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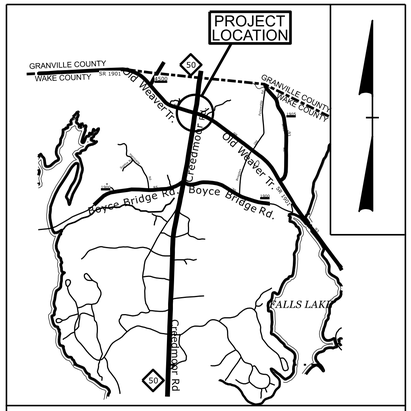
01/16/24

TIP PROJECT: HL-0121

CONTRACT: DE00382



VICINITY MAP (NTS)

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

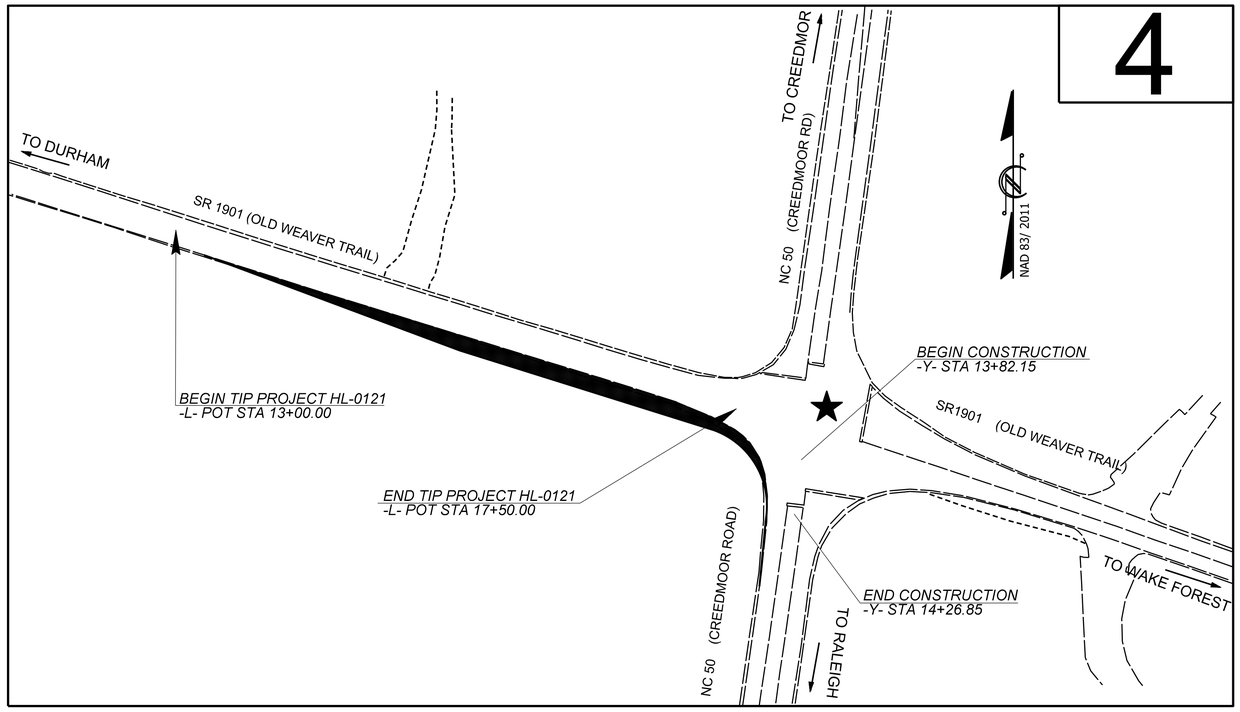
WAKE COUNTY

LOCATION: *SR 1901 (OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR ROAD)*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE, AND SIGNALS.*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HL-0121	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50788.1.1	5078801	PE
50788.2.1	5078801	ROW
50788.2.2	5078801	UTILITY
50788.3.1	5078801	CONSTRUCTION



NOTES:

NONE OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF TOWN OR CITY

NO CONTROL OF ACCESS AT THIS FACILITY

★ UPGRADE SIGNAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

40 20 0 40 80
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2025 = 7556
ADT 2045 = 11230
K = 10%
D = 55%
T = 3%
V = 60 MPH
* TTST = 1% DUAL 2%
FUNC CLASS =MINOR COLLECTOR

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT HL-0121 = 0.085 MILES

TOTAL LENGTH OF TIP PROJECT HL-0121 = 0.085 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 27, 2025

LETTING DATE: FEBRUARY 11, 2026

VICTOR M. CHAVEZ, PE
PROJECT MANAGER/ENGINEER

JOHN W. BRAXTON Jr
DM · STIP ENGINEER

HYDRAULICS ENGINEER

DocuSigned by:
Michelle Berry, PE P.E.
SIGNATURE:

NORTH CAROLINA PROFESSIONAL SEAL 046593 ENGINEER MICHELLE G BERRY

ROADWAY DESIGN ENGINEER

DocuSigned by:
Victor Chavez
7CD1F54298E940A... P.E.
SIGNATURE:

01/29/2026

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
FIFTH DIVISION
BECCA J. GALLAS, P.E.
DIVISION ENGINEER

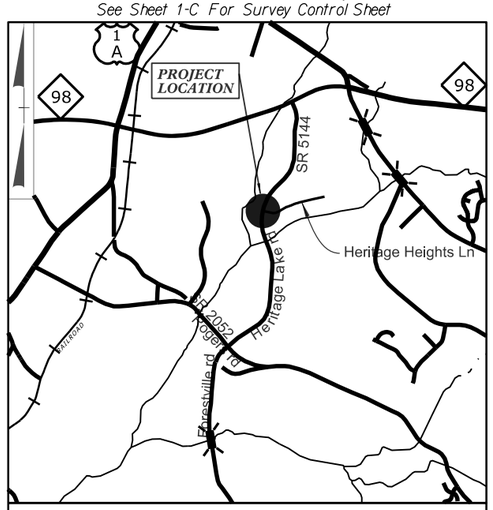
STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

09/08/99

TIP PROJECT: HS-2405Q

CONTRACT: DE00382

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



VICINITY MAP SHOWING
LOCATION OF PROJECT HS-2405Q

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HS-2405Q	1	

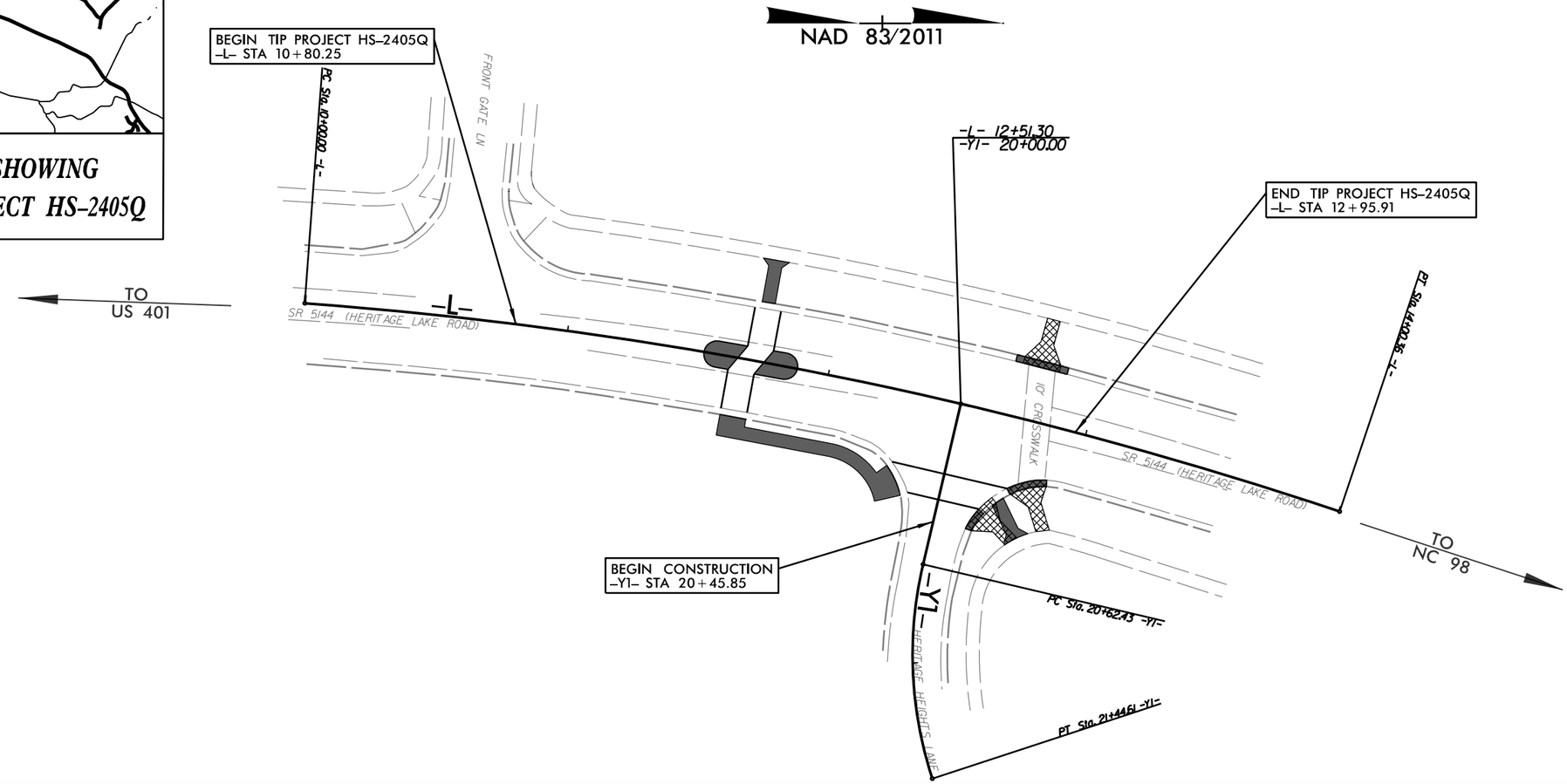
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50977.1.18		PE
50977.2.18		R /W
50977.2.36		UTIL.
50977.3.18	5097718	CONST.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: SR 5144 (HERITAGE LAKE ROAD) AT HERITAGE HEIGHTS LANE

TYPE OF WORK: GRADING, SIDEWALK AND CONCRETE ISLAND

NAD 83/2011



GRAPHIC SCALES

20 10 0 20 40
PLANS

DESIGN DATA

ADT 2026 = 16,450
ADT 2046 = 24,300

V = 40 MPH

FUNC CLASS = MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY PROJECT HS-2405Q = 0.041 MILES

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

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NA

LETTING DATE:
MARCH 11, 2026

MATTHEW NOLFO, PE
PROJECT ENGINEER

SUNIL PATEL
PROJECT DESIGN ENGINEER

DIVISION DESIGN ENGINEER
ROADWAY DESIGN
01/30/2026

NORTH CAROLINA PROFESSIONAL SEAL 058695 ENGINEER MATTHEW NOLFO

Signed by:
Matthew Nolfo, PE
SIGNATURE
5F550057278F42E...

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
FIFTH DIVISION
BECCA GALLAS, P.E.
DIVISION ENGINEER

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

29-JAN-2026 18:25
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sjpatel AT DIV05-346(93)

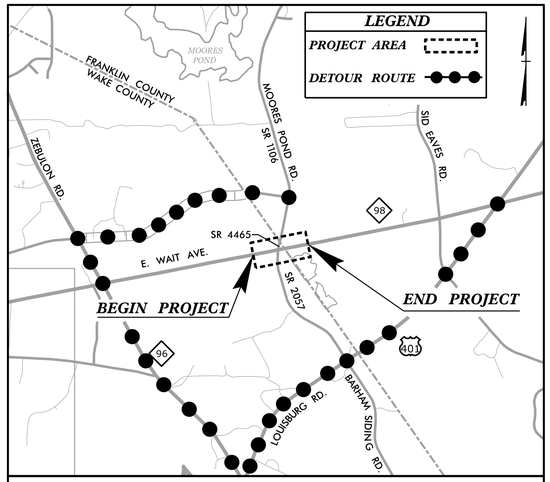
Docusign Envelope ID: D1DAFF17-0B86-4DBD-8BAE-19447BF4A3D5

09/08/99

TIP PROJECT: W-5805E

CONTRACT: DE00382

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



VICINITY MAP NTS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY & FRANKLIN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5805E	1	

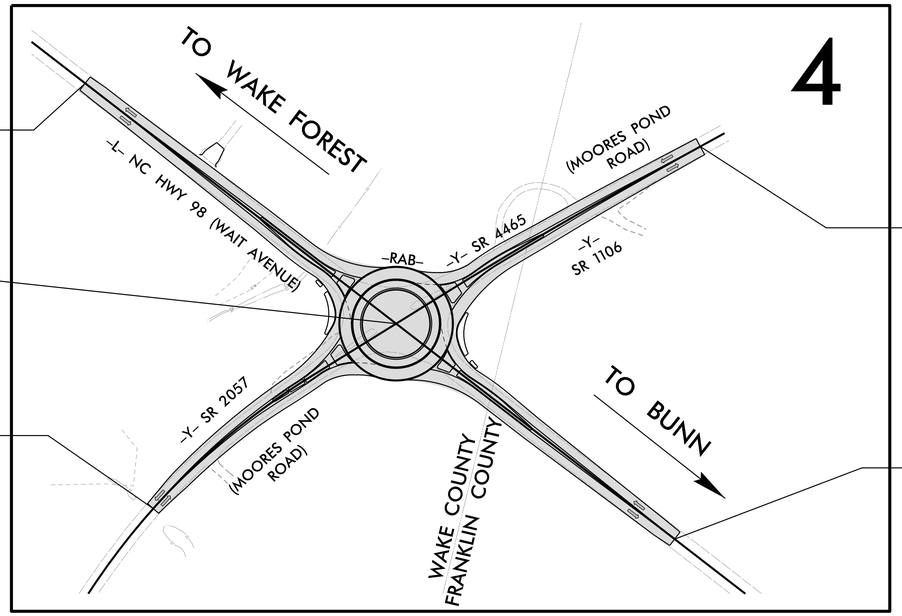
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
48950.1.6	0098038	PE
48950.2.6	0098038	ROW
48950.3.6	0098038	CONST
48950.2.10	0098038	UTL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: *NC 98 AND SR 2057 / SR 4465 / SR 1106 (MOORES POND ROAD)*

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

NAD 83/NA 2011



BEGIN PROJECT W-5805E
-L- STA. 12+60.00

-L- POT STA. 17+79.03 =
-Y- POT STA. 16+04.31

BEGIN CONSTRUCTION
-Y- STA. 11+99.31

END CONSTRUCTION
-Y- STA. 20+69.31

END PROJECT W-5805E
-L- STA. 22+44.03

GRAPHIC SCALES

PLANS: 40 20 0 40 80

PROFILE (HORIZONTAL): 40 20 0 40 80

PROFILE (VERTICAL): 8 4 0 8 16

DESIGN DATA

-L- NC 98
ADT 2026 = 9,100
ADT 2046 = 16,300

-Y- SR 2057
ADT 2026 = 2,100
ADT 2046 = 3,800

V = 60 MPH -L- & -Y-
25 MPH -RAB-

FUNCTIONAL CLASS:
-L- = MINOR ARTERIAL
-Y- = MAJOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY PROJECT W-5805E = 0.186 MILES

NCDOT CONTACT: MATTHEW NOLFO, PE
DIVISION 5 /Division Design Construction Engineer

Prepared in the Office of:

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
PHONE: 919-872-5115
www.drmp.com | NC License No. F-1524

2024 STANDARD SPECIFICATIONS

APRIL 19, 2023
RIGHT OF WAY DATE:
MARCH 11, 2026
LETTING DATE:

KAYLA M. POULOS, PE
PROJECT ENGINEER

HERB L. RIDGEWAY IV
PROJECT DESIGNER

HYDRAULICS ENGINEER

NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY:
FORREST N. BROOKS
055416 ON 05-28-2024
THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.

NORTH CAROLINA PROFESSIONAL SEAL 044113 ENGINEER RYAN P. MITCHELL

Signed by: Ryan P. Mitchell
SIGNATURE: 1/30/2026

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

Signed by: Kayla M. Poulos
SIGNATURE: 1/30/2026

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

1/30/2026
...\Proj\W5805E_Rdy_tsh.dgn
User: mlindsey

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A–1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
3B–1	ROADWAY SUMMARY OF MILLING, EARTHWORK & GUARDRAIL
3G–1	GEOTECHNICAL SUMMARY
4 THRU 6	PLAN AND PROFILE SHEET
RW–01 THRU RW–04	SURVEY CONTROL SHEETS
TMP–1 THRU TMP–3	TRANSPORTATION MANAGEMENT PLANS
PMP–1 THRU PMP–2	PAVEMENT MARKING PLANS
EC–1 THRU EC–5	EROSION CONTROL PLANS
SIGN–1 THRU SIGN–3	SIGNING PLANS
SIG1.0 THRU SIG2.3	SIGNAL PLANS
UO–1 THRU UO–2	UTILITY BY OTHERS PLANS
X–1 THRU X–4	CROSS–SECTIONS

EFF. 01–16–2024
REV.

2024 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, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 – EARTHWORK	
200.03	Method of Clearing – Method III
225.02	Guide for Grading Subgrade – Secondary and Local
225.04	Method of Obtaining Superelevation – Two Lane Pavement
DIVISION 5 – SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction – High Side of Superelevated Curve – Method I
DIVISION 6 – ASPHALT, BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 – INCIDENTALS	
806.01	Concrete Right–of–Way Marker
806.02	Granite Right–of–Way Marker
815.02	Subsurface Drain
862.01	Guardrail Placement
862.02	Guardrail Installation

GENERAL NOTES: 2024 SPECIFICATIONS

EFFECTIVE: 01–16–2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE–IN.

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

GUARDRAIL:

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

TEMPORARY SHORING

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE WAKE ENERGY MC (POWER), ATT DISTRIBUTION, FRONTIER COMMUNICATIONS, CHARTER COMMUNICATIONS AND RALEIGH UTILITY (WATER).

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.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HL–0121
SHEET 1A

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR HUGO CHAVEZ
12/3/2026
Victor Chavez
7CD1F5429BE840A...
ROADWAY ENGINEER

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
HS-2405Q	1A

ROADWAY DESIGN ENGINEER
01/30/2026

NORTH CAROLINA PROFESSIONAL SEAL 058695 ENGINEER

Signed by: Matthew Dalla PE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SHEET INDEX

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C	SURVEY CONTROL SHEET
4	PLAN SHEET
TMP-1 THRU TMP-4	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING & SIGNING PLANS
SIG-1	RRFB (RECTANGULAR RAPID FLASHING BEACON) DETAIL

ROADWAY STANDARD DRAWINGS

EFF. 01-16-2024
REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.06	Curb Ramp
852.01	Concrete Islands
DIVISION 17 - SIGNALS AND TRAFFIC MANAGEMENT SYSTEMS	
1743.04	Pedestals - Foundations

GENERAL NOTES

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE BRIGHTSPEED, CHARTER,

VERIZON, NC EMC, TING FIBER, ENBRIDGE GAS OF NC, AND CITY OF RALEIGH.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

CURB RAMPS

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

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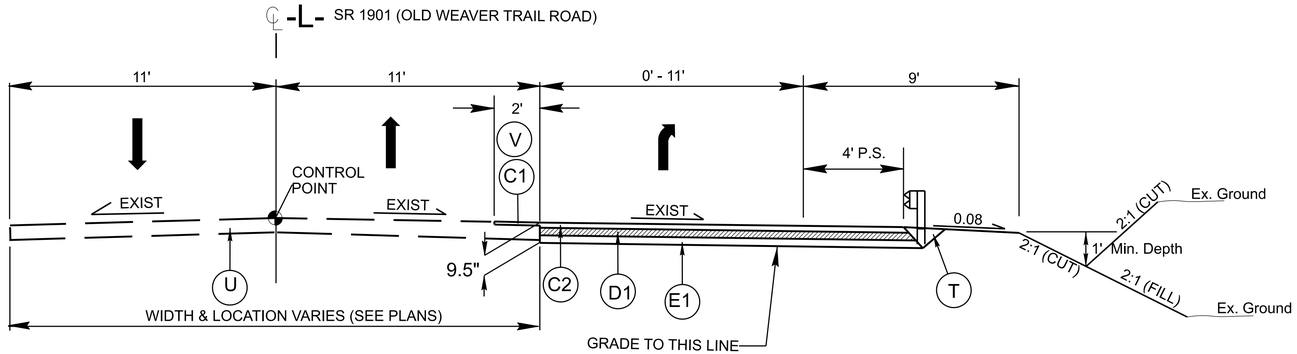
11/14/23

PAVEMENT SCHEDULE

FINAL PAVEMENT DESIGN

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	T	EARTH MATERIAL.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	U	EXISTING PAVEMENT.
D1	APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COUSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	V	MILLING, 1.5" DEPTH
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.		

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



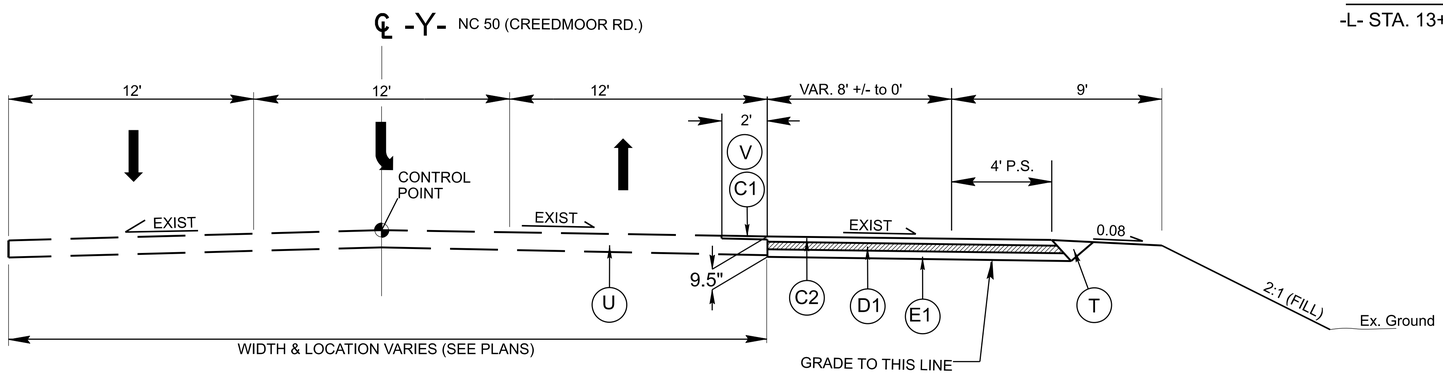
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

-L- STA. 13+00.00 TO STA. 17+50.00, RT. SIDE

USE CUT DITCH DETAIL

-L- STA. 13+75.00 TO STA. 15+95.00, RT. SIDE



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-Y- STA. 13+82.15 TO STA. 14+26.85, RT. SIDE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HL-0121

SHEET | 2A-1

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER

01/30/2026

DocuSigned by: Victor Chavez 7CD1E54298E940A...

ROADWAY ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER

01/30/2026

DocuSigned by: Victor Chavez 7CD1E54298E940A...

PAVEMENT ENGINEER

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
HS-24050	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Existing Concrete Monument (ECM)
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Existing Historic Property Boundary
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line
- Existing Control of Access Line
- Proposed Control of Access Line
- Proposed ROW and CA Line
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Drainage/Utility Easement
- Proposed Permanent Utility Easement
- Proposed Temporary Utility Easement
- Proposed Aerial Utility Easement

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Curb Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)*
- U/G Power Line (SUE – LOS C)*
- U/G Power Line (SUE – LOS D)*

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Pedestal
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)*
- U/G Telephone Cable (SUE – LOS C)*
- U/G Telephone Cable (SUE – LOS D)*
- U/G Telephone Conduit (SUE – LOS B)*
- U/G Telephone Conduit (SUE – LOS C)*
- U/G Telephone Conduit (SUE – LOS D)*
- U/G Fiber Optics Cable (SUE – LOS B)*
- U/G Fiber Optics Cable (SUE – LOS C)*
- U/G Fiber Optics Cable (SUE – LOS D)*

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)*
- U/G Water Line (SUE – LOS C)*
- U/G Water Line (SUE – LOS D)*
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)*
- U/G TV Cable (SUE – LOS C)*
- U/G TV Cable (SUE – LOS D)*
- U/G Fiber Optic Cable (SUE – LOS B)*
- U/G Fiber Optic Cable (SUE – LOS C)*
- U/G Fiber Optic Cable (SUE – LOS D)*

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)*
- U/G Gas Line (SUE – LOS C)*
- U/G Gas Line (SUE – LOS D)*
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

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

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown U/G Line (SUE – LOS B)*
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP) — EIP
- Computed Property Corner
- Existing Concrete Monument (ECM) — 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:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW 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

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:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H–Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)* — P
- U/G Power Line (SUE – LOS C)* — P
- U/G Power Line (SUE – LOS D)* — 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 Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)* — T
- U/G Telephone Cable (SUE – LOS C)* — T
- U/G Telephone Cable (SUE – LOS D)* — T
- U/G Telephone Conduit (SUE – LOS B)* — TC
- U/G Telephone Conduit (SUE – LOS C)* — TC
- U/G Telephone Conduit (SUE – LOS D)* — TC
- U/G Fiber Optics Cable (SUE – LOS B)* — T FO
- U/G Fiber Optics Cable (SUE – LOS C)* — T FO
- U/G Fiber Optics Cable (SUE – LOS D)* — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)* — W
- U/G Water Line (SUE – LOS C)* — W
- U/G Water Line (SUE – LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)* — TV
- U/G TV Cable (SUE – LOS C)* — TV
- U/G TV Cable (SUE – LOS D)* — TV
- U/G Fiber Optic Cable (SUE – LOS B)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS C)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS D)* — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)* — G
- U/G Gas Line (SUE – LOS C)* — G
- U/G Gas Line (SUE – LOS D)* — 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 Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)* — FSS
- SS Force Main Line (SUE – LOS C)* — FSS
- SS Force Main Line (SUE – LOS D)* — FSS

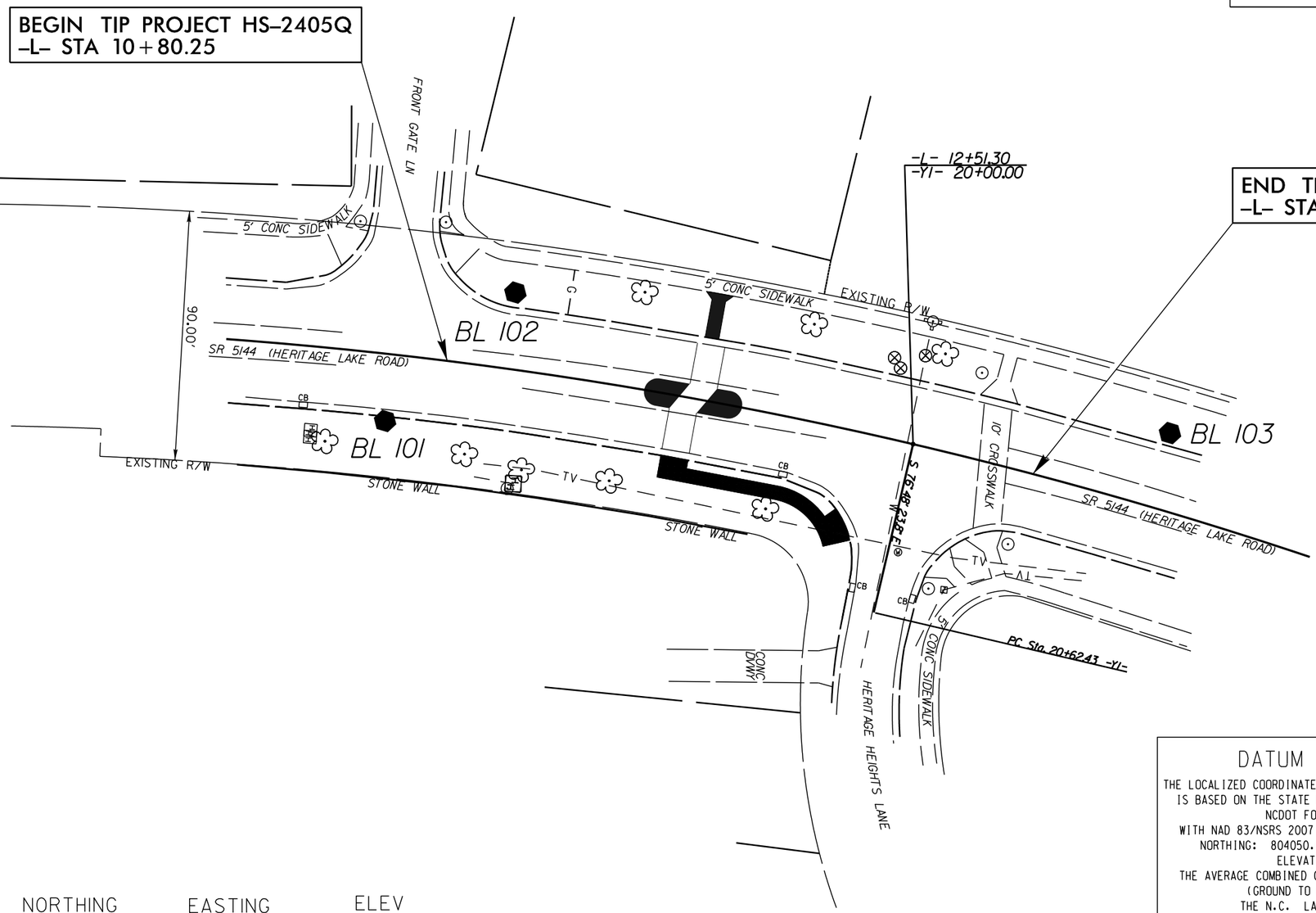
MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line (SUE – LOS B)* — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

SURVEY CONTROL SHEET

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
NC	HS-2405Q	1C	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION



POINT	NORTHING	EASTING	ELEV
BL 101	804003.58	2147537.22	258.26
BL 102	804050.68	2147490.87	260.43
BL 103	804287.14	2147541.59	264.10

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL102"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 804050.68 FT EASTING: 2147490.87 FT
ELEVATION: 260.43 FEET
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988804
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL102" TO -L- STATION 10+80.25 IS
S45°01'01"E 34.84'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

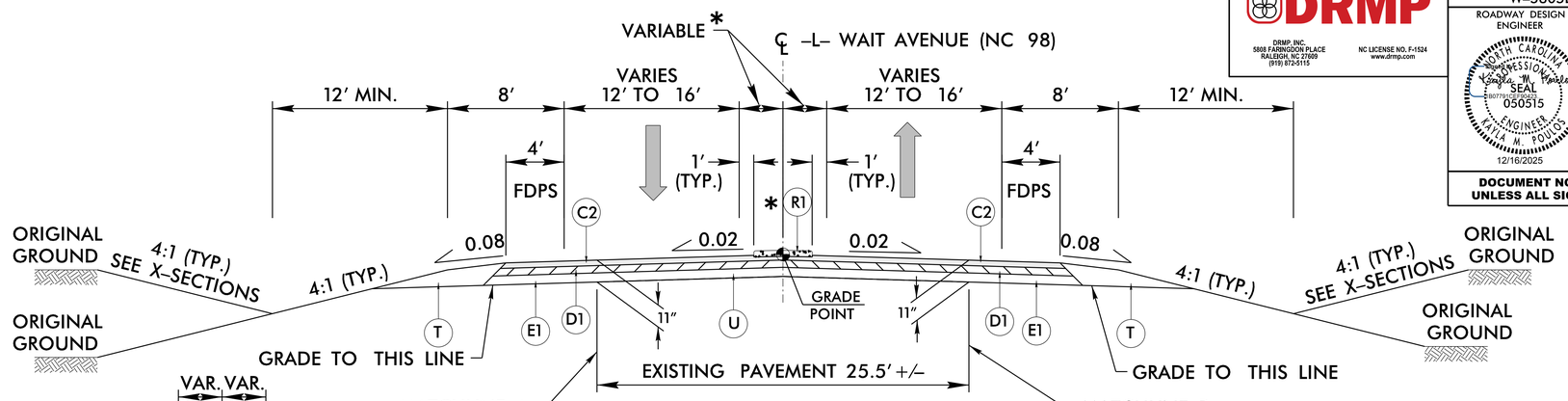
NOTE: DRAWING NOT TO SCALE

Docusign Envelope ID: 6A162984-5D18-46BE-A7D6-002139195FCD

FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2.0" IN DEPTH.
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NO LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. 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 NO LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
R1	5" KEYED-IN CONCRETE MONOLITHIC ISLAND
R2	2'-6" CURB AND GUTTER
R3	3" ROLLED CURB (SEE DETAIL THIS SHEET)
R4	10" JOINTED CONCRETE TRUCK APRON (4x4-W5xW5 OR 6x6-W7.5xW7.5 WELDED WIRE MESH REINFORCEMENT)
S	4" CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING - 1.5" DEPTH
W	WEDGING (SEE DETAIL)

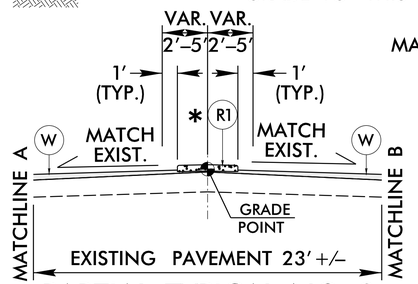
NOTES: 1. ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.
2. SEE ROADWAY PLANS FOR LOCATION OF INTERSECTION TURNOUTS.



TYPICAL SECTION NO. 1

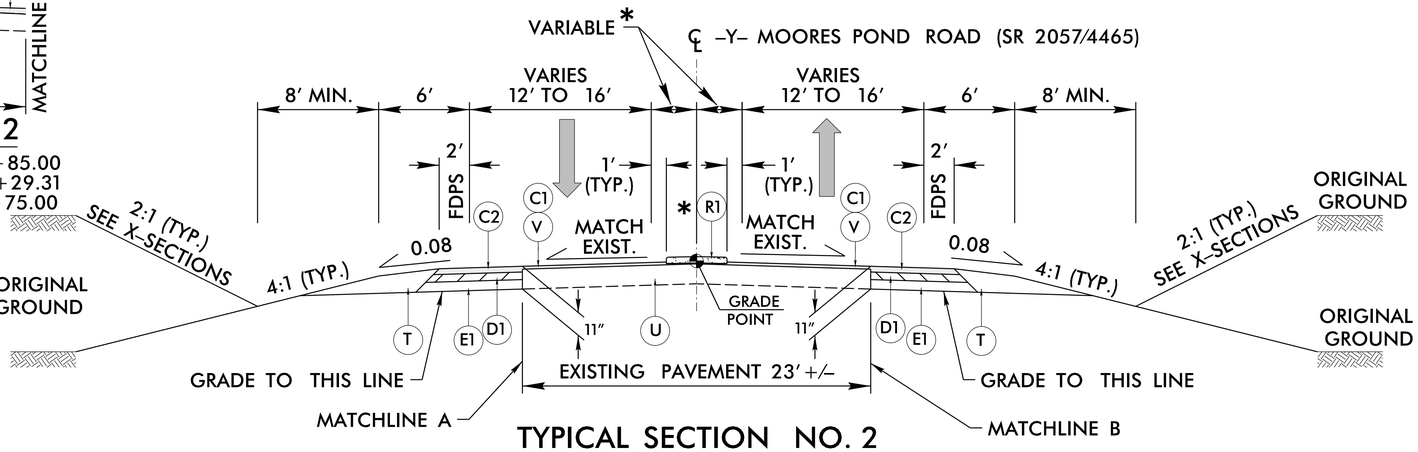
–L– STA. 12+60.00 TO –L– STA. 17+04.03
–L– STA. 18+54.03 TO –L– STA. 22+44.03

* SEE DETAIL SHEET 2B–1 FOR ISLAND WIDTH & LOCATIONS



PARTIAL TYPICAL NO. 2

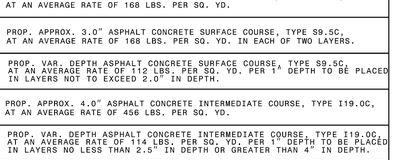
–L– STA. 19+25.00 TO –L– STA. 20+85.00
–Y– STA. 13+95.00 TO –Y– STA. 15+29.31
–Y– STA. 16+79.31 TO –Y– STA. 19+75.00



TYPICAL SECTION NO. 2

–Y– STA. 11+99.31 TO –Y– STA. 15+29.31
END MILL & OVERLAY –Y– STA. 13+45.00
–Y– STA. 16+79.31 TO –Y– STA. 20+69.31
MONOLITHIC ISLANDS:
–Y– STA. 14+12.50 TO –Y– STA. 15+27.50
–Y– STA. 16+81.50 TO –Y– STA. 18+31.20

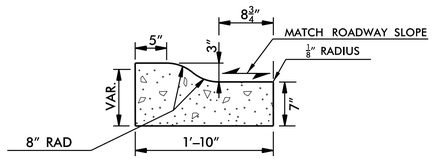
* SEE DETAIL SHEET 2B–1 FOR ISLAND WIDTH & LOCATIONS



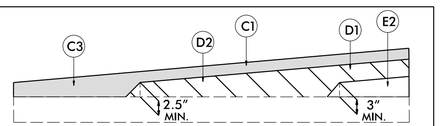
INCIDENTAL MILLING DETAIL

–L– STA 12+60.00 TO –L– STA 13+00.00
–L– STA 20+85.00 TO –L– STA 22+44.03
–Y– STA 13+45.00 TO –Y– STA 13+95.00
–Y– STA 19+75.00 TO –Y– STA 20+69.31

DETAIL OF 3" ROLLED CURB

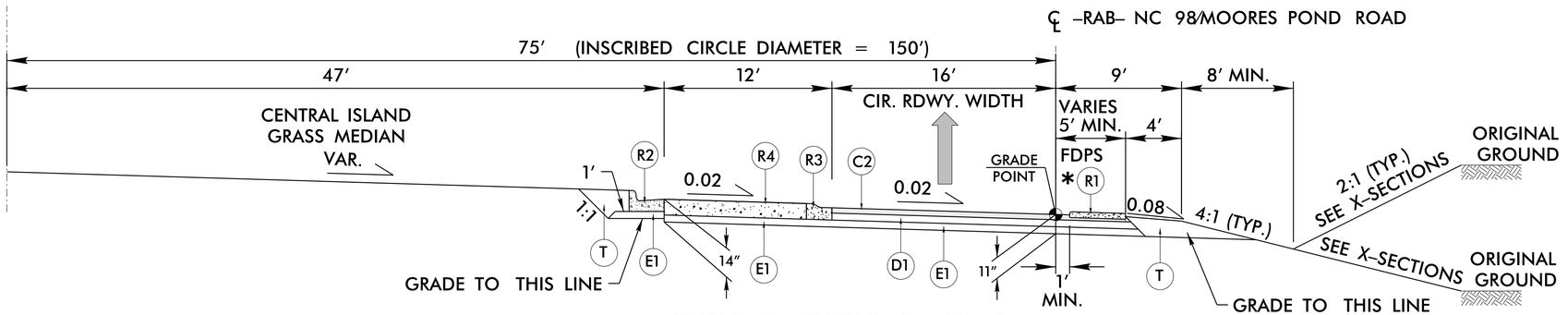


ROUNDABOUT TRUCK APRON CURB AND GUTTER
(3" ROLLED CURB)



WEDGING DETAIL FOR RESURFACING

℄ –L– & –Y–



TYPICAL SECTION NO. 3

–RAB– STA. 10+00.00 TO –RAB– STA. 14+71.24

* SEE DETAIL SHEET 2B–1 FOR ISLAND WIDTH & LOCATIONS

DRMP
DRMP, INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	2A–1

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050515 ENGINEER KAYLA M. POULOS
12/16/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038176 ENGINEER SHIHAI ZHANG
12/17/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/16/2025
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User: mlindsey

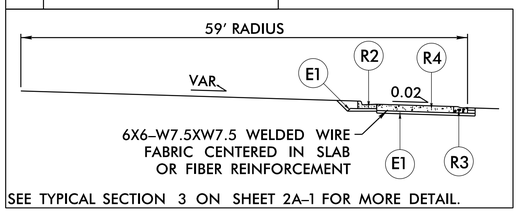
Docusign Envelope ID: 9B702630-DC5B-4400-8087-9D1661E0226D

8/17/99

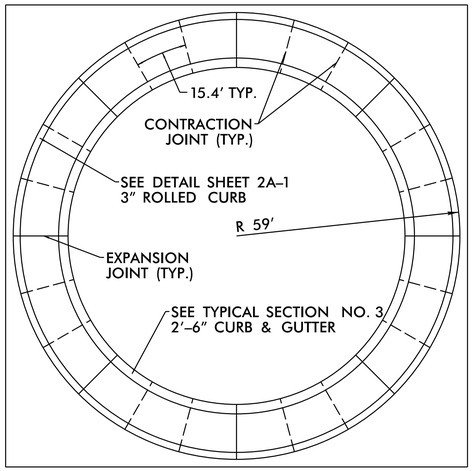
REVISIONS

NOTES:
1. ALL RADII ARE 1′ UNLESS OTHERWISE NOTED.

LEGEND	
E1	4″ B25.0C
R2	2′–6″ CURB & GUTTER
R3	3″ ROLLED CURB
R4	10″ JOINTED CONC. TRUCK APRON



SEE TYPICAL SECTION 3 ON SHEET 2A–1 FOR MORE DETAIL.



ROUNDABOUT JOINT DETAIL
NOTES:
1. MAXIMUM SPACING BETWEEN JOINTS NOT TO EXCEED 16′.
2. MAXIMUM SPACING BETWEEN EXPANSION JOINTS NOT TO EXCEED 50′.

