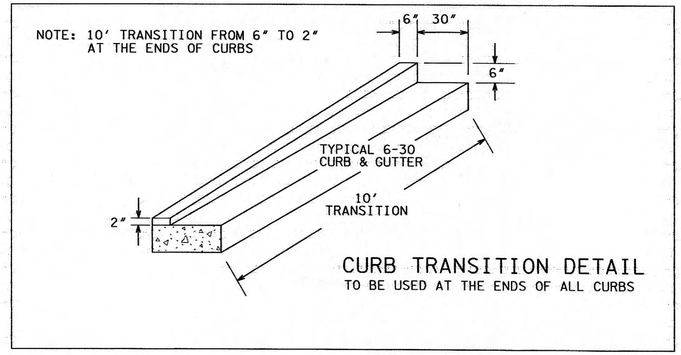
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPICAL TANGENT SIDEROAD SECTION

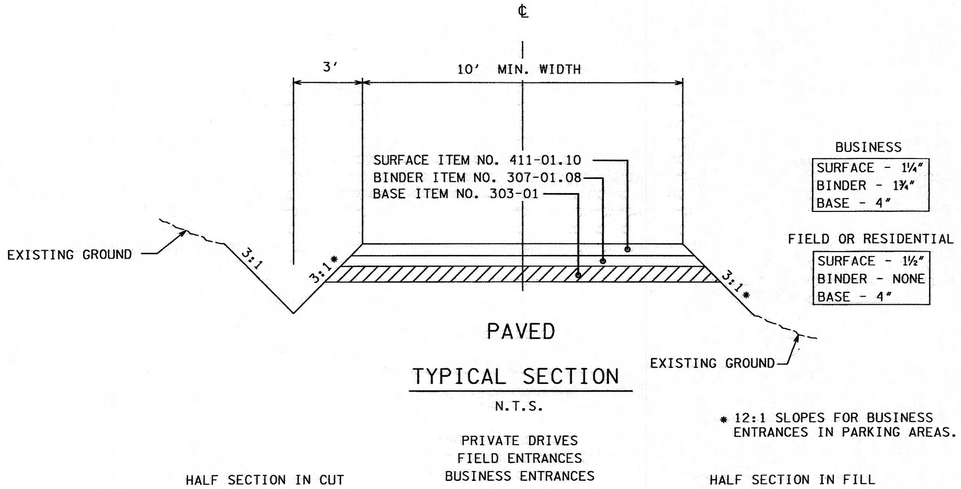
BASED ON STD. DWG. RD01-TS-1

PANSY HILL ROAD, STA. 80+80.00 TO STA. 82+10.00



CURB TRANSITION DETAIL

TO BE USED AT THE ENDS OF ALL CURBS



PAVED

TYPICAL SECTION

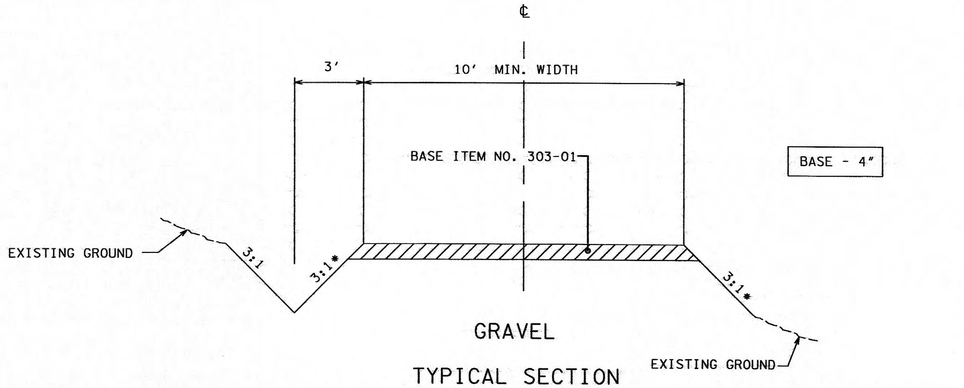
N.T.S.

PRIVATE DRIVES
FIELD ENTRANCES
BUSINESS ENTRANCES

* 12:1 SLOPES FOR BUSINESS ENTRANCES IN PARKING AREAS.

HALF SECTION IN CUT

HALF SECTION IN FILL



GRAVEL

TYPICAL SECTION

N.T.S.

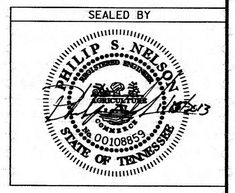
PRIVATE DRIVES
FIELD ENTRANCES

* 12:1 SLOPES FOR BUSINESS ENTRANCES IN PARKING AREAS.

HALF SECTION IN CUT

HALF SECTION IN FILL

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

1/14/2013 10:48:47 AM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-7
		73035-3209-14	

ROANE CO.

REV. 3-18-13: UPDATED EXISTING AND PROPOSED ELECTRIC FACILITIES ON STRUCTURES P25, P29, P30, AND P31. ADDED POLE P30-1. UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

MATCHLINE STA. 48+00 SHEET NO. U5-6

BAUMGARTNER RD.

PRES. R.O.W.

STATE ST.

SOUTH ROANE ST.

(SR-29)

S.R. 29

RURITAN RD. (SR-29)

PANSY HILL ROAD

STATE STREET

RUSSEL AVE.

CONST. ESMT.

PROP. R.O.W.

PRES. & PROP. R.O.W.

CURB

CONC. SW

RW

EIP

MB

WELL

SIGNALS

1-S-F

1-S-BL

1-S-R

2-S-F

50

55

INTERCEPT EXISTING U/G SERVICE AND INSTALL 2 X 3 FLUSH MOUNTED HANDHOLE. EXCAVATE AND CONNECT EXISTING SERVICE CONDUCTORS TO NEW CONDUCTORS FROM P25E. ALL NEW CONDUCTORS TO BE INSTALLED IN 2" SCHEDULE 40 CONDUIT.

SEE INSERT "A"

SEE INSERT "B"

REMOVE: A5
INSTALL: A5(#2 ACSR)

REMOVE: (2)SVC

REMOVE: TYPE B POLE, E1-2, FP-2, SLT, SVC RISER, SVC
INSTALL: SLT POLE, SVC

INSTALL: SVC

REMOVE: SLT POLE, SLT, (4)SVC, E2-2

REMOVE: SLT POLE, SLT, SVC

INSTALL: SLT POLE, SVC

REMOVE: SLT POLE, SLT, SVC

INSTALL: SLT POLE, SVC

REMOVE: SVC
INSTALL: SLT, (2)SVC

REMOVE: E2-2, SVC
INSTALL: E2-2

INSTALL: 40-2 WOOD POLE, E1-2, FP-2
REMOVE: TYPE B WOOD POLE, E1-2, FP-2

REMOVE: (TYPE B) POLE, (2)E1-2, (2)FP-2, SLT, (3)SVC

REMOVE: TYPE B POLE, DC-C1, A5-2, 1C9, 1TR-50kVA(5591), METER, (2)SVC RISER, (3)SVC
INSTALL: 55-1 STEEL POLE, DC-C8(336), A5-2(#2ACSR), 1CO, 1TR-50kVA(5501), METER, (2)SVC RISER, (2)E1-2, (2)FP-2, (3)SVC

1-S-BL BUSINESS "DOLLAR GENERAL MARKET"

BUSINESS "AUTOZONE"

1-S-BL BUSINESS "GARY BAKER ELECTRIC"

"CASH EXPRESS"

"ANNE'S BEAUTY SALON"

DEVI'S FOODETTE

GAS PUMP

TCB SERV

AKI

CONCESSIONS

N



HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC
SCALE	1"=50'
DATE	03.18.2013

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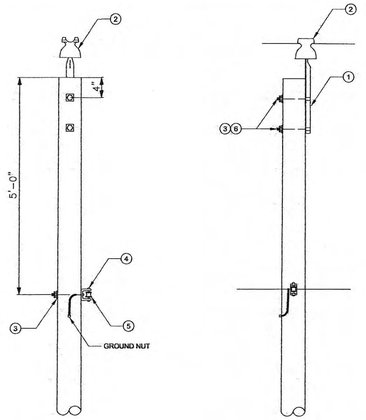
(865) 693-7881 (865) 693-7824

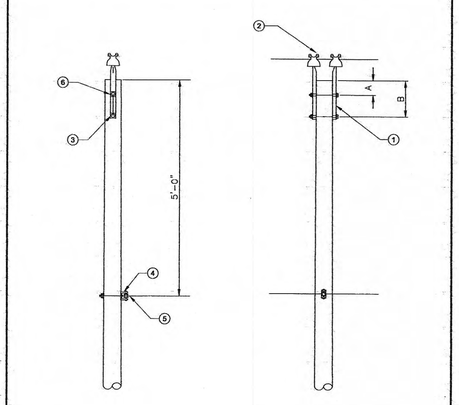
ELECTRIC UTILITY RELOCATION
STA 48+00 TO SOUTH ROANE ST.



NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.
2. SPLIT BOLT USED ON WOOD POLES ONLY.

ID	QTY.	DESCRIPTION
1	1	PIN, FIBERGLASS STRAIGHT RIDGE
2	1	INSULATOR, POLE TOP
3	3	THRU BOLT, 5/8" X REQ'D LENGTH
4	1	CLEVIS, SECONDARY
5	1	INSULATOR, SECONDARY DE WHITE
6	3	WASHER, SQUARE, 3" CURVED

A1 — 1-PHASE VERTICAL CONSTRUCTION 0° ANGLE — N.T.S.

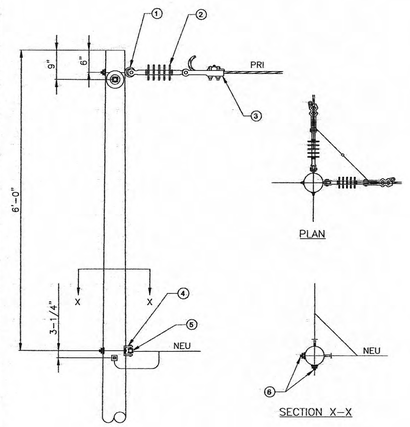


CONSTRUCTION NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.
2. USE TWO WIRE TIES, ONE FOR EACH INSULATOR.

	A	B
WOOD POLE	4"	9"
STEEL POLE	4"	12"

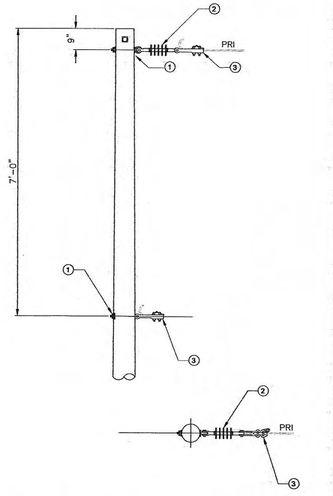
ID	QTY.	DESCRIPTION
1	2	PIN, STRAIGHT RIDGE
2	2	INSULATOR, POLE TOP
3	3	THRU BOLTS 5/8" – LENGTH AS NEEDED
4	1	CLEVIS, SECONDARY DE
5	1	INSULATOR, SECONDARY

A1-1 — 1-PHASE VERTICAL CONSTRUCTION (TANGENT) — N.T.S.



ID	QTY.	DESCRIPTION
1	2	EYE BOLT, 5/8" x 10"
2	2	INSULATOR, POLYMER SUSPENSION (25kV)
3	2	DEAD END SHOES
4	2	CLEVIS, SECONDARY DE
5	2	INSULATOR, SECONDARY DE WHITE
6	2	THRU BOLT, 5/8" x 10"

A4 — 1-PHASE VERTICAL CONSTRUCTION (60°-90°) — N.T.S.



CONSTRUCTION NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	2	EYE BOLTS 5/8" – LENGTH AS REQUIRED
2	1	INSULATOR, SUSPENSION
3	2	CLAMP, DE

A5 — SINGLE DEADEND — N.T.S.

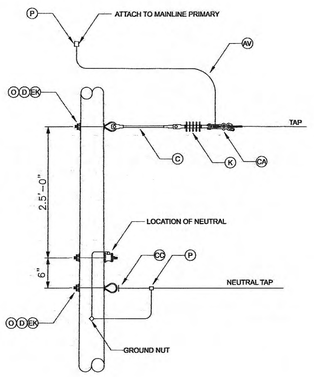
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-8
		73035-3209-14	

ROANE CO.

REV. 3-18-2013: UPDATED CONSTRUCTION YEAR.

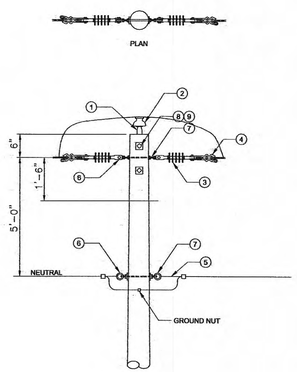
REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

NOTES:
1. ALL INSULATORS TO BE 15kV POLYMER UNLESS SPECIFIED OTHERWISE.
2. ALL CROSSARMS TO BE BRACELESS FIBERGLASS CONSTRUCTION UNLESS SPECIFIED OTHERWISE.



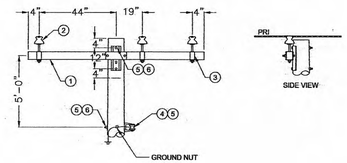
ID	QTY.	DESCRIPTION
1	1	FIBERGLASS EXTENSION, 24" MINIMUM
2	2	WASHER, SQUARE, 3", CURVED
3	2	INSULATOR, SUSPENSION, 15 kV
4	3	BOLT, EYE, 5/8" X REQ'D
5	1	NUT, EYE, 5/8"
6	1	DEADEND ASSEMBLY, PRIMARY
7	1	DEADEND ASSEMBLY, NEUTRAL
8	1	SHACKLE, ANCHOR

A5-2 — SINGLE DEADEND — N.T.S.



ID	QTY.	DESCRIPTION
1	1	PIN, FIBERGLASS, STRAIGHT RIDGE
2	1	INSULATOR, SUSPENSION, 15kV
3	2	INSULATOR, SUSPENSION
4	2	CLAMP, DE, AS REQ'D
5	2	CLAMP, NEUTRAL DE
6	2	EYEBOLT, 5/8" X REQ'D
7	2	EYENUT, 5/8"
8	6	WASHER, 3", SQUARE CURVED
9	2	BOLT W/NUT, 5/8" X REQ'D
10	–	CONNECTORS, AS REQ'D
11	–	JUMPERS, AS REQ'D

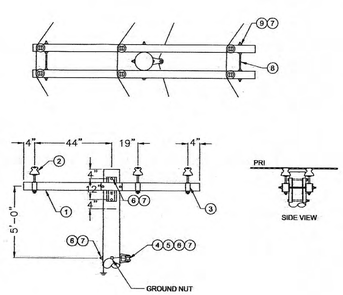
A6 — DOUBLE DEADEND — N.T.S.



NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	1	CROSSARM, FIBERGLASS HEAVY DUTY TANGENT 8'-0"
2	3	INSULATOR, PIN TYPE, 15KV
3	3	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
4	1	CLEVIS, SECONDARY
5	1	INSULATOR, SECONDARY
6	3	BOLT W/NUT, 5/8" X REQ'D
7	3	WASHER, 3", SQUARE CURVED
8	–	CONNECTORS, AS REQ'D
9	–	JUMPERS, AS REQ'D

C1 — SINGLE SUPPORT ON CROSSARM (TANGENT) — N.T.S.



NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.
2. USE 5/8" BOLT ON ITEM #4 INSTEAD OF LEG SCREW ON ANGLE BRACES.

ID	QTY.	DESCRIPTION
1	2	CROSSARM, FIBERGLASS HEAVY DUTY TANGENT 8'-0"
2	6	INSULATOR, SUSPENSION 15kV
3	6	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
4	1	CLEVIS, SECONDARY
5	1	INSULATOR, SECONDARY
6	3	BOLT W/NUT, 5/8" X REQ'D
7	13	WASHER, 3", SQUARE CURVED
8	2	BOLT, DA, 5/8" X REQ'D
9	8	NUT, LOCK, 5/8"
10	–	CONNECTORS, AS REQ'D
11	–	JUMPER, AS REQ'D

C2 — DOUBLE SUPPORT ON CROSSARM — N.T.S.



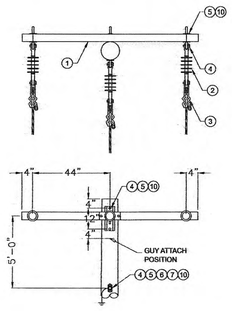
HUB
Harriman Utility Board

JOB NUMBER: 81128
DESIGNED: CED
DRAWN: RKW
CHECKED: JNC

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE: N.T.S.
DATE: 03.18.2013

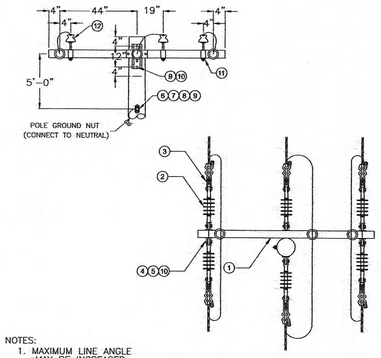
ASSEMBLY DETAILS



NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	1	CROSSARM, FIBERGLASS HEAVY DUTY DEADEND 8'-0"
2	3	INSULATOR, SUSPENSION 15kV
3	3	CLAMP, DE, SIZE AS REQ'D
4	2	EYEBOLT, 5/8" X REQ'D
5	4	EYENUT, 5/8"
6	1	CLEVIS, SECONDARY
7	1	INSULATOR, SECONDARY
8	1	CLAMP, NEUTRAL DE
9	3	BOLT W/NUT, 5/8" X REQ'D
10	4	WASHER, 3", SQUARE CURVED
11	–	CONNECTORS, AS REQ'D
12	–	JUMPERS, AS REQ'D

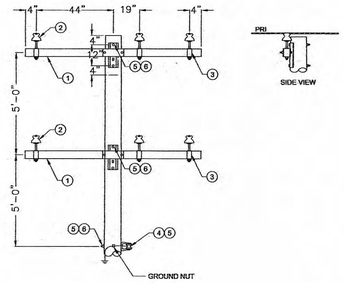
C7 — SINGLE DEADEND ON CROSSARM — N.T.S.



NOTES:
1. MAXIMUM LINE ANGLE MAY BE INCREASED TO 15° BY INSTALLING ANCHOR SHACKLES, TO (HORIZONTAL) EYE NUT AND INSTALLING SIDE GUYS AS REQ'D.

ID	QTY.	DESCRIPTION
1	1	CROSSARM, FIBERGLASS HEAVY DUTY DEADEND 8'-0"
2	6	INSULATOR, SUSPENSION 15kV
3	6	CLAMP, DE, SIZE AS REQ'D
4	4	EYEBOLT, 5/8" X REQ'D
5	3	EYENUT, 5/8"
6	1	CLEVIS, SECONDARY
7	1	INSULATOR, SECONDARY
8	1	CLAMP, NEUTRAL DE
9	3	BOLT W/NUT, 5/8" X REQ'D
10	4	WASHER, 3", SQUARE CURVED
11	3	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
12	3	INSULATOR, PIN TYPE, 15KV
13	–	CONNECTORS, AS REQ'D
14	–	JUMPERS, AS REQ'D

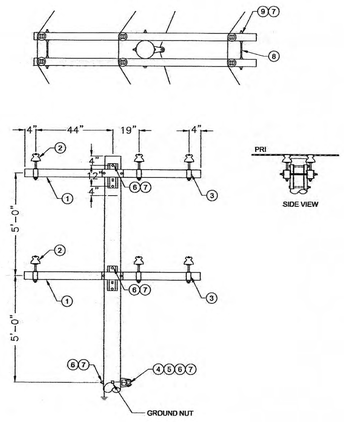
C8 — DOUBLE DEADEND ON CROSSARM — N.T.S.



NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	2	CROSSARM, FIBERGLASS HEAVY DUTY TANGENT 8'-0"
2	6	INSULATOR, PIN TYPE, 15KV
3	6	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
4	1	CLEVIS, SECONDARY
5	1	INSULATOR, SECONDARY
6	5	BOLT W/NUT, 5/8" X REQ'D
7	5	WASHER, 3", SQUARE CURVED
8	–	CONNECTORS, AS REQ'D
9	–	JUMPERS, AS REQ'D

DC-C1 — SINGLE SUPPORT ON CROSSARM (TANGENT) — N.T.S.

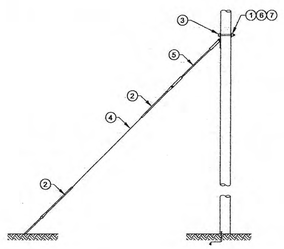


NOTES:
1. USE FLAT WASHERS ON FLAT SURFACES AND CURVED WASHERS ON CURVED SURFACES.
2. USE 5/8" BOLT ON ITEM #4 INSTEAD OF LEG SCREW ON ANGLE BRACES.

ID	QTY.	DESCRIPTION
1	4	CROSSARM, FIBERGLASS HEAVY DUTY TANGENT 8'-0"
2	12	INSULATOR, PIN TYPE 15kV
3	12	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
4	1	CLEVIS, SECONDARY
5	1	INSULATOR, SECONDARY
6	5	BOLT W/NUT, 5/8" X REQ'D
7	21	WASHER, 3", SQUARE CURVED
8	4	BOLT, DA, 5/8" X REQ'D
9	16	NUT, LOCK, 5/8"
10	–	CONNECTORS, AS REQ'D
11	–	JUMPER, AS REQ'D

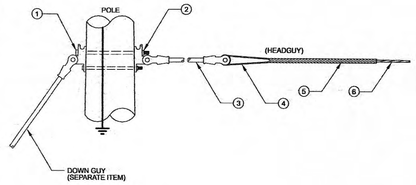
DC-C2 — DOUBLE SUPPORT ON CROSSARM — N.T.S.

NOTES:
1. SPECIFY ONE UNIT FOR EACH GUY USED ON A MULTIPLE GUY STRUCTURE.
2. POLE GROUNDING IS SEPARATE ITEM.



ID	QTY.	DESCRIPTION
1	1	BOLT, 5/8" MACHINE X REQ'D LENGTH
2	2	PREFORMED DEADEND (2/8")
3	1	GUY ATTACHMENT (FOR GUY STRAIN INSULATOR)
4	75	GUY, 3/8" STRAND
5	1	GUY, FIBERGLASS LINK
6	2	NUT, 3/4" LOCK
7	1	WASHER, 4" X 13/16" SQUARE FLAT
8	2	GUY MARKER, 8', YELLOW

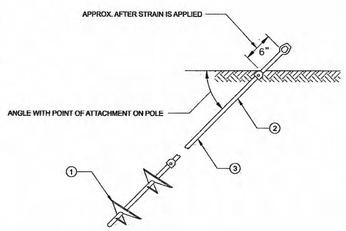
E1-2 — INSULATED SINGLE DOWN GUY ASSEMBLY — N.T.S.



NOTES:
1. VIEW TYPICAL FOR BOTH ENDS UNLESS SPECIFIED OTHERWISE.

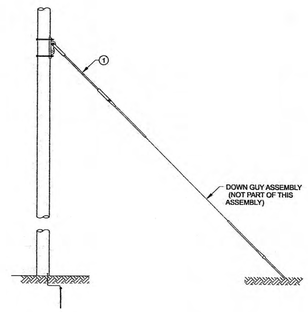
ID	QTY.	DESCRIPTION
1	4	MACHINE BOLT (SIZE AS REQ'D)
2	2	POLE EYE PLATE (#21,000 MIN.)
3	2	GUY STRAIN INSULATOR (#21,000 MIN.)
4	2	GUY ROLLER (SIZE AS REQ'D)
5	2	PREFORM DEADEND
6	–	GUY WIRE (AS REQ'D)

E2-2 — SINGLE OVERHEAD GUY THROUGH BOLT TYPE — N.T.S.



ID	QTY.	DESCRIPTION
1	1	DOULBE HELIX HUB
2	1	TWIN EYE ADAPTER
3	1	EXTENSION ROD 3-1/2' (INCLUDED IN BASE UNIT)
		ADD'L EXTENSION RODS (3-1/3', 5', & 7' AS REQ'D)

FP-2 — POWER INSTALLED HELIX SCREW ANCHORS — N.T.S.



NOTES:
1. ULTIMATE TENSION STRENGTH OF FIBERGLASS LINK IS 21,000 LBS.
2. INS LINK QUANTITIES ARE IN ADDITION TO INS LINKS IN CLUDED IN GUY ASSEMBLIES.

ID	QTY.	DESCRIPTION
1	1	GUY, FIBERGLASS LINK

INSLINK — INSULATOR LINK — N.T.S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-9
		73035-3209-14	

ROANE CO.

REV. 3-18-2013: UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

NOTES:
1. **ALL INSULATORS TO BE 15kV POLYMER UNLESS SPECIFIED OTHERWISE.**
2. **ALL CROSSARMS TO BE BRACELESS FIBERGLASS CONSTRUCTION UNLESS SPECIFIED OTHERWISE.**

JAMES N. CROWDER — REGISTERED ENGINEER — AGRICULTURE — No. 021075 — STATE OF TENNESSEE — 01/29/2013

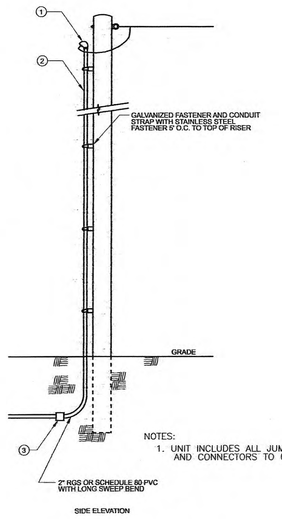
HUB
Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ASSEMBLY DETAILS

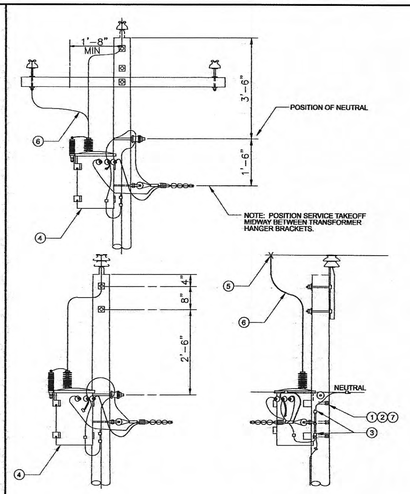
SCALE: N.T.S. DATE: 03.18.2013



NOTES:
1. UNIT INCLUDES ALL JUMPERS, CONDUCTORS AND CONNECTORS TO COMPLETE ASSEMBLY.

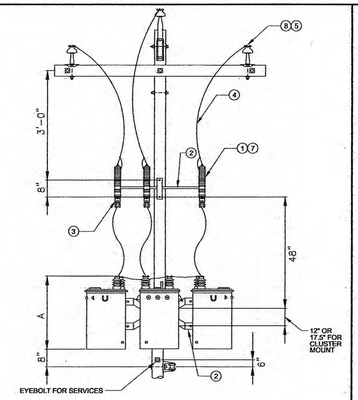
ID	QTY.	DESCRIPTION
1	1	WEATHERHEAD
2		2" CONDUIT (AS REQ'D)
3	2	PVC TO RGS ADAPTOR (IF REQ'D)

SVCRISER | UNDERGROUND SECONDARY SERVICE RISER POLE | N.T.S.



ID	QTY.	DESCRIPTION
1	2	BOLT, MACHINE, 5/8" X REQ'D LENGTH
2	2	WASHER, SQUARE, 2 1/4"
3		CONNECTORS, COMPRESSION TYPE, AS REQ'D
4	1	TRANSFORMER, 14.4kV, SELF-PORTECTED
5	1	CLAMP, HOT LINE
6		JUMPERS, STANDED, AS REQ'D
7	2	LOCKNUTS

ITR | SINGLE PHASE POLE MOUNTED TRANSFORMER | N.T.S.

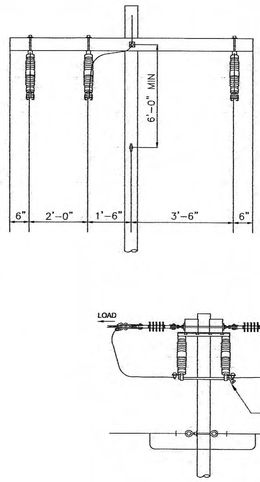


NOTES:
1. CONNECT TRANSFORMER NEUTRAL TO SYSTEM GROUND.
2. REFER TO CONNECTION DETAIL FOR TRANSFORMER WIRING SCHEMATICS.
3. UNIT TO BE COMPLETE WITH ALL NECESSARY MOUNTING HARDWARE, CONNECTORS, AND JUMPERS.
4. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.
5. CUTOUT SHOULD BE MOUNTED SO THAT IT CAN BE EASILY OPERATED FROM THE GROUND AND WILL NOT DISCHARGE ON OTHER EQUIPMENT.
6. CUTOUT AND ARRESTER BRACKET SHOULD BE MOUNTED ON OPPOSITE SIDE OF POLE FROM TRANSFORMERS.

TYPICAL DIMENSIONS		
	CONVENTIONAL	CSP
SIZE	OVERALL HEIGHT "A"	OVERALL HEIGHT "A"
10kVA	32"	36"
15kVA	35"	42"
25kVA	38"	44"
37.5kVA	40"	46"
50kVA	44"	46"
75kVA	51"	–
100kVA	55"	–
167kVA	55"	–

ID	QTY.	DESCRIPTION
1	3	ARRESTER, 10kV
2	1	CLUSTER MOUNT FOR STELL POLE
3	1	BRACKET, CUTOUT & ARRESTER
4	25	CONDUCTOR, STRANDED WP-1/0, 7-STR.
5	3	CLAMP, HOTLINE
6	4	CONNECTOR, 4 CU
7	3	CUTOUT SWITCHES, 10kV
8	3	STIRRUP, AL

3TR | THREE PHASE POLE MOUNTED TRANSFORMER | N.T.S.



NOTES:
1. PRIMARY ASSEMBLY IS A SEPARATE ITEM.

ID	QTY.	DESCRIPTION
1	3	13KV DISCONNECT SWITCHES

SW-DISC | CUTOUT KNIFE SWITCH, SNGL LOADBREAK 15KV | N.T.S.

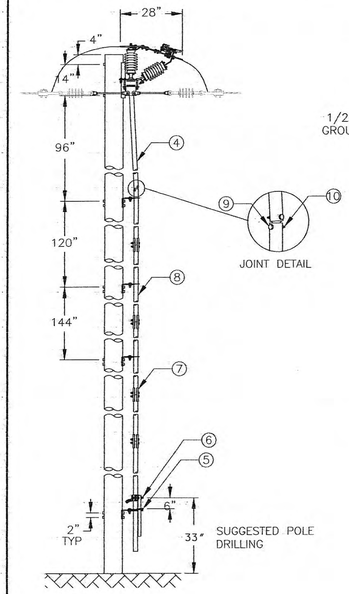
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-10
		73035-3209-14	

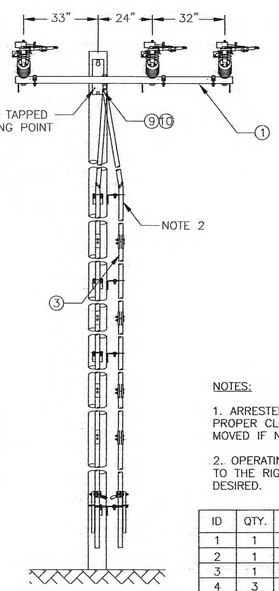
ROANE CO.

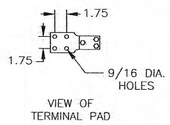
REV. 3-18-2013: UPDATED CONSTRUCTION YEAR.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.

NOTES:
1. **ALL INSULATORS TO BE 15kV POLYMER UNLESS SPECIFIED OTHERWISE.**
2. **ALL CROSSARMS TO BE BRACELESS FIBERGLASS CONSTRUCTION UNLESS SPECIFIED OTHERWISE.**







VIEW OF TERMINAL PAD

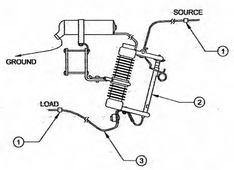
NOTES:

1. ARRESTERS MUST BE POSITIONED FOR PROPER CLEARANCE. BRACKETS MAY BE MOVED IF NECESSARY.

2. OPERATING MECHANISM MAY BE MOVED TO THE RIGHT QUADRANT OF THE POLE IF DESIRED.

ID	QTY.	DESCRIPTION
1	1	SWITCH UNIT
2	1	NAMEPLATE GROUP
3	1	LOCK SEGMENT ASSEMBLY
4	3	PIPE GUIDE ASSEMBLY
5	1	U-JOINT ASSEMBLY
6	1	HANDLE ASSEMBLY
7	5	PIPE, 7'
8	2	PIN
9	4	COUPLING ASSEMBLY
10	2	COTTER PIN

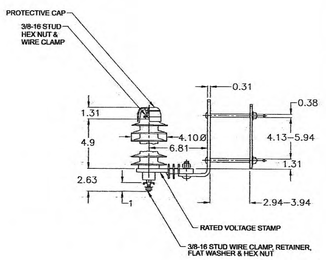
SW-GANG | GOAB SWITCH 15KV | N.T.S.



NOTES:
1. COORDINATE FUSE SIZE WITH OWNER.

ID	QTY.	DESCRIPTION
1	1	CONDUCTOR, AS REQ'D
2	1	CUTOUT & ARRESTOR COMB. (10kV)
3	1	JUMPERS, AS REQ'D

1CO | FUSE CUTOUT XARM MOUNT 15KV | N.T.S.



NOTES:
1. DIMENSIONS SUBJECT TO +/- 3% TOLERANCE.
2. LEAKAGE DISTANCE (INCHES) - 14.4.
3. ALTITUDE 0-12,000 FT. ABOVE SEA LEVEL.
4. WEIGHT OF UNIT INCLUDING HARDWARE - 6.4LB.
5. MAXIMUM CONTINUOUS LINE-TO-GROUND OPERATING VOLTAGE 8.4kV MCOV.
6. DUTY CYCLE VOLTAGE RATING 10kV RMS.

.5 Ll SEC 10kA IR kV	500 A SWITCHING SURGE IR kV	MAXIMUM 8/20 DISCHARGE VOLTAGE - kV AT					
		1.5 kA	3.0 kA	5 kA	10 kA	20 kA	40 kA
34	24.4	25.4	27.1	28.8	31.6	35.6	42.3

LA | LIGHTING ARRESTER ARM MOUNTED 9KV | N.T.S.

JAMES N. CROWDER REGISTERED ENGINEER AGRICULTURE No. 031978 STATE OF TENNESSEE 04/29/2012

HUB
Harriman Utility Board

JOB NUMBER: 81128
DESIGNED: CED
DRAWN: RKW
CHECKED: JNC

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ASSEMBLY DETAILS

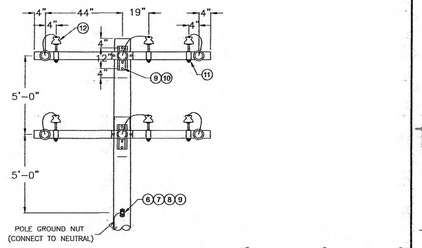
SCALE: N.T.S. | DATE: 03.18.2013

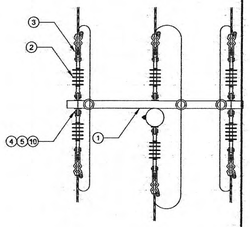
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U5-11
		73035-3209.14	

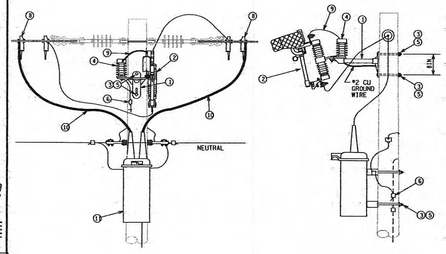
ROANE CO.

REV. 3-18-2013: UPDATED CONSTRUCTION YEAR AND BOLLARD DETAIL. ADDED DC-C8.

REV. 4-22-13: REMOVED 04 FROM SHEET NUMBERING.







NOTE: ALL GROUNDS TO BE ELECTRICALLY BONDED TO SYSTEM NEUTRAL.

ID	QTY.	DESCRIPTION
1	2	CROSSARM, FIBERGLASS HEAVY DUTY DEADEND 8'-0"
2	12	INSULATOR, SUSPENSION 15kV
3	12	CLAMP, DE, SIZE AS REQ'D
4	8	EYEBOLT, 5/8" X REQ'D
5	6	EYENUT, 5/8"
6	2	CLEVIS, SECONDARY
7	2	INSULATOR, SECONDARY
8	2	CLAMP, NEUTRAL DE
9	6	BOLT W/NUT, 5/8" X REQ'D
10	8	WASHER, 3", SQUARE CURVED
11	6	PIN, SADDLE TYPE FOR FIBERGLASS ARMS
12	6	INSULATOR, PIN TYPE, 15KV
13	–	CONNECTORS, AS REQ'D
14	–	JUMPERS, AS REQ'D

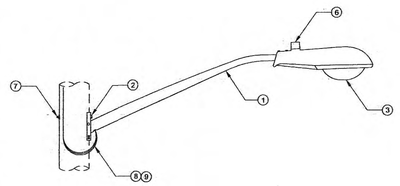
ID	ITEM #	INDEX DESCRIPTION	QTY
1	179838	BRACKET FG CO-ARR 2-HOLE	1
2	170605	CUTOUT 15KV LOADBREAK	1
3	151548	BOLT MACHINE 5/8X12IN	4
4	140517	ARRESTER 10KV MO GAPLESS	1
5	151456	WASHER SQUARE 2-1/4IN	8
6	144667	CONNECTOR 1-BOLT PC 1/0	6
7	168575	RODS TAP PROTECTION 1/0	2
8	151696	CLAMP HOTLINE 1/0AR-CU	4
9	174508	WIRE CU WP 2AWG AS REQ'D	
10		JUMPERS, STRANDED AS REQ'D	
11		RECLOSER, OIL CIRCUIT	1

NOTES:

1. ALL INSULATORS TO BE 15kV POLYMER UNLESS SPECIFIED OTHERWISE.
2. ALL CROSSARMS TO BE BRACELESS FIBERGLASS CONSTRUCTION UNLESS SPECIFIED OTHERWISE.

DC-C8	DOUBLE SUPPORT DOUBLE DEADEND ON CROSSARM
N.T.S.	

RECL	RECLOSER
N.T.S.	

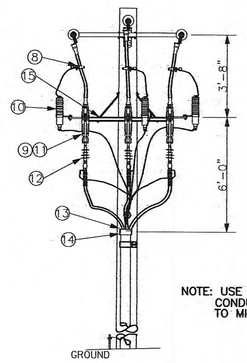


NOTES:

1. GROUND TO POLE NEUTRAL.
2. ACTUAL LIGHT FIXTURE MAY DIFFER FROM ONE SHOWN. COORDINATE LIGHT TYPE AND STYLE WITH UTILITY.

ID	QTY.	DESCRIPTION
1	1	ARM, STREET LIGHT, GALV. 6' X 1.25"
2	1	BOLT, MACHINE, 5/8" X 12"
3	1	FIXTURE, STREET LIGHT HEAD. HPS
4	1	GROUNDING LUG, FOR STREET LIGHT ARM
5	1	LAMP, HPS
6	1	PE CELL, SOCKET TYPE
7	1	WASHER, 2-1/4" SQUARE, 11/16"
8	12	WIRE, #12 COPPER SOLID, WHITE
9	12	WIRE, #12 COPPER SOLID, BLACK

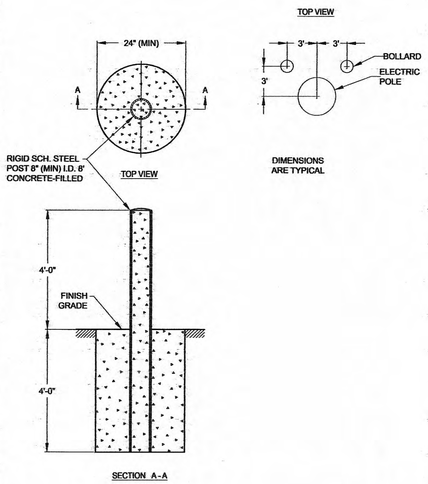
LT	STREET LIGHT / PRIVATE LIGHT
N.T.S.	



NOTE: USE SCHED 80 CONDUIT FROM GROUND TO MIN. OF 8'

MATERIAL LIST– ALL		
ID	QTY.	DESCRIPTION
1	1	WIRE CU BARE SD 6AWG SOL
2	4	WIRE CU WP SD 2AWG 7 STR XLP
3	2	BOLT MACH 5/8"
4	2	WASHER SQUARE 2 1/4", 11/16" HOLE
5	1	CONN 2 BOLT
6	3	CONN SPLIT BOLT BRNZ 6AWG CU-CU
7	3	CONN SPLIT BOLT TIMMED
8	3	CLAMP HOTLINE SIZE AS REQUIRED
9	3	CUTOUT 15kV
10	3	ARRESTER 10kV M/O GAPLESS RISER POLE
11	3	FUSE 15kV 200A
12	3	TERMINATOR CABLE RUB 1 PIECE 15kV SIZE AS REQUIRED
13	1	COMPOUND SEALING DUCT NON-TOXIC
14	1	GRIP CABLE 4" COND
15	1	BRACKET FGLS CO-ARR 3 PHASE

TP3S	THREE PHASE PRIMARY RISER
N.T.S.	



TYPICAL GUARD POST ARRANGEMENTS FOR ELECTRIC UTILITY POLES:

1. QUANTITY AND ARRANGEMENT OF GUARD POSTS ARE TO BE DETERMINED BY ENGINEER / INSPECTOR IN RELATION TO POLE'S LOCATION TO VEHICULAR TRAFFIC.
2. GUARD POSTS ARE TO BE RIGID SCH. STEEL, 12" (MIN) I.D. X 8' LONG, CONCRETE-FILLED AND SET IN A 24"(MIN) DIA. CONCRETE-FILLED HOLE.
3. GUARD POST TO BE PAINTED HIGH-VISIBILITY YELLOW FROM GROUND LINE TO TOP OF POST.
4. SHIFT BOLLARDS AS REQUIRED TO AVOID U/G CONFLICTS.

BLDS	BOLLARD
N.T.S.	



HUB

Harriman Utility Board

JOB NUMBER:	81128
DESIGNED:	CED
DRAWN:	RKW
CHECKED:	JNC

SCALE	DATE
N.T.S.	03.18.2013

Allen&Hoshall
engineering since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ASSEMBLY DETAILS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
ESTIMATED UTILITY QUANTITIES	U6-1
UTILITY RELOCATION BEGIN PROJ. TO STA. 21+00.00	U6-2
UTILITY RELOCATION STA. 21+00 TO STA.35+00	U6-3
UTILITY RELOCATION STA. 35+00 TO STA.48+00	U6-4
UTILITY RELOCATION STA. 48+00 TO END OF PROJECT	U6-5

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29 (58)	U6-1

S.R. 29 ROANE
73035-3209-14
PIN NO. 103779.00

LEGEND:

- TEMPORARY LOCATION (BLUE)
- EXISTING TO REMAIN (ORANGE)
- EXISTING TO BE REMOVED OR RETIRED (GREEN)
- NEW INSTALLATION (RED)
- T (UG) NEW AT&T UNDERGROUND CABLE (DIRECT BURIED)
- T (OH) NEW AT&T OVERHEAD LINE
- T (OH) NEW AT&T SERVICE DROP
- ET (UG) EXISTING AT&T UNDERGROUND CABLE TO REMAIN
- ET (OH) EXISTING AT&T OVERHEAD LINE TO REMAIN
- T (OH) EXISTING AT&T SERVICE DROP TO REMAIN
- RT (UG) EXISTING AT&T UNDERGROUND CABLE TO BE REMOVED OR RETIRED
- RT (OH) EXISTING AT&T OVERHEAD LINE TO BE REMOVED OR RETIRED
- T (OH) EXISTING AT&T SERVICE DROP TO BE REMOVED OR RETIRED
- EXISTING AT&T POLE TO REMAIN
- EXISTING AT&T POLE TO BE REMOVED OR RETIRED
- NEW INSTALLATION OF AT&T POLE
- NEW INSTALLATION OF AT&T POLE WITH GUY WIRE
- EXISTING AT&T GUY WIRE TO REMAIN
- EXISTING AT&T GUY WIRE TO BE REMOVED
- NEW INSTALLTION OF AT&T GUY WIRE
- EXISTING ELE
- EXISTING ELE
- NEW INSTALL
- EXISTING AT&

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	Project No. 1: QUANTITY	% Utility	%Project
773-12.83	PLACE 1 1/4 IN TRIPLE EYE ANCHOR	EACH	22	0.00%	100.00%
773-12.84	PLACE 35FT POLE	EACH	1	0.00%	100.00%
773-12.85	PLACE 40FT POLE	EACH	1	0.00%	100.00%
773-12.86	PLACE 45FT POLE	EACH	1	0.00%	100.00%
773-12.87	PLACE 55FT POLE	EACH	1	0.00%	100.00%
773-12.88	REMOVE 30FT POLE	EACH	1	0.00%	100.00%
773-12.89	REMOVE 35FT POLE	EACH	10	0.00%	100.00%
773-12.90	REMOVE 40FT POLE	EACH	9	0.00%	100.00%
773-12.91	REMOVE 45FT POLE	EACH	2	0.00%	100.00%
773-12.92	REMOVE 55FT POLE	EACH	1	0.00%	100.00%
773-12.93	REMOVE PUSH BRACE	EACH	2	0.00%	100.00%

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29 (58)	U6-2

S.R. 29 ROANE
73035-3209-14
PIN NO. 103779.00

BEGIN. CONST. PROJECT NO. STP-29(58)
73035-3209-14
STA. 11+52.13
N 576764.2099
E 2395163.6072

12+54.73 S.R. 29 "Q"
14+00.00 RURITAN RD. S.E.
N 576837.9360
E 2395092.3090

19+02.78 S.R. 29 =
15+00.00 TIDWELL CIRCLE
N 577420.7310
E 2394826.5520

SEE SHEET NO. U6-3

STATION 21+00 MATCH LINE

TELEPHONE CABINET (5'x7')
STA. 9+91.39, LT. 37.64'

(1) 10' L

40' 4
STA. 16+88.23
6.88 LT

35' TRANS. OF PVMT.

REMOVED EXISTING TELEPHONE CABINET (DO NOT FILL AREA UNIT ALL TELEPHONE COMPANY WORK IS COMPLETE)

RURITAN RD. (SR-29) N 45° 56' 10" W

S.R. 29 N 14° 29' 27" W

N 74° 10' 15" E

N 45° 56' 07" E

PROPOSED AT&T

EXISTING AT&T TO REMAIN

EXISTING AT&T TO REMAIN OR RETIRED

EXISTING AT&T TO REMAIN OR RETIRED

PROPOSED AT&T

EXISTING AT&T TO REMAIN

EXISTING AT&T TO REMAIN OR RETIRED

PROPOSED AT&T

EXISTING AT&T TO REMAIN OR RETIRED

EXISTING AT&T TO REMAIN

PROPOSED AT&T

PROPOSED AT&T

EXISTING AT&T TO REMAIN OR RETIRED

EXISTING AT&T TO REMAIN

PROP. 42" RCP

EXIST. PERM. DRAIN ESMT.

PROP. R.O.W.

PRES. & PROP. R.O.W.

CONST. ESMT.

IRRIGATION

APPROX. LIMITS OF GRAVES

OBSCURED WOODS

WOODS

OBSCURED

GRASS

CUT

ASPH.

CONC. SW

C&G

CONC.

RW

CO

CEM

WOOD SHED

MTL. SHED

MTL. CARPORT

BARNED HOUSE

1-S-F

2-S-F

2-S-APT.

2-S-B

1-S-B

ET (OH)

RT (OH)

RT (UG)

FO

T (OH)

FIBER

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.0001 & TIED TO THE TGRN.

ROBERT B. STEPHENS
REGISTERED ENGINEER
No. 17992
STATE OF TENNESSEE
4/1/2013

BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
1033 Sherrill Blvd., Suite 200, Knoxville, Tennessee 37932
PHONE (865) 637-2810 FAX (865) 673-8554
BWSC PROJECT NO. 32119-22

AT&T
TENNESSEE

UTILITY RELOCATION

BEGIN PROJ. TO
STA. 21+00.00
SCALE: 1"=50'

4/1/2013
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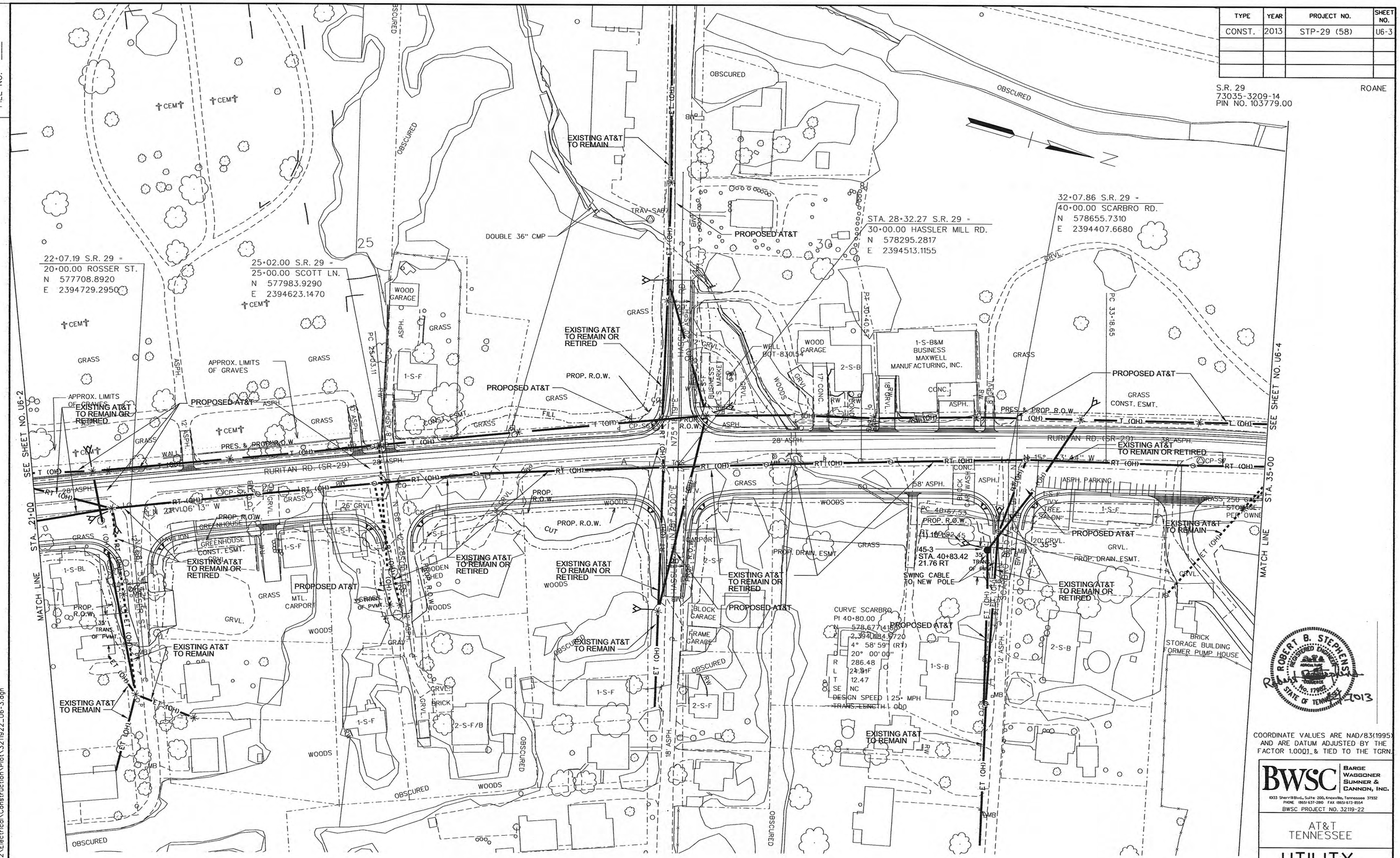
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ——

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29 (58)	U6-3

S.R. 29
73035-3209-14
PIN NO. 103779.00

ROANE



ROBERT B. STEPHENS
REGISTERED ENGINEER
No. 17982
STATE OF TENNESSEE
2013

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.0001 & TIED TO THE TGRN.

BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
10133 Sherrill Blvd., Suite 200, Knoxville, Tennessee 37932
PHONE (865) 637-2800 FAX (865) 673-8554
BWSC PROJECT NO. 32119-22

AT&T
TENNESSEE

UTILITY RELOCATION

STA. 21+00 TO STA. 35+00

SCALE: 1"=50'

4/1/2013
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ——

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29 (58)	U6-4

S.R. 29
73035-3209-14
PIN NO. 103779.00
ROANE



4/1/2013
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ROBERT B. STEPHENS
REGISTERED ENGINEER
No. 17982
STATE OF TENNESSEE
4-1-2013

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.0001_& TIED TO THE TGRN.

BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
10133 Sherrill Blvd., Suite 200, Knoxville, Tennessee 37932
PHONE (865) 637-2180 FAX (865) 673-8554
BWSC PROJECT NO. 32119-22

AT&T TENNESSEE

UTILITY RELOCATION

STA. 35+00 TO STA. 48+00

SCALE: 1"=50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ——

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29 (58)	U6-5

S.R. 29
73035-3209-14
PIN NO. 103779.00

ROANE

END CONST. PROJECT NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

73+17.38 STATE ST. =
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

MATCH LINE STATION 48+00 SEE SHEET NO. U6-4

PROPOSED AT&T

EXISTING AT&T TO REMAIN

EXISTING AT&T TO REMAIN OR RETIRED

BAUMGARTNER RD.

S.R. 29 RURITAN RD. (SR-29)

STATE ST. SOUTHEASTERN

SOUTH ROANE ST.

RUSSEL AVE.

PANSY HILL RD

PC 70+79.67

PT 73+20.25

PT 75+86.63

N 78° 07' 03" E

N 54° 22' 08" W

N 2° 58' 06" W

N 74° 22' 07" E

N 69° 33' 25" E

PRES. & PROP. R.O.W.

PROP. R.O.W.

CONC. SW

CURB

ASPH.

GRASS

GRVL.

18' ASPH.

20' ASPH.

22' ASPH.

24' ASPH.

58' ASPH.

30' ASPH.

2 WAY

4 WAY

ET (OH)

OH GUY

TRAV-SA10.3

EIP

EIF

CP-SW

GROUNE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00001 & TIED TO THE TGRN.

BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
1033 Sherrill Blvd., Suite 200, Knoxville, Tennessee 37932
PHONE (865) 637-2810 FAX (865) 673-8554
BWSC PROJECT NO. 32119-22

AT&T
TENNESSEE

UTILITY RELOCATION

STA.48+00 TO END OF PROJ.

SCALE: 1"=50'

ROBERT B. STEPHENS
REGISTERED ENGINEER
No. 17966
STATE OF TENNESSEE
4/1/2013

4/1/2013
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2C6

ROANE COUNTY 73035-3209-14

PROPOSED PAVING SCHEDULE - ALL ROADWAYS

(1) MINERAL AGGREGATE BASE COURSE AT 10 IN THICK (APPROX. 1,128 LB/SY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(11) BITUMINOUS PLANT MIX BASE (HM) AT 2 IN THICK (APPROX. 226 LB/SY) ITEM NO. 307-02.08 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2
(2) MINERAL AGGREGATE BASE COURSE AT 11.75 IN THICK (APPROX. 1,325 LB/SY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(12) PRIME COAT (PC) ITEM NO. 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) ITEM NO. 402-02 BITUMINOUS MATERIAL FOR COVER MATERIAL (PC)
(3) MINERAL AGGREGATE BASE COURSE AT 12 IN THICK (APPROX. 1,353 LB/SY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(13) TACK COAT (TC) ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)
(4) MINERAL AGGREGATE BASE COURSE AT 12.25 IN THICK (APPROX. 1,382 LB/SY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(14) ASPHALTIC CONCRETE SURFACES (HM) AT 1.25 IN THICK (APPROX. 132.5 LB/SY) ITEM NO. 411-01.10 ACS MIX (PG64-22) GRADING D
(5) MINERAL AGGREGATE BASE COURSE AT 14.75 IN THICK (APPROX. 1,663 LB/SY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(15) ASPHALTIC CONCRETE SURFACES (HM) AT 1.5 IN THICK (APPROX. 154.5 LB/SY) ITEM NO. 411-01.07 ACS MIX (PG64-22) GRADING E SHOULDER
(6) BITUMINOUS PLANT MIX BASE (HM) AT 3 IN THICK (APPROX. 345 LB/SY) ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	(16) ASPHALTIC CONCRETE SURFACES (HM) AT 1.25 IN THICK (APPROX. 132.5 LB/SY) ITEM NO. 411-02.10 ACS MIX (PG70-22) GRADING D
(7) BITUMINOUS PLANT MIX BASE (HM) AT 2 IN THICK (APPROX. 226 LB/SY) ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	(17) COLD PLANING AT -1.25 IN THICK ITEM NO. 415-01.01 COLD PLANING BITUMINOUS PAVEMENT
(8) BITUMINOUS PLANT MIX BASE (HM) AT 2.5 IN THICK (APPROX. 282.5 LB/SY) ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	(18) CURB AND GUTTER ITEM NO. 702-03 CONCRETE COMBINED CURB & GUTTER TYPE 6-30, SEE STANDARD DRAWING RP-NMC-10
(9) BITUMINOUS PLANT MIX BASE (HM) AT 3 IN THICK (APPROX. 345 LB/SY) ITEM NO. 307-02.01 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	(19) AGGREGATE UNDERDRAINS ITEM NO. 710-02 AGGREGATE UNDERDRAINS (WITH PIPE) SEE STANDARD DRAWING RD-UD-3 FOR DETAIL THAT APPLIES.
(10) BITUMINOUS PLANT MIX BASE (HM) AT 3 IN THICK (APPROX. 270 LB/SY) ITEM NO. 307-02.02 ASPHALT CEMENT (PG70-22) (BPMB-HM) GRADING A-S ITEM NO. 307-02.03 AGGREGATE (BPMB-HM) GRADING A-S MIX	

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

N.T.S.

9/24/2012 7:00:51PM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U7-1
		73035-3209-14	

ROANE CO.

INDEX OF DRAWINGS

SHT. NUMBER	SHT. NAME
U7-1	ESTIMATED QUANTITIES (GAS)
U7-2	UTILITY RELOCATION PLAN (GAS)
U7-3	TYPICAL GAS DETAILS

NOTES	ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
(1)	791-01.05	6IN STL. GAS MAIN	L.F.	45	0%	100%
(2)	791-06.12	CONNECT TO 6IN EX. STL. MAIN	EACH	2	0%	100%
(3)	791-10.10	RETIRE GAS MAINS	L.S.	1	0%	100%

FOOTNOTES:

(1) INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF R.O.W., LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP, COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

(2) INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.

(3) INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO RETIRE THE SYSTEM INDICATED ON THE DRAWINGS INCLUDING BUT NOT LIMITED TO DISCONNECTING THE PIPING FROM THE GAS SUPPLY SOURCE, PURGING ALL GAS FROM THE EXISTING PIPING AND PERMANENTLY SEALING THE ENDS OF THE SYSTEM.

GENERAL NOTES:

1. CONSTRUCTION MATERIALS AND INSTALLATION MUST MEET ROCKWOOD WATER, SEWER, AND GAS (ROCKWOOD) SPECIFICATIONS. MATERIAL SUBMITTALS MUST BE APPROVED BY ROCKWOOD PRIOR TO CONSTRUCTION.
2. PRESENT WELDERS QUALIFICATION STATEMENTS & CERTIFICATES TO ROCKWOOD PRIOR TO START OF CONSTRUCTION FOR EVERY WELDER THAT MAY WORK ON THIS PROJECT.
3. THE CONTRACTOR SHALL STAKE THE PROPOSED GAS MAIN LAYOUTS TO ALLOW AMPLE TIME FOR ROCKWOOD'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ROCKWOOD FOR INSPECTION AT LEAST FIVE (5) DAYS PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR TO COORDINATE CONNECTIONS INTO EXISTING GAS MAINS WITH ROCKWOOD'S CONNECTION CREWS PRIOR TO MAKING TAPS. ROCKWOOD APPROVAL REQUIRED PRIOR TO TAPS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR POT HOLING EXISTING UTILITIES AND DETERMINING ELEVATION AND LOCATION. POT HOLING SHALL BE CONDUCTED WITH THE LEAST INTRUSIVE MEANS SUCH AS A VACTRON, HAND DIGGING, OR OTHER SIMILAR EQUIPMENT. PAVEMENT RESTORATION AT POTHOLE LOCATIONS SHALL BE INCLUDED IN THE BASE BID.
6. THE CONTRACTOR SHALL PHOTOGRAPH OR VIDEO EACH SITE WITHIN 24 HOURS OF BEGINNING WORK ON THE ASSOCIATED PROPERTY. THE CONTRACTOR SHALL PROVIDE ONE COPY OF SUCH PHOTOS OR VIDEO TO ROCKWOOD WITH-IN 48 HOURS OF BEGINNING WORK ON SAID PROPERTY. IN THE EVENT THE RESIDENT PROJECT REPRESENTATIVE (RPR) IS NOT PRESENT FOR THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR TAKING A PHOTOGRAPH OF THE EXCAVATED SERVICE BEFORE THE CONDEMNATION AND AFTER THE CONDEMNATION. FAILURE TO DOCUMENT THE WORK BY MEANS OF PHOTOGRAPHY WILL RESULT IN THE CONTRACTOR VERIFYING THE WORK BY MEANS OF RE-EXCAVATING THE SITE, AT THE EXPENSE OF THE CONTRACTOR.
7. THE CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPARTS E AND N RELATED TO NATURAL GAS WORK INCLUDING BUT NOT LIMITED TO DRUG AND ALCOHOL TESTING, OPERATOR QUALIFICATION, FUSION QUALIFICATION, WELDER CERTIFICATION, ETC. THE CONTRACTOR SHALL FURNISH TO ROCKWOOD A LIST OF CREW MEMBERS THAT WILL BE SPECIFICALLY ASSIGNED TO THE WORK AND EVIDENCE OF THEIR QUALIFICATIONS UNDER THE REQUIRED PROGRAMS. UNQUALIFIED CREW MEMBERS WILL BE QUALIFIED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR MAY BE SUBJECT TO PENALTIES THAT COULD INCLUDE TERMINATION OF THE CONTRACT AS DETERMINED BY THE OWNER FOR HAVING CREW MEMBERS PERFORMING TASKS IN WHICH THEY ARE NOT QUALIFIED TO PERFORM.
8. IN ORDER FOR THE MOST CURRENT OPERATOR QUALIFICATION STATUS CHECKS OF CONTRACTOR OR CONTRACTOR EMPLOYEES TO BE PERFORMED, THE CONTRACTOR MUST COMPLY WITH 49 CFR PART 192, SUBPART N USING ONE OF THE THREE OPTIONS LISTED BELOW:
   - 8.1. BE A SUBSCRIBER OF THE OQ PLAN PROVIDER THAT ROCKWOOD CURRENTLY HAS A SUBSCRIPTION OR CONTRACT WITH,
   - 8.2. USE HIS OR HER OWN OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY ROCKWOOD OR
   - 8.3. USE A THIRD-PARTY OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY ROCKWOOD.
9. THE CONTRACTOR SHALL HAVE ALL DOCUMENTATION DEMONSTRATING THAT PERSONNEL PERFORMING COVERED OQ TASKS ARE QUALIFIED TO PERFORM SUCH TASKS AS WELL AS MEET THE DOT OQ STANDARDS AND HAVE THAT DOCUMENTATION ELECTRONICALLY ACCESSIBLE BY ROCKWOOD WITHIN 10 BUSINESS DAYS AFTER RECEIVING THE NOTICE OF AWARD. ROCKWOOD MAY CONSIDER THE CONTRACTOR IN DEFAULT IF THIS DOCUMENTATION IS NOT RECEIVED OR ELECTRONICALLY AVAILABLE WITHIN 10 BUSINESS DAYS AFTER THE CONTRACTOR RECEIVES THE NOTICE OF AWARD.
10. CONTRACTOR WILL BE REQUIRED TO HAVE THE FOLLOWING SAFETY EQUIPMENT ON-SITE AS THE WORK IS PERFORMED.
    - 10.1. FIRE EXTINGUISHER – CONTRACTORS WILL NEED TO POSSESS A 20 CUBIC FOOT OR GREATER EXTINGUISHER RATED AS ABC.
    - 10.2. A FIRE HOOD(S) FOR ALL PERSONNEL WORKING IN LIVE GAS WILL NEED TO PROVIDE COVERAGE FOR HEAD, FACE AND NECK AND BE CLASSIFIED AS FIRE RESISTANT.
    - 10.3. A FIRE SUIT(S) FOR ALL PERSONNEL WORKING DIRECTLY IN LIVE GAS WILL NEED TO BE – INSULATED FLAME RESISTANT ONE PIECE COVERALL.
11. EACH CONTRACTOR EMPLOYEE, PERFORMING OR PARTICIPATING IN THE PERFORMANCE OF A COVERED TASK, SHALL ADHERE TO THE FOLLOWING GUIDELINES FOR FIRE RETARDANT CLOTHING WHEN WORKING IN CONDITIONS AS STATED BELOW:
    - 11.1. INITIAL EXCAVATION ACTIVITIES – 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
    - 11.2. HAND EXCAVATION OF SERVICE TEE – 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
    - 11.3. SQUEEZE OFF OF PIPELINE – 100% COTTON CLOTHING PLUS HOODED FLAME RESISTANT 1 PIECE COVERALL, FLAME RESISTANT HEAD SOCK, + APPROPRIATE PPE FOR TASK.
    - 11.4. BLOWING GAS ENVIRONMENT – 100% COTTON CLOTHING PLUS HOODED INSULATED FLAME RESISTANT ONCE PIECE COVERALL, FLAME RESISTANT HEAD SOCK AND LEATHER GLOVES.
12. ALL INCIDENTAL WORK, INCLUDING LABOR AND MATERIALS, NECESSARY TO COMPLETE THE PROJECT AS SHOWN IN THE CONTRACT DOCUMENTS, FOR WHICH A SEPERATE PAY ITEM IS NOT SHOWN SHALL BE PERFORMED BY THE CONTRACTOR AND NO ADDITIONAL PAYMENT SHALL BE MADE. THE COST OF THIS WORK SHALL BE MERGED INTO THE UNIT PRICES BID FOR THE BID ITEMS SHOWN.

UTILITY INFORMATION

UTILITY TITLE	ROCKWOOD WATER, SEWER & GAS
ADDRESS	110 North Chamberlain Avenue Rockwood, TN. 37854
CONTACT PERSON	KIM RAMSEY
PHONE	(865) 354-0163

LEGEND

	PROPOSED CENTERLINE
	PROP/EXIST. R.O.W.
G	PROPOSED GAS LINE
	PROPOSED STORM SEWER
PL	EXIST. PROPERTY LINE
8" SA	EXIST. SANITARY SEWER
8" W	EXIST. WATER LINE
P/T	EXIST. POWER LINE
3" G	EXIST. NATURAL GAS
	EXIST. STORM SEWER
	EXIST. STREAM
W.M.	EXIST. WATER METER
G.M.	EXIST. GAS METER
MB	EXIST. MAILBOX



ROCKWOOD WATER, SEWER & GAS

GAS LINE RELOCATION

ESTIMATED QUANTITIES

Survey & Design Division

3/15/2013
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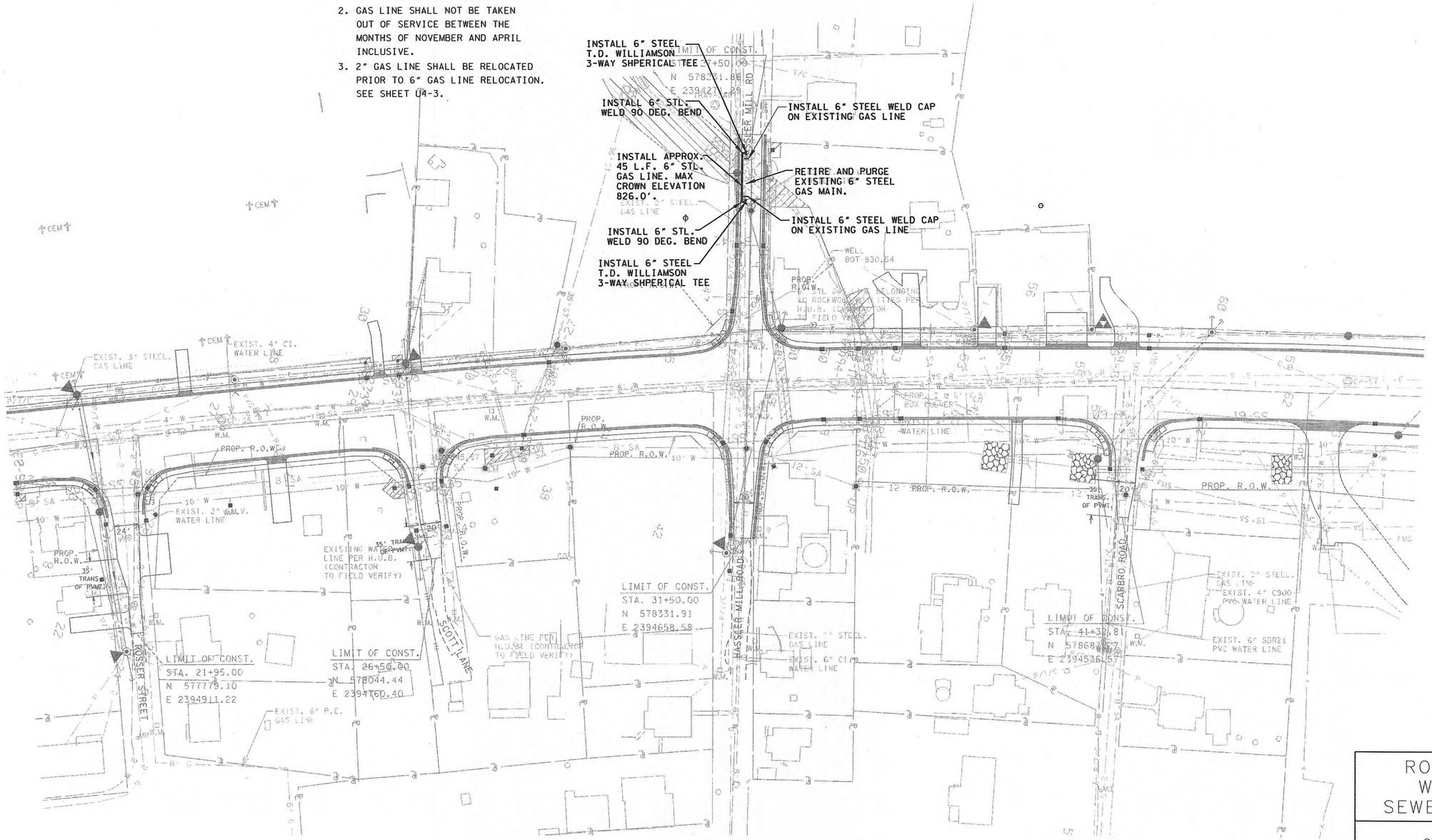
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U7-2
		73035-3209-14	

ROANE CO.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTE:

1. CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPART E AND N RELATED TO NATURAL GAS WORK, AND MUST MEET OR EXCEED ROCKWOOD'S OPERATOR QUALIFICATION (OQ) PROGRAM. (SEE SPECIFICATION 33 51 13.20) TO PERFORM THE GAS LINE WORK IN THIS CONTRACT.
2. GAS LINE SHALL NOT BE TAKEN OUT OF SERVICE BETWEEN THE MONTHS OF NOVEMBER AND APRIL INCLUSIVE.
3. 2" GAS LINE SHALL BE RELOCATED PRIOR TO 6" GAS LINE RELOCATION. SEE SHEET U4-3.



ROCKWOOD WATER, SEWER & GAS

GAS LINE RELOCATION

STA. 21+00.00 TO STA. 35+00.00
SCALE: 1"=50'

3/15/2013
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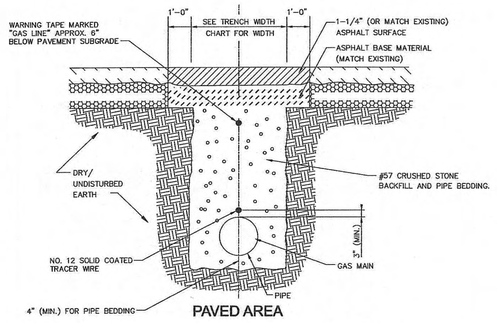
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

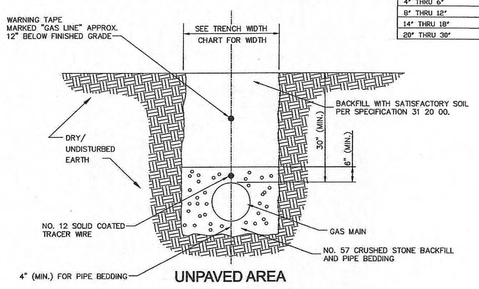


TYPICAL BACKFILL & BEDDING METHOD

NOTES:

1. EDGE TO BE SAWED WITH A CONCRETE SAW TO A NEAT SQUARED EDGE. BROOMED CLEAN OF DUST BEFORE TACK COAT IS APPLIED.
2. EDGES TO BE TACKED WITH EMULSIFIED ASPHALT TACK CRS-1 OR CRS-II.
3. CUTTING AND REPAIRING EXISTING PAVEMENT CONCRETE OR GRAVEL SHALL BE IN ACCORDANCE WITH OWNER'S REQUIREMENTS.

TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"
14" THRU 18"	42"
20" THRU 30"	54"



TRENCH WIDTH	
PIPE SIZE	X
4" THRU 6"	30"
8" THRU 12"	36"
14" THRU 18"	42"
20" THRU 30"	54"

TYPICAL BACKFILL & BEDDING METHOD

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2013	STP-29(58)	U7-3
		73035-3209-14	

ROANE CO.



ROCKWOOD
WATER,
SEWER & GAS

GAS LINE
RELOCATION

TYPICAL DETAILS
SCALE: AS SHOWN

Survey & Design Division

3/15/2013
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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	S1
CONST.	2012	73035-3209-14	S1
P.E.	2012	73035-3209-54	S1

CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING CERTIFICATIONS (3.1.1) YES ☒ NO ☐ (CHECK ALL THAT APPLY BELOW)

1.1.1. ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC); OR

1.1.2. ☒ TDEC LEVEL II

1.2. DOES THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (SEDIMENT BASINS, ETC.)? YES ☐ NO ☒(3.1.1)

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT?

☐YES ☐ NO

1.3. DOES THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING? (5.4.1) YES ☐ NO ☒ (CHECK ALL THAT APPLY BELOW)

1.3.1. ☐ IMPAIRED WATERS (303d FOR SILTATION OR HABITAT ALTERATION)

1.3.2. ☐ TENNESSEE KNOWN EXCEPTIONAL WATERS

IF YES, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? ☐YES ☐ NO (5.4.1.b); AND

IF YES, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? (5.4.1.b) ☐YES ☐ NO ☐ N/A (MAY 23, 2013 CGP EXEMPTION)

2. SITE DESCRIPTION (3.5.1)

2.1. PROJECT LIMITS: REFER TO TITLE SHEET (3.5.1.g)

2.2. PROJECT DESCRIPTION: (3.5.1.a)

TITLE: STATE ROUTE 29 (RURITAN ROAD)

COUNTY: ROANE

PIN: 103779.00

2.3. SITE MAP(S): REFER TO TITLE SHEET (3.5.1.g)

2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS ON DRAINAGE MAP SHEET(S) 18-19, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.2.3 BELOW.

2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY)

2.5.1. ☒ CLEARING AND GRUBBING

2.5.2. ☒ EXCAVATION

2.5.3. ☒ CUTTING AND FILLING

2.5.4. ☒ FINAL GRADING AND SHAPING

2.5.5. ☒ UTILITIES

2.5.6. ☒ OTHER (DESCRIBE): STREAM RELOCATION

2.6. TOTAL PROJECT AREA (3.5.1.c): 13.48 ACRES

2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c):13.48 ACRES

IF GREATER THAN 50 ACRES, HAS CONSTRUCTION PROJECT PHASING BEEN SPECIFIED IN SECTION 3 BELOW AND IN THE PLANS (3.5.3.1.k)?

YES ☐ NO ☐ N/A ☒

2.8. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES ☐ NO ☒

IF YES, DESCRIBE AND LIST THE CORRESPONDING PLAN SHEET: ____

2.9. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010?

YES ☒ 05/22/2009 (DATE) NO ☐ (4.1.2.2).

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.10. ARE UTILITIES INCLUDED IN THE CONTRACT? YES ☒ NO ☐

2.11. SOIL PROPERTIES (3.5.1.e)(4.1.1)

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
Fullerton-Pailo Complex	B	1	0.28
Fullerton-Dewey-Urban Land	B	72	0.28
Shady-Swafford-Urban Lane	B	27	0.28

2.12. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.f)

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	5.39	40	89	
GRASS	8.09	60	69	
WEIGHTED CURVE NUMBER OR C-FACTOR =			77	

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	8.63	64	98	
GRASS	4.85	36	61	
WEIGHTED CURVE NUMBER OR C-FACTOR =			85	

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a)

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 2F)

3.2. INSTALL STABILIZED CONSTRUCTION EXITS.

3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEETS FROM THE SITE.

3.4. INSTALL INITIAL EPSC (EROSION PREVENTION AND SEDIMENT CONTROL) MEASURES.

3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).

3.6. REMOVE AND STORE TOPSOIL. STABILIZE TOPSOIL STOCKPILES WITHIN 15 DAYS OF INACTIVITY.

3.7. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY PHASE OF ACTIVITY.

3.8. INSTALL UTILITIES, STORM SEWERS AND BRIDGE STRUCTURES.

3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.

3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.

3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.

3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.

3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, SOD, ETC)

3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT PERMANENT VEGETATIVE COVER.

3.15. RESEED AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION

WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS? YES ☒ NO ☐

4.1.1. STREAM INFORMATION

4.1.1.1. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.i). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S5. ALL PERMITS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

4.1.1.2. RECEIVING STREAMS (3.5.1.j)

RECEIVING STREAM INFORMATION			
NATURAL RESOURCE LABEL	NAME OF RECEIVING NATURAL RESOURCE	IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	KNOWN EXCEPTIONAL QUALITY WATERS (YES OR NO)
STR-1	UNNAMED TRIBUTARY TO CANEY CREEK	NO	NO
STR-2	UNNAMED TRIBUTARY TO CANEY CREEK	NO	NO
STR-3	UNNAMED TRIBUTARY TO CANEY CREEK	NO	NO

4.1.2. ARE BUFFER ZONES REQUIRED? YES ☐ NO ☒ (4.1.2, 5.4.2)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER

☐ 60-FEET FOR IMPAIRED AND EXCEPTIONAL WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET)

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET)

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2)

4.1.3. ARE THERE BUFFER ZONE EXEMPTIONS? YES ☒ NO ☐ (4.1.2.1)

IF YES, EXISTING CONDITIONS DESCRIPTION: EXISTING ROADWAY.

4.2. OUTFALL INFORMATION :

A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

4.2.1. OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (3.5.3.3)

4.2.2. OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (5.4.1.f).

4.2.3. OUTFALL TABLE (3.5.1.d, 5.4.1.f)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	S2
CONST.	2012	73035-3209-14	S2
P.E.	2012	73035-3209-54	S2

OUTFALL INFORMATION						
OUTFALL LABEL	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	SUB-OUTFALL (e.g. A, B, C)†	RECEIVING NATURAL RESOURCE NAME OR LABEL
1	12+25 LT	5%	0.46	N/A		
2	13+80 LT	20%	9.17	N/A	A, B	STR-1
3	16+50 LT	12%	0.69	N/A		
4	20+20 LT	5%	4.13	N/A	A, B, C	WWC-1
5	27+90 RT	2%	4.59	N/A		STR-2
6	27+50 RT	2%	2.07	N/A	A, B	STR-2
7	29+42 LT	3%	4.13	N/A	A, B, C, D	STR-2
8A	40+82 RT	3%	0.69	N/A		STR-3
8B	40+82 LT	3%	2.14	N/A		STR-3
9	35+50 LT	23%	1.37	N/A		
10	36+20 RT	4%	1.72	N/A	A, B, C	STR-3
11	37+90 RT	2%	3.79	N/A	A	STR-3
12	39+50 RT	8%	5.05	N/A		STR-3
13	42+10 RT	2%	4.59	N/A		
14	46+80 RT	10%	7.35	N/A		
15	50+75 LT	5%	5.75	N/A		
16	63+50 LT	3%	1.03	N/A		
17	62+15 LT	3%	0.68	N/A		
18	26+70 LT	5%	3.09	N/A		STR-2

†NOTE: SUB-OUTFALLS ARE DEFINED AS OUTFALLS THAT DISCHARGE WITHIN THE PROJECT AND DO NOT DIRECTLY DISCHARGE OFF ROW OR INTO WATERS OF THE STATE.

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED THROUGH THE PROJECT SO THAT THE OFF-SITE RUN-ON WILL NOT FLOW OVER DISTURBED AREAS WITHIN THE ROW, THUS SEPARATING NON-PROJECT RUN-OFF FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA TO ANY ONE OUTFALL? YES ☒ NO ☐ N/A ☐

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? YES ☐ NO ☒ N/A ☐

4.2.6. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.g, 5.4.1.f)? YES ☒ NO ☐

4.2.7. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)? YES ☒ NO ☐

4.3. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES ☐ NO ☒

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT WETLAND IMPACTS AND HAVE BEEN INCLUDED IN THE ARAP PERMIT, 401 OR 404 PERMITS.

WETLAND INFORMATION				
WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)

4.4.1. IS THIS PROJECT LOCATED IN A WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES ☒ NO ☐

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)? YES ☒ NO ☐

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION? YES ☐ NO ☒

4.4.4. IF YES, HAS A SUMMARY OF THE CONSULTATION (LETTER) BEEN INCLUDED WITH THE SWPPP DOCUMENTATION? YES ☐ NO ☐

4.5. ECOLOGY INFORMATION (3.5.5.e)

IF SPECIAL NOTES ARE PRESENT IN THE TDOT ECOLOGY REPORT, HAVE THEY BEEN ADDED TO THE APPROPRIATE PLAN SHEETS?

YES ☒ NO ☐ NO NOTES REQUIRED ☐

IF YES, LIST ALL PLAN SHEETS WHERE SPECIAL NOTES HAVE BEEN ADDED. 2D4, 2F

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION. (4.1.1)

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED ACCORDING TO THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)? YES ☒ NO ☐

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 2-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a). FOR SITES THAT DISCHARGE INTO AN IMPAIRED OR KNOWN EXCEPTIONAL QUALITY WATER, EPSC MEASURES WILL BE DESIGNED TO CONTROL STORM RUNOFF GENERATED BY A 5-YEAR, 24-HOUR STORM EVENT.

