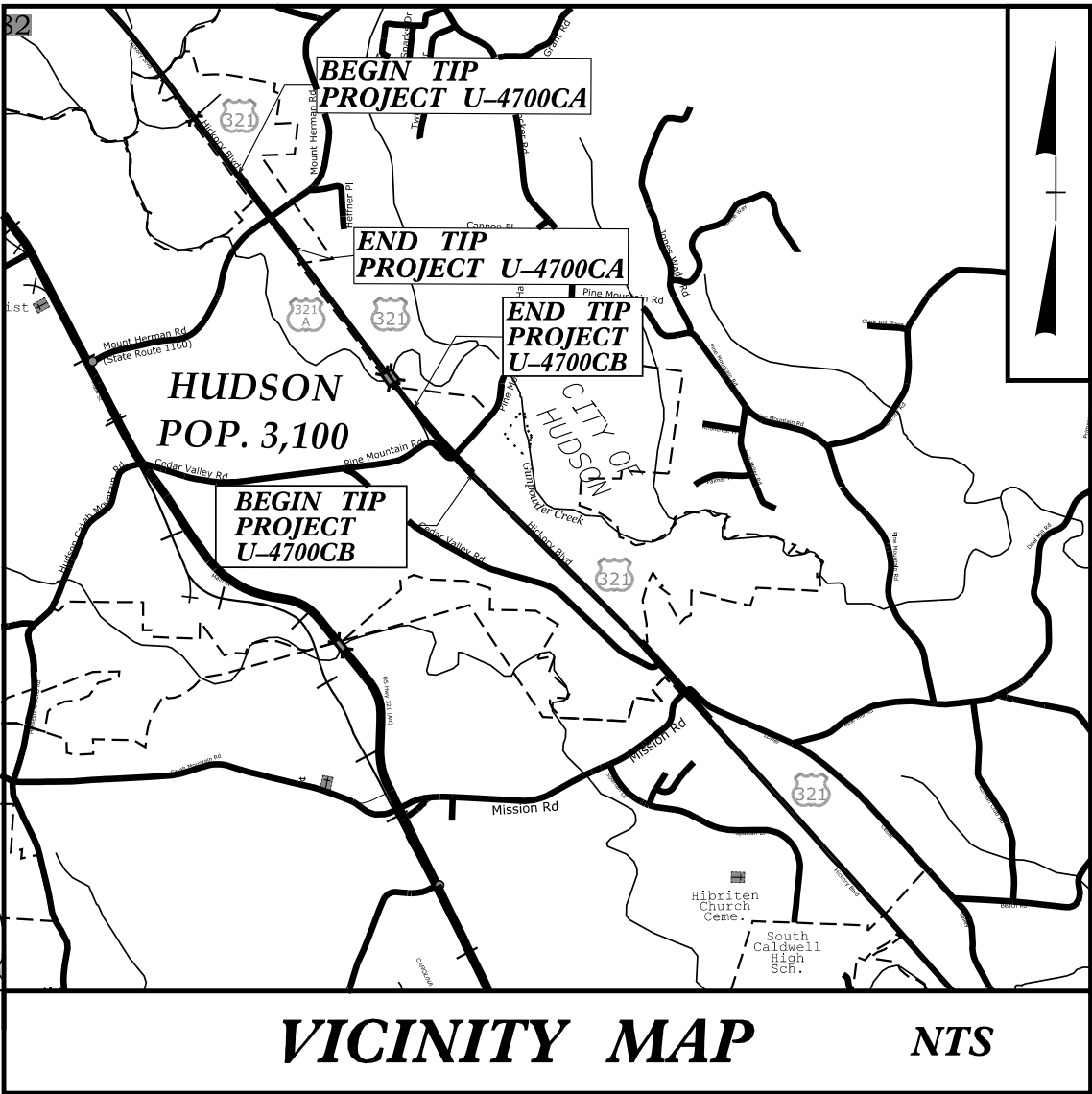


09.08/2019

TIP PROJECT: U-4700CAU-4700CB

CONTRACT: C204947



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

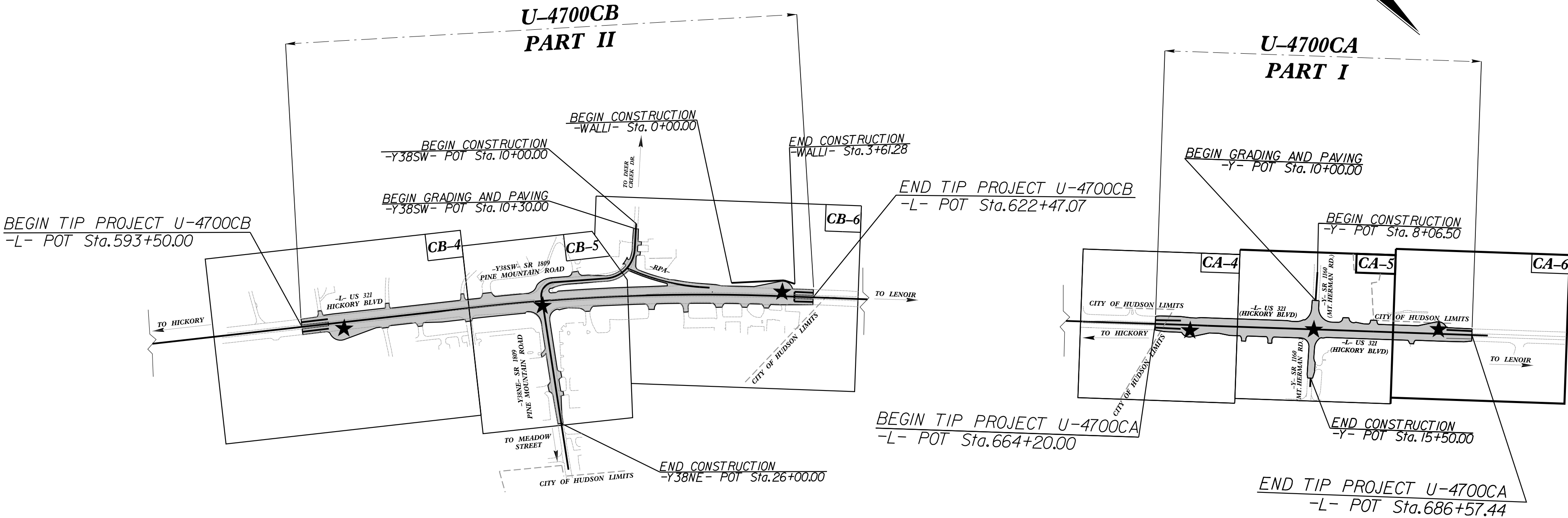
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CALDWELL COUNTY

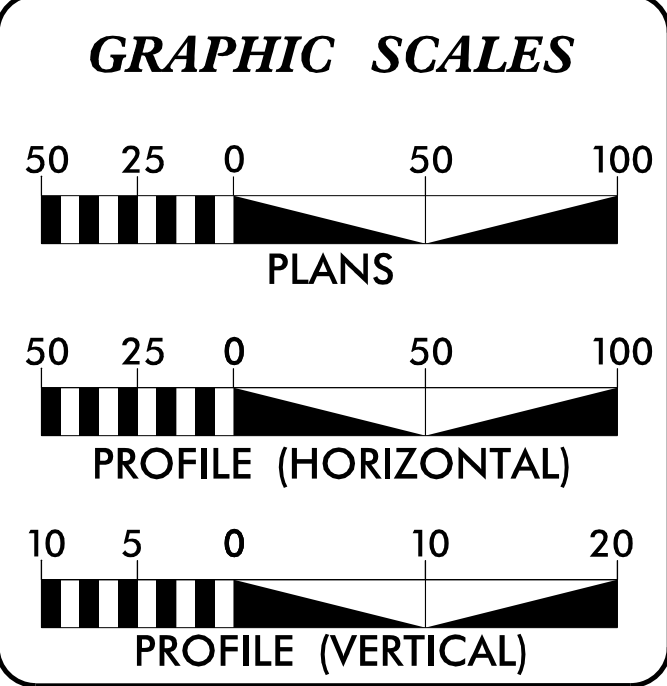
LOCATION: US 321 (HICKORY BLVD) AT SR 1160 (MOUNT HERMAN ROAD),
SR 1809 /1952 (PINE MOUNTAIN ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS AND RETAINING WALL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4700CAU-4700CB	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35993.1.10	NHP-0321(037)	PE (U-4700CA)	
35993.2.5	NHP-0321(037)	ROW/UTIL (U-4700CA)	
35993.3.5	NHP-0321(037)	CONST (U-4700CA)	
35993.1.11		PE (U-4700CB)	
35993.2.9	NHP-0321(046)	ROW (U-4700CB)	
35993.2.13	NHP-0321(046)	UTIL (U-4700CB)	
35993.3.9	NHP-0321(046)	CONST (U-4700CB)	



U-4700CA	U-4700CB
DESIGN DATA	DESIGN DATA
ADT 2026 = 38,300	ADT 2026 = 38,200
ADT 2046 = 50,000	ADT 2046 = 50,000
K = 8 %	K = 8 %
D = 55 %	D = 55 %
T = 6 % *	T = 6 % *
V = 60 MPH	V = 60 MPH
* TTST = 3% DUAL 3%	* TTST = 3% DUAL 3%
FUNC CLASS =	FUNC CLASS =
PRINCIPAL ARTERIAL	PRINCIPAL ARTERIAL
STATEWIDE TIER	STATEWIDE TIER



PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-4700CA = 0.424 MI.
LENGTH OF ROADWAY TIP PROJECT U-4700CB = 0.549 MI.
GRAND TOTAL LENGTH TIP PROJECT U-4700CAU-4700CB = 0.973 MI.

Prepared In the Office of:

Johnson, Mirman, & Thompson Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC, 27609
License No: C-3097

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 31, 2018

LETTING DATE:
SEPTEMBER 15, 2026

REECE SCHULER, PE, PLS
PROJECT ENGINEER

JOSHUA ROEMER, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Signed by: Kevin Higgins
E08080648FC2444
P.E.

ROADWAY DESIGN ENGINEER

Signed by: Reece Schuler
16634024C7824FC
P.E.

6/2/2025 11:20:26 PM PDT

6/2/2025 11:22:37 AM PDT



ROADWAY DESIGN
ENGINEER

NORTH CAROLINA
PROFESSIONAL
SEAL
26960
ENGINEER
RECE M. SCHULER

SHEET NUMBER	SHEET
1	TITLE SHEET (U-4700CA/U-4700CB)
1A-1 THRU 1A-2	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
<u>U-4700CA</u>	
INDEX OF SHEETS	

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

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

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

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

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

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.

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

NO SUBSURFACE PLANS ARE AVAILABLE ON PROJECT U-4700CA. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY,
BLUE RIDGE EMC, AT&T, CHARTER/SPECTRUM, MCNC, PIEDMONT NATURAL GAS,
CALDWELL COUNTY, CONTRERRA, SEGRA, AND CITY OF LENOIR.

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

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06 OR DETAILS IN PLANS.

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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.
U-4700CA/U-4700CB

SHEET NO.
1A-2

ROADWAY DESIGN
ENGINEER

NORTH CAROLINA
PROFESSIONAL
SEAL
26960
ENGINEER
RECE M. SCHULTE

EFF. 01-16-2024
REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" CONTRACTS STANDARDS AND DEVELOPMENT UNIT - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY 16, 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO. TITLE

DIVISION 2 - EARTHWORK

- 200.03 METHOD OF CLEARING - METHOD III
- 225.02 GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
- 225.04 METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
- 275.01 ROCK PLATING

DIVISION 3 - PIPE CULVERTS

- 300.01 METHOD OF PIPE INSTALLATION-(USE DETAILS IN LIEU OF STANDARD FOR SHEETS 1 AND 2 OF 2)
- 310.10 DRIVEWAY PIPE CONSTRUCTION

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS

- 560.01 METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD I

DIVISION 6 - ASPHALT BASES AND PAVEMENTS

- 654.01 PAVEMENT REPAIRS

DIVISION 8 - INCIDENTALS

- 815.02 SUBSURFACE DRAIN
- 838.01 CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS - 15" THRU 48" PIPE 90 SKEW
- 838.11 BRICK ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS - 15" THRU 48" PIPE 90 SKEW
- 838.33 REINFORCED CONCRETE ENDWALL - FOR SINGLE 66" PIPE 90 SKEW
- 838.39 REINFORCED CONCRETE ENDWALL - FOR SINGLE 72" PIPE 90 SKEW
- 838.45 NOTES FOR REINFORCED CONCRETE ENDWALL - STD. DWG 838.21 THRU 838.40
- 838.63 REINFORCED BRICK ENDWALL - FOR SINGLE 66" PIPE 90 SKEW
- 838.69 REINFORCED BRICK ENDWALL - FOR SINGLE 72" PIPE 90 SKEW
- 838.75 NOTES FOR REINFORCED BRICK ENDWALL - STD. DWG 838.51 THRU 838.70
- 838.80 PRECAST ENDWALLS - 12" THRU 72" PIPE 90 SKEW
- 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
- 840.19 CONCRETE GRATED DROP INLET TYPE 'D' - 12" THRU 36" PIPE
- 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 - 12" THRU 66" PIPE
- 840.32 BRICK JUNCTION BOX - 12" THRU 66" PIPE
- 840.35 TRAFFIC BEARING GRATED DROP INLET - FOR CAST IRON DOUBLE FRAME AND GRATES
- 840.45 PRECAST DRAINAGE STRUCTURE
- 840.46 TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
- 840.54 MANHOLE FRAME AND COVER
- 840.72 PIPE COLLAR
- 846.02 DROP INLET INSTALLATION IN EXPRESSWAY GUTTER
- 846.04 DROP INLET INSTALLATION IN SHOULDER BERM GUTTER
- 848.01 CONCRETE SIDEWALK (USE DETAIL IN LIEU OF STANDARD FOR SHEET 1 OF 1)
- 848.02 DRIVEWAY TURNOUT - RADIUS TYPE
- 848.04 STREET TURNOUT
- 848.06 CURB RAMP (USE DETAILS IN LIEU OF STANDARDS FOR SHEETS 9 AND 10 OF 13)
- 852.01 CONCRETE ISLANDS
- 852.04 METHOD FOR PLACEMENT OF DROP INLETS IN GRASSED MEDIAN - USING 1'-6" CURB AND GUTTER
- 852.06 METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS
- 862.01 GUARDRAIL PLACEMENT (USE DETAILS IN LIEU OF STANDARDS FOR SHEETS 4, 6, 11, 12 AND 14 OF 15)
- 862.02 GUARDRAIL INSTALLATION (USE DETAIL IN LIEU OF STANDARD FOR SHEET 5 OF 9)
- 876.02 GUIDE FOR RIP RAP AT PIPE OUTLETS
- 876.04 DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

