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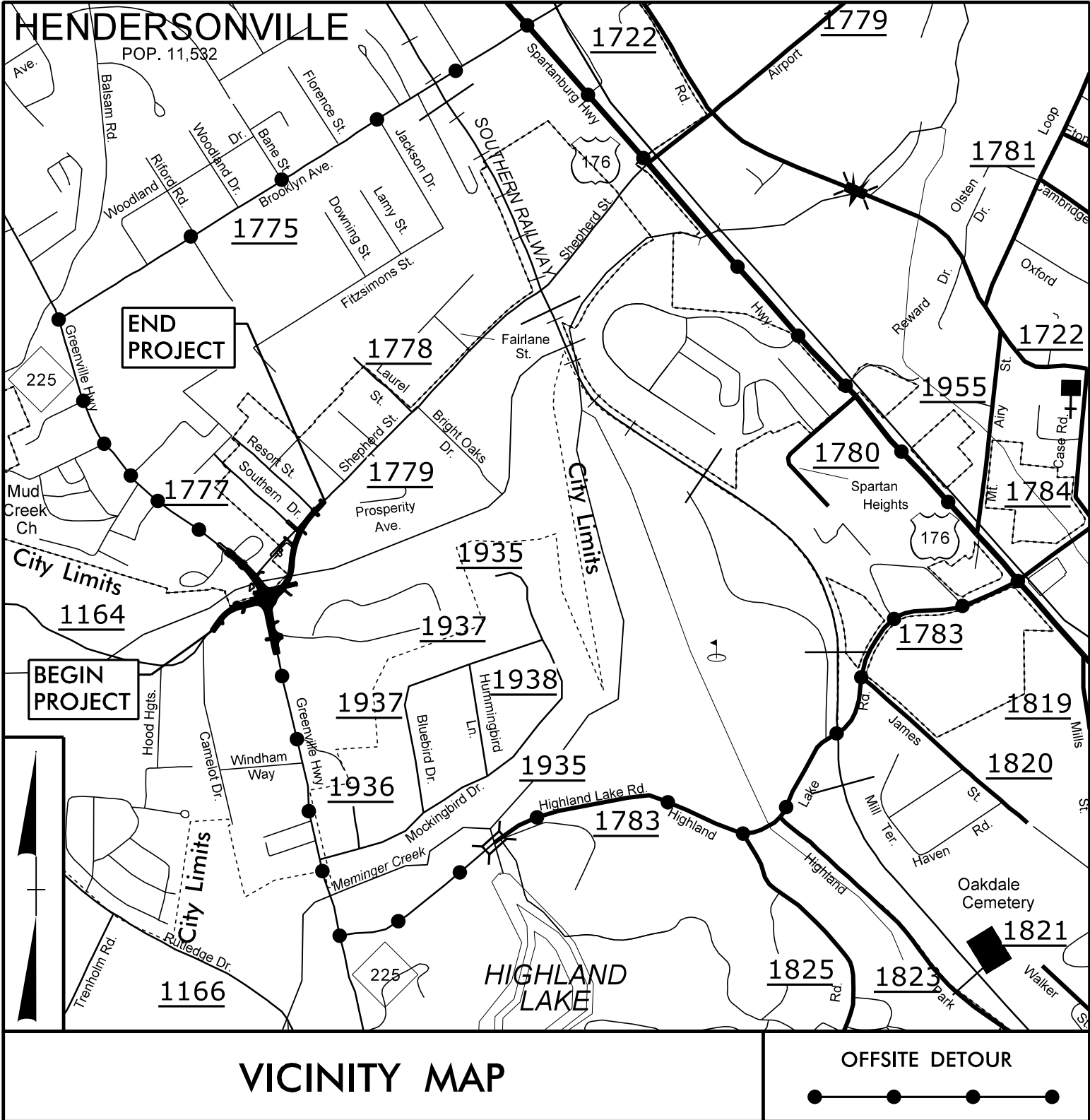
09.08/2018

7/12/2018
R:\Roadway\Proj\U5105_rdy_1.fsh.dgn
gaugsborg

TIP PROJECT: U-5105

CONTRACT: DN00650

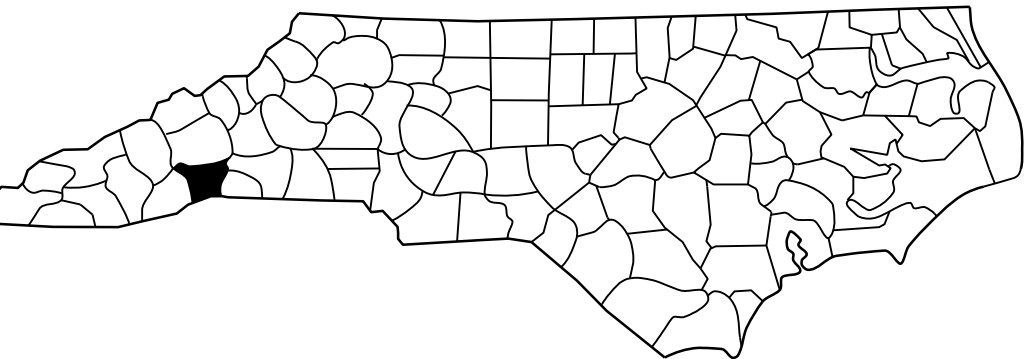
See Sheet 1-A For Index of Sheets



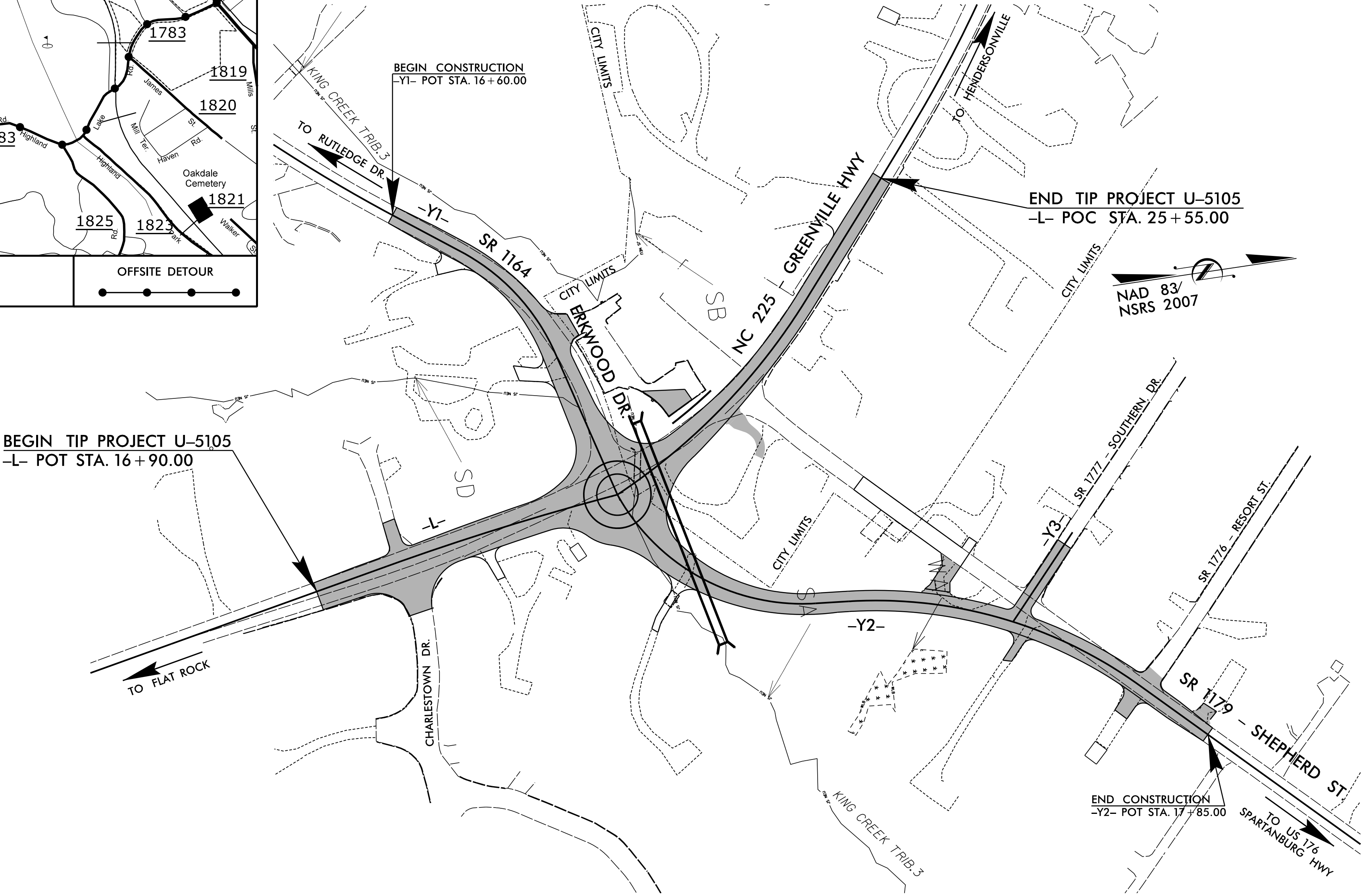
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: HENDERSONVILLE - NC 225/SR 1164 (ERKWOOD DRIVE) /SR 1779 (SHEPHERD STREET) - INTERSECTION IMPROVEMENTS
TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERT, & LIGHTING



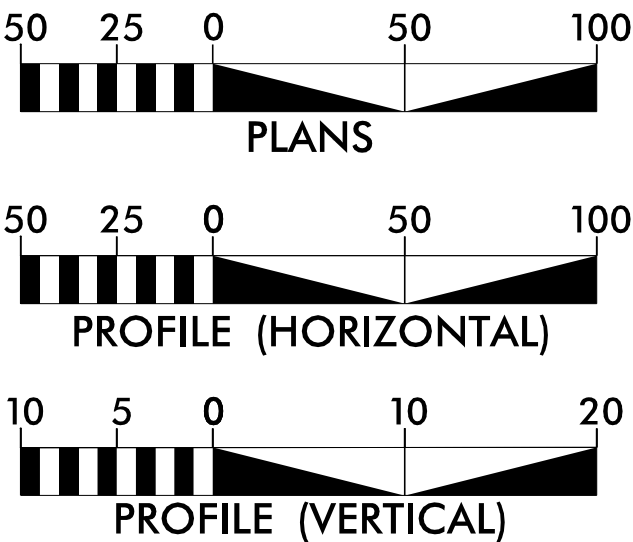
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5105	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41903.1.1		P.E.	
41903.2.2		RW, UTL.	
41903.3.3		CONST.	



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2018 = 9,800
ADT 2035 = 11,600
K = 55 %
D = 9 %
T = 5 % *
V = 40 MPH
* TTST =1% + DUAL 4%
FUNC CLASS =
URBAN COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5105 = 0.164 MILES
LENGTH TIP PROJECT U-5105 = 0.164 MILES

Prepared for:
**HIGHWAY
DIVISION 14**
253 Webster Rd.
Sylva, NC 28779

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 21, 2016

LETTING DATE:
AUGUST 28, 2018

Prepared by:
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6700 TRYON ROAD
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CALYXengineers.com
NC License # E13333

JOHNNY BANKS
PROJECT MANAGER

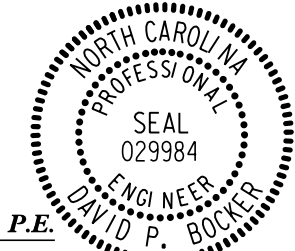
STEPHEN C. BROWDE, PE
ROADWAY PROJECT DESIGN ENGINEER

STEVE WILLIAMS
NCDOT CONTACT
DIVISION 14 DESIGN CONSTRUCTION ENGINEER

HYDRAULICS ENGINEER

7/12/2018

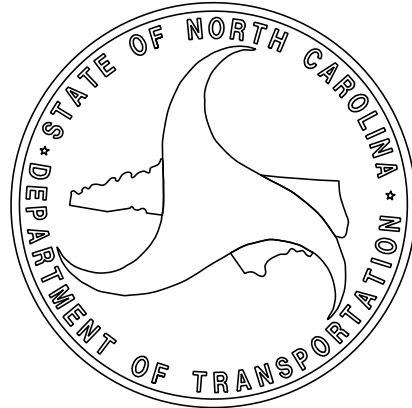
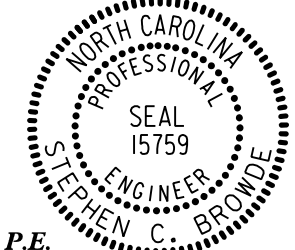
DocuSigned by:
David Barker
SIGNATURE



