

09/28/99

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

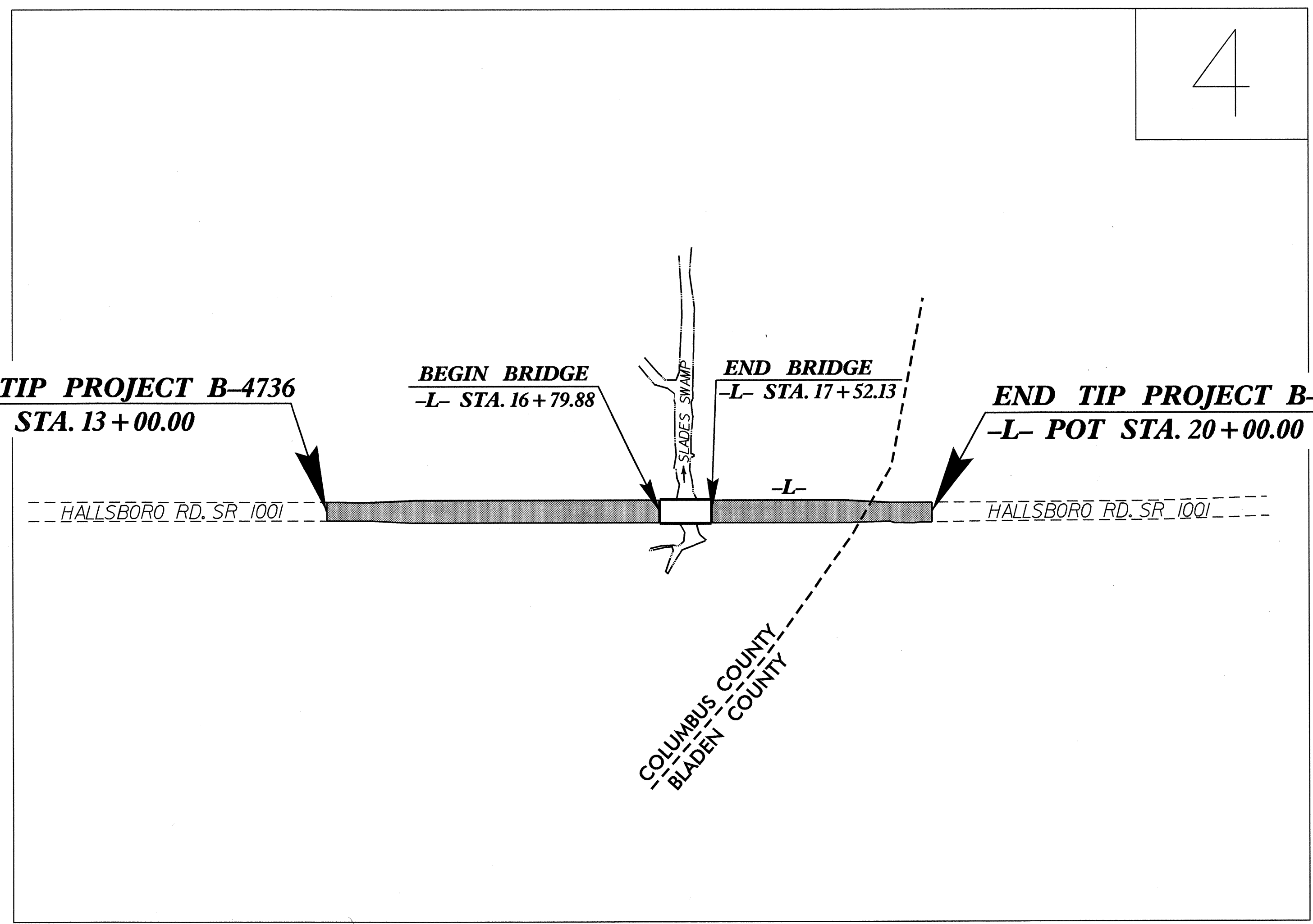
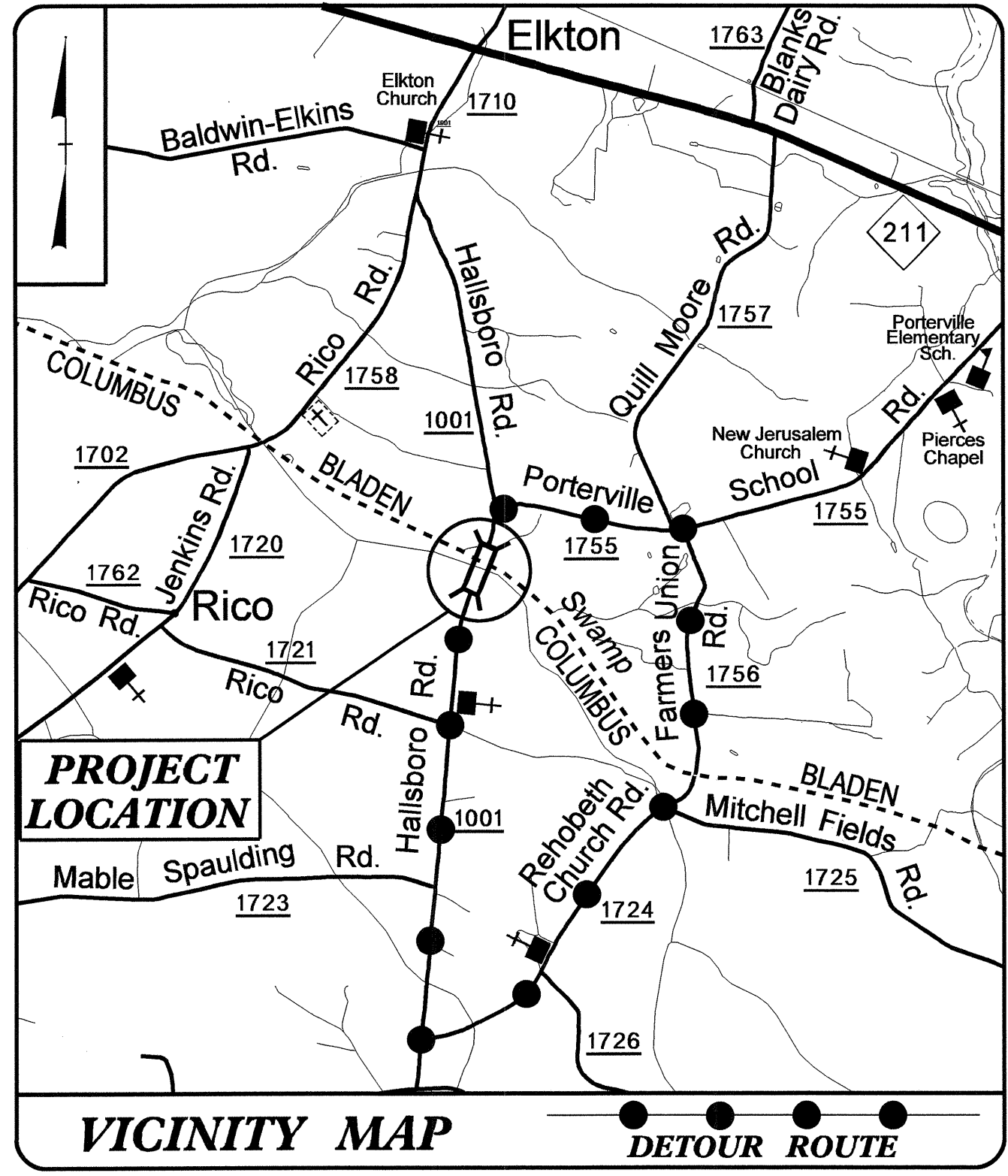
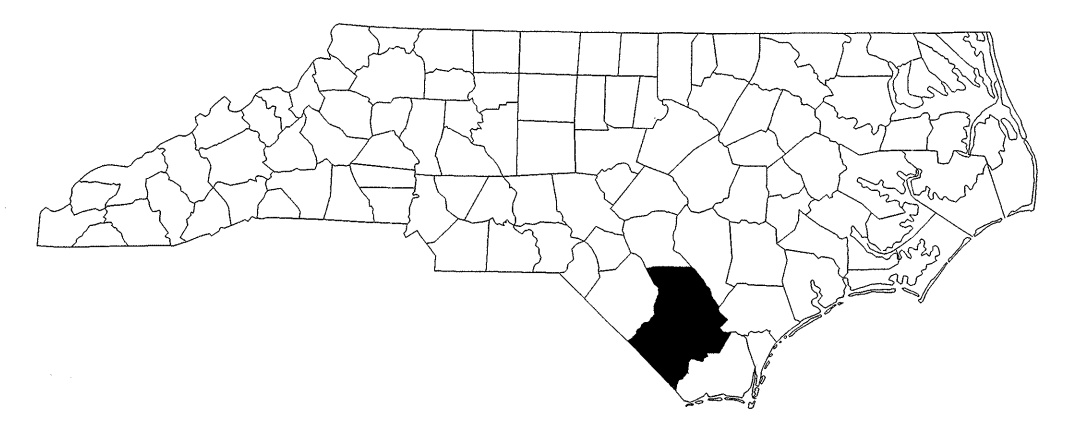
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BLADEN & COLUMBUS COUNTIES**

