

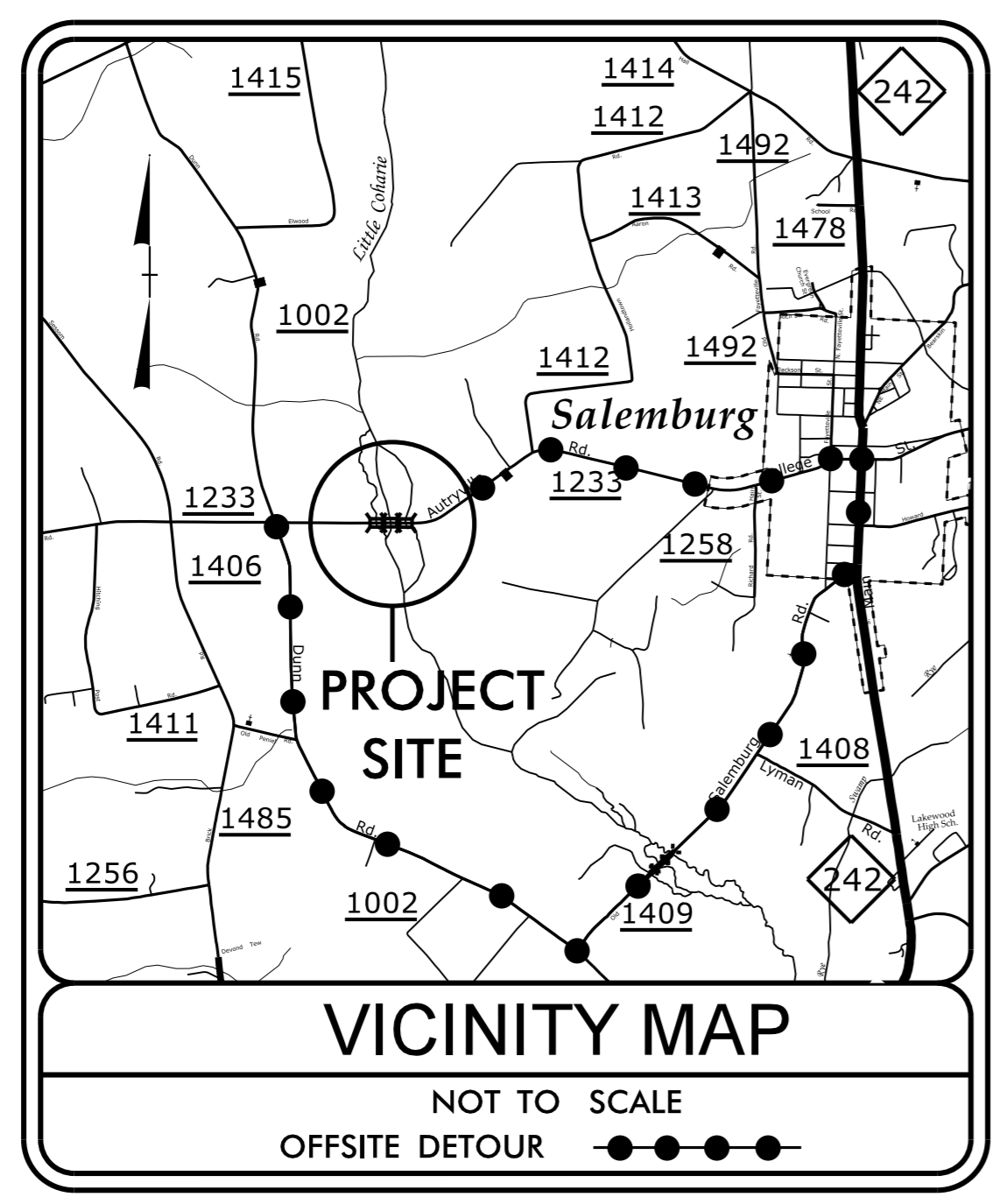
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09/08/99

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SAMPSON COUNTY

LOCATION: BRIDGES NO. 102, 103, AND 104 OVER LITTLE COHARIE CREEK ON SR 1233 (AUTRYVILLE RD.)

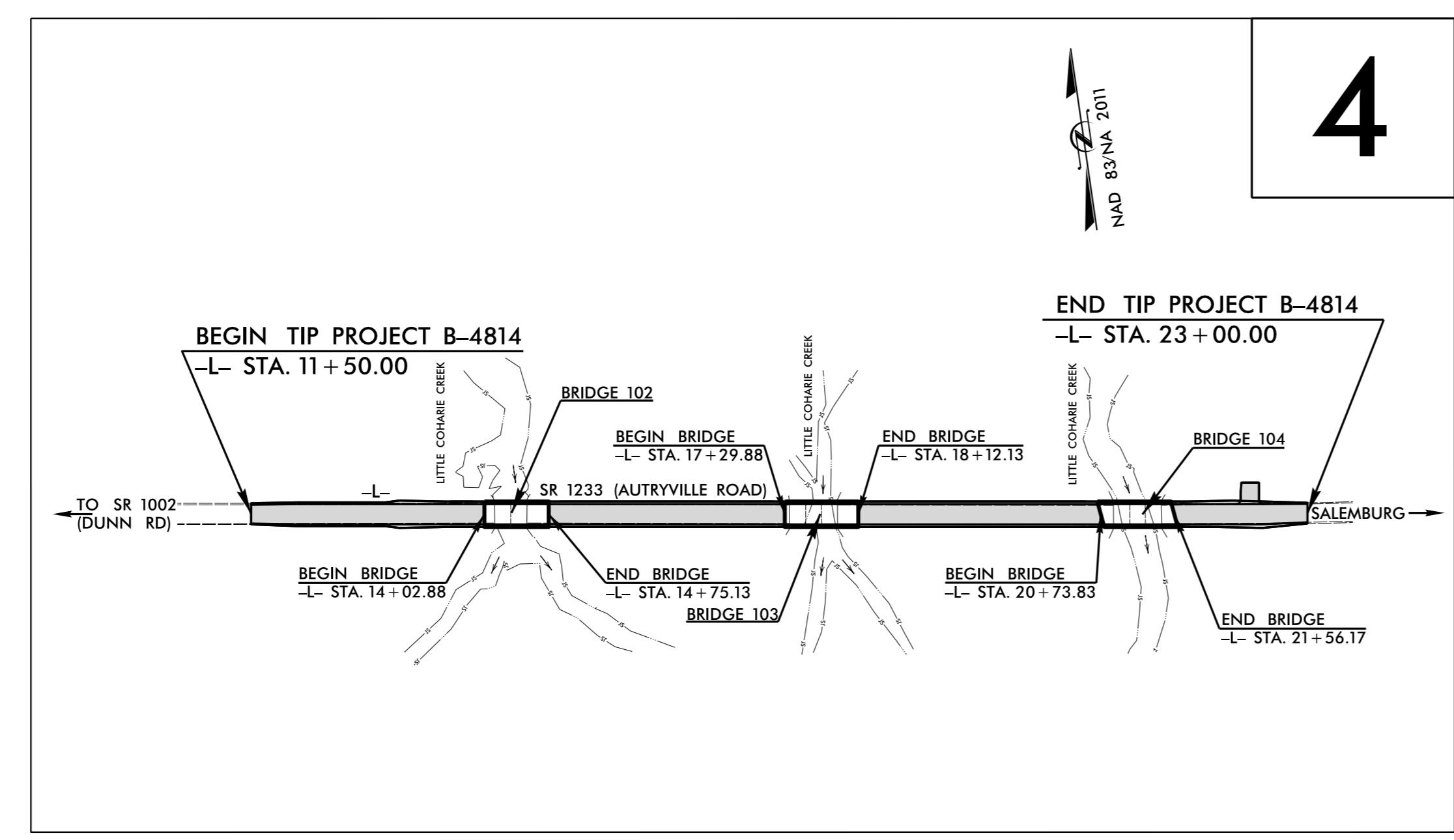
TYPE OF WORK: RESURFACING, GRADING, PAVING, DRAINAGE AND STRUCTURES

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | B-4814 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 38584.1.2 | BRZ-1233(6) | P.E. | |
| 38584.2.1 | BRZ-1233(6) | RW/UTIL. | |
| 38584.3.1 | BRZ-1233(6) | CONST. | |