ROADWAY DESIGN
ENGINEER

7/12/2018

DocuSigned by:
Stephen C. Browde
SIGNATURE



8/17/99

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

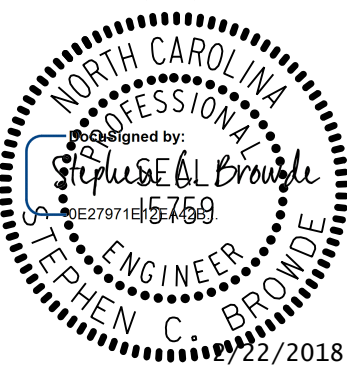
PROJECT REFERENCE NO.
U-5105

SHEET NO.
I-A



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ENGINEER



INDEX OF SHEETS

GENERAL NOTES

STANDARD SPECIFICATIONS

SHEET #	DESCRIPTION	GENERAL NOTES:	2018 SPECIFICATIONS EFFECTIVE: 01-16-2018 REVISED:	EFF. 01-16-2018 REV.
1	TITLE SHEET			
1-A	INDEX OF SHEETS, GENERAL NOTES, & LIST OF STANDARD DRAWINGS	GRADING AND SURFACING OR RESURFACING AND WIDENING:		2018 ROADWAY ENGLISH STANDARD DRAWINGS
1-B	CONVENTIONAL PLAN SHEET SYMBOLS		THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES AS 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.	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:
1C-1 THRU 1C-2	SURVEY CONTROL SHEET			STD.NO. TITLE
2A-1 THRU 2A-4	PAVEMENT SCHEDULE & TYPICAL SECTIONS			DIVISION 2 - EARTHWORK
2B-1 TRHU 2B-2	INTERSECTION DETAILS	CLEARING:		200.03 Method of Clearing - Method II
3B-1	ROADWAY SUMMARIES		CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.	225.02 Guide for Grading Subgrade - Secondary and Local
3D-1	DRAINAGE SUMMARIES	SHOULDER CONSTRUCTION:		225.04 Method of Obtaining Superelevation - Two Lane Pavement
3G-1	GEOTECHNICAL SUMMARY TABLES		ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.02	DIVISION 3 - PIPE CULVERTS
4	PLAN SHEETS			300.01 Method of Pipe Installation
5 THRU 6	PROFILE SHEETS	SIDE ROADS:		310.10 Driveway Pipe Construction
TMP-1 THRU TMP-5	TRANSPORTATION MANAGEMENT PLANS		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.	DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS			560.02 Method of Shoulder Construction - High Side of Superelevated Curve - Method II (Sheet 2 of 3 is no longer applicable)
LIGHT-1 THRU LIGHT-2	LIGHTING PLANS	DRIVEWAYS:		DIVISION 6 - ASPHALT BASES AND PAVEMENTS
EC-1 THRU EC-04	EROSION CONTROL PLANS		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.	654.01 Pavement Repairs
SIGN-1 THRU SIGN-4	SIGNING PLANS			DIVISION 8 - INCIDENTALS
UC-1 THRU UC-7	UTILITY CONSTRUCTION PLANS	STREET TURNOUT:		815.02 Subsurface Drain
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS		NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.	840.02 Concrete Catch Basin - 12" thru 54" Pipe
X-0A	CROSS SECTION SUMMARY	UTILITIES:		840.03 Frame, Grates and Hood - for Use on Standard Catch Basin
X-0	CROSS-SECTION SHEET INDEX			840.14 Concrete Drop Inlet - 12" thru 30" Pipe
X-1 THRU X-13	CROSS-SECTIONS		ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.	840.16 Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
C1 THRU C7	CULVERT PLANS	RIGHT-OF-WAY MARKERS:		840.24 Frames and Narrow Slot Sag Grates
W-1 THRU W-2	WALL PLANS		ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.	840.31 Concrete Junction Box - 12" thru 66" Pipe
		CURB RAMPS		840.34 Traffic Bearing Junction Box - for Use with Pipes 42" and Under
			CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.	840.54 Manhole Frame and Cover
				852.06 Method for Placement of Drop Inlets in Concrete Islands
				862.01 Guardrail Placement
				862.02 Guardrail Installation
				876.01 Rip Rap in Channels
				876.02 Guide for Rip Rap at Pipe Outlets
				876.03 Drainage Ditches with Class 'A' Rip Rap
				876.04 Drainage Ditches with Class 'B' Rip Rap

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Computed Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
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	

RAILROADS:

Standard Gauge	
RR Signal Milepost	
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 Easment 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	
New Right of Way Line with Pin and Cap	
New Right of Way Line with Concrete or Granite R/W Marker	
New Control of Access Line with Concrete C/A Marker	
Existing Control of Access	
New Control of Access	
Existing Easement Line	
New Temporary Construction Easement	
New Temporary Drainage Easement	
New Permanent Drainage Easement	
New Permanent Drainage /Utility Easement	
New Permanent Utility Easement	
New Temporary Utility Easement	
New 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	

*S.U.E. = Subsurface Utility Engineering

Hedge	
Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

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

UTILITIES:

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

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.*)	
U/G Telephone Cable LOS C (S.U.E.*)	
U/G Telephone Cable LOS D (S.U.E.*)	
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	
U/G Telephone Conduit LOS D (S.U.E.*)	
U/G Fiber Optics Cable LOS B (S.U.E.*)	
U/G Fiber Optics Cable LOS C (S.U.E.*)	
U/G Fiber Optics Cable LOS D (S.U.E.*)	

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	

TV:

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

GAS:

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

SANITARY SEWER:

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

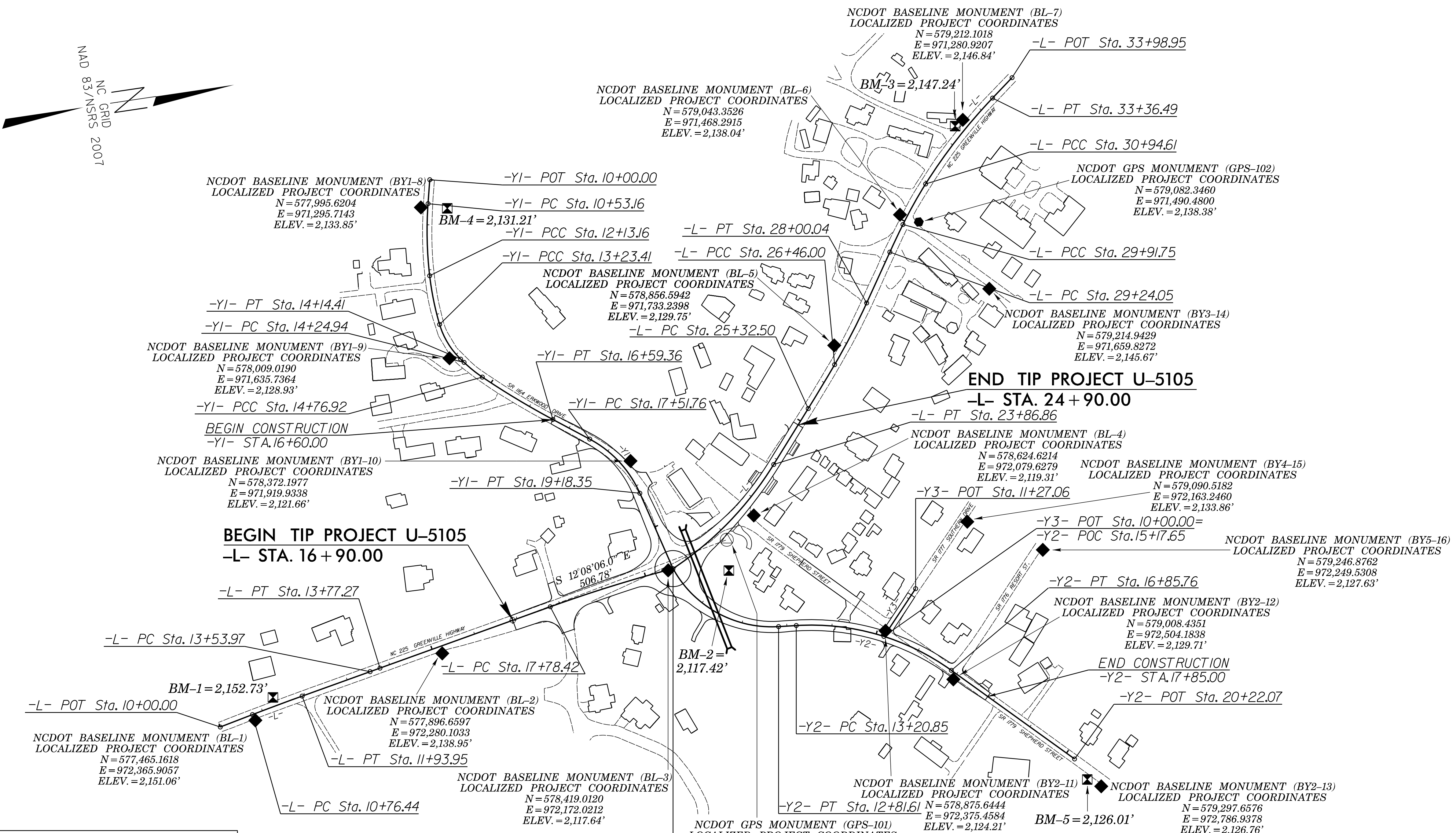
MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line LOS B (S.U.E.*)	
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	
End of Information	

PROJECT REFERENCE NO.	SHEET NO.
U-5105	1C-1
Location and Surveys	

SURVEY CONTROL SHEET U-5105

-FINAL-



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "GPS-101" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 578,557.507(±) EASTING: 972,124.237(±) ELEVATION: 2,117.74(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977589

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-101" TO -L- STATION 16+90.00 IS S 12°08'06.0" E 506.78'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

TIE EQUATION

-L- PRC STA.20+63.31
-YI- POT STA.21+00.90
-Y2- PC STA.10+00.00

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)
- THE FILES TO BE FOUND ARE AS FOLLOWS:
U-5105_LS_CONTROL.TXT
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- ⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET U-5105

-FINAL-

PROJECT REFERENCE NO.	SHEET NO.
U-5105	1C-2
Location and Surveys	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		BL-1	577465.1618	972365.9057	2151.06
2		BL-2	577896.6597	972280.1033	2138.95
3		BL-3	578419.0120	972172.0212	2117.64
4		BL-4	578624.6214	972079.6279	2119.31
5		BL-5	578856.5942	971733.2398	2129.75
6		BL-6	579043.3526	971468.2915	2138.04
7		BL-7	579212.1018	971280.9207	2146.84

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
8		BY1-8	577995.6204	971295.7143	2133.85
9		BY1-9	578009.0190	971635.7364	2128.93
10		BY1-10	578372.1977	971919.9338	2121.66
33		BL-3	578419.0120	972172.0212	2117.64

BY2	POINT	DESC.	NORTH	EAST	ELEVATION
44		BL-4	578624.6214	972079.6279	2119.31
11		BY2-11	578875.6444	972375.4584	2124.21
12		BY2-12	579008.4351	972504.1838	2129.71
13		BY2-13	579297.6576	972786.9378	2126.76

BY3	POINT	DESC.	NORTH	EAST	ELEVATION
66		BL-6	579043.3526	971468.2915	2138.04
14		BY3-14	579214.9429	971659.8272	2145.67

BY4	POINT	DESC.	NORTH	EAST	ELEVATION
15		BY4-15	579090.5182	972163.2460	2133.86
111		BY2-11	578875.6444	972375.4584	2124.21

BY5	POINT	DESC.	NORTH	EAST	ELEVATION
16		BY5-16	579246.8762	972249.5308	2127.63
112		BY2-12	579008.4351	972504.1838	2129.71

L				
TYPE	STATION	NORTH	EAST	
POT	10+00.00	577386.0828	972369.0873	
PC	10+76.44	577460.6704	972352.3793	
PT	11+93.95	577575.6323	972328.0423	
PC	13+53.97	577732.5660	972296.7421	
PT	13+77.27	577755.4092	972292.1769	
PC	17+78.42	578148.7530	972213.4075	
PRC	20+63.31	578430.2081	972169.8893	
PT	23+86.86	578684.9996	971974.5664	
PC	25+32.50	578778.9413	971863.2740	
PCC	26+46.00	578851.1576	971775.7226	
PT	28+08.04	578941.4974	971651.0382	
PC	29+24.05	579009.0000	971547.0143	
PCC	29+91.75	579046.7313	971490.8015	
PCC	30+94.61	579109.5983	971409.4410	
PT	33+36.49	579284.5067	971242.7624	
POT	33+98.95	579333.8531	971204.6702	

Y1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	578024.1641	971238.0153
PC	10+53.16	578012.5721	971289.8955
PCC	12+13.16	577992.5414	971448.3987
PCC	13+23.41	577998.3983	971558.3589
PT	14+14.41	578033.2732	971641.3016
PC	14+24.94	578039.7130	971649.6332
PCC	14+76.92	578074.9018	971687.8122
PT	16+59.36	578215.6858	971803.7248
PC	17+51.76	578289.9040	971858.7683
PT	19+18.35	578382.1674	971993.7782
POT	21+00.90	578430.2081	972169.8893

Y2			
TYPE	STATION	NORTH	EAST
PC	10+00.00	578430.2081	972169.8893
PT	12+01.61	578642.5855	972331.5067
PC	13+20.85	578681.7778	972334.9181
PT	16+85.76	579007.1192	972483.8736
POT	20+22.07	579248.1666	972718.3915

.....

BM1 ELEVATION = 2152.73
N 577511 E 972321
8" SPIKE SET IN ROOT OF 24" PINE TREE
.....

BM2 ELEVATION = 2117.42
N 578552 E 972192
8" SPIKE SET IN ROOT OF 20" POPLAR TREE
.....

BM3 ELEVATION = 2147.24
N 579193 E 971292
8" SPIKE SET IN ROOT OF 15" DOUBLEMAPLE TREE
.....

BM4 ELEVATION = 2131.21
N 578053 E 971306
8" SPIKE SET IN ROOT OF 20" SYCAMORETREE
.....

BM5 ELEVATION = 2126.01
N 579269 E 972788
8" SPIKE SET IN BASE OF 24" RED OAK TREE
.....

