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

INDEX OF SHEETS

SEE SHEET 1A FOR INDEX

# STATE OF TENNESSEE
# DEPARTMENT OF TRANSPORTATION
# BUREAU OF ENGINEERING

| TENN. | YEAR | SHEET NO. |
|---|---|---|
| | 2014 | 1 |
| FED. AID PROJ. NO. | | |
| STATE PROJ. NO. | 30009-4232-04 | |

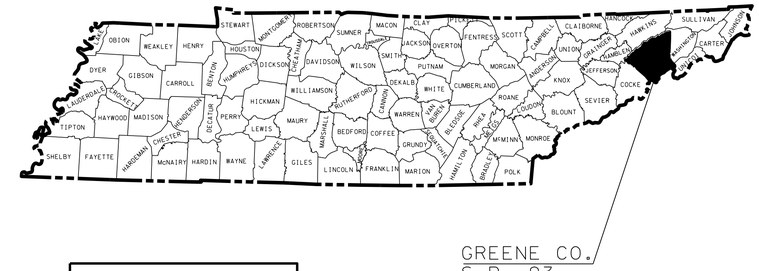
S.R.93 GREENE CO.

# GREENE COUNTY

## S.R.93: CULVERTS AT L.M. 2.15 AND L.M. 8.00

GRADE, DRAIN, BASE, PAVE, GUARDRAIL AND CULVERTS

STATE HIGHWAY NO. 93 F.A.H.S. NO. 93




N

0 1MI 2MI 3MI

SCALE: 1" = 1 MILE

NO EXCLUSIONS

NO EQUATIONS

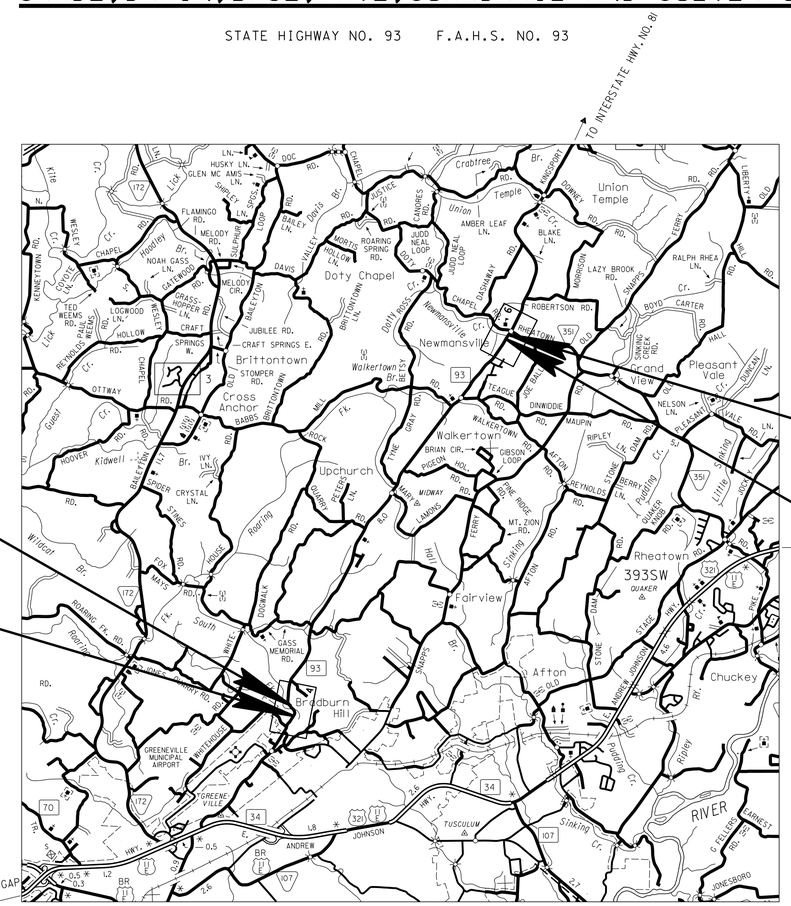
PROJECT OF LIMITED SCOPE

ROAD TO BE CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION

**UNOFFICIAL SET**

**NOT FOR BIDDING**

30009-4232-04
END PROJECT(L.M. 2.15)
STA.16+75.00 (CONST.)
30009-4232-04
BEGIN PROJECT(L.M. 2.15)
STA.13+97.00 (CONST.)




30009-4232-04
END PROJECT(L.M. 8.00)
STA.56+24.00 (CONST.)
30009-4232-04
BEGIN PROJECT(L.M. 8.00)
STA.54+70.00 (CONST.)

SEALED BY

PAUL THOMAS BEEBE
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
COMMERCE & INSURANCE
No. 102366
STATE OF TENNESSEE

APPROVED: Paul D. Doggett
CHIEF ENGINEER

DATE:

APPROVED:
COMMISSIONER

S.R. 93 @ L.M. 2.15

| TRAFFIC DATA | |
|---|---|
| ADT (2014) | 2668 |
| ADT (2034) | 3188 |
| DHV (2034) | 319 |
| D | 65 - 35 |
| T (ADT) | 3 % |
| T (DHV) | 2 % |
| V | 30 MPH |

S.R. 93 @ L.M. 8.00

| TRAFFIC DATA | |
|---|---|
| ADT (2014) | 1690 |
| ADT (2034) | 2020 |
| DHV (2034) | 223 |
| D | 65 - 35 |
| T (ADT) | 4 % |
| T (DHV) | 3 % |
| V | 50 MPH |

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

## 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.

| | L.M.2.15 | L.M.8.00 |
|---|---|---|
| ROADWAY LENGTH | 0.053 MILES | 0.029 MILES |
| BRIDGE LENGTH | 0.000 MILES | 0.000 MILES |
| BOX BRIDGE LENGTH | 0.000 MILES | 0.000 MILES |
| PROJECT LENGTH | 0.053 MILES | 0.029 MILES |

TDOT ROAD SP. SV. 2 MAYSOON HADDAD

DESIGNER JEN POLLARD CHECKED BY: PAUL BEEBE, P.E.

P.E. NO. 30009-4230-04 (DESIGN)

PIN NO. 114430.00

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 1A |
| | | | |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4232-04 (CONST.)

# INDEX


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| TYPICAL SECTIONS AND PAVEMENT SCHEDULE | 2A |
| GENERAL NOTES | 2B, 2C |
| GENERAL NOTES, SPECIAL NOTES AND SCOPE OF WORK | 2D |
| TABULATED QUANTITIES | 2E |
| PROPERTY MAPS & UTILITY OWNERS | 3 |
| R.O.W. ACQUISITION TABLE, R.O.W. NOTES & UTILITY NOTES | 3A |
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| PROPOSED R.O.W. LAYOUT | 4A |
| PROPOSED LAYOUT | 4B, 6A |
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| STORM WATER POLLUTION PREVENTION PLAN (SWPPP) INDEX | S-1 |


**NOTE: NO PROJECT COMMITMENTS SHEET INCLUDED IN THIS SET OF PLANS**

# STANDARD BRIDGE DRAWINGS

| DWG. NO | REV. | DESCRIPTION |
|---|---|---|
| **BRIDGE APPURTENANCES ENGLISH (NEW STRUCTURES)** | | |
| STD-9-1 | 10-07-08 | REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS |
| STD-10-1 | 04-08-05 | MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS |
| **BRIDGE APPURTENANCES ENGLISH (LRFD BOX CULVERTS)** | | |
| STD-15-16A | | LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET |
| 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-17-13 | | 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-17-20 | | LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET |
| STD-17-23 | | SIDEWALK AND MISCELLANEOUS DETAILS |
| STD-17-24 | | WARPED SLOPE DETAIL |
| STD-17-29 | | PRECAST BOX CULVERT DETAILS |
| STD-17-72 | | BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' - 5', 0 - 60' FILL |

# STANDARD ROADWAY DRAWINGS

| 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-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 | 05-24-12 | STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL |
| 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-S-11B | 10-15-02 | DESIGN AND CONSTRUCTION DETAILS FOR ROCK CUT SLOPE AND CATCHMENT |
| RD01-SE-3 | 10-15-02 | RURAL SUPERELEVATION DETAILS |

| DWG NO | REV. | DESCRIPTION |
|---|---|---|
| **SAFETY APPURTENANCES AND FENCE** | | |
| S-CZ-1 | | CLEAR ZONE CRITERIA |
| S-PL-1 | | SAFETY PLAN AT ROADSIDE HAZARDS |
| S-PL-2 | | SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES |
| S-GR31-1 | | W-BEAM GUARDRAIL |
| S-GRT-2 | | TYPE 38 GUARDRAIL TERMINAL |
| S-GRT-2P | | EARTH PAD FOR TYPE 38 GUARDRAIL TERMINAL |
| S-GRA-3 | | GUARDRAIL ANCHOR FOR TYPE 21, 13, AND IN-LINE TERMINALS |
| S-F-1 | 05-24-12 | HIGH VISIBILITY FENCE |
| S-RP-2 | 01-19-99 | STANDARD CONCRETE RIGHT-OF-WAY MARKERS |
| **TRAFFIC CONTROL APPURTENANCES** | | |
| T-M-1 | 11-01-11 | DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS |
| T-PBR-1 | 06-30-09 | INTERCONNECTED PORTABLE BARRIER RAIL |
| T-S-10 | 04-04-12 | STANDARD MOUNTING DETAILS – FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN |
| T-S-17 | 07-19-13 | GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE |
| T-S-19 | 07-19-13 | STANDARD STEEL SIGN SUPPORTS |
| T-S-20 | 11-01-11 | SIGN DETAILS |
| 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-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-25 | 08-01-12 | TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD |
| EC-STR-27 | 08-01-12 | TEMPORARY SLOPE DRAIN AND BERM |
| EC-STR-31 | 08-01-12 | TEMPORARY DIVERSION CHANNEL |
| EC-STR-31A | 04-01-08 | TEMPORARY DIVERSION CHANNEL DESIGN |
| EC-STR-34 | 08-01-12 | EROSION CONTROL BLANKET FOR SLOPE INSTALLATION |
| EC-STR-37 | 08-01-12 | SEDIMENT TUBE |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

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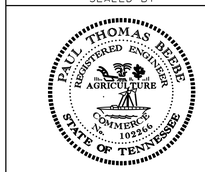


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD DRAWINGS

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

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 2 |

S.R.93 GREENE CO.
30009-4232-04 (CONST.)

## ESTIMATED ROADWAY QUANTITIES

| | ITEM NO. | DESCRIPTION | UNIT | LM 2.15 QUANTITY | LM 8.00 QUANTITY | TOTAL QUANTITY |
|---|---|---|---|---|---|---|
| | 105-01 | CONSTRUCTION STAKES, LINES AND GRADES | LS | 0.5 | 0.5 | 1 |
| | 201-01 | CLEARING AND GRUBBING | LS | 0.5 | 0.5 | 1 |
| | 203-30.01 | ROADWAY APPROACHES | L.S. | 0.5 | 0.5 | 1 |
| | 204-08 | FOUNDATION FILL MATERIAL | C.Y. | 17 | 17 | 34 |
| | 209-02.03 | 8" TEMPORARY SLOPE DRAIN | L.F. | 20 | 0 | 20 |
| | 209-05 | SEDIMENT REMOVAL | C.Y. | 7 | 4 | 11 |
| 1 14 | 209-08.02 | TEMPORARY SILT FENCE (WITH BACKING) | L.F. | 474 | 450 | 924 |
| | 209-08.07 | ROCK CHECK DAM | EACH | 6 | 1 | 7 |
| | 209-08.08 | ENHANCED ROCK CHECK DAM | EACH | 4 | 2 | 6 |
| | 209-09.03 | SEDIMENT FILTER BAG (15' X 15') | EACH | 2 | 2 | 4 |
| 2 | 303-01 | MINERAL AGGREGATE, TYPE A BASE, GRADING D | TON | 370 | 260 | 630 |
| | 303-01.01 | GRANULAR BACKFILL (ROADWAY) | TON | 201 | 390 | 591 |
| | 303-10.01 | MINERAL AGGREGATE (SIZE 57) | TON | 22 | 22 | 44 |
| | 307-01.01 | ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A | TON | 9 | 9 | 18 |
| | 307-01.08 | ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2 | TON | 6 | 6 | 12 |
| 3 | 402-01 | BITUMINOUS MATERIAL FOR PRIME COAT (PC) | TON | 0.5 | 0.3 | 0.8 |
| | 403-01 | BITUMINOUS MATERIAL FOR TACK COAT (TC) | TON | 0.3 | 0.2 | 0.5 |
| | 411-01.10 | ACS MIX(PG64-22) GRADING D | TON | 62 | 33 | 95 |
| | 604-01.01 | CLASS A CONCRETE (ROADWAY) | C.Y. | 75 | 80 | 155 |
| | 604-01.02 | STEEL BAR REINFORCEMENT (ROADWAY) | LB. | 15600 | 16350 | 31950 |
| | 705-01.04 | METAL BEAM GUARD FENCE | L.F. | 38 | 38 | 76 |
| | 705-02.02 | SINGLE GUARDRAIL (TYPE 2) | L.F. | 135 | 70 | 205 |
| | 705-04.05 | GUARDRAIL TERMINAL (TYPE-IN-LINE) | EACH | 1 | 0 | 1 |
| | 705-04.07 | TAN ENERGY ABSORBING TERM (NCHRP 350, TL3) | EACH | 2 | 4 | 6 |
| 12 | 706-05 | GUARDRAIL ADJUSTMENT | L.F. | 118 | 0 | 118 |
| | 708-02.01 | MARKERS (CONCRETE R.O.W. POSTS) | EACH | 3 | 0 | 3 |
| 1 13 | 709-05.05 | MACHINED RIP-RAP (CLASS A-3) | TON | 100 | 50 | 150 |
| 1 4 | 709-05.06 | MACHINED RIP-RAP (CLASS A-1) | TON | 56 | 0 | 56 |
| 1 5 | 709-05.08 | MACHINED RIP-RAP (CLASS B) | TON | 156 | 108 | 264 |
| 3 | 712-02.02 | INTERCONNECTED PORTABLE BARRIER RAIL | L.F. | 60 | 60 | 120 |
| | 712-04.01 | FLEXIBLE DRUMS (CHANNELIZING) | EACH | 50 | 50 | 100 |
| 3 | 712-05.01 | WARNING LIGHTS (TYPE A) | EACH | 4 | 4 | 8 |
| | 712-01 | TRAFFIC CONTROL | LS | 0.5 | 0.5 | 1 |
| 6 | 712-06 | SIGNS (CONSTRUCTION) | S.F. | 378 | 216 | 594 |
| | 712-07.03 | TEMPORARY BARRICADES (TYPE III) | L.F. | 56 | 56 | 112 |
| 10 | 713-15 | REMOVAL OF SIGNS, POSTS AND FOOTINGS | LS | 0.5 | 0.5 | 1 |
| | 713-16.20 | SIGNS (W1-8 w/ 1-U3 SUPPORT) | EACH | 6 | 0 | 6 |
| 11 | 713-16.21 | SIGNS (2-TN-17a w/ 1-U1 SUPPORT) | EACH | 0 | 1 | 1 |
| | 713-16.22 | SIGNS (M3-3, TN-6B & M6-1 w/ 1 P8 SUPPORT) | EACH | 0 | 1 | 1 |
| | 716-01.21 | SNWPLWBLE PVMT MRKRS(BI-DIR)(1 COLOR) | EACH | 5 | 3 | 8 |
| 8 | 716-13.01 | SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE) | L.M. | 0.21 | 0.12 | 0.33 |
| | 717-01 | MOBILIZATION | LS | 0.5 | 0.5 | 1 |
| 1 9 | 740-10.03 | GEOTEXTILE (TYPE III)(EROSION CONTROL) | S.Y. | 394 | 197 | 591 |
| 1 | 740-11.02 | TEMPORARY SEDIMENT TUBE 12IN (DESCRIPTION) | L.F. | 213 | 300 | 513 |
| | 802-13.02 | CALYCANTHUS FLORIDUS (SWEETSHRUB 2-5FT CNTNR GRWN) | EACH | 3 | 0 | 3 |
| | 802-13.09 | LINDERA BENZOIN (SPICEBUSH 2-5FT CNTNR GRWN) | EACH | 3 | 0 | 3 |
| 7 | 802-13.10 | SAMBUCUS CANADENSIS ( ELDERBERRY 2-5FT CNTNR GRWN) | EACH | 3 | 0 | 3 |
| | 802-13.01 | ALNUS SERRULATA (HAZEL ALDER 2-5FT CNTNR GRWN) | EACH | 3 | 0 | 3 |
| | 802-13.04 | CORNUS AMOMUM (SILKY DOGWOOD 2-5FT CNTNR GRWN) | EACH | 3 | 0 | 3 |

FOOTNOTES

1. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.
2. INCLUDES 100 TONS FOR MAINTENANCE OF TRAFFIC AT EACH LOCATION.
3. TO BE INCREASED OR DECREASED AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.
4. INCLUDES 44 TON FOR RIP-RAP DITCHES AT L.M.2.15.
5. FOR RIP RAP APRONS AT BRIDGE OUTLETS.
6. SEE SHEETS 14-16 FOR CONSTRUCTION SIGN LOCATIONS.
7. SEE SHEET 4B FOR SHRUB PLACEMENT LOCATIONS.
8. THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
9. INCLUDES 172 S.Y. FOR TEMPORARY CONSTRUCTION EXITS AND 222 S.Y. FOR SEDIMENT FILTER BAGS FOR L.M.2.15. INCLUDES 86 S.Y. FOR TEMPORARY CONSTRUCTION EXITS AND 111 S.Y. FOR SEDIMENT FILTER BAGS FOR L.M.8.00.
10. REMOVE SIGN AND SUPPORT ON TWELVE (12) SIGNS (NO FOOTINGS ON THESE SIGNS) OR AS DIRECTED BY THE TDOT OPERATIONS DISTRICT ENGINEER.
11. SEE PROPOSED LAYOUT SHEETS FOR DETAILS.
12. FOR THE ADJUSTMENT OF THE EXISTING GUARDRAIL AT APPROX. STA.13+14 +/- RT. TO TIE INTO PROP. GUARDRAIL AT STA.14+25 +/- RT.
13. TO BE USED AT TEMPORARY CONSTRUCTION EXITS.
14. INCLUDES 102 L.F. TO BE USED WITH SEDIMENT FILTER BAGS AT EACH LOCATION.