ROUNDABOUT DETAIL

FOR –L–, –Y–, & –RAB– PLAN VIEW, SEE SHEET NO. 4

DRMP
DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W–5805E	2B–1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

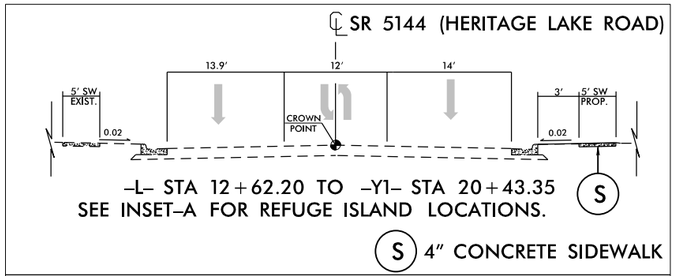
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS
12/16/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/16/2025
...\Roadway\Proj\W5805E_Rdy_2B.dgn
User:mlindsey

PROJECT REFERENCE NO.	SHEET NO.
HS-24050	4

SEE SHT–1A FOR CONSTRUCTION SEQUENCING NOTES



TYPICAL SECTION

BEGIN TIP PROJECT HS–2405Q
–L– STA 10+80.25

PC Sta. 10+00.00 –L–

FRONT GATE LN

5' CONC SIDEWALK

90.00'

SR 5144 (HERITAGE LAKE ROAD)

–L–

13.9'

12.0'

14.0'

+57.18 –L–

+83.02 –L–

EXISTING R/W

TV

STONE WALL

5' SIDEWALK

+43.35 –Y1–

–L– 12+51.30
–Y1– 20+00.00

INSTALL 25' OF 2.5' C&G

INSTALL 20' OF 2.5' C&G

REMOVE CURB RAMP & SIDEWALK

END TIP PROJECT HS–2405Q
–L– STA 12+95.91

PT Sta. 14+00.36 –L–

S 10° 43' 32" E

10' CROSSWALK

SR 5144 (HERITAGE LAKE ROAD)

REMOVE SIDEWALK & CURB RAMPS

DO NOT DISTURB STREET /STOP SIGNS AND UTILITY BOX

PC Sta. 20+62.43 –Y1–

–Y1–

HERITAGE HEIGHTS LANE

5' CONC SIDEWALK

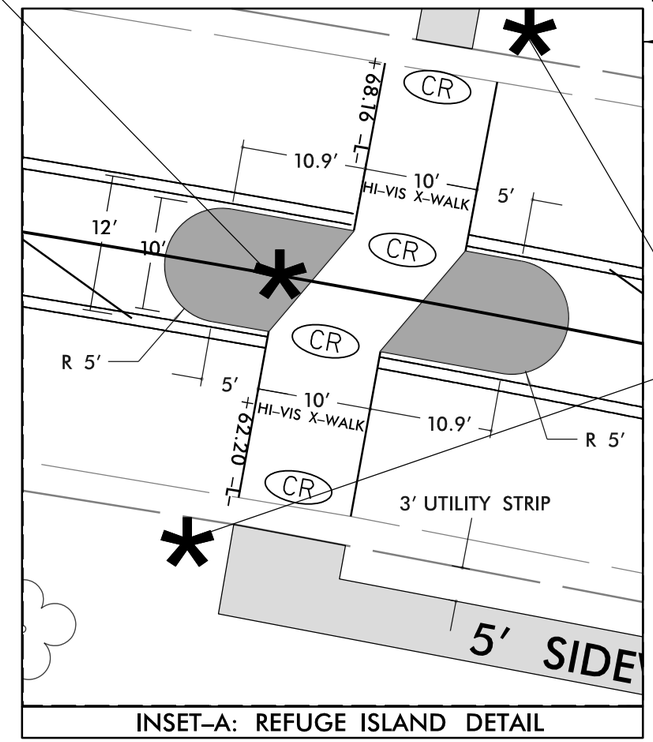
PT Sta. 21+44.61 –Y1–

INSTALL 2 RECTANGULAR RAPID FLASHING BEACONS BACK TO BACK ON THE SAME POST (SEE SHEET SIG–1 FOR DETAILS)

DO NOT DISTURB TREES

SEE INSET–A FOR DETAIL

BEGIN CONSTRUCTION
–Y1– STA 20+45.85



INSET–A: REFUGE ISLAND DETAIL

INSTALL RECTANGULAR RAPID FLASHING BEACONS (SEE SHEET SIG–1 FOR DETAILS)

CONC. SIDEWALK, RAMP, AND C&G

MONOLITHIC CONC. ISLAND

SIDEWALK OR CURB RAMP REMOVAL

PI Sta 12+01.23 –L–	PI Sta 21+04.58 –Y1–
Δ = 14° 20' 12.6" (RT)	Δ = 31° 23' 23.6" (LT)
D = 3° 34' 51.6"	D = 38° 11' 49.9"
L = 400.36'	L = 82.18'
T = 201.23'	T = 42.15'
R = 1600.00'	R = 150.00'

EROSION & SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1636.01	Wattle	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION FIVE DESIGN

01/30/2026

NORTH CAROLINA PROFESSIONAL SEAL 058695 ENGINEER MATTHEW J. NOLFO

Signed by:

5F550057078F42E...

P.E. SIGNATURE

PEDESTRIAN IMPROVEMENTS ON SR 5144 (HERITAGE LAKE ROAD) AT HERITAGE HEIGHTS LANE

DIVISION 05 WAKE COUNTY WAKE FOREST

REVISIONS	INIT.	DATE

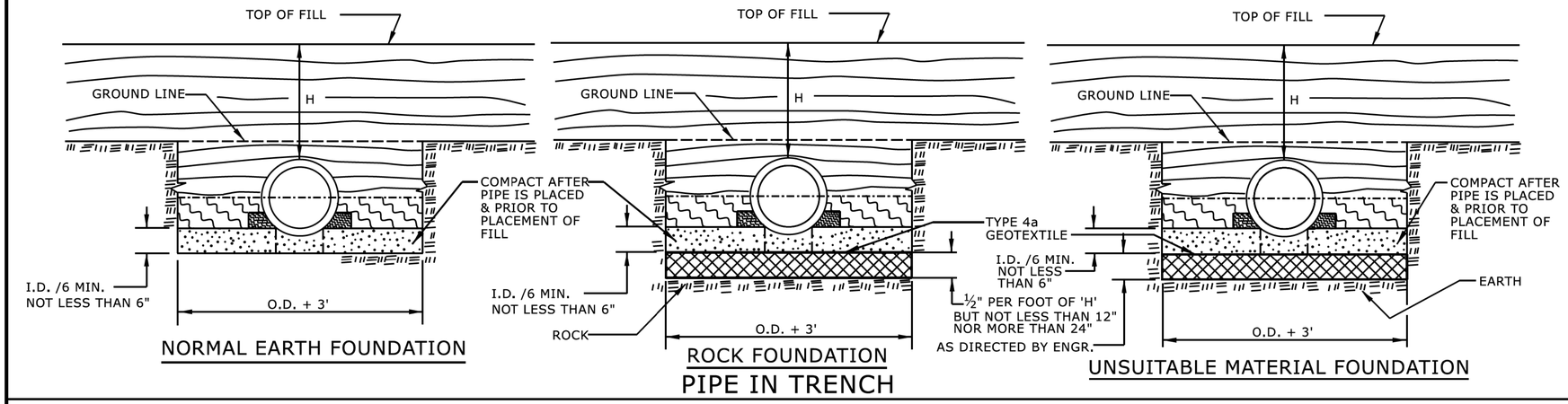
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

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

SCALE:	1"=40'
DATE:	AUG/2025
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	MATTHEW NOLFO, PE
REVIEWED BY:	

Docusign Envelope ID: DE20BC17-EA9B-433A-A042-379F4F8AB4B7

PROJECT REFERENCE NO.	SHEET NO.
W–5805E	2C–2



GENERAL NOTES:

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

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

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

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

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

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

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

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

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

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

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 2

300.01

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKLER

12/16/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

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

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

COMPUTED BY:	MML	DATE:	1/23/2024
CHECKED BY:	KMP	DATE:	1/23/2024

PROJECT NO.	SHEET NO.
W-5805E	3B-1

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Line	Station	Station	Uncl. Excav.	Rock Excav.	Undercut Excav.	Unsuitable Unclassified	Embank.	Borrow	Waste
-L-	13+00.00	17+50.00	162	0	0	50	2285	2173	50
-L-	18+50.00	22+00.00	985	0	0	0	257	0	728
-Y-	11+99.31	15+50.00	296	20	0	0	228	0	68
-Y-	16+50.00	20+69.31	178	0	200	100	233	155	300
-RAB-	10+00.00	14+50.00	25	0	0	0	3468	3443	0
TOTAL			**1646**				**6470**	**5770**	**1146**
ADJUSTMENTS DUE TO									
Additional Undercut			0						
Est. Loss Due To Clearing And Grubbing			0						0
Shoulder Material								600	
Rock Waste To Replace Borrow									
Adjust for Rock Waste									
Waste in lieu of Borrow								-776	-776
PROJECT TOTAL			**1646**	**20**	**200**	**150**	**7070**	**5594**	**370**
Est. 5% to Replace Topsoil in Borrow Pits								280	
GRAND TOTAL			**1646**	**20**	**200**	**150**	**7070**	**5873**	**370**
SAY			**1700**					**5900**	
Geotextile For Sugrade Stab.	**900 SY**								
Select Granular Material	**100 CY**								
Geotextile For Soil Stab.	**100 SY**								
Estimate Undercut Excavation	**100 CY**								
Est. Shallow Undercut (Contingency)	**100 CY**								
Est. Shallow Undercut (by Sta.)	**200 CY**								
Class IV Subgrade Stab.	**600 TONS**								

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

Earthwork quantities are calculated by the roadway designer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

SUMMARY OF INCIDENTAL MILLING

Line	Begin Station	End Station	Length	SY
L	12+60	13+00	40	111.56
L	20+85	22+44	159	456.19
Y	13+45	14+05	60	137.42
Y	19+75	20+69	94	240.30
			TOTAL	945
			SAY	1000

SUMMARY OF 1.5" MILLING

Line	Begin Station	End Station	Length	SY
Y	11+99	13+45	146	345.50
			TOTAL	345
			SAY	400

SUMMARY OF BREAKING PAVEMENT

Line	Begin Station	End Station	Length	SY
L	13+50	17+00	350	1013.74
			TOTAL	1014
			SAY	1020

COMPUTED BY: KH	DATE: 09/06/24
CHECKED BY: VMC	DATE: 09/12/24

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	3B-1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF MILLING

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	LENGTH FT.	WIDTH FT.	SQ. YDS.
-L-	13+25.00	17+50	RT	425	2	100
-Y-	13+82.15	14+26.85	RT	44	2	10
			TOTAL:			110
			SAY:			120

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	EMBT+%	BORROW	WASTE
-L- 13+00.00 RT TO -L- 17+50.00 RT	5038	4158		880
-Y- 13+82.15 RT TO -Y- 14+26.85 RT	407	152		255
SUBTOTALS No. 1	5445	4310		1135
PROJECT SUBTOTALS	5445	4310		1135
WASTE IN LIEU OF BORROW				
PROJECT TOTALS	5445	4310		1135
LOSS DUE TO CLEARING & GRUBBING	50	4310		50
GRAND TOTALS	5495	4310		1185
SAY	5600 CY			

CLASS IV SUBGRADE STABILIZATION = 300 TONS (GEOTECH. REPORT)
SHALLOW UNDERCUT = 150 CY (GEOTECH. REPORT)

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

"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 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GREU TL-3	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
-L-	13+50	17+56.25	RIGHT	365.00'	41.25		15+00	17+15	4'	9'	50'		1'				1			1										
		LESS ANCHOR DEDUCTIONS																												
		GREU, TL-3	1@50.00'=	50'																										
		AT-I	1@6.25'=		6.25'																									
TOTAL				315.00'	37.50'																									
			SAY	325'	50.0'																									
		(5 ADDITIONAL GUARDRAIL POSTS)																												

5/9/06
$$$$$$$$SYSTIME$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

RKA-RAL-LAP-33

COMPUTED BY: Forrest Brooks DATE: 2/21/2023

CHECKED BY: DATE:

PROJECT NO.	SHEET NO.
W5805E NC 98	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 %	R. C. PIPE CLASS III							R. C. PIPE CLASS IV							ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS STD. 838.80 CY
								12	15	18	24	30	36	42	12	15	18	24	30	36	42		
L 14+50	32 LT	0401															40						
L 16+38		0402	0403		364.5	363.0															88		4.500
Y 17+80	30 LT	0404														32							
Y 18+84	28 LT	0405														44							
Y 13+00	30 RT	0406														32							
SHEET TOTALS																108	40				88		4.500
PROJECT TOTALS																108	40				88		4.500

LINE & STATION	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. 852.04 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 WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
L 14+50																										
L 16+38																										
Y 17+80																										
Y 18+84																										
Y 13+00																										
SHEET TOTALS																										
PROJECT TOTALS																										

LINE & STATION	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE		MODIFIED CONC. FLUME	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
L 14+50																		30	REMOVE 30LF OF 18" RCP AND 2 BRICK HWs
L 16+38																		44	REMOVE 44LF OF 30" RCP, BURY 42" 0.7'
Y 17+80																		28	REMOVE 28LF OF 12" RCP
Y 18+84																		32	REMOVE 32LF OF 15" RCP
Y 13+00																			
SHEET TOTALS																		134	
PROJECT TOTALS																		134	

ABBREVIATIONS

- **C.A.A.** CORRUGATED ALUMINIUM ALLOY
- **C.B.** CATCH BASIN
- **C.S.** CORRUGATED STEEL
- **D.I.** DROP INLET
- **G.D.I.** GRATED DROP INLET
- **H.D.P.E.** HIGH DENSITY POLYETHYLENE
- **J.B.** JUNCTION BOX
- **M.H.** MANHOLE
- **N.S.** NARROW SLOT
- **P.V.C.** POLYVINYL CHLORIDE
- **R.C.** REINFORCED CONCRETE
- **T.B.D.I.** TRAFFIC BEARING DROP INLET
- **T.B.J.B.** TRAFFIC BEARING JUNCTION BOX
- **W.S.** WIDE SLOT

COMPUTED BY: Neil Roberson DATE: 11/15/2024
CHECKED BY: Jinyoung Park DATE: 11/22/2024

(2-3-23)

PROJECT NO.	SHEET NO.
HL-0121	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

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

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

COMPUTED BY: Alex Jones DATE: 06-20-2023	(2-3-23)	PROJECT NO.	SHEET NO.
CHECKED BY: Thein Tun Zan DATE: 06-21-2023		48950.1.6 (W-5805E)	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	100
				TOTAL LF:	100

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	16+25	18+75	ASU	12	200	400	600		
CONTINGENCY			ASU	12	100	200	300		
				TOTAL CY/TONS/SY:	300	600**	900**	0	0

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

COMPUTED BY:	MML	DATE:	2/24/2023
CHECKED BY:	KMP	DATE:	2/24/2023

PROJECT NO.	SHEET NO.
W-5805E	3P-1

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX

NOTE: ALL AREAS ARE IN SF

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNER NAME	R/W AREA TAKEN	TEMP CONST ESMT	PERM DRAIN ESMT	PERM UTILITY ESMT	DRAINAGE UTILITY ESMT
1	4	BOBBIE W. PRIVETTE	2389	1399	-	1901	-
2	4	TOMMY RAY HILL	4626	2096	191	-	-
3	4	KATRINA W. COLLIE	6230	4097	106	-	-
5	4	DONNA FREEMAN	-	2519	-	450	-
6	4	WINSLOW HOLDINGS, LLC	8128	6436	-	718	-
7	4	LOIS SHEARON MURPHY, TRUST OF ALICE PEACE SHEARON, BETTY SHEARON ROWLAND, & ELSIE P. SHEARON	12456	8724	201	1227	-
8	4	LOIS SHEARON MURPHY, TRUST OF ALICE PEACE SHEARON, & BETTY SHEARON ROWLAND	11245	2918	-	4204	1009
9	4	LOIS SHEARON MURPHY, TRUST OF ALICE PEACE SHEARON, & BETTY SHEARON ROWLAND	-	-	-	6853	-

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DRMP
DRMP INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050515 KAYLA M. POLLOCK
12/16/2025

HYDRAULICS ENGINEER

Signed Secure by DocuSign
Kayla M. Pollock
ENGINEER
2/16/2025

NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY:
FORREST N. BROOKS
055416 ON 05/28/2024
THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8/17/99

REVISIONS

BEGIN PROJECT W-5805E
-L- POT STA. 12+60.00

1 BOBBIE W. PRIVETTE
DB 19416 PG 1021 (WAKE COUNTY REGISTRY)
DB 19416 PG 1025
DB 19416 PG 1029
DB 19416 PG 1033
DB 2344 PG 708 (FRANKLIN COUNTY REGISTRY)
DB 2344 PG 712
DB 2344 PG 716
DB 2344 PG 720
PB 2023 PG 867 (WAKE COUNTY REGISTRY)
PB 2023 PG 276 (WAKE COUNTY REGISTRY)
PB 2023 PG 14 (FRANKLIN COUNTY REGISTRY)

2 TOMMY RAY HILL
DB 14937 PG 1118
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)
PB 2007 PG 323 (FRANKLIN COUNTY REGISTRY)

3 KATRINA W. COLLIE
DB 16908 PG 2598
(WAKE COUNTY REGISTRY)
PB 2007 PG 323
(FRANKLIN COUNTY REGISTRY)

9 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 5069 PG 485 (WAKE COUNTY REGISTRY)
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)

8 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 17458 PG 2381
(TRACT 4 MAPPED)

5 DONNA FREEMAN
DB 778 PG 644
DB 746 PG 221
PB 1997 PG 452

6 WINSLOW HOLDINGS, LLC
DB 2246 PG 724
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)

7 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
ELSIE P. SHEARON (FRANKLIN COUNTY GIS)
DB 946 PG 983 (WAKE AND FRANKLIN COUNTY REGISTRY)
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)

N 15°13'43.8" W -Y- PC Sta. 10+65.81

N 76°59'25.5" E -L- NC 98 (WAIT AVE.)

-Y- SR 2057 (MOORES POND RD.)

-Y- SR 1106 (MOORES POND RD.)

-Y- SR 4465

-L- POT STA. 17+04.03 = -RAB- PC STA. 10+00.00 -RAB- PT STA. 14+71.24

-Y- PC Sta. 16+91.34

-Y- POT STA. 16+79.31 = -RAB- PCC STA. 13+26.58

-L- POT STA. 17+79.03 = -Y- POT STA. 16+04.31

-L- POT STA. 18+54.03 -RAB- PCC STA. 12+35.62

-Y- PT Sta. 14+68.98

-Y- POT STA. 15+29.31 = -RAB- PCC STA. 10+90.96

-Y- PT Sta. 13+68.24

-Y- POT STA. 20+69.31

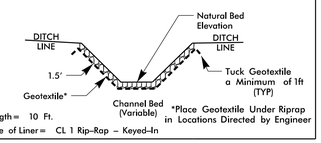
END CONSTRUCTION
-Y- POT STA. 20+69.31

BEGIN CONSTRUCTION
-Y- POC STA. 11+99.31

END PROJECT W-5805E
-L- POT STA. 22+44.03

NAD 83/2001

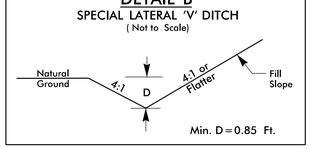
DETAIL A
CHANNEL PROTECTION
(Not to Scale)



Length = 10 Ft.
Type of Liner = CL 1 Rip-Rap – Keyed-In

-L- STA. 16+40 LT

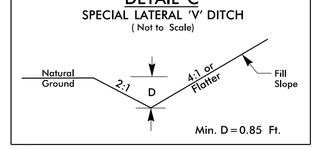
DETAIL B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.85 Ft.

FROM STA. -L- 13+00 LT TO -L- STA. 14+25 LT
FROM STA. -L- 14+25 LT TO -L- STA. 16+40 LT
FROM STA. -L- 16+50 LT TO -L- STA. 17+00 LT
FROM STA. -L- 19+00 LT TO -L- STA. 21+50 LT
FROM STA. -L- 14+50 RT TO -L- STA. 15+00 RT
FROM STA. -L- 16+50 RT TO -L- STA. 17+00 RT
FROM STA. -L- 19+00 RT TO -L- STA. 22+00 RT

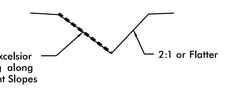
DETAIL C
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.85 Ft.

FROM STA. -Y- 13+50 LT TO -Y- STA. 15+00 LT
FROM STA. -Y- 17+00 LT TO -Y- STA. 18+00 LT
FROM STA. -Y- 18+00 LT TO -Y- STA. 20+50 LT
FROM STA. -Y- 13+50 RT TO -Y- STA. 15+00 RT
FROM STA. -Y- 17+00 RT TO -Y- STA. 18+00 RT

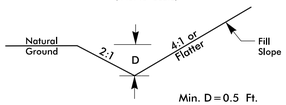
DETAIL D
SLOPE STABILIZATION
(Not to Scale)



Type of Liner = PSRM

FROM -RAB- STA. 10+10 TO 10+60 RT
FROM -RAB- STA. 11+05 TO 12+15 RT
FROM -RAB- STA. 12+45 TO 13+00 RT
FROM -RAB- STA. 13+40 TO 14+50 RT

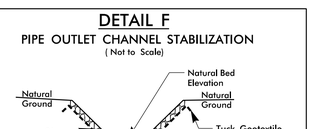
DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.5 Ft.

FROM -RAB- STA. 11+15 TO 12+00 RT

DETAIL F
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)



Length = 14 Ft.
Type of Liner = CL 1 Rip-Rap – Keyed-In

STA. -L- STA. 16+30 RT

-Y-

PI Sta 12+70.58	PI Sta 18+29.82
Δ = 24° 43' 55.7" (RT)	Δ = 3° 02' 00.7" (RT)
D = 6° 08' 04.0"	D = 1° 05' 43.9"
L = 403.17'	L = 276.90'
T = 204.77'	T = 138.48'
R = 934.00'	R = 5,230.00'
e = EXIST.	e = NC
R0 = 150'	R0 = N/A
DS = 50MPH	DS = 40MPH

-RAB-

PI Sta 10+52.02	PI Sta 14+34.72	PI Sta 11+99.10	PI Sta 12+87.64
Δ = 69° 29' 11.4" (LT)	Δ = 110° 30' 48.6" (LT)	Δ = 110° 30' 48.6" (LT)	Δ = 69° 29' 11.4" (LT)
D = 76° 23' 39.7"	D = 76° 23' 39.7"	D = 76° 23' 39.7"	D = 76° 23' 39.7"
L = 90.96'	L = 144.66'	L = 144.66'	L = 90.96'
T = 52.02'	T = 108.14'	T = 108.14'	T = 52.02'
R = 75.00'	R = 75.00'	R = 75.00'	R = 75.00'

CONC. TRUCK APRON
CONCRETE ISLAND

FOR -L- PROFILE SEE SHEET 5
FOR -Y- PROFILE SEE SHEET 5
FOR -RAB- PROFILE SEE SHEET 6
FOR INTERSECTION DETAIL SEE SHEET 2B-1

12/16/2025
Proj:\W5805E_Rdy_psh04.dgn
User:mlindsey

11/14/23

HL-0121

SHEET 04

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER FOR M CHI
11/29/2023
Docusigned by:
Victor Chavez
7CD1F54298E940A...
ROADWAY ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 046593 ENGINEER MICHELLE G. BERRY
Docusigned by:
Michelle Berry, PE
HYDRAULICS ENGINEER

0 40 80

-L- POT 10+00.00 10

10 -Y- POT 10+00.00

TO DURHAM

TO CREEDMOOR

TO WAKE FOREST

TO RALEIGH

NAD 83/ 2011

DETAIL A
CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
2:1
2:1
D
Min. D= 1.0 Ft.
FROM -L- STA. 13+75 RT TO STA. 15+95 RT

BEGIN TIP PROJECT HL-0121
POT, -L- STA. 13+00.00

END TIP PROJECT HL-0121
POT, -L- STA. 17+50.00

-L- POT STA 17+84.58=
-Y- POT STA 13+54.84

-L- POT 19+80.65

BEGIN CONSTRUCTION
-Y- POT STA 13+82.15

END CONSTRUCTION
-Y- POT 14+26.85

-Y- POT 14+82.69

SR 1901 (OLD WEAVER TRAIL)
25' PAVED ROADWAY
EXISTING RW
48" WD POST W/ SS ELEC
MTL GATE
POST
S72°35'57.5"E
GREU TYPE TL-3
25' TAPER
STA. 13+22
4' PAV. SHLD
200' TAPER
CL B RIP RAP
EST. 1 TONS
EST. 5 SY GF
CUT DITCH SEE DETAIL 'A'
Tie into natural ground.
NOTE: EXISTING POWER POLE TO BE RETAINED. SEE CROSS SECTION FOR CUT DITCH DETAIL.
PROPOSED GUARDRAIL
200' STORAGE
STA. 15+25
RETAIN EX. POLE
NOTE: EXISTING POWER POLE TO BE RETAINED. SEE CROSS SECTION FOR FILL DETAIL.
65' R
INNERDUCT
VAR PAVED ROADWAY
NC 50 (CREEDMOOR RD)
SR1901 (OLD WEAVER TRAIL)
PAVED
WOODS
POND

1 ANDREW B. CURL
DB 14E PG 1939
DB 2529 PG 472

2 CARLTON PATRICK CURRIN
DB 7242 PG 449
BM 1996 PG 1686

SUE C. SMITH AND BONNIE E. EMORY
DB 11E PG 2881
BM 1996 PG 1686

SUE C. SMITH AND BONNIE E. EMORY
DB 11E PG 2881
DB 6860 PG 423

KENNETH W. WOODLIEF
DB 163 PG 0000E
DB 2387 PG 497
BM 1997 PG 1591

KENNETH W. WOODLIEF
AND WIFE SUE KEITH WOODLIEF
DB 2387 PG 496

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

★ UPGRADE SIGNAL

FOR -L- PROFILE, SEE SHEET 5
FOR -Y- PROFILE, SEE SHEET 6

DocuSign Envelope ID: 1E3B510A-F171-4DF6-9E05-349215A048DA

5/28/99

–L– NC 98 (WAIT AVENUE)

PIPE HYDRAULIC DATA
42" RCP–IV @ –L– STA. 16+38.00

DRAINAGE AREA	=	31.5 AC
DESIGN FREQUENCY	=	50 YR
DESIGN DISCHARGE	=	50 CFS
DESIGN HW ELEVATION	=	368.80 FT
100 YEAR DISCHARGE	=	55 CFS
100 YEAR HW ELEVATION	=	369.10 FT
OVERTOPPING FREQUENCY	=	500+ YR
OVERTOPPING DISCHARGE	=	66 CFS
OVERTOPPING ELEVATION	=	369.7 FT

BEGIN GRADE –L– STA. 12+60.00
BEGIN INCIDENTAL MILLING
EL. = 380.36'

END INCIDENTAL MILLING
–L– STA. 13+00.00

–L– PC STA. 13+52.5
EL. = 377.13'

PI = 15+25.00
EL = 371.12'
VC = 345'
K = 79
DS = 45 MPH

EXISTING GROUND

PROPOSED GRADE

–3.4868%
–6.00%
–3.50%
–2.30%
–2.00%
±0.8713%
4.42%
3.64%

BEGIN SP LAT V DITCH
–L– STA. 13+00.00 LT
EL. = 376.25'

–L– STA. 13+50.00 LT
EL. = 373.25'

BEGIN SP LAT V DITCH
–L– STA. 14+50.00 RT
EL. = 369.60'

END SP LAT V DITCH
–L– STA. 15+00.00 RT
EL. = 368.30'

–L– STA. 15+00.00 LT
EL. = 368.00'

END SP LAT V DITCH
–L– STA. 16+25.00 LT
EL. = 365.50'

EX 30" RCP
PROP 42" RCP
INV 364.5'

END SP LAT V DITCH
–L– STA. 16+50.00 RT
EL. = 366.79'

END SP LAT V DITCH
–L– STA. 16+50.00 LT
EL. = 365.63'

–L– PT STA. 16+97.50
EL. = 372.62'

END GRADE
–L– STA. 17+04.03 =
–RAB– STA. 10+00.00 =
–RAB– STA. 14+71.24 =
EL. = 372.68'

–L– STA. 17+00.00 LT
TO –RAB– STA. 14+00 RT
EL. = 367.45'

BEGIN SP LAT V DITCH
–L– STA. 17+00.00 RT
EL. = 369.00'

BEGIN GRADE
–L– STA. 18+54.03 =
–RAB– STA. 12+35.62
EL. = 374.59

–L– PC STA. 18+94.00
EL. = 374.20'

–0.9717%

PROPOSED GRADE

PI = 19+94.00
EL = 373.23'
VC = 200'
K = 62
DS = 45 MPH

EXISTING GROUND

–1.00%
–2.50%
–3.00%
–4.2229%

–L– STA. 19+00.00 LT
TO –Y– STA. 17+00 RT
EL. = 371.00'

BEGIN SP LAT V DITCH
–L– STA. 19+00.00 RT
EL. = 370.50'

–L– STA. 20+00.00 RT
EL. = 369.50'

BEGIN INCIDENTAL MILLING
–L– STA. 20+85.00

–L– PT /PC STA. 20+94.00
EL. = 369.01'

–L– STA. 21+00.00 RT
EL. = 366.50'

END SP LAT V DITCH
–L– STA. 21+50.00 LT
EL. = 364.75'

END GRADE
END INCIDENTAL MILLING
–L– STA. 22+44.03
EL. = 363.83'

PI = 21+69.00
EL = 365.84'
VC = 150'
K = 97
DS = 50 MPH

–L– PT STA. 22+44.00
EL. = 363.83'

–4.2229%
–3.50%
–2.6789%

END SP LAT V DITCH
–L– STA. 21+50.00 RT
EL. = 364.75'

EX 18" RCP

FOR –L– PLANS SEE SHEET 4

410 400 390 380 370 360 350

12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00

–Y– SR 2057/4465/1106 (MOORES POND ROAD)

LEFT DITCH
RIGHT DITCH

BEGIN MILL, OVERLAY AND WIDENING
–Y– STA. 11+99.31
EL. = 365.69'

END MILL & OVERLAY
BEGIN INCIDENTAL MILLING
BEGIN GRADE
–Y– PC STA. 13+45.00
EL. = 369.25'

–Y– STA. 13+50.00 RT
EL. = 366.85'

PI = 14+25.00
EL = 371.90'
VC = 160'
K = 65
DS = 45 MPH

PROPOSED GRADE

EXISTING GROUND

+3.3182%
+0.8703%
1.32%
0.30%
4.83%
5.64%
2.70%
2.40%
2.06%

–Y– PT STA. 15+05.00
EL. = 372.60'

–Y– STA. 15+00.00 RT
TO –RAB– 11+50.00 RT
EL. = 370.43'

END GRADE
–Y– STA. 15+29.31 =
–RAB– STA. 10+90.96
EL. = 372.81'

BEGIN SP LAT V DITCH
EX 48" RCP –Y– STA. 13+00.00 RT
EL. = 364.03'

BEGIN SP LAT V DITCH
–Y– STA. 13+00.00 LT
EL. = 364.30'

–Y– STA. 14+00.00 RT
EL. = 368.20'

–Y– STA. 14+00.00 LT
EL. = 369.13'

–Y– STA. 14+50.00 RT
EL. = 369.40'

–Y– STA. 14+50.00 LT
EL. = 369.79'

END SP LAT V DITCH
–Y– STA. 15+00.00 LT
EL. = 369.94'

BEGIN GRADE
–Y– STA. 16+79.31 =
–RAB– STA. 13+26.58
EL. = 374.97'

–Y– STA. 17+00.00 RT
TO –L– STA. 19+00 LT
EL. = 372.50'

–Y– PC STA. 16+87.50
EL. = 374.92'

PI = 17+55.00
EL = 374.56'
VC = 135'
K = 50
DS = 35 MPH

–0.5404%
1.00%
1.40%
3.52%
2.28%

–Y– STA. 17+00.00 LT
TO –RAB– 14+00 RT
EL. = 370.50'

BEGIN SP LAT V DITCH
–Y– STA. 18+00.00 RT
EL. = 373.70'

–Y– PT STA. 18+22.50
EL. = 376.02'

–Y– STA. 18+00.00 LT
EL. = 373.40'

–Y– STA. 17+50.00 LT
EL. = 372.26'

–Y– STA. 17+50.00 RT
EL. = 373.00'

–Y– PC STA. 18+95.00
EL. = 377.58'

PI = 19+65.00
EL = 379.09'
VC = 140'
K = 203
DS = 65 MPH

BEGIN INCIDENTAL MILLING
–Y– STA. 19+75.00

–Y– PT STA. 20+35.00
EL. = 380.12'

2.00%
1.26%
2.04%
1.80%
1.56%
+2.1571%
+1.4668%

–Y– STA. 19+50.00 LT
EL. = 376.05'

–Y– STA. 19+00.00 LT
EL. = 375.03'

–Y– STA. 18+50.00 LT
EL. = 374.40'

END GRADE
END INCIDENTAL MILLING
–Y– STA. 20+69.31
EL. = 380.62'

END SP LAT V DITCH
–Y– STA. 20+50.00 LT
EL. = 377.73'

–Y– STA. 20+00.00 LT
EL. = 376.95'

FOR –Y– PLANS SEE SHEET 4

410 400 390 380 370 360 350

11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00

DRMP
DRMP INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W–5805E	5

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAITLIN M. POULOS
5/29/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 55416 ENGINEER FOREST N. BROOKS
5/28/2024

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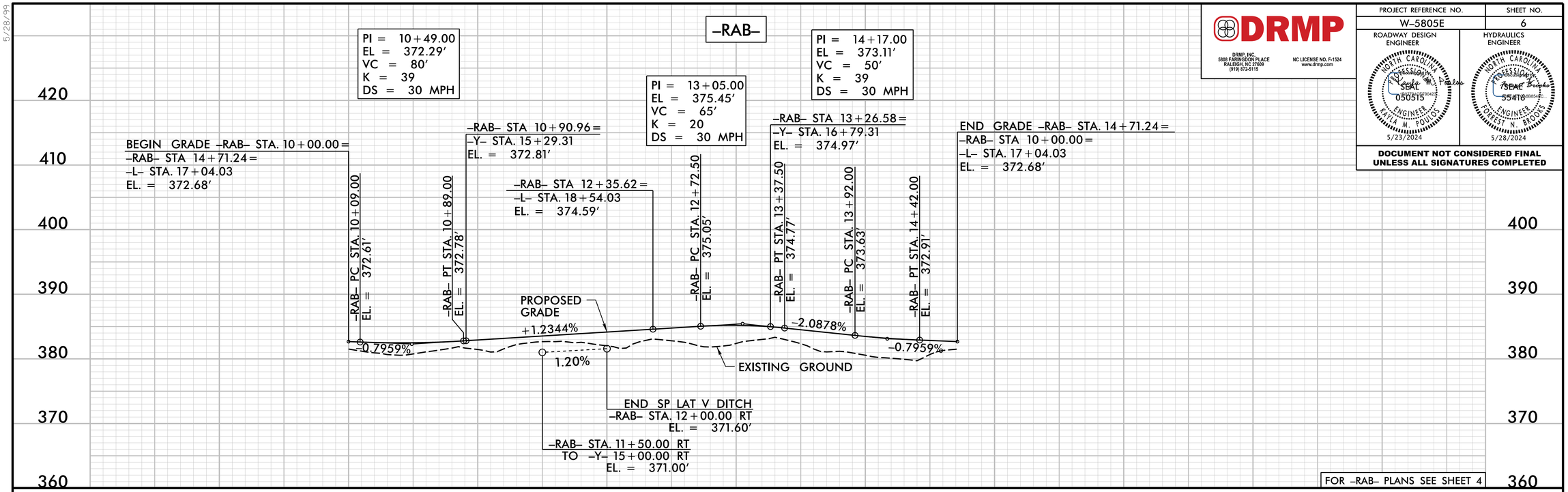
5/28/99



FOR –RAB– PLANS SEE SHEET 4

DRMP
DRMP, INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W–5805E	6

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050515 ENGINEER KATHLEEN M. POULOS
5/23/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 55416 ENGINEER FORREST N. BROOKS
5/28/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

3/13/2024
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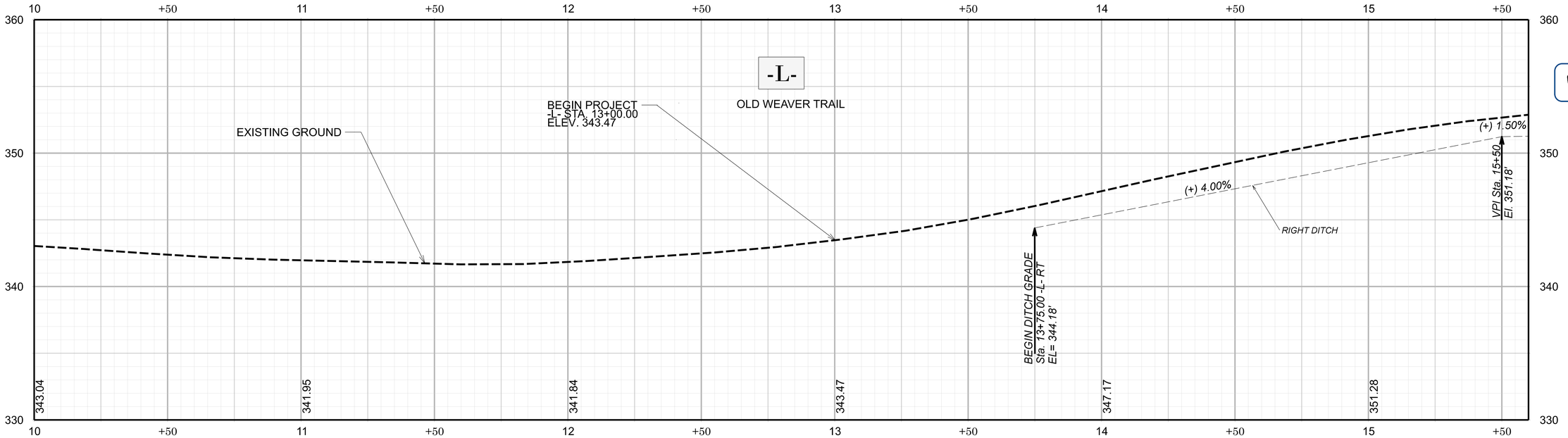
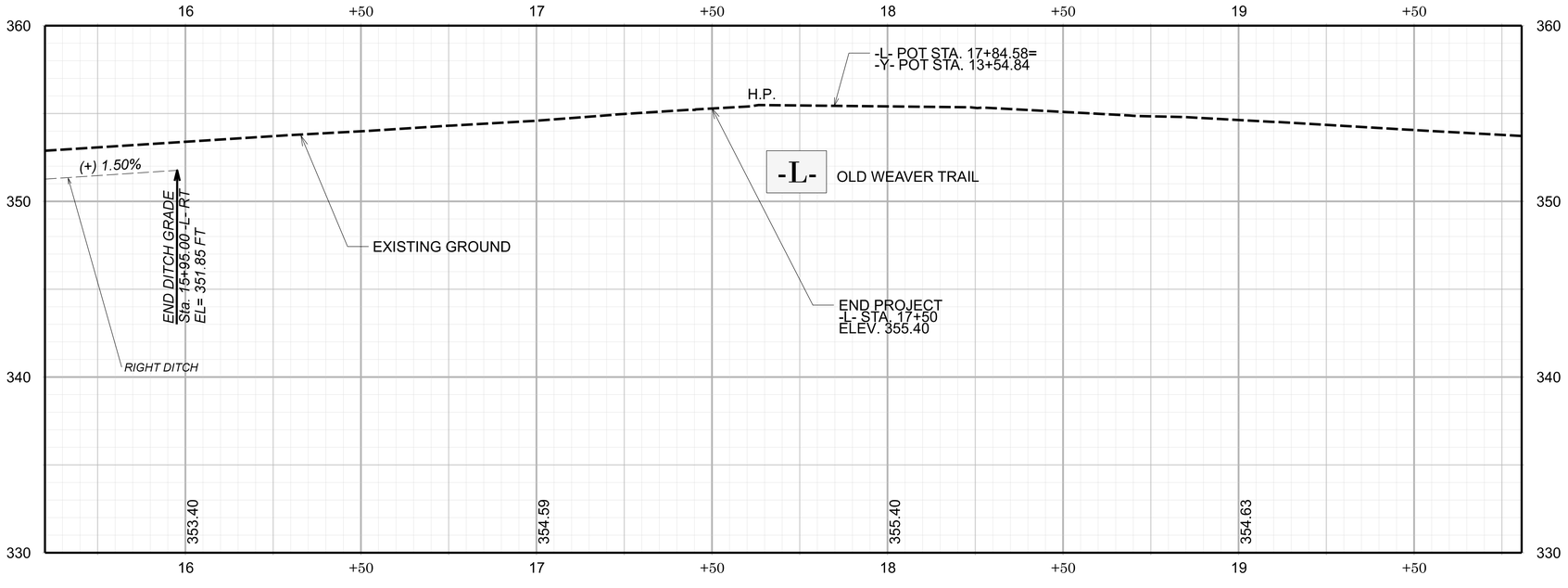
User:mjunker

11/14/23





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UNLESS ALL SIGNATURES COMPLETED

FOR -L- PLAN, SEE SHEET 4

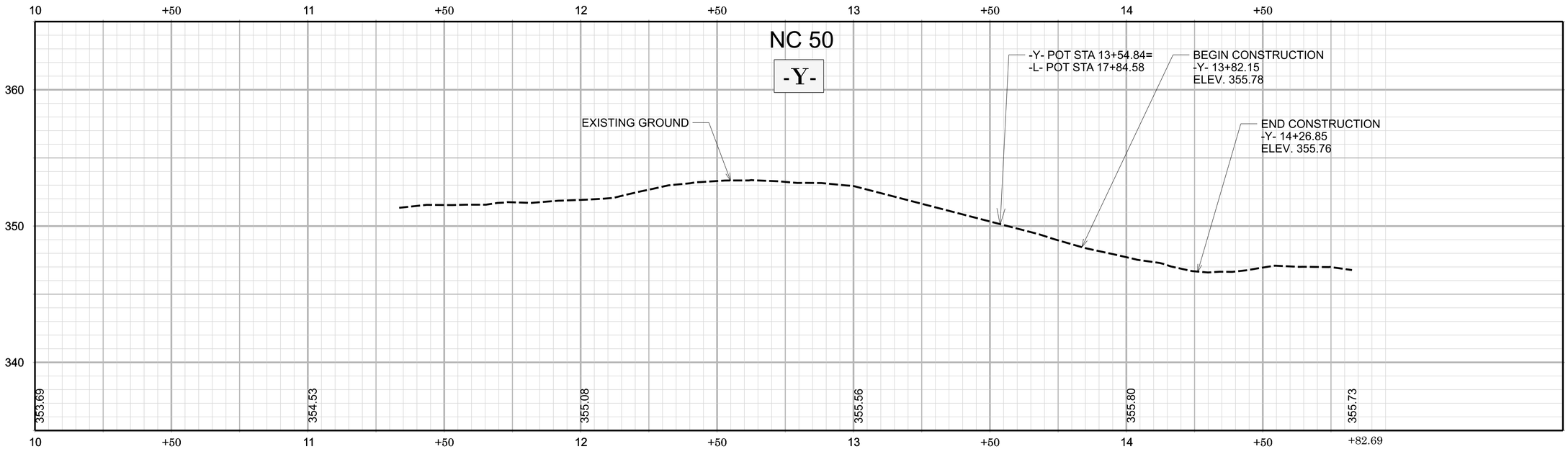
HL-0121
SHEET | 05

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ

11/30/2023

DocuSigned by:
Victor Chavez
7CD1754298E940A...

ROADWAY ENGINEER



FOR -L- PLAN, SEE SHEET 4

HL-0121

SHEET | 06

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ 01/30/2026

Digitally signed by Victor Chavez
7CD1F54298E940A...

