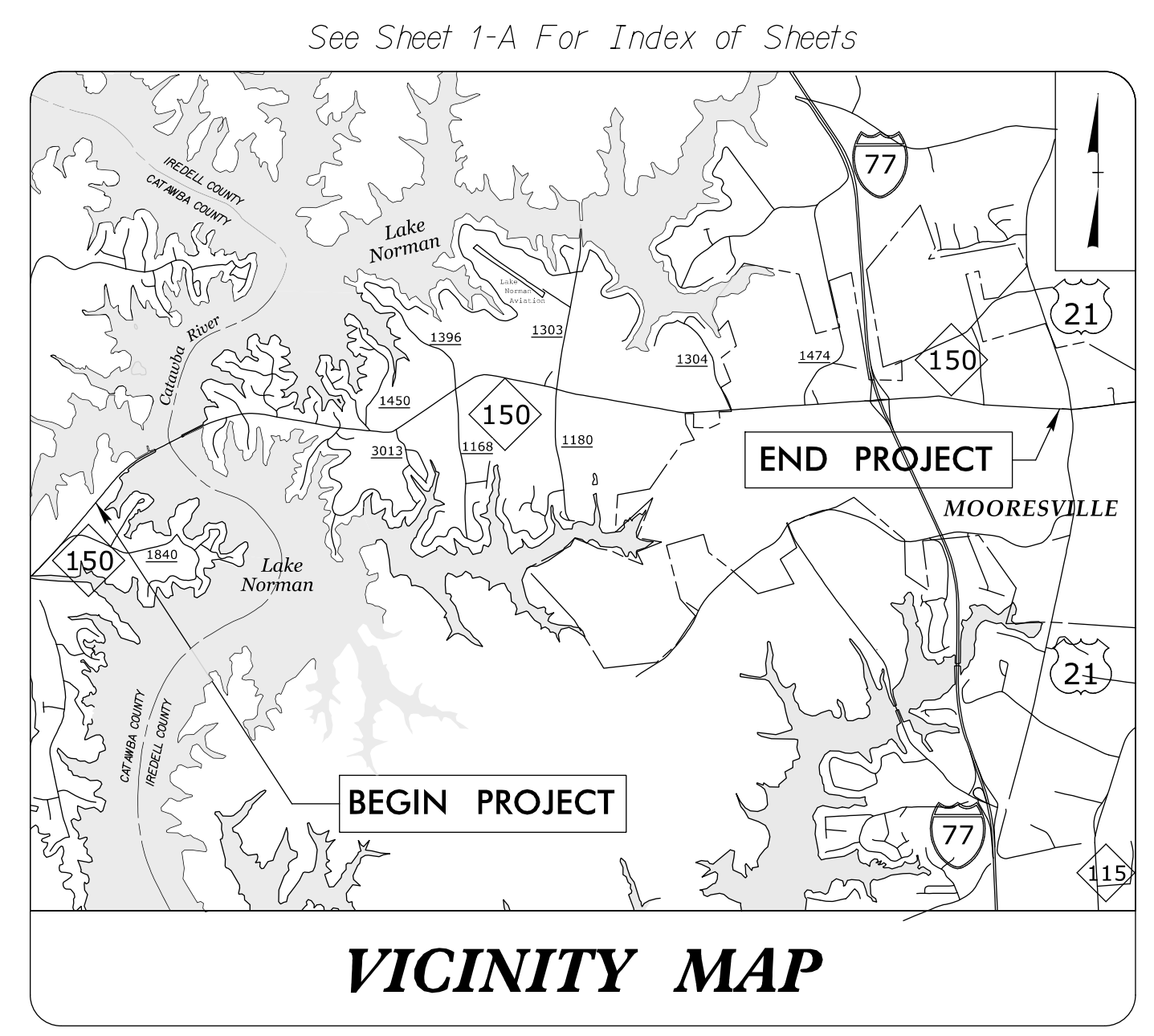


09/28/24

8/26/2024 X:\ncdot\ar-2307b\roadway\proj\ar-2307b\_rdy\_tsh.dgn User:bevans

CONTRACT: C204348 TIP PROJECT: R-2307B



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

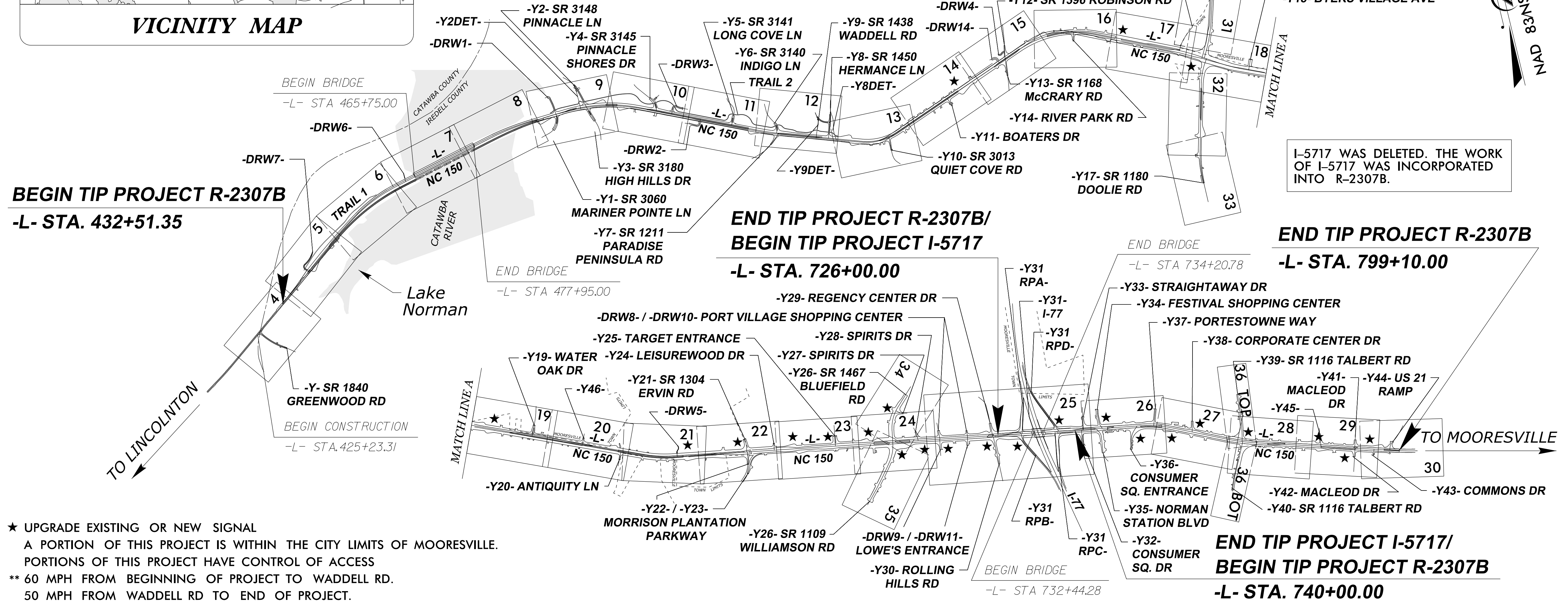
# CATAWBA & IREDELL COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2307B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37944.1.FR5	STP-0150(36)	PE (R-2307B)	
50134.1.FS1	NHPP-077-1(221)37	PE (I-5717)	
37944.2.4	STP-0150(036)	RW (R-2307B)	
37944.2.5	STP-0150(036)	UTILITIES (R-2307B)	
50134.2.1	NHPP-077-1(221)37	RW (I-5717)	
37944.3.4	STP-0150(036)	CONST. (R-2307B)	

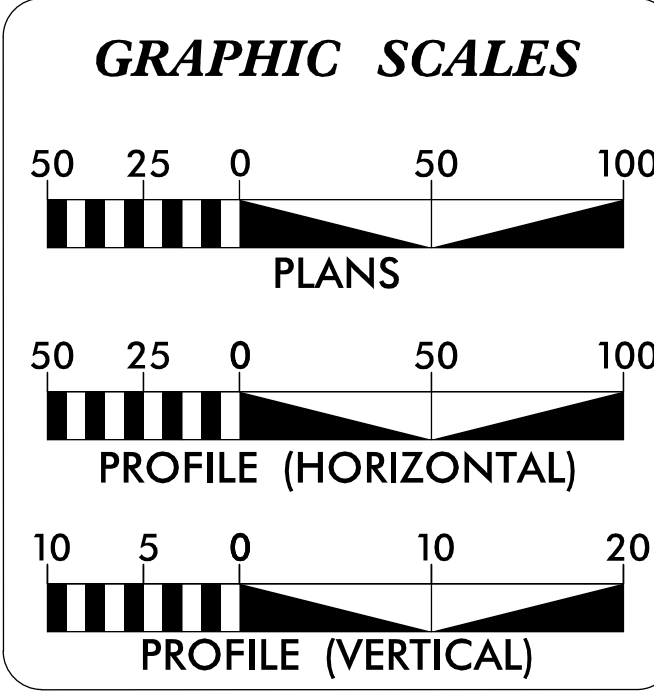
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: NC 150 FROM SR 1840 (GREENWOOD RD) IN CATAWBA COUNTY TO US 21 IN IREDELL COUNTY

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



★ UPGRADE EXISTING OR NEW SIGNAL  
A PORTION OF THIS PROJECT IS WITHIN THE CITY LIMITS OF MOORESVILLE.  
PORTIONS OF THIS PROJECT HAVE CONTROL OF ACCESS  
\*\* 60 MPH FROM BEGINNING OF PROJECT TO WADDELL RD.  
50 MPH FROM WADDELL RD TO END OF PROJECT.



**DESIGN DATA**

ADT 2019 = 47,900  
ADT 2039 = 58,860  
K = 8%  
D = 55%  
T = 6%\*  
V = \*\*  
\* TTST 2%+ DUAL 4%  
FUNC CLASS =  
PRINCIPAL ARTERIAL  
STATEWIDE TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-2307B	=	6.447 MI.
LENGTH STRUCTURES TIP PROJECT R-2307B	=	0.231 MI.
TOTAL LENGTH TIP PROJECT R-2307B	=	6.678 MI.
LENGTH ROADWAY TIP PROJECT I-5717	=	0.232 MI.
LENGTH STRUCTURES TIP PROJECT I-5717	=	0.033 MI.
TOTAL LENGTH TIP PROJECT I-5717	=	0.265 MI.
TOTAL LENGTH TIP PROJECT R-2307B /I-5717	=	6.943 MI.

Prepared For:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
TGS ENGINEERS  
706 HILLSBOROUGH ST SUITE 200  
RALEIGH, NC 27603

PH (919) 773-8887  
CORP. LICENSE NO.: C-0275

2024 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
AUGUST 31, 2017

**LETTING DATE:**  
OCTOBER 15, 2024

**BURKE EVANS, PE**  
PROJECT ENGINEER

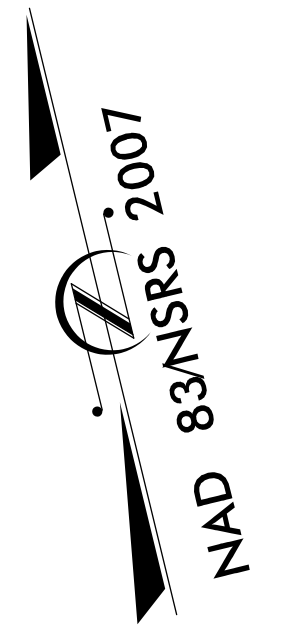
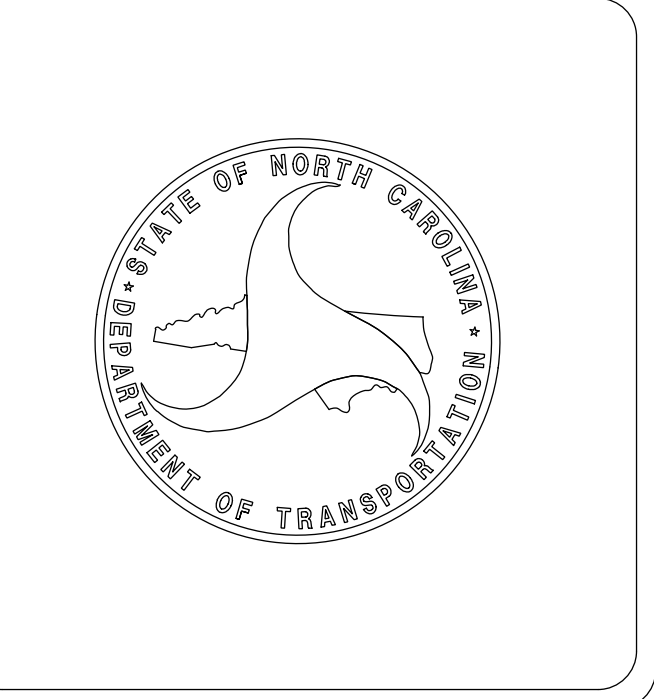
**NATHAN ADIMA, PE**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

Signed by: *David B. Petty*  
SEAL 038697  
DAVID B. PETTY  
SIGNATURE: 8/26/2024 8:59 AM EDT

**ROADWAY DESIGN ENGINEER**

DocuSigned by: *David Burke Evans*  
SEAL 019724  
DAVID BURKE EVANS  
SIGNATURE: 8/26/2024 11:49 AM EDT





# 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)	○
Computed Property Corner	×
Existing Concrete Monument (ECM)	□
Parcel/Sequence Number	⑩②③
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	-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	×
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	○
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	_____
Proposed Control of Access Line	_____
Proposed ROW and CA Line	_____
Existing Easement Line	_____
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	_____
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:

\* 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)*	_____
U/G Power Line (SUE - LOS C)*	_____
U/G Power Line (SUE - LOS D)*	_____

## 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)*	_____
U/G Telephone Cable (SUE - LOS C)*	_____
U/G Telephone Cable (SUE - LOS D)*	_____
U/G Telephone Conduit (SUE - LOS B)*	_____
U/G Telephone Conduit (SUE - LOS C)*	_____
U/G Telephone Conduit (SUE - LOS D)*	_____
U/G Fiber Optics Cable (SUE - LOS B)*	_____
U/G Fiber Optics Cable (SUE - LOS C)*	_____
U/G Fiber Optics Cable (SUE - LOS D)*	_____

## 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)*	_____
U/G Water Line (SUE - LOS C)*	_____
U/G Water Line (SUE - LOS D)*	_____
Above Ground Water Line	_____
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)*	_____
U/G TV Cable (SUE - LOS C)*	_____
U/G TV Cable (SUE - LOS D)*	_____
U/G Fiber Optic Cable (SUE - LOS B)*	_____
U/G Fiber Optic Cable (SUE - LOS C)*	_____
U/G Fiber Optic Cable (SUE - LOS D)*	_____

## GAS:

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

## SANITARY SEWER:

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

## MISCELLANEOUS:

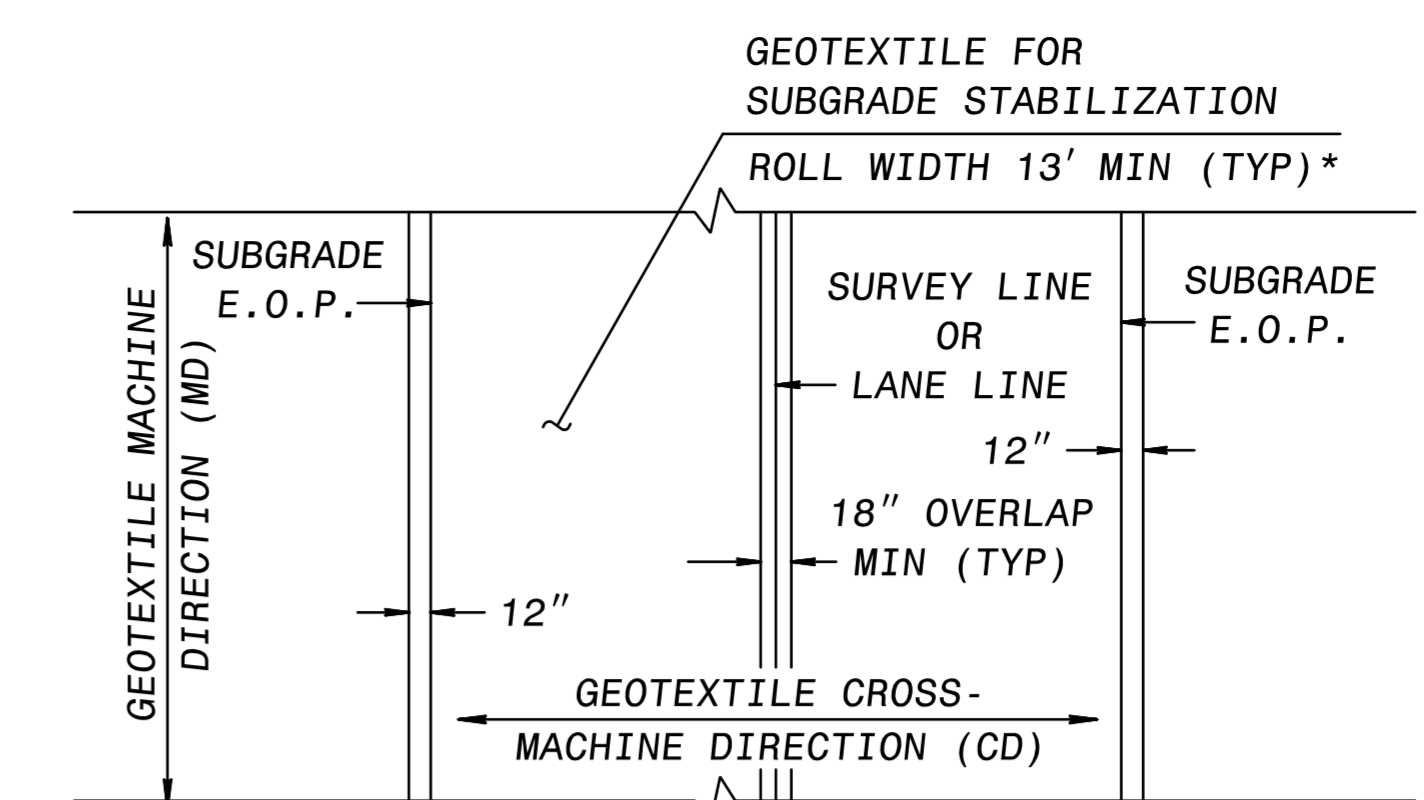
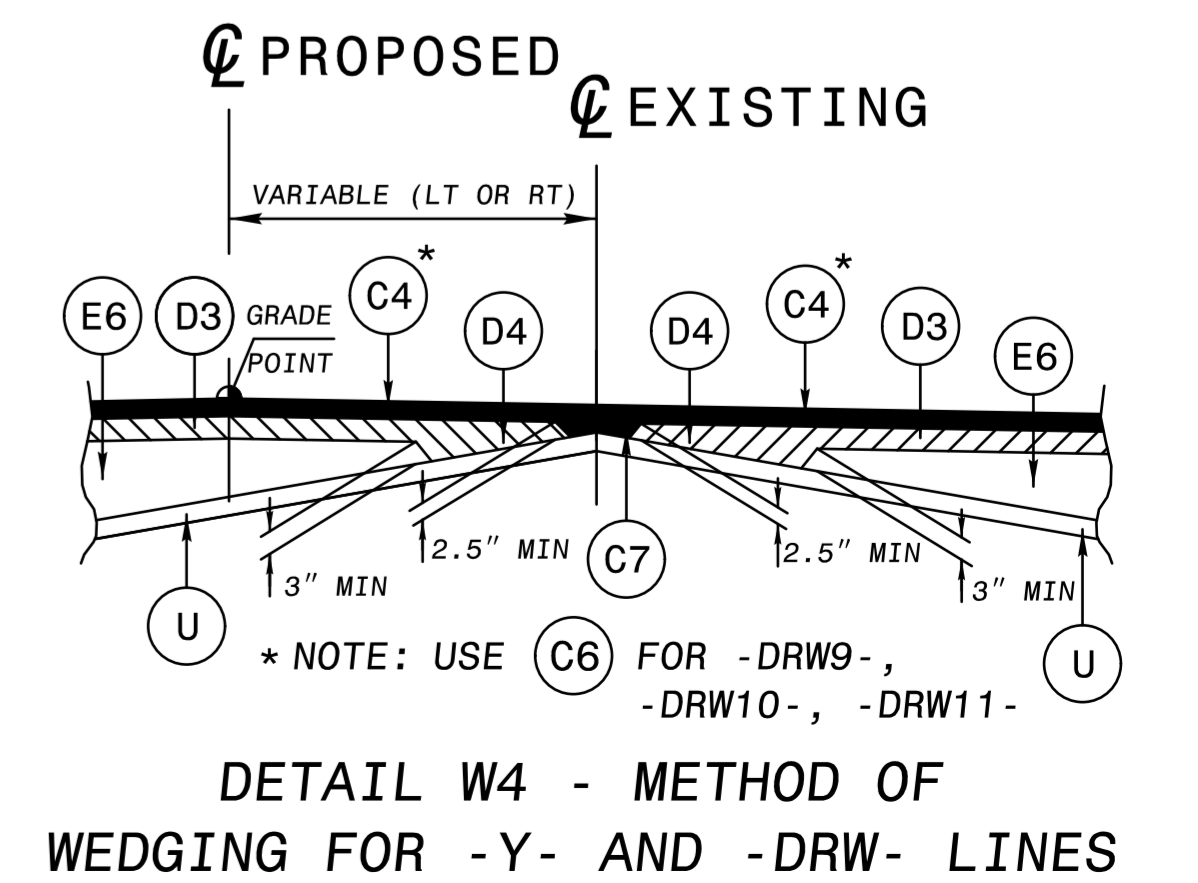
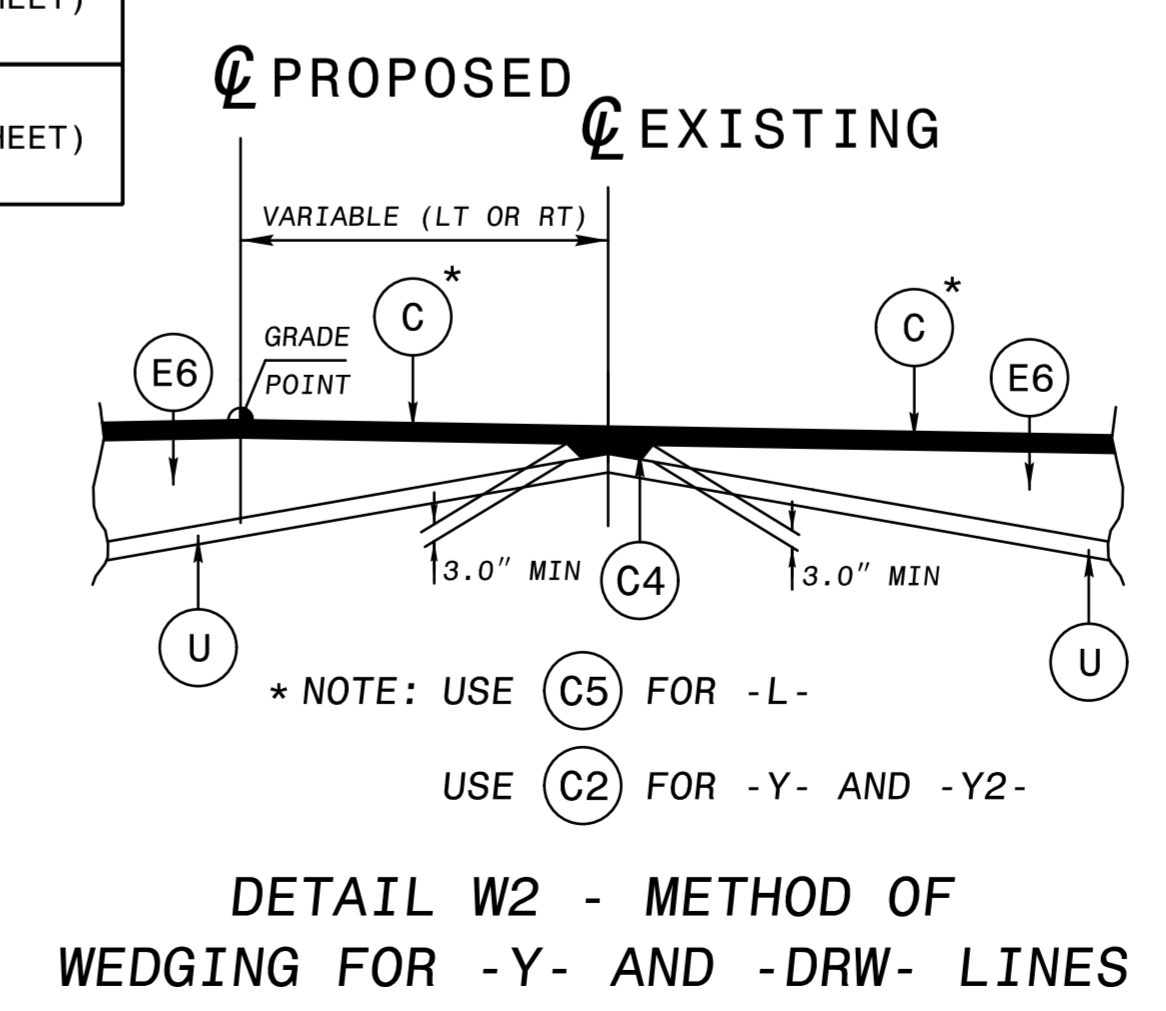
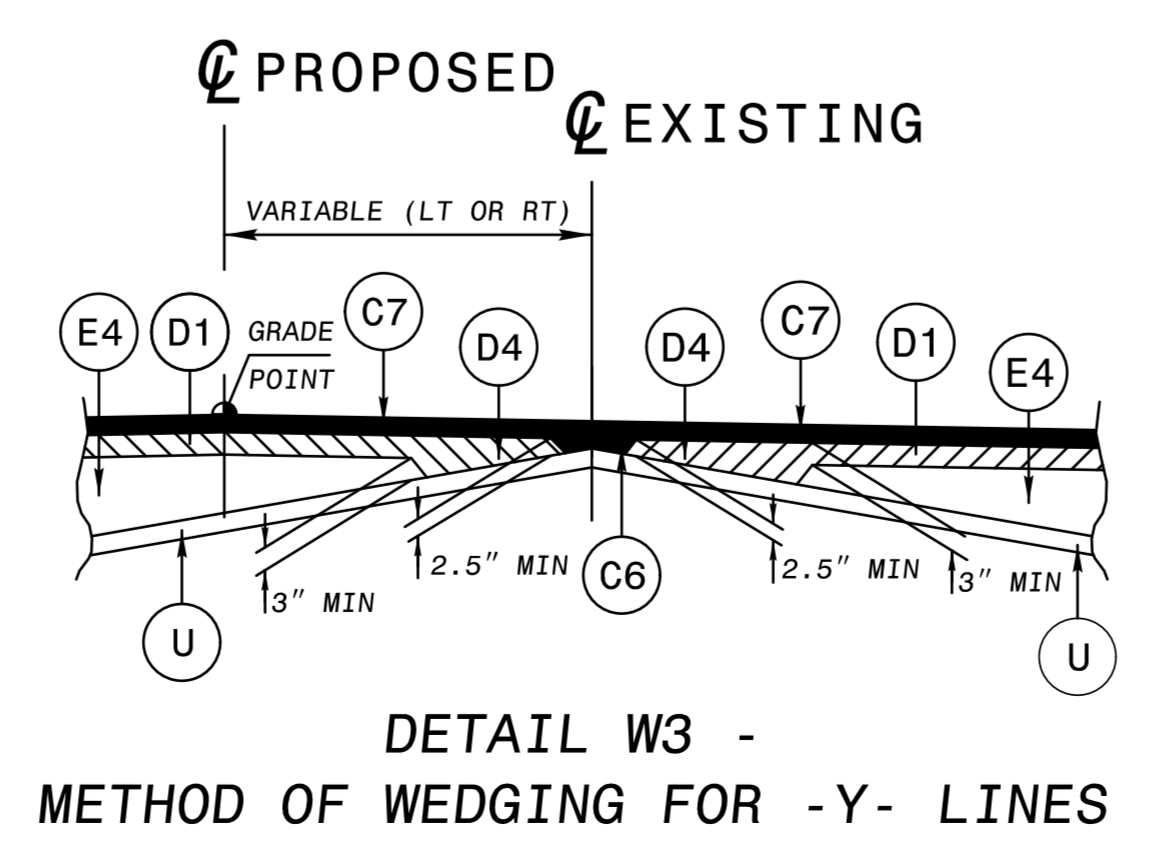
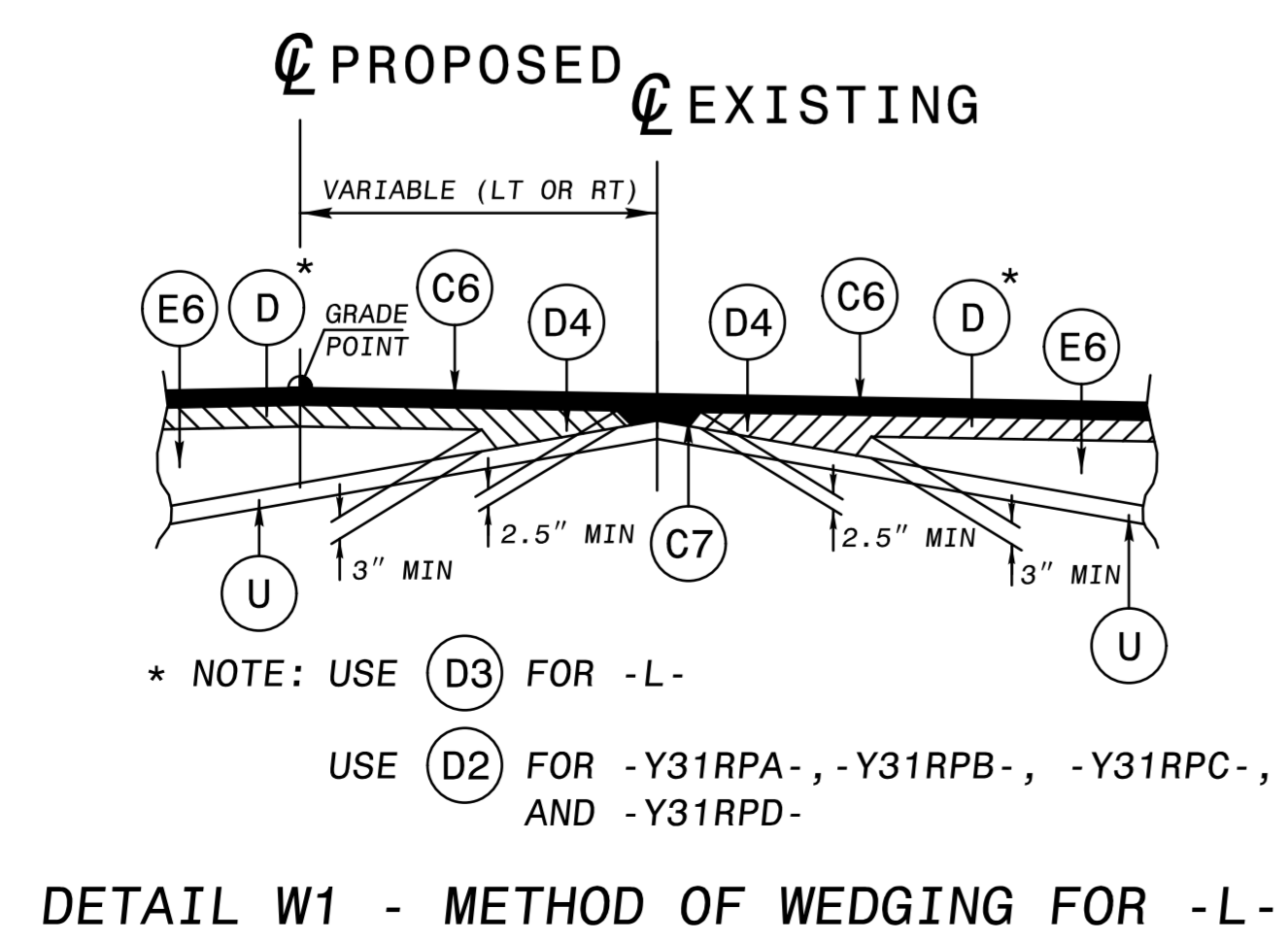
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line (SUE - LOS B)*	_____
U/G Tank; Water, Gas, Oil	_____
Underground Storage Tank, Approx. Loc.	_____
A/G Tank; Water, Gas, Oil	_____
Geoenvironmental Boring	⊕
Abandoned According to Utility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

6/2/2019

# PAVEMENT SCHEDULE

<b>C1</b>	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YARD	<b>K1</b>	BASE TO BE TREATED WITH LIME (METHOD-SLURRY) TO A DEPTH OF 8", AT A RATE OF 25 LBS. PER SQ. YD. AS DIRECTED BY THE ENGINEER.
<b>C2</b>	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YARD IN EACH OF TWO LAYERS		OR
<b>C3</b>	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YARD IN EACH OF TWO LAYERS	<b>K2</b>	PROP. 8" CLASS IV SUBGRADE STABILIZATION
<b>C4</b>	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" OR GREATER THAN 1.5" IN DEPTH	<b>N</b>	GEOTEXTILE FOR SUBGRADE STABILIZATION
<b>C5</b>	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD	<b>R1</b>	2'-6" CONCRETE CURB & GUTTER
<b>C6</b>	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD. IN EACH OF TWO LAYERS	<b>R2</b>	1'-6" CONCRETE CURB & GUTTER
<b>C7</b>	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2" IN DEPTH	<b>R3</b>	2'-9" CONCRETE CURB & GUTTER
<b>C8</b>	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YARD IN EACH OF TWO LAYERS	<b>R4</b>	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
<b>D1</b>	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YARD	<b>R5</b>	8" X 18" CONCRETE CURB
<b>D2</b>	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YARD	<b>R6</b>	CONCRETE SHOULDER BERM GUTTER
<b>D3</b>	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD	<b>R7</b>	SINGLE FACED CONCRETE BARRIER
<b>D4</b>	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH	<b>R8</b>	DOUBLE FACED CONCRETE BARRIER TYPE III
<b>E1</b>	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YARD	<b>S</b>	4" CONCRETE SIDEWALK
<b>E2</b>	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD	<b>T</b>	EARTH MATERIAL
<b>E3</b>	PROP. APPROX. 5.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YARD	<b>U</b>	EXISTING PAVEMENT
<b>E4</b>	PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YARD IN EACH OF TWO LAYERS	<b>V1</b>	MILLING ASPHALT PAVEMENT, 2.5" DEPTH
<b>E5</b>	PROP. APPROX. 13.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YARD IN EACH OF THREE LAYERS	<b>V2</b>	MILLING ASPHALT PAVEMENT, 3.0" DEPTH
<b>E6</b>	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH	<b>W1</b>	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAIL ON THIS SHEET)
<b>J1</b>	6" AGGREGATE BASE COURSE	<b>W2</b>	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAIL ON THIS SHEET)
<b>J2</b>	8" AGGREGATE BASE COURSE	<b>W3</b>	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAIL ON THIS SHEET)
		<b>W4</b>	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAIL ON THIS SHEET)

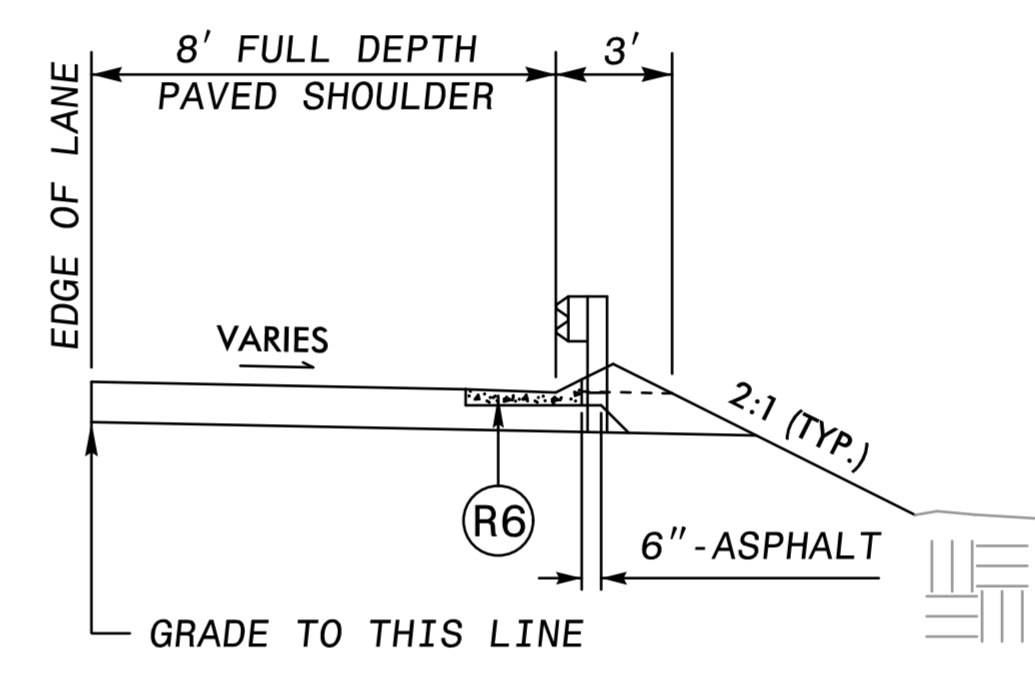
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



\*INSTALL GEOTEXTILE FOR SUBGRADE STABILIZATION WITH MINIMUM ROLL WIDTH UNDER ROADWAY EDGES AND SHOULDERS ADJACENT TO FILL SLOPES

## GEOTEXTILE FOR SUBGRADE STABILIZATION PLACEMENT (PLAN VIEW)

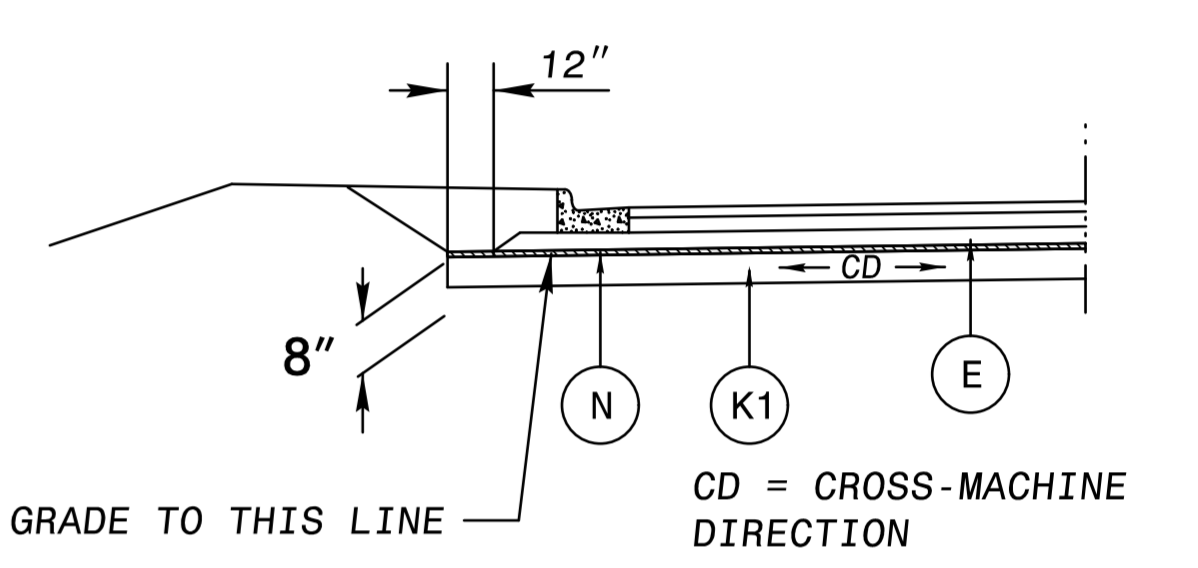
(100% COVERAGE REQUIRED)



LINE	STATIONS
-L-	494+71.13 TO 497+18.13 RT
-L-	538+00.00 TO 541+05.00 LT

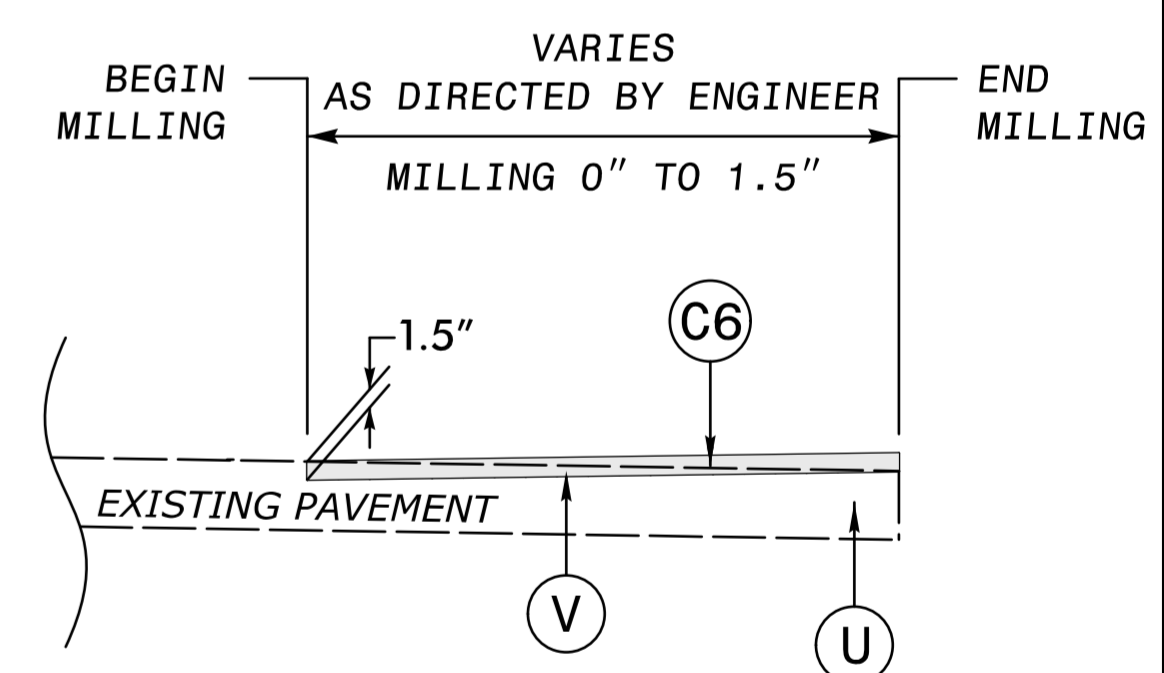
SEE CORRESPONDING TYPICAL SECTION FOR PAVEMENT DESIGN.  
SEE TYPICAL SECTIONS AND PLANS FOR ACTUAL DIMENSIONS.

## DETAILS FOR SHOULDER BERM GUTTER



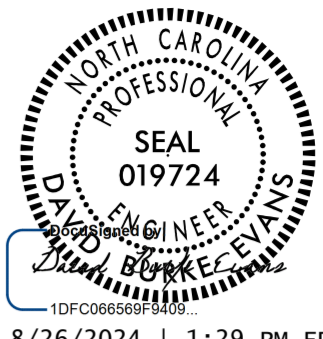
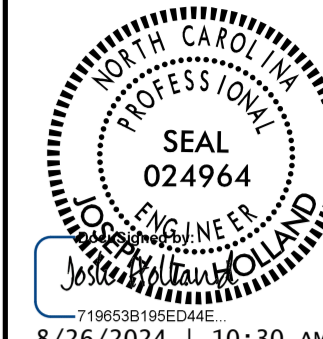
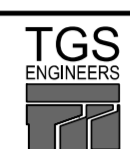
SEE CHART ON SHEET 3G-1 FOR LOCATIONS

## INCIDENTAL MILLING DETAIL

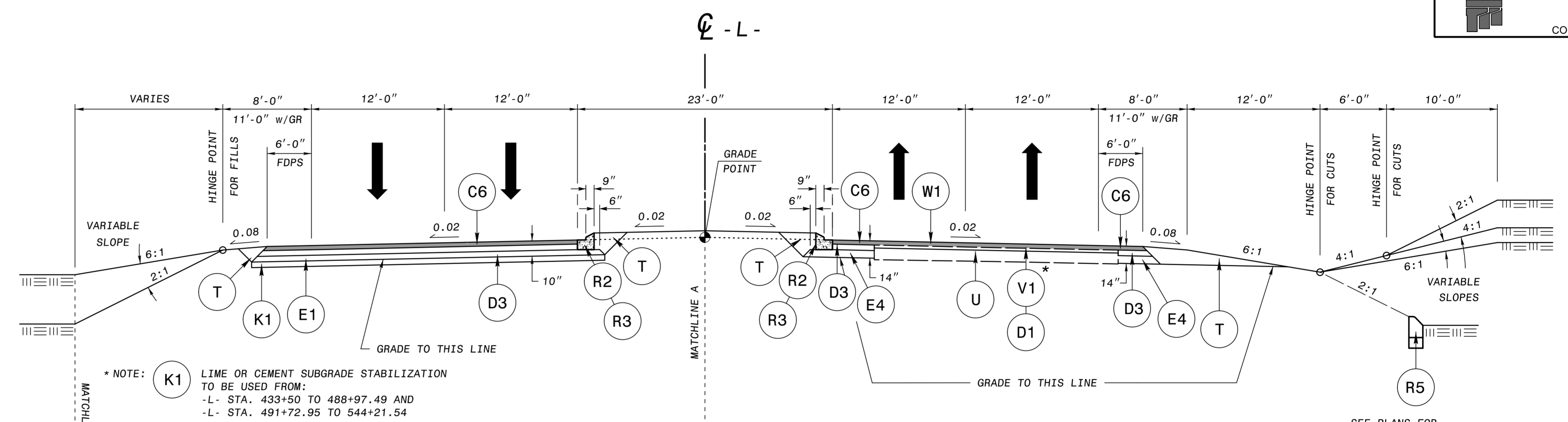


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5/14/199

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-2</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

8/26/2024  
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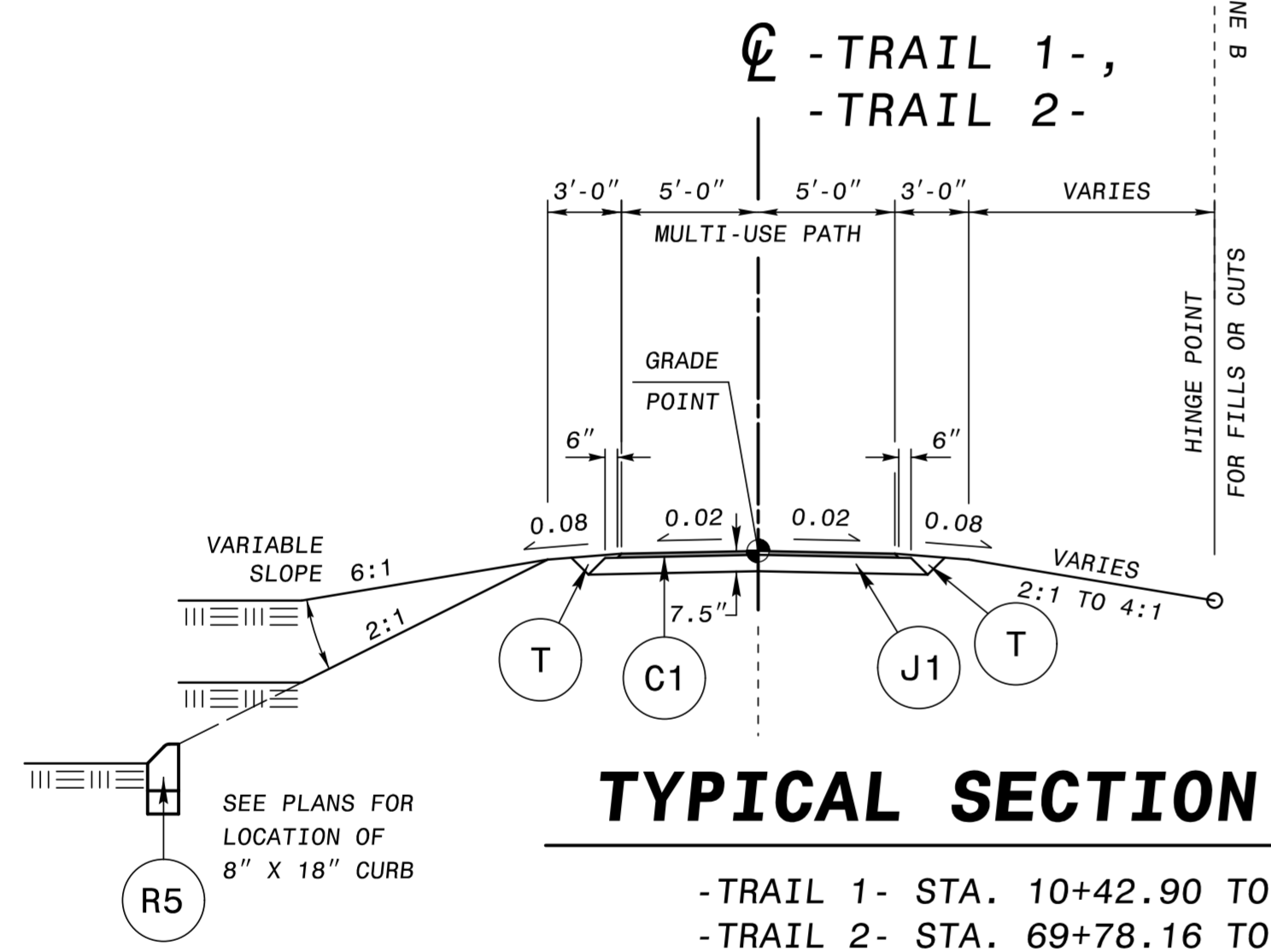


**TYPICAL SECTION NO. 1**

-L- STA. 432+51.35 TO 439+66.05 TRANSITION FROM EXISTING TO SECTION 1  
 -L- STA. 439+66.05 TO 448+97.49  
 -L- STA. 491+72.95 TO 544+21.54

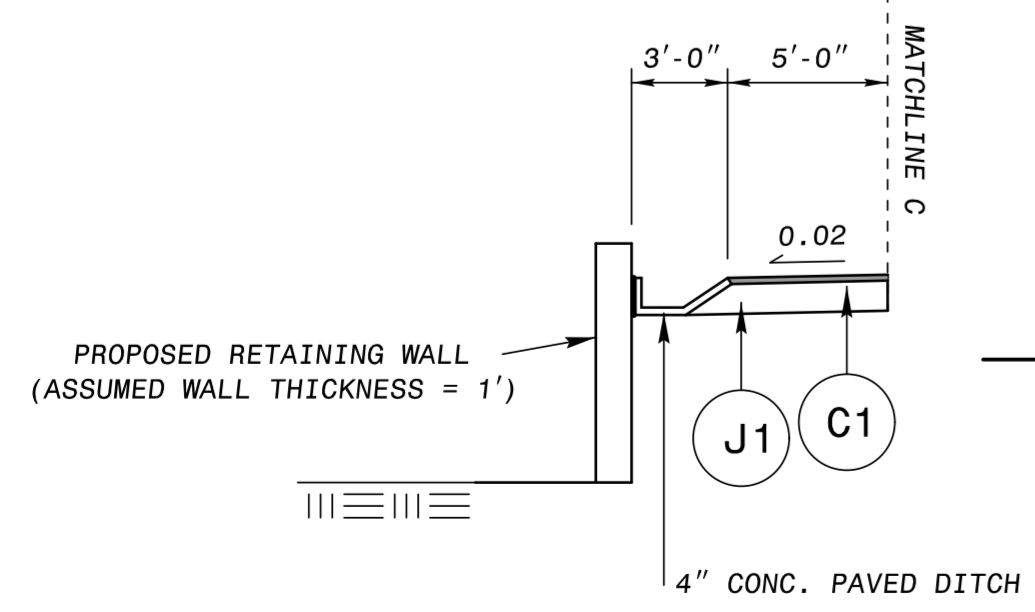
\* MILL AND FILL THROUGH LANES FROM  
 -L- STA. 432+51.35 TO 447+00.00  
 -L- STA. 491+72.95 TO 504+00.00  
 MILL AND FILL NOT REQUIRED WHEN WEDGING MORE THAN 1'.