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS? (3.5.1.n) YES ☒ NO ☐

5.6. HAVE PHASED EPSC PLANS BEEN PREPARED FOR THE PROJECT? (3.5.2)

YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)

5.6.1. ☐ PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO PHASES OF EPSC PLANS)

5.6.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE PHASES OF EPSC PLANS)

5.7. IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? YES ☐ NO ☒

5.8. HAVE STEEP SLOPES (GREATER THAN 35%) BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE? (3.5.3.2) (10 "STEEP SLOPE")

YES ☒ NO ☐

5.9. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AMD FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

5.10. ALL EPSC CONTROL MEASURES WILL BE INSTALLED ACCORDING TO TDOT STANDARDS (E.G. STANDARD DRAWINGS).

5.11. EPSC MEASURES WILL NOT BE INSTALLED IN A STREAM WITHOUT FIRST OBTAINING US COE SECTION 404, TDEC ARAP, AND TVA PERMITS.

5.12. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY CONTROLS PROVIDING EQUIVALENT LEVEL OF TREATMENT (FILTRATION) (4.14)

5.13. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS MUST USE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT, UNLESS INFEASIBLE. (4.1.7)

5.14. THE CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 26A HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).

5.15. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 26A (3.5.3.1.n).

5.16. STABILIZATION PRACTICES

PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED. (3.5.3.1.h)

5.17. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE. (3.5.3.2)

5.18. STEEP SLOPES (3.5.3.2)

STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR STEEPER REGARDLESS OF HEIGHT. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

6. CONSTRUCTION SUPPORT ACTIVITIES – BORROW AND WASTE AREAS (1.2.2)(3.5.3.1.g)

IF OFFSITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL AS INDICATED IN THE STATEWIDE STORMWATER MANAGEMENT PLAN (SSWMP).

7. MAINTENANCE AND INSPECTION

7.1. INSPECTION PRACTICES (3.5.8)

7.1.1. INSPECTORS MUST HAVE SUCCESSFULLY COMPLETED THE TDEC FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL COURSE (TDEC LEVEL I) AND MAINTAIN THE CERTIFICATION. A COPY OF THE INSPECTOR'S CERTIFICATION SHOULD BE KEPT ON SITE. (3.5.8.1)

7.1.2. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART. (3.5.8.2.a)

7.1.3. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH (I.E. EXTREME DROUGHT CONDITIONS, FROZEN GROUND, ETC.) WITH WRITTEN NOTIFICATION TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION. (3.5.8.2.a)

7.1.4. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED. (3.5.8.2.b)

7.1.5. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, US COE AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE. (10)

7.1.6. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION. (3.8.5.2.e AND 3.8.5.2.f)

7.1.7. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED. (10 "INSPECTOR") (3.5.1.n)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

4/16/2013
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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	S3
CONST.	2012	73035-3209-14	S3
P.E.	2012	73035-3209-54	S3

7.1.8. INSPECTIONS WILL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT (TDEC PRE-APPROVED) AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S), TITLE AND TN EPSC CERTIFICATION NUMBER OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, CURRENT APPROXIMATE DISTURBED ACREAGE AT TIME OF INSPECTION, CHECKLIST (NOC, SWPPP, RAIN GAGE, SITE CONTACT INFORMATION, ETC.) AND MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWPPP. (3.5.8.2.g)

7.1.9. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT SUPERVISOR PER THE CONTRACT.

7.1.10. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

7.1.11. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES. (3.8.5.2.h)

7.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT SUPERVISOR MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT SUPERVISOR AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST PERFORM THE FOLLOWING:

7.2.1. COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

7.2.2. SUBMIT THE EPSC DELEGATION OF AUTHORITY TO THE LOCAL TDEC EFO.

7.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)

7.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER. NECESSARY REPAIRS OR MAINTENANCE WILL BE ACCOMPLISHED BEFORE THE NEXT STORM EVENT AND IN NO CASE MORE THAN 24 HOURS AFTER THE NEED IS IDENTIFIED. IN A CASE WHERE THE ACTIVITY IS DEEMED IMPRACTICABLE, ANY SUCH CONDITIONS WILL BE DOCUMENTED (3.5.8.2.e).

7.3.2. ALL CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)

7.3.3. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, AND OTHER CONTROLS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%. (3.5.3.1.e)

7.3.4. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

7.3.5. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF OF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED. (3.5.3.1.f)

7.3.6. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

7.3.7. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8. SITE ASSESSMENTS (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED BY THE TDOT ENVIRONMENTAL DIVISION COMPREHENSIVE INSPECTIONS OFFICE GUIDELINES.

9. STORMWATER MANAGEMENT (3.5.4)

9.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE SHOWN ON THE PLANS AND NOTED AS PERMANENT.

9.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.1.F, 3.5.4): WHERE SPECIFIED IN THE PLANS, RIP-RAP SHALL BE USED FOR DITCH LINING AND RIP-RAP SHALL BE USED AT CULVERT OUTLETS.

9.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

9.3.1. CONSTRUCTION MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

9.3.1.1. ☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
9.3.1.2. ☒ CONCRETE WASHOUT
9.3.1.3. ☒ CONCRETE AND CORRUGATED METAL PIPES
9.3.1.4. ☒ MINERAL AGGREGATES, ASPHALT
9.3.1.5. ☒ EARTH
9.3.1.6. ☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
9.3.1.7. ☒ ROCK
9.3.1.8. ☐ CURING COMPOUND
9.3.1.9. ☐ EXPLOSIVES
9.3.1.10. ☐ OTHER

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

9.3.2. WASTE MATERIALS (3.5.5.b)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

9.3.3. HAZARDOUS WASTE (3.5.5.c) (7.9)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

9.3.4. SANITARY WASTE (3.5.5.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

9.3.5. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

9.3.5.1. ☒ FERTILIZERS AND LIME
9.3.5.2. ☐ PESTICIDES AND/OR HERBICIDES
9.3.5.3. ☒ DIESEL AND GASOLINE
9.3.5.4. ☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED THIS SWPPP.

10. NON-STORMWATER DISCHARGES (3.5.9)

10.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE COURSE OF THIS PROJECT (CHECK ALL THAT APPLY):

10.1.1. ☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER
10.1.2. ☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES SITE
10.1.3. ☒ WATER USED TO CONTROL DUST (3.5.3.1.n)
10.1.4. ☐ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE
10.1.5. ☐ UNCONTAMINATED GROUNDWATER OR SPRING WATER
10.1.6. ☐ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS
10.1.7. ☐ OTHER:

10.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE.

10.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

10.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

10.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.h)?

YES ☐ NO ☒ IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER.

11. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)

11.1. SPILL PREVENTION (3.5.5.c)

11.1.1. MATERIAL MANAGEMENT

11.1.1.1. HOUSEKEEPING

ONLY PRODUCTS NEEDED WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

11.1.1.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING
OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL
RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL PH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	S4
CONST.	2012	73035-3209-14	S4
P.E.	2012	73035-3209-54	S4

SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

11.1.1.3. PRODUCT SPECIFIC PRACTICES

11.1.1.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

11.1.1.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

11.1.1.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

11.1.1.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

11.2. SPILL MANAGEMENT

11.2.1. IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY.

11.2.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

11.2.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.

11.2.4. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

11.2.5. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

11.2.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

11.2.7. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

11.2.8. IF A SPILL OCCURS THE SUPERINTENDENT OR THE SUPERINTENDENT'S DESIGNEE WILL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT SUPERVISOR.

11.2.9. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

11.3. SPILL NOTIFICATION (5.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

11.3.1. THE TDOT PROJECT SUPERVISOR IS RESPONSIBLE FOR NOTIFYING THE REGIONAL ENVIRONMENTAL COORDINATOR OR ASSISTANT REGIONAL ENVIRONMENTAL COORDINATOR AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

11.3.2. THE TDOT REGIONAL ENVIRONMENTAL COORDINATOR WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

11.3.3. A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.

11.3.4. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

12. RECORD-KEEPING

12.1. REQUIRED RECORDS

TDOT OR THEIR DESIGNEE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (6.2.1):

12.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR

12.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE

12.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED

12.1.4. RECORDS OF TWICE WEEKLY EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES

12.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS

12.1.6. COPY OF SITE EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION

12.1.7. RAINFALL MONITORING PLAN (3.5.3.1.o)

12.1.7.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

12.1.7.2. LOCATION

THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

12.1.7.3. METHODS

12.1.7.3.1. RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

12.1.7.3.2. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

12.1.7.3.3. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT EROSION AND SEDIMENT CONTROL CONSTRUCTION INSPECTION REPORT LOCATED IN CONSTRUCTION CIRCULAR 209.01-02 AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

12.1.7.3.4. IF, IN THE EVENT THAT THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

12.1.7.3.5. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

12.2. KEEPING PLANS CURRENT (3.4)

TDOT OR THEIR DESIGNEE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

12.2.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

12.2.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

12.2.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

12.2.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

12.2.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS; OR

12.2.6. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION)

12.3. MAKING PLANS ACCESSIBLE

12.3.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	S5
CONST.	2012	73035-3209-14	S5
P.E.	2012	73035-3209-54	S5

STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE. (6.2)

12.3.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, TDOT OR THEIR DESIGNEE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):

12.3.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

12.3.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

12.3.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

12.3.2.4. THE LOCATION OF THE SWPPP.

12.3.3. ALL INFORMATION DESCRIBED IN SECTION 10.3.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

12.4. NOTICE OF TERMINATION (8.0)

12.4.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, TDOT WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

12.4.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE FOLLOWING:

12.4.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

12.4.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

12.4.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

12.4.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

12.4.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

12.4.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND

12.4.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

12.5. RETENTION OF RECORDS (6.2)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

13. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

AUTHORIZED *TDOT PERSONNEL SIGNATURE* (3.3.1)

JIM OZMENT
PRINTED NAME

DIRECTOR - ENVIRONMENTAL DIVISION
TITLE

JUNE 10, 2013
DATE

14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ON-SITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS.

AUTHORIZED OPERATOR (CONTRACTOR) SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

15. ENVIRONMENTAL PERMITS (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT (TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DESIGNEE):

ENVIRONMENTAL PERMITS			
PERMIT	YES OR NO	PERMIT OR TRACKING NO.	EXPIRATION DATE*
TDEC ARAP			
CORPS OF ENGINEERS (COE)			
TVA 26A			
TDEC CGP			
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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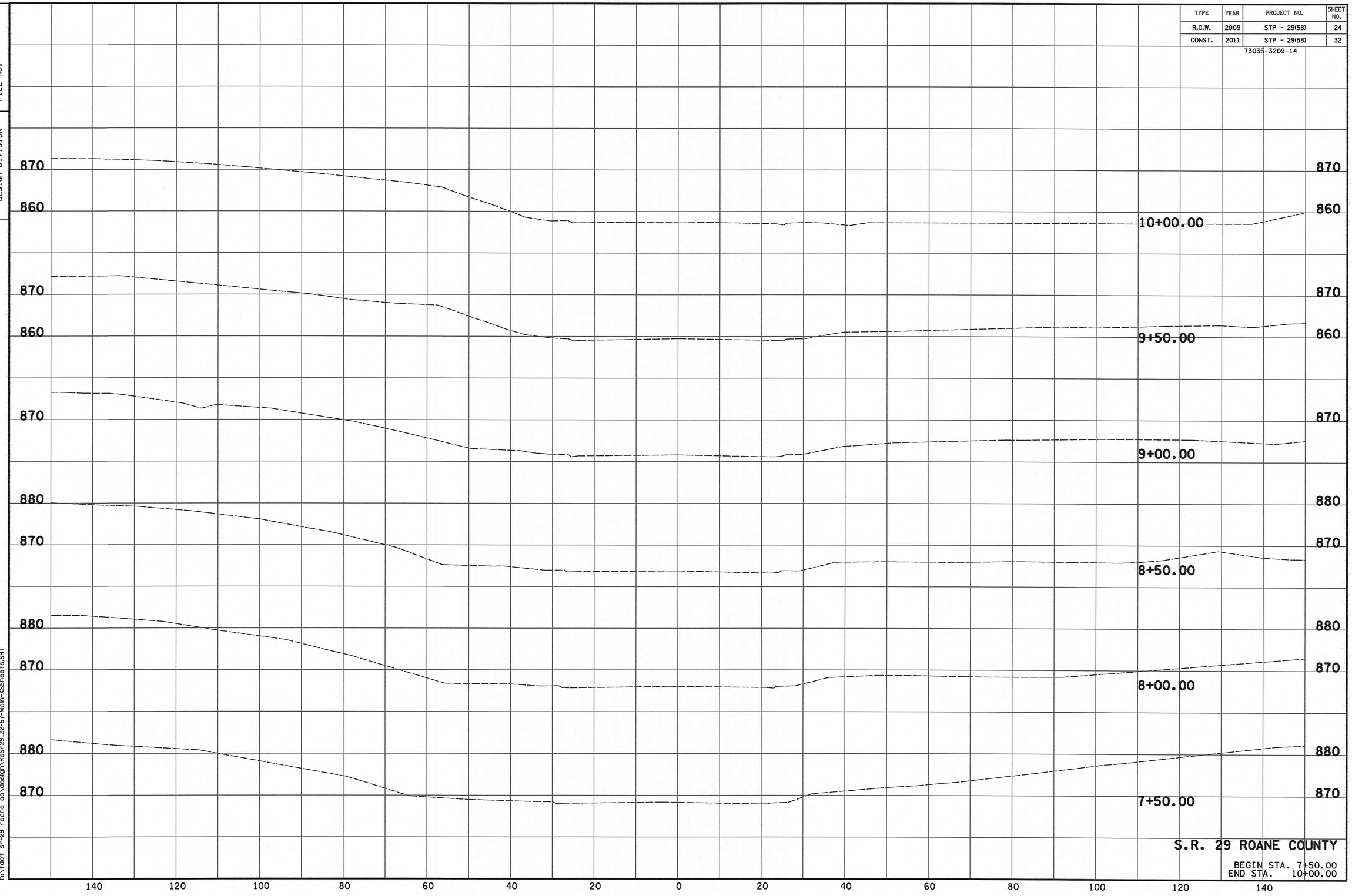
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	24
CONST.	2011	STP - 29(58)	32

73035-3209-14



S.R. 29 ROANE COUNTY

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END STA. 10+00.00

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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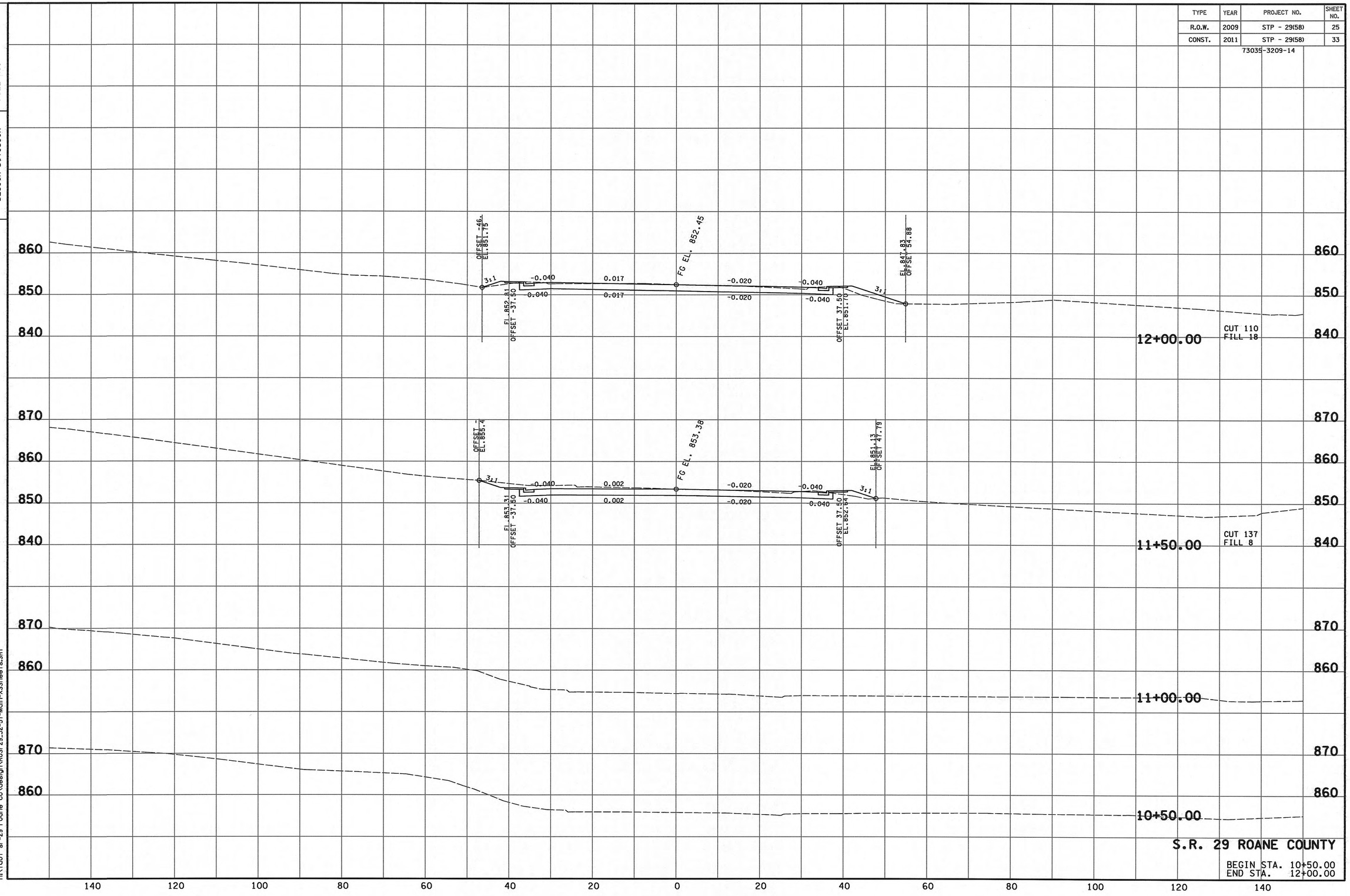
CONST.	2011	STP - 29(58)	33

73035-3209-14



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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2D
ROANE COUNTY		73035-3209-14	

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE 0F THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.

(2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

(3) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

(4) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET , SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(2) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(3) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

(4) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

(1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(2) EXCAVATION FOR PIPE CULVERTS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

(3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(4) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(5) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

(6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

UTILITIES

(1) UTILITY NOTES (SEE SHEET 3A.)

MISCELLANEOUS

(1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.

(3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

RIGHT - OF – WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION AND THE CIVIL ENGINEERING MANAGER 1, REGIONAL DESIGN OFFICE, ARE TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(3) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(5) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(6) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(7) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(8) ON PROJECTS WITH CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT. AFTER THE PERMIT HAS BEEN GRANTED, THE DEPARTMENT WILL CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE THROUGH THE CURB AND SIDEWALK, PROVIDED THE CURB AND SIDEWALK HAVE NOT BEEN CONSTRUCTED. IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE FROM BACK OF SIDEWALK TO TOUCHDOWN POINT FOR ANY ADDITIONAL DRIVEWAYS OR FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(9) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

(2) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), LIN. FT.

FINAL PAVEMENT MARKING IF 4" ENHANCED FLATLINE THERMOPLASTIC IS USED

(3) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.01, ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

(4) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" ENHANCED FLATLINE THERMOPLASTIC IS USED

(5) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.03, ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 00108859
STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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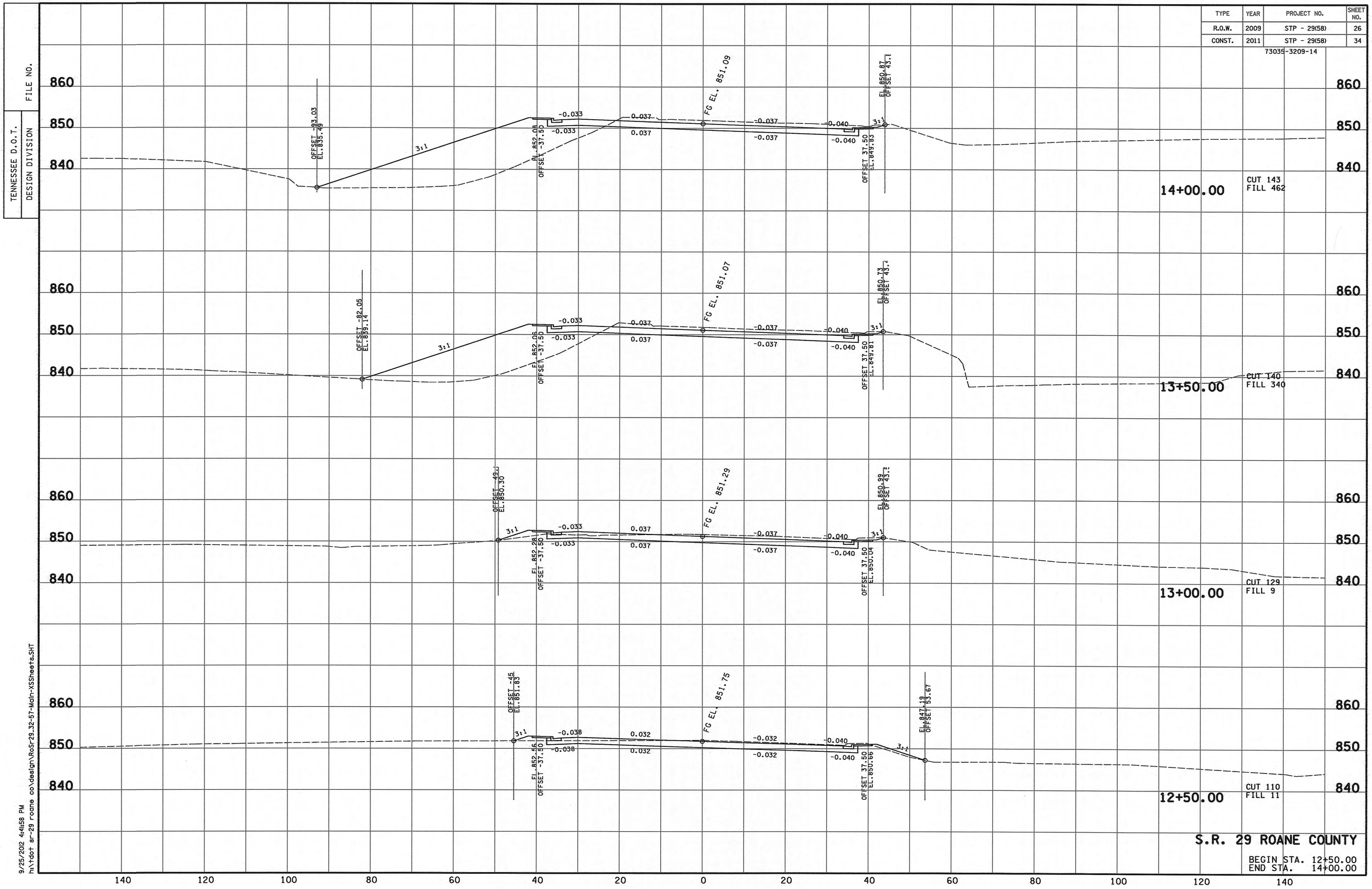
CONST.	2011	STP - 29(58)	34

73035-3209-14



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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	35

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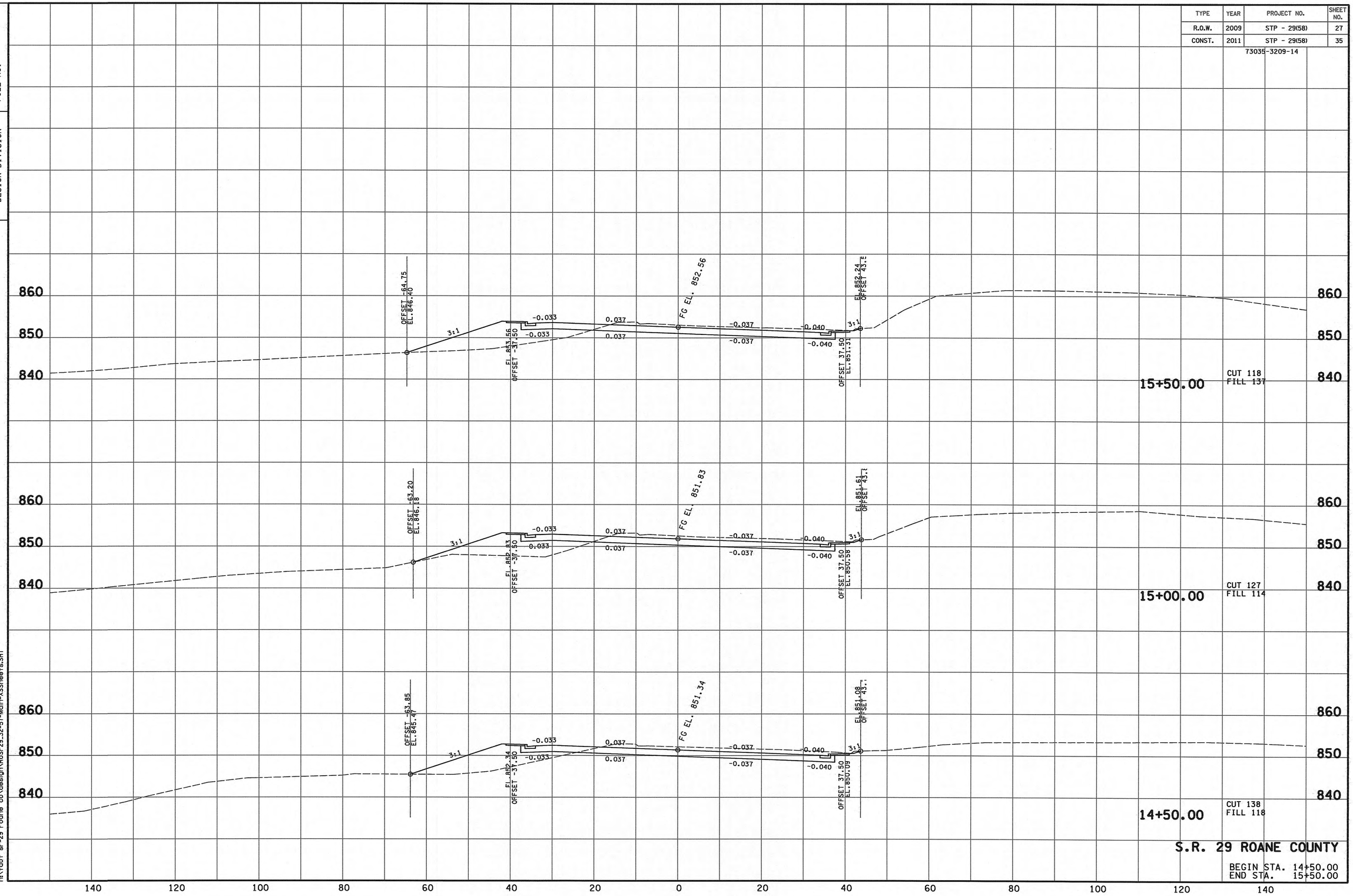

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	36

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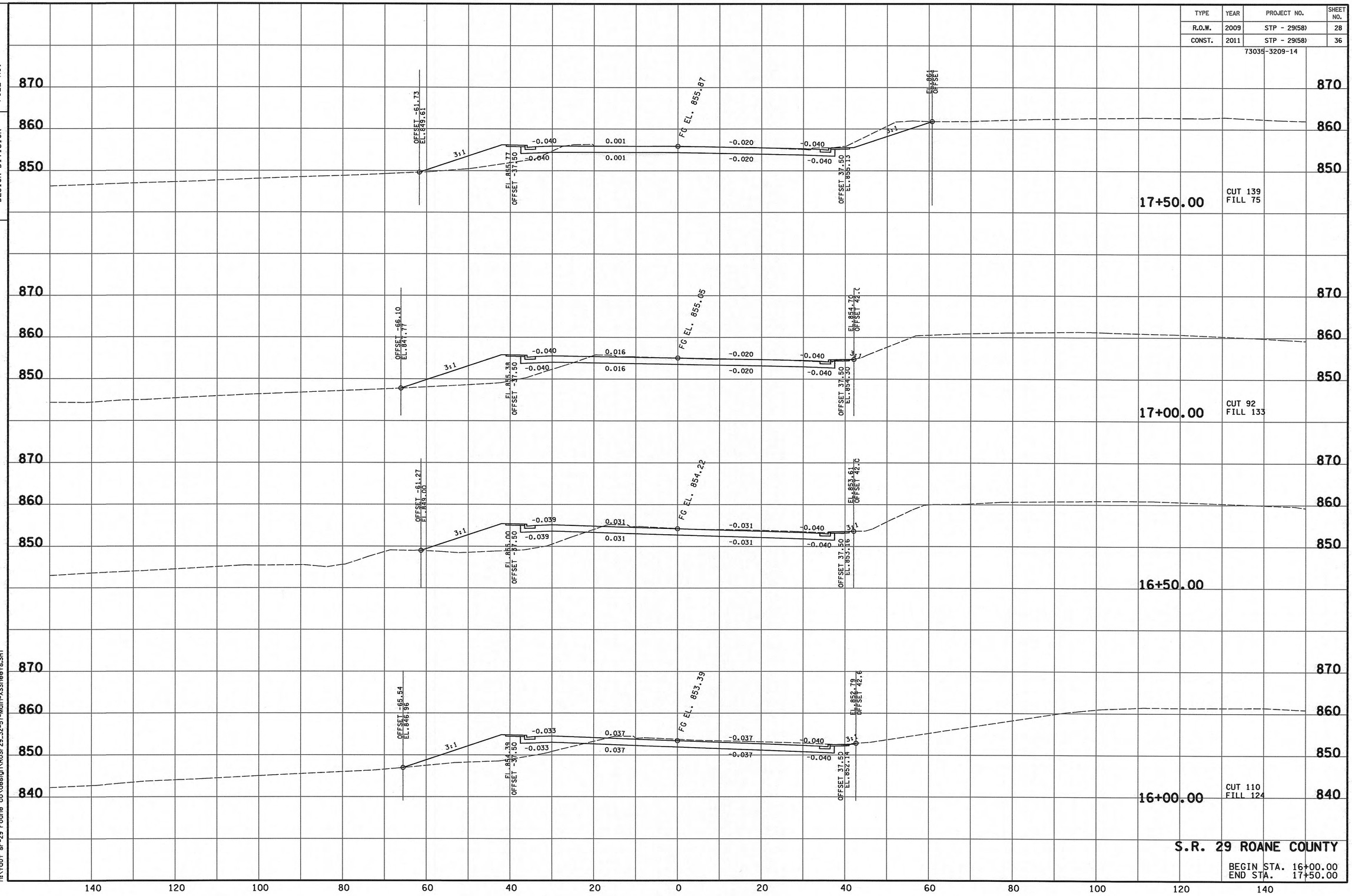

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	37

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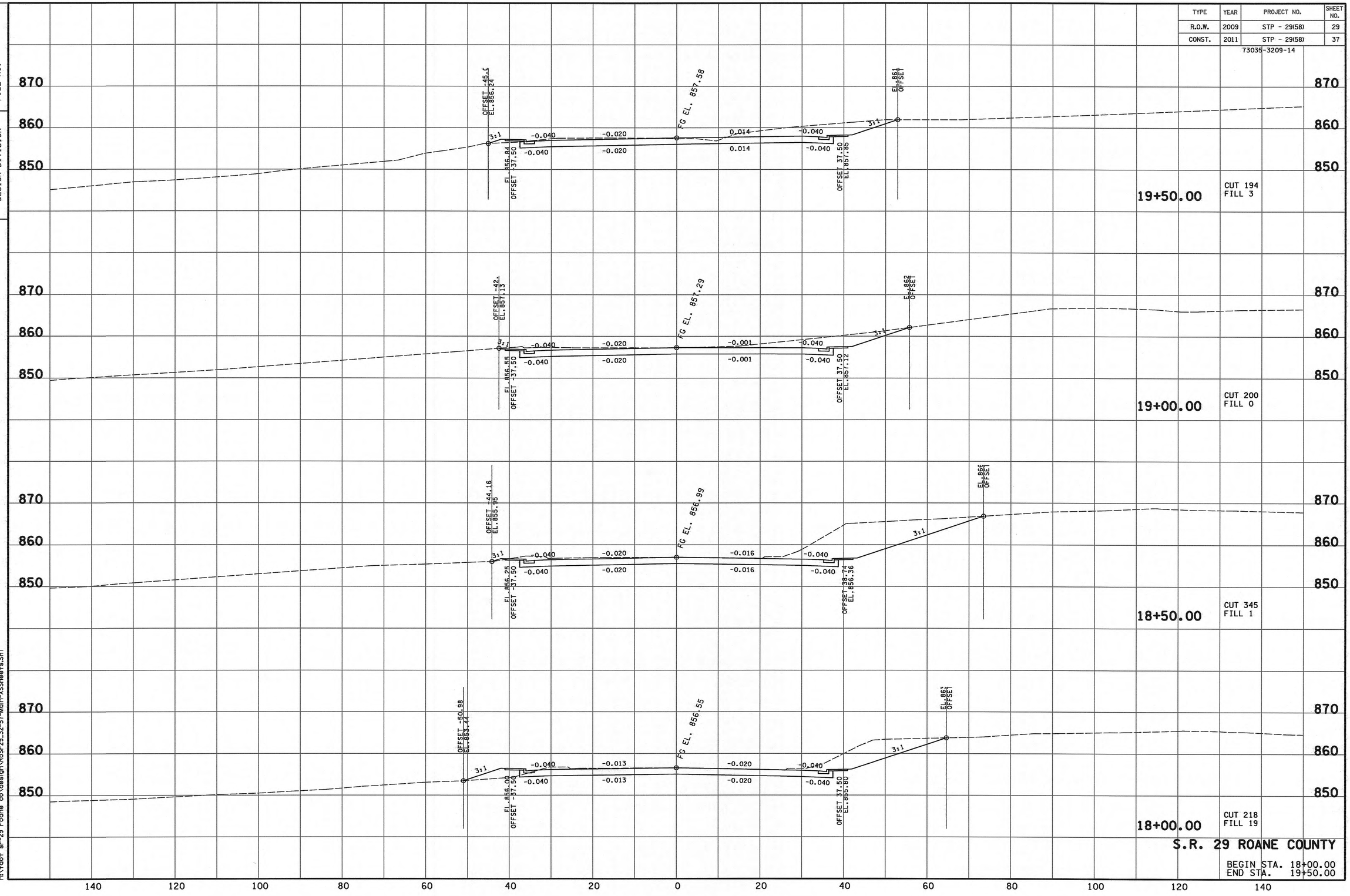

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

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CONST.	2011	STP - 29(58)	38

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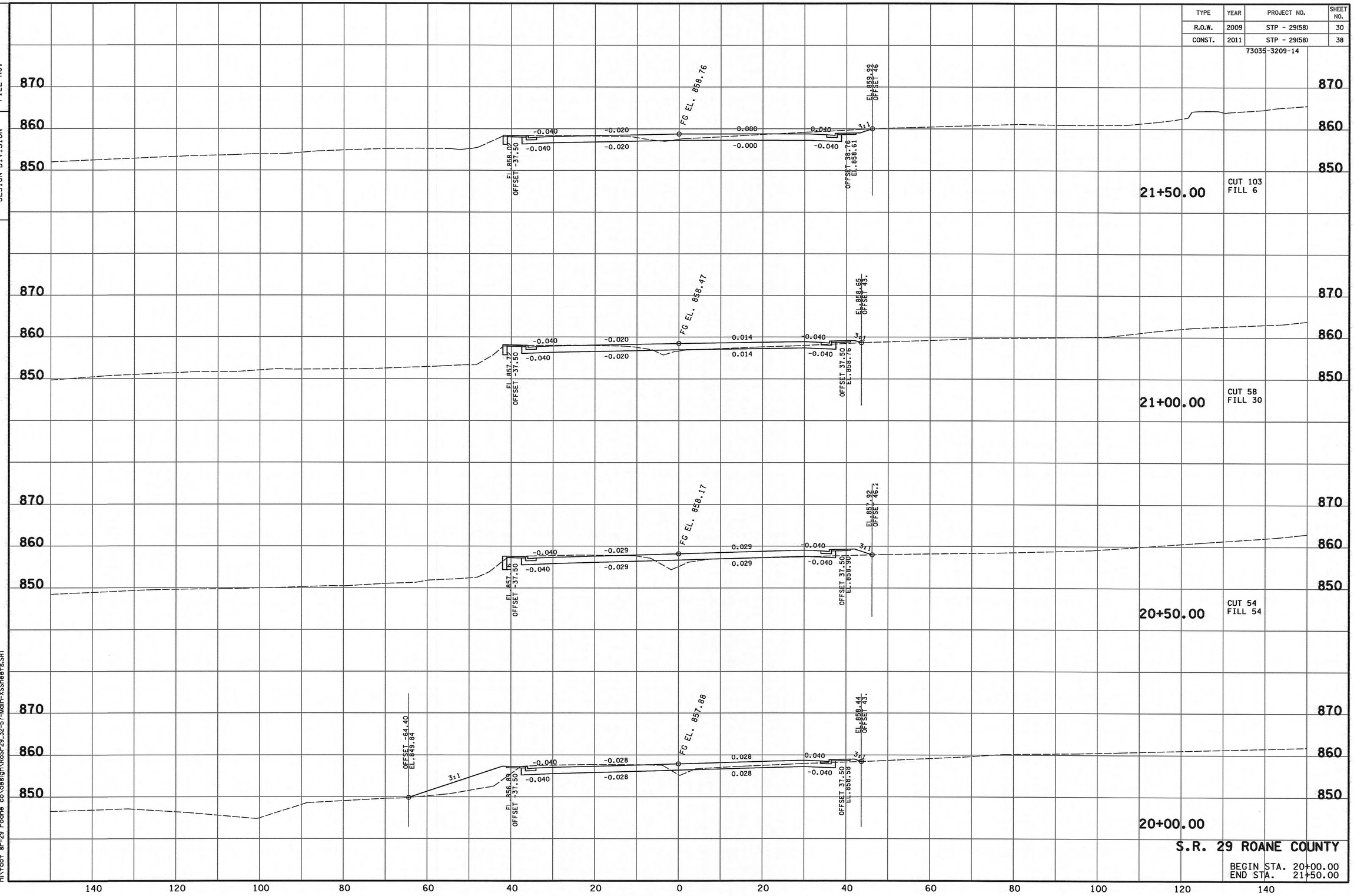

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	39

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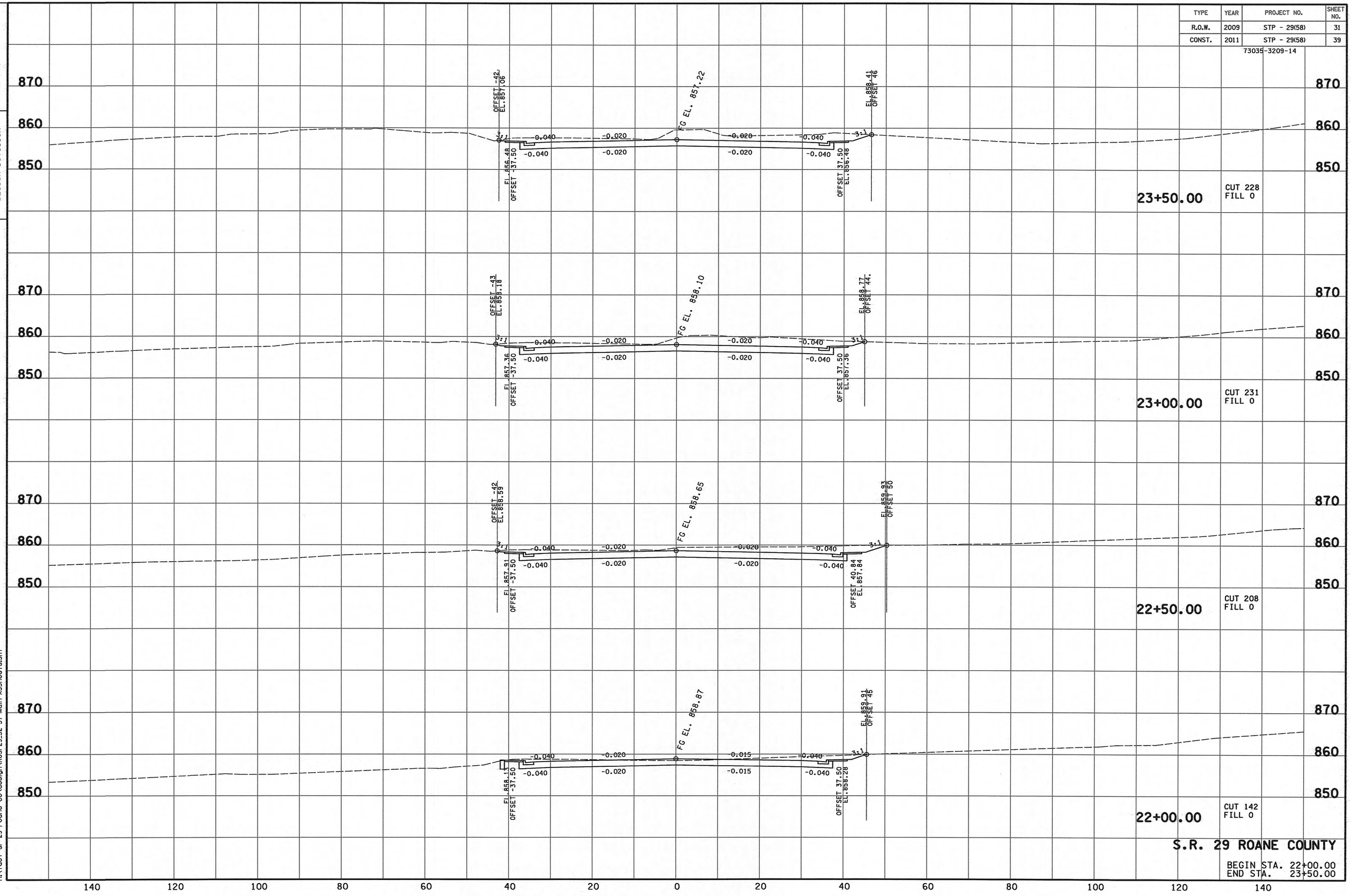

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	40

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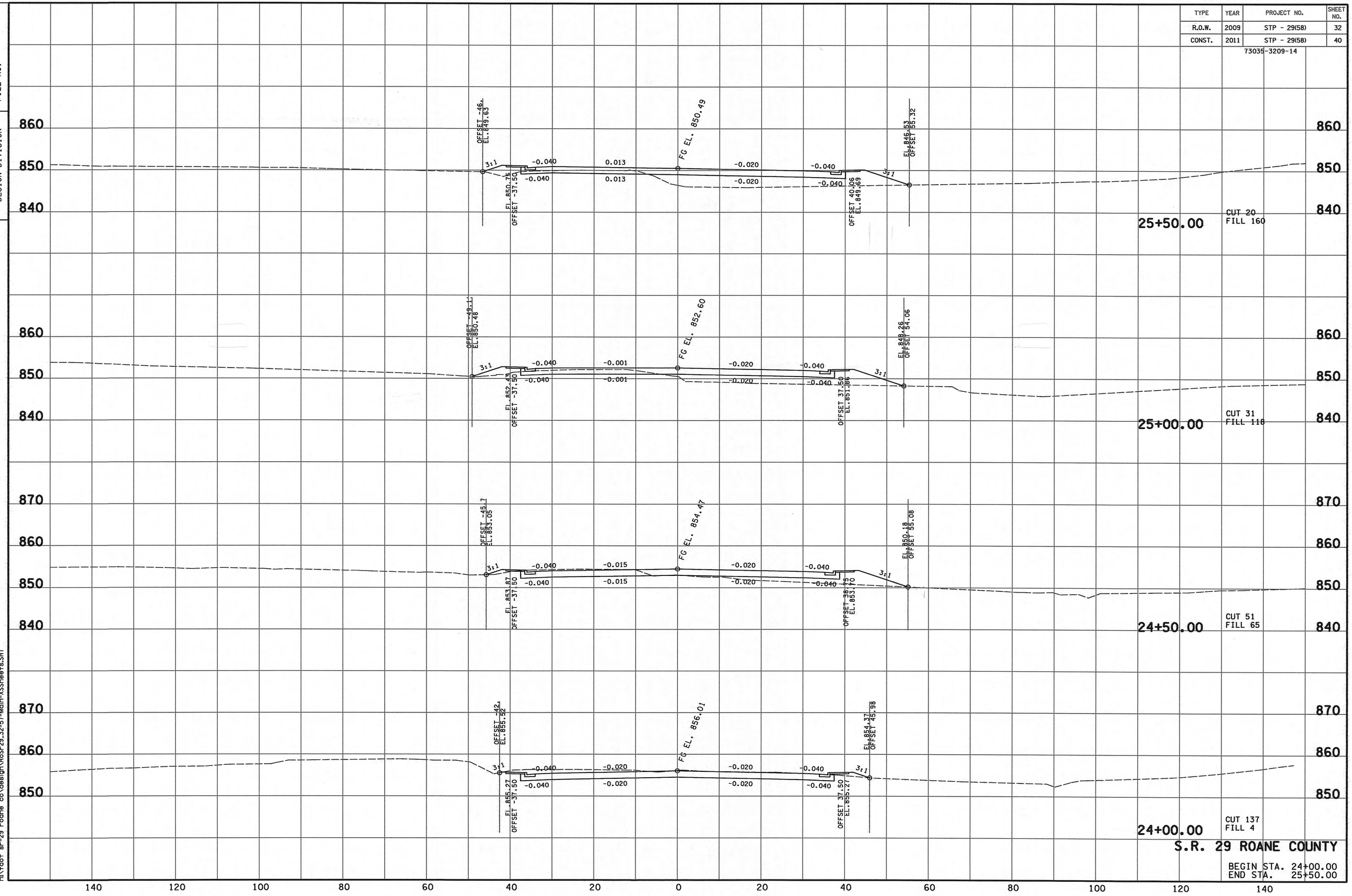

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	41

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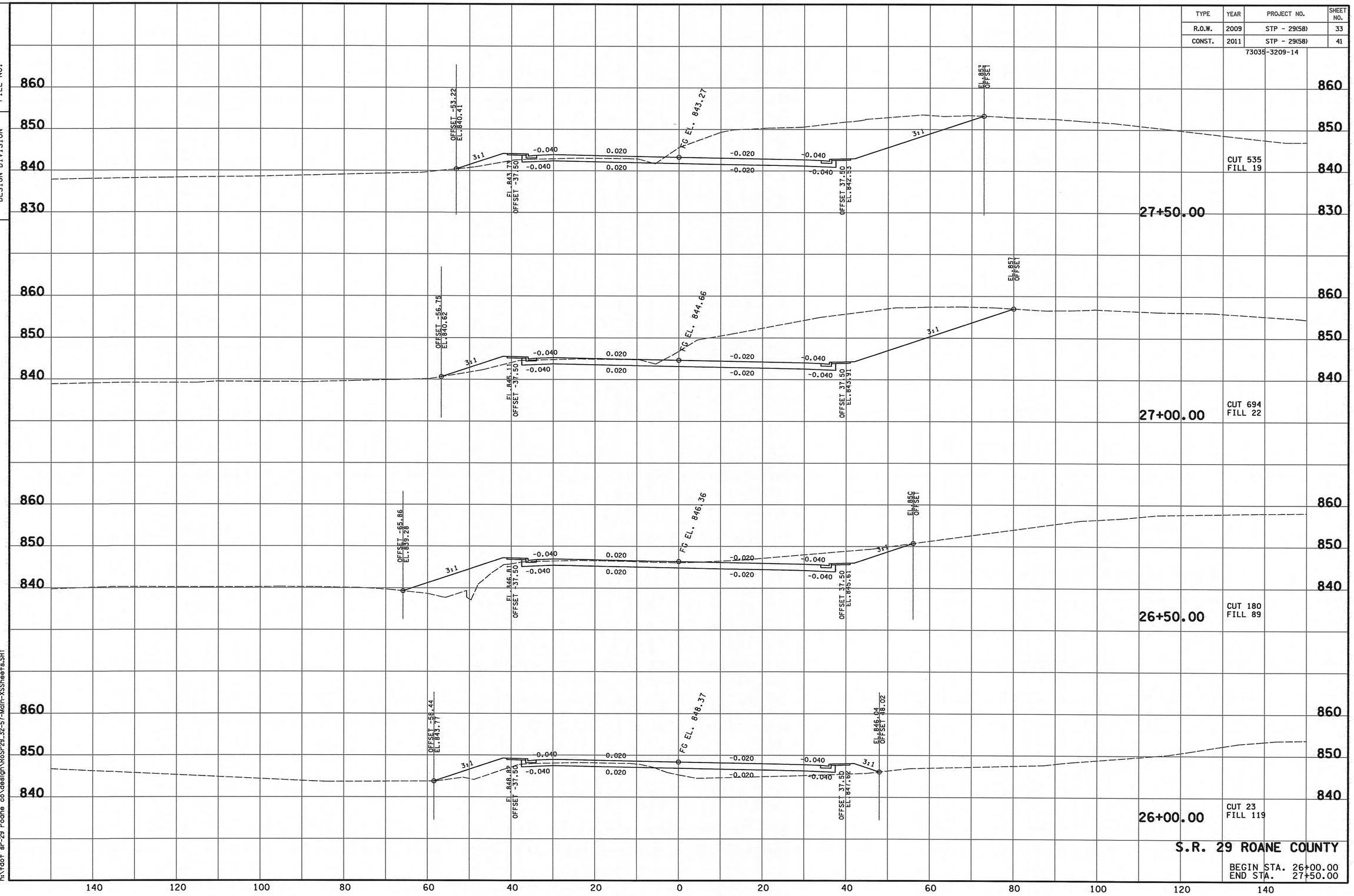

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	34
CONST.	2011	STP - 29(58)	42

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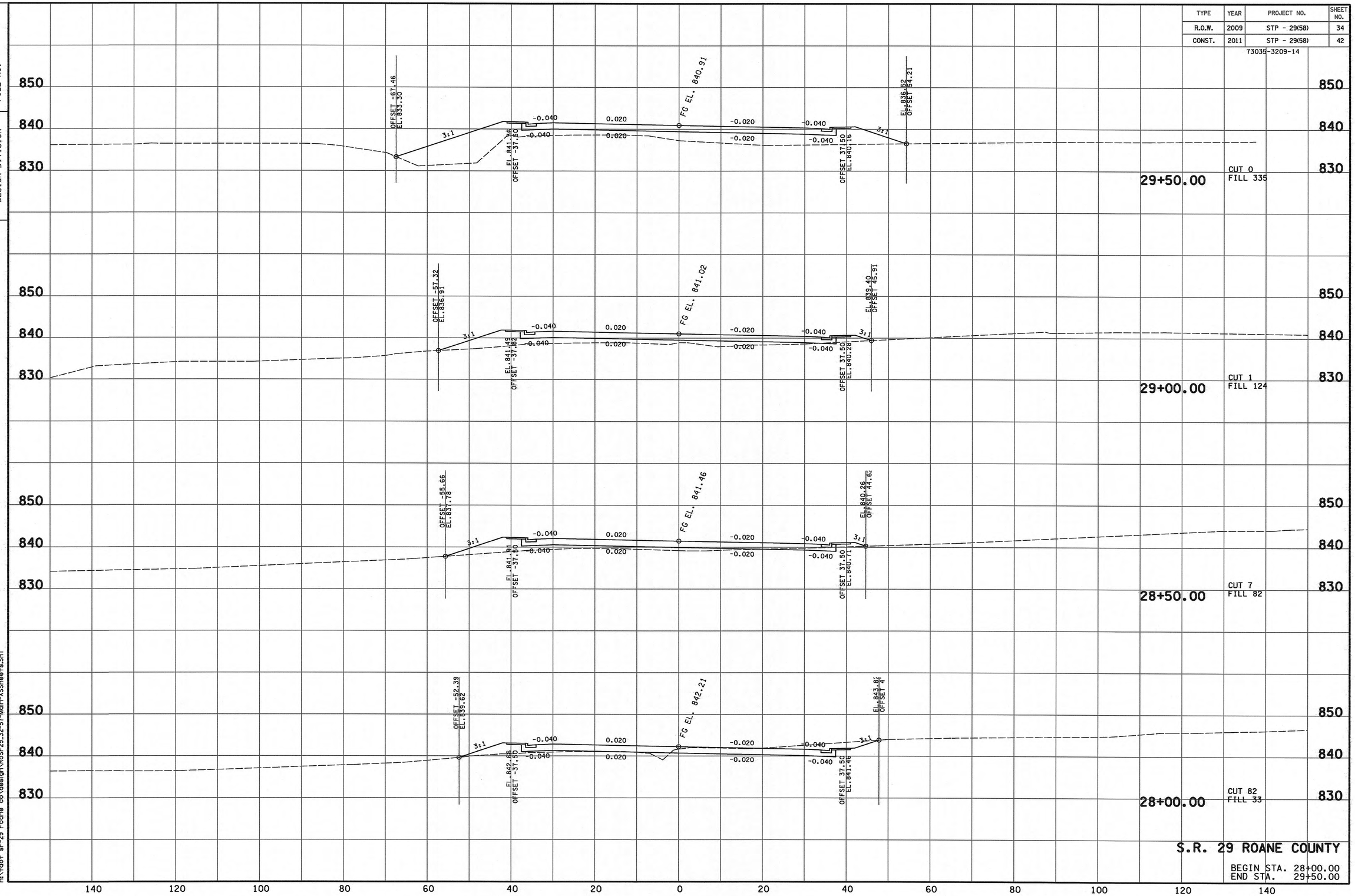

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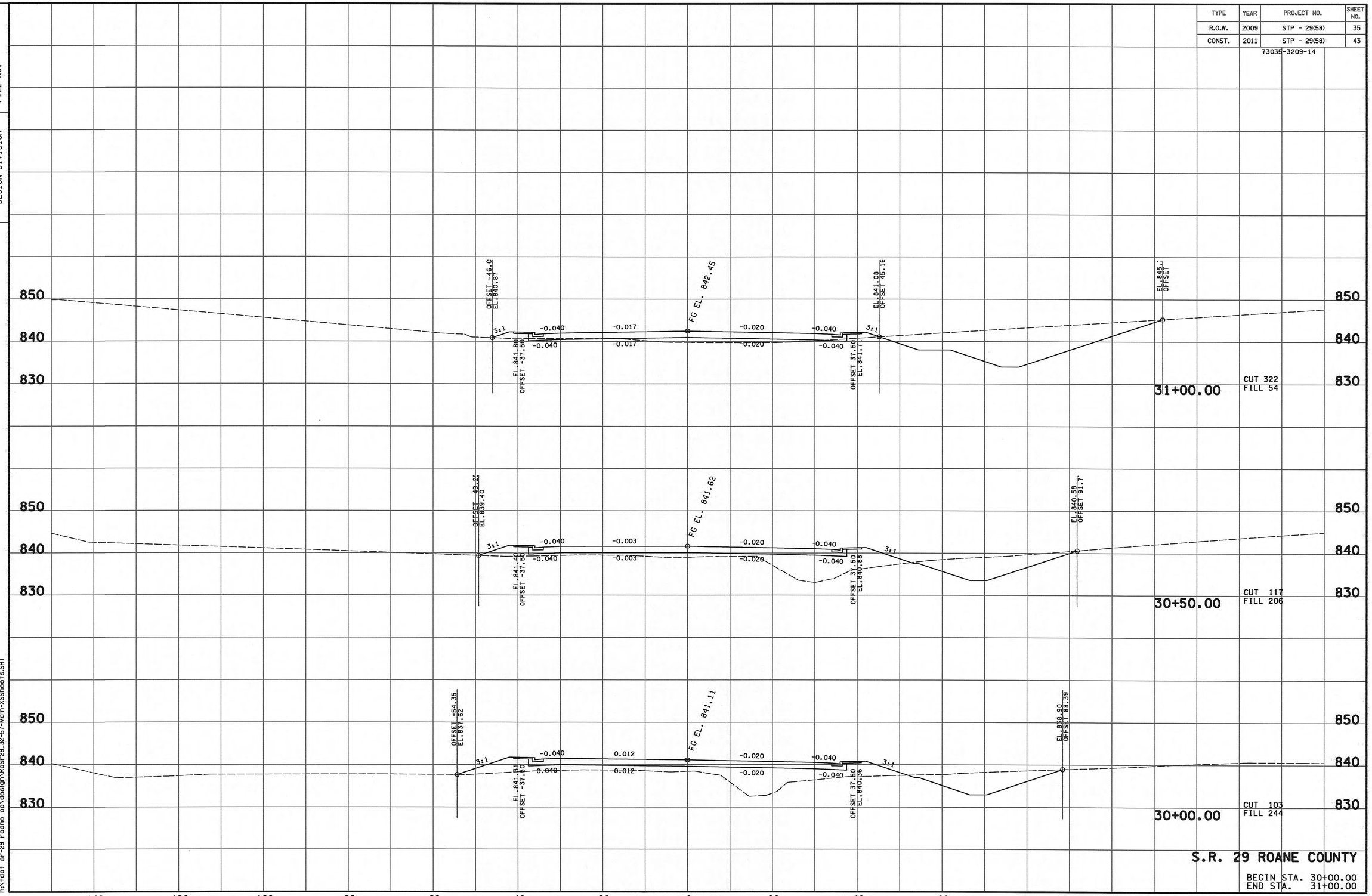
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	35
CONST.	2011	STP - 29(58)	43

73035-3209-14



S.R. 29 ROANE COUNTY

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2D1

ROANE COUNTY 73035-3209-14

FINAL PAVEMENT MARKING IF 4" SPRAY THERMOPLASTIC (60 mil) IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.01, SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" SPRAY THERMOPLASTIC (60 mil) IS USED

(2) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.02, SPRAY THERMO PVMT MRKNG (60 mil) (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" SPRAY THERMOPLASTIC (60 mil) IS USED

(3) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.03, SPRAY THERMO PVMT MRKNG (60 mil) (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 4" SPRAY THERMOPLASTIC (40 mil) IS USED

(4) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.06, SPRAY THERMO PVMT MRKNG (40 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" SPRAY THERMOPLASTIC (40 mil) IS USED

(5) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.07, SPRAY THERMO PVMT MRKNG (40 mil) (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" SPRAY THERMOPLASTIC (40 mil) IS USED

(6) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.08, SPRAY THERMO PVMT MRKNG (40 mil) (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF REFLECTORIZED PAINT IS USED

(7) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M.

(8) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20 PAINTED PAVEMENT MARKING (6IN LINE), L.M.

(9) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8IN BARRIER LINE), L.F

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(10) THE PAVEMENT MARKING ON THE LANE SHIFT FOR CENTERLINES AND EDGELINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), LIN. MI.

(11) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM 712-09.01 REMOVABLE PAVEMENT MARKING LINE, LIN. FT. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

(12) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

RESURFACING

(3) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) ALL PUBLIC SIDE ROADS SHALL BE PAVED ONE PAVER WIDTH THROUGH THE INTERSECTION AS A MINIMUM. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD OR BUSINESS ENTRANCE SHALL BE PROVIDED. SHOULD THE PAVEMENT OF THE INTERSECTING PUBLIC ROAD BE DISTRESSED, THE RESURFACING WIDTH MAY BE INCREASED TO THE NORMAL RIGHT OF WAY LINE.

(5) PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED, IT SHALL BE BASED ON AN ADDITIONAL ONE FOOT OF WIDTH PER ONE INCH DEPTH OF PAVEMENT. IF THE SHOULDER IS NARROW ENOUGH THAT THE SUM OF THE SHOULDER AND THE TRANSITION ARE LESS THAN A PAVER WIDTH, THE TRANSITION SHALL OCCUR WITHIN THE PAVER WIDTH. IF THE SUM OF THE SHOULDER AND THE TRANSITION IS GREATER THAN A PAVER WIDTH (LANE WIDTH), THE TRANSITION SHALL OCCUR OUTSIDE OF THE PAVER WIDTH.

(6) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.

(7) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.

(8) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

RIPRAP

(1) RIPRAP SHALL CONSIST OF FURNISHING AND PLACING EITHER RUBBLE STONES BY HAND OR MACHINED. RUBBLE STONE SHALL MEET THE REQUIREMENTS OF SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE CLEAN (FREE FROM ORGANIC MATTER), DURABLE, ANGULAR WITH FRACTURED FACES, NEARLY RECTANGULAR IN SHAPE WITH A BREADTH OR THICKNESS AT LEAST ONE-THIRD ITS LENGTH.

IF THE CONTRACTOR ELECTS TO USE MACHINED RIPRAP, IT SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS, AND SHALL VARY IN SIZE FROM 3" TO 2'- 3". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN 6". THE THICKNESS OF THE STONE LAYER SHALL BE 3'- 0" (+/-3") AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE. UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES 6" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM 709-05.08 AND QUANTITIES WILL BE BASED ON A THICKNESS OF 3'- 0".

SIGNING

(1) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE DESIGN DIVISION, SIGNING AND MARKING SECTION, TELEPHONE NO. (615)-741-0982. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

(2) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(3) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(4) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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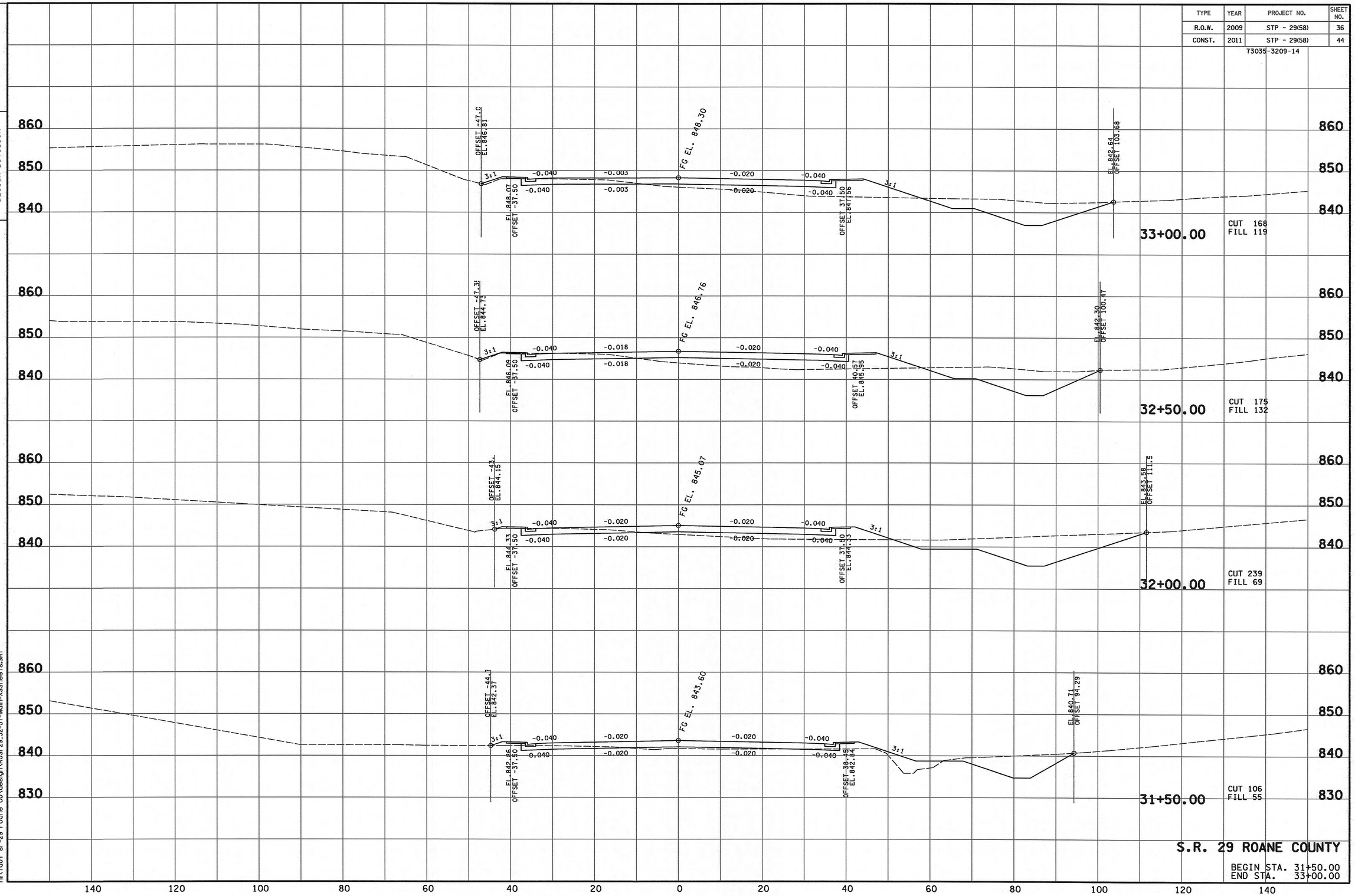
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	36
CONST.	2011	STP - 29(58)	44

73035-3209-14



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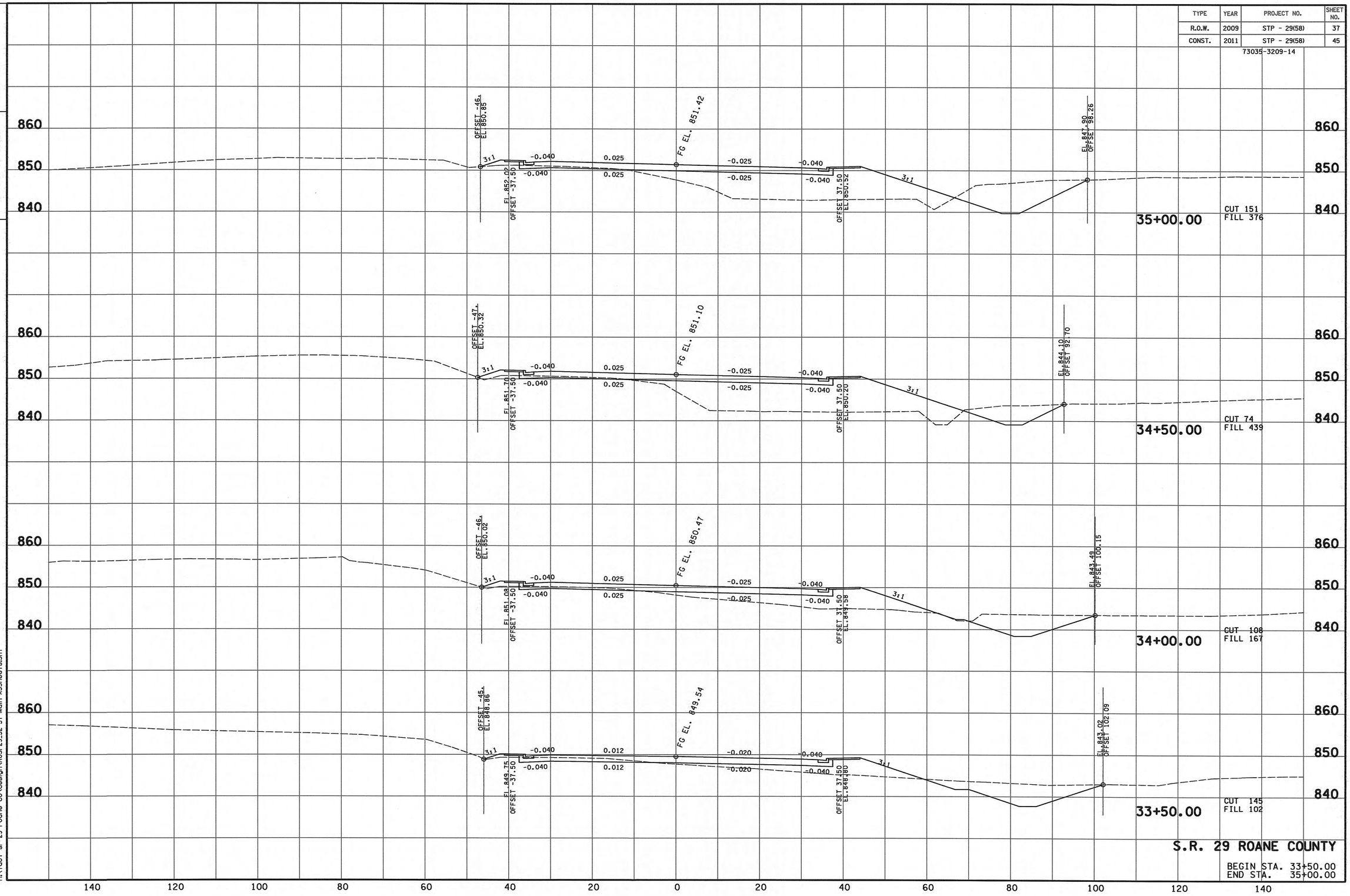
TENNESSEE D.O.T. DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	37
CONST.	2011	STP - 29(58)	45

73035-3209-14



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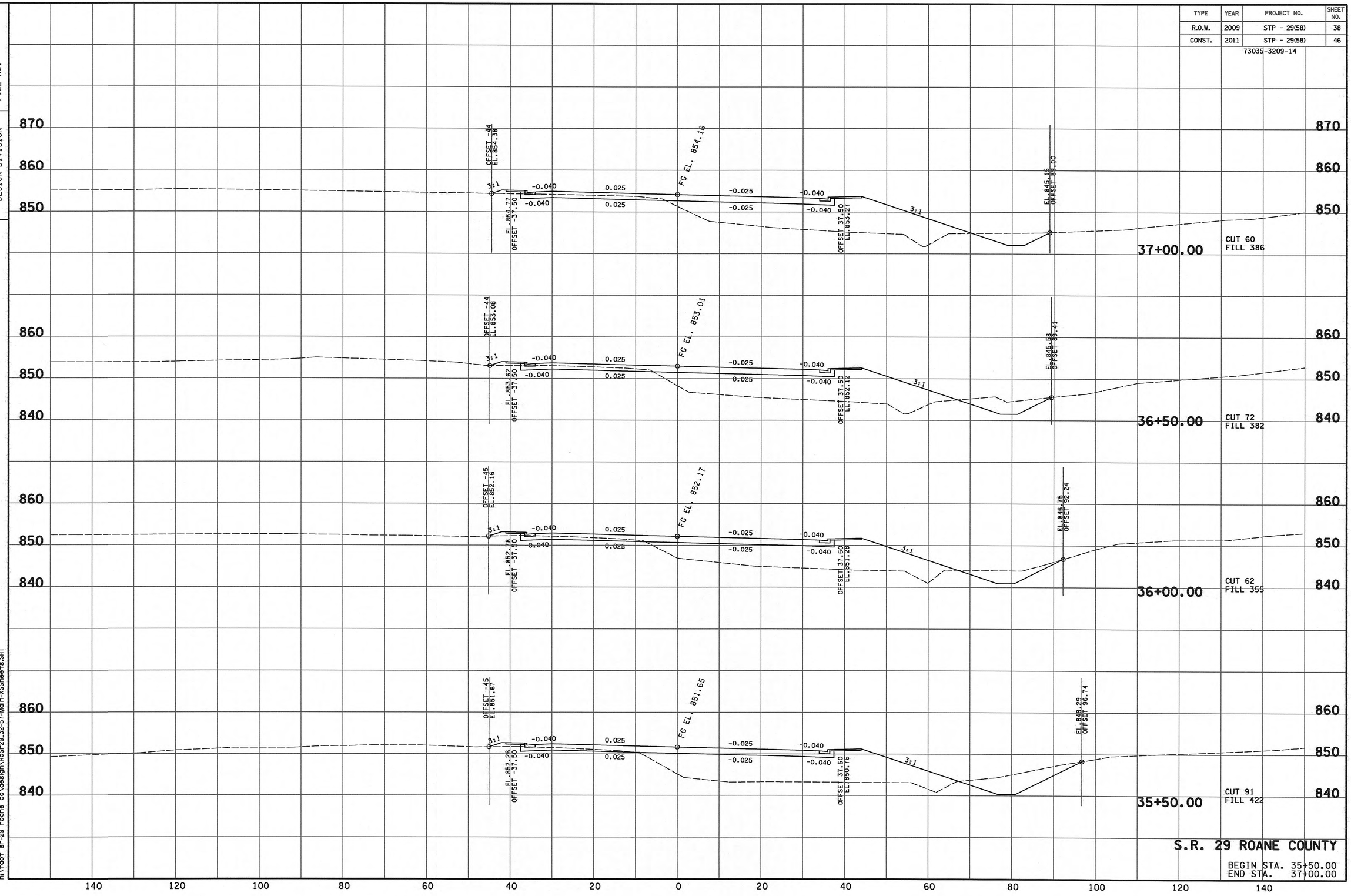
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	38
CONST.	2011	STP - 29(58)	46

73035-3209-14



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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	39
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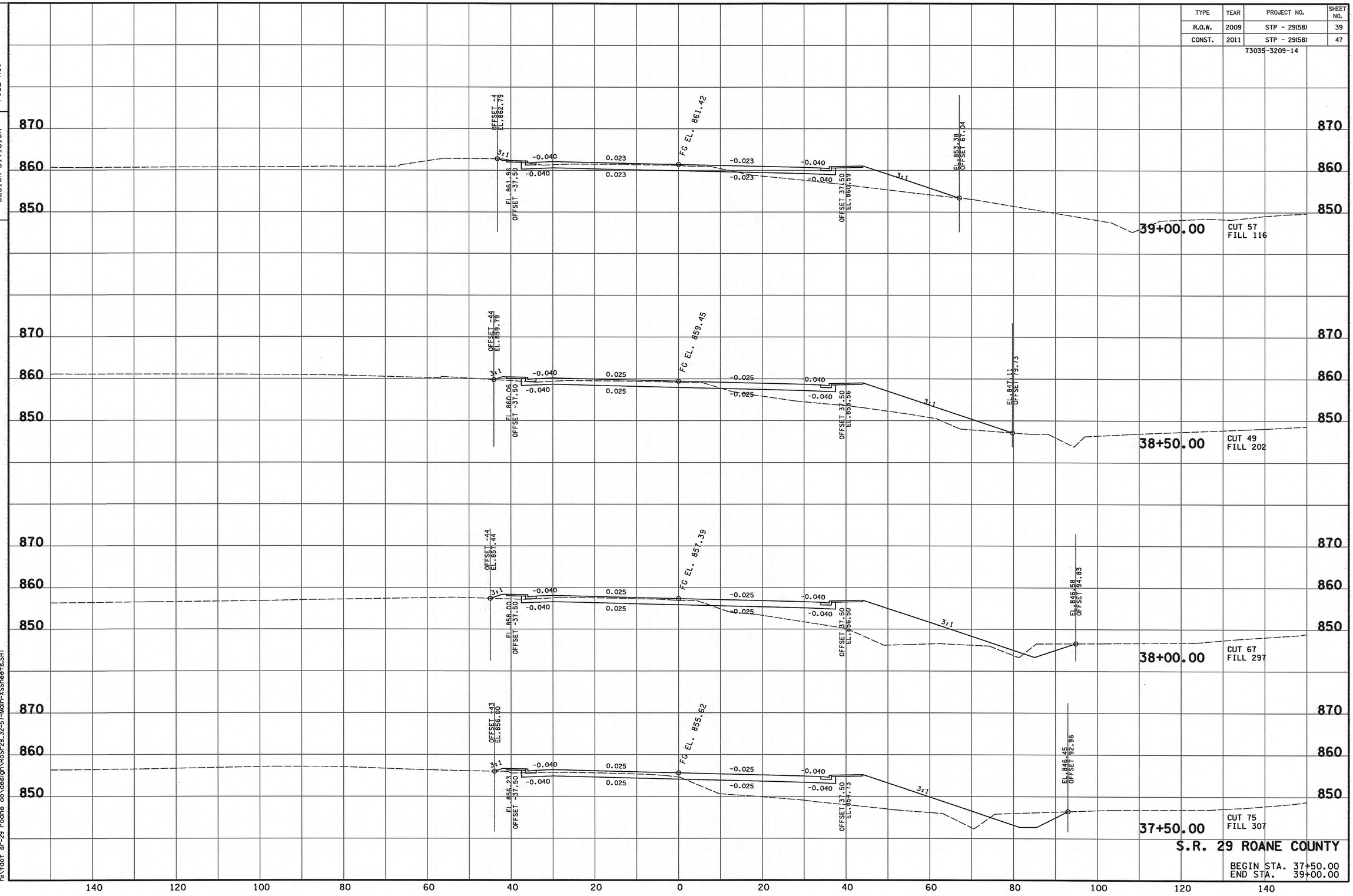

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	40
CONST.	2011	STP - 29(58)	48

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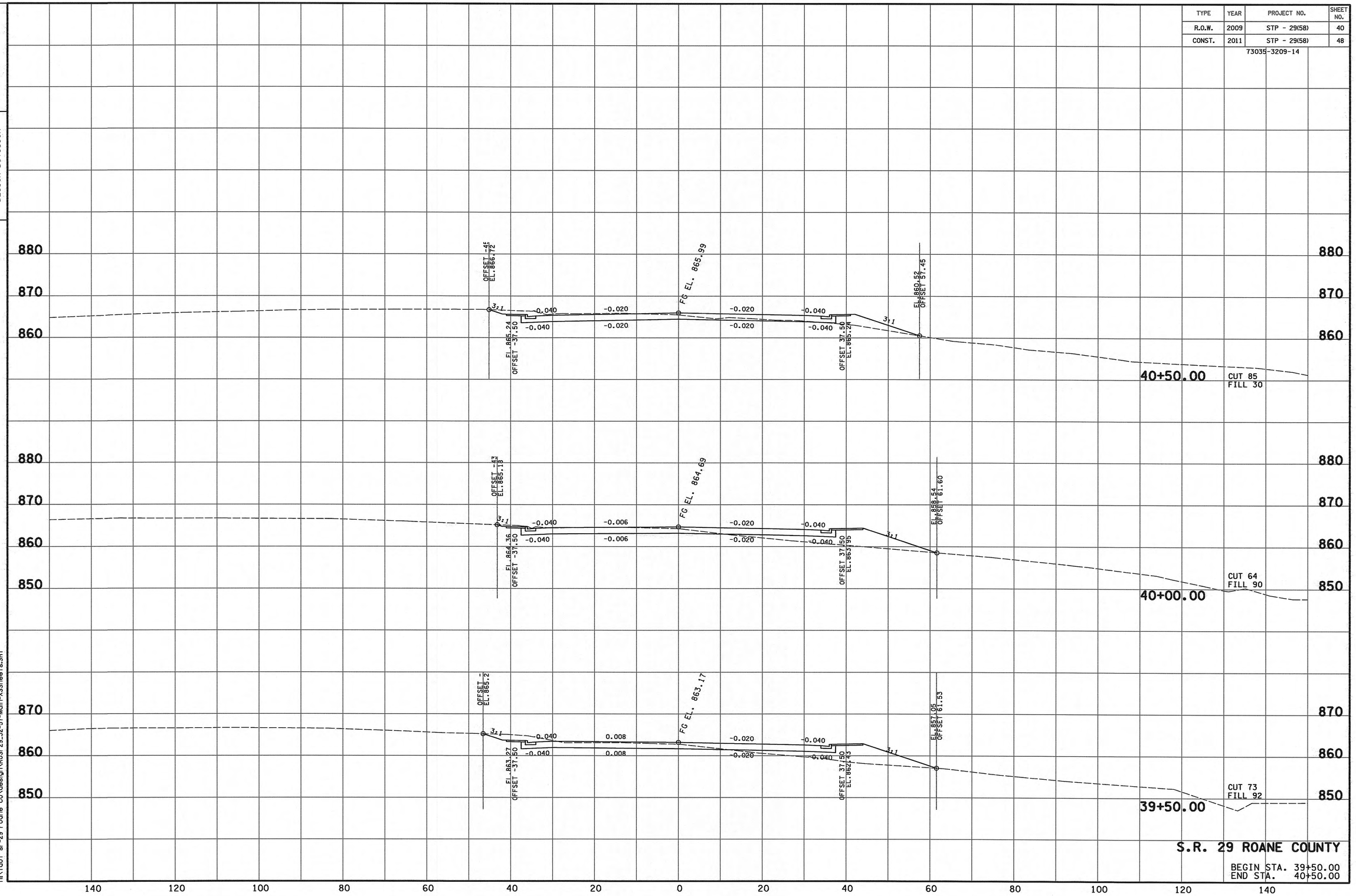

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	49

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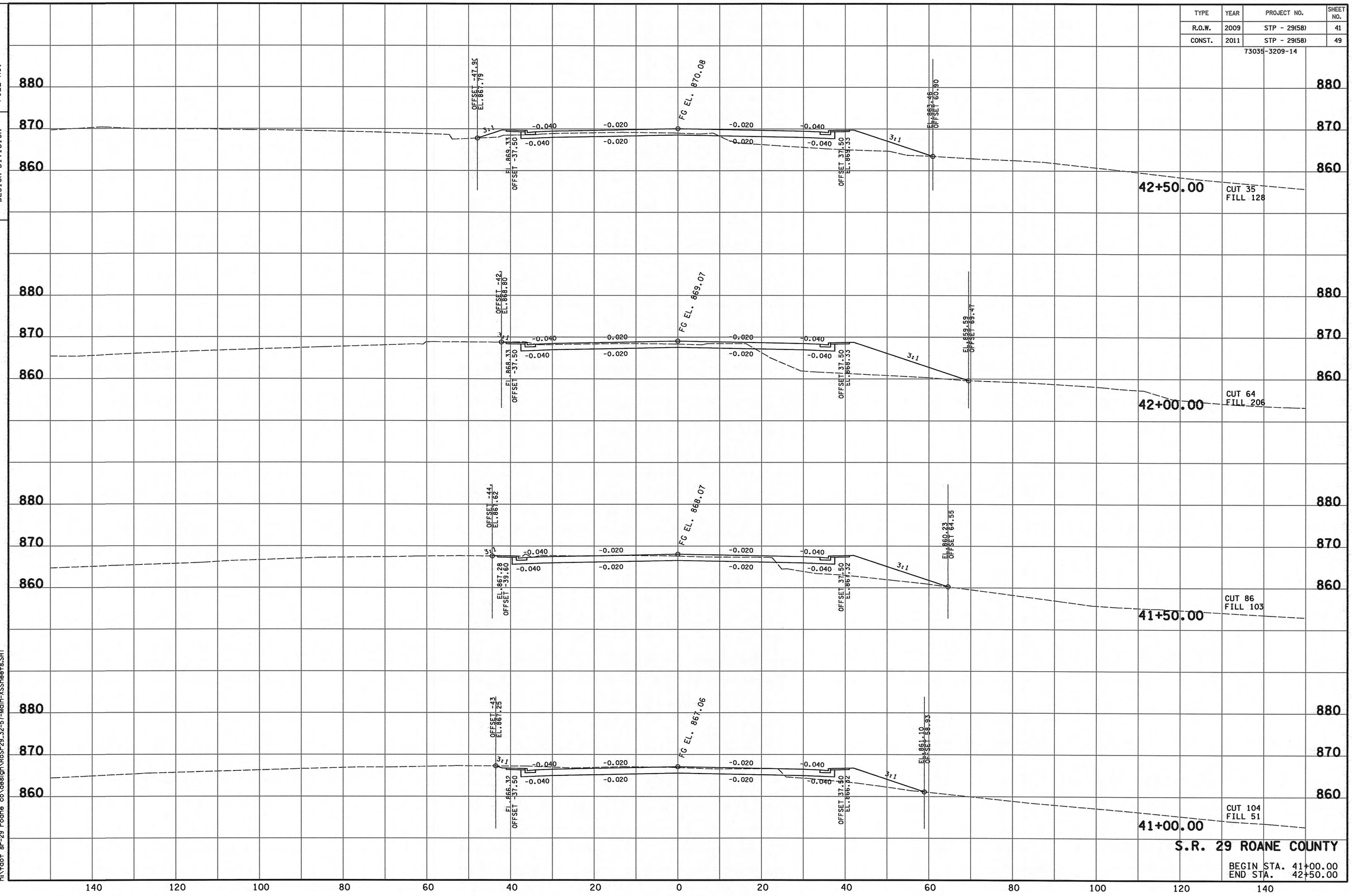