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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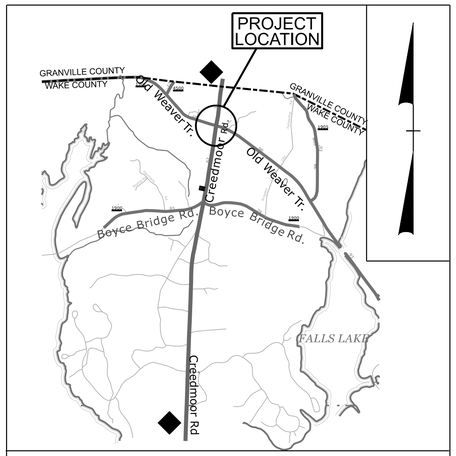
09/08/99

TIP PROJECT: *HL-0121*



VICINITY MAP (NTS)

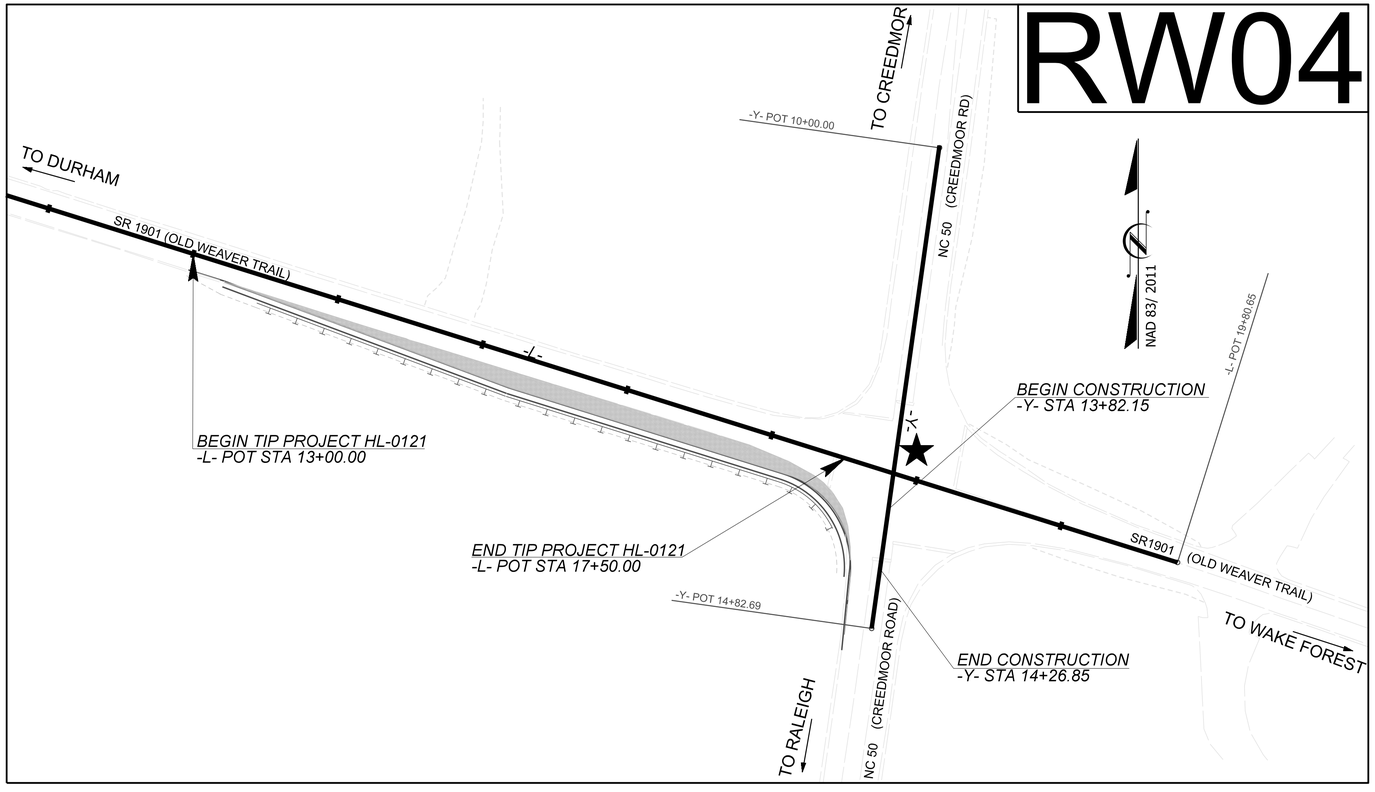
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HL-0121	RW01	6

RW04



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50' 25' 0' 50' 100'

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
NCDOT FOR MONUMENT HL0121-2
WITH NAD83/2011 STATE PLANE GRID COORDINATES OF
NORTHING: 845192.766(ft) EASTING: 2089184.076(ft)
ELEVATION: 347.512(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.9996332546
THE N.C. LAMBERT GRRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
HL0121-2 TO -L- STATION 10+00.00 IS
S70°00'24"E 482.72(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

McKIM & CREED
4300 EDWARDS MILL RD. SUITE 200
RALEIGH, NC 27612
(P) 919-233-8091

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: *MARCH 27, 2025*

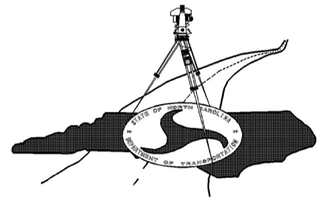
LETTING DATE: *JANUARY 28, 2026*

PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-5060 LAND SURVEYOR RICHARD A MITCHELL

Signed by: Richard Mitchell 08/29/2025

SIGNATURE DATE



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5/26/20

PROPOSED ALIGNMENT CONTROL SHEET

I, RICHARD A. MITCHELL, PLS, CERTIFY THAT THE DATA COMPILED CAME FROM AVAILABLE SURVEYS/MAPPING PERFORMED BY OTHERS AND PROVIDED TO ME BY NCDOT AND DO NOT CERTIFY TO THE ACCURACY OR QUALITY OF THE INDIVIDUAL DATA SOURCES.

THIS 29TH DAY OF AUGUST, 2025.

Signed by:
Richard Mitchell 08/29/2025
DocuSigned by:
PROFESSIONAL LAND SURVEYOR L-5060

PROPOSED ALIGNMENT: L												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
START	10+00.00	845027.7183	2089637.7058	S72°35'57.5"E	980.6474							
END	19+80.65	844734.4534	2090573.4756									

PROPOSED ALIGNMENT: Y												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
START	10+00.00	845144.4784	2090435.7747	S08°00'06.7"W	482.6877							
END	14+82.69	844666.4904	2090368.5820									

NOTES:

1. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HL-0121
R/W | 020-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

SEAL L-5060 RICHARD A MITCHELL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HL-0121
County: Wake

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

MCKIM&CREED
4325 EDWARDS MILL RD, SUITE 200
RALEIGH, NC 27612
(P) 919-233-8091

Docusign Envelope ID: 5AD56F8B-08A4-42E3-8456-D725701609E5

09/08/99

TIP PROJECT: W-5805E

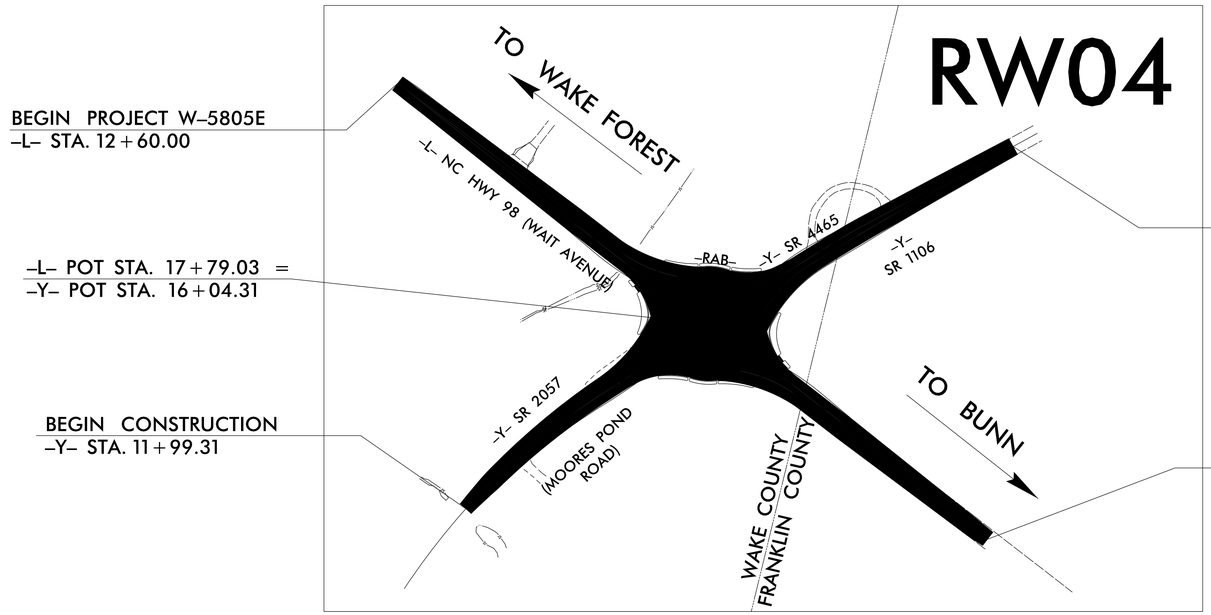
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5805E	RW01	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

WAKE & FRANKLIN COUNTIES

NAD 83/NA 2011



BEGIN PROJECT W-5805E
-L- STA. 12+60.00

-L- POT STA. 17+79.03 =
-Y- POT STA. 16+04.31

BEGIN CONSTRUCTION
-Y- STA. 11+99.31

END CONSTRUCTION
-Y- STA. 20+69.31

END PROJECT W-5805E
-L- STA. 22+44.03

GRAPHIC SCALE

40 20 0 40 80
PLANS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W-5805E-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 806,527.839(ft) EASTING: 2,170,504.100(ft) ELEVATION: 383.76(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99993592 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W-5805E-2" TO -L- STATION 10+00.00 IS N 77-19'45.7" E 601.41(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

WETHERILL ENGINEERING

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: *APRIL 19, 2023*

LETTING DATE:

PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4372 LAND SURVEYOR ANTHONY K. ALFORD

DocuSigned by: Anthony K. Alford CC5F7993A106408...

12/9/2025

SIGNATURE: ***Date:***

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

09-DEC-2025 07:52
C:\Users\mscnwartz\Desktop\w5805e_ls_rw01.dgn
mscnwartz AT WEI-49WBN34

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5/26/20

RIGHT OF WAY CONTROL SHEET

I , RICHARD A. MITCHELL , PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED ON 8/27/2025, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 29TH DAY OF AUGUST, 2025.

Signed by:
Richard Mitchell 08/29/2025
PROFESSIONAL LAND SURVEYOR L-5060

PERMANENT ROW MARKER IRON PIN AND CAP: L			
STATION	OFFSET	NORTH	EAST
13+65.00	30.00	844889.9371	2089977.0307
13+65.00	45.00	844875.6236	2089972.5449
17+00.00	-30.00	844847.0088	2090314.6431
17+25.00	45.00	844767.9647	2090316.0701

PERMANENT ROW MARKER IRON PIN AND CAP: Y			
STATION	OFFSET	NORTH	EAST
11+41.51	30.00	844876.3321	2090367.7853
12+93.63	30.00	844725.6928	2090346.6093

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HL-0121
R/W | 03E-I

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR
SEAL L-5060

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HL-0121
County:Wake

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

MCKIM&CREED
4205 EDWARDS MILL RD. SUITE 200
RALEIGH, NC 27612
(P) 919-233-8091

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
W-5805-E	RW02C-1

Location and Surveys

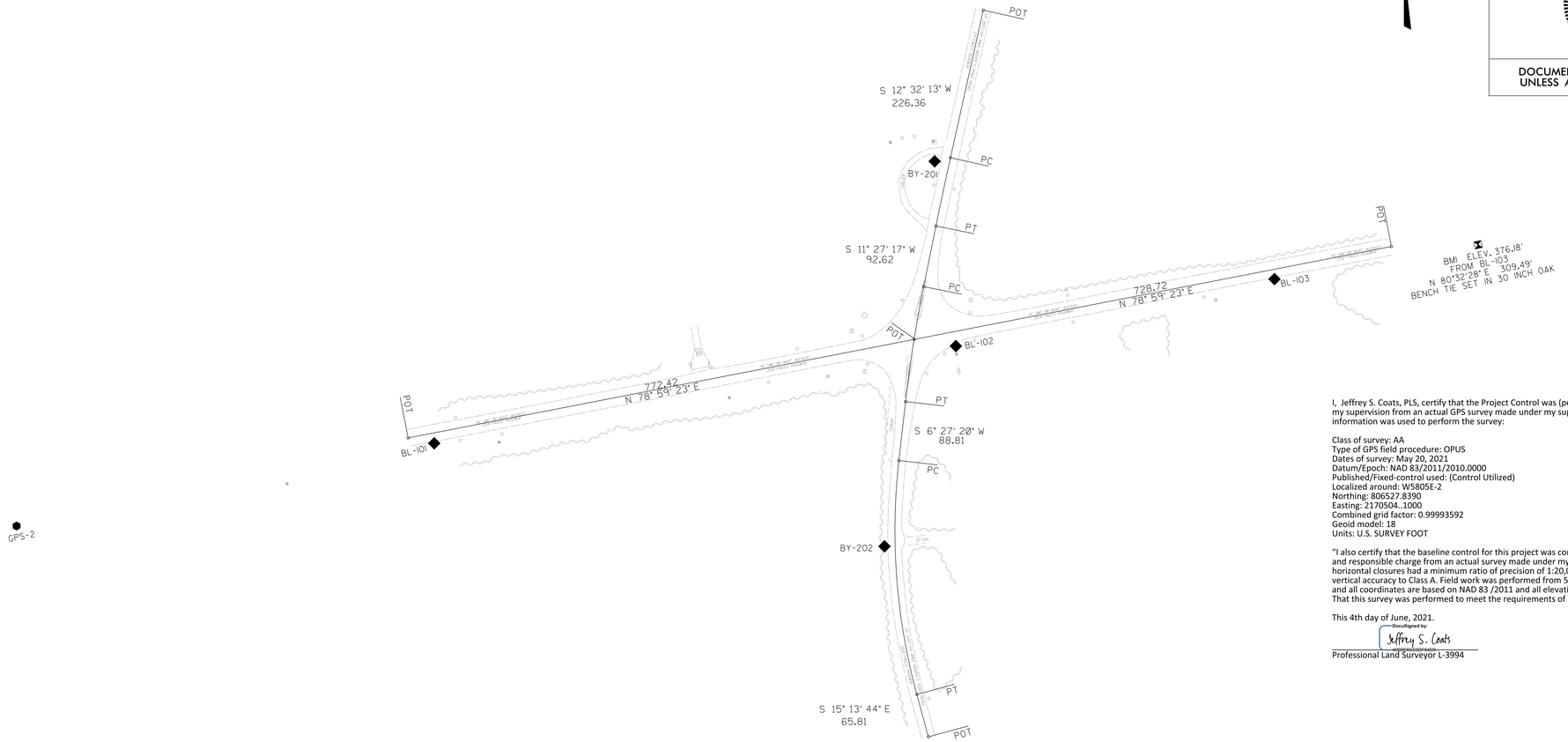
SEPI

PROJECT SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-3994 LAND SURVEYOR JEFFREY S. COATS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NC GRID
NAD 83 NA 2011



I, Jeffrey S. Coats, PLS, certify that the Project Control was (performed/verified) under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA
Type of GPS field procedure: OPUS
Dates of survey: May 20, 2021
Datum/Epoch: NAD 83/2011/2010.0000
Published/Fixed-control used: (Control Utilized)
Localized around: W5805E-2
Northing: 806527.8390
Easting: 2170504..1000
Combined grid factor: 0.99993592
Geoid model: 18
Units: U.S. SURVEY FOOT

"I also certify that the baseline control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and vertical accuracy to Class A. Field work was performed from 5/20/2021 to 6/4/2021, and all coordinates are based on NAD 83 /2011 and all elevations are based on NAVD 88; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 4th day of June, 2021.

DocuSigned by:
Jeffrey S. Coats
Professional Land Surveyor L-3994

SEE SHEET RW02C-2 FOR FURTHER ALIGNMENT DETAILS

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

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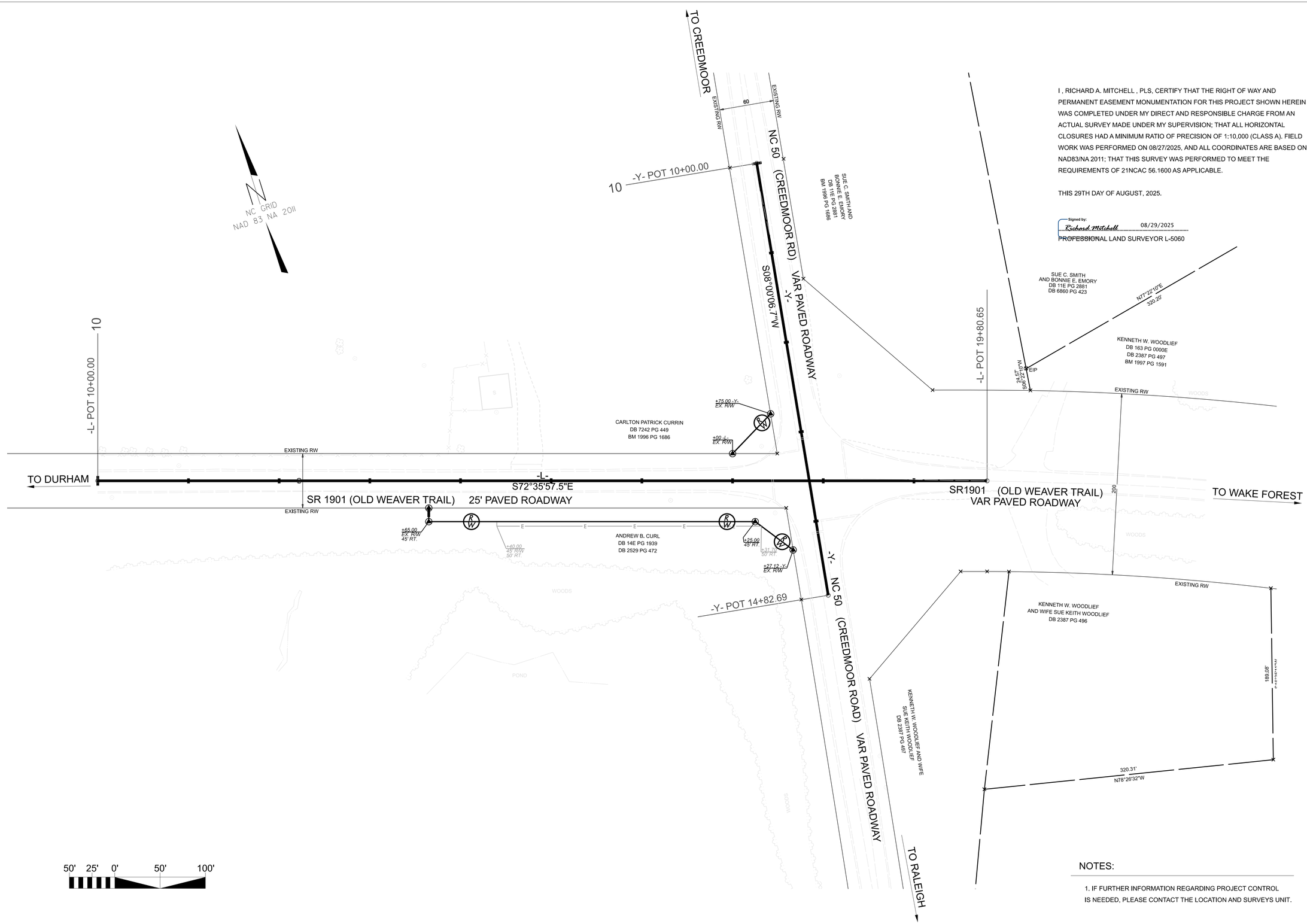
5/26/20



I , RICHARD A. MITCHELL , PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED ON 08/27/2025, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 29TH DAY OF AUGUST, 2025.

Signed by:
Richard Mitchell 08/29/2025
PROFESSIONAL LAND SURVEYOR L-5060

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HL-0121
R/W 04

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR
SEAL L-5060 RICHARD A MITCHELL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HL-0121
County:Wake

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

McKIM&CREED
4205 EDWARDS MILL RD. SUITE 200
RALEIGH, NC 27613
(P) 919-233-8091

PROJECT REFERENCE NO.	SHEET NO.
W-5805-E	RW02C-2
Location and Surveys	

REVISIONS

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BL

POINT	DESC.	NORTH	EAST	ELEVATION
2	GPS-2	806527.8390	2170504.1000	383.76
101	BL-101	806651.6348	2171129.8237	386.06
102	BL-102	806797.5104	2171911.2280	371.70
103	BL-103	806897.6162	2172389.0658	362.72

BY

POINT	DESC.	NORTH	EAST	ELEVATION
201	BY-201	807074.5796	2171880.7467	375.67
Y102	BL-102	806797.5104	2171911.2280	371.70
202	BY-202	806497.4144	2171804.8013	367.15

****

BM1 ELEVATION = 376.18'
N 806948 E 2172694
FROM BL-103
N 80°32'28" E 309.49'
BENCH TIE SET IN 30 IN OAK

****

****

BM2 ELEVATION = 379.99'
N 806049 E 2171886
FROM BY-202
S 10°13'16" E 456.15'
BM BENCH TIE SET 34 INCH GUM

****

EL

POINT	N	E	BEARING	DIST
POT	806659.757	2171090.866		
LINE			N 78°59'23.3" E	772.42
POT	806807.277	2171849.071		
LINE			N 78°59'23.3" E	728.72
POT	806946.450	2172564.375		

EY

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	807300.461	2171952.723							
LINE			S 12°32'12.5" W	226.36					
PC	807079.501	2171903.589							
CURVE			S 11°59'44.8" W	104.58	01°04'55.5"(LT)	01°02'04.9"	104.58	52.29	5537.48
PT	806977.206	2171881.853							
LINE			S 11°27'17.0" W	92.62					
PC	806886.435	2171863.460							
CURVE			S 08°57'18.7" W	174.45	04°59'56.7"(LT)	02°51'53.2"	174.50	87.31	2000.00
PT	806714.116	2171836.306							
LINE			S 06°27'20.3" W	88.81					
PC	806625.865	2171826.320							
CURVE			S 04°23'11.7" E	351.38	21°41'04.2"(LT)	06°08'04.0"	353.49	178.88	934.00
PT	806275.513	2171853.195							
LINE			S 15°13'43.8" E	65.81					
POT	806212.016	2171870.482							

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

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PROPOSED ALIGNMENT CONTROL SHEET

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	806659.7567	2171090.8664
POT	17+79.03	806808.5395	2171855.5605
POT	25+01.14	806946.4502	2172564.3750

RAB

TYPE	STATION	NORTH	EAST
PC	10+00.00	806794.2157	2171781.9410
PCC	10+90.96	806734.5688	2171843.1776
PCC	12+35.62	806822.8633	2171929.1800
PCC	13+26.58	806882.5102	2171867.9433
PT	14+71.24	806794.2157	2171781.9410

Y

TYPE	STATION	NORTH	EAST
POT	10+00.00	806212.0157	2171870.4818
PC	10+65.81	806275.5135	2171853.1955
PT	14+68.98	806675.0594	2171833.2156
PC	16+91.34	806894.3695	2171869.9286
PT	19+68.24	807166.1332	2171922.8528
POT	21+05.85	807300.4614	2171952.7233

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	RW02D-1

Location and Surveys

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4372 LAND SURVEYOR ANTHONY K. ALFORD

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

I, Anthony K. Alford, PLS, certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

This 27th day of July, 2023.

DocuSigned by:
Anthony K. Alford
22BA29B2F08A44E...

Professional Land Surveyor L-4372

REVISIONS

6/2/99

27-JUL-2023 08:18
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amore
AT RAL-WS034

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6/2/99

REVISIONS

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amoore
AT RAL-WS034

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	RW03E-1

Location and Surveys

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4372 LAND SURVEYOR ANTHONY K. ALFORD

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+75.00	-30.00	806741.7250	2171355.0750
L	12+75.00	-40.00	806751.5410	2171353.1652
L	14+00.00	50.00	806687.0706	2171493.0528
L	14+00.00	30.00	806706.7024	2171489.2332
L	15+50.00	-50.00	806813.8775	2171621.1934
L	16+47.50	50.00	806734.3391	2171735.9972
L	16+50.00	-55.00	806837.8838	2171718.3978
L	18+99.94	-44.95	806875.7483	2171965.6525
L	19+00.00	45.00	806787.4705	2171982.8945
L	20+50.00	-45.00	806904.4614	2172112.9449
L	22+15.00	-30.00	806921.2499	2172277.7726
L	22+25.00	40.00	806854.4482	2172300.9574
L	22+25.00	30.00	806864.2641	2172299.0475

I , Anthony K. Alford, PLS, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 07/19/2023 to 07/27/2023, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 27th day of July, 2023.

DocuSigned by:
Anthony K. Alford
22BA29B2F0BA44E...

Professional Land Surveyor L-4372

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	12+50.00	-47.50	806453.5870	2171775.2051
Y	12+50.00	-30.00	806454.7863	2171792.6640
Y	13+15.00	30.00	806521.7619	2171850.3980
Y	13+15.00	35.00	806521.7569	2171855.3980
Y	13+60.00	-40.00	806568.7402	2171781.5755
Y	14+50.00	35.00	806651.2365	2171864.9028
Y	14+60.00	-40.00	806672.4237	2171792.2634
Y	17+00.00	-46.00	806910.5809	2171826.0096
Y	17+50.40	35.00	806946.3927	2171914.4602
Y	17+85.00	-35.00	806992.9982	2171851.8082
Y	18+50.00	35.00	807043.6092	2171932.8222
Y	18+50.00	28.75	807044.8284	2171926.6885
Y	19+68.24	-35.00	807173.7305	2171888.6873
Y	20+55.00	-35.00	807258.4221	2171907.5201
Y	20+55.00	-30.00	807257.3349	2171912.4005

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 07/19/2023 TO 07/27/2023 .

DocuSign Envelope ID: C6C000F4-D839-4DAF-AFA0-8EAF7B5D02D5

6/2/99

REVISIONS

PERMANENT EASEMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	RW03E-2

Location and Surveys

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4372 LAND SURVEYOR ANTHONY K. ALFORD

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+35.00	-30.00	806714.9873	2171217.6519
L	11+35.00	-60.00	806744.4351	2171211.9224
L	11+40.00	30.00	806657.0466	2171234.0189
L	11+40.00	52.00	806635.4516	2171238.2206
L	11+50.00	-60.00	806747.2998	2171226.6463
L	11+50.00	-30.00	806717.8520	2171232.3758
L	16+12.50	50.00	806727.6546	2171701.6414
L	16+12.50	72.80	806705.2743	2171705.9958
L	16+25.00	-53.75	806831.8822	2171694.0967
L	16+25.00	-64.00	806841.9436	2171692.1392
L	16+57.50	-64.00	806848.1505	2171724.0409
L	16+57.50	-58.19	806842.4458	2171725.1509
L	16+62.67	75.00	806712.6969	2171755.6647
L	18+54.08	81.00	806743.3627	2171944.6929
L	18+72.50	81.00	806746.8811	2171962.7761
L	18+72.50	97.00	806731.1756	2171965.8319
L	18+85.00	97.00	806733.5629	2171978.1018
L	18+93.50	61.00	806770.5233	2171979.5700
L	18+93.50	50.10	806781.2273	2171977.4873
L	19+10.00	72.00	806762.8770	2171997.8671
L	19+10.00	61.00	806773.6746	2171995.7662

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	12+62.50	30.00	806470.9735	2171851.7746
Y	12+62.50	37.00	806471.3598	2171858.7639
Y	12+90.00	38.00	806497.7735	2171858.6948
Y	12+90.00	30.00	806497.5675	2171850.6974
Y	17+15.00	71.20	806905.6236	2171944.0618
Y	17+90.00	35.00	806985.0889	2171921.5394
Y	18+93.28	-52.00	807103.4081	2171856.1903
Y	18+97.49	-35.00	807104.1028	2171873.6978
Y	19+90.00	30.00	807180.8625	2171956.8609
Y	19+90.00	66.00	807173.0481	2171992.0026
Y	20+00.00	-35.00	807204.7334	2171895.5814
Y	20+00.00	-46.00	807207.1212	2171884.8437
Y	20+02.50	30.00	807193.0645	2171959.5743
Y	20+02.50	66.00	807185.2501	2171994.7159

I , Anthony K. Alford, PLS, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 07/19/2023 to 07/27/2023, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 27th day of July, 2023.

DocuSigned by:
Anthony K. Alford
22BA09B2F0BA44E...

Professional Land Surveyor L-4372

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 07/19/2023 TO 07/27/2023 .

27-JUL-2023 02:18
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amoore
AT RAL-WS094

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PROJECT REFERENCE NO.	SHEET NO.
W-5805E	RW04

Location and Surveys

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4372 LAND SURVEYOR ANTHONY K. ALFORD

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS

6/2/99

1 BOBBIE W. PRIVETTE
DB 19416 PG 1021(WAKE COUNTY REGISTRY)
DB 19416 PG 1025
DB 19416 PG 1029
DB 19416 PG 1033
PB 2023 PG 867 (WAKE COUNTY REGISTRY)

2 TOMMY RAY HILL
DB 14937 PG 1118
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)
PB 2007 PG 323 (FRANKLIN COUNTY REGISTRY)

3 KATRINA W. COLLIE
DB 16908 PG 2598
(WAKE COUNTY REGISTRY)
PB 2007 PG 323
(FRANKLIN COUNTY REGISTRY)

BOBBIE W. PRIVETTE
DB 19416 PG 1021(WAKE COUNTY REGISTRY)
DB 19416 PG 1025
DB 19416 PG 1029
DB 19416 PG 1033
DB 2344 PG 708 (FRANKLIN COUNTY REGISTRY)
DB 2344 PG 712
DB 2344 PG 716
DB 2344 PG 720
PB 2023 PG 867 (WAKE COUNTY REGISTRY)
PB 2023 PG 276 (WAKE COUNTY REGISTRY)
PB 2023 PG 14 (FRANKLIN COUNTY REGISTRY)

5 DONNA FREEMAN
DB 778 PG 644
DB 746 PG 221
PB 1997 PG 452

6 WINSLOW HOLDINGS, LLC
DB 2246 PG 724
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001(FRANKLIN COUNTY REGISTRY)

7 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
ELSIE P. SHEARON (FRANKLIN COUNTY GIS)
DB 946 PG 983 (WAKE AND FRANKLIN COUNTY REGISTRY)
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001(FRANKLIN COUNTY REGISTRY)

8 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 17458 PG 2381
(TRACT 4 MAPPED)

9 LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 5069 PG 485 (WAKE COUNTY REGISTRY)
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)

-L- NC 98 (WAIT AVE.)
N 78°59'23.3" E

-L- 15+00

-L- 20+00

-Y- SR 2057/1465 (MOORES POND RD)

-RAB-

-Y-

-L- POT STA. 17+04.03 =
-RAB- PC STA. 10+00.00
-RAB- PT STA. 14+71.24

-Y- PC Sta. 16+91.34

-Y- POT STA. 16+79.31 =
-RAB- PCC STA. 13+26.58

-Y- PT Sta. 14+68.98

-Y- POT STA. 15+29.31 =
-RAB- PCC STA. 10+90.96

-L- POT STA. 18+54.03 =
-RAB- PCC STA. 12+35.62

-L- POT STA. 17+79.03 =
-Y- POT STA. 16+04.31

-RAB-

PI Sta 10+52.02	PI Sta 14+34.72	PI Sta 11+99.10	PI Sta 12+87.64
Δ = 69° 29' 11.4" (LT)	Δ = 110° 30' 48.6" (LT)	Δ = 110° 30' 48.6" (LT)	Δ = 69° 29' 11.4" (LT)
D = 76° 23' 39.7"	D = 76° 23' 39.7"	D = 76° 23' 39.7"	D = 76° 23' 39.7"
L = 90.96'	L = 144.66'	L = 144.66'	L = 90.96'
T = 52.02'	T = 108.14'	T = 108.14'	T = 52.02'
R = 75.00'	R = 75.00'	R = 75.00'	R = 75.00'

-Y-

PI Sta 12+70.58	PI Sta 18+29.82
Δ = 24° 43' 55.7" (RT)	Δ = 3° 02' 00.7" (RT)
D = 6° 08' 04.0"	D = 1° 05' 43.9"
L = 403.17'	L = 276.90'
T = 204.77'	T = 138.48'
R = 934.00'	R = 5,230.00'
e = EXIST.	e = NC
RO = 150'	RO = N/A
DS = 50MPH	DS = 40MPH

NAD 83/2001

I , Anthony K. Alford, PLS, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 07/19/2023 to 07/27/2023 and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 7th day of December, 2023.

DocuSigned by:
Anthony K. Alford
CC5F7993A8E8408...

Professional Land Surveyor L-4372

NOTES:

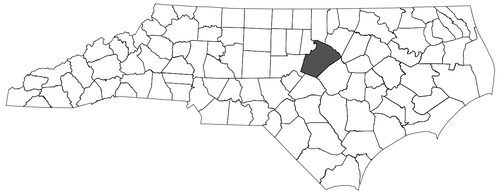
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 07/19/2023 TO 07/27/2023.

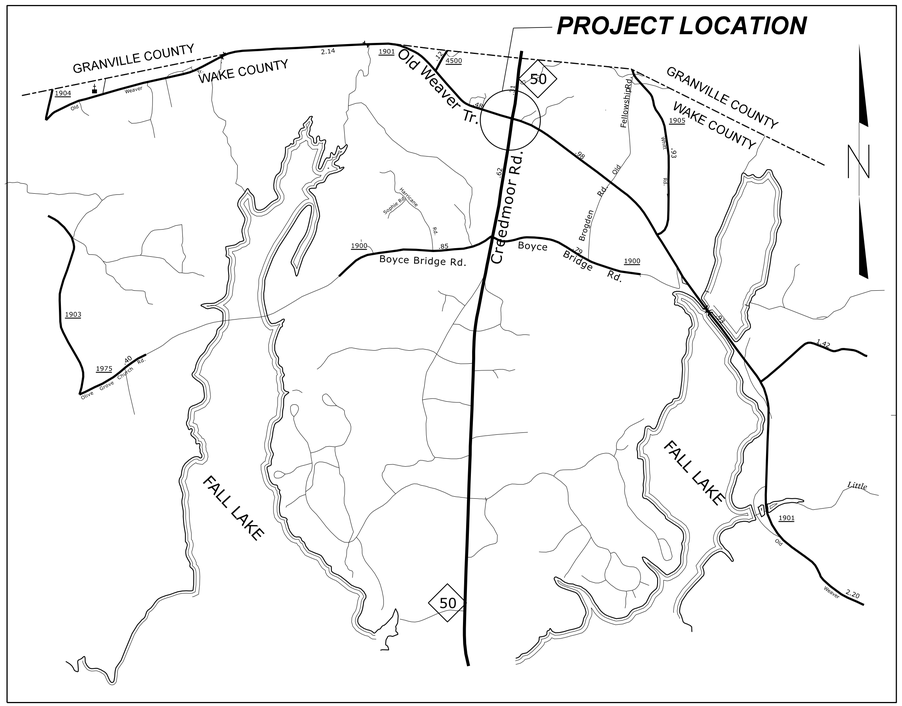
07-DEC-2023 16:17
P:\2021\NC0070_Location and Surveys\W-5805E RW Staking 23163.30\80-Drawings\Revised 120723\w2805e_ls_rw04.dgn
amoore AT WEI-BNTDX3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY





VICINITY MAP

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

PLANS PREPARED IN THE OFFICE OF:
DIVISION FIVE, DIVISION OF HIGHWAYS, NCDOT

VICTOR M CHAVEZ, PE — TRAFFIC CONTROL PROJECT ENGINEER

INDEX OF SHEETS

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

LEGEND

GENERAL
- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- REMOVAL

SIGNALS
- EXISTING
- PROPOSED
- TEMP TEMPORARY

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

APPROVED:

DATE: DocuSigned by: Victor Chavez 7CD1F54298E940A... 01/30/2026

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 018204 VICTOR M CHAVEZ

SHEET NO.
TMP-1

TIP PROJECT:
HL-0121

1/29/2026
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Users\mchavez1
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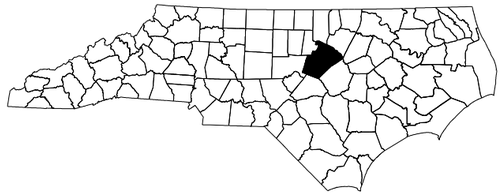
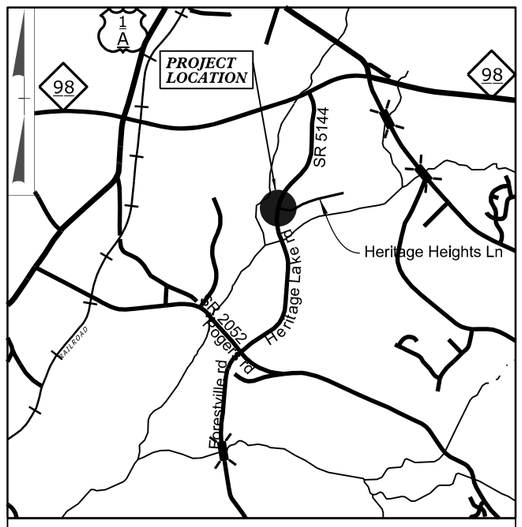
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



LOCATION: SR 5144 (HERITAGE LAKE ROAD) AT HERITAGE HEIGHTS LANE
TYPE OF WORK: GRADING, SIDEWALK AND CONCRETE ISLAND



VICINITY MAP

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES, CONSTRUCTION SEQUENCES, AND LEGEND
TMP-4	PEDESTRIAN DETOUR DETAIL

SHEET NO.
TMP-1

HS-2405Q

TIP PROJECT:

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

Prepared in the Office of:
DIVISION FIVE, DIVISION OF HIGHWAYS
815 STADIUM DRIVE, DURHAM, NC 27704

PLANS REVIEWED BY:

SUNIL PATEL

MATTHEW NOLFO, PE ***PROJECT ENGINEER***

SUNIL PATEL ***PROJECT DESIGN ENGINEER***

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED:
DATE: 01/30/2026

Signed by:
5E550057278E42E...

28-JAN-2026 10:00
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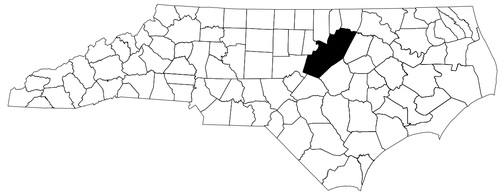
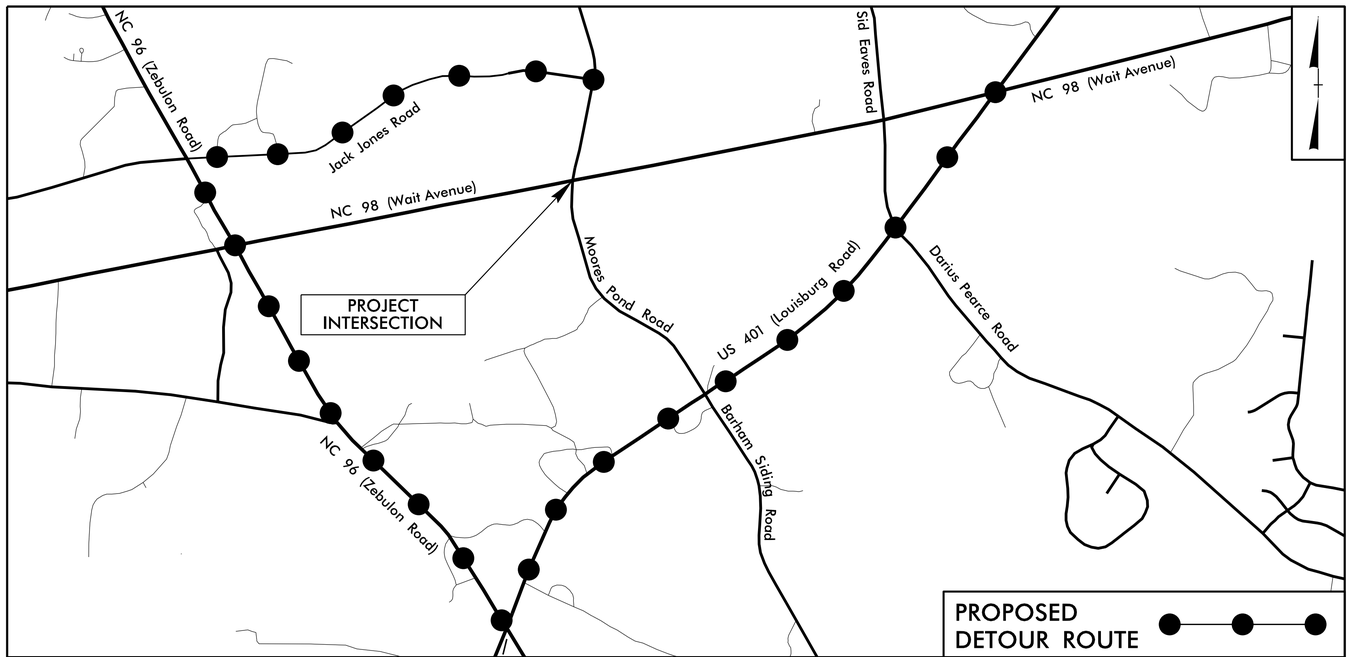
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY & FRANKLIN COUNTY



LOCATION: NC 98 AND SR 2057 /SR 4465 /SR 1106 (MOORES POND ROAD)



VICINITY MAP

NTS

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-3A-3B	GENERAL NOTES
TMP-4	TRASNPORTATION MANAGEMENT STRATEGIES, PHASING NOTES AND PHASING PLAN
TMP-5	PHASE I DETOUR PLAN

SHEET NO.
TMP-1

W-5805E

T.I.P. PROJECT:

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

PLANS PREPARED BY:

ZACHARY M. ESPOSITO, PE, TCDS
PROJECT ENGINEER

ANDREW W. POOLE, EI
PROJECT DESIGN ENGINEER

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

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DRMP
ENGINEERS SURVEYORS PLANNERS SCIENTISTS
DRMP, INC.
5808 FARINGDON PLACE RALEIGH, NC 27609
PHONE: 919-872-5115 | www.drmp.com | NC License No. F-1524

APPROVED: Signed by: Zachary M Esposito 5647DD76D4884E8...

DATE: 11/24/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

TRAFFIC CONTROL 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	MONDAY THRU FRIDAY 6AM - 9AM & 4PM - 7PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, 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 WITHIN 10 FT OF AN OPEN TRAVEL LANE ON A DIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

H) 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.

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

TRAFFIC CONTROL DEVICES

J) 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

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

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

MISCELLANEOUS

M) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

CONSTRUCTION SEQUENCING:

STEP 1: USING RSD 1101.02 (SHEET I OF 19) CLOSE THE NORTHBOUND TRAVEL LANE AND TWO-WAY TURN LANE TO CONSTRUCT ALL THE WORK, INCLUDING HALF OF THE PEDESTRIAN REFUGE ISLAND, ON THE WESTERN SIDE OF THE CENTERLINE OF SR 5144 (HERITAGE LAKE ROAD).

STEP 2: USING RSD 1101.02 (SHEET I OF 19) CLOSE THE SOUTHBOUND TRAVEL LANE AND TWO-WAY TURN LANE TO CONSTRUCT ALL THE WORK, INCLUDING HALF OF THE PEDESTRIAN REFUGE ISLAND, ON THE EASTERN SIDE OF THE CENTERLINE OF SR 5144 (HERITAGE LAKE ROAD).

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ROADWAY STANDARD DRAWINGS

PROJ. REFERENCE NO.	SHEET NO.
HS-2405Q	TMP-2

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 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
1101.05	WORK ZONE VEHICLE ACCESS
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANES AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

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
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

EXISTING PROPOSED TEMP TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

APPROVED: _____ DATE: _____
01/30/2026

NORTH CAROLINA PROFESSIONAL SEAL 058695

SEAL
Signed by: Matthew Dilla PE

DIVISION OF HIGHWAYS - STATE OF NORTH CAROLINA - DEPARTMENT OF TRANSPORTATION - PROJECT SERVICES UNIT - DESIGN DIVISION

ROADWAY STANDARD DRAWINGS, GENERAL NOTES, CONSTRUCTION SEQUENCES, AND LEGEND

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ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	TMP-2

DRMP
DRMP, INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

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
- TEMPORARY PAVEMENT

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
- PORTABLE CONCRETE BARRIERS

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

APPROVED: Signed by: Zachary M. Esposito 5647D076D4884E8... DATE: 11/24/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

ROADWAY STANDARD DRAWINGS & LEGEND

PROJ. REFERENCE NO.	SHEET NO.
HL-0121	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARD
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGERS
1180.01	SKINNY DRUMS

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
SR 1901 (OLD WEAVER TRAIL)	6:00 AM TO 9:00 AM AND 4:00PM TO 7:00PM (MON. - FRIDAY)
NC 50 (CREEDMOOR ROAD	6:00 AM TO 9:00 AM AND 4:00PM TO 7:00PM (MON. - FRIDAY)

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.04 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. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

GENERAL NOTES

PAVEMENT EDGE DROP OFF REQUIREMENTS

F) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

H) 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.

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

J) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 50FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

K) PLACE ADDITIONAL SETS OF THREE CHANNELIZING, DRUMS, PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 50 FT CENTERS WHEN UNOPENED LANES ARE CLOSE TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

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

MISCELLANEOUS

N) 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 AND BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7)

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: _____

DATE: _____

01/30/2026

DocuSigned by:
Victor Chavez
7CD1F54298E940A...