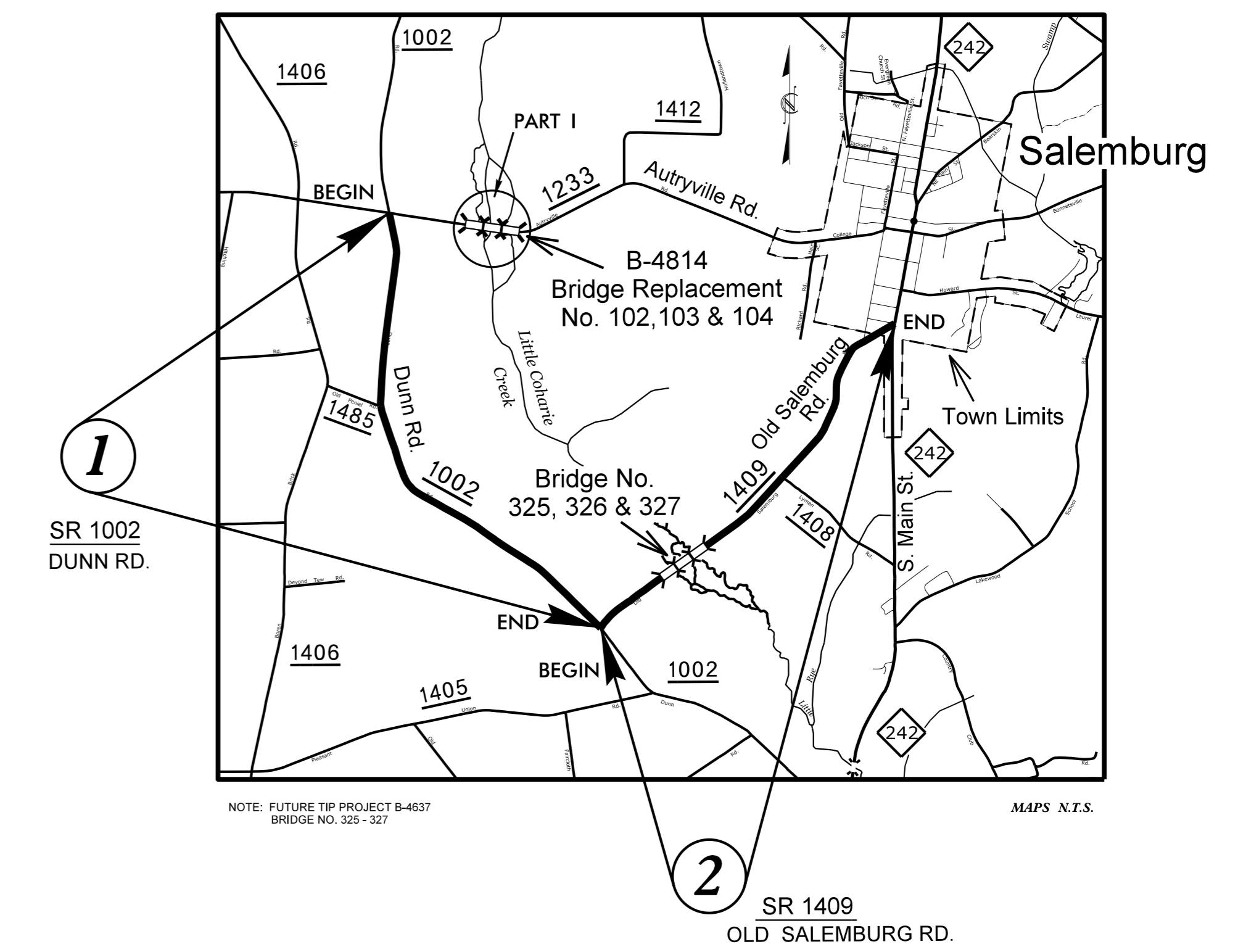
TIP PROJECT: B-4814

CONTRACT: C203824

PART 1 : B-4814



PART 2 : B-4814 DETOUR RESURFACING



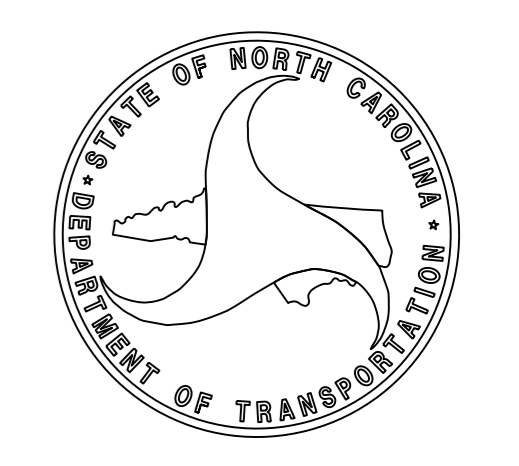
PROJECT LENGTH

| | |
|--|--|
| PART 1: B-4814 | LENGTH ROADWAY STATE PROJECT = 0.173 MILES |
| | LENGTH STRUCTURE STATE PROJECT = 0.045 MILES |
| PART 2: B-4814 DETOUR RESURFACING | LENGTH ROADWAY STATE PROJECT = 4.669 MILES |
| PART 1 & PART 2 | TOTAL LENGTH STATE PROJECT = 4.887 MILES |

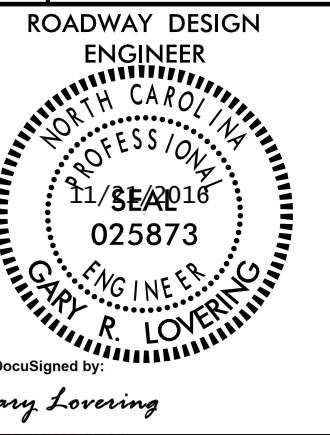
Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 31, 2015 (B-4814)

LETTING DATE:
DECEMBER 20, 2016



25-OCT-2016 14:48
R:\Roadway\Proj\B4814_Rdy_tsh_COMBINED.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

EFF. 01-17-2012
REV. 02-29-2016

| SHEET NUMBER | INDEX OF SHEETS |
|------------------|---|
| 1 | COMBINED TITLE SHEET (PART I & 2) |
| 1A | INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS |
| 1B | CONVENTIONAL SYMBOLS |
| PART I | |
| 1 | TITLE SHEET |
| 1C-1 THRU 1C-2 | SURVEY CONTROL SHEETS |
| 2A-1 | PAVEMENT SCHEDULE AND TYPICAL SECTIONS |
| 2C-1 | GUARDRAIL ANCHOR UNIT, TYPE III |
| 2C-2 | PARALLEL PIPE END SECTION |
| 3B-1 | SUMMARIES OF SHOULDER BERM GUTTER, GUARDRAIL, PAVEMENT REMOVAL, AND EARTHWORK |
| 3D-1 | DRAINAGE SUMMARY |
| 3G-1 | SUMMARY OF SUBSURFACE DRAINAGE |
| 4 | PLAN SHEET |
| 5 | PROFILE SHEET |
| TMP-1 THRU TMP-4 | TRAFFIC MANAGEMENT PLANS |
| PMP-1 THRU PMP-2 | PAVEMENT MARKING PLANS |
| EC-1 THRU EC-5 | EROSION CONTROL PLANS |
| UO-1 THRU UO-2 | UTILITIES BY OTHERS PLANS |
| X-1A | CROSS-SECTION SUMMARY SHEET |
| X-1 THRU X-5 | CROSS-SECTIONS |
| S1-1 THRU S1-14 | STRUCTURE #102 PLANS |
| S2-1 THRU S2-16 | STRUCTURE #103 PLANS |
| S3-1 THRU S3-16 | STRUCTURE #104 PLANS |
| PART II | |
| 1 | RESURFACING MAPS |
| 2 | TYPICAL SECTIONS |
| 3 | ROADWAY DETAILS FOR PATCHING EXISTING PAVEMENT AND MILLING |
| 4 | SHOULDER WEDGING DETAILS |
| 5 THRU 6 | SUMMARY OF QUANTITIES |
| EC-1 THRU EC-3 | EROSION CONTROL AND WATTLE DETAILS |

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

GRADE LINE:
GRADING AND SURFACING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

SUBSURFACE DRAINS:
SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

END BENTS:
THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:
CENTURY LINK - TELEPHONE
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

| STD. NO. | TITLE |
|--|---|
| DIVISION 2 - EARTHWORK | |
| 200.03 | Method of Clearing - Method III |
| 225.02 | Guide for Grading Subgrade - Secondary and Local |
| 225.04 | Method of Obtaining Superelevation - Two Lane Pavement |
| DIVISION 3 - PIPE CULVERTS | |
| 300.01 | Method of Pipe Installation |
| 310.10 | Driveway Pipe Construction |
| DIVISION 4 - MAJOR STRUCTURES | |
| 422.10 | Reinforced Bridge Approach Fills |
| DIVISION 5 - SUBGRADE, BASES AND SHOULDERS | |
| 560.01 | Method of Shoulder Construction - High Side of Superelevated Curve - Method I |
| DIVISION 8 - INCIDENTALS | |
| 815.02 | Subsurface Drain |
| 840.00 | Concrete Base Pad for Drainage Structures |
| 840.25 | Anchorage for Frames - Brick or Concrete or Precast |
| 840.29 | Frames and Narrow Slot Flat Grates |
| 840.35 | Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates |
| 840.46 | Traffic Bearing Precast Drainage Structure |
| 840.66 | Drainage Structure Steps |
| 846.01 | Concrete Curb, Gutter and Curb & Gutter |
| 846.04 | Drop Inlet Installation in Shoulder Berm Gutter |
| 862.01 | Guardrail Placement |
| 862.02 | Guardrail Installation |
| 876.02 | Guide for Rip Rap at Pipe Outlets |
| 876.04 | Drainage Ditches with Class 'B' Rip Rap |

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale *S.U.E. = *Subsurface Utility Engineering*