NOTE:  
 EXISTING PAVEMENT LOCATION VARIES WITHIN THE TYPICAL SECTION FROM THE LEFT TO RIGHT SIDE OF THE PROPOSED TYPICAL SECTION. SEE PLANS FOR LOCATIONS.



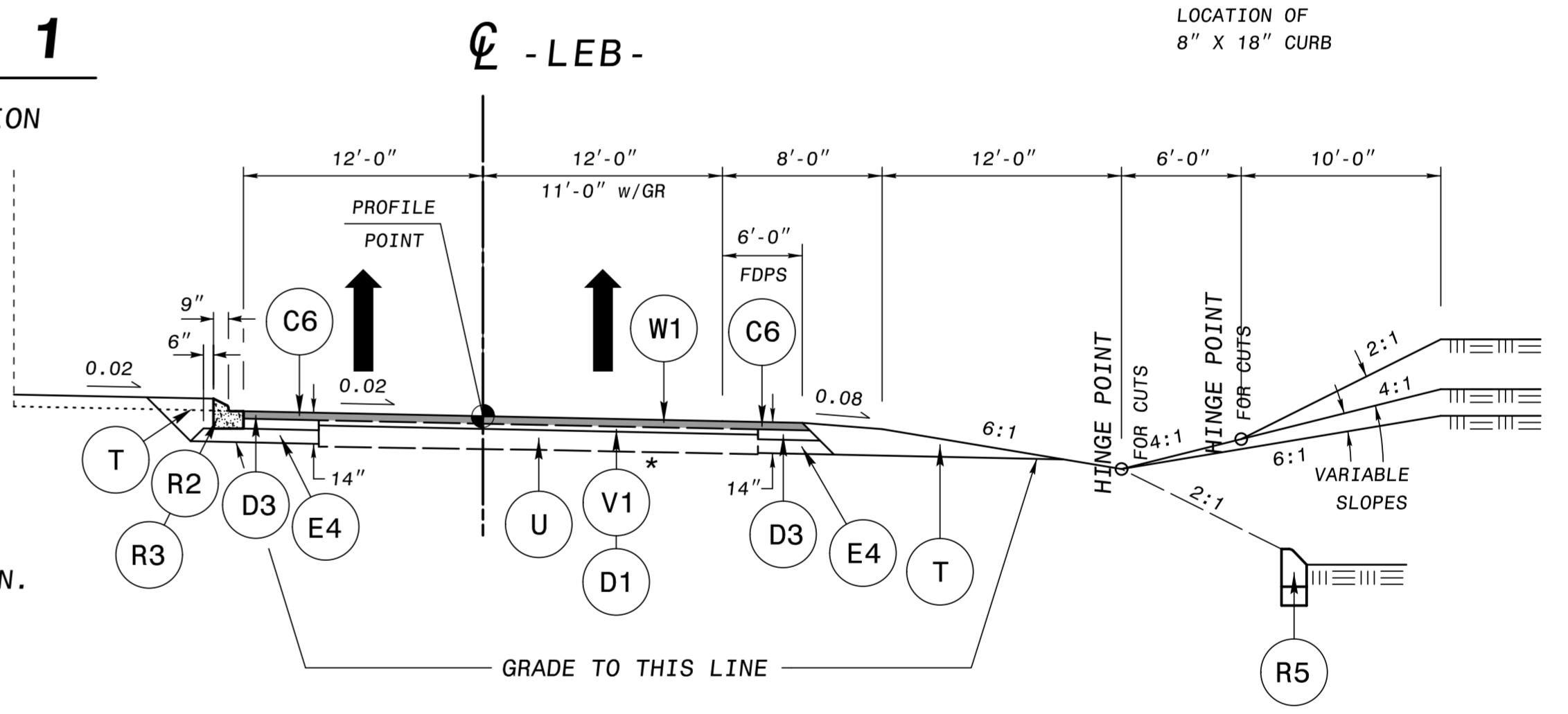
**TYPICAL SECTION NO. 2**

-TRAIL 1- STA. 10+42.90 TO 29+19.09  
 -TRAIL 2- STA. 69+78.16 TO 126+66.87



**TYPICAL SECTION NO. 2-A**

WALL W-2: -L- STA. 516+80.00 TO 522+10.00 LT



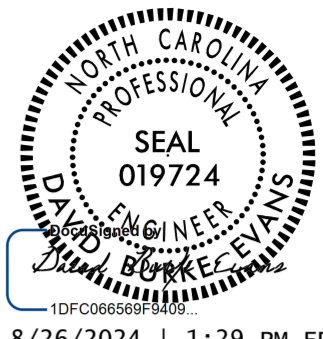
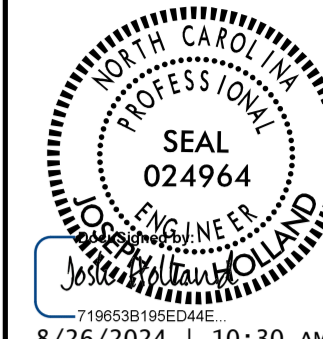
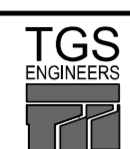
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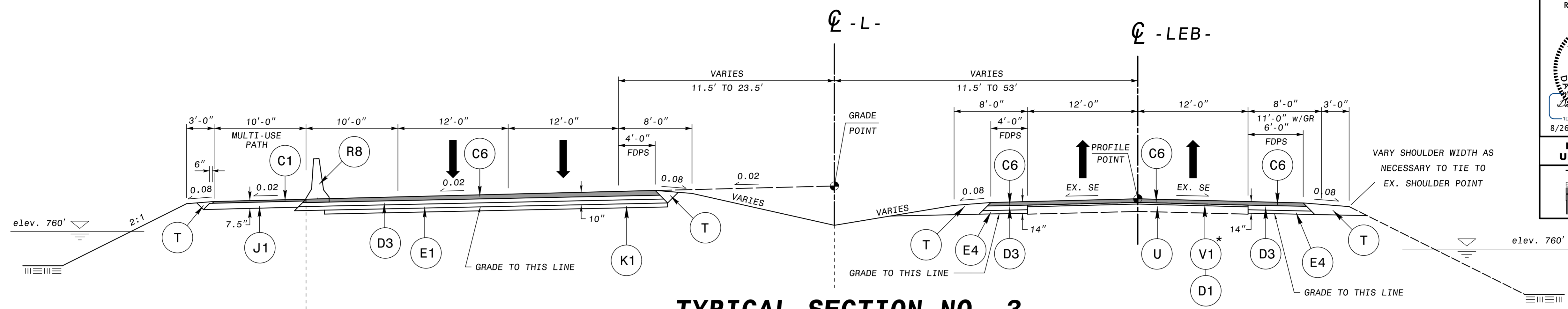
-LEB- STA. 45+60.03 TO 47+57.14  
 \* MILL AND FILL THROUGH LANES FROM  
 -LEB- STA. 45+60.03 TO 47+57.14.

**PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)**

C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM CUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

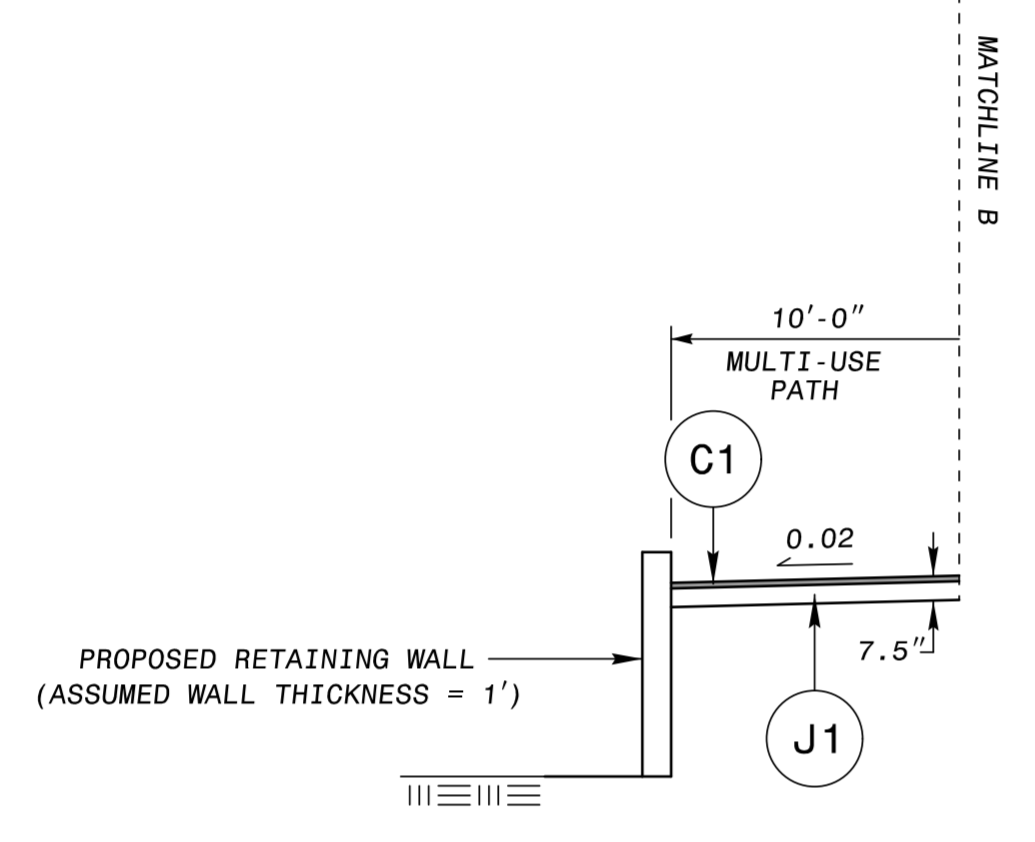
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-3</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TYPICAL SECTION NO. 3**

-L- STA. 448+97.49 TO 465+75.00  
 -L- STA. 477+95.00 TO 491+72.95  
 -LEB- STA. 47+57.14 TO 48+50.00  
 \* MILL AND FILL THROUGH LANES FROM  
 -LEB- STA. 47+57.14 TO 48+50.00.



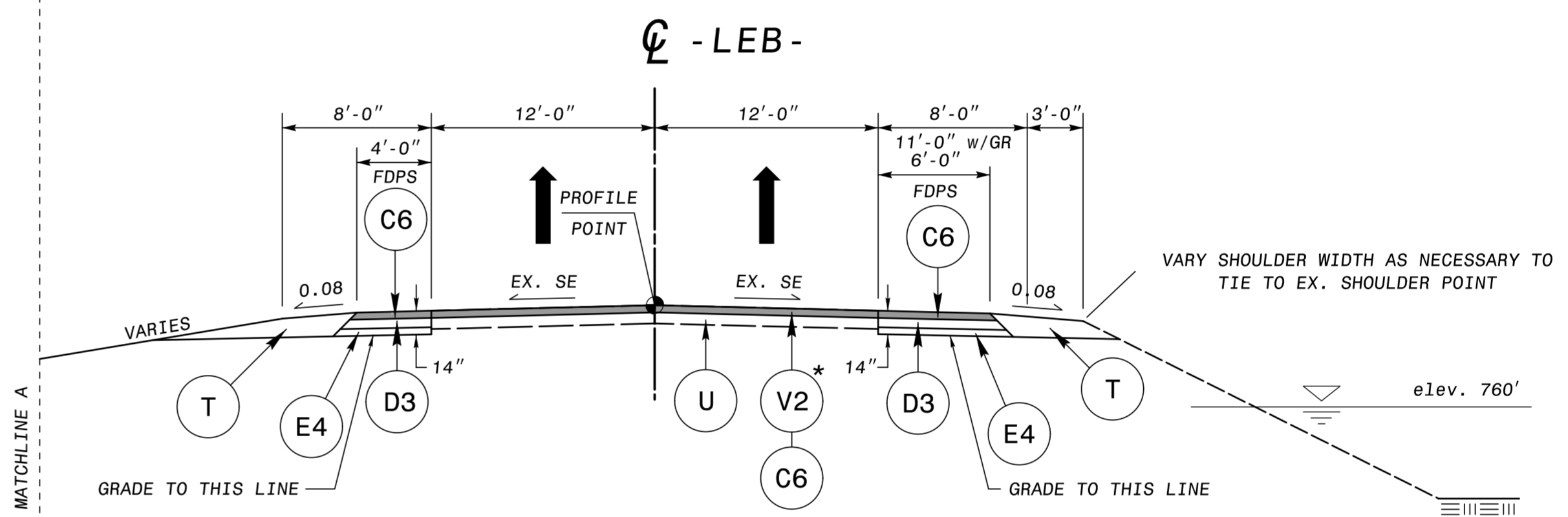
**TYPICAL SECTION NO. 3-B**

WALL W-1 FROM -L- STA. 488+70.00 TO 491+70.00

**TYPICAL SECTION NO. 3-A**

-LEB- STA. 48+50.00 TO 64+51.06  
 -LEB- STA. 76+16.99 TO 87+15.00

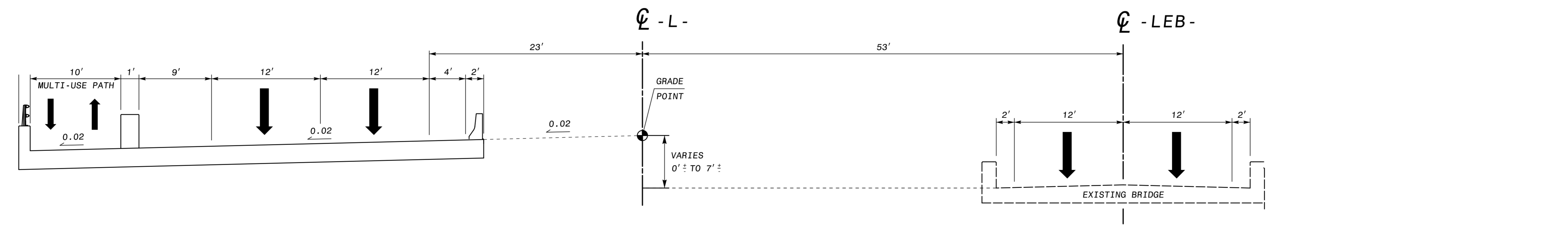
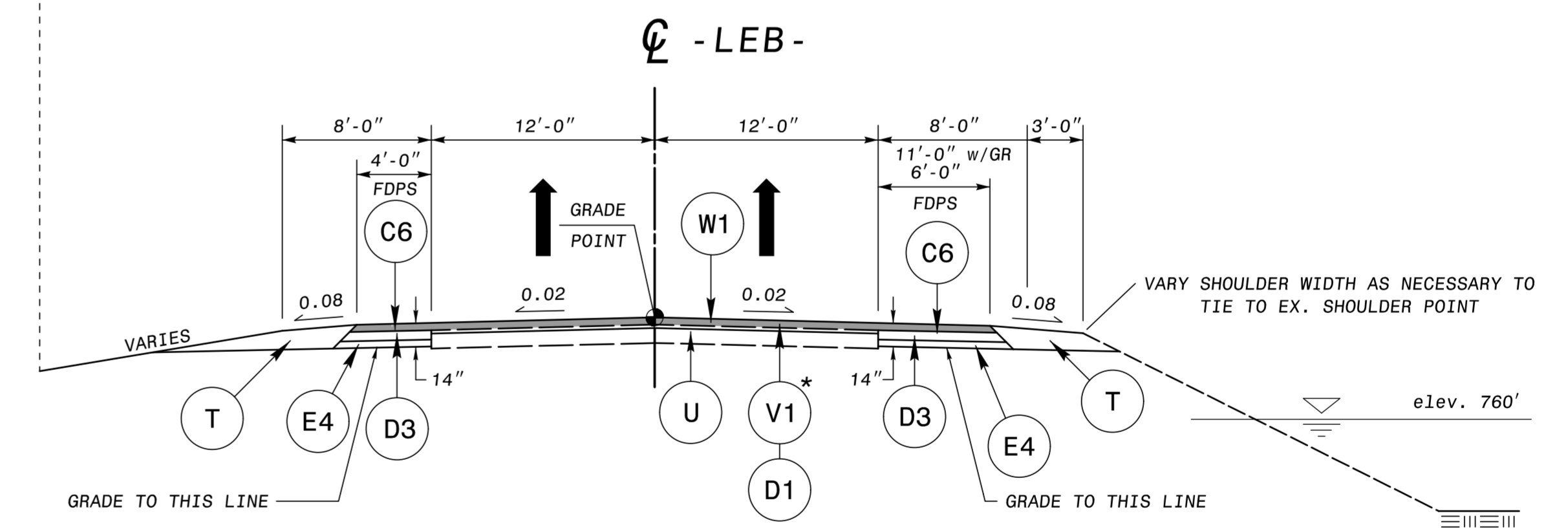
\* MILL AND FILL THROUGH LANES FROM  
 -LEB- STA. 48+50.00 TO 64+51.06  
 -LEB- STA. 76+16.99 TO 87+15.00.



**TYPICAL SECTION NO. 3-C**

-LEB- STA. 87+15.00 TO 90+08.02

\* MILL AND FILL THROUGH LANES FROM  
 -LEB- STA. 87+15.00 TO 90.08.02  
 MILL AND FILL NOT REQUIRED WHEN  
 WEDGING MORE THAN 1'.



**TYPICAL SECTION NO. 4**

-L- STA. 465+75.00 TO 477+95.00

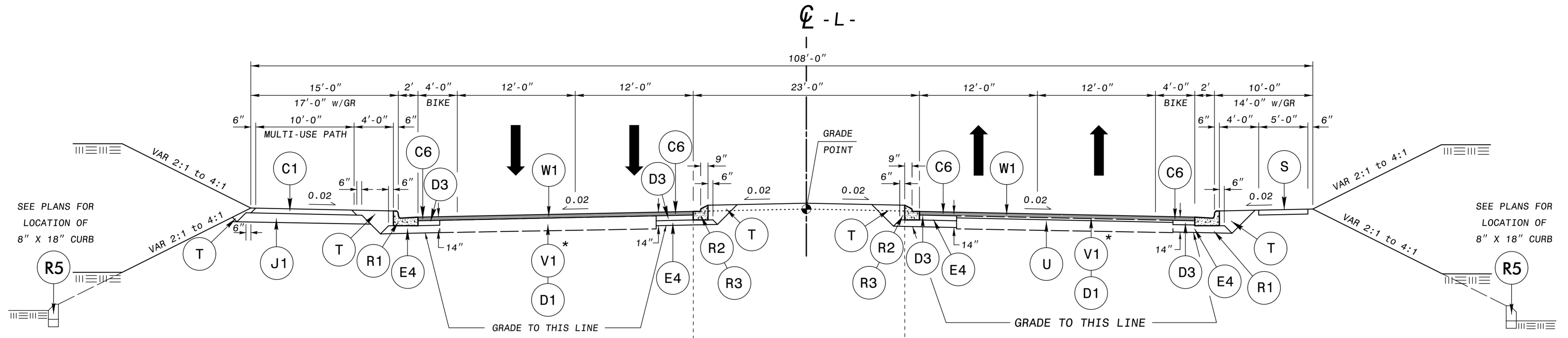
-LEB- STA. 64+51.06 TO 76+16.99

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

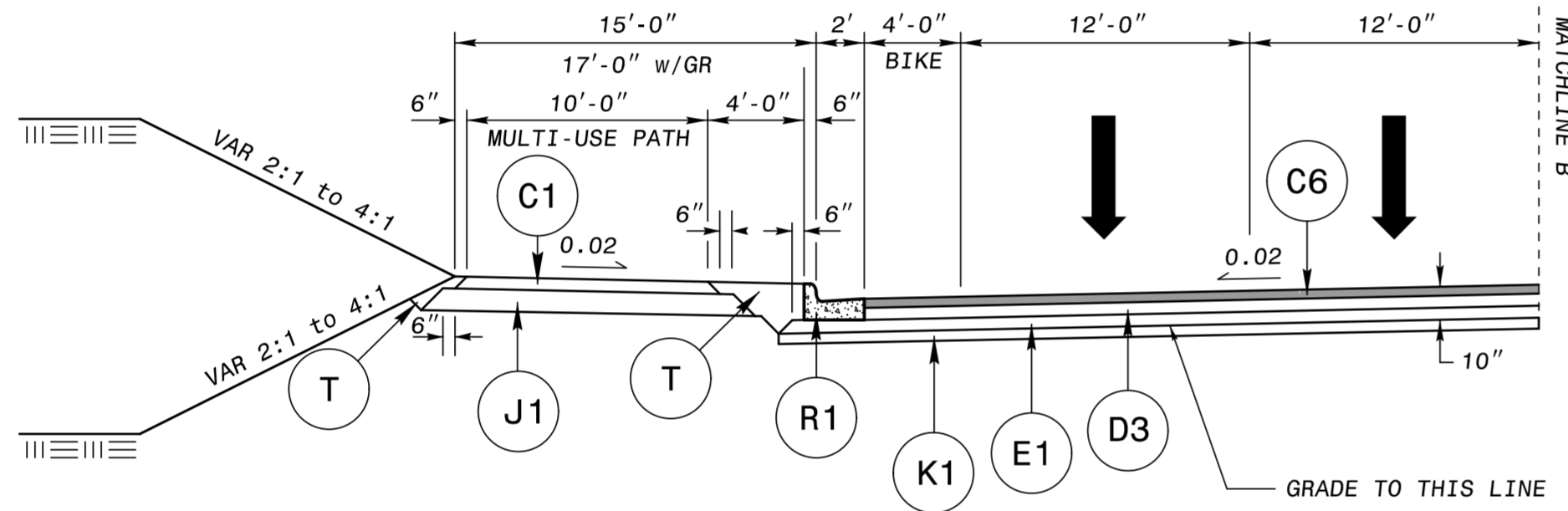
6/22/99  
 8/26/2024  
 I:\mtdo\N-2307b\roadway\proj\N-2307B.RDY\_tup.dgn  
 10:30 AM PDT

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-4</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
<b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



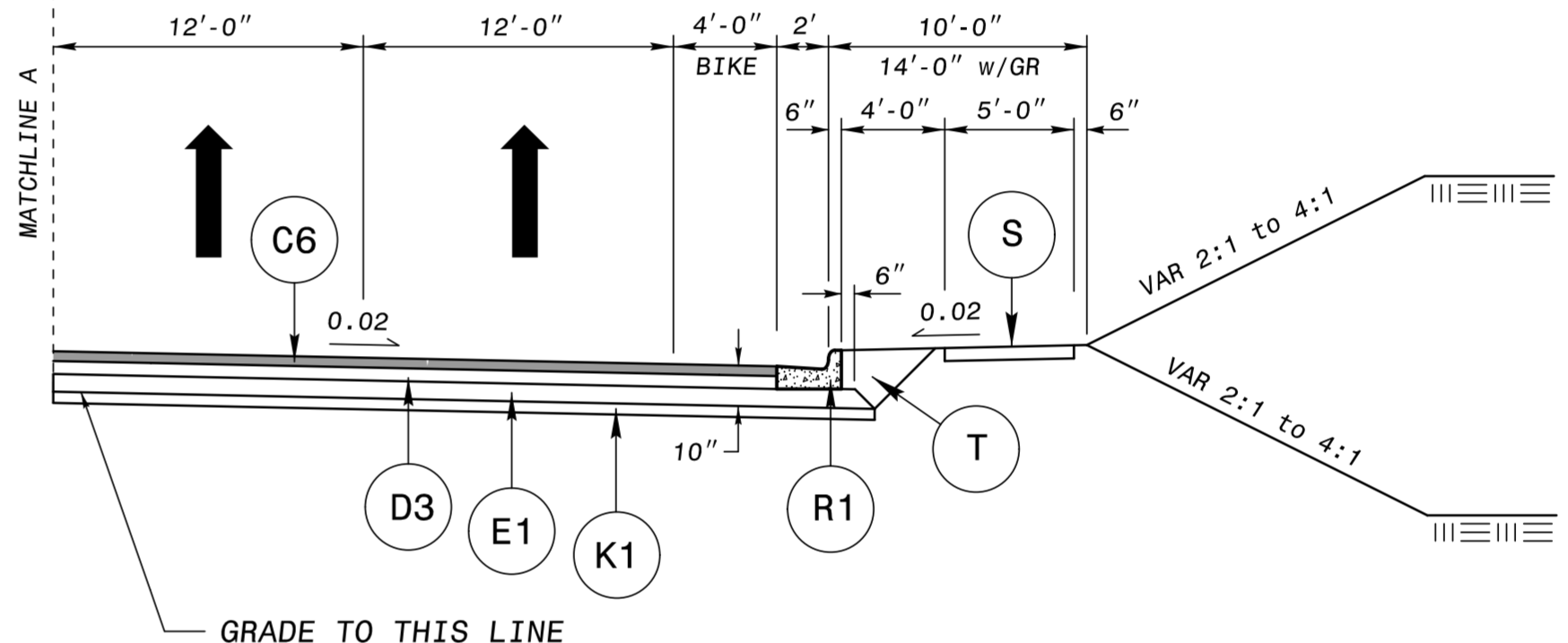
### TYPICAL SECTION NO. 5

-L- STA. 544+21.54 TO 592+00.00  
 -L- STA. 592+00.00 TO 601+00.00  
 TRANSITION FROM SECTION 5 TO SECTION 6  
 \* MILL AND FILL THROUGH LANES FROM  
 -L- STA. 548+75.00 TO 555+67.39  
 -L- STA. 570+36.25 TO 575+80.00  
 -L- STA. 583+84.09 TO 592+00.00  
 -L- STA. 592+00.00 TO 595+06.16  
 MILL AND FILL NOT REQUIRED IN UNDERCUT OR WHEN WEDGING MORE THAN 1'.



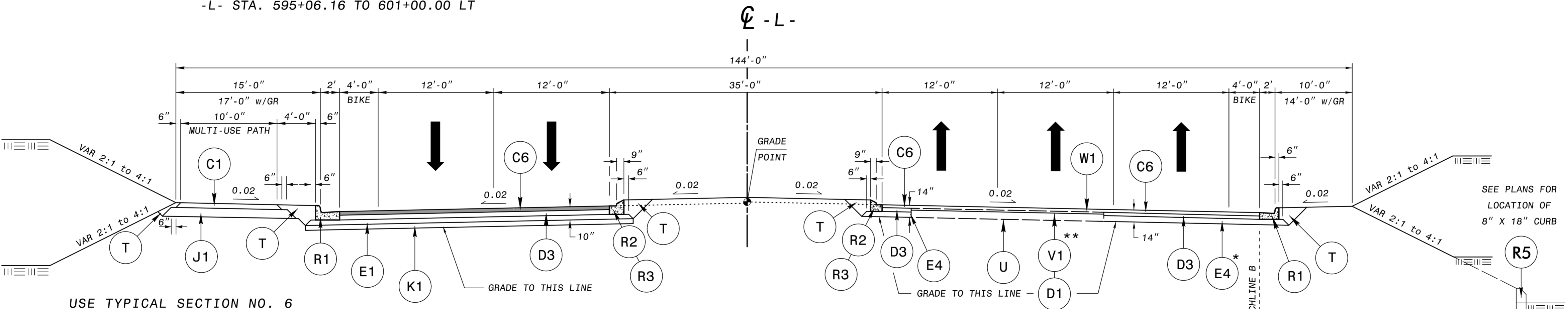
### TYPICAL SECTION NO. 5-B

-L- STA. 595+06.16 TO 601+00.00 LT



### TYPICAL SECTION NO. 5-A

-L- STA. 586+50.00 TO 593+50.00 RT

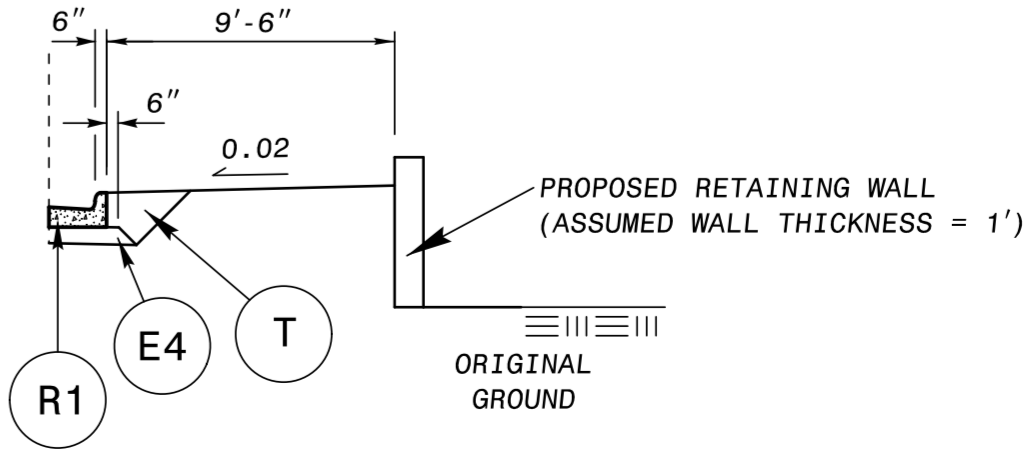


### TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6  
 -L- STA. 601+00.00 TO 618+00.00  
 \* NOTE:  
 USE **(E1)** **(K1)** LIME OR CEMENT SUBGRADE STABILIZATION FROM:  
 -L- STA. 601+00.00 TO 618+00.00  
 DO NOT USE LIME OR CEMENT SUBGRADE STABILIZATION ON PAVEMENT LESS THAN 6 FEET IN WIDTH.  
 \*\* MILL AND FILL THROUGH LANES FROM  
 -L- STA. 602+00.00 TO 614+05.00.  
 MILL AND FILL NOT REQUIRED IN UNDERCUT OR WHEN WEDGING MORE THAN 1'.

### TYPICAL SECTION NO. 6-A

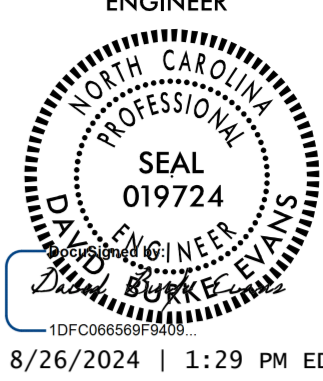
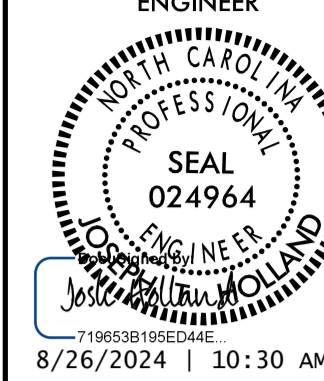

WALL W-3: -L- STA. 614+05.00 TO 617+60.00 RT

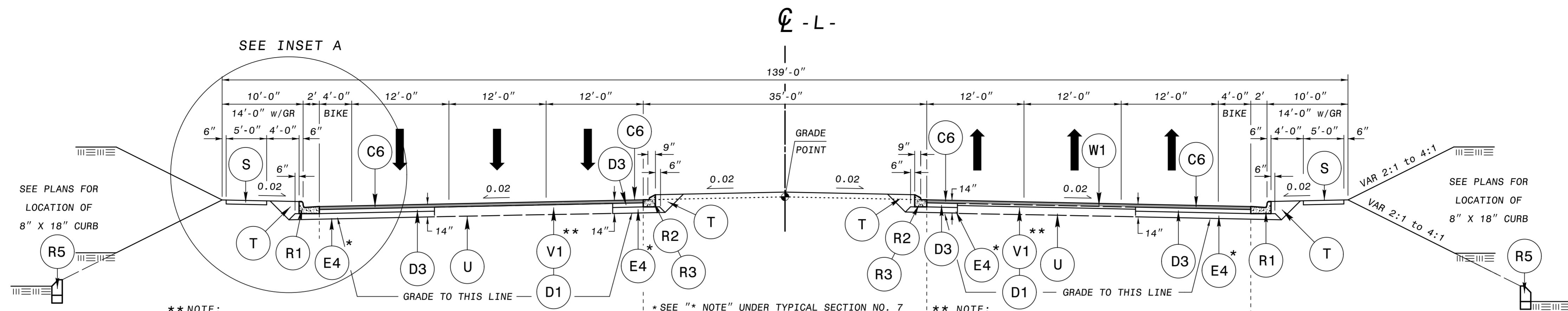


PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/2024 8/26/2024 1:29 PM EDT 10:30 AM PDT

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-5</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



### TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

- L- STA. 618+00.00 TO 723+53.00
- L- STA. 723+53.00 TO 728+83.07  
TRANSITION FROM SECTION 7 TO SECTION 8
- L- STA. 742+30.00 TO 793+11.94
- L- STA. 793+11.94 TO 799+10.00  
TRANSITION FROM SECTION 6 TO EXISTING

NOTE: MILL AND FILL THROUGH LANES FROM  
-L- STA. 618+00.00 TO 637+10.00

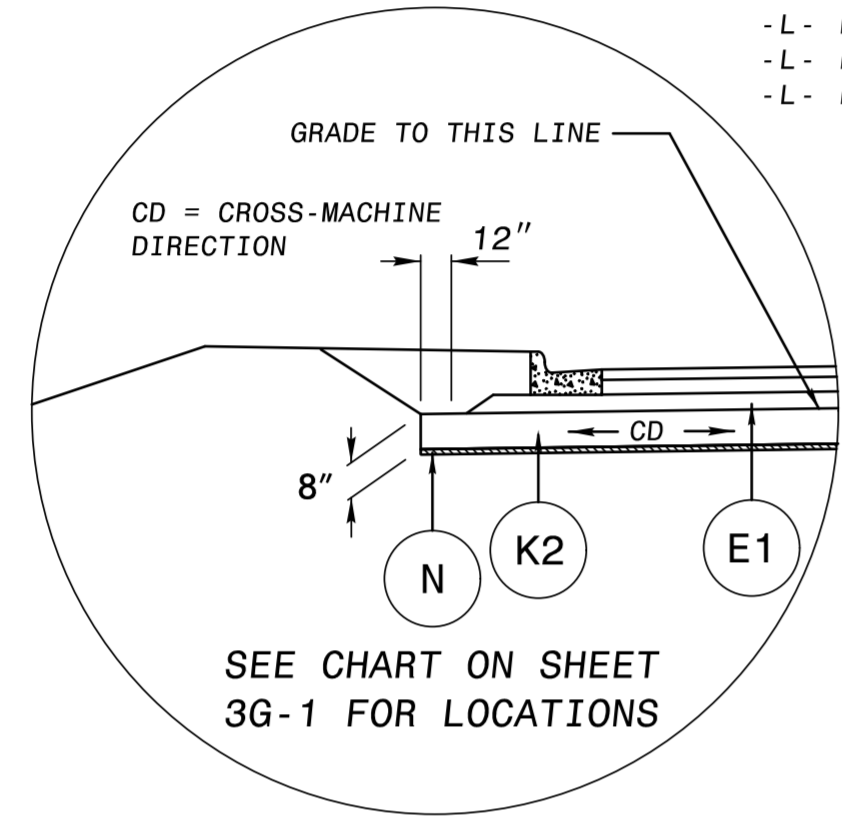
\* NOTE:

USE **E1** **K1** LIME OR CEMENT SUBGRADE STABILIZATION FROM:  
-L- STA. 618+00.00 TO 680+00.00

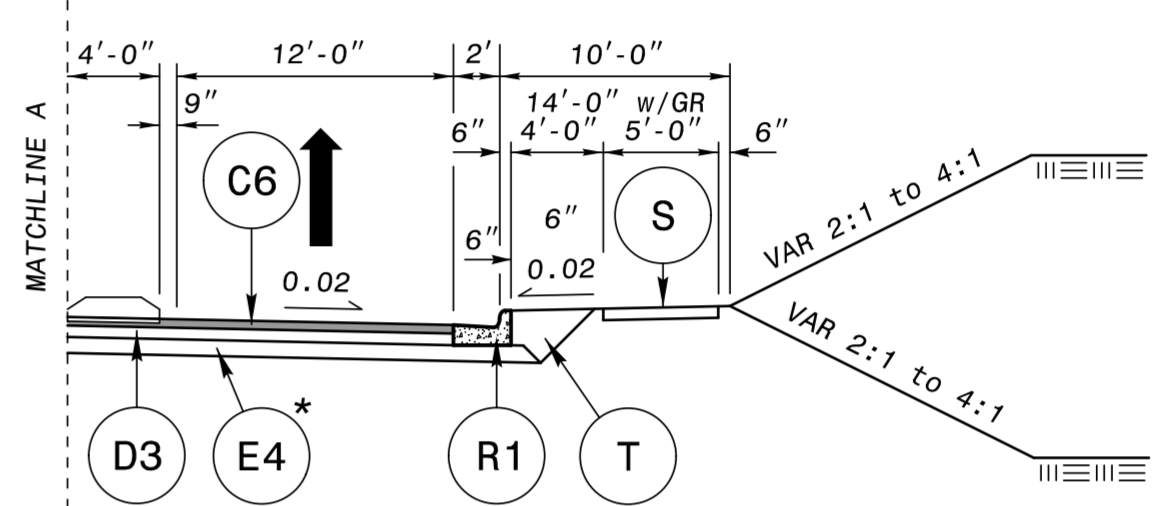
DO NOT USE LIME OR CEMENT SUBGRADE STABILIZATION ON PAVEMENT LESS THAN 6 FEET IN WIDTH. AREAS OF APPLICATION INCLUDE BUT ARE NOT LIMITED TO TYPICAL SECTIONS NO. 7-B, 7-C, AND 7-D.

\* NOTE:

USE **E1** **K2** **N** AGGREGATE SUBGRADE TYPE 2 FROM:  
-L- STA. 680+00.00 TO 799+10.00.  
SEE INSET A.



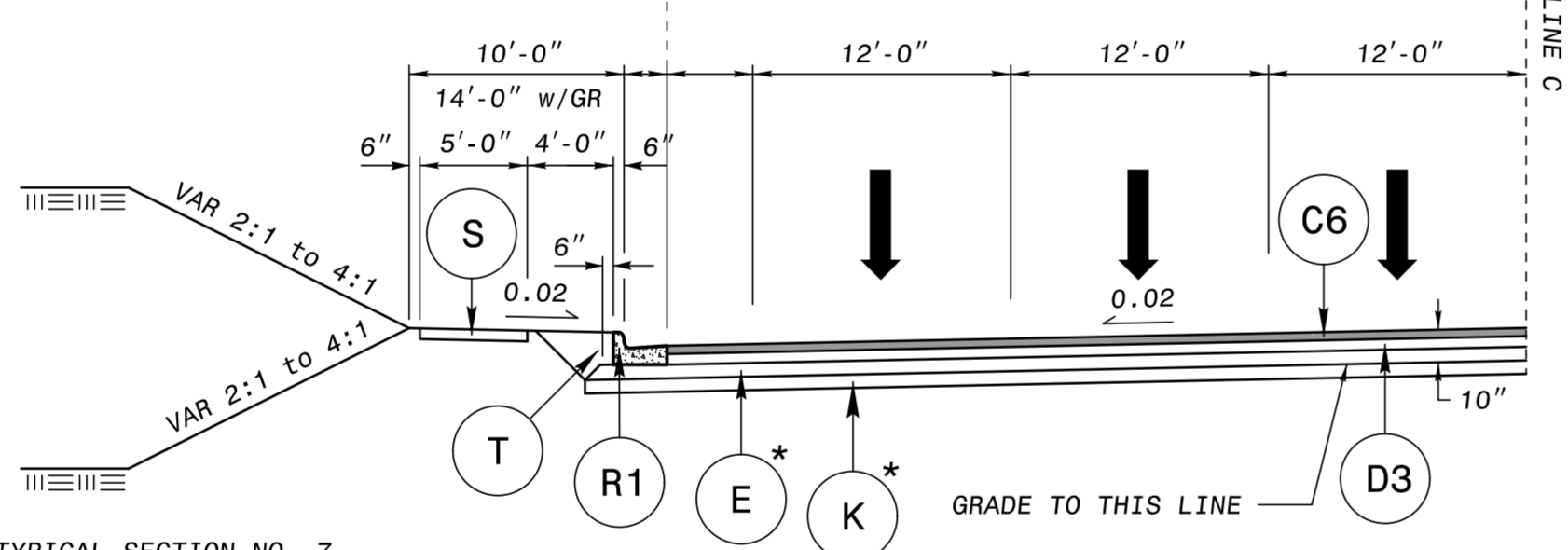
### INSET A - AGGREGATE SUBGRADE TYPE 2 FOR CG WITH ASPHALT BASE



### TYPICAL SECTION NO. 7-A

-L- STA. 620+89.89 TO 627+50.00 RT

\* SEE "\*\* NOTE" UNDER TYPICAL SECTION NO. 7 NOTES TO DETERMINE WHICH SUBGRADE TYPE K AND BASE TYPE E TO USE

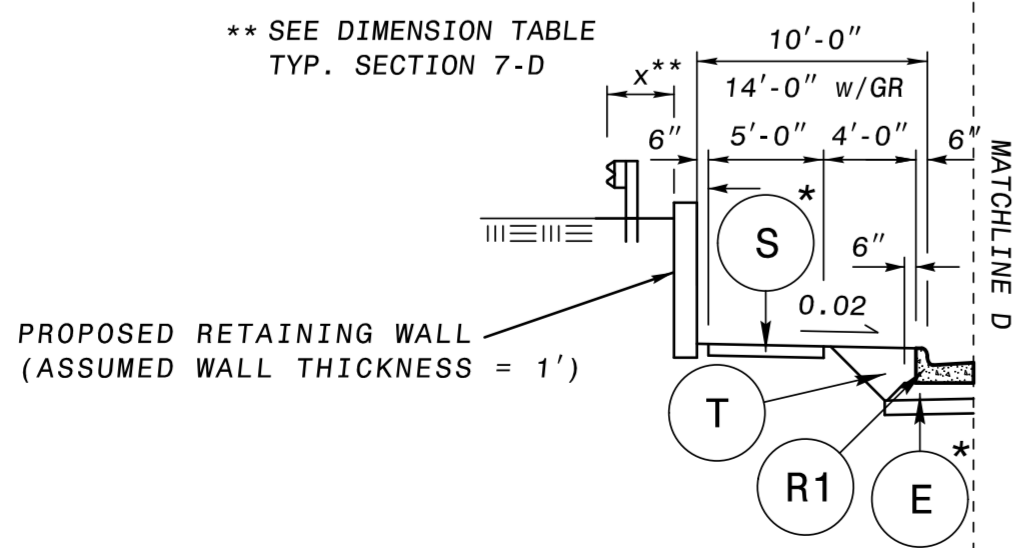


### TYPICAL SECTION NO. 7-C

- L- STA. 638+50.00 TO 652+50.00 LT
- L- STA. 656+50.00 TO 669+00.00 LT
- L- STA. 676+00.00 TO 680+00.00 LT
- L- STA. 732+00.00 TO 735+00.00 LT

\* SEE "\*\* NOTE" UNDER TYPICAL SECTION NO. 7 NOTES TO DETERMINE WHICH SUBGRADE TYPE K AND BASE TYPE E TO USE

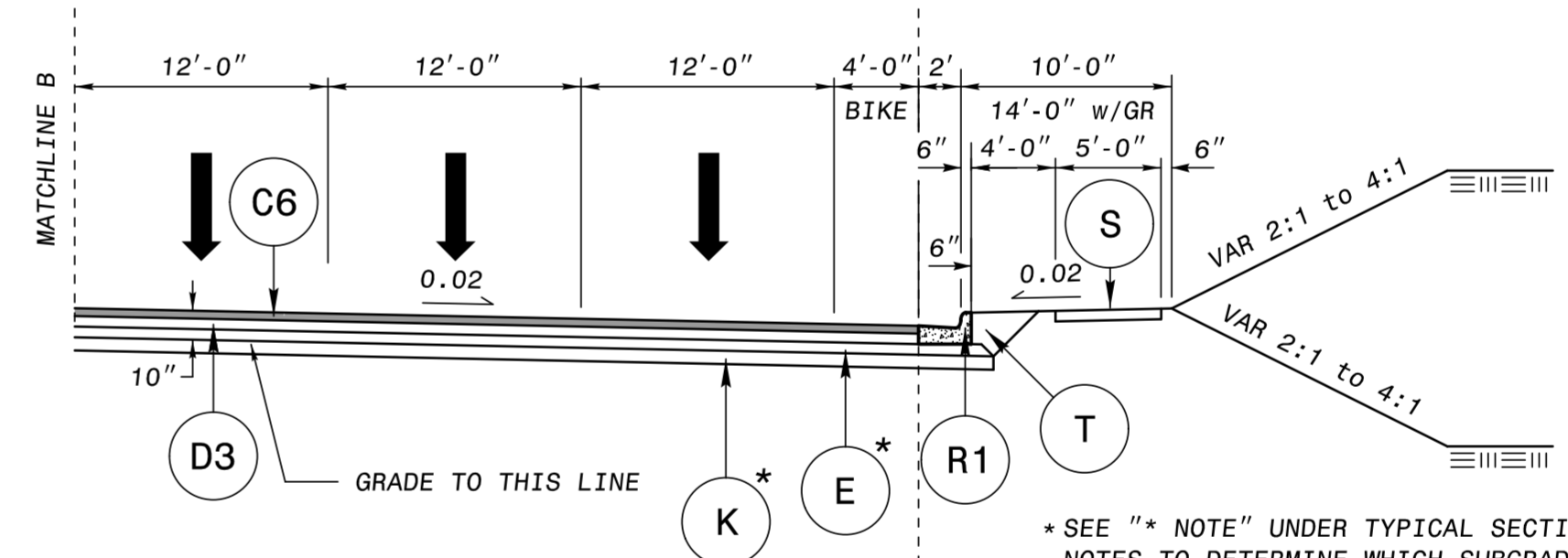
\*\* SEE DIMENSION TABLE TYP. SECTION 7-D



### TYPICAL SECTION NO. 7-D

\* SEE "\*\* NOTE" UNDER TYPICAL SECTION NO. 7 NOTES TO DETERMINE WHICH SUBGRADE TYPE K AND BASE TYPE E TO USE

DIMENSION TABLE TYP. SECTION 7-D	
WALL	DISTANCE FROM FACE OF GUARDRAIL TO FACE OF WALL (FT.)
W-6	4'-0"
W-16	4'-0"



### TYPICAL SECTION NO. 7-B

- L- STA. 637+10.00 TO 652+50.00 RT
- L- STA. 656+50.00 TO 676+00.00 RT
- L- STA. 732+21.32 TO 735+00.00 RT

USE TYPICAL SECTION NO. 7-D IN CONJUNCTION WITH TYPICAL SECTION NO. 7 & 7-C:

\* WALL W-6: -L- STA. 676+85.00 TO 679+65.00

USE TYPICAL SECTION NO. 7-D IN CONJUNCTION WITH TYPICAL SECTION NO. 7:

- \* WALL W-16: -L- STA. 709+12.00 TO 710+70.00
- WALL W-18: -L- STA. 716+00.00 TO 717+85.00
- WALL W-25: -L- STA. 742+30.00 TO 744+10.00
- WALL W-38: -Y38- STA. 15+60.00 TO -L- STA. 763+80.00
- WALL W-44: -L- STA. 771+15.00 TO 772+55.00

NOTE:

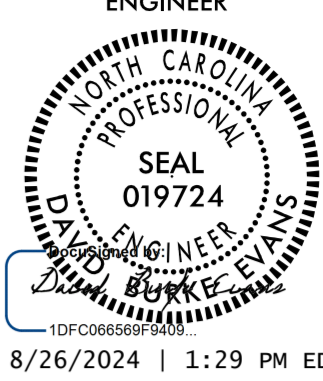
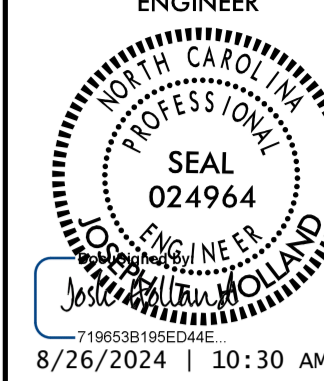
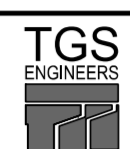
\* INDICATES PRESENCE OF GUARDRAIL AT EACH SPECIFIED WALL LOCATION. SEE TYP. SECTIONS AND "DIMENSION TABLE TYPICAL SECTION 7-D" FOR DISTANCE BETWEEN FACE OF GUARDRAIL AND FACE OF WALL.