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ

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

TRANSPORTATION OPERATIONS PLAN

1/29/2026
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User:vmchavez

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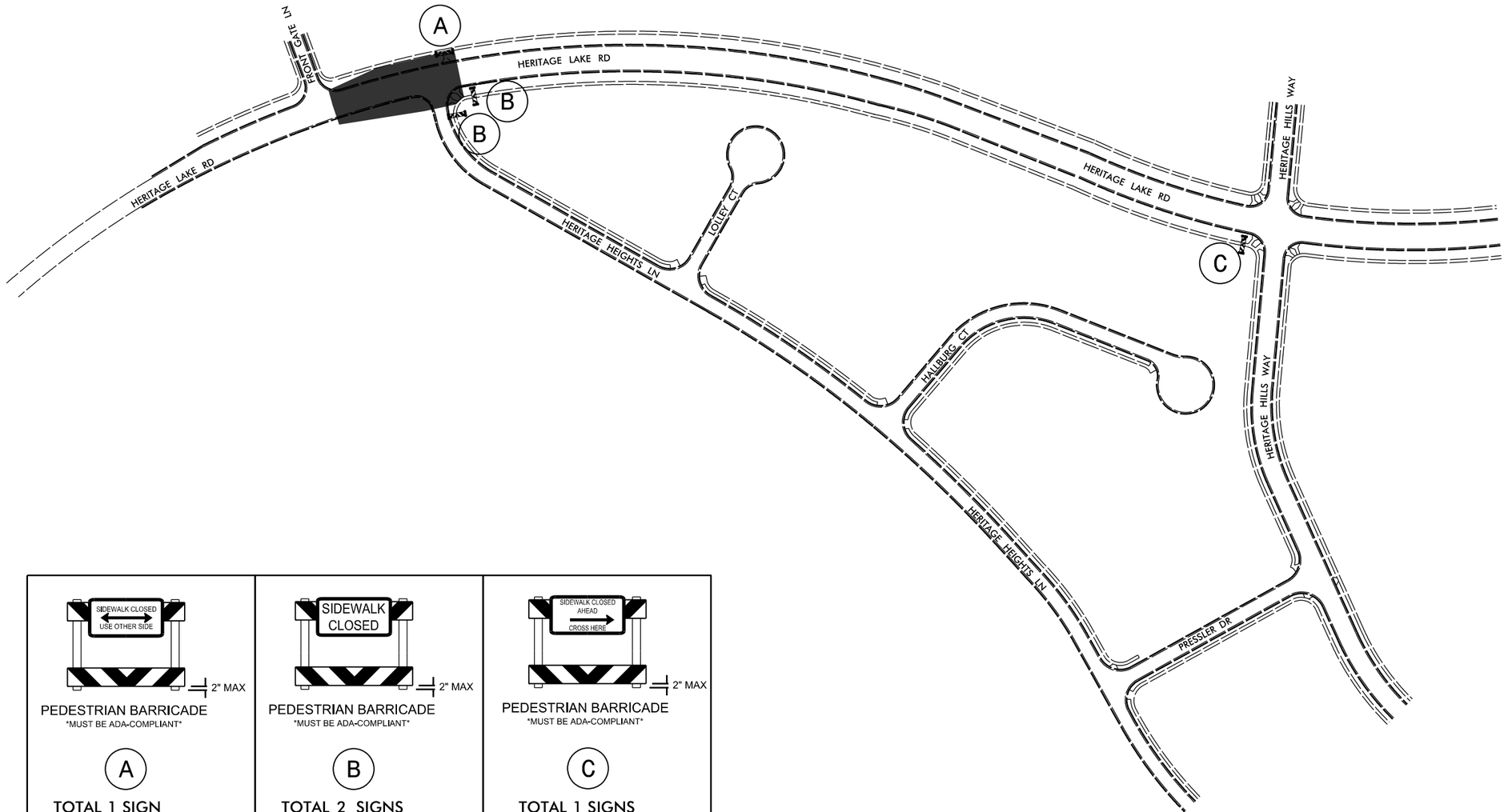
PROJ. REFERENCE NO.	SHEET NO.
HS-2405Q	TMP-4



PEDESTRIAN BARRICADE
MUST BE ADA-COMPLIANT

A

TOTAL 1 SIGN

PEDESTRIAN BARRICADE
MUST BE ADA-COMPLIANT

B

TOTAL 2 SIGNS

PEDESTRIAN BARRICADE
MUST BE ADA-COMPLIANT

C

TOTAL 1 SIGNS

APPROVED: 01/30/2026

DATE:

Signed by: SEAL

5F550857270F42E...

NORTH CAROLINA PROFESSIONAL SEAL 058695 ENGINEER OLFD

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

PEDESTRIAN DETOUR DETAIL

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DRMP
DRMP, INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

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. TRAFFIC CONTROL MAY BE REVISED BY THE NCDOT INSPECTOR IN THE FIELD IF NEEDED.

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

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 98	MONDAY THRU FRIDAY 6AM TO 9AM AND 4PM TO 7PM
MOORES POND ROAD	MONDAY THRU FRIDAY 6AM TO 9AM AND 4PM TO 7PM

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

ROAD NAME
NC 98
MOORES POND ROAD

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 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.

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

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON NC 98 AND/OR MOORES POND ROAD.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

APPROVED: Zachary M. Esposito
DocuSigned by: 5647DD76D4484E8...
DATE: 2/11/2026

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

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

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GENERAL NOTES

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GENERAL NOTES CONT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) 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.

M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

Q) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 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.

R) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

S) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

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

V) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE CONES TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

APPROVED: Zachary M. Esposito
9647DD76D4884E8...

DATE: 2/11/2026

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

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

GENERAL NOTES

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TRANSPORTATION MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

TRAFFIC MANAGEMENT STRATEGIES:
- -FULL ROADWAY CLOSURES
- -ONE-LANE, TWO WAY OPERATION (FLAGGING)
- -OFF-SITE DETOURS / USE OF ALTERNATIVE ROUTES

PHASING NOTES

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES (RSD 1101.01). FIELD VERIFY LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES, SCHOOLS, BUS STOPS, EMERGENCY SERVICES, AND BUSINESSES DURING THE LIFE OF THE CONTRACT, PRIOR TO INCORPORATION, OBTAIN WRITTEN APPROVAL FROM THE ENGINEER ON METHOD TO MAINTAIN ACCESS.

COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT NO PONDING OF WATER WILL OCCUR WITHIN THE TRAVEL LANE.

TRAFFIC CONTROL NOTE #1:
FOR THE DURATION OF CONSTRUCTION, ENSURE ALL DRIVEWAY ACCESS IS MAINTAINED.

PHASING PLAN

PHASE I:

INSTALL WORK ZONE ADVANCE WARNING SIGNS ALONG NC 98 AND MOORES POND ROAD (RSD 1101.01).

INSTALL DETOUR SIGNING FOR NC 98 AND MOORES POND ROAD. COVER SIGNAGE UNTIL READY TO SHIFT INTO PHASE I TRAFFIC PATTERN. SEE TMP-5 FOR DETOUR ROUTE AND PROPER LOCATIONS FOR DETOUR SIGNAGE.

USING ROAD CLOSURES AND BARRICADES AS NEEDED, UNBAG DETOUR SIGNAGE FOR NC 98 AND MOORES POND ROAD, SHIFT TRAFFIC TO THE PHASE I TRAFFIC PATTERN. PHASE I TRAFFIC PATTERN ENTAILS CLOSING THE INTERSECTION OF NC 98 AND MOORES POND ROAD.

ONCE SHIFTED, BEHIND BARRICADES AND AWAY FROM TRAFFIC, CONSTRUCT NC 98 AND MOORES POND ROAD INTERSECTION IMPROVEMENTS. INSTALL ALL PAVEMENT MARKINGS WITHIN PROJECT LIMITS. SEE PAVEMENT MARKING PLANS FOR MORE DETAILS.

AFTER COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES AND ALLOW NORMAL TRAFFIC OPERATION.

ICT NOTE:
ONCE THE ROAD CLOSURE IS ACTIVE, THE CONTRACTOR SHALL HAVE ONE HUNDRED AND TWENTY (120) DAYS TO COMPLETE ALL WORK RELATED TO W-5805E, INCLUDING FINAL PAVING AND STRIPING. AFTER THE ONE HUNDRED AND TWENTY (120) DAY TIMELINE, THE CONTRACTOR MUST REOPEN THE IMPACTED ROADS TO NORMAL TRAFFIC CONDITIONS. SEE ICTS FOR MORE DETAILS.

APPROVED: Signed by: Zachary M. Esposito 5847DD76248B4EB...

DATE: 2/11/2026

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

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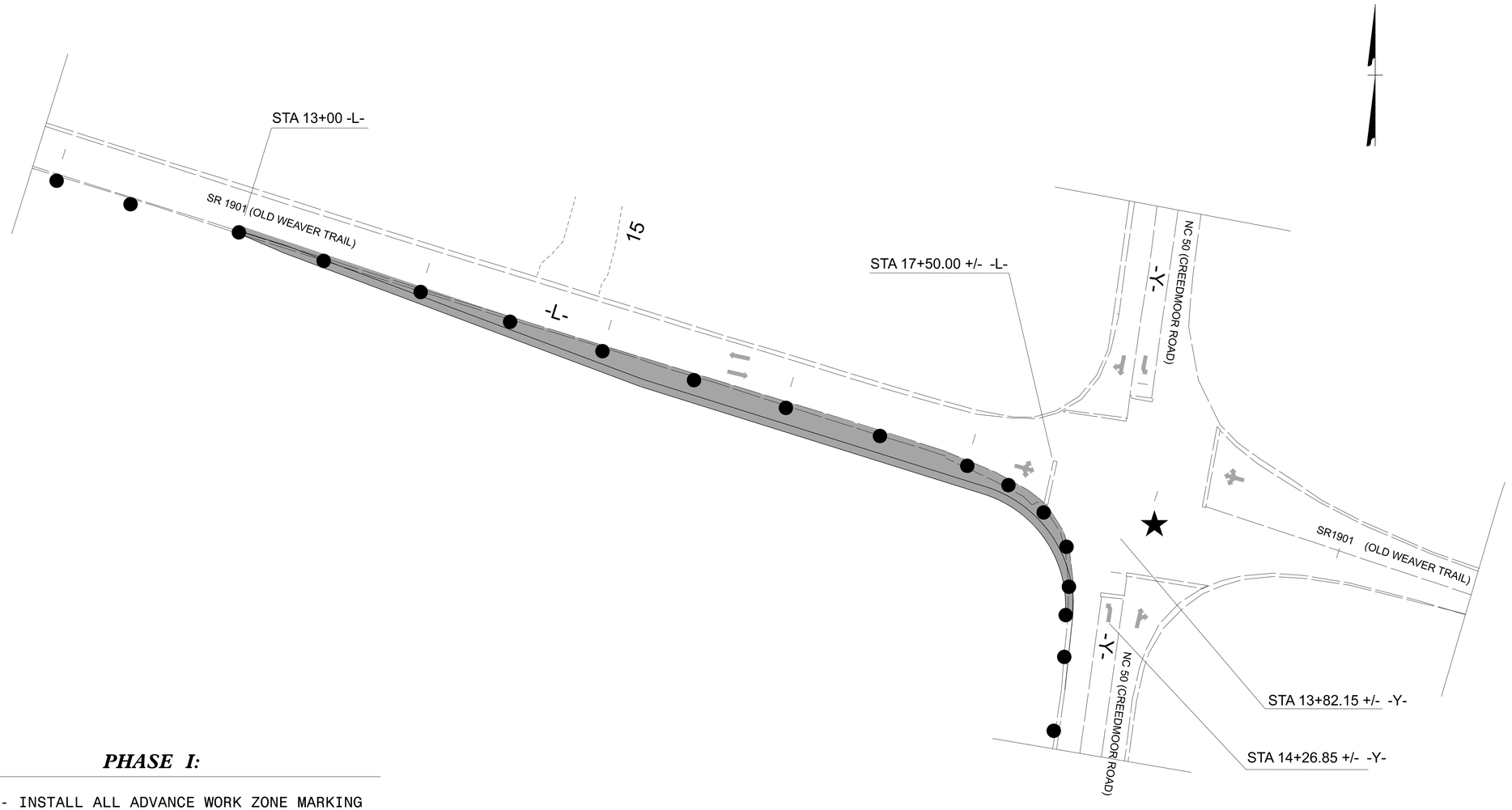
TRANSPORTATION MANAGEMENT STRATEGIES, PHASING NOTES AND PHASING PLAN

PROJ. REFERENCE NO.	SHEET NO.
HL-0121	TMP-2



PHASE I:

STEP 1 - INSTALL ALL ADVANCE WORK ZONE MARKING
SIGNS PER RSD 1101.01, ON SR 1901 (OLD WEAVER TRAIL)

STEP 2 - USING RSD 1101.04 , SHEET 1 OF 2,
CONSTRUCT WIDENING , MILLING,
OF SR 1901 (OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR ROAD)
FROM STA 13+00.00 TO STA 17+50.00 +/- -L-, AND NC 50 (CREEDMOOR ROAD)
FROM STA 13+82.15 TO STA 14+26.85 -Y-LINE
UP TO BUT NOT INCLUDING FINAL LAYER OF
SURFACE COURSE, AWAY FROM TRAFFIC.

ALL STEPS ABOVE SHOULD BE COMPLETED BEFORE MOVING TO THE NEXT PHASE.

★ *UPGRADE SIGNAL*

PROPOSED PAVEMENT

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APPROVED: _____

DATE: _____

DocuSigned by:
Victor Chavez
7CD1F54298E940A...

NORTH CAROLINA PROFESSIONAL SEAL 018204 03/30/2026 ENGINEER VICTOR M CHAVEZ

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

PHASING DETAIL

1/29/2026
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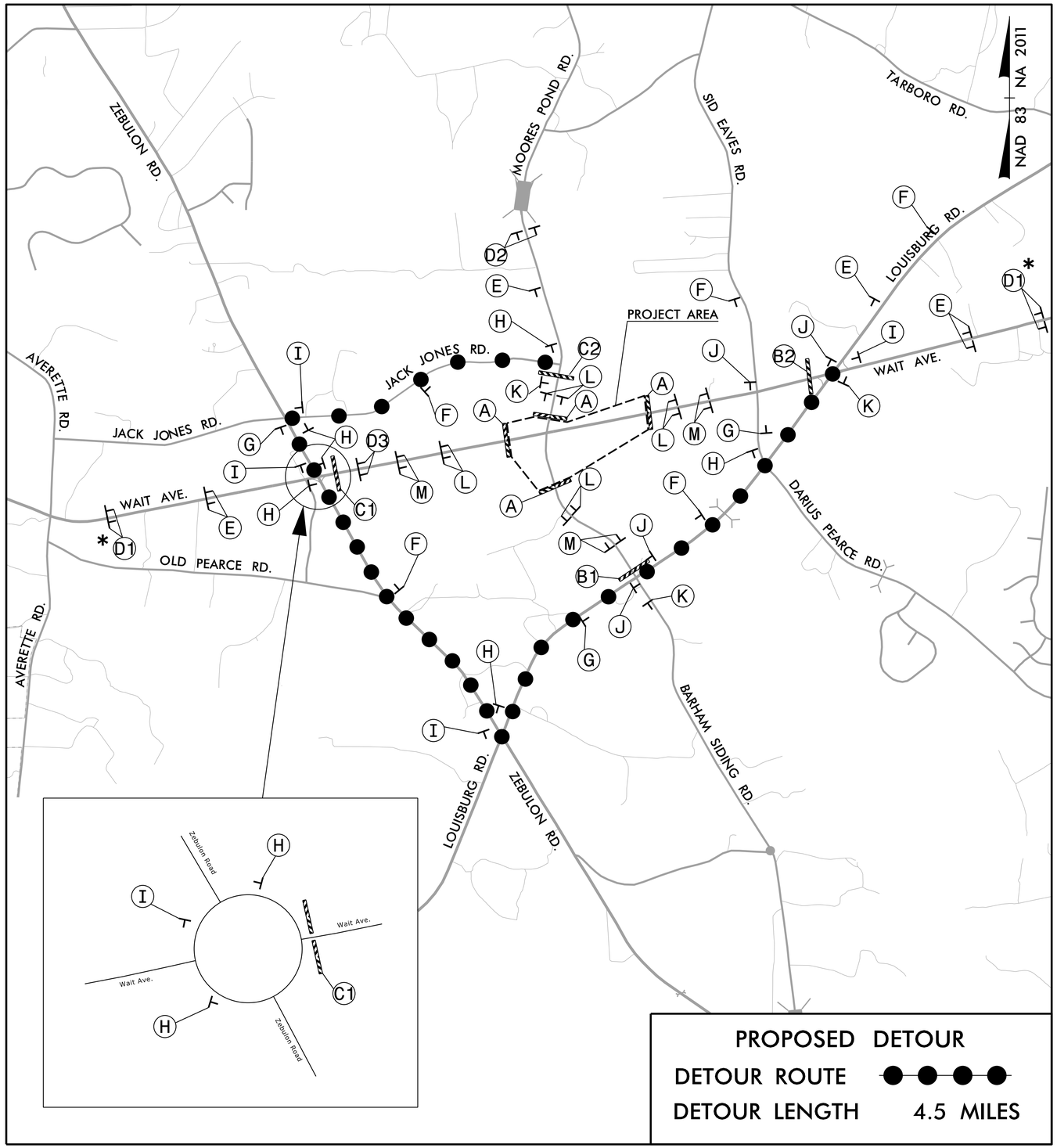
DETOUR – NC 98 VIA NC 96 AND US 401



PROPOSED DETOUR

DETOUR ROUTE

DETOUR LENGTH 4.5 MILES

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R11-2
48″ x 30″
ROAD CLOSED

TYPE III BARRICADE(S)

A

R11-3
60″ x 30″
ROAD CLOSED
0.5 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10L
48″ x 18″

TYPE III BARRICADE

B1

R11-3
60″ x 30″
ROAD CLOSED
0.7 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10L
48″ x 18″

TYPE III BARRICADE

B2

R11-3
60″ x 30″
ROAD CLOSED
0.7 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10R
48″ x 18″

TYPE III BARRICADE

C1

R11-3
60″ x 30″
ROAD CLOSED
0.2 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10R
48″ x 18″

TYPE III BARRICADE

C2

ROAD CLOSED AHEAD
W20-3
48″ x 48″
1.6 MILES
W16-3P
24″ X 24″

D1

ROAD CLOSED AHEAD
W20-3
48″ x 48″
0.8 MILES
W16-3P
24″ X 24″

D2

ROAD CLOSED AHEAD
W20-3
48″ x 48″

D3

DETOUR AHEAD
W20-2
48″ X 48″

E

ROAD CLOSED AHEAD
W20-3
48″ x 48″
NEXT RIGHT
SP-4R
42″ X 12″

F

ROAD CLOSED AHEAD
W20-3
48″ x 48″
NEXT LEFT
SP-4L
42″ X 12″

G

DETOUR
M4-8
24″ X 12″

H

M6-1
21″ X 15″

DETOUR
M4-8
24″ X 12″

I

M6-1 L
21″ X 15″

DETOUR
M4-8
24″ X 12″

J

M6-3
21″ X 15″

END DETOUR
M4-8 A
24″ X 18″

K

ROAD CLOSED 500 FT
W20-3
48″ x 48″

L

ROAD CLOSED 1000 FT
W20-3
48″ x 48″

M

MESSAGE NO. 1	MESSAGE NO. 2
NOTICE	FROM
NC 98	XX/XX -
CLOSED	XX/XX

CHANGEABLE MESSAGE SIGN

*INSTALL CMS BOARDS 2500′ +/- PRIOR TO SIGN 'D1'. INSTALL PER RSD 1101.03 SHEET 1

APPROVED: Signed by: Zachary M Esposito 5647DD76D4884E8...

DATE: 2/13/2026

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 054155 ENGINEER ZACHARY M. ESPOSITO

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

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PHASE I DETOUR

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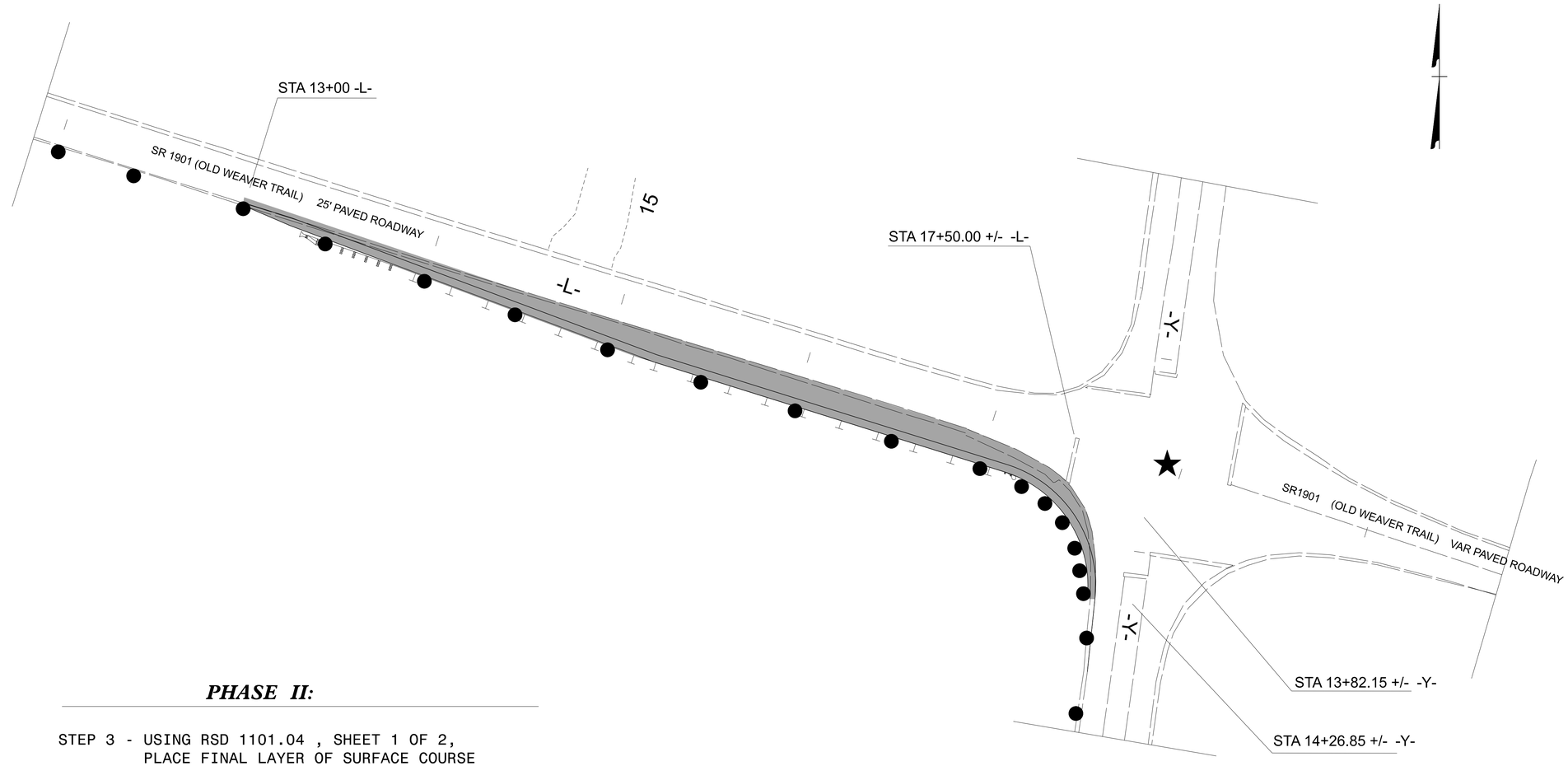

PHASE II:

STEP 3 - USING RSD 1101.04 , SHEET 1 OF 2,
PLACE FINAL LAYER OF SURFACE COURSE
ON RIGHT SIDE OF -L- SR 1901 (OLD WEAVER TRAIL)
FROM STA 13+00 TO STA 17+50+/- AND AND ON RIGHT SIDE OF
-Y- NC 50 (CREEDMOOR ROAD) FROM STA 13+82.15 TO STA 14+26.85,
AWAY FROM TRAFFIC.

STEP 4 - COMPLETE SIGNAL WORK, INSTALL PROPOSED
GUARDRAIL AND INSTALL SIGNS.

STEP 5 - INSTALL FINAL PAVEMENT MARKING.

★ *UPGRADE SIGNAL*

PROPOSED PAVEMENT

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DATE: _____

DocuSigned by:
Victor Chavez
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NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ
01/30/2026

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

PHASING DETAIL

1/29/2026
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PROJECT REFERENCE NO.	SHEET NO.
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PAVEMENT MARKING PLAN

WAKE COUNTY

LOCATION:

TIP PROJECT: HL-0121

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKINGS PLAN TITLE AND SCHEDULE SHEET
PMP-2	PAVEMENT MARKINGS DETAIL SHEET

GENERAL NOTES

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

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

ROAD NAME	MARKING	MARKER
SR 1901 (OLD WEAVER TRAIL)	THERMOPLASTIC	NONE

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 SYMBOLS.
E) REFER TO THE TRAFFIC SIGNAL DESIGN PLANS FOR STOP BAR LOCATION.

PAVEMENT MARKING SCHEDULE

SYMB	DESCRIPTION AND TYPE	PAY ITEM QUANTITY
T1	WHITE EDGELINE (4", 90 MIL)	525 LF
T2	WHITE SOLID LANE LINE (4", 90 MIL)	225 LF
T4	3FT - 9FT/ SP. WHITE MINI SKIP (4", 90 MIL)	225 LF
T13	YELLOW DOUBLE CENTER (4", 90 MIL)	475 LF
T61	WHITE STOP BAR (24", 90 MIL)	40 LF
T71	RIGHT TURN ARROW (90 MIL)	2 EA
T73	COMBO. LEFT/STRAIGHT ARROW (90 MIL)	1 EA

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 2024 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
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES

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Prepared in the Office of:
DIVISION DESIGN & CONSTRUCTION
1020 Birch Ridge Dr., Raleigh NC, 27610

2024 STANDARD SPECIFICATIONS

VICTOR M. CHAVEZ, PE
MARKING PROJECT ENGINEER

DIVISION FIVE DESIGN & CONSTRUCTION ENGINEER

DocuSigned by:
Victor Chavez
7CD1F54298E940A...
01/30/2026
SIGNATURE:

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ P.E.

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

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PROJECT REFERENCE NO.	SHEET NO.
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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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
904.10	SIGNING - ORIENTATION OF GROUND MOUNTED SIGNS
904.50	SIGNING - MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNDS ON 'U' CHANNEL POSTS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE & MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

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:

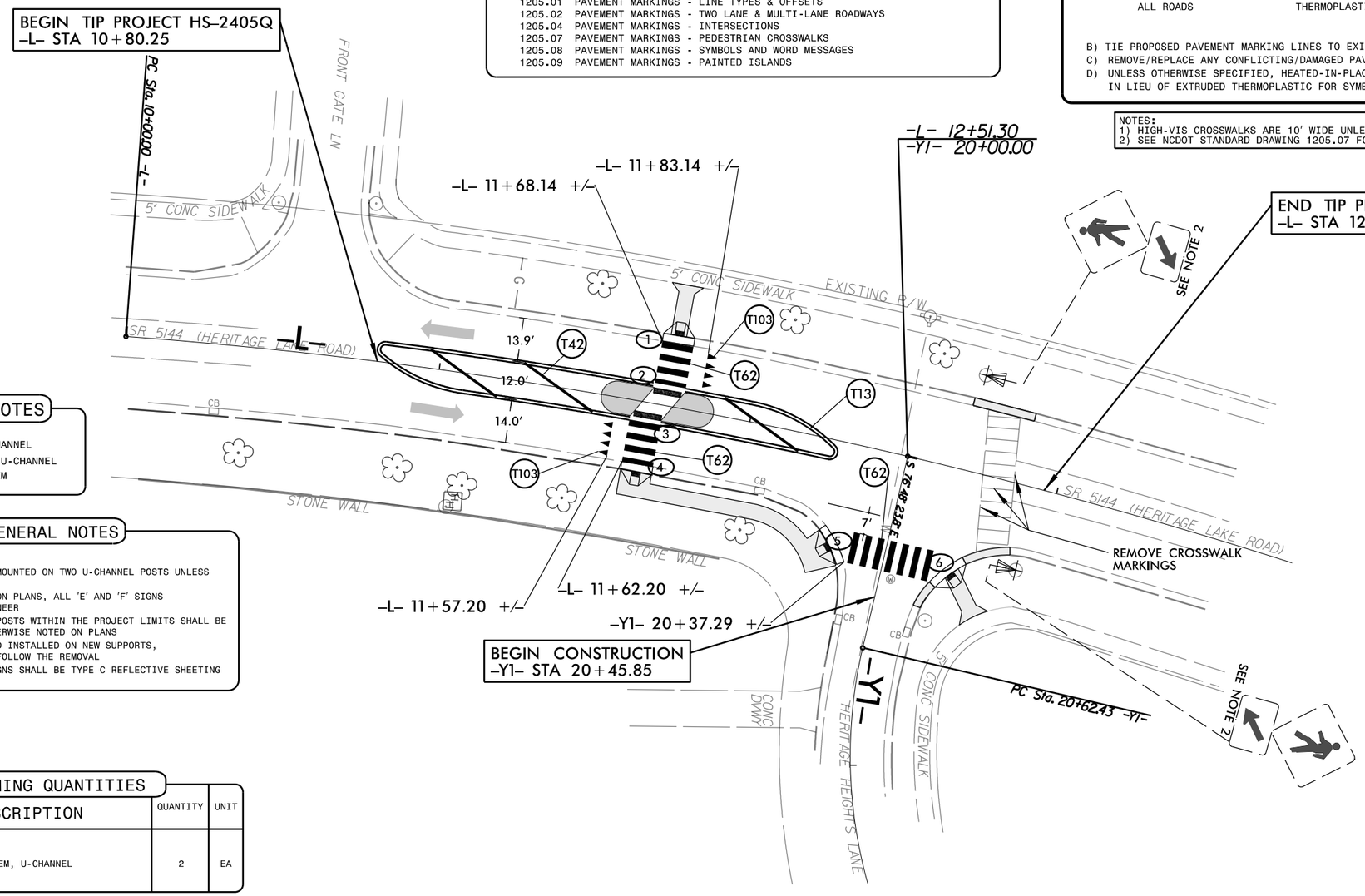
ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	NONE

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 SYMBOLS.

NOTES:
1) HIGH-VIS CROSSWALKS ARE 10' WIDE UNLESS OTHERWISE NOTED.
2) SEE NCDOT STANDARD DRAWING 1205.07 FOR CROSSWALK PLACEMENT.

PI Sta 12+01.23 -L-
Δ = 14° 20' 12.6" (RT)
D = 3° 34' 51.6"
L = 400.36'
T = 201.23'
R = 1600.00'

PI Sta 21+04.58 -Y1-
Δ = 31° 23' 23.6" (LT)
D = 38° 11' 49.9"
L = 82.18'
T = 42.15'
R = 150.00'



SIGNING PAY ITEM NOTES

1	DISPOSAL OF SUPPORT, U-CHANNEL
2	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
3	DO NOT DISTURB SIGN SYSTEM

SIGNING GENERAL NOTES

- SIGNS FURNISHED BY CONTRACTOR
- ALL TYPE 'D' AND 'F' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- ALL EXISTING SIGNS ON "U" CHANNEL POSTS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL
- THE BACKGROUND FOR TYPE E AND F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING

SUMMARY OF SIGNING QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	2	EA

NUMBER	CURB RAMP TYPE	LOCATION
1	TYPE 3	-L- STA 11+73 +/- LT
2	TYPE 7	-L- STA 11+73 +/- LT
3	TYPE 7	-L- STA 11+67 +/- RT
4	TYPE 3	-L- STA 11+67 +/- RT
5	TYPE 1 MODIFIED	-Y1- STA 20+33 +/- RT
6	TYPE 1 MODIFIED	-Y1- STA 20+33 +/- LT

PAVEMENT MARKING SCHEDULE

T13	YELLOW DOUBLE CENTER (4", 90 mils)	TOTAL: 570 LF
T42	YELLOW DIAGONAL (8", 90 mils)	TOTAL: 84 LF
T62	WHITE CROSSWALK LINE (24", 90 mils)	TOTAL: 150 LF
T103	24" YIELD LINE TRIANGLE (90 mils)	TOTAL: 8 EA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION FIVE DESIGN

01/30/2026

NORTH CAROLINA PROFESSIONAL SEAL 058695 ENGINEER MATTHEW J NOLFO

Signed by: Matthew Nolfo, PE
5F550057278F42E...

P.E. SIGNATURE

PEDESTRIAN IMPROVEMENTS ON SR 5144 (HERITAGE LAKE ROAD) AT HERITAGE HEIGHTS LANE

DIVISION 05 WAKE COUNTY WAKE FOREST

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

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

SCALE:	1"=40'
DATE:	OCT/2025
PREPARED BY:	SUNIL PATEL
REVIEWED BY:	MATTHEW NOLFO, PE
REVIEWED BY:	

Docusign Envelope ID: 7D703EFC-05DF-4846-8487-DC95B92B8C97

CONTRACT: DE00382 T.I.P.: W-5805E

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
WAKE COUNTY & FRANKLIN COUNTY
LOCATION: NC 98 AND SR 2057 / SR 4465 / SR 1106 (MOORES POND ROAD)

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	PMP-1

APPROVED: Signed by: Kayla M. Poulos 1B07791CEF90423...

DATE: 12/16/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY STANDARD DRAWING

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

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING SCHEDULE AND PAVEMENT MARKING PLAN COVER SHEET
PMP-2	PAVEMENT MARKING DETAILS

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	8300	L.F.
4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	500	L.F.
4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	20	EA.
4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	8300	L.F.
4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	88	EA.

GENERAL NOTES

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

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

ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	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.

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
THERMOPLASTIC(4", 90 MILS)	
T1	WHITE EDGELINE
T10	YELLOW EDGELINE
T11	YELLOW SINGLE CENTER
T13	YELLOW DOUBLE CENTER
THERMOPLASTIC(12", 90 MILS)	
T50	WHITE GORELINE
T52	YELLOW DIAGONAL
T55	3 FT. - 3 FT./SP WHITE MINISKIP
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)	
T103	24" YIELD LINE TRIANGLE

PLANS PREPARED BY: DRMP, INC.

KAYLA M. POULOS, PE PROJECT MANAGER

MIKAYLA M. LINDSEY, EI PROJECT ENGINEER

DRMP

DRMP, INC.
5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

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DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	PMP-2

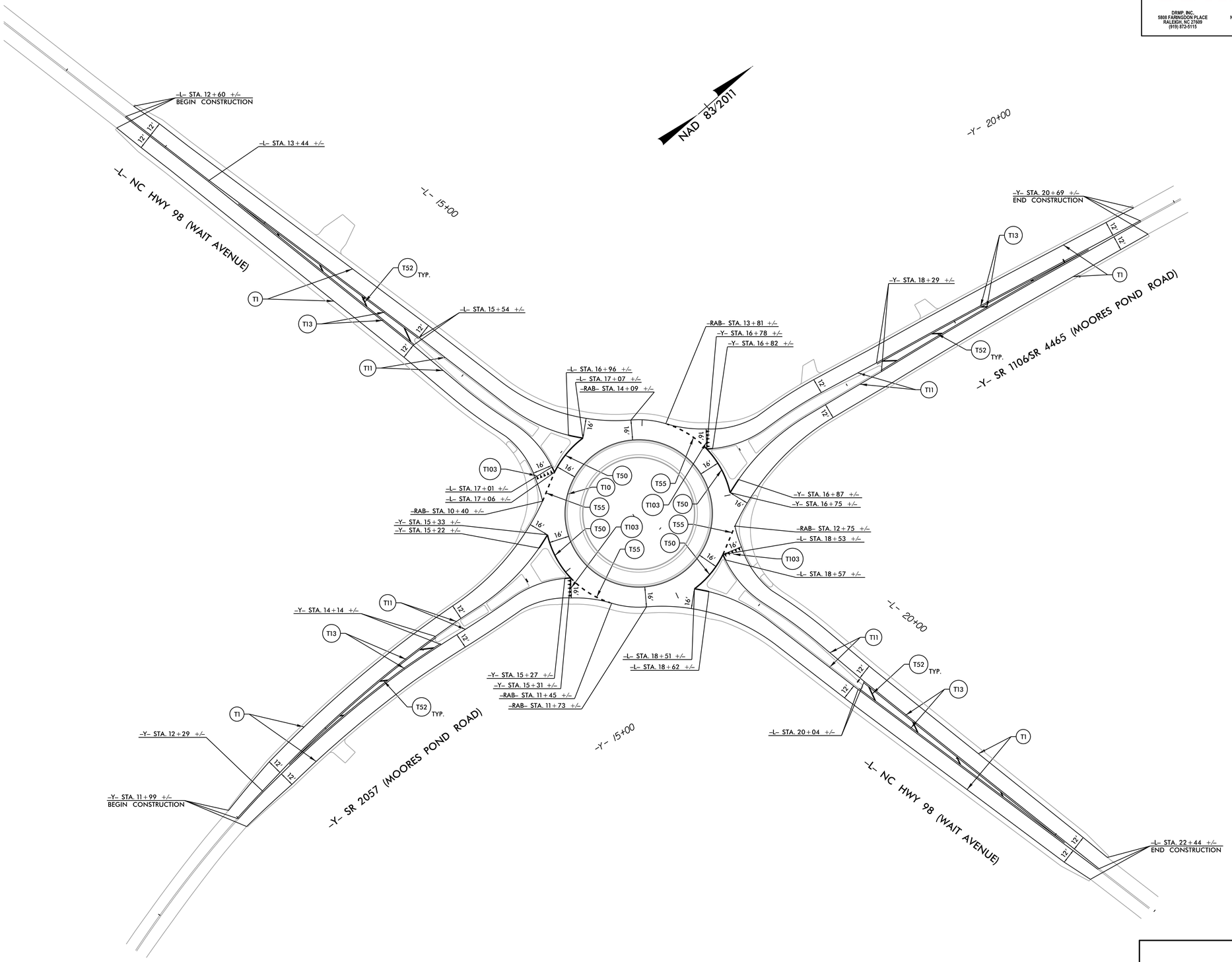
APPROVED: Signed by: Kayla M. Poulos 1B07791CEF90423...

DATE: 11/18/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PAVEMENT MARKING DETAIL

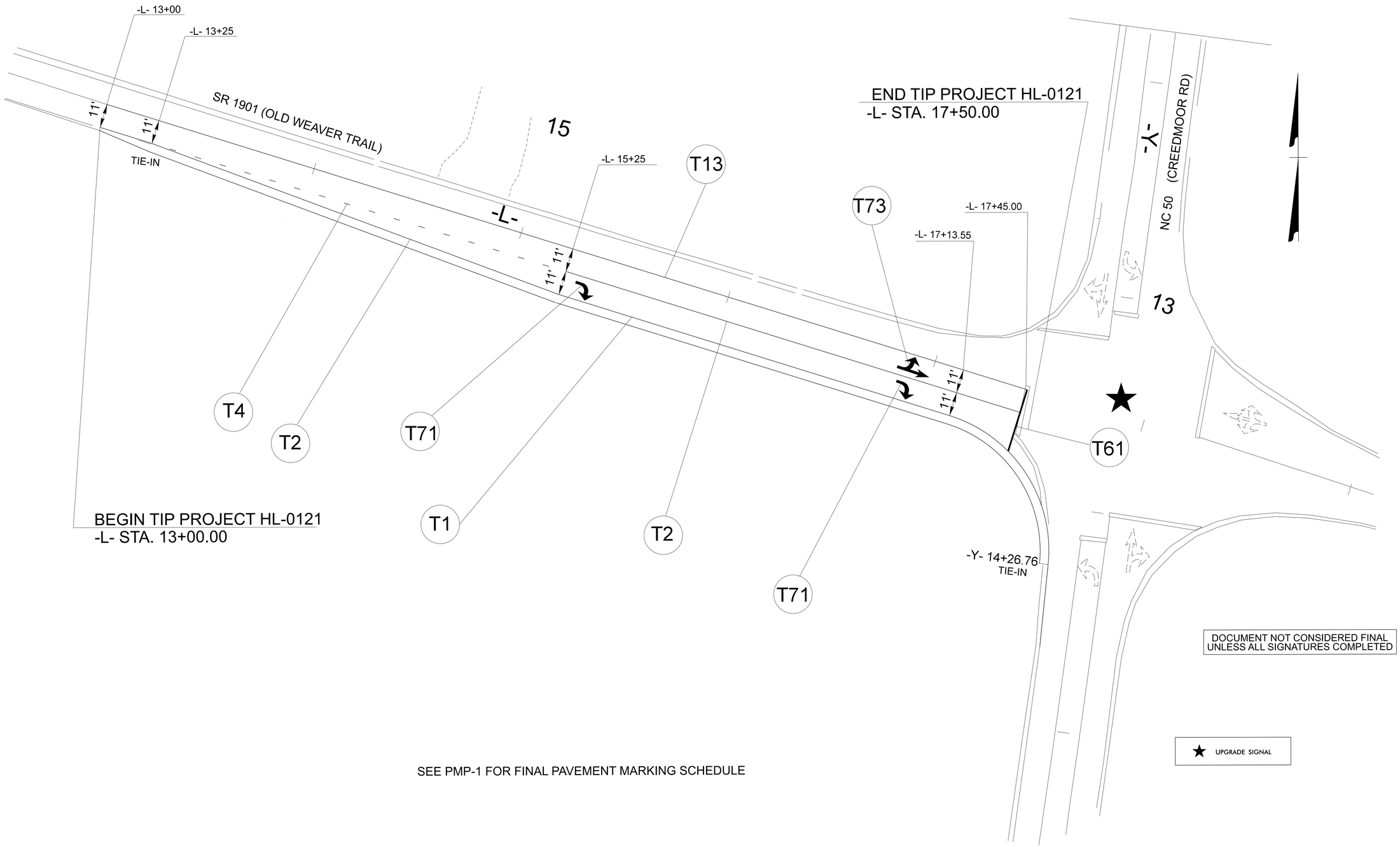
10/22/2025
...\22246_pmp_02.dgn
User:mlindsey

5/26/20

HL-0121
SHEET | PMP-2

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ
5/30/2026

DocuSigned by:
Victor Chavez
7CD1F54298E940A...