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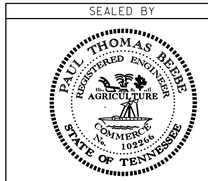


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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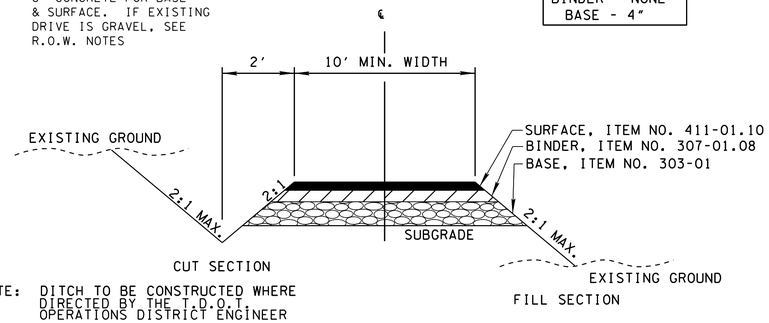
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 2 |
| CONST. | 2014 | 30009-4232-04 | 2A |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

IF EXISTING DRIVE IS CONCRETE, SUBSTITUTE 8" CONCRETE FOR BASE & SURFACE. IF EXISTING DRIVE IS GRAVEL, SEE R.O.W. NOTES

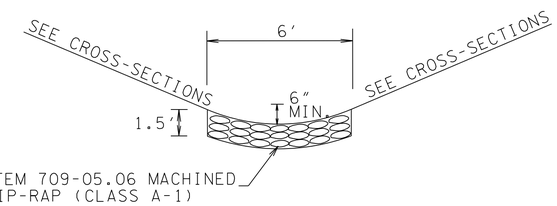
FIELD OR RESIDENTIAL
SURFACE - 1½"
BINDER - NONE
BASE - 4"




NOTE: DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER

## TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS, FIELD, OR RESIDENTIAL PROPERTY

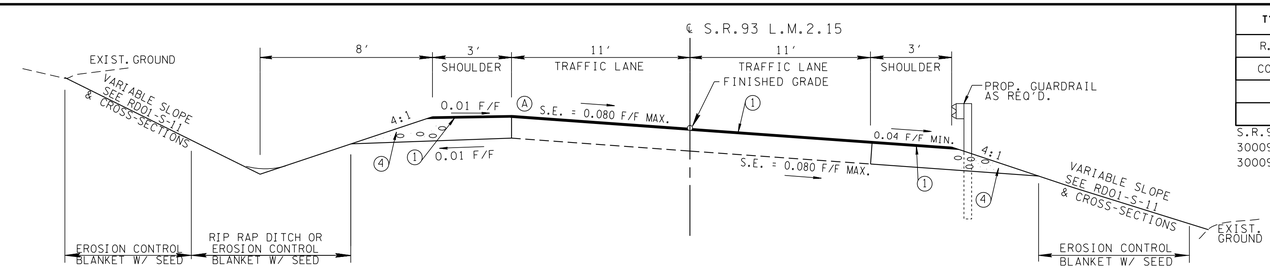



## DETAIL OF RIP-RAP DITCH

(ROARING FORK CREEK L.M.2.15)
STA.14+25.00 TO STA.15+00.00, LEFT

## PROPOSED PAVEMENT SCHEDULE

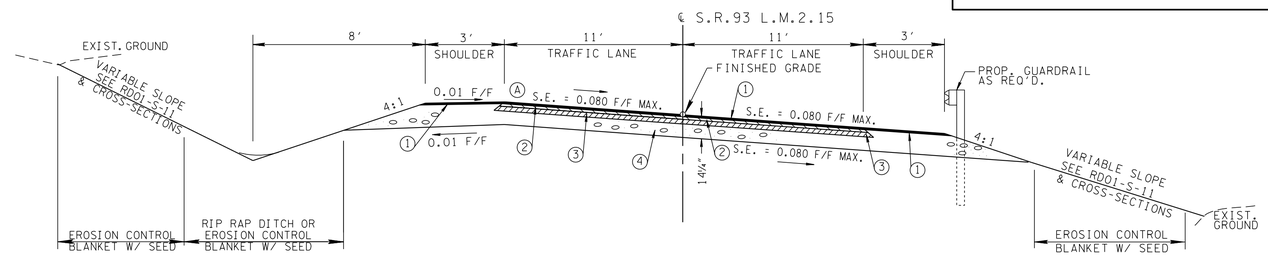
| | |
|---|---|
| 1 | ASPHALTIC CONCRETE SURFACE (HOT MIX) @ 1¼" THICK (APPROX. 132.5 LBS/SQ. YD.)<br>411-01.10 ACS MIX (PG64-22) GRADING "D"<br>403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (RATE 0.07 GAL / SQ. YD.) |
| 2 | BITUMINOUS PLANT MIX BASE (HOT MIX) @ 2" THICK (APPROX. 226 LBS/SQ. YD.)<br>307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB) GRADING BM-2<br>403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (RATE 0.07 GAL / SQ. YD.) |
| 3 | BITUMINOUS PLANT MIX BASE (HOT MIX) @ 3" THICK (APPROX. 345 LBS/SQ. YD.)<br>307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-22) GRADING A<br>402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (RATE 0.35 GAL / SQ. YD.) |
| 4 | MINERAL AGGREGATE BASE @ 8" (ROADWAY) & FULL DEPTH (SHOULDERS)<br>303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D" |




## TYPICAL SUPERELEVATED CROSS-SECTION OF IMPROVEMENT

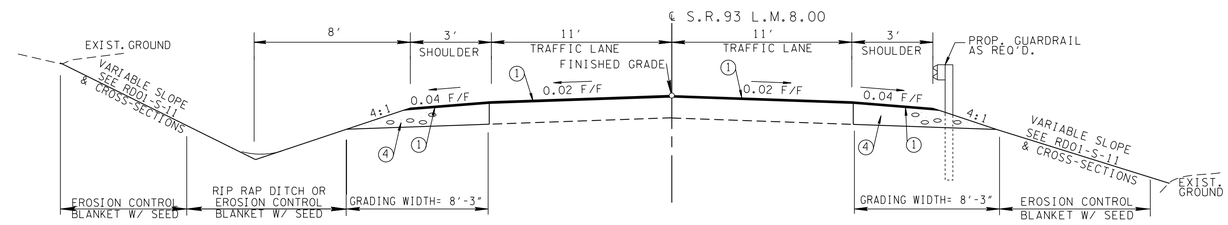
(ROARING FORK CREEK) (L.M. 2.15)
STA.13+97.00 TO STA.15+06.00
STA.15+24.00 TO STA.16+23.00

(A) THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.



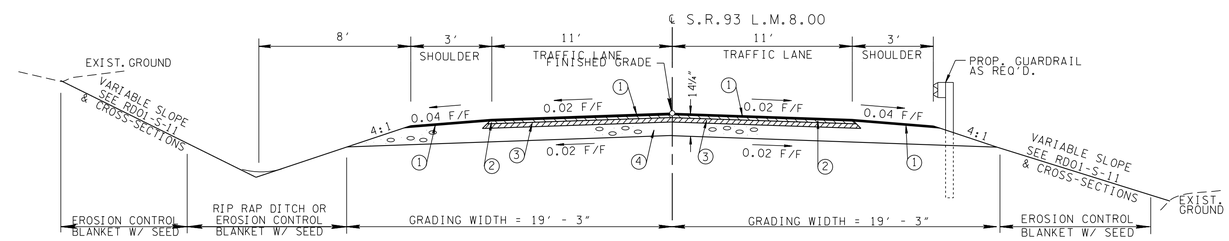

## TYPICAL SUPERELEVATED CROSS-SECTION OF IMPROVEMENT

(ROARING FORK CREEK) (L.M. 2.15)
STA.15+06.00 TO STA.15+24.00



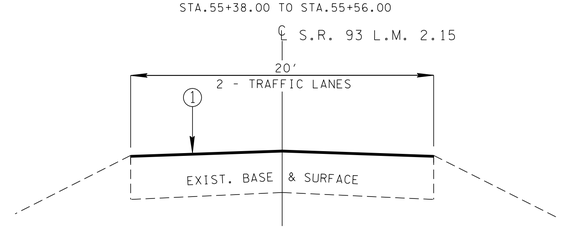

## TYPICAL TANGENT CROSS-SECTION OF IMPROVEMENT

(UNION TEMPLE BRANCH) (L.M. 8.00)
STA.54+70.00 TO STA.55+38.00
STA.55+56.00 TO STA.56+24.00




## TYPICAL TANGENT CROSS-SECTION OF IMPROVEMENT

(UNION TEMPLE BRANCH) (L.M. 8.00)
STA.55+38.00 TO STA.55+56.00




## TYPICAL CROSS-SECTION OF IMPROVEMENT (RESURFACING)

STA. 16+23.00 TO STA. 16+75.00 (L.M.2.15)

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 2B |

S.R.93 GREENE CO.
30009-4232-04 (CONST.)

# 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..

## GUARDRAIL

(1) 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.

## 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 CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES 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) 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.

## FENCING

(1) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.

## MISCELLANEOUS

(1) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.

(2) 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.

## PAVEMENT MARKINGS

(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.

(2) 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.

## SIGNING

(1) 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.

(2) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM NO. 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(3) 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.

(4) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

## 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.

## EROSION PREVENTION AND SEDIMENT CONTROL

## DISTURBED AREA

(1) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

(2) 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.

(3) 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.

(4) 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.

(5) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

(6) 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.

(7) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

PAUL THOMAS BEEBE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 102256
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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# GENERAL NOTES, CONT.

## SEDIMENT CONTROL

(8) 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.

(9) 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.

(10) 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.

(11) 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 ROOADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

(12) 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.

(13) 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.

(14) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

## STREAM/WETLAND

(15) 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.

(16) 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.

(17) 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.

(18) 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.

(19) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.

(20) 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.

(21) 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.

(22) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

## SPECIES

(23) 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

(24) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.

(25) 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.

(26) 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.

(27) 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.

(28) 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.

(29) 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.

(30) 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.

(31) 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

(32) 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

(33) 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.

(34) 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, ROOADWAY 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.

(35) 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.

(36) 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.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 2C |
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S.R.93 GREENE CO.
30009-4232-04 (CONST.)

UNOFFICIAL SET

NOT FOR BIDDING

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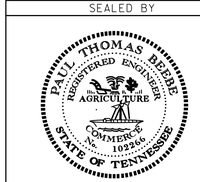


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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# GENERAL NOTES, CONT.

## SWPPP, PERMITS, PLANS, RECORDS (CONT.)

(37) 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 ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(38) 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.

(39) 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.

(40) 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.

(41) 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

(42) 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.

(43) 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.

# 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.

## SEEDING AND SODDING

(1) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET SHALL BE USED ON ALL SLOPES.

## EROSION PREVENTION AND SEDIMENT CONTROL

## NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEETS 11, 12, 13 AND 14, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

## STREAM RELOCATION

(1) 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.

## ROAD CLOSURE

(1) ONLY ONE LOCATION SHALL BE CLOSED AT ANY GIVEN TIME.

# SCOPE OF WORK

## L.M.2.15

(1) THIS PROJECT INCLUDES THE CONSTRUCTION OF A 2 @ 8' X 3' CONCRETE BOX CULVERT ON S.R. 93.

(2) THIS PROJECT INCLUDES THE GRADING, DRAINAGE, BASE AND PAVEMENT FOR S.R. 92 TO LINES AND GRADES AS INDICATED ON THE TYPICAL CROSS-SECTIONS AND PLAN AND PROFILE SHEET OR AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.

(3) CONSTRUCTION OF PRIVATE DRIVES TO LINES AND GRADES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.

## L.M.8.00

(4) THIS PROJECT INCLUDES THE CONSTRUCTION OF A 2 @ 8' X 4' CONCRETE BOX CULVERT ON S.R. 93.

(5) THIS PROJECT INCLUDES THE GRADING, DRAINAGE, BASE AND PAVEMENT FOR S.R. 92 TO LINES AND GRADES AS INDICATED ON THE TYPICAL CROSS-SECTIONS AND PLAN AND PROFILE SHEET OR AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.

## ALL L.M.'s

(6) CONSTRUCTION OF ALL DITCHES, GUARDRAIL, APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL DEVICES, SEEDING, PAVEMENT MARKINGS, INSTALLATION OF TRAFFIC CONTROL DEVICES AND OTHER DESIGN FEATURES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 2D |
| | | | |
| | | | |
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S.R.93 GREENE CO.
30009-4232-04 (CONST.)

UNOFFICIAL SET

NOT FOR BIDDING

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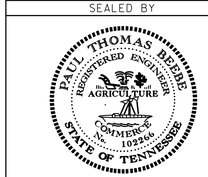


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, SPECIAL NOTES, AND SCOPE OF WORK

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 2E |

S.R.93 GREENE CO.
30009-4232-04 (CONST.)

## ESTIMATED GRADING QUANTITIES

| STATION | | ROAD & DRAINAGE EXC. (UNCL.) COMMON - C.Y. | ROAD & DRAINAGE EXC. (UNCL.) S. ROCK - C.Y. | EMBANKMENT C.Y. | TOPSOIL C.Y. | WASTE MATERIAL C.Y. | COMMENT |
|---|---|---|---|---|---|---|---|
| 13+97 | 16+75 | 385 | 81 | 147 | 80 | 151 | L.M.2.15 |
| 54+70 | 56+24 | 118 | 0 | 14 | 13 | 55 | L.M.8.00 |
| | | | | | | | |
| TOTALS | | 503 | 81 | 161 | 93 | 206 | |

## BOX CULVERT TABULATION

| STATION | LOCATION | SPAN | HEIGHT | LENGTH | SKEW | DRAINAGE AREA ACRES | BOX CULVERT CLASS "A" CONC. CU. YD. | BOX CULVERT REINF. STEEL LBS. | DRAWING NO. | BACKFILLING ITEM 303-01.01 TONS | FOUNDATION FILL MATERIAL CU. YD. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15+15.00 | S.R.93, L.M.2.15 | 2 @ 8' | 3 | 42 | 90 | 50 | 75 | 15600 | STD-17-72 | 201 | 17 |
| 55+47.00 | S.R.93, L.M.8.00 | 2 @ 8' | 4 | 43 | 90 | 300 | 80 | 16350 | STD-17-72 | 390 | 17 |
| | | | | | | | | | | | |
| TOTALS | | | | | | | 155 | 31950 | | 591 | 34 |

## ALL COSTS OF THESE ESTIMATED QUANTITIES TO BE INCLUDED IN PRICE BID FOR ROADWAY APPROACHES ITEM NO. 203-30.01

| LOCATION | ROAD & DRAIN. EXC.(UNCL.) C.Y. | ROCK EXCAVATION C.Y. | PLACING & SPREADING TOPSOIL C.Y. | WATER M.G. | FURNISHING & SPREADING TOPSOIL C.Y. | SEEDING (WITHOUT MULCH) UNIT | TEMPORARY SEEDING (WITH MULCH) UNIT | WATER (SEEDING & SODDING) M.G. | JUTE MESH FABRIC S.Y. | EROSION CONTROL BLANKET (TYPE I) S.Y. |
|---|---|---|---|---|---|---|---|---|---|---|
| L.M. 2.15 | 490* | 81 | 80 | 3 | 12 | 2 | 4 | 0.5 | 515 | 515 |
| L.M. 8.00 | 92** | 0 | 13 | 5 | 15 | 1 | 2 | 0.5 | 0 | 126 |

NO CHANGE IN COMPENSATION WILL BE MADE FOR NORMAL VARIATIONS IN ESTIMATED QUANTITIES.

*INCLUDES 90 TONS FOR TEMPORARY BERM (0.36 C.Y./L.F.); AND 14 C.Y. FOR A TEMPORARY CONSTRUCTION EXIT.

**INCLUDES 7 C.Y. FOR A TEMPORARY CONSTRUCTION EXIT.

## RIP-RAP DITCHES

| STATION FROM | STATION TO | SIDE LT | SIDE RT | WIDTH (L.F.) | RIP-RAP (CLASS A-1) (TON) 709-05.06 | REMARKS |
|---|---|---|---|---|---|---|
| 14+25 | 15+00 | X | | 6 | 44 | L.M. 2.15 |
| | | | | | | |
| TOTALS | | | | | 44 | |

## R.O.W. MARKERS

| SHEET NO. | QUANTITIES "A" | "B" | "C" | TOTALS |
|---|---|---|---|---|
| 4A | 3 | | | 3 |
| | | | | 0 |
| TOTALS | 3 | 0 | 0 | 3 |

## PROPOSED GUARDRAIL

| SHEET NO. | SIDE LT | SIDE RT | STATION FROM | STATION TO | GUARDRAIL METAL BEAM GUARD FENCE 705-01.04 (L.F.) | GUARDRAIL SINGLE TYPE 2 705-02.02 (L.F.) | TERMINAL ANCHORS TYPE IN-LINE 705-04.05 (EACH) | TERMINAL ANCHORS TYPE 38 705-04.07 (EACH) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 4B | | X | 14+25 | 15+28 | 19 | 84 | 1 | 0 | L.M. 2.15; TIE TO EXISTING AT APPROX. STA. 14+25. |
| 4B | X | | 14+30 | 16+00 | 19 | 51 | 0 | 2 | L.M. 2.15 |
| 6A | X | | 54+70 | 56+24 | 19 | 35 | 0 | 2 | L.M. 8.00 |
| 6A | | X | 54+70 | 56+24 | 19 | 35 | 0 | 2 | L.M. 8.00 |
| | | | | | | | | | |
| TOTALS | | | | | 76 | 205 | 1 | 6 | |

NOTE: GUARDRAIL LENGTHS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE T.D.O.T. OPERATIONS DISTRICT ENGINEER.

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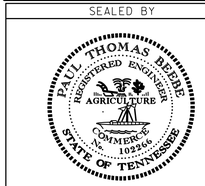


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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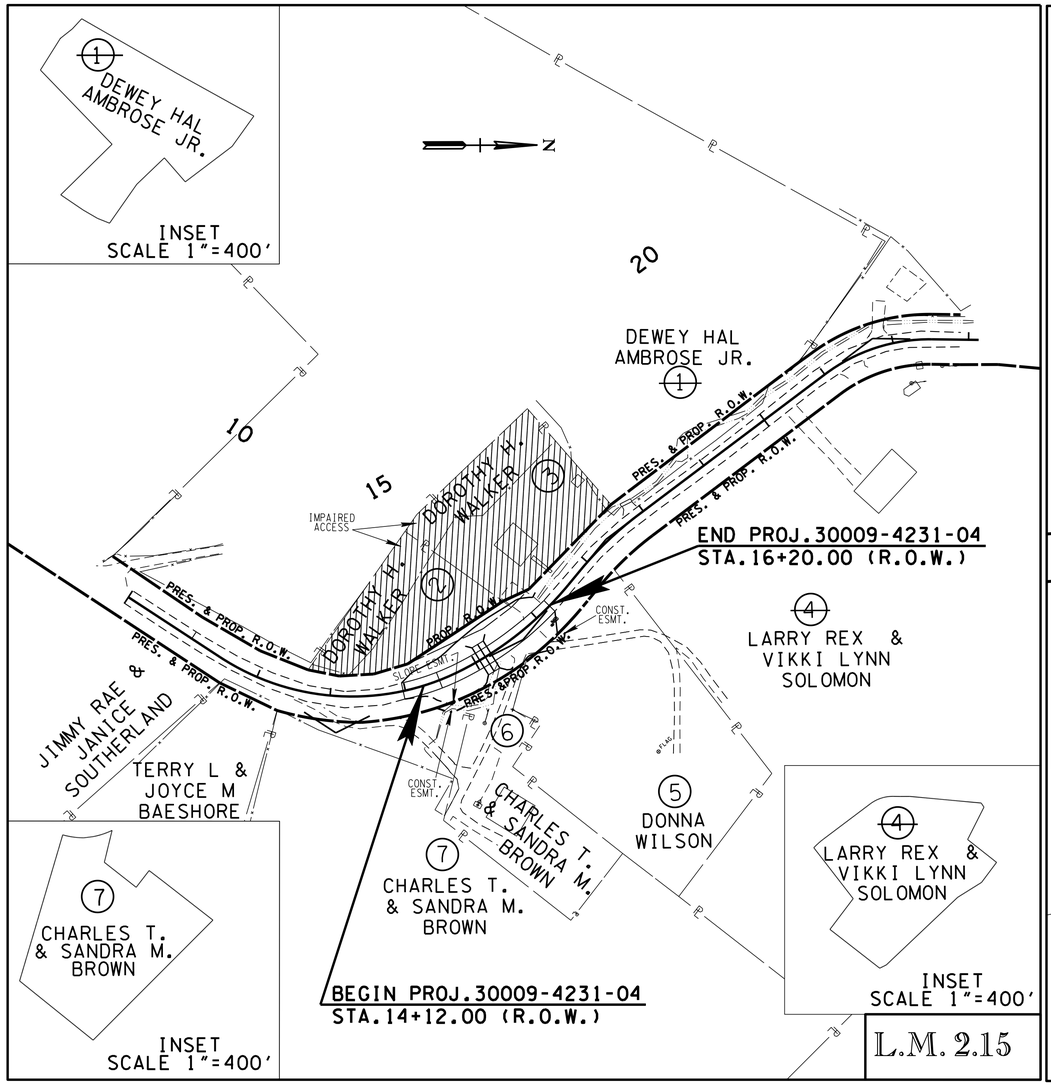
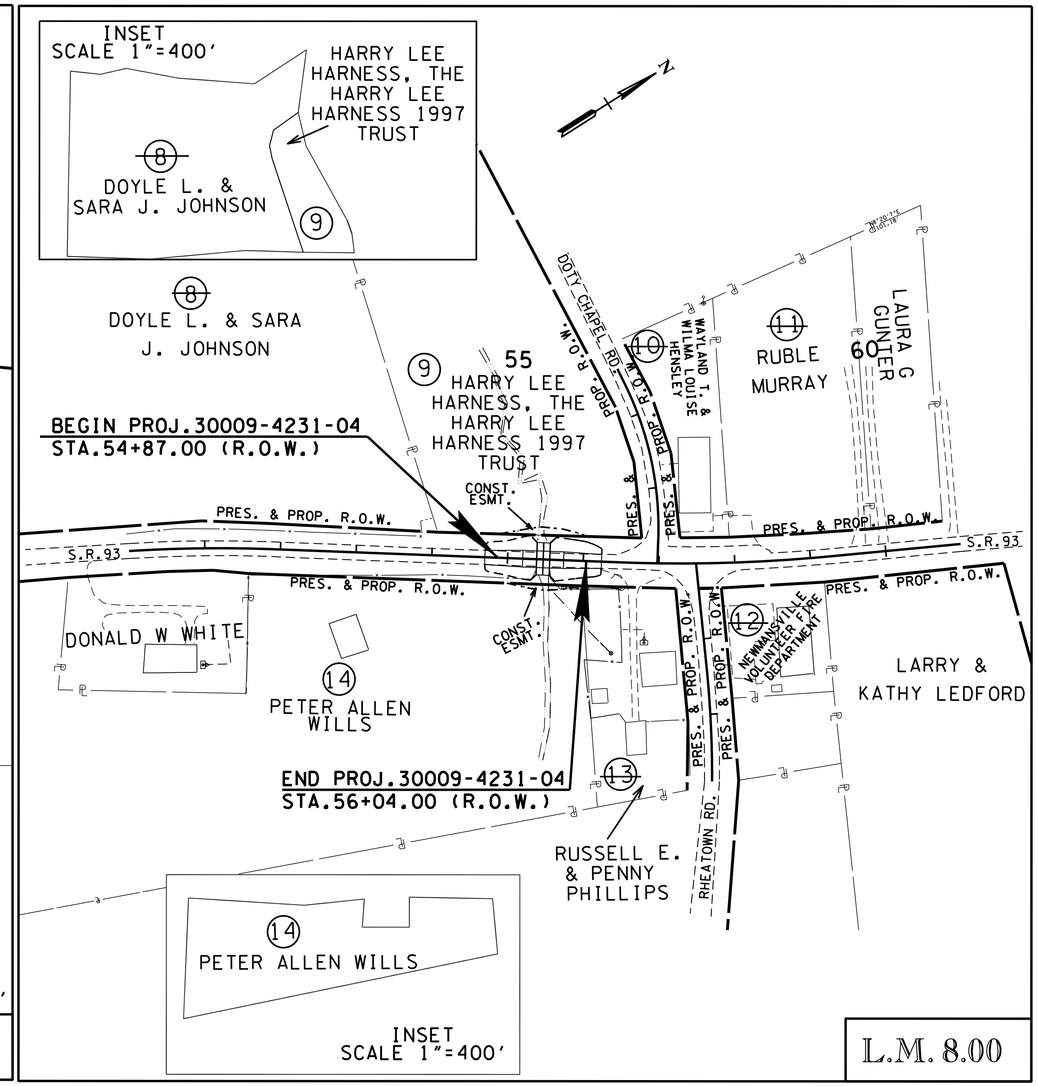
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 3 |
| CONST. | 2014 | 30009-4232-04 | 3 |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 REMOVED PROP.DWY AT STA.14+75 LT; ADDED IMPAIRED ACCESS TO TRACTS 2 & 3. CORRECTED SIDE ROAD NAMES.




