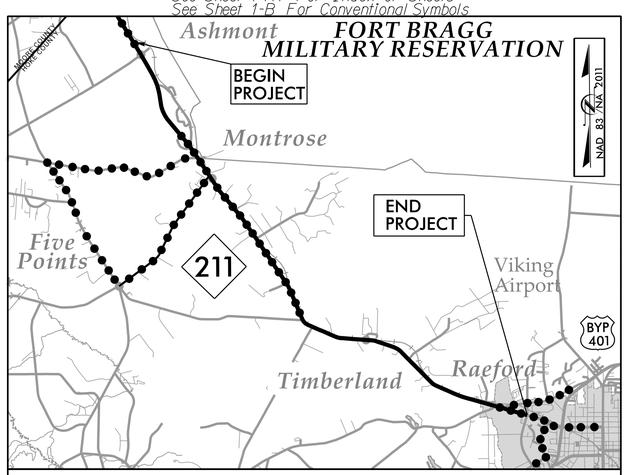
09/08/99

TIP PROJECT: R–5709C

CONTRACT: C204992

See Sheet 1-A1 For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP (NTS)

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HOKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R–5709C	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50205.1.4		PE
50205.2.1		ROW
50205.2.2		UTILITIES
50205.3.4		CONSTRUCTION

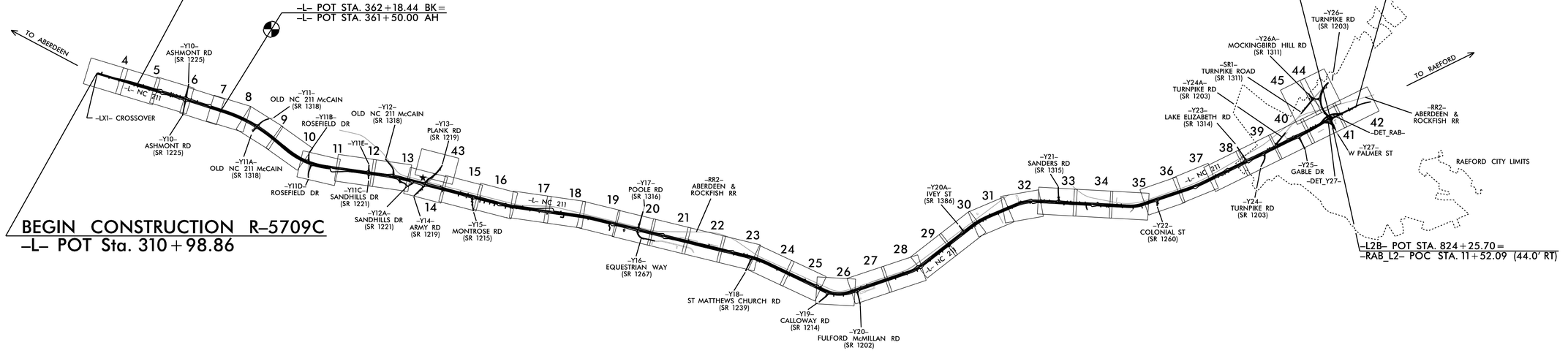
LOCATION: *NC 211 FROM 0.40 MILES NORTH OF SR 1225 (ASHEMONT ROAD) TO EAST OF SR 1244 (WEST PALMER STREET)/SR 1311 (MOCKINGBIRD HILL ROAD) IN RAEFORD.*

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

END FUTURE TIP PROJECT R–5709B
BEGIN TIP PROJECT R–5709C
–L– POT Sta. 328+00.00

BEGIN CONSTRUCTION R–5709C
–L– POT Sta. 310+98.86

END TIP PROJECT R–5709C
–L2B– POC Sta. 835+30.00



★ PROPOSED SIGNAL

NOTE:
1. THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2024 = 16,400
ADT 2044 = 23,400
K = 9%
D = 60%
T = 21% *
V = 60 MPH
* TTST = 16% DUAL 5%
FUNC CLASS = MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R–5709C..... 9.621 miles
LENGTH STRUCTURE TIP PROJECT R–5709C..... 0.000 miles
TOTAL LENGTH OF PROJECT R–5709C..... 9.621 miles

NCDOT CONTACT

Terry E. Farr, PE
PROJECT MANAGER

PLANS PREPARED BY:
RK&K
8601 Six Forks Road, Forum 1 Suite 700
RALEIGH, NORTH CAROLINA 27615–3960
NC LICENSE NO. F–0112
1–888–521–4455 OR 919–878–9560
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 23, 2021

LETTING DATE:
JANUARY 21, 2025

Brandon McInnis, PE
PROJECT ENGINEER

Mary Mays Yahl, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN

Signed by: Courtland Hoffman P.E. 10/14/2024
SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

Signed by: Mary Mays Yahl P.E. 10/15/2024
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

9/25/2024
R:\Roadway\Proj\R5709C_Rdy_tsh.dgn
default

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	1A-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS JAHL
10/18/2024
Signed by: Mary Mays Jahl

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX of SHEETS

GENERAL NOTES

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.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 AND 560.02.

SIDE ROADS:

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

BERM DITCHES:

BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

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

STREET TURNOUT:

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

GUARDRAIL:

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

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY (DIST), PIEDMONT NATURAL GAS, WINDSTREAM, BRIGHTSPEED, CHARTER/SPECTRUM - CATV, HOKE CO. PUBLIC WORKS (W/S), TOWN OF RAEFORD (W/S)

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

RIGHT-OF-WAY MARKERS:

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

CURB RAMPS

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

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	1A-2

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL — 3/15/2024

Signed by: Mary Mays Yahl

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
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	
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.05	Method of Obtaining Superelevation - Divided Highways
225.06	Method of Grading Sight Distance at Intersections
240.01	Guide for Berm Ditch Construction
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.22	Reinforced Concrete Endwall - for Double and Triple 54" Pipes 90 Skew
838.27	Reinforced Concrete Endwall - for Single 60" Pipe 90 Skew
838.33	Reinforced Concrete Endwall - for Single 66" Pipe 90 Skew
838.39	Reinforced Concrete Endwall - for Single 72" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
838.52	Reinforced Brick Endwall - for Double and Triple 54" Pipe 90 Skew
838.57	Reinforced Brick Endwall - for Single 60" Pipe 90 Skew
838.63	Reinforced Brick Endwall - for Single 66" Pipe 90 Skew
838.69	Reinforced Brick Endwall - for Single 72" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.22	Frames and Wide Slot Sag Grates
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.41	Spring Box - Concrete or Brick
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.02	Drop Inlet Installation in Expressway Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.06	Curb Ramp
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
850.11	Guide for Berm Drainage Outlet - 24" and 30" Pipe
852.01	Concrete Islands
852.02	Monolithic Concrete Mountable Island Median for Use with Rigid or Flexible Pavement
852.04	Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter
852.05	Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
852.10	Median Construction - with Curb and Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
866.07	Wildlife Fence - with Chain Link
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets
876.03	Drainage Ditches with Class 'A' Rip Rap
876.04	Drainage Ditches with Class 'B' Rip Rap

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NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	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 — 23
- 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.

8/17/99

FINAL PAVEMENT SCHEDULE

A1	12″ JOINTED CONCRETE TRUCK APRON.	E1	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
C1	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS.	E3	PROP. APPROX. 5.5″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E4	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 NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5.5″ IN DEPTH.
C3	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	J1	PROP. 8″ AGGREGATE BASE COURSE
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1.5″ IN DEPTH.	K	PROP. 12″ CLASS IV SUBGRADE STABILIZATION
C6	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.	N	GEOTEXTILE FOR SUBGRADE STABILIZATION
C7	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2″ IN DEPTH.	P	PRIME COAT
D1	PROP. APPROX. 2.5″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	R1	2′-6″ CONCRETE CURB AND GUTTER
D2	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	1′-6″ CONCRETE CURB AND GUTTER
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5″ OR GREATER THAN 4″ IN DEPTH.	R4	5″ MONOLITHIC CONCRETE ISLAND (KEYED IN)
R5	EXPRESSWAY GUTTER		
R6	4″ CONCRETE COVER		
R9	SHOULDER BERM GUTTER		
SM	SELECT GRANULAR MATERIAL, CLASS III		
S	4″ CONCRETE SIDEWALK		
T	EARTH MATERIAL		
U	EXISTING PAVEMENT		
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS)		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-1
R/W SHEET NO.	

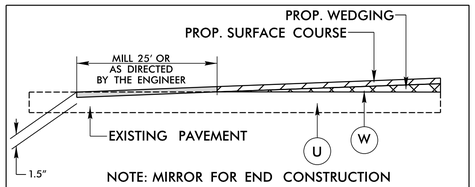
ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAIL
10/08/2024
Signature: Mary Mays Yail

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO
10/08/2024
Docusigned by: Andrew D. Wargo

NOTE: ALL OUTSIDE PAVED SHOULDERS ALONG -L- WILL BE REMOVED DUE TO VARIABILITY IN SHOULDER DEPTH ALONG THE PROJECT.

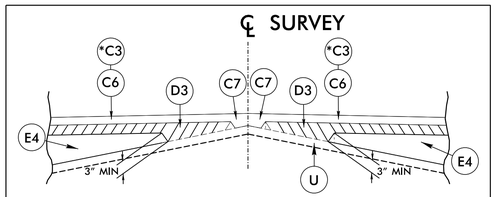


NOTE: MIRROR FOR END CONSTRUCTION

INCIDENTAL MILLING DETAIL

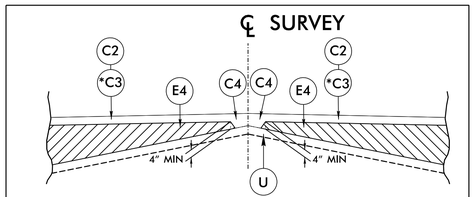
MILL EXISTING PAVEMENT ON THE FOLLOWING ALIGNMENT TIES:

–LX1–	–Y12–	–Y19–	–Y25–
–L2B–	–Y12A–	–Y20–	–Y26–
–Y10–	–Y13–	–Y20A–	–Y26A
–Y11–	–Y14–	–Y21–	–Y27–
–Y11A–	–Y15–	–Y22–	–DR7–
–Y11B–	–Y16–	–Y23–	–DR8–
–Y11C–	–Y17–	–Y24–	–DR10–
–Y11D–	–Y18–	–Y24A–	–SR1–
–Y11E–			



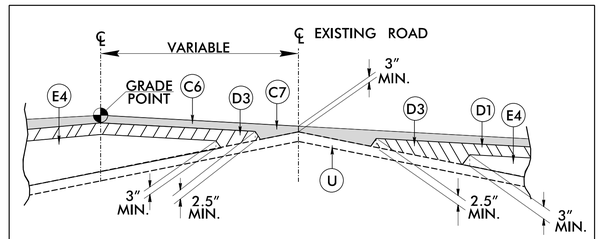
DETAIL SHOWING METHOD OF WEDGING NO. 1

–LX1–	–Y11–	–Y22–
–LX1RT–	–Y12A–	–Y24–
–L–	*–Y16–	–Y25–
–L2B–	*–Y17–	–Y26–
	–Y20A–	–Y27–

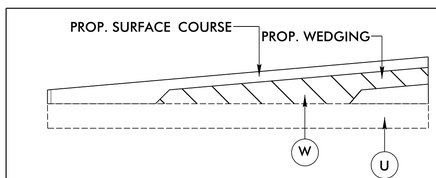


DETAIL SHOWING METHOD OF WEDGING NO. 2

–Y10–	*–Y13–	–Y21–
–Y11A–	*–Y14–	–Y23–
–Y11B–	–Y15–	–Y24A–
–Y11C–	–Y18–	–Y26A–
–Y11D–	–Y19–	–SR1–
–Y12–	–Y20–	



DETAIL SHOWING METHOD OF WEDGING
FOR –L– & –L2B–



WEDGING DETAIL FOR RESURFACING

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8/17/99

PAVEMENT SCHEDULE	
C6	3″ S9.5C
D2	4″ I19.0C
E1	4″ B25.0C
J1	8″ ABC
T	EARTH MATERIAL
U	EXIST. PAVEMENT

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-2
R/W SHEET NO.	

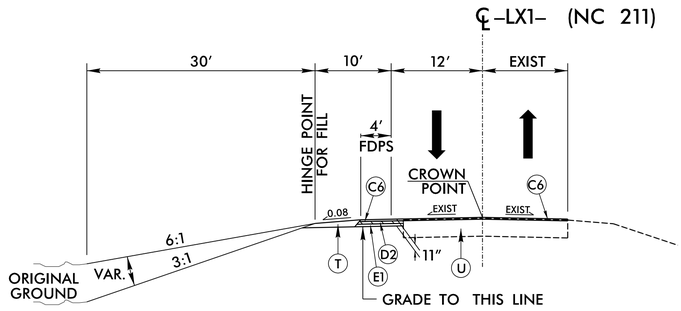
ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL 9/25/2024

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO 9/25/2024

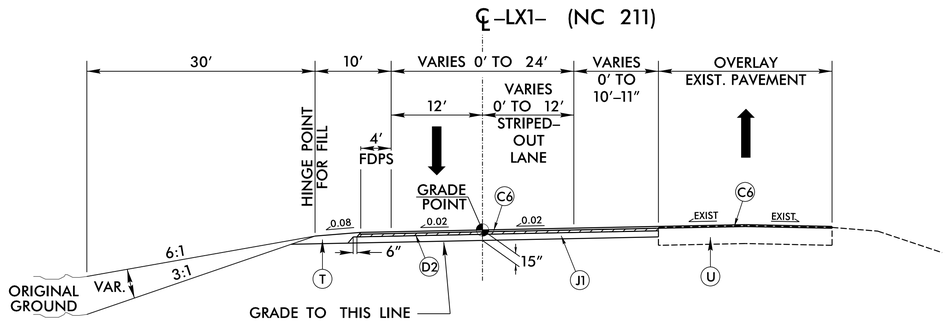
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

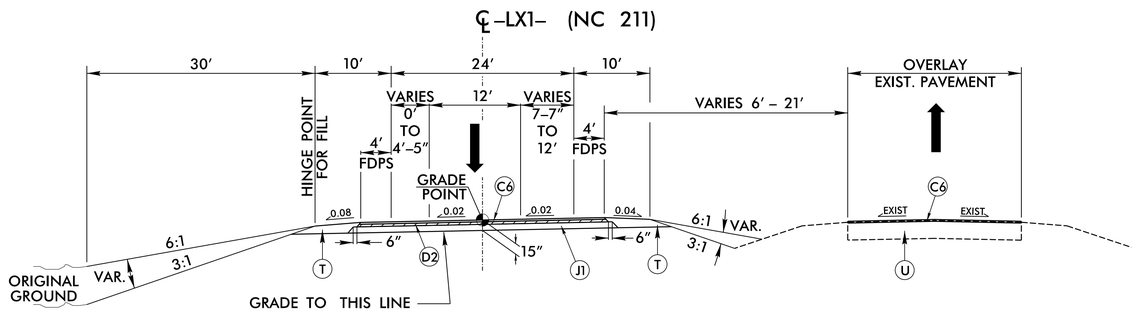
–LX1– STA. 10+00.00 TO STA. 14+93.46



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

–LX1– STA. 14+93.46 TO STA. 18+41.61



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3

–LX1– STA. 18+41.61 TO STA. 20+83.11

NOTES
PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, SIDEWALK, CONCRETE ISLANDS, AND TAPERS.

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8/17/99

PAVEMENT SCHEDULE	
C6	3″ S9.5C
D2	4″ I19.0C
E1	4″ B25.0C
J1	8″ ABC
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-3
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAIL — 9/25/2024

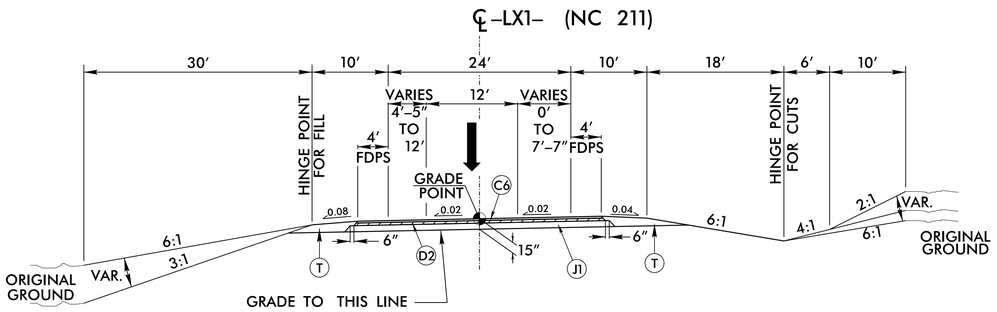
Signature: Mary Mays Yail

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO — 9/25/2024

DocuSigned by: Andrew D. Wargo

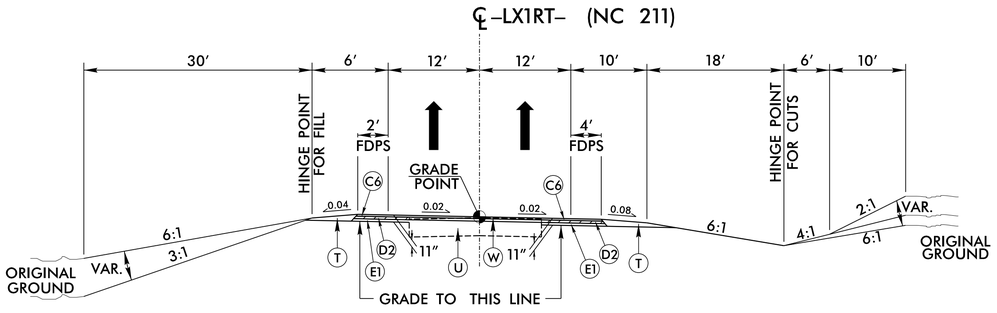
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4

–LX1– STA. 20+83.11 TO STA. 26+18.97



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5

–LX1RT– STA. 10+00.00 TO STA. 15+32.80

NOTES
PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, SIDEWALK, CONCRETE ISLANDS, AND TAPERS.

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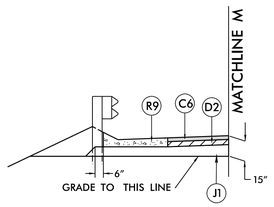
8/17/99

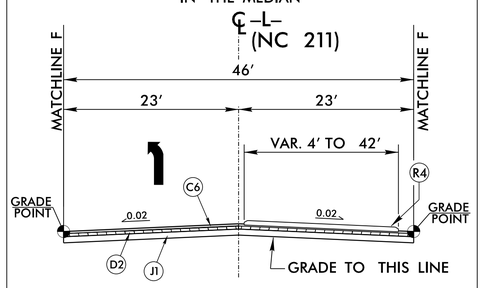
PAVEMENT SCHEDULE	
C6	3″ S9.5C
D2	4″ I19.0C
E1	4″ B25.0C
J1	8″ ABC
R4	5″ CONC. ISLAND
R9	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

INSET M
SHOULDER BERM GUTTER (SBG)
ON TOP OF SUBGRADE



USE TYPICAL SECTION NO. 6, 7, & 8
* SEE PLANS FOR LOCATION

INSET F
LEFT TURN LOCATIONS
IN THE MEDIAN



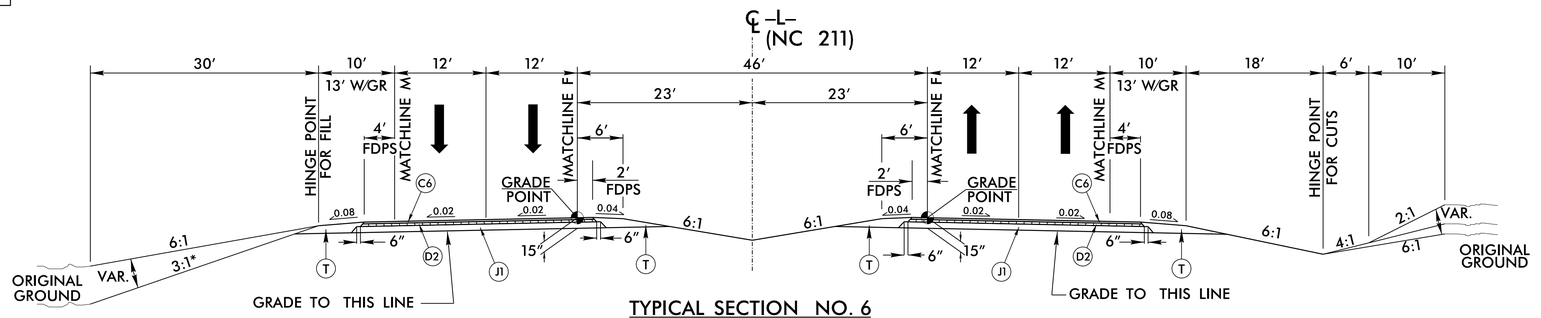
USE TYPICAL SECTION NO. 6, NO. 7, & NO. 8
* SEE PLANS FOR LOCATION

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU
8/17/2024
Mary E. Mays Yau

PAVEMENT ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER INDU P. WARGO
8/17/2024
Indu P. Wargo

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

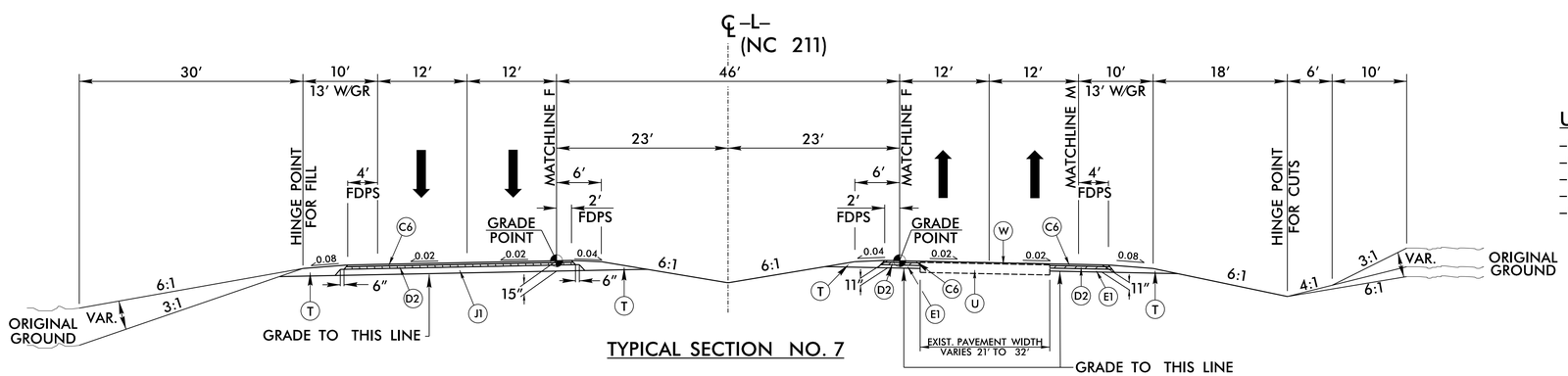


TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

–L– STA. 336+00.00 TO STA. 341+00.00
–L– STA. 347+50.00 TO STA. 356+00.00
–L– STA. 357+50.00 TO STA. 362+18.44
–L– STA. 367+00.00 TO STA. 370+50.00
–L– STA. 412+50.00 TO STA. 417+00.00
–L– STA. 433+50.00 TO STA. 434+50.00
–L– STA. 445+50.00 TO STA. 448+50.00
–L– STA. 477+50.00 TO STA. 481+00.00
–L– STA. 496+50.00 TO STA. 500+50.00
–L– STA. 508+50.00 TO STA. 511+00.00
–L– STA. 512+50.00 TO STA. 514+00.00
–L– STA. 515+50.00 TO STA. 519+00.00
–L– STA. 531+50.00 TO STA. 533+50.00
–L– STA. 551+50.00 TO STA. 554+00.00
–L– STA. 555+50.00 TO STA. 570+00.00
–L– STA. 581+00.00 TO STA. 591+00.00
–L– STA. 592+00.00 TO STA. 604+50.00
–L– STA. 607+00.00 TO STA. 632+50.00
–L– STA. 648+00.00 TO STA. 678+50.00
–L– STA. 715+50.00 TO STA. 719+50.00
–L– STA. 723+50.00 TO STA. 726+50.00
–L– STA. 728+00.00 TO STA. 732+50.00
–L– STA. 763+50.00 TO STA. 774+00.00

*NOTE: USE SEPARATE –L RT– GRADES IN THE FOLLOWING LOCATION:
–L– STA. 648+00 TO STA. 653+40



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

–L– STA. 328+00.00 TO STA. 336+00.00
–L– STA. 341+00.00 TO STA. 347+50.00
–L– STA. 356+00.00 TO STA. 357+50.00
–L– STA. 361+50.00 TO STA. 367+00.00
–L– STA. 370+50.00 TO STA. 377+35.09

NOTES
PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, SIDEWALK, CONCRETE ISLANDS, AND TAPERS.

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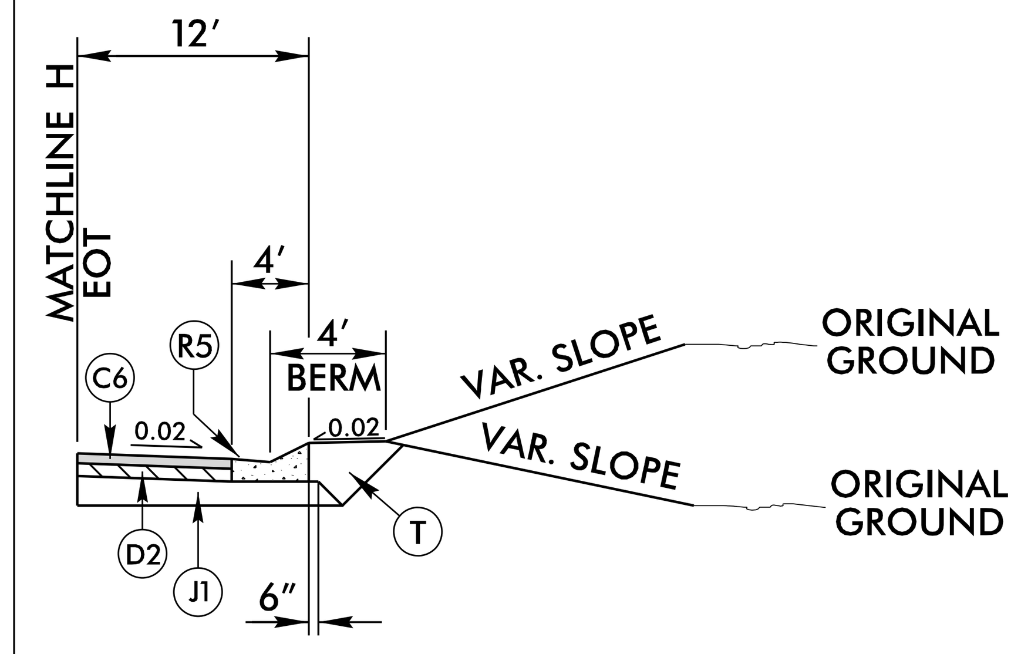
rrocker

PAVEMENT SCHEDULE	
C6	3" S9.5C
D2	4" I19.0C
E1	4" B25.0C
J1	8" ABC
R1	2'-6" C&G
R5	EXPRESSWAY GUTTER
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

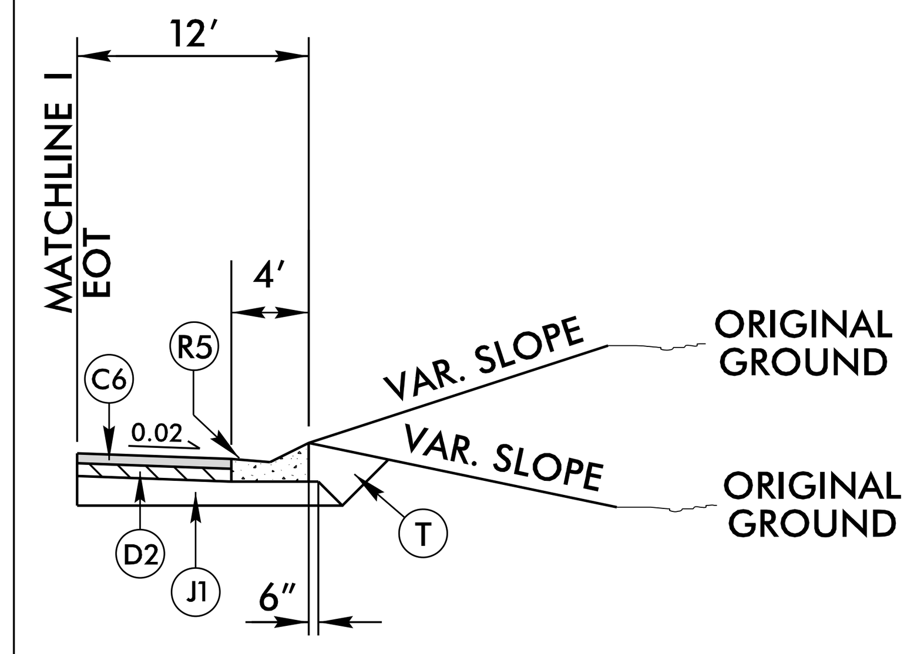
INSET H
EXPRESSWAY GUTTER WITH BERM



USE TYPICAL SECTION NO. 8
-L- STA. 482+53.89 TO 484+50.00 RT

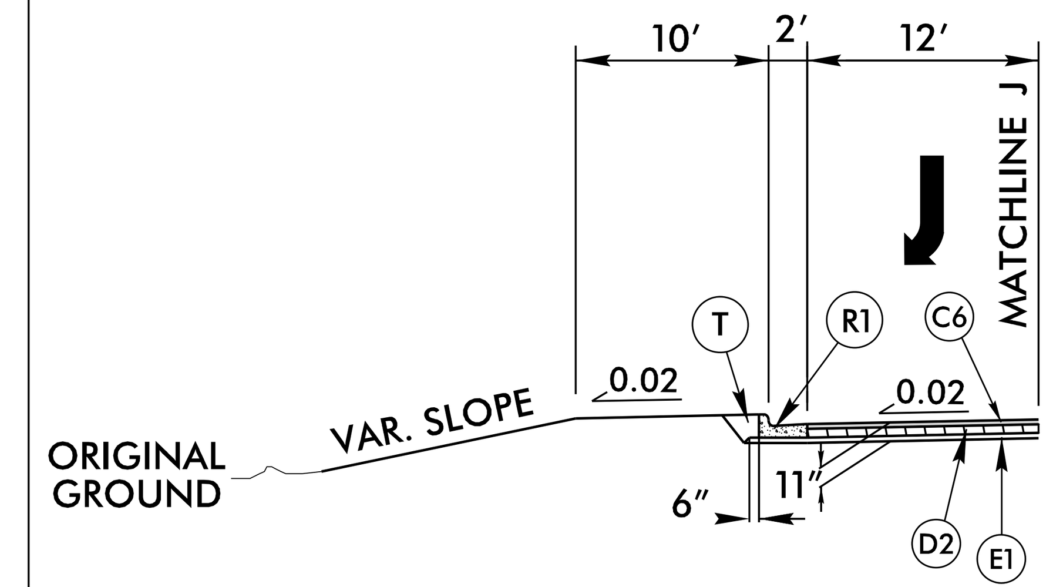
TRANSITION BETWEEN INSET H & I
-L- STA. 484+50.00 TO 485+00.00 RT

INSET I
EXPRESSWAY GUTTER



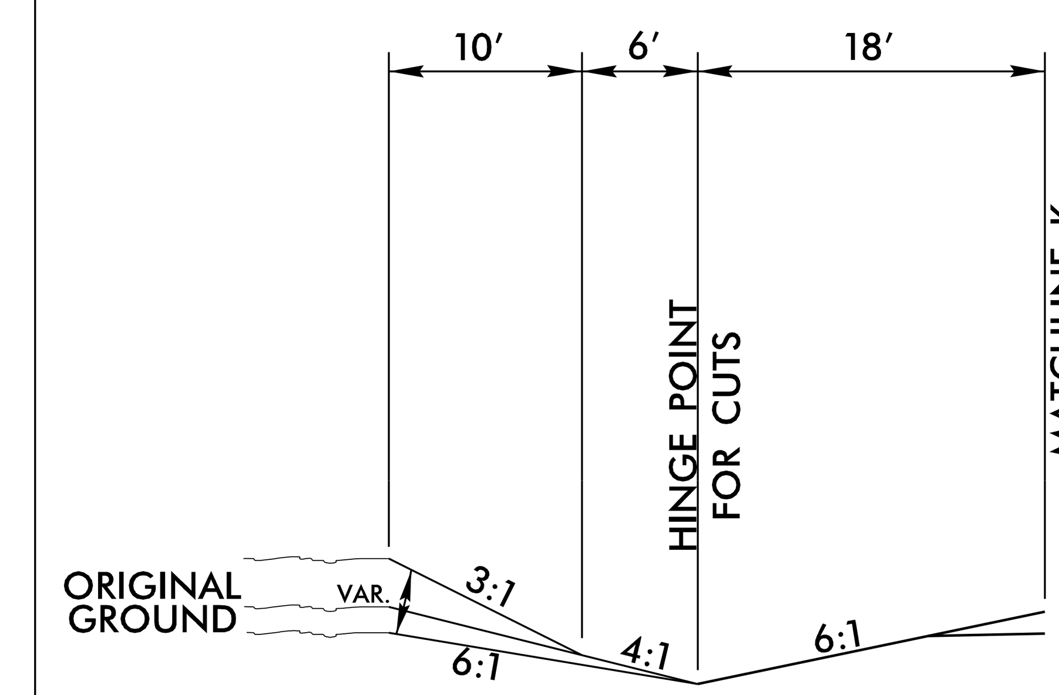
USE TYPICAL SECTION NO. 8
-L- STA. 485+00.00 TO 489+16.12 RT

INSET J
2'-6" CURB & GUTTER

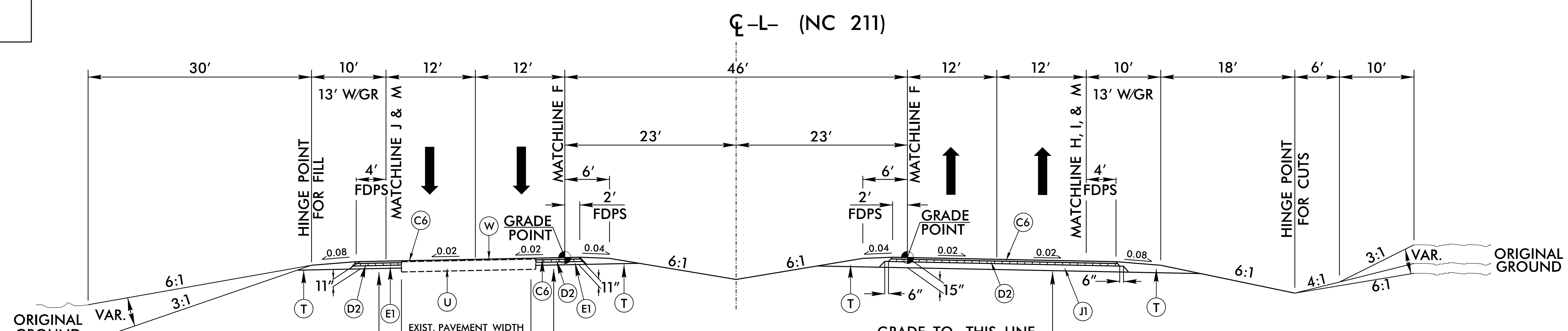


USE TYPICAL SECTION NO. 8
-L- STA. 805+86.40 TO 807+92.91 LT

INSET K
CUT DITCH



USE TYPICAL SECTION NO. 9
* SEE PLANS FOR LOCATION

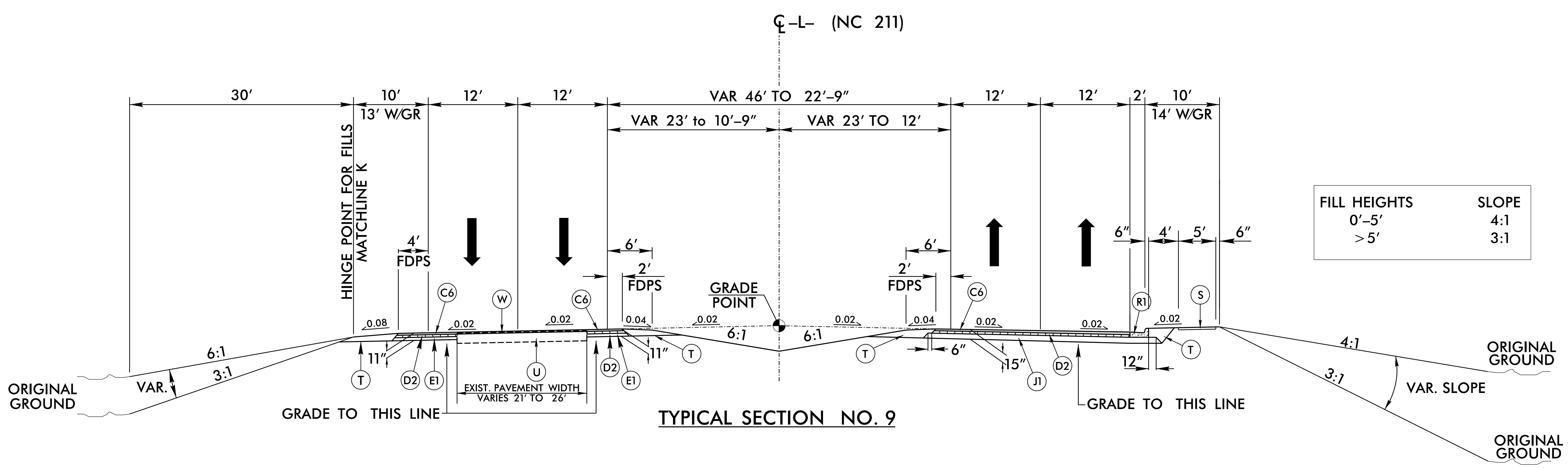


TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8

-L- STA. 377+35.09 TO STA. 412+50.00
-L- STA. 417+00.00 TO STA. 433+50.00
-L- STA. 434+50.00 TO STA. 445+50.00
-L- STA. 448+50.00 TO STA. 477+50.00
-L- STA. 481+00.00 TO STA. 496+50.00
-L- STA. 500+50.00 TO STA. 508+50.00
-L- STA. 511+00.00 TO STA. 512+50.00
-L- STA. 514+00.00 TO STA. 515+50.00
-L- STA. 519+00.00 TO STA. 531+50.00
-L- STA. 533+50.00 TO STA. 551+50.00
-L- STA. 554+00.00 TO STA. 555+50.00
-L- STA. 570+00.00 TO STA. 581+00.00
-L- STA. 591+00.00 TO STA. 592+00.00
-L- STA. 604+50.00 TO STA. 607+00.00
*-L- STA. 632+50.00 TO STA. 648+00.00
*-L- STA. 678+50.00 TO STA. 715+50.00
-L- STA. 719+50.00 TO STA. 723+50.00
-L- STA. 726+50.00 TO STA. 728+00.00
-L- STA. 732+50.00 TO STA. 763+50.00
-L- STA. 774+00.00 TO STA. 811+00.00

*NOTE: USE SEPARATE -L_RT- GRADES IN THE FOLLOWING LOCATION:
-L- STA. 692+95.00 TO STA. 707+50.00
-L-STA. 645+50.00 TO STA. 648+00.00



FILL HEIGHTS	SLOPE
0'-5'	4:1
>5'	3:1

TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9
-L- STA. 811+00.00 TO STA. 817+59.00

NOTES
PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, SIDEWALK, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL 8/28/2024
NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO 8/28/2024

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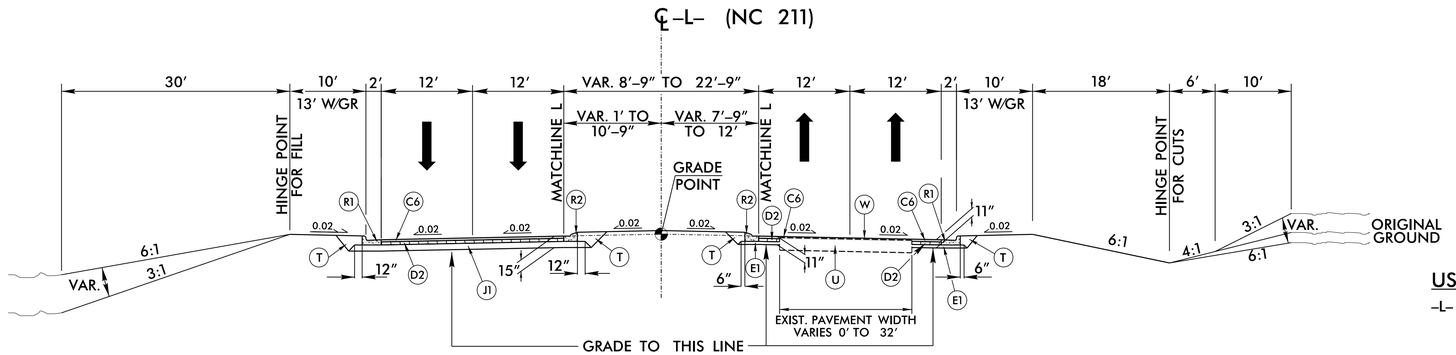
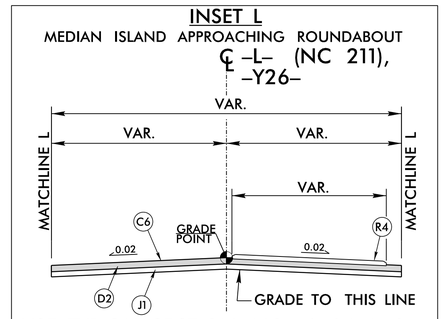
8/17/99

PAVEMENT SCHEDULE	
A1	12″ 4x4 WIRE MESH
C6	3″ S9.5C
D2	4″ I19.0C
E1	4″ B25.0C
J1	8″ ABC
R1	2′-6″ C&G
R2	1′-6″ C&G
R4	5″ CONC. ISLAND
R5	EXPRESSWAY GUTTER
R6	4″ CONC. COVER
SM	SELECT MATERIAL
S	4″ CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING