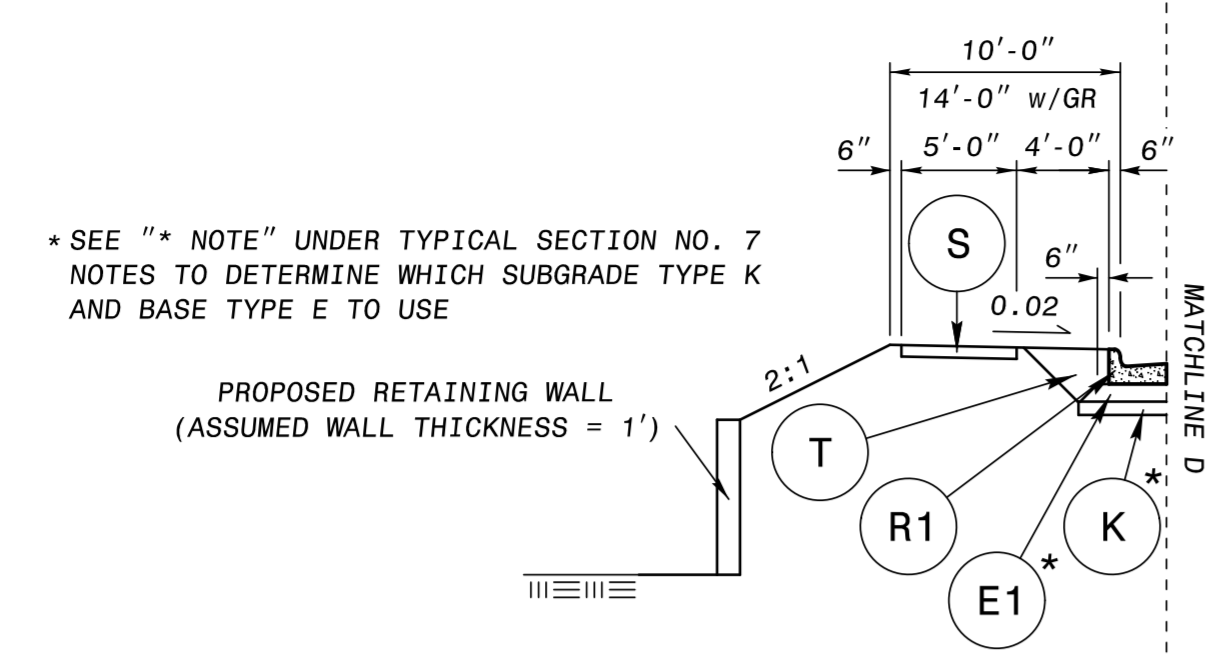
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99  
8/26/2024  
I:\projects\2307b\roadway\proj\N-2307B-RD1-typ.dgn



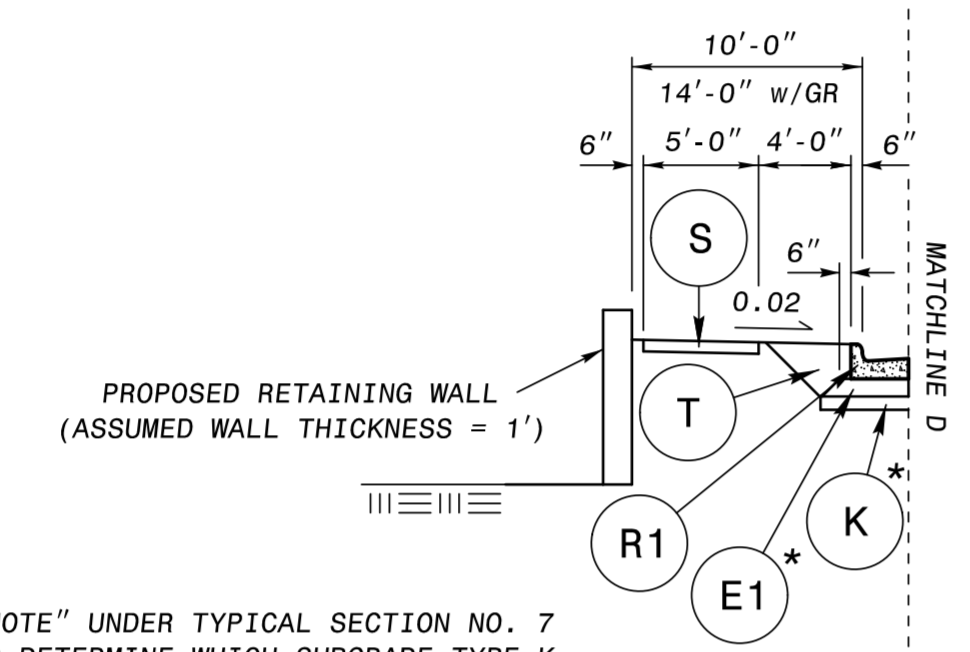
PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-6</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



\* SEE "\*\* NOTE" UNDER TYPICAL SECTION NO. 7 NOTES TO DETERMINE WHICH SUBGRADE TYPE K AND BASE TYPE E TO USE

**TYPICAL SECTION NO. 7-E**

USE TYPICAL SECTION NO. 7-E IN CONJUNCTION WITH TYPICAL SECTION 7:  
 WALL W-4: -L- STA. 621+25.00 TO 622+10.00 LT  
 WALL W-46: -L- STA. 701+53.00 TO 702+57.00 LT  
 WALL W-45: -L- STA. 778+62.00 TO 779+45.00 LT



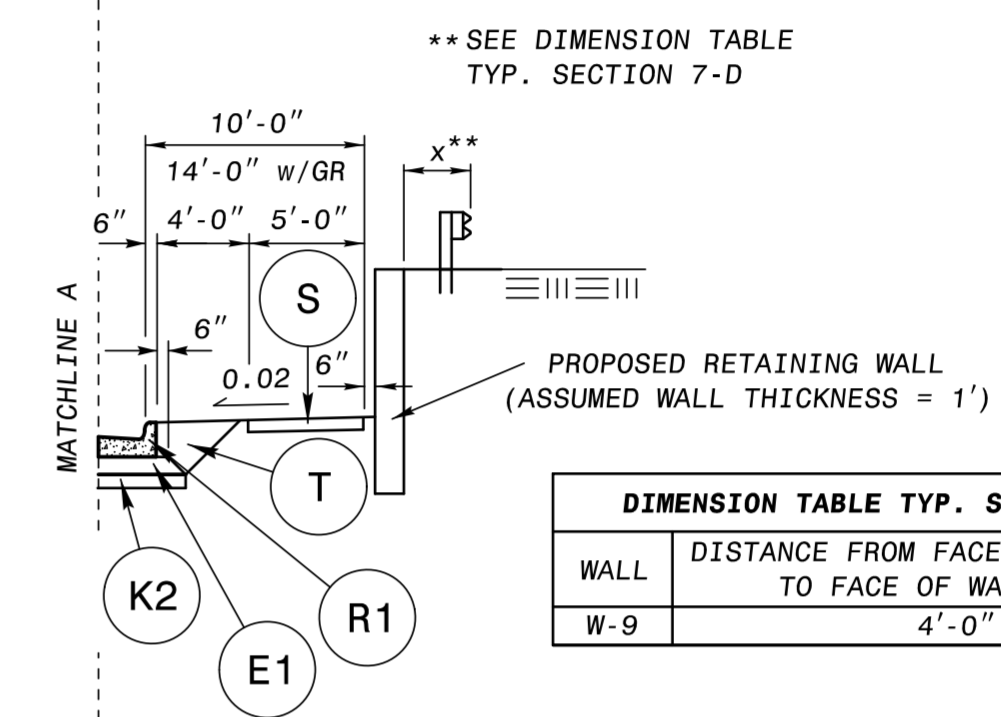
\* SEE "\*\* NOTE" UNDER TYPICAL SECTION NO. 7 NOTES TO DETERMINE WHICH SUBGRADE TYPE K AND BASE TYPE E TO USE

**TYPICAL SECTION NO. 7-F**

USE TYPICAL SECTION NO. 7-F IN CONJUNCTION WITH TYPICAL SECTION NO. 7:  
 WALL W-5: -L- STA. 623+10.00 TO 626+00.00  
 WALL W-7: -Y21- STA. 15+00.00 TO -L- STA. 685+05.00  
 WALL W-8: -L- STA. 687+00.00 TO 688+00.00  
 WALL W-39: -L- STA. 698+45.00 TO 699+55.00  
 WALL W-40: -L- STA. 700+00.00 TO 701+40.00  
 WALL W-15: -L- STA. 707+84.00 TO 708+50.00  
 WALL W-17: -L- STA. 711+87.90 TO 715+10.00  
 WALL W-26: -L- STA. 744+90.00 TO 748+70.00  
 WALL W-30: -L- STA. 757+93.00 TO 758+83.00

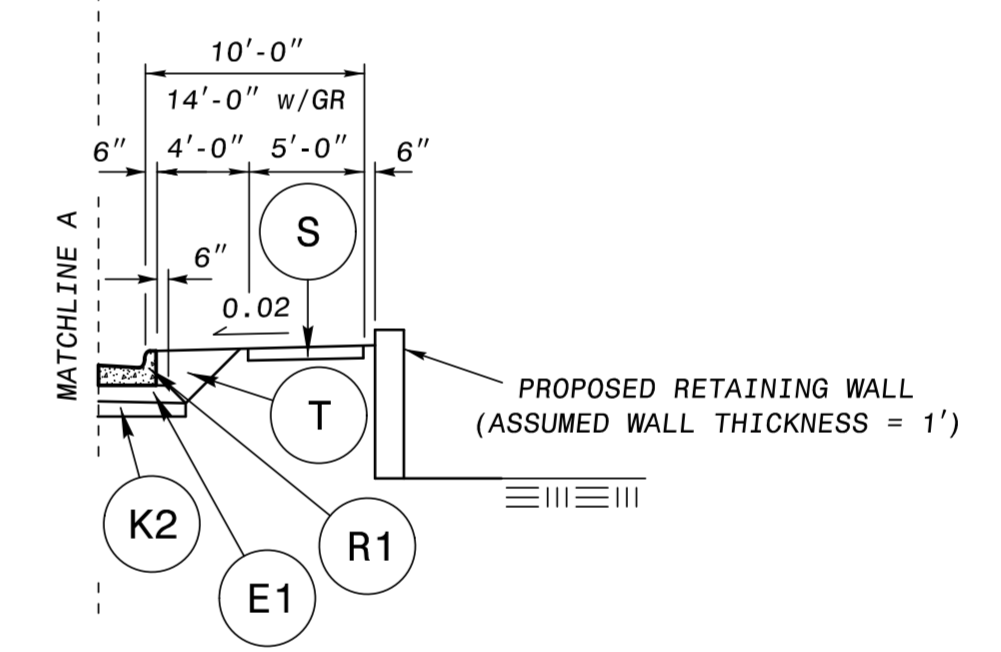
USE TYPICAL SECTION NO. 7-G IN CONJUNCTION WITH TYPICAL SECTION NO. 7:  
 \* WALL W-9: -L- STA. 687+35.00 TO 689+00.00  
 WALL W-10: -L- STA. 689+78.00 TO 691+35.00  
 WALL W-11: -L- STA. 691+87.00 TO 693+80.00  
 WALL W-12: -L- STA. 694+15.00 TO 696+00.00  
 WALL W-43: -L- STA. 776+45.00 TO 777+50.00

NOTE:  
 \* INDICATES PRESENCE OF GUARDRAIL AT EACH SPECIFIED WALL LOCATION. SEE TYP. SECTIONS AND "DIMENSION TABLE TYPICAL SECTION 7-D FOR DISTANCE BETWEEN FACE OF GUARDRAIL AND FACE OF WALL.



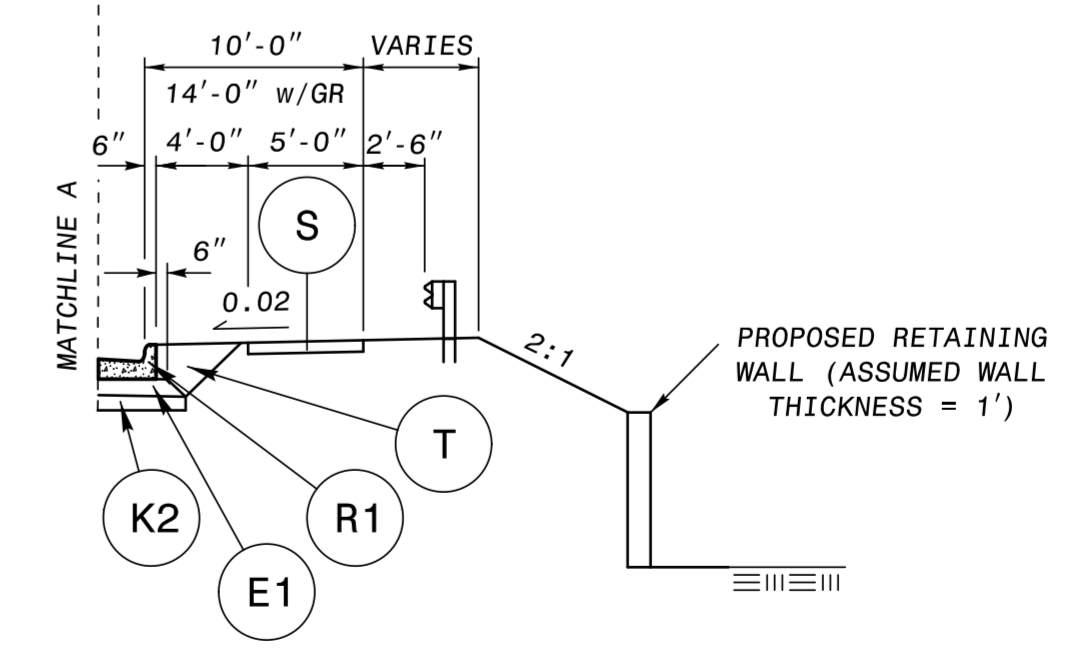
**TYPICAL SECTION NO. 7-G**

USE TYPICAL SECTION NO. 7-H IN CONJUNCTION WITH TYPICAL SECTION 7:  
 WALL W-13: -L- STA. 701+45.00 TO 703+15.00  
 WALL W-14: -L- STA. 703+80.00 TO 706+00.00  
 WALL W-19: -L- STA. 718+30.00 TO 720+00.00  
 WALL W-20: -L- STA. 721+00.00 TO 722+50.00  
 WALL W-21: -L- STA. 722+80.00 TO 724+65.00  
 WALL W-24(2): -L- STA. 742+30.00 TO 744+25.00  
 WALL W-27: -L- STA. 746+15.00 TO 746+70.00  
 WALL W-31: -L- STA. 794+80.00 TO 796+75.00  
 WALL W-37: -L- STA. 789+15.00 TO 790+14.00  
 WALL W-41: -L- STA. 761+70.00 TO 763+70.00  
 WALL W-42: -L- STA. 764+25.00 TO 768+10.00

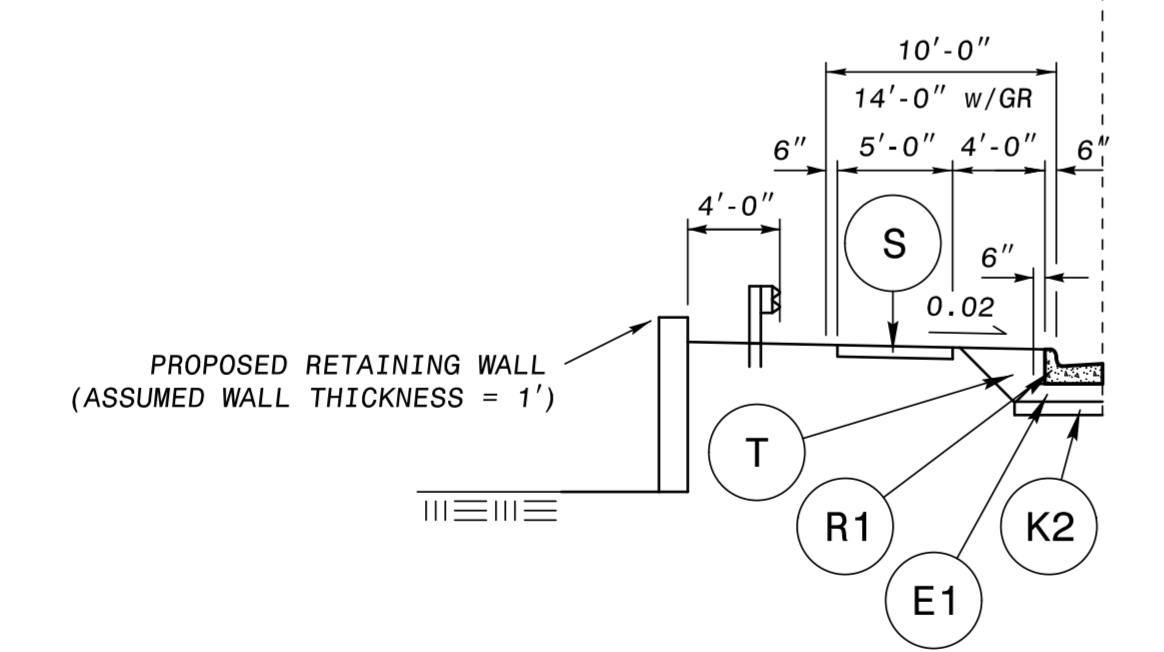


**TYPICAL SECTION NO. 7-H**

USE TYPICAL SECTION NO. 7-I IN CONJUNCTION WITH TYPICAL SECTION NO. 7:  
 WALL W-22 FROM -L- STA. 726+40.00 TO 726+85.00



**TYPICAL SECTION NO. 7-I**



**TYPICAL SECTION NO. 7-J**

USE TYPICAL SECTION NO. 7-J IN CONJUNCTION WITH TYPICAL SECTION 7:  
 WALL W-29: -L- STA. 756+15.00 TO 757+35.00

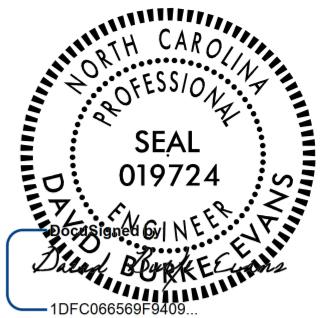
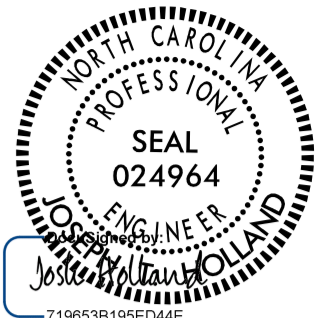
**PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)**

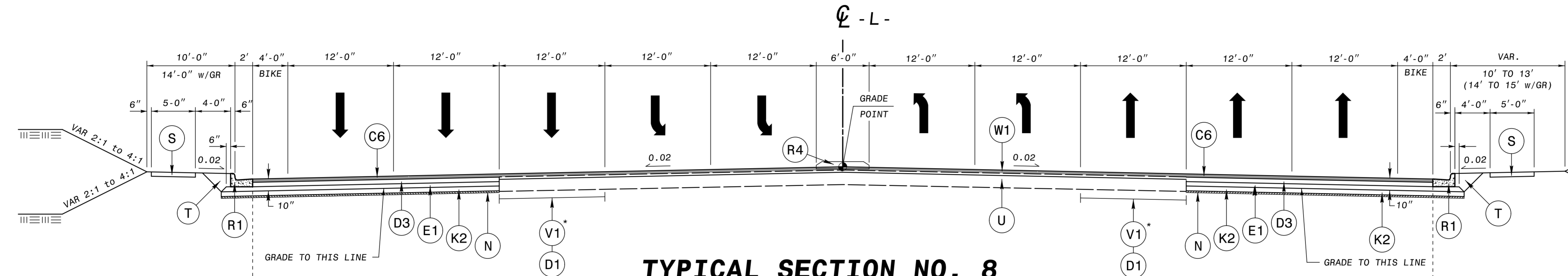
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99

8/26/2024  
 I:\msd\2307b\roadway\proj\N-2307B.RDY\_tup.dgn  
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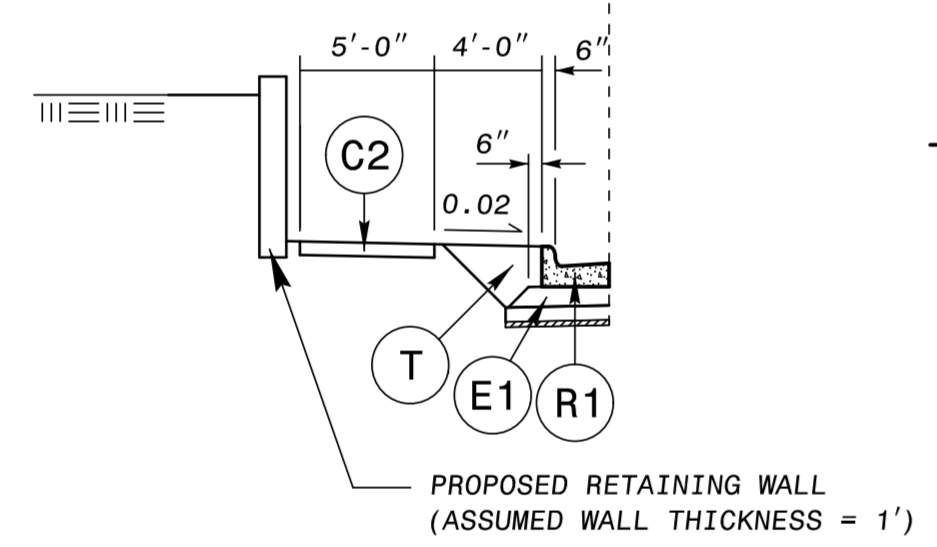
PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-7</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
<b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



### TYPICAL SECTION NO. 8

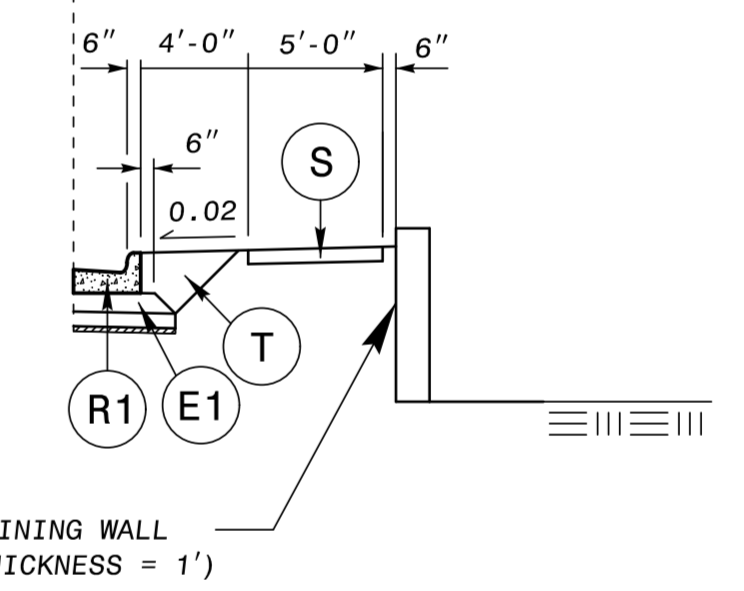
-L- STA. 728+83.07 TO 732+45.28  
 -L- STA. 734+19.78 TO 738+00.00  
 -L- STA. 738+00.00 TO 742+30.00  
 TRANSITION FROM SECTION 7 TO SECTION 6

\* MILL AND FILL OUTSIDE THROUGH LANES  
 FROM -L- LT STA. 728+83.07 TO 732+00.00  
 FROM -L- RT STA. 728+83.07 TO 732+00.00.  
 MILL AND FILL NOT REQUIRED IN UNDERCUT  
 OR WHEN WEDGING MORE THAN 1'.



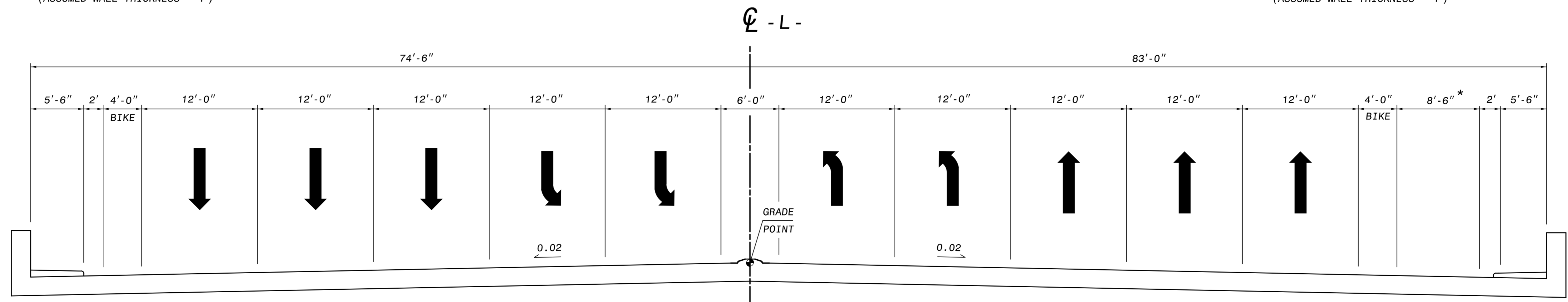
### TYPICAL SECTION NO. 8-A

WALL W-23: -L- STA. 737+62.00 TO 739+25.00



### TYPICAL SECTION NO. 8-B

WALL W-24(1): -L- STA. 741+45.00 TO 742+30.00



### TYPICAL SECTION NO. 9

-L- STA. 732+45.28 TO 734+19.78

NOTE: SIDEWALKS ARE TO BE CONSTRUCTED  
 AFTER ALL TRAFFIC SHIFTS HAVE OCCURRED.  
 SEE TRAFFIC CONTROL PLANS FOR DETAILS.

NOTE: SIDEWALKS ARE TO BE CONSTRUCTED  
 AFTER ALL TRAFFIC SHIFTS HAVE OCCURRED.  
 SEE TRAFFIC CONTROL PLANS FOR DETAILS.

\* ADDITIONAL WIDTH REQUIRED FOR  
 TRAFFIC CONTROL CONSTRUCTION PHASING

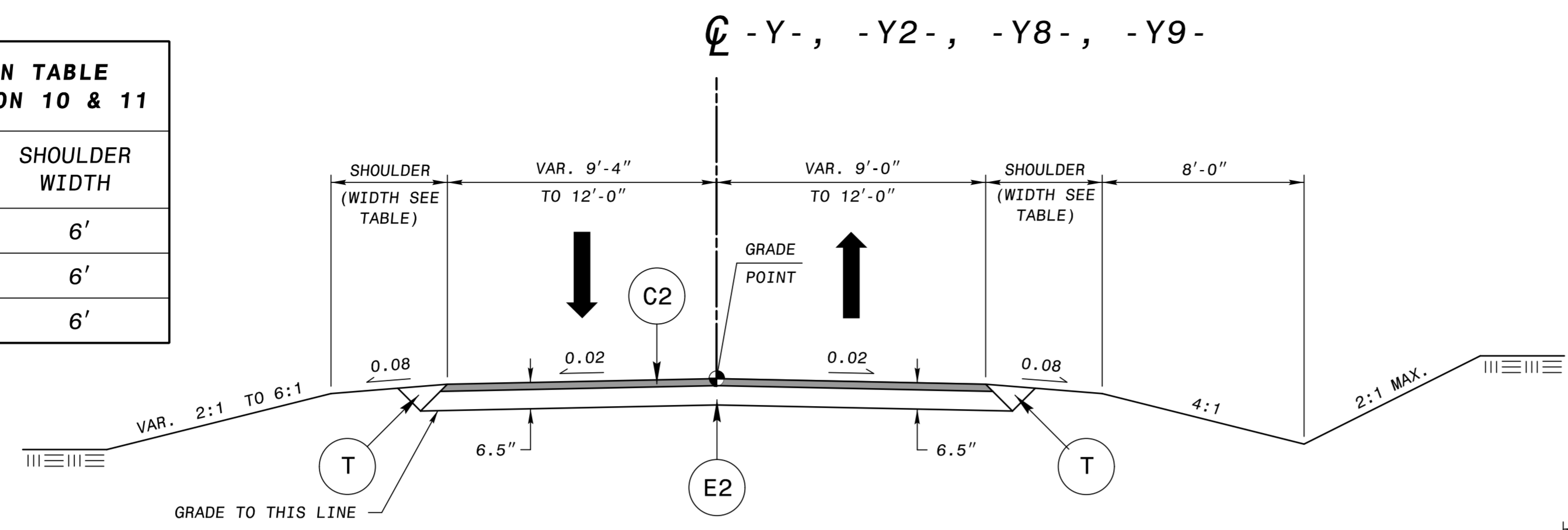
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1  
UNLESS NOTED OTHERWISE

6/22/99  
 8/26/2024  
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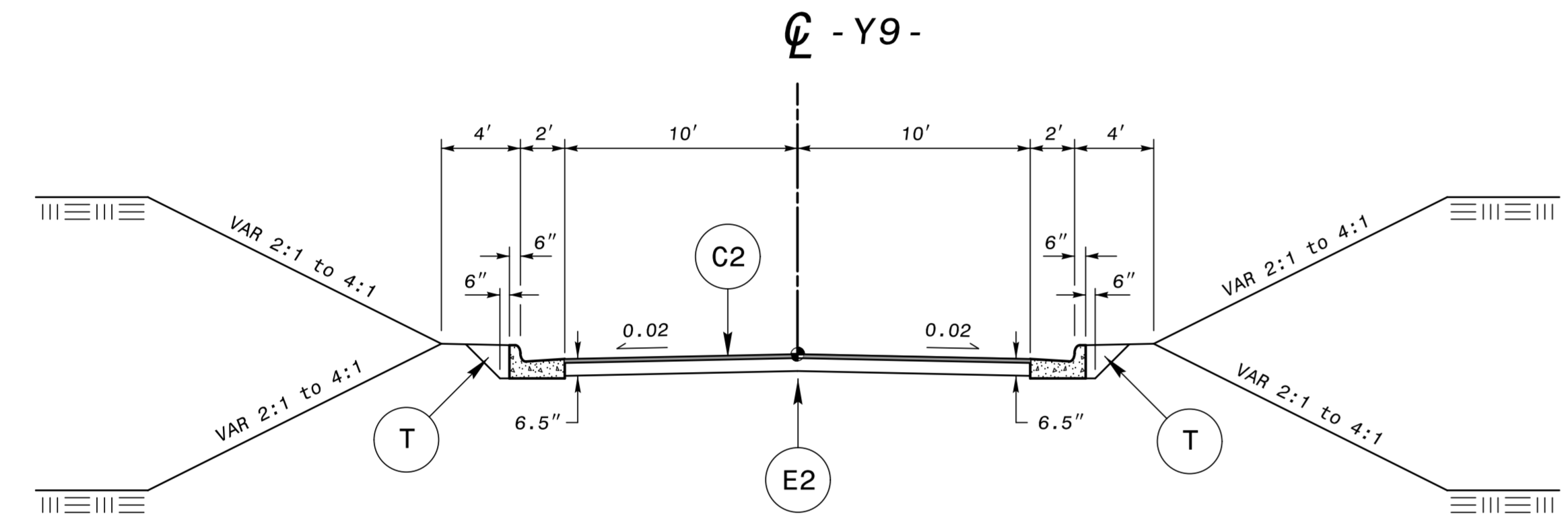
6/2/99

DIMENSION TABLE TYP. SECTION 10 & 11	
ROADWAY	SHOULDER WIDTH
-Y-	6'
-Y2-	6'
-Y8-	6'



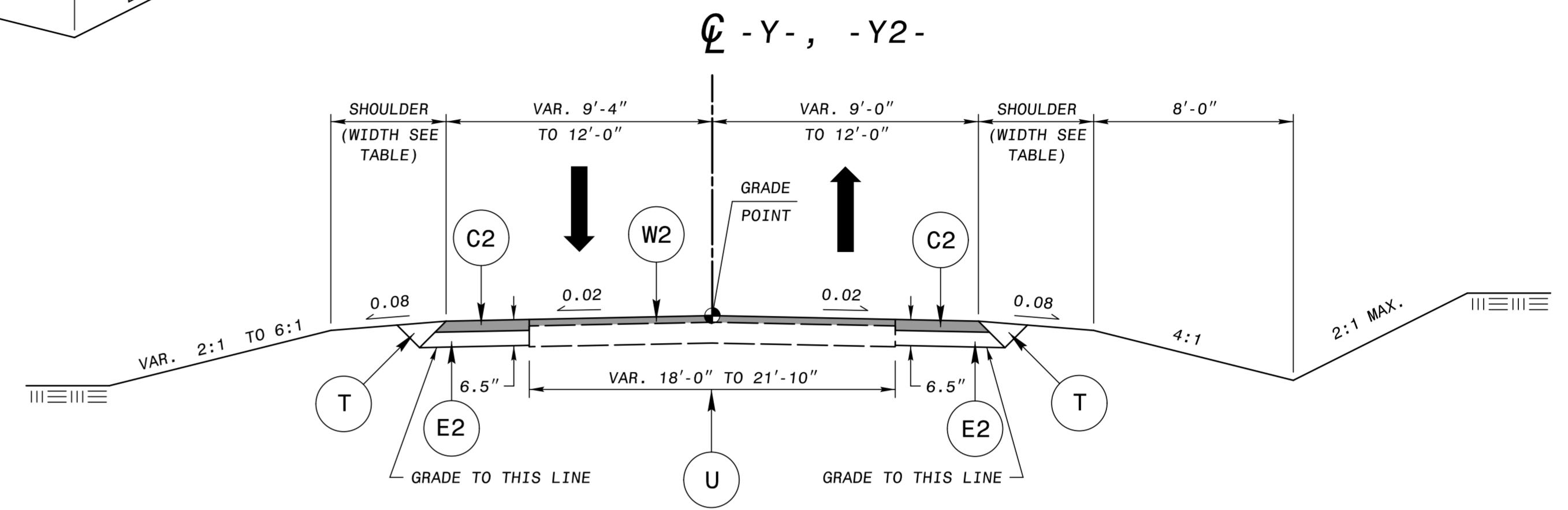
**TYPICAL SECTION NO. 10**

-Y- STA. 10+11.37 TO 14+65.00  
 -Y2- STA. 12+80.00 TO 16+42.42  
 -Y8- STA. 10+40.00 TO 14+27.29



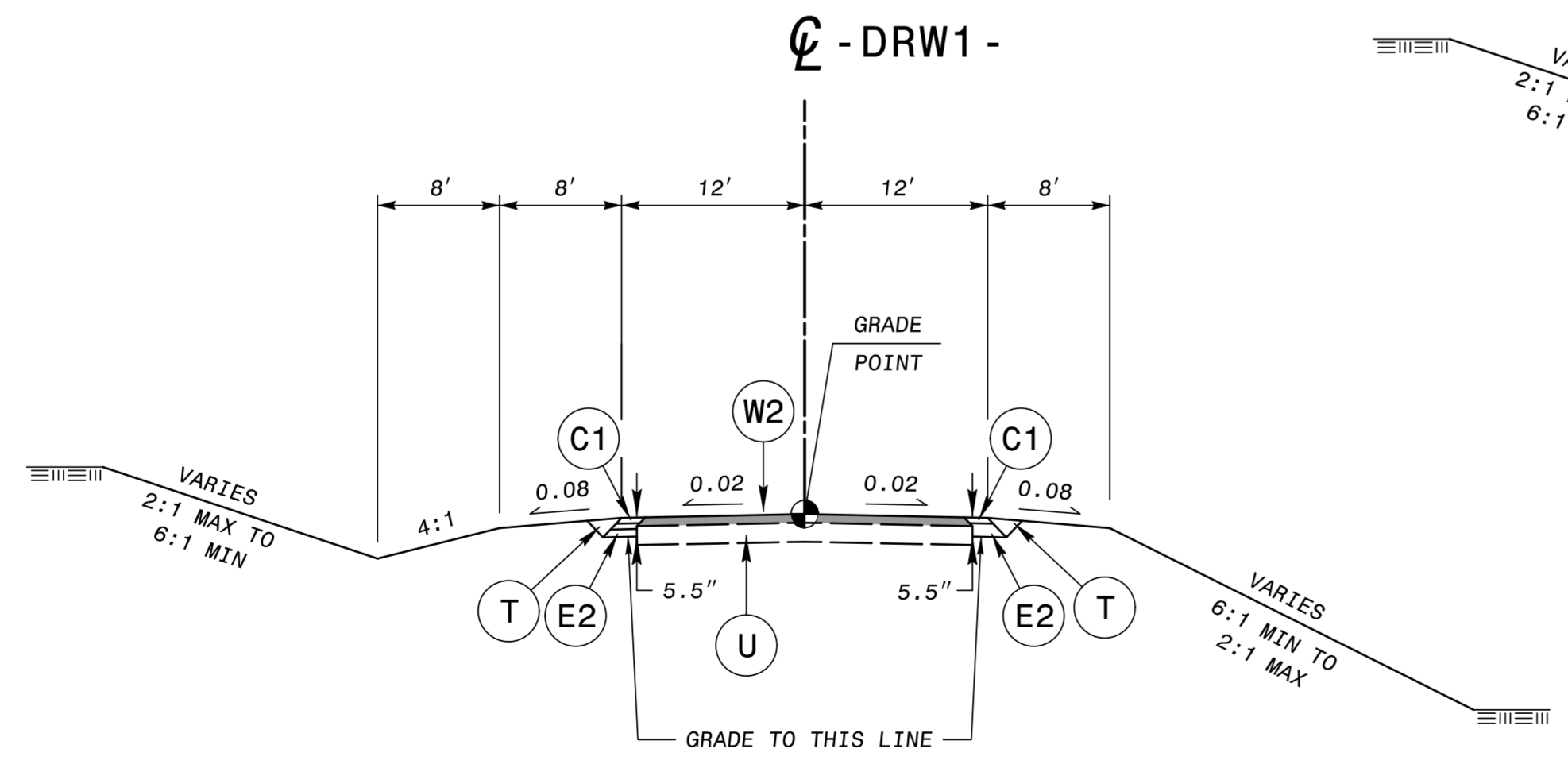
**TYPICAL SECTION NO. 12**

-Y9- STA. 10+90.00 TO 13+41.55



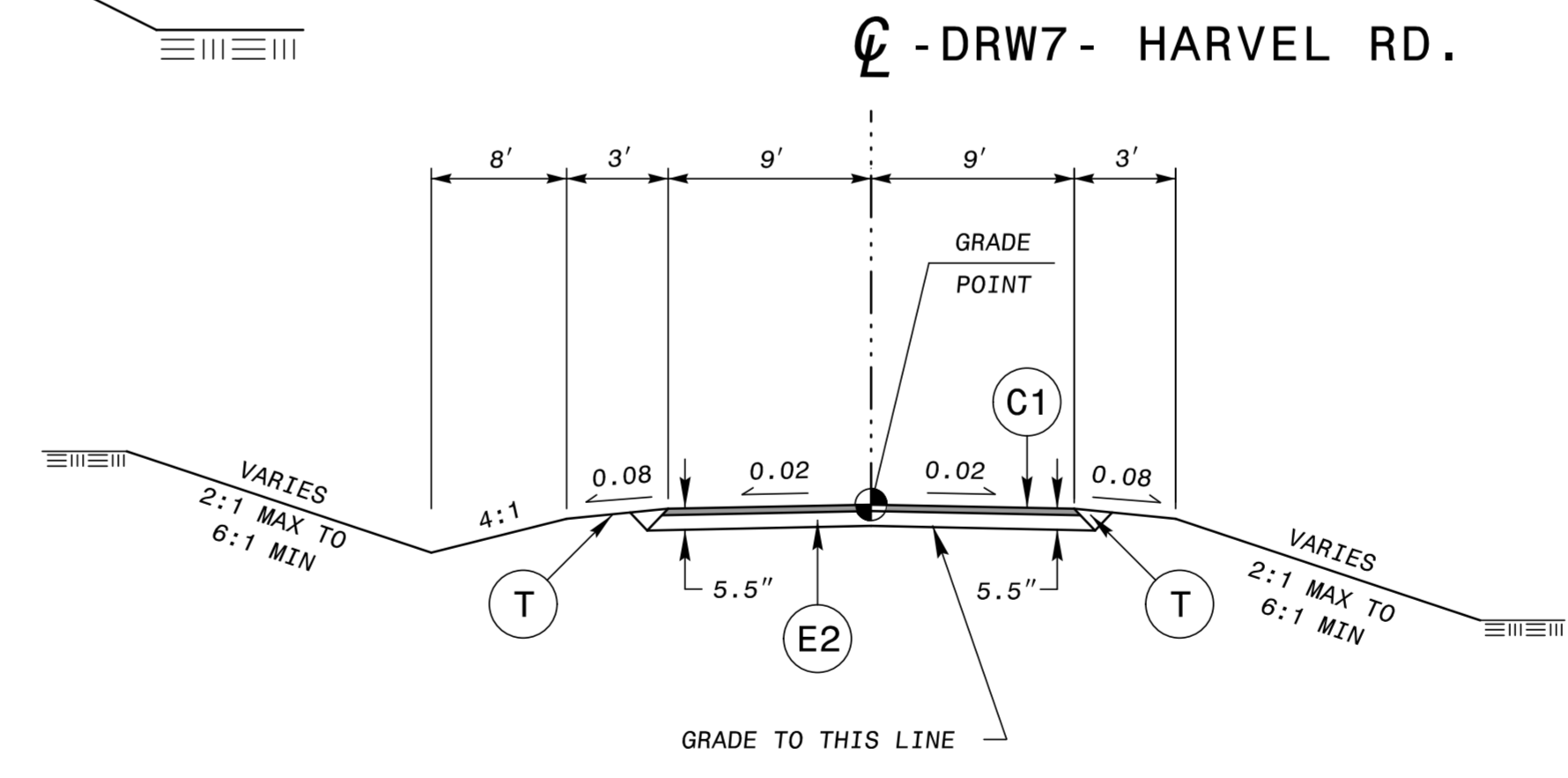
**TYPICAL SECTION NO. 11**

-Y- STA. 14+65.00 TO 15+80.00  
 -Y2- STA. 12+40.00 TO 12+80.00



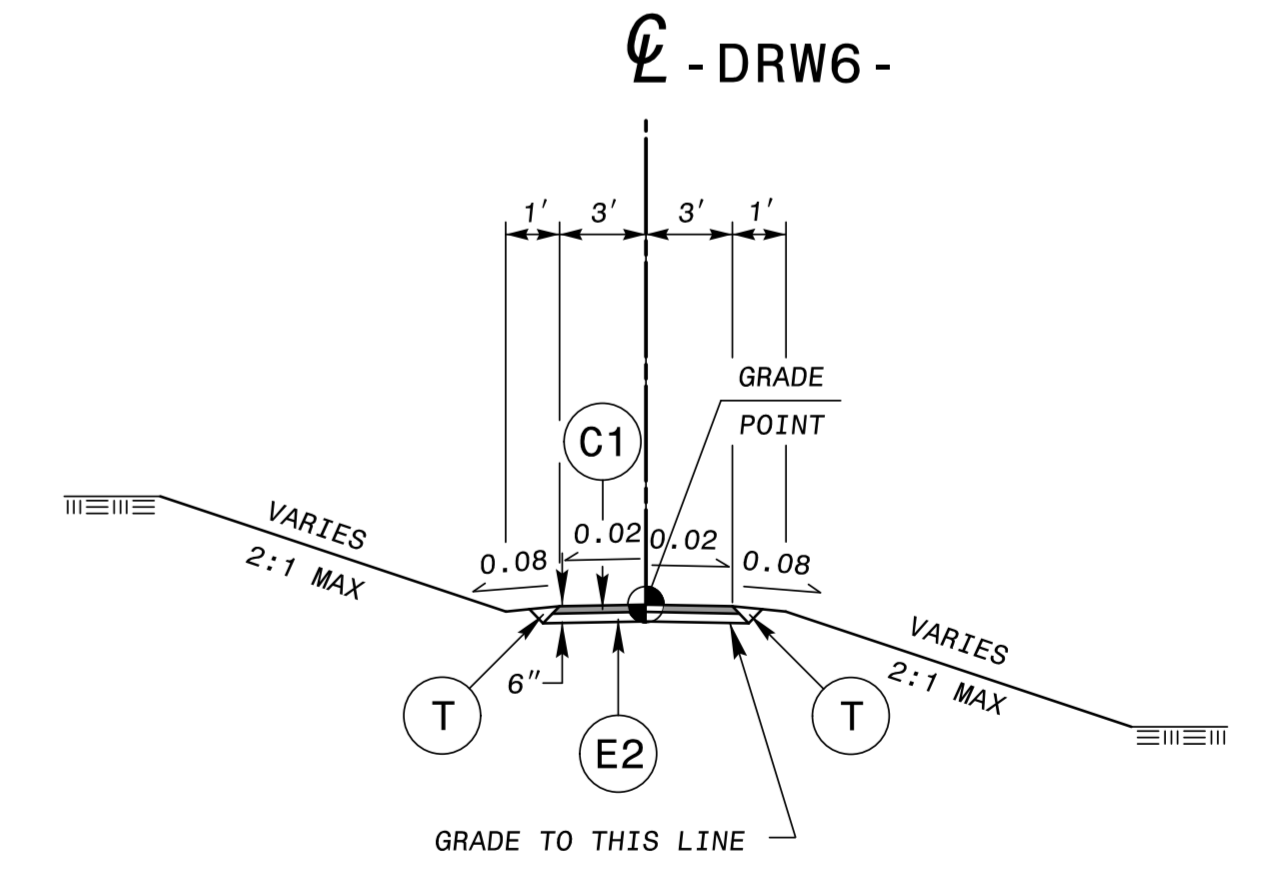
**TYPICAL SECTION NO. 15**

-DRW1- STA. 10+46.00 TO STA. 13+61.50



**TYPICAL SECTION NO. 13**

-DRW7- STA. 10+41.50 TO STA. 14+45.00



**TYPICAL SECTION NO. 14**

-DRW6- STA. 10+68.71 TO STA. 11+51.12


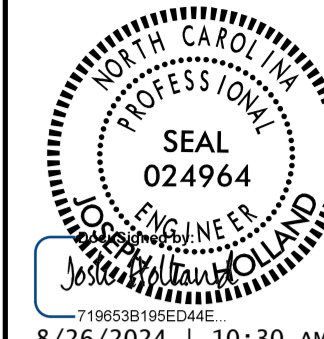

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-8</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
<b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

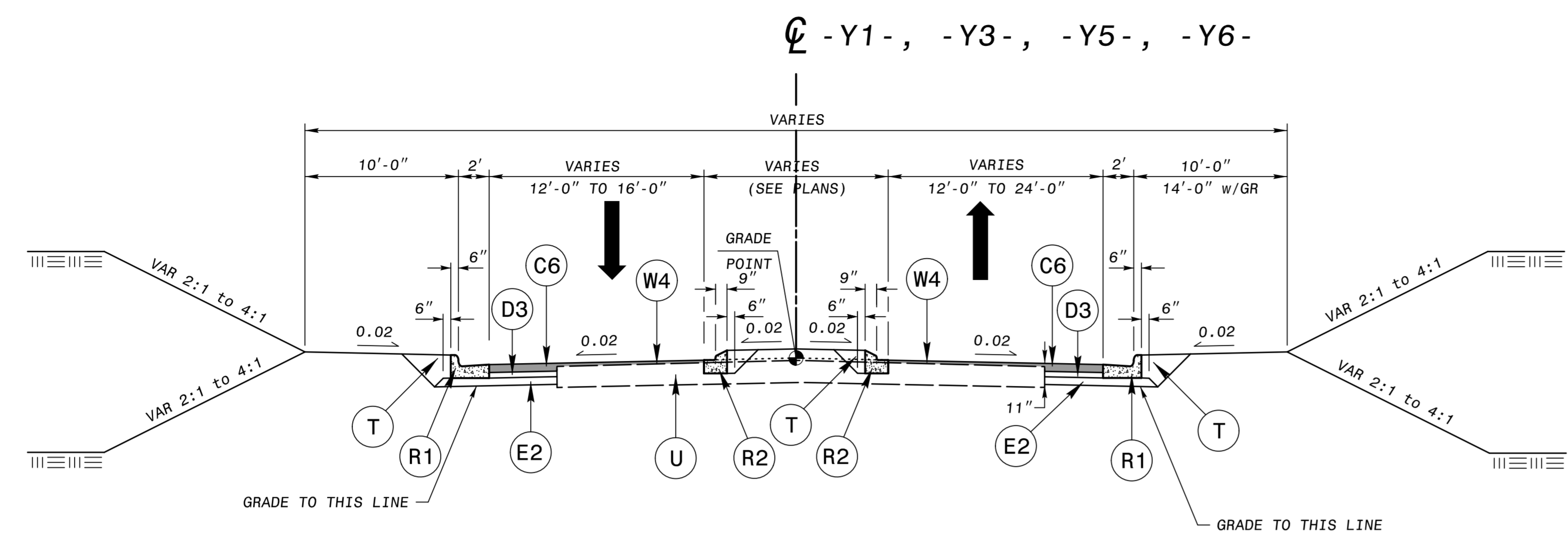
**PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)**

C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

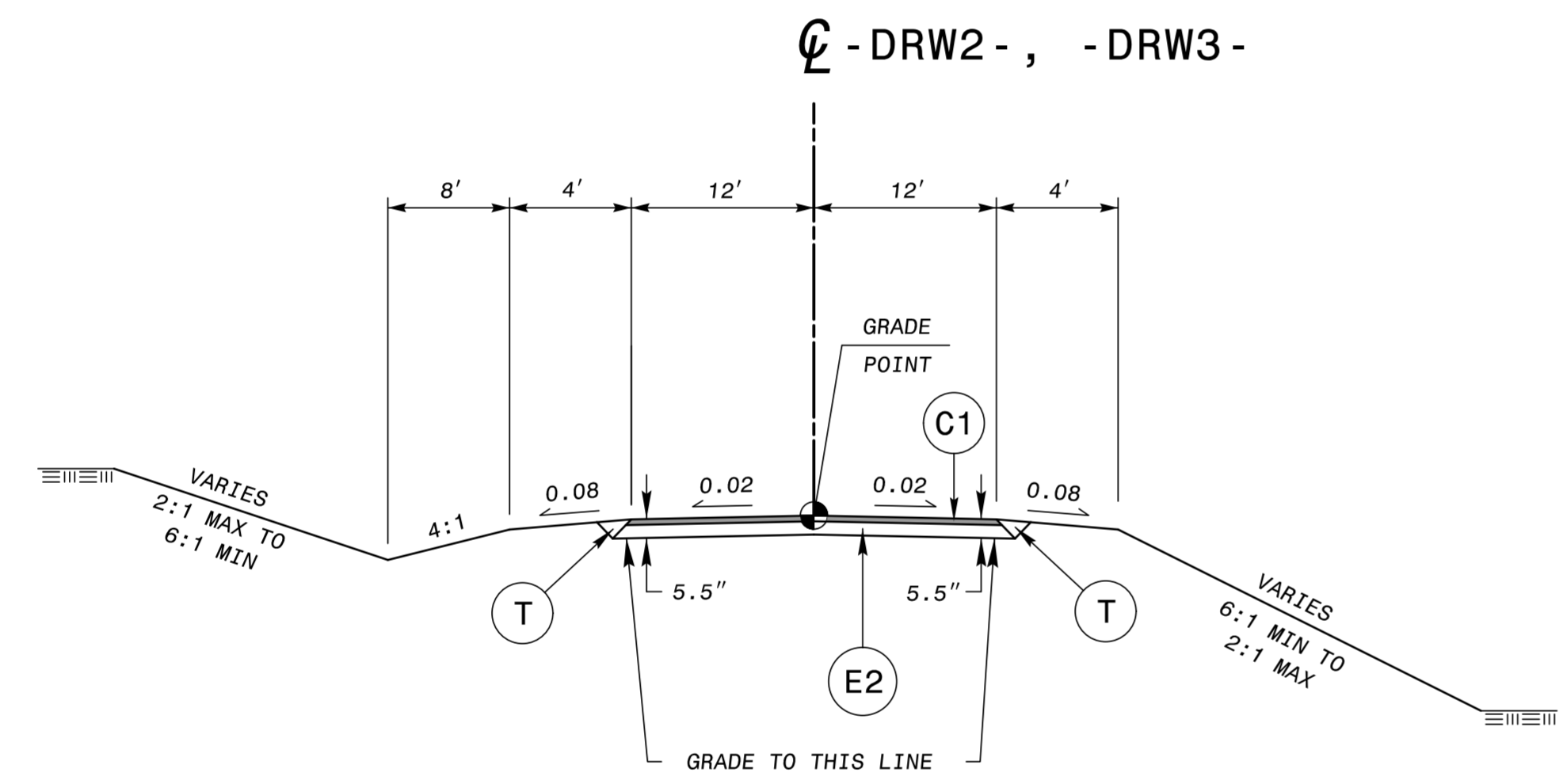
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PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-9</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



