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09/08/99

CONTRACT: DN00638

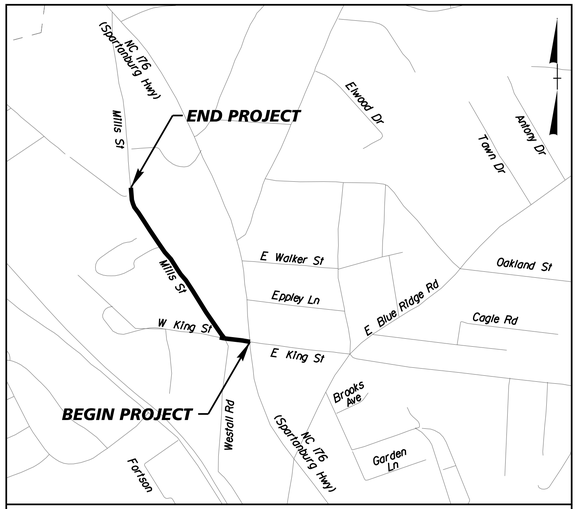
WBS PROJECT: 47417

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	47

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
47417		P.E.
47417		RIGHT-OF-WAY

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY



VICINITY MAP

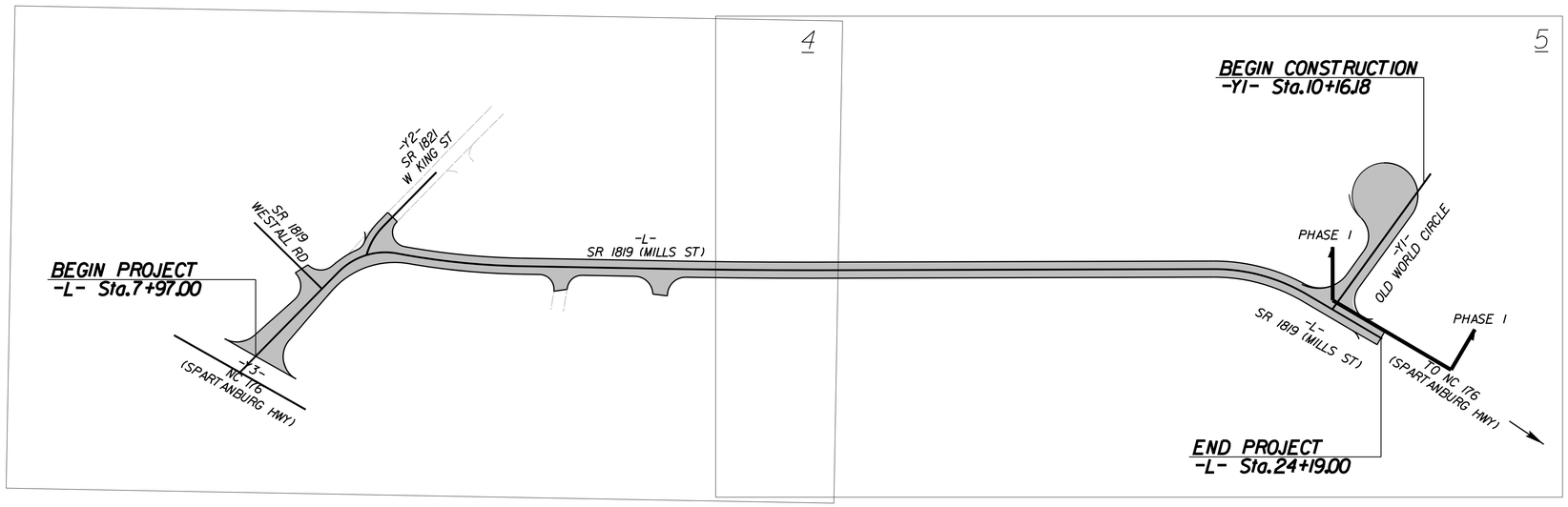
Note: Not to Scale

LOCATION: ***FROM THE INTERSECTION OF WEST KING STREET AND NC 176 TO APPROX. 1600' NORTH TO OLD WORLD CIRCLE ON SR 1819 (MILLS STREET)***

NC GRID NAD 83/95

TYPE OF WORK: ***GRADING, PAVING, DRAINAGE***

PROJECT PHASING: ***PHASE 2 CONSTRUCTION, –L– SR 1819 (MILLS ST), –Y2– SR 1821 (W KING ST) AND –Y1– OLD WORLD CIRCLE – FINAL SURFACE COURSE***



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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

SR 1819 (MILLS ST)
V = 30 MPH

PROJECT LENGTH

TOTAL LENGTH OF SR 1819 (MILLS ST) = 0.30 MILES

TOTAL LENGTH OF ROADWAY CONSTRUCTION = 0.30 MILES

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn ©2017
NC LICENSE #F-0102
421 FAYETTEVILLE ST. SUITE 600
RALEIGH, NORTH CAROLINA, 27601
PHONE: (919) 677-2000

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

CHARLES NUCKOLS, P.E.
PROJECT ENGINEER

CALEB LOWMAN, E.I.
PROJECT DESIGN ENGINEER

STEVE CANNON, P.E.
DIVISION 14
DISTRICT ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. VICKERY
Bryan T. Vickery
5/9/2018
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS
Charles A. Nuckols II
5/9/2018
P.E.
SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

5/4/2018

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
011036406	1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18151 CHARLES A. NUCKOLS II

DocuSigned by: Charles A. Nuckols II
DOCUSIGN PROFILE

6/5/2018

REVISIONS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEET
2A-1	TYPICAL SECTIONS, PAVEMENT SCHEDULE, AND MISCELLANEOUS DETAILS
2C-1	GUARDRAIL INSTALLATION
2D-1	DRAINAGE DETAILS
3B-1	SUMMARY OF GUARDRAIL
3D-1 THRU 3D-2	SUMMARY OF DRAINAGE QUANTITIES
4 THRU 5	PLAN SHEETS
6	PROFILE SHEETS
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
SIGN-1 THRU SIGN-5	SIGNING PLANS
EC-1 THRU EC-4	EROSION CONTROL PLANS
X-0	CROSS SECTION INDEX
X-1 THRU X-9	CROSS SECTIONS

GENERAL NOTES

2018 SPECIFICATIONS

EFFECTIVE: 07-01-17

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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. IN AREAS WITH PERMANENT UTILITY EASEMENTS, CLEARING SHALL EXTEND TO THE RIGHT-OF-WAY LIMITS.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND/OR 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.

DRIVEWAYS:

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

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 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 THE PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

STREET TURNOUT:

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

GUARDRAIL:

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

UTILITIES:

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

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 840 OF THE 2018 STANDARD SPECIFICATIONS. PROVIDE A FRAME AND COVER WITH THE COVER BOLTED INTO THE FRAME. PROVIDE 2⅝" STAINLESS STEEL BOLTS FOR EACH FRAME WITH COVER THAT MEET THE REQUIREMENTS OF SEC. 1072-5 OF THE 2018 STANDARD SPECIFICATIONS

LIST OF ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AND ANY OTHER APPLICABLE STANDARDS WITHIN THE "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.	DESCRIPTION
200.02	METHOD OF CLEARING - METHOD II
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
225.06	METHOD OF GRADING SIGHT DISTANCE AT INTERSECTIONS
300.01	METHOD OF PIPE INSTALLATION
560.02	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD II
654.01	PAVEMENT REPAIRS
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01	BRICK CATCH BASIN - 12" THRU 54" PIPE
840.02	CONCRETE CATCH BASIN - 12" THRU 54" PIPE
840.03	FRAME, GRATES, AND HOOD - FOR USE ON STANDARD CATCH BASIN
840.14	CONCRETE DROP INLET - 12" THRU 30" PIPE
840.15	BRICK DROP INLET - 12" THRU 30" PIPE
840.16	DROP INLET FRAME AND GRATES - FOR USE WITH STD. DWG 840.14 AND 840.15
840.18	CONCRETE GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.24	FRAMES AND NARROW SLOT SAG GRATES
840.25	ANCHORAGE FOR FRAMES - BRICK, CONCRETE, OR PRECAST
840.27	BRICK GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.31	CONCRETE JUNCTION BOX - 12" THRU 66" PIPE
840.32	BRICK JUNCTION BOX - 12" THRU 66" PIPE
840.34	TRAFFIC BEARING JUNCTION BOX - FOR USE WITH PIPES 42" AND UNDER
840.45	PRECAST DRAINAGE STRUCTURE
840.54	MANHOLE FRAME AND COVER
840.66	DRAINAGE STRUCTURE STEPS
840.71	CONCRETE AND BRICK PIPE PLUG
846.01	CONCRETE CURB, GUTTER AND CURB AND GUTTER
848.02	DRIVEWAY TURNOUT - RADIUS TYPE
848.04	STREET TURNOUT - RADIUS TYPE
848.05	CURB RAMP - PROPOSED CURB & GUTTER
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION (USE DETAIL 2C-1 IN LIEU OF SHEET 6 OF 8)
876.01	RIP RAP IN CHANNELS
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

6/5/2018

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STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

PROJECT REFERENCE NO.	SHEET NO.
011036406	1B

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS, II

DocuSigned by: Charles A. Nuckols II 5/10/2018

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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
- 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 — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

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
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- 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 — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- 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 — W
- 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 — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- 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 — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- 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.

REVISIONS

5/9/2018

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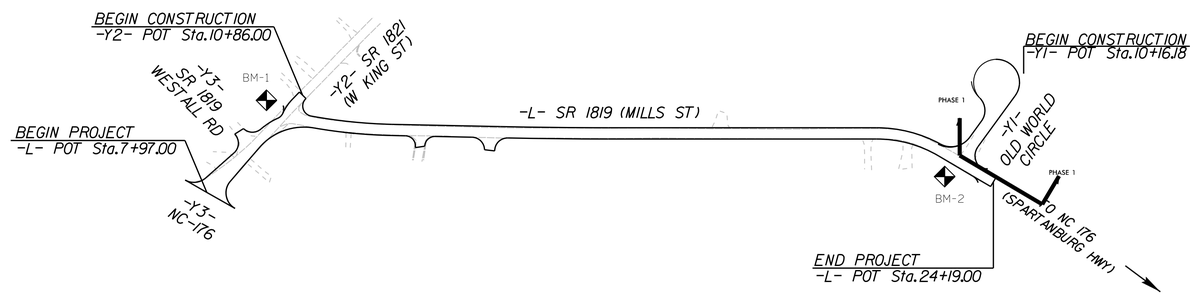
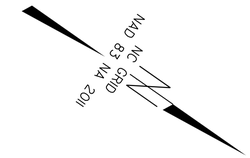
PROJECT REFERENCE NO.	SHEET NO.
011036406	IC-1
LOCATION AND SURVEYS	

SURVEY CONTROL SHEET WBS–47417





BENCHMARK DATA

BM1 ELEVATION - 2204.89'
N 575461 E 978422
BL STATION 5+00.00
N 25° 32' 55" E DISTANCE 30.48'
8" SPIKE SET IN THE ROOT OF A 24" WHITE PINE TREE STUMP

BM2 ELEVATION - 2175.31'
N 576636 E 977782
BL STATION 18+00.37
S 41° 02' 23" E DISTANCE 73.93'
8" SPIKE SET IN THE ROOT OF A 36" WALNUT TREE

BASELINE DATA

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	575488.3210	978435.1080	320.89	9+92.27	21.86 LT
2	BL-2	575785.6910	978283.3240	317.78	13+16.62	12.61 RT
3	BL-3	576117.4150	978055.4670	326.64	17+18.82	11.58 RT
4	BL-4	576580.3170	977733.1610	302.88	22+80.69	13.30 LT

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS
BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
BY NCDOT FOR MONUMENT "G102"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 575999.6720(ft), EASTING: 978569.9000(ft).
ELEVATION: 2187.79(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.999773145
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"G102" TO -L- STATION 13+35.37 IS
N 56°13'05"E 369.95'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

GEOID G12ANC

NOTE: DRAWING NOT TO SCALE

NOTES:

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

9/2/99
$$$$$SYSTIME$$$$
$$$$$

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5/14/99

Kimley»Horn ©2017
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, N.C. 27601

RIGHT-OF-WAY REV.