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	16+77.67	-12.00	578047.6078	972221.4241
L	16+80.19	-24.51	578047.6176	972208.6615
L	16+87.32	-60.00	578047.6454	972172.4636
L	17+78.42	-60.00	578136.9715	972154.5755
L	18+50.00	-70.00	578206.8727	972131.2078
L	19+50.00	-70.00	578307.7394	972114.9420
L	21+70.00	-30.00	578506.8117	972092.8170
L	23+86.86	-30.00	578662.0748	971955.2156
L	25+32.50	-30.00	578756.0165	971843.9232
L	26+83.92	-12.00	578802.6536	971816.1693
L	28+08.04	25.00	578936.1000	971833.7718
L	29+00.00	30.00	578980.9016	971907.4613
L	23+86.86	30.00	578707.9244	971993.9171
L	22+68.89	40.00	578628.2901	972080.6387
L	22+46.56	63.76	578625.2542	972122.1892
L	21+66.00	70.00	578558.0084	972178.8200
L	19+70.00	70.00	578347.2495	972250.7314
L	17+78.42	75.00	578163.4798	972286.9474
L	17+45.00	45.00	578124.8184	972264.0939
L	16+00.00	45.00	578061.0038	972276.8572
L	16+80.00	12.00	578054.6040	972244.4996

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
Y1	19+90.00	60.00	578343.1375	972078.6886
Y1	19+18.35	60.00	578324.2824	972009.5684
Y1	17+50.00	60.00	578252.7447	971905.9096
Y1	17+25.00	30.00	578250.5353	971866.9209
Y1	16+59.36	30.00	578197.8149	971827.8211
Y1	16+50.00	30.00	578190.1840	971822.1309
Y1	16+50.00	12.00	578200.9816	971807.7291
Y1	16+50.00	-12.00	578215.3784	971788.5267
Y1	16+59.36	-38.00	578238.3222	971773.2028
Y1	17+51.76	-38.00	578312.5405	971828.2463
Y1	18+00.00	-42.00	578356.6672	971862.7383
Y1	18+50.00	-46.00	578394.9038	971907.4566
Y1	19+14.00	-39.00	578418.4257	971978.6702
Y1	19+14.00	-27.00	578406.9055	971982.8294
Y1	19+86.00	-34.00	578432.7713	972050.8916

ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+29.00	-70.00	578548.8051	972220.4145
Y2	12+10.00	-55.00	578593.2689	972264.0092
Y2	12+47.32	-60.25	578622.2336	972267.4507
Y2	13+20.70	-142.86	578694.0398	972192.5853
Y2	15+54.16	-50.00	578927.5336	972361.3499
Y2	16+13.77	-50.00	578982.0140	972397.0972
Y2	16+71.35	-30.00	579016.9875	972451.9059
Y2	17+15.55	-35.00	579052.8818	972479.5649
Y2	17+95.00	-35.00	579109.8247	972534.9653
Y2	17+95.00	-15.00	579095.8781	972549.3002
Y2	17+95.00	10.00	579078.4447	972567.2189
Y2	17+95.00	35.00	579061.0114	972585.1376
Y2	16+85.76	50.00	578972.2526	972519.7110
Y2	16+00.00	50.00	578912.4415	972470.2238
Y2	15+07.29	60.00	578835.5496	972437.3146
Y2	13+20.85	60.00	578676.5616	972394.6909
Y2	12+01.61	60.00	578637.4693	972391.2795
Y2	12+28.00	60.00	578572.3647	972378.4699
Y2	12+00.00	95.00	578525.7933	972398.3769
Y2	10+69.28	99.52	578382.9150	972289.6219

PUE				
ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	19+58.00	-76.27	578314.9426	972107.5648
L	19+53.50	-80.08	578309.8387	972104.4480
L	19+60.00	-88.00	578315.3191	972095.6699
L	19+66.05	-82.63	578322.2152	972100.1164
L	22+58.40	-49.50	578562.3263	972027.2646
L	22+57.00	-61.00	578553.9456	972019.2836
L	22+68.50	-61.50	578561.6702	972012.0648
L	22+69.20	-49.00	578570.3315	972021.1010
L	24+67.00	-46.94	578700.8184	971883.0479
L	25+10.00	-30.00	578741.5022	971861.1181
L	18+67.72	157.46	578263.1710	972352.2985
L	18+63.00	165.54	578250.1252	972361.0099
L	18+53.50	160.42	578250.3592	972357.5139
L	18+69.00	133.75	578260.3709	972328.7080
L	18+60.00	129.27	578251.1820	972325.7598
L	18+85.87	84.26	578268.2254	972277.1986
L	17+65.60	63.49	578148.6523	972278.1826
L	16+21.00	50.00	578004.2142	972293.3449
L	14+99.00	33.00	577881.2512	972300.6315

PUE				
ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
Y1	19+98.00	73.62	578332.1813	972089.9915
Y1	19+75.00	60.00	578339.1899	972084.2174
Y1	14+18.44	-12.00	578045.2334	971637.1531
Y1	14+11.00	-39.00	578062.5321	971615.3414
Y1	16+48.50	-50.43	578237.2679	971756.9024
Y1	16+57.90	-57.16	578248.5971	971756.9710
Y1	16+63.50	-49.84	578248.6958	971766.1607
Y1	18+51.70	-65.69	578412.8883	971899.1802
Y1	18+46.70	-73.53	578416.3039	971889.6610
Y1	18+53.00	-80.27	578426.3218	971893.2554
Y1	18+66.40	-60.00	578416.7849	971918.0374
Y1	18+85.25	-71.50	578437.2607	971934.7507
Y1	18+89.00	-62.70	578430.9395	971942.5033
Y1	18+80.50	-57.17	578421.7345	971934.9592
Y1	18+97.50	-38.90	578412.3907	971960.5831
Y1	20+05.09	-52.93	578456.0604	972063.5307

PDE				
ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
Y1	19+93.00	-40.94	578441.3090	972055.0184
Y1	19+93.00	-64.00	578463.5559	972048.9497
Y1	20+03.50	-78.38	578480.1895	972055.2960

TDE				
ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
Y2	11+40.00	85.35	578460.5387	972348.7869
Y2	11+40.00	100.00	578451.6389	972350.3399
Y2	12+05.00	120.00	578522.5535	972424.1754

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
U-5105_LS_CONTROL.TXT

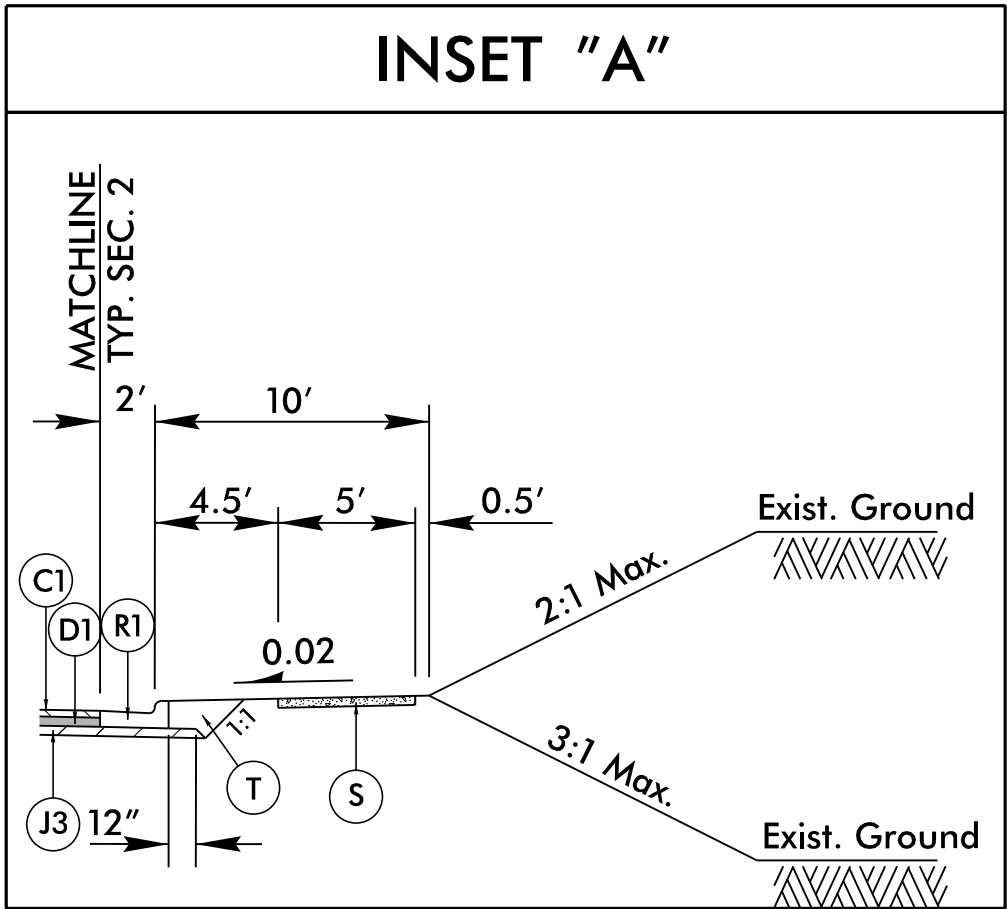
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

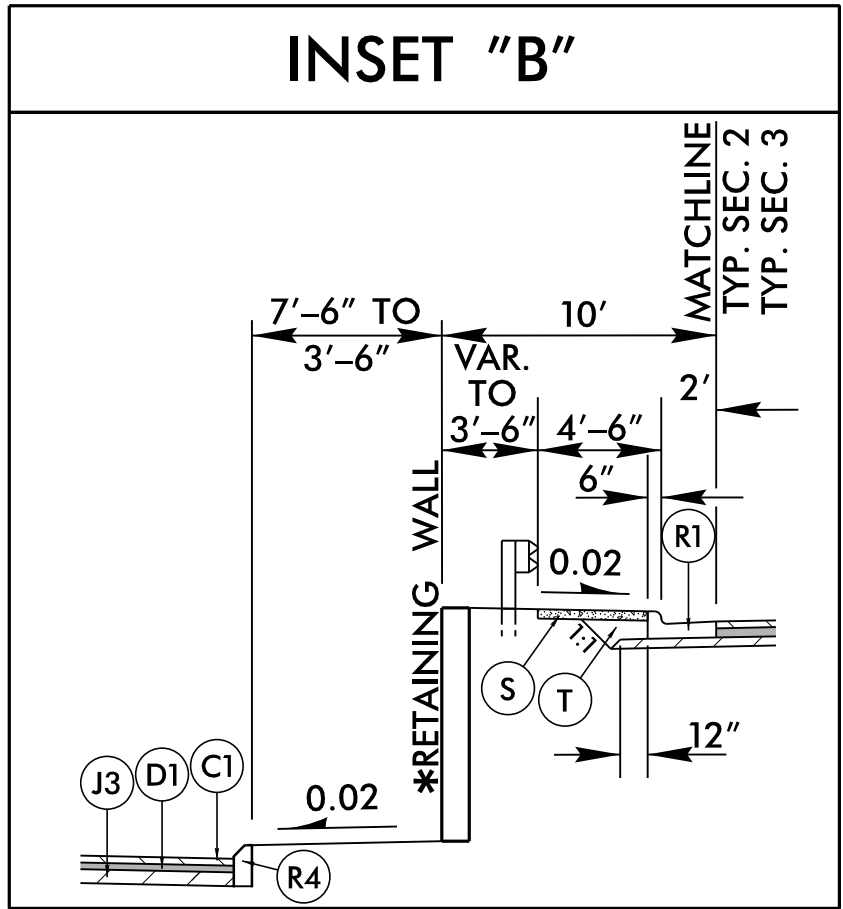
6/2/99

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN 11/27/2017)	
A	7" PORTLAND CEMENT CONCRETE PAVEMENT. (TINTED AS DIRECTED BY ENGINEER)
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	VAR. DEPTH OF ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	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 LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J1	4" AGGREGATE BASE COURSE.
J2	6" AGGREGATE BASE COURSE.
J3	8" AGGREGATE BASE COURSE.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	1'-6" CONCRETE CURB AND GUTTER (MOUNTABLE).
R3	9" X 18" CONCRETE CURB.
R4	8" X 12" CONCRETE CURB.
R5	EXPRESSWAY GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING (0"-3" IN DEPTH)
W	WEDGING

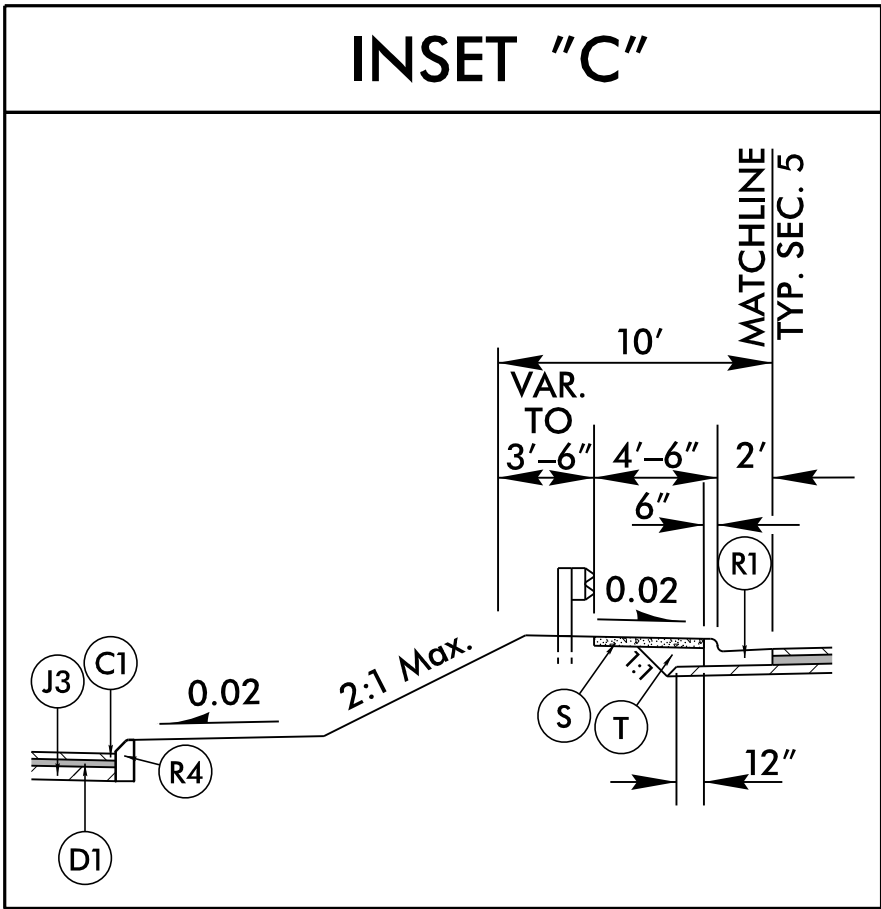
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