TYPICAL SECTION NO. 10

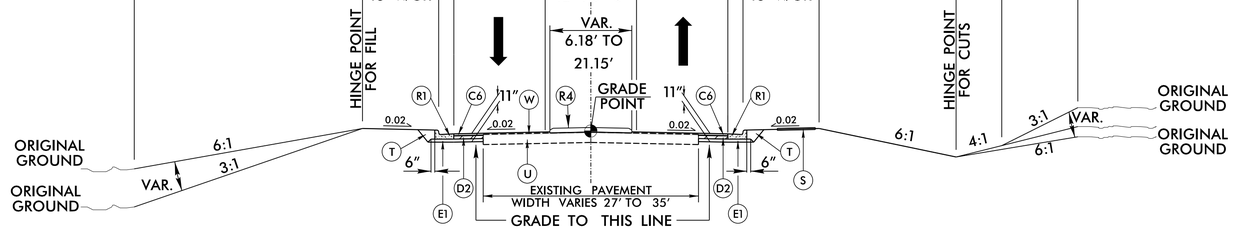


USE TYPICAL SECTION NO. 10

–L– STA. 817+59.00 TO STA. 823+46.17

USE TYPICAL SECTION NO. 10, 34, & 35

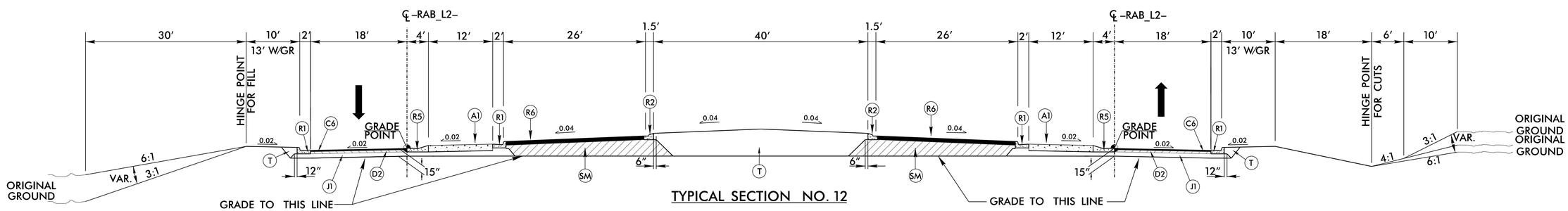
–L– STA. 821+94.55 TO 823+50.55
–Y26– STA. 12+00.00 TO 16+42.00



TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11

–L2B– STA. 825+05.18 TO STA. 835+05.00



TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12

–RAB_L2– STA 10+00.00 TO STA 14+02.12

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU
8/28/2024
Signature: Mary Mays Yau
Date: 8/28/2024

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO
8/28/2024
Document not considered final unless all signatures completed
Andrew D. Wargo
Date: 8/28/2024

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jcrocker

8/17/99

PAVEMENT SCHEDULE	
C2	2.5" S9.5B
E1	4" B25.0C
K	12" CLASS IV
N	GEOTEXTILE
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU 10/21/2024

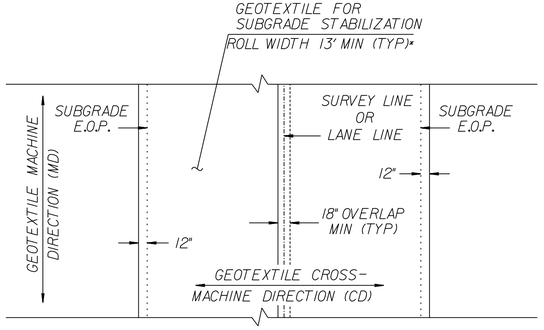
Signed by: Mary Mays Yau

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO 10/21/2024

Docusigned by: Andrew D. Wargo

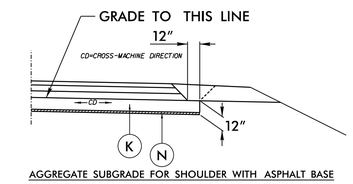
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



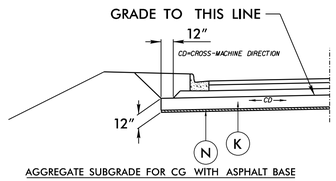
GEOTEXTILE FOR SUBGRADE STABILIZATION PLACEMENT (PLAN VIEW)

(100% COVERAGE REQUIRED)

*INSTALL GEOTEXTILE FOR SUBGRADE STABILIZATION WITH MINIMUM ROLL WIDTH UNDER ROADWAY EDGES AND SHOULDERS ADJACENT TO FILL SLOPES



AGGREGATE SUBGRADE FOR SHOULDER WITH ASPHALT BASE

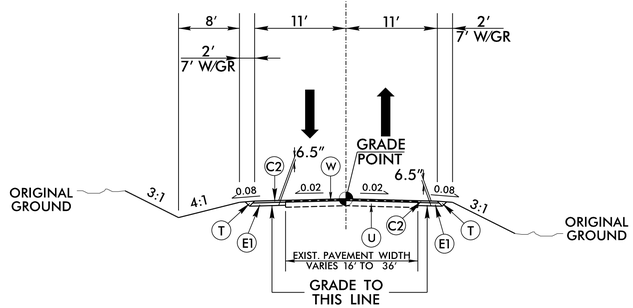


AGGREGATE SUBGRADE FOR CG WITH ASPHALT BASE

DETAIL FOR SHALLOW UNDERCUT

–L– STA. 355+75.00 TO STA. 356+25.00
–L– STA. 379+75.00 TO STA. 382+25.00
–L– STA. 439+75.00 TO STA. 442+25.00
–L– STA. 647+75.00 TO STA. 648+75.00
–L– STA. 695+75.00 TO STA. 698+25.00
–L– STA. 726+75.00 TO STA. 728+25.00
–L– STA. 732+75.00 TO STA. 737+25.00
–L– STA. 742+75.00 TO STA. 745+25.00
–L– STA. 756+25.00 TO STA. 760+25.00
–L– STA. 778+25.00 TO STA. 780+25.00
–L– STA. 810+75.00 TO STA. 821+25.00
–L2B– STA. 827+25.00 TO STA. 830+25.00
–Y17– STA. 10+75.00 TO STA. 13+25.00
–Y23– STA. 10+75.00 TO STA. 12+25.00
–Y24– STA. 12+50.00 TO STA. 14+25.00
–Y26– STA. 22+25.00 TO STA. 25+50.00
–Y26A– STA. 12+25.00 TO STA. 14+25.00
–Y27– STA. 10+25.00 TO STA. 12+25.00

℄ –Y10–, –Y18–, –Y21–



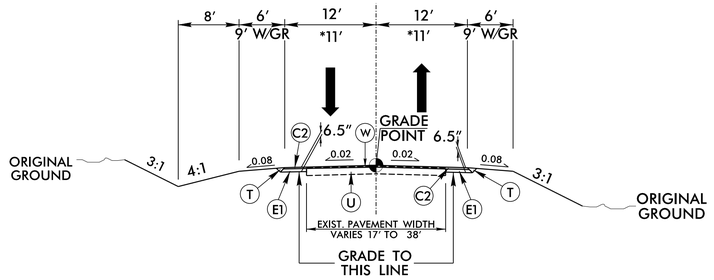
TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13

–Y10– STA. 13+75.00 TO STA. 16+11.79
–Y10– STA. 17+30.42 TO STA. 19+75.00
–Y18– STA. 12+50.00 TO STA. 15+17.08
–Y21– STA. 10+51.78 TO STA. 12+50.00

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y12–, –Y15–, –Y19–, –Y20–



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14

*–Y12– STA. 10+59.00 TO STA. 12+00.00
*–Y15– STA. 12+00.00 TO STA. 13+25.00
–Y19– STA. 11+00.00 TO STA. 12+25.00
*–Y20– STA. 13+10.00 TO STA. 15+29.36

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

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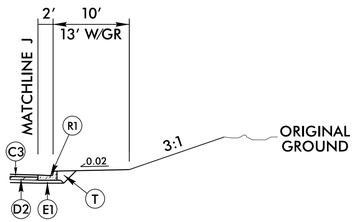
ppenderson

8/17/99

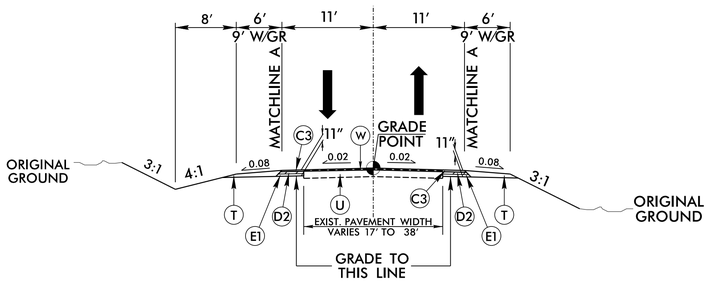
PAVEMENT SCHEDULE	
C2	2.5″ S9.5B
C3	3″ S9.5B
D2	4″ I19.0C
E1	4″ B25.0C
E3	5.5″ B25.0C
R1	2′-6″ C&G
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

INSET A
2′–6″ CURB & GUTTER



USE TYPICAL SECTION NO. 15
* SEE PLANS FOR LOCATION

℄ –Y17–

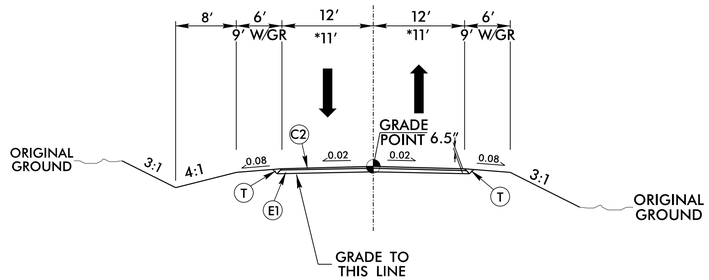


TYPICAL SECTION NO. 15

USE TYPICAL SECTION NO. 15
–Y17– STA. 11+75.00 TO STA. 13+00.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y15–, –Y19–

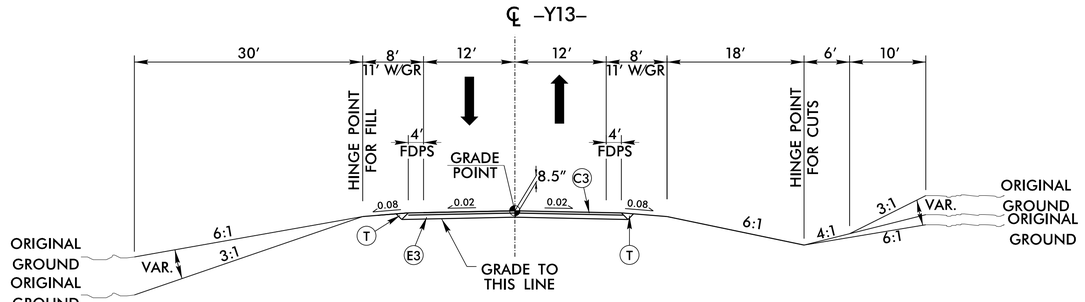


TYPICAL SECTION NO. 16

USE TYPICAL SECTION NO. 16
*–Y15– STA. 13+25.00 TO STA. 15+09.60
–Y19– STA. 12+25.00 TO STA. 14+89.35

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y13–

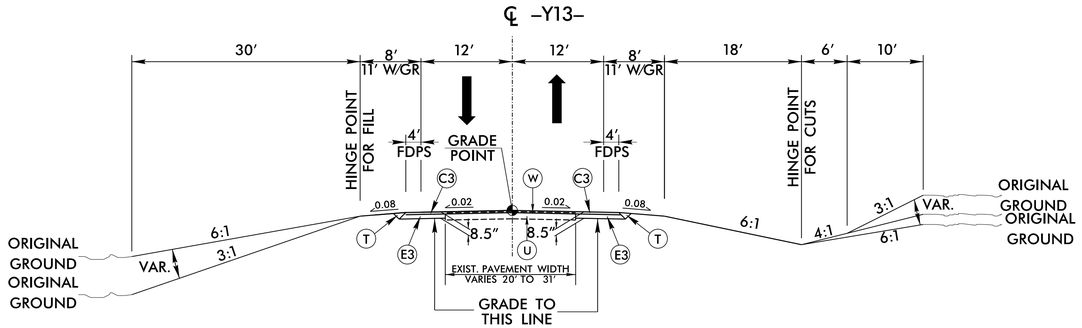


TYPICAL SECTION NO. 17

USE TYPICAL SECTION NO. 17
–Y13– STA. 10+48.66 TO STA. 14+48.20

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y13–



TYPICAL SECTION NO. 18

USE TYPICAL SECTION NO. 18
–Y13– STA. 14+48.20 TO STA. 18+90.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

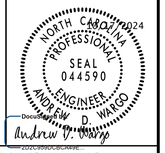
NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

PAVEMENT ENGINEER



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 040878, MARY E. MAYS YAHL, 8/28/2024

PAVEMENT ENGINEER — SEAL 044590, ANDREW D. WARGO

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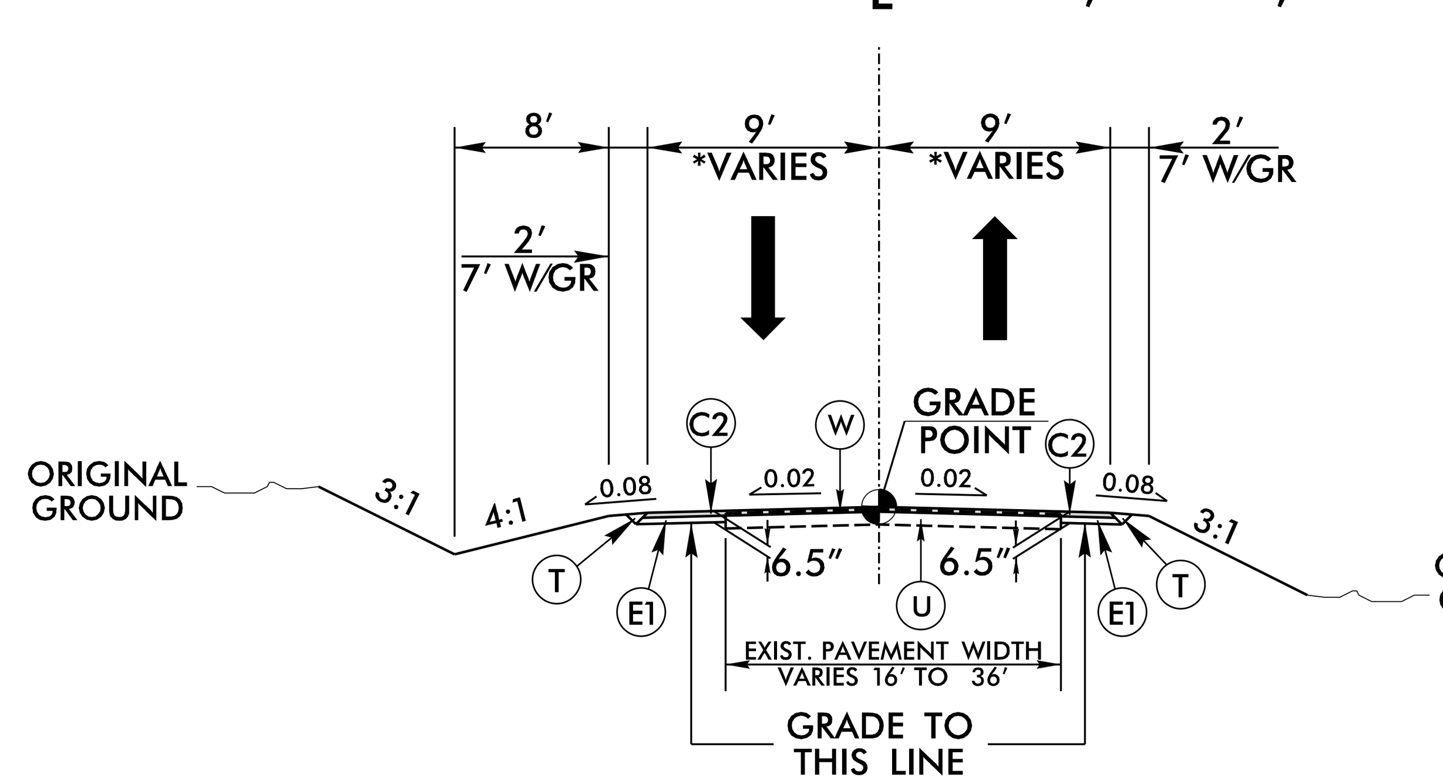
PAVEMENT SCHEDULE	
C2	2.5" S9.5B
C3	3" S9.5B
C6	3" S9.5C
D2	4" I19.0C
E1	4" B25.0C
J1	8" ABC
R1	2'-6" C&G
R9	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

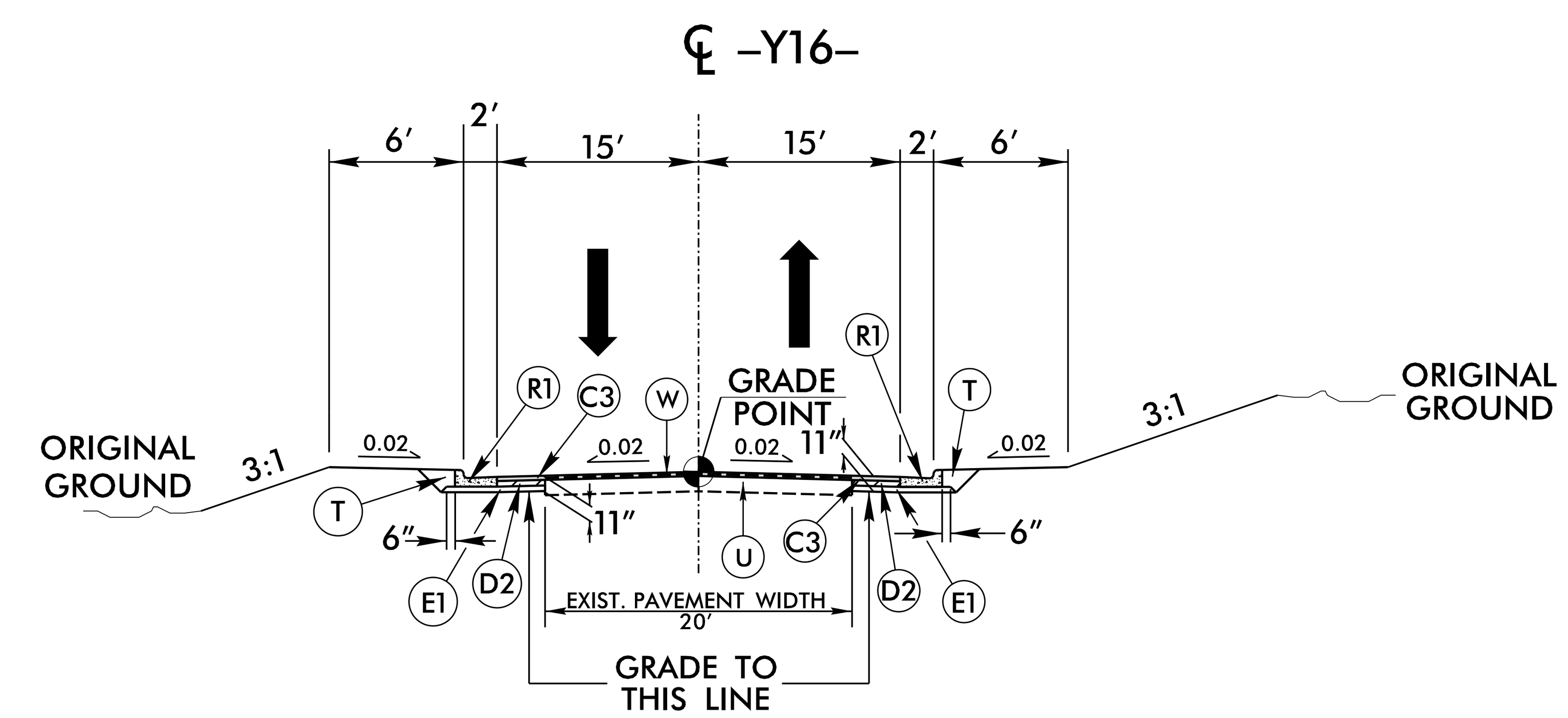


TYPICAL SECTION NO. 19

USE TYPICAL SECTION NO. 19

-Y11A- STA. 10+75.00 TO STA. 12+18.70
-Y11B- STA. 10+47.00 TO STA. 13+00.00
-Y11C- STA. 10+40.00 TO STA. 11+85.66
-Y23- STA. 10+59.48 TO STA. 12+00.00
*-SR1- STA. 15+00.00 TO STA 17+65.85

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

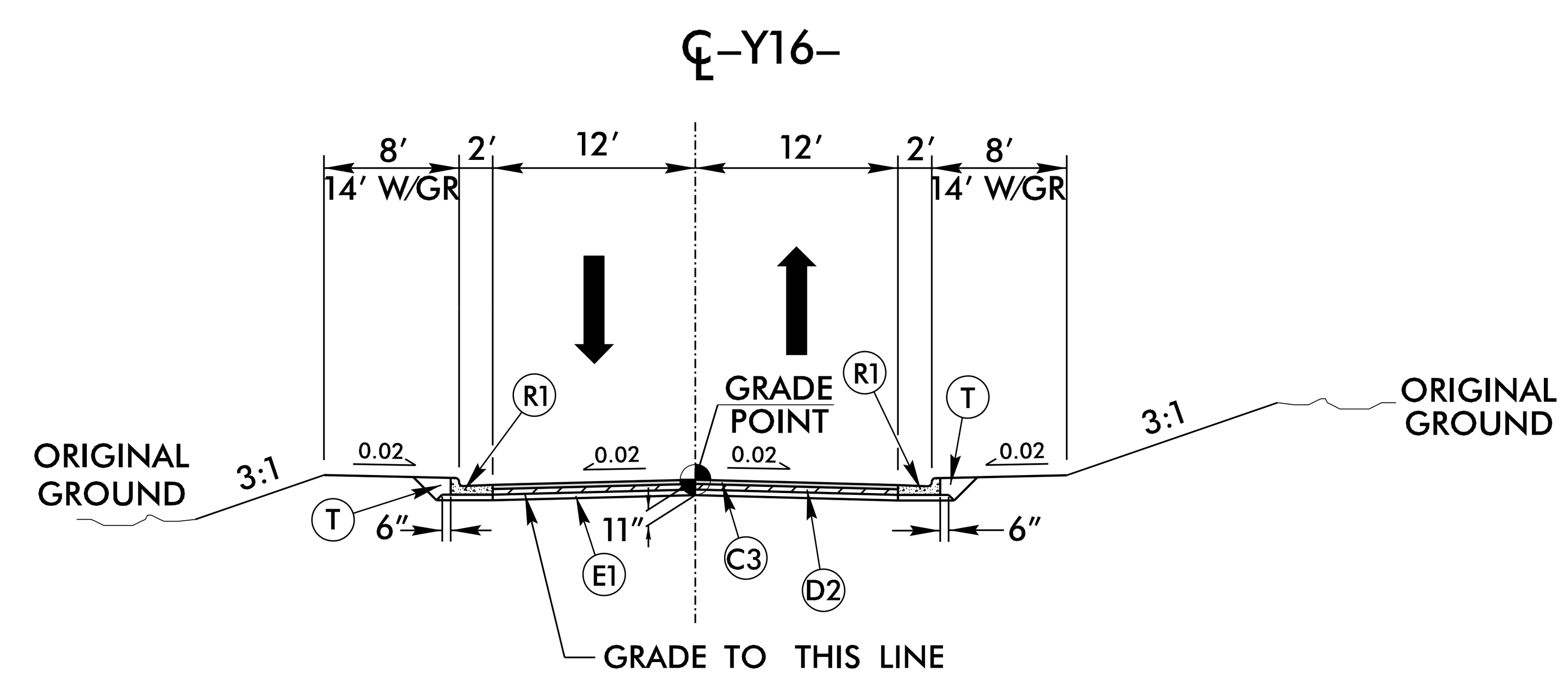


TYPICAL SECTION NO. 20

USE TYPICAL SECTION NO. 20

-Y16- STA. 14+25.00 TO STA. 15+75.00

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



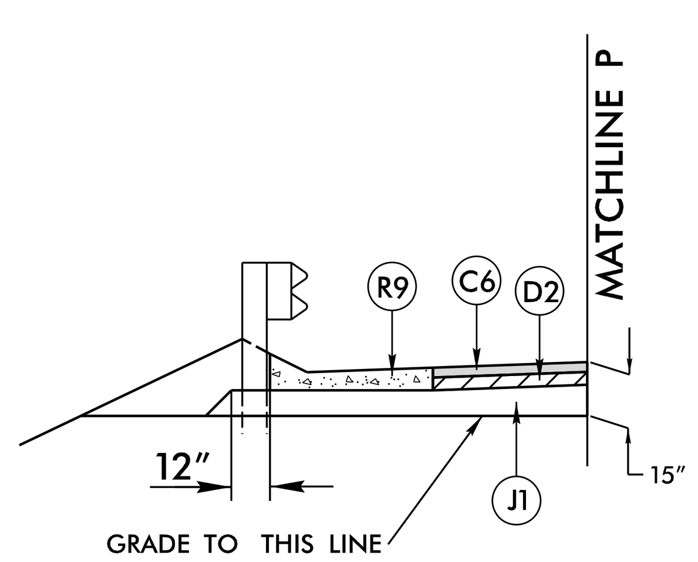
TYPICAL SECTION NO. 21

USE TYPICAL SECTION NO. 21

-Y16- STA. 15+75.00 TO STA. 18+71.79
NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

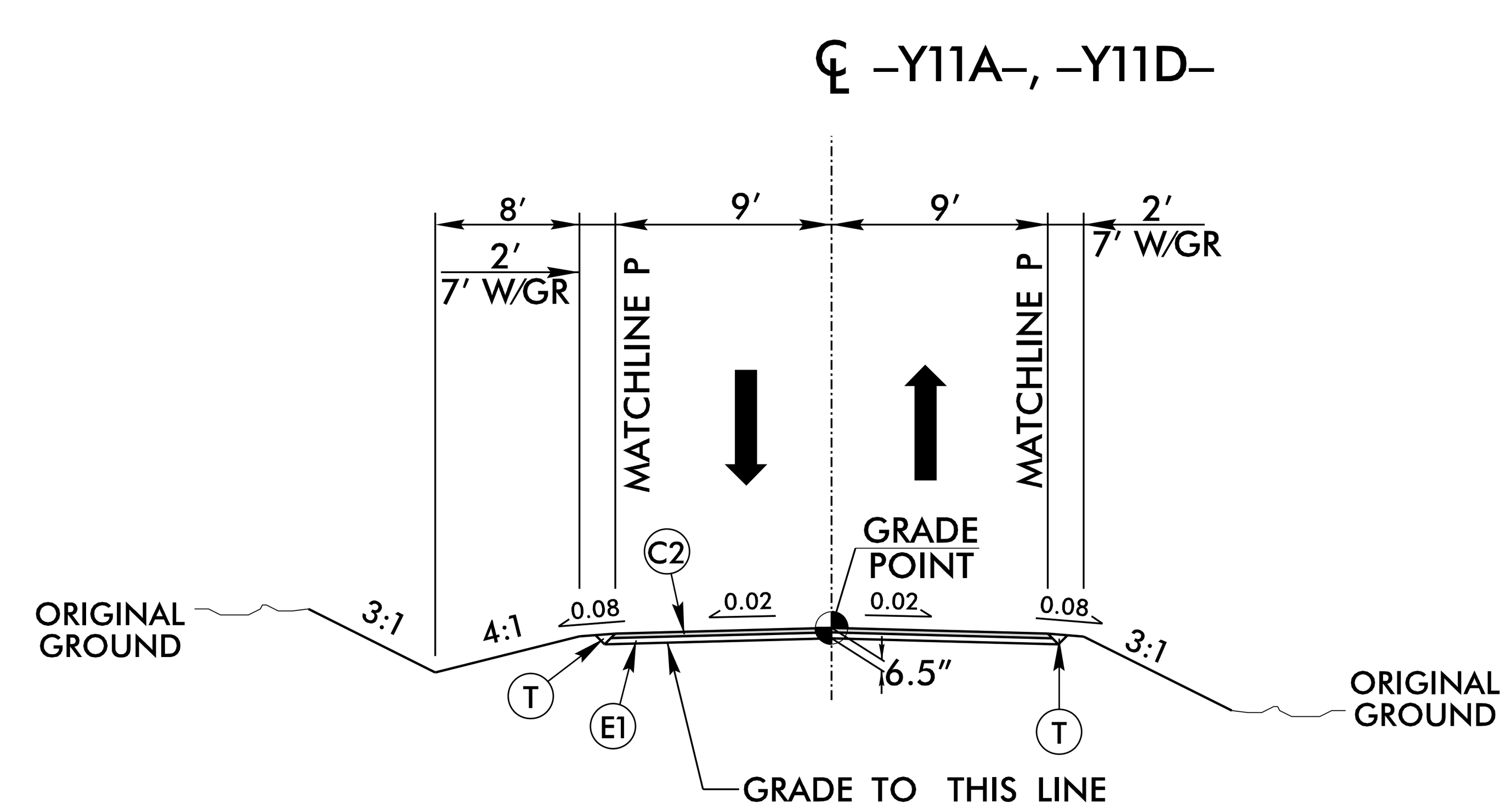
INSET P

SHOULDER BERM GUTTER (SBG) ON TOP OF SUBGRADE



USE TYPICAL SECTION NO. 22

-Y11D- STA. 12+47.06 TO 11+24.96 RT



TYPICAL SECTION NO. 22

USE TYPICAL SECTION NO. 22

-Y11A- STA. 10+50.00 TO STA. 10+75.00
-Y11D- STA. 10+25.00 TO STA. 15+25.90
NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

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8/17/99

PAVEMENT SCHEDULE	
C3	3″ S9.5B
C6	3″ S9.5C
D2	4″ I19.0C
E1	4″ B25.0C
E3	5.5″ B25.0C
R1	2′-6″ C&G
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-10
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU 10/21/2024

Signature: Mary Mays Yau

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO 10/21/2024

Docusigned by: Andrew D. Wargo

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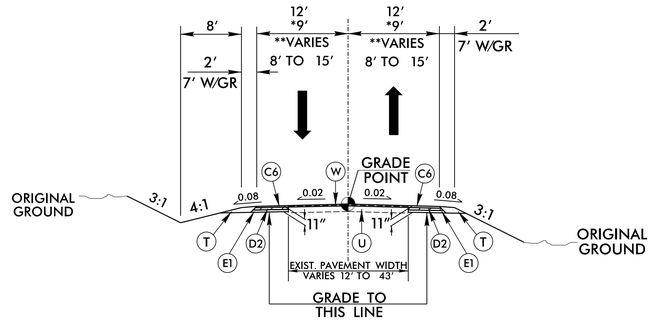
℄ –Y11–, –Y11E–, –Y12A–, –Y20A–



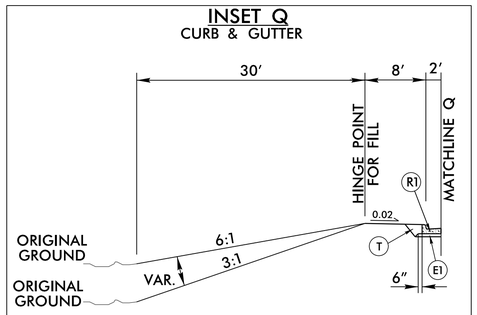
TYPICAL SECTION NO. 23

USE TYPICAL SECTION NO. 23

–Y11– STA. 10+48.18 TO STA. 12+20.00
*–Y11E– STA. 10+47.44 TO STA. 12+75.00
**–Y12A– STA. 11+50.00 to STA. 12+25.00
–Y20A– STA. 10+47.00 TO STA. 11+25.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

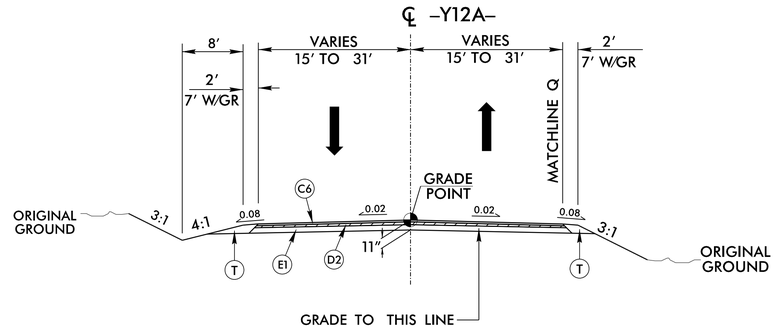
INSET Q
CURB & GUTTER



USE TYPICAL SECTION NO. 24

–Y12A– STA. 16+10.00 TO STA. 17+05.00 RT

℄ –Y12A–



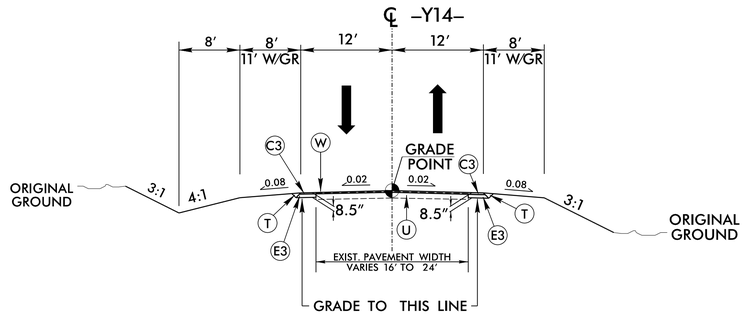
TYPICAL SECTION NO. 24

USE TYPICAL SECTION NO. 24

–Y12A– STA. 10+46.49 TO STA. 11+50.00
–Y12A– STA. 16+15.00 TO STA. 17+70.89

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y14–



TYPICAL SECTION NO. 25

USE TYPICAL SECTION NO. 25

–Y14– STA. 11+20.00 TO STA. 12+25.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

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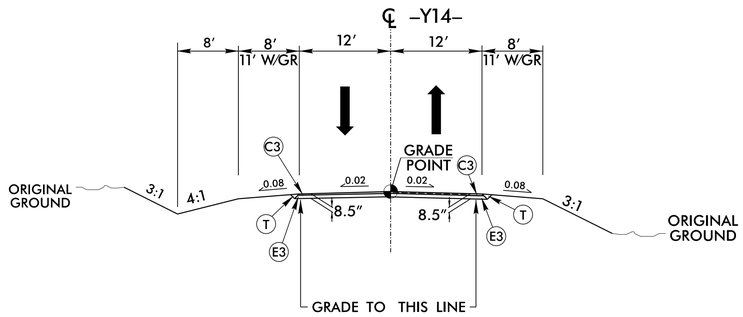
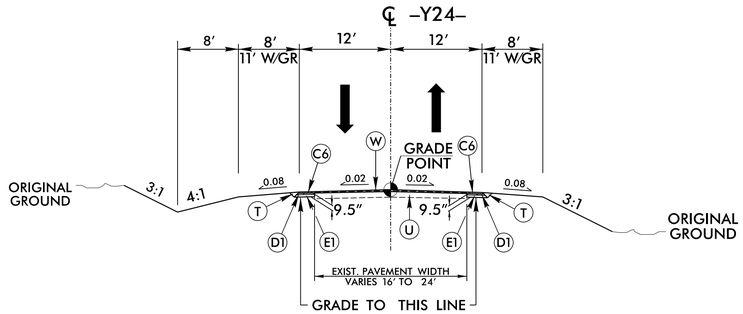
PAVEMENT SCHEDULE	
C2	2.5" S9.5B
C3	3" S9.5B
C6	3" S9.5C
D1	2.5" I19.0C
E1	4" B25.0C
E3	5.5" B25.0C
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING



TYPICAL SECTION NO. 26

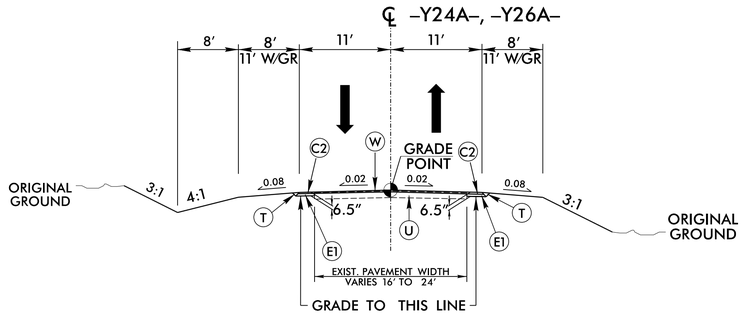
USE TYPICAL SECTION NO. 26
–Y14– STA. 12+25.00 TO STA. 15+63.31



TYPICAL SECTION NO. 27

USE TYPICAL SECTION NO. 27
–Y24– STA. 12+20.00 TO STA. 13+75.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



TYPICAL SECTION NO. 28

USE TYPICAL SECTION NO. 28
–Y24A– STA. 10+47.00 TO STA. 12+75.00
–Y26A– STA. 12+50.00 TO STA. 15+25.22

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-11
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU
10/23/2024
Signature: Mary Mays Yau

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO
10/23/2024
Document not considered final unless all signatures completed
Andrew D. Wargo

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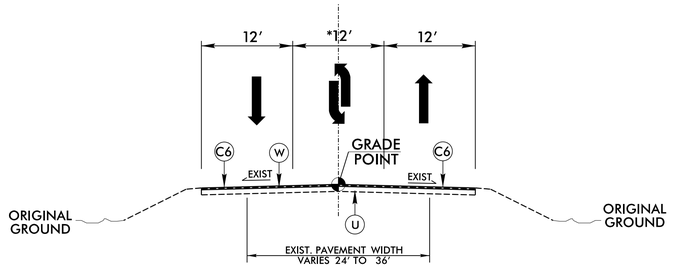
jgroeker

8/17/99

PAVEMENT SCHEDULE	
C2	2.5″ S9.5B
C3	3″ S9.5B
C6	3″ S9.5C
D1	2.5″ I19.0C
D2	4″ I19.0C
E1	4″ B25.0C
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

℄ –Y20A–, –Y23–, –Y27–

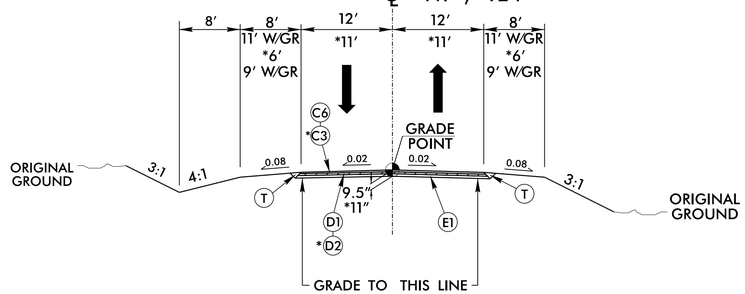


TYPICAL SECTION NO. 29

USE TYPICAL SECTION NO. 29
–Y20A– STA. 11+34.57 TO STA. 11+59.57
–Y23– STA. 12+37.00 TO STA. 12+87.00
*–Y27– STA. 9+50.00 TO STA. 10+50.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y17–, –Y24–

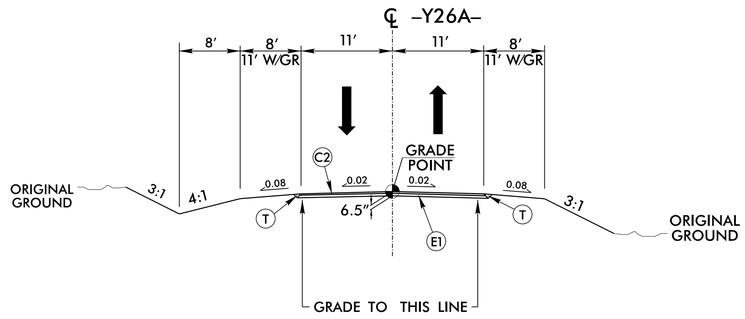


TYPICAL SECTION NO. 30

USE TYPICAL SECTION NO. 30
*–Y17– STA. 10+59.03 TO STA. 11+75.00
–Y24– STA. 13+75.00 TO STA. 15+24.06

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

℄ –Y26A–



TYPICAL SECTION NO. 31

USE TYPICAL SECTION NO. 31
–Y26A– STA. 10+29.60 TO STA. 12+50.00

NOTE: LANE WIDTH INCREASES TO 15′ FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

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SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-12
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL
10/23/2024
Signed by: Mary Mays Yahl
DocuSigned by: 10/23/2024

PAVEMENT ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO
10/23/2024
DocuSigned by: Andrew D. Wargo