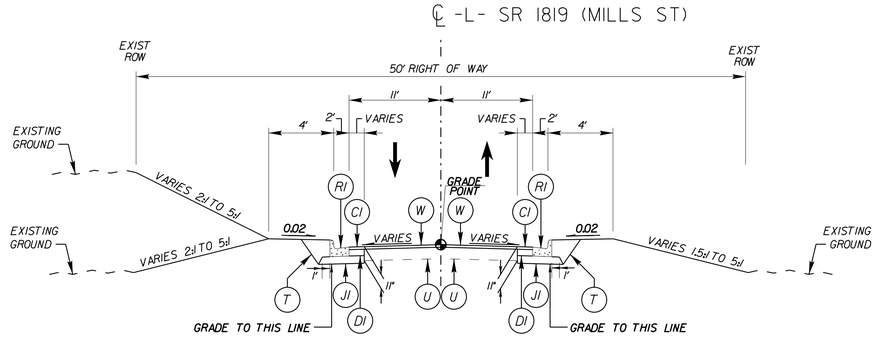
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
011036406	2A-1

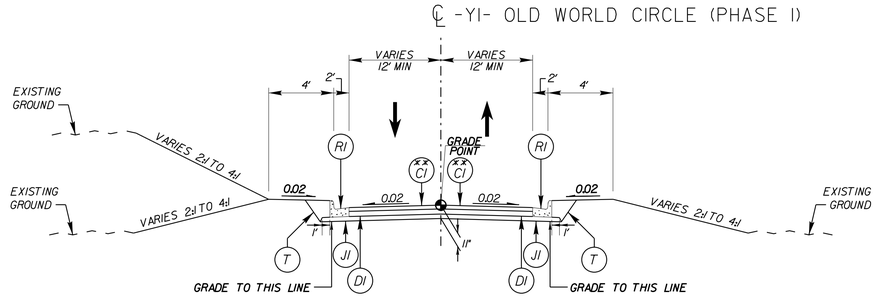
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 1815 ENGINEER CHARLES A. NUCKOLS, III
DocuSigned by: Charles A. Nuckols III
5/9/2018

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. VICKERY
DocuSigned by: Bryan T. Vickery
5/9/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

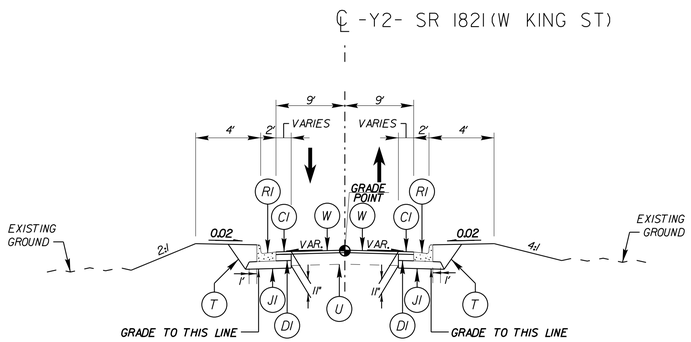


TYPICAL SECTION NO. 1
-L- STA. 8+37.00 TO 24+19.00



TYPICAL SECTION NO. 2
-Y1- STA. 10+24.55 TO 11+77.92

** FINAL SURFACE TO BE CONSTRUCTED IN PHASE 2

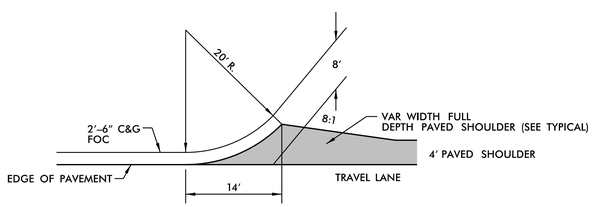


TYPICAL SECTION NO. 3
-Y2- STA. 10+86.00 TO 11+36.72

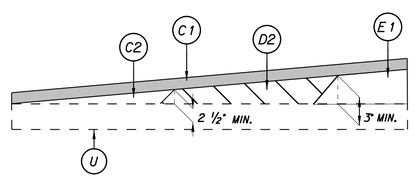
PAVEMENT SCHEDULE

CI	PROPOSED APPROX 2" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROPOSED 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.
DI	PROPOSED APPROX. 5" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD. TO BE PLACED IN EACH OF TWO LAYERS.
D2	PROPOSED 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.
EI	PROPOSED 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" OR GREATER THAN 5.5" IN DEPTH.
JI	PROPOSED 6" AGGREGATE BASE COURSE
J2	PROPOSED VAR. DEPTH AGGREGATE BASE COURSE
RI	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL 2, SHEET 2A-1)

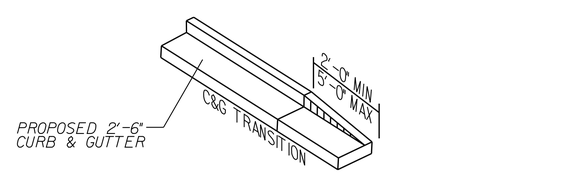
NOTES:
1. RETAIN EXIST 2'-6" C&G FROM -L- STA. 7+97.00 TO 8+37.00
2. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
3. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS



DETAIL 1 - SHOWING STANDARD CURB & GUTTER FLAIR



DETAIL 2 - METHOD OF WEDGING



NOT TO SCALE

DETAIL 3 - CURB AND GUTTER END TREATMENT

5/9/2018

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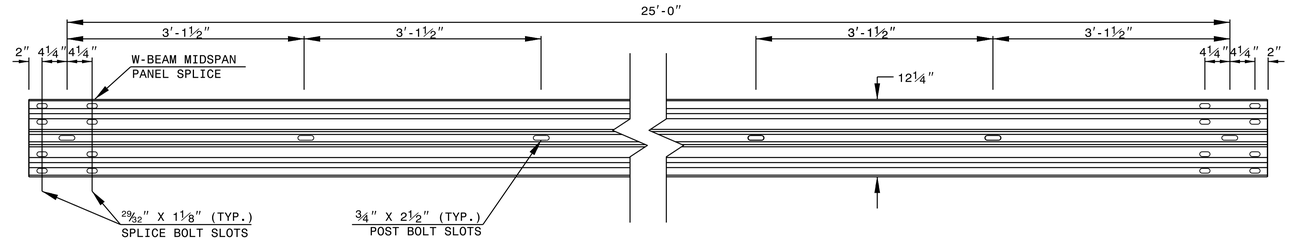
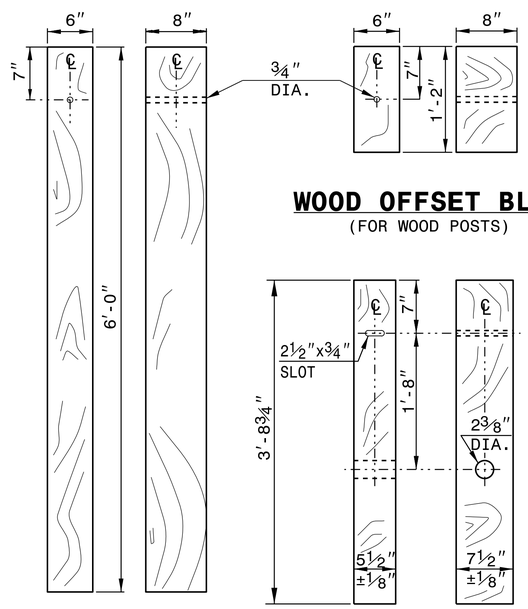
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



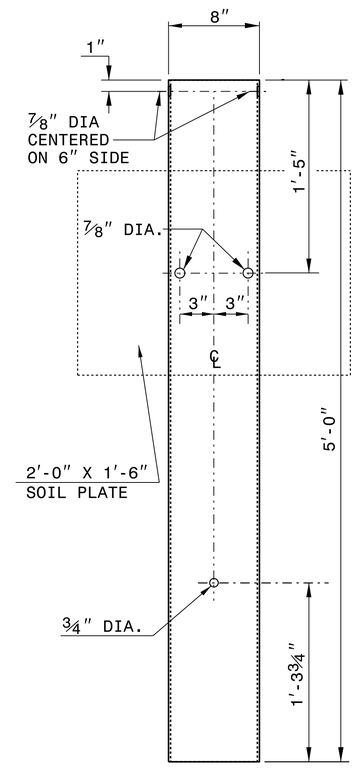
STANDARD W-BEAM GUARDRAIL



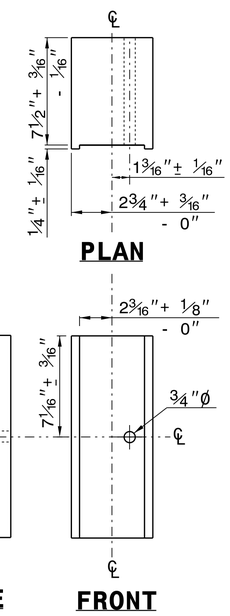
STANDARD LINE POST

WOOD OFFSET BLOCK
(FOR WOOD POSTS)

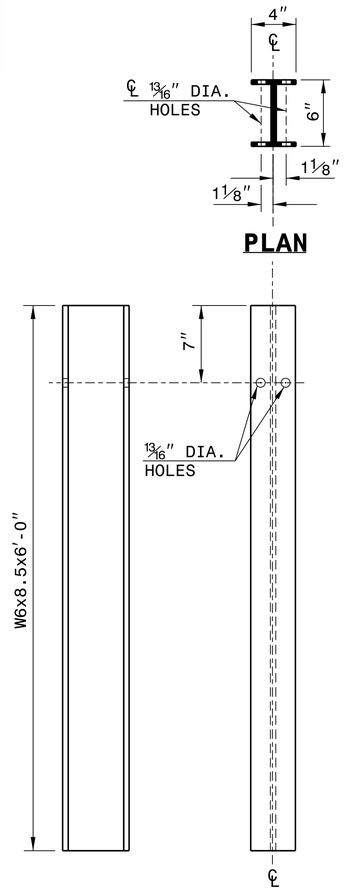
SHORT WOOD BREAKAWAY POST



STEEL TUBE
TS 6"x8"x0.1875"



ROUTED OFFSET BLOCK



"W6" STEEL POST

SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOSHUA D. HOWERTON
DocuSigned by: 8F8F3D1FDCDC46F... 6/5/2018

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

SEE TITLE BLOCK

ORIGINAL BY: J.HOWERTON DATE: 3-7-2018
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

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RALEIGH, N.C. 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
011036406	2D-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS, III
DocuSigned by: Charles A. Nuckols III
4/25/2018

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. VICKERY
DocuSigned by: Bryan T. Vickery
4/25/2018

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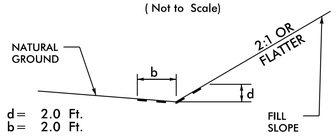
DETAIL 4
TOE PROTECTION
(Not to Scale)

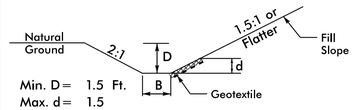


d = 2.0 Ft.
b = 2.0 Ft.