04/06/15

BOUNDARIES AND PROPERTY:

| | |
|---------------------------------------|-----------|
| State Line | ----- |
| County Line | ----- |
| Township Line | ----- |
| City Line | ----- |
| Reservation Line | ----- |
| Property Line | ----- |
| Existing Iron Pin | ○ EP |
| Property Corner | ----- |
| Property Monument | □ EDM |
| Parcel/Sequence Number | ⑫③ |
| Existing Fence Line | -x-x-x- |
| Proposed Woven Wire Fence | ○ |
| Proposed Chain Link Fence | □ |
| Proposed Barbed Wire Fence | ◇ |
| Existing Wetland Boundary | ----- WLB |
| Proposed Wetland Boundary | ----- WLB |
| Existing Endangered Animal Boundary | ----- EAB |
| Existing Endangered Plant Boundary | ----- EPB |
| Existing Historic Property Boundary | ----- HPB |
| Known Contamination Area: Soil | ☠ |
| Potential Contamination Area: Soil | ☠ |
| Known Contamination Area: Water | ☠ |
| Potential Contamination Area: Water | ☠ |
| Contaminated Site: Known or Potential | ☠ |

BUILDINGS AND OTHER CULTURE:

| | |
|-------------------------------|-----|
| Gas Pump Vent or U/G Tank Cap | ○ |
| Sign | ○ S |
| Well | ○ W |
| Small Mine | ✕ |
| Foundation | □ |
| Area Outline | □ |
| Cemetery | □ |
| Building | □ |
| School | □ |
| Church | □ |
| Dam | □ |

HYDROLOGY:

| | |
|------------------------------------|------------|
| Stream or Body of Water | ----- |
| Hydro, Pool or Reservoir | ----- |
| Jurisdictional Stream | ----- JS |
| Buffer Zone 1 | ----- BZ 1 |
| Buffer Zone 2 | ----- BZ 2 |
| Flow Arrow | ← |
| Disappearing Stream | ----- |
| Spring | ○ |
| Wetland | ----- |
| Proposed Lateral, Tail, Head Ditch | ----- |
| False Sump | ----- |

RAILROADS:

| | |
|--------------------|---------------|
| Standard Gauge | ----- |
| RR Signal Milepost | ○ MILEPOST 35 |
| Switch | □ SWITCH |
| RR Abandoned | ----- |
| RR Dismantled | ----- |

RIGHT OF WAY:

| | |
|--|-----------|
| Baseline Control Point | ◇ |
| Existing Right of Way Marker | △ |
| Existing Right of Way Line | ----- |
| Proposed Right of Way Line | ----- RW |
| Proposed Right of Way Line with Iron Pin and Cap Marker | ----- RW |
| Proposed Right of Way Line with Concrete or Granite R/W Marker | ----- RW |
| Proposed Control of Access Line with Concrete CA Marker | ----- CA |
| Existing Control of Access | ----- CA |
| Proposed Control of Access | ----- CA |
| Existing Easement Line | ----- E |
| Proposed Temporary Construction Easement | ----- E |
| Proposed Temporary Drainage Easement | ----- TDE |
| Proposed Permanent Drainage Easement | ----- PDE |
| Proposed Permanent Drainage / Utility Easement | ----- DUE |
| Proposed Permanent Utility Easement | ----- PUE |
| Proposed Temporary Utility Easement | ----- TUE |
| Proposed Aerial Utility Easement | ----- AUE |
| Proposed Permanent Easement with Iron Pin and Cap Marker | ◇ |

ROADS AND RELATED FEATURES:

| | |
|----------------------------|----------|
| Existing Edge of Pavement | ----- |
| Existing Curb | ----- |
| Proposed Slope Stakes Cut | ----- C |
| Proposed Slope Stakes Fill | ----- F |
| Proposed Curb Ramp | ----- CR |
| Existing Metal Guardrail | ----- |
| Proposed Guardrail | ----- |
| Existing Cable Guiderail | ----- |
| Proposed Cable Guiderail | ----- |
| Equality Symbol | ⊕ |
| Pavement Removal | ----- |

VEGETATION:

| | |
|--------------|-------|
| Single Tree | ☼ |
| Single Shrub | ☼ |
| Hedge | ----- |
| Woods Line | ----- |

| | |
|----------|------------|
| Orchard | ☼ |
| Vineyard | □ Vineyard |

EXISTING STRUCTURES:

| | |
|--|---------------|
| MAJOR: | |
| Bridge, Tunnel or Box Culvert | ----- CONC |
| Bridge Wing Wall, Head Wall and End Wall | ----- CONC WW |
| MINOR: | |
| Head and End Wall | ----- CONC HW |
| Pipe Culvert | ----- |
| Footbridge | ----- |
| Drainage Box: Catch Basin, DI or JB | □ CB |
| Paved Ditch Gutter | ----- |
| Storm Sewer Manhole | ⊙ |
| Storm Sewer | ----- S |

UTILITIES:

| | |
|--------------------------------|---------|
| POWER: | |
| Existing Power Pole | ● |
| Proposed Power Pole | ○ |
| Existing Joint Use Pole | ● |
| Proposed Joint Use Pole | ○ |
| Power Manhole | ⊙ |
| Power Line Tower | ⊠ |
| Power Transformer | ⊠ |
| U/G Power Cable Hand Hole | ○ |
| H-Frame Pole | ● |
| U/G Power Line LOS B (S.U.E.*) | ----- P |
| U/G Power Line LOS C (S.U.E.*) | ----- P |
| U/G Power Line LOS D (S.U.E.*) | ----- P |

TELEPHONE:

| | |
|--|------------|
| Existing Telephone Pole | ● |
| Proposed Telephone Pole | ○ |
| Telephone Manhole | ⊙ |
| Telephone Pedestal | ⊠ |
| Telephone Cell Tower | ⊠ |
| U/G Telephone Cable Hand Hole | ○ |
| U/G Telephone Cable LOS B (S.U.E.*) | ----- T |
| U/G Telephone Cable LOS C (S.U.E.*) | ----- T |
| U/G Telephone Cable LOS D (S.U.E.*) | ----- T |
| U/G Telephone Conduit LOS B (S.U.E.*) | ----- TC |
| U/G Telephone Conduit LOS C (S.U.E.*) | ----- TC |
| U/G Telephone Conduit LOS D (S.U.E.*) | ----- TC |
| U/G Fiber Optics Cable LOS B (S.U.E.*) | ----- T FO |
| U/G Fiber Optics Cable LOS C (S.U.E.*) | ----- T FO |
| U/G Fiber Optics Cable LOS D (S.U.E.*) | ----- T FO |

WATER:

| | |
|--------------------------------|-----------------|
| Water Manhole | ⊙ |
| Water Meter | ○ |
| Water Valve | ⊗ |
| Water Hydrant | ⊕ |
| U/G Water Line LOS B (S.U.E.*) | ----- W |
| U/G Water Line LOS C (S.U.E.*) | ----- W |
| U/G Water Line LOS D (S.U.E.*) | ----- W |
| Above Ground Water Line | ----- A/G Water |

TV:

| | |
|---------------------------------------|-------------|
| TV Pedestal | ⊠ |
| TV Tower | ⊗ |
| U/G TV Cable Hand Hole | ○ |
| U/G TV Cable LOS B (S.U.E.*) | ----- TV |
| U/G TV Cable LOS C (S.U.E.*) | ----- TV |
| U/G TV Cable LOS D (S.U.E.*) | ----- TV |
| U/G Fiber Optic Cable LOS B (S.U.E.*) | ----- TV FO |
| U/G Fiber Optic Cable LOS C (S.U.E.*) | ----- TV FO |
| U/G Fiber Optic Cable LOS D (S.U.E.*) | ----- TV FO |

GAS:

| | |
|------------------------------|---------------|
| Gas Valve | ◇ |
| Gas Meter | ⊕ |
| U/G Gas Line LOS B (S.U.E.*) | ----- G |
| U/G Gas Line LOS C (S.U.E.*) | ----- G |
| U/G Gas Line LOS D (S.U.E.*) | ----- G |
| Above Ground Gas Line | ----- A/G Gas |

SANITARY SEWER:

| | |
|-------------------------------------|--------------------------|
| Sanitary Sewer Manhole | ⊙ |
| Sanitary Sewer Cleanout | ⊕ |
| U/G Sanitary Sewer Line | ----- SS |
| Above Ground Sanitary Sewer | ----- A/G Sanitary Sewer |
| SS Forced Main Line LOS B (S.U.E.*) | ----- FSS |
| SS Forced Main Line LOS C (S.U.E.*) | ----- FSS |
| SS Forced Main Line LOS D (S.U.E.*) | ----- FSS |

MISCELLANEOUS:

| | |
|--|------------|
| Utility Pole | ● |
| Utility Pole with Base | ⊠ |
| Utility Located Object | ○ |
| Utility Traffic Signal Box | ⊠ |
| Utility Unknown U/G Line LOS B (S.U.E.*) | ----- ?UTL |
| U/G Tank; Water, Gas, Oil | □ |
| Underground Storage Tank, Approx. Loc. | ⊠ UST |
| A/G Tank; Water, Gas, Oil | □ |
| Geoenvironmental Boring | ⊕ |
| U/G Test Hole LOS A (S.U.E.*) | ⊕ |
| Abandoned According to Utility Records | AATUR |
| End of Information | E.O.I. |