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	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	
BUILDINGS AND OTHER CULTURE:	
Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	
HYDROLOGY:	
Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

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

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	
Permanent Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage/Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
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:

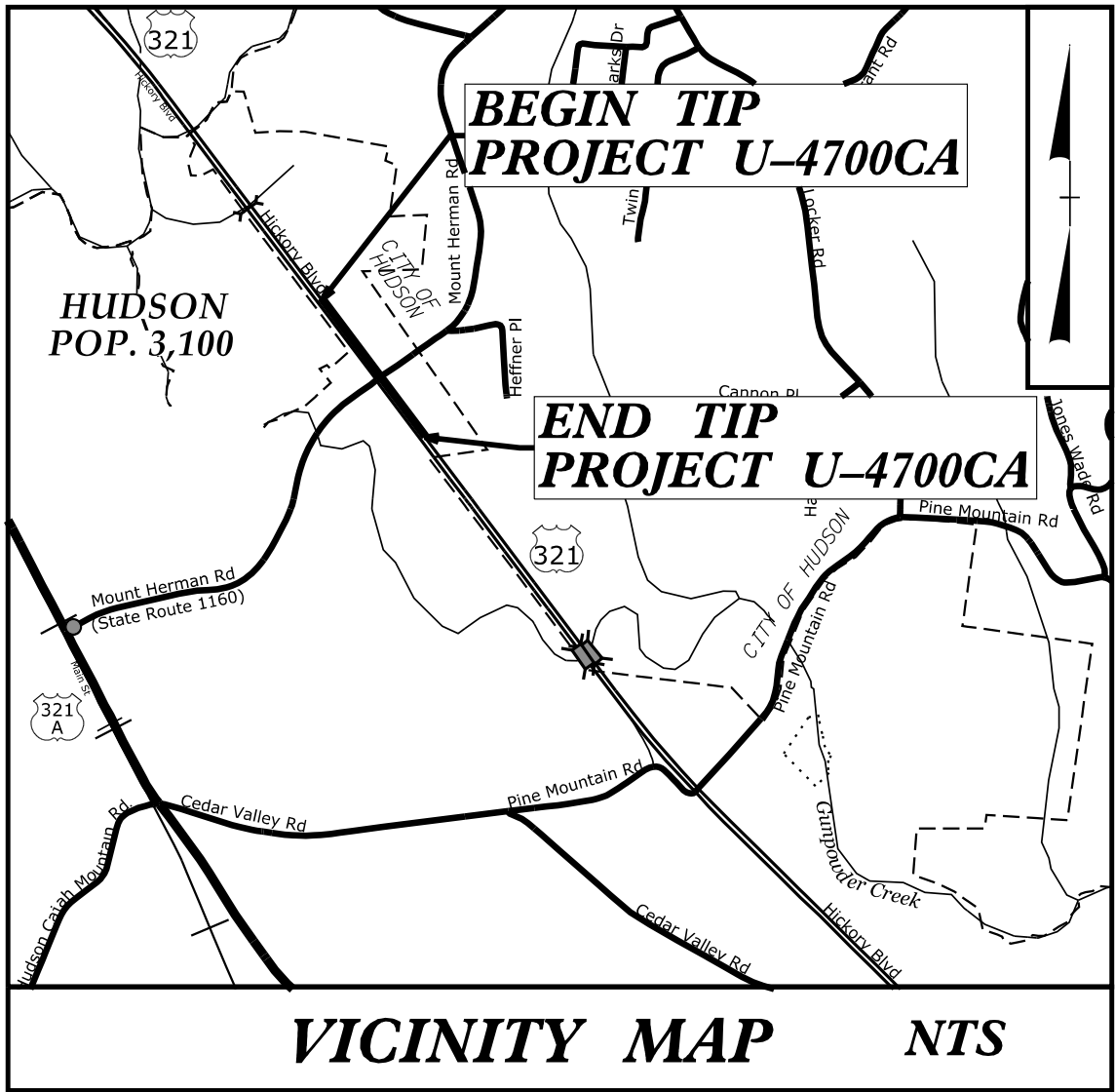
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE - LOS A)*	
SS Force Main Line (SUE - LOS B)*	
SS Force Main Line (SUE - LOS C)*	
SS Force Main Line (SUE - LOS D)*	

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	
End of Information	

TIP PROJECT: U-4700CA

CONTRACT: C204947



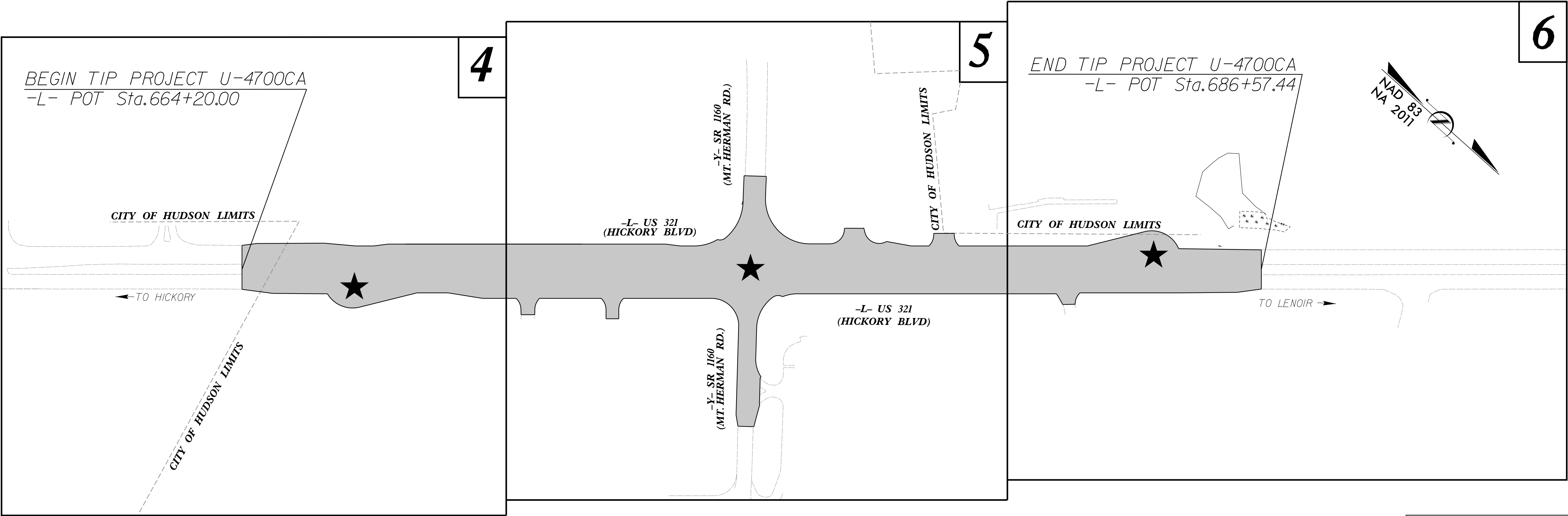
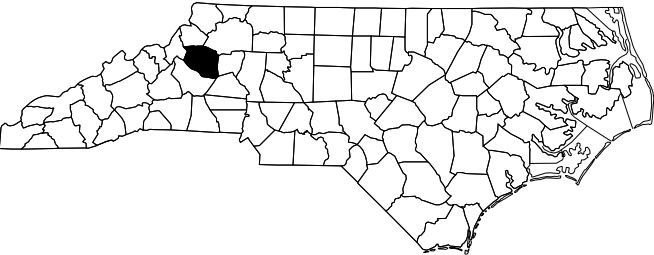
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CALDWELL COUNTY

LOCATION: US 321 (HICKORY BLVD) AT SR 1160 (MOUNT HERMAN ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4700CA	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35993.1.10	NHP-0321(037)	PE	
35993.2.5	NHP-0321(037)	ROW, UTIL	
35993.3.5	NHP-0321(037)	CONST	

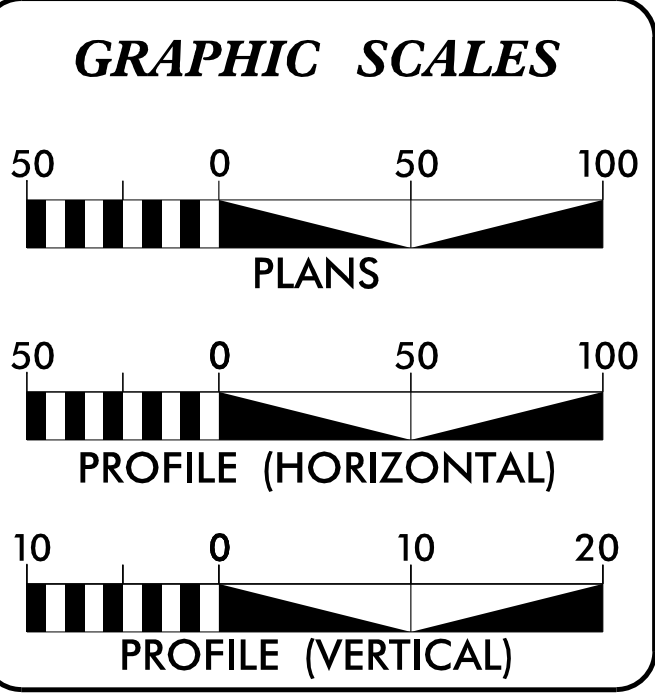


★ PROPOSED SIGNAL

This is a Limited Controlled Access Project with access being limited to interchanges and at-grade intersections.

NCDOT CONTACT: RAMIE A. SHAW, PE DIVISION PROJECT DEVELOPMENT ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

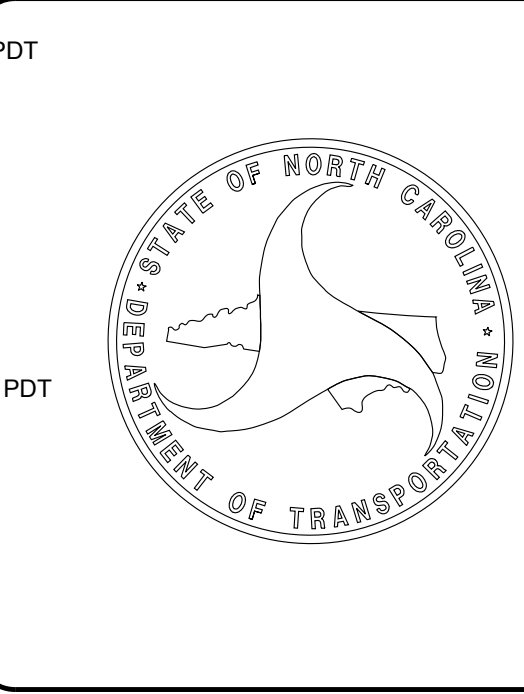


DESIGN DATA	
ADT 2026 =	38,300
ADT 2046 =	50,000
K =	8 %
D =	55 %
T =	6 % *
V =	60 MPH
* TTST =	3% DUAL = 3%
FUNC CLASS =	PRINCIPAL ARTERIAL
STATEWIDE TIER	

PROJECT LENGTH	
LENGTH ROADWAY PROJECT U-4700CA =	0.424 MI.
TOTAL LENGTH OF PROJECT U-4700CA =	0.424 MI.

Prepared In the Office of: JMT Johnson, Mirmiran, & Thompson Inc. 4700 Falls of Neuse Rd, Suite 100, Raleigh, NC, 27609 License No: C-3097	
2024 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: DECEMBER 31, 2018	REECE SCHULER, PE, PLS PROJECT ENGINEER
LETTING DATE: SEPTEMBER 15, 2026	JOSHUA ROEMER, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER Signature: Kevin Higgins Signature: Kevin P. Higgins Signature: Reece M. Schuler	
ROADWAY DESIGN ENGINEER Signature: Reece M. Schuler	



6/2/2006

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jwagner

FINAL PAVEMENT SCHEDULE			
C1	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.	R2	2'-6" CURB AND GUTTER
C2	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.	R3	EXPRESSWAY GUTTER
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS PER SQ. YARD.	S	4" CONCRETE SIDEWALK
D2	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 4.0" IN DEPTH.	T	EARTH MATERIAL
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS PER SQ. YARD.	U	EXISTING PAVEMENT
E2	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 GREATER THAN 5.5" IN DEPTH OR LESS THAN 3.0" IN DEPTH.	V1	MILLING BITUMINOUS PAVEMENT. 0" TO 1.5" DEPTH. (INCIDENTAL MILLING)
R1	1' - 6" CURB AND GUTTER	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL THIS SHEET)