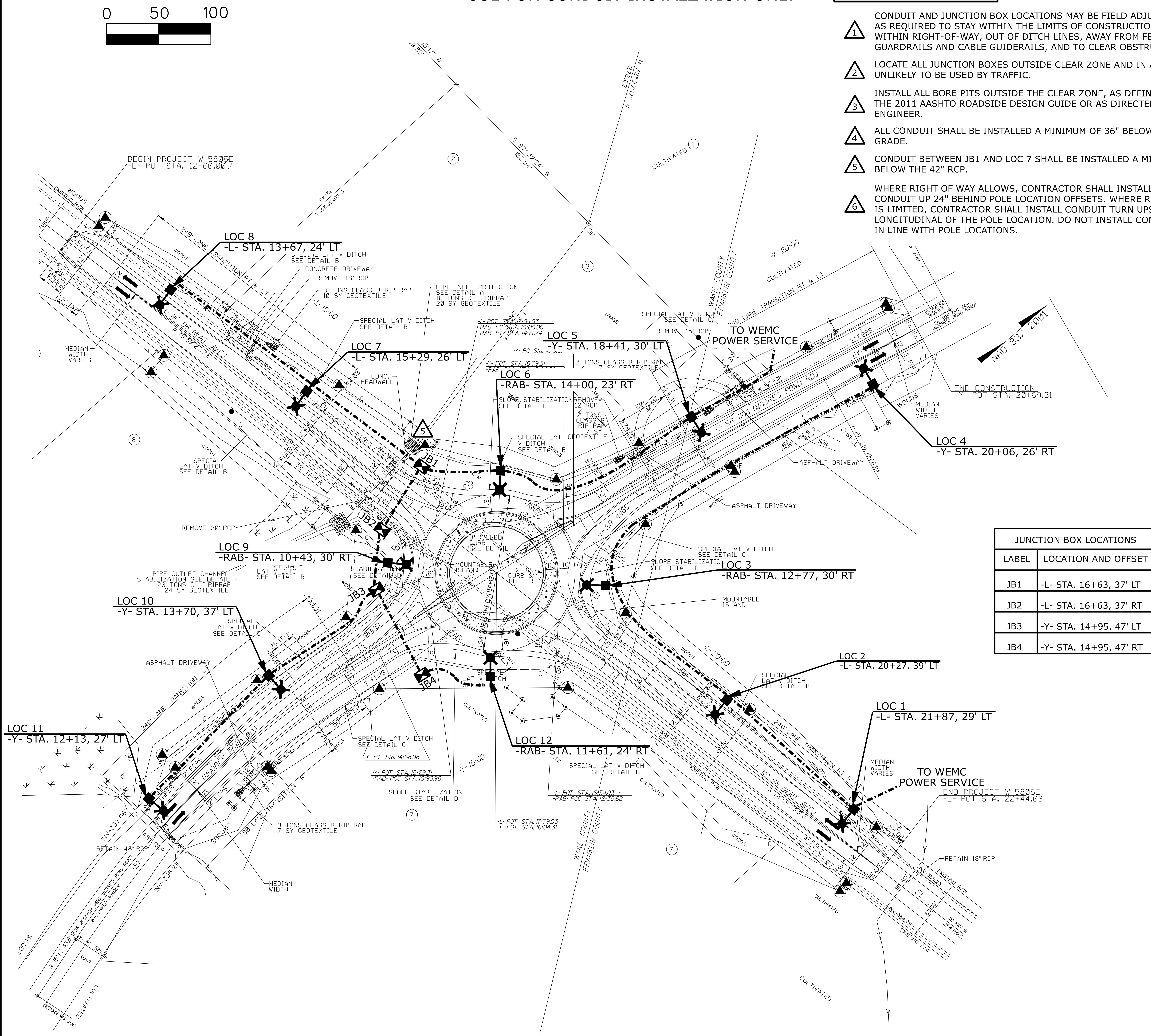
SEE PMP-1 FOR FINAL PAVEMENT MARKING SCHEDULE

NORTH CAROLINA PROFESSIONAL SEAL 055078 ENGINEER NATHAN P DOMINGUEZ

DocuSigned by: Nathan Dominguez 4C60B9594A58434... 11/21/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

USE FOR CONDUIT INSTALLATION ONLY



DELTA NOTES

1. CONDUIT AND JUNCTION BOX LOCATIONS MAY BE FIELD ADJUSTED AS REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION, WITHIN RIGHT-OF-WAY, OUT OF DITCH LINES, AWAY FROM FENCE POSTS, GUARDRAILS AND CABLE GUIDERAILS, AND TO CLEAR OBSTRUCTIONS.
2. LOCATE ALL JUNCTION BOXES OUTSIDE CLEAR ZONE AND IN AN AREA UNLIKELY TO BE USED BY TRAFFIC.
3. INSTALL ALL BORE PITS OUTSIDE THE CLEAR ZONE, AS DEFINED BY THE 2011 AASHTO ROADSIDE DESIGN GUIDE OR AS DIRECTED BY THE ENGINEER.
4. ALL CONDUIT SHALL BE INSTALLED A MINIMUM OF 36" BELOW FINISHED GRADE.
5. CONDUIT BETWEEN JB1 AND LOC 7 SHALL BE INSTALLED A MINIMUM OF 12" BELOW THE 42" RCP.
6. WHERE RIGHT OF WAY ALLOWS, CONTRACTOR SHALL INSTALL AND TURN CONDUIT UP 24" BEHIND POLE LOCATION OFFSETS. WHERE RIGHT OF WAY IS LIMITED, CONTRACTOR SHALL INSTALL CONDUIT TURN UPS 24" LONGITUDINAL OF THE POLE LOCATION. DO NOT INSTALL CONDUIT DIRECTLY IN LINE WITH POLE LOCATIONS.

JUNCTION BOX LOCATIONS

LABEL	LOCATION AND OFFSET
JB1	-L- STA. 16+63, 37' LT
JB2	-L- STA. 16+63, 37' RT
JB3	-Y- STA. 14+95, 47' LT
JB4	-Y- STA. 14+95, 47' RT

SCOPE OF WORK

INSTALL UNDERGROUND CONDUIT FOR FUTURE ROUNDABOUT LIGHTING SYSTEM. CONDUIT TO BE PROVIDED BY WAKE ELECTRIC MEMBERSHIP CORPORATION (WEMC). JUNCTION BOXES, LIGHT STANDARDS, LUMINAIRES AND CIRCUITRY TO BE PROVIDED AND INSTALLED BY WEMC AND ARE NOT PART OF THIS PROJECT.

DESIGN CRITERIA

2023 NATIONAL ELECTRICAL CODE

2011 AASHTO ROADSIDE DESIGN GUIDE

ROADWAY STANDARDS

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

STD NO.	TITLE
1409.01	ELECTRICAL DUCT

UNLESS OTHERWISE NOTED, ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2024.

LEGEND

- PROPOSED LIGHT STANDARD LOCATION. STUB CONDUIT UP 18" ABOVE GRADE AT THESE LOCATIONS. POLE, LUMINAIRE AND CIRCUITRY TO BE INSTALLED BY OTHERS.
- PROPOSED ELECTRICAL JUNCTION BOX LOCATION. JUNCTION BOXES TO BE PROVIDED AND INSTALLED BY OTHERS. STUB CONDUIT 18" ABOVE GRADE AT THESE LOCATIONS.
- 2" ELECTRICAL CONDUIT

Rev.	Date	Description	Approved
2			
1			

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN — LIGHTING/ELECTRICAL SECTION

CONDUIT SYSTEM LAYOUT

NC 98 (WAIT AVE) AND MOORES POND ROAD ROUNDABOUT

WAKE/FRANKLIN COUNTY

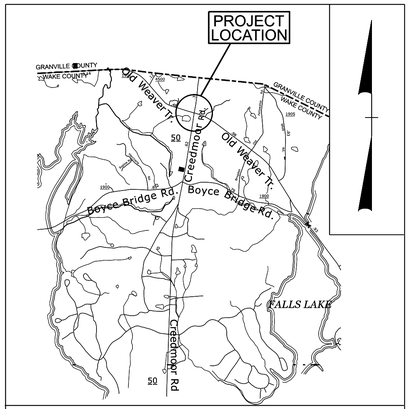
Drawn By:	Approved By:	Dwg No.:
RGH		

$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

01/16/24

TIP PROJECT: HL-0121

CONTRACT: DE00382



VICINITY MAP (NTS)

See Sheet 1A For Index of Sheets
See Sheet 1B For Symbology of Sheet

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

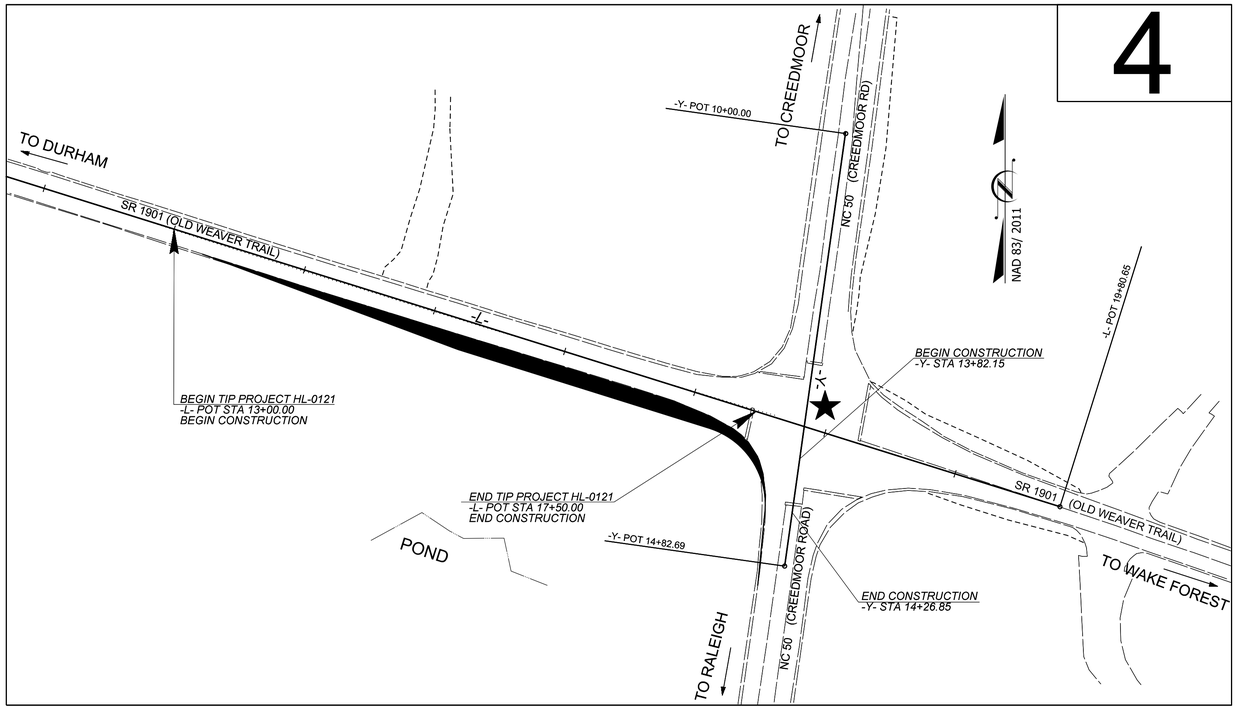
PLAN FOR PROPOSED EROSION CONTROL

LOCATION: *SR 1901 (OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR ROAD)*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE, AND SIGNALS.*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HL-0121	1	4

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50788.1.1	5078801	PE
50788.2.1	5078801	ROW
50788.2.2	5078801	UTILITIES
50788.3.1	5078801	CONSTRUCTION



NOTE

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

★ UPGRADE SIGNAL

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALES

40 20 0 40 80
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2025 = 7380
ADT 2045 = 12600
K = 10%
D = 55%
T = 3%
V = 60 MPH
* TTST = 1% DUAL 2%
FUNC CLASS =LOCAL
REGIONAL TIER

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG–010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

Prepared in the Office of:

DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 27, 2025

LETTING DATE: FEBRUARY 11, 2026

VICTOR M. CHAVEZ, PE
PROJECT MANAGER/ENGINEER

JOHN W. BRAXTON
DM-STIP ENGINEER

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2024 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

Erosion Control Designed by:

David Davis — *NAME*

3553 — *LEVEL III CERTIFICATION NO.*

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

FIFTH DIVISION
BECCA J. GALLAS, P.E.
DIVISION ENGINEER

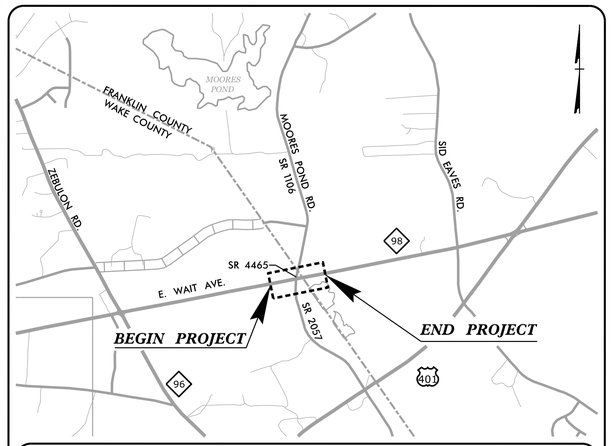
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

$$$-USER_NAME-$$$ - $$$-DATE-$$$

TIP PROJECT: W-5805E

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5805E	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WAKE COUNTY & FRANKLIN COUNTY

LOCATION: NC 98 AND SR 2057 /SR 4465 /SR 1106 (MOORES POND ROAD)
TYPE OF WORK: GRADING, PAVING, & DRAINAGE

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

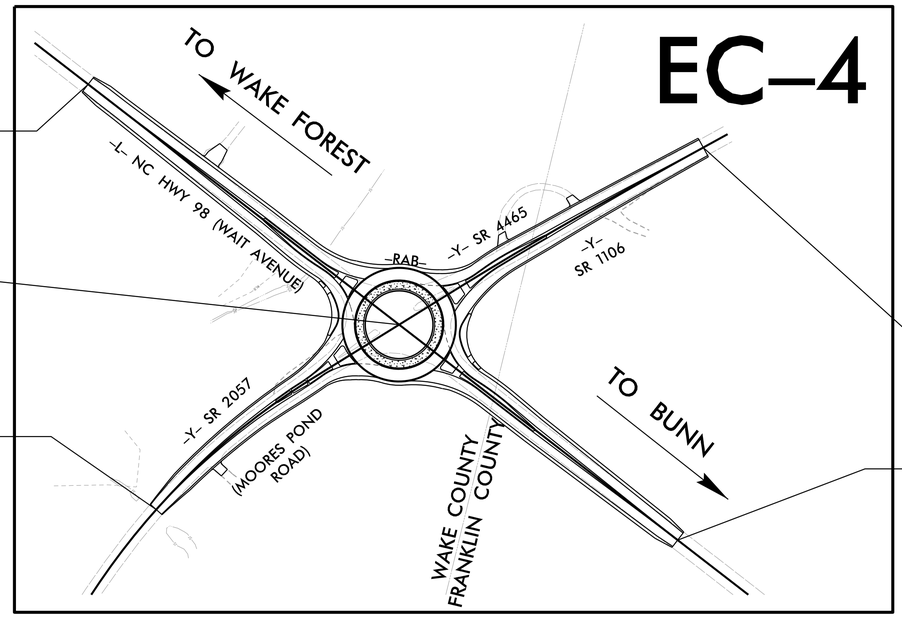
HIGH QUALITY WATER(S) EXIST ON THIS PROJECT

High Quality Water Zone(s) Exist
From Sta. –L– 16+00
to Sta. –L– 17+00
Refer To E. C. Special Provisions for Special Considerations.

BEGIN PROJECT W–5805E
–L– STA. 12+60.00

–L– POT STA. 17+79.03 =
–Y– POT STA. 16+04.31

BEGIN CONSTRUCTION
–Y– STA. 11+99.31



END CONSTRUCTION
–Y– STA. 20+69.31

END PROJECT W–5805E
–L– STA. 22+44.03

NAD 83/NA 2011

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
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 / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

GRAPHIC SCALE

80 40 0 40 80
PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG 010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
DRMP, INC.
5808 FARINGDON PLACE RALEIGH, NC 27609
PHONE: 919-872-5115 | www.drmp.com | NC License No. F-1524

Prepared In the Office of:

DRMP, INC.

5808 Faringdon Place Raleigh, NC 27609

2024 STANDARD SPECIFICATIONS

Designed by:

SEAN V. MCCARTHY — *NAME*
4773 — *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2024 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

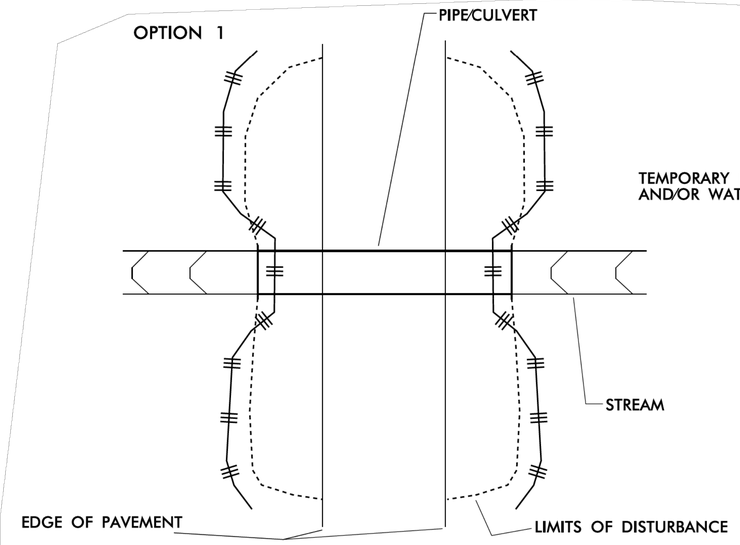
EROSION & SEDIMENT CONTROL LEGEND

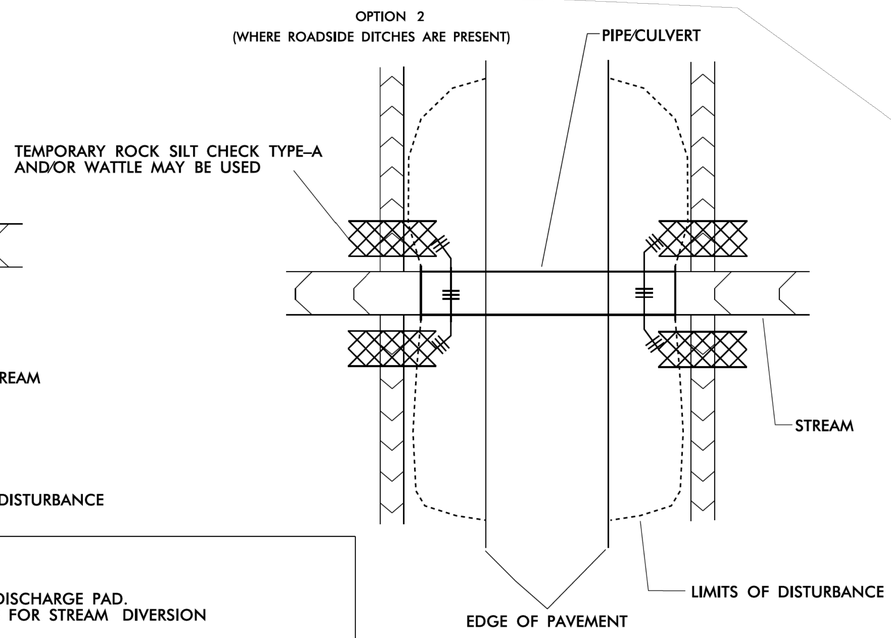
Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C

Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	B
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	EW
	Silt Fence Coir Fiber Wattle Break	CFW
1636.03	Excelsior Wattle Barrier	EW EW EW
1636.03	Coir Fiber Wattle Barrier	CFW CFW CFW

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	EC-2A

PUMP-AROUND OPERATION FOR PIPE REPLACEMENT IN JURISDICTIONAL STREAMS





ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2018 STANDARD SPECIFICATIONS

DRAWINGS NOT DRAWN TO SCALE

LEGEND:

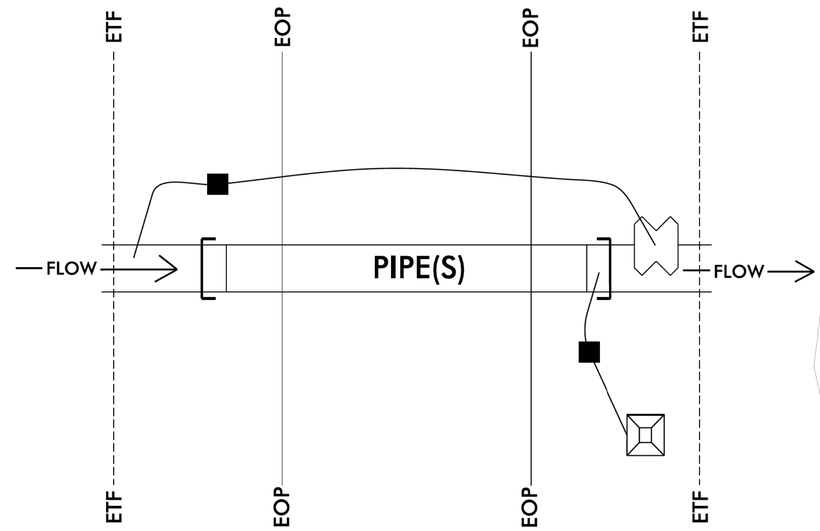
- IMPERVIOUS DIKE
- PUMP
- SPECIAL STILLING BASIN
- STABILIZED DISCHARGE PAD (GEOTEXTILE)
- EOP — EDGE OF PAVEMENT
- ETF — EXISTING TRANSPORTATION FACILITY (ROW)
- TEMPORARY ROCK SILT CHECK TYPE–A AND/OR WATTLE
- TEMPORARY SILT FENCE

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA:

1. INSTALL SPECIAL STILLING BASIN.
2. INSTALL UPSTREAM PUMP, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION DISCHARGING ONTO STABILIZED OUTLET PAD.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER WORK ZONE. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL PIPE(S), STREAM BED STABILIZATION, AND SLOPE STABILIZATION AS DIRECTED.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN AND RESTORE AREA TO ORIGINAL CONDITIONS.
8. STABILIZE ALL DISTURBED AREAS THROUGHOUT PROJECT WITH SEED AND MATTING FOR EROSION CONTROL.

NOTES:

INSTALL EROSION CONTROL MEASURES PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
INSTALL SPECIAL SEDIMENT CONTROL FENCE BREAKS OR TEMPORARY ROCK SILT CHECKS. TYPE–A AT LOW POINTS IN SILT FENCE.
FOR OPTION 1 INSTALL SILT FENCE SUCH THAT ALL EARTH DISTURBANCE IS CONTAINED.
FOR CULVERT CONSTRUCTION SEQUENCING SEE THE PUMP AROUND DETAIL OR CONSULT "BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES".
ALL EXCAVATION IN JURISDICTIONAL STREAMS SHALL BE PERFORMED IN ONLY DRY OR ISOLATED SECTIONS OF THE WORK ZONE.
IMPERVIOUS DIKES ARE TO BE USED TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY.
MAINTENANCE OF STREAM FLOW OPERATIONS SHALL BE INCIDENTAL TO THE WORK.
THIS INCLUDES THE DISCHARGE PAD, DIVERSION PIPES, PUMPS, AND HOSES.
PUMPS AND HOSES SHALL BE OF SUFFICIENT SIZE TO MAINTAIN STREAM FLOW AND TO DEWATER THE WORK AREA.
INSTALL SPECIAL STILLING BASIN IN VEGETATED AREA WITHIN RIGHT OF WAY. DISCHARGE SHOULD BE DIRECTED THROUGH VEGETATED BUFFER AWAY FROM WORK SITE.
INSTALL SILT FENCE AS DIRECTED TO CONTAIN DISTURBED AREAS AND/OR EXCAVATED STOCKPILES.
BORROW MATERIAL FROM OR DISPOSAL OF MATERIAL TO ANY UNPERMITTED SITE WILL REQUIRE A RECLAMATION PLAN.
INSTALL PIPE(S) IN JURISDICTIONAL AREAS IN ACCORDANCE WITH NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



PUMP-AROUND OPERATION FOR PIPE REPLACEMENT IN JURISDICTIONAL STREAMS EROSION CONTROL DETAIL

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

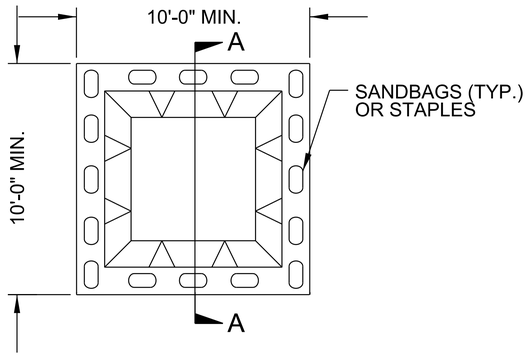
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

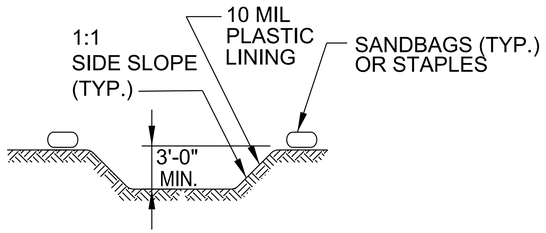
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	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-5805E	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

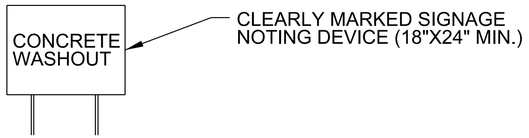
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A



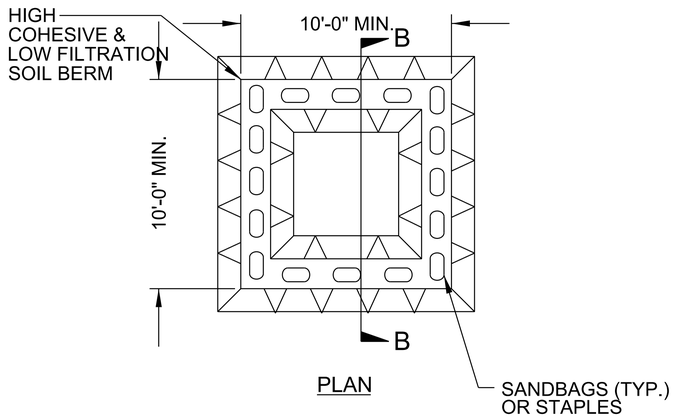
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

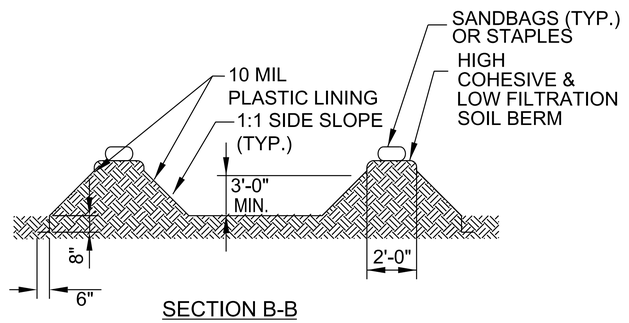
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

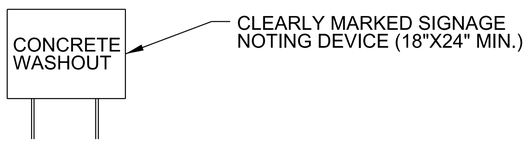
NOT TO SCALE



PLAN



SECTION B-B



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

11/14/23

CLEARING & GRUBBING PHASE

HL-0121
SHEET | EC4

0 20 40

DETAIL A
CUT DITCH
(Not to Scale)
Natural Ground | 2:1 | D | 2:1 | Front Ditch Slope
Min. D= 1.0 Ft.

FROM -L- STA. 13+75 RT TO STA. 15+95 RT

NAD 83/ 2011

SUE C. SMITH AND
BONNIE E. EMORY
DB 11E PG 2881
BM 1996 PG 1686

CARLTON PATRICK CURRIN
DB 7242 PG 449
BM 1996 PG 1686

SUE C. SMITH
AND BONNIE E. EMORY
DB 11E PG 2881
DB 6860 PG 423

KENNETH W. WOODLIEF
DB 163 PG 0000E
DB 2387 PG 497
BM 1997 PG 1591

ANDREW B. CURL
DB 14E PG 1939
DB 2529 PG 472

KENNETH W. WOODLIEF
AND WIFE SUE KEITH WOODLIEF
DB 2387 PG 496

-L- POT STA 17+84.58=
-Y- POT STA 13+54.84

BEGIN CONSTRUCTION
-Y- POT STA 13+82.15

END CONSTRUCTION
-Y- POT 14+26.85

Point Feature Description
INV =
48" WD POST W/ 5S ELEC
18" RCP
60'
SR 1901 (OLD WEAVER TRAIL) 25' PAVED ROADWAY
EXISTING RW
MTL GATE
GR
15
-L- S72°35'57.5"E
STA. 13+25
+65.00 85' EX. ROW LT
200' TAPER
CL B RIP RAP
EST. 1 TONS
EST. 5 SY GF
Tie into natural ground.
PROP. GR.
200' STORAGE
STA. 14+25
+65.00 85' EX. ROW RT
+33.78 50' EX. ROW
65' R
+25.85 LT EX. ROW
+75.00 EX. ROW
+100 EX. ROW
-Y- N 90°00'80" W
NC 50 (CREEDMOOR RD) VAR PAVED ROADWAY
EIP
PAVED
WOODS
POND
BZ 1
BZ 2
BZ 2
200'
MODIFIED SIGNAL

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	EC-3A

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+50	15+00	LT	325
4	-L-	16+40	17+50	LT	235
4	-L-	19+00	21+50	LT	525
4	-L-	14+50	15+50	RT	190
4	-L-	16+50	17+00	RT	180
4	-L-	19+00	20+00	RT	190
4	-L-	20+00	22+00	RT	930
4	-Y-	12+50	15+00	LT	325
4	-Y-	17+00	18+00	LT	120
4	-Y-	18+00	20+50	LT	290
4	-Y-	13+50	15+00	RT	290
4	-Y-	17+00	18+00	RT	185
			SUBTOTAL		3785
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					7780
				TOTAL	11565
				SAY	12000

EXCELSIOR FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	12+50	13+50	LT	190
4	-L-	15+00	16+40	LT	205
			SUBTOTAL		395
MISCELLANEOUS EXCELSIOR TO BE INSTALLED AS DIRECTED BY THE ENGINEER					195
				TOTAL	590
				SAY	700

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

11/14/23

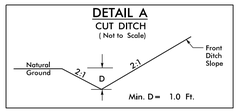
FINAL PHASE

HL-0121

SHEET	EC5

0 20 40

DETAIL A
CUT DITCH
(Not to Scale)



FROM -L- STA. 13+75 RT TO STA. 15+95 RT

NAD 83/ 2011

SUE C. SMITH AND
BONNIE E. EMORY
DB 11E PG 2881
BM 1996 PG 1686

CARLTON PATRICK CURRIN
DB 7242 PG 449
BM 1996 PG 1686

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ANDREW B. CURL
DB 14E PG 1939
DB 2529 PG 472

-L- POT STA 17+84.58=
-Y- POT STA 13+54.84

BEGIN CONSTRUCTION
-Y- POT STA 13+82.15

END CONSTRUCTION
-Y- POT 14+26.85

Point Feature Description

INV =

INV =

48" WD POST W/ 5S ELEC

48" WD POST W/ 5S ELEC

SR 1901 (OLD WEAVER TRAIL) 25' PAVED ROADWAY

EXISTING RW

EXISTING RW

EXISTING RW

MTL GATE

MTL GATE

MTL GATE

S

GR

GR

GR

GR

15

18" RCP

60'

-L-
S72°35'57.5"E

-Y-
N90°00'00"W

NC 50 (CREEDMOOR RD) VAR PAVED ROADWAY

VAR PAVED ROADWAY

STA 13+25

+65.00 EC RDW 15 RT

+75.00 EX. RDW

+60.00 EX. RDW

200' TAPER

200' STORAGE

PROP. GR.

STA 15+25

+65.00 RDW 50 RT

+33.78 50 RT

+26.85 EX. RDW

65' R

65' R

CL B RIP RAP
EST. 1 TONS
EST. 5 SY GF

Tie into natural ground.

WOODS

WOODS

BZ 2

BZ 1

BZ 2

POND

PAVED

PAVED

EIP

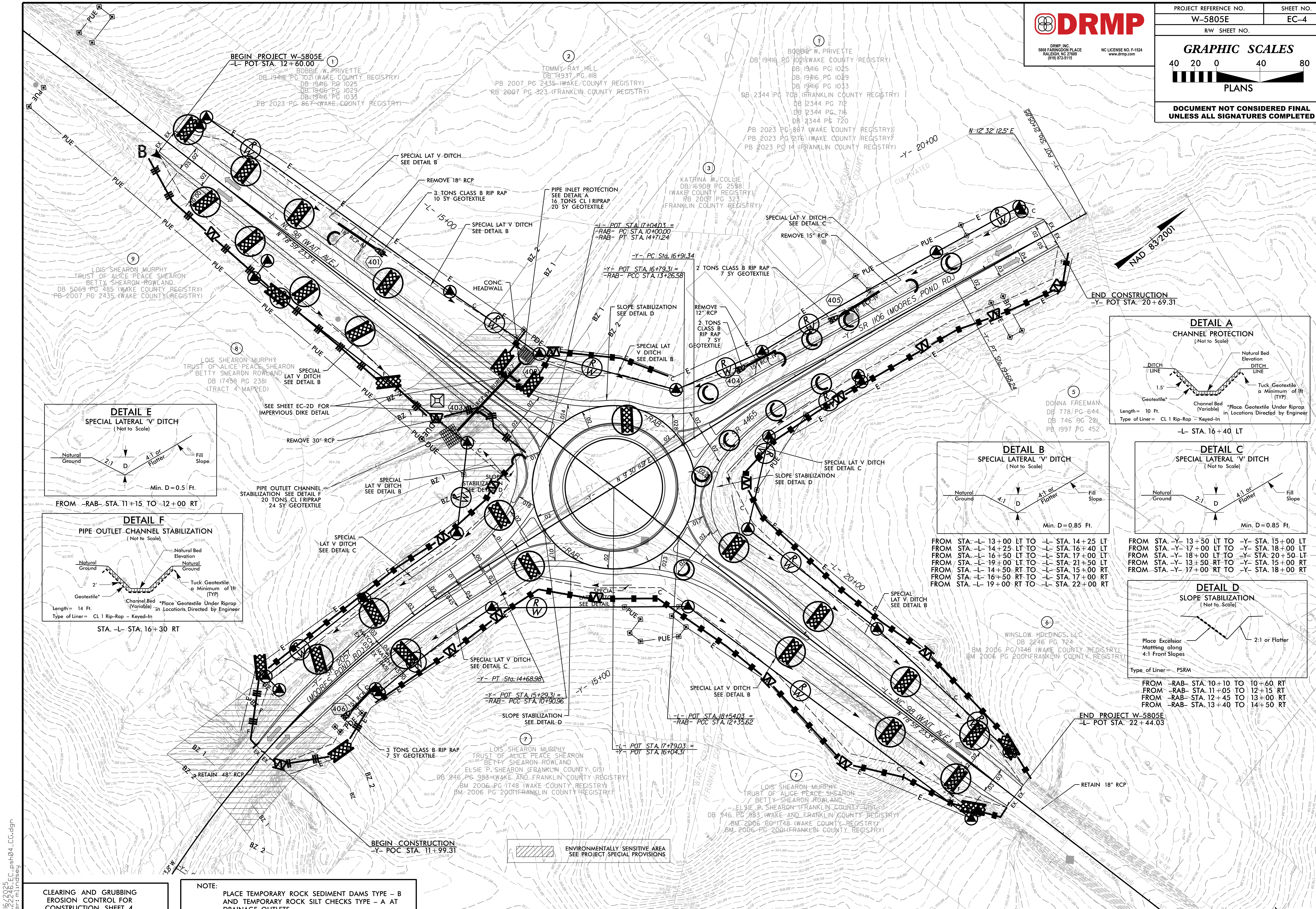
EXISTING RW

EXISTING RW

SR 1901 (OLD WEAVER TRAIL) VAR PAVED ROADWAY

200'

MODIFIED SIGNAL


DRMP
DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com
PROJECT REFERENCE NO.
W-5805E
SHEET NO.
EC-4
R/W SHEET NO.
GRAPHIC SCALES
40 20 0 40 80
PLANS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
BEGIN PROJECT W-5805E
-L- POT STA. 12+60.00
END PROJECT W-5805E
-L- POT STA. 22+44.03
BEGIN CONSTRUCTION
-Y- POC STA. 11+99.31
END CONSTRUCTION
-Y- POT STA. 20+69.31
-L- POT STA. 17+04.03 =
-RAB- PC STA. 10+00.00
-RAB- PT STA. 14+71.24
-Y- PC Sta. 16+91.34
-Y- POT STA. 16+79.31 =
-RAB- PCC STA. 13+26.58
-Y- PT Sta. 14+68.98
-Y- POT STA. 15+29.31 =
-RAB- PCC STA. 10+90.96
-L- POT STA. 18+54.03 =
-RAB- PCC STA. 12+35.62
-L- POT STA. 17+79.03 =
-Y- POT STA. 16+04.31
-Y- POT Sta. 21+05.85
-Y- PT Sta. 19+68.24
N 12° 32' 12.5" E
N 78°59' 23.3" E
N 9°30' 11.9" E
-L- NC 98 (WAIT AVE.)
-Y- SR 1106 (MOORES POND RD.)
-Y- SR 2057 (MOORES POND RD.)
SR 4465
-L- 15+00
-L- 20+00
-Y- 15+00
-Y- 20+00
NAD 83/2001
SPECIAL LAT V DITCH SEE DETAIL B
REMOVE 18" RCP
3 TONS CLASS B RIP RAP 10 SY GEOTEXTILE
PIPE INLET PROTECTION SEE DETAIL A 16 TONS CL I RIPRAP 20 SY GEOTEXTILE
CONC. HEADWALL
SLOPE STABILIZATION SEE DETAIL D
REMOVE 12" RCP
2 TONS CLASS B RIP RAP 7 SY GEOTEXTILE
2 TONS CLASS B RIP RAP 7 SY GEOTEXTILE
SPECIAL LAT V DITCH SEE DETAIL C
REMOVE 15" RCP
SEE SHEET EC-2D FOR IMPERVIOUS DIKE DETAIL
REMOVE 30" RCP
PIPE OUTLET CHANNEL STABILIZATION SEE DETAIL F 20 TONS CL I RIPRAP 24 SY GEOTEXTILE
SPECIAL LAT V DITCH SEE DETAIL E
3 TONS CLASS B RIP RAP 7 SY GEOTEXTILE
RETAIN 48" RCP
RETAIN 18" RCP
1 BOBBIE W. PRIVETTE DB 19416 PG 1021 (WAKE COUNTY REGISTRY) DB 19416 PG 1025 DB 19416 PG 1029 DB 19416 PG 1033 PB 2023 PG 867 (WAKE COUNTY REGISTRY)
1 BOBBIE W. PRIVETTE DB 19416 PG 1021 (WAKE COUNTY REGISTRY) DB 19416 PG 1025 DB 19416 PG 1029 DB 19416 PG 1033 DB 2344 PG 708 (FRANKLIN COUNTY REGISTRY) DB 2344 PG 712 DB 2344 PG 716 DB 2344 PG 720 PB 2023 PG 867 (WAKE COUNTY REGISTRY) PB 2023 PG 276 (WAKE COUNTY REGISTRY) PB 2023 PG 14 (FRANKLIN COUNTY REGISTRY)
2 TOMMY RAY HILL DB 14937 PG 1118 PB 2007 PG 2435 (WAKE COUNTY REGISTRY) PB 2007 PG 323 (FRANKLIN COUNTY REGISTRY)
3 KATRINA W. COLLIE DB 16908 PG 2598 (WAKE COUNTY REGISTRY) PB 2007 PG 323 (FRANKLIN COUNTY REGISTRY)
5 DONNA FREEMAN DB 778 PG 644 DB 746 PG 221 PB 1997 PG 452
6 WINSLOW HOLDINGS, LLC DB 2246 PG 724 BM 2006 PG 1748 (WAKE COUNTY REGISTRY) BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)
7 LOIS SHEARON MURPHY TRUST OF ALICE PEACE SHEARON BETTY SHEARON ROWLAND ELSIE P. SHEARON (FRANKLIN COUNTY GIS) DB 946 PG 983 (WAKE AND FRANKLIN COUNTY REGISTRY) BM 2006 PG 1748 (WAKE COUNTY REGISTRY) BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)
8 LOIS SHEARON MURPHY TRUST OF ALICE PEACE SHEARON BETTY SHEARON ROWLAND DB 17458 PG 2381 (TRACT 4 MAPPED)
9 LOIS SHEARON MURPHY TRUST OF ALICE PEACE SHEARON BETTY SHEARON ROWLAND DB 5069 PG 485 (WAKE COUNTY REGISTRY) PB 2007 PG 2435 (WAKE COUNTY REGISTRY)
DETAIL A
CHANNEL PROTECTION
(Not to Scale)
DITCH LINE
Natural Bed Elevation
1.5'
Geotextile*
Channel Bed (Variable)
Tuck Geotextile a Minimum of 1ft (TYP)
*Place Geotextile Under Riprap in Locations Directed by Engineer
Length = 10 Ft.
Type of Liner = CL 1 Rip-Rap - Keyed-In
-L- STA. 16+40 LT
DETAIL B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
4:1
D
4:1 or Flatter
Fill Slope
Min. D = 0.85 Ft.
FROM STA. -L- 13+00 LT TO -L- STA. 14+25 LT
FROM STA. -L- 14+25 LT TO -L- STA. 16+40 LT
FROM STA. -L- 16+50 LT TO -L- STA. 17+00 LT
FROM STA. -L- 19+00 LT TO -L- STA. 21+50 LT
FROM STA. -L- 14+50 RT TO -L- STA. 15+00 RT
FROM STA. -L- 16+50 RT TO -L- STA. 17+00 RT
FROM STA. -L- 19+00 RT TO -L- STA. 22+00 RT
DETAIL C
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
2:1
D
4:1 or Flatter
Fill Slope
Min. D = 0.85 Ft.
FROM STA. -Y- 13+50 LT TO -Y- STA. 15+00 LT
FROM STA. -Y- 17+00 LT TO -Y- STA. 18+00 LT
FROM STA. -Y- 18+00 LT TO -Y- STA. 20+50 LT
FROM STA. -Y- 13+50 RT TO -Y- STA. 15+00 RT
FROM STA. -Y- 17+00 RT TO -Y- STA. 18+00 RT
DETAIL D
SLOPE STABILIZATION
(Not to Scale)
Place Excelsior Mattting along 4:1 Front Slopes
2:1 or Flatter
Type of Liner = PSRM
FROM -RAB- STA. 10+10 TO 10+60 RT
FROM -RAB- STA. 11+05 TO 12+15 RT
FROM -RAB- STA. 12+45 TO 13+00 RT
FROM -RAB- STA. 13+40 TO 14+50 RT
DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
2:1
D
4:1 or Flatter
Fill Slope
Min. D = 0.5 Ft.
FROM -RAB- STA. 11+15 TO 12+00 RT
DETAIL F
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)
Natural Ground
Natural Bed Elevation
2'
Geotextile*
Channel Bed (Variable)
Tuck Geotextile a Minimum of 1ft (TYP)
*Place Geotextile Under Riprap in Locations Directed by Engineer
Length = 14 Ft.
Type of Liner = CL 1 Rip-Rap - Keyed-In
STA. -L- STA. 16+30 RT
ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
12/16/2025
...\22246_EC_psh04_CG.dgn
User: mlindsey

DRMP

DRMP INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	EC-5
R/W SHEET NO.	

GRAPHIC SCALES

40 20 0 40 80

PLANS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BEGIN PROJECT W-5805E
-L- POT STA. 12+60.00

① BOBBIE W. PRIVETTE
DB 19416 PG 1021 (WAKE COUNTY REGISTRY)
DB 19416 PG 1025
DB 19416 PG 1029
DB 19416 PG 1033
PB 2023 PG 867 (WAKE COUNTY REGISTRY)

② TOMMY RAY HILL
DB 14937 PG 1118
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)
PB 2007 PG 323 (FRANKLIN COUNTY REGISTRY)

① BOBBIE W. PRIVETTE
DB 19416 PG 1021 (WAKE COUNTY REGISTRY)
DB 19416 PG 1025
DB 19416 PG 1029
DB 19416 PG 1033
DB 2344 PG 708 (FRANKLIN COUNTY REGISTRY)
DB 2344 PG 712
DB 2344 PG 716
DB 2344 PG 720
PB 2023 PG 867 (WAKE COUNTY REGISTRY)
PB 2023 PG 276 (WAKE COUNTY REGISTRY)
PB 2023 PG 14 (FRANKLIN COUNTY REGISTRY)

③ KATRINA W. COLLIE
DB 16908 PG 2598
(WAKE COUNTY REGISTRY)
PB 2007 PG 323
(FRANKLIN COUNTY REGISTRY)

⑨ LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 5069 PG 485 (WAKE COUNTY REGISTRY)
PB 2007 PG 2435 (WAKE COUNTY REGISTRY)

⑧ LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
DB 17458 PG 2381
(TRACT 4 MAPPED)

⑤ DONNA FREEMAN
DB 778 PG 644
DB 746 PG 221
PB 1997 PG 452

⑥ WINSLOW HOLDINGS, LLC
DB 2246 PG 724
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)

⑦ LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
ELSIE P. SHEARON (FRANKLIN COUNTY GIS)
DB 946 PG 983 (WAKE AND FRANKLIN COUNTY REGISTRY)
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)

⑦ LOIS SHEARON MURPHY
TRUST OF ALICE PEACE SHEARON
BETTY SHEARON ROWLAND
ELSIE P. SHEARON (FRANKLIN COUNTY GIS)
DB 946 PG 983 (WAKE AND FRANKLIN COUNTY REGISTRY)
BM 2006 PG 1748 (WAKE COUNTY REGISTRY)
BM 2006 PG 2001 (FRANKLIN COUNTY REGISTRY)

-L- NC 98 (WAIT AVE.) N 76°59'23.5" E

-Y- SR 1106 (MOORES POND RD.)

