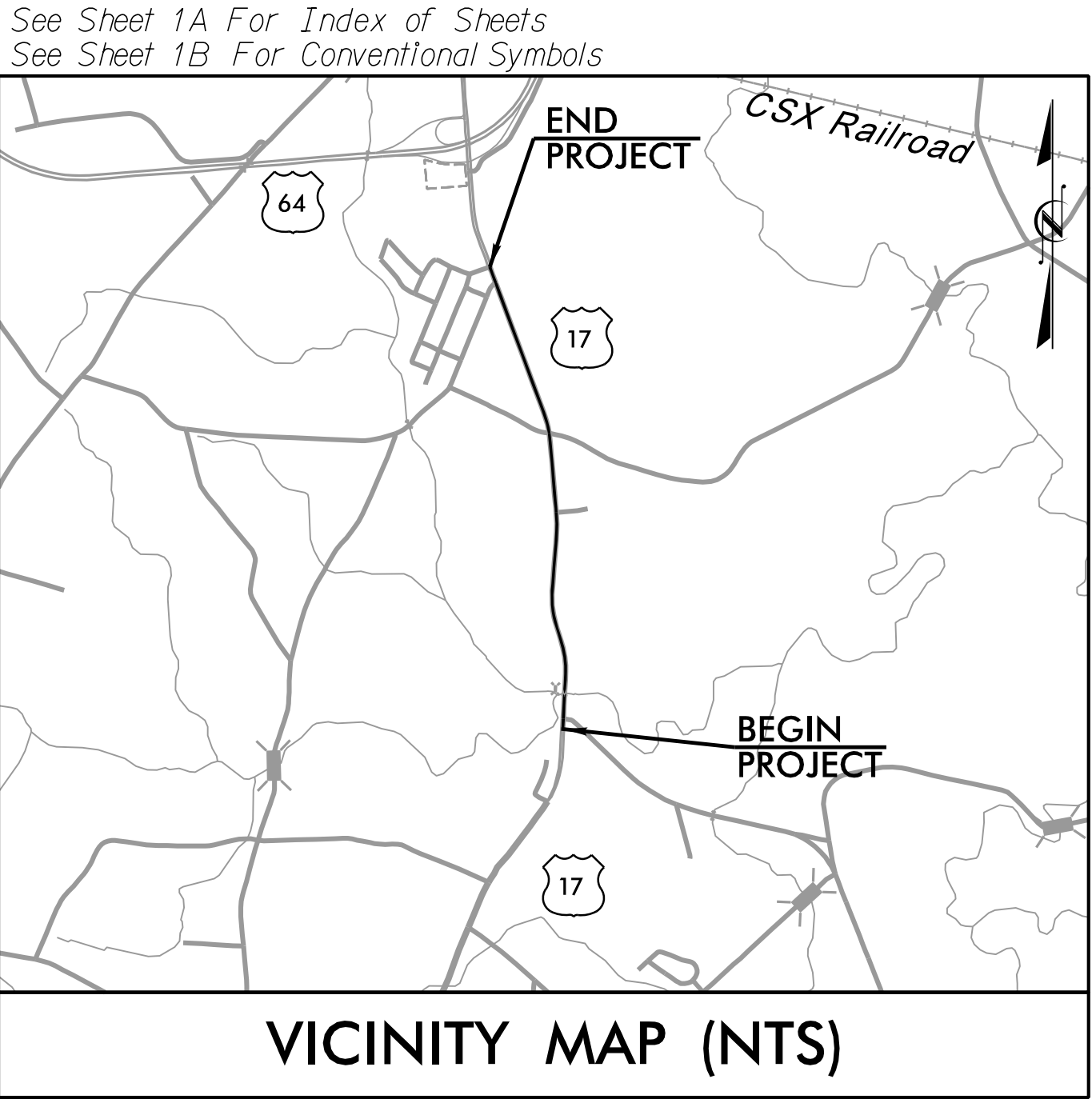
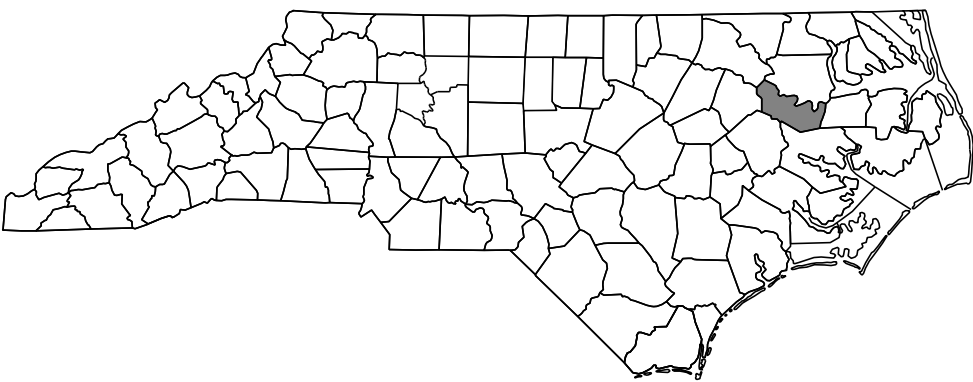


| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.        | TOTAL SHEETS |
|-----------------|-----------------------------|------------------|--------------|
| N.C.            | R-5810                      | 1                |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION      |              |
| 46978.1.1       |                             | PE               |              |
| 46978.2.1       |                             | ROW              |              |
| 46978.2.2       |                             | UTIL. RELOCATION |              |
| 46978.3.1       | 4697801                     | CONST.           |              |
|                 |                             |                  |              |
|                 |                             |                  |              |
|                 |                             |                  |              |

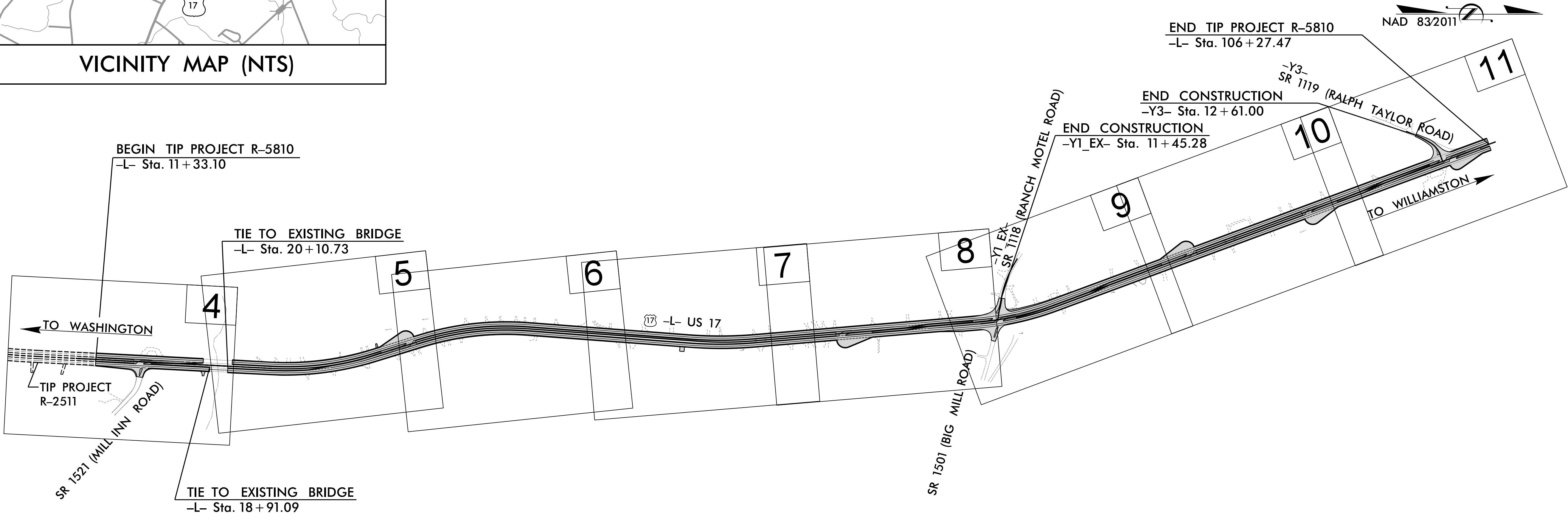


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# MARTIN COUNTY

LOCATION: US 17 FROM SR 1521 (MILL INN ROAD) TO SR 1119 (RALPH TAYLOR ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

NOTES:  
THIS IS A PARTIALLY CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

### GRAPHIC SCALES

PLANS

PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

### DESIGN DATA

ADT 2026 = 10,700  
ADT 2046 = 15,306  
K = 5%  
D = 60%  
T = 13% \*  
V = 60 MPH  
\* TTST = 8% DUAL 5%  
FUNC CLASS = PINCIPAL ARTERIAL STATEWIDE TIER

### PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5810..... 1.776 miles  
TOTAL LENGTH OF TIP PROJECT R-5810..... 1.776 miles

### PLANS PREPARED BY:

**RK&K**  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 31, 2024

LETTING DATE: OCTOBER 20, 2026

NCDOT CONTACT: JUSTIN R. SMITH, PE.  
PROJECT ENGINEER - DIVISION 1

### HYDRAULICS ENGINEER

Signed by: Matthew Bailey  
SIGNATURE: [Signature]

Professional Engineer Seal: Matthew J. Bailey, P.E., Seal 54408, 8/18/2026

### ROADWAY DESIGN ENGINEER

Signed by: Roman Prokopovych  
SIGNATURE: [Signature]

Professional Engineer Seal: Roman B. Prokopovych, P.E., Seal 048576, 8/18/2026

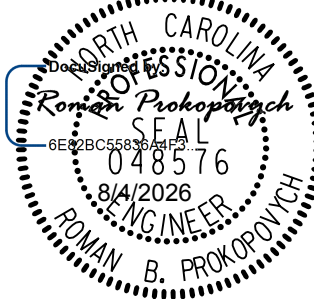
09.08/2026  
8/18/2026  
R:\Roadway\Proj\R-5810\_Rdy\_tsh.dgn  
delFault

INDEX of SHEETS, GENERAL NOTES, and LIST of STANDARDS

PROJECT REFERENCE NO.  
R-5810

SHEET NO.  
1A

ROADWAY DESIGN ENGINEER



INDEX OF SHEETS

| SHEET NUMBER        | SHEET                                                                        |
|---------------------|------------------------------------------------------------------------------|
| 1                   | TITLE SHEET                                                                  |
| 1A                  | INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS                |
| 1B                  | CONVENTIONAL SYMBOLS                                                         |
| 2A-1 THRU 2A-2      | PAVEMENT SCHEDULE, TYPICAL SECTIONS,AND WEDGING DETAIL                       |
| 2B-1 THRU 2B-4      | INTERSECTION DETAILS                                                         |
| 2C-1 THRU 2C-3      | DRAINAGE DETAILS                                                             |
| 2C-4 THRU 2C-6      | GUARDRAIL DETAILS                                                            |
| 2C-7                | TRANSPORTATION MANAGMENT DETAILS                                             |
| 2G                  | GEOTECHNICAL DETAILS                                                         |
| 3B-1                | SUMMARY OF EARTHWORK, PAVEMENT REMOVAL SUMMARY, FENCE, AND GUARDRAIL SUMMARY |
| 3D-1 THRU 3D-5      | DRAINAGE SUMMARY                                                             |
| 3G-1                | GEOTECHNICAL SUMMARY                                                         |
| 3P-1                | PARCEL INDEX SHEET                                                           |
| 4 THRU 11           | PLAN SHEETS                                                                  |
| 12 THRU 19          | PROFILE SHEETS                                                               |
| RW-1 THRU RW-2      | RIGHT OF WAY                                                                 |
| TMP-1 THRU TMP-20   | TRANSPORTATION MANAGEMENT PLANS                                              |
| PMP-1 THRU PMP-9A   | PAVEMENT MARKING PLANS                                                       |
| EC-1 THRU EC-19     | EROSION CONTROL PLANS                                                        |
| SIGN-1 THRU SIGN-11 | SIGNING PLANS                                                                |
| UC-1 THRU UC-13     | UTILITY CONSTRUCTION PLANS                                                   |
| X-0 THRU X-19       | CROSS SECTION SHEETS                                                         |

LIST OF STANDARD DRAWINGS  
2024 ROADWAY ENGLISH STANDARD DRAWINGS

| The following Roadway Standards as appear in “Roadway Standard Drawings” Contracts Standards and Development Unit – N. C. Department of Transportation – Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans: |                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| STD.NO.                                                                                                                                                                                                                                                                                      | TITLE                                                                                        |
| DIVISION 2 – EARTHWORK                                                                                                                                                                                                                                                                       |                                                                                              |
| 200.02                                                                                                                                                                                                                                                                                       | Method of Clearing – Method II                                                               |
| 225.01                                                                                                                                                                                                                                                                                       | Guide for Grading Subgrade – Interstate and Freeway                                          |
| 225.04                                                                                                                                                                                                                                                                                       | Method of Obtaining Superelevation – Two Lane Pavement                                       |
| DIVISION 3 – PIPE CULVERTS                                                                                                                                                                                                                                                                   |                                                                                              |
| 300.01                                                                                                                                                                                                                                                                                       | Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)       |
| 310.10                                                                                                                                                                                                                                                                                       | Driveway Pipe Construction                                                                   |
| DIVISION 5 – SUBGRADE, BASES AND SHOULDERS                                                                                                                                                                                                                                                   |                                                                                              |
| 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                                                                 |
| 806.03                                                                                                                                                                                                                                                                                       | Concrete Contol of Access 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                |
| 840.00                                                                                                                                                                                                                                                                                       | Concrete Base Pad for Drainage Structures                                                    |
| 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                                      |
| 840.24                                                                                                                                                                                                                                                                                       | Frames and Narrow Slot Sag Grates                                                            |
| 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                    |
| 840.45                                                                                                                                                                                                                                                                                       | Precast Drainage Structure                                                                   |
| 840.46                                                                                                                                                                                                                                                                                       | Traffic Bearing Precast Drainage Structure                                                   |
| 840.54                                                                                                                                                                                                                                                                                       | Manhole Frame and Cover                                                                      |
| 840.66                                                                                                                                                                                                                                                                                       | Drainage Structure Steps                                                                     |
| 840.71                                                                                                                                                                                                                                                                                       | Concrete and Brick Pipe Plug                                                                 |
| 840.72                                                                                                                                                                                                                                                                                       | Pipe Collar                                                                                  |
| 848.03                                                                                                                                                                                                                                                                                       | Driveway Turnout – Drop Curb Type                                                            |
| 852.01                                                                                                                                                                                                                                                                                       | Concrete Islands                                                                             |
| 852.06                                                                                                                                                                                                                                                                                       | Method for Placement of Drop Inlets in Concrete Islands                                      |
| 862.01                                                                                                                                                                                                                                                                                       | Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 11, 12, and 14 of 15) |
| 862.02                                                                                                                                                                                                                                                                                       | Guardrail Installation (Use Detail in Lieu of Standard for Sheet 5 of 9)                     |
| 862.03                                                                                                                                                                                                                                                                                       | Structure Anchor Units (Use Detail in Lieu of Standards for Sheet 6 and 8 of 9)              |
| 862.04                                                                                                                                                                                                                                                                                       | Anchoring End of Guardrail – for B-77 and B-83 Anchor Units                                  |
| 866.02                                                                                                                                                                                                                                                                                       | Woven Wire Fence – with Wood Post                                                            |
| 876.02                                                                                                                                                                                                                                                                                       | Guide for Rip Rap at Pipe Outlets                                                            |
| 876.04                                                                                                                                                                                                                                                                                       | Drainage Ditches with Class ‘B’ Rip Rap                                                      |

EFF. 08-11-2025  
REV. 11-26-2025

GENERAL NOTES:  
2024 SPECIFICATIONS  
EFFECTIVE: 01-16-2024  
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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

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. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

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 TOWN OF WILLIAMSTON WATER AND SEWER. 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.



P: (919) 878-9560  
8601 Six Forks Road, Forum 1, Suite 700  
Raleigh, North Carolina 27615-3960  
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Engineers | Construction Managers | Planners | Scientists  
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Responsive People | Creative Solutions

Note: Not to Scale

BOUNDARIES AND PROPERTY:

|                                       |  |
|---------------------------------------|--|
| State Line                            |  |
| County Line                           |  |
| Township Line                         |  |
| City Line                             |  |
| Reservation Line                      |  |
| Property Line                         |  |
| Existing Iron Pin (EIP)               |  |
| Computed Property Corner              |  |
| Existing Concrete Monument (ECM)      |  |
| Parcel / Sequence Number              |  |
| Existing Fence Line                   |  |
| Proposed Woven Wire Fence             |  |
| Proposed Chain Link Fence             |  |
| Proposed Barbed Wire Fence            |  |
| Existing Wetland Boundary             |  |
| Proposed Wetland Boundary             |  |
| Existing Endangered Animal Boundary   |  |
| Existing Endangered Plant Boundary    |  |
| Existing Historic Property Boundary   |  |
| Known Contamination Area: Soil        |  |
| Potential Contamination Area: Soil    |  |
| Known Contamination Area: Water       |  |
| Potential Contamination Area: Water   |  |
| Contaminated Site: Known or Potential |  |
| BUILDINGS AND OTHER CULTURE:          |  |
| Gas Pump Vent or U/G Tank Cap         |  |
| Sign                                  |  |
| Well                                  |  |
| Small Mine                            |  |
| Foundation                            |  |
| Area Outline                          |  |
| Cemetery                              |  |
| Building                              |  |
| School                                |  |
| Church                                |  |
| Dam                                   |  |

HYDROLOGY:

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

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS  
CONVENTIONAL PLAN SHEET SYMBOLS

RAILROADS:

|                    |  |
|--------------------|--|
| Standard Gauge     |  |
| RR Signal Milepost |  |
| Switch             |  |
| RR Abandoned       |  |
| RR Dismantled      |  |

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

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

VEGETATION:

|              |  |
|--------------|--|
| Single Tree  |  |
| Single Shrub |  |

|            |  |
|------------|--|
| Hedge      |  |
| Woods Line |  |
| Orchard    |  |
| Vineyard   |  |

EXISTING STRUCTURES:

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

UTILITIES: \* SUE - Subsurface Utility Engineering  
LOS - Level of Service - A,B,C or D (Accuracy)

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

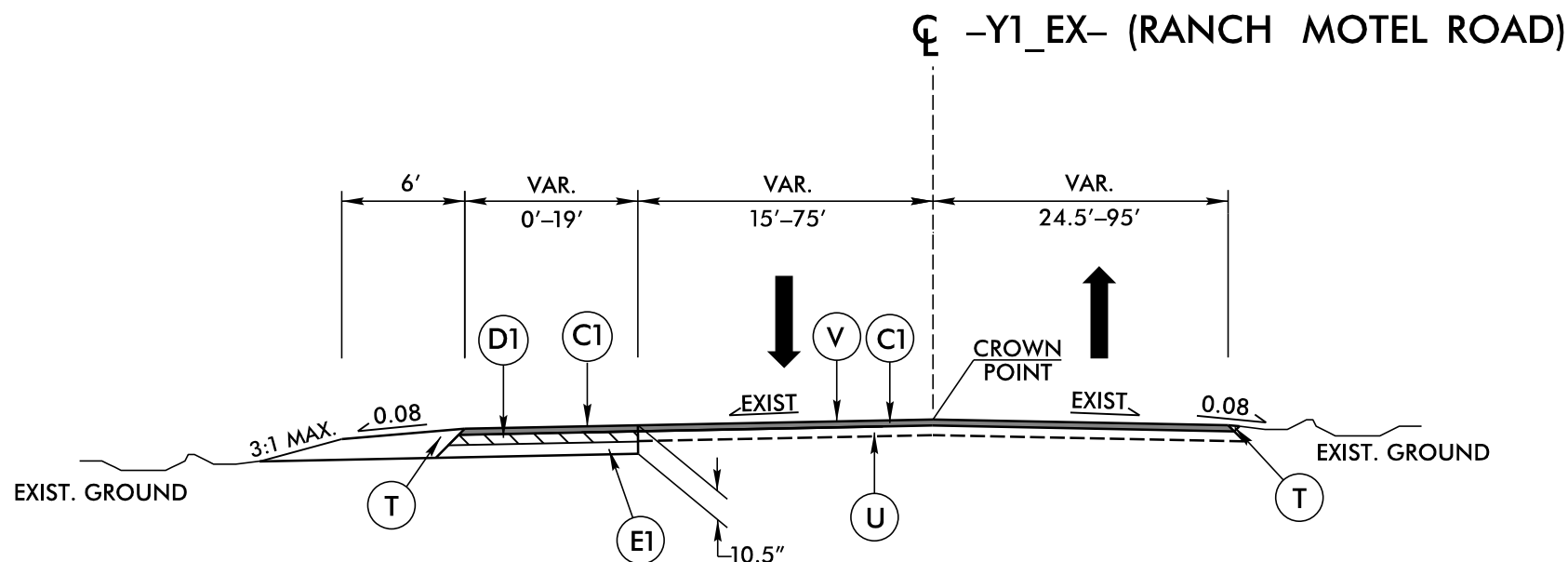
MISCELLANEOUS:

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



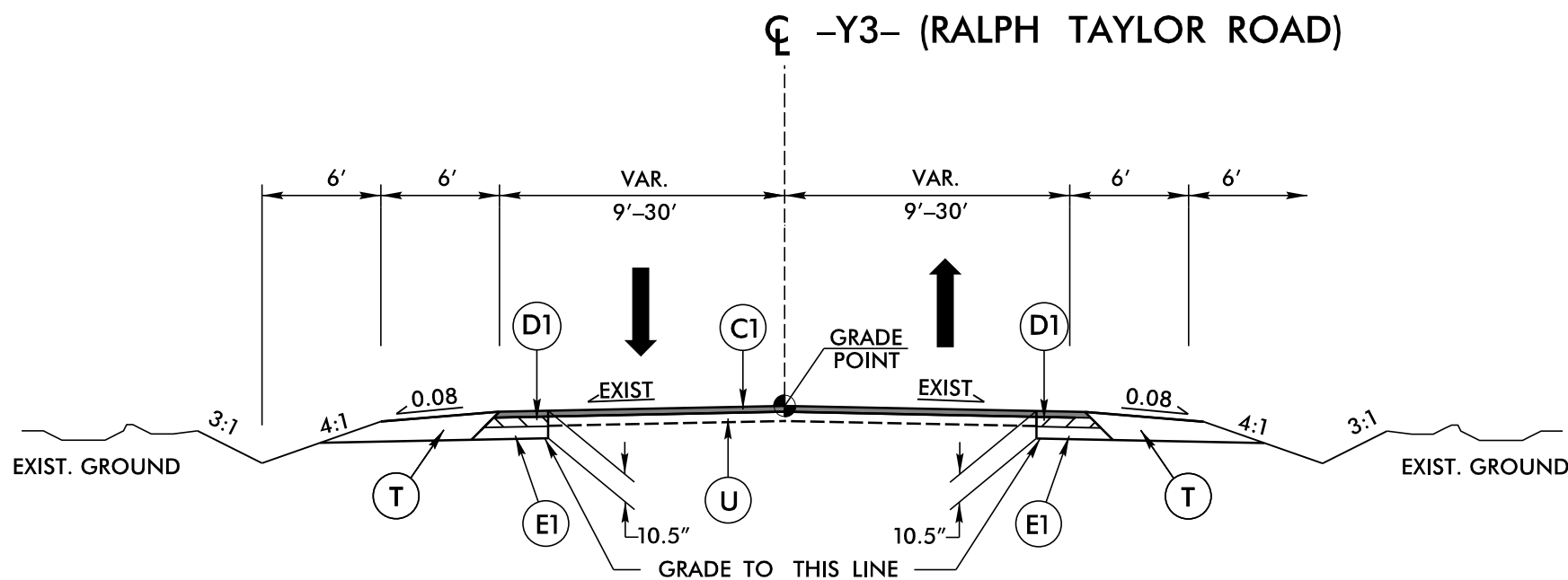
| FINAL PAVEMENT SCHEDULE |                    |
|-------------------------|--------------------|
| C1                      | 3" S9.5C           |
| C2                      | VAR. S9.5C         |
| D1                      | 3.5" I19.0C        |
| E1                      | 4" B25.0C          |
| T                       | EARTH MATERIAL     |
| U                       | EXISTING PAVEMENT  |
| V                       | MILLING, 1.5"      |
| V2                      | INCIDENTAL MILLING |

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.  
SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, SIDEWALK, AND TURN LANES.



