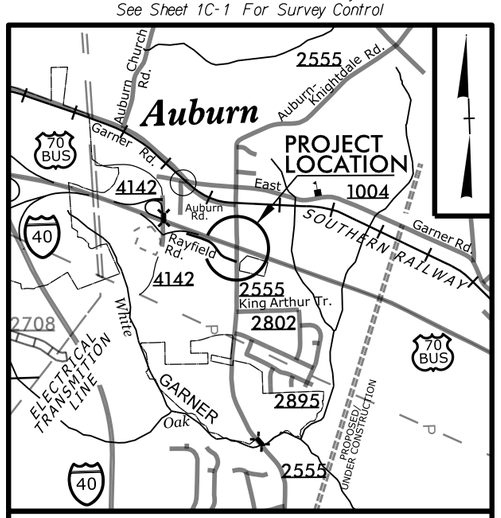
09/08/99

TIP PROJECT: W-5601CR

CONTRACT: DE00169

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



VICINITY MAP SHOWING LOCATION OF PROJECT

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

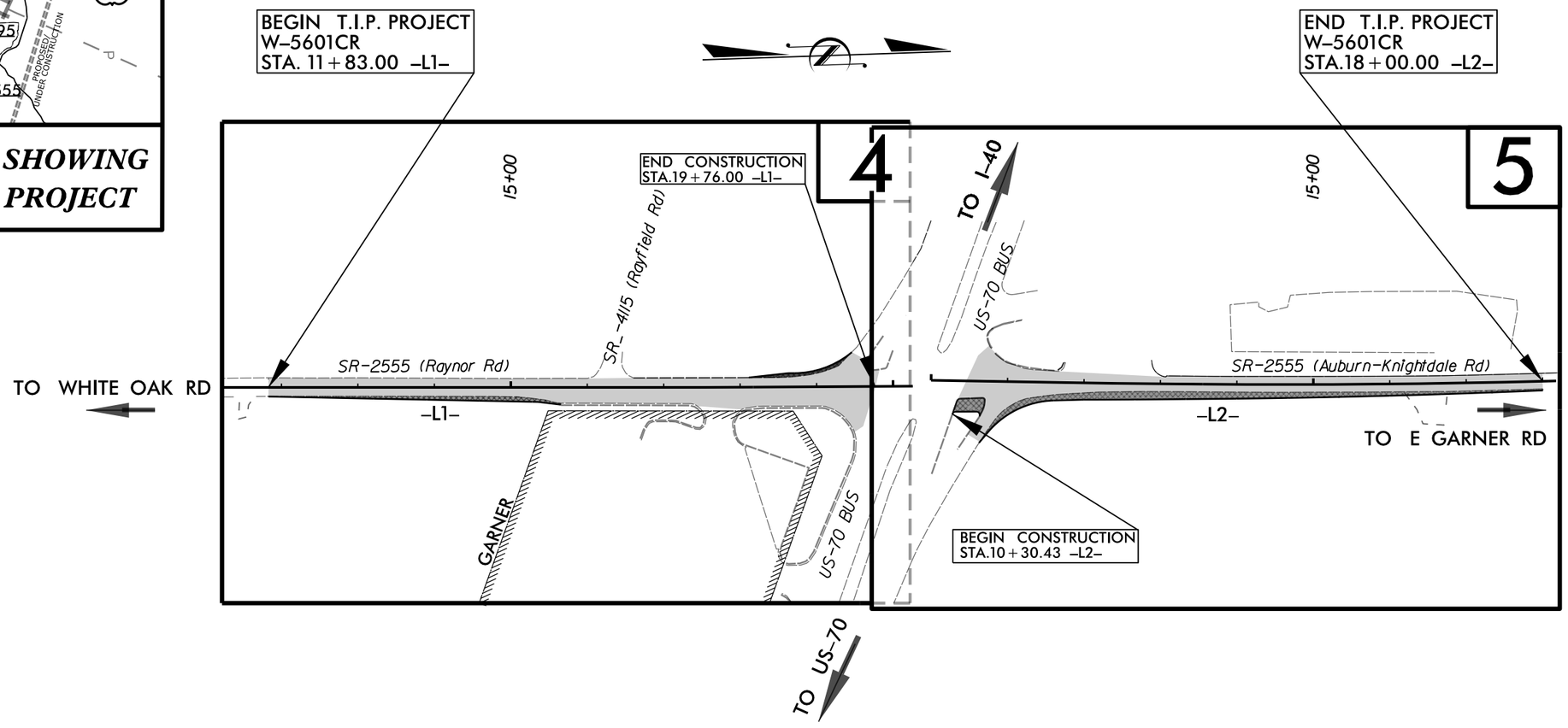
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601CR	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50138.1.97	HSIP-0070(194)	PE
50138.2.97	HSIP-0070(194)	R/W&UTIL
50138.3.97		CON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: SR-2555 (RAYNOR RD./AUBURN-KNIGHTDALE RD.) AT US 70 BUS

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND SIGNALS



GRAPHIC SCALES

30 15 0 30 60
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 6,300

V = 50 MPH

FUNC CLASS=
MAJOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY PROJECT W5601CR = 0.296 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
2612 N. DUKE ST, DURHAM, NC 27704

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

BEN J UPSHAW, P.E.
PROJECT ENGINEER

SUNIL PATEL
PROJECT DESIGN ENGINEER

DIVIDSION DESIGN ENGINEER
ROADWAY DESIGN AND HYDRAULICS

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN J UPSHAW

Docusigned by:
Ben Upshaw
CD6EB110D6E5...

6/9/2017
P.E.
SIGNATURE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
FIFTH DIVISION
J.R. HOPKINS, P.E.
DIVISION ENGINEER

DIVISION OF HIGHWAYS · DIVISION FIVE · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

08-JUN-2017 12:27
R:\Roadway\Proj\W5601CR_Rdy_tsh.dgn
lcharova
AT DIV5-298390

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	1A

DIVISION FIVE DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DocuSigned by: Ben Upshaw 6/9/2017

CD6EB110D6E54E5...

P.E.

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEETS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	SHOULDER WEDGE DETAIL
3B-1	EARTHWORK SUMMARY
4 THRU 5	PLAN SHEETS
6	PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-3B THRU EC-5	EROSION CONTROL PLANS
SIG-1 THRU SIG-3	SIGNAL PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-6	CROSS-SECTIONS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE

DIVISION 2 - EARTHWORK
200.02 Method of Clearing - Method II
225.02 Guide for Grading Subgrade - Secondary and Local

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I

DIVISION 8 - INCIDENTALS
815.03 Pipe Underdrain and Blind Drain
846.01 Concrete Curb, Gutter and Curb & Gutter

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

GRADING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE 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.

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY, PSNC ENERGY, ATT, EARTHLINK , TWC , CITY OF RALEIGH AND NCDOT.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

BOUNDARIES AND PROPERTY:

State Line
County Line
Township Line
City Line
Reservation Line
Property Line
Existing Iron Pin — EIP
Computed Property Corner
Property Monument — ECM
Parcel/Sequence Number — 123
Existing Fence Line
Proposed Woven Wire Fence
Proposed Chain Link Fence
Proposed Barbed Wire Fence
Existing Wetland Boundary — WLB
Proposed Wetland Boundary — WLB
Existing Endangered Animal Boundary — EAB
Existing Endangered Plant Boundary — EPB
Existing Historic Property Boundary — HPB
Known Contamination Area: Soil — S
Potential Contamination Area: Soil — S
Known Contamination Area: Water — W
Potential Contamination Area: Water — W
Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point
Primary Horiz Control Point
Primary Horiz and Vert Control Point
Exist Permanent 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 — RW
New Right of Way Line with Pin and Cap — RW
New Right of Way Line with Concrete or Granite R/W Marker — RW
New Control of Access Line with Concrete C/A Marker — CA
Existing Control of Access — CA
New Control of Access — CA
Existing Easement Line — E
New Temporary Construction Easement — E
New Temporary Drainage Easement — TDE
New Permanent Drainage Easement — PDE
New Permanent Drainage / Utility Easement — DUE
New Permanent Utility Easement — PUE
New Temporary Utility Easement — TUE
New Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

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

VEGETATION:

Single Tree
Single Shrub
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*) — W
U/G Water Line LOS C (S.U.E*) — W
U/G Water Line LOS D (S.U.E*) — W
Above Ground Water Line — A/G Water

TV:
TV Pedestal — 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.*) — ?U/TL
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.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601CR	1C-1	

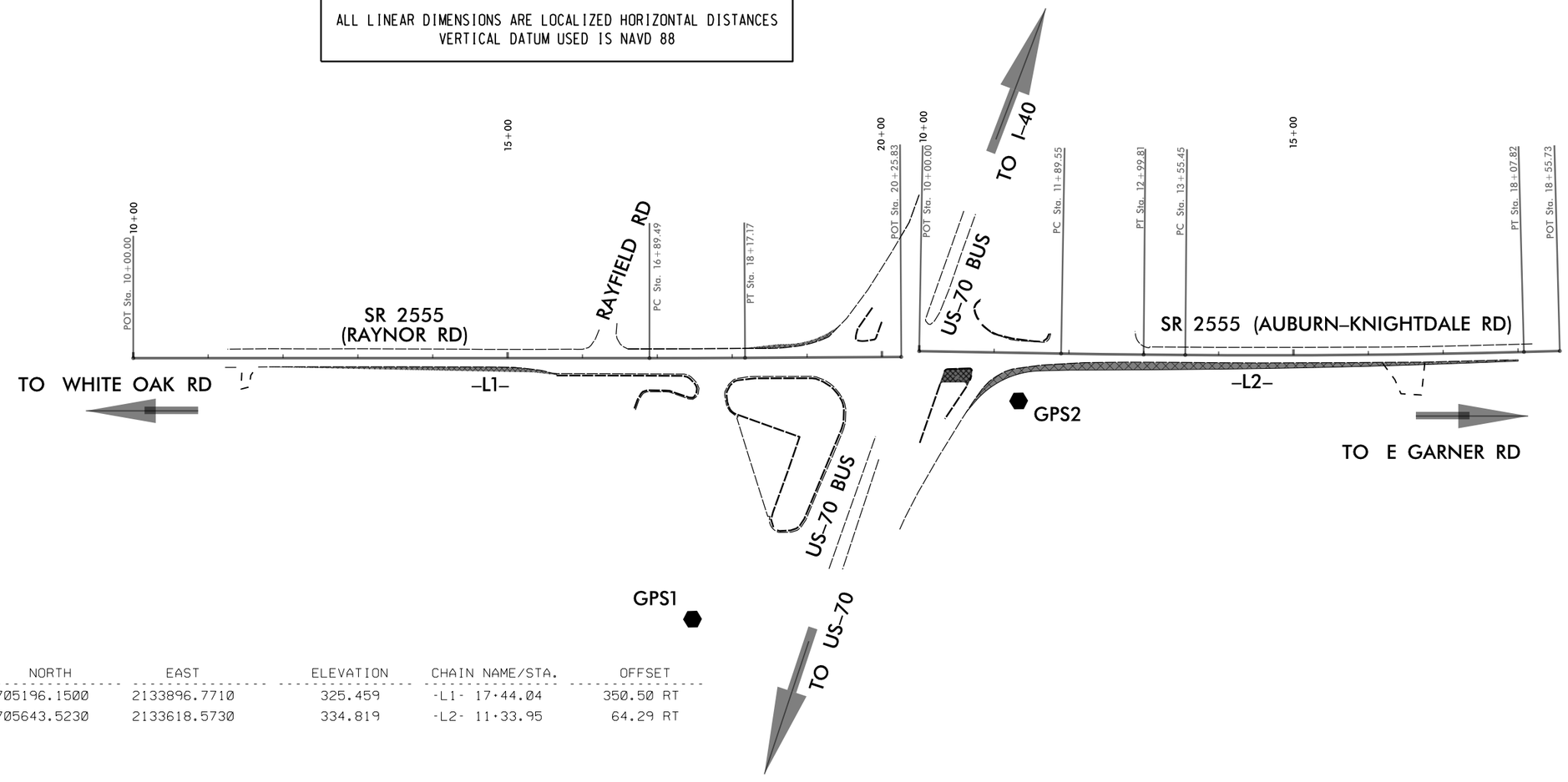
SURVEY CONTROL SHEET

NC GRID
NAD 83/NSRS 2007

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
NCDOT FOR MONUMENT "GPS1"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 705196.1500(ft) EASTING: 2133896.7710(ft)
ELEVATION: 325.459(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: NONE
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"GPS1" TO -L- STATION IS

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



POINT	DESC.	NORTH	EAST	ELEVATION	CHAIN NAME/STA.	OFFSET
1	GPS1	705196.1500	2133896.7710	325.459	-L1- 17+44.04	350.50 RT
2	GPS2	705643.5230	2133618.5730	334.819	-L2- 11+33.95	64.29 RT

NOTE: DRAWING NOT TO SCALE

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	2A-1

ROADWAY DESIGN ENGINEER — PAVEMENT DESIGN ENGINEER

DocuSigned by: Ben Upshaw 6/9/2017 CD6EB110D6E54E5...