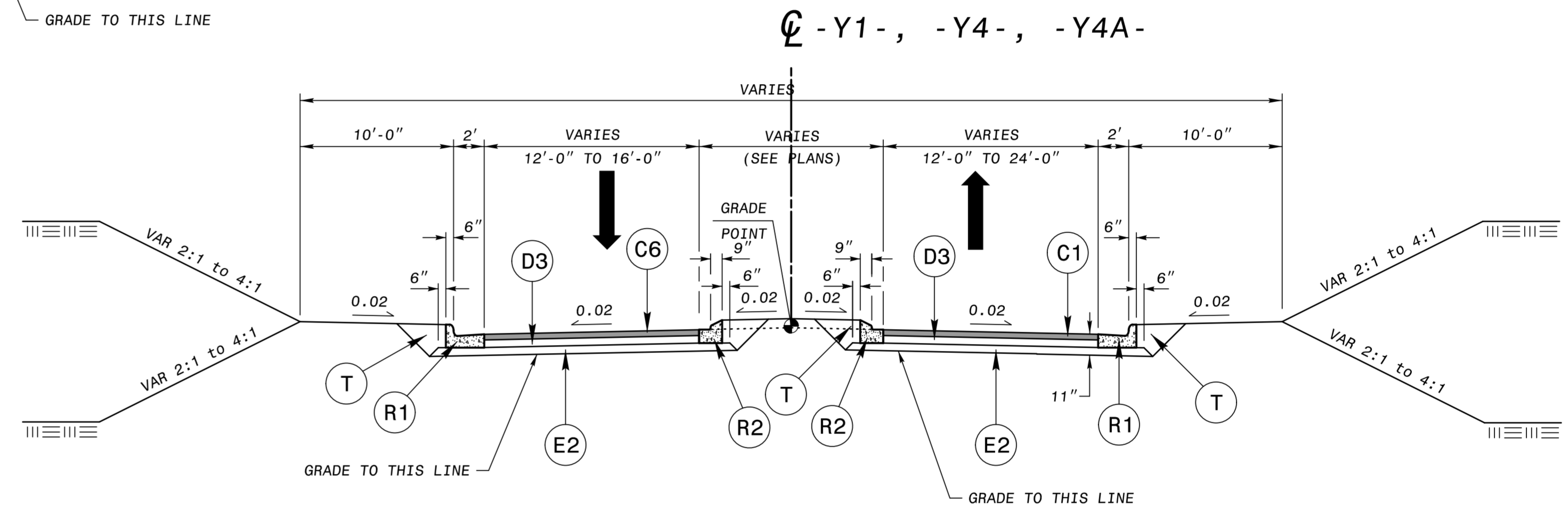
**TYPICAL SECTION NO. 16**

-Y1- STA. 12+40.00 TO 13+10.00  
 -Y3- STA. 10+50.90 TO 13+00.00  
 -Y5- STA. 13+50.00 TO 14+88.58  
 -Y6- STA. 14+00.00 TO 15+52.65



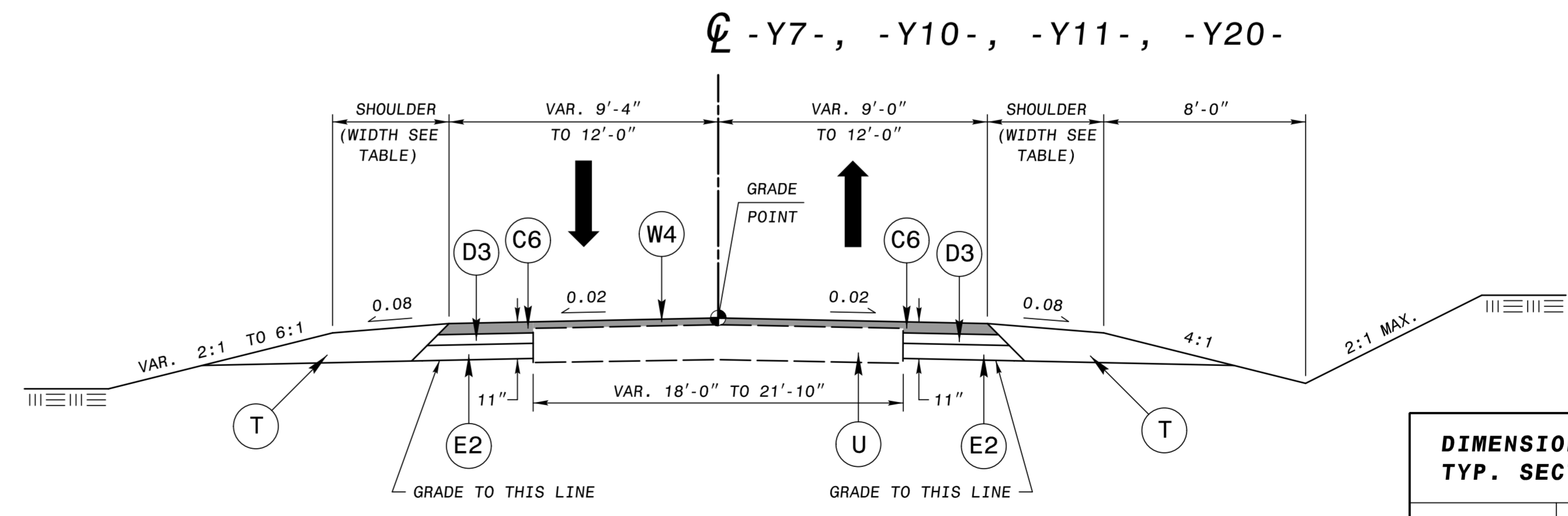
**TYPICAL SECTION NO. 18**

-DRW2- STA. 10+41.50 TO STA. 12+53.90  
 -DRW3- STA. 10+92.26 TO STA. 13+57.51



**TYPICAL SECTION NO. 17**

-Y1- STA. 10+47.51 TO 12+40.00  
 -Y4- STA. 13+80.00 TO 15+99.62  
 -Y4A- STA. 10+18.56 TO 10+90.00



**TYPICAL SECTION NO. 19**

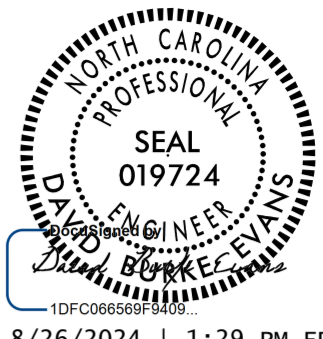
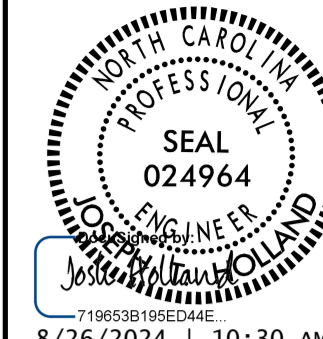
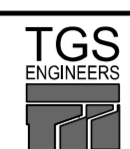
-Y7- STA. 10+46.89 TO 12+50.00  
 -Y10- STA. 11+60.00 TO 12+40.00  
 -Y11- STA. 10+90.00 TO 11+50.00  
 -Y20- STA. 10+57.53 TO 11+51.83

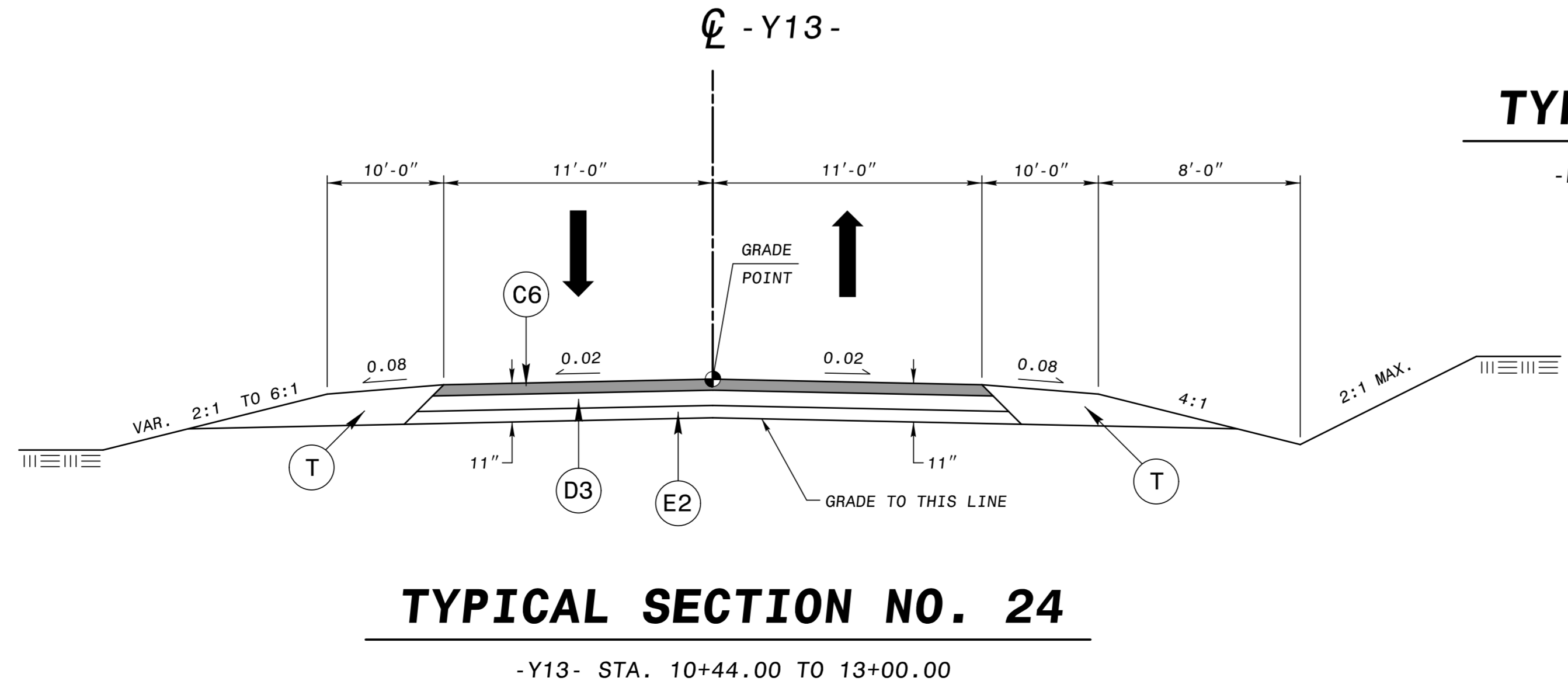
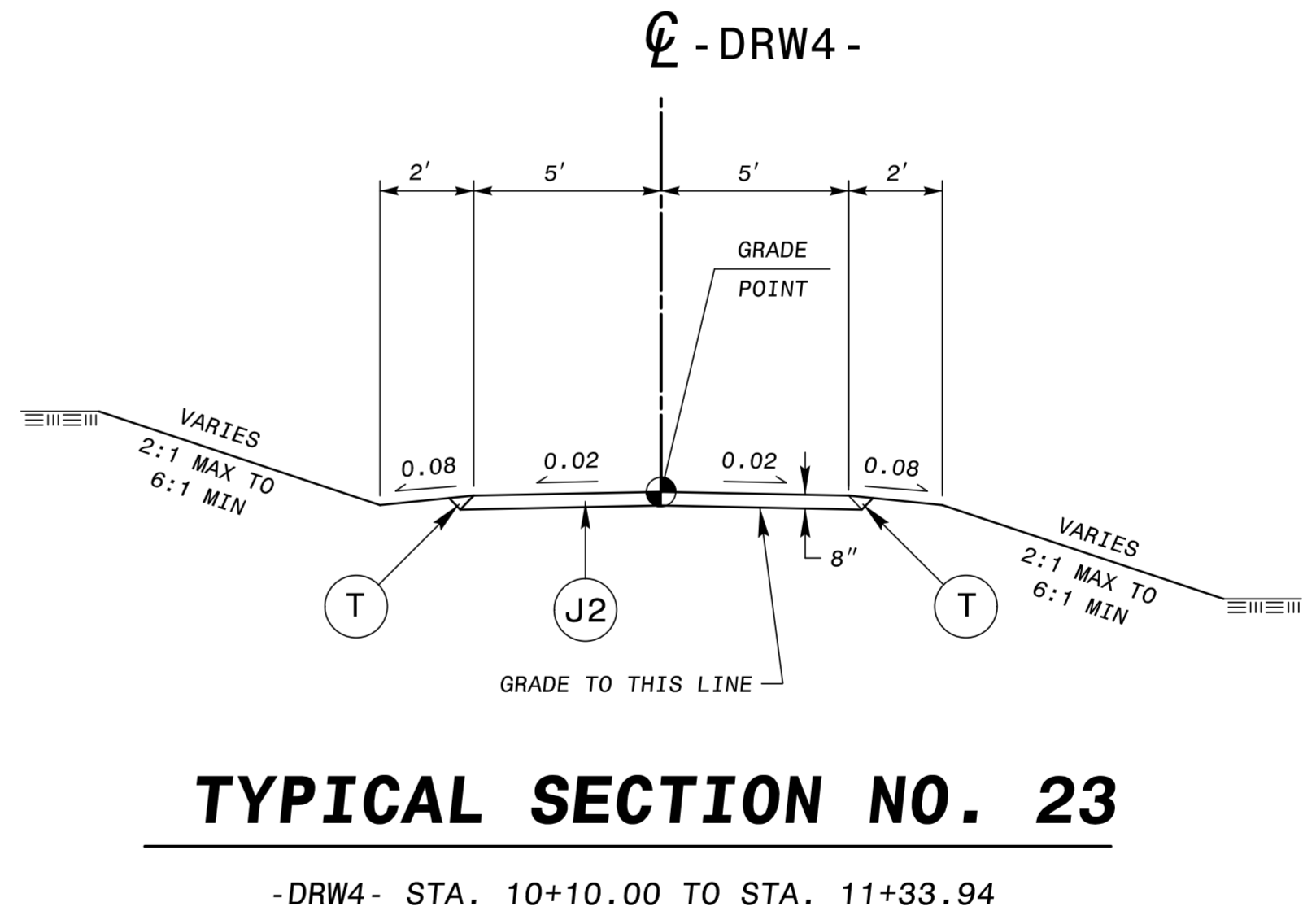
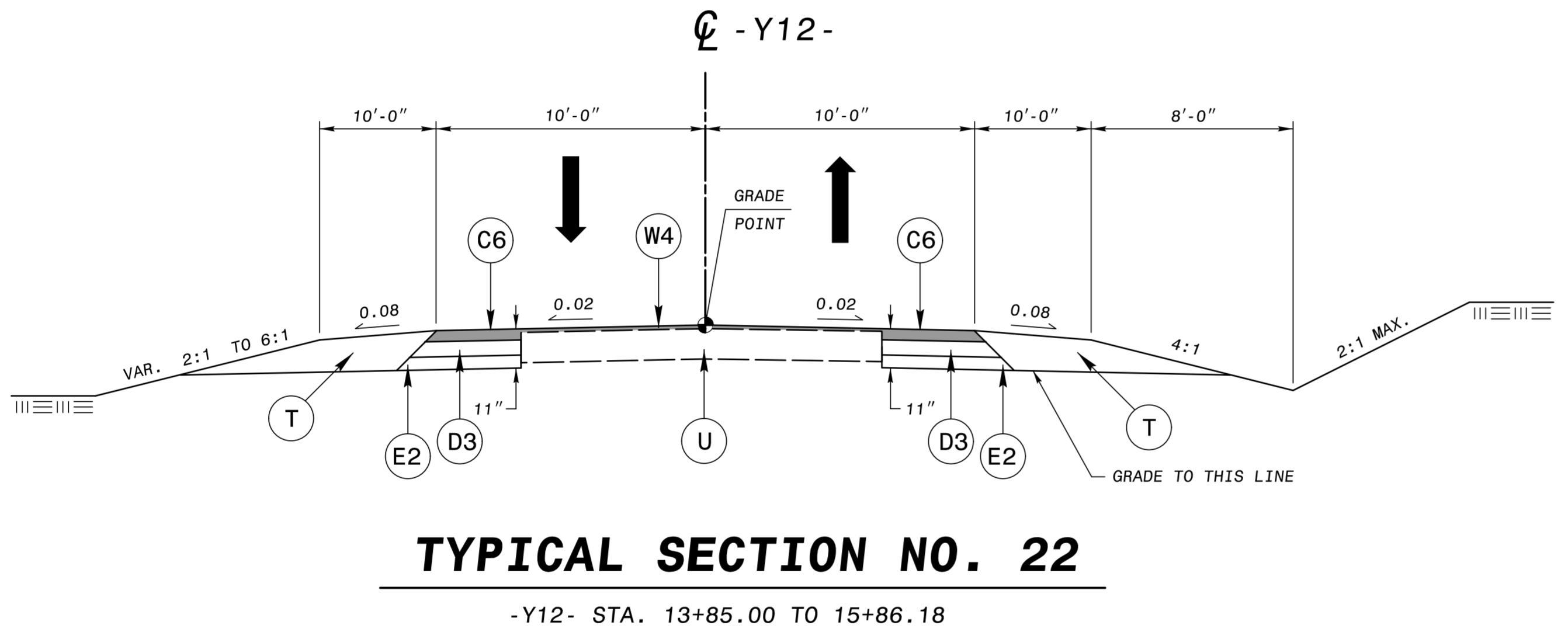
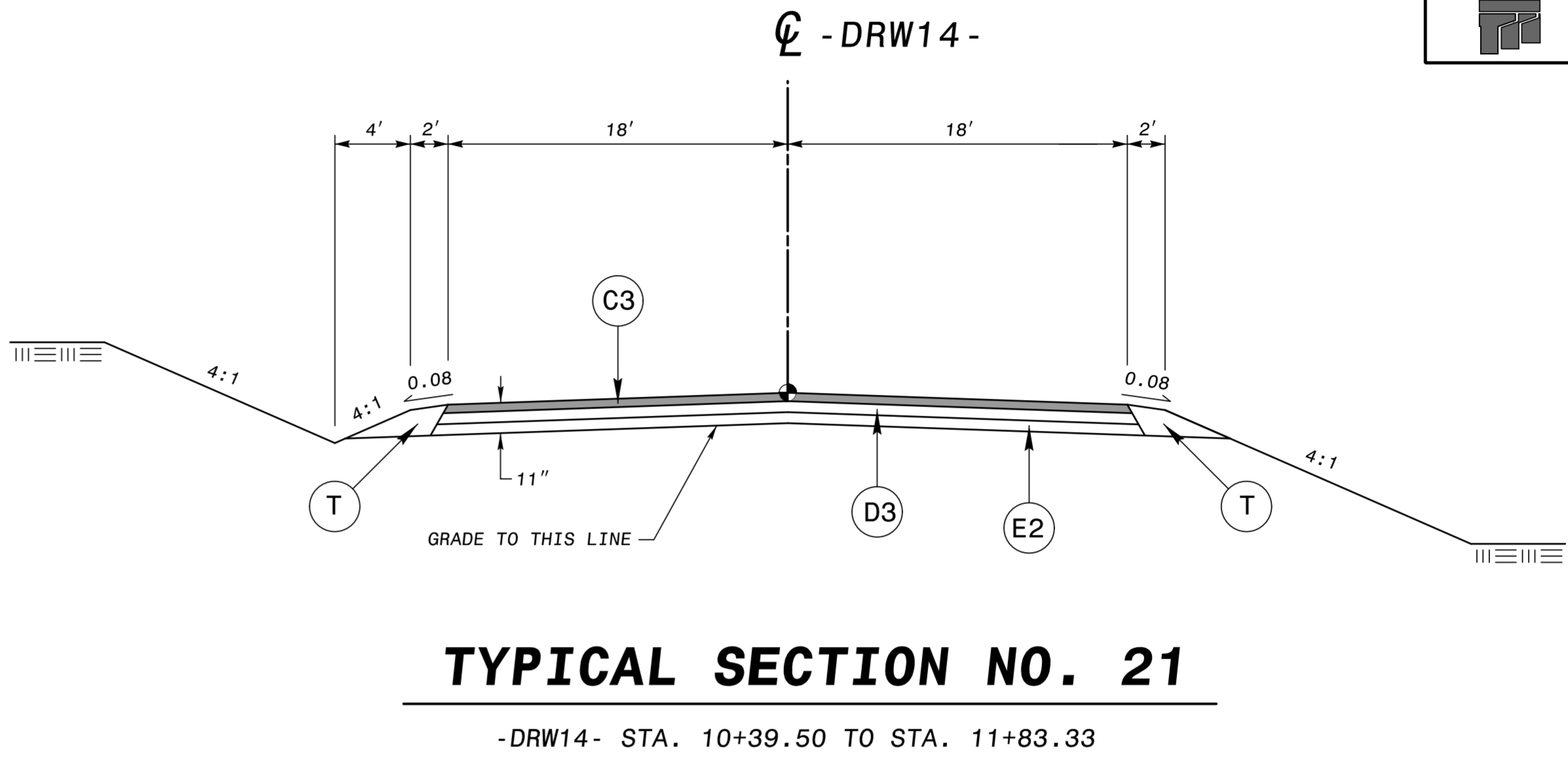
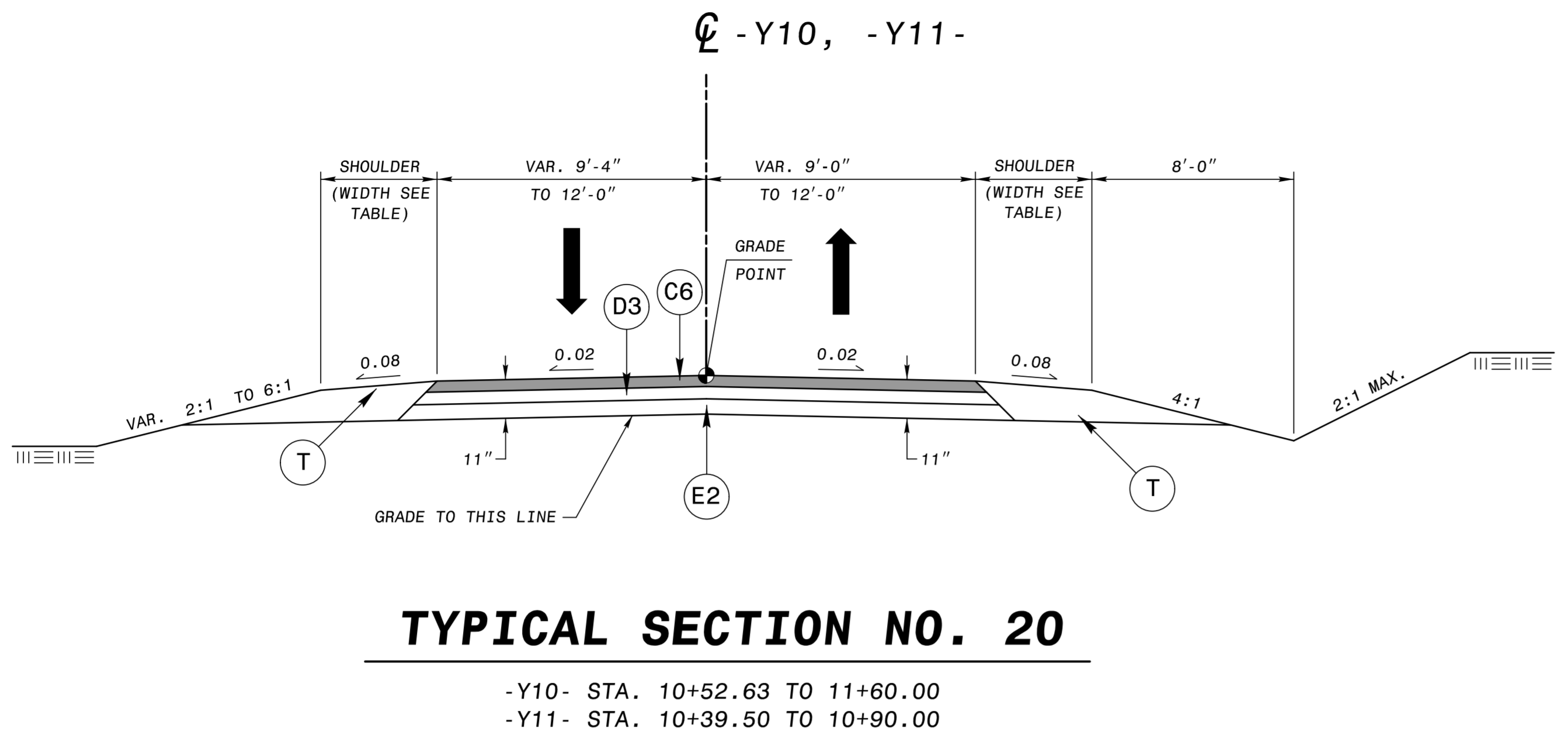
ROADWAY	SHOULDER WIDTH
-Y7-	2'
-Y10-	6'
-Y11-	6'
-Y20-	8'

C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

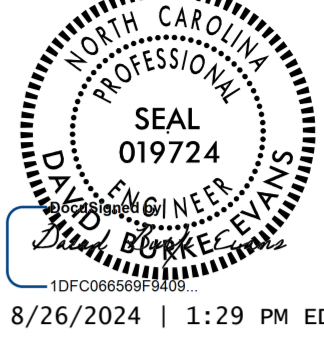
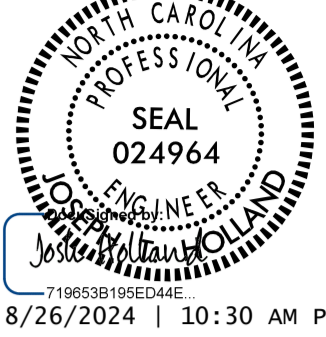
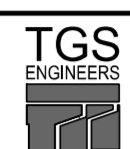
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 8/26/2024  
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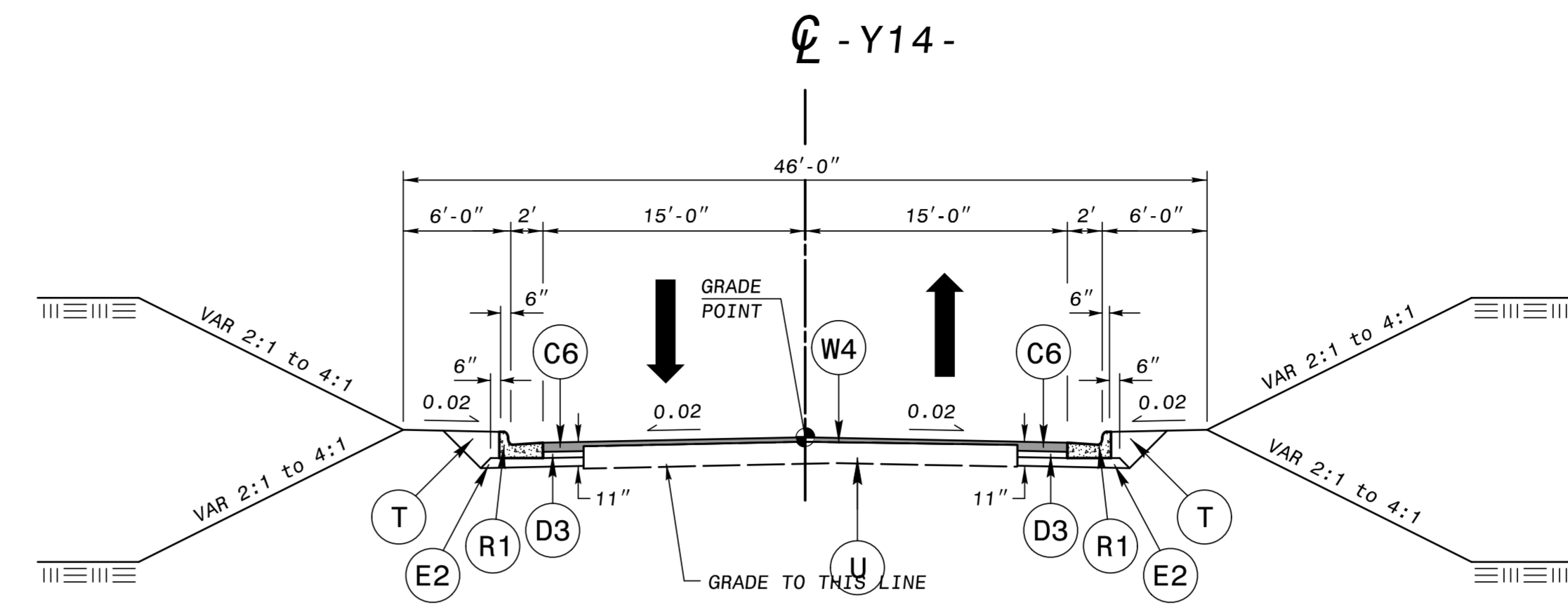
PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-10</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



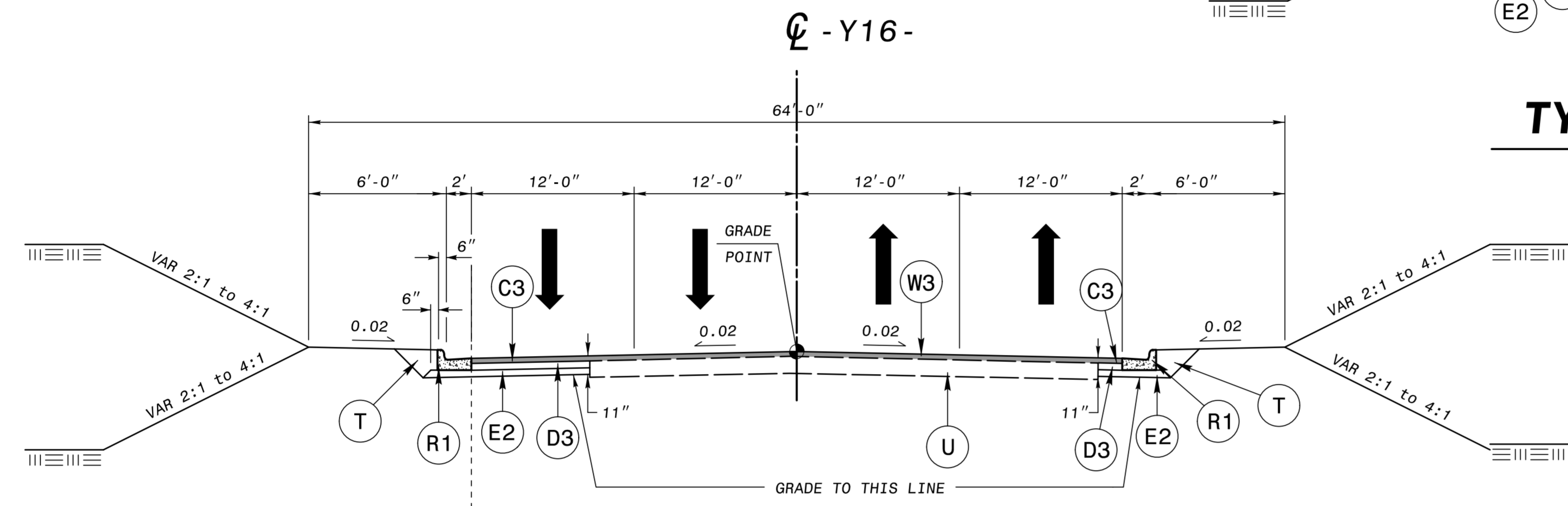
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

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8/26/2024  
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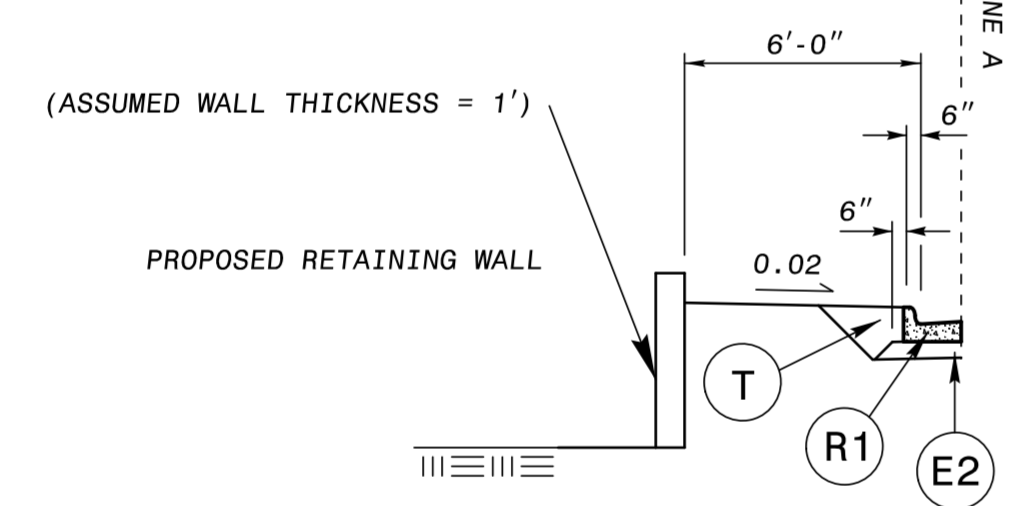
PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-11</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TYPICAL SECTION NO. 25**  
-Y14- STA. 10+75.00 TO 11+50.00

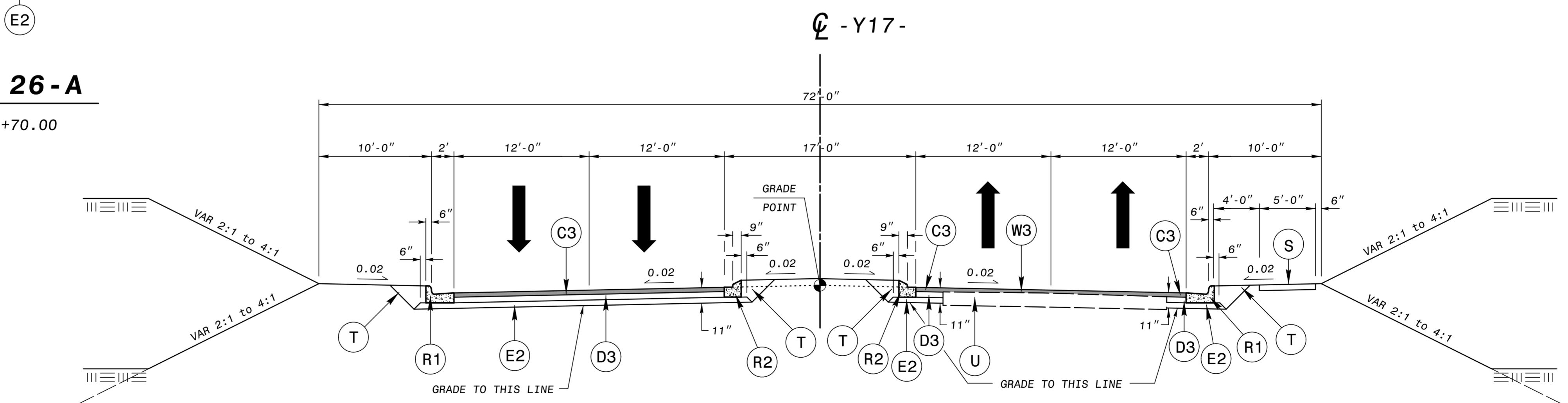


**TYPICAL SECTION NO. 26**  
-Y16- STA. 11+17.51 TO 25+12.66



**TYPICAL SECTION NO. 26-A**

WALL W-32: -Y16- STA. 21+30.00 TO 21+70.00



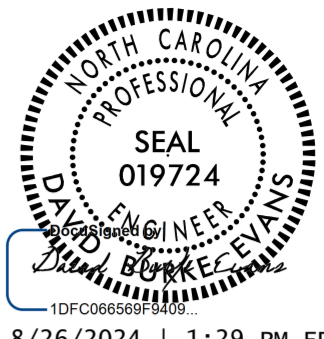
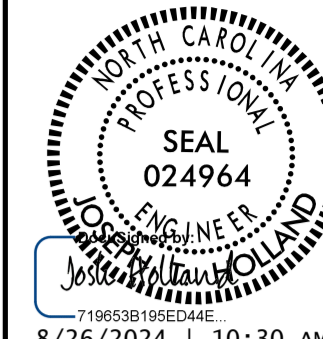

**TYPICAL SECTION NO. 27**  
-Y17- STA. 10+57.50 TO 32+70.42

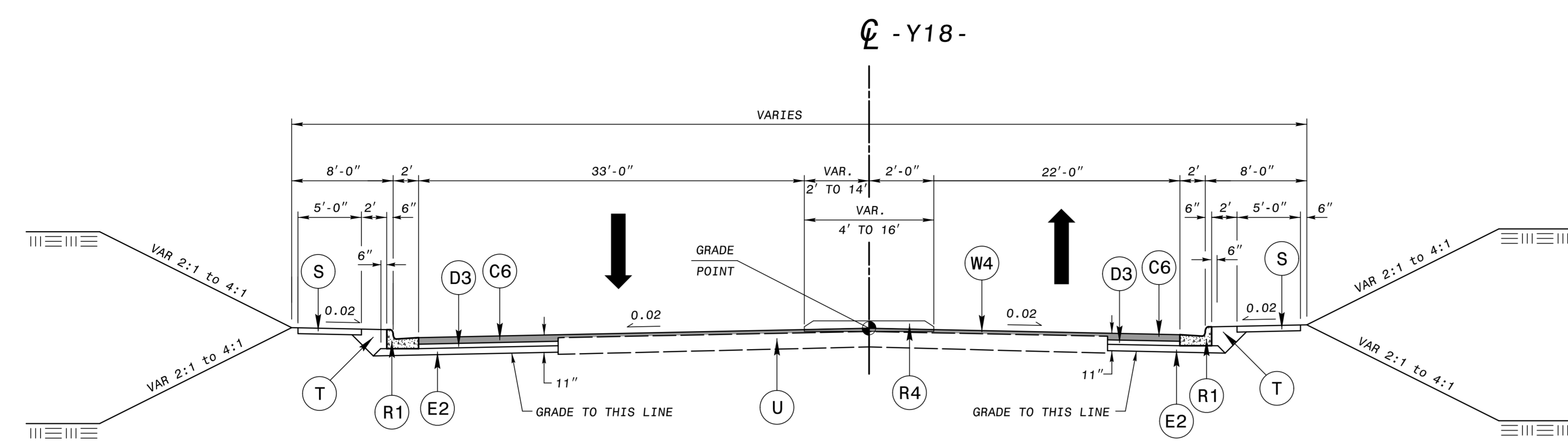
SEE PLANS FOR  
LOCATION OF  
8" X 18" CURB

SEE PLANS FOR  
LOCATION OF  
8" X 18" CURB

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

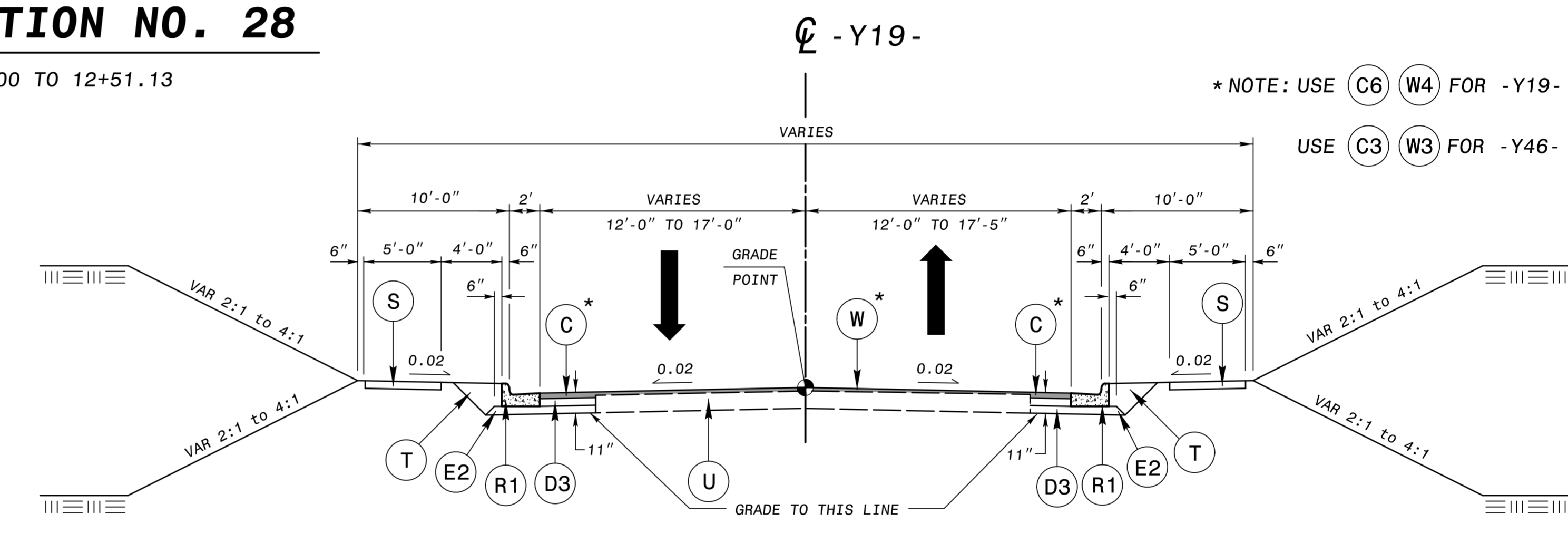
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-12</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



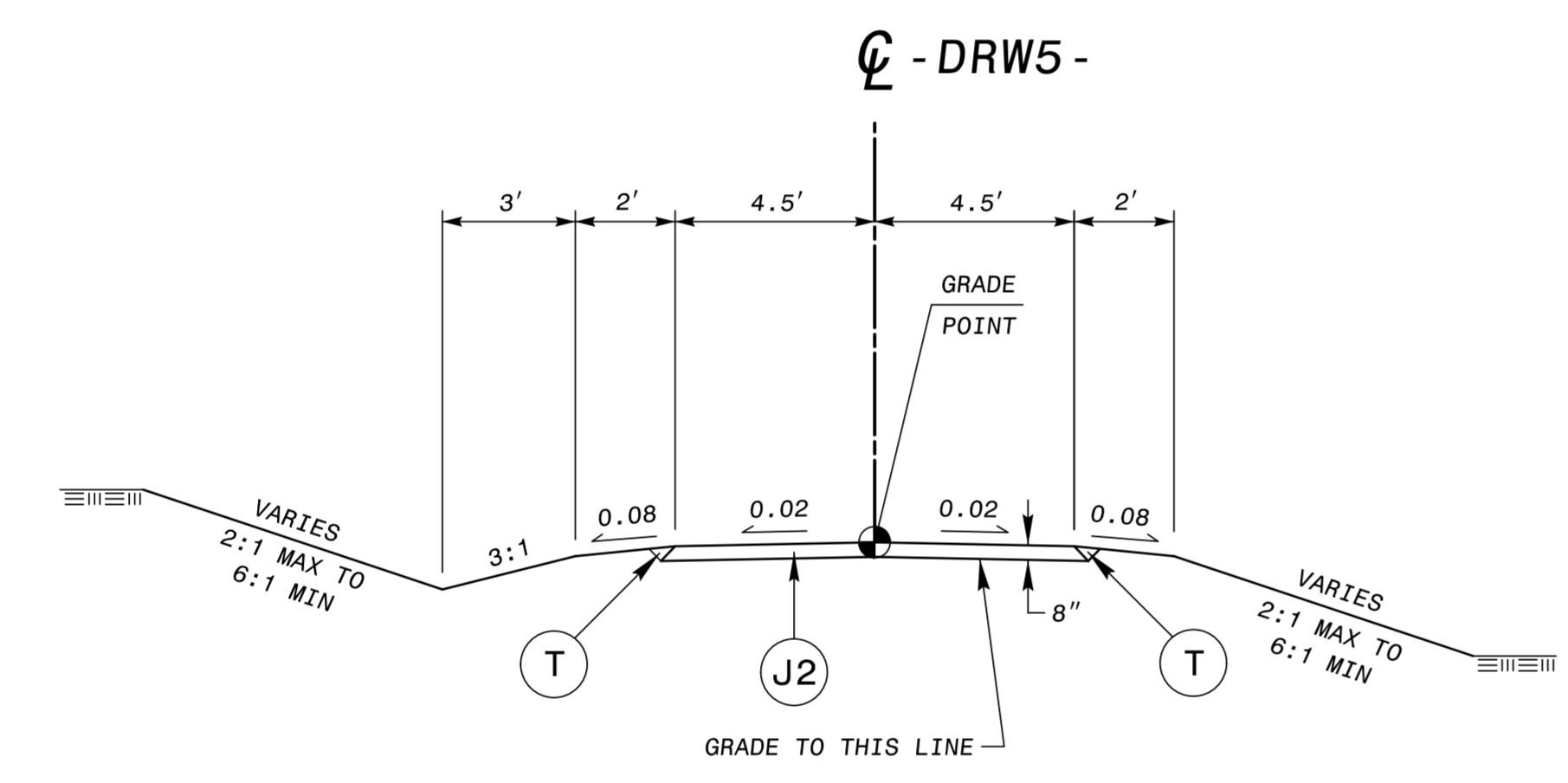
**TYPICAL SECTION NO. 28**

-Y18- STA. 11+20.00 TO 12+51.13



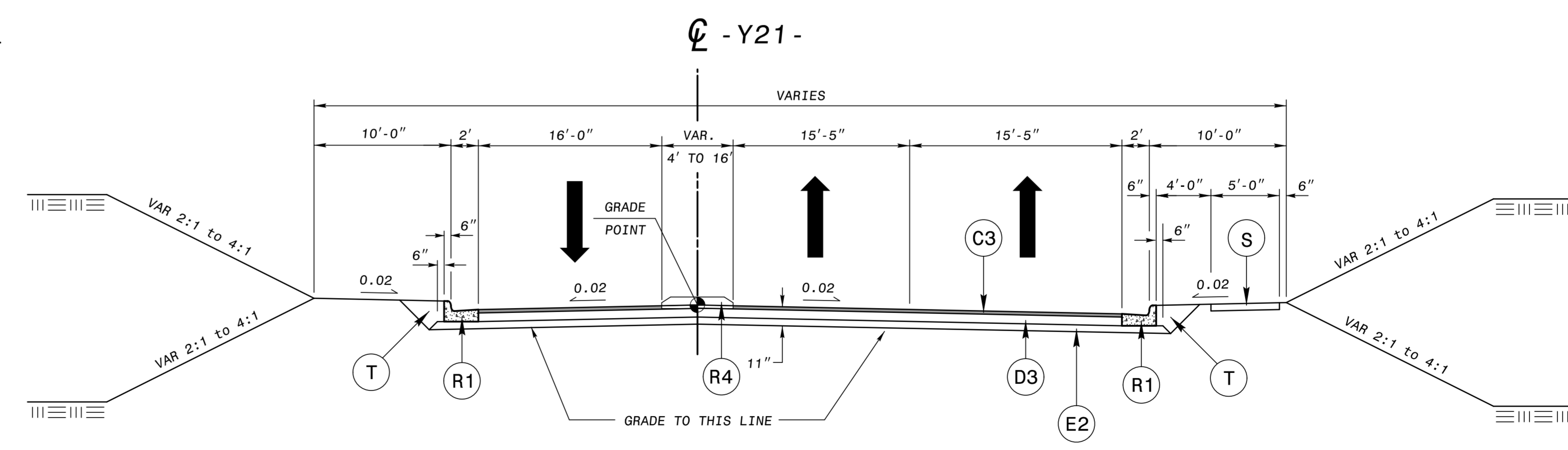
**TYPICAL SECTION NO. 29**

-Y19- STA. 13+40.00 TO 14+82.82  
-Y46- STA. 10+75.00 TO 11+42.50



**TYPICAL SECTION NO. 30**

-DRW5- STA. 10+69.50 TO STA. 12+10.00


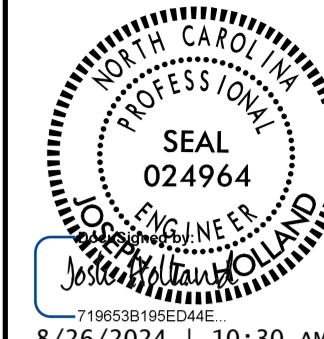


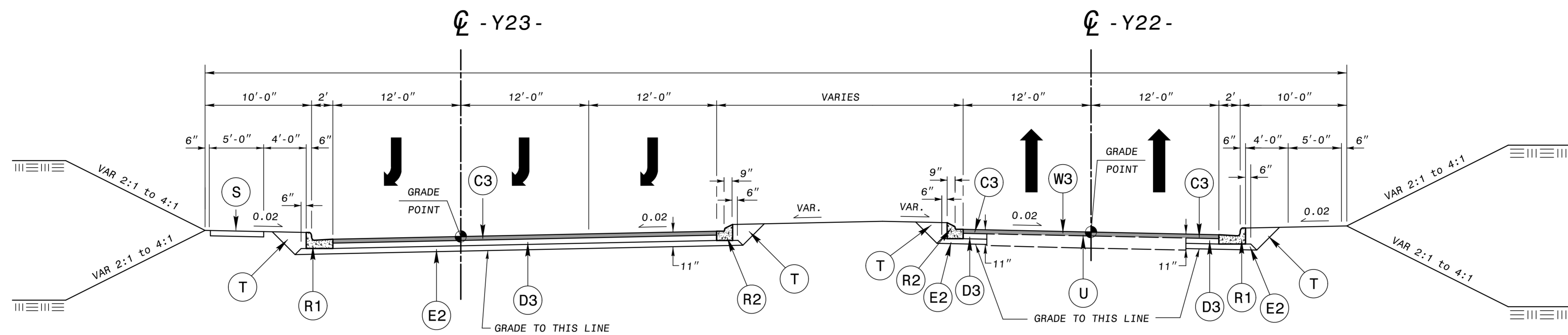
**TYPICAL SECTION NO. 31**

-Y21- STA. 13+60.00 TO 15+32.75

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

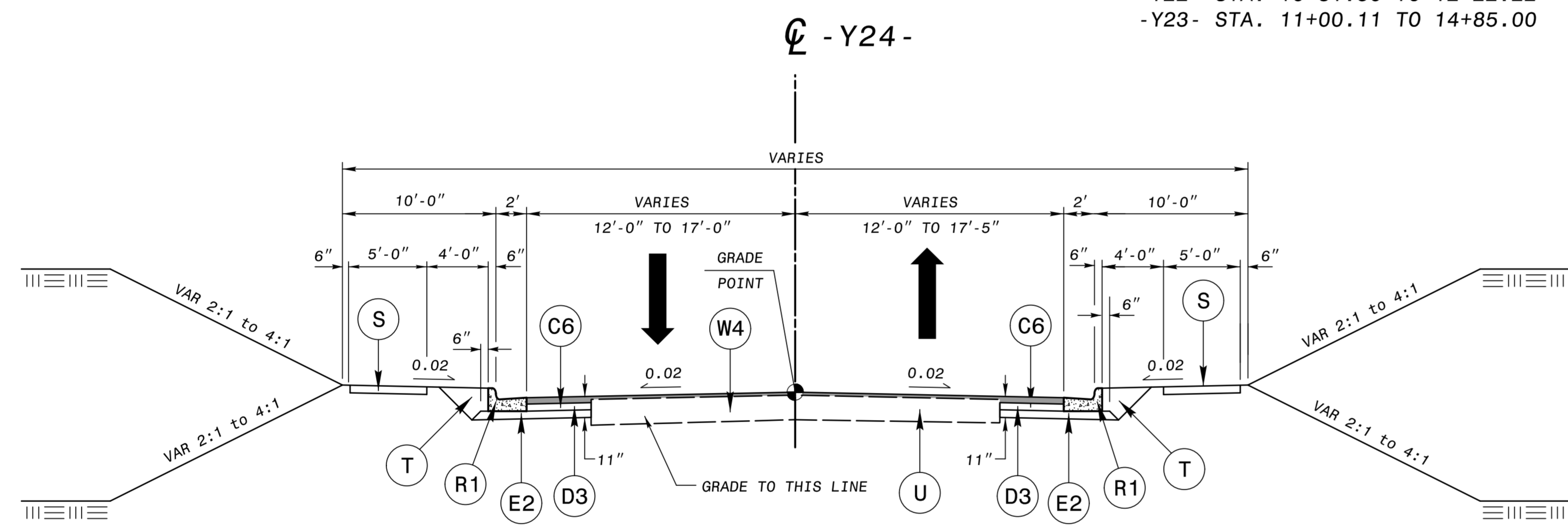
6/2/2024 8/26/2024 10:30 AM PDT 8/26/2024 1:29 PM EDT

