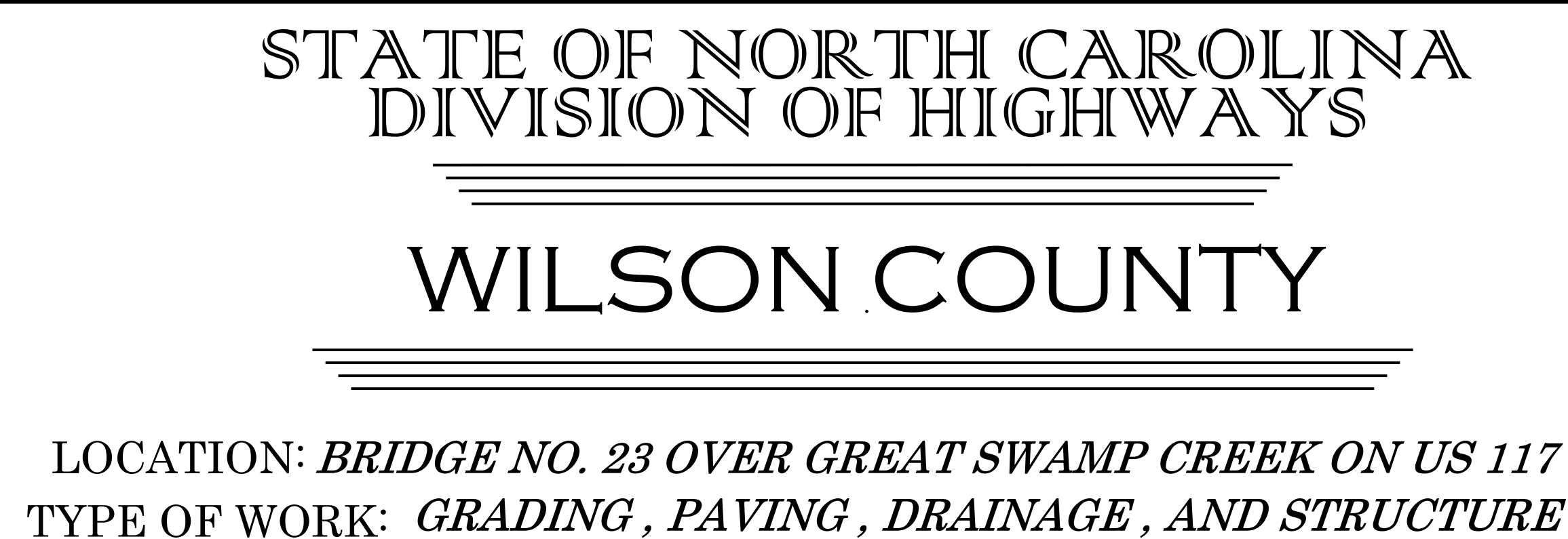
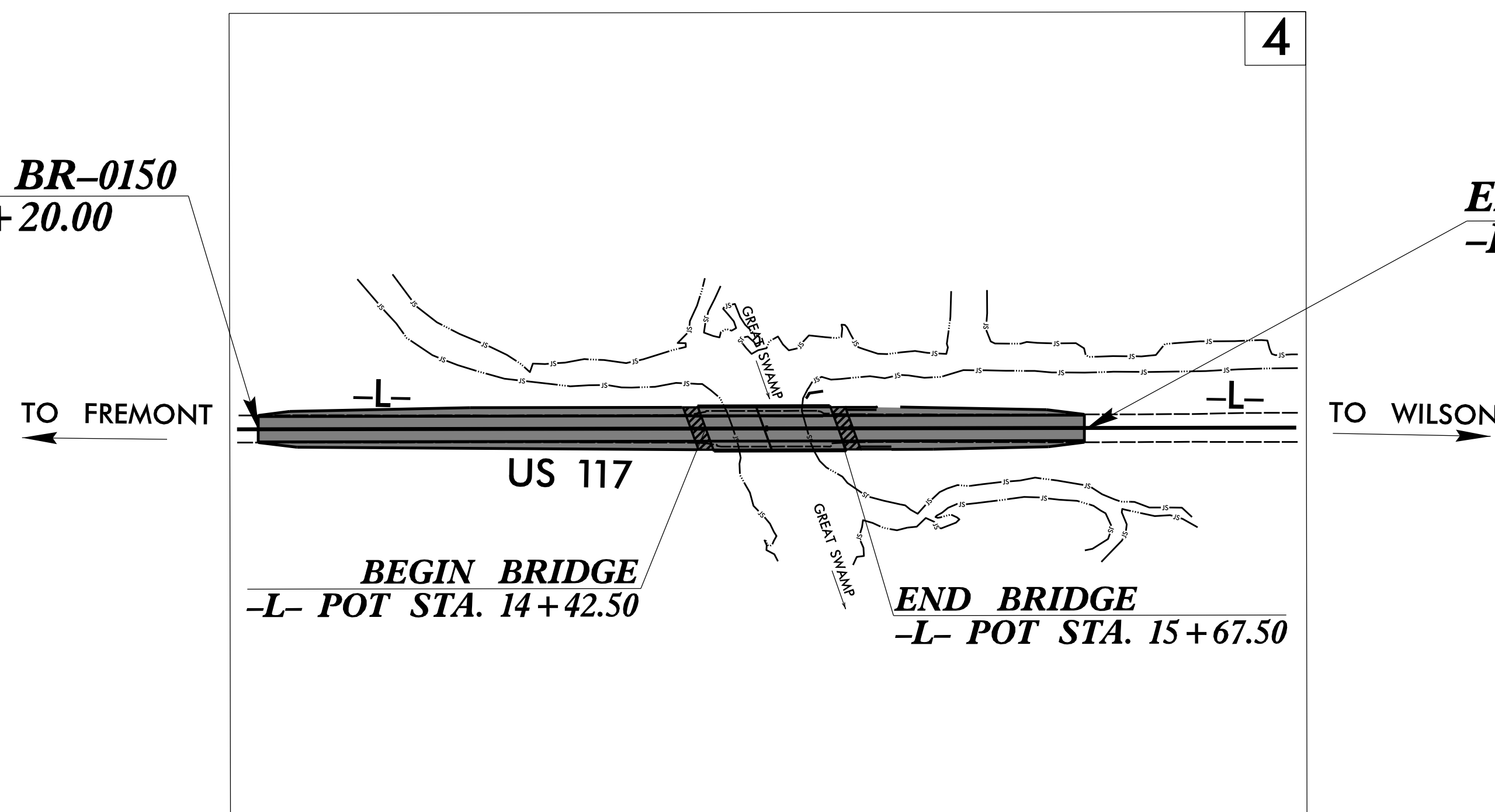
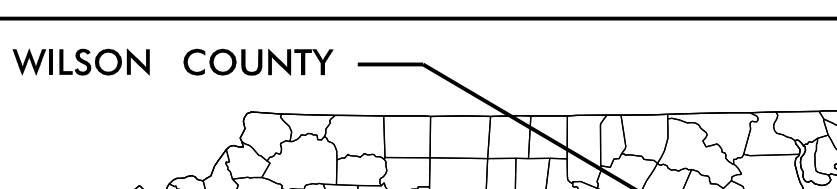


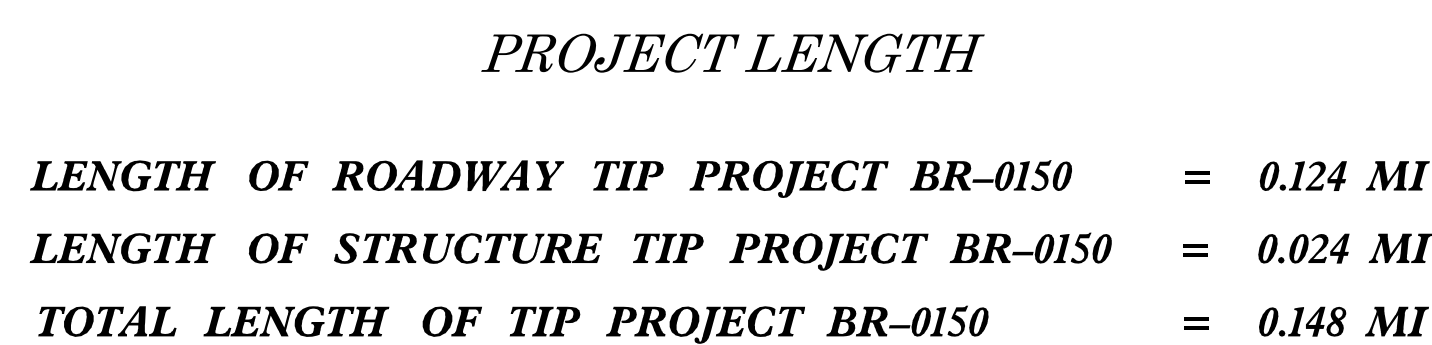


***100% PLANS SUBMITTAL***

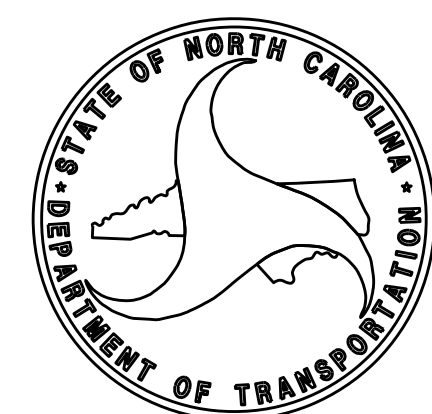
WILSON COUNTY



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



|                                                                |                                                                                       |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>HYDRAULICS ENGINEER</b>                                     |                                                                                       |
| Signed by:<br><b>Scott Wildman Brookhart</b><br>#986C2307C349B |  |
| <b>SIGNATURE</b> _____                                         | <b>7/9/2026</b>                                                                       |
| <b>ROADWAY DESIGN ENGINEER</b>                                 |                                                                                       |
| Signed by:<br><b>Prithvirekha Raja</b><br>1D06E058B9291446     |  |
| <b>SIGNATURE</b> _____                                         | <b>P.E.</b><br><b>7/9/2026</b>                                                        |





*SHEET NUMBER*                      *SHEET*

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

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:

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

2024 SPECIFICATIONS  
EFFECTIVE: 01-16-2024  
REVISED:

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

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.

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

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

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.

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

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITY OWNERS ON THIS PROJECT ARE

## CHARTER COMMUNICATIONS

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

REVISIONS



***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      |  |
| <i><b>BUILDINGS AND OTHER CULTURE:</b></i> |  |
| Gas Pump Vent or U/G Tank Cap              |  |
| Sign                                       |  |
| Well                                       |  |
| Small Mine                                 |  |
| Foundation                                 |  |
| Area Outline                               |  |
| Cemetery                                   |  |
| Building                                   |  |
| School                                     |  |
| Church                                     |  |
| Dam                                        |  |
| <i><b>HYDROLOGY:</b></i>                   |  |
| Stream or Body of Water                    |  |
| Hydro, Pool or Reservoir                   |  |
| Jurisdictional Stream                      |  |
| Buffer Zone 1                              |  |
| Buffer Zone 2                              |  |
| Flow Arrow                                 |  |
| Disappearing Stream                        |  |
| Spring                                     |  |
| Wetland                                    |  |
| Proposed Lateral, Tail, Head Ditch         |  |
| False Sump                                 |  |

***RAILROADS:***

|                    |  |
|--------------------|--|
| Standard Gauge     |  |
| 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             |  |
| 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           |  |
| <i><b>VEGETATION:</b></i>  |  |
| Single Tree                |  |
| Single Shrub               |  |
| Hedge                      |  |

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

|            |  |
|------------|--|
| 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:

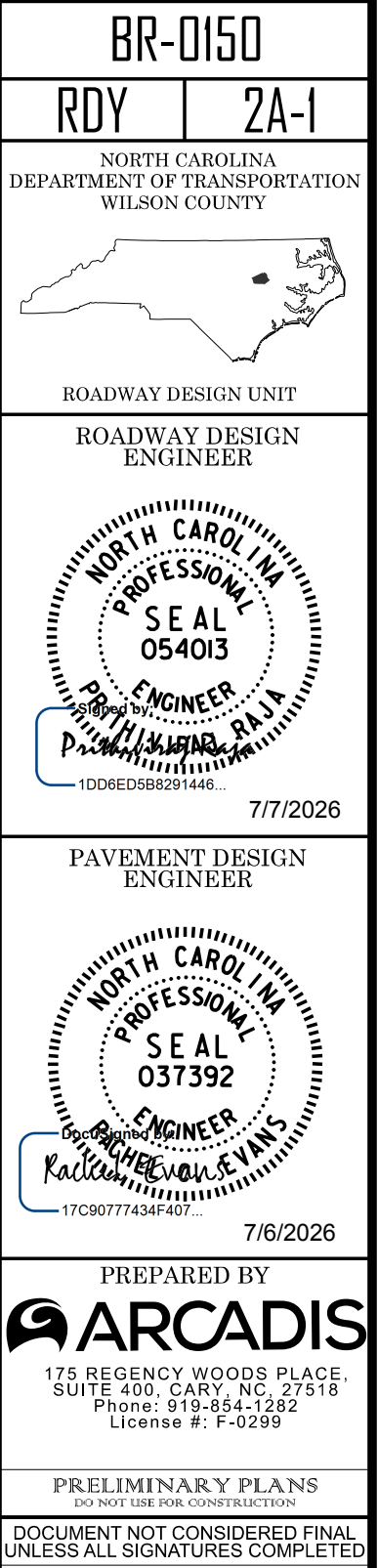
|                                             |  |
|---------------------------------------------|--|
| Sanitary Sewer Manhole                      |  |
| Sanitary Sewer Cleanout                     |  |
| U/G Sanitary Sewer Line                     |  |
| Above Ground Sanitary Sewer                 |  |
| 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               |  |
| Geoenviromental Boring                  |  |
| Abandoned According to Utility Records  |  |
| End of Information                      |  |