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

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

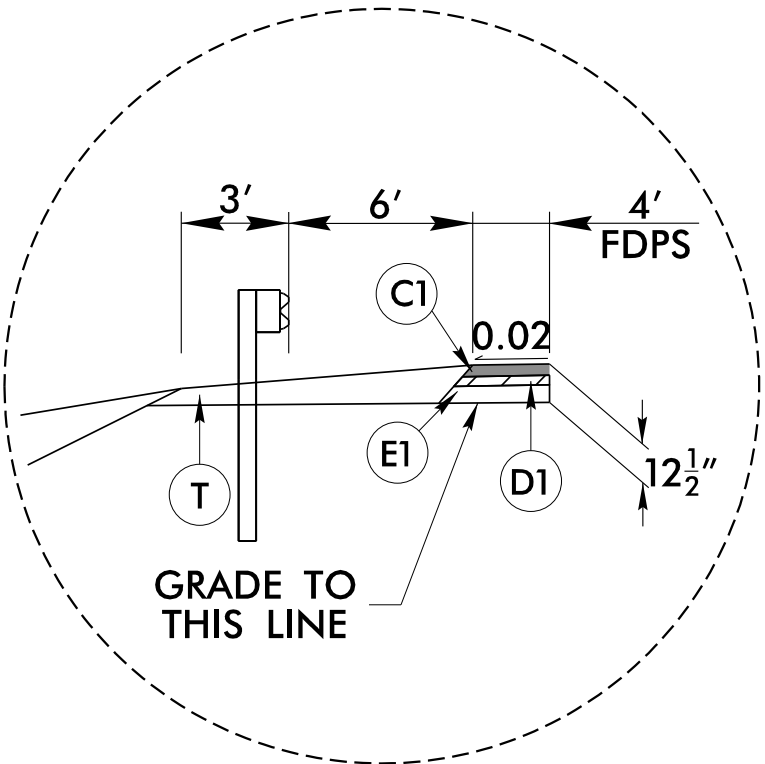
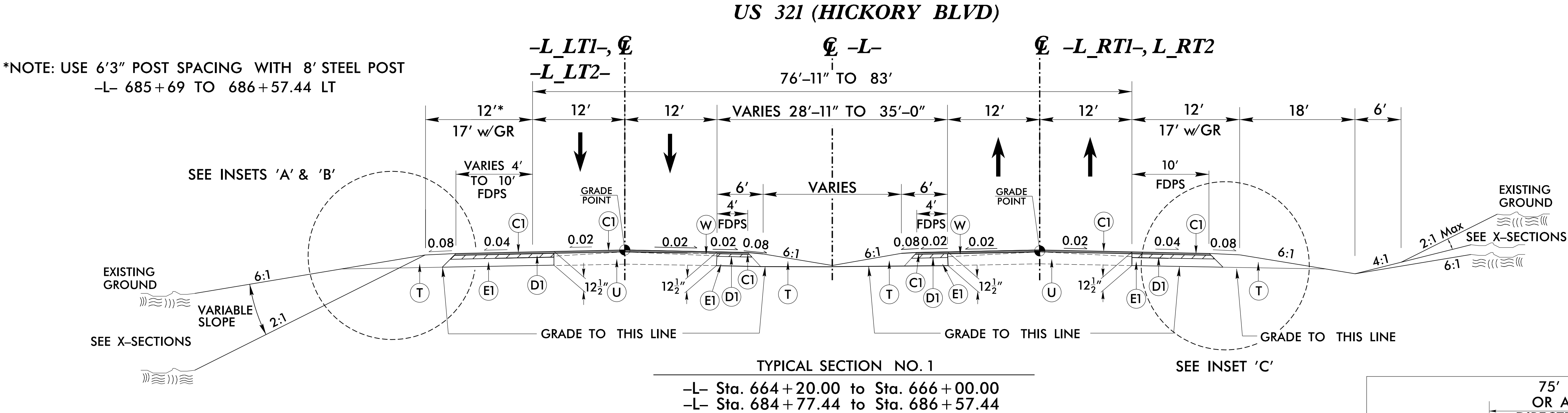
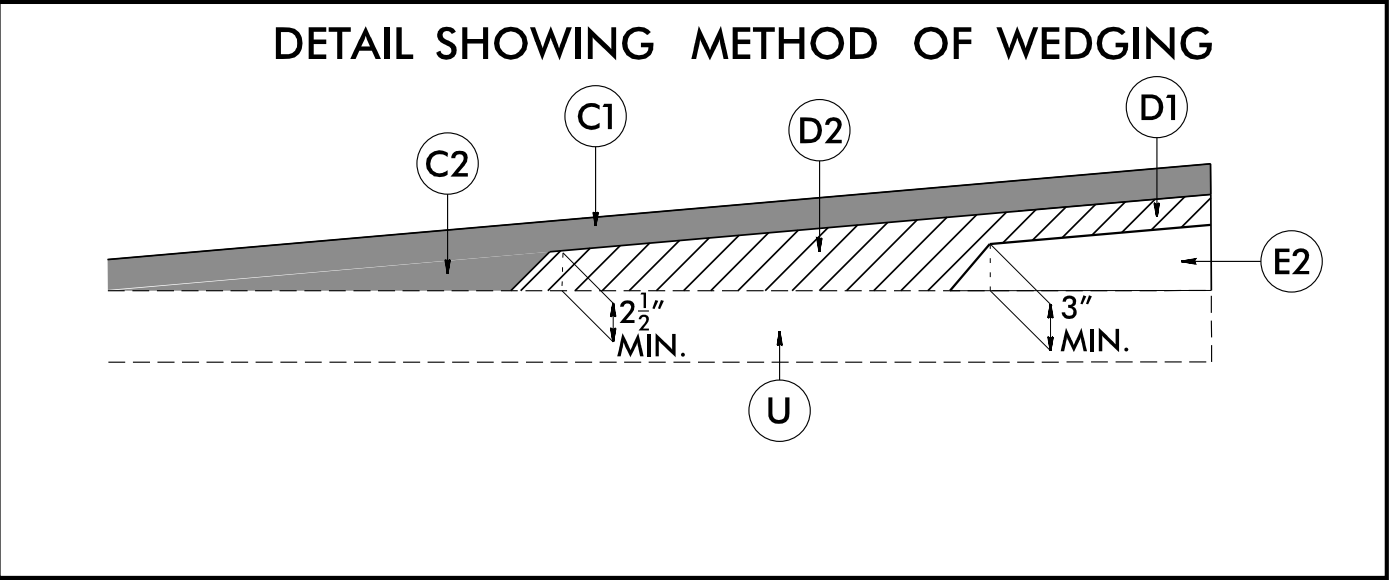
PROJECT REFERENCE NO.
U-4700CA

SHEET NO.
2A-1

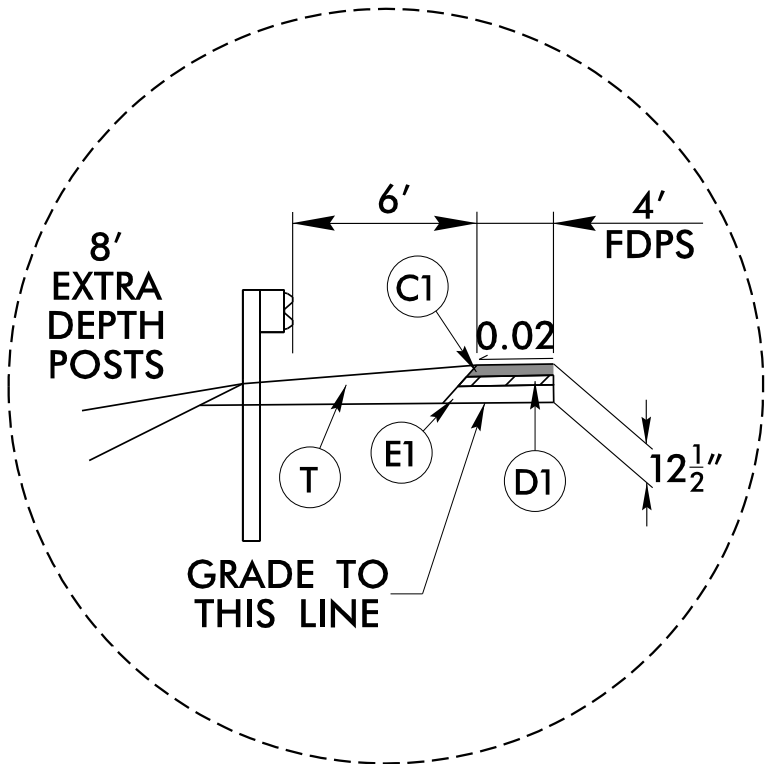
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PROFESSIONAL
SEAL
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R. A. S. S. S. S.
Ramin Shari

ROADWAY DESIGN
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PROFESSIONAL
SEAL
26960
R. A. S. S. S. S.
Ramin Shari

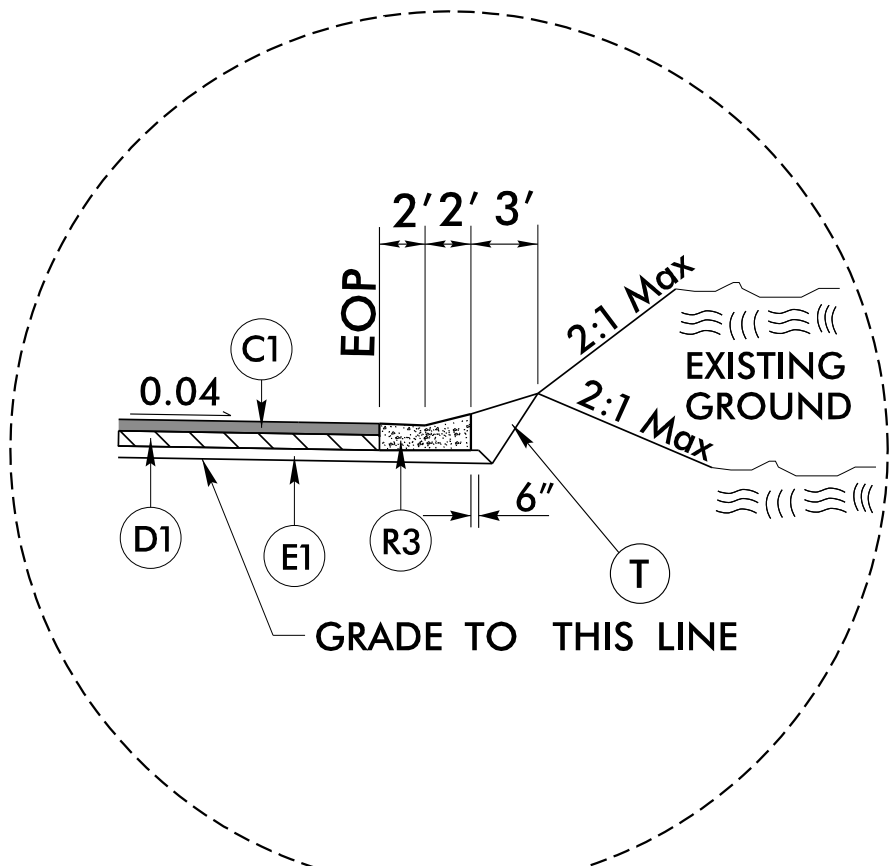
Johnson, Mirmiran, & Thompson, Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC, 27609
License No: C-3097



-L- Sta. 684+87.68 LT to Sta. 686+00.00 LT



-L- Sta. 686+00.00 LT to Sta. 686+57.44 LT



-L- Sta. 664+87.23 RT to Sta. 666+03.53 RT

75' OR AS DIRECTED BY ENGINEER

1.5"

W

U

MILL TO THIS LINE

DETAIL OF INCIDENTAL MILLING

-L LT1- Sta. 10+00.00 to 10+75.00
-L RT1- Sta. 10+00.00 to 10+75.00
-L RT2- Sta. 11+05.00 to 11+80.00
-L LT2- Sta. 11+05.02 to 11+80.02
-Y- Sta. 10+00.00 to 10+75.00
-Y- Sta. 14+75.00 to 15+50.00

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.
U-4700CA

SHEET NO.
2B-1

ROADWAY DESIGN
ENGINEER
6/20/2018 11:42:37 AM PDT
NORTH CAROLINA
PROFESSIONAL
SEAL
26960
ENGINEER
REECE M. SCHULTE
JMT
Johnson, Morrison, & Thompson, Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC 27609
License No: C-3097

50 25 0 50 100

INTERSECTION DETAILS

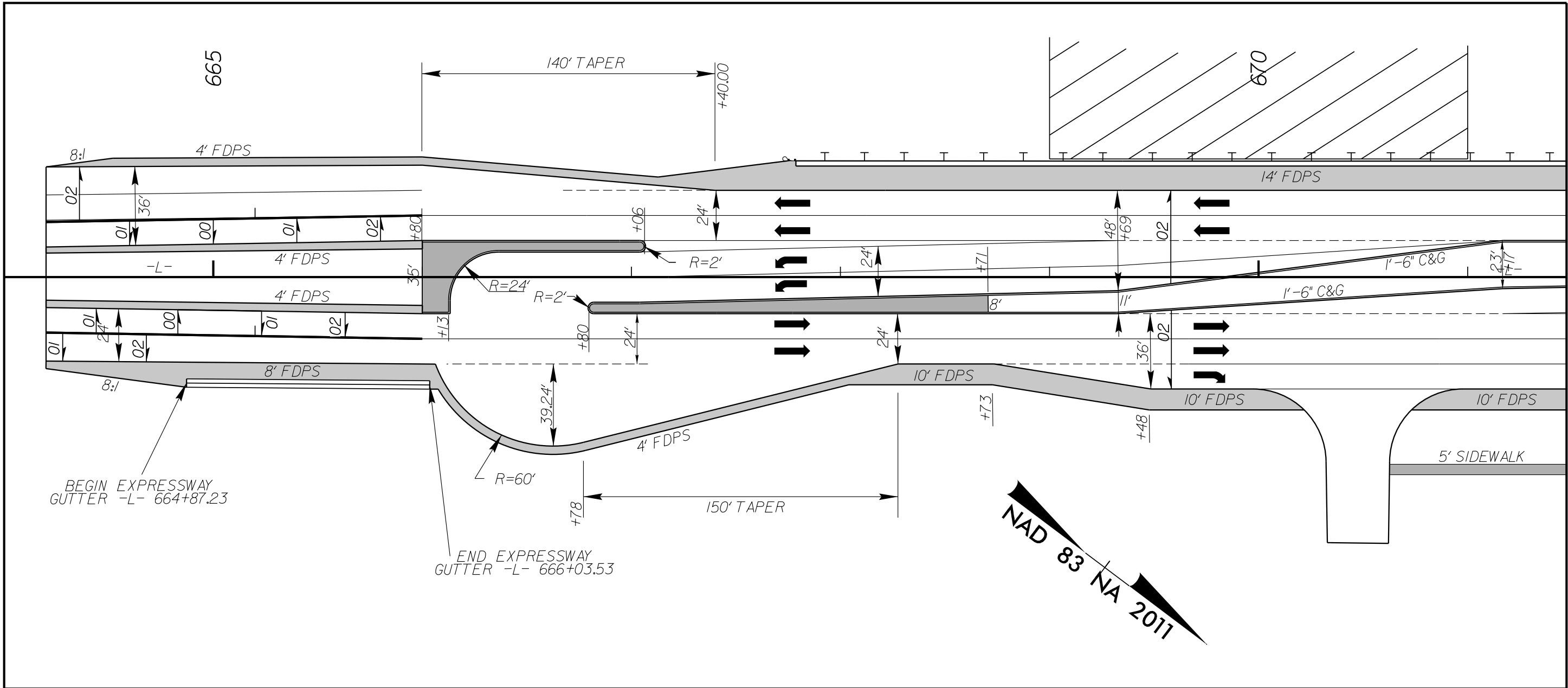
US 321 (-L-)