Type of Liner = PSRM

FROM STA. 11+50 TO STA. 12+50 –L– (RT)

DETAIL 5
SPECIAL LATERAL BASE DITCH
(Not to Scale)

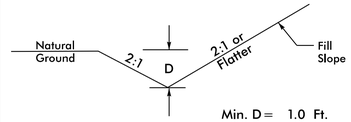


Min. D = 1.5 Ft.
Max. d = 1.5
B = 5.0 Ft.

Type of Liner = Class B Rip–Rap

FROM STA. 14+37 TO STA. 17+50 –L– (RT)

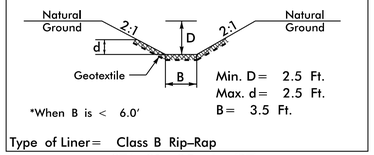
DETAIL 6
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.0 Ft.

FROM STA. 9+50 TO STA. 10+00 –L– (LT)
FROM STA. 10+50 TO STA. 13+93 –L– (LT)
FROM STA. 13+93 TO STA. 15+50 –L– (LT)
FROM STA. 22+00 TO STA. 23+00 –L– (LT)

DETAIL 7
STANDARD BASE DITCH
(Not to Scale)



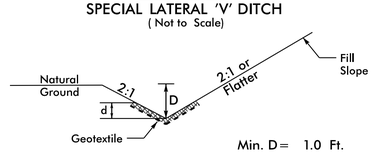
Min. D = 2.5 Ft.
Max. d = 2.5 Ft.
B = 3.5 Ft.

*When B is < 6.0'

Type of Liner = Class B Rip–Rap

STA. 21+35 –L– (RT)

DETAIL 8
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.0 Ft.
Max. d = 1.0 Ft.

Type of Liner = Class B Rip–Rap

FROM STA. 20+50 TO STA. 21+33 –L– (LT)
FROM STA. 21+33 TO STA. 22+00 –L– (LT)
PHASE 1 FROM STA. 11+65 TO STA. 11+91 –Y1– (LT)

4/24/2018

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COMPUTED BY: C. LOWMAN DATE: 9/05/2017
CHECKED BY: C. NUCKOLS DATE: 9/05/2017

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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RALEIGH, N.C. 27601

PROJECT REFERENCE NO.	SHEET NO.
011036406	3B-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS
Charles A. Nuckols
4/25/2018

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"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE TL-2
NG = NON-GATING IMPACT ATTENUATOR TYPE TL-2

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS		REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GREU TL-2		
-L-	14+55.00	17+80.00	RT	325′			14+80.00	17+55.00	2′	4′	25′	25′	1′	1′	2		
			SUBTOTAL	325′											2		
	LESS ANCHOR DEDUCTIONS																
	GREU TL-3	2 @ 50′	=	50′													
			TOTAL	275′													
			SAY	275′													

ADDITIONAL GUARDRAIL POSTS = 5 EA

4/24/2018

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D08313

COMPUTED BY: BTV (DS BTV) DATE: 10/08/17

CHECKED BY: DATE:

PROJECT NO.	SHEET NO.
Demmel Site	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

| LINE & STATION / SIZE / THICKNESS OR GAUGE | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | REINFORCED ENDWALLS CY | DRAINAGE STRUCTURE MASONRY CY | QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH | A 5' THRU 10' LIN. FT. | B 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06 OR STD. 852.04 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING D.I. TO C.B. | ADJUST C.B. | ADJUST D.I. | 15" DRAINAGE PIPE ELBOW | 15" C.S. ELBOW | 18" C.S. ELBOW | PREFORMED SCOUR HOLE (PER EACH) | ENERGY DISSIPATION BASIN | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

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COMPUTED BY: BTV DATE: 10/08/17

CHECKED BY: DATE:

PROJECT NO.	SHEET NO.
Demmel Site	3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

| LINE & STATION / SIZE / THICKNESS OR GAUGE | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | REINFORCED ENDWALLS CY | DRAINAGE STRUCTURE MASONRY CY | QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH | A 5' THRU 10' LIN. FT. | B 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06 / 852.04 OR STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING D.I. TO C.B. | ADJUST C.B. | ADJUST D.I. | 15" DRAINAGE PIPE ELBOW | 15" C.S. ELBOW | 18" C.S. ELBOW | PREFORMED SCOUR HOLE (PER EACH) | ENERGY DISSIPATION BASIN | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

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	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS, II — Charles A. Nuckols II — 4/25/2018	NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. VICKERY — Bryan T. Vickery — 4/25/2018

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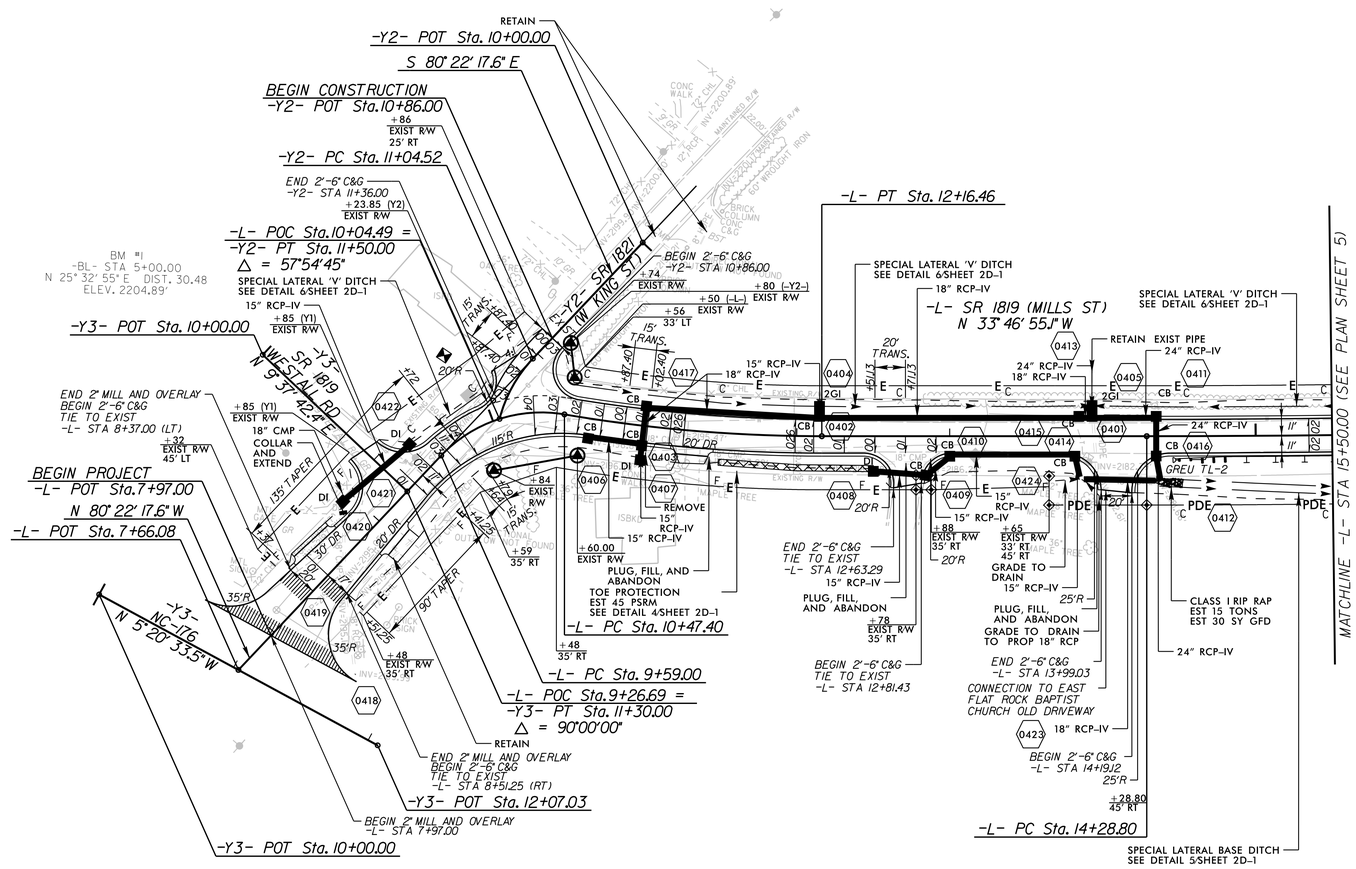
-L-

PI Sta 10+07.13	PI Sta 11+32.13	PI Sta 15+34.83	PI Sta 22+35.37
△ = 56° 16' 33.1" (RT)	△ = 9° 41' 10.6" (LT)	△ = 1° 12' 54.1" (LT)	△ = 30° 37' 16.3" (RT)
D = 63° 39' 43.1"	D = 5° 43' 46.5"	D = 0° 34' 22.6"	D = 22° 55' 05.9"
L = 88.40'	L = 169.06'	L = 212.06'	L = 133.61'
T = 48.13'	T = 84.73'	T = 106.03'	T = 68.44'
R = 90.00'	R = 1,000.00'	R = 10,000.00'	R = 250.00'

-Y2-

PI Sta 11+27.76
△ = 28° 57' 22.4" (LT)
D = 63° 39' 43.1"
L = 45.48'
T = 23.24'
R = 90.00'

NC GRID NAD 83/95



15

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SEE SHEET 6 FOR -Y2- PROFILE

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RALEIGH, N.C. 27601

PROJECT REFERENCE NO.	SHEET NO.
011036406	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHARLES A. NUCKOLS, III
Charles A. Nuckols III 18151
4/25/2018

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER BRYAN T. VICKERY
Bryan T. Vickery 042551
4/25/2018

