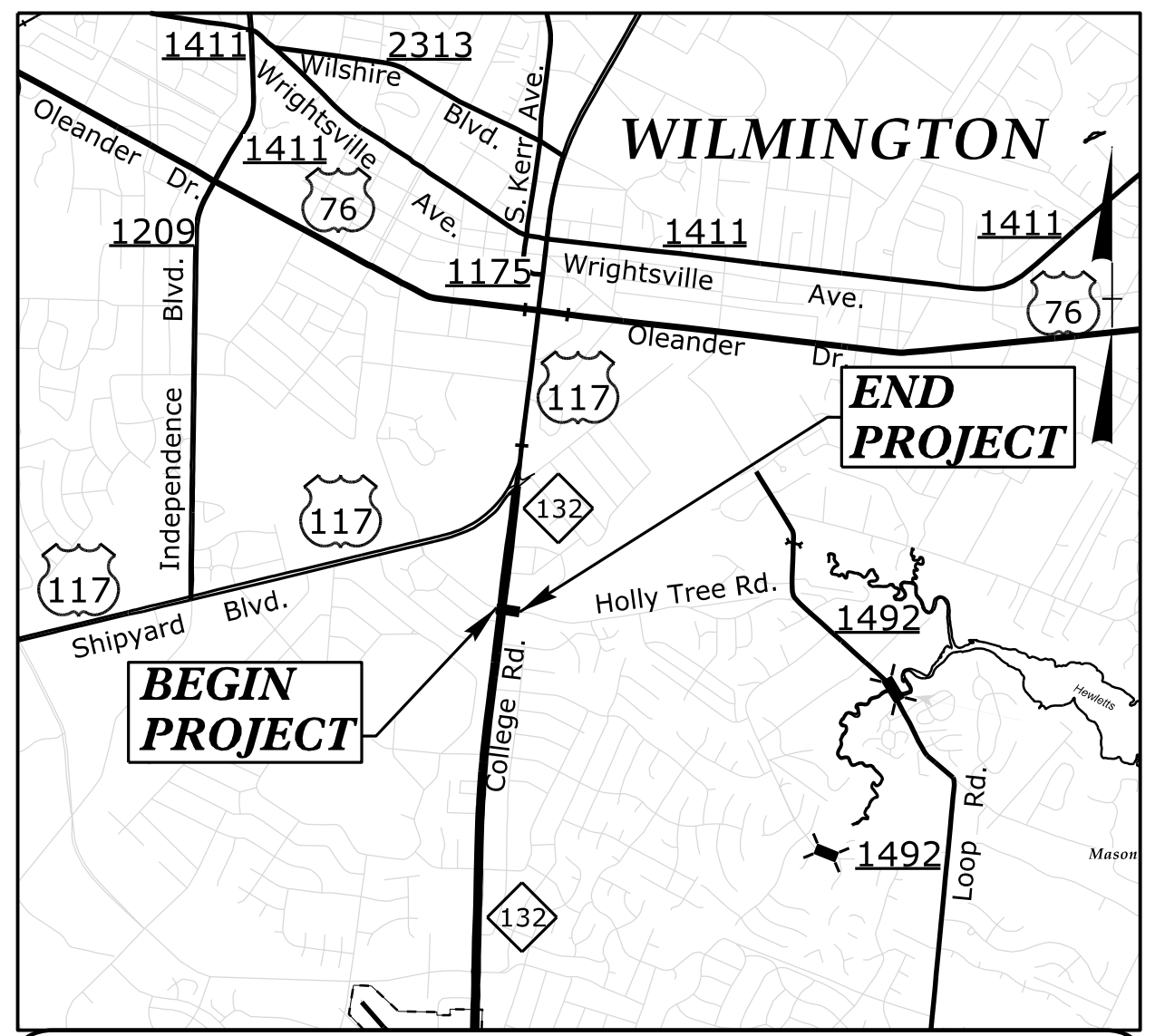


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5534Q	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44096.1.18	STPDA-0332(059)	PE	
44096.2.18	STPDA-0332(059)	ROW	
44096.3.18	STPDA-0332(059)	CON	

See Sheet 1A For Index of Sheets



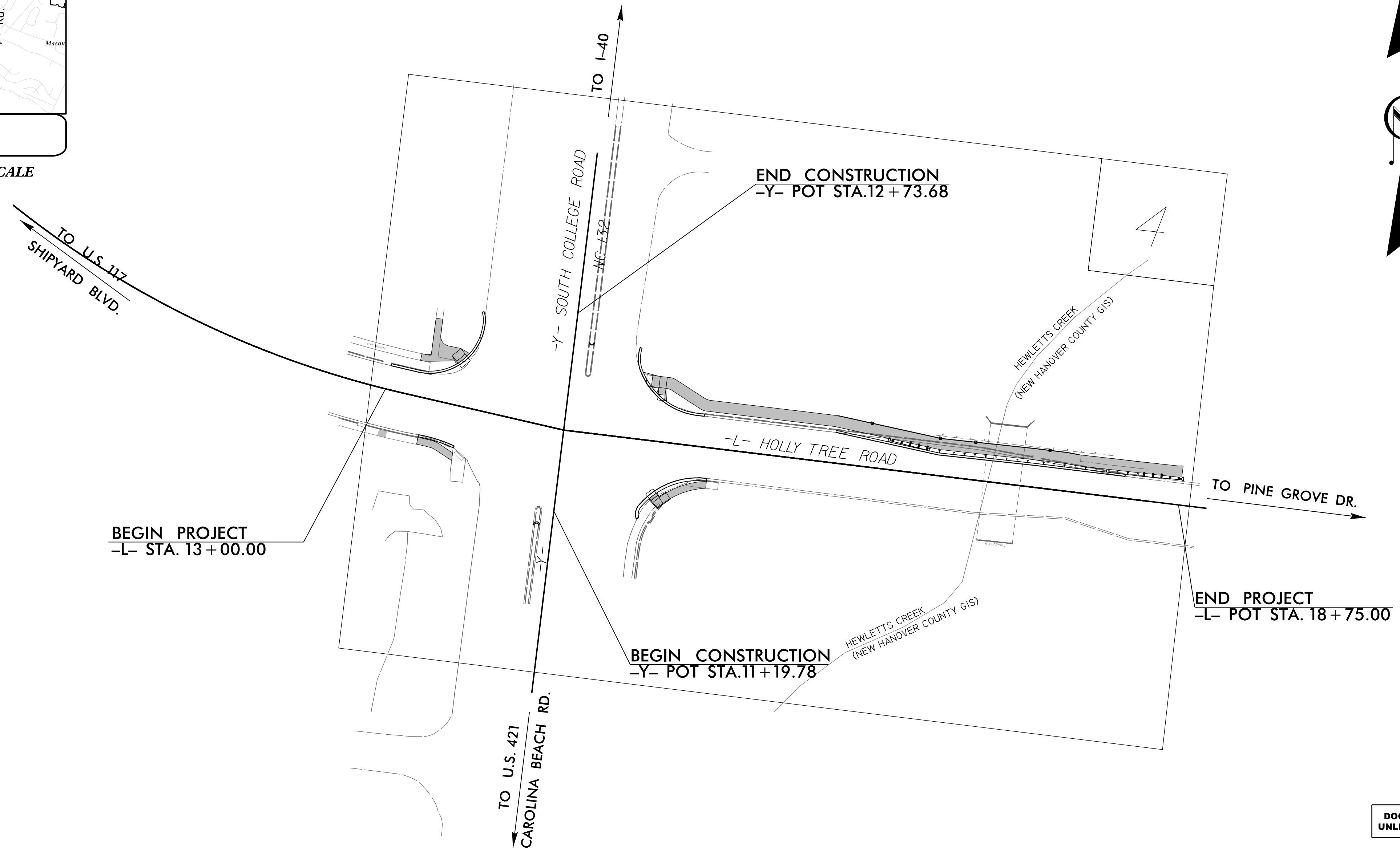
VICINITY MAP

NOT TO SCALE

CITY OF WILMINGTON

LOCATION: HOLLY TREE ROAD AT SOUTH COLLEGE ROAD

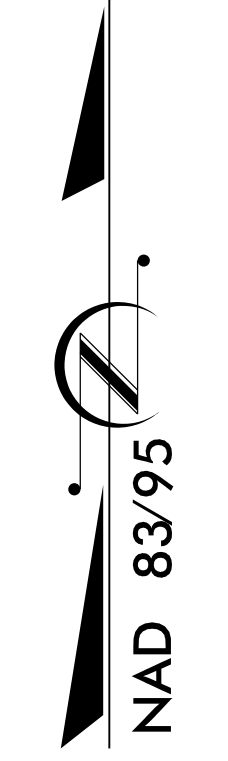
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS



Project Surveyed by:
Peter J. Brennan, PLS
City of Wilmington
910.341.7807

Project Manager
Jason Pace, PE
City of Wilmington
910.341.7808

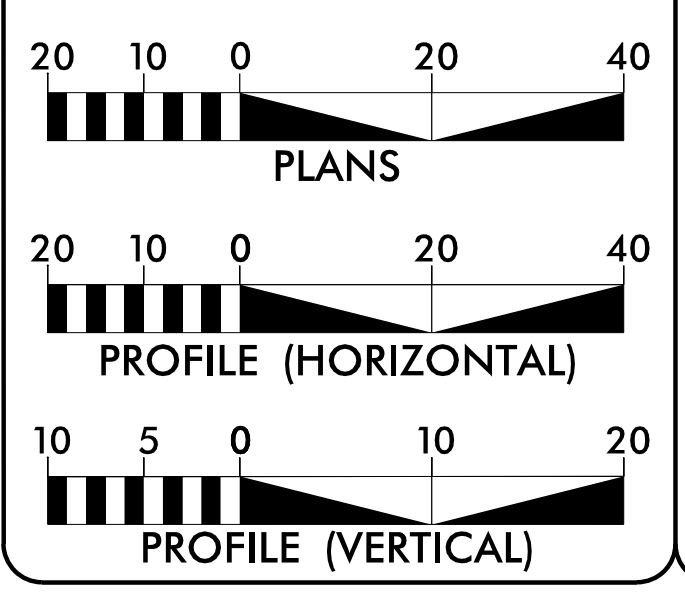
CLEARING ON THIS PROJECT WILL BE PERFORMED TO THE LIMITS ESTABLISHED BY NCDOT METHOD II. THIS IS WITHIN THE CITY LIMITS.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT: U-5534Q

GRAPHIC SCALES



DESIGN DATA

V = 40 MPH
FUNC CLASS = LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5534Q= 0.097 MI
LENGTH STRUCTURE TIP PROJECT U-5534Q= 0.000 MI
TOTAL LENGTH TIP PROJECT U-5534Q= 0.097 MI

Prepared in the Office of:
AECOM
2018 STANDARD SPECIFICATIONS
NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd, Suite 200
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

RIGHT OF WAY DATE: **EDWARD G. EDENS, JR., PE**
AUGUST 2021
PROJECT ENGINEER

LETTING DATE: **MORGAN K. NELSON, EI**
FEBRUARY 2022
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

DocuSigned by:
Memo D. Busconi
SEAL 037863
ENGINEER
MEMO D. BUSCONI
P.E. 2/29/2022

ROADWAY DESIGN ENGINEER

DocuSigned by:
Edward Glenn Edens, Jr.
SEAL 18470
ENGINEER
EDWARD GLENN EDENS, JR.
P.E. 2/29/2022

2/8/2022 P:\a\aecom-na-pw-bentley.com\AECOM_DS2L_NA_2020\Documents\60658506-U-5534Q Holly Tree Sidewalk\900-CAD GIS\910_CAD\70_NCDOT_TIP\Roadway\Design\U5534Q_rdy_tsh.dgn Patrick McBrner son

12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
U-55340	1A

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

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

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	ROADWAY DETAILS
2C-1	ROADWAY DETAILS
3A-1	ROADWAY DETAILS
3B-1	DRAINAGE SUMMARY
4	PLAN SHEETS
5	PROFILE SHEETS
TMP-01 THRU TMP-03	TRANSPORTATION MANAGEMENT PLANS
PMP-01 THRU PMP-02	PAVEMENT MARKING PLANS
EC-1 THRU EC-2	EROSION CONTROL PLANS
SIG-1.0 THRU SIG-1.8	SIGNAL PLANS
SCP 1 THRU SCP 3	SIGNAL PLANS
X-1 THRU X-2	CROSS SECTIONS

2018 ROADWAY ENGLISH STANDARD DRAWINGS

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

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method II
225.03	Deceleration and Acceleration Lanes
225.06	Method of Grading Sight Distance at Intersections
240.01	Guide for Berm Ditch Construction
275.01	Rock Plating
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.03	Cross Pipe End Section - Precast Concrete Section for 18" to 30" Pipe
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
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
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
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
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and
840.20	Frames and Wide Slot Flat Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

EFF. 01-16-2018
REV.

