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09/05/19

**PROJECT: 17BP.14.R.143**

**CONTRACT: DN00123**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

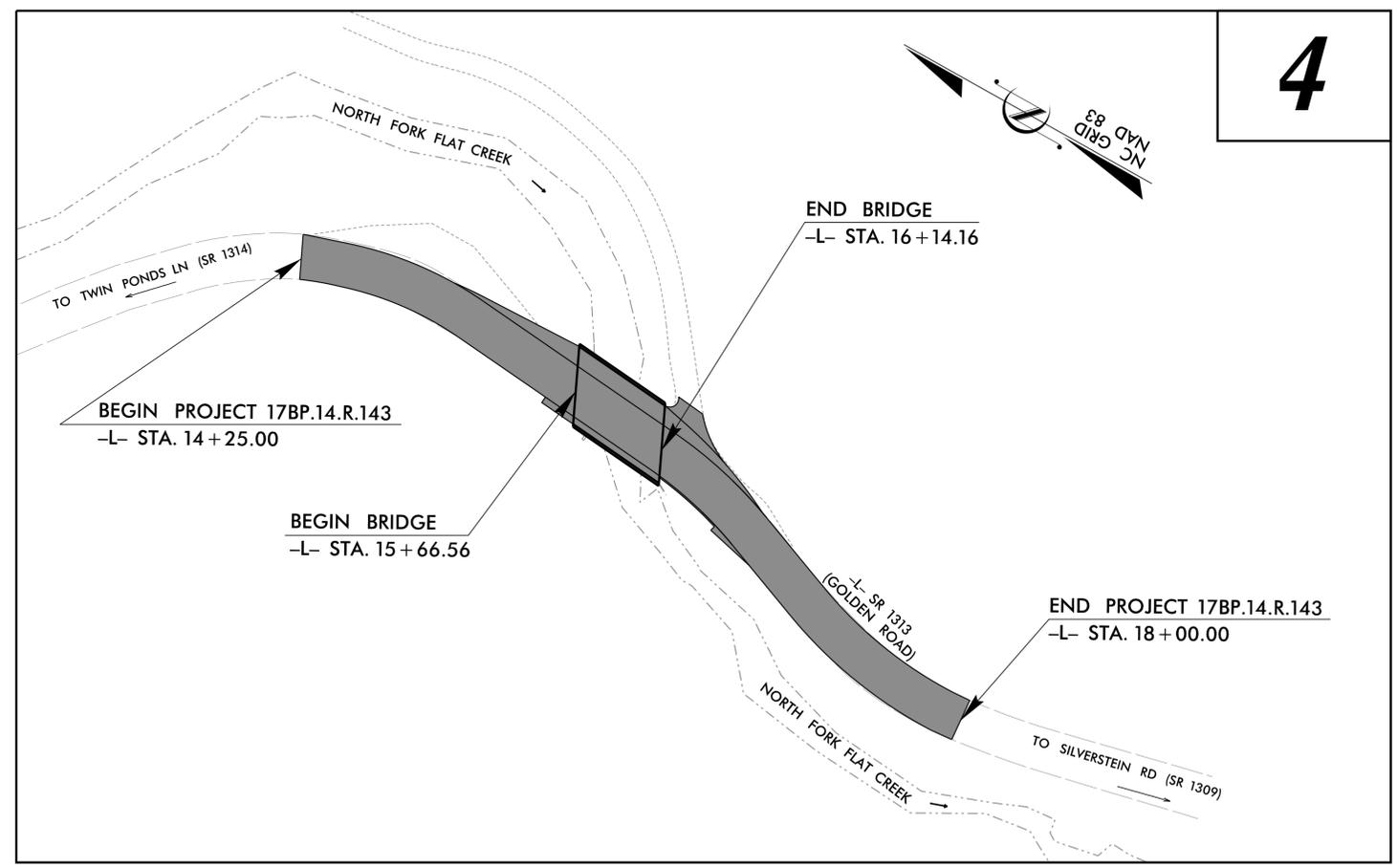
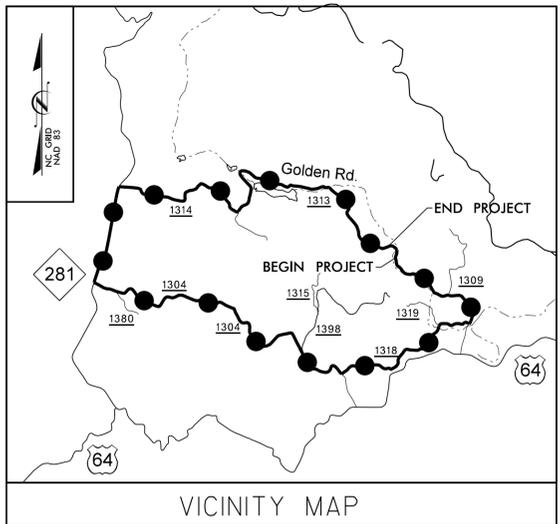
**TRANSYLVANIA COUNTY**

**LOCATION: BRIDGE NO. 064 OVER NORTH FORK FLAT CREEK  
ON SR 1313 (GOLDEN ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.143	1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45360.1.36	BRZ-1313(5)	PE	
45360.2.36	BRZ-1313(5)	RW	
17BP.14.R.143		CONST.	

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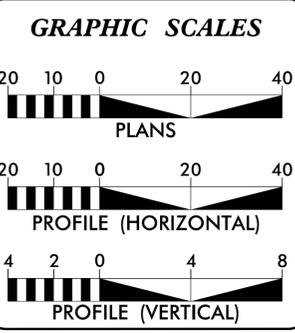
**4**

**V&M**  
**Vaughn & Melton**  
Consulting Engineers  
Asheville, North Carolina  
828-253-2796

- Boone, NC 828-355-9933
- Tri-Cities, TN 423-467-8401
- Knoxville, TN 865-546-5800
- Spartanburg, SC 864-574-4775
- Charleston, SC 843-974-5650
- Middlesboro, KY 606-248-6600
- Raleigh, NC 919-977-9455
- Charlotte, NC 704-357-0488
- Atlanta, GA 770-627-3509

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This project does not have controlled access.



**DESIGN DATA**

ADT 2010 = 290
ADT 2025 = 580
T = 6 %
V = 20 MPH
FUNC CLASS = LOCAL SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY PROJECT 17BP.14.R.143 =	0.062 MI.
LENGTH STRUCTURE PROJECT 17BP.14.R.143 =	0.009 MI.
TOTAL LENGTH OF PROJECT 17BP.14.R.143 =	0.071 MI.

Prepared in the Office of:  
**VAUGHN & MELTON**  
1318-F PATTON AVE.  
ASHEVILLE NC, 28806  
FOR THE NORTH CAROLINA DIVISION OF HIGHWAYS

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
DECEMBER 2, 2014

**LETTING DATE:**

**REECE SCHULER, PE**  
PROJECT ENGINEER

**PHILLIP SCHULER, PE**  
PROJECT DESIGN ENGINEER

**JOSH DEYTON, PE**  
DIVISION 14 BRIDGE PROGRAM MANAGER

**HYDRAULICS ENGINEER**

5/6/2016

DocuSigned by:  
Bradley S. Kuhn, PE  
730412120A3145A...

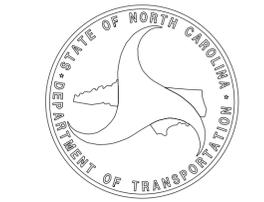
SIGNATURE:

**ROADWAY DESIGN ENGINEER**

5/6/2016

DocuSigned by:  
Reece M. Schuler  
16634024C7824FC...

SIGNATURE:



\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DDN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-A	MODIFIED CONCRETE FLUME DETAIL
3-A	SUMMARY OF DRAINAGE QUANTITIES, SUMMARY OF GUARDRAIL, AND ASPHALT PAVEMENT REMOVAL SUMMARY
3-B	EARTHWORK SUMMARY
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS
PM-1	PAVEMENT MARKING PLAN
SD-1	SPECIAL SIGN DESIGN
EC-1 THRU EC-4	EROSION CONTROL PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-0	CROSS-SECTION SUMMARY
X-1 THRU X-7	CROSS-SECTIONS
S-1 THRU S-17	STRUCTURE PLANS

**GENERAL NOTES:**

2012 SPECIFICATIONS  
EFFECTIVE: 01-17-12

**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 BY THE ENGINEER AT THEIR BEGINNING AND ENDING AND AT STRUCTURES IN ORDER TO SECURE A PROPER TIE-IN.