LEGEND

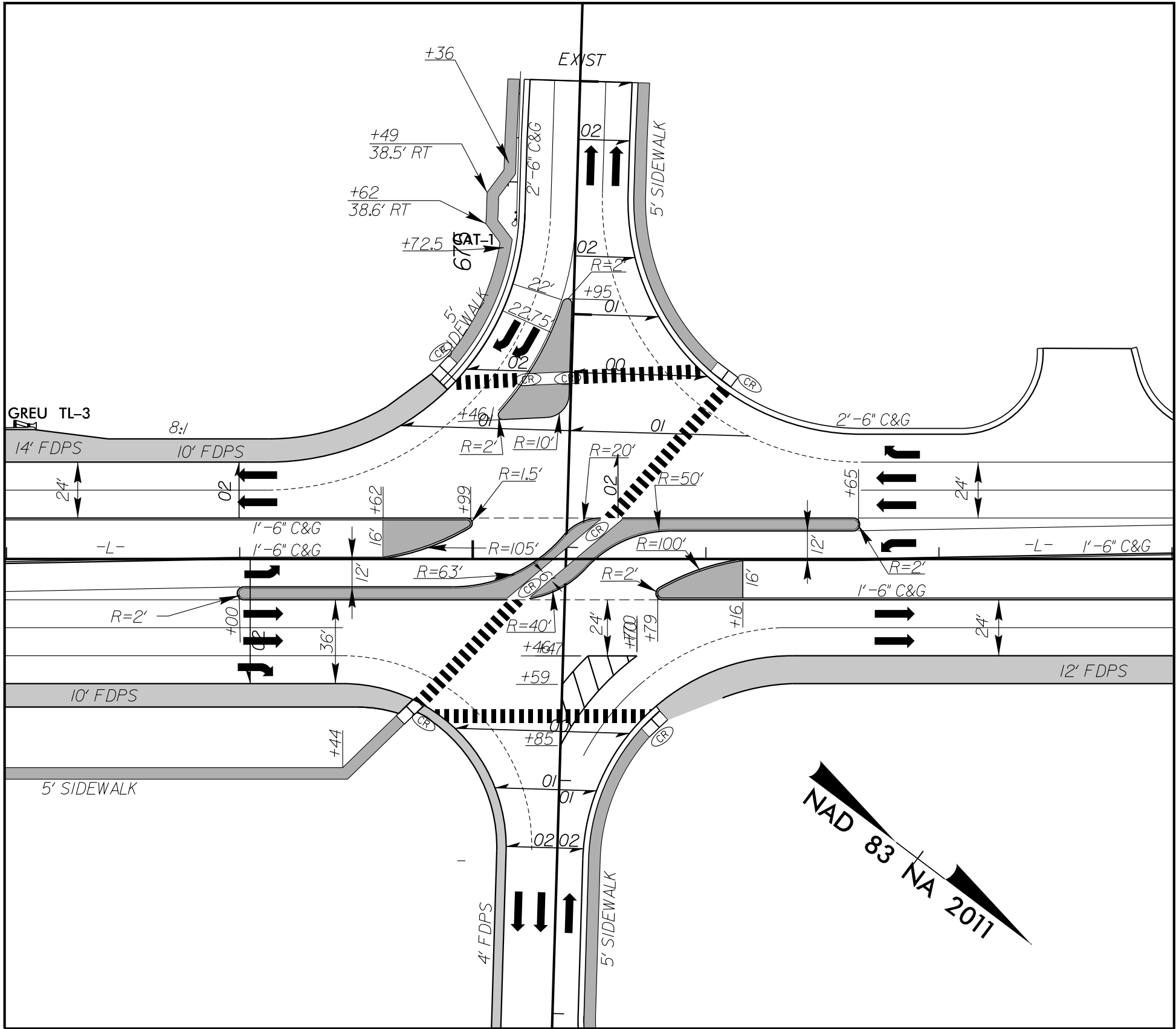
PROPOSED 5" MONOLITHIC ISLAND

PROPOSED 4" CONCRETE SIDEWALK

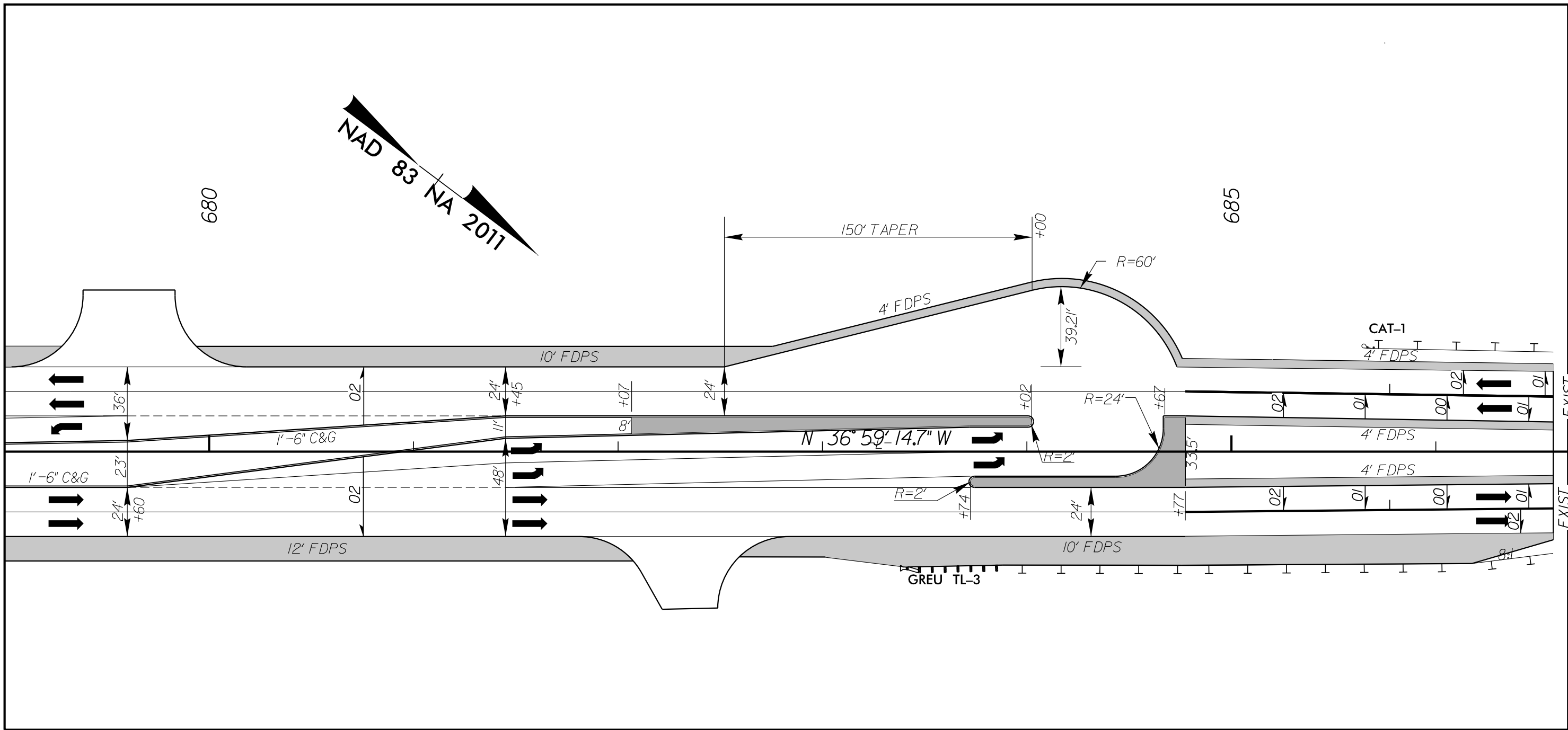
PROPOSED FULL DEPTH PAVED SHOULDER



-L- Sta. 664+20 TO Sta. 671+50
INTERSECTION DETAIL SHOWN FROM PLAN SHEET 4



-L- Sta. 673+00 TO Sta. 678+00
INTERSECTION DETAIL SHOWN FROM PLAN SHEET 5



-L- Sta. 679+00 TO Sta. 686+50
INTERSECTION DETAIL SHOWN FROM PLAN SHEET 5 & 6

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

SHEET 1 OF 2
300.01

TOP OF FILL

NORMAL EARTH FOUNDATION

TOP OF FILL

**ROCK FOUNDATION
PIPE IN TRENCH**

TOP OF FILL

UNSUITABLE MATERIAL FOUNDATION

TOP OF FILL

NORMAL EARTH FOUNDATION

TOP OF FILL

**ROCK FOUNDATION
PIPE ABOVE GROUND**

TOP OF FILL

UNSUITABLE MATERIAL FOUNDATION

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

6/2/2026 | 11:23:42 AM PDT

Signed by:
Nicole M. Hackler
5884323034164C5...

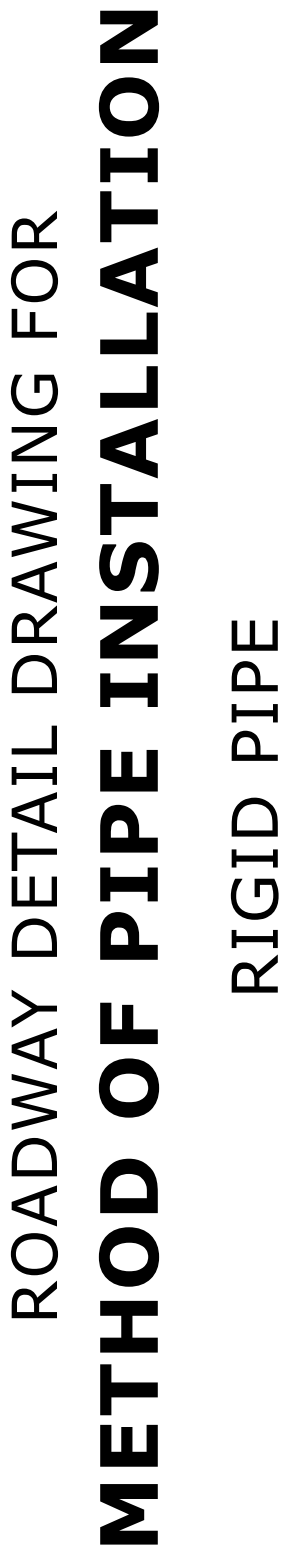
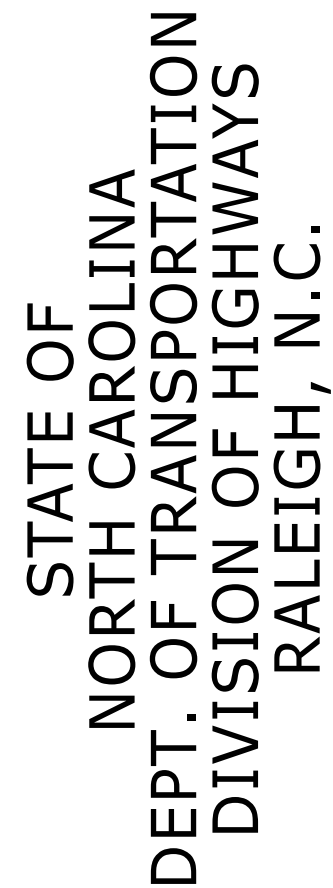
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:



	SPRINGLINE OF PIPE
	SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.
	UNDISTURBED EARTH MATERIAL
	SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SHEET 2 OF 2

300.01

6/2/2026 | 11:23:42 AM PDT



Signed by:
Nicole M. Hackler
5884323D34164C5...

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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

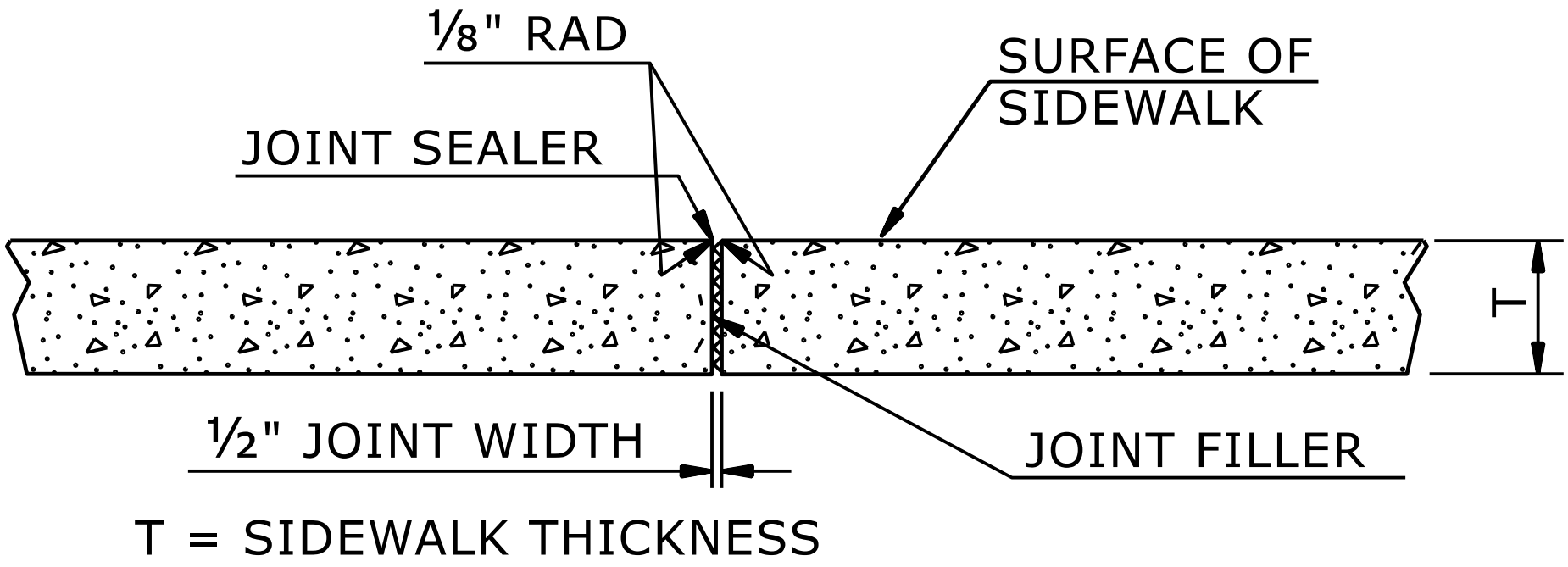
PROJECT REFERENCE NO.	SHEET NO.
U-4700CA	2C-3