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	50

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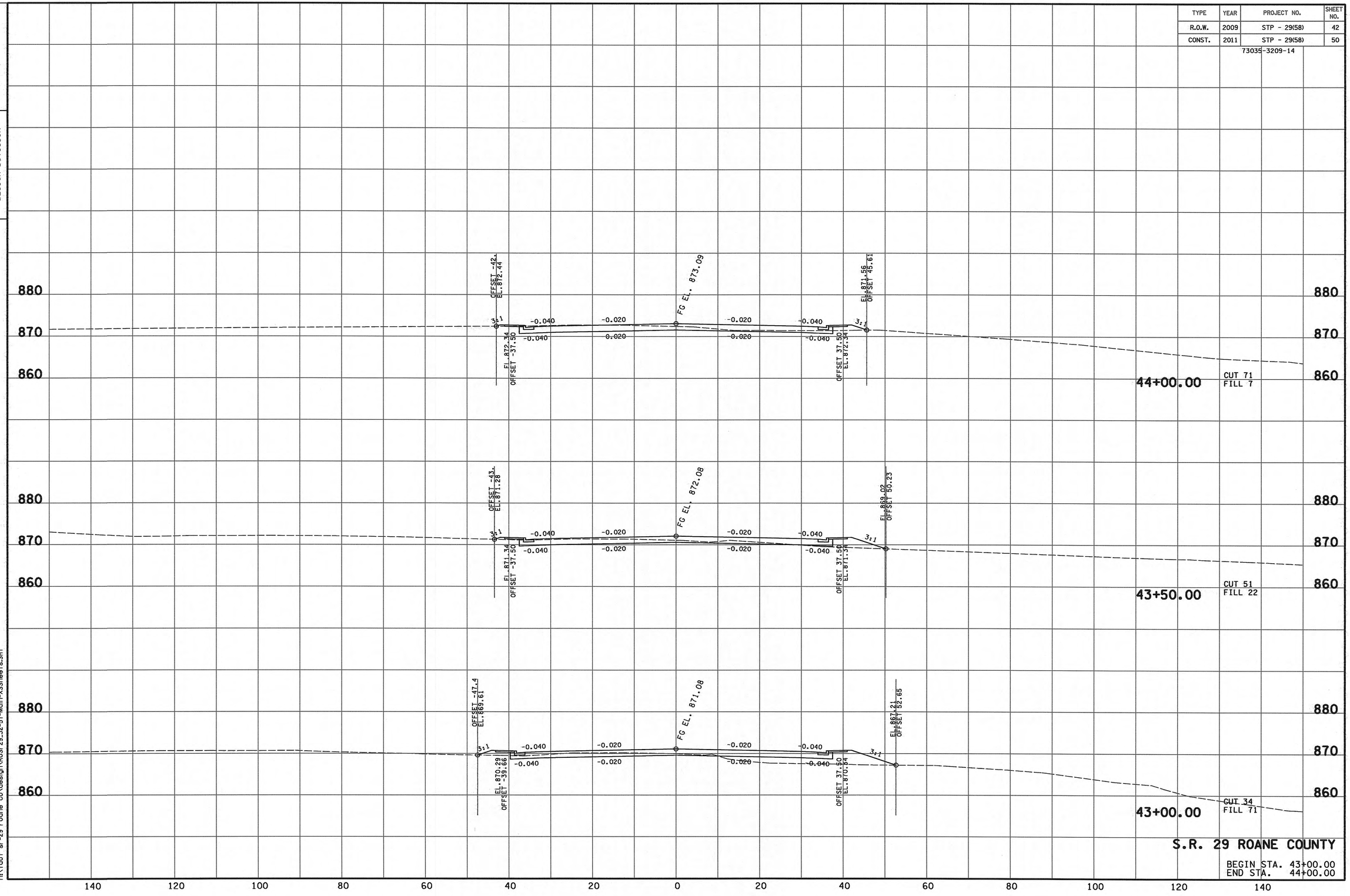

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	43
CONST.	2011	STP - 29(58)	51

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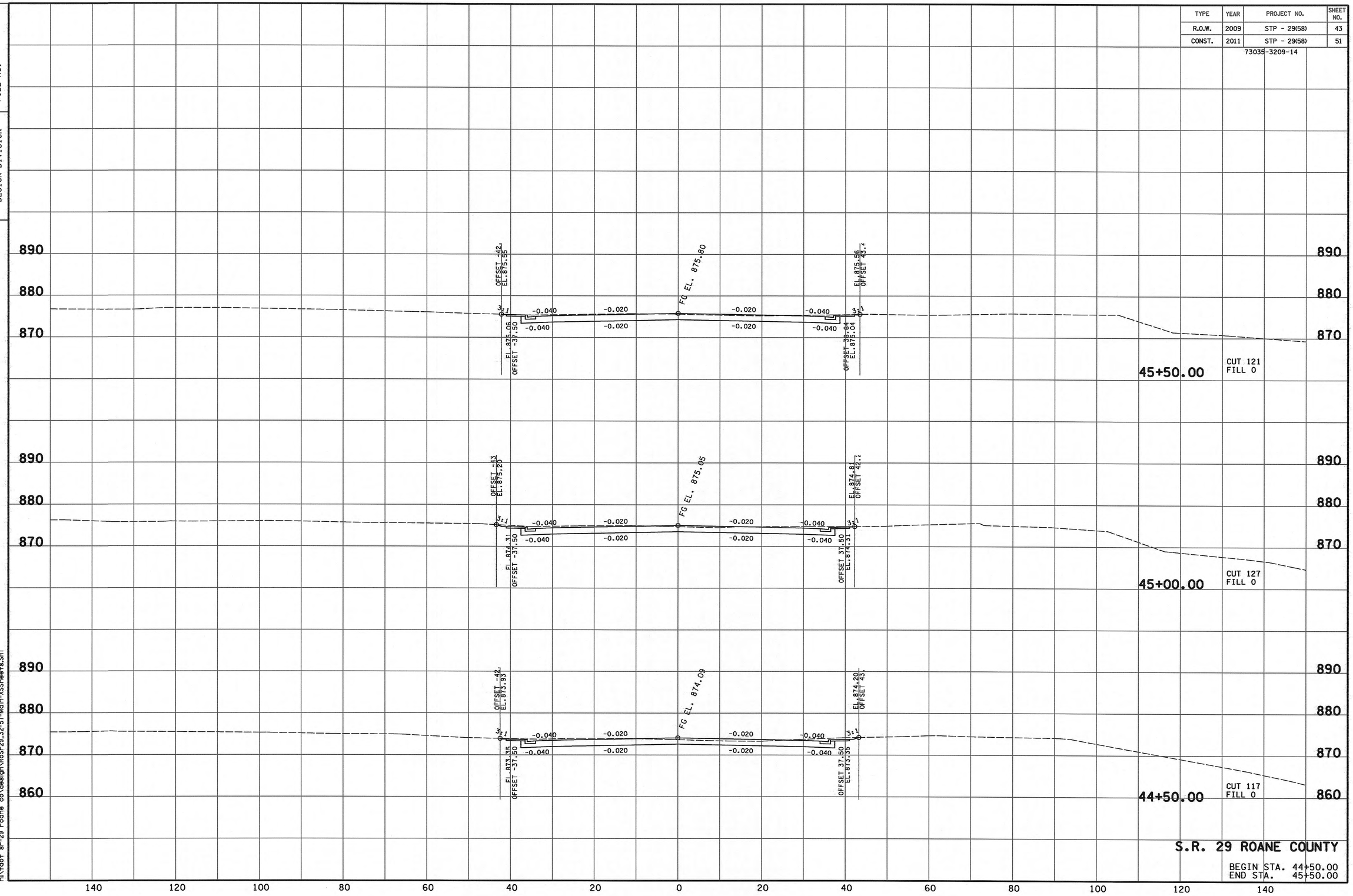

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2011	STP - 29(58)	52

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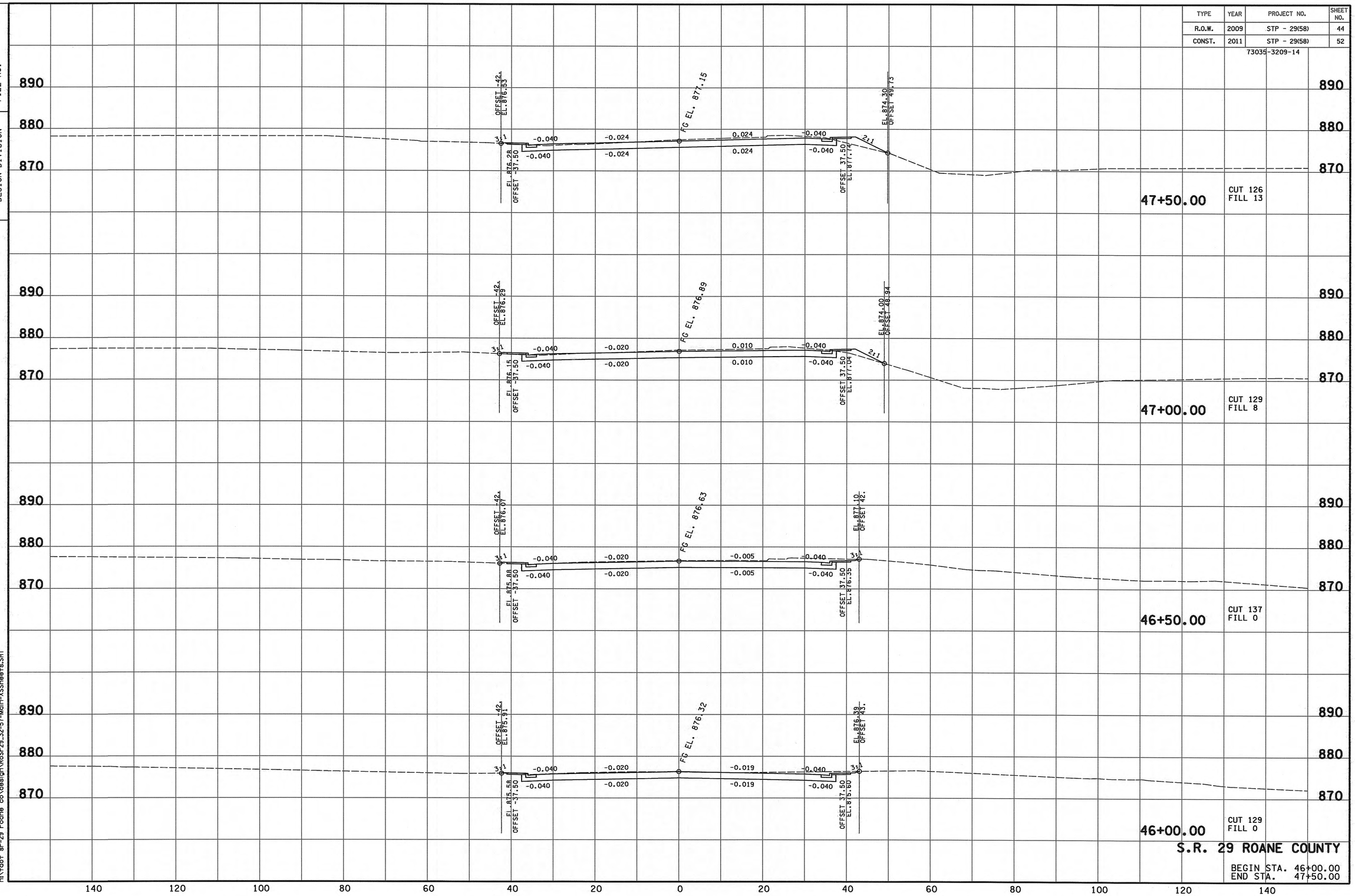

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TENNESSEE D.O.T.
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R.O.W.	2009	STP - 29(58)	45
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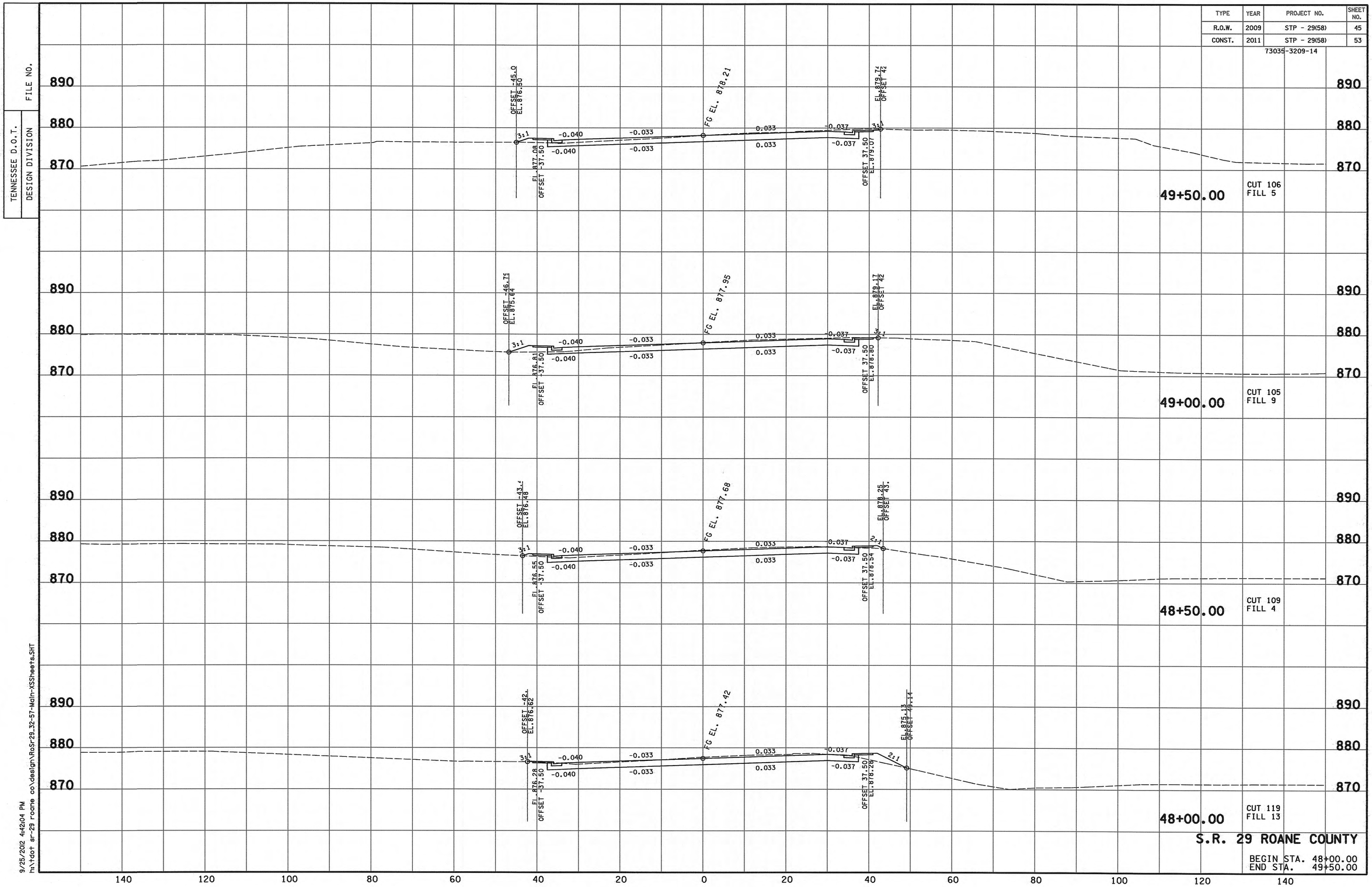

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Index Of Sheets

SEE SHEET NO. 1A FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.	STP - 29(58)	
STATE PROJ. NO.	73035-3209-14	

REV. 01-11-13:
REVISED PROJECT YEAR. THE 2013 DATE APPLIES TO ALL SHEETS IN THE PLANS.

REV. 02-04-14:
REVISED PROJECT YEAR. THE 2014 DATE APPLIES TO ALL SHEETS IN THE PLANS.

ROANE COUNTY

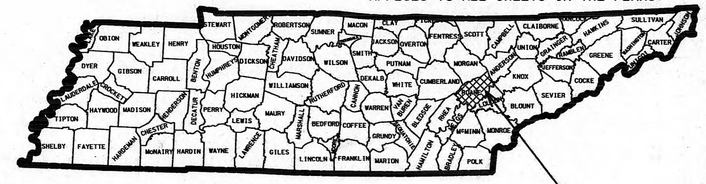
STATE ROUTE 29 (RURITAN ROAD)

FROM PINE RIDGE ROAD
TO STATE ROUTE 61 IN HARRIMAN

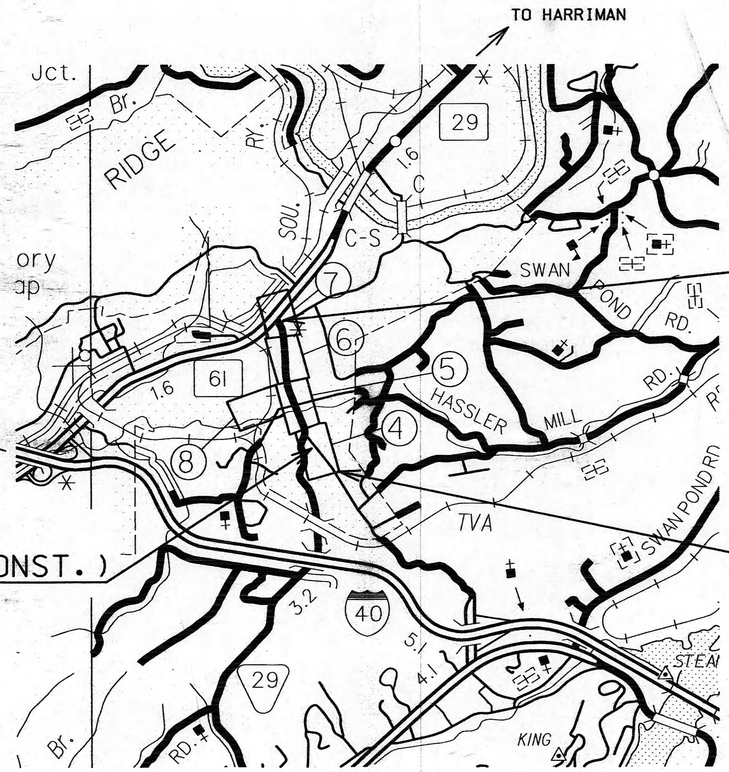
GRADE, DRAIN, PAVE, PAVEMENT MARKINGS, SIGNING

CONSTRUCTION

STATE HIGHWAY NO. 29 F.A.H.S. NO. 29



PROJECT NO. STP-29(58)
ROANE COUNTY



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SCALE: 1"= 2000'

73035-3209-14
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73035-3209-14
END PROJECT NO. STP-29(58) (CONST.)
STA. 56+17.62
N 580981.2381
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NO EQUATIONS
NO EXCLUSIONS

ADJOINING PROJECT
73945-2472-04

SEALED BY
PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
20108959
STATE OF TENNESSEE

RSAR PROJECT - PROJECT OF LIMITED SCOPE

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED. EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 2 ATAUR RAHMAN, P.E.
TDOT ROAD SP. SV. 2
DESIGNED BY CIVIC ENGINEERING & IT, INC.
DESIGNER ADAM CARTER, P.E. CHECKED BY PHILIP NELSON, P.E.
P.E. NO. 73035-3209-54
PIN NO. 103779.00

ROADWAY LENGTH	0.892 MILES
BRIDGE LENGTH	0.000 MILES
*BOX BRIDGE LENGTH	0.002 MILES
CONST. PROJECT LENGTH	0.892 MILES

*NOT INCLUDED IN ROADWAY LENGTH

TRAFFIC DATA	
ADT (2012)	11,370
ADT (2032)	15,930
DHV (2032)	1,593
D	55-45
T (ADT)	3 %
T (DHV)	2 %
V	45 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

Survey & Data Division

2/11/2014 10:39:56 AM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	202
ROANE COUNTY		73035-3209-14	

SIGNING (CONTINUED)

(1) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

(2) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

TRAFFIC CONTROL DIRECTIONAL SIGNING

(1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(2) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. 712-01, L.S., AS DIRECTED BY THE ENGINEER.

(3) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR

SIGNALIZATION

(1) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.

(2) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730C-TRAFFIC SIGNALS."

(3) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730K-TRAFFIC SIGNALS."

(4) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730M-TRAFFIC SIGNALS."

(5) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730N-TRAFFIC SIGNALS."

(6) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE (CITY OR COUNTY) AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE (CITY OR COUNTY).

(7) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.

(8) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.

(9) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.

(10) LOOPS SHALL BE INSTALLED IN THE LEVELING COURSE IF A LEVELING COURSE IS PROVIDED.

(11) LOOP REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

(3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF A OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE.. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

EROSION PREVENTION AND SEDIMENT CONTROL

SPECIAL NOTES

(1) EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES (SEE SHEET NO. 26)

DISTURBED AREA

(2) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

(3) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

(4) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

(5) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

(6) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

(7) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

SEDIMENT CONTROL

(8) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

(9) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.

(10) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

(11) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.

(12) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

(13) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

(14) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

(15) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

(16) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(17) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.

SEALED BY

PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 00108859
STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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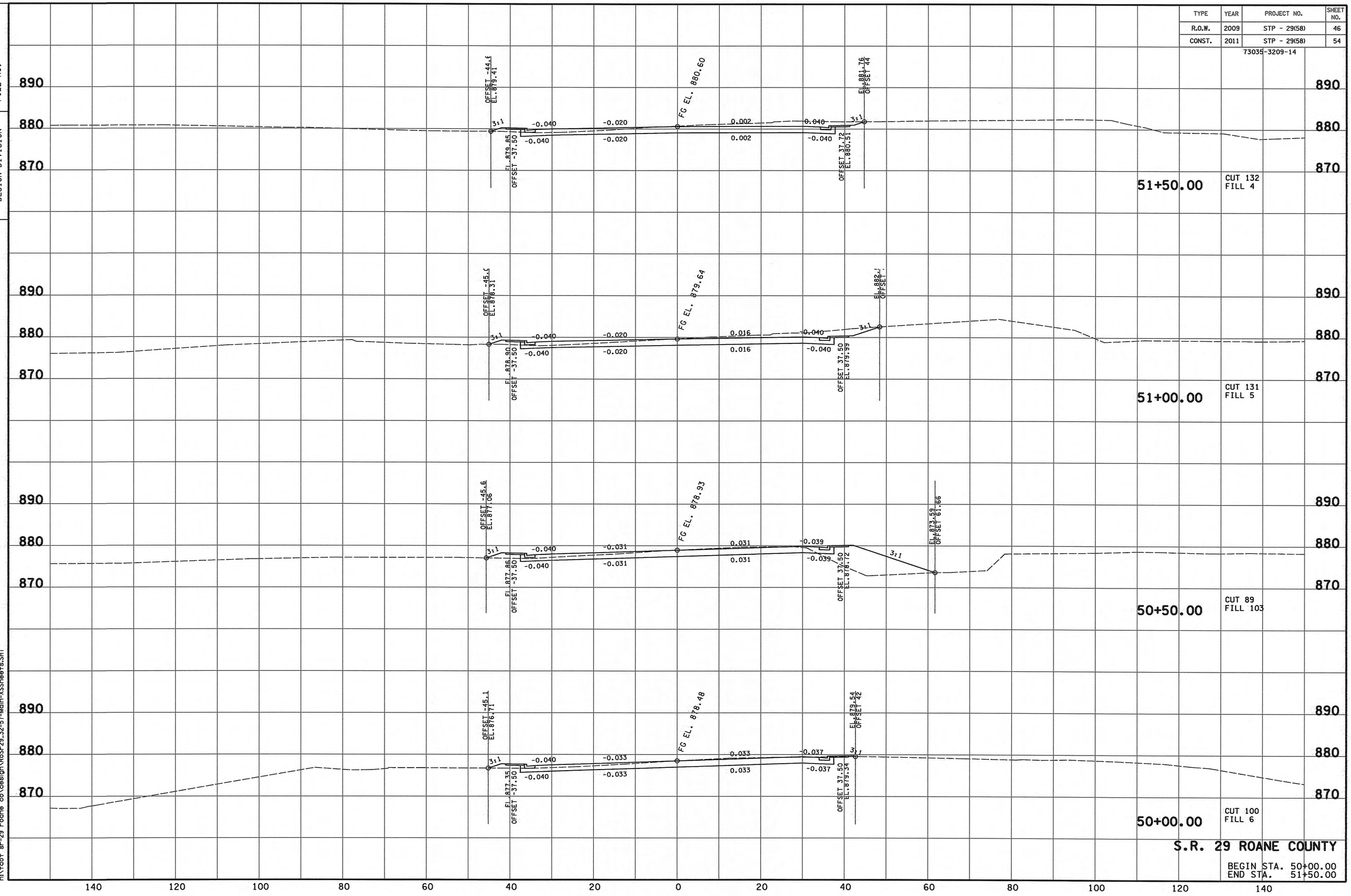
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	46
CONST.	2011	STP - 29(58)	54

73035-3209-14



S.R. 29 ROANE COUNTY

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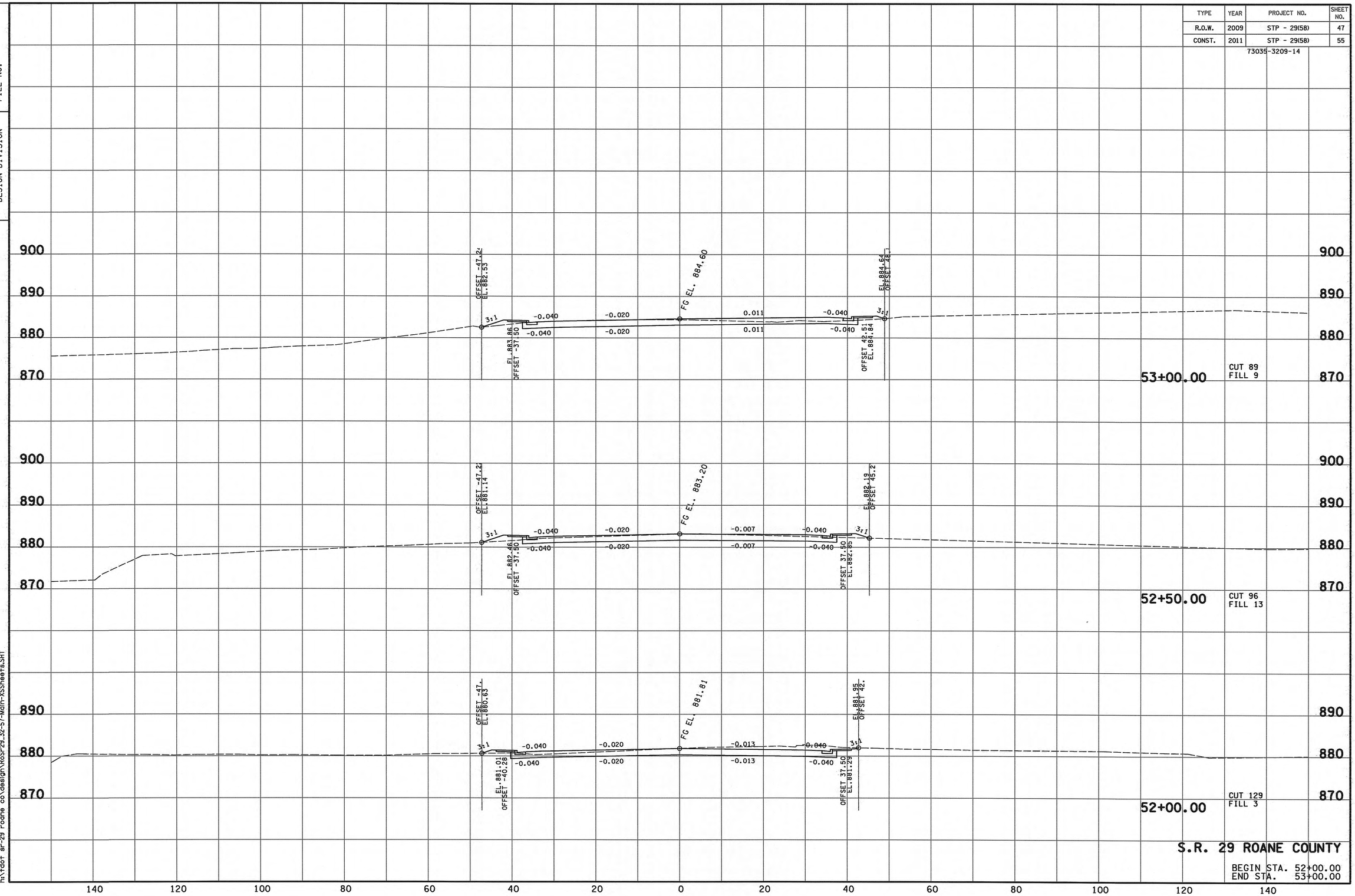
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	47
CONST.	2011	STP - 29(58)	55

73035-3209-14



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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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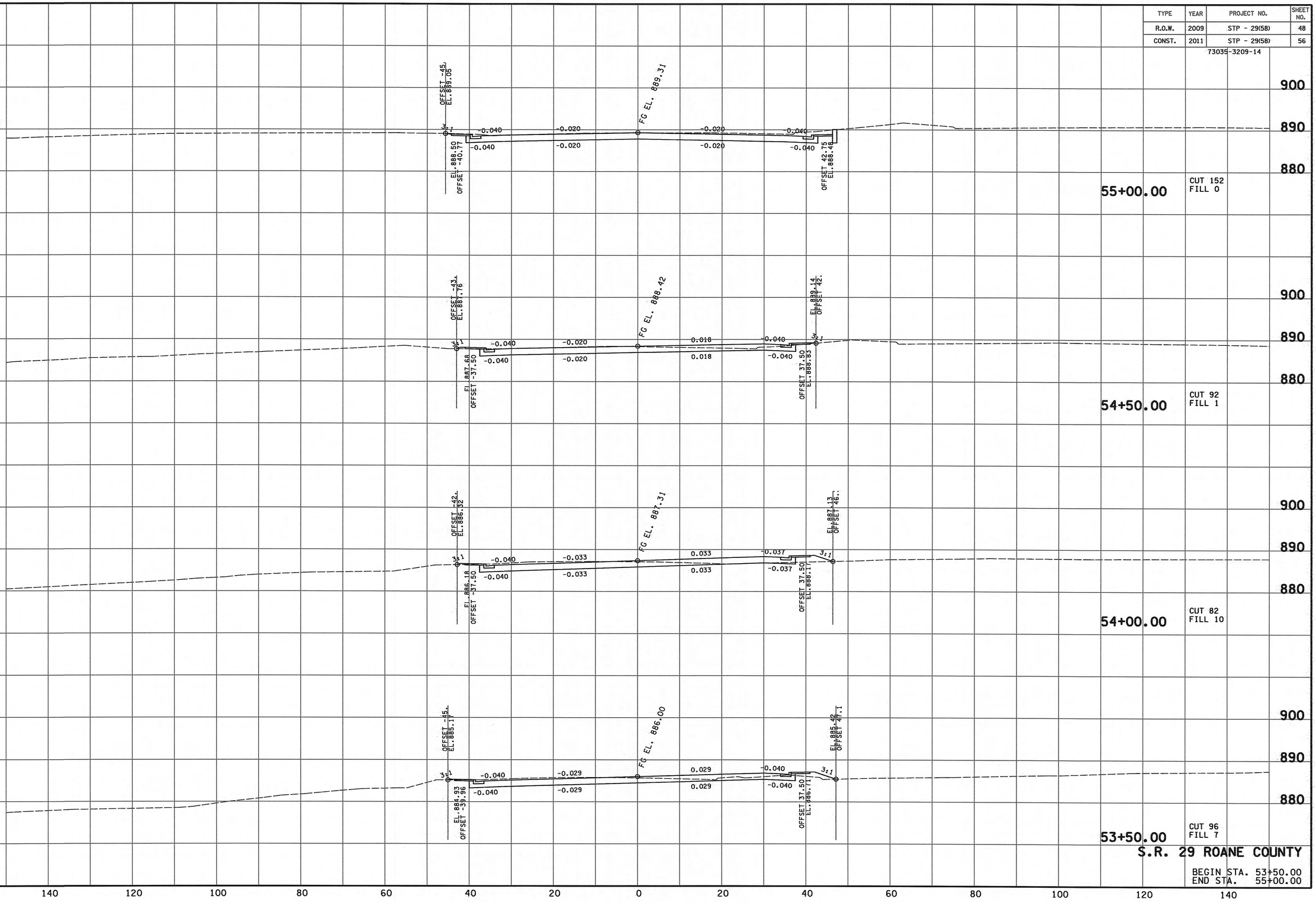
CONST.	2011	STP - 29(58)	56

73035-3209-14



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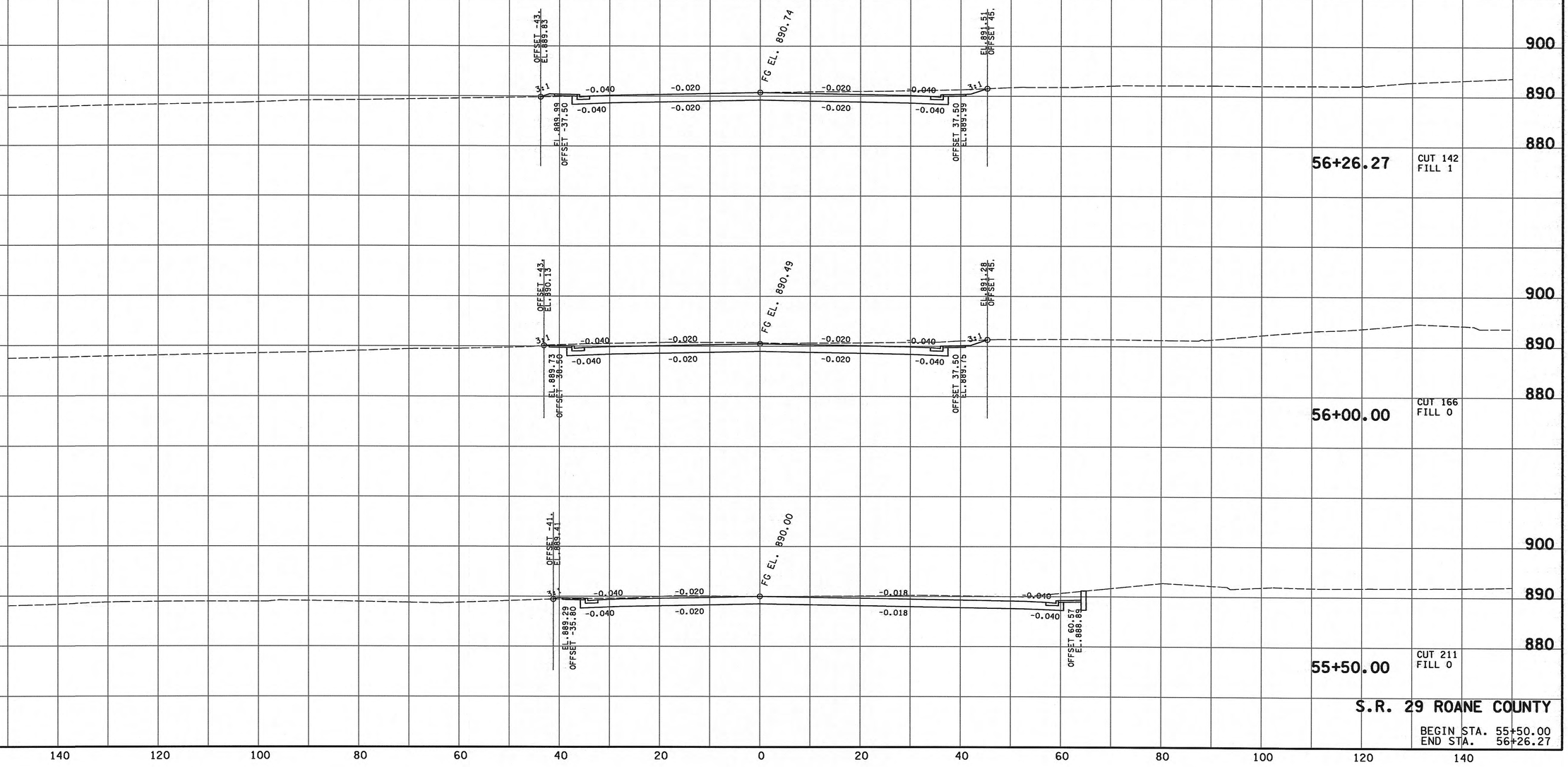
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	49
CONST.	2011	STP - 29(58)	57

73035-3209-14



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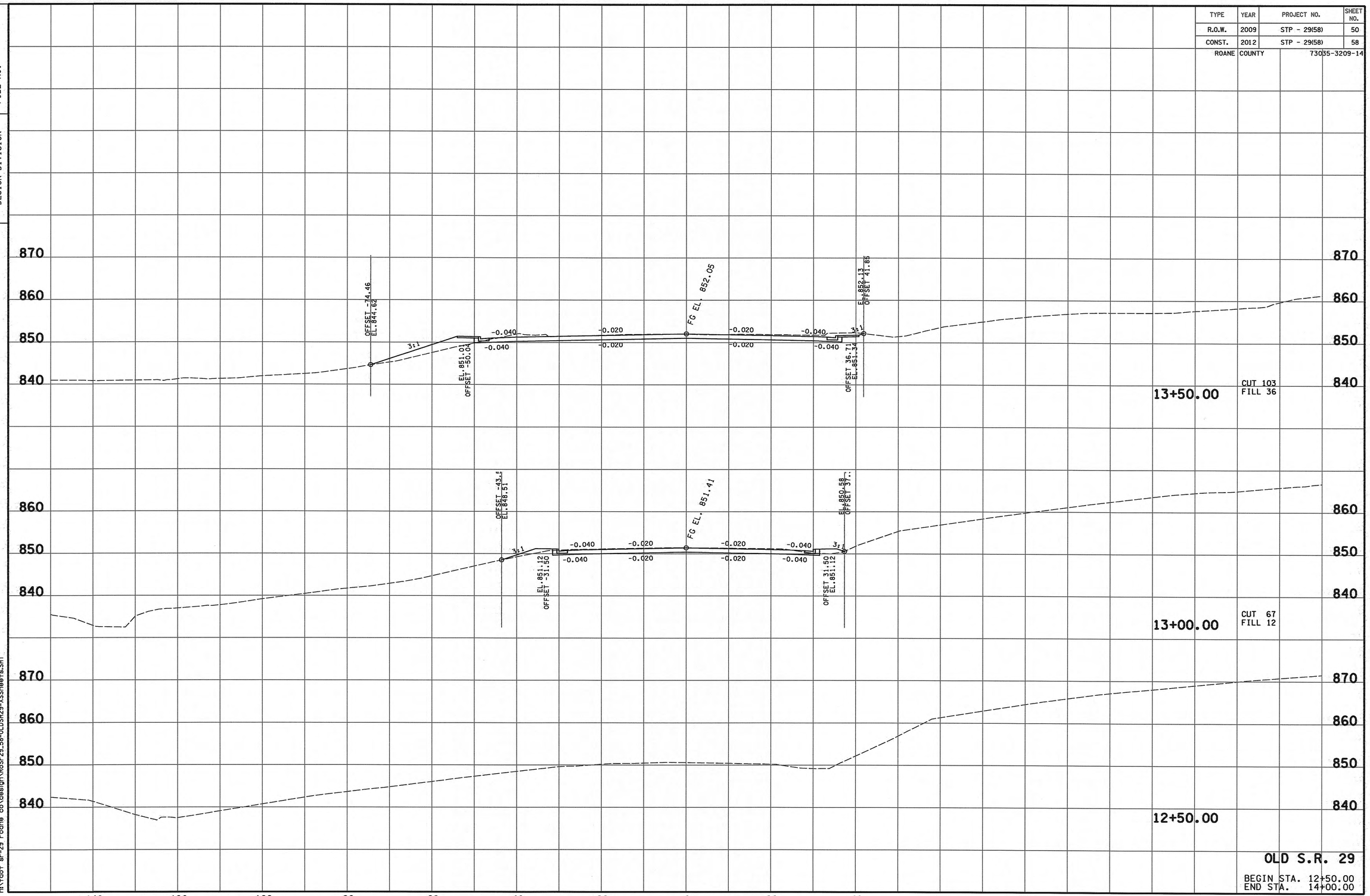
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	50
CONST.	2012	STP - 29(58)	58

ROANE COUNTY 73035-3209-14



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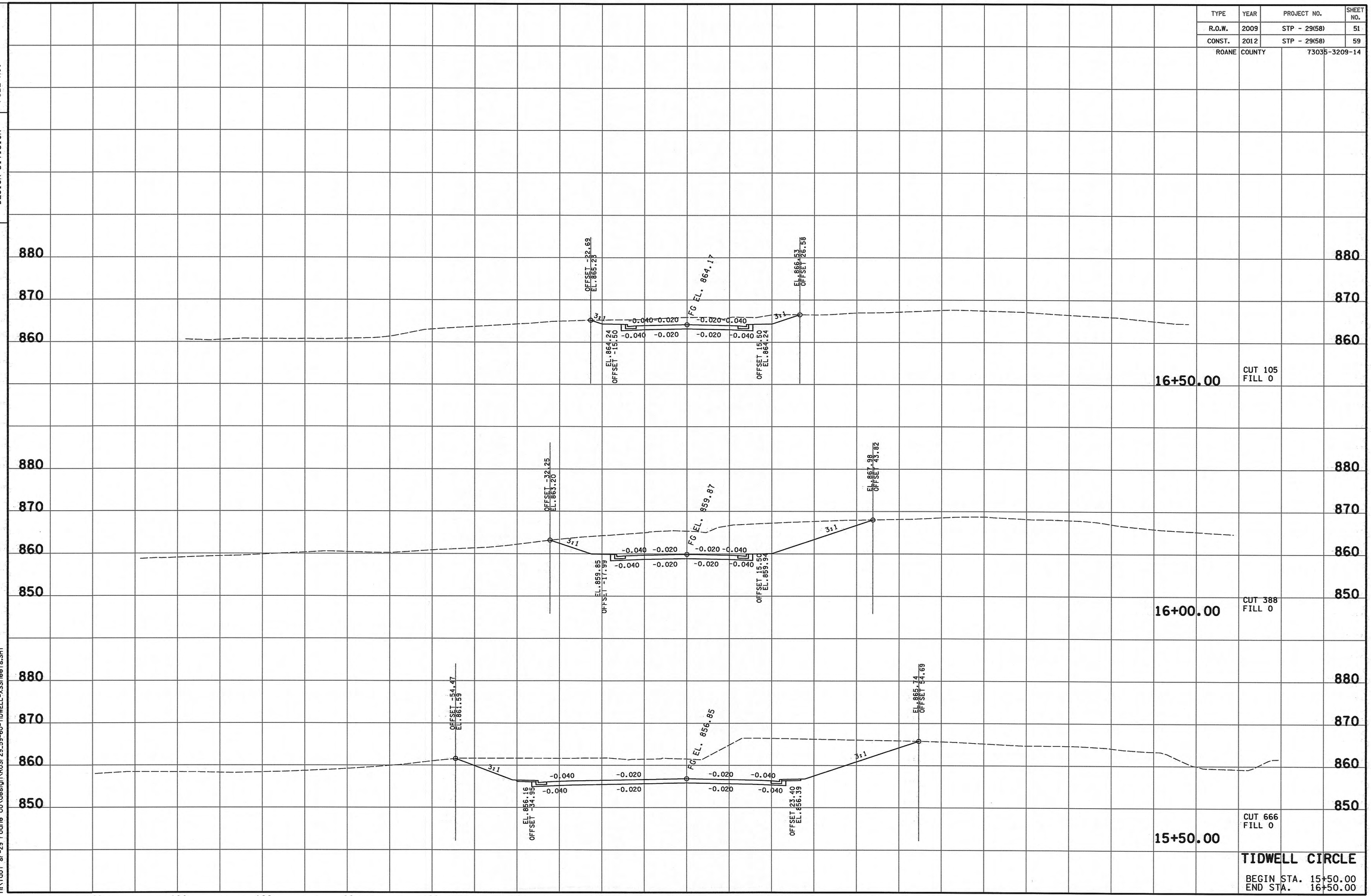
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	51
CONST.	2012	STP - 29(58)	59

ROANE COUNTY 73035-3209-14



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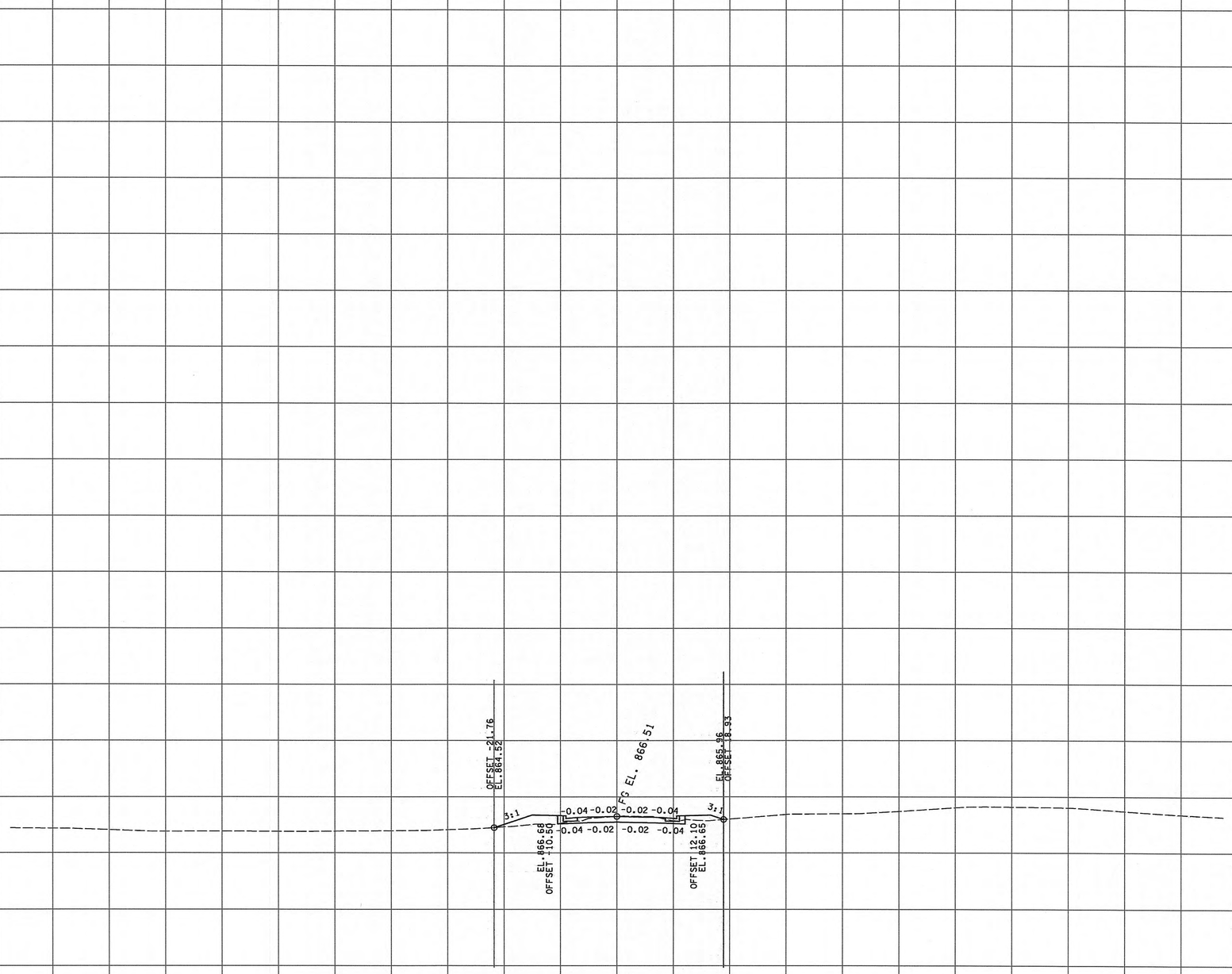
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	52
CONST.	2012	STP - 29(58)	60
ROANE COUNTY		73035-3209-14	



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CUT 17
FILL 18

TIDWELL CIRCLE

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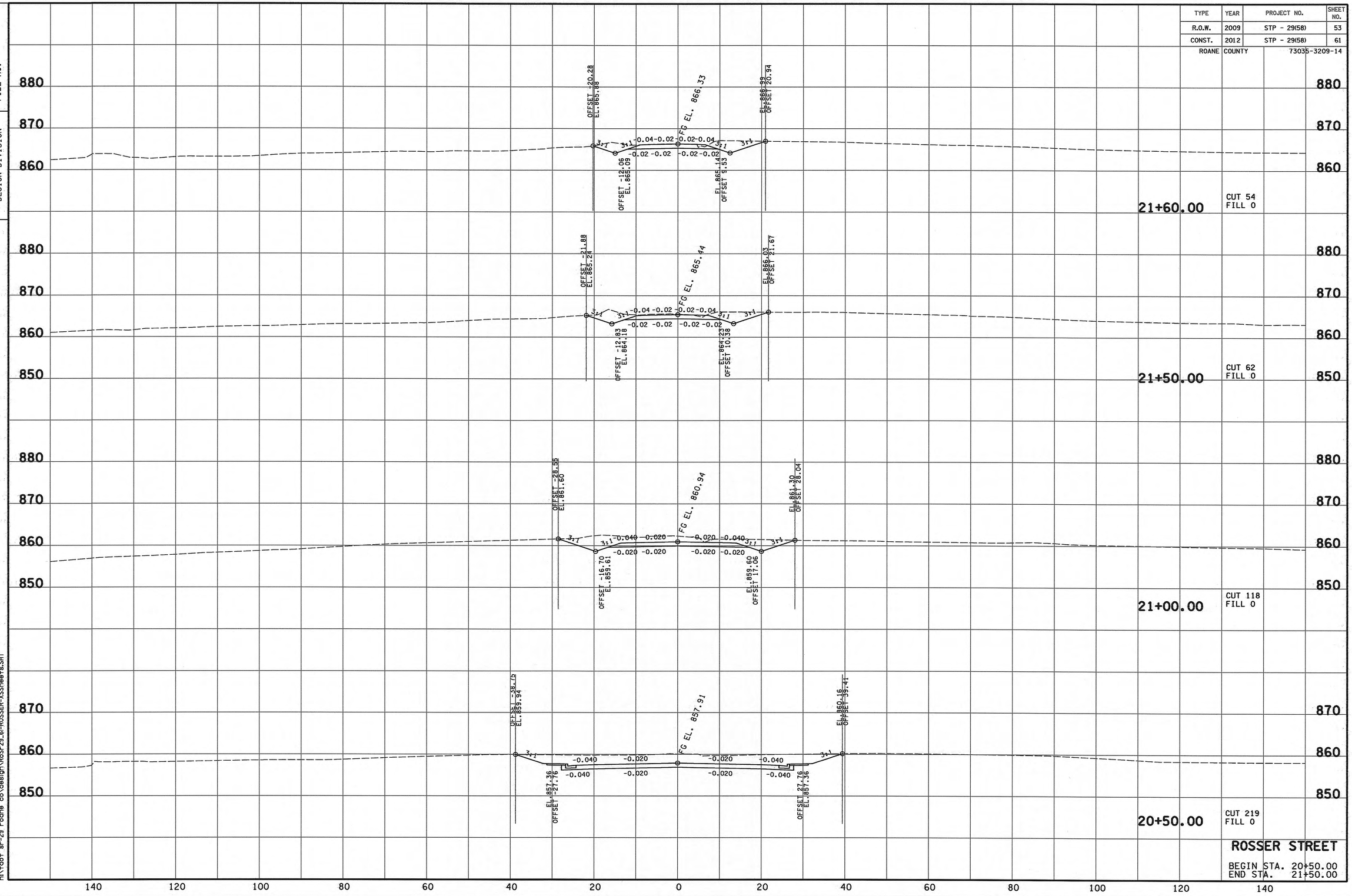
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	53
CONST.	2012	STP - 29(58)	61

ROANE COUNTY 73035-3209-14



ROSSER STREET

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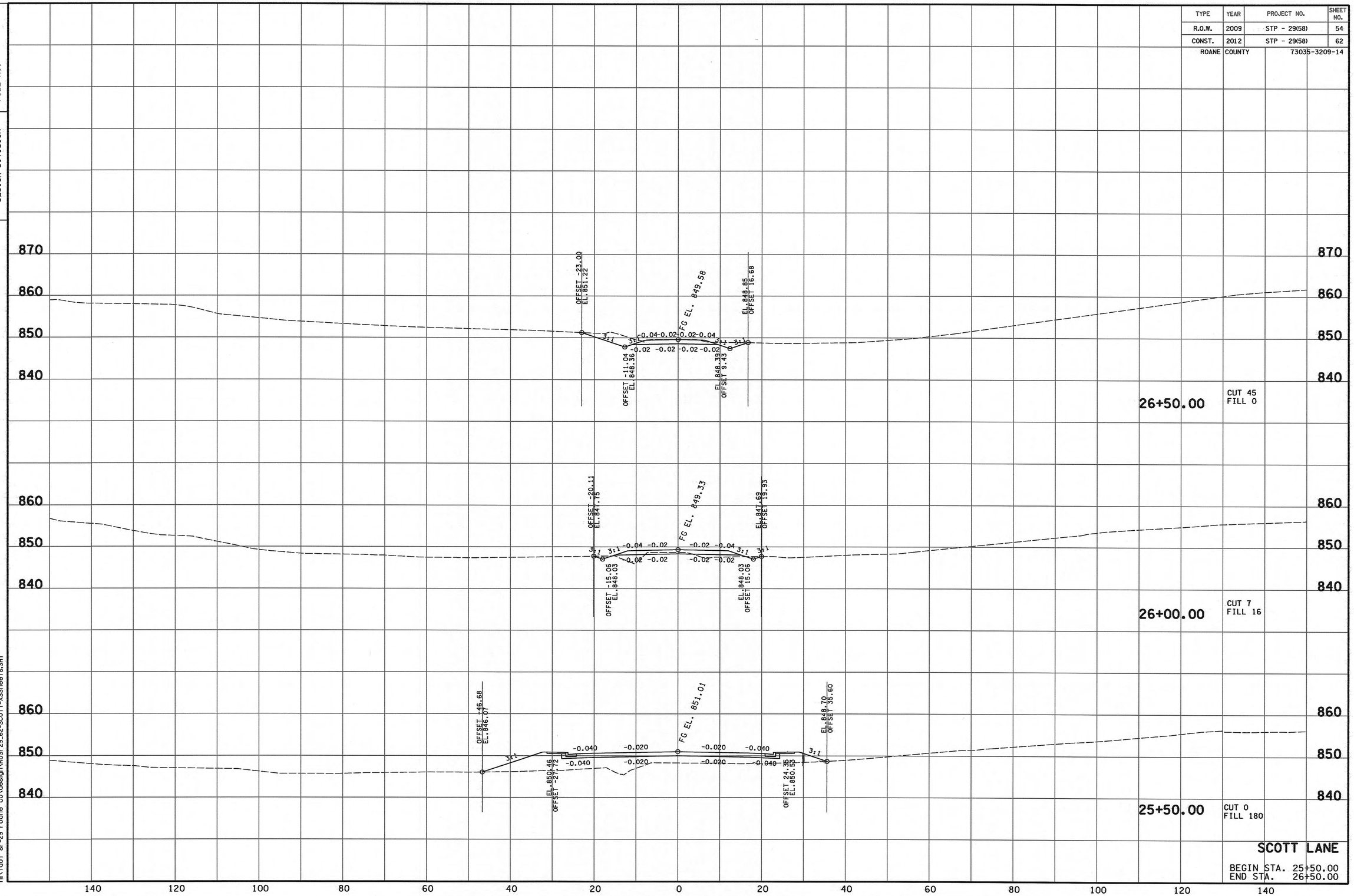
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	54
CONST.	2012	STP - 29(58)	62
ROANE COUNTY		73035-3209-14	



SCOTT LANE

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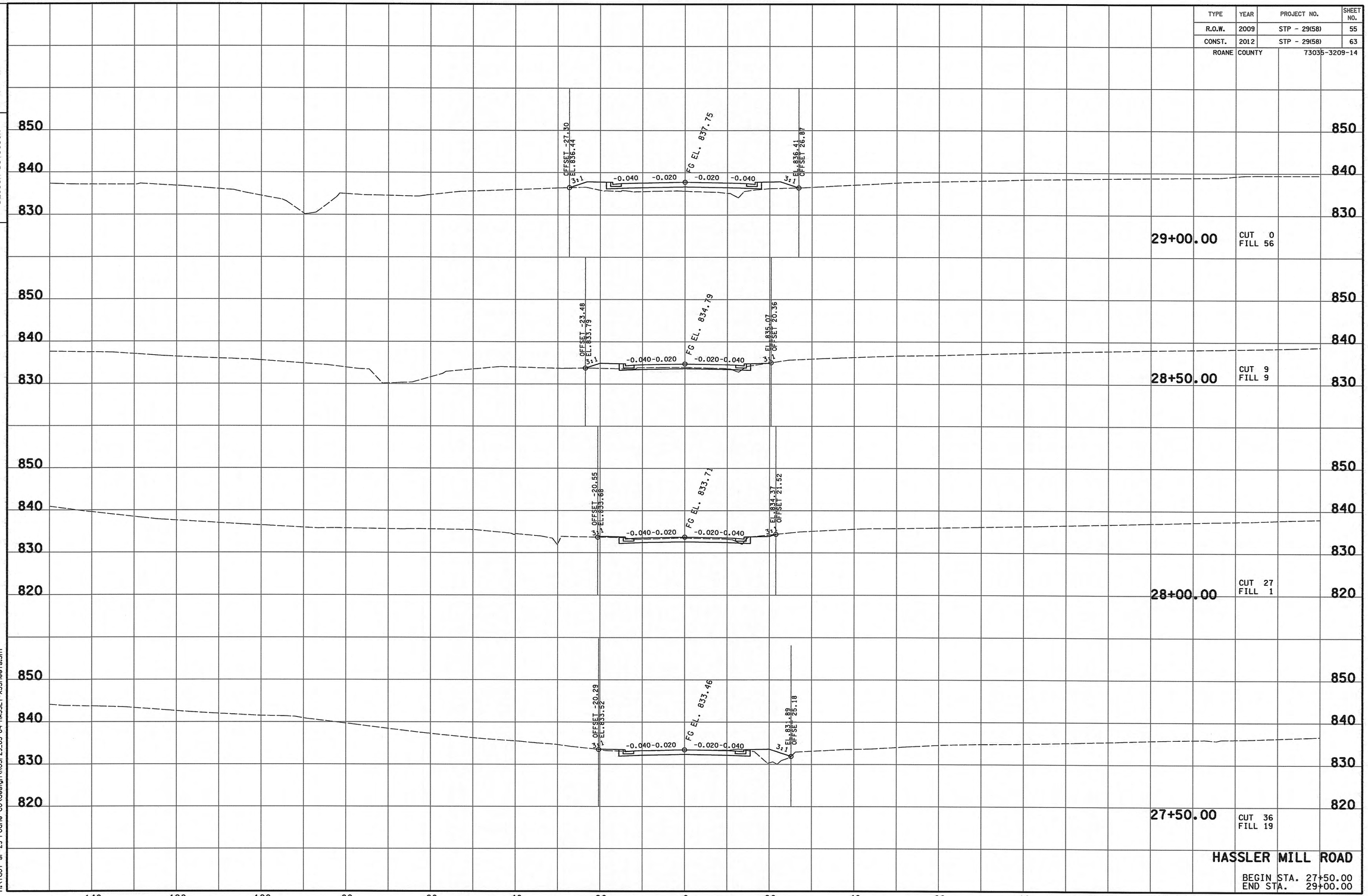
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	55
CONST.	2012	STP - 29(58)	63
ROANE COUNTY		73035-3209-14	



HASSLER MILL ROAD

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2D3
ROANE COUNTY		73035-3209-14	

STREAM/WETLAND (CONTINUED)

(1) INSTREAM EPSC DEVICES REQUIRE THE ENVIRONMENTAL DIVISION'S PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN TDEC, USACE, AND TVA PERMITS.

(2) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.

(3) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.

(4) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.

(5) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.

(6) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

(7) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

(8) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.

(9) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

(10) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.

(11) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.

(12) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.

(13) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

(14) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

(15) THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

MATERIALS

(16) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

SWPPP, PERMITS, PLANS, RECORDS

(17) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.

(18) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.

(19) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.

(20) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BREIF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

(21) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS OR MODIFICATIONS OF THE SWPPP ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(22) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.

(23) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER A CHANGE IN CHEMICAL TREATMENT METHODS IS MADE INCLUDING USE OF A DIFFERENT CHEMICAL, DIFFERENT DOSAGE OR APPLICATION RATE, OR A DIFFERENT AREA OF APPLICATION.

(24) IF A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION) THE SWPPP SHALL BE MODIFIED OR UPDATED.

(25) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

(26) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.

(27) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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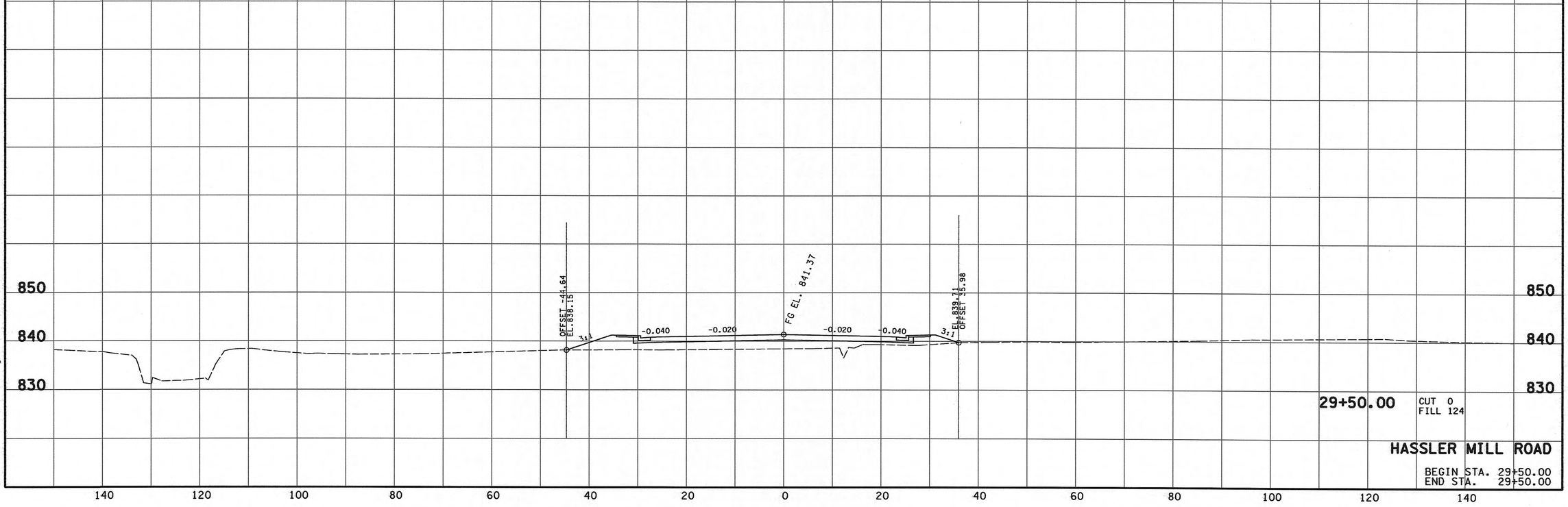
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	56
CONST.	2012	STP - 29(58)	64

ROANE COUNTY 73035-3209-14



29+50.00

CUT 0
FILL 124

HASSLER MILL ROAD

BEGIN STA. 29+50.00
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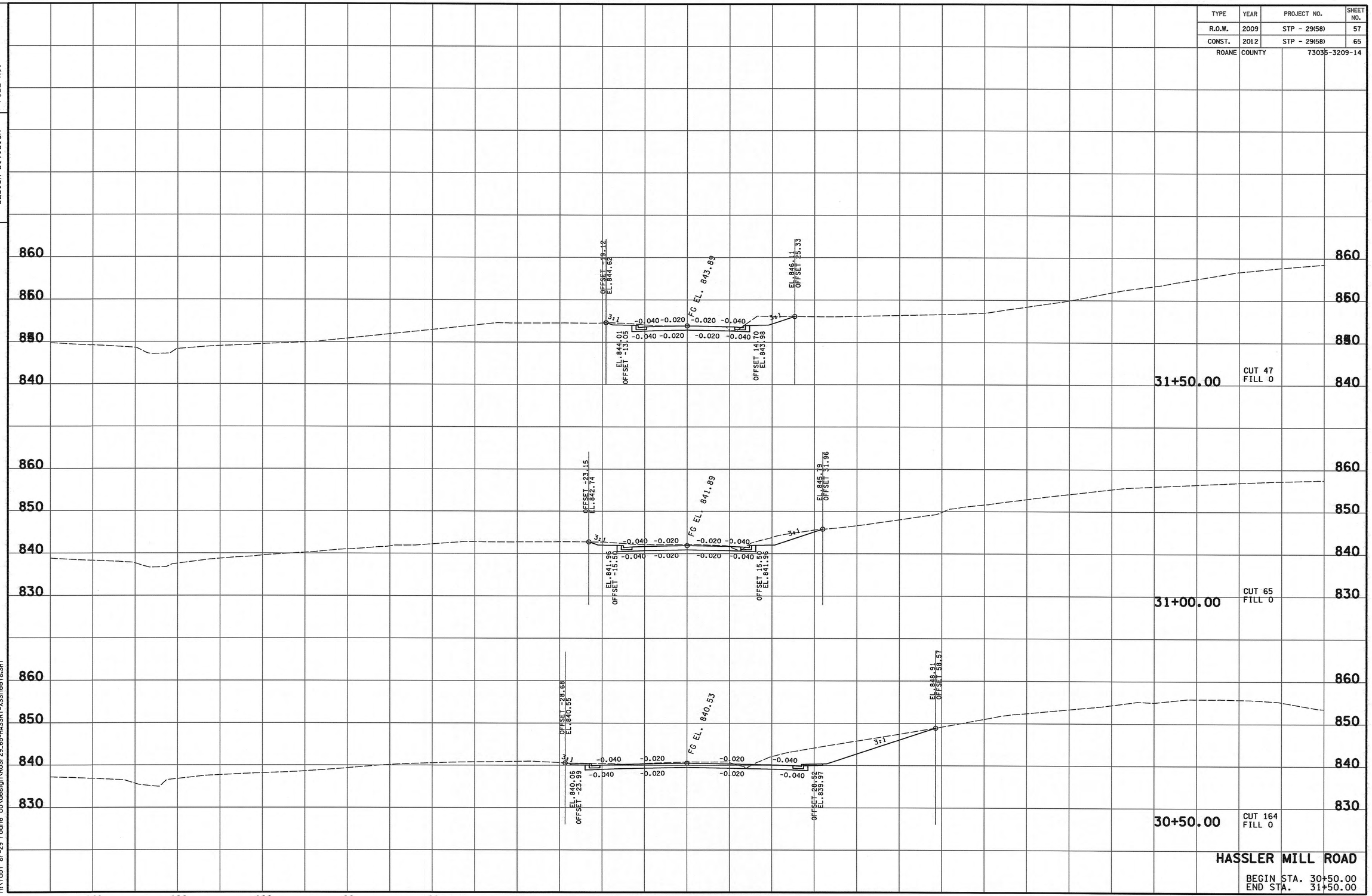
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	57
CONST.	2012	STP - 29(58)	65

ROANE COUNTY 73035-3209-14



HASSLER MILL ROAD

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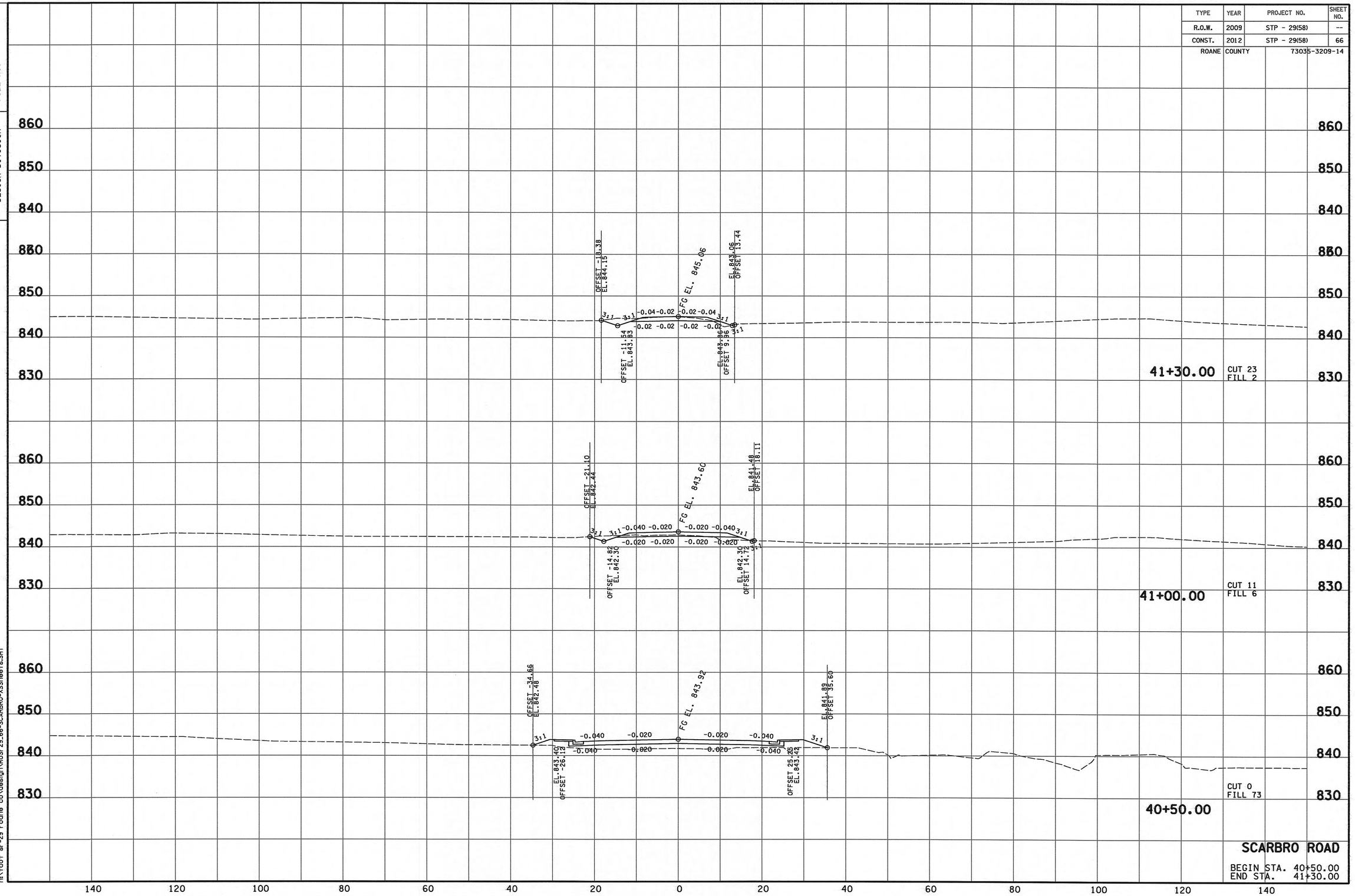
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	66
ROANE COUNTY		73035-3209-14	



SCARBRO ROAD

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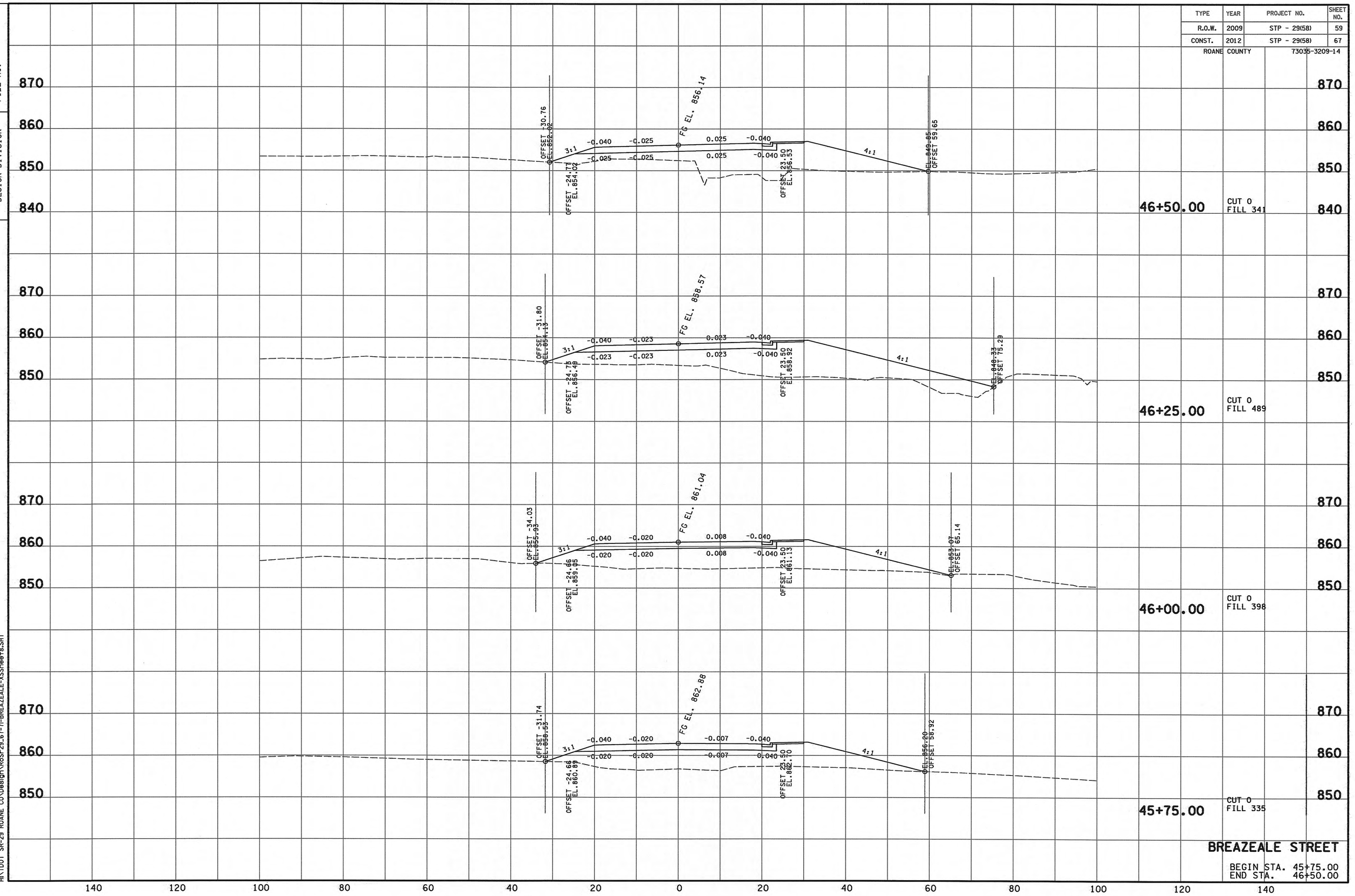
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	59
CONST.	2012	STP - 29(58)	67

ROANE COUNTY 73035-3209-14



BREAZEALE STREET

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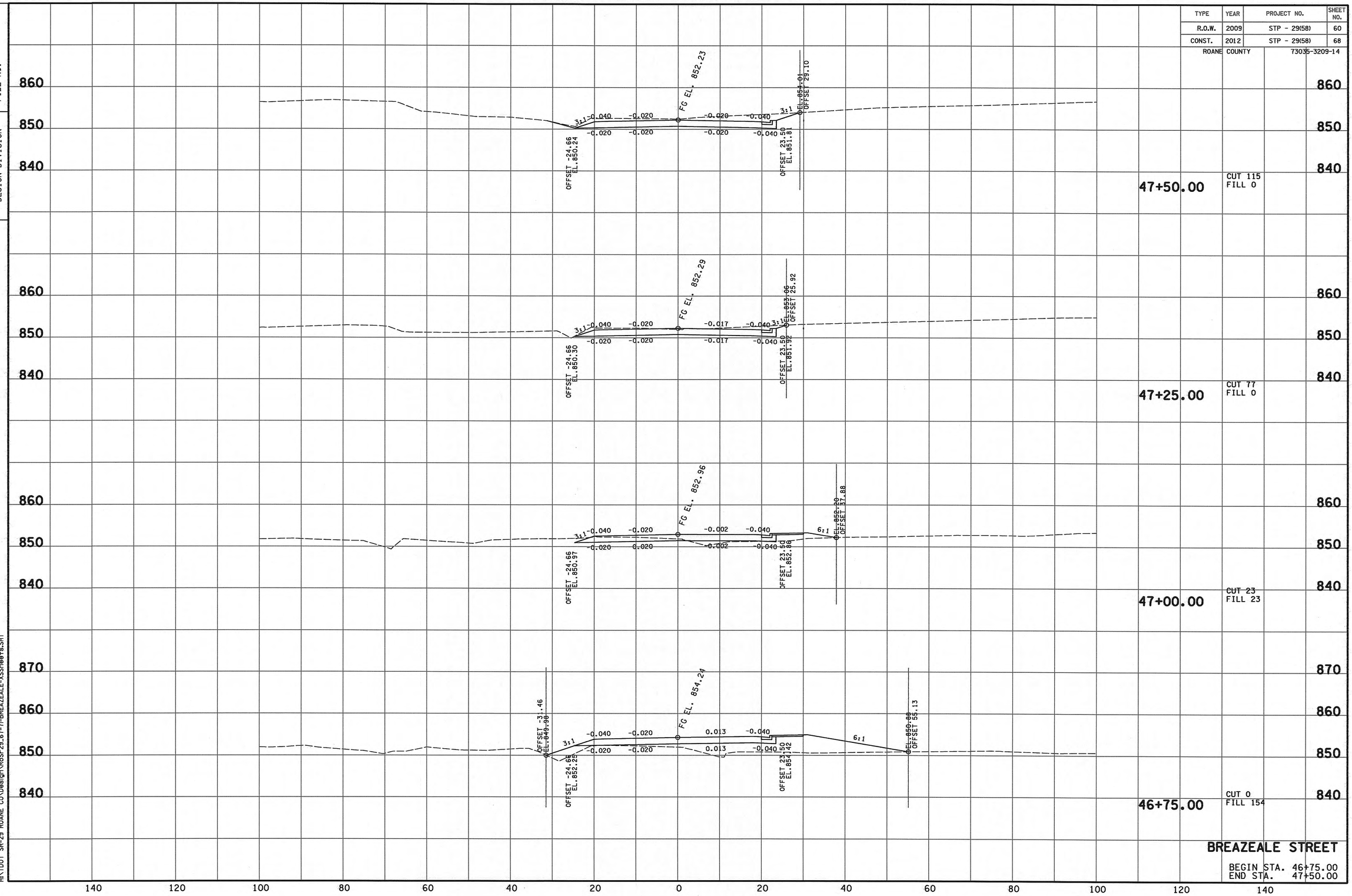
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	60
CONST.	2012	STP - 29(58)	68
ROANE COUNTY		73035-3209-14	



BREAZEALE STREET

BEGIN STA. 46+75.00
END STA. 47+50.00

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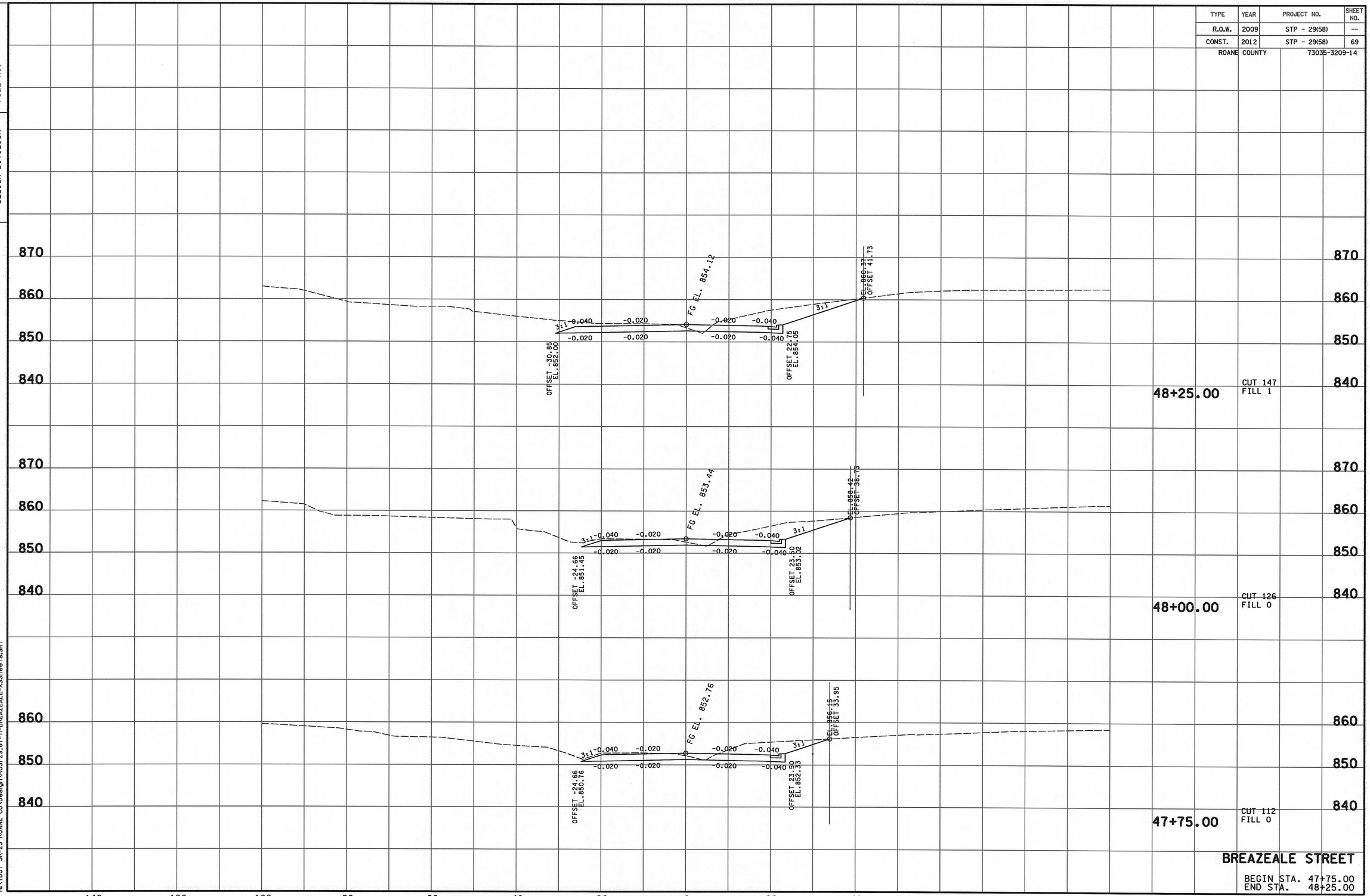
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	69
ROANE COUNTY		73035-3209-14	