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030459

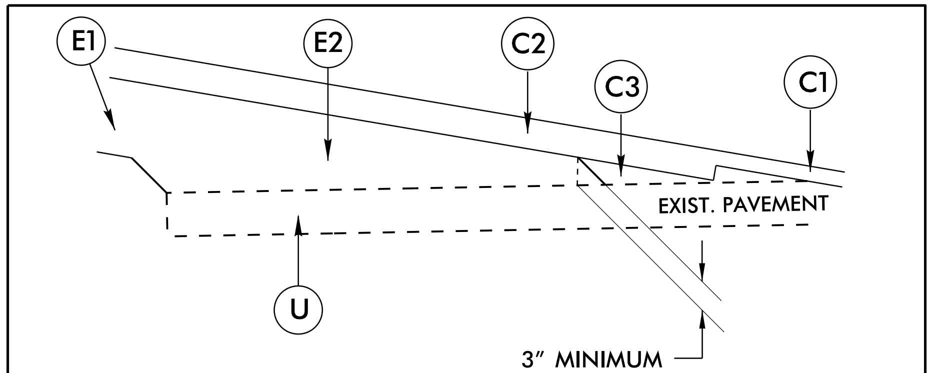
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

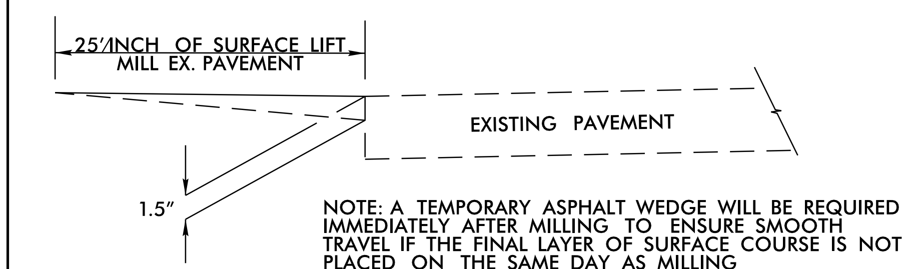
(PRELIMINARY PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD, IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 8" ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0, 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.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	1.5" MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

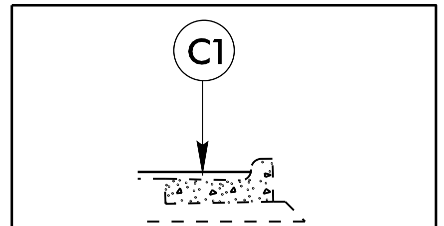
NOTES:
1). THE PORTION OF EACH EXISTING PAVED SHOULDER THAT IS NOT FULL DEPTH IS TO BE REMOVED AND PAVED TO FULL DEPTH.
2). PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
3). FOR VARIABLE DEPTH WEDGING SEE CROSS SECTIONS.



WEDGING DETAIL

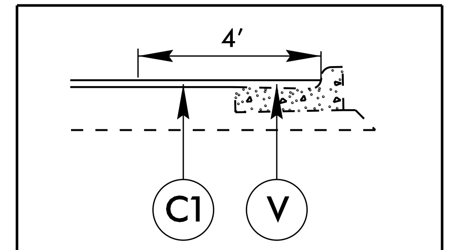


INCIDENTAL MILLING PAVEMENT KEY-IN DETAIL (TIE-IN)



CURB&GUTTER RESURFACING DETAIL A

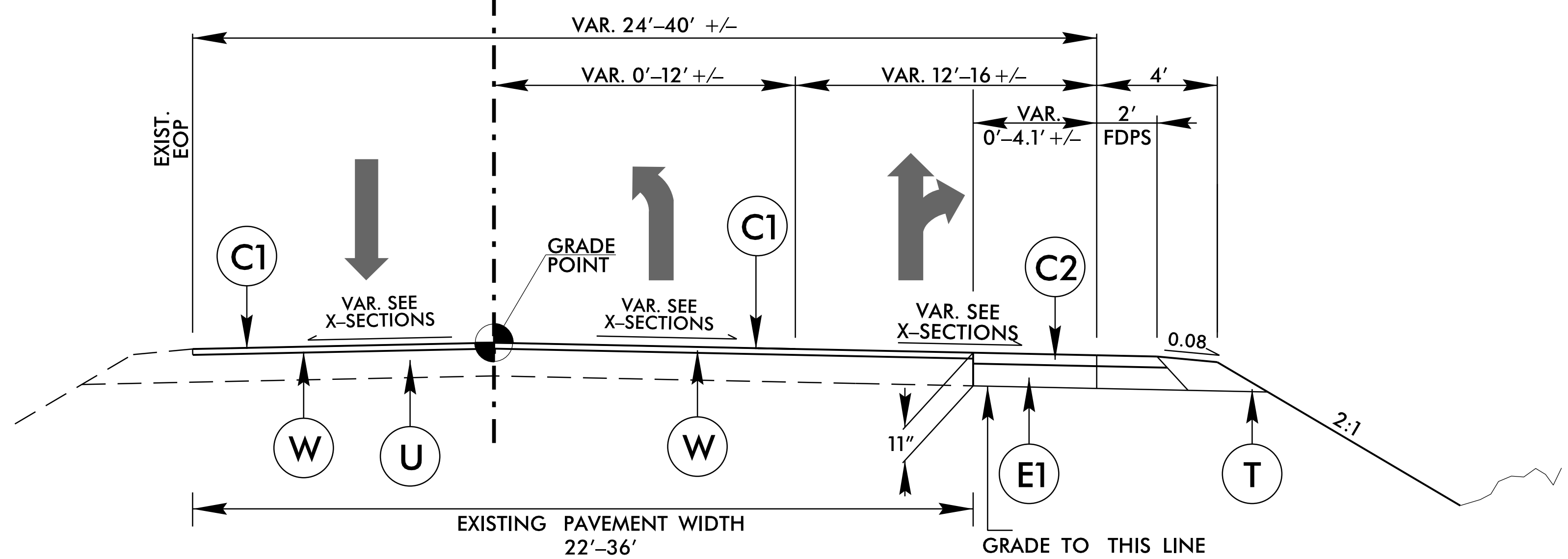
-L1 RT- STA. 15+65 TO 18+30



CURB&GUTTER RESURFACING DETAIL B

-L1 RT- STA. 18+30 TO 19+40

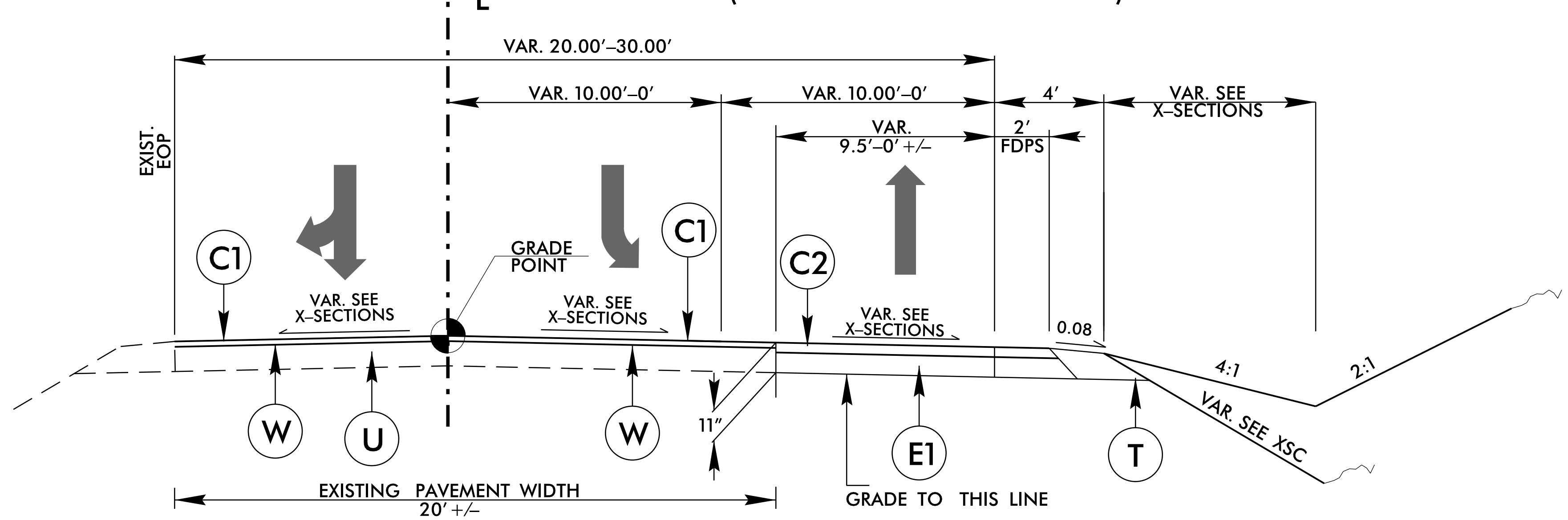
℄ -L1- SR-2555 (RAYNOR RD)



TYPICAL SECTION NO. 1

-L1- STA. 11+83.00 TO 19+76.00

℄ -L2- SR-2555 (AUBURN-KNIGHDALE RD)