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 II.

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.

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.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE Cape Fear Public Utility Authority, Charter Spectrum, Duke Energy, AT&T, Segra

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

12/2/2016

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	-----
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	----- C/A
Existing Control of Access	----- C/A
New Control of Access	----- C/A
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	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
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	⊙
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.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
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

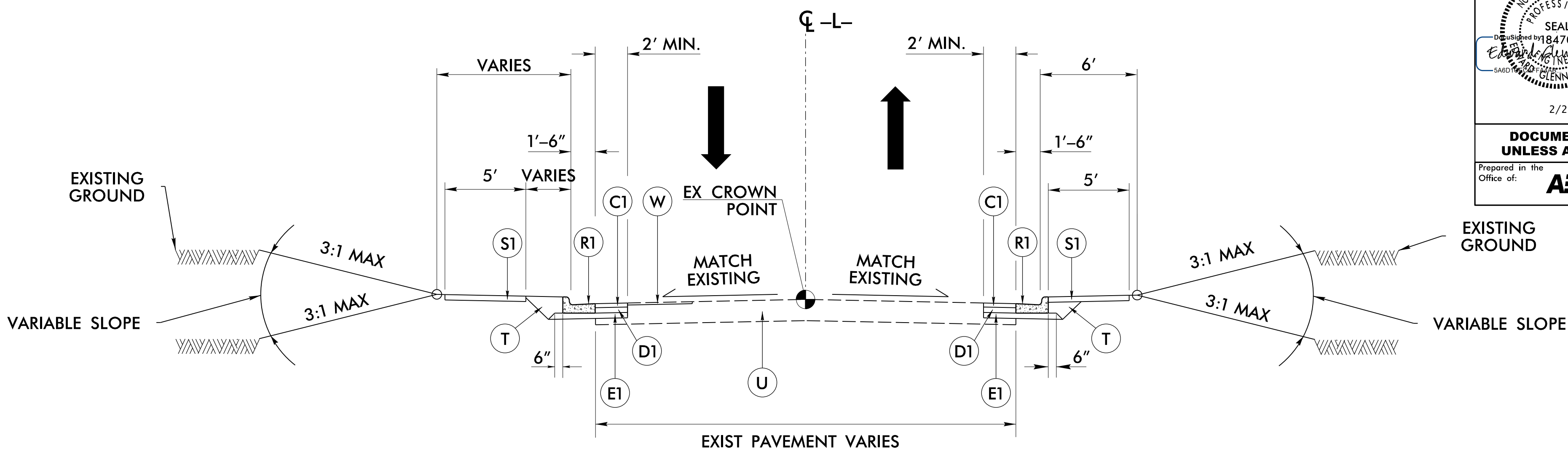
MISCELLANEOUS:

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.	⊠ UST
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.

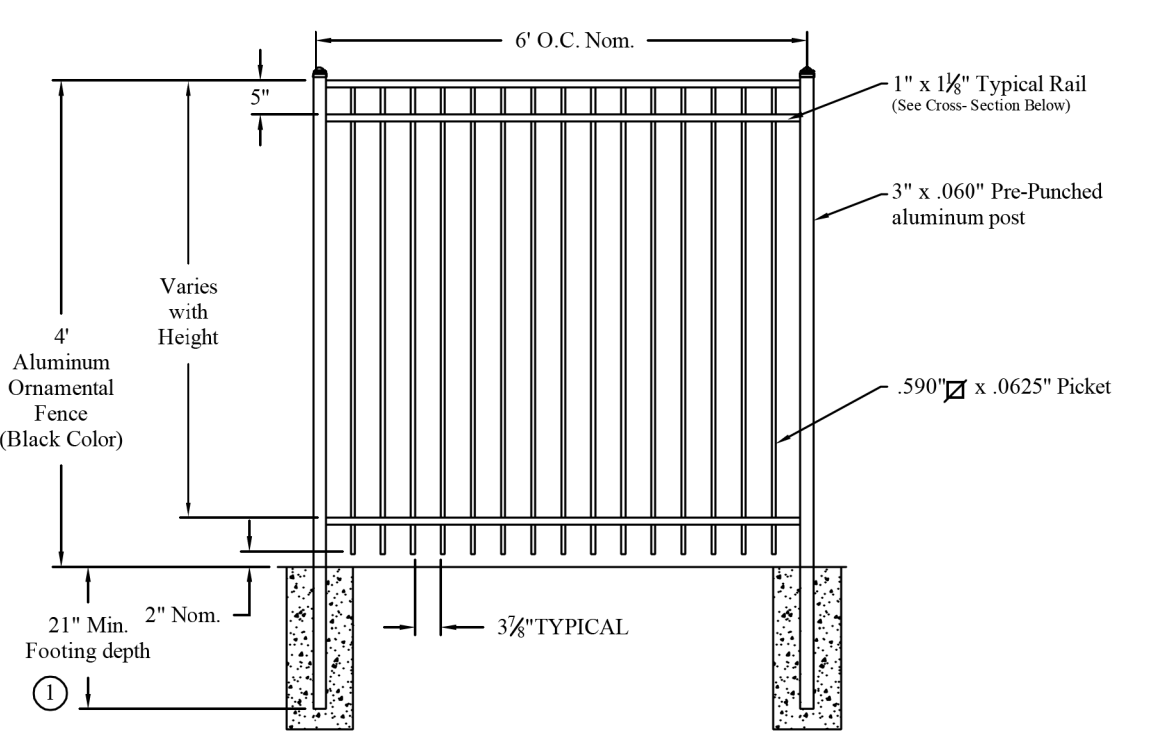
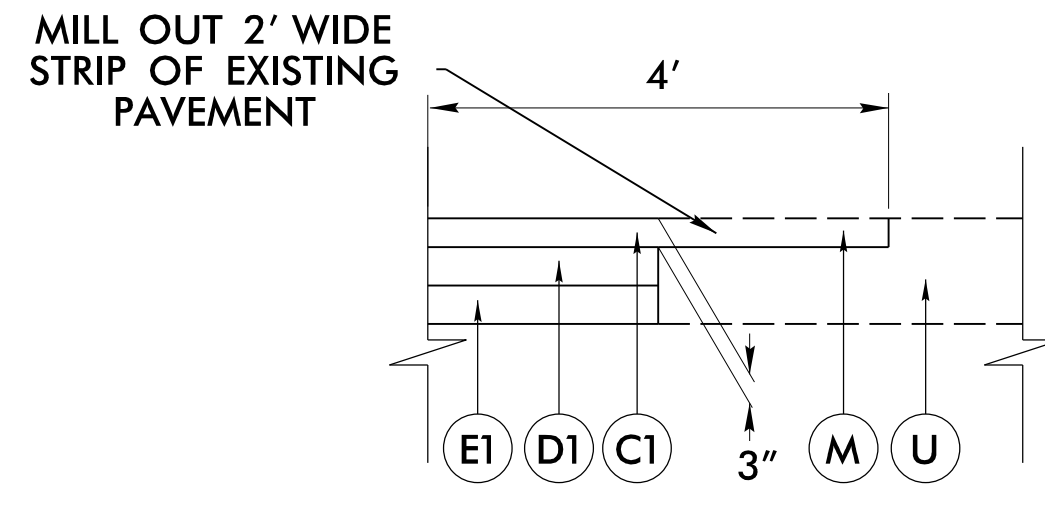
6/2/2022
2/8/2022
pwt\veccom-na-pw.bentley.com\veccom-na-2020\Documents\60658506-U-55340-Holly Tree Sidewalk\900-CAD\70-NCDOT-TIP\Roadway\Design\U55340-r-dj-tyj.dgn

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
R1	2'-0" CONCRETE CURB & GUTTER (CITY OF WILMINGTON STD. 3-11)
S1	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
M	VARIABLE DEPTH MILLING
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL THIS SHEET)

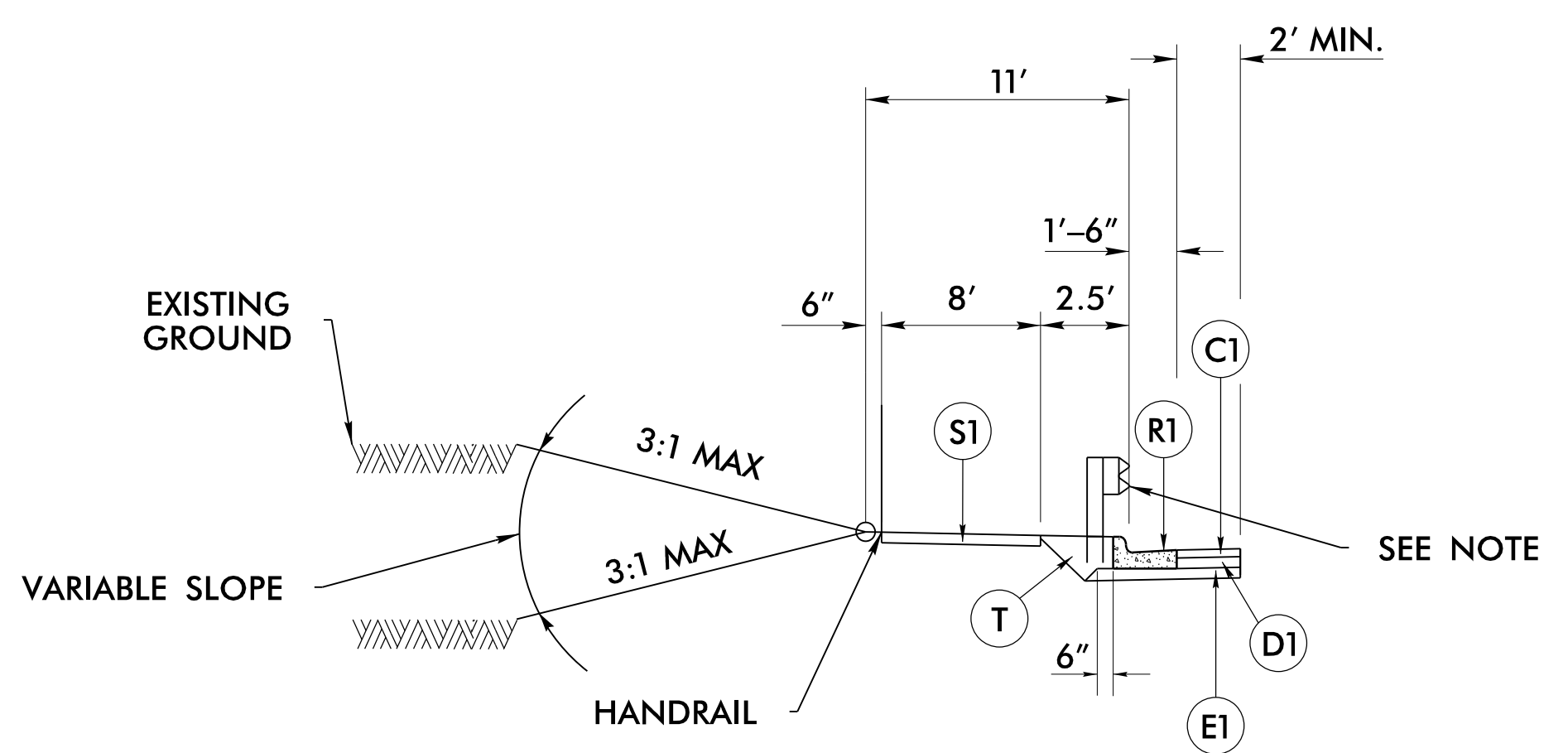
- NOTES:
- PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE
 - SEE SHEET 4 FOR LIMITS OF CURB AND GUTTER REPLACEMENT AND SIDEWALK WIDTHS
 - SAWCUT AND REMOVE EXISTING PAVEMENT TO PROVIDE 2' MINIMUM WIDTH OF FULL DEPTH PAVEMENT IN FRONT OF PROPOSED CURB
 - PROVIDE FULL DEPTH PAVEMENT REPAIR FOR UTILITY AND STORM DRAIN INSTALLATIONS (SEE PLANS)
 - SLOPE SHOULDERS FOR POSITIVE DRAINAGE
 - SEE SHEET 2B-1 FOR PROPOSED CURB GRADES