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-13</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>	
<p><b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275</p>	



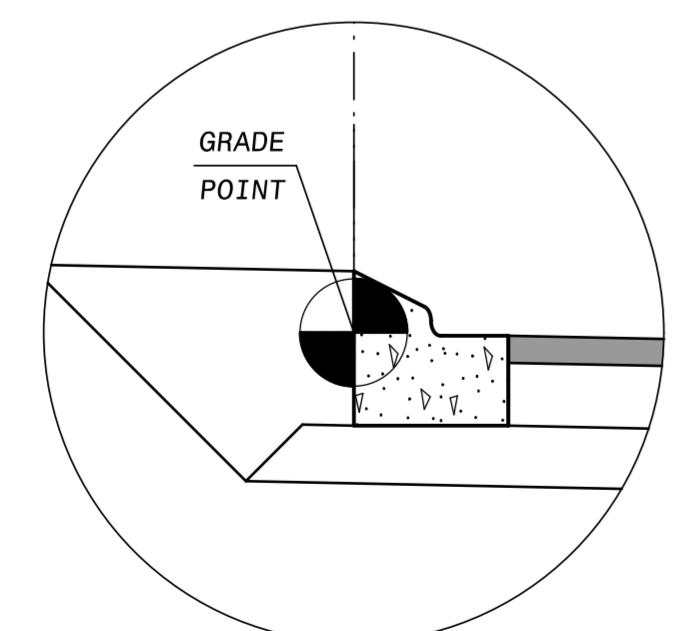
**TYPICAL SECTION NO. 32**

-Y22- STA. 10+81.50 TO 12+22.22  
-Y23- STA. 11+00.11 TO 14+85.00

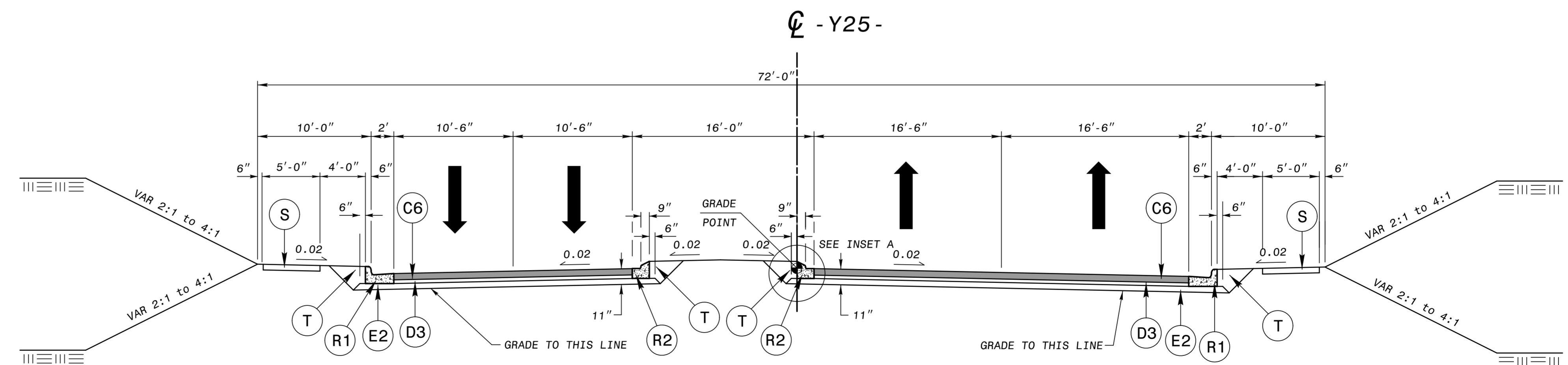


**TYPICAL SECTION NO. 33**

-Y24- STA. 10+40.00 TO 10+97.00



**INSET A - GRADE POINT**



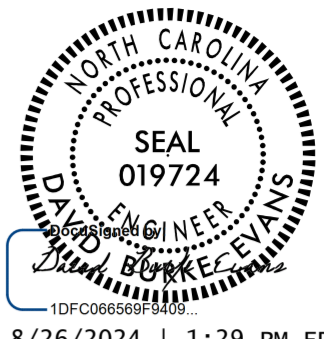
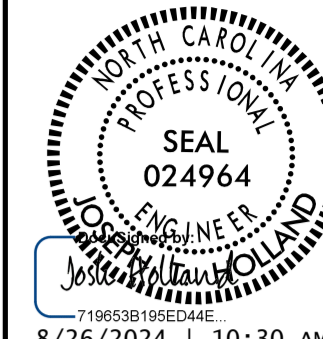

**TYPICAL SECTION NO. 34**

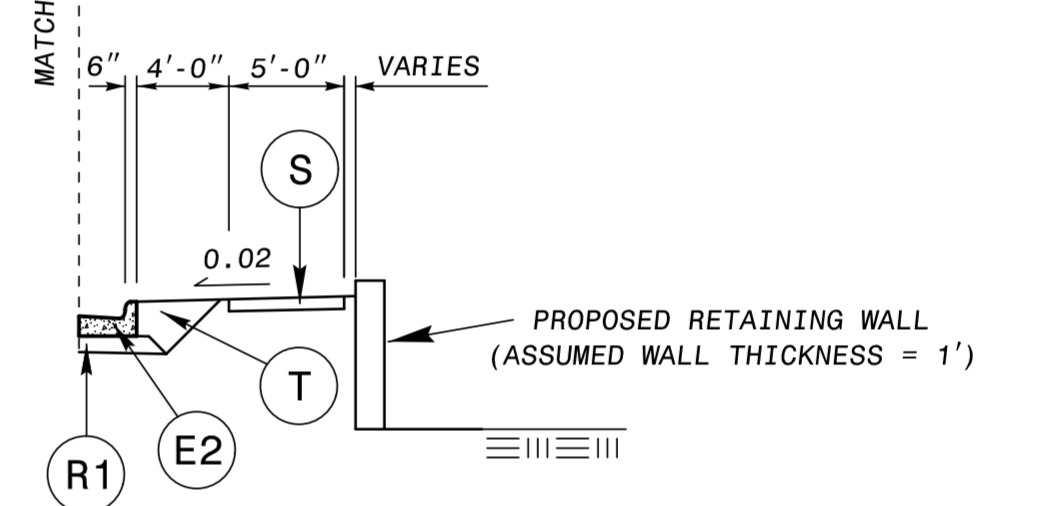
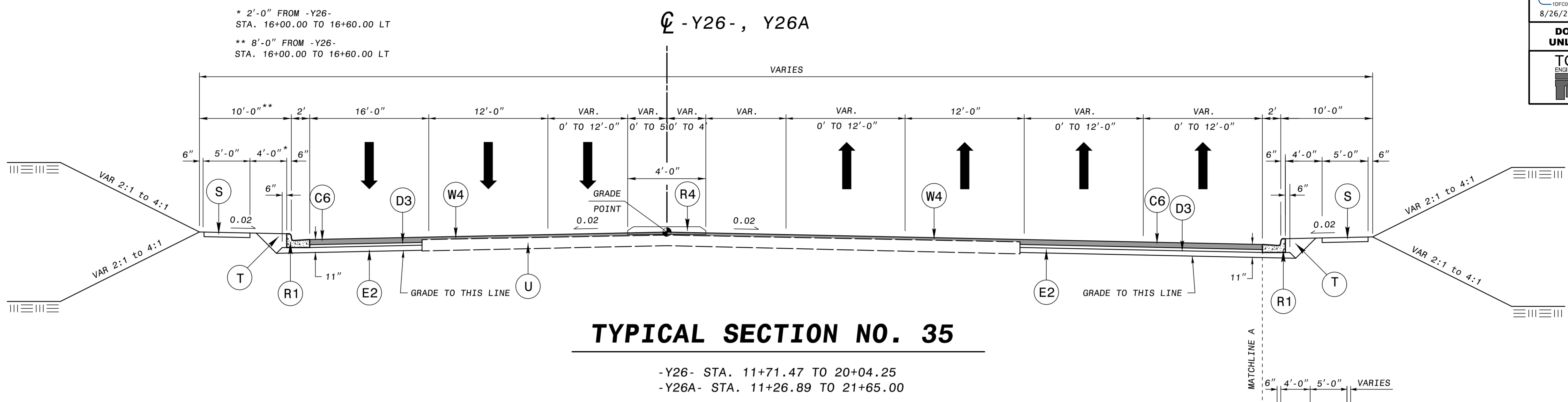
-Y25- STA. 11+90.00 TO 13+07.93

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

6/2/2024 8/26/2024 1:29 PM EDT 10:30 AM PDT R-2307B \\roadway\proj\R-2307B-RDY-tyup.dgn

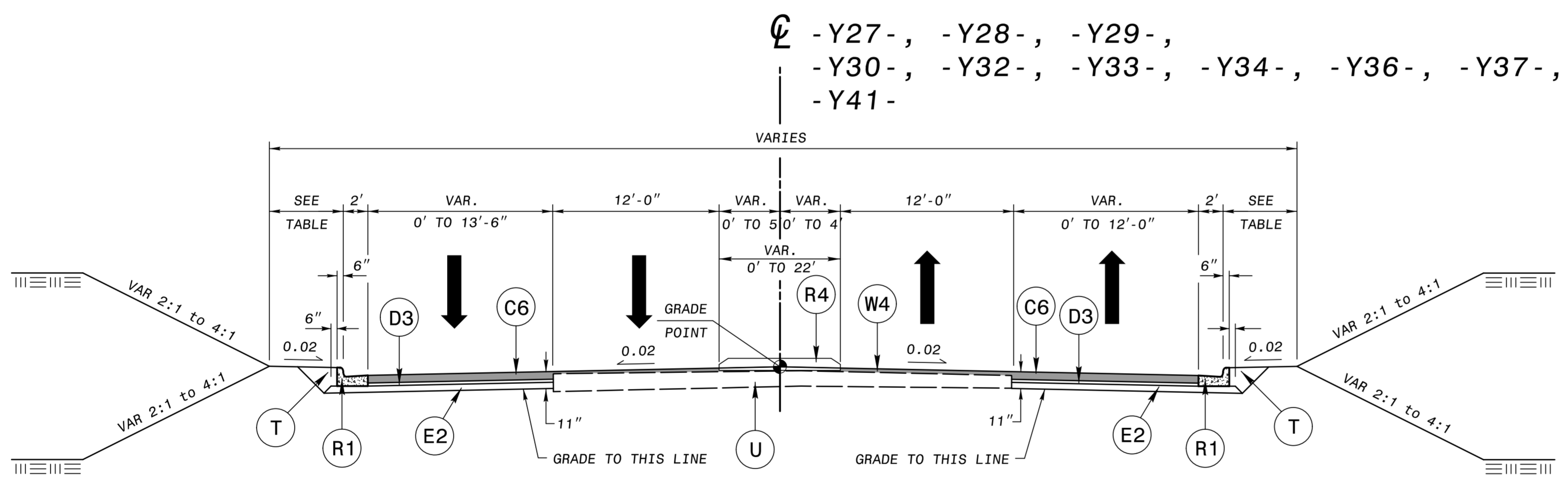


PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-14</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TYPICAL SECTION NO. 35-A**

WALL W-33: -Y26- STA. 15+50.00 TO 16+80.00



- Y27- STA. 10+40.53 TO 11+39.79
- Y28- STA. 10+80.00 TO 11+75.76
- Y29- STA. 15+40.00 TO 16+97.51
- Y30- STA. 10+74.09 TO 15+25.00
- Y32- STA. 10+71.97 TO 12+80.00
- Y33- STA. 11+70.00 TO 13+46.52
- Y34- STA. 10+20.00 TO 13+01.98
- Y36- STA. 10+87.26 TO 14+50.00
- Y37- STA. 10+92.30 TO 12+25.00
- Y41- STA. 12+50.00 TO 13+43.79

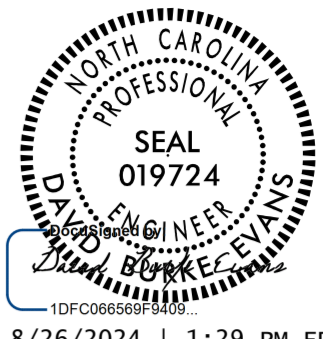
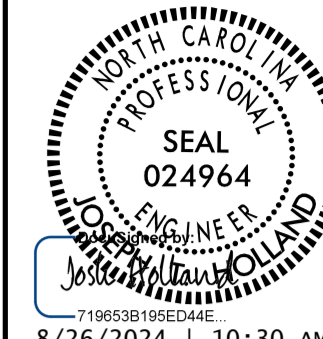
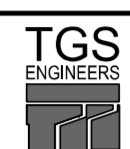
NOTE: FOR -Y27- USE FULL DEPTH PAVEMENT IN LIEU OF WEDGING.

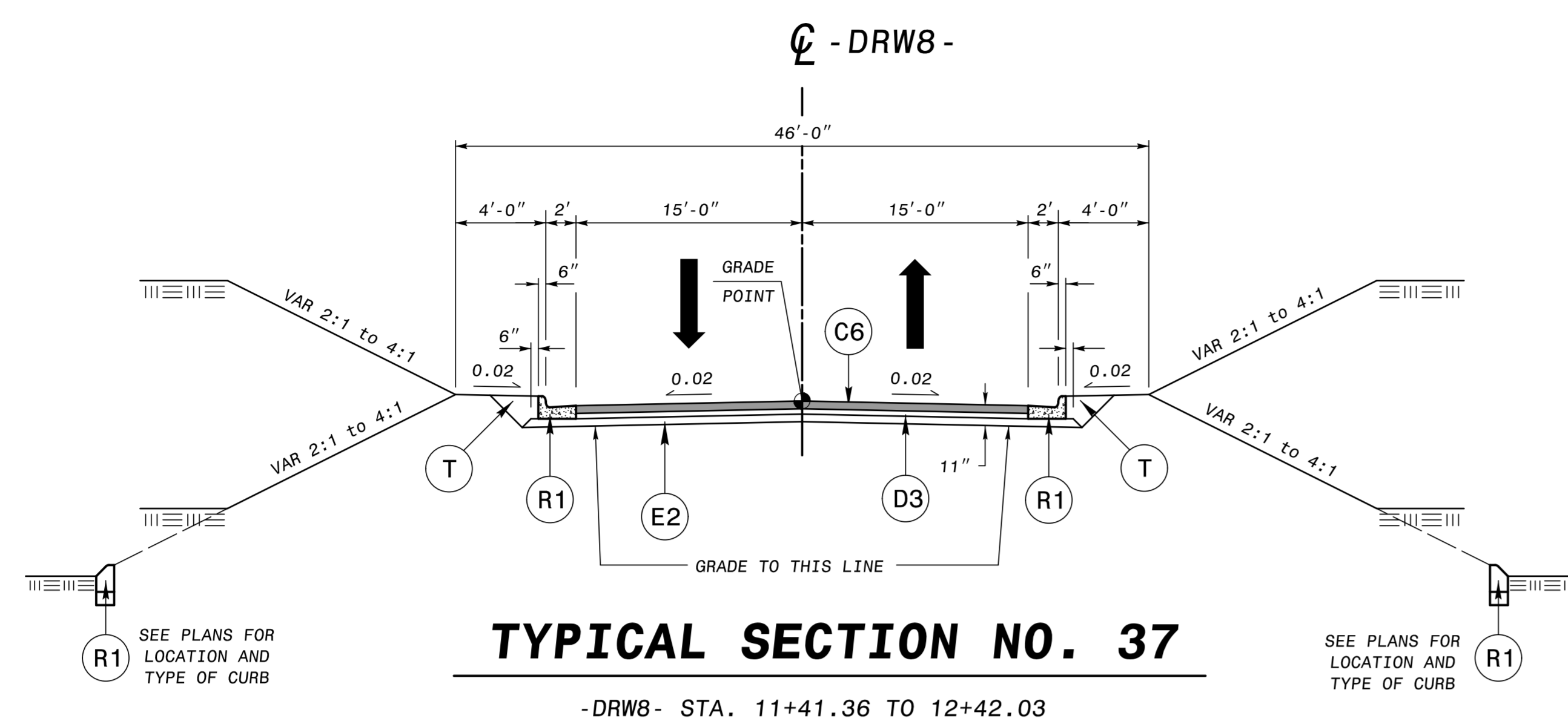
DIMENSION TABLE TYP. SECTION 38	
ROADWAY	BERM WIDTH (LT/RT)
-Y27-	4' / 6'
-Y28-	4' / 4'
-Y29-	4' / 4'
-Y30-	4' / 4'
-Y32-	4' / 4'
-Y33-	4' / 4'
-Y34-	4' / 4'
-Y36-	4' / 4'
-Y37-	4' / 6'
-Y41-	4' / 4'

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

6/2/99

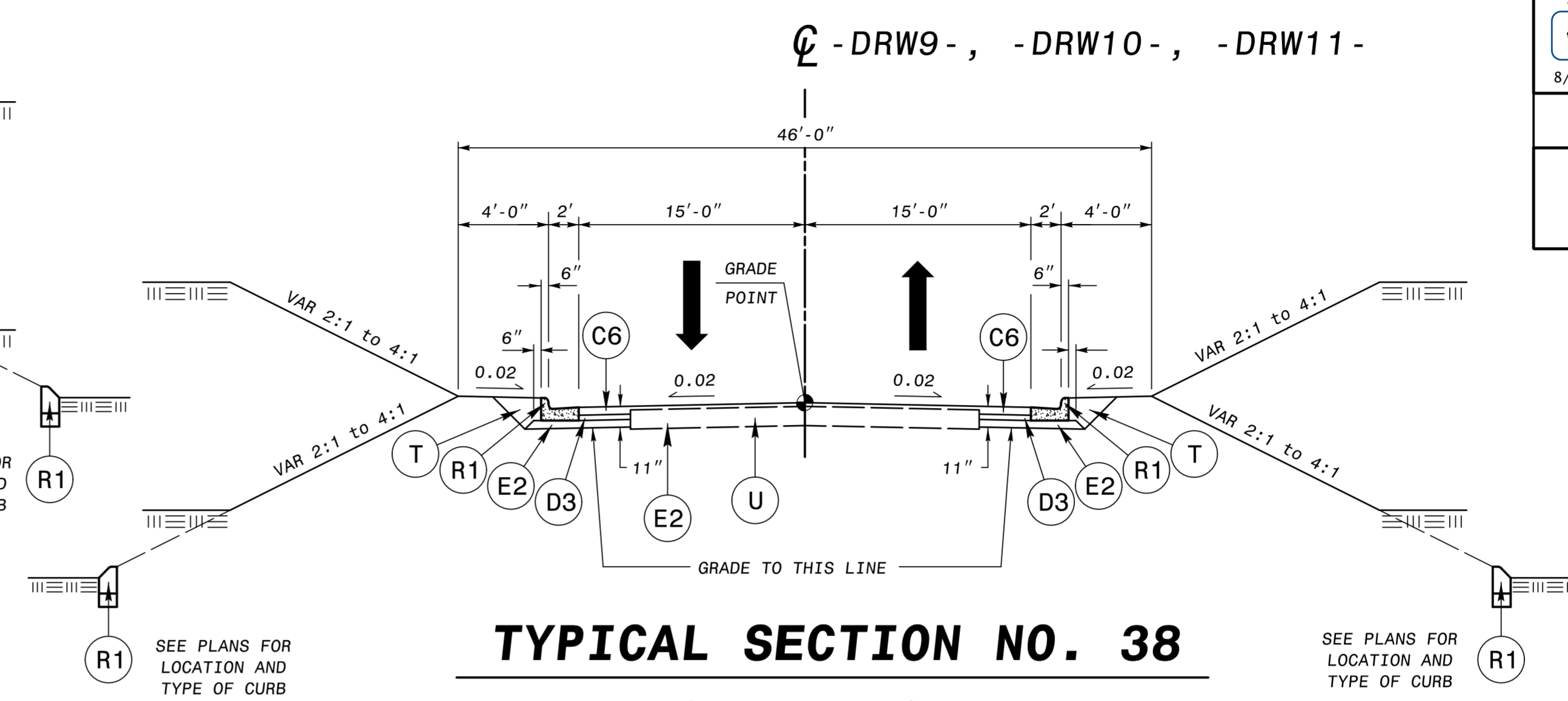
8/26/2024  
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PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-15</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



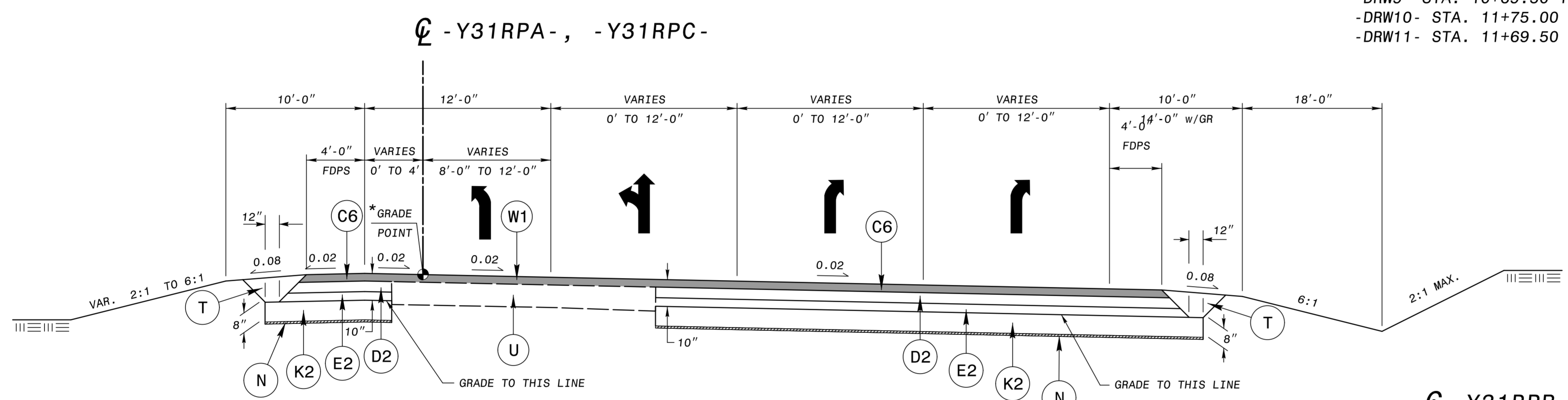
**TYPICAL SECTION NO. 37**

-DRW8- STA. 11+41.36 TO 12+42.03



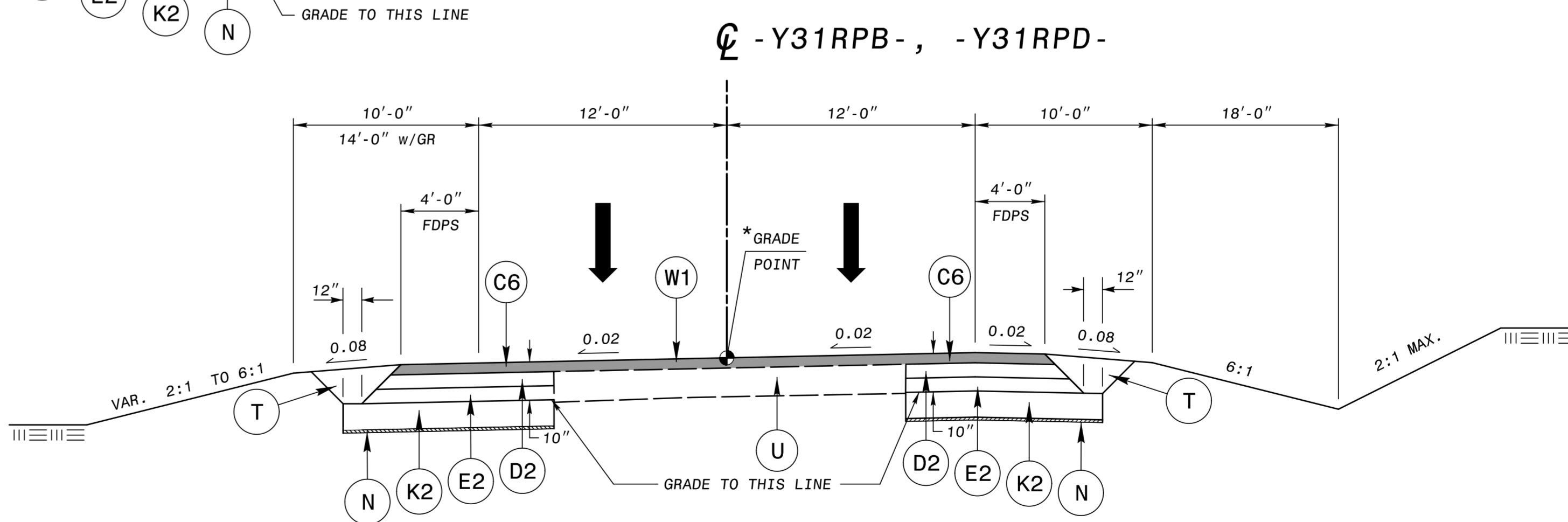
**TYPICAL SECTION NO. 38**

-DRW9- STA. 10+69.50 TO 11+90.00  
 -DRW10- STA. 11+75.00 TO 12+42.11  
 -DRW11- STA. 11+69.50 TO 11+45.00



**TYPICAL SECTION NO. 39**

\* NOTE: PROFILE POINT FOR THE FOLLOWING ALIGNMENT AND STATIONS:  
 -Y31RPA- STA. 14+03.21 TO 16+60.00  
 -Y31RPA- STA. 16+60.00 TO 18+97.82  
 -Y31RPC- STA. 14+52.00 TO 20+38.84

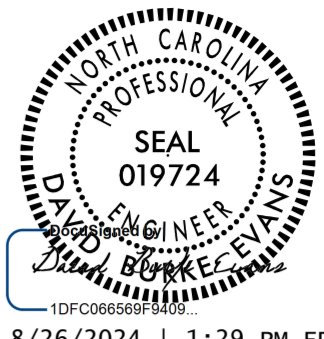
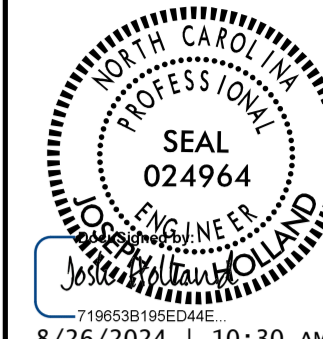
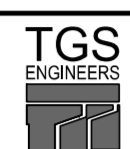


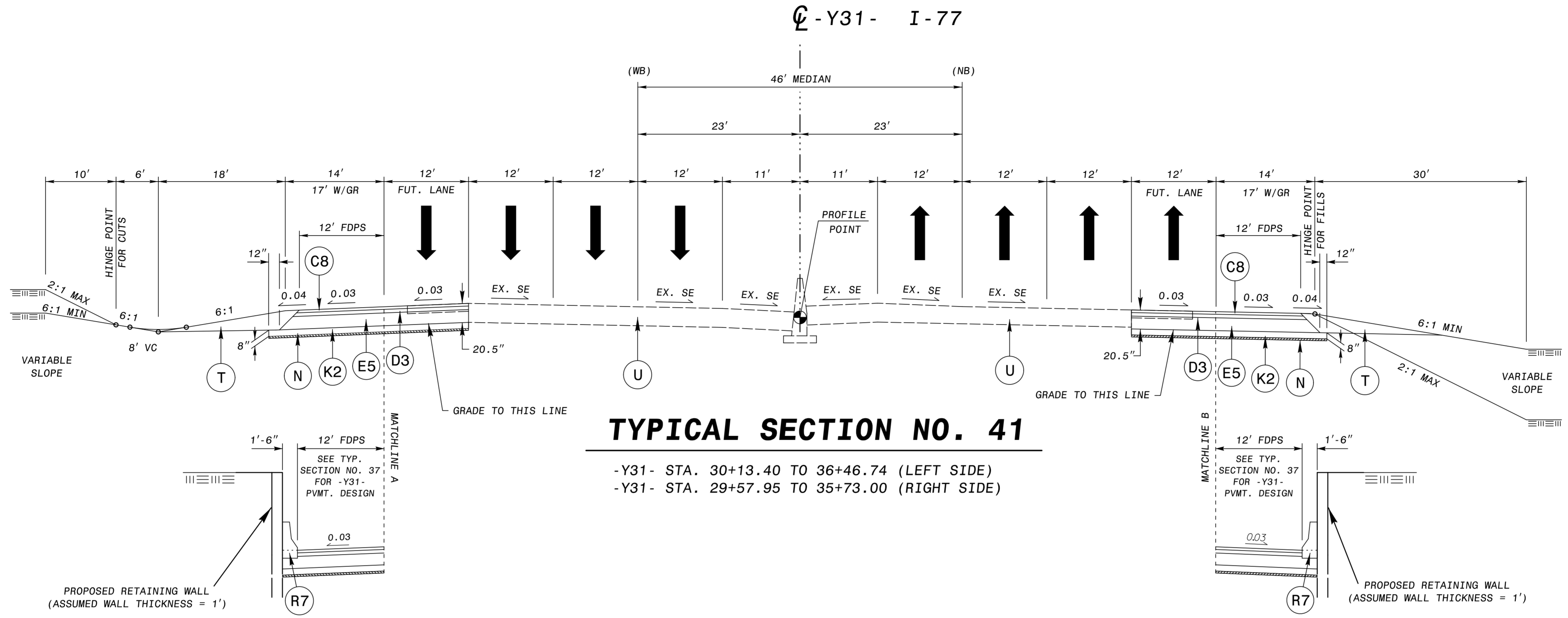
**TYPICAL SECTION NO. 40**

-Y31RPB- STA. 18+00.00 TO 21+90.91  
 \* NOTE: PROFILE POINT FOR THE FOLLOWING ALIGNMENT AND STATIONS:  
 -Y31RPD- STA. 15+00.00 TO 22+12.00  
 -Y31RPD- STA. 22+12.00 TO 23+05.49

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

6/22/99  
8/26/2024  
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PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-16</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TYPICAL SECTION NO. 41**

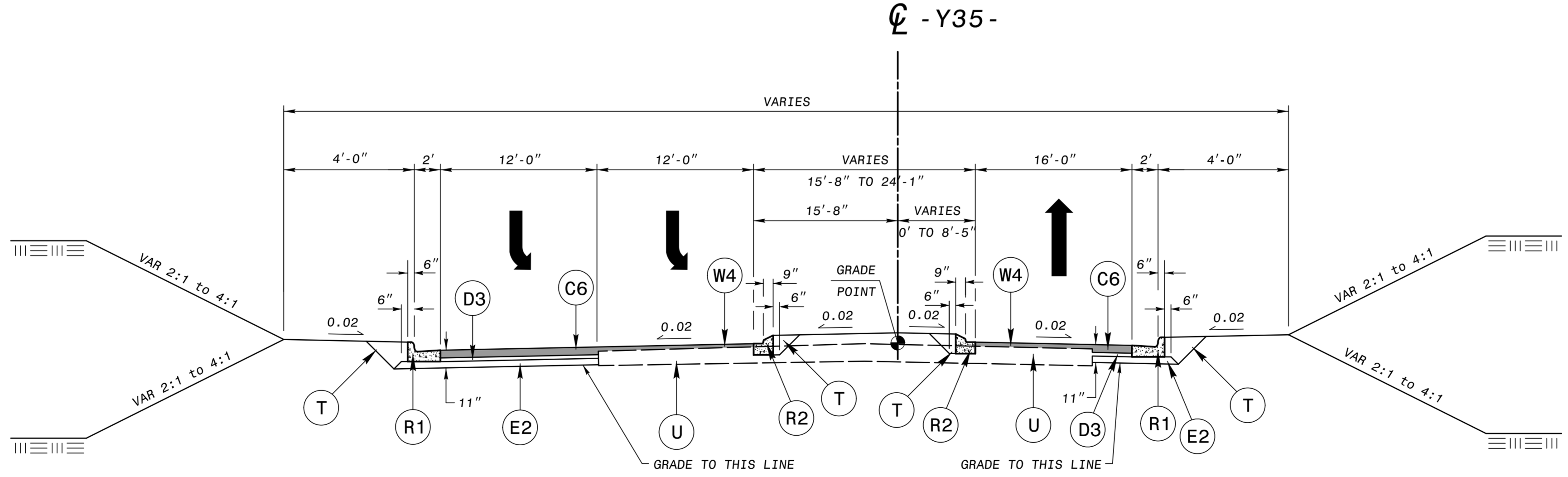
-Y31- STA. 30+13.40 TO 36+46.74 (LEFT SIDE)  
 -Y31- STA. 29+57.95 TO 35+73.00 (RIGHT SIDE)

**TYPICAL SECTION NO. 41-A**

WALL W-35: -Y31- STA. 31+68.36 TO 34+45.16

**TYPICAL SECTION NO. 41-B**

WALL W-36: -Y31- STA. 31+13.02 TO 34+10.77



**TYPICAL SECTION NO. 42**

-Y35- STA. 10+89.94 TO 12+58.73

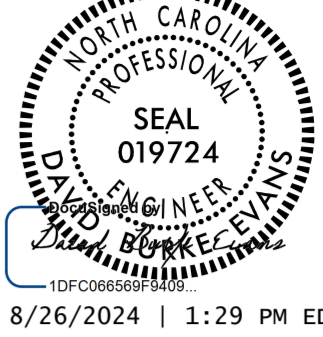
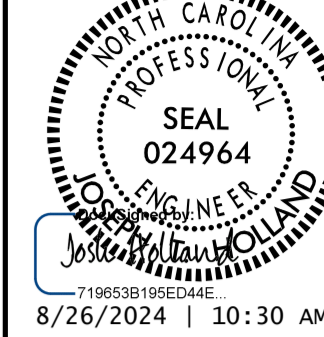

**PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)**

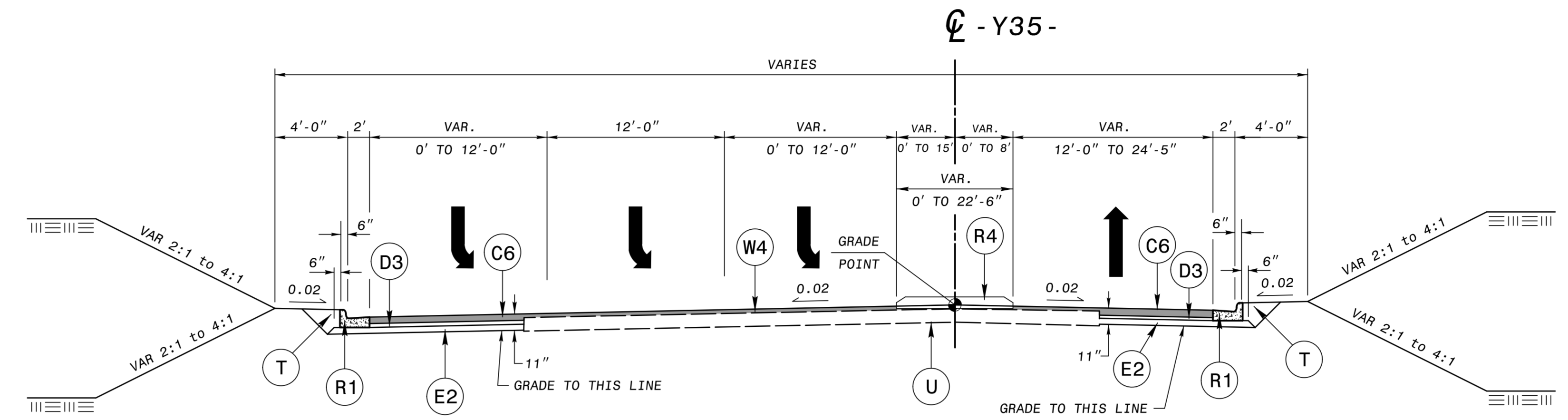
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99

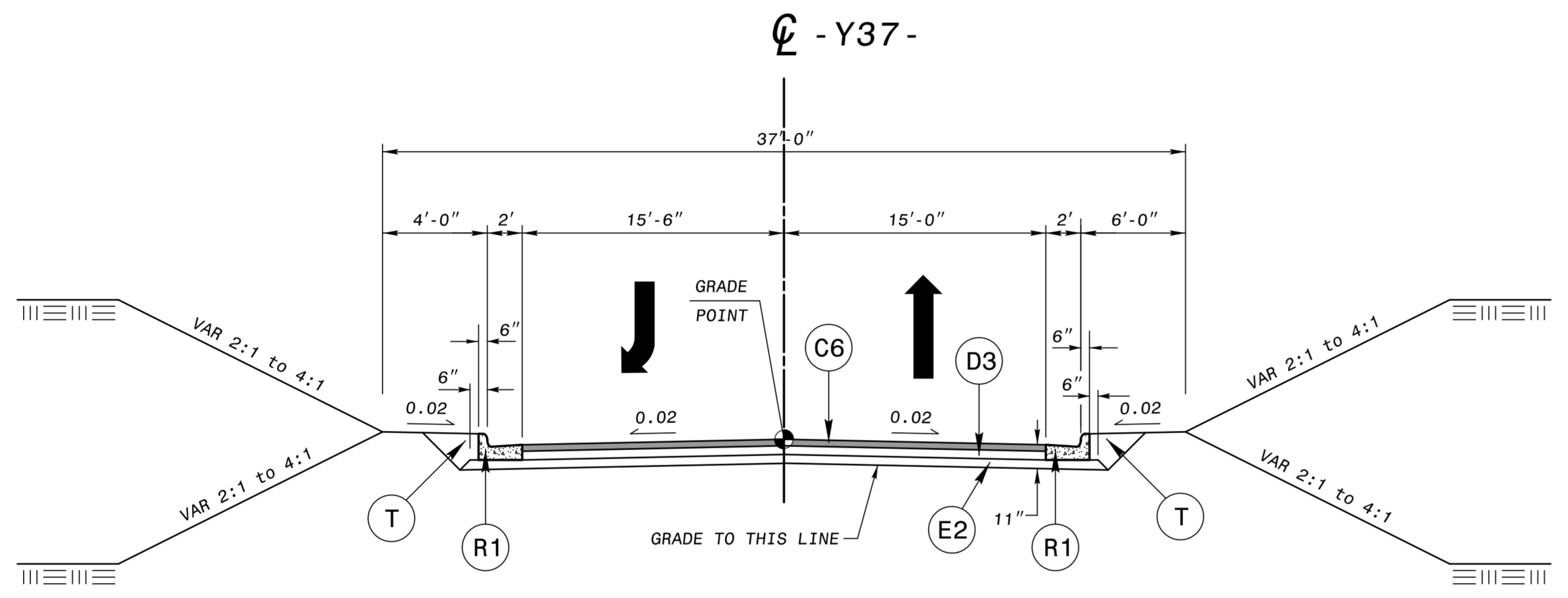
8/26/2024  
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 10:30 AM

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-17</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



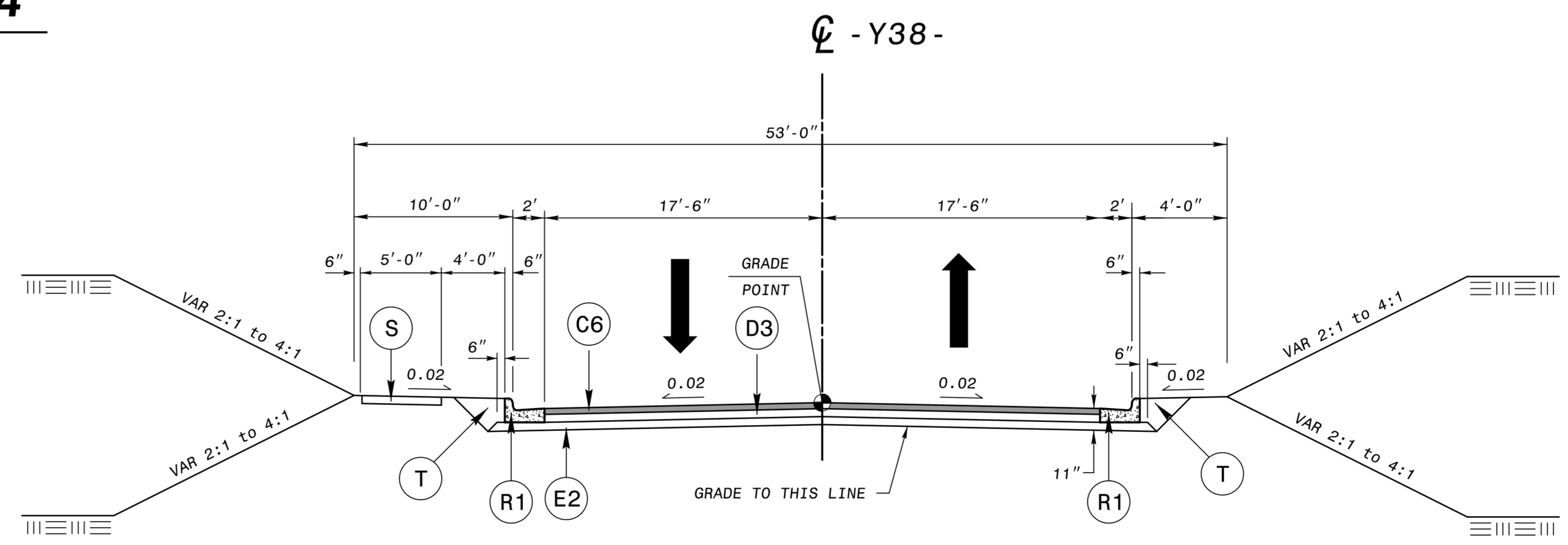
**TYPICAL SECTION NO. 43**

-Y35- STA. 12+58.73 TO 14+70.00



**TYPICAL SECTION NO. 44**

-Y37- STA. 12+25.00 TO 13+23.42



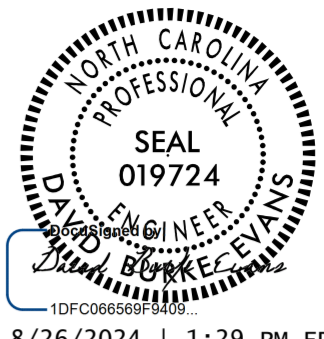
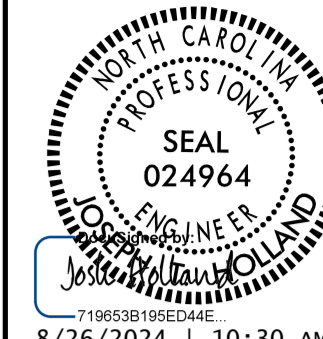
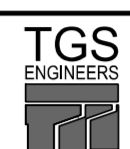
**TYPICAL SECTION NO. 45**

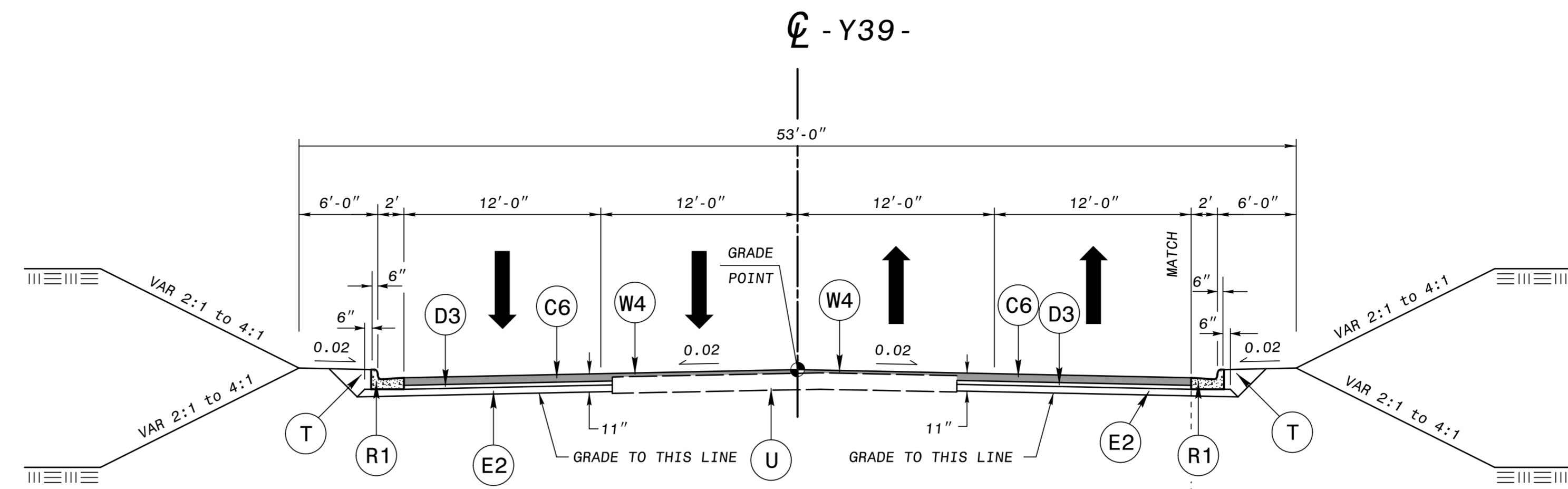
-Y38- STA. 14+60.00 TO 15+97.38

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE	

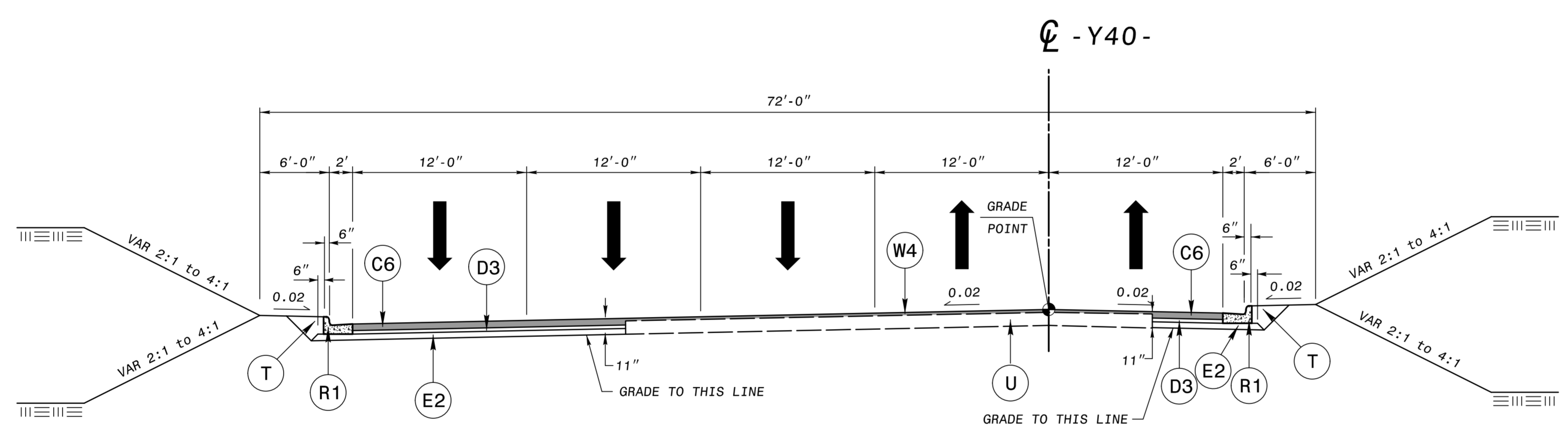
6/2/2024  
8/26/2024  
I:\mtdo\N-2307b\roadway\proj\N-2307B\_RDI\_typ.dgn

6/22/24

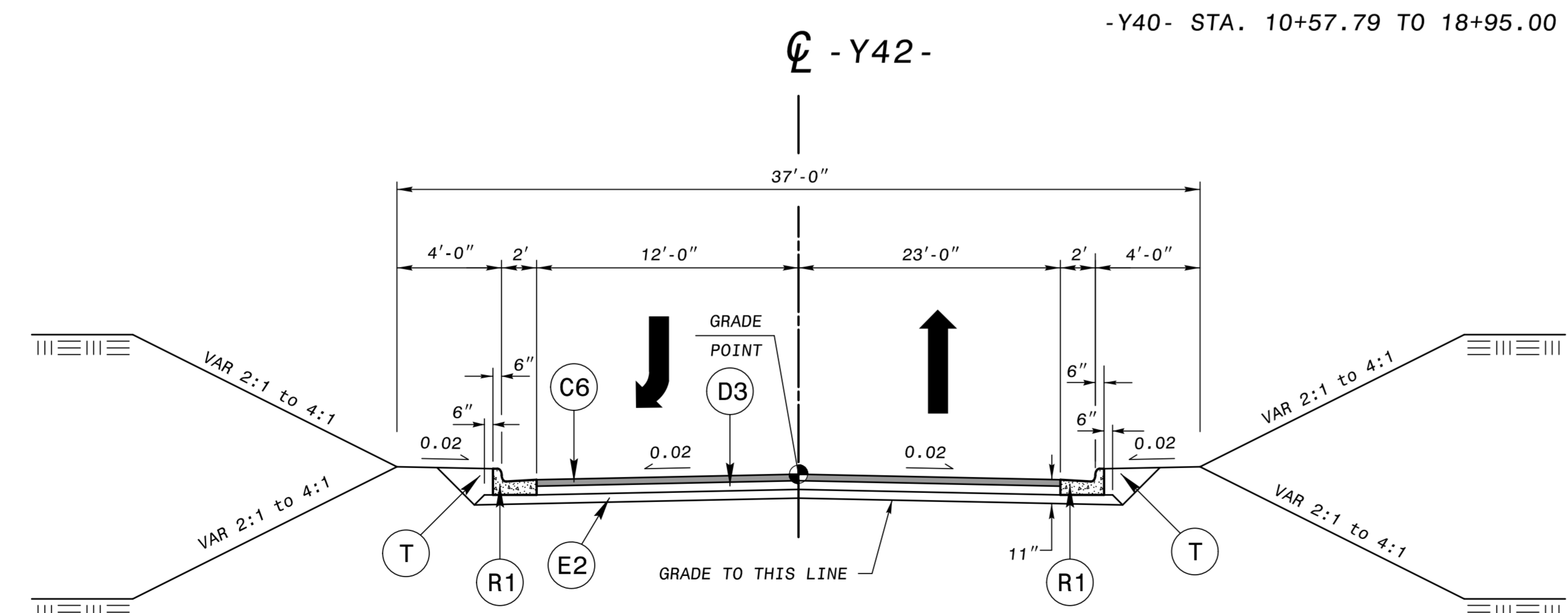
PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-18</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