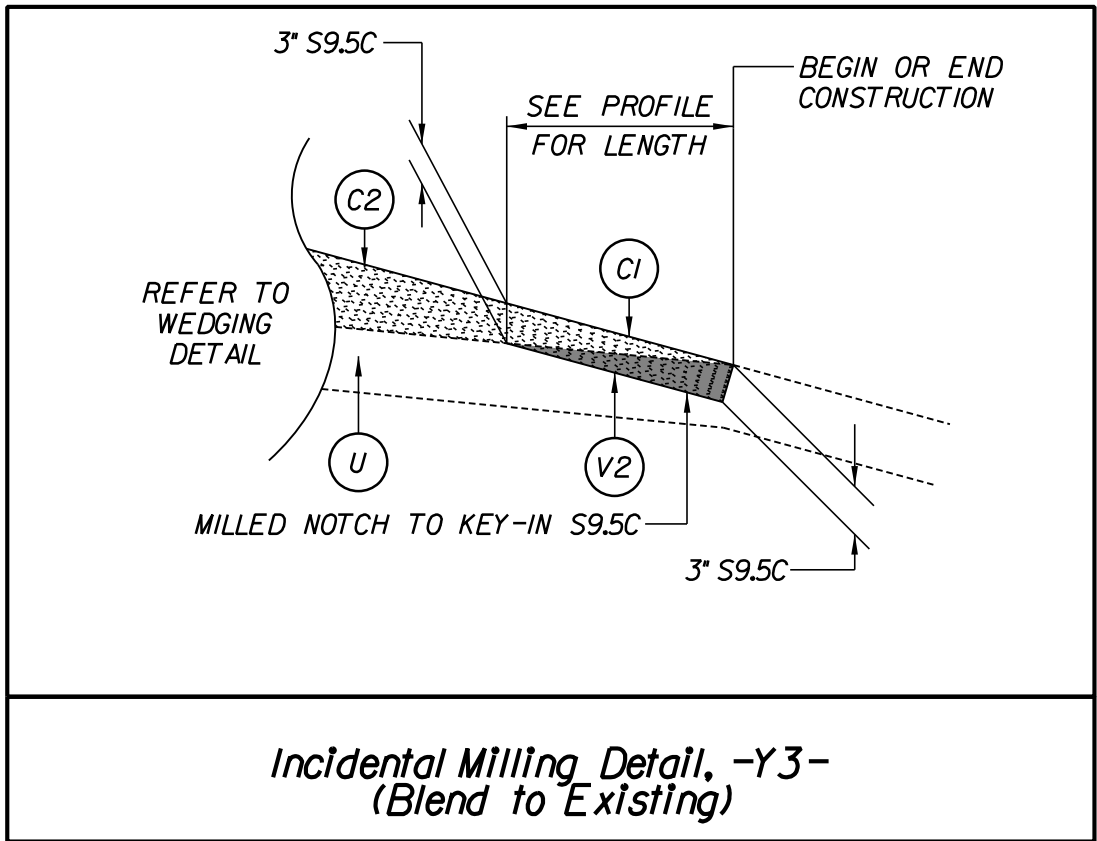
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5  
-Y1\_EX- Sta. 10+41.10 TO Sta. 11+45.28

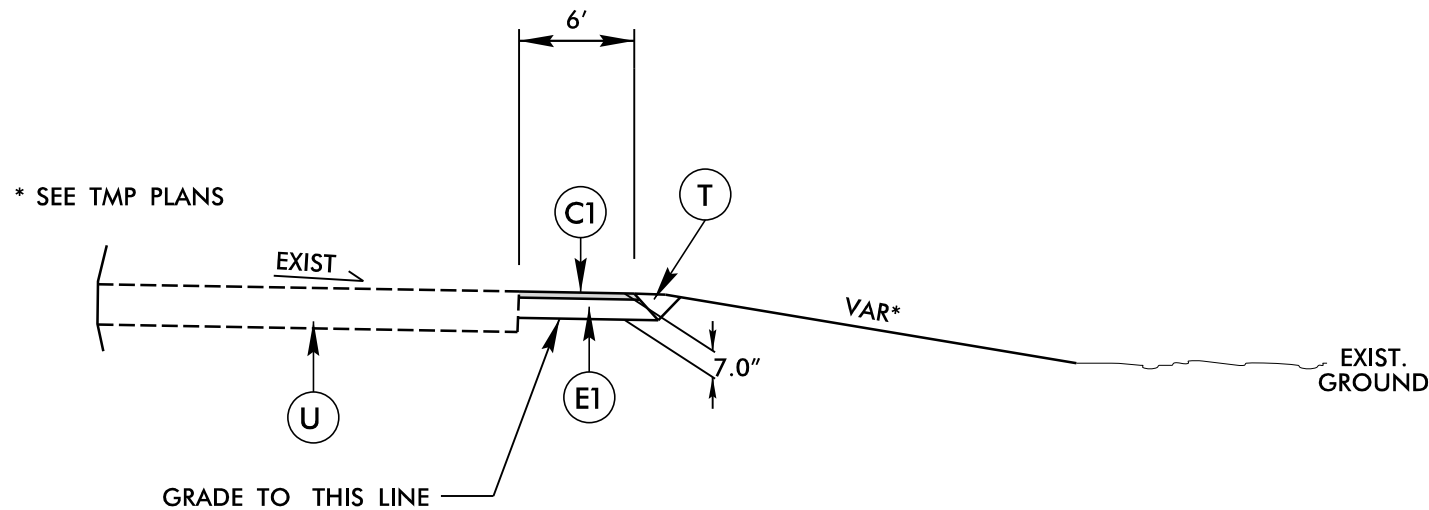


TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6  
-Y3- Sta. 10+39.00 TO Sta. 12+61.00



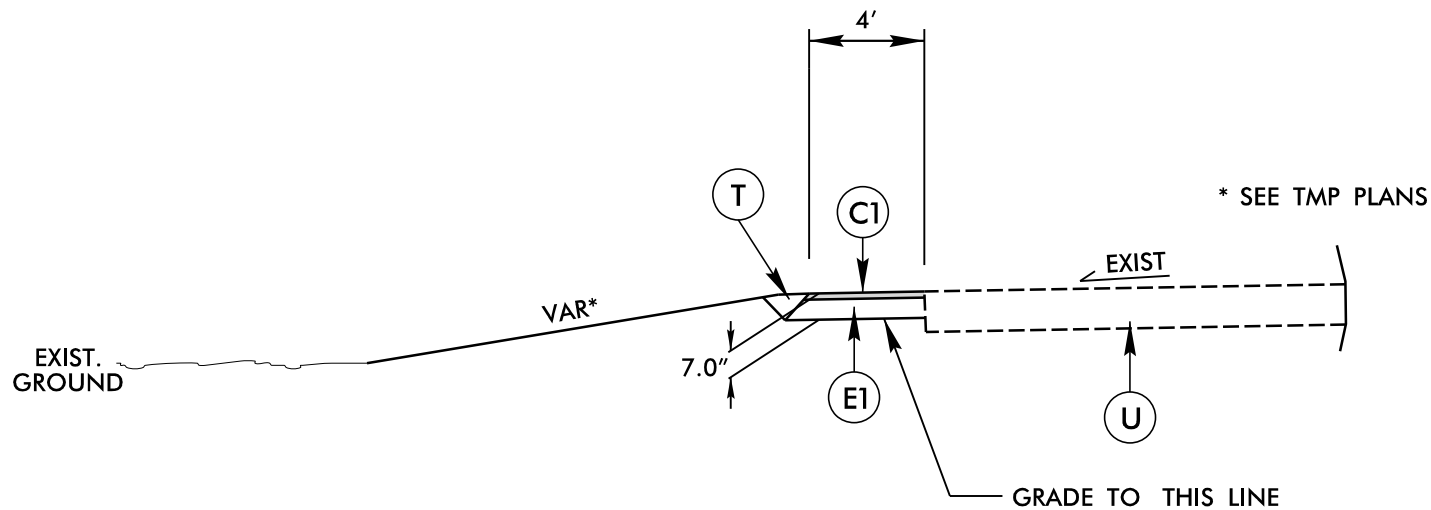
Incidental Milling Detail, -Y3-  
(Blend to Existing)



TEMPORARY PAVEMENT DETAIL 1

(SEE TMP PLANS FOR MORE INFORMATION)

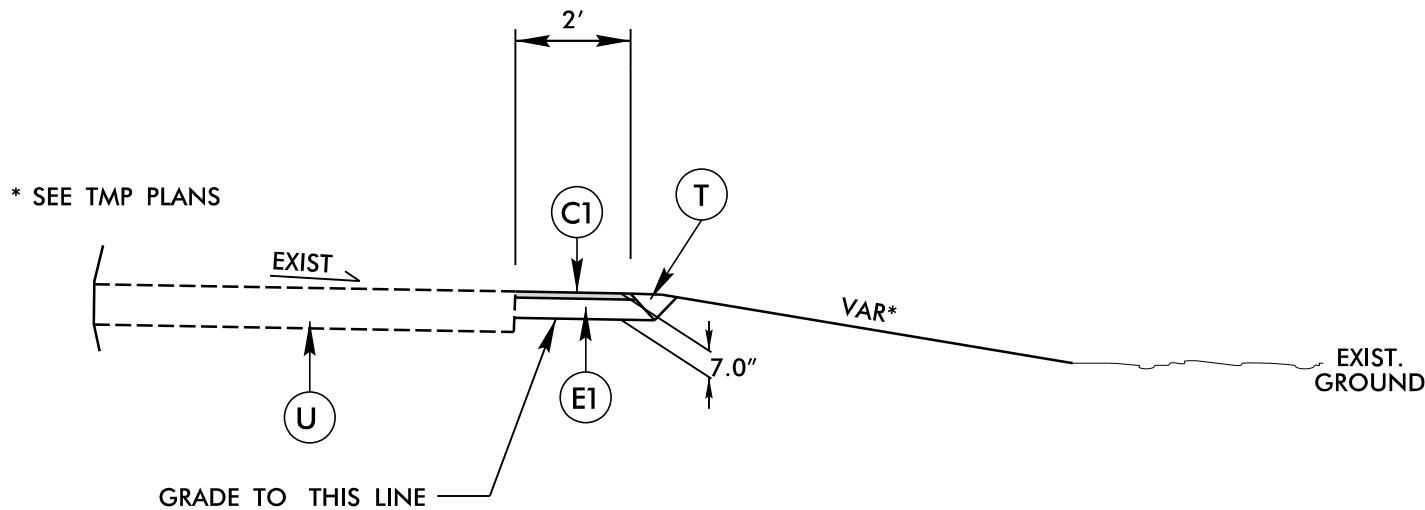
USE TEMPORARY PAVEMENT DETAIL SECTION  
-L- Sta. 21+42 TO Sta. 28+83 RT



TEMPORARY PAVEMENT DETAIL 2

(SEE TMP PLANS FOR MORE INFORMATION)

USE TEMPORARY PAVEMENT DETAIL SECTION  
-L- Sta. 21+50 TO Sta. 25+94 MED RT

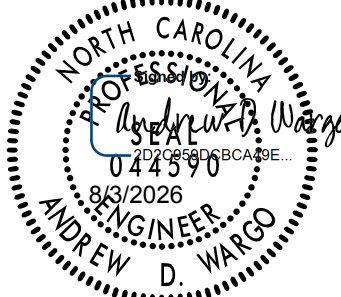
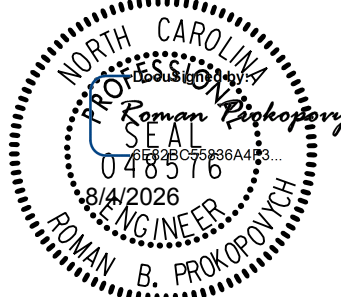
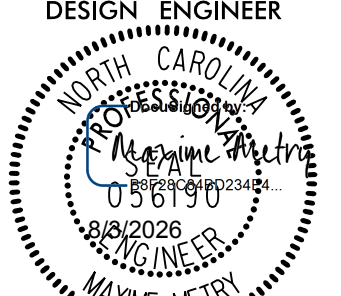


TEMPORARY PAVEMENT DETAIL 3

(SEE TMP PLANS FOR MORE INFORMATION)

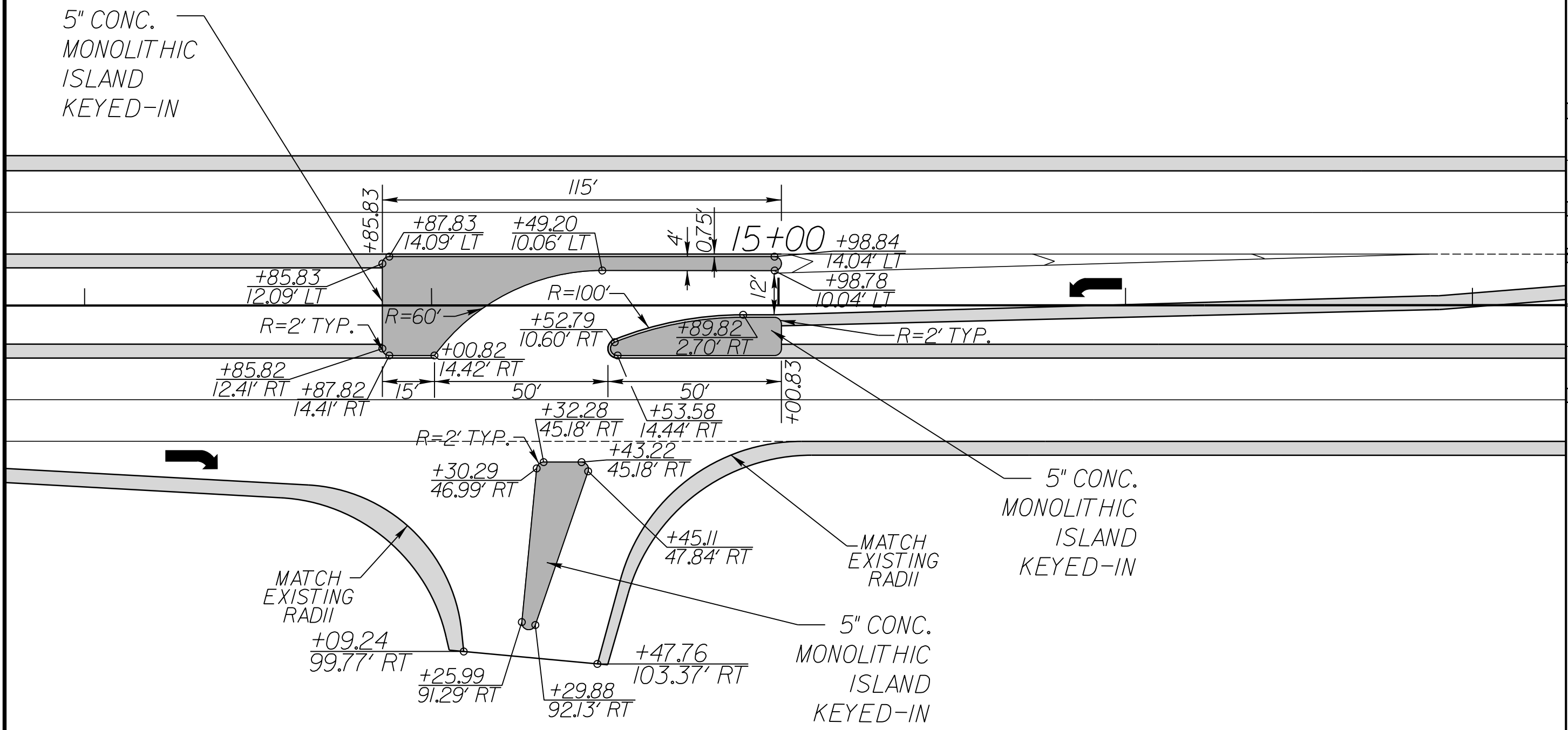
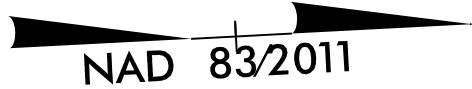
USE TEMPORARY PAVEMENT DETAIL SECTION  
-L- Sta. 26+69 TO Sta. 27+19 MED LT

8/3/2026  
R:\Roadway\Projects\NF-5810.Rdw.typ.dgn  
default

| PROJECT REFERENCE NO.                                                               |  | SHEET NO.                                                                           |  |
|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|
| R-5810                                                                              |  | 2A-2                                                                                |  |
| RW SHEET NO.                                                                        |  |                                                                                     |  |
| PAVEMENT DESIGN<br>ENGINEER                                                         |  | ROADWAY DESIGN<br>ENGINEER                                                          |  |
|  |  |  |  |
|                                                                                     |  | TEMPORARY PAVEMENT<br>DESIGN ENGINEER                                               |  |
|                                                                                     |  |  |  |

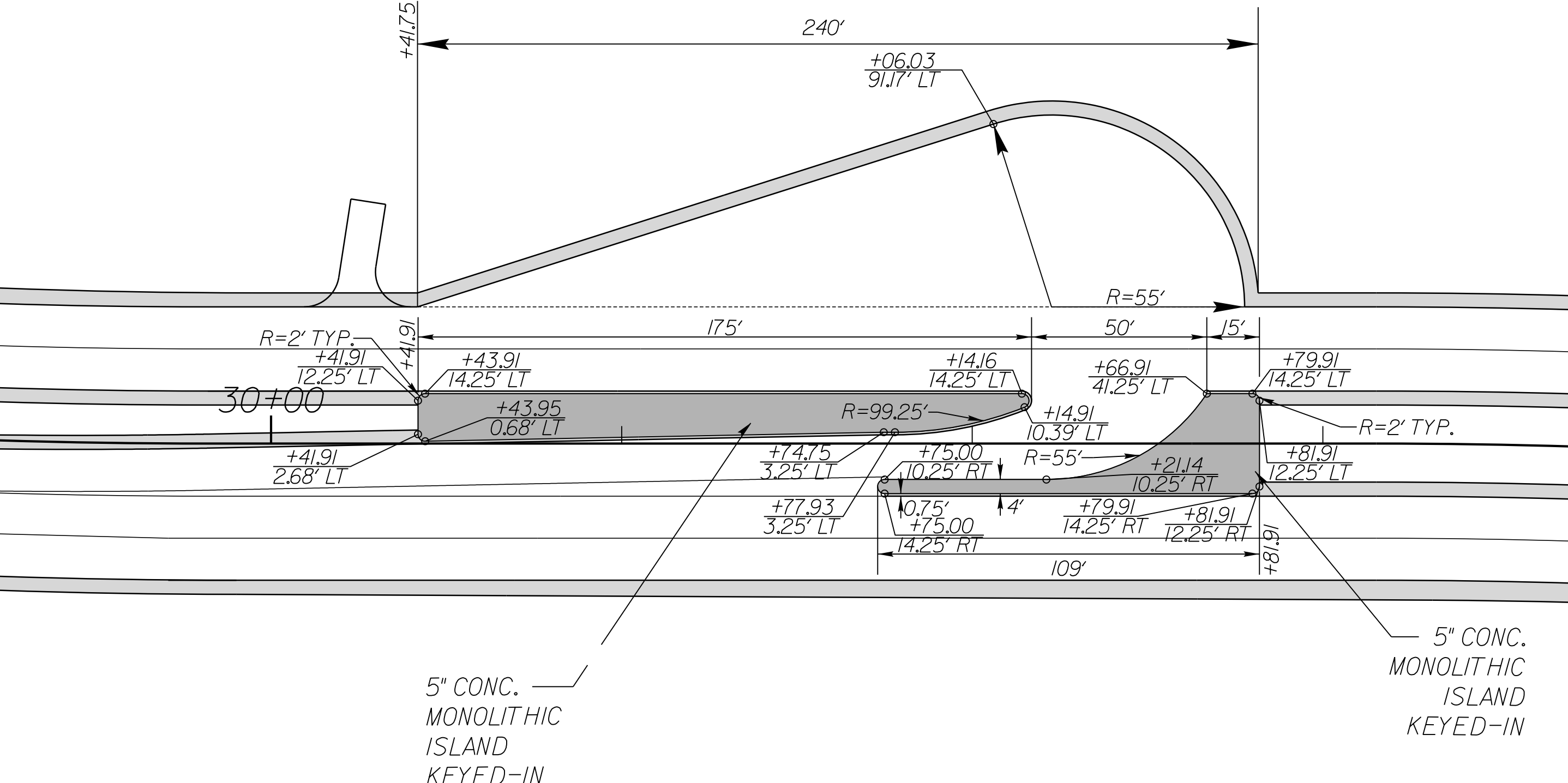
MILL INN ROAD INTERSECTION DETAIL

SCALE 1" = 30'



STA. 32 + 00 U-TURN DETAIL

SCALE 1" = 30'



|                                                                    |           |
|--------------------------------------------------------------------|-----------|
| PROJECT REFERENCE NO.                                              | SHEET NO. |
| R-5810                                                             | 2B-1      |
| RW SHEET NO.                                                       |           |
| <div>ROADWAY DESIGN<br/>ENGINEER<br/><br/>ROMAN B. PROKHOROV</div> |           |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED   |           |

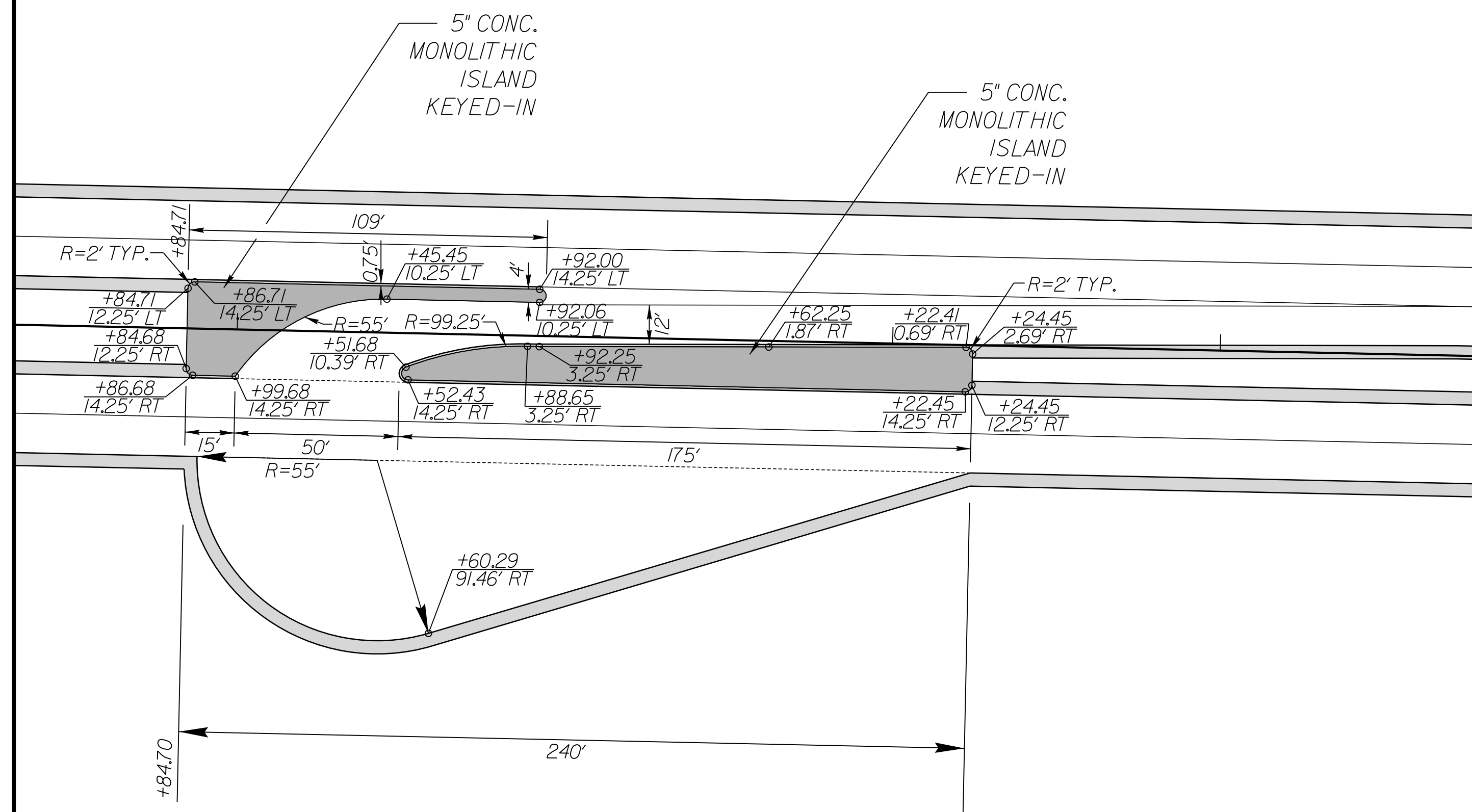
8/4/2026  
R:\Roadway\Project\N-5810.Rdw\_psh02B-1.dgn  
default

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SCALE 1" = 30'

NAD 83/2011

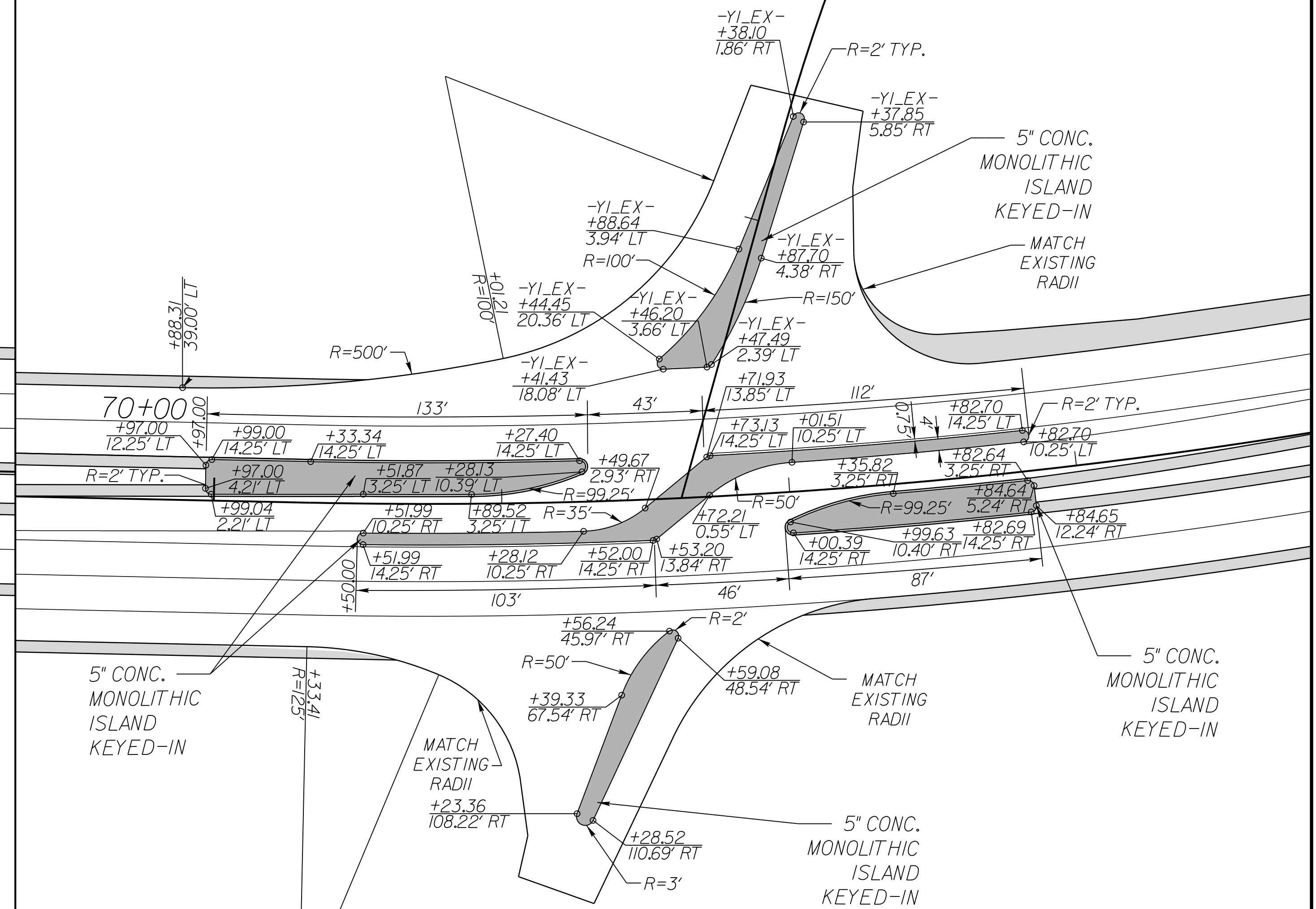


8/4/2026  
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default

FOR PLAN SEE SHT. 8

SCALE 1" = 30'