**CLEARING:**

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

**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.

**UNDERDRAINS:**

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 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 NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "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: HAYWOOD EMC AND COMPORIUM COMMUNICATIONS.

**RIGHT-OF-WAY MARKERS:**

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT IN ACCORDANCE WITH SECTION 801 OF THE 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

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 17, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
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
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type "B"
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames
840.27	Brick Grated Drop Inlet Type "B"
840.45	Precase Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

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# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

## CONVENTIONAL PLAN SHEET SYMBOLS

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

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	① 123
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 RW 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	--- E --- ◆

### 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	○ S
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 ---

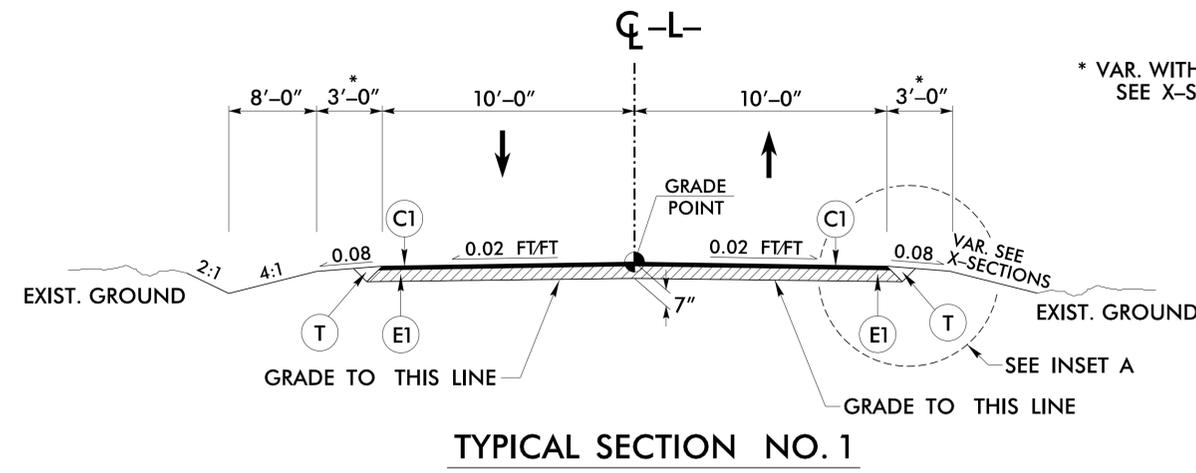
### MISCELLANEOUS:

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.	⊠
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.



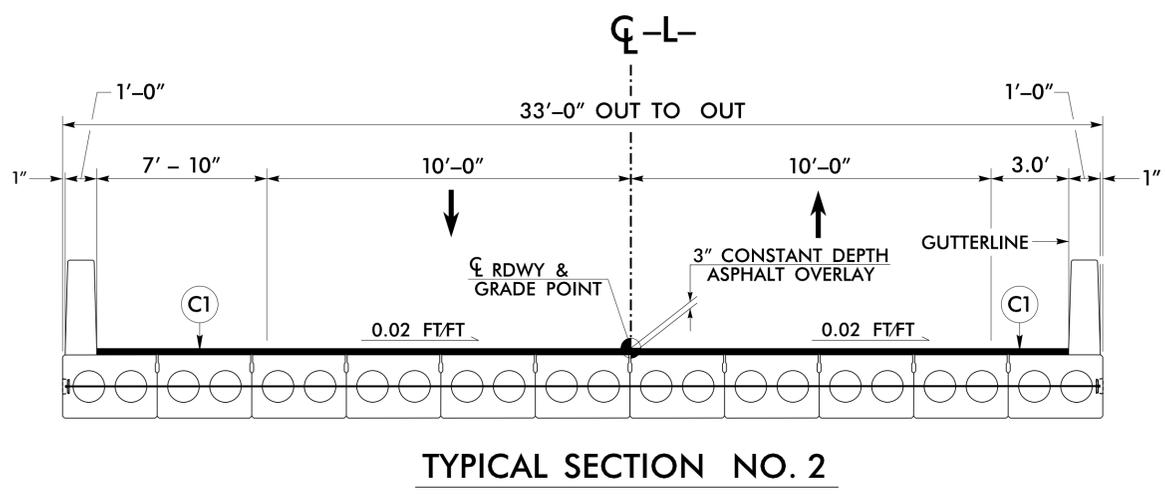
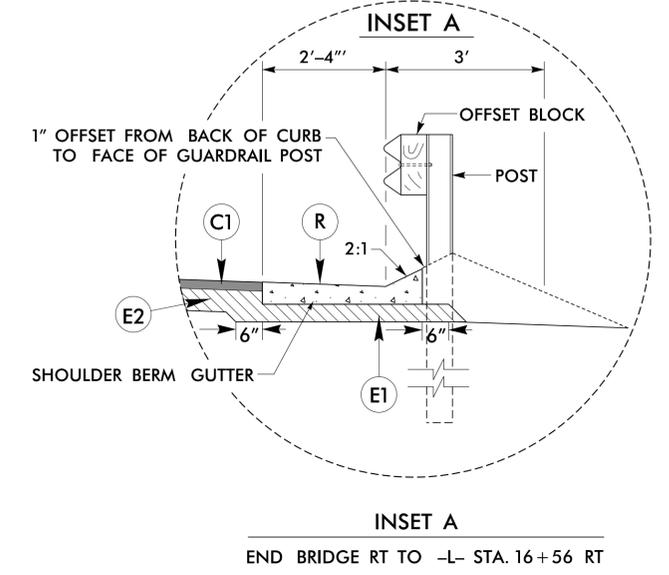
6/2/16

PROJECT REFERENCE NO. 17BP14RJ43	SHEET NO. 2
ROADWAY DESIGN ENGINEER KARL M. SCHUBERT 5/6/2016	PAVEMENT DESIGN ENGINEER KARL M. SCHUBERT 5/6/2016
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



**USE TYPICAL SECTION NO. 1**  
 -L- STA. 14+25.00 TO -L- STA. 15+66.56 (BEGIN BRIDGE)  
 -L- STA. 16+14.16 (END BRIDGE) TO -L- STA. 18+00.00

NOTE: Pave Existing Driveway Lt. -L- Sta. 16+15 With 3" S9.5B to Limits of Construction as Shown on Plans



**USE TYPICAL SECTION NO. 2**  
 -L- STA. 15+66.56 (BEGIN BRIDGE) TO  
 -L- STA. 16+14.16 (END BRIDGE)

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 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 LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R	SHOULDER BERM GUTTER (NCDOT STD. DRAWING NO. 846.01)
T	EARTH MATERIAL

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

6/2/16  
 17BP14RJ43  
 2  
 KARL M. SCHUBERT  
 5/6/2016





DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA

**SUMMARY OF EARTHWORK**  
 IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
SUMMARY NO.1					
-L- STA. 14+25 TO STA. 15+66.56 (BEGIN BRIDGE)	26		63	37	
SUBTOTAL SUMMARY NO.1	26		63	37	
SUMMARY NO.2					
-L- STA. 16+14.16 (END BRIDGE) TO STA. 18+00	63		51		12
SUBTOTAL SUMMARY NO.2	63		51		12
PROJECT SUBTOTAL	89		114	37	12
WASTE IN LIEU OF BORROW				-12	-12
PROJECT TOTAL	89			25	
EST. 5% FOR REPLACING TOPSOIL ON BORROW PITS				1	
GRAND TOTAL	90		114	26	
SAY	95			30	

CONTINGENCY ITEMS:  
 INCIDENTAL STONE = 50 TONS  
 UNDERCUT EXCAVATION = 50 CY  
 SELECT GRANULAR MATERIAL = 50 CY  
 CLASS IV SUBGRADE STABILIZATION = 50 TONS  
 GEOTEXTILE FOR SOIL STABILIZATION = 50 SY

Approximate quantities only. Unclassified excavation, borrow excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the contract lump sum price for "grading".