BREAZEALE STREET

BEGIN STA. 47+75.00
END STA. 48+25.00

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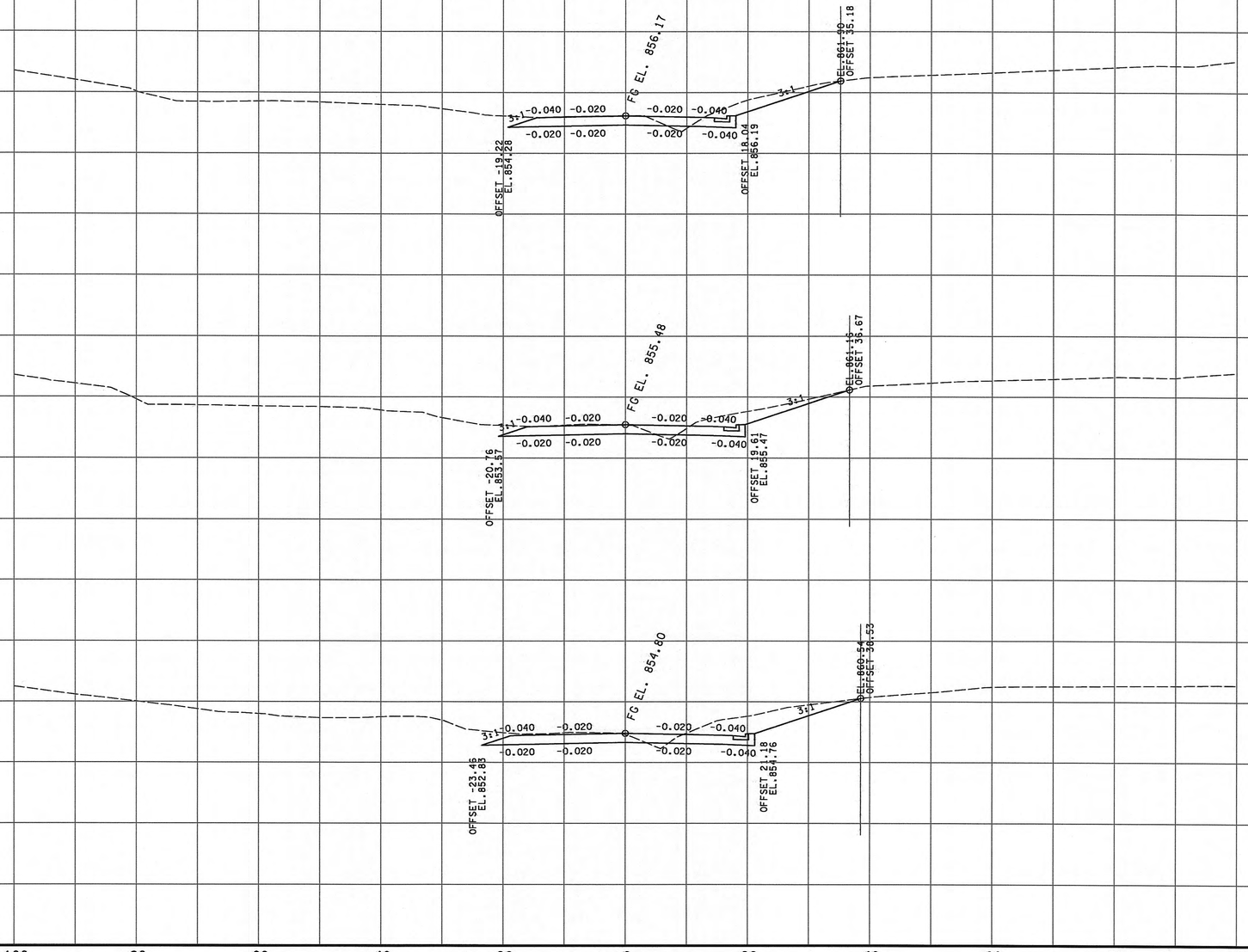
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	70

ROANE COUNTY 73035-3209-14



BREAZEALE STREET

BEGIN STA. 48+50.00
END STA. 49+00.00

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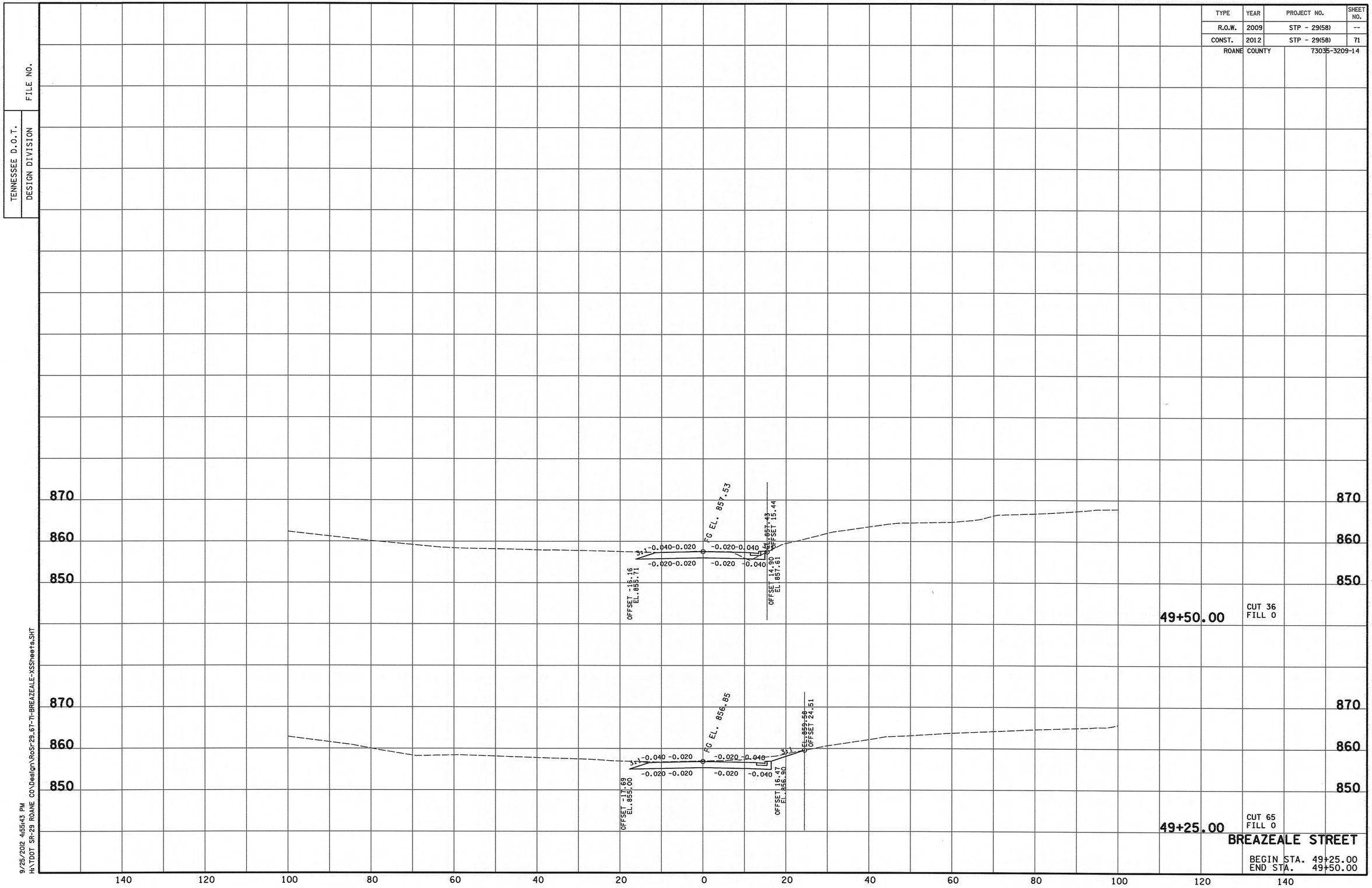
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	71
ROANE COUNTY		73035-3209-14	



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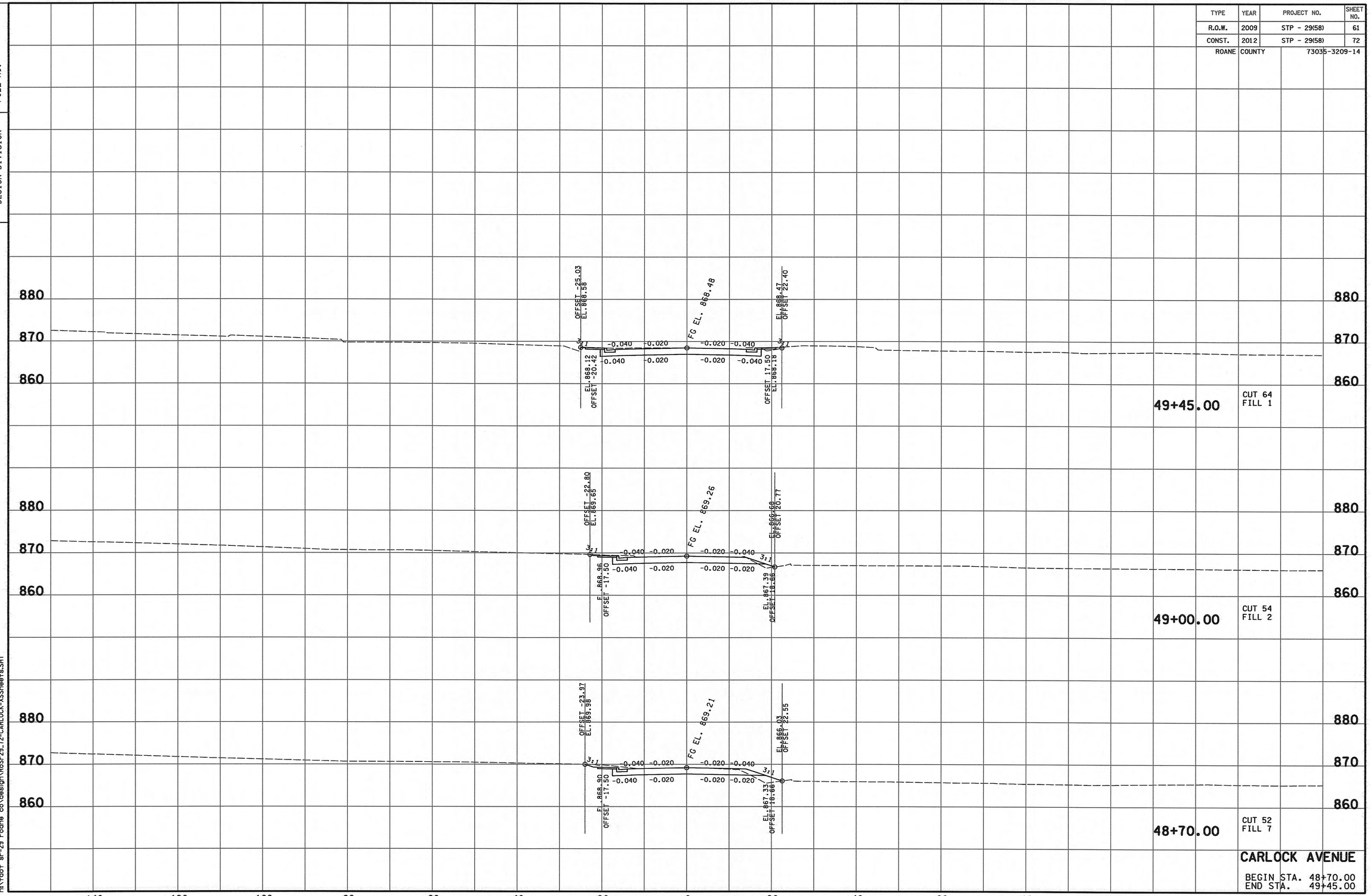
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	61
CONST.	2012	STP - 29(58)	72

ROANE COUNTY 73035-3209-14



CARLOCK AVENUE

BEGIN STA. 48+70.00
END STA. 49+45.00

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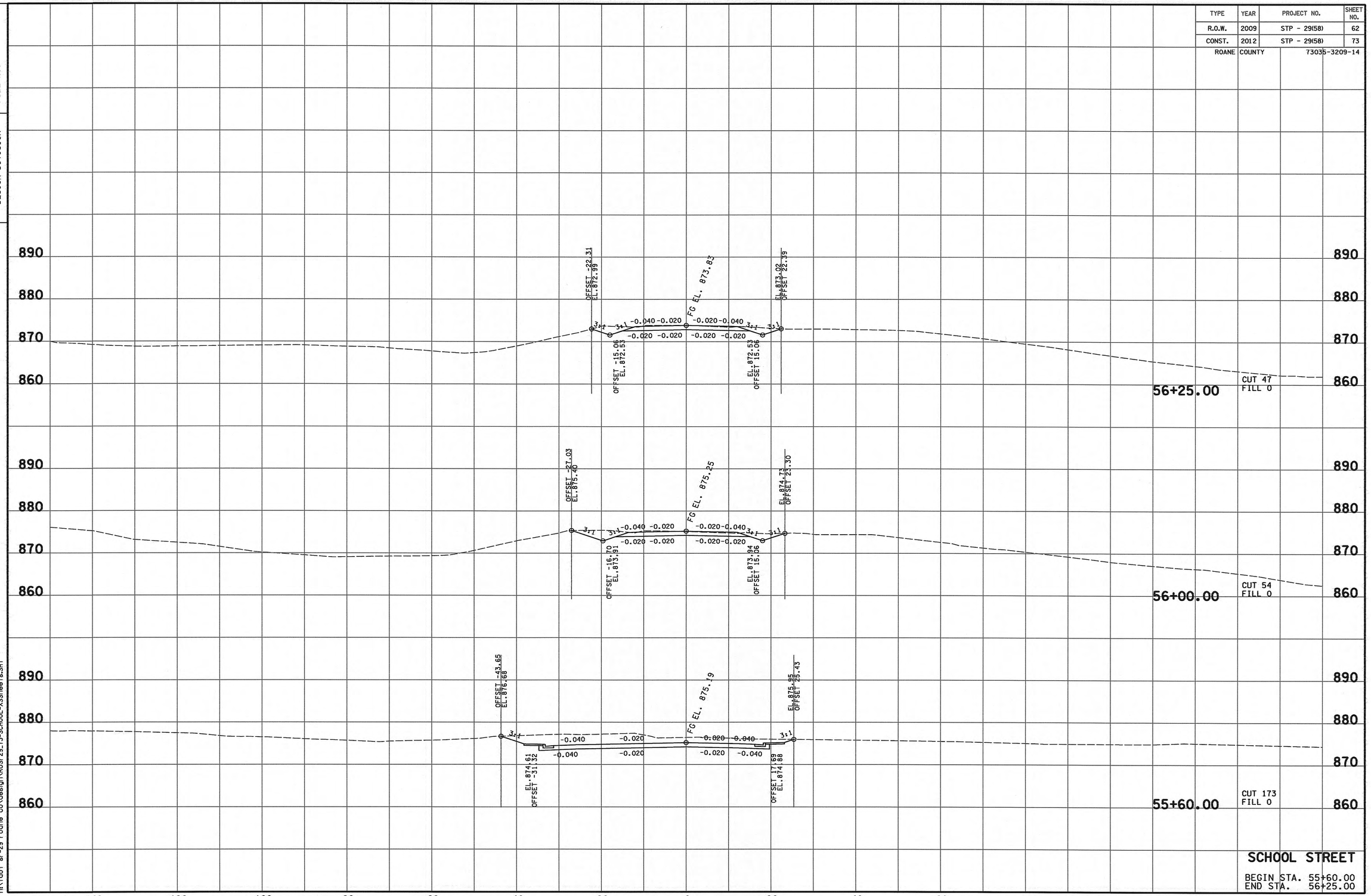
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	62
CONST.	2012	STP - 29(58)	73

ROANE COUNTY 73035-3209-14



SCHOOL STREET

BEGIN STA. 55+60.00
END STA. 56+25.00

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2D4

ROANE COUNTY 73035-3209-14

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

PAVEMENT

RESURFACING

(1) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:

A. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FEET PER MINUTE.

B. THE SURFACE SHALL BE SWEPT AND CLEANED OF ALL LOOSE MATERIALS.

C. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.

D. THE MILLED SURFACE SHALL BE PAVED WITHIN 48 HOURS.

E. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.

F. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS.

G. IF RAVELING OR DETERIORATION OF THE MILLED SURFACE IS OCCURRING WHILE TRAFFIC IS DRIVING ON THE MILLED SURFACE, THEN THIS PRACTICE WILL NOT BE ALLOWED AND PAVING SHALL BE COMPLETED IMMEDIATELY AFTER MILLING.

H. ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

SIGNALIZATION

(1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

(2) THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRIES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90 MPH WITH A RECURRENCE INTERVAL OF 50 YEARS. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY I. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 OF THE SUBJECT AASHTO DOCUMENT AND THE FOLLOWING LOADS:

GALLOPING – NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL CANTILEVERED ARMS THAT ARE 50' OR LONGER.

VORTEX SHEDDING – NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.

NATURAL WIND GUSTS – THE YEARLY MEAN WIND SPEED FOR NATURAL WIND GUSTS SHALL BE 11.2 MPH.

THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED CANTILEVERED ARM(S) IN ACCORDANCE WITH METRO PUBLIC WORKS. FOR POLE AND ARM DETAILS, CONTACT MIKE HIRTZER AT 615-880-3261.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 21, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.

(2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED BRIDGE WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

(3) ALL BRIDGE PROJECTS WITH THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED MUST HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER THE STREAM.

STREAM RELOCATION

(4) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

SEALED BY

PHILIP S NELSON
REGISTERED ENGINEER
AGRICULTURE
No. 00108853
STATE OF TENNESSEE

9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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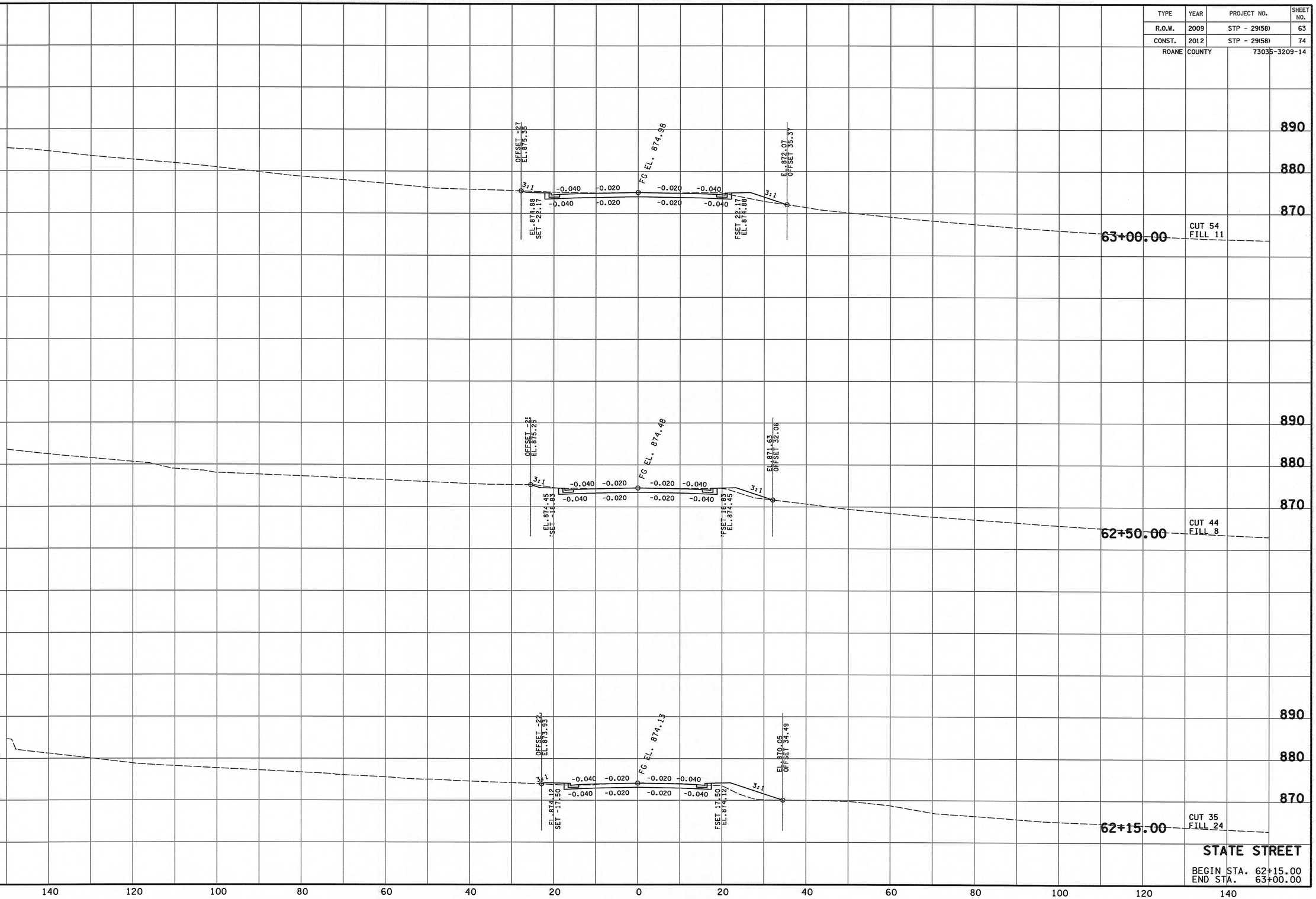
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	63
CONST.	2012	STP - 29(58)	74

ROANE COUNTY 73035-3209-14



STATE STREET

BEGIN STA. 62+15.00
END STA. 63+00.00

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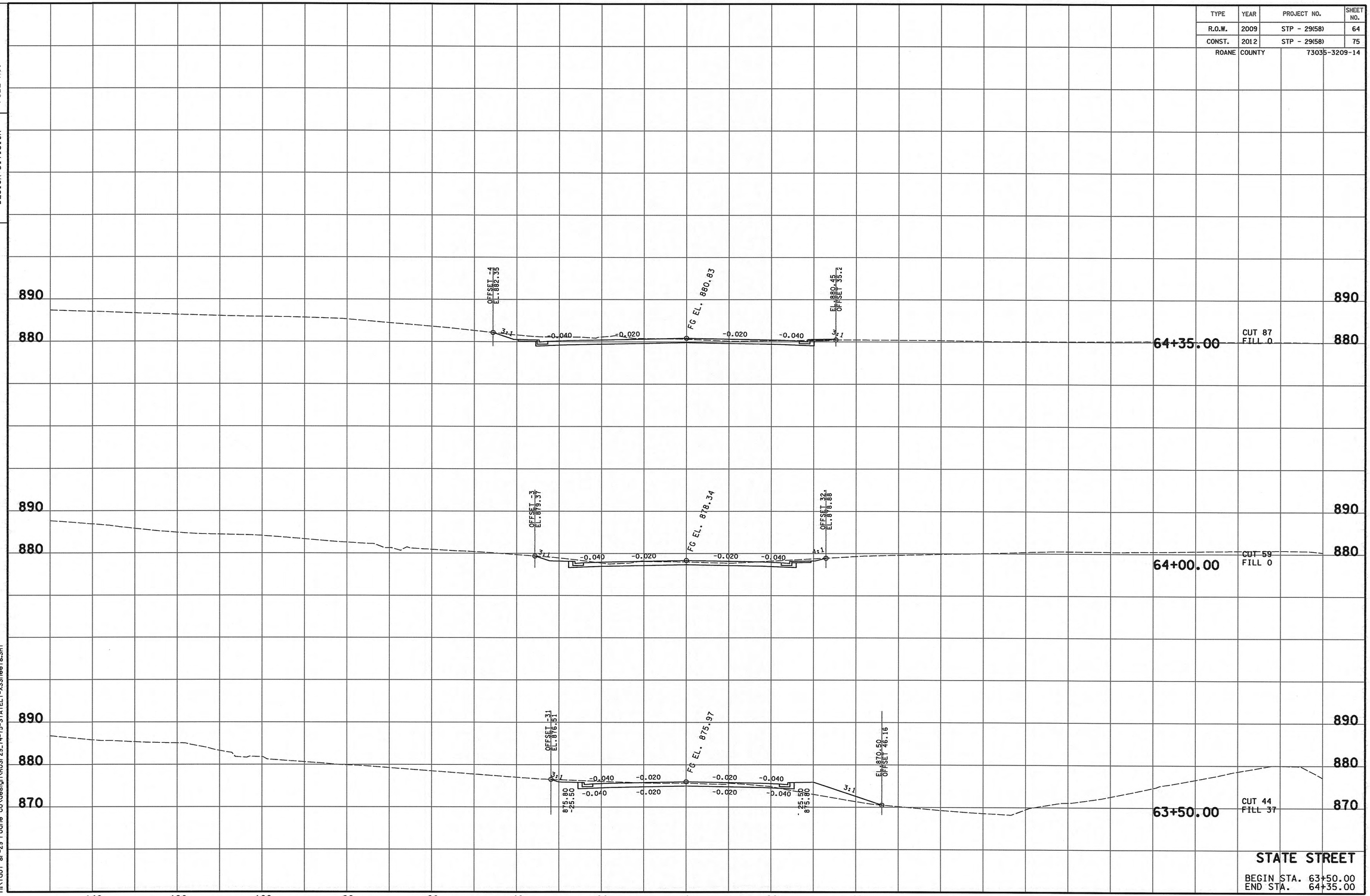
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	64
CONST.	2012	STP - 29(58)	75
ROANE COUNTY		73035-3209-14	



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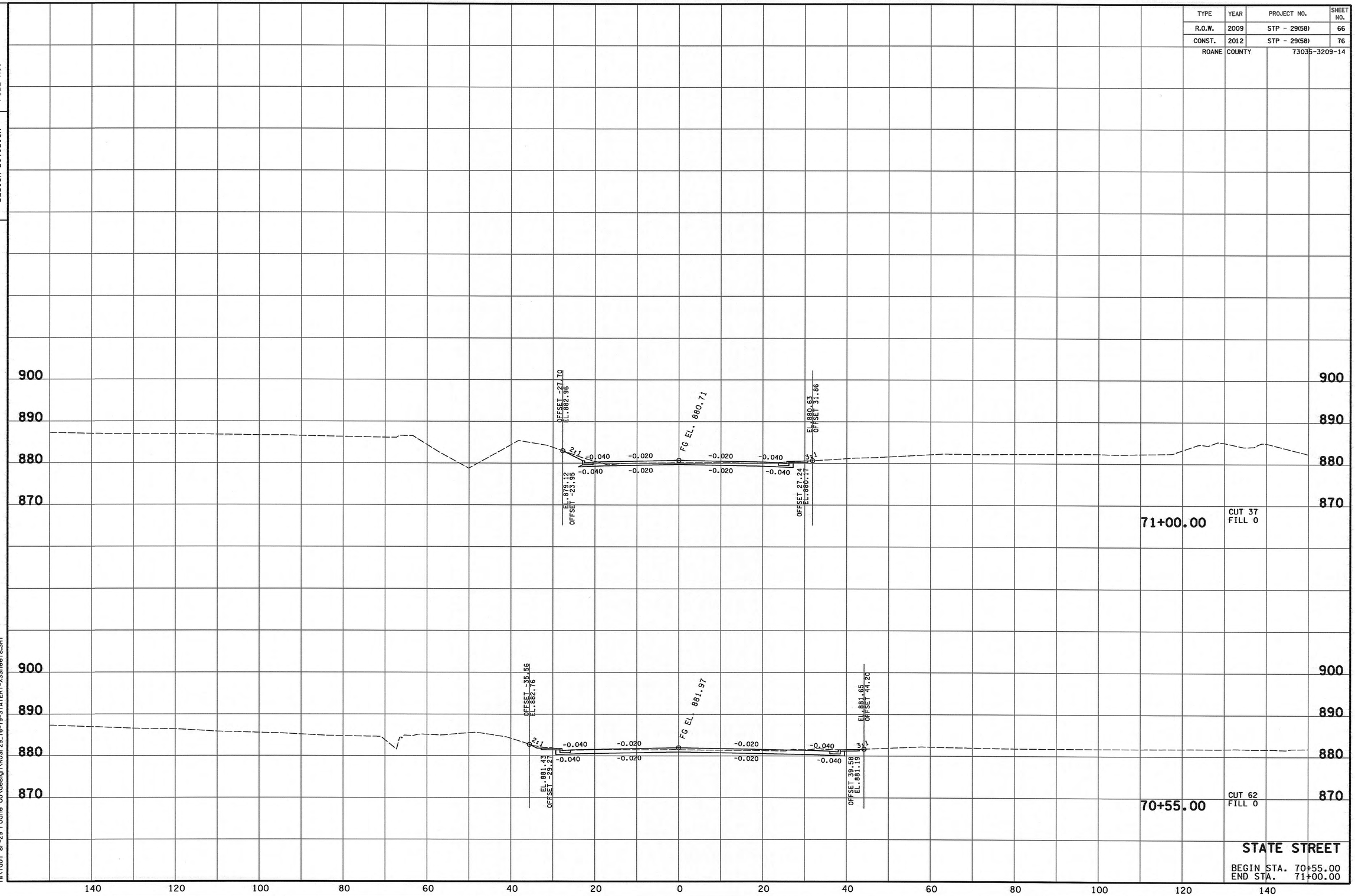
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	66
CONST.	2012	STP - 29(58)	76
ROANE	COUNTY	73035-3209-14	



STATE STREET

BEGIN STA. 70+55.00
END STA. 71+00.00

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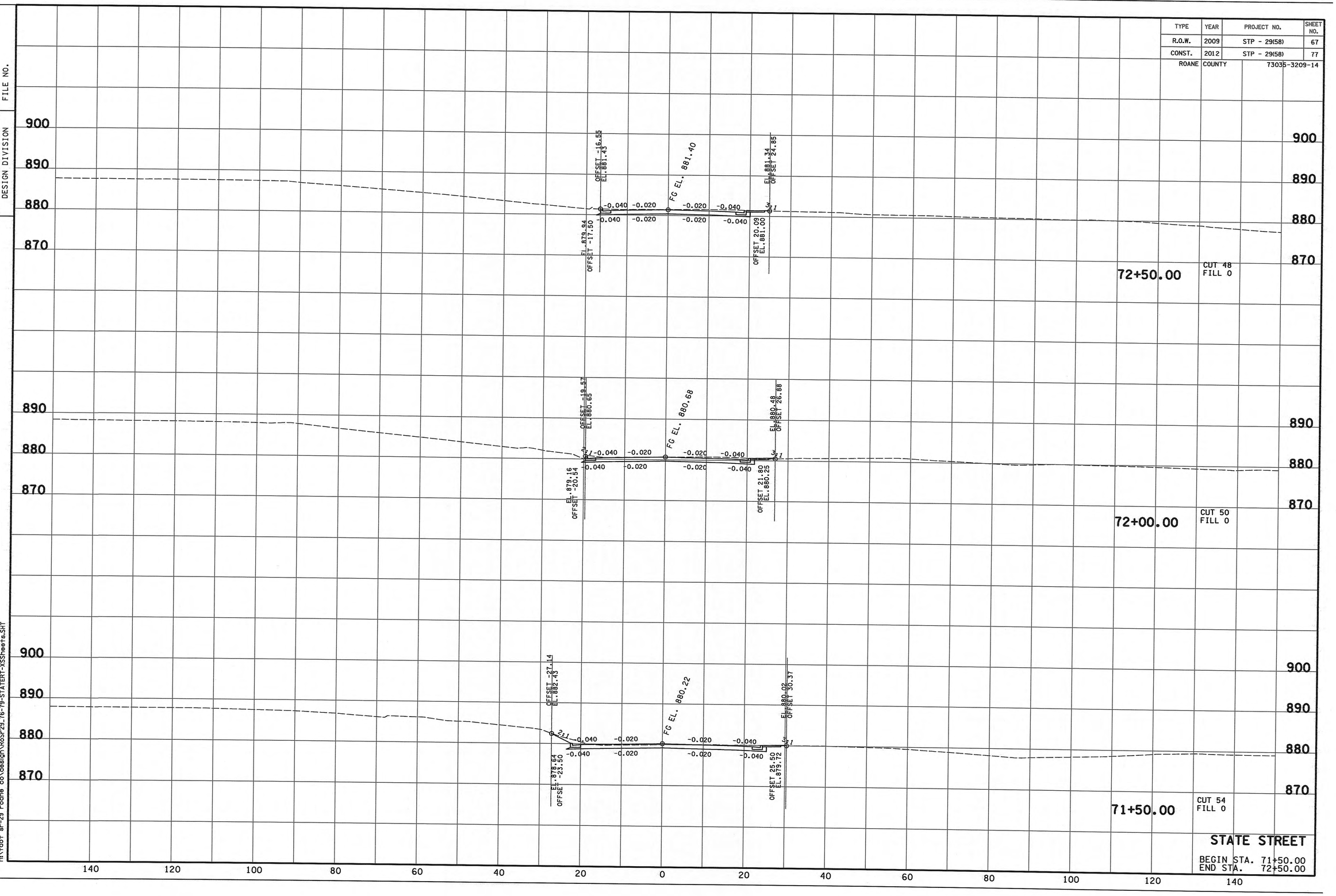
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	67
CONST.	2012	STP - 29(58)	77
ROANE COUNTY		73035-3209-14	



STATE STREET
BEGIN STA. 71+50.00
END STA. 72+50.00

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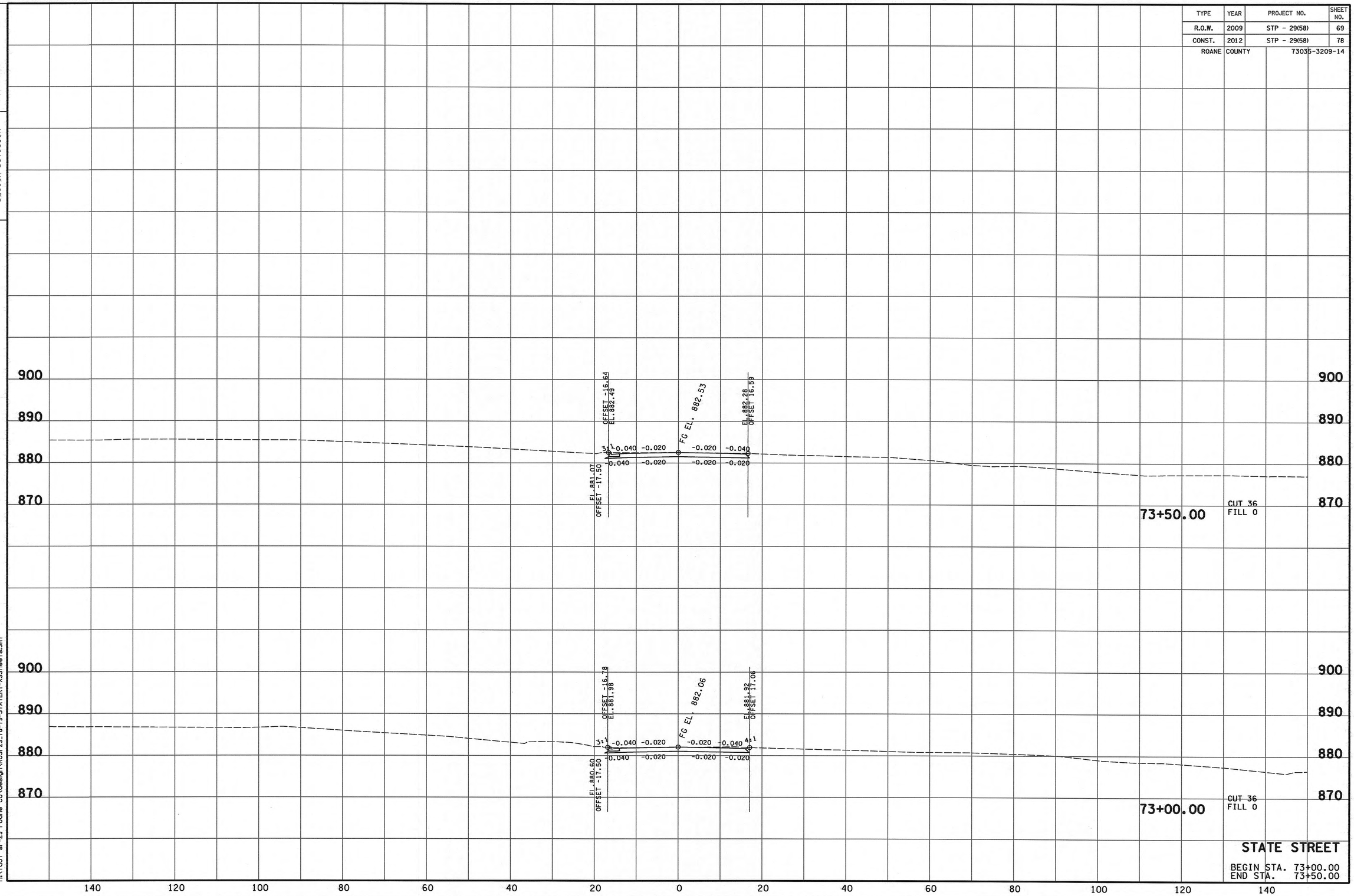
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	69
CONST.	2012	STP - 29(58)	78
ROANE COUNTY		73035-3209-14	



STATE STREET

BEGIN STA. 73+00.00
END STA. 73+50.00

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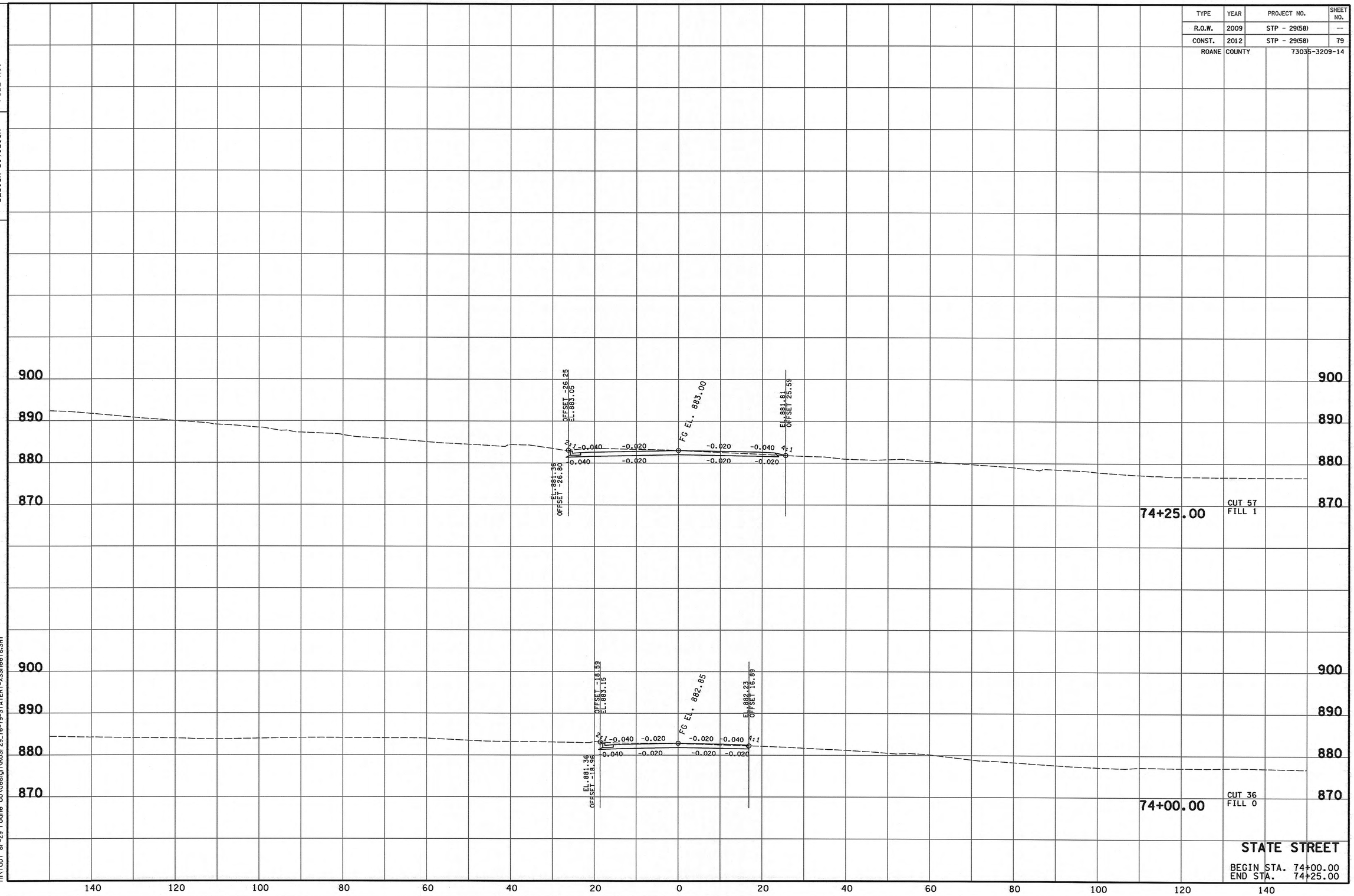
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	79
ROANE COUNTY		73035-3209-14	



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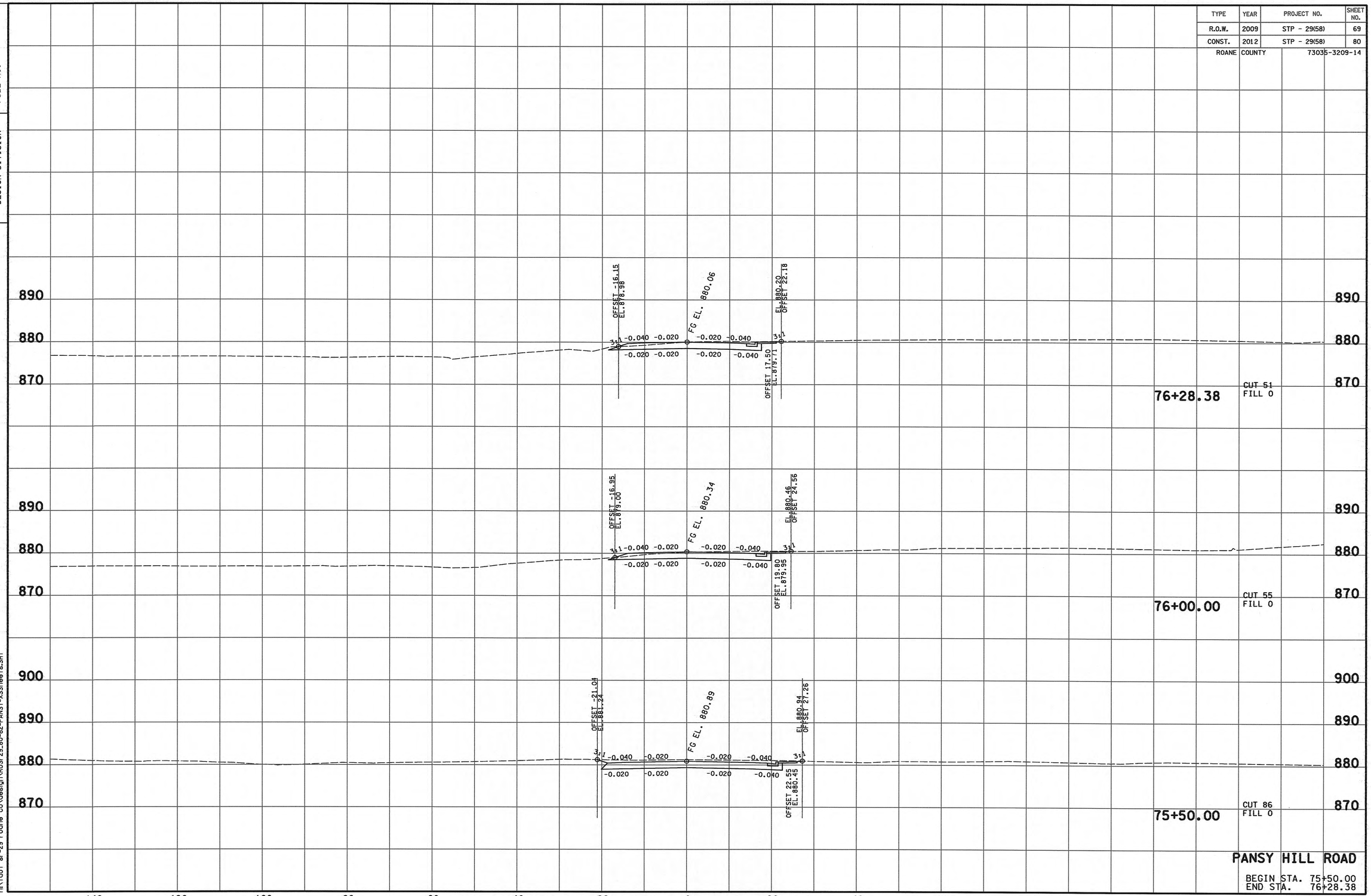
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	69
CONST.	2012	STP - 29(58)	80
ROANE	COUNTY	73035-3209-14	



PANSY HILL ROAD

BEGIN STA. 75+50.00
END STA. 76+28.38

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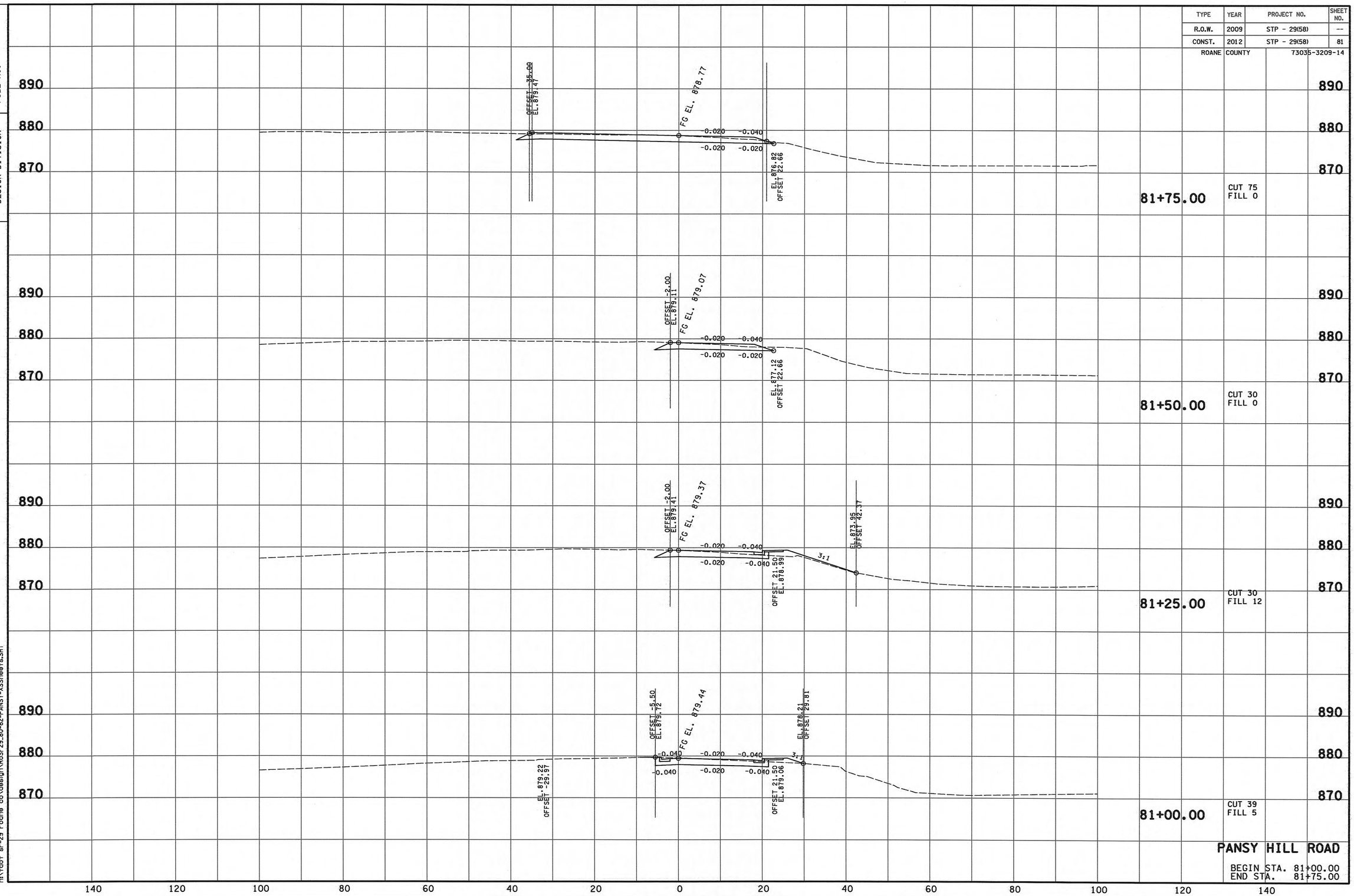
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	81

ROANE COUNTY 73035-3209-14



PANSY HILL ROAD

BEGIN STA. 81+00.00
END STA. 81+75.00

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED SIDE DRAIN PIPE LENGTH FOR 24" PIPE.
REVISED DRIVEWAYS ON SR-29 AT STA. 32+07 AND STA. 35+21.

BUSINESS ENTRANCES, PRIVATE DRIVES AND FIELD ENTRANCES

ROAD NAME	STATION	SURFACE WIDTH (FT)	SURFACE TYPE	SIDE DRAINS (FT)					LIMIT OF CONST.	ENDWALLS			STANDARD DWGS. / REMARKS
				18" DIA.	24" DIA.	30" DIA.	42" DIA.	6'x3' BOX CULVERT		CONCRETE ITEM NO. 611-07.01	REINF. STEEL ITEM NO. 611-07.02	STRUCT. STEEL ITEM NO. 611-07.03	
SR 29	12+58.16	18	ASPHALT		45				2+11.80				2
	15+67.41	12	ASPHALT						1+50.00				1
	16+02.16	12	ASPHALT						1+30.00				1
	17+70.73	12	ASPHALT						1+60.00				1
	19+02.33	10	ASPHALT						0+90.00				1
	22+77.58	12	ASPHALT						0+80.00				1
	23+61.37	18	GRAVEL						1+00.00				1
	24+70.89	10	ASPHALT						0+90.00				1
	25+07.65	10	ASPHALT						1+00.00				1
	29+95.05	18	CONCRETE						1+20.00				1
	30+69.58	18	GRAVEL						0+95.00				1
	30+99.37	10	GRAVEL					20	1+20.00				3
	31+48.64	40	ASPHALT						0+70.00				1
	32+07.86	10 - 24	ASPHALT						1+10.00				1
	34+04.64	24 - 30	ASPHALT					75	3+92.26				3
	35+20.81	10 - 40	ASPHALT						0+90.00				1
	35+87.98	40	ASPHALT						0+80.00				1
	38+11.99	24	ASPHALT						0+90.00				1
	40+07.16	12	GRAVEL						0+80.00				1
	41+09.87	40	ASPHALT						0+75.00				1
	43+45.87	10	GRAVEL						1+00.00				1
	43+47.53	30	ASPHALT						0+60.00				1
	43+97.34	20	ASPHALT						0+65.00				1
	44+81.00	40	ASPHALT						0+58.87				1
	45+17.29	40	ASPHALT						0+80.00				1
	46+71.78	40	ASPHALT						0+70.00				1
	48+55.00	40	ASPHALT						1+00.00				1
	49+18.06	40	ASPHALT						0+81.89				1
	50+42.15	40	GRAVEL						1+10.00				1
	51+35.57	40	ASPHALT						0+80.08				1
	53+97.89	40	ASPHALT						0+83.42				1
	54+68.13	12	ASPHALT						0+50.28				1
TIDWELL CIRCLE	16+60.00	10	GRAVEL						0+51.06				1
ROSSER STREET	21+19.80	40	ASPHALT						0+40.00				1
	21+81.00	15	ASPHALT						0+64.50				1
HASSLER MILL ROAD	27+85.39	10	ASPHALT						0+93.17				1
BREAZEALE STREET	46+95.00	10	GRAVEL			30			0+35.00				2
	47+25.00	26	ASPHALT						1+00.00				1
	48+33.33	12	ASPHALT						0+43.22				1
CARLOCK AVENUE	49+05.00	30	ASPHALT						0+50.00				1
SCHOOL STREET	55+65.30	20	ASPHALT						0+45.00				1
	55+91.29	10	CONCRETE						0+25.00				1
STATE STREET	62+28.72	15	ASPHALT						0+47.83				1
	62+73.04	14	ASPHALT						0+54.23				1
	63+04.07	28	ASPHALT						0+48.16				1
	63+54.51	12	ASPHALT						0+50.00				1
	64+03.39	40	ASPHALT						0+70.00				1
	71+76.02	38	ASPHALT						0+95.00				1
	72+32.50	30	ASPHALT						0+50.00				1
TOTAL				0	45	30	0	95		0	0	0	

1 NO SIDE DRAIN REQUIRED
2 SIDE DRAIN QUANTITY INCLUDED IN PIPE SCHEDULE
3 BOX CULVERT QUANTITY INCLUDED IN SCHEDULE

SEALED BY

PHILIP S. NELSON
AGRICULTURE
TENNESSEE
001088
STATE OF TENNESSEE
1/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

STORM DRAINAGE PIPES

SHEET NO.	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.) 18"	24"	30"	36"	42"	60"
4B	2	837.22	3	836.33	3.11%					29	
4B	3	836.16	5	833.77	3.45%					70	
4B	5	833.60	6	832.50	1.98%					56	
4B	01A	845.58	3	841.77	2.76%		138				
4B	1	847.82	5	847.67	0.50%	31					
4B	8	847.68	5	847.53	0.50%	31					
4B	9	849.88	8	847.85	1.13%	178					
4B	4	844.12	3	843.95	3.04%		6				
4B	7	845.10	4	844.29	2.25%		37				
4B	10	848.03	7	845.60	1.22%	199					
4B	11	850.99	10	848.20	1.59%	175					
4B	12	851.50	11	851.16	0.49%	70					
4B	13	855.17	12	852.25	5.07%	58					
4B	15	852.01	12	851.71	0.50%	60					
4B	14	860.74	13	855.34	5.31%	102					
4B	16	861.00	14	860.91	0.52%	18					
4B	18	850.00	17	849.82	0.99%	19					
4B	19	851.22	18	850.17	1.56%	68					
4B	20	854.50	19	854.46	0.54%	8					
4B,5B	21	851.74	19	851.39	0.49%	71					
4B	SIDE DRAIN FOR PRIVATE DRIVE AT STA. 12+58.16						45				
5B	22	855.00	21	854.48	6.97%	8					
5B	23	852.28	21	851.91	0.51%	73					
5B	25	852.70	23	852.45	0.49%	50					
5B	24	855.53	23	852.51	10.01%	31					
5B	26	855.71	25	852.80	9.39%	31					
5B	40	835.75	40A	834.34	9.40%				16		
5B	29	847.77	40	842.31	3.82%	143					
5B	38	842.17	39	842.12	0.50%	10					
5B	37	842.47	38	842.34	0.50%	27					
5B	36	840.02	39	838.23	2.28%				79		
5B	35	840.45	36	840.19	1.01%				26		
5B	34	841.27	35	840.62	1.58%				42		
5B	33	842.92	34	842.27	2.50%		27				
5B	32	842.22	35	841.92	1.01%				30		
5B	31	842.50	32	842.39	1.00%				11		
5B	30	848.00	29	847.94	0.54%	12					
5B	27	848.27	29	848.13	0.50%	29					
5B	28	848.50	27	848.44	0.49%	13					
5B	39	838.06	40	837.70	0.51%				72		
5B	47	830.46	CULVERT	828.67	2.84%			64			
5B	47A	829.50	CULVERT	829.00	1.72%	30					
5B	46	831.69	47	831.46	1.00%	24					
5B	45	833.27	47	830.57	4.41%			62			
5B	44	834.07	45	833.44	0.50%			126			
5B	43	835.26	44	835.07	0.50%	38					
5B	42	838.78	44	834.76	4.69%		86				
5B	41	839.78	42	838.95	2.64%		32				
5B	50	835.50	CULVERT	834.50	3.18%	32					
5B	52	838.17	50	838.00	0.55%	32					
5B	52A	832.29	52B	831.05	2.38%	52					
5B	53	835.71	CULVERT	834.50	6.37%	19					
5B	55	836.78	53	836.23	0.50%	110					
5B	56	837.00	55	836.95	0.48%	11					
5B	59	839.78	55	837.60	1.57%	140					
5B	60	840.25	59	839.95	3.17%	10					
5B	49	835.97	51	835.82	0.50%	30					
5B	51	835.49	CULVERT	835.00	20.08%	3					
5B	54	835.83	CULVERT	835.00	4.11%	21					
5B	57	838.17	54	836.00	1.43%	152					
5B	62	842.54	57	838.34	3.09%	137					
5B	63	846.00	62	842.71	1.94%	170					
6B	90	872.57	89	870.33	4.20%	54					
6B	89	870.16	86	869.91	0.51%	48					
6B	86	869.73	85	869.55	0.49%	33					
6B	85	869.38	84	869.22	0.51%	33					
TOTALS (THIS COLUMN)						2694	371	252	276	155	0

STORM DRAINAGE PIPES

SHEET NO.	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.) 18"	24"	30"	36"	42"	60"
6B	84	865.90	82	866.07	1.48%	211					
6B	82	865.90	77	862.05	1.96%	197					
6B	77	861.88	70	858.32	2.53%	141					
6B	70	858.15	68	853.66	3.92%	115					
6B	68	853.49	65	847.39	3.00%	204					
6B	65	844.23	64	844.03	0.96%		21				
6B	88	871.50	87	871.39	1.47%	8					
6B	87	871.22	83	868.41	1.49%	190					
6B	83	868.24	81	865.67	1.93%	134					
6B	81	865.50	80	863.90	4.54%	36					
6B	80	863.57	79	863.20	0.99%	38					
6B	79	862.87	78	862.52	1.01%	35					
6B	78	862.35	71	860.53	1.30%	140					
6B	71	860.43	69	855.26	2.77%	187					
6B	69	855.09	66	848.89	2.94%	211					
6B	67	849.00	66	848.89	0.96%	12					
6B	66	848.72	65	847.39	1.98%	68					
6B	73	845.45	72	845.21	0.49%						50
6B	74	847.00	73	846.31	1.49%						47
6B	75	846.65	73	845.95	0.75%		94				
6B	76	855.00	75A	848.99	3.83%		157				
6B	75A	848.82	75	847.15	2.42%		70				
6B	SIDE DRAIN FOR PRIVATE DRIVE ON BREAZEAL STREET AT STA. 46+95.00							30			
7B	105	870.08	104	870.00	0.53%	16					
7B	106	870.58	105	870.33	0.49%	41					
7B	107	871.10	106	870.72	0.51%	77					
7B	108	871.47	107	871.27	0.49%	41					
7B	92	872.85	91	872.10	10.05%	8					
7B	91	871.93	93	871.59	0.50%	69					
7B	94	872.25	93	872.20	0.50%	10					
7B	93	871.42	95	870.85	0.50%	114					
7B	96	873.19	95	873.14	0.48%	11					
7B	95	870.68	99	870.38	0.49%	61					
7B	99	866.69	EX CB	865.75	4.43%				22		
7B	97	871.50	98	871.40	0.98%		11				
7B	98	870.00	99	869.67	0.50%				66		
7B	109	873.62	98	871.00	1.50%		175				
7B	110	874.13	109	873.79	0.98%		35				
7B	111	874.46	110	874.30	0.52%	32					
7B	112	874.73	111	874.63	0.50%	24					
7B	113	876.04	112	875.48	0.93%	61					
7B	114	877.09	113	876.21	10.02%	9					
7B	103	875.62	102	875.44	0.81%	23					
7B	101	876.21	102	875.44	3.18%	25					
7B	102	875.12	112	874.92	0.48%	42					
7B	115	879.75	109	878.23	3.69%	42					
7B	117	883.58	115	879.92	2.88%	127					
7B	118	884.50	117	883.91	6.39%	10					
7B	99A	876.50	100	876.14	3.27%	12					
7B	100	875.97	99	874.13	2.01%	92					
7B	116	880.31	100	876.14	2.59%	162					
7B	119	884.09	116	880.48	2.66%	136					
TOTALS (THIS COLUMN)						3172	563	30	88	0	97
TOTALS (ENTIRE PROJECT)						5866	934	282	364	155	97

NOTES:

SEE SHEET 26A FOR ALL RIP-RAP APRON LOCATIONS AND TABULATED QUANTITIES.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E1

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED PIPES FROM STRUCTURE 60 TO STRUCTURE 59 AND FROM STRUCTURE 59 TO STRUCTURE 55.

REV. 09-03-13:
ADDED PIPE FROM STRUCTURE 52A TO 528.

REV. 10-02-13:
ADDED 24" PIPE FROM STRUCTURE 01A TO 03. REMOVED PIPE FROM STRUCTURE FROM EX CB-04 TO 3. REVISED PIPES FROM STRUCTURES 9 TO 8, 11 TO 10, 12 TO 11, 25 TO 23, 26 TO 25, 53 TO CULVERT, 55 TO 53, 89 TO 86, 86 TO 85, 85 TO 84, 84 TO 82, 78 TO 71, 71 TO 69, 106 TO 105, 107 TO 106, 112 TO 111, 113 TO 112, 102 TO 112, AND 119 TO 116.

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 0010885
STATE OF TENNESSEE
10/4/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E2

ROANE COUNTY 73035-3209-14

REV. 09-03-13:
ADDED ITEM NO. 611-02.01 AND ADDED STRUCTURE NO. 52A.

REV. 10-02-13:
ADDED STRUCTURE NO. 01A.
REVISED STATION, ELEVATION, AND DEPTH AT STRUCTURE NOS. 9, 11, 25, AND 53.
REVISED INSIDE DIMENSIONS STRUCTURE NO. 25.

CATCH BASINS AND MANHOLES

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS	DEPTH (FT.)	STANDARD DRAWING	TYPE 3 611-01.03 8' - 12'	TYPE 1 611-02.01 0'-4'	TYPE 1 611-02.10 4' -8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 12 611-12.04 12' - 16'	TYPE 14 611-14.01 0'-4'	TYPE 14 611-14.02 4' - 8'	TYPE 14 611-14.05 16' - 20'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'
4B	SR-29	12+11.54	33.47	01A	851.80	CB #12	48"X36"	6.22	①					1							
4B	SR-29	13+40.00	-36.00	1	851.90	CB #12	48"X36"	4.08	①					1							
4B	SR-29	13+58.00	36.00	3	849.62	CB #12	62"X62"	13.46	①							1					
4B	SR-29	13+70.00	36.00	4	849.61	CB #14	96"X36"	5.49	②									1			
4B	SR-29	13+75.00	-36.00	5	851.86	CB #14	96"X36"	18.26	②										1		
4B	SR-29	14+10.00	36.00	7	849.68	CB #12	48"X36"	4.58	①					1							
4B	SR-29	14+10.00	-36.00	8	851.93	CB #12	48"X36"	4.25	①					1							
4B	SR-29	15+86.44	-36.00	9	854.22	CB #12	48"X36"	4.34	①					1							
4B	SR-29	16+20.00	36.00	10	852.28	CB #12	48"X36"	4.25	①					1							
4B	SR-29	18+01.91	36.00	11	855.64	CB #12	48"X36"	4.65	①					1							
4B	SR-29	18+75.00	45.00	12	856.33	CB #12	72" DIA.	4.83	①					1							
4B	TIDWELL	16+00.00	14.00	13	859.42	CB #12	48"X36"	4.25	①					1							
4B	TIDWELL	17+05.00	10.00	14	866.00	CB #42	32"X32"	5.26	③												1
4B	SR-29	19+40.00	47.50	15	856.10	CB #14	96"X36"	4.09	②									1			
4B	TIDWELL	17+05.00	-10.00	16	865.00	CB #42	32"X32"	4.00	③												1
4B	SR-29	20+25.00	-36.00	18	856.63	CB #14	96"X36"	6.63	②									1			
4B	SR-29	20+30.00	36.00	19	858.79	CB #12	48"X36"	7.57	①					1							
4B	SR-29	20+30.00	46.00	20	858.00	CB #42	32"X32"	3.50	③											1	
5B	SR-29	21+03.00	36.00	21	858.56	CB #12	48"X36"	6.82	①					1							
5B	SR-29	21+03.00	46.00	22	858.50	CB #42	32"X32"	3.50	③											1	
5B	SR-29	21+80.00	50.00	23	857.10	CB #14	96" DIA.	4.82	②									1			
5B	ROSSER	20+85.00	20.00	24	860.13	CB #42	32"X32"	4.60	③												1
5B	SR-29	22+34.79	50.14	25	857.69	CB #14	96" DIA.	4.40	②									1			
5B	ROSSER	20+85.00	-20.00	26	860.05	CB #42	32"X32"	4.34	③												1
5B	SR-29	24+58.00	-36.00	27	853.42	CB #12	48"X36"	5.15	①					1							
5B	SR-29	24+58.00	-50.00	28	852.00	CB #42	32"X32"	3.50	③											1	
5B	SR-29	24+90.00	-36.00	29	852.56	CB #12	48"X36"	4.79	①					1							
5B	SR-29	24+90.00	-49.00	30	851.50	CB #42	32"X32"	3.50	③											1	
5B	SCOTT	25+75.00	30.50	31	847.50	CB #42	48"X48"	5.00	③												1
5B	SCOTT	25+75.00	17.00	32	849.42	CB #12	48"X36"	7.20	①					1							
5B	SCOTT	26+20.00	15.00	33	846.92	CB #42	32"X32"	4.00	③												1
5B	SCOTT	26+20.00	-15.00	34	846.92	CB #42	48"X48"	5.65	③												1
5B	SCOTT	25+75.00	-17.50	35	849.42	CB #12	48"X48"	8.97	①						1						
5B	SR-29	25+25.00	44.00	36	850.68	MH #3	84" DIA.	10.66	④	1											
5B	SR-29	25+75.00	53.00	37	845.97	CB #42	32"X32"	3.50	③											1	
5B	SR-29	26+05.00	48.00	38	846.50	CB #42	32"X32"	4.33	③												1
5B	SR-29	26+08.00	36.00	39	847.10	CB #12	48"X48"	9.04	①						1						
5B	SR-29	26+38.00	-36.00	40	846.90	CB #12	62"X62"	11.15	①						1						
5B	SR-29	26+47.00	-51.89	40A	844.00	MH #3	60" DIA.	9.83	④	1											
5B	HASS MILL RT	31+82.00	9.50	41	843.78	CB #42	32"X32"	4.00	③												1
5B	HASS MILL RT	31+46.00	13.00	42	843.36	CB #12	48"X36"	4.58	①					1							
5B	SR-29	28+50.00	55.43	43	839.85	CB #14	96"X36"	4.59	②									1			
5B	SR-29	28+05.00	55.12	44	839.85	CB #14	96" DIA.	5.78	②									1			
5B	HASS MILL LT	29+25.00	17.03	45	839.27	CB #12	48"X48"	6.00	①					1							
5B	HASS MILL LT	28+60.00	-14.00	46	834.78	CB #12	48"X36"	3.09	①				1								
5B	HASS MILL LT	28+60.00	14.00	47	834.78	CB #12	48"X48"	4.32	①					1							
5B	HASS MILL LT	27+65.00	-20.50	47A	832.50	CB #42	48" DIA.	3.00	③											1	
5B	SR-29	29+07.00	36.00	49	840.05	CB #12	48"X36"	4.08	①					1							
5B	SR-29	29+07.00	-36.00	50	841.27	CB #12	48"X36"	5.77	①					1							
5B	SR-29	29+43.00	36.00	51	839.97	CB #14	96"X36"	4.48	②									1			
5B	SR-29	29+43.00	-36.00	52	841.17	CB #14	96"X36"	3.00	②								1				
5B	SR-29	28+70.57	-29.43	52A	835.71	SD #1	32"X32"	3.42	⑥		1										
5B	SR-29	29+73.04	-36.00	53	841.24	CB #12	48"X36"	5.47	①					1							
5B	SR-29	29+84.00	36.00	54	840.08	CB #12	48"X36"	4.25	①					1							
5B	SR-29	30+87.00	-36.00	55	841.49	CB #12	48"X36"	4.71	①					1							
5B	SR-29	30+87.00	-49.00	56	840.50	CB #42	32"X32"	3.50	③											1	
5B	SR-29	31+40.00	36.00	57	842.42	CB #12	48"X36"	4.25	①					1							
TOTALS (THIS SHEET)										2	1	0	1	23	3	1	1	8	1	7	9

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PHILIP S. NELSON
REGISTERED ENGINEER
10/4/13
00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E3

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
UPDATED STRUCTURES 59 AND 60.

REV. 09-03-13:
ADDED ITEM NO. 611-02.01

REV. 10-02-13:
REVISED STATION, ELEVATION, AND DEPTH AT STRUCTURE NOS. 71, 84, 86, AND 106.
REVISED INSIDE DIMENSIONS STRUCTURE NO. 86.

CATCH BASINS AND MANHOLES

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS	DEPTH (FT.)	STANDARD DRAWING	TYPE 3 611-01.03 8' - 12'	TYPE 1 611-02.01 0'-4'	TYPE 1 611-02.10 4' -8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 12 611-12.04 12' - 16'	TYPE 14 611-14.01 0'-4'	TYPE 14 611-14.02 4' - 8'	TYPE 14 611-14.05 16' - 20'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'
5B	SCARBORO	40+85.50	16.00	58	842.94	CB #42	32"X32"	3.34	③											1	
5B	SR-29	32+30.00	-36.00	59	845.19	CB #12	48"X36"	5.41	①					1							
5B	SR-29	32+30.00	-48.00	60	843.75	CB #42	32"X32"	3.75	③											1	
5B	SCARBORO	40+84.00	-16.00	61	842.93	CB #42	32"X32"	2.55	③											1	
5B	SR-29	32+80.00	36.00	62	846.79	CB #12	48"X36"	4.25	①					1							
5B	SR-29	34+55.00	36.00	63	850.08	CB #12	48"X36"	4.08	①					1							
6B	SR-29	36+25.00	36.00	65	851.47	CB #12	48"X36"	7.24	①					1							
6B	SR-29	36+25.00	-36.00	66	852.97	CB #12	32"X32"	4.25	①					1							
6B	SR-29	36+25.00	-50.00	67	852.50	CB #42	32"X32"	3.50	③											1	
6B	SR-29	38+35.00	36.00	68	857.74	CB #12	48"X36"	4.25	①					1							
6B	SR-29	38+37.00	-36.00	69	859.34	CB #12	48"X36"	4.25	①					1							
6B	SR-29	39+55.00	36.00	70	862.40	CB #12	48"X36"	4.25	①					1							
6B	SR-29	40+26.00	-36.00	71	864.65	CB #12	48"X36"	4.22	①					1							
6B	BREAZEALE	46+41.00	22.00	73	857.17	CB #12	84"X84"	11.72	①						1						
6B	BREAZEALE	47+40.00	22.00	75	851.57	CB #14	96"X36"	4.92	②									1			
6B	BREAZEALE	48+15.00	22.00	75A	853.24	CB #12	48"X36"	4.42	①					1							
6B	SR-29	41+00.00	36.00	77	866.13	CB #12	48"X36"	4.25	①					1							
6B	SR-29	41+70.00	-36.00	78	867.54	CB #12	48"X36"	5.19	①					1							
6B	SR-29	42+03.77	-55.00	79	867.93	CB #14	96"X36"	5.06	②									1			
6B	SR-29	42+45.52	-55.00	80	867.99	CB #14	96"X36"	4.42	②									1			
6B	SR-29	42+80.00	-36.00	81	869.75	CB #12	48"X36"	4.25	①					1							
6B	SR-29	43+00.00	36.00	82	870.15	CB #12	48"X36"	4.25	①					1							
6B	SR-29	44+17.00	-36.00	83	872.49	CB #12	48"X36"	4.25	①					1							
6B	SR-29	45+14.60	36.00	84	874.37	CB #12	48"X36"	5.15	①					1							
6B	SR-29	45+51.00	37.25	85	874.85	CB #12	48"X36"	5.47	①					1							
6B	SCHOOL	45+83.36	53.68	86	875.07	CB #12	48" DIA.	5.16	①					1							
6B	SR-29	46+10.00	-36.00	87	875.47	CB #12	48"X36"	4.25	①					1							
6B	SR-29	46+10.00	-46.00	88	875.00	CB #42	32"X32"	3.50	③											1	
6B	SCHOOL	55+65.00	-29.86	89	874.41	CB #12	48"X36"	4.25	①					1							
6B	SR-29	46+87.00	36.00	90	876.65	CB #12	48"X36"	4.08	①					1							
7B	SR-29	48+16.00	-36.00	91	876.18	CB #12	48"X36"	4.25	①					1							
7B	SR-29	48+16.00	-46.00	92	876.46	CB #42	32"X32"	3.61	③											1	
7B	SR-29	48+90.00	-36.00	93	876.57	CB #12	48"X36"	5.15	①					1							
7B	SR-29	48+90.00	-48.50	94	875.75	CB #42	32"X32"	3.50	③											1	
7B	SR-29	50+10.00	-36.00	95	877.23	CB #12	48"X36"	6.55	①					1							
7B	SR-29	50+10.00	-49.00	96	876.69	CB #42	32"X32"	3.50	③											1	
7B	SR-29	50+76.33	36.00	98	879.64	CB #12	72" DIA.	9.64	①						1						
7B	SR-29	50+76.50	-36.00	99	878.21	CB #12	48"X36"	11.52	①						1						
7B	SR-29	51+74.47	-49.25	99A	879.50	CB #42	32"X32"	3.00	③											1	
7B	SR-29	51+74.34	-36.24	100	880.22	CB #12	48"X36"	4.25	①					1							
7B	STATE RT	71+18.00	24.00	101	879.71	CB #12	48"X36"	3.50	①				1								
7B	STATE RT	71+48.00	24.00	102	879.53	CB #14	96"X36"	4.41	②									1			
7B	STATE RT	71+76.00	22.00	103	879.70	CB #12	48"X36"	4.08	①					1							
7B	STATE LT	62+18.00	16.00	105	873.63	CB #12	60" DIA.	3.55	①				1								
7B	STATE LT	62+50.06	-17.35	106	874.40	CB #12	48"X36"	3.82	①				1								
7B	STATE LT	63+30.00	-22.71	107	874.75	CB #12	48"X36"	3.65	①				1								
7B	STATE LT	63+30.00	22.65	108	874.75	CB #12	48"X36"	3.28	①				1								
TOTALS (THIS SHEET)										0	0	0	5	26	3	0	0	4	0	9	0

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PHILIP S. NELSON
No. 00108855
STATE OF TENNESSEE
10/4/2013

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DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E4

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED STORM DRAINAGE ENDWALLS TABLE AND ADDED FOOTNOTE 1 TO BOX CULVERT TABULATION

REV. 09-03-13:
ADDED ITEM NO. 611-02.01 AND STANDARD D-SDS-1 TO CATCH BASINS AND MANHOLES

REV. 10-02-13:
REVISED STATION, ELEVATION, AND DEPTH AT STRUCTURE NOS. 112 AND 119.

CATCH BASINS AND MANHOLES

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS	DEPTH (FT.)	STANDARD DRAWING	TYPE 3 611-01.03 8' - 12'	TYPE 1 611-02.01 0'-4'	TYPE 1 611-02.10 4' -8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 12 611-12.04 12' - 16'	TYPE 14 611-14.01 0'-4'	TYPE 14 611-14.02 4' - 8'	TYPE 14 611-14.05 16' - 20'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'
7B	STATE RT	70+45.00	-6.00	109	882.55	MH #3	72" DIA.	8.93	④	1											
7B	STATE RT	70+81.82	-24.17	110	880.51	CB #12	48" DIA.	6.38	①					1							
7B	STATE RT	71+18.00	-22.00	111	879.79	CB #12	48"X36"	5.33	①					1							
7B	STATE RT	71+43.07	-22.00	112	879.62	CB #14	96"X36"	4.89	②									1			
7B	STATE RT	72+10.00	-18.35	113	880.29	CB #12	48"X36"	4.25	①					1							
7B	STATE RT	72+10.00	-29.00	114	881.90	JB #1	32"X32"	4.81	⑤			1									
7B	SR-29	53+00.00	41.00	115	884.00	CB #12	48"X36"	4.25	①					1							
7B	SR-29	53+42.00	-38.90	116	884.56	CB #12	48"X36"	4.25	①					1							
7B	SR-29	54+27.00	36.00	117	888.00	CB #14	96"X36"	4.42	②									1			
7B	SR-29	54+27.54	47.76	118	888.00	CB #42	32"X32"	3.50	③											1	
7B	SR-29	54+87.71	-36.00	119	888.59	CB #12	48"X36"	4.50	①					1							
TOTALS (THIS SHEET)										1	0	1	0	6	0	0	0	2	0	1	0
TOTALS (ENTIRE PROJECT)										3	1	1	6	55	6	1	1	14	1	17	9

① D-CB-12P, D-CB-12RA, D-CB-12RB, D-CB-12RC, D-CB-12SB, D-CB-12SC, D-CB-12SD, D-CB-12B, D-CB-12LP, D-CB-12S, D-CB-12SE

② D-CB-14P, D-CB-14RB, D-CB-14S, D-CB-14SE, D-CB-14B

③ D-CB-42RB, D-CB-42S, D-CB-42SB, D-CB-42SC, D-CB-42SD

④ D-JBS-2, D-JBS-3, D-JBS-4, D-JBS-5

⑤ D-JBS-1

⑥ D-SDS-1

STORM DRAINAGE ENDWALLS

SHEET NO.	ROAD	STATION	OFFSET (FT.)	DRAINAGE CODE	STRUCTURE TYPE		STANDARD DRAWING	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	STRUC. STEEL 611-07.03 (LB.)
					PIPE SIZE	HEADWALL TYPE				
4B	SR-29	13+50.93	64.35	2	42"	TYPE 'A'	D-PE-1	4.72	79	①
4B	SR-29	13+86.95	-90.73	6	42"	TYPE 'A'	D-PE-1	4.72	79	①
4B	SR-29	20+20.00	-54.00	17	18" (3:1)	TYPE 'U'	D-PE-18A, B	0.87	79	①
5B	SR-29	27+27.82	-288.20	48	36"	TYPE 'A'	D-PE-1	3.89	73	①
5B	SR-29	29+18.74	-102.33	52B	18" (2:1)	TYPE 'B'	D-PE-9	1.07	153	①
6B	SR-29	36+25.00	57.42	64	24" (3:1)	TYPE 'U'	D-PE-24A, B	1.28	124	①
6B	BREAZEALE	46+26.05	71.09	72	60"	TYPE 'A'	D-PE-1	9.07	120	①
6B	BREAZEALE	46+57.24	-25.05	74	60"	TYPE 'A'	D-PE-1	9.07	120	①
6B	BREAZEALE	49+72.83	14.00	76	24" (3:1)	TYPE 'U'	D-PE-24A, B	1.28	124	①
7B	SR-29	50+67.00	44.50	97	24" (3:1)	TYPE 'U'	D-PE-24A, B	1.28	124	①
7B	STATE	62+00.00	22.49	104	18" (3:1)	TYPE 'U'	D-PE-18A, B	0.87	79	①
TOTALS								38.12	1154	0

① PIPE GRATE IS NOT REQUIRED FOR 18" AND 24" CULVERTS OR TYPE "A" HEADWALLS

BOX CULVERT TABULATION

STATION	LOCATION	SPAN FT.	HEIGHT FT.	LENGTH FT.	SKEW	DRAINAGE AREA ACRES	BOX CULVERT					①	DRAWING NO.	BACKFILLING ITEM 303-01.02 DWG. STD-17-17 TONS	FOUNDATION FILL MATERIAL CU. YD.
							BOX		APRON						
							CLASS "A" CONC. CU. YD.	REINF. STEEL LBS.	CLASS "A" CONC. CU. YD.	WIRE FABRIC LBS.	STEEL BAR REINF. LBS.	CULVERT EXC. CU. YD.			
27+96.02	HASSLER MILL RD	2x8	3	70			111	25140				600	STD 17-72	350	65
29+50.94	SR 29	2x6	5	120			167	33800				800	STD 17-71	600	90
30+99.37 RT	SR 29 PRIVATE DRIVE	6	3	20			20	3670				75	STD 17-51	100	9
40+85.15	SCARBRO RD	6	3	65			48	10015				235	STD 17-51	320	30
34+04.64 RT	SR 29 PRIVATE DRIVE	6	3	75			56	11425				280	STD 17-51	560	35
	BAUMGARTNER RD	6	5	41			40	7840				150	STD 17-51	200	20
TOTALS							442	91890	0	0	0	2140		2130	249

① CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN OTHER BID ITEMS.

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	2E5

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
MOVED ESTIMATED TREE QUANTITIES TO SHEET 2F.
REVISED PAVING AND STRIPING QUANTITIES.

ESTIMATED GRADING QUANTITIES

STATION TO STATION	ROAD & DRAINAGE EXC. (UNCL.)		BORROW EXCAVATION		CHANNEL EXC. C.Y.	EXCESS EXC. WASTE C.Y.	EMB. C.Y.
	COMMON - C.Y.	S. ROCK - C.Y.	UNCL. - C.Y.	S. ROCK - C.Y.			
11+52.13 to 56+17.62 (INCLUDING SIDE ROADS)	22296		2500		1000	4200	17235
TOTALS	22296	0	2500	0	1000	4200	17235

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS														
	303-01 (TON)	307-01.01 (TON)	307-01.08 (TON)	307-02.01 (TON)	307-02.02 (TON)	307-02.03 (TON)	307-02.08 (TON)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.07 (TON)	411-01.10 (TON)	411-02.10 (TON)	415-01.02 (S.Y.)	
MAINLINE	29200	0	0	6622	171	5012	4340	59.4	233	36.5	0	0	2644	1350	
RURITAN	440	111	73	0	0	0	0	1.2	4	0.4	0	44	0	270	
TIDWELL	424	0	79	0	0	0	0	1.1	4	0.2	0	46	0	50	
ROSSER	413	0	55	0	0	0	0	0.7	3	0.1	10	31	0	50	
SCOTT	260	0	44	0	0	0	0	0.7	2	0.2	3	24	0	50	
HASSLER MILL	869	0	149	0	0	0	0	2.0	8.5	0.4	0	90	0	100	
SCARBRO	260	0	44	0	0	0	0	0.7	3	0.1	3	28	0	50	
BREAZEALE	1293	0	226	0	0	0	0	3.3	12	0.2	8	132	0	50	
CARLOCK	244	0	55	0	0	0	0	0.6	3	0.7	2	24	0	50	
SCHOOL	237	0	39	0	0	0	0	0.6	2	0.1	2	22	0	50	
PANSY HILL	512	0	48	0	0	0	0	1.2	5	0.2	5	53	0	100	
STATE	2090	567	374	0	0	0	0	5.5	20	2.1	4	211	0	100	
SR 61	0	0	0	0	0	0	0	0.0	0	0.0	0	0	0	0	
D/W	3927	0	335	0	0	0	0	9.8	0	0.8	0	589	0	0	
BAUMGARTNER	79	0	15	0	0	0	0	0.0	0	0.0	0	9	0	50	
TRAFFIC MAINT.	500														
TOTALS	40744	678	1535	6622	171	5012	4340	87	301	42	37	1303	2644	2320	

STRIPING QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
716-02.04	PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING)	SY	749
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	LF	667
716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	35
716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	LF	622
716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	5
716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	2
716-04.15	PLASTIC PAVEMENT MARKING-BIKE SYMBOL/ARROW	EACH	22
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	LM	5.5
716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	LF	600
716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	LF	36
716-08.06	REMOVAL OF PAVEMENT MARKING (TURN LANE ARROW)	EACH	1
716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	LM	6.2
716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	LM	1.3
716-12.03	ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE)	LF	460
716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	LF	350
716-12.07	ENHANCED FLAT LINE THERMO (8IN BROKEN LN)	LF	230

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

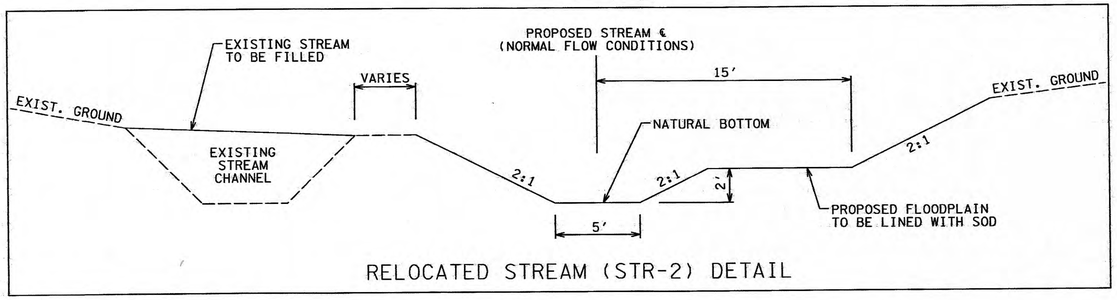
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2F

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED MODIFIED STR-2 DETAIL AND ADDED ESTIMATED TREE QUANTITIES TABLE.