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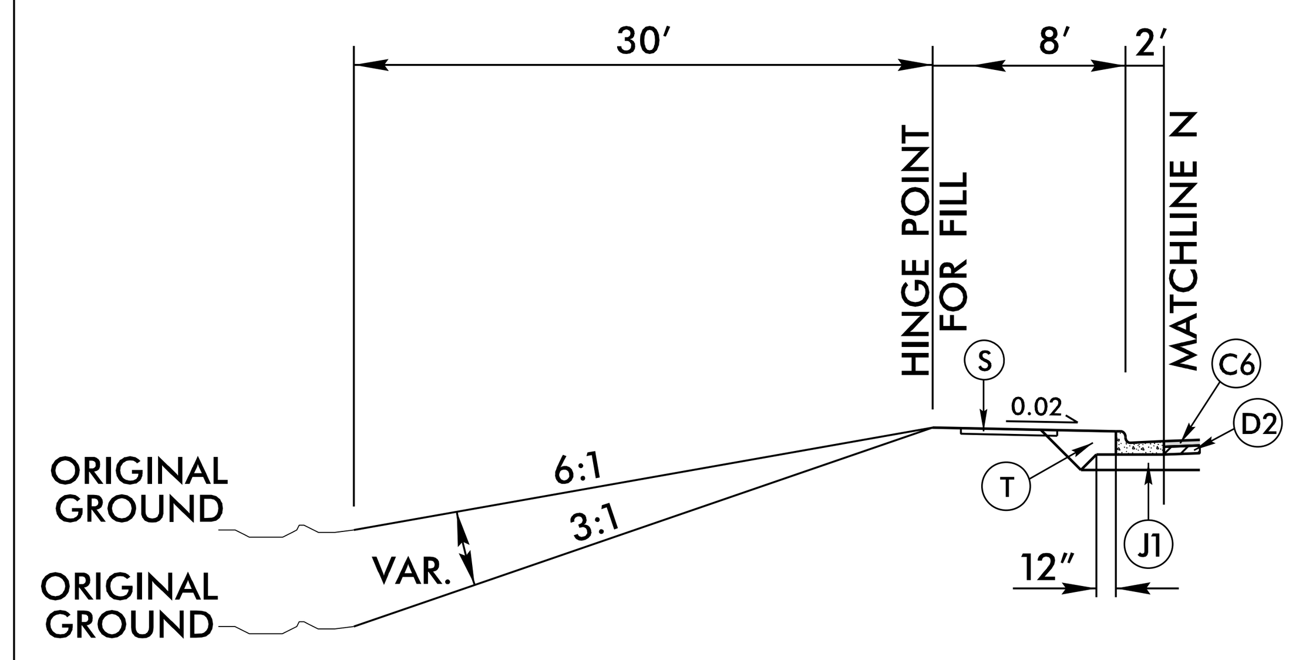
PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C6	3" S9.5C
D1	2.5" I19.0C
D2	4" I19.0C
E1	4" B25.0C
J1	8" ABC
R1	2'-6" C&G
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

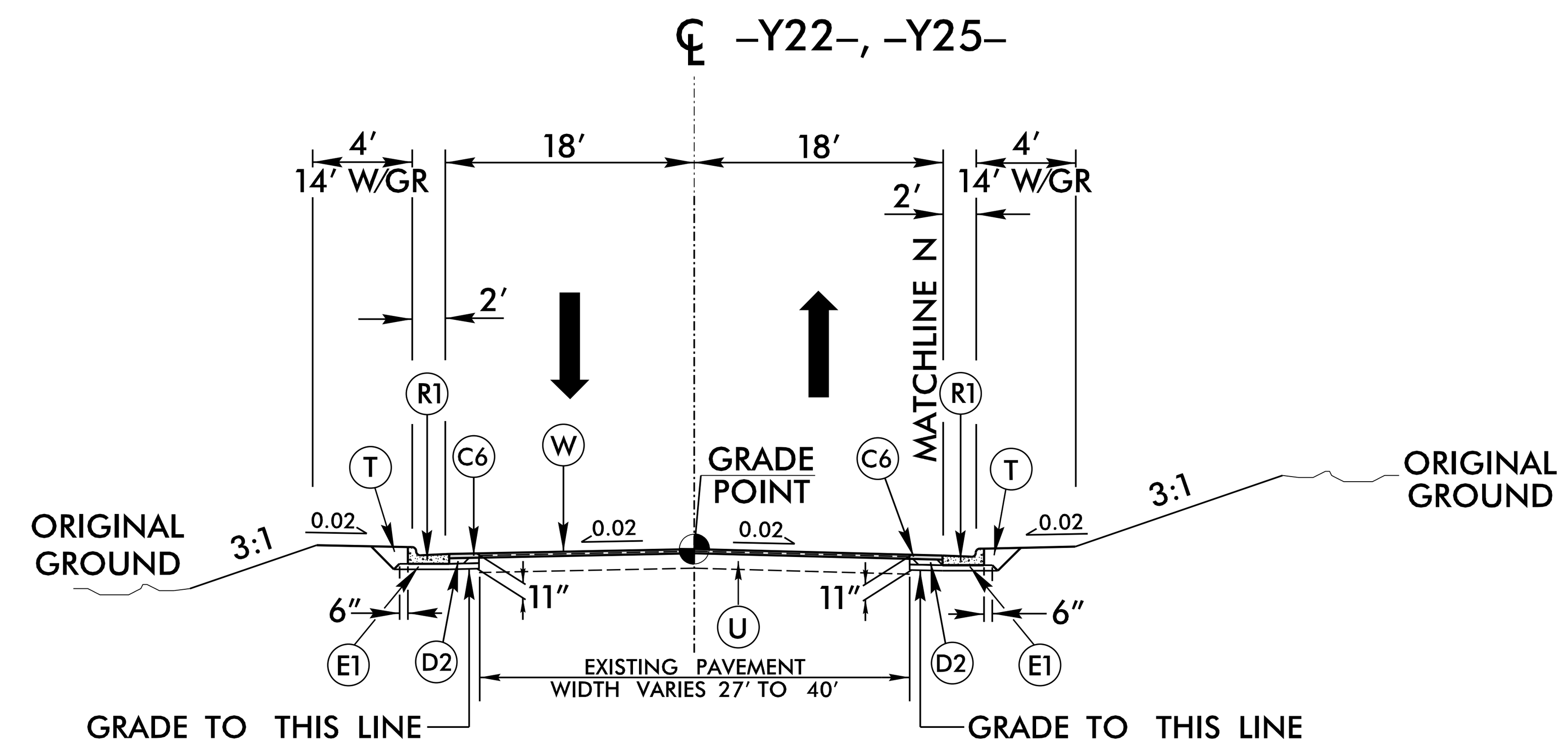
INSET N

CURB & GUTTER WITH SIDEWALK



USE TYPICAL SECTION NO. 32

-Y25- STA. 14+80.65 TO 15+25.89 RT

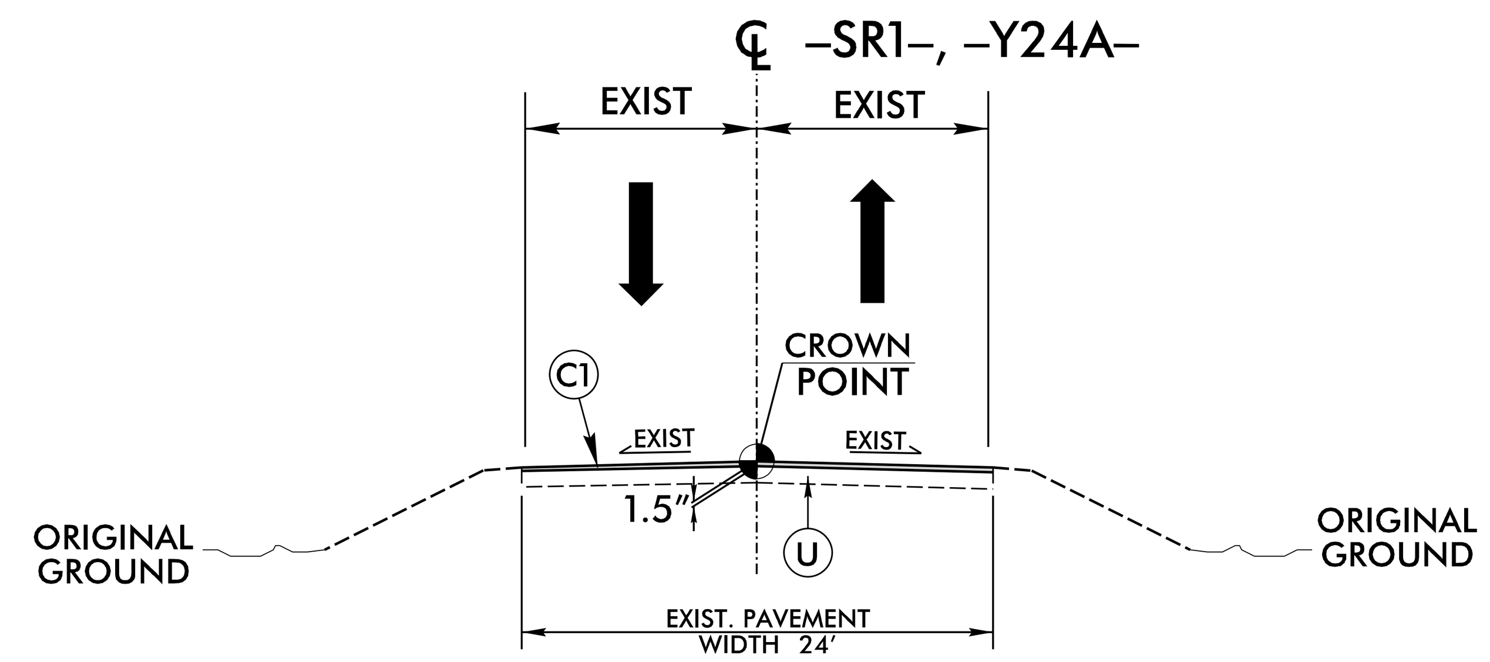


TYPICAL SECTION NO. 32

USE TYPICAL SECTION NO. 32

-Y22- STA. 10+15.00 TO STA. 11+98.92
-Y25- STA. 13+65.00 TO STA. 15+51.93

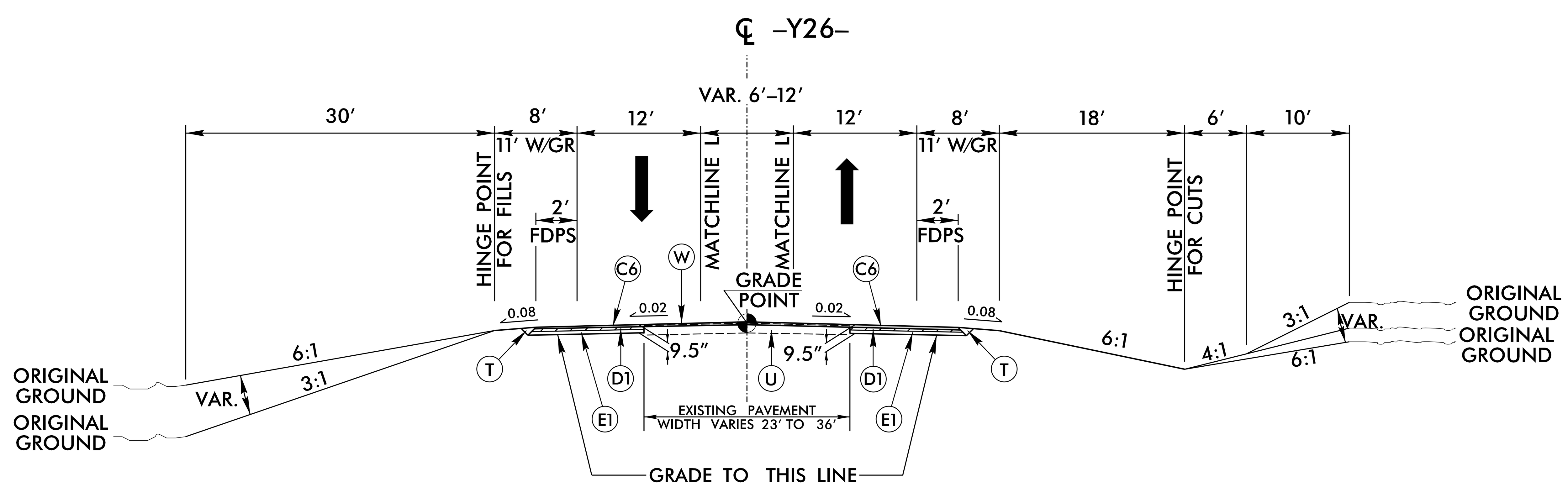
NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



TYPICAL SECTION NO. 33

USE TYPICAL SECTION NO. 33

-SR1- STA. 10+75.00 TO STA. 15+00.00
-Y24A- STA. 12+75.00 TO STA. 16+00.00

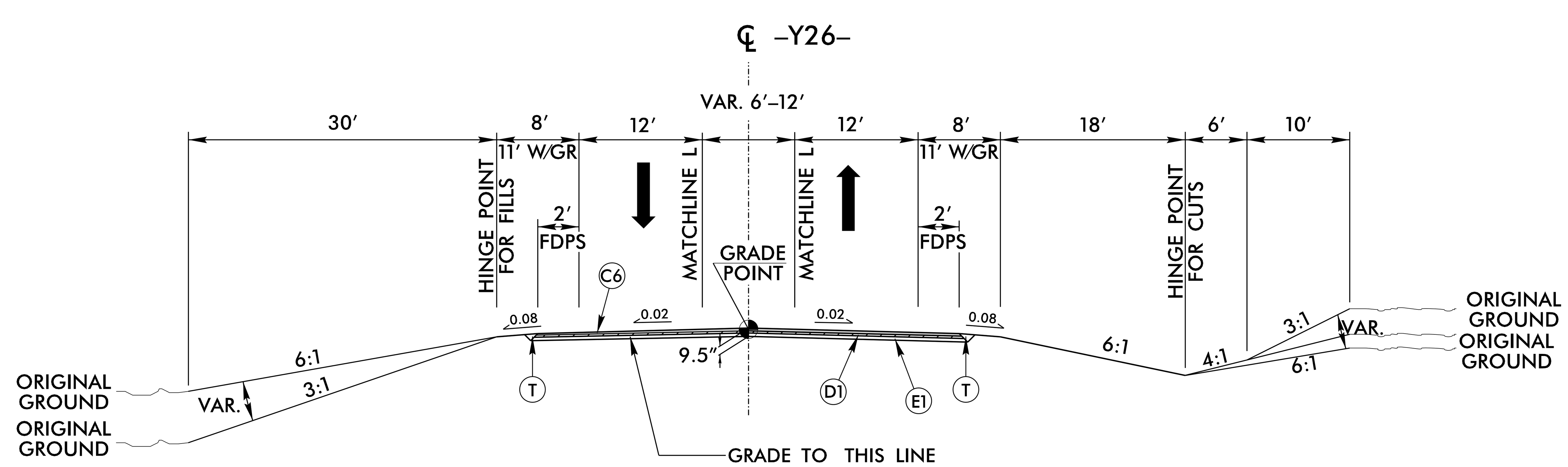


TYPICAL SECTION NO. 34

USE TYPICAL SECTION NO. 34

-Y26- STA. 12+00.00 TO STA. 14+75.00
-Y26- STA. 22+50.00 TO STA. 25+50.00

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



TYPICAL SECTION NO. 35

USE TYPICAL SECTION NO. 35

-Y26- STA. 14+75.00 TO STA. 22+50.00

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040878 MARY E. MAYS YAHL 10/21/2024	NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 044590 ANDREW D. WARGO 10/17/2024

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	PAVEMENT SCHEDULE
C2	2.5" S9.5B
C6	3" S9.5C
D1	2.5" I19.0C
D2	4" I19.0C
E1	4" B25.0C
J1	8" ABC
P	PRIME COAT
R1	2'-6" C&G
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL 10/21/2024

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO 10/21/2024

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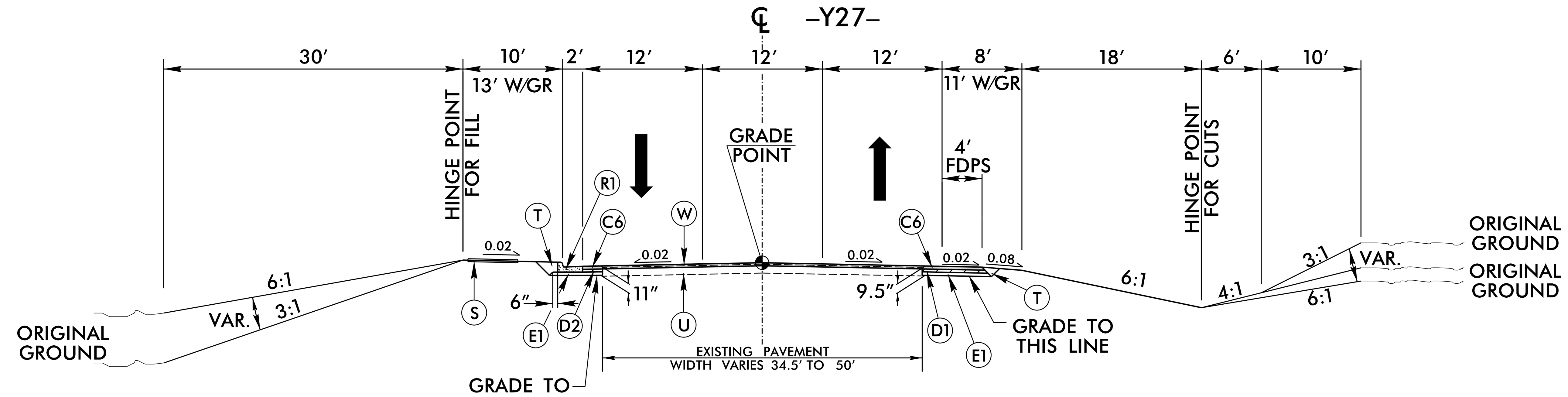
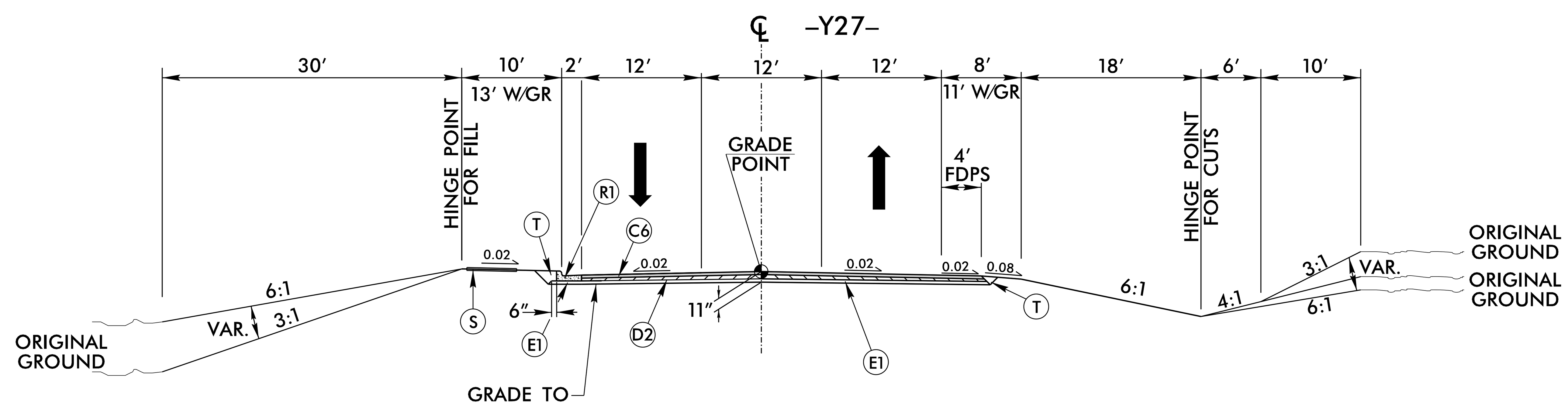


TYPICAL SECTION NO. 36

USE TYPICAL SECTION NO. 36
-Y27- STA. 10+50.00 TO STA. 11+75.00

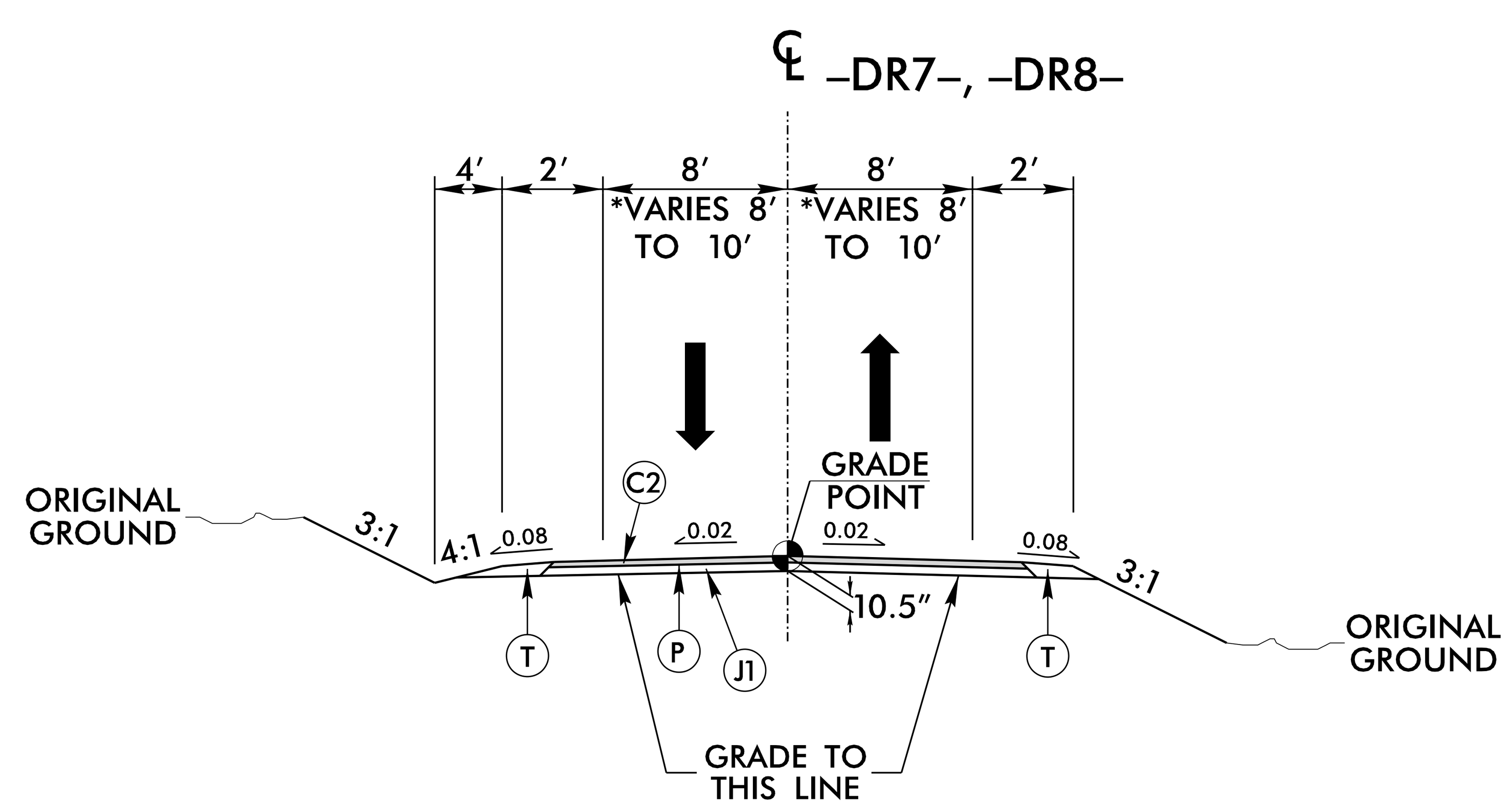
NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



TYPICAL SECTION NO. 37

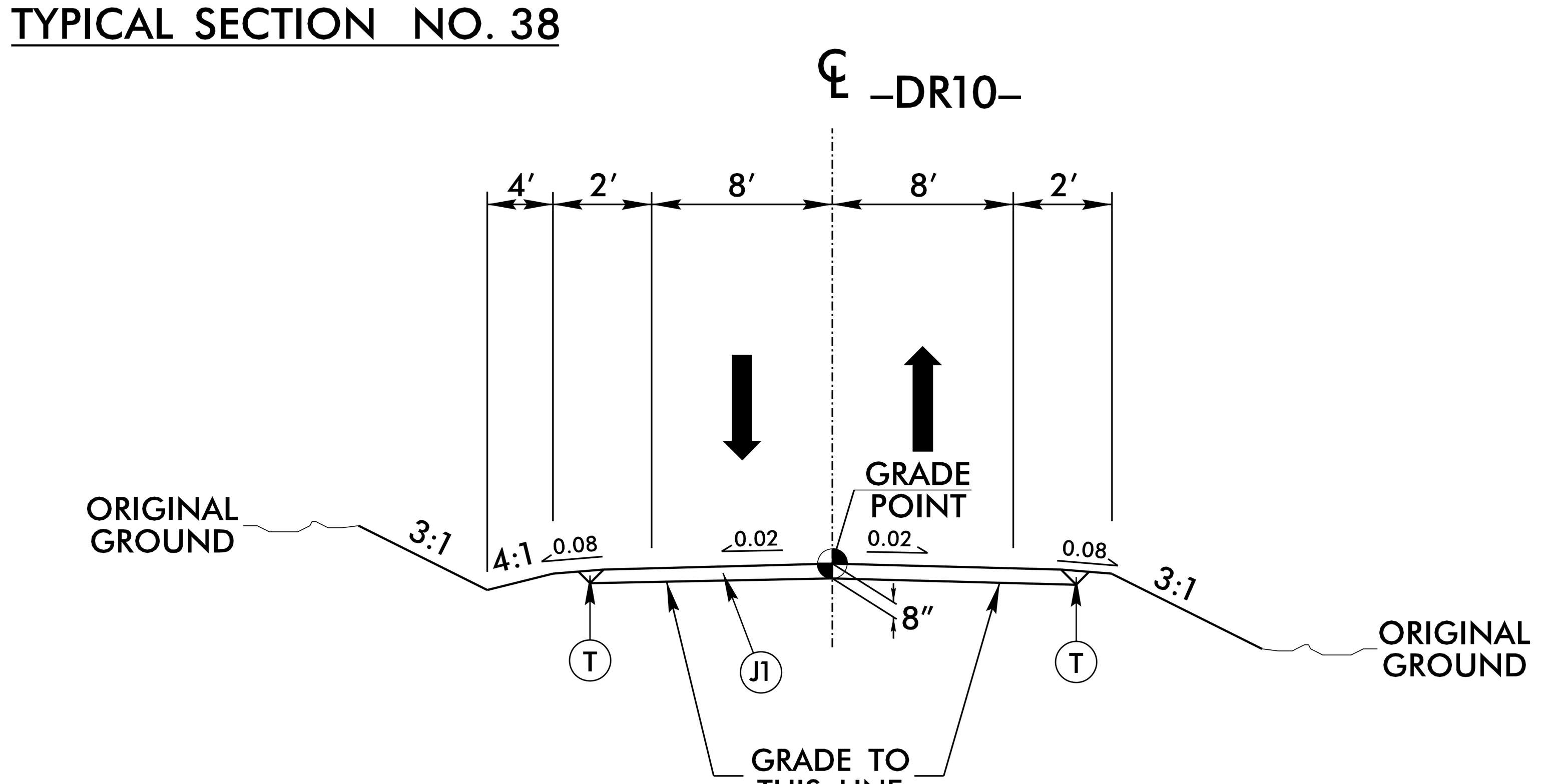
USE TYPICAL SECTION NO. 37
-Y27- STA. 11+75.00 TO STA. 13+06.46

NOTE: LANE WIDTH INCREASES TO 15' FROM PROPOSED WIDTH AT INTERSECTION WITH NC 211



TYPICAL SECTION NO. 38

USE TYPICAL SECTION NO. 38
-DR7- STA. 10+60.00 TO STA. 11+90.59
*-DR8- STA. 10+85.00 TO STA. 12+10.60



TYPICAL SECTION NO. 39

USE TYPICAL SECTION NO. 39
-DR10- STA. 10+60.00 TO STA. 12+74.50

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

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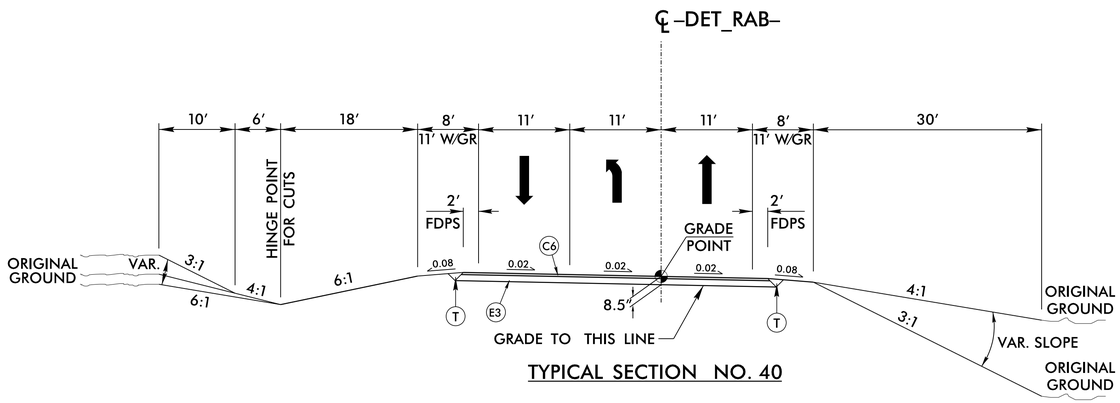
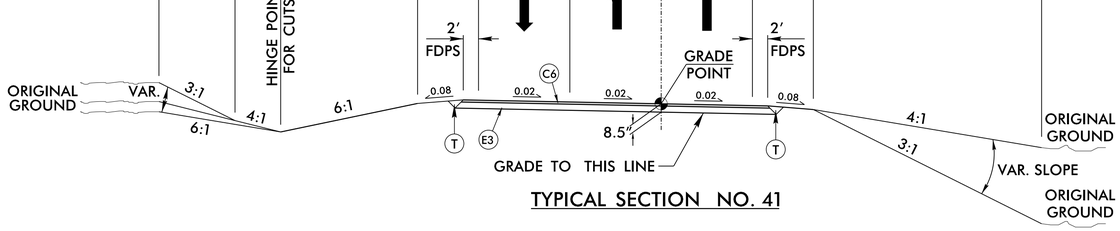
PAVEMENT SCHEDULE	
C6	3″ S9.5C
E3	5.5″ B25.0C
T	EARTH MATERIAL
U	EXIST. PAVEMENT



TYPICAL SECTION NO. 40

USE TYPICAL SECTION NO. 40

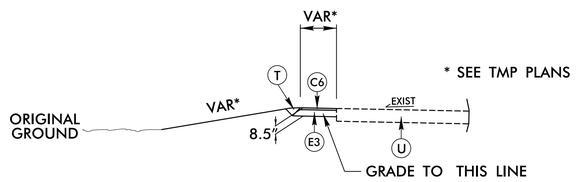
–DET_RAB– STA. 11+40.00 – 26+70.00



TYPICAL SECTION NO. 41

USE TYPICAL SECTION NO. 41

–DET_Y27– STA. 10+70.00 – 16+41.13



TEMPORARY PAVEMENT DETAIL

(SEE TMP PLANS FOR MORE INFORMATION)

–L– STA. 368+20 TO 374+44
–L– STA. 377+31 TO 382+03
–L– STA. 400+50 TO 403+33
–L– STA. 424+50 TO 426+00
–L– STA. 435+36 TO 441+55
–L– STA. 442+61 TO 443+75
–L– STA. 447+22 TO 454+61
–L– STA. 462+51 TO 475+26
–L– STA. 527+10 TO 528+09
–L– STA. 532+00 TO 536+89
–L– STA. 552+67 TO 553+32
–L– STA. 572+55 TO 586+97
–L– STA. 607+08 TO 631+60
–L– STA. 671+19 TO 671+48
–L– STA. 710+15 TO 717+00
–L– STA. 742+80 TO 749+35
–L– STA. 749+71 TO 758+50
–L– STA. 786+92 TO 788+32
–L– STA. 793+00 TO 818+00

NOTES

PAVEMENT EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR LOCATION OF AUXILIARY LANES, CONCRETE ISLANDS, AND TAPERS.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2A-15
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER
10/21/2024
Signed by: MARY E. MAYS YAHL
DocuSigned by: Mary Mays Yahl

PAVEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER ANDREW D. WARGO
10/22/2024
DocuSigned by: Andrew D. Wargo

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-1
R/W SHEET NO.	R-5709 64

ROADWAY DESIGN ENGINEER — Seal 040878, Mary E. Mays Yahl, 10/15/2024

HYDRAULICS ENGINEER — Seal 51640, Courtland A. Hoffman, 10/14/2024

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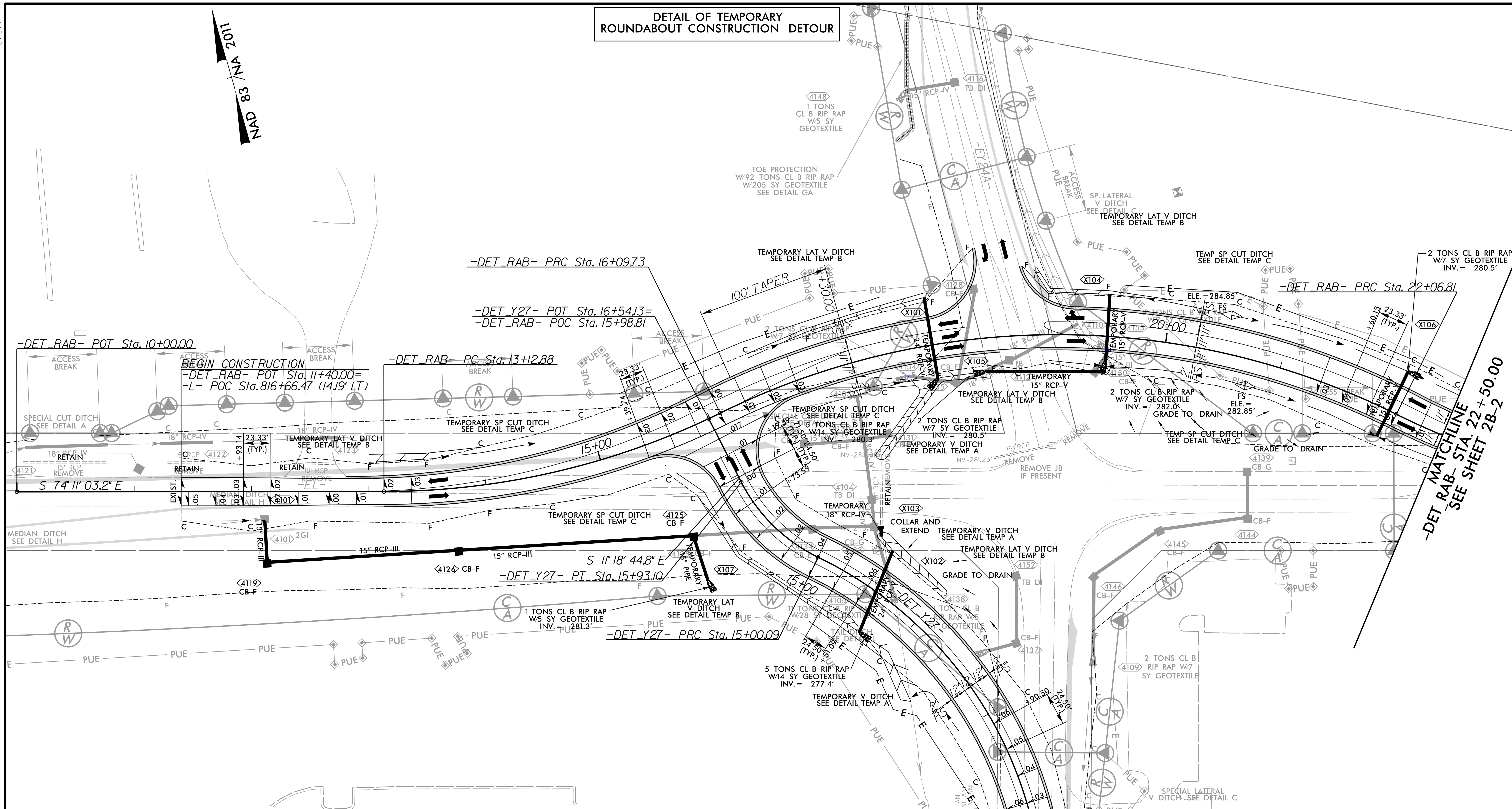
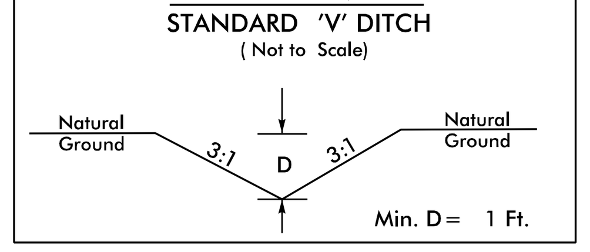
DETAIL OF TEMPORARY ROUNDABOUT CONSTRUCTION DETOUR



DETAIL TEMP A

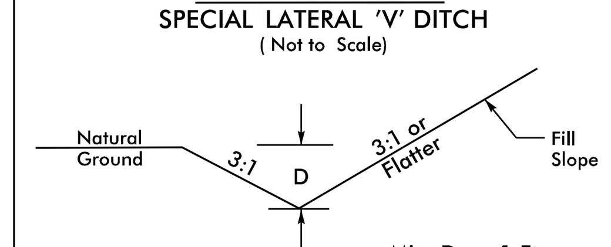
STANDARD 'V' DITCH
(Not to Scale)



-DET RAB- STA. 18+00 RT; S=0.32%;
L=81', Beg El=280.32'; End EL=280.06'; DDE=31 CY
-DET RAB- STA. 19+50 RT; S=2.14%;
L=7', Beg El=282.0'; End EL=281.85'; DDE=3 CY
-DET Y27- STA. 13+50 LT; S=5.56%;
L=18', Beg El=278.0'; End EL=277.0'; DDE=9 CY
-DET Y27- STA. 14+50 RT; S=0.81%;
L=16', Beg El=278.82'; End EL=278.93'; DDE=7 CY

DETAIL TEMP B

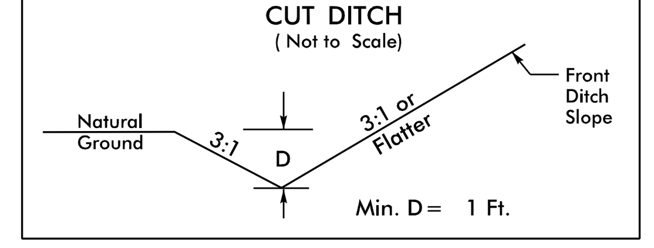
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



-DET RAB- STA. 13+00 TO STA. 13+50 LT
-DET RAB- STA. 16+50 TO STA. 18+00 LT
-DET RAB- STA. 19+00 TO STA. 20+00 LT
-DET RAB- STA. 18+00 TO STA. 18+44 RT
-DET Y27- STA. 14+00 TO STA. 15+50 LT
-DET Y27- STA. 14+00 TO STA. 14+50 RT

DETAIL TEMP C

CUT DITCH
(Not to Scale)



-DET RAB- STA. 11+50 TO STA. 12+11 RT
-DET RAB- STA. 13+50 TO STA. 14+50 LT
-DET RAB- STA. 20+00 TO STA. 24+50 LT
-DET RAB- STA. 17+00 TO STA. 18+00 RT
-DET RAB- STA. 19+00 TO STA. 22+50 RT
-DET Y27- STA. 15+50 TO STA. 16+35.75 LT
-DET Y27- STA. 13+00 TO STA. 14+00 LT

-DET_RAB-

PI Sta 14+63.94	PI Sta 19+31.20	PI Sta 23+60.33
Δ = 26° 09' 58.2" (LT)	Δ = 52° 37' 52.2" (RT)	Δ = 26° 34' 40.8" (LT)
D = 8° 48' 53.0"	D = 8° 48' 53.0"	D = 8° 48' 53.0"
L = 296.85'	L = 597.08'	L = 301.52'
T = 151.06'	T = 321.47'	T = 153.52'
R = 650.00'	R = 650.00'	R = 650.00'
SE = 0.03	SE = 0.03	SE = 0.03
V = 35MPH	V = 35MPH	V = 35MPH

-DET_Y27-

PI Sta 10+58.58	PI Sta 13+31.81	PI Sta 15+48.28
Δ = 0° 17' 33.1" (RT)	Δ = 64° 31' 42.1" (LT)	Δ = 37° 00' 30.9" (RT)
D = 0° 14' 58.8"	D = 16° 51' 06.1"	D = 39° 47' 19.4"
L = 117.17'	L = 382.92'	L = 93.01'
T = 58.58'	T = 214.64'	T = 48.19'
R = 22,948.65'	R = 340.00'	R = 144.00'
SE = EXIST.	SE = 0.03	SE = 0.03
	V = 35MPH	V = 25MPH(Stop Cond.)

TEMPORARY DRAINAGE FOR TRAFFIC PHASING

- DURING PHASE 1 ROADWAY CONSTRUCTION, INSTALL PIPE 4101 AND TIE EXISTING DITCH TO IT, INSTALL BOX 4119, BOX 4126, BOX 4125, PIPE 4119, PIPE 4126 AND OUTLET WITH TEMPORARY 15" PIPE X107
- INSTALL TEMPORARY PIPE X101 AND TEMPORARY DITCHES UPSTREAM AND DOWNSTREAM OF IT
- COLLAR AND EXTEND EXISTING PIPE X103 7' WITH 18" RCP-IV AND INSTALL TEMPORARY PIPE X102, INSTALL ALL DITCHES UPSTREAM AND DOWNSTREAM OF PIPE X102
- INSTALL TEMPORARY PIPE X104 AND X105 AND TEMPORARY DITCHES UPSTREAM AND DOWNSTREAM OF THEM
- INSTALL TEMPORARY PIPE X106 AND TEMPORARY DITCHES UPSTREAM AND DOWNSTREAM OF IT, INSTALL FALSE SUMP AT STATION -DET RAB- STA. 20+50 LT

FOR -L- PLAN SEE SHT. 41
FOR -DET_RAB- AND -DET_Y27- PROFILES, SEE SHT. 2B-1A

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5/28/99

-DET_RAB-

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER — 8/14/2024

Signed by: E. MAYS HILL

Mary Mays Hill

88E1E1DE98C7E44D...

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND HOFFMAN — 8/14/2024

Signed by:

Courtland Hoffman

934659E2FB738480...