|          |
|----------|
| BR-0150  |
| RDY   IB |

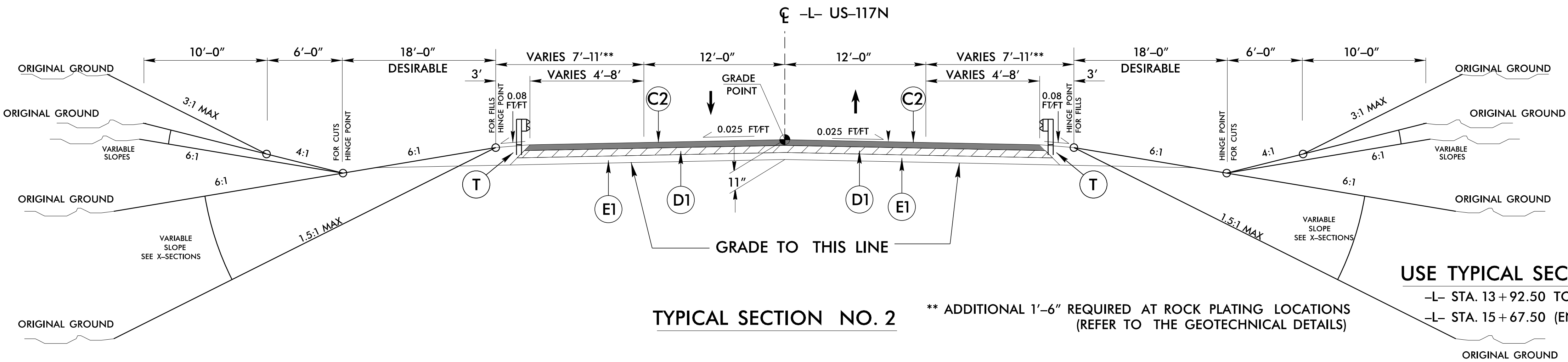




|    |                                                                                                                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.                                                                                                 |
| C2 | PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS                                                                           |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED LAYERS NOT TO EXCEED 2.0" IN DEPTH                                     |
| D1 | PROP. APPROX. 4.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.                                                                                           |
| D2 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.0" IN DEPTH |
| E1 | PROP. APPROX. 4.0" ASPHALT BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.                                                                                                            |
| E2 | PROP. VAR. DEPTH ASPHALT BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH                  |
| R1 | SHOULDER BERM GUTTER                                                                                                                                                                                       |
| T  | EARTH MATERIAL                                                                                                                                                                                             |
| U  | EXISTING PAVEMENT                                                                                                                                                                                          |
| V  | MILLING: MILL 1.5" OF EXISTING PAVEMENT AND REPLACE WITH 1.5" OF S9.5C AT TIE-INS.                                                                                                                         |
| W  | VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS W)                                                                                                                                                    |

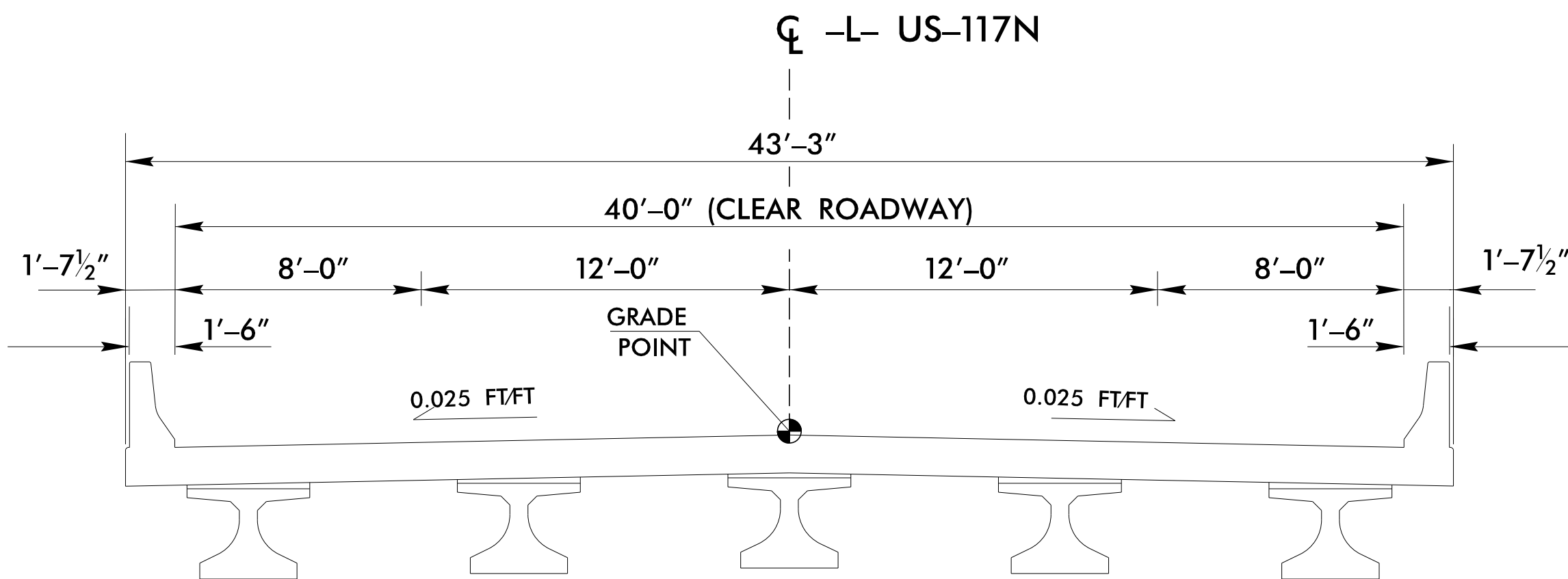
## REVISIONS





TYPICAL SECTION NO. 2

\*\* ADDITIONAL 1'-6" REQUIRED AT ROCK PLATING LOCATIONS  
(REFER TO THE GEOTECHNICAL DETAILS)

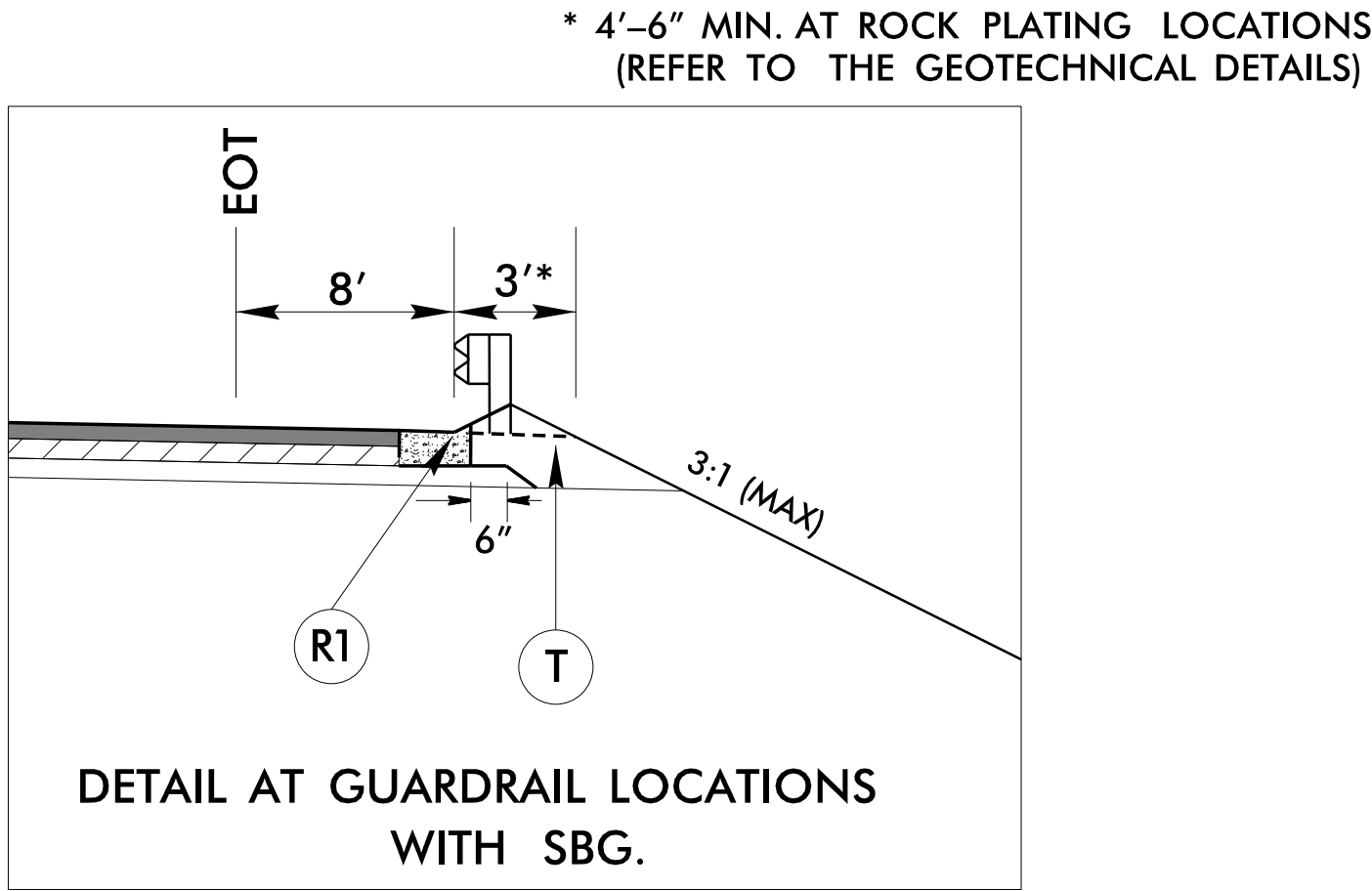


TYPICAL SECTION NO. 3  
BRIDGE TYPICAL SECTION

USE TYPICAL SECTION NO.3 AS FOLLOWS

-L- STA. 14 + 42.50 (BEGIN BRIDGE) TO STA. 15 + 67.50 (END BRIDGE)

| PAVEMENT SCHEDULE |                      |
|-------------------|----------------------|
| C2                | 3.0" TYPE S9.5C      |
| D1                | 4.0" TYPE I19.0C     |
| E1                | 4.0" TYPE B25.0C     |
| R1                | SHOULDER BERM GUTTER |
| T                 | EARTH MATERIAL       |



BR-0150

RDY2A-2

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WILSON COUNTY

ROADWAY DESIGN UNIT  
ROADWAY DESIGN ENGINEER

7/7/2026

PAVEMENT DESIGN ENGINEER

7/6/2026

PREPARED BY  
  
175 REGENCY WOODS PLACE,  
SUITE 400, CARY, NC 27518  
Phone: 919-854-1282  
License #: F-0299

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

REVISIONS



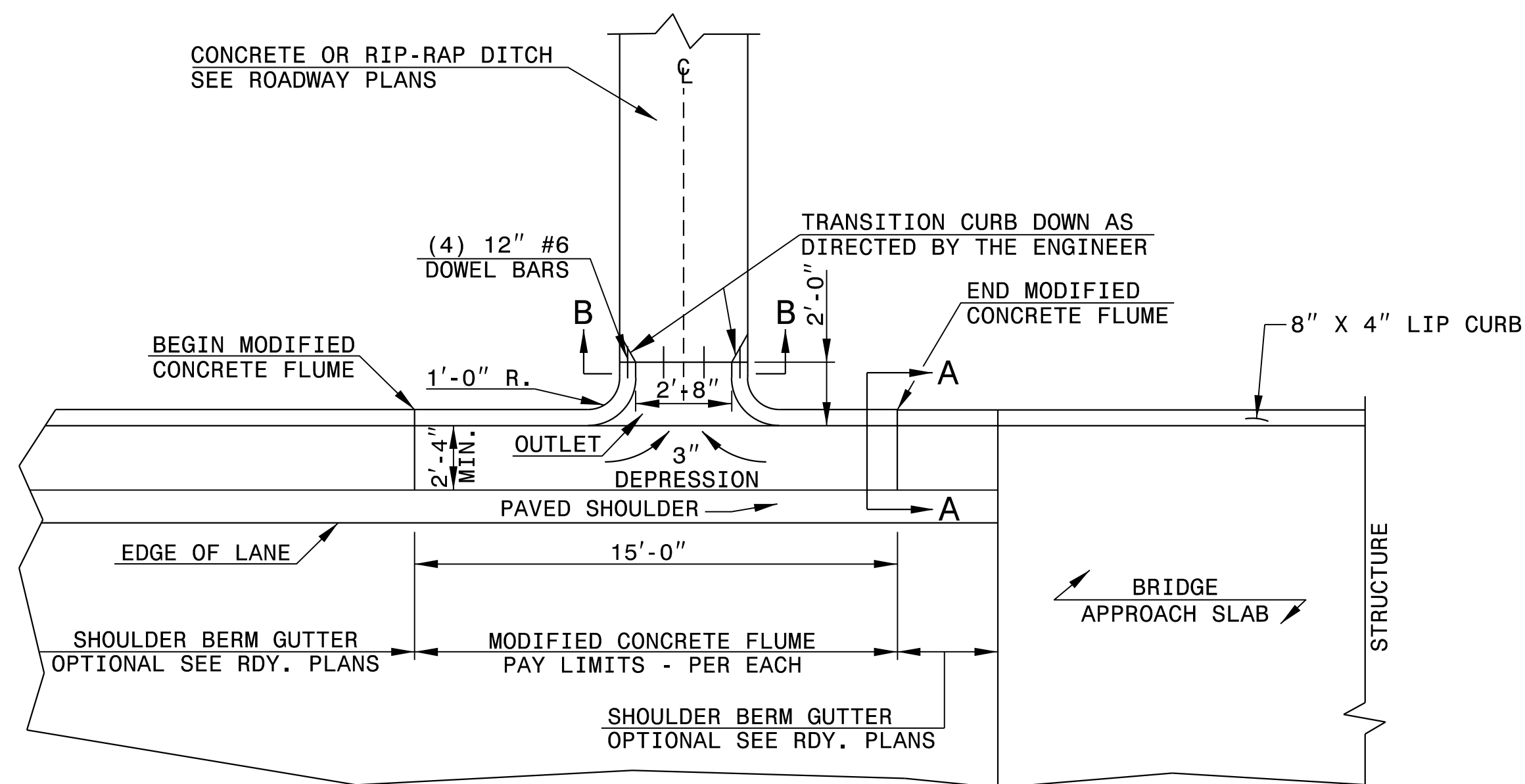
ENGLISH DETAIL DRAWING FOR  
**MODIFIED CONCRETE FLUME**  
WITH CONCRETE OR RIP-RAP DITCH