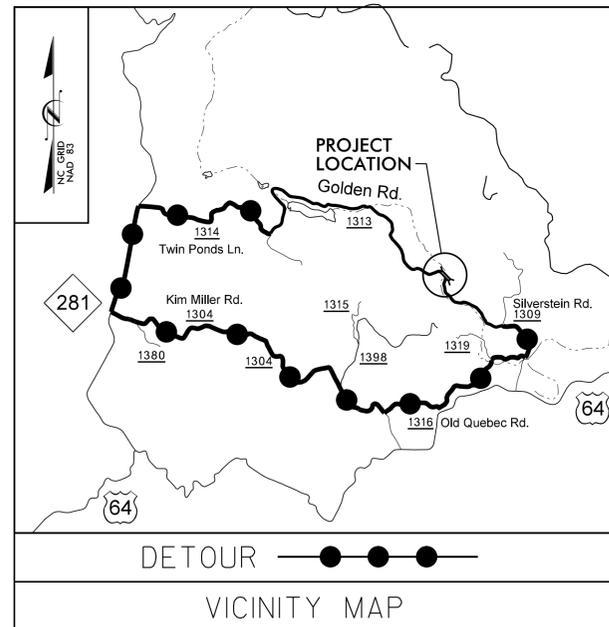


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**TRANSYLVANIA COUNTY**

**DIVISION 14**



**LOCATION: BRIDGE NO. 064 OVER NORTH FORK FLAT CREEK  
ON SR 1313 (GOLDEN ROAD)**

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, LEGEND, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES AND TRANSPORTATION OPERATIONS
TMP-2	TEMPORARY TRAFFIC CONTROL DETAIL, PHASING NOTES, DETOUR SIGNING AND ROAD CLOSURE
PM-1	PAVEMENT MARKING PLAN
SD-1	SPECIAL SIGN DESIGN

**LEGEND**

**GENERAL**

← DIRECTION OF TRAFFIC FLOW

■ WORK AREA

**TRAFFIC CONTROL DEVICES**

▨ BARRICADE (TYPE III)

**TEMPORARY SIGNING**

┌ STATIONARY SIGN

SHEET NO.  
TMP-1

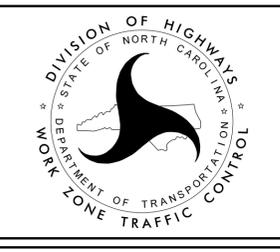
**PROJECT: 17BP.14.R.143**

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**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1580 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1580  
1020 BIRCH RIDGE DRIVE, RALEIGH, NC 27610 (DELIVERY)  
PHONE: (919) 250-4094 FAX: (919) 250-4098

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
LLOYD D. BROWN, P.E. TRAFFIC CONTROL PROJECT ENGINEER  
PHILLIP SCHULER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
PHILLIP SCHULER, P.E. TRAFFIC CONTROL DESIGN ENGINEER



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Consulting Engineers  
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**PROJECT ENGINEER** LLOYD D. BROWN, P.E.  
**DESIGN ENGINEER** PHILLIP SCHULER, P.E.

**APPROVED:** *Lloyd D. Brown*  
**DATE:** 5/6/2016

**SEAL**

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
\$\$\$\$\$ USER NAME \$\$\$\$\$\$  
\$\$\$\$\$ \$\$\$\$\$\$

## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE & MULTI-LANE
1205.12	PAVEMENT MARKINGS - BRIDGES

## TRANSPORTATION OPERATIONS

### CONSTRUCTION

REMOVE AND REPLACE EXISTING STRUCTURE ALONG THE EXISTING ROADWAY ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

### TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED OFF SITE DURING THE CONSTRUCTION PERIOD.

THE OFF SITE DETOUR WILL INCLUDE SR 1309 (SILVERSTEIN ROAD), SR 1316 (OLD QUEBEC ROAD), SR 1304 (KIM MILLER ROAD), NC 281, AND SR 1314 (TWIN PONDS LANE), (SEE SHEET TMP-2).

## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

### TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- B) PROVIDE PERMANENT SIGNING.
- C) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.  
  
PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- D) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.  
  
COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- E) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

- F) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R-11-2 ATTACHED OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