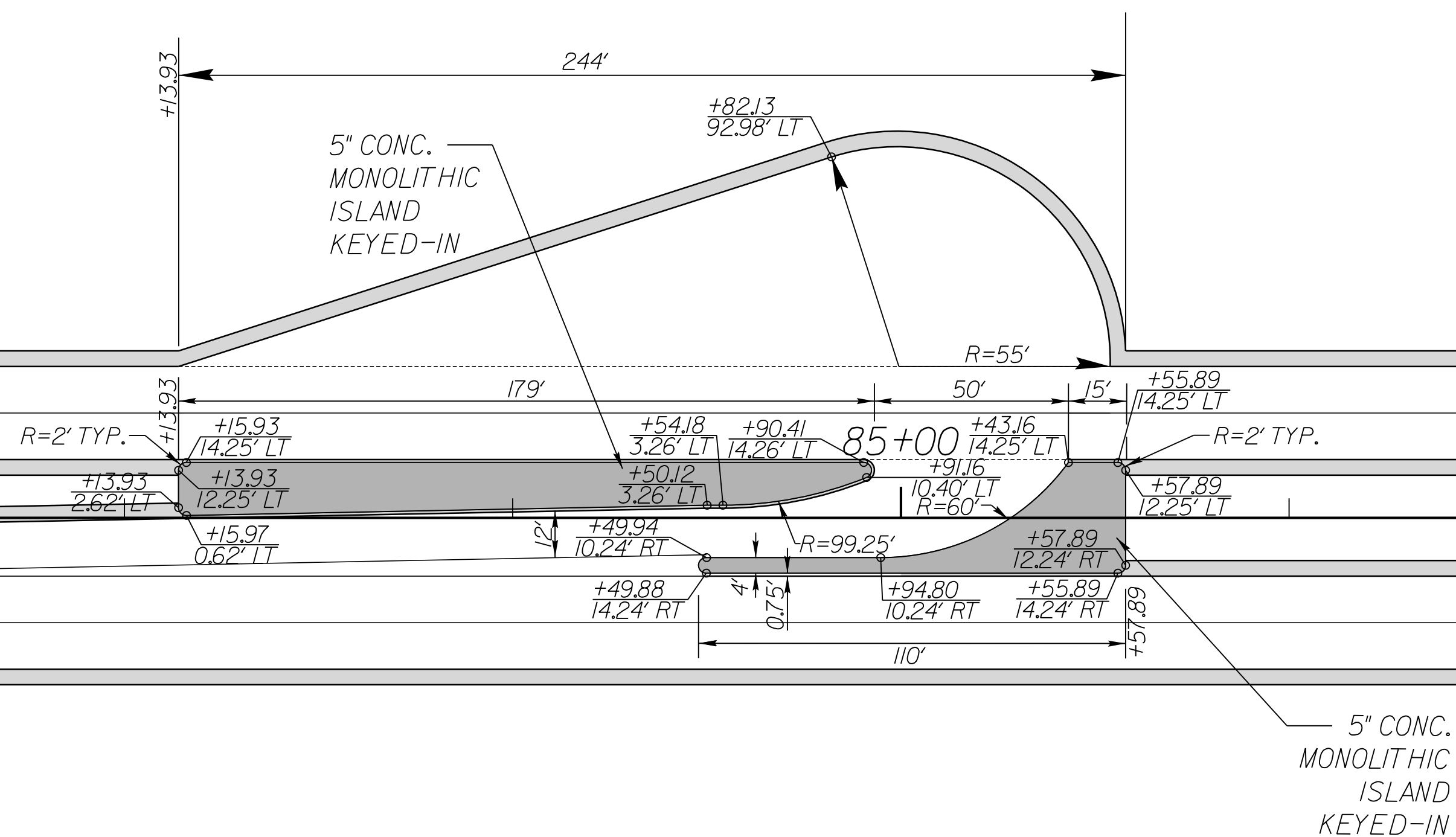
NAD 83/2011



FOR PLAN SEE SHT. 9

SCALE 1" = 30'

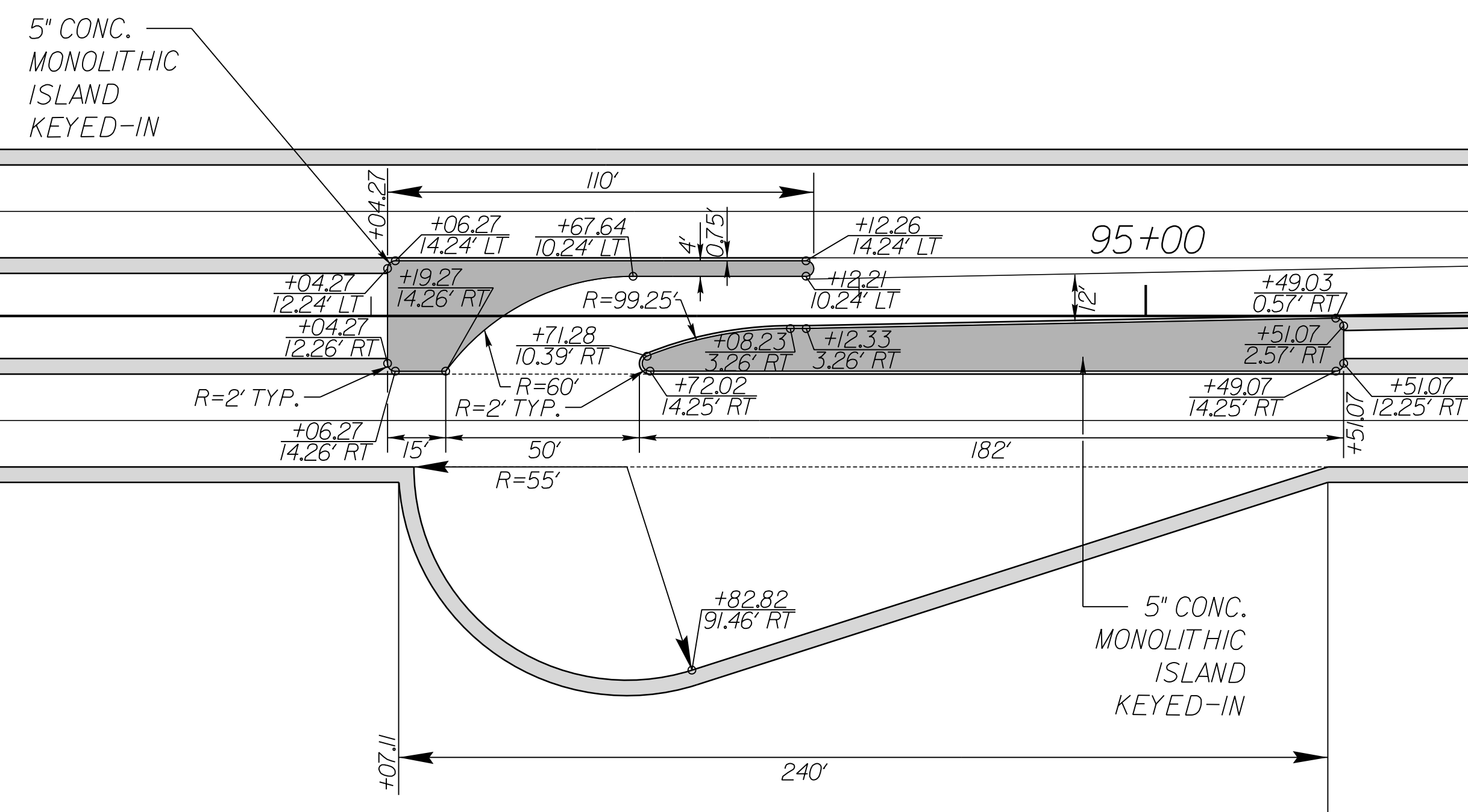
NAD 83/2011



FOR PLAN SEE SHT. 10

SCALE 1" = 30'

NAD 83/2011



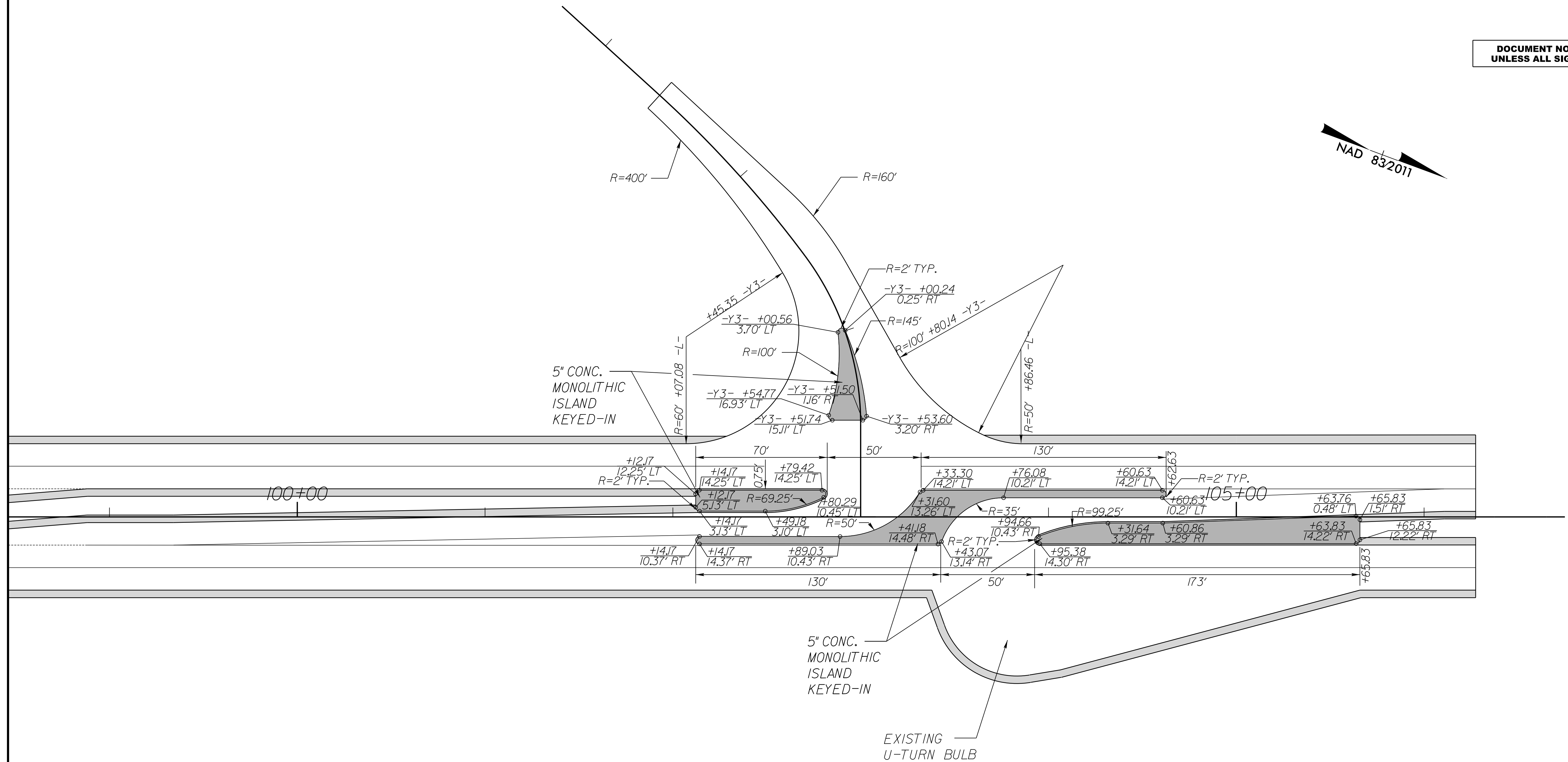
FOR PLAN SEE SHT. 10

SCALE 1" = 30'

R/W SHEET NO. \_\_\_\_\_

Professional Engineer Seal for Roman Prokopovych, State of North Carolina, License No. 048576, expires 8/6/2026.

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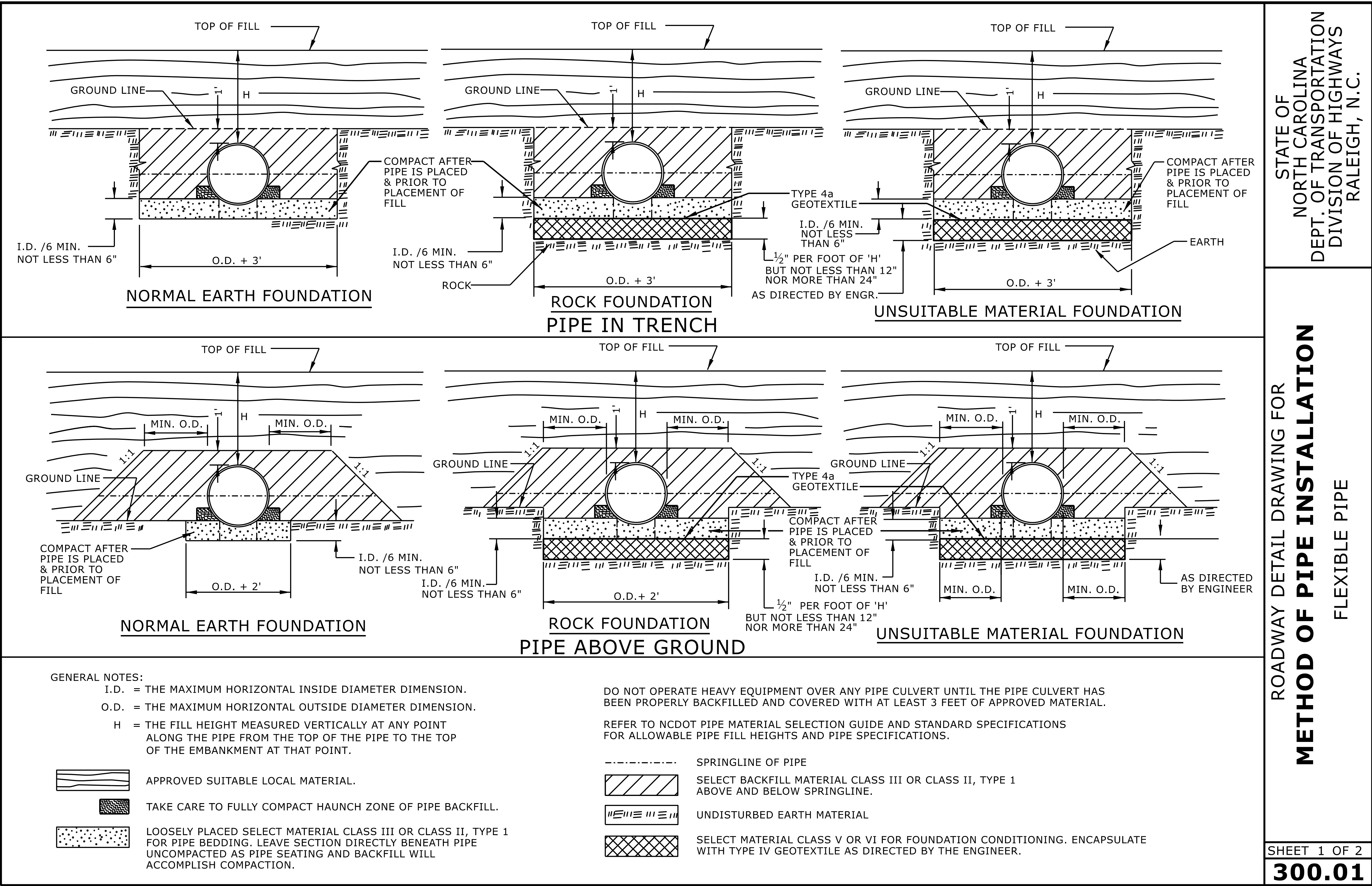


8/4/2026  
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default

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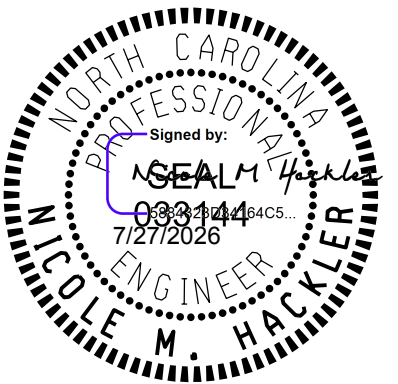
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR  
**METHOD OF PIPE INSTALLATION**  
FLEXIBLE PIPE

SHEET 1 OF 2  
**300.01**



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AND DEVELOPMENT UNIT  
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**SEE TITLE BLOCK**

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

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RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

**METHOD OF PIPE INSTALLATION**

RIGID PIPE

SHEET 2 OF 2

**300.01**

TOP OF FILL

GROUND LINE

H

I.D. /6 MIN.  
NOT LESS THAN 6"

O.D. + 3'

**NORMAL EARTH FOUNDATION**

TOP OF FILL

GROUND LINE

H

I.D. /6 MIN.  
NOT LESS THAN 6"

ROCK

O.D. + 3'

**ROCK FOUNDATION  
PIPE IN TRENCH**

TOP OF FILL

GROUND LINE

H

TYPE 4a  
GEOTEXTILE

I.D. /6 MIN.  
NOT LESS  
THAN 6"

1/2" PER FOOT OF 'H'  
BUT NOT LESS THAN 12"  
NOR MORE THAN 24"  
AS DIRECTED BY ENGR.

O.D. + 3'

**UNSUITABLE MATERIAL FOUNDATION**

TOP OF FILL

GROUND LINE

H

MIN. O.D.

MIN. O.D.

I.D. /6 MIN.  
NOT LESS THAN 6"

O.D. + 2'

**NORMAL EARTH FOUNDATION**

TOP OF FILL

GROUND LINE

H

MIN. O.D.

MIN. O.D.

I.D. /6 MIN.  
NOT LESS THAN 6"

O.D. + 2'

**ROCK FOUNDATION  
PIPE ABOVE GROUND**

TOP OF FILL

GROUND LINE

H

MIN. O.D.

MIN. O.D.

TYPE 4a  
GEOTEXTILE

COMPACT AFTER  
PIPE IS PLACED  
& PRIOR TO  
PLACEMENT OF  
FILL

I.D. /6 MIN.  
NOT LESS THAN 6"

1/2" PER FOOT OF 'H'  
BUT NOT LESS THAN 12"  
NOR MORE THAN 24"  
AS DIRECTED BY ENGINEER

MIN. O.D.

MIN. O.D.

**UNSUITABLE MATERIAL FOUNDATION**

GENERAL NOTES:

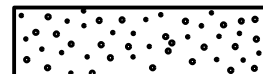
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

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

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

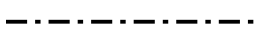
 APPROVED SUITABLE LOCAL MATERIAL.

 TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

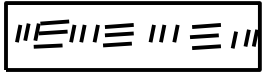
 LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1  
FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE  
UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL  
ACCOMPLISH COMPACTION.

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

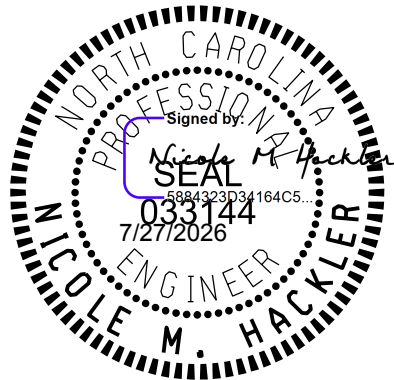
REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS  
FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

 SPRINGLINE OF PIPE

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

 UNDISTURBED EARTH MATERIAL

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



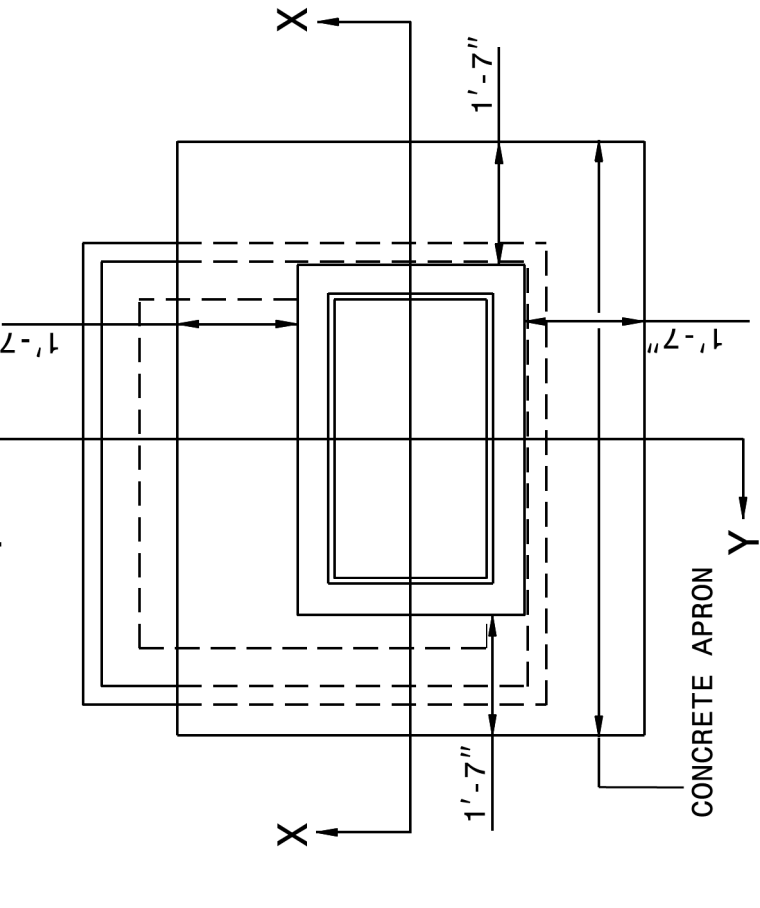
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AND DEVELOPMENT UNIT**

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| FILE SPEC.:            |                 |

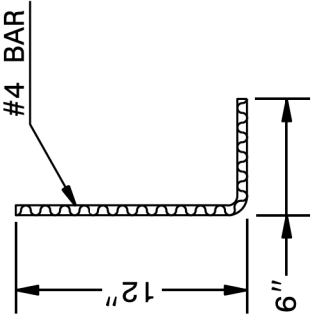
STATE OF  
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.



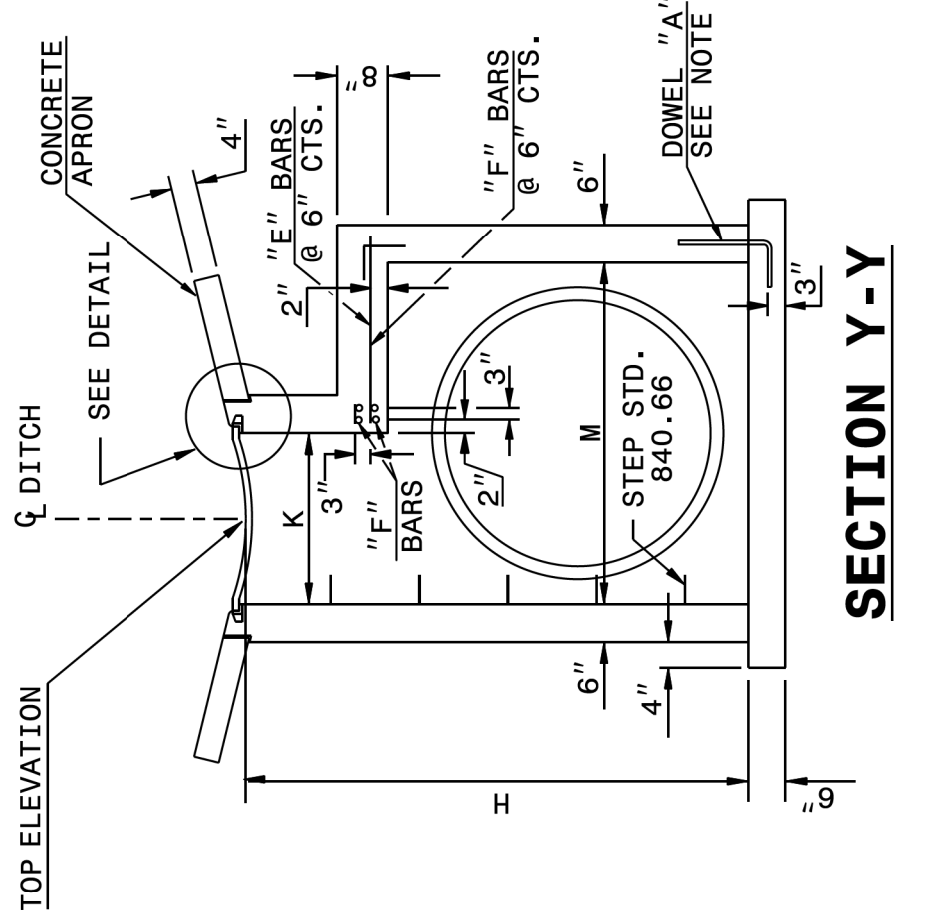
GENERAL NOTES:

- USE CLASS "B" CONCRETE THROUGHOUT.  
PROVIDE ALL GRATED DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
CONSTRUCT WITH PIPE CROWNS MATCHING.  
USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.20 (NOT SHOWN) OR 840.29 (NOT SHOWN).  
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.  
CHAMFER ALL EXPOSED CORNERS 1".  
DRAWING NOT TO SCALE.  
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

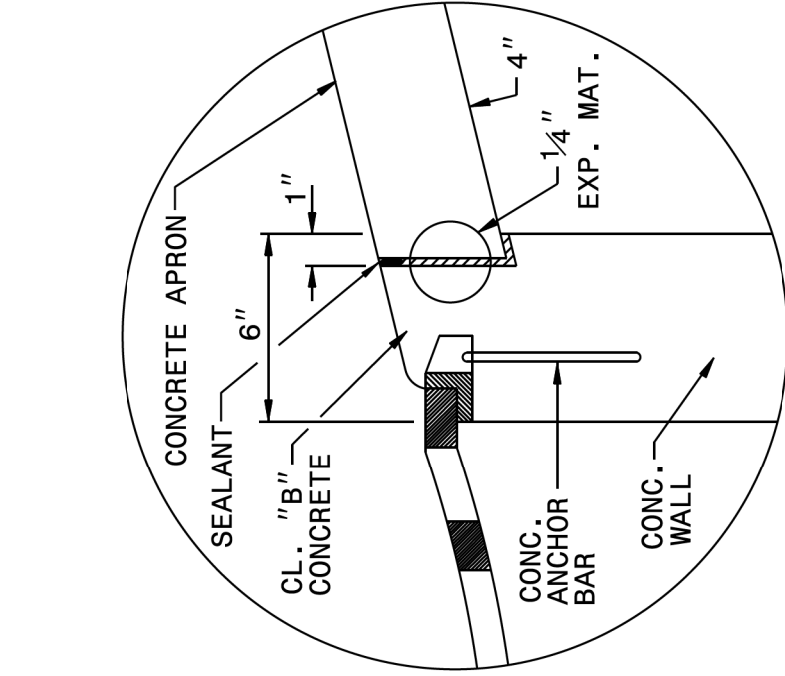
**DOWEL-A**



ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
12" THRU 72" PIPE



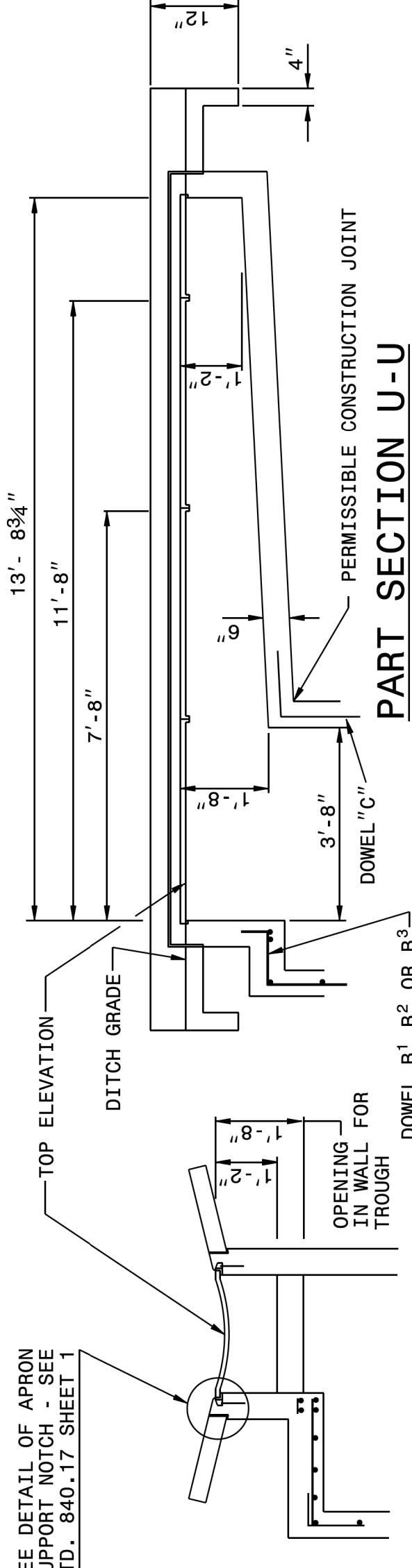
**SECTION X-X**



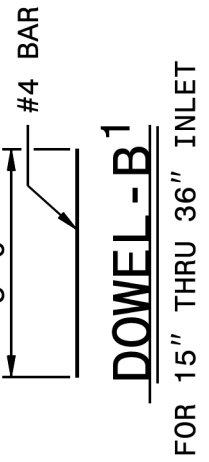
**DETAIL**  
(APRON SUPPORT NOTCH)