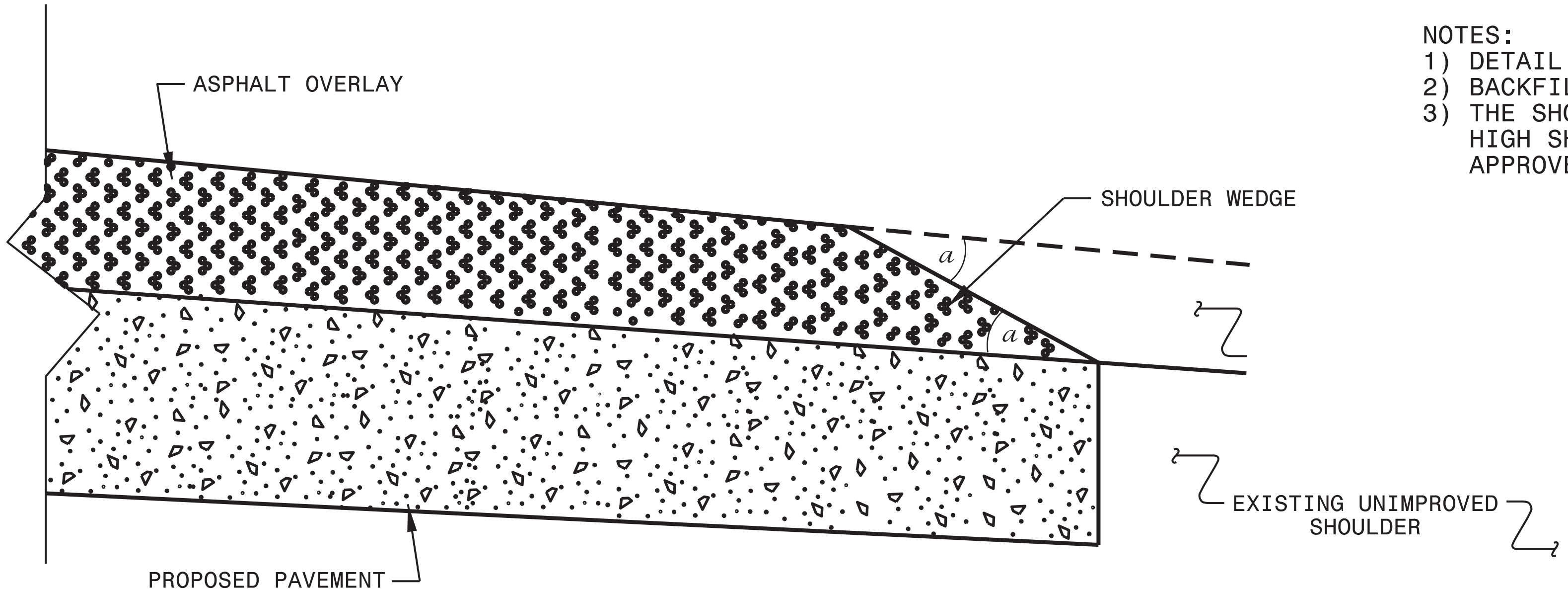


TYPICAL SECTION NO. 2

-L2- STA. 10+30.43 TO 18+00.00

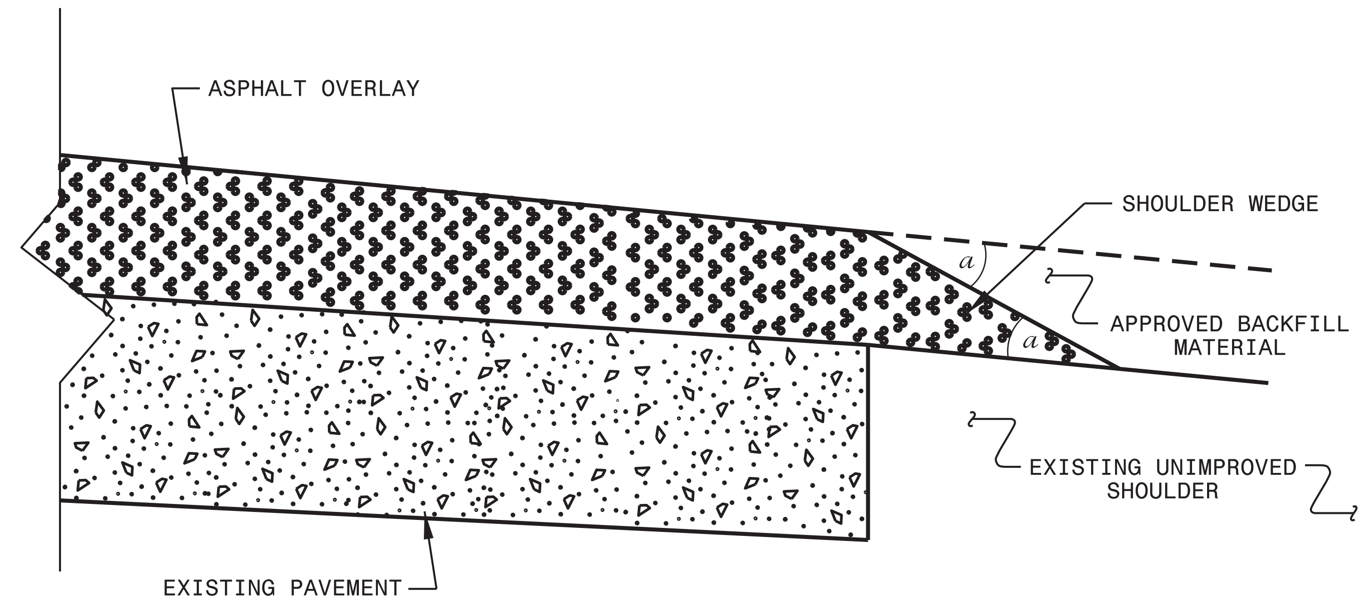
PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	2B-1

NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



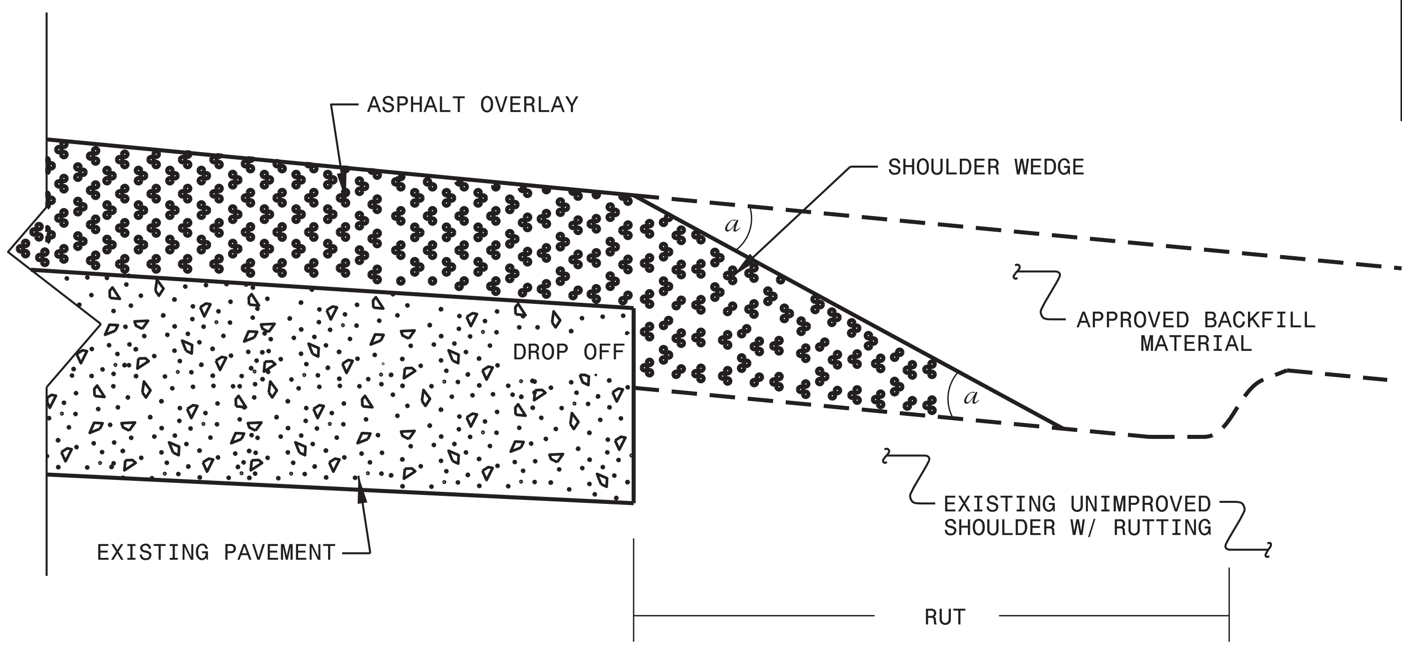
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

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

SHOULDER WEDGE DETAILS

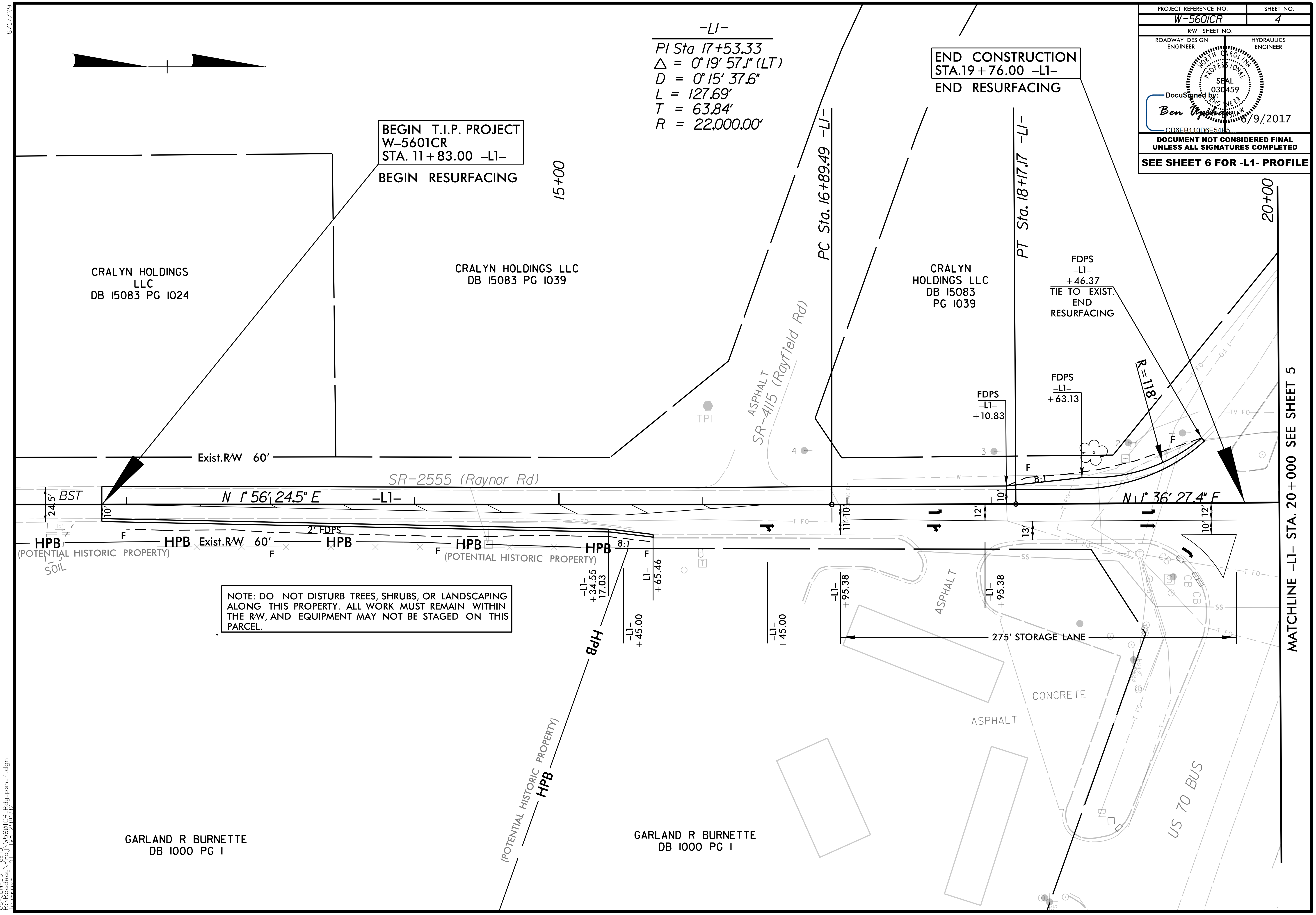
ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 2/2/16
CHECKED BY: DATE:
FILE SPEC.: s:usr/details/stand/shoulderwedgedetail.dgn

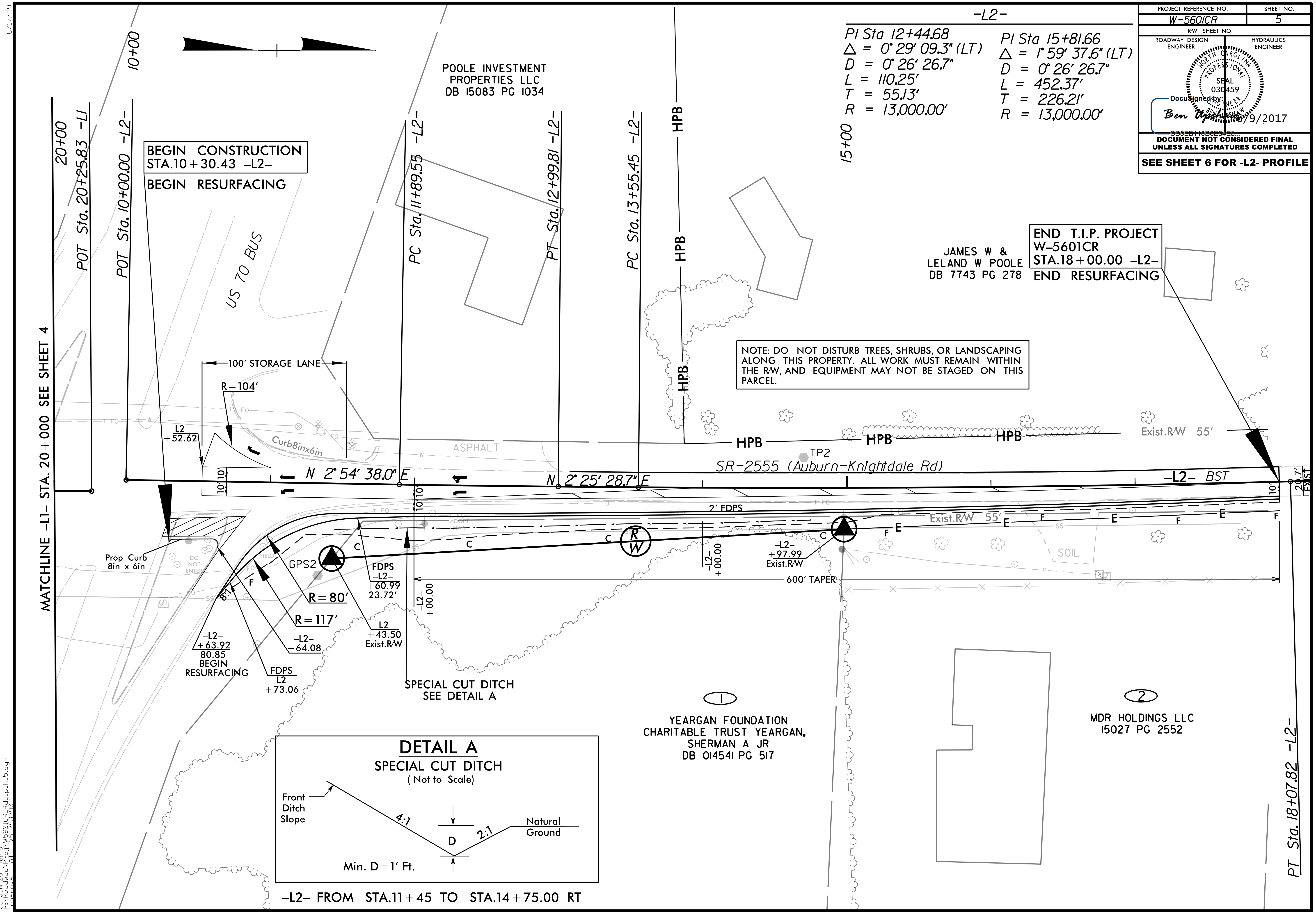
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

LOCATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +20%	BORROW	WASTE
(–L1–) 12+00 TO 15+50	21		34	13	0
(–L1–) 18+25 TO 19+25	6		6	0	0
SUBTOTALS:	27		40	13	0
(–L2–) 10+30.43 TO 18+00	293		11	0	282
SUBTOTALS:	293		11	0	282
TOTALS:	293		51	13	282
WASTE IN LIEU OF BORROW				–13	–13
PROJECT TOTALS:	320		51	0	269
GRAND TOTALS:	320		51	0	269
SAY:	350				

Approximate quantities only. Unclassified excavation, removal of existing pavement, and clearing & gurbbing will be paid for at the lump sump price for "Grading".


