

09/08/99

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

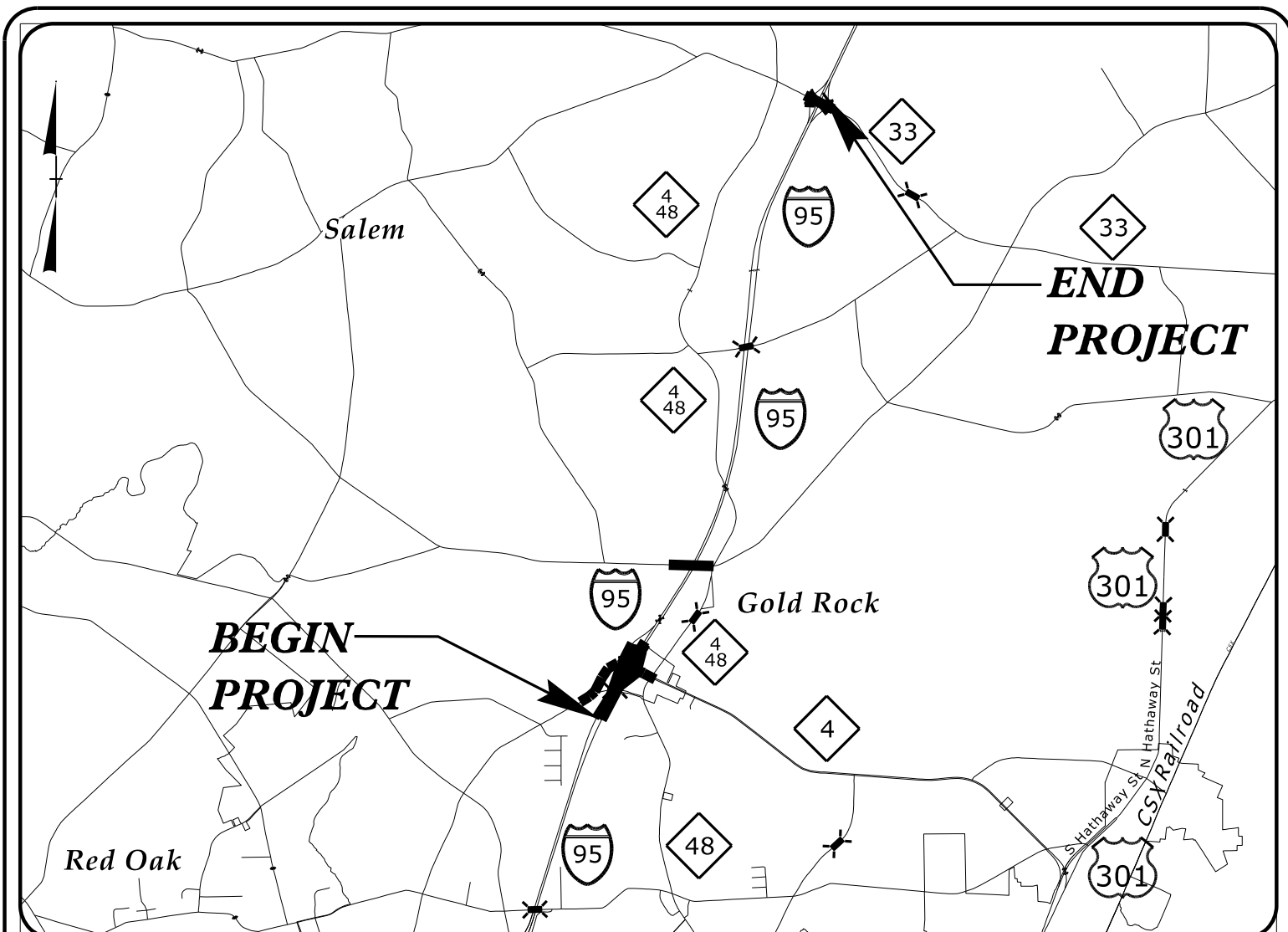
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**NASH COUNTY**

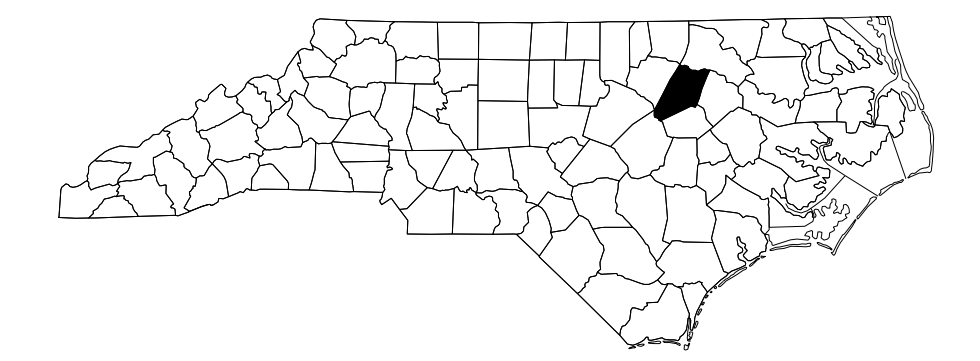
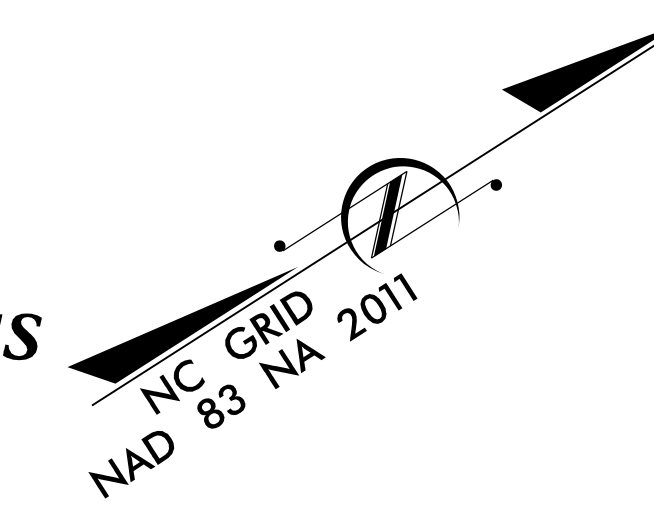
**LOCATION: I-95 FROM HALIFAX ROAD (SR 1544)  
TO NC 33**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING,  
UTILITY CONSTRUCTION, SIGNALS, AND STRUCTURES**

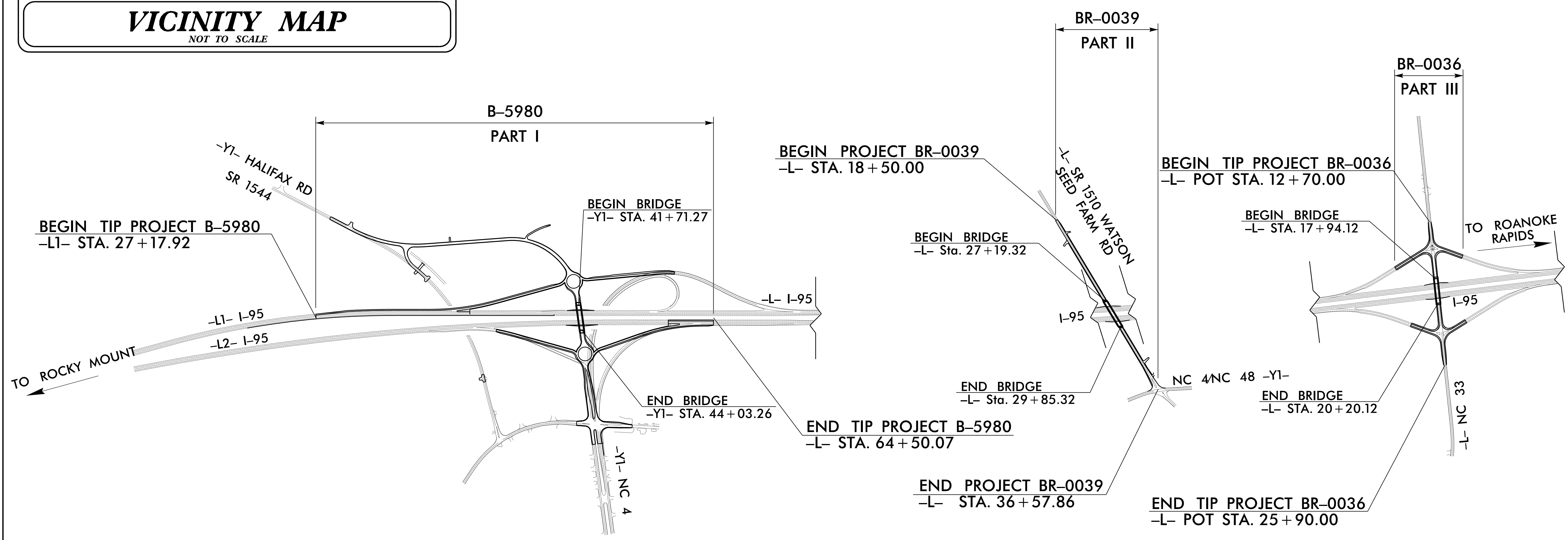
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5980/BR-0039/BR-0036	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47617.1.1	NHP-1522(005)	PE	
47617.2.1	NHP-1522(005)	ROW/UTILITIES	
47617.3.1	NHP-1522(005)	CONSTRUCTION	
49075.1.1		PE	
49075.2.1		ROW/UTILITIES	
49075.3.1		CONSTRUCTION	
49074.1.1		PE	
49074.2.1		ROW/UTILITIES	
49074.3.1		CONSTRUCTION	



**VICINITY MAP**  
NOT TO SCALE



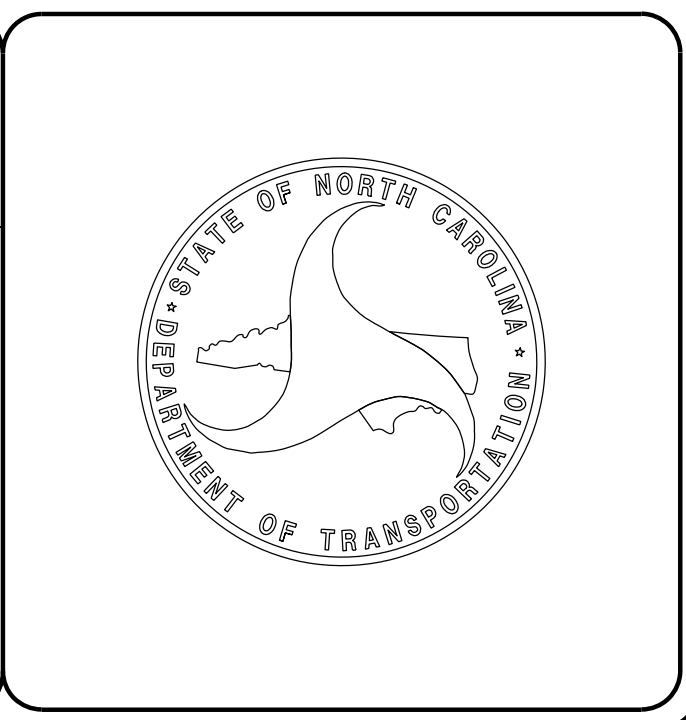
**CONTRACT: C204350 TIP PROJECT: B-5980/BR-0039/BR-0036**



PROJECT LENGTH
LENGTH OF ROADWAY TIP PROJECTS B-5980/BR-0039/BR-0036 = 1.189 MILES
LENGTH OF STRUCTURE TIP PROJECTS B-5980/BR-0039/BR-0036 = 0.093 MILES
TOTAL LENGTH OF TIP PROJECTS B-5980/BR-0039/BR-0036 = 1.282 MILES

Prepared in the Office of: <b>VAUGHN &amp; MELTON</b> 1318-F PATTON AVE. ASHEVILLE NC, 28806 FOR THE NORTH CAROLINA DIVISION OF HIGHWAYS	
<b>RIGHT OF WAY DATE:</b> BR-0036: OCTOBER 28, 2019	<b>JOHN LANSFORD, P.E.</b> PROJECT ENGINEER
<b>RIGHT OF WAY DATE:</b> BR-0039: OCTOBER 14, 2019	<b>KEITH BRIDGERS</b> PROJECT DESIGN ENGINEER
<b>LETTING DATE:</b> JUNE 15, 2021	<b>DAVID STUTTS, P.E.</b> NCDOT CONTACT

Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 - (919) 854-6259(FAX)	
<b>RIGHT OF WAY DATE:</b> B-5980: JANUARY 11, 2019	<b>EDWARD G. EDENS, P.E.</b> PROJECT ENGINEER
<b>LETTING DATE:</b> JUNE 15, 2021	<b>KIMBERLY A. KOIVUNIEMI, P.E.</b> PROJECT DESIGN ENGINEER
	<b>RUSSELL BROADWELL, P.E.</b> NCDOT CONTACT



3/1/2021  
R:\Roadway\Proj\B5980\_rdy\_tsh\_combined.dgn  
Morgan, Nelson

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

**INDEX OF SHEETS, GENERAL NOTES AND 2018 ROADWAY ENGLISH STANDARD DRAWINGS**

EFF. 01-16-2018  
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
<b>DIVISION 2 - EARTHWORK</b>	
200.03	Method of Clearing - Method III
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.02	Guide for Grading Subgrade - Secondary and Local
225.03	Deceleration and Acceleration Lanes
225.04	Method of Obtaining Superlevation - Two Lane Pavement
225.05	Method of Obtaining Superlevation - Divided Highways
225.06	Method of Grading Sight Distance at Intersections
225.08	Earth Berm Median Pier Protection
225.09	Guide for Shoulder and Ditch Transition at Grade Separations
240.01	Guide for Berm Ditch Construction
275.01	Rock Plating
<b>DIVISION 3 - PIPE CULVERTS</b>	
300.01	Method of Pipe Installation
310.02	Parallel Pipe End Section - Precast Concrete Section for 15" to 24" Pipe
310.03	Cross Pipe End Section - Precast Concrete Section for 18" to 30" Pipe
310.10	Driveway Pipe Construction
<b>DIVISION 4 - MAJOR STRUCTURES</b>	
422.01	Bridge Approach Fills - Type I Standard Approach Fill
422.02	Bridge Approach Fills - Type II Modified Approach Fill
422.03	Reinforced Bridge Approach Fills - Type A Alternate Approach Fill for Integral Abutment
<b>DIVISION 5 - SUBGRADE, BASES AND SHOULDERS</b>	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
<b>DIVISION 6 - ASPHALT BASES AND PAVEMENTS</b>	
610.03	Guide for Paving Shoulders Under Bridges - Method III
654.01	Pavement Repairs
665.01	Asphalt Shoulders - Milled Rumble Strips
<b>DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS</b>	
700.01	Concrete Pavement Joints - Construction and Contraction Joints
700.02	Expansion Joint Layout - for Rigid Doweled Pavement at Bridges
700.03	Dowel Assembly
700.04	Concrete Pavement Header Board
700.05	Tying Proposed Pavement to Existing
<b>DIVISION 8 - INCIDENTALS</b>	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.22	Frames and Wide Slot Sag Grates
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.51	Brick Manhole - 12" thru 36" Pipe
840.52	Precast Manhole - 4', 5' and 6' Diameter
840.53	Precast Manhole with Masonry Base - 12" thru 42" Pipe
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
852.01	Concrete Islands
852.05	Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
852.10	Median Construction - with Curb and Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
865.01	Cable Guiderail
866.02	Woven Wire Fence - with Wood Post
866.03	Woven Wire Fence - with Steel Post
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

PART I B-5980: INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1C-1 THRU 1C-3	SURVEY CONTROL SHEETS
2A-1 THRU 2A-5	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	BRIDGE RELATIONSHIP DETAIL
2B-2 THRU 2B-3	ROUNDBOUT DETAILS
2B-4 THRU 2B-5	DETOUR DETAILS
2C-1 THRU 2C-5	ROADWAY DETAILS
2G-1 THRU 2G-3	WICK DRAIN DETAILS
2G-4	TEMPORARY SHORING DETAIL
2G-5 THRU 2G-7	TEMPORARY WALL DETAILS
3B-1	ROADWAY SUMMARIES
3D-1 THRU 3D-3	DRAINAGE SUMMARY
3G-1	GEOTECHNICAL SUMMARIES
4 THRU 9	PLAN SHEETS
10 THRU 20	PROFILE SHEETS
TMP-01 THRU TMP-29	TRANSPORTATION MANAGEMENT PLANS
PMP-01 THRU PMP-08	PAVEMENT MARKING PLANS
E-1 THRU E-7	ELECTRICAL PLANS
EC-1 THRU EC-16	EROSION CONTROL PLANS
SIGN-01 THRU SIGN-19	SIGNING PLANS
SIG-1.0 THRU SIG-5.0	SIGNAL PLANS
ITS-01 THRU ITS-03	ITS PLANS
UC-01 THRU UC-05	UTILITY CONSTRUCTION PLANS
UO-01 THRU UO-04	UTILITIES BY OTHERS PLANS
X-1A	CROSS SECTION INDEX
X-1B	CROSS SECTION SUMMARY SHEET
X-1 THRU X-78	CROSS SECTIONS
S-1 THRU S-34	STRUCTURE PLANS

PART II BR-0039: INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
2A-1 THRU 2A-3	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3B-1	SUMMARY OF SHOULDER BERM GUTTER, PAVEMENT REMOVAL, EARTHWORK, AND PARCEL INDEX
3D-1	LIST OF PIPES, ENDWALLS, ETC AND GUARDRAIL
3G-1	GEOTECHNICAL SUMMARIES
4 THRU 5	PLAN SHEETS
6	PROFILE SHEETS
RW-01 THRU RW-05	RIGHT OF WAY PLANS
TMP-1 THRU TMP-8	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-3	SIGNING PLANS
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-1A	CROSS SECTION SUMMARY SHEET
X-1 THRU X-18	CROSS SECTIONS
S-1 THRU S-31	STRUCTURE PLANS

PART III BR-0036: INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
2A-1 THRU 2A-2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3B-1	SUMMARY OF EARTHWORK, SHOULDER BERM GUTTER, PARCEL INDEX, PAVEMENT REMOVAL, GUARDRAIL, AND LIST OF PIPES, ENDWALLS, ETC.
3G-1	GEOTECHNICAL SUMMARIES
4	PLAN SHEETS
5 THRU 6	PROFILE SHEETS
RW-01 THRU RW-08	RIGHT OF WAY PLANS
TMP-1 THRU TMP-6	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-9	SIGNING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS SECTION SUMMARY SHEET
X-1 THRU X-28	CROSS SECTIONS
S-1 THRU S-29	STRUCTURE PLANS

GENERAL NOTES:

2018 SPECIFICATIONS  
EFFECTIVE: 01-16-2018  
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

CLEARING (BR-0039 & BR-0036):

CLEARING LIMITS SHALL EXTEND 5 FEET BEYOND THE TOE OF THE SLOPE WITH NO GRUBBING.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 AND 560.02

SIDE ROADS:

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

SUBSURFACE DRAINS:

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

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:

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

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

END BENTS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE City of Rocky Mount, Time Warner Cable, Century Link, Duke Energy

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

B-5980: RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.  
BR-0036/BR-0039 :RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY THE STATE.

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

## BOUNDARIES AND PROPERTY:

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

## BUILDINGS AND OTHER CULTURE:

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

## HYDROLOGY:

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

## RAILROADS:

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

## RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	▲
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	○ R W
New Right of Way Line with Pin and Cap	○ R W ▲
New Right of Way Line with Concrete or Granite R/W Marker	▲ R W
New Control of Access Line with Concrete C/A Marker	△ R W
Existing Control of Access	△
New Control of Access	△
Existing Easement Line	--- E ---
New Temporary Construction Easement	--- E ---
New Temporary Drainage Easement	--- TDE ---
New Permanent Drainage Easement	--- PDE ---
New Permanent Drainage / Utility Easement	--- DUE ---
New Permanent Utility Easement	--- PUE ---
New Temporary Utility Easement	--- TUE ---
New Aerial Utility Easement	--- AUE ---

## ROADS AND RELATED FEATURES:

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

## VEGETATION:

Single Tree	☼
Single Shrub	☼

Note: Not to Scale

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

Hedge	-----
Woods Line	-----
Orchard	☼
Vineyard	□ Vineyard

## EXISTING STRUCTURES:

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

## UTILITIES:

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

## TELEPHONE:

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

## WATER:

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

## TV:

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

## GAS:

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

## SANITARY SEWER:

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

## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line LOS B (S.U.E.*)	--- 7UTL ---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

09/08/99

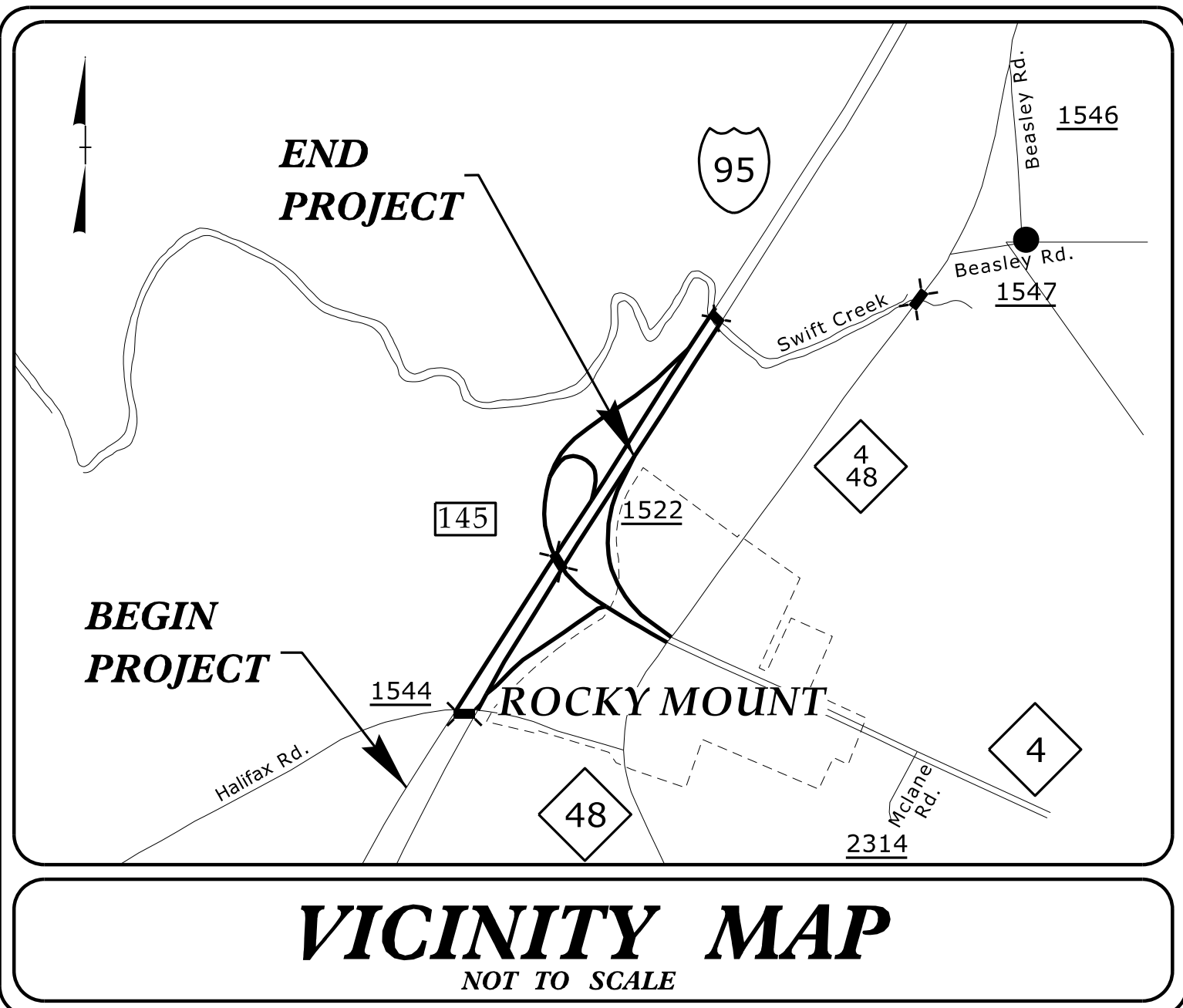
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# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS NASH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-5980</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47617.1.1	NHP-1522(005)	PE	
47617.2.1	NHP-1522(005)	ROW/UTILITIES	
47617.3.1	NHP-1522(005)	CONSTRUCTION	