## UTILITY OWNERS

**WATER**
CROSS ANCHOR UTILITY DISTRICT
800 WEST ANDREW JOHNSON HIGHWAY
GREENEVILLE, TN 37745
PHONE: (423) 639-6263
CONTACT: TYSON LAMB,(423)670-2554

**TELEPHONE**
AT&T
9733 PARKSIDE DR.
KNOXVILLE, TN 37922
PHONE: (865)539-8534
FAX: (865) 470-8519
CONTACT: DAVID OVERMAN

**POWER**
GREENEVILLE LIGHT & POWER SYSTEM
P.O. BOX 1690
110 NORTH COLLEGE ST.
GREENEVILLE, TN 37744
PHONE: (423) 636-6200
FAX: (423) 636-6227
CONTACT: STACY BOLTON,(423)636-6218

**CABLE**
XFINITY (COMCAST)
1794 OLD GRAY STATION ROAD
GRAY, TN 37654
PHONE: (423)791-4128
CELL: 276-676-2537
CONTACT: KEVIN WALDROP

SEE SHEET 3A FOR THE R.O.W. ACQUISITION TABLE.

**UNOFFICIAL SET**
**NOT FOR BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PROPERTY MAPS & UTILITY OWNERS

SCALE: 1"=100'

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

# R.O.W. ACQUISITION TABLE

| TRACT NO. | PROPERTY OWNERS | COUNTY RECORDS: TAX MAP NO. | PARCEL NO. | DEED DOCUMENT BK. | DEED DOCUMENT PAGE | TOTAL AREA (ACRES) LEFT | TOTAL AREA RIGHT | TOTAL AREA TOTAL | AREA TO BE ACQUIRED (ACRES) LEFT | AREA TO BE ACQUIRED RIGHT | AREA TO BE ACQUIRED TOTAL | AREA REMAINING (ACRES) LEFT | AREA REMAINING RIGHT | EASEMENT (SQUARE FEET) PERM DRAINAGE | EASEMENT SLOPE | EASEMENT CONST. ① | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~1~~ | ~~DEWEY HAL AMBROSE JR.~~ | ~~75~~ | ~~61.01~~ | ~~452~~ | ~~510~~ | ~~12.945~~ | | ~~12.945~~ | | | | ~~12.945~~ | | | | | |
| ② 2 | DOROTHY H. WALKER | 75 | 62 | 173A | 928 | 0.576 | | 0.576 | 1508 S.F. | | 1508 S.F. | 0.541 | | | | | |
| ③ 3 | DOROTHY H. WALKER | 75 | 61 | 131 | 193 | 0.822 | | 0.822 | 226 S.F. | | 226 S.F. | 0.817 | | | | | |
| ~~4~~ | ~~LARRY REX & VICKI LYNN SOLOMON~~ | ~~75~~ | ~~32~~ | ~~486A~~ | ~~228~~ | | ~~12.104~~ | ~~12.104~~ | | | | | ~~12.104~~ | | | | L.M. 2.15 |
| 5 | DONNA WILSON | 75 | 32.01 | 403A | 475 | | 1.817 | 1.817 | | 0.000 | 0.000 | | 1.817 | | 14 S.F. | 160 S.F. | |
| 6 | CHARLES T. & SANDRA M. BROWN | 75 | 74.01 | 490A | 1219 | | 0.769 | 0.769 | | 0.000 | 0.000 | | 0.769 | | | 194 S.F. | |
| 7 | CHARLES T. & SANDRA M. BROWN | 75 | 74.03 | 470A | 2003 | | 13.771 | 13.771 | | 0.000 | 0.000 | | 13.771 | | 40 S.F. | 285 S.F. | |
| | | | | | | | | | | | | | | | | | |
| ~~8~~ | ~~DOYLE L. & SARA J. JOHNSON~~ | ~~45~~ | ~~46~~ | ~~365~~ | ~~437~~ | ~~25.349~~ | | ~~25.349~~ | | | | ~~25.349~~ | | | | | |
| 9 | HARRY LEE HARNESS, TRUSTEE OF THE HARRY LEE HARNESS 1997 TRUST | 45 | 14.02 | 490A | 982 | 3.798 | | 3.798 | 0.000 | | 0.000 | 3.798 | | | | 740 S.F. | |
| ~~10~~ | ~~WAYLAND T. & WILMA LOUISE HENSLEY~~ | ~~45~~ | ~~14.03~~ | ~~420A~~ | ~~224~~ | ~~0.568~~ | | ~~0.568~~ | | | | ~~0.568~~ | | | | | |
| ~~11~~ | ~~RUBLE MURRAY~~ | ~~45~~ | ~~14.04~~ | ~~434~~ | ~~237~~ | ~~1.514~~ | | ~~1.514~~ | | | | ~~1.514~~ | | | | | L.M. 8.00 |
| ~~12~~ | ~~NEWMANSVILLE VOLUNTEER FIRE DEPARTMENT~~ | ~~45~~ | ~~17.02~~ | ~~366A~~ | ~~1006~~ | | ~~0.452~~ | ~~0.452~~ | | | | | ~~0.452~~ | | | | |
| ~~13~~ | ~~RUSSELL E. & PENNY PHILLIPS~~ | ~~45~~ | ~~41~~ | ~~408~~ | ~~356~~ | | ~~0.801~~ | ~~0.801~~ | | | | | ~~0.801~~ | | | | |
| 14 | PETER ALLEN WILLS | 45 | 41.01 | 362A | 921 | | 16.184 | 16.184 | | 0.000 | 0.000 | | 16.184 | | | 297 S.F. | |

① TO BE USED FOR ROADWAY CONSTRUCTION, WORKING ROOM, MAINTENANCE OF TRAFFIC, AND EPSC.

② INCLUDES 0.541 ACRES IMPAIRED ACCESS.

③ INCLUDES 0.817 ACRES IMPAIRED ACCESS.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 3A |
| CONST. | 2014 | 30009-4232-04 | 3A |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 ADDED FOOTNOTES TO ACQ. TABLE CONCERNING IMPAIRED ACCESS ON TRACTS 2 & 3.

## 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) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF 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) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) TRACT REMAINDERS NOT HAVING AN EXISTING DRIVEWAY WILL BE PROVIDED ONE 50-FOOT OPENING IN THE ACCESS CONTROL FENCE AND A DRIVEWAY WILL BE CONSTRUCTED UNLESS ACCESS IS PROVIDED FROM AN INTERSECTING ROAD OR BASED ON PHYSICAL CONDITIONS AND/OR CONFLICTS WITH OTHER DESIGN CONSIDERATIONS WHICH PREVENT AN ACCESS OPENING. PAVING OF THESE NEW DRIVEWAYS WILL BE IN ACCORDANCE TO THE 7 PERCENT CRITERIA PREVIOUSLY MENTIONED FOR EXISTING DRIVEWAYS.

(8) 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.

(9) 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.

## 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 IT'S 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.

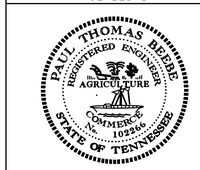
(3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST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

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY




STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. ACQUISITION TABLE, R.O.W. NOTES & UTILITY NOTES

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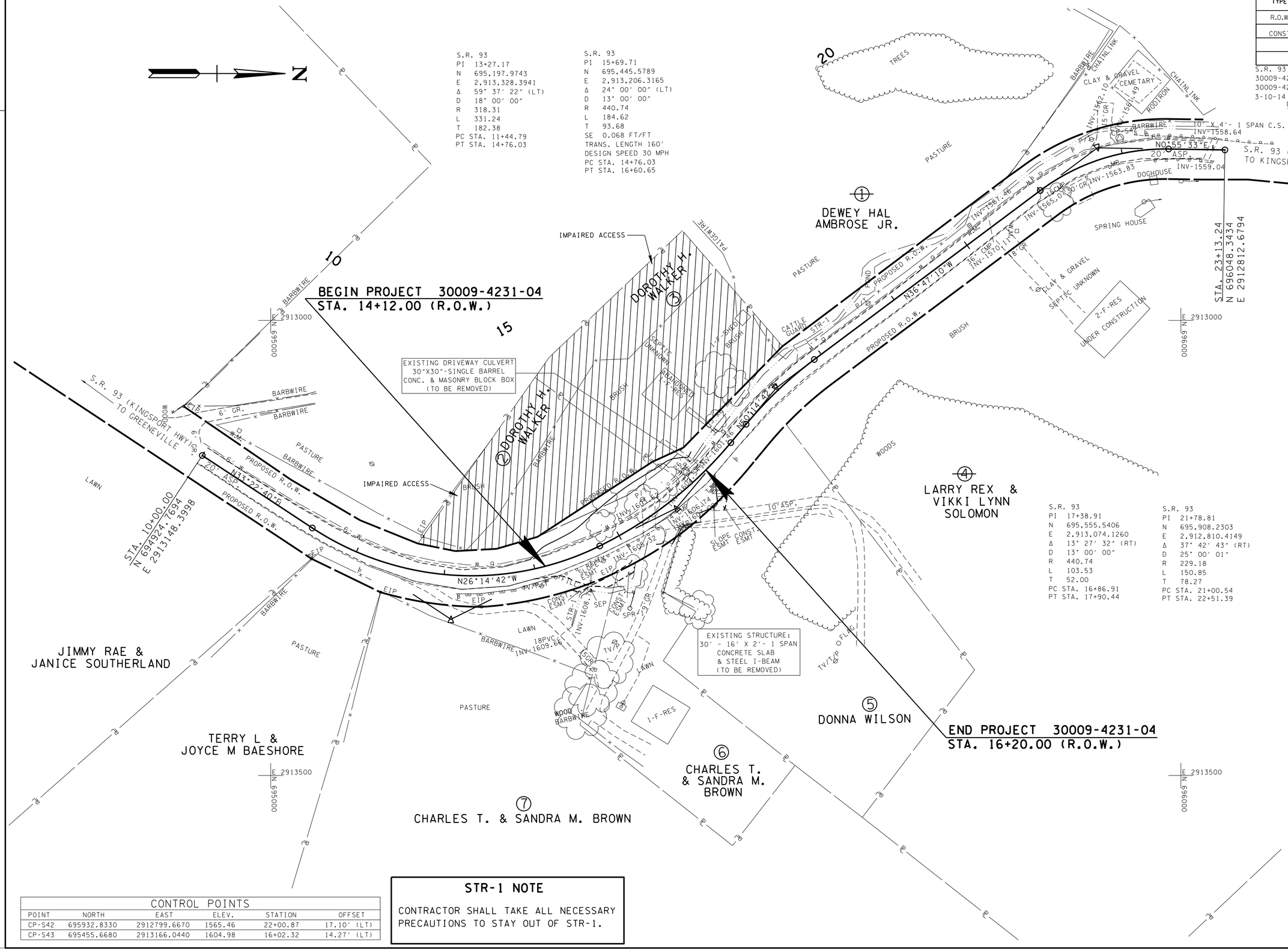
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 4 |
| CONST. | 2014 | 30009-4232-04 | 4 |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 REMOVED PROP. DWY AT STA. 14+75± LT; ADDED IMPAIRED ACCESS FOR TRACTS 2 AND 3.




| CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
| CP-S42 | 695932.8330 | 2912799.6670 | 1565.46 | 22+00.87 | 17.10' (LT) |
| CP-S43 | 695455.6680 | 2913166.0440 | 1604.98 | 16+02.32 | 14.27' (LT) |

**STR-1 NOTE**

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STAY OUT OF STR-1.

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

PAUL THOMAS BEARD REGISTERED ENGINEER AGRICULTURE COMMERCE No. 102266 STATE OF TENNESSEE

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

# PRESENT LAYOUT

## (L.M. 2.15)

STA.14+12.00 TO STA. 16+20.00
SCALE: 1"= 50'

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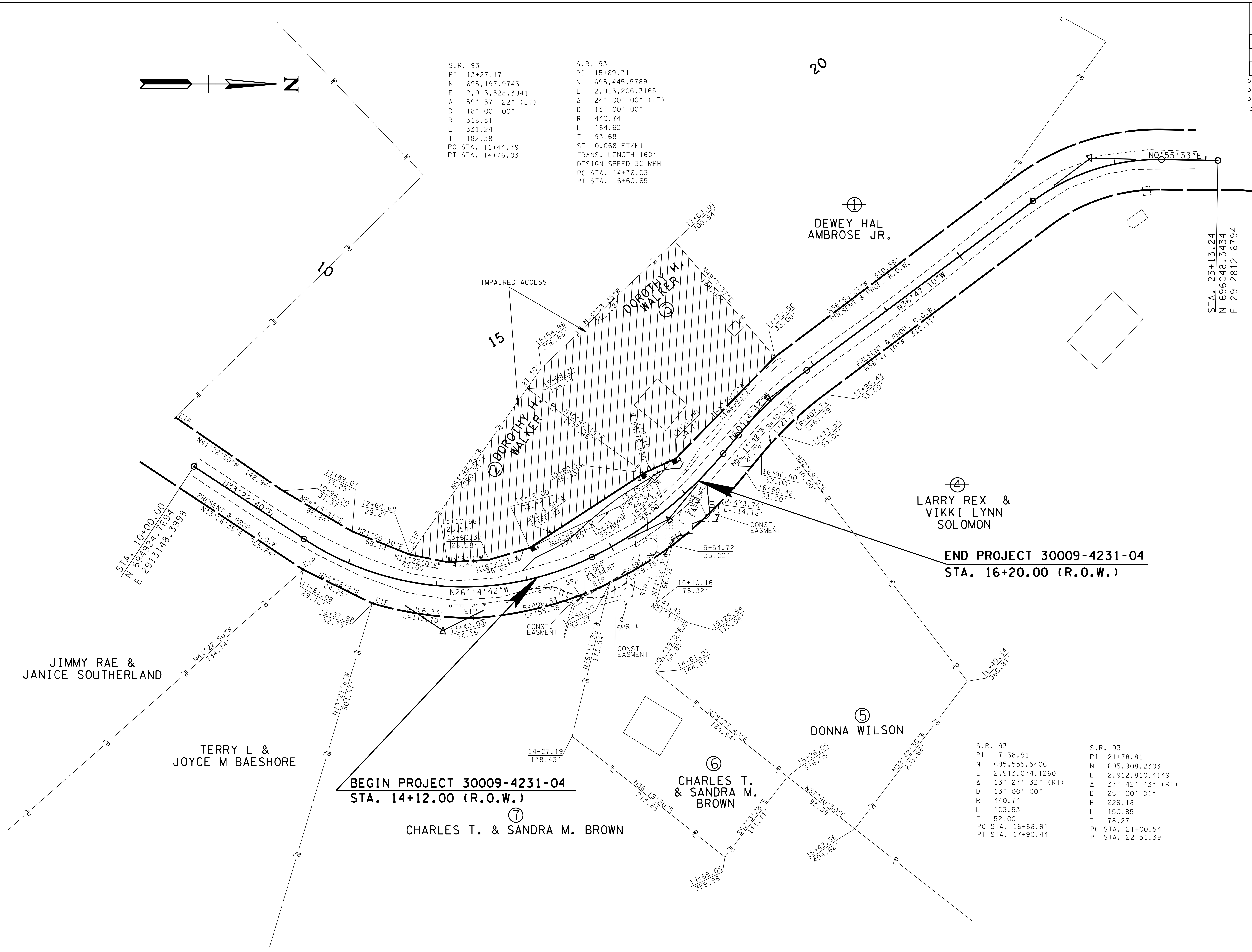
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 4A |
| CONST. | 2014 | 30009-4232-04 | 4A |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 REMOVED PROP.DWY AT STA. 14+75 LEFT. ADDED IMPAIRED ACCESS TO TRACTS 2 AND 3.




S.R. 93
PI 13+27.17
N 695,197.9743
E 2,913,328.3941
Δ 59° 37' 22" (LT)
D 18° 00' 00"
R 318.31
L 331.24
T 182.38
PC STA. 11+44.79
PT STA. 14+76.03

S.R. 93
PI 15+69.71
N 695,445.5789
E 2,913,206.3165
Δ 24° 00' 00" (LT)
D 13° 00' 00"
R 440.74
L 184.62
T 93.68
SE 0.068 FT/FT
TRANS. LENGTH 160'
DESIGN SPEED 30 MPH
PC STA. 14+76.03
PT STA. 16+60.65

S.R. 93
PI 17+38.91
N 695,555.5406
E 2,913,074.1260
Δ 13° 27' 32" (RT)
D 13° 00' 00"
R 440.74
L 103.53
T 52.00
PC STA. 16+86.91
PT STA. 17+90.44

S.R. 93
PI 21+78.81
N 695,908.2303
E 2,912,810.4149
Δ 37° 42' 43" (RT)
D 25° 00' 01"
R 229.18
L 150.85
T 78.27
PC STA. 21+00.54
PT STA. 22+51.39

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

PAUL THOMAS BEEBE
REGISTERED ENGINEER
AGRICULTURE COMMERCE
No. 102266
STATE OF TENNESSEE

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 R.O.W. LAYOUT (L.M. 2.15)

STA.14+12.00 TO STA.16+20.00
SCALE: 1"= 50'

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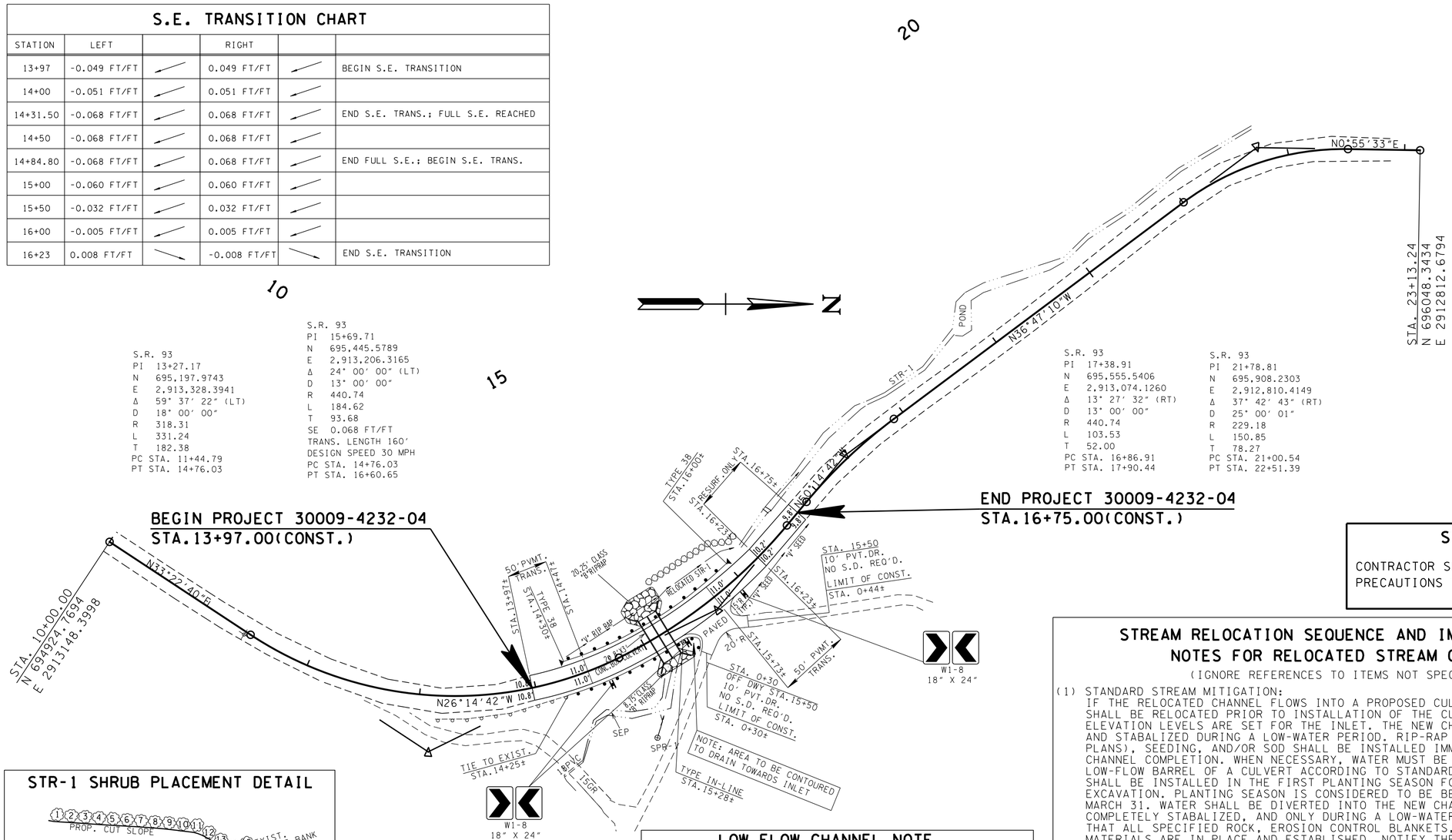
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 4B |
| CONST. | 2014 | 30009-4232-04 | 4B |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 REMOVED PROP. DWY. AT STA.14+75, LEFT.