NOTES:

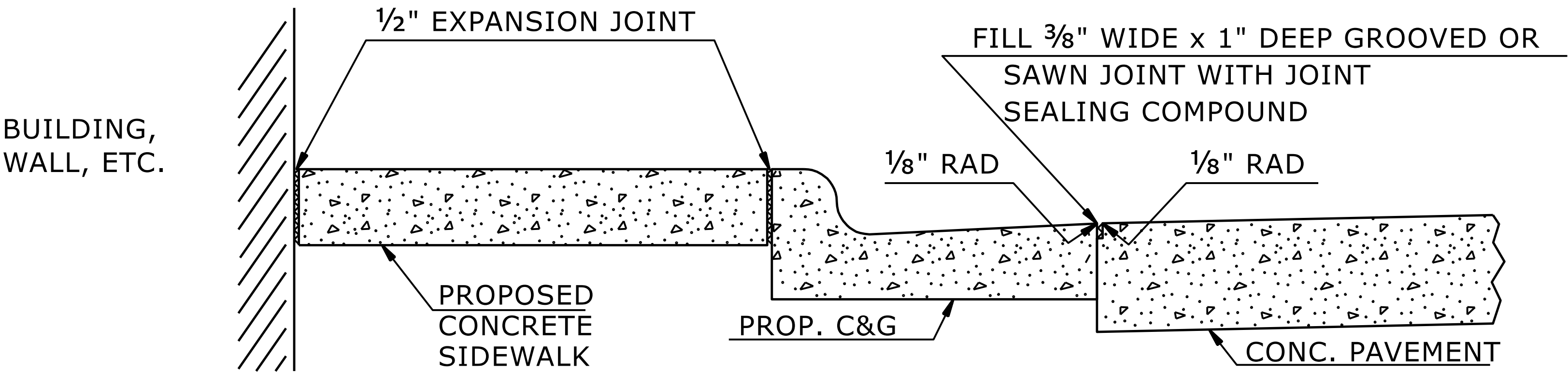
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

SHEET 1 OF 1
848D01

6/2/2026 | 11:23:42 AM PDT



Signed by:
Nicole M. Hacker
5884323034164CS...

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UNLESS ALL SIGNATURES COMPLETED

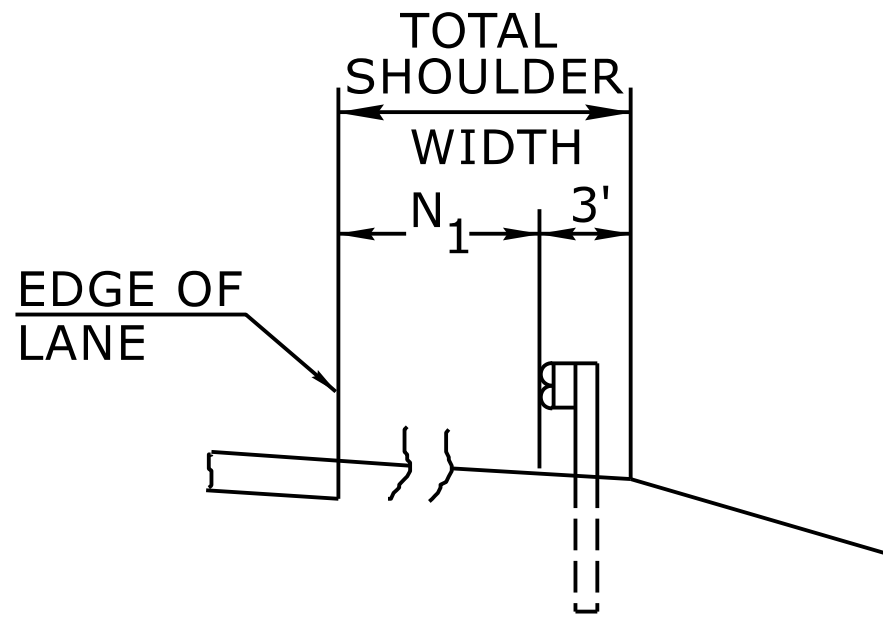
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

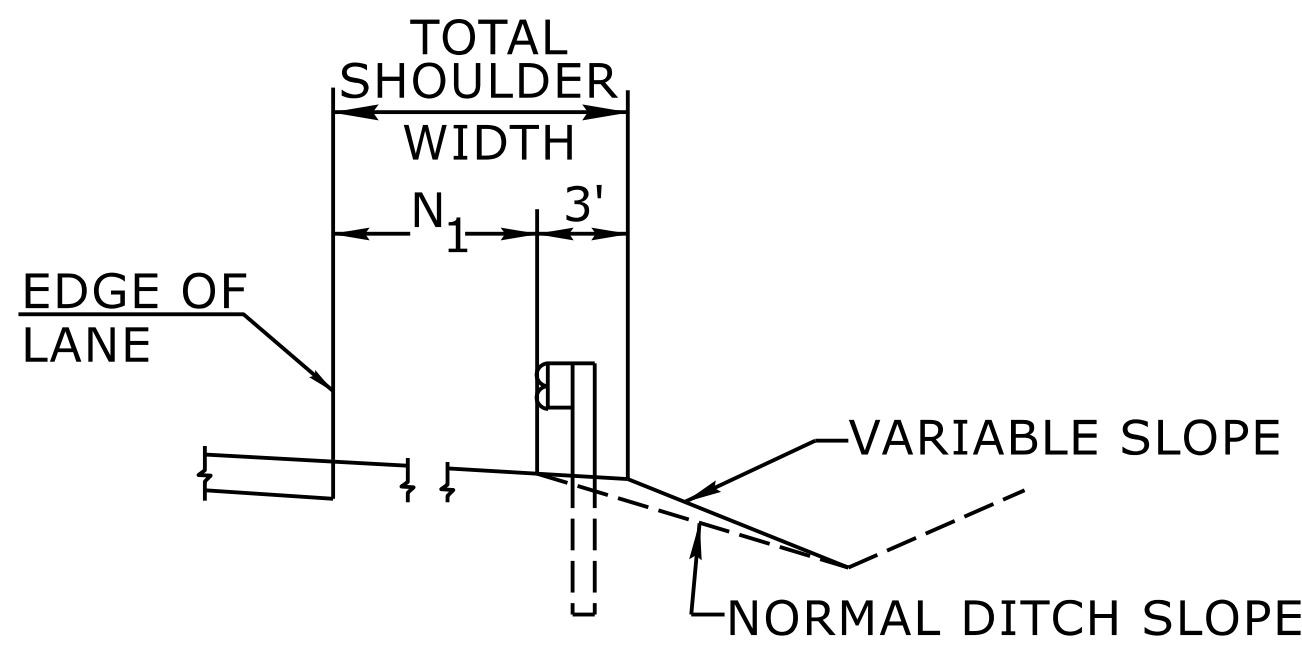
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-4700CA	2C-4

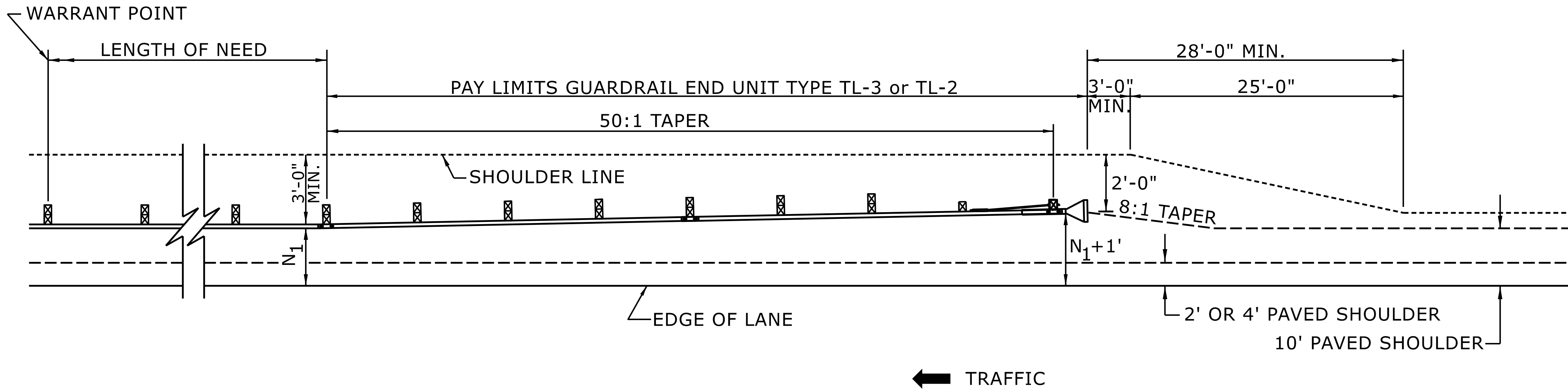


FILL SECTION



CUT SECTION

"N₁"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

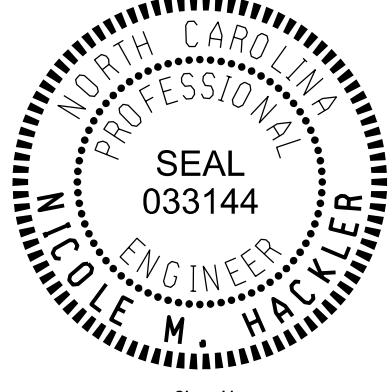
DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 6 OF 15
862D01

6/2/2026 | 11:23:42 AM PDT



Signed by:
Nicole M. Hackler
5884323034164CS...

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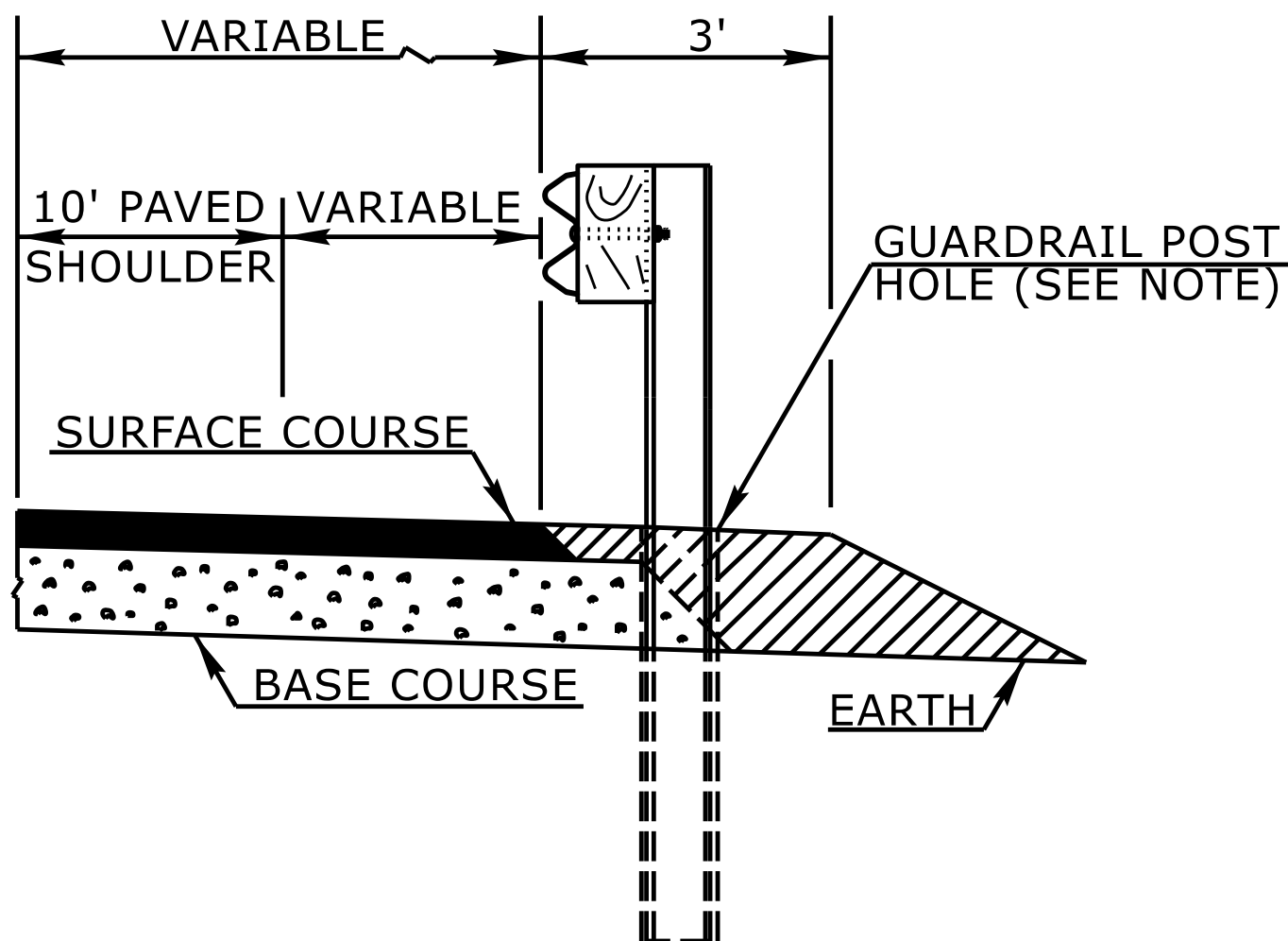
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