**LOCATION: BRIDGE NO. 233 ON SR 1001 (HALLSBORO RD.)  
OVER SLADES SWAMP**

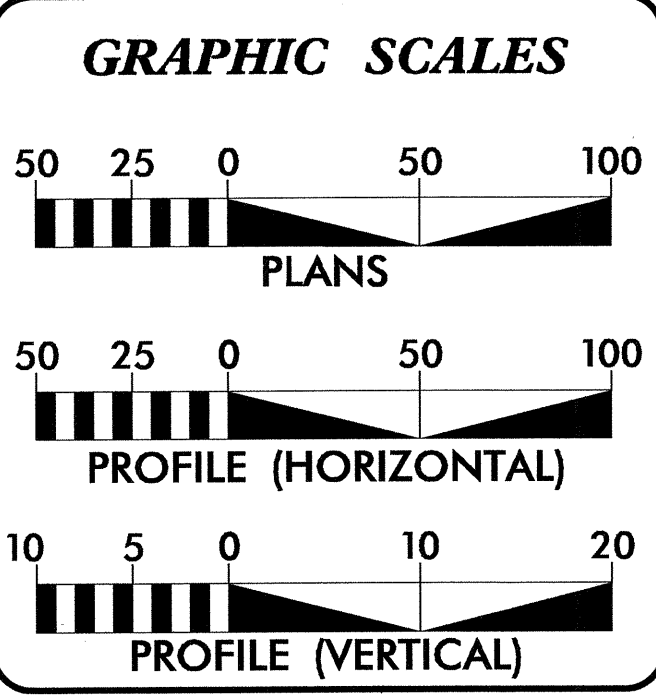
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4736	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38509.1.1	BRSTP-1001(40)	PE	
38509.2.1	BRSTP-1001(40)	ROW & UTIL	
38509.3.1	BRSTP-1001(40)	CONST	



**TIP PROJECT: B-4736**

**CONTRACT: C202956**



**DESIGN DATA**  
SUB-REGIONAL TIER

ADT 2012 =	932
ADT 2035 =	1300
DHV =	11 %
D =	55 %
T =	4 % *
V =	60 MPH
* TTST 1%	DUAL 3%
FUNC. CLASS =	MAJOR COLLECTOR

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4736 =	0.119 MI
LENGTH STRUCTURE TIP PROJECT B-4736 =	0.014 MI
TOTAL LENGTH TIP PROJECT B-4736 =	0.133 MI

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

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
OCTOBER 14, 2011

**LETTING DATE:**  
NOVEMBER 20, 2012

**REKHA PATEL, PE**  
PROJECT ENGINEER

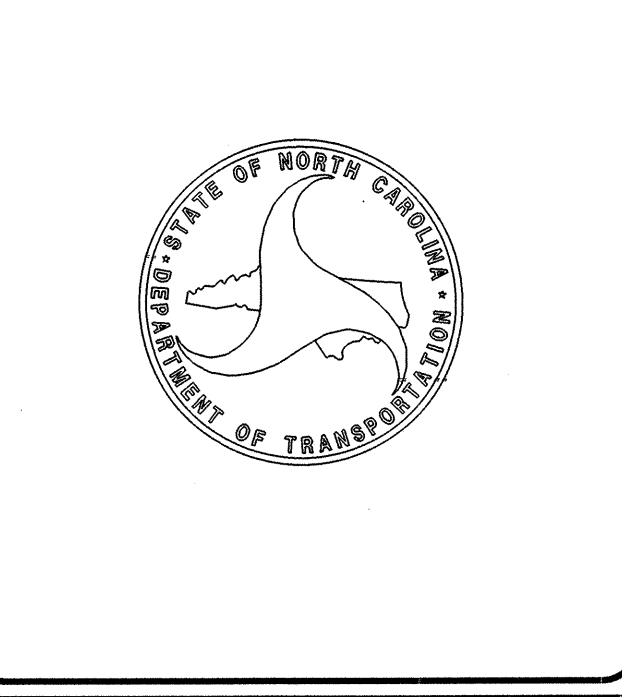
**BRIAN P. ROBINSON**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

*[Signature]*  
8/20/12  
PE

**ROADWAY DESIGN ENGINEER**

*[Signature]*  
8/20/12  
16378  
ENGINEER  
REKHA V. PATEL  
P.E.