REV. 06-13-13:
ADDED FILL TREATMENT DETAIL FOR OPEN BASEMENT AT TRACT 39A.

REV. 09-03-13:
MODIFIED FILL TREATMENT DETAIL TO INCLUDE SPRING DRAIN.



RELOCATED STREAM (STR-2) DETAIL

CHANNEL RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED STREAM CHANNELS (IGNORE REFERENCES TO ITEMS NOT SPECIFIED)

1. The new channel shall be excavated and stabilized during a low-water period. Rip-rap (only shown on plans), seeding and sod shall be installed immediately following channel completion. Trees shall be installed in the first planting season following channel excavation. Water shall be diverted into the new channel only after it is completely stabilized, and only during a low-water period. Stabilized means that all specified rock and erosion control blanket or flexible channel liner is in place, and seeding and sod are in place and established.

2. CHANNEL RELOCATION SEQUENCE
   a. Flag edge of the new channel top bank prior to clearing. Do not clear large trees in position to shade the new channel. Leave as many trees and shrubs as possible between toe of the new highway slope and the stream.
   b. Excavate the new channel "in the dry" by leaving areas of undisturbed earth (diversion berms) in place at both ends.
   c. Shape channel to specifications shown. Remove loose soils and debris.
   d. Place topsoil, erosion control blanket or flexible channel liner, seed and sod as specified.
   e. Remove diversion beams, beginning with the most downstream, banks and bottom elevation of the old channel should transition smoothly into the new channel. The elevations of the new channel bottom at each end of the relocation sequence should match the elevations of the existing channel, and a steady percent slope should be maintained throughout the relocated channel centerline or as specified.
   f. Install trees according to standard specifications section 802.

3. Only rip-rap shown on plans should be used in the relocated channel reach. Any other proposed rip-rap should be coordinated with the Environmental Division through the TDOT Headquarters Construction Office.

4. Requests by any agency that would require the modification of channels, ditches, elevations, rip-rap or any other stream mitigation items associated with the channel relocations shall be referred to the TDOT Environmental Division via the Headquarters Construction Office for coordination with all involved agencies and TDOT divisions.

TREES

No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Concerning **stream mitigation**, trees shall be of the variety requested and first quality. Concerning **temporary wetland mitigation**, trees shall be of the variety requested, well branched, **bare root (roots must be kept moist at all times)** and first quality. No clones or cultivars will be accepted. Any found to be incorrect species, or improperly planted, at any time prior to termination of the contract shall be removed and replaced at the contractor's expense. Stakes and wires shall be removed immediately prior to contract termination, unless otherwise directed by the engineer.

The contractor should arrange several months ahead of time to obtain the correct tree species, as some may require some time to locate.

All trees planted shall be wrapped as per section 802.07 of TDOT standard specifications for the road and bridge construction.

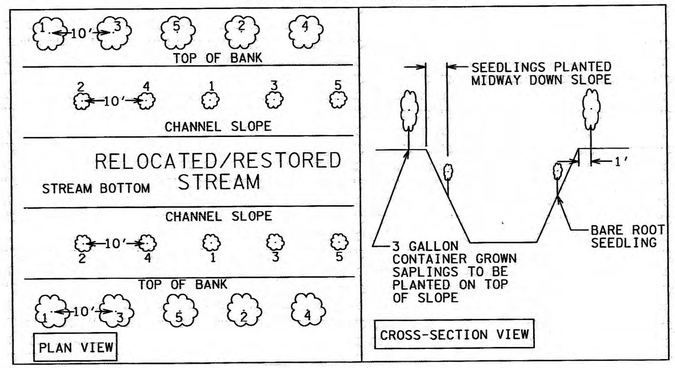
Trees shall be watered as required through the period of establishment to ensure survival.

ESTIMATED TREE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-11.01	#1 (*ACER SEGUNDO* (BOXELDER 2-5 FT CONTAINER GROWN))	27	EACH
802-12.01	#1 (*ACER SEGUNDO* (BOXELDER SEEDLING B.R.))	27	EACH
802-11.02	#2 (*ACER RUBRUM* (RED MAPLE 2-5 FT CONTAINER GROWN))	27	EACH
802-12.02	#2 (*ACER RUBRUM* (RED MAPLE SEEDLING B.R.))	27	EACH
802-11.26	#3 (*PLATANUS OCCIDENTALIS* (SYCAMORE 2-5 FT CONTAINER GROWN))	27	EACH
802-12.26	#3 (*PLATANUS OCCIDENTALIS* (SYCAMORE SEEDLING B.R.))	27	EACH
802-11.29	#4 (*QUERCUS ALBA* (WHITE OAK 2-5 FT CONTAINER GROWN))	27	EACH
802-12.29	#4 (*QUERCUS ALBA* (WHITE OAK SEEDLING B.R.))	27	EACH
802-11.37	#5 (*QUERCUS PALUSTRIS* (PIN OAK 2-5 FT CONTAINER GROWN))	27	EACH
802-12.37	#5 (*QUERCUS PALUSTRIS* (PIN OAK SEEDLING B.R.))	27	EACH
TOTAL		270	

B.R. = BARE ROOT

TREE PLANTING SCHEME FOR STR-1 AND STR-3



STREAM (STR-1) DETAIL

MODIFIED STREAM (STR-2) DETAIL
SEE SHEET 8B FOR 50-YEAR FLOODWATER ELEVATIONS

TRACT 39A OPEN BASEMENT FILL TREATMENT DETAIL (WITH SPRING)

SEQUENCE OF FILL TREATMENT:
1. PUMP OUT WATER
2. REMOVE DEBRIS AND SEDIMENT
3. PLACE SPRING DRAIN BOX NO. 1 AND PROPOSED 18" PIPE (PLACE BEDDING AND BACKFILL AT PIPE PER D-PB-1)
4. LINE BOTTOM AND ALL SIDES WITH TY IV GEOTEXTILE FABRIC
5. FILL WITH GRADED SOLID ROCK
6. COVER WITH TY IV GEOTEXTILE FABRIC
7. PLACE 12" OF TOPSOIL WITH SEED AND MULCH

RELOCATED STREAM (STR-3) DETAIL
STA. 29+41 TO STA. 38+00

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DETAIL SHEET

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

INDEX

STANDARD ROADWAY DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	1A

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED DRAINAGE - CULVERTS AND ENDWALL STANDARD DRAWING LIST. REORDERED AND UPDATED ROADWAY DESIGN STANDARDS DRAWING LIST.

REV. 09-25-13:
REVISED SHEET NUMBERS ON PRESENT LAYOUTS, RIGHT-OF-WAY LAYOUTS, AND PROPOSED LAYOUTS FROM SHEET NOS. 8, 8A, AND 8B TO SHEET NOS. 5-1, 5AA, AND 5BB.

REV. 09-03-13:
ADDED STANDARDS D-PE-9 AND D-SDS-1.

REV. 02-04-14:
REVISED REVISION DATES FOR D-CB-12B, D-CB-12P, D-CB-12RA, D-CB-12RB, D-CB-12RC, D-CB-12S, D-CB-12SB, D-CB-12SC, D-CB-12SD, D-CB-14B, D-CB-14P, D-CB-14S, D-CB-42RB, D-CB-42SB, D-CB-42SC, D-CB-42SD.

DESCRIPTION	SHT.
TITLE SHEET	1
ROADWAY INDEX AND STANDARD DRAWINGS INDEX	1A-1B
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ESTIMATED BRIDGE QUANTITIES	2A1
ESTIMATED SIGNAL QUANTITIES	2A2
ESTIMATED UTILITIES QUANTITIES	2B - 2B1
TYPICAL SECTIONS AND PAVING SCHEDULE	2C - 2C6
GENERAL NOTES AND SPECIAL NOTES	2D - 2D4
TABULATED QUANTITIES	2E - 2E5
DETAIL SHEETS	2F
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PRIVATE DRIVE AND FIELD RAMP PROFILES	12 - 17
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SIDE ROAD CROSS SECTIONS	58 – 82
UTILITIES INDEX SHEET	U1-1

NOTES: LETTERS I, O, AND Q OMITTED

SHEET NO. 8 WAS NOT USED

DWG. NO	REV.	DESCRIPTION
ROADWAY DESIGN STANDARDS		
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7		STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	05-27-01	UNDERDRAIN LATERAL DETAILS
RD-UD-6	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 SLOPES
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-TS-6	10-15-02	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	01-24-12	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
DRAINAGE - CULVERTS AND ENDWALL		
D-PB-1	04-15-07	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PE-1	02-12-76	TYPE "A" ENDWALL
D-PE-9	04-25-90	CONCRETE ENDWALLS TYPE "B"
D-PE-18A		18" CONCRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN
D-PE-24A		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
DRAINAGE-CATCH BASINS AND MANHOLES		
D-CB-12B	09-24-12	RECTANGULAR BRICK NO. 12 CATCH BASIN
D-CB-12LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN
D-CB-12P	09-24-12	PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12RA	09-24-12	PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	09-24-12	PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	09-24-12	PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	09-24-12	RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	09-24-12	4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	09-24-12	5'2" X 5'2" SQUARE CONCRETE NO. 12 CATCH BASIN

DWG. NO	REV.	DESCRIPTION
D-CB-12SD	09-24-12	7' X 7' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	08-01-12	9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-14B	09-24-12	RECTANGULAR BRICK NO. 14 CATCH BASIN
D-CB-14P	09-24-12	PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14RB	08-15-12	PRECAST CIRCULAR NO. 14RB CATCH BASIN
D-CB-14S	09-24-12	RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14SE	08-01-12	9' X 9' SQUARE CONCRETE NO. 14 CATCH BASIN
D-CB-42RB	09-24-12	PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	09-24-12	4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	09-24-12	5'2" X 5'2" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	09-24-12	7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, & 17 TYPE CATCH BASINS
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS
D-JBS-1	08-01-12	32" X 32" SQUARE CONCRETE NO. 1 JUNCTION BOX
D-JBS-2	08-01-12	4' X 4' SQUARE CONCRETE NO. 2 JUNCTION BOX
D-JBS-3	08-01-12	5'2" X 5'2" SQUARE CONCRETE NO. 3 JUNCTION BOX
D-JBS-4	08-01-12	7' X 7' SQUARE CONCRETE NO. 4 JUNCTION BOX
D-JBS-5	08-01-12	9' X 9' SQUARE CONCRETE NO. 5 JUNCTION BOX
D-SDS-1	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 SPRING DRAIN BOX
D-MH-2	08-01-12	MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	08-01-12	PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-3A	08-01-12	PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE (108" AND 120" DIA.)
D-MH-4	08-01-12	NO. 3 MANHOLE CASTINGS AND STEPS
D-MH-5	08-01-12	5'2" X 5'2" SQUARE CONCRETE NO. 3 MANHOLE
D-MH-6	08-01-12	7' X 7' SQUARE CONCRETE NO. 3 MANHOLE
D-MH-7	08-01-12	9' X 9' SQUARE CONCRETE NO. 3 MANHOLE
ROADWAY AND PAVEMENT APPURTENANCES		
RP-D-15	07-15-08	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	04-13-11	HANDICAP RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-5	04-13-11	PARALLEL CURB RAMP
RP-H-9	04-13-11	PARALLEL HANDICAP RAMP FOR 20' THRU 60' RADIUS
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-1	05-27-01	RAMPS TO SIDE ROADS
RP-S-7	07-29-96	DETAILS FOR STANDARD CONCRETE SIDEWALKS
RP-S-8	01-19-93	DETAILS FOR STANDARD CONCRETE STEPS AND PIPE HANDRAILS

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

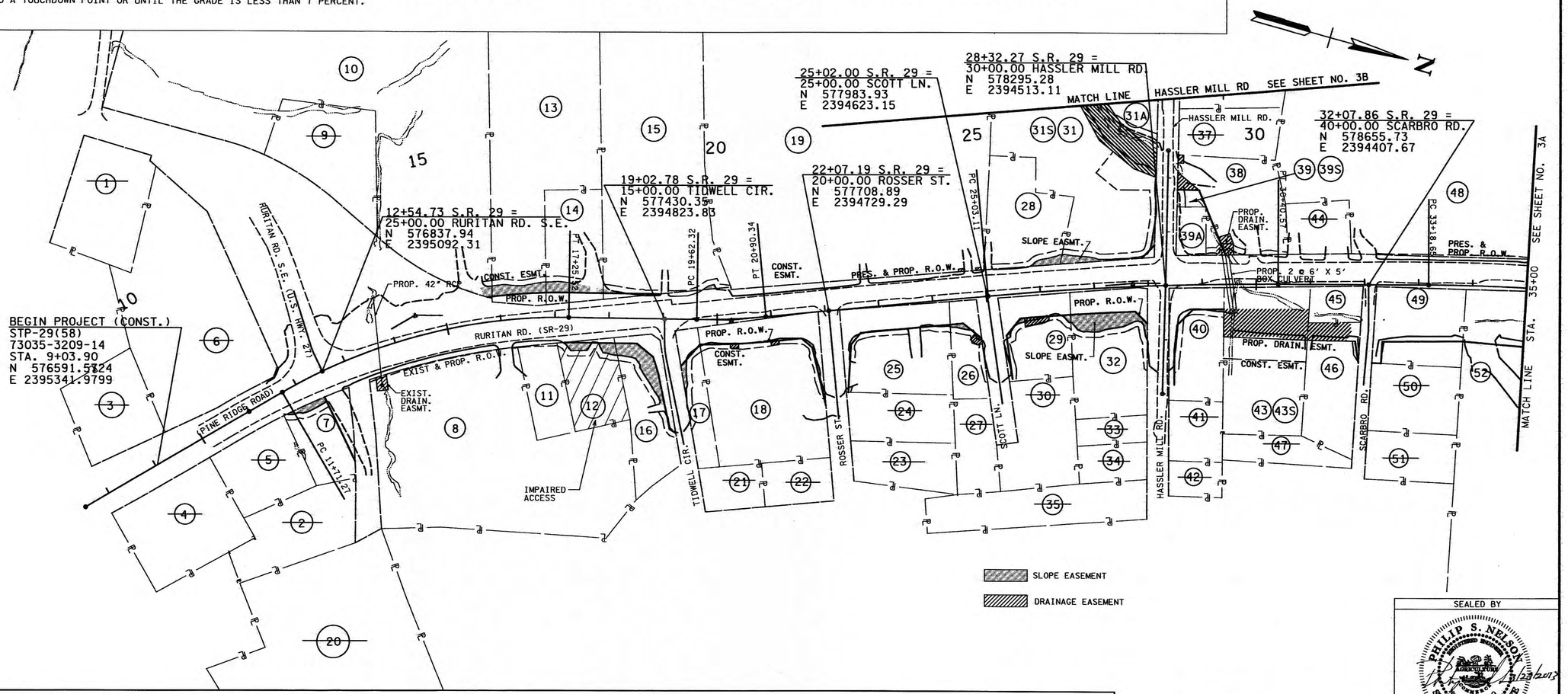
R.O.W. NOTES:

1. IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THEREFROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.
2. ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION ON PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.
3. EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.
4. WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.
5. WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.
6. NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.
7. ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.
8. ON PROJECTS WITHOUT CURB AND GUTTER, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DESIRED DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.
9. ON NON-STATE ROUTES ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	3
CONST.	2012	STP - 29(58)	3
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
ADDED TRACT 31S AND ADDED COMPLETE ACQUISITION OF TRACTS 39A AND 39S. ADDED LOSS OF ACCESS LABEL AND HATCHING ON TRACT 12. REVISED TEMP. CONST. ESMT. ON TRACT 48.

REV. 03-25-13:
ADDED TRACT 31A AND REVISED NOTE AT TRACT 12.



UTILITY OWNERS

WATER:
ROCKWOOD WATER, SEWER & GAS
110 N. CHAMBERLAIN AVENUE
ROCKWOOD, TN 37854
CONTACT PERSON: ROD KING
PHONE: 865-354-4221 EXT:103

HARRIMAN UTILITY BOARD
P.O.BOX 434, 300 N. ROANE STREET
HARRIMAN, TN 37748
CONTACT PERSON: JAMES BURNHAM
PHONE: 865-285-1022
FAX: 865-882-1024

SEWER:
HARRIMAN UTILITY BOARD
P.O.BOX 434, 300 N. ROANE STREET
HARRIMAN, TN 37748
CONTACT PERSON: JAMES BURNHAM
PHONE: 865-285-1022
FAX: 865-882-1024

ELECTRIC:
HARRIMAN UTILITY BOARD (POWER)
P.O.BOX 434, 300 N. ROANE STREET
HARRIMAN, TN 37748
CONTACT PERSON: JAMES BURNHAM
PHONE: 865-285-1022
FAX: 865-882-1024

GAS:
HARRIMAN UTILITY BOARD
P.O.BOX 434, 300 N. ROANE STREET
HARRIMAN, TN 37748
CONTACT PERSON: JAMES BURNHAM
PHONE: 865-285-1022
FAX: 865-882-1024

TELEPHONE:
AT&T
9733 PARKSIDE DRIVE
KNOXVILLE,TN 37922
CONTACT PERSON: DAVID OVERMAN
PHONE: 865-539-8534
FAX: 865-470-8519

TELEPHONE:
SPRINT COMMUNICATION
411 HUGER STREET
COLUMBIA, SC 29201
CONTACT PERSON: STEVE THOMPSON
CELL: 678-852-2726
E-MAIL: steve.r.thompson@sprint.com

CABLE:
XFINITY (COMCAST)
5720 ASHEVILLE HIGHWAY
KNOXVILLE, TN 37924
CONTACT PERSON: J.T. POPE
PHONE: 865-862-5060
FAX: 865-862-5098

100' 0' 50' 100' 150' 200'
SCALE: 1"=100'

SEALED BY
PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 001088
STATE OF TENNESSEE
4/23/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

BEGINNING OF PROJECT TO STA.35+00

SCALE: 1"=100'

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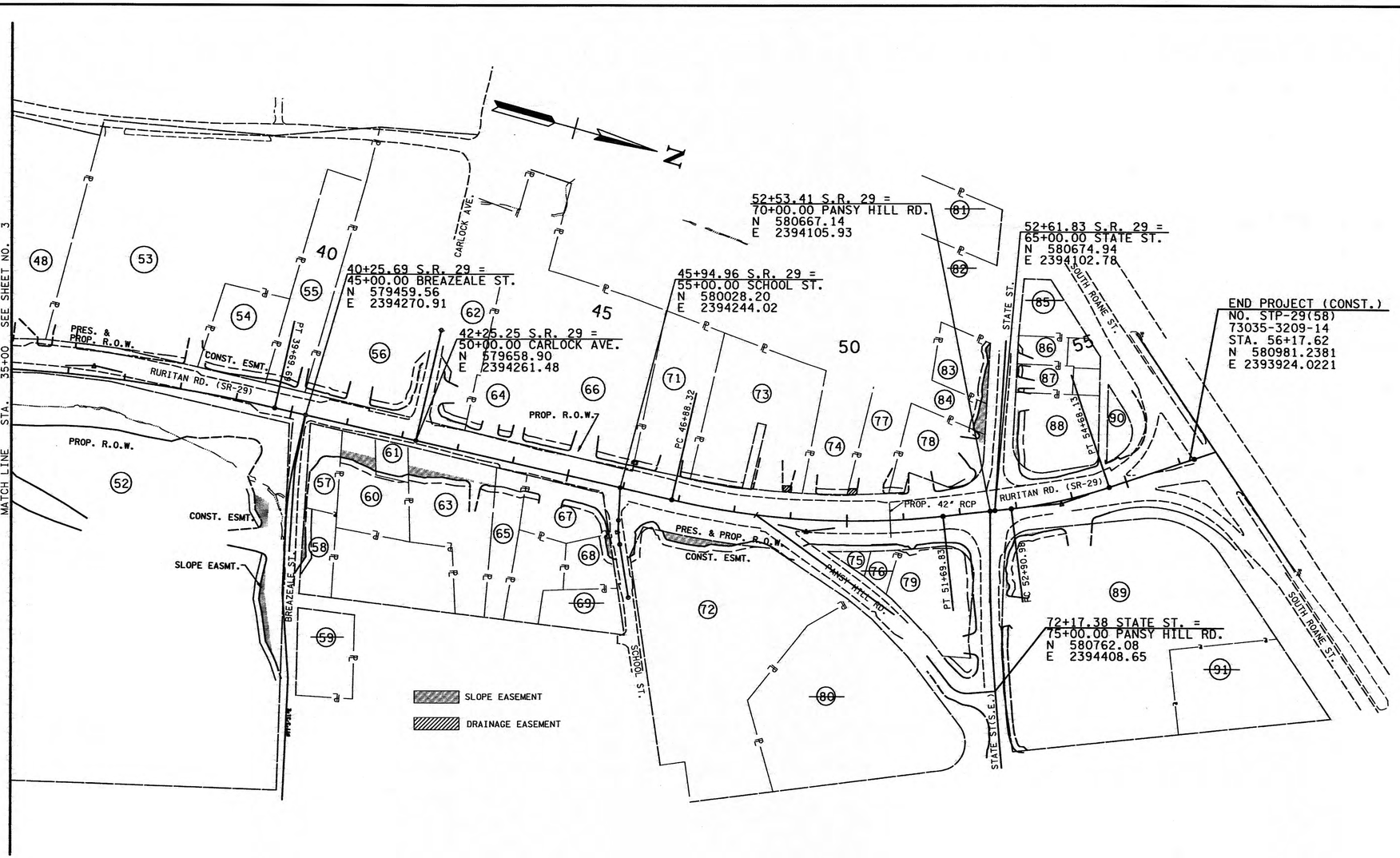
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	3A
CONST.	2012	STP - 29(58)	3A
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
REVISED CONST. ESMT. ON TRACT 48.



UTILITIES

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

(3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

SEALED BY

PHILIP S. NELSON
REGISTERED
00108859
STATE OF TENNESSEE
1/4/2013

100' 0' 50' 100' 150' 200'
SCALE: 1"=100'

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA.35+00 TO
END OF PROJECT
SCALE: 1"=100'

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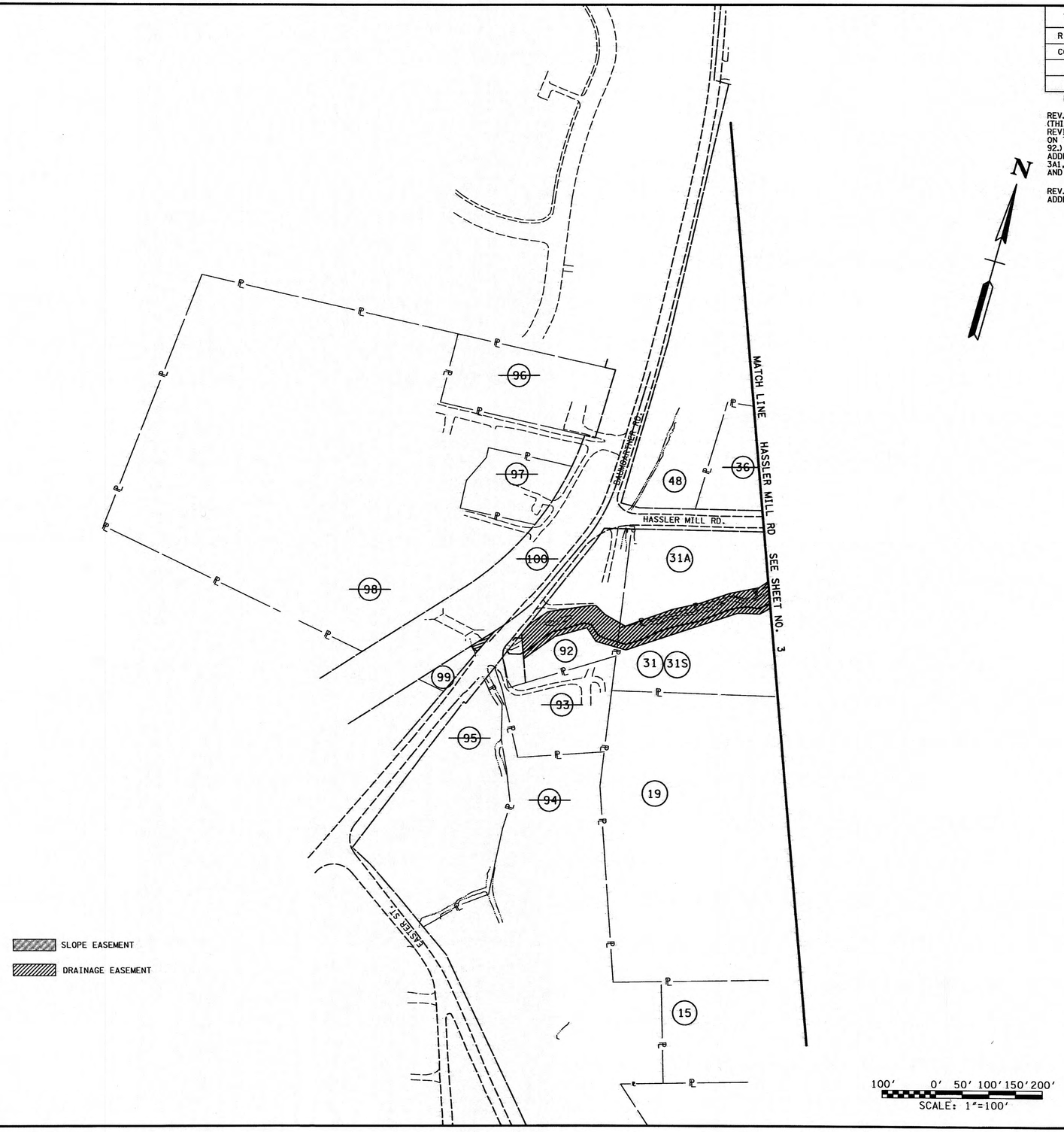
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	3A1
CONST.	2012	STP - 29(58)	3B

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN 9-13-12 REVISION, WHICH INCLUDED R.O.W. FEATURES ON TRACT 100 AND THE ADDITION OF TRACT 92.)
ADDED THIS SHEET TO THE R.O.W. PLANS AS 3A1, REMOVED ALL EASEMENT FROM TRACT 100 AND STRUCK THROUGH TRACT 100 LABEL.

REV. 03-25-13:
ADDED TRACT 31A AND LABELS FOR 31 AND 31S.



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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
3/25/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

BAUMGARTNER ROAD
AND HASSLER MILL ROAD
SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	3B
CONST.	2012	STP-29(58)	3C

ROANE COUNTY 73035-3209-14

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
~~1~~	~~SOUTH HARRIMAN CHURCH OF GOD~~	~~36J-F~~	~~10.00~~	~~S8~~	~~195~~	~~0.737~~		~~0.737~~				~~0.737~~				
~~2~~	~~BRUCE E. WALKER & PAULA WALKER~~	~~36K-A~~	~~40.01~~	~~R13~~	~~340~~		~~0.608~~	~~0.608~~					~~0.608~~			
~~3~~	~~FAIRMONT INVESTMENT CORP.~~	~~36J-F~~	~~12.00~~	~~1213~~	~~387~~	~~0.522~~		~~0.522~~				~~0.522~~				
~~4~~	~~R. ALLEN WILLIAMS & SANDRA WILLIAMS~~	~~36K-A~~	~~37.00~~	~~Q15~~	~~262~~	~~0.806~~		~~0.806~~				~~0.806~~				
~~5~~	~~R. ALLEN WILLIAMS & SANDRA WILLIAMS~~	~~36K-A~~	~~38.00~~	~~L21~~	~~446~~		~~0.476~~	~~0.476~~					~~0.476~~			
~~6~~	~~GARY BAKER D/B/A FAIRMONT INVESTMENT GROUP~~	~~36J-F~~	~~11.00~~	~~1160~~	~~154~~	~~1.898~~		~~1.898~~				~~1.898~~				
7	BRENDA M GOLDSTON ET AL	36K-A	39.00	J21	95		0.365	0.365		3310 S.F.	3310 S.F.		0.289		723	856
8	ALLAN BLAKE GOLDSTON ET AL	36K-A	41.00	H22-J21	535-98		2.803	2.803					2.803			454
	~~DARREL KEITH GOLDSTON & ROCKY LYNN ADCOX~~															
	~~RITCHIE LYNN ADCOX & GARY BAKER~~															
~~9~~	~~RAYMOND T BREAZEALE & LINDA A M BREAZEALE~~	~~36G-D~~	~~7.00~~	~~P20~~	~~833~~	~~0.724~~		~~0.724~~				~~0.724~~				
10	JIMMY PAYNE AND STEVE BYERLY	36G-D	6.00	1242	04	6.419		6.419	15 S.F.		15 S.F.	6.419			389	159
11	JAMES E LOWERY & KATHRYN A LOWERY	36K-A	42.00	1394	640		0.578	0.578					0.578			163
① 12	HUGH RUSSELL SR & CAROLYN	36K-A	43.00	1309	694		0.367	0.367		355 S.F.	355 S.F.		0.359		890	1280
13	JIMMY PAYNE AND STEVE BYERLY	36G-D	6.00	1242	04	2.241		2.241	1821 S.F.		1821 S.F.	2.199			1761	1005
14	BETTY BULLINGTON	36G-D	5.00	C18	810	0.508		0.508	1824 S.F.		1824 S.F.	0.466			1524	621
15	EDGAR R BOWERS & KAY S. BOWERS	36G-D	4.00	1232	876	2.510		2.510	595 S.F.		595 S.F.	2.496			275	1674
16	CHARLES TONY CLOUGH	36K-A	44.00	V14	364		0.574	0.574		3795 S.F.	3795 S.F.		0.487		3445	2024
17	CHARLES R LAMANCE & REBECCA LAMANCE	36G-J	2.00	1406	427		0.243	0.243		2032 S.F.	2032 S.F.		0.196		431	1482
18	ELTHA ROSSER	36G-J	3.00	1330	728		1.314	1.314		0.241	0.241		1.073	225	13	1996
19	WILLARD PARK CO CEMETARY	36G-D	3.00	Z19	441	7.632		7.632				7.632		100		
~~20~~	~~CHANE D GOLDSTON & BRENDA GOLDSTON~~	~~36K-A~~	~~40.00~~	~~A14~~	~~325~~		~~2.868~~	~~2.868~~					~~2.868~~			
~~21~~	~~CHARLES R LAMANCE & REBECCA LAMANCE~~	~~36G-J~~	~~1.00~~	~~A18~~	~~87~~		~~0.210~~	~~0.210~~					~~0.210~~			
~~22~~	~~W T LUFFMAN & NORMA LUFFMAN~~	~~36G-J~~	~~4.00~~	~~G6~~	~~35~~		~~0.235~~	~~0.235~~					~~0.235~~			
~~23~~	~~REBECCA A BROWN~~	~~36G-J~~	~~6.01~~	~~1381~~	~~501~~		~~0.372~~	~~0.372~~					~~0.372~~			
~~24~~	~~REBECCA ANN BROWN~~	~~36G-J~~	~~6.02~~	~~F22~~	~~485~~		~~0.403~~	~~0.403~~					~~0.403~~			
25	REBECCA A BROWN	36G-J	6.00	1370	35		0.745	0.745		0.235	0.235		0.510		64	1765
26	REBECCA A BROWN	36G-J	6.00	1370	35		0.246	0.246		2652 S.F.	2652 S.F.		0.185	281	239	1005
~~27~~	~~KELLIE D CLARK~~	~~36G-J~~	~~8.00~~	~~D21~~	~~581~~		~~0.302~~	~~0.302~~					~~0.302~~			
28	GEORGE D WHALEY	36G-D	2.00	1298	659	0.605		0.605				0.605			653	1264
29	WILLIAM GREGORY SMITH & ALISA C SMITH	36G-J	10.00	1418	719		0.438	0.438		0.149	0.149		0.289	537	318	1448
~~30~~	~~WILLIAM GREGORY SMITH & ALISA C SMITH~~	~~36G-J~~	~~9.00~~	~~H18~~	~~632~~		~~0.589~~	~~0.589~~					~~0.589~~			
31	GEORGE D WHALEY	36G-D	1.01	1298	659	3.434		3.434	259 S.F.		259 S.F.	3.428			1242	3049
② 31S	GEORGE D WHALEY	36G-D	1.01	1298	659	2.402		2.402				2.402		18350		2936
② 31A	WILLOW CREEK PROPERTIES, LLC	36G-D	1.00	1129	591	1.026		1.026				1.026		2198		1036
32	MARGIE CRISCILLIS	36G-J	11.00	Y8	627		0.748	0.748		0.145	0.145		0.603		3726	2092
~~33~~	~~DOUGLAS L COFER & KAREN S COFER~~	~~36G-J~~	~~12.00~~	~~Q17~~	~~154~~		~~0.150~~	~~0.150~~					~~0.150~~			
~~34~~	~~SANDRA LEAH MOORE~~	~~36G-J~~	~~13.00~~	~~Q20~~	~~651~~		~~0.204~~	~~0.204~~					~~0.204~~			
~~35~~	~~JOHN MICHAEL POOLE & A JANE BERTH~~	~~36G-J~~	~~14.00~~	~~1182~~	~~191~~		~~0.654~~	~~0.654~~					~~0.654~~			
~~36~~	~~LUCINDA SUE GOOCH~~	~~36G-E~~	~~10.00~~	~~WB27~~	~~720~~	~~0.516~~		~~0.516~~				~~0.516~~				
~~37~~	~~ALMA JOY MOORE~~	~~36G-E~~	~~9.00~~	~~1164~~	~~983~~	~~0.390~~		~~0.390~~				~~0.390~~				
38	FAYE GOLDSTON	36G-E	7.00	U6	297	0.632		0.632				0.632		395	90	905
38S	FAYE GOLDSTON	36G-E	7.00	U6	297	0.632		0.632				0.632		1142		
39	LUCINDA SUE GOOCH	36G-E	8.01 & 8.02	WB27	720	3098 S.F.		3098 S.F.				3098 S.F.		278	614	1687
39S	LUCINDA SUE GOOCH	36G-E	8.01 & 8.02	WB27	720	3098 S.F.		3098 S.F.	3098 S.F.		3098 S.F.					
39A	ZENIA GOOCH ESTATE	36G-E	8.00	1100	57	0.113		0.113	497 S.F.		497 S.F.	0.102			407	1155
40	LUCINDA SUE GOOCH	36G-F	16.00	1283	592		0.422	0.422		0.141	0.141		0.281		193	1518
~~41~~	~~WILLIAM E JOHNSON & JANICE JOHNSON~~	~~36G-F~~	~~15.00~~	~~L22~~	~~501~~		~~0.257~~	~~0.257~~					~~0.257~~			
~~42~~	~~JEREMIAH ADKISSON~~	~~36G-F~~	~~14.00~~	~~1366~~	~~224~~		~~0.148~~	~~0.148~~					~~0.148~~			
43	JERRY W LOWERY	36G-F	17.00	1409	516		0.957	0.957		0.342	0.342		0.615			
43S	JERRY W LOWERY	36G-F	17.00	1409	516		0.615	0.615					0.615			0.141 AC
~~44~~	~~AMY CASTONGUAY~~	~~36G-E~~	~~6.00~~	~~1396~~	~~200~~	~~0.261~~		~~0.261~~				~~0.261~~				
45	VIVIAN S MANIS	36G-F	18.00	K18	531		0.149	0.149		0.149	0.149					
46	HERMAN LOWERY	36G-F	6.00	1304	621		0.511	0.511		3402 S.F.	3402 S.F.		0.433			182
~~47~~	~~BONNIE BRANDON~~	~~36G-F~~	~~6.01~~	~~P21~~	~~646~~		~~0.246~~	~~0.246~~					~~0.246~~			

① THE REMAINING AREA OF TRACT 12 IS IMPAIRED ACCESS
② CONSTRUCTION EASEMENT FOR THIS TRACT USED FOR TEMP. SEDIMENT FILTER BAG AND SLOPE DEVELOPMENT DUE TO STREAM RELOCATION

REV. 04-11-11:
REVISED TABLE INFORMATION FOR TRACTS 7, 13, 14, 17, 19, 26, 29, 38, 39, 43, 46, AND 48.
ADDED TRACT 39A.

REV. 02-24-12:
MOVED TRACT 48 TO SHEET 3C.
REVISED TABLE INFORMATION FOR TRACTS 12 AND 29.
STRUCK THROUGH UNUSED TRACTS.

REV. 09-13-12:
REVISED EASEMENTS FOR TRACT 12 AND ADDED TRACTS 31S, 38S, 39S, AND 43S.
REVISED PROPERTY OWNER FOR TRACTS 8, 11, 12, 13, 17, 18, 23, 26, 28, 29, 31 36, 37, 39A, 40, 42, 43, 44 AND 46.

REV. 01-11-13:
REVISED PERMANENT DRAINAGE EASEMENT AREA FOR TRACT 38S.
ADDED FOOTNOTES FOR TRACTS 12 AND 31S.

REV. 03-25-13:
ADDED TRACT 31A. ADJUSTED PERM. DRAINAGE AND CONST. EASEMENT VALUES FOR TRACT 31S.

REV. 06-13-13:
REVISED PERM. DRAINAGE EASEMENT VALUES FOR TRACTS 31A AND 31S.

SEALED BY

PHILIP S. NELSON
LICENSED LANDSCAPE ARCHITECT
No. 001088563
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP-29(58)	3C
CONST.	2012	STP-29(58)	3D

ROANE COUNTY 73035-3209-14

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
48	SOUTH HARRIMAN BAPTIST CHURCH	36 G-E	5.00	1420	294	5.902		5.902				5.902				1061
49	JIMMY E BARNES & PATRICIA E BARNES	36G-F	5.00	1093	534		0.543	0.543		0.391	0.391		0.152			44
~~50~~	~~DANNY THOMAS & SUSAN L THOMAS~~	~~36G-F~~	~~5.01~~	~~L17~~	~~445~~		~~0.475~~	~~0.475~~					~~0.475~~			
~~51~~	~~JOHN W MOORE & MARGARET M MOORE~~	~~36G-F~~	~~4.00~~	~~D22~~	~~950~~		~~0.342~~	~~0.342~~					~~0.342~~			
52	ROANE COUNTY BOARD OF EDUCATION	36G-F	1.00	1034	430		9.815	9.815		1.691	1.691		8.124		2068	0.250 AC
53	SOUTH HARRIMAN BAPTIST CHURCH	36G-E	4.00	1249	670	3.567		3.567	73 S.F.		73 S.F.	3.565				620
54	SOUTH HARRIMAN BAPTIST CHURCH	36G-E	3.00	G10	34	0.425		0.425	663 S.F.		663 S.F.	0.410				823
55	SOUTH HARRIMAN BAPTIST CHURCH	36G-E	2.00	O13	420	0.643		0.643	517 S.F.		517 S.F.	0.631			27	544
56	ERIC EDWARD COKER & GREGRORY SCOTT COKER	36G-E	1.00	T21	329	2.036		2.036	1907 S.F.		1907 S.F.	1.992			101	1926
57	PATSY O MCGILL	36B-G	V16	651		0.195		0.195		0.195	0.195	0.195				
58	BEECHER L TINCH	36B-G	7.00	V19	484	0.195		0.195				0.195			461	1083
~~59~~	~~B F HOPE & HAZEL HOPE~~	~~36B-H~~	~~7.00~~	~~1012~~	~~369~~		~~0.347~~	~~0.347~~					~~0.347~~			
60	MICHAEL TOROK & TERESA TOROK	36B-G	9.00	W21	459		0.396	0.396		2050 S.F.	2050 S.F.		0.349		1032	848
61	CLARY P FOOTE MD, TRUSTEE	36B-G	9.01	O21	214		3746 S.F.	3746 S.F.		3731 S.F.	3731 S.F.		15 S.F.			
62	ROBERT N COPELAND	36B-F	12.00	U19/W18	601/12	0.427		0.427	1928 S.F.		1928 S.F.	0.383			85	927
63	RUPERT C HESTER, JR	36B-G	5.00	1355	595		0.701	0.701		0.199	0.199		0.502		1157	1310
64	PAUL R TRAUGHBER	36B-F	11.00	1018	230	1.277		1.277	1030 S.F.		1030 S.F.	1.253			2	411
65	DENNIS RAY KEELING	36B-G	4.00	W19	456		0.271	0.271		1683 S.F.	1683 S.F.		0.232		19	521
66	MARK LONG STOWERS ET AL	36B-F	10.00	1185	647	1.321		1.321	2264 S.F.		2264 S.F.	1.269		20		1001
67	MARION KITTRELL	36B-G	1.00	N13	290		0.317	0.317		0.107	0.107		0.210			829
68	TOMMY G GOLDSTON & JEFF A GOLDSTON	36B-G	2.00	1045	639		0.175	0.175					0.175		287	550
~~69~~	~~JOSHUA A FINK & KIRSY R MCGARRAH~~	~~36B-G~~	~~3.00~~	~~1142~~	~~946~~		~~0.230~~	~~0.230~~					~~0.230~~			
~~70~~	~~N/A~~															
71	LANN DAVID WEBB & MILDRED F WEBB	36B-F	6.00	J22	171	0.663		0.663	356 S.F.		356 S.F.	0.655		30		372
72	HARRIMAN CITY SCHOOL BOARD OF DIRECTORS	36B-J	6.01	J13	328		2.456	2.456					2.456		1349	2234
73	LANN DAVID WEBB & MILDRED F WEBB	36B-F	6.00	J22	171	1.047		1.047	312 S.F.		312 S.F.	1.040		150		1035
74	HASKELL HILL	36B-F	5.00	K22	294	0.397		0.397	16 S.F.		16 S.F.	0.397				498
75	HEIDI M. FROSS (AIKENS)	36B-J	5.00	1287	453		1638 S.F.	1638 S.F.		1638 S.F.	1638 S.F.					
~~76~~	~~ANN MCKINNEY & SHELBY SKILES~~	~~36B-J~~	~~4.00~~	~~C15~~	~~49~~		~~2941 S.F.~~	~~2941 S.F.~~					~~2941 S.F.~~			
77	CHANDUBHAI PATEL	36B-F	3.00	1395	866	0.293		0.293				0.293		160	1	105
78	CHANDUBHAI PATEL	36B-F	3.00	1395	866	0.390		0.390	486 S.F.		486 S.F.	0.379			176	511
79	DENNIS GARY BAKER D/B/A GARY BAKER LEASING	36B-J	3.00	X21/Q17	164/544		0.519	0.519		446 S.F.	446 S.F.		0.509			1303
~~80~~	~~ROANE COUNTY BOARD OF EDUCATION~~	~~36B-J~~	~~6.00~~	~~N/A~~	~~N/A~~		~~1.911~~	~~1.911~~					~~1.911~~			
~~81~~	~~JAMES H BOLES & BRENDA BOLES~~	~~36B-D~~	~~2.00~~	~~Y21~~	~~45~~	~~0.359~~		~~0.359~~				~~0.359~~				
~~82~~	~~FAITH PRIMITIVE CHURCH TRUSTEES~~	~~36B-D~~	~~3.00~~	~~C16~~	~~78~~	~~0.315~~		~~0.315~~				~~0.315~~				
83	JAMES E WRIGHT & P GARNER & AMELIA W WRIGHT	36B-F	1.00	R21	53	0.230		0.230				0.230			695	767
84	PATRICIA WRIGHT ET AL	36B-F	2.00	W11	348	0.160		0.160				0.160			847	371
~~85~~	~~DONALD LOMBARD & PRECILLA LOMBARD~~	~~36B-E~~	~~6.00~~	~~1247~~	~~787~~	~~0.196~~		~~0.196~~				~~0.196~~				
86	KF LLC	36B-E	5.00	1132	372	0.101		0.101				0.101			13	95
87	KF LLC	36B-E	4.00	1132	372	0.115		0.115				0.115			107	200
88	KF LLC A LIMITED LIABILITY COMPANY	36B-E	3.00	1132	372	0.451		0.451	523 S.F.		523 S.F.	0.439			319	1179
89	SHADOWBLUFF, LP	36B-J	1.00	X20	164		3.198	3.198		2582 S.F.	2582 S.F.		3.139		267	2802
~~90~~	~~TERRY G KEELING~~	~~36B-E~~	~~1.00~~	~~W19~~	~~459~~	~~3861 S.F.~~		~~3861 S.F.~~				~~3861 S.F.~~				
~~91~~	~~AUTOZONE, INC~~	~~36B-J~~	~~1.01~~	~~D20~~	~~451~~		~~0.794~~	~~0.794~~					~~0.794~~			
92	DOROTHY C WRIGHT	36G-D	11	1269	270	0.792		0.792				0.792		0.214 AC		
~~93~~	~~BASIL MAYNARD HUMAN, JR., ETUX~~	~~36G-D~~	~~10~~	~~A8~~	~~413~~	~~0.682~~		~~0.682~~				~~0.682~~				
~~94~~	~~RON GUINN~~	~~36G-D~~	~~8.01~~	~~G20~~	~~823~~	~~4.340~~		~~4.340~~				~~4.340~~				
~~95~~	~~ALVIN DEWEY SAMPSON~~	~~36G-D~~	~~9~~	~~1083~~	~~265~~	~~1.721~~		~~1.721~~				~~1.721~~				
~~96~~	~~GLADYS COLLINS~~	~~36G-B~~	~~32~~	~~WB18~~	~~768~~	~~0.913~~		~~0.913~~				~~0.913~~				
~~97~~	~~DANNY R. ORAN, ETUX~~	~~36G-B~~	~~34.01~~	~~D22~~	~~509~~	~~0.442~~		~~0.442~~				~~0.442~~				
~~98~~	~~BRIAN L. WALLS~~	~~36G-B~~	~~33~~	~~P21~~	~~413~~	~~8.266~~		~~8.266~~				~~8.266~~				
99	ELAINE G MARSH, TRUSTEE & MARTHA M GALYON	36G-C	1	E17	383	3679 S.F.		3679 S.F.				3679 S.F.		389		
~~100~~	~~TENNESSEE VALLEY AUTHORITY~~	~~37~~	~~46~~	~~NA~~	~~NA~~											

REV. 04-11-11:
REVISED TABLE INFORMATION FOR TRACTS 49, 52, 53, 54, 55, 58, 75, 76, 78, 79, AND 90.

REV. 02-24-12:
RESTORED TRACT 48 TO THE TABLE.
REVISED TABLE INFORMATION FOR TRACTS 55, 75, AND 76.
STRUCK THROUGH UNUSED TRACTS.

REV. 04-11-12:
REVISED TABLE INFORMATION FOR TRACT 89.

REV. 09-13-12:
REVISED PROPERTY OWNER FOR TRACTS 60, 64, 66, 69, 77, 78, 84, 85, 86, 87 AND 88.
ADDED TRACTS 92 TO 100.

REV. 01-11-13:
REMOVED EASEMENT FROM TRACT 100 AND STRUCK THRU TRACT 100.
CHANGED TEMP. CONST. ESMT. ON TRACT 99 TO PERMANENT DRAINAGE ESMT.
REVISED CONST. ESMT. ON TRACT 48.

REV. 03-25-13:
REVISED CONST. ESMT. ON TRACT 48.

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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
00108859
STATE OF TENNESSEE
3/29/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

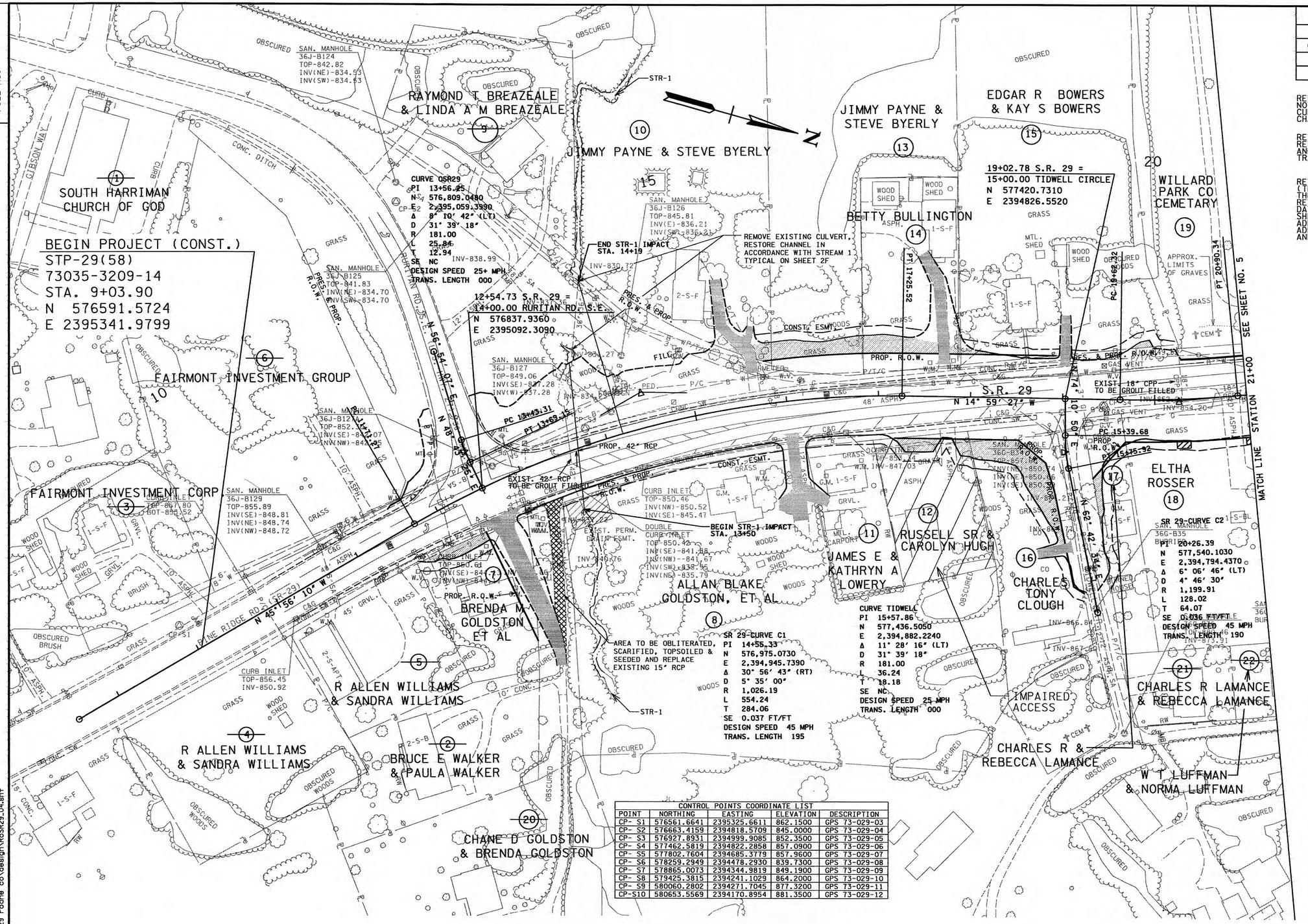
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	4
CONST.	2012	STP - 29(58)	4

73035-3209-14

REV. 04-11-11:
NOTED TO REMOVE EXISTING CULVERT AND RESTORE STREAM CHANNEL.

REV. 03-02-12:
REVISED DRIVEWAY FOR TRACT 12 AND RELOCATED DRIVEWAY FOR TRACT 18.

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN THE 9-13-12 REVISION. ALL REVISION NOTES ON SHEET 4A DATED 9-13-12 APPLY TO THIS SHEET.)
ADDED IMPACT LABELS FOR STR-1.
ADDED IMPAIRED ACCESS LABEL AND HATCHING ON TRACT 12.



CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.0073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

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REGISTERED LANDSCAPE ARCHITECT
AGRICULTURE
No. 00108959
STATE OF TENNESSEE
1/15/2013

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

Sharp & Bales Surveying Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	4A
CONST.	2012	STP - 29(58)	4A

73035-3209-14

REV. 03-02-12:
REVISED EASEMENTS FOR TRACTS 12 AND 18.

REV. 09-13-12:
REVISED EASEMENTS FOR TRACT 12.
REVISED PROPERTY OWNERS FOR TRACTS 8, 10, 11, 12, 13, 17, & 18.

SOUTH HARRIMAN CHURCH OF GOD (1)

BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799

FAIRMONT INVESTMENT GROUP (6)

FAIRMONT INVESTMENT GROUP (3)

RAYMOND T BREAZEALE & LINDA A M BREAZEALE (9)

JIMMY PAYNE AND STEVE BYERLY (10)

JIMMY PAYNE & STEVE BYERLY (13)

BETTY BULLINGTON (14)

EDGAR R. BOWERS & WILLARD PARK
KAY S. BOWERS (15)

CO CEMETARY (19)

12+54.73 S.R. 29 =
14+00.00 RURITAN RD. S.E.
N 576837.9360
E 2395092.3090

19+02.78 S.R. 29 =
15+00.00 TIDWELL CIRCLE
N 577420.7310
E 2394826.5520

S.R. 29

SEE SHEET NO. 5A

STATION 21+00 MATCH LINE

EXISTING PERMANENT DRAINAGE EASEMENT

R ALLEN WILLIAMS & SANDRA WILLIAMS (5)

R ALLEN WILLIAMS & SANDRA WILLIAMS (4)

BRUCE E WALKER & PAULA WALKER (2)

BRENDA M. GOLDSTON ET AL (7)

ALLAN BLAKE GOLDSTON ET AL (8)

JAMES E & KATHRYN A LOWERY (11)

RUSSELL SR & CAROLYN HUGH (12)

IMPAIRED ACCESS

CHARLES TONY CLOUGH (16)

ELTHA ROSSER (18)

CHARLES R & REBECCA LAMANCE (17)

CHARLES R LAMANCE & REBECCA LAMANCE (21)

CHANE D GOLDSTON & BRENDA GOLDSTON (20)

PERM. DRAINAGE ESMT.
DETAIL "A"

A	R=1245.91' L=126.28'	D	20+37.23 46.00'	I	S71°46'39"W 7.50'
B	20+22.78 46.00'	E	N71°46'39"E 7.50'	G	S18°13'21"E 15.00'
C	R=1245.91' L=15.00'	F	20+37.18 53.50'	H	20+22.82 53.50'

PERM. DRAINAGE ESMT.
DETAIL "B"

A	N21°06'13"W 61.92'	D	21+10.50 46.00'	I	S21°06'13"E 15.00'
B	20+95.50 46.00'	E	N68°53'47"E 7.50'	G	20+95.50 53.50'
C	N21°06'13"W 15.00'	F	21+10.50 53.50'	H	S68°53'47"W 7.50'

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

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PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE
No. 0010895
STATE OF TENNESSEE
25002

COORDINATE VALUES ARE NAD/83(1990) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED R.O.W. LAYOUT

BEGIN PROJ.TO 21+00.00
SCALE: 1"=50'

Survey & Design Division

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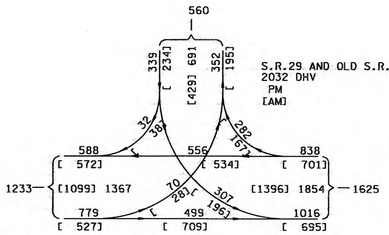
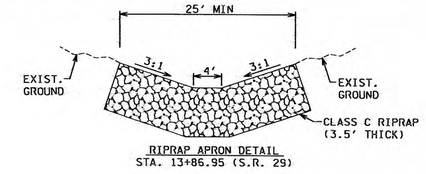
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	4B
CONST.	2012	STP - 29(58)	4B

73035-3209-14

REV. 04-11-11:
NOTED TO REMOVE EXISTING CULVERT AND RESTORE STREAM CHANNEL.

REV. 03-02-12:
REVISED DRIVEWAY FOR TRACT 12, ADDED RETAINING WALL AT TRACT 12, AND RELOCATED DRIVEWAY FOR TRACT 18.

REV. 04-11-12:
REVISED RETAINING WALL NOTES AT TRACT 12.

REV. 01-11-13:
REVISED RIP-RAP DEPTH FOR RIP-RAP APRON IN STR-1 AND ADDED IMPACT LABELS FOR STR-1. ADDED ASPHALT TRANSITION NOTE AND DIMENSION TO RURITAN ROAD. REMOVED DRIVEWAY AND RETAINING WALL ON TRACT 12.

REV. 10-02-13:
ADDED LOWERED CURB STA. 17+76.25, ADDED DRAINAGE NODE 01A AND 24" PIPE FROM 01A TO 03. REVISED DRAINAGE NODES 09 AND 11. MODIFIED CURB RAMPS AT TIDWELL CIRCLE. REVISED CALLOUT TO REMOVE EX. CATCH BASIN NEAR STA. 12+55 (RT.).

*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

01A *12 GT. EL. 851.80 OUT. EL. 845.58
01 *12 GT. EL. 851.90 OUT. EL. 847.82
02 EW INV. EL. 837.22
03 *12 GT. EL. 849.62 IN. EL. SE 841.77 IN. EL. NW 843.95 IN. EL. E 836.33 OUT. EL. 836.16
04 *14 GT. EL. 849.61 IN. EL. 844.29 OUT. EL. 844.12
05 *14 GT. EL. 851.86 IN. EL. SE 847.67 IN. EL. NW 847.53 IN. EL. E 833.77 OUT. EL. 833.60
06 EW INV. EL. 832.50
07 *12 GT. EL. 849.68 IN. EL. 845.60 OUT. EL. 845.10
08 *12 GT. EL. 851.93 IN. EL. 847.85 OUT. EL. 847.68
09 *12 GT. EL. 854.22 OUT. EL. 849.88
10 *12 GT. EL. 852.28 IN. EL. 848.20 OUT. EL. 848.03
11 *12 GT. EL. 855.64 IN. EL. 851.16 OUT. EL. 850.99
12 *12 GT. EL. 856.33 IN. EL. N 851.71 IN. EL. E 852.25 OUT. EL. 851.50
13 *12 GT. EL. 859.42 IN. EL. 855.34 OUT. EL. 855.17
14 *42 GT. EL. 866.00 IN. EL. 860.91 OUT. EL. 860.74
15 *14 GT. EL. 856.10 OUT. EL. 852.01
16 *42 GT. EL. 865.00 OUT. EL. 861.00
17 EW INV. EL. 849.82
18 *14 GT. EL. 856.63 IN. EL. 850.17 OUT. EL. 850.00
19 *12 GT. EL. 858.79 IN. EL. N. 851.39 IN. EL. E. 854.46 OUT. EL. 851.22
20 *42 GT. EL. 858.00 OUT. EL. 854.50

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PHILIP S. NELSON
REGISTERED
No. 0010885
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

BEGIN PROJ. TO STA. 21+00.00

SCALE: 1"= 50'

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Division

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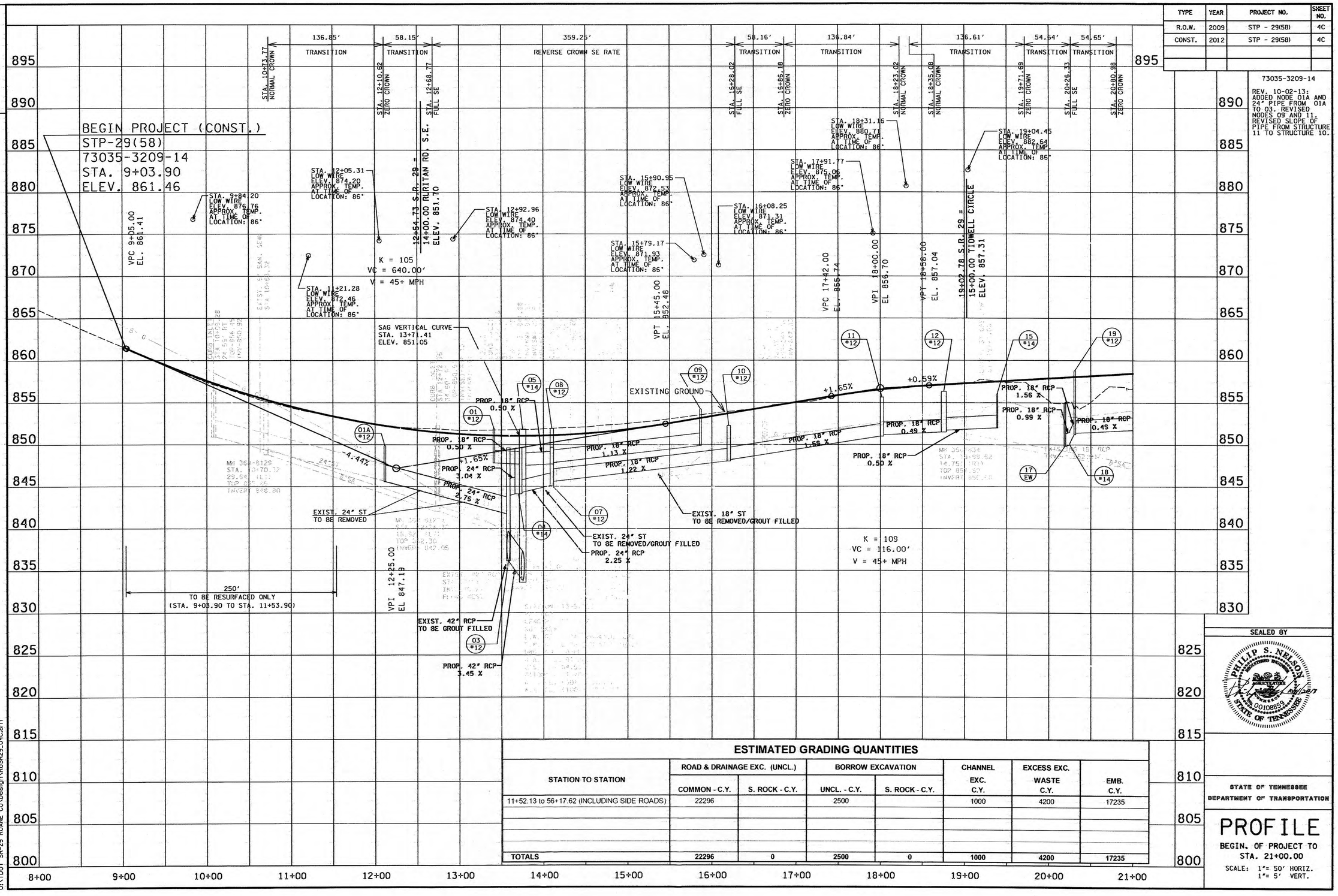
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	4C
CONST.	2012	STP - 29(58)	4C

73035-3209-14

REV. 10-02-13: ADDED NODE 01A AND 24" PIPE FROM 01A TO 03. REVISED NODES 09 AND 11. REVISED SLOPE OF PIPE FROM STRUCTURE 11 TO STRUCTURE 10.



ESTIMATED GRADING QUANTITIES

STATION TO STATION	ROAD & DRAINAGE EXC. (UNCL.)		BORROW EXCAVATION		CHANNEL EXC. C.Y.	EXCESS EXC. WASTE C.Y.	EMB. C.Y.
	COMMON - C.Y.	S. ROCK - C.Y.	UNCL. - C.Y.	S. ROCK - C.Y.			
11+52.13 to 56+17.62 (INCLUDING SIDE ROADS)	22296		2500		1000	4200	17235
TOTALS	22296	0	2500	0	1000	4200	17235

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PHILIP S. NELSON REGISTERED ENGINEER AGENT AUTHORIZATION 00108859 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

BEGIN. OF PROJECT TO STA. 21+00.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	5
CONST.	2012	STP - 29(58)	5

73035-3209-14

REV. 04-11-11:
REVISED PROPERTY LINES, EASEMENTS, AND R.O.W. FOR TRACTS 25, 29, 32, 38, 39, 40, 43, 46, 49, AND 52.
ADDED TRACT 39A.

REV. 03-02-12:
ADDED DRIVEWAY AT STA. 21+81.00 RT. ON ROSSER STREET.

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN THE 9-13-12 REVISION. ALL REVISION NOTES ON SHEET 5A DATED 9-13-12 APPLY TO THIS SHEET, WHICH INCLUDES A TOTAL TAKE FOR TRACTS 39 AND 39S.)
ADDED STR-2 / STR-3 LABELS.
REVISED DRIVEWAY TIE-IN ON TRACT 48.

REV. 03-25-13:
REVISED MATCHLINE CALLOUT TO "SEE SHEET NO. 5-1" AND ADDED TRACT 31A.

REV. 06-13-13:
ADDED SHAPE AND CALLOUT FOR OPEN BASEMENT AT PROPERTY 39A.

REV. 09-03-13:
ADDITIONAL SURVEY INFORMATION AT TRACT NO. 39A.

SR 29-CURVE C3
PI 27+72.03
N 578,235.8480
E 2,394,525.9210
Δ 5° 22' 29" (RT)
D 1° 00' 00"
R 5,729.58
L 537.46
T 268.93
SE RC
DESIGN SPEED 45 MPH
TRANS. LENGTH 140

22+07.19 S.R. 29 = 20+00.00 ROSSER ST.
N 577708.8920
E 2394729.2950

25+02.00 S.R. 29 = 25+00.00 SCOTT LN.
N 577983.9290
E 2394623.1470

STA. 28+32.27 S.R. 29 = 30+00.00 HASSLER MILL RD.
N 578295.2817
E 2394513.1155

32+07.86 S.R. 29 = 40+00.00 SCARBRO RD.
N 578655.7310
E 2394407.6680

SEE SHEET NO. 5-1
MATCH LINE
SEE SHEET NO. 4
SEE SHEET NO. 6
STA. 21+00
STA. 35+00

WILLARD PARK CO CEMETARY (19)
NOTE: DO NOT DISTURB CEMETARY
GEORGE D WHALEY (31, 31S)
WILLOW CREEK PROPERTIES, LLC (25)
GEORGE D WHALEY (28)
ZENIA GOOCH ESTATE (27)
OPEN BASEMENT WITH PONDED WATER AND SPRING. SEE SHEET 2F FOR FILL TREATMENT DETAIL
LUCINDA SUE GOOCH (36)
ALMA JOY MOORE (37)
FAYE GOLDSTON (38, 38S)
LUCINDA S. GOOCH (39, 39S)
AMY CASTONGUAY (39A)
SOUTH HARRIMAN BAPTIST CHURCH (48)
VIVIAN S. MANIS (45)
LUCINDA SUE GOOCH (40)
JERRY W LOWERY HERMAN LOWERY (43, 43S)
JIMMY E BARNES & PATRICIA E BARNES (49)
REBECCA A BROWN (25)
REBECCA A BROWN (26)
WILLIAM GREGORY SMITH & ALISA C SMITH (29)
MARGIE CRISCILLIS (32)
WILLIAM GEGORY SMITH & ALISA C SMITH (30)
ELTHA ROSSER (18)
REBECCA ANN BROWN (24)
REBECCA A BROWN (23)
KELLIE D CLARK (27)
DOUGLAS L COFER & KAREN S COFER (33)
SANDRA LEAH MOORE (34)
WILLIAM E JOHNSON & JANICE JOHNSON (41)
BONNIE BRANDON (47)
JEREMIAH ADKISSON (42)
DANNY THOMAS & SUSAN L THOMAS (50)
JOHN W MOORE & MARGARET M MOORE (51)
ROANE COUNTY BOARD OF EDUCATION (52)
W T LUFFMAN & NORMA LUFFMAN (22)
JOHN MICHAEL POOLE & A JANE BERTH (35)

EXISTING 3'X3' BOX CULVERT TO BE REMOVED 18" CMP
EXISTING 4'X5' BOX CULVERT TO BE REMOVED
DOUBLE 36" CMP TO BE REMOVED
42"X56" RCP TO BE REMOVED
36" CMP TO BE REMOVED
PROP. R.O.W.
PRES. & PROP. R.O.W.
CONST. ESMT.
BEGIN STR-3 IMPACT STA. 29+65.23
END STR-2 IMPACT STA. 29+60
CURVE SCARBRO
PI 40+80.00
N 578,677.4180
E 2,394,484.6720
Δ 4° 58' 59" (RT)
D 20° 00' 00"
R 286.48
L 24.91
T 12.47
SE NC
DESIGN SPEED 25+ MPH
TRANS. LENGTH 000
PT 40+92.45
PT 30+40.57
PC 33+18.65
PC 25+50.11
RURITAN RD. (SR-29)
N 21° 06' 13" W
N 15° 43' 44" W
N 75° 52' 00" E
S 75° 52' 00" W
S.R. 29

SEALED BY
PHILIP S. NELSON
AGRICULTURE
LICENSED PROFESSIONAL ENGINEER
100108855
STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 21+00 TO STA. 35+00
SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

DWG. NO	REV.	DESCRIPTION
SAFETY APPURTENANCES AND FENCE		
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-GR-11	11-26-07	W-BEAM & THRIE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES
S-GR-12	05-27-03	W-BEAM BARRIER POST DETAILS AND SPECIFICATIONS
S-GR-13	05-27-03	BARRIER RAIL MOUNTING, POST BLOCK-OUTS WITH VERTICAL ADJUSTMENT HOLES
S-GR-13A		BARRIER RAIL MOUNTING POST FOR PLASTIC BLOCK-OUTS WITH HORIZONTAL ADJUSTMENT HOLES
S-GR-14	04-17-12	W-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-15	06-30-05	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-21	06-30-09	LENGTH OF NEED AND TERMINAL REQUIREMENTS IN FILLS
S-GR-22	03-10-10	GUARDRAIL ATTACHMENT TO CONCRETE DECKS OF BOX AND SLAB CULVERTS AND BRIDGES
S-GR-23	09-11-02	GUARDRAIL ATTACHMENT TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE END DETAILS
S-GR-26	08-23-12	SLOTTED GUARDRAIL TERMINAL ANCHOR (TYPE 21)
S-GR-27	05-27-03	GUARDRAIL TERMINAL ANCHOR (TYPE 21) ELEMENT ASSEMBLY DETAILS
S-GR-28	06-30-05	GUARDRAIL TERMINAL ANCHOR (TYPE 21) POST AND ASSEMBLY DETAILS
S-GR-39	05-27-01	DETAILS FOR CONSTRUCTION OF EARTH PAD FOR TYPE 21 GUARDRAIL END TERMINALS
S-GR-46		CURVED GUARDRAIL
S-RP-2	01-19-99	CONCRETE RIGHT-OF-WAY MARKERS
TRAFFIC CONTROL APPURTENANCES		
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	05-25-11	STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION
T-M-1	11-01-11	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-3	09-19-91	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	11-01-11	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-12	11-01-11	SIGNING AND PAVEMENT MARKINGS FOR URBAN BICYCLE LANES
T-M-13	05-01-07	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-10	04-04-12	MOUNTING DETAILS - FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-16	11-01-11	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-17	07-19-13	GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE

DWG. NO	REV.	DESCRIPTION
T-S-18	05-27-01	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-13	STANDARD MEMBERS BENDAWAY SIGN SUPPORTS STEEL DESIGN
T-S-20	11-01-11	SIGN DETAILS
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-4		SPAN WIRE AND MESSENGER CABLE DETAILS
T-SG-5	07-29-04	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-8	11-01-11	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-9	11-16-07	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A		MISCELLANEOUS SIGNAL DETAILS
T-SG-10	05-06-13	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	07-29-04	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-SG-13	06-01-09	FLASHING BEACON DETAIL
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
EROSION PREVENTION AND SEDIMENT CONTROL		
EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-11	08-01-12	CULVERT PROTECTION TYPE 1
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSON (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSON (UPSTREAM)
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	08-01-12	SEDIMENT TUBE
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-42		CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A		CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS

DWG. NO	REV.	DESCRIPTION
EC-STR-43		CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A		CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-44		CATCH BASIN FILTER ASSEMBLY (TYPE 4)
EC-STR-44A		CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS
EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS
STANDARD BOX CULVERT DRAWINGS		
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		TYPICAL ELEVATIONS
STD-17-7		CURB, RAIL & EDGE BEAM DETAILS - SKEW NOT LESS THAN 45 DEG
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' – 6"
STD-17-9		INTERIOR WALL END TREATMENTS
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-12		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-13		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-14		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-15		WINGWALL & SPECIAL RETAINING WALL DESIGN SECTIONS
STD-17-16		WINGWALL DESIGN SECTION
STD-17-17		BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-19		PAVED OUTLET DETAILS
STD-17-20		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-17-21		DEBRIS DEFLECTION WALL FOR BOX BRIDGE
STD-17-23		SIDEWALK AND MISCELLANEOUS DETAILS
STD-17-24		WARPED SLOPE DETAIL
STD-17-25		STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-6")
STD-17-26		EXTENSION DETAILS
STD-17-27		EXTENSION DETAILS FOR SCOURED OUTLET
STD-17-28		END SECTION DETAILS
STD-17-29		PRECAST BOX CULVERT DETAILS
STD-17-51		BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-71		BOX BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-17-72		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	1B

ROANE COUNTY 73035-3209-14

REV. 09-03-13:
ADDED STANDARD EC-STR-11A.

REV. 02-04-14:
REVISED REVISION DATES FOR S-F-1, S-GR-14, S-GR-26, T-L-4, T-S-17, T-S-19, T-SG-10, EC-STR-2, EC-STR-3B, EC-STR-3C, EC-STR-6, EC-STR-6A, EC-STR-11, EC-STR-11A, EC-STR-25, EC-STR-31, EC-STR-32, EC-STR-33, EC-STR-33A, EC-STR-34, EC-STR-37, AND EC-STR-39A.

SEALED BY

PHILIP S. NELSON
REGISTERED
No. 0010885
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	5A
CONST.	2012	STP - 29(58)	5A

73035-3209-14

REV. 04-11-11:
REVISED PROPERTY LINES, EASEMENTS, AND R.O.W. FOR TRACTS 25, 29, 32, 38, 39, 40, 43, 46, 49, AND 52.
ADDED TRACT 39A.

REV. 03-02-12:
REVISED PROPERTY CALLOUTS FOR TRACTS 25, 26, 32, 38, 45, 46, AND 52.

REV. 09-13-12:
ADDED TRACTS 31S, 38S, 39S, 43S
REVISED PROP. R.O.W. LINE AT TRACTS 38, 39, & 39A.
ADDED DRAINAGE EASEMENT TO TRACTS 31 & 38S.
ADDED ADDITIONAL CONSTRUCTION EASEMENT TO TRACT 31S.
REVISED PROPERTY OWNERS FOR TRACTS 19, 23, 26, 28, 29, 31, 36, 37, 39A, 40, 42, 43, 44, & 46.

REV. 01-11-13:
ADDED STATION AND OFFSET INFORMATION FOR TRACT 39A.
REVISED CONST. ESMT. ON TRACT 48.

REV. 03-25-13:
REVISED MAICHLINE CALLOUT AND NOTES TO "SHEET NO. 5AA."

REV. 06-13-13:
ADDED CALLOUT FOR PERMANENT DRAINAGE EASEMENT DETAIL FOR TRACT 31A

NOTES:
1. SEE DETAIL "G4" ON SHEET 5E FOR DRAINAGE EASEMENT ACQUIRED UNDER TRACTS 31S.
2. SEE DETAILS "G" AND "G2" ON SHEET 5A AND DETAILS "G1" AND "G3" ON SHEET 5AA TO DETERMINE DRAINAGE EASEMENTS ACQUIRED UNDER TRACTS 38 AND 38S.
3. CONSTRUCTION EASEMENT AND SLOPE EASEMENT WAS ACQUIRED ON TRACT 39 AND THE WHOLE PARCEL WAS ACQUIRED UNDER TRACT 39S.
4. CONSTRUCTION EASEMENT WAS ACQUIRED UNDER TRACT 43S.

PERM. DRAINAGE ESMT. DETAIL "C"

A	S22°33'07"W 43.90'	F	24+84.61 86.65'
B	N22°33'07"E 15.00'	G	S23°47'32"E 10.85'
C	N66°12'24"E 184.41'	H	24+73.77 87.16'
D	24+84.12 76.30'	I	S22°33'07"W 15.00'
E	N66°12'24"E 10.35'	J	24+62.91 76.80'
		K	N67°26'53"W 15.00'
		L	24+73.27 65.95'

PERM. DRAINAGE ESMT. DETAIL "D"

A	S68°53'47"W 4.93'	E	N68°53'47"E 5.07'
B	24+53.00 54.81'	F	N20°15'23"W 468.71'
C	N21°06'13"W 10.00'	G	24+63.00 49.73'
D	24+63.00 54.81'	H	S20°15'23"E 10.00'
		I	24+53.00 49.88'

PERM. DRAINAGE ESMT. DETAIL "E"

A	S68°53'47"W 4.93'	E	N68°53'47"E 5.07'
B	24+85.01 54.33'	F	N20°15'23"W 468.71'
C	N21°06'13"W 10.00'	G	24+95.01 49.26'
D	24+95.01 54.33'	H	S20°15'23"E 10.00'
		I	24+85.01 49.41'

PERM. DRAINAGE ESMT. DETAIL "F"

A	R=5683.58' L=93.49'	E	25+67.42 61.74'
B	N69°54'55"E 8.21'	F	S69°36'55"W 15.74'
C	26+12.57 54.21'	G	25+67.44 46.00'
D	29+44.11 54.34'	H	R=5683.58' L=44.76'
		I	26+12.56 46.00'

PERM. DRAINAGE ESMT. DETAIL "G"

A	29+35.95 75.49'	D	S16°42'07"E 14.57'
B	N51°56'52"E 22.70'	E	29+58.54 54.36'
C	29+44.11 54.34'	F	N16°42'07"W 115.34'
		G	S73°17'51"W 21.14'
		H	29+58.49 75.51'
		I	N16°42'07"W 22.83'

PERM. DRAINAGE ESMT. DETAIL "G2"

A	27+57.53 18.50'	E	27+72.57 28.45'
B	S75°29'37"W 15.00'	F	N75°29'37"E 14.73'
C	27+72.54 18.45'	G	27+57.84 28.50'
D	S14°30'23"E 10.00'	H	N12°57'06"W 10.00'

22+07.19 S.R. 29 = 20+00.00 ROSSER ST.
N 577708.8920
E 2394729.2950

25+02.00 S.R. 29 = 25+00.00 SCOTT LN.
N 577983.9290
E 2394623.1470

STA. 28+32.27 S.R. 29 = 30+00.00 HASSLER MILL RD.
N 578295.2817
E 2394513.1155

32+07.86 S.R. 29 = 40+00.00 SCARBRO RD.
N 578655.7310
E 2394407.6680

MATCH LINE HASSLER MILL RD SEE SHEET NO. 5AA

SEE SHEET NO. 4A

SEE SHEET NO. 6A

STA. 21+00

STA. 35+00

S.R. 29

WILLARD PARK CO CEMETARY (19)

GEORGE D WHALEY (28)

GEORGE D WHALEY (31) (31S)

WILLOW CREEK PROPERTIES, LLC (31A)

LUCINDA SUE GOOCH (36)

ALMA JOY MOORE (37)

FAYE GOLDSTON (38) (38S)

LUCINDA S. GOOCH (39) (39S)

PROP. R.O.W. (39A)

AMY CASTONGUAY (44)

SOUTH HARRIMAN BAPTIST CHURCH (48)

VIVIAN S MANIS (45)

LUCINDA SUE GOOCH (40)

HERMAN LOWREY (46)

JERRY W LOWERY (41) (43) (43S)

WILLIAM E. JOHNSON & JANICE JOHNSON (42)

BONNIE BRANDON (47)

JOHN W MOORE & MARGARET M MOORE (51)

ROANE C BOARI EDUCA (52)

EL THA ROSSER (18)

REBECCA A BROWN (25)

REBECCA A BROWN (26)

MARGIE CRISCILLIS (32)

REBECCA ANN BROWN (24)

DOUGLAS L COFER & KAREN S COFER (30) (33)

REBECCA A BROWN (23)

KELLIE D. CLARK (27)

WILLIAM GEGORY SMITH & ALISA C SMITH (34)

SANDRA LEAH MOORE (34)

W T LUFFMAN NORMA LUFFMAN (22)

JOHN MICHAEL POOLE & A JANE BERTH (35)

JIMMY E. BARNES & PATRICIA E BARNES (49)

DANNY THOMAS & SUSAN L THOMAS (50)

*NOTE: ADDITIONAL CONSTRUCTION EASEMENT FOR INSTALLATION OF SEDIMENT FILTER BAG ASSEMBLY. (TRACT 31S)

SEALED BY
PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
No. 001089
STATE OF TENNESSEE
6/12/2013

COORDINATE VALUES ARE NAD/83(1990) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED R.O.W. LAYOUT

STA. 21+00 TO STA. 35+00

SCALE: 1"=50'

SCALE: 1"=50'

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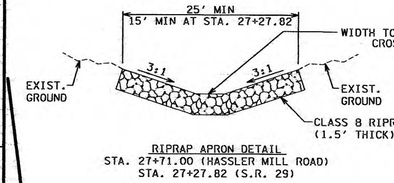
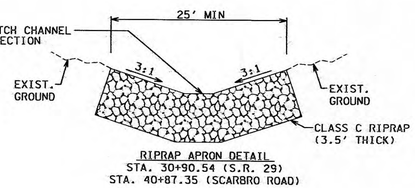
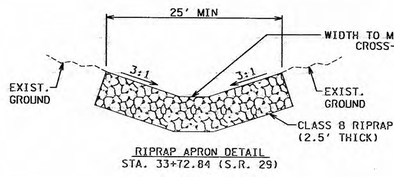
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



RIPRAP APRON DETAIL
STA. 27+71.00 (HASSLER MILL ROAD)
STA. 27+27.82 (S.R. 29)



RIPRAP APRON DETAIL
STA. 30+90.54 (S.R. 29)
STA. 40+87.35 (SCARBRO ROAD)



RIPRAP APRON DETAIL
STA. 33+72.84 (S.R. 29)

*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	58
CONST.	2012	STP - 29(58)	58

73035-3209-14

REV. 04-11-11:
PROVIDED NEW 6'X3' BOX CULVERT AT DRIVEWAYS AND ROADWAY CROSSINGS ONLY.
ADDITION OF MITIGATION NOTES REGARDING STREAM 3.

REV. 03-02-12:
ADDED DRIVEWAY AT STA. 21+81.00 RT. ON ROSSER STREET.