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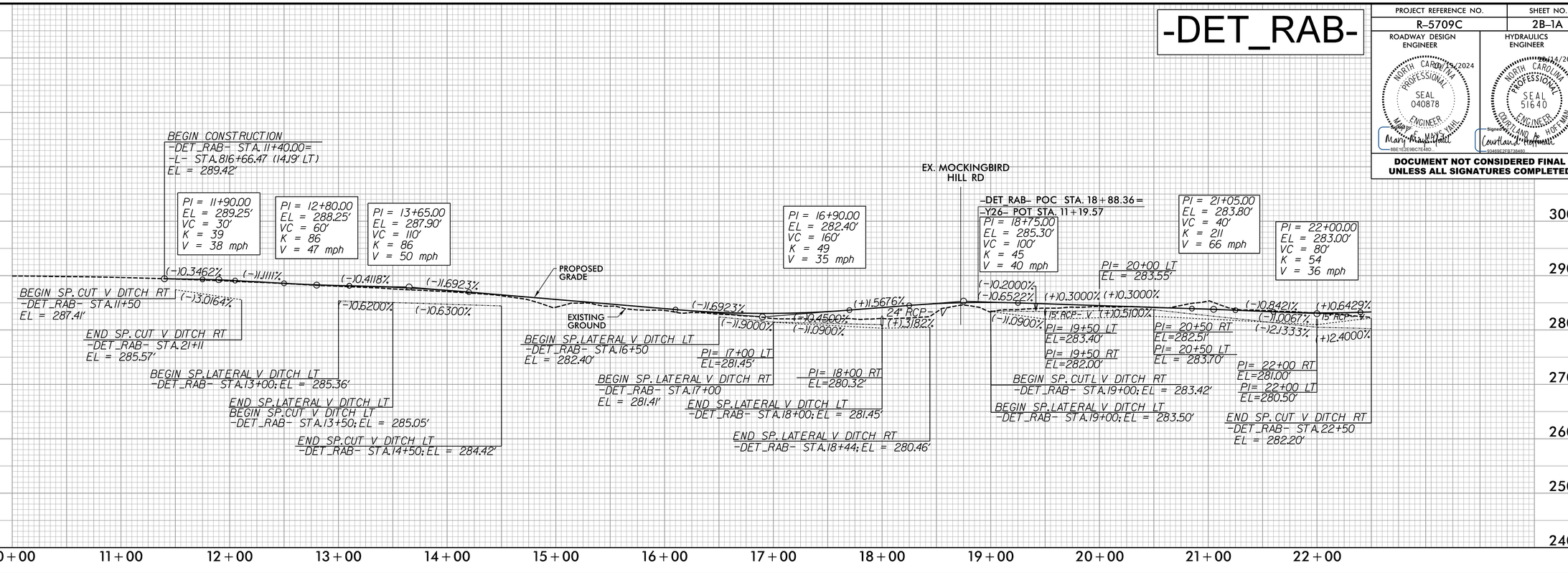
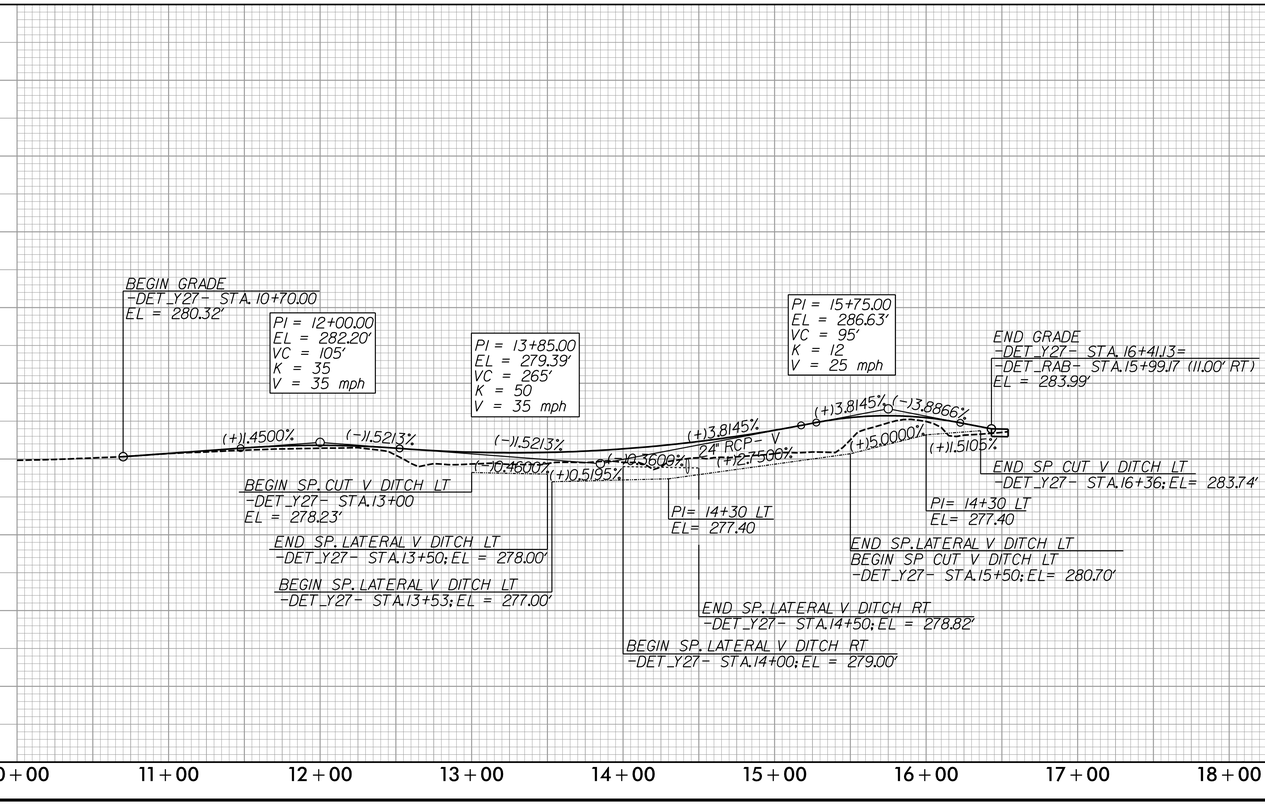


-DET_Y27-



LEFT DITCH ----------

RIGHT DITCH ----------

FOR -DET_RAB- AND -DET_Y27- PLAN, SEE SHEET 2B-1

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mmcpherson

8/17/99

DETAIL OF TEMPORARY ROUNDABOUT CONSTRUCTION DETOUR

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-2
R/W SHEET NO.	R-5709 65

ROADWAY DESIGN ENGINEER — 10/25/2024
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS JAIL
Signature: Mary Keays Jail

HYDRAULICS ENGINEER — 10/14/2024
NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN
Signature: Courtland A. Hoffman

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NAD 83 NA 2011

-DET_RAB-
PI Sta 23+60.33
Δ = 26° 34' 40.8" (LT)
D = 8° 48' 53.0"
L = 301.52'
T = 153.52'
R = 650.00'
SE = 0.03
V = 35MPH

END TIP PROJECT
R-5709C
-L2B- POC Sta. 835+30.00

-DET_RAB- PT Sta. 25+08.33=
-L2B- POT Sta.829+93.06 (00.00' LT)

-DET_RAB- MATCHLINE STA. 22+50.00 SEE SHEET 2B-1

360' LANE TAPER RT & LT

TEMPORARY SP CUT DITCH SEE DETAIL TEMP C

TOE PROTECTION W/64 TONS CL B RIP RAP W/143 SY GEOTEXTILE SEE DETAIL GA

SPECIAL LATERAL V DITCH SEE DETAIL E

-DET_RAB- POT Sta. 28+15.26

25' BLEND TO EXIST.

END CONSTRUCTION -L2B- Sta.838+98.00

TOE PROTECTION SEE DETAIL TEMP D

REMOVE SIDE DRAIN, DI AND 12' OF EX. 15"

RETAIN

PIPE CLEANOUT

2 TONS CL B RIP RAP W/7 SY GEOTEXTILE

DO NOT DISTURB SIGNS, LIGHT POLES, OR FLAGPOLES

END CONSTRUCTION
-DET_RAB- POT Sta. 26+70.00=
-L2B- POT Sta.831+54.74 (00.00' LT)

-L2B- PCC Sta.837+00.90

-L2B- PT Sta.839+32.37

-L2B- POT Sta.841+37.81

-L2B- PC Sta.835+22.44

-DET_RAB-

PI = 23+40.00
EL = 283.90'
VC = 200'
K = 74
V = 47 mph

PI = 24+70.00
EL = 281.20'
VC = 30'
K = 86
V = 47 mph

PI = 26+55.00
EL = 278.00'
VC = 30'
K = 51
V = 35 mph

END CONSTRUCTION
-DET_RAB- STA. 26+70.00=
-L2B- STA.831+54.74 (00.00' LT)
EL = 277.83'

(+)0.6429% (−)12.0769% (−)11.7297% (−)11.1373% (−)10.4880%

PROPOSED GRADE

EXISTING GROUND

END SP.CUT V DITCH LT
-DET_RAB- STA.24+50
EL = 279.28'

310 300 290 280 270 260

23+00 24+00 25+00 26+00 27+00 28+00

FOR -L2B- PLANS SEE SHTS. 41 & 42

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mmorrison

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

10/15/2024

Mary Mays Yahl

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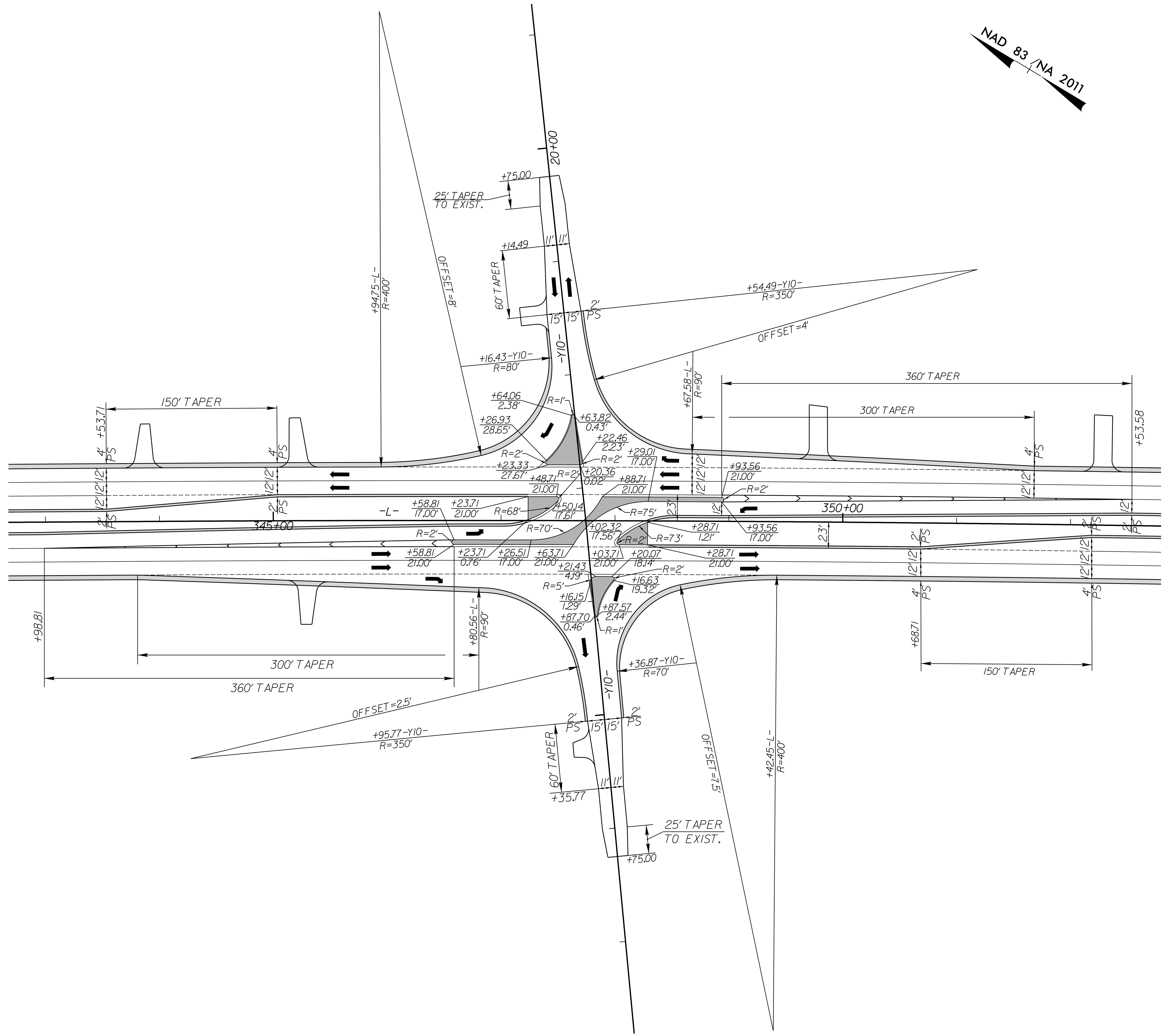
–L– & –Y10– INTERSECTION DETAIL



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10-FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 6
FOR –L– PROFILE, SEE SHEET NOS. 47 & 48
FOR –Y10– PROFILE, SEE SHEET NO. 66

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–L– & –Y11– /–L– & –Y11A– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

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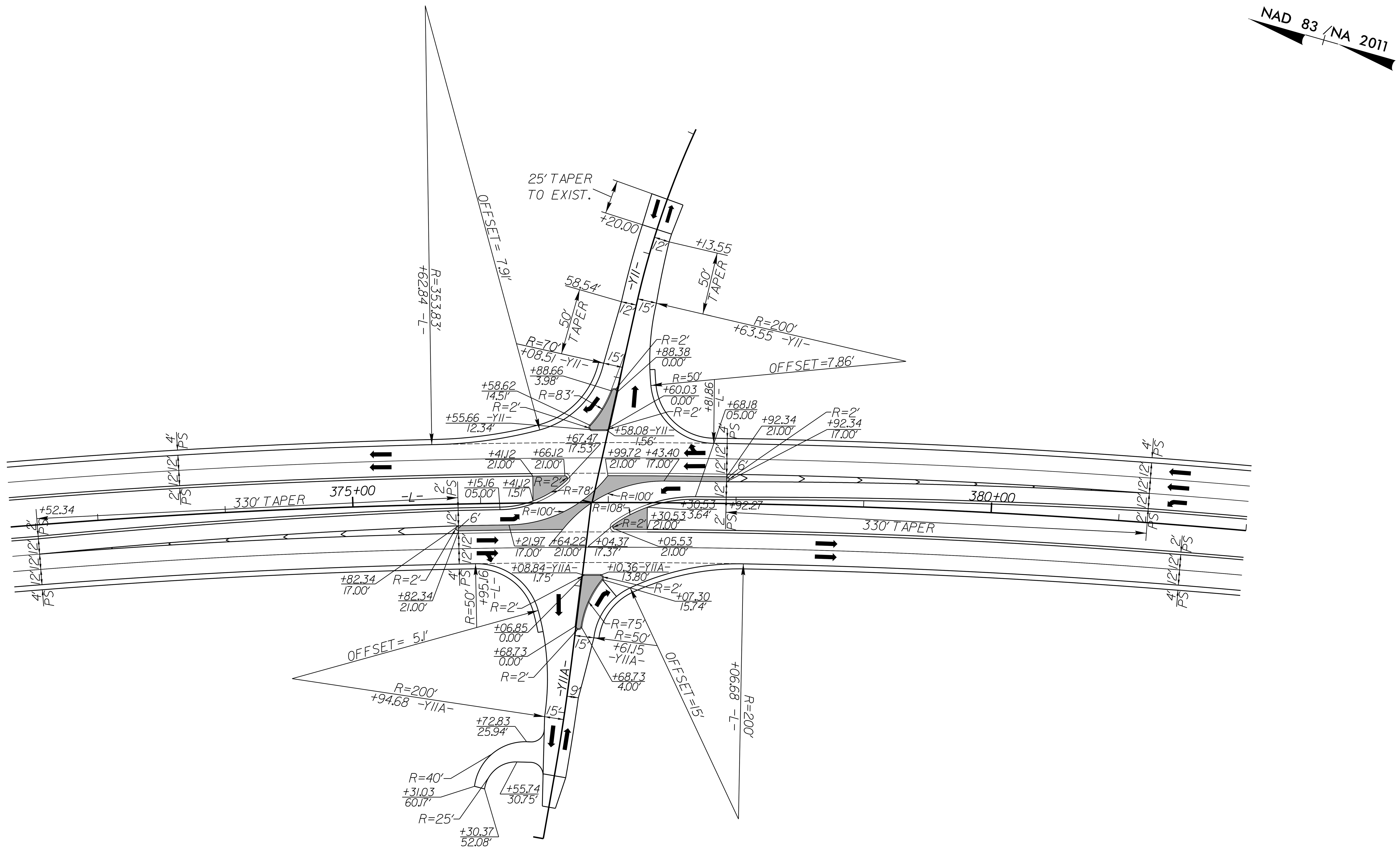

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10-FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 9
FOR –L– PROFILE, SEE SHEET NO. 49
FOR –Y11– PROFILE, SEE SHEET NO. 66
FOR –Y11A– PROFILE, SEE SHEET NO. 66

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-4A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

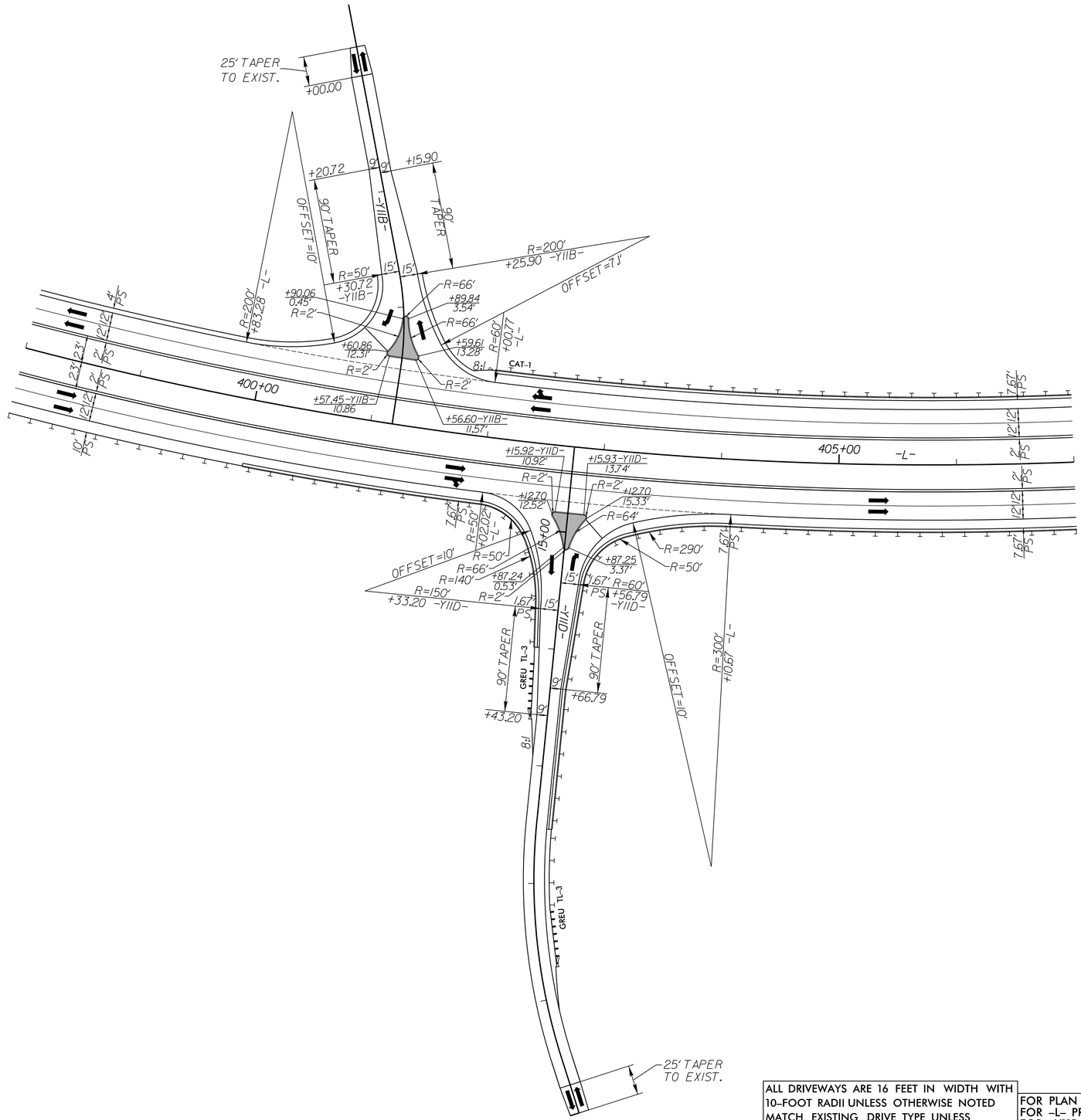
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY K. MAYS

Signed by: Mary K. Mays
8BE1E2E9BCE44D...

8/16/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L– & –Y11B– /–L– & –Y11D– INTERSECTION DETAIL



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NOS. 10–11
FOR –L– PROFILE, SEE SHEET NO. 50
FOR –Y11B– PROFILE, SEE SHEET NO. 67
FOR –Y11D– PROFILE, SEE SHEET NO. 67

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-4B
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

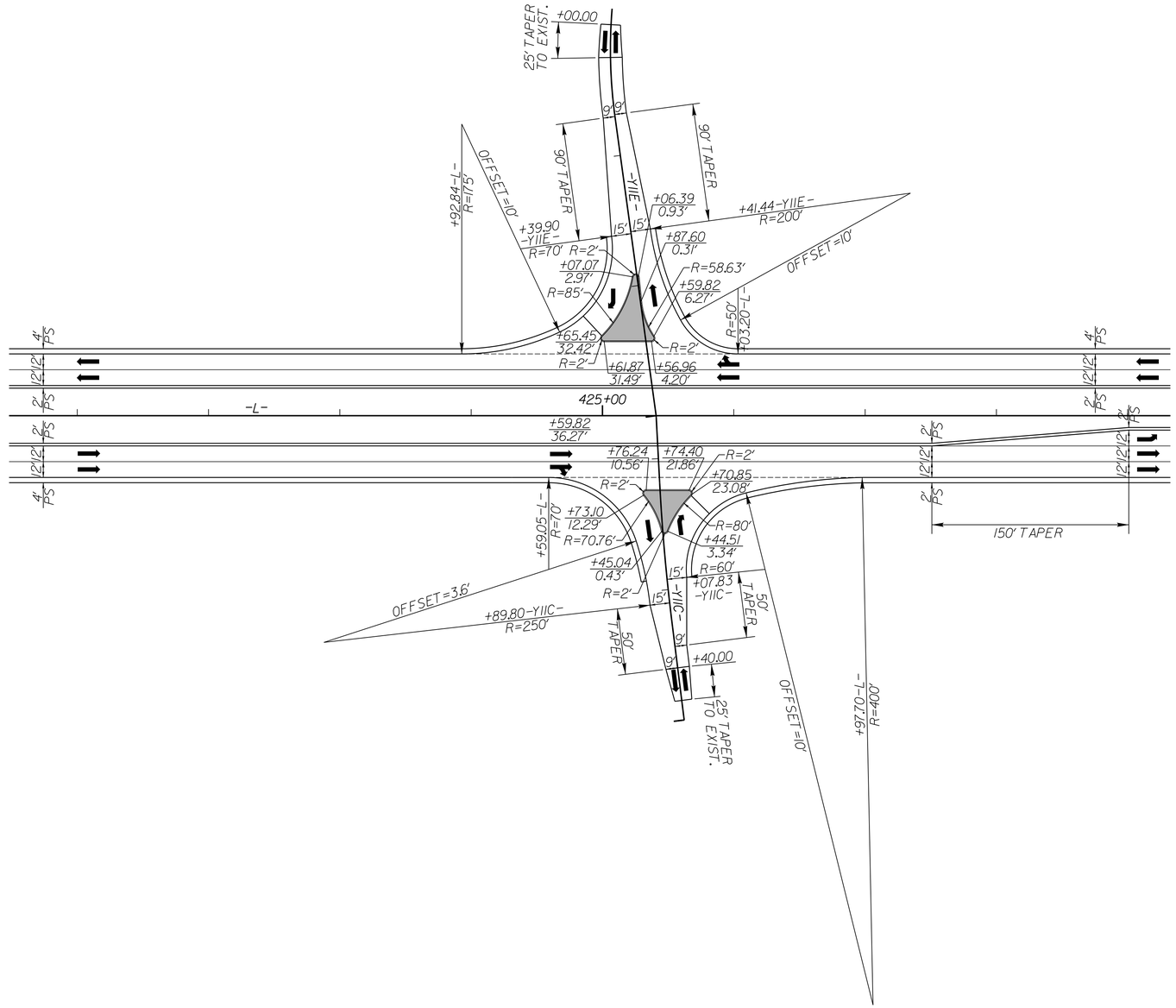
8/5/2024

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

Signed by: Mary Mays Yahl

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L– & –Y11E– /–L– & –Y11C– INTERSECTION DETAIL



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NOS. 12–13
FOR –L– PROFILE, SEE SHEET NOS. 50–51
FOR –Y11E– PROFILE, SEE SHEET NO. 67
FOR –Y11C– PROFILE, SEE SHEET NO. 67

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

Signature: Mary Mays Yahl 8/26/2024

DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L– & –Y12– /–L– & –Y12A– INTERSECTION DETAIL

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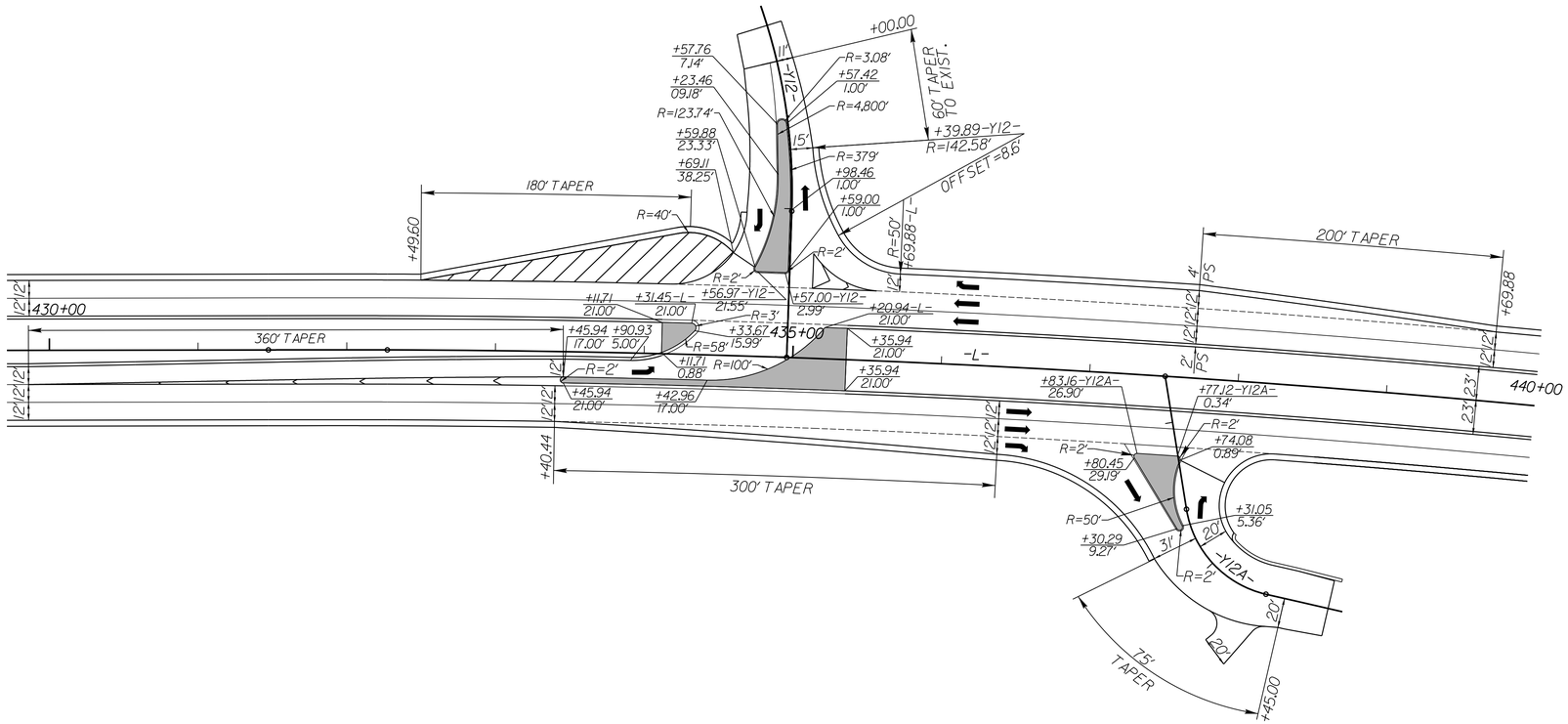

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED	FOR PLAN VIEW, SEE SHEET NO. 13 FOR –L– PROFILE, SEE SHEET NO. 51 FOR –Y12– PROFILE, SEE SHEET NO. 68 FOR –Y12A– PROFILE, SEE SHEET NO. 68

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–L– & –Y13– /–L– & –Y14– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-6
R/W SHEET NO.	

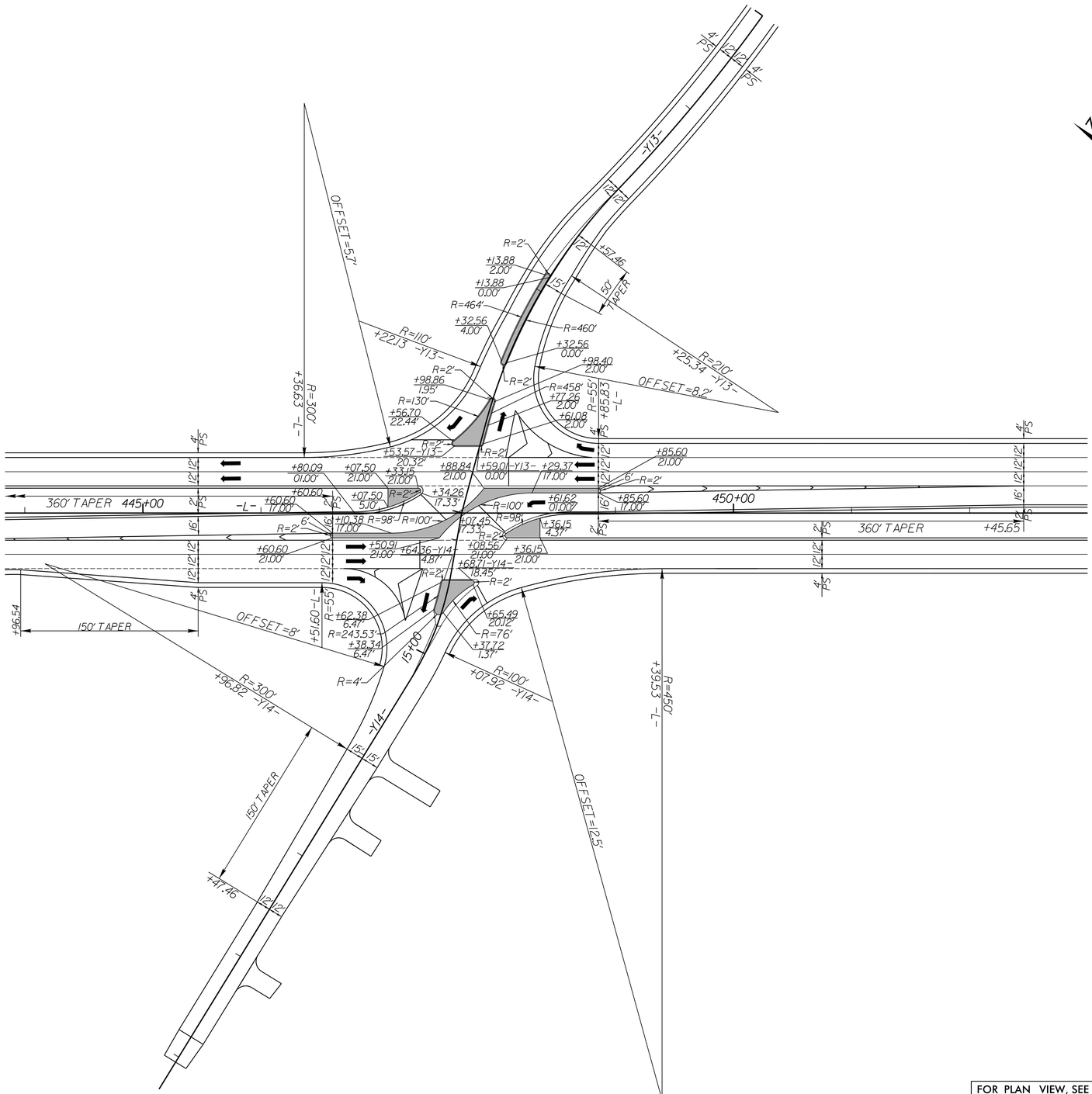
ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAHL

8/15/2024

Signed by: Mary Mays Yahl

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 14
FOR –L– PROFILE, SEE SHEET NO. 51
FOR –Y12A– PROFILE, SEE SHEET NO. 67
FOR –Y13– PROFILE, SEE SHEET NO. 68
FOR –Y14– PROFILE, SEE SHEET NO. 69

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–L– & –Y15– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS, PE
8/28/2024
Signed by: Mark E. Mays, PE
DocuSigned by:

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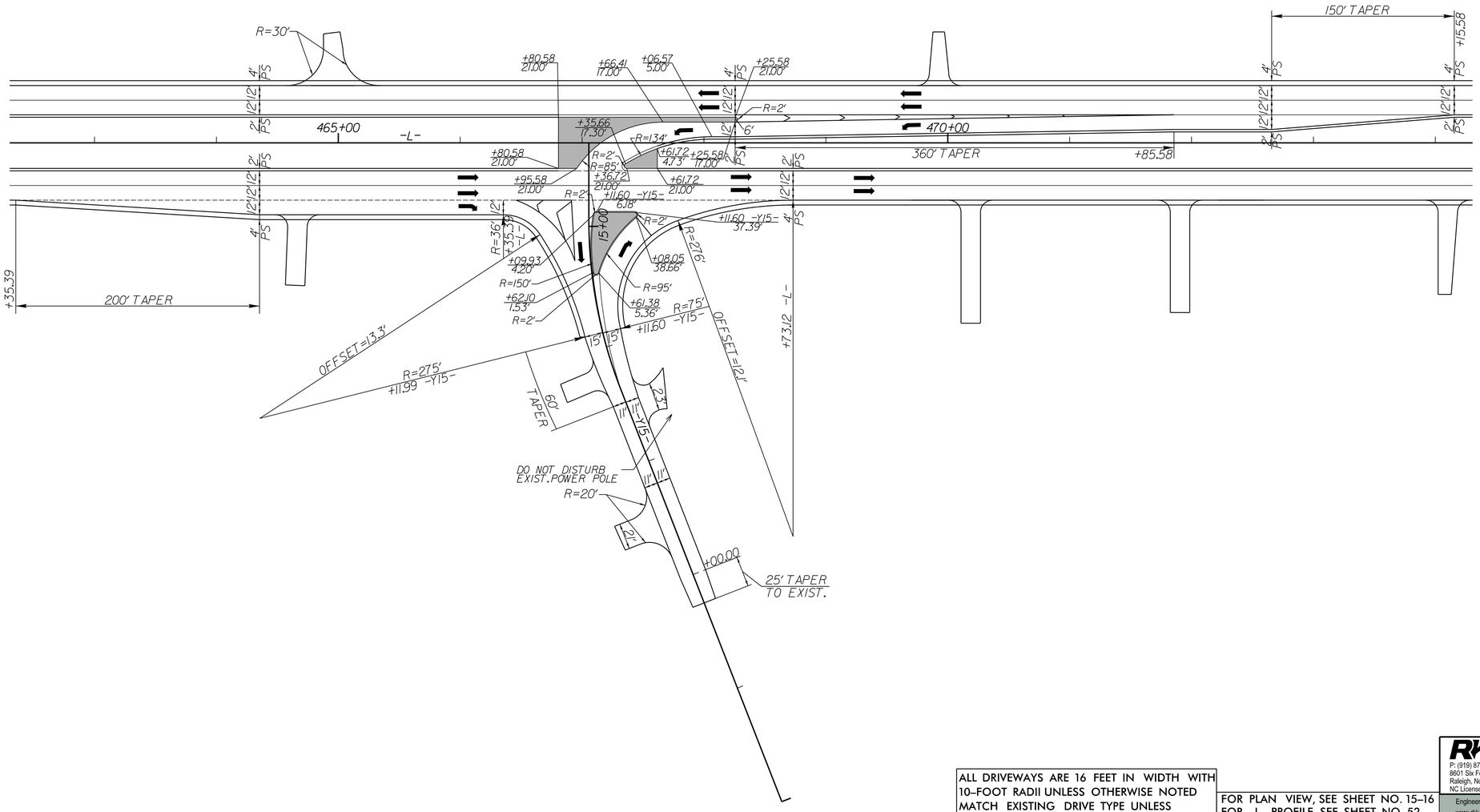

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 15–16
FOR –L– PROFILE, SEE SHEET NO. 52
FOR –Y15– PROFILE, SEE SHEET NO. 69

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–L– & –Y16– /–L– & –Y17– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

8/15/2024

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. YAHL

Signed by: Mary E. Yahl
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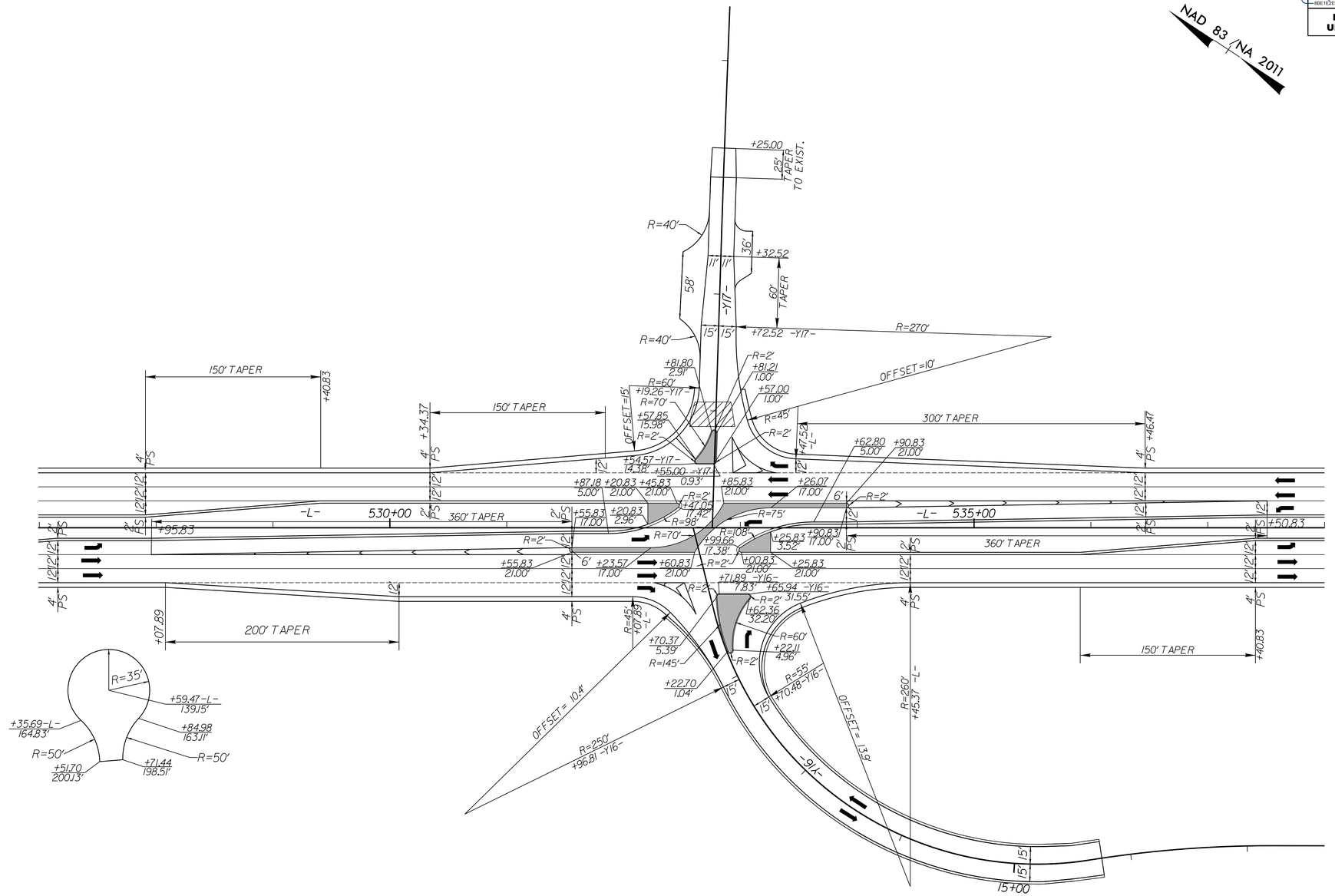

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 20
FOR –L– PROFILE, SEE SHEET NO. 54
FOR –Y16– PROFILE, SEE SHEET NO. 69
FOR –Y17– PROFILE, SEE SHEET NO. 69

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-8A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS

8/27/2024

Signed by: Mary E. Mays
8BE1E2E9BCE44D...