## S.E. TRANSITION CHART

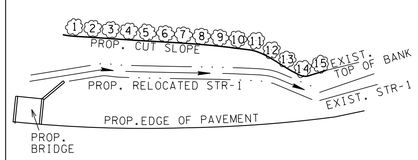
| STATION | LEFT | | RIGHT | | |
|---|---|---|---|---|---|
| 13+97 | -0.049 FT/FT | | 0.049 FT/FT | | BEGIN S.E. TRANSITION |
| 14+00 | -0.051 FT/FT | | 0.051 FT/FT | | |
| 14+31.50 | -0.068 FT/FT | | 0.068 FT/FT | | END S.E. TRANS.; FULL S.E. REACHED |
| 14+50 | -0.068 FT/FT | | 0.068 FT/FT | | |
| 14+84.80 | -0.068 FT/FT | | 0.068 FT/FT | | END FULL S.E.; BEGIN S.E. TRANS. |
| 15+00 | -0.060 FT/FT | | 0.060 FT/FT | | |
| 15+50 | -0.032 FT/FT | | 0.032 FT/FT | | |
| 16+00 | -0.005 FT/FT | | 0.005 FT/FT | | |
| 16+23 | 0.008 FT/FT | | -0.008 FT/FT | | END S.E. TRANSITION |




## STR-1 NOTE

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STAY OUT OF STR-1.

## STR-1 SHRUB PLACEMENT DETAIL




| SHRUB# | STATION | OFFSET | ITEM NO. | DESCRIPTION |
|---|---|---|---|---|
| 1 | 15+33.57 | -43.8' | 802-13.02 | SWEETSHRUB |
| 2 | 15+40.22 | -43.6' | 802-13.09 | SPICEBUSH |
| 3 | 15+46.88 | -43.4' | 802-13.10 | ELDERBERRY |
| 4 | 15+53.52 | -43.1' | 802-13.01 | HAZEL ALDER |
| 5 | 15+60.15 | -42.7' | 802-13.04 | SILKY DOGWOOD |
| 6 | 15+66.77 | -42.2' | 802-13.02 | SWEETSHRUB |
| 7 | 15+73.37 | -41.6' | 802-13.09 | SPICEBUSH |
| 8 | 15+79.94 | -40.9' | 802-13.10 | ELDERBERRY |
| 9 | 15+86.50 | -40.1' | 802-13.01 | HAZEL ALDER |
| 10 | 15+93.02 | -39.3' | 802-13.04 | SILKY DOGWOOD |
| 11 | 15+99.52 | -38.4' | 802-13.02 | SWEETSHRUB |
| 12 | 16+04.76 | -34.8' | 802-13.09 | SPICEBUSH |
| 13 | 16+09.91 | -31.1' | 802-13.10 | ELDERBERRY |
| 14 | 16+14.97 | -27.4' | 802-13.01 | HAZEL ALDER |
| 15 | 16+21.33 | -28.1' | 802-13.04 | SILKY DOGWOOD |

## SHRUB NOTES

(1) NO SUBSTITUTIONS OF SHRUB SPECIES SHALL BE ALLOWED WITHOUT WRITTEN APPROVAL OF T.D.O.T. ENVIRONMENTAL DIVISION. SHRUBS SHALL BE OF THE VARIETY REQUESTED, BETWEEN 2 AND 5 FEET IN HEIGHT, CONTAINERIZED AND OF THE 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 ENVIRONMENTAL DIVISION.

(2) THE CONTRACTOR SHOULD ARRANGE SEVERAL MONTHS AHEAD OF TIME TO OBTAIN THE CORRECT SHRUB SPECIES, AS SOME MAY REQUIRE SOME TIME TO LOCATE.

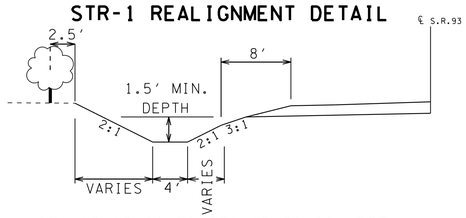
(3) SHRUBS SHALL BE WATERED AS REQUIRED THROUGH THE PERIOD OF ESTABLISHMENT TO ENSURE SURVIVAL.

## LOW FLOW CHANNEL NOTE

A LOW FLOW CHANNEL IS REQUIRED FOR THE PROPOSED BOX BRIDGE.REFER TO STD-15-16A FOR DETAILS.

RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING 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 THE RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM THE CULVERT EXCAVATION AREA.

## STR-1 REALIGNMENT DETAIL




STA.15+15.00 TO STA.15+30.00 LEFT
(TO BE LINED WITH CLASS B RIP-RAP)
STA.15+30.00 TO STA.16+23.00 LEFT
(TO BE UNLINED;NATURAL STREAM BOTTOM)

## STREAM RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED STREAM CHANNELS

(IGNORE REFERENCES TO ITEMS NOT SPECIFIED)

(1) STANDARD STREAM MITIGATION:
IF THE RELOCATED CHANNEL FLOWS INTO A PROPOSED CULVERT, THE NEW CHANNEL SHALL BE RELOCATED PRIOR TO INSTALLATION OF THE CULVERT TO ENSURE CORRECT ELEVATION LEVELS ARE SET FOR THE INLET. THE NEW CHANNEL SHALL BE EXCAVATED AND STABALIZED DURING A LOW-WATER PERIOD. RIP-RAP (ONLY AS SHOWN ON THE PLANS), SEEDING, AND/OR SOD SHALL BE INSTALLED IMMEDIATELY FOLLOWING CHANNEL COMPLETION. WHEN NECESSARY, WATER MUST BE DIVERTED INTO THE LOW-FLOW BARREL OF A CULVERT ACCORDING TO STANDARD DRAWING 15-16A. SHRUBS SHALL BE INSTALLED IN THE FIRST PLANTING SEASON FOLLOWING CHANNEL EXCAVATION. PLANTING SEASON IS CONSIDERED TO BE BETWEEN NOVEMBER 1 AND MARCH 31. WATER SHALL BE DIVERTED INTO THE NEW CHANNEL ONLY AFTER IT IS COMPLETELY STABALIZED, AND ONLY DURING A LOW-WATER PERIOD. STABALIZED MEANS THAT ALL SPECIFIED ROCK, EROSION CONTROL BLANKETS, SEEDING, SOD, OR MATERIALS ARE IN PLACE AND ESTABLISHED. NOTIFY THE REGIONAL BIOLOGIST WHEN WATER IS DIVERTED INTO EACH NEW CHANNEL.

(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, SEED, SOD, OR OTHER MATERIAL AS SPECIFIED.
E. REMOVE DIVERSION BERMS, 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 SHRUBS 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 CONSTRUCTION OFFICE.

(4) REQUESTS BY ANY AGENCY THAT WOULD REQUIRE MODIFCATION OF CHANNELS, ELEVATIONS, RIP-RAP, OR ANY OTHER STREAM MITIGATION ITEMS ASSOCIATED WITH THE CHANNEL RELOCATIONS SHALL BE REFFERED TO TDOT ENVIRONMENTAL DIVISION VIA HEADQUARTERS CONSTRUCTION OFFICE FOR COORDINATION WITH ALL INVOLVED AGENCIES AND TDOT DIVISIONS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION MAY MAKE RECOMMENDATIONS CONCERNING EROSION CONTROL VIA THE ENGINEER WITHOUT SUCH REFERRAL.

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT
(L.M. 2.15)

STA.13+97.00 TO STA.16+75.00
SCALE: 1:50

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

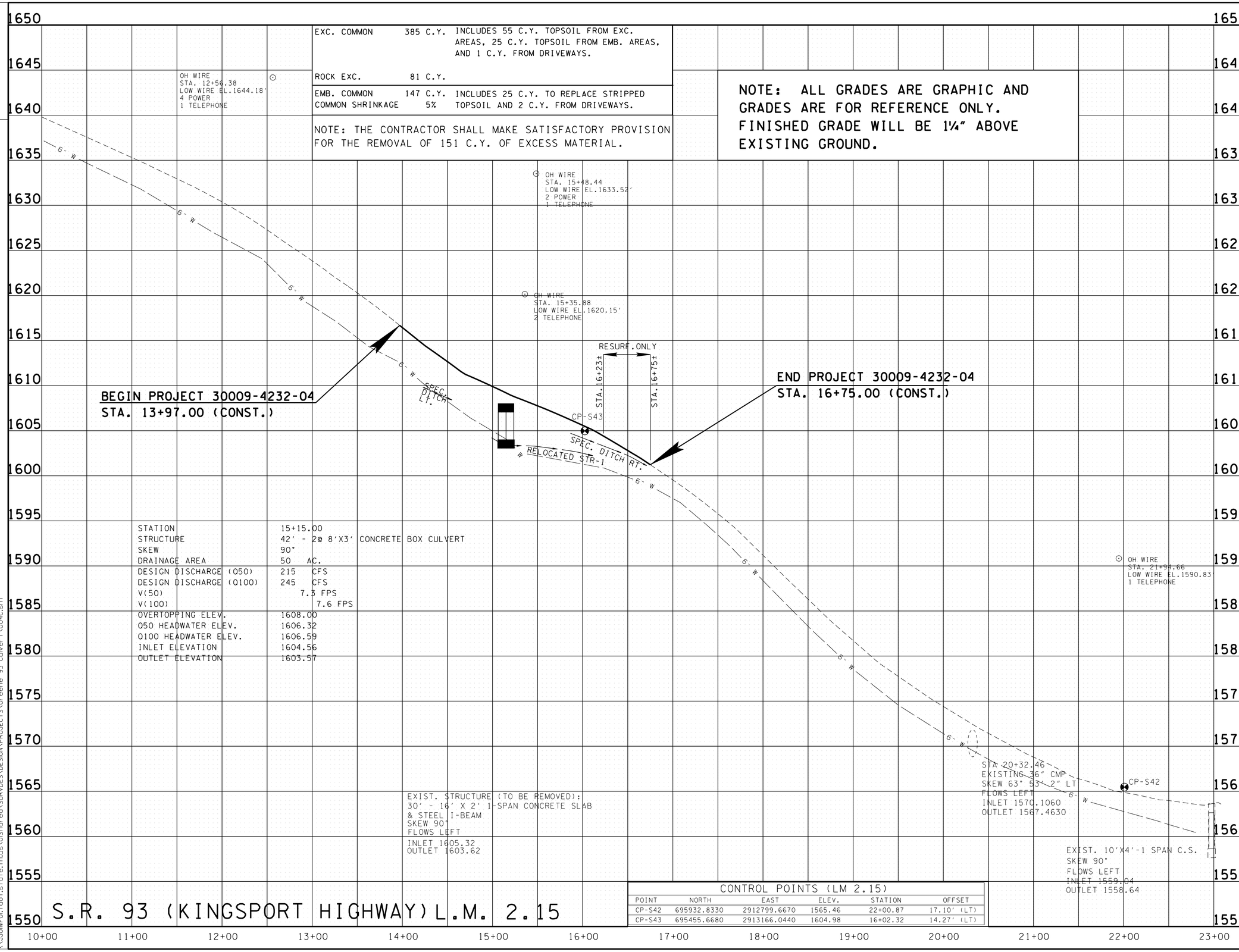
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 4C |
| CONST. | 2014 | 30009-4232-04 | 4C |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-7-14 REMOVED SIDEDRAIN AT STA.14+75 LEFT.

| | | |
|---|---|---|
| EXC. COMMON | 385 C.Y. | INCLUDES 55 C.Y. TOPSOIL FROM EXC. AREAS, 25 C.Y. TOPSOIL FROM EMB. AREAS, AND 1 C.Y. FROM DRIVEWAYS. |
| ROCK EXC. | 81 C.Y. | |
| EMB. COMMON | 147 C.Y. | INCLUDES 25 C.Y. TO REPLACE STRIPPED TOPSOIL AND 2 C.Y. FROM DRIVEWAYS. |
| COMMON SHRINKAGE | 5% | |

NOTE: THE CONTRACTOR SHALL MAKE SATISFACTORY PROVISION FOR THE REMOVAL OF 151 C.Y. OF EXCESS MATERIAL.

NOTE: ALL GRADES ARE GRAPHIC AND GRADES ARE FOR REFERENCE ONLY. FINISHED GRADE WILL BE 1¼" ABOVE EXISTING GROUND.




| | |
|---|---|
| STATION | 15+15.00 |
| STRUCTURE | 42' - 2@ 8'X3' CONCRETE BOX CULVERT |
| SKEW | 90° |
| DRAINAGE AREA | 50 AC. |
| DESIGN DISCHARGE (Q50) | 215 CFS |
| DESIGN DISCHARGE (Q100) | 245 CFS |
| V(50) | 7.3 FPS |
| V(100) | 7.6 FPS |
| OVERTOPPING ELEV. | 1608.00 |
| Q50 HEADWATER ELEV. | 1606.32 |
| Q100 HEADWATER ELEV. | 1606.59 |
| INLET ELEVATION | 1604.56 |
| OUTLET ELEVATION | 1603.57 |

EXIST. STRUCTURE (TO BE REMOVED):
30' - 16' X 2' 1-SPAN CONCRETE SLAB
& STEEL I-BEAM
SKEW 90°
FLOWS LEFT
INLET 1605.32
OUTLET 1603.62

CONTROL POINTS (LM 2.15)

| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
|---|---|---|---|---|---|
| CP-S42 | 695932.8330 | 2912799.6670 | 1565.46 | 22+00.87 | 17.10' (LT) |
| CP-S43 | 695455.6680 | 2913166.0440 | 1604.98 | 16+02.32 | 14.27' (LT) |

# S.R. 93 (KINGSPORT HIGHWAY) L.M. 2.15

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PROFILE
## (L.M. 2.15)

STA.13+97.00 TO STA. 16+75.00

SCALE: 1"=50' HORIZ.
1"= 5' VERT.

9-JUN-2014 11:42
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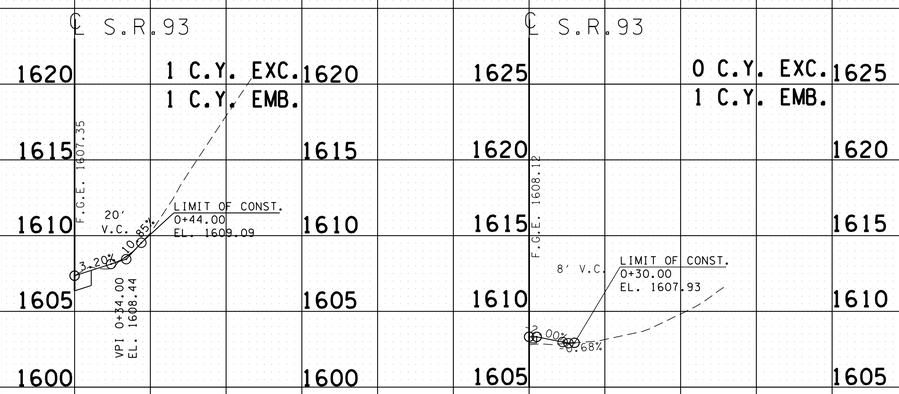
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 5 |
| CONST. | 2014 | 30009-4232-04 | 5 |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
3-10-14 REMOVED DWY AT STA.14+75, LEFT.




PRIVATE DRIVE
STA. 15+50± RT.
NO S.D. REQ'D.
TRACT 6 CHARLES T. &
SANDRA M. BROWN




PRIVATE DRIVE
STA. 0+30± OFF
DWY STA. 15+50±
NO S.D. REQ'D.
TRACT 5 DONNA WILSON

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILES OF PRIVATE DRIVES (L.M.2.15)

SCALE: 1"=50' HORIZ.
1"=5' VERT.

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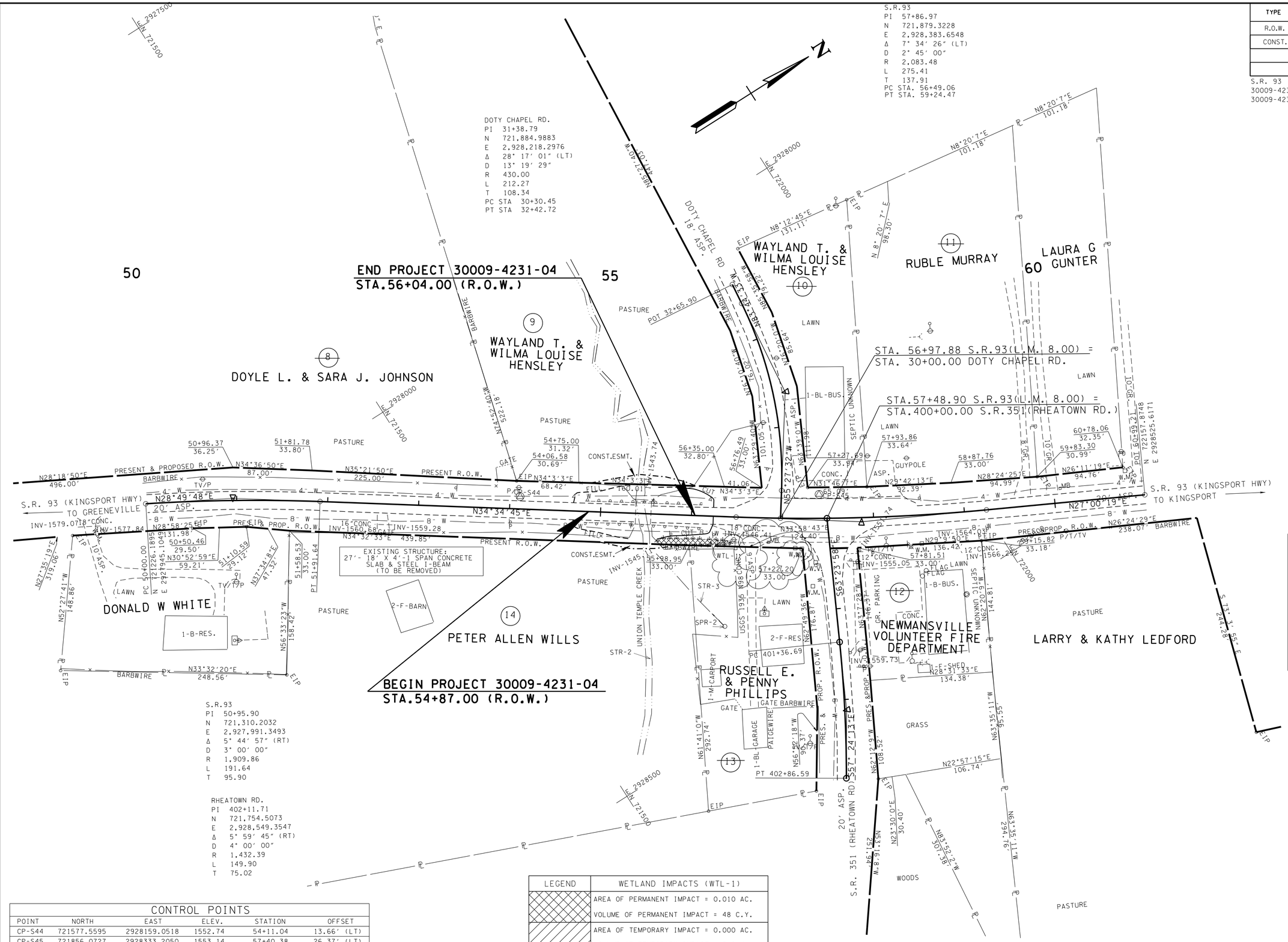
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 6 |
| CONST. | 2014 | 30009-4232-04 | 6 |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)




| LEGEND | WETLAND IMPACTS (WTL-1) |
|---|---|
| | AREA OF PERMANENT IMPACT = 0.010 AC. |
| | VOLUME OF PERMANENT IMPACT = 48 C.Y. |
| | AREA OF TEMPORARY IMPACT = 0.000 AC. |
| | VOLUME OF TEMPORARY IMPACT = 0 C.Y. |