20-AUG-2012 09:55  
P:\ROADWORK\PROJECTS\B-4736-rdy\_tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$



04/16/11















Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering












STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS











## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	----- 
Property Corner	----- 
Property Monument	----- 
Parcel/Sequence Number	----- 
Existing Fence Line	----- 
Proposed Woven Wire Fence	----- 
Proposed Chain Link Fence	----- 
Proposed Barbed Wire Fence	----- 
Existing Wetland Boundary	----- 
Proposed Wetland Boundary	----- 
Existing Endangered Animal Boundary	----- 
Existing Endangered Plant Boundary	----- 
Known Soil Contamination: Area or Site	----- 
Potential Soil Contamination: Area or Site	----- 

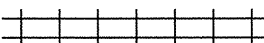

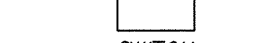
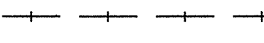
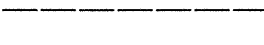
## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	----- 
Sign	----- 
Well	----- 
Small Mine	----- 
Foundation	----- 
Area Outline	----- 
Cemetery	----- 
Building	----- 
School	----- 
Church	----- 
Dam	----- 



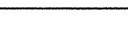








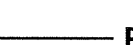
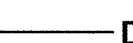
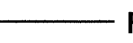


## HYDROLOGY:

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





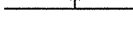
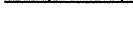


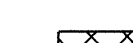

## RAILROADS:

Standard Gauge	----- 
RR Signal Milepost	----- 
Switch	----- 
RR Abandoned	----- 
RR Dismantled	----- 



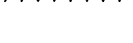

## RIGHT OF WAY:

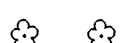
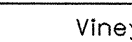
Baseline Control Point	----- 
Existing Right of Way Marker	----- 
Existing Right of Way Line	----- 
Proposed Right of Way Line	----- 
Proposed Right of Way Line with Iron Pin and Cap Marker	----- 
Proposed Right of Way Line with Concrete or Granite Marker	----- 
Existing Control of Access	----- 
Proposed Control of Access	----- 
Existing Easement Line	----- 
Proposed Temporary Construction Easement	----- 
Proposed Temporary Drainage Easement	----- 
Proposed Permanent Drainage Easement	----- 
Proposed Permanent Drainage / Utility Easement	----- 
Proposed Permanent Utility Easement	----- 
Proposed Temporary Utility Easement	----- 
Proposed Aerial Utility Easement	----- 

## ROADS AND RELATED FEATURES:

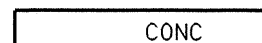
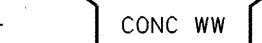
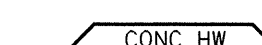

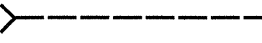

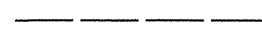


Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- 
Proposed Slope Stakes Fill	----- 
Proposed Curb Ramp	----- 
Curb Cut Future Ramp	----- 
Existing Metal Guardrail	----- 
Proposed Guardrail	----- 
Existing Cable Guiderail	----- 
Proposed Cable Guiderail	----- 
Equality Symbol	----- 
Pavement Removal	----- 

## VEGETATION:



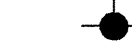








Single Tree	----- 
Single Shrub	----- 
Hedge	----- 
Woods Line	----- 

Orchard	----- 
Vineyard	----- 

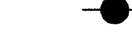






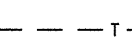
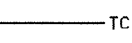
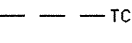
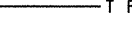


## EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- 
Bridge Wing Wall, Head Wall and End Wall	----- 
MINOR:	
Head and End Wall	----- 
Pipe Culvert	----- 
Footbridge	----- 
Drainage Box: Catch Basin, DI or JB	----- 
Paved Ditch Gutter	----- 
Storm Sewer Manhole	----- 
Storm Sewer	----- 








## 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	----- 
Recorded U/G Power Line	----- 
Designated U/G Power Line (S.U.E.*)	----- 









## TELEPHONE:

Existing Telephone Pole	----- 
Proposed Telephone Pole	----- 
Telephone Manhole	----- 
Telephone Booth	----- 
Telephone Pedestal	----- 
Telephone Cell Tower	----- 
U/G Telephone Cable Hand Hole	----- 
Recorded U/G Telephone Cable	----- 
Designated U/G Telephone Cable (S.U.E.*)	----- 
Recorded U/G Telephone Conduit	----- 
Designated U/G Telephone Conduit (S.U.E.*)	----- 
Recorded U/G Fiber Optics Cable	----- 
Designated U/G Fiber Optics Cable (S.U.E.*)	----- 






## WATER:

Water Manhole	----- 
Water Meter	----- 
Water Valve	----- 
Water Hydrant	----- 
Recorded U/G Water Line	----- 
Designated U/G Water Line (S.U.E.*)	----- 
Above Ground Water Line	----- 







## TV:

TV Satellite Dish	----- 
TV Pedestal	----- 
TV Tower	----- 
U/G TV Cable Hand Hole	----- 
Recorded U/G TV Cable	----- 
Designated U/G TV Cable (S.U.E.*)	----- 
Recorded U/G Fiber Optic Cable	----- 
Designated U/G Fiber Optic Cable (S.U.E.*)	----- 













## GAS:

Gas Valve	----- 
Gas Meter	----- 
Recorded U/G Gas Line	----- 
Designated U/G Gas Line (S.U.E.*)	----- 
Above Ground Gas Line	----- 