-Y- SR 2051 (MOORES POND RD.)

-Y- SR 4465

-RAB-

-L- POT STA. 17+04.03 = -RAB- PC STA. 10+00.00 -RAB- PT STA. 14+71.24

-Y- PC Sta. 16+91.34

-Y- POT STA. 16+79.31 = -RAB- PCC STA. 13+26.58

-Y- PT Sta. 19+68.24

-L- POT STA. 17+79.03 = -Y- POT STA. 16+04.31

-L- POT STA. 18+54.03 = -RAB- PCC STA. 12+35.62

-Y- PT Sta. 14+68.98

-Y- POT STA. 15+29.31 = -RAB- PCC STA. 10+90.96

-Y- PC Sta. 10+65.81

N 15°13'43.8" W

N 9°30'11.9" E

N 12°32'12.5" E

-Y- POT STA. 21+05.85

-Y- 20+00

-Y- 15+00

SPECIAL LAT V DITCH SEE DETAIL B

REMOVE 18" RCP

3 TONS CLASS B RIP RAP
10 SY GEOTEXTILE

PIPE INLET PROTECTION
SEE DETAIL A
16 TONS CL I RIPRAP
20 SY GEOTEXTILE

SPECIAL LAT V DITCH SEE DETAIL C

REMOVE 15" RCP

2 TONS CLASS B RIP RAP
7 SY GEOTEXTILE

CONC. HEADWALL

SLOPE STABILIZATION SEE DETAIL D

REMOVE 12" RCP

2 TONS CLASS B RIP RAP
7 SY GEOTEXTILE

SPECIAL LAT V DITCH SEE DETAIL B

SEE SHEET EC-2D FOR IMPERVIOUS DIKE DETAIL

REMOVE 30" RCP

PIPE OUTLET CHANNEL STABILIZATION SEE DETAIL F
20 TONS CL I RIPRAP
24 SY GEOTEXTILE

SPECIAL LAT V DITCH SEE DETAIL C

SLOPE STABILIZATION SEE DETAIL D

SPECIAL LAT V DITCH SEE DETAIL B

SPECIAL LAT V DITCH SEE DETAIL C

SLOPE STABILIZATION SEE DETAIL D

SPECIAL LAT V DITCH SEE DETAIL B

SPECIAL LAT V DITCH SEE DETAIL C

SLOPE STABILIZATION SEE DETAIL D

SPECIAL LAT V DITCH SEE DETAIL B

3 TONS CLASS B RIP RAP
7 SY GEOTEXTILE

BEGIN CONSTRUCTION
-Y- POC STA. 11+99.31

END CONSTRUCTION
-Y- POT STA. 20+69.31

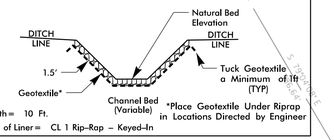
END PROJECT W-5805E
-L- POT STA. 22+44.03

RETAIN 48" RCP

RETAIN 18" RCP

NAD 83/2001

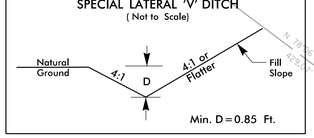
DETAIL A
CHANNEL PROTECTION
(Not to Scale)



Length = 10 Ft.
Type of Liner = CL 1 Rip-Rap – Keyed-In

–L– STA. 16+40 LT

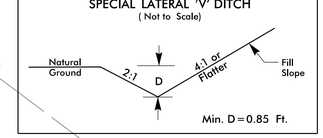
DETAIL B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.85 Ft.

FROM STA. –L– 13+00 LT TO –L– STA. 14+25 LT
FROM STA. –L– 14+25 LT TO –L– STA. 16+40 LT
FROM STA. –L– 16+50 LT TO –L– STA. 17+00 LT
FROM STA. –L– 19+00 LT TO –L– STA. 21+50 LT
FROM STA. –L– 14+50 RT TO –L– STA. 15+00 RT
FROM STA. –L– 16+50 RT TO –L– STA. 17+00 RT
FROM STA. –L– 19+00 RT TO –L– STA. 22+00 RT

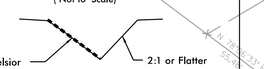
DETAIL C
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.85 Ft.

FROM STA. –Y– 13+50 LT TO –Y– STA. 15+00 LT
FROM STA. –Y– 17+00 LT TO –Y– STA. 18+00 LT
FROM STA. –Y– 18+00 LT TO –Y– STA. 20+50 LT
FROM STA. –Y– 13+50 RT TO –Y– STA. 15+00 RT
FROM STA. –Y– 17+00 RT TO –Y– STA. 18+00 RT

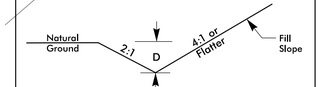
DETAIL D
SLOPE STABILIZATION
(Not to Scale)



Type of Liner = PSRM

FROM –RAB– STA. 10+10 TO 10+60 RT
FROM –RAB– STA. 11+05 TO 12+15 RT
FROM –RAB– STA. 12+45 TO 13+00 RT
FROM –RAB– STA. 13+40 TO 14+50 RT

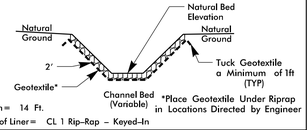
DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 0.5 Ft.

FROM –RAB– STA. 11+15 TO 12+00 RT

DETAIL F
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)



Length = 14 Ft.
Type of Liner = CL 1 Rip-Rap – Keyed-In

STA. –L– STA. 16+30 RT

12/6/2025
...\2246_EC_psh04_FINAL.dgn
User: mlindsey

09/08/99

TIP PROJECT: HL-0121

CONTRACT: DE00382

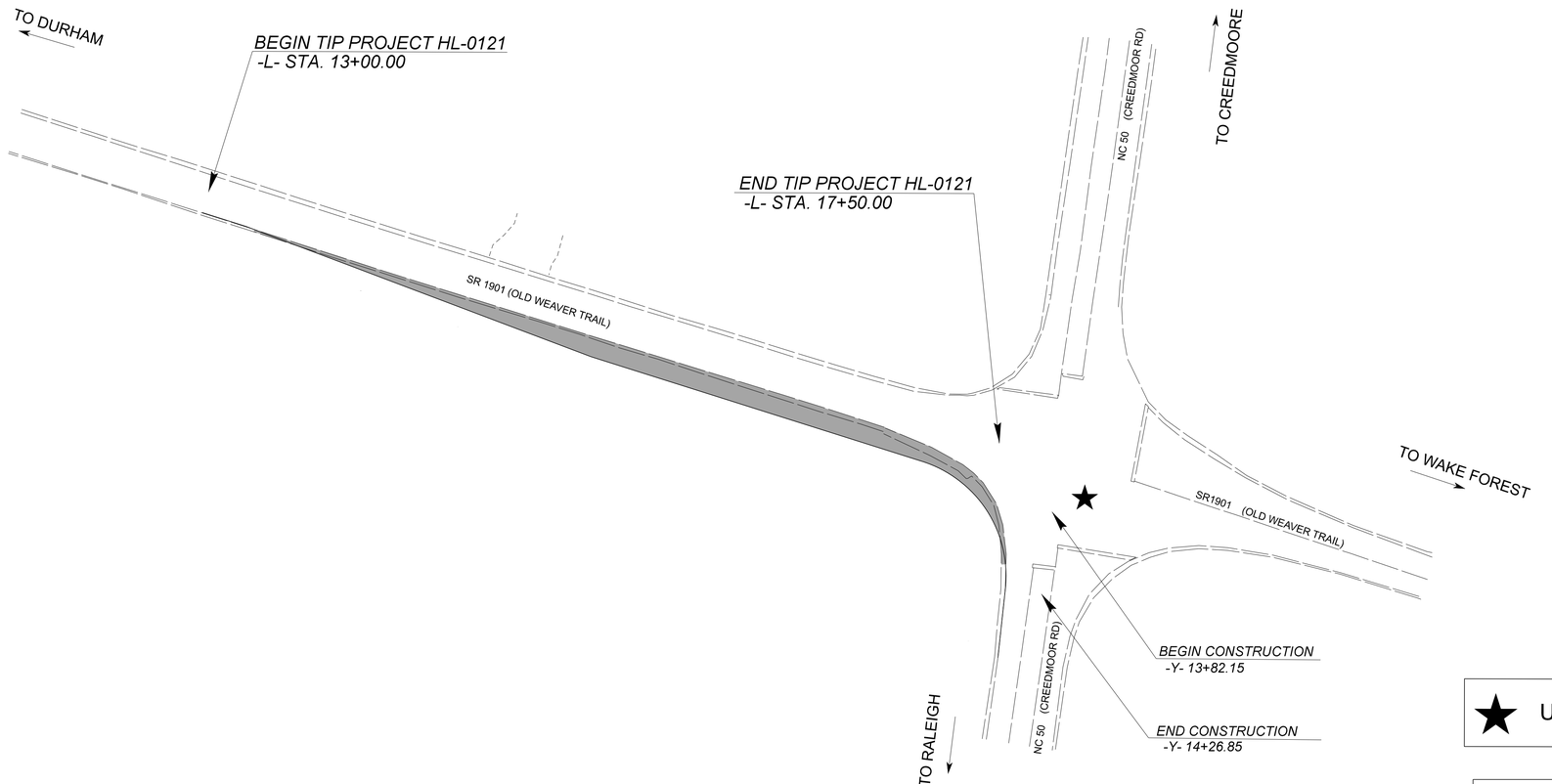
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	HL-0121	SIGN-1

SIGNING PLANS

WAKE COUNTY

LOCATION: SR 1901(OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR ROAD)



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPE F SIGN DESIGNS
3	SIGN ROADWAY SHEET

Prepared in the Office of:
DIVISION DESIGN & CONSTRUCTION
815 Stadium Dr., Durham NC, 27704

2024 STANDARD SPECIFICATIONS

VICTOR M. CHAVEZ, PE
SIGNING PROJECT ENGINEER

PROJECT DESIGN ENGINEER

DIVISION FIVE DESIGN & CONSTRUCTION ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ
01/30/2026
DocuSigned by: Victor Chavez
7CD1F54298E940A...
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
FIFTH DIVISION
B. H. JONES, P.E.
DIVISION ENGINEER

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

1/28/2026
S:\DDC\Dist\FUNDED TIP\HL-0121\Roadway\Proj\ORD\HL-0121_SIGN.dgn
User:vmchavez

Docusign Envelope ID: 9B702630-DC5B-4400-8087-9D1661E0226D

T.I.P.: W-5805E

CONTRACT: DE00382

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
WAKE COUNTY & FRANKLIN COUNTY
LOCATION: NC 98 AND SR 2057 / SR 4465 / SR 1106 (MOORES POND ROAD)

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	SIGN-1

APPROVED: Signed by: Kayla M. Poulos 1B07791CEF90423...

DATE: 12/16/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

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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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
910D40	DETAIL IN LIEU OF STANDARD "SINGLE LANE RURAL ROUNDABOUT SIGNING"

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	SIGNING PLAN COVER SHEET
SIGN-2A	TYPE "E" AND "F" SIGNS
SIGN-2B	SPECIAL DETAIL
SIGN-3	EXISTING SIGNING DETAIL
SIGN-4	PROPOSED SIGNING DETAIL

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4025000000-E	901	CONTRACTOR FURNISHED, TYPE E SIGN	210	S.F.
4025000000-E	901	CONTRACTOR FURNISHED, TYPE F SIGN	30	S.F.
4072000000-E	903	SUPPORT, 3-LB STEEL U-CHANNEL	410	L.F.
4102000000-N	904	SIGN ERECTION, TYPE E	36	EA.
4108000000-N	904	SIGN ERECTION, TYPE F	2	EA.
4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	16	EA.

PROJECT NOTE

1 DISPOSE EXISTING SIGN ASSEMBLY

GENERAL NOTES

. SIGNS FURNISHED BY CONTRACTOR
. IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
. ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

PLANS PREPARED BY: DRMP, INC.

KAYLA M. POULOS, PE — PROJECT MANAGER

MIKAYLA M. LINDSEY, EI — PROJECT ENGINEER

DRMP

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

Docusign Envelope ID: 9B702630-DC5B-4400-8087-9D1661E0226D

(401) QUANTITY REQ'D _8_

36" X 36" X 36"
R1-2

ONE "U" POST PER SIGN

(402) QUANTITY REQ'D _8_

36" X 36"
W2-6

ONE "U" POST PER SIGN

(403) QUANTITY REQ'D _8_

18" X 18"
W13-1P

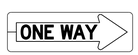
MOUNT BELOW SIGNs 402
IN 8 INSTALLATIONS

(404) QUANTITY REQ'D _4_

30" X 30"
W3-2

ONE "U" POST PER SIGN

(405) QUANTITY REQ'D _4_



36" X 12"
R6-1

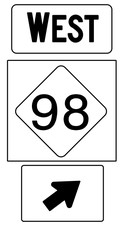
ONE "U" POST PER SIGN

(406) QUANTITY REQ'D _4_

18" X 18"
OM1-3

MOUNT BELOW SIGN 405
IN 4 INSTALLATIONS

(501)



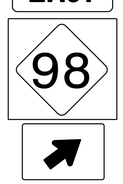
1 - 24" X 12"

1 - 24" X 24"

1 - 21" X 15"

ONE "U" POST PER ASSEMBLY

(502)



1 - 24" X 12"

1 - 24" X 24"

1 - 21" X 15"

ONE "U" POST PER ASSEMBLY

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RALEIGH, NC 27609
(919) 872-5115

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www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	SIGN-2A

APPROVED: Signed by: Kayla M. Poulos 1B07791CEF90423...

DATE: 12/16/2025

SEAL

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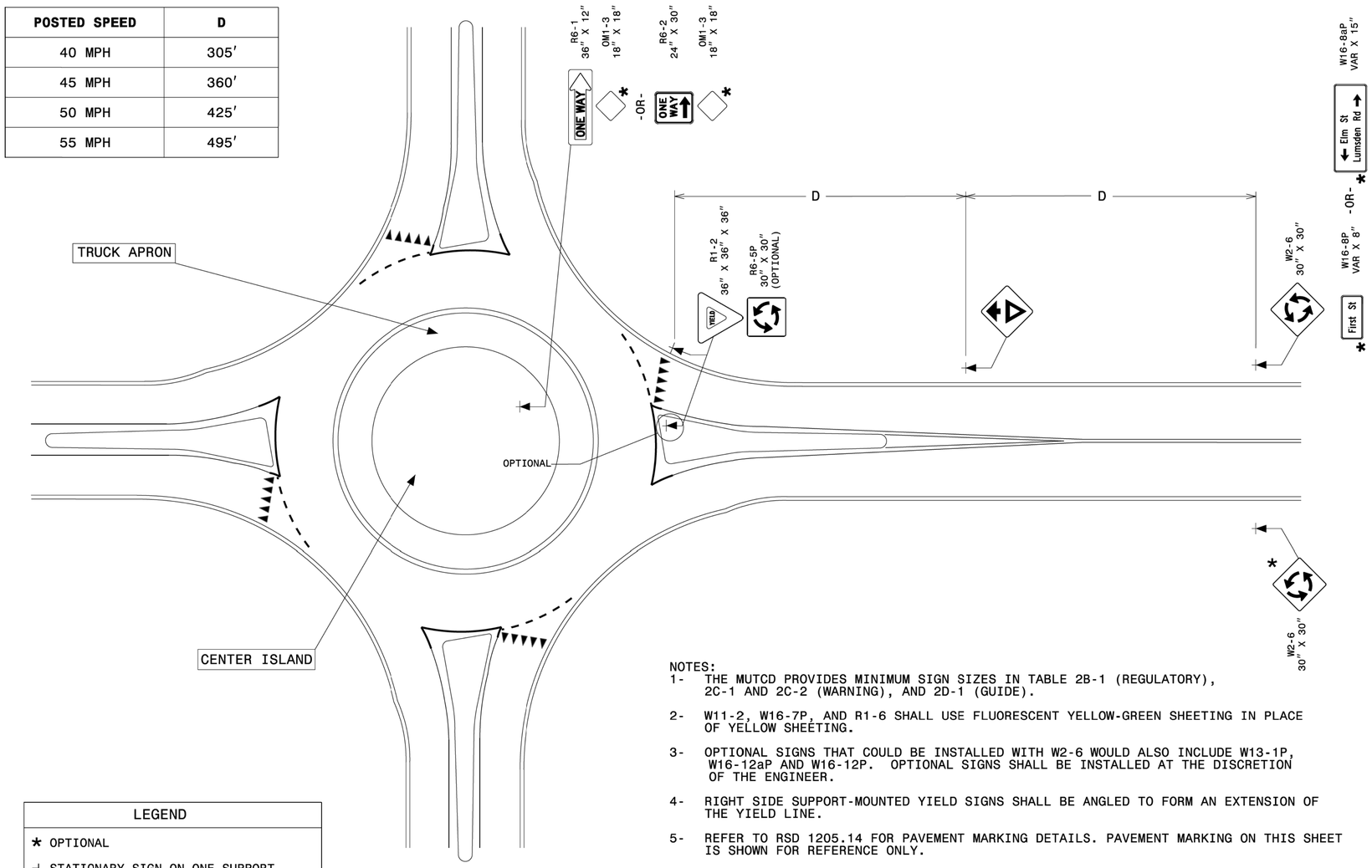
TYPE "E" AND "F" SIGNS

12/16/2025
...\Signing_22246_sign_02.dgn
User: mlindsey

Docusign Envelope ID: 37A515F8-23FD-4D45-B3B9-DCC1A80764E6

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	SIGN-2B

POSTED SPEED	D
40 MPH	305′
45 MPH	360′
50 MPH	425′
55 MPH	495′



LEGEND
* OPTIONAL
⊣ STATIONARY SIGN ON ONE SUPPORT
⊣⊣ STATIONARY SIGN ON TWO SUPPORTS

NOTES:

1- THE MUTCD PROVIDES MINIMUM SIGN SIZES IN TABLE 2B-1 (REGULATORY), 2C-1 AND 2C-2 (WARNING), AND 2D-1 (GUIDE).

2- W11-2, W16-7P, AND R1-6 SHALL USE FLUORESCENT YELLOW-GREEN SHEETING IN PLACE OF YELLOW SHEETING.

3- OPTIONAL SIGNS THAT COULD BE INSTALLED WITH W2-6 WOULD ALSO INCLUDE W13-1P, W16-12aP AND W16-12P. OPTIONAL SIGNS SHALL BE INSTALLED AT THE DISCRETION OF THE ENGINEER.

4- RIGHT SIDE SUPPORT-MOUNTED YIELD SIGNS SHALL BE ANGLED TO FORM AN EXTENSION OF THE YIELD LINE.

5- REFER TO RSD 1205.14 FOR PAVEMENT MARKING DETAILS. PAVEMENT MARKING ON THIS SHEET IS SHOWN FOR REFERENCE ONLY.

6- REFER TO MUTCD FIGURES 2A-4, 2B-22, AND 2D-12 FOR ADDITIONAL SIGNING GUIDANCE.

7- THE MUTCD PROVIDES GUIDANCE FOR DIMENSION "D" IN TABLE 2C-3 AND SHOULD BE APPLIED WITH ENGINEERING JUDGEMENT.

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

ROADWAY DETAIL DRAWING FOR

SINGLE LANE RURAL ROUNDABOUT SIGNING

NORTH CAROLINA PROFESSIONAL SEAL 042546 ENGINEER MATTHEW V. SPRINGER

12/16/2025

SHEET 1A OF 2

910D40

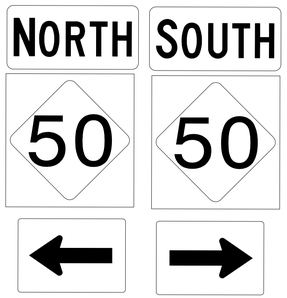
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: R.S. GALLO DATE: 02-29-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

8/17/99

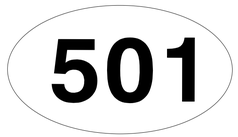
TYPE "F" SIGNS



2 - 24" X 12"

2 - 24" X 24"

2 - 21" X 15"



MOUNT ONE "U" CHANNEL POST PER SIGN

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	SIGN-2

DIVISION FIVE DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ

01/30/2026

DocuSigned by:
Victor Chavez
7CD1F54298E940A...

P.E.

SIGNATURE:

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TYPE "F" SIGNS

1/28/2026
C:\Users\vchavez1\FUNDED TIP\HL-0121\Roadway\Proj\ORD\HL-0121_SIGN.dgn
User:vchavez1

DocuSign Envelope ID: 1AB04836-F9D3-40DE-A357-AE6697094DBA

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DRMP, INC.
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RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	SIGN-3

APPROVED: DocuSigned by: Kayla M. Poulos 1B07791CEF90423...
DATE: 5/23/2024

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

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REMOVE EXISTING STOP AHEAD SIGNS OUTSIDE OF PROJECT LIMITS.

NAD 83/2011

-L- NC HWY 98 (WAIT AVENUE)

-Y- SR 4465 (MOORES POND ROAD)

-Y- SR 1106 (MOORES POND ROAD)

REMOVE EXISTING STOP AHEAD AND NEW TRAFFIC PATTERN/ALL WAY STOP SIGNS OUTSIDE OF PROJECT LIMITS.

STOP ALL WAY

STOP ALL WAY

STOP ALL WAY

STOP ALL WAY

-Y- SR 2057 (MOORES POND ROAD)

-L- NC HWY 98 (WAIT AVENUE)

REMOVE EXISTING STOP AHEAD SIGNS OUTSIDE OF PROJECT LIMITS.

SEE PROJECT NOTE 1 ON TITLE SHEET FOR ALL EXISTING SIGN SYSTEMS

EXISTING SIGNING DETAIL

3/13/2024
...\Signing\22246_sign_03.dgn
User:mlindsey

Docusign Envelope ID: 9B702630-DC5B-4400-8087-9D1661E0226D

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NC LICENSE NO. F-1524
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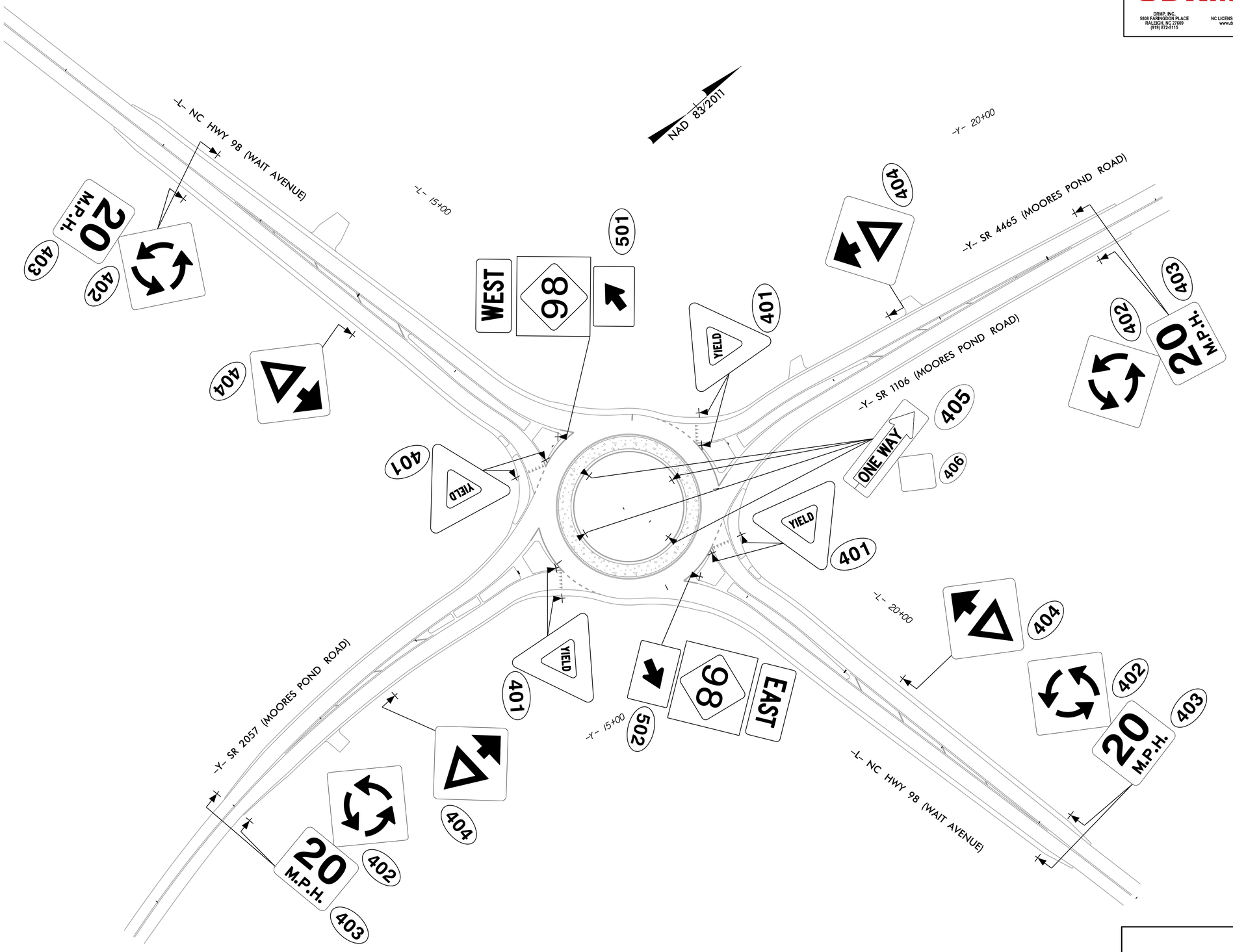
PROJECT REFERENCE NO.	SHEET NO.
W-5805E	SIGN-4

APPROVED: Signed by: Kayla M. Poulos 1B07791CEF90423...
DATE: 12/16/2025

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PROPOSED SIGNING DETAIL

12/16/2025
...\Signing\22246_sign_04.dgn
User:mlindsey

8/17/99

GENERAL NOTES

- ALL SIGNS FURNISHED BY CONTRACTOR
- ALL TYPE 'F' SIGNS SHALL BE MOUNTED ON ONE OR TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS
- SIGNING PLANS DO NOT INCLUDE TEMPORARY CONTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC MANAGEMENT PLANS
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- ALL EXISTING SIGNS ON "U" CHANNEL POSTS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL
- THE BACKGROUND FOR TYPE F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	SIGN-3

DIVISION FIVE DESIGN ENGINEER

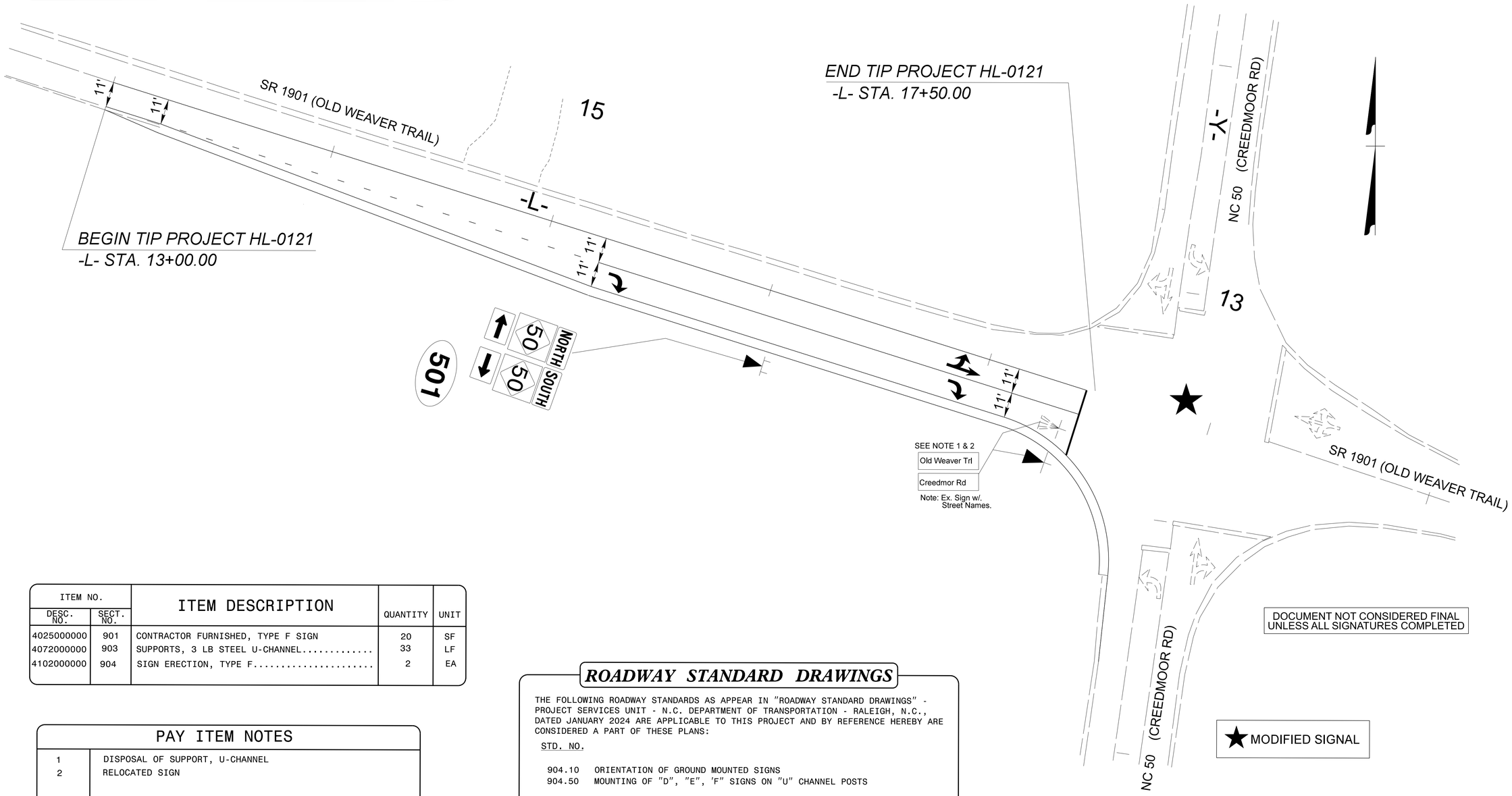
NORTH CAROLINA PROFESSIONAL SEAL 018204 ENGINEER VICTOR M CHAVEZ

01/30/2026

DocuSigned by: Victor Chavez 7CD1F54298E940A...

P.E.

SIGNATURE:



ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4025000000	901	CONTRACTOR FURNISHED, TYPE F SIGN	20	SF
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL.....	33	LF
4102000000	904	SIGN ERECTION, TYPE F.....	2	EA

PAY ITEM NOTES

1	DISPOSAL OF SUPPORT, U-CHANNEL
2	RELOCATED SIGN

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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.

904.10 ORIENTATION OF GROUND MOUNTED SIGNS
904.50 MOUNTING OF "D", "E", 'F" SIGNS ON "U" CHANNEL POSTS

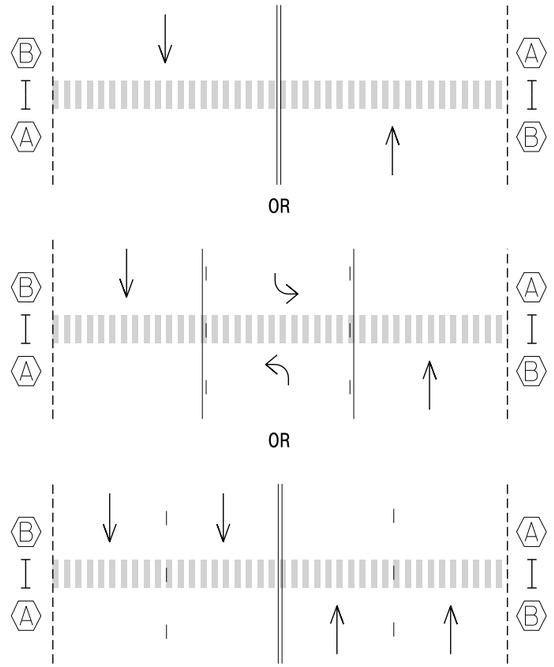
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

EXISTING and PROPOSED 'F' SIGNS
SR 1901 (OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR RD.)

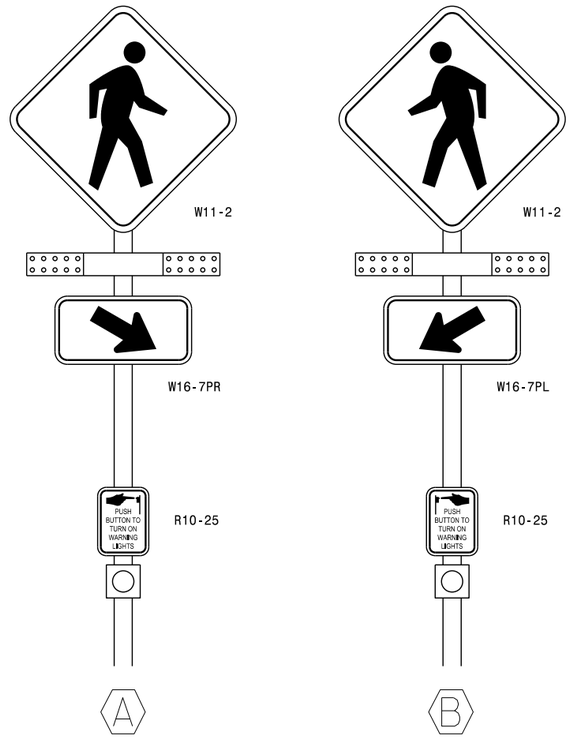
1/28/2026
C:\Projects\FUNDED TIP\HL-0121\Roadway\Proj\ORD\HL-0121_SIGN.dgn
User:mchavez1

PROJECT REFERENCE NO.	SHEET NO.
HS-2405Q	SIG-1

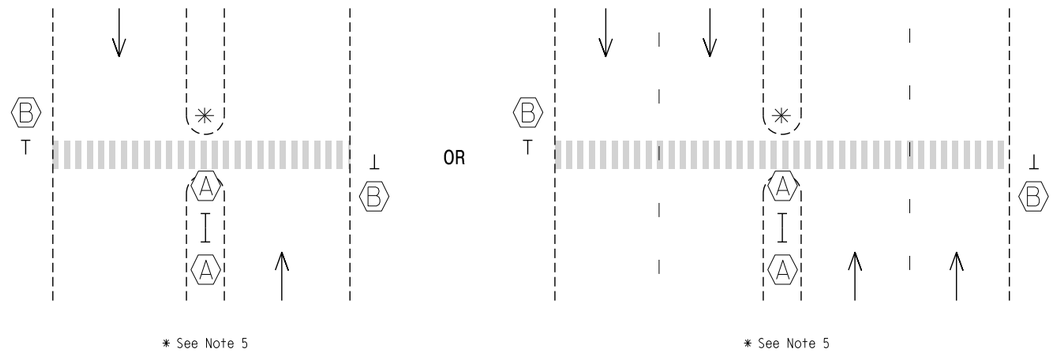
Two to Four Lanes, Undivided



RRFB Sign Detail



Two or Multi-Lanes, Divided



* See Note 5

* See Note 5

Notes

1. Design the RRFB in accordance with the 2023 MUTCD, 11th Edition, Chapter 4L: Rectangular Rapid-Flashing Beacons. The RRFB unit associated with a post-mounted sign and plaque should be located between the pedestrian crossing warning (W11-2) sign and the supplemental downward diagonal arrow plaque (W16-7p).
2. If needed, a supplemental RRFB with an "AHEAD" (W16-9P) or distance (W16-2P) plaque may be installed on the approach in advance of the crosswalk. The addtional RRFB shall be a supplemental to and not a replacement for the RRFB at the actual crosswalk.
3. When practical, the RRFB and mounting post on the right side of the road shall be mounted on the approach side of the crosswalk closest to approaching traffic.
4. When practical, the RRFB and mounting post on the left side of the road may be mounted on the back of the post for the opposing approach.
5. A RRFB on the left side of the roadway or in the median may be individually mounted on the approach side of the crosswalk closest to approaching traffic, or, when practical, may be mounted back to back on the same post and mounted on either side of the crosswalk in the median.
6. Locate push button sign (R10-25) and push button to face crosswalk, even if it is mounted on the back side of the sign.
7. All RRFB units associated with a given crosswalk (including those with an advance crossing sign) shall, when actuated, simultaneously commence operation of their rapid-flashing indications and shall cease operation simultaneously.
8. For quantitative purposes, a single sided, post mounted RRFB is one assembly unit. A double sided RRFB mounted on the same post is counted as two (2) assemblies.
9. For additional information, see Version 24 of the Transportation Systems Management and Operations (TSMO) Unit Project Special Provisions (PSP).

Timing of RRFBs

When actuated, the two yellow indications in each RRFB unit shall flash in a rapidly flashing sequence.

The RRFB shall flashing sequence shall provide enough time for pedestrians to cross from curb to curb. It is recommened to be a minimum of 7 seconds plus the crossing distance (D) divided by 3.5 feet/per sec., rounded up to the next whole second:

Flash Time (sec.) = 7 + D/3.5

Per Section 4L.03 of the 2023 MUTCD, RRFBs shall provide 75 flashing sequences per minute. During each 800 millisecond flashing sequence, the left and right RRFB indications shall operate using the following sequence:

- The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- Both RRFB indications shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- Both RRFB indications shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 250 milliseconds.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Standard Drawing for Rectangular Rapid Flashing Beacon

Prepared in the Offices of:

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION
TSMO Unit

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

DocuSigned by: Robert J. Ziemba
SIGNATURE

05/30/2024
DATE

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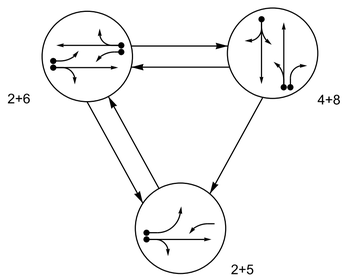
S:\Traffic\Signals\Signal Design Section\Central Region\RJZ's Files\RRFB Std\rrfb Updated 5-24.dgn
rjziemba

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig 1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION				
SIGNAL FACE	2 + 5	2 + 6	4 + 8	FLASH
21, 22	G	G	R	R
41, 42	R	R	G	R
51	←	F	R	R
61	F	F	R	R
62, 63	R	G	R	R
81, 82	R	R	G	R
83	R	R	F	R

SIGNAL FACE I.D.

All Heads L.E.D.

MAXTIME DETECTOR INSTALLATION CHART

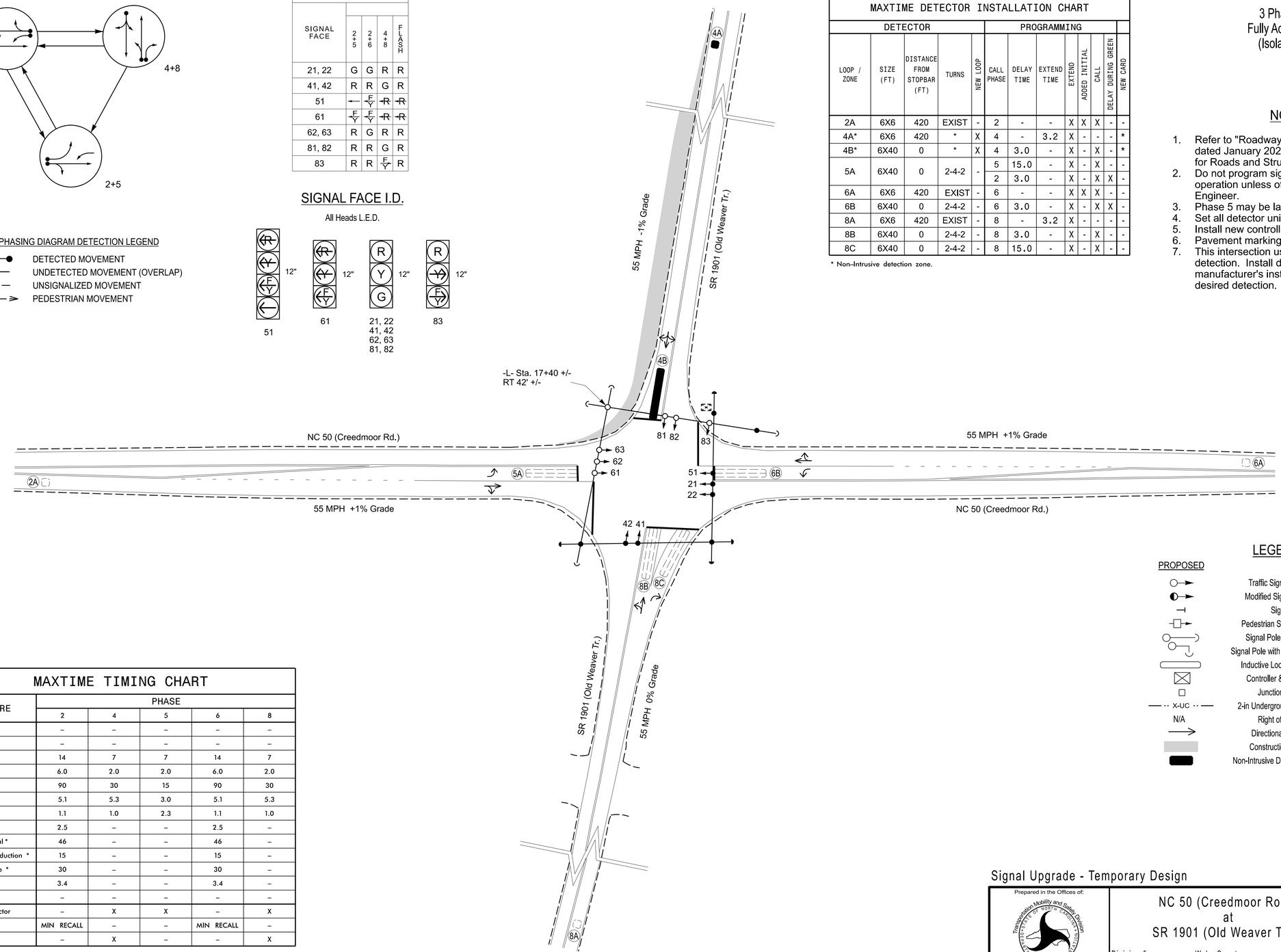
DETECTOR					PROGRAMMING							
LOOP / ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
2A	6X6	420	EXIST	-	2	-	-	X	X	X	-	-
4A*	6X6	420	*	X	4	-	3.2	X	-	-	-	*
4B*	6X40	0	*	X	4	3.0	-	X	-	X	-	*
5A	6X40	0	2-4-2	-	5	15.0	-	X	-	X	-	-
					2	3.0	-	X	-	X	X	-
6A	6X6	420	EXIST	-	6	-	-	X	X	X	-	-
6B	6X40	0	2-4-2	-	6	3.0	-	X	-	X	X	-
8A	6X6	420	EXIST	-	8	-	3.2	X	-	-	-	-
8B	6X40	0	2-4-2	-	8	3.0	-	X	-	X	-	-
8C	6X40	0	2-4-2	-	8	15.0	-	X	-	X	-	-

* Non-Intrusive detection zone.