TYPICAL SECTION NO. 1
-L- STA. 13+00.00 (CURB BEGINS) TO 13+59.18

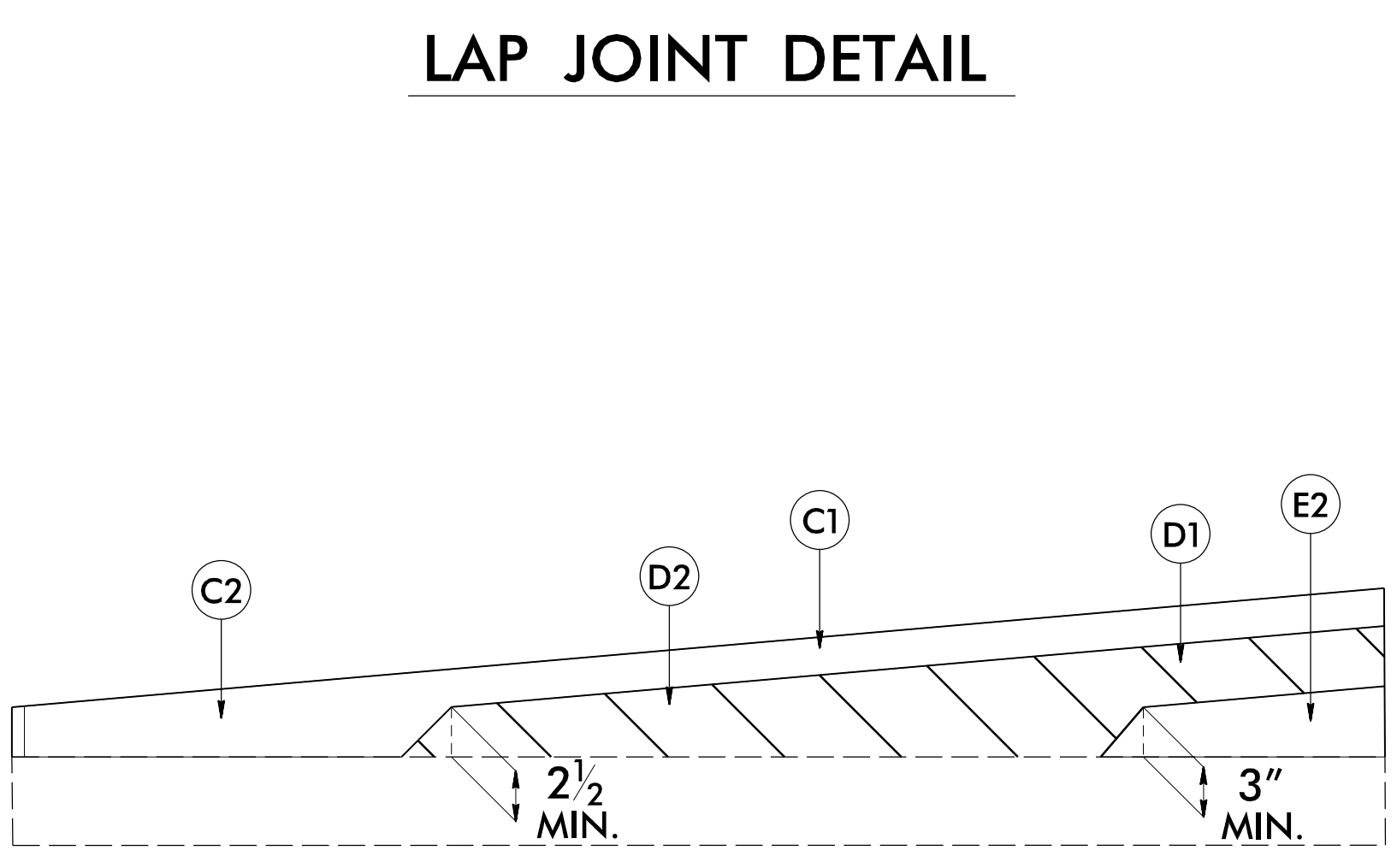


NOTES:
1. Post footing available in 21" or 33" depths.

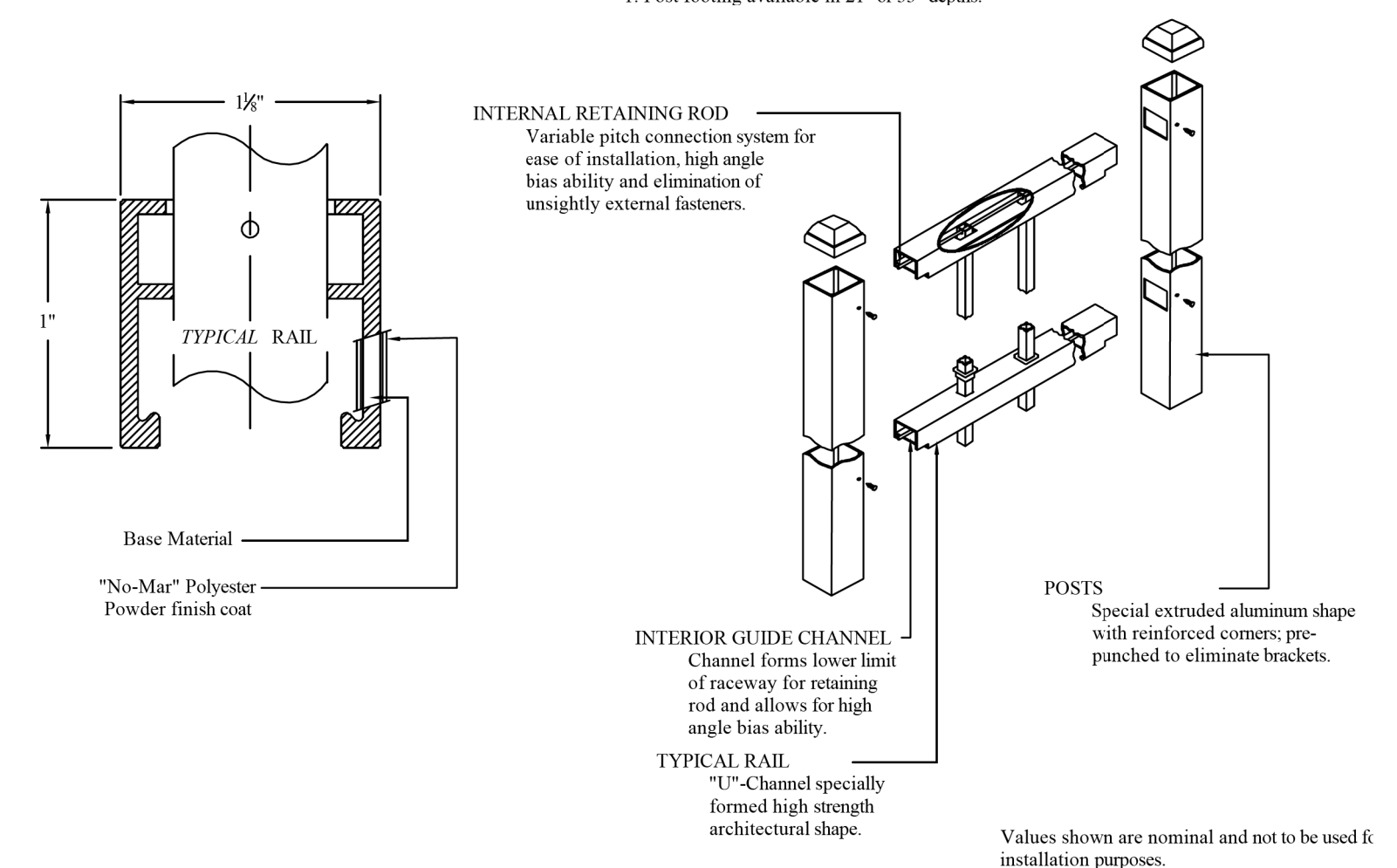


DETAIL NO. 1
-L- STA. 14+72.03 TO 18+75.00 (LT)

NOTE: INSTALL COMPOSITE WOOD RUB RAIL ON BACKSIDE OF NEW GUARDRAIL (SEE DETAIL 1 ON SHEET 3A-1)

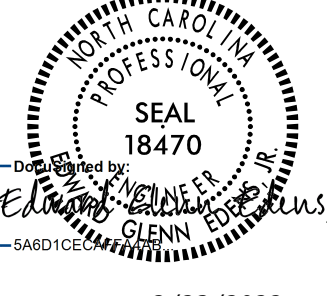
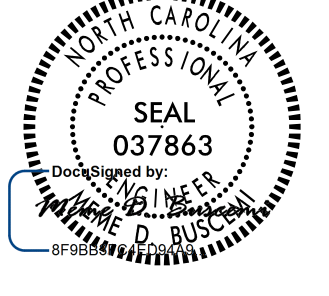


WEDGING DETAIL FOR RESURFACING

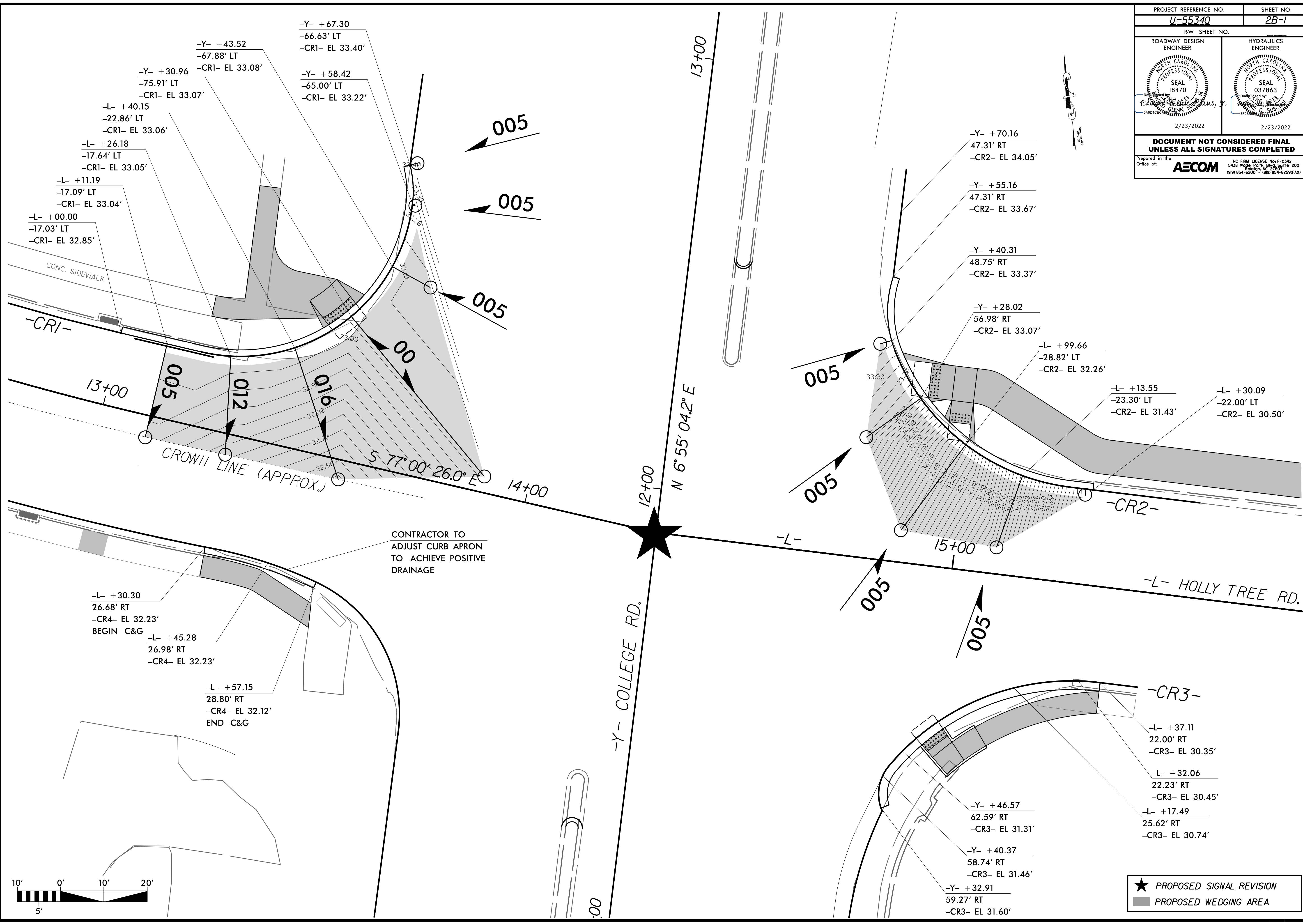


TYPICAL HANDRAIL DETAIL
-L- STA. 16+25.00 TO 18+00.00 (LT)

Values shown are nominal and not to be used for installation purposes.