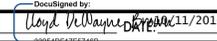
### PAVEMENT MARKINGS AND MARKERS

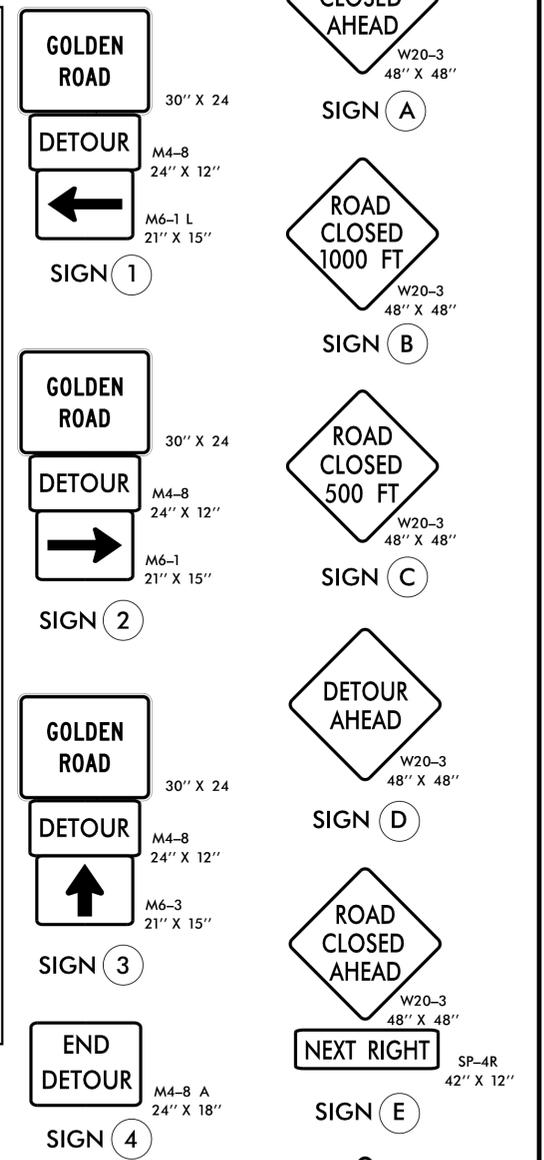
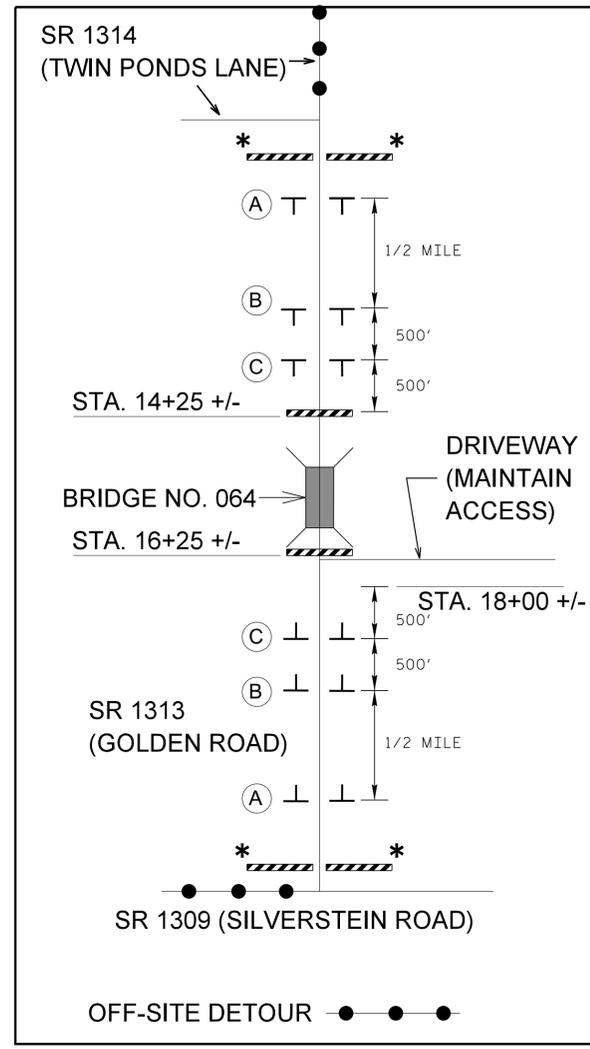
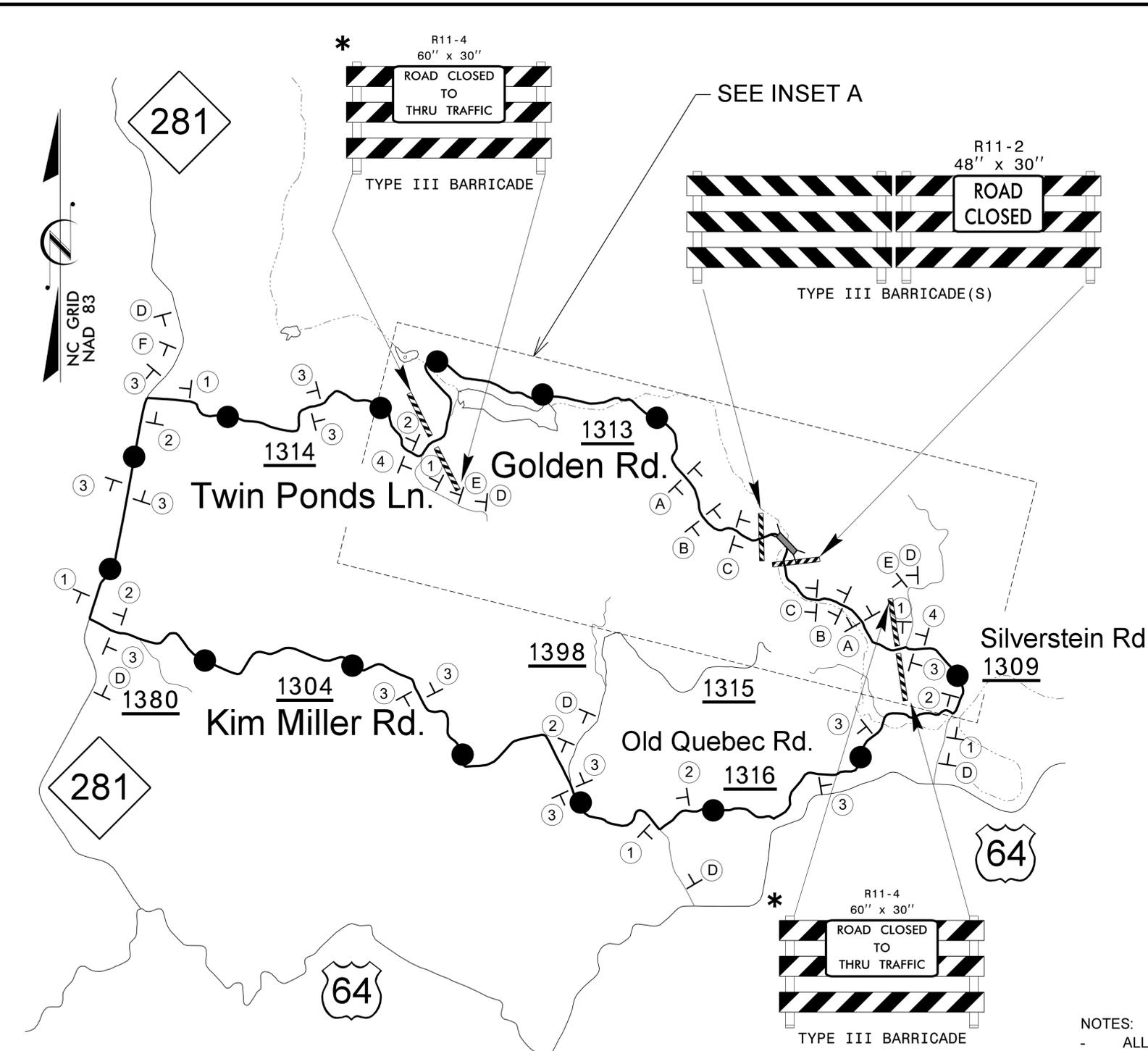
- G) INSTALL PAVEMENT MARKINGS (PAINT) ON THE FINAL SURFACE OF THE ENTIRE PROJECT.
- H) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- I) FINAL PAVEMENT MARKING APPLICATIONS OF PAINT SHALL BE PLACED IN TWO APPLICATIONS

## LOCAL NOTES

- 1. NOTIFY TRANSYLVANIA COUNTY EMERGENCY SERVICES AND PUBLIC SCHOOLS AT LEAST 30 DAYS PRIOR TO ROAD CLOSURE.

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

<p>APPROVED:  11/2014</p>		
<p><b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b></p>		



- NOTES:**
- ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.
  - ALL DETOUR SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.
  - TRAFFIC CONTROL DEVICES (A) THROUGH (F) SHALL BE INSTALLED ACCORDING TO ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9.
  - TRAFFIC CONTROL DEVICES (1) AND (4) SHALL BE INSTALLED AS PER ENGINEER'S INSTRUCTIONS, AND AS SHOWN HEREON.
  - \* SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9 AND 2 OF 9, FOR ADDITIONAL WORK ZONE SIGNS.

- PHASING**
- STEP 1:** - INSTALL OFF-SITE DETOUR ROUTE SIGN ASSEMBLIES FOR THE CLOSING OF SR 1313 ( GOLDEN ROAD, -L- ).
- USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEETS 1 OF 9 AND 2 OF 9, CLOSE SR 1313 ( GOLDEN ROAD, -L- ) TO THRU TRAFFIC.
  - MAINTAIN ACCESS TO DRIVEWAY SOUTHEAST OF EXISTING BRIDGE STRUCTURE NO. 064 THROUGHOUT CONSTRUCTION.
- STEP 2:** - REMOVE THE EXISTING STRUCTURE AND CONSTRUCT THE PROPOSED STRUCTURE AND ROADWAY UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS ON SR 1313 ( GOLDEN ROAD, -L- ) FROM STATION 14+25 +/- -L- TO STATION 18+00 +/- -L-. (SEE CONSTRUCTION PLANS).
- STEP 3:** - REMOVE ALL TRAFFIC CONTROL DEVICES, SIGNING AND DETOUR ROUTE SIGNING.
- OPEN SR 1313 ( GOLDEN ROAD, -L- ) TO FINAL TRAFFIC PATTERN.

**V&M**  
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 Boone, NC 828-355-9933  
 Tri-Cities, TN 423-467-8401  
 Knoxville, TN 865-546-5800  
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APPROVED BY: *Boyd W. Brown* DATE: 5/6/2016

SEAL

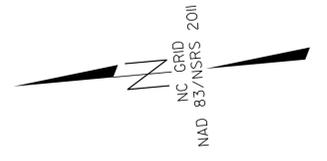
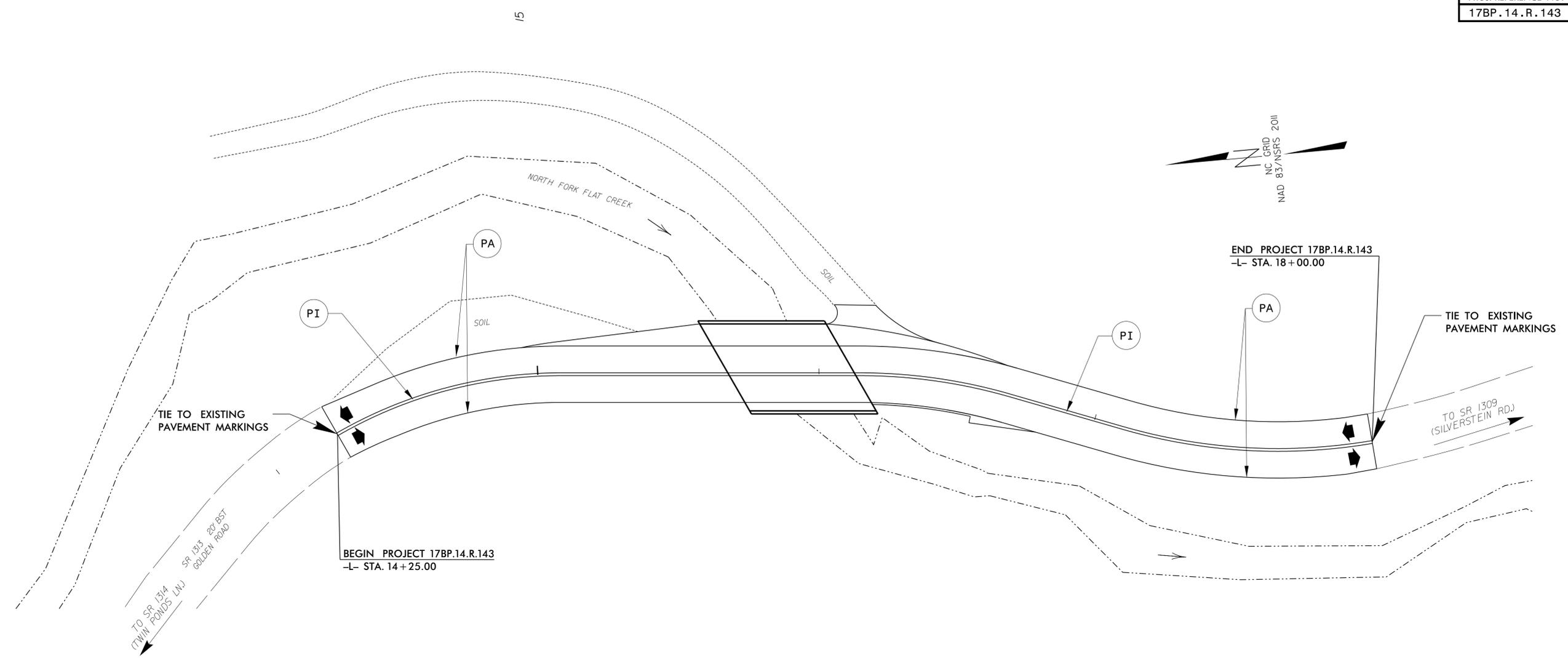
PROFESSIONAL ENGINEER  
LLOYD D. BROWN