PROJECT REFERENCE NO.
W-5601CR
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER
DocuSigned by:
Ben Upshaw
6/9/2017
CD6EB110D6E54B5
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
SEE SHEET 6 FOR -L1- PROFILE
-L1-
PI Sta 17+53.33
Δ = 0° 19' 57.1" (LT)
D = 0° 15' 37.6"
L = 127.69'
T = 63.84'
R = 22,000.00'
BEGIN T.I.P. PROJECT
W-5601CR
STA. 11+83.00 -L1-
BEGIN RESURFACING
END CONSTRUCTION
STA.19+76.00 -L1-
END RESURFACING
15+00
20+00
PC Sta. 16+89.49 -L1-
PT Sta. 18+17.17 -L1-
CRALYN HOLDINGS LLC
DB 15083 PG 1024
CRALYN HOLDINGS LLC
DB 15083 PG 1039
CRALYN HOLDINGS LLC
DB 15083 PG 1039
FDPS -L1- +46.37
TIE TO EXIST. END RESURFACING
FDPS -L1- +10.83
FDPS -L1- +63.13
R=118'
ASPHALT
SR-4115 (Rayfield Rd)
TPI
Exist.R/W 60'
SR-2555 (Raynor Rd)
BST
N 1° 56' 24.5" E
-L1-
N 1° 36' 27.4" E
2' FDPS
HPB
(POTENTIAL HISTORIC PROPERTY)
SOIL
Exist.R/W 60'
8:1
-L1- +34.55 17.03
-L1- +65.46
-L1- +45.00
-L1- +45.00
-L1- +95.38
-L1- +95.38
275' STORAGE LANE
NOTE: DO NOT DISTURB TREES, SHRUBS, OR LANDSCAPING ALONG THIS PROPERTY. ALL WORK MUST REMAIN WITHIN THE R/W, AND EQUIPMENT MAY NOT BE STAGED ON THIS PARCEL.
CONCRETE
ASPHALT
US 70 BUS
GARLAND R BURNETTE
DB 1000 PG 1
GARLAND R BURNETTE
DB 1000 PG 1
MATCHLINE -L1- STA. 20+000 SEE SHEET 5
8/17/99
08-JUN-2017 16:45



PROJECT REFERENCE NO. W-5601CR
SHEET NO. 5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030459
DocuSigned by: Ben Upshaw 6/9/2017
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
SEE SHEET 6 FOR -L2- PROFILE
-L2-
PI Sta 12+44.68
△ = 0° 29' 09.3" (LT)
D = 0° 26' 26.7"
L = 110.25'
T = 55.13'
R = 13,000.00'
PI Sta 15+81.66
△ = 1° 59' 37.6" (LT)
D = 0° 26' 26.7"
L = 452.37'
T = 226.21'
R = 13,000.00'
8/17/99
POOLE INVESTMENT PROPERTIES LLC DB 15083 PG 1034
BEGIN CONSTRUCTION STA.10+30.43 -L2-
BEGIN RESURFACING
10+00
20+00
POT Sta. 20+25.83 -L1-
POT Sta. 10+00.00 -L2-
PC Sta. 11+89.55 -L2-
PT Sta. 12+99.81 -L2-
PC Sta. 13+55.45 -L2-
15+00
HPB
US 70 BUS
JAMES W & LELAND W POOLE DB 7743 PG 278
END T.I.P. PROJECT W-5601CR STA.18+00.00 -L2-
END RESURFACING
NOTE: DO NOT DISTURB TREES, SHRUBS, OR LANDSCAPING ALONG THIS PROPERTY. ALL WORK MUST REMAIN WITHIN THE R/W, AND EQUIPMENT MAY NOT BE STAGED ON THIS PARCEL.
100' STORAGE LANE
R=104'
L2 +52.62
Curb8inx6in
ASPHALT
TP2
Exist.R/W 55'
SR-2555 (Auburn-Knightdale Rd)
N 2° 54' 38.0" E
N 2° 25' 28.7" E
-L2- BST
MATCHLINE -L1- STA. 20+000 SEE SHEET 4
2' FDPS
Exist.R/W 55'
Prop Curb 8in x 6in
GPS2
R=80'
R=117'
FDPS -L2- +60.99 23.72'
-L2- +43.50 Exist.R/W
-L2- +63.92 80.85 BEGIN RESURFACING
-L2- +64.08
FDPS -L2- +73.06
-L2- +00.00
-L2- +97.99 Exist.R/W
600' TAPER
SOIL
SPECIAL CUT DITCH SEE DETAIL A
1
YEARGAN FOUNDATION CHARITABLE TRUST YEARGAN, SHERMAN A JR DB 014541 PG 517
2
MDR HOLDINGS LLC 15027 PG 2552
PT Sta. 18+07.82 -L2-
DETAIL A
SPECIAL CUT DITCH
(Not to Scale)
Front Ditch Slope
4:1
D
2:1
Natural Ground
Min. D=1' Ft.
-L2- FROM STA.11+45 TO STA.14+75.00 RT
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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR INFORMATION ONLY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SHEET 4 FOR PLAN VIEW

BEGIN T.I.P.PROJECT
W-5601CR
STA. 11+83.00 -L1-

END CONSTRUCTION
STA. 19+76.00 -L1-

-L1- (Raynor Rd.)

340
330
320
310

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

SEE SHEET 5 FOR PLAN VIEW

-L2- (Auburn-Knightdale)

BEGIN CONSTRUCTION
STA. 10+30.43 -L2-

END T.I.P. PROJECT
W-5601CR
STA. 18+00.00 -L2-

BEGIN SPECIAL CUT DITCH
RT -L2-STA. 11+45.00
EL=328.87'

BEGIN SPECIAL CUT DITCH
RT -L2-STA. 11+45.00
EL=334.16'

(+) 1.20%
(+) 1.72%
(+) 1.76%
(+) 1.72%
(+) 1.76%
(+) 1.04%
(+) 1.08%
(+) 1.84%
(+) 1.88%

PI =11+50.000
El = 328.93

PI =11+75.000
El = 329.36

PI =12+25.000
El = 330.22

PI =12+50.000
El = 330.66

PI =13+00.000
El = 331.52

PI =13+25.000
El = 331.96

PI =13+50.000
El = 332.22

PI =14+00.000
El = 332.76

PI =14+25.000
El = 333.22

350
340
330
320
310

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

DITCH LEGEND	
LEFT DITCH	— - - — -
RIGHT DITCH	- - - - - - -

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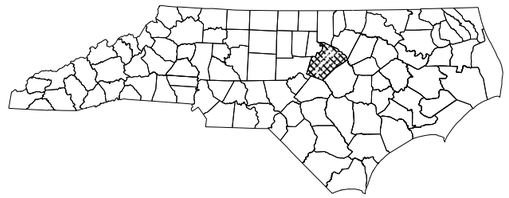
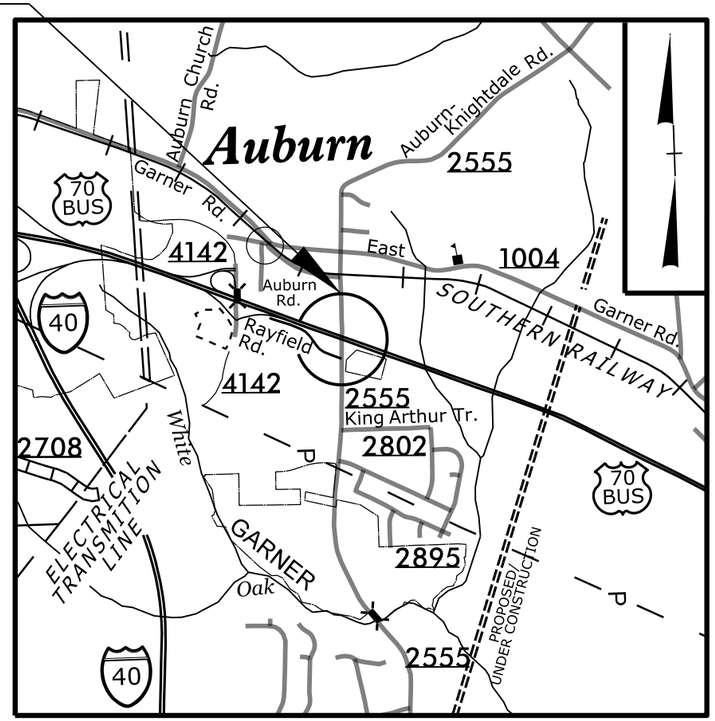
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



PROJECT W-5601CR



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-2	GENERAL NOTES, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND

SHEET NO.
TMP-1

TIP PROJECT: W-5601CR

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

_____ STATE TRAFFIC MANAGEMENT ENGINEER
_____ TRAFFIC CONTROL PROJECT ENGINEER
_____ TRAFFIC CONTROL PROJECT DESIGN ENGINEER
_____ TRAFFIC CONTROL DESIGN ENGINEER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

APPROVED: DocuSigned by: Ben Upshaw
DATE: 6/9/2017
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION DESIGN UNIT

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PROJ. REFERENCE NO.	SHEET NO.
W-5601CR	TMP-2

LEGEND

GENERAL

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

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

ROADWAY STANDARD DRAWINGS

REV. SEPTEMBER 2011

ROADWAY STANDARD DRAWINGS

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
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

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
ALL ROADS	MONDAY THRU FRIDAY 6 AM TO 9 AM & 4 PM TO 7 PM

B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 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 OR A LANE CLOSURE IS INSTALLED.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

E) 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.

F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) 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.

I) 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) 5OFT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AR

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

TRAFFIC CONTROL DEVICES

M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	NONE

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

P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DocuSigned by: Ben Upshaw CD6EB110D6E54E5...

APPROVED:

DATE: 6/9/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER BEN UPSHAW

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · DIVISION DESIGN UNIT

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601CR	PMP-1	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX

SIGNING & PAVEMENT MARKING PLAN

WAKE COUNTY

LOCATION: SR-2555 (RAYNOR RD./AUBURN-KNIGHTDALE RD.) AT US 70 BUS

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
THERMOPLASTIC(4", 90 MILS)	
TA	WHITE EDGELINE
THERMOPLASTIC(4", 120 MILS)	
T8	2 FT. - 6 FT./SP WHITE MINISKIP
TD	3 FT. - 9 FT./SP WHITE MINISKIP
TE	WHITE SOLID LANE LINE
TI	YELLOW DOUBLE CENTER
THERMOPLASTIC(8", 120 MILS)	
TV	YELLOW DIAGONAL
TR	WHITE SOLID LANE LINE
THERMOPLASTIC(12", 90 MILS)	
TU	WHITE DIAGONAL LINE
THERMOPLASTIC(24", 90 MILS)	
UN	YIELD LINE TRIANGLE
THERMOPLASTIC(24", 120 MILS)	
T2	WHITE STOPBAR
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW
UB	RIGHT TURN ARROW
UC	STRAIGHT ARROW
UE	COMBO STRAIGHT/RIGHT ARROW
THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	
UI	ALPHANUMERIC CHAR.
MARKERS	
PERMANENT RAISED PAVEMENT MARKERS	
MA	YELLOW & YELLOW
MB	CRYSTAL & RED

ROADWAY STANDARD DRAWINGS

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 & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTION
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

GENERAL NOTES PAVEMENT MARKING

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
ALL ROADS	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) 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) REFER TO THE TRAFFIC SIGNAL DESIGN PLANS FOR STOP BAR INFORMATION.