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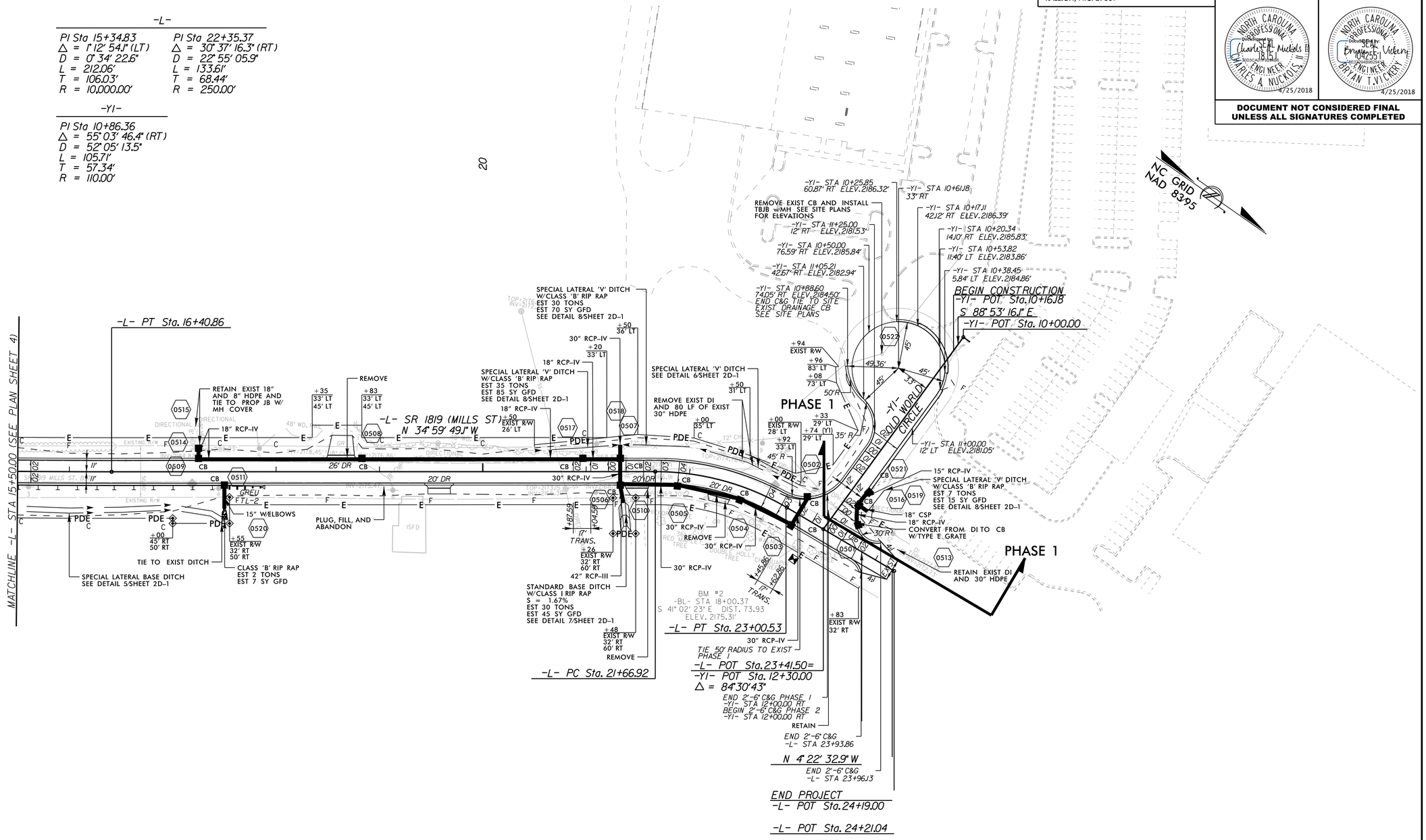
-L-

PI Sta 15+34.83
△ = 1° 12' 54.1" (LT)
D = 0° 34' 22.6"
L = 212.06'
T = 106.03'
R = 10,000.00'

PI Sta 22+35.37
△ = 30° 37' 16.3" (RT)
D = 22° 55' 05.9"
L = 133.61'
T = 68.44'
R = 250.00'

-Y1-

PI Sta 10+86.36
△ = 55° 03' 46.4" (RT)
D = 52° 05' 13.5"
L = 105.71'
T = 57.34'
R = 110.00'



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PROJECT REFERENCE NO.	SHEET NO.
011036406	6

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18151 ENGINEER CHARLES A. NUCKOLS, III
Charles A. Nuckols III
4/25/2018

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. VICKERY
Bryan T. Vickery
4/25/2018

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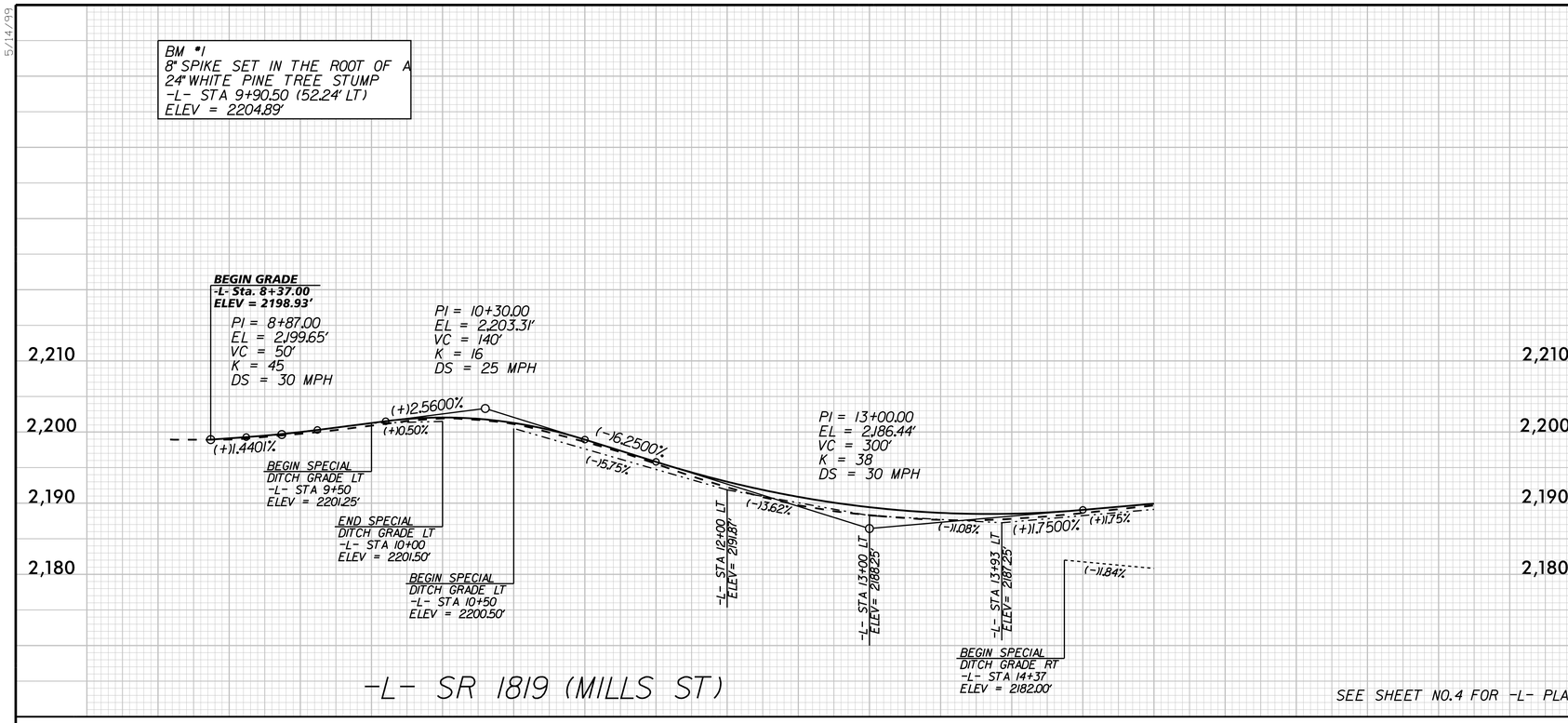