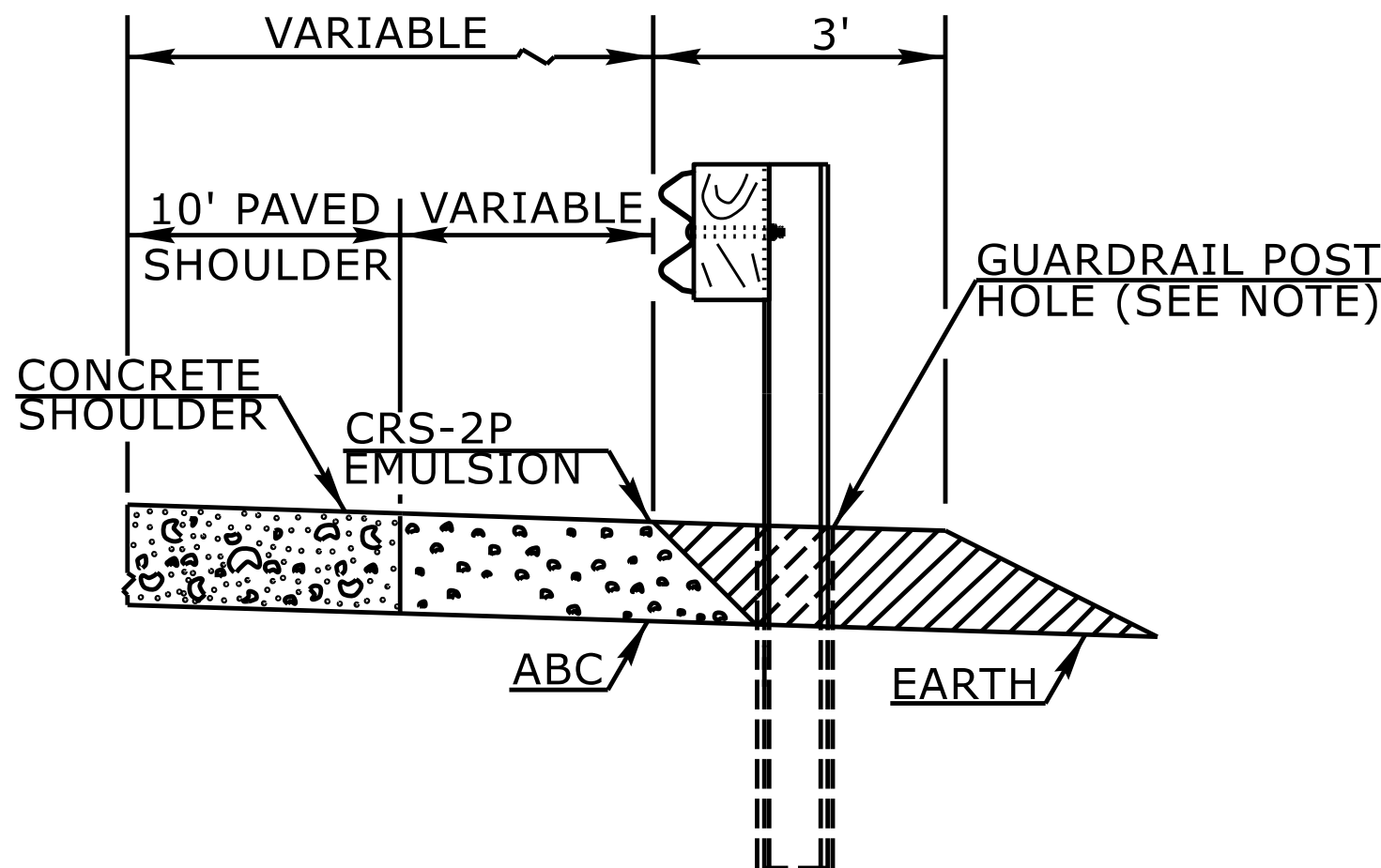
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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

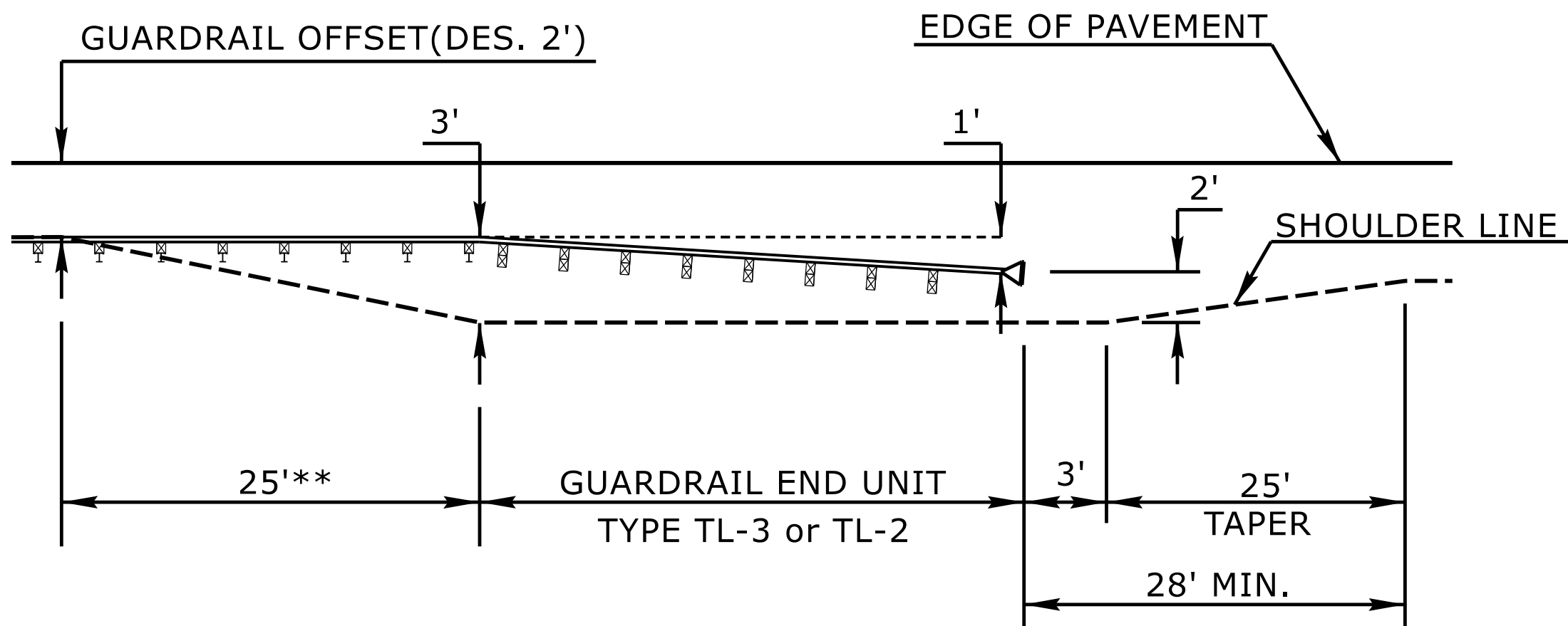
PROJECT REFERENCE NO.	SHEET NO.
U-4700CA	2C-5



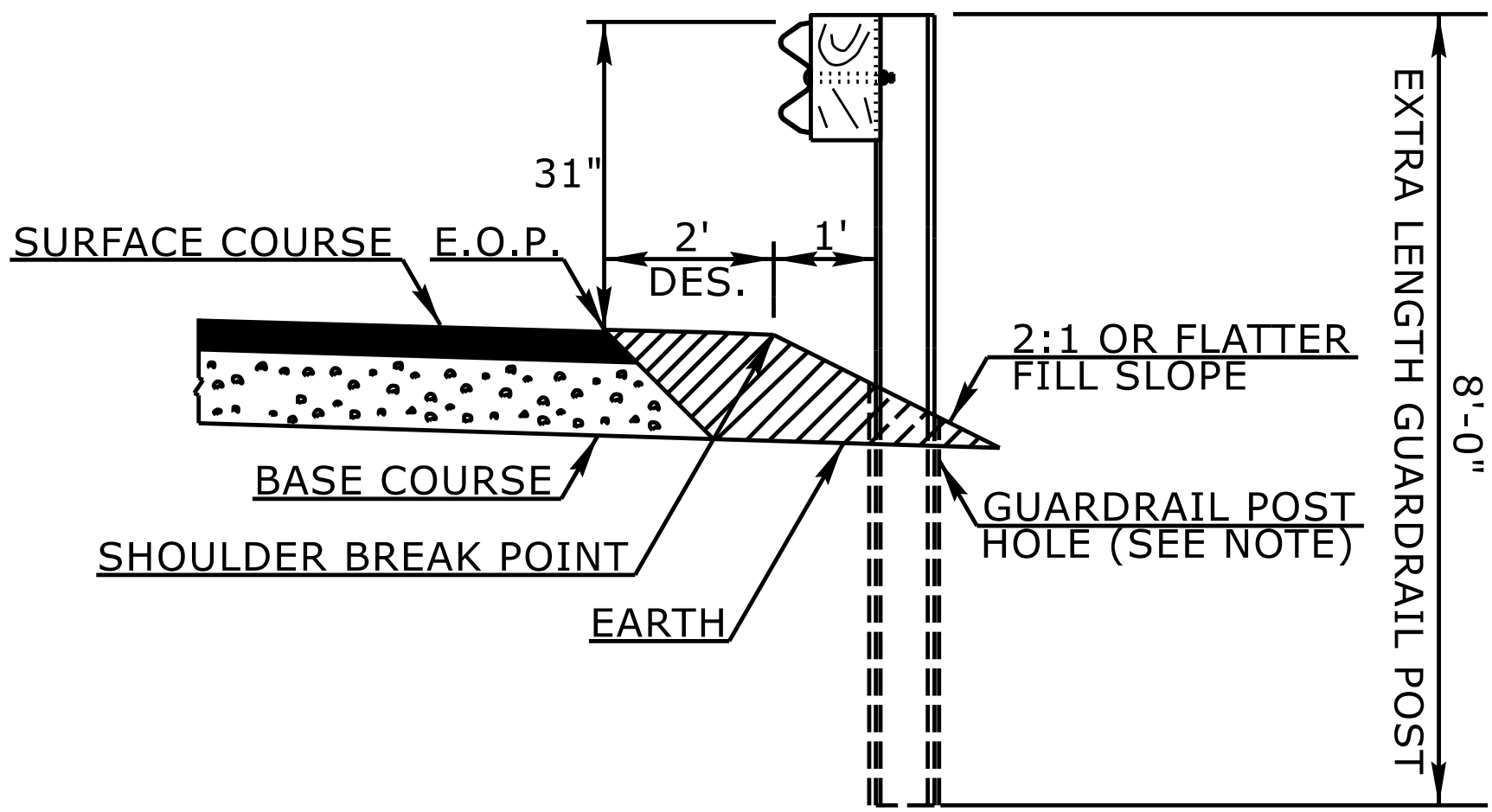
FLEXIBLE PAVED SHOULDER



CONCRETE PAVED SHOULDER



8' GUARDRAIL POST ON 2:1 SLOPE-END UNIT TRANSITION*
PLAN VIEW



8' GUARDRAIL POST ON 2:1 SLOPE*

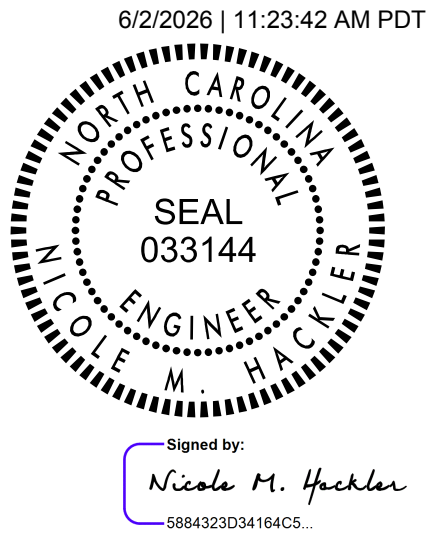
* THE 8' GUARDRAIL POST ON 2:1 SLOPE DETAIL IS INTENDED FOR USE ONLY IN SEVERELY CONSTRAINED AREAS WITH A POSTED SPEED $\leq$ 60 MPH. GUARDRAIL END UNITS MAY NOT BE PLACED ON THE 2:1 SLOPE AND MUST TRANSITION TO THE SHOULDER.
** 8' GUARDRAIL POST SHOULD BE USED IN THIS RANGE

NOTE:
WHEN WOODEN GUARDRAIL POSTS ARE USED, DRILL HOLES THROUGH EARTH MATERIAL AND BASE COURSE. THE POST MAY THEN BE DRIVEN TO THE PROPER DEPTH. DRILL THE HOLE OF SUFFICIENT SIZE TO ACCOMMODATE THE PARTICULAR POST BEING USED. BACKFILL AND TAMP HOLES USING THE EXCAVATED MATERIAL.

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 11 OF 15
862D01

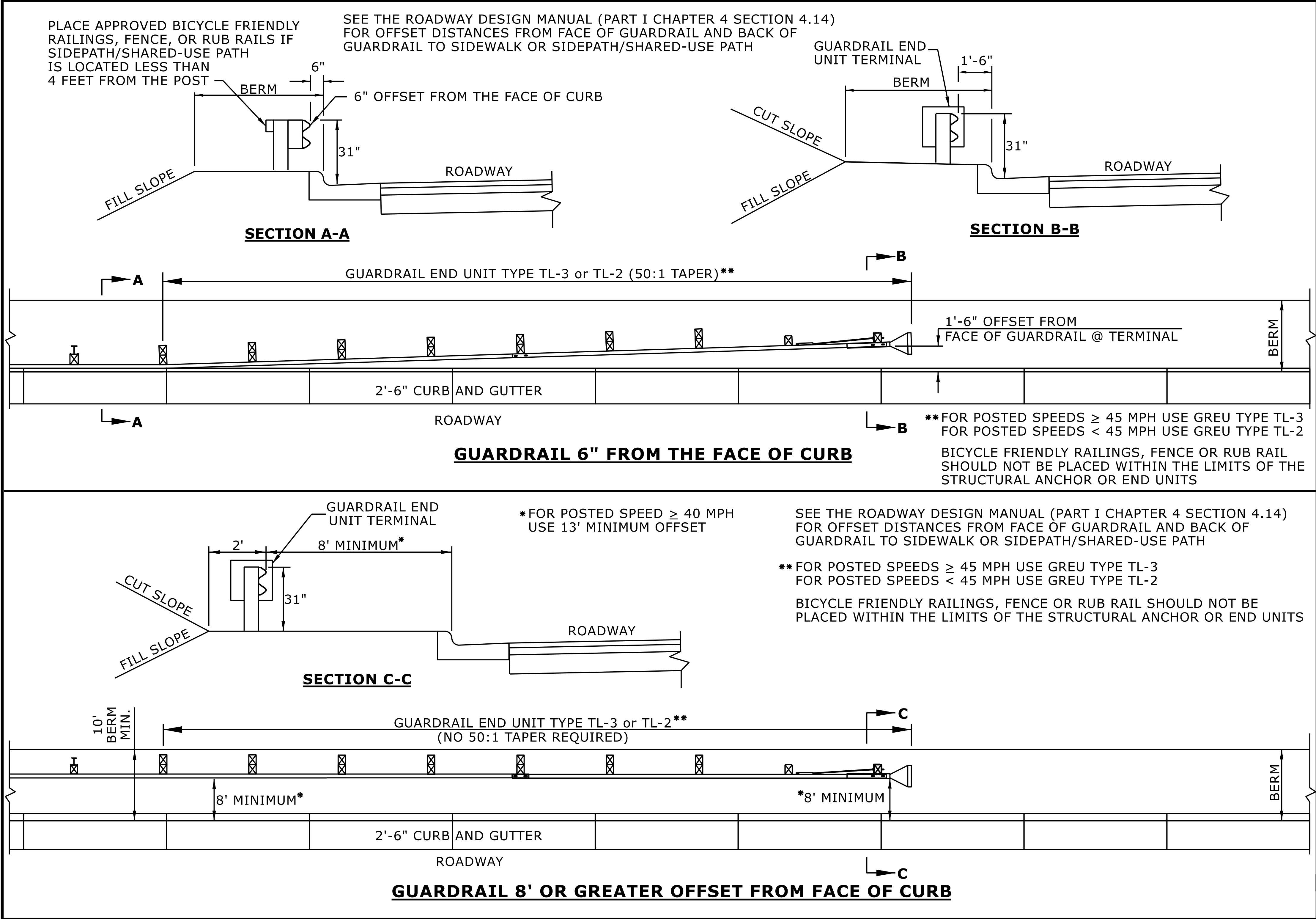


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CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

