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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

JACKSON COUNTY

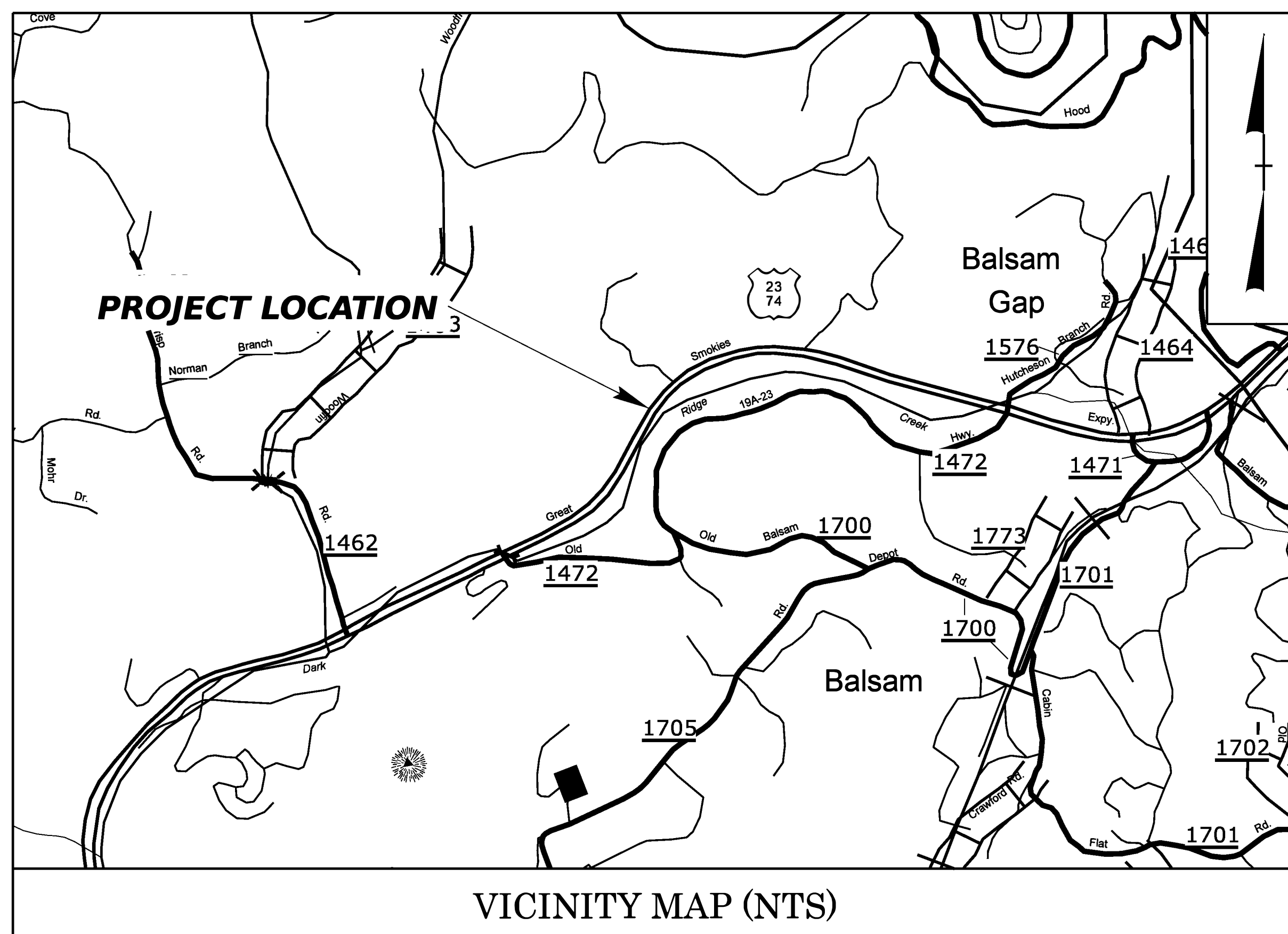
LOCATION: *US-74 (GREAT SMOKIES EXPY)*

TYPE OF WORK: *GRADING, PAVEMENT REMOVAL
GUARDRAIL*

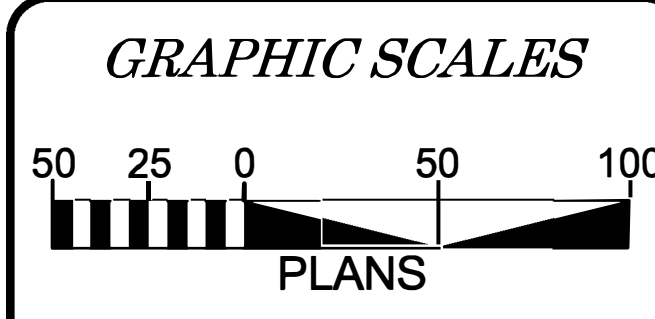
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SS-60140	1	11
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
49454.1.1	N/A	P.E	
49454.2.1	N/A	ROW	
49454.3.1	N/A	CONSTRUCTION	

TIP PROJECT: SS-60140