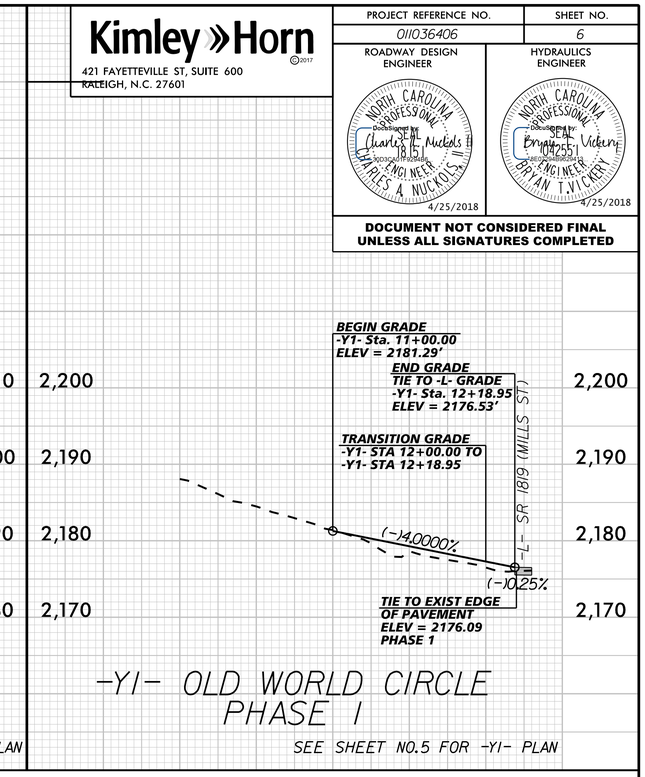

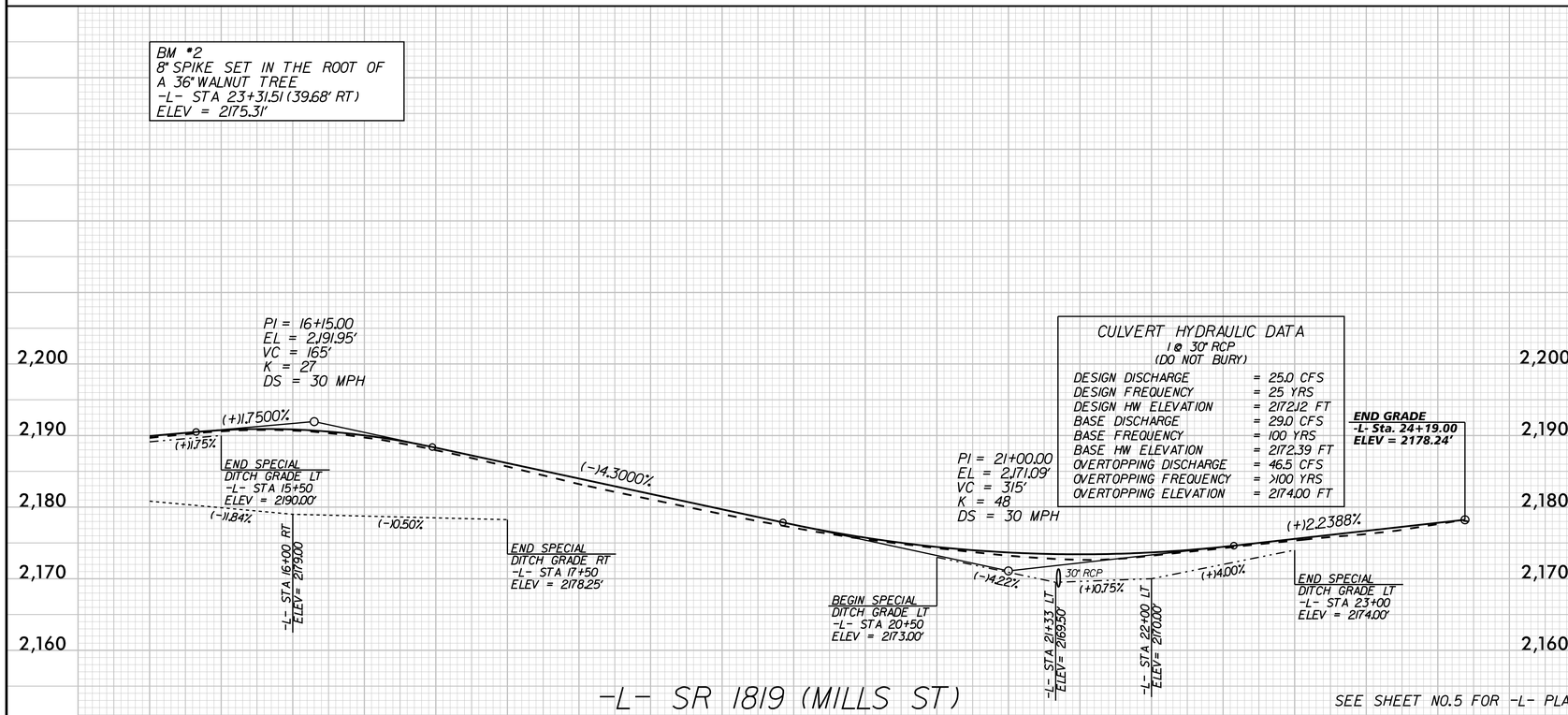

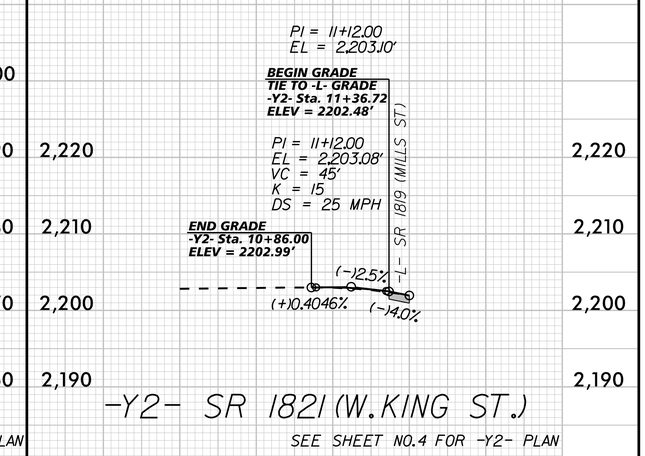

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TRAFFIC NOTES

ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST MUTCD AND 2012 NCDOT STANDARDS

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RALEIGH, N.C. 27601

PROJECT REFERENCE NO.	SHEET NO.
011036406	TMP-1

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL CHARLES A. NUCKOLS, II
DocuSigned by: Charles A. Nuckols II 3003CA1D4D4D4D4...
4/25/2018

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

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
1. SR 1819 MILLS ST	MONDAY THROUGH FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM
2. SR 1821 W. KING ST	

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

ROAD NAME	DAY AND TIME RESTRICTIONS
1. SR 1819 MILLS ST	ANYTIME
2. SR 1821 W. KING ST	

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. SR 1819 MILLS ST	MONDAY THROUGH FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM
2. SR 1821 W. KING ST	

D) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

ROAD NAME	OPERATION
1. SR 1819 MILLS ST	MONDAY THROUGH FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM
2. SR 1821 W. KING ST	

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) 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.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT 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.

H) 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.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

K) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

PAVEMENT EDGE DROP OFF REQUIREMENTS

L) 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 A DROP-OFF AS FOLLOWS:

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.

M) DO NOT EXCEED A DIFFERENCE OF 1.5 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE OF THE UNEVEN AREA.

SIGNING

N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER.

O) PROVIDE PERMANENT SIGNING.

P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

Q) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

R) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 300 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

PAVEMENT MARKINGS AND MARKERS

S) INSTALL PAVEMENT MARKINGS AS SHOWN ON PLAN SHEETS.

T) REFER TO SECTION 1205 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012 FOR APPLICATION TIMES AND TEMPERATURE CONDITIONS FOR PAVEMENT MARKINGS.

U) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

W) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

X) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

Y) CONTRACTOR SHALL MAINTAIN ALL TEMPORARY PAINT PAVEMENT MARKINGS UNTIL COMPLETION OF THERMOPLASTIC PAVEMENT MARKING INSTALLATION.

Z) BEFORE SHIFTING TRAFFIC TO NEW LOCATIONS, CONTRACTOR SHALL REMOVE ANY MARKINGS WHICH CONFLICT WITH THE NEW TRAFFIC PATTERN(S).

PEDESTRIAN AND BICYCLIST SAFETY

AA) PEDESTRIAN AND BICYCLIST SAFETY MUST BE MAINTAINED AT ALL TIMES BY ADEQUATE PROJECT LIMITS, FENCING, AND SIGNAGE.

BB) MAINTAIN CROSSWALK MARKINGS AT ALL TIMES. PLACE NEW TEMPORARY MARKINGS AND REMOVE EXISTING CONFLICTING MARKINGS UPON COMPLETION OF NEW WHEEL CHAIR RAMPS. TEMPORARY CROSSWALK MARKINGS SHALL BE 8" WHITE PAINT AND PLACED IN ACCORDANCE WITH NCDOT STANDARD DRAWING NO. 1205.07. APPLY TEMPORARY PAINT, HIGH VISIBILITY CROSSWALK MARKINGS WHEN DIRECTED BY THE ENGINEER.

MISCELLANEOUS

CC) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH INTERSECTIONS.

DD) STOCKPILE EXISTING SIGNS FOR USE WHEN NEEDED IN TEMPORARY LOCATIONS DURING CONSTRUCTION.

EE) ACCESS SHALL BE MAINTAINED TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES.

FF) 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) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

ADVANCE WARNING SIGNS

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ADVANCE WARNING SIGN SPACING IS RECOMMENDED TO BE THE FOLLOWING:
  - SR 1819 MILLS ST - 500' BEFORE CONSTRUCTION LIMITS
  - SR 1821 W. KING ST - 500' BEFORE CONSTRUCTION LIMITS
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3 LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3 LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3 LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

4/24/2018

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-L- SR 1819 (MILLS ST) & -Y2- SR 1821 (W KING ST)

PHASING NOTES

STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE EAST SIDE OF -L- SR 1819 (MILLS ST) & -Y2- SR 1821 (W KING ST) INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES AND DITCHES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE WEST SIDE OF -L- SR 1819 (MILLS ST) & -Y2- SR 1821 (W KING ST) INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES AND DITCHES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

STEP 3

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.

4/24/2018

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PROJECT REFERENCE NO.	SHEET NO.
011036406	TMP-2

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18715 CHARLES A. NUCKOLS, II
DocuSigned by: Charles A. Nuckols II
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4/25/2018

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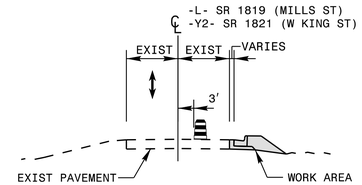
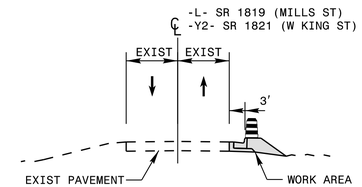
TEMPORARY LANE CLOSURE TRAFFIC PATTERN
(NCDOT STD. 1101.02)



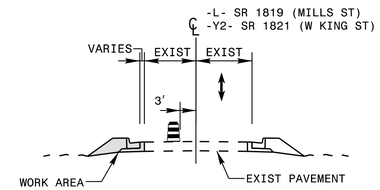
PHASE 1 CONSTRUCTION

"END OF DAY" TRAFFIC PATTERN



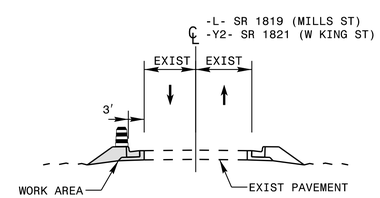
PHASE 1 CONSTRUCTION

TEMPORARY LANE CLOSURE TRAFFIC PATTERN
(NCDOT STD. 1101.02)



PHASE 2 CONSTRUCTION

"END OF DAY" TRAFFIC PATTERN



PHASE 2 CONSTRUCTION

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DATE: _____

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NORTH CAROLINA PROFESSIONAL SEAL 18615 ENGINEER CHARLES A. NUCKOLS III

DocuSigned by: Charles A. Nuckols III 30D3CA8D9B3D4A...

4/25/2018

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: FROM THE INTERSECTION OF WEST KING STREET AND NC 176 TO APPROX. 1600' NORTH TO OLD WORLD CIRCLE ON SR 1819 (MILLS STREET)

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN COVER SHEET
PMP-2	N/A
PMP-3 THRU PMP-4	PAVEMENT MARKING DETAILS

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 2012 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 - 2 LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	THERMOPLASTIC SYMBOLS (90 MILS)
UC	STRAIGHT ARROW
UN	YIELD LINE TRIANGLE
	THERMOPLASTIC (4", 90 MILS)
TB	YELLOW EDGELINE
	THERMOPLASTIC (4", 120 MILS)
TI	YELLOW DOUBLE CENTER LINE
T8	WHITE 2' - 6'/SP MINISKIP
T9	YELLOW 2' - 6'/SP MINISKIP
	THERMOPLASTIC (8", 90 MILS)
TN	WHITE GORELINE
TP	YELLOW DIAGONAL
	THERMOPLASTIC (12", 120 MILS)
T10	WHITE 3' - 3'/SP MINISKIP
	THERMOPLASTIC (24", 120 MILS)
T2	WHITE STOPBAR
	MARKERS
MA	PERMANENT RAISED
MB	PERMANENT RAISED

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
-L-	THERMOPLASTIC	PERMANENT RAISED
-Y1-	THERMOPLASTIC	PERMANENT RAISED
-Y2-	THERMOPLASTIC	PERMANENT RAISED

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

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

E) 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.

F) ALL TRAVEL LANES ARE 11' WIDTH UNLESS OTHERWISE NOTED.