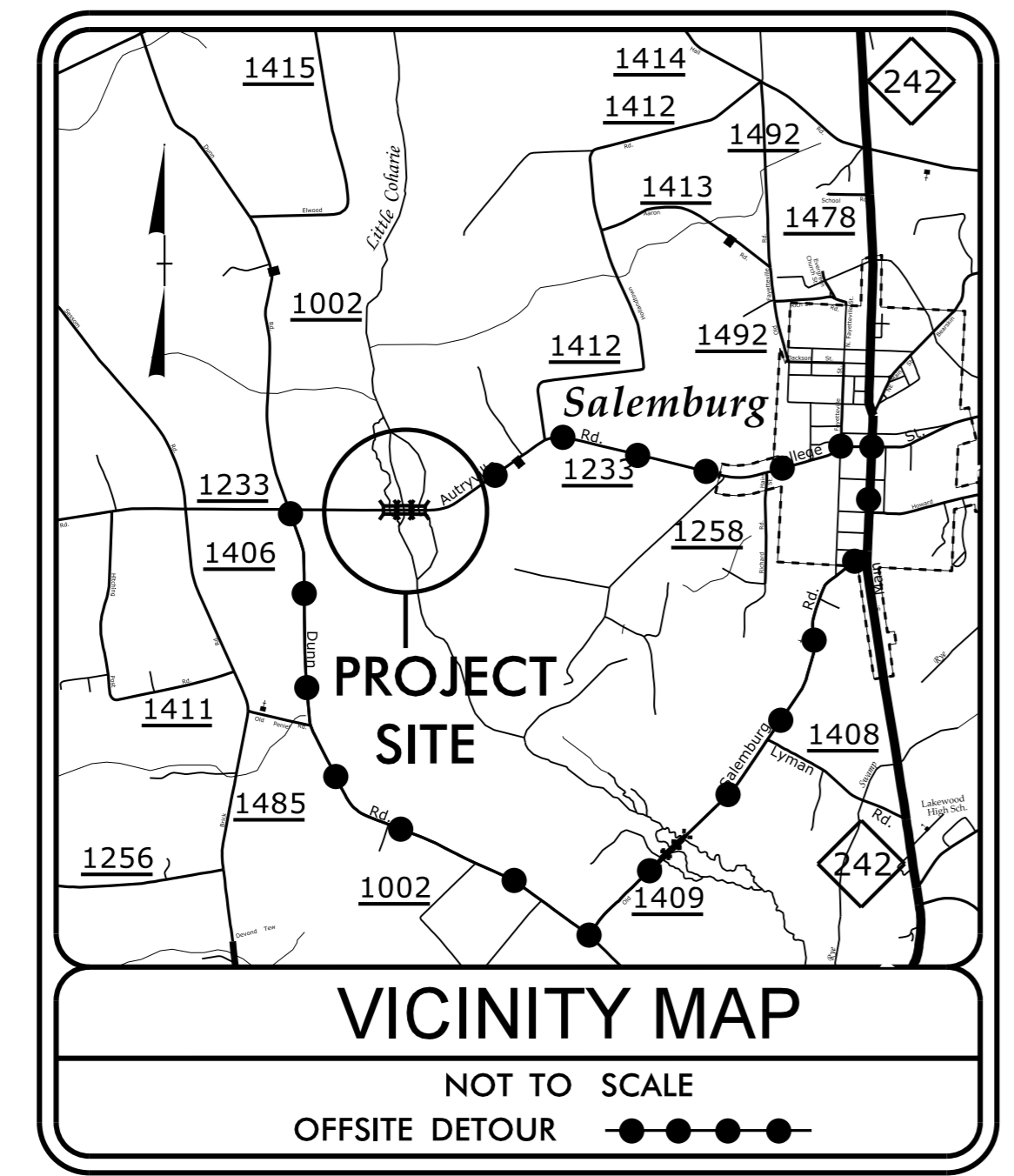
09/08/99

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SAMPSON COUNTY

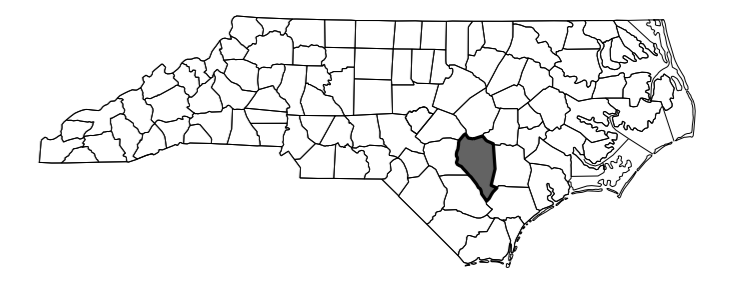
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | B-4814 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 38584.1.2 | BRZ-1233 (6) | PE | |
| 38584.2.1 | BRZ-1233 (6) | R/W & UTIL. | |
| 38584.3.1 | BRZ-1233 (6) | CONST. | |

TIP PROJECT: B-4814

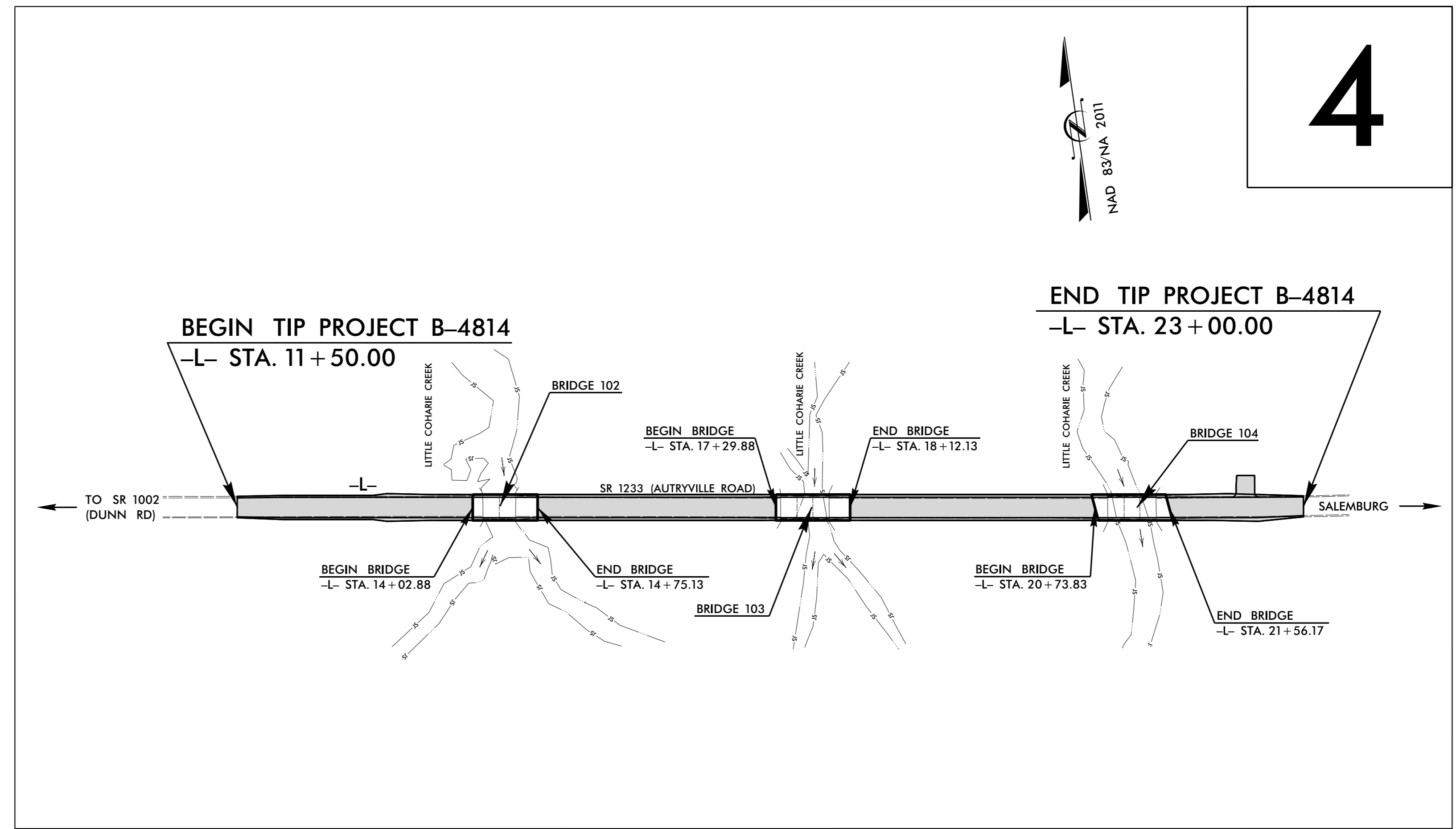


LOCATION: BRIDGES NO. 102, 103, AND 104 OVER LITTLE COHARIE CREEK ON SR 1233 (AUTRYVILLE RD.)