PROJECT REFERENCE NO. U-55340	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
2/23/2022	2/23/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of: AECOM	NC FIRM LICENSE No F-0342 5436 Ridge Park Blvd, Suite 200 Raleigh, NC 27612 (919) 854-6500 • (919) 854-6299(FAX)

8/17/99
 REVISIONS
 2/8/2022
 pw\Aecom\pw.bentley.com\AECOM_DS21_NA_2022\Documents\6055506-U-55340_Holly_Tree_Sidewalk\920-CAD_615\910-CAD\70-NC001_IP_Roadway_Design\U55340_rdy_curbdetalsheet.dgn



 PROPOSED SIGNAL REVISION
 PROPOSED WEDGING AREA

8/17/99

REVISIONS
 2/18/2022
 P:\2022\com-nor-bentley.com\AECOM_DS21_NA_2022\Documents\50658506-U-55340_Holju_Tree_Sidewalk\900-CAD_GIS\910_CAD\70_NGD01_TIP\Drawings\U55340_drn_3B-2.dgn
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PROJECT REFERENCE NO. U-55340	SHEET NO. 3B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of: AECOM	NC FIRM LICENSE No: F-0342 5438 Rouse Park Blvd, Suite 200 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (fax)

GRADE RING

HEIGHT	WEIGHT (lbs)
4"	200
6"	300

SEE CHART

GENERAL DESIGN NOTES:

- STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI 318.
- APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
 - ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (MAIN DESIGN SPECIFICATION).
 - ASTM C890 STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES (LOADING SPECIFICATION).
 - ASTM C478 STANDARD SPECIFICATION FOR PRECAST MANHOLES (PRODUCT SPECIFICATION).
- PRECAST RATED FOR HS20-44 TRUCK LIVE LOAD W/ IMPACT I.A.W. ASTM C890.
- MAX DEPTH TO INVERT OF MANHOLE (I.E. FLOOR) = 30".
- LATERAL DESIGN PRESSURES (AS APPLICABLE TO DESIGN):
 - EQUIV DRY SOIL FLUID PRESSURE = 47 PCF.
 - EQUIV SATURATED SOIL FLUID PRESSURE = 85 PCF.
 - HYDROSTATIC WATER PRESSURE = 62.4 PCF.
 - LIVE LOAD SURCHARGE = 80 PSF
- DESIGN CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI (MIN).
- REINFORCEMENT:
 - CARBON-STEEL DEFORMED BARS: ASTM A615, $f_y = 60$ KSI (MIN).
 - WELDED WIRE REINFORCEMENT (PLAIN): ASTM A1064 $f_y = 65$ KSI (MIN).
 - WELDED WIRE REINFORCEMENT (DEFORMED): ASTM A1064 $f_y = 70$ KSI (MIN).
- JOINT SEALANT (PER CONTRACT SPECIFICATIONS):
 - CS-102 CONSEAL BUTYL RUBBER SEALANT (OR EQUIV.) I.A.W. ASTM C990 FED. SPEC. SS-S-210.
 - CS-212 CONSEAL EXTERIOR JOINT WRAP (OR EQUIV.) I.A.W. ASTM C877 AND ASTM C990.
 - CS-50 CONSEAL LIQUID BUTYL PRIMER (OR EQUIV.) AS NEEDED.
- COPOLYMER POLY PROPYLENE STEEL REINFORCED STEPS I.A.W. ASTM C478 SPACED 16" O.C.
- OPENINGS CAST OR CORED IN MANHOLE TO DEFLECTIONS AND ELEVATIONS SPECIFIED ON CONTRACT DRAWINGS MAX HOLE SIZE IS 42" (30" RCP).
- PRECAST INVERT PROVIDED UPON REQUEST: MIN $\frac{1}{2}$ " PER FT BENCH SLOPE FROM SPRINGLINE

FLAT TOP
WT = 1,700 LBS.

ACCESS OPENING

CONE

HEIGHT	WEIGHT (lbs)
2.00'	1680
3.00'	2520

SEE CHART

RISER SECTION

HEIGHT	WEIGHT (lbs)
1.00' RISER	875
1.33' RISER	1,165
2.00' RISER	1,750
2.67' RISER	2,350
3.00' RISER	2,625
4.00' RISER	3,500

SEE CHART

MH STEPS (LOCATION PER CONTRACT DRAWINGS)

DOGHOUSE RISER SECTION

DOGHOUSE OPENING

STANDARD BASE SECTION

HEIGHT	WEIGHT (lbs)
2.00' BASE	2,800
2.50' BASE	3,200
2.67' BASE	3,350
3.00' BASE	3,650
3.50' BASE	4,100
4.00' BASE	4,500

SEE CHART

6" FLOOR

OPENING(S) SIZE AND LOCATION PER CONTRACT DRAWINGS

EXTENDED BASE SECTION

HEIGHT	WEIGHT (lbs)
2.00' BASE	3,450
2.50' BASE	3,850
2.67' BASE	4,000
3.00' BASE	4,300
3.50' BASE	4,750
4.00' BASE	5,150

SEE CHART

6" TYP

6" FLOOR

SCALE (TYP): 1/4" = 1'-0"

JOINT DETAIL
SCALE: 1" = 1'-0"

5" WALL

2 1/2" TOUNCE

JOINT SEALANT

Oldcastle Precast
1431 PRODUCT RD, FLOUQUAY VARINA, NC
OFFICE 919-658-2252, FAX 844-866-7476
NC ENGINEERING LICENSE #F-1002

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4' DIAMETER MANHOLE
SUMBITTAL LAYOUT

CUSTOMER: STANDARD					
DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
6/15/17		PPS			
DRAWING NUMBER			REVISION	SHEET	
4-MH-2017			REV DATE	1 OF 1	



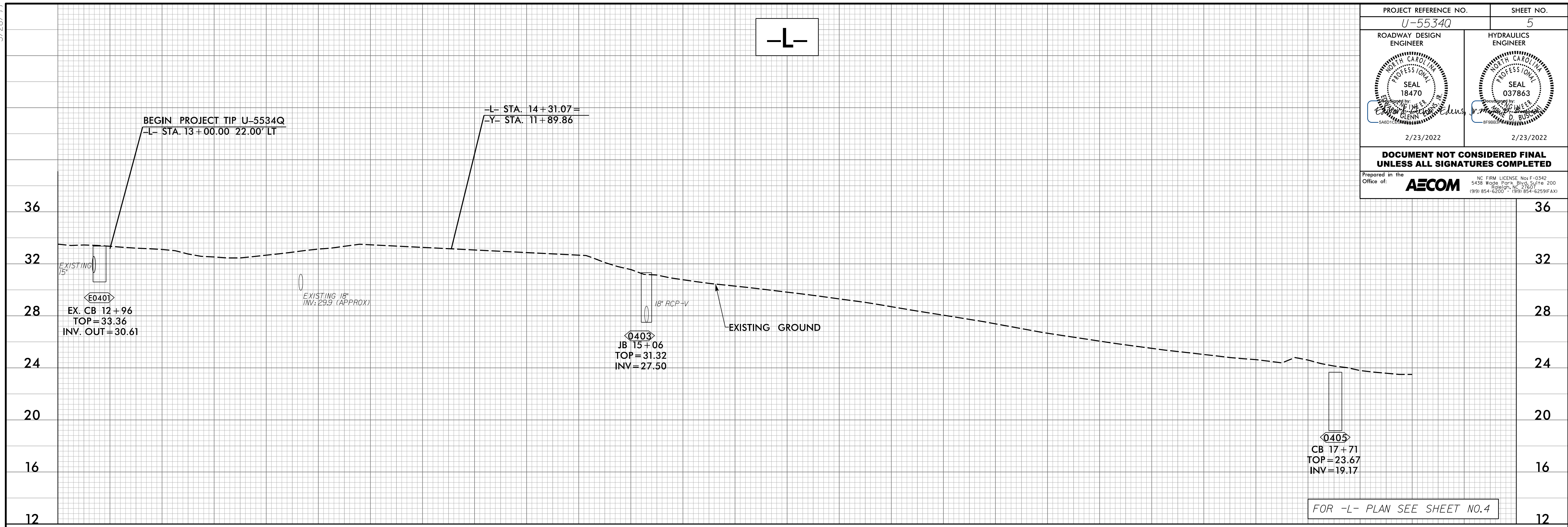
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4' DIAMETER MANHOLE
SUMBITTAL LAYOUT

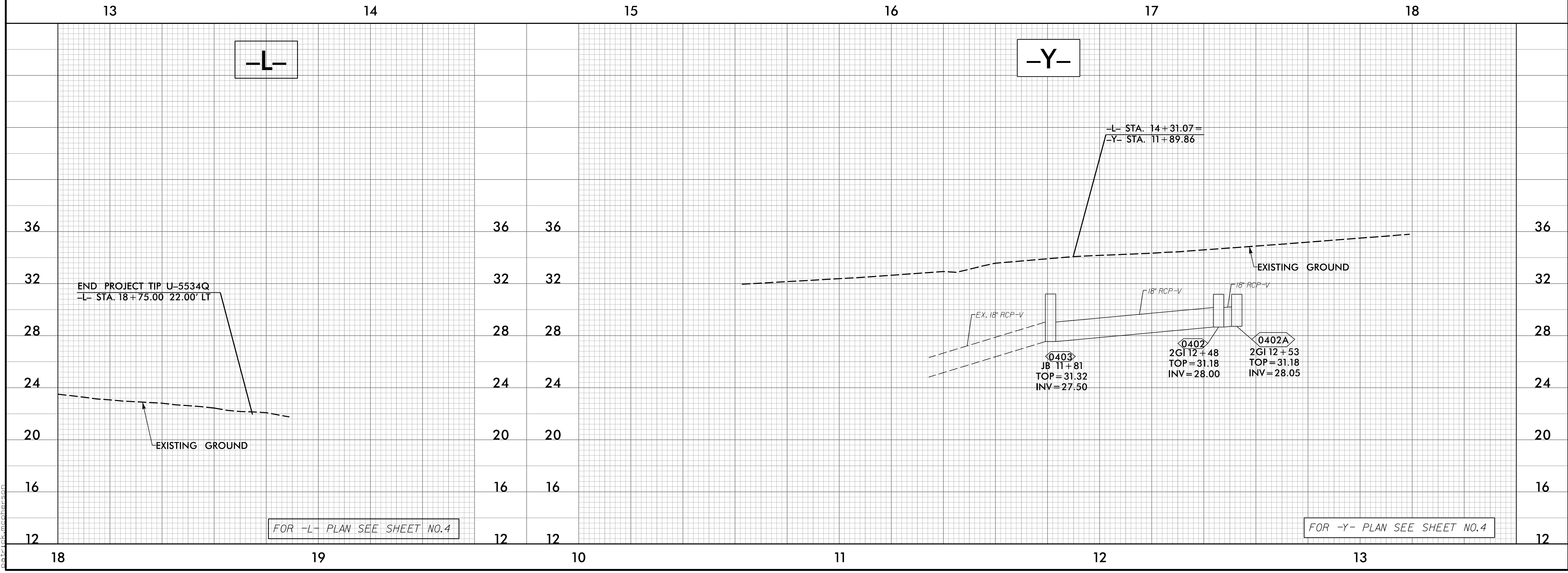
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DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
6/15/17		PPS			
DRAWING NUMBER			REVISION	SHEET	
4-MH-2017			REV DATE	1 OF 1	