SHEET 1 OF 2  
**840d17**

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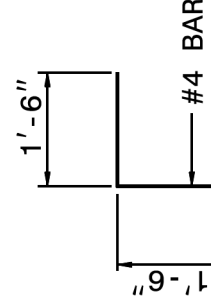
**PART SECTION V-V**



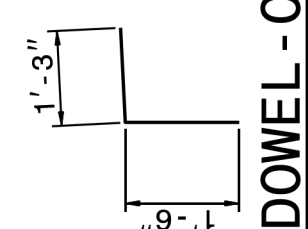
FOR 15" THRU 36" INLET

**DOWEL-B2**

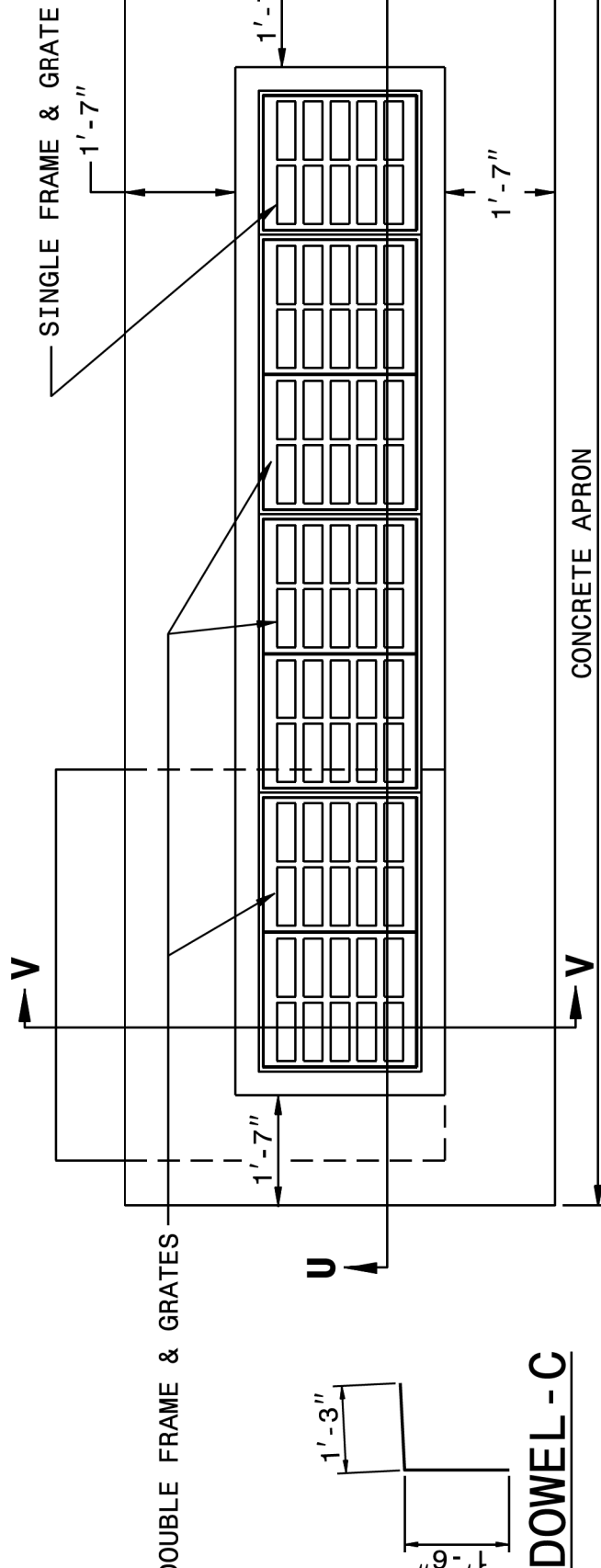
FOR 42" INLET



**DOWEL-B3**



**DOWEL-C**



**PART SECTION U-U**

| QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING |       |       |       |       |        |        |        |        |        |
|----------------------------------------------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| ADDITIONAL INLETS                                        | 2'-0" | 4'-0" | 6'-0" | 8'-0" | 10'-0" | 12'-0" | 12'-0" | 12'-0" | 12'-0" |
| CONCRETE CU. YDS.                                        | 0.191 | 0.417 | 0.665 | 0.897 | 1.145  | 1.380  |        |        |        |
| CONCRETE APRON CU. YDS.                                  | 0.074 | 0.148 | 0.222 | 0.296 | 0.370  | 0.444  |        |        |        |

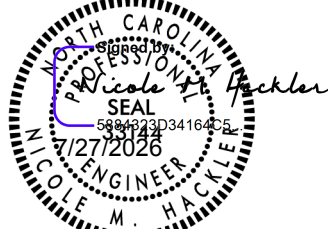
| MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H) |       |       |        |                                |        |        |        |                     |                         |
|-----------------------------------------------------------------------------------------|-------|-------|--------|--------------------------------|--------|--------|--------|---------------------|-------------------------|
| DIMENSIONS OF BOX AND PIPE                                                              |       |       |        | REINFORCING STEEL - NO. 4 BARS |        |        |        | CU YDS CONC. IN BOX |                         |
| PIPE                                                                                    | SPAN  | WIDTH | HEIGHT | BARS E                         | BARS F | BARS G | BARS H | H PER FT            | DEDUCTIONS FOR ONE PIPE |
| D                                                                                       | J     | K     | L      | M                              | N      | O      | P      | Q                   | R                       |
| 12"                                                                                     | 3'-8" | 2'-0" | 2'-0"  | 2'-3"                          | —      | —      | —      | —                   | —                       |
| 15"                                                                                     | 3'-8" | 2'-0" | 2'-0"  | 2'-5"                          | —      | —      | —      | —                   | —                       |
| 18"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 24"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 30"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 36"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 42"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 48"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 54"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 60"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 66"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |
| 72"                                                                                     | —     | —     | —      | —                              | —      | —      | —      | —                   | —                       |

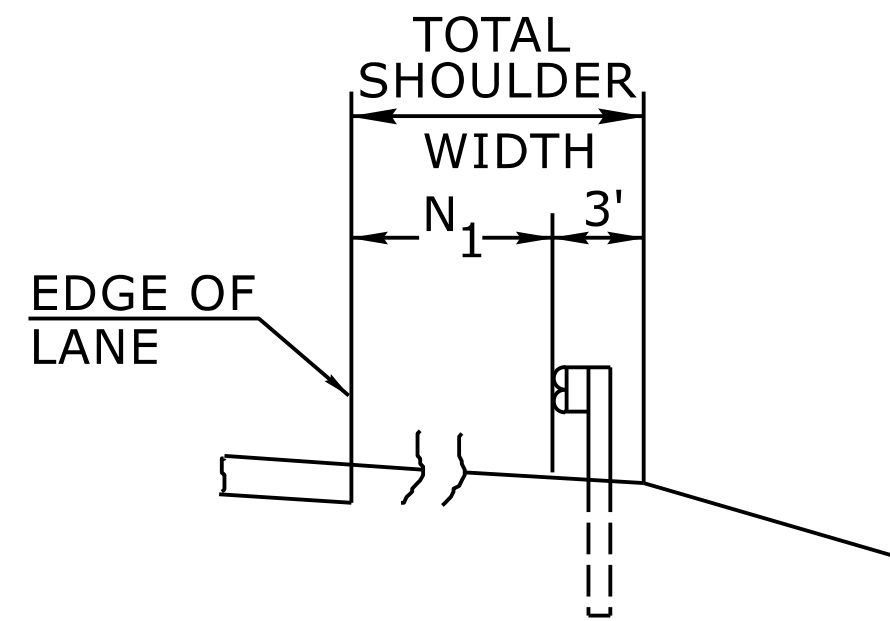
SHEET 2 OF 2  
**840d17**

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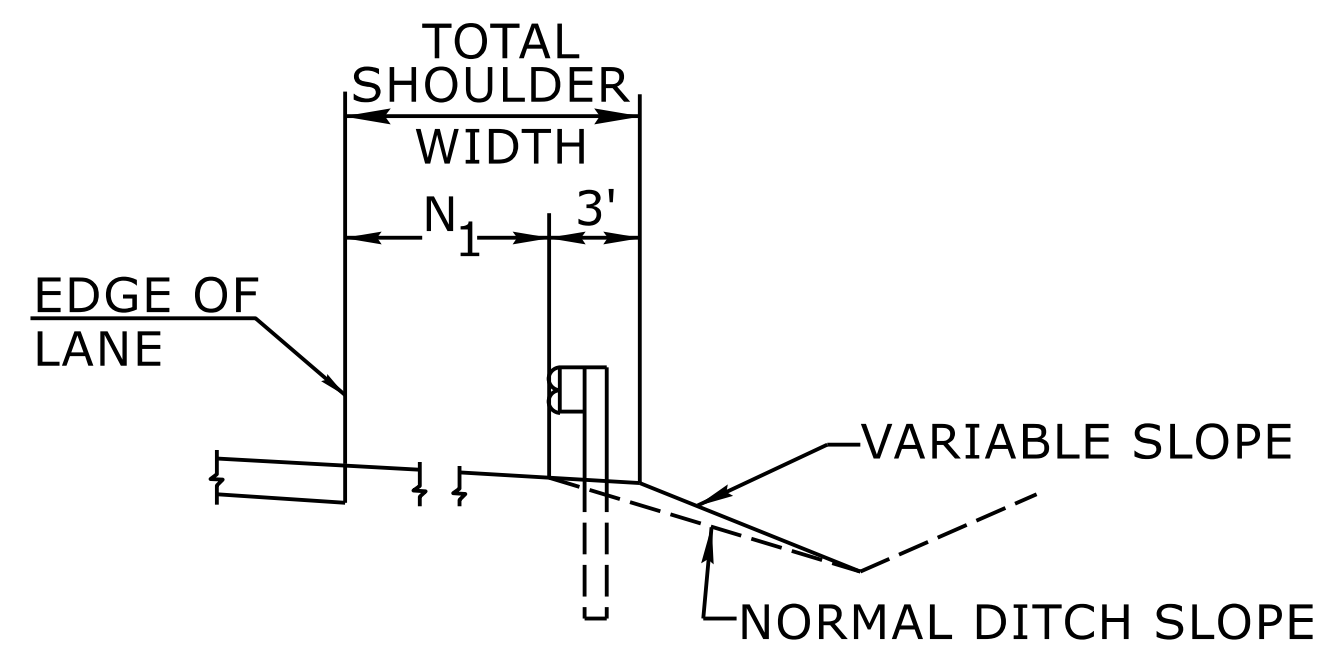
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ORIGINAL BY: J. Howerton DATE: 1/22/14  
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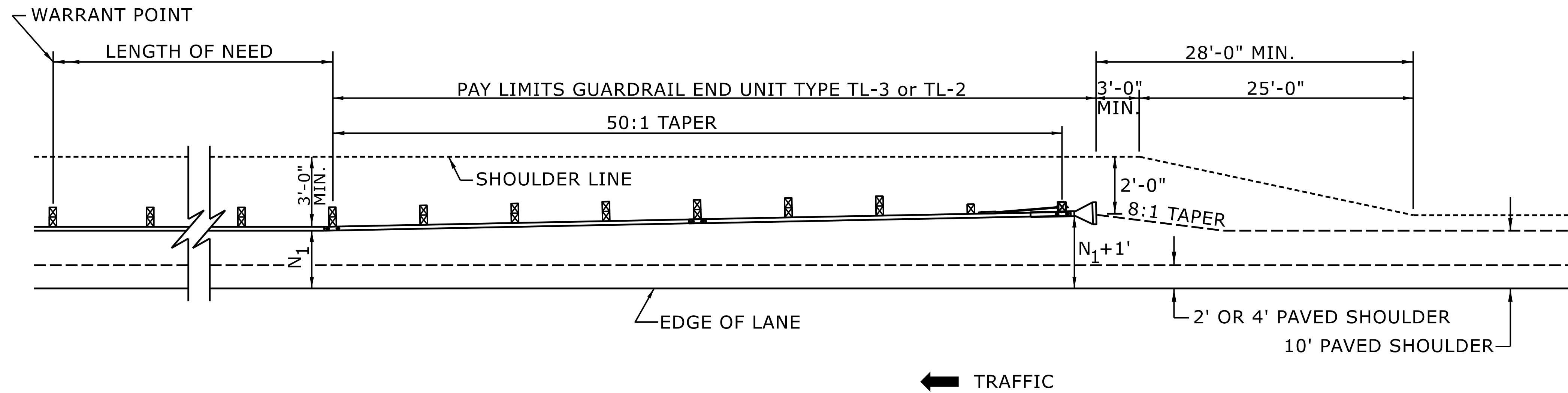


FILL SECTION



CUT SECTION

"N<sub>1</sub>" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



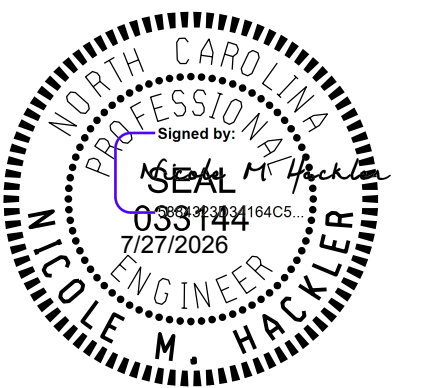
FOR POSTED SPEEDS  $\geq$  45mph USE GREU TYPE TL-3  
FOR POSTED SPEEDS  $<$  45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

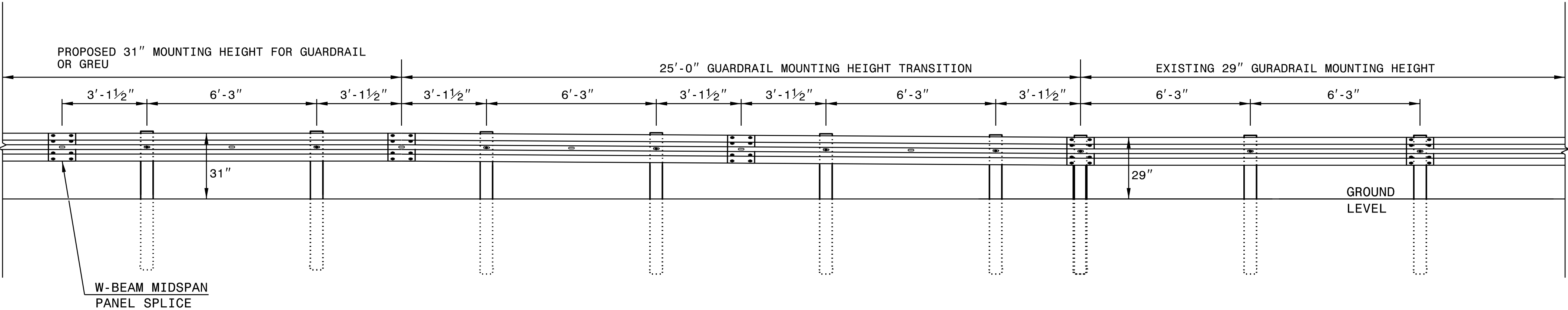
ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL PLACEMENT**

SHEET 6 OF 15  
**862D01**

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DIVISION OF HIGHWAYS  
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NOTE: IF EXISTING GUARDRAIL IS LOWER THAN 29", USE AN ADDITIONAL 12'-6" LONG SECTION OF GUARDRAIL, FOR EVERY 1" OF HEIGHT DIFFERENCE, TO TRANSITION FROM EXISTING GUARDRAIL TO PROPOSED 31" GUARDRAIL.



ELEVATION VIEW

TRANSITION FROM 29" TO 31" W-BEAM GUARDRAIL MOUNTING HEIGHT

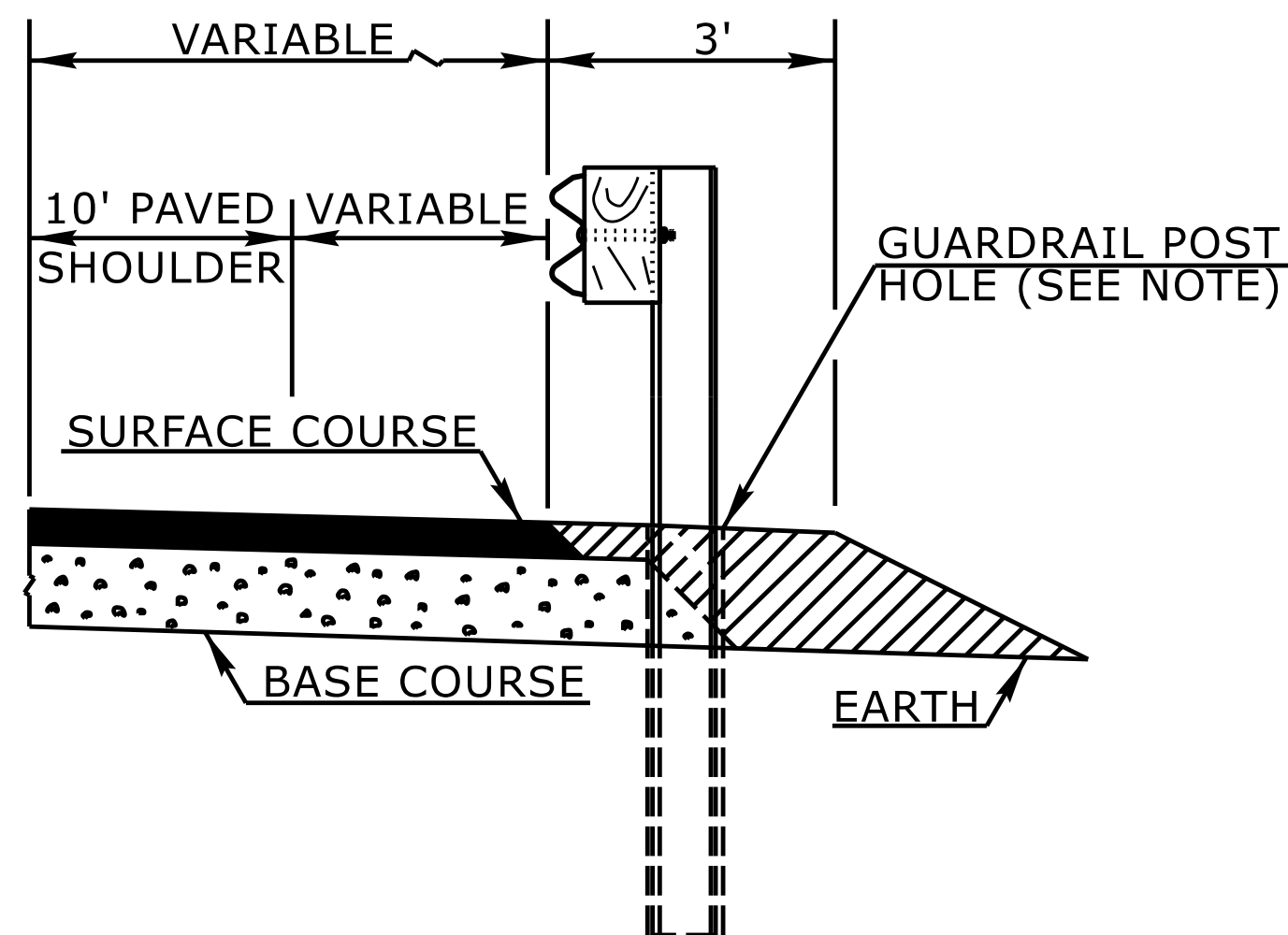
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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

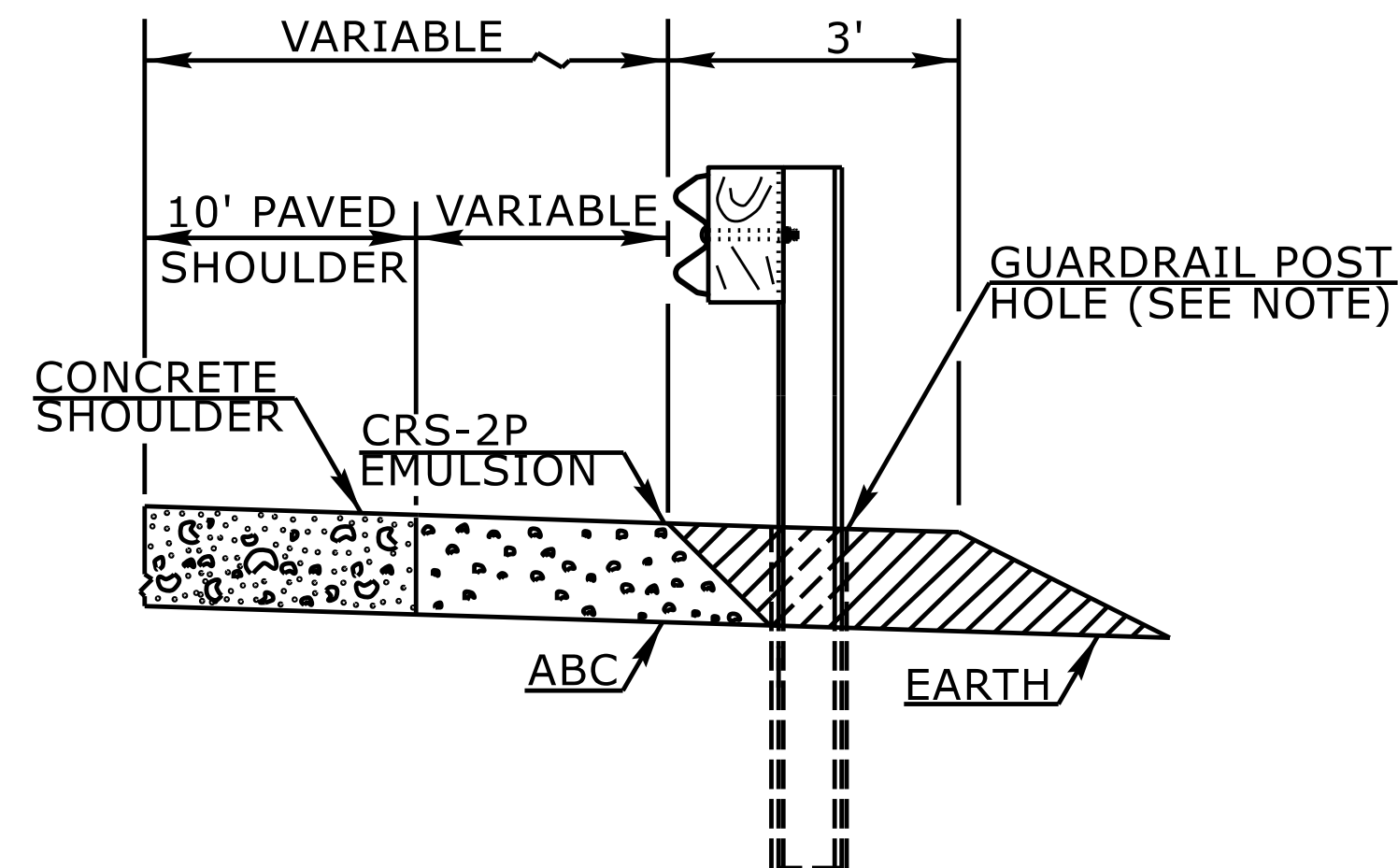
SHEET 5 OF 9  
**862D02**



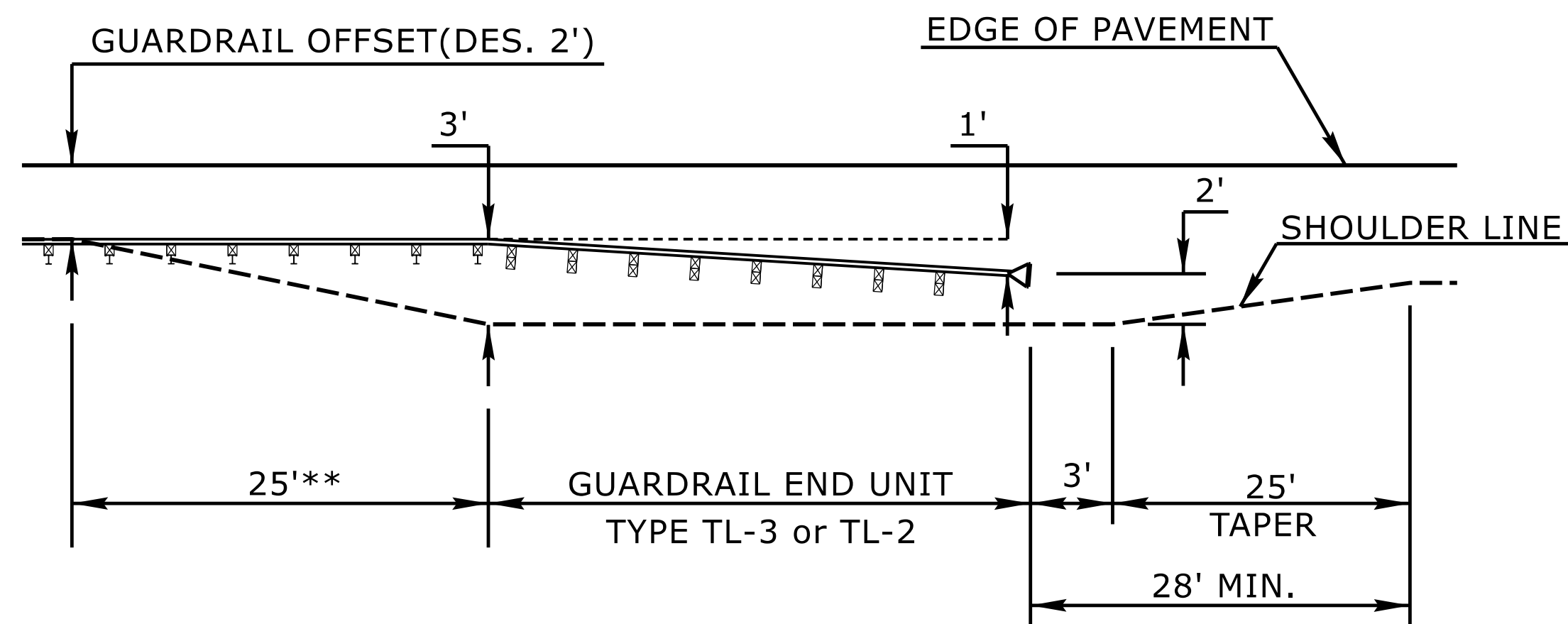
|                                                     |             |
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| <b>CONTRACTS STANDARDS<br/>AND DEVELOPMENT UNIT</b> |             |
| Office 919-707-8950 FAX 919-250-4119                |             |
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| ORIGINAL BY: K. Aldridge                            | DATE: 02-25 |
| MODIFIED BY:                                        | DATE:       |
| CHECKED BY:                                         | DATE:       |
| FILE SPEC.:                                         |             |