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TEMPORARY TRAFFIC CONTROL DETAIL, PHASING NOTES, OFF SITE DETOUR SIGNING AND ROAD CLOSURE

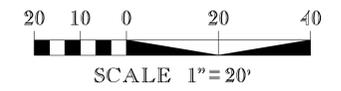
\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
\$\$\$\$\$ DATE \$\$\$\$\$\$  
\$\$\$\$\$ USER NAME \$\$\$\$\$\$  
\$\$\$\$\$



### FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY BREAKDOWN	PAY ITEM	TOTAL QUANTITY
PAVEMENT MARKING LINES				
PA	WHITE SOLID EDGE LINE	750 FT	PAINT (4")	1,500 FT
PI	YELLOW DOUBLE CENTER LINE	750 FT	PAINT (4")	1,500 FT

NOTE: TEMPORARY PAVEMENT MARKINGS = 1 COAT OF PAINT  
 FINAL PAVEMENT MARKINGS = 2 COATS OF PAINT



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Charlotte, North Carolina  
 704-357-0488

Tri-Cities, Tennessee  
 423-467-8401

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 865-546-5800

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 606-248-6600

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APPROVED BY: *Boyd Wayne Brown* DATE: 5/6/2016

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER  
 2019  
 LLOYD D. BROWN

DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

**PERMANENT PAVEMENT MARKING PLAN**

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
 \$\$\$ USER NAME \$\$\$





PROJECT REFERENCE NO. 17BPJ4.RJ43	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**SOIL STABILIZATION TIMEFRAMES**

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES, AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

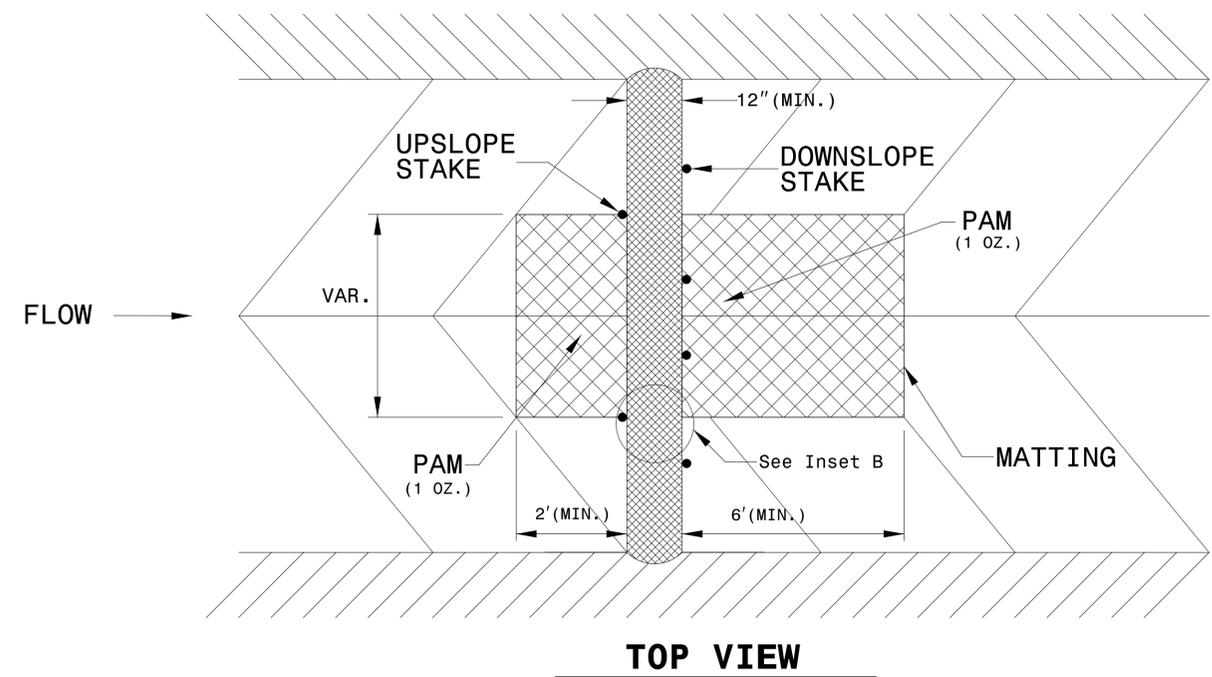
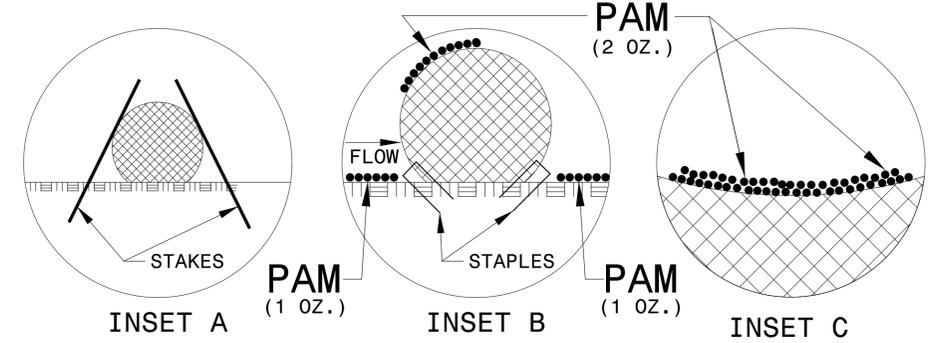
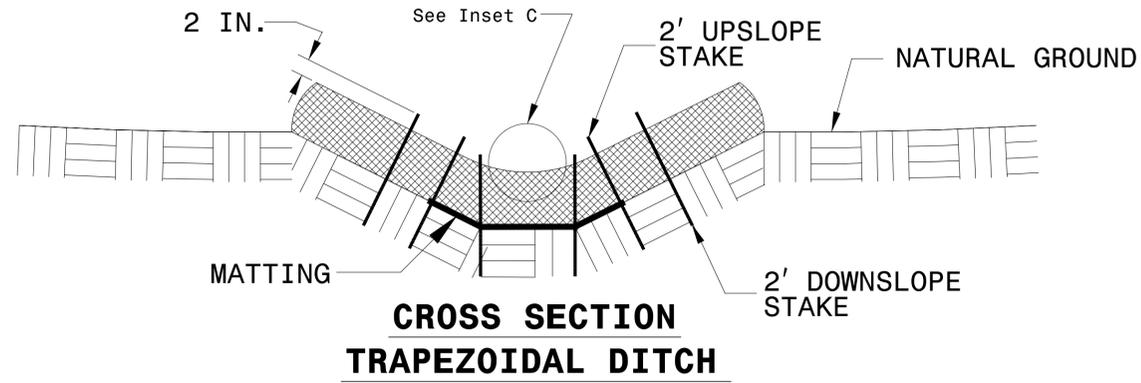
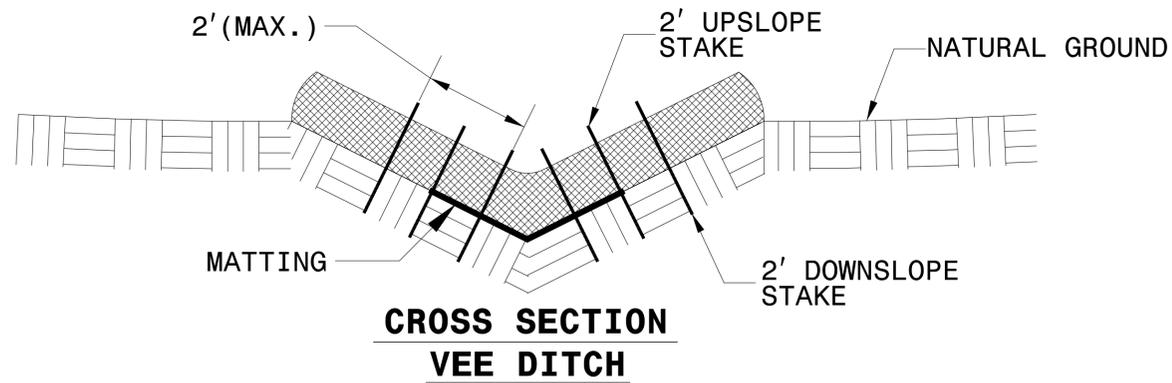
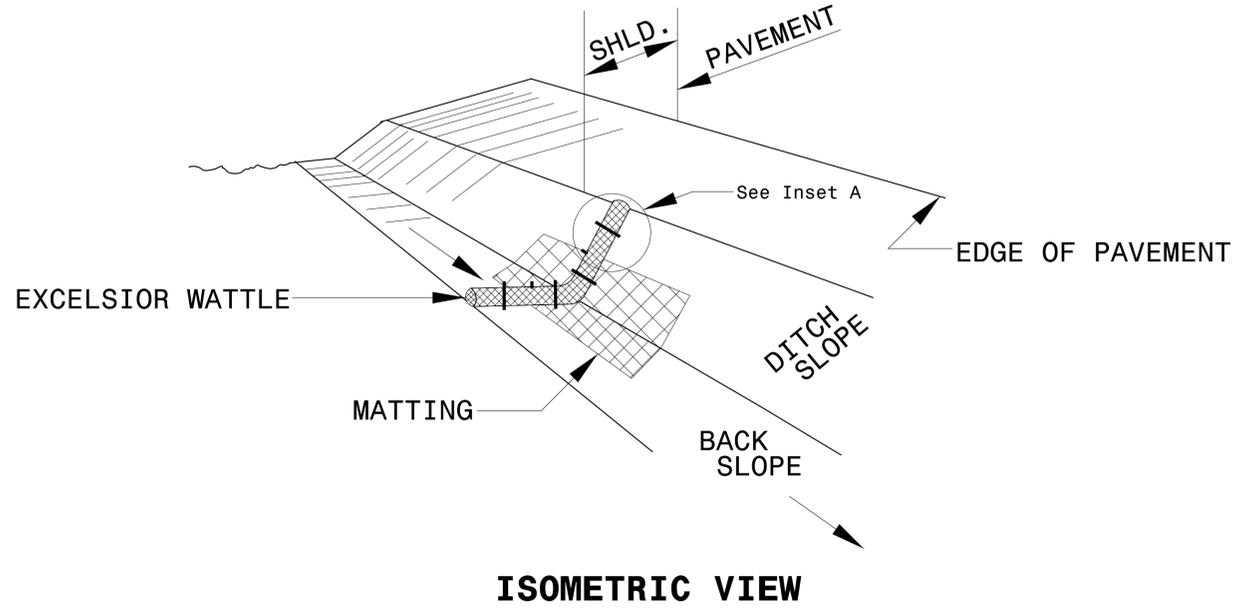