CONTROL POINTS

| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
|---|---|---|---|---|---|
| CP-S44 | 721577.5595 | 2928159.0518 | 1552.74 | 54+11.04 | 13.66′ (LT) |
| CP-S45 | 721856.0727 | 2928333.2050 | 1553.14 | 57+40.38 | 26.37′ (LT) |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

PAUL THOMAS BIEBER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 102866
STATE OF TENNESSEE

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

# PRESENT LAYOUT AND PROPOSED R.O.W. (L.M.8.00)

STA.54+87.00 TO STA.56+04.00
SCALE: 1"= 50′

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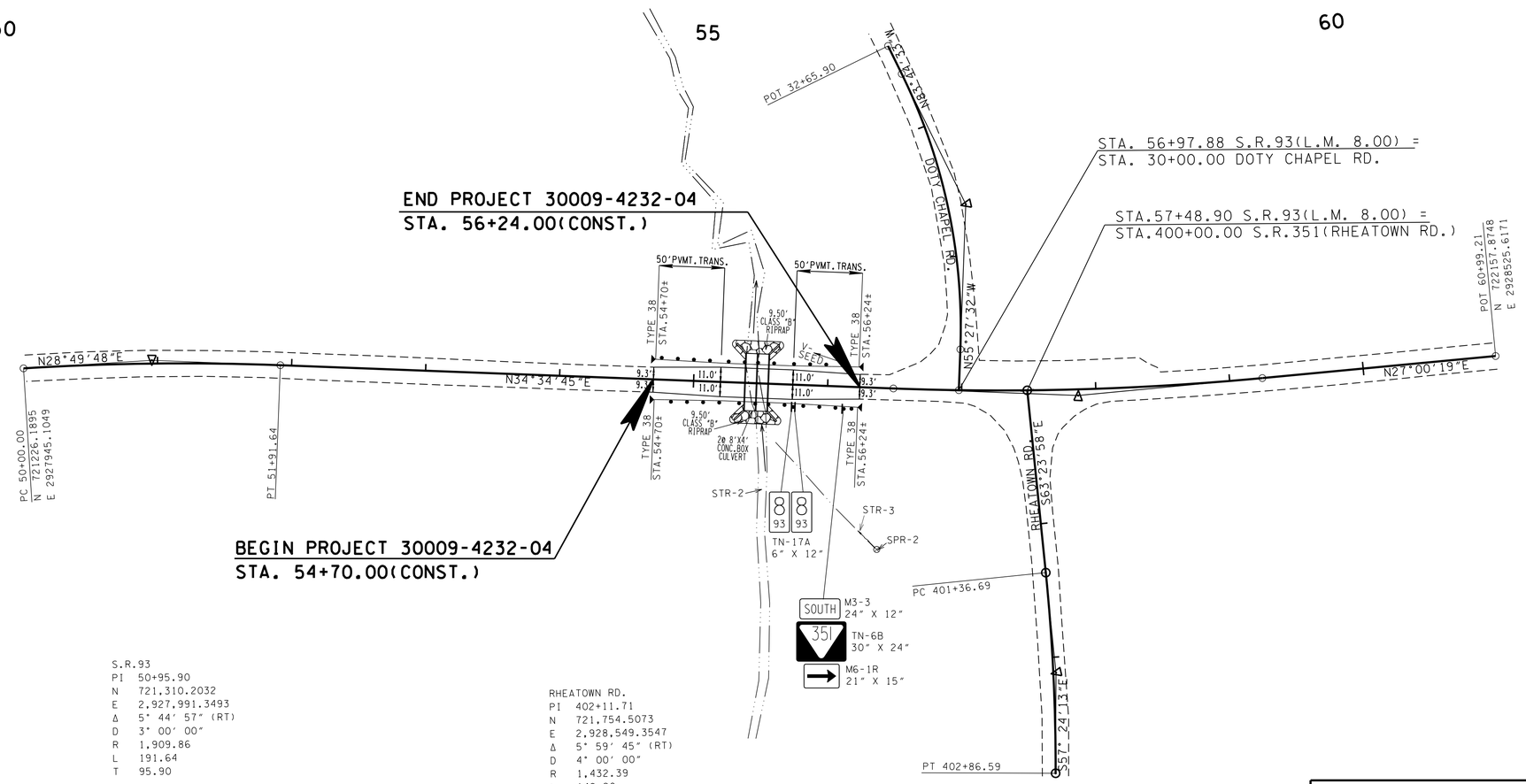
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 6A |
| CONST. | 2014 | 30009-4232-04 | 6A |
| | | | |
| | | | |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

DOTY CHAPEL RD.
PI 31+38.79
N 721,884.9883
E 2,928,218.2976
Δ 28° 17′ 01″ (LT)
D 13° 19′ 29″
R 430.00
L 212.27
T 108.34
PC STA 30+30.45
PT STA 32+42.72

S.R.93
PI 57+86.97
N 721,879.3228
E 2,928,383.6548
Δ 7° 34′ 26″ (LT)
D 2° 45′ 00″
R 2,083.48
L 275.41
T 137.91
PC STA. 56+49.06
PT STA. 59+24.47




S.R.93
PI 50+95.90
N 721,310.2032
E 2,927,991.3493
Δ 5° 44′ 57″ (RT)
D 3° 00′ 00″
R 1,909.86
L 191.64
T 95.90

RHEATOWN RD.
PI 402+11.71
N 721,754.5073
E 2,928,549.3547
Δ 5° 59′ 45″ (RT)
D 4° 00′ 00″
R 1,432.39
L 149.90
T 75.02

S.R.93
PI 50+95.90
N 721,310.2032
E 2,927,991.3493
Δ 5° 44′ 57″ (RT)
D 3° 00′ 00″
R 1,909.86
L 191.64
T 95.90

## LOW FLOW CHANNEL NOTE

A LOW FLOW CHANNEL IS REQUIRED FOR THE PROPOSED BOX BRIDGE. REFER TO STD-15-16A FOR DETAILS.

RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING 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 THE RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM THE CULVERT EXCAVATION AREA.

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

PAUL THOMAS BEABE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
102246
STATE OF TENNESSEE

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 LAYOUT (L.M.8.00)

STA.54+70.00 TO STA.56+24.00

SCALE: 1″= 50′

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

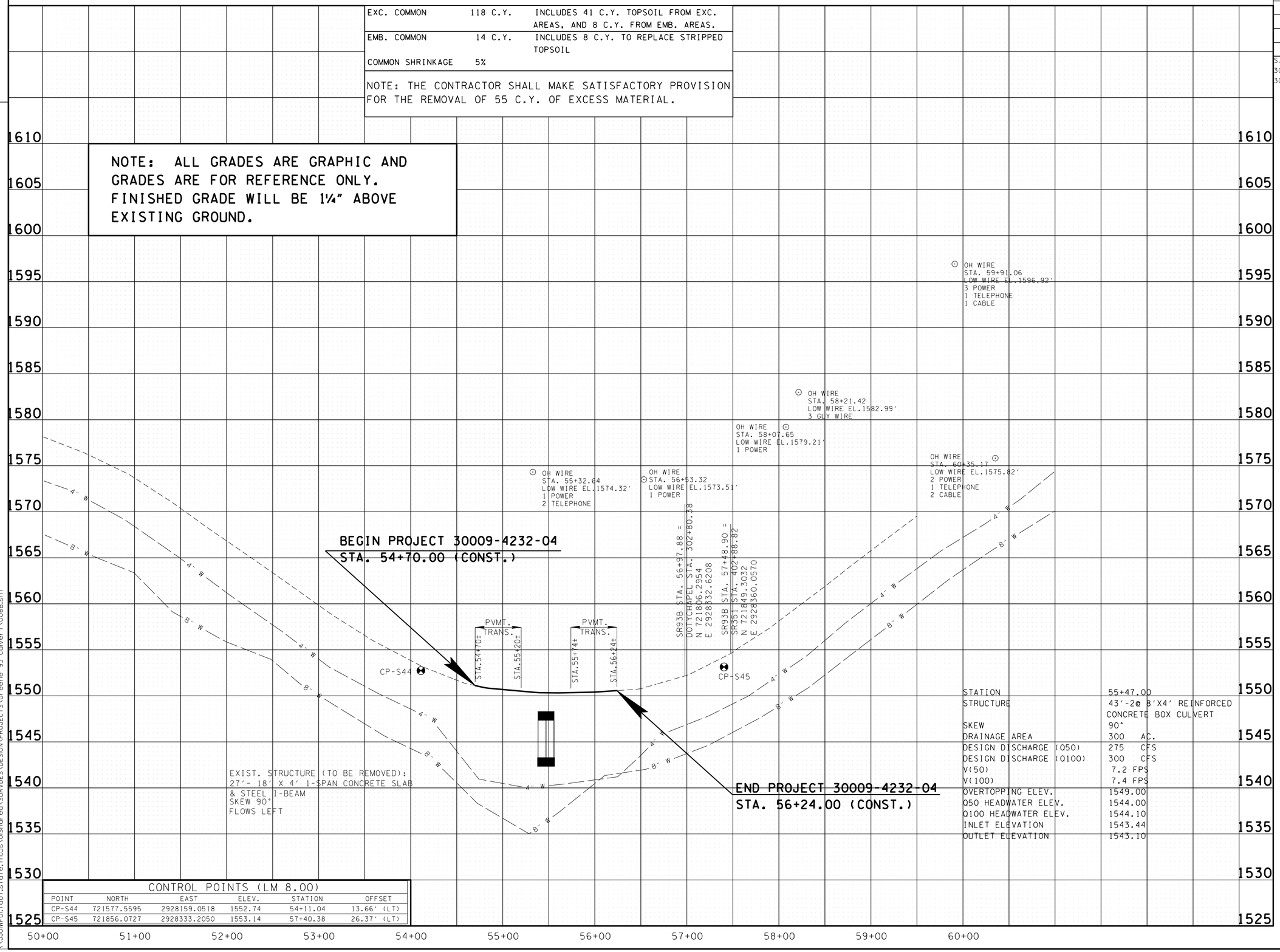
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 6B |
| CONST. | 2014 | 30009-4232-04 | 6B |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

| | | |
|---|---|---|
| EXC. COMMON | 118 C.Y. | INCLUDES 41 C.Y. TOPSOIL FROM EXC. AREAS, AND 8 C.Y. FROM EMB. AREAS. |
| EMB. COMMON | 14 C.Y. | INCLUDES 8 C.Y. TO REPLACE STRIPPED TOPSOIL |
| COMMON SHRINKAGE | 5% | |

NOTE: THE CONTRACTOR SHALL MAKE SATISFACTORY PROVISION FOR THE REMOVAL OF 55 C.Y. OF EXCESS MATERIAL.

NOTE: ALL GRADES ARE GRAPHIC AND GRADES ARE FOR REFERENCE ONLY. FINISHED GRADE WILL BE 1¼" ABOVE EXISTING GROUND.




| | |
|---|---|
| STATION | 55+47.00 |
| STRUCTURE | 43'-2@ 8'X4' REINFORCED CONCRETE BOX CULVERT |
| SKEW | 90° |
| DRAINAGE AREA | 300 AC. |
| DESIGN DISCHARGE (Q50) | 275 CFS |
| DESIGN DISCHARGE (Q100) | 300 CFS |
| V(50) | 7.2 FPS |
| V(100) | 7.4 FPS |
| OVERTOPPING ELEV. | 1549.00 |
| Q50 HEADWATER ELEV. | 1544.00 |
| Q100 HEADWATER ELEV. | 1544.10 |
| INLET ELEVATION | 1543.44 |
| OUTLET ELEVATION | 1543.10 |

CONTROL POINTS (LM 8.00)

| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
|---|---|---|---|---|---|
| CP-S44 | 721577.5595 | 2928159.0518 | 1552.74 | 54+11.04 | 13.66' (LT) |
| CP-S45 | 721856.0727 | 2928333.2050 | 1553.14 | 57+40.38 | 26.37' (LT) |

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY
PAUL THOMAS BEEBE
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
No. 102266
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PROFILE
## (L.M.8.00)

STA.54+70.00 TO STA.56+24.00
SCALE: 1"=50' HORIZ.
1"= 5' VERT.

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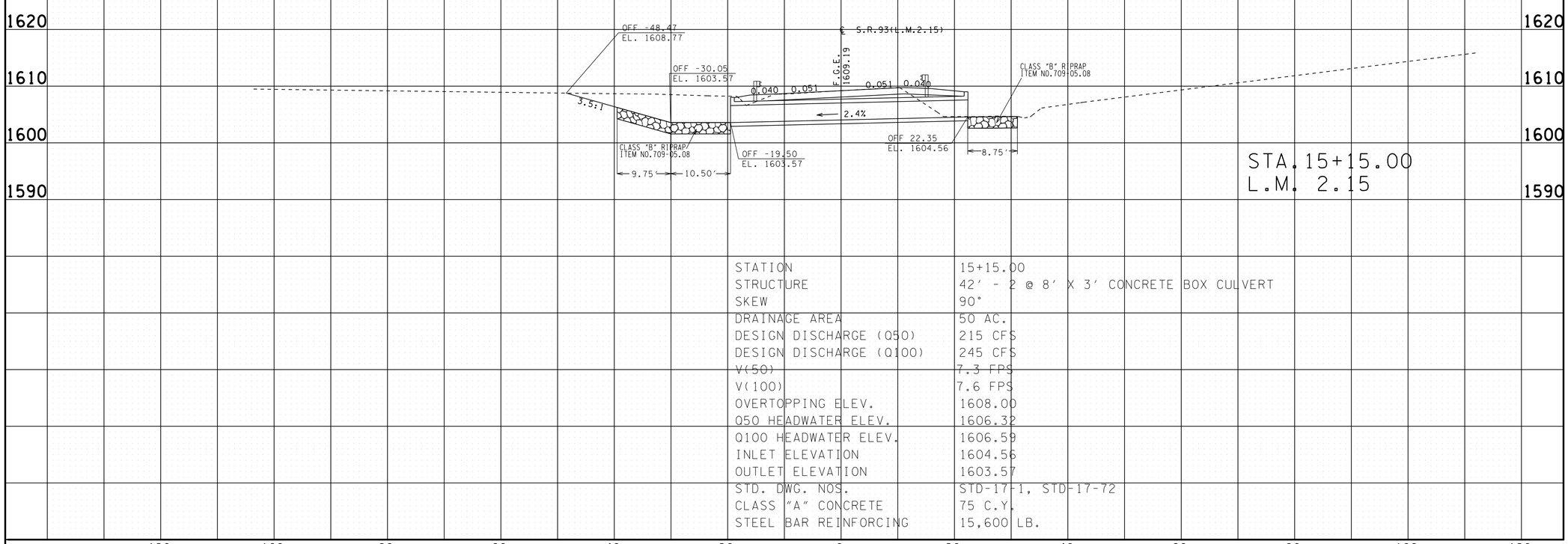
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 7 |
| CONST. | 2014 | 30009-4232-04 | 7 |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)




| | |
|---|---|
| STATION | 15+15.00 |
| STRUCTURE | 42' - 2 @ 8' X 3' CONCRETE BOX CULVERT |
| SKEW | 90° |
| DRAINAGE AREA | 50 AC. |
| DESIGN DISCHARGE (Q50) | 215 CFS |
| DESIGN DISCHARGE (Q100) | 245 CFS |
| V(50) | 7.3 FPS |
| V(100) | 7.6 FPS |
| OVERTOPPING ELEV. | 1608.00 |
| Q50 HEADWATER ELEV. | 1606.32 |
| Q100 HEADWATER ELEV. | 1606.59 |
| INLET ELEVATION | 1604.56 |
| OUTLET ELEVATION | 1603.57 |
| STD. DWG. NOS. | STD-17-1, STD-17-72 |
| CLASS "A" CONCRETE | 75 C.Y. |
| STEEL BAR REINFORCING | 15,600 LB. |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTION (L.M.2.15)

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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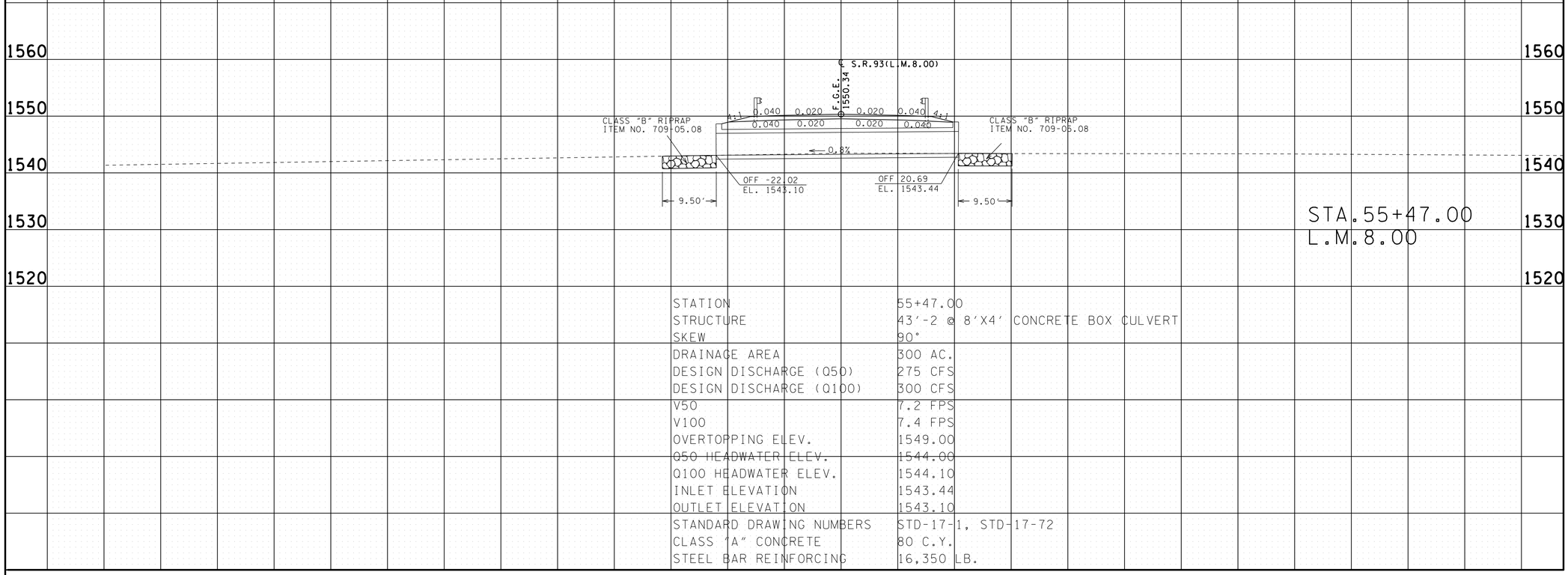
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 8 |
| CONST. | 2014 | 30009-4232-04 | 8 |

S.R. 93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

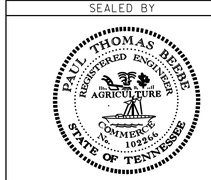



| | |
|---|---|
| STATION | 55+47.00 |
| STRUCTURE | 43'-2 @ 8'X4' CONCRETE BOX CULVERT |
| SKEW | 90° |
| DRAINAGE AREA | 300 AC. |
| DESIGN DISCHARGE (Q50) | 275 CFS |
| DESIGN DISCHARGE (Q100) | 300 CFS |
| V50 | 7.2 FPS |
| V100 | 7.4 FPS |
| OVERTOPPING ELEV. | 1549.00 |
| Q50 HEADWATER ELEV. | 1544.00 |
| Q100 HEADWATER ELEV. | 1544.10 |
| INLET ELEVATION | 1543.44 |
| OUTLET ELEVATION | 1543.10 |
| STANDARD DRAWING NUMBERS | STD-17-1, STD-17-72 |
| CLASS "A" CONCRETE | 80 C.Y. |
| STEEL BAR REINFORCING | 16,350 LB. |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY




STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTION (L.M.8.00)

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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

# EROSION PREVENTION AND SEDIMENT CONTROL NOTES

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 9 |
| CONST. | 2014 | 30009-4232-04 | 9 |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

## 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.

(2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM 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 30 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 15 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

(3) 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.