CONTRACT: DN01033



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UNLESS ALL SIGNATURES COMPLETED



PROJECT LENGTH
0.18 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
253 WEBSTER RD., SYLVA, NC 28779

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

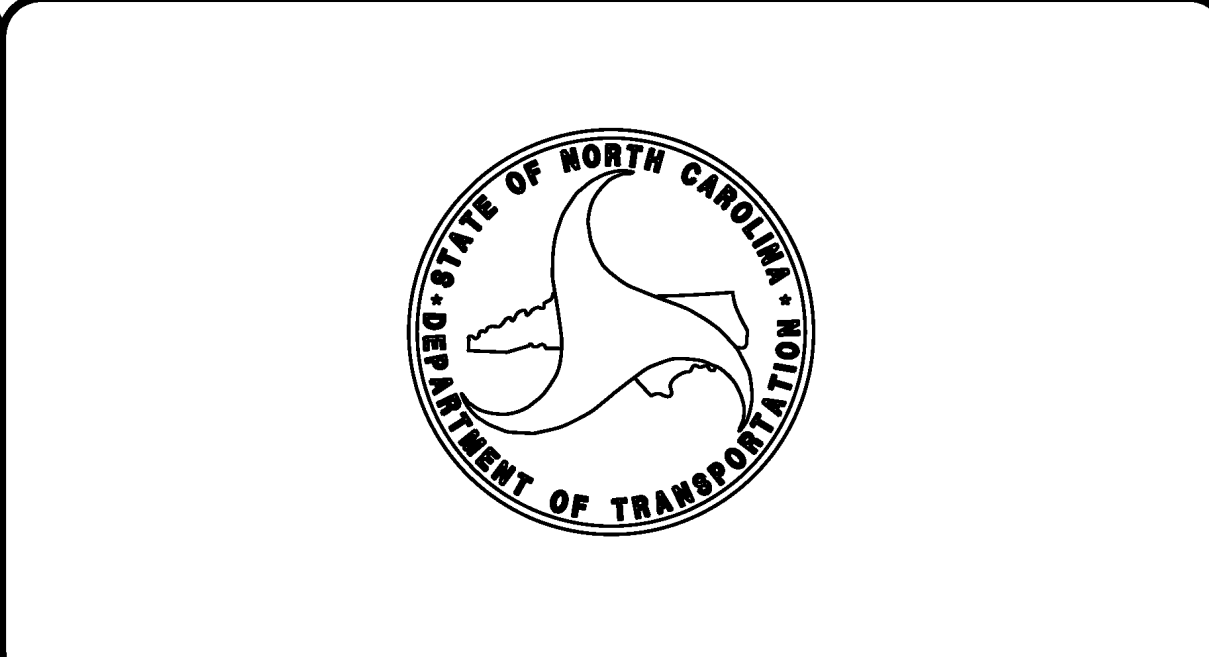
LETTING DATE:
October 10th, 2023

CHRIS LEE, P.E.
PROJECT ENGINEER

GARRETT B. HIGDON, P.E.
PROJECT DESIGN ENGINEER

ROADWAY DESIGN ENGINEER

DocuSigned by:
Chris Lee
2023/10/10 14:18:18
SIGNATURE: _____ P.E.