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

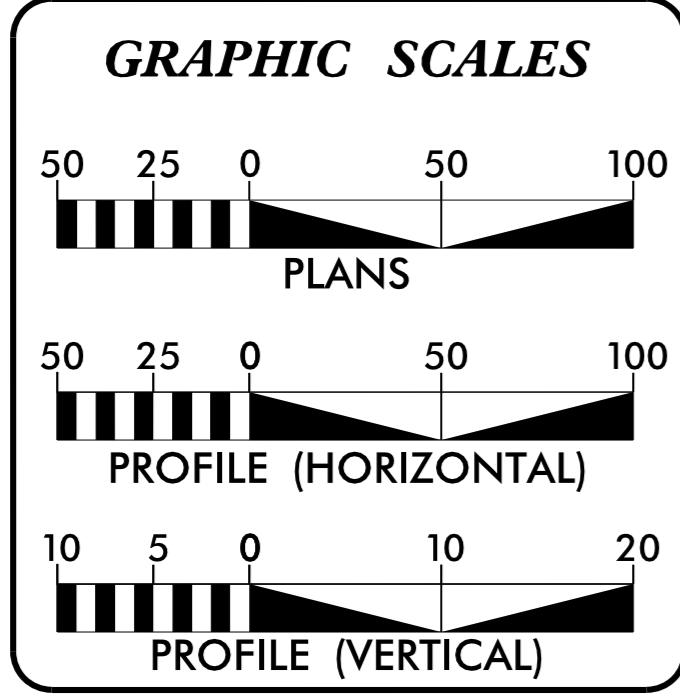


PART 1



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT: C203824



DESIGN DATA

| | |
|------------------------|--------|
| ADT 2016 = | 1,960 |
| ADT 2036 = | 2,740 |
| K = | 12 % |
| D = | 55 % |
| T = | 7 % * |
| V = | 60 MPH |
| * (TTST 2% + DUALS 5%) | |
| FUNC CLASS = | |
| MINOR COLLECTOR | |
| SUBREGIONAL TIER | |

PROJECT LENGTH

| | | |
|--------------------------------------|---|----------|
| LENGTH ROADWAY TIP PROJECT B-4814 | = | 0.173 MI |
| LENGTH STRUCTURES TIP PROJECT B-4814 | = | 0.045 MI |
| TOTAL LENGTH TIP PROJECT B-4814 | = | 0.218 MI |

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 31, 2015

LETTING DATE:
DECEMBER 20, 2016

GARY LOVERING, PE
PROJECT ENGINEER

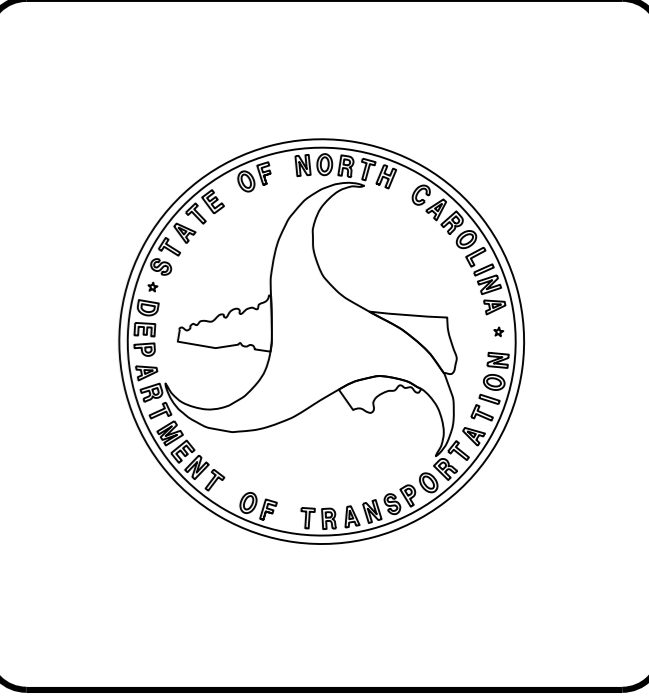
SAM ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

DocuSigned by:
Linda M. Johns
SIGNATURE: Linda M. Johns
P.E.

ROADWAY DESIGN ENGINEER

DocuSigned by:
Gary R. Lovering
SIGNATURE: Gary R. Lovering
P.E.



25-OCT-2016 14:48
R:\Roadway\Proj\B4814_Rdy_1.sh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

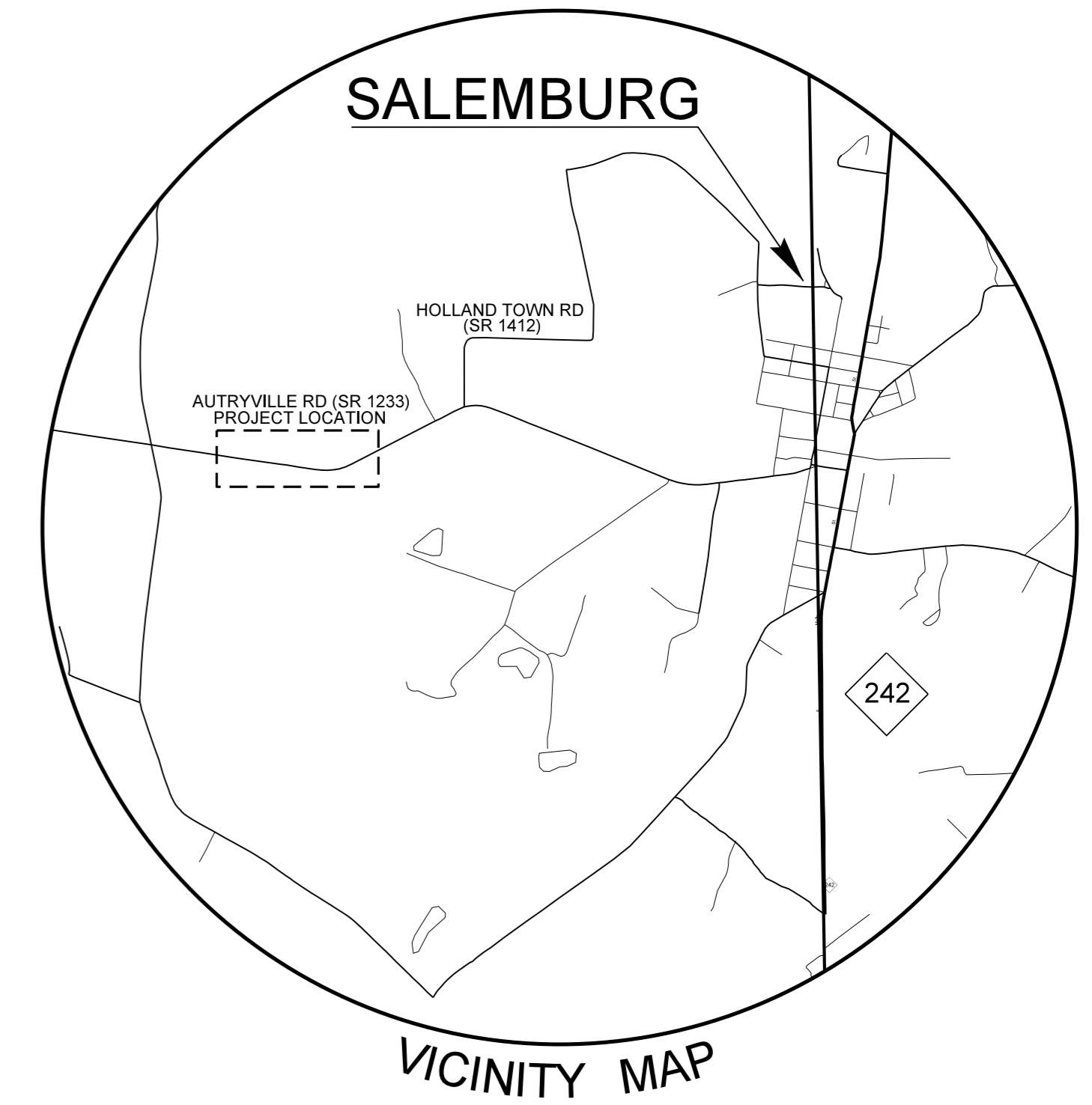
SURVEY CONTROL SHEET B-4814



| BL | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|--------|-------|---------|-------------|--------------|-----------|------------------------|----------|
| B48141 | | GPS R&C | 461373.8760 | 2135276.8210 | 134.59 | OUTSIDE PROJECT LIMITS | |
| B48142 | | GPS R&C | 461207.6090 | 2136359.1660 | 115.90 | OUTSIDE PROJECT LIMITS | |
| BL1 | | TRV R&C | 461148.4010 | 2136966.0060 | 108.18 | OUTSIDE PROJECT LIMITS | |
| BL2 | | TRV R&C | 461058.8150 | 2137572.7220 | 108.62 | 14+06.39 | 16.76 LT |
| BL3 | | TRV R&C | 461011.3140 | 2137890.5550 | 108.31 | 17+27.75 | 15.31 LT |
| BL4 | | TRV R&C | 460961.0740 | 2138238.4840 | 108.74 | 20+79.29 | 15.46 LT |
| BL5 | | TRV R&C | 460894.5240 | 2138877.0220 | 126.31 | OUTSIDE PROJECT LIMITS | |
| B48143 | | GPS R&C | 461151.8150 | 2139496.1410 | 143.17 | OUTSIDE PROJECT LIMITS | |
| B48144 | | GPS R&C | 461586.2910 | 2140334.3800 | 155.70 | OUTSIDE PROJECT LIMITS | |