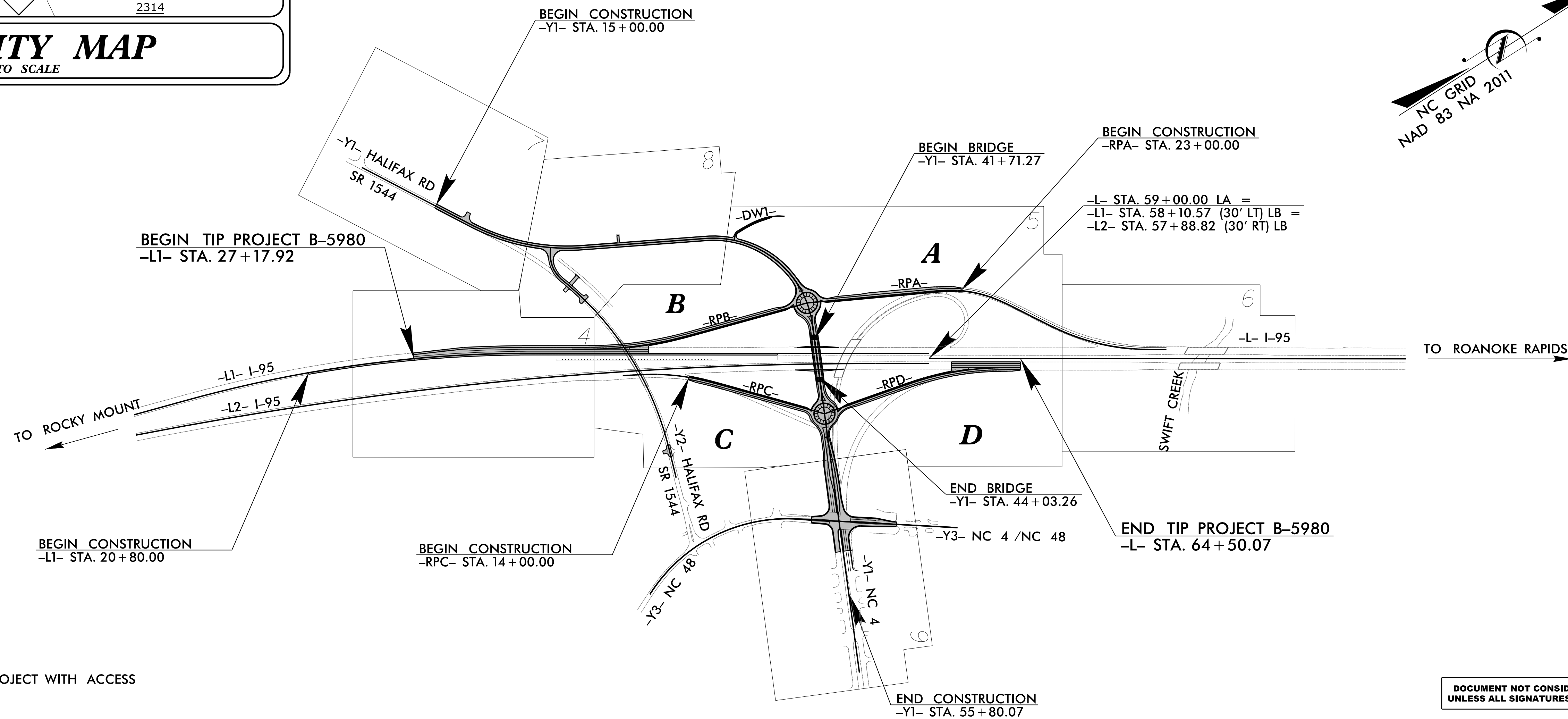
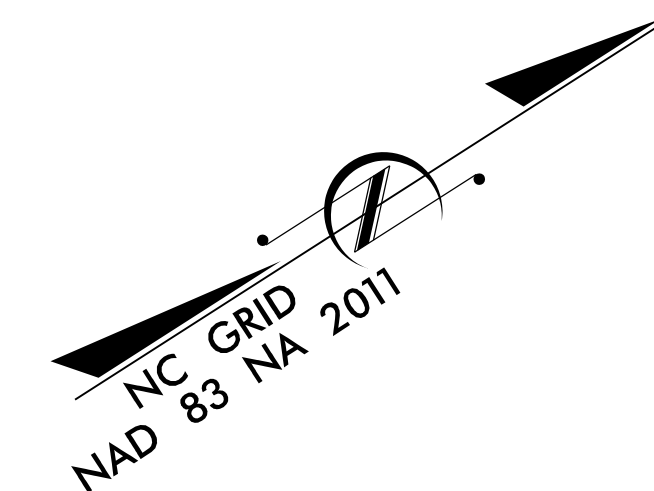
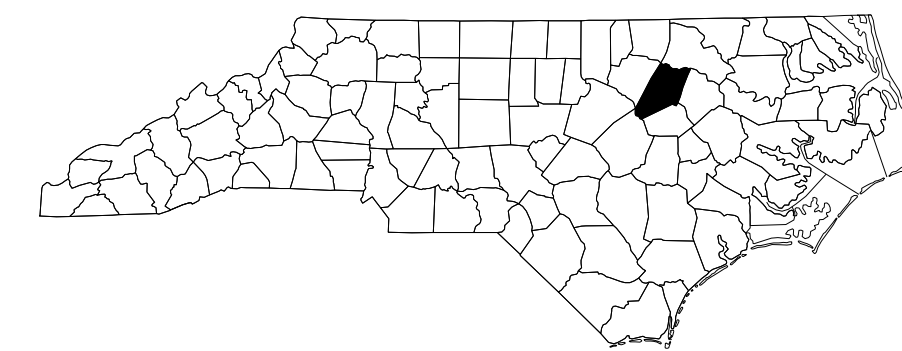
**TIP PROJECT: B-5980**

**CONTRACT: C204350**



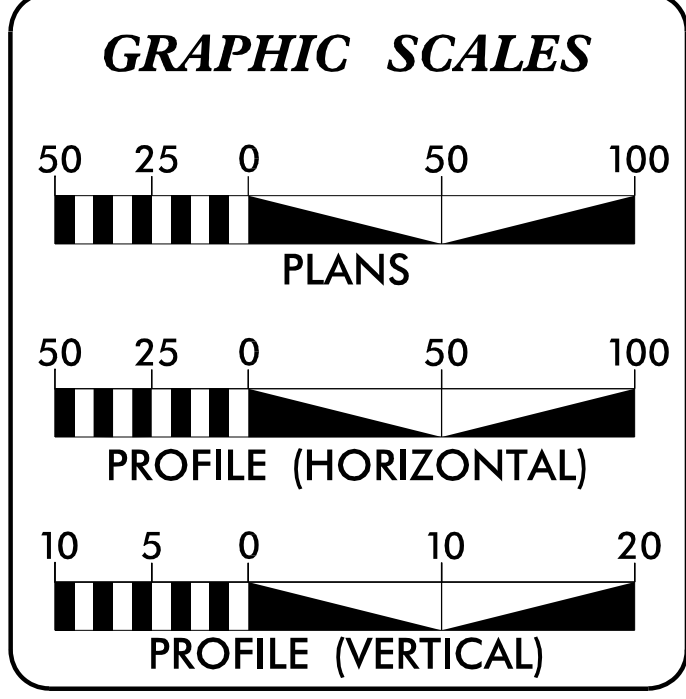
**LOCATION: I-95 INTERCHANGE IMPROVEMENTS  
AT HALIFAX ROAD (SR 1544)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, UTILITY CONSTRUCTION,  
AND STRUCTURES**



THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO INTERCHANGES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**

ADT 2020 =	29,090
ADT 2040 =	39,700
K =	6 %
D =	55 %
T =	17 % *
V =	75 MPH
* (TTST 15% + DUAL 2%)	
FUNC CLASS =	INTERSTATE STATEWIDE TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5980 =	0.690 MILES
TOTAL LENGTH OF TIP PROJECT B-5980 =	0.690 MILES

Prepared in the Office of:

**AECOM**  
NC FIRM LICENSE No: F-0342  
701 Corporate Center Drive, Suite 475  
Raleigh, NC 27607  
(919) 854-6200 - (919) 854-6259(FAX)

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
JANUARY 11, 2019

**LETTING DATE:**  
JUNE 15, 2021

**EDWARD G. EDENS, P.E.**  
PROJECT ENGINEER

**KIMBERLY A. KOIVUNIEMI, P.E.**  
PROJECT DESIGN ENGINEER

**RUSSELL BROADWELL, P.E.**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

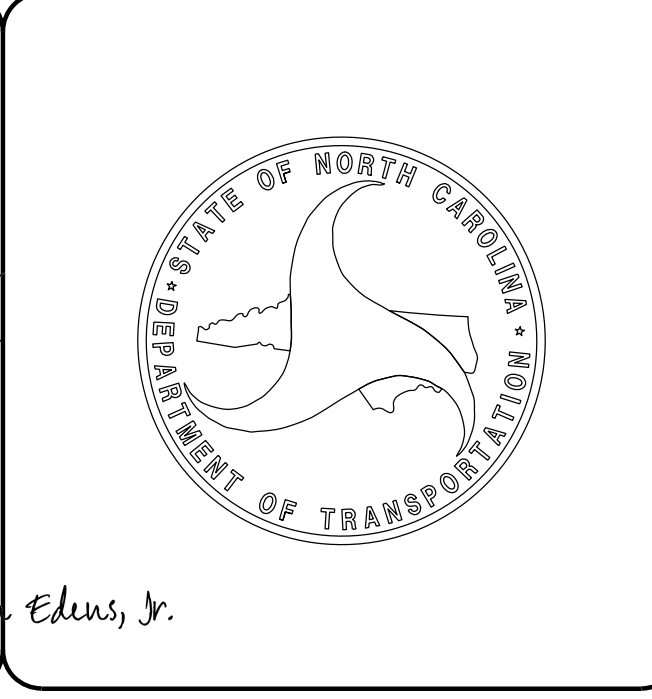
**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

Seal: NORTH CAROLINA PROFESSIONAL SEAL 10746

Seal: NORTH CAROLINA PROFESSIONAL SEAL 18470



3/1/2021 R:\Roadway\Proj\B5980\_rdy\_tsh.dgn Morgan, Nelson



# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-5980	RW02C-2
<b>Location and Surveys</b>	
INSERT CONSULTANT'S NAME	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
100		BL-100	840527.9700	2346178.4630	157.07
101		BL-101	841205.9740	2346446.6420	151.89
1		B5980-1	841926.9130	2346794.0350	145.92
2		B5980-2	842824.2450	2347245.9400	137.95
102		BL-102	843310.3300	2347509.3190	136.50
103		BL-103	843782.4140	2347782.5700	138.20
104		BL-104	844251.1210	2348069.7390	136.47
105		BL-105	844766.0830	2348398.8410	130.57
106		BL-106	845271.3370	2348724.2260	125.13
107		BL-107	846009.6380	2349204.3960	118.81
3		B5980-3	846790.8150	2349698.4290	118.99
4		B5980-4	847526.6590	2350169.8940	126.23

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
	113	BY1-113	842467.6250	2348670.5920	126.07
	114	BY1-114	842897.4600	2348545.6700	137.21
	115	BY1-115	843444.4800	2348646.9610	144.47
	BY15	B5980-5	843680.0000	2348975.4260	140.20

BY	POINT	DESC.	NORTH	EAST	ELEVATION
	108	BY-108	842474.3810	2345468.0850	147.60
	109	BY-109	843026.0650	2346436.3990	151.41
	110	BY-110	843236.0720	2347066.4390	152.37
	111	BY-111	843244.1120	2347637.6090	156.09
	112	BY-112	843121.7050	2347991.9410	140.84
	BY114	BY1-114	842897.4600	2348545.6700	137.23

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
	6	B5980-6	843349.0640	2349656.3760	133.17
	5	B5980-5	843680.0000	2348975.4260	140.20
	116	BY2-116	843944.0380	2348488.1060	148.73
	117	BY2-117	844198.7560	2348163.5690	158.13
	118	BY2-118	844744.0050	2348027.6340	149.52
	119	BY2-119	845327.8760	2348392.1550	128.50

\*\*\*\*\*  
 BM1 ELEVATION = 139.57  
 N 844439 E 2348872  
 NAIL SET IN 32" PINE  
 \*\*\*\*\*

\*\*\*\*\*  
 BM4 ELEVATION = 151.38  
 N 842477 E 2345413  
 NAIL SET IN 12" PINE  
 \*\*\*\*\*

\*\*\*\*\*  
 BM2 ELEVATION = 132.25  
 N 843420 E 2349938  
 NAIL SET IN 20" PINE  
 \*\*\*\*\*

\*\*\*\*\*  
 BM5 ELEVATION = 156.50  
 N 840384 E 2346248  
 NAIL SET IN 16" PINE  
 \*\*\*\*\*

\*\*\*\*\*  
 BM3 ELEVATION = 130.31  
 N 842379 E 2348687  
 NAIL SET IN 16" PINE  
 \*\*\*\*\*

\*\*\*\*\*  
 BM6 ELEVATION = 127.03  
 N 847346 E 2350172  
 NAIL SET IN 30" OAK  
 \*\*\*\*\*

- NOTES:
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
  - THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

6/2/09

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-5980	RW02C-3
Location and Surveys	
INSERT CONSULTANT'S NAME	

EL		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	842850.402	2347199.481	N 30°31'59.5" E	460.68					
PC	LINE	843247.198	2347433.522	N 30°57'48.2" E	114.94	00°51'37.5"(RT)	00°44'54.9"	114.94	57.47	7653.90
PT	LINE	843345.758	2347492.656	N 31°23'37.0" E	0.01					
PC	LINE	843345.755	2347492.661	N 32°01'57.9" E	1658.37	01°16'41.8"(RT)	00°04'37.5"	1658.41	829.24	74334.85
PT	LINE	844751.643	2348372.268	N 32°40'18.8" E	2865.89					
POT	LINE	847164.080	2349919.354							

EL1		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	840553.684	2346070.507	N 17°14'13.1" E	269.85					
PC	LINE	840811.418	2346150.471	N 18°04'02.9" E	326.88	01°39'39.6"(RT)	00°30'29.2"	326.89	163.46	11276.08
PT	LINE	841122.182	2346251.849	N 18°53'52.7" E	9.95					
PC	LINE	841131.597	2346255.072	N 20°36'06.5" E	408.38	03°24'27.5"(RT)	00°50'03.5"	408.44	204.28	6867.56
PT	LINE	841513.863	2346398.771	N 22°18'20.2" E	28.08					
PC	LINE	841539.838	2346409.427	N 24°07'01.5" E	465.11	03°37'22.7"(RT)	00°46'43.7"	465.19	232.67	7356.82
PT	LINE	841964.353	2346599.473	N 25°55'42.8" E	15.57					
PC	LINE	841978.359	2346606.283	N 27°40'54.4" E	450.18	03°30'23.2"(RT)	00°46'43.6"	450.25	225.19	7357.09
PT	LINE	842377.009	2346815.417	N 29°26'06.0" E	10.06					
PC	LINE	842385.770	2346820.361	N 30°58'14.2" E	415.44	03°04'16.4"(RT)	00°44'21.0"	415.49	207.80	7751.31
PT	LINE	842741.983	2347034.147	N 32°30'22.4" E	183.67					
POT	LINE	842896.876	2347132.848							

EL2		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	840490.048	2346202.460	N 21°57'25.2" E	211.90					
PC	LINE	840686.582	2346281.693	N 22°52'15.8" E	641.38	01°49'41.1"(RT)	00°17'06.1"	641.40	320.73	20102.80
PT	LINE	841277.533	2346530.969	N 23°47'06.3" E	123.75					
PC	LINE	841390.769	2346580.877	N 24°38'38.1" E	559.63	01°43'03.6"(RT)	00°18'24.9"	559.65	279.85	18668.01
PT	LINE	841899.426	2346814.230	N 25°30'09.9" E	90.17					
PC	LINE	841980.810	2346853.053	N 26°31'33.1" E	746.80	02°02'46.2"(RT)	00°16'26.3"	746.84	373.46	20912.57
PT	LINE	842648.997	2347186.575	N 27°32'56.2" E	182.54					
POT	LINE	842810.836	2347270.999							

EY		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	842453.137	2345483.150	N 60°14'53.1" E	1047.52					
PC	LINE	842972.965	2346392.589	N 61°57'17.0" E	182.33	03°24'47.9"(RT)	01°52'18.4"	182.36	91.21	3061.04
PT	LINE	843058.691	2346553.509	N 63°39'41.0" E	0.00					
PC	LINE	843058.691	2346553.510	N 67°42'04.3" E	213.33	08°04'46.6"(RT)	03°47'03.4"	213.50	106.93	1514.05
PT	LINE	843139.635	2346750.885	N 71°44'27.6" E	38.00					
PC	LINE	843151.542	2346786.973	N 75°25'34.0" E	240.76	07°22'12.7"(RT)	03°03'32.7"	240.93	120.63	1872.98
PT	LINE	843212.125	2347019.989	N 79°06'40.3" E	2.25					
PC	LINE	843212.549	2347022.194	N 83°36'29.9" E	286.01	08°59'39.1"(RT)	03°08'29.5"	286.30	143.44	1823.81
PT	LINE	843244.368	2347306.422	N 88°06'19.4" E	11.11					
PC	LINE	843244.756	2347317.530	S 86°21'51.7" E	363.51	11°03'37.7"(RT)	03°02'16.6"	364.08	182.61	1886.00
PT	LINE	843221.705	2347680.310	S 80°50'02.8" E	18.13					
PC	LINE	843218.817	2347698.209	S 75°59'30.9" E	282.64	09°41'03.8"(RT)	03°25'20.3"	282.98	141.83	1674.18
PT	LINE	843150.401	2347972.445	S 71°08'59.0" E	193.99					
PC	LINE	843087.725	2348156.028	S 72°24'56.4" E	171.08	02°31'54.7"(LT)	01°28'47.3"	171.10	85.56	3871.87
PT	LINE	843036.039	2348319.116	S 73°40'53.8" E	3.12					
PC	LINE	843035.164	2348322.106	S 72°35'07.7" E	205.31	02°11'32.2"(RT)	01°04'03.8"	205.32	102.67	5366.21
PT	LINE	842973.718	2348518.006	S 71°29'21.6" E	56.20					
POT	LINE	842955.874	2348571.303							

EY1		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	842470.829	2348710.469	N 24°23'28.7" W	75.76					
PC	LINE	842539.830	2348679.181	N 21°56'49.9" W	163.18	04°53'17.6"(RT)	02°59'41.0"	163.23	81.66	1913.22
PT	LINE	842691.183	2348618.193	N 19°30'11.0" W	0.01					
PC	LINE	842691.188	2348618.191	N 10°37'07.3" W	251.60	17°46'07.6"(RT)	07°02'02.5"	252.61	127.33	814.55
PT	LINE	842938.480	2348571.828	N 01°44'03.5" W	32.59					
PC	LINE	842971.051	2348570.842	N 16°59'34.6" E	611.16	37°27'16.1"(RT)	06°01'11.6"	622.18	322.66	951.78
PT	LINE	843555.529	2348749.456	N 35°43'12.7" E	509.52					
POT	LINE	843959.194	2349046.926							

EY2		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	843341.019	2349825.574	N 65°02'12.7" W	758.18					
PC	LINE	843361.000	2349138.219	N 64°44'21.9" W	125.89	00°35'41.6"(RT)	00°28'21.2"	125.89	62.95	12124.76
PT	LINE	843714.721	2349024.368	N 64°26'31.0" W	132.33					
POT	LINE	843771.812	2348904.986							

RPA		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	843330.825	2347580.729	N 34°09'42.0" E	7.58					
PC	LINE	843337.094	2347584.984	N 45°06'59.8" E	483.46	21°54'35.6"(RT)	04°38'15.4"	486.42	246.22	1272.03
PT	LINE	843678.259	2347927.540	N 56°04'17.6" E	522.54					
PC	LINE	843969.919	2348361.110	N 82°52'31.4" E	99.17	53°36'27.6"(RT)	52°06'30.2"	102.88	55.55	109.95
PT	LINE	843982.218	2348459.510	S 70°19'14.8" E	8.19					
PC	LINE	843979.458	2348467.225	S 63°51'41.6" E	62.44	12°55'06.5"(RT)	20°38'38.7"	62.58	31.42	277.54
PT	LINE	843951.949	2348523.284	S 57°24'08.3" E	152.06					
PC	LINE	843870.029	2348651.391	S 59°52'24.8" E	122.64	04°56'32.9"(LT)	04°01'43.6"	122.68	61.38	1422.17
PT	LINE	843808.473	2348757.466	S 62°20'41.2" E	142.63					
POT	LINE	843742.273	2348883.799							

RPB		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	843771.744	2348904.987	N 63°35'40.2" W	115.13					
PC	LINE	843822.947	2348880.865	N 61°26'23.4" W	292.12	04°18'33.5"(RT)	01°28'29.5"	292.19	146.16	3884.86
PT	LINE	843962.602	2348545.294	N 59°17'06.7" W	139.86					
PC	LINE	844034.036	2348425.057	N 54°51'18.8" W	200.97	08°51'35.9"(RT)	04°24'14.8"	201.17	100.79	1300.96
PT	LINE	844149.726	2348260.720	N 50°25'30.8" W	20.58					
PC	LINE	844162.834	2348244.860	N 38°25'00.8" W	283.77	24°01'00.0"(RT)	08°24'06.1"	285.85	145.06	681.95
PT	LINE	844385.168	2348068.534	N 26°24'30.8" W	10.01					
PC	LINE	844394.134	2348064.082	N 13°56'21.4" W	291.24	24°56'18.7"(RT)	08°29'43.7"	293.55	149.14	674.43
PT	LINE	844676.796	2347993.924	N 01°28'12.1" W	56.11					
PC	LINE	844732.883	2347992.485	N 11°24'35.9" E	267.64	25°45'36.0"(RT)	09°32'37.9"	269.91	137.28	600.34
PT	LINE	844995.238	2348045.432	N 24°17'23.9" E	0.40					
PC	LINE	844995.600	2348045.596	N 38°21'55.3" E	349.26	28°09'02.9"(RT)	07°58'45.1"	352.80	180.04	718.06
PT	LINE	845269.447	2348262.375	S 52°28'26.7" W	0.00					
PC	LINE	845269.447	2348262.374	N 55°56'50.9" E	174.84	07°00'48.4"(RT)	04°00'31.5"	174.95	87.59	1429.27
PT	LINE	845367.352	2348407.237	N 59°27'15.2" E	180.32					
PC	LINE	845458.996	2348562.534	N 55°45'36.0" E	221.21	07°23'18.3"(LT)	03°20'16.0"	221.36	110.83	1716.59
PT	LINE	845583.459	2348745.402	N 52°03'56.8" E	28.79					
PC	LINE	845601.157	2348768.107	N 44°29'27.4" E	280.94	15°08'58.8"(LT)	05°22'36.4"	281.76	141.71	1065.62
PT	LINE	845801.569	2348964.990	N 36°54'58.0" E	78.94					
POT	LINE	845864.682	2349012.404							