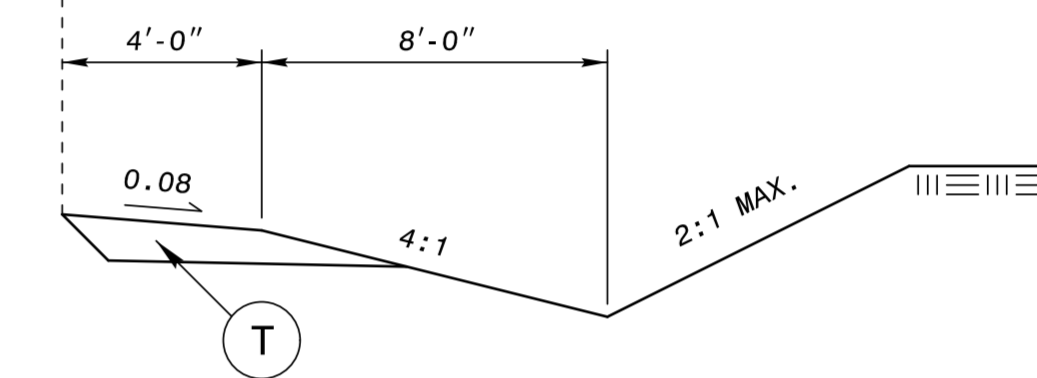
**TYPICAL SECTION NO. 46**  
-Y39- STA. 11+60.00 TO 19+62.02



**TYPICAL SECTION NO. 47**  
-Y40- STA. 10+57.79 TO 18+95.00



**TYPICAL SECTION NO. 48**  
-Y42- STA. 10+57.50 TO 11+50.00

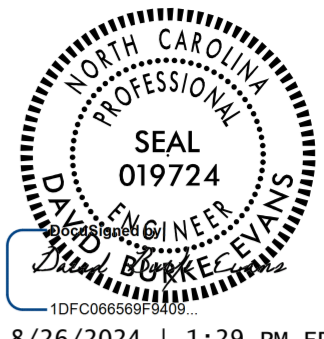
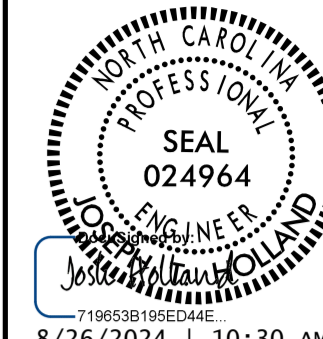



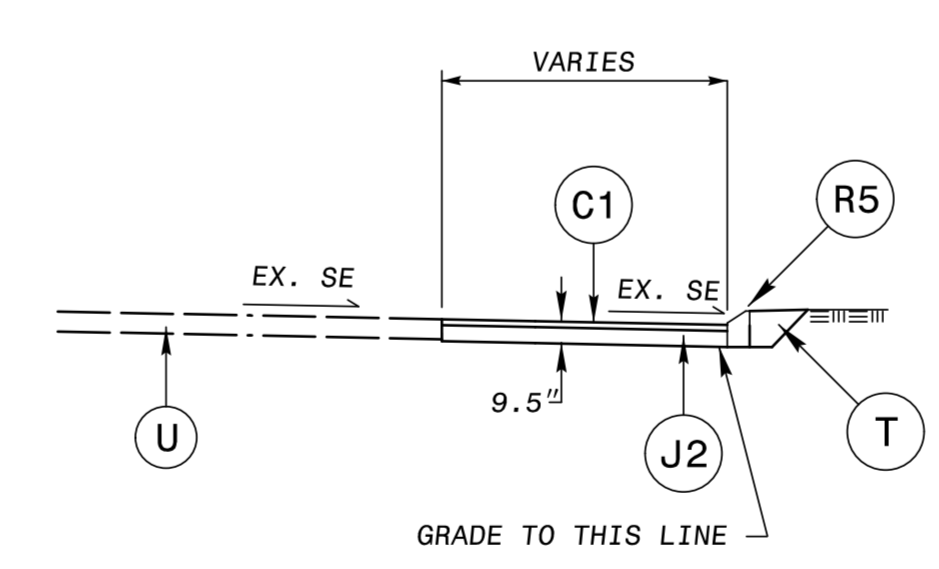
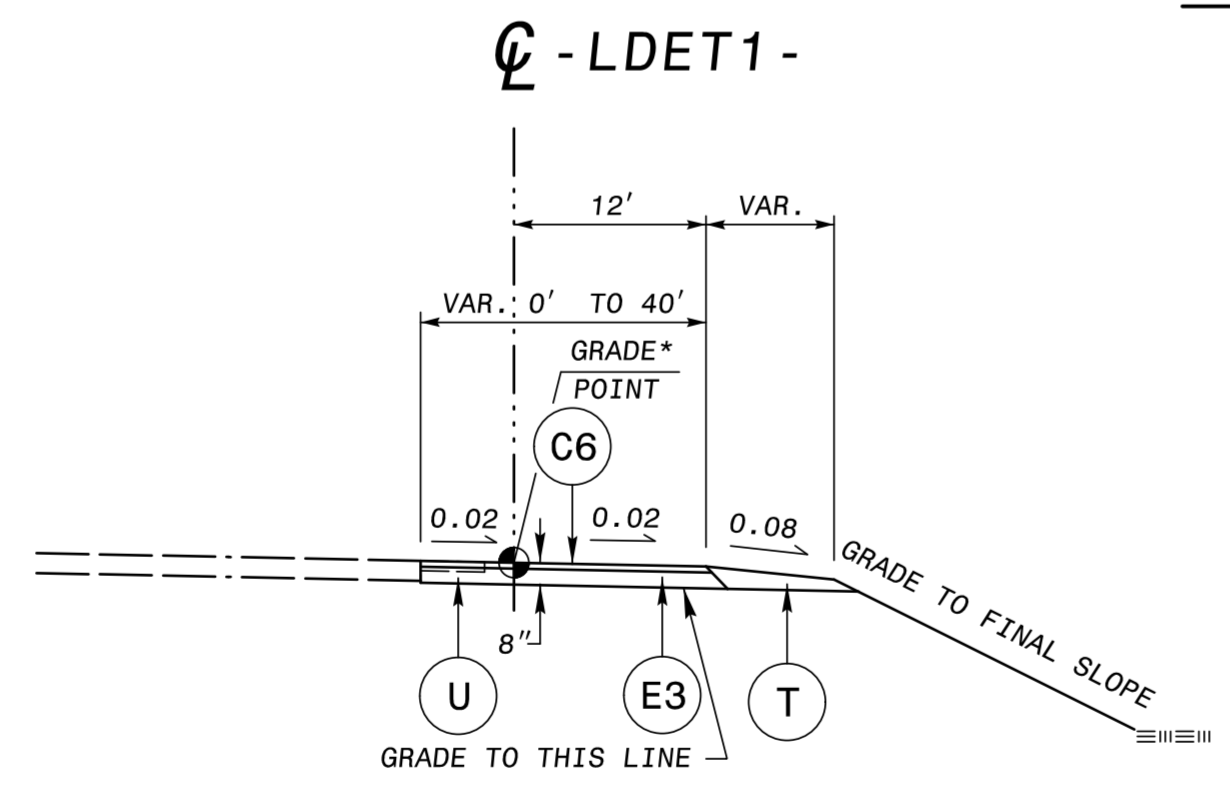
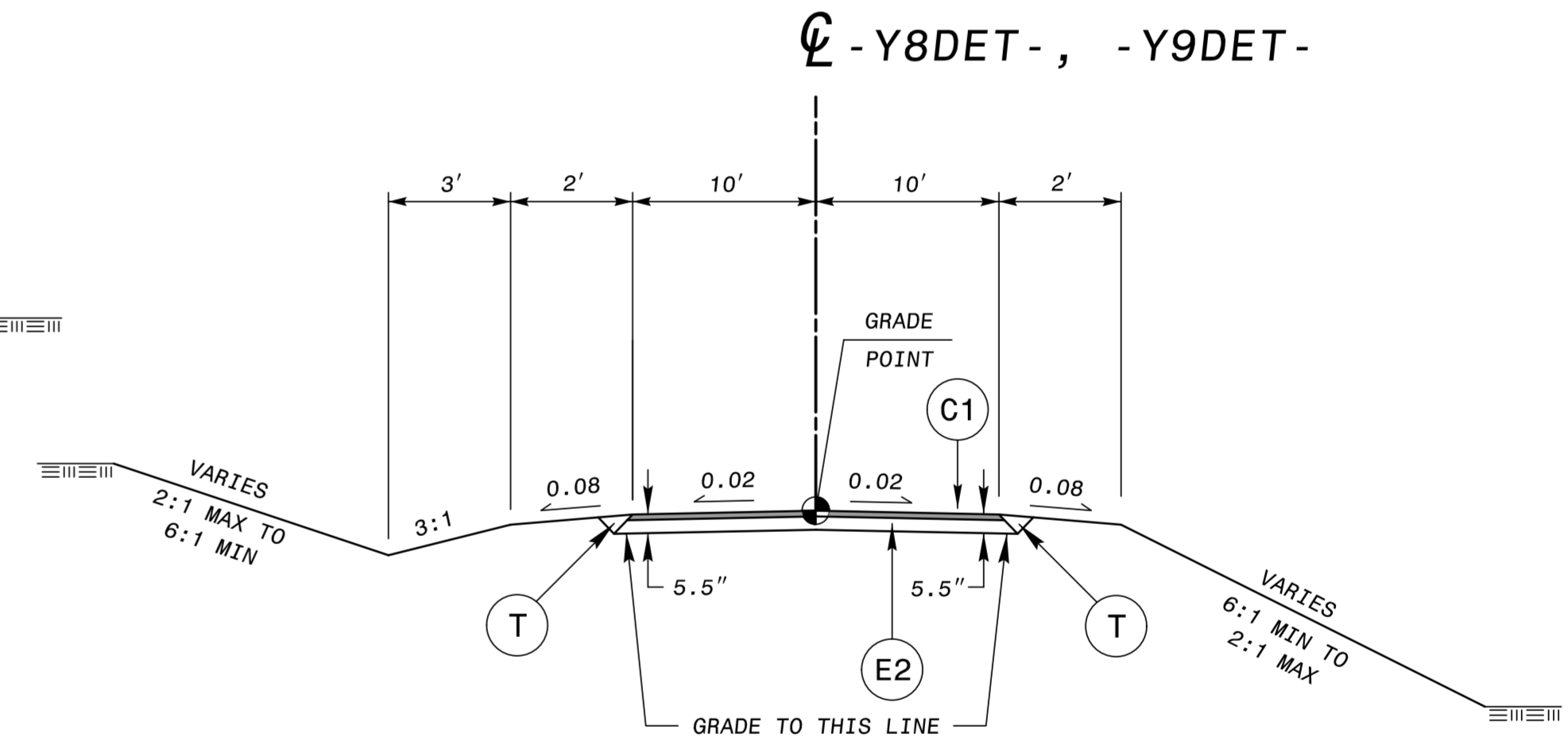
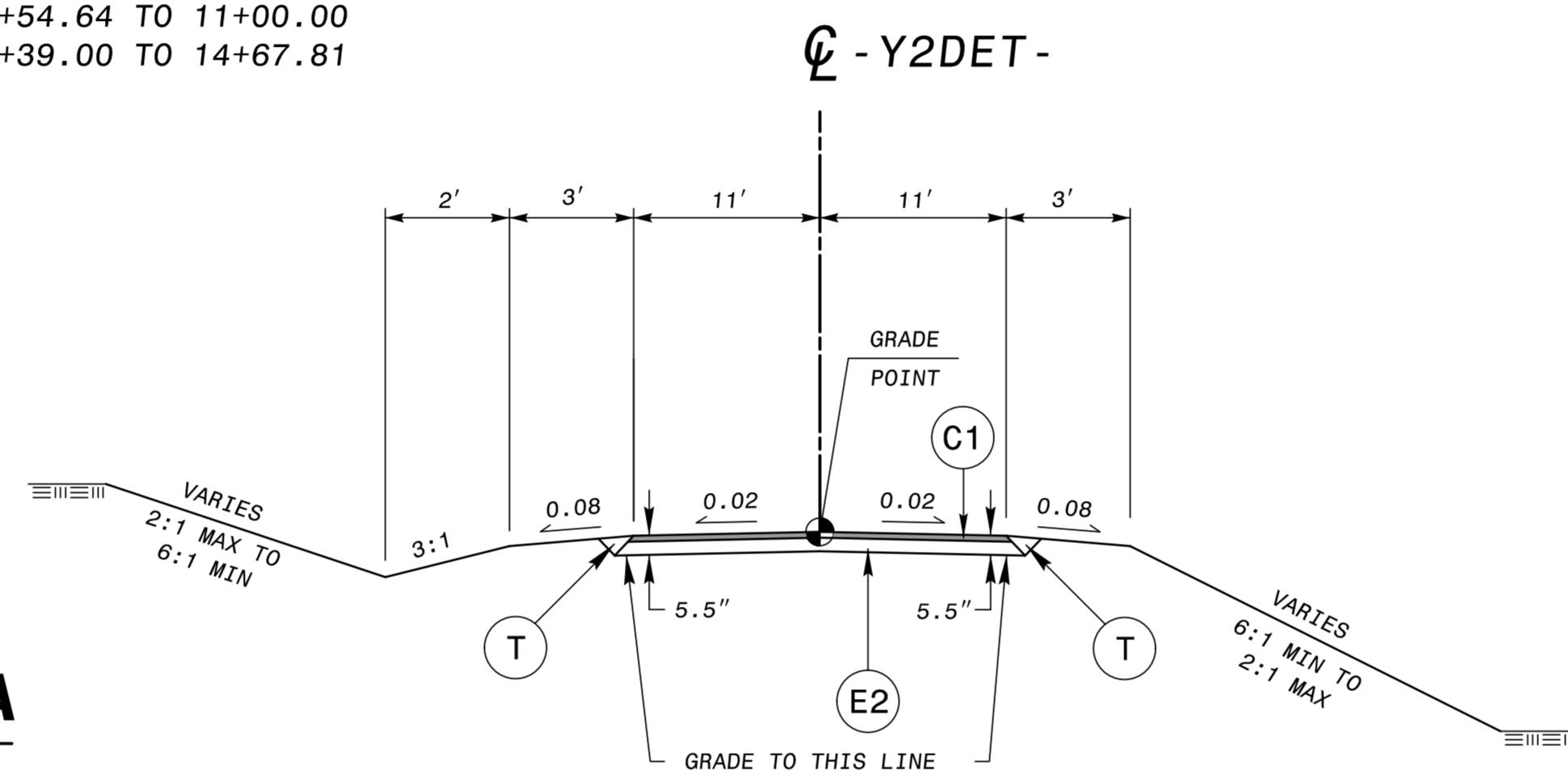
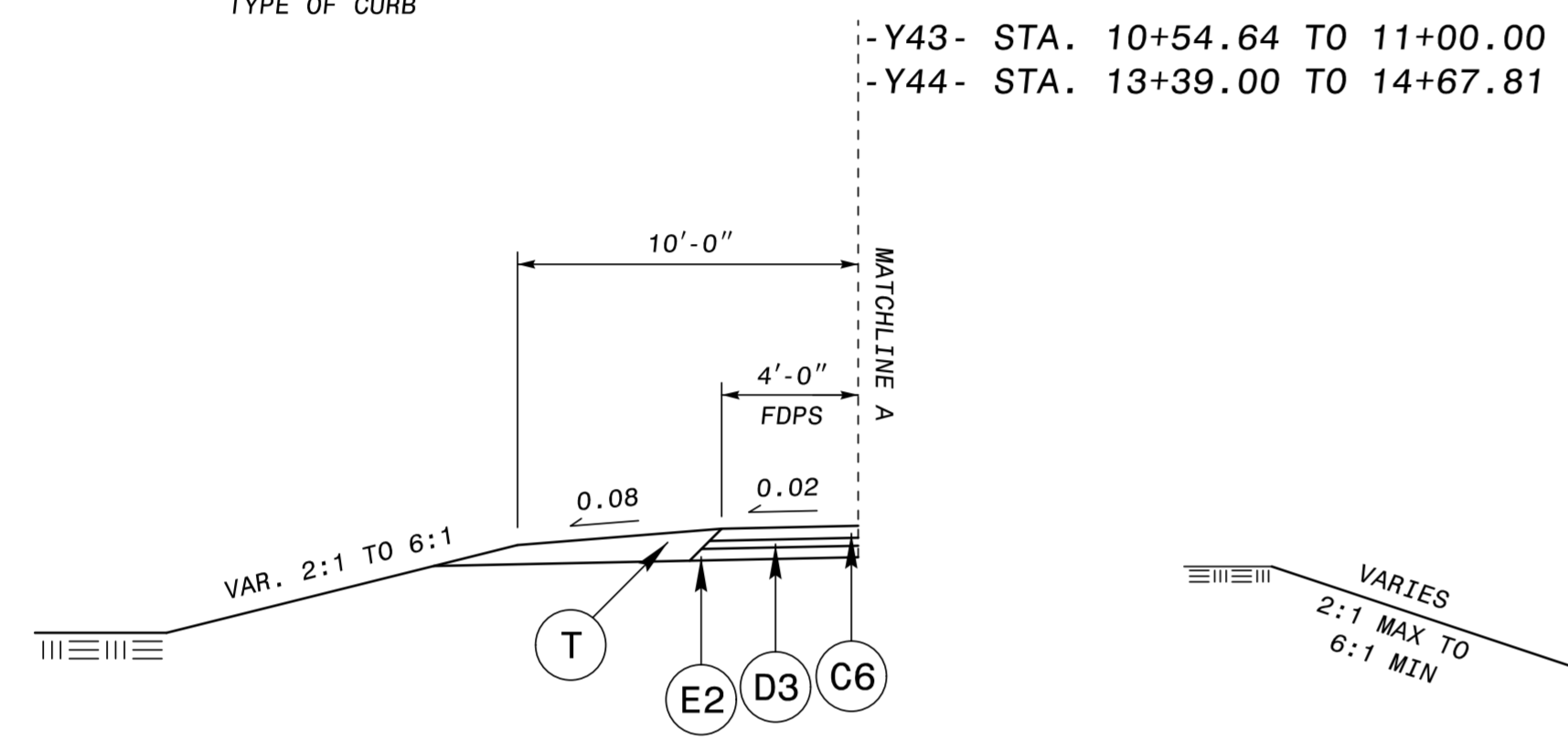
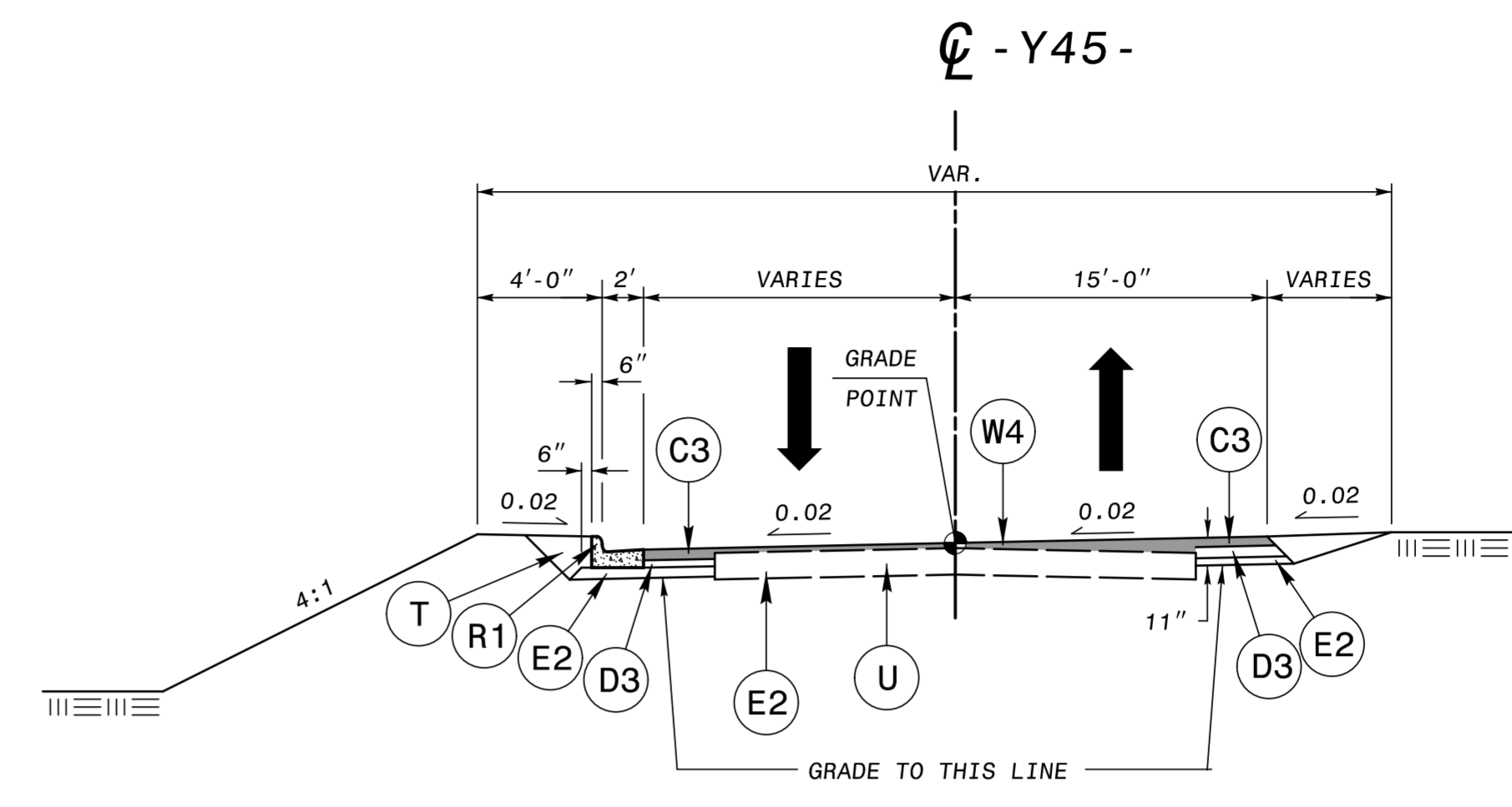
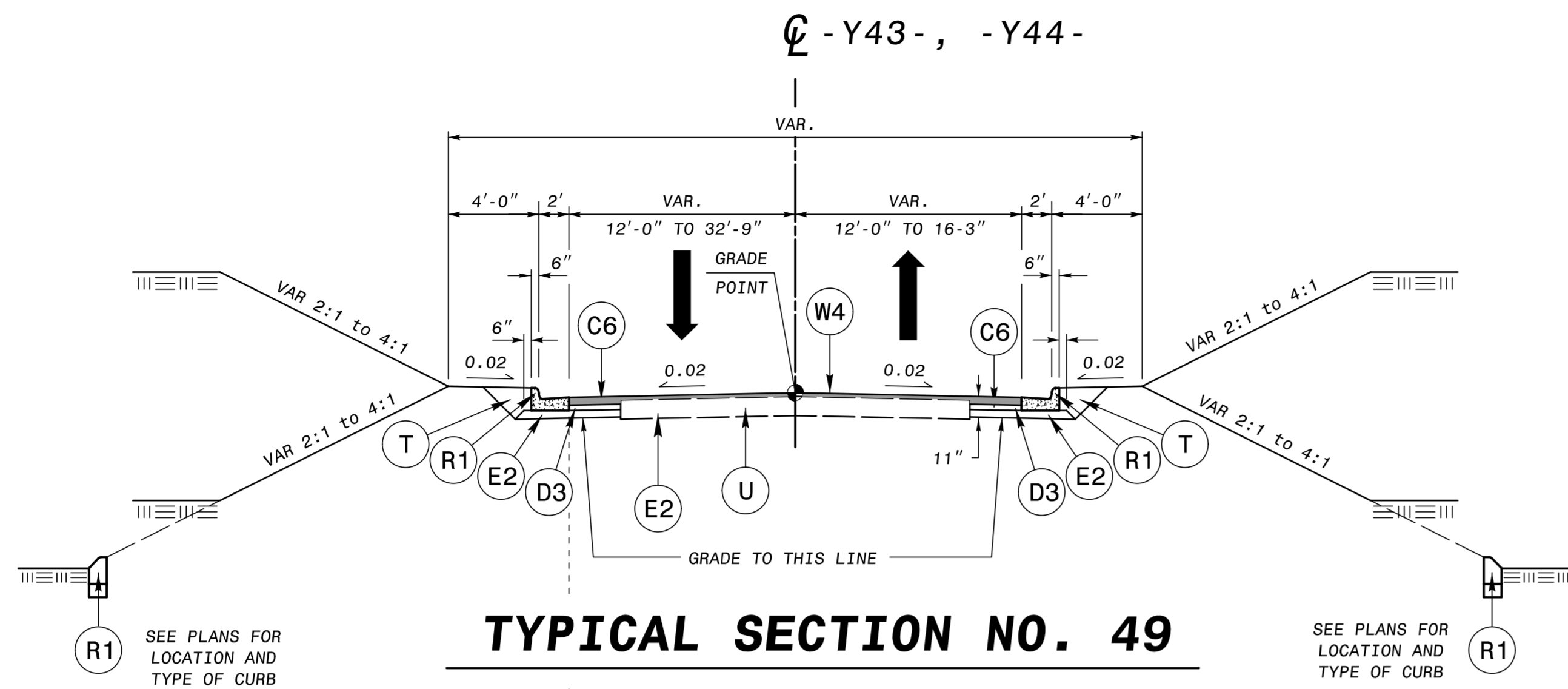
**TYPICAL SECTION NO. 46-A**  
FROM -Y39- STA. 11+60.00 TO 14+17.78 RT

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

6/22/99

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2A-19</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TYPICAL SECTION NO. 54**

-LDET1- STA. 14+00.00 TO STA. 16+64.20

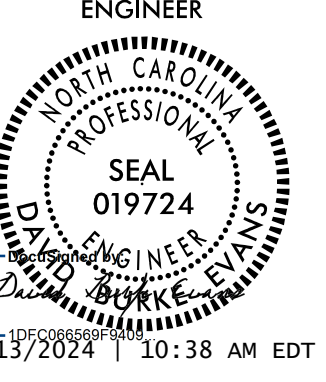
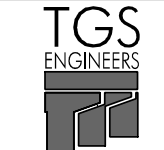
NOTE:  
WIDEN USING EXISTING EDGE OF PAVEMENT ELEVATION AND EXISTING SUPERELEVATION.  
USE THIS PAVEMENT DESIGN FOR AREAS OF TEMPORARY PAVEMENT ON -L- .  
USE THIS PAVEMENT DESIGN FOR AREAS OF TEMPORARY PAVEMENT ON APPLICABLE -Y- LINES INCLUDING BUT NOT LIMITED TO Y4.

NOTE:  
WIDEN USING EXISTING EDGE OF PAVEMENT ELEVATION AND EXISTING SUPERELEVATION.  
USE THIS PAVEMENT DESIGN FOR WIDENING OF McCRARY ACCESS PARKING LOT.

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5B
C2	2.5" S9.5B
C3	3" S9.5B
C4	VAR. S9.5B
C5	1.5" S9.5C
C6	3" S9.5C
C7	VAR. S9.5C
C8	3" S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.0" B25.0C
E4	7" B25.0C
E5	13.5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K1	LIME OR CEMENT SUBGRADE STABILIZ.
K2	CLASS IV SUBGRADE STABILIZ.
N	GEOTEXTILE FOR SUBGRADE STABILIZ.
R1	2'-6" C & G
R2	1'-6" C & G
R3	2'-9" C & G
R4	5" MONO. CONC. ISLAND (KEYED IN)
R5	8"x18" CONC. CURB
R6	CONC. SHOULDER BERM GUTTER
R7	SINGLE FACED CONC. BARRIER
R8	DOUBLE FACED CONC. BARRIER - TYPE III
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	MILLING, 2.5"
V2	MILLING, 3.0"
W1	WEDGING
W2	WEDGING
W3	WEDGING
W4	WEDGING

PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE

# CURVE DATA

PROJECT REFERENCE NO. <i>R-2307B / 1-5717</i>	SHEET NO. <i>2B-01</i>
ROADWAY DESIGN ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-L-								
<i>PI Sta 416+47.15</i> $\Delta = 3^{\circ} 52' 18.1''$ (LT) $D = 1^{\circ} 00' 00.0''$ $L = 387.17'$ $T = 193.66'$ $R = 5,729.58'$	<i>PI Sta 436+08.76</i> $\Delta = 2^{\circ} 33' 33.6''$ (LT) $D = 0^{\circ} 21' 29.2''$ $L = 714.70'$ $T = 357.41'$ $R = 16,000.00'$ $SE = NC$ $V = 75$ MPH	<i>PI Sta 445+27.52</i> $\Delta = 5^{\circ} 21' 28.1''$ (RT) $D = 0^{\circ} 28' 38.9''$ $L = 1,122.13'$ $T = 561.48'$ $R = 12,000.00'$ $SE = NC$ $V = 60$ MPH	<i>PIs Sta 452+71.54</i> $\Theta_s = 2^{\circ} 48' 49.1''$ $L_s = 275.00'$ $LT = 183.36'$ $ST = 91.69'$	<i>PI Sta 457+05.95</i> $\Delta = 13^{\circ} 57' 30.7''$ (RT) $D = 2^{\circ} 02' 46.6''$ $L = 682.14'$ $T = 342.77'$ $R = 2,800.00'$ $SE = 05$ $V = 60$ MPH	<i>PIs Sta 461+62.03</i> $\Theta_s = 3^{\circ} 34' 51.6''$ $L_s = 350.00'$ $LT = 233.38'$ $ST = 116.71'$	<i>PIs Sta 481+35.32</i> $\Theta_s = 1^{\circ} 12' 11.6''$ $L_s = 210.00'$ $LT = 140.00'$ $ST = 70.00'$	<i>PI Sta 485+72.45</i> $\Delta = 8^{\circ} 23' 55.6''$ (RT) $D = 1^{\circ} 08' 45.3''$ $L = 732.93'$ $T = 367.12'$ $R = 5,000.00'$ $SE = 03$ $V = 60$ MPH	<i>PIs Sta 489+88.25</i> $\Theta_s = 0^{\circ} 51' 34.0''$ $L_s = 150.00'$ $LT = 100.00'$ $ST = 50.00'$

-L-								
<i>PIs Sta 496+43.05</i> $\Theta_s = 1^{\circ} 43' 53.3''$ $L_s = 165.00'$ $LT = 110.00'$ $ST = 55.00'$	<i>PI Sta 502+50.46</i> $\Delta = 22^{\circ} 52' 42.5''$ (RT) $D = 2^{\circ} 05' 55.5''$ $L = 1,090.10'$ $T = 552.41'$ $R = 2,730.00'$ $SE = 05$ $V = 60$ MPH	<i>PIs Sta 508+79.84</i> $\Theta_s = 2^{\circ} 53' 08.8''$ $L_s = 275.00'$ $LT = 183.36'$ $ST = 91.69'$	<i>PIs Sta 531+56.90</i> $\Theta_s = 1^{\circ} 08' 45.3''$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$	<i>PI Sta 533+56.78</i> $\Delta = 3^{\circ} 03' 08.8''$ (LT) $D = 1^{\circ} 08' 45.3''$ $L = 266.38'$ $T = 133.22'$ $R = 5,000.00'$ $SE = 03$ $V = 60$ MPH	<i>PIs Sta 535+56.61</i> $\Theta_s = 1^{\circ} 08' 45.3''$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$	<i>PI Sta 553+92.09</i> $\Delta = 39^{\circ} 43' 23.2''$ (LT) $D = 5^{\circ} 43' 46.5''$ $L = 693.30'$ $T = 361.24'$ $R = 1,000.00'$ $SE = 04$ $V = 50$ MPH	<i>PI Sta 591+47.47</i> $\Delta = 45^{\circ} 30' 36.5''$ (RT) $D = 3^{\circ} 08' 53.2''$ $L = 1,445.63'$ $T = 763.38'$ $R = 1,820.00'$ $SE = 04$ $V = 50$ MPH	<i>PI Sta 591+47.47</i> $\Delta = 45^{\circ} 30' 36.5''$ (RT) $D = 3^{\circ} 08' 53.2''$ $L = 1,445.63'$ $T = 763.38'$ $R = 1,820.00'$ $SE = 04$ $V = 50$ MPH

-L-					-LEB-			
<i>PI Sta 615+24.77</i> $\Delta = 8^{\circ} 00' 36.5''$ (RT) $D = 1^{\circ} 38' 13.3''$ $L = 489.31'$ $T = 245.06'$ $R = 3,500.00'$ $SE = 03$ $V = 50$ MPH	<i>PI Sta 623+30.29</i> $\Delta = 9^{\circ} 20' 05.2''$ (LT) $D = 1^{\circ} 47' 25.8''$ $L = 521.35'$ $T = 261.25'$ $R = 3,200.00'$ $SE = 03$ $V = 50$ MPH	<i>PI Sta 664+34.50</i> $\Delta = 13^{\circ} 43' 47.9''$ (LT) $D = 2^{\circ} 30' 07.2''$ $L = 548.76'$ $T = 275.70'$ $R = 2,290.00'$ $SE = 03$ $V = 50$ MPH	<i>PI Sta 754+87.21</i> $\Delta = 15^{\circ} 23' 13.6''$ (LT) $D = 2^{\circ} 30' 07.2''$ $L = 614.99'$ $T = 309.36'$ $R = 2,290.00'$ $SE = 03$ $V = 50$ MPH	<i>PI Sta 770+45.08</i> $\Delta = 8^{\circ} 28' 32.9''$ (LT) $D = 1^{\circ} 27' 48.6''$ $L = 579.15'$ $T = 290.10'$ $R = 3,915.00'$ $SE = 03$ $V = 50$ MPH	<i>PI Sta 800+64.34</i> $\Delta = 4^{\circ} 38' 12.1''$ (LT) $D = 1^{\circ} 30' 00.0''$ $L = 309.11'$ $T = 154.64'$ $R = 3,819.72'$	<i>PI Sta 42+92.56</i> $\Delta = 4^{\circ} 26' 50.4''$ (RT) $D = 0^{\circ} 28' 42.2''$ $L = 929.62'$ $T = 465.05'$ $R = 11,976.50'$ $SE = 02$ $V = 60$ MPH	<i>PI Sta 54+74.18</i> $\Delta = 2^{\circ} 15' 48.9''$ (RT) $D = 1^{\circ} 30' 00.0''$ $L = 1,417.57'$ $T = 717.04'$ $R = 3,819.72'$ $SE = MATCH EXIST.$ $V = 60$ MPH	<i>PI Sta 82+34.72</i> $\Delta = 3^{\circ} 35' 38.4''$ (RT) $D = 0^{\circ} 52' 53.3''$ $L = 407.73'$ $T = 203.93'$ $R = 6,500.00'$ $SE = 03$ $V = 60$ MPH

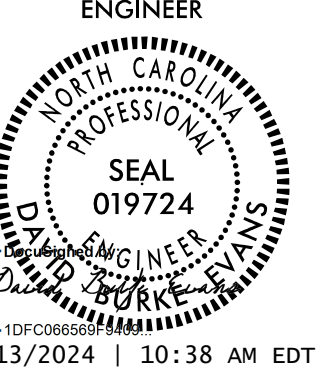
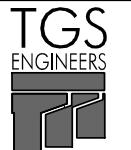
-LEB-			-Y-		-Y1-	-Y2-		
<i>PIs Sta 85+38.51</i> $\Theta_s = 1^{\circ} 13' 40.0''$ $L_s = 150.00'$ $LT = 100.00'$ $ST = 50.00'$	<i>PI Sta 87+23.33</i> $\Delta = 4^{\circ} 24' 42.8''$ (RT) $D = 1^{\circ} 38' 13.3''$ $L = 269.51'$ $T = 134.82'$ $R = 3,500.00'$ $SE = 05$ $V = 60$ MPH	<i>PIs Sta 89+08.02</i> $\Theta_s = 1^{\circ} 13' 40.0''$ $L_s = 150.00'$ $LT = 100.00'$ $ST = 50.00'$	<i>PI Sta 13+02.04</i> $\Delta = 19^{\circ} 42' 29.8''$ (LT) $D = 5^{\circ} 12' 31.3''$ $L = 378.37'$ $T = 191.07'$ $R = 1,000.00'$ $SE = 04$ $V = 50$ MPH	<i>PI Sta 16+18.43</i> $\Delta = 4^{\circ} 19' 13.7''$ (RT) $D = 4^{\circ} 46' 28.7''$ $L = 90.49'$ $T = 45.27'$ $R = 1,200.00'$ $SE = MATCH EXIST.$	<i>PI Sta 12+58.79</i> $\Delta = 76^{\circ} 39' 13.3''$ (RT) $D = 20^{\circ} 06' 13.6''$ $L = 381.29'$ $T = 225.30'$ $R = 285.00'$ $SE = 04$ $V = 30$ MPH	<i>PI Sta 11+05.68</i> $\Delta = 16^{\circ} 15' 57.3''$ (RT) $D = 8^{\circ} 18' 12.2''$ $L = 195.89'$ $T = 98.61'$ $R = 690.03'$	<i>PI Sta 12+64.67</i> $\Delta = 17^{\circ} 32' 15.8''$ (RT) $D = 14^{\circ} 19' 26.2''$ $L = 122.44'$ $T = 61.70'$ $R = 400.00'$ $SE = MATCH EXIST.$	<i>PI Sta 15+05.96</i> $\Delta = 8^{\circ} 19' 41.1''$ (RT) $D = 2^{\circ} 18' 37.1''$ $L = 360.47'$ $T = 180.55'$ $R = 2,480.00'$ $SE = 02$ $V = 30$ MPH

-Y3-		-Y4-		-Y5-		-Y6-		
<i>PI Sta 12+17.54</i> $\Delta = 6^{\circ} 03' 56.7''$ (LT) $D = 4^{\circ} 02' 05.7''$ $L = 154.91'$ $T = 77.53'$ $R = 1,420.00'$ $SE = SEE PLANS$ $V = STOP$ CONDITION	<i>PI Sta 14+79.22</i> $\Delta = 34^{\circ} 41' 45.3''$ (RT) $D = 9^{\circ} 42' 40.1''$ $L = 357.28'$ $T = 184.31'$ $R = 590.00'$ $SE = MATCH EXIST.$	<i>PI Sta 10+54.04</i> $\Delta = 13^{\circ} 33' 44.3''$ (LT) $D = 14^{\circ} 19' 26.2''$ $L = 94.68'$ $T = 47.56'$ $R = 400.00'$	<i>PI Sta 15+24.79</i> $\Delta = 50^{\circ} 26' 04.5''$ (RT) $D = 24^{\circ} 54' 40.4''$ $L = 202.46'$ $T = 108.31'$ $R = 230.00'$ $SE = SEE PLANS$ $V = STOP$ CONDITION	<i>PI Sta 10+42.46</i> $\Delta = 29^{\circ} 08' 13.5''$ (LT) $D = 40^{\circ} 55' 32.0''$ $L = 71.20'$ $T = 36.39'$ $R = 140.00'$	<i>PI Sta 12+36.64</i> $\Delta = 54^{\circ} 03' 54.5''$ (RT) $D = 35^{\circ} 48' 35.5''$ $L = 150.98'$ $T = 81.64'$ $R = 160.00'$	<i>PI Sta 11+74.32</i> $\Delta = 19^{\circ} 19' 15.3''$ (LT) $D = 25^{\circ} 27' 53.2''$ $L = 75.87'$ $T = 38.30'$ $R = 225.00'$	<i>PI Sta 12+58.25</i> $\Delta = 9^{\circ} 11' 52.9''$ (LT) $D = 12^{\circ} 03' 44.2''$ $L = 76.25'$ $T = 38.21'$ $R = 475.00'$	<i>PI Sta 14+81.03</i> $\Delta = 5^{\circ} 34' 20.2''$ (RT) $D = 33^{\circ} 42' 12.2''$ $L = 153.02'$ $T = 82.13'$ $R = 170.00'$ $SE = SEE PLANS$ $V = STOP$ CONDITION

-Y7-			-Y8-	-Y9-		-Y10-		
<i>PI Sta 11+94.61</i> $\Delta = 6^{\circ} 03' 56.7''$ (RT) $D = 3^{\circ} 22' 13.2''$ $L = 179.97'$ $T = 90.07'$ $R = 1,700.00'$ $SE = SEE PLANS$ $V = STOP$ CONDITION	<i>PI Sta 13+79.61</i> $\Delta = 15^{\circ} 02' 23.1''$ (RT) $D = 9^{\circ} 32' 57.5''$ $L = 157.50'$ $T = 79.20'$ $R = 600.00'$	<i>PI Sta 15+52.97</i> $\Delta = 7^{\circ} 15' 13.2''$ (RT) $D = 4^{\circ} 24' 26.5''$ $L = 164.58'$ $T = 82.40'$ $R = 1,300.00'$	<i>PI Sta 11+50.35</i> $\Delta = 3^{\circ} 22' 28.1''$ (RT) $D = 3^{\circ} 49' 11.0''$ $L = 88.34'$ $T = 44.18'$ $R = 1,500.00'$ $SE = 02$ $V = 25$ MPH	<i>PI Sta 10+44.25</i> $\Delta = 10^{\circ} 41' 49.2''$ (LT) $D = 14^{\circ} 19' 26.2''$ $L = 74.68'$ $T = 37.45'$ $R = 400.00'$ $SE = MATCH EXIST.$	<i>PI Sta 11+82.05</i> $\Delta = 53^{\circ} 23' 23.1''$ (LT) $D = 28^{\circ} 38' 52.4''$ $L = 186.37'$ $T = 100.57'$ $R = 200.00'$ $SE = SEE PLANS$ $V = STOP$ CONDITION	<i>PI Sta 12+97.98</i> $\Delta = 6^{\circ} 26' 57.5''$ (LT) $D = 16^{\circ} 22' 12.8''$ $L = 39.40'$ $T = 19.72'$ $R = 350.00'$	<i>PI Sta 13+74.38</i> $\Delta = 14^{\circ} 45' 02.0''$ (LT) $D = 28^{\circ} 38' 52.4''$ $L = 51.49'$ $T = 25.89'$ $R = 200.00'$	<i>PI Sta 14+43.89</i> $\Delta = 23^{\circ} 38' 43.7''$ (LT) $D = 32^{\circ} 44' 25.6''$ $L = 72.22'$ $T = 36.63'$ $R = 175.00'$

-DRW14-	-Y12-	-Y13-
<i>PI Sta 11+13.92</i> $\Delta = 74^{\circ} 38' 27.5''$ (LT) $D = 119^{\circ} 21' 58.3''$ $L = 62.53'$ $T = 36.59'$ $R = 48.00'$	<i>PI Sta 12+58.69</i> $\Delta = 3^{\circ} 35' 35.4''$ (RT) $D = 2^{\circ} 51' 53.2''$ $L = 125.43'$ $T = 62.73'$ $R = 2,000.00'$	<i>PI Sta 14+27.47</i> $\Delta = 4^{\circ} 13' 12.1''$ (RT) $D = 2^{\circ} 51' 53.2''$ $L = 147.31'$ $T = 73.69'$ $R = 2,000.00'$

# CURVE DATA

PROJECT REFERENCE NO. R-2307B / 1-5717	SHEET NO. 2B-02
ROADWAY DESIGN ENGINEER	
	
8/13/2024   10:38 AM EDT	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-TRAIL1-					
PI Sta 14+57.62 Δ = 13° 16' 17.3" (RT) D = 2° 51' 53.2" L = 463.26' T = 232.67' R = 2,000.00'	PI Sta 21+65.14 Δ = 12° 26' 16.2" (LT) D = 14° 19' 26.2" L = 86.83' T = 43.59' R = 400.00'	PI Sta 23+24.45 Δ = 18° 49' 41.8" (RT) D = 8° 11' 06.4" L = 230.03' T = 116.06' R = 700.00'	PI Sta 25+28.13 Δ = 4° 06' 38.0" (LT) D = 2° 17' 30.6" L = 179.36' T = 89.72' R = 2,500.00'	PI Sta 27+96.82 Δ = 27° 57' 17.3" (RT) D = 28° 38' 52.4" L = 97.58' T = 49.78' R = 200.00'	PI Sta 28+82.29 Δ = 21° 20' 00.8" (LT) D = 28° 38' 52.4" L = 74.47' T = 37.67' R = 200.00'

-TRAIL2-		
PI Sta 70+04.78 Δ = 29° 48' 52.3" (LT) D = 57° 17' 44.8" L = 52.04' T = 26.62' R = 100.00'	PI Sta 70+50.64 Δ = 23° 06' 46.1" (RT) D = 57° 17' 44.8" L = 40.34' T = 20.45' R = 100.00'	PI Sta 71+61.37 Δ = 10° 15' 01.9" (RT) D = 11° 27' 33.0" L = 89.45' T = 44.85' R = 500.00'

-TRAIL2-								
PI Sta 74+48.13 Δ = 1° 21' 39.2" (RT) D = 1° 08' 45.3" L = 118.76' T = 59.38' R = 5,000.00'	PI Sta 75+31.61 Δ = 87° 54' 24.0" (LT) D = 229° 10' 59.2" L = 38.36' T = 24.10' R = 25.00'	PI Sta 75+98.38 Δ = 138° 18' 04.4" (RT) D = 286° 28' 44.0" L = 48.28' T = 52.51' R = 20.00'	PI Sta 76+17.89 Δ = 50° 48' 55.3" (LT) D = 114° 35' 29.6" L = 44.34' T = 23.75' R = 50.00'	PI Sta 83+40.45 Δ = 11° 40' 01.1" (RT) D = 3° 49' 11.0" L = 305.44' T = 153.25' R = 1,500.00'	PI Sta 86+00.21 Δ = 56° 32' 54.6" (RT) D = 28° 38' 52.4" L = 197.39' T = 107.57' R = 200.00'	PI Sta 88+25.11 Δ = 61° 57' 28.0" (LT) D = 25° 27' 53.3" L = 243.31' T = 135.08' R = 225.00'	PI Sta 90+03.18 Δ = 19° 48' 28.1" (LT) D = 14° 19' 26.2" L = 138.28' T = 69.84' R = 400.00'	PI Sta 93+25.91 Δ = 92° 16' 51.4" (RT) D = 23° 26' 48.8" L = 393.57' T = 254.29' R = 244.36'

-TRAIL2-								
PI Sta 95+18.06 Δ = 55° 43' 26.5" (LT) D = 57° 17' 44.8" L = 97.26' T = 52.86' R = 100.00'	PI Sta 104+48.65 Δ = 24° 48' 52.4" (LT) D = 96° 23' 39.7" L = 120.67' T = 77.91' R = 75.00'	PI Sta 105+53.86 Δ = 92° 17' 57.1" (RT) D = 95° 29' 34.7" L = 96.66' T = 62.46' R = 60.00'	PI Sta 106+83.83 Δ = 21° 08' 00.0" (LT) D = 28° 38' 52.4" L = 73.77' T = 37.31' R = 200.00'	PI Sta 108+83.91 Δ = 78° 34' 24.7" (RT) D = 28° 38' 52.4" L = 274.27' T = 163.62' R = 200.00'	PI Sta 110+50.72 Δ = 58° 38' 06.9" (LT) D = 57° 17' 44.8" L = 102.34' T = 56.16' R = 100.00'	PI Sta 113+90.76 Δ = 36° 47' 51.2" (LT) D = 57° 17' 44.8" L = 64.22' T = 33.26' R = 100.00'	PI Sta 115+51.79 Δ = 76° 37' 45.0" (RT) D = 57° 17' 44.8" L = 133.74' T = 79.02' R = 100.00'	PI Sta 116+42.56 Δ = 39° 38' 35.2" (LT) D = 57° 17' 44.8" L = 69.19' T = 36.04' R = 100.00'

-TRAIL2-						
PI Sta 118+28.44 Δ = 20° 21' 40.3" (RT) D = 28° 38' 52.4" L = 71.07' T = 35.92' R = 200.00'	PI Sta 118+85.60 Δ = 24° 48' 52.4" (LT) D = 57° 17' 44.8" L = 43.31' T = 22.00' R = 100.00'	PI Sta 121+10.72 Δ = 33° 49' 04.8" (LT) D = 20° 40' 59.5" L = 163.50' T = 84.21' R = 277.02'	PI Sta 122+41.08 Δ = 54° 06' 40.2" (RT) D = 57° 17' 44.8" L = 94.44' T = 84.21' R = 100.00'	PI Sta 123+10.92 Δ = 20° 01' 04.5" (LT) D = 38° 11' 49.9" L = 52.41' T = 26.47' R = 150.00'	PI Sta 125+43.87 Δ = 43° 19' 49.2" (RT) D = 57° 17' 44.8" L = 75.63' T = 39.72' R = 100.00'	PI Sta 126+26.30 Δ = 49° 54' 29.1" (LT) D = 57° 17' 44.8" L = 87.11' T = 46.53' R = 100.00'

-Y15-	
PI Sta 12+08.57 Δ = 9° 43' 27.1" (LT) D = 5° 43' 46.5" L = 169.72' T = 85.06' R = 1,000.00'	PI Sta 13+81.73 Δ = 16° 54' 19.9" (LT) D = 9° 42' 40.1" L = 174.08' T = 87.68' R = 590.00' SE = SEE PLANS V = STOP CONDITION

-Y16-	
PI Sta 13+16.76 Δ = 7° 35' 59.0" (LT) D = 1° 54' 35.5" L = 397.92' T = 199.25' R = 3,000.00' SE = 03 V = 50 MPH	PI Sta 21+78.77 Δ = 12° 31' 11.8" (RT) D = 1° 58' 57.2" L = 631.51' T = 317.02' R = 2,890.00' SE = 03 V = 50 MPH

-Y17-	
PI Sta 12+67.82 Δ = 18° 09' 08.8" (LT) D = 5° 12' 31.3" L = 348.50' T = 175.72' R = 1,100.00' SE = 03 V = 35 MPH	PI Sta 29+48.90 Δ = 14° 05' 13.2" (LT) D = 2° 28' 28.0" L = 565.49' T = 284.18' R = 2,300.00' SE = 03 V = 50 MPH

-Y19-
PI Sta 12+09.57 Δ = 8° 46' 29.4" (RT) D = 3° 41' 47.4" L = 237.38' T = 118.92' R = 1,550.00'

-Y21-	
PI Sta 12+26.51 Δ = 8° 41' 06.6" (RT) D = 3° 10' 59.2" L = 272.85' T = 136.69' R = 1,800.00'	PI Sta 14+37.27 Δ = 16° 58' 16.8" (RT) D = 11° 27' 33.0" L = 148.10' T = 74.60' R = 500.00'

-Y22-		
PI Sta 11+79.62 Δ = 10° 37' 05.3" (RT) D = 10° 46' 11.6" L = 98.59' T = 49.44' R = 532.00' SE = 04 V = 35 MPH	PI Sta 13+47.95 Δ = 18° 49' 20.1" (RT) D = 16° 08' 22.8" L = 116.62' T = 58.84' R = 355.00'	PI Sta 14+39.21 Δ = 7° 04' 12.9" (RT) D = 10° 34' 16.2" L = 66.88' T = 33.48' R = 542.00'

-Y23-	
PI Sta 11+87.09 Δ = 79° 44' 17.7" (LT) D = 25° 34' 42.5" L = 311.74' T = 187.09' R = 224.00' SE = SEE PLANS V = STOP CONDITION	PI Sta 14+48.54 Δ = 26° 37' 54.8" (RT) D = 9° 54' 46.0" L = 268.66' T = 136.80' R = 578.00' SE = MATCH EXIST.