5/28/2022
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-L-

PROJECT REFERENCE NO. U-5534Q	SHEET NO. 5
ROADWAY DESIGN ENGINEER [Signature] SEAL 18470	HYDRAULICS ENGINEER [Signature] SEAL 037863
2/23/2022	2/23/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of: AECOM	NC FIRM LICENSE No. F-0342 5438 Ridge Park Blvd, Suite 200 Raleigh, NC 27617 (919) 854-6200 • (919) 854-6259(FAX)



-L-

-Y-

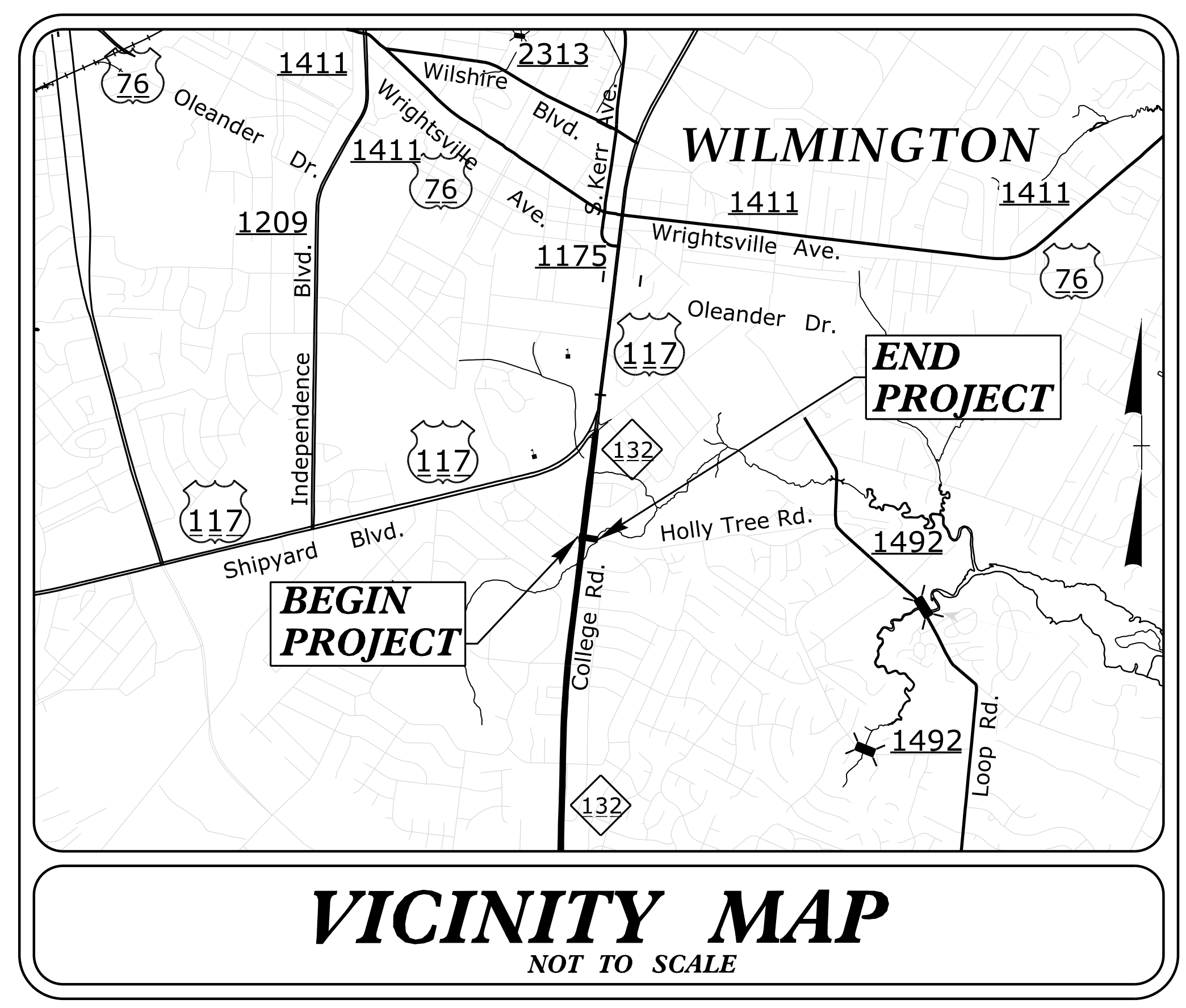
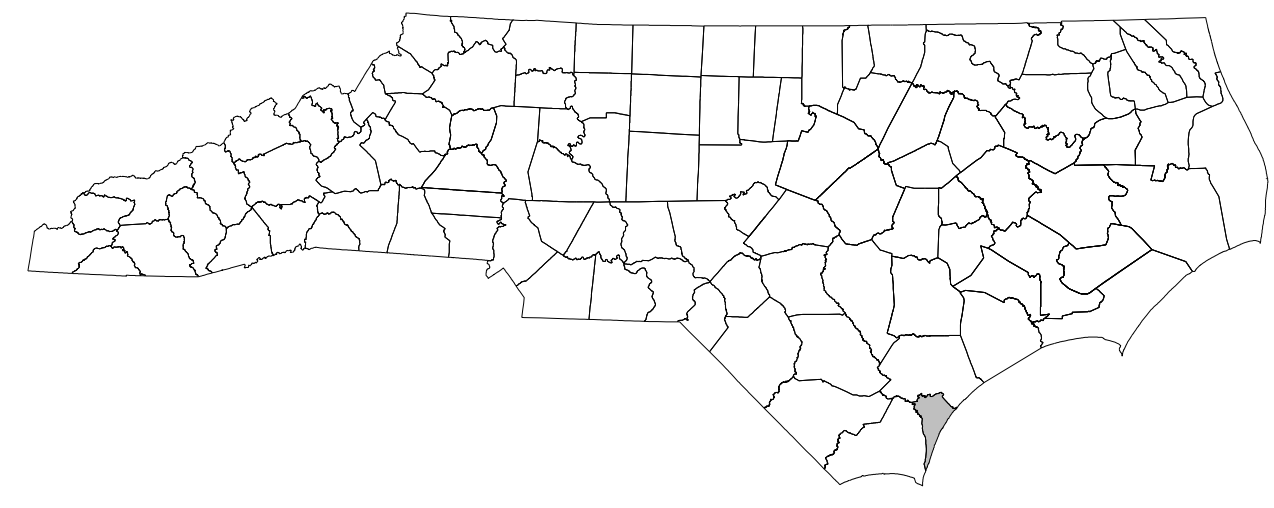
FOR -L- PLAN SEE SHEET NO.4

FOR -Y- PLAN SEE SHEET NO.4

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

NEW HANOVER COUNTY



INDEX OF SHEETS

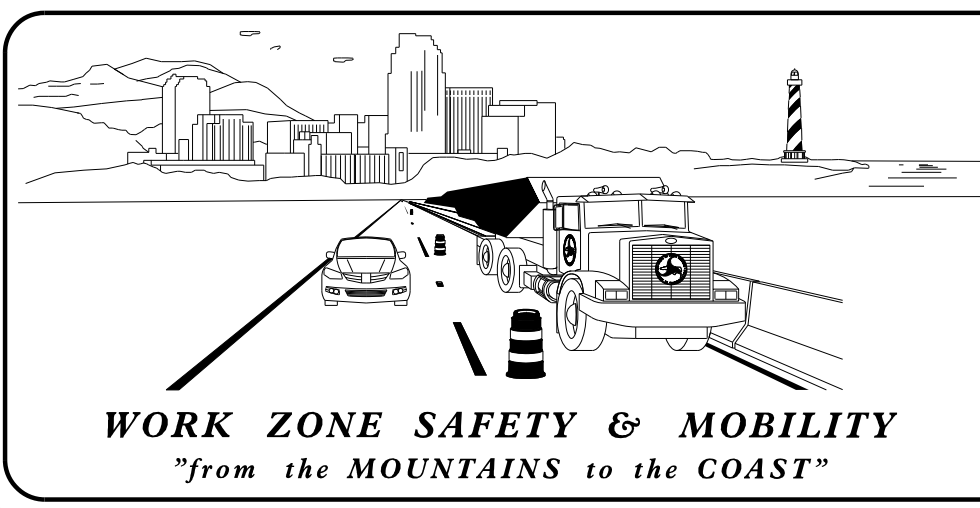
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES, LOCAL NOTES AND PHASING)
TMP-02	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

SHEET NO.
TMP-1

U-5534Q

TIP PROJECT:

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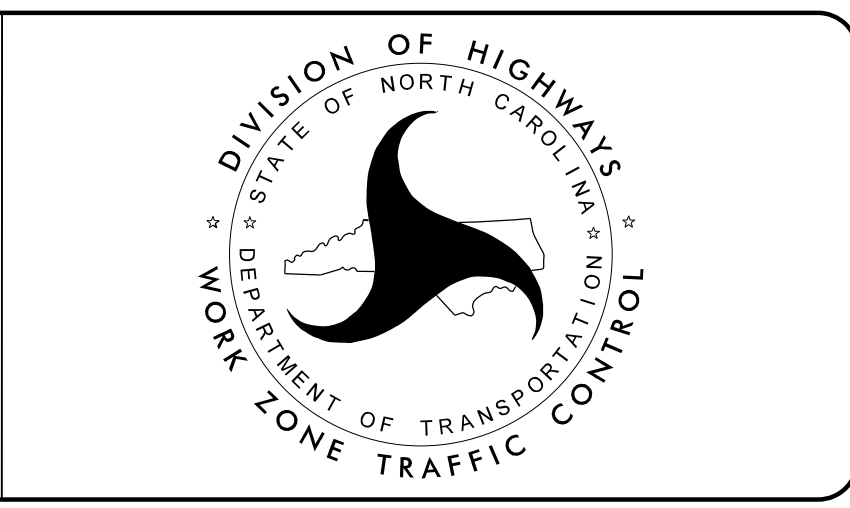
PLANS PREPARED BY:

KEVIN VAN METRE, PE
TRAFFIC CONTROL PROJECT ENGINEER

PATRICK MCPHERSON, EI
TRAFFIC CONTROL DESIGN ENGINEER

CITY OF WILMINGTON CONTACTS:

JASON PACE, PE
PROJECT ENGINEER



AECOM

NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd, Suite 200
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

APPROVED: _____

DATE: _____

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

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APPROVED: _____ DATE: _____			ROADWAY STANDARD DRAWINGS & LEGEND
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GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

HOLLY TREE RD
COLLEGE RD

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- F) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- G) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 150' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- H) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- I) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- K) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 150' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

- L) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- M) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- N) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.
- O) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).
- P) USE TRUCK MOUNTED IMPACT ATTENUATOR AS NEEDED FOR DRAINAGE INSTALLATION AS DIRECTED BY THE ENGINEER.

LOCAL NOTES

- P) CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES.
- Q) CONES OR SKINNY DRUMS MAY BE USED IN LIEU OF DRUMS.
- R) CONTRACTOR SHALL NOT EXCEED MORE THAN 2,000' OF LANE CLOSURE AT ONE TIME UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- T) ONE LANE-TWO WAY OPERATIONS RESTRICTED TO DAYLIGHT HOURS.