PROJECT REFERENCE NO. 17BPJ4RJ43	SHEET NO. EC-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

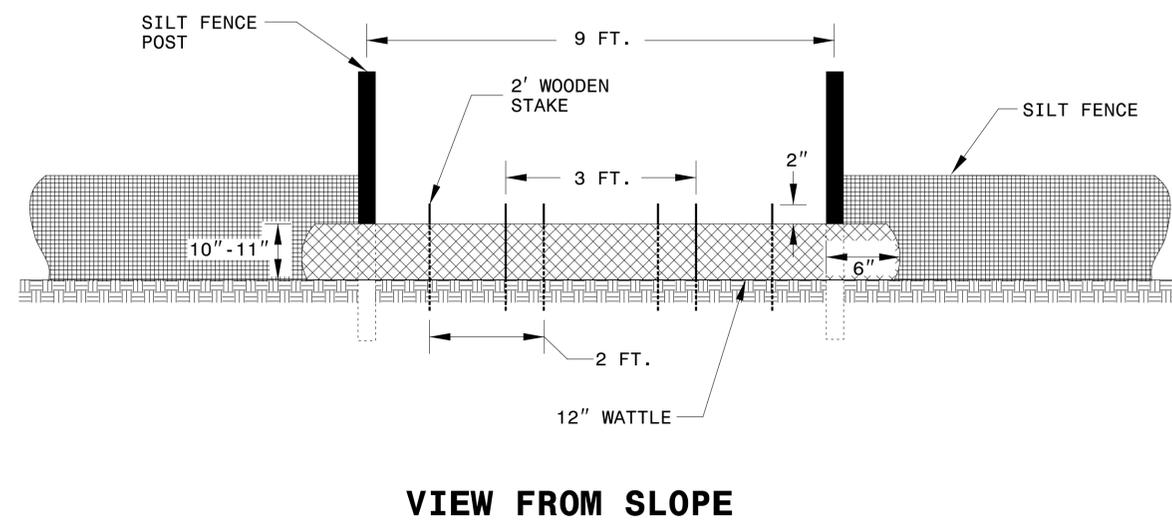
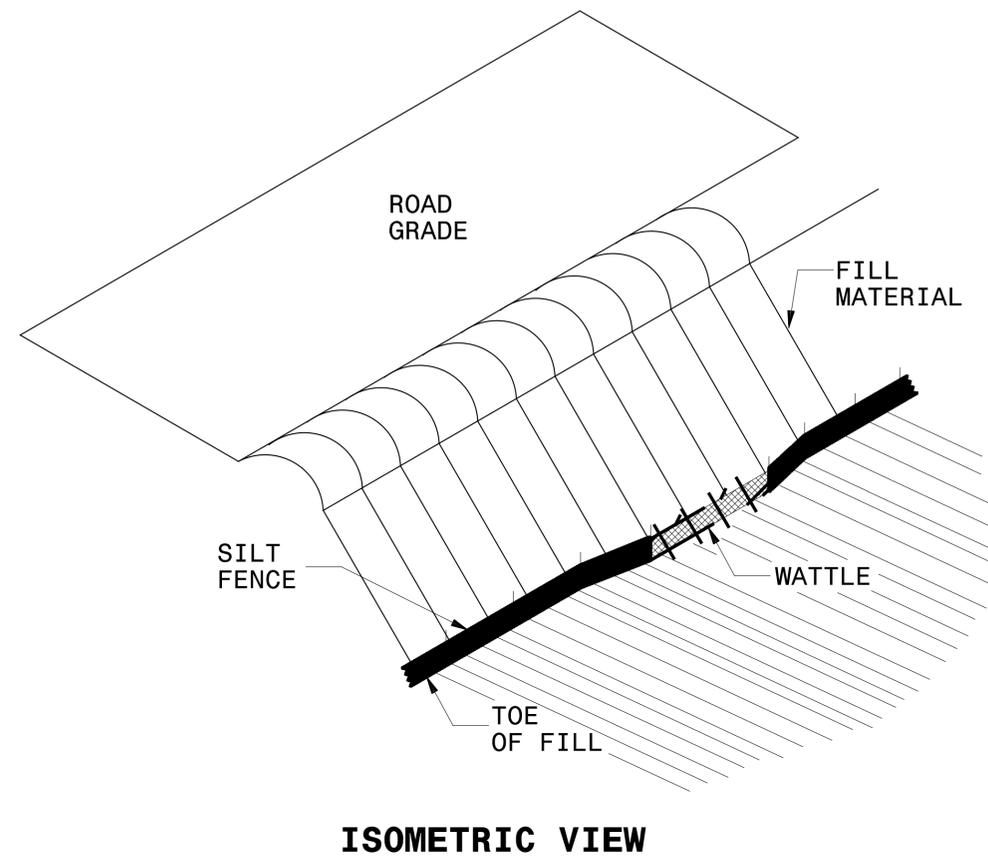
**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. 17BPJ4RJ43	SHEET NO. EC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