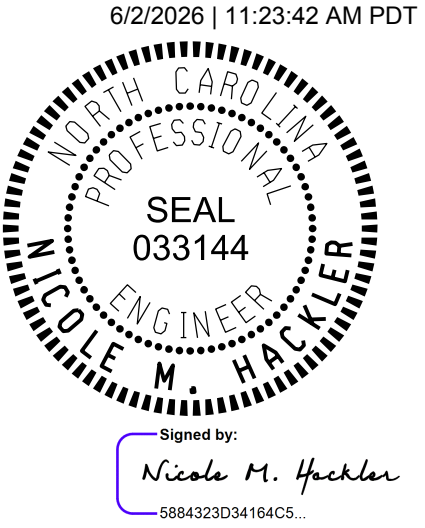
ORIGINAL BY: L.SMITH DATE: 10-14-2025
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:



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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
GUARDRAIL TREATMENT AT CURB AND GUTTER

SHEET 12 OF 15
862D01



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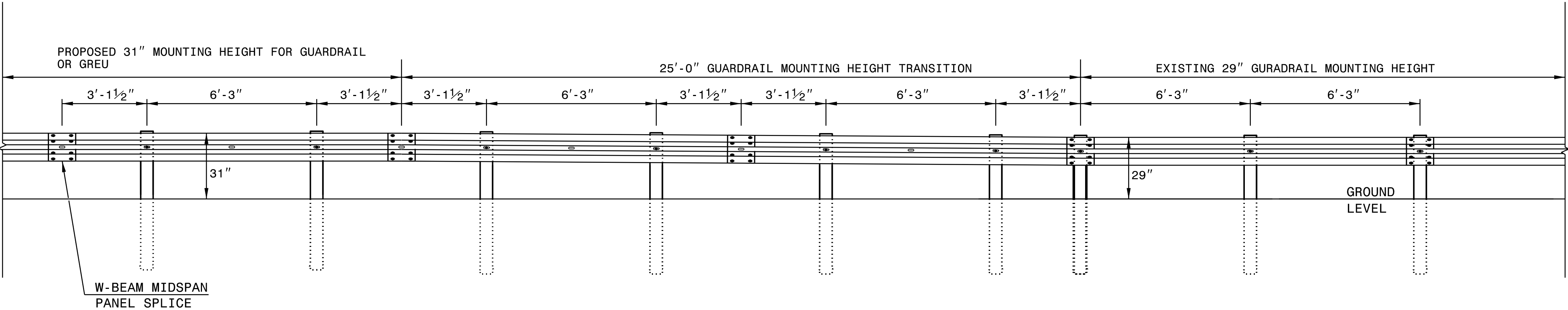
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN	DATE: 7-25-2024
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

PROJECT REFERENCE NO.	SHEET NO.
U-4700CA	2C-7

NOTE: IF EXISTING GUARDRAIL IS LOWER THAN 29", USE AN ADDITIONAL 12'-6" LONG SECTION OF GUARDRAIL,
FOR EVERY 1" OF HEIGHT DIFFERENCE, TO TRANSITION FROM EXISTING GUARDRAIL TO PROPOSED 31" GUARDRAIL.



ELEVATION VIEW

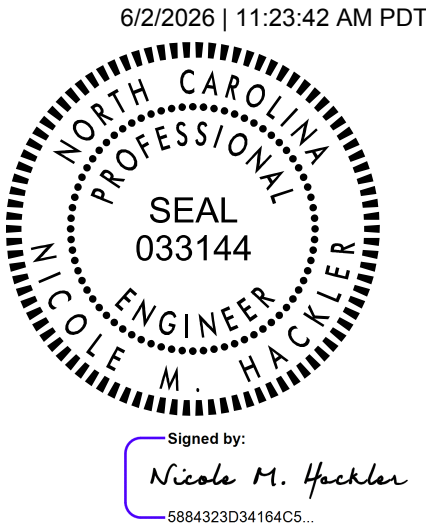
TRANSITION FROM 29" TO 31" W-BEAM GUARDRAIL MOUNTING HEIGHT

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 5 OF 9

862D02



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**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: K. Aldridge DATE: 02-25
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Undercut	Embank. +%	Borrow	Waste
-L- Sta. 664+20.00 LT	-L- Sta. 686+57.44 LT	1,979		6,749	4,770	0
-Y- Sta. 10+00.00	-Y- Sta. 11+53.98	54		207	153	0
SUBTOTALS:		2,033		6,956	4,923	0
-L- Sta. 664+20.00 RT	-L- Sta. 686+57.44 RT	2,834		2,254	0	580
-Y- Sta. 12+56.02	-Y- Sta. 15+50.00	239		36	0	203
SUBTOTALS:		3,073		2,289	0	783
TOTALS:		5,106		9,245	4,923	783
MATERIAL FOR SHOULDER CONST. LOSS TO CLEARING & GRUBBING		-500		1,277	1,277	
WASTE IN LIEU OF BORROW					-783	-783
ADDITIONAL UNDERCUT			500			500
PROJECT TOTAL:		4,606	500	10,522	5,917	500
EST. 5% REPLACE TOPSOIL ON BORROW PIT					296	
GRAND TOTAL:		4,606	500		6,213	500
SAY:		4,650	500		6,300	

DRAINAGE DITCH EXCAVATION = 110 CY

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing and Removal of Existing Pavement will be paid for at the contract lump sum price for grading.

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/MED	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	664+20.00	666+12.20	RT	164.90			
-L-	664+20.00	666+00.00	LT MED	88.22			
-L-	664+20.00	666+00.00	RT MED	100.41			
-L-	666+61.96	674+30.10	LT	83.77			
-L-	667+33.45	667+87.52	RT	158.56			
-L-	668+06.37	669+36.67	RT	62.75			
-L-	669+75.01	670+13.45	RT	3.88			
-L-	671+92.89	672+19.01	RT	21.00			
-L-	672+47.01	672+70.47	RT	5.87			
-L-	673+97.81	674+99.37	RT	20.26			
-L-	675+44.19	682+21.59	RT	380.85			
-L-	676+37.86	677+10.36	LT	10.15			
-L-	678+40.41	679+24.06	LT	41.61			
-L-	680+03.51	682+57.18	LT	39.04			
-L-	682+59.76	682+70.33	RT	0.53			
-L-	682+72.12	686+57.44	RT	84.90			
-L-	684+72.73	686+57.44	LT	49.75			
-Y-	12+62.21	14+42.59	LT	111.44			
-Y-	12+99.32	14+39.46	RT	15.70			
-Y-	15+36.00	15+50.00	RT	1.38			
		TOTAL:		1444.98			
		SAY:		1,450			

COMPUTED BY:	Keith Bridgers	DATE:	3/1/23
CHECKED BY:	Joshua Roemer, PE	DATE:	3/22/23

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
GUARDRAIL SUMMARY

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	EXTRA LENGTH POSTS, 8' STEEL (EACH)	REMARKS		
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	Type III	B-77	GREU, TL-3	GREU, TL-2	CAT-1	AT-1	Type III SC	B-77 SC		G					NG	
-L-	667+75.00	673+12.500	LT		537.5'			671+00.00		14'	17'		1'					1		1							900'			
-L-	685+69.94	686+57.44	LT		87.50'			686+57.44	686+00	10'	13'									1							172'	15		TIE TO EXIST GUARDRAIL / USE EXTRA DEPTH POSTS -L- 685+69 TO 686+57.44
-L-	683+44.94	686+57.44	RT		312.50'			685+50.00		14'	17'	50'	1'					1									193'			Tie to Exist. Guardrail
-Y-	10+00.00	10+62.50	RT		62.5'				10+55	2.5'	8'									1							189'			Tie To Exist. Guardrail
-Y-	11+95	15+83	RT																											
			SUBTOTALS:	1000.00'														2		3							1454'			
			ANCHOR DEDUCTIONS																											
			CAT-1: 3 @ 6.25'	-18.75'																										
			GREU TL-3: 2 @ 50'	-100'																										
			TOTALS:	881.25'														2		3							1454'	15		
			SAY:	900.00'														2		3							1500'	15		
			ADDITIONAL POSTS:	5																										

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jroemer

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	300
				TOTAL LF:	300

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

SUMMARY OF ROCK PLATING

[illegible]

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

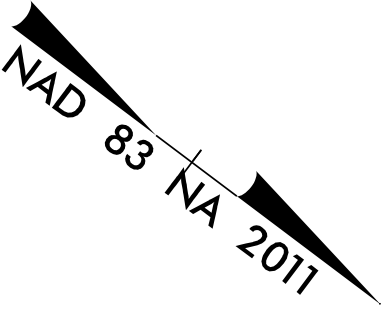
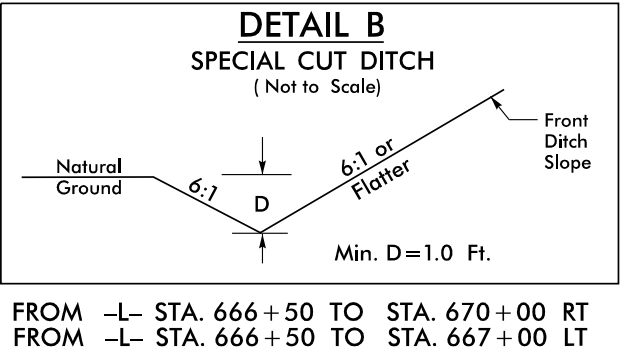
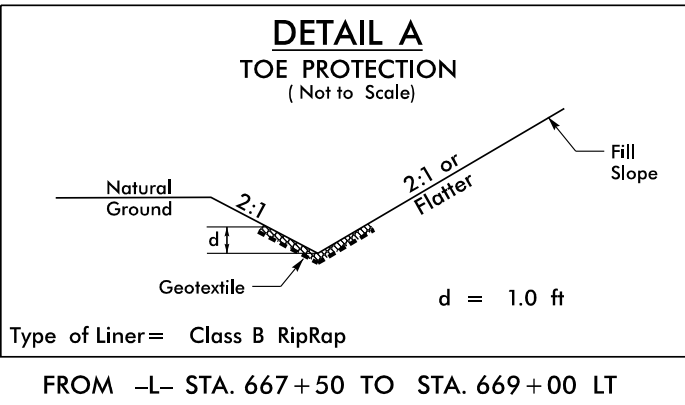
LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
	CONTINGENCY		ASU1	12	150	300	450		
			TOTAL CY/TONS/SY:		150	300**	450**	0	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
 *AST = Aggregate Stabilization
 **Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

8/17/99

LEGEND

- PROPOSED 5" MONOLITHIC ISLAND
- PROPOSED FULL DEPTH PAVED SHOULDER

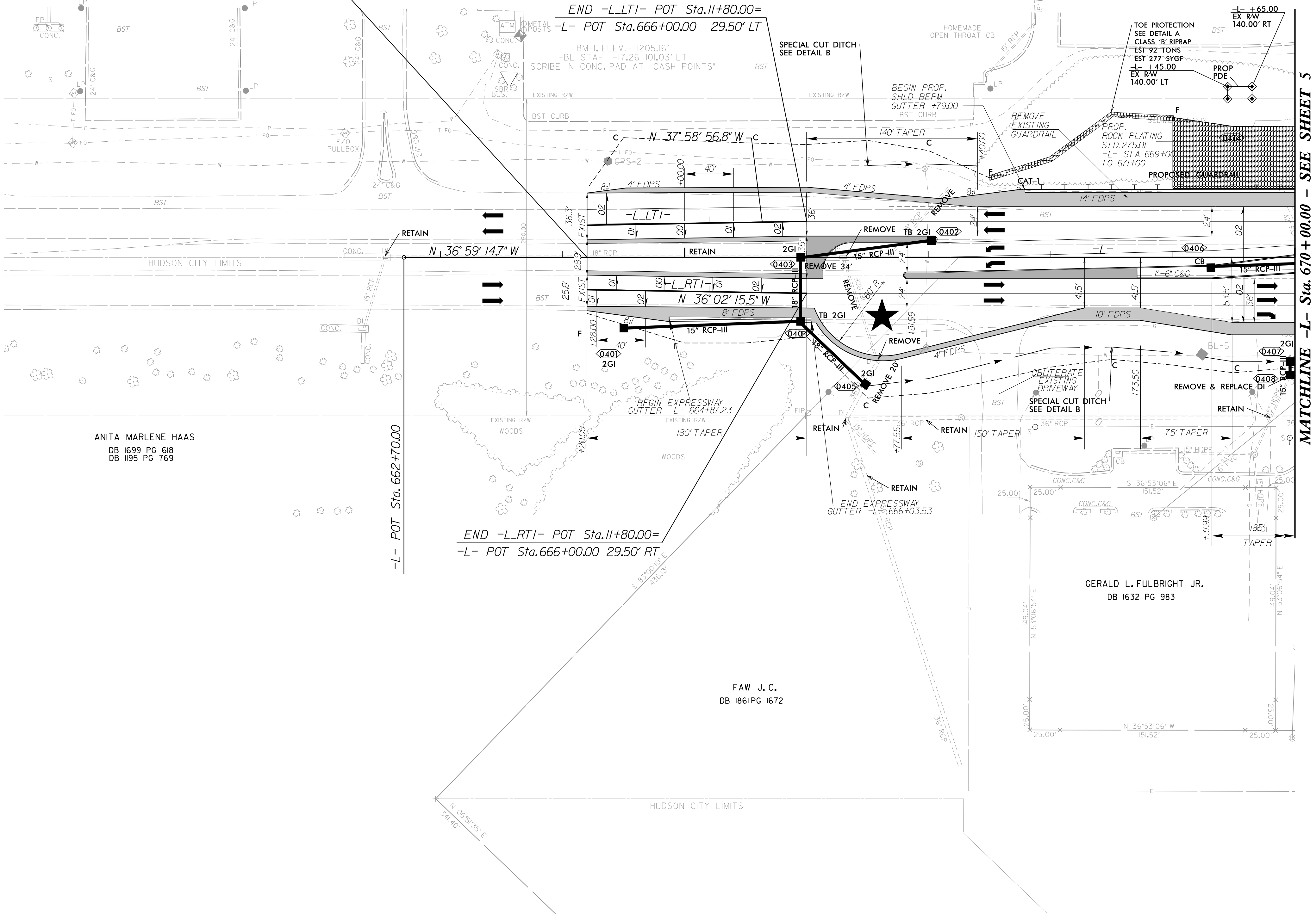


CALDWELL TECHNICAL INSTITUTE
DB 497 PG 118

4

BEGIN TIP PROJECT U-4700CA

-L- POT Sta.664+20.00=
-L-LTI- POT Sta.10+00.00 26.37' LT
-L-RTI- POT Sta.10+00.00 26.52' RT



SEE SHEET 28-1 FOR INTERSECTION DETAIL
SEE SHEET 7 FOR -L-LTI- PROFILE
SEE SHEET 7 FOR -L-RTI- PROFILE
SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 8 FOR -Y- PROFILE