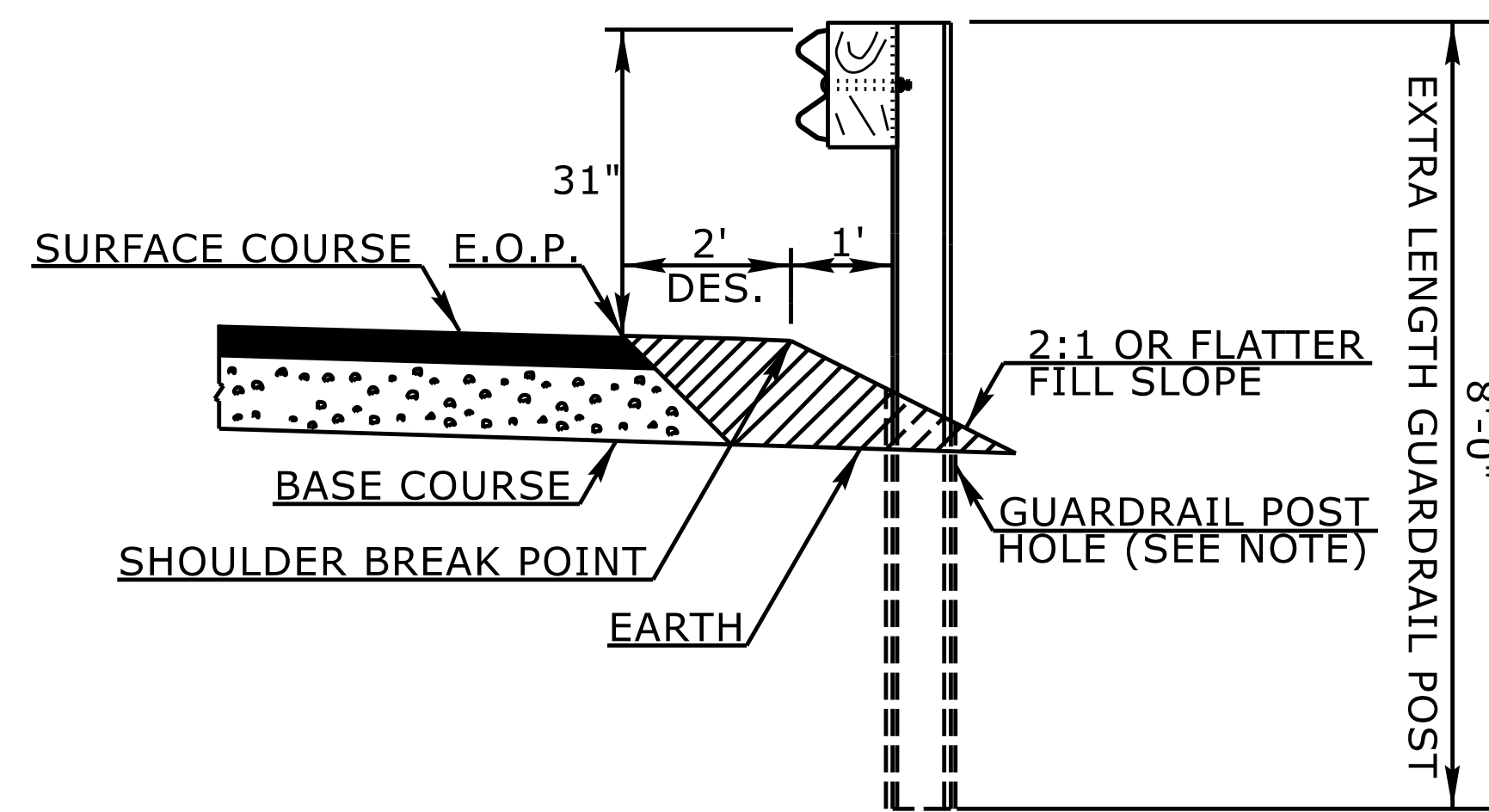
FLEXIBLE PAVED SHOULDER



CONCRETE PAVED SHOULDER



8' GUARDRAIL POST ON 2:1 SLOPE-END UNIT TRANSITION\*  
PLAN VIEW



8' GUARDRAIL POST ON 2:1 SLOPE\*

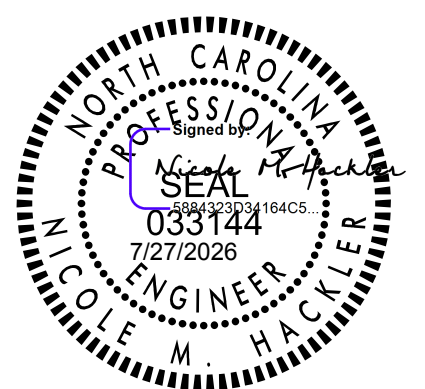
- \* THE 8' GUARDRAIL POST ON 2:1 SLOPE DETAIL IS INTENDED FOR USE ONLY IN SEVERELY CONSTRAINED AREAS WITH A POSTED SPEED  $\leq$  60 MPH. GUARDRAIL END UNITS MAY NOT BE PLACED ON THE 2:1 SLOPE AND MUST TRANSITION TO THE SHOULDER.
- \*\* 8' GUARDRAIL POST SHOULD BE USED IN THIS RANGE

NOTE:  
WHEN WOODEN GUARDRAIL POSTS ARE USED, DRILL HOLES THROUGH EARTH MATERIAL AND BASE COURSE. THE POST MAY THEN BE DRIVEN TO THE PROPER DEPTH. DRILL THE HOLE OF SUFFICIENT SIZE TO ACCOMMODATE THE PARTICULAR POST BEING USED. BACKFILL AND TAMP HOLES USING THE EXCAVATED MATERIAL.

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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL PLACEMENT**

SHEET 11 OF 15  
**862D01**

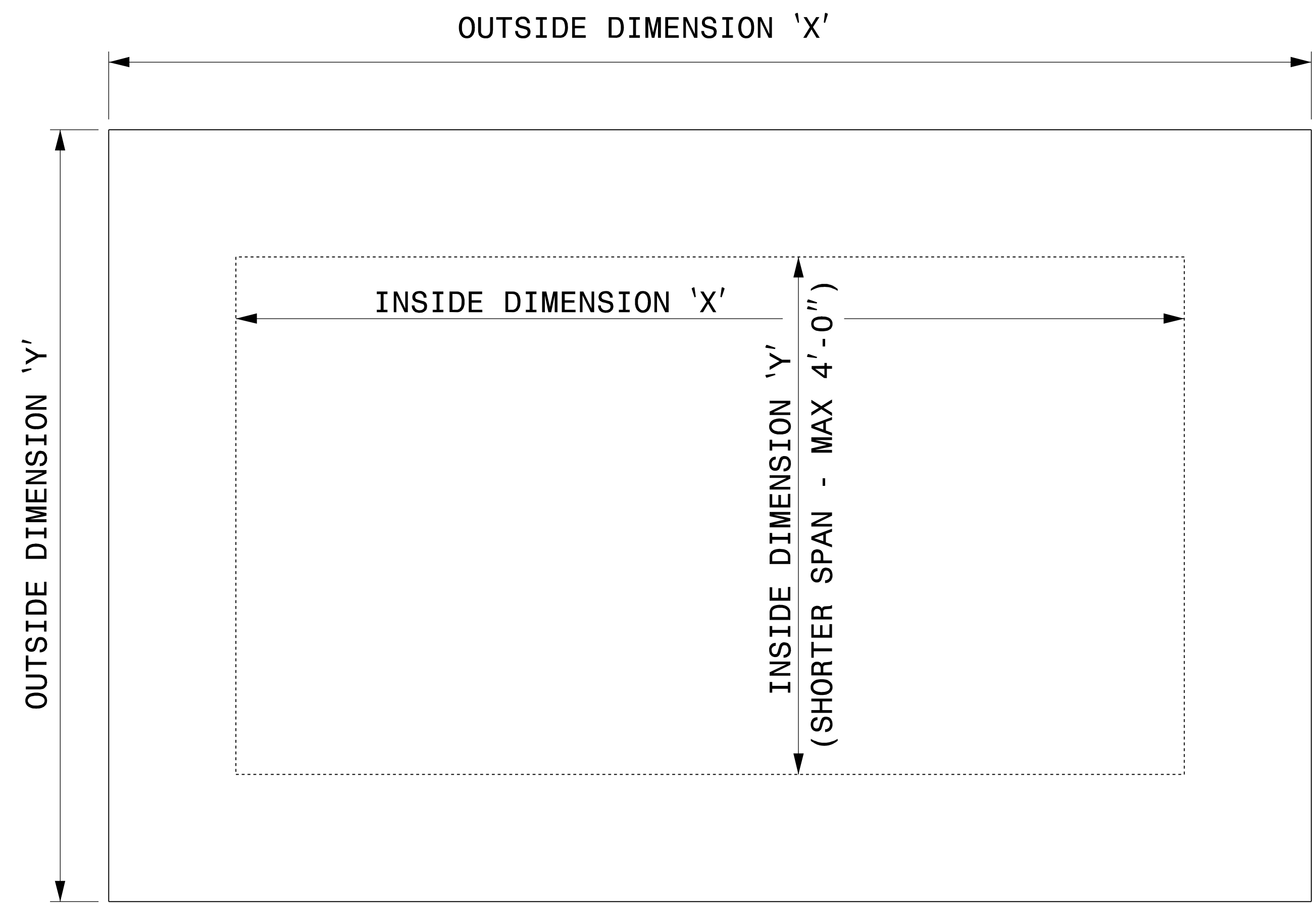


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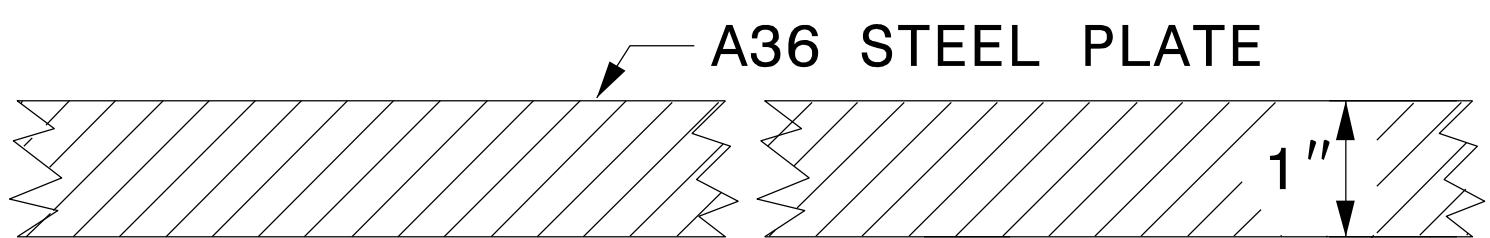
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ORIGINAL BY: L.SMITH DATE: 10-14-2025  
MODIFIED BY: DATE:  
CHECKED BY: DATE:  
FILE SPEC.: DATE:



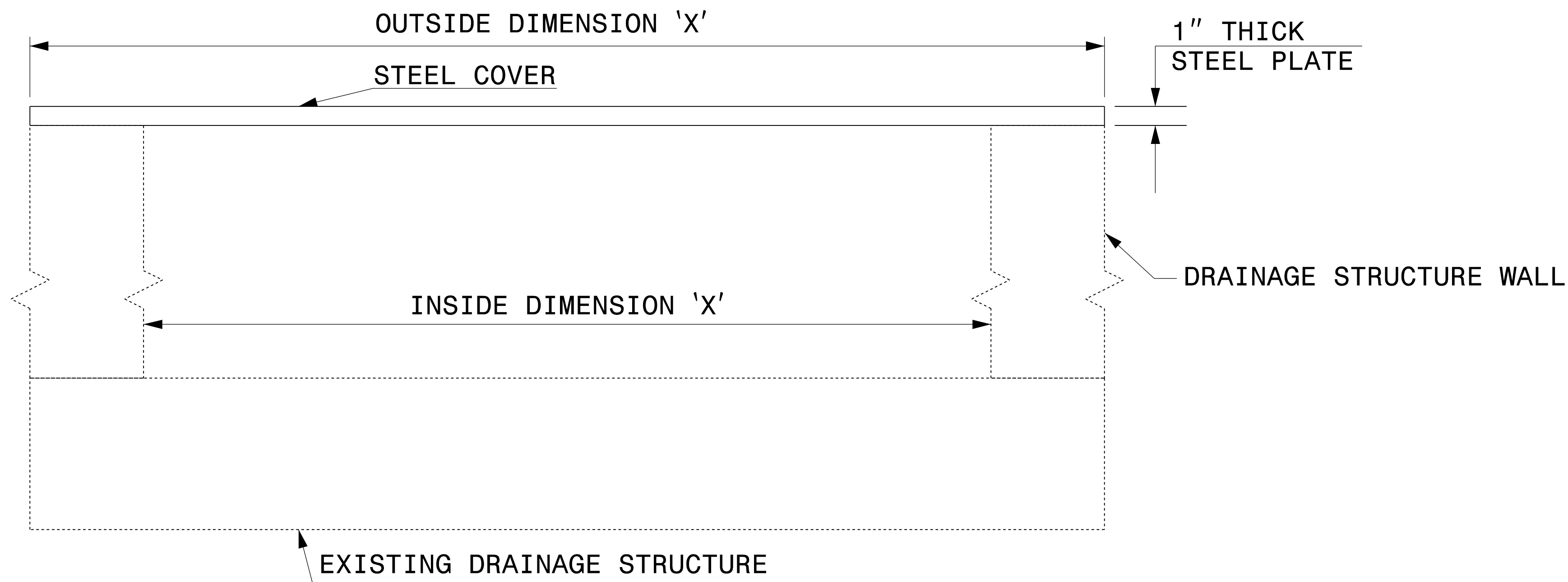
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.

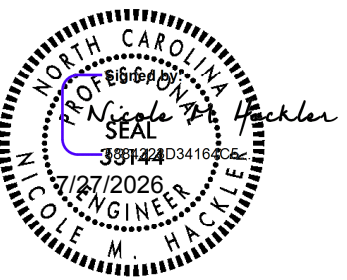


SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS

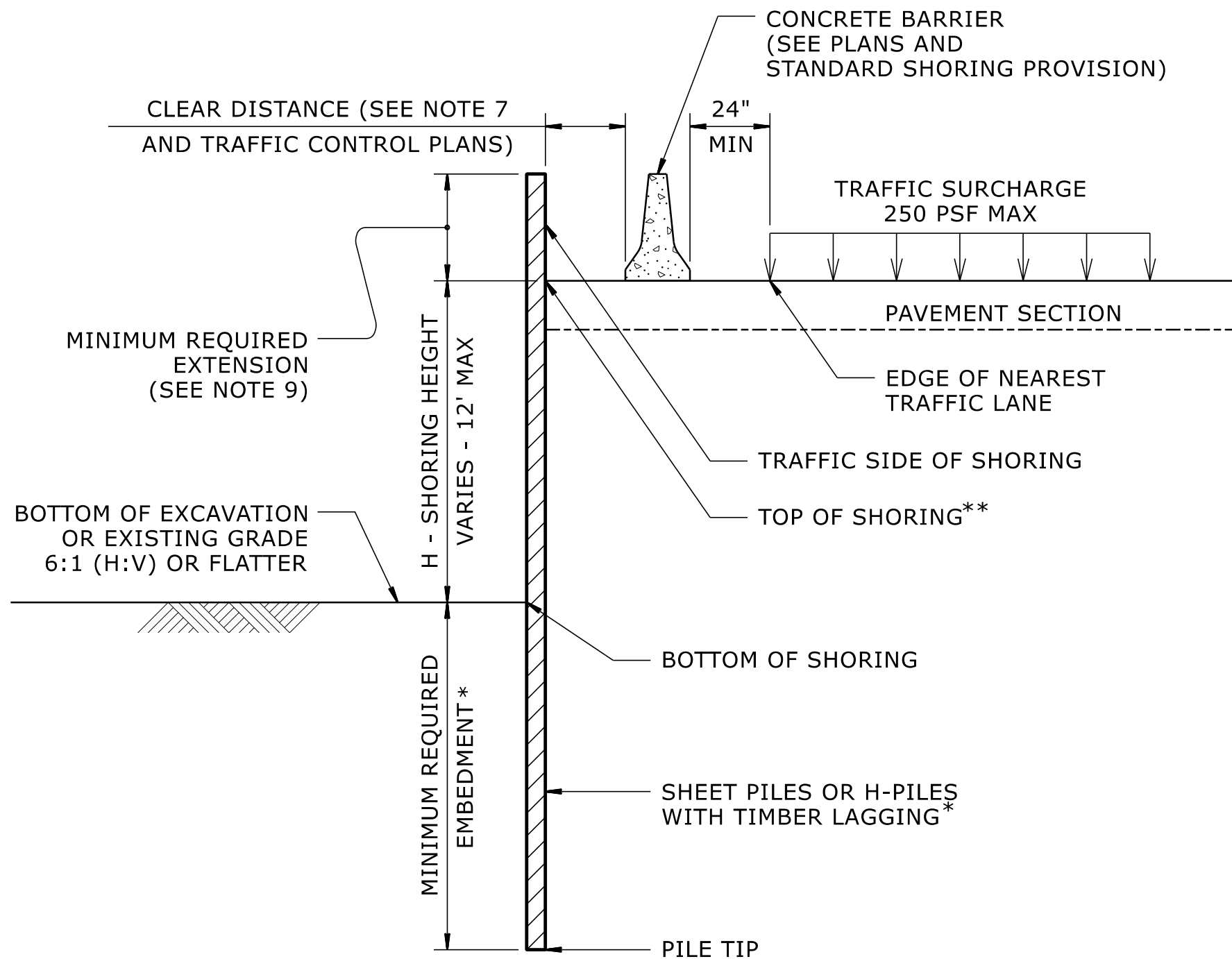


|                                                                           |                  |
|---------------------------------------------------------------------------|------------------|
| <b>CONTRACT STANDARDS<br/>AND DEVELOPMENT UNIT</b>                        |                  |
| Office 919-707-6950                                                       | FAX 919-250-4119 |
| <b>DETAIL OF TEMPORARY<br/>1" STEEL COVER<br/>OVER DRAINAGE STRUCTURE</b> |                  |
| ORIGINAL BY: E.E. WARD                                                    | DATE: 2-2-98     |
| MODIFIED BY:                                                              | DATE:            |
| CHECKED BY:                                                               | DATE:            |
| FILE SPEC.: eric:/usr/details/metric/stand/stlcvr2.dgn                    |                  |

| GROUNDWATER<br>CONDITION<br>(SEE NOTE 6)                              | H<br>SHORING<br>HEIGHT<br>(FT) | SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT |                                                              |                                                       |          |          | SURCHARGE CASE WITH TRAFFIC IMPACT       |                                                              |                                                       |          |          |
|-----------------------------------------------------------------------|--------------------------------|------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|----------|----------|------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|----------|----------|
|                                                                       |                                | SHEET PILES                                    |                                                              | H-PILES WITH TIMBER LAGGING                           |          |          | SHEET PILES                              |                                                              | H-PILES WITH TIMBER LAGGING                           |          |          |
|                                                                       |                                | MINIMUM<br>REQUIRED<br>EMBEDMENT<br>(FT)       | MINIMUM REQUIRED<br>SECTION MODULUS<br>(IN <sup>4</sup> /FT) | MINIMUM REQUIRED EMBEDMENT *<br>(FT)<br>(SEE NOTE 10) |          |          | MINIMUM<br>REQUIRED<br>EMBEDMENT<br>(FT) | MINIMUM REQUIRED<br>SECTION MODULUS<br>(IN <sup>4</sup> /FT) | MINIMUM REQUIRED EMBEDMENT *<br>(FT)<br>(SEE NOTE 10) |          |          |
|                                                                       |                                |                                                |                                                              | HP 10x42                                              | HP 12x53 | HP 14x73 |                                          |                                                              | HP 10x42                                              | HP 12x53 | HP 14x73 |
| GROUNDWATER<br>ELEVATION BETWEEN<br>BOTTOM OF SHORING<br>AND PILE TIP | < 6                            | 11.5                                           | 4.5                                                          | 11.5                                                  | 11.5     | 11.5     | 16.0                                     | 12.0                                                         | 13.0                                                  | 13.0     | 13.0     |
|                                                                       | 7                              | 13.0                                           | 7.0                                                          | 13.0                                                  | 13.0     | 13.0     | 17.0                                     | 14.5                                                         | 14.5                                                  | 14.5     | 14.5     |
|                                                                       | 8                              | 15.0                                           | 10.0                                                         | --                                                    | 15.0     | 15.0     | 18.0                                     | 17.0                                                         | --                                                    | 15.5     | 15.5     |
|                                                                       | 9                              | 17.0                                           | 14.0                                                         | --                                                    | 17.0     | 17.0     | 19.0                                     | 20.0                                                         | --                                                    | 17.0     | 17.0     |
|                                                                       | 10                             | 18.5                                           | 19.5                                                         | --                                                    | --       | 18.5     | 20.0                                     | 23.5                                                         | --                                                    | --       | 18.5     |
|                                                                       | 11                             | 20.5                                           | 26.0                                                         | --                                                    | --       | --       | 21.0                                     | 28.0                                                         | --                                                    | --       | 20.0     |
|                                                                       | 12                             | 22.5                                           | 33.0                                                         | --                                                    | --       | --       | 22.0                                     | 33.0                                                         | --                                                    | --       | 21.5     |
| GROUNDWATER<br>ELEVATION BELOW<br>PILE TIP                            | < 6                            | 7.5                                            | 3.0                                                          | 8.0                                                   | 8.0      | 8.0      | 11.0                                     | 10.0                                                         | 9.5                                                   | 9.5      | 9.5      |
|                                                                       | 7                              | 8.5                                            | 4.5                                                          | 9.5                                                   | 9.5      | 9.5      | 12.0                                     | 12.0                                                         | 10.5                                                  | 10.5     | 10.5     |
|                                                                       | 8                              | 10.0                                           | 6.5                                                          | 10.5                                                  | 10.5     | 10.5     | 12.5                                     | 14.0                                                         | 11.5                                                  | 11.5     | 11.5     |
|                                                                       | 9                              | 11.0                                           | 9.5                                                          | --                                                    | 12.0     | 12.0     | 13.5                                     | 16.5                                                         | --                                                    | 12.5     | 12.5     |
|                                                                       | 10                             | 12.5                                           | 13.0                                                         | --                                                    | --       | 13.5     | 14.0                                     | 19.5                                                         | --                                                    | 13.5     | 13.5     |
|                                                                       | 11                             | 13.5                                           | 17.0                                                         | --                                                    | --       | 14.5     | 15.0                                     | 22.5                                                         | --                                                    | --       | 14.5     |
|                                                                       | 12                             | 15.0                                           | 21.5                                                         | --                                                    | --       | 16.0     | 16.0                                     | 25.5                                                         | --                                                    | --       | 15.5     |

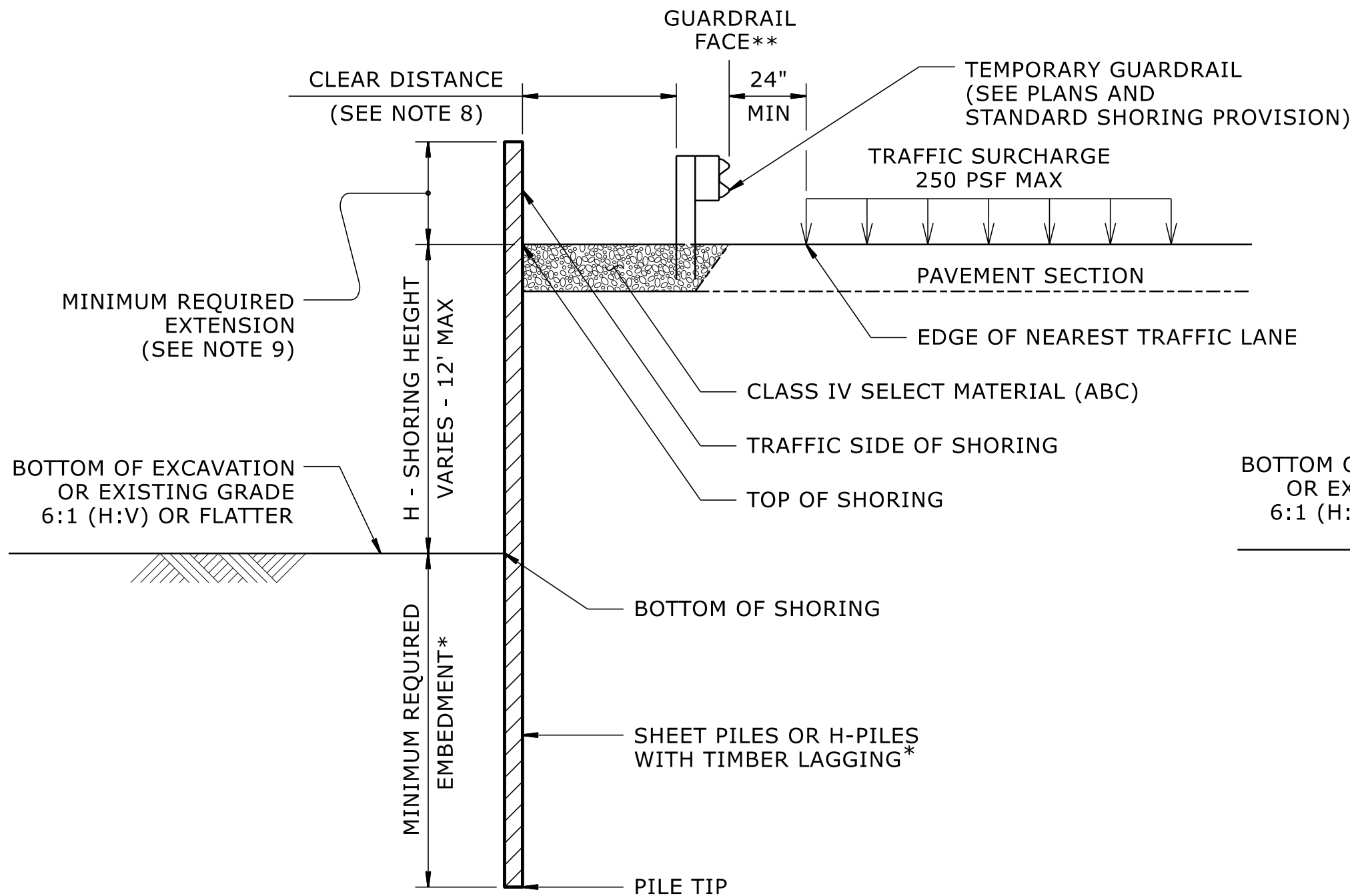
MINIMUM REQUIRED EMBEDMENT AND SECTION MODULUS

\*DO NOT USE H-PILES WITH TIMBER LAGGING FOR GROUNDWATER CONDITION, SHORING HEIGHT AND H-PILE SIZE SHOWN IF MINIMUM REQUIRED EMBEDMENT IS "---".