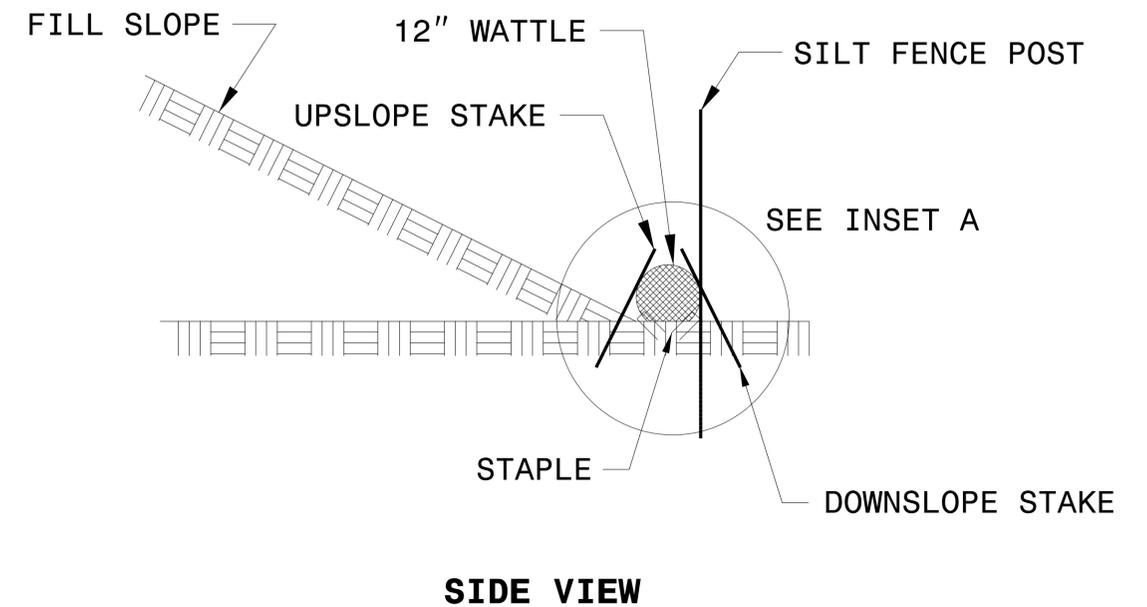
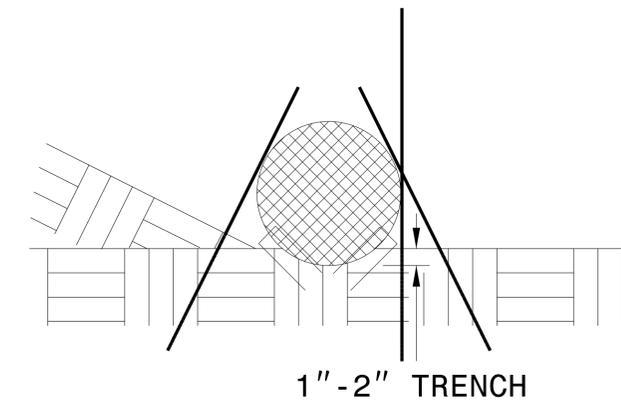
# SILT FENCE WATTLE BREAK DETAIL



**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

**INSET A**



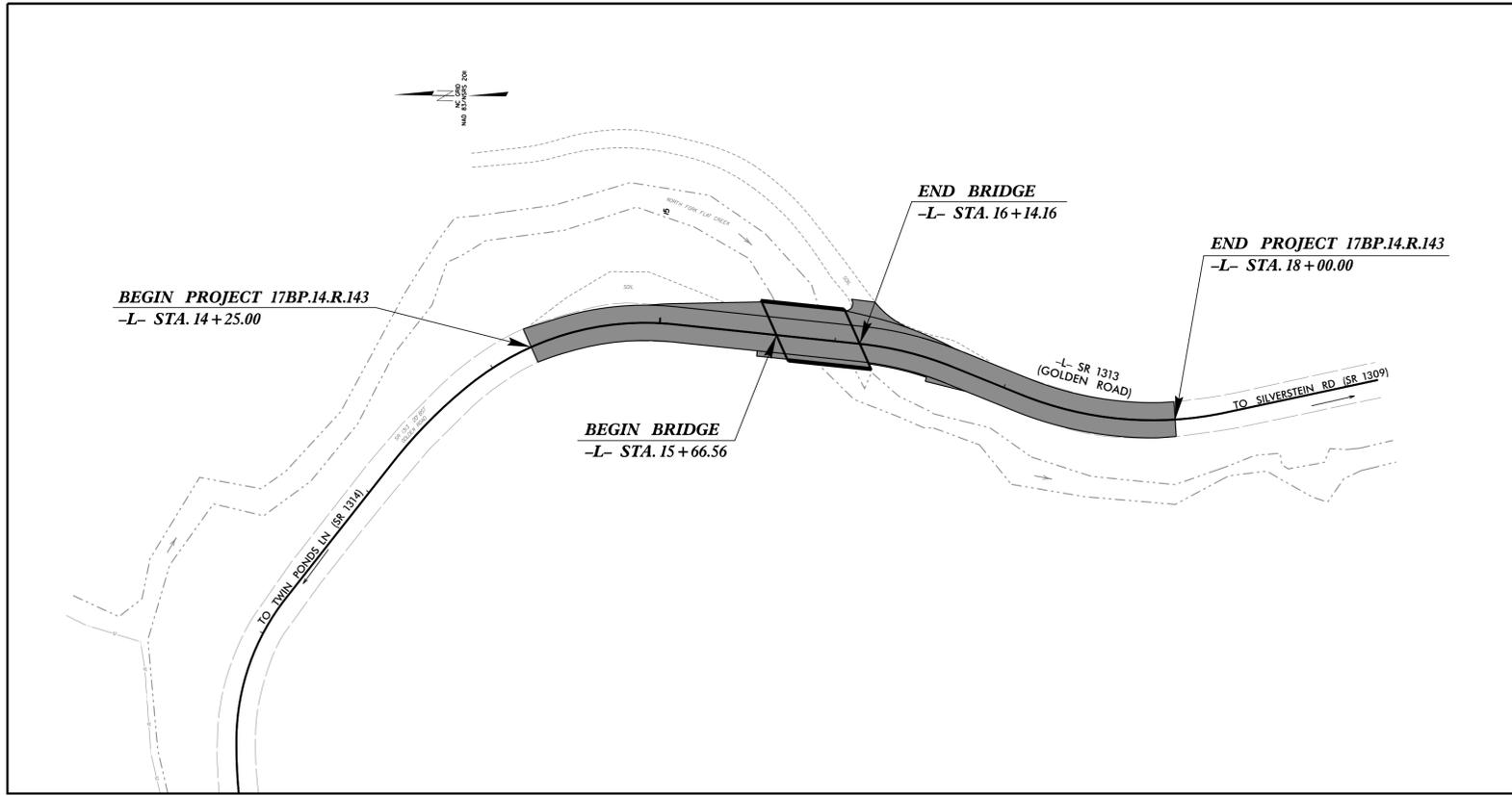
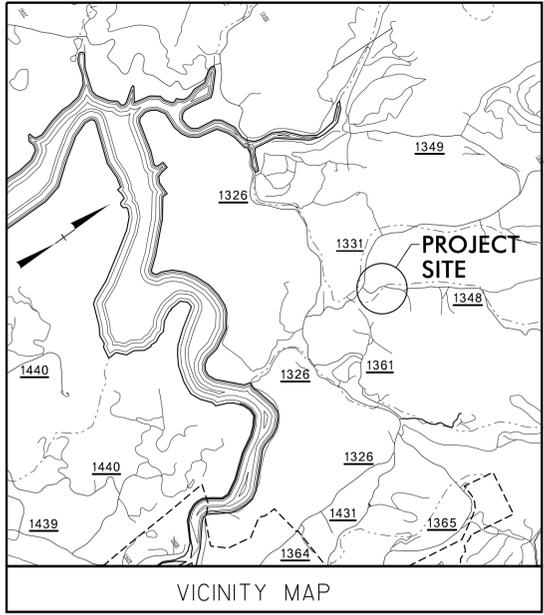
PROJECT NO.	SHEET NO.
17BP.14.R.143	UO-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS  
TRANSYLVANIA COUNTY**