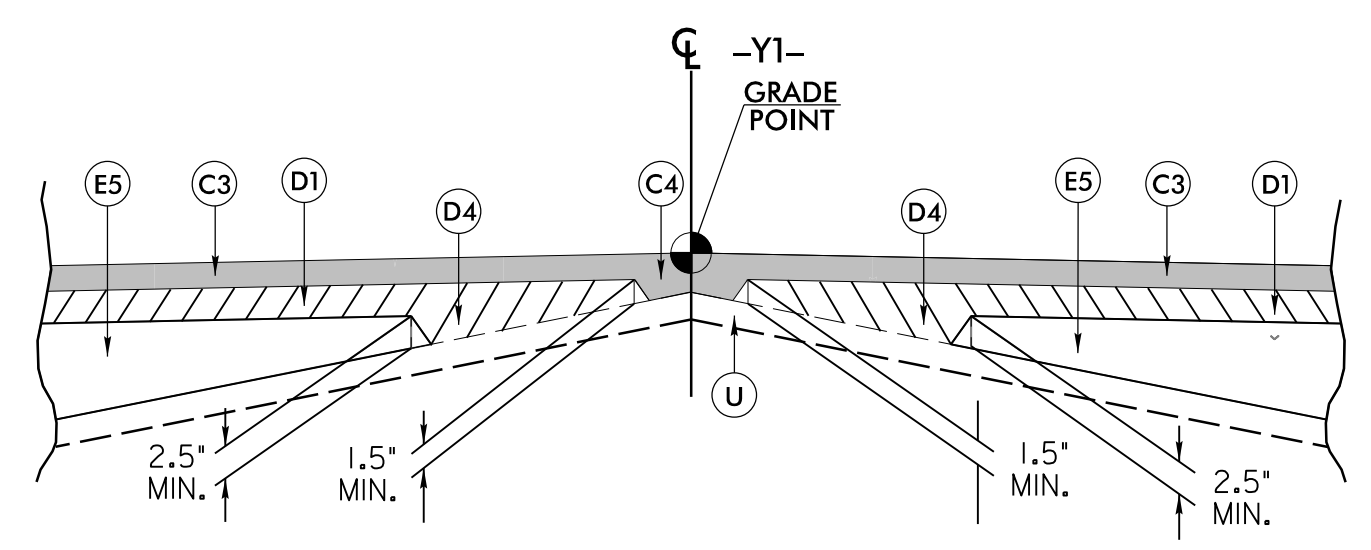
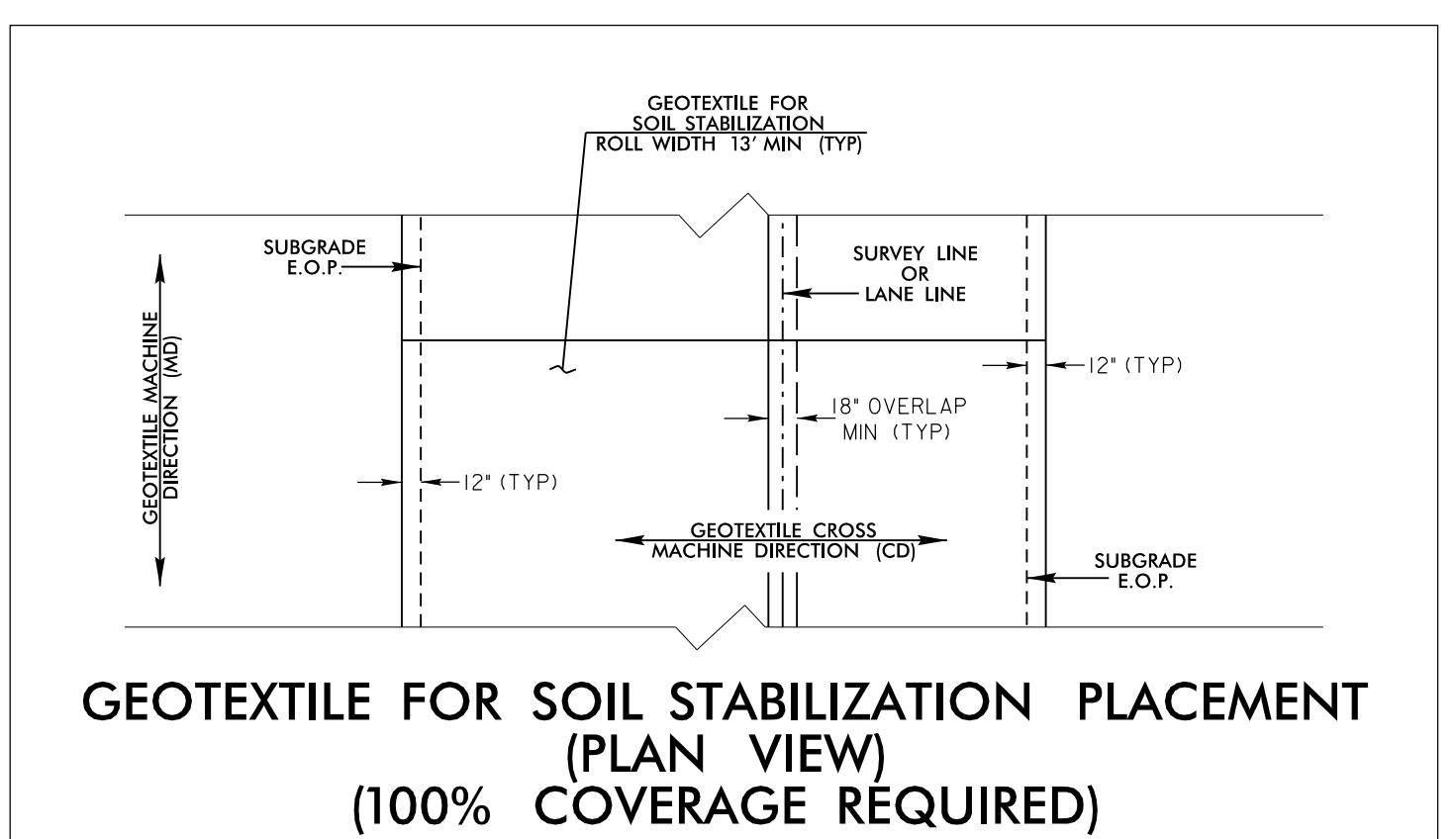
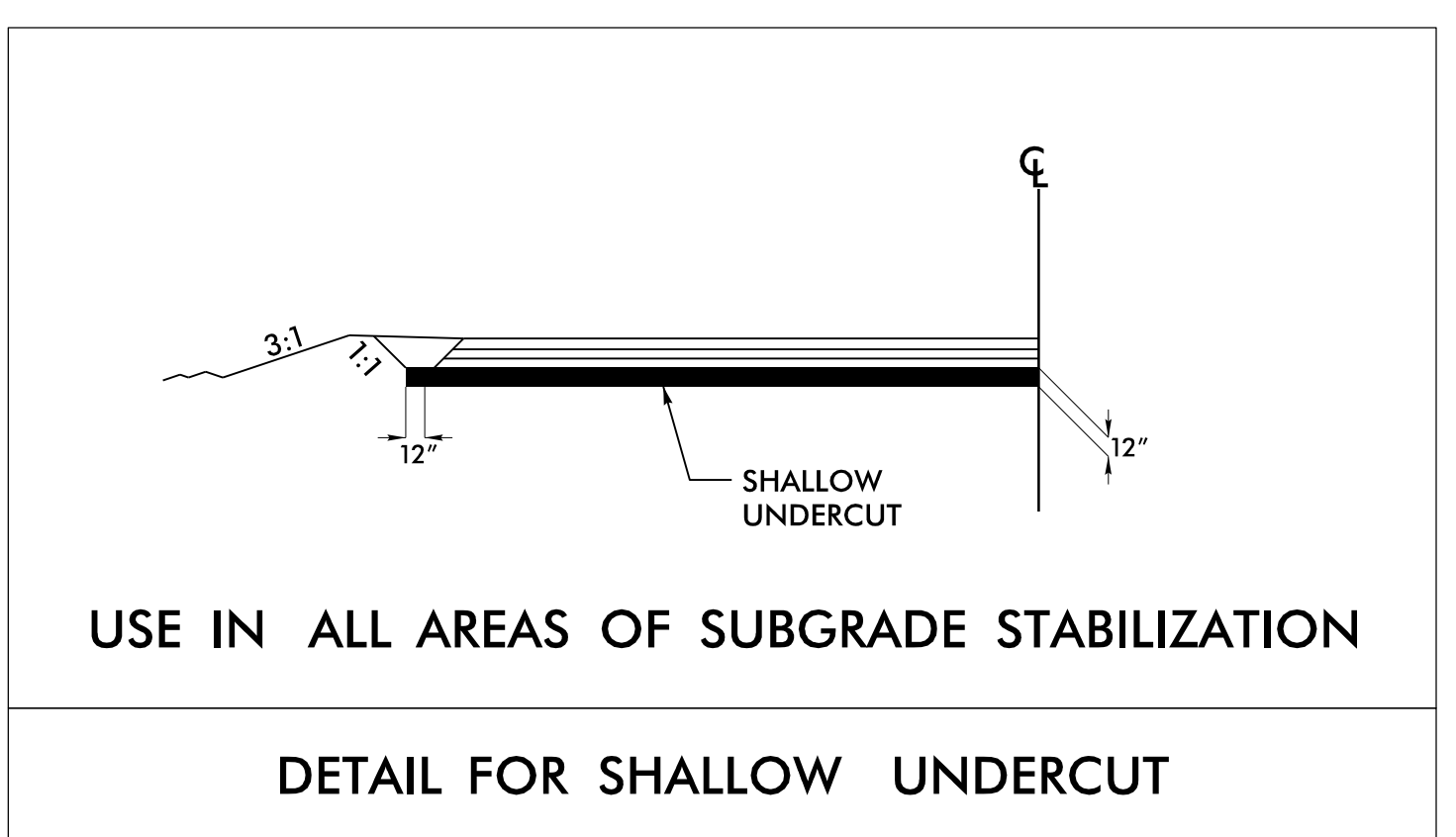
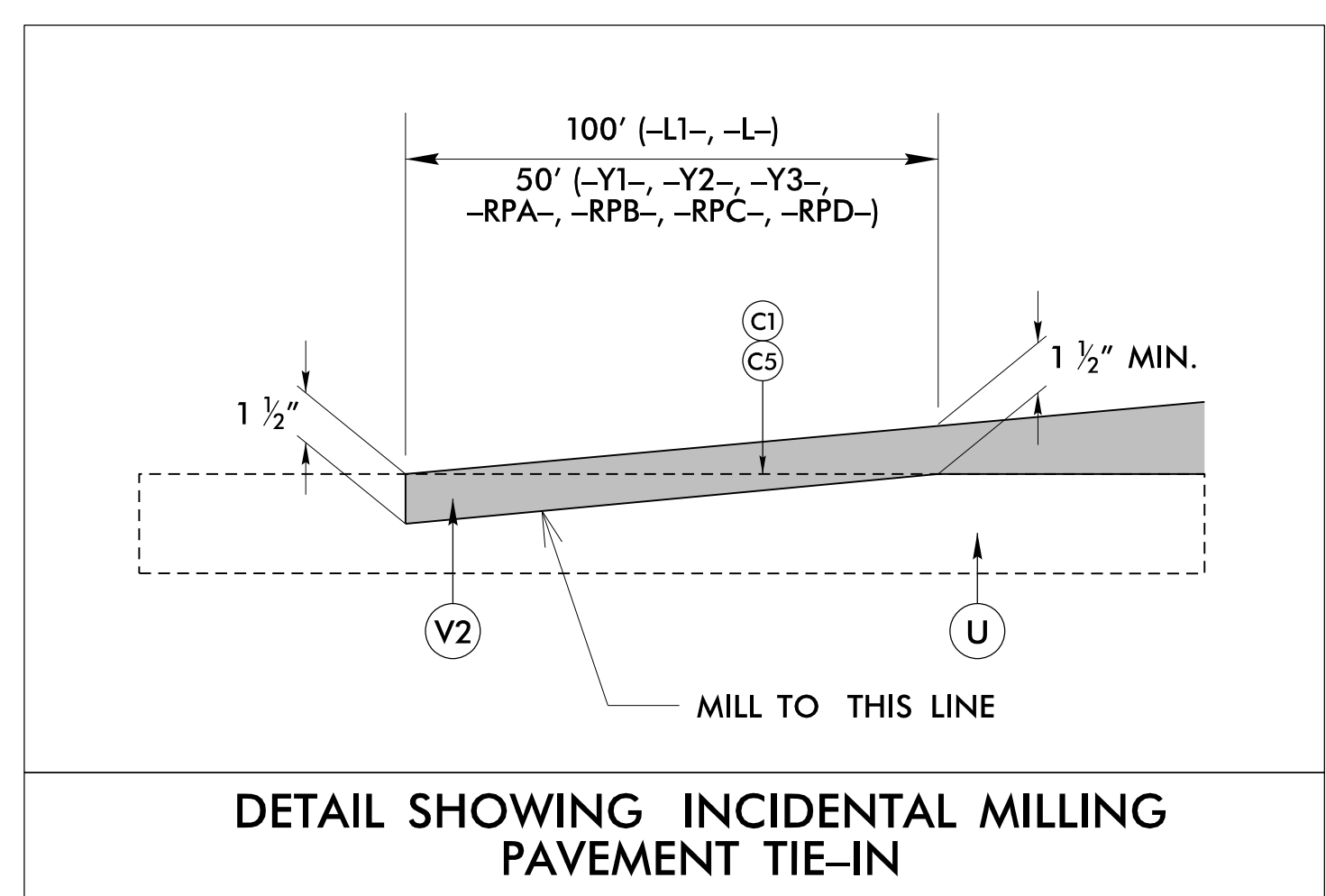
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6/2/2021

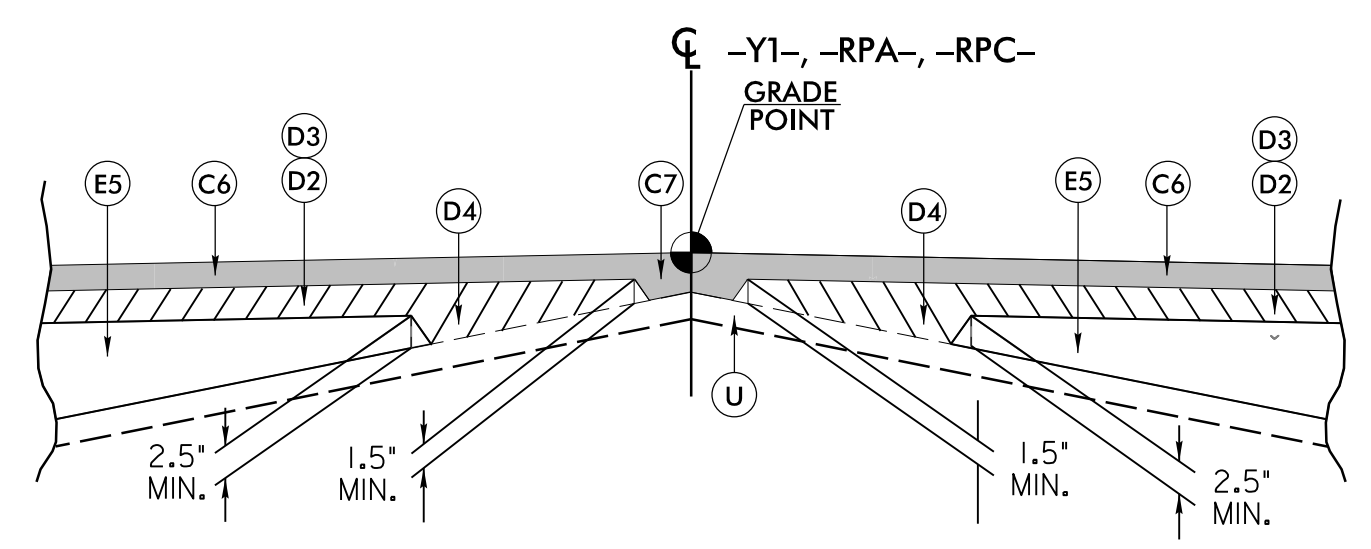
3/1/2021  
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 M. Moran

PROJECT REFERENCE NO. <b>B-5980</b>	SHEET NO. <b>2A-1</b>
ROADWAY DESIGN ENGINEER <b>SEAL 18470</b>	PAVEMENT DESIGN ENGINEER <b>SEAL 022896</b>
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27601 1991 854-6200 • 1991 854-6259 FAX	
<b>DOCUMENT NOT CONSIDERED FINAL                  UNLESS ALL SIGNATURES COMPLETED</b>	

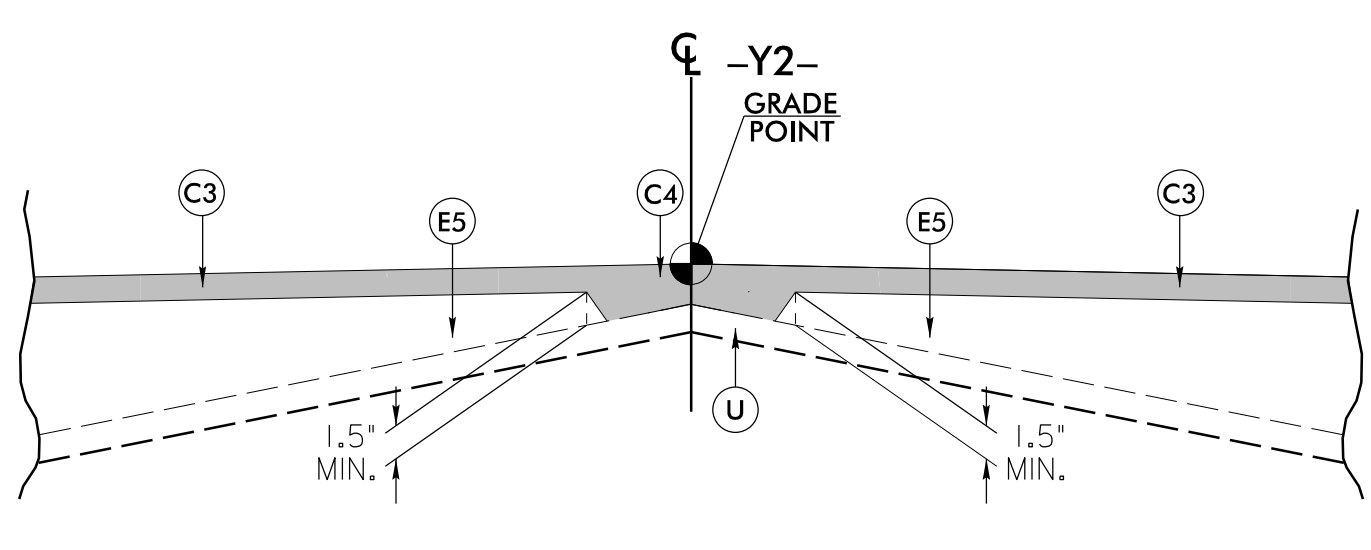
PAVEMENT SCHEDULE FINAL PAVEMENT DESIGN					
A1	PROP. APPROX. 11" JOINTED CONCRETE PAVEMENT WITH DOWELS.	D4	PROP. VAR. DEPTH ASPHALT CONCRETEE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.	R2	5" INCH MONOLITHIC CONCRETE ISLAND.
A2	PROP. TRUCK APRON.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.	R3	1'-6" CONCRETE CURB AND GUTTER, MODIFIED 11" DEPTH.
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E2	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE. TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YARD.	T	EARTH MATERIAL.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	E3	PROP. APPROX. 7.5" ASPHALT CONCRETE BASE COURSE. TYPE B25.0C, AT AN AVERAGE RATE OF 427.5 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.	U	EXISTING PAVEMENT.
C3	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.	E4	PROP. APPROX. 9.5" ASPHALT CONCRETE BASE COURSE. TYPE B25.0C, AT AN AVERAGE RATE OF 541.5 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.	V	1.5" MILLING.
C4	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 TO EXCEED 2" IN DEPTH.	E5	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT GREATER THAN 5.5" IN DEPTH OR LESS THAN 4" IN DEPTH.	V2	INCIDENTAL MILLING.
C5	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	J1	PROP. 4" AGGREGATE BASE COURSE.	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING NO. 1).
C6	PROP. APPROX 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.	J2	PROP. 6" AGGREGATE BASE COURSE.	W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING NO. 2).
C7	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	J3	PROP. 8" AGGREGATE BASE COURSE.	W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING NO. 3).
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	K	12" CLASS IV SUBGRADE STABILIZATION.	NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE	
D2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	N	GEOTEXTILE FOR SOIL STABILIZATION.		
D3	PROP. APPROX 4" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.	R1	1'-6" CONCRETE CURB AND GUTTER.		



USE THIS DETAIL IN CONJUNCTION WITH TYPICAL SECTION #10



USE THIS DETAIL IN CONJUNCTION WITH TYPICAL SECTIONS #3, 16



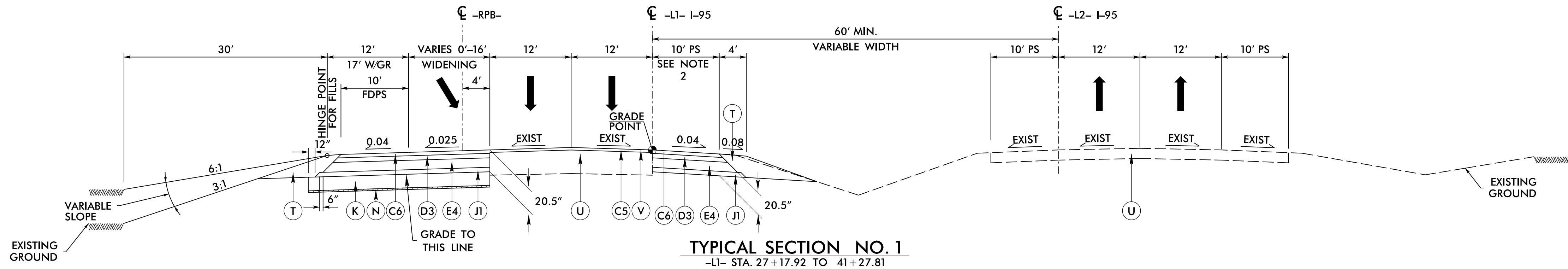
USE THIS DETAIL IN CONJUNCTION WITH TYPICAL SECTION #19



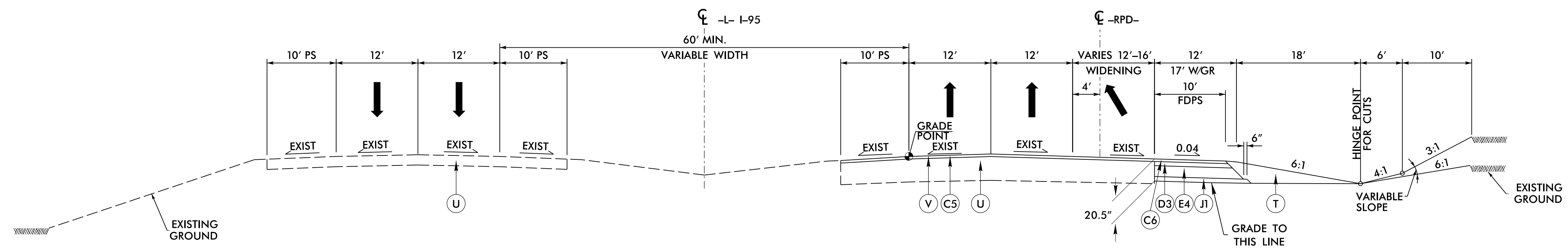
6/2/2021

3/1/2021  
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 Mccormick

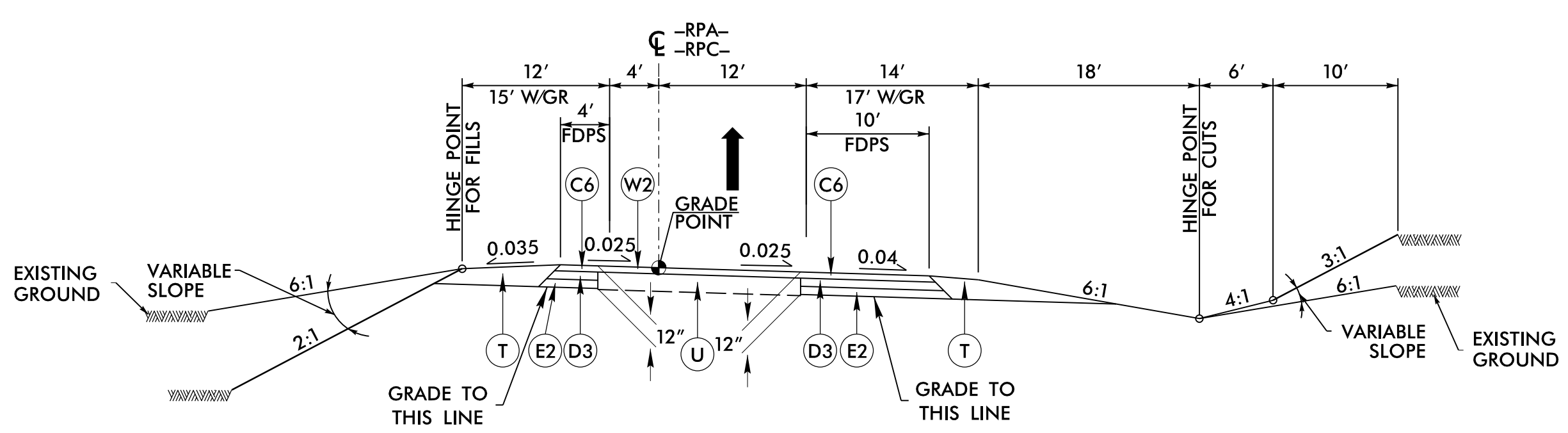
PROJECT REFERENCE NO. B-5980	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER EDWARD GLENN EDWARDS SEAL 18470 5/2/2021	PAVEMENT DESIGN ENGINEER EDWARD GLENN EDWARDS SEAL 022896 5/3/2021
Prepared in the Office of: <b>AECOM</b>	
NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27601 1991 854-6200 • 1991 854-6259 FAX	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



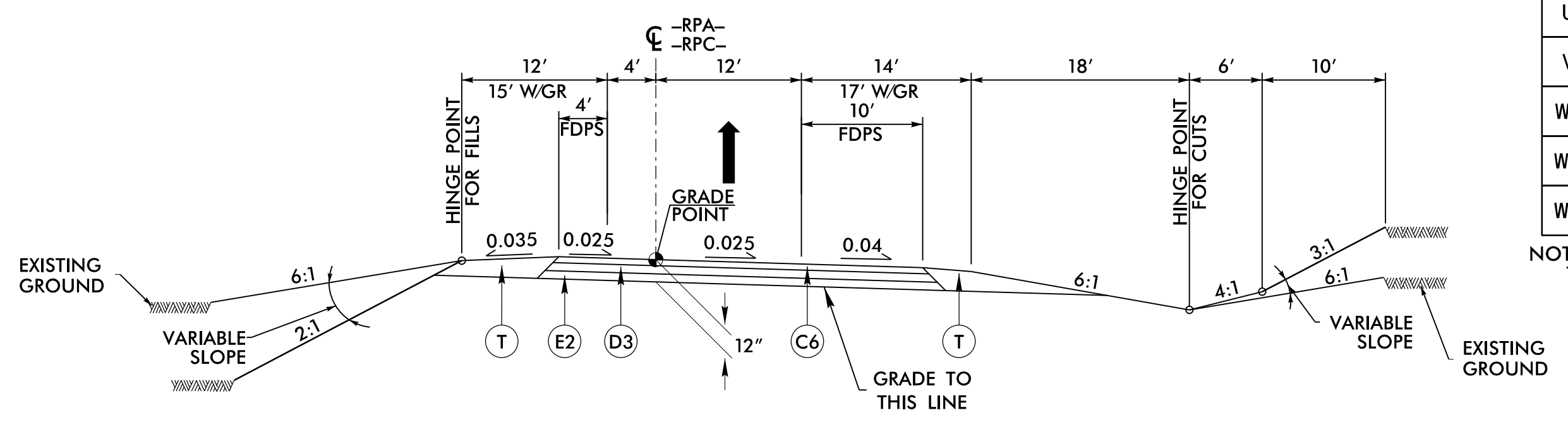
**TYPICAL SECTION NO. 1**  
 -L1- STA. 27+17.92 TO 41+27.81  
 -L2- STA. 27+18.00 TO 41+28.00  
 NOTE 1: MATCH THE NEW ABC LAYER TO THE EXISTING DRAINAGE SAND LAYER LOCATED OUTSIDE OF THE PROPOSED WIDENING  
 NOTE: SOIL STABILIZATION AND SHALLOW UNDERCUT FROM STA. 27+18.00 TO 41+28.00 (OFFSET VARIES SEE X&C FOR DETAILS)  
 NOTE 2: SHOULDER RECONSTRUCTION -L1- STA. 20+80.00 TO 49+00.00



**TYPICAL SECTION NO. 2**  
 -L- STA. 60+35.90 TO 64+50.07  
 NOTE: MATCH THE NEW ABC LAYER TO THE EXISTING DRAINAGE SAND LAYER LOCATED OUTSIDE OF THE PROPOSED WIDENING



**TYPICAL SECTION NO. 3**  
 -RPA- STA. 23+00.00 TO 25+81.40  
 -RPC- STA. 14+00.00 TO 17+25.36  
 TRANSITION FROM TYPICAL SECTION NO. 3 TO NO. 4  
 -RPA- STA. 24+91.67 TO 25+81.40  
 -RPC- STA. 15+60.50 TO 17+25.36



**TYPICAL SECTION NO. 4**  
 -RPA- STA. 25+81.40 TO 30+96.96  
 -RPC- STA. 17+25.36 TO 21+17.41

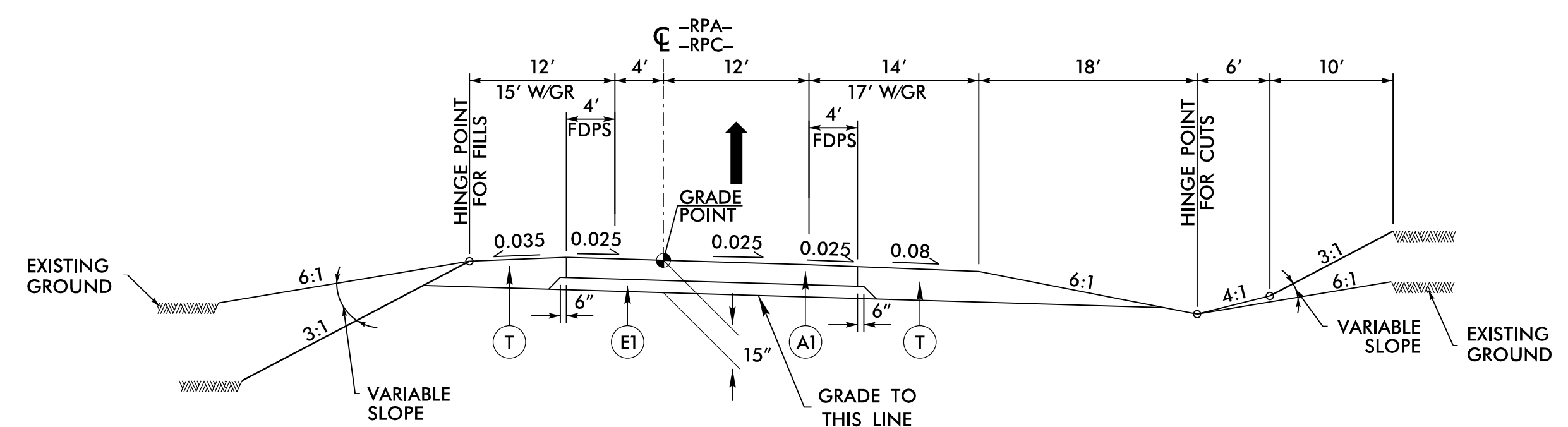
A1	11" CONC. PAVE. W/ DOWELS
A2	TRUCK APRON
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. S9.5C
C5	1.5" S9.5D
C6	3" S9.5D
C7	VAR. S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7.5" B25.0C
E4	9.5" B25.0C
E5	VAR. B25.0C
J1	4" ABC
J2	6" ABC
J3	8" ABC
K	12" CLS IV SBGRD STBL
N	GEOTX FOR SOIL STBL
R1	1'-6" C&G
R2	5" MONO CONC ISLAND
R3	1'-6" C&G (11' DEPTH)
T	EARTH MATERIAL
U	EXIST. PVMNT.
V	1.5" MILLING
W1	WEDGE DET. NO. 1
W2	WEDGE DET. NO. 2
W3	WEDGE DET. NO. 3