PHASING

RSD = NCDOT ROADWAY STANDARD DRAWINGS

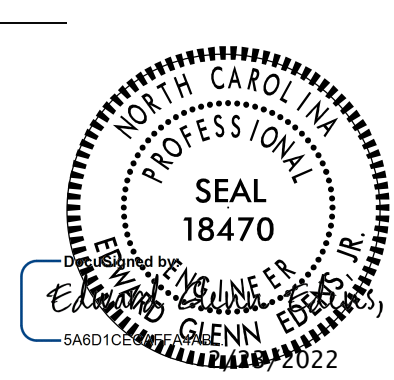
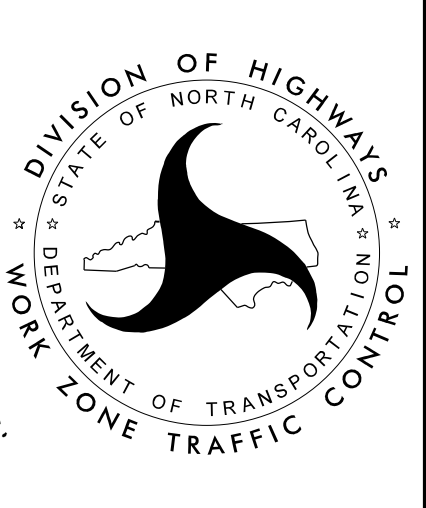
PHASE I

- STEP 1) PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, INSTALL WORK ZONE ADVANCE WARNING SIGNS USING RSD 1101.01, SHEET 3 OF 3 AND RSD 1101.02, SHEET 1 OF 14 AS NEEDED.
- STEP 2) USING RSD 1101.02, SHEETS 3 AND 7 OF 14, INSTALL PROPOSED 18" RCP ACROSS HOLLY TREE RD. AS SHOWN IN THE ROADWAY PLANS. USE STEEL PLATES AS NEEDED TO MAINTAIN TRAFFIC DURING TIME RESTRICTIONS OF LANE CLOSURES.
- STEP 3) USING RSD 1101.02 SHEET 3 OF 14, CONSTRUCT THE PROPOSED CURB AND GUTTER ON THE WESTBOUND SIDE OF HOLLY TREE RD. FROM STA. 16+25 TP STA 18+35 AS SHOWN. LEAVE EXISTING GUARDRAIL IN PLACE BEFORE NEW GUARDRAIL CONSTRUCTED. CONSTRUCT THE PROPOSED CURB RAMP AND THE SIDEWALK IN SAME QUADRANT FROM THE INTERSECTION RETURN TO THE LIMITS SHOWN IN THE ROADWAY PLANS ALONG THE WESTBOUND SIDE OF HOLLY TREE ROAD.
- STEP 4) USING RSD 1102.02 SHEET 3 OF 14 CONSTRUCT THE PROPOSED CURB RAMPS AND CURB AND GUTTER IN THE SOUTHEAST, SOUTHWEST, AND NORTHWEST QUADRANTS AS SHOWN IN THE ROADWAY PLANS.
- CLOSE THE ADJACENT LANES IN EACH DIRECTION AS NEEDED AND CLOSE THE APPROACHING THRU LANE ON THE OTHER SIDE OF THE INTERSECTION AS NEEDED AND AS DIRECTED BY THE ENGINEER. ONLY CONSTRUCT ONE QUADRANT AT A TIME WHEN CLOSING MULTIPLE LANES OF TRAFFIC FOR A SINGLE QUADRANT.
- STEP 5) WORKING IN A CONTINUOUS MANNER IN EACH QUADRANT, MILL AND WEDGE THE PROPOSED NORTHEAST AND NORTHWEST QUADRANTS AS SHOWN IN THE ROADWAY DETAILS. CLOSE THE NECESSARY ADJACENT LANES AS NEEDED AND CLOSE THE APPROACHING THRU LANES ON THE OTHER SIDE OF THE INTERSECTION AS NEEDED. THIS INCLUDES PLACING THE FINAL LAYER OF SURFACE COURSE.

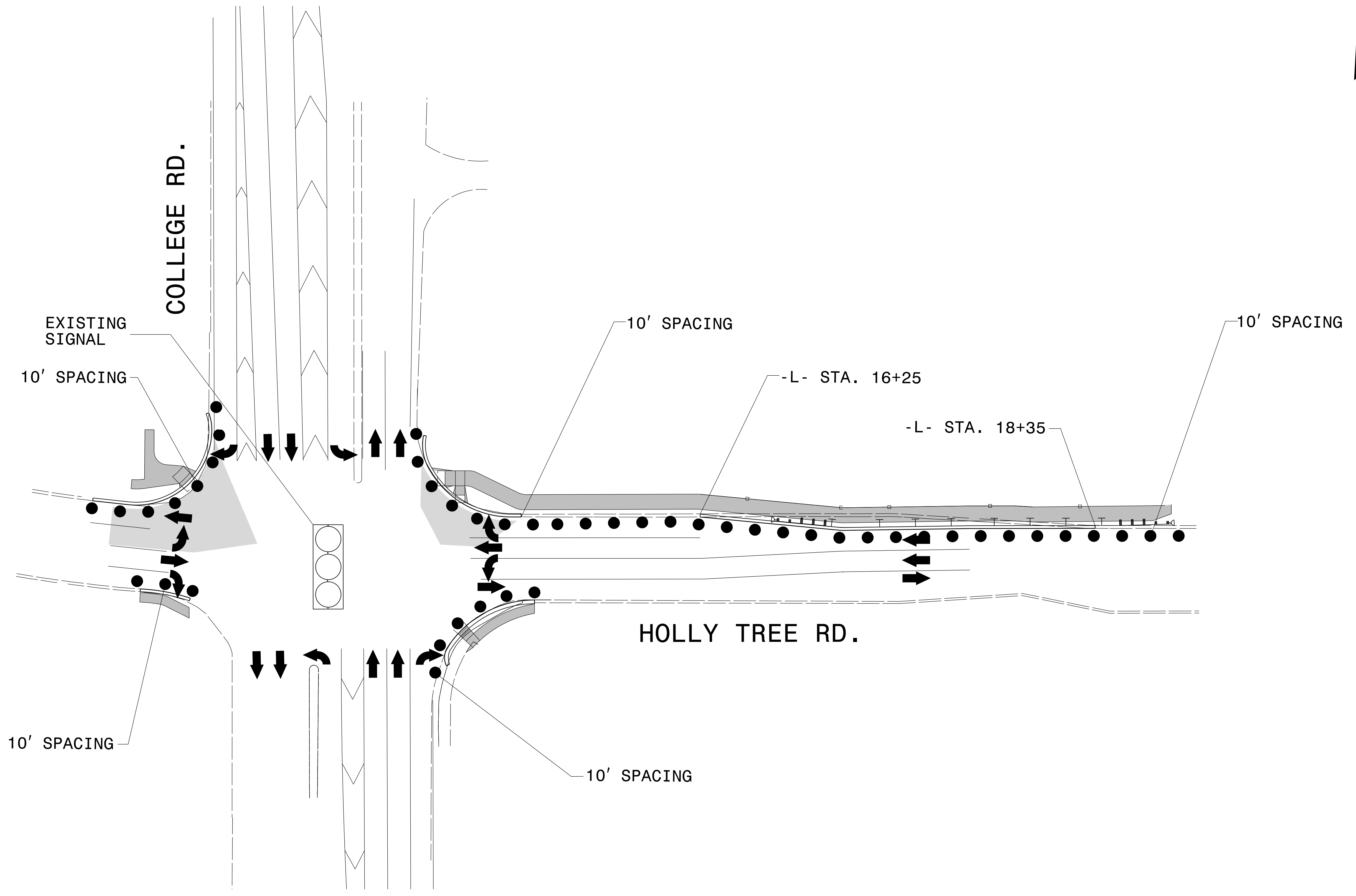
PHASE II

- STEP 1) USING RSD 1101.02, SHEET 2 OF 14, REMOVE EXISTING PAVEMENT MARKINGS AS NEEDED, PLACE FINAL PAVEMENT MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. COMPLETE PLACEMENT OF FINAL MARKINGS.
- STEP 2) REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN PROJECT TO FINAL PATTERN.

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APPROVED: _____ DATE: _____			<p style="text-align: center;">TRANSPORTATION OPERATIONS PLAN</p>
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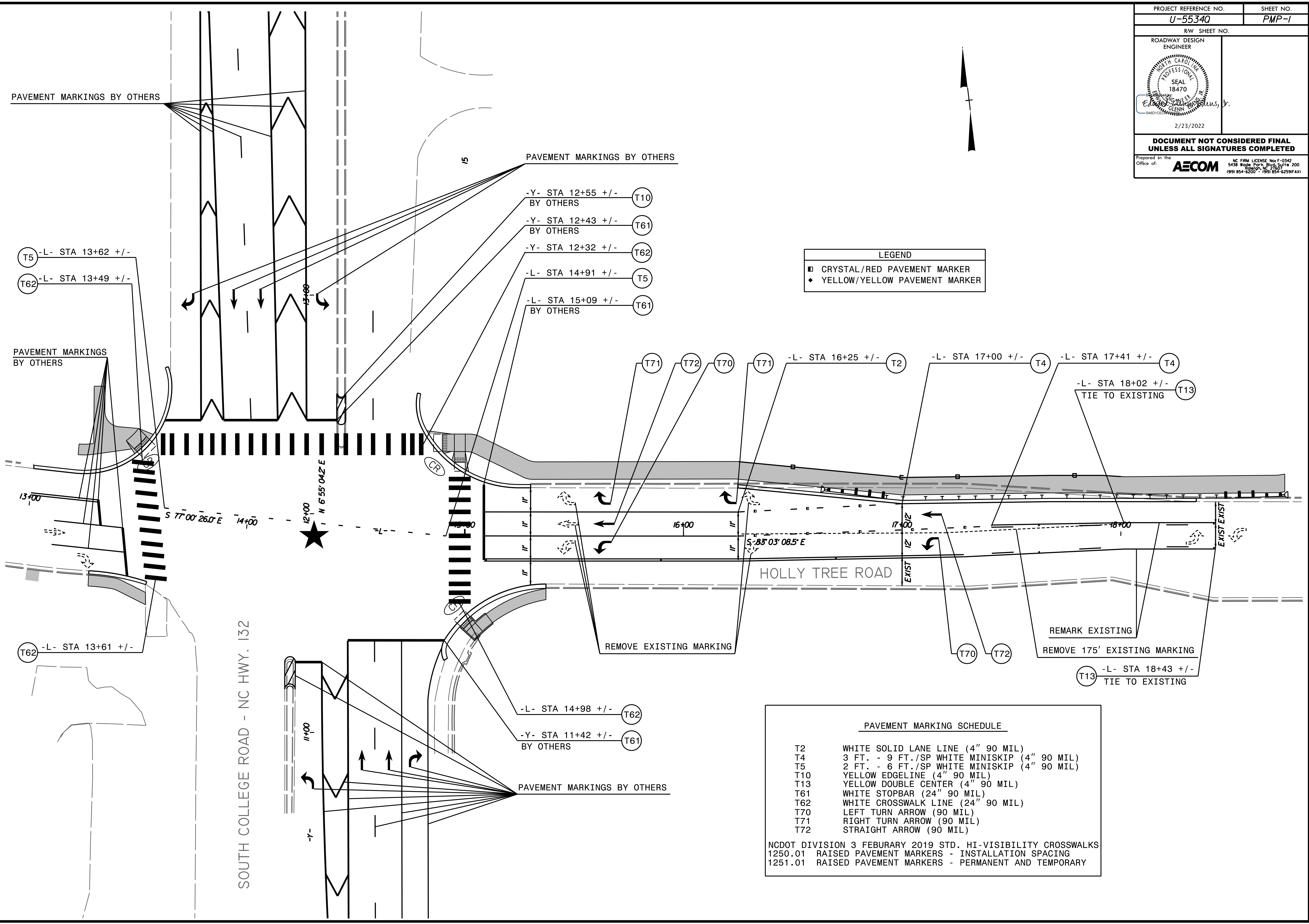
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PROJECT REFERENCE NO. U-55340	SHEET NO. PMP-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
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Prepared in the Office of:	<p>AECOM</p> <small>NC FIRM LICENSE No. F-0342 5438 Rose Park Drive, Suite 200 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 FAX</small>