PLAN PREPARED BY: Kimley-Horn and Associates
P. O. BOX 33068
RALEIGH, NC 27636
P.E. NO. F-0102

Charles A. Nuckols P.E. — PROJECT DESIGN ENGINEER
Caleb D. Lowman E.I. — DESIGNER

Kimley»Horn

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
011036406	PMP-3

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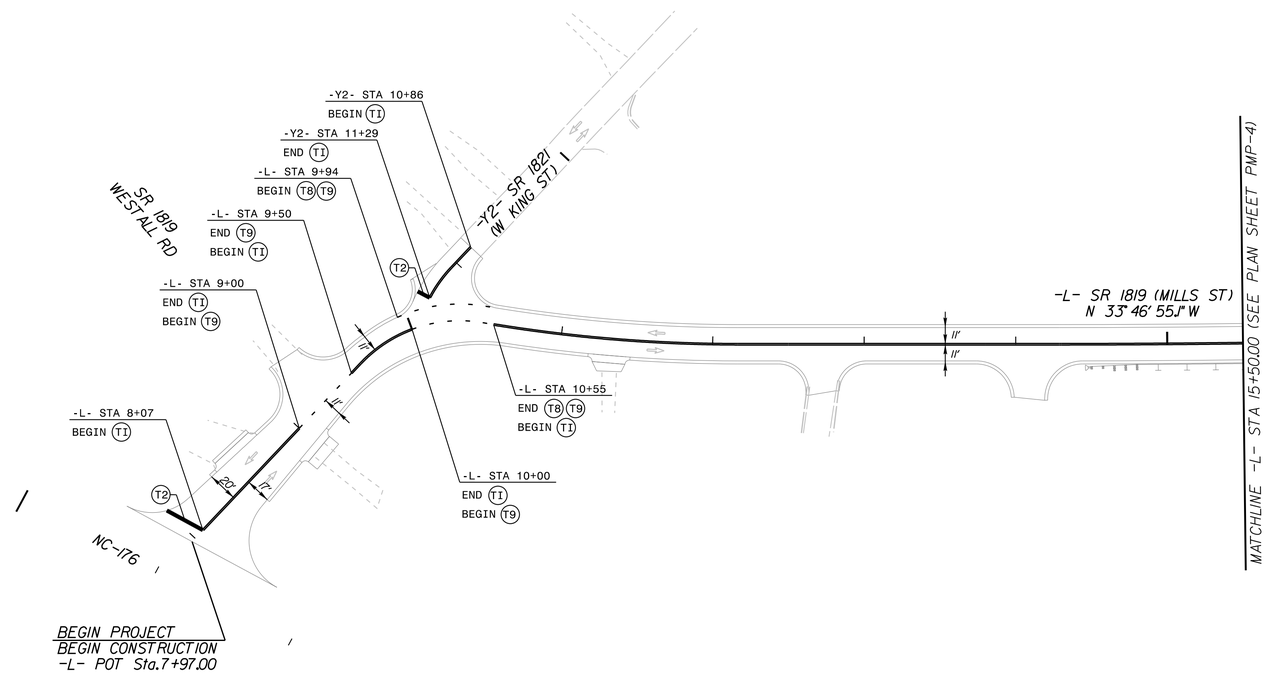

PAVEMENT MARKING LINES

TB - THERMOPLASTIC (4" YELLOW, 90 MILS) EDGELINE
TI - THERMOPLASTIC (4" YELLOW, 120 MILS) DOUBLE CENTER
TN - THERMOPLASTIC (8" WHITE, 90 MILS) GORELINE
TP - THERMOPLASTIC (8" YELLOW, 90 MILS) DIAGONAL
T2 - THERMOPLASTIC (24" WHITE, 120 MILS) STOP BAR
T8 - THERMOPLASTIC (4" WHITE, 120 MILS) 2' - 6'/SP MINISKIP
T9 - THERMOPLASTIC (4" YELLOW, 120 MILS) 2' - 6'/SP MINISKIP
T10 - THERMOPLASTIC (12" WHITE, 120 MILS) 3' - 3'/SP MINISKIP

PAVEMENT MARKING SYMBOLS

UC - THERMOPLASTIC (STRAIGHT ARROW) (90 MILS)
UN - THERMOPLASTIC (24" YIELD LINE TRIANGLE) (90 MILS)

NOTES:
1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

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NORTH CAROLINA PROFESSIONAL SEAL 019861 ENGINEER CHARLES A. NUCKOLS II

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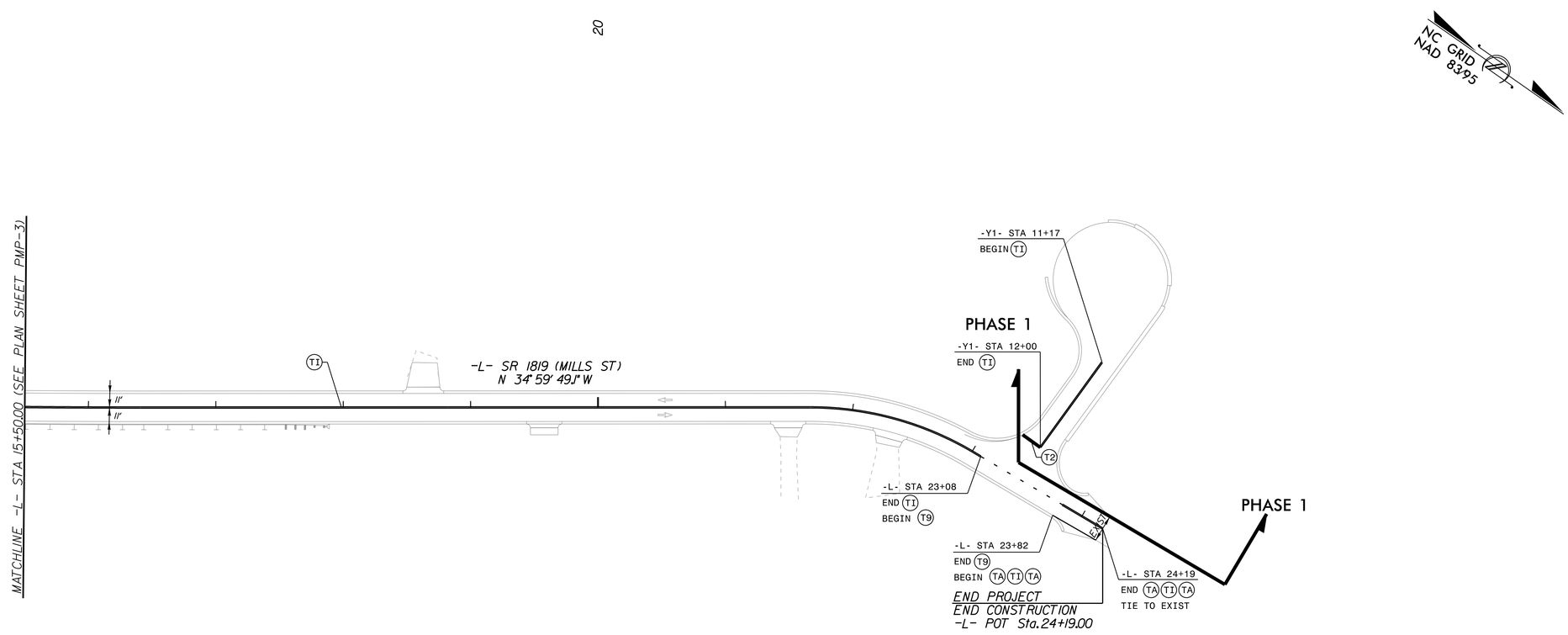

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PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

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NARRATIVE

Project Description

The North Carolina Department of Transporation proposes to upgrade SR 1819 (Mills St.) and SR 1821 (W King St.) to a widening project from NC-176 North past the future development and site drive. Approximately 1.44 acres will be disturbed during the construction of this project. Also, approximately 0.88 acres will be vegetatively stabilized with grass and permanent plantings.

The widening project of SR 1819 (Mills St.) and SR 1821 (W King St.) is located in Henderson County, NC. The project extends approximately 0.30 miles. The proposed curb and gutter typical section will be constructed on an existing two-lane roadway with a four foot berm width extending past the interesction of the new location Site Drive. Contractor shall use WestEd Seed Mix design.

Site Description

The site is generally rolling and contains some drainage ways that are bordered by moderate slopes. Land use along the roadway is partially undeveloped and primarily residential where theres existing development. The majority of the drainage from the project site makes its way through a series of ditches and storm drain systems. All outfalls to the east make their way to unnamed tributaries traveling north and empties into the French Broad River within the French Broad River Basin. No new drainage patterns were introduced. The fill slopes and drainage ditches around the project appear to be stable and do not show signs of significant erosion soils.

Soils

The soil types throughout the project limits are mostly Hayesville loam and sandy loam (TeB, HyC and HyB.).

IMPERVIOUS AND PERVIOUS SURFACES IN THE DISTURBED AREA

PROPOSED IMPERVIOUS SURFACE = 0.54 AC
PROPOSED PERVIOUS SURFACE = 0.88 AC

⇨ DIRECTION OF FLOW

-·-·-·-·- PROJECT DENUDED AREAS

Total Disturbed Area (shaded) = 1.44 acres

PROJECT REFERENCE NO.	SHEET NO.
011036406	EC-1

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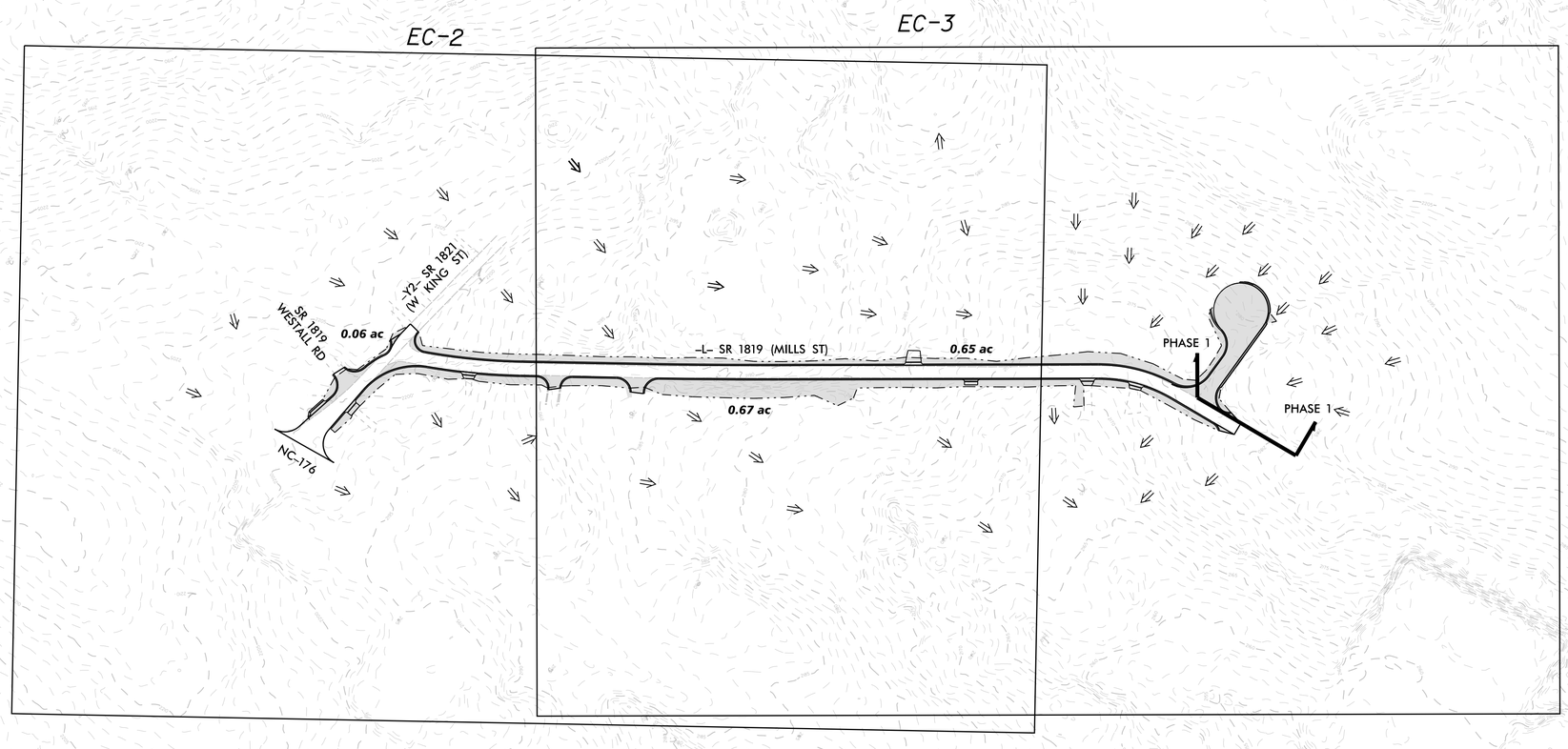