(4) 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.

(5) 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.

(6) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 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 14 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-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(7) STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

(8) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE “WASTE AND BORROW” MANUAL PER THE SSWMP.

(9) 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.

## STREAM RELOCATION

(10) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABALIZED 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.

**UNOFFICIAL SET**

**NOT FOR BIDDING**

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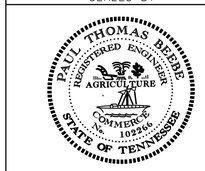


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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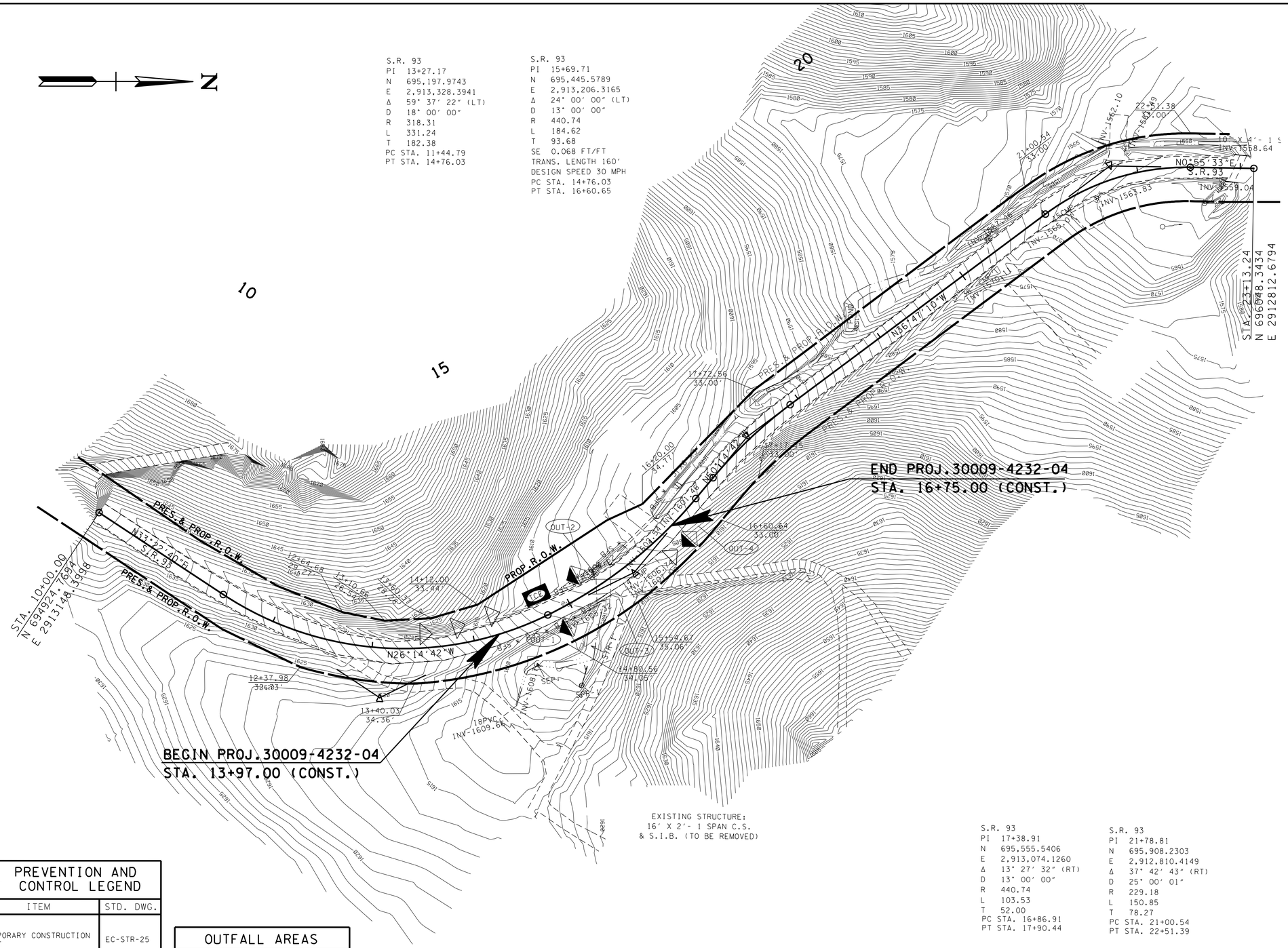
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 10 |
| CONST. | 2014 | 30009-4232-04 | 10 |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

S.R. 93
PI 13+27.17
N 695,197.9743
E 2,913,328.3941
Δ 59° 37′ 22″ (LT)
D 18° 00′ 00″
R 318.31
L 331.24
T 182.38
PC STA. 11+44.79
PT STA. 14+76.03

S.R. 93
PI 15+69.71
N 695,445.5789
E 2,913,206.3165
Δ 24° 00′ 00″ (LT)
D 13° 00′ 00″
R 440.74
L 184.62
T 93.68
SE 0.068 FT/FT
TRANS. LENGTH 160′
DESIGN SPEED 30 MPH
PC STA. 14+76.03
PT STA. 16+60.65




EXISTING STRUCTURE:
16′ X 2′- 1 SPAN C.S.
& S.I.B. (TO BE REMOVED)

S.R. 93
PI 17+38.91
N 695,555.5406
E 2,913,074.1260
Δ 13° 27′ 32″ (RT)
D 13° 00′ 00″
R 440.74
L 103.53
T 52.00
PC STA. 16+86.91
PT STA. 17+90.44

S.R. 93
PI 21+78.81
N 695,908.2303
E 2,912,810.4149
Δ 37° 42′ 43″ (RT)
D 25° 00′ 01″
R 229.18
L 150.85
T 78.27
PC STA. 21+00.54
PT STA. 22+51.39

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

PAUL THOMAS BEERS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 102266
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

## EROSION PREVENTION AND SEDIMENT CONTROL PLAN (L.M. 2.15) STAGE 1

STA.13+97.00 TO STA.16+75.00

SCALE: 1"= 50′

## EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

| SYMBOL | ITEM | STD. DWG. |
|---|---|---|
| TCE | TEMPORARY CONSTRUCTION EXIT | EC-STR-25 |
| * SFB * SFB * SFB * | SILT FENCE WITH WIRE BACKING | EC-STR-3C |
| | ENHANCED ROCK CHECK DAM (V-DITCH) | EC-STR-6A |
| | ROCK CHECK DAM (V-DITCH) | EC-STR-6 |

## OUTFALL AREAS

| OUTFALL # | AREA (ACRES) |
|---|---|
| 1 | 0.5 |
| 2 | 0.5 |
| 3 | 0.3 |
| 4 | 0.2 |

## STR-1 NOTE

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STAY OUT OF STR-1.

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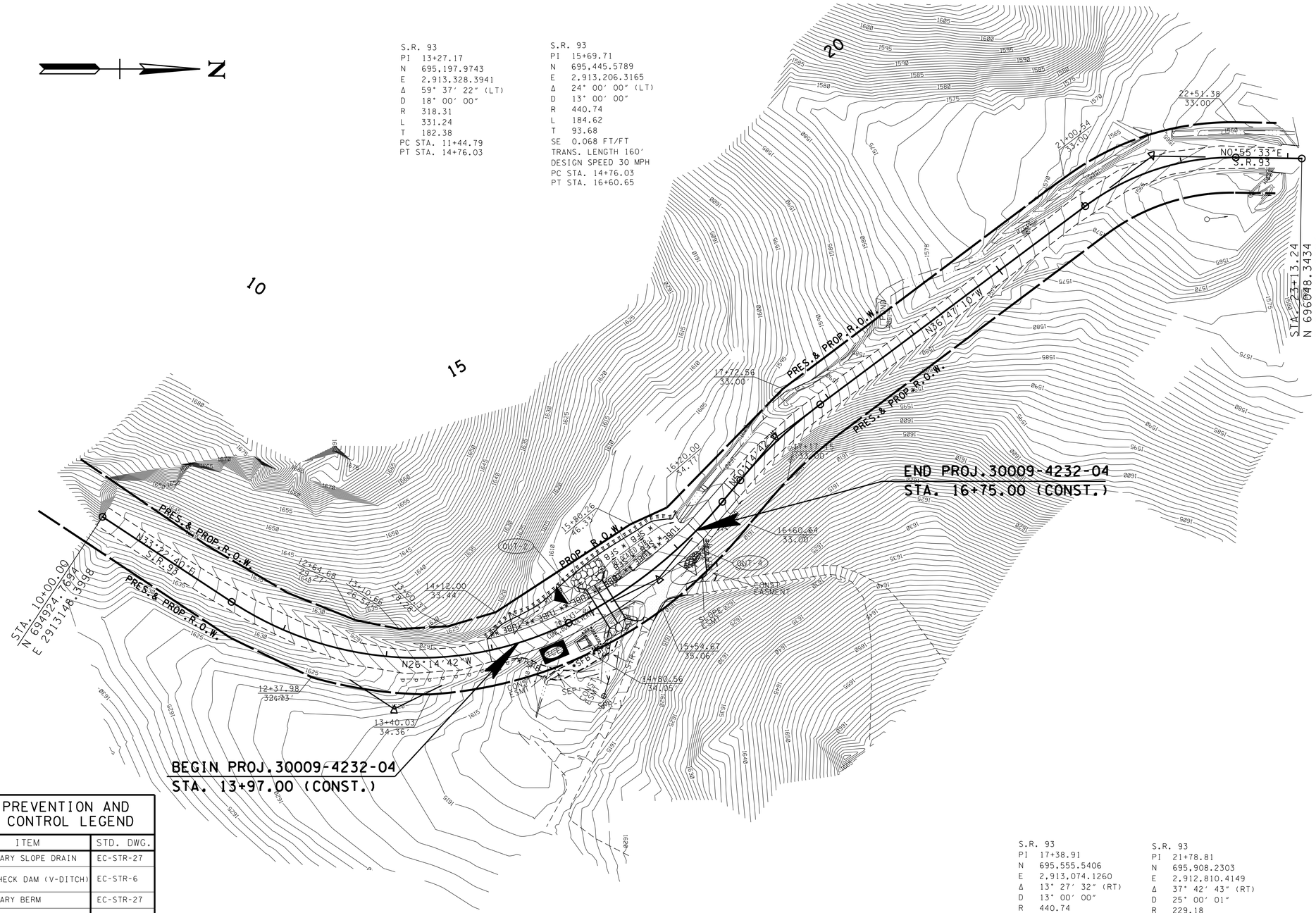
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 11 |
| CONST. | 2014 | 30009-4232-04 | 11 |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

S.R. 93
PI 13+27.17
N 695,197.9743
E 2,913,328.3941
Δ 59° 37′ 22″ (LT)
D 18° 00′ 00″
R 318.31
L 331.24
T 182.38
PC STA. 11+44.79
PT STA. 14+76.03

S.R. 93
PI 15+69.71
N 695,445.5789
E 2,913,206.3165
Δ 24° 00′ 00″ (LT)
D 13° 00′ 00″
R 440.74
L 184.62
T 93.68
SE 0.068 FT/FT
TRANS. LENGTH 160′
DESIGN SPEED 30 MPH
PC STA. 14+76.03
PT STA. 16+60.65




S.R. 93
PI 17+38.91
N 695,555.5406
E 2,913,074.1260
Δ 13° 27′ 32″ (RT)
D 13° 00′ 00″
R 440.74
L 103.53
T 52.00
PC STA. 16+86.91
PT STA. 17+90.44

S.R. 93
PI 21+78.81
N 695,908.2303
E 2,912,810.4149
Δ 37° 42′ 43″ (RT)
D 25° 00′ 01″
R 229.18
L 150.85
T 78.27
PC STA. 21+00.54
PT STA. 22+51.39

## EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

| SYMBOL | ITEM | STD. DWG. |
|---|---|---|
| | TEMPORARY SLOPE DRAIN | EC-STR-27 |
| | ROCK CHECK DAM (V-DITCH) | EC-STR-6 |
| TTTTTTTTTT | TEMPORARY BERM | EC-STR-27 |
| * SFB * SFB * SFB * | SILT FENCE WITH WIRE BACKING | EC-STR-3C |
| TCE | TEMPORARY CONSTRUCTION EXIT | EC-STR-25 |
| SFB | SEDIMENT FILTER BAG | EC-STR-2 |
| | ENHANCED ROCK CHECK DAM (V-DITCH) | EC-STR-6A |
| ** TUBE ** TUBE ** | SEDIMENT TUBE | EC-STR-37 |

## OUTFALL AREAS

| OUTFALL # | AREA (ACRES) |
|---|---|
| 2 | 0.5 |
| 4 | 0.2 |

## STR-1 NOTE

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STAY OUT OF STR-1.

# UNOFFICIAL SET

NOT FOR BIDDING

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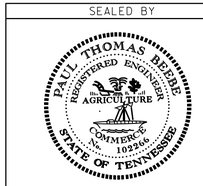


COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00009 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

## EROSION PREVENTION AND SEDIMENT CONTROL PLAN (L.M. 2.15) STAGE 2

STA.13+97.00 TO STA.16+75.00

SCALE: 1"= 50′

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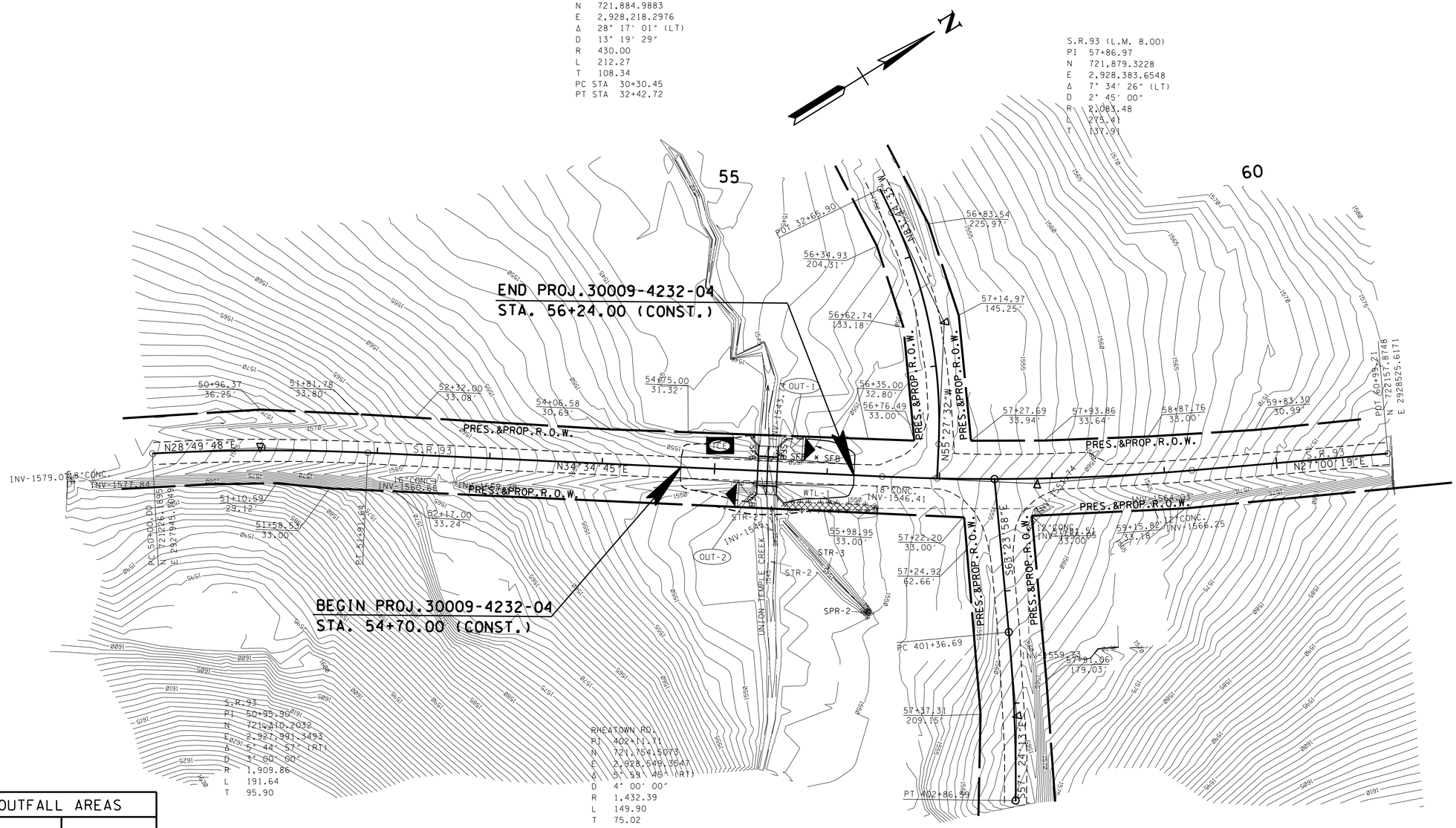
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 12 |
| CONST. | 2014 | 30009-4232-04 | 12 |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

DOTY CHAPEL RD.
PI 31+38.79
N 721,884.9883
E 2,928,218.2976
Δ 28° 17′ 01″ (LT)
D 13° 19′ 29″
R 430.00
L 212.27
T 108.34
PC STA 30+30.45
PT STA 32+42.72

S.R.93 (L.M. 8.00)
PI 57+86.97
N 721,879.3228
E 2,928,383.6548
Δ 7° 34′ 26″ (LT)
D 2° 45′ 00″
R 2,083.48
L 275.41
T 137.91




| OUTFALL AREAS | |
|---|---|
| OUTFALL # | AREA (ACRES) |
| 1 | 0.3 |
| 2 | 0.7 |

| EROSION PREVENTION AND SEDIMENT CONTROL LEGEND | | |
|---|---|---|
| SYMBOL | ITEM | STD. DWG. |
| TCE | TEMPORARY CONSTRUCTION EXIT | EC-STR-25 |
| *SFB*SFB*SFB* | SILT FENCE WITH WIRE BACKING | EC-STR-3C |
| | ENHANCED ROCK CHECK DAM (V-DITCH) | EC-STR-6A |

| LEGEND | WETLAND IMPACTS (WTL-1) |
|---|---|
| | AREA OF PERMANENT IMPACT = 0.010 AC. |
| | VOLUME OF PERMANENT IMPACT = 48 C.Y. |
| | AREA OF TEMPORARY IMPACT = 0.000 AC. |
| | VOLUME OF TEMPORARY IMPACT = 0 C.Y. |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

SEALED BY

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

**EROSION PREVENTION AND SEDIMENT CONTROL PLAN (L.M. 8.00) STAGE 1**

STA.54+70.00 TO STA.56+24.00
SCALE: 1"= 50′

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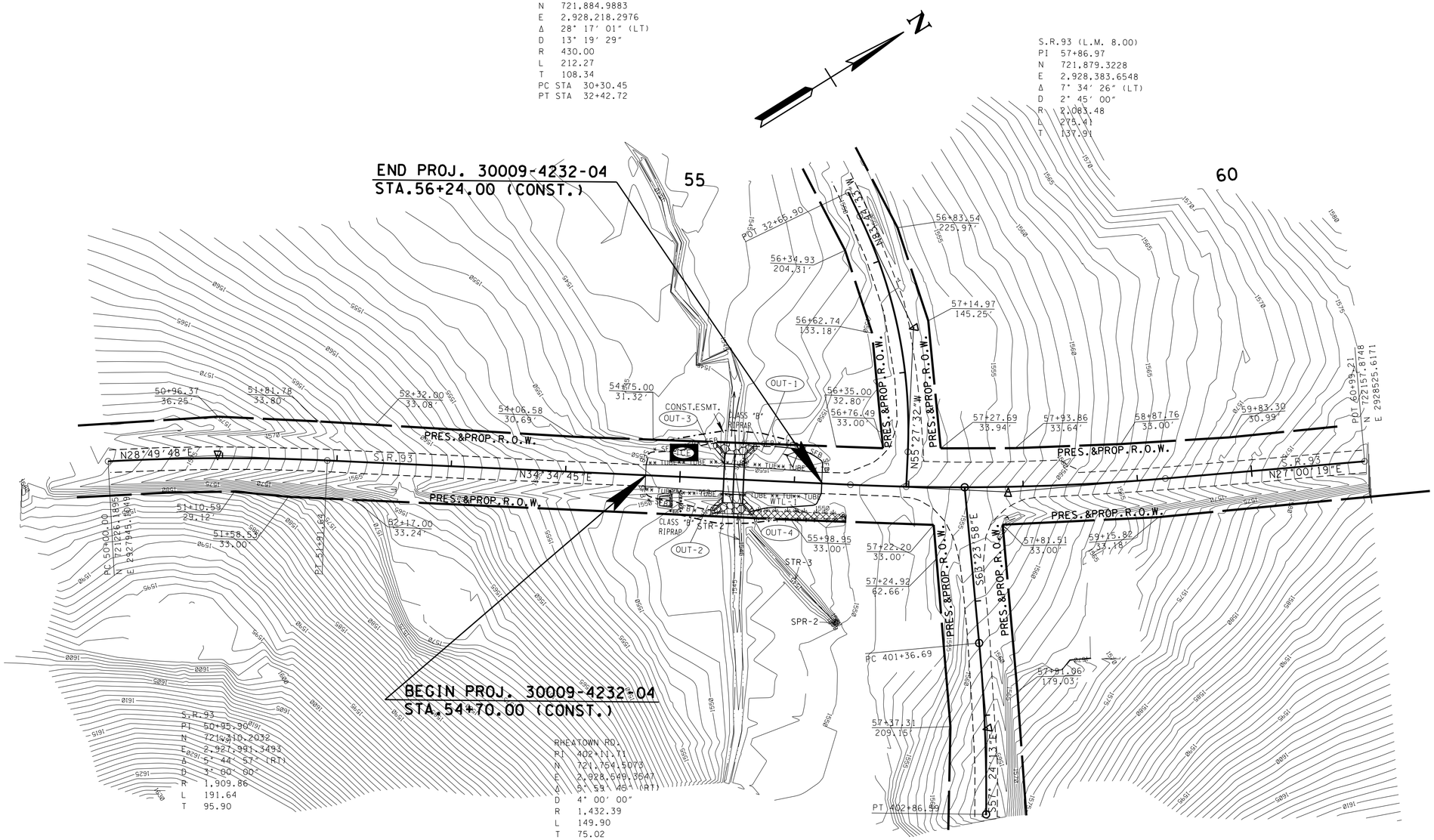
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 13 |
| CONST. | 2014 | 30009-4232-04 | 13 |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