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A	TYPICAL SECTIONS
2B	ROADWAY DETAILS
3B	ROADWAY SUMMARIES
4	PLAN
TMP-1 THRU TMP-	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-	PAVEMENT MARKING PLANS
EC-1 THRU EC-	EROSION CONTROL PLANS

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018

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.

2018 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, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 8 - INCIDENTALS	
862.01	Guardrail Placement
862.02	Guardrail Installation
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin (EIP)	----- ○ EIP
Computed Property Corner	----- X
Existing Concrete Monument (ECM)	----- □ ECM
Parcel / Sequence Number	----- (23)
Existing Fence Line	----- -x-x-x-
Proposed Woven Wire Fence	----- ○
Proposed Chain Link Fence	----- □
Proposed Barbed Wire Fence	----- ◇
Existing Wetland Boundary	----- -MLB-
Proposed Wetland Boundary	----- MLB
Existing Endangered Animal Boundary	----- -EAB-
Existing Endangered Plant Boundary	----- -EPB-
Existing Historic Property Boundary	----- -HPB-
Known Contamination Area: Soil	----- -s-s-
Potential Contamination Area: Soil	----- -s-s-
Known Contamination Area: Water	----- -w-w-
Potential Contamination Area: Water	----- -w-w-
Contaminated Site: Known or Potential	----- ☠ ☒

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	----- ○
Sign	----- ○
Well	----- ○
Small Mine	----- X
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 & PROJECT CONTROL:

Primary Horiz Control Point	----- ○
Primary Horiz and Vert Control Point	----- ●
Secondary Horiz and Vert Control Point	----- ◆
Vertical Benchmark	----- ⊠
Existing Right of Way Monument	----- △
Proposed Right of Way Monument (Rebar and Cap)	----- ▲
Proposed Right of Way Monument (Concrete)	----- ●
Existing Permanent Easement Monument	----- ◇
Proposed Permanent Easement Monument (Rebar and Cap)	----- ◆
Existing C/A Monument	----- ▲
Proposed C/A Monument (Rebar and Cap)	----- ▲
Proposed C/A Monument (Concrete)	----- ●
Existing Right of Way Line	----- ▬
Proposed Right of Way Line	----- ▬
Existing Control of Access Line	----- (C/A)
Proposed Control of Access Line	----- (C/A)
Proposed ROW and CA Line	----- ▬
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

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	----- ▬

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:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)

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 Test Hole (SUE - LOS A)*	----- ⊕
U/G Power Line (SUE - LOS B)*	----- P
U/G Power Line (SUE - LOS C)*	----- P
U/G Power Line (SUE - LOS D)*	----- P

TELEPHONE:

Existing Telephone Pole	----- ●
Proposed Telephone Pole	----- ○
Telephone Manhole	----- ⊕
Telephone Pedestal	----- ⊠
Telephone Cell Tower	----- ⊠
U/G Telephone Cable Hand Hole	----- □
U/G Telephone Test Hole (SUE - LOS A)*	----- ⊕
U/G Telephone Cable (SUE - LOS B)*	----- T
U/G Telephone Cable (SUE - LOS C)*	----- T
U/G Telephone Cable (SUE - LOS D)*	----- T
U/G Telephone Conduit (SUE - LOS B)*	----- TC
U/G Telephone Conduit (SUE - LOS C)*	----- TC
U/G Telephone Conduit (SUE - LOS D)*	----- TC
U/G Fiber Optics Cable (SUE - LOS B)*	----- T FO
U/G Fiber Optics Cable (SUE - LOS C)*	----- T FO
U/G Fiber Optics Cable (SUE - LOS D)*	----- T FO