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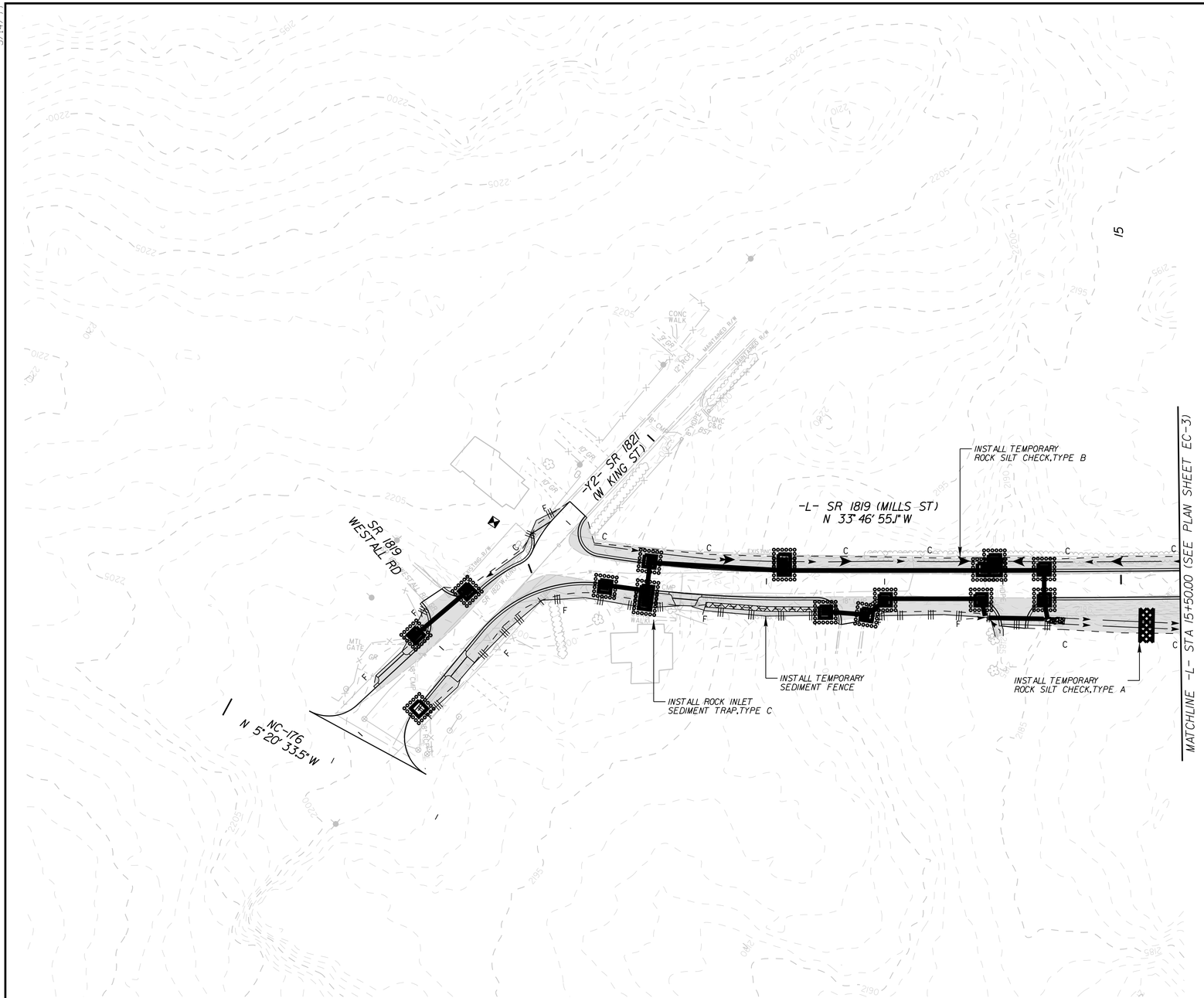

LEGEND

CONSTRUCTION LIMIT	C F	LIMITS OF DISTURBANCE (SHADED)	
TEMPORARY SILT FENCE		ROCK INLET SEDIMENT TRAP, TYPE C	
ROCK SILT CHECK, TYPE B		TEMPORARY ROCK SILT CHECK, TYPE A	

6/1/2018

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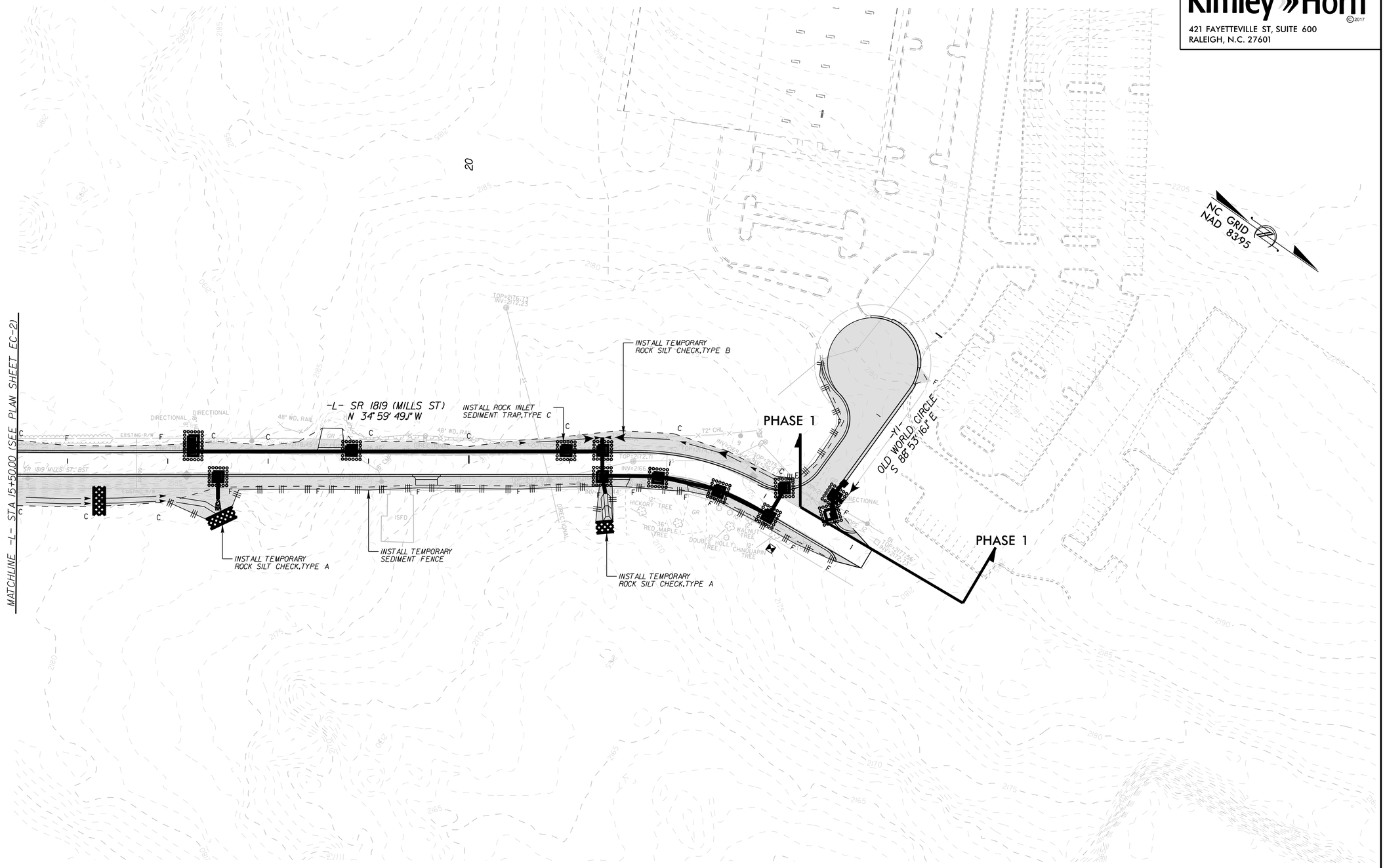

LEGEND

CONSTRUCTION LIMIT	C F	LIMITS OF DISTURBANCE (SHADED)	
TEMPORARY SILT FENCE		ROCK INLET SEDIMENT TRAP, TYPE C	
ROCK SILT CHECK, TYPE B		TEMPORARY ROCK SILT CHECK, TYPE A	

6/1/2018

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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
011036406	EC-4

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RALEIGH, N.C. 27601

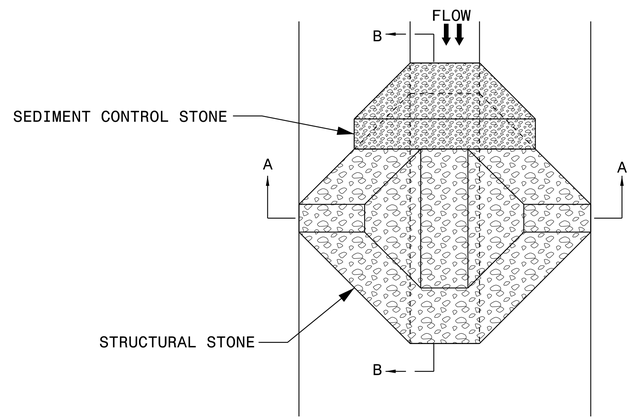
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR

TEMPORARY ROCK SILT CHECK TYPE 'A'

SHEET 1 OF 1

1633.01

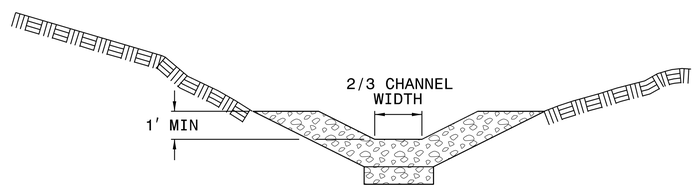


PLAN

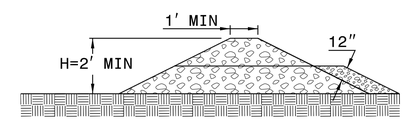
NOTES

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.