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

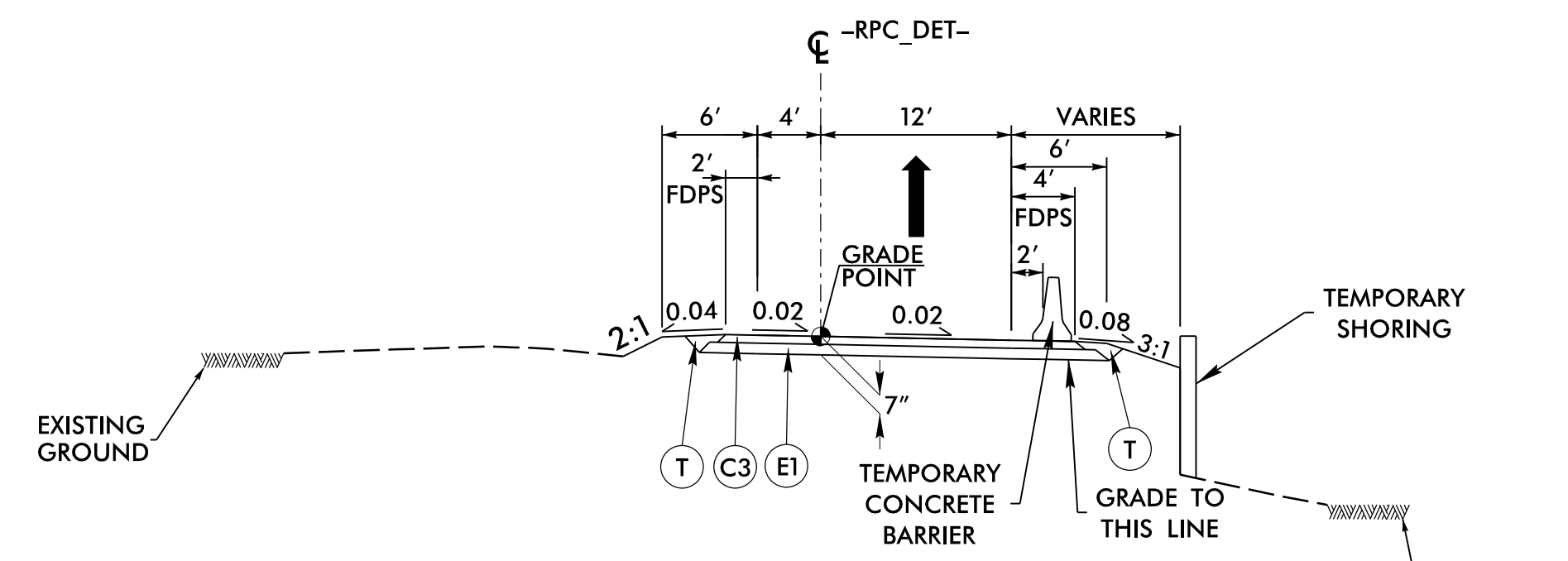
6/2/2021

3/1/2021  
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 Mccormick

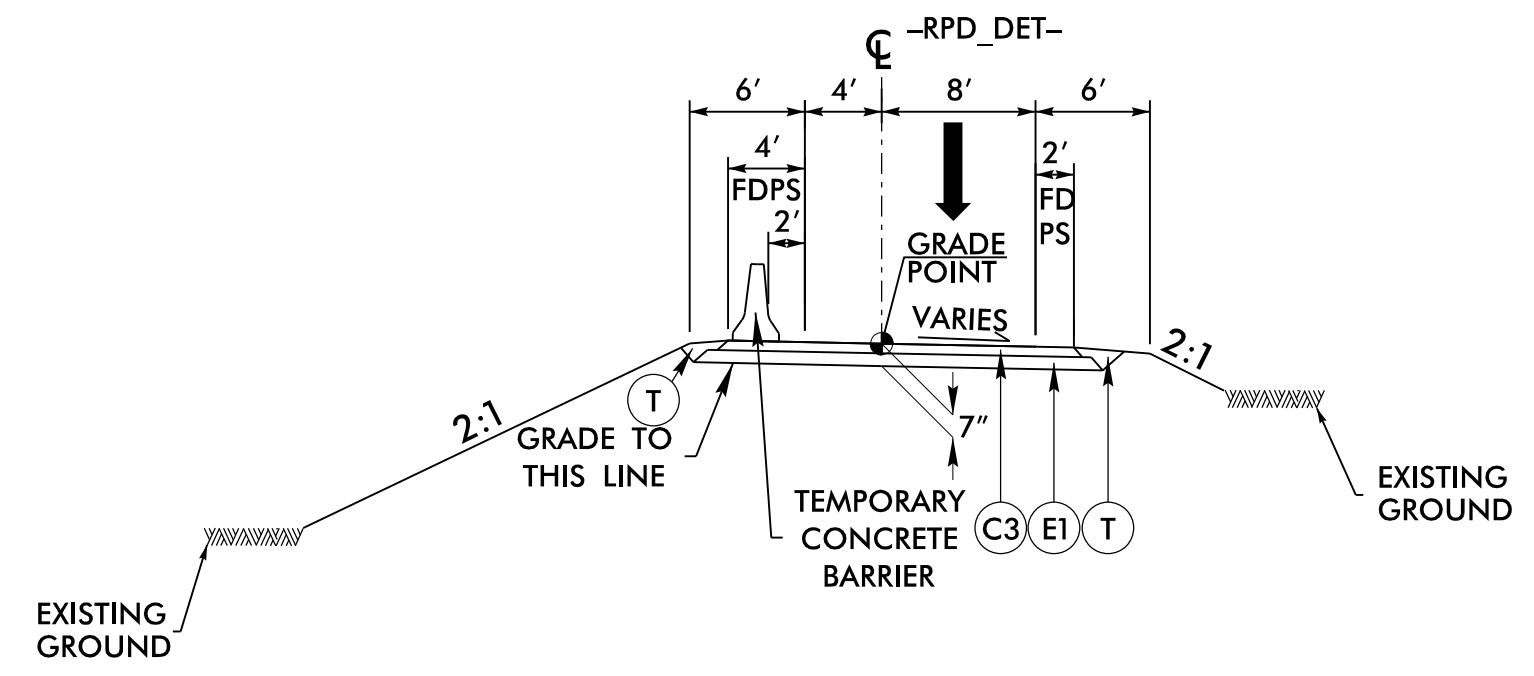
PROJECT REFERENCE NO. B-5980	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
Prepared in the Office of: <b>AECOM</b> <small>NC FIRM LICENSE No: F-0342                  701 Corporate Center Drive, Suite 475                  Raleigh, NC 27601                  1919 854-6200 • 1919 854-6259 FAX</small>	
<b>DOCUMENT NOT CONSIDERED FINAL                  UNLESS ALL SIGNATURES COMPLETED</b>	



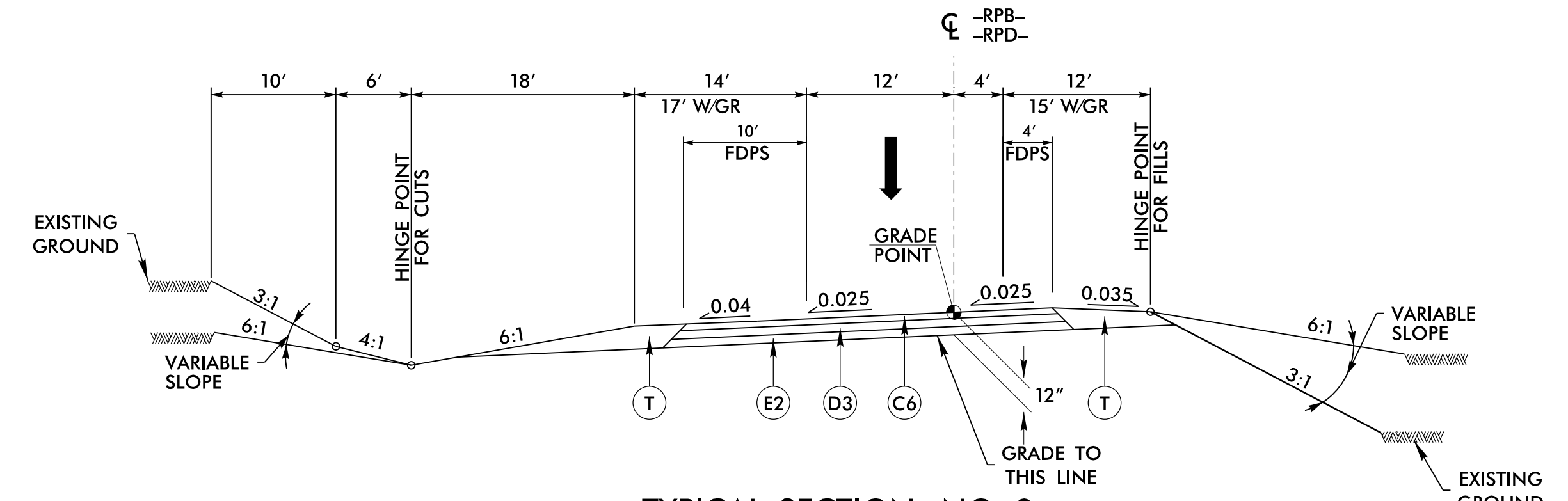
**TYPICAL SECTION NO. 5**  
 -RPA- STA. 30+96.96 TO 31+43.86 (BEGIN ROUNDABOUT)  
 -RPC- STA. 21+17.41 TO 21+57.92 (BEGIN ROUNDABOUT)  
 REFER TO SHEET 2B-1 AND 2B-2 FOR ROUNDABOUT DETAILS



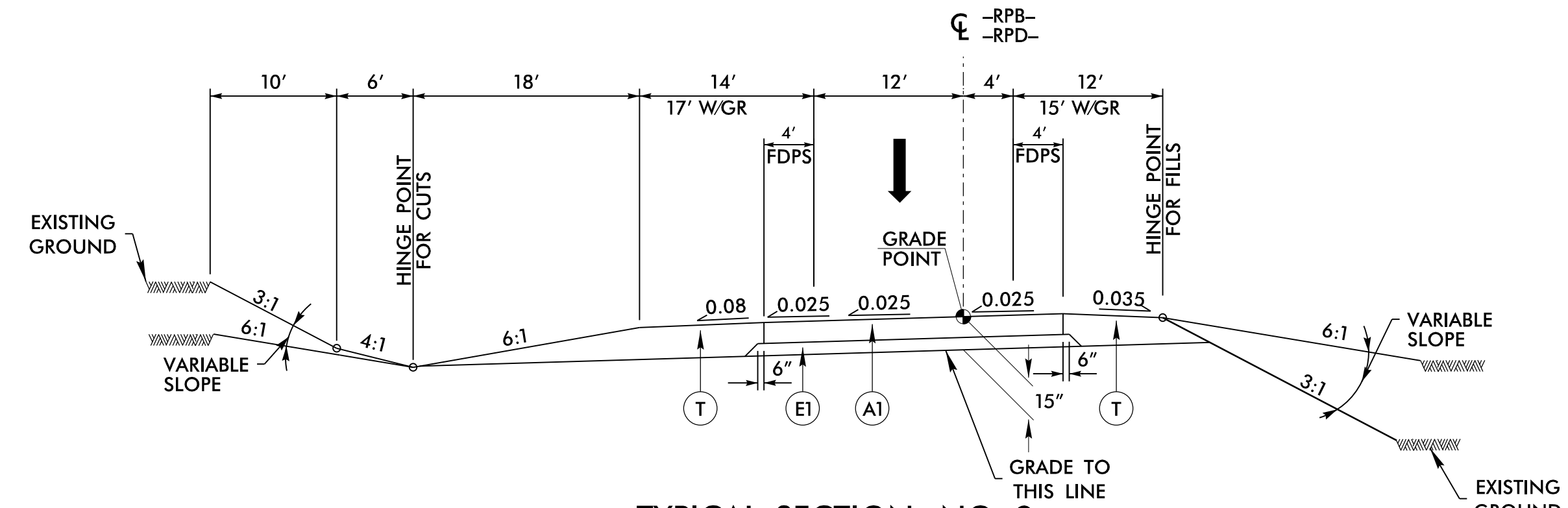
**TYPICAL SECTION NO. 6**  
 -RPC\_DET- 10+00.00 TO 14+17.80



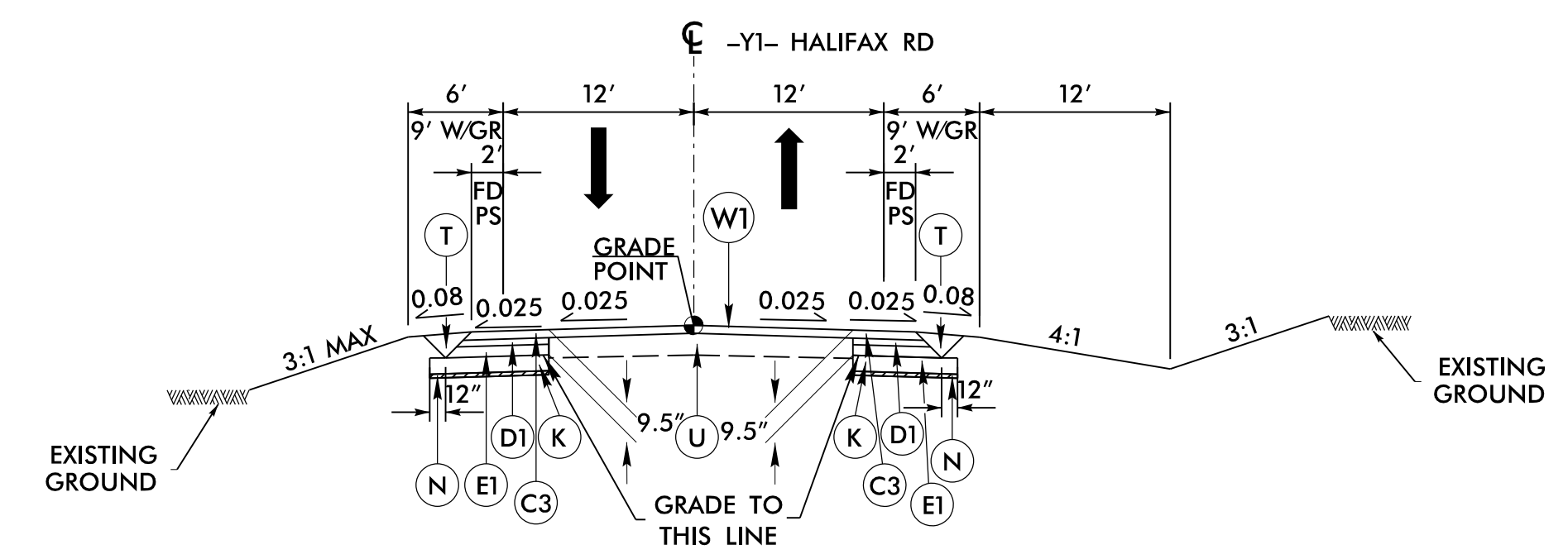
**TYPICAL SECTION NO. 7**  
 -RPD\_DET- 10+00.00 TO 13+36.94



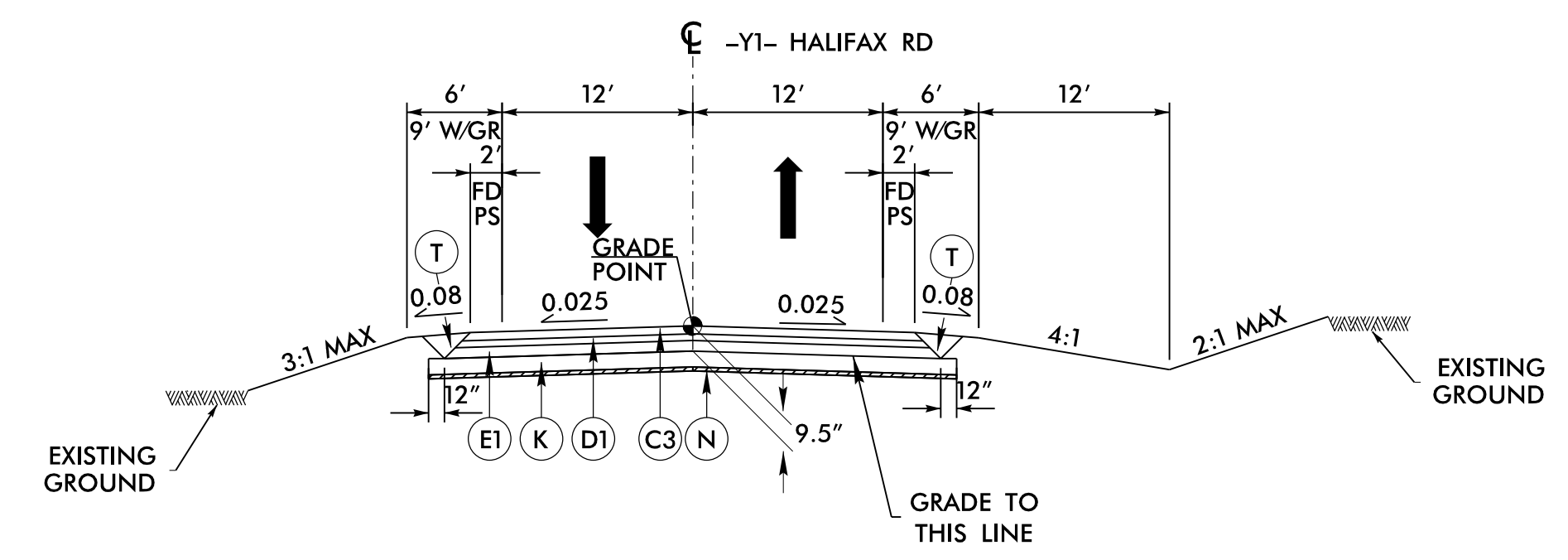
**TYPICAL SECTION NO. 8**  
 -RPB- 14+60.26 TO 22+99.10  
 -RPD- 14+14.49 TO 20+62.50



**TYPICAL SECTION NO. 9**  
 -RPB- 22+99.10 TO 23+60.76 (BEGIN ROUNDABOUT)  
 -RPD- 20+62.50 TO 21+34.55 (BEGIN ROUNDABOUT)  
 REFER TO SHEET 2B-1 AND 2B-2 FOR ROUNDABOUT DETAILS



**TYPICAL SECTION NO. 10**  
 -Y1- STA. 15+00.00 TO 18+00.00  
 NOTE: SOIL STABILIZATION AND SHALLOW UNDERCUT FROM STA. 15+00.00 TO 19+25.00 (OFFSET VARIES SEE XSC FOR DETAILS)



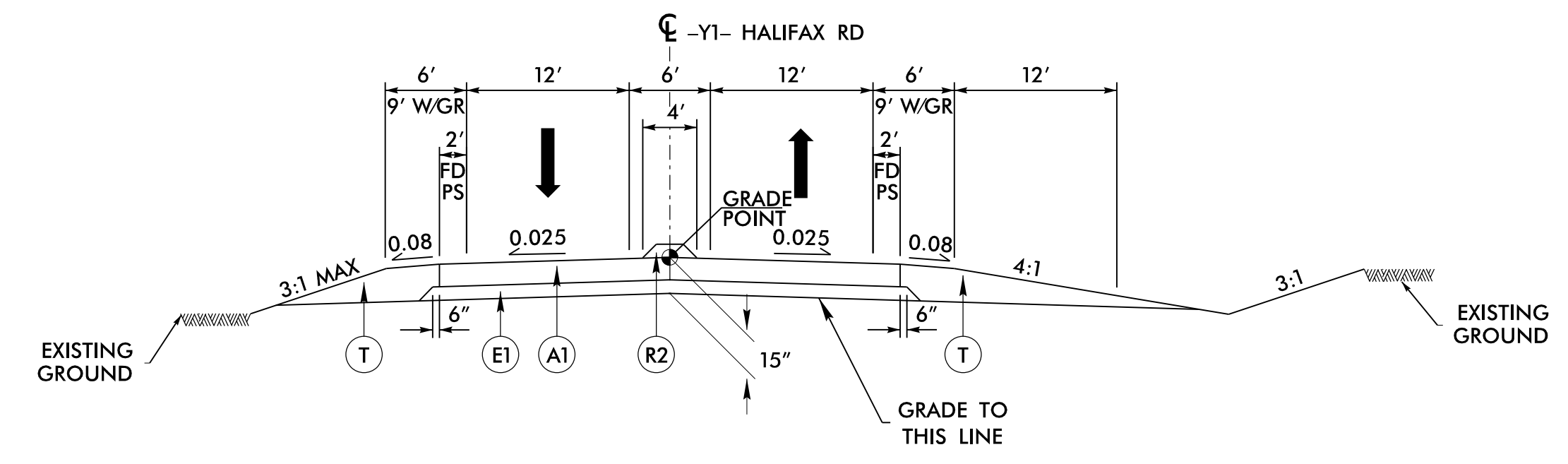
**TYPICAL SECTION NO. 11**  
 -Y1- STA. 18+00.00 TO 36+00.00  
 NOTE: SOIL STABILIZATION AND SHALLOW UNDERCUT FROM STA. 15+00.00 TO 19+25.00 (OFFSET VARIES SEE XSC FOR DETAILS)

A1	11" CONC. PAVE. W/ DOWELS
A2	TRUCK APRON
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. S9.5C
C5	1.5" S9.5D
C6	3" S9.5D
C7	VAR. S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7.5" B25.0C
E4	9.5" B25.0C
E5	VAR. B25.0C
J1	4" ABC
J2	6" ABC
J3	8" ABC
K	12" CLS IV SBGRD STBL
N	GEOTX FOR SOIL STBL
R1	1'-6" C&G
R2	5" MONO CONC ISLAND
R3	1'-6" C&G (11' DEPTH)
T	EARTH MATERIAL
U	EXIST. PVMNT.
V	1.5" MILLING
W1	WEDGE DET. NO. 1
W2	WEDGE DET. NO. 2
W3	WEDGE DET. NO. 3

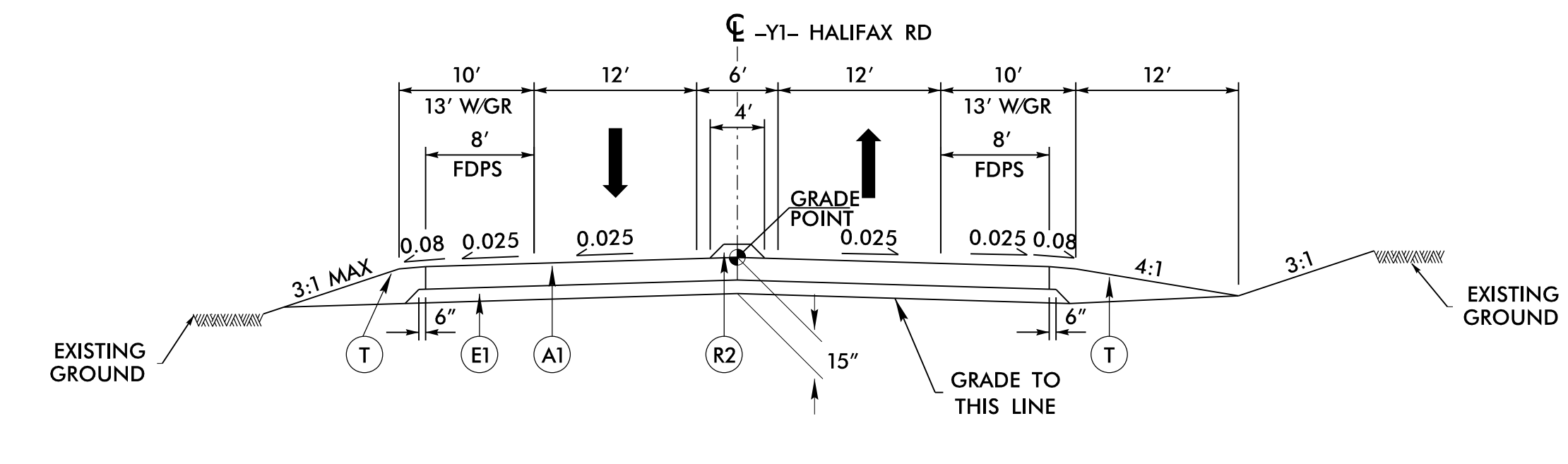
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