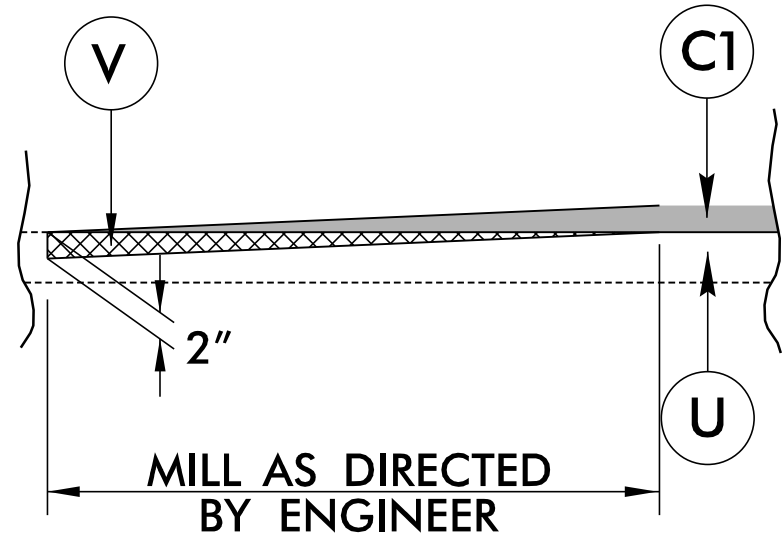
USE INSET "A" W/TYPICAL NO. 1 & 2 AS FOLLOWS:
TYPICAL 1 -L- STA. 16+90.00 TO 18+72.86
TYPICAL 2 -L- STA. 20+63.31 TO 21+23.33



USE INSET "B" W/TYPICAL NO. 2 & 3 AS FOLLOWS:
TYPICAL 2 -L- STA. 20+74.46 TO 21+23.33 LT
TYPICAL 3 -L- STA. 21+50.00 TO 22+55.22 LT
TYPICAL 4 -L- STA. 21+23.33 TO 21+50.00 LT
*RETAINING WALL STA. 21+68.00 TO 22+30.00



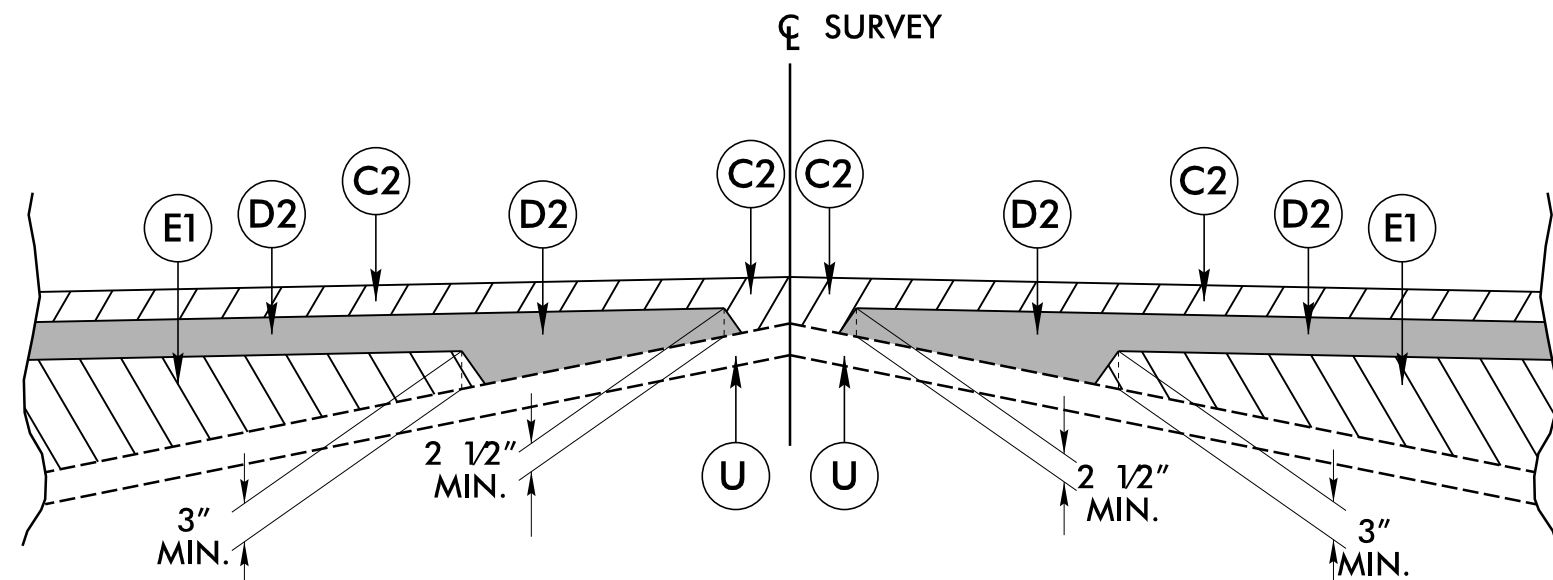
USE INSET "C" W/TYPICAL NO. 4 AS FOLLOWS:
TYPICAL 5 -Y1- STA. 20+07.01 TO 20+40.90 RT



MILL AS DIRECTED BY ENGINEER

MILLING DETAIL

MILL EXISTING PAVEMENT AT THE FOLLOWING END ALIGNMENTS:
-L- STA. 16+90.00 & 24+90.00
-Y1- STA. 16+60.00
-Y2- STA. 17+85.00
-Y3- STA. 11+10.00



Detail Showing Method of Symetrical Wedging for -L-, -Y1- & -Y2-

PROJECT REFERENCE NO.

U-5105

SHEET NO.

2A-1

PAVEMENT DESIGN ENGINEER

DESIGNED BY:

SEAN J. SEAR

39779

REGISTERED PROFESSIONAL ENGINEER

STATE OF NORTH CAROLINA

007538000

4/22/2018

ROADWAY DESIGN ENGINEER

DESIGNED BY:

STEPHEN C. BRODIE

42797

REGISTERED PROFESSIONAL ENGINEER

STATE OF NORTH CAROLINA

002797450

4/22/2018

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

CL -L- (NC 225 - GREENVILLE HWY)

TYPICAL SECTION No. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS:
-L- STA. 16+90.00 TO 20+00.00

CL -L- CENTER OF ROUNDABOUT

TYPICAL SECTION No. 2

NOTE:
THE ROUNDABOUT IS DESIGNED ON A
CONSTANT-SLOPE PLANE

USE TYPICAL SECTION NO. 2 AS FOLLOWS:
-L- STA. 20+03.31 TO 21+23.33
NOTE:
SEE INSET 'A'

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

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



USE TYPICAL SECTION NO. 3 AS FOLLOWS:
 -L- STA. 21+50.00 TO 25+55.00
NOTE:
 *SIDEWALK LOCATION & BERM WIDTH
 VARIES. SEE PLANS AND X-SECTIONS.
 SEE INSET 'B'

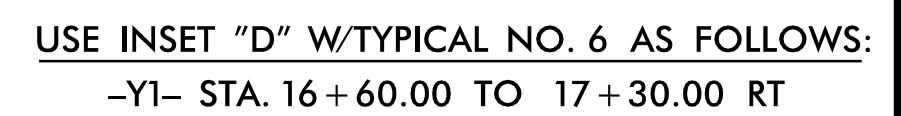
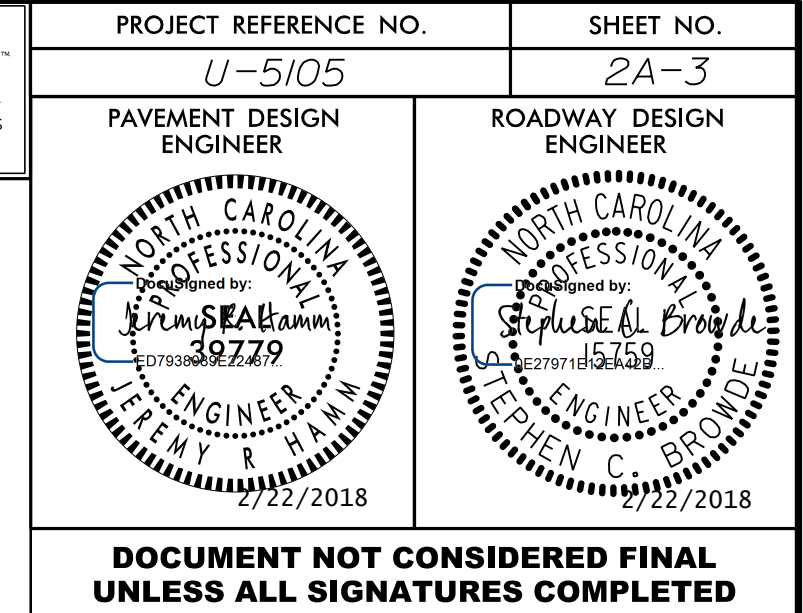
USE TYPICAL SECTION NO. 4 AS FOLLOWS:
 -L- STA. 20+00.00 TO 20+03.31
 -L- STA. 21+23.33 TO 21+50.00
NOTE:
 *SIDEWALK LOCATION & BERM WIDTH
 VARIES. SEE PLANS AND X-SECTIONS.
 SEE INSET 'B'

USE TYPICAL SECTION NO. 5 AS FOLLOWS:
 -L- STA. 24+90.00 TO 25+55.00
NOTE:
 EXISTING SIDEWALK TO BE RETAINED.

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



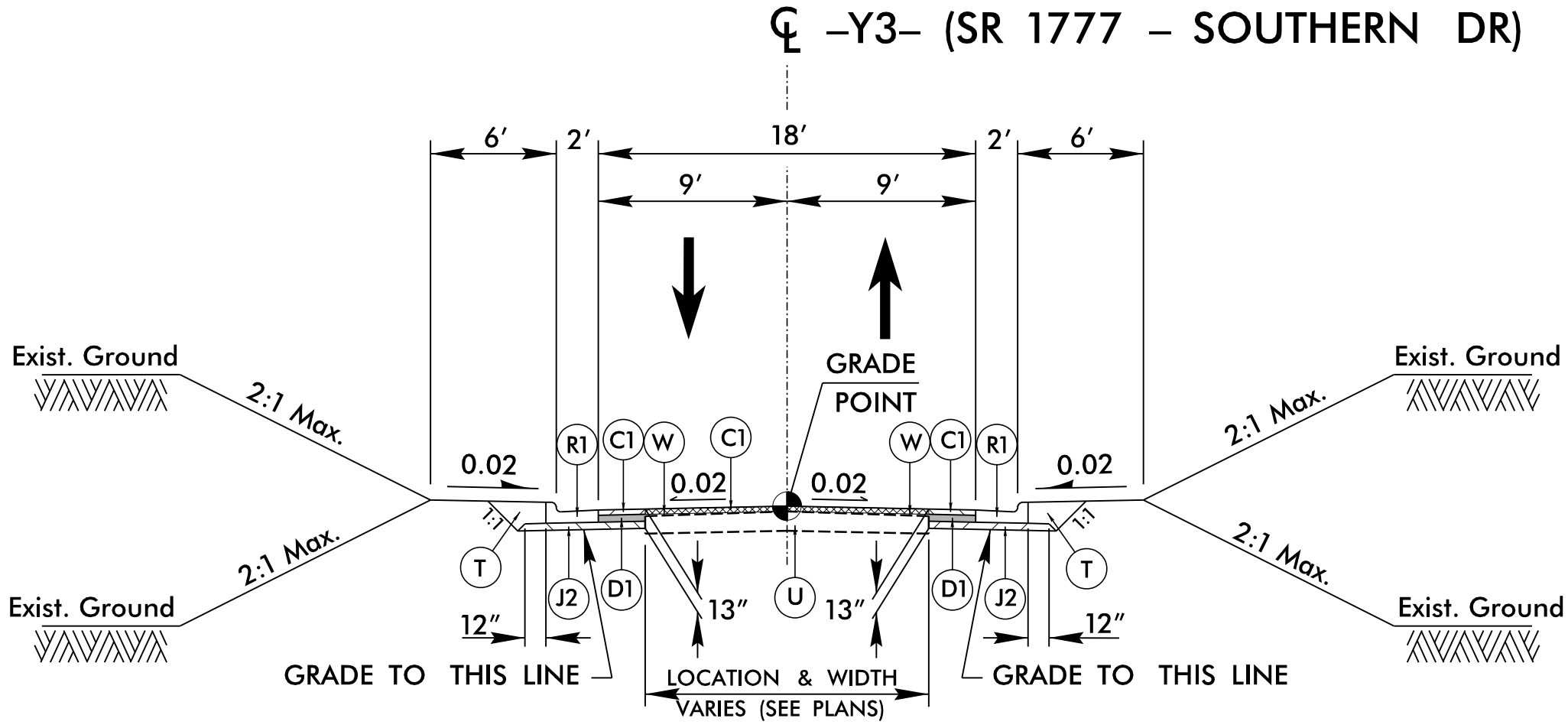
USE TYPICAL SECTION NO. 8 AS FOLLOWS:
-Y2- STA. 15+85.00 TO 17+85.00