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LEGEND

- CRYSTAL/RED PAVEMENT MARKER
- ◆ YELLOW/YELLOW PAVEMENT MARKER

PAVEMENT MARKING SCHEDULE

T2	WHITE SOLID LANE LINE (4" 90 MIL)
T4	3 FT. - 9 FT./SP WHITE MINISKIP (4" 90 MIL)
T5	2 FT. - 6 FT./SP WHITE MINISKIP (4" 90 MIL)
T10	YELLOW EDGELINE (4" 90 MIL)
T13	YELLOW DOUBLE CENTER (4" 90 MIL)
T61	WHITE STOPBAR (24" 90 MIL)
T62	WHITE CROSSWALK LINE (24" 90 MIL)
T70	LEFT TURN ARROW (90 MIL)
T71	RIGHT TURN ARROW (90 MIL)
T72	STRAIGHT ARROW (90 MIL)

NCDOT DIVISION 3 FEBURARY 2019 STD. HI-VISIBILITY CROSSWALKS
 1250.01 RAISED PAVEMENT MARKERS - INSTALLATION SPACING
 1251.01 RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

8/17/99
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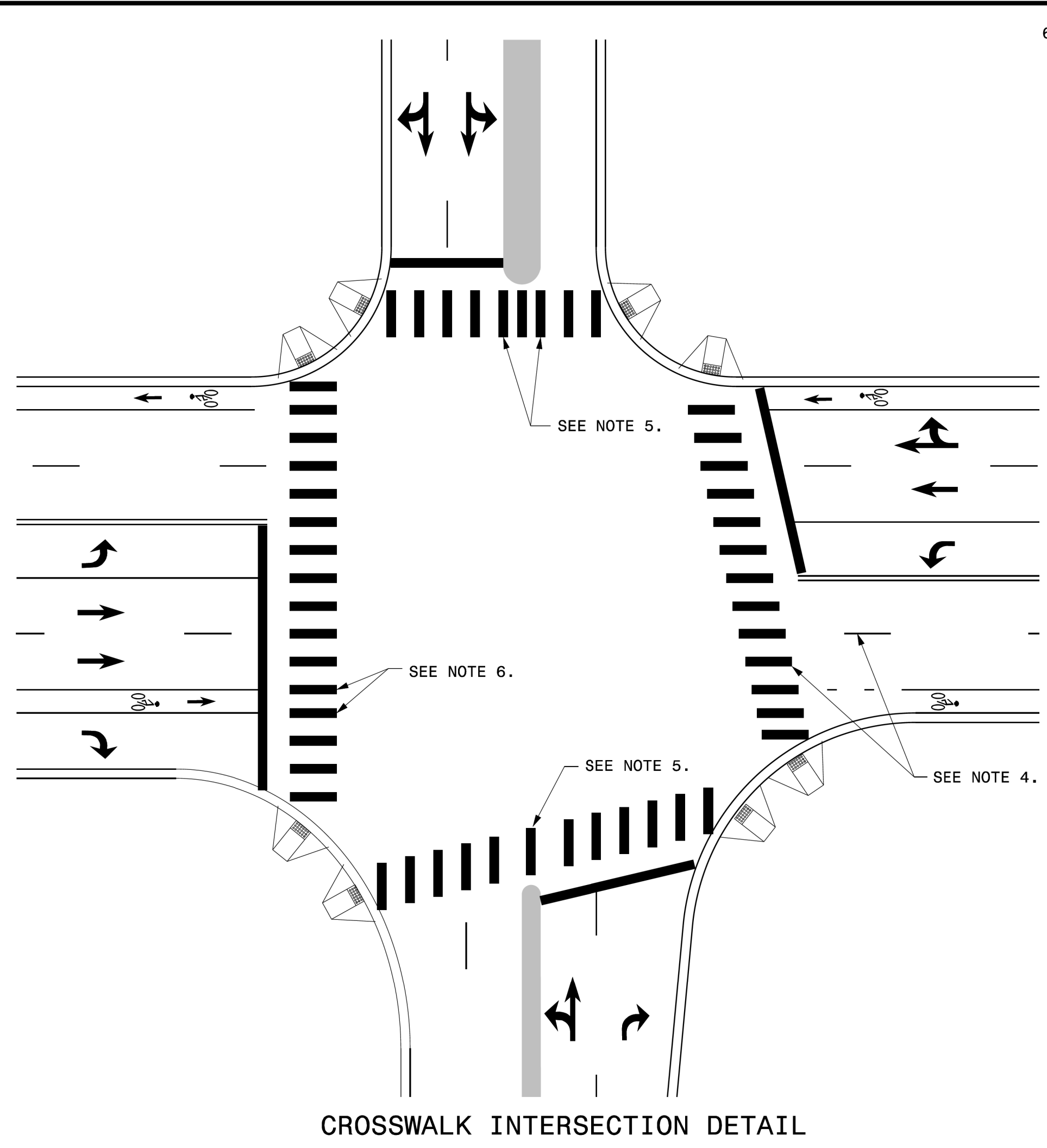
REVISIONS

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

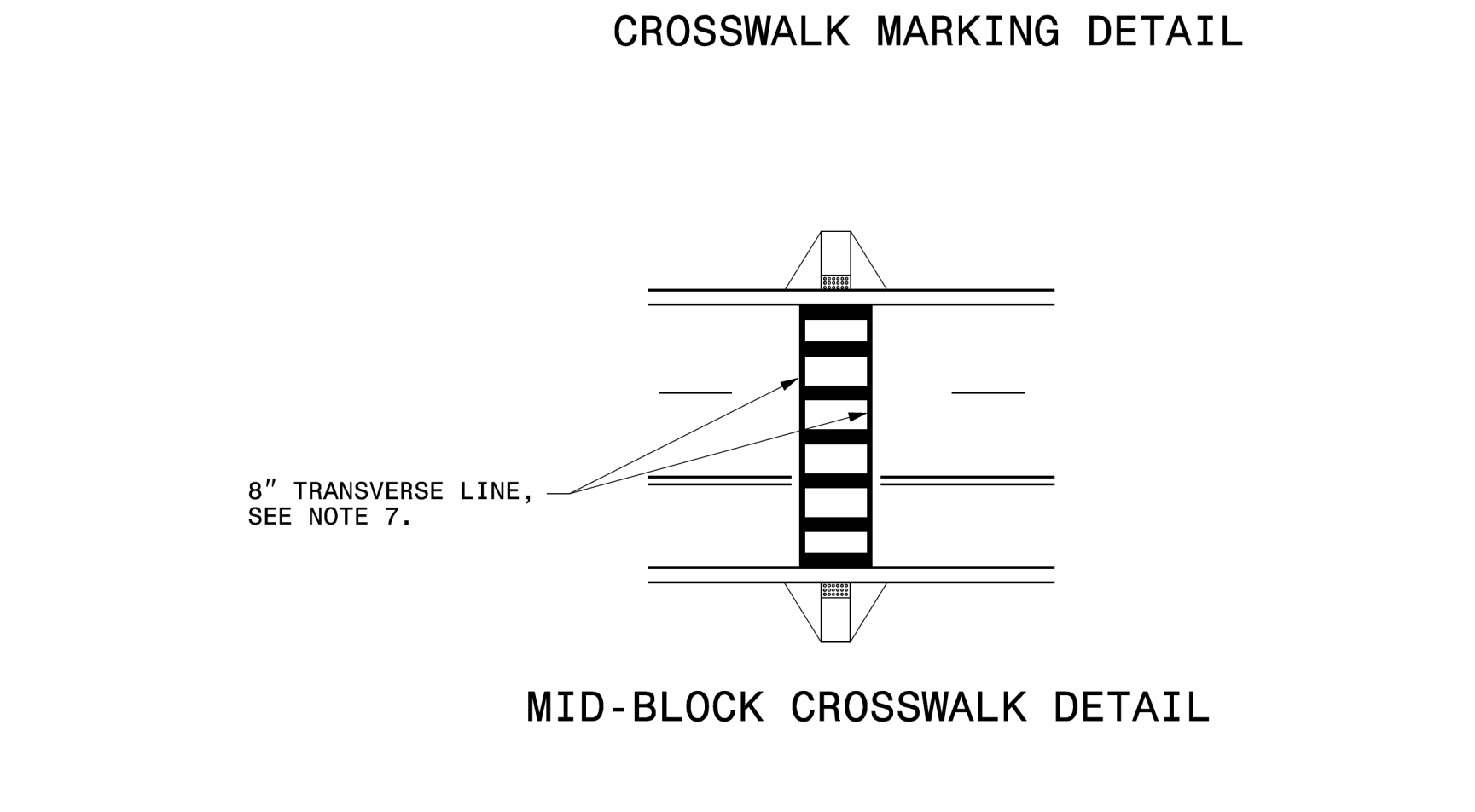
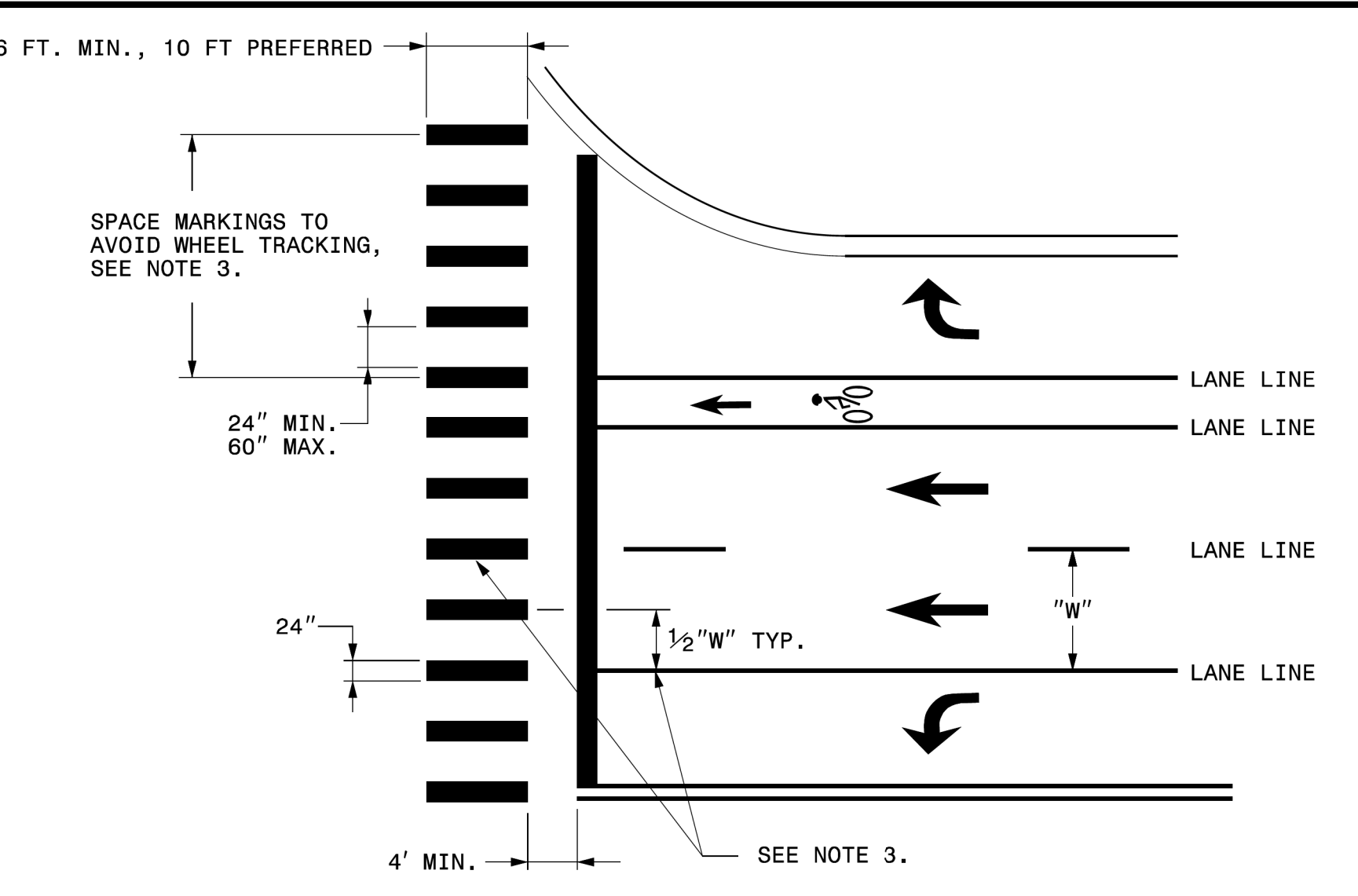
2-19

ENGLISH TYPICAL DRAWING FOR
PAVEMENT MARKINGS
HI-VISIBILITY CROSSWALKS
NO-TRACK MARKING GUIDANCE

SHEET 1 OF 1



- GENERAL NOTES:
- 1- THE GUIDANCE IN THIS DETAIL IS TO BE USED WHEN NO-TRACK SPACING OF HI-VISIBILITY MARKINGS IS REQUESTED.
 - 2- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH PAVEMENT MARKING GUIDANCE SHOWN ON ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.07.
 - 3- PLACE MARKINGS TO AVOID WHEELPATH OF VEHICLES. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE LINES AND EDGE LINES WITH ONE ADDITIONAL MARKING CENTERED IN THE MIDDLE OF THE LANE. AT WIDE LANE WIDTHS DUE TO TAPERS AND LARGE RADII, LOCATE MARKINGS AT BEST SPACING TO AVOID WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.