6/12/2021

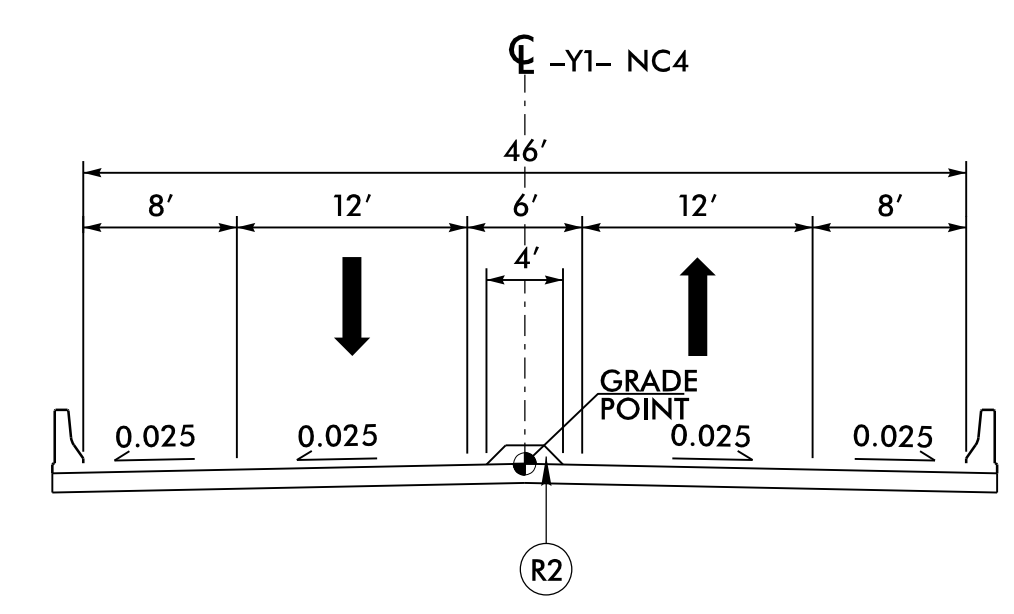
PROJECT REFERENCE NO. B-5980	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER SEAL 18470 EDWARD GLENN EDWARDS 5/2/2021	PAVEMENT DESIGN ENGINEER SEAL 022896 EDWARD GLENN EDWARDS 5/3/2021
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27603 1991 854-6200 / 1991 854-6259 FAX	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



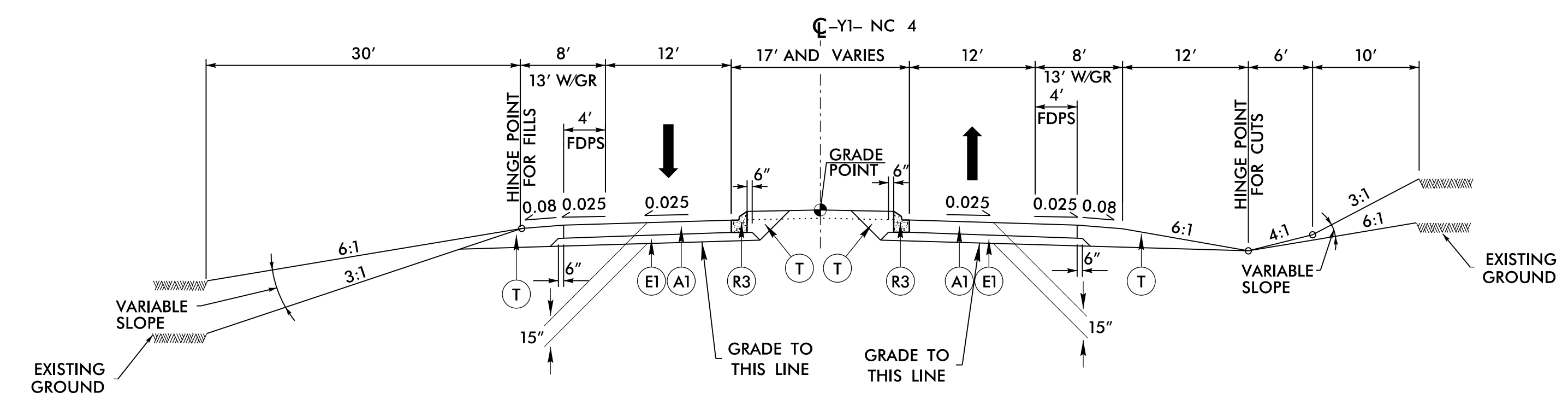
**TYPICAL SECTION NO. 12**  
-Y1- STA. 36+00.00 TO 38+67.70 (BEGIN ROUNDABOUT)



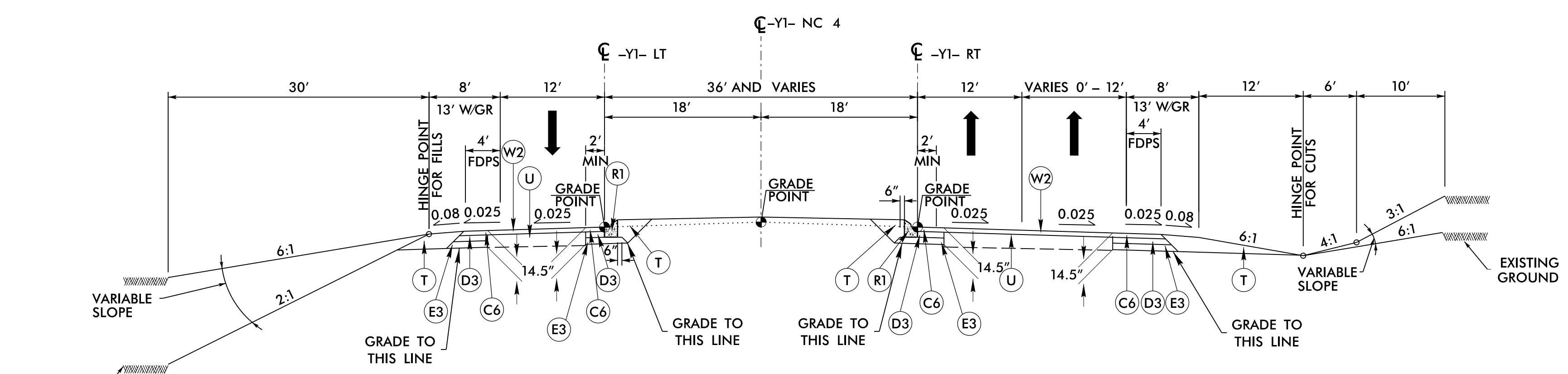
**TYPICAL SECTION NO. 13**  
-Y1- STA. 40+27.81 (END ROUNDABOUT) TO 41+71.27 (BEGIN BRIDGE)  
-Y1- STA. 44+03.26 (END BRIDGE) TO 45+42.02 (BEGIN ROUNDABOUT)



**TYPICAL SECTION NO. 14**  
-Y1- STA. 41+71.27 TO 44+03.26



**TYPICAL SECTION NO. 15**  
-Y1- STA. 47+02.02 (END ROUNDABOUT) TO 47+64.09



**TYPICAL SECTION NO. 16**  
-Y1- STA. 47+64.09 TO 52+50.00  
NOTE: -Y1- LT & RT GRADE POINTS APPLICABLE -Y1- STA. 49+50.00 TO 52+50.00

A1	11" CONC. PAVE. W/ DOWELS
A2	TRUCK APRON
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. S9.5C
C5	1.5" S9.5D
C6	3" S9.5D
C7	VAR. S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7.5" B25.0C
E4	9.5" B25.0C
E5	VAR. B25.0C
J1	4" ABC
J2	6" ABC
J3	8" ABC
K	12" CLS IV SBGRD STBL
N	GEO TX FOR SOIL STBL
R1	1'-6" C&G
R2	5" MONO CONC ISLAND
R3	1'-6" C&G (11' DEPTH)
T	EARTH MATERIAL
U	EXIST. PVMNT.
V	1.5" MILLING
W1	WEDGE DET. NO. 1
W2	WEDGE DET. NO. 2
W3	WEDGE DET. NO. 3

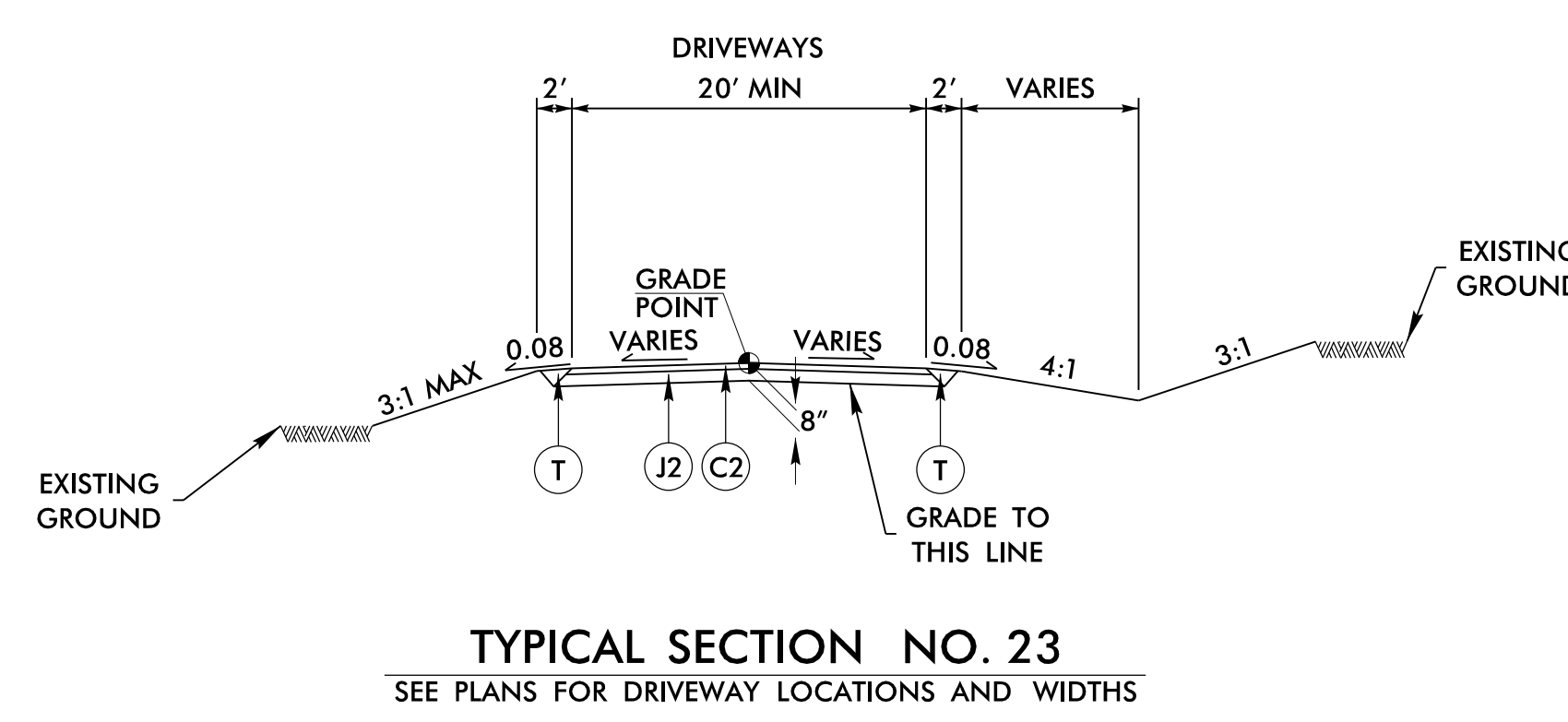
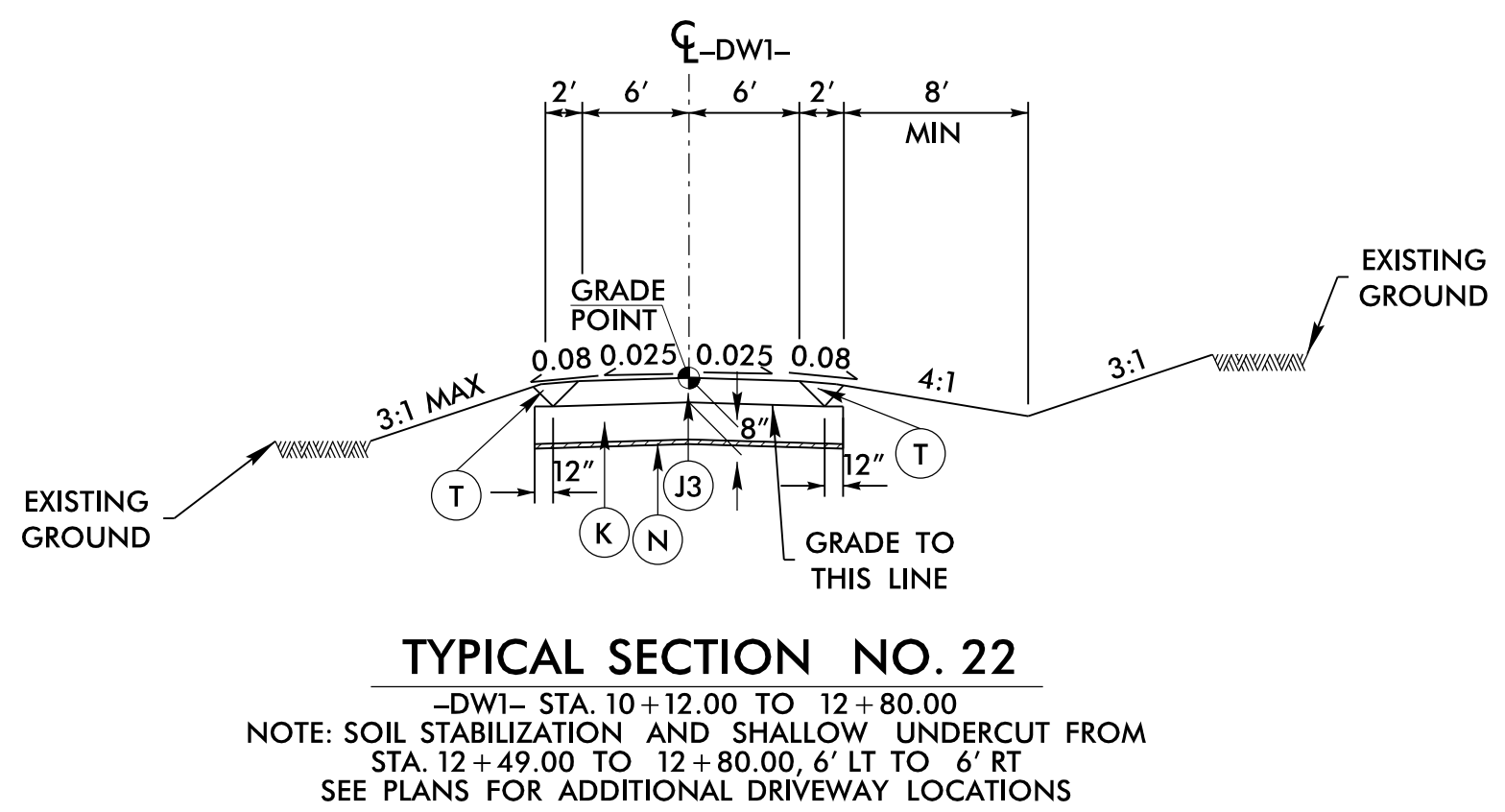
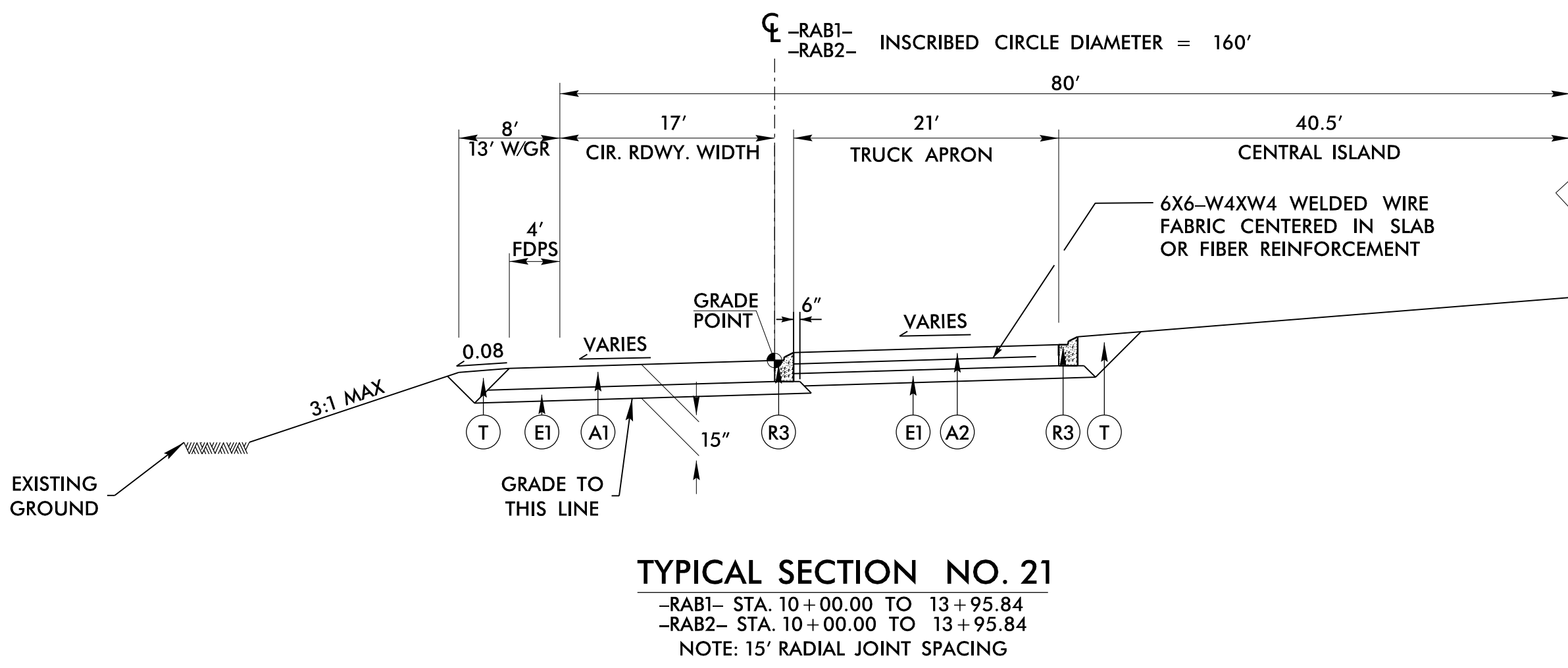
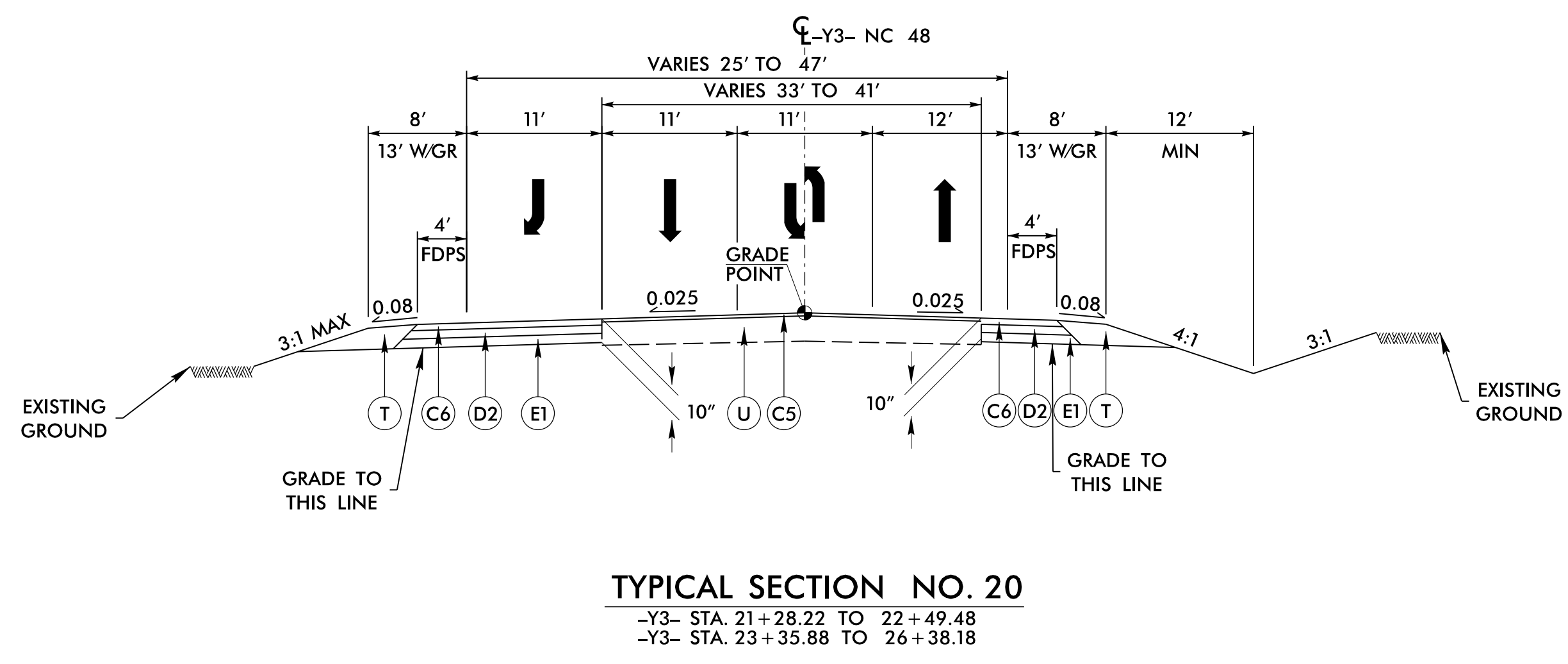
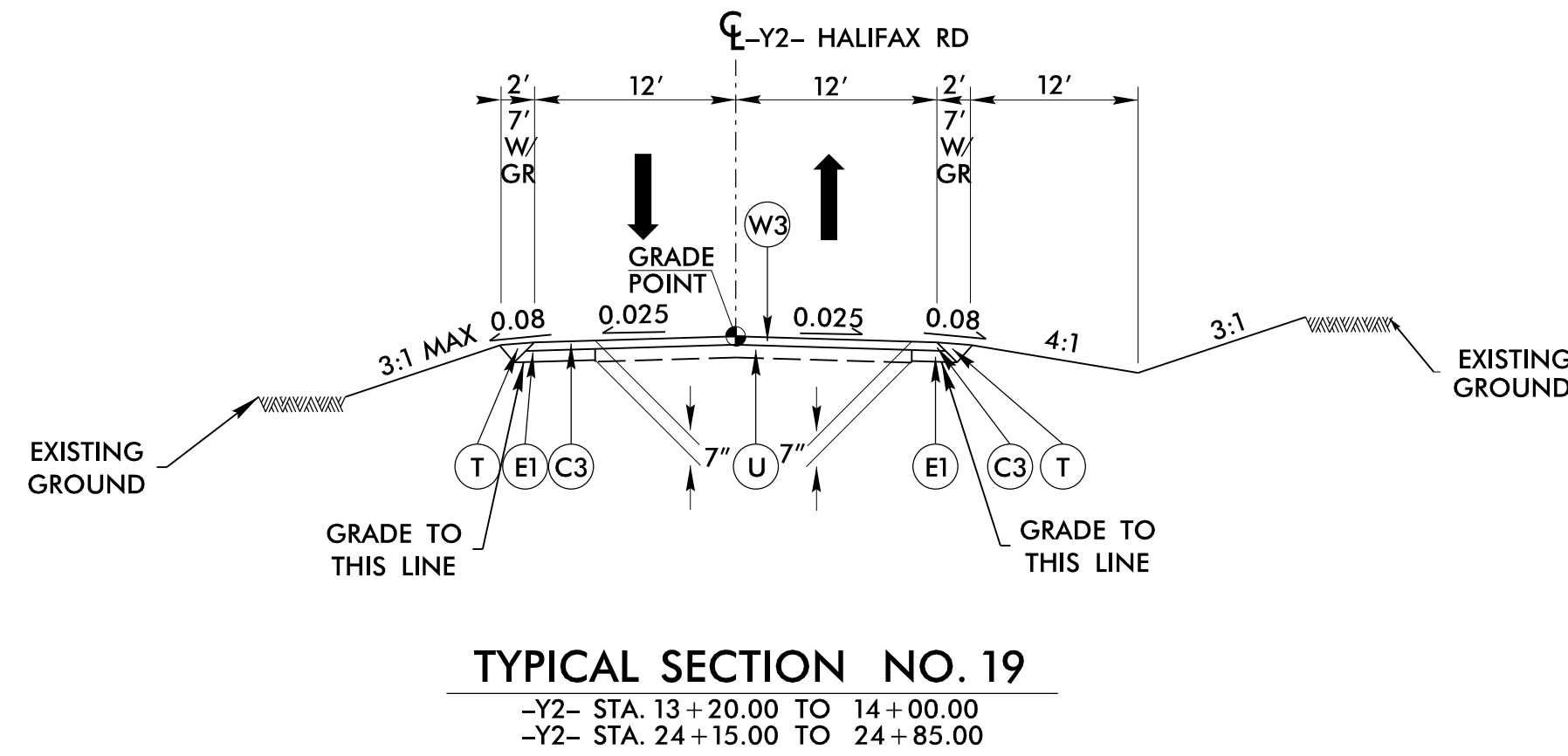
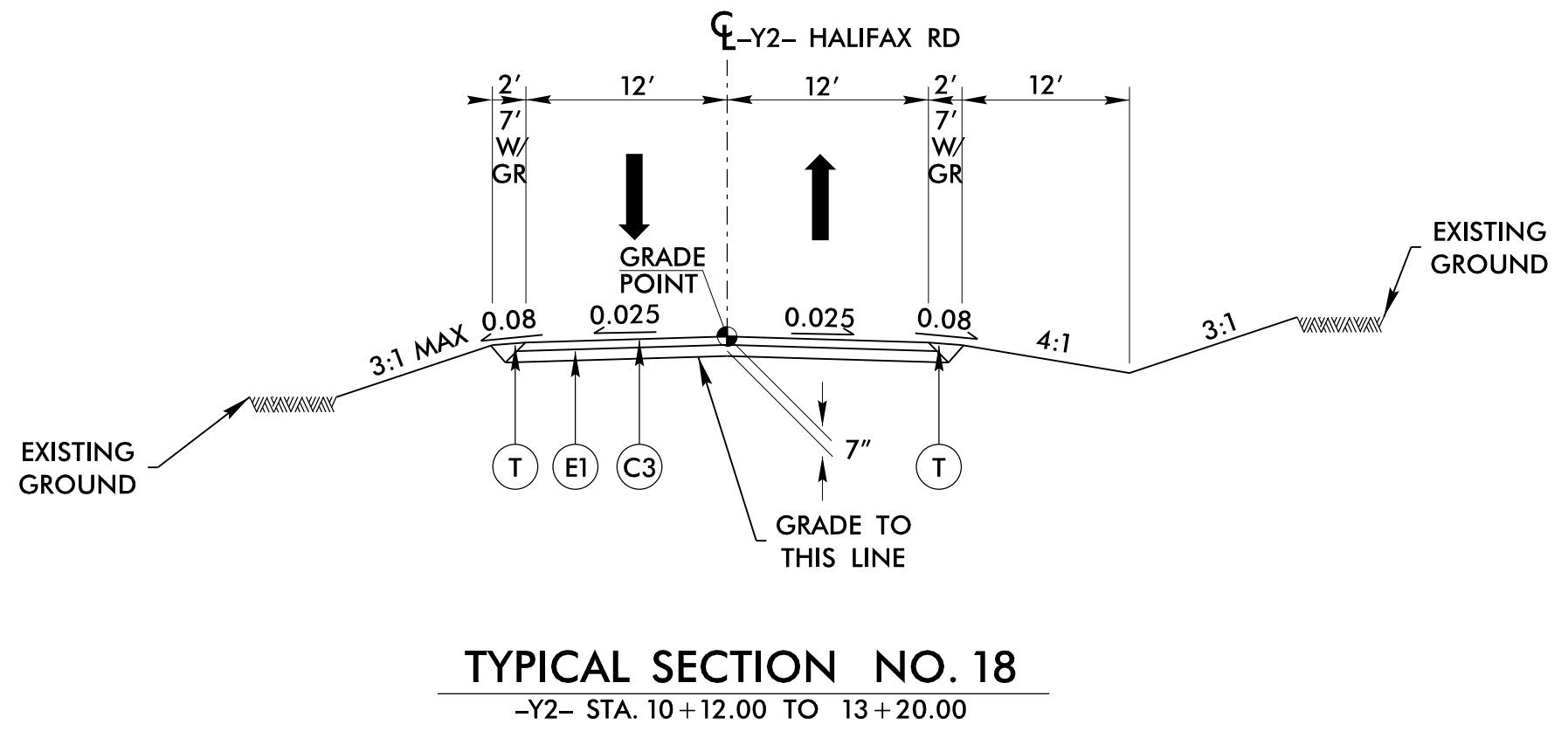
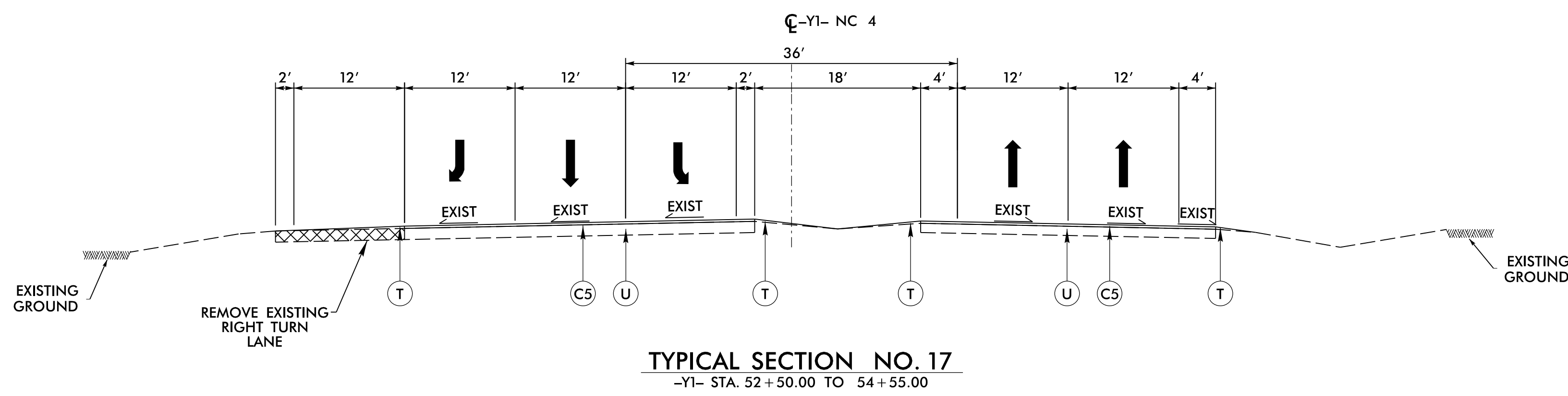
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