## SANITARY SEWER:

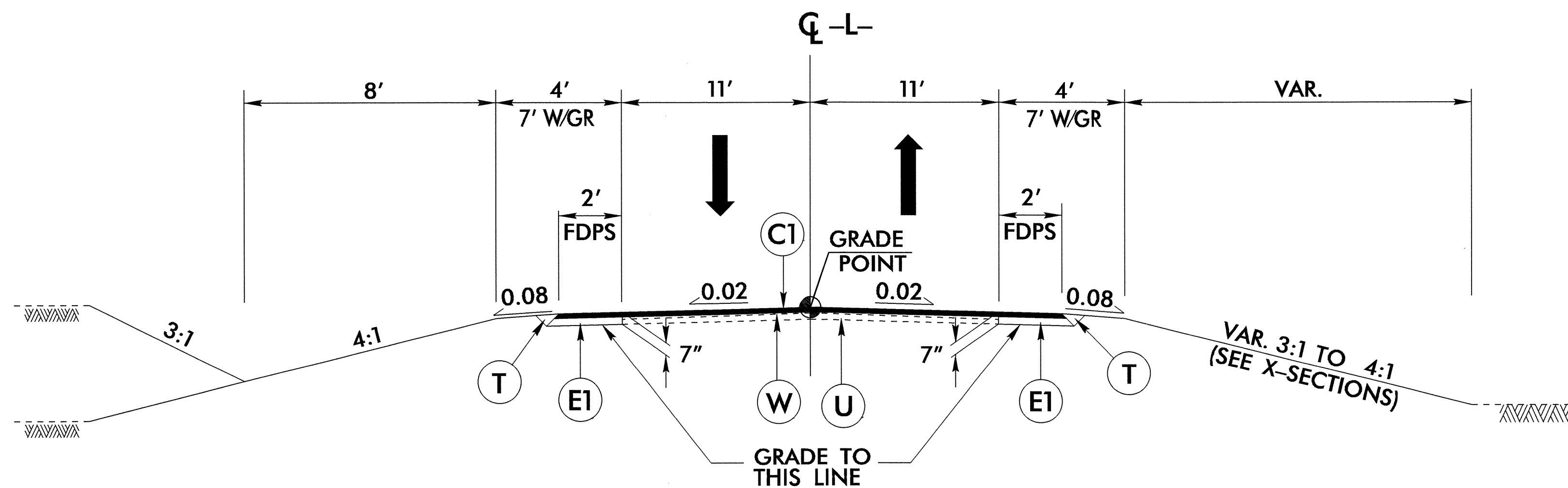
Sanitary Sewer Manhole	----- 
Sanitary Sewer Cleanout	----- 
U/G Sanitary Sewer Line	----- 
Above Ground Sanitary Sewer	----- 
Recorded SS Forced Main Line	----- 
Designated SS Forced Main Line (S.U.E.*)	----- 

## MISCELLANEOUS:

Utility Pole	----- 
Utility Pole with Base	----- 
Utility Located Object	----- 
Utility Traffic Signal Box	----- 
Utility Unknown U/G Line	----- 
U/G Tank; Water, Gas, Oil	----- 
Underground Storage Tank, Approx. Loc.	----- 
A/G Tank; Water, Gas, Oil	----- 
Geoenvironmental Boring	----- 
U/G Test Hole (S.U.E.*)	----- 
Abandoned According to Utility Records	----- 
End of Information	----- 