MODFLMDTCH

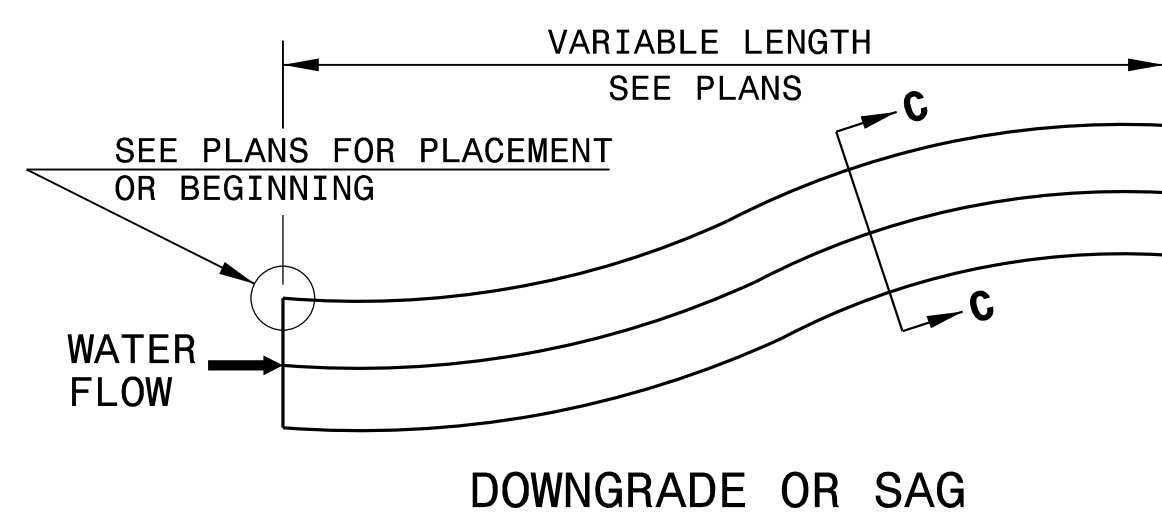
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MODIFIED CONCRETE FLUID**  
WITH CONCRETE OR RIP-RAP DITCH

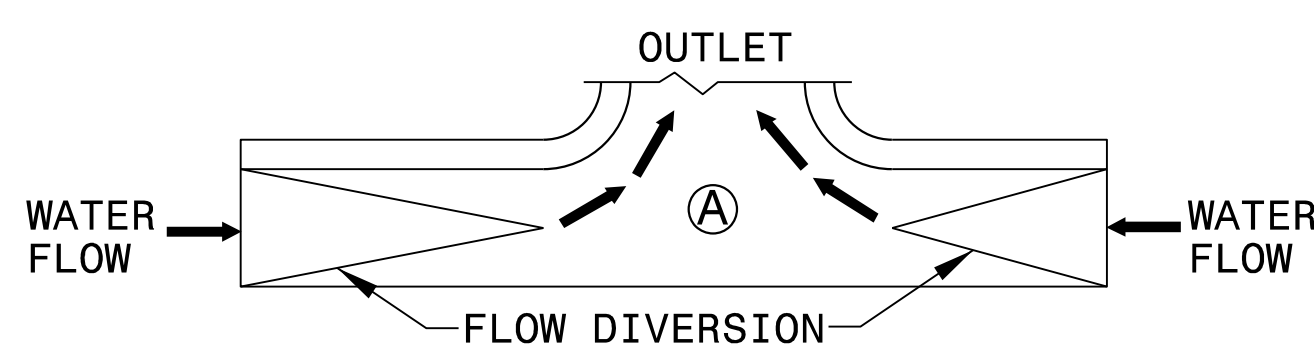
MODFLMDTCH



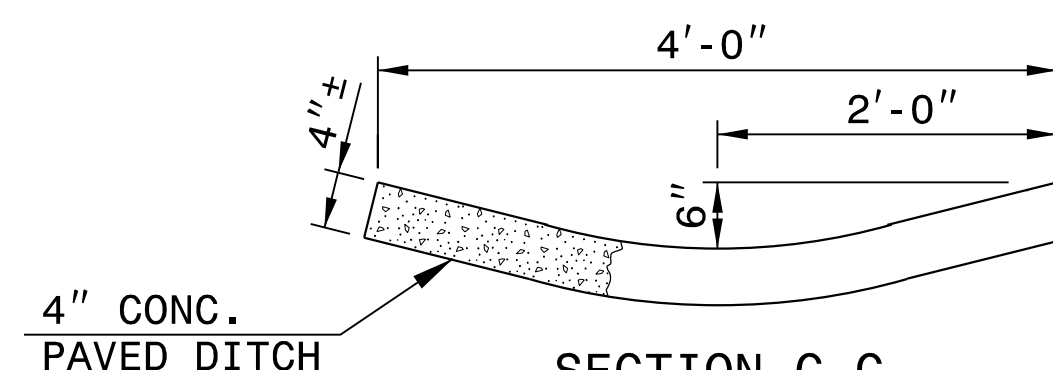
PLAN VIEW



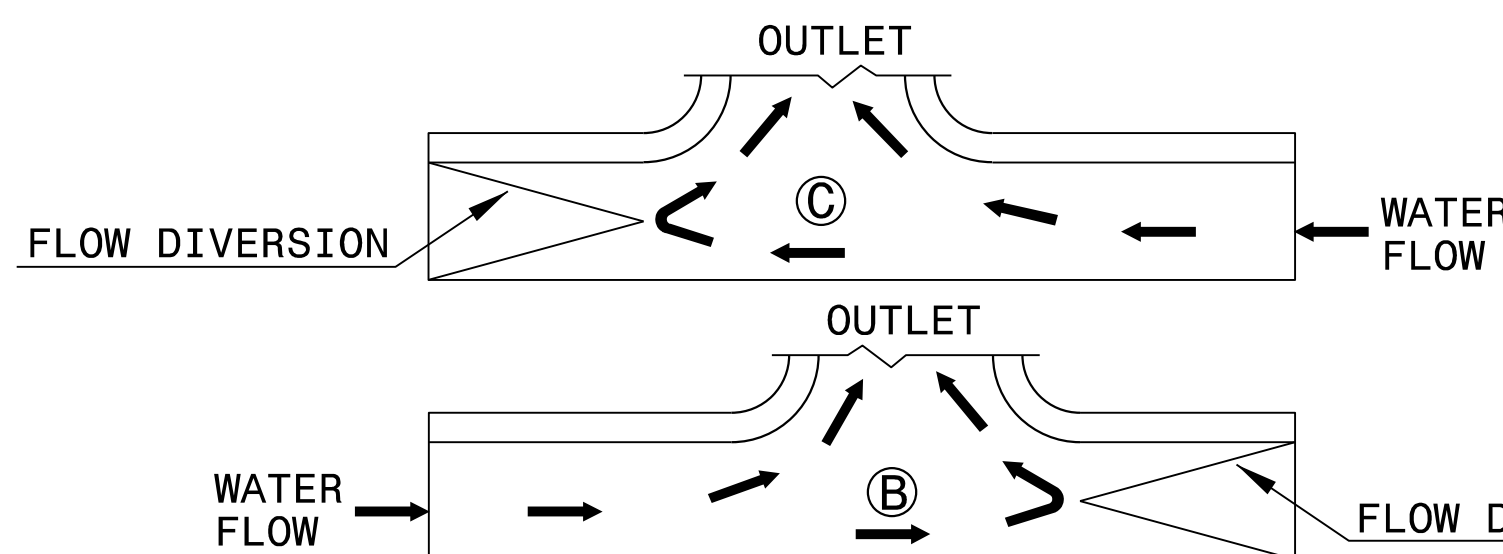
DOWNGRADE OR SAG



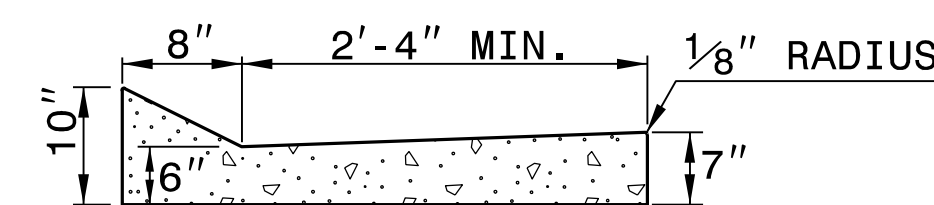
SAG



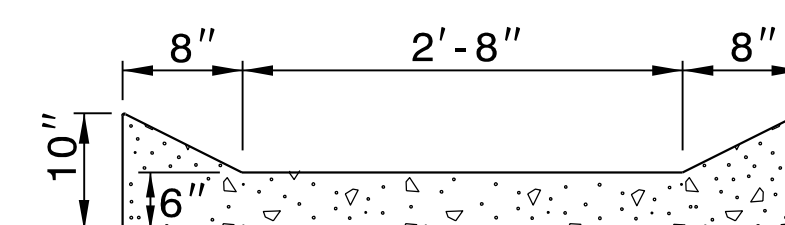
SECTION C-C



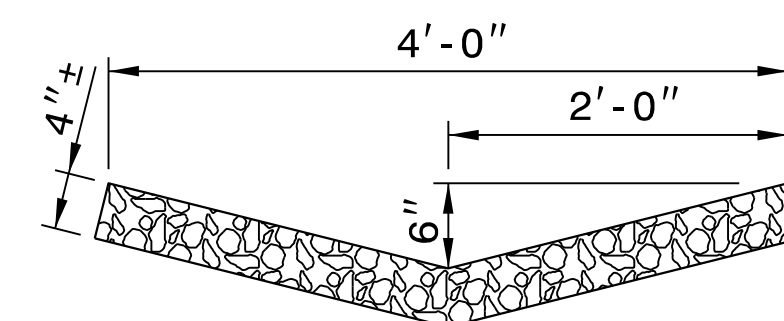
DOWN GRADE



SECTION A-A



SECTION B-B



RIP-RAP LINED DITCH

NOTES:

- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

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

**SEE PLATE FOR TITLE**

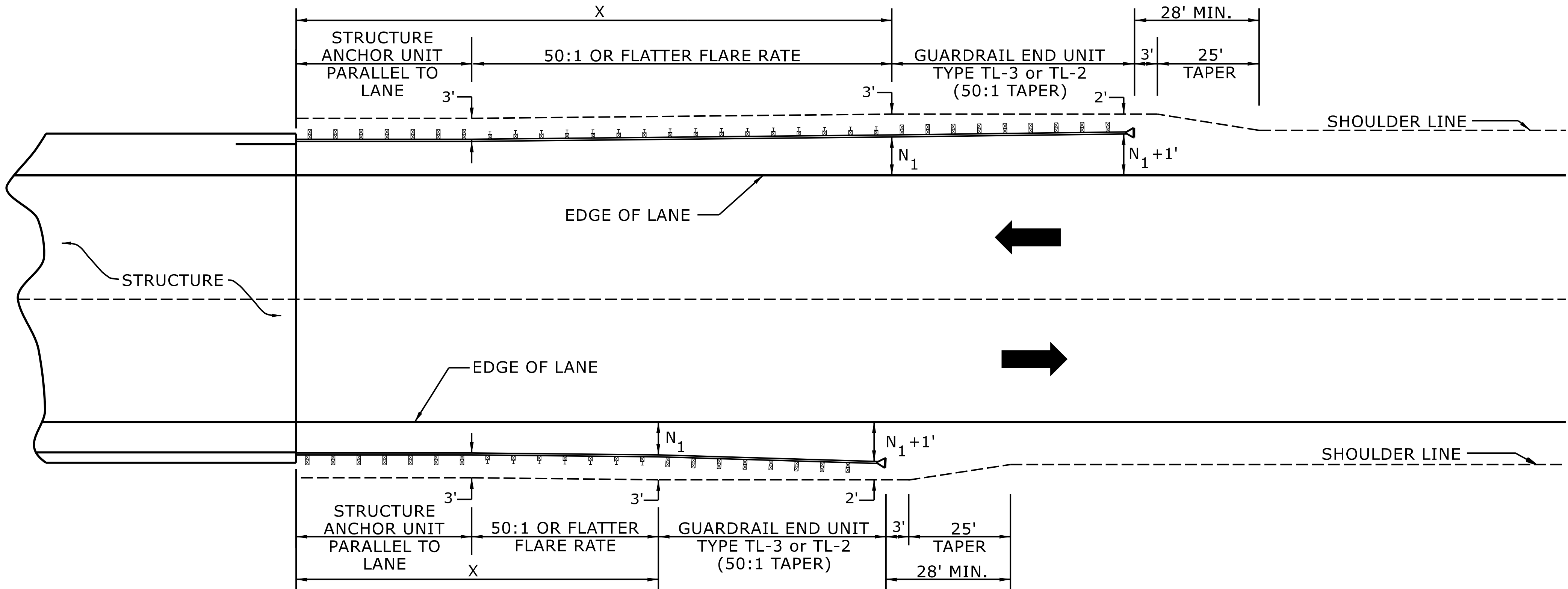
ORIGINAL BY: E.E. Ward      DATE: Apr. 2002  
MODIFIED BY: J.S. Howerton      DATE: October 2017  
CHECKED BY: \_\_\_\_\_      DATE: \_\_\_\_\_  
FILE SPEC.: w:details\stand\modifiedflume.dgn



7/8/2026



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| BR-0150               | 2C-2      |



USE FLARE RATE AS THE CONTROL IF THE "N<sub>1</sub>" DISTANCE IS NOT OBTAINED.  
("N<sub>1</sub>" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