3/1/2021  
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Moran Nelson

6/2/2021

3/1/2021  
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 Morrison

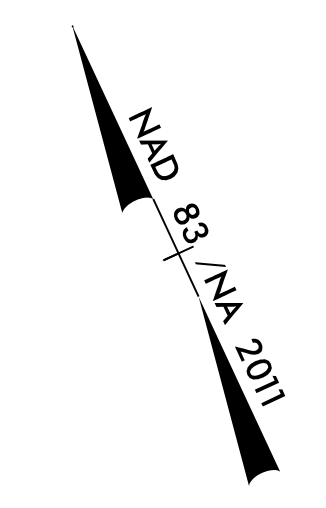
PROJECT REFERENCE NO. B-5980	SHEET NO. 2A-5
ROADWAY DESIGN ENGINEER EDWARD GLENN EDWARDS SEAL 18470 5/2/2021	PAVEMENT DESIGN ENGINEER S. MONTGOMERY SEAL 022896 5/3/2021
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27601 1919 854-6200 • 1919 854-6259 FAX	
<b>DOCUMENT NOT CONSIDERED FINAL                  UNLESS ALL SIGNATURES COMPLETED</b>	



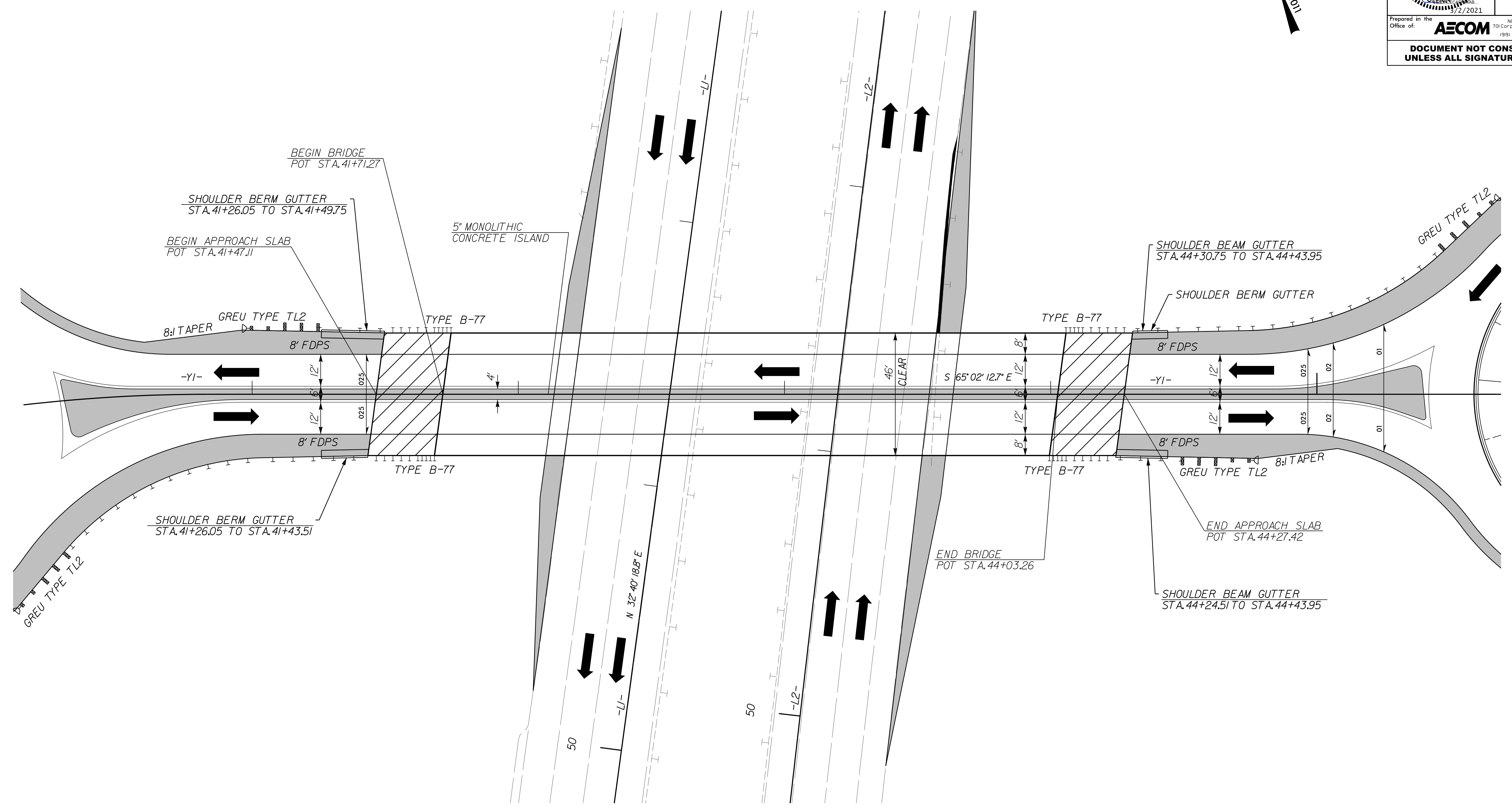
A1	11" CONC. PAVE. W/ DOWELS
A2	TRUCK APRON
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. S9.5C
C5	1.5" S9.5D
C6	3" S9.5D
C7	VAR. S9.5D
D1	2.5" I19.0C
D2	3" I19.0C
D3	4" I19.0C
D4	VAR. I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7.5" B25.0C
E4	9.5" B25.0C
E5	VAR. B25.0C
J1	4" ABC
J2	6" ABC
J3	8" ABC
K	12" CLS IV SBGRD STBL
N	GEOTX FOR SOIL STBL
R1	1'-6" C&G
R2	5" MONO CONC ISLAND
R3	1'-6" C&G (11' DEPTH)
T	EARTH MATERIAL
U	EXIST. PVMNT.
V	1.5" MILLING
W1	WEDGE DET. NO. 1
W2	WEDGE DET. NO. 2
W3	WEDGE DET. NO. 3

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

PROJECT REFERENCE NO. B-5980	SHEET NO. 2B-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	Edens, Jr.
Prepared in the Office of: <b>AECOM</b>	NC FIRM LICENSE No: F-0342 701 Corporate Center, Suite 475 Raleigh, NC 27603 (919) 854-6200 / (919) 854-6291(FAX)
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

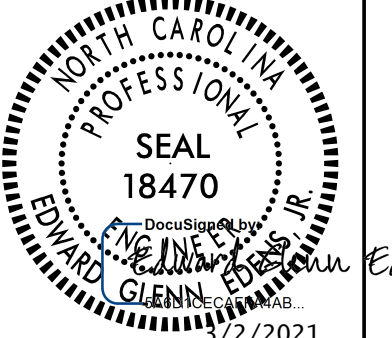


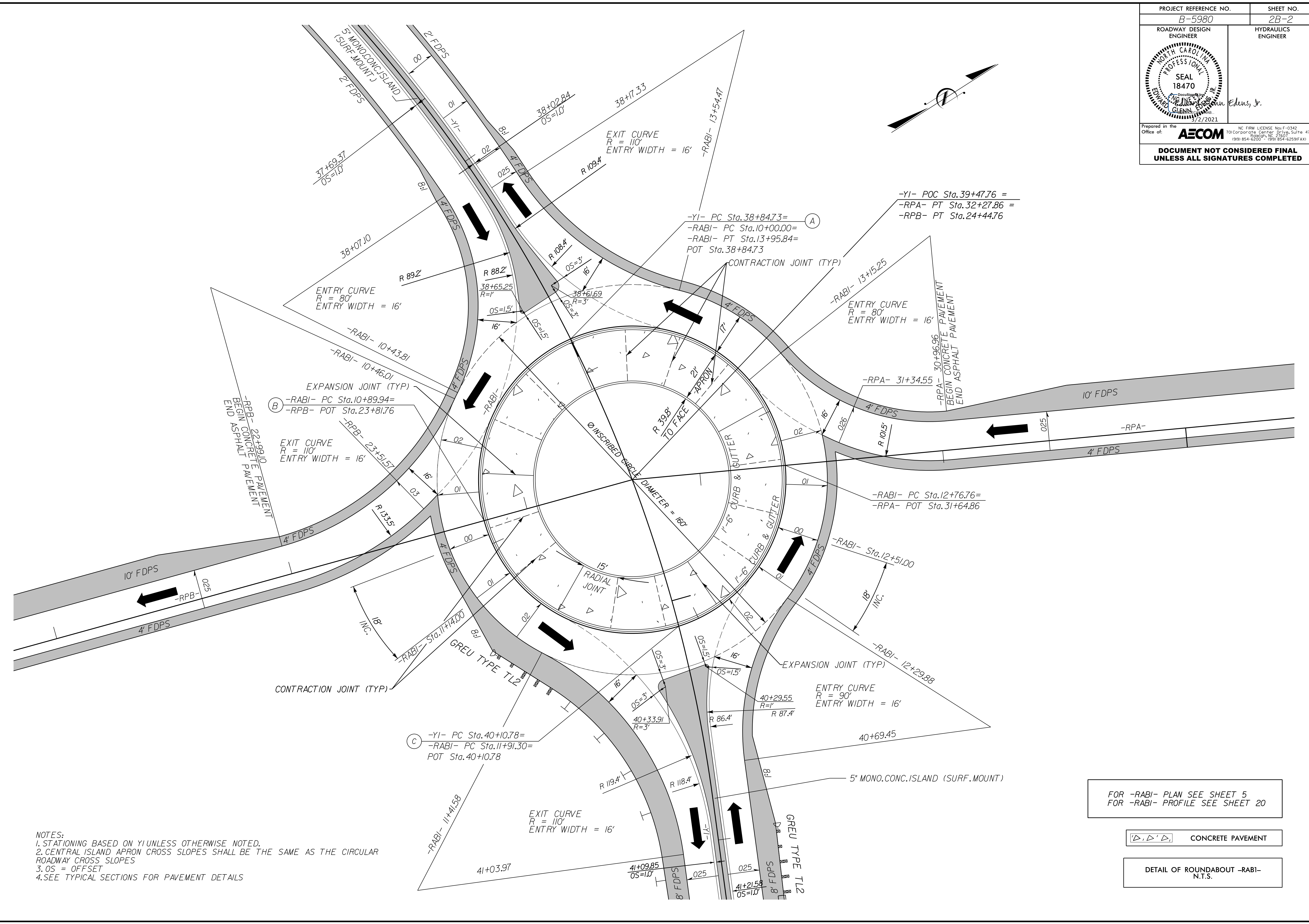
-Y1- (HALIFAX RD/NC 4) OVER -L1- & -L2- (I-95)  
BRIDGE/PAVEMENT RELATIONSHIP SKETCH (N.T.S.)



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3/1/2021 10:00:00 AM  
edens

FOR Y1 PLAN VIEW SEE SHEET 5  
FOR Y1 PROFILE VIEW SEE SHEET 16-17

PROJECT REFERENCE NO. B-5980	SHEET NO. 2B-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
Prepared in the Office of: <b>AECOM</b> <small>NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27603 (919) 854-6200 • (919) 854-6291 (FAX)</small>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

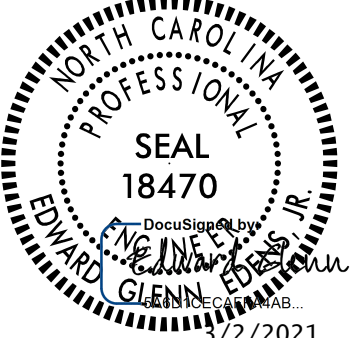


NOTES:  
 1. STATIONING BASED ON YI UNLESS OTHERWISE NOTED.  
 2. CENTRAL ISLAND APRON CROSS SLOPES SHALL BE THE SAME AS THE CIRCULAR ROADWAY CROSS SLOPES  
 3. OS = OFFSET  
 4. SEE TYPICAL SECTIONS FOR PAVEMENT DETAILS

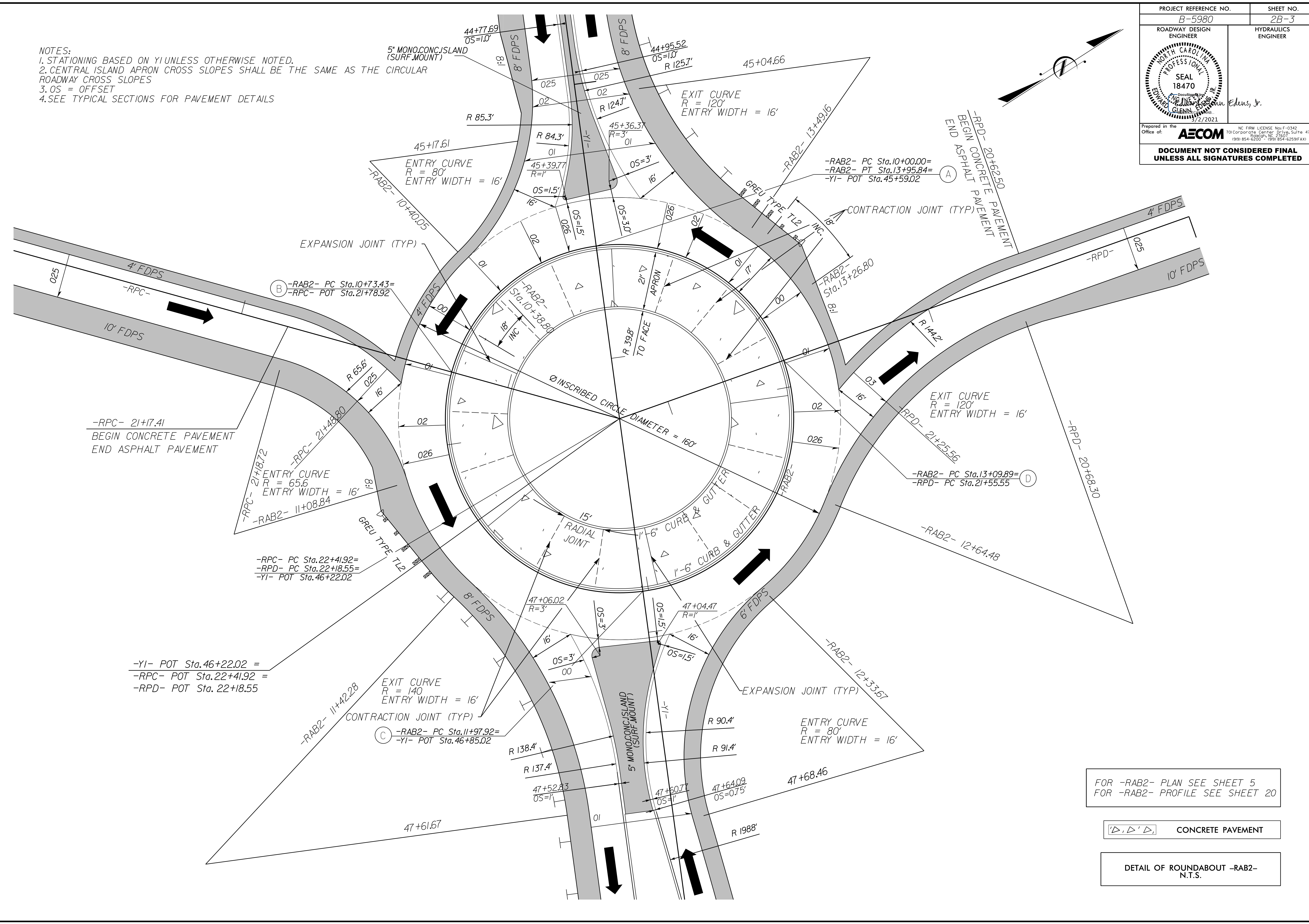
FOR -RABI- PLAN SEE SHEET 5  
 FOR -RABI- PROFILE SEE SHEET 20

 CONCRETE PAVEMENT

DETAIL OF ROUNDABOUT -RABI-  
 N.T.S.

PROJECT REFERENCE NO. B-5980	SHEET NO. 2B-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
Prepared in the Office of: <b>AECOM</b> <small>70 Corporate Center Drive, Suite 475 Raleigh, NC 27603 (919) 854-6200 / (919) 854-6299(FAX)</small>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

NOTES:  
 1. STATIONING BASED ON YI UNLESS OTHERWISE NOTED.  
 2. CENTRAL ISLAND APRON CROSS SLOPES SHALL BE THE SAME AS THE CIRCULAR ROADWAY CROSS SLOPES  
 3. OS = OFFSET  
 4. SEE TYPICAL SECTIONS FOR PAVEMENT DETAILS



FOR -RAB2- PLAN SEE SHEET 5  
 FOR -RAB2- PROFILE SEE SHEET 20

 CONCRETE PAVEMENT

DETAIL OF ROUNDABOUT -RAB2-  
 N.T.S.

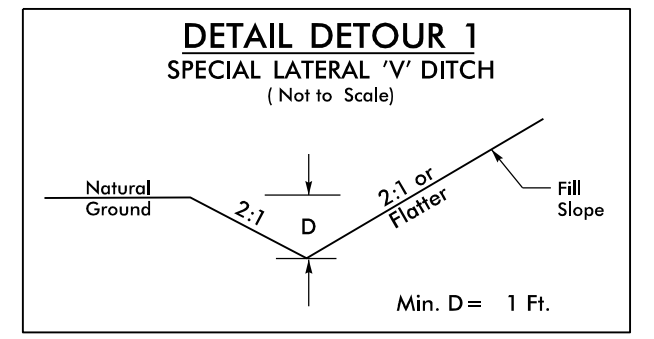
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 AECOM

5/14/19

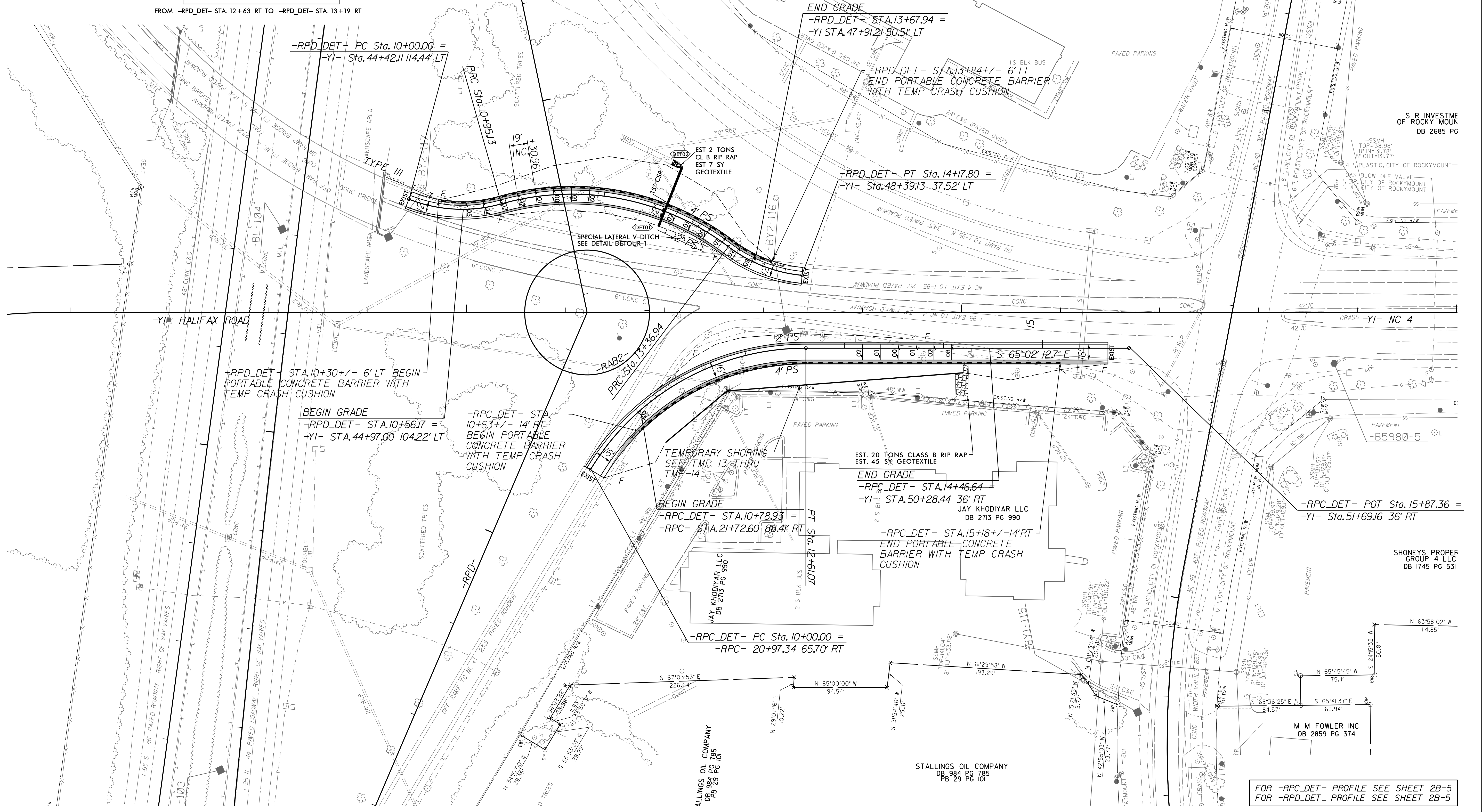
PROJECT REFERENCE NO. <b>B-5980</b>	SHEET NO. <b>2B-4</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of: <b>AECOM</b>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**-RPC\_DET-**  
 PI Sta 10+49.32 Δ = 37°19'55.3" (LT) D = 39°14'37.3" L = 95.13' T = 49.32' R = 146.00' e = MATCH EXISTING  
 PI Sta 12+25.41 Δ = 52°52'48.3" (RT) D = 21°52'07.0" L = 241.81' T = 130.29' R = 262.00' e = 2%  
 PI Sta 13+78.43 Δ = 31°43'58.4" (LT) D = 39°14'37.3" L = 80.86' T = 41.50' R = 146.00' e = MATCH EXISTING