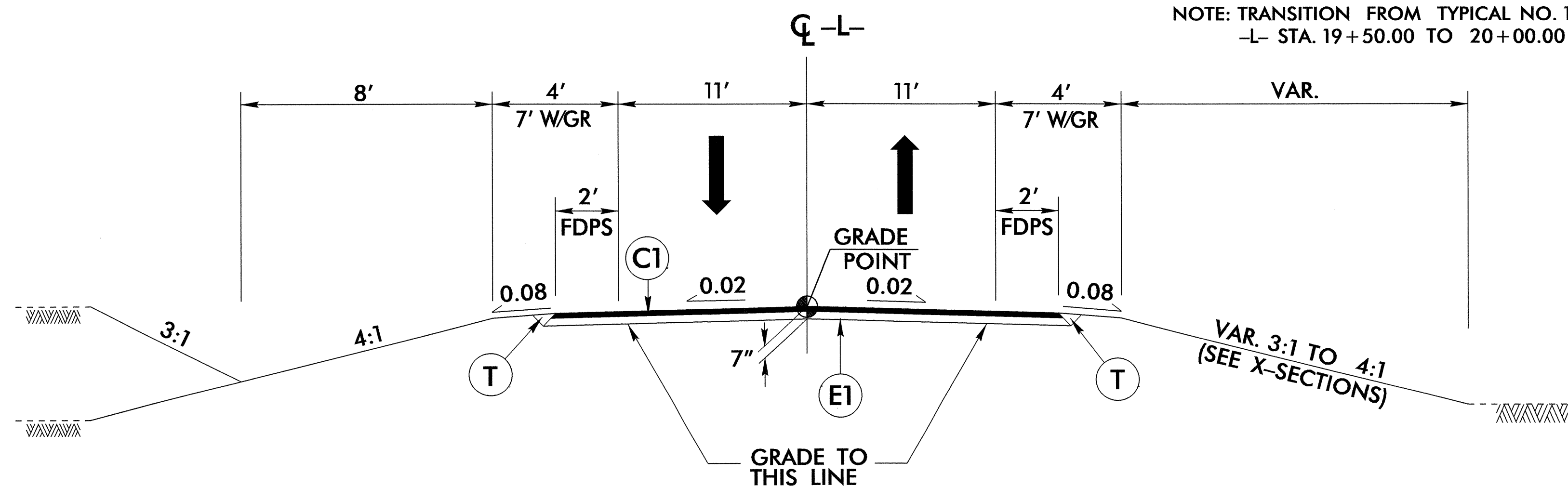


**TYPICAL SECTION NO. 1**

USE TYPICAL SECTION NO. 1  
 -L- STA. 13+50.00 TO 14+50.00  
 -L- STA. 18+50.00 TO 19+50.00

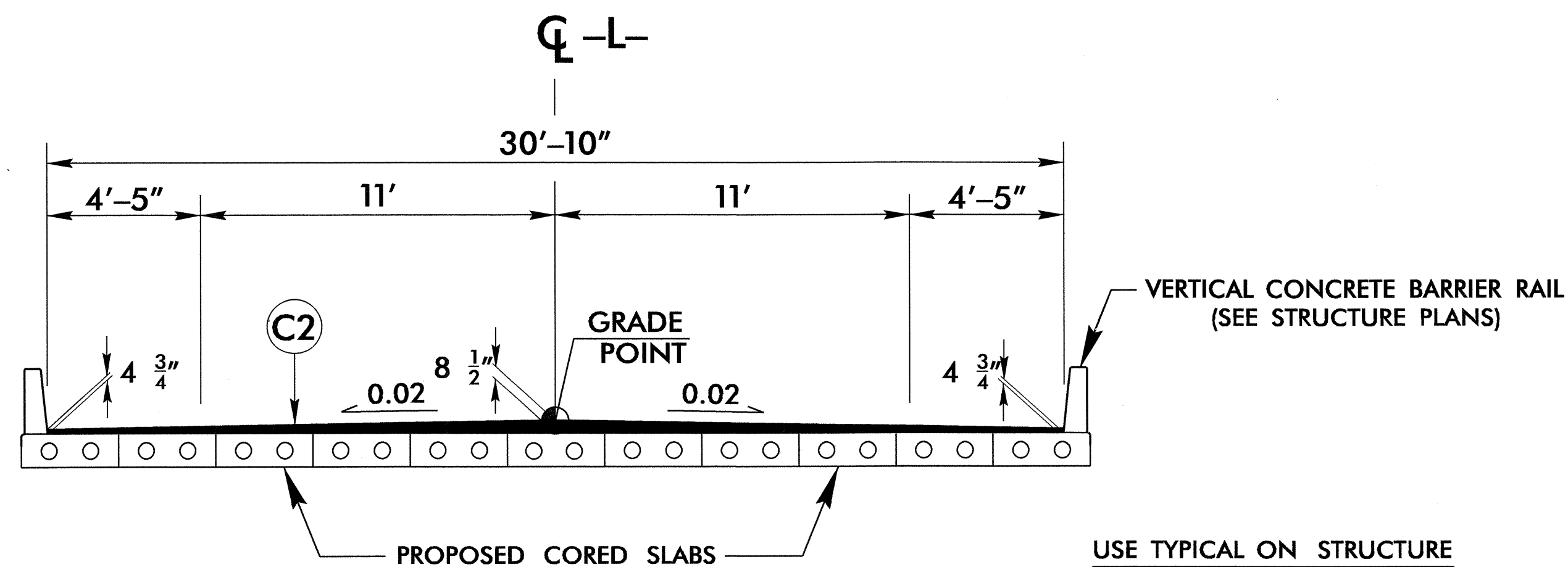
NOTE: TRANSITION FROM EXISTING TO TYPICAL NO. 1  
 -L- STA. 13+00.00 TO 13+50.00 OVERLAY WITH (C1)

NOTE: TRANSITION FROM TYPICAL NO. 1 TO EXISTING  
 -L- STA. 19+50.00 TO 20+00.00 OVERLAY WITH (C1)



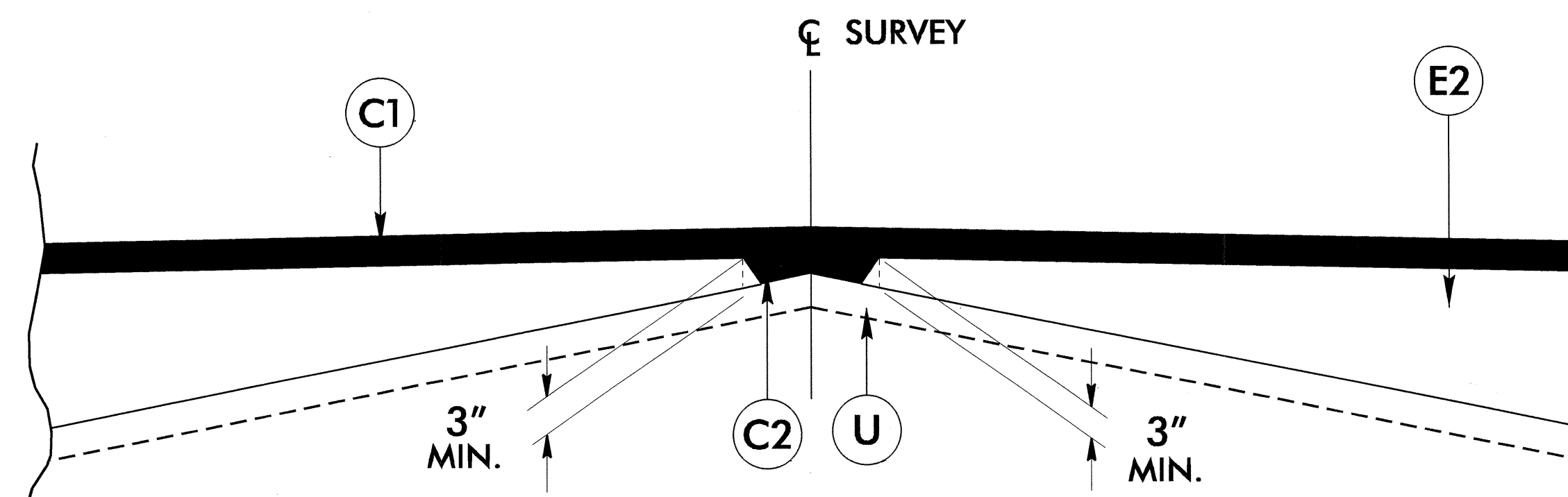
**TYPICAL SECTION NO. 2**

USE TYPICAL SECTION NO. 2  
 -L- STA. 14+50.00 TO 16+79.88 (BEGIN BRIDGE)  
 -L- STA. 17+52.13 (END BRIDGE) TO 18+50.00



**TYPICAL SECTION ON STRUCTURE  
(SEE STRUCTURE PLANS)**

USE TYPICAL ON STRUCTURE  
 -L- STA. 16+79.88 (BEGIN BRIDGE)  
 TO 17+52.13 (END BRIDGE)



**DETAIL SHOWING METHOD OF WEDGING**

**FINAL PAVEMENT SCHEDULE**

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	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 LESS THAN 1" IN DEPTH OR GREATER THAN 1 1/2" IN DEPTH.
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.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202956

ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION
000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
002900000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (17+16.00-L-)
004300000-N	226	Lump Sum		GRADING
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB- BING
005700000-E	226	400	CY	UNDERCUT EXCAVATION
019500000-E	265	400	CY	SELECT GRANULAR MATERIAL
019600000-E	270	400	SY	GEOTEXTILE FOR SOIL STABILIZA- TION
031800000-E	300	5	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES
032000000-E	300	15	SY	FOUNDATION CONDITIONING GEO- TEXTILE
033520000-E	305	32	LF	15" DRAINAGE PIPE
122000000-E	545	20	TON	INCIDENTAL STONE BASE
133000000-E	607	250	SY	INCIDENTAL MILLING
148900000-E	610	300	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
152500000-E	610	400	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
157500000-E	620	40	TON	ASPHALT BINDER FOR PLANT MIX
202200000-E	815	23	CY	SUBDRAIN EXCAVATION
202600000-E	815	100	SY	GEOTEXTILE FOR SUBSURFACE DRAINS
203600000-E	815	17	CY	SUBDRAIN COARSE AGGREGATE
204400000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
207000000-N	815	1	EA	SUBDRAIN PIPE OUTLET
207700000-E	815	6	LF	6" OUTLET PIPE
228600000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES
236700000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29
255600000-E	846	70	LF	SHOULDER BERM GUTTER

ItemNumber	Sec #	Quantity	Unit	Description
303000000-E	862	50	LF	STEEL BM GUARDRAIL
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
327000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
364900000-E	876	4	TON	RIP RAP, CLASS B
365600000-E	876	514	SY	GEOTEXTILE FOR DRAINAGE
407200000-E	903	63	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
409600000-N	904	2	EA	SIGN ERECTION, TYPE D
415500000-N	907	5	EA	DISPOSAL OF SIGN SYSTEM, U- CHANNEL
440000000-E	1110	389	SP	WORK ZONE SIGNS (STATIONARY)
441000000-E	1110	144	SP	WORK ZONE SIGNS (BARRICADE MOUNTED)
444500000-E	1145	112	LF	BARRICADES (TYPE III)
481000000-E	1205	4,800	LF	PAINT PAVEMENT MARKING LINES (4")
600000000-E	1605	1,000	LF	TEMPORARY SILT FENCE
600600000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	80	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	105	TON	SEDIMENT CONTROL STONE
601500000-E	1615	1	ACR	TEMPORARY MULCHING
601800000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEED- ING
602400000-E	1622	100	LF	TEMPORARY SLOPE DRAINS
602900000-E	SP	400	LF	SAFETY FENCE
603000000-E	1630	100	CY	SILT EXCAVATION
603600000-E	1631	2,500	SY	MATTING FOR EROSION CONTROL
603700000-E	SP	200	SY	COIR FIBER MAT
604200000-E	1632	220	LF	1/4" HARDWARE CLOTH

ItemNumber	Sec #	Quantity	Unit	Description
607000000-N	1639	2	EA	SPECIAL STILLING BASINS
607101000-E	SP	150	LF	WATTLE
607101200-E	SP	40	LF	COIR FIBER WATTLE
607102000-E	SP	30	LB	POLYACRYLAMIDE (PAM)
608400000-E	1660	1.5	ACR	SEEDING & MULCHING
608700000-E	1660	0.5	ACR	MOWING
609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	0.75	TON	FERTILIZER TOPDRESSING
611450000-N	1667	15	MHR	SPECIALIZED HAND MOWING
611700000-N	SP	15	EA	RESPONSE FOR EROSION CONTROL