WATER:

Water Manhole	----- ⊕
Water Meter	----- ○
Water Valve	----- ⊕
Water Hydrant	----- ⊕
U/G Water Line Test Hole (SUE - LOS A)*	----- ⊕
U/G Water Line (SUE - LOS B)*	----- W
U/G Water Line (SUE - LOS C)*	----- W
U/G Water Line (SUE - LOS D)*	----- W
Above Ground Water Line	----- A/G Water

TV:

TV Pedestal	----- □
TV Tower	----- ⊕
U/G TV Cable Hand Hole	----- □
U/G TV Test Hole (SUE - LOS A)*	----- ⊕
U/G TV Cable (SUE - LOS B)*	----- TV
U/G TV Cable (SUE - LOS C)*	----- TV
U/G TV Cable (SUE - LOS D)*	----- TV
U/G Fiber Optic Cable (SUE - LOS B)*	----- TV FO
U/G Fiber Optic Cable (SUE - LOS C)*	----- TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	----- TV FO

GAS:

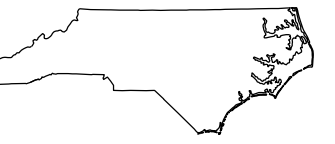
Gas Valve	----- ◇
Gas Meter	----- ⊕
U/G Gas Line Test Hole (SUE - LOS A)*	----- ⊕
U/G Gas Line (SUE - LOS B)*	----- G
U/G Gas Line (SUE - LOS C)*	----- G
U/G Gas Line (SUE - LOS D)*	----- G
Above Ground Gas Line	----- A/G Gas

SANITARY SEWER:

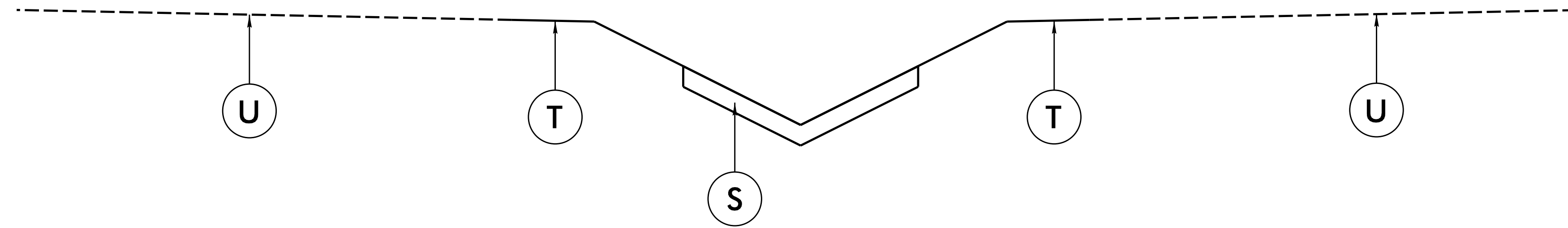
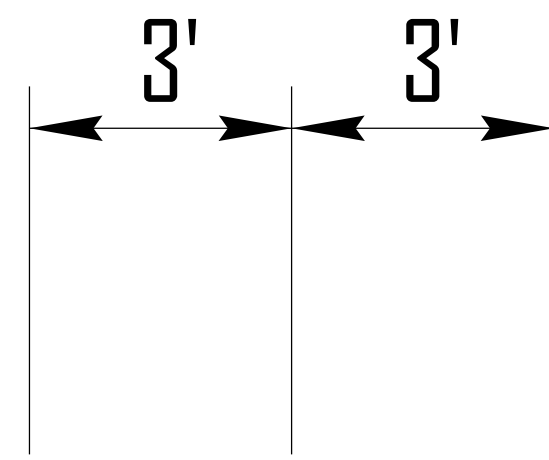
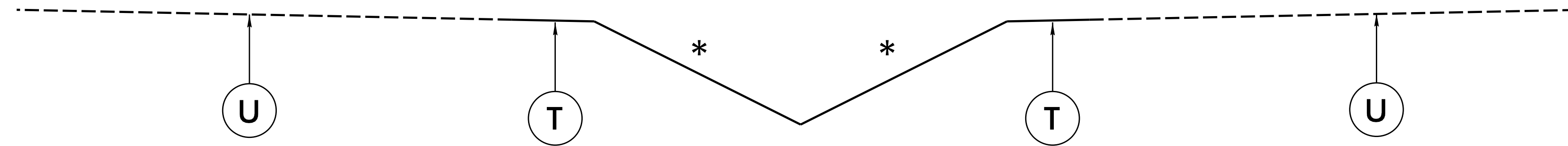
Sanitary Sewer Manhole	----- ⊕
Sanitary Sewer Cleanout	----- ⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Force Main Line Test Hole (SUE - LOS A)*	----- ⊕
SS Force Main Line (SUE - LOS B)*	----- FSS
SS Force Main Line (SUE - LOS C)*	----- FSS
SS Force Main Line (SUE - LOS D)*	----- FSS