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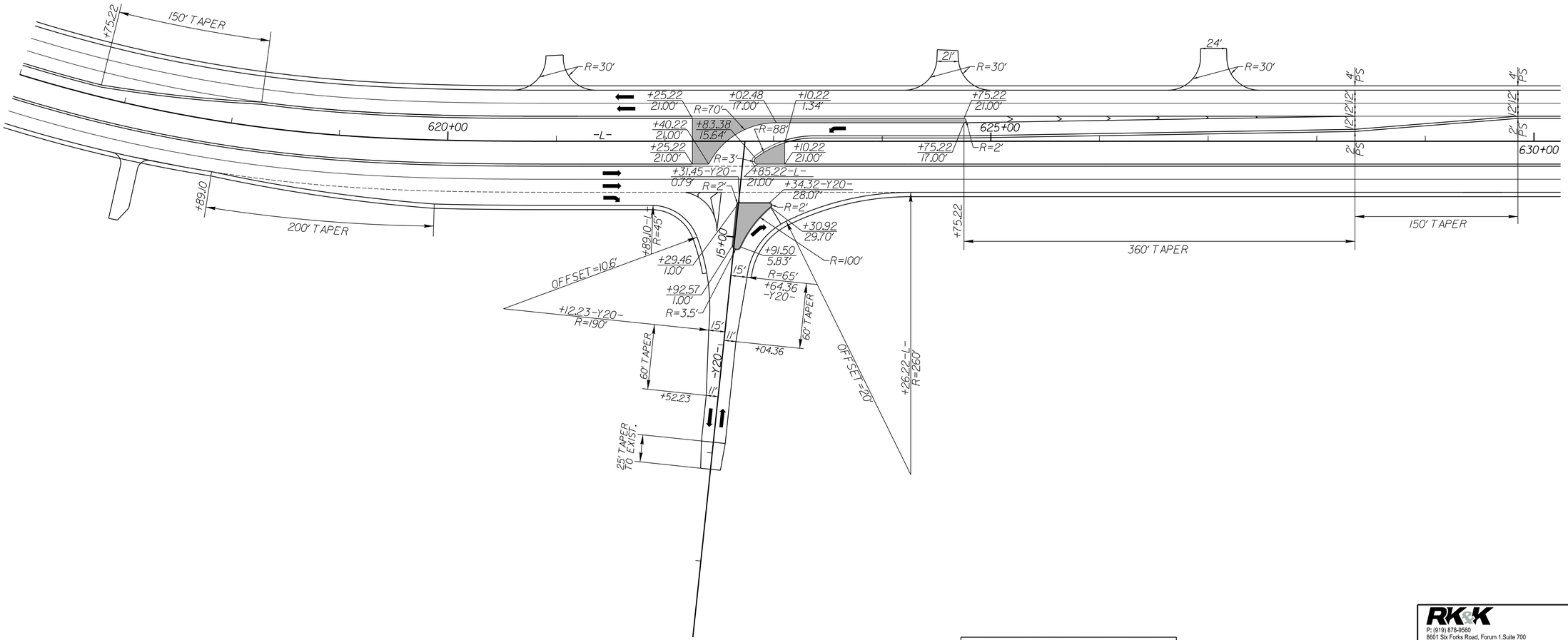
–L– & –Y20– INTERSECTION DETAIL

NAD 83/NA 2011



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NOS. 26–27
FOR –L– PROFILE, SEE SHEET NOS. 57–58
FOR –Y20– PROFILE, SEE SHEET NO. 70

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-8B
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

8/15/2024

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS, PE

Mary Mays Pate

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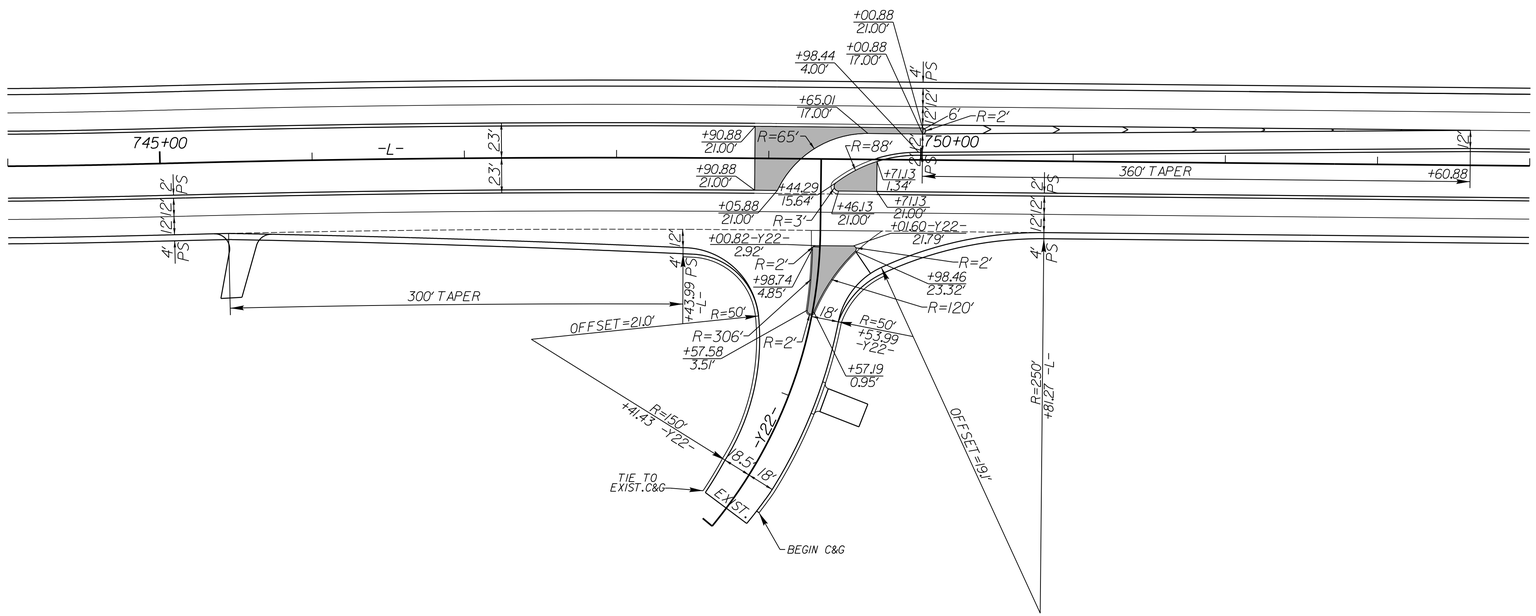
–L– & –Y22– INTERSECTION DETAIL

NAD 83 /NA 2011



ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 35–36
FOR –L– PROFILE, SEE SHEET NO. 62
FOR –Y22– PROFILE, SEE SHEET NO. 71

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–L– & –Y23– /–L– & –Y24– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS YAIL — 8/15/2024

Signature for Mark E. Mays Yail

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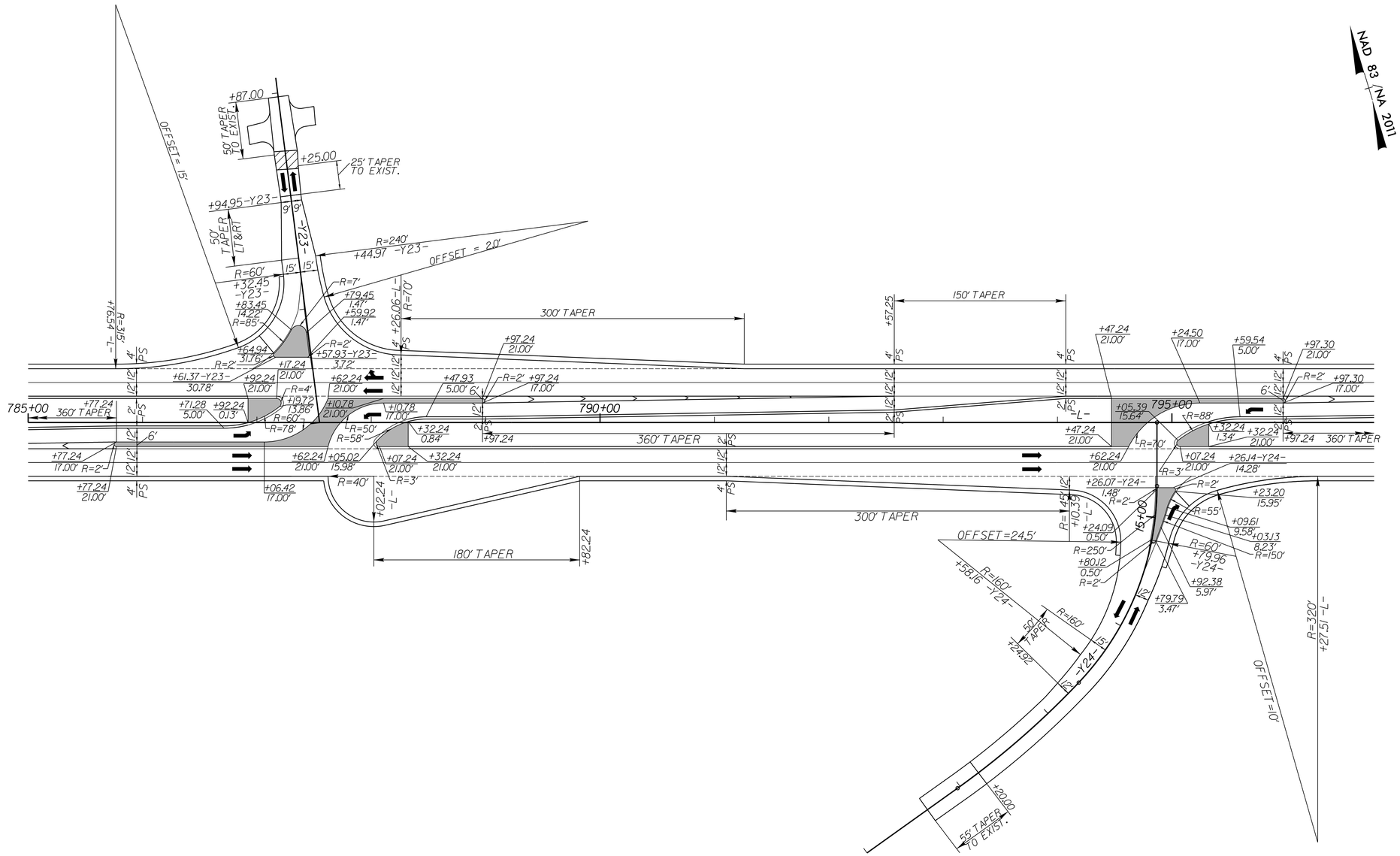

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED	FOR PLAN VIEW, SEE SHEET NO. 38–39
MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED	FOR –L– PROFILE, SEE SHEET NOS. 63–64
	FOR –Y23– PROFILE, SEE SHEET NO. 71
	FOR –Y24– PROFILE, SEE SHEET NO. 71

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–L– & –Y25– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-10
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

10/15/2024

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAXS YAHL

Mary Maxs Yahl

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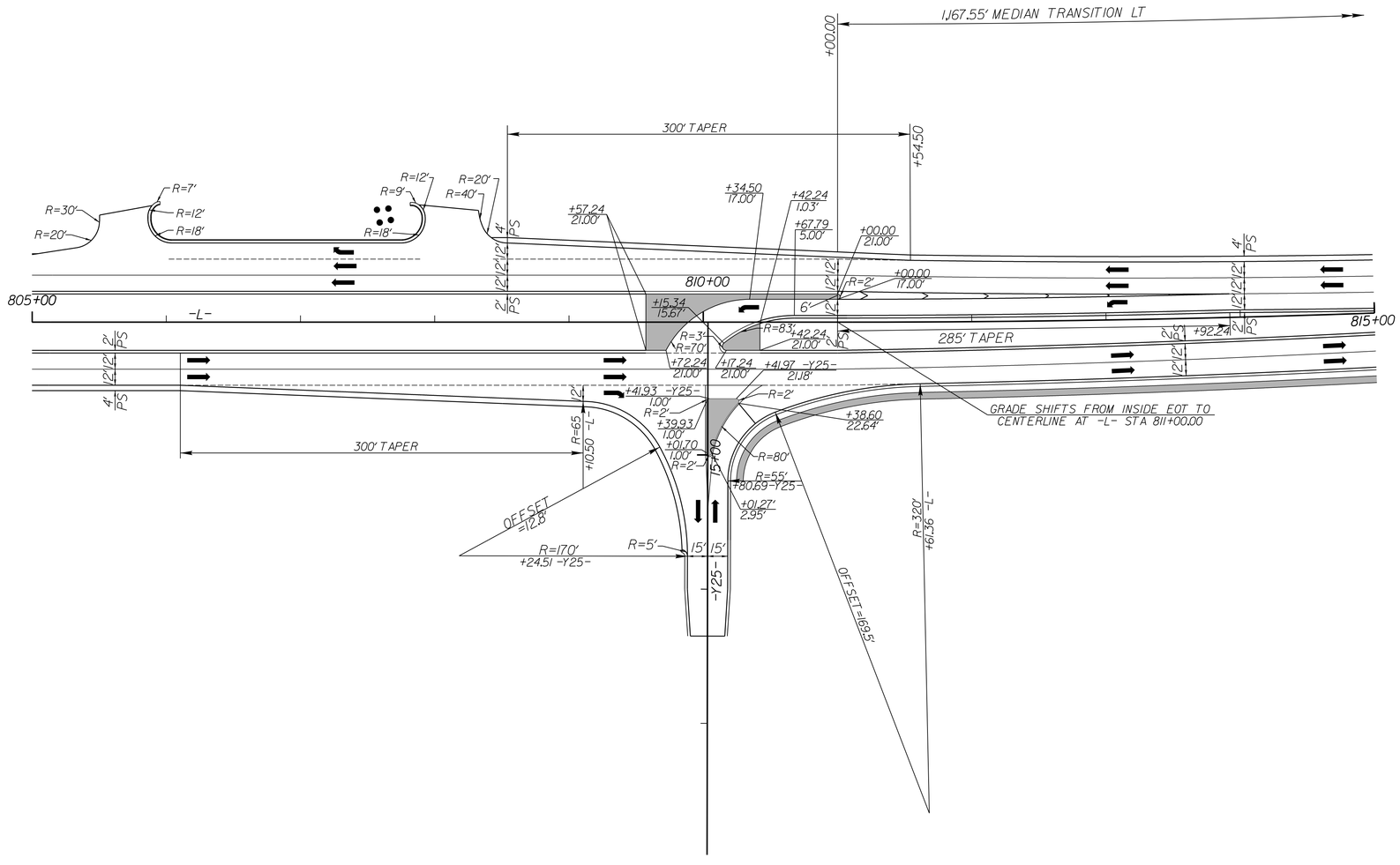

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10–FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 40 & 41
FOR –L– PROFILE, SEE SHEET NO. 64
FOR –Y25– PROFILE, SEE SHEET NO. 72

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–L– & –Y26– /–L– & –Y27– INTERSECTION DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-11
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. HAYS YAHL
7/25/2024
Signature: Mary Hays Yahl

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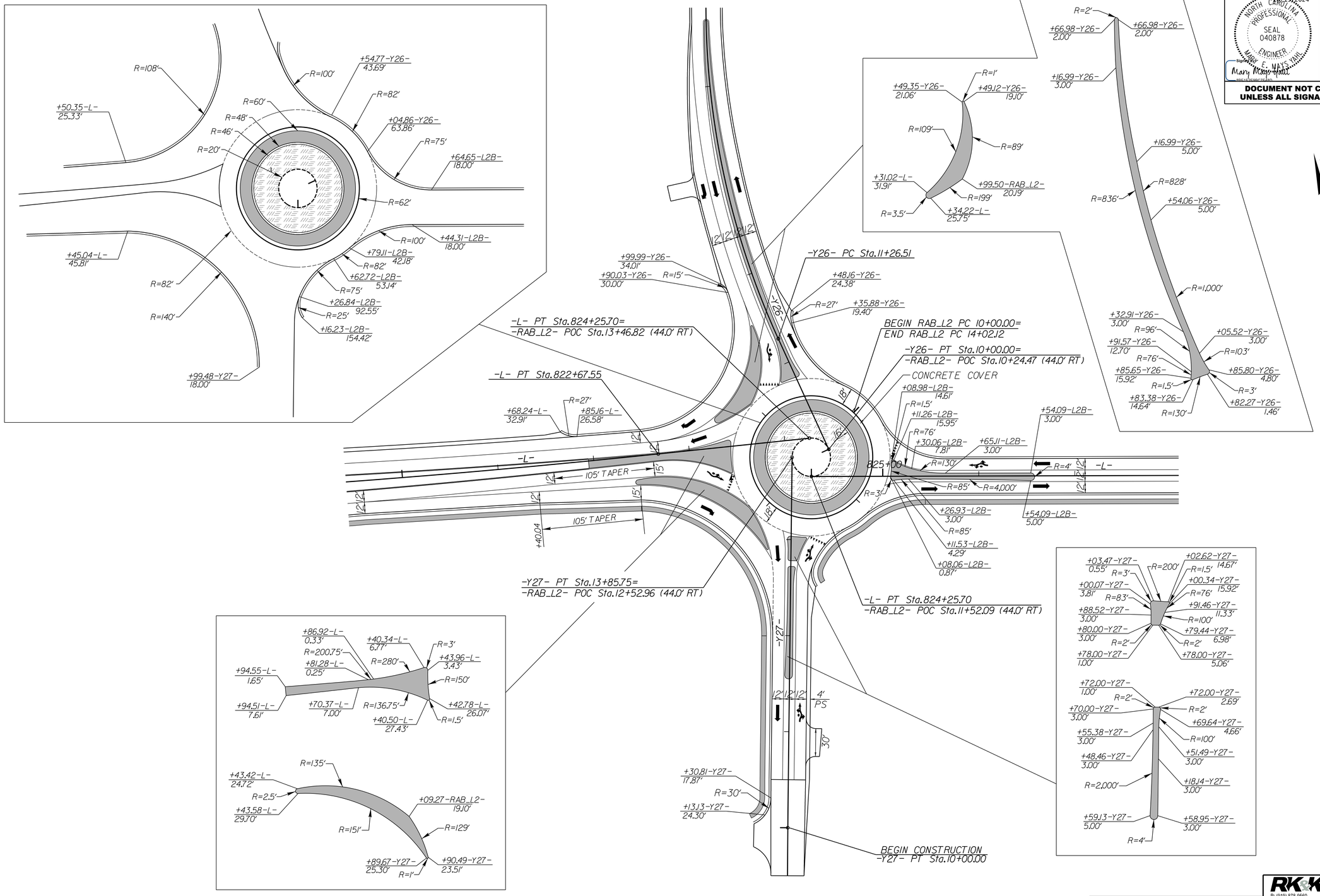

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10-FOOT RADII UNLESS OTHERWISE NOTED MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR PLAN VIEW, SEE SHEET NO. 41–44
FOR –L– PROFILE, SEE SHEET NO. 65
FOR –RAB_L2– PROFILE, SEE SHEET NO. 65
FOR –Y26– PROFILE, SEE SHEET NO. 72
FOR –Y27– PROFILE, SEE SHEET NO. 73

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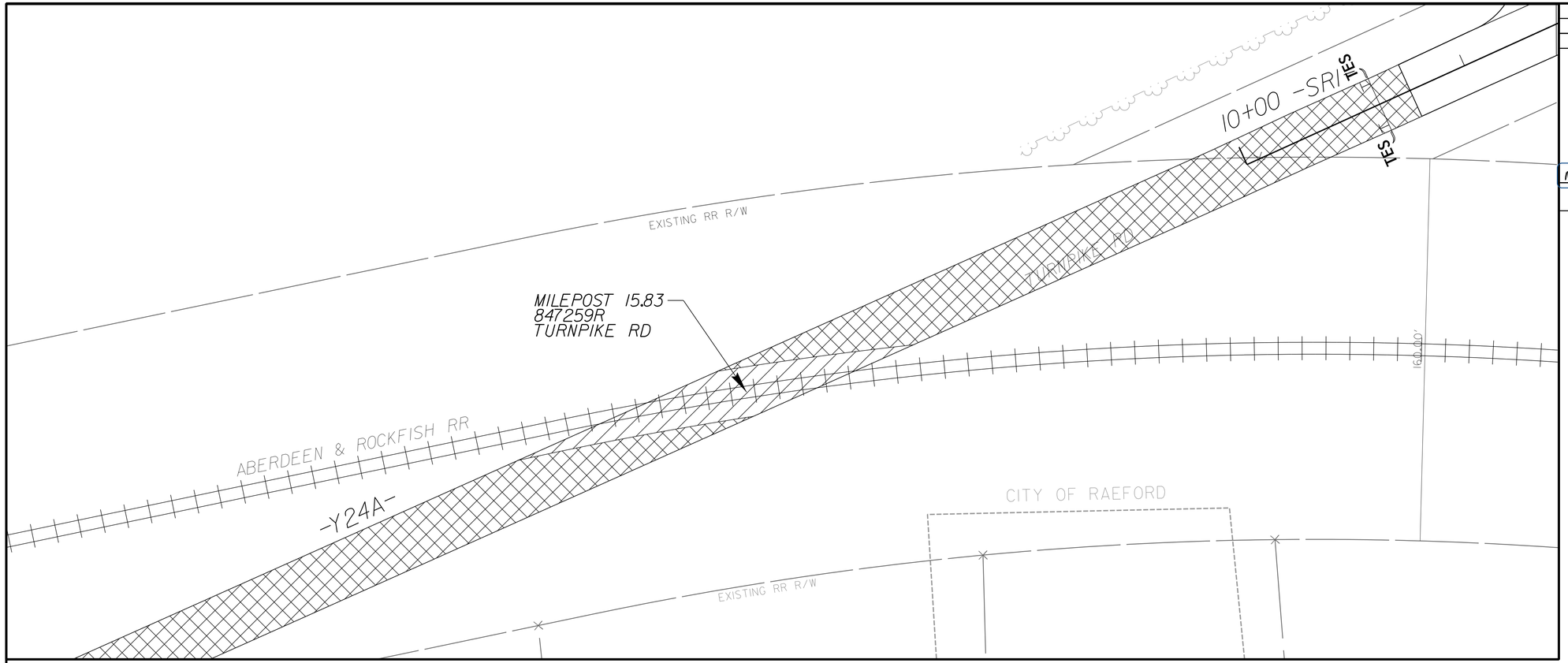

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-12

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS HALL

10/15/2024

Signed by: MARY E. MAYS HALL

DocuSigned by: Mary Mays Hall

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NAD 83 NA 2011

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. CONTACT THE NCDOT RESIDENT ENGINEER TO SCHEDULE THE CLOSURE OF TURNPIKE RD AT-GRADE CROSSING.
2. THE EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY TO BE REMOVED BY CONTRACTOR. THE CONTRACTOR WILL SAW CUT THE ASPHALT 8 FEET FROM THE NEAR RAIL ON EITHER SIDE OF THE TRACK. THE RAILROAD WILL REMOVE THE ASPHALT BETWEEN THE SAW CUTS (PAVEMENT REMOVAL BY OTHERS) AND STOCKPILE ASPHALT FOR REMOVAL BY THE CONTRACTOR. THE EXISTING CROSSBUCKS, GATES AND/OR FLASHERS WILL BE REMOVED BY THE RAILROAD.
3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.
4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN AND ROCKFISH RIGHT-OF-WAY.
5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY. ANY EXISTING PIPE CULVERTS IN THE RAILROAD DITCHES SHALL BE REMOVED AND EXISTING DITCHES GRADED TO DRAIN. ALL PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY CORRIDOR IS TO BE REMOVED PRIOR TO THE CONCLUSION OF THE PROJECT.
6. PROVIDE PERMANENT SIGNING AS SHOWN IN THE R-5709 SIGNING PLANS. EXISTING ADVANCED RAILROAD WARNING SIGNS ARE TO BE REMOVED BY CONTRACTOR.
7. PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.
8. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

GRAPHIC SCALE

25 0 25 50

PLANS

CROSSING CLOSURE DETAIL

TURNPIKE RD.

FOR Y24A PLAN VIEW SEE SHT. 40.
FOR -SR1- PLAN VIEW SEE SHT. 45.

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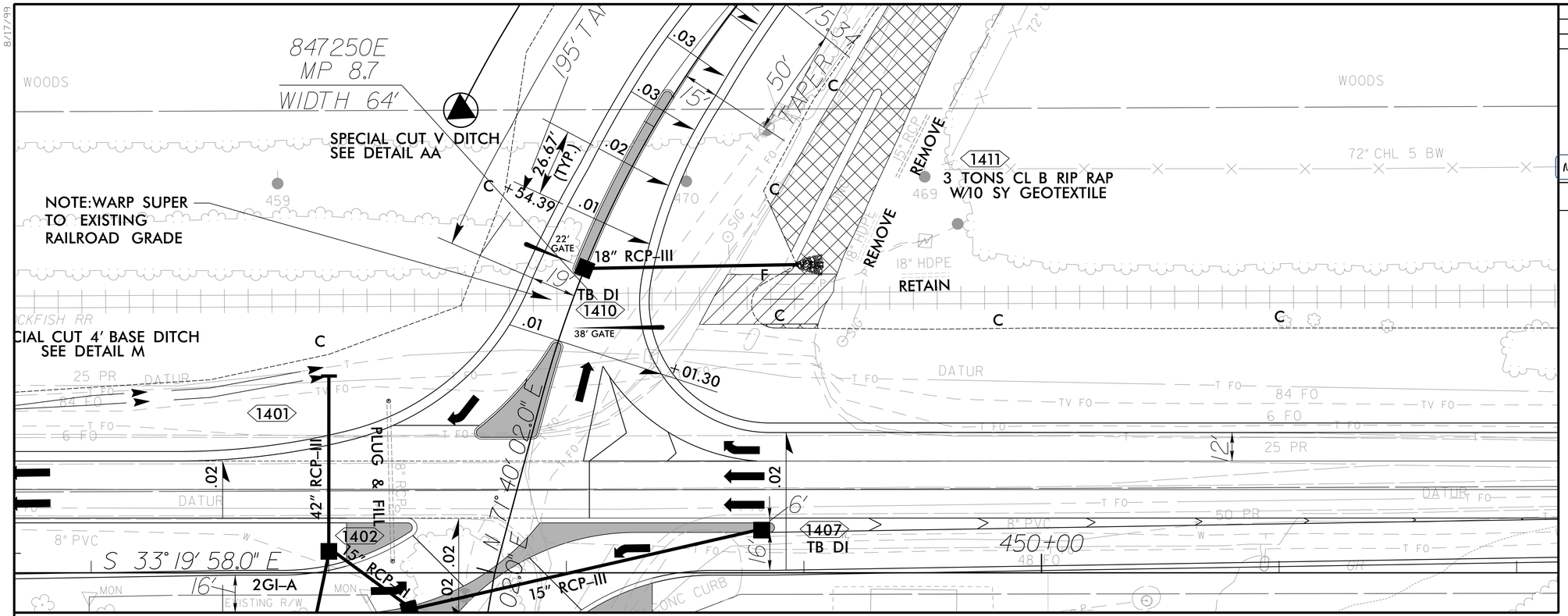

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. CONTACT THE NCDOT RESIDENT ENGINEER TO COORDINATE THE INSTALLATION OF THE NEW AT-GRADE CROSSING, CONCRETE TUB AND ASSOCIATED REMOVAL/REPLACEMENT OF TRACK, AND THE RAILROAD PROTECTIVE DEVICES, AS THESE WILL BE INSTALLED BY THE RAILROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAVING UP TO AND THROUGH THE NEW AT-GRADE CROSSING UNDER THE DIRECTION OF THE RAILROAD.

2. THE EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY TO BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR WILL SAW CUT ASPHALT 8 FEET FROM THE NEAR RAIL ON EACH SIDE OF THE CROSSING. THE RAILROAD WILL REMOVE ASPHALT BETWEEN THE SAW CUTS (PAVEMENT REMOVAL BY OTHERS) AND STOCKPILE FOR REMOVAL BY THE CONTRACTOR. ALL EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY TO BE REMOVED BY THE CONTRACTOR. THE EXISTING CROSSBUCKS, GATES AND/OR FLASHERS WILL BE REMOVED BY THE RAILROAD.

3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY.

5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED, DRAINAGE AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY, ACCORDING TO THE PLAN.

6. ENSURE ALL NECESSARY TEMPORARY AND/OR PERMANENT PAVEMENT MARKING/SIGNING AND CROSSING PROTECTION IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS. SHOULD THE NECESSARY PROTECTIONS NOT BE AVAILABLE, THEN THE ROAD MUST REMAIN CLOSED TO VEHICULAR TRAFFIC.

CROSSING CONSTRUCTION DETAIL

NC 211 / PLANK RD.

GRAPHIC SCALE
25 0 25 50
PLANS

FOR PLAN VIEW, SEE SHEET NO. 14

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-13
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — 10/15/2024
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAU
Signature: Mary Mays Yau
BBE1E2E98C7E48D...

HYDRAULICS ENGINEER — 10/14/2024
NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN
Signature: Courtland Hoffman
DocuSigned by:

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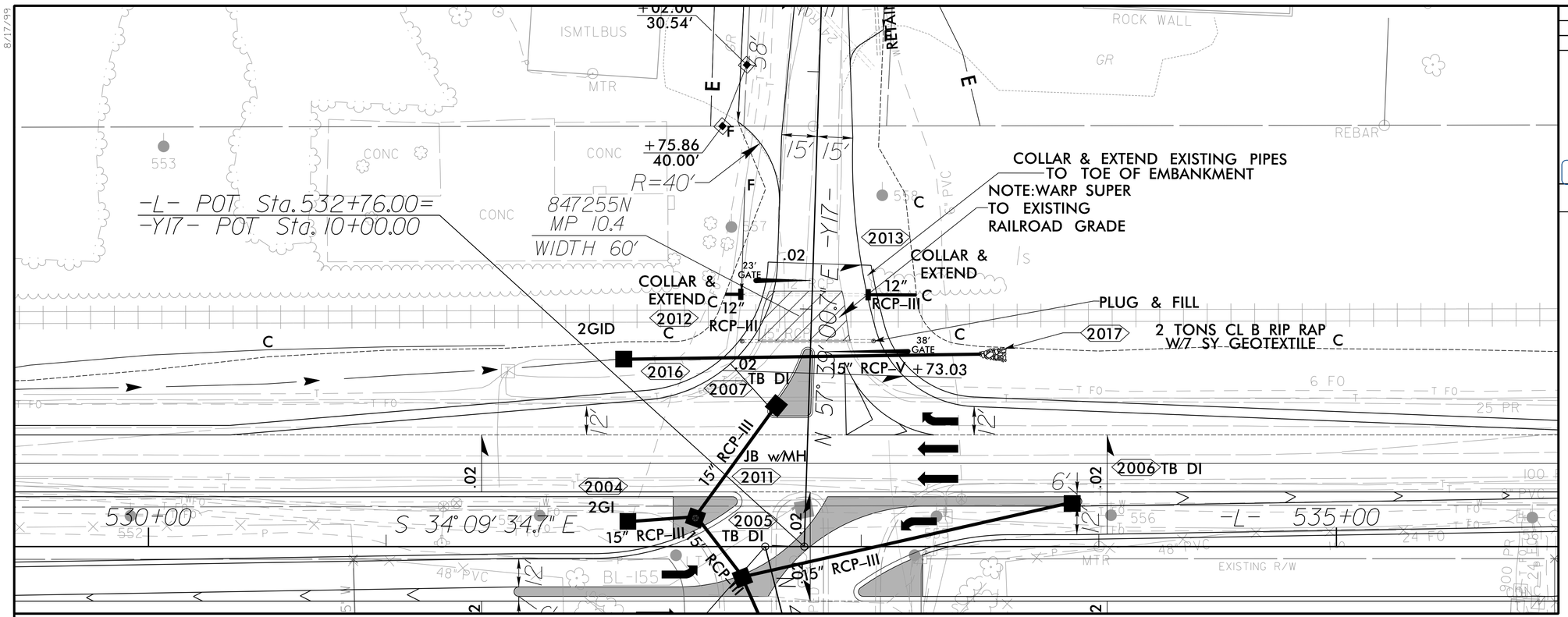

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. CONTACT THE NCDOT RESIDENT ENGINEER TO COORDINATE THE INSTALLATION OF THE NEW AT-GRADE CROSSING, CONCRETE TUB AND ASSOCIATED REMOVAL/REPLACEMENT OF TRACK, AND THE RAILROAD PROTECTIVE DEVICES, AS THESE WILL BE INSTALLED BY THE RAILROAD. THIS IS A ONE-WAY IN AND ONE-WAY OUT CROSSING. TEMPORARY ACCESS NEEDS TO BE PROVIDED BY THE CONTRACTOR DURING RECONSTRUCTION OF THE EXISTING CROSSING BY THE RAILROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAVING UP TO AND THROUGH THE NEW AT-GRADE CROSSING UNDER THE DIRECTION OF THE RAILROAD.

2. THE EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY TO BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR WILL SAW CUT ASPHALT 8 FEET FROM THE NEAR RAIL ON EACH SIDE OF THE CROSSING. THE RAILROAD WILL REMOVE ASPHALT BETWEEN THE SAW CUTS (PAVEMENT REMOVAL BY OTHERS) AND STOCKPILE FOR REMOVAL BY THE CONTRACTOR. ALL EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY TO BE REMOVED BY THE CONTRACTOR. THE EXISTING CROSSBUCKS, GATES AND/OR FLASHERS WILL BE REMOVED BY THE RAILROAD.

3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY.

5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED, DRAINAGE AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY, ACCORDING TO THE PLAN.

6. ENSURE ALL NECESSARY TEMPORARY AND/OR PERMANENT PAVEMENT MARKING/SIGNING AND CROSSING PROTECTION IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS. SHOULD THE NECESSARY PROTECTIONS NOT BE AVAILABLE, THEN THE ROAD MUST REMAIN CLOSED TO VEHICULAR TRAFFIC.

GRAPHIC SCALE
25 0 25 50
PLANS

CROSSING CONSTRUCTION DETAIL

NC 211 / POOLE RD.

FOR PLAN VIEW, SEE SHEET NO. 20

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-14
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
10/15/2024
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER
Signed by: MARK E. MAYS, PE
Mark E. Mays

HYDRAULICS ENGINEER
10/14/2024
NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER
Signed by: COURTLAND A. HOFFMAN
Courtland A. Hoffman

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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8/28/2024
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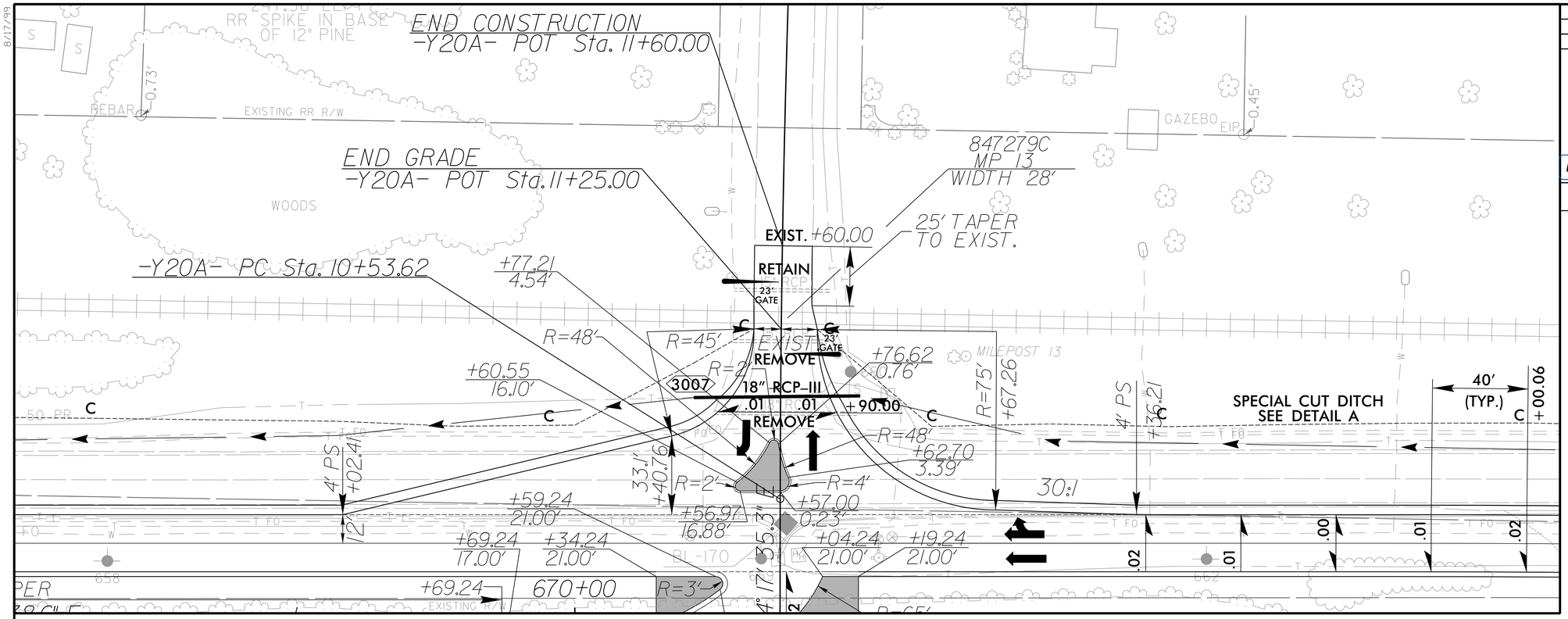

NAD 83 /NA 2011

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-15
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAIL

8/28/2024

Signed by: Mary Mays Yail

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HYDRAULICS ENGINEER

10/14/2024

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN

Signed by: Courtland Hoffman

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. THE EXISTING CROSSING SURFACE SHALL NOT BE DISTURBED. CONTRACTOR SHALL PAVE UP TO THE EXISTING CROSSING ON EACH SIDE OF THE TRACK AND MAKE A SMOOTH TRANSITION WITH THE EXISTING PAVEMENT SURFACE. CONTACT THE NCDOT RESIDENT ENGINEER TO COORDINATE THE INSTALLATION OF THE NEW ASPHALT PAVEMENT SURFACE APPROACHES. THE RAILROAD PROTECTIVE DEVICES WILL BE INSTALLED BY THE RAILROAD.

2. ANY EXISTING ASPHALT REMOVED FROM THE CROSSING APPROACHES SHALL BE REMOVED FROM THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY BY THE CONTRACTOR. THE EXISTING CROSSBUCKS WILL BE REMOVED BY THE RAILROAD.

3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY.

5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED, DRAINAGE AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY, ACCORDING TO THE PLAN.

6. ENSURE ALL NECESSARY TEMPORARY AND/OR PERMANENT PAVEMENT MARKING/SIGNING AND CROSSING PROTECTION IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS. SHOULD THE NECESSARY PROTECTIONS NOT BE AVAILABLE, THEN THE ROAD MUST REMAIN CLOSED TO VEHICULAR TRAFFIC.

GRAPHIC SCALE

25 0 25 50

PLANS

CROSSING CONSTRUCTION DETAIL

NC 211 / IVEY ST.

FOR PLAN VIEW, SEE SHEET NO. 30

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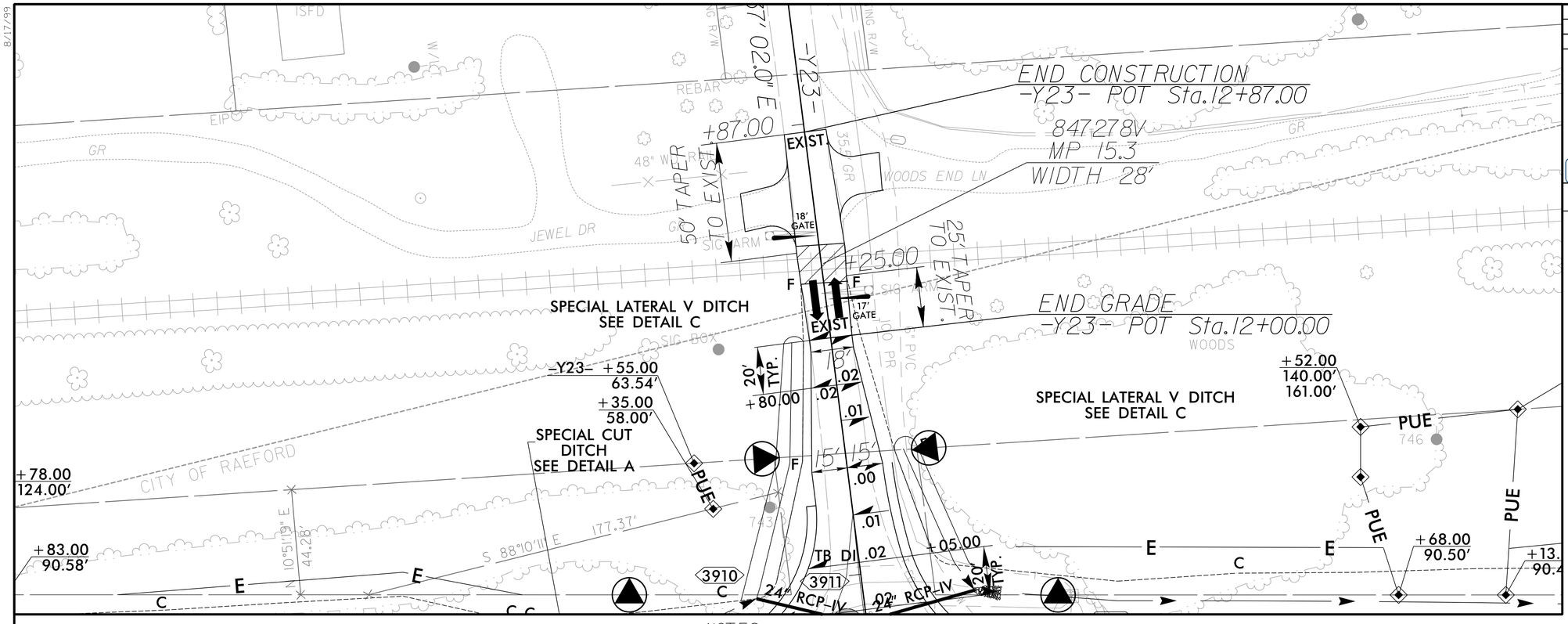
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-16
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — 8/14/2024
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS, PE
Signature: Mary Mays Hall

HYDRAULICS ENGINEER — 8/14/2024
NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN
Signature: Courtland Hoffman

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NAD 83 /NA 2011

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. CONTACT THE NCDOT RESIDENT ENGINEER TO COORDINATE THE REMOVAL/INSTALLATION OF THE NEW AT-GRADE CROSSING SURFACE AND INSTALLATION OF THE RAILROAD PROTECTIVE DEVICES, AS THESE WILL BE INSTALLED BY THE RAILROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAVING UP TO AND THROUGH THE NEW AT-GRADE CROSSING UNDER THE DIRECTION OF THE RAILROAD. THIS IS A ONE-WAY IN AND ONE-WAY OUT CROSSING. THE CONTRACTOR SHALL PROVIDE THE MEANS FOR THE CROSSING WORK TO BE PERFORMED AND MAINTAIN AT LEAST ONE LANE OF ACCESS.