FOR POSTED SPEEDS ≥ 45MPH USE GREU TYPE TL-3  
FOR POSTED SPEEDS < 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

**LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS**

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

ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL PLACEMENT**

SHEET 4 OF 15  
**862D01**



7/8/2026

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**

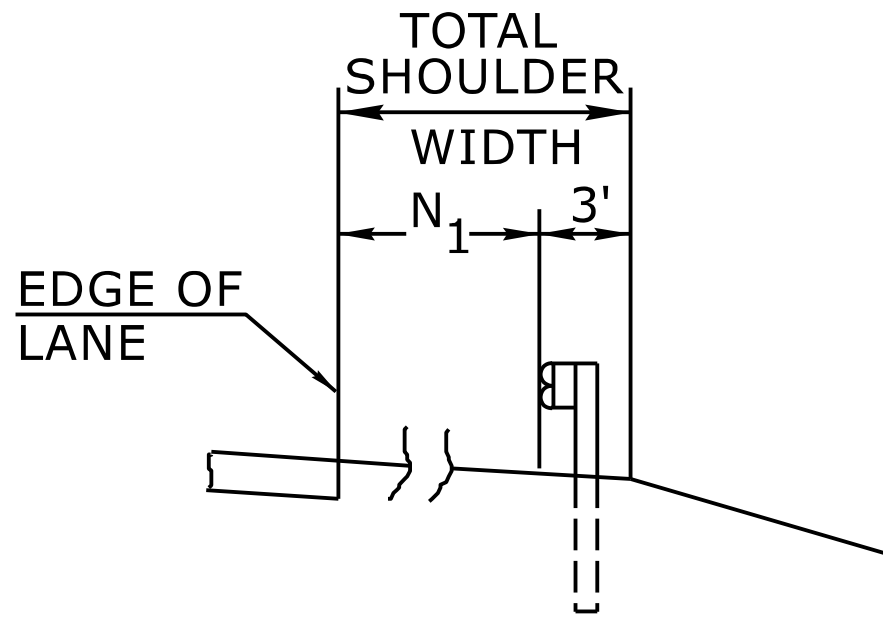
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

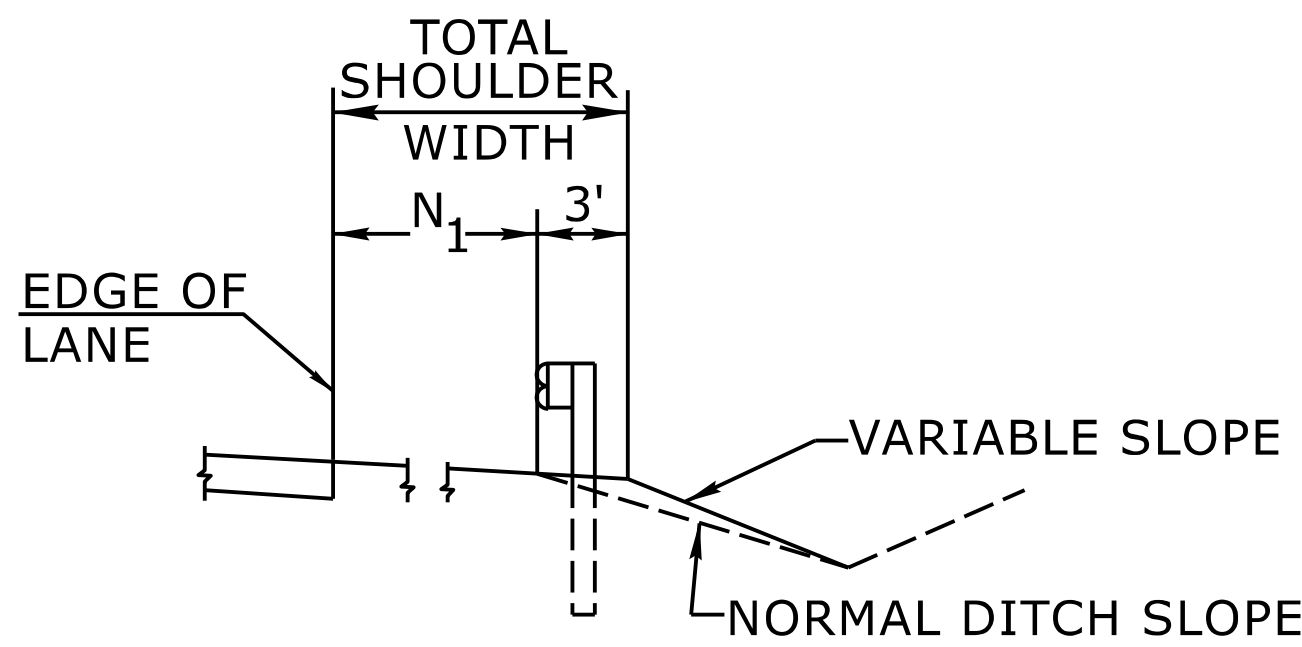
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024  
MODIFIED BY: DATE:   
CHECKED BY: DATE:   
FILE SPEC.:



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| BR-0150               | 2C-3      |

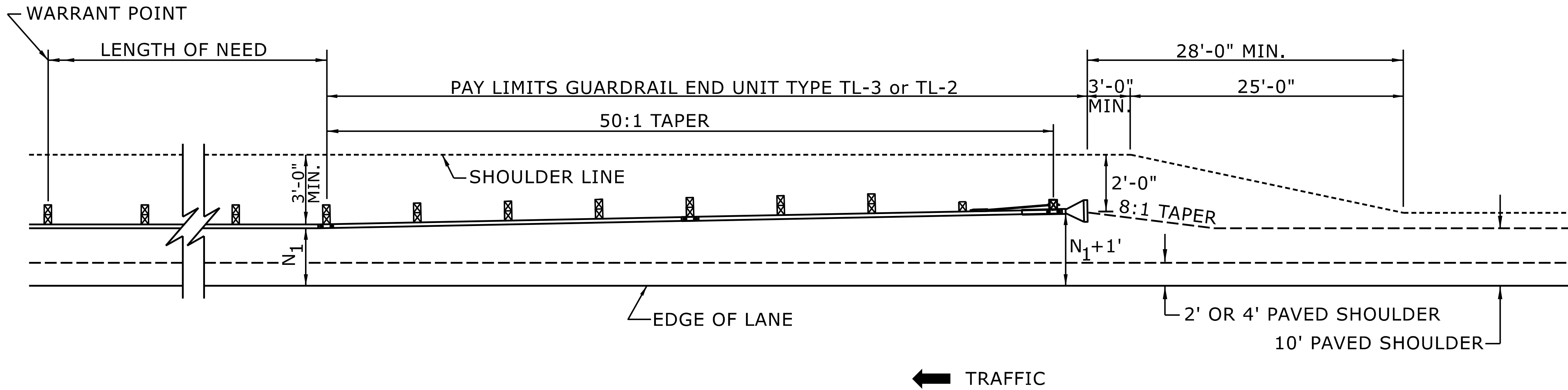


FILL SECTION



CUT SECTION

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



FOR POSTED SPEEDS ≥ 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**



7/8/2026

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

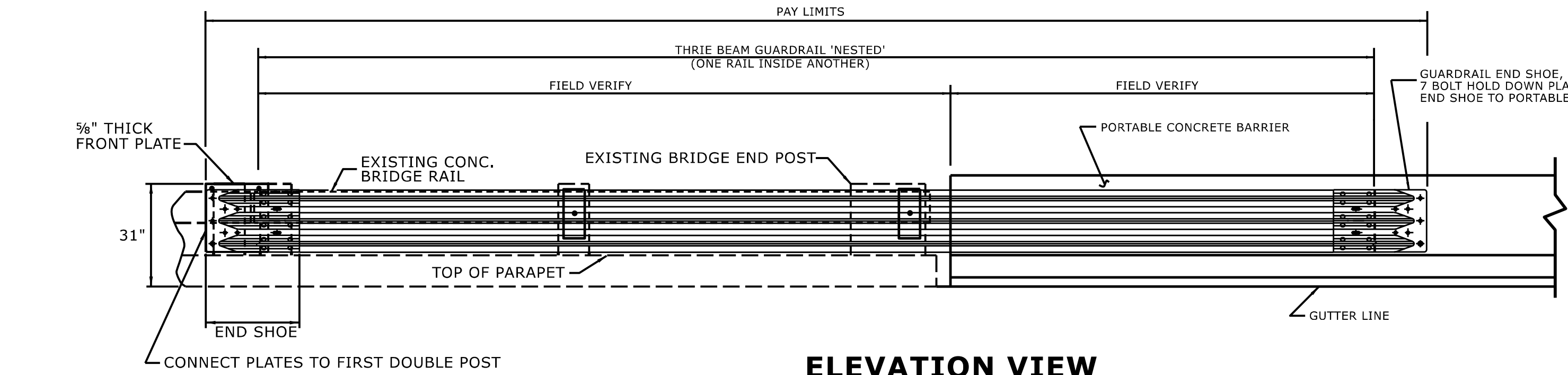
**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**