MISCELLANEOUS:

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



*MATCH EXISTING DITCH SLOPE



S	4" CONCRETE DITCH
T	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT

STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

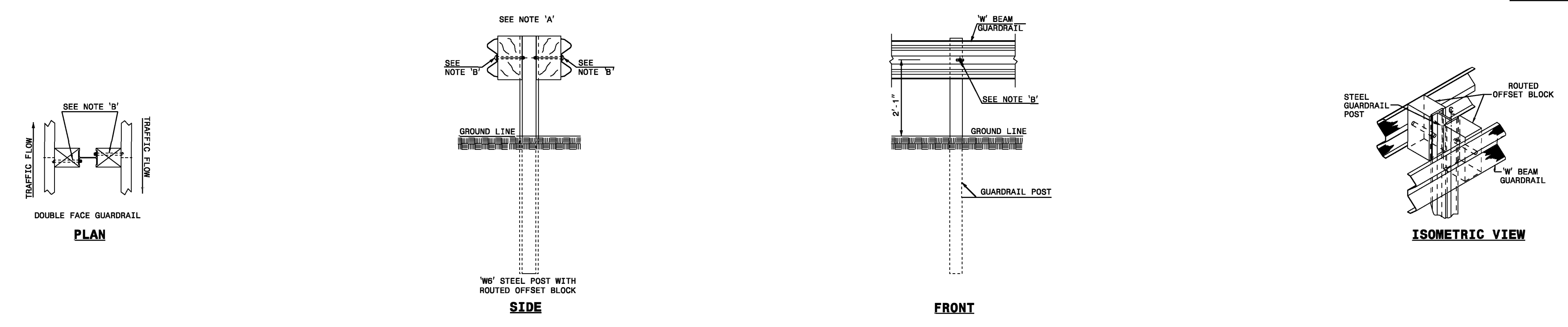
ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
DOUBLE FACED W-BEAM