GENERAL NOTES SIGNING

A) SIGNING FURNISHED BY THE STATE.

B) WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.

C) WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.

D) ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.

E) THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

DocuSigned by:

APPROVED: Ben Upshaw

DATE: 6/9/2017

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030459 BEN UPSHAW

DIVISION OF HIGHWAYS – STATE OF NORTH CAROLINA – DEPARTMENT OF TRANSPORTATION – DIVISION FIVE – DIVISION DESIGN UNIT

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PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	PMP-2

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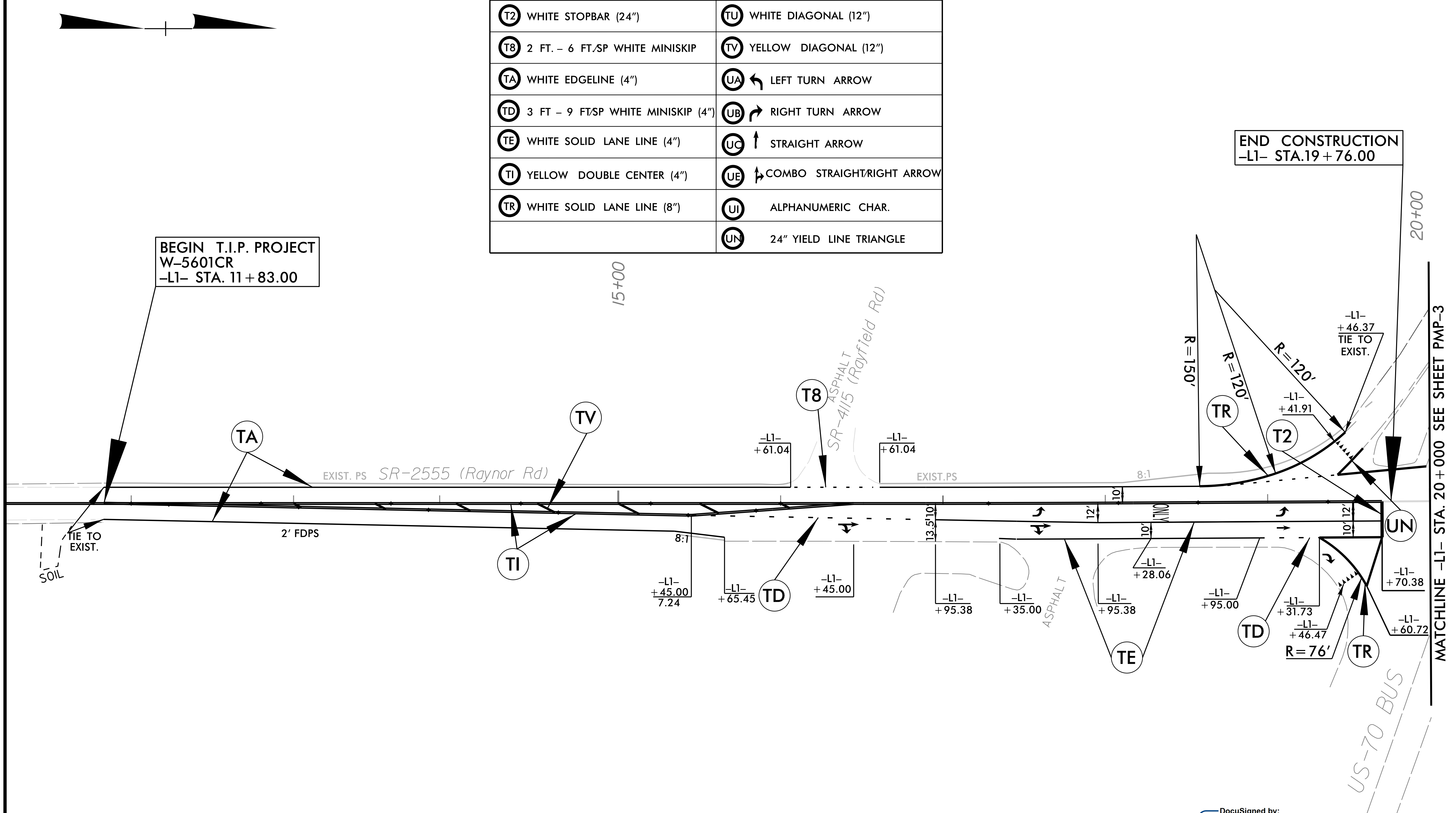
THERMOPLASTIC PAVEMENT MARKING LEGEND

(T2) WHITE STOPBAR (24")	(TU) WHITE DIAGONAL (12")
(T8) 2 FT. – 6 FT./SP WHITE MINISKIP	(TV) YELLOW DIAGONAL (12")
(TA) WHITE EDGELINE (4")	(UA) LEFT TURN ARROW
(TD) 3 FT – 9 FT/SP WHITE MINISKIP (4")	(UB) RIGHT TURN ARROW
(TE) WHITE SOLID LANE LINE (4")	(UC) STRAIGHT ARROW
(TI) YELLOW DOUBLE CENTER (4")	(UE) COMBO STRAIGHT/RIGHT ARROW
(TR) WHITE SOLID LANE LINE (8")	(UI) ALPHANUMERIC CHAR.
	(UN) 24" YIELD LINE TRIANGLE



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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030459 BEN UPSHAW

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — DIVISION DESIGN UNIT

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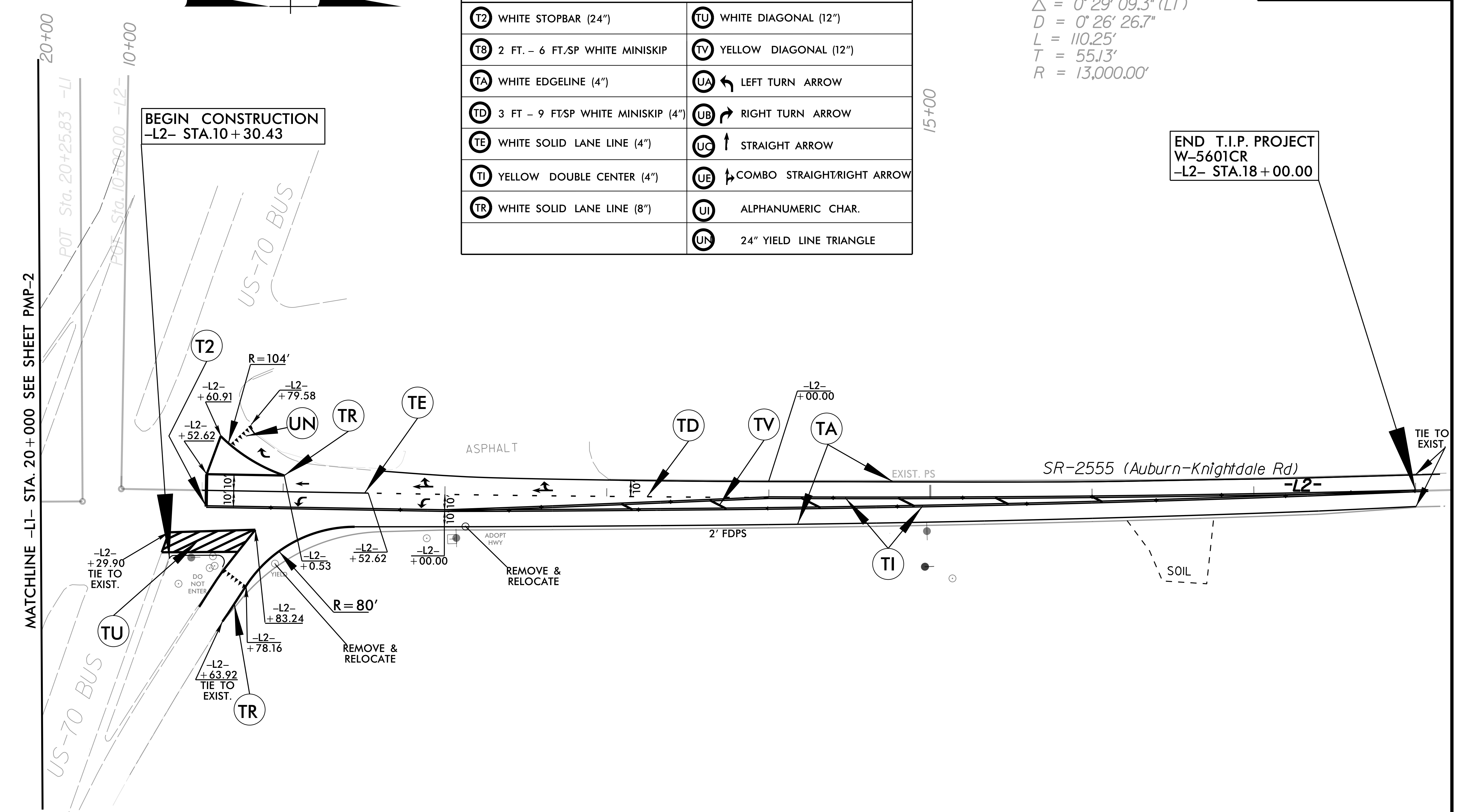
PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	PMP-3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

THERMOPLASTIC PAVEMENT MARKING LEGEND

(T2) WHITE STOPBAR (24")	(TU) WHITE DIAGONAL (12")
(T8) 2 FT. – 6 FT./SP WHITE MINISKIP	(TV) YELLOW DIAGONAL (12")
(TA) WHITE EDGELINE (4")	(UA) LEFT TURN ARROW
(TD) 3 FT – 9 FT/SP WHITE MINISKIP (4")	(UB) RIGHT TURN ARROW
(TE) WHITE SOLID LANE LINE (4")	(UC) STRAIGHT ARROW
(TI) YELLOW DOUBLE CENTER (4")	(UE) COMBO STRAIGHT/RIGHT ARROW
(TR) WHITE SOLID LANE LINE (8")	(UI) ALPHANUMERIC CHAR.
	(UN) 24" YIELD LINE TRIANGLE

-L2-
PI Sta 12+44.68
Δ = 0° 29′ 09.3″ (LT)
D = 0° 26′ 26.7″
L = 110.25′
T = 55.13′
R = 13,000.00′



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APPROVED: Ben Upshaw
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DATE: 6/9/2017

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030459 BEN UPSHAW

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — DIVISION DESIGN UNIT

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PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	EC-4

-L1-
PI Sta 17+53.33
△ = 0° 19' 57.1" (LT)
D = 0° 15' 37.6"
L = 127.69'
T = 63.84'
R = 22,000.00'

15+00

PC Sta. 16+89.49 -L1-

PT Sta. 18+17.17 -L1-

20+00

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

TEMP SILT FENCE

SR_2555(Raynor Rd)