**-RPC\_DET-**  
 PI Sta 11+43.39 Δ = 58°53'29.7" (RT) D = 22°33'26.6" L = 261.07' T = 143.39' R = 254.00' e = 2%



**-RPC\_DET-**  
**-RPD\_DET-**



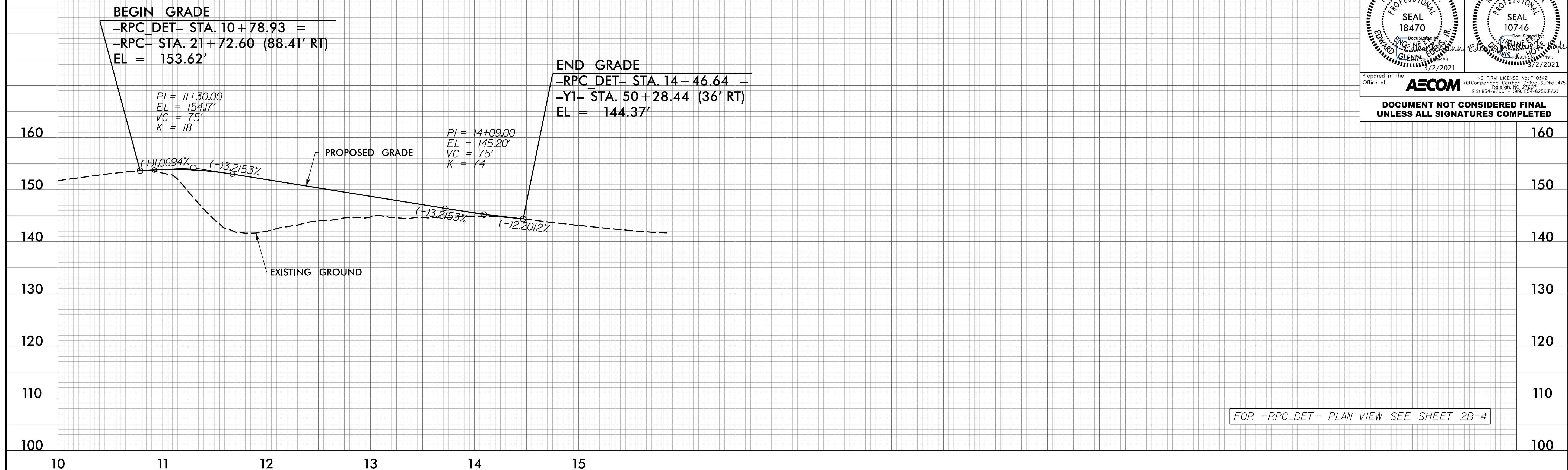
FOR -RPC\_DET- PROFILE SEE SHEET 2B-5  
 FOR -RPD\_DET- PROFILE SEE SHEET 2B-5

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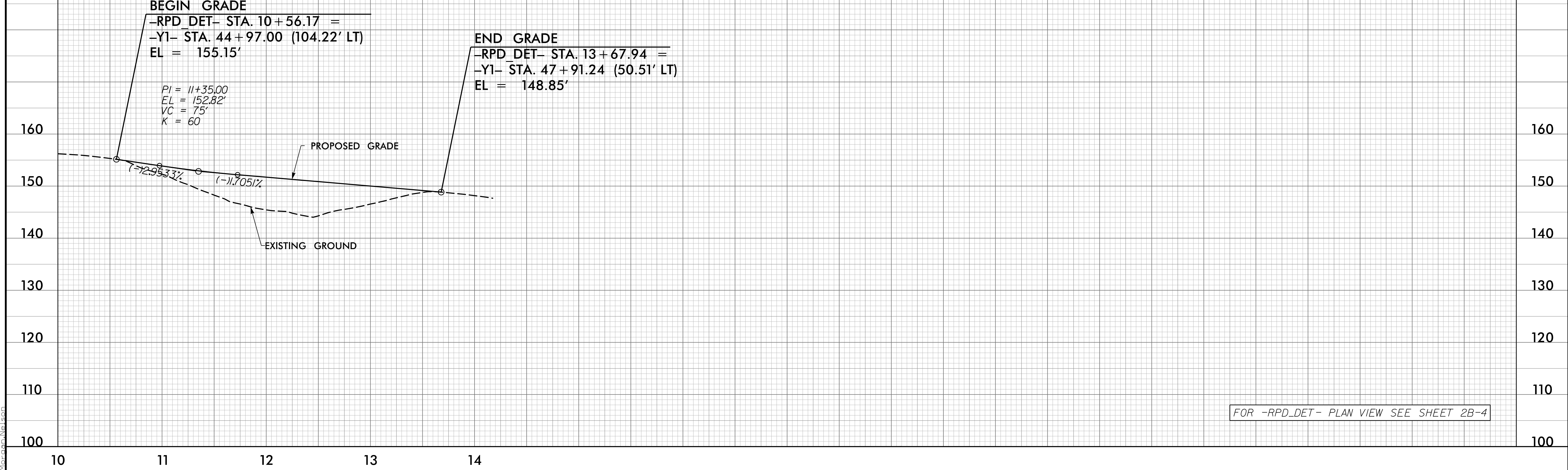
5/28/99

# -RPC\_DET-



FOR -RPC\_DET- PLAN VIEW SEE SHEET 2B-4

# -RPD\_DET-



FOR -RPD\_DET- PLAN VIEW SEE SHEET 2B-4

PROJECT REFERENCE NO. B-5980	SHEET NO. 2B-5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of:	NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 (919) 854-6200 • (919) 854-6259 (FAX)
<b>AECOM</b>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

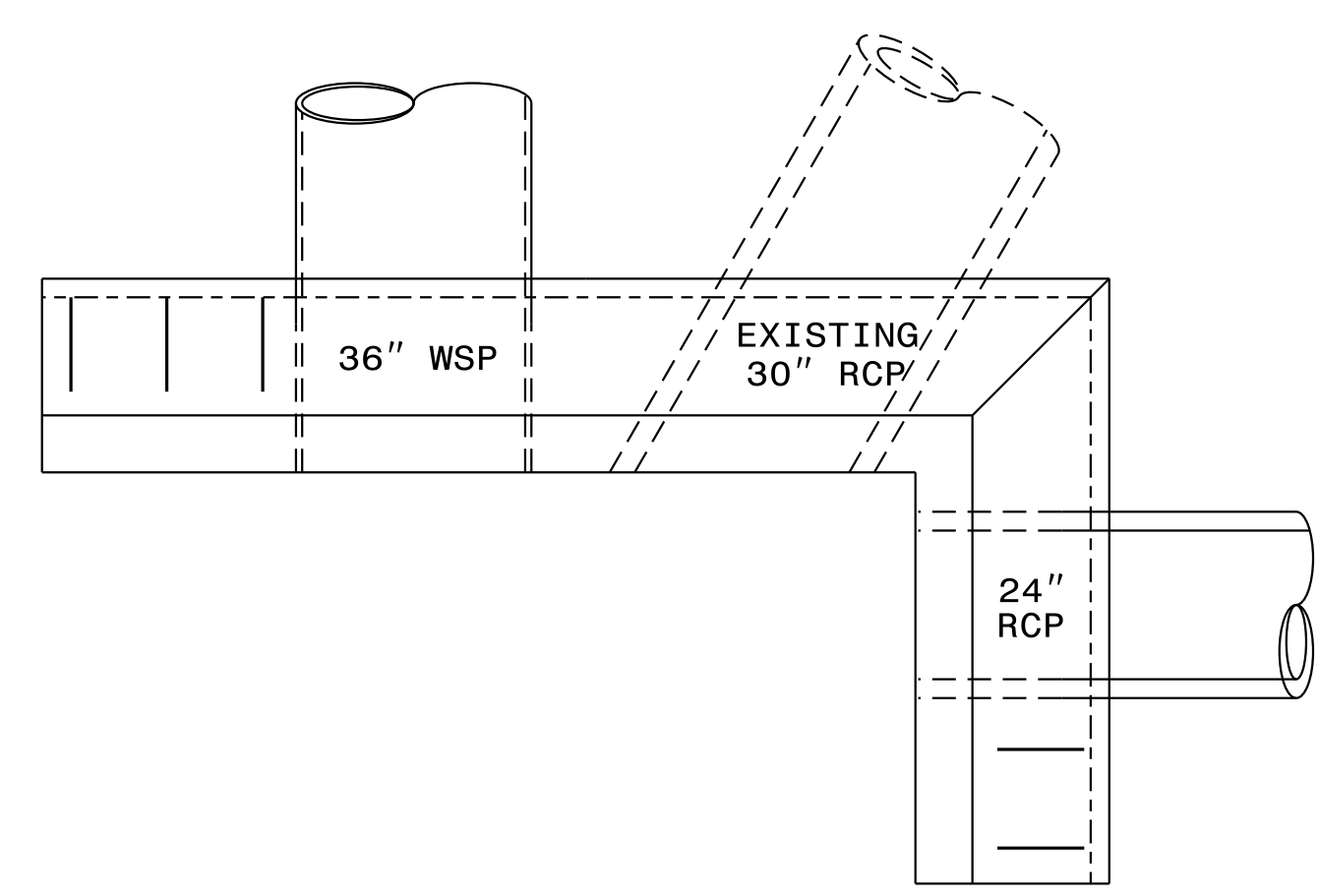
3/1/2021  
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Mordecai Nelson

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

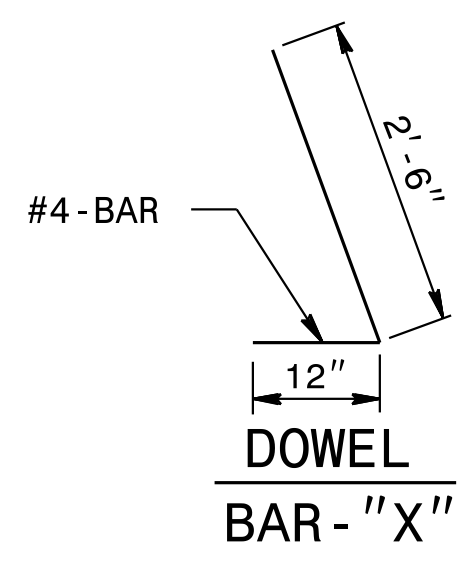
ROADWAY STANDARD DRAWING FOR  
CONCRETE "L" ENDWALL FOR  
SINGLE AND DOUBLE PIPE CULVERTS

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ROADWAY STANDARD DRAWING FOR  
CONCRETE "L" ENDWALL FOR  
SINGLE AND DOUBLE PIPE CULVERTS

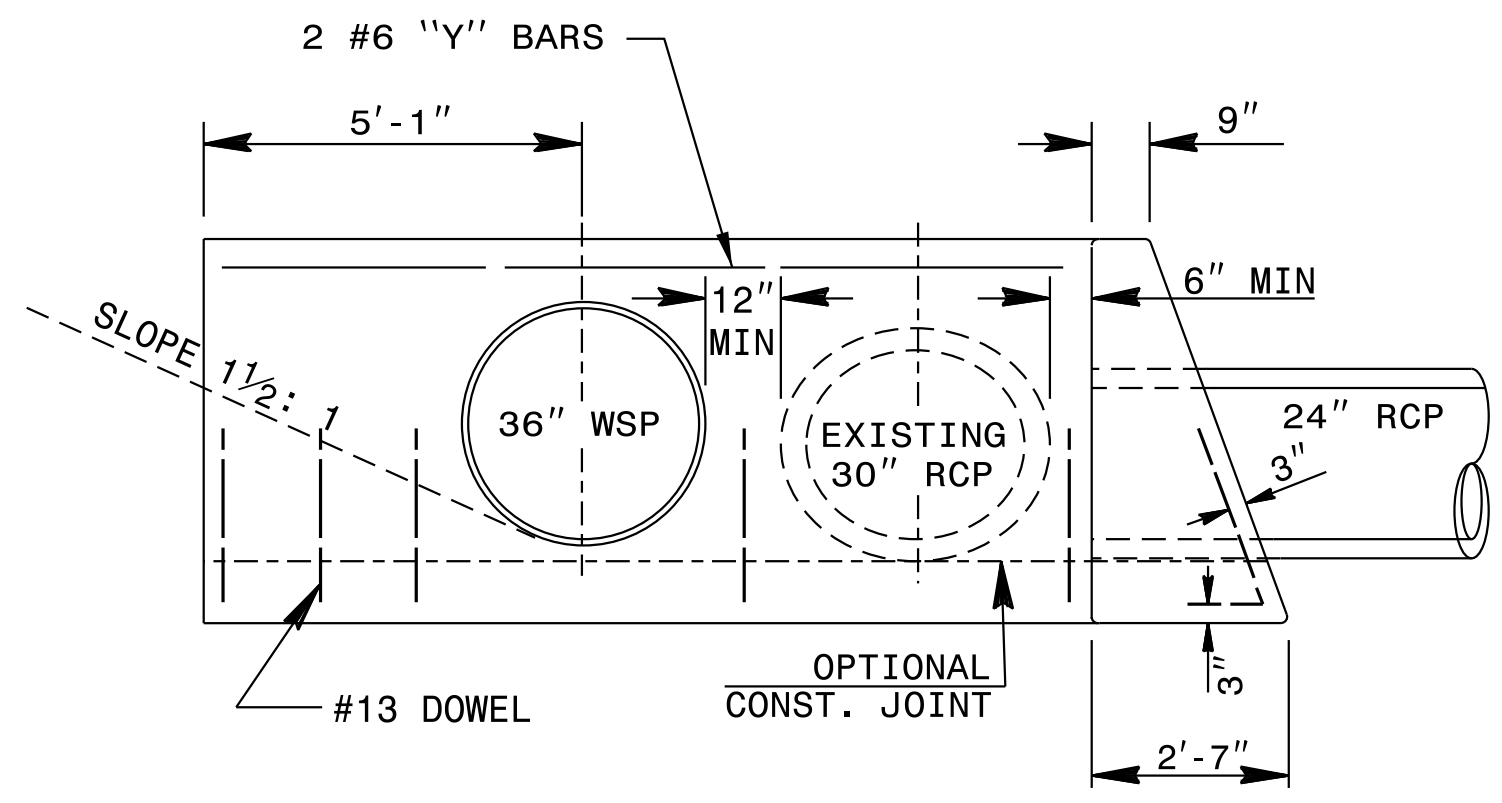


PLAN

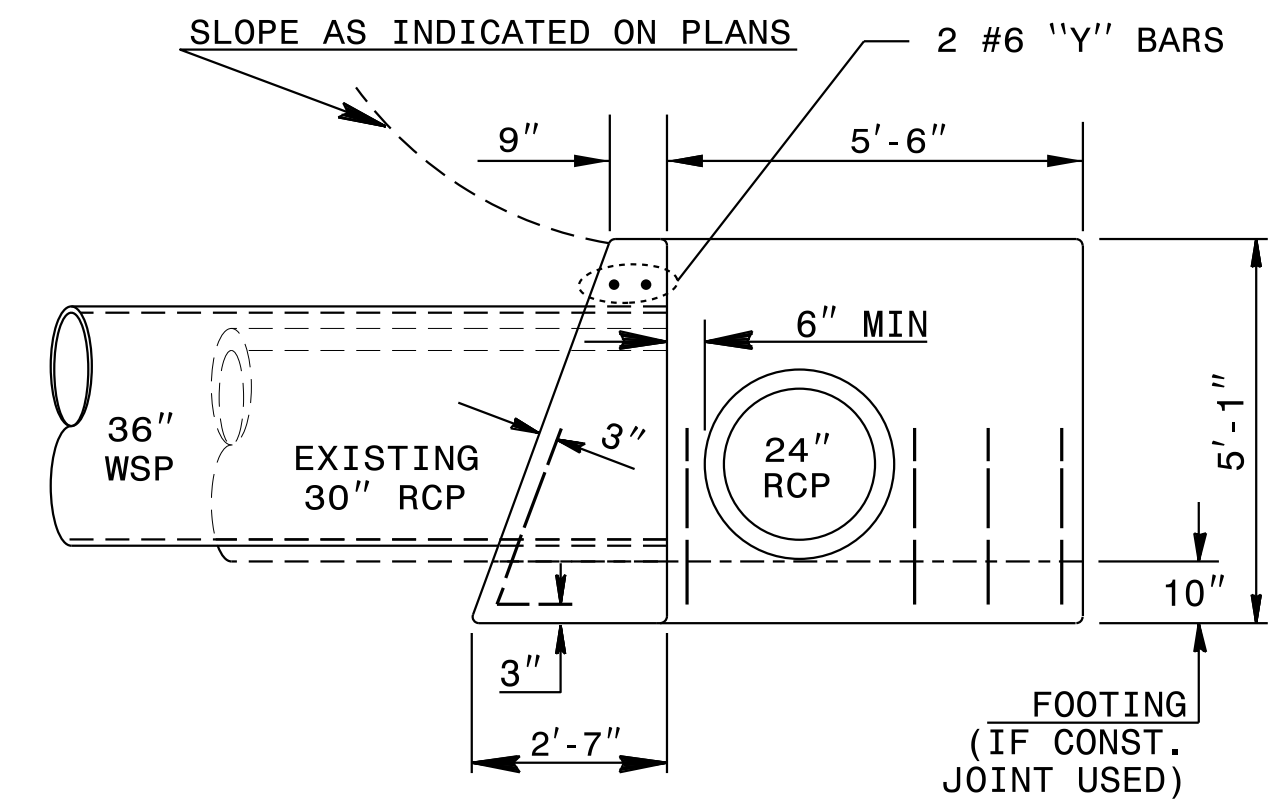


QUANTITIES				
BAR	NO.	SIZE	LENGTH	WEIGHT
X	11	4	3'-6"	26
Y	2	6	11'-3"	34
TOTAL REINF. STEEL (lbs.)				60
CLASS "B" CONC. (yd <sup>3</sup> )				5.8

\* NO DEDUCTION HAS BEEN MADE FOR PIPES



ELEVATION

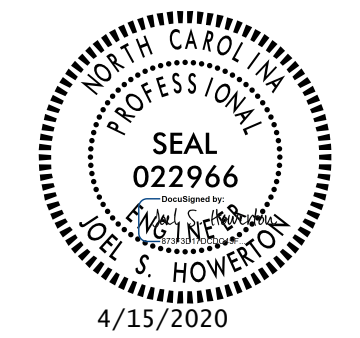


END ELEVATION

GENERAL NOTES:  
 ALL CORNERS SHALL BE CHAMFERED 1 INCH. CLASS "B" CONCRETE SHALL BE USED.  
 IF CONTRACTOR ELECTS TO USE CONSTRUCTION JOINT AT BOTTOM OF PIPE, BAR 'X' DOWELS SHALL BE PLACED IN THE BASE AS SHOWN ON PLANS. SPACING OF BARS IS APPROXIMATELY 12 INCHES ON CENTER UNLESS THE ENGINEER SPECIFIES OTHERWISE.  
 WHEN CONTRACTOR ELECTS TO USE CONSTRUCTION JOINT AT BOTTOM OF PIPE AND POURS BASE SEPERATELY, THE TOP OF BASE SHALL BE LEFT ROUGH.  
 FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

SHEET 1 OF 1  
838D05

SHEET 1 OF 1  
838D05



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

**SEE NAME PLATE**

ORIGINAL BY: K. KEMPF DATE: JAN. 17, 2019  
 MODIFIED BY: DATE:  
 CHECKED BY: DATE:  
 FILE SPEC.: kkempf/english/B5980\_838d05.dgn

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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

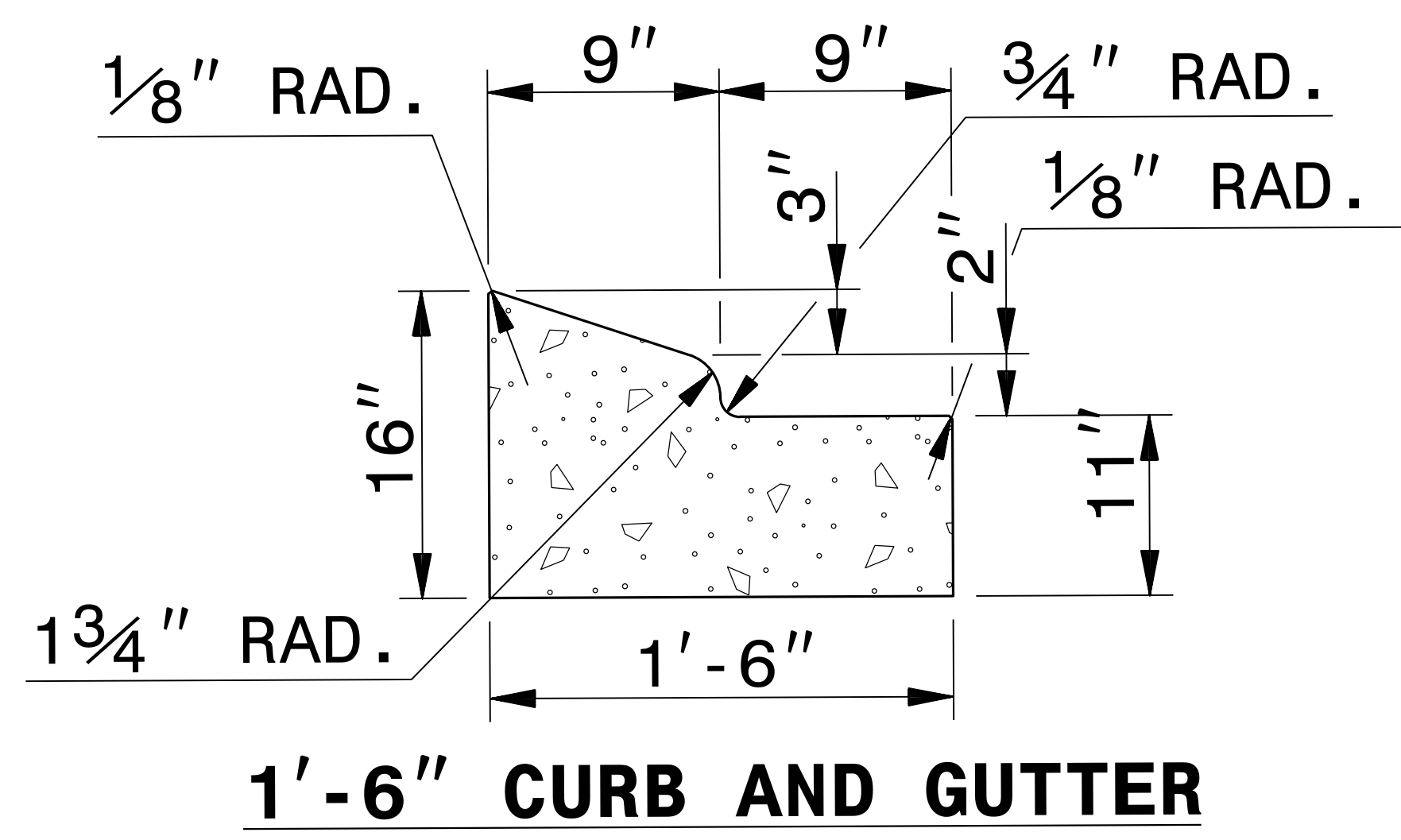
ROADWAY DETAIL DRAWING FOR  
**CONCRETE CURB, GUTTER  
AND CURB & GUTTER**

SHEET 1 OF 1  
**846D01**

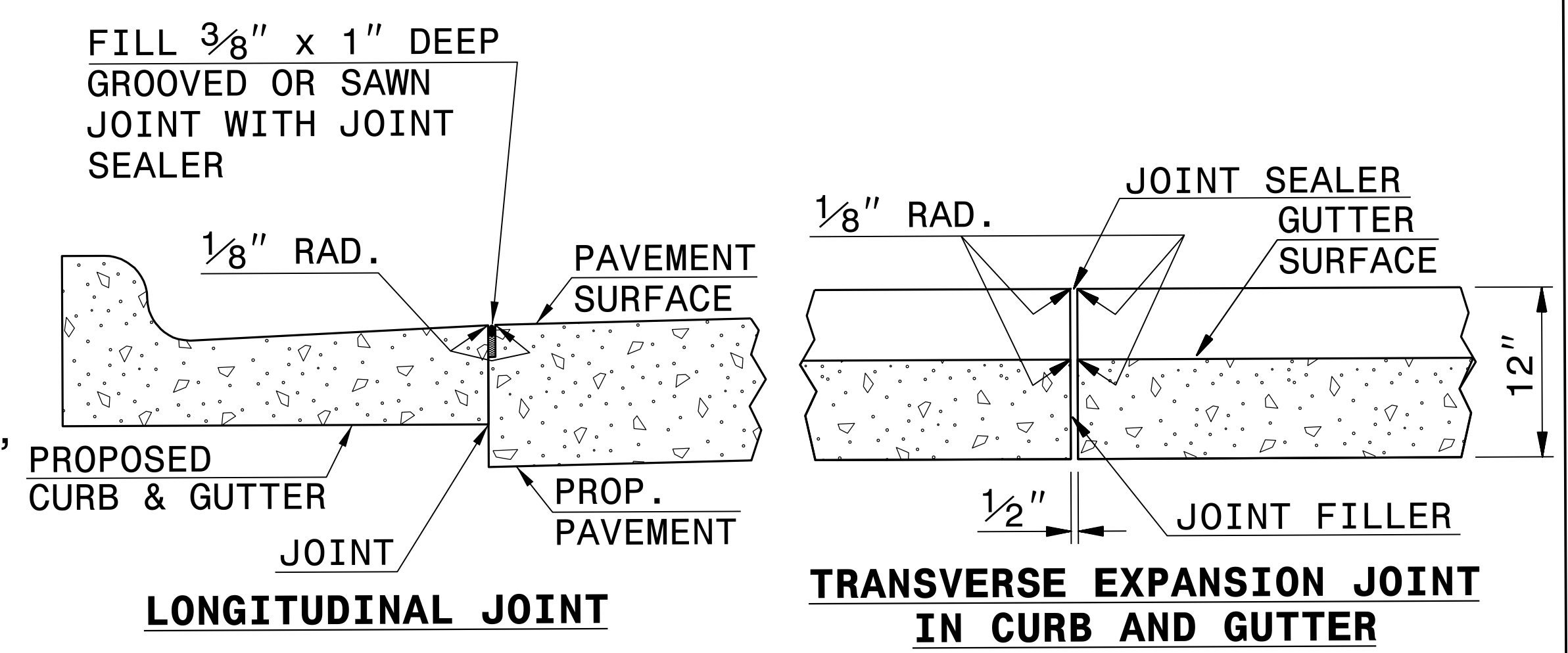
STATE OF  
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ROADWAY DETAIL DRAWING FOR  
**CONCRETE CURB, GUTTER  
AND CURB & GUTTER**

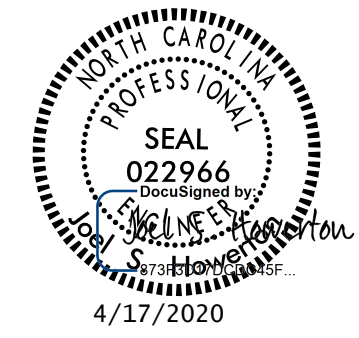
SHEET 1 OF 1  
**846D01**



**GENERAL NOTES:**  
 -PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.  
 -JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.  
 -CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.  
 -CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.  
 -FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.  
 -SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