SHEET OF
862D01

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
DOUBLE FACED W-BEAM

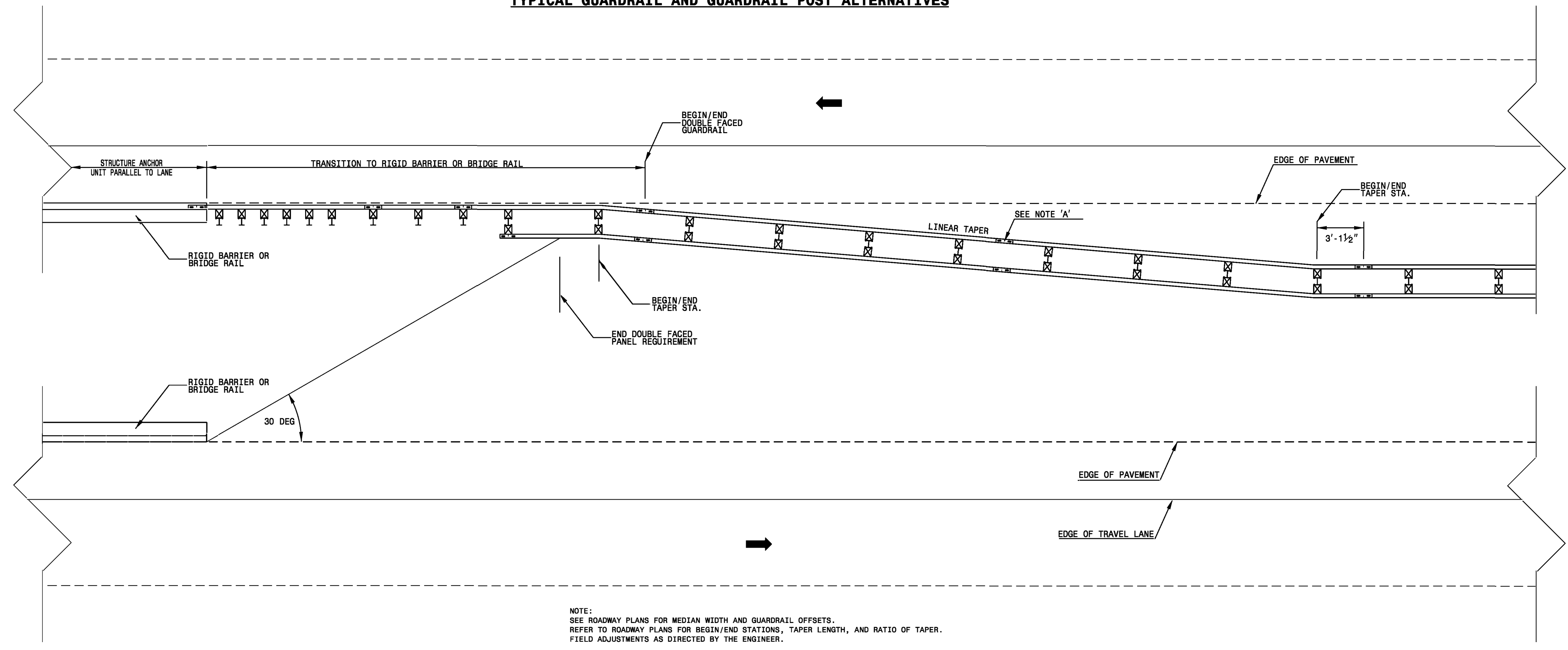
SHEET OF
862D01



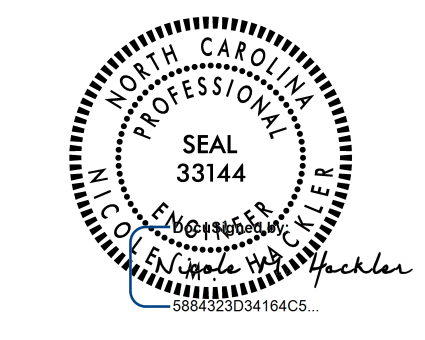
DRAWING NOT TO SCALE

NOTES:
A - 5/8" DIA. BUTTON HEAD SPLICE BOLT 1 1/4" LONG (8 REQ. PER SPLICE JOINT).
B - 5/8" DIA. BUTTON HEAD BOLT 7 1/2" LONG WITH NUT FOR BOLTING 6" 'B' ROUTED OFFSET BLOCK TO STEEL POSTS.
C - FIELD PUNCHING OF HOLES INTO GUARDRAIL AS DIRECTED BY THE ENGINEER.

TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES



APPROACH TO RIGID BARRIER OR BRIDGE RAIL

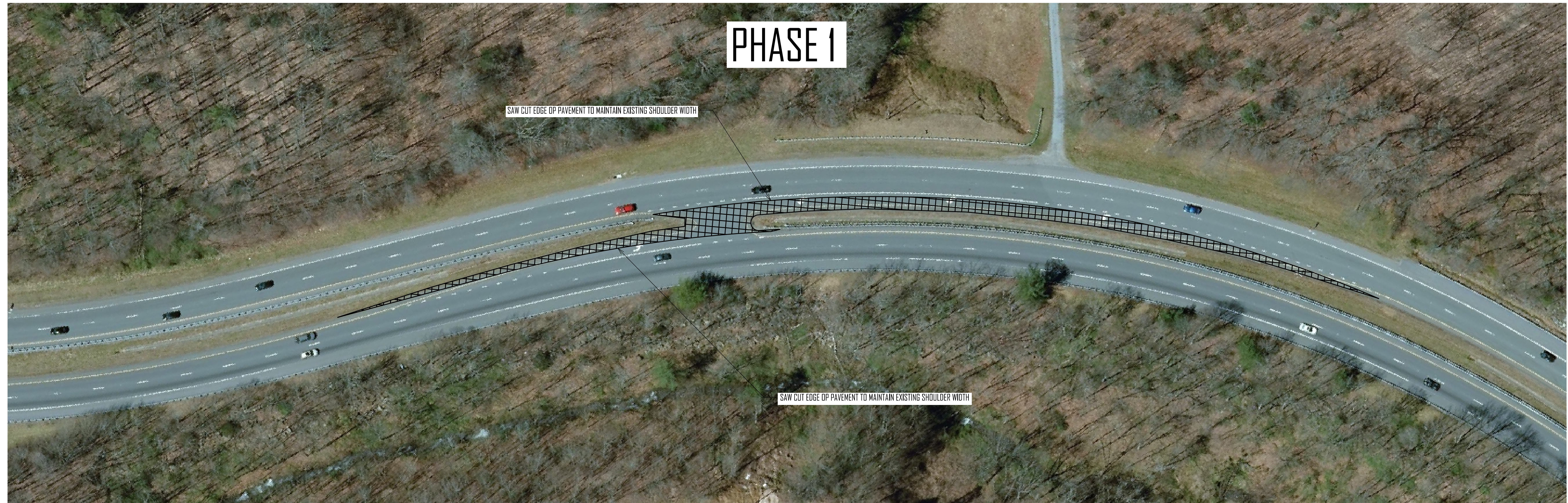
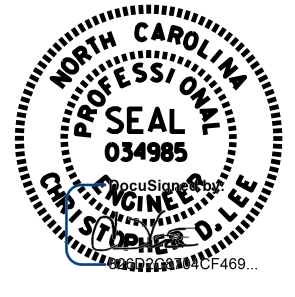
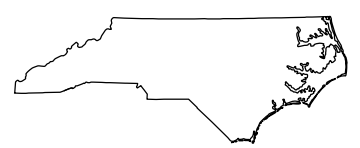


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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

GUARDRAIL PLACEMENT DOUBLE FACED W-BEAM

ORIGINAL BY: _____	DATE: _____
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: _____	



INSTALL TRAFFIC CONTROL SIGNAGE AND TEMPORARY LANE CLOSURES PER NCDOT ROADWAY STANDARD DRAWINGS STD. 1101.01 (SHEET 1 OF 3) AND 1101.02 (SHEET 3 OF 14)



INSTALL TRAFFIC CONTROL SIGNAGE AND TEMPORARY LANE CLOSURES PER NCDOT ROADWAY STANDARD DRAWINGS STD. 1101.01 (SHEET 1 OF 3) AND 1101.02 (SHEET 3 OF 14)

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQP) 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.