-Y26-			
PI Sta 16+67.34 Δ = 35° 49' 51.5" (LT) D = 8° 11' 06.4" L = 437.76' T = 226.30' R = 700.00' SE = 04 V = 40 MPH	PI Sta 22+87.02 Δ = 27° 25' 27.8" (RT) D = 8° 03' 30.5" L = 340.32' T = 173.48' R = 711.00' * SE = 04 V = 45 MPH	PI Sta 28+94.92 Δ = 6° 59' 30.2" (RT) D = 0° 47' 36.9" L = 881.05' T = 441.07' R = 7,220.00' SE = NC V = 50 MPH	PI Sta 16+67.34 Δ = 35° 49' 51.5" (LT) D = 8° 11' 06.4" L = 437.76' T = 226.30' R = 700.00' SE = 04 V = 40 MPH

\* Design Exception Required

-Y26A-	
PI Sta 11+94.87 Δ = 27° 27' 45.3" (RT) D = 8° 03' 30.5" L = 340.79' T = 173.73' R = 711.00' * SE = 04 V = 45 MPH	PI Sta 18+00.58 Δ = 6° 57' 12.6" (RT) D = 0° 47' 36.9" L = 876.23' T = 438.65' R = 7,220.00' SE = NC V = 50 MPH

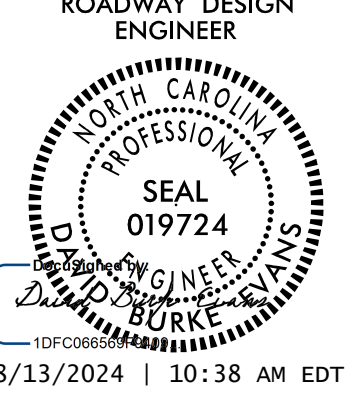
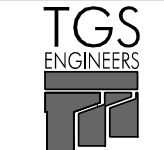
-Y27-
PI Sta 11+03.41 Δ = 25° 03' 11.0" (LT) D = 38° 11' 49.9" L = 65.59' T = 33.33' R = 150.00' SE = SEE PLANS V = STOP CONDITION

-Y28-
PI Sta 11+03.41 Δ = 25° 03' 11.0" (LT) D = 38° 11' 49.9" L = 65.59' T = 33.33' R = 150.00' SE = SEE PLANS V = STOP CONDITION

\* Design Exception Required



# CURVE DATA

PROJECT REFERENCE NO. R-2307B / 1-5717	SHEET NO. 2B-03
ROADWAY DESIGN ENGINEER	
	
8/13/2024   10:38 AM EDT	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-Y29-	
<i>PI Sta 11+54.27</i> $\Delta = 37^{\circ} 08' 38.0" (RT)$ $D = 28' 38" 52.4"$ $L = 129.66'$ $T = 67.20'$ $R = 200.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PI Sta 13+80.14</i> $\Delta = 3^{\circ} 26' 49.2" (RT)$ $D = 2' 51" 53.2"$ $L = 120.32'$ $T = 60.18'$ $R = 2,000.00'$ SE = SEE PLANS V = STOP CONDITION

-Y31-	
<i>PIs Sta 27+08.08</i> $\Theta_s = 0^{\circ} 33' 55.5"$ $L_s = 150.00'$ $LT = 100.00'$ $ST = 50.00'$	<i>PI Sta 40+59.49</i> $\Delta = 19^{\circ} 26' 02.4" (RT)$ $D = 0' 45" 14.0"$ $L = 2,577.82'$ $T = 1,301.41'$ $R = 7,600.00'$ SE = SEE PLANS V = STOP CONDITION
<i>PIs Sta 53+85.90</i> $\Theta_s = 0^{\circ} 33' 55.5"$ $L_s = 150.00'$ $LT = 100.00'$ $ST = 50.00'$	<i>PI Sta 12+02.28</i> $\Theta_s = 4^{\circ} 39' 02.3"$ $D = 200.00'$ $LT = 133.38'$ $ST = 66.71'$

-Y31RPA-		
<i>PIs Sta 12+02.28</i> $\Theta_s = 4^{\circ} 39' 02.3"$ $D = 200.00'$ $LT = 133.38'$ $ST = 66.71'$	<i>PI Sta 13+10.41</i> $\Delta = 3^{\circ} 51' 33.0" (RT)$ $D = 4' 39" 02.3"$ $L = 82.98'$ $T = 41.51'$ $R = 1,232.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PIs Sta 14+18.59</i> $\Theta_s = 4^{\circ} 39' 02.3"$ $L_s = 200.00'$ $LT = 133.38'$ $ST = 66.71'$

-Y31RPB-			
<i>PIs Sta 11+33.37</i> $\Theta_s = 3^{\circ} 57' 05.2"$ $L_s = 200.00'$ $LT = 133.37'$ $ST = 66.70'$	<i>PI Sta 13+15.60</i> $\Delta = 9^{\circ} 06' 59.1" (LT)$ $D = 3' 57" 05.2"$ $L = 230.71'$ $T = 115.60'$ $R = 1,450.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PIs Sta 14+97.41</i> $\Theta_s = 3^{\circ} 57' 05.2"$ $L_s = 200.00'$ $LT = 133.37'$ $ST = 66.70'$	<i>PI Sta 21+57.79</i> $\Delta = 31^{\circ} 10' 16.7" (RT)$ $D = 20' 14" 45.1"$ $L = 153.96'$ $T = 78.94'$ $R = 283.00'$ SE = SEE PLANS V = STOP CONDITION

-Y31RPC-		
<i>PIs Sta 11+33.37</i> $\Theta_s = 3^{\circ} 57' 05.2"$ $L_s = 200.00'$ $LT = 133.37'$ $ST = 66.70'$	<i>PI Sta 13+37.53</i> $\Delta = 10^{\circ} 50' 10.4" (RT)$ $D = 3' 57" 05.2"$ $L = 274.24'$ $T = 137.53'$ $R = 1,450.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PIs Sta 15+74.34</i> $\Theta_s = 5^{\circ} 55' 37.7"$ $L_s = 300.00'$ $LT = 200.11'$ $ST = 100.10'$

-Y31RPD-		
<i>PIs Sta 11+22.83</i> $\Theta_s = 0^{\circ} 45' 28.8"$ $\Theta_s = 4^{\circ} 01' 47.1"$ $L_s = 200.00'$ $LT = 122.83'$ $ST = 77.28'$	<i>PI Sta 14+13.58</i> $\Delta = 17^{\circ} 05' 00.7" (LT)$ $D = 4' 01" 45.3"$ $L = 423.99'$ $T = 213.58'$ $R = 1,422.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PIs Sta 16+90.69</i> $\Theta_s = 4^{\circ} 01' 45.3"$ $L_s = 200.00'$ $LT = 133.37'$ $ST = 66.70'$

-Y32-
<i>PI Sta 12+20.17</i> $\Delta = 23^{\circ} 15' 50.9" (LT)$ $D = 19' 45" 25.8"$ $L = 117.75'$ $T = 59.70'$ $R = 290.00'$ SE = SEE PLANS V = STOP CONDITION

-Y33-
<i>PI Sta 11+32.18</i> $\Delta = 1^{\circ} 45' 05.6" (LT)$ $D = 2' 17" 30.6"$ $L = 76.43'$ $T = 38.22'$ $R = 2,500.00'$ SE = SEE PLANS V = STOP CONDITION

-Y34-	
<i>PI Sta 11+31.74</i> $\Delta = 9^{\circ} 22' 38.6" (LT)$ $D = 14' 19" 26.2"$ $L = 65.47'$ $T = 32.81'$ $R = 400.00'$ SE = MATCH EXIST.	<i>PI Sta 12+87.35</i> $\Delta = 21^{\circ} 46' 45.7" (LT)$ $D = 38' 11" 49.9"$ $L = 57.02'$ $T = 28.86'$ $R = 150.00'$ SE = SEE PLANS V = STOP CONDITION

-Y35-	
<i>PI Sta 11+31.15</i> $\Delta = 37^{\circ} 42' 39.8" (RT)$ $D = 34' 56" 11.2"$ $L = 107.94'$ $T = 56.01'$ $R = 164.00'$ SE = SEE PLANS V = STOP CONDITION	<i>PI Sta 15+44.36</i> $\Delta = 42^{\circ} 17' 36.4" (LT)$ $D = 20' 14" 45.1"$ $L = 208.90'$ $T = 109.47'$ $R = 283.00'$

-Y36-
<i>PI Sta 11+98.69</i> $\Delta = 36^{\circ} 09' 30.5" (LT)$ $D = 17' 03" 08.3"$ $L = 212.04'$ $T = 109.69'$ $R = 336.00'$ SE = SEE PLANS V = STOP CONDITION

-Y39-
<i>PI Sta 17+64.39</i> $\Delta = 7^{\circ} 01' 30.8" (RT)$ $D = 1' 54" 35.5"$ $L = 367.84'$ $T = 184.15'$ $R = 3,000.00'$ SE = SEE PLANS V = STOP CONDITION

-Y40-
<i>PI Sta 17+40.86</i> $\Delta = 4^{\circ} 58' 25.0" (LT)$ $D = 1' 28" 08.8"$ $L = 338.54'$ $T = 169.38'$ $R = 3,900.00'$ SE = NC V = 35 MPH

-Y43-
<i>PI Sta 10+87.18</i> $\Delta = 8^{\circ} 57' 14.3" (RT)$ $D = 22' 55" 05.9"$ $L = 39.07'$ $T = 19.57'$ $R = 250.00'$ SE = SEE PLANS V = STOP CONDITION

-Y44-
<i>PI Sta 12+29.57</i> $\Delta = 16^{\circ} 22' 22.0" (RT)$ $D = 6' 01" 52.1"$ $L = 271.47'$ $T = 136.67'$ $R = 950.00'$ SE = SEE PLANS

-DRW1-	
<i>PI Sta 11+50.10</i> $\Delta = 5^{\circ} 06' 45.5" (RT)$ $D = 1' 42" 15.2"$ $L = 300.00'$ $T = 150.10'$ $R = 3,362.00'$	<i>PI Sta 12+58.79</i> $\Delta = 76^{\circ} 39' 13.3" (RT)$ $D = 20' 06" 13.6"$ $L = 381.29'$ $T = 225.30'$ $R = 285.00'$ SE = 04 V = 30 MPH

-DRW2-
<i>PI Sta 11+30.94</i> $\Delta = 93^{\circ} 05' 46.4" (RT)$ $D = 127' 19" 26.2"$ $L = 73.12'$ $T = 47.50'$ $R = 45.00'$

-DRW3-
<i>PI Sta 11+64.85</i> $\Delta = 19^{\circ} 34' 36.2" (RT)$ $D = 22' 55" 05.9"$ $L = 85.42'$ $T = 43.13'$ $R = 250.00'$

-DRW4-
<i>PI Sta 10+40.28</i> $\Delta = 58^{\circ} 18' 36.6" (LT)$ $D = 114' 35" 29.6"$ $L = 50.89'$ $T = 27.89'$ $R = 50.00'$

-DRW5-
<i>PI Sta 10+75.25</i> $\Delta = 18^{\circ} 08' 39.2" (RT)$ $D = 76' 23" 39.7"$ $L = 23.75'$ $T = 11.98'$ $R = 75.00'$

-DRW6-
<i>PI Sta 11+47.77</i> $\Delta = 76^{\circ} 47' 39.2" (RT)$ $D = 163' 42" 08.0"$ $L = 46.91'$ $T = 27.74'$ $R = 35.00'$

-DRW7-
<i>PI Sta 10+99.26</i> $\Delta = 44^{\circ} 01' 58.5" (RT)$ $D = 95' 29" 34.7"$ $L = 46.11'$ $T = 24.26'$ $R = 60.00'$

-DRW8-
<i>PI Sta 11+71.45</i> $\Delta = 79^{\circ} 59' 25.3" (LT)$ $D = 95' 29" 34.7"$ $L = 83.77'$ $T = 50.34'$ $R = 60.00'$

-DRW9-
<i>PI Sta 11+42.81</i> $\Delta = 101^{\circ} 47' 16.3" (RT)$ $D = 114' 35" 29.6"$ $L = 88.83'$ $T = 61.51'$ $R = 50.00'$

-DRW10-
<i>PI Sta 13+13.03</i> $\Delta = 35^{\circ} 59' 09.8" (LT)$ $D = 13' 01" 18.4"$ $L = 276.35'$ $T = 142.91'$ $R = 440.00'$

-DRW11-
<i>PI Sta 11+02.88</i> $\Delta = 10^{\circ} 38' 01.2" (RT)$ $D = 10' 36" 37.2"$ $L = 100.22'$ $T = 50.25'$ $R = 540.00'$

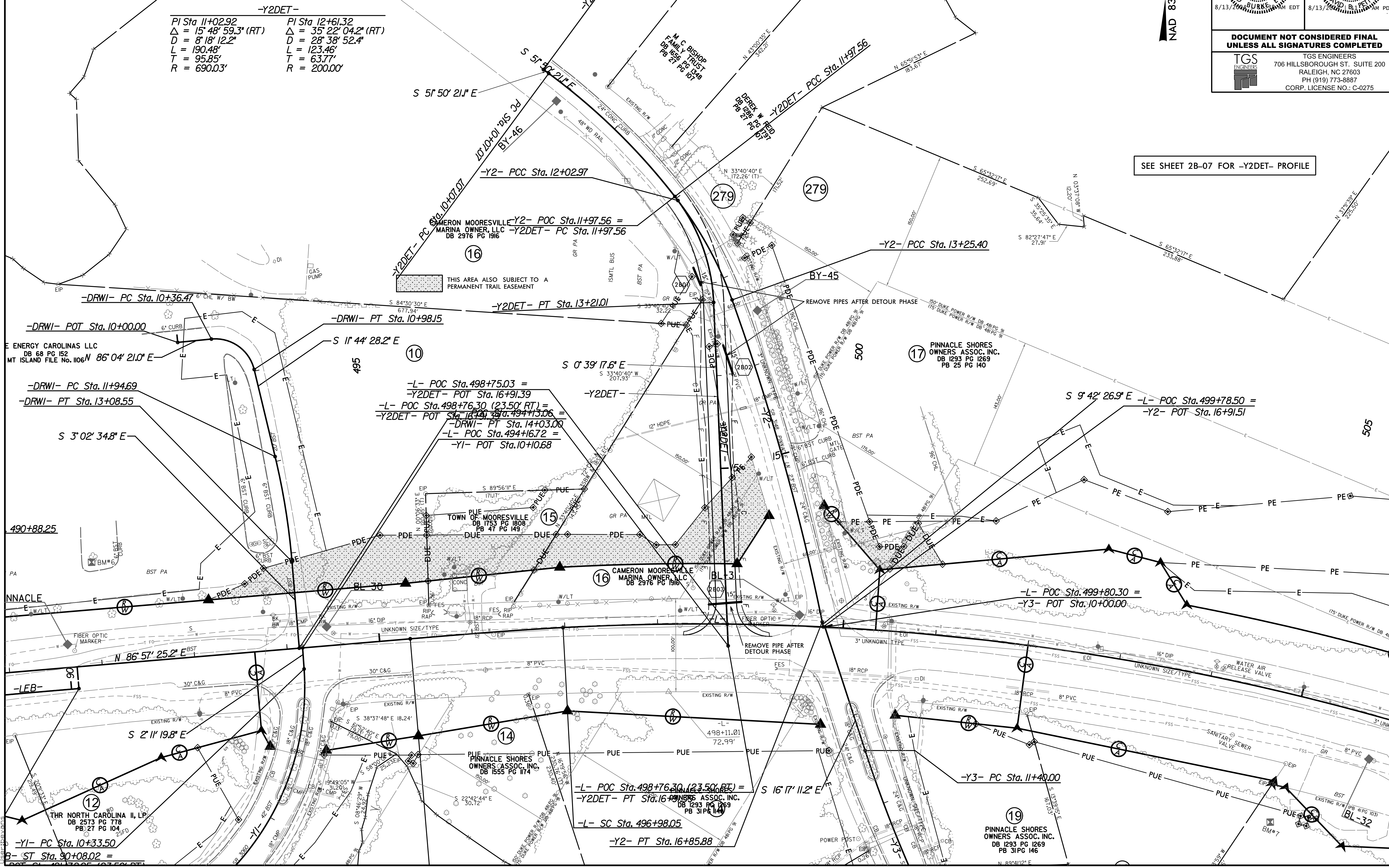
8/17/19  
R:\13\2024\13-2307B\Roadway\Proc\13-2307B\RDY\_PSH\_02B-04.dgn

# -Y2DET- DETAIL SHEET

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2B-04</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p> <p>TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275</p>	



SEE SHEET 2B-07 FOR -Y2DET- PROFILE



**-Y2DET-**

PI Sta 11+02.92	PI Sta 12+61.32
$\Delta = 15^\circ 48' 59.3" (RT)$	$\Delta = 35^\circ 22' 04.2" (RT)$
$D = 8' 18" 12.2"$	$D = 28' 38" 52.4"$
$L = 190.48'$	$L = 123.46'$
$T = 95.85'$	$T = 63.77'$
$R = 690.03'$	$R = 200.00'$

THIS AREA ALSO SUBJECT TO A PERMANENT TRAIL EASEMENT

E ENERGY CAROLINAS LLC  
DB 68 PG 152  
MT ISLAND FILE No. 1106N 86° 04' 21.0" E

-L- POC Sta. 498+75.03 =  
-Y2DET- POT Sta. 16+91.39  
-L- POC Sta. 498+76.30 (23.50' RT) =  
-Y2DET- POT Sta. 16+91.39  
-DRWI- PT Sta. 14+03.00  
-L- POC Sta. 494+16.72 =  
-Y1- POT Sta. 10+10.88

17 PINNACLE SHORES OWNERS ASSOC. INC.  
DB 1293 PG 1269  
PB 25 PG 140

S 9° 42' 26.9" E -L- POC Sta. 499+78.50 =  
-Y2- POT Sta. 16+91.51

-L- POC Sta. 499+80.30 =  
-Y3- POT Sta. 10+00.00

-L- POC Sta. 498+76.30 (23.50' RT) =  
-Y2DET- PT Sta. 16+85.88  
-L- SC Sta. 496+98.05  
-Y2- PT Sta. 16+85.88

19 PINNACLE SHORES OWNERS ASSOC. INC.  
DB 1293 PG 1269  
PB 31 PG 146

8/17/19  
7/24/2024  
X:\Projects\19-2307B\Roadway\Proc\19-2307B\_RDY\_PSH\_02B-05.dgn

# -Y8DET- & -Y9DET- DETAIL SHEET

**-Y9DET-**

PI Sta 11+66.99	PI Sta 13+45.72
$\Delta = 32' 20' 06.4" (RT)$	$\Delta = 5' 27' 19.1" (LT)$
$D = 28' 38' 52.4"$	$D = 4' 16' 32.9"$
$L = 112.87'$	$L = 127.59'$
$T = 57.98'$	$T = 63.84'$
$R = 200.00'$	$R = 1,340.00'$
SE = MATCH EXIST.	SE = SEE PLANS
V = 25 mph	V = STOP CONDITION

**-Y8DET-**

PI Sta 11+97.00	PI Sta 13+56.08	PI Sta 15+63.51
$\Delta = 23' 08' 17.5" (LT)$	$\Delta = 22' 27' 47.6" (RT)$	$\Delta = 19' 44' 57.5" (LT)$
$D = 14' 19' 26.2"$	$D = 14' 19' 26.2"$	$D = 14' 19' 26.2"$
$L = 161.53'$	$L = 156.82'$	$L = 137.88'$
$T = 81.88'$	$T = 79.43'$	$T = 69.63'$
$R = 400.00'$	$R = 400.00'$	$R = 400.00'$
SE = 02	SE = 02	SE = 02
V = 25 mph	V = 25 mph	V = STOP CONDITION

THIS AREA ALSO SUBJECT TO A PERMANENT TRAIL EASEMENT  
STEVEN J. HARTLE AND WIFE  
ASHLEY PRICE HARTLE  
DB 2557 PG 1447

CAROLINA WATER SERVICES INC  
DB 1057 PG 744  
PB 26 PG 55

GENE SWEATT  
MONICA SWEATT  
DB 2483 PG 517  
PB 66 PG 32, LOT 1

CAROLINA WATER SERVICES,  
INC. OF NORTH CAROLINA  
DB 1057 PG 744  
PB 26 PG 55, LOT 102

LAKE LUXURY HOMES LLC  
DB 2356 PG 1902  
PB 49 PG 20

RONNIE L. SMITH &  
LEE A. SMITH  
DB 2084 PG 2258  
PB 57 PG 80

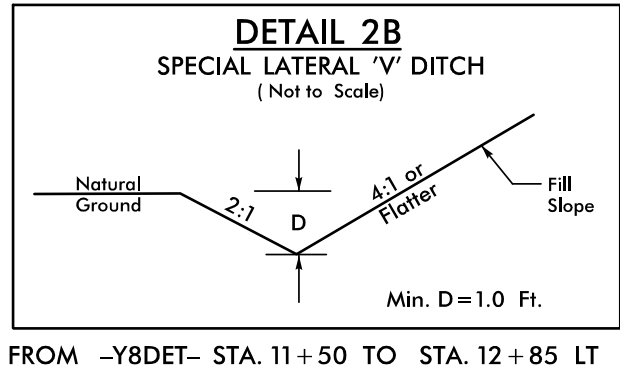
RONNIE L. SMITH &  
LEE A. SMITH  
DB 2084 PG 2258  
PB 57 PG 80

DAVID W. & MARIA DEGENHART  
DB 1697 PG 1495  
PB 31 PG 145

TED ROOSEVELT BOWERS JR  
& VERONICA BOWERS  
DB 2185 PG 270  
PB 31 PG 145

WOODLAND + WATERVIEW LLC  
DB 1907 PG 655  
PB 42 PG 131

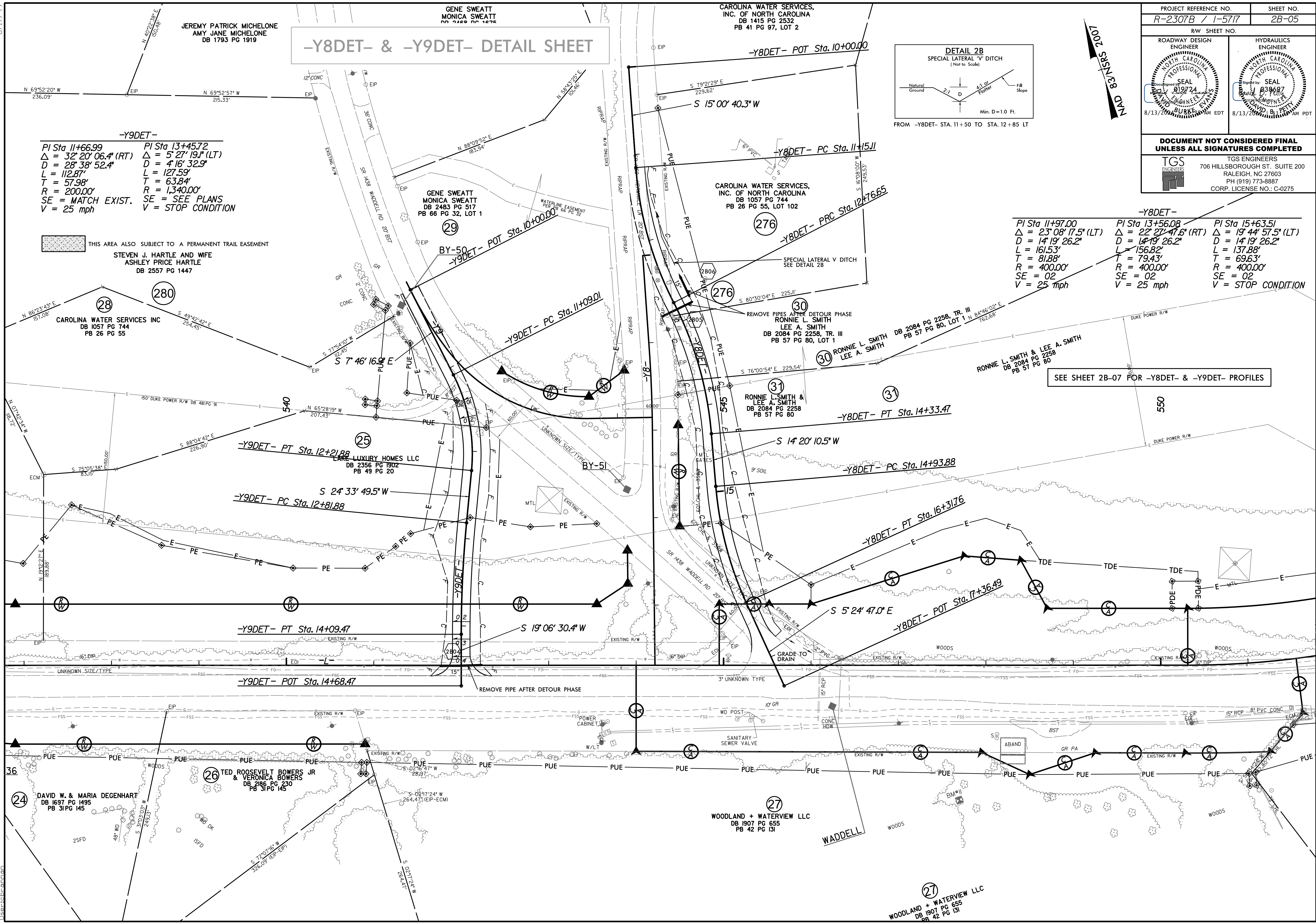
WOODLAND + WATERVIEW LLC  
DB 1907 PG 655  
PB 42 PG 131



100' STATION  
NAD 83

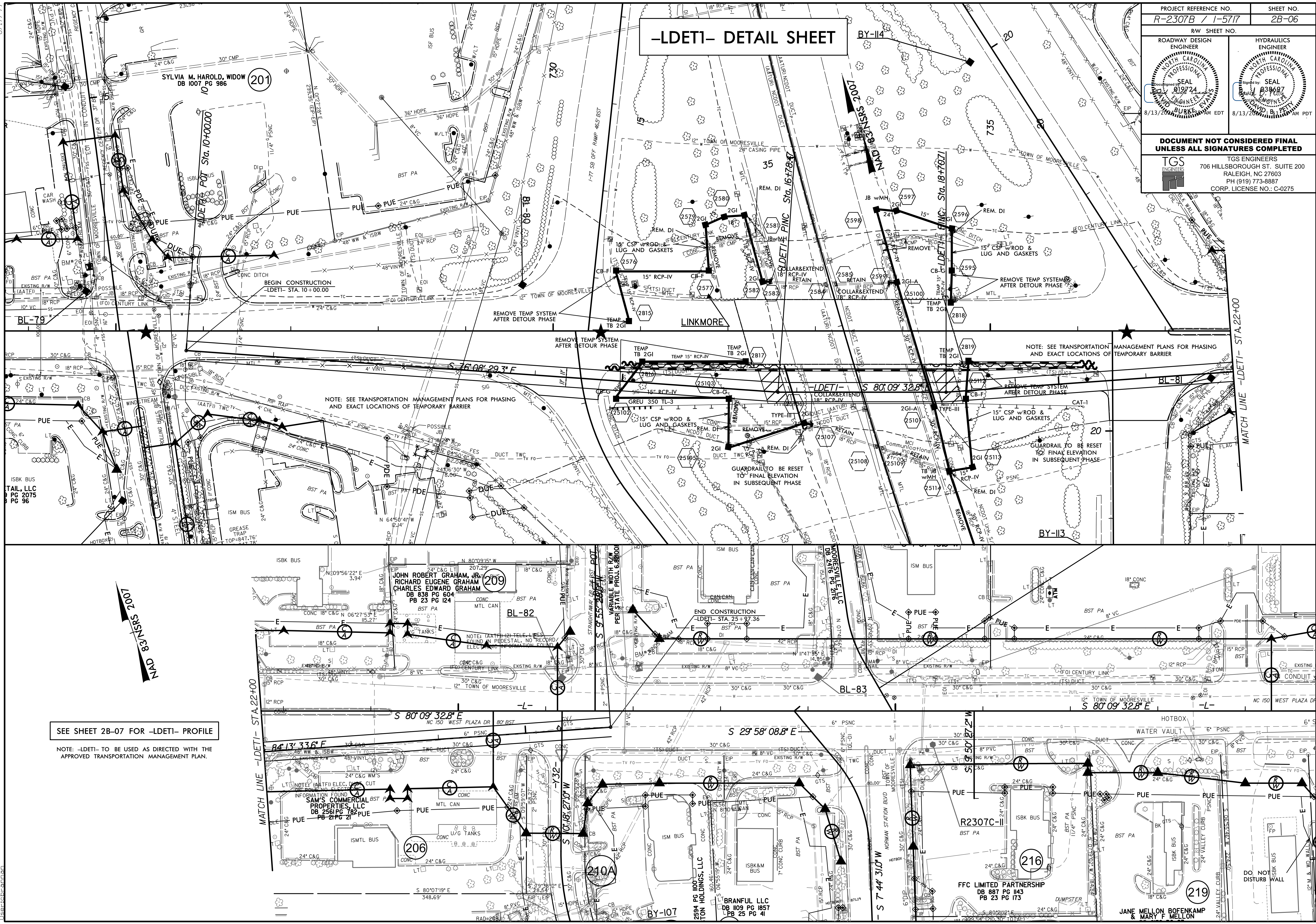
PROJECT REFERENCE NO. R-2307B / 1-5117	SHEET NO. 2B-05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p> <p>TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275</p>	

SEE SHEET 2B-07 FOR -Y8DET- & -Y9DET- PROFILES



PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>		SHEET NO. <b>2B-06</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		PROFESSIONAL SEAL	
<p><b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b></p>			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

# -LDET1- DETAIL SHEET



SEE SHEET 2B-07 FOR -LDET1- PROFILE

NOTE: -LDET1- TO BE USED AS DIRECTED WITH THE APPROVED TRANSPORTATION MANAGEMENT PLAN.

7/24/2024 R:\2307B\Roadway\Proc\1R-2307B\Roadway\Proc\1R-2307B\_RDY\_PSH\_02B\_06.dgn

8/17/19

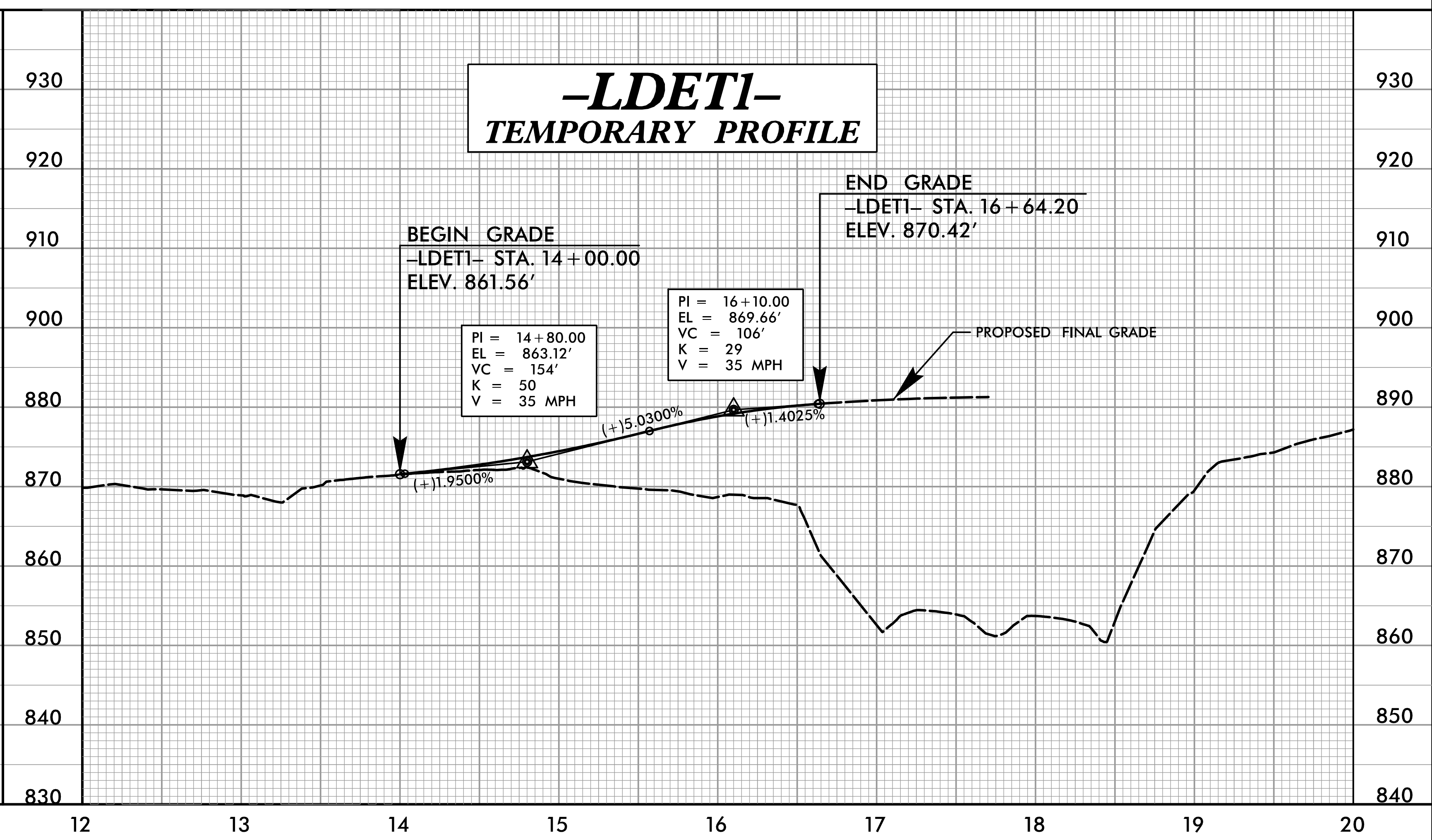
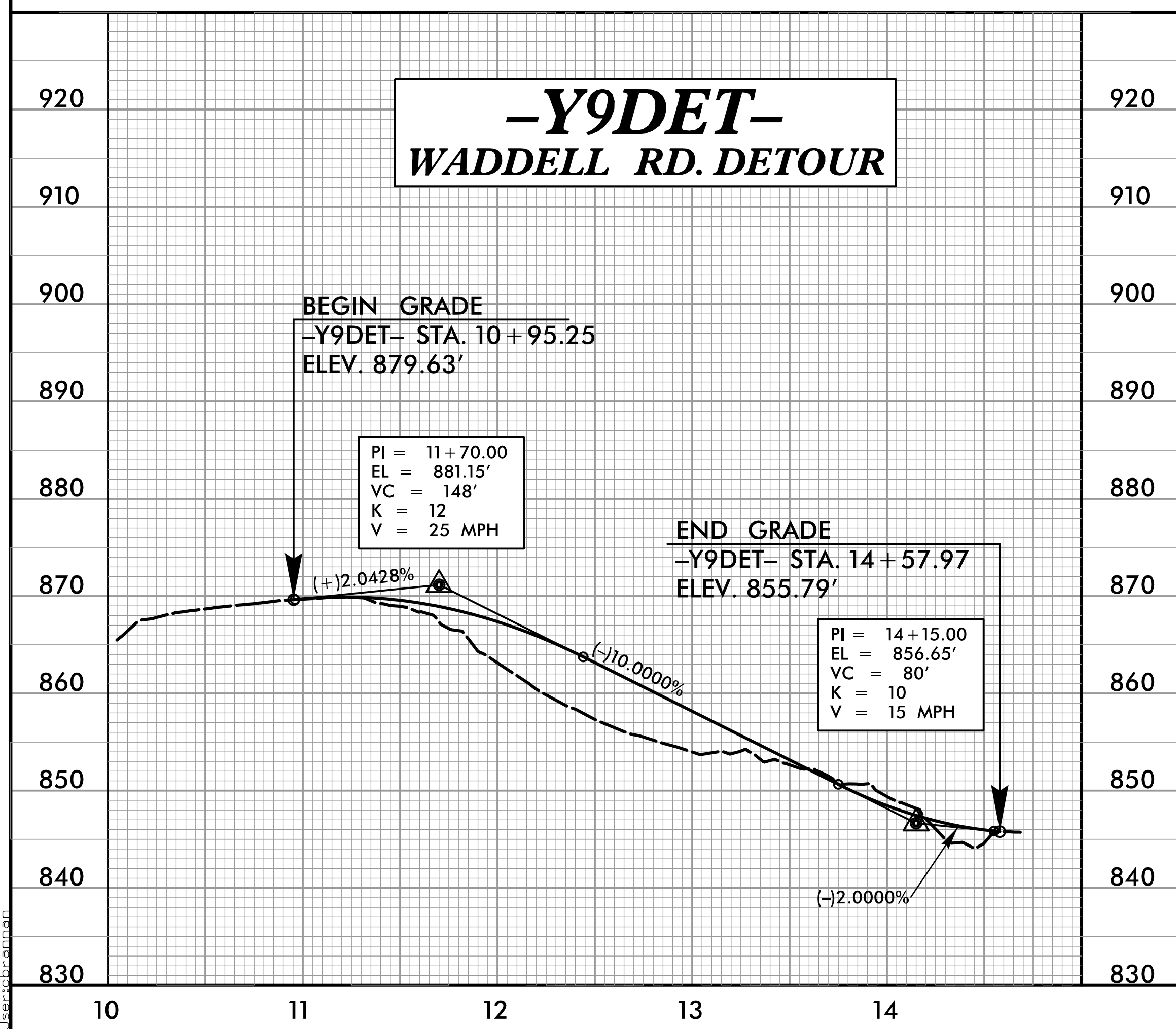
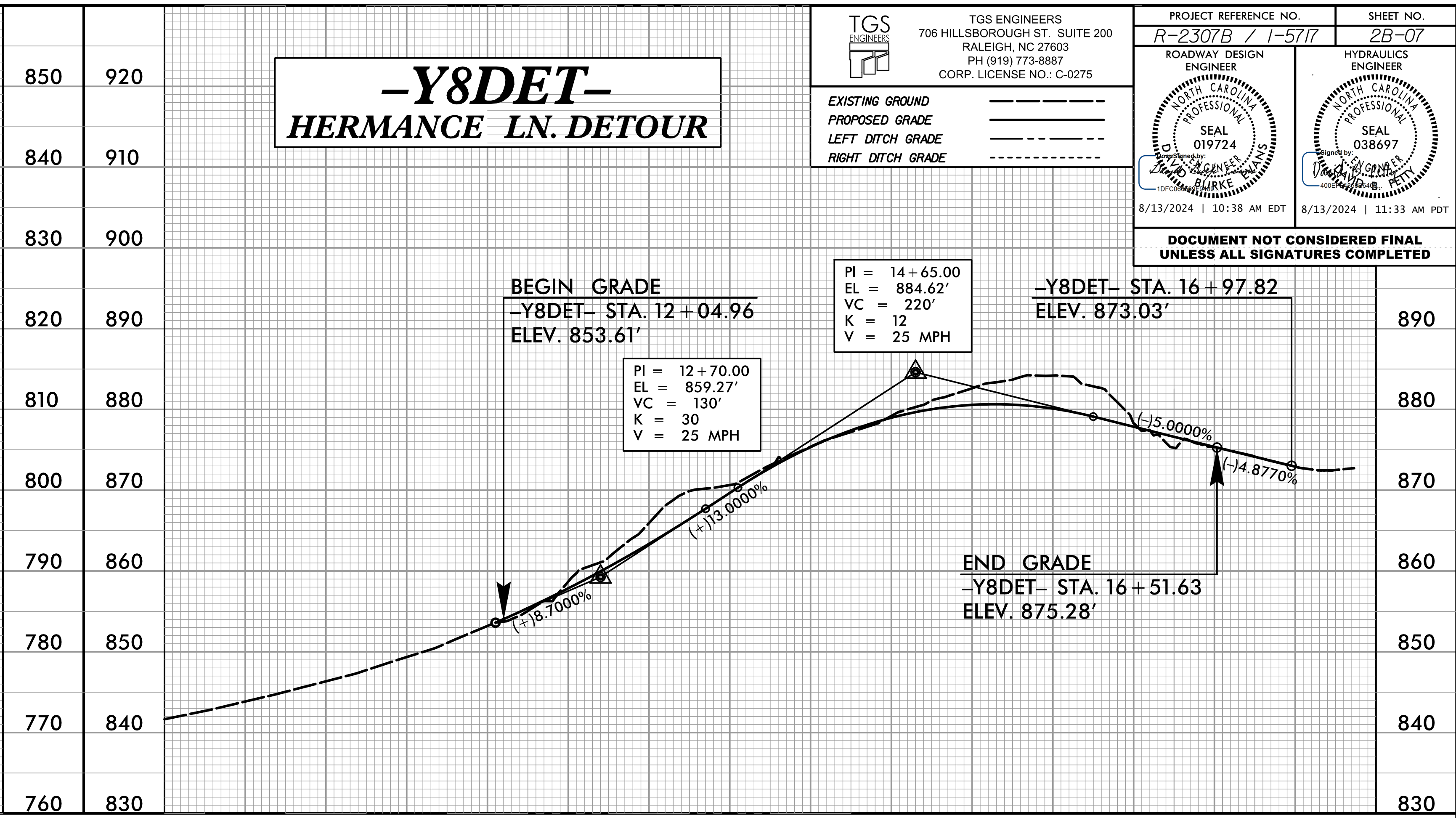
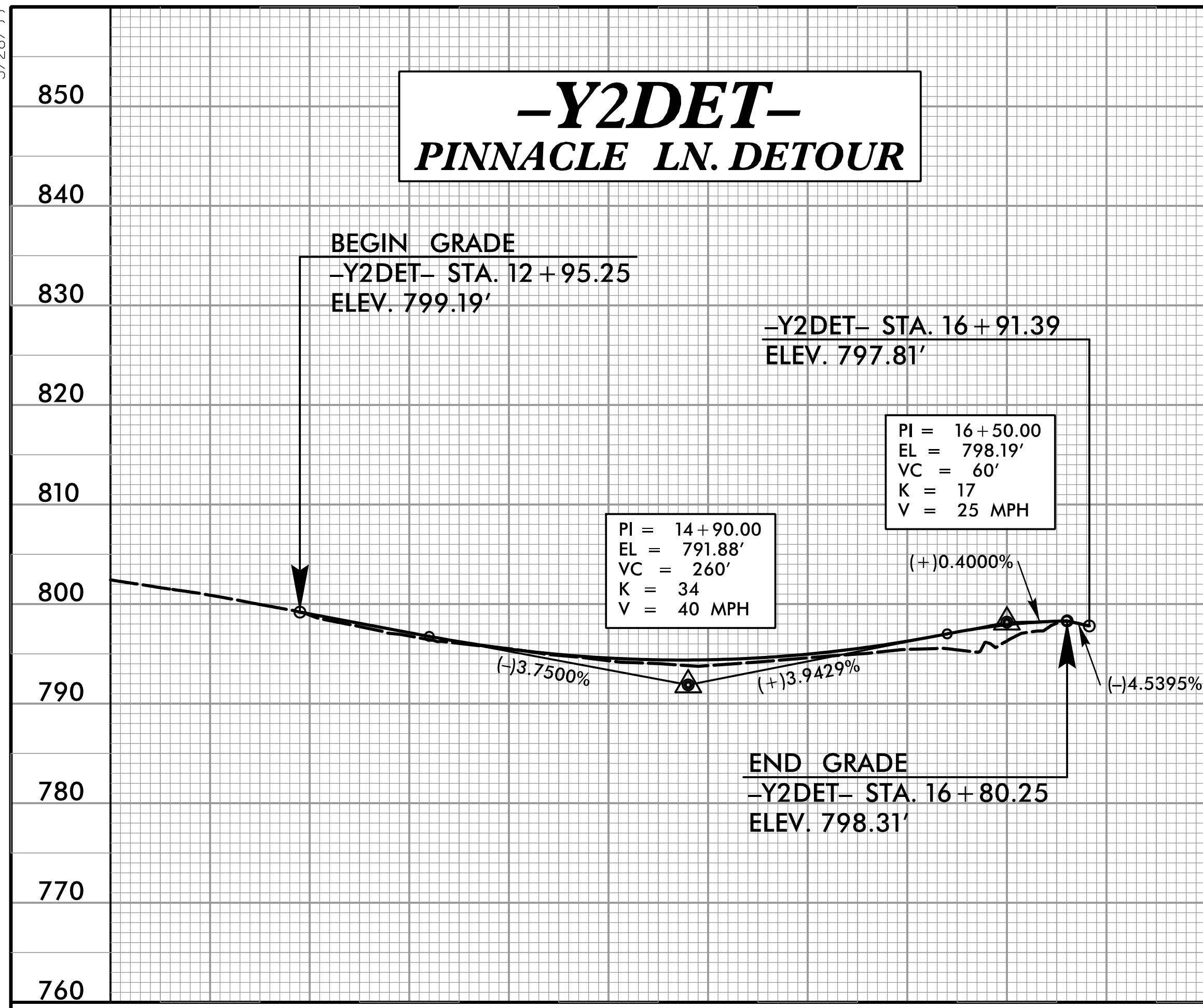
5/28/24

**TGS ENGINEERS**  
 706 HILLSBOROUGH ST. SUITE 200  
 RALEIGH, NC 27603  
 PH (919) 773-8887  
 CORP. LICENSE NO.: C-0275

EXISTING GROUND \_\_\_\_\_  
 PROPOSED GRADE \_\_\_\_\_  
 LEFT DITCH GRADE \_\_\_\_\_  
 RIGHT DITCH GRADE \_\_\_\_\_

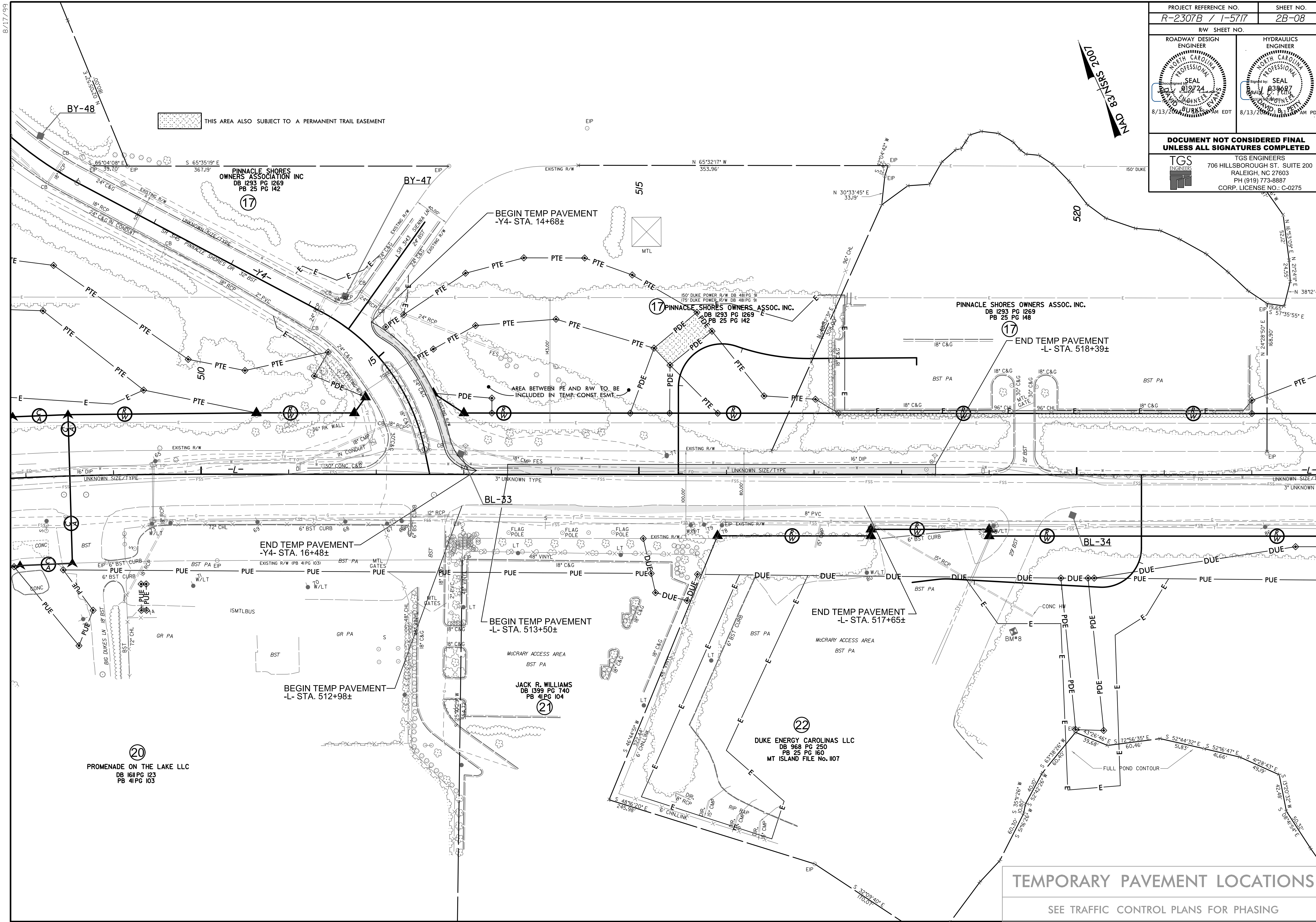
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ROADWAY DESIGN ENGINEER <b>DAVID BURKE</b> SEAL 019724	HYDRAULICS ENGINEER <b>DAVID BURKE</b> SEAL 038697
8/13/2024   10:38 AM EDT	8/13/2024   11:33 AM PDT