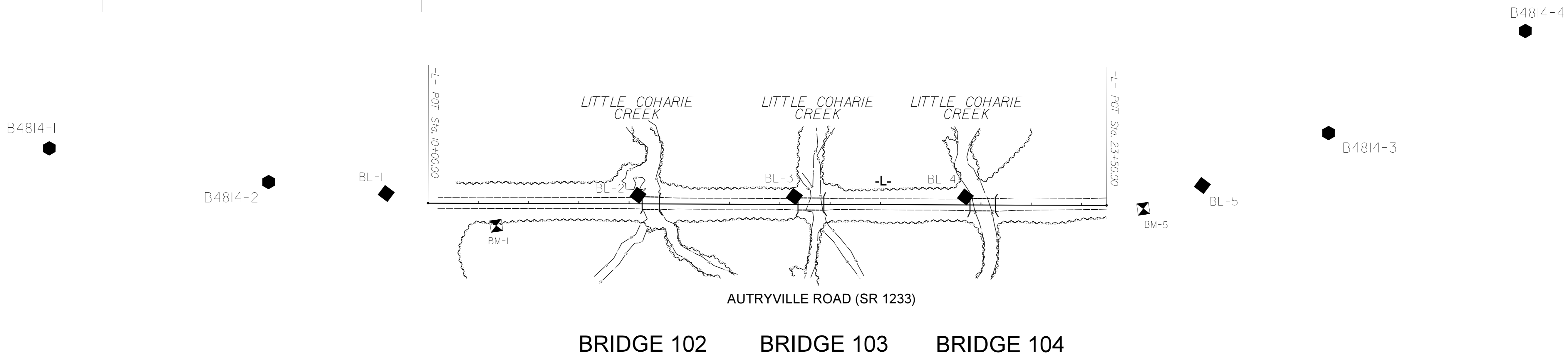
 BM-1 ELEVATION = 104.80
 N 461037 E 2137275
 BL STA 25+27 64' RT
 R/R SPIKE SET IN 12" GUM

 BM-5 ELEVATION = 124.78
 N 460863 E 2138758
 BL STA 38+26 116' RT
 R/R SPIKE SET IN 18" OAK



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4814-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 461207.609(++) EASTING: 2136359.166(++) ELEVATION: 115.90(++) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0001202500 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4814-2" TO -EL- STATION 10+00 IS S 18 19 52.01 E 361.76' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



NOTE: DRAWING NOT TO SCALE

6/2/99

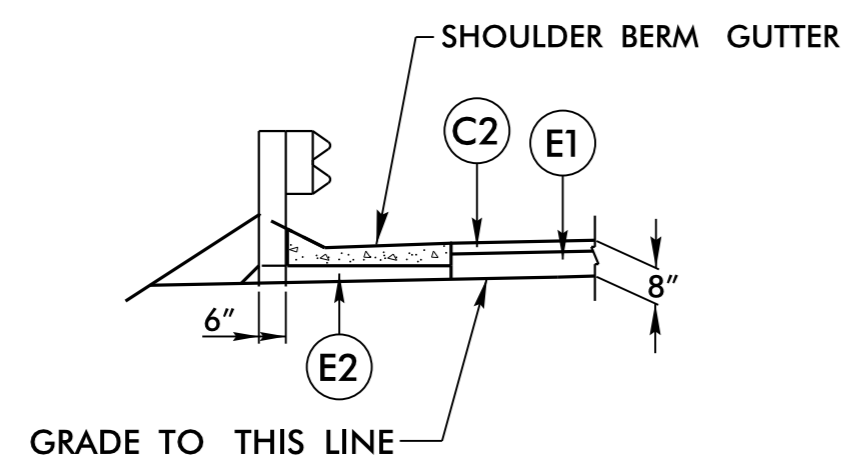
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PAVEMENT SCHEDULE

FINAL PAVEMENT DESIGN

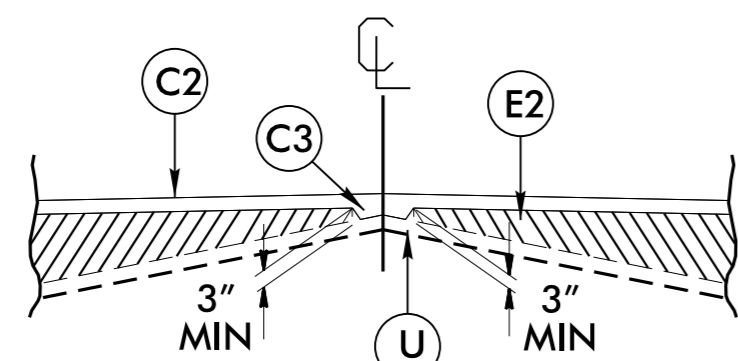
| | |
|----|--|
| C1 | PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. |
| C2 | PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH |
| E1 | PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. |
| E2 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT GREATER THAN 5 1/2" IN DEPTH OR LESS THAN 3" IN DEPTH. |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT |
| W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING) |

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

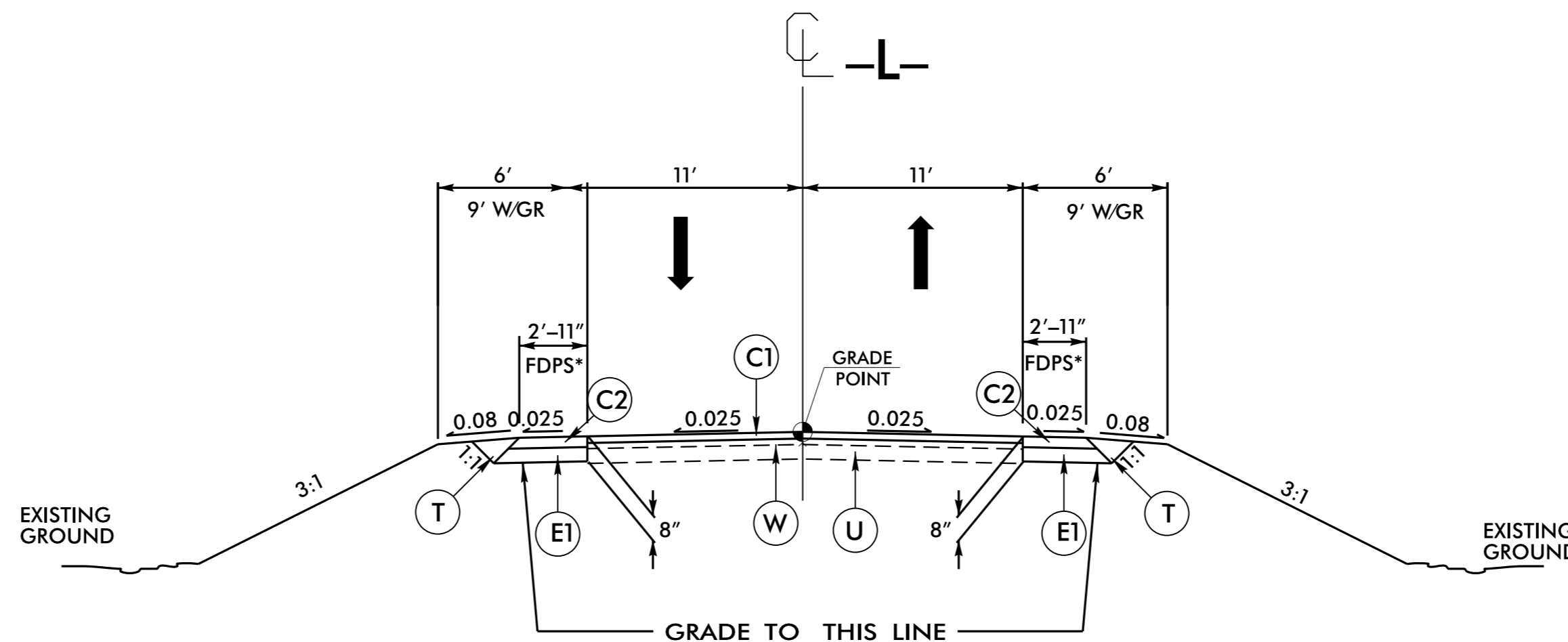


DETAIL SHOWING SHOULDER BERM GUTTER

- L- STA. 13+67.00 TO -L- STA. 13+92.00 (LT & RT)
- L- STA. 14+86.00 TO -L- STA. 17+19.00 (LT & RT)
- L- STA. 18+23.00 TO -L- STA. 20+59.88 (LT)
- L- STA. 18+23.00 TO -L- STA. 20+66.72 (RT)
- L- STA. 21+70.11 TO -L- STA. 21+96.00 (RT)