**SECTION VIEW OF JOINTS**



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**SPECIAL 1'-6" CURB & GUTTER**

ORIGINAL BY: T.S.SPELL DATE: NOV. 26, 2001  
 MODIFIED BY: T.S.SPELL DATE: JAN. 23, 2007  
 CHECKED BY: DATE:  
 FILE SPEC.: DS174:\usr\details\stand\ctrtransit.dgn

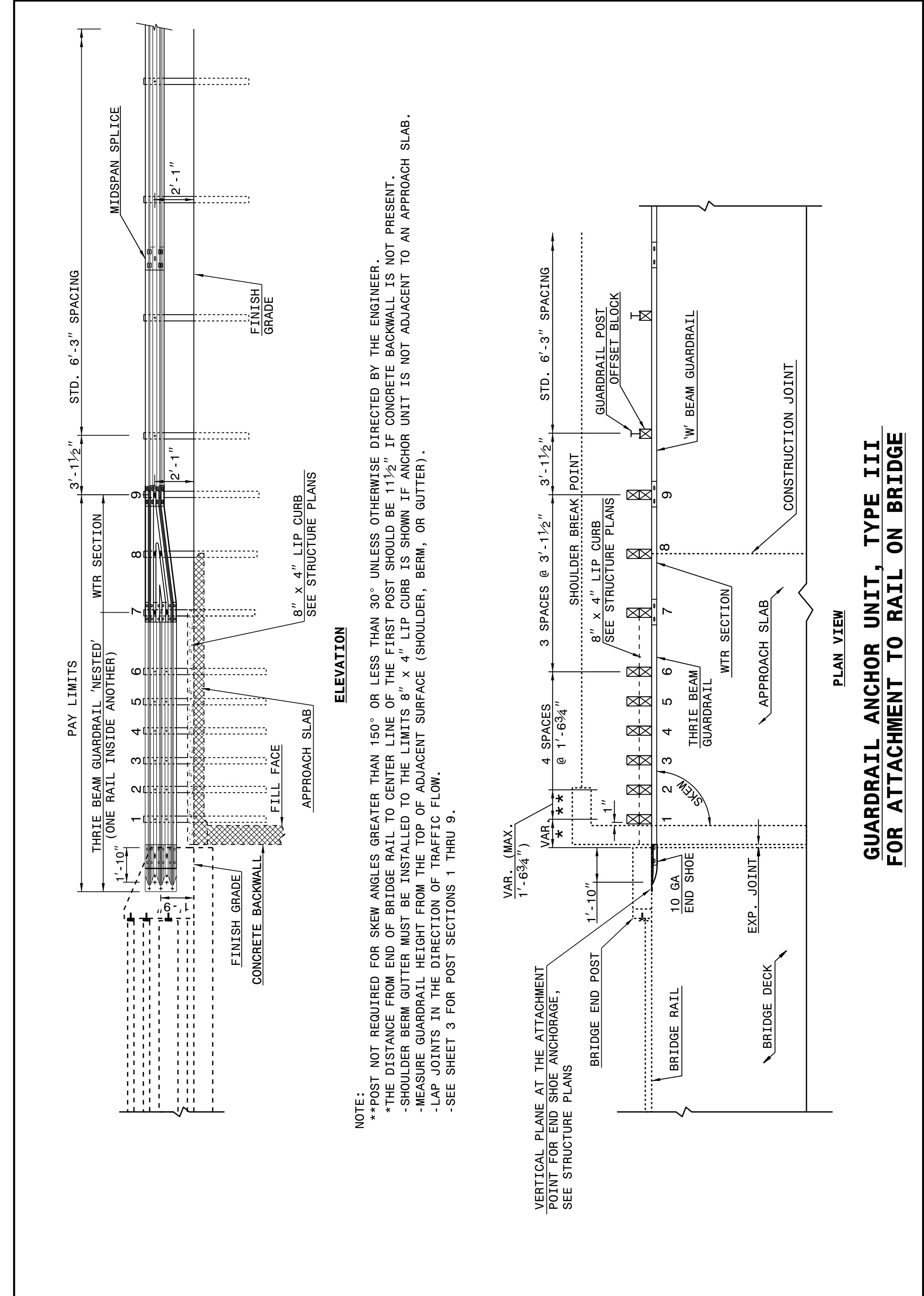
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 Jhowerton AT: USD-292595

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ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7  
862D03



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

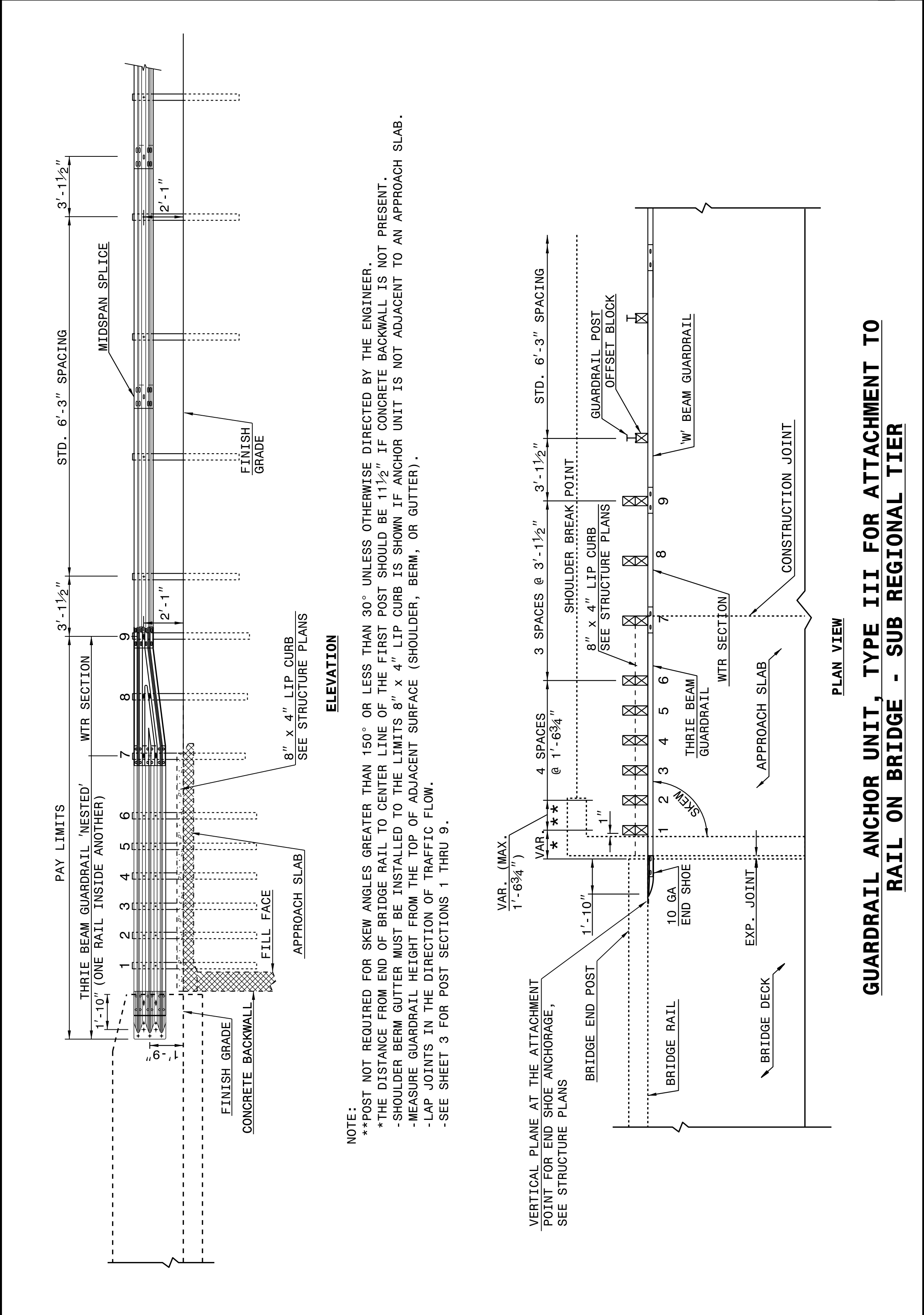
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7  
862D03

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

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7  
862D03



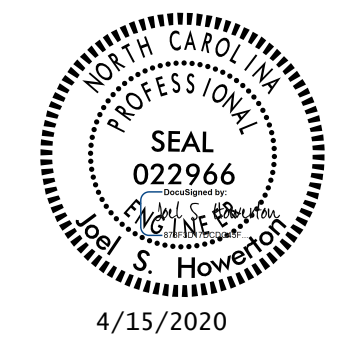
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7  
862D03

**NOTE:**  
 \*\*POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.  
 \*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11 1/2" IF CONCRETE BACKWALL IS NOT PRESENT.  
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.  
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).  
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.  
 -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.

**NOTE:**  
 \*\*POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.  
 \*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11 1/2" IF CONCRETE BACKWALL IS NOT PRESENT.  
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.  
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).  
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.  
 -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.



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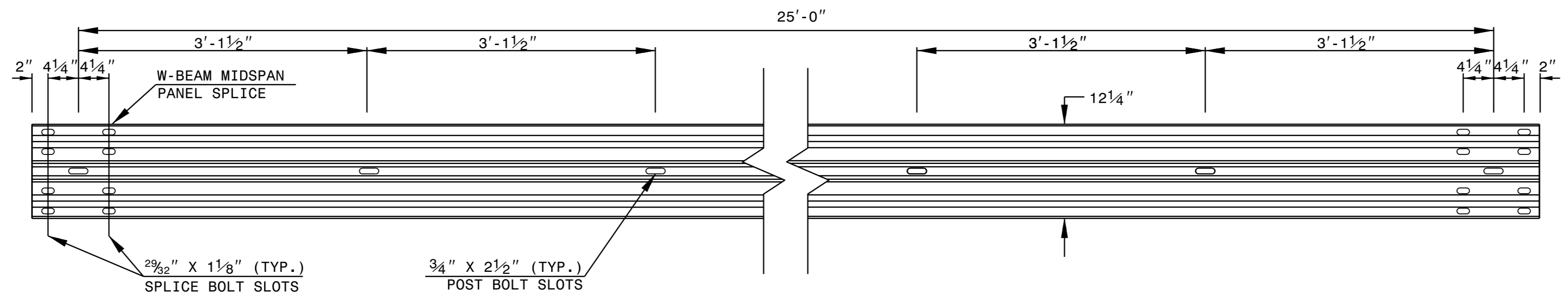
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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

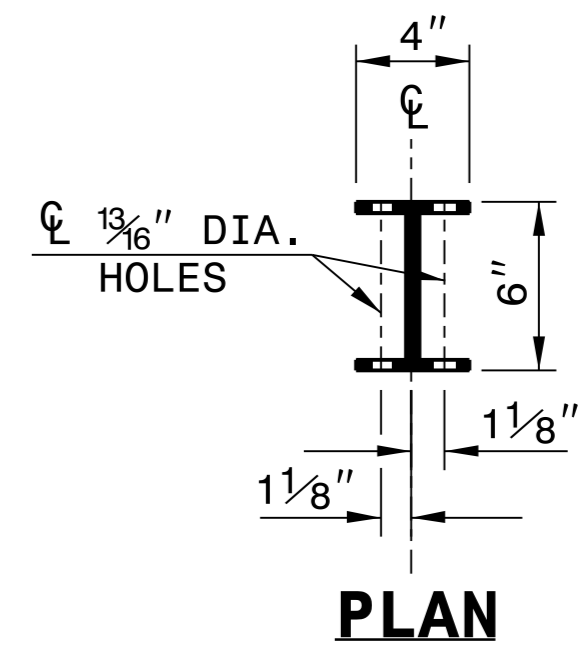
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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

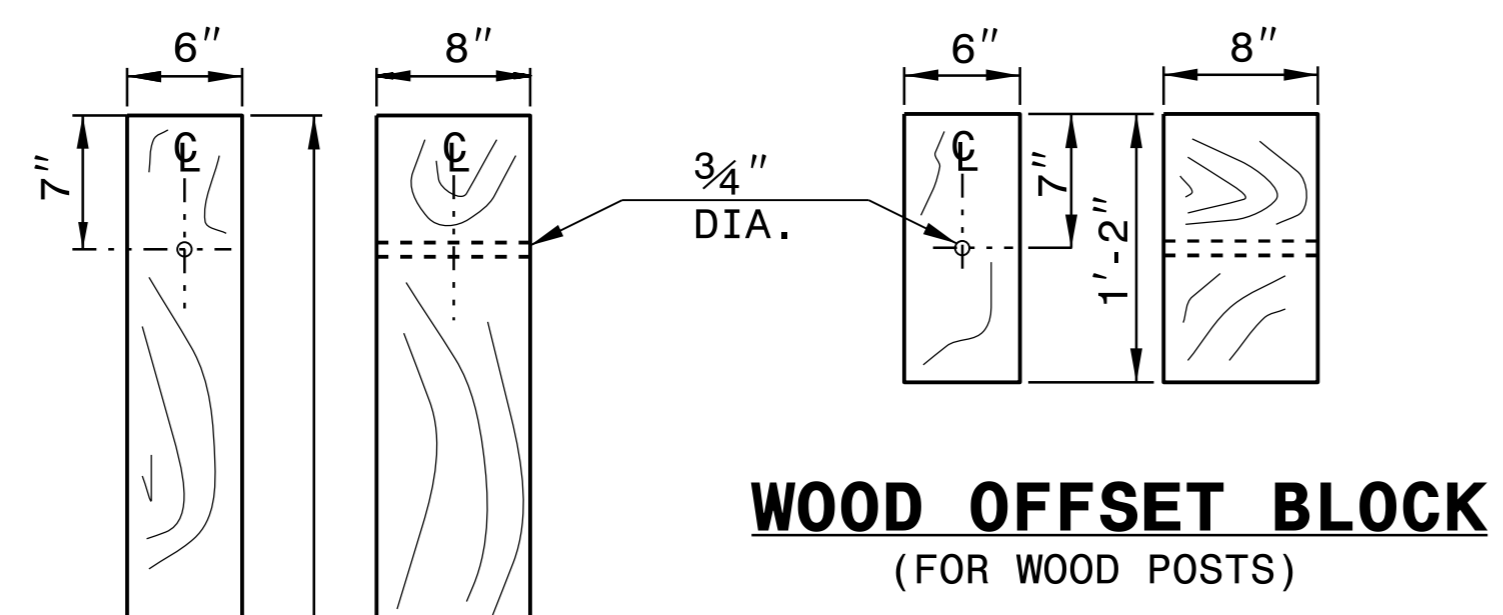
SHEET 6 OF 8  
**862D02**



**STANDARD W-BEAM GUARDRAIL**



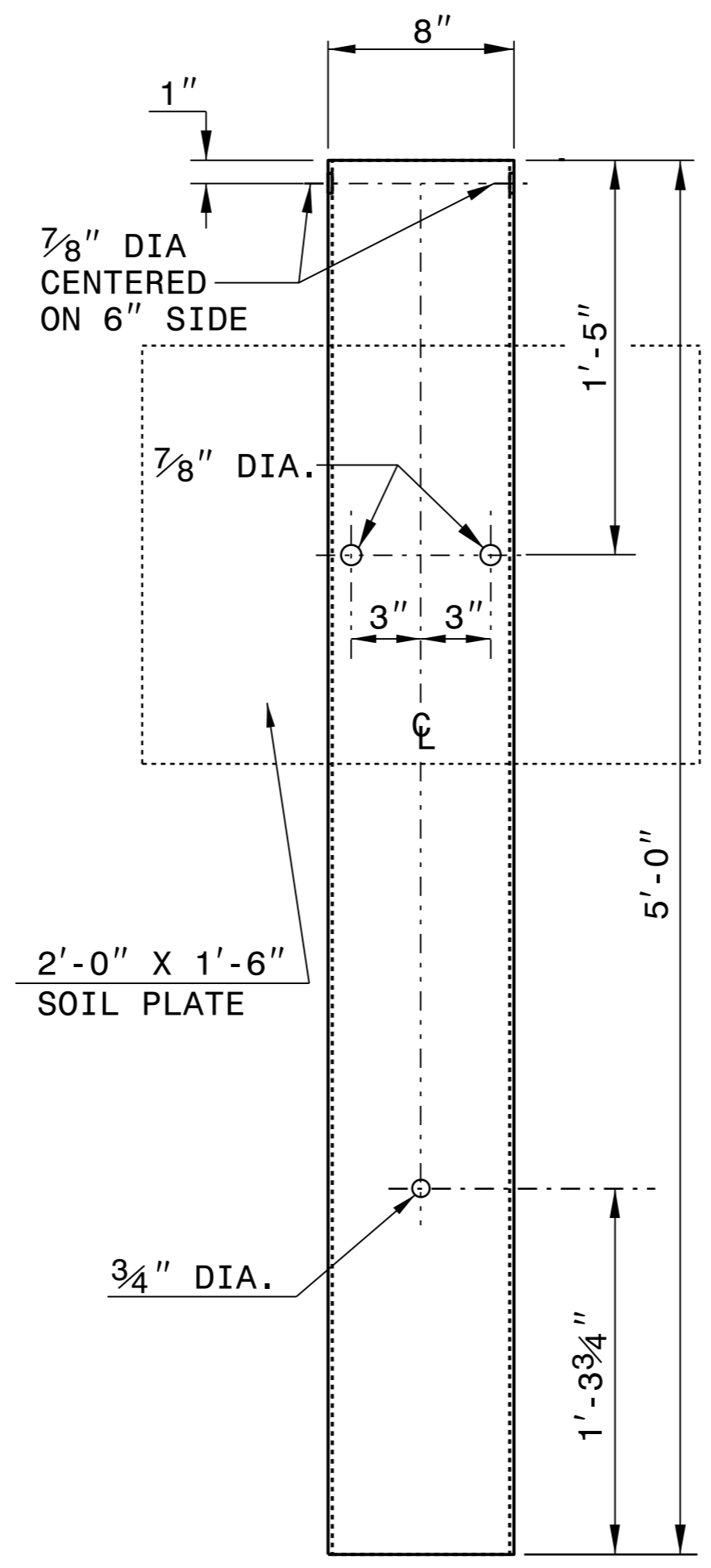
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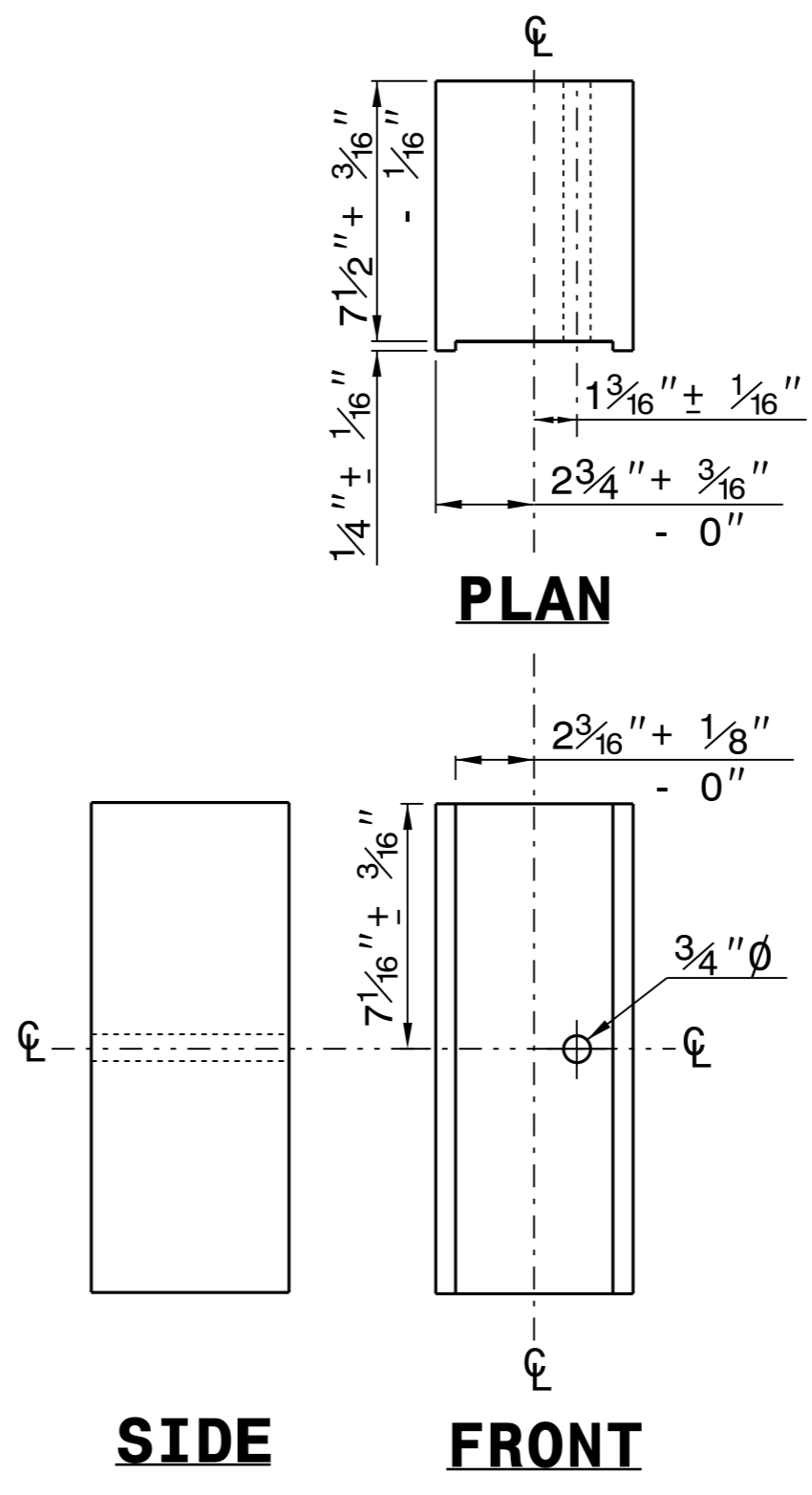
**WOOD OFFSET BLOCK  
(FOR WOOD POSTS)**

**STANDARD  
LINE POST**

**SHORT WOOD  
BREAKAWAY POST**



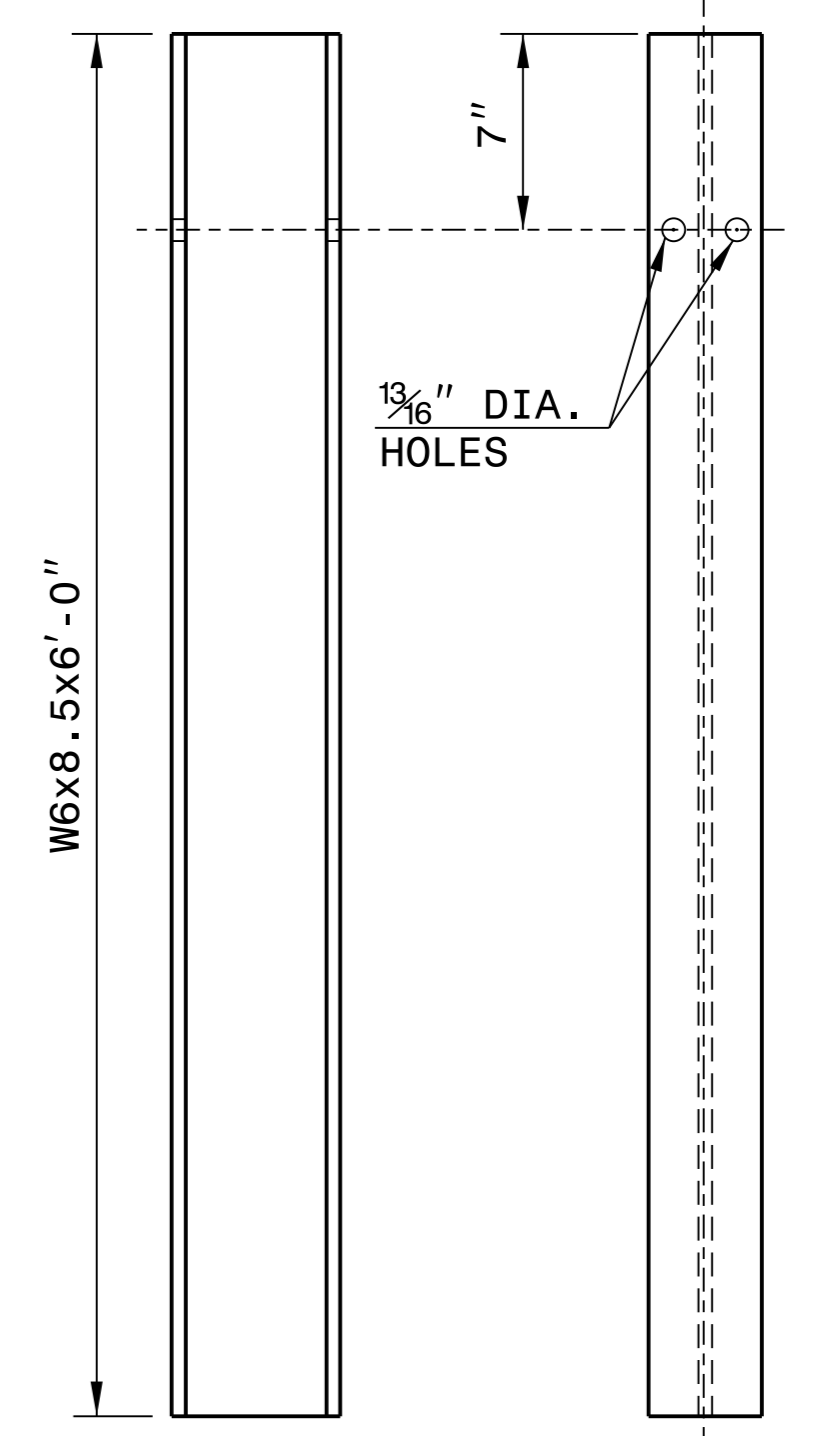
**STEEL TUBE  
TS 6"x8"x0.1875"**



**SIDE**

**FRONT**

**ROUTED  
OFFSET BLOCK**



**SIDE**

**FRONT**

**"W6" STEEL POST**

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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

SHEET 6 OF 8  
**862D02**

**SYSTEM PARTS**



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ORIGINAL BY: J. HOWERTON DATE: 3-7-2018  
MODIFIED BY: DATE: \_\_\_\_\_  
CHECKED BY: DATE: \_\_\_\_\_  
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