3 Phase
Fully Actuated
(Isolated)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Install new controller in existing cabinet.
6. Pavement markings are existing.
7. This intersection uses non-intrusive detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
X-UC	2-in Underground Conduit	UC
N/A	Right of Way	
	Directional Arrow	
	Construction Zone	
	Non-Intrusive Detection Zone	

MAXTIME TIMING CHART

FEATURE	PHASE				
	2	4	5	6	8
Walk *	–	–	–	–	–
Ped Clear	–	–	–	–	–
Min Green *	14	7	7	14	7
Passage *	6.0	2.0	2.0	6.0	2.0
Max 1 *	90	30	15	90	30
Yellow Change	5.1	5.3	3.0	5.1	5.3
Red Clear	1.1	1.0	2.3	1.1	1.0
Added Initial *	2.5	–	–	2.5	–
Maximum Initial *	46	–	–	46	–
Time Before Reduction *	15	–	–	15	–
Time To Reduce *	30	–	–	30	–
Minimum Gap	3.4	–	–	3.4	–
Advance Walk	–	–	–	–	–
Non Lock Detector	–	X	X	–	X
Vehicle Recall	MIN RECALL	–	–	MIN RECALL	–
Dual Entry	–	X	–	–	X

* These values may be field adjusted. Do not adjust Min Green and Passage 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 - Temporary Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: December 2024 | REVIEWED BY:
PREPARED BY: J.A. Lohr | REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
026486
ENGINEER
ROBERT J. ZIEMBA

DocuSigned by: 01/27/2025
DATE

SIG. INVENTORY NO. 05-2063T

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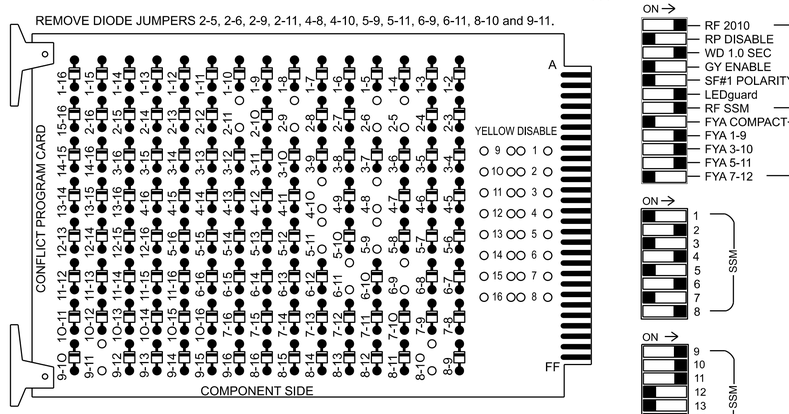
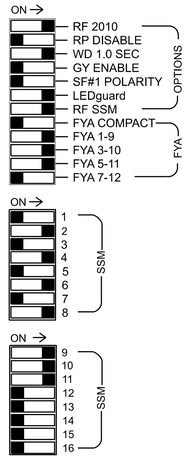
jlohr

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig. 1.1

16 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)





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. Make sure jumpers SEL2-SEL5 are present on the monitor board.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 1,3,5,7,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 4 and 8 for Dual Entry.
4. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
5. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S2, S4, S5, S6, S8, S9, S10, S12,
Phases Used.....2, 4, 5, 6, 8
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....Not Used

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
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	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	NU	21.22	NU	NU	41,42	NU	51★	62,63	NU	NU	81,82	NU	61★	83★	NU	51★	NU	NU
RED		128			101			134			107			A124				
YELLOW		129			102		*	135			108							
GREEN		130			103			136			109							
RED ARROW													A121			A114		
YELLOW ARROW													A122	A125		A115		
FLASHING YELLOW ARROW													A123	A126		A116		
GREEN ARROW							133											
✋																		
🚶																		

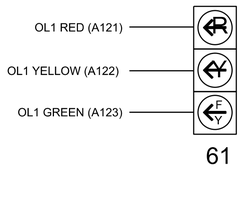
NU = Not Used

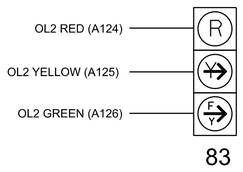
★Denotes install load resistor. See load resistor installation detail this sheet.

★See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

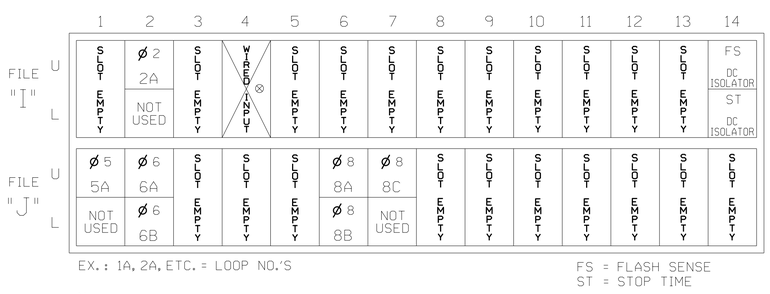
(wire signal heads as shown)





INPUT FILE POSITION LAYOUT

(front view)



Note:

Remove jumper from J1-W, to 14-W, on rear of input file.

INPUT FILE CONNECTION & PROGRAMMING CHART

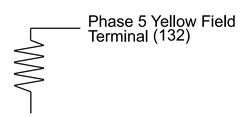
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
2A	TB2-5,6	I2U	39	1	2	2			X	X	X	
5A	TB3-1,2	J1U	55	17	15	5	15		X		X	
				-	31	2	3		X		X	X
6A	TB3-5,6	J2U	40	2	16	6			X	X	X	
6B	TB3-7,8	J2L	44	6	17	6	3		X		X	X
8A	TB5-9,10	J6U	42	4	22	8		3.2	X			
8B	TB5-11,12	J6L	46	8	23	8	3		X		X	
8C	TB7-1,2	J7U	66	32	24	8	15		X		X	

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown)

ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



SPECIAL DETECTOR NOTE

For detection zones 4A and 4B, Install a Non-Intrusive detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-2063T
DESIGNED: December 2024
SEALED: 1/27/2025
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:
Traffic Engineering Branch
Traffic Engineering & Safety Systems Section
NCDOT Transportation Mobility and Safety Division
Traffic Signals Management Unit
750 N.Greenfield Pkwy,Garner,NC 27529

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: January 2025 | REVIEWED BY:
PREPARED BY: Zarrar Zafar | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 01/27/2025
SIGNATURE DATE

SIG. INVENTORY NO. 05-2063T

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PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig. 1.2

OVERLAP PROGRAMMING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3
Type	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section
Included Phases	2	8	6
Modifier Phases	-	-	5
Modifier Overlaps	-	-	-
Trail Green	0	0	0
Trail Yellow	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

OUTPUT CHANNEL CONFIGURATION

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channel Configuration

Channel Configuration

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		X	X	1
2	Phase Vehicle	2		X		2
3	Phase Vehicle	3		X	X	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	X	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	X	8
9	Overlap	1		X	X	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		X	X	17
18	Overlap	6		X		18

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: 05-2063T
DESIGNED: December 2024
SEALED: 1/27/2025
REVISED: N/A

Electrical Detail - Sheet 2 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering Branch, Mobility and Safety Division
NC DEPARTMENT OF TRANSPORTATION
Traffic Engineering & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: January 2025	REVIEWED BY:
PREPARED BY: Zarrar Zafar	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 01/27/2025
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SIG. INVENTORY NO. 05-2063T

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PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig 2.0

DEFAULT PHASING DIAGRAM

DEFAULT PHASING TABLE OF OPERATION				
SIGNAL FACE	2+5	2+6	4+8	FLASH
21, 22	G	G	R	R
41, 42	R	R	G	R
43	→	R	FY	R
51	←	FY	~~R~~	~~R~~
61	FY	FY	~~R~~	~~R~~
62, 63	R	G	R	R
81, 82	R	R	G	R
83	R	R	FY	R

ALTERNATE PHASING DIAGRAM

ALTERNATE PHASING TABLE OF OPERATION				
SIGNAL FACE	2+5	2+6	4+8	FLASH
21, 22	G	G	R	R
41, 42	R	R	G	R
43	→	R	FY	R
51	←	~~R~~	~~R~~	~~R~~
61	FY	FY	~~R~~	~~R~~
62, 63	R	G	R	R
81, 82	R	R	G	R
83	R	R	FY	R

3 Phase
Fully Actuated
(Isolated)

NOTES

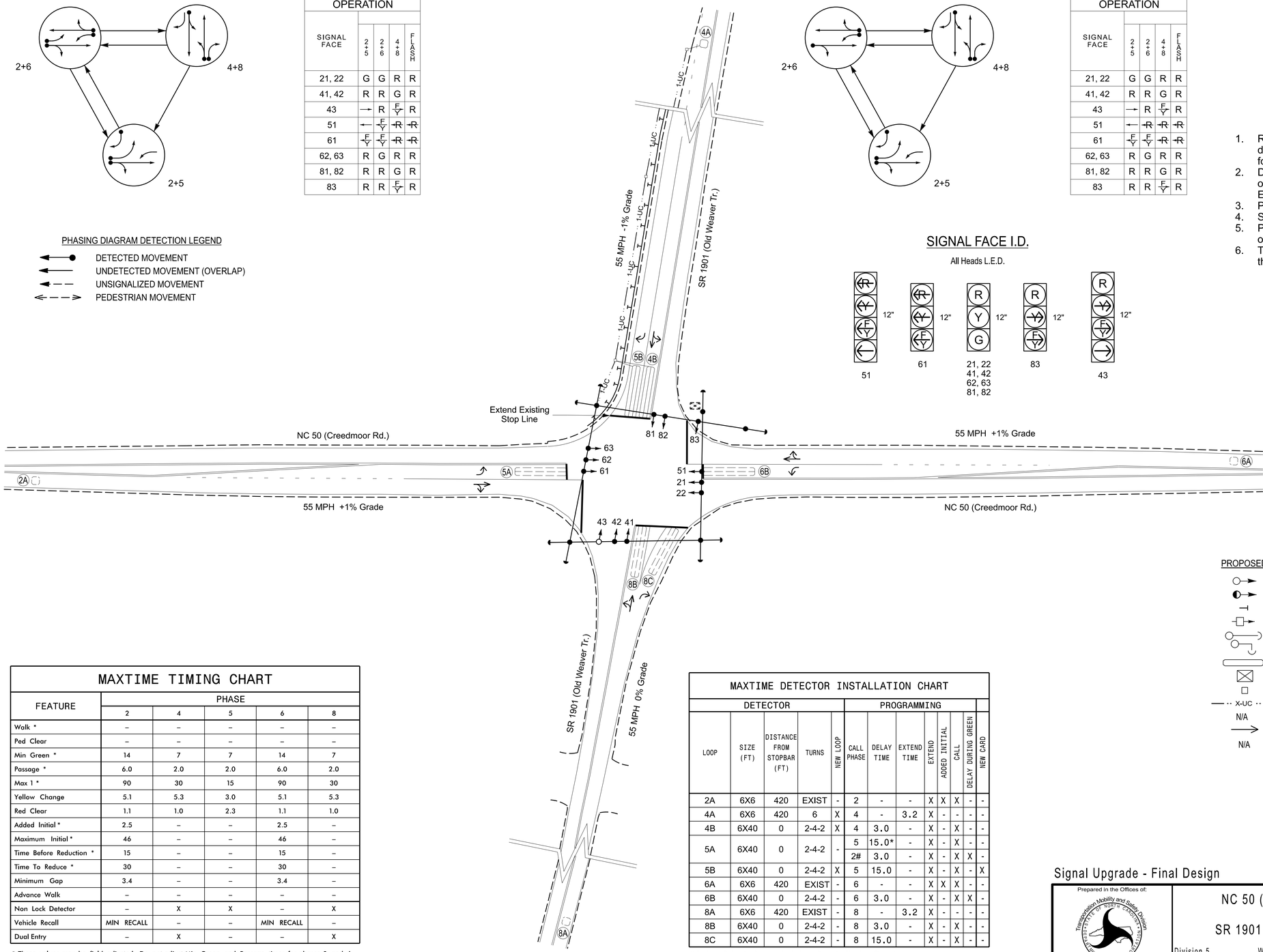
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Pavement markings are existing unless otherwise shown.
6. The Division Traffic Engineer will determine the hours of use for each phasing plan.

PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME TIMING CHART

FEATURE	PHASE				
	2	4	5	6	8
Walk *	–	–	–	–	–
Ped Clear	–	–	–	–	–
Min Green *	14	7	7	14	7
Passage *	6.0	2.0	2.0	6.0	2.0
Max 1 *	90	30	15	90	30
Yellow Change	5.1	5.3	3.0	5.1	5.3
Red Clear	1.1	1.0	2.3	1.1	1.0
Added Initial *	2.5	–	–	2.5	–
Maximum Initial *	46	–	–	46	–
Time Before Reduction *	15	–	–	15	–
Time To Reduce *	30	–	–	30	–
Minimum Gap	3.4	–	–	3.4	–
Advance Walk	–	–	–	–	–
Non Lock Detector	–	X	X	–	X
Vehicle Recall	MIN RECALL	–	–	MIN RECALL	–
Dual Entry	–	X	–	–	X

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

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
2A	6X6	420	EXIST	-	2	-	-	X	X	X	-	-
4A	6X6	420	6	X	4	-	3.2	X	-	-	-	-
4B	6X40	0	2-4-2	X	4	3.0	-	X	-	X	-	-
5A	6X40	0	2-4-2	-	5	15.0*	-	X	-	X	-	-
					2#	3.0	-	X	-	X	X	-
5B	6X40	0	2-4-2	X	5	15.0	-	X	-	X	-	X
6A	6X6	420	EXIST	-	6	-	-	X	X	X	-	-
6B	6X40	0	2-4-2	-	6	3.0	-	X	-	X	X	-
8A	6X6	420	EXIST	-	8	-	3.2	X	-	-	-	-
8B	6X40	0	2-4-2	-	8	3.0	-	X	-	X	-	-
8C	6X40	0	2-4-2	-	8	15.0	-	X	-	X	-	-

* Reduce Delay to 3 seconds during Alternate Phasing Operation.
\# Disable phase call for loop during Alternate Phasing Operation.

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□→	Pedestrian Signal Head	■→
○	Signal Pole with Guy	●—
○	Signal Pole with Sidewalk Guy	●—
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
— ·· X-UC ·· —	2-in Underground Conduit	— ·· UC ·· —
N/A	Right of Way	— — — —
→	Directional Arrow	→
N/A	Guardrail	⊥⊥

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

NC 50 (Creedmoor Road) at SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: December 2024 | REVIEWED BY:
PREPARED BY: J.A. Lohr | REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J ZIEMBA
DocuSigned by: Robert J Ziemba 01/27/2025
1B9B4B6B2744494 DATE

SIG. INVENTORY NO. 05-2063

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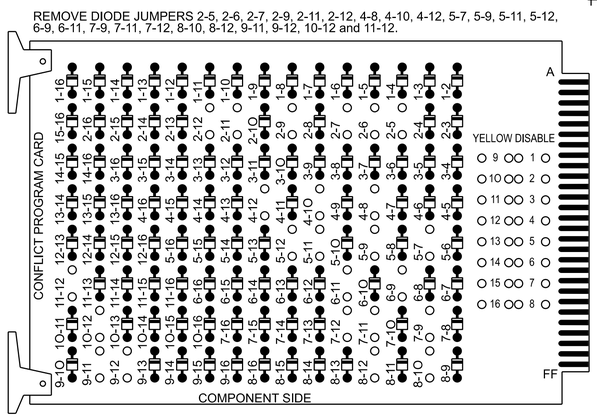
jalohr

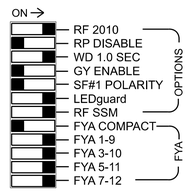
PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig. 2.1

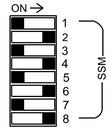
16 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

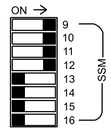
(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 2-5, 2-6, 2-7, 2-9, 2-11, 2-12, 4-8, 4-10, 4-12, 5-7, 5-9, 5-11, 5-12, 6-9, 6-11, 7-9, 7-11, 7-12, 8-10, 8-12, 9-11, 9-12, 10-12 and 11-12.









■ = DENOTES POSITION OF SWITCH

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. Make sure jumpers SEL2-SEL5 are present on the monitor board.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 1,3,5,7,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 4 and 8 for Dual Entry.
4. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
5. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S2, S4, S5, S6, S7, S8, S9, S10, S12, S13
Phases Used.....2, 4, 5, 6, 8
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....*
Overlap "7".....*

*See overlap programming detail on sheet 3

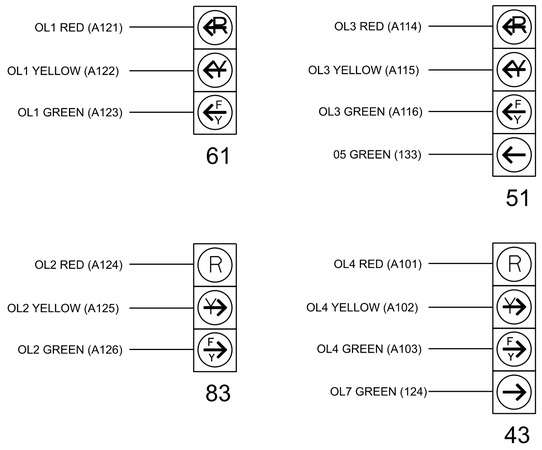
SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
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	OL7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	NU	21,22	NU	NU	41,42	NU	51★	62,63	NU	43★	81,82	NU	61★	83★	NU	51★	43★	NU
RED		128			101			134			107			A124			A101	
YELLOW		129			102		*	135		*	108							
GREEN		130			103			136			109							
RED ARROW													A121			A114		
YELLOW ARROW													A122	A125		A115	A102	
FLASHING YELLOW ARROW													A123	A126		A116	A103	
GREEN ARROW							133			124								
✋																		
🚶																		

NU = Not Used
★ Denotes install load resistor. See load resistor installation detail this sheet.
★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I" U	SLOT EMPTY	ø2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
FILE "I" L		NOT USED				ø4 4B								ST DC ISOLATOR
FILE "J" U	ø5 5A	ø6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø8 8A	ø8 8C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
FILE "J" L	NOT USED	ø6 6B				ø8 8B	ø5 5B							

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

FS = FLASH SENSE
ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
2A	TB2-5,6	I2U	39	1	2	2			X	X	X	
4A	TB4-9,10	I6U	41	3	8	4		3.2	X			
4B	TB4-11,12	I6L	45	7	9	4	3		X		X	
5A	TB3-1,2	J1U	55	17	15★	5	15		X		X	
				-	31★	2	3		X		X	X
5B	TB7-3,4	J7L	79	45	25	5	15		X		X	
6A	TB3-5,6	J2U	40	2	16	6			X	X	X	
6B	TB3-7,8	J2L	44	6	17	6	3		X		X	X
8A	TB5-9,10	J6U	42	4	22	8		3.2	X			
8B	TB5-11,12	J6L	46	8	23	8	3		X		X	
8C	TB7-1,2	J7U	66	32	24	8	15		X		X	

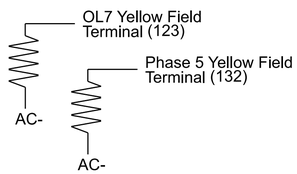
★ For the detectors to work as shown on the signal design plan, see the Detector Programming Detail for Alternate Phasing on sheet 3.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown)

ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



SPECIAL DETECTOR NOTE

For detection zones 4A and 4B, Install a Non-Intrusive detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-2063
DESIGNED: December 2024
SEALED: 1/27/2025
REVISED: N/A

Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering Branch, Mobility and Safety Division
NCDOT Department of Transportation
Traffic Engineering & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: January 2025 | REVIEWED BY:
PREPARED BY: Zarrar Zafar | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 01/27/2025
DATE

SIG. INVENTORY NO. 05-2063

27-JAN-2025 14:19
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zzafar

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig. 2.2

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.

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

OUTPUT CHANNEL CONFIGURATION

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channel Configuration

Channel Configuration

NOTICE: CONTROL TYPE AND CONTROL SOURCE →

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		X	X	1
2	Phase Vehicle	2		X		2
3	Phase Vehicle	3		X	X	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	X	6
7	Overlap	7		X		7
8	Phase Vehicle	8		X	X	8
9	Overlap	1		X	X	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		X	X	17
18	Overlap	6		X		18

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-2063
DESIGNED: December 2024
SEALED: 1/27/2025
REVISED: N/A

Electrical Detail - Sheet 2 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering Branch, Mobility and Safety Division
North Carolina Department of Transportation
Traffic Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

PLAN DATE: January 2025 | REVIEWED BY:
PREPARED BY: Zarrar Zafar | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 01/27/2025
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SIG. INVENTORY NO. 05-2063

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zzafar

PROJECT REFERENCE NO.	SHEET NO.
HL-0121	Sig. 2.3

MAXTIME OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	4	7
Type	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	Normal
Included Phases	2	8	6	4	5
Modifier Phases	-	-	5	5	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

Overlap	1	2	3	4	7
Type	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	Normal
Included Phases	2	8	-	4	5
Modifier Phases	-	-	5	5	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

← NOTICE INCLUDED PHASE

MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOP 5A

Front Panel
Main Menu >Controller >Detector >Veh Det Plans

Web Interface
Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

5A

Detector	Call Phase	Delay
15	5	3
31	0	-

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2.
A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for head 51 to run protected urns only.

VEH DET PLAN 2: Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 3 seconds.

MAXTIME ALTERNATE PHASING PATTERN PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Coordination >Patterns

Web Interface
Home >Controller >Coordination >Patterns

Pattern Parameters

Pattern	Veh Det Plan	Overlap Plan
*	2	2

* The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-2063
DESIGNED: December 2024
SEALED: 1/27/2025
REVISED: N/A

Electrical Detail - Sheet 3 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 50 (Creedmoor Road)
at
SR 1901 (Old Weaver Trail)

Division 5 | Wake County | North of Raleigh

Prepared In the Offices of:
NC Department of Transportation Mobility and Safety Division Traffic Engineering Branch Signals Management Section
750 N.Greenfield Pkwy.Garner,NC 27529

PLAN DATE: January 2025 | REVIEWED BY:
PREPARED BY: Zarrar Zafar | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 01/27/2025
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SIG. INVENTORY NO. 05-2063

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tpwbentley.contractor
zzafar

TIP PROJECT: HL–0121

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

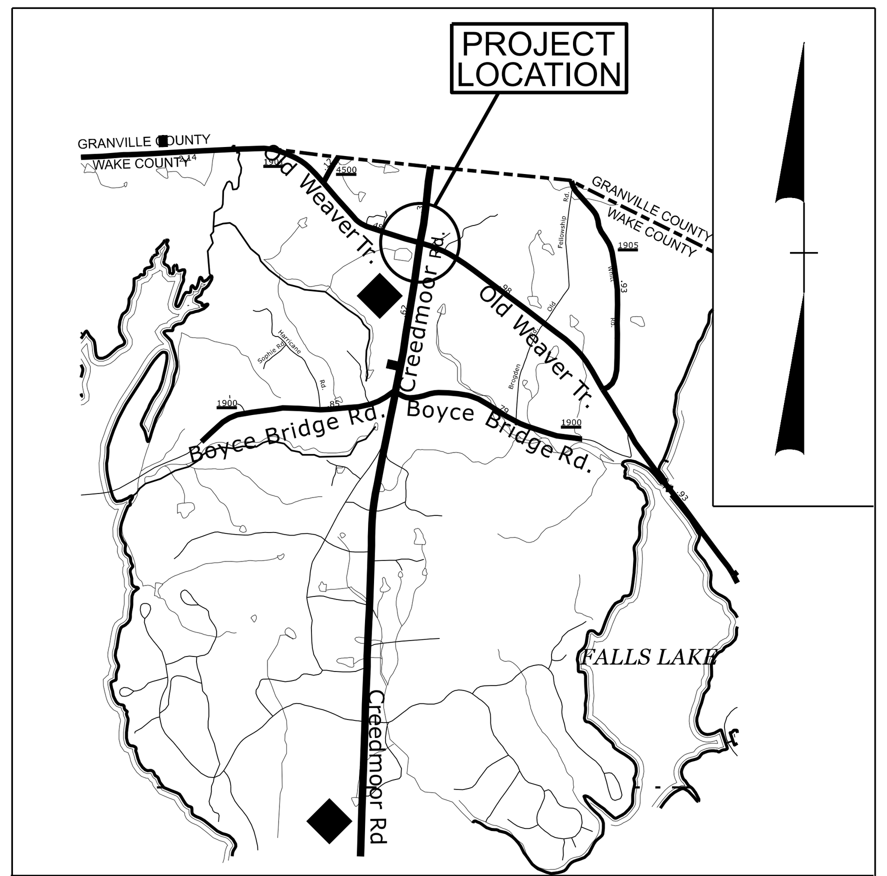
T.I.P. NO.	SHEET NO.
HL–0121	UO–1

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

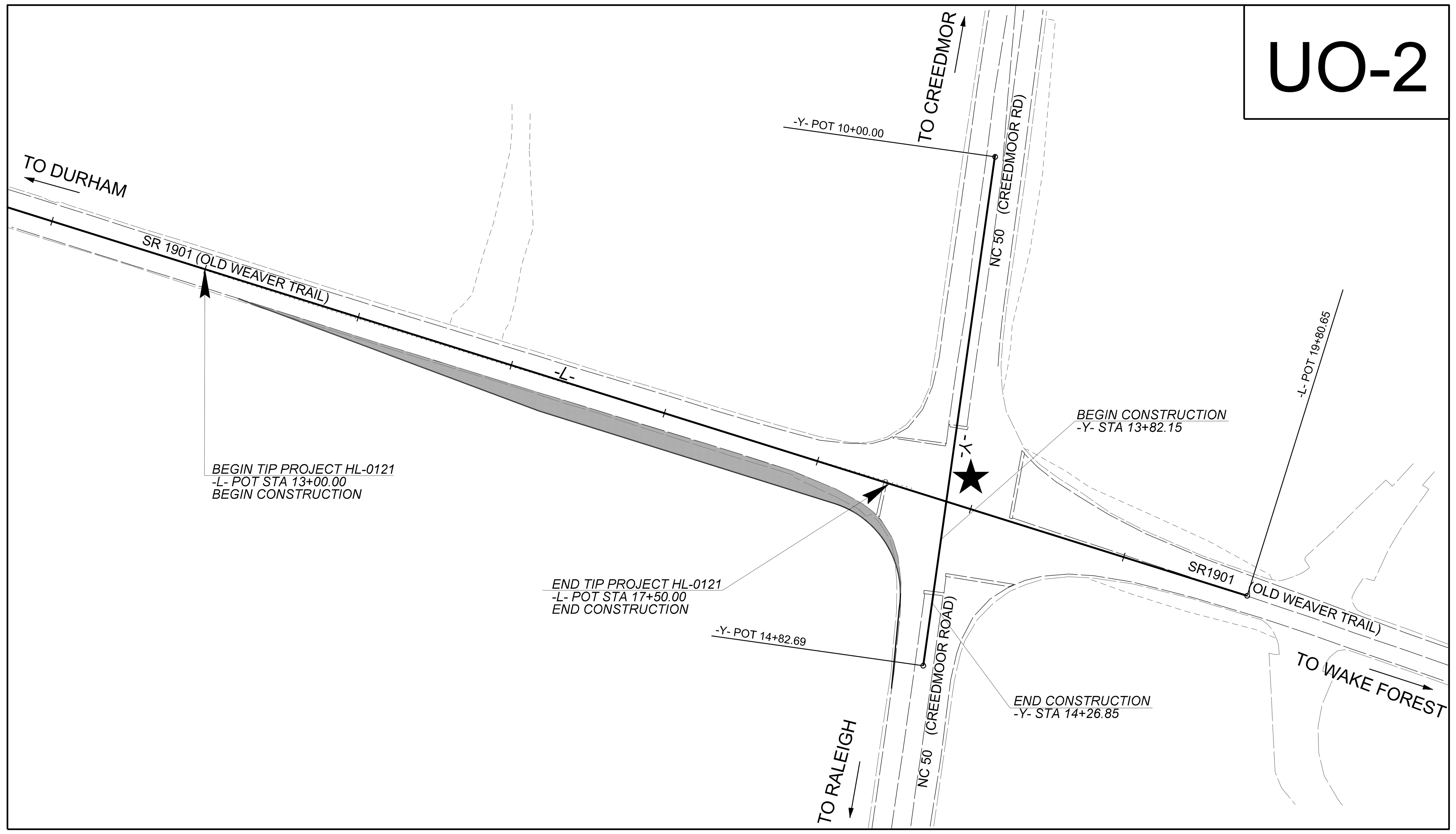
UTILITIES BY OTHERS PLANS
WAKE COUNTY

LOCATION: *SR 1901 (OLD WEAVER TRAIL) AT NC 50 (CREEDMOOR ROAD)*

TYPE OF WORK: *COMMUNICATIONS RELOCATION*



VICINITY MAP (NTS)



NAD 83/ 2011

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	*DESCRIPTION:*
UO–1	*TITLE SHEET*
UO–2	*UBO PLAN SHEETS*

UTILITY OWNERS WITH CONFLICTS

(A) AT&T – TELECOMMUNICATIONS
(B) CHARTER – TELECOMMUNICATIONS
(C) FRONTIER – TELECOMMUNICATIONS

PREPARED IN THE OFFICE OF:

Pennoni

PENNONI ASSOCIATES INC.
5430 WADE PARK BLVD., SUITE 106,
RALEIGH, NC 27607 PHONE: 919.929.1173
FAX: 919.493.6548 NC LICENSE #F-1267

BRIAN WILES — *UTILITY PROJECT MANAGER*
LEVI SMITH — *PROJECT UTILITY COORDINATOR*

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
DIVISION 5
PROJECT DEVELOPMENT UNIT
2612 N. DUKE STREET
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SUSAN LANCASTER, PE — *TEAM LEAD*
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DONALD W. PROPER — *DIVISION UTILITIES ENGINEER*
JAMES SWINSON — *SENIOR UTILITIES ENGINEER*

09/08/99
$$$$$SYSTIME$$$$
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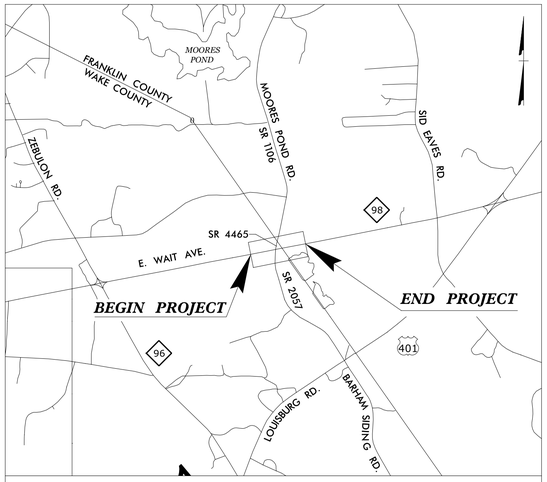
$$$$USERNAME$$$$

TIP PROJECT: W–5805E



VICINITY MAP NTS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

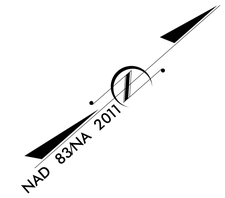
UTILITIES BY OTHERS PLANS
WAKE COUNTY AND
FRANKLIN COUNTY

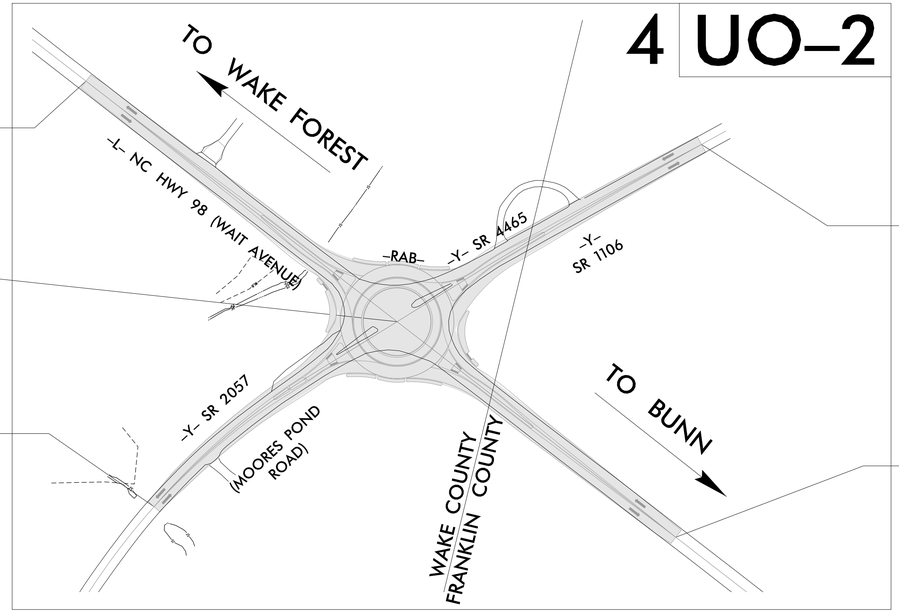
LOCATION: NC 98 AND SR 2057 /SR 4465 /SR 1106 (MOORES POND ROAD)

TYPE OF WORK: RELOCATION OF POWER AND TELEPHONE

T.I.P. NO.	SHEET NO.
W–5805E	UO–1

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET IS DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.





BEGIN PROJECT W–5805E
–L– STA. 12 + 60.00

–L– POT STA. 17 + 79.03 =
–Y– POT STA. 16 + 04.31

BEGIN CONSTRUCTION
–Y– STA. 11 + 99.31

END CONSTRUCTION
–Y– STA. 20 + 69.31

END PROJECT W–5805E
–L– STA. 22 + 44.03

GRAPHIC SCALES

40 25 0 40 80
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO–1	TITLE SHEET
UO–2	UBO PLAN SHEET

UTILITY OWNERS WITH CONFLICTS

(A) POWER – WAKE EMC
(B) TELECOMM – BRIGHTSPEED

PREPARED IN THE OFFICE OF:

Wooten

120 North Boylan Avenue • Raleigh, NC 27603-1423
(919) 828-0531 • thewootencompany.com
License Number: F-0115

WEBB WHITE — UTILITY PROJECT MANAGER
TOMMY MARTIN — PROJECT UTILITY COORDINATOR

DIVISION OF HIGHWAYS
DIVISION 5
PROJECT DELIVERY UNIT
2612 N. DUKE STREET
DURHAM, NC 27704
PHONE (919) 317–4700
FAX (919) 317–4710

SUSAN LANCASTER, P.E. TEAM LEAD
MATTHEW NOLFO, P.E. DIVISION PROJECT MANAGER
DON W. PROPER DIVISION UTILITIES ENGINEER
JAMES SWINSON SENIOR UTILITY ENGINEER

11/14/23

HL-0121
U02 | RDY04

PENNONI ASSOCIATES INC.
5430 WADE PARK BLVD., SUITE 100
RALEIGH, NC 27607 PHONE: 919.929.1173
FAX: 919.493.6846 NC LICENSE #P-1267

START POT -L- 10+00

PC -Y- POT 10+00 00

BEGIN TIP PROJECT HL-0121
POT, -L- STA. 13+00.00

END TIP PROJECT HL-0121
POT, -L- STA. 17+50.00

CHARTER

CHARTER TO BORE 5' BELOW ROAD

FRONTIER NEW COPPER

FRONTIER NEW FIBER

AT&T TO BURY EXISITING LINE DEEPER

CHARTER UG

BEGIN CONSTRUCTION
-Y- POT STA 13+82.15

END CONSTRUCTION
-Y- POT 14+26.85

-EL- S72°35'58"E 980.65'

-EY- N08°00'07"E 482.69'

-L- POT 19+80.85

PC

PT -Y- POT 14+82.69

N77°22'10"E 320.20'

24.57' S06°22'10"W

189.08' S16°35'17"W

200' TAPER

200' STORAGE

65' R

65' R

DURHAM

SR 1901 (OLD WEAVER TRAIL) 25' PAVED ROADWAY

BL 101

BL 102

EXISTING RW

INV = 338.02'

INV = 337.10'

48" WD POST W/ 5S ELEC

MTL GATE

POST

15" RCP

18" RCP

GR

FO

INNERDUCT

NC 50 (CREEDMOOR RD) VAR PAVED ROADWAY

PAVED

12" CMP

WOODS

POND

EIP

SUE C. SMITH AND BONNIE E. EMORY
DB 11E PG 2881
BM 1996 PG 1686

SUE C. SMITH
AND BONNIE E. EMORY
DB 11E PG 2881
DB 6860 PG 423

CARLTON PATRICK CURRIN
DB 7242 PG 449
BM 1996 PG 1686

ANDREW B. CURL
DB 14E PG 1939
DB 2529 PG 472

KENNETH W. WOODLIEF
DB 163 PG 0000E
DB 2387 PG 497
BM 1997 PG 1591

KENNETH W. WOODLIEF AND WIFE
SUE KEITH WOODLIEF
DB 2387 PG 497

KENNETH W. WOODLIEF
AND WIFE SUE KEITH WOODLIEF
DB 2387 PG 496

NC GRID
NAD 83 NA 2011

PROJECT REFERENCE NO.	SHEET NO.
W-5805E	UO-02

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

WAKE EMC & BRIGHTSPEED JOINT OVERHEAD LINE

ABANDONED

ABANDONED

REM

WAKE EMC & BRIGHTSPEED JOINT OVERHEAD LINE

BRIGHTSPEED BORE PITS

BRIGHTSPEED U/G COMMUNICATION CABLES TO BE PLACED AT A MINIMUM OF 5'

BRIGHTSPEED BORE PIT

ABANDONED

WAKE EMC & BRIGHTSPEED JOINT OVERHEAD LINE

REM

REM

REM

REM

ABANDONED

REM

BRIGHTSPEED U/G COMMUNICATION CABLES

WAKE EMC & BRIGHTSPEED JOINT OVERHEAD LINE

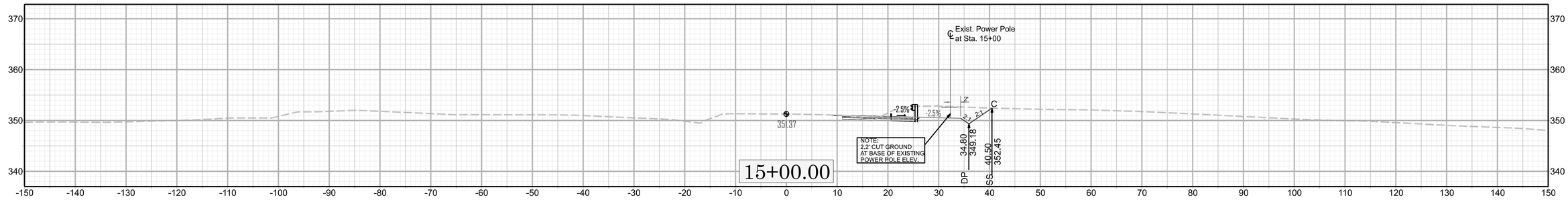
ABANDONED

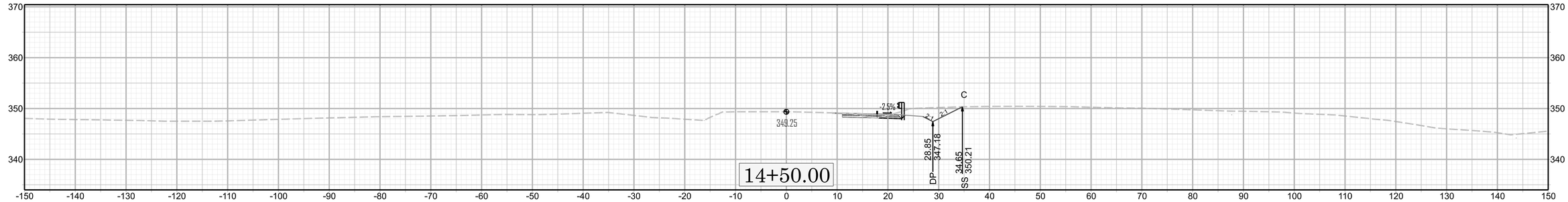
ABANDONED

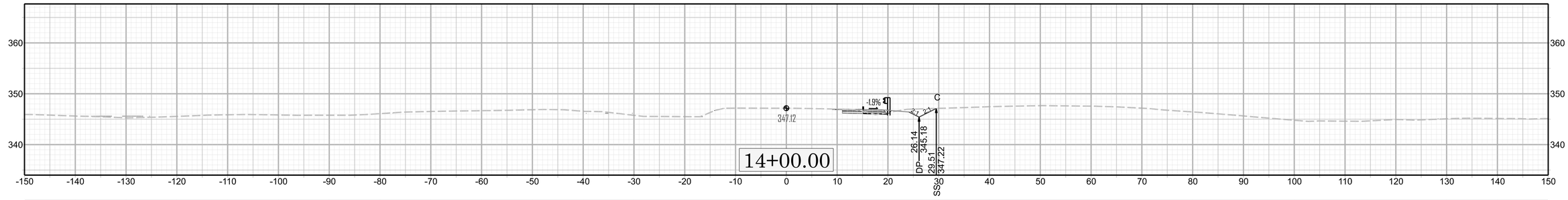
BRIGHTSPEED U/G COMMUNICATION CABLES TO BE PLACED AT A MINIMUM OF 4'

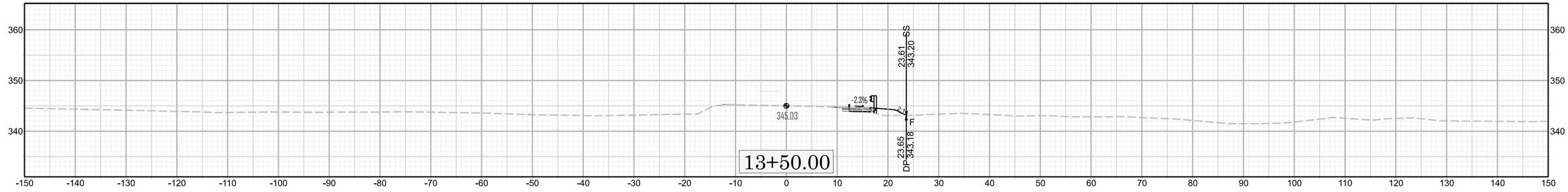
BRIGHTSPEED BORE PIT

BRIGHTSPEED U/G COMMUNICATION CABLES


Exist. Power Pole
at Sta. 15+00
351.37
-2.5%
-2.5%
2'
2:1
2:1
C
NOTE:
2.2' CUT GROUND
AT BASE OF EXISTING
POWER POLE ELEV.
34.80
349.18
DP
40.50
352.45
SS
15+00.00


349.25
-2.5%
2:1
2:1
C
28.85
347.18
DP
34.65
350.21
SS
14+50.00


347.12
-1.9%
2:1
2:1
C
26.14
345.18
DP
29.51
347.22
SS
30
14+00.00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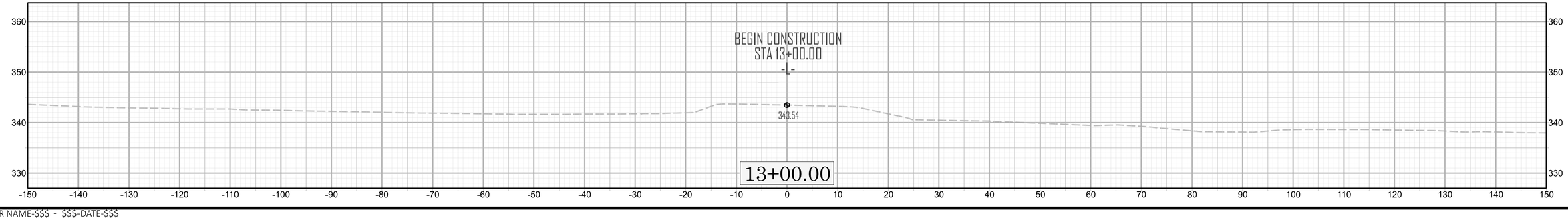
-2.3%
2:1
SS
23.61
343.20
F
23.65
343.18
DP
13+50.00


BEGIN CONSTRUCTION
STA 13+00.00
348.54
13+00.00

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

301 BE3[illegible] 10/22/2025 S:\2022 Projects\22246 W5805E NC 98 at Moores Pond Rd\Roadway\XSC\W5805E_XSC_Index.xls

PROJECT NO.	SHEET NO.
W-5805E	X-1

DRMP

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

INDEX OF CROSS SECTION SHEETS

-L- NC 98 (WAIT AVENUE)	X-2 THRU X-7
-Y- SR 2057/ SR 4465 / SR 1106 (MOORES POND ROAD)	X-8 THRU X-13
-RAB-	X-14 THRU X-17

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

S:\2022 Projects\22246 W5805E NC 98 at Moores Pond Rd\Roadway\XSC\W5805E_XSC_EW_Volume_Summary.xls

PROJ. REFERENCE NO.	SHEET NO.
W-5805E	X-1A

DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115

NC LICENSE NO. F-1524
www.drmp.com

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CROSS-SECTION SUMMARY

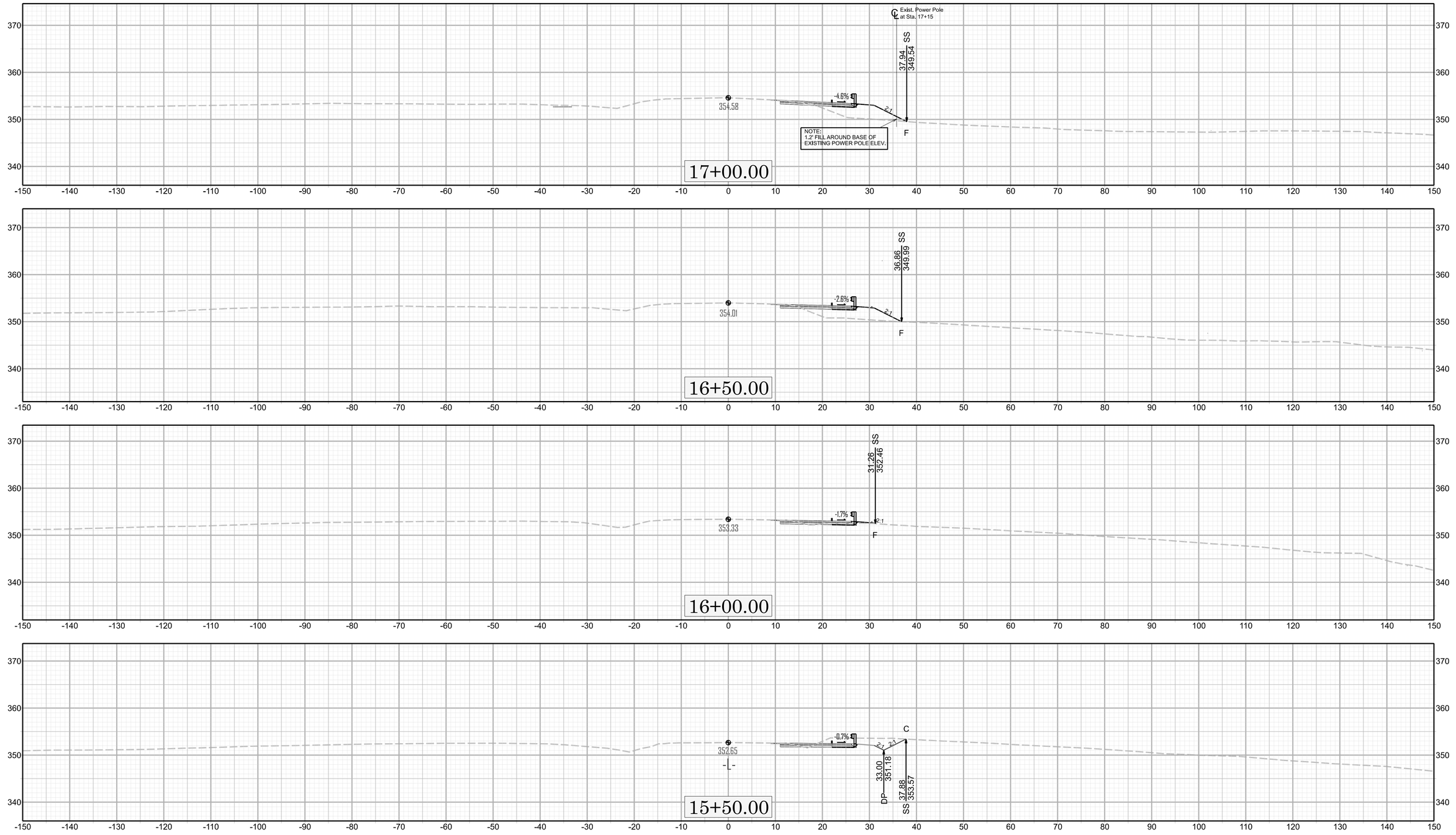
Approximate quantities only. Unclassified Excavation, Borrow Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading".