Detail Showing Method of Wedging

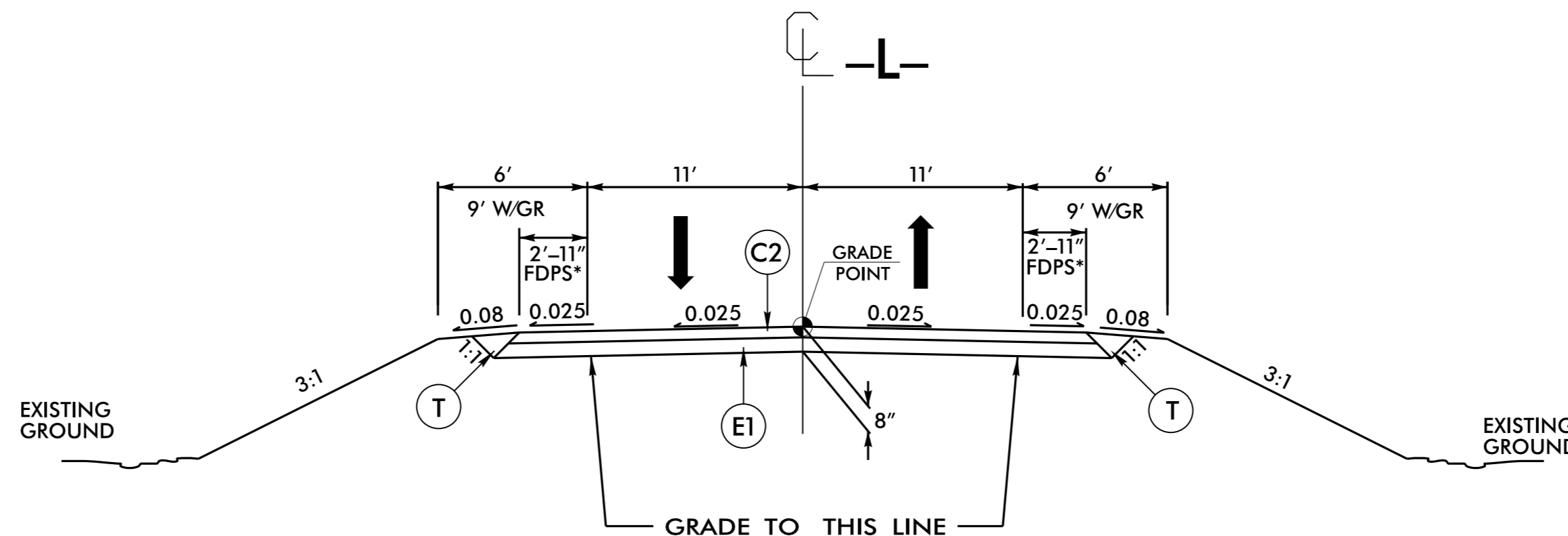


TYPICAL SECTION NO. 1

USE TYPICAL SECTION 1 AS FOLLOWS:

- L- STA. 11+50.00 TO -L- STA. 13+35.00
- L- STA. 22+20.00 TO -L- STA. 23+00.00

* PAVE TO FACE OF GUARDRAIL

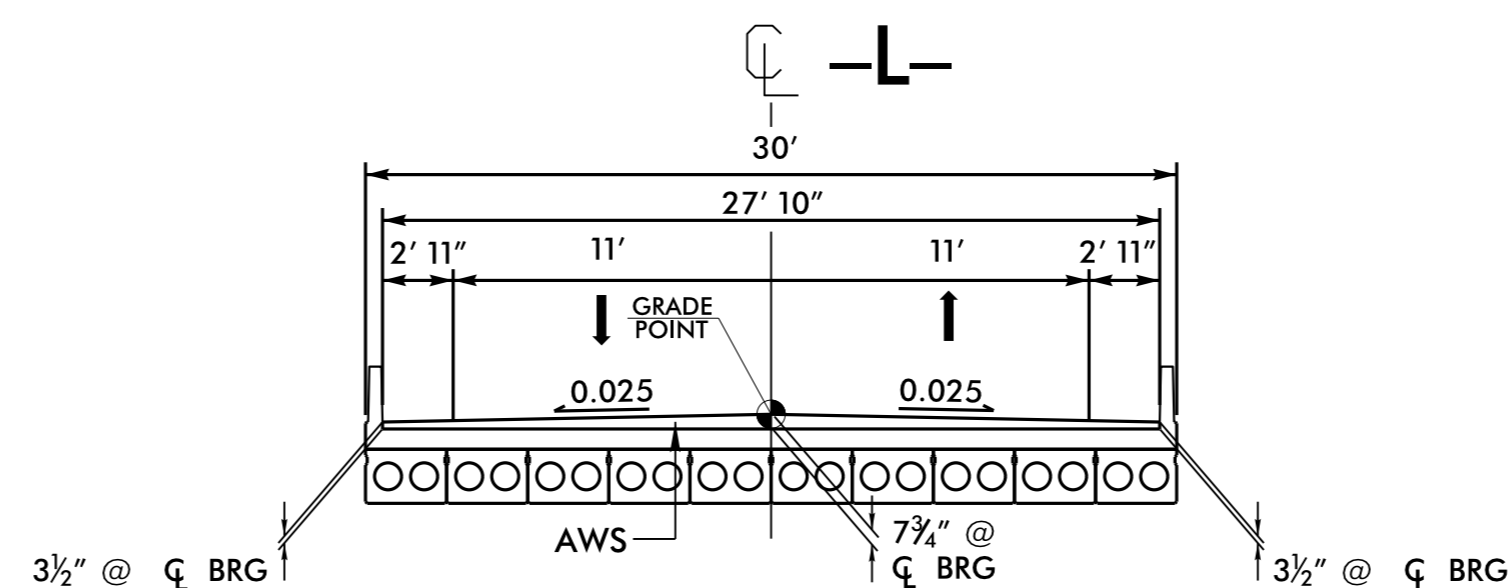


TYPICAL SECTION NO. 2

USE TYPICAL SECTION 2 AS FOLLOWS:

- L- STA. 13+35.00 TO -L- STA. 14+02.88 (BEGIN BRIDGE)
- L- STA. 14+75.13 (END BRIDGE) TO -L- STA. 17+29.88 (BEGIN BRIDGE)
- L- STA. 18+12.13 (END BRIDGE) TO -L- STA. 20+73.83 (BEGIN BRIDGE)
- L- STA. 21+56.17 (END BRIDGE) TO -L- STA. 22+20.00

* PAVE TO FACE OF GUARDRAIL

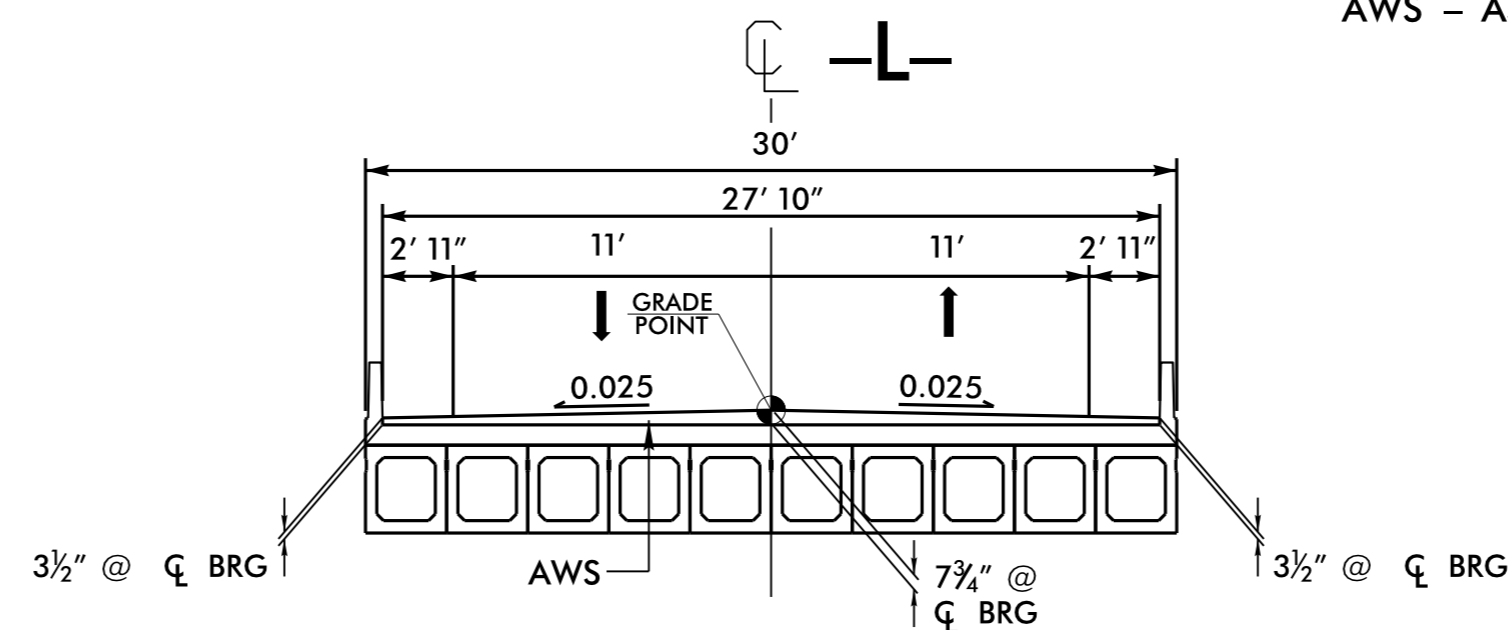


TYPICAL SECTION NO. 3

USE TYPICAL SECTION 3 AS FOLLOWS:

- L- STA. 14+02.88 (BEGIN BRIDGE) TO -L- STA. 14+75.13 (END BRIDGE)

AWS - ASPHALT WEARING SURFACE



TYPICAL SECTION NO. 4

USE TYPICAL SECTION 4 AS FOLLOWS:

- L- STA. 17+29.88 (BEGIN BRIDGE) TO -L- STA. 18+12.13 (END BRIDGE)
- L- STA. 20+73.83 (BEGIN BRIDGE) TO -L- STA. 21+56.17 (END BRIDGE)

COMPUTED BY: JDG JDG DATE: 7/20/2016
 CHECKED BY: RJD RJD DATE: 8/15/2016

PROJECT NO. SHEET NO.
 B-4814 3G-1

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

| LINE | Station | Station | Location LT/RT/CL | Drain Type* UD/BD/SD | LF |
|------|-------------|---------|----------------------|-------------------------|-----|
| | | | | | |
| | | | | | |
| | CONTINGENCY | | | SD | 500 |
| | | | | | |
| | | | | TOTAL LF: | 500 |