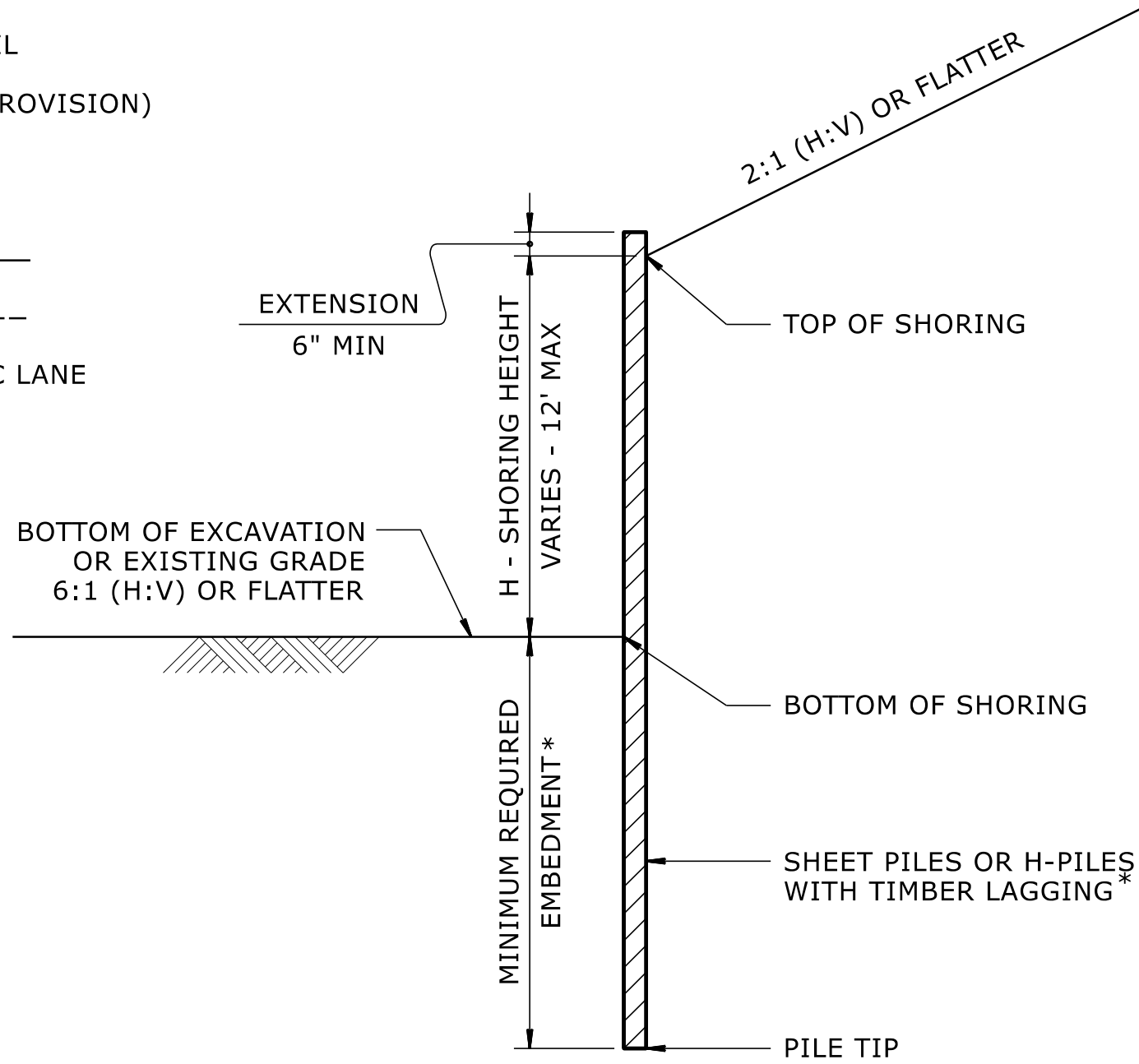
CONCRETE BARRIER

\*\*TOP OF SHORING =  
EDGE OF PAVEMENT



TEMPORARY GUARDRAIL

\*\*GUARDRAIL FACE =  
EDGE OF PAVEMENT



STANDARD TEMPORARY SHORING

(SLOPE CASE)  
\*SEE TABLE ABOVE.

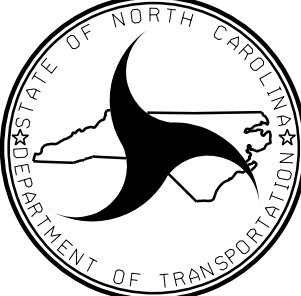
NOTES:

1. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING AS NOTED IN THE PLANS.
2. FOR STANDARD TEMPORARY SHORING, SEE STANDARD SHORING PROVISION.
3. STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:  
UNIT WEIGHT,  $\gamma$  = 120 PCF  
FRICTION ANGLE,  $\phi$  = 30 DEGREES  
COHESION,  $c$  = 0 PSF
4. DO NOT USE STANDARD TEMPORARY SHORING IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE.
5. DO NOT USE STANDARD TEMPORARY SHORING WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS WITHIN THE EMBEDMENT DEPTH.
6. USE GROUNDWATER ELEVATION NOTED IN THE PLANS. IF NO GROUNDWATER ELEVATION IS SHOWN IN THE PLANS, USE "GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP" FOR GROUNDWATER CONDITION. DO NOT USE STANDARD TEMPORARY SHORING IF GROUNDWATER IS ABOVE BOTTOM OF SHORING.
7. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN THE MINIMUM REQUIRED FOR CONCRETE BARRIER, SET BARRIER NEXT TO AND UP AGAINST TRAFFIC SIDE OF PILES AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
8. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN 4' FOR TEMPORARY GUARDRAIL, ATTACH GUARDRAIL TO TRAFFIC SIDE OF PILES AS SHOWN IN THE PLANS AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
9. MINIMUM REQUIRED EXTENSION IS 6" FOR "SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT" AND 32" FOR "SURCHARGE CASE WITH TRAFFIC IMPACT".
10. MINIMUM REQUIRED EMBEDMENT FOR H-PILES WITH TIMBER LAGGING IS BASED ON DRIVEN H-PILES AT MAXIMUM 6' SPACING. AT THE CONTRACTOR'S OPTION, EMBEDMENT DEPTHS MAY BE REDUCED BY 25% FOR DRILLED-IN H-PILES.
11. SUBMIT A "STANDARD TEMPORARY SHORING SELECTION FORM" AT LEAST 7 DAYS BEFORE STARTING TEMPORARY SHORING CONSTRUCTION. UP TO 3 SHORING LOCATIONS MAY BE INCLUDED ON EACH FORM. STANDARD SHORING SELECTION FORMS ARE AVAILABLE FROM:  
[connect.ncdot.gov/resources/Geological/Pages/Geotech\\_Forms\\_Details.aspx](http://connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx)
12. CONTACT THE ENGINEER IF PILES DO NOT ATTAIN THE MINIMUM REQUIRED EMBEDMENT.

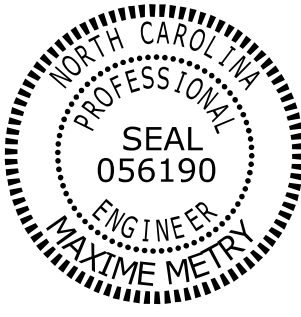
R-5810

G002

NORTH CAROLINA  
DEPARTMENT  
OF TRANSPORTATION

  
GEOTECHNICAL  
ENGINEERING UNIT

GEOTECHNICAL  
ENGINEER

  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

STANDARD  
DETAIL NO. 1801.01

GEOTECHNICAL STANDARD DETAIL FOR  
TEMPORARY SHORING

8/17/99

|             |               |            |
|-------------|---------------|------------|
| COMPUTED BY | CAIO A PARRA  | 06/15/2026 |
| REVIEWED BY | ERIN SEALS,PE | 06/18/2026 |

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-5810                | 3B-I      |

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

WOVEN WIRE FENCE

SUMMARY OF EARTHWORK  
IN CUBIC YARDS

| CHAIN                                     | BEGINNING STATION | ENDING STATION | UNCL. EXCA. C.Y. | UNDERCUT C.Y. | EMBANK. +% C.Y. | BORROW C.Y. | WASTE C.Y. |
|-------------------------------------------|-------------------|----------------|------------------|---------------|-----------------|-------------|------------|
| SUMMARY 1                                 |                   |                |                  |               |                 |             |            |
| -L-                                       | 15+00.00          | 18+00.00       | 27               |               | 56              | 29          |            |
| -L-                                       | 25+50.00          | 32+50.00       | 419              |               | 874             | 455         |            |
| -L-                                       | 55+00.00          | 56+00.00       | 87               |               |                 |             | 87         |
| -L-                                       | 60+50.00          | 71+00.00       | 412              |               | 1,649           | 1,237       |            |
| -L-                                       | 72+50.00          | 85+50.00       | 1,304            |               | 650             |             | 654        |
| -L-                                       | 87+50.00          | 88+00.00       | 53               |               |                 |             | 53         |
| -L-                                       | 93+50.00          | 102+50.00      | 281              |               | 819             | 538         |            |
| -L-                                       | 104+50.00         | 106+27.47      | 50               |               | 6               |             | 44         |
| SUBTOTAL                                  |                   |                | 2,633            |               | 4,054           | 2,259       | 838        |
| SUMMARY 2                                 |                   |                |                  |               |                 |             |            |
| -Y3-                                      | 10+50.00          | 12+61.00       | 109              |               | 74              |             | 35         |
| SUBTOTAL                                  |                   |                | 109              |               | 74              |             | 35         |
| SHEET TOTALS                              |                   |                | 2,742            |               | 4,128           | 2,259       | 873        |
| MATERIAL FOR SHOULDER CONSTRUCTION        |                   |                |                  |               | 831             | 831         |            |
| EARTH WASTE IN LIEU OF BORROW             |                   |                |                  |               |                 | -873        | -873       |
| PROJECT TOTAL                             |                   |                | 2,742            |               | 4,128           | 2,216       |            |
| EST. 5% TO REPLACE TOP SOIL ON BORROW PIT |                   |                |                  |               |                 | 111         |            |
| CONTINGENCY FOR UNDERCUT                  |                   |                |                  | 300           |                 |             |            |
| GRAND TOTAL                               |                   |                | 2,742            | 300           |                 | 2,327       |            |
| SAY                                       |                   |                | 2,750            | 300           |                 | 2,330       |            |

DRAINAGE DITCH EXCAVATION = 380 CY

| STATION TO STATION | LT. OR RT. | A<br>FABRIC L.F. | B<br>END BRACE | C<br>CORNER BRACE | D<br>LINE BRACE | E<br>4" POSTS | F<br>5" POSTS |
|--------------------|------------|------------------|----------------|-------------------|-----------------|---------------|---------------|
|                    |            |                  |                |                   |                 |               |               |
| 30+55 - 33+20      | LT         | 302.34           | 2              | 1                 |                 | 18            | 7             |
| 60+65 - 63+45      | RT         | 331.17           | 2              | 2                 |                 | 18            | 10            |
| 82+55 - 85+90      | LT         | 388.41           | 2              | 1                 |                 | 24            | 7             |
| 92+35 - 96+10      | RT         | 406.31           | 2              | 1                 |                 | 25            | 7             |
| 103+02 - 105+80    | RT         | 309.49           | 2              | 2                 |                 | 17            | 10            |
| TOTAL              |            | 1,737.71         |                |                   |                 | 102           | 41            |
| SAY                |            | 1,740            |                |                   |                 | 102           | 41            |

PAVEMENT REMOVAL SUMMARY

| LINE | STATION | STATION | LOCATION | LENGTH OR AREA | WIDTH | SQUARE YARDS |
|------|---------|---------|----------|----------------|-------|--------------|
| -L-  | 10+51   | 13+86   |          | 442.47         |       | 49.16        |
| -L-  | 14+61   | 15+70   |          | 196.57         |       | 21.84        |
| -L-  | 55+46   | 56+49   |          | 1352.38        |       | 150.26       |
| -L-  | 87+64   | 88+26   |          | 1168.59        |       | 129.84       |
| -L-  | 72+85   | 76+19   |          | 634.26         |       | 70.47        |
| -Y3- | 10+44   | 11+64   |          | 2592.61        |       | 288.07       |
|      |         |         |          |                | TOTAL | 709.65       |
|      |         |         |          |                | SAY   | 710          |

GUARDRAIL SUMMARY

| ALN.                       | BEG. STA. | END STA. | LOCATION | LENGTH   |             |              | WARRANT POINT                   |            | "N" DIST. FROM E.O.L. | TOTAL SHOUL WIDTH | FLARE LENGTH  |               | W         |            | ANCHORS  |      |       |           |           |      | IMPACT ATTENUATOR |    | REMOVE EXISTING GR | REMARKS |
|----------------------------|-----------|----------|----------|----------|-------------|--------------|---------------------------------|------------|-----------------------|-------------------|---------------|---------------|-----------|------------|----------|------|-------|-----------|-----------|------|-------------------|----|--------------------|---------|
|                            |           |          |          | STRAIGHT | SHOP CURVED | DOUBLE FACED | APPR. END                       | TRAIL. END |                       |                   | APPRO ACH END | TRAILI NG END | APPR. END | TRAIL. END | TYPE III | B-77 | CAT-1 | GREU TL-2 | GREU TL-3 | AT-1 | G                 | NG |                    |         |
| -L-                        | 16+43.42  | 18+68.42 | MED RT   | 225.000  |             |              | 18+91.18                        |            | 5.86                  | 4                 | 224.94        |               | 1.72      |            |          |      |       |           |           |      |                   | 1  | 272.3              |         |
| -L-                        | 16+16.02  | 18+34.77 | RT       | 218.750  |             |              | 18+91.14                        |            | 9.80                  | 4                 | 50            |               | 1         |            |          |      | 1     |           | 1         |      |                   |    | 244.3              |         |
| -L-                        | 16+35.36  | 18+70.50 | MED LT   | 210.375  |             |              |                                 | 18+45.50   | 4.16                  | 4                 |               |               |           |            |          | 1    |       |           |           |      |                   |    | 165.4              |         |
| -L-                        | 18+16.39  | 18+70.54 | LT       | 54.125   |             |              |                                 | 18+70.54   | 7.61                  | 4                 |               |               |           |            |          | 1    | 1     |           |           |      |                   |    | 56.2               |         |
| -L-                        | 20+13.42  | 22+11.35 | LT       | 197.875  |             |              | 20+13.42                        |            | 6.50                  | 4                 | 170.2         |               | 2.70      |            |          | 1    |       |           | 1         |      |                   |    | 204.4              |         |
| -L-                        | 20+13.38  | 23+38.12 | MED LT   | 322.875  |             |              | 20+13.38                        |            | 4.84                  | 4                 | 50            |               | 1         |            |          | 1    |       |           | 1         |      |                   |    | 166.0              |         |
| -L-                        | 20+33.31  | 23+08.31 | MED RT   | 275.000  |             |              |                                 | 20+10.90   | 5.82                  | 4                 |               | 50            |           | 1          |          |      |       |           | 1         |      |                   |    | 154.2              |         |
| -L-                        | 20+33.69  | 21+14.94 | RT       | 81.250   |             |              |                                 | 20+10.90   | 9.80                  | 4                 |               |               | 0.43      |            |          |      | 1     |           |           |      |                   |    | 100.8              |         |
| SUBTOTAL:                  |           |          |          | 1,585.25 | 0.00        |              |                                 |            |                       |                   |               |               |           |            | 0        | 4    | 3     | 0         | 4         | 0    |                   |    | 1363.7             |         |
| ANCHOR UNIT DEDUCTIONS:    |           |          |          |          |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| B-77 @ 22.875' Each        |           |          |          | 91.500   |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| TL-2 @ 50' Each            |           |          |          | 0.00     |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| TL-3 @ 50' Each            |           |          |          | 200.00   |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| CAT-1 @ 6.25' Each         |           |          |          | 18.75    |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| Type III @ 18.75' Each     |           |          |          | 0.00     |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| AT-1 @ 6.25' Each          |           |          |          | 0.00     |             |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| LESS GUARDRAIL DEDUCTIONS: |           |          |          | 1,275.00 | 0.00        |              |                                 |            |                       |                   |               |               |           |            |          |      |       |           |           |      |                   |    |                    |         |
| PROJECT TOTAL:             |           |          |          | 1,275.00 | 0.00        |              | (ADDITIONAL 10 GUARDRAIL POSTS) |            |                       |                   |               |               |           |            |          | 4    | 3     | 0         | 4         | 0    |                   | 1  | 1363.7             |         |
| SAY:                       |           |          |          | 1,275.0  | 0.0         |              | (ADDITIONAL 10 GUARDRAIL POSTS) |            |                       |                   |               |               |           |            |          | 4    | 3     | 0         | 4         | 0    |                   | 1  | 1,364.0            |         |

Note: Earthwork quantities are calculated by RK&K. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

|              |                  |       |                   |
|--------------|------------------|-------|-------------------|
| COMPUTED BY: | <u>A. Keeter</u> | DATE: | <u>2026-05-20</u> |
| CHECKED BY:  | <u>M. Bailey</u> | DATE: | <u>2026-07-08</u> |

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-5810                | 3D-1      |

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

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

[illegible]

8/17/2026  
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default

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

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

---

Engineers | Construction Managers | Planners | Scientists  
[www.rkk.com](http://www.rkk.com)

---

Responsive People | Creative Solutions



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

### ABBREVIATIONS

|            |                   |
|------------|-------------------|
| C.B.       | CATCH BASIN       |
| N.D.I.     | NARROW DROP       |
|            | INLET             |
| D.I.       | DROP INLET        |
| G.D.I.     | GRATED DROP INLET |
| J.I.(N.S.) | (NARROW SLOT)     |
| J.B.       | JUNCTION BOX      |
| M.H.       | MANHOLE           |
| B.D.I.     | TRAFFIC BEARING   |
|            | DROP INLET        |
| B.B.B.     | TRAFFIC BEARING   |
|            | JUNCTION BOX      |

REMARKS

|              |                  |       |                   |
|--------------|------------------|-------|-------------------|
| COMPUTED BY: | <u>A. Keeter</u> | DATE: | <u>2026-05-20</u> |
| CHECKED BY:  | <u>M. Bailey</u> | DATE: | <u>2026-07-08</u> |

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-5810                | 3D-5      |

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

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

[illegible]

8/17/2026  
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default

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-5810                | 36-1      |

## GEOTECHNICAL SUMMARY

Note: Earthwork quantities are calculated by RK&K. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

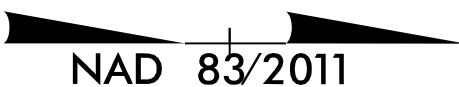
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
***PARCEL INDEX SHEET***

| PARCEL No. | SHEET No. | PROPERTY OWNER NAME                                                          |
|------------|-----------|------------------------------------------------------------------------------|
| 1          | 4 & 5     | Mary P. Lilley                                                               |
| 2          | 5         | Alice Pearl Coltrain                                                         |
| 3          | 5 & 6     | Warren Cratt                                                                 |
| 4          | 8         | Christina Costanzo Mendat, Stephanie Lynn Costanzo & Orazio Antonia Costanzo |
| 5          | 9         |                                                                              |
| 6          | 9 & 10    | Believers Fellowship Conference Center Inc                                   |
| 7          | 10 & 11   | Ann E. Williams, Ritchie R. Williams & Beverly Sue Williams                  |
| 8          | 11        | Glenn Arscott & Dianne Arscott                                               |
| 9          | 4         | Ronald D. Wynn, Jr. and Matthew Wade Wynn                                    |
| 10         | 5         | Bonita Harden Ragland                                                        |
| 11         | 5         | Robby Manning Bright                                                         |
| 12         | 5 & 6     | Victoria Ashley Congdon & Trevor Jordan Hansen                               |
| 13         | 6         | Christopher Scott & Hazel Anne Scott                                         |

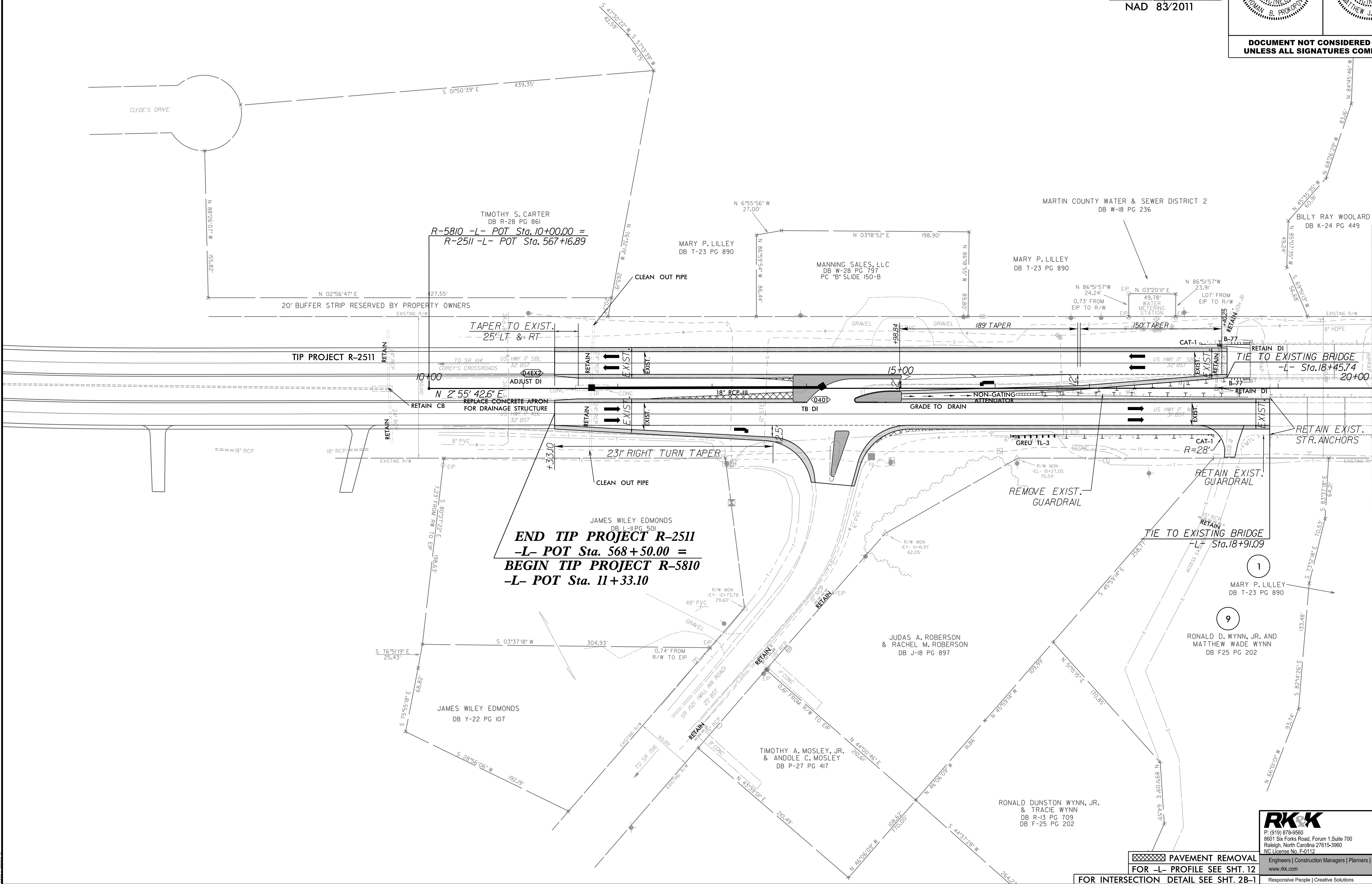
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|                                                                                                                         |                                                                                                                   |                       |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------|
| PROJECT REFERENCE NO.<br><i>R-5810</i>                                                                                  |                                                                                                                   | SHEET NO.<br><i>4</i> |
| RW SHEET NO.                                                                                                            |                                                                                                                   |                       |
| ROADWAY DESIGN<br>ENGINEER<br><i>Ronald Prokopowicz</i><br>040876<br>REGISTERED PROFESSIONAL ENGINEER<br>NORTH CAROLINA | HYDRAULICS<br>ENGINEER<br><i>Matthew J. Bailey</i><br>54408<br>REGISTERED PROFESSIONAL ENGINEER<br>NORTH CAROLINA |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                        |                                                                                                                   |                       |