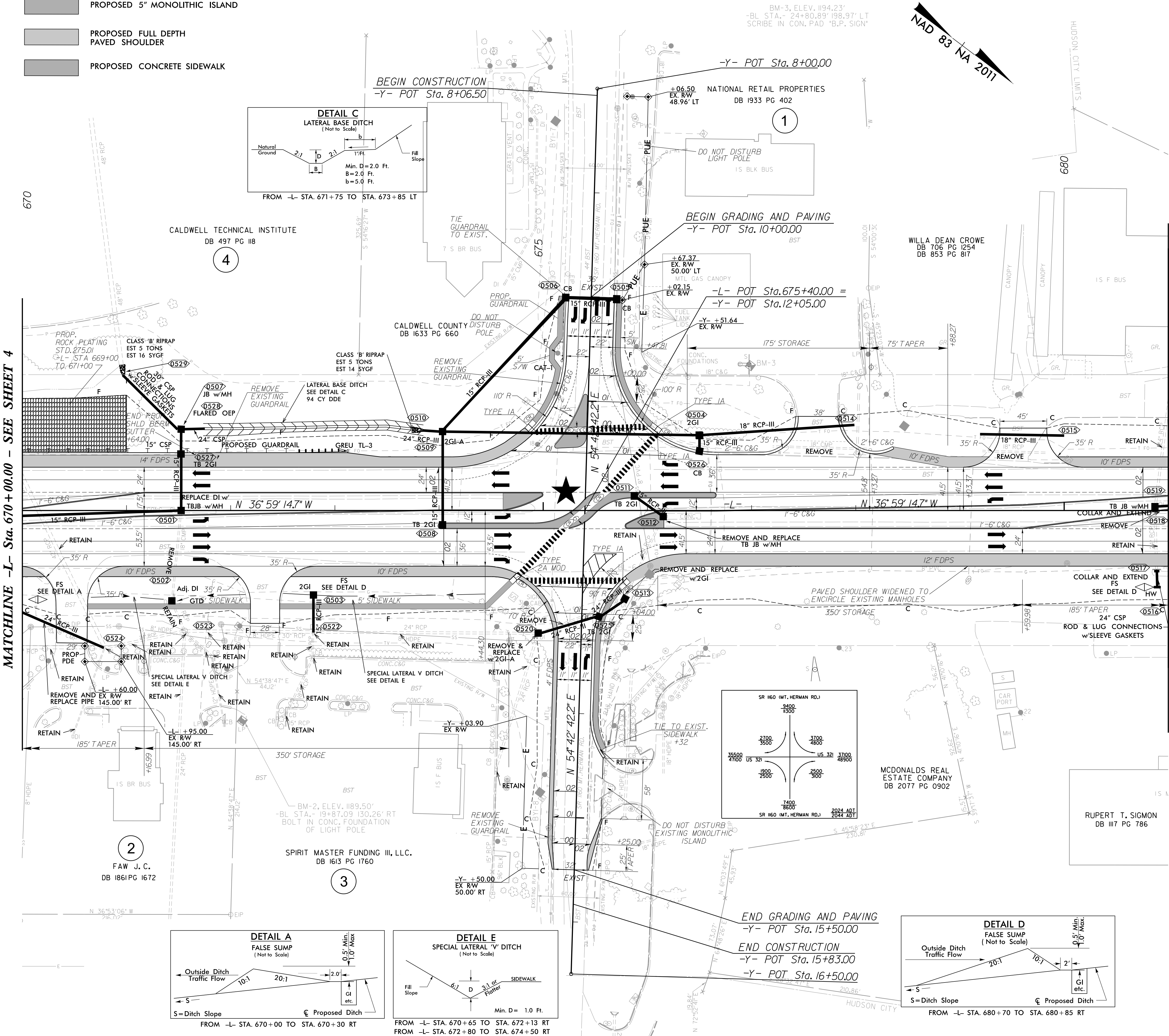
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U-4700CA		4	
RW SHEET NO.			
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8/17/99

5/7/2026 8:46:56 AM
User: jreimer
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LEGEND

- PROPOSED 5" MONOLITHIC ISLAND
- PROPOSED FULL DEPTH PAVED SHOULDER
- PROPOSED CONCRETE SIDEWALK



PROJECT REFERENCE NO. U-4700CA		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 8/2/2026 11:22:37 AM PDT NORTH CAROLINA PROFESSIONAL SEAL 26960 KEVIN SCHULIER		HYDRAULICS ENGINEER 8/2/2026 12:05:26 PM PDT NORTH CAROLINA PROFESSIONAL SEAL 035700 KEVIN HIGGINS	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
JMT Johnson, Mirmiran, & Thompson Inc. 4700 Falls of Neuse Rd, Suite 100, Raleigh, NC 27609 License No. C-3097			



SEE SHEET 2B-1 FOR INTERSECTION DETAIL
SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 8 FOR -Y- PROFILE

8/17/99

5/28/2026 8:03:28 PM
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User: jremer

LEGEND

- PROPOSED 5" MONOLITHIC ISLAND
- PROPOSED FULL DEPTH PAVED SHOULDER

PROJECT REFERENCE NO.
U-4700CA

SHEET NO.
6

RW SHEET NO.

ROADWAY DESIGN ENGINEER
6/2/2026 11:22:37 AM PDT
NORTH CAROLINA PROFESSIONAL SEAL
26960
KEVIN S. HIGGINS

HYDRAULICS ENGINEER
6/2/2026 12:05:26 PM PDT
NORTH CAROLINA PROFESSIONAL SEAL
035700
KEVIN P. HIGGINS

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

JMT

Johnson, Mirmiran, & Thompson Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC, 27609
License No: C-3097

END TIP PROJECT U-4700CA
-L- POT Sta.686+57.44=
-L-LT2- POT Sta.11+80.02 27.00' LT
-L-RT2- POT Sta.11+80.00 27.74' RT

WILLA DEAN CROWE
DB 706 PG 1254
DB 853 PG 817

GLENN T. HICKMAN, HEIRS
DB 168 PG 175

MARLENE OUIDA HARTLEY
DB 571 PG 395

HUDSON CITY LIMITS

US 321/HICKORY BLVD.

ANDERSON FAMILY PROPERTIES, LLC.
DB 1127 PG 1882
DB 1127 PG 1886
DB 1147 PG 476

MATCHLINE -L- Sta.681+00.00 - SEE SHEET 5

BEGIN -L-RT2- POT Sta.10+00.00=
-L- POT Sta.684+77.44 29.50' RT

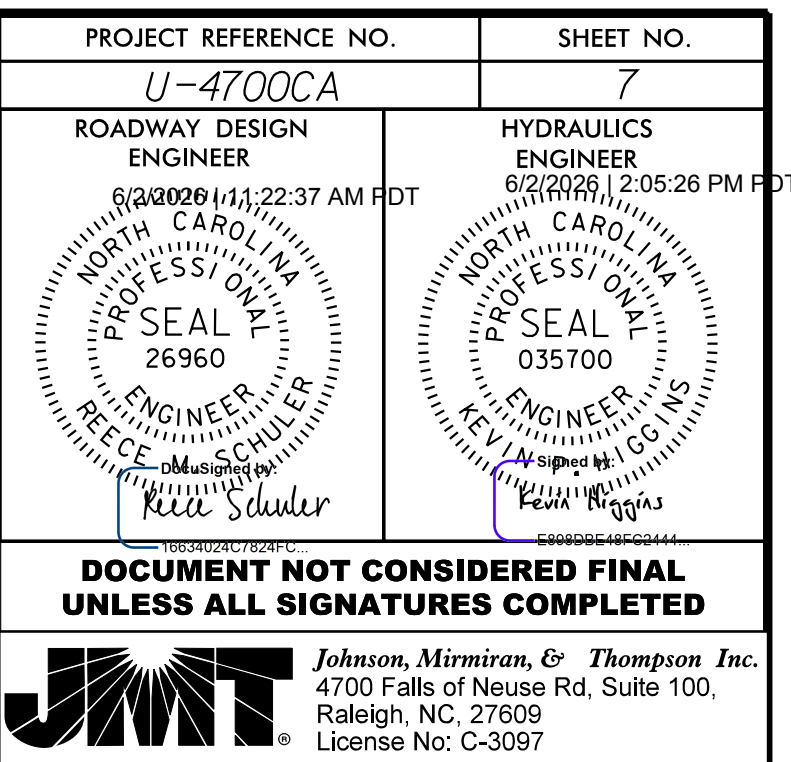
BEGIN -L-RT2- POT Sta.10+00.00=
-L- POT Sta.684+77.44 29.50' RT

DETAIL A
BERM, BASE DITCH
(Not to Scale)

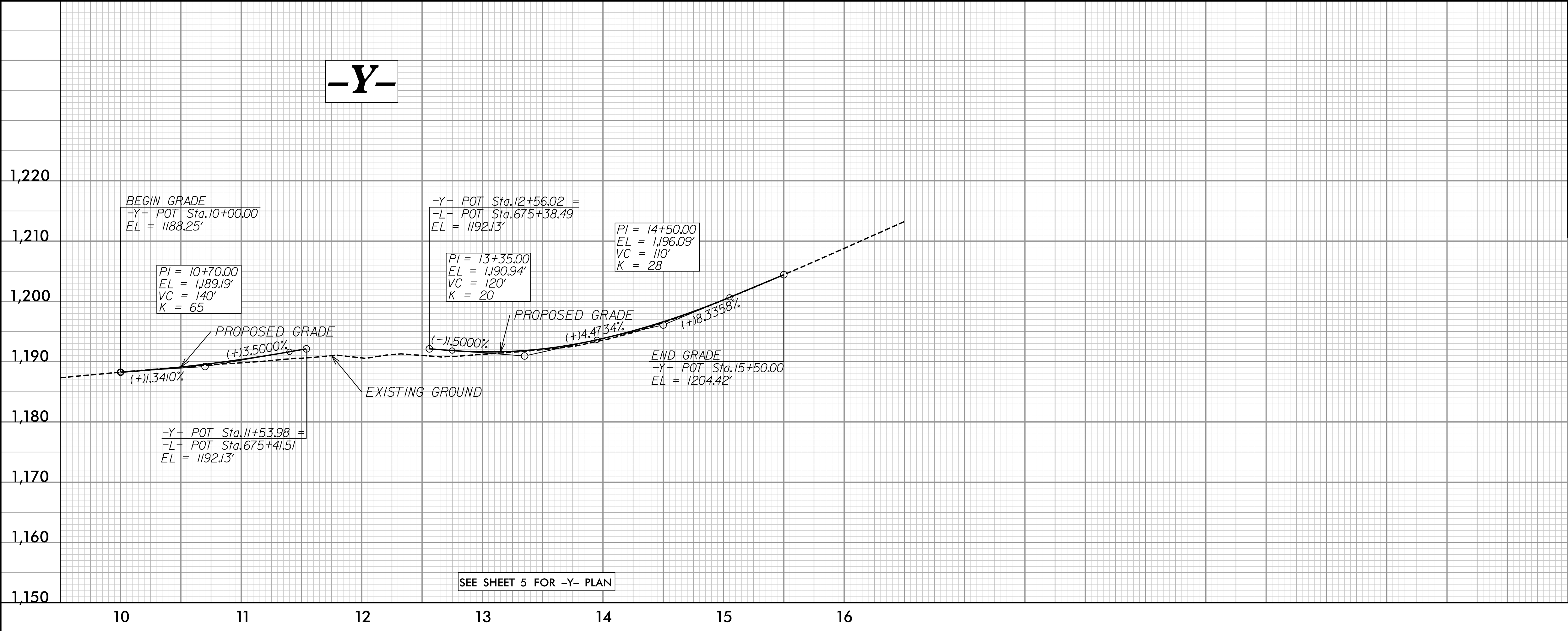
DETAIL B
PIPE INLET BANK STABILIZATION
(Not to Scale)

PROPOSED SIGNAL

SEE SHEET 2B-1 FOR INTERSECTION DETAIL
SEE SHEET 7 FOR -L- PROFILE



5/28/99



PROJECT REFERENCE NO. U-4700CA		SHEET NO. 8
ROADWAY DESIGN ENGINEER 6/2/2006 11:22:37 AM PDT NORTH CAROLINA PROFESSIONAL SEAL 26960 KEVIN SCHULER RECEIVED	HYDRAULICS ENGINEER 6/2/2006 11:05:26 PM PDT NORTH CAROLINA PROFESSIONAL SEAL 035700 KEVIN GIGGINS RECEIVED	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
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