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



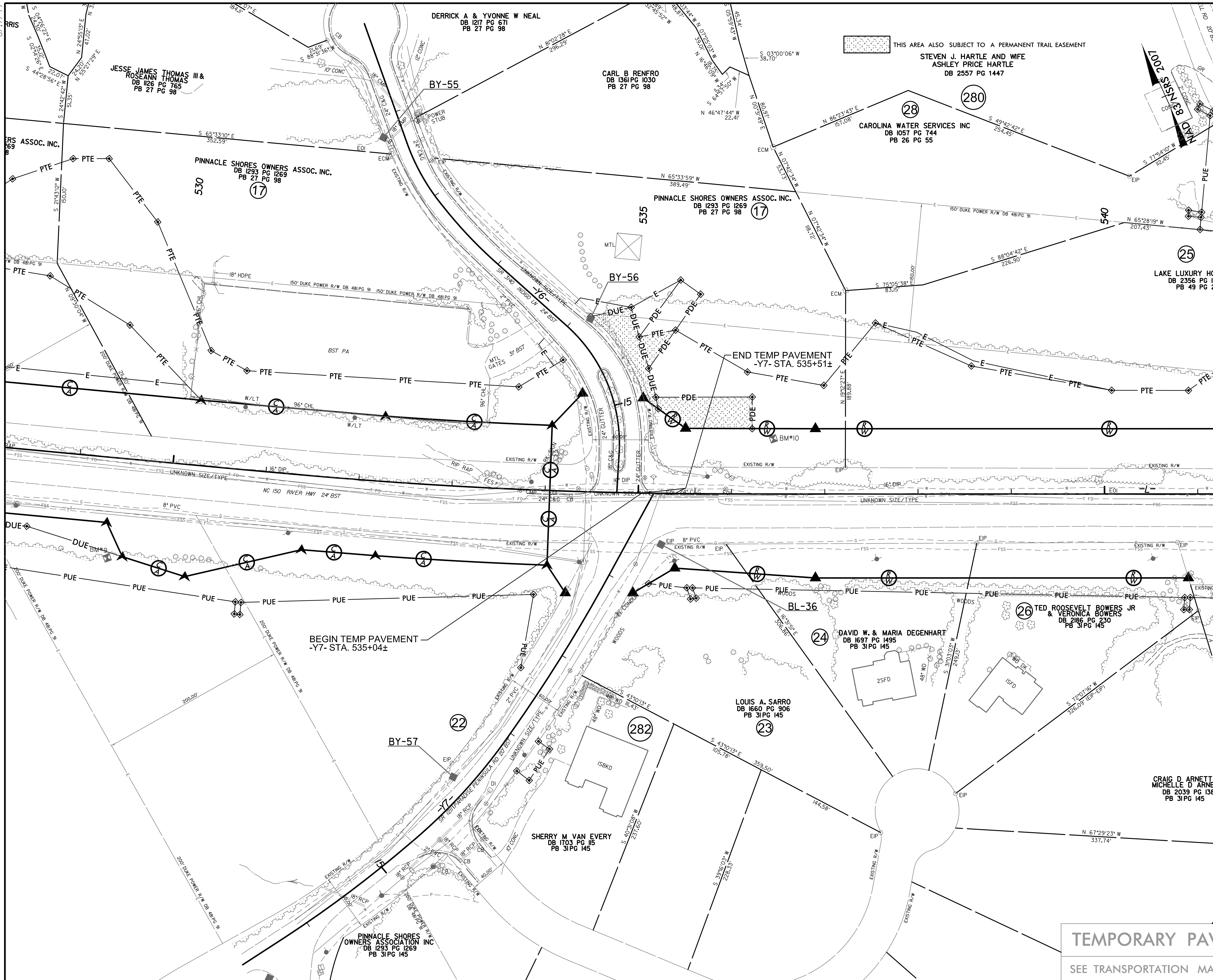
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PROJECT REFERENCE NO. R-2307B / 1-5177		SHEET NO. 2B-08	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		PROFESSIONAL	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



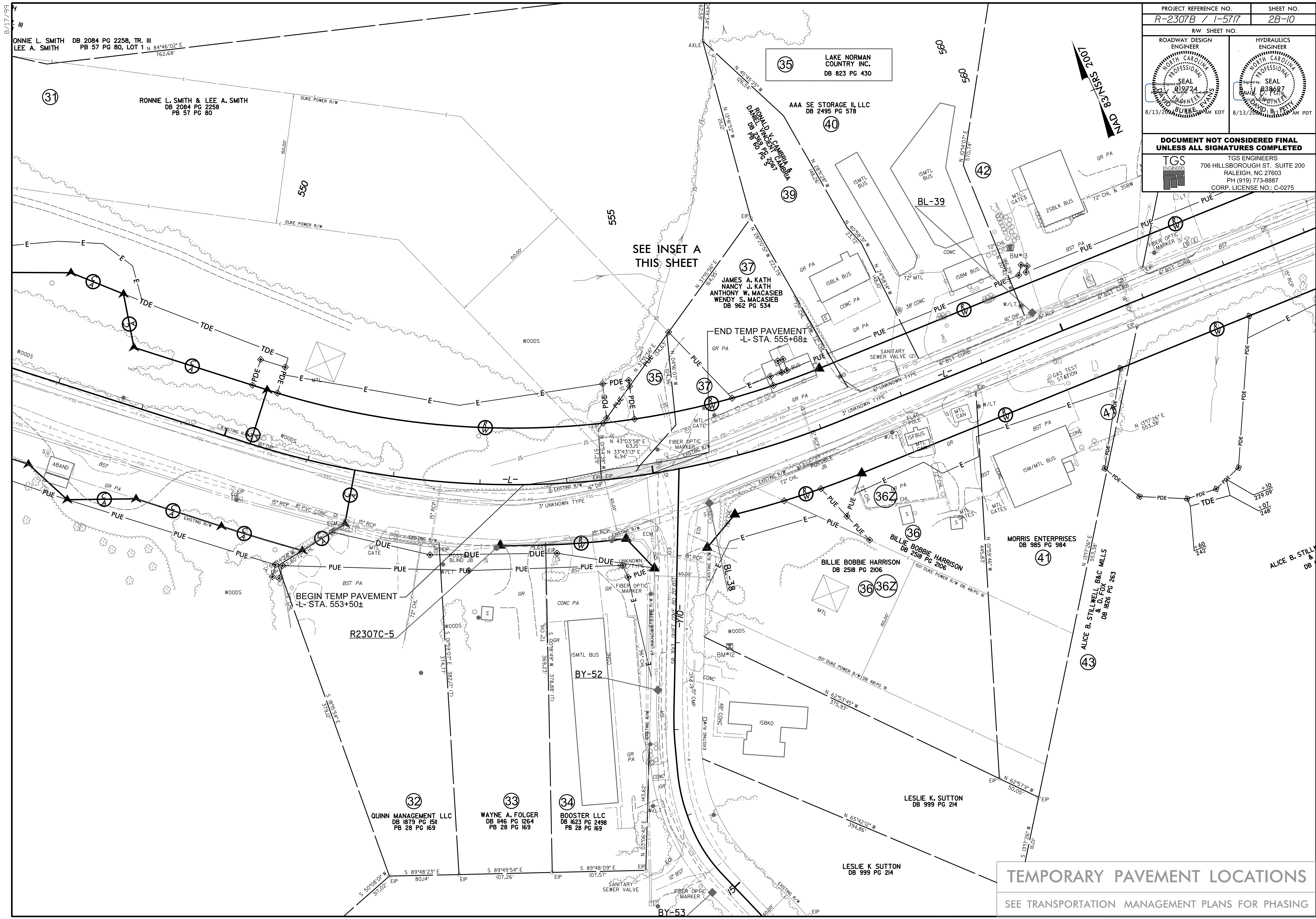
**TEMPORARY PAVEMENT LOCATIONS**  
SEE TRAFFIC CONTROL PLANS FOR PHASING

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>		SHEET NO. <b>2B-09</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		PROFESSIONAL SEAL DAVID B. PETT 8/13/2009	
PROFESSIONAL SEAL DAVID B. PETT 8/13/2009		PROFESSIONAL SEAL DAVID B. PETT 8/13/2009	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
TGS ENGINEERS		TGS ENGINEERS	
706 HILLSBOROUGH ST. SUITE 200		706 HILLSBOROUGH ST. SUITE 200	
RALEIGH, NC 27603		RALEIGH, NC 27603	
PH (919) 773-8887		PH (919) 773-8887	
CORP. LICENSE NO.: C-0275		CORP. LICENSE NO.: C-0275	



**TEMPORARY PAVEMENT LOCATIONS**  
SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING

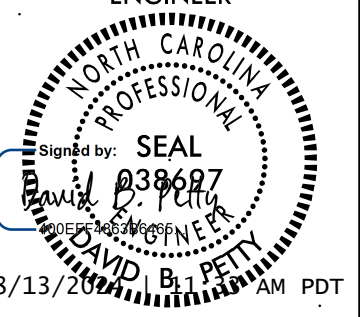
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

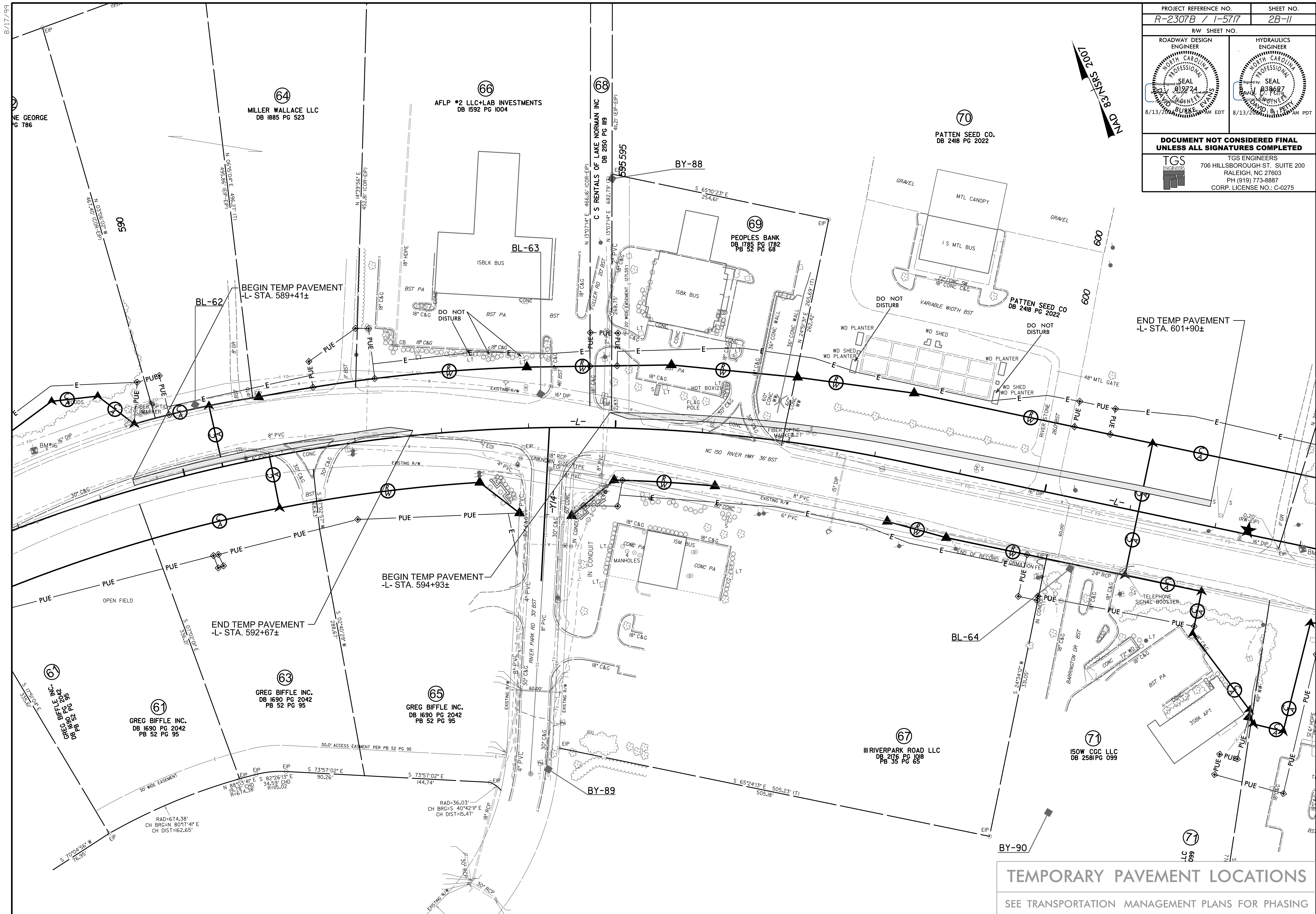


**TEMPORARY PAVEMENT LOCATIONS**  
SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING

7/24/2024  
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 User:dbfannan



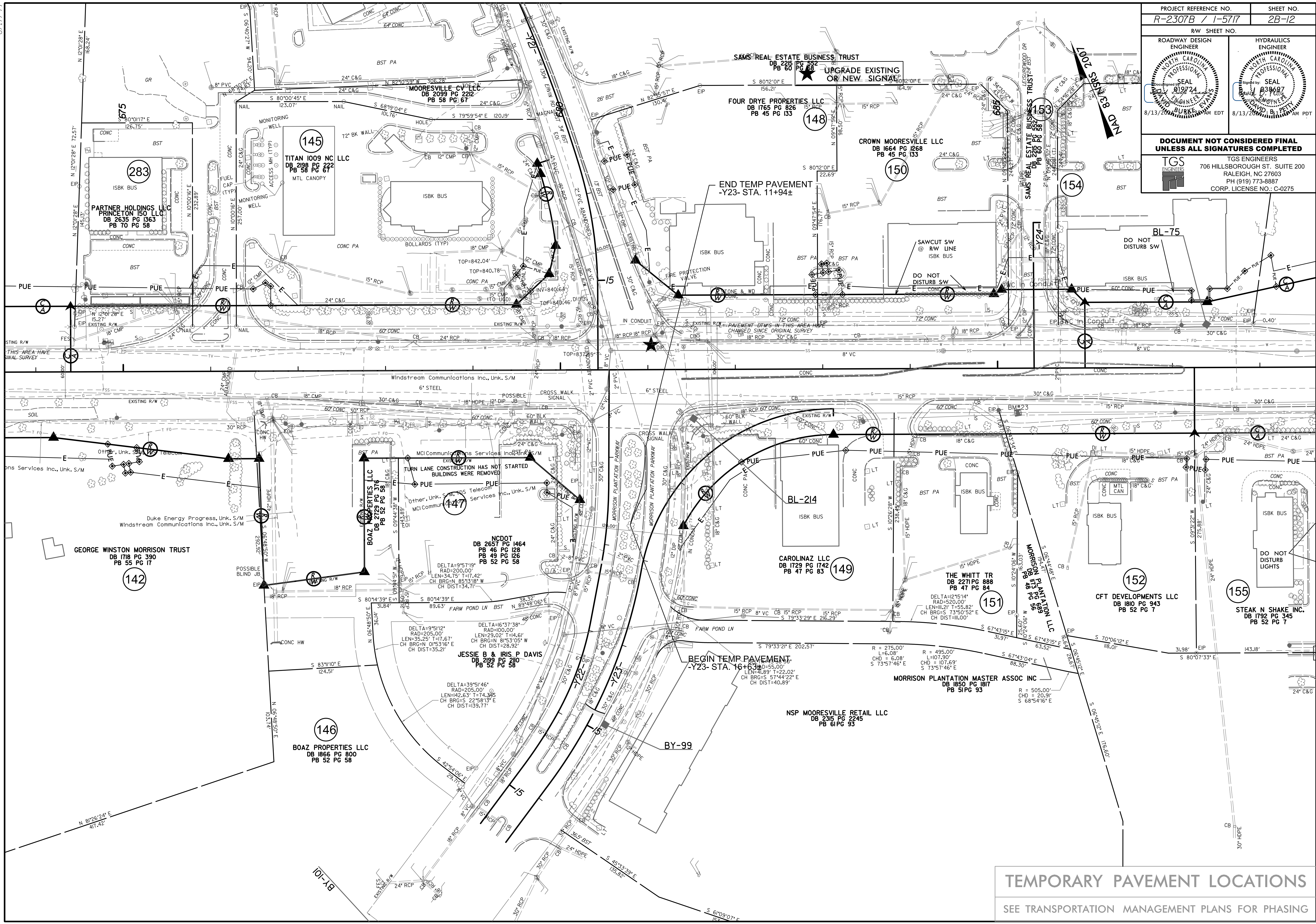
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**TEMPORARY PAVEMENT LOCATIONS**  
 SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING

7/24/2024  
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 User:dbfannan

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>		SHEET NO. <b>2B-12</b>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

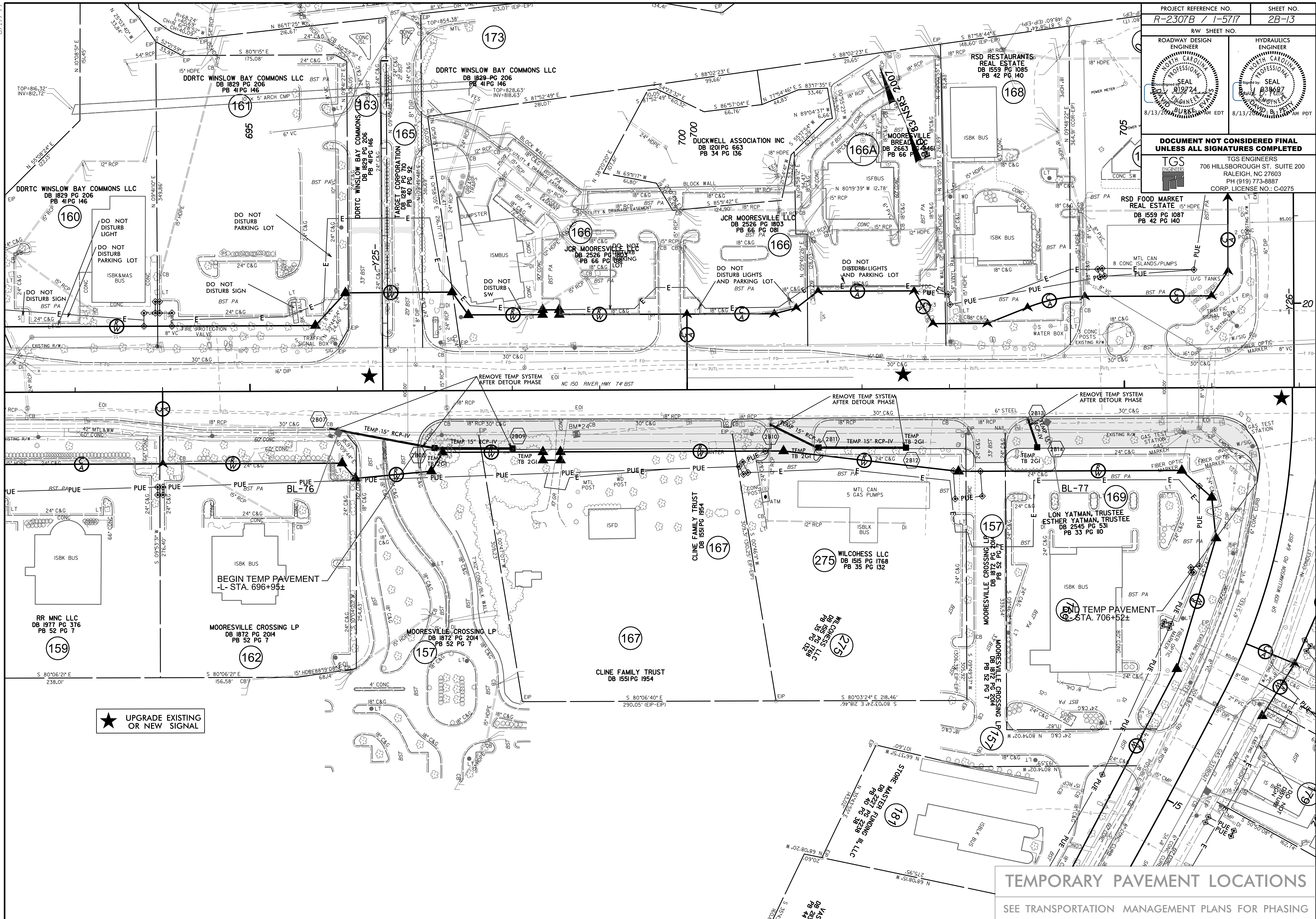


**TEMPORARY PAVEMENT LOCATIONS**  
SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING

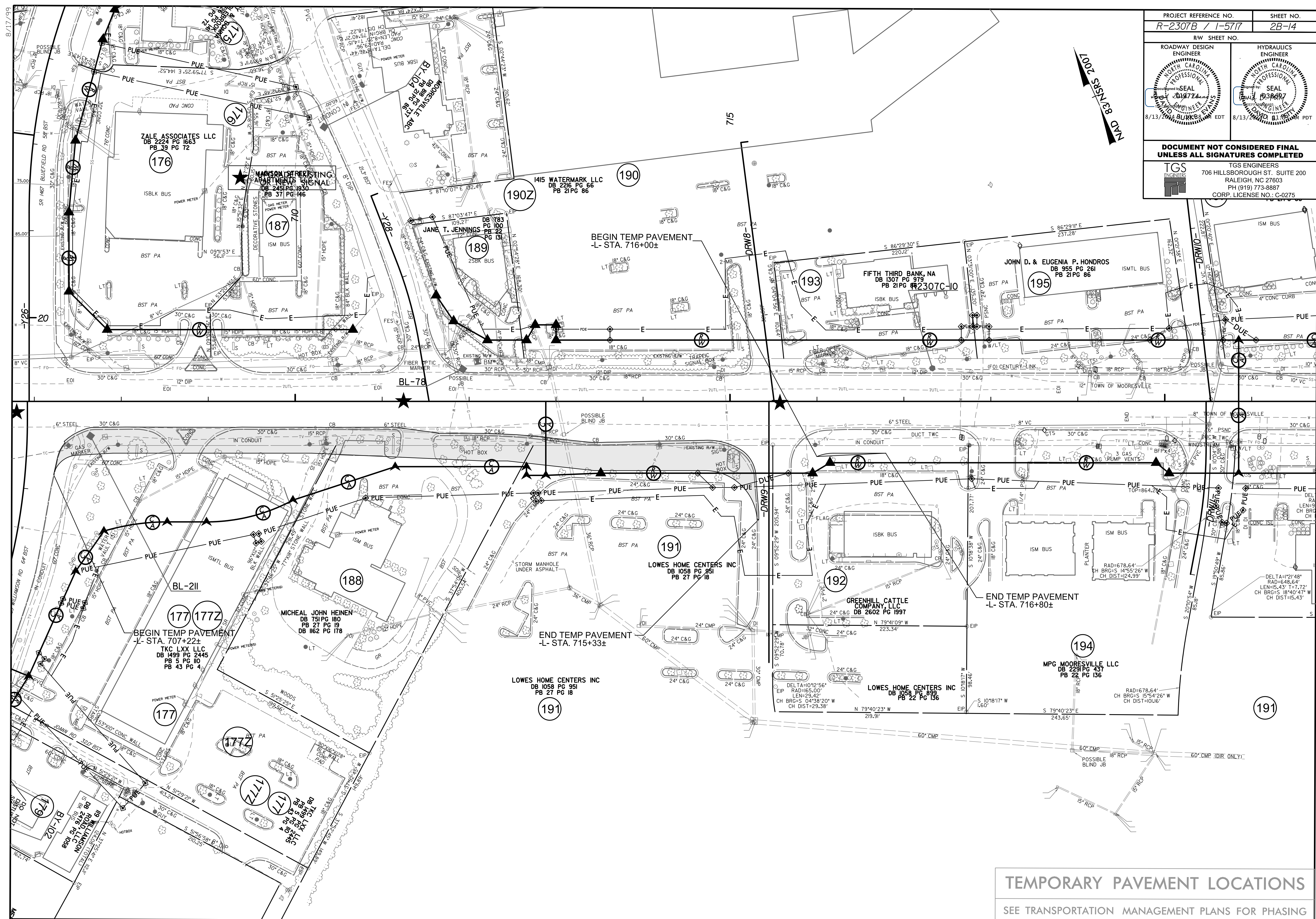
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
8/13/2014	8/13/2014

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

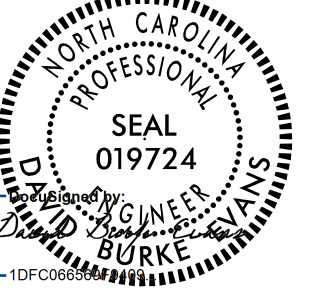
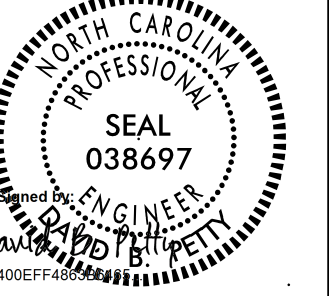
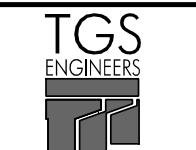
TGS ENGINEERS  
706 HILLSBOROUGH ST., SUITE 200  
RALEIGH, NC 27603  
PH (919) 773-8887  
CORP. LICENSE NO.: C-0275

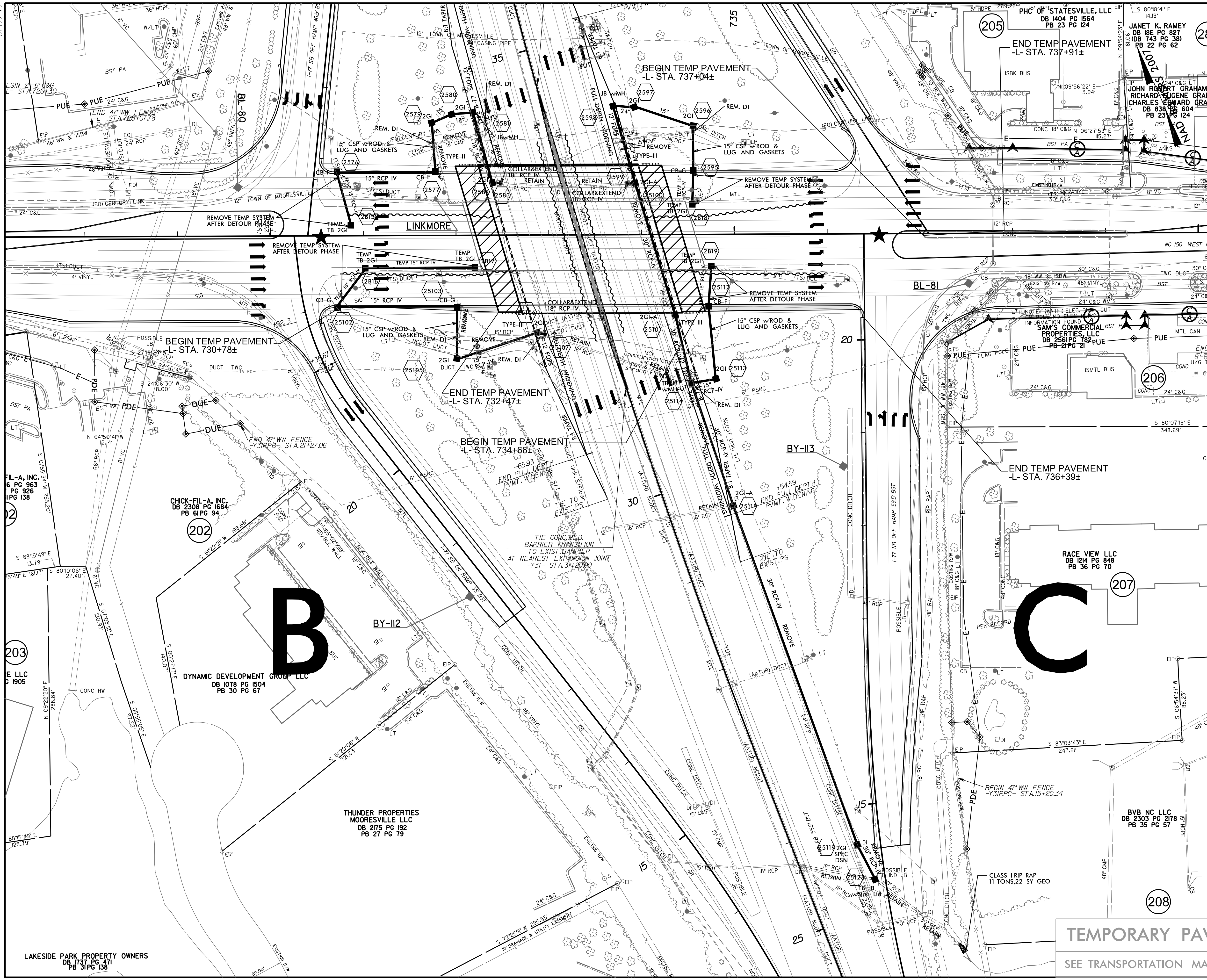


PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>		SHEET NO. <b>2B-14</b>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
8/13/2017 DAVID BURKHOLDER EDT		8/13/2017 DAVID BURKHOLDER PDT	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 (PH 919) 773-8887 CORP. LICENSE NO.: C-0275			

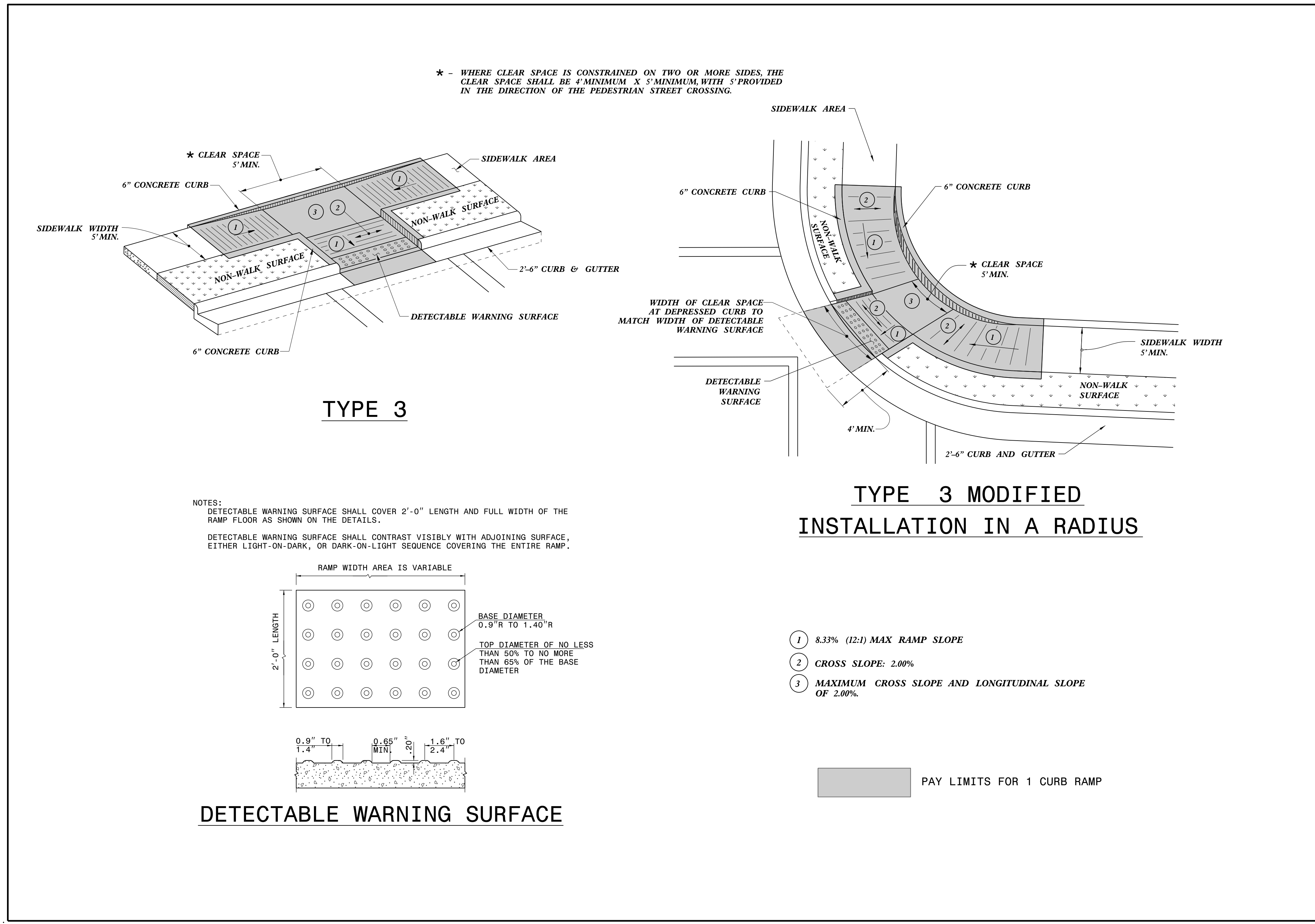


**TEMPORARY PAVEMENT LOCATIONS**  
SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING

PROJECT REFERENCE NO. <b>R-2307B / 1-5717</b>	SHEET NO. <b>2B-15</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 <b>JOHN ROBERT GRAHAM</b> DB 838 PG 604 PB 23 PG 124	 <b>RICHARD EUGENE GRAHAM</b> DB 838 PG 604 PB 23 PG 124
8/13/2024   4:08 PM EDT	8/13/2024   12:51 PM PDT
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



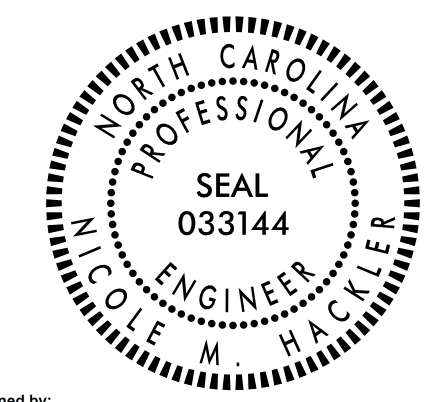
**TEMPORARY PAVEMENT LOCATIONS**  
 SEE TRANSPORTATION MANAGEMENT PLANS FOR PHASING



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

ROADWAY DETAIL DRAWING FOR  
**CURB RAMP**  
 PARALLEL RAMP

SHEET 9 OF 13  
**848D06**



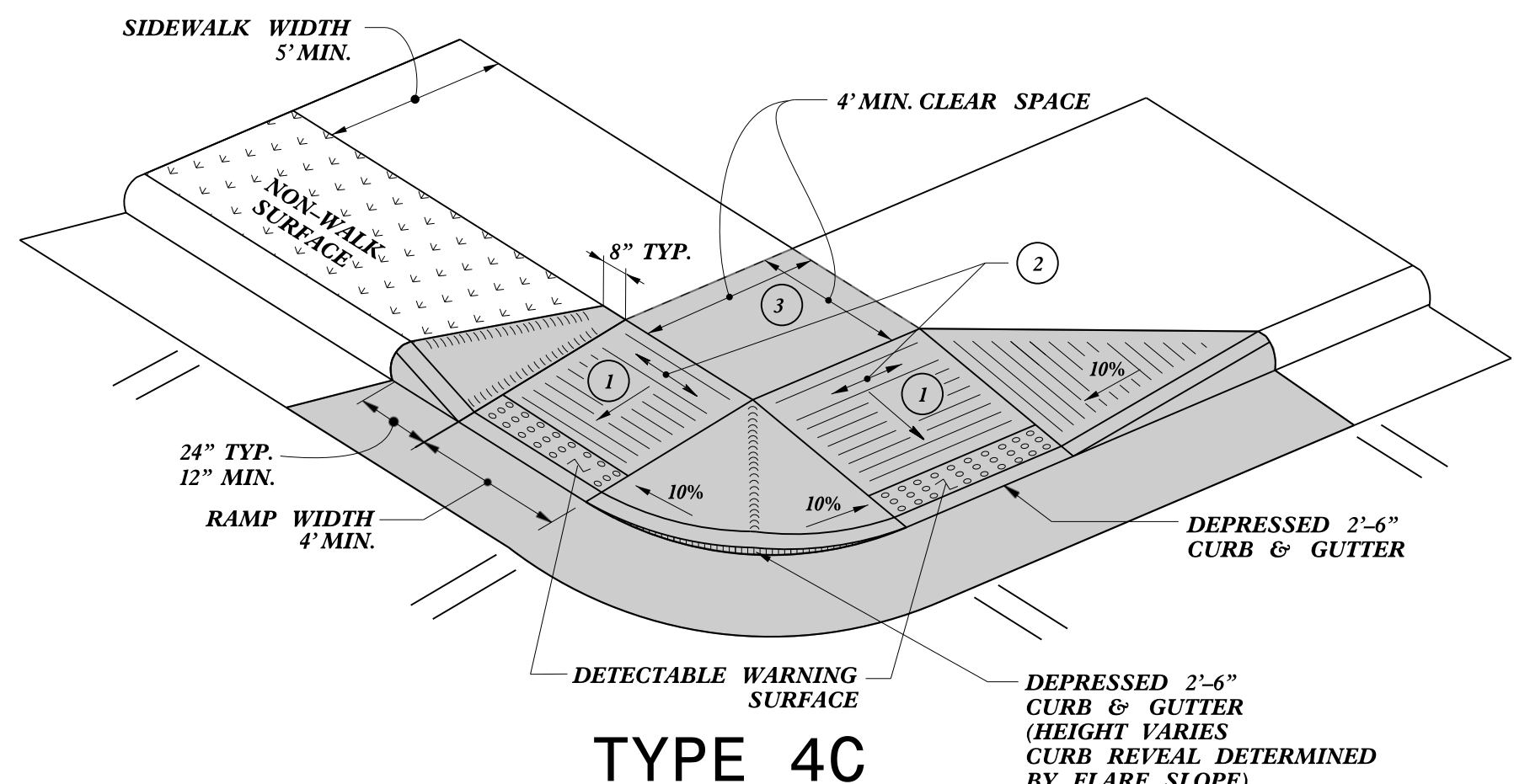
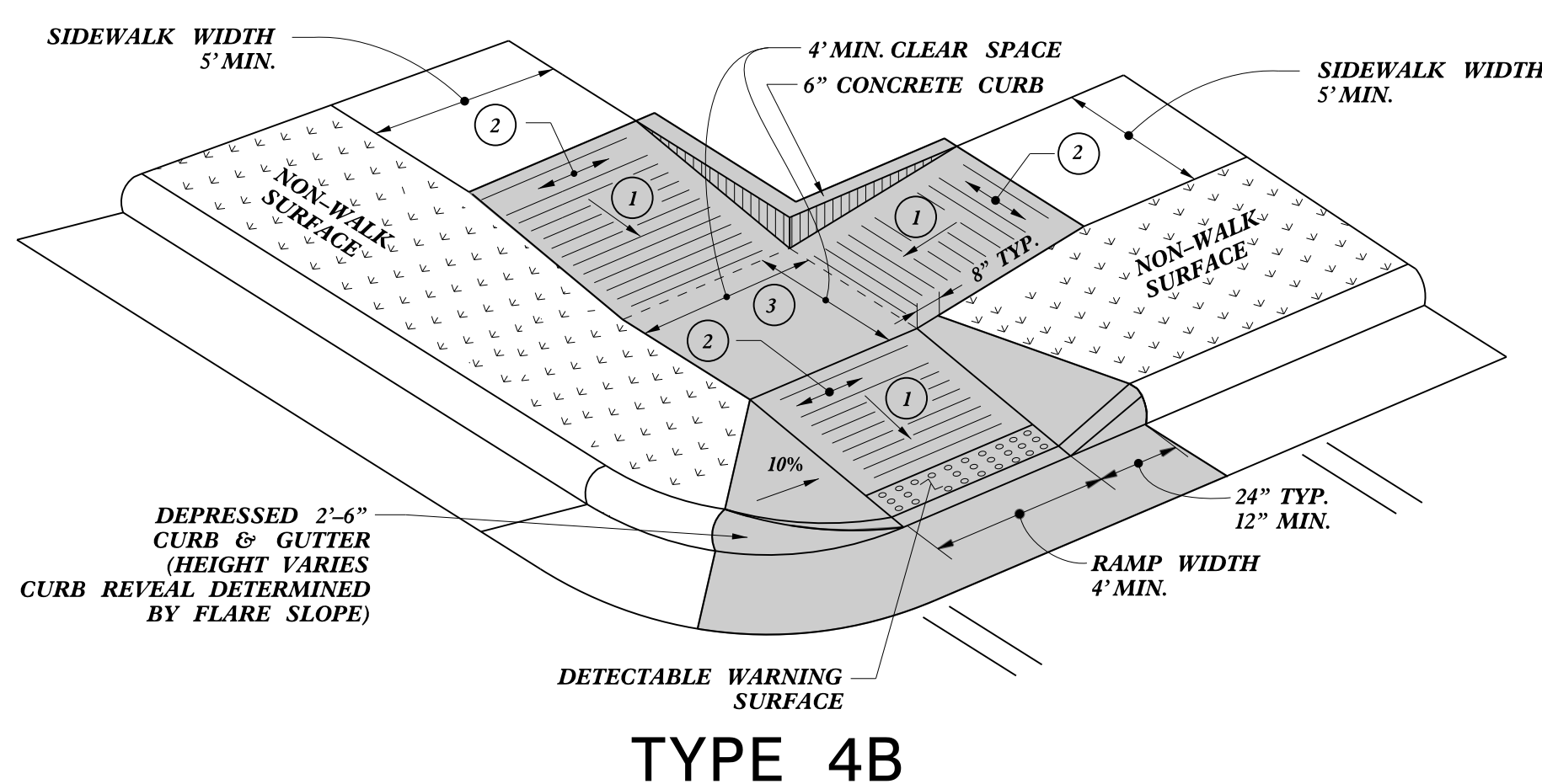
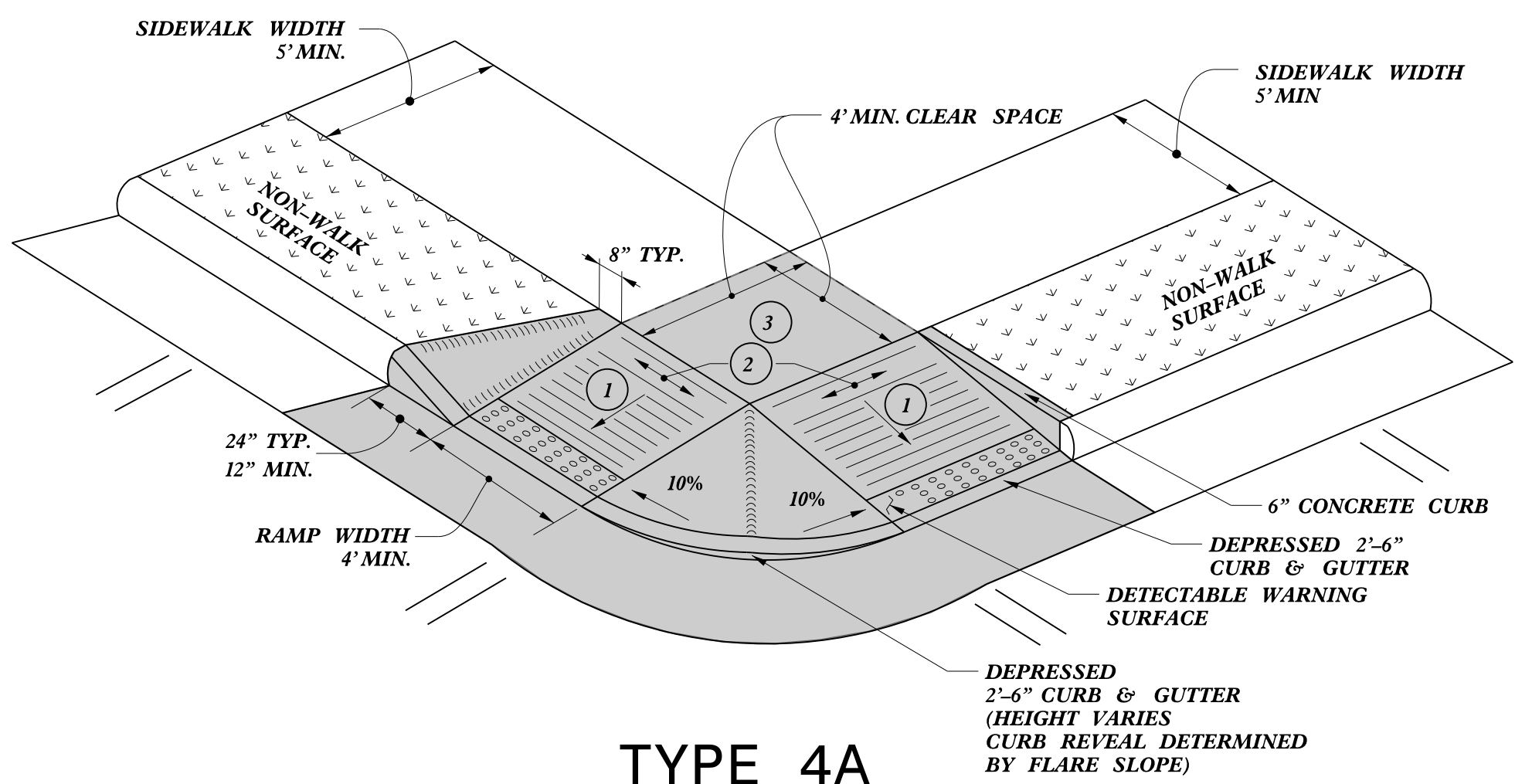
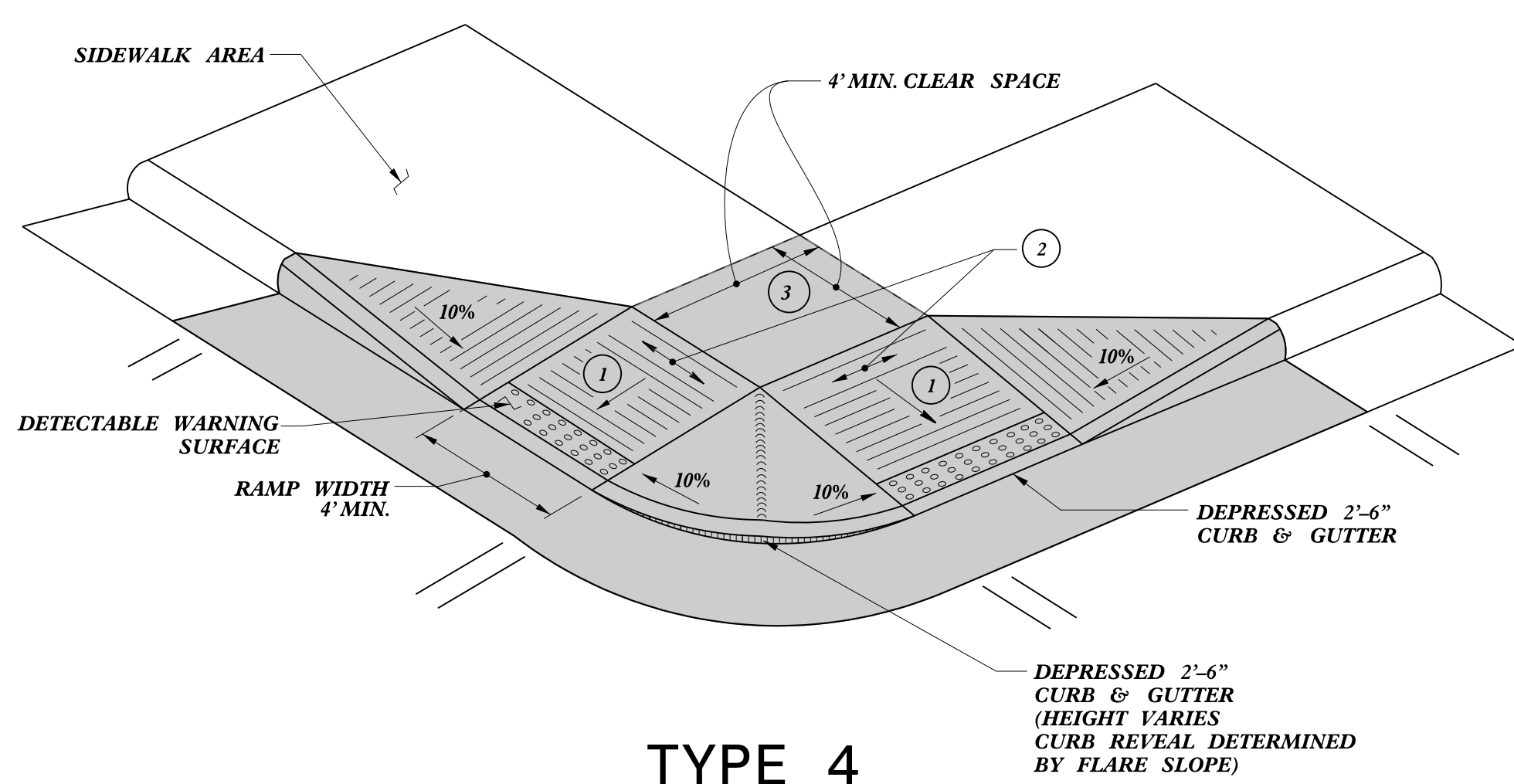
Signed by:  
 Nicole M. Hecker  
 588422303418405  
 8/13/2024 | 8:31 AM PDT

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

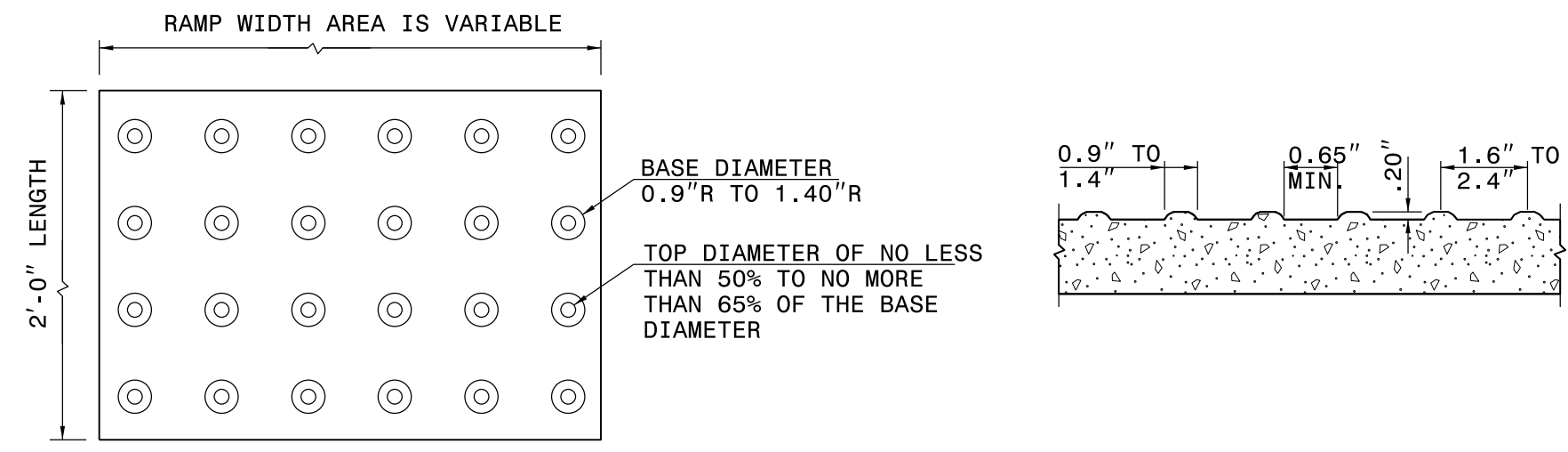
**CONTRACTS STANDARDS  
 AND DEVELOPMENT UNIT**  
 Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

ORIGINAL BY: S.CALHOUN	DATE: 12-22-2023
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: special_details\nmhackler\0609.dgn	



NOTES:  
 DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.  
 DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

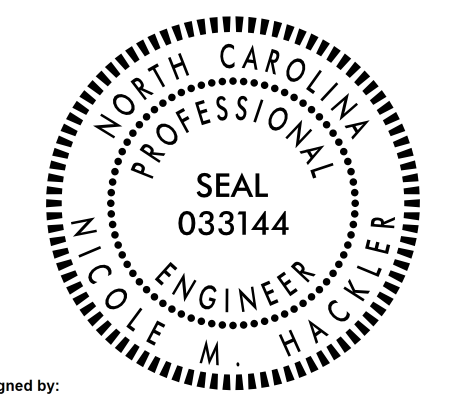


- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%

PAY LIMITS FOR 1 OR 2 CURB RAMPS  
 (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES)

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

ROADWAY DETAIL DRAWING FOR  
**CURB RAMP**  
 SHARED LANDING



Signed by:  
 Nicole M. Hickler  
 08842325341564CS  
 8/13/2024 | 8:31 AM PDT

SHEET 10 OF 13  
**848D06**

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

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

**SEE TITLE BLOCK**

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023  
 MODIFIED BY: DATE:  
 CHECKED BY: DATE:  
 FILE SPEC.: special\_details\nmhackler\848D0610.dgn