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

| LINE | Station | Station | Aggregate Type ASU/AST | Shallow Undercut CY | Class IV Subgrade Stabilization TONS | Geotextile for Soil Stabilization SY | Stabilizer Aggregate TONS | Class IV Aggregate Stabilization TONS |
|------|-------------|---------|------------------------------|------------------------|---|---|---------------------------------|--|
| | | | | | | | | |
| | | | | | | | | |
| | CONTINGENCY | | ASU | 100 | 200 | 300 | | |
| | | | | | | | | |
| | | | TOTAL CY/TONS/SY: | 100 | 200 | 300* | | |

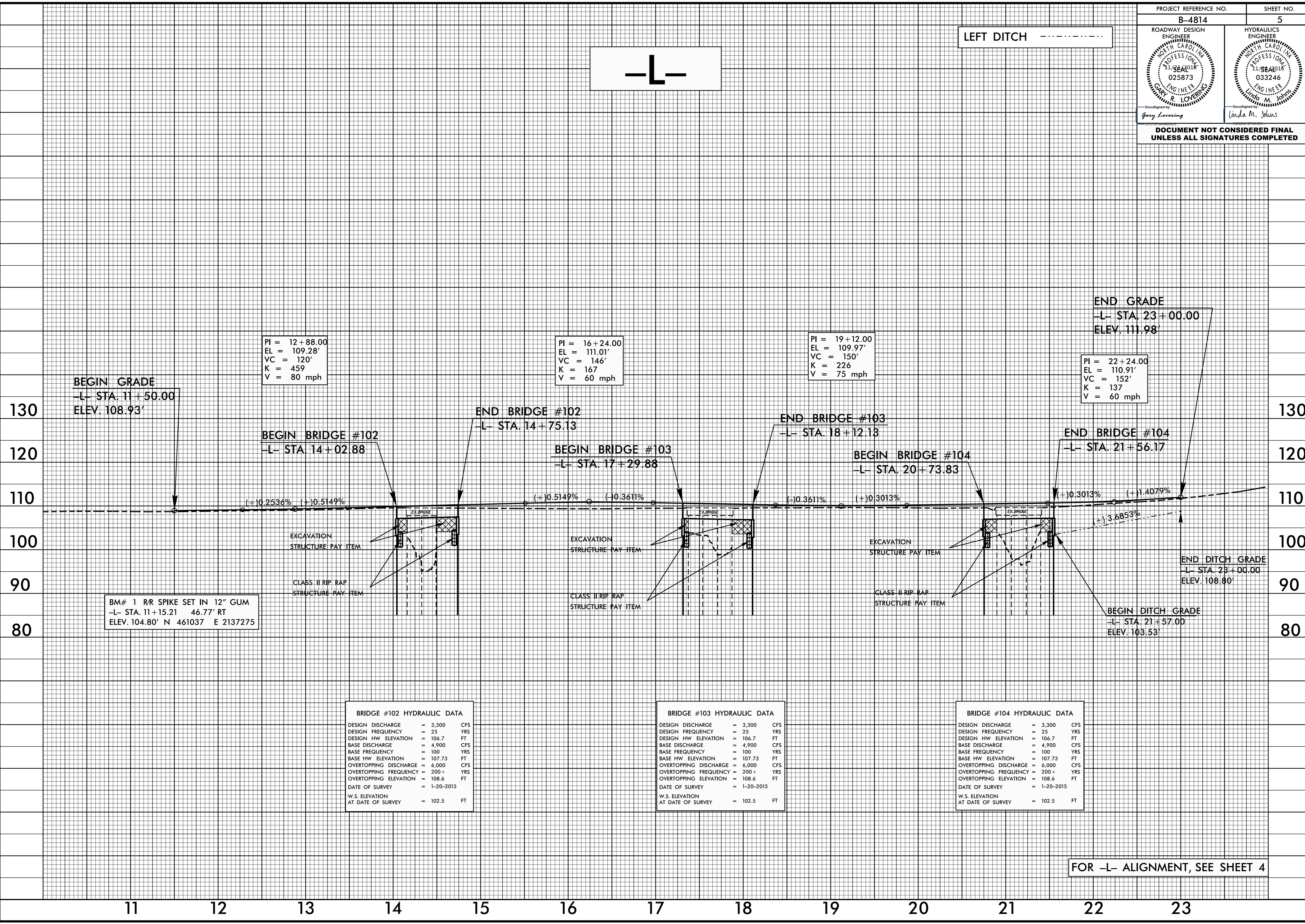
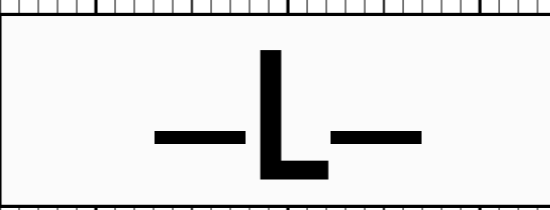
ASU = Aggregate Subgrade, AST = Aggregate Stabilization

*Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

5/14/99

| | |
|---|---|
| PROJECT REFERENCE NO. B-4814 | SHEET NO. 5 |
| ROADWAY DESIGN ENGINEER GARY R. LOVERING 025873 11/SEA016 | HYDRAULICS ENGINEER LINDA M. JOHNS 033246 11/SEA016 |
| <p>DocuSigned by: Gary Lovring</p> | |
| <p>DocuSigned by: Linda M. Johns</p> | |
| <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> | |

LEFT DITCH - - - - -



BEGIN GRADE
-L- STA. 11+50.00
ELEV. 108.93'

PI = 12+88.00
EL = 109.28'
VC = 120'
K = 459
V = 80 mph

PI = 16+24.00
EL = 111.01'
VC = 146'
K = 167
V = 60 mph

PI = 19+12.00
EL = 109.97'
VC = 150'
K = 226
V = 75 mph

PI = 22+24.00
EL = 110.91'
VC = 152'
K = 137
V = 60 mph

BM# 1 RR SPIKE SET IN 12" GUM
-L- STA. 11+15.21 46.77' RT
ELEV. 104.80' N 461037 E 2137275

BEGIN BRIDGE #102
-L- STA. 14+02.88

END BRIDGE #102
-L- STA. 14+75.13

BEGIN BRIDGE #103
-L- STA. 17+29.88

END BRIDGE #103
-L- STA. 18+12.13

BEGIN BRIDGE #104
-L- STA. 20+73.83

END BRIDGE #104
-L- STA. 21+56.17

END GRADE
-L- STA. 23+00.00
ELEV. 111.98'

END DITCH GRADE
-L- STA. 23+00.00
ELEV. 108.80'

BEGIN DITCH GRADE
-L- STA. 21+57.00
ELEV. 103.53'

BRIDGE #102 HYDRAULIC DATA

| | | |
|----------------------------------|-------------|-----|
| DESIGN DISCHARGE | = 3,300 | CFS |
| DESIGN FREQUENCY | = 25 | YRS |
| DESIGN HW ELEVATION | = 106.7 | FT |
| BASE DISCHARGE | = 4,900 | CFS |
| BASE FREQUENCY | = 100 | YRS |
| BASE HW ELEVATION | = 107.73 | FT |
| OVERTOPPING DISCHARGE | = 6,000 | CFS |
| OVERTOPPING FREQUENCY | = 200+ | YRS |
| OVERTOPPING ELEVATION | = 108.6 | FT |
| DATE OF SURVEY | = 1-20-2015 | |
| W.S. ELEVATION AT DATE OF SURVEY | = 102.5 | FT |

BRIDGE #103 HYDRAULIC DATA

| | | |
|----------------------------------|-------------|-----|
| DESIGN DISCHARGE | = 3,300 | CFS |
| DESIGN FREQUENCY | = 25 | YRS |
| DESIGN HW ELEVATION | = 106.7 | FT |
| BASE DISCHARGE | = 4,900 | CFS |
| BASE FREQUENCY | = 100 | YRS |
| BASE HW ELEVATION | = 107.73 | FT |
| OVERTOPPING DISCHARGE | = 6,000 | CFS |
| OVERTOPPING FREQUENCY | = 200+ | YRS |
| OVERTOPPING ELEVATION | = 108.6 | FT |
| DATE OF SURVEY | = 1-20-2015 | |
| W.S. ELEVATION AT DATE OF SURVEY | = 102.5 | FT |

BRIDGE #104 HYDRAULIC DATA

| | | |
|----------------------------------|-------------|-----|
| DESIGN DISCHARGE | = 3,300 | CFS |
| DESIGN FREQUENCY | = 25 | YRS |
| DESIGN HW ELEVATION | = 106.7 | FT |
| BASE DISCHARGE | = 4,900 | CFS |
| BASE FREQUENCY | = 100 | YRS |
| BASE HW ELEVATION | = 107.73 | FT |
| OVERTOPPING DISCHARGE | = 6,000 | CFS |
| OVERTOPPING FREQUENCY | = 200+ | YRS |
| OVERTOPPING ELEVATION | = 108.6 | FT |
| DATE OF SURVEY | = 1-20-2015 | |
| W.S. ELEVATION AT DATE OF SURVEY | = 102.5 | FT |

FOR -L- ALIGNMENT, SEE SHEET 4

14-SEP-2016 10:31 AM B4814_Rdy-p1.dgn