2. THE EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY TO BE REMOVED BY CONTRACTOR. CONTRACTOR WILL SAW CUT THE ASPHALT 8' FROM THE NEAR RAIL EITHER SIDE OF THE TRACK. RAILROAD WILL REMOVE ASPHALT BETWEEN THE SAW CUTS AND STOCKPILE ASPHALT FOR REMOVAL BY CONTRATOR. THE EXISTING CROSSBUCKS, GATES, AND/OR FLASHERS WILL BE REMOVED BY THE RAILROAD.

3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY.

5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED, DRAINAGE AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY, ACCORDING TO THE PLAN.

6. ENSURE ALL NECESSARY TEMPORARY AND/OR PERMANENT PAVEMENT MARKING/SIGNING AND CROSSING PROTECTION IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS. SHOULD THE NECESSARY PROTECTIONS NOT BE AVAILABLE, THEN THE ROAD MUST REMAIN CLOSED TO VEHICULAR TRAFFIC.

CROSSING CONSTRUCTION DETAIL

NC 211 / LAKE ELIZABETH RD.

GRAPHIC SCALE
25 0 25 50
PLANS

FOR PLAN VIEW, SEE SHEET NOS. 39

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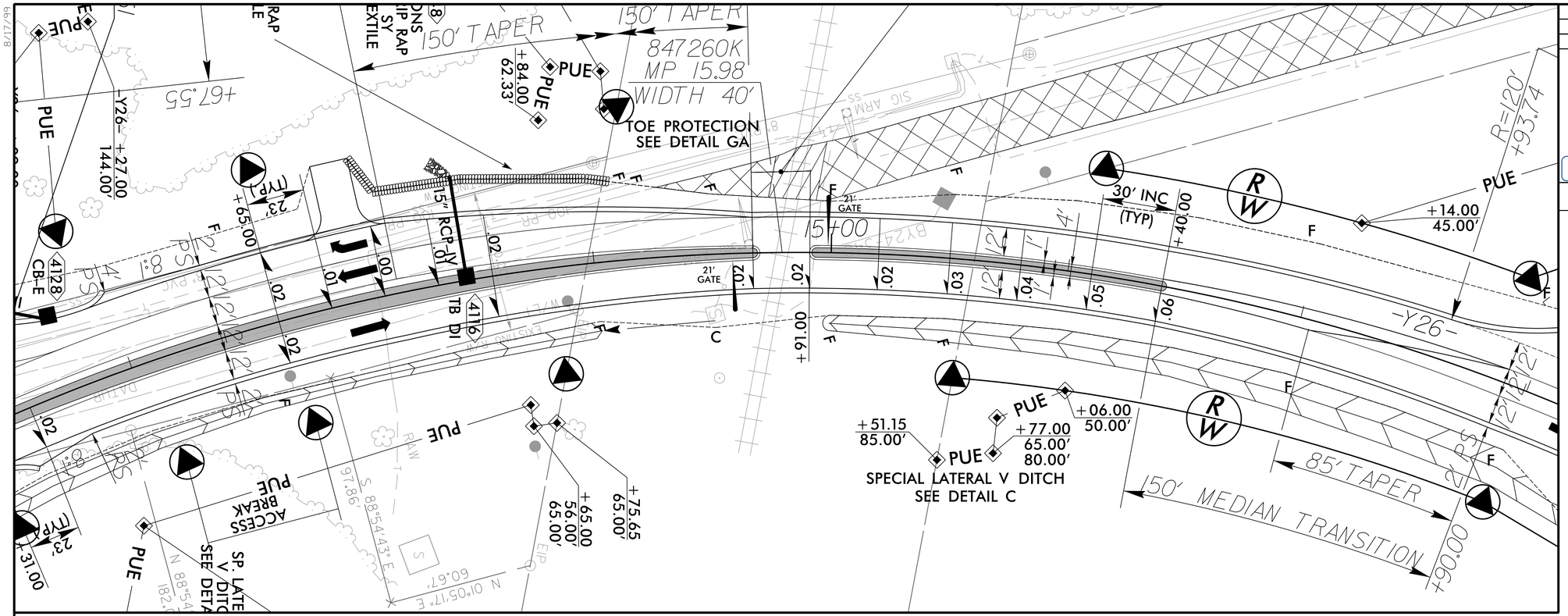

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-17
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS YAIL — 10/16/2024

Signed by: Mary E. Mays Yail

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND R. HOFFMAN — 10/14/2024

Signed by: Courtland R. Hoffman

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83 /NA 2011

NOTE: ALL WORK WITHIN ABERDEEN & ROCKFISH RR CORRIDOR TO BE COORDINATED WITH NCDOT & ABERDEEN & ROCKFISH RR.

PAVEMENT REMOVAL BY OTHERS

NOTES:

1. CONTACT THE NCDOT RESIDENT ENGINEER TO COORDINATE THE INSTALLATION OF THE NEW AT-GRADE CROSSING, CONCRETE TUB AND ASSOCIATED REMOVAL/REPLACEMENT OF TRACK, AND THE RAILROAD PROTECTIVE DEVICES, AS THESE WILL BE INSTALLED BY THE RAILROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAVING UP TO AND THROUGH THE NEW AT-GRADE CROSSING UNDER THE DIRECTION OF THE RAILROAD.

2. THE EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT-OF-WAY TO BE REMOVED BY CONTRACTOR. THE CONTRACTOR WILL SAW CUT ASPHALT 8 FEET FROM THE NEAR RAIL ON EACH SIDE OF THE CROSSING. THE RAILROAD WILL REMOVE ASPHALT BETWEEN THE SAW CUTS (PAVEMENT REMOVAL BY OTHERS) AND STOCKPILE FOR REMOVAL BY THE CONTRACTOR. ALL EXISTING PAVEMENT WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY TO BE REMOVED BY THE CONTRACTOR. THE EXISTING CROSSBUCKS, GATES AND/OR FLASHERS WILL BE REMOVED BY THE RAILROAD.

3. CONTRACTOR SHALL STABILIZE THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.

4. CONTRACTOR SHALL CONTACT NORTH CAROLINA 811 TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA. CONTRACTOR SHALL ALSO CONTACT ABERDEEN & ROCKFISH RR TO LOCATE ANY UNDERGROUND RAILROAD UTILITIES IN THE WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THE ABERDEEN & ROCKFISH RR RIGHT OF WAY.

5. CONTRACTOR SHALL REMOVE EXISTING HIGHWAY ROADBED, DRAINAGE AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY, ACCORDING TO THE PLAN.

6. ENSURE ALL NECESSARY TEMPORARY AND/OR PERMANENT PAVEMENT MARKING/SIGNING AND CROSSING PROTECTION IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS. SHOULD THE NECESSARY PROTECTIONS NOT BE AVAILABLE, THEN THE ROAD MUST REMAIN CLOSED TO VEHICULAR TRAFFIC.

GRAPHIC SCALE
25 0 25 50
PLANS

CROSSING CONSTRUCTION DETAIL

NC 211 / MOCKINGBIRD HILL RD.

FOR PLAN VIEW, SEE SHEET NOS. 41-44

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-18

R/W SHEET NO.

ROADWAY DESIGN ENGINEER — SEAL 040878, Mary Mays Yalil, 10/15/2024

HYDRAULICS ENGINEER — SEAL 51640, Courtland A. Hoffman, 10/14/2024

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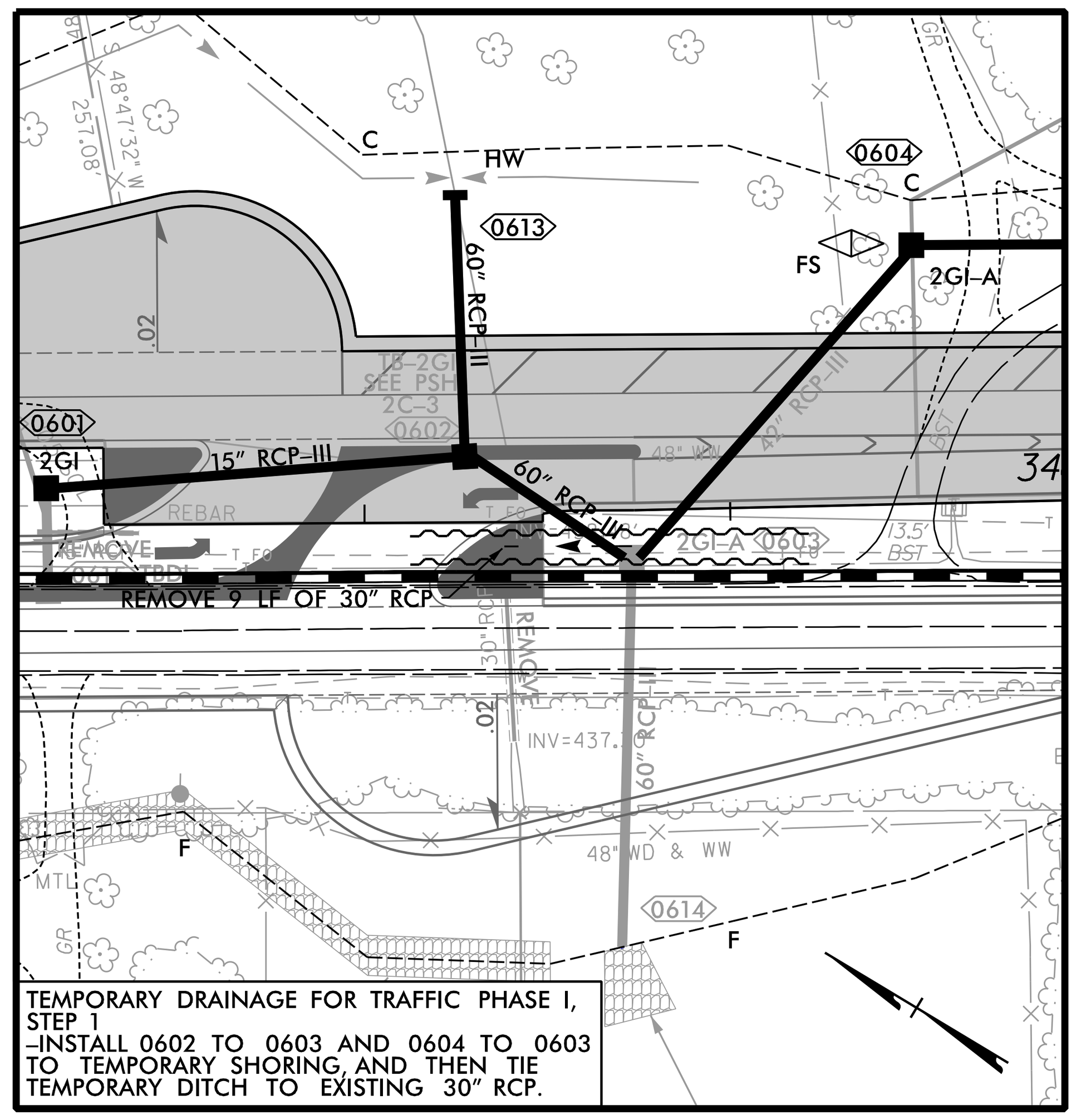
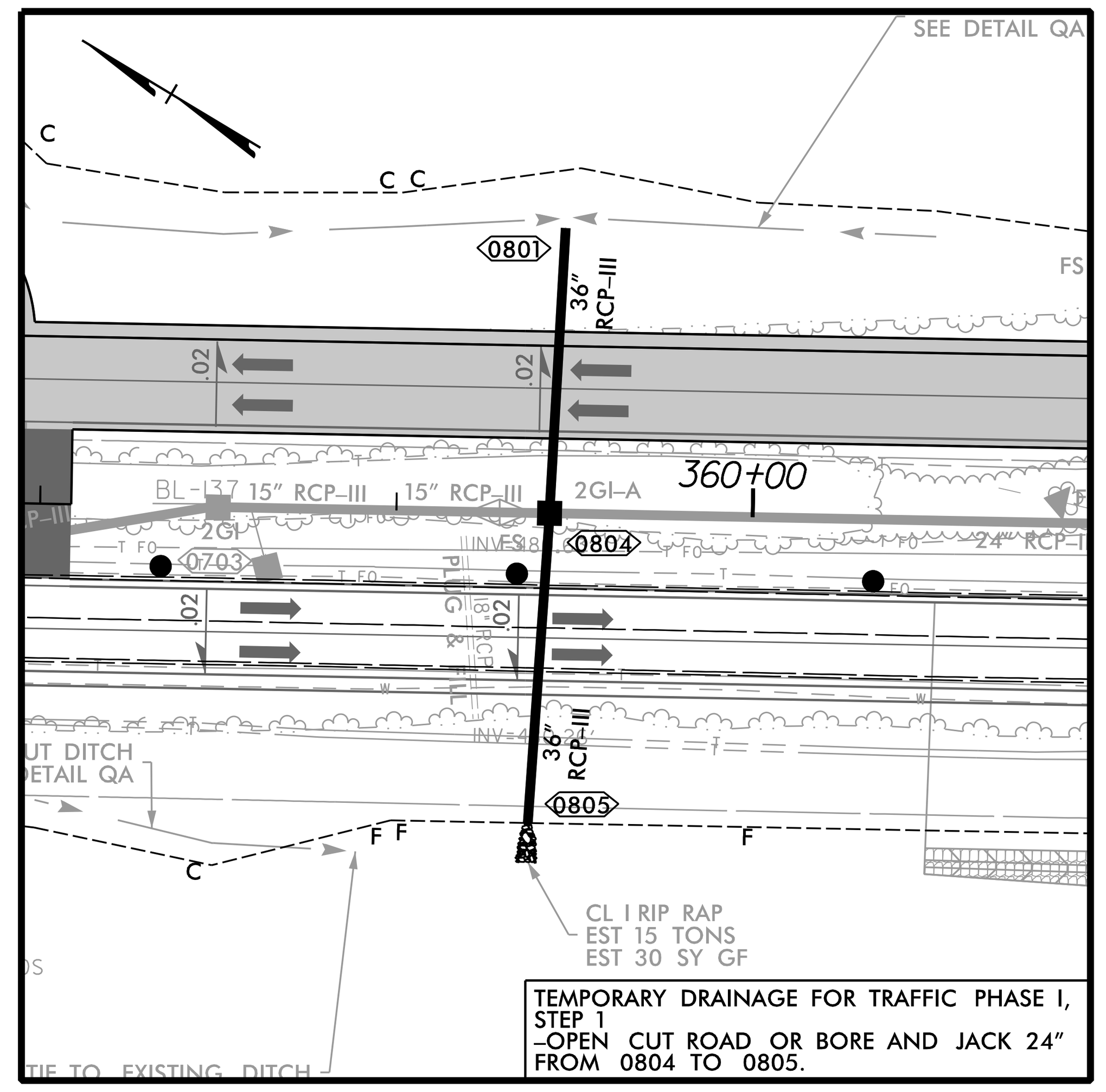
TEMPORARY DRAINAGE PIPE LOCATION DETAILS FOR INFORMATION USE





TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE CONSTRUCTED AND/OR UTILIZED WHILE IN THE TRAFFIC PHASE INDICATED

PROPOSED DRAINAGE FOR FINAL CONDITION

SCALE
50 25 0 50 100

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-19
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER — 10/14/2024

Signed MARY E. MAXS YAIL

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER — 10/14/2024

Signed Courtland A. Hoffman

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TEMPORARY DRAINAGE PIPE LOCATION DETAILS FOR INFORMATION USE

#1: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– REMOVE HEADWALL AND 22' OF EXISTING 18" RCP.
– INSTALL FIRST 88' OF PROP 24" RCP–III (0806)
– INSTALL TEMP. BOXES T100 AND T101; TIE T101 TO EXISTING 18" RCP
– INSTALL TEMP. 24" PIPE BETWEEN T100 AND T101
– PRIOR TO FINAL PHASE, REMOVE T100, T101, AND TEMP. 24" PIPE

NOTE: RCP OR HDPE IS RECOMMENDED FOR 24" TEMP. PIPE TO MAXIMIZE CAPACITY DUE TO SHALLOW SLOPE.

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#4:TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– REMOVE LAST 36' OF EXISTING 18" RCP
– INSTALL TEMP. BOX T104 AND TIE TO EXISTING 18" RCP
– INSTALL BOX 1112 AND REMAINDER OF PROP. SYSTEM ON DOWNSTREAM SIDE
– INSTALL 24" RCP–III BETWEEN T104 AND 1112
– PRIOR TO FINAL PHASE, REMOVE T104 AND TEMP. 24" PIPE

NOTE: RCP OR HDPE IS RECOMMENDED FOR 24" TEMP. PIPE TO ACHIEVE SIMILAR CAPACITY TO EXIST. 18" RCP.

#7: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– REMOVE LAST 14' OF EXISTING 18" RCP
– INSTALL TEMPORARY JB W/MH T106
– INSTALL PROPOSED BOX 1305 AND REMAINDER OF THE CONNECTED PROPOSED SYSTEM
– INSTALL TEMPORARY 18" RCP–III BETWEEN T106 AND 1305.
– PRIOR TO FINAL PHASE, REMOVE T106, T107, AND TEMP. 18" PIPE

NOTE: RCP OR HDPE IS RECOMMENDED FOR 18" TEMP. PIPE TO ACHIEVE SIMILAR CAPACITY TO EXISTING 18" RCP.

NOTE: TEMP. RCP SIZED AT 30" TO ACHIEVE SIMILAR CAPACITY TO EXISTING 24" RCP.

#2: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL PROP. SYSTEM TO JB W/MH (0904)
– REMOVE EXISTING HW AND FIRST 12' OF EXISTING 24" RCP
– INSTALL TEMP. BOXES T102 AND T103
– TIE T103 WITH EXISTING 24" RCP
– INSTALL FIRST 32' OF PROP. 36" RCP–III (0904)
– TIE 36" RCP–III TO T102
– PRIOR TO FINAL PHASE, REMOVE T102, T103, AND TEMP. 30" PIPE

#5: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL TEMPORARY BOX T134 AND TEMP 15" TO TIE WITH PROPOSED BOX 1116
– INSTALL REMAINDER OF PROPOSED SYSTEM TO OUTFALL
– PRIOR TO FINAL PHASE, REMOVE T134 AND TEMP. 15" PIPE

#8: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL TEMP. BOX T110 AND TIE TO EXISTING 18" RCP, GRADE TO DRAIN AS NECESSARY
– INSTALL TEMP. 18" RCP FROM T110 TO T111
– ONCE FULL LENGTH OF 2@42" RCP ARE INSTALLED, REMOVE T110 AND PLUG & FILL TEMP 18" RCP

#3: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– REMOVE 17' EXISTING 30" RCP
– INSTALL TEMP. BOX T105 AND TIE TO EX. 30" RCP
– INSTALL PROP. BOX 1202 AND 1214
– INSTALL TEMP. 30" RCP FROM T105 TO 3502 AND PROP. 72" PIPES TO OUTLET (1203)
– PRIOR TO FINAL PHASE; REMOVE T105, PLUG & FILL TEMP. 30" PIPE

NOTE: TEMP. LAYOUT DESIGNED TO PERMIT USE OF EXISTING 30" RCP UNTIL DITCH GRADING TO PROPOSED HEADWALL (3504) IS COMPLETE.

#6: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL TEMP. BOX T108 AND TIE TO EXISTING 18" RCP
– INSTALL TEMP. 24" RCP FROM T108 TO T109
– GRADE TO DRAIN ANY LOW SPOTS ALONG TEMP. FILL SLOPE, AS SHOWN
– ONCE FULL LENGTH OF 42" RCP IS INSTALLED,REMOVE T108 AND PLUG & FILL TEMP. 24" RCP

NOTE: TEMP. RCP SIZED AT 24" TO ACHIEVE SIMILAR CAPACITY TO EXISTING 18" RCP.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE CONSTRUCTED AND/OR UTILIZED WHILE IN THE TRAFFIC PHASE INDICATED

PROPOSED DRAINAGE FOR FINAL CONDITION

SCALE 50 25 0 50 100

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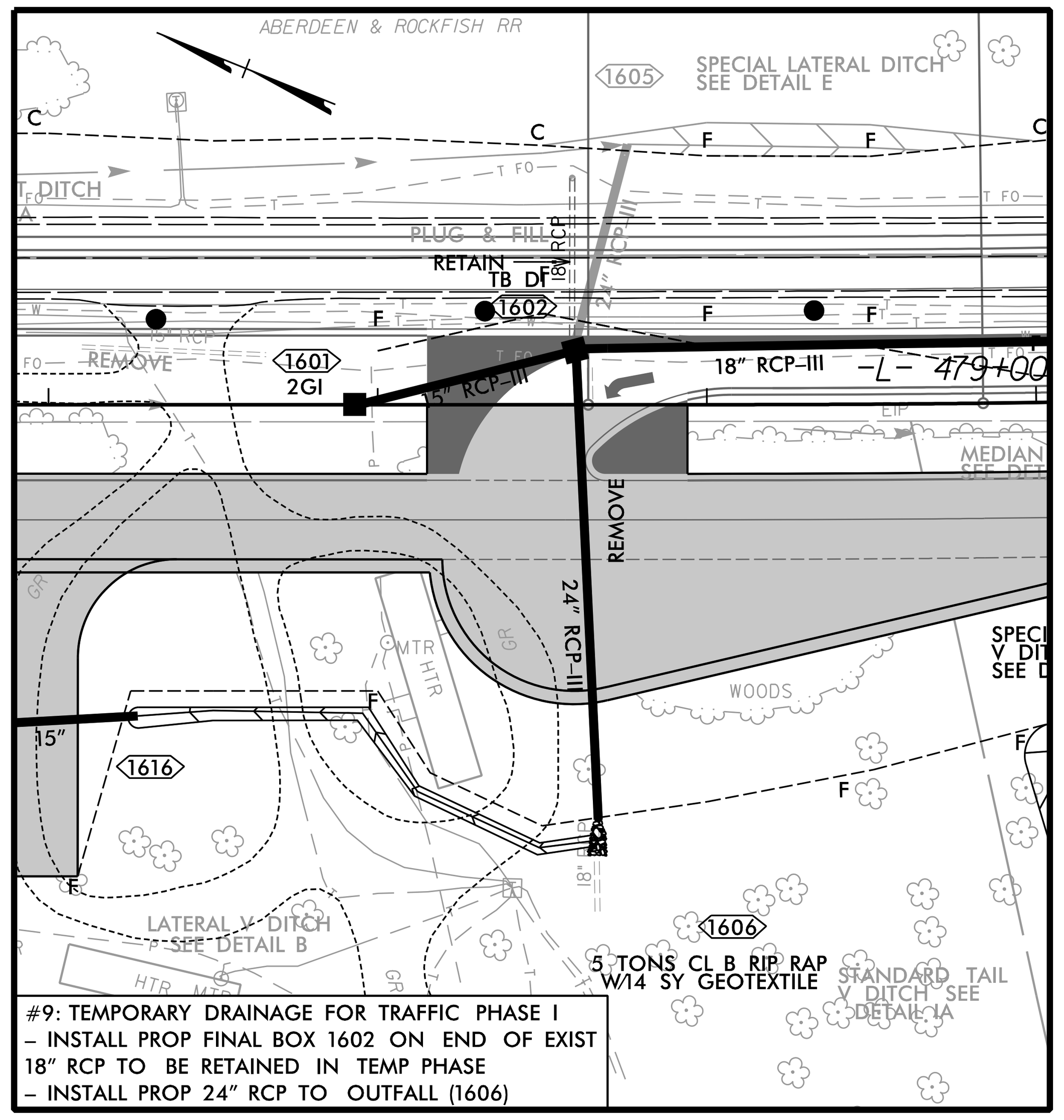
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-20
R/W SHEET NO.	

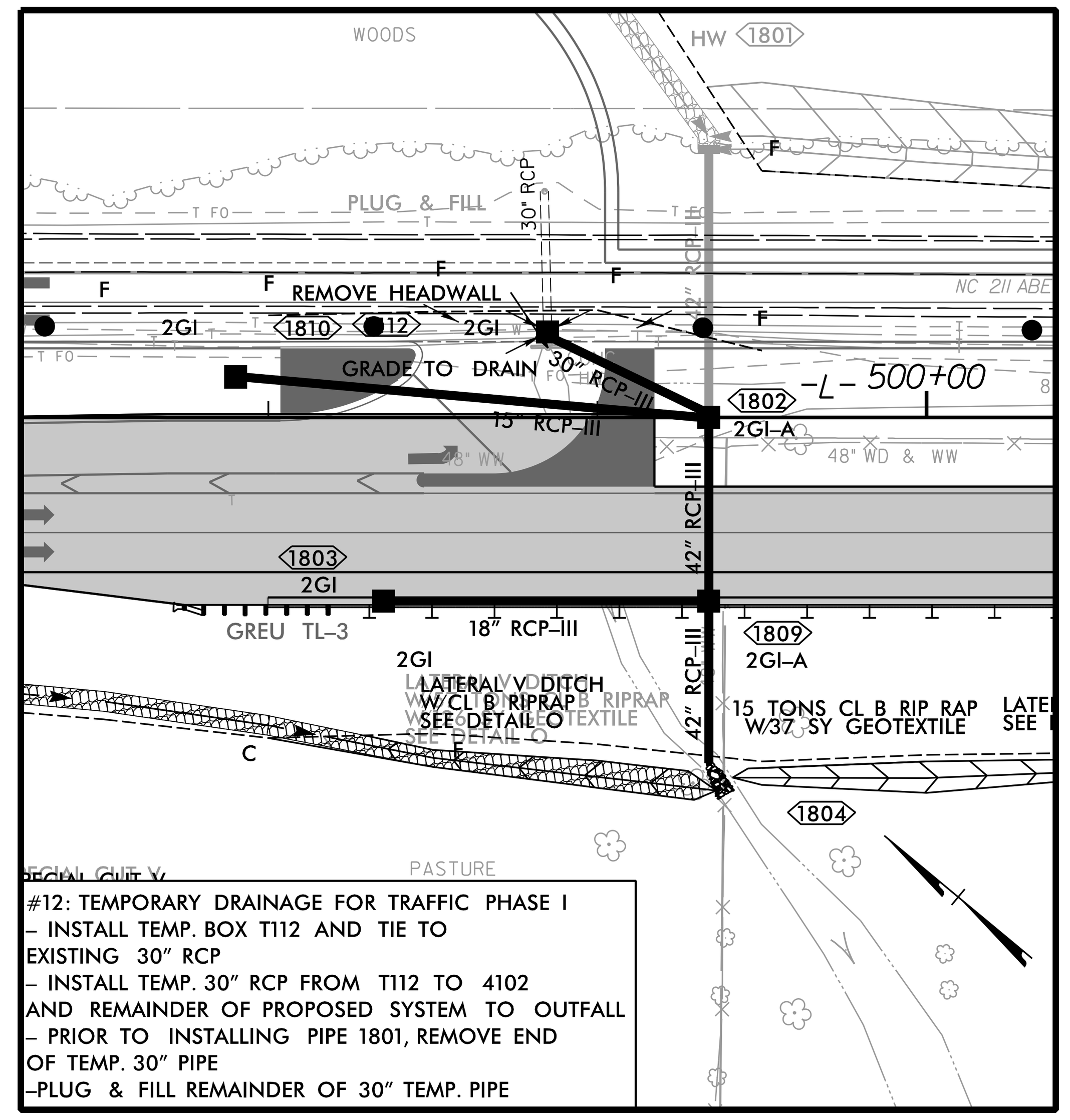
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARY E. MAYS HALL — 10/15/2024	NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN — 10/14/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

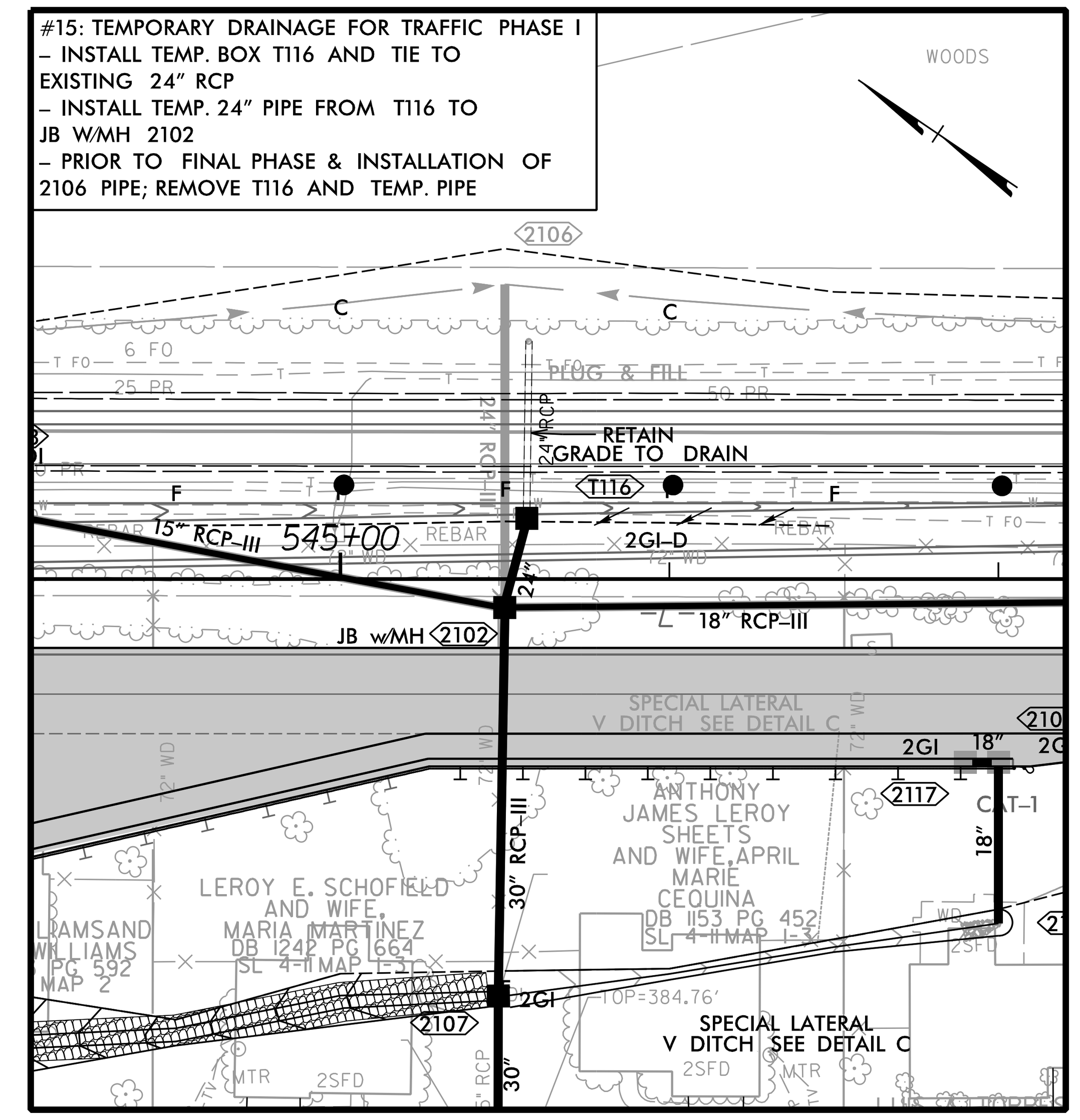
TEMPORARY DRAINAGE PIPE LOCATION DETAILS FOR INFORMATION USE



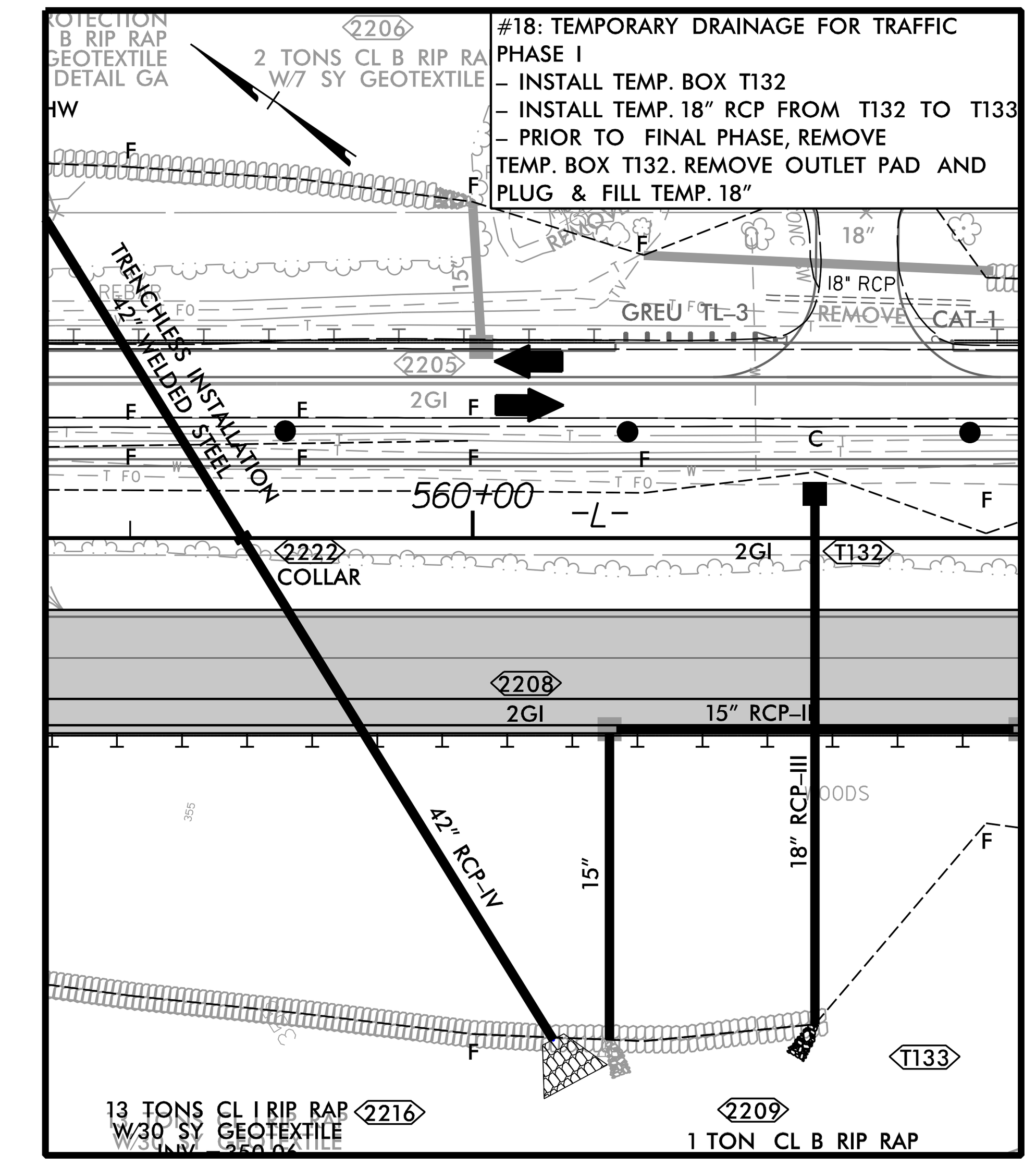
#9: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL PROP FINAL BOX 1602 ON END OF EXIST 18" RCP TO BE RETAINED IN TEMP PHASE
- INSTALL PROP 24" RCP TO OUTFALL (1606)



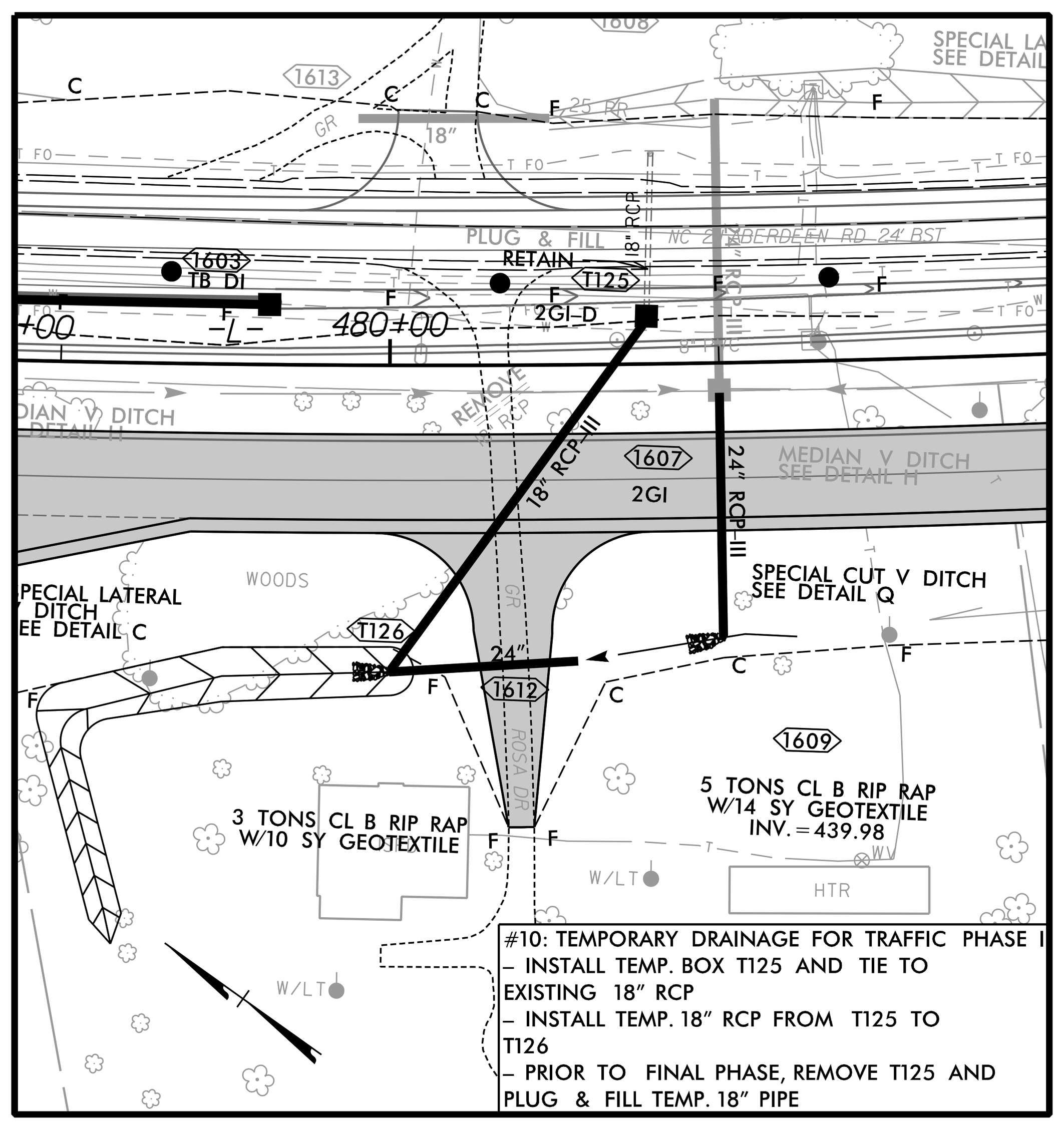
#12: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T112 AND TIE TO EXISTING 30" RCP
- INSTALL TEMP. 30" RCP FROM T112 TO 4102 AND REMAINDER OF PROPOSED SYSTEM TO OUTFALL
- PRIOR TO INSTALLING PIPE 1801, REMOVE END OF TEMP. 30" PIPE
- PLUG & FILL REMAINDER OF 30" TEMP. PIPE



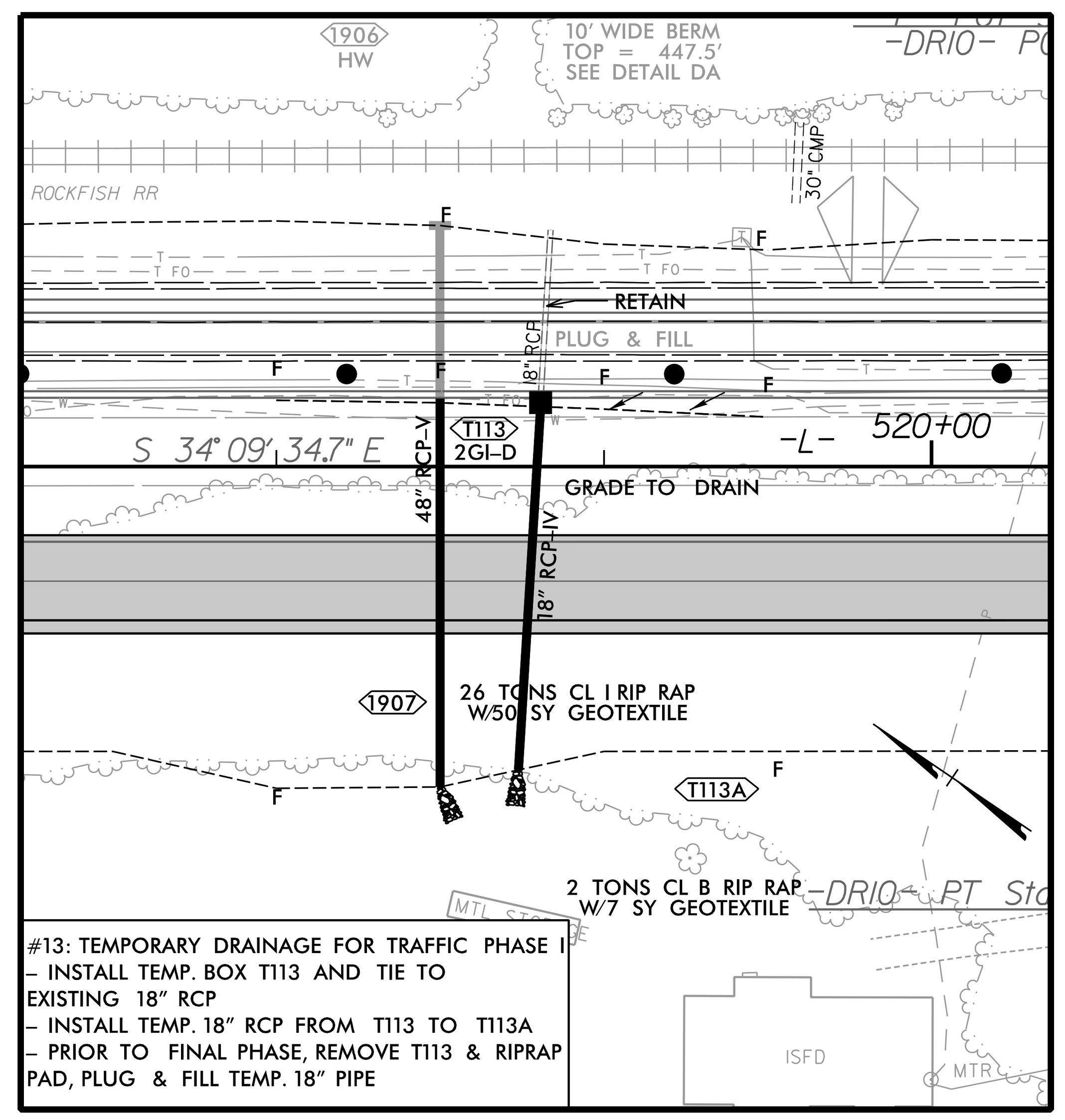
#15: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T116 AND TIE TO EXISTING 24" RCP
- INSTALL TEMP. 24" PIPE FROM T116 TO JB W/MH 2102
- PRIOR TO FINAL PHASE & INSTALLATION OF 2106 PIPE; REMOVE T116 AND TEMP. PIPE