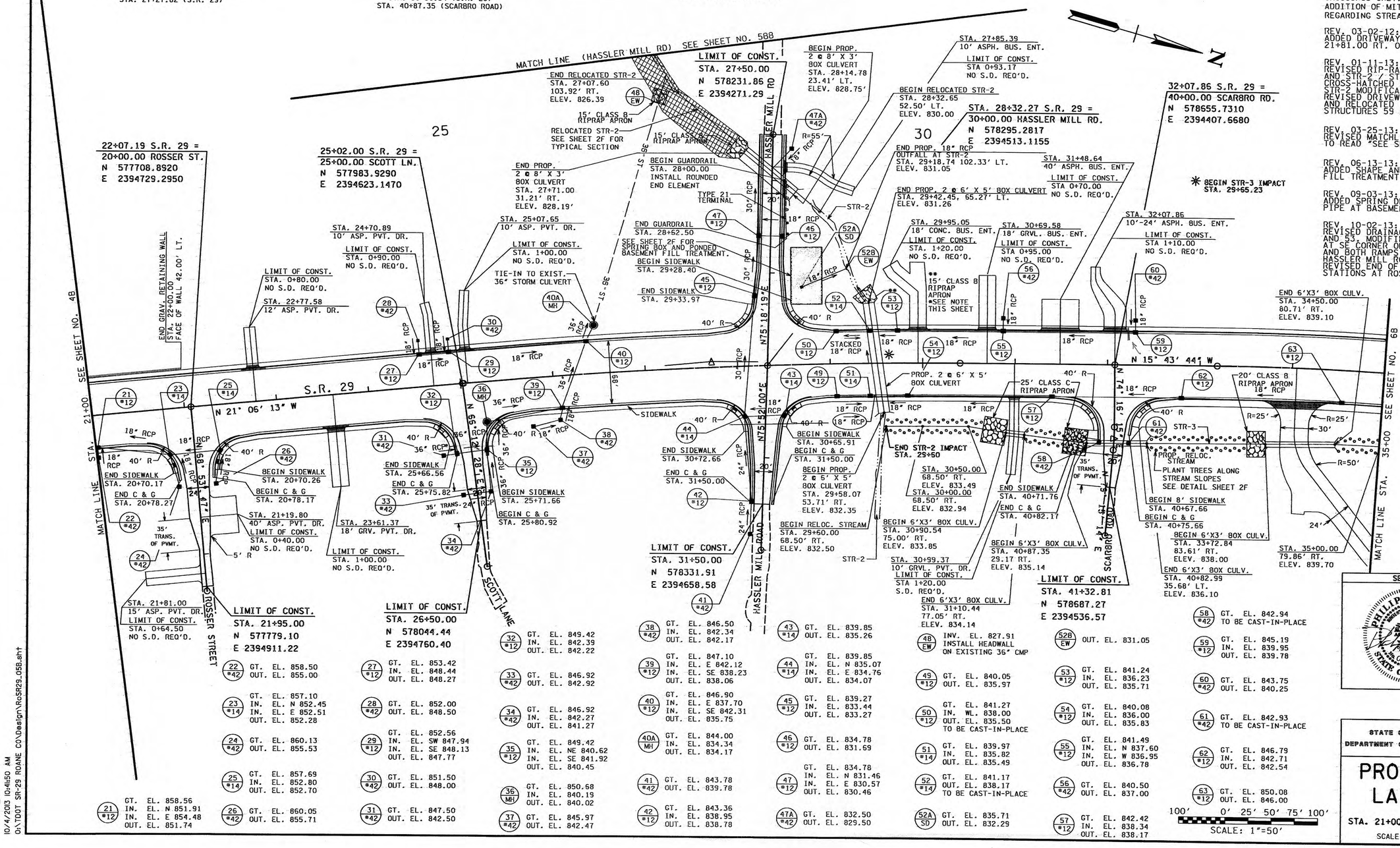
REV. 01-11-13:
REVISED RIP-RAP APRON DETAILS AND STR-2 / STR-3 LABELS. CROSS-HATCHED WORK AREA FOR STR-2 MODIFICATION. REVISED DRIVEWAY AT STA. 32+07 AND RELOCATED DRAINAGE STRUCTURES 59 AND 60.

REV. 03-25-13:
REVISED MATCHLINE CALLOUT TO READ "SEE SHEET NO. 588."

REV. 06-13-13:
ADDED SHAPE AND CALLOUT FOR FILL TREATMENT AREA.

REV. 09-03-13:
ADDED SPRING DRAIN BOX AND PIPE AT BASEMENT.

REV. 10-02-13:
REVISED DRAINAGE NODES 25 AND 53. MODIFIED CURB RAMPS AT SE CORNER OF ROSSER STREET AND BOTH RAMPS AT EAST SIDE OF HASSLER MILL ROAD. REVISED END OF SIDEWALK STATIONS AT ROSSER STREET.



SEALED BY
PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 0108553
STATE OF TENNESSEE
10/3/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 21+00 TO STA. 35+00

SCALE: 1"= 50'

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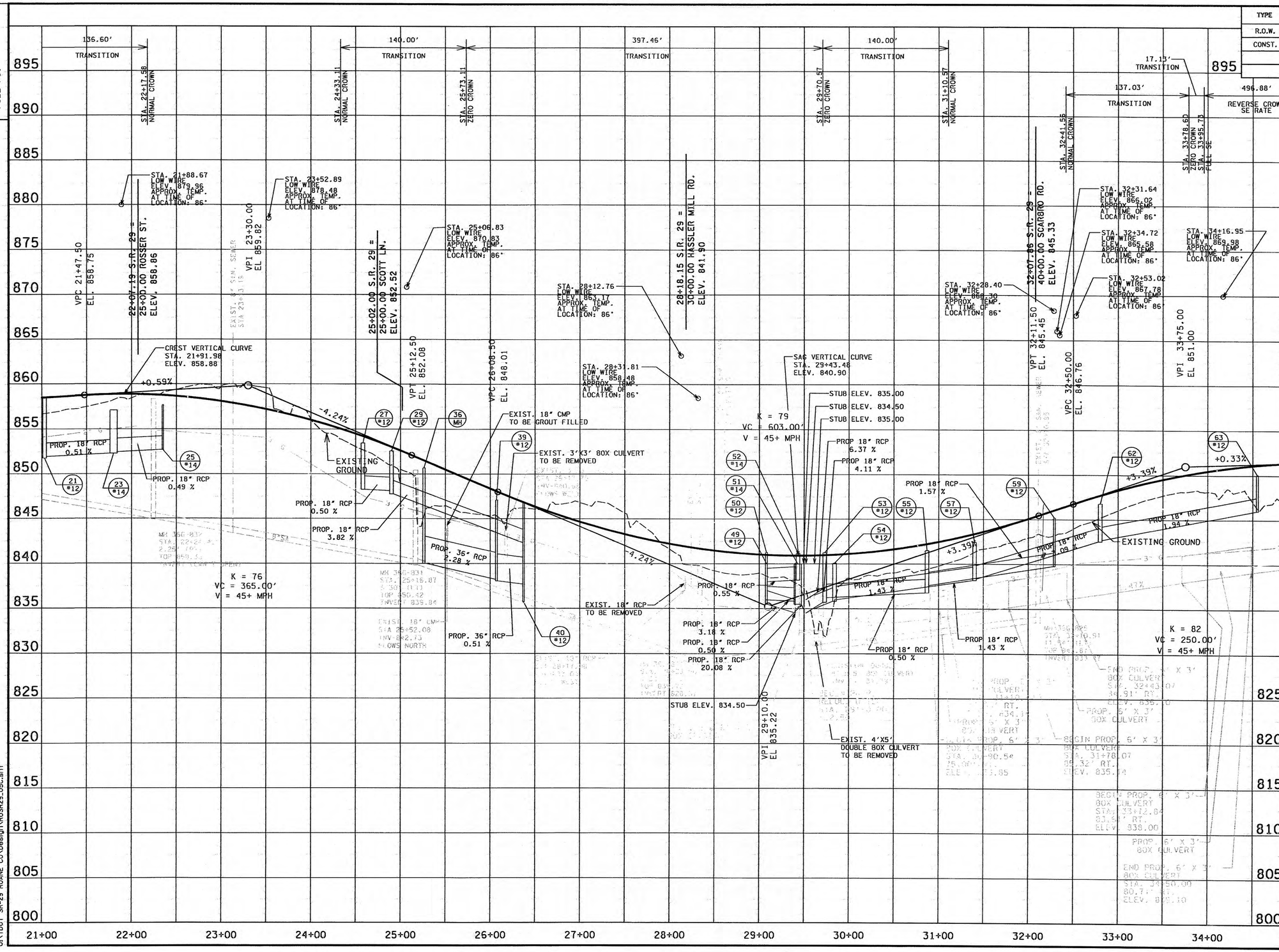
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	5C
CONST.	2012	STP - 29(58)	5C

73035-3209-14

REV. 01-11-13: RELOCATED STR. 59 AND REVISED PIPE FROM 59 TO 55.

REV. 10-02-13: REVISED DRAINAGE NODES 25 AND 53.



SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
ARCHITECTURE
TENNESSEE
00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"= 50' HORIZ. 1"= 5' VERT.

Survey & Design Division

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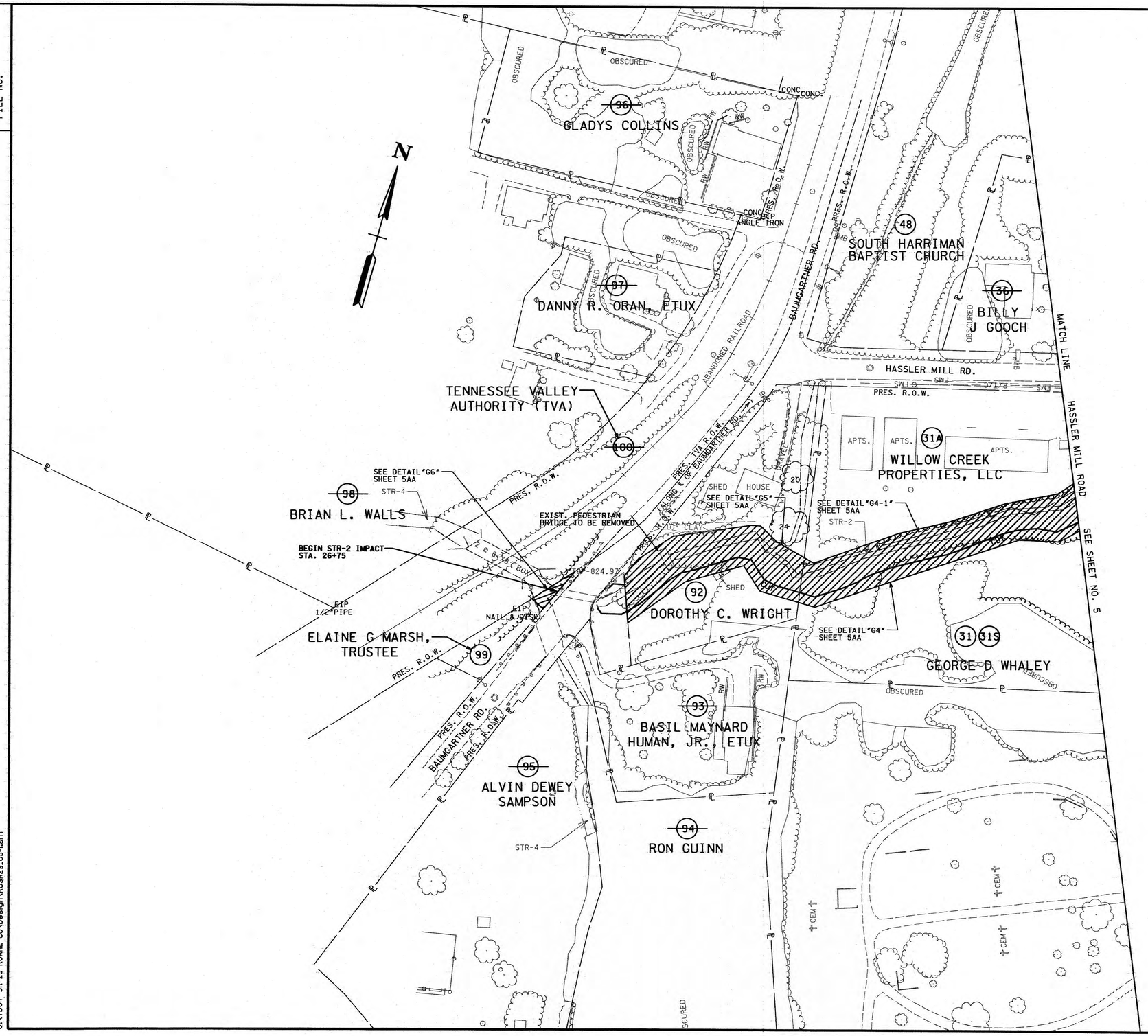
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	5-1

73035-3209-14

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN THE 9-13-12 REVISION. CONSTRUCTION EASEMENT AND SLOPE LINES SHOWN ON SHEET 8A DATED 9-13-12 WERE MODIFIED.)
ADDED STR-2 IMPACT LABEL. REMOVED ALL EASEMENT AND SLOPE LINES FROM TRACT 100 AND REMOVED NOTE FOR REMOVAL OF 8'X8' BOX CULVERT UNDER THE RAILROAD.
STRUCK THROUGH TRACTS 98 AND 100 AND ADDED CONSTRUCTION ACTIVITY NOTE FOR TRACT 100.

REV. 03-25-13:
REVISED SHEET NO. AND ADDED TRACT 31A.

REV. 06-13-13:
ADDED CALLOUT FOR PERMANENT DRAINAGE EASEMENT DETAIL FOR TRACT 31A.

REV. 02-04-14:
ADDED NOTE TO TRACT NO. 92 TO REMOVE PEDESTRIAN BRIDGE.

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT #100 - TENNESSEE VALLEY AUTHORITY (TVA)

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

HASSLER MILL ROAD AND BAUMGARTNER ROAD

SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	5AA
CONST.	2012	STP - 29(58)	5AA

73035-3209-14

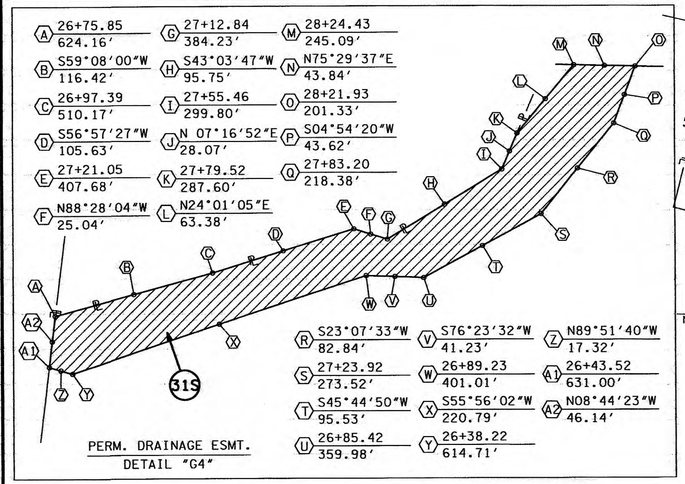
REV. 09-13-12:
ADDED THIS SHEET.

REV. 01-11-13:
REMOVED ALL EASEMENT AND SLOPE LINES FROM TRACT 100 AND STRUCK THRU TRACT 100. CHANGED TEMP. CONST. ESMT. ON TRACT 99 TO PERMANENT DRAINAGE ESMT. ADDED CONSTRUCTION ACTIVITY NOTE FOR TRACT 100.

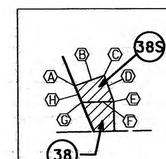
REV. 03-25-13:
REVISED SHEET NO. AND ADDED TRACT NO. 31A.

REV. 06-13-13:
ADDED DETAIL "G4-1" FOR PERMANENT DRAINAGE EASEMENT FOR TRACT 31A AND REVISED DETAIL "G4."

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT #100 - TENNESSEE VALLEY AUTHORITY (TVA)



PERM. DRAINAGE ESMT.
DETAIL "G4"



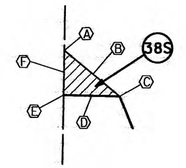
SEE DETAIL "G" ON SHEET 5A

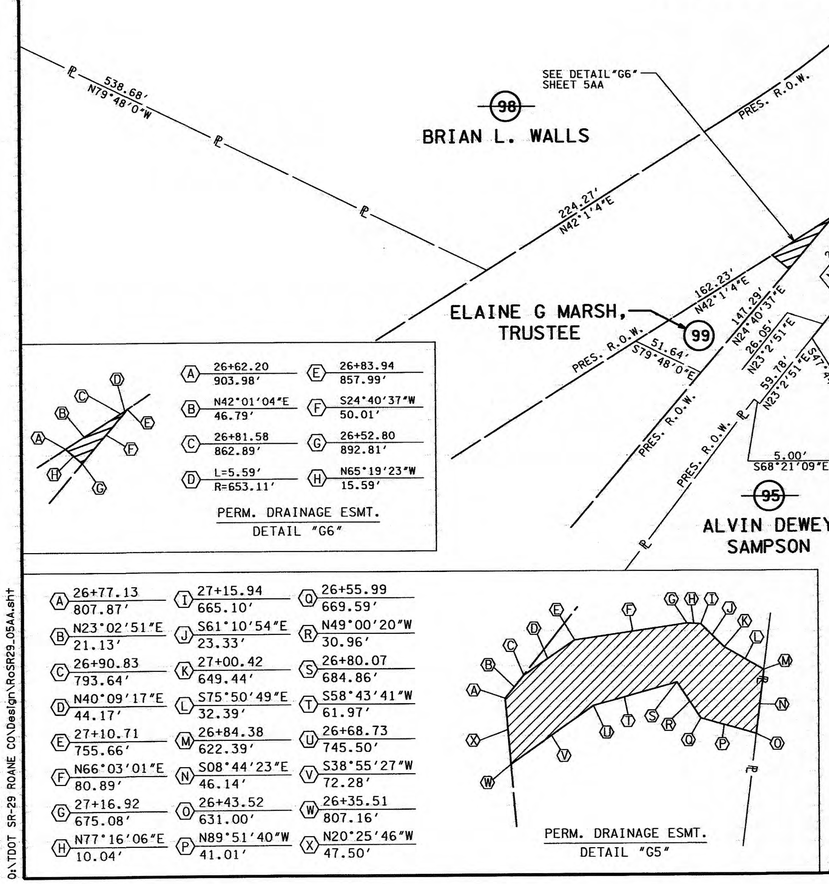
A 29+31.40 / 87.35'		E 29+58.49 / 75.51'	
B N35°19'17"W / 22.24'		F S16°42'07"E / 22.83'	
C 29+52.16 / 94.45'		G 29+35.95 / 75.49'	
D N54°40'43"E / 20.00'		H S51°56'52"W / 12.72'	

PERM. DRAINAGE ESMT.
DETAIL "G1"

PERM. DRAINAGE ESMT.
DETAIL "G3"

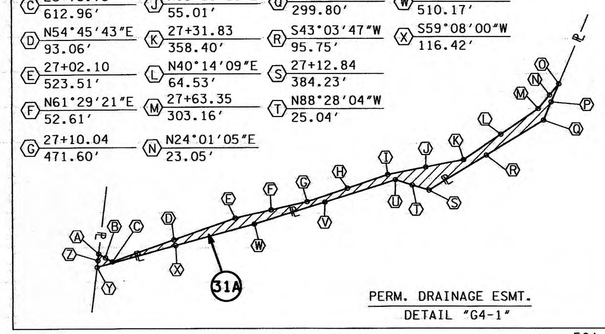
A 27+89.46 / 18.40'		D S14°30'21"E / 40.00'	
B N23°56'49"E / 51.08'		E 28+21.23 / 18.29'	
C 28+21.36 / 58.29'		F S75°29'36"W / 31.76'	





PERM. DRAINAGE ESMT.
DETAIL "G6"

PERM. DRAINAGE ESMT.
DETAIL "G5"



PERM. DRAINAGE ESMT.
DETAIL "G4-1"

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY



6/13/2013

COORDINATE VALUES ARE NAD/83(1990) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED R.O.W. LAYOUT

HASSLER MILL ROAD AND BAUMGARTNER ROAD
SCALE: 1"=50'

Survey & Design Bureau

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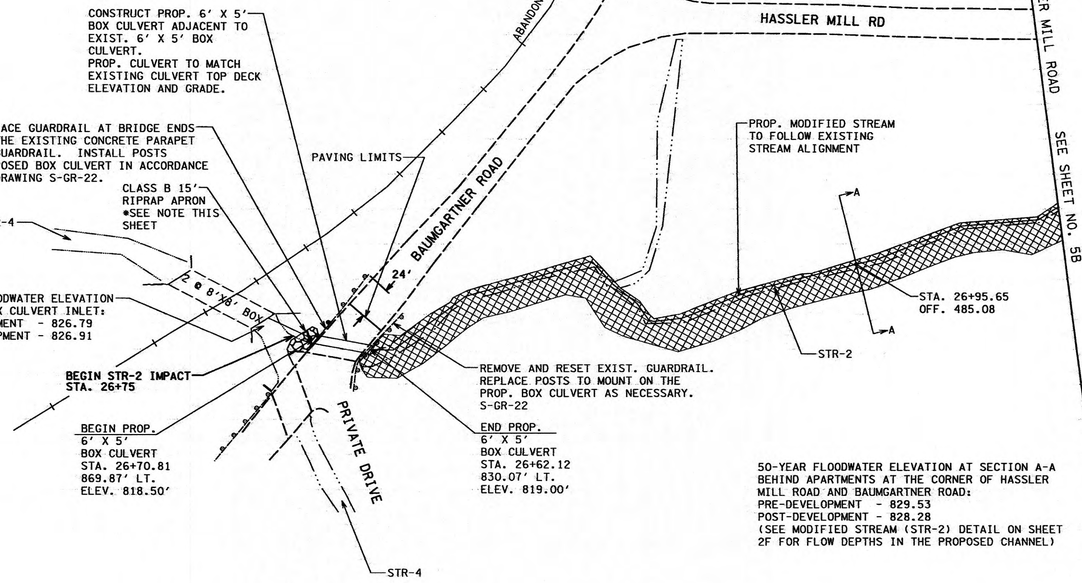
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	5BB

73035-3209-14

REV. 01-11-13:
ADDED STR-2 IMPACT LABEL.
REMOVED TREE NOTE AND NOTE REGARDING 8'X8' CULVERT REMOVAL.
ADDED FLOOD ELEVATION NOTES AND SECTION A-A.
ADDED BOXED NOTE REGARDING DOWNSTREAM HYDRAULIC EFFECTS.

REV. 03-25-13:
REVISED SHEET NO.



50-YEAR FLOODWATER ELEVATION AT SECTION A-A BEHIND APARTMENTS AT THE CORNER OF HASSLER MILL ROAD AND BAUMGARTNER ROAD:
PRE-DEVELOPMENT - 829.53
POST-DEVELOPMENT - 828.28
(SEE MODIFIED STREAM (STR-2) DETAIL ON SHEET 2F FOR FLOW DEPTHS IN THE PROPOSED CHANNEL)

NOTE:
NO CONSTRUCTION ACTIVITY OF ANY KIND IS TO BE ALLOWED ON TRACT *100 - TENNESSEE VALLEY AUTHORITY (TVA)

*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

THIS PROJECT WILL NOT HAVE A SIGNIFICANT, ADVERSE EFFECT ON THE HYDRAULIC CONDITIONS DOWNSTREAM OF THE PROJECT.

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
No. 0108853
STATE OF TENNESSEE
3/27/2013

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

HASSLER MILL ROAD AND BAUMGARTNER ROAD
SCALE: 1"= 50'

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	6
CONST.	2012	STP - 29(58)	6

73035-3209-14

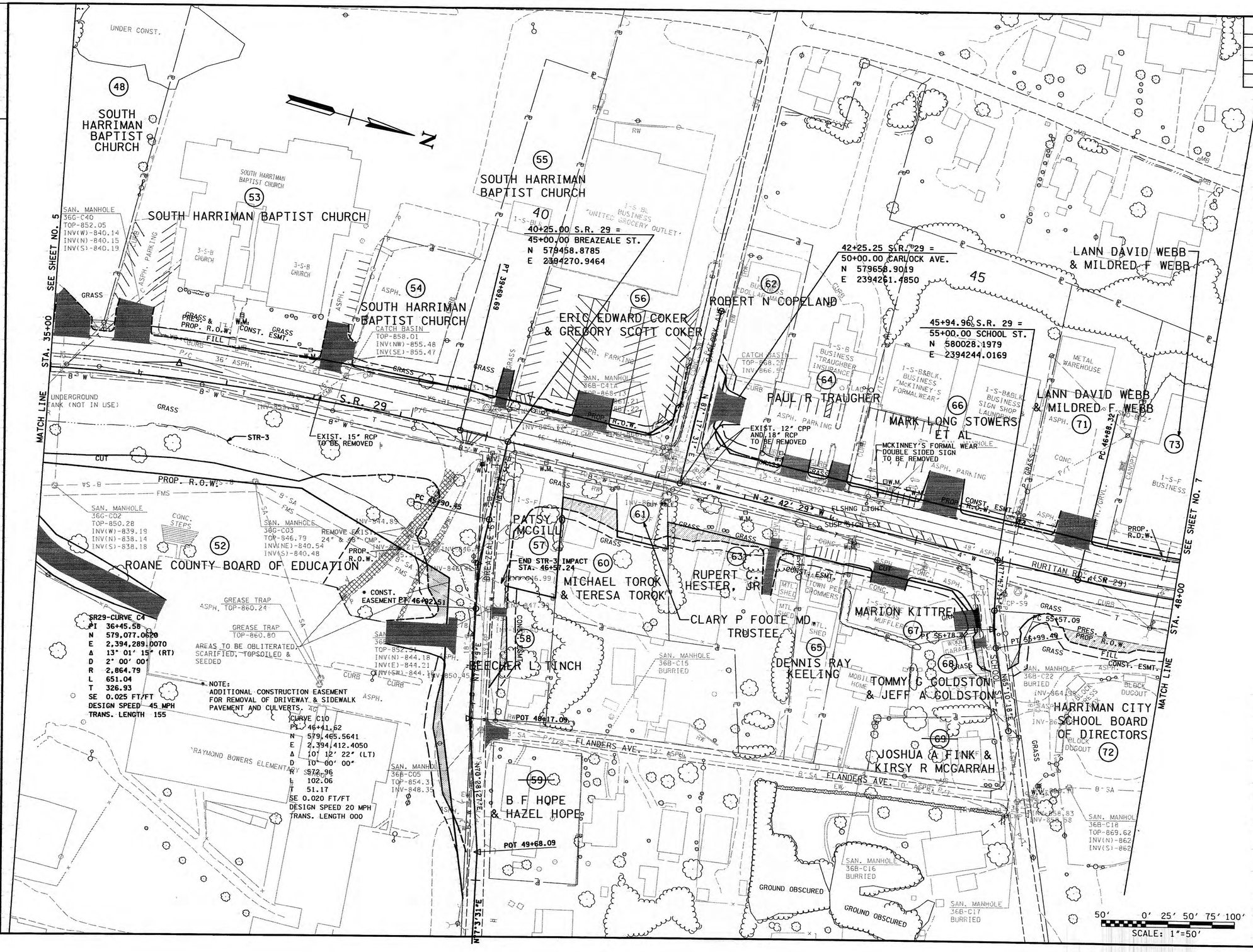
REV. 04-11-11:
ADJUSTMENT OF PROPOSED R.O.W. AND EASEMENTS FOR TRACT 52.

REV. 04-11-12:
DRIVEWAY FOR TRACT 67 RELOCATED TO STA. 44+81.

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN THE 9-13-12 REVISION. ALL REVISION NOTES ON SHEET 6A DATED 9-13-12 APPLY TO THIS SHEET.)
REVISED STREAM 3 LABELS.
REVISED DRIVEWAY TIE-IN ON TRACT 48.

REV. 02-04-14:
TRACT NO. 52 AND 66-ADDED NOTES FOR SIGN TO BE REMOVED.

REV. 04-07-14:
TRACT NO. 52-REMOVED NOTE FOR SIGN TO BE REMOVED.



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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 35+00 TO STA. 48+00

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	6A
CONST.	2012	STP - 29(58)	6A

73035-3209-14

REV. 04-11-11:
ADJUSTMENT OF PROPOSED R.O.W. AND EASEMENTS FOR TRACT 52.

REV. 03-02-12:
REVISED PROPERTY CALLOUTS ON TRACT 52.

REV. 09-13-12:
REVISED PROPERTY OWNERS FOR TRACTS 60, 64, 66, & 69.

REV. 01-11-13:
REVISED CONST. ESMT ON TRACT 48.

DETAIL "H1"

A	S65°25'38"W 18.43'	E N28°05'24"W 5.01'
B	N65°25'38"E 71.74'	F 55+83.38 30.99'
C	55+81.80 26.33'	G N28°05'24"W 72.33'
D	N65°25'40"E 96.48'	

PERM. DRAINAGE ESMT.
DETAIL "H"

A	N2°42'29"W 196.76'	G	46+15.00 51.00'	M	46+09.04 46.00'
B	S87°17'31"W 5.00'	H	N87°17'31"E 5.00'	N	S2°42'29"E 4.04'
C	46+05.00 51.00'	I	N86°11'10"E 5.00'	O	46+05.00 46.00'
D	N2°42'29"W 3.94'	J	N2°42'29"W 79.28'	P	S86°11'10"W 276.93'
E	46+08.94 51.00'	K	46+15.00 46.00'	Q	N03°34'32"W 85.62'
F	N2°42'29"W 6.06'	L	S2°42'29"E 5.96'	R	S86°11'14"W 8.48'
				S	S86°11'10"W 4.24'

48 SOUTH HARRIMAN BAPTIST CHURCH

53 SOUTH HARRIMAN BAPTIST CHURCH

SOUTH HARRIMAN BAPTIST CHURCH

55 SOUTH HARRIMAN BAPTIST CHURCH

56 ERIC EDWARD COKER & GREGORY SCOTT

PAUL R TRAUGHBER 64

62 ROBERT N. COPELAND

LANN DAVID WEBB & MILDRED F WEBB 45

LANN DAVID WEBB & MILDRED F WEBB 71 73

66 MARK LONG STOWERS ET AL

52 ROANE COUNTY BOARD OF EDUCATION

57 PATSY O. MCGILL

60 MICHAEL TOROK & TERESA TOROK

61 CLARY P. FOOTE MD, TRUSTEE

67 MARION KITTRELL

68 TOMMY G GOLDSTON & JEFF A GOLDSTON

58 BEECHER L. TINCH

63 RUPERT G. HESTER, JR.

65 DENNIS RAY KEELING

69 JOSHUA A FINK & KIRSY R MCGARRAH

59 B F HOPE & HAZEL HOPE

72 HARRIMAN CITY SCHOOL BOARD OF DIRECTORS

40+25.00 S.R. 29 = 45+00.00 BREAZEALE ST.
N 579458.8785
E 2394270.9464

42+25.25 S.R. 29 = 50+00.00 CARLOCK AVE.
N 579658.9019
E 2394261.4850

45+94.96 S.R. 29 = 55+00.00 SCHOOL ST.
N 580028.1979
E 2394244.0169

* NOTE:
ADDITIONAL CONSTRUCTION EASEMENT FOR REMOVAL OF DRIVEWAY & SIDEWALK PAVEMENT AND CULVERTS.

SEE SHEET NO. 5A — MATCH LINE STA. 35+00

SEE SHEET NO. 7A — MATCH LINE STA. 48+00

S.R. 29

PROP. R.O.W.

PRES. R.O.W.

CONST. ESMT.

SEE DETAIL "H" SHEET 6A

SEE DETAIL "H1" SHEET 6A

SEALED BY
PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 0010885
STATE OF TENNESSEE
1/15/2013

COORDINATE VALUES ARE NAD/83(1990) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED R.O.W. LAYOUT

STA.35+00 TO STA.48+00

SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Division

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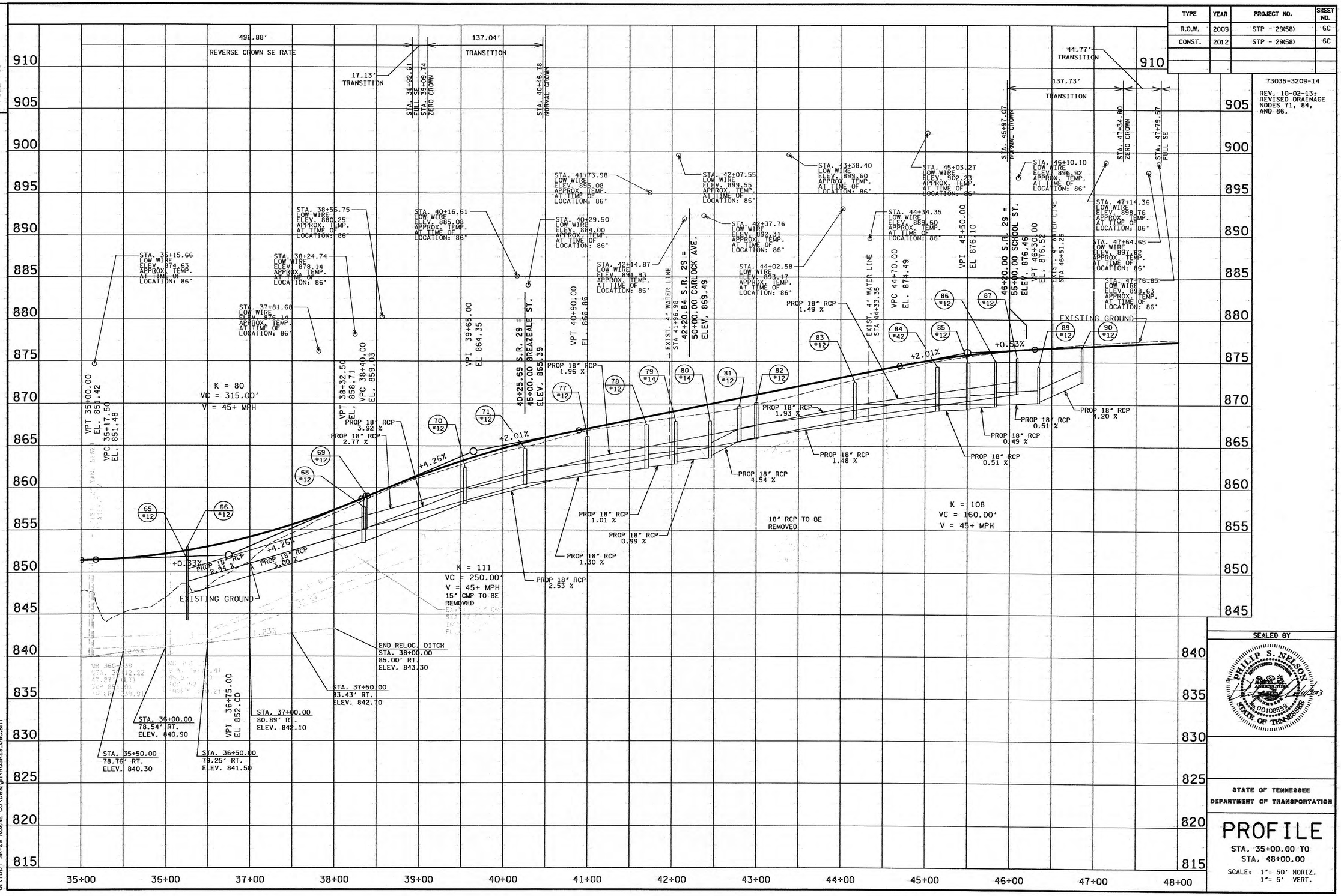
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	6C
CONST.	2012	STP - 29(58)	6C

73035-3209-14

REV. 10-02-13: REVISED DRAINAGE NODES 71, 84, AND 86.



SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
ROANE
No. 0010889
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 35+00.00 TO
STA. 48+00.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	7
CONST.	2012	STP - 29(58)	7

73035-3209-14

REV. 04-11-11:
REVISED NAME AND SHOW TOTAL ACQUISITION ON TRACT 75.
ADJUST PROPERTY LINES FOR TRACTS 76 AND 78.
REMOVE CONSTRUCTION EASEMENT ON TRACT 90.
ADD NEW TIE-IN OF PANSY HILL ROAD TO SR 29 AT STA. 48+39.42.

REV. 03-02-12:
ADDED DRIVEWAY @ STA. 48+55 LT.
REVISED SLOPE LINES ON TRACT 89 DUE TO RETAINING WALL. REVISED TEMPORARY CONST. EASEMENT ON TRACTS 88 AND 90. REVISED DRIVEWAY @ STA. 54+68.13 LT.

REV. 01-11-13:
(THIS SHEET WAS EXCLUDED IN THE 9-13-12 REVISION. ALL REVISION NOTES ON SHEET 7A DATED 9-13-12 APPLY TO THIS SHEET.)

REV. 02-04-14:
ADDED NOTE TO TRACT NO. 75 TO REMOVE BUILDING.

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

SR29-CURVE C5
PI 49+31.37
N 580,364.2260
E 2,394,228.1220
Δ 19° 15' 37" (LT)
D 4° 00' 00"
R 1,432.39
L 481.51
T 243.05
SE 0.033 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 170

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

SR29-CURVE C6
PI 53+79.90
N 580,784.4470
E 2,394,050.6110
Δ 12° 24' 02" (LT)
D 7° 00' 00"
R 818.51
L 177.15
T 88.92
SE 0.039 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 190

STATE ST. S.E.
CURVE STATER
PI 72+00.03
N 580,721.0380
E 2,394,298.5600
Δ 4° 48' 42" (LT)
D 2° 00' 00"
R 2,864.79
L 240.58
T 120.36
SE RC
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

73+17.38 STATE ST=
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY
PHILIP S. NELSON
REGISTERED
LICENSED
No. 00108855
STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TCRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 48+00 TO END OF PROJ.

SCALE: 1"=50'

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
(33)	202-01	REMOVAL OF STRUCTURES AND OBSRUCTIONS	LS	1
(35)	202-01.56	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (PED. BRIDGE)	LS	1
(34)	202-06.01	REMOVAL OF BUILDINGS (TRACT NO. 75)	LS	1
(32)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	1323
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	22681
(18)	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	2500
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	3500
	203-06	WATER	M.G.	320
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	575
(27)	203-08	CHANNEL EXCAVATION (UNCLASSIFIED)	C.Y.	1000
(3)	209-05	SEDIMENT REMOVAL	C.Y.	300
(4)(3)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	6450
(3)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	6150
(3)	209-08.07	ROCK CHECK DAM	EACH	9
(3)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	3
(19)(3)	209-09.01	SANDBAGS	BAG	3400
(3)	209-09.02	TEMPORARY SEDIMENT FILTER BAG (14'6" X 2'0" X 13'3")	BAG	8
(3)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	8
(3)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	500
(3)	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	103
(3)	209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	1
(3)	209-40.43	CATCH BASIN FILTER ASSEMBLY(TYPE 3)	EACH	4
(3)	209-40.44	CATCH BASIN FILTER ASSEMBLY(TYPE 4)	EACH	4
(3)	209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	17
(20)(3)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	80
(5)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	40744
	303-01.03	GRANULAR BACKFILL (RETAINING WALLS)	TON	85
(6)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	115
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	678
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	1535
	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	6622
	307-02.02	ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S	TON	171
	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	5012
	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	4340
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	87
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	301
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	42
	407-02.13	REMOVAL & DISPOSAL OF EXISTING ASPHALT PAVEMENT	S.Y.	26825
	407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F.	1300
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	37
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	1303
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	2644
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	2320
(24)	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	100
(7)	604-01.04	1-1/2" STEEL PIPE HANDRAIL	L.F.	170
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	5866
(26)	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	889
(26)	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	252
	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	364
	607-08.02	42" CONCRETE PIPE CULVERT (CLASS III)	L.F.	155
	607-11.03	60" CONCRETE PIPE CULVERT (CLASS III)	L.F.	97
	607-39.03	24" PIPE CULVERT (SIDE DRAIN)	L.F.	45
	607-39.04	30" PIPE CULVERT (SIDE DRAIN)	L.F.	30
	611-01.03	MANHOLES, > 8' - 12' DEPTH	EACH	3
	611-02.01	SPRING DRAIN BOX, TYPE 1	EACH	1
	611-02.10	JUNCTION BOX, TYPE 1	EACH	1
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	39
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1154
	611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	6
	611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	55
	611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	6
	611-12.04	CATCH BASINS, TYPE 12, > 12' - 16' DEPTH	EACH	1
	611-14.01	CATCH BASINS, TYPE 14, 0' - 4' DEPTH	EACH	1
	611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	14
	611-14.05	CATCH BASINS, TYPE 14, > 16' - 20' DEPTH	EACH	1
	611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	17
	611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	9
	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	130
	621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	100

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	701-01.01	CONCRETE SIDEWALK (4 ")	S.F.	38481
	701-02	CONCRETE DRIVEWAY	S.F.	5064
	701-02.03	CONCRETE HANDICAP RAMP	S.F.	3157
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	930
	705-01.04	METAL BEAM GUARD FENCE	L.F.	18.75
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	18.75
	705-04.04	GUARDRAIL TERMINAL (TYPE 21)	EACH	1
	705-08.11	PRORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	2
(28)	706-02.01	GUARDRAIL REMOVED AND RESET	L.F.	75
(29)	706-03.01	POSTS FURNISHED	EACH	8
	706-03.10	POST BLOCKOUTS & BACKUP PLATES	EACH	8
	706-10.26	ROUNDED END ELEMENT	EACH	1
	707-08.11	HIGH VISIBILITY CONSTRUCTION FENCE	L.F.	500
(17)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	200
(21)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	275
(22)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	351
(22)	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	405
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	5400
	710-06.12	LATERAL UNDERDRAIN ENDWALL (3:1)	EACH	28
	712-01	TRAFFIC CONTROL	LS	1
(25)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	500
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	180
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	88
	712-06	SIGNS (CONSTRUCTION)	S.F.	572.5
	712-06.01	VERTICAL PANELS	S.F.	32
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	64
	712-08.03	ARROW BOARD (TYPE C)	EACH	2
(8)	713-02.21	SIGN POST DELINEATION ENHANCEMENT	L.F.	21
	713-11.01	"U" SECTION STEEL POSTS	LB.	4299
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	1182
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	278.5
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	184.5
(9)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	3
(10)	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	749
(10)	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	667
(10)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	35
(10)	716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	622
(10)	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	5
(10)	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	2
(10)	716-04.15	PLASTIC PAVEMENT MARKING-BIKE SYMBOL/ARROW	EACH	22
(10)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	5.5
(10)	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	600
(10)	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	36
	716-08.06	REMOVAL OF PAVEMENT MARKING (TURN LANE ARROW)	EACH	1
	716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	L.M.	6.2
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	1.3
	716-12.03	ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE)	L.F.	460
	716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	L.F.	350
	716-12.07	ENHANCED FLAT LINE THERMO (8IN BROKEN LN)	L.F.	230
	717-01	MOBILIZATION	LS	1
(11)	730-01.08	SCHOOL SPEED LIMIT FLASHING SIGNAL INSTALLED	EACH	2
(12)	730-23.40	CANTILEVER SIGNAL SUPPORT (1 ARM @ 15')	EACH	2
(13)(14)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	970
(30)	740-10-04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	656
(31)	740-11.02	TEMPORARY SEDIMENT TUBE 12IN	L.F.	4015
	801-01	SEEDING (WITH MULCH)	UNIT	28
(15)	801-02	SEEDING (WITHOUT MULCH)	UNIT	9
	801-03	WATER (SEEDING & SODDING)	M.G.	12
	802-11.01	ACER NEGUNDO (BOX ELDER 2-5FT CNTNR GRWN)	EACH	27
	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	27
	802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	27
	802-11.29	QUERCUS ALBA (WHITE OAK 2-5FT CNTNR GRWN)	EACH	27
	802-11.37	QUERCUS PALUSTRIS (PIN OAK 2-5FT CNTNR GRWN)	EACH	27
	802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	27
	802-12.02	ACER RUBRUM (RED MAPLE SEEDLNG B.R.)	EACH	27
	802-12.26	PLATANUS OCCIDENTALIS (SYCAMORE SEEDLNG B.R.)	EACH	27
	802-12.29	QUERCUS ALBA (WHITE OAK SEEDLNG B.R.)	EACH	27
	802-12.37	QUERCUS PALUSTRIS (PIN OAK SEEDLNG B.R.)	EACH	27
(23)	803-01	SODDING (NEW SOD)	S.Y.	2500
	805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	7650
(16)	806-02.03	PROJECT MOWING	CYCL	2

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	2

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
QUANTITY REVISIONS:
ADDED ITEM NOS. 415-01.02, 604-01.01, 705-01.04, 705-02.02, 705-04.04, 705-08.11, 706-02.01, 706-03.01, 706-03.10, 706-10.26, 707-08.11, 710-06.12, 710-09.01, 712-06.01, AND 713-16.01
REVISED ITEM NOS. 209-08.02, 303-01, 307-08.01, 411-01.10, 607-03.02, 607-05.02, 607-39.03, 611-07.01, 611-07.02, 709-05.08, 709-05.09, 712-04.01, 712-05.01, 712-06, 712-07.03, 801-01, 802-11.01, 802-11.02, 802-11.26, 802-11.29, 802-11.37, 802-12.01, 802-12.02, 802-12.26, 802-12.29, 802-12.37, 803-01
DELETED ITEM NOS. 204-08, 303-10.03, 415-01.01, 705-08.23, 705-08.70, 712-02.36, 805-12.02

REV. 06-13-13:
QUANTITY REVISIONS:
ADDED ITEM NO. 740-10.04
REVISED ITEM NOS. 203-07, 209-08.03, 303-10.01, AND 801-01.

REV. 09-03-13:
QUANTITY REVISIONS:
DELETED ITEM NO. 712-08.06
ADDED ITEM NOS. 203-02.01 AND 611-02.01
REVISED ITEM NOS. 209-40.47, 303-10.01, 607-03.02 611-07.01, 611-07.02, AND 740-11.02.

REV. 10-02-13:
QUANTITY REVISIONS:
ADDED ITEM NO. 202-01.
REVISED ITEM NOS. 209-40.41, 209-40.44, 607-03.02, 607-05.02, AND 611-12.02.

REV. 02-04-14:
QUANTITY REVISIONS:
ADDED ITEM NOS. 202-06.01 AND 202-01.56.

SEALED BY

PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 0010865
STATE OF TENNESSEE

NOTE: SEE SHEET 2A FOR QUANTITY FOOTNOTES.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

2/4/2014 10:19:28 AM O:\TDOT SR-29 ROANE CO\Design\Construction\RoSR29_02_ROADWAYQUANTITIES.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	7A
CONST.	2012	STP - 29(58)	7A

73035-3209-14

REV. 04-11-11:
REVISED NAME AND SHOW TOTAL ACQUISITION ON TRACT 75.
ADJUST PROPERTY LINES FOR TRACTS 76 AND 78.
REMOVE CONSTRUCTION EASEMENT ON TRACT 90.
ADD NEW TIE-IN OF PANSY HILL ROAD TO SR 29 AT STA. 48+39.42.
REVISED R.O.W. CALLOUTS ON TRACT 79 AND 88.

REV. 02-29-12:
REVISED PROPERTY CALLOUTS ON TRACTS 73, 74, 75, 76, 79, AND 88. REVISED SLOPE LINES ON TRACT 89 DUE TO RETAINING WALL.

REV. 04-11-12:
STRUCK THROUGH UNUSED TRACTS, SLOPE AND TEMP. CONSTRUCTION EASEMENT REMOVED FROM TRACT 89 AT RETAINING WALL, AND DRAINAGE EASEMENTS DISPLAYED IN PLAN.

REV. 09-13-12:
REVISED PROPERTY OWNERS FOR TRACTS 77, 78, 84, 85, 86, 87 & 88.

(78) CHANDUBHAI PATEL
(83) JAMES E. WRIGHT & P. GARNER & AMELA W WRIGHT
(87) KF LLC

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

73+17.38 STATE ST=
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

JAMES H BOLES & BRENDA BOLES (81)
FAITH PRIMATIVE CHURCH (82)
DONALD & PRECILLA LOMBARD (85)
KF LLC (86)
KF LLC (88)
TERRY G. KEELING (90)
LANN DAVID WEBB & MILDRED F WEBB (73)
HASKELL HILL (74)
PATRICIA WRIGHT, ET AL (84)
CHANDUBHAI PATEL (78)
(77)
HEIDE M. FROSS (AIKENS) (75)
(76)
SHADOWBLUFF, LP (89)
HARRIMAN CITY SCHOOL BOARD OF DIRECTORS (72)
ANN MCKINNEY & SHELBY SKILES
DENNIS GARY BAKER D/B/A GARY BAKER LEASING
(79)
ROANE COUNTY BOARD OF EDUCATION (80)
AUTOZONE, INC (91)

S.R. 29
N 34° 22' 08" W
N 21° 58' 06" W
N 74° 22' 07" E
N 69° 33' 25" E
MATCH LINE STATION 48+00 SEE SHEET NO. 6A
50
55

PERM. DRAINAGE ESMT.
DETAIL "J"

(A)	50+00.02 46.29'	(E)	N15°58'41"W 14.69'
(B)	S88°06'08"W 10.37'	(F)	50+17.80 56.48'
(C)	50+02.50 56.38'	(G)	N74°25'30"E 10.00'
(D)	S88°06'08"W 195.47'	(H)	R=1382.50' L=73.35'
		(I)	50+17.74 46.48'
		(J)	R=1382.50' L=17.14'

PERM. DRAINAGE ESMT.
DETAIL "I"

(A)	N79°13'29"E 9.98'	(E)	S79°13'29"W 9.98'
(B)	48+82.19 55.98'	(F)	R=1386.39' L=90.79'
(C)	S10°46'31"E 15.00'	(G)	48+97.75 46.00'
(D)	48+97.80 55.98'	(H)	R=1386.39' L=15.00'
		(I)	48+82.25 46.00'

SEALED BY
PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 00108859
STATE OF TENNESSEE
7/26/12

COORDINATE VALUES ARE NAD/83(1990) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00009 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED R.O.W. LAYOUT

STA.21+00 TO STA.35+00

SCALE: 1"=50'

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Division
9/24/2012 6:14:04 PM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	78
CONST.	2012	STP - 29(58)	78

73035-3209-14

REV. 04-11-11:
ADD NEW TIE-IN OF PANSY HILL ROAD TO SR 29 AT STA. 48+39.42. EXTENDED CURB AND GUTTER AT TRACT 90.

REV. 03-02-12:
ADDED RETAINING WALL @ CORNER OF SR 29 AND SR 61. ADDED DRIVEWAY @ STA. 48+55 LT. AND CURB CUT @ STA. 51+06.50 RT. REVISED DRIVEWAY @ STA. 54+08.13 LT.

REV. 10-02-13:
REVISED DRAINAGE NODES 106, 112, AND 119.

SR29-CURVE C5
PI 49+31.37
N 580,364.2260
E 2,394,228.1220
Δ 19° 15' 37" (LT)
D 4° 00' 00"
R 1,432.39
L 481.51
T 243.05
SE 0.033 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 170

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

73+17.38 STATE ST=
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

LIMIT OF CONST.
STA. 62+15.00
N 580515.77
E 2393823.99

LIMIT OF CONST.
STA. 82+10.00
N 580468.83
E 2394296.36

LIMIT OF CONST.
STA. 76+28.30
N 580646.87
E 2394394.68

LIMIT OF CONST.
STA. 74+32.76
N 580802.37
E 2394516.77

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

S.R.29 AND STATE ST.
2032 DHV
PM
[AM]

S.R. 29 AND S.R.61
2032 DHV
PM
[AM]

S.R.29 & PANSY HILL DR.
2032 DHV
PM
[AM]

BEGIN C & G
STA. 62+15.00

STA. 62+28.72
15' ASPH. PVT. DR.

LIMIT OF CONST.
STA. 0+47.83
NO S.D. REQ'D.

STA. 62+73.04
14' ASPH. PVT. DR.

STA. 54+68.13
12' ASPH. ALLEY

LIMIT OF CONST.
STA. 0+50.28
NO S.D. REQ'D.

END C & G
STA. 62+15.00

LIMIT OF CONST.
STA. 0+54.23
NO S.D. REQ'D.

LIMIT OF CONST.
STA. 0+48.16
NO S.D. REQ'D.

STA. 63+04.07
28' ASPH. PVT. DR.

LIMIT OF CONST.
STA. 0+50.00
NO S.D. REQ'D.

STA. 63+54.51
12' ASPH. PVT. DR.

BEGIN SIDEWALK
STA. 64+16.47

END SIDEWALK
STA. 64+29.44

END SIDEWALK
STA. 55+61.41

END C & G
STA. 55+68.30

PAVE PARKING LOT IN FRONT OF TRACT 90 TO DRAIN

VARIABLE RADIUS SEE DETAIL THIS SHEET

STA. 64+03.39
40' ASPH. BUS. ENT.

LIMIT OF CONST.
STA. 0+70.00
NO S.D. REQ'D.

STA. 49+18.06
40' ASPH. BUS. DR.

LIMIT OF CONST.
STA. 0+81.89
NO S.D. REQ'D.

STA. 48+55.00
40' ASPH. BUS. DR.

LIMIT OF CONST.
STA. 1+00.00
NO S.D. REQ'D.

STA. 50+42.15
40' GRVL. BUS. ENT.

LIMIT OF CONST.
STA. 1+10.00
NO S.D. REQ'D.

CATCH BASIN
TOP-875.08
INV(E)-855.75
OUT(W)-855.50

STA. 51+35.57
40' ASPH. BUS. ENT.

LIMIT OF CONST.
STA. 0+80.08
NO S.D. REQ'D.

TIE-IN TO EX. CATCH BASIN

STA. 51+06.50
24' CURB CUT

CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO WALL DURING CONSTRUCTION

STA. 72+32.50
30' ASPH. BUS. ENT.

LIMIT OF CONST.
STA. 0+50.00
NO S.D. REQ'D.

STA. 71+76.02
38' ASPH. BUS. ENT.

LIMIT OF CONST.
STA. 0+95.00
NO S.D. REQ'D.

TIE-IN TO EXISTING OUTLET OF DETENTION BASIN. DEPTH TO BE FIELD VERIFIED

TIE-IN TO EXISTING 15" STORM DEPTH TO BE FIELD VERIFIED

STA.54+55.53
BEGIN RETAINING WALL

FACE OF RETAINING WALL TO FOLLOW BACK OF SIDEWALK

LIMIT OF CONST.
STA. 0+83.42
NO S.D. REQ'D.

STA. 53+97.89
40' ASPH. BUS. ENT.

NOTE: HISTORIC SIGN SHALL NOT TO BE DISTURBED DURING CONSTRUCTION

STA.55+45.29
END RETAINING WALL AND TIE IN TO EXIST. SIDEWALK, CURB & GUTTER

END C & G
STA. 76+28.38

END SIDEWALK
STA. 76+19.75

END C & G
STA.74+30.65

REDEFINE DRAINAGE DITCH 80'

GRASS
2'(TYP.)
R=±5'
24" STOP LINE
±36'
HATCHED AREA TO BE PAVED WITH TYPICAL PAVEMENT SECTION SHOWN FOR SR-29
±14.5'
RADIUS POINT TO BE EVEN WITH PROPOSED 24" STOP LINE
SAW CUT EXIST. PVMT.

CURB AND GUTTER
EDGE OF TRAVEL LANE
STA. 55+72.91
OFF. -130.47
140' R
SIDEWALK
STA. 55+76.19
OFF. -102.51
136' R
75' R
70' R
STA. 55+54.71
OFF. -48.97
50' R
STA. 55+19.03
OFF. -34.00

VARIABLE RADIUS DETAIL

91 #12	GT. EL. 876.18 IN. EL. 872.10 OUT. EL. 871.93	98 #12	GT. EL. 879.64 IN. EL. SE 871.40 IN. EL. N 871.00 OUT. EL. 870.00
92 #42	GT. EL. 876.46 OUT. EL. 872.85	99 #12	GT. EL. 878.21 IN. EL. S 870.38 IN. EL. E 869.67 IN. EL. N 874.13 OUT. EL. 866.69
93 #12	GT. EL. 876.57 IN. EL. S 871.59 IN. EL. W 872.20 OUT. EL. 871.42	99A #42	GT. EL. 879.50 OUT. EL. 876.50
94 #42	GT. EL. 875.75 OUT. EL. 872.25	100 #12	GT. EL. 880.22 IN. EL. N 876.14 IN. EL. W 876.14 OUT. EL. 875.97
95 #12	GT. EL. 877.23 IN. EL. S 870.85 IN. EL. W 873.14 OUT. EL. 870.68	101 #12	GT. EL. 879.71 OUT. EL. 876.21
96 #42	GT. EL. 876.69 OUT. EL. 873.19	102 #14	GT. EL. 879.53 IN. EL. W 875.44 IN. EL. E 875.44 OUT. EL. 875.12
97 EW	INV. EL. 871.50	103 #12	GT. EL. 879.70 OUT. EL. 875.62
104 EW	INV. EL. 870.00	108 #12	GT. EL. 874.75 OUT. EL. 871.47
105 #12	GT. EL. 873.63 IN. EL. 870.33 OUT. EL. 870.08	109 MH	GT. EL. 882.55 IN. EL. N 878.23 IN. EL. NE 873.79 OUT. EL. 873.62
106 #12	GT. EL. 874.40 IN. EL. 870.72 OUT. EL. 870.58	110 #12	GT. EL. 880.51 IN. EL. 874.30 OUT. EL. 874.13
107 #12	GT. EL. 874.75 IN. EL. 871.27 OUT. EL. 871.10	111 #12	GT. EL. 879.79 IN. EL. 874.63 OUT. EL. 874.46
		112 #14	GT. EL. 879.62 IN. EL. S 874.92 IN. EL. E 875.48 OUT. EL. 874.73
		113 #12	GT. EL. 880.29 IN. EL. 876.21 OUT. EL. 876.04
		114 JB#1	GT. EL. 881.90 OUT. EL. 877.09
		115 #12	GT. EL. 884.00 IN. EL. 879.92 OUT. EL. 879.75
		116 #12	GT. EL. 884.56 IN. EL. 880.48 OUT. EL. 880.31
		117 #14	GT. EL. 888.00 IN. EL. 883.91 OUT. EL. 883.58
		118 #42	GT. EL. 888.00 OUT. EL. 884.50
		119 #12	GT. EL. 888.59 OUT. EL. 884.09

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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE BUILDING
No. 0010865
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.48+00 TO END OF PROJ.

SCALE: 1"= 50'

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

Survey & Design Bureau

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	7C
CONST.	2012	STP - 29(58)	7C

73035-3209-14

REV. 10-02-13:
REVISED DRAINAGE NODE 119.

263.33' REVERSE CROWN SE RATE | 37.77' TRANSITION | 132.06' TRANSITION | 100.43' TRANSITION | 53.72' TRANSITION | 65.22' TRANSITION | 137.28' TRANSITION

STA. 50+42.90 FULL SE
STA. 50+80.67 ZERO CROWN
STA. 52+12.73 NORMAL CROWN
STA. 52+25.40 NORMAL CROWN
STA. 53+25.83 ZERO CROWN
STA. 53+79.55 FULL SE
STA. 54+44.77 ZERO CROWN
STA. 55+82.05 NORMAL CROWN

52+53.41 S.R. 29 = 70+00.00 STATE ST. S.E.
ELEV. 883.30
52+61.83 S.R. 29 = 65+00.00 STATE ST.
ELEV. 883.53
56+66.40 S.R. 29 = 92+50.00 SOUTH ROANE ST.

STA. 49+04.37
LOW WIRE
ELEV. 897.28
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 49+83.98
LOW WIRE
ELEV. 896.38
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 50+77.96
LOW WIRE
ELEV. 907.36
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 51+45.78
LOW WIRE
ELEV. 904.62
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 52+38.81
LOW WIRE
ELEV. 903.50
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 53+18.55
LOW WIRE
ELEV. 912.34
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 53+60.09
LOW WIRE
ELEV. 905.21
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 54+68.81
LOW WIRE
ELEV. 917.94
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

END PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 56+17.62
ELEV. 890.74

K = 99
VC = 225.00'
V = 45+ MPH

VPC 49+87.50
EL. 878.41

VPT 52+12.50
EL. 882.15

VPC 53+55.00
EL. 886.14

VPI 54+50.00
EL 888.80

VPT 55+45.00
EL. 889.94

VPI 55.60
EL 890.12

EXIST. 4" WATER LINE
STA 48+84.95

EXIST. 6" WATER LINE
STA 52+45.60

STA. 51+75.59
LOW WIRE
ELEV. 902.28
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

STA. 52+90.02
LOW WIRE
ELEV. 903.53
APPROX. TEMP.
AT TIME OF
LOCATION: 86°

VPI 51+00.00
EL 879.00

+0.53%
+2.80%
+2.80%
+1.20%
+0.94%

EXISTING GROUND

PROP. 18" RCP 0.50 %
PROP. 18" RCP 0.50 %
PROP. 18" RCP 0.49 %
36" RCP TO BE REMOVED
EXIST. 36" RCP
STA 50+76.47
INV-870.52
FLOWS WEST
PROP. 18" RCP 2.01 %
PROP. 24" RCP 1.50 %
PROP. 18" RCP 2.59 %
PROP. 18" RCP 3.69 %
PROP. 18" RCP 2.88 %
PROP. 18" RCP 2.66 %

K = 118
VC = 190.00'
V = 45+ MPH

91 #12 | 93 #12 | 95 #12 | 99 #12 | 98 #12 | 100 #12 | 109 MH | 115 #12 | 116 #12 | 117 #14 | 119 #12

930 925 920 915 910 905 900 895 890 885 880 875 870 865 860 855 850 845 840

48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00

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PHILIP S. NELSON
REGISTERED
LICENSE NO. 0010885
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 48+00.00 TO
END OF PROJECT

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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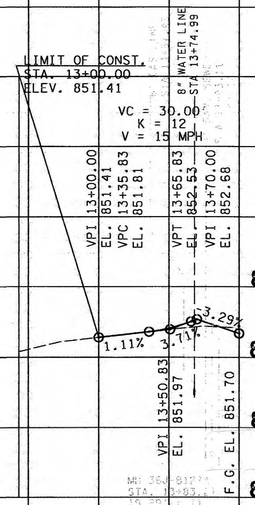
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	8
CONST.	2012	STP - 29(58)	9

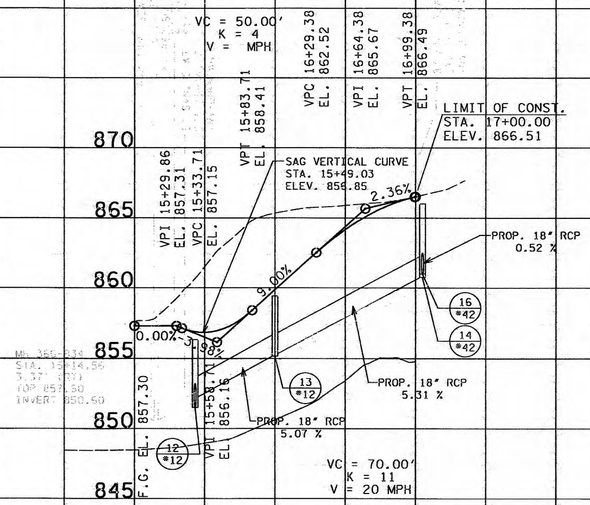
ROANE COUNTY 73035-3209-14

REV. 04-11-11:
REVISED PROFILE FOR REALIGNMENT OF BREAZEALE STREET.
MOVED PANSY HILL ROAD PROFILE TO SHEET 10.

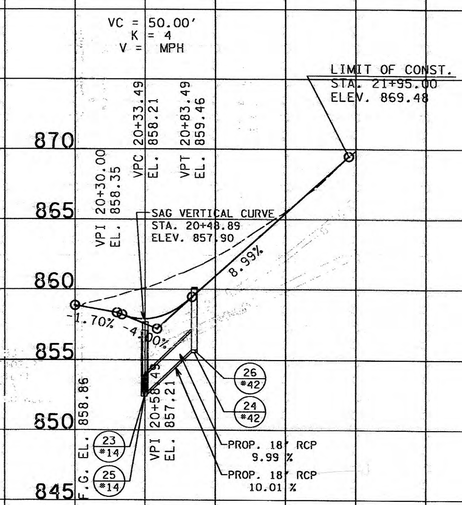
REV. 10-02-13:
REVISED DRAINAGE NODE 25 AT ROSSER STREET.



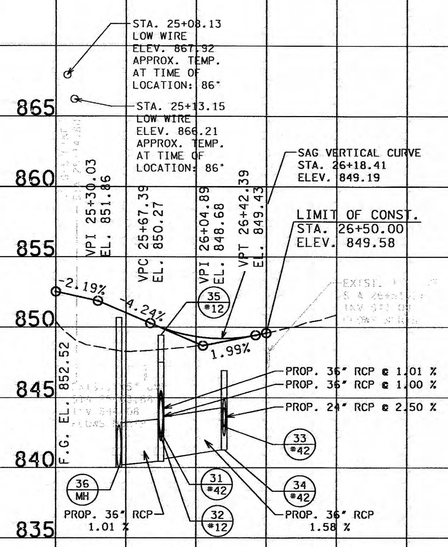
OLD RURITAN ROAD
(OLD S.R. 29)
12+54.73 LT.



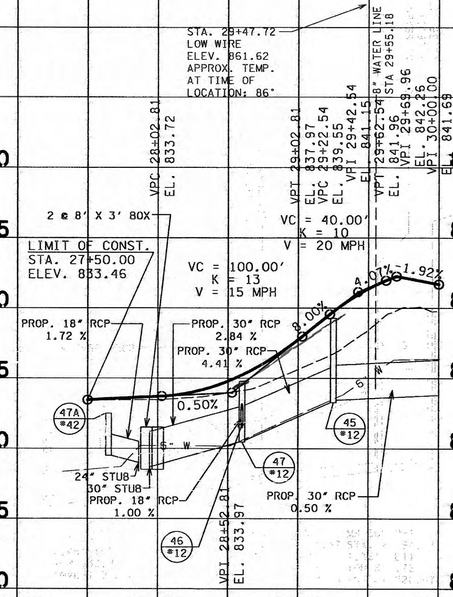
TIDWELL CIRCLE
19+02.78 RT.



ROSSER STREET
22+07.19 RT.



SCOTT LANE
25+02.00 RT.



HASSLER MILL ROAD
28+32.27 LT.

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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
No. 100108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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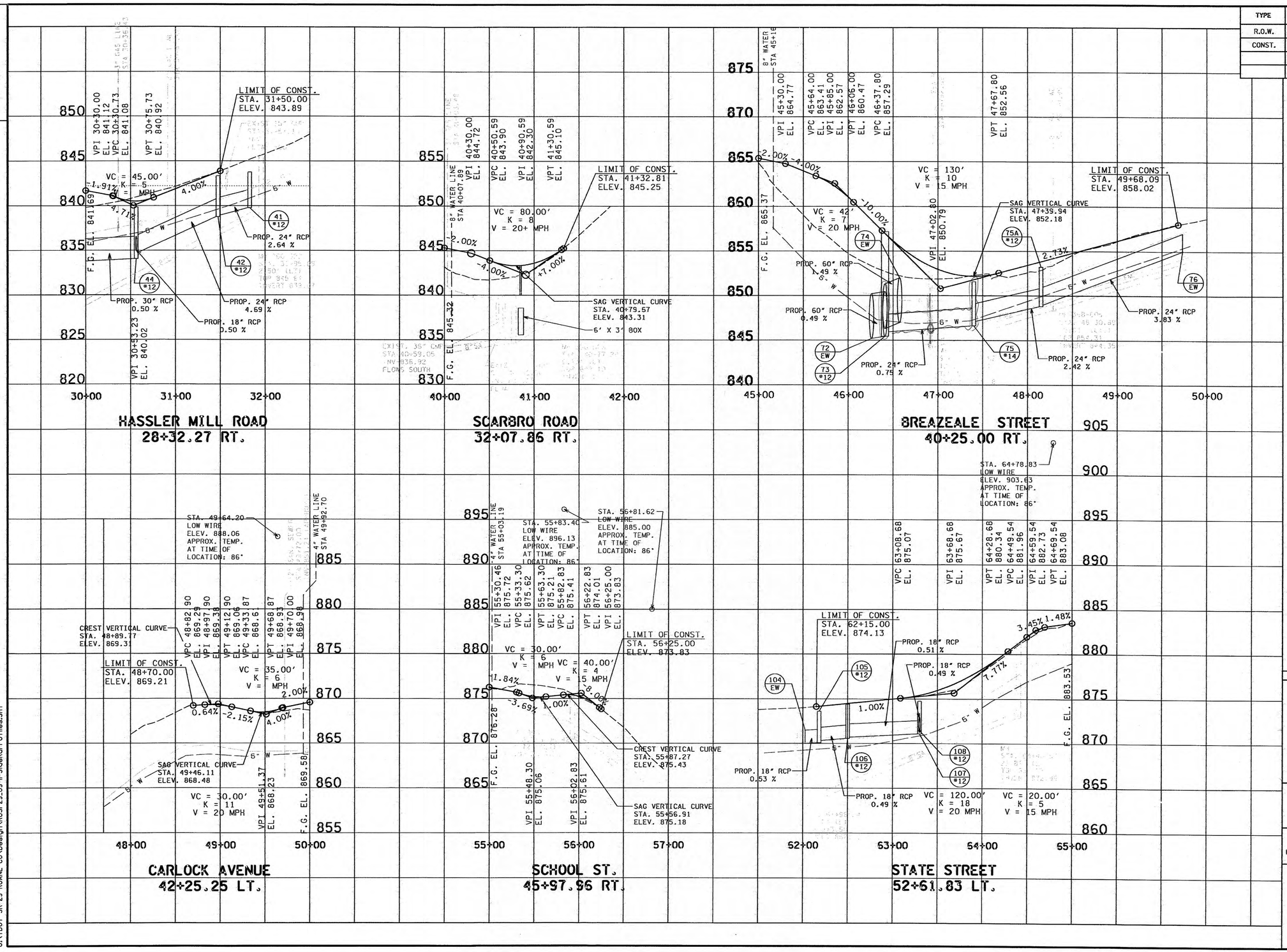
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(56)	9
CONST.	2012	STP - 29(56)	10

ROANE COUNTY 73035-3209-14

REV. 04-11-11:
REVISED PROFILE FOR REALIGNMENT OF BREAZEALE STREET.
MOVED PANSY HILL ROAD PROFILE TO SHEET 10.

REV. 10-02-13:
REVISED DRAINAGE NODE 106 AT STATE STREET.



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PHILIP S. NELSON
TENNESSEE
DO108855
REGISTERED
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Source & Design Division

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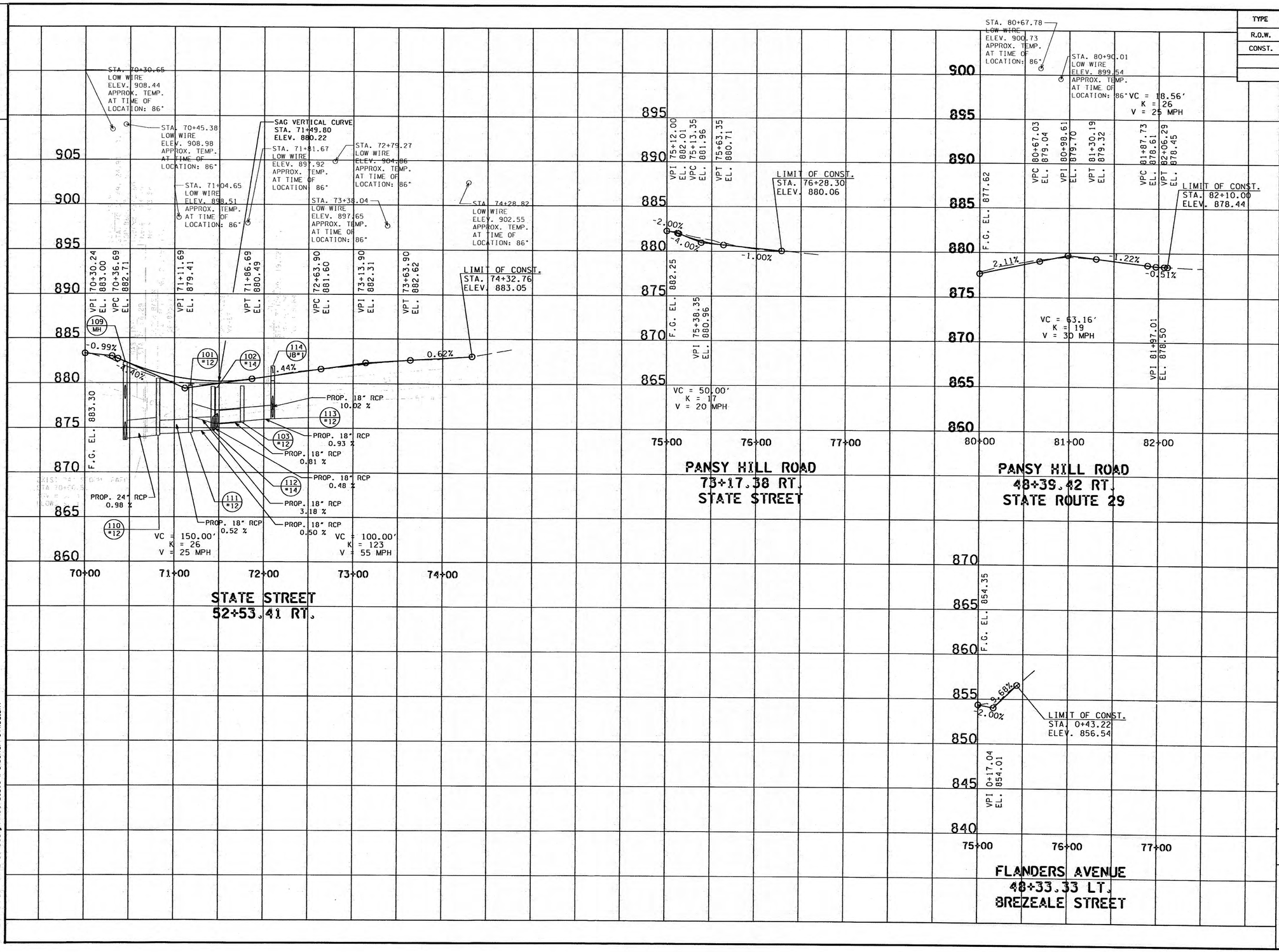
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	10
CONST.	2012	STP - 29(58)	11

ROANE COUNTY 73035-3209-14

REV. 04-11-11:
ADDED NEW AND EXISTING PANSY HILL ROAD PROFILES TO NEW SHEET.

REV. 10-02-13:
REVISED DRAINAGE NODE 112 AT STATE STREET.

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PHILIP S. NELSON
REGISTERED ENGINEER
No. 0010805
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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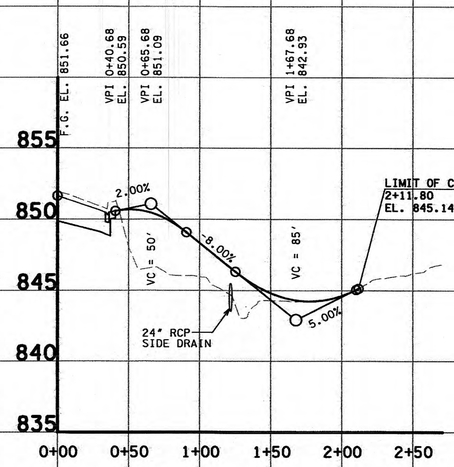
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

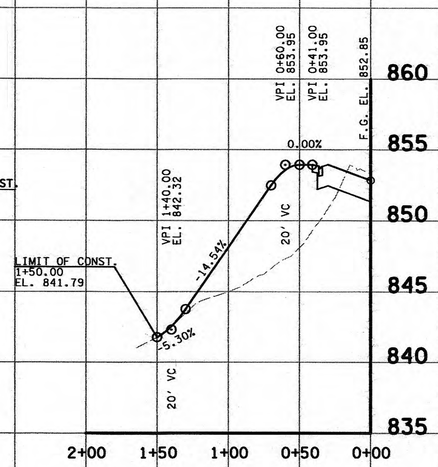
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	10
CONST.	2012	STP - 29(58)	12

73035-3209-14

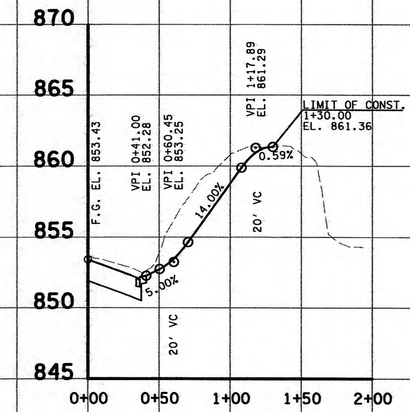
REV. 03-02-12:
REVISED DRIVEWAY FOR TRACT 12.
RELOCATED DRIVEWAY ON TRACT 18.



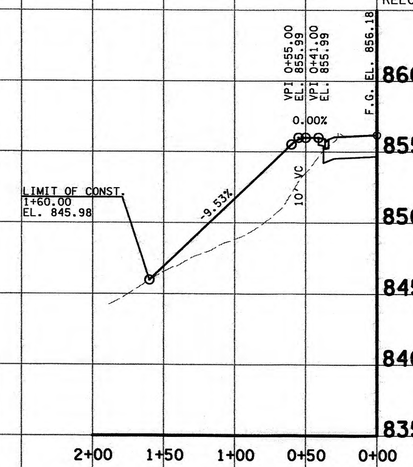
ACCESS DR. RT. 12+58.16
TRACT NO. 7



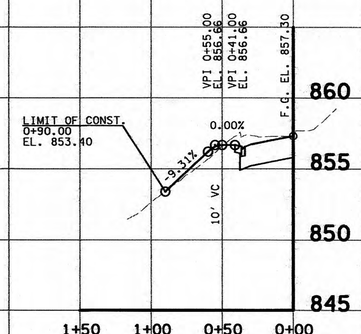
PVT. DR. LT. 15+67.41
TRACT NO. 10



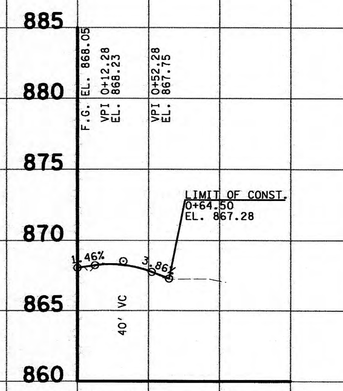
PVT. DR. RT. 16+02.16
TRACT NO. 8



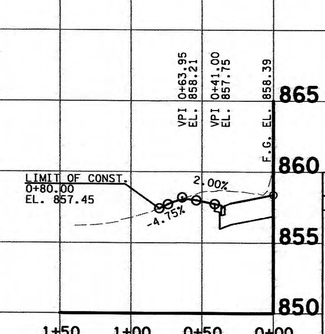
PVT. DR. LT. 17+70.73
TRACT NO. 14



PVT. DR. LT. 19+02.33
TRACT NO. 15

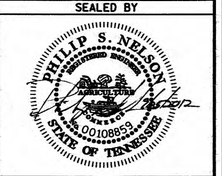


PVT. DR. RT. 21+81.00
ROSSER STREET
TRACT NO. 18



PVT. DR. LT. 22+77.58
TRACT NO. 19

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

3/24/2012 8:57:25 PM
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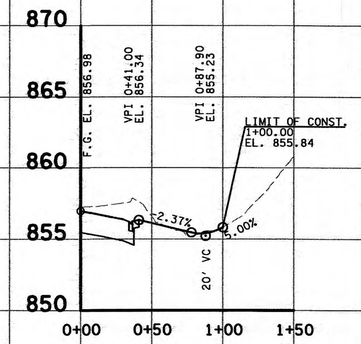
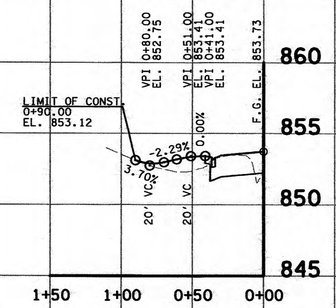
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	11
CONST.	2012	STP - 29(58)	13

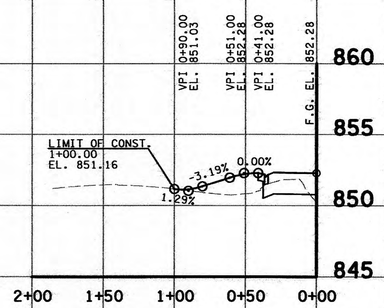
73035-3209-14



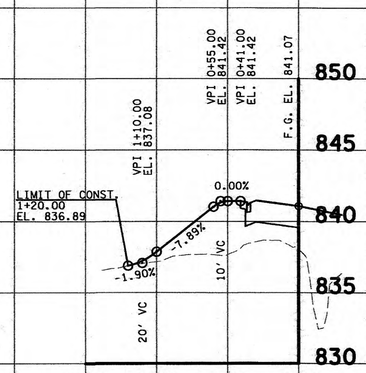
PVT. DR. RT. 23+61.37
TRACT NO. 25



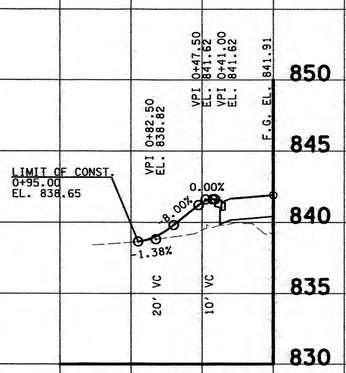
PVT. DR. LT. 24+70.89
TRACT NO. 19



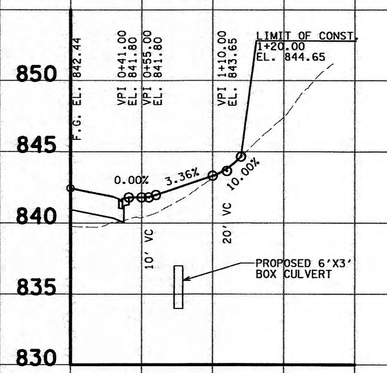
PVT. DR. LT. 25+07.65
TRACT NO. 28



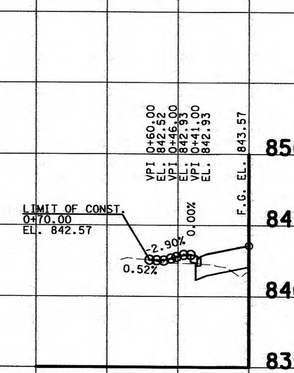
PVT. DR. LT. 29+95.05
TRACT NO. 38



BUS. ENT. LT. 30+69.58
TRACT NO. 44



PVT. DR. RT. 30+99.37
TRACT NOS. 43 & 46



BUS. ENT. LT. 31+48.64
TRACT NO. 44

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PHILIP S. NELSON
REGISTERED
LICENSED PROFESSIONAL ENGINEER
No. 001088539
STATE OF TENNESSEE
9-25-2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

9/24/2012 8:57:26 PM
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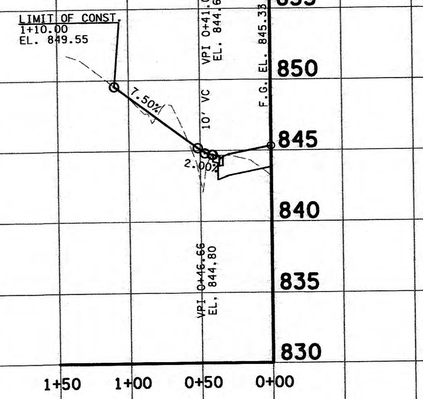
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	12
CONST.	2012	STP - 29(58)	14

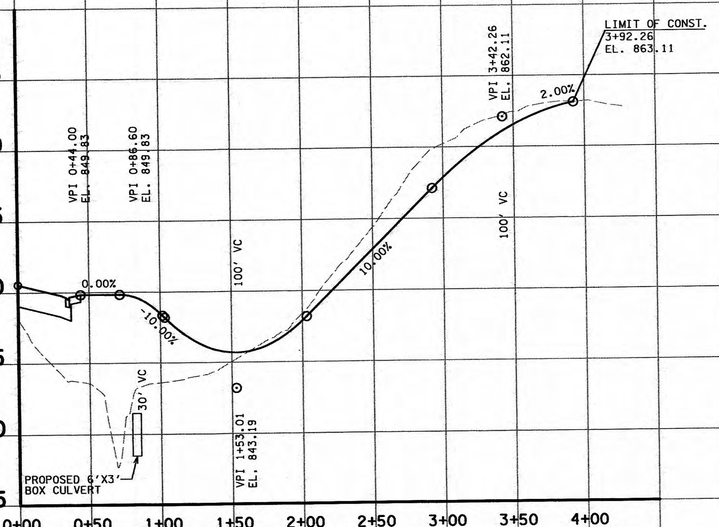
73035-3209-14

REV. 01-11-13:
REVISED DRIVEWAY PROFILES ON TRACT 48
AT STA. 32+07 AND STA. 35+21.