Office 919-707-6950 FAX 919-250-4119

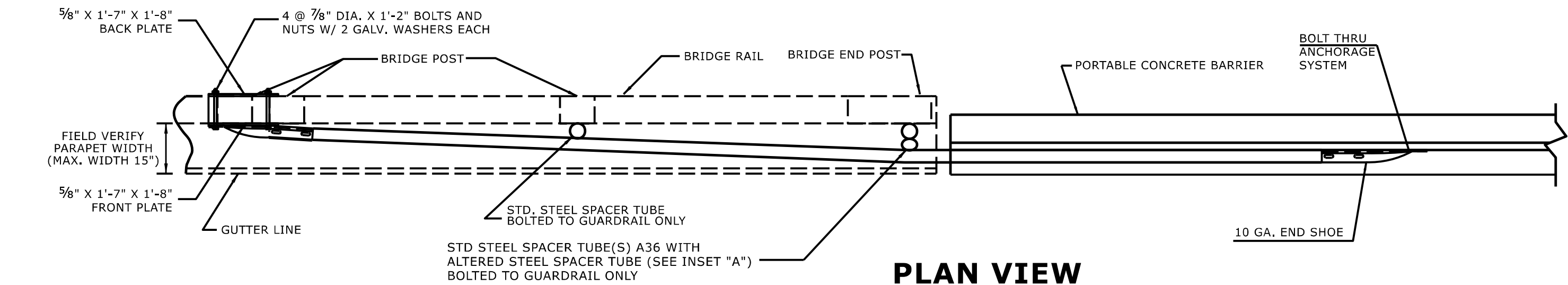
**SEE TITLE BLOCK**

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

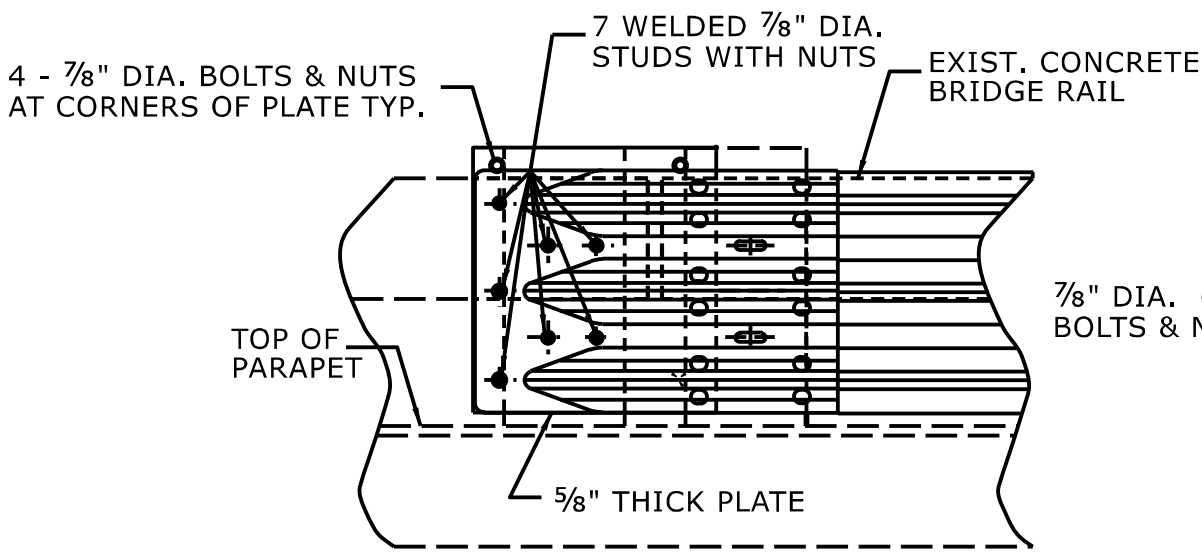




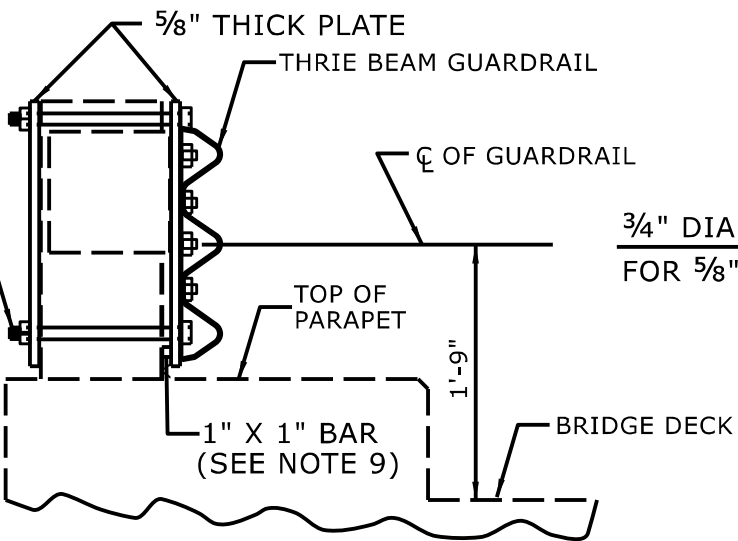
ELEVATION VIEW



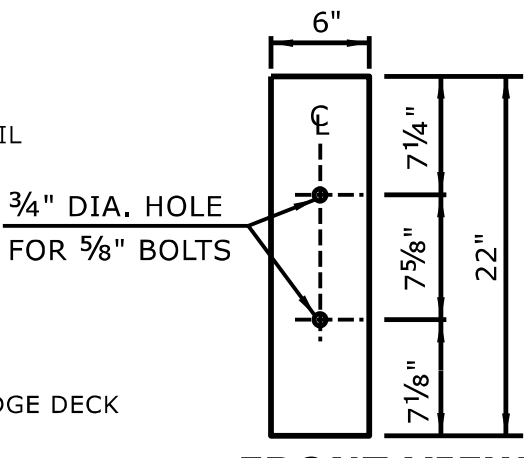
PLAN VIEW



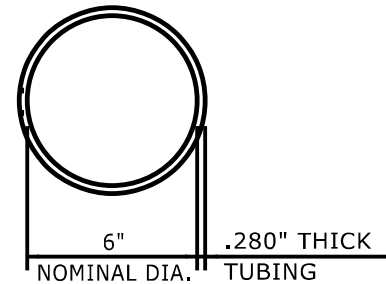
ELEVATION VIEW



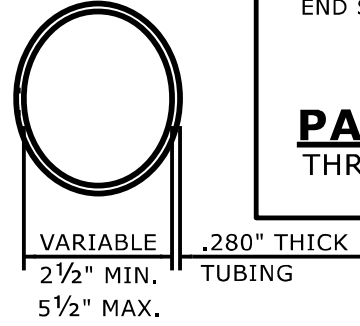
SECTION VIEW



FRONT VIEW

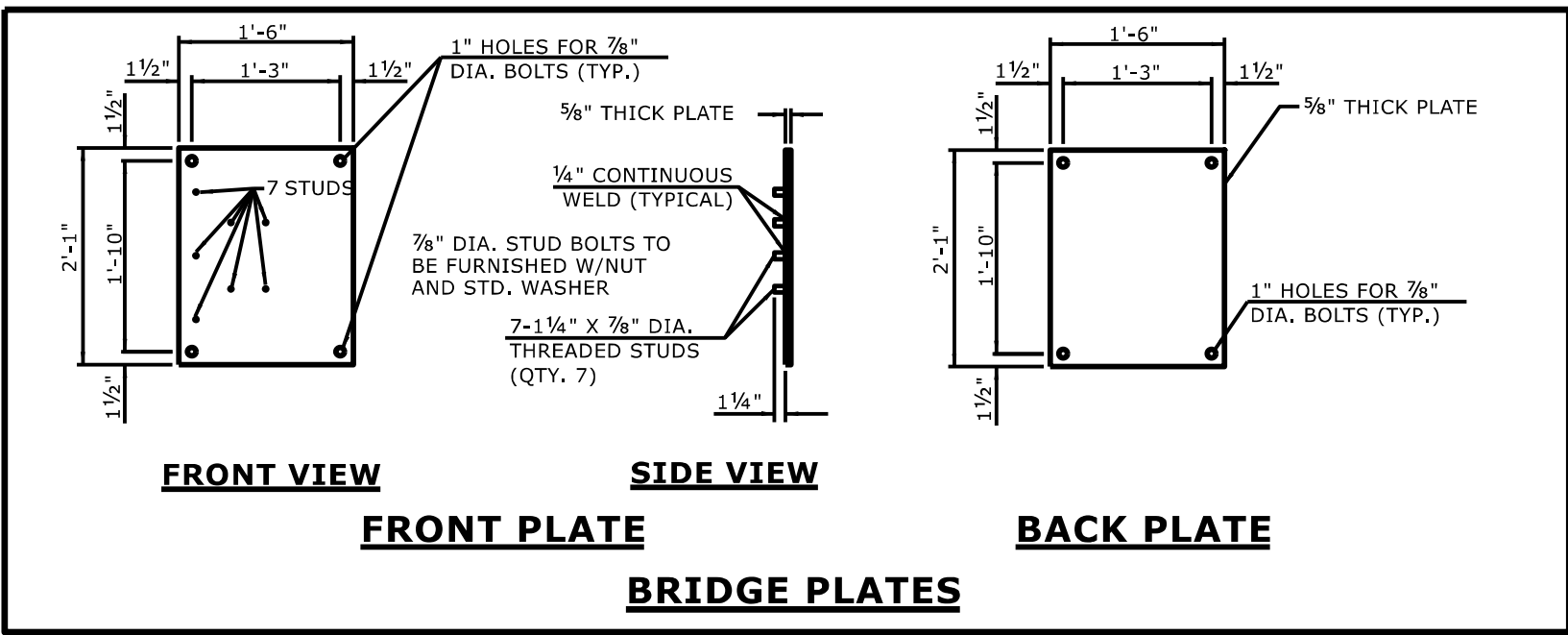


PLAN VIEW



PLAN VIEW  
INSET "A"

STEEL SPACER TUBE



FRONT VIEW

SIDE VIEW

FRONT PLATE

BACK PLATE

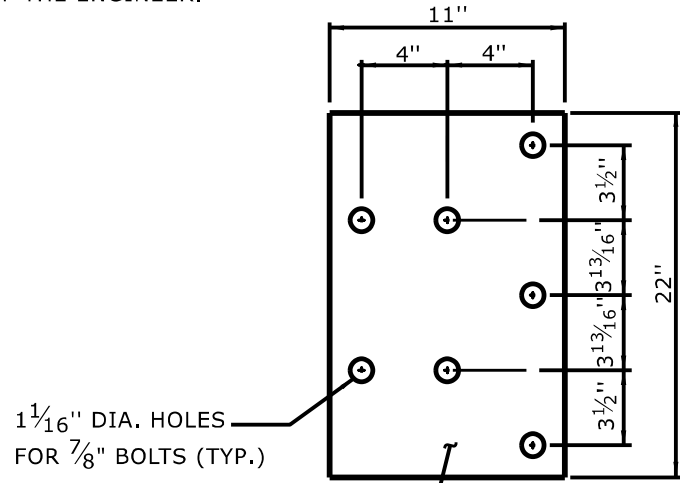
BRIDGE PLATES

NOTES FOR 7 BOLT HOLD DOWN PLATE

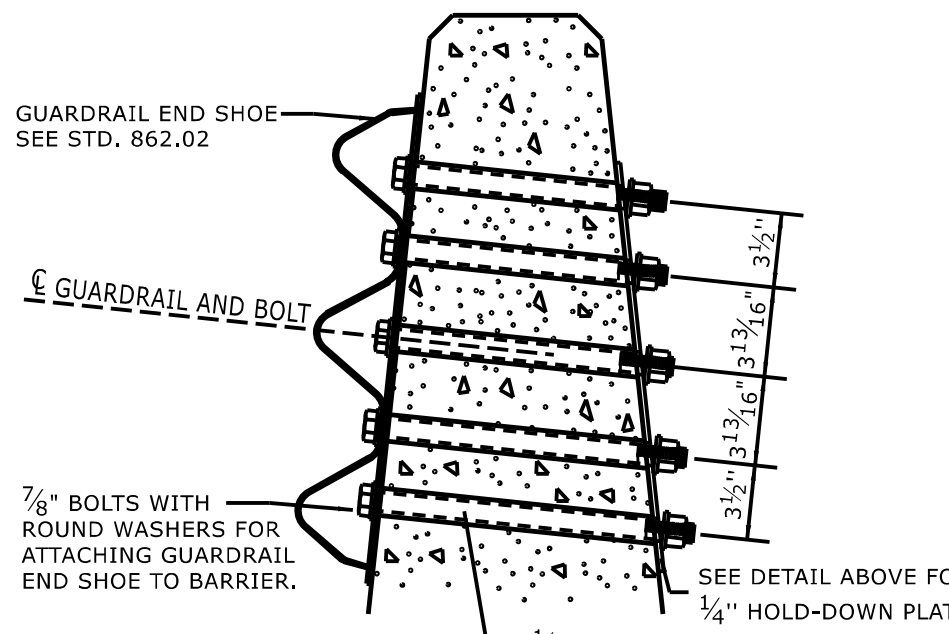
THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" DIA. BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL. THE 1/4" DIA. HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



7 BOLT HOLD DOWN PLATE



PART SECTION OF BARRIER OR RAIL  
THRU END SHOE SECTION AND 7 BOLT HOLD DOWN PLATE

GENERAL NOTES:

- USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
- TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
- USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
- ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
- INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
- DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
- USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
- ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
- 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
- PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
- LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- SEE ROADWAY STANDARD DRAWING 862.03 SHEET 3 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT

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

ROADWAY DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
TEMPORARY ANCHOR UNIT TYPE THRIE-BEAM

SHEET 8 OF 9  
**862D03**



7/8/2026

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

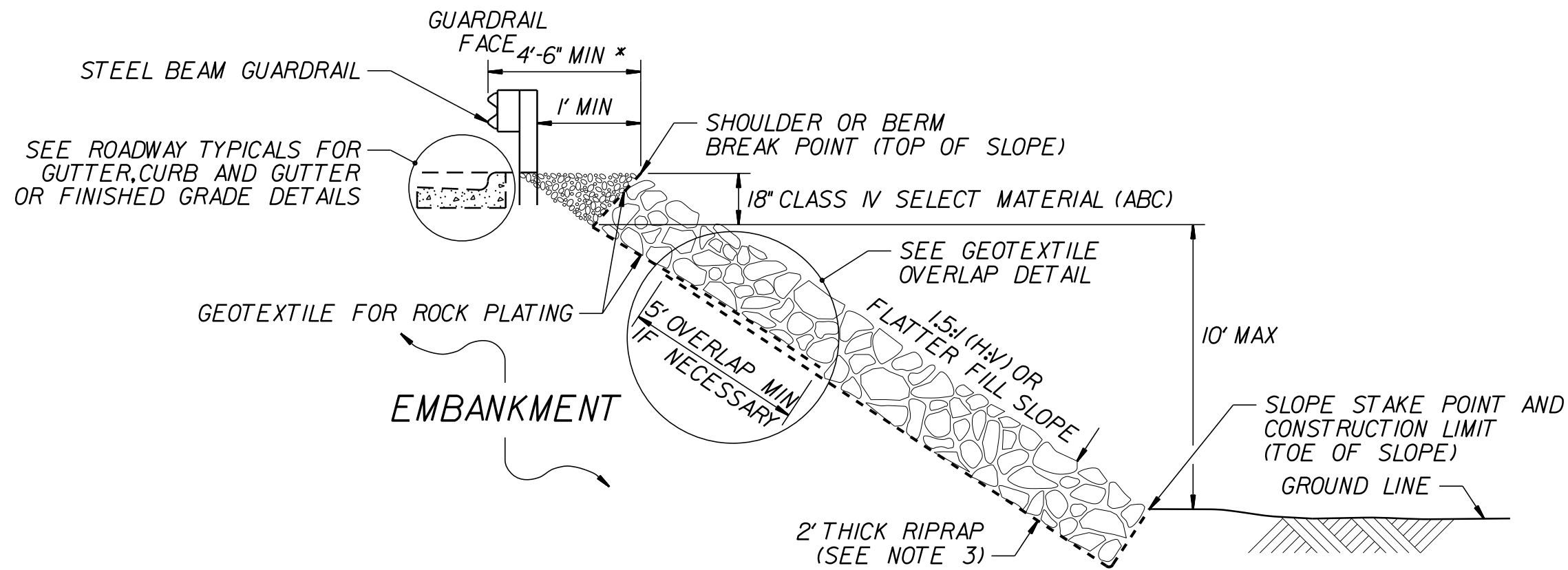
CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

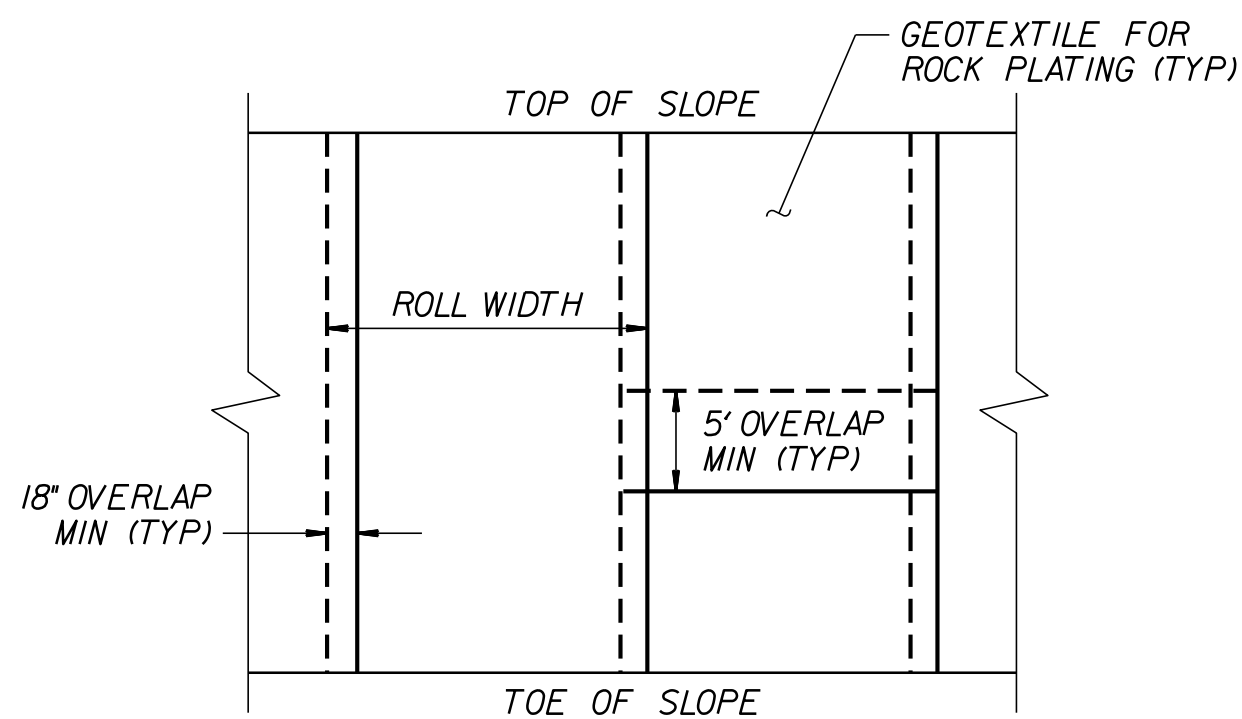
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024  
MODIFIED BY: DATE:  
CHECKED BY: DATE:  
FILE SPEC.: DATE:





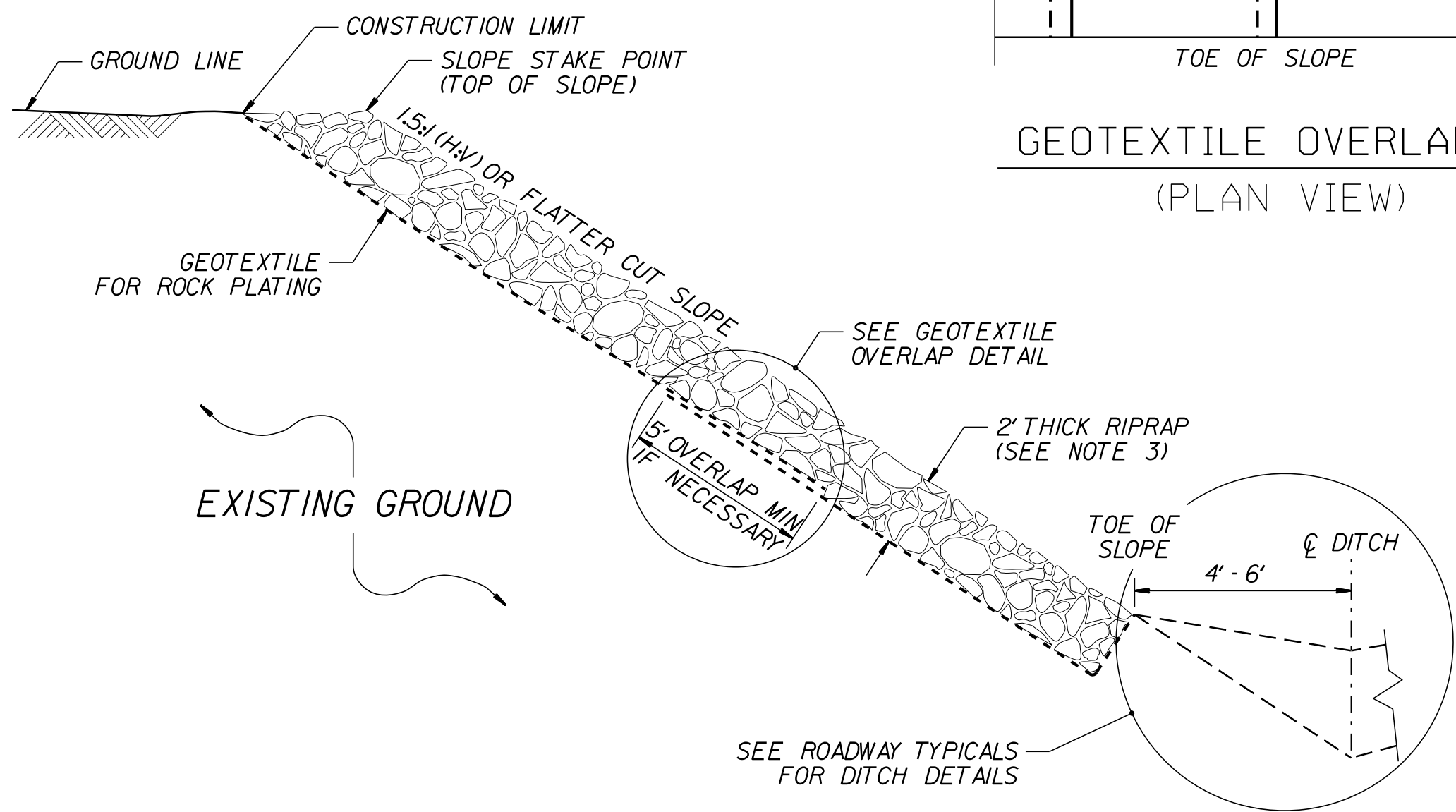
ROCK PLATING DETAIL NO.1 - TYPICAL SECTION

\* 3'-6" MINIMUM WITH 8' LONG GUARDRAIL POSTS

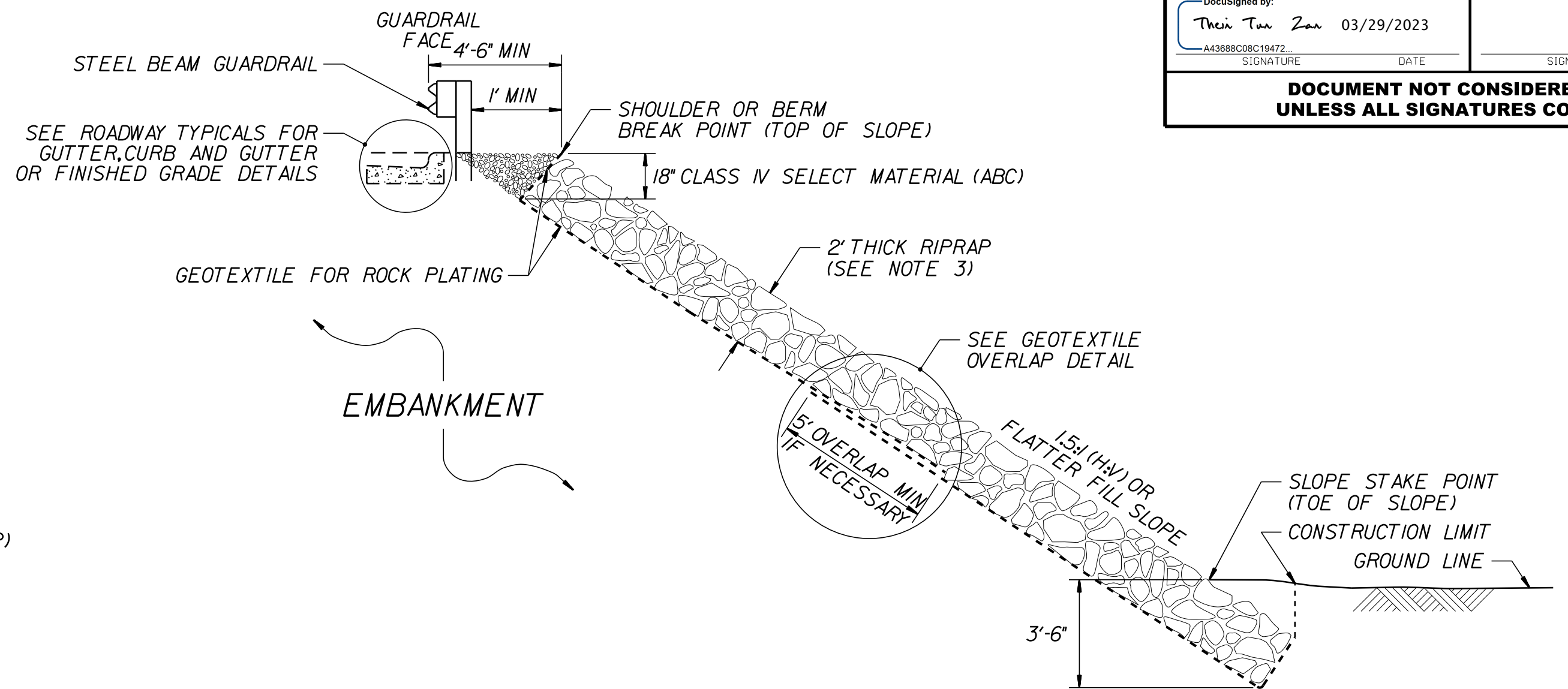


GEOTEXTILE OVERLAP DETAIL

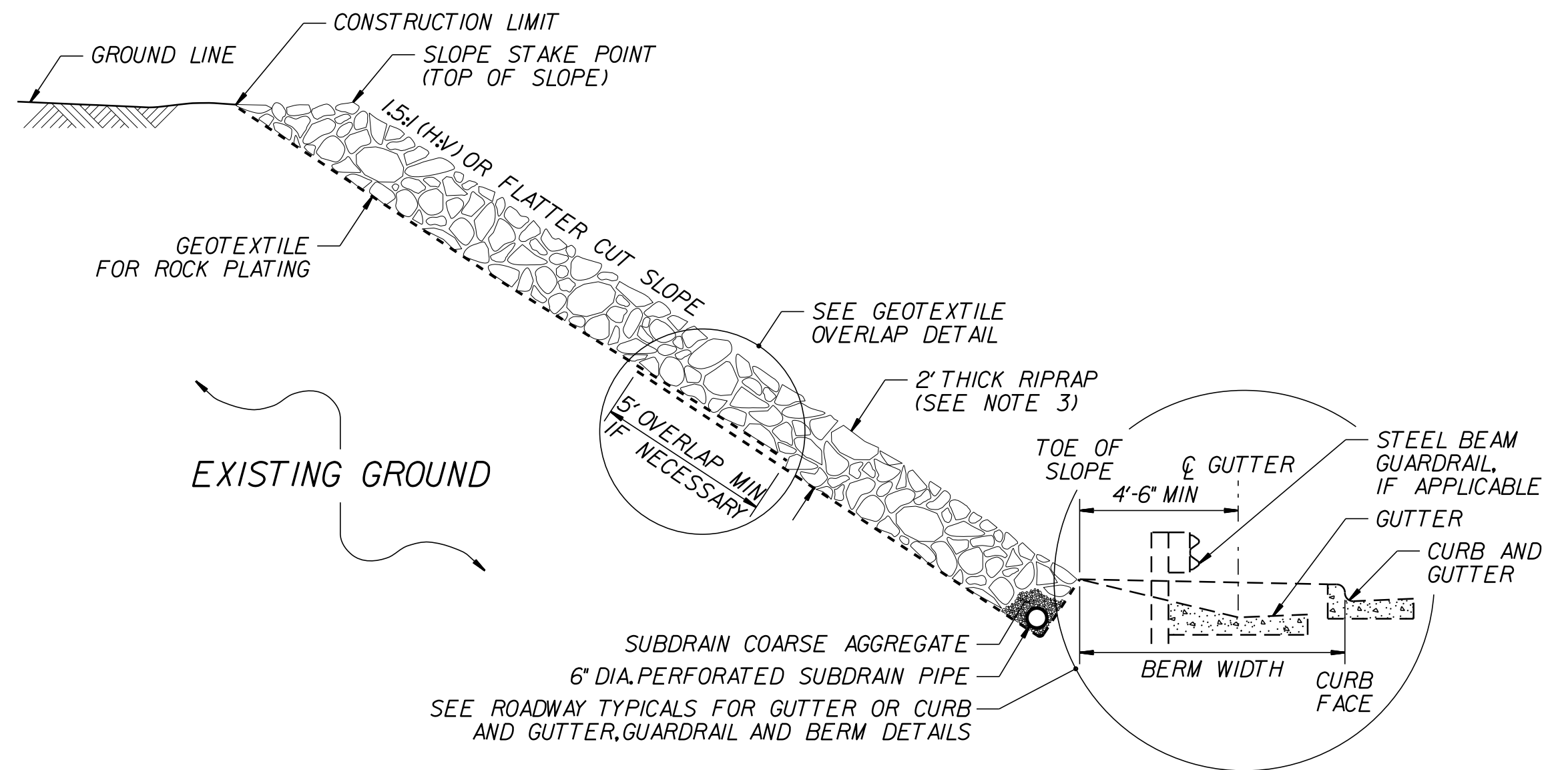
(PLAN VIEW)



ROCK PLATING DETAIL NO.3 - TYPICAL SECTION



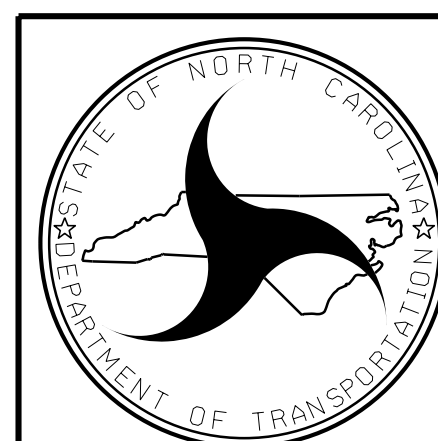
ROCK PLATING DETAIL NO.2 - TYPICAL SECTION



ROCK PLATING DETAIL NO.4 - TYPICAL SECTION

NOTES:

- SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
- FOR ROCK PLATING,SEE ROCK PLATING (SPECIAL) PROVISION.
- USE CLASS I,2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.



NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

GEOTECHNICAL  
ENGINEERING UNIT

MODIFIED STANDARD  
ROCK PLATING DETAILS

| REVISIONS |    |      |     |    |      |
|-----------|----|------|-----|----|------|
| NO.       | BY | DATE | NO. | BY | DATE |
| 1         |    |      | 3   |    |      |
| 2         |    |      | 4   |    |      |



DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

| SUMMARY OF EARTHWORK (In Cubic Yards)    |                                 |              |          |            |        |       |
|------------------------------------------|---------------------------------|--------------|----------|------------|--------|-------|
| Station                                  | Station                         | Uncl. Excav. | Undercut | Embank. +% | Borrow | Waste |
| -L- STA 10+20.00                         | -L- STA 14+42.50 (BEGIN BRIDGE) | 97           |          | 2702       | 2,605  |       |
| -L- STA 15+67.50 (END BRIDGE)            | -L- STA 18+00.00                | 110          |          | 730        | 620    |       |
|                                          |                                 |              |          |            |        |       |
| SUBTOTALS:                               |                                 | 207          | 0        | 3432       | 3225   | 0     |
| MATERIAL USED FOR SHOULDER CONSTRUCTION  |                                 |              |          |            | 515    |       |
| LOSS DUE TO CLEARING & GRUBBING          |                                 |              |          |            | 0      |       |
| ADDITIONAL UNDERCUT                      |                                 |              | 300      |            |        |       |
| ROCK WASTE TO REPLACE BORROW             |                                 |              |          |            |        |       |
| ADJUST FOR ROCK WASTE                    |                                 |              |          |            |        |       |
| WASTE IN LIEU BORROW                     |                                 |              |          |            |        | 300   |
|                                          |                                 |              |          |            |        |       |
| PROJECT TOTALS:                          |                                 | 207          | 300      | 3432       | 3740   | 300   |
| EST. 5% TO REPLACE TOPSOIL ON BORROW PIT |                                 |              |          |            | 187    |       |
| GRAND TOTALS:                            |                                 | 207          | 300      | 3450       | 3927   | 300   |
| SAY:                                     |                                 | 250          | 300      |            | 3950   |       |

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGNER. THESE EARTHWORK QUANTITIES ARE BASED IN PART OF SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR GRADING.

EST.DDE = 0 CY

EST.SHALLOW UNDERCUT = 0 CY

EST.SHALLOW UNDERCUT BY STATIONS = 0 CY

TOTAL SHALLOW UNDERCUT BY = 0 CY

GEOTEXTILE FOR SOIL STABILIZATION = 300 SY

| PAVEMENT REMOVAL SUMMARY |         |         |          |         |
|--------------------------|---------|---------|----------|---------|
| IN SQUARE YARDS          |         |         |          |         |
|                          | Station | Station | LOCATION | ASPHALT |
| LINE                     |         |         | LT/RT/CL | REMOVAL |
| L                        | 13+92   | 14+42   | CL       | 147.60  |
| L                        | 15+67   | 16+17   | CL       | 143.38  |
|                          |         |         |          |         |
|                          |         |         |          |         |
|                          |         | TOTAL:  |          | 291     |
|                          |         |         |          |         |
|                          |         | SAY:    |          | 300     |

| SHOULDER BERM GUTTER SUMMARY |          |          |      |             |
|------------------------------|----------|----------|------|-------------|
| LINE                         | Station  | Station  | Side | LENGTH (ft) |
| L                            | 15+88.74 | 16+17.74 | RT   | 29.00       |
| L                            | 15+75.34 | 16+03.83 | LT   | 28.49       |
|                              |          |          |      |             |
|                              |          | TOTAL:   |      | 57.49       |
|                              |          |          |      |             |
|                              |          | SAY:     |      | 60          |
|                              |          |          |      |             |

REVISIONS











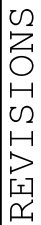
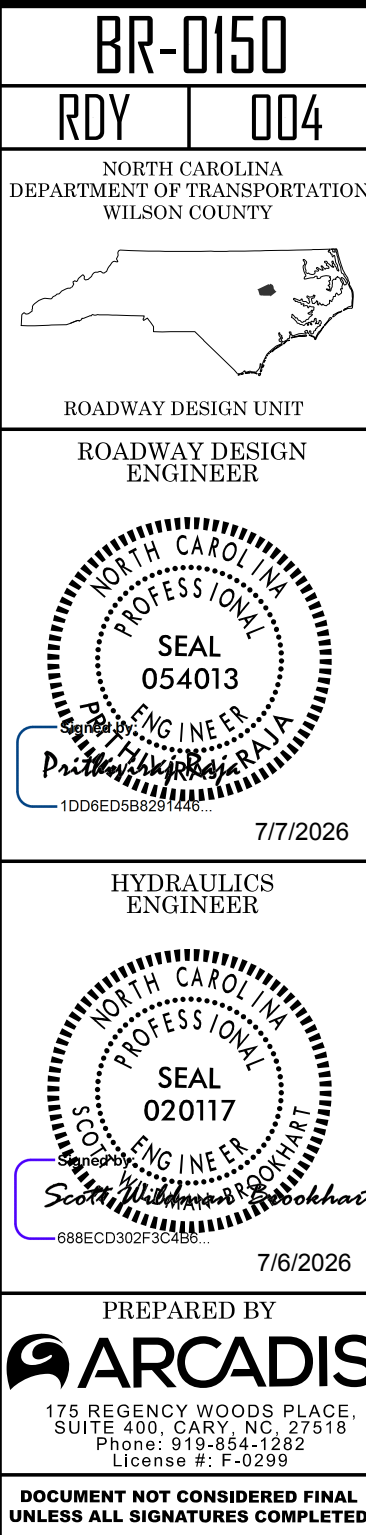
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

| SUMMARY OF ROCK PLATING                                                             |                       |                 |                    |                 |                |                                 |                     |                 |
|-------------------------------------------------------------------------------------|-----------------------|-----------------|--------------------|-----------------|----------------|---------------------------------|---------------------|-----------------|
|                                                                                     |                       |                 |                    |                 |                |                                 |                     |                 |
| LINE                                                                                | Beginning Slope (H:V) | Approx. Station | Ending Slope (H:V) | Approx. Station | Location LT/RT | Rock Plating Detail No. 1/2/3/4 | Riprap Class* 1/2/B | Rock Plating SY |
| -L-                                                                                 | 3:1                   | 11+75           | 1.5:1              | 14+20           | LT             | 2                               | *                   | 710             |
| -L-                                                                                 | 1.5:1                 | 15+80           | 2:1                | 17+75           | LT             | 2                               | *                   | 430             |
| -L-                                                                                 | 1.5:1                 | 15+95           | 2.5:1              | 17+75           | RT             | 2                               | *                   | 370             |
|                                                                                     |                       |                 |                    |                 |                |                                 |                     |                 |
|                                                                                     |                       |                 |                    |                 |                |                                 | TOTAL SY:           | 1510            |
|                                                                                     |                       |                 |                    |                 |                |                                 |                     |                 |
| *Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location. |                       |                 |                    |                 |                |                                 |                     |                 |

| SUMMARY OF SUBSURFACE DRAINAGE |         |         |                   |                      |     |
|--------------------------------|---------|---------|-------------------|----------------------|-----|
|                                |         |         |                   |                      |     |
| LINE                           | Station | Station | Location LT/RT/CL | Drain Type* UD/BD/SD | LF  |
|                                |         |         |                   |                      |     |
|                                |         |         |                   |                      |     |
|                                |         |         |                   |                      |     |
| CONTINGENCY                    |         |         |                   | SD                   | 200 |
|                                |         |         |                   |                      |     |
|                                |         |         |                   | TOTAL LF:            | 200 |
|                                |         |         |                   |                      |     |
| *UD = Underdrain               |         |         |                   |                      |     |
| *BD = Blind Drain              |         |         |                   |                      |     |
| *SD = Subsurface Drain         |         |         |                   |                      |     |

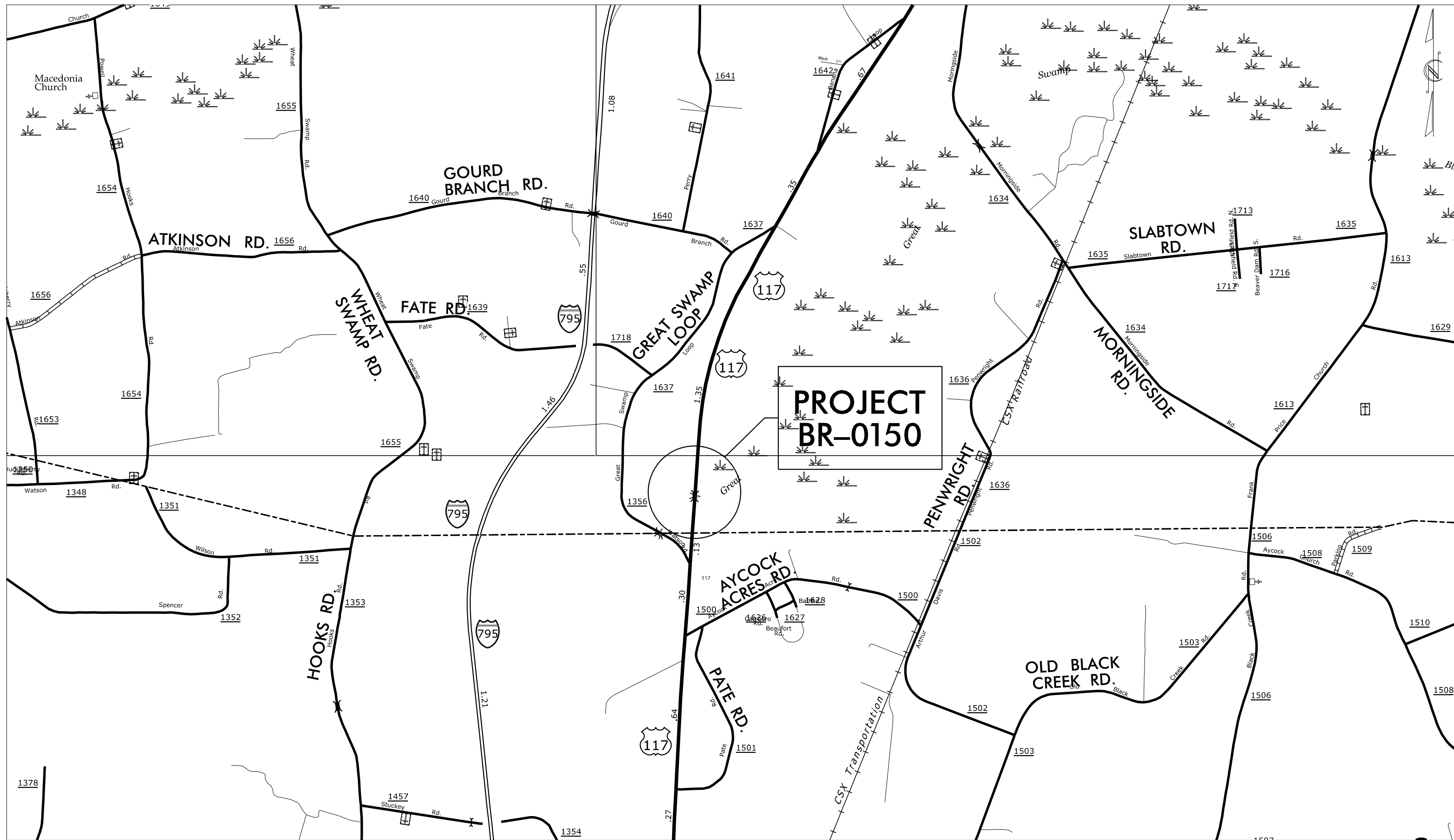
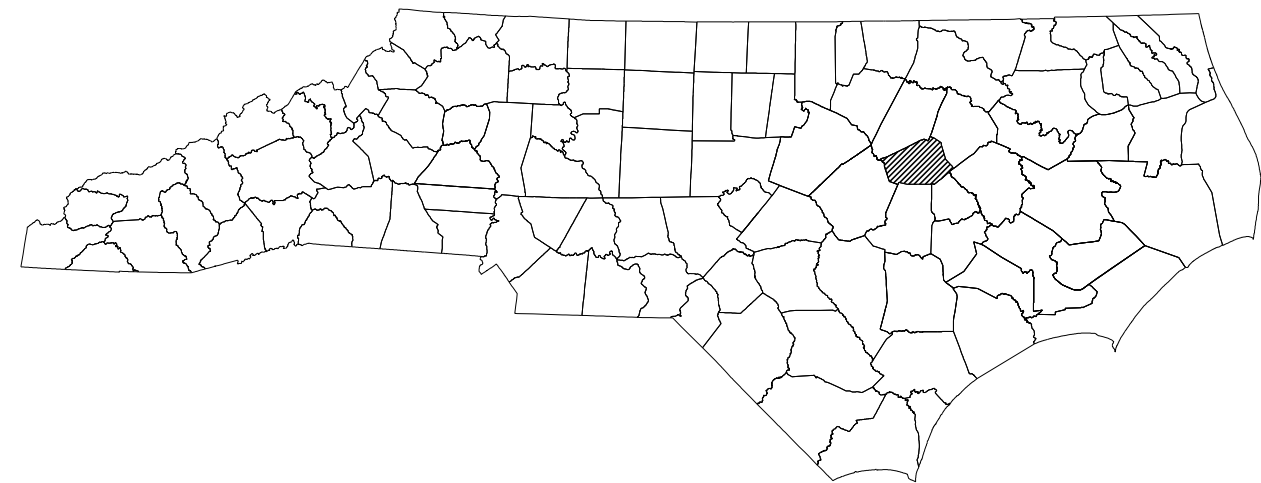