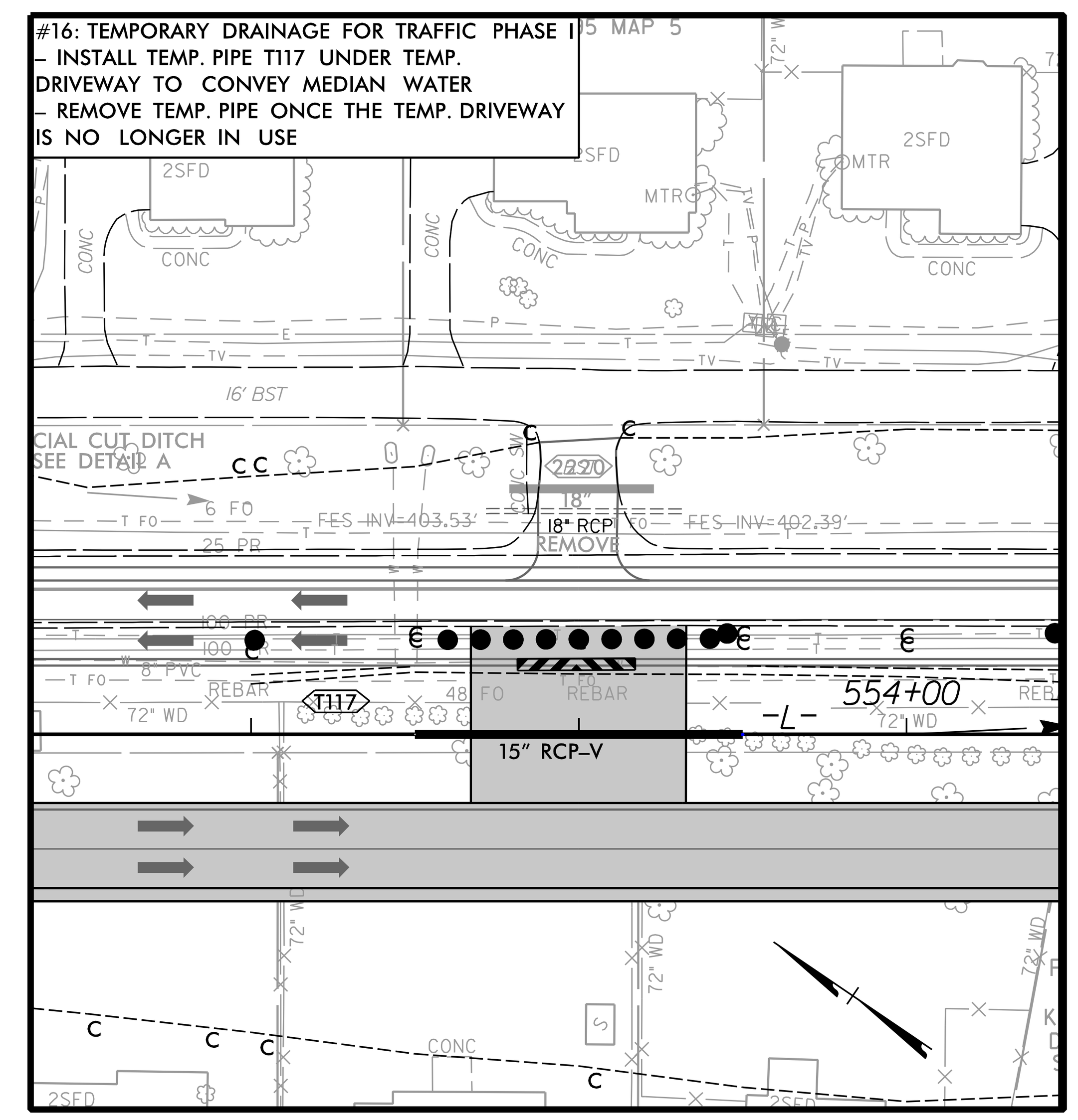
#18: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T132
- INSTALL TEMP. 18" RCP FROM T132 TO T133
- PRIOR TO FINAL PHASE, REMOVE TEMP. BOX T132, REMOVE OUTLET PAD AND PLUG & FILL TEMP. 18"



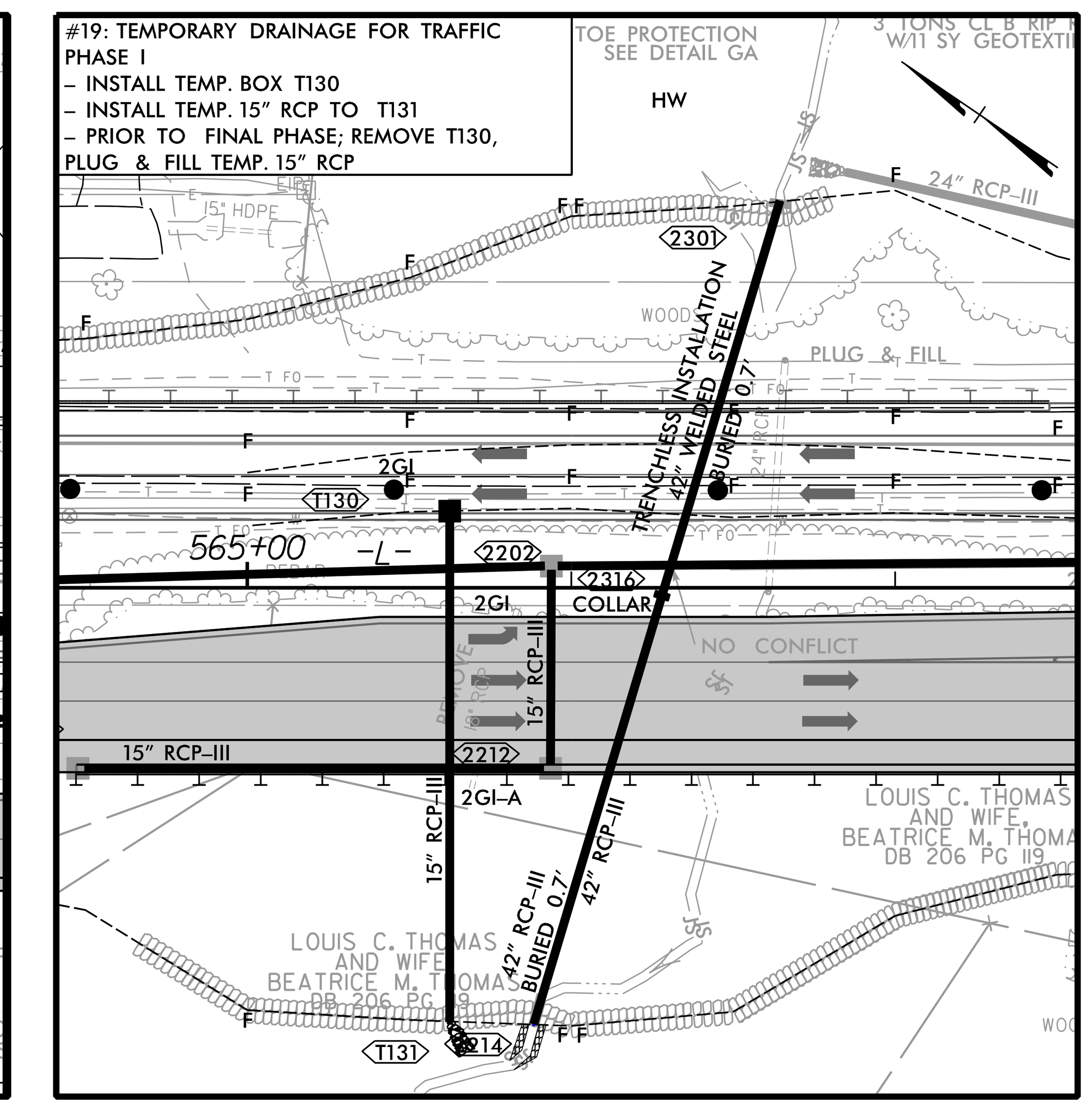
#10: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T125 AND TIE TO EXISTING 18" RCP
- INSTALL TEMP. 18" RCP FROM T125 TO T126
- PRIOR TO FINAL PHASE, REMOVE T125 AND PLUG & FILL TEMP. 18" PIPE



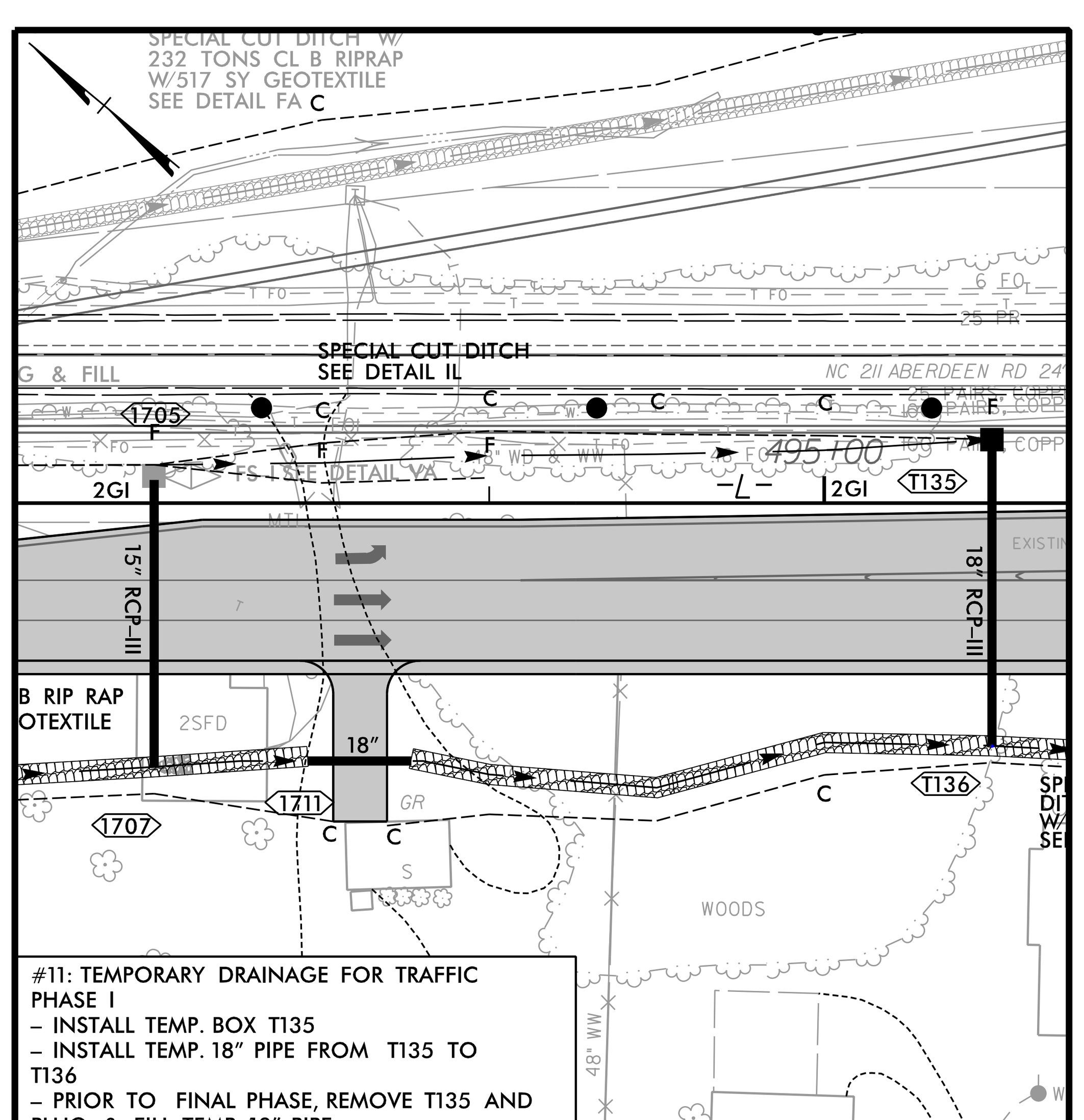
#13: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T113 AND TIE TO EXISTING 18" RCP
- INSTALL TEMP. 18" RCP FROM T113 TO T113A
- PRIOR TO FINAL PHASE, REMOVE T113 & RIPRAP PAD, PLUG & FILL TEMP. 18" PIPE



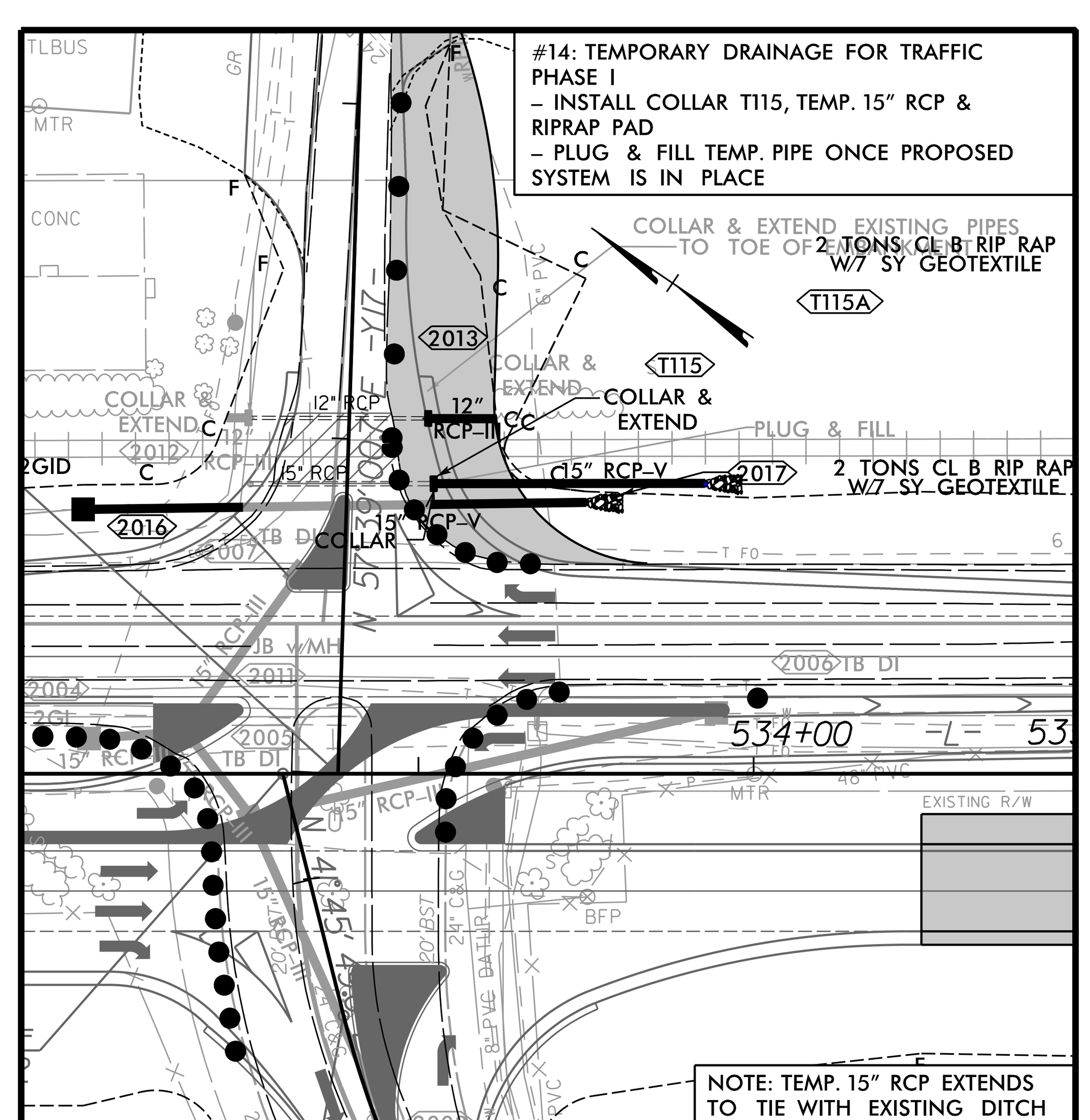
#16: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. PIPE T117 UNDER TEMP. DRIVEWAY TO CONVEY MEDIAN WATER
- REMOVE TEMP. PIPE ONCE THE TEMP. DRIVEWAY IS NO LONGER IN USE



#19: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T130
- INSTALL TEMP. 15" RCP TO T131
- PRIOR TO FINAL PHASE; REMOVE T130, PLUG & FILL TEMP. 15" RCP

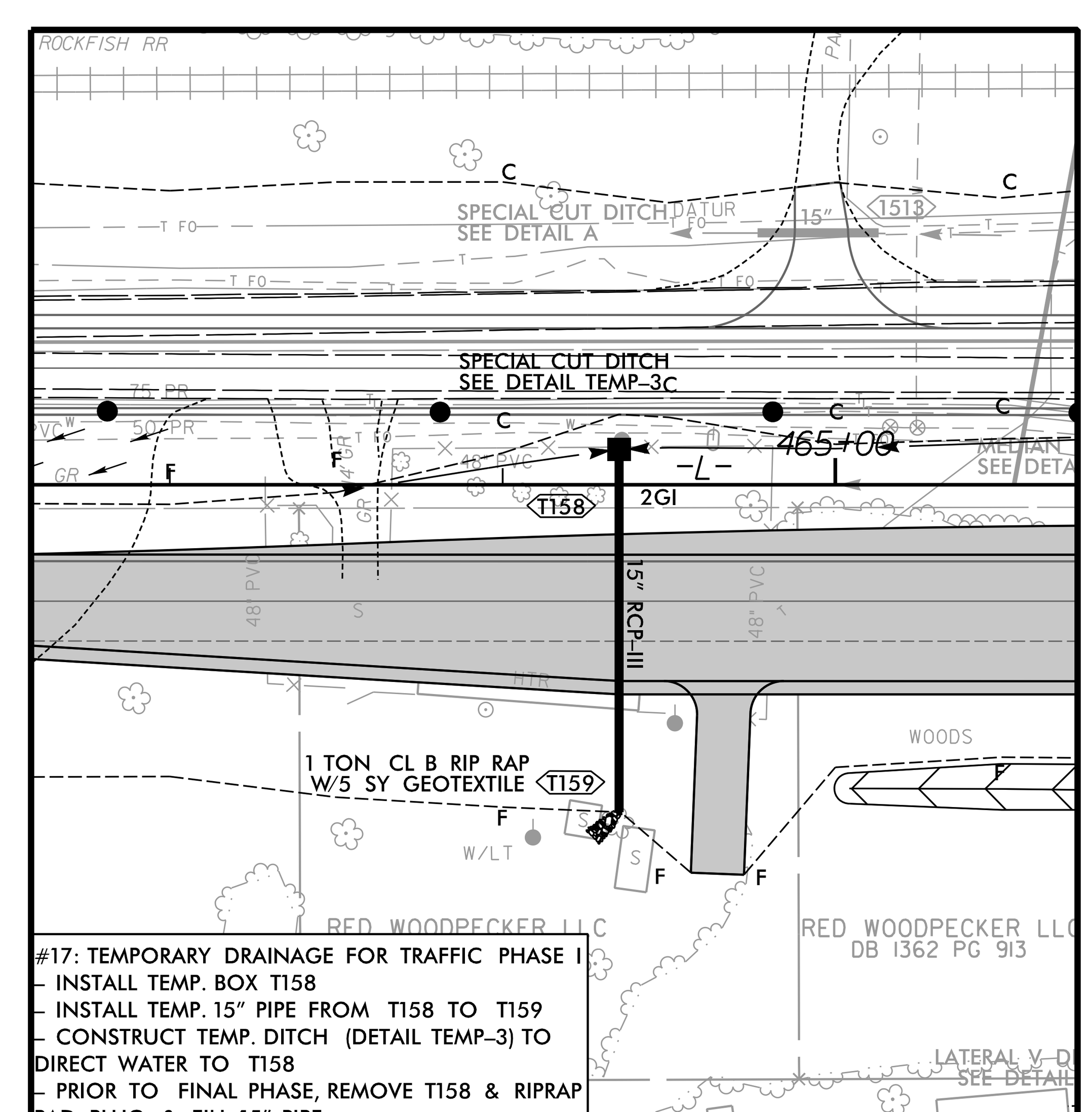


#11: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T135
- INSTALL TEMP. 18" PIPE FROM T135 TO T136
- PRIOR TO FINAL PHASE, REMOVE T135 AND PLUG & FILL TEMP. 18" PIPE

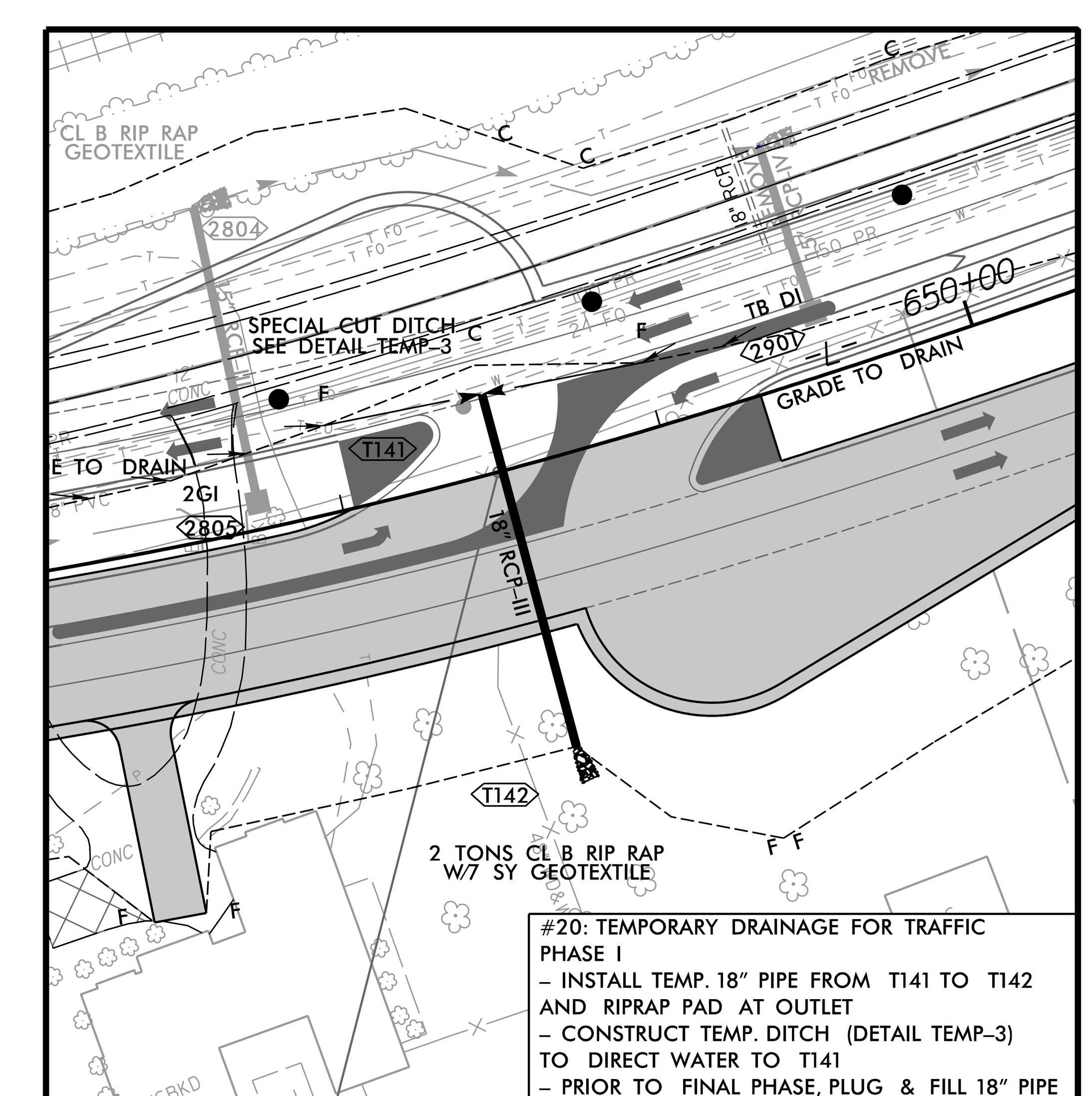


#14: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL COLLAR T115, TEMP. 15" RCP & RIPRAP PAD
- PLUG & FILL TEMP. PIPE ONCE PROPOSED SYSTEM IS IN PLACE

NOTE: TEMP. 15" RCP EXTENDS TO TIE WITH EXISTING DITCH AT SLOPE OF EXISTING 15" RCP.

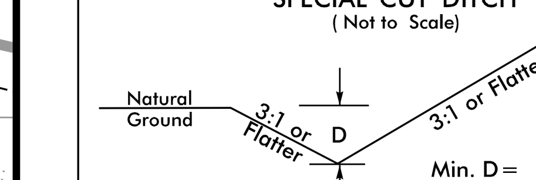


#17: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T158
- INSTALL TEMP. 15" PIPE FROM T158 TO T159
- CONSTRUCT TEMP. DITCH (DETAIL TEMP-3) TO DIRECT WATER TO T158
- PRIOR TO FINAL PHASE, REMOVE T158 & RIPRAP PAD, PLUG & FILL 15" PIPE



#20: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. 18" PIPE FROM T141 TO T142 AND RIPRAP PAD AT OUTLET
- CONSTRUCT TEMP. DITCH (DETAIL TEMP-3) TO DIRECT WATER TO T141
- PRIOR TO FINAL PHASE, PLUG & FILL 18" PIPE & REMOVE RIPRAP PAD

DETAIL TEMP-3
SPECIAL CUT DITCH
(Not to Scale)



-L-(TEMP) FROM STA. 463+50 TO 464+35 LT BEGIN ELEV=453.22', END ELEV=452.00'
-L-(TEMP) FROM STA. 464+35 TO STA. 466+00 LT BEGIN ELEV=452.00', END ELEV=453.52'
-L- (TEMP) FROM STA. 648+00 TO STA. 648+50 LT BEGIN ELEV=365.58', END ELEV=365.40'
-L- (TEMP) FROM STA. 648+50 TO STA. 649+00 LT BEGIN ELEV=365.40', END ELEV=365.58'

TEMPORARY DRAINAGE/ PERMANENT DRAINAGE TO BE CONSTRUCTED AND/OR UTILIZED WHILE IN THE TRAFFIC PHASE INDICATED

PROPOSED DRAINAGE FOR FINAL CONDITION

SCALE
50 25 0 50 100

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
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8/28/2024
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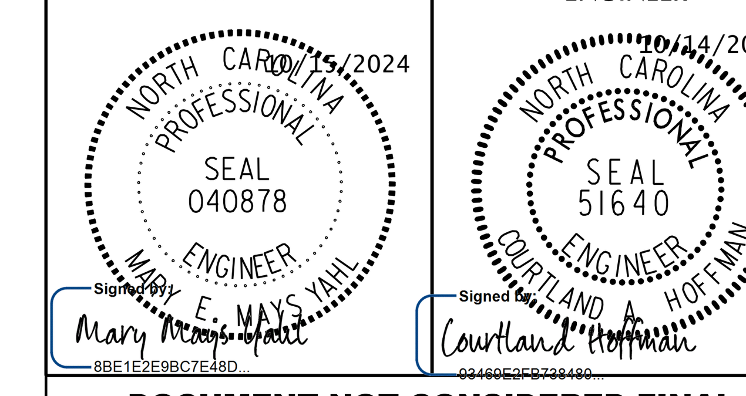
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-21

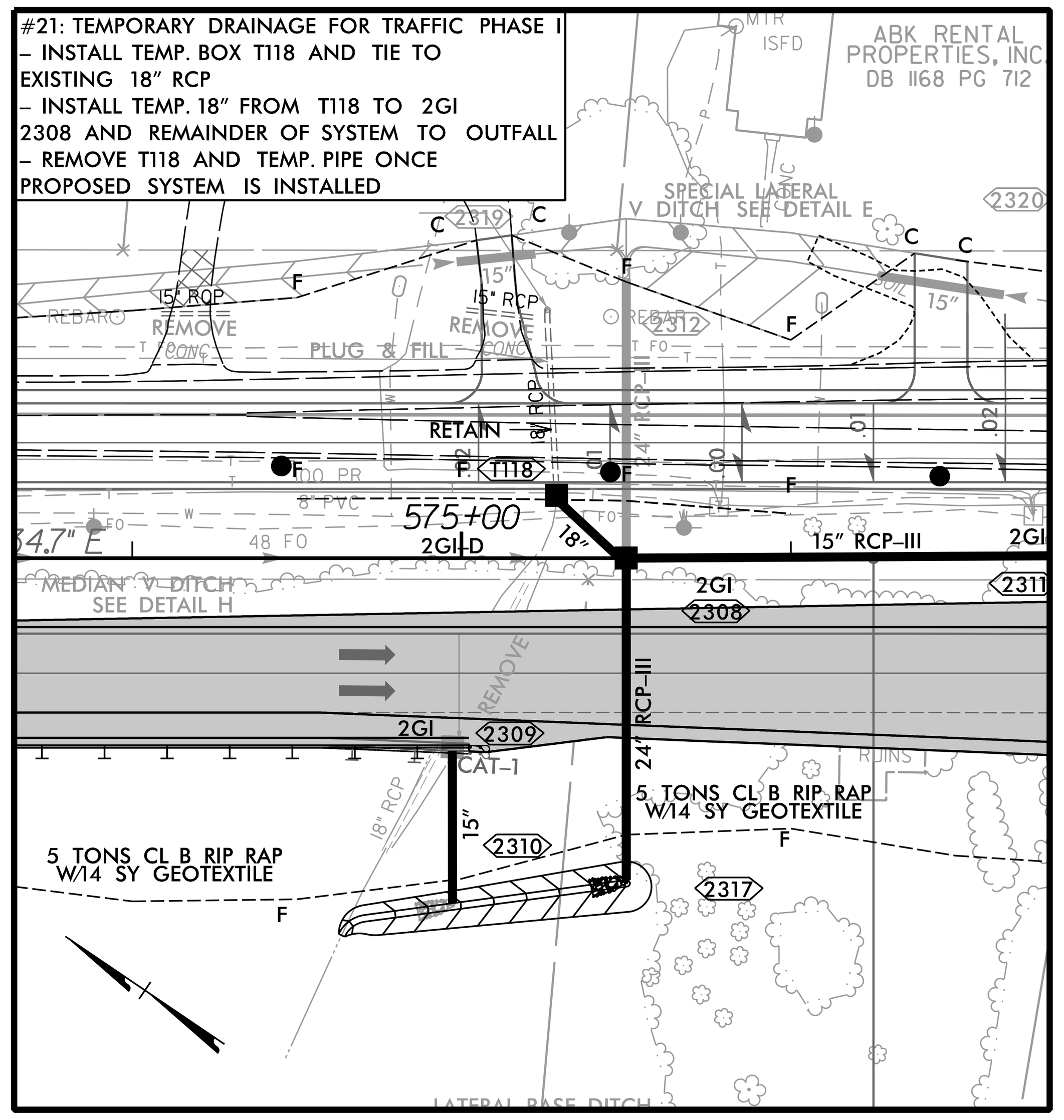
R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

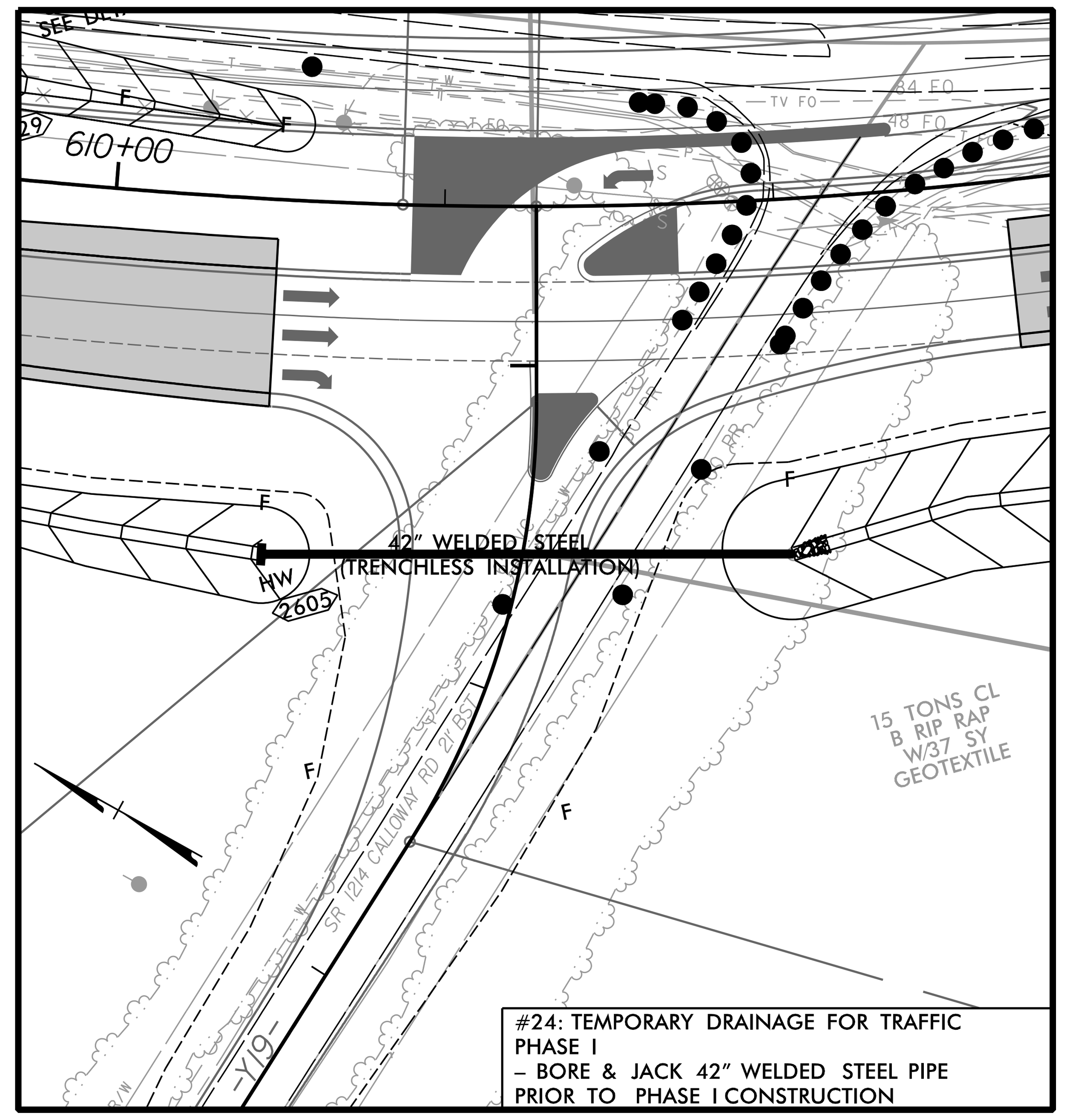


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

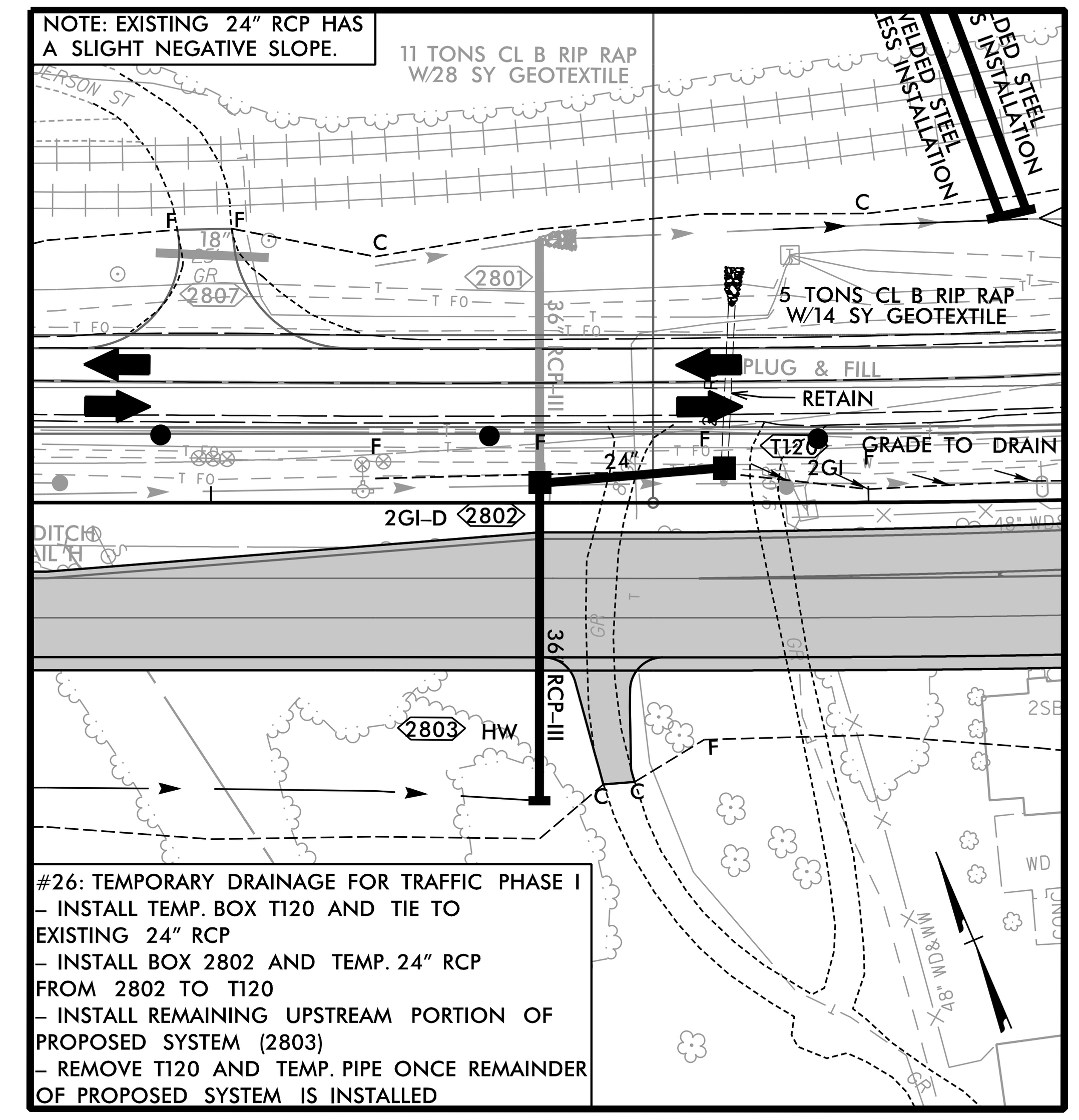
TEMPORARY DRAINAGE PIPE LOCATION DETAILS FOR INFORMATION USE



#21: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T118 AND TIE TO EXISTING 18" RCP
- INSTALL TEMP. 18" FROM T118 TO 2GI 2308 AND REMAINDER OF SYSTEM TO OUTFALL
- REMOVE T118 AND TEMP. PIPE ONCE PROPOSED SYSTEM IS INSTALLED

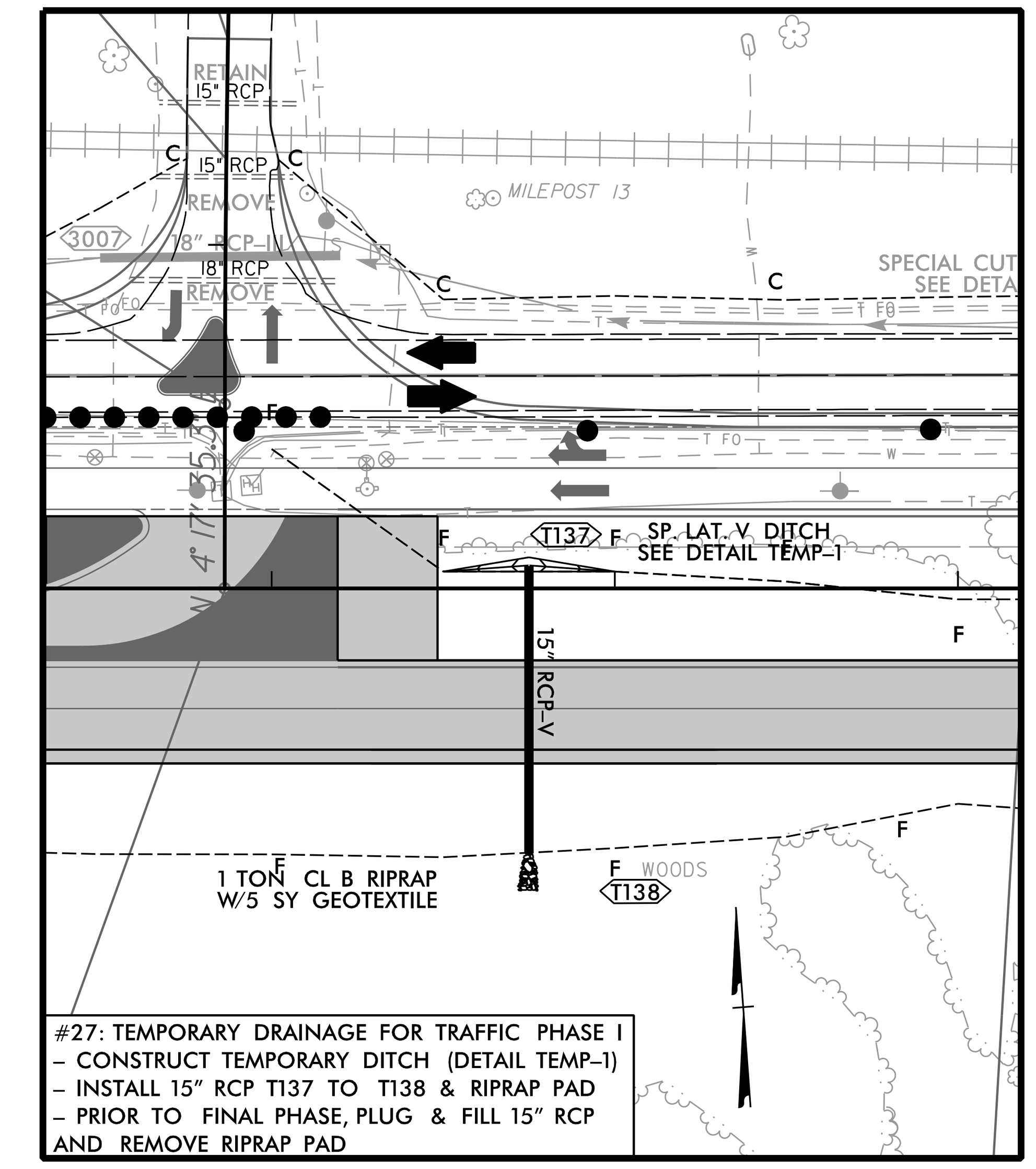


#24: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- BORE & JACK 42" WELDED STEEL PIPE PRIOR TO PHASE I CONSTRUCTION

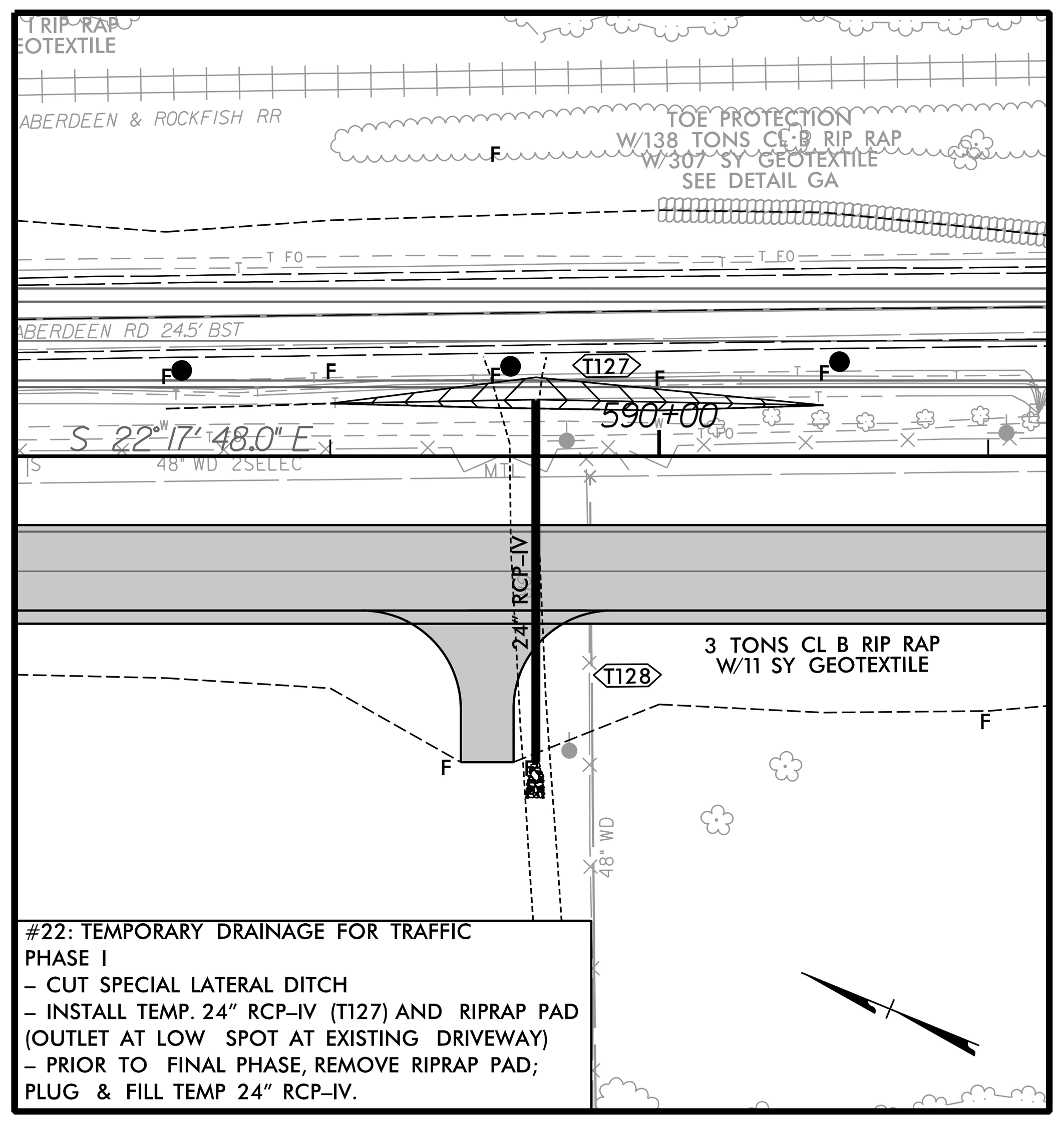


NOTE: EXISTING 24" RCP HAS A SLIGHT NEGATIVE SLOPE.