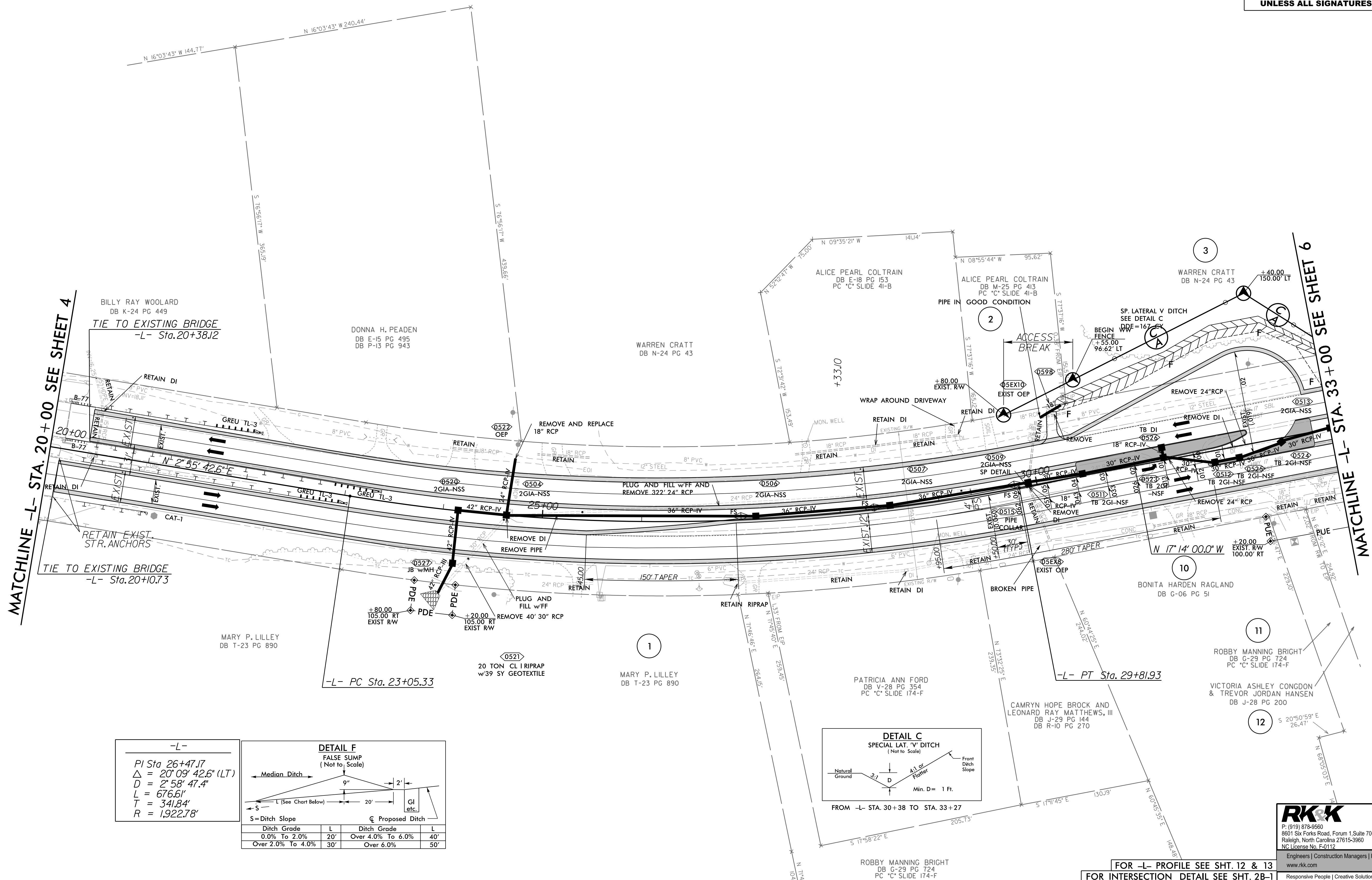
MATCHLINE -L- STA. 20 + 00 SEE SHEET 5

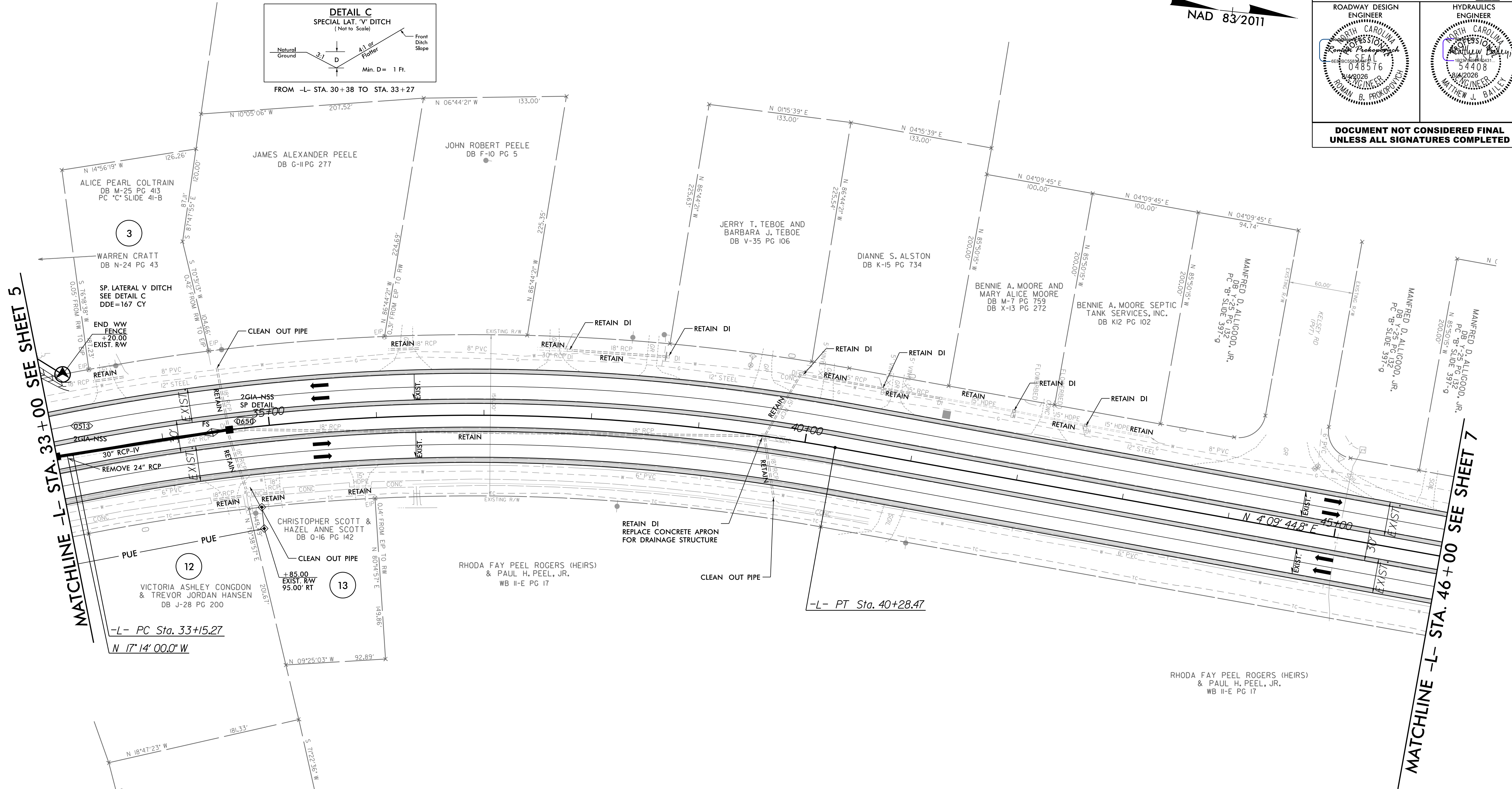


PAVEMENT REMOVAL  
FOR -L- PROFILE SEE SHT. 12

FOR INTERSECTION DETAIL SEE SHT. 2B-1

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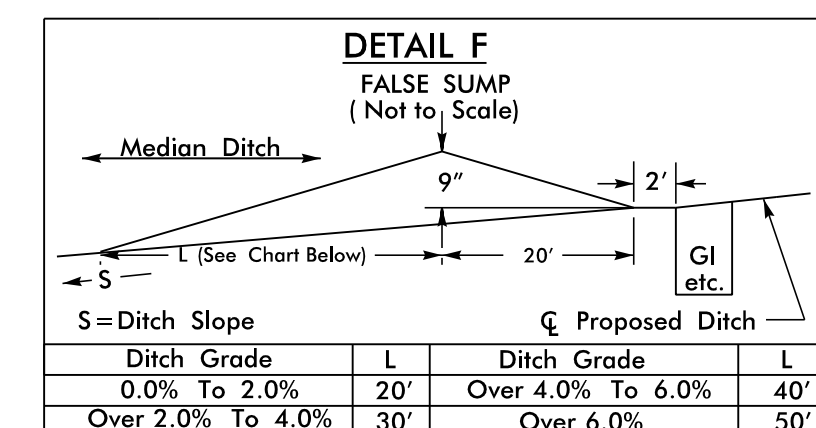




-L-

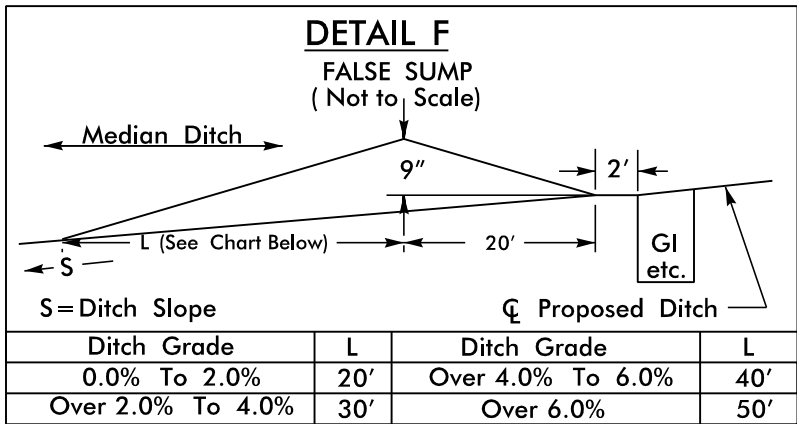
---

*PI Sta* 36+76.07  
 $\Delta = 21^{\circ} 23' 44.8''$  (RT)  
*D* = 3° 00' 00.0"  
*L* = 713.19'  
*T* = 360.80'  
*R* = 1,909.86'



8/17/99

8/4/2026  
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NAD 83/2011

|                                                                  |  |                     |
|------------------------------------------------------------------|--|---------------------|
| PROJECT REFERENCE NO.<br><i>R-5810</i>                           |  | SHEET NO.<br>7      |
| RW SHEET NO.                                                     |  | HYDRAULICS ENGINEER |
| ROADWAY DESIGN ENGINEER                                          |  | SEAL                |
|                                                                  |  |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |  |                     |

MATCHLINE -L- STA. 46+00 SEE SHEET 6

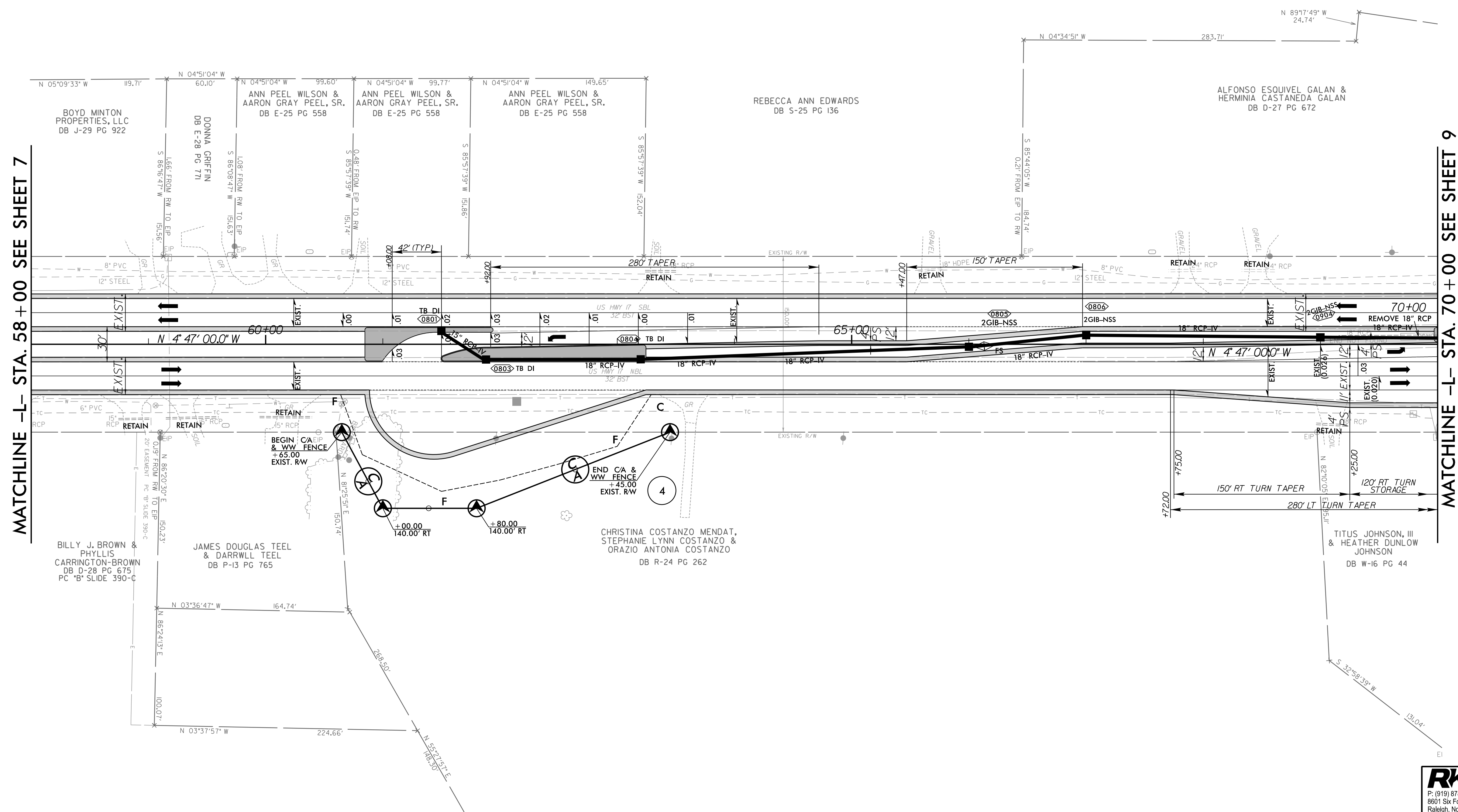
MATCHLINE -L- STA. 58+00 SEE SHEET 8

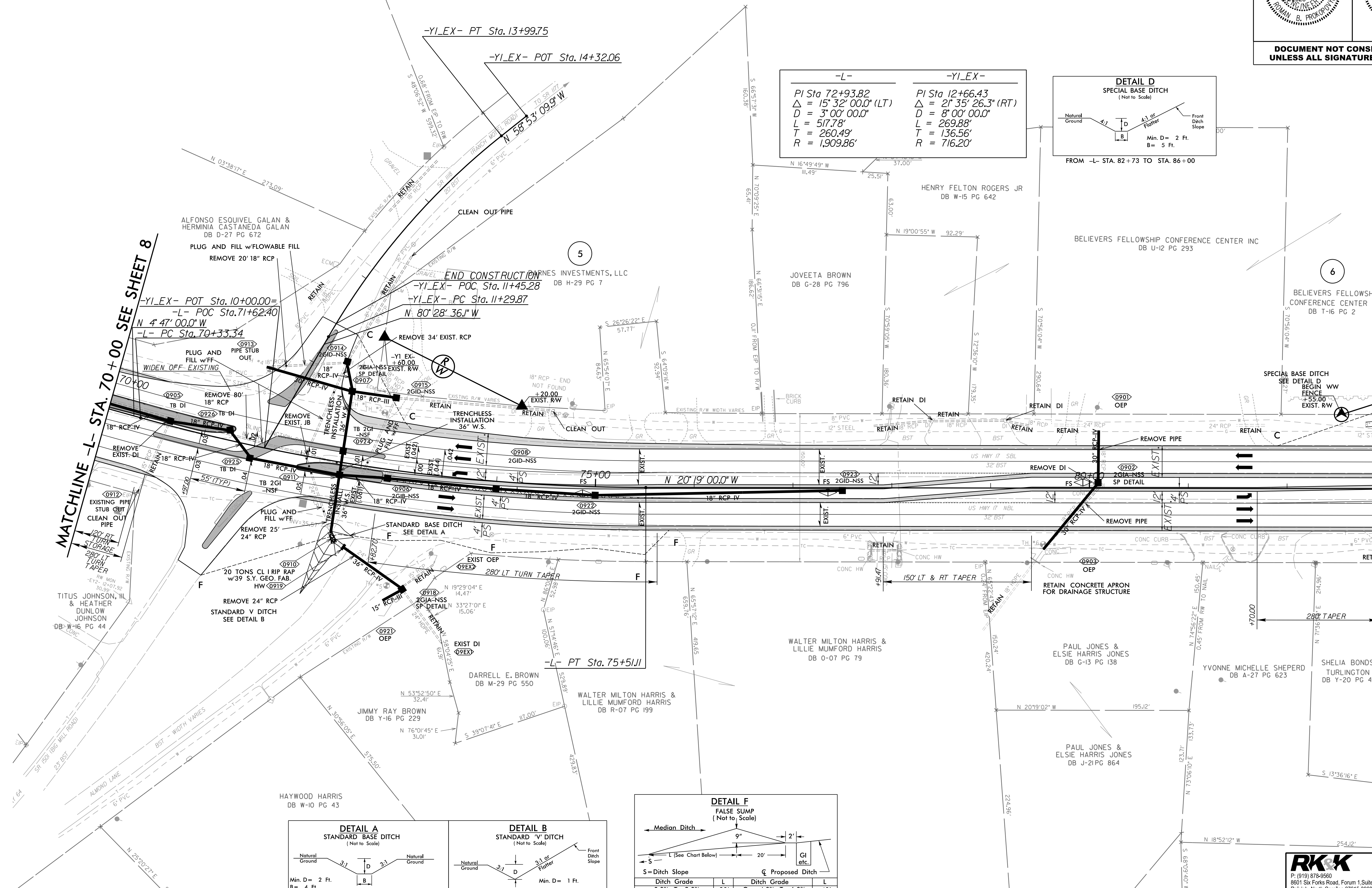
-L-  
PI Sta 53+50.36  
Δ = 8° 56' 44.8" (LT)  
D = 2' 30' 00.0"  
L = 357.83'  
T = 179.28'  
R = 2,291.83'

PAVEMENT REMOVAL  
FOR -L- PROFILE SEE SHT. 14 & 15

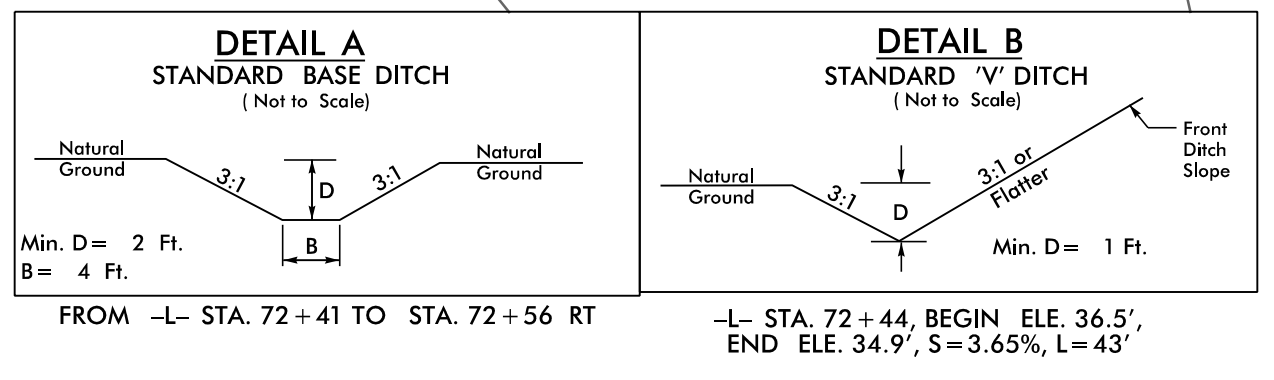
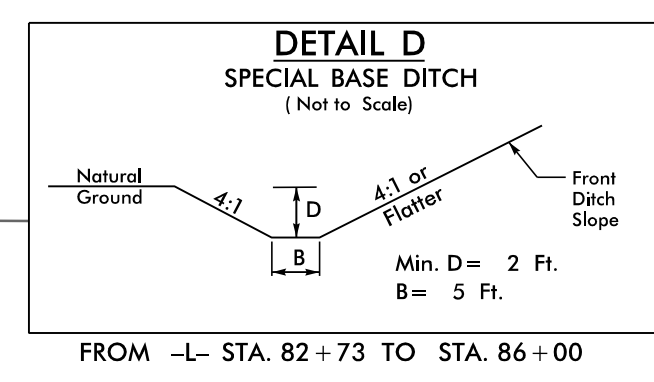
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| -L-                                 | -YI_EX-                            |
|-------------------------------------|------------------------------------|
| $PI\ Sta\ 72+93.82$                 | $PI\ Sta\ 12+66.43$                |
| $\Delta = 15^{\circ}32'00.0\" (LT)$ | $\Delta = 2^{\circ}35'26.3\" (RT)$ |
| $D = 3^{\circ}00'00.0\"$            | $D = 8^{\circ}00'00.0\"$           |
| $L = 517.78'$                       | $L = 269.88'$                      |
| $T = 260.49'$                       | $T = 136.56'$                      |
| $R = 1,909.86'$                     | $R = 716.20'$                      |



**DETAIL F**  
FALSE SUMP  
(Not to Scale)

| S=Ditch Slope     | L   | Ditch Grade       | L   |
|-------------------|-----|-------------------|-----|
| 0.0% To 2.0%      | 20' | Over 4.0% To 6.0% | 40' |
| Over 2.0% To 4.0% | 30' | Over 6.0%         | 50' |

XXXXXXXX PAVEMENT REMOVAL  
FOR -L- PROFILE SEE SHT. 16 & 17  
FOR INTERSECTION DETAIL SEE SHT. 2B-2

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8/4/2026  
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MATCHLINE -L- STA. 83 + 00 SEE SHEET 9

MATCHLINE -L- STA. 96 + 00 SEE SHEET 11

BELIEVERS FELLOWSHIP CONFERENCE CENTER INC  
DB T-16 PG 2

BARNEY LEE CONWAY JR.  
DB T-26 PG 633

CATHY C. ROBERTS  
WB 22-E PG 33

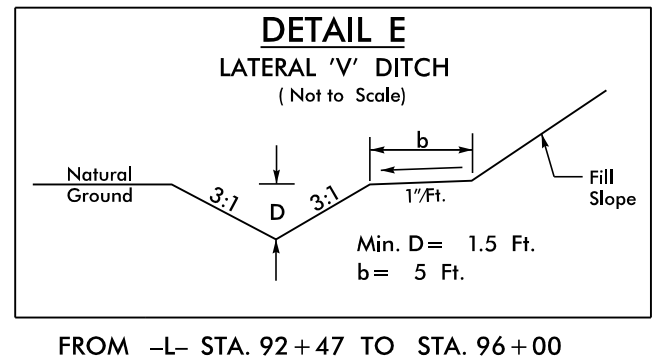
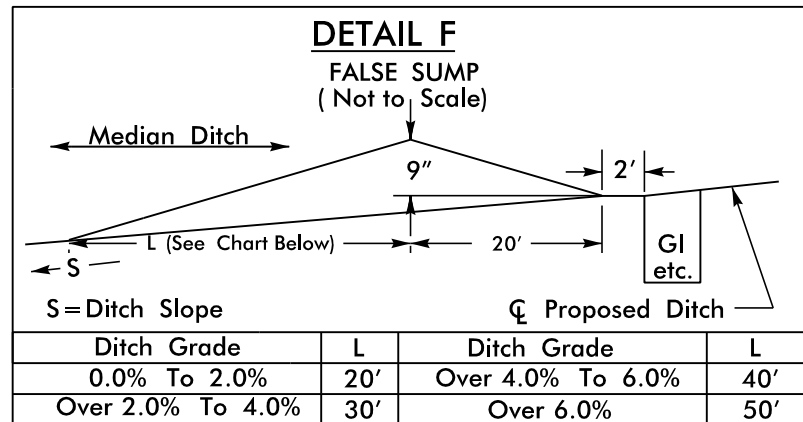
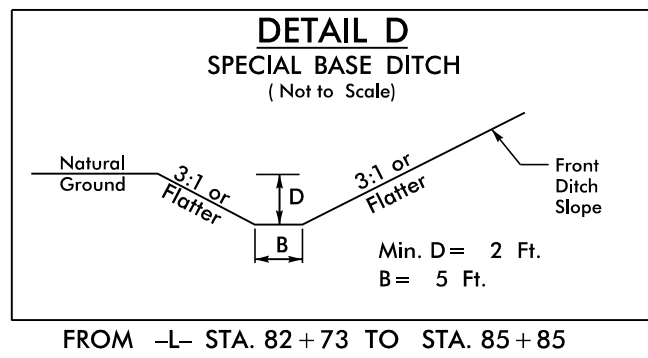
DONNIE S. WHITEHURST &  
MELINDA R. WHITEHURST  
DB S-20 PG 795

ALFREDO GONZALEZ BARBOSA  
& YERLIN VILLEGAS  
DB M-39 PG 823

KENNETH R. GURGANUS  
& RENE E. GURGANUS  
DB O-16 PG 496

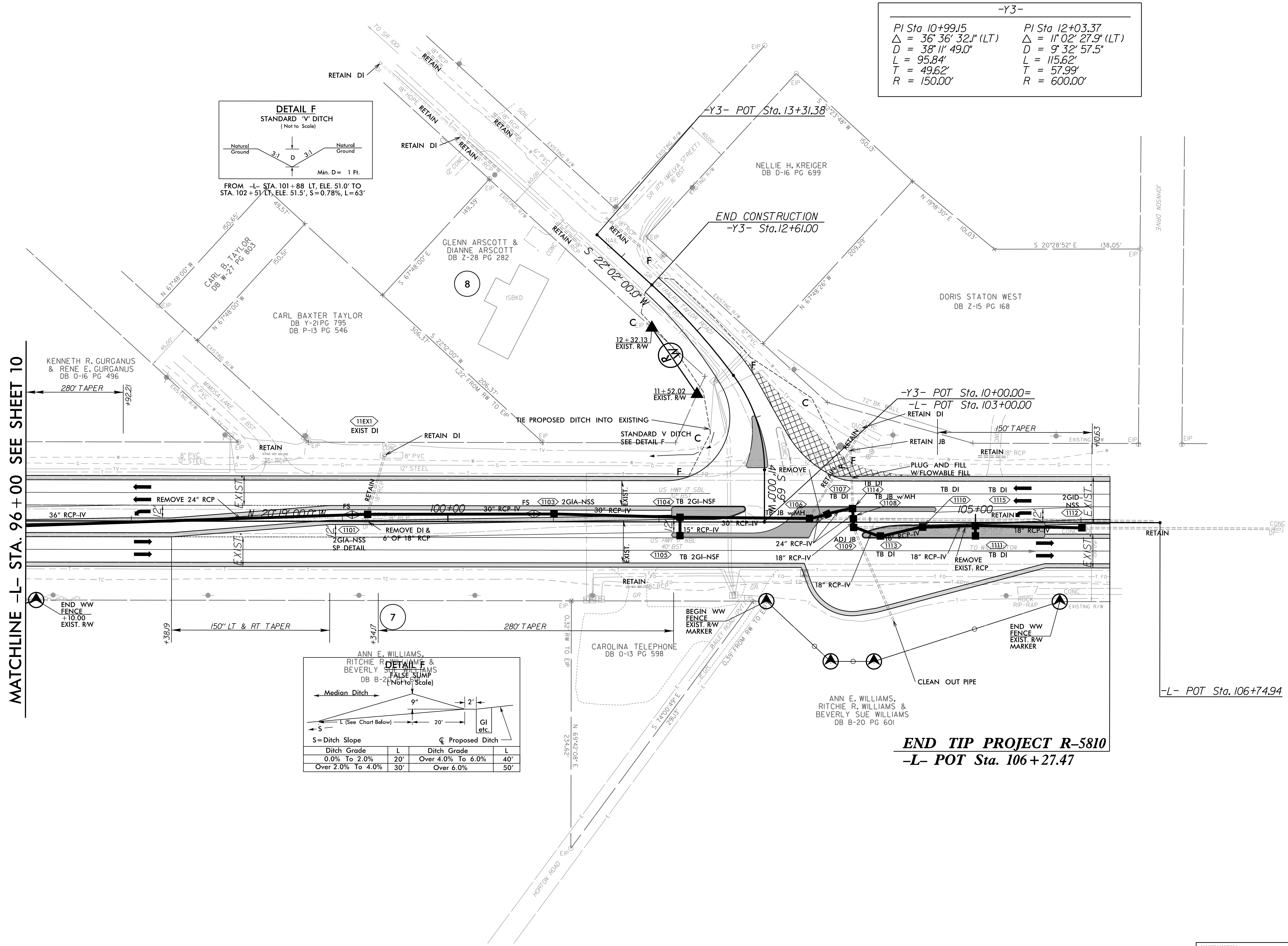
ANN E. WILLIAMS,  
RITCHIE R. WILLIAMS &  
BEVERLY SUE WILLIAMS  
DB B-20 PG 601

RITCHIE R. WILLIAMS  
DB Y-13 PG 157  
PC "B" SLIDE 368-B



XXXXXXXX PAVEMENT REMOVAL  
FOR -L- PROFILE SEE SHT. 17 & 18  
FOR INTERSECTION DETAIL SEE SHT. 2B-3

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### XXXXXXXXXX PAVEMENT REMOVAL

FOR -L- PROFILE SEE SHT. 18

FOR -Y3- PROFILE SEE SHT. 19

FOR INTERSECTION DETAIL SEE SHT. 2B-4

5/28/99

PROJECT REFERENCE NO.