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
12+60.00	0	0
13+00.00	5	19
13+50.00	14	63
14+00.00	16	110
14+50.00	20	144
15+00.00	19	203
15+50.00	8	282
16+00.00	11	346
16+50.00	20	377
17+00.00	30	274
17+50.00	18	85
RAB	0	0
19+00.00	28	39
19+50.00	59	67
20+00.00	67	47
20+50.00	140	25
21+00.00	339	6
21+50.00	291	1
22+00.00	58	15
22+44.03	2	13

Station Y	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
11+99.31	0	**0**
12+00.00	0	0
12+50.00	11	55
13+00.00	21	76
13+50.00	54	33
14+00.00	84	14
14+50.00	74	3
15+00.00	40	5
15+50.00	12	5
RAB	0	0
17+00.00	11	14
17+50.00	17	18
18+00.00	13	7
18+50.00	13	6
19+00.00	31	3
19+50.00	29	5
20+00.00	10	7
20+50.00	12	1
20+69.31	3	0

Station RAB	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+00.00	0	118
10+50.00	0	275
11+00.00	0	317
11+50.00	6	321
12+00.00	7	364
12+50.00	1	369
13+00.00	0	364
13+50.00	0	371
14+00.00	11	392
14+50.00	11	361



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X 002

HL-0121

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6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W–5805E	X–2

BEGIN TIP PROJECT W–5805E
–L– 12+60.00

–L– NC 98 (WAIT AVE.)

10/22/2025
...\XSC\W5805E_Rdy_L_XPL.dgn
User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-3

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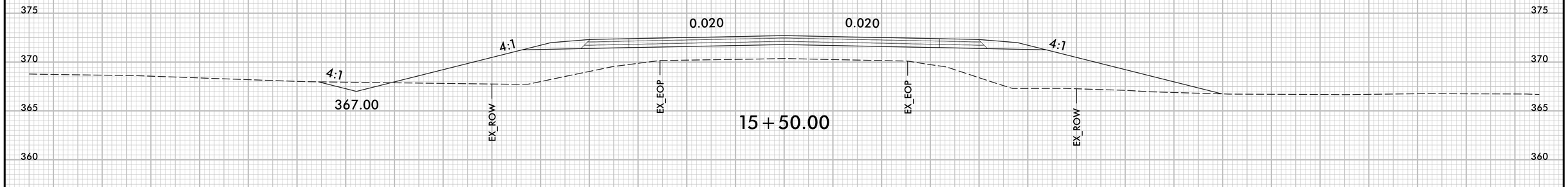

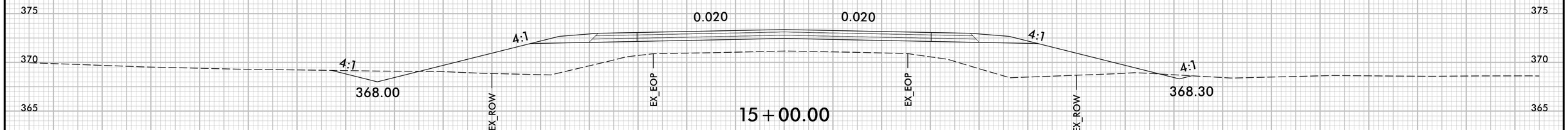

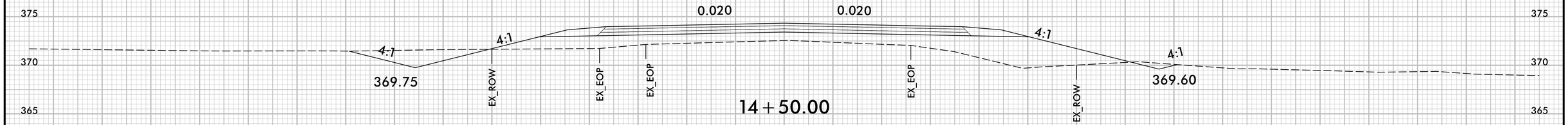

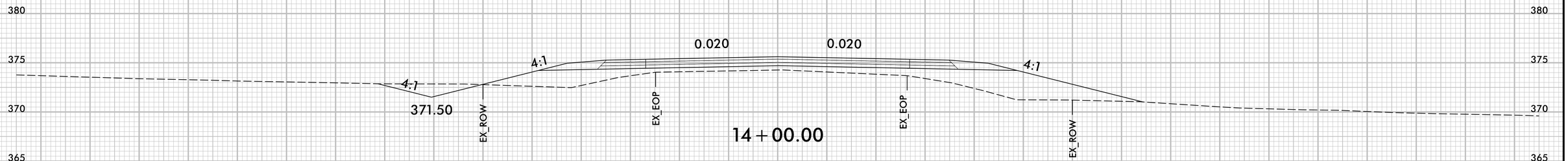

–L– NC 98 (WAIT AVE.)

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10/22/2025
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User: mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-4

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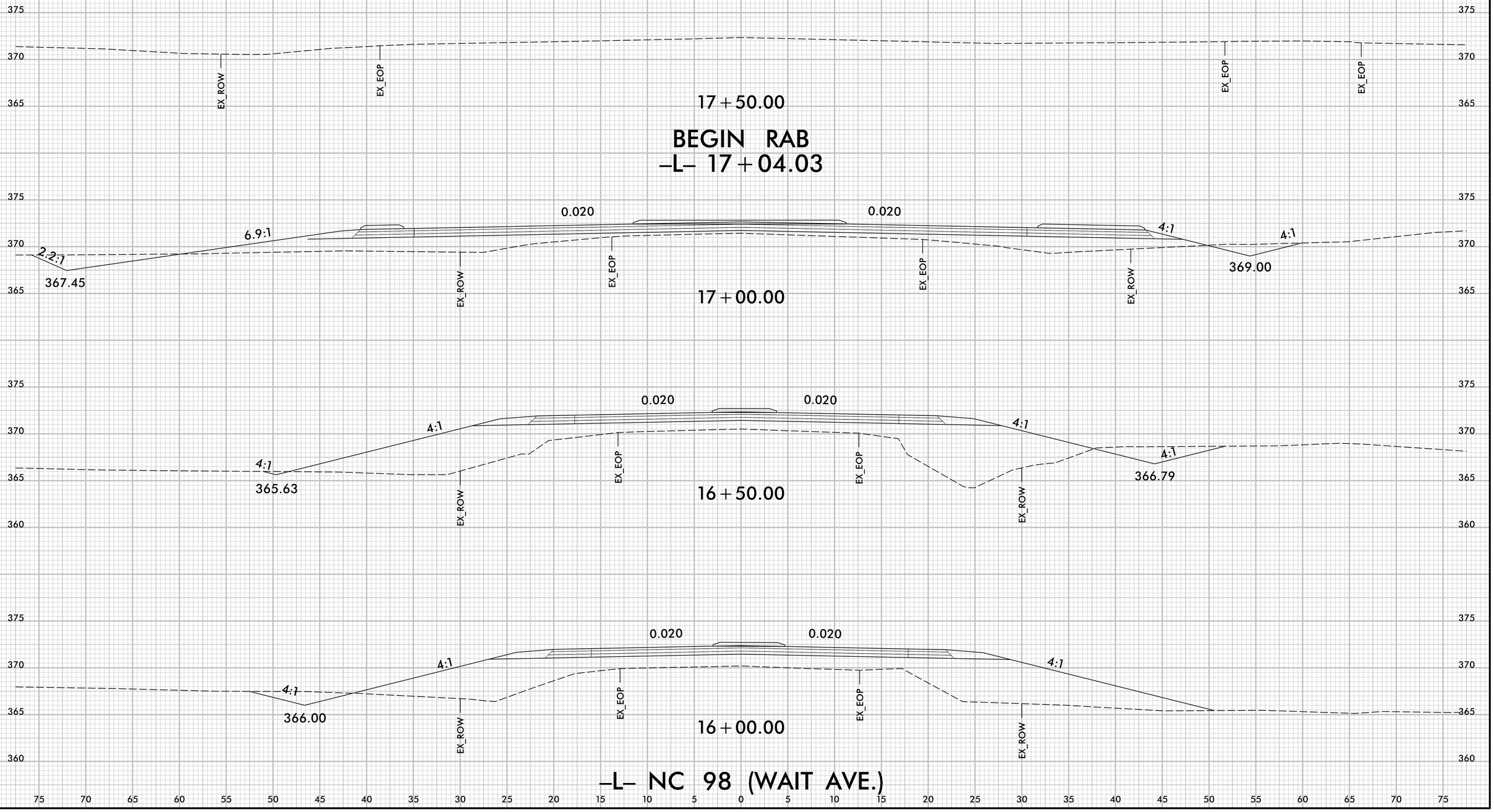

10/22/2025
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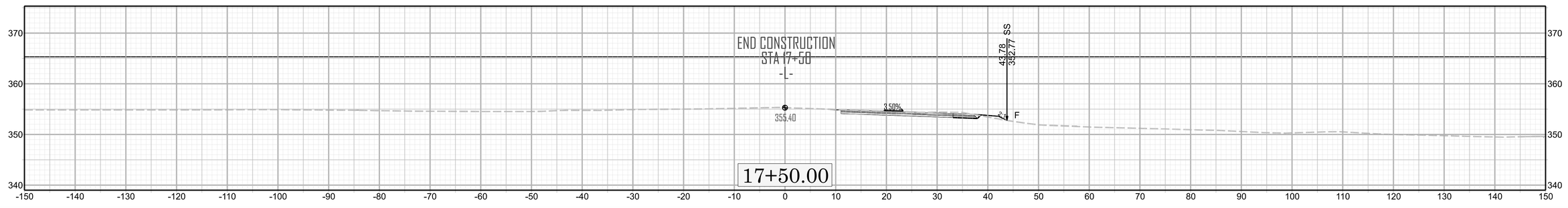
User:mlindsey

0 10 20

X 003

HL-0121



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6/23/16

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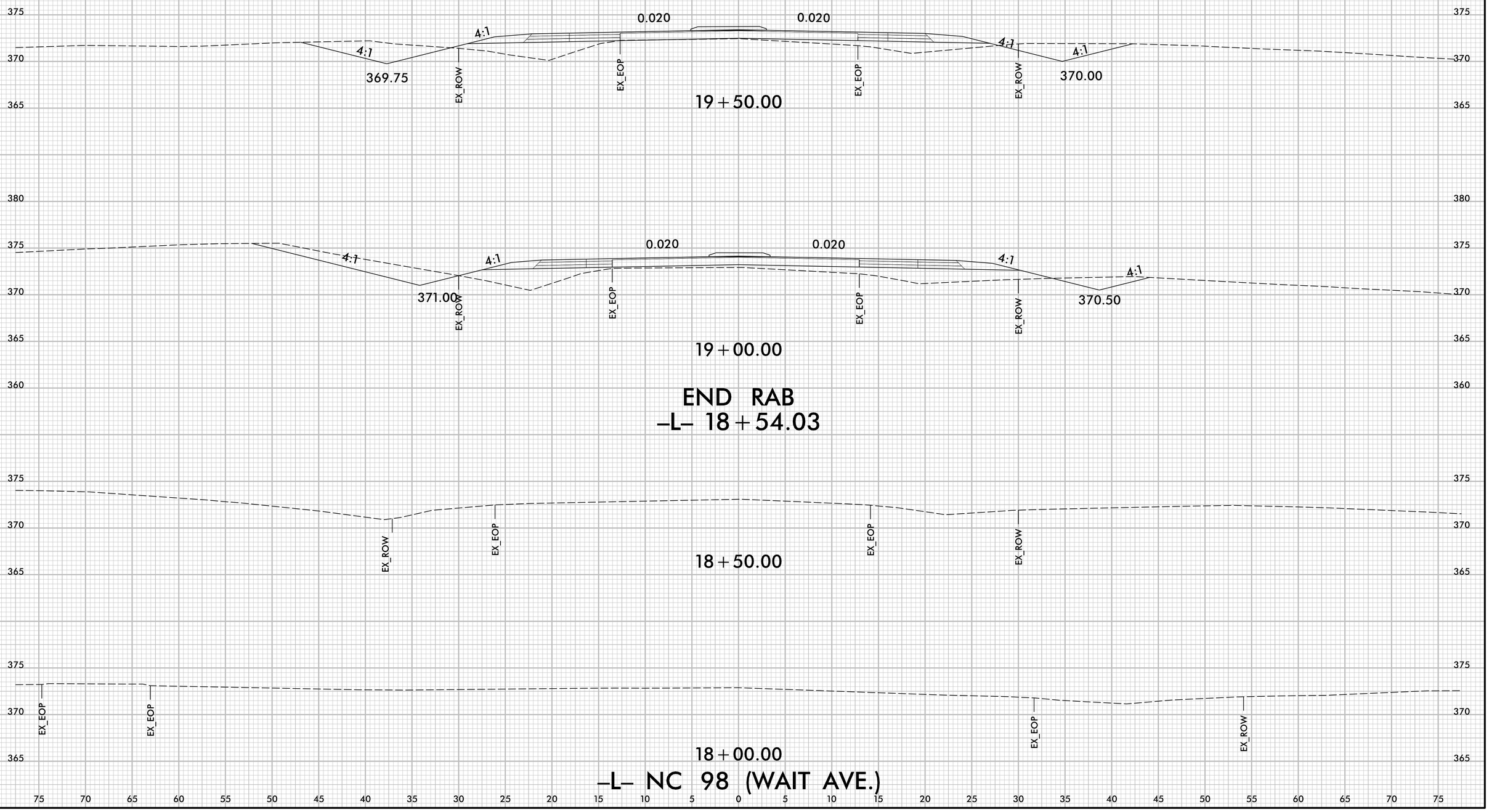
	W-5805E	X-5



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6/23/16

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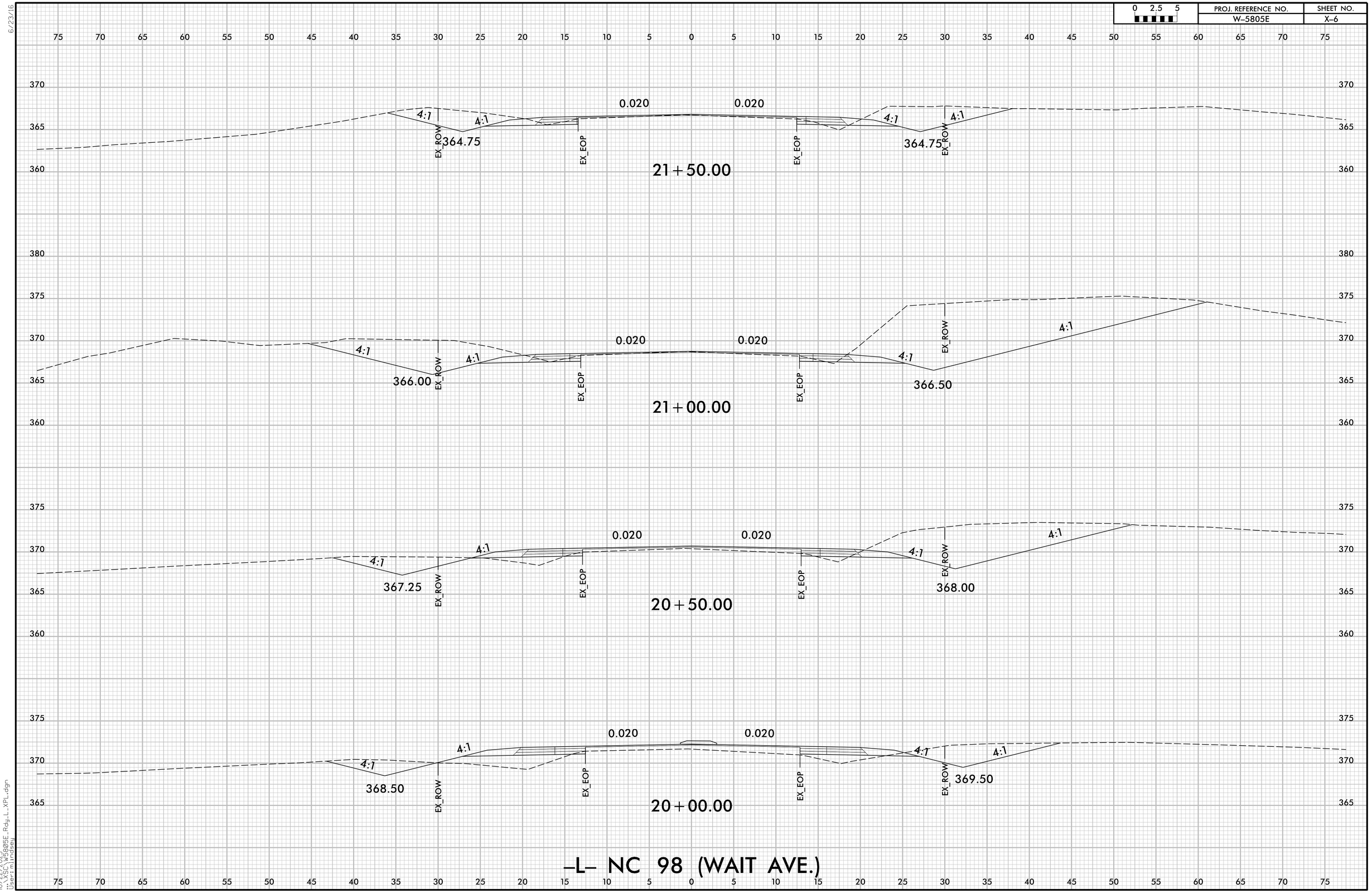

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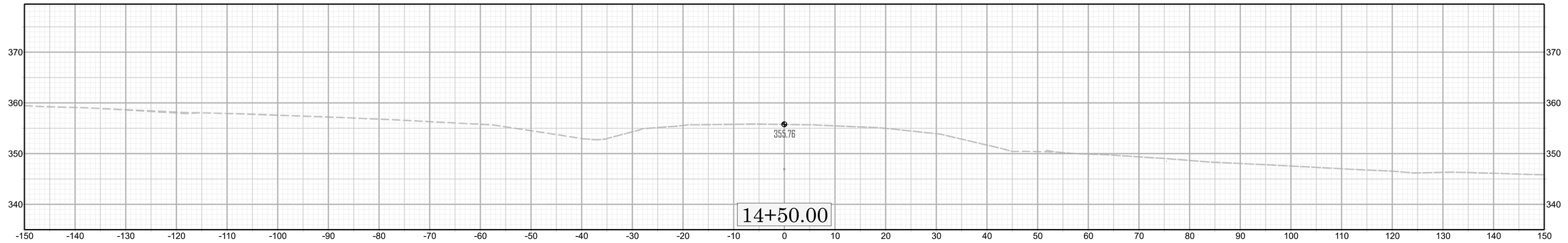
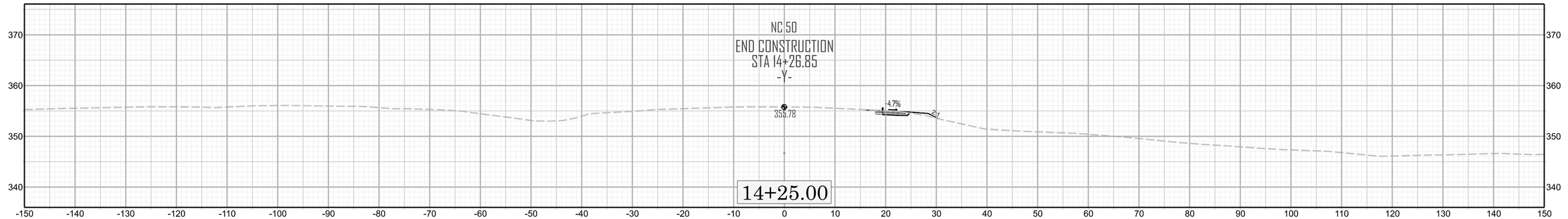
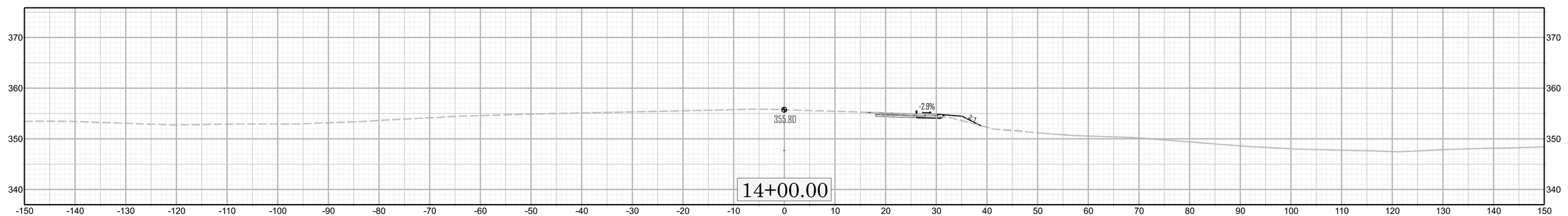
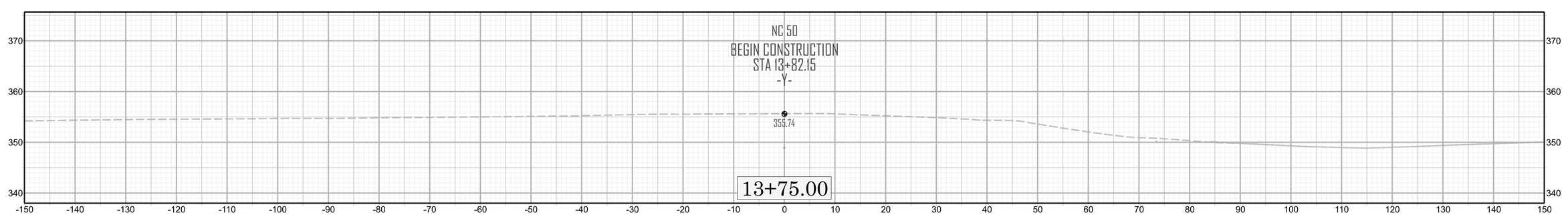
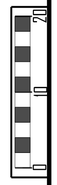
User:mlindsey


370
360
350
340
355.76
14+50.00
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150


NC 50
END CONSTRUCTION
STA 14+26.85
-Y-
355.78
-4.7%
2:1
14+25.00
370
360
350
340
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150


355.80
-2.9%
2:1
14+00.00
370
360
350
340
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150


NC 50
BEGIN CONSTRUCTION
STA 13+82.15
-Y-
355.74
13+75.00
370
360
350
340
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150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HL-0121

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6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-7

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

365
360
355
350

EX_ROW EX_EOP EX_EOP EX_ROW

23+00.00

365
360
355

EX_ROW EX_EOP EX_EOP EX_ROW

22+50.00

END TIP PROJECT W-5805E
-L- 22+44.03

370
365
360
355

0.022 0.022

4:1 4:1

EX_ROW EX_EOP EX_EOP EX_ROW

22+00.00

-L- NC 98 (WAIT AVE.)

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

10/22/2025
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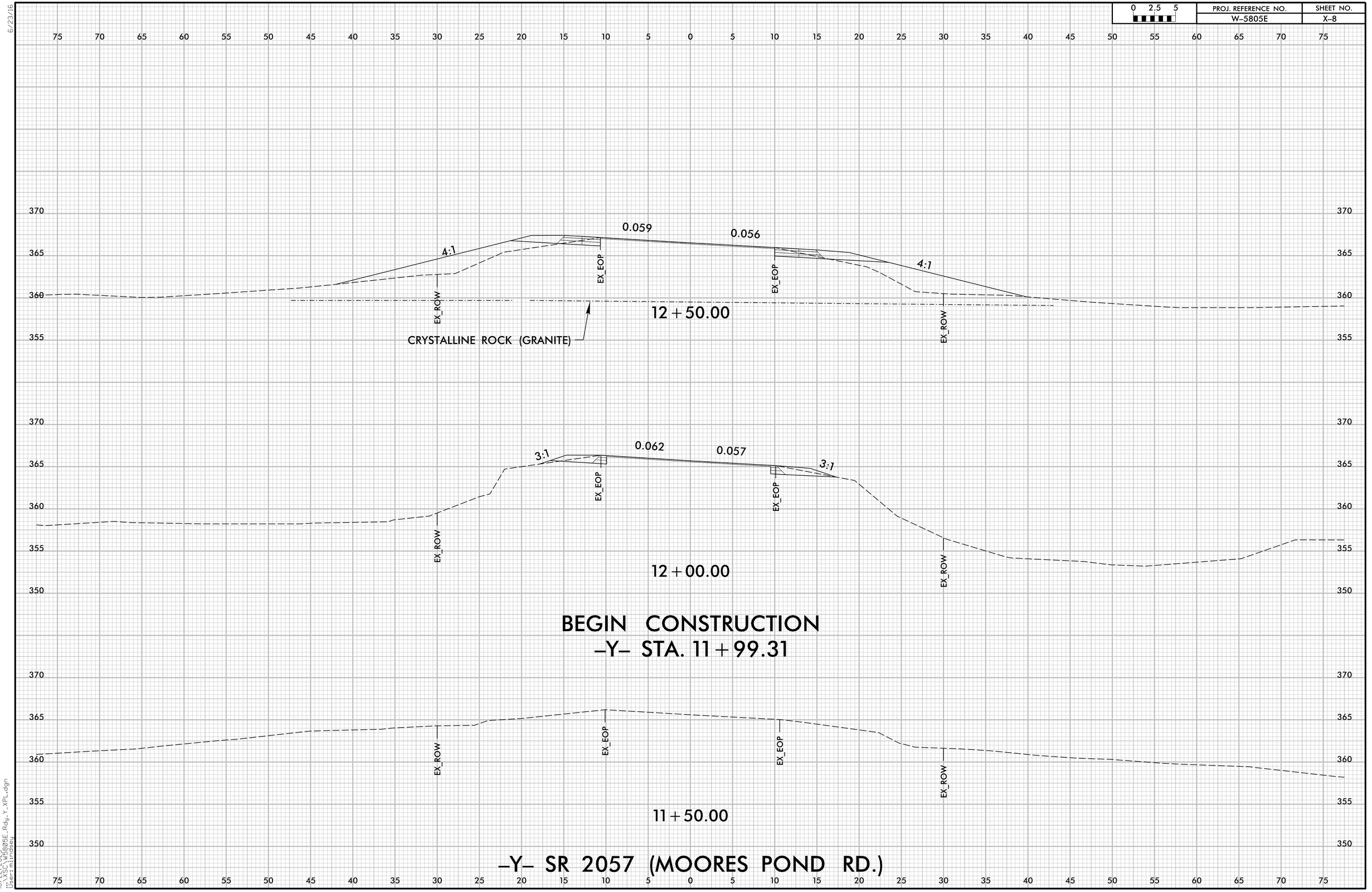
User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-8



10/22/2025
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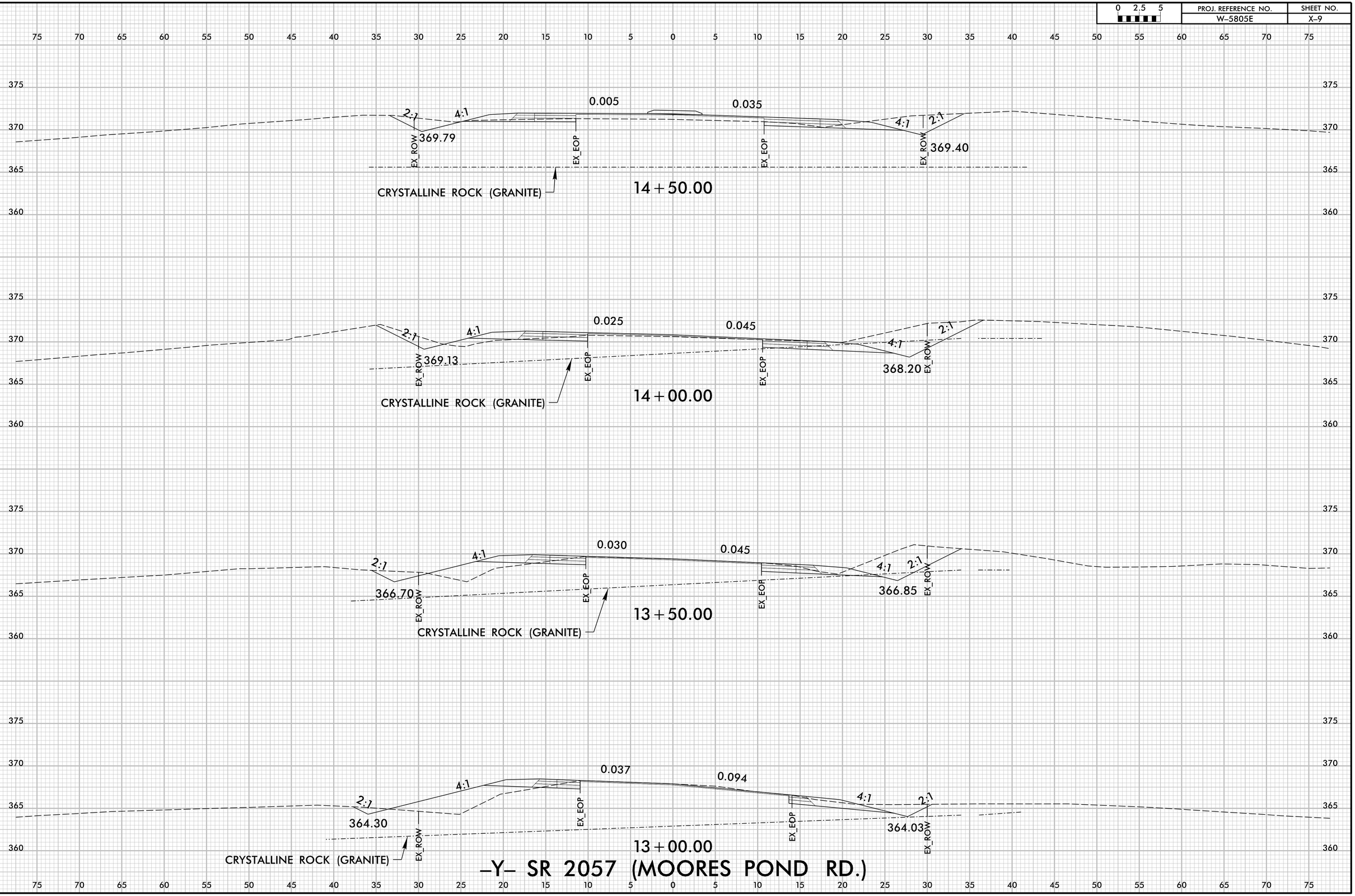
User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-9



10/22/2025
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User:mlindsey

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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-10

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 RAB
–Y– STA. 16+79.31

375 / 370 / 365

EX_ROW EX_EOP EX_EOP EX_EOP

16+50.00

375 / 370 / 365

EX_EOP EX_EOP EX_ROW

16+00.00

375 / 370 / 365

EX_EOP EX_EOP EX_EOP EX_EOP EX_ROW

15+50.00

BEGIN RAB
–Y– STA. 15+29.31

375 / 370 / 365

2:1 4:1 0.015 0.020 4:1 2:1

369.94 370.43

EX_ROW EX_EOP EX_EOP EX_ROW

15+00.00

360

–Y– SR 2057 (MOORES POND RD.)

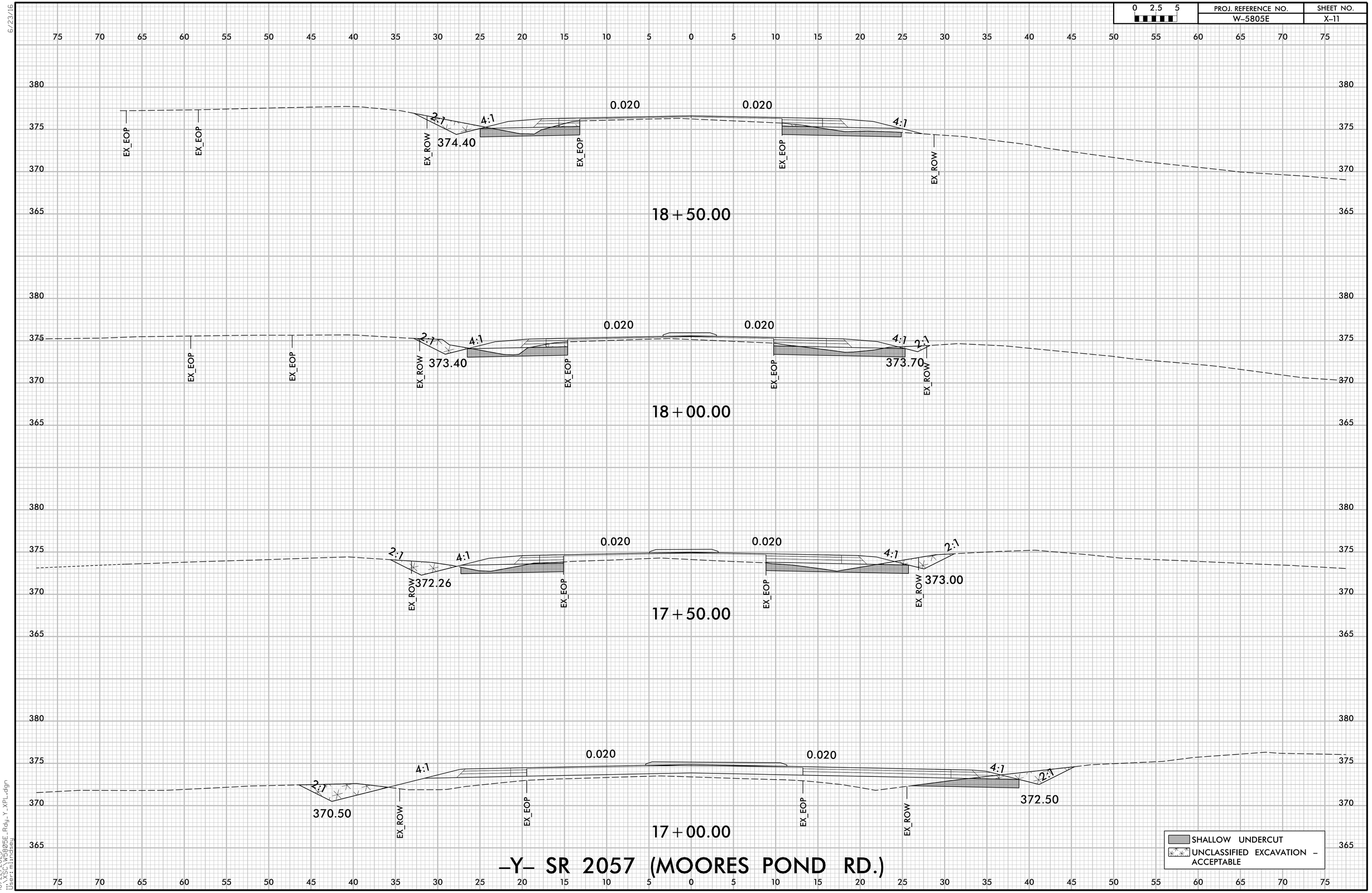
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

10/22/2025
:::\XSC\W5805E_Rdy_Y_XPL.dgn
User: mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-11



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User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-12

10/22/2025
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User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-13

10/22/2025
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User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-14

10/22/2025
I:\XSC\W5805E_Rdy_RAB_XPL.dgn
User: mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-15

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

385 380 375 370 365

CENTER OF
–RAB–
377.41′

–L– INTERSECTION
374.77′

0.02

0.02

372.80

EX_EOP

12+50.00

CENTER OF
–RAB–
377.41′

0.02

0.02

374.15

4:1

2:1

371.60

372.02

EX_EOP

EX_ROW

12+00.00

CENTER OF
–RAB–
377.41′

0.02

0.02

373.54

4:1

2:1

372.66

371.00

EX_EOP

EX_ROW

11+50.00

–RAB–

10/22/2025
...\XSC\W5805E_Rdy_RAB_XPL.dgn
User:mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-16

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

385 / 380 / 375 / 370 / 365

CENTER OF
–RAB–
377.41'

0.02

0.02

373.47

4:1

2:1

370.56

368.8

EX_EOP

EX_ROW

14 + 00.00

CENTER OF
–RAB–
377.41'

–Y– INTERSECTION
374.51'

0.02

0.02

372.35

EX_EOP

EX_ROW

13 + 50.00

CENTER OF
–RAB–
377.41'

–Y– INTERSECTION
375.20'

0.02

0.02

372.39

EX_EOP

EX_ROW

13 + 00.00

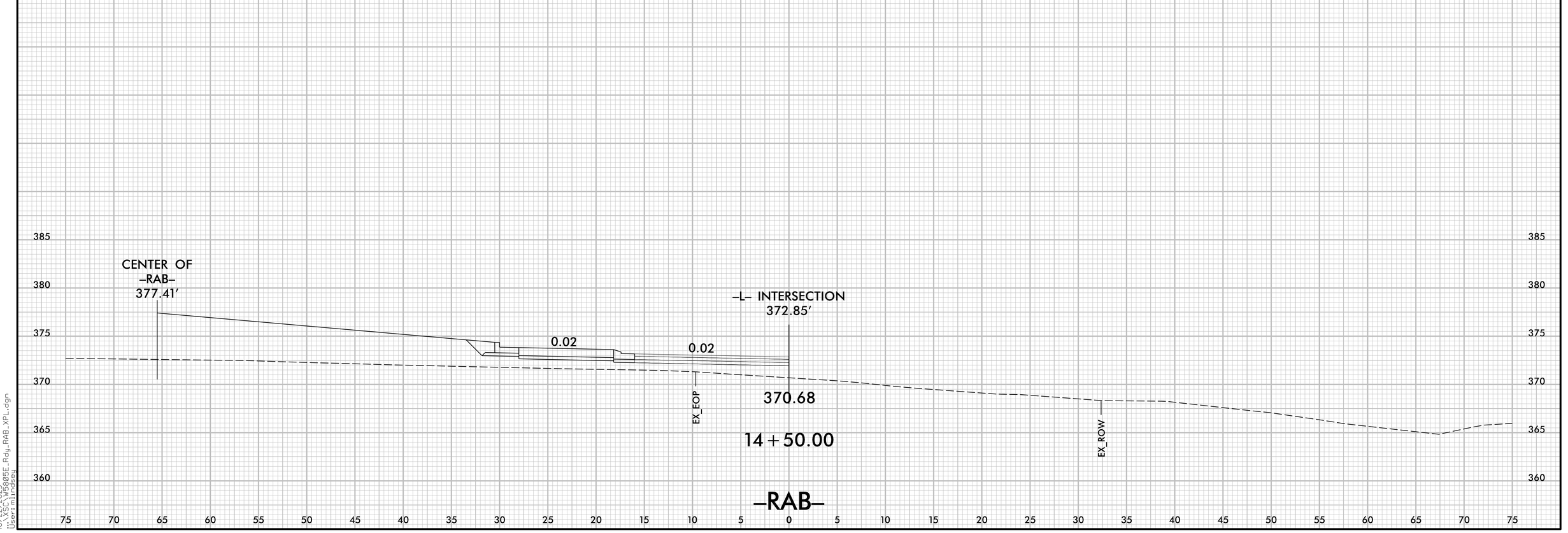
–RAB–

10/22/2025
\\XSC\W5805E_Rdy_RAB_XPL.dgn
User: mlindsey

Docusign Envelope ID: B2F84C28-8C06-4071-BAB9-9AD20DE51E60

6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5805E	X-17



10/22/2025
...\SC\W5805E_Rdy_RAB_XPL.dgn
User:mlindsey