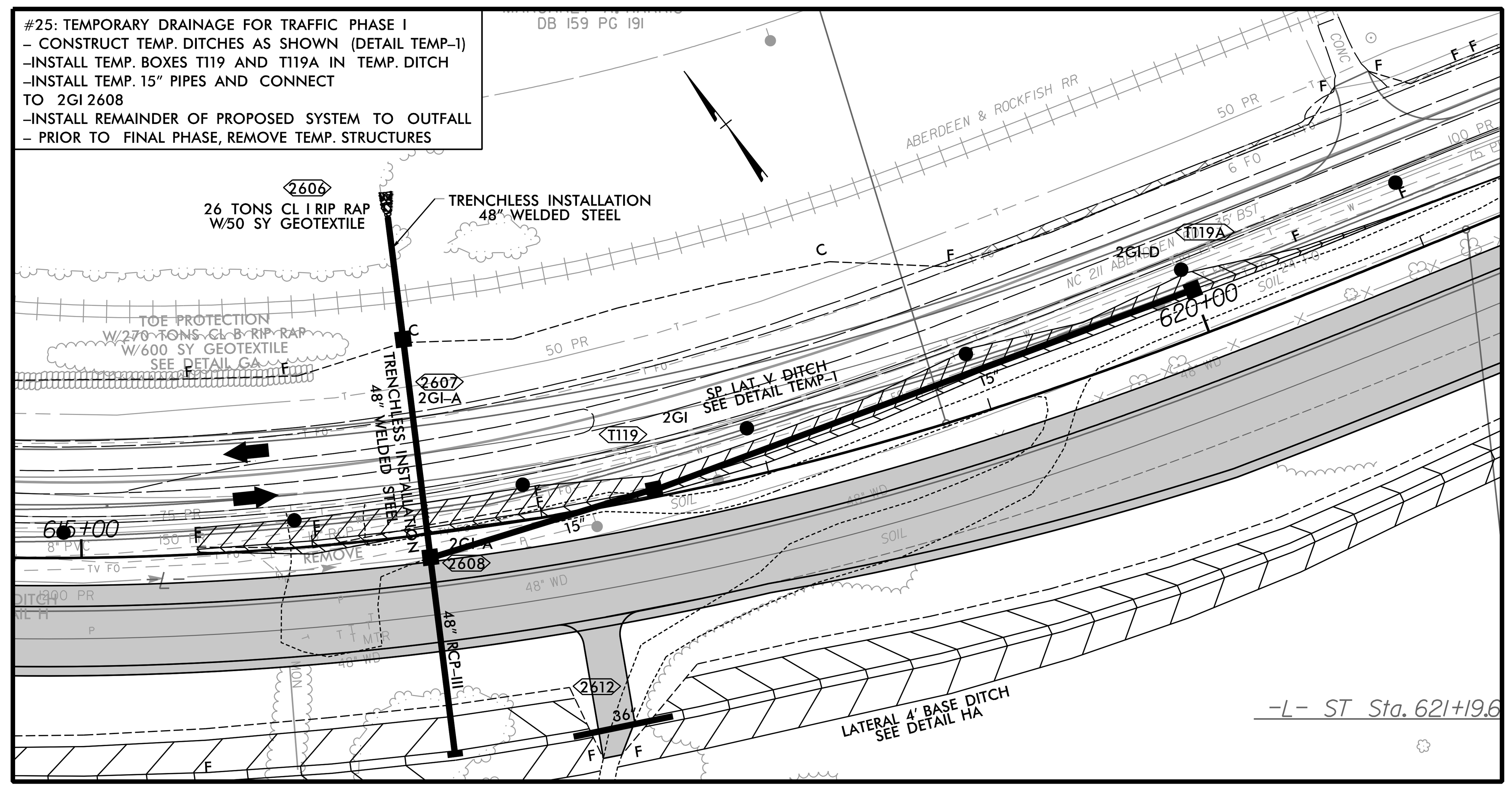
#26: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. BOX T120 AND TIE TO EXISTING 24" RCP
- INSTALL BOX 2802 AND TEMP. 24" RCP FROM 2802 TO T120
- INSTALL REMAINING UPSTREAM PORTION OF PROPOSED SYSTEM (2803)
- REMOVE T120 AND TEMP. PIPE ONCE REMAINDER OF PROPOSED SYSTEM IS INSTALLED



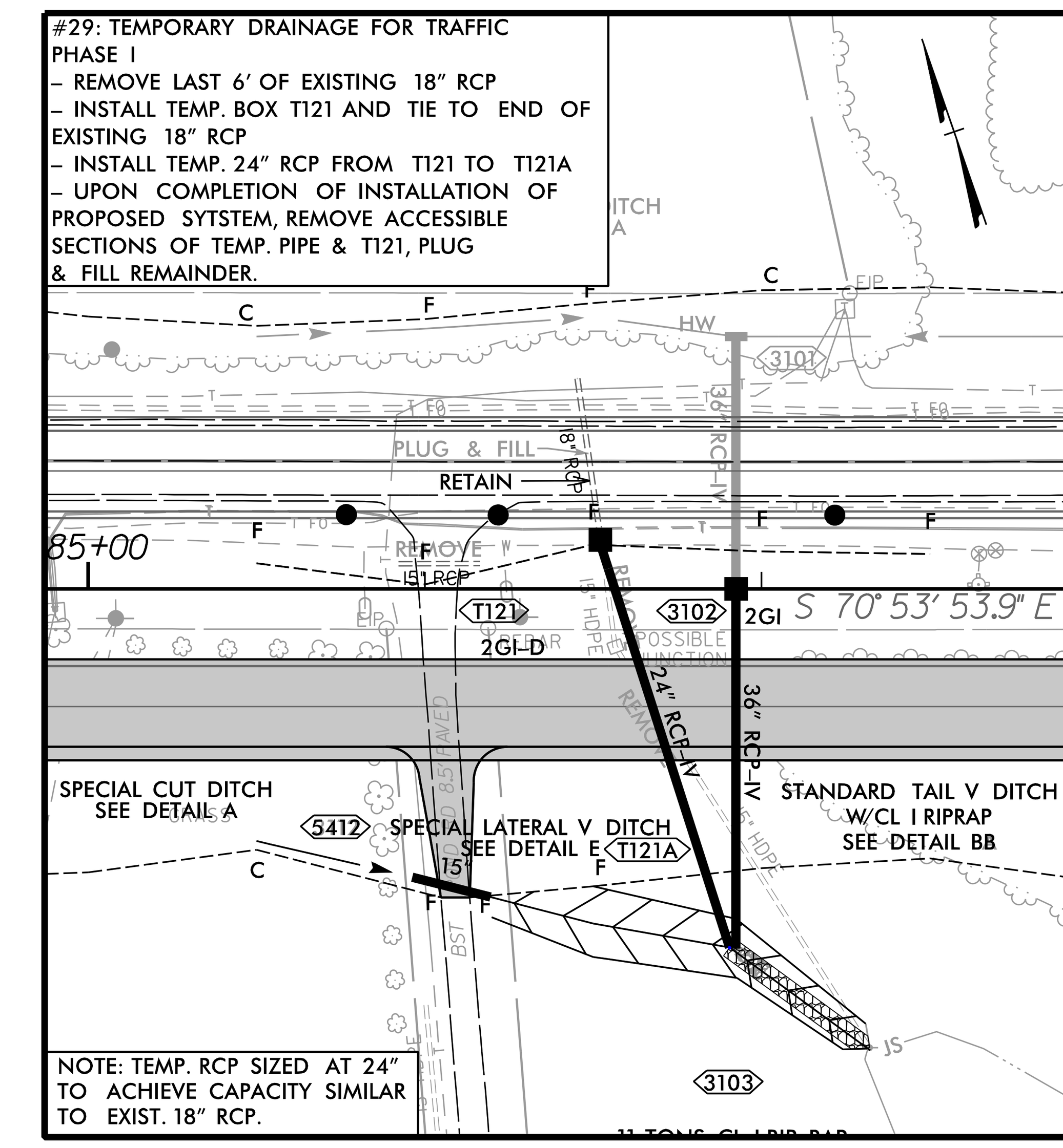
#27: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- CONSTRUCT TEMPORARY DITCH (DETAIL TEMP-1)
- INSTALL 15" RCP T137 TO T138 & RIPRAP PAD
- PRIOR TO FINAL PHASE, PLUG & FILL 15" RCP AND REMOVE RIPRAP PAD



#22: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- CUT SPECIAL LATERAL DITCH
- INSTALL TEMP. 24" RCP-IV (T127) AND RIPRAP PAD (OUTLET AT LOW SPOT AT EXISTING DRIVEWAY)
- PRIOR TO FINAL PHASE, REMOVE RIPRAP PAD; PLUG & FILL TEMP 24" RCP-IV.



#25: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- CONSTRUCT TEMP. DITCHES AS SHOWN (DETAIL TEMP-1)
- INSTALL TEMP. BOXES T119 AND T119A IN TEMP. DITCH
- INSTALL TEMP. 15" PIPES AND CONNECT TO 2GI 2608
- INSTALL REMAINDER OF PROPOSED SYSTEM TO OUTFALL
- PRIOR TO FINAL PHASE, REMOVE TEMP. STRUCTURES

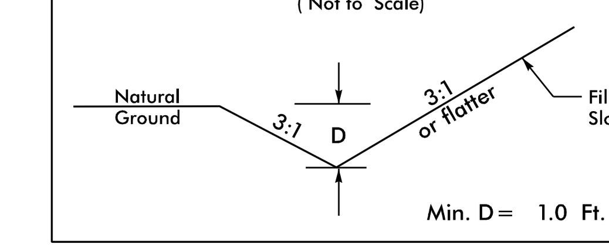


#29: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- REMOVE LAST 6' OF EXISTING 18" RCP
- INSTALL TEMP. BOX T121 AND TIE TO END OF EXISTING 18" RCP
- INSTALL TEMP. 24" RCP FROM T121 TO T121A
- UPON COMPLETION OF INSTALLATION OF PROPOSED SYTSTEM, REMOVE ACCESSIBLE SECTIONS OF TEMP. PIPE & T121, PLUG & FILL REMAINDER.

NOTE: TEMP. RCP SIZED AT 24" TO ACHIEVE CAPACITY SIMILAR TO EXIST. 18" RCP.

DETAIL TEMP-1

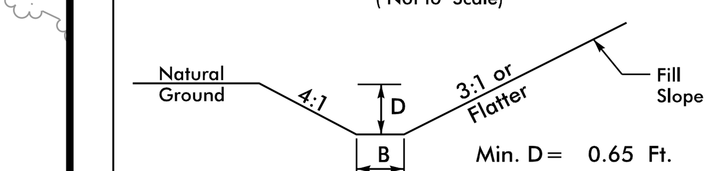
SPECIAL LATERAL 'V' DITCH (Not to Scale)



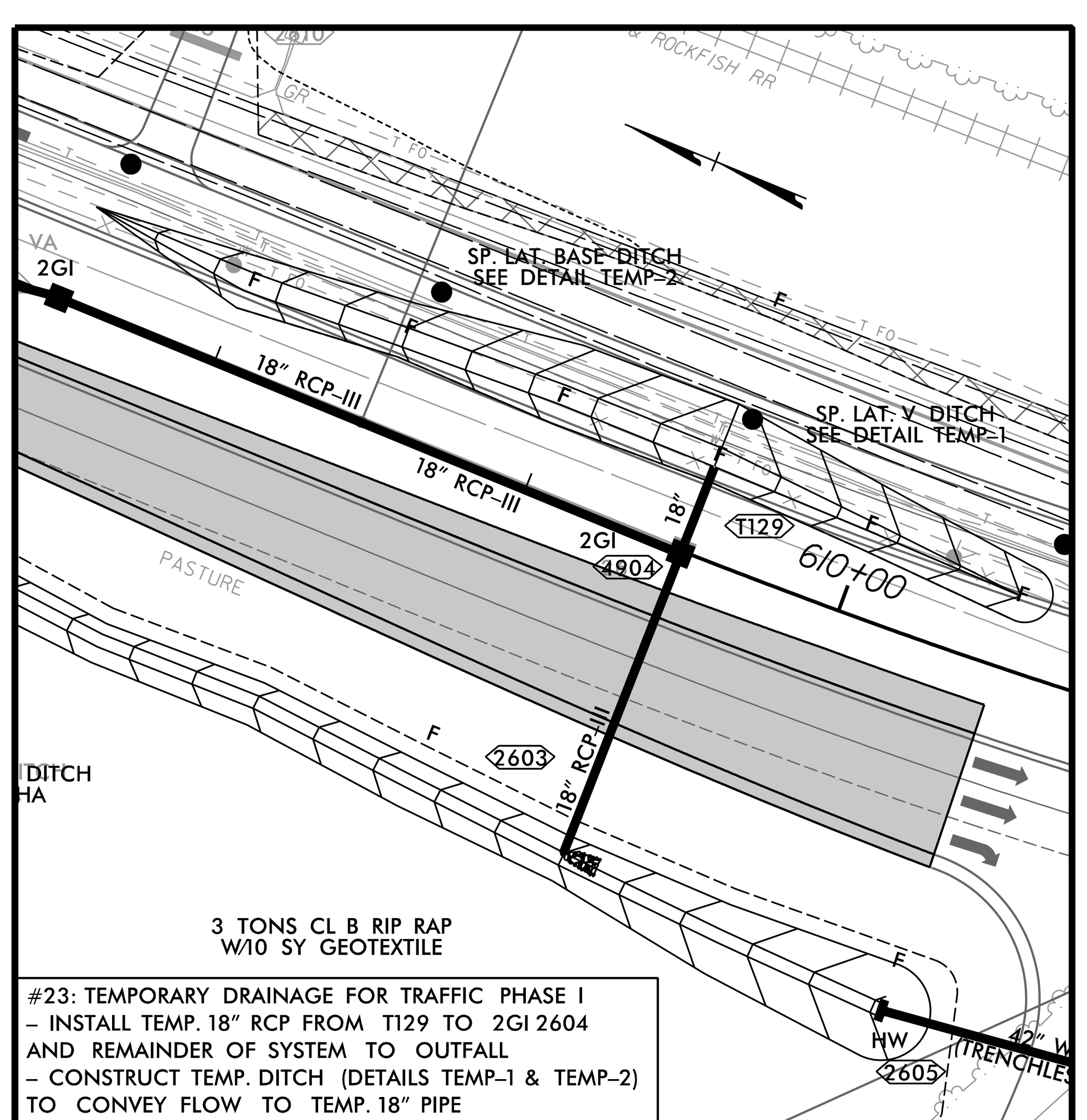
-L- (TEMP) FROM STA. 589+00 TO STA. 589+63 LT BEGIN ELEV=382.7', END ELEV=382.5'
-L- (TEMP) FROM STA. 589+63 TO STA. 590+50 LT BEGIN ELEV=382.5', END ELEV=383.2'
-L- (TEMP) FROM STA. 615+50 TO STA. 617+50 LT BEGIN ELEV=381.0', END ELEV=380.0'
-L- (TEMP) FROM STA. 617+50 TO STA. 620+00 LT BEGIN ELEV=380.0', END ELEV=378.75'
-L- (TEMP) FROM STA. 620+00 TO STA. 621+50 LT BEGIN ELEV=378.75', END ELEV=379.50'
-L- (TEMP) FROM STA. 671+50 TO STA. 671+75 LT BEGIN ELEV=362.80', END ELEV=362.50'
-L- (TEMP) FROM STA. 671+75 TO STA. 672+00 LT BEGIN ELEV=362.50', END ELEV=362.71'
-L- (TEMP) FROM STA. 609+50 TO STA. 610+50 LT BEGIN ELEV=378.75', END ELEV=379.25'

DETAIL TEMP-2

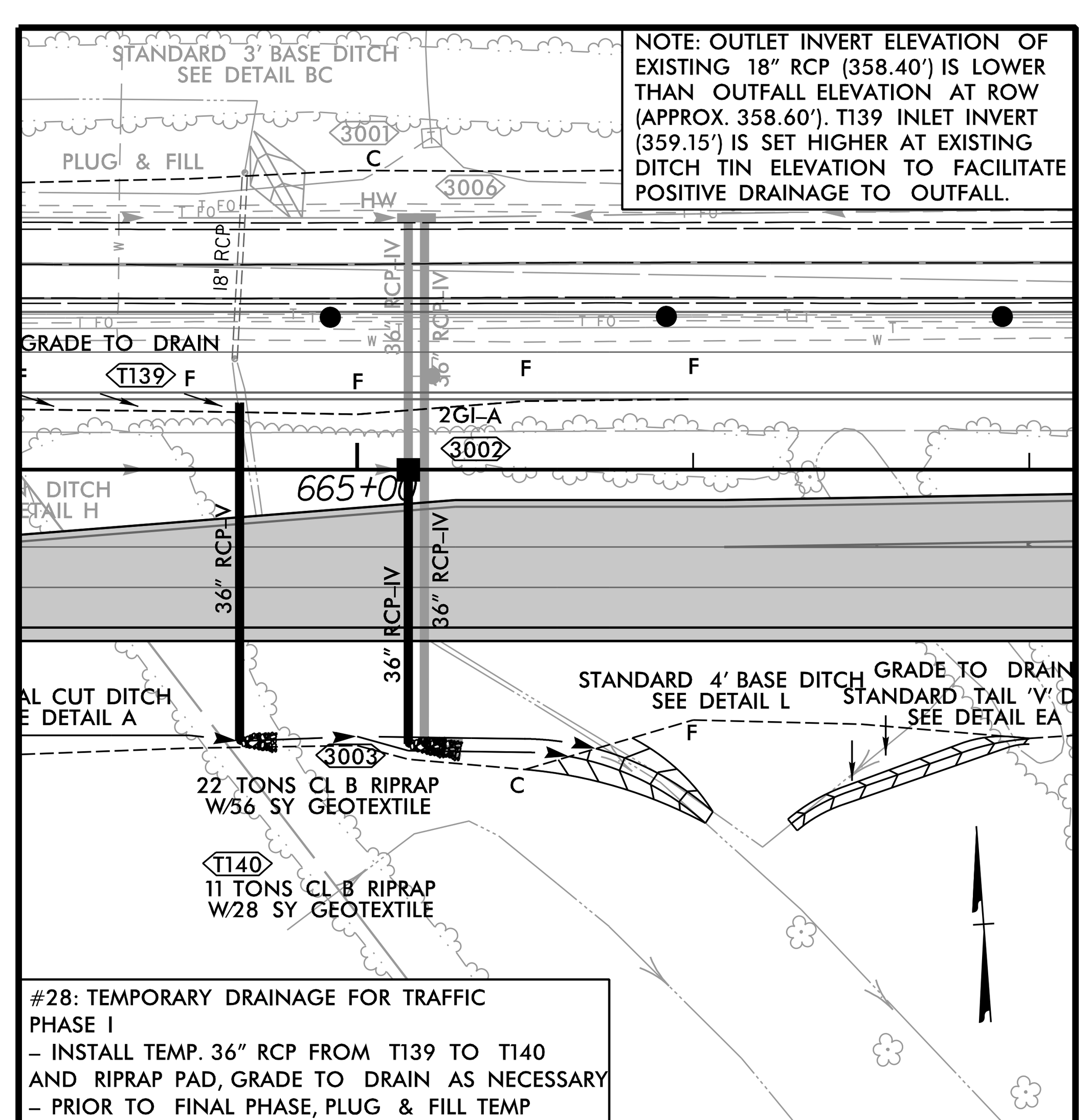
SPECIAL LATERAL BASE DITCH (Not to Scale)



-L- (TEMP) FROM STA. 607+50 TO STA. 608+00 LT BEGIN ELEV=380.48', END ELEV=379.50'
-L- (TEMP) FROM STA. 608+00 TO STA. 609+50 LT BEGIN ELEV=379.50', END ELEV=378.75'

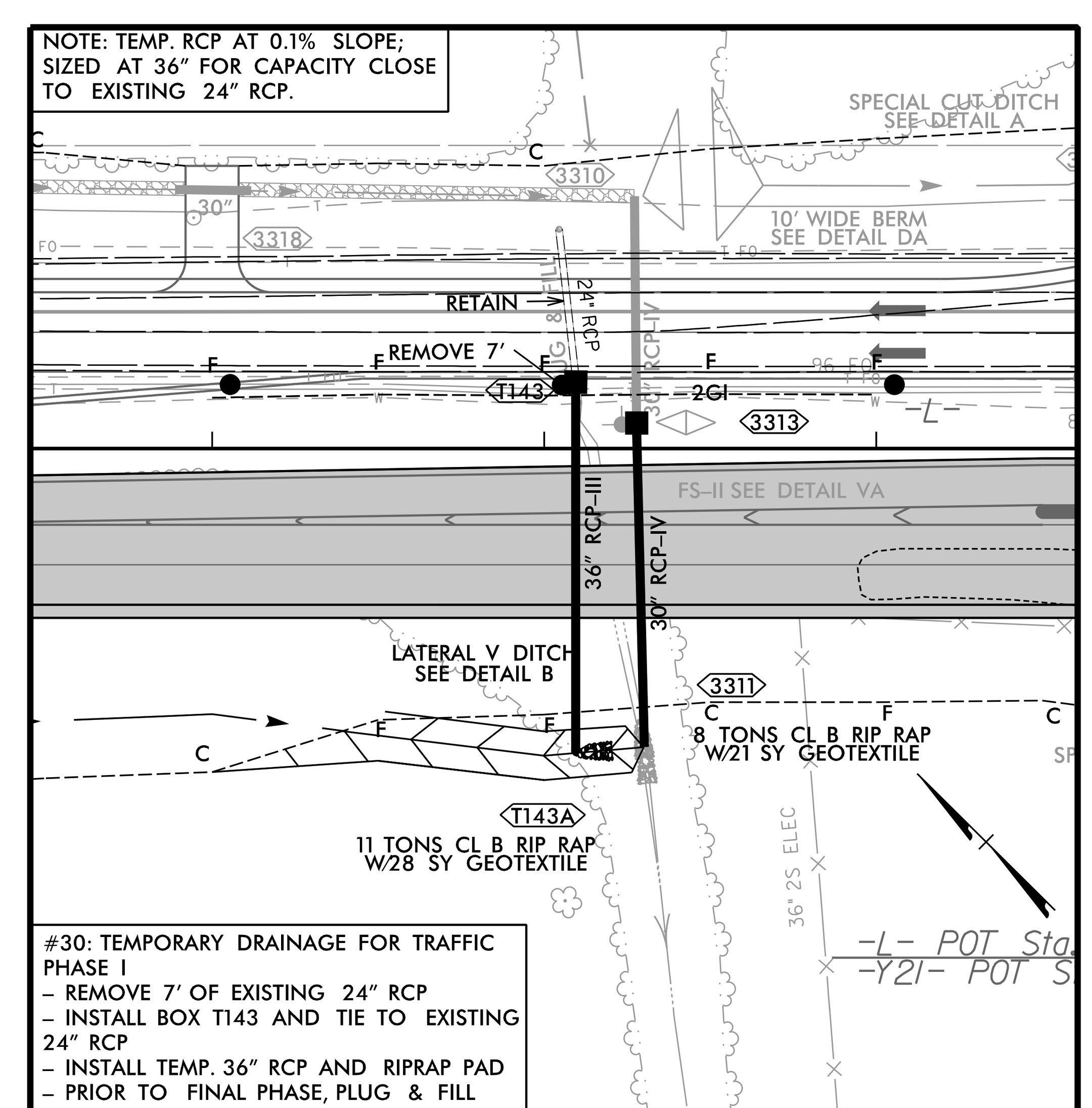


#23: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. 18" RCP FROM T129 TO 2GI 2604 AND REMAINDER OF SYSTEM TO OUTFALL
- CONSTRUCT TEMP. DITCH (DETAILS TEMP-1 & TEMP-2) TO CONVEY FLOW TO TEMP. 18" PIPE
- PRIOR TO FINAL PHASE, REMOVE TEMP. 18" RCP



NOTE: OUTLET INVERT ELEVATION OF EXISTING 18" RCP (358.40') IS LOWER THAN OUTFALL ELEVATION AT ROW (APPROX. 358.60'). T139 INLET INVERT (359.15') IS SET HIGHER AT EXISTING DITCH TIN ELEVATION TO FACILITATE POSITIVE DRAINAGE TO OUTFALL.

#28: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- INSTALL TEMP. 36" RCP FROM T139 TO T140 AND RIPRAP PAD, GRADE TO DRAIN AS NECESSARY
- PRIOR TO FINAL PHASE, PLUG & FILL TEMP 36" RCP AND REMOVE RIPRAP PAD



NOTE: TEMP. RCP AT 0.1% SLOPE; SIZED AT 36" FOR CAPACITY CLOSE TO EXISTING 24" RCP.

#30: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
- REMOVE 7' OF EXISTING 24" RCP
- INSTALL BOX T143 AND TIE TO EXISTING 24" RCP
- INSTALL TEMP. 36" RCP AND RIPRAP PAD
- PRIOR TO FINAL PHASE, PLUG & FILL TEMP. 36" RCP & REMOVE RIPRAP PAD

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE CONSTRUCTED AND/OR UTILIZED WHILE IN THE TRAFFIC PHASE INDICATED

PROPOSED DRAINAGE FOR FINAL CONDITION

SCALE

50 25 0 50 100

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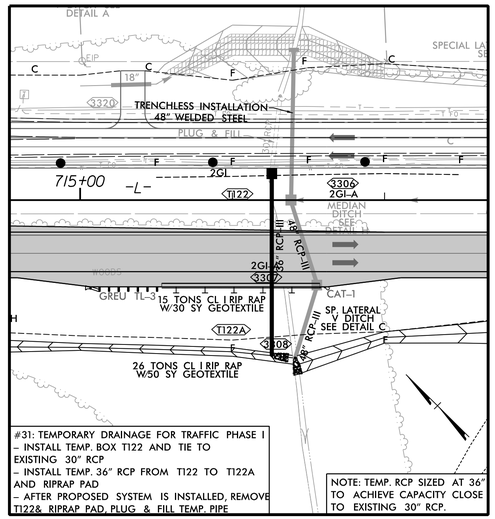
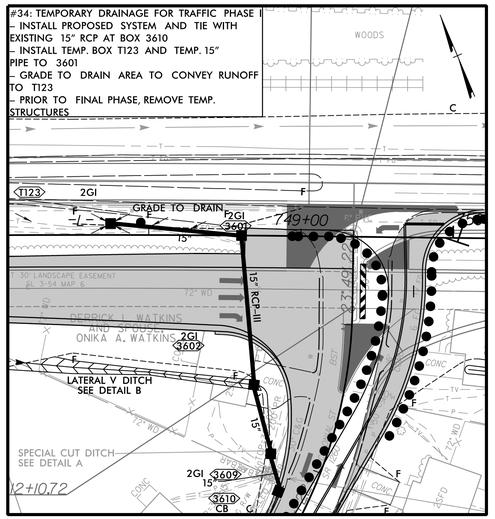
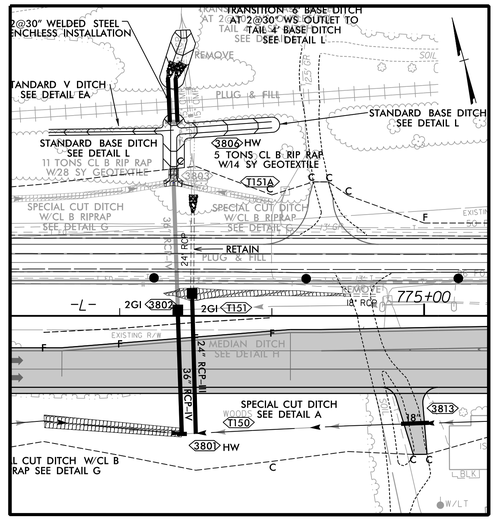
8/17/99



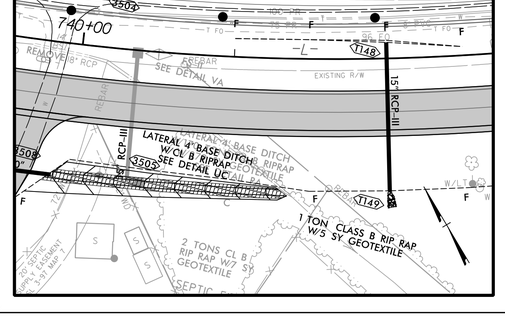
#31: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL TEMP. BOX T122 AND TIE TO EXISTING 30" RCP
– INSTALL TEMP. 36" RCP FROM T122 TO T122A AND RIPRAP PAD
– AFTER PROPOSED SYSTEM IS INSTALLED, REMOVE T122& RIPRAP PAD, PLUG & FILL TEMP. PIPE

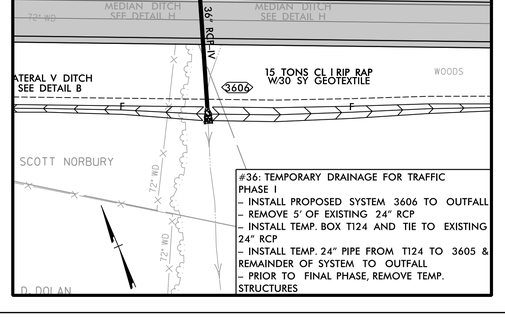
NOTE: TEMP. RCP SIZED AT 36" TO ACHIEVE CAPACITY CLOSE TO EXISTING 30" RCP.





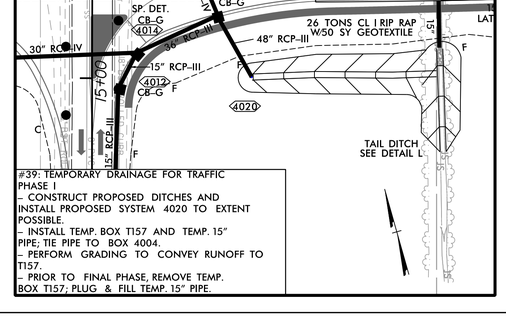
#37: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– BORE & JACK 2@30" WELDED STEEL PIPES UNDER RAILROAD.
– PERFORM PROPOSED DITCH WORK ADJACENT TO RAILROAD AS SHOWN.
– PLUG & FILL EXISTING 15" CMPS UNDER RAILROAD.
– INSTALL TEMP. BOX T151 AND TIE TO EXISTING 24" RCP; INSTALL OUTLET RIPRAP PAD.
– INSTALL TEMP. 24" RCP–IV (T150).
– INSTALL PROPOSED SPECIAL CUT DITCHES AND ADJUST TO DRAIN TO T150.
– PRIOR TO FINAL PHASE, REMOVE T151 AND RIPRAP PAD; PLUG & FILL TEMP. 24" RCP–IV AND ADJUST SPECIAL CUT DITCHES TO DRAIN TO 3801.





NOTE: RCP OR HDPE RECOMMENDED FOR 18" TEMP. PIPE TO MAXIMIZE CAPACITY. USE OF 18" AVOIDS NEED FOR 2GI-A AT T153. NO GRATE AT T152 TO BYPASS 18" PIPE AND LIMIT DISCHARGE.

#35: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– REMOVE 25' OF EXISTING 18" RCP
– INSTALL TEMP. BOX T152 AND TIE TO EXISTING 18" RCP
– INSTALL TEMP. BOX T153, TEMP. 18" & 24" PIPES TO OUTLET T154 & RIPRAP PAD
– PRIOR TO FINAL PHASE, PLUG & FILL TEMP. 24" RCP
– REMOVE TEMP. STRUCTURES T152, T153, RIPRAP PAD AND TEMP. 18" PIPE IN FINAL PHASE



#38: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– CONSTRUCT PROPOSED DITCHES AS SHOWN.
– INSTALL TEMP. BOX T155 AND TIE TO EXISTING 24" RCP.
– INSTALL TEMP. 30" RCP AND OUTLET RIPRAP PAD
– PERFORM GRADING TO CONVEY RUNOFF TO T155.
– PRIOR TO FINAL PHASE, REMOVE TEMP. BOX T155 AND TEMP. OUTLET PAD; PLUG & FILL TEMP. 30" RCP.

#36: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– INSTALL PROPOSED SYSTEM 3606 TO OUTFALL
– REMOVE 5' OF EXISTING 24" RCP
– INSTALL TEMP. BOX T124 AND TIE TO EXISTING 24" RCP
– INSTALL TEMP. 24" PIPE FROM T124 TO 3605 & REMAINDER OF SYSTEM TO OUTFALL
– PRIOR TO FINAL PHASE, REMOVE TEMP. STRUCTURES

#39: TEMPORARY DRAINAGE FOR TRAFFIC PHASE I
– CONSTRUCT PROPOSED DITCHES AND INSTALL PROPOSED SYSTEM 4020 TO EXTENT POSSIBLE.
– INSTALL TEMP. BOX T157 AND TEMP. 15" PIPE; TIE PIPE TO BOX 4004.
– PERFORM GRADING TO CONVEY RUNOFF TO T157.
– PRIOR TO FINAL PHASE, REMOVE TEMP. BOX T157; PLUG & FILL TEMP. 15" PIPE.

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2B-22
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040878 ENGINEER MARK E. MAYS, PE

Signed: Mary Mays Hall — 10/15/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 51640 ENGINEER COURTLAND A. HOFFMAN

Signed: Courtland Hoffman — 10/14/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TEMPORARY DRAINAGE PIPE LOCATION DETAILS FOR INFORMATION USE

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE CONSTRUCTED AND/OR UTILIZED WHILE IN THE TRAFFIC PHASE INDICATED
PROPOSED DRAINAGE FOR FINAL CONDITION

SCALE
50 25 0 50 100

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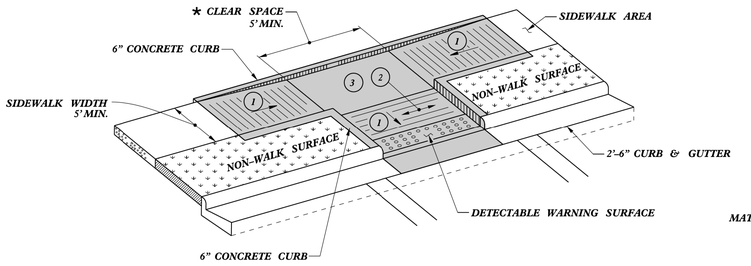
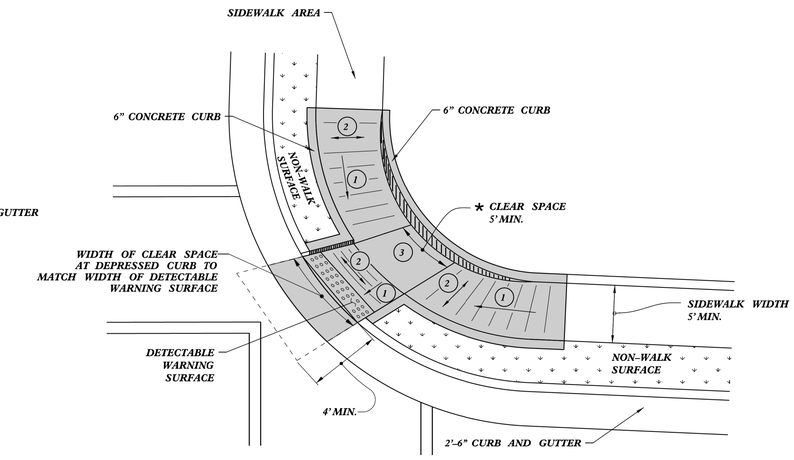
jcrocker

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	2C-1

* - *WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4'MINIMUM X 5'MINIMUM, WITH 5'PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.*



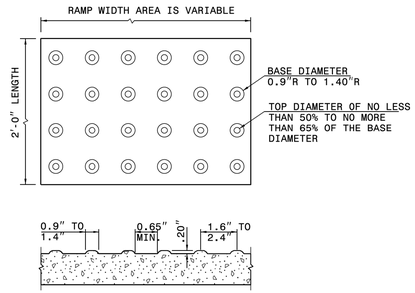
TYPE 3



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

1. *8.33% (12:1) MAX RAMP SLOPE*
2. *CROSS SLOPE: 2.00%*
3. *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 CURB RAMP

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

ROADWAY DETAIL DRAWING FOR

CURB RAMP

PARALLEL RAMP

SHEET 9 OF 13

848D06

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKLER
5/4/2024
Signed by: Nicole M. Hackler
5684323D34164C5...

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

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MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: special details\nmhackler\D0609.dgn