R-5810

SHEET NO.

12

ROADWAY DESIGN  
ENGINEER

Matthew J. Bailey

Professional Engineer

048576

8/1/2026

Matthew J. Bailey

HYDRAULICS  
ENGINEER

Matthew J. Bailey

Professional Engineer

048576

8/1/2026

Matthew J. Bailey

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

## -L- NBL

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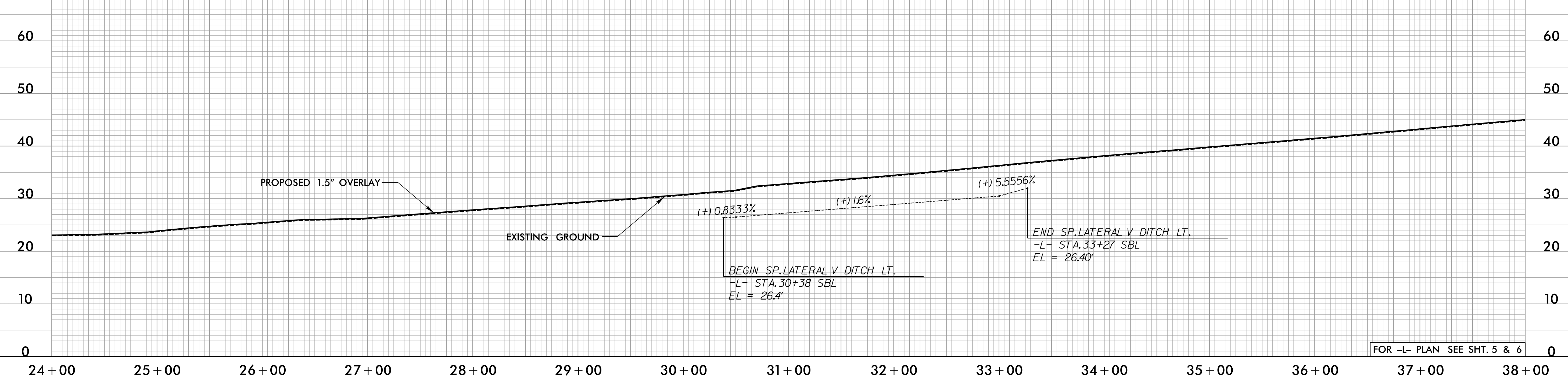
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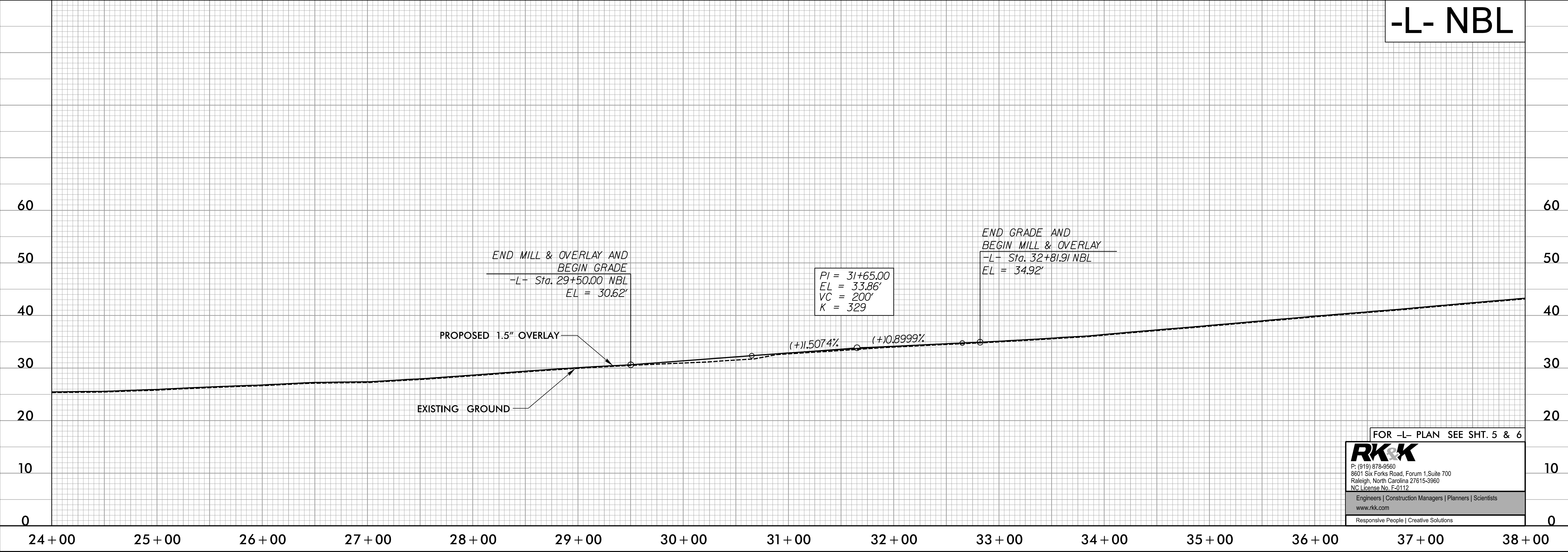
5/28/99

-L- SBL

|                                                                                                                    |                                                                                                              |                        |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------|
| PROJECT REFERENCE NO.<br><i>R-5810</i>                                                                             |                                                                                                              | SHEET NO.<br><i>13</i> |
| ROADWAY DESIGN<br>ENGINEER<br><i>Robert Prokopowicz</i><br>SEAL<br>048576<br>12/2026<br>NORTH CAROLINA<br>ENGINEER | HYDRAULICS<br>ENGINEER<br><i>Matthew J. Bailey</i><br>SEAL<br>54708<br>12/2026<br>NORTH CAROLINA<br>ENGINEER |                        |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                   |                                                                                                              |                        |



-L- NBL



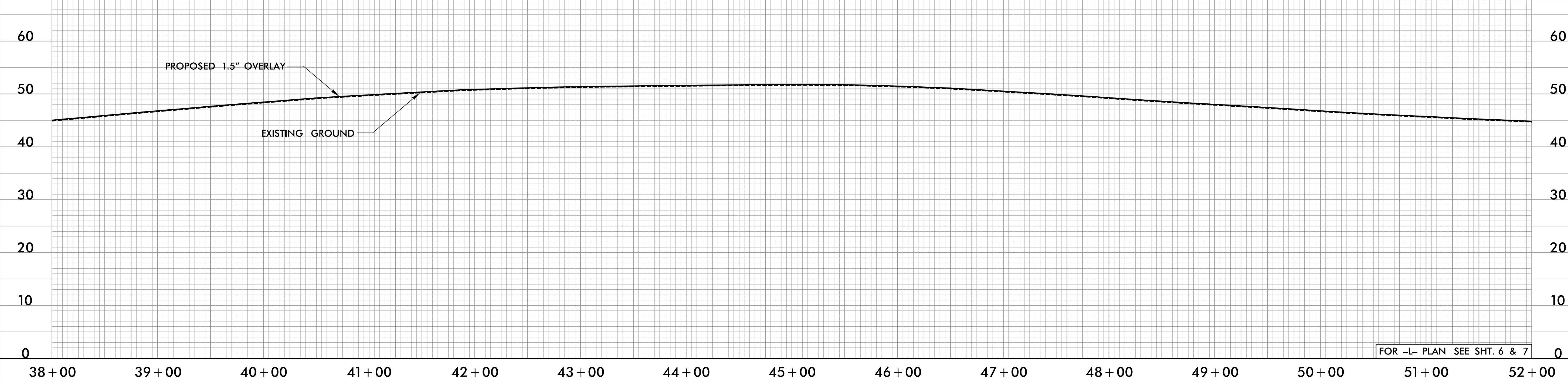
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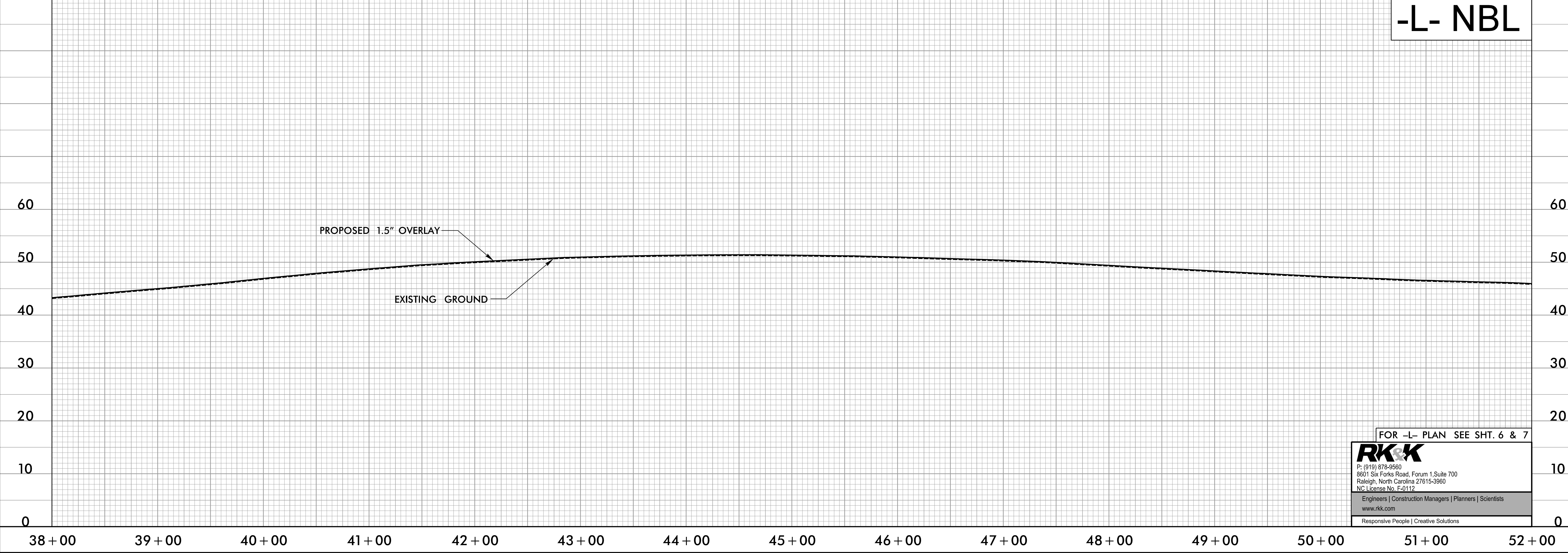
5/28/99

-L- SBL

|                                                                                                                  |                                                                                                              |                        |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------|
| PROJECT REFERENCE NO.<br><i>R-5810</i>                                                                           |                                                                                                              | SHEET NO.<br><i>14</i> |
| ROADWAY DESIGN<br>ENGINEER<br> | HYDRAULICS<br>ENGINEER<br> |                        |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                 |                                                                                                              |                        |



-L- NBL



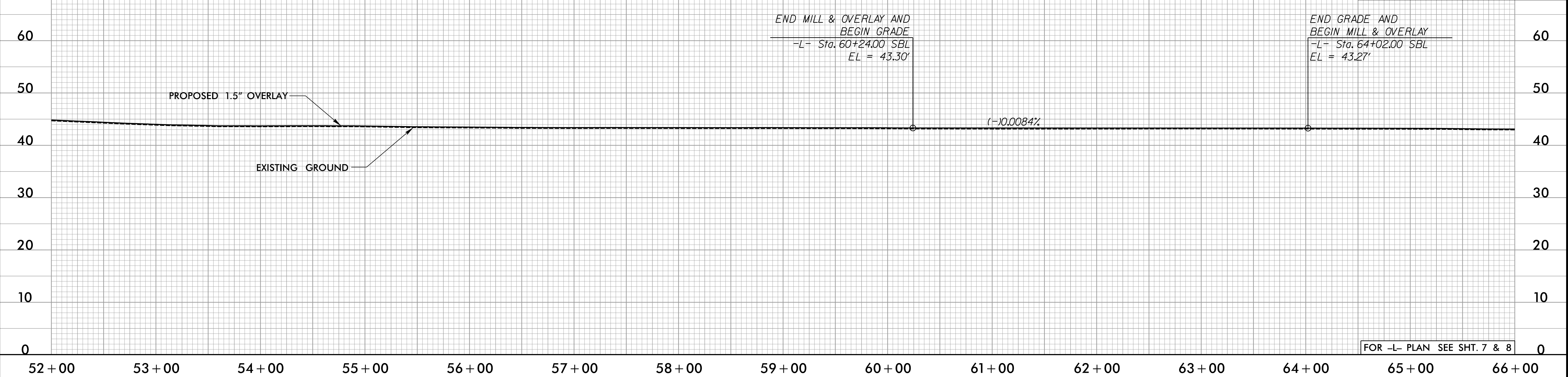
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|                                                                                                                 |                                                                                                            |                 |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------|
| PROJECT REFERENCE NO.<br>R-5810                                                                                 |                                                                                                            | SHEET NO.<br>15 |
| ROADWAY DESIGN<br>ENGINEER<br>Matthew J. Bailey<br>Professional Engineer<br>048576<br>2026<br>Matthew J. Bailey | HYDRAULICS<br>ENGINEER<br>Matthew J. Bailey<br>Professional Engineer<br>54408<br>2026<br>Matthew J. Bailey |                 |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                |                                                                                                            |                 |



-L- NBL

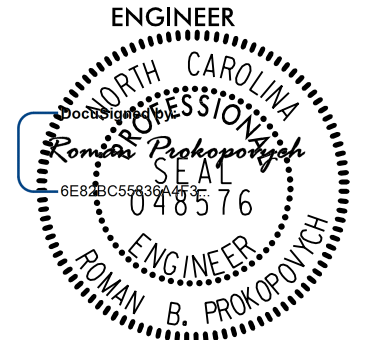
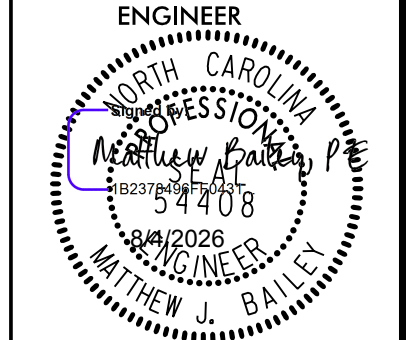


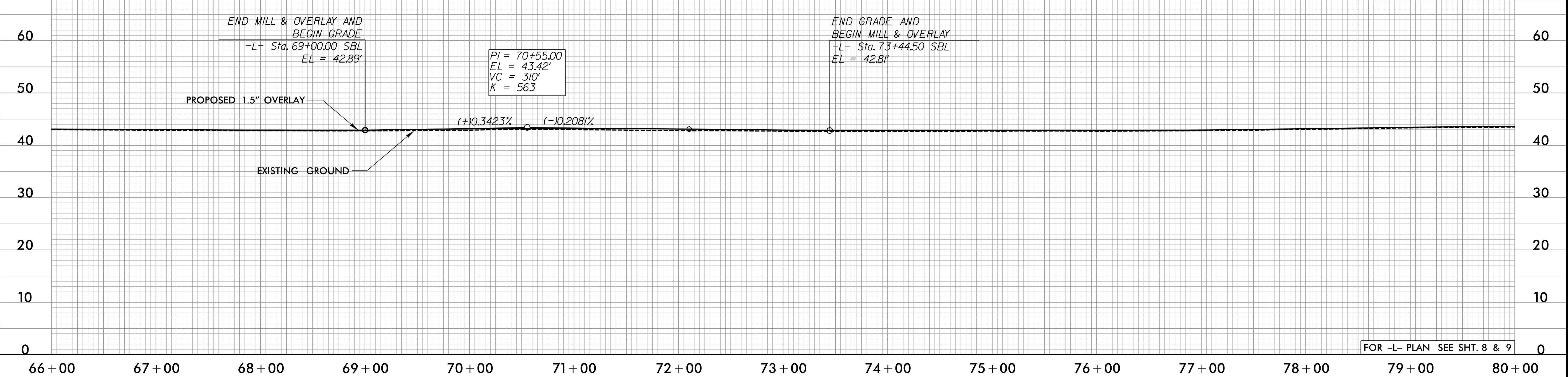
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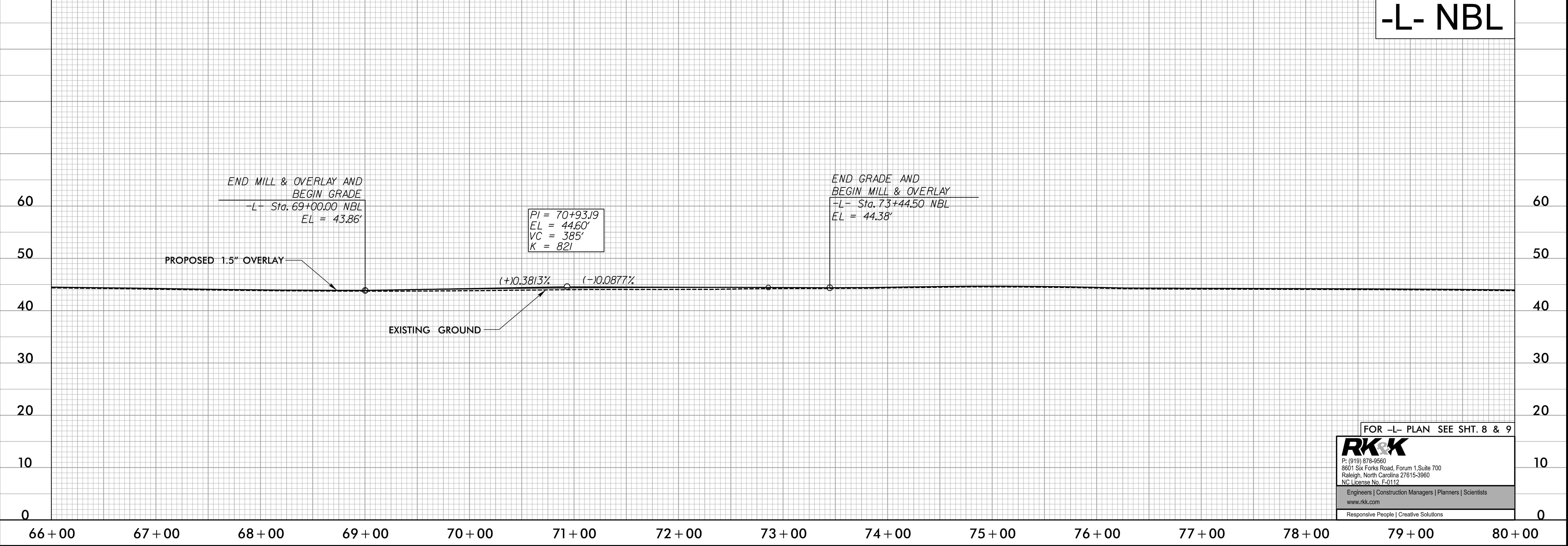
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-L- SBL

|                                                                                                                  |                                                                                                              |                 |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------|
| PROJECT REFERENCE NO.<br>R-5810                                                                                  |                                                                                                              | SHEET NO.<br>16 |
| ROADWAY DESIGN<br>ENGINEER<br> | HYDRAULICS<br>ENGINEER<br> |                 |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                 |                                                                                                              |                 |



-L- NBL

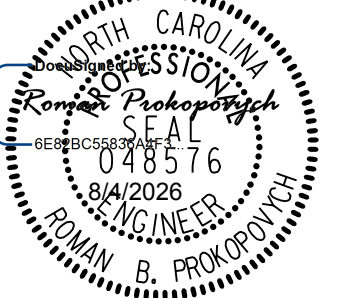
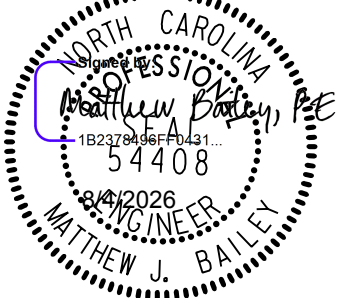


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|                                                                                                                   |                                                                                                               |                 |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------|
| PROJECT REFERENCE NO.<br>R-5810                                                                                   |                                                                                                               | SHEET NO.<br>17 |
| ROADWAY DESIGN<br>ENGINEER<br> | HYDRAULICS<br>ENGINEER<br> |                 |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                  |                                                                                                               |                 |

END MILL & OVERLAY AND  
BEGIN GRADE  
-L- Sta. 93+50.00 SBL  
EL = 47.15'

PROPOSED 1.5" OVERLAY  
EXISTING GROUND

(-) 0.8056%  
(-) 3.7778%  
(+) 0.0234%  
(+) 0.84%  
(+) 2.56%  
BEGIN SP. BASE DITCH LT.  
-L- STA. 82+73 SBL  
EL = 40.35'  
END SP. BASE DITCH LT.  
-L- STA. 33+27 SBL  
EL = 26.40'

(+) 0.6987%

FOR -L- PLAN SEE SHT. 9 & 10

-L- NBL

END MILL & OVERLAY AND  
BEGIN GRADE  
-L- Sta. 83+29.00 NBL  
EL = 43.35'

PROPOSED 1.5" OVERLAY

EXISTING GROUND

END GRADE AND  
BEGIN MILL & OVERLAY  
-L- Sta. 85+00.00 NBL  
EL = 43.62'

(+) 0.1603%

(-) 2.48%  
(-) 0.3048%  
BEGIN LATERAL V DITCH RT.  
-L- STA. 92+47 NBL  
EL = 42.80'

FOR -L- PLAN SEE SHT. 9 & 10

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5/28/99

-L- SBL

PROJECT REFERENCE NO.  
R-5810

SHEET NO.  
18

ROADWAY DESIGN  
ENGINEER  
Matthew J. Bailey  
Professional Engineer  
No. 048576  
Exp. 12/31/2026

HYDRAULICS  
ENGINEER  
Matthew J. Bailey  
Professional Engineer  
No. 54408  
Exp. 8/1/2026

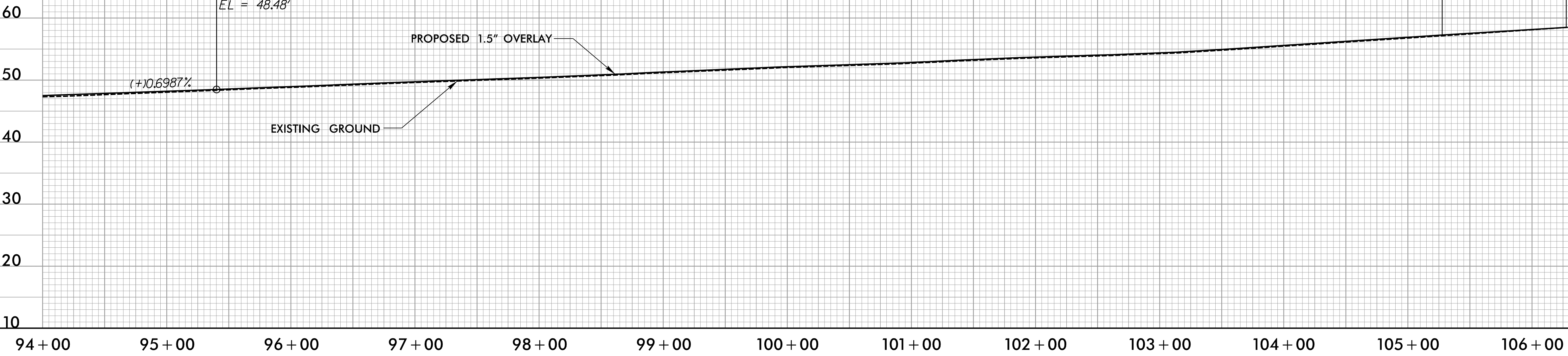
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

END CONSTRUCTION  
-L- STA 106+27.47 SBL  
ELEV = 58.49'

END MILL & OVERLAY  
-L- Sta. 105+27.47 SBL  
EL = 57.26'

100' MILL/ FILL  
TAPER TO EXIST.

END GRADE AND  
BEGIN MILL & OVERLAY  
-L- Sta. 95+40.00 SBL  
EL = 48.48'



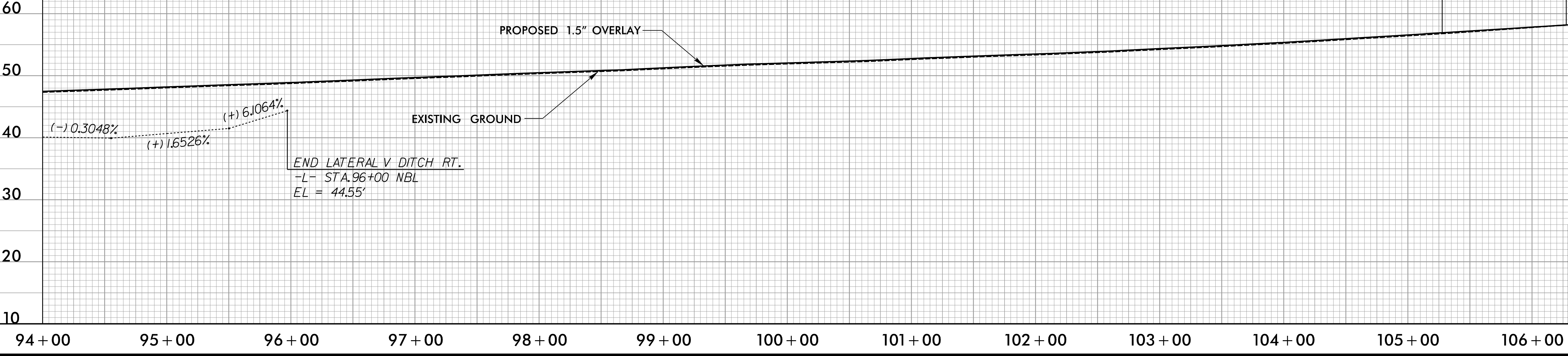
-L- NBL

END CONSTRUCTION  
-L- STA 106+27.47 NBL  
ELEV = 58.18'

END MILL & OVERLAY  
-L- Sta. 105+27.47 NBL  
EL = 56.92'

100' MILL/ FILL  
TAPER TO EXIST.

END LATERAL V DITCH RT.  
-L- STA. 96+00 NBL  
EL = 44.55'



FOR -L- PLAN SEE SHT. 10 & 11

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-Y3-

SHEET NO.

19

60

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20

10

0

FOR -Y3- PLAN SEE SHT. 11