SECTION A-A



SECTION B-B

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

ENGLISH STANDARD DRAWING FOR

TEMPORARY ROCK SILT CHECK TYPE 'A'

SHEET 1 OF 1

1633.01

6/1/2018

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PROJECT REFERENCE NO.	SHEET NO.
011036406	SIGN-1

APPROVED:

DATE:

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036161 CHARLES A. NUCKOLS, III

DocuSigned by: Charles A. Nuckols III 3D0DC3D1B0A4B6

4/25/2018

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: FROM THE INTERSECTION OF WEST KING STREET AND NC 176 TO APPROX. 1600' NORTH TO OLD WORLD CIRCLE ON SR 1819 (MILLS STREET)

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 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
901.50	ARROWS AND SHIELDS
901.70	SIGN STRINGERS AND SUPPORT SPACING
903.10	GROUND MOUNTED SIGN SUPPORTS (EXCEPT FOR SHEET 1 OF 3 WHICH IS REPLACED WITH SIGN-1A AND SHEET 2 OF 3 WHICH IS REPLACED WITH SIGN-1B IN PLANS)
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.
- NCDOT TO PROVIDE SIGNS TO CONTRACTOR
- CONTRACTOR TO COORDINATE INSTALLATION WITH NCDOT. CONTRACTOR TO PROVIDE 3 WEEKS NOTICE TO NCDOT BEFORE INSTALLATION TO BEGIN.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	N/A
SIGN-3	TYPE "E" SHEET
SIGN-4 THRU SIGN-5	SIGNING PLAN SHEETS

PLAN PREPARED BY: KIMLEY-HORN AND ASSOCIATES, INC.

Charles A. Nuckols P.E. — PROJECT DESIGN ENGINEER

Caleb D. Lowman E.I. — DESIGNER

Kimley»Horn

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PROJECT REFERENCE NO.	SHEET NO.
011036406	SIGN-3

APPROVED:

DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 18 ENGINEER CHARLES A. NUCKOLS, III

DocuSigned by: Charles A. Nuckols III 3003CA0A7A0A48...

4/25/2018

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(401) QUANTITY REQ'D _3_

36" X 36"
W23-2

ONE "U" POST PER SIGN

(402) QUANTITY REQ'D _1_

30" X 30"
W1-2R

ONE "U" POST PER SIGN

(403) QUANTITY REQ'D _2_

18" X 18"
W13-1P

ONE "U" POST PER SIGN
MOUNT BELOW SIGN #402 & #405

(404) QUANTITY REQ'D _2_

24" X 30"
R2-1

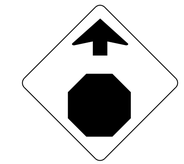
ONE "U" POST PER SIGN

(405) QUANTITY REQ'D _1_

30" X 30"
W1-2L

ONE "U" POST PER SIGN

(406) QUANTITY REQ'D _1_



30" X 30"
W3-1

ONE "U" POST PER SIGN

(407) QUANTITY REQ'D _3_

30" X 30"
R1-1

ONE "U" POST PER SIGN

(408) QUANTITY REQ'D _1_

24" X 30"
R2-5

ONE "U" POST PER SIGN

NOTES:
1. NCDOT TO PROVIDE SIGNS TO CONTRACTOR
2. CONTRACTOR TO COORDINATE INSTALLATION WITH NCDOT. CONTRACTOR TO PROVIDE 3 WEEKS NOTICE TO NCDOT BEFORE INSTALLATION TO BEGIN.

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RIGHT-OF-WAY REV.

CONST. REV.

TYPE "E" SIGNS

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
011036406	SIGN-4

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 019 ENGINEER CHARLES A. NUCKOLS II

DocuSigned by: Charles A. Nuckols II 4/25/2018 10:03:06 AM PDT 4/25/2018

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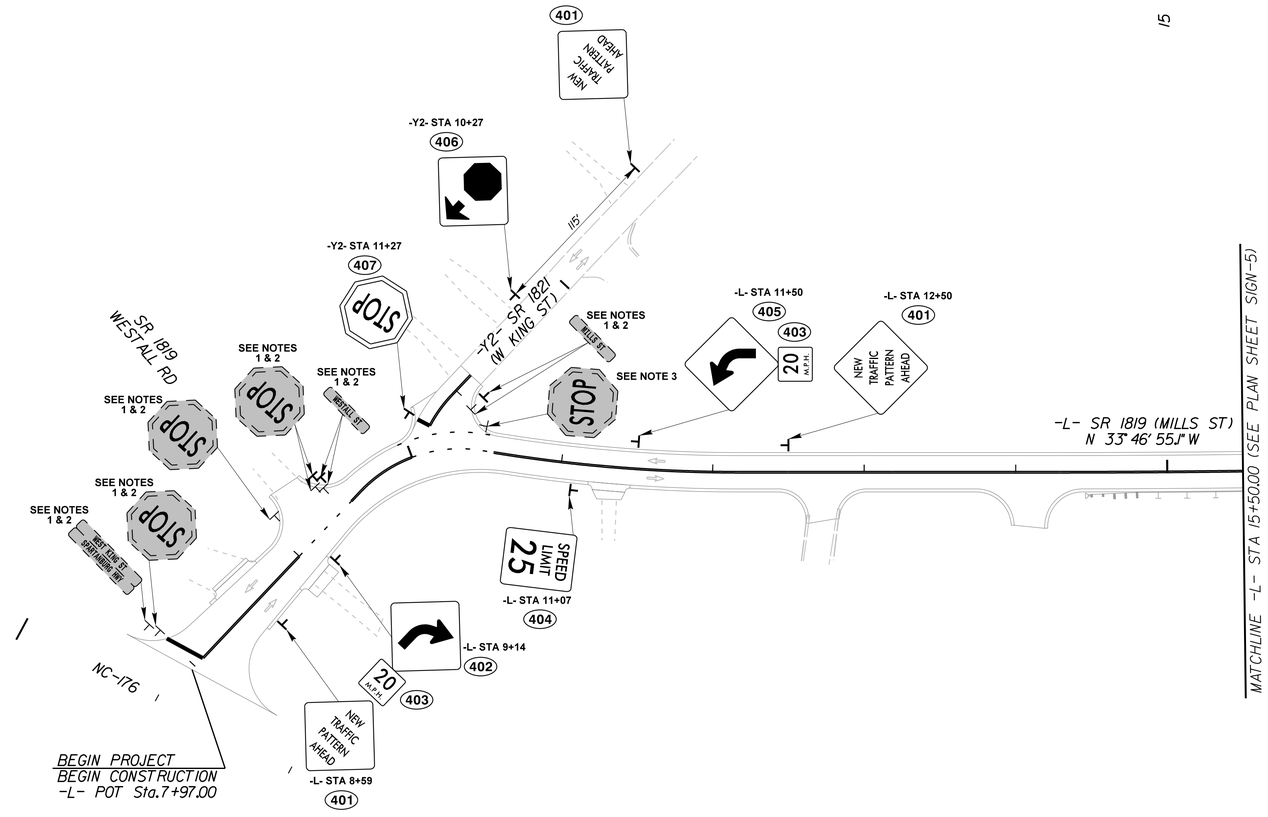

DENOTES EXISTING SIGN

DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION

DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION

PAY ITEM NOTES:

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
011036406	SIGN-5

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 015 ENGINEER CHARLES A. NUCKOLS II
DocuSigned by: Charles A. Nuckols II
9203CA0A2C2D4AD...
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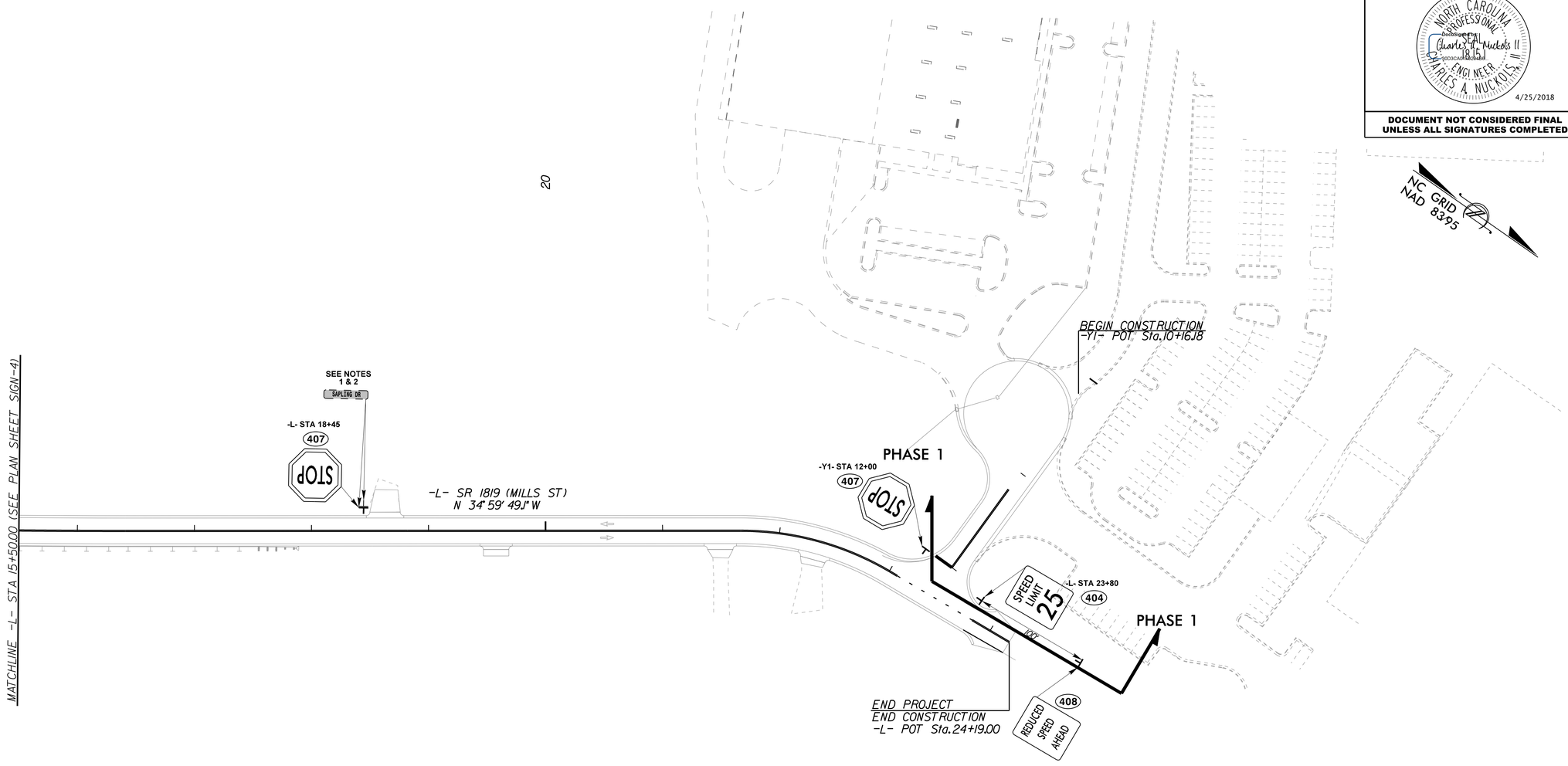

DENOTES EXISTING SIGN

DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION

DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION

PAY ITEM NOTES:

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST

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4/24/2018