- 4- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.
- 5- PLACE MARKINGS ON BOTH EDGES OF THE NOSE OF A MEDIAN. FOR NARROW MEDIANS LESS THAN 4 FEET, A SINGLE MARKING MAY BE USED. FOR WIDE MEDIANS, INSTALL ADDITIONAL MARKINGS IN THE MEDIAN AREA. THE SPACE BETWEEN THE MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.
- 6- LOCATE MARKINGS CENTERED ON BICYCLE LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE BICYCLE PATH.
- 7- INCLUDE 8" TRANSVERSE LINES WITH 24" LONGITUDINAL MARKINGS AT MID-BLOCK CROSSINGS.



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

2-19

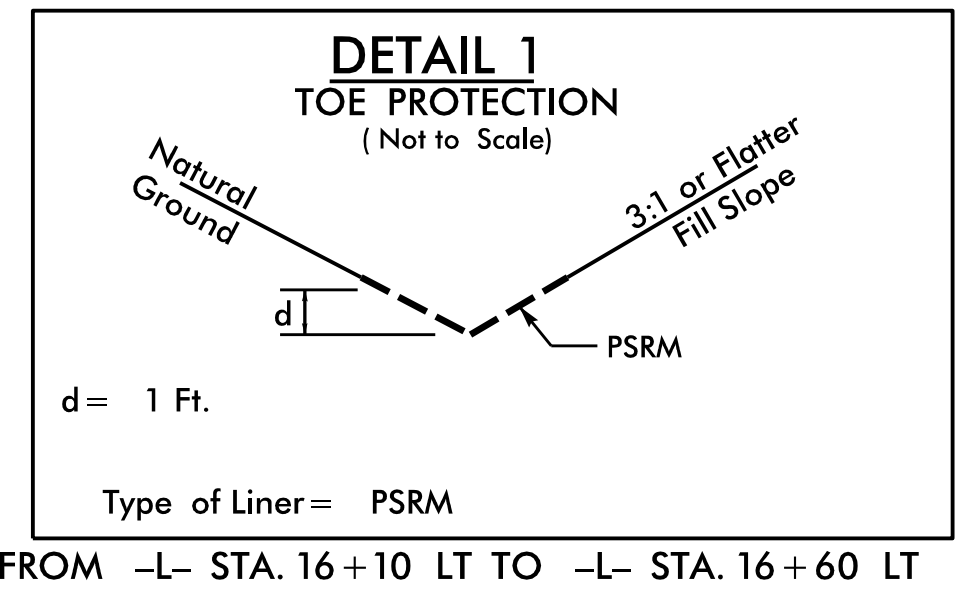
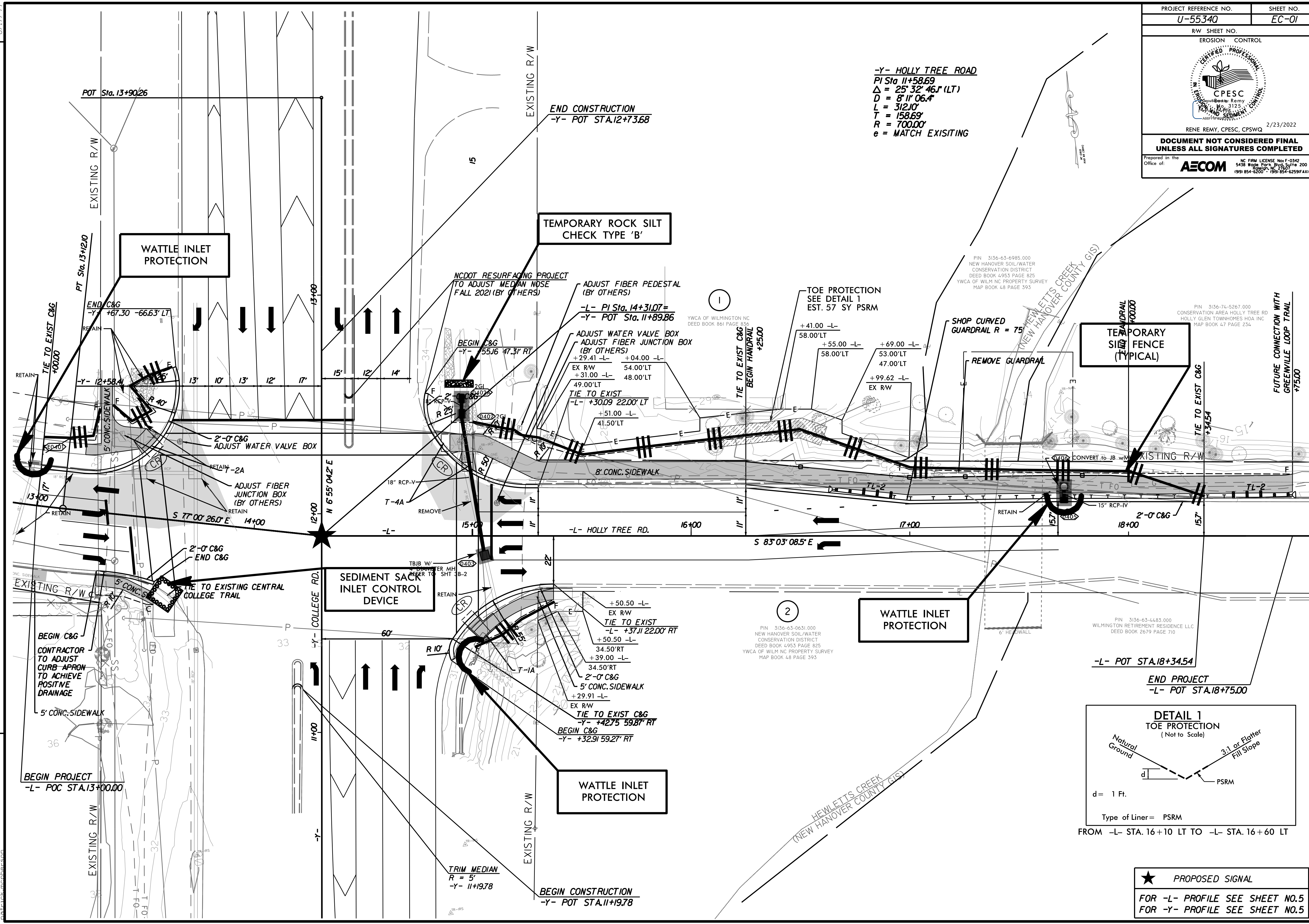
ENGLISH TYPICAL DRAWING FOR
PAVEMENT MARKINGS
HI-VISIBILITY CROSSWALKS
NO-TRACK MARKING GUIDANCE

SHEET 1 OF 1

PROJECT REFERENCE NO. U-55340	SHEET NO. PMP-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
2/23/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of:	
<small>NC FIRM LICENSE No. F-0342 5436 Rose Park Drive, Suite 200 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)</small>	

PROJECT REFERENCE NO. U-55340	SHEET NO. EC-01
RW SHEET NO. EROSION CONTROL	
 RENE REMY, CPESC, CPSWQ 2/23/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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-Y- HOLLY TREE ROAD
 PI Sta. 11+58.69
 $\Delta = 25^{\circ} 32' 46.1''$ (LT)
 $D = 8^{\circ} 11' 06.4''$
 $L = 312.10'$
 $T = 158.69'$
 $R = 700.00'$
 $e = \text{MATCH EXISTING}$

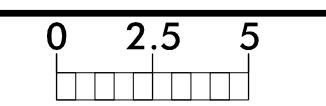


FROM -L- STA. 16+10 LT TO -L- STA. 16+60 LT

★ **PROPOSED SIGNAL**
 FOR -L- PROFILE SEE SHEET NO.5
 FOR -Y- PROFILE SEE SHEET NO.5

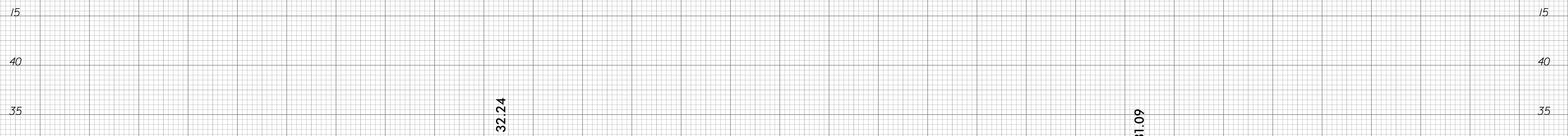
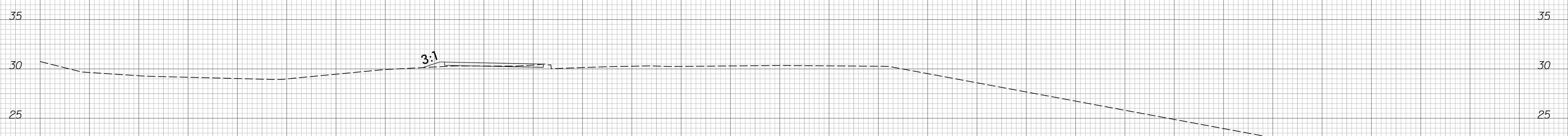
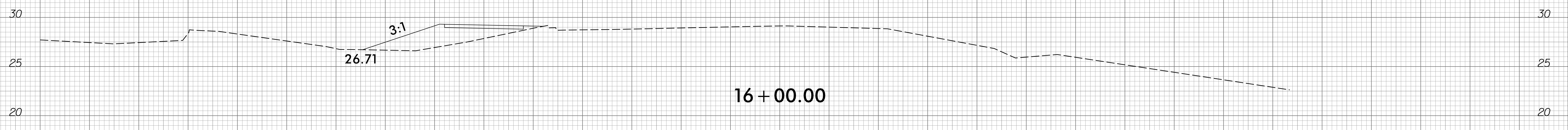
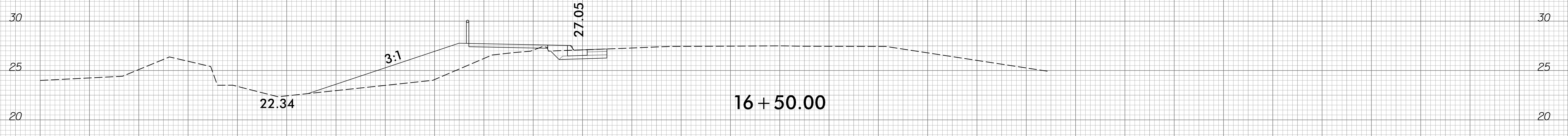
REVISIONS
 2/18/2022
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 8/17/19

6/23/16



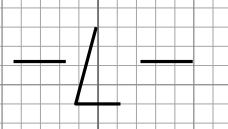
PROJ. REFERENCE NO.	SHEET NO.
U-5534Q	X-1

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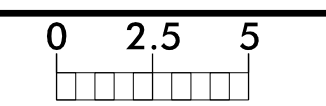


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2/8/2022
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6/23/16
2/8/2022
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paw\kmcpherson



PROJ. REFERENCE NO.	SHEET NO.
U-5534Q	X-2