DOTY CHAPEL RD.
PI 31+38.79
N 721,884.9883
E 2,928,218.2976
Δ 28° 17′ 01″ (LT)
D 13° 19′ 29″
R 430.00
L 212.27
T 108.34
PC STA 30+30.45
PT STA 32+42.72

S.R.93 (L.M. 8.00)
PI 57+86.97
N 721,879.3228
E 2,928,383.6548
Δ 7° 34′ 26″ (LT)
D 2° 45′ 00″
R 2,083.48
L 275.41
T 137.91




| EROSION PREVENTION AND SEDIMENT CONTROL LEGEND | | |
|---|---|---|
| SYMBOL | ITEM | STD. DWG. |
| * SFB * SFB * SFB * | SILT FENCE WITH WIRE BACKING | EC-STR-3C |
| | ROCK CHECK DAM (V-DITCH) | EC-STR-6 |
| TCE | TEMPORARY CONSTRUCTION EXIT | EC-STR-25 |
| * SFB * * SFB * | SEDIMENT FILTER BAG | EC-STR-2 |
| ** TUBE ** TUBE ** | SEDIMENT TUBE | EC-STR-37 |

| OUTFALL AREAS | |
|---|---|
| OUTFALL # | AREA (ACRES) |
| 1 | 0.1 |
| 2 | 0.7 |
| 3 | 0.3 |
| 4 | 0.4 |

| LEGEND | WETLAND IMPACTS (WTL-1) |
|---|---|
| | AREA OF PERMANENT IMPACT = 0.010 AC. |
| | VOLUME OF PERMANENT IMPACT = 48 C.Y. |
| | AREA OF TEMPORARY IMPACT = 0.000 AC. |
| | VOLUME OF TEMPORARY IMPACT = 0 C.Y. |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

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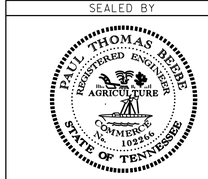


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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**EROSION PREVENTION AND SEDIMENT CONTROL PLAN (L.M. 8.00) STAGE 2**

STA.54+70.00 TO STA.56+24.00
SCALE: 1"= 50′

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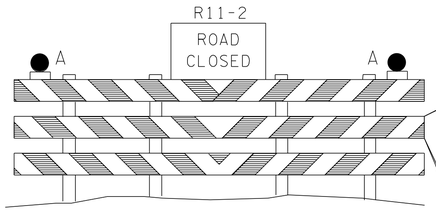
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 14 |
| | | | |
| | | | |
| | | | |

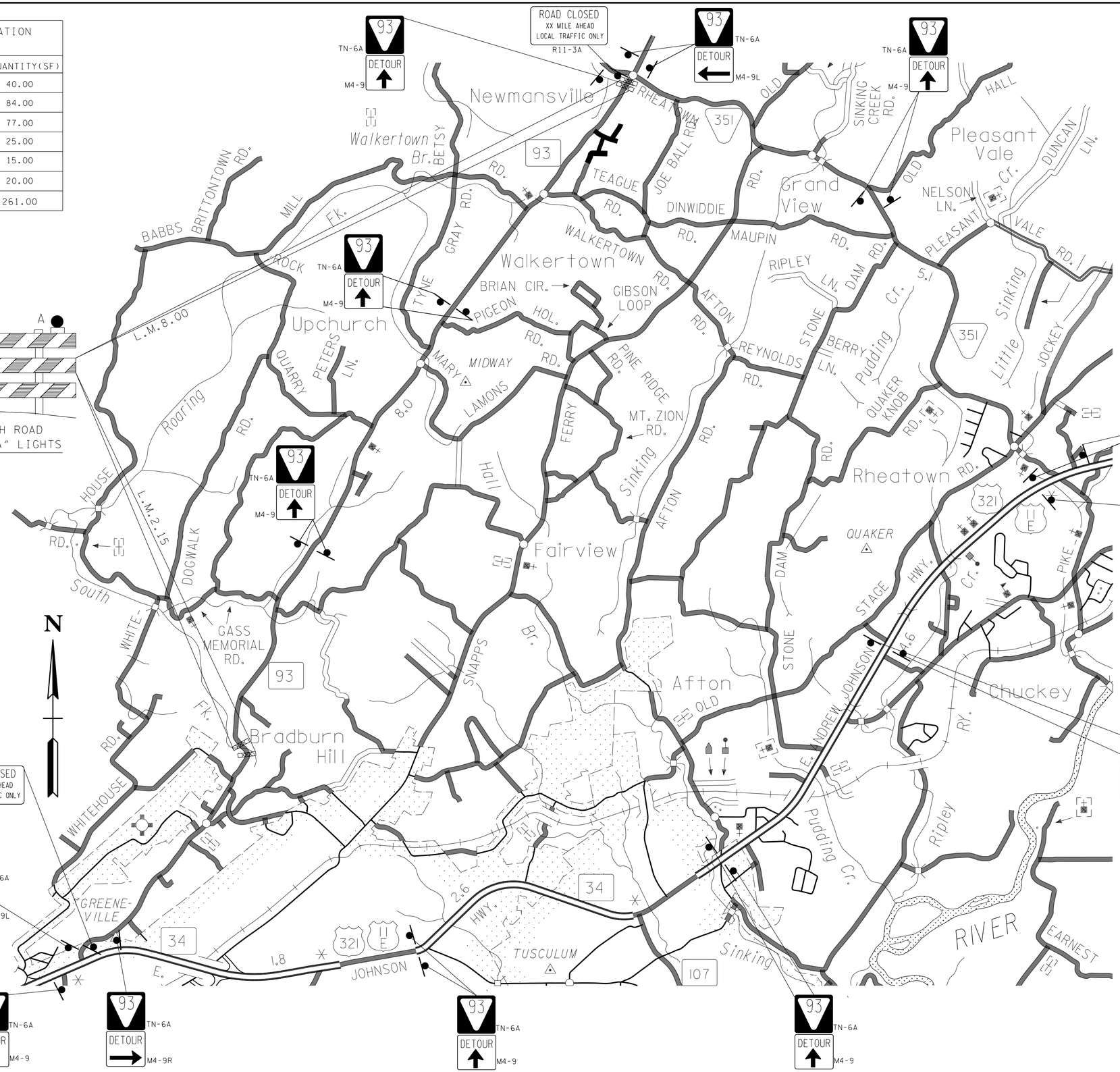
S.R.93 GREENE CO.
30009-4231-04 (CONST.)

CONSTRUCTION SIGN TABULATION
ITEM NO. 712-06

| NO. | TYPE | SIZE | QUANTITY(SF) |
|---|---|---|---|
| 4 | R11-2 | 48" X 30" | 40.00 |
| 21 | TN-6A | 24" X 24" | 84.00 |
| 14 | M4-9 | 33" X 24" | 77.00 |
| 2 | R11-3a | 60" X 30" | 25.00 |
| 3 | M4-9R | 30" X 24" | 15.00 |
| 4 | M4-9L | 30" X 24" | 20.00 |
| | | TOTALS: | 261.00 |




TYPE III BARRICADE WITH ROAD CLOSED SIGN AND 2 TYPE "A" LIGHTS

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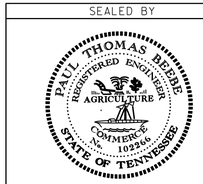


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

SCALE: 1"=2000'

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 15 |
| | | | |
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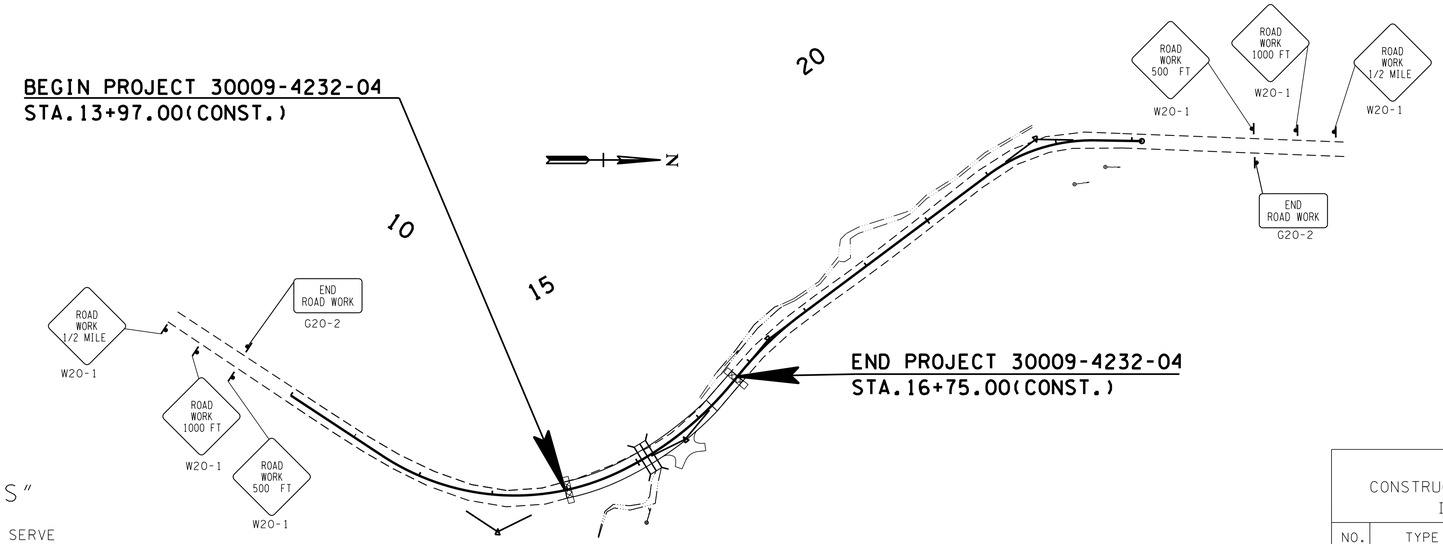
| | | | |

S.R. 93 GREENE CO.
30009-4232-04 (CONST.)




## "TRAFFIC CONTROL NOTES"

THE CONSTRUCTION SIGNING PLANS ARE TO SERVE AS A GUIDE ONLY, OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.

THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

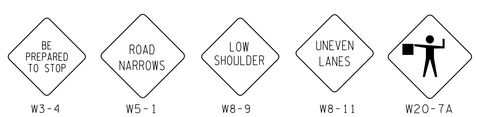
THE CONTRACTOR IS TO MAINTAIN ACCESS TO ALL LOCAL PROPERTY OWNERS.

WHEN TRAFFIC IS RESTRICTED TO ONE LANE, THE CONTRACTOR IS TO HAVE TWO FLAGGERS ON THE PROJECT. COST OF THE FLAGGERS IS TO BE INCLUDED IN ITEM NO. 712-01.

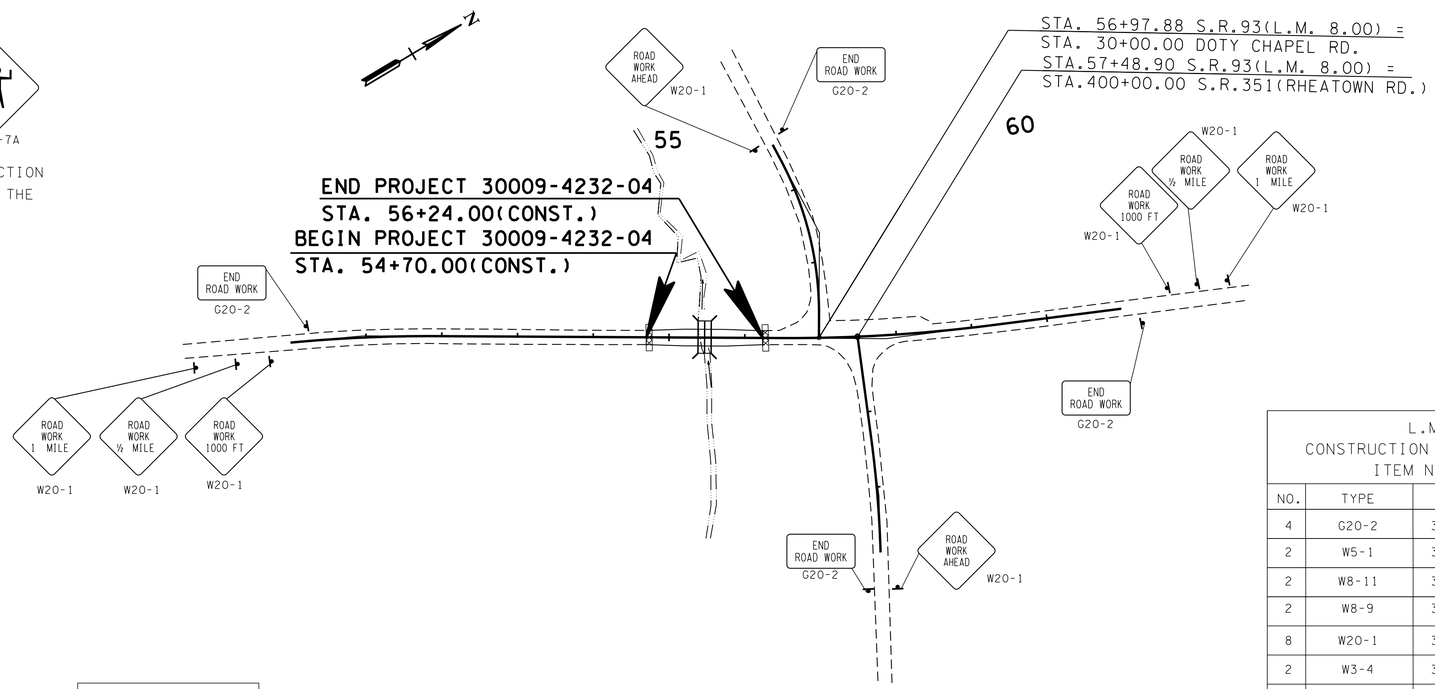
**L.M.2.15**

| L.M.2.15 CONSTRUCTION SIGN TABULATION ITEM NO. 712-06 | | | |
|---|---|---|---|
| NO. | TYPE | SIZE | QUANTITY (SF) |
| 2 | G20-2 | 36" X 18" | 9.00 |
| 2 | W5-1 | 36" X 36" | 18.00 |
| 2 | W8-11 | 36" X 36" | 18.00 |
| 2 | W8-9 | 36" X 36" | 18.00 |
| 6 | W20-1 | 36" X 36" | 54.00 |
| 2 | W3-4 | 36" X 36" | 18.00 |
| 2 | W20-7A | 36" X 36" | 18.00 |
| | | TOTALS: | 153.00 |

A TYPE "A" LIGHT
ITEM NO. 712-05.01




SIGNS SHOWN ABOVE ARE TO BE USED WHEN CONSTRUCTION OPERATIONS WARRENT. TO BE USED AS DIRECTED BY THE TDOT SUPERVISOR.




**L.M.8.00**

| L.M.8.00 CONSTRUCTION SIGN TABULATION ITEM NO. 712-06 | | | |
|---|---|---|---|
| NO. | TYPE | SIZE | QUANTITY (SF) |
| 4 | G20-2 | 36" X 18" | 18.00 |
| 2 | W5-1 | 36" X 36" | 18.00 |
| 2 | W8-11 | 36" X 36" | 18.00 |
| 2 | W8-9 | 36" X 36" | 18.00 |
| 8 | W20-1 | 36" X 36" | 72.00 |
| 2 | W3-4 | 36" X 36" | 18.00 |
| 2 | W20-7A | 36" X 36" | 18.00 |
| | | TOTALS: | 180.00 |

**UNOFFICIAL SET**

**NOT FOR BIDDING**

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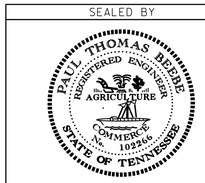


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL PLAN

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2014 | 30009-4232-04 | 16 |
| | | | |
| | | | |
| | | | |

S.R.93 GREENE CO.
30009-4232-04 (CONST.)

# PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. DIFFERENCES 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:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES:

a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 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.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 2 INCHES AND NOT EXCEEDING 6 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 2 INCHES OR LESS BY THE END OF EACH WORKDAY, 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 LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 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 THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3.5 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 LANES AND/OR SHOULDER DROP-OFF) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 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 2 MILES 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.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 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 6 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 WITH PLAQUE (W8-17 AND W8-17P). 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 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 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.

4. 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 1 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.

B. 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.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.

WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 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.

3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 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 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

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.

UNOFFICIAL SET

NOT FOR BIDDING

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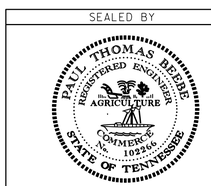


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

19-JUN-2014 11:43
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 14 |
| CONST. | 2014 | 30009-4232-04 | 17 |

S.R.93
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

GREENE CO.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

# REPRESENTATIVE OF STATION 15+00 TO END OF PROJECT RIGHT OF CENTERLINE

4-203.02

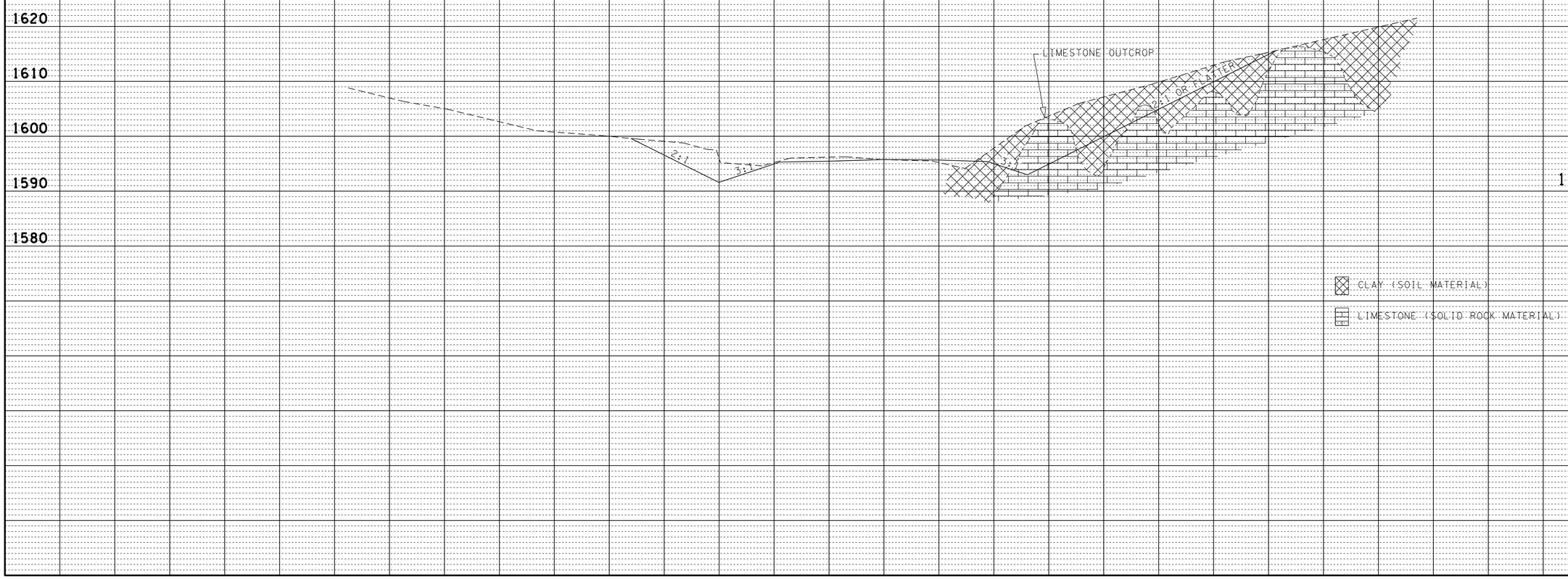
A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS. THIS MATERIAL WOULD HAVE A SHRINK FACTOR AS GIVEN IN THE SHRINK FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

4-203.02

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E., BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCKCUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTUCTION PRODUCTS. THIS MATERIAL WOULD HAVE A SIGNIFICANT SWELL FACTOR AS GIVEN IN SWELL FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.




SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# SOILS SHEET

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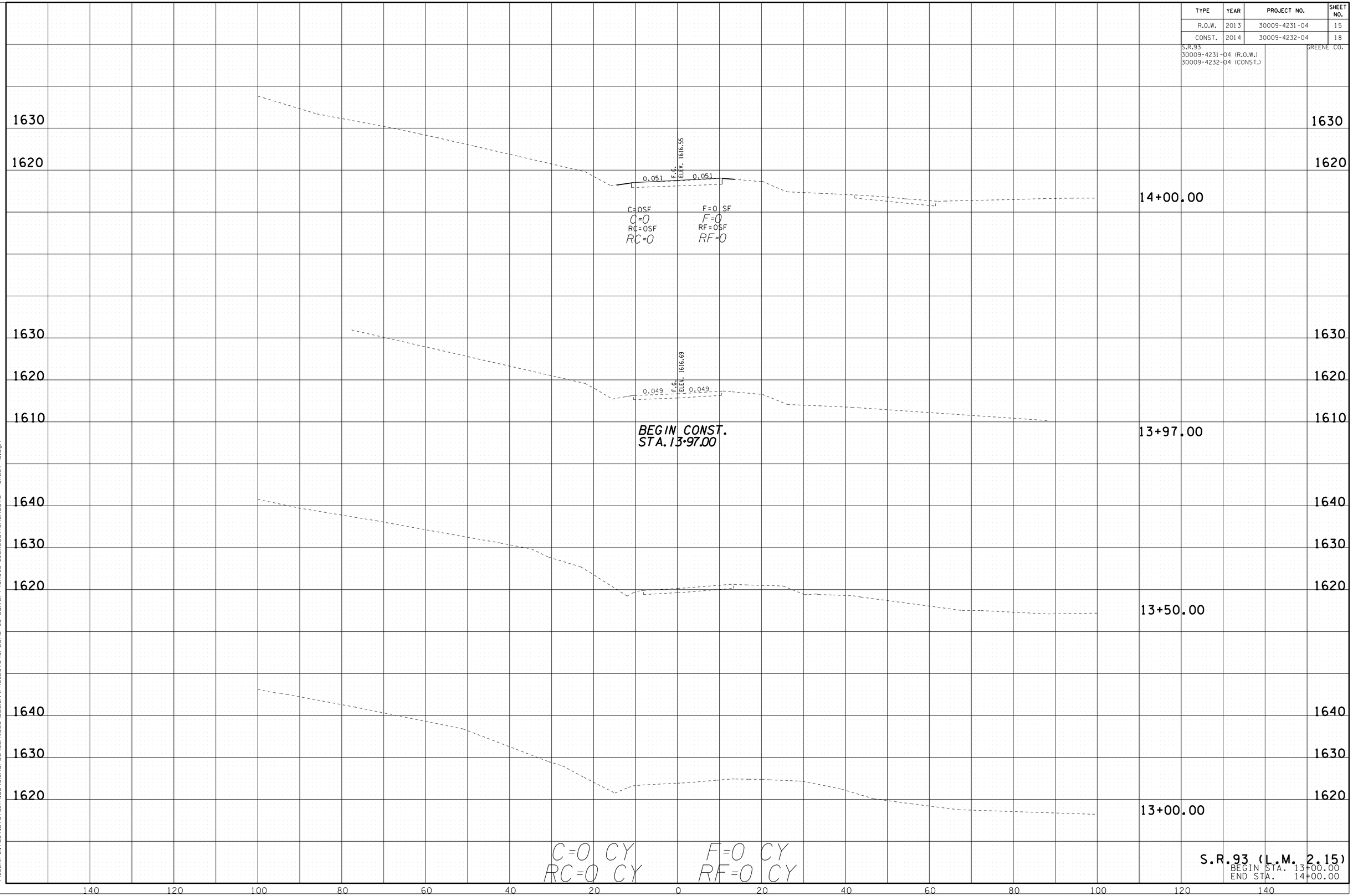
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 15 |
| CONST. | 2014 | 30009-4232-04 | 18 |

S.R.93
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
GREENE CO.

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BEGIN STA. 13+00.00
END STA. 14+00.00

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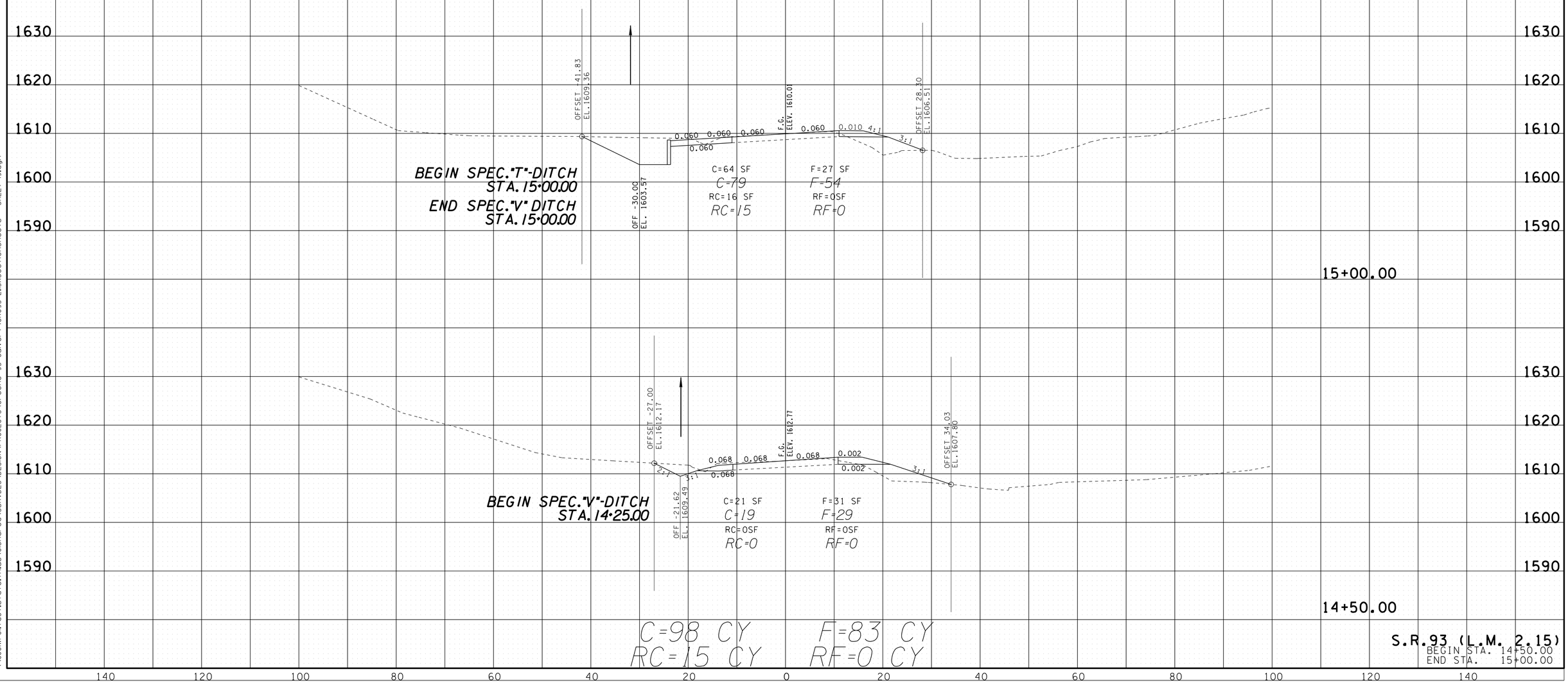
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 16 |
| CONST. | 2014 | 30009-4232-04 | 19 |

S.R.93 GREENE CO.
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)




S.R.93 (L.M. 2.15)
BEGIN STA. 14+50.00
END STA. 15+00.00

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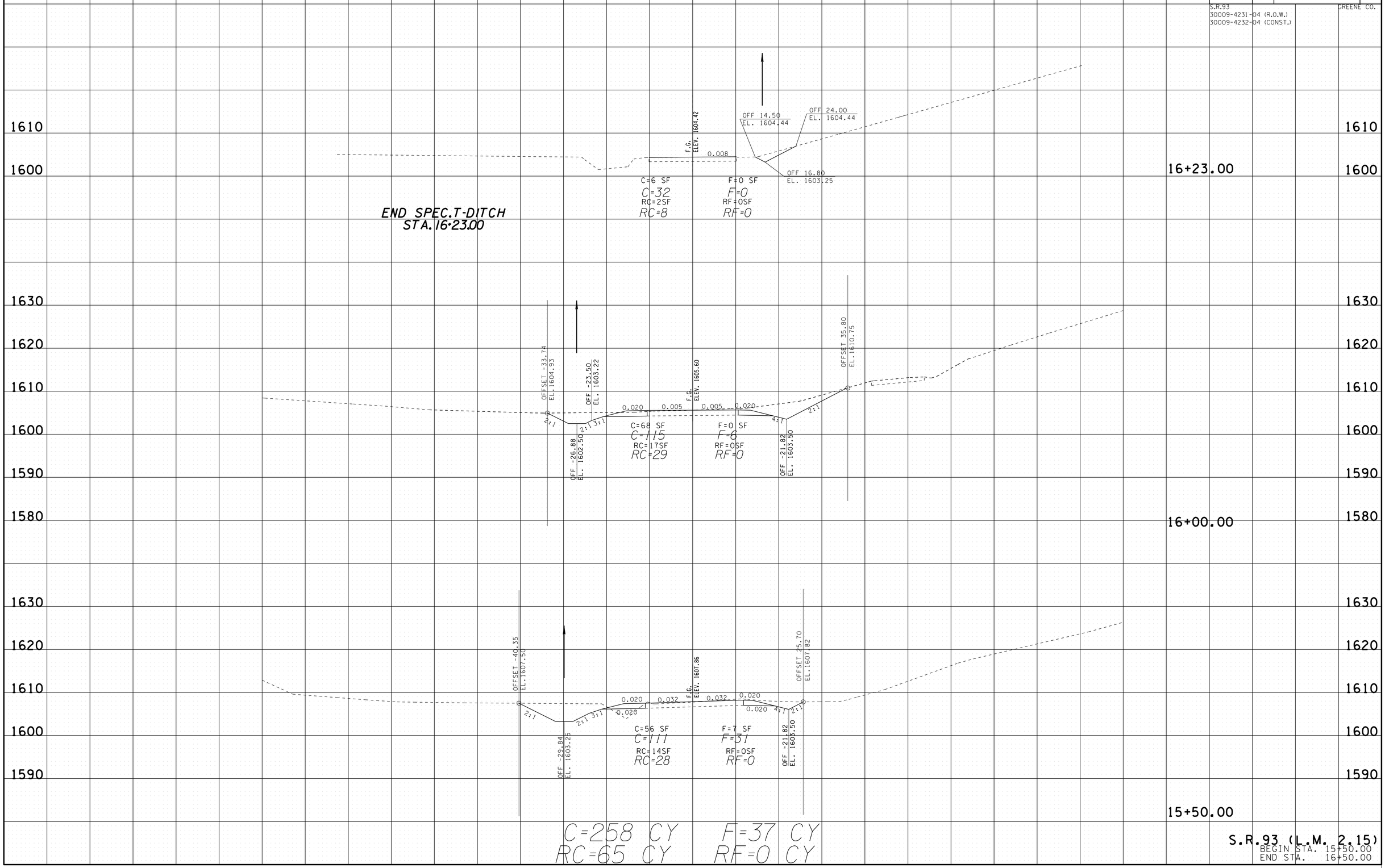
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 17 |
| CONST. | 2014 | 30009-4232-04 | 20 |

S.R.93
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)
GREENE CO.

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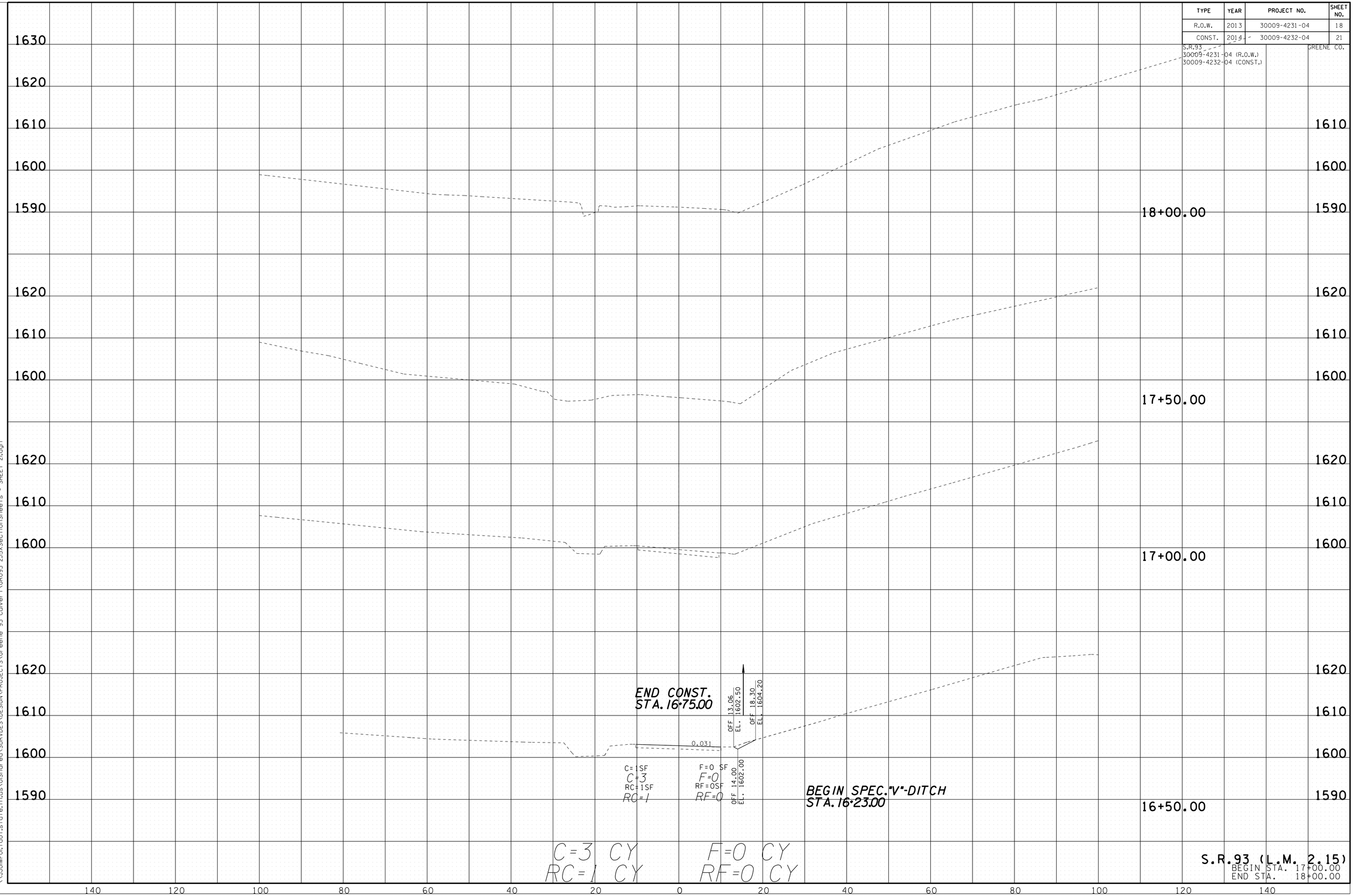
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 18 |
| CONST. | 2014 | 30009-4232-04 | 21 |

S.R.93
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

GREENE CO.

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BEGIN STA. 17+00.00
END STA. 18+00.00

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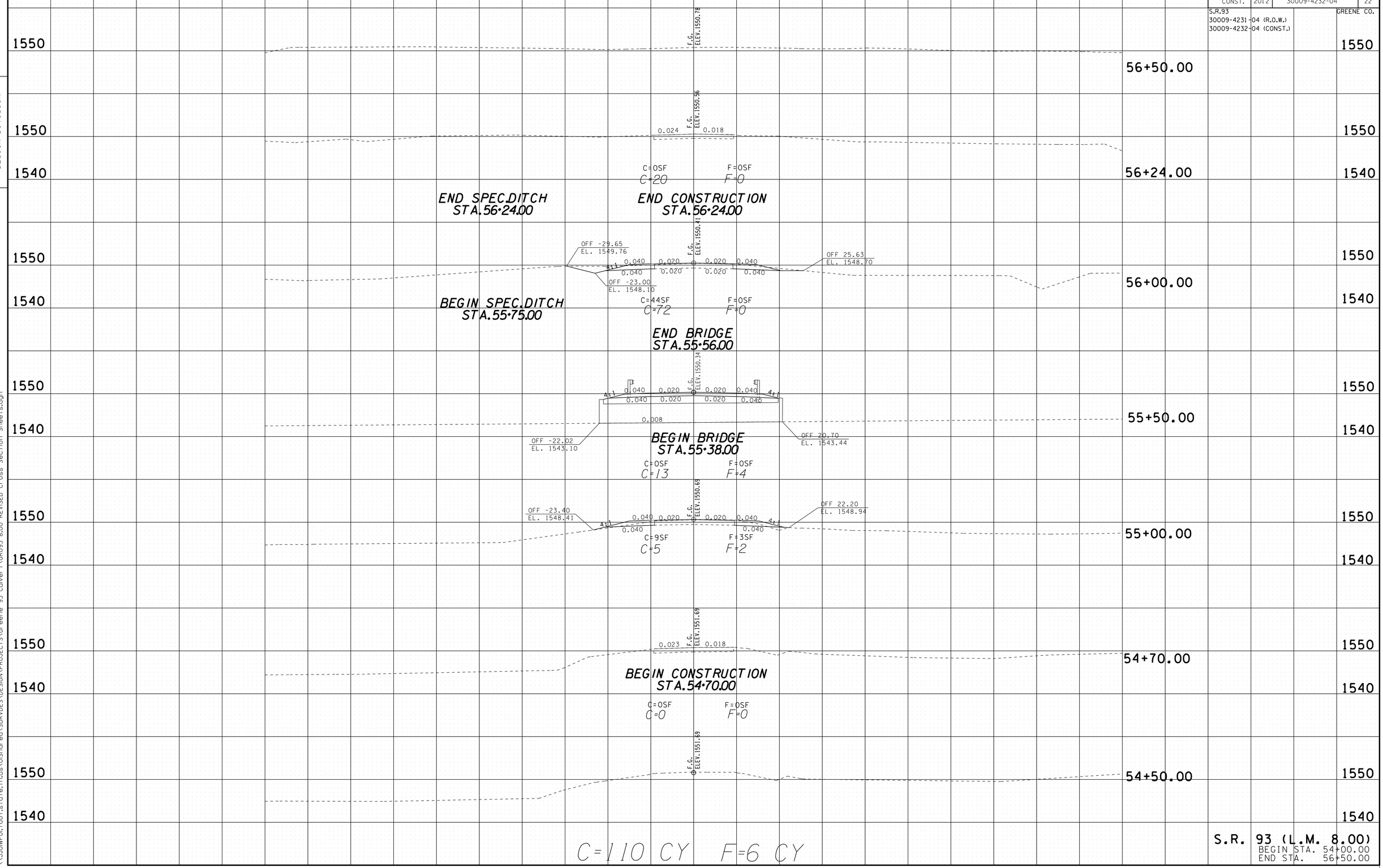
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2013 | 30009-4231-04 | 17 |
| CONST. | 2012 | 30009-4232-04 | 22 |

S.R.93
30009-4231-04 (R.O.W.)
30009-4232-04 (CONST.)

GREENE CO.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION




S.R. 93 (L.M. 8.00)
BEGIN STA. 54+00.00
END STA. 56+50.00

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