N 1° 56' 24.5" E -L1-

N 1° 36' 27.4" E

TEMP SILT FENCE

INSTALL 50' OF SPECIAL SEDIMENT CONTROL FENCE AT LOW POINT

CONCRETE

ASPHALT

CB

DI

MATCHLINE -L1- STA. 20+000 SEE SHEET EC-5

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

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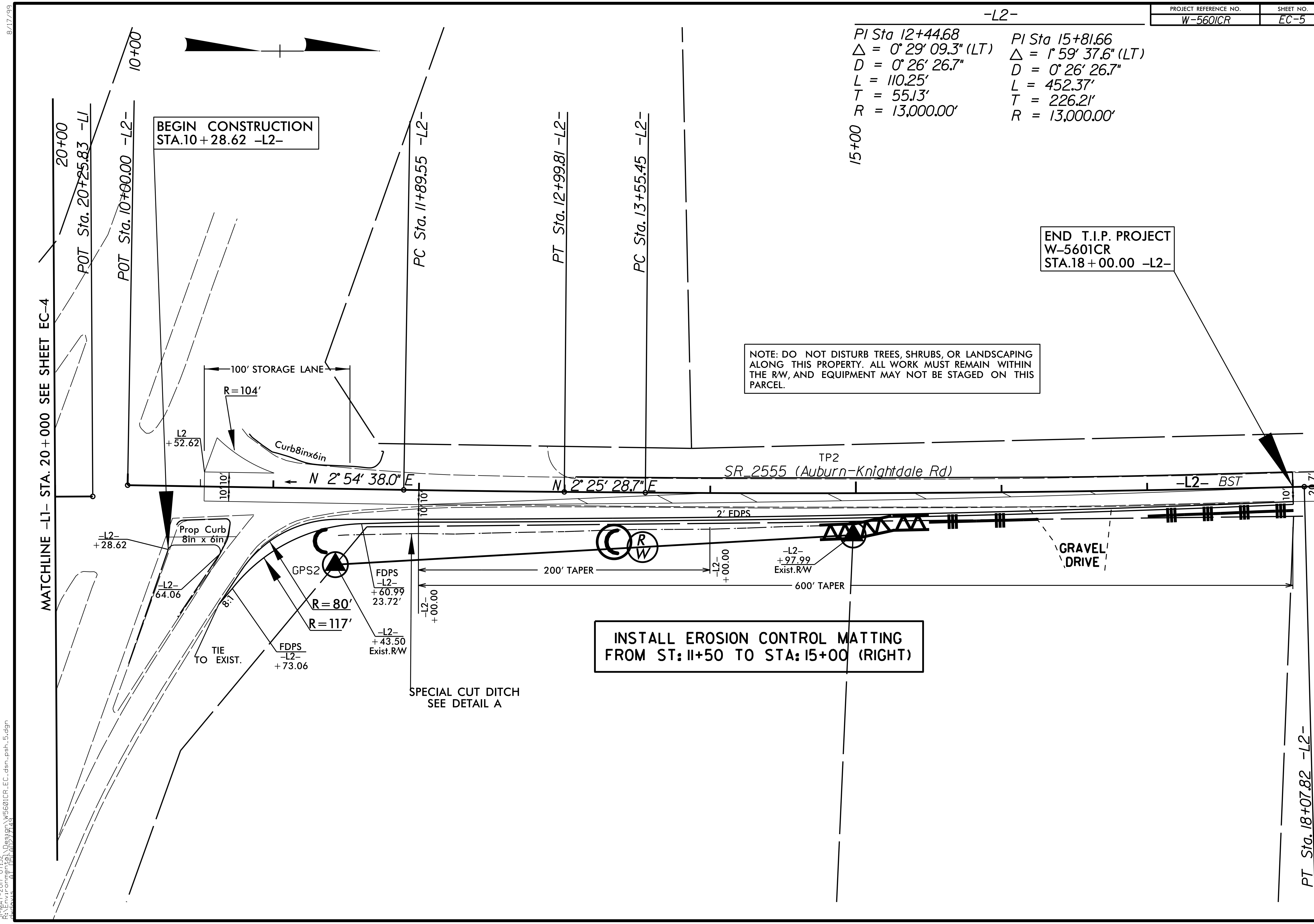

-L2-
PI Sta 12+44.68
△ = 0° 29' 09.3" (LT)
D = 0° 26' 26.7"
L = 110.25'
T = 55.13'
R = 13,000.00'
PI Sta 15+81.66
△ = 1° 59' 37.6" (LT)
D = 0° 26' 26.7"
L = 452.37'
T = 226.21'
R = 13,000.00'
BEGIN CONSTRUCTION
STA.10+28.62 -L2-
END T.I.P. PROJECT
W-5601CR
STA.18+00.00 -L2-
MATCHLINE -L1- STA. 20+000 SEE SHEET EC-4
POT Sta. 20+25.83 -L1
POT Sta. 10+00.00 -L2-
PC Sta. 11+89.55 -L2-
PT Sta. 12+99.81 -L2-
PC Sta. 13+55.45 -L2-
PT Sta. 18+07.82 -L2-
NOTE: DO NOT DISTURB TREES, SHRUBS, OR LANDSCAPING ALONG THIS PROPERTY. ALL WORK MUST REMAIN WITHIN THE R/W, AND EQUIPMENT MAY NOT BE STAGED ON THIS PARCEL.
100' STORAGE LANE
R=104'
Curb8inx6in
N 2° 54' 38.0" E
N 2° 25' 28.7" E
TP2
SR 2555 (Auburn-Knightdale Rd)
-L2- BST
2' FDPS
Prop Curb 8in x 6in
GPS2
R=80'
R=117'
FDPS -L2- +60.99 23.72'
-L2- +43.50 Exist.R/W
FDPS -L2- +73.06
TIE TO EXIST.
200' TAPER
600' TAPER
-L2- +97.99 Exist.R/W
GRAVEL DRIVE
INSTALL EROSION CONTROL MATTING FROM ST: 11+50 TO STA: 15+00 (RIGHT)
SPECIAL CUT DITCH SEE DETAIL A
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	Sig. 1

6 Phase
Fully Actuated
(US 70 Bus.-NC 42 Clayton CLS)

PHASING DIAGRAM

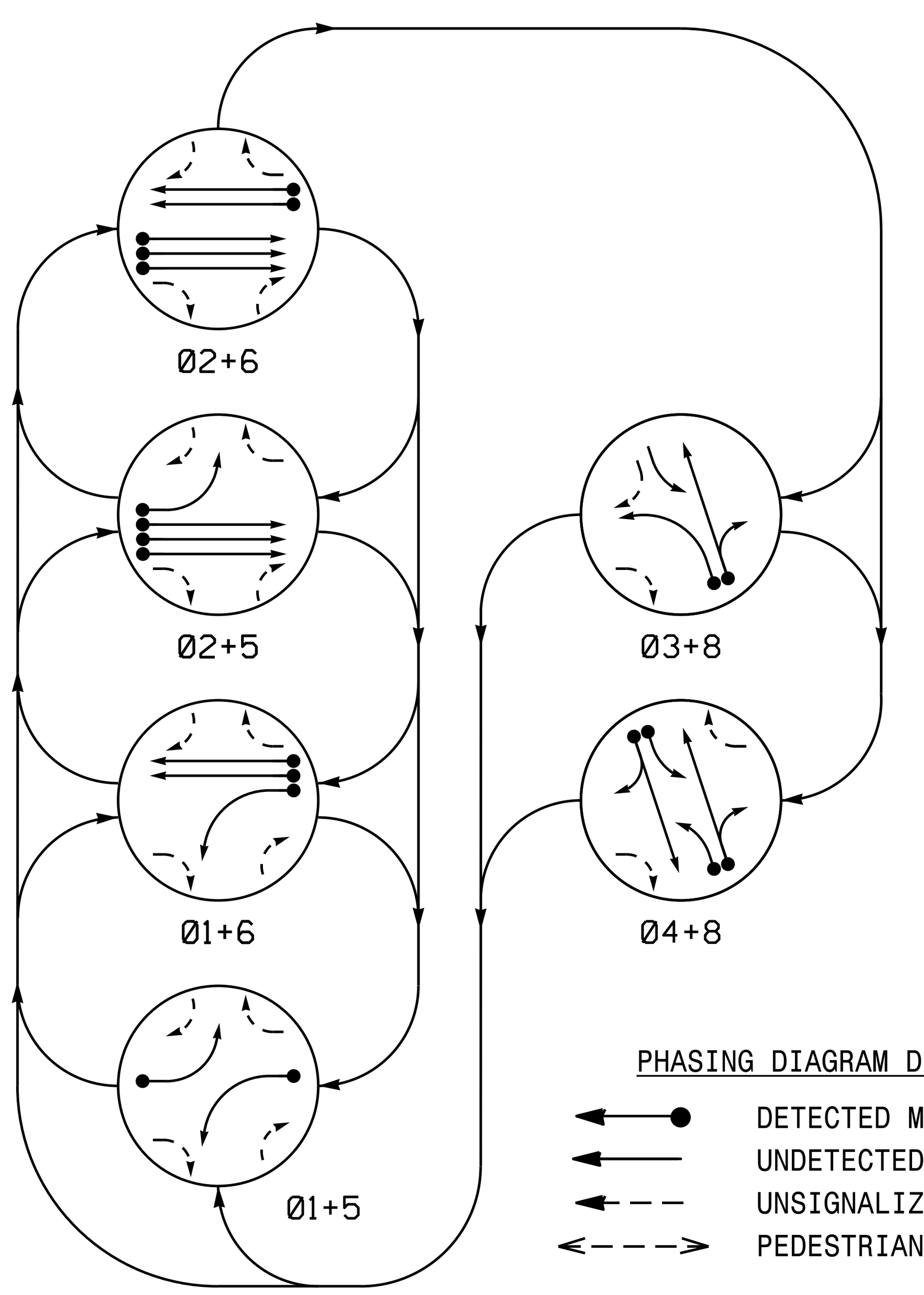
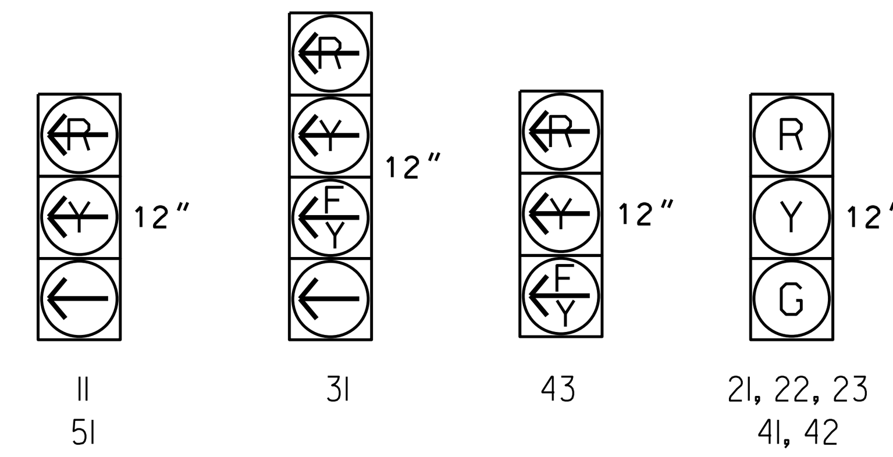


TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+8	Ø4+8	FLASH
11	←	←	←R	←R	←R	←R	←R
21, 22, 23	R	R	G	G	R	R	Y
31	←R	←R	←R	←R	←	←F/Y	←R
41, 42	R	R	R	R	R	G	R
43	←R	←R	←R	←R	←F/Y	←F/Y	←R
51	←	←R	←	←R	←R	←R	←R
61, 62	R	G	R	G	R	R	Y
81, 82	R	R	R	R	G	G	R

SIGNAL FACE I.D.

All heads L.E.D.

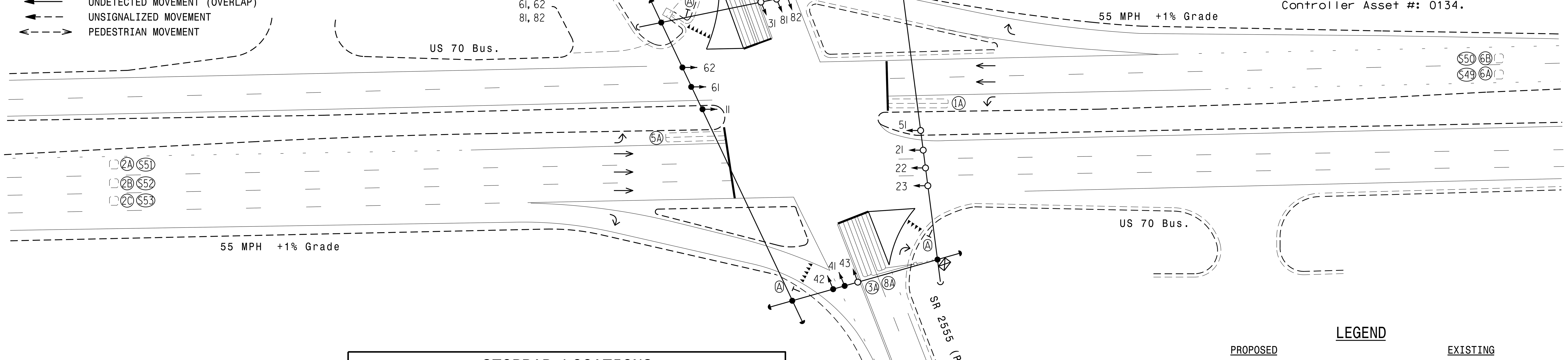


2070 LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
1A	6X40	0	2-4-2	-	1	Y	Y	-	——	——	-	Y
2A/S51	6X6	420	EXIST	-	2	Y	Y	-	——	——	Y	Y
2B/S52	6X6	420	EXIST	-	2	Y	Y	-	——	——	Y	Y
2C/S53	6X6	420	EXIST	-	2	Y	Y	-	——	——	Y	Y
3A	6X40	0	2-4-2	Y	3	Y	Y	-	——	15	-	Y
					8	Y	Y	-	——	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	——	3	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	——	——	-	Y
5A	6X40	0	2-4-2	-	5	Y	Y	-	——	——	-	Y
6A/S49	6X6	420	EXIST	-	6	Y	Y	-	——	——	Y	Y
6B/S50	6X6	420	EXIST	-	6	Y	Y	-	——	——	Y	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	——	——	-	Y