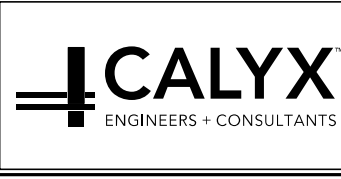
6/2/99

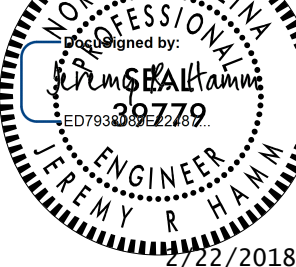
PAVEMENT SCHEDULE	
C1	3.0" S9.5B
D1	4.0" I19.0C
J2	6" ABC
R1	2'-6" C&G
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING

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



TYPICAL SECTION No. 9



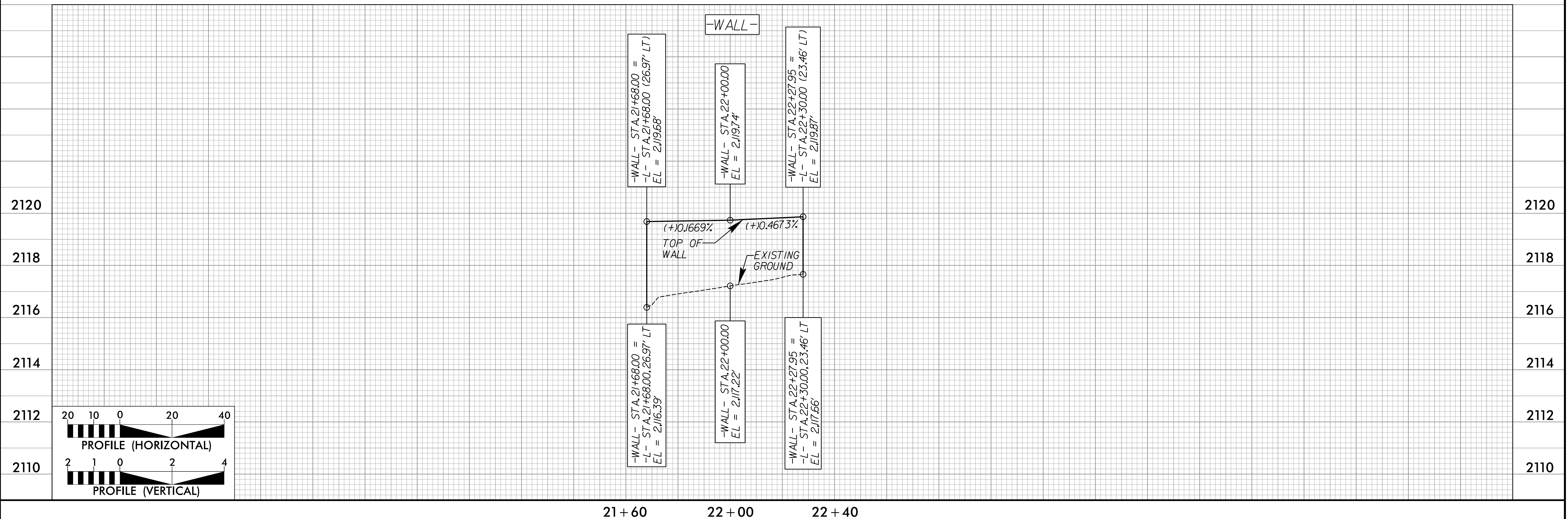
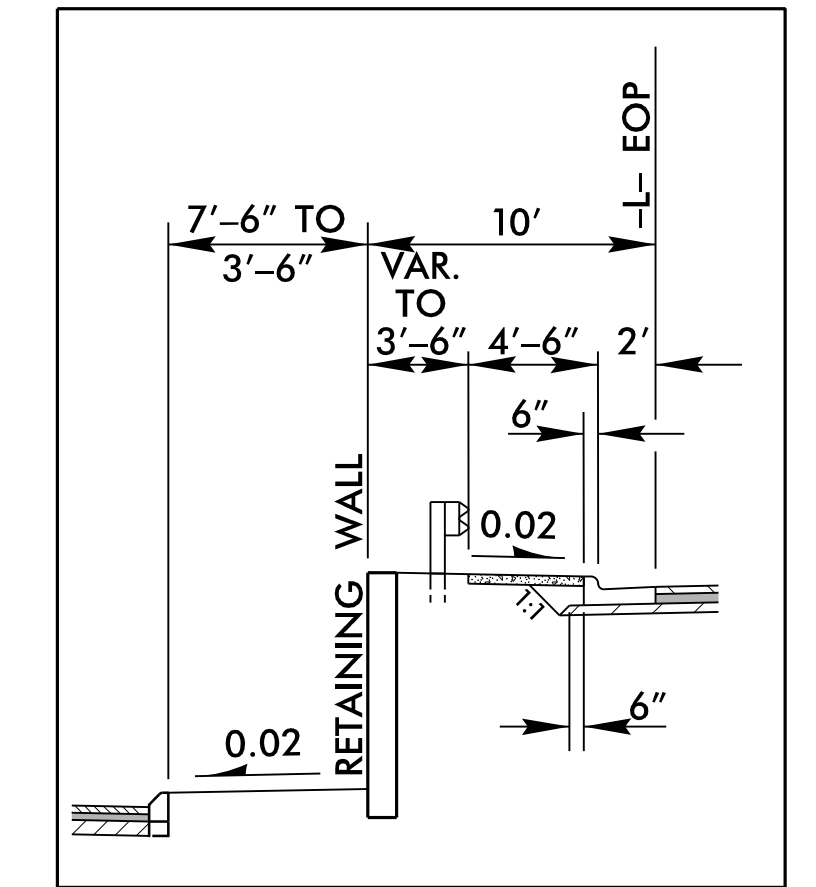
PROJECT REFERENCE NO.		SHEET NO.	
U-5105		2A-4	
PAVEMENT DESIGN ENGINEER		ROADWAY DESIGN ENGINEER	
			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

USE TYPICAL SECTION NO. 9 AS FOLLOWS:
-Y3- STA. 10+12.47 to 11+10.00

(NOT TO SCALE)

NOTES:
SEE SHEET 4
 CONCRETE ISLANDS & SIDEWALK
 CURB RAMP

—WALL— LENGTH = 59.95'



COMPUTED BY: E.Stewart	DATE: 2/14/2018			PROJECT NO.	SHEET NO.
CHECKED BY: J. Banks	DATE: 2/14/2018			U-5105	3B-1

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PAVEMENT REMOVAL & BREAKING SUMMARY

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	ASPHALT REMOVAL (SY)	ASPHALT BREAKUP (SY)
-L-	18+04.92	18+15.00	LT	7.50 SY	
-Y1-	19+19.01	20+07.12	RT	43.78 SY	
-L-	21+37.97	22+15.37	LT	10.34 SY	
-Y2-	10+00.00	13+41.64	RT	326.32 SY	
-Y2-	14+44.99	15+17.01	RT	161.36 SY	
-Y2-	15+35.06	16+18.97	RT	77.78 SY	
-L-	20+03.31	21+23.33	CL		438.49 SY
			TOTAL:	627.09	438.49 SY
			SAY:	630	440 SY

EXPRESSWAY GUTTER SUMMARY

LINE	STATION	STATION	LENGTH
-Y1-	16+60.00	17+30.62	71
		TOTAL:	71
		SAY:	75

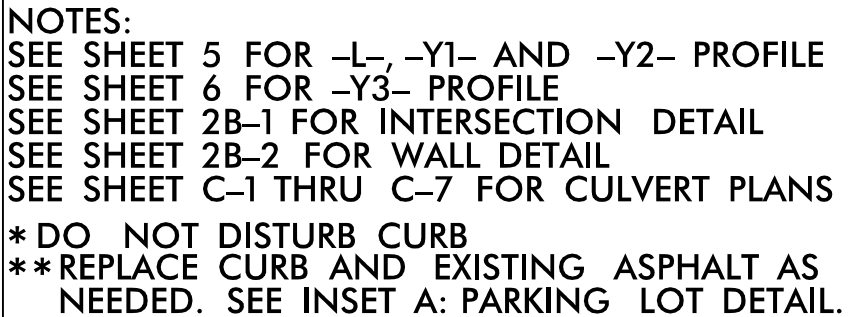
SUMMARY OF EARTHWORK

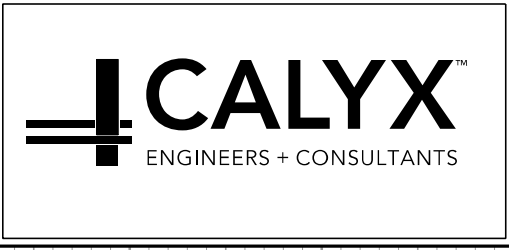
STATION	STATION	UNCL. EXCAV. (CY)	EMBANK. +%(CY)	BORROW (CY)	WASTE (CY)
-L- STA. 16+90.00	-L- STA. 25+55.00	1,890	2,666	776	0
SUBTOTALS:		1,890	2,666	776	0
-Y1- STA. 16+60.00	-Y1- STA. 20+40.90	1,303	278	0	1,025
SUBTOTALS:		1,303	278	0	1,025
-Y2- STA. 10+60.14	-Y2- STA. 17+85.00	135	7,651	7,516	0
SUBTOTALS:		135	7,651	7,516	0
-Y3- STA. 10+12.47	-Y3- STA. 11+10.00	26	83	57	0
SUBTOTALS:		26	83	57	0
PROJECT TOTALS:		3,354	10,678	8,348	1,025
LOSS DUE TO CLEARING & GRUBBING				500	
WASTE IN LIEU OF BORROW				-1,025	-1,025
PROJECT TOTALS:		3,354		7,823	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				391	
GRAND TOTALS:		3,354		8,214	
SAY:		3,360		8,220	

[illegible]

[illegible]

COMPUTED BY: ESTEWART DATE: 12-19-2017		(2-16-16)	PROJECT NO.		SHEET NO.				
CHECKED BY: JBANKS DATE: 12-19-2017			U-5105		3G-1				
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS							SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION		
LINE	Station	Station	Aggregate Type* ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY							5450		
					150	250	250		
							200		
			TOTAL CY/TONS/SY:		150	250	5900**	0	0
*ASU = Aggregate Subgrade *AST = Aggregate Stabilization **Total square yards of "Geotextile for Soil Stabilization" is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.									

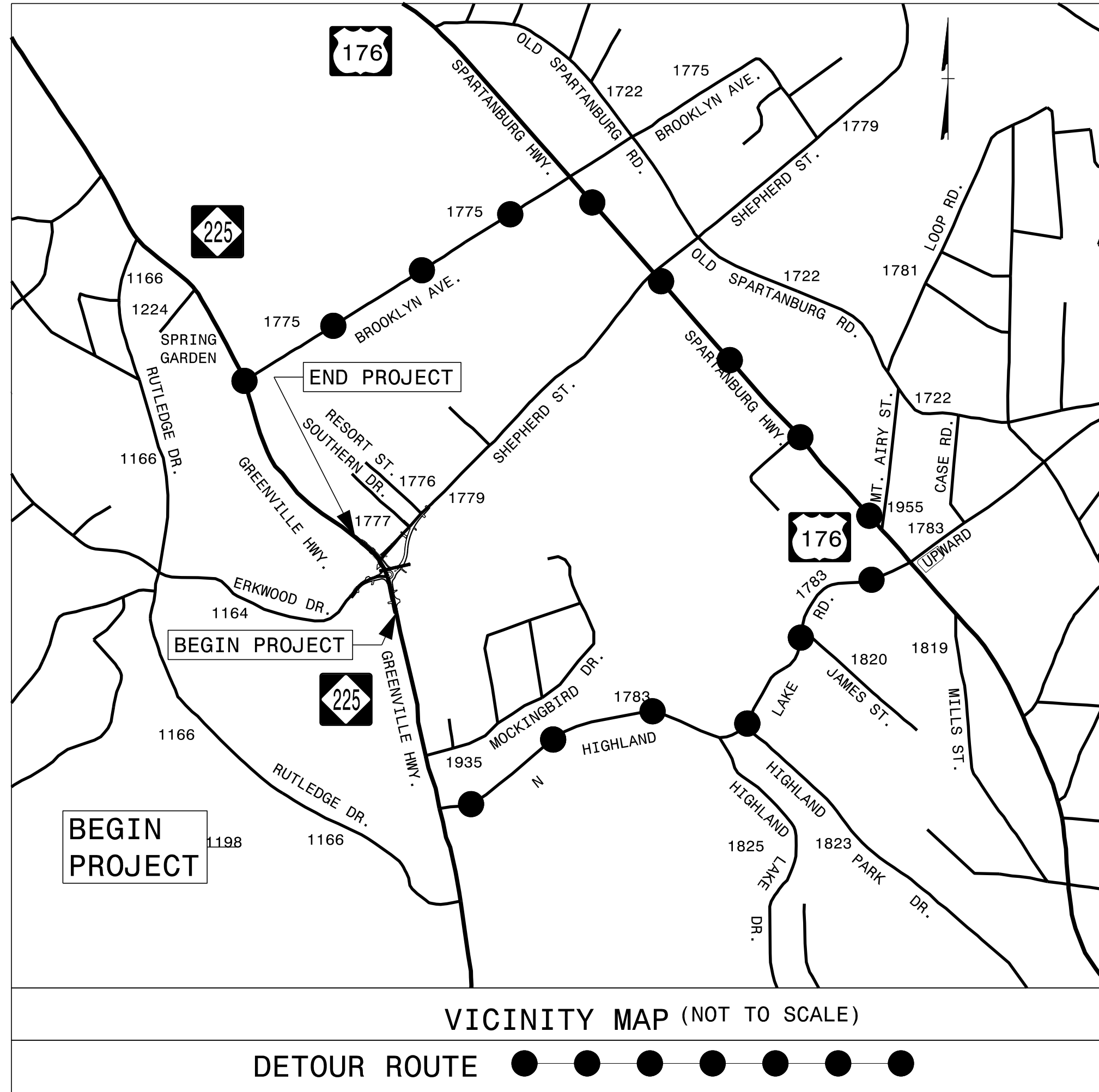
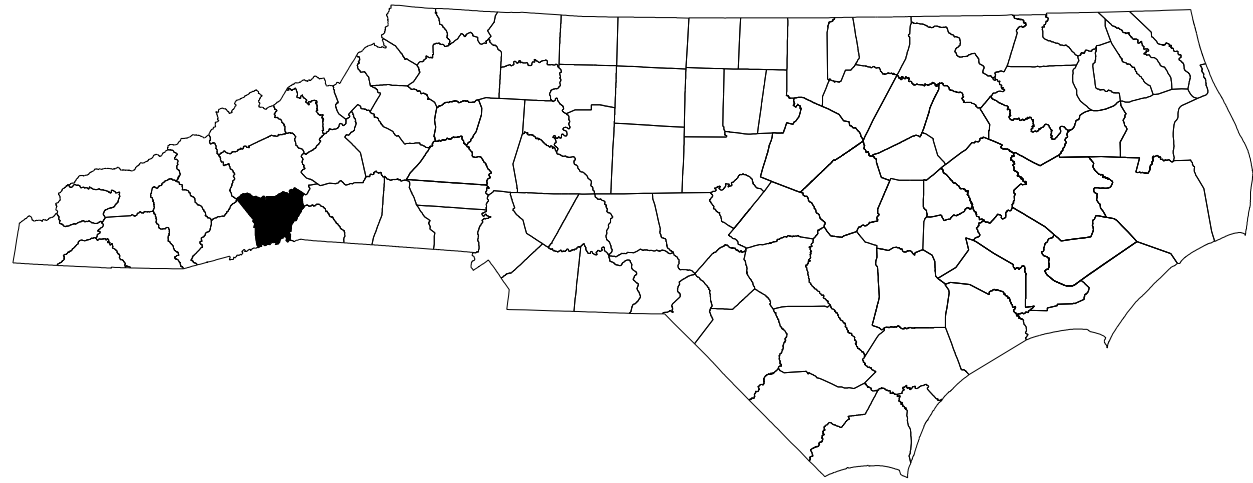




STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HENDERSON COUNTY



LOCATION: NC 225 (GREENVILLE HWY) INTERSECTION
IMPROVEMENTS FROM SR 1164 (ERKWOOD
DR) TO SR 1770 (SHEPHERD ST)

TYPE OF WORK: GRADING, DRAINAGE, CULVERT, &
ROUNDAABOUT

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B THRU 1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-2 THRU 2A	OFF-SITE DETOUR ROUTE AND GUIDE SIGNS
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED FOR THE NCDOT BY:

M
MOTT
MACDONALD

PO Box 700
Furquay-Variato, NC 27526
(919) 552-2253
(919) 552-2254 (Fax)
www.mottmac.com/americas
LICENSE NO. F-0669

APPROVED: *David W. Bissette*
F30C814C54B3430...

DATE: 5/30/2018 10:59:21 AM EDT

SEAL

SEAL
030864
DAVID W. BISSETTE

TIP PROJECT: U-5105

5/30/2018
\\NCF-DATA\Proj\369798_Caiyx-U-5105\Plans\TrafficControl\TCP\U-5105_TC_TMP_01A.dgn
User:BS82185

ROADWAY STANDARD DRAWINGS

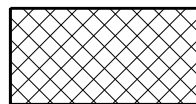
THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

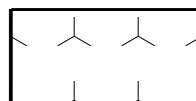
STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1145.01	BARRICADES
1150.01	FLAGGERS

GENERAL

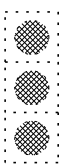
-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  TEMP. SHORING (LOCATION PURPOSES ONLY)

 WORK AREA

 REMOVAL

 ON GOING CONSTRUCTION

SIGNALS

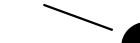
-  EXISTING
-  PROPOSED
-  TEMPORARY

PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES

LEGEND

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

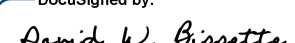
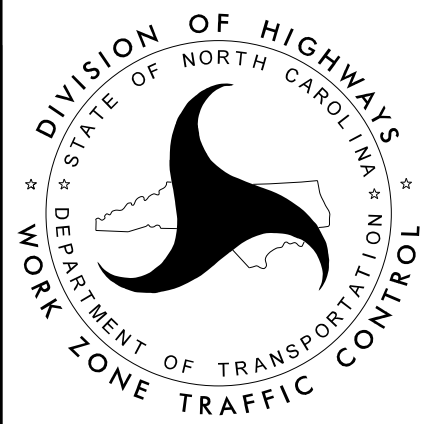
-  CRYSTAL/CRYSTAL
-  CRYSTAL/RED
-  YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

-    PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

ITEM	SYMBOL	DESCRIPTION
PAINT (4")	PA PI	WHITE YELLOW DOUBLE CENTER
PAINT (24")	P2	WHITE STOPBAR
TEMPORARY RAISED PAVEMENT MARKERS	MH	YELLOW & YELLOW

APPROVED:  F30C814C54B3430... DATE: 5/30/2018 10:31:48 AM EDT			ROADWAY STANDARD DRAWINGS & LEGEND
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

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MANAGEMENT STRATEGIES

WORKING AWAY FROM TRAFFIC, BEHIND SHOULDER CLOSURES, AND WITHIN LANE CLOSURES:

- INSTALL WORK ZONE ADVANCE WARNING SIGNS
- CLOSE THE ROADWAY SHOULDERS WITHIN THE WORK ZONE
- BEGIN CONSTRUCTION OF THE PROPOSED ROADWAY SECTIONS
- CONSTRUCT 196' OF THE PROPOSED 10' X 7' RCBC

TRAFFIC WILL BE RETURNED TO THE EXISTING TWO-LANE, TWO-WAY PATTERN AT THE END OF EACH WORK DAY.

WORKING WITHIN A ROAD CLOSURE, THRU TRAFFIC WILL BE DETOURED OFF SITE, LOCAL TRAFFIC WILL BE MAINTAINED:

- CONSTRUCT THE REMAINING 74' OF THE PROPOSED 10' X 7' RCBC
- CONSTRUCT THE PROPOSED RETAINING WALL
- COMPLETE CONSTRUCTION OF THE PROPOSED ROADWAY SECTIONS UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS IN THE FINAL PATTERN
- OPEN ALL ROADS TO TRAFFIC IN THE FINAL PATTERN

WORKING AWAY FROM TRAFFIC, BEHIND SHOULDER CLOSURES, AND WITHIN LANE CLOSURES:

- REMOVE THE EXISTING SHEPHERD ST ALIGNMENT
- CONSTRUCT THE PROPOSED MONOLITHIC CONCRETE ISLANDS
- CONSTRUCT THE PROPOSED SIDEWALK
- PLACE THE FINAL LAYER OF SURFACE COURSE AND THE FINAL PAVEMENT MARKINGS
- REMOVE ALL REMAINING WORK ZONE TRAFFIC CONTROL DEVICES

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 AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 225 (GREENVILLE HWY)	MONDAY THRU FRIDAY 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM
SR 1164 (ERKWOOD DRIVE)	MONDAY THRU FRIDAY 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM
SR 1779 (SHEPHERD STREET)	MONDAY THRU FRIDAY 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM

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

ROAD NAME
NC 225 (GREENVILLE HWY)
SR 1164 (ERKWOOD DRIVE)
SR 1779 (SHEPHERD STREET)
HOLIDAY
1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st AND 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00AM THURSDAY AND 7:00 PM MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 7:00 PM TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 7:00 PM THE DAY AFTER INDEPENDENCE DAY.

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) 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.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FEET 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.
- F) 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.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FEET ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY DIRECTION ON ANY ROAD.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- I) 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.
- J) 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) 200 FEET IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- K) NOTIFY THE ENGINEER TWENTY-ONE (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FEET FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.
- N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FEET IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

- Q) 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 FEET ON-CENTER IN RADII, AND 3 FEET 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.
- R) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- S) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FEET CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

- T) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC 225 (GREENVILLE HWY)	PAINT	TEMPORARY RAISED
SR 1164 (ERKWOOD DRIVE)	PAINT	TEMPORARY RAISED
SR 1779 (SHEPHERD STREET)	PAINT	TEMPORARY RAISED

- U) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- W) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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PROJ. REFERENCE NO.	SHEET NO.
U-5105	TMP-1B

APPROVED: <i>David W. Bisette</i> DATE: 5/30/2018 4:05:16 PM EDT SEAL DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	DocuSigned by: David W. Bisette F30CB14C54B343D... SEAL 030864 DAVID W. BISSETTE	DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	TRANSPORTATION OPERATIONS PLAN
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GENERAL NOTES

- X) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY MONOLITHIC ISLANDS BEFORE INSTALLATION.

MISCELLANEOUS

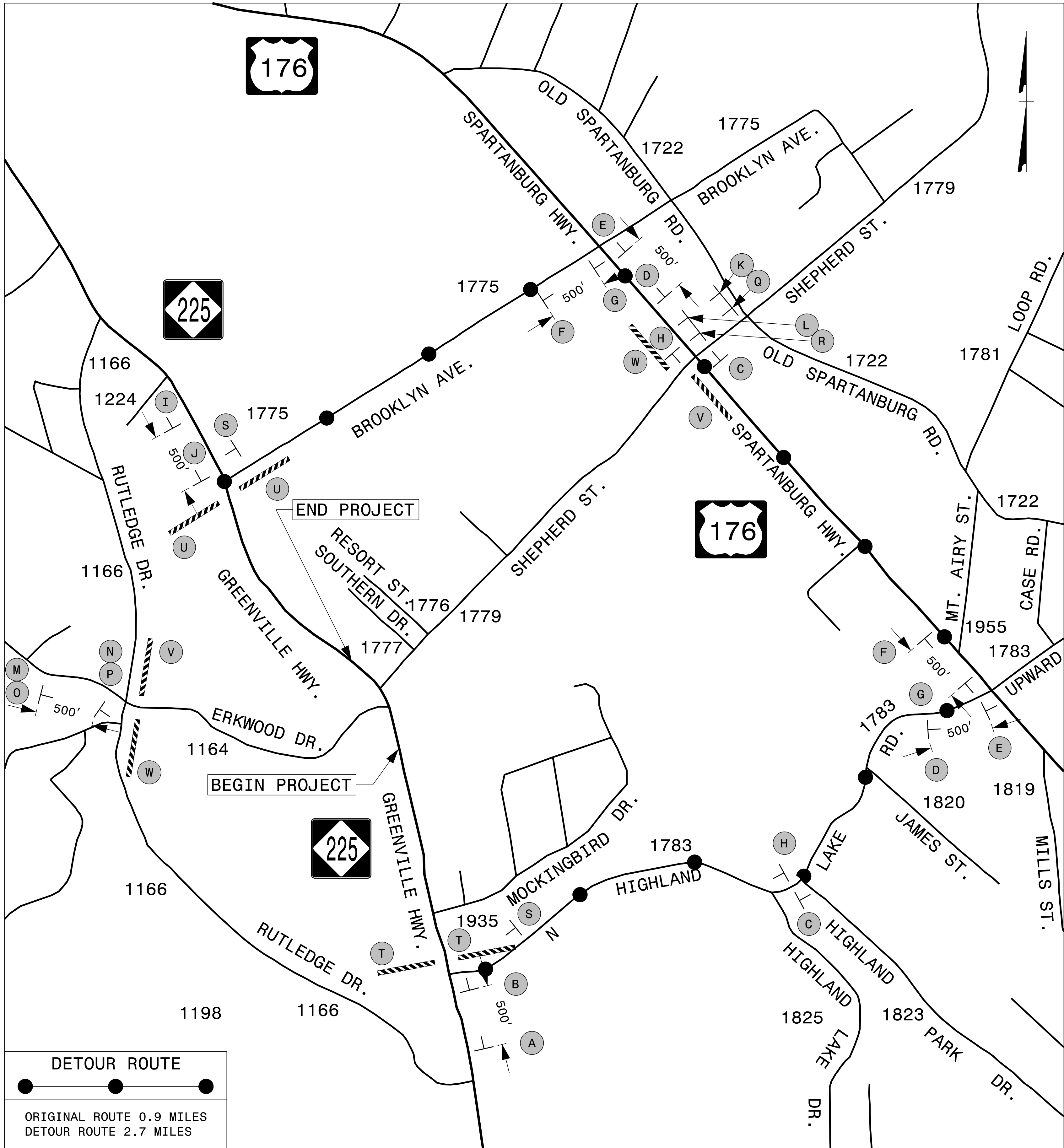
- Y) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- Z) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 200 FEET AND 400 FEET RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.
- AA) 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.