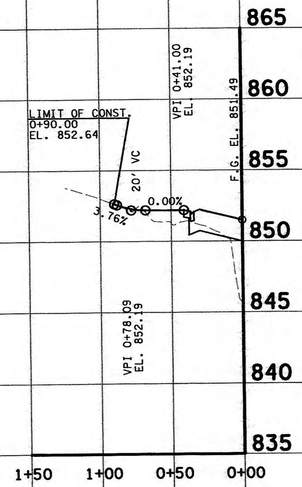
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



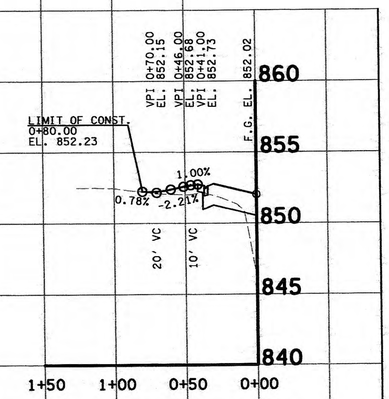
FLD. ENT. LT. 32+07.86
TRACT NO. 48



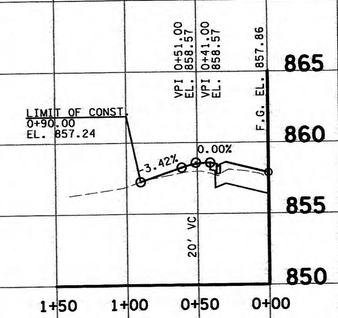
BUS. ENT. RT. 34+04.64
TRACT NO. 52



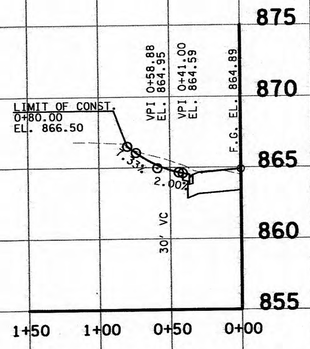
FLD. ENT. LT. 35+20.81
TRACT NO. 48



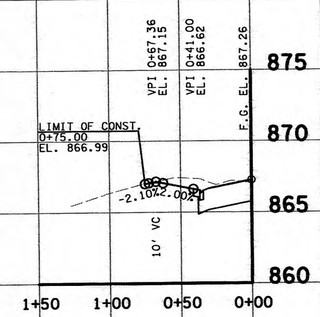
BUS. ENT. LT. 35+87.98
TRACT NO. 53



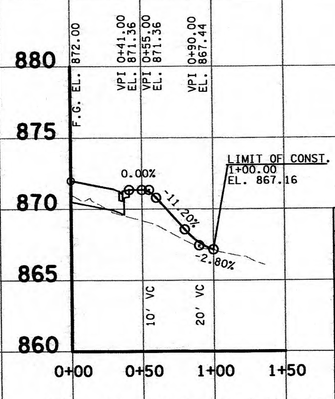
BUS. ENT. LT. 38+11.99
TRACT NO. 53



FLD. ENT. LT. 40+07.16
TRACT NO. 55



BUS. ENT. LT. 41+09.87
TRACT NO. 56



PVT. DR. RT. 43+45.87
TRACT NO. 63

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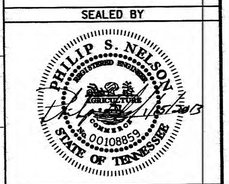

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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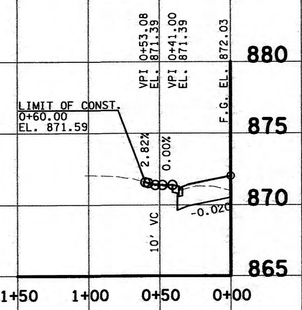
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

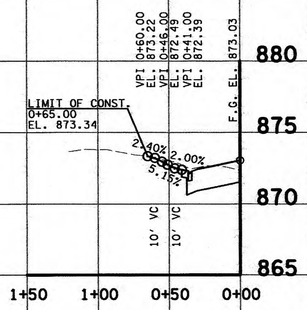
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	13
CONST.	2012	STP - 29(58)	15

73035-3209-14

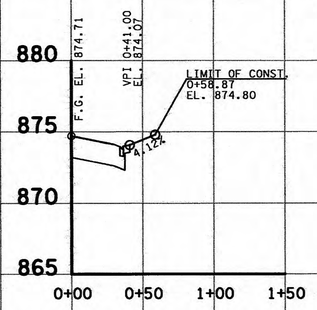
REV. 03-02-12:
ADDED DRIVEWAY TO TRACT 73 AT STA. 48+55.00. RELOCATED DRIVEWAY ON TRACT 67.



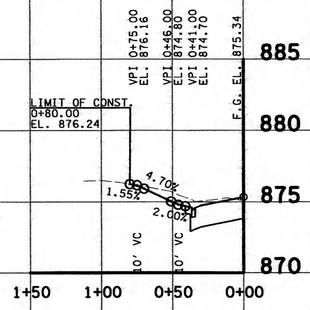
BUS. ENT. LT. 43+47.53
TRACT NO. 64



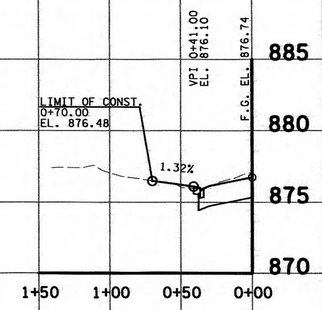
BUS. ENT. LT. 43+97.34
TRACT NO. 64



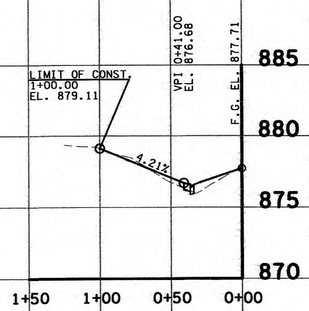
BUS. ENT. RT. 44+81.00
TRACT NO. 67



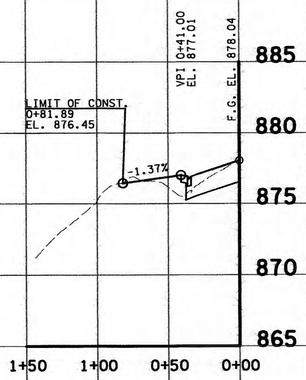
BUS. ENT. LT. 45+17.29
TRACT NO. 66



BUS. ENT. LT. 46+71.78
TRACT NO. 71



BUS. ENT. LT. 48+55.00
TRACT 73



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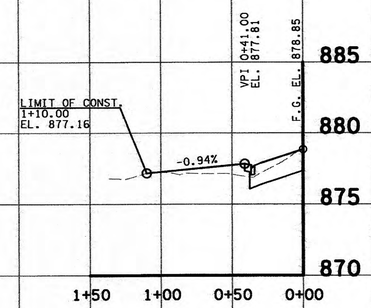
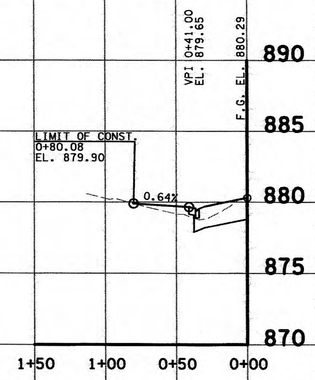
TRACT NO. 73 & 74



BUS. ENT. LT. 50+42.15
TRACT NO. 77



BUS. ENT. LT. 51+35.57
TRACT NO. 78

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PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	2A

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
-DELETED NOTE 2
-REVISED NOTES 1, 6 AND 14
-ADDED NOTES 18 THRU 27

REV. 06-13-13:
-REVISED NOTE 6
-ADDED NOTE 30

REV. 09-03-13:
-REVISED NOTE 6
-ADDED NOTES 31 AND 32

REV. 10-02-13:
-ADDED NOTE 33

REV. 02-04-14:
-REVISED NOTE 9
ADDED NOTES 34 AND 35

REV. 04-07-14:
-REVISED NOTE 9

FOOTNOTES:

(1) INCLUDES 385 C.Y. FOR E.P.S.C. MEASURES. (SEE SHEET 26A)
(3) SEE SUBSECTION 209-07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE AND REPLACEMENT.
(4) INCLUDES 420 LF FOR FILTER BAGS
(5) INCLUDES 500 TONS FOR MAINTENANCE OF TRAFFIC. SEE SHEET 2E5 FOR PAVEMENT QUANTITIES TABULATION.
(6) INCLUDES 75 TONS FOR FILTER BAGS, 40 TONS FOR CULVERT PROTECTION,
(7) HAND RAIL TO BE PLACED ALONG TOP OF RETAINING WALL FROM S.R. 29 STATION 20+30 TO STATION 22+00 PER TDOT STANDARD RP-S-8.
(8) FOR SIGNS NUMBER 54, 55, AND 56. SEE TN.Q P.L. FOR PRODUCT PROVIDERS
(9) REMOVE SIGN AND SUPPORT SIGN NO. 1A, 1B AND APPROXIMATELY 60 EXISTING SIGNS AND SUPPORTS (NO FOOTINGS ON THESE SIGNS) WITHIN THE PROJECT LIMITS OR AS DIRECTED BY THE ENGINEER, INCLUDING MCKINNEYS FORMAL WEAR SIGN, SHEET 6, TRACT 66.
(10) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(11) ITEM NO. TO INCLUDE SIGN FACE (TN-08-OH), ALL ELECTRICAL: FLASHING LIGHTS, WIRING AND CONNECTORS (AS SPECIFIED IN T.D.O.T. STANDARD SPECIFICATIONS BOOK (720.28) FLASHING SCHOOL SIGNAL), TIMER, ALL BRACKETS, CONTROL BOX WITH LOCK AND KEY AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM AS LOCATED IN THE PLANS.
(12) TO BE USED FOR THE SCHOOL SIGNAL SPEED SIGN SUPPORT. THE FOOTING FOR THE 15'-0" CANTILEVER SIGNAL SUPPORT WILL USE A 3'-0" DIA. DRILLED SHAFT WITH A DEPTH OF 15'-0".
(13) TO BE USED WHEN AND WHERE AS DIRECTED BY THE ENGINEER.
(14) INCLUDES 580 SY FOR CULVERT PROTECTION, 180 SY FOR CONSTRUCTION EXITS, 75 SY FOR DIVERSION CHANNEL AND 135 SY FOR FILTER BAGS.
(15) FOR USE WITH EROSION CONTROL MATTING
(16) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, CYCL.
(17) INCLUDES QUANTITIES FOR 4 CONSTRUCTION EXITS, 2 ON EACH SIDE. LOCATIONS TO BE APPROVED BY THE ENGINEER.
(18) TO BE USED FOR PHASE I CONSTRUCTION FROM STA. 11+53.90 TO STA. 19+00.
(19) TO BE USED AT CULVERT CROSSINGS AS FLOW DIVERSION AND/OR CHANNELIZATION DEVICE.
(20) TO BE USED TO DIVERT FLOW INTO DIVERSION PIPES AT CULVERT CROSSINGS.
(21) INCLUDES 275 TONS FOR E.P.S.C. MEASURES.
(22) FOR E.P.S.C. MEASURES.
(23) TO BE USED ON ALL STREAM CHANNEL SLOPES.
(24) TO BE USED FOR RETAINING WALLS FROM STA. 20+30 TO STA. 22+00 AND STA. 54+55.53 TO STA. 55+45.29
(25) NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND RESETTING PORTABLE BARRIER RAIL ON NEW ALIGNMENT AT THE SAME SITE TO PROVIDE FOR CHANGES IN TRAFFIC CONTROL REQUIRED BY THE CONSTRUCTION PHASING.
(26) SIDE DRAINS AT PRIVATE DRIVES ARE PAID SEPARATELY.
(27) FOR MODIFICATION OF STR-2 FROM HASSLER MILL ROAD TO BAUMGARTNER ROAD.
(28) INCLUDES THE REMOVAL AND RESETTING OF ANY NECESSARY GUARDRAIL FOR THE 6'X5' BOX CULVERT INSTALLATION ON BAUMGARTNER ROAD.
(29) FOR GUARDRAIL POSTS TO BE REPLACED AND MOUNT TO THE TOP OF THE PROPOSED 6'X5' BOX CULVERT ON BAUMGARTNER ROAD.
(30) TO BE USED AT FILL TREATMENT AREA TRACT 39A.
(31) TO BE USED WHEN AND WHERE AS DIRECTED BY THE ENGINEER. INCLUDES 15 LF FOR CULVERT PROTECTION TYPE 2 AT STRUCTURE NO. 52B.
(32) TO BE USED FOR FILL TREATMENT TRACT NO. 32A.
(33) INCLUDES REMOVAL OF EXISTING STORM CULVERTS AND STRUCTURES, AND CONCRETE PAVEMENT, AS REQUIRED.
(34) 2-STORY COMMERCIAL BUILDING WITH 2500 SQ. FT. BASEMENT. SEE SHEET 7.
(35) 9'X12' CONCRETE/STEEL PEDESTRIAN BRIDGE WITH WOOD RAILS SEE SHEET 5-1.

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PHILIP S. NELSON
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No. 00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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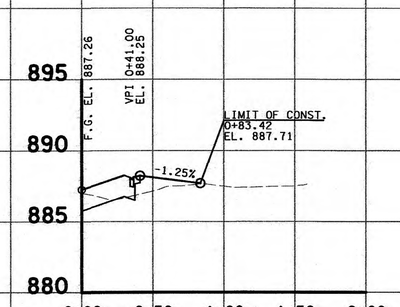
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

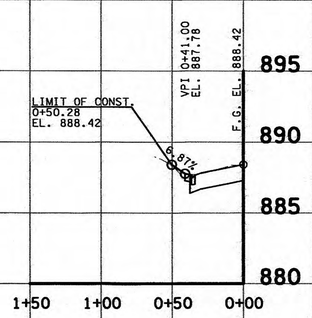
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	14
CONST.	2012	STP - 29(58)	16

73035-3209-14

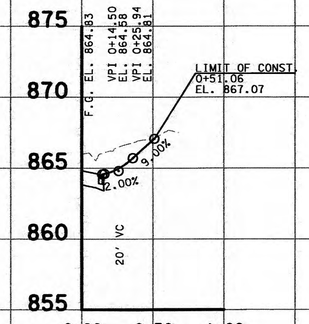
REV. 03-02-12:
REVISED DRIVEWAY @ STA. 54+68.13 LT.



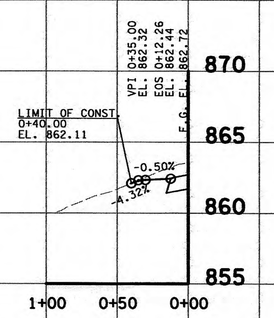
BUS. ENT. RT. 53+97.89
TRACT NO. 89



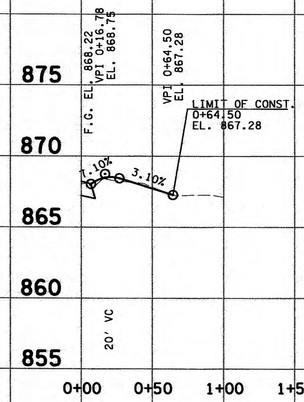
PVT. DR. LT. 54+68.13
ALLEY



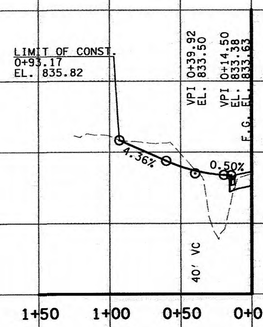
PVT. DR. RT. 16+60.00
TIDWELL CIRCLE
TRACT NO. 16



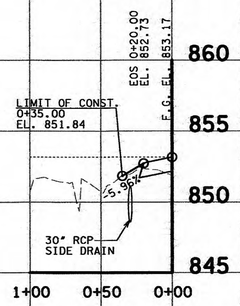
PVT. DR. LT. 21+19.80
ROSSER STREET
TRACT NO. 25



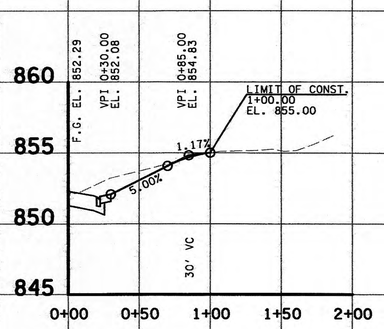
PVT. DR. RT. 21+81.00
ROSSER STREET
TRACT NO. 18



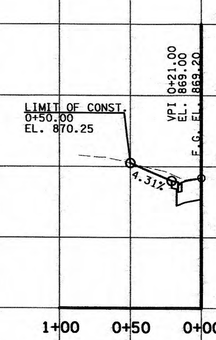
PVT. DR. LT. 27+85.39
HASSLER MILL ROAD
TRACT NO. 38



FIELD ENT. LT. 46+95.00
BREAZEALE STREET
TRACT NO. 58



PVT. DR. RT. 47+25.00
BREAZEALE STREET
TRACT NO. 52



BUS. ENT. LT. 49+05.00
CARLOCK AVENUE
TRACT NO. 62

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COMMERCE
No. 00108859
STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

Survey & Design Division

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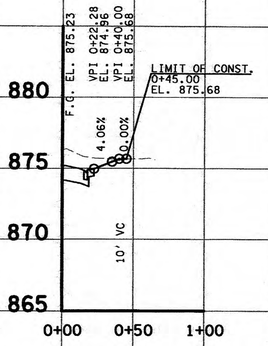
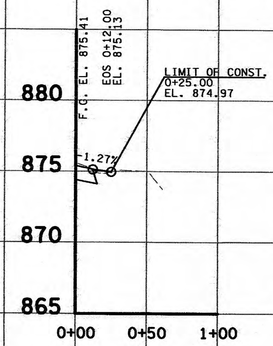
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	15
CONST.	2012	STP - 29(58)	17

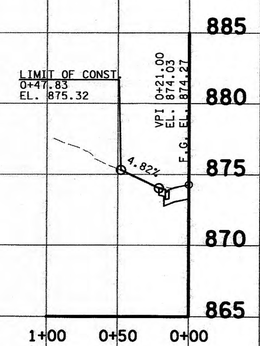
73035-3209-14



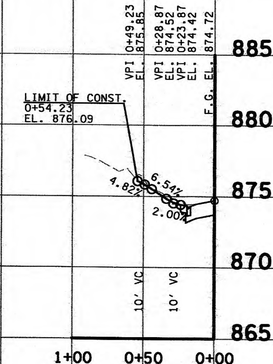
BUS. ENT. RT. 55+65.30
SCHOOL STREET
TRACT NO. 67



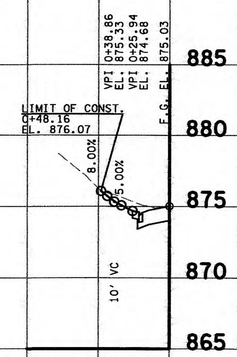
PVT. DR. RT. 55+91.29
SCHOOL STREET
TRACT NO. 68



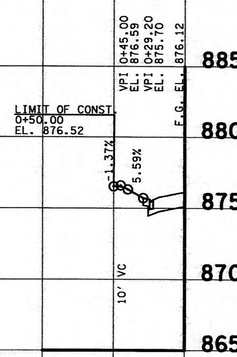
PVT. DR. LT. 62+28.72
STATE STREET
TRACT NO. 86



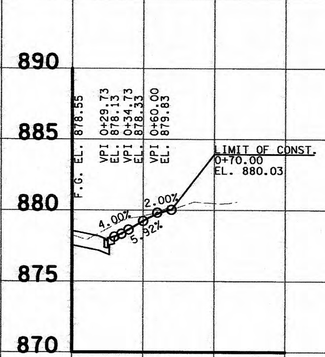
PVT. DR. LT. 62+73.04
STATE STREET
TRACT NO. 87



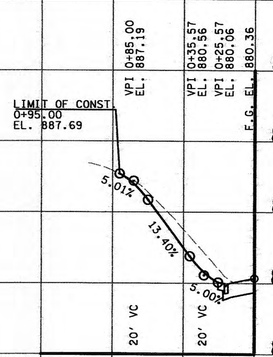
PVT. DR. LT. 63+04.07
STATE STREET
TRACT NO. 88



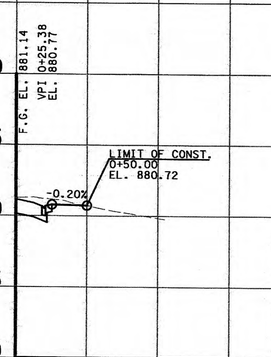
PVT. DR. LT. 63+54.51
STATE STREET
TRACT NO. 88



BUS. ENT. RT. 64+03.39
STATE STREET
TRACT NO. 78



PVT. DR. LT. 71+76.02
STATE STREET
TRACT NO. 89



PVT. DR. RT. 72+32.50
STATE STREET
TRACT NO. 79

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STATE OF TENNESSEE
12/7/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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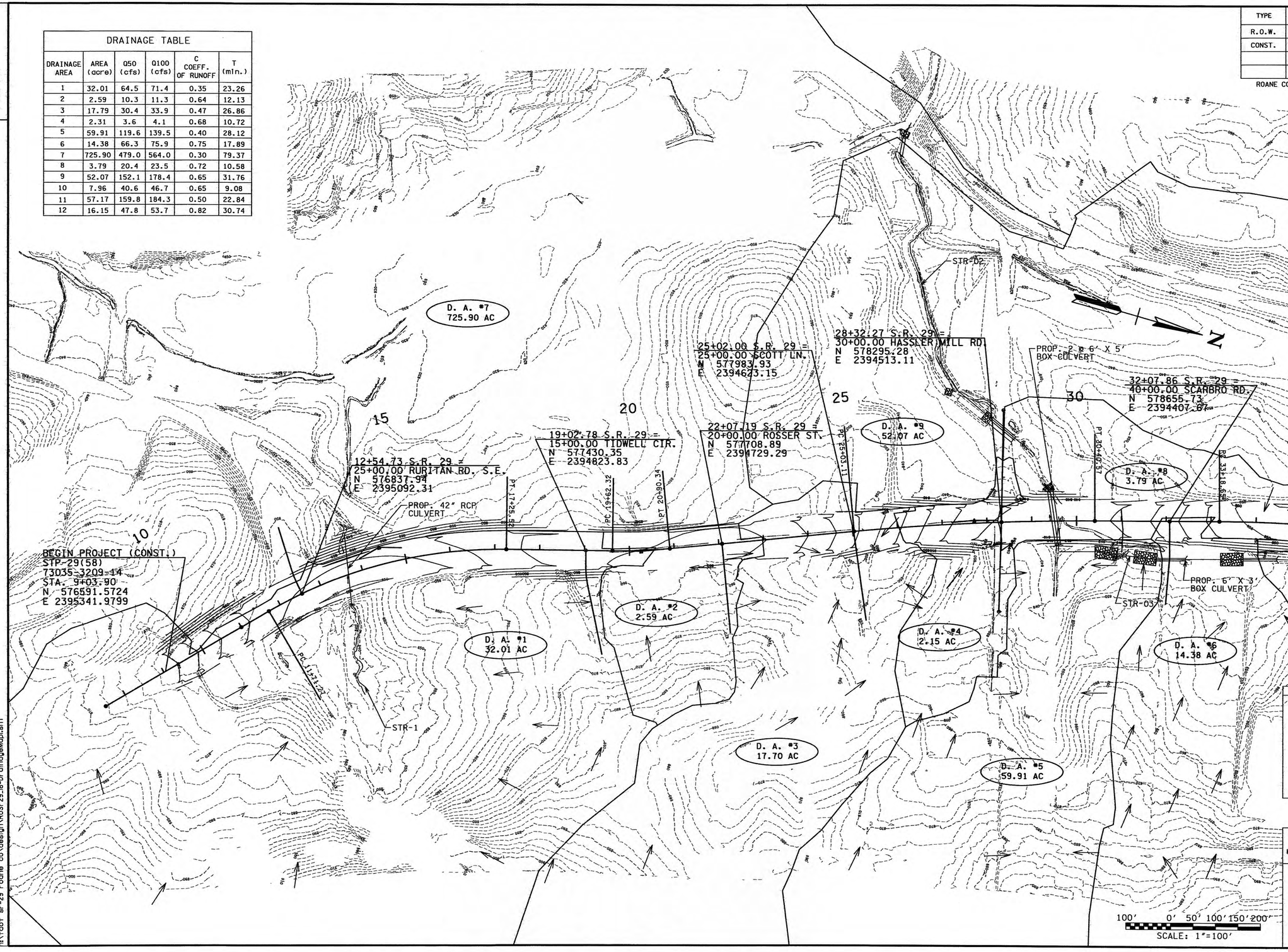
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	16
CONST.	2012	STP - 29(58)	18

ROANE COUNTY 73035-3209-14

DRAINAGE TABLE

DRAINAGE AREA	AREA (acre)	Q50 (cfs)	Q100 (cfs)	C COEFF. OF RUNOFF	T (min.)
1	32.01	64.5	71.4	0.35	23.26
2	2.59	10.3	11.3	0.64	12.13
3	17.79	30.4	33.9	0.47	26.86
4	2.31	3.6	4.1	0.68	10.72
5	59.91	119.6	139.5	0.40	28.12
6	14.38	66.3	75.9	0.75	17.89
7	725.90	479.0	564.0	0.30	79.37
8	3.79	20.4	23.5	0.72	10.58
9	52.07	152.1	178.4	0.65	31.76
10	7.96	40.6	46.7	0.65	9.08
11	57.17	159.8	184.3	0.50	22.84
12	16.15	47.8	53.7	0.82	30.74



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STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

BEGINNING OF PROJECT TO STA.35+00

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	17
CONST.	2012	STP - 29(58)	19

ROANE COUNTY 73035-3209-14



DRAINAGE TABLE					
DRAINAGE AREA	AREA (acre)	Q50 (cfs)	Q100 (cfs)	C COEFF. OF RUNOFF	T (min.)
1	65.88	116.2	135.4	0.35	27.68
2	2.59	10.3	11.3	0.64	12.13
3	17.79	30.4	33.9	0.47	26.86
4	2.31	3.6	4.1	0.68	10.72
5	59.91	119.6	139.5	0.40	28.12
6	14.38	66.3	75.9	0.75	17.89
7	725.90	479.0	564.0	0.30	79.37
8	3.79	20.4	23.5	0.72	10.58
9	52.07	152.1	178.4	0.65	31.76
10	7.96	40.6	46.7	0.65	9.08
11	57.17	159.8	184.3	0.50	22.84
12	16.15	47.8	53.7	0.82	30.74

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PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 100108859
STATE OF TENNESSEE
9/25/2012

100' 0' 50' 100' 150' 200'
SCALE: 1"=100'

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA.35+00 TO
END OF PROJECT
SCALE: 1"=100'

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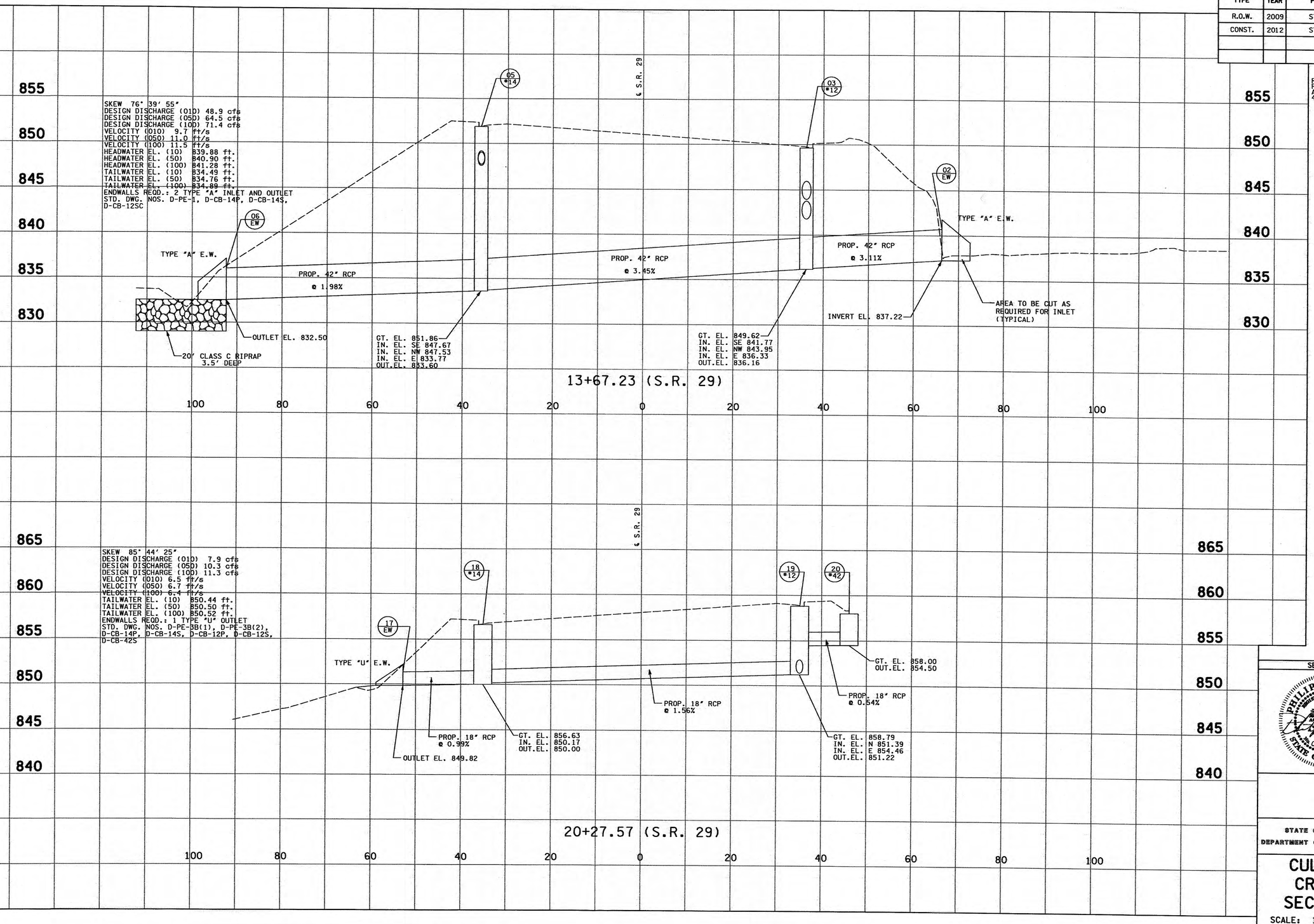
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	18
CONST.	2012	STP - 29(58)	20

73035-3209-14
REV. 01-11-13: REVISED RIP-RAP APRON DEPTH FOR 42" RCP CULVERT.



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PHILIP S. NELSON
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AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
6/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

Survey & Design Division

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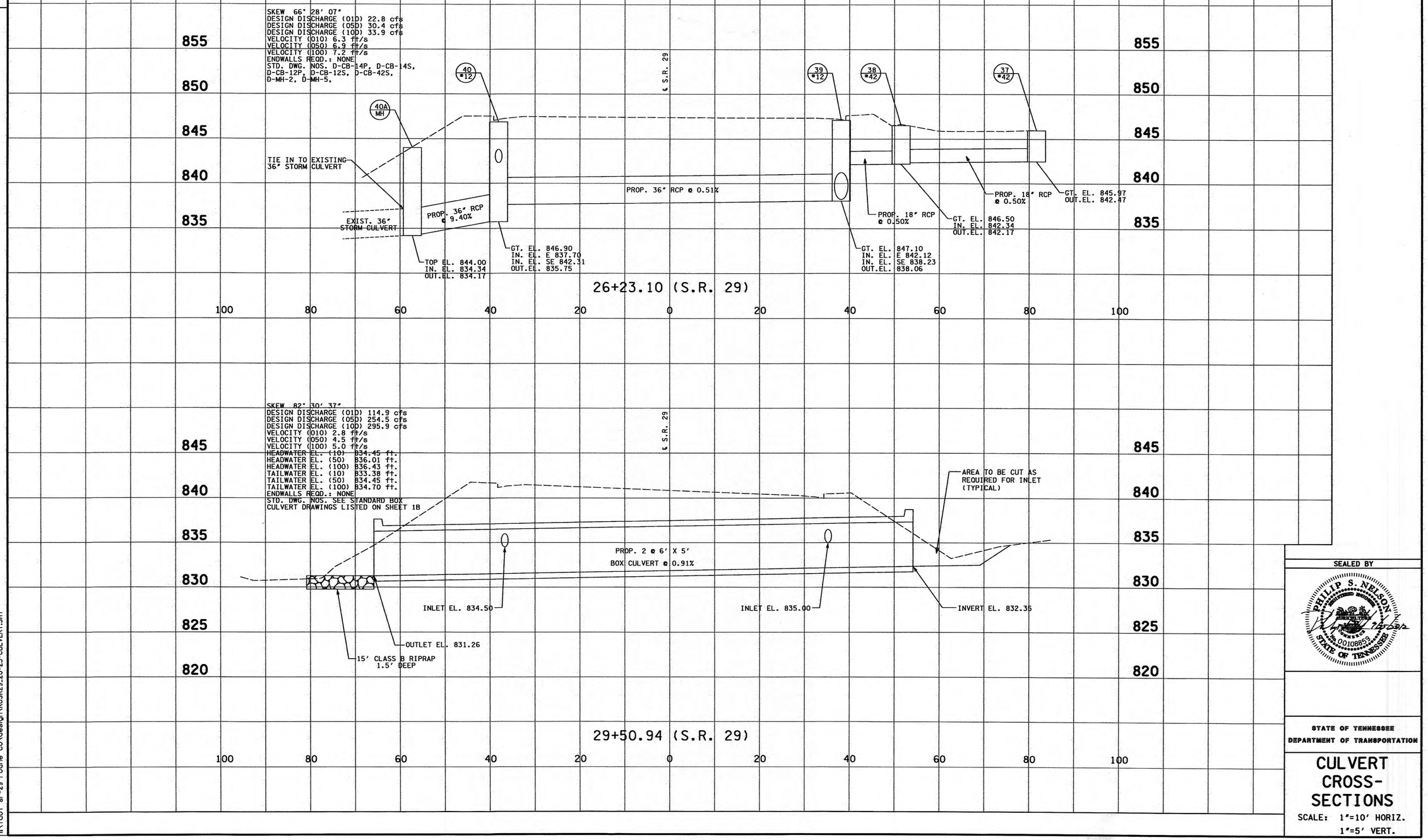
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	18
CONST.	2012	STP - 29(58)	21

73035-3209-14



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No. 0108853
STATE OF TENNESSEE
2/22/12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

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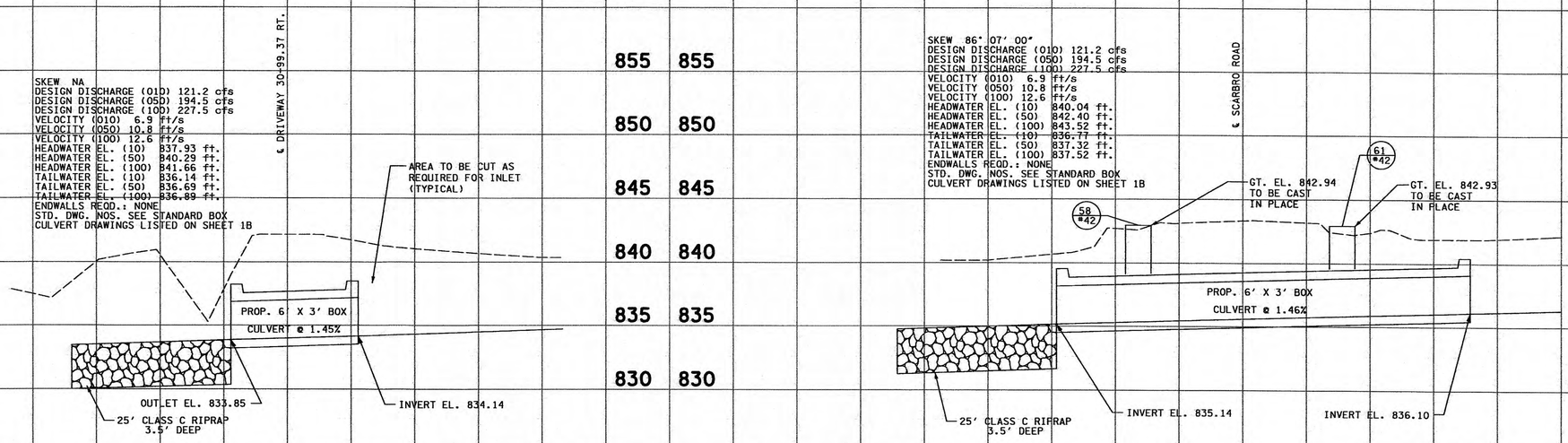
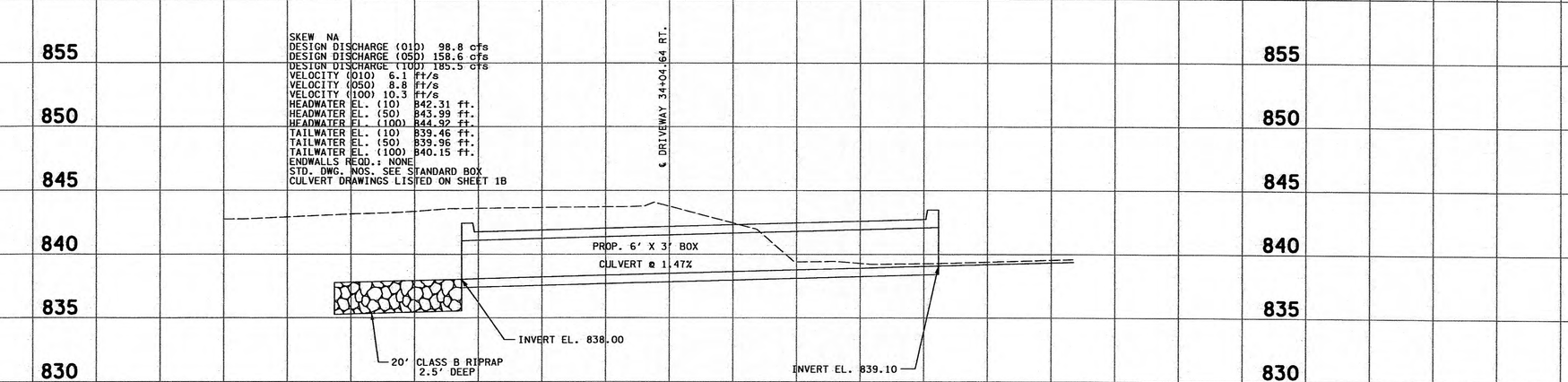
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	19
CONST.	2012	STP - 29(58)	22

73035-3209-14
REV. 01-11-13:
REVISED RIP-RAP APRON SPECIFICATIONS FOR 6' x 3' BOX CULVERTS.





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REGISTERED ENGINEER
100108859
STATE OF TENNESSEE
1/25/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

Survey & Data Division

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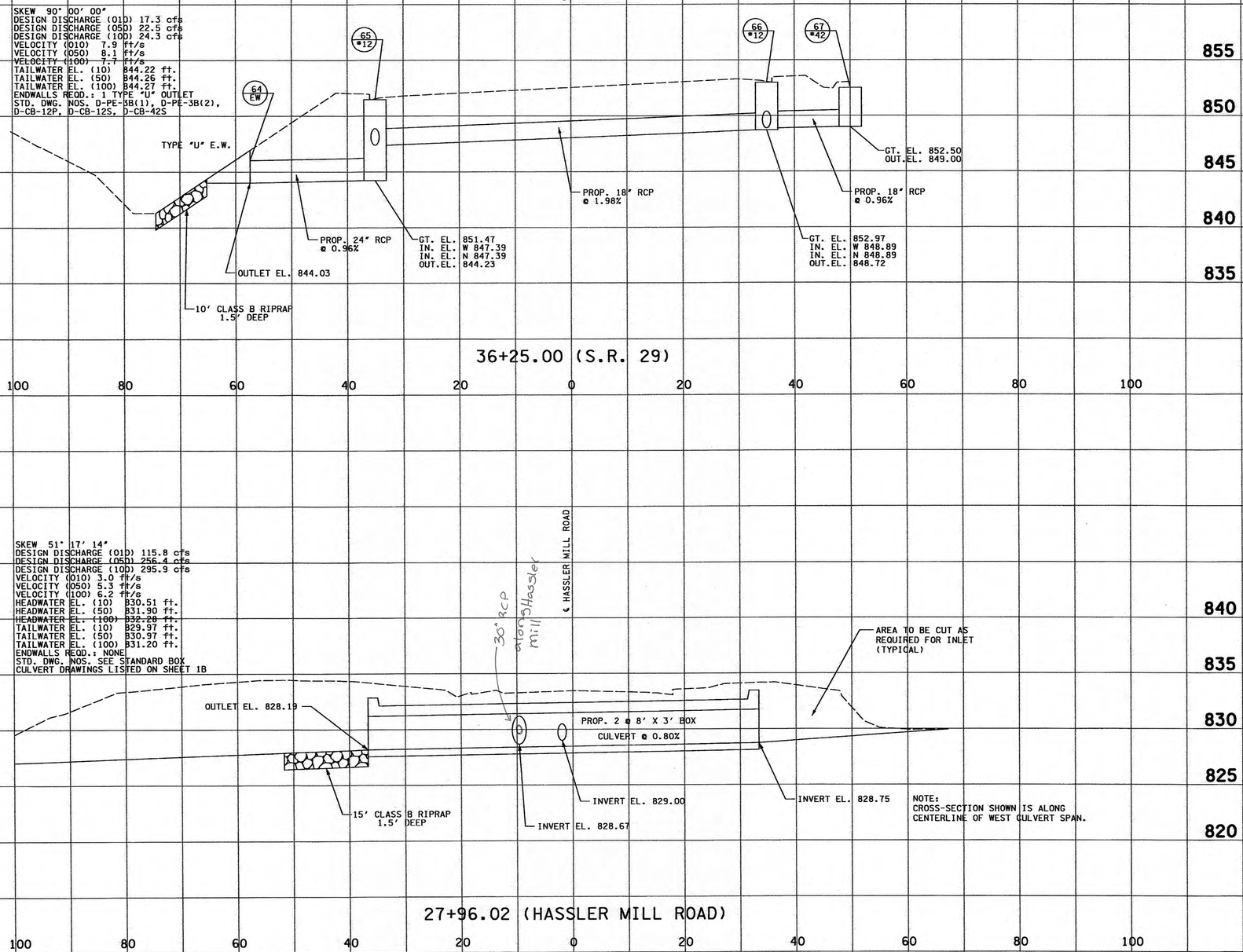
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	19
CONST.	2012	STP - 29(58)	23

73035-3209-14



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STATE OF TENNESSEE
7/25/12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

Survey & Design Bureau

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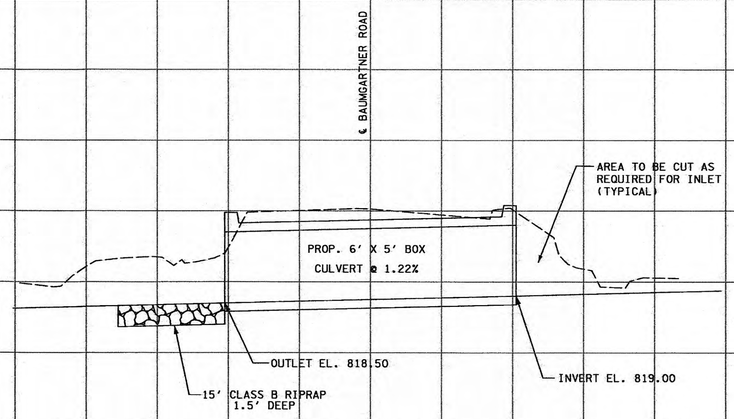
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	19
CONST.	2012	STP - 29(58)	24

73035-3209-14

REV 01-11-13
REVISED RIP-RAP APRON SPECIFICATIONS FOR 60" RCP CULVERT.

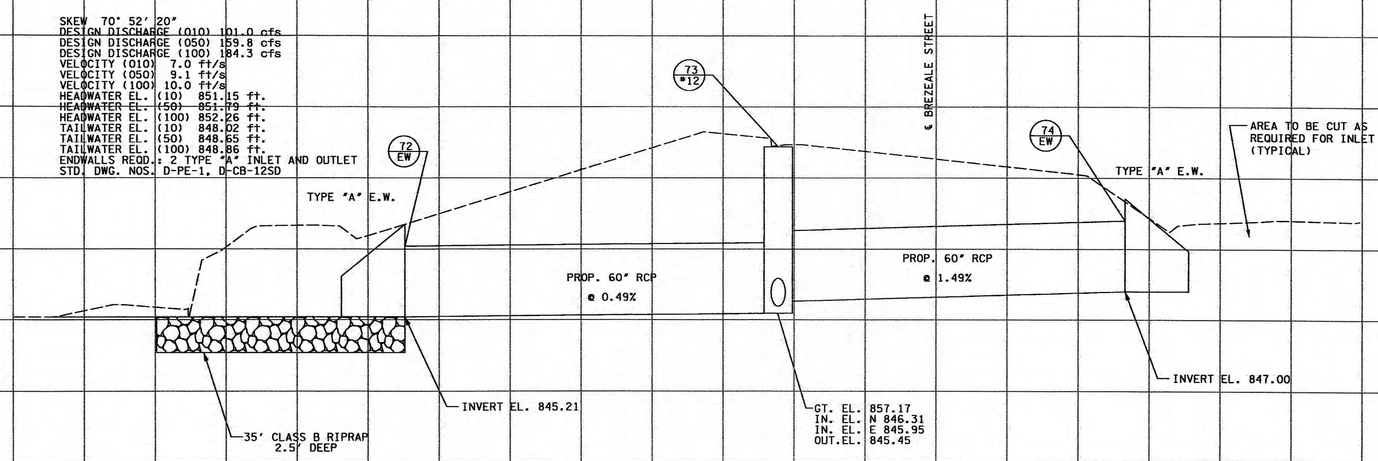
SKEW MATCH EXISTING CULVERT
DESIGN DISCHARGE (Q1D) 187.8 cfs
DESIGN DISCHARGE (Q5D) 416.8 cfs
DESIGN DISCHARGE (Q10D) 484.5 cfs
VELOCITY (Q10) 3.7 ft/s
VELOCITY (Q50) 7.4 ft/s
VELOCITY (Q100) 8.1 ft/s
HEADWATER EL. (10) 821.94 ft.
HEADWATER EL. (50) 824.26 ft.
HEADWATER EL. (100) 824.94 ft.
TAILWATER EL. (10) 820.36 ft.
TAILWATER EL. (50) 821.41 ft.
TAILWATER EL. (100) 821.66 ft.
ENDWALLS REQD.: NONE
STD. DWG. NOS. SEE STANDARD BOX CULVERT DRAWINGS LISTED ON SHEET 1B



BAUMGARTNER ROAD

NOTE:
PROPOSED 6'X5' BOX CULVERT TO BE CONSTRUCTED ADJACENT TO EXISTING 6'X5' BOX CULVERT. TOP SLAB ELEVATION AND GRADE TO MATCH EXISTING CULVERT.

SKEW 70° 52' 20"
DESIGN DISCHARGE (Q10) 101.0 cfs
DESIGN DISCHARGE (Q50) 159.8 cfs
DESIGN DISCHARGE (Q100) 184.3 cfs
VELOCITY (Q10) 7.0 ft/s
VELOCITY (Q50) 9.1 ft/s
VELOCITY (Q100) 10.0 ft/s
HEADWATER EL. (10) 851.15 ft.
HEADWATER EL. (50) 851.79 ft.
HEADWATER EL. (100) 852.26 ft.
TAILWATER EL. (10) 848.02 ft.
TAILWATER EL. (50) 848.65 ft.
TAILWATER EL. (100) 848.86 ft.
ENDWALLS REQD.: 2 TYPE "A" INLET AND OUTLET
STD. DWG. NOS. D-PE-1, D-CB-12SD



46+41.00 (BREZEALE STREET)

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PHILIP S. NELSON
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AGRICULTURE
No. 0010885
STATE OF TENNESSEE
1/7/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

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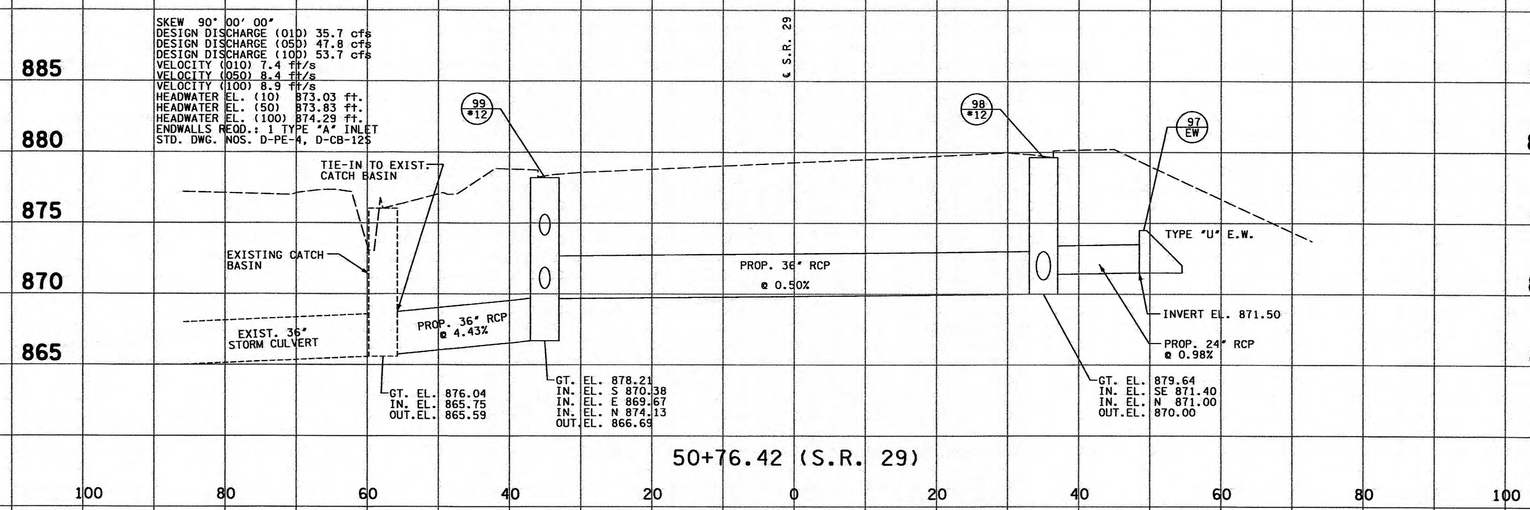
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	--
CONST.	2012	STP - 29(58)	25

73035-3209-14



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No. 00108859
STATE OF TENNESSEE
9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=5' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	2A1

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED ITEM NO. 710-09.01 AND ADDED FOOTNOTES.

ESTIMATED BRIDGE QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
(2)	204-08	FOUNDATION FILL MATERIAL	C.Y.	249
(2)	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	2130
(2)	604-02.01	CLASS A CONCRETE (BOX BRIDGES)	C.Y.	442
(2)	604-02.02	STEEL BAR REINFORCEMENT (BOX BRIDGES)	LB.	91890
(3)	710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	197

FOOTNOTES:

(1) FOR REMOVAL OF THE EXISTING 4'X5' BOX CULVERT AT STA. 29+65 ON SR-29 AND THE REMOVAL OF THE NORTHERN WINGWALLS FROM THE EXISTING 6'X5' BOX CULVERT AT BAUMGARTNER ROAD.

(2) SEE BOX CULVERT TABULATION ON SHEET 2E4 FOR SPECIFIC LOCATIONS.

(3) INCLUDES 8 L.F. PER WINGWALL FOR 3' HIGH BOX CULVERTS, AND 11.5 L.F. PER WINGWALL FOR 5' HIGH BOX CULVERTS.

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No. 0010885
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26
ROANE COUNTY		73035-3209-14	

STREAM/WETLAND

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING, RIP-RAP PLACEMENT, MULTI-BARREL CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS, EC-STR-31 AND TEMPORARY DIVERSION CULVERTS, EC-STR-32 FOR SINGLE BARREL CULVERT CONSTRUCTION.

HIGH QUALITY WATERS

(2) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, AN OUTFALL IN A DRAINAGE AREA OF 5 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT.

(3) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 25 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

(4) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(5) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.

(6) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(7) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 15 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER RUNS WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(8) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

UTILITY RELOCATION

(9) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.

(10) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.

(11) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).

(12) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

(13) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.

(14) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.

(15) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

(16) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

(17) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).

(18) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

POLYACRYLAMIDE

(19) ENSURE POLYACRYLAMIDE (PAM) EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE AND MEET THE FOLLOWING REQUIREMENTS:

(20) MEETS THE EPA AND FDA ACRYLABIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER

(21) HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE

(22) MIXTURE IN NON-COMBUSTIBLE

(23) CONTAINS ONLY MANUFACTURED RECOMMENDED ADDITIVES

(24) PAM SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND THE MANUFACTURE'S RECOMMENDATIONS FOR THE SPECIFIED USED CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.

(25) ALL VENDERS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIT POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF PAM ARE NOT ALLOWED FOR UNDER THIS GUIDELINE DUE TO THEIR HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. PAM EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUE TO SURFACTANT TOXITY. CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DEISGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR USE ON THIS PROJECT.

(26) ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING THAT A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

(27) EMULSION BATCHES SHALL BE MIXED FOLLOWIGN RECOMMENDATIONS OF A TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHOD SHALL INSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER FUNOFF OR RIPARIAN WATERS.

(28) PAM POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. MIXING PAM POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.

(29) PREMIXING OF PAM POWDER INTO FERTILIXER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHDON SHALL INSURE UNIFORM COVERAGE TO THE TARGET AREA.

(30) PAM LOGS OR BLOCKS SHALL BE APPLLED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

GENERAL NOTES, ESTIMATED QUANTITIES, AND LEGEND

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB BJS BJS SFB	SEDIMENT FILTER BAG	EC-STR-2
SF SF SF SF	SILT FENCE	EC-STR-3B
SFB SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
RIP RAP	PERMANENT RIPRAP ENERGY DISSIPATOR	EC-STR-21
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	RIPRAP	EC-STR-27
	TEMPORARY DIVERSION CHANNEL	EC-STR-31
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
	SAND BAG BERM	EC-STR-33
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41 EC-STR-41A
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42 EC-STR-42A
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43 EC-STR-43A
4	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EC-STR-44 EC-STR-44A
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47 EC-STR-47A

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(4)(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	385
(1)	209-05	SEDIMENT REMOVAL	C.Y.	300
(5)(1)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	6450
(1)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	6150
(1)	209-08.07	ROCK CHECK DAM PER	EACH	9
(1)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	3
(9)(1)	209-09.01	SANDBAGS	BAG	3400
(1)	209-09.02	TEMPORARY SEDIMENT FILTER BAG (14'6" x 2'0" x 13'3")	BAG	8
(1)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	8
(1)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	500
(1)	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	103
(1)	209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	1
(1)	209-40.43	CATCH BASIN FILTER ASSEMBLY(TYPE 3)	EACH	4
(1)	209-40.44	CATCH BASIN FILTER ASSEMBLY(TYPE 4)	EACH	4
(1)	209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	17
(1)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	80
(6)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	1120
(1)	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	130
(1)	621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	100
(1)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	500
(8)(1)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	200
(8)(1)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	275
(8)(1)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	351
(8)(1)	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	405
(3)(7)(1)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	970
(12)	740-10.04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	656
(13)(2)	740-11.02	TEMPORARY SEDIMENT TUBE (12 IN)	L.F.	4015
(2)	801-01	SEEDING (WITH MULCH)	UNIT	28
(11)	801-02	SEEDING (WITHOUT MULCH)	UNIT	9
(10)(2)	803-01	SODDING (NEW SOD)	S.Y.	2500
	805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	7650

(1) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(2) TO BE USED WHEN AND WHERE AS DIRECTED BY THE ENGINEER.
(3) TO BE USED WHERE AND AS DIRECTED BY ENGINEER.
(4) INCLUDES 30 CY FOR CONSTRUCTION EXITS AND 45 CY FOR CULVERT PROTECTION
(5) INCLUDES 420 LF FOR FILTER BAGS.
(6) INCLUDES 75 TONS FOR FILTER BAGS, 40 TONS FOR CULVERT PROTECTION. AND 1005 TONS FOR FILL TREATMENT AREA TRACT 39A.
(7) INCLUDES 580 SY FOR CULVERT PROTECTION, 180 SY FOR CONSTRUCTION EXITS, 75 SY FOR DIVERSION CHANNEL, AND 135 SY FOR FILTER BAGS.
(8) SEE PROPOSED RIP-RAP TABLE (THIS SHEET)
(9) TO BE USED AT CULVERT CROSSINGS AS FLOW DIVERSION AND/OR CHANNELIZATION DEVICE.
(10) TO BE USED ON ALL STREAM CHANNEL SLOPES.
(11) FOR USE WITH EROSION CONTROL MATTING
(12) TO BE USED AT FILL TREATMENT AREA TRACT 39A.
(13) INCLUDES 15 LF FOR CULVERT PROTECTION TYPE 2 AT STRUCTURE NO. 52B.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26A

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED E.P.S.C. QUANTITIES AND FOOTNOTES.

REV. 06-13-13:
REVISED E.P.S.C. QUANTITIES AND FOOTNOTES.

REV. 09-03-13:
ADDED CULVERT PROTECTION TYPE 2 TO E.P.S.C. LEGEND.
REVISED QUANTITIES ITEM NOS. 209-40.47 AND 740-11.02.
ADDED FOOTNOTE NO. 13.

REV. 10-02-13:
REVISED QUANTITY ITEM NO. 209-40.41 AND 209-40.44.

PROPOSED RIP-RAP

STA.		STA.	SIDE	ROADWAY	LENGTH OF RIP-RAP APRON (L.F.)	709-05.05 MACHINED RIP-RAP (CLASS A-3) (TON)	709-05.06 MACHINED RIP-RAP (CLASS A-1) (TON)	709-05.08 MACHINED RIP-RAP (CLASS B) (TON)	709-05.09 MACHINED RIP-RAP (CLASS C) (TON)
12+50	-	12+72	LT	RURITAN ROAD	TCE	50			
27+05	-	27+19	RT	HASSLER MILL ROAD	15			22	
27+51	-	27+78	RT	HASSLER MILL ROAD	15			27	
28+80	-	29+00	LT	HASSLER MILL ROAD	TCE	50			
13+75	-	14+10	LT	S.R. 29	20				115
14+58	-	14+80	LT	S.R. 29	TCE	50			
27+90	-	28+25	RT	S.R. 29	CP		50		
28+80	-	29+05	LT	S.R. 29	TCE	50			
29+25	-	29+69	LT	S.R. 29	DC		75		
29+25	-	29+52	LT	S.R. 29	15			30	
30+40	-	30+92	RT	S.R. 29	50				145
31+26	-	31+80	RT	S.R. 29	50				145
32+00	-	32+20	LT	S.R. 29	CP		25		
33+20	-	33+73	RT	S.R. 29	50			85	
36+20	-	36+30	RT	S.R. 29	10			12	
38+70	-	38+85	LT	S.R. 29	CP		25		
39+00	-	39+60	RT	S.R. 29	50			145	
50+54	-	50+70	RT	S.R. 29	CP		25		
46+50	-	46+70	LT	BREAZEALE STREET	CP		25		
47+10	-	47+22	LT	BREAZEALE STREET	CP		25		
56+45	-	56+60	LT	SCHOOL STREET	CP		25		
6'x5' BOX CULVERT APRON			LT	BAUMGARTNER ROAD	15			30	
TOTAL						200	275	351	405

CP = Culvert Protection
TCE = Temporary Construction Exit
DC = Diversion Channel

EPSC PHASE DESCRIPTIONS

PHASE I - BUFFER PROTECTION, CULVERT INSTALLATIONS, CLEARING AND GRUBBING

PHASE II - MASS GRADING OPERATIONS

PHASE III - FINISHED GRADE, RUNOFF CONTROL, AND FINAL STABILIZATION

SEALED BY

PHILIP S. NELSON
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REGISTERED
No. 0010855
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

GENERAL NOTES, ESTIMATED QUANTITIES, AND LEGEND

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	20
CONST.	2012	STP - 29(58)	26B

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
CORRECTED TEXT-ON-TEXT.

BEGIN PROJECT CONST
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799

PLANT TREES ALONG STREAM SLOPES SEE DETAIL SHEET 2F

END STR-1 IMPACT STA. 14+19

REMOVE EXISTING CULVERT, RESTORE CHANNEL IN ACCORDANCE WITH STREAM TYPICAL ON SHEET 2F

PLACE J-HOOKS ON CONTOURS (TYP.)

SEDIMENT FILTER BAG EC-STR-2 (TYP.)

USE EXISTING 42" PIPE FOR STREAM CHANNEL PIPE DIVERSION

SUSPENDED PIPE DIVERSION 36" PIPE TO BE USED (EC-STR-33)(TYP.)

BEGIN STR-1 IMPACT STA. 13+50

SUSPENDED PIPE DIVERSION 36" PIPE TO BE USED (EC-STR-33)(TYP.)

MATCH LINE STATION 21+00 SEE SHEET NO. 26E

S.R. 29
N 14° 59' 27" W

(PINE RIDGE ROAD)
N 45° 56' 10" W

N 56° 54' 07" E
N 48° 43' 25" E
N 14° 10' 50" E
N 62° 42' 34" E

CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.0073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

PHASE I

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY
PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
100108852
STATE OF TENNESSEE
1/13/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26C

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
CORRECTED TEXT-ON-TEXT.

REV. 10-02-13:
ADDED CATCH BASIN FILTER ASSEMBLY AT STRUCTURE NEAR STA. 12+12.00. (RT.)
REVISED STRUCTURES AND LOCATIONS OF CATCH BASIN FILTER ASSEMBLYS NEAR STA. 15+86.00 (LT.) AND STA. 18+02.00 (RT.)

BEGIN PROJECT (CONST.)
STP-29(58)
73035-3209-14
STA. 9+03.90
N 576591.5724
E 2395341.9799

RURITAN RD. S.E. (U.S. HWY. 29)

N 55° 54' 07" E

N 48° 45' 25" E

(PINE RIDGE ROAD)

N 45° 56' 10" W

S.R. 29

N 14° 59' 27" W

STR-1

END STR-1 IMPACT STA. 14+19

BEGIN STR-1 IMPACT STA. 13+50

EXIST. PERM. DRAIN ESMT.

CONST. ESMT.

PRES. & PROP. R.O.W.

PROP. R.O.W.

MATCH LINE STATION 21+00

SEE SHEET NO. 26F

TIDWELL CIRCLE

CONTROL POINTS COORDINATE LIST				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.5085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
CP- S5	577802.7604	2394685.3779	857.9600	GPS 73-029-07
CP- S6	578259.2949	2394478.2930	839.7300	GPS 73-029-08
CP- S7	578865.0073	2394344.9819	849.1900	GPS 73-029-09
CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

PHASE II

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BEGIN PROJ. TO STA. 21+00.00
SCALE: 1"=50'

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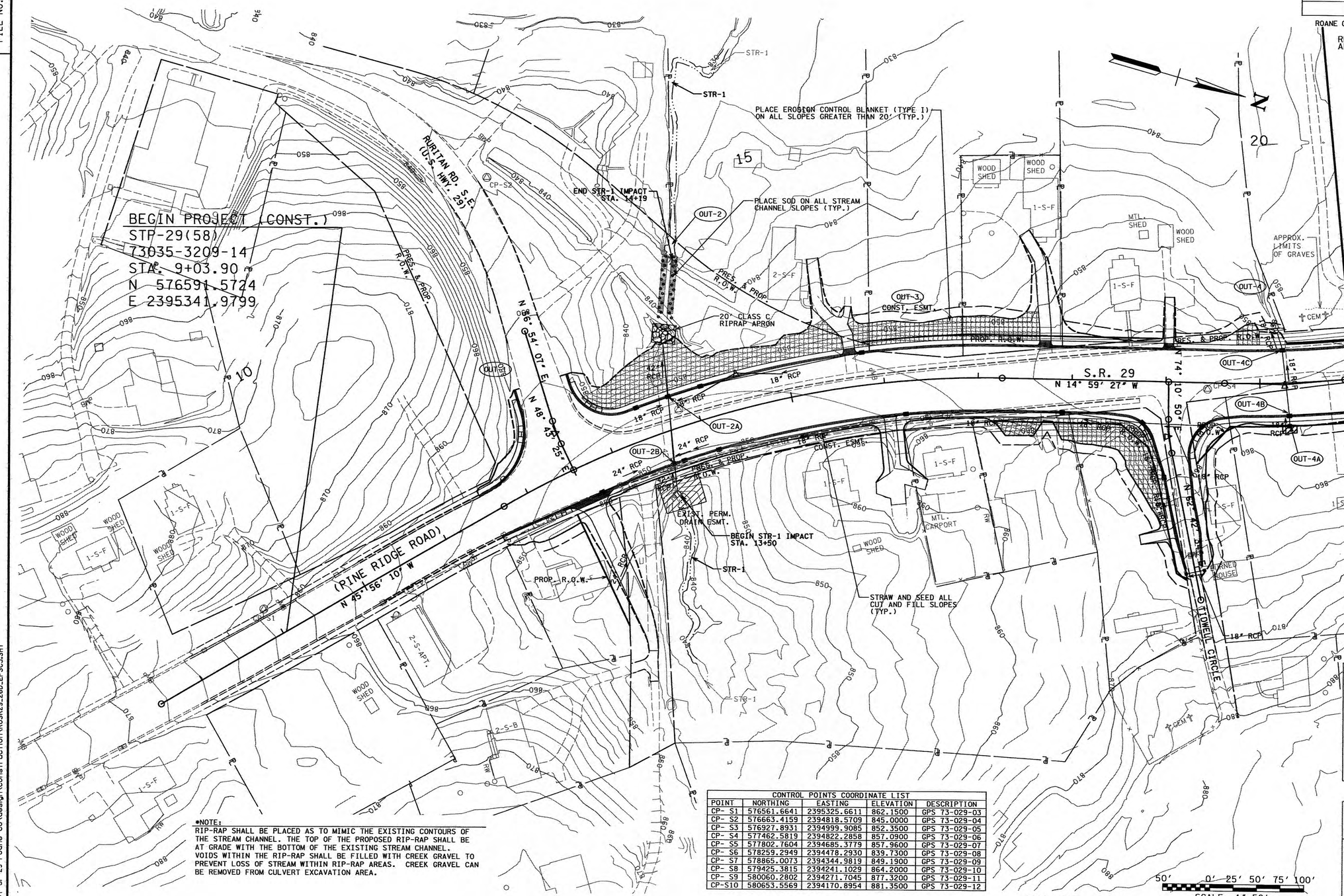
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26D

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED RIP-RAP NOTE.



*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

CONTROL POINTS COORDINATE LIST

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP- S1	576561.6641	2395325.6611	862.1500	GPS 73-029-03
CP- S2	576663.4159	2394818.5709	845.0000	GPS 73-029-04
CP- S3	576927.8931	2394999.9085	852.3500	GPS 73-029-05
CP- S4	577462.5819	2394822.2858	857.0900	GPS 73-029-06
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CP- S8	579425.3815	2394241.1029	864.2000	GPS 73-029-10
CP- S9	580060.2802	2394271.7045	877.3200	GPS 73-029-11
CP-S10	580653.5569	2394170.8954	881.3500	GPS 73-029-12

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

PHASE III

SEALED BY
PHILIP S. NELSON
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AGRICULTURE & COMMERCE
No. 00108859
STATE OF TENNESSEE
1/13/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BEGIN PROJ. TO
STA. 21+00.00
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	21
CONST.	2012	STP - 29(58)	26E

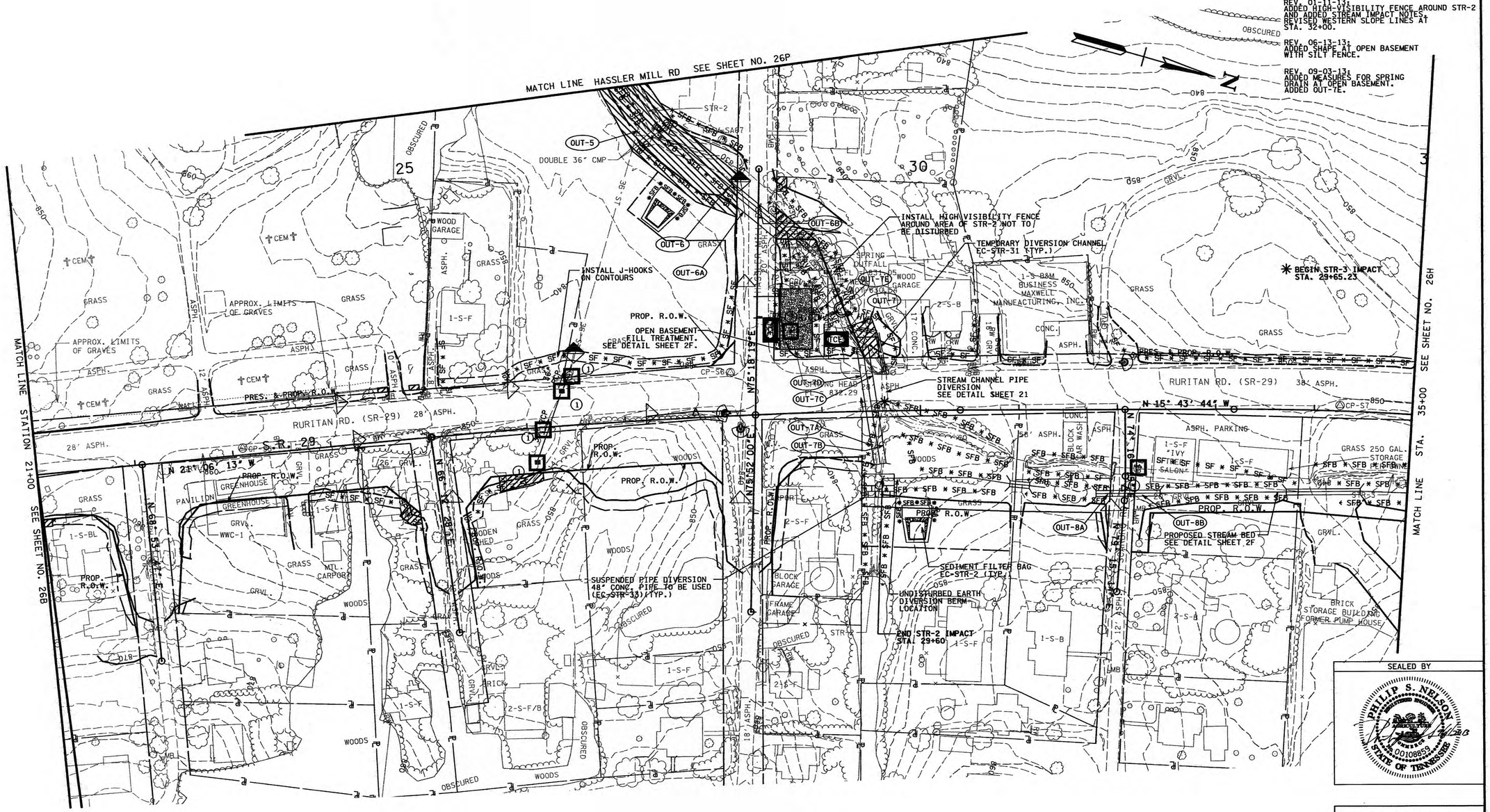
ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED HIGH-VISIBILITY FENCE AROUND STR-2 AND ADDED STREAM IMPACT NOTES. REVISED WESTERN SLOPE LINES AT STA. 32+00.

REV. 06-13-13:
ADDED SHAPE AT OPEN BASEMENT WITH SILT FENCE.

REV. 09-03-13:
ADDED MEASURES FOR SPRING DRAIN AT OPEN BASEMENT. ADDED OUT-7E.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



SEALED BY

PHILIP S. NELSON
STATE OF TENNESSEE
00108859

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

PHASE I

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26F

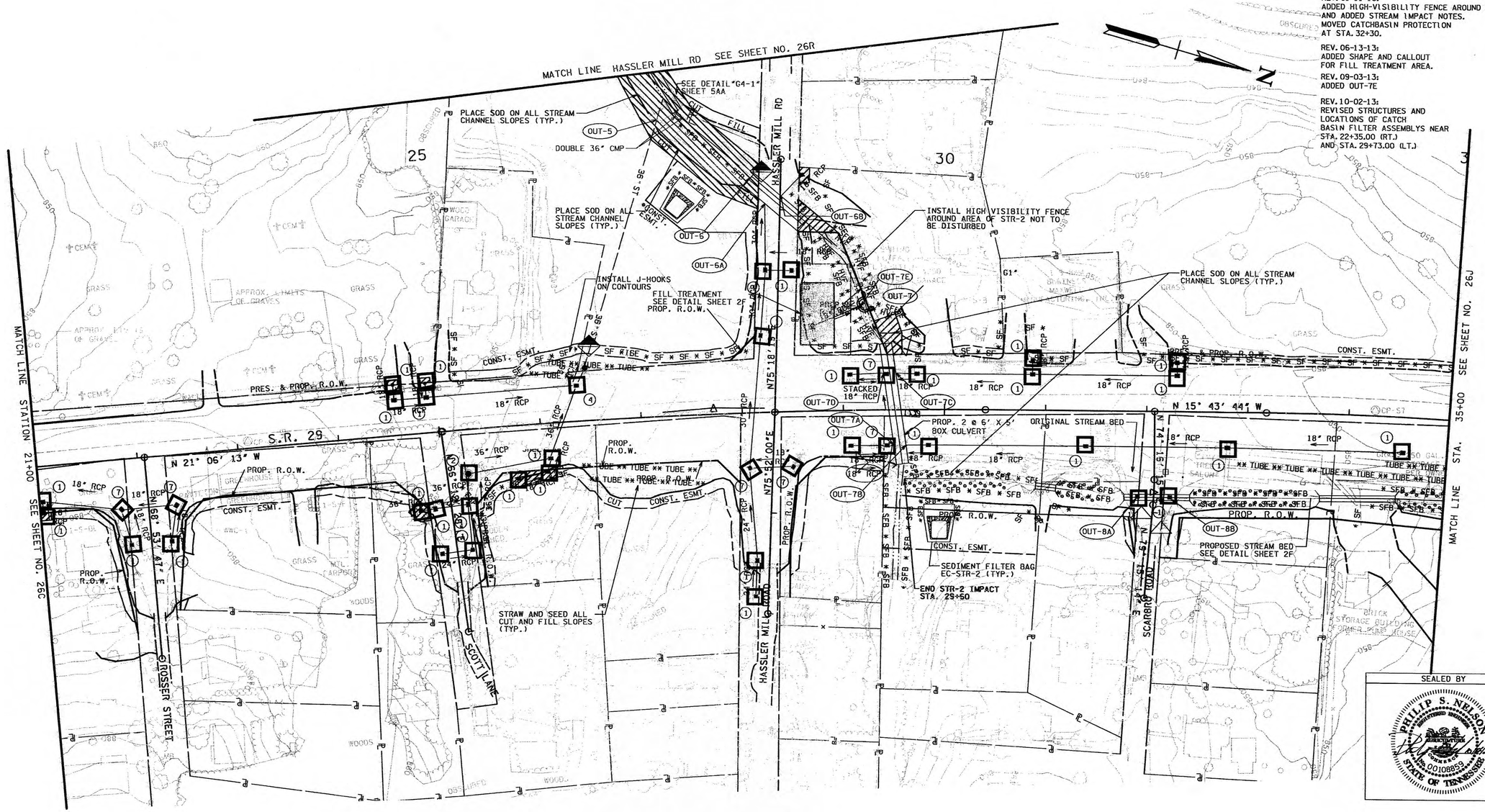
ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED HIGH-VISIBILITY FENCE AROUND STR-2 AND ADDED STREAM IMPACT NOTES. MOVED CATCHBASIN PROTECTION AT STA. 32+30.

REV. 06-13-13:
ADDED SHAPE AND CALLOUT FOR FILL TREATMENT AREA.

REV. 09-03-13:
ADDED OUT-7E

REV. 10-02-13:
REVISED STRUCTURES AND LOCATIONS OF CATCH BASIN FILTER ASSEMBLYS NEAR STA. 22+35.00 (RT.) AND STA. 29+73.00 (LT.)



SEALED BY

PHILIP S. NELSON
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No. 0010869
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 21+00.00 TO
STA. 35+00.00

SCALE: 1"=50'

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

PHASE II

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

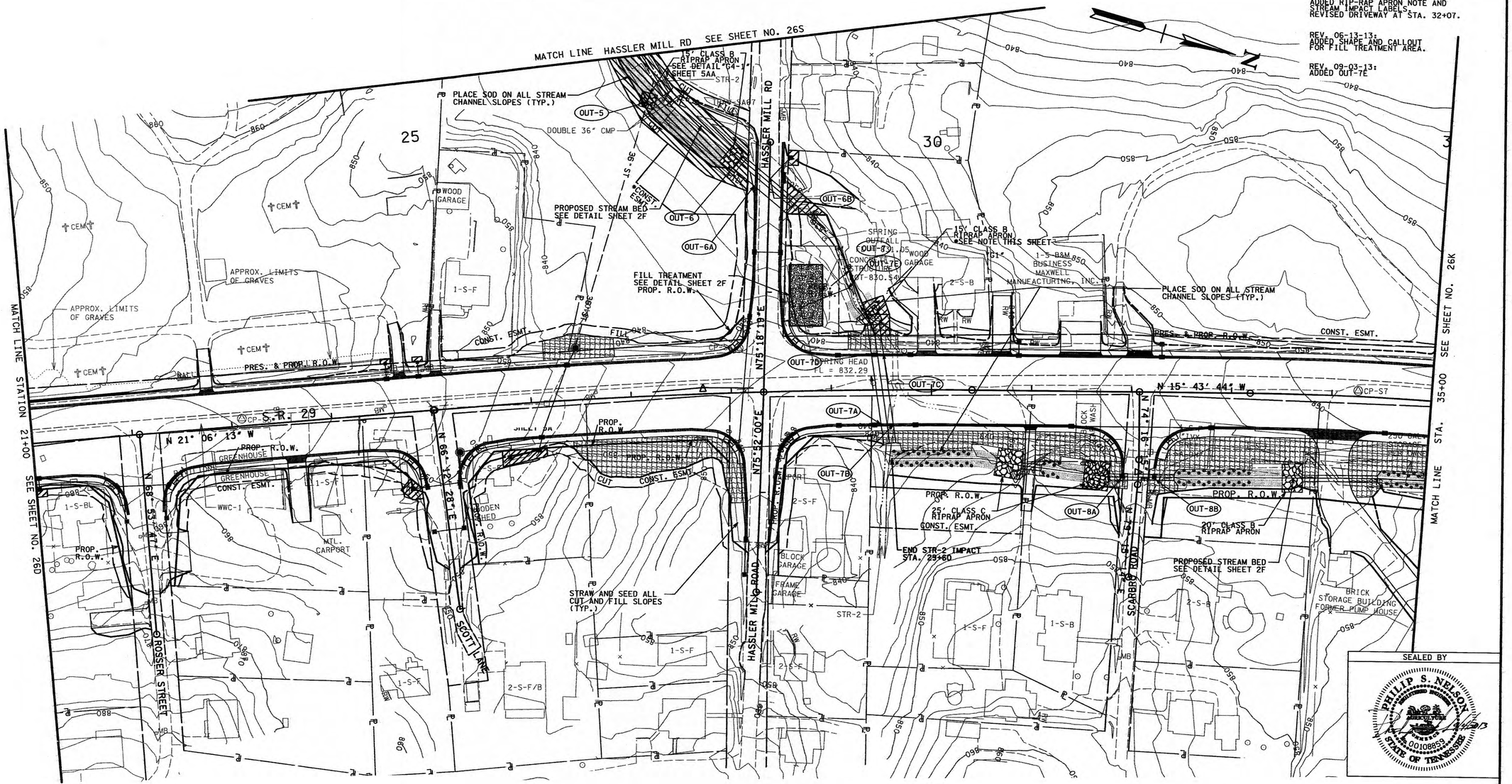
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26G

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED RIP-RAP LENGTHS AND CLASSIFICATIONS.
ADDED RIP-RAP APRON NOTE AND STREAM IMPACT LABELS.
REVISED DRIVEWAY AT STA. 32+07.

REV. 06-13-13:
ADDED SHAPE AND CALLOUT FOR FILL TREATMENT AREA.