LOCATION: BRIDGE NO. 064 OVER NORTH FORK FLAT CREEK  
ON SR 1313 (GOLDEN ROAD)

TYPE OF WORK: AERIAL POWER AND TELEPHONE



PROJECT: 17BP.14.R.143

CONTRACT: DN00123

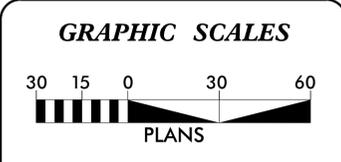
3/25/14

V&M PROJECT #31236-11 TRANSPORTATION\31236-11 UTILITIES\UO-1.DGN

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**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET

**UTILITY OWNERS ON PROJECT**

(1) TELEPHONE - COMPORIUM COMMUNICATIONS

**PLANS PREPARED BY:**

1318-F Patton Ave.  
Asheville, NC 28806  
828-253-2796

PREPARED FOR THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
UTILITIES ENGINEERING  
SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Lynn Mann, P.G.** UTILITIES PROJECT DESIGNER

3/28/16

**PROJECT: 17BP.14.R.143**

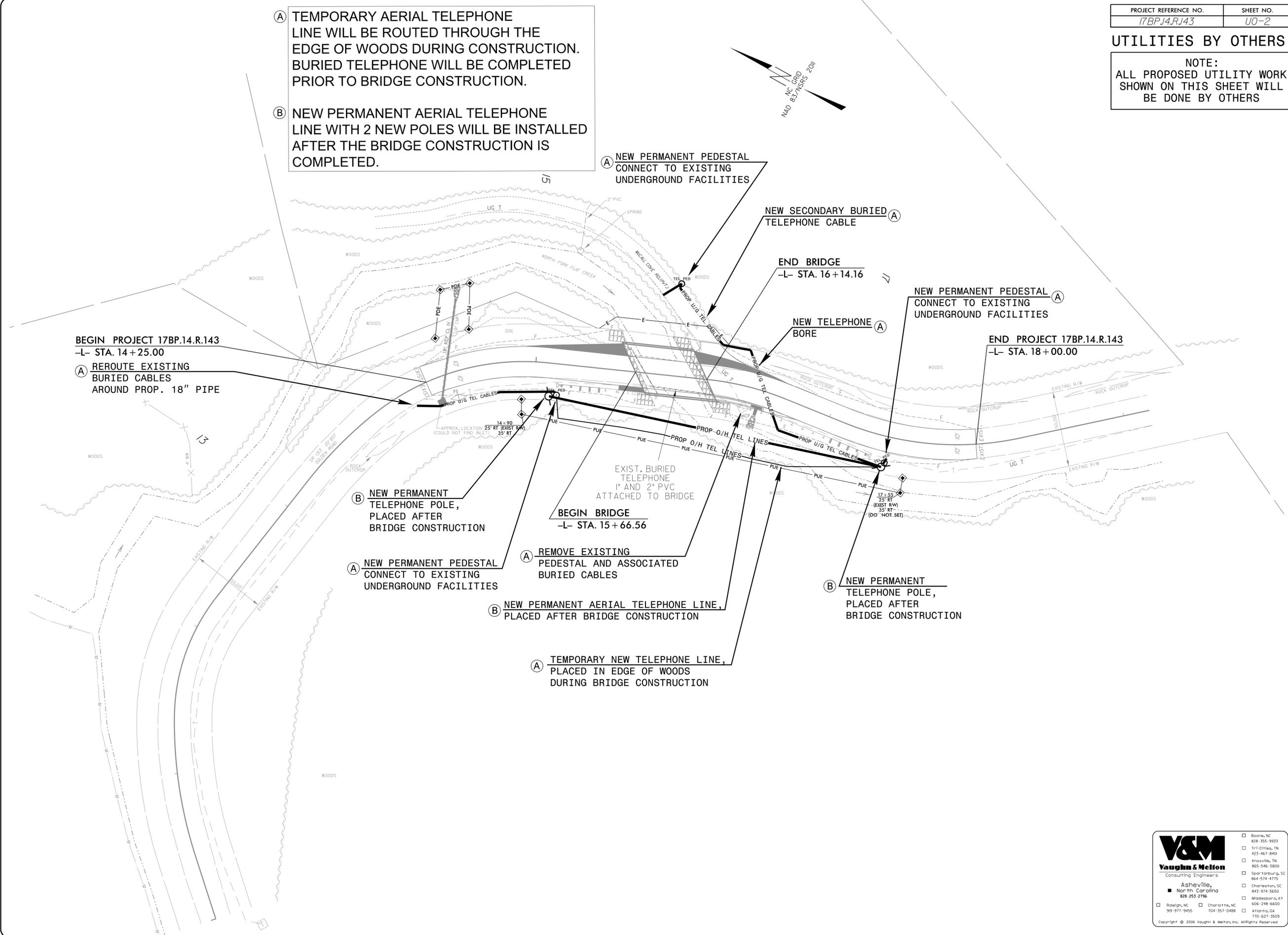
**CONTRACT: DN00123**

V&M PROJECT #31235-14  
TRANSPORTATION\31235-14 UTILITIES\UO-2.DGN

PROJECT REFERENCE NO. 17BP.14.R.143	SHEET NO. UO-2
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**UTILITIES BY OTHERS**

NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



- (A) TEMPORARY AERIAL TELEPHONE LINE WILL BE ROUTED THROUGH THE EDGE OF WOODS DURING CONSTRUCTION. BURIED TELEPHONE WILL BE COMPLETED PRIOR TO BRIDGE CONSTRUCTION.
- (B) NEW PERMANENT AERIAL TELEPHONE LINE WITH 2 NEW POLES WILL BE INSTALLED AFTER THE BRIDGE CONSTRUCTION IS COMPLETED.

BEGIN PROJECT 17BP.14.R.143  
-L- STA. 14+25.00  
(A) REROUTE EXISTING BURIED CABLES AROUND PROP. 18" PIPE

(B) NEW PERMANENT TELEPHONE POLE, PLACED AFTER BRIDGE CONSTRUCTION

(A) NEW PERMANENT PEDESTAL CONNECT TO EXISTING UNDERGROUND FACILITIES

(B) NEW PERMANENT AERIAL TELEPHONE LINE, PLACED AFTER BRIDGE CONSTRUCTION

(A) TEMPORARY NEW TELEPHONE LINE, PLACED IN EDGE OF WOODS DURING BRIDGE CONSTRUCTION

(A) NEW PERMANENT PEDESTAL CONNECT TO EXISTING UNDERGROUND FACILITIES

NEW SECONDARY BURIED TELEPHONE CABLE (A)

END BRIDGE -L- STA. 16+14.16

NEW TELEPHONE BORE (A)

NEW PERMANENT PEDESTAL CONNECT TO EXISTING UNDERGROUND FACILITIES (A)

END PROJECT 17BP.14.R.143 -L- STA. 18+00.00

(A) REMOVE EXISTING PEDESTAL AND ASSOCIATED BURIED CABLES

(B) NEW PERMANENT TELEPHONE POLE, PLACED AFTER BRIDGE CONSTRUCTION

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<input type="checkbox"/> Raleigh, NC 919-977-9455	<input type="checkbox"/> Charleston, SC 843-974-5650
<input type="checkbox"/> Charlotte, NC 704-357-0488	<input type="checkbox"/> Milledgeville, GA 770-627-5500
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