6/21/00

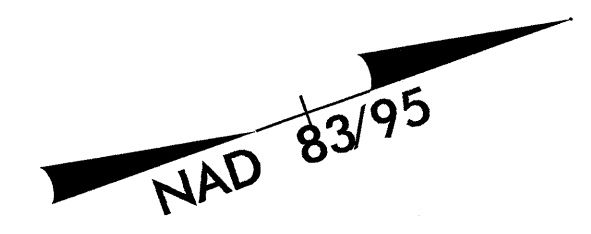
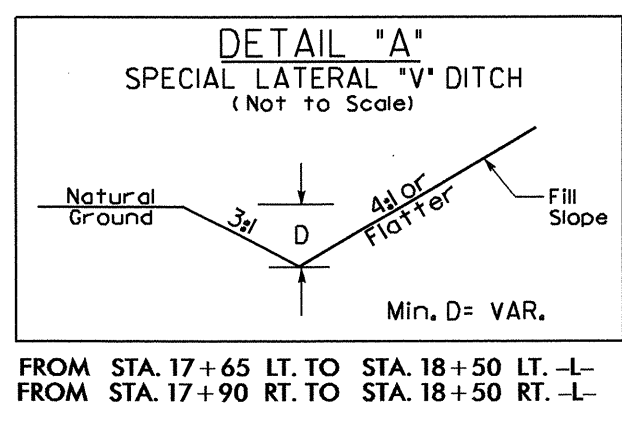
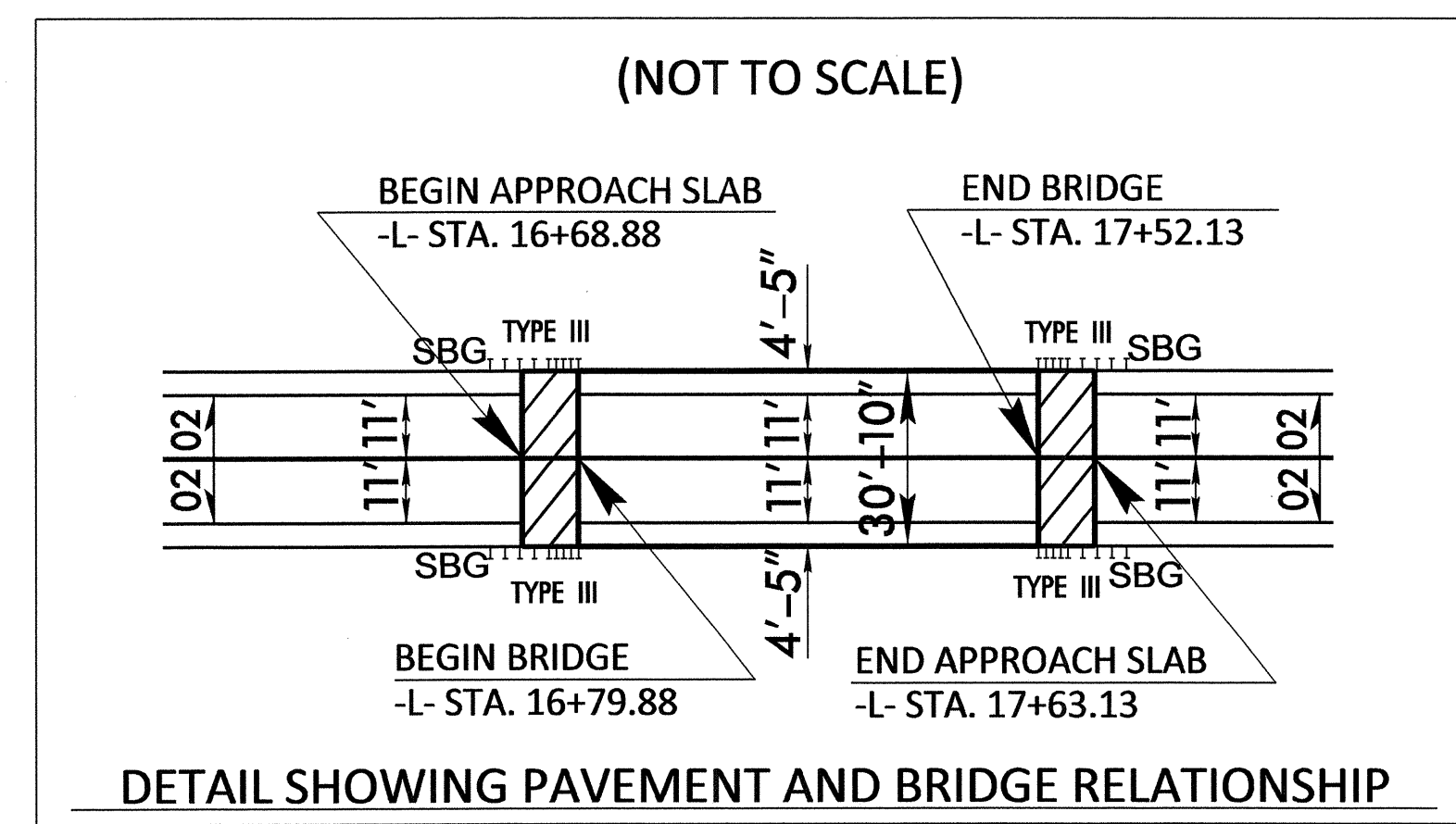
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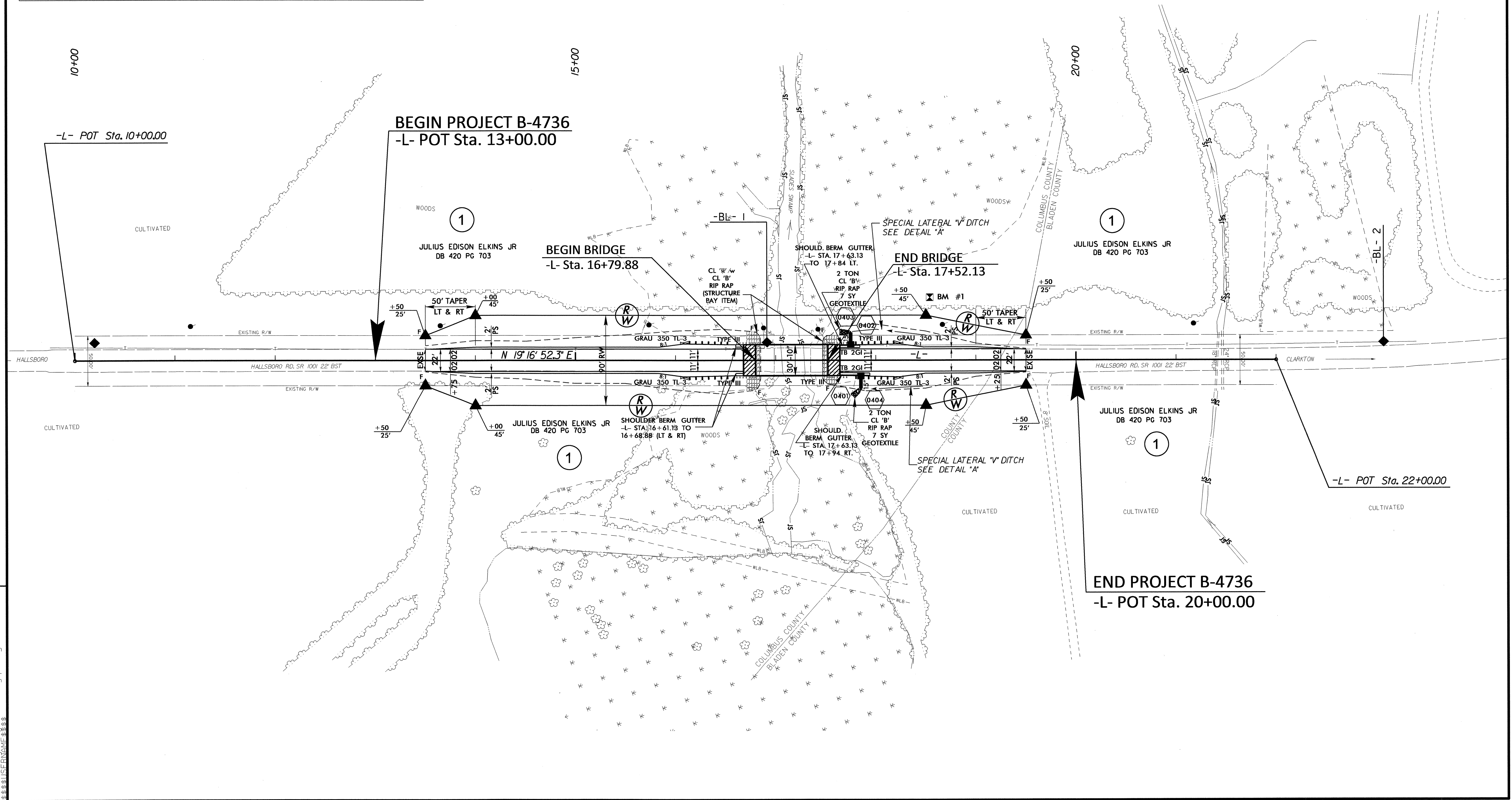