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DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"
NORTH	M3-1 24" X 12"	NORTH	M3-1 24" X 12"	NORTH	M3-1 24" X 12"	NORTH	M3-1 24" X 12"
	M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"
	M5-1 R 21" X 15"		M6-1 R 21" X 15"		M6-3 21" X 15"		M5-1 L 21" X 15"

A B C D

DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"
NORTH	M3-1 24" X 12"	SOUTH	M3-3 24" X 12"	SOUTH	M3-3 24" X 12"	SOUTH	M3-3 24" X 12"
	M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"
	M6-1 L 21" X 15"		M5-1 R 21" X 15"		M6-1 R 21" X 15"		M6-3 21" X 15"

E F G H

DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"	TO	M4-5 24" X 12"	TO	M4-5 24" X 12"
SOUTH	M3-3 24" X 12"	SOUTH	M3-3 24" X 12"	NORTH	M3-1 24" X 12"	NORTH	M3-1 24" X 12"
	M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"		M1-5 24" X 24"
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TO	M4-5 24" X 12"	TO	M4-5 24" X 12"	TO	M4-5 24" X 12"	TO	M4-5 24" X 12"
NORTH	M3-1 24" X 12"	NORTH	M3-1 24" X 12"	SOUTH	M3-3 24" X 12"	SOUTH	M3-3 24" X 12"
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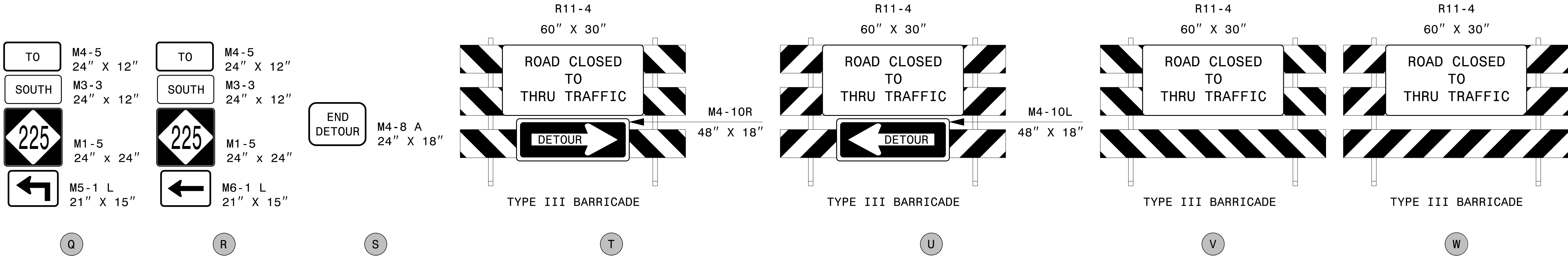
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ENGINEER
DAVID W. BISSETTE

TEMPORARY TRAFFIC CONTROL
OFF SITE DETOUR ROUTE
AND GUIDE SIGNS

5/30/2018
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PROJ. REFERENCE NO.	SHEET NO.
U-5105	TMP-2A



NOTES

- USING ROADWAY STANDARD DRAWING 1101.03 SHEET 1 OF 9 CLOSE GREENVILLE HWY (NC 225), ERKWOOD DR (SR 1164), AND SHEPHERD ST (SR 1779) TO THRU TRAFFIC AND PLACE TRAFFIC ON THE OFF SITE DETOUR SHOWN.
- INSTALL W20-3 "ROAD CLOSED AHEAD" AND W20-2 "DETOUR AHEAD" 2000' AND 1500' RESPECTIVELY FROM THE TYPE III BARRICADES WITH R11-4 "ROAD CLOSED TO THRU TRAFFIC" SIGNS SHOWN ON GREENVILLE HWY (NC 225), ERKWOOD DR (SR 1164), AND SHEPHERD ST (SR 1779). (SEE RSD 1101.03, 1 OF 9)
- PLACE WING BARRICADES WITH A R11-4 SIGN AT THROUGH SIDE ROADS BETWEEN THE DETOUR POINT AND THE POINT OF CLOSURE ON GREENVILLE HWY (NC 225), ERKWOOD DR (SR 1164), AND SHEPHERD ST (SR 1779). (SEE RSD 1101.03, 1 OF 9)
- SEE SHEET TMP-5 FOR ADDITIONAL ROAD CLOSURE SIGNING.

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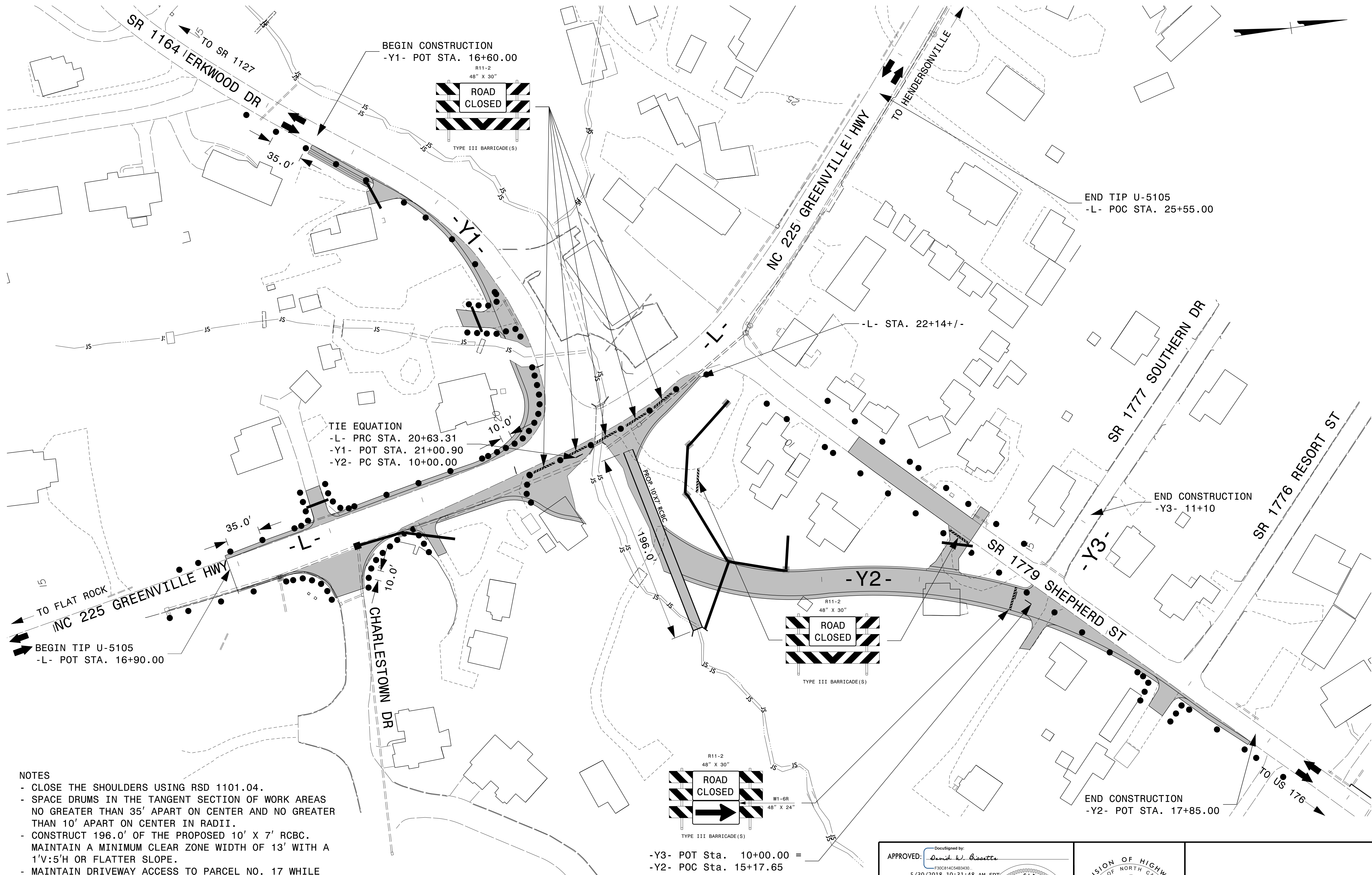
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OFF SITE DETOUR ROUTE
AND GUIDE SIGNS

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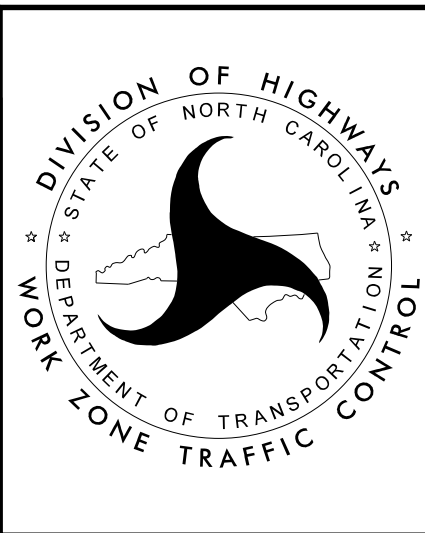
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PROJ. REFERENCE NO.	SHEET NO.
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TEMPORARY TRAFFIC CONTROL
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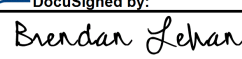
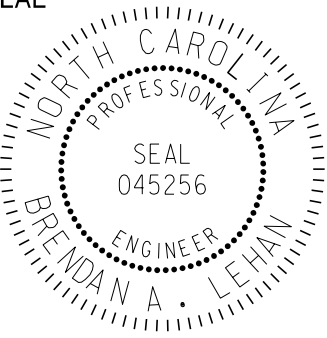


U-5105

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
HENDERSON COUNTY

LOCATION: NC 225 (GREENVILLE HIGHWAY) AT SR 1164 (ERKWOOD DR.) AND SR 1779 (SHEPHERD ST)

TIP NO.	SHEET NO.
U-5105	PMP - 1
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4702000000	1205	THERMOPLASTIC(12", 120 MILS)	70	L.F.
4710000000	1205	THERMOPLASTIC(24", 120 MILS)	15	L.F.
4686000000	1205	THERMOPLASTIC(4", 120 MILS)	4870	L.F.
4650000000	1205	THERMOPLASTIC(4", 90 MILS)	1810	L.F.
4695000000	1205	THERMOPLASTIC(8", 90 MILS)	120	L.F.
4725000000	1205	THERMOPLASTICPAVEMENT MARKING SYMBOLS (90 MILS)	24	EA.
4900000000	1250	SNOW PLOWABLE PAVEMENT MARKERS	42	EA.

GENERAL NOTES

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.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1164	Thermoplastic	Snow Plowable Y/Y
SR 1779	Thermoplastic	Snow Plowable Y/Y

- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
D) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF COLD APPLIED PLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS ON ASPHALT OR CONCRETE ROADWAYS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE COLD APPLIED PAY ITEM.

- F) SEE ROADWAY PLANS FOR ALTERNATE CURB RAMP DESIGNS WHEN INDICATED ON PAVEMENT MARKING DETAIL SHEETS.

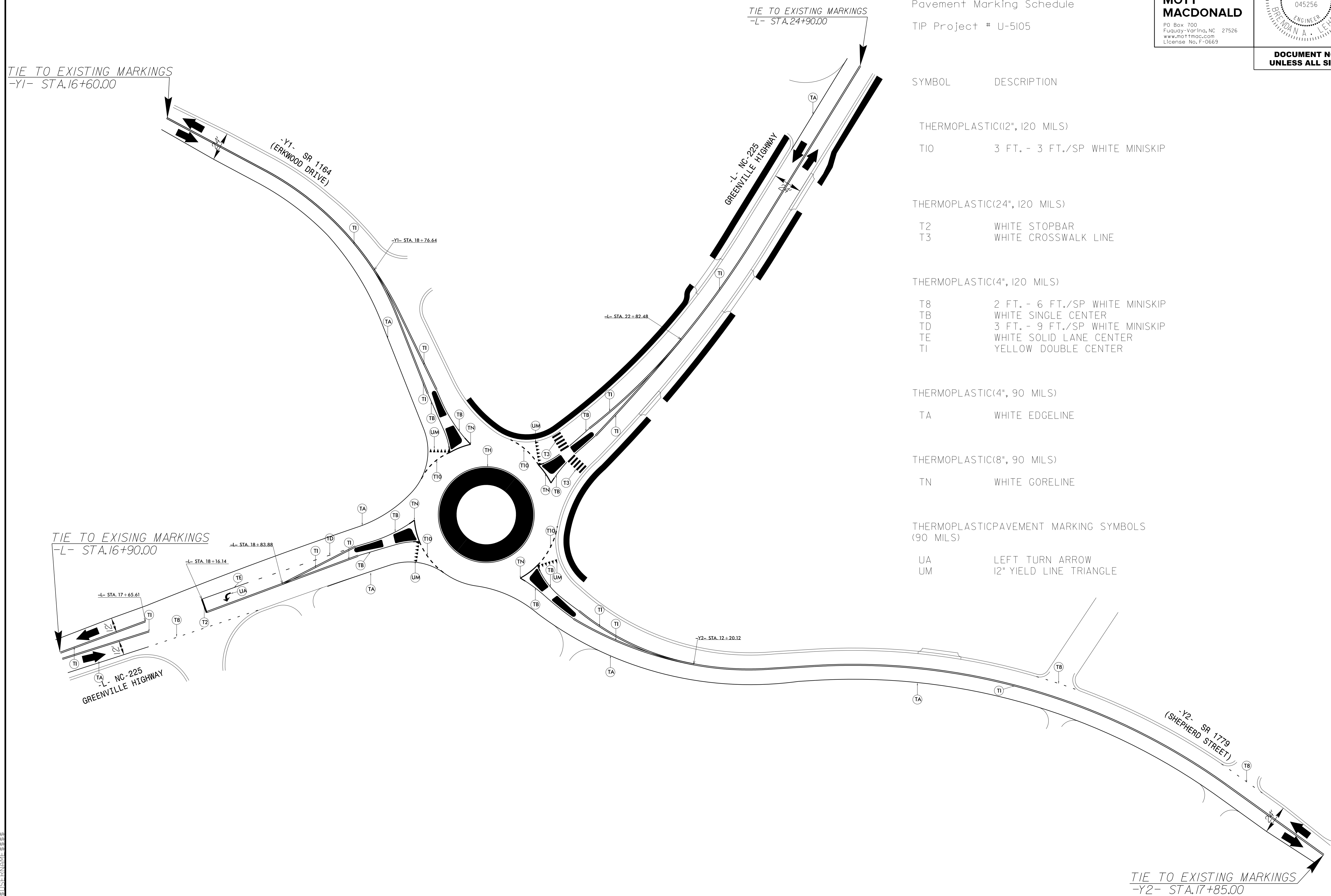
INDEX

SHEET NO.	DESCRIPTION
PMP - 1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP - 2	CROSSWALK PAVEMENT MARKING GUIDANCE DETAIL