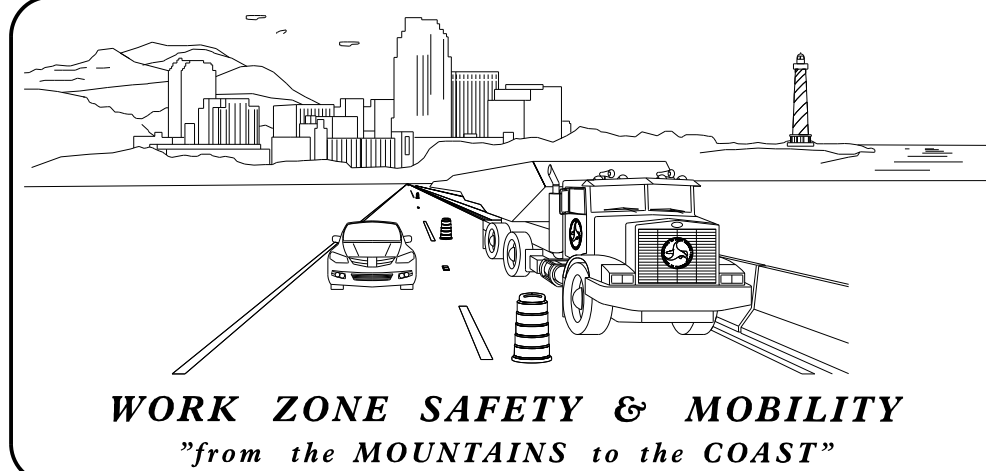


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN  
WILSON COUNTY

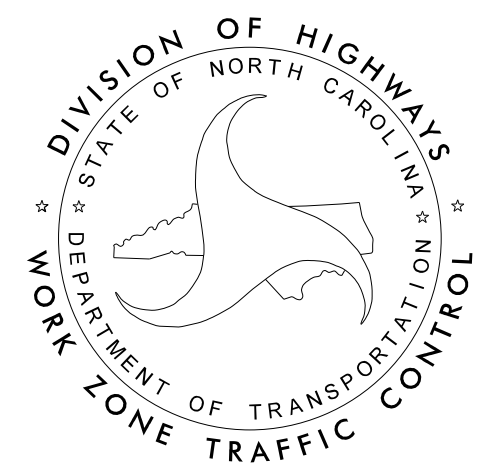


LOCATION: BRIDGE NO. 23 ON US-117 OVER GREAT SWAMP CREEK



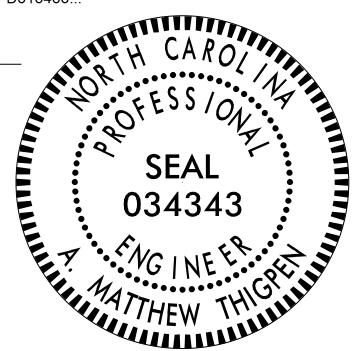
PLANS PREPARED BY:  
A. Matthew Thigpen, PE  
PROJECT ENGINEER

NCDOT CONTACTS:  
Karmen Miller, PE  
PROJECT ENGINEER  
Alla Lyudmirskaya  
PROJECT DESIGN ENGINEER



APPROVED: Matthew Thigpen  
DATE: 6/28/2026

SEAL



INDEX OF SHEETS

| SHEET NO. | TITLE                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------|
| TMP-1     | TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS<br>LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS,<br>AND LEGEND |
| TMP-2     | TRANSPORTATION OPERATIONS PLAN                                                                                |
| TMP-3     | OFF-SITE DETOUR                                                                                               |

ROADWAY STANDARD DRAWINGS

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

| STD. NO. | TITLE                                                    |
|----------|----------------------------------------------------------|
| 1101.01  | WORK ZONE WARNING SIGNS                                  |
| 1101.03  | TEMPORARY ROAD CLOSURES                                  |
| 1101.04  | TEMPORARY SHOULDER CLOSURES                              |
| 1101.11  | TRAFFIC CONTROL DESIGN TABLES                            |
| 1110.01  | STATIONARY WORK ZONE SIGNS                               |
| 1145.01  | BARRICADES                                               |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS               |
| 1205.02  | PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS      |
| 1250.01  | RAISED PAVEMENT MARKERS - INSTALLATION SPACING           |
| 1251.01  | RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)      |
| 1253.01  | RAISED PAVEMENT MARKERS - (SNOWPLOWABLE)                 |
| 1261.01  | GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING |
| 1261.02  | GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING   |
| 1262.01  | GUARDRAIL END DELINEATION                                |

LEGEND

GENERAL

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

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)

TEMPORARY SIGNING

- STATIONARY SIGN

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

SHEET NO.  
TMP-1

BR-0150

TIP PROJECT:



6/28/2026  
G:\Users\Wgt\Thigpen\OneDrive\Projects\00055\_BR-0150\BR-0150\TrafficControl\TCP\BR0150\_tc\_tmp\_02.dgn  
User:Matt Thigpen

## GENERAL NOTES

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

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

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF  
TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- N) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY  
STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.  
AND  
PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC  
CONTROL PLANS.
- O) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE  
IS NOT IN OPERATION  
AND  
COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN  
OPERATION.
- P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

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

### PAVEMENT MARKINGS AND MARKERS

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

| ROAD NAME       | MARKING       | MARKER                     |
|-----------------|---------------|----------------------------|
| -L- (US 117)    | THERMOPLASTIC | NON-CAST IRON SNOWPLOWABLE |
| CONCRETE BRIDGE | THERMOPLASTIC | RAISED                     |

- Y) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Z) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH  
DAY'S OPERATION.
- Z) PASSING ZONE WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGOINEER.

## PHASING

### PHASE I

PRIOR TO ANY CONSTRUCTION OPERATIONS, INSTALL AND COVER DETOUR SIGNS  
AS SHOWN ON TMP-3 AND IN ACCORDANCE WITH ROADWAY STANDARD  
1101.03 SHEET 1 OF 9. DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN  
3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.

### PHASE II

INSTALL BARRICADES AND UNCOVER DETOUR SIGNS. CLOSE -L- (US 117) TO  
TRAFFIC AS SHOWN ON TMP-3. CONSTRUCT BRIDGE, APPROACHES, AND ROADWAY  
UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE.

### PHASE III

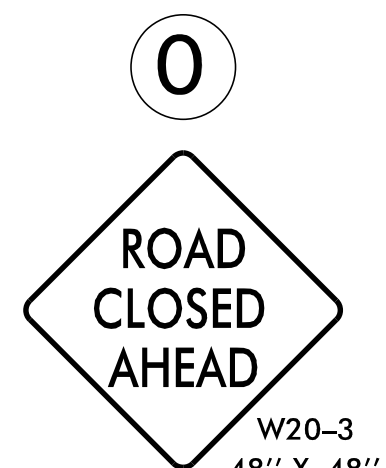
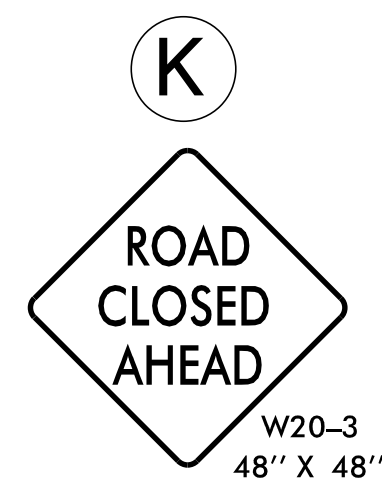
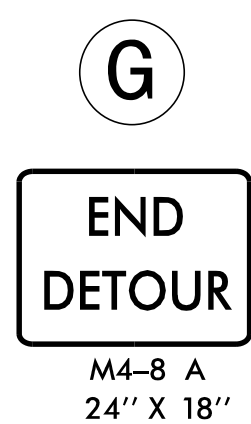
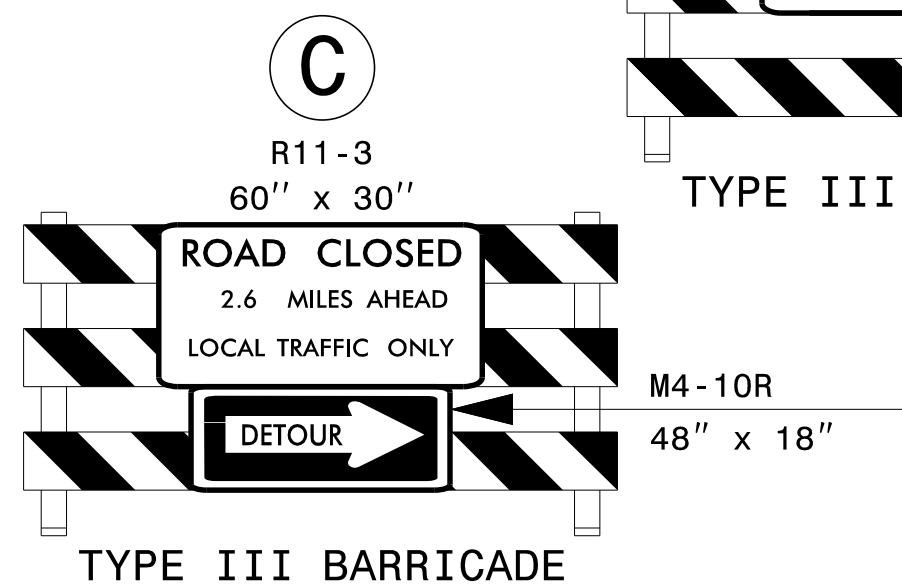
UPON COMPLETION OF BRIDGE, APPROACHES AND ROADWAY, PLACE FINAL  
PAVEMENT MARKINGS AND MARKERS IN ACCORDANCE WITH ROADWAY STANDARD  
DRAWINGS AND PAVEMENT MARKING PLANS. REMOVE ALL ROAD CLOSURE SIGNS  
AND BARRICADES AND OPEN -L- (US 117) TO THROUGH TRAFFIC.

| PROJ. REFERENCE NO. | SHEET NO. |
|---------------------|-----------|
| BR-0150             | TMP-2     |



|                                                                                                                                                                                                                                                                       |                                                                                                                                                  |                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <div>APPROVED: <div>DocuSigned by:<br/>Matthew Thigpen<br/>7202285FD315433</div></div> <div>DATE: 6/28/2026</div> <div><div>SEAL<br/>034343<br/>ENGINEER<br/>MATTHEW THIGPEN</div></div> <div>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</div> | <div><div>DIVISION OF HIGHWAYS<br/>STATE OF NORTH CAROLINA<br/>DEPARTMENT OF TRANSPORTATION<br/>WORK ZONE TRAFFIC CONTROL</div><div></div></div> | <div>TRANSPORTATION<br/>OPERATIONS<br/>PLAN</div> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|





R11-3  
60" x 30"

ROAD CLOSED  
1.1 MILES AHEAD  
LOCAL TRAFFIC ONLY

TYPE III BARRICADE

# DETOUR SIGNING

6/28/2026  
C:\Users\Watt\Thigpen\OneDrive\Thigpen\Projects\00055-BR-050\BR-050\Traffic\TrafficControl\TCP\BR050\_TC\_Detour2.dgn  
User:Watt\Thigpen



6/28/2026 11:11 AM C:\Users\matt.Thigpen\OneDrive\Projects\100055.BR-0150\BR-0150\Traffic\Pavement Marking Seed\_08-13-19.dgn User: matt.Thigpen

T.I.P.: BR-0150

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN  
WILSON COUNTY

TIP NO.  
BR-0150

SHEET NO.  
PMP-1

DocuSigned by:  
*Matthew Thigpen*  
7202285FD315433

APPROVED:

DATE: 6/28/2026

SEAL  


DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

INDEX

| SHEET NO. | DESCRIPTION                                    |
|-----------|------------------------------------------------|
| PMP-1     | PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET |
| PMP-2     | DETAIL OF INLAID CRADLE MARKER                 |
| PMP-2     | DETAIL OF INLAID RAISED PAVEMENT MARKER        |
| PMP-2     | DETAIL OF MILLED RUMBLE SKIPS                  |
| PMP-5     | PAVEMENT MARKING DETAIL                        |

ROADWAY STANDARD DRAWING

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

| STD. NO. | TITLE                                                    |
|----------|----------------------------------------------------------|
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS               |
| 1205.02  | PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS      |
| 1205.12  | PAVEMENT MARKINGS - BRIDGES                              |
| 1250.01  | RAISED PAVEMENT MARKERS - INSTALLATION SPACING           |
| 1251.01  | RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY        |
| 1253.01  | RAISED PAVEMENT MARKERS - SNOWPLOWABLE                   |
| 1261.01  | GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING |
| 1261.02  | GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING   |
| 1262.01  | GUARDRAIL END DELINEATION                                |

PAVEMENT MARKING SCHEDULE

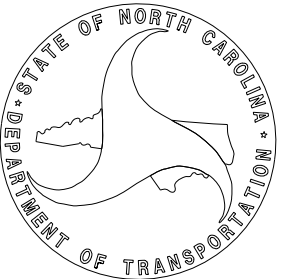
| SYMBOL    | ITEM DESCRIPTION                                                      | TOTAL QUANTITY |    |
|-----------|-----------------------------------------------------------------------|----------------|----|
| T1<br>T13 | THERMOPLASTIC (4", 90 MILS)<br>WHITE EDGELINE<br>YELLOW DOUBLE CENTER | 3,120          | LF |
| MA        | PERMANENT RAISED MARKERS<br>YELLOW & YELLOW                           | 2              | EA |
| ME        | NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKERS<br>YELLOW & YELLOW        | 8              | EA |

GENERAL NOTES

- THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- |           |               |                          |
|-----------|---------------|--------------------------|
| ROAD NAME | MARKING       | MARKER                   |
| US-117    | THERMOPLASTIC | SNOWPLOWABLE ALTERNATIVE |
| BRIDGES   | THERMOPLASTIC | RAISED                   |
- D) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- E) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- F) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- H) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING THERMOPLASTIC PAVEMENT MARKING MATERIAL.

PLAN SUBMITTED TO: N.C.D.O.T. SIGNING AND DELINEATION UNIT

Mitch Eaton, PE SIGNING AND DELINATION REGIONAL ENGINEER  
Stacey Johns SIGNING AND DELINATION PROJECT DESIGN ENGINEER

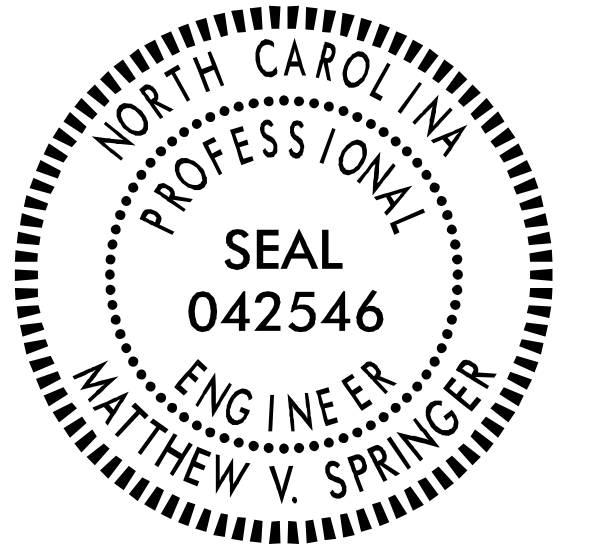