PROJECT REFERENCE NO. B-4736	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16378 R. KHA V. PATEL	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26676 MARC T. SHOWN

NOTE: SEE SHEET 5 FOR -L- PROFILE  
SEE SHEETS S-1 THRU S-14 FOR  
STRUCTURE PLANS



REVISIONS



8/17/99

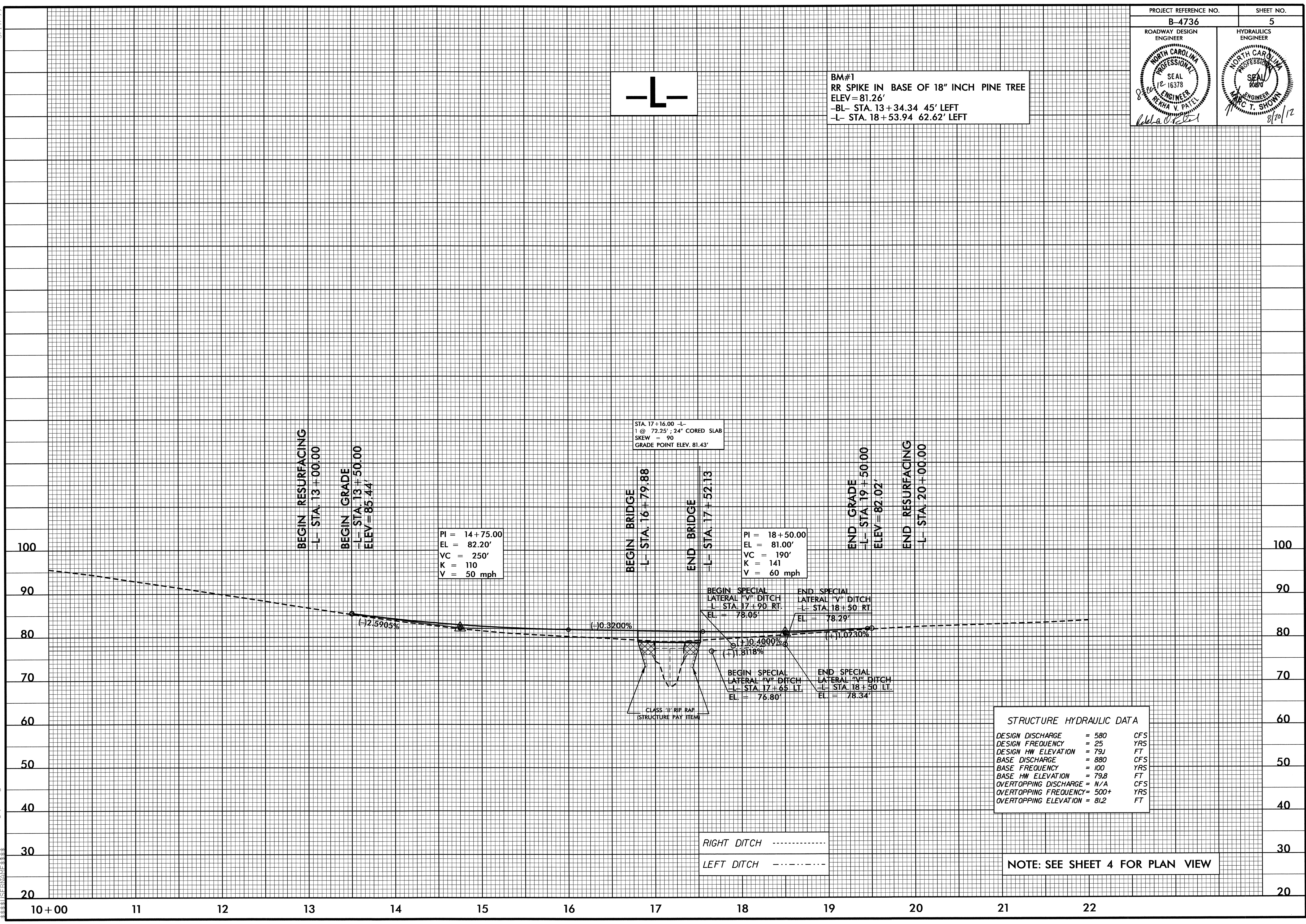
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5/14/99

PROJECT REFERENCE NO. <b>B-4736</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BM#1  
RR SPIKE IN BASE OF 18" INCH PINE TREE  
ELEV = 81.26'  
-BL- STA. 13+34.34 45' LEFT  
-L- STA. 18+53.94 62.62' LEFT



PI = 14+75.00  
EL = 82.20'  
VC = 250'  
K = 110  
V = 50 mph

STA. 17+16.00 -L-  
1 @ 72.25' ; 24" CORED SLAB  
SKEW = 90  
GRADE POINT ELEV. 81.43'

PI = 18+50.00  
EL = 81.00'  
VC = 190'  
K = 141  
V = 60 mph

BEGIN BRIDGE  
-L- STA. 16+79.88

END BRIDGE  
-L- STA. 17+52.13

END GRADE  
-L- STA. 19+50.00  
ELEV = 82.02'

END RESURFACING  
-L- STA. 20+00.00

BEGIN RESURFACING  
-L- STA. 13+00.00

BEGIN GRADE  
-L- STA. 13+50.00  
ELEV = 85.44'

BEGIN SPECIAL LATERAL "V" DITCH  
-L- STA. 17+99 RT.  
EL = 78.05'

END SPECIAL LATERAL "V" DITCH  
-L- STA. 18+50 RT.  
EL = 78.29'

BEGIN SPECIAL LATERAL "V" DITCH  
-L- STA. 17+65 LT.  
EL = 76.80'

END SPECIAL LATERAL "V" DITCH  
-L- STA. 18+50 LT.  
EL = 78.34'

CLASS "IV" RIP RAP  
STRUCTURE PAY ITEM

STRUCTURE HYDRAULIC DATA		
DESIGN DISCHARGE	= 580	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 79J	FT
BASE DISCHARGE	= 880	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 79.8	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 81.2	FT

RIGHT DITCH -----  
LEFT DITCH -----

NOTE: SEE SHEET 4 FOR PLAN VIEW

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