Prepared In the Offices of:

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Pavement Marking Schedule	
TIP Project # U-5105	
SYMBOL	DESCRIPTION
THERMOPLASTIC(12", 120 MILS)	
T10	3 FT. - 3 FT./SP WHITE MINISKIP
THERMOPLASTIC(24", 120 MILS)	
T2	WHITE STOPBAR
T3	WHITE CROSSWALK LINE
THERMOPLASTIC(4", 120 MILS)	
T8	2 FT. - 6 FT./SP WHITE MINISKIP
TB	WHITE SINGLE CENTER
TD	3 FT. - 9 FT./SP WHITE MINISKIP
TE	WHITE SOLID LANE CENTER
TI	YELLOW DOUBLE CENTER
THERMOPLASTIC(4", 90 MILS)	
TA	WHITE EDGE LINE
THERMOPLASTIC(8", 90 MILS)	
TN	WHITE GORE LINE
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW
UM	12" YIELD LINE TRIANGLE

Prepared In the Offices of: M MOTT MACDONALD PO Box 700 Fuquay-Varina, NC 27526 www.jmottmac.com License No. F-10659 M	PAVEMENT MARKING ENGINEER 	DESIGN DocuSigned by: <i>Brandon Lehan</i> 58B17B8597B54CD... 3/1/2018
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PROJ. REFERENCE NO.	SHEET NO.
U-5105	LIGHT -1

PLANS AND DETAILS FOR PROPOSED LIGHTING/ELECTRICAL CONSTRUCTION

NOTES

- 1
- TYPE PC18 JUNCTION BOXES ARE 18" L X 12" W X 18" D.
- 2
- LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
- 3
- LOCATE PROPOSED CONTROL SYSTEM IN AN AREA ACCESSIBLE FOR MAINTENANCE VEHICLES AND OUTSIDE OF CLEAR ZONE AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE.

SCOPE OF WORK

PLACE ROADWAY LIGHTING SYSTEM INTO SERVICE BY PROVIDING AND INSTALLING 40 FT. LIGHT STANDARDS WITH LED LUMINAIRES ON 10-15 FT. ARMS, UNDERGROUND CIRCUITRY, CONTROL SYSTEM AND JUNCTION BOXES.

DESIGN CRITERIA

2008 IES DESIGN GUIDE FOR ROUNDABOUT LIGHTING

2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE

2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, AND LATEST INTERIM SPECIFICATIONS VALID AT THE TIME OF LETTING

DESIGN LIGHT STANDARDS FOR BASIC WINDSPEED OF 70 MPH SHOWN IN AASHTO.

FATIGUE CATEGORY II SHALL BE USED IN DESIGN

2017 NATIONAL ELECTRIC CODE

2011 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "NCDOT ROADWAY STANDARD DRAWINGS", ROADWAY DESIGN UNIT-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
1404.01	LIGHT STANDARDS
1405.01	STANDARD FOUNDATION
1406.01	LIGHT STANDARD LUMINAIRES
1407.01	ELECTRIC SERVICE POLE AND LATERAL
1408.01	LIGHT CONTROL SYSTEM
1409.01	ELECTRICAL DUCT
1410.01	FEEDER CIRCUITS
1411.01	ELECTRICAL JUNCTION BOXES

ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2018.

LEGEND

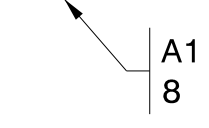
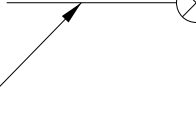
- PROPOSED LIGHT STANDARD TYPE MTLT 40 FT WITH SINGLE ARM (ARM LENGTH SHOWN). INCLUDES STANDARD FOUNDATION TYPE R1 (UNLESS OTHERWISE NOTED) & 13,000-14,000 LUMENS LED ROADWAY LUMINAIRE. IES DISTRIBUTION: MEDIUM, TYPE II
- PROPOSED CONTROL SYSTEM
BREAKER SIZE SHOWN IN LOAD SCHEDULE, SHEET E2.
- JB1
PROPOSED ELECTRICAL JUNCTION BOX SEE DETAILS & TABLE "B", THIS SHEET
- REFERENCE TO CORRESPONDING NOTE AS NUMBERED
- PROPOSED FEEDER CIRCUIT CONTROL SYSTEM (A),
CIRCUIT (1) PLAN SYMBOL (8) SEE TABLE A,
THIS SHEET
- PROPOSED SERVICE POLE AND LATERAL 30 FT. CLASS 4
3#1/0 USE CONDUCTORS
2" CONDUIT
- 2", 3" OR 4" ELEC. DUCT JA/BD
PROPOSED ELECTRICAL DUCT SIZE 2", 3" OR 4"
TYPE (JA) OR (BD) LOCATION: SEE TABLE C, THIS SHEET

TABLE "A" CIRCUITRY CONDUCTOR CONDUIT TYPE & SIZE			
PLAN SYMBOL	DESCRIPTION		CONTRACT ITEM
8	2-#8 AWG 1-#10 AWG 1.5" P	2 AWG SIZE 8 CONDUCTOR (BK & RD) 1 AWG SIZE 10 GROUNDING CONDUCTOR 1.5" PVC CONDUIT	2 - 8 W/G FEEDER CIRCUIT IN 1.5" CONDUIT

TABLE "B" JUNCTION BOX SUMMARY				
NUMBER	LOCATION	TYPE		SHEET
JB1	19+18 -L-, 30' LT	PC18		E2
JB2	19+61 -Y1-, 25' LT	PC18		E2
JB3	11+43 -Y2-, 26' RT	PC18		E2
JB4	22+45 -L-, 30' RT	PC18		E2
JB5	22+41 -L-, 25' LT	PC18		E2
		5		

TABLE "D" CONVENTIONAL LED LUMINAIRES	
MANUFACTURER	PART NUMBER
GENERAL ELECTRIC	ERLH-14-B140-XX-XXXX-XX
AMERICAN ELECTRIC LIGHTING	ATBM-E-XXXXX-R2-XXXX

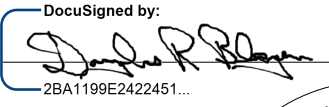
TABLE "C" ELECTRICAL DUCT SUMMARY (ESTIMATED LENGTH IN FEET)							
		TYPE					
		JACKED (JA) FEET			BURIED (BD) FEET		
LOCATION	SHEET	SIZE 2"	SIZE 3"	SIZE 4"	SIZE 2"	SIZE 3"	SIZE 4"
19+18 -L-, 30' LT	E2					50	
19+61 -Y1-, 25' LT	E2					45	
11+43 -Y2-, 26' RT	E2					42	
22+45 -L-, 30' RT	E2					40	
TOTALS						177	

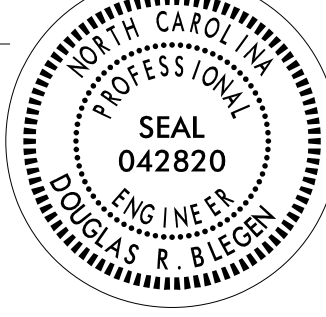
ABBREVIATIONS

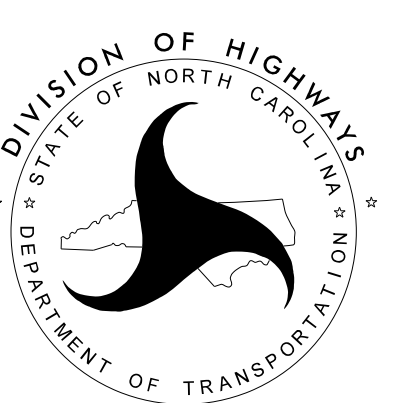
BD	BURIED	PVC	PVC SCHEDULE 40 CONDUIT
LT	LIGHT	RGC	RIGID GALVANIZED STEEL CONDUIT
JA	JACKED	C	CONDUIT
MH	MOUNTING HEIGHT	CKT	CIRCUIT
Ø	PHASE	N	NEUTRAL
SER LAT	SERVICE LATERAL	G	GROUND



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APPROVED: 
DATE: 2-21-2018

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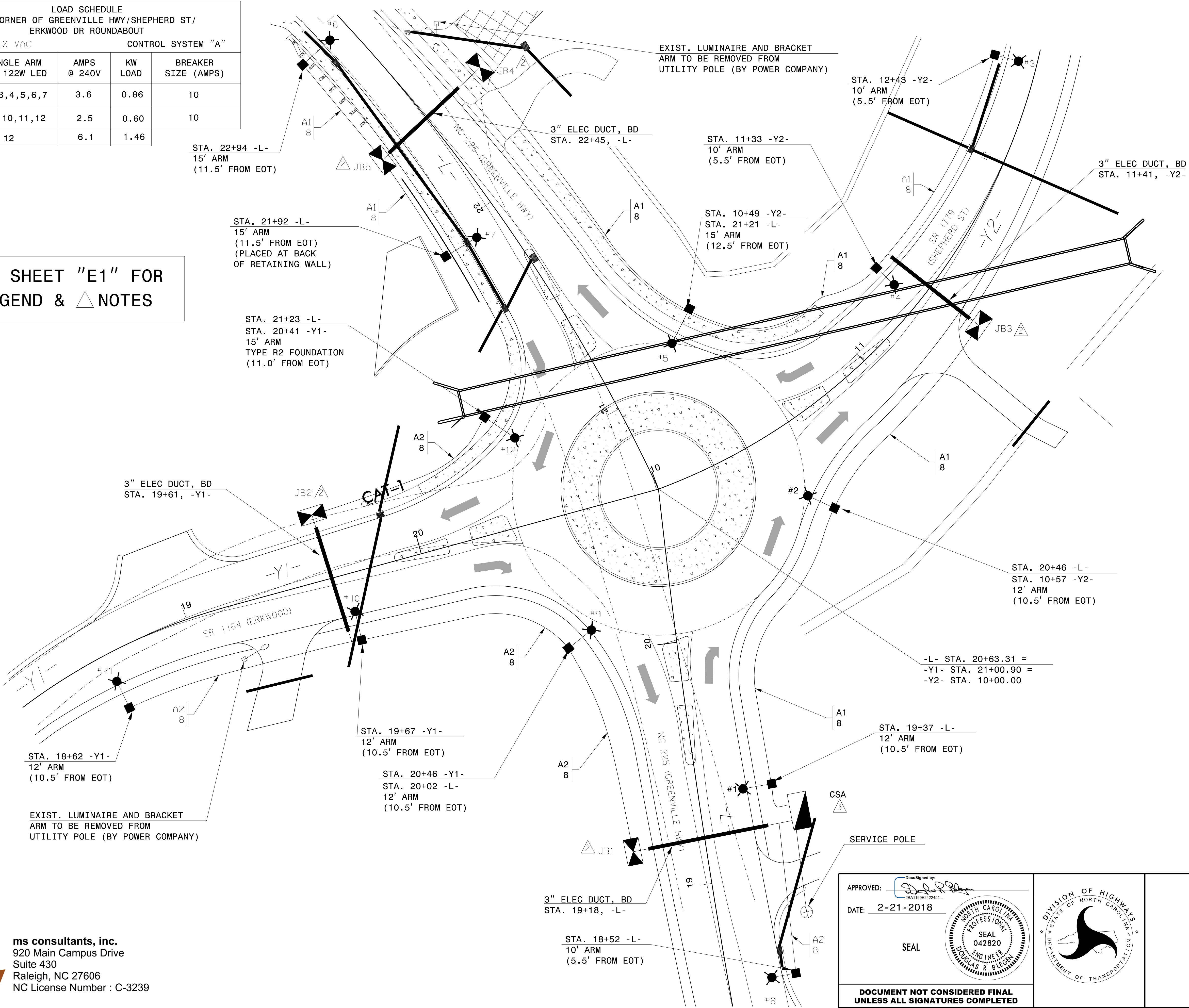
LIGHTING PLAN

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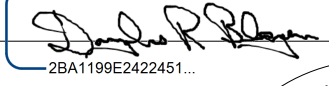
PROJ. REFERENCE NO.	SHEET NO.
U-5105	LIGHT-2

LOAD SCHEDULE SE CORNER OF GREENVILLE HWY/SHEPHERD ST/ ERKWOOD DR ROUNDABOUT 10,3W,120/240 VAC CONTROL SYSTEM "A"				
CKT	SINGLE ARM 1 @ 122W LED	AMPS @ 240V	KW LOAD	BREAKER SIZE (AMPS)
A1	1,2,3,4,5,6,7	3.6	0.86	10
A2	8,9,10,11,12	2.5	0.60	10
TOTAL	12	6.1	1.46	

SEE SHEET "E1" FOR
LEGEND & △ NOTES



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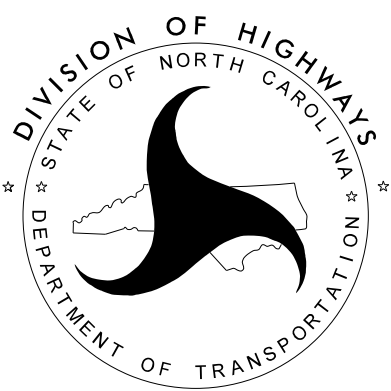
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LIGHTING PLAN