NOTES

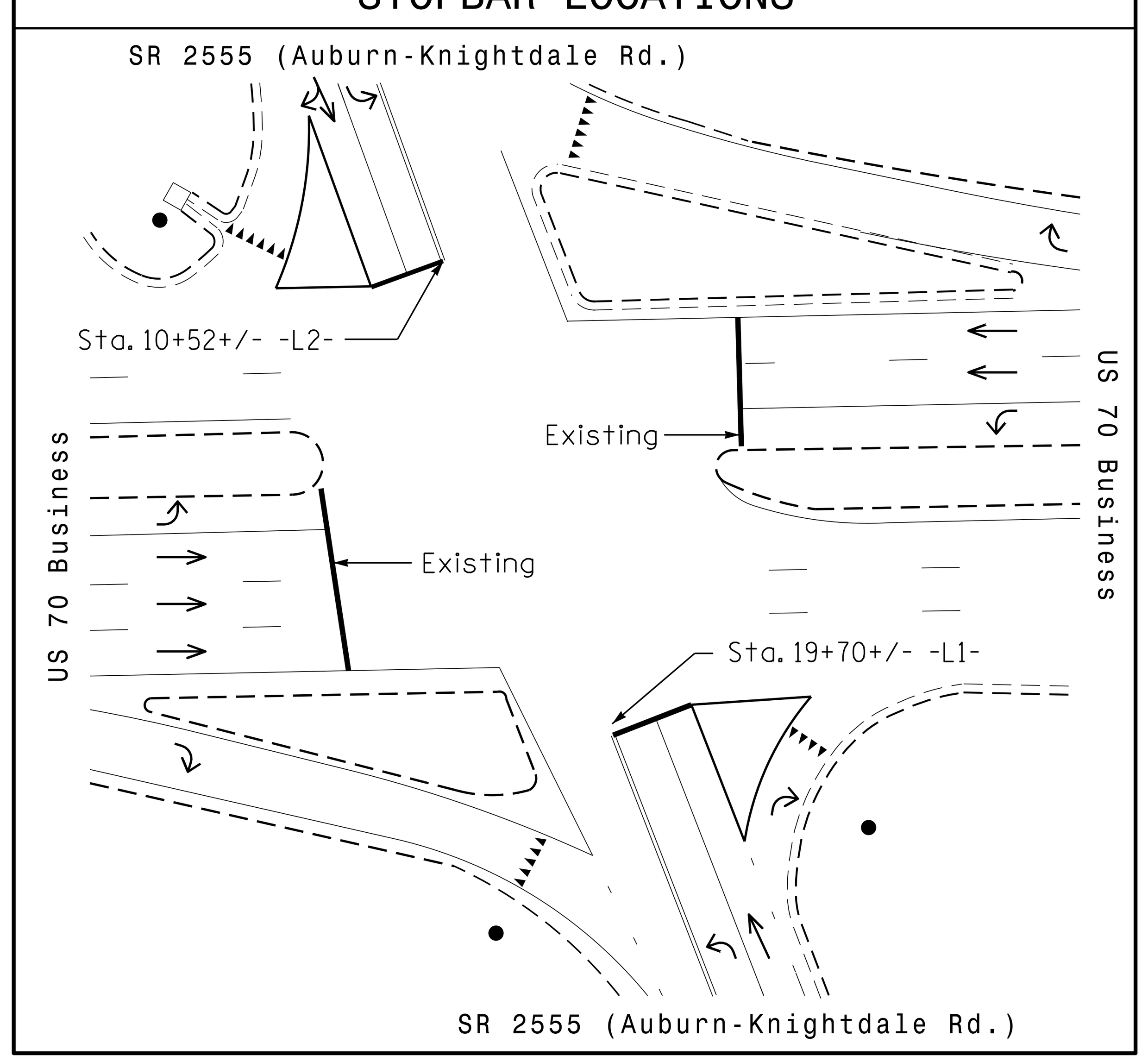
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 may be lagged.
5. Reposition existing signal heads numbered 41 and 42.
6. Set all detector units to presence mode.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Pavement markings are existing unless otherwise shown.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Closed loop system data:
    Controller Asset #: 0134.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ

STOPBAR LOCATIONS



OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	8
Min Green 1 *	7	14	7	7	7	14	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0
Max Green 1 *	20	100	25	35	20	100	35
Yellow Clearance	3.0	5.1	3.0	4.7	3.0	5.1	4.7
Red Clearance	2.8	1.1	3.3	1.7	2.3	1.2	1.7
Walk 1 *	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-
Max Variable Initial *	-	46	-	-	-	46	-
Time Before Reduction *	-	15	-	-	-	15	-
Time To Reduce *	-	30	-	-	-	30	-
Minimum Gap	-	3.4	-	-	-	3.4	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-
Dual Entry	-	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 70 Business
at
SR 2555 (Auburn-Knightdale Road/ Raynor Road)

Division 5 | Wake County | East of Garner

PLAN DATE: April 2016 | REVIEWED BY:
PREPARED BY: M.E.Giles | REVIEWED BY:

SCALE 0 40
1"=40'

REVISIONS | INIT. | DATE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL 026486
ENGINEER
ROBERT J. ZIEMBA

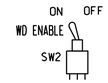
SIGNATURE 5/13/2016 DATE

SIG. INVENTORY NO. 05-0134

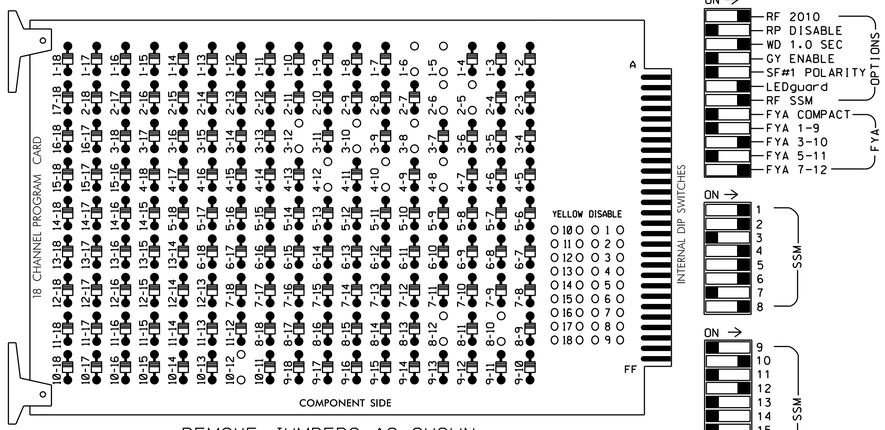
PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	Sig. 2

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 1-5, 1-6, 2-5, 2-6, 3-8, 3-10, 3-12, 4-8, 4-10, 4-12, 8-10, 8-12, and 10-12.



REMOVE JUMPERS AS SHOWN

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

■ = DENOTES POSITION OF SWITCH

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Program phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Start Up In Green.
6. Program phases 2 and 6 for Yellow Flash and overlap 2 as Wag Overlaps.
7. The cabinet and controller are part of the US 70 Bus.-NC 42 Clayton Closed Loop System.

EQUIPMENT INFORMATION

CONTROLLER.....2070
CABINET.....332 W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S1,S2,S4,S5,S7,S8,S11, AUX S2,AUX S5
PHASES USED.....1,2,3,4,5,6,8
OVERLAP "A".....NOT USED
OVERLAP "B".....3+4
OVERLAP "C".....NOT USED
OVERLAP "D".....8

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22 23	NU	31★	41,42	NU	51	61,62	NU	NU	81,82	NU	NU	31★	NU	NU	43★	NU
RED		128			101			134			107							
YELLOW		129		✳	102			135			108							
GREEN		130			103			136			109							
RED ARROW	125						131							A124			A101	
YELLOW ARROW	126						132							A125			A102	
FLASHING YELLOW ARROW														A126			A103	
GREEN ARROW	127			118			133											

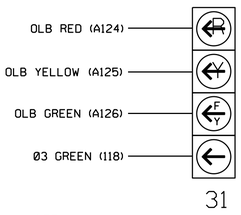
NU = Not Used

✳ Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail below.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

The sequence display for signal head 31 requires special logic programming. See sheet 2 for programming instructions.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø 1	Ø2/SYS	Ø2/SYS	SLOT EMPTY	Ø 3	Ø 4	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
		1A	2A/S51	2C/S53		3A	4A								
	L	NOT USED	Ø2/SYS 2B/S52	NOT USED		NOT USED	Ø 4 4B								ST DC ISOLATOR
FILE "J"	U	Ø 5	Ø6/SYS	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8	SLOT EMPTY	WIRED INPUT ⊗	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
		5A	6A/S49				8A								
	L	NOT USED	Ø6/SYS 6B/S50				NOT USED								

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	TB2-1,2	I1U	56	18	1	1	Y	Y			
2A/S51	TB2-5,6	I2U	39	1	2	2/SYS	Y	Y			
2B/S52	TB2-7,8	I2L	43	5	12	2/SYS	Y	Y			
2C/S53	TB2-9,10	I3U	63	25	32	2/SYS	Y	Y			
3A[1]	TB4-5,6	I5U	58	20	3	3	Y	Y			15
	-	J8U	50	12	28	8	Y	Y			3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			
6A/S49	TB3-5,6	J2U	40	2	6	6/SYS	Y	Y			
6B/S50	TB3-7,8	J2L	44	6	16	6/SYS	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			

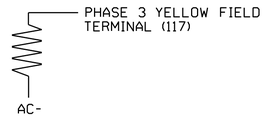
[1] Add jumper from I5-W to J8-W, on rear of input file.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown below)

ACCEPTABLE VALUES	
VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-0134
DESIGNED: April 2016
SEALED: 5/13/2016
REVISED: N/A

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signals Management Section

750 N.Greenfield Pkwy.Garner,NC 27529

US 70 Business
at
SR 2555 (Auburn-Knightdale Rd/ Raynor Road)

Division 5 | Wake County | East of Garner

PLAN DATE: May 2016 | REVIEWED BY: BAS

PREPARED BY: S. Armstrong | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MIMS

DocuSigned by: Keith M. Mims 5/18/2016
2F807B6E8CD34A5 DATE

SIG. INVENTORY NO. 05-0134

15-MAY-2016 07:57
S:\TTSGUM\TS signals\Workgroups\Sig Mgt\Armstrong\05013A_sm_ele_xxx.dgn
armstrong

PROJECT REFERENCE NO.	SHEET NO.
W-5601CR	Sig. 3

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL
TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, AND 3.

2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

```
  LOGICAL I/O COMMAND #1  (+/-COMMAND#)
IF  ACTIVE PHASE       #3  IS ON
AND RED CLEAR ON PHASE #3  IS ON

            SCROLL DOWN

 THEN:
 SET OUTPUT  ASSIGNMENT #47 ON
 SET OUTPUT  ASSIGNMENT #48 OFF
```

NOTE: LOGIC FOR PHASE 3 RED CLEAR WHEN TRANSITIONING FROM PHASE 3 TO PHASE 4 (HEAD 31).

PRESS '+'

```
  LOGICAL I/O COMMAND #2  (+/-COMMAND#)
IF  ACTIVE PHASE       #3  IS ON

            SCROLL DOWN

 THEN:
 SET OUTPUT  ASSIGNMENT #49 OFF
```

NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 3 (HEAD 31).

PRESS '+'

```
  LOGICAL I/O COMMAND #3  (+/-COMMAND#)
IF  YELLOW ON PHASE    #3  IS ON

            SCROLL DOWN

 THEN:
 SET OUTPUT  ASSIGNMENT #48 ON
```

NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 3 (HEAD 31).