REV. 09-03-13:
ADDED OUT-7E



*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

PHASE III

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

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00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 21+00.00 TO
STA. 35+00.00
SCALE: 1"=50'

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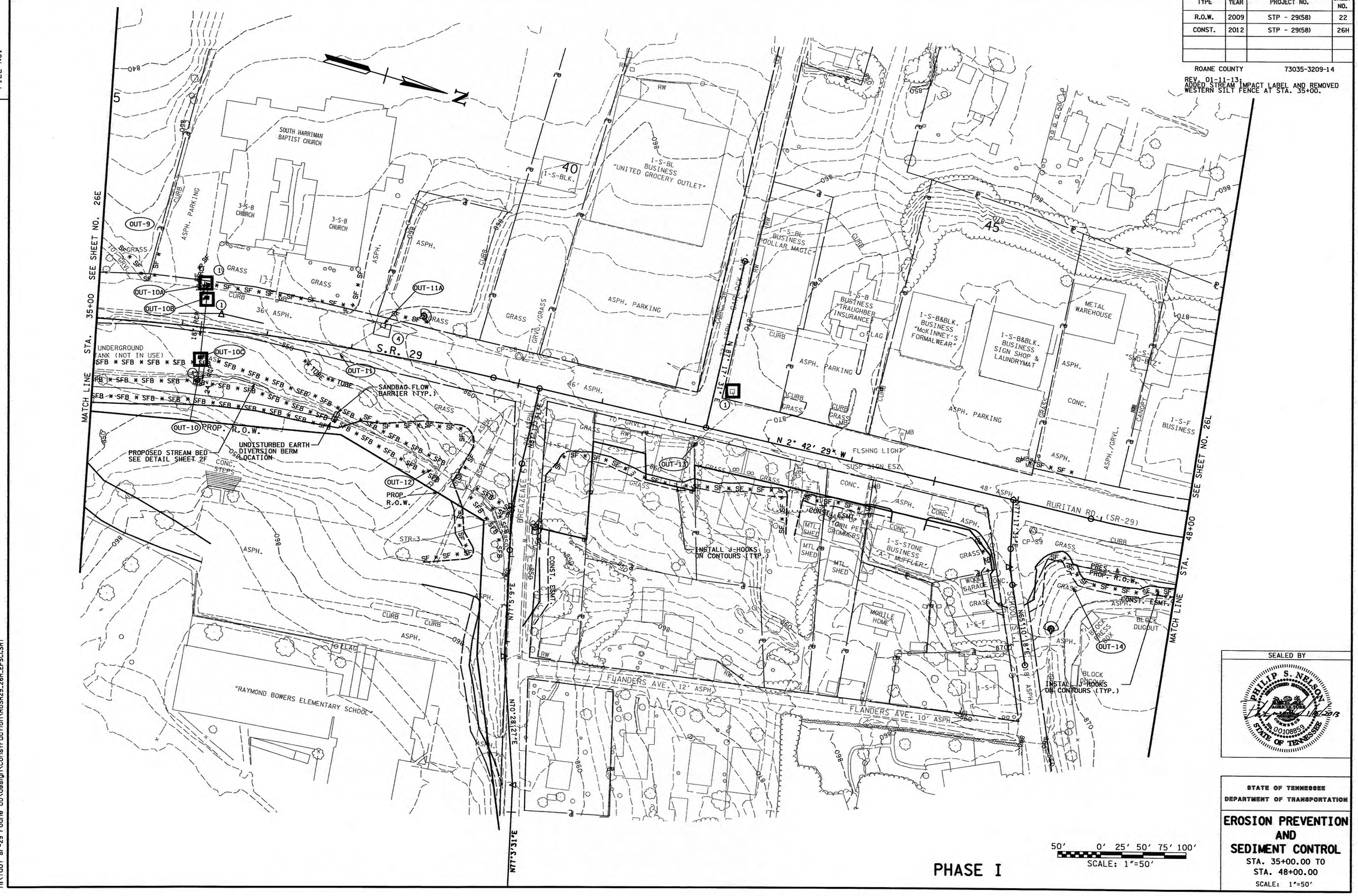
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	22
CONST.	2012	STP - 29(58)	26H
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
ADDED STREAM IMPACT LABEL AND REMOVED WESTERN SILT FENCE AT STA. 35+00.



PHASE I

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100108553
STATE OF TENNESSEE
1/4/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 35+00.00 TO
STA. 48+00.00

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26J

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED STREAM IMPACT LABEL AND REMOVED WESTERN SILT FENCE AT STA. 35+00.

REV. 10-02-13:
REVISED STRUCTURES AND LOCATIONS OF CATCH BASIN FILTER ASSEMBLYS NEAR STA. 40+21.00 (LT.), STA. 45+00.00 (RT.), AND SCHOOL STREET STA. 55+63.00 (RT.).



50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

PHASE II

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
CONNECTICUT
No. 00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 35+00.00 TO STA. 48+00.00

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ESTIMATED SIGNAL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	713-15.07	SUSPENDED FLAT SHEET ALUMINUM SIGN (0.080" THICK)	EACH	2
	714-03.01	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	L.F.	8618
(15)	714-03.03	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 80)	L.F.	965
	714-05.03	PULL BOXES (TYPE B)	EACH	47
(2)	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	4
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	21
	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	2
	730-02.30	SIGNAL HEAD ASSEMBLY (130 A3 WITH BACKPLATE)	EACH	5
	730-02.31	SIGNAL HEAD ASSEMBLY (140 A1 WITH BACKPLATE)	EACH	2
	730-03.20	INSTALL PULL BOX (TYPE A)	EACH	18
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	14
(3)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	4
	730-08.01	SIGNAL CABLE - 3 CONDUCTOR	L.F.	1973
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	2906
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	2246
	730-08.30	INTERCONNECT CABLE (COPPER-TWISTED PAIR)	L.F.	1380
(4)	730-09.01	SPAN WIRE ASSEMBLY(16,000 LBS.MIN.BRK STRENGTH)	L.F.	355
(5) (6)	730-09.03	SPAN WIRE ASSEMBLY(13,250 LBS.MIN.BRK STRENGTH)	L.F.	726
(7)	730-09.04	SPAN WIRE ASSEMBLY(18,900 LBS.MIN.BRK STRENGTH)	L.F.	654
	730-10.01	TETHER WIRE ASSEMBLY - 1/4" DIAMETER	L.F.	1518
	730-12.01	CONDUIT 1" DIAMETER (PVC)	L.F.	2400
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	1680
	730-12.03	CONDUIT 3" DIAMETER (PVC)	L.F.	34
(15)	730-12.16	CONDUIT (2" PVC, SCHEDULE 80)	L.F.	402
	730-13.03	VEHICLE DETECTOR (4 - CHANNEL, RACK MOUNT)	EACH	8
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	6353
	730-14.02	SAW SLOT	L.F.	4044
	730-14.03	LOOP WIRE	L.F.	11680
	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	4
(8)	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	4
(9)	730-18.01	MASTER CONTROLLER	EACH	1
(10)	730-23.01	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	8
(11)	730-23.02	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	4
(12)	730-23.03	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	4
	730-23.30	PEDESTAL POLE (PEDESTRIAN SIGNAL SUPPORT)	EACH	8
(13)	730-26.05	COUNTDOWN PEDESTRIAN SIGNAL	EACH	18
(14)	730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	4

FOOTNOTES

(1) FOR TWO (2) R10-12 SIGNS

(2) FOR THE REMOVAL OF ALL SIGNAL POLES, SPAN WIRE, CONTROLLER CABINETS, SIGNAL HEADS AND ANY OTHER SIGNAL RELATED ITEMS AT THE INTERSECTIONS OF SR 29 AT RURITAN RD., CARLOCK AVE., STATE ST. AND SR-61.

(3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CONTROLLER. THESE CHARGES SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 730-05.01 FOR PAYMENT BY THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE SERVICE CONNECTIONS WITH CHUCK FLORA, HARRIMAN UTILITY BOARD, AT (865) 882-3242.

FOOTNOTES CONTINUED

(4) AT THE INTERSECTION OF SR-29 & RURITAN RD.

(5) AT THE INTERSECTION OF SR-29 & CARLOCK AVE. (317 FT.)

(6) AT THE INTERSECTION OF SR-29 & STATE ST. (409 FT.)

(7) AT THE INTERSECTION OF SR-29 & S-61.

(8) CONTROLLER TYPE TO BE PEEK 3000E

(9) TO BE LOCATED AT THE INTERSECTION OF SR-29 & SR-61 IN THE LOCAL CABINET AND COMPATIABLE WITH THE PEEK 3000E

(10) AT THE INTERSECTIONS OF SR-29 & RURITAN RD. AND STATE ST.
MOMENT CAPACITY: 209,400 FT-LBS.
FOOTING DEPTH: 19'-0"
FOOTING DIAMETER: 3'-0"

(11) AT THE INTERSECTION OF SR-29 & CARLOCK AVE.
MOMENT CAPACITY: 163,500 FT-LBS.
FOOTING DEPTH: 17'-0"
FOOTING DIAMETER: 3'-0"

(12) AT THE INTERSECTION OF SR-29 & SR-61
MOMENT CAPACITY: 264,200 FT-LBS.
FOOTING DEPTH: 21'-0"
FOOTING DIAMETER: 3'-0"

(13) INCLUDES PUSHBUTTONS & R10-3E SIGNS.

(14) TO BE USED AT ALL FOUR (4) EXISTING SIGNALIZED INTERSECTIONS. INCLUDES WOOD POLES, GUYING DEVICES, SPAN WIRE, CONDUIT RISERS, TEMPORARY SIGNAL DETECTION AND ANY OTHER SIGNAL EQUIPMENT NEEDED FOR A FULLY OPERATIONAL TRAFFIC SIGNAL SYSTEM.

(15) SCHEDULE 80 PVC TO BE USED UNDER ROADWAY

SPECIAL NOTES REGARDING SIGNAL HEADS

(1) ALL CIRCULAR AND ARROW INDICATIONS WITHIN ALL VEHICULAR SIGNAL HEADS PROPOSED FOR THIS PROJECT SHALL CONSIST OF AN LED (LIGHT EMITTING DIODE) SIGNAL MODULE UNLESS OTHERWISE NOTED IN THE PLANS.

(2) ALL PEDESTRIAN TRAFFIC CONTROL INDICATIONS, WHERE CALLED FOR, SHALL CONSIST OF LED MODULES DISPLAYING "WALKING PERSON" AND "HAND" SYMBOLS, ALONG WITH A PEDESTRIAN INTERVAL COUNTDOWN DISPLAY, WITHIN THE SAME FACE UNLESS OTHERWISE NOTED IN THE PLANS

(3) CIRCULAR INDICATIONS SHALL MEET "ITE VTCSH-LED CIRCULAR SIGNAL SUPPLEMENT" FOR EXPANDED/EXTENDED VIEW.
ARROW INDICATIONS SHALL MEET "ITE VTCSH-3 LED ARROW SPECIFICATON" FOR EXPANDED/EXTENDED VIEW.
PEDESTRIAN INDICATIONS SHALL MEET "ITE PTCSI PART 2".

(4) INCANDESCENT OR SCREW-IN MODULES ARE NOT ACCEPTABLE.

(5) COMPATABILITY WITH CONFLICT MONITORS AND LOAD SWITCHES SHALL BE TESTED AND CONFIRMED.

(6) MANUFACTURER SHALL PROVIDE A MINIMUM FIVE-YEAR WARRANTY FOR OPERATION OF THE UNIT.

(7) ALL SIGNAL HEADS WITH LED LENSES SHALL INCLUDE SWIVEL BALANCE ADJUSTERS TO MAINTAIN THE PROPER VISIBILITY. COSTS OF ADJUSTERS TO BE INCLUDED IN COSTS OF SIGNAL HEADS.

(8) THE ATTACHMENT OF THE TETHER WIRE TO THE POLE SHALL BE LOCATED BELOW THE LOWEST ELEVATION OF THE SIGNAL HEADS.

(9) SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1" MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PRISMATIC OR BETTER MATERIAL.

(10) ALL SIGNAL HEADS TO INCLUDE QUICK DISCONNECT HANGERS.

SPECIAL NOTES

(1) ALL TRAFFIC SIGNAL EQUIPMENT INCLUDING SIGNAL HEADS, DISCONNECTS, PEDESTRIAN SIGNALS, AND SIGNAL HARDWARE SHALL BE POWDER COATED BLACK.

(2) BACKPLATES SHALL BE BLACK IN COLOR AND BE FABRICATED AS A SINGLE PIECE.

(3) ALL CONDUIT UNDER ROADWAYS SHALL BE SCHEDULE 80 PVC. ALL OTHER CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP-29(58)	2A2

ROANE COUNTY 73075-3209-14

REV.2-04-14: REVISED NOTE NO. 9, UNDER SPECIAL NOTES REGARDING SIGNAL HEADS, AND FOOTNOTES 8 & 9.

SEALED BY

PETER FALKENBERG REGISTERED ENGINEER 26 No. 101370 STATE OF TENNESSEE

02/12/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED SIGNAL QUANTITIES AND SPECIAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26K
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
ADDED RIP-RAP NOTE AND REVISED RIP-RAP SPECIFICATIONS FOR RIP-RAP APRON SOUTH OF BREAZEALE STREET.
REVISED WESTERN DRIVEWAY AT STA. 35+20.



*NOTE:
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

PHASE III

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
100108859
STATE OF TENNESSEE
1/25/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 35+00.00 TO
STA. 48+00.00

SCALE: 1"=50'

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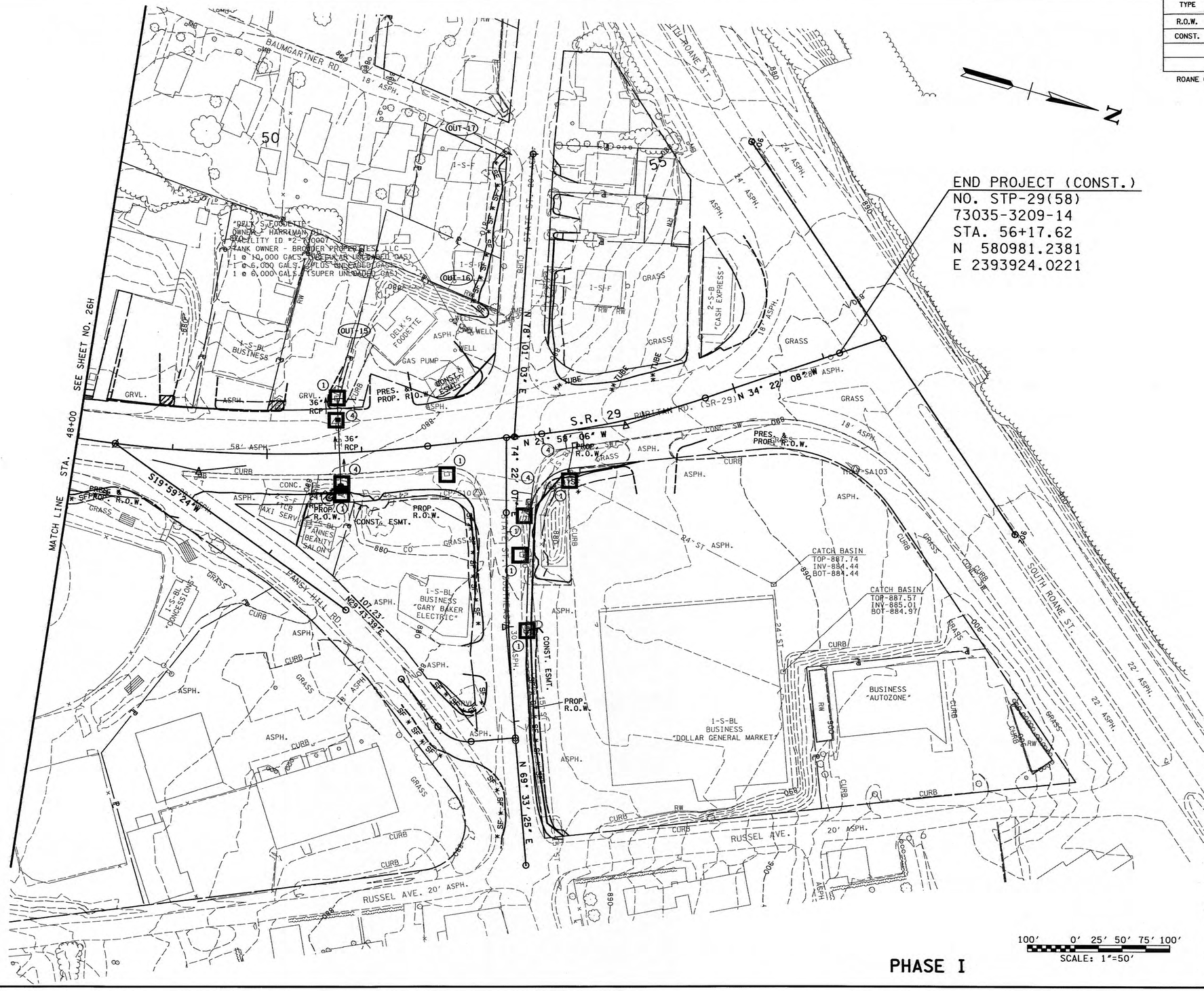
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2009	STP - 29(58)	23
CONST.	2012	STP - 29(58)	26L

ROANE COUNTY 73035-3209-14

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



PHASE I

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
No. 00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 48+00.00 TO END PROJ.

SCALE: 1"=50'

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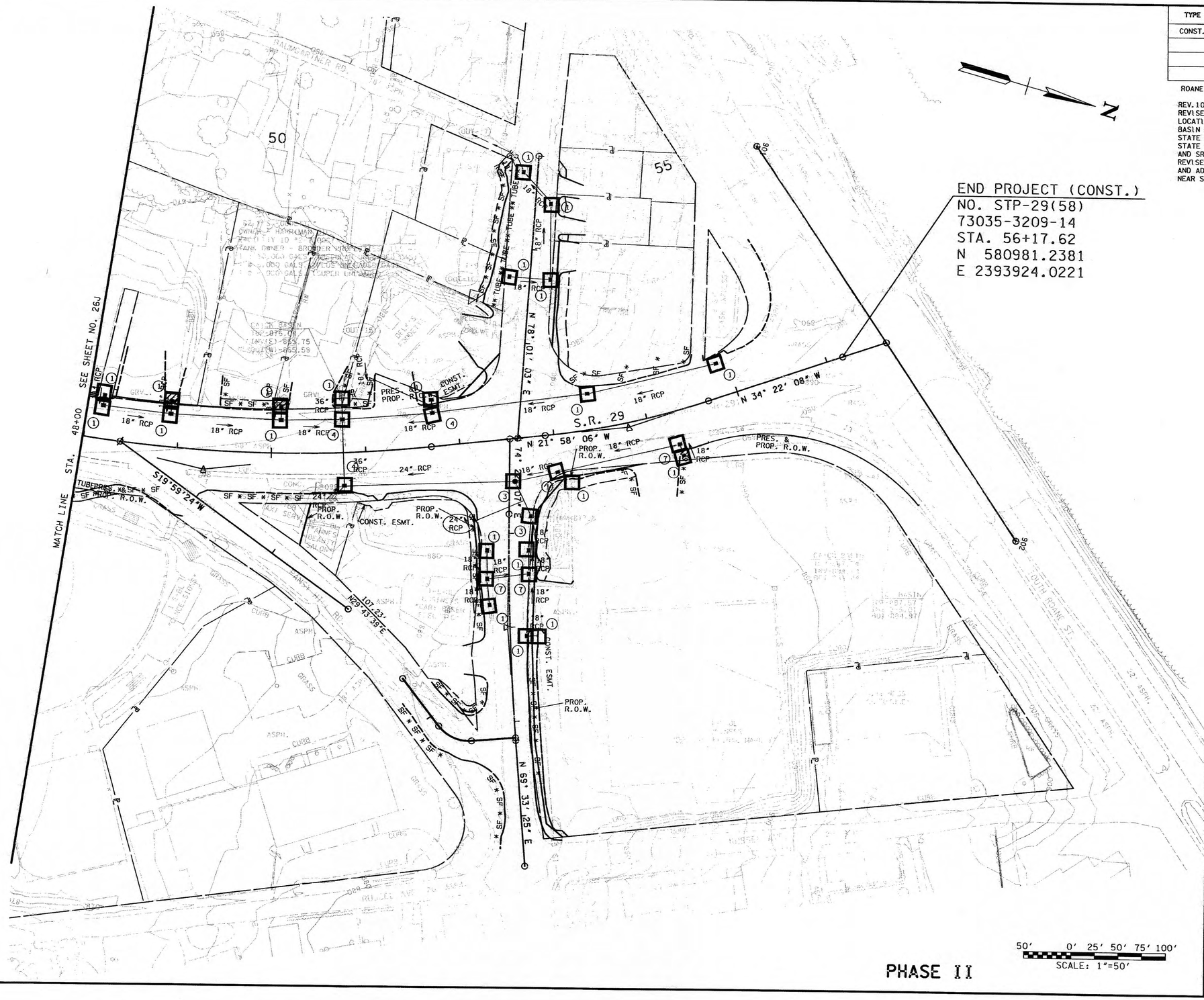
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26M

ROANE COUNTY 73035-3209-14

REV. 10-02-13:
REVISED STRUCTURES AND LOCATIONS OF CATCH BASIN FILTER ASSEMBLYS NEAR STATE STREET STA. 62+50.00 (LT.), STATE STREET STA. 71+48.00 (LT.), AND SR-29 STA. 54+84.00 (LT.). REVISED CATCH BASIN FILTER ASSEMBLY AND ADDED AN ADDITIONAL ASSEMBLY NEAR STA. 51+74.00 (LT.).



PHASE II

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 48+00.00 TO END PROJ.

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26N
ROANE COUNTY		73035-3209-14	

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

SEE SHEET NO. 26K

STA. 48+00

MATCH LINE

S 19° 59' 24" W

PANSY HILL ROAD

N 23° 43' 39" E 107.23'

STATE STREET

N 18° 07' 03" E 74.00'

N 21° 58' 06" W

N 34° 22' 08" W

N 69° 33' 25" E

S.R. 29

SOUTH ROANE ST.

RUSSELL AVENUE

"DELK'S FOODETTE"
OWNER - HARRIMAN OIL
FACILITY ID #2-710007
TANK OWNER - BROWDER PROPERTIES, LLC
1 @ 10,000 GALS. (REGULAR UNLEADED GAS)
1 @ 6,000 GALS. (PLUS UNLEADED GAS)
1 @ 6,000 GALS. (SUPER UNLEADED GAS)

DELK'S FOODETTE
GAS PUMP
WELL
1-S-BL BUSINESS
2-S-B "CASH EXPRESS"
STRAW AND SEED ALL CUT AND FILL SLOPES (TYP.)
PRES. PROP. R.O.W.
CONST. ESMT.
PROP. R.O.W.
TOB
AX1 SERV
1-S-BL "ANNES BEAUTY SALON"
1-S-BL "CONCESSIONS"
I-S-BL BUSINESS "GARY BAKER ELECTRIC"
INV-877.53
CATCH BASIN
TOP-887.74
INV-884.44
BOT-884.44
CATCH BASIN
TOP-887.57
INV-885.01
BOT-884.97
BUSINESS "AUTOZONE"
1-S-BL BUSINESS "DOLLAR GENERAL MARKET"
CONST. ESMT. 15' ST
24' ST
CURB
CURB CONC. ST.
RW
INLET SA103

18" RCP
24" RCP
36" RCP

SEALED BY

PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 0010885
STATE OF TENNESSEE
2/24/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

STA. 48+00.00 TO
END PROJ.
SCALE: 1"=50'

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

PHASE III

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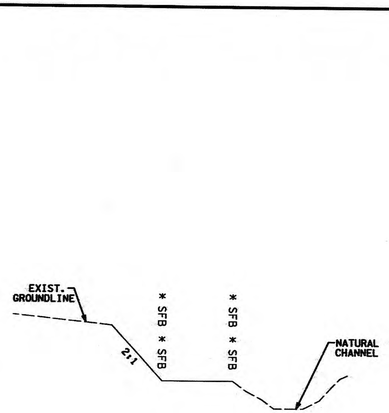
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

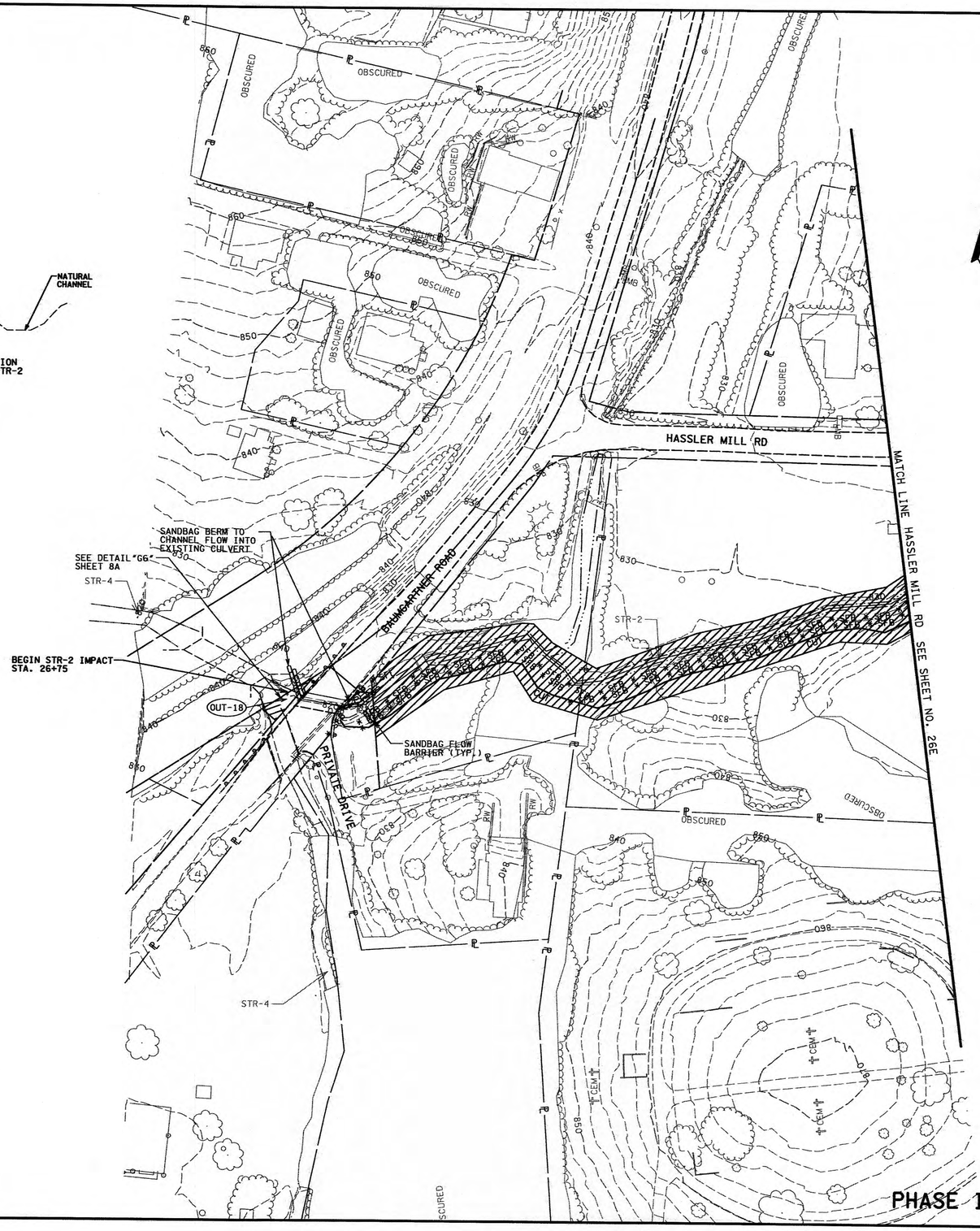
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26P

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED STR-2 AND STR-4 LABELS AND REMOVED ALL EPSC MEASURES FROM TRACT 100. ADDED STR-2 IMPACT LABEL.



DETAIL FOR INSTALLATION OF SILT FENCE ALONG STR-2



N

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
TENNESSEE
20108859
STATE OF TENNESSEE
1/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BAUMGARTNER ROAD AND HASSLER MILL ROAD

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26R
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
ADDED STR-2 AND STR-4 LABELS AND REMOVED ALL EPSC MEASURES FROM TRACT 100. ADDED STR-2 IMPACT LABEL.



SEALED BY

PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
00108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BAUMGARTNER ROAD AND HASSLER MILL ROAD

SCALE: 1"=50'

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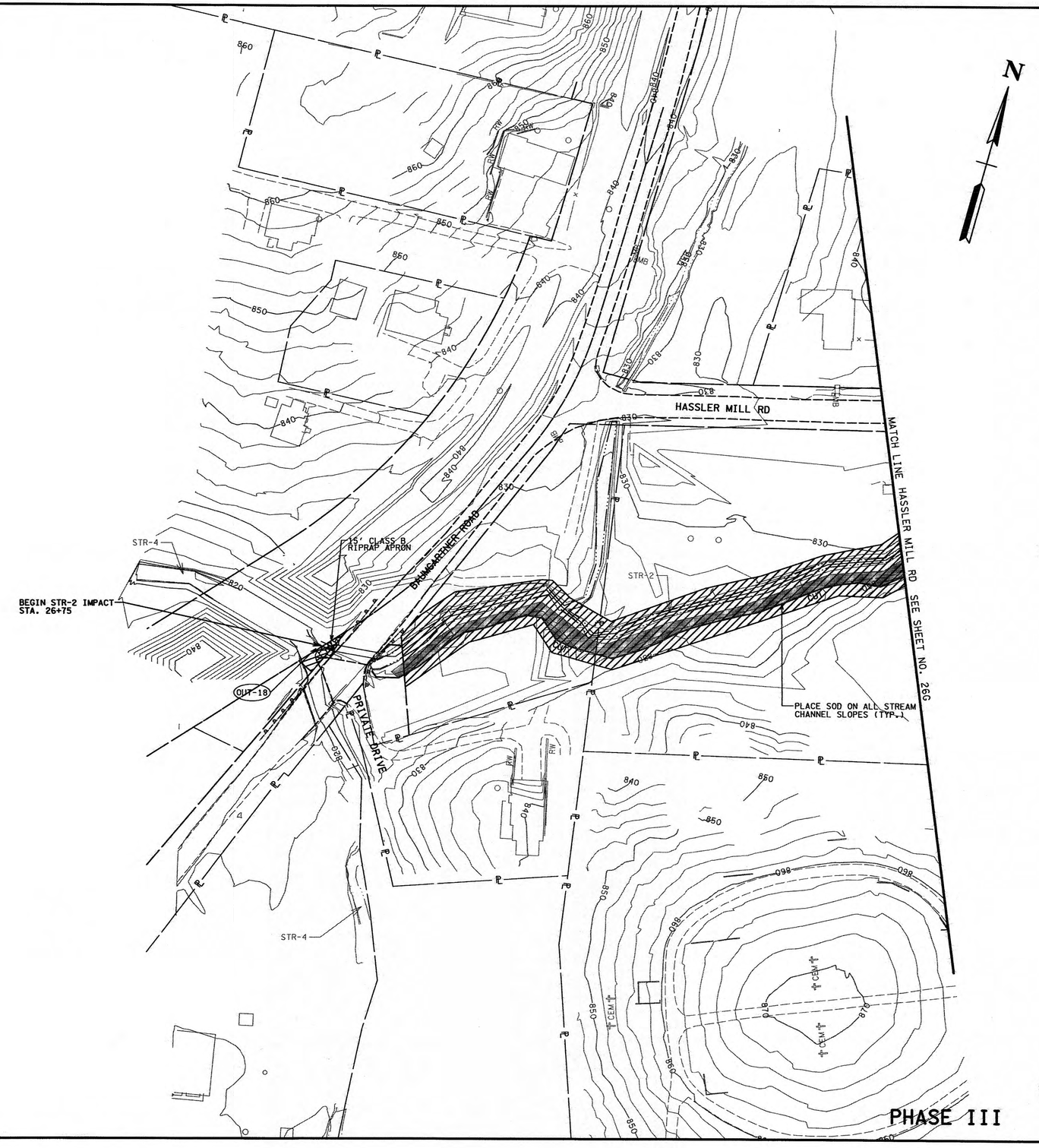
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	26S
ROANE COUNTY		73035-3209-14	

REV. 01-11-13:
REMOVED ALL EPSC MEASURES FROM TRACT 100 AND ADDED STR-2 IMPACT LABEL.



PHASE III

SEALED BY

PHILIP S. NELSON
REGISTERED
AGRICULTURAL
ENGINEER
No. 00108853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL

BAUMGARTNER ROAD AND HASSLER MILL ROAD

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADDED "BAUMGARTNER ROAD" AND "BRIDGE OUT" SIGNS ON HESTER DR AT EASTER ST AND ON RURITAN RD AT EASTER ST.

N

WORK AREA

DETOUR AHEAD

BAUMGARTNER RD
DETOUR

END DETOUR

BRIDGE OUT
1/4 MILE AHEAD
LOCAL TRAFFIC ONLY

BRIDGE OUT
LOCAL TRAFFIC ONLY

BRIDGE OUT
USE SR-29

HILLWOOD DR
HESTER DR
EASTER ST
BAUMGARTNER RD
RURITAN RD
RURITAN RD (S.R. 29)
HASSLER MILL RD
TIDWELL CIR
ROSSER ST
SCOTT ST
SCARBRO RD

SEALED BY

PHILIP S. NELSON
REGISTERED
No. 00108859
STATE OF TENNESSEE
1/15/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

PHASE I

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27A

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REMOVED SIX (6) "BAUMGARTNER ROAD" SIGNS AND ONE (1) "BRIDGE OUT" SIGN.
ADDED THREE (3) "HASSLER MILL ROAD CLOSED" SIGNS.

N

HILLWOOD DR
HESTER DR
EASTER ST
BAUMGARTNER RD
END DETOUR
HASSLER MILL RD
HASSLER MILL ROAD CLOSED
WORK AREA
DETOUR
HASSLER MILL ROAD CLOSED
RURITAN RD
DETOUR
DETOUR
RURITAN RD (S.R. 29)
TIDWELL CIR
ROSSER ST
SCOTT ST
DETOUR
HASSLER MILL ROAD CLOSED
DETOUR AHEAD

SEALED BY
PHILIP S. NELSON
REGISTERED ENGINEER
AGRICULTURE
00108859
STATE OF TENNESSEE
1/25/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

PHASE III

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27A1

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REMOVED TWO (2) "BAUMGARTNER ROAD" SIGNS.

N

ROBERTS AVE SE
CARLOCK AVE
BAUMGARTNER RD
STATE ST
SOUTH ROANE ST (U.S. 27)
RURITAN RD (S.R. 29)
SCARBRO RD
BREAZEALE ST
SCHOOL ST
RUSSELL AVE
FARLEY HILL RD

DETOUR AHEAD
END DETOUR
DETOUR

SEALED BY

PHILIP S. NELSON
LICENSED PROFESSIONAL ENGINEER
No. 00108853
STATE OF TENNESSEE
1/25/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

PHASE III (CONT'D)

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP- 29(58)	2B

ROANE COUNTY 73035-3209-14

REV. 02-04-14:
QUANTITY REVISIONS:
ADDED ITEM NOS. 790-27.10, 790-31.33, 790-40.09, 790-41.01, 790-41.55, 790-42.14, 790-43.47, 791-01.05, 791-04.05, 791-06.12, 791-10.10 (x2) 791-8.05, 791-8.10, 795-01.03, 795-01.07, 795-05.91, 795-05.92, 795-06.05

REVISED ITEM NOS. 773-12.83, 790-03.01, 790-04.07, 790-05.01, 790-05.05, 790-06.05, 790-20.01, 790-21.08, 790-25.01, 790-25.10, 790-25.21, 790-25.23, 790-27.01, 790-27.06, 790-30.04, 790-31.04, 790-31.11, 790-32.01, 790-32.07, 790-32.25, 790-40.02, 790-40.05, 790-41.45, 790-42.08, 790-42.12, 790-60.01, 790-64.01, 790-70.04, 790-70.10, 790-70.20, 790-98.01, 790-98.02, 790-98.03, 791-02.02, 791-02.05, 791-06.04, 791-06.10, 791-06.21, 791-07.03, 791-8.02, 791-8.07, 791-8.08, 795-01.04, 795-01.06, 795-01.08, 795-03.02, 795-05.63, 795-05.67, 795-06.01, 795-06.04, 795-07.03, 795-08.04, 795-08.05, 795-08.06, 795-09.01, 795-09.02, 795-09.28, 795-09.29

DELETED ITEM NOS. 790-03.03, 790-31.19, 790-40.18, 790-42.13, 790-58.06, 795-99.01, 795-99.02, 797-05.59, 797-05.61

MOVED TO SHEET 2B1: 795-10.03, 795-11.02, 795-13.01, 795-13.03, 797-05.51, 797-05.52, 797-05.53, 797-05.60, 797-06.64, 797-06.67

ADDED FOOTNOTE.

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	73035-3209-14 QUANTITY
773-12.83	PLACE 1 1/4 IN TRIPLE EYE ANCHOR	EACH	22
773-12.84	PLACE 35FT POLE	EACH	1
773-12.85	PLACE 40 FT POLE	EACH	1
773-12.86	PLACE 45 FT POLE	EACH	1
773-12.87	PLACE 55 FT POLE	EACH	1
773-12.88	REMOVE 30 FT POLE	EACH	1
773-12.89	REMOVE 35 FT POLE	EACH	10
773-12.90	REMOVE 40 FT POLE	EACH	9
773-12.91	REMOVE 45 FT POLE	EACH	2
773-12.92	REMOVE 55 FT POLE	EACH	1
773-12.93	REMOVE PUSH BRACE	EACH	2
790-03.01	POLE 40FT CLASS 2 WOOD	EACH	4
790-04.02	POLE 45FT CLASS 2 WOOD	EACH	5
790-04.06	POLE 45FT CLASS 1 METAL	EACH	2
790-04.07	POLE 45FT CLASS 2 METAL	EACH	9
790-05.01	POLE 50FT CLASS 1 WOOD	EACH	2
790-05.05	POLE 50FT CLASS 1 METAL	EACH	3
790-06.05	POLE 55FT CLASS 1 METAL	EACH	24
790-07.06	POLE 60FT CLASS 2 METAL	EACH	1
790-20.01	POLE 40FT CLASS 4 METAL	EACH	3
790-21.01	1Ø SGL PRIMARY SUPPORT 15KV	EACH	2
790-21.04	1Ø SGL SUPPORT 15KV	EACH	1
790-21.07	1Ø PRIMARY LG ANGLE 15KV	EACH	1
790-21.08	1Ø DEADEND 15KV	EACH	5
790-21.09	1Ø PRIMARY TAP 15KV	EACH	10
790-21.10	1Ø VERTICAL DDE 15KV	EACH	4
790-25.01	3Ø CROSSARM SGL 15KV	EACH	5
790-25.10	3Ø CROSSARM DBL DBL PRIM SUPPORT 15KV	EACH	2
790-25.21	3Ø CROSSARM DEADEND SGL 15KV	EACH	7
790-25.23	3Ø CROSSARM DDE 15KV	EACH	6
790-27.01	DBL CKT XARM 15KV	EACH	9
790-27.06	DBL CKT DBL XARM SM ANG 15KV	EACH	6
790-27.10	DBL CKT CROSSARM DDE 15KV	EACH	5
790-30.04	SECONDARY ASSEMBLIES MISC	EACH	75
790-31.04	SERVICE CONDUCTOR 6 AL DUPLEX	L.F.	2000
790-31.11	SERVICE CONDUCTOR 2 AL TRIPLEX	L.F.	310
790-31.33	SERVICE CONDUCTOR 336.4 MCM AL SGL COND	L.F.	50
790-32.01	DOWN GUY - THROUGH BOLT TYPE	EACH	70
790-32.07	OH GUY - THROUGH BOLT TYPE	EACH	6
790-32.25	ANCHOR (POWER INSTALLED HELIX SCREW ANCHO	EACH	45
790-40.02	OH COND 2 7/1 ACSR SPARATE	L.F.	5500
790-40.03	OH COND 1/0 6/1 ACSR RAVEN	L.F.	1720
790-40.05	OH COND 3/0 6/1 ACSR PIGEON	L.F.	660
790-40.09	OH COND 336.4 18/1 ACSR MERLIN	L.F.	3030
790-41.01	UG PRI COND 2 AL 15KV	L.F.	165
790-41.45	UG SEC COND 2 AL TPLX	L.F.	95
790-41.55	UG SEC COND 1/0 AL QPLX	L.F.	205
790-42.08	2IN DIA PVC PIPE	L.F.	60
790-42.12	CONDUIT-POLE MTD-2FT SCH 80 PVC	L.F.	7
790-42.14	CONDUIT-POLE MTD-4FT SCH 80 PVC	L.F.	32
790-43.46	SECONDARY PULLBOX LARGE	EACH	1
790-43.47	PRIMARY PULLBOX	EACH	1
790-46.01	1Ø TRANSFORMER	EACH	20
790-49.01	3Ø XFMR BNK POLE MTD NO FUSE/ARRESTERS	EACH	1
790-58.03	CUTOUT KNIFE SWITCH, SNGL LOADBREAK 15KV	EACH	2
790-60.01	1Ø FUSE CUTOUT XARM MOUNT 15KV	EACH	8
790-60.09	3Ø SECTIONALIZER OR RECL 15KV	EACH	1

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	73035-3209-14 QUANTITY
790-64.01	SEC MTG 1Ø 120/240 VOLTS	EACH	3
790-65.03	LIGHTNING ARRESTER ARM MTD 9 KV	EACH	1
790-68.10	MISCELLANEOUS ASSEMBLIES	EACH	2
790-69.28	EXTENTION LINK-EPOXY-6FT	EACH	12
790-70.04	STREET LIGHT W/ FRNG ANC BASE & MTL POLE	EACH	5
790-70.10	FLOOD LIGHT	EACH	3
790-70.20	STREET LIGHT (ALL)	EACH	27
790-98.01	REMOVE WIRE	L.F.	14431
790-98.02	REMOVE POLES	EACH	72
790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	EACH	395
790-98.20	TREE AND BRUSH REMOVAL OFF ROW	LS	1
791-01.05	6IN STL. GAS MAIN	L.F.	45
791-02.02	2IN MDPE GAS MAIN	L.F.	1624
791-02.03	3IN MDPE GAS MAIN	L.F.	530
791-02.05	6IN MDPE GAS MAIN	L.F.	5790
791-03.05	6IN HDPE GAS MAIN	L.F.	985
791-04.05	HDD 6IN PE PIPE-UNCONSOLIDATED	L.F.	50
791-06.02	CONNECT TO 2IN EX. PE MAIN	EACH	5
791-06.04	CONNECT TO 6IN EX. PE MAIN	EACH	3
791-06.09	CONNECT TO 3IN EX. PE MAIN	EACH	1
791-06.10	CONNECT TO 2IN EX. STL MAIN	EACH	8
791-06.12	CONNECT TO 6IN EX. STL. MAIN	EACH	2
791-06.21	CONNECT TO 3IN EX. CI/DI MAIN	EACH	3
791-07.01	2IN PE GAS VALVE ASSEMBLY	EACH	13
791-07.03	6IN PE GAS VALVE ASSEMBLY	EACH	21
791-07.08	3IN PE GAS VALVE ASSEMBLY	EACH	3
791-10.10	RETIRE GAS MAINS	L.S.	1
791-10.10	RETIRE GAS MAINS	LS	1
791-8.02	3/4IN SERVICE ASSEMBLY	EACH	11
791-8.03	1IN SERVICE ASSEMBLY	EACH	9
791-8.05	2IN SERVICE ASSEMBLY	EACH	1
791-8.07	3/4IN PE SERVICE PIPE	L.F.	335
791-8.08	1IN PE SERVICE PIPE	L.F.	1190
791-8.10	2IN PE SERVICE PIPE	L.F.	235
795-01.03	6IN DIP RESTRAINED JOINT WATER LINE	L.F.	295
795-01.04	6IN DIP SLIP JOINT WATER LINE	L.F.	2460
795-01.06	8IN DIP SLIP JOINT WATER LINE	L.F.	205
795-01.07	10IN DIP RESTRAINED JOINT WATER LINE	L.F.	370
795-01.08	10IN DIP SLIP JOINT WATER LINE	L.F.	4490
795-03.02	2IN PVC WATER LINE	L.F.	833
795-05.63	BORE/JACK 12IN STEEL CASING PIPE-UNCON.	L.F.	230
795-05.67	BORE/JACK 20IN STEEL CASING PIPE-UNCON.	L.F.	340
795-05.91	2IN PVC CASING PIPE OPEN CUT	L.F.	355
795-05.92	4IN PVC CASING PIPE OPEN CUT	L.F.	90
795-06.01	CONNECT TO 2IN WATER LINE	EACH	5
795-06.04	CONNECT TO 6IN WATER LINE	EACH	8
795-06.05	CONNECT TO 8IN WATER LINE	EACH	2
795-07.03	6IN X 6IN TAPPING SLEEVE AND VALVE	EACH	4
795-07.10	10IN X 10IN TAPPING SLEEVE AND VALVE	EACH	1
795-08.01	2IN GATE VALVE ASSEMBLY	EACH	5
795-08.04	6IN GATE VALVE ASSEMBLY	EACH	9
795-08.05	8IN GATE VALVE ASSEMBLY	EACH	2
795-08.06	10IN GATE VALVE ASSEMBLY	EACH	21
795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EACH	29
795-09.02	1IN WATER SERVICE METER ASSEMBLY	EACH	9
795-09.28	3/4IN COPPER SERVICE PIPE	L.F.	615
795-09.29	1IN COPPER SERVICE PIPE	L.F.	875

FOOTNOTE:

SEE SHEET U1-1 FOR INDEX OF UTILITY SHEETS.
APPLICABLE FOOTNOTES FOR ESTIMATED UTILITIES QUANTITIES WILL BE ON THE UTILITY TABULATION BLOCKS.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED UTILITY QUANTITIES

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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27B

ROANE COUNTY 73035-3209-14

TRAFFIC CONTROL NOTES

PAVEMENT EDGE DROP-OFF

DIFFERENCE IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

DIFFERENCE IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING TWO INCHES:

A. WARNING SIGNS, UNEVEN PAVEMENT (W8-11) AND/OR SHOULDER DROP-OFF (W8-9A), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

B. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

C. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

D. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

DIFFERENCE IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN TWO INCHES AND NOT EXCEEDING SIX INCHES. TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

A. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

B. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO TWO INCHES OR LESS BY THE END OF EACH DAY'S WORK, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH A, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

C. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THRU TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3-1/2 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE ENGINEER. SEE PARAGRAPH A REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

IN THESE SITUATIONS THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING TWO MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

DIFFERENCE IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN SIX INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

A. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

IN ORDER TO USE THIS METHOD THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO SIX INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

B. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH A, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

C. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH A, AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

D. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

FOR PRECEDING CONDITIONS A, B, AND C, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN (W8-9A). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. IN THESE SITUATIONS THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING ONE MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING ONE MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.

IF THE DIFFERENCE IN ELEVATION IS WITHIN EIGHT FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 0.75 INCH AND NOT EXCEEDING TWO INCHES:

WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

IF THE DIFFERENCE IN ELEVATION IS WITHIN EIGHT FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN TWO INCHES AND NOT EXCEEDING SIX INCHES:

A. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

IF THE DIFFERENCE IN ELEVATION IS WITHIN EIGHT FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN SIX INCHES:

A. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

B. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN EIGHT FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

SEALED BY

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STATE OF TENNESSEE
9/24/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL NOTES

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27B1

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
REVISED TRAFFIC CONTROL QUANTITIES AND CONSTRUCTION SIGNS TABULATION

REV. 01-11-13:
REVISED TRAFFIC CONTROL QUANTITIES.

REV. 09-03-13:
REVISED TRAFFIC CONTROL QUANTITIES.

TRAFFIC CONTROL NOTES (CONTINUED)

PAVEMENT EDGE DROP-OFF

IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN EIGHT FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

A. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

CONSTRUCTION WORK ZONE

ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FOOT SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

SEQUENCE OF CONSTRUCTION

PHASE I

THE NEW CONSTRUCTION OF THE LEFT SIDE OF S.R. 29 BETWEEN STATION 54+25 AND THE END OF PROJECT INCLUDING CURB & GUTTER AND SIDEWALK. THE NEW CONSTRUCTION OF THE LEFT SIDE OF S.R. 29 BETWEEN STATION 11+53.90 AND STATION 19+00 INCLUDING CURB & GUTTER AND SIDEWALK. THE NEW CONSTRUCTION OF THE BOX CULVERT ON BAUMGARTNER ROAD AND CHANNEL MODIFICAITON OF STR-2.

TRAFFIC CONTROL, EROSION CONTROL, CONSTRUCTION OF CROSS DRAINS WITHIN THE CONSTRUCTION AREA, AND STORM SEWERS. TEMPORARY SIGNING AND TEMPORARY PAVEMENT MARKINGS ON NEW LANES. THE COMPLETE CONSTRUCTION OF SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES, AND FIELD ENTRANCES AS SHOWN ON THE CONSTRUCTION DOCUMENTS.

THIS PHASE SHALL CONSIST OF NEW ROAD CONSTRUCTION WHILE MAINTAINING TRAFFIC ON EXISTING LANES ON S.R. 29 AND CLOSING BAUMGARTNER ROAD TO THRU TRAFFIC WITH DETOUR. ACCESS TO ALL SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES, AND FIELD ENTRANCES SHALL BE MAINTAINED WITH CRUSHED STONE AS CONSTRUCTION CONTINUES DURING THIS PHASE.

PHASE II

THE NEW CONSTRUCTION OF THE RIGHT SIDE OF S.R. 29 BETWEEN STATION 11+53.90 AND THE END OF PROJECT INCLUDING CURB & GUTTER AND SIDEWALK.

TRAFFIC CONTROL, EROSION CONTROL, CONSTRUCTION OF CROSS DRAINS WITHIN THE CONSTRUCTION AREA, AND STORM SEWERS. TEMPORARY SIGNING AND TEMPORARY PAVEMENT MARKINGS ON NEW LANES. THE COMPLETE CONSTRUCTION OF SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES, AND FIELD ENTRANCES AS SHOWN ON THE CONSTRUCTION DOCUMENTS.

THIS PHASE SHALL CONSIST OF NEW ROAD CONSTRUCTION WHILE MAINTAINING TRAFFIC ON EXISTING LANES ON S.R. 29 AND NEW ROADWAY CONSTRUCTED IN PHASE I. ACCESS TO ALL SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES AND FIELD ENTRANCES SHALL BE MAINTAINED WITH CRUSHED STONE AS CONSTRUCTION CONTINUES DURING THIS PHASE.

PHASE III

THE NEW CONSTRUCTION OF THE LEFT SIDE OF S.R. 29 BETWEEN STATION 19+00 AND STATION 54+25 INCLUDING CURB & GUTTER AND SIDEWALK.

TRAFFIC CONTROL, EROSION CONTROL, CONSTRUCTION OF CROSS DRAINS WITHIN THE CONSTRUCTION AREA, AND STORM SEWERS. TEMPORARY SIGNING AND TEMPORARY PAVEMENT MARKINGS ON NEW LANES. THE COMPLETE CONSTRUCTION OF SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES, AND FIELD ENTRANCES AS SHOWN ON THE CONSTRUCTION DOCUMENTS.

THIS PHASE SHALL CONSIST OF NEW ROAD CONSTRUCTION WHILE MAINTAINING TRAFFIC ON NEW ROADWAY CONSTRUCTED IN PHASE II. HASSLER MILL ROAD WILL BE CLOSED WITH A DETOUR. ACCESS TO ALL OTHER SIDE ROADS, BUSINESS ENTRANCES, PRIVATE DRIVES AND FIELD ENTRANCES SHALL BE MAINTAINED WITH CRUSHED STONE AS CONSTRUCTION CONTINUES DURING THIS PHASE.

PHASE IV

FINAL PAVING OPERATIONS FOR THE SURFACE COAT AND THE FINAL CLEANUP OF THE CONSTRUCTION SITE INCLUDING REMOVAL OF ALL TEMPORARY TRAFFIC CONTROL AND EROSION CONTROL ITEMS. TRAFFIC CONTROL REQUIRED FOR TEMPORARY MEDIAN CROSSOVER AND TEMPORARY TRANSITION SHALL REMAIN IN PLACE AND WILL BE REMOVED IN FUTURE CONTRACT.

TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	PHASE #1 QUANTITY	PHASE #2 QUANTITY	PHASE #3 QUANTITY	TOTAL QUANTITY	UNIT	REMARKS
705-08.11	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	2	0	0	2	EA	
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	500	0	0	500	L.F.	
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	30	150	0	180	EA	
712-05.01	WARNING LIGHTS (TYPE A)	26	62	0	88	EA	
712-06	SIGNS (CONSTRUCTION)	516.0	12.0	47.5	572.5	S.F.	
712-06.01	VERTICAL PANELS	32.0	0.0	0.0	32.0	S.F.	
712-07.03	TEMPORARY BARRICADES (TYPE III)	32	0	32	64	L.F.	
712-08.03	ARROW BOARD (TYPE C)	2	0	0	2	EA	
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	3	0	0	3	EA	

CONSTRUCTION SIGNS

SIGN DESIGNATION (M.U.T.C.D. NO.)	DESCRIPTION	SIZE (in.)	SIZE (FT^2)	NO. REQUIRED			FT^2
				PHASE #1	PHASE #2	PHASE #3	
M4-8A	PHASE I & III DETOUR - END DETOUR	24 x 18	3.0	2	0	0	6.0
M4-9L	PHASE I & III DETOUR - DETOUR LEFT	24 x 18	3.0	5	0	0	15.0
M4-9R	PHASE I & III DETOUR - DETOUR RIGHT	24 x 18	3.0	5	0	0	15.0
M4-9*	PHASE I & III DETOUR - DETOUR STRAIGHT	24 x 18	3.0	0	0	2	6.0
R11-3A	PHASE I & III DETOUR - BRIDGE OUT	60 x 30	12.5	4	0	0	50.0
R11-3A	PHASE I & III DETOUR - ROAD CLOSED	60 x 30	12.5	0	0	3	37.5
	PHASE I & III DETOUR - BAUMGERTNER RD	48 x 18	6.0	12	0	0	72.0
W20-2	PHASE I & III DETOUR - DETOUR AHEAD	36 x 36	9.0	2	0	0	18.0
G20-1	ROAD WORK NEXT 1 MILE	36 x 18	4.5	1	0	0	4.5
G20-2	END ROAD WORK	36 x 18	4.5	15	0	0	67.5
R1-2	YIELD	36 x 36 x 36	4.0	0	0	1	4.0
R2-1	SPEED LIMIT (25 MPH)	24 x 30	5.0	9	0	0	45.0
R11-2	BRIDGE OUT	48 x 30	10.0	2	0	0	20.0
W1-4L	LANE SHIFT AHEAD (LEFT)	36 x 36	9.0	1	0	0	9.0
W2-5A	REDUCED SPEED AHEAD	24 x 30	5.0	1	0	0	5.0
W4-2R	MERGE (RIGHT)	36" x 36"	9.0	1	0	0	9.0
W4-2L	MERGE (LEFT)	36" x 36"	9.0	0	1	0	9.0
W20-1	ROAD WORK AHEAD	36 x 36	9.0	17	0	0	153.0
W20-1M	ROAD WORK 1/2 MILE	36 x 36	9.0	1	0	0	9.0
W20-1M	ROAD WORK 1 MILE	36 x 36	9.0	1	0	0	9.0
W20-2	DETOUR AHEAD	36 x 36	9.0	1	0	0	9.0
						TOTAL =	572.5

* = MODIFIED SIGN

SEALED BY

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No. 0010895
STATE OF TENNESSEE
7/2/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL NOTES

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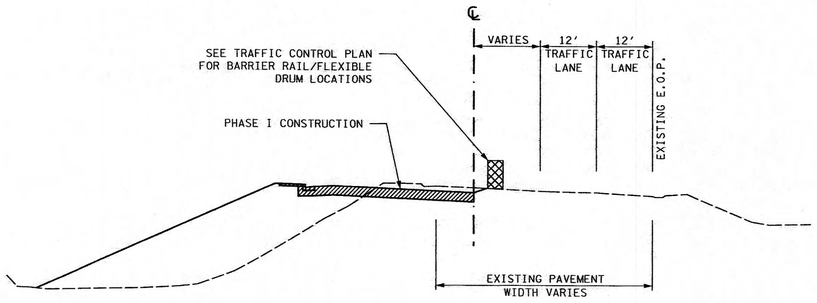
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27B2

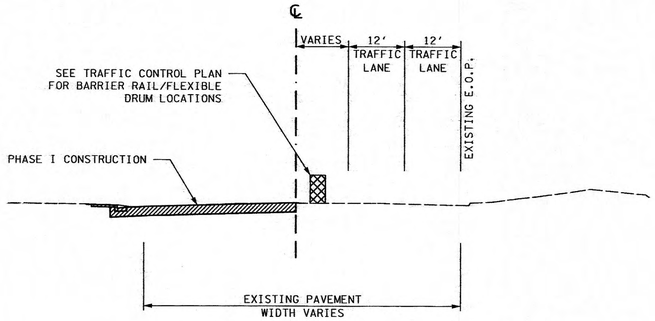
ROANE COUNTY 73035-3209-14

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PHASE I TRAFFIC CONTROL

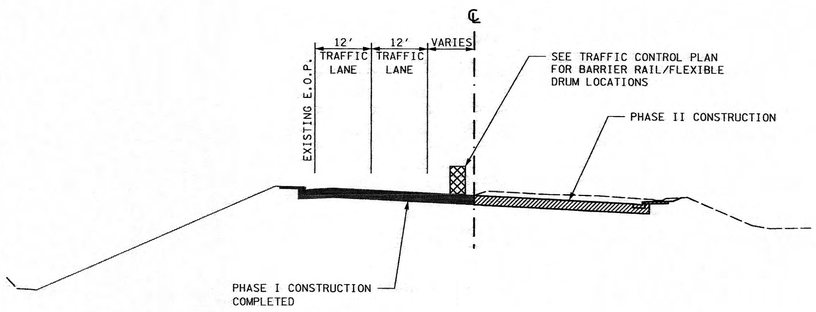


TRAFFIC CONTROL TYPICAL SECTION
NOT TO SCALE
11+53.90 TO 19+00



TRAFFIC CONTROL TYPICAL SECTION
NOT TO SCALE
54+25 TO END OF PROJECT

PHASE II TRAFFIC CONTROL



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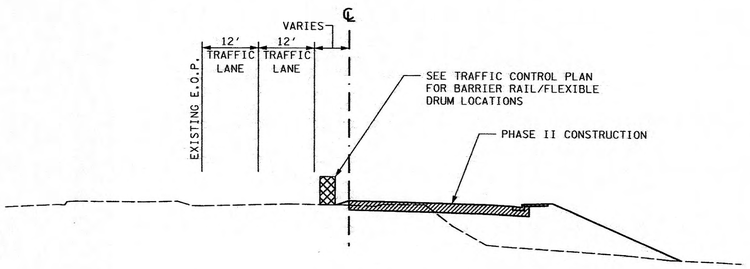
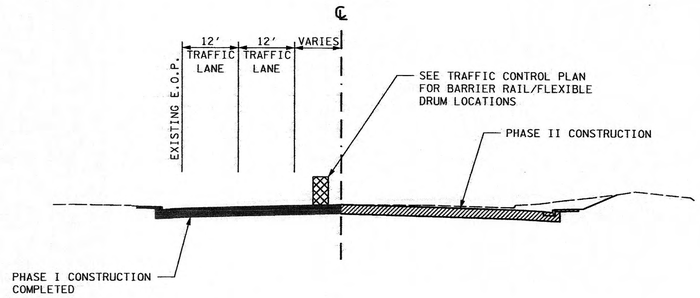
NOT TO SCALE
11+53.90 TO 19+00



TRAFFIC CONTROL TYPICAL SECTION
NOT TO SCALE
19+00 TO 54+25



TRAFFIC CONTROL TYPICAL SECTION
NOT TO SCALE
54+25 TO END OF PROJECT

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL TYPICAL SECTIONS

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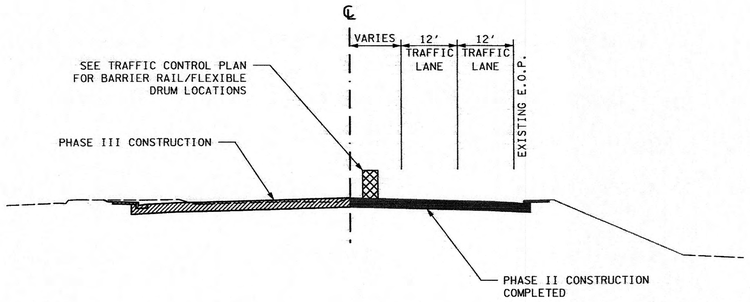
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27B3

ROANE COUNTY 73035-3209-14

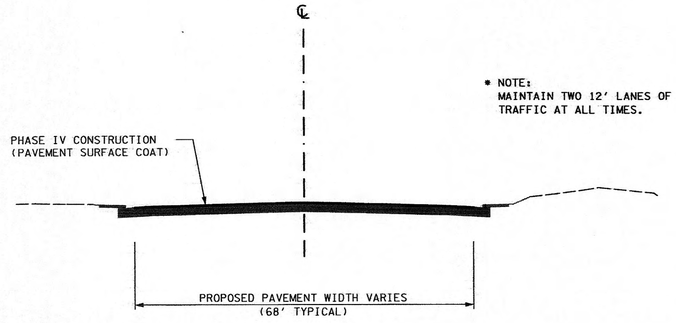
PHASE III TRAFFIC CONTROL



TRAFFIC CONTROL TYPICAL SECTION

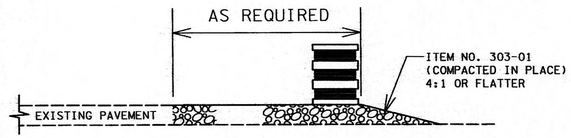
NOT TO SCALE
19+00 TO 54+25

PHASE IV TRAFFIC CONTROL



TRAFFIC CONTROL TYPICAL SECTION

NOT TO SCALE
BEGINNING OF PROJECT TO END OF PROJECT



STONE WEDGE DETAIL

VERTICAL DROP-OFF PROTECTION

SEALED BY

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00108859
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL TYPICAL SECTIONS

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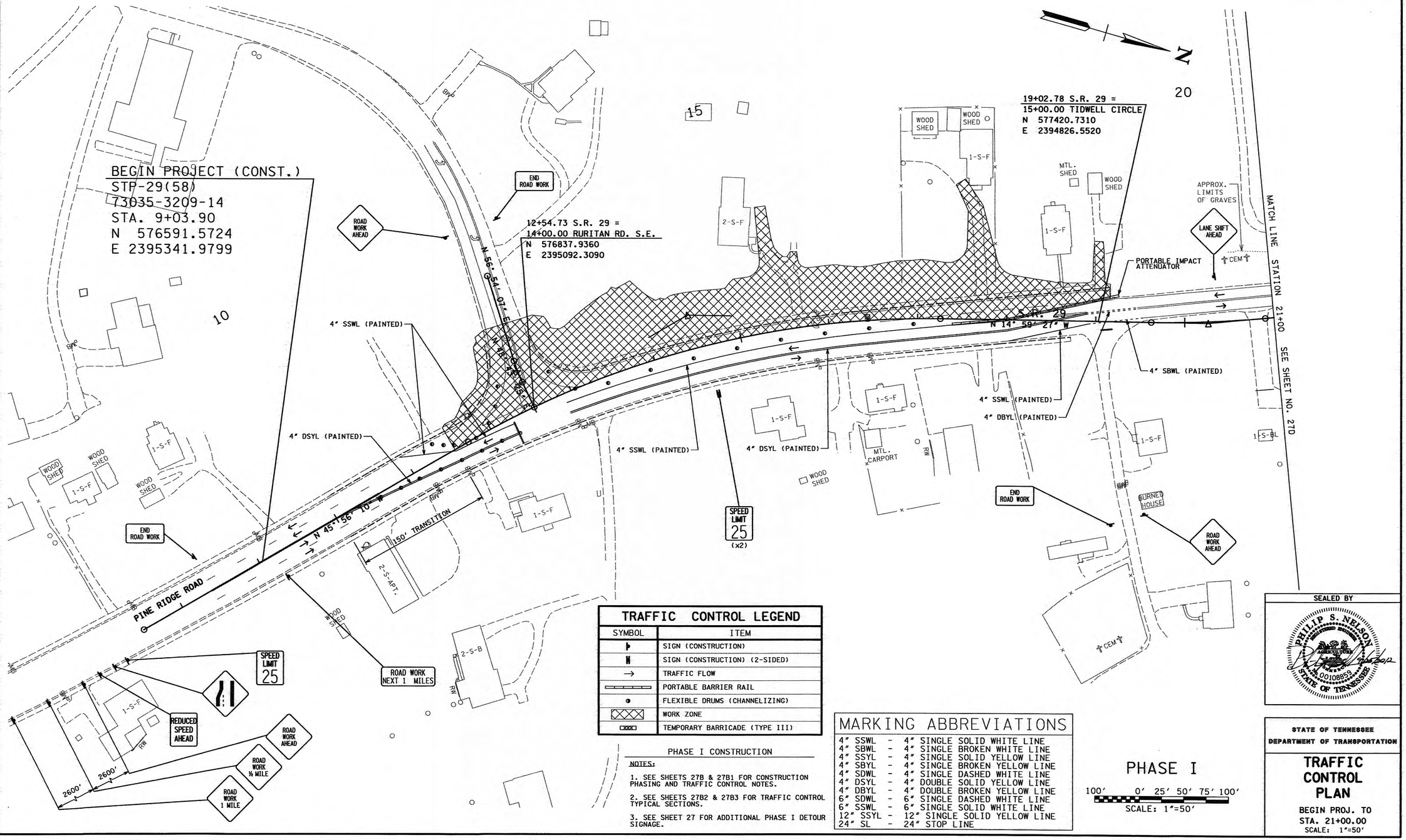
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27C

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE I CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEET 27 FOR ADDITIONAL PHASE I DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE I

100' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

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LICENSED PROFESSIONAL ENGINEER
100108859
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

BEGIN PROJ. TO
STA. 21+00.00
SCALE: 1"=50'

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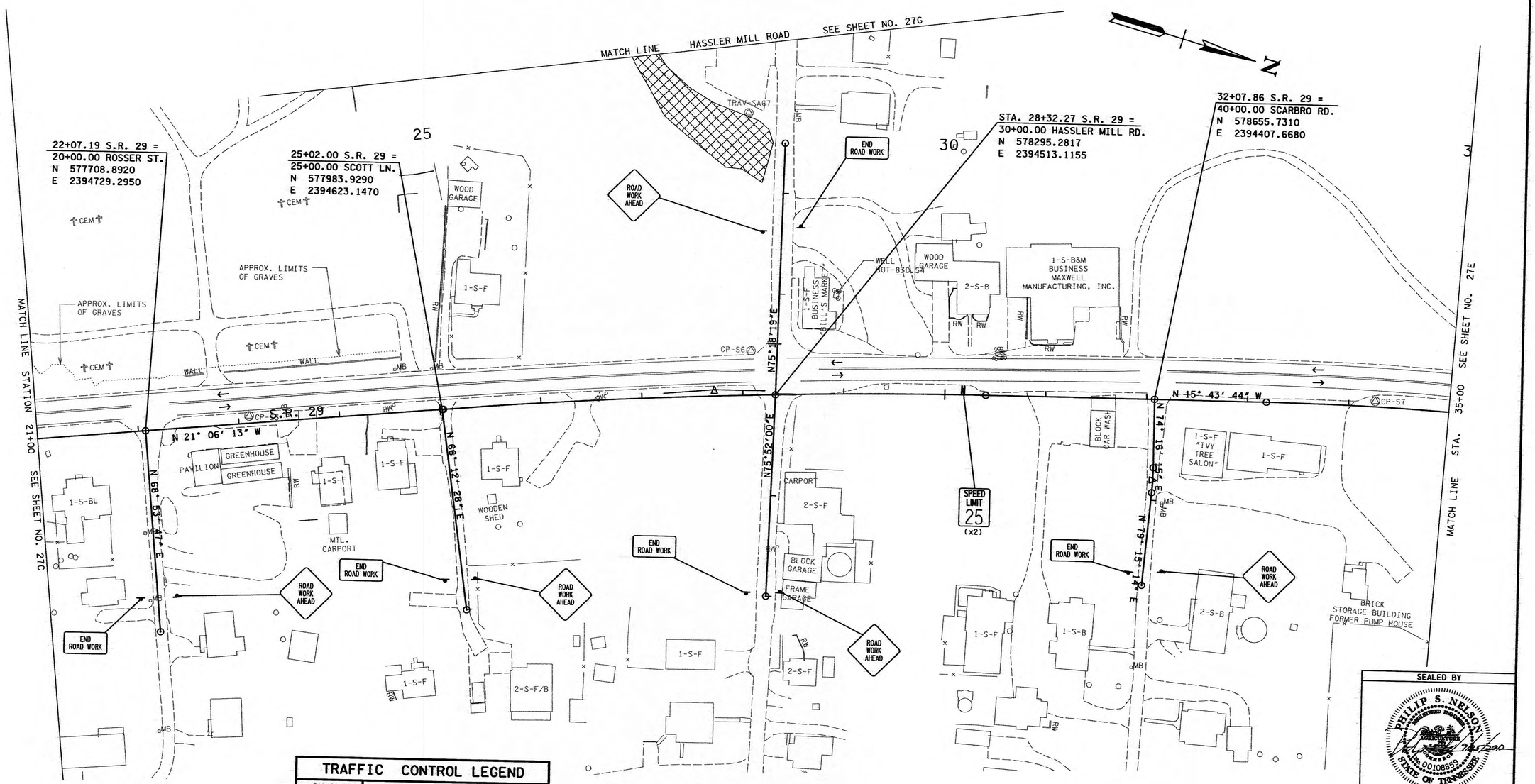
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27D

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE I CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEET 27 FOR ADDITIONAL PHASE I DETOUR SIGNAGE.

MARKING ABBREVIATIONS

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4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE I

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON 101089 REGISTERED AGRICULTURAL ENGINEER STATE OF TENNESSEE 9/25/2012

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"=50'

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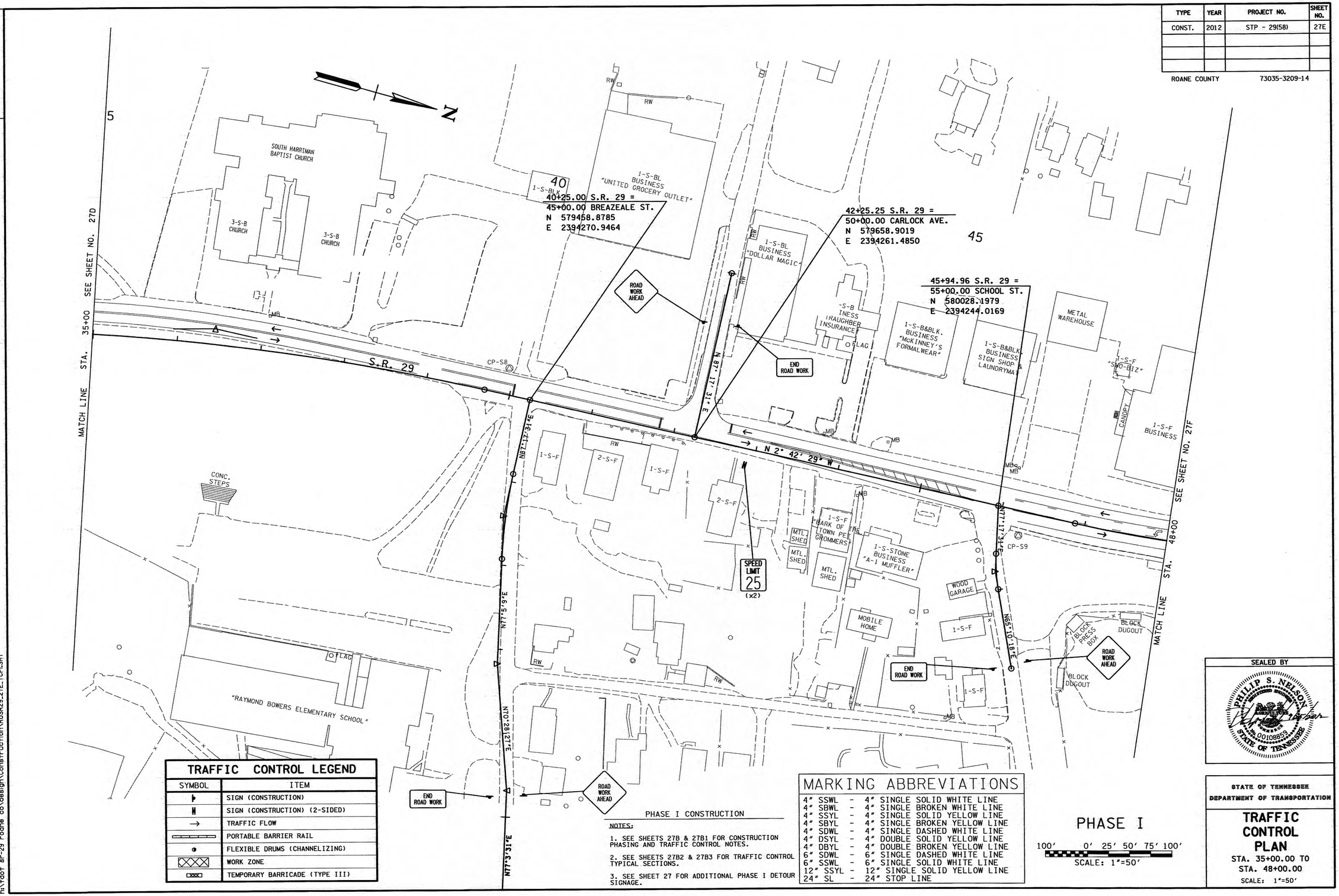
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27E

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE I CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEET 27 FOR ADDITIONAL PHASE I DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE I

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 35+00.00 TO STA. 48+00.00

SCALE: 1"=50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27F

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADJUSTED CROSS-HATCHED WORK ZONE AREA.

52+61.83 S.R. 29 =
65+00.00 STATE ST.
N 580674.9450
E 2394102.7830

52+53.41 S.R. 29 =
70+00.00 STATE ST. S.E.
N 580667.1410
E 2394105.9300

48+39.42 S.R. 29 =
80+00.00 PANSY HILL ROAD
N 580271.4751
E 2394224.5649

END PROJECT (CONST.)
NO. STP-29(58)
73035-3209-14
STA. 56+17.62
N 580981.2381
E 2393924.0221

56+66.40 S.R. 29 =
92+50.00 S.R. 61
(SOUTH ROANE STREET)
N 581021.50
E 2393896.48

73+17.38 STATE ST=
75+00.00 PANSY HILL RD
N 580762.0763
E 2394408.6517

CONTRACTOR TO ADJUST PORTALE BARRIER RAIL AS NEEDED THROUGHOUT CONSTRUCTION TO ALLOW FOR RIGHT TURN MOVEMENTS OF LARGE VEHICLES

PORTABLE IMPACT ATTENUATOR

4" SBWL (PAINTED)
4" DBYL (PAINTED)
4" SSWL (PAINTED)
4" DSYL (PAINTED)

SEE SHEET NO. 27E

MATCH LINE STA. 48+00

S19°59'24"W

N 21° 58' 06" W

N 18° 01' 03" E 74° 22' 07" E

N 69° 33' 25" E

N 34° 22' 08" W

S.R. 29

SPEED LIMIT 25 (x2)

CURB

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE I CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEET 27 FOR ADDITIONAL PHASE I DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
4" SBWL	-	4" SINGLE BROKEN WHITE LINE
4" SSYL	-	4" SINGLE SOLID YELLOW LINE
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4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE I

50' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

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No. 0010853
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 48+00.00 TO END PROJ.

SCALE: 1"=50'

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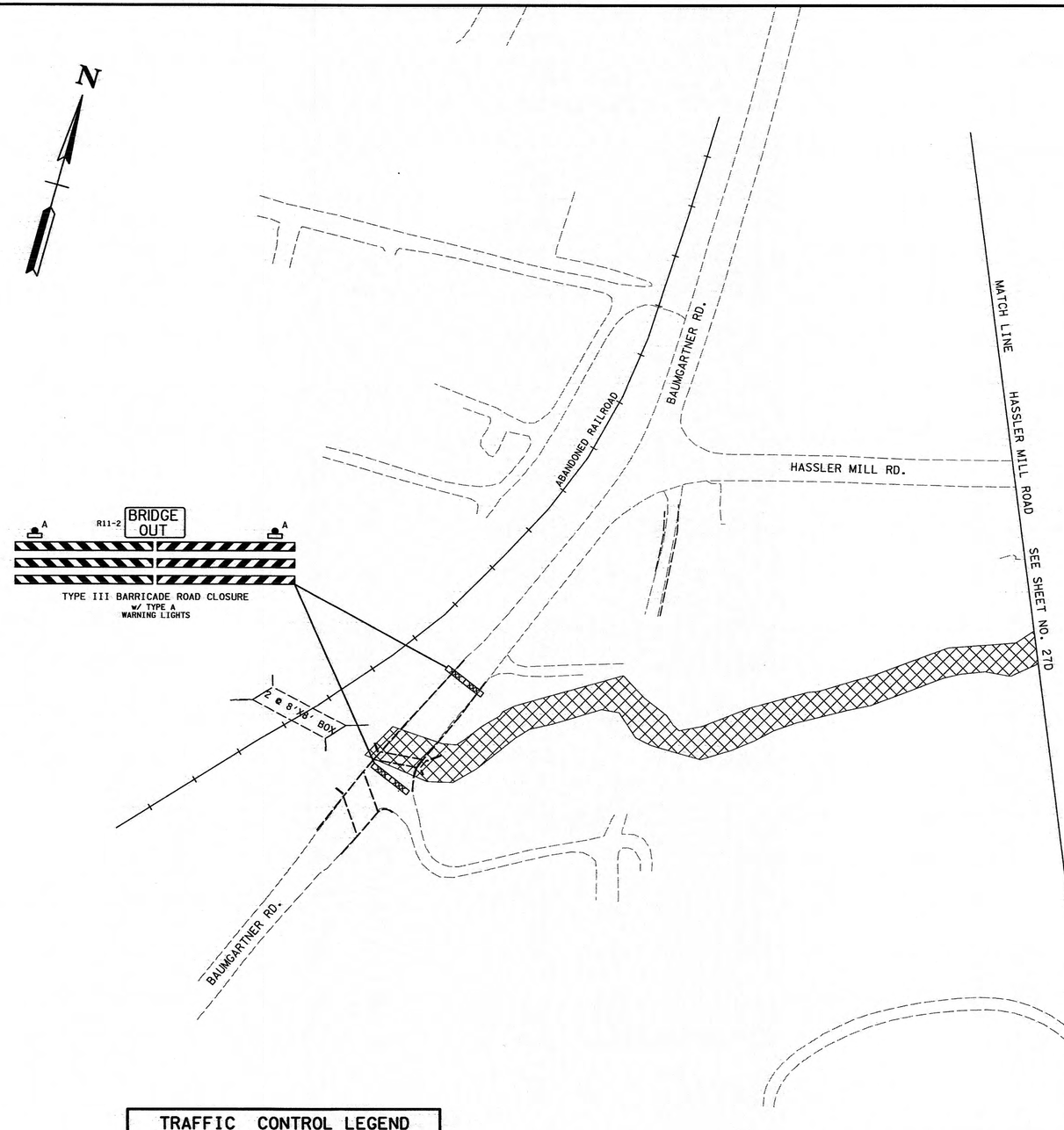
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27G

ROANE COUNTY 73035-3209-14

REV. 01-11-13:
ADJUSTED CROSS-HATCHED WORK ZONE AREA.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE I CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS.
3. SEE SHEET 27 FOR ADDITIONAL PHASE I DETOUR SIGNAGE.

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
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6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE I

50' 0' 25' 50' 75' 100'
SCALE: 1"=50'

SEALED BY

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AGRICULTURE
COMMERCE
No. 00108859
STATE OF TENNESSEE
1/13/2013

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

BAUMGARTNER ROAD AND HASSLER MILL ROAD

SCALE: 1"=50'

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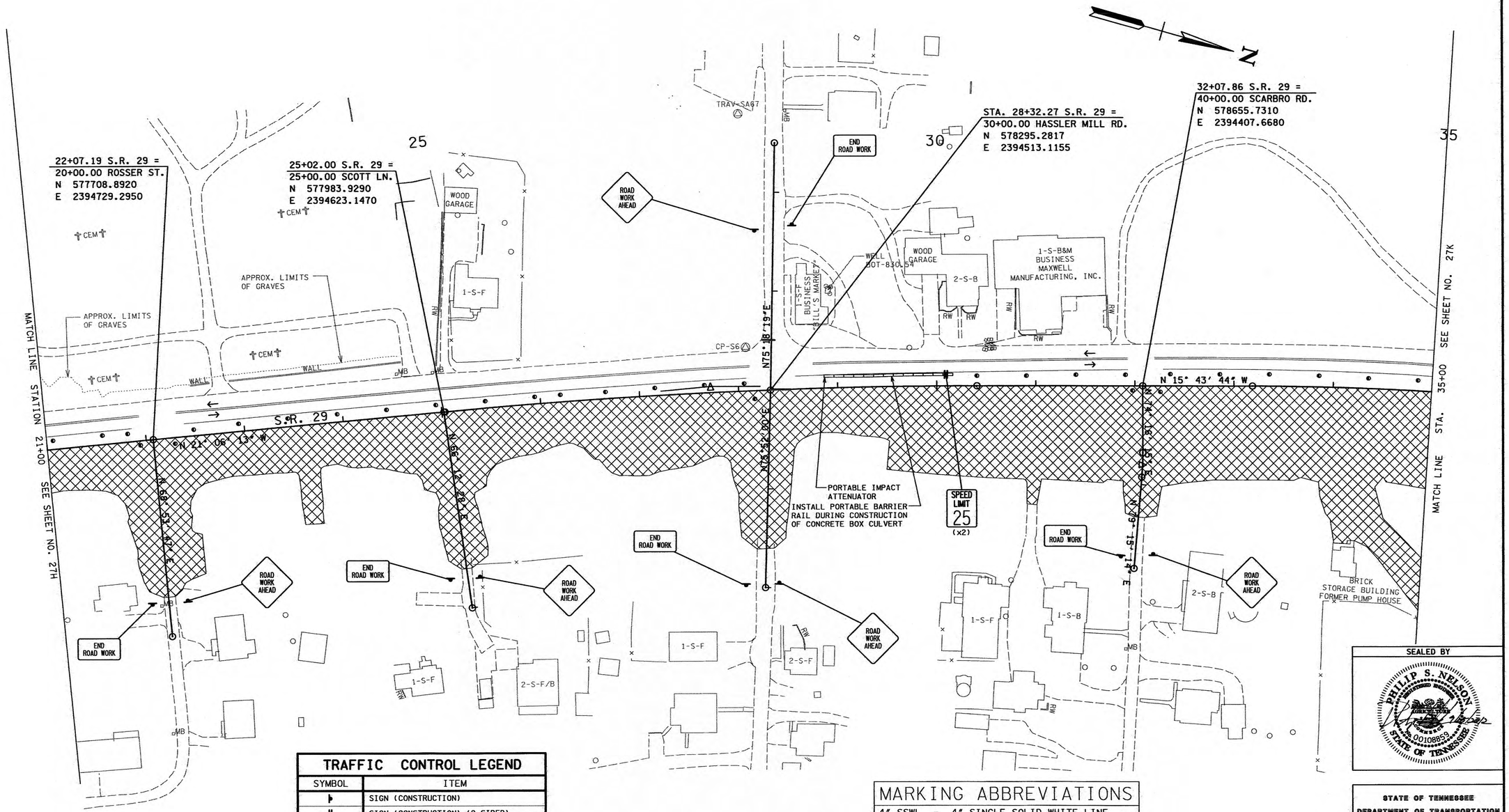
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2012	STP - 29(58)	27J

ROANE COUNTY 73035-3209-14



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	SIGN (CONSTRUCTION) (2-SIDED)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)

PHASE II CONSTRUCTION

NOTES:

1. SEE SHEETS 27B & 27B1 FOR CONSTRUCTION PHASING AND TRAFFIC CONTROL NOTES.
2. SEE SHEETS 27B2 & 27B3 FOR TRAFFIC CONTROL TYPICAL SECTIONS

MARKING ABBREVIATIONS

4" SSWL	-	4" SINGLE SOLID WHITE LINE
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4" SBYL	-	4" SINGLE BROKEN YELLOW LINE
4" SDWL	-	4" SINGLE DASHED WHITE LINE
4" DSYL	-	4" DOUBLE SOLID YELLOW LINE
4" DBYL	-	4" DOUBLE BROKEN YELLOW LINE
6" SDWL	-	6" SINGLE DASHED WHITE LINE
6" SSWL	-	6" SINGLE SOLID WHITE LINE
12" SSYL	-	12" SINGLE SOLID YELLOW LINE
24" SL	-	24" STOP LINE

PHASE II

100' 0' 25' 50' 75' 100'

SCALE: 1"=50'

SEALED BY

PHILIP S. NELSON 00108853 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

STA. 21+00.00 TO STA. 35+00.00

SCALE: 1"=50'

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