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

OUTPUT REFERENCE SCHEDULE

OUTPUT 47 = Overlap B Red
OUTPUT 48 = Overlap B Yellow
OUTPUT 49 = Overlap B Green

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

PRESS '+'

```
 PAGE 1: VEHICLE OVERLAP 'B' SETTINGS
 PHASE:          |1234567891011121314151 6
VEH OVL PARENTS: |  XX
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR: _ RED  _ YELLOW  _ GREEN
FLASH COLORS:  _ RED  _ YELLOW  X GREEN
SELECT VEHICLE OVERLAP OPTIONS:   (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).........0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
```

← NOTICE GREEN FLASH

PRESS '+' TWICE

```
 PAGE 1: VEHICLE OVERLAP 'D' SETTINGS
 PHASE:          |1234567891011121314151 6
VEH OVL PARENTS: |        X
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR: _ RED  _ YELLOW  _ GREEN
FLASH COLORS:  _ RED  _ YELLOW  X GREEN
SELECT VEHICLE OVERLAP OPTIONS:   (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).........0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
```

← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

1. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
2. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
3. REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-0134
DESIGNED: April 2016
SEALED: 5/13/2016
REVISED: N/A

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section

750 N.Greenfield Pkwy,Garner,NC 27529

US 70 Business
at
SR 2555 (Auburn-Knightdale Rd/ Raynor Road)

Division 5 | Wake County | East of Garner

PLAN DATE:	May 2016	REVIEWED BY:	BAS
PREPARED BY:	S. Armstrong	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MIMS

DocuSigned by: Keith M. Mims 5/18/2016
2F80786E8CD34A5...

DATE

SIG. INVENTORY NO. 05-0134

18-MAY-2016 10:58
S:*ITSASU#\ITS Signals\Workgroups\Sig Mon\Armstrong\050134_smele_xxx.dgn
sarmstrong

PROJ. REFERENCE NO.	SHEET NO.
W-5601CR	X-1A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

CROSS-SECTION SUMMARY

Station L1	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
12+00	0	0
12+25	1	2
12+50	1	1
12+75	1	1
13+00	1	2
13+25	1	3
13+50	1	3
13+75	1	3
14+00	1	3
14+25	1	4
14+50	1	3
14+75	2	1
15+00	3	1
15+25	3	1
15+50	3	0
TOTAL=	21	28

Station L1	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
18+50	1	1
18+75	1	1
19+00	1	2
19+25	3	1
TOTAL=	6	5

Station L2	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
11+25	0	0
11+50	4	2
11+75	30	2
12+00	48	0
12+25	37	0
12+50	27	1
12+75	18	1
13+00	13	0
13+25	11	0
13+50	8	1
13+75	8	1
14+00	8	1
14+25	7	0
14+50	8	0
14+75	8	0
15+00	8	0
15+25	6	0
15+50	6	0
15+75	6	0
16+00	5	0
16+25	5	0
16+50	4	0
16+75	3	0
1700	3	0
1725	3	0
1750	3	0
1775	3	0
1800	3	0
TOTAL=	293	9

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5601CR	X-1

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

335 330 325

0.006 0.010 2:1

329.95

14+50.00

0.006 0.006 2:1

329.89

14+00.00

0.007 0.008 2:1

329.94

13+50.00

0.007 0.009 2:1

329.97

13+00.00

0.007 0.008 2:1

330.34

12+50.00

0.007 0.007 2:1

330.88

12+00.00

BEGIN T.I.P. PROJECT
W-5601CR -L1- STA.11+83.00

331.41

11+50.00

-L1-

08-JUN-2017 12:54
R:\Roadway\Corridor Modeling\W5601CR_Rdy_xpl_L1.dgn
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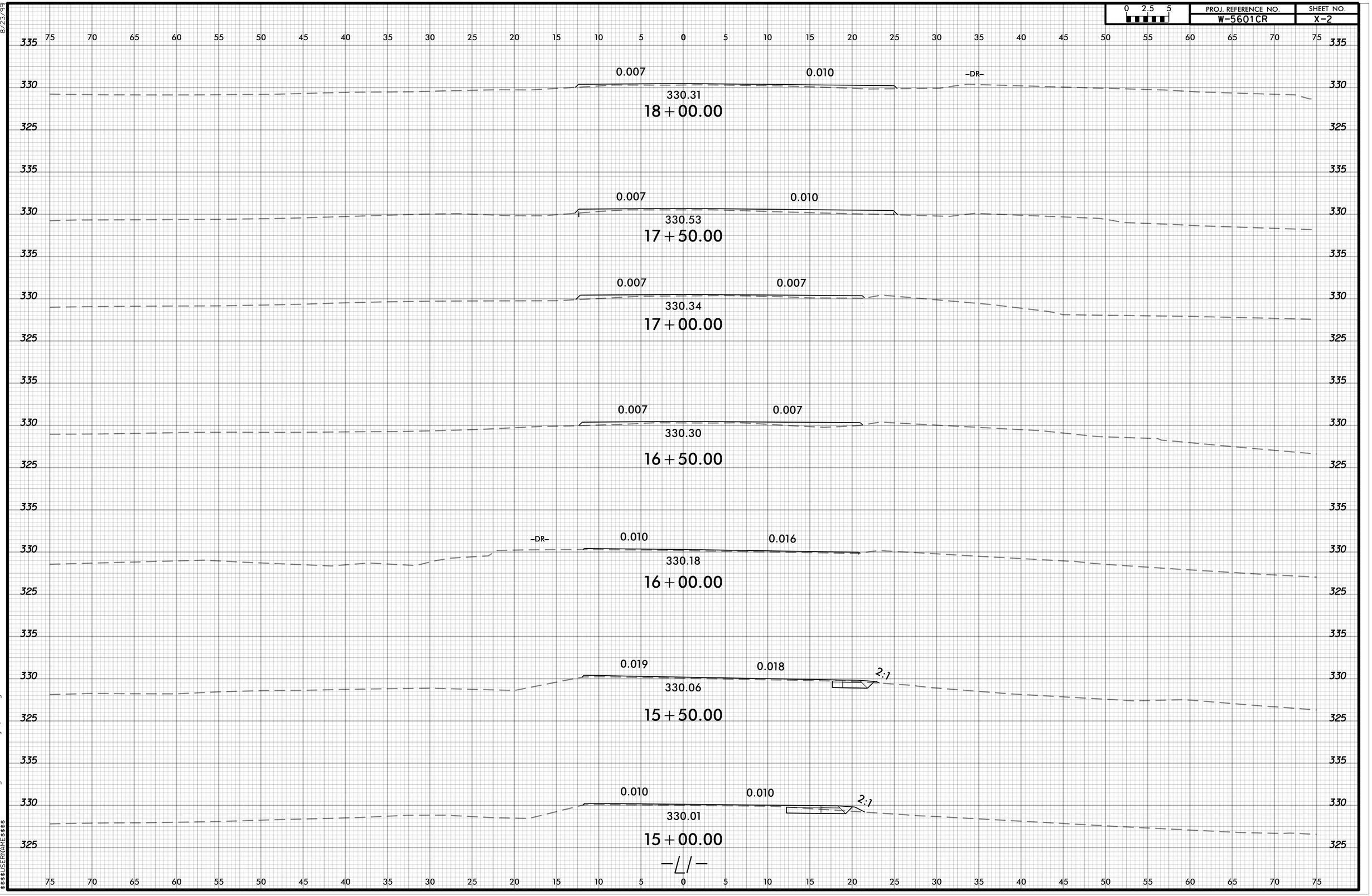


8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5601CR	X-3

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

END CONSTRUCTION
–L1– STA.19+76.00

335
330
325

0.005 0.014
328.56
19+50.00

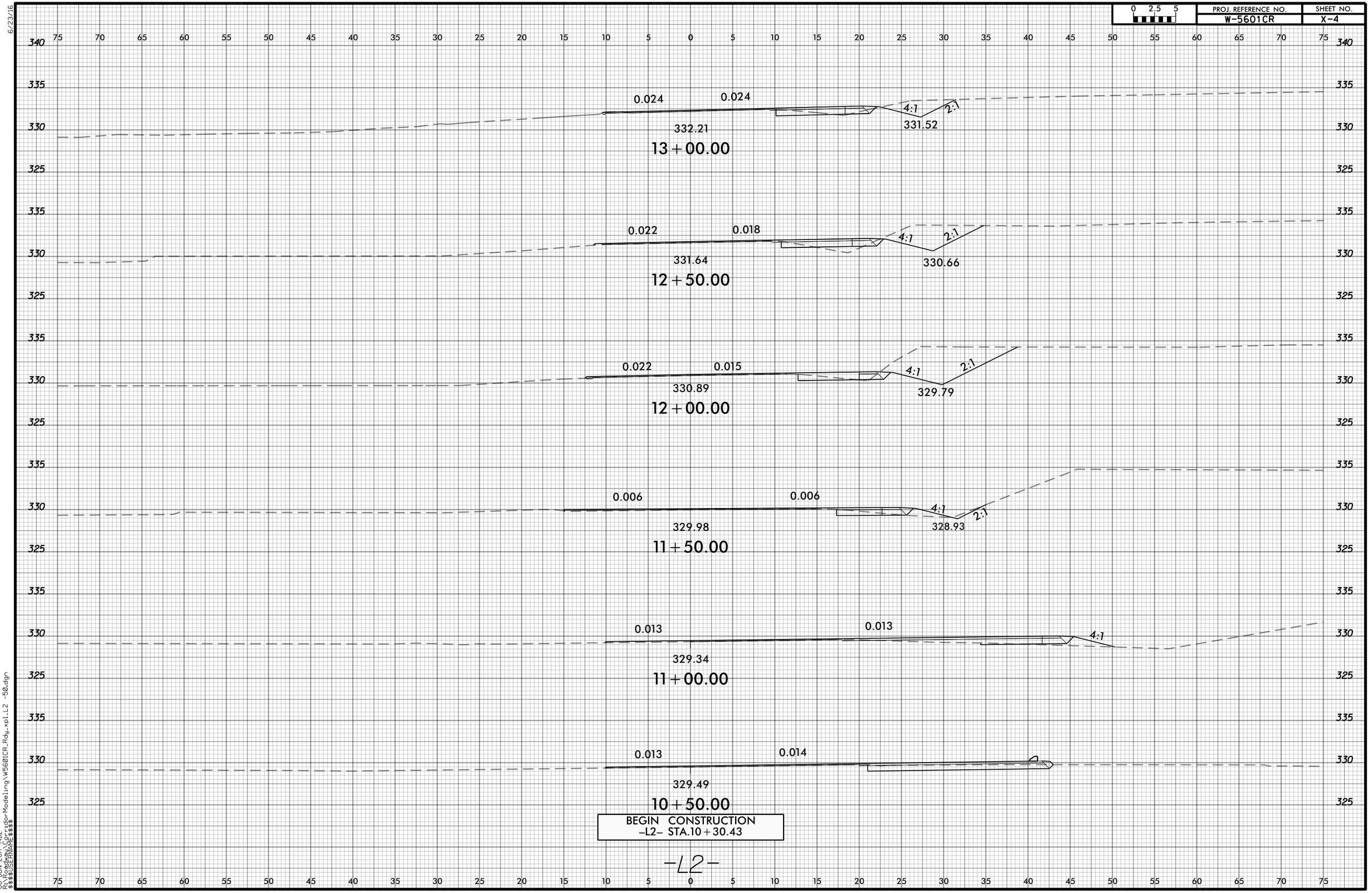
4:1
0.01 0.020
329.34
19+00.00

4:1
0.020 0.010
329.97
18+50.00

–L1–

08-JUN-2017 14:12
R:\Roadway\Corridor Modeling\W5601CR_Rdy_xpl_L1.dgn
$$$$USERNAME$$$$

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5601CR	X-4



6/23/16

0 2,5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5601CR	X-5

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

340 / 335 / 330

0.003 0.001

337.34

16+00.00

340 / 335 / 330

0.005 0.002

336.24

15+50.00

340 / 335 / 330

0.008 0.008

4:1 2:1

335.18

334.62

15+00.00

340 / 335 / 330

0.008 0.008

4:1 2:1

334.30

333.69

14+50.00

340 / 335 / 330

0.010 0.010

4:1 2:1

333.59

332.76

14+00.00

340 / 335 / 330

0.011 0.011

4:1 2:1

332.95

332.22

13+50.00

-L2-

325

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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R:\Roadway\Corridor Modeling\W5601CR_Rdy_xpl_L2 -50.dgn
$$$$USERNAME$$$$

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5601CR	X-6

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

END CONSTRUCTION
–L2– STA.18+00

350
345
340

0.008 0.013 2:1

342.71

18+00.00

345
340
335

0.007 0.004

341.50

17+50.00

345
340
335

0.004 0.007 2:1

340.12

17+00.00

345
340
335

0.007 0.003

338.63

16+50.00

330

–L2–

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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R:\Roadway\Corridor Modeling\W5601CR_Rdy_xpl_L2 -50.dgn
$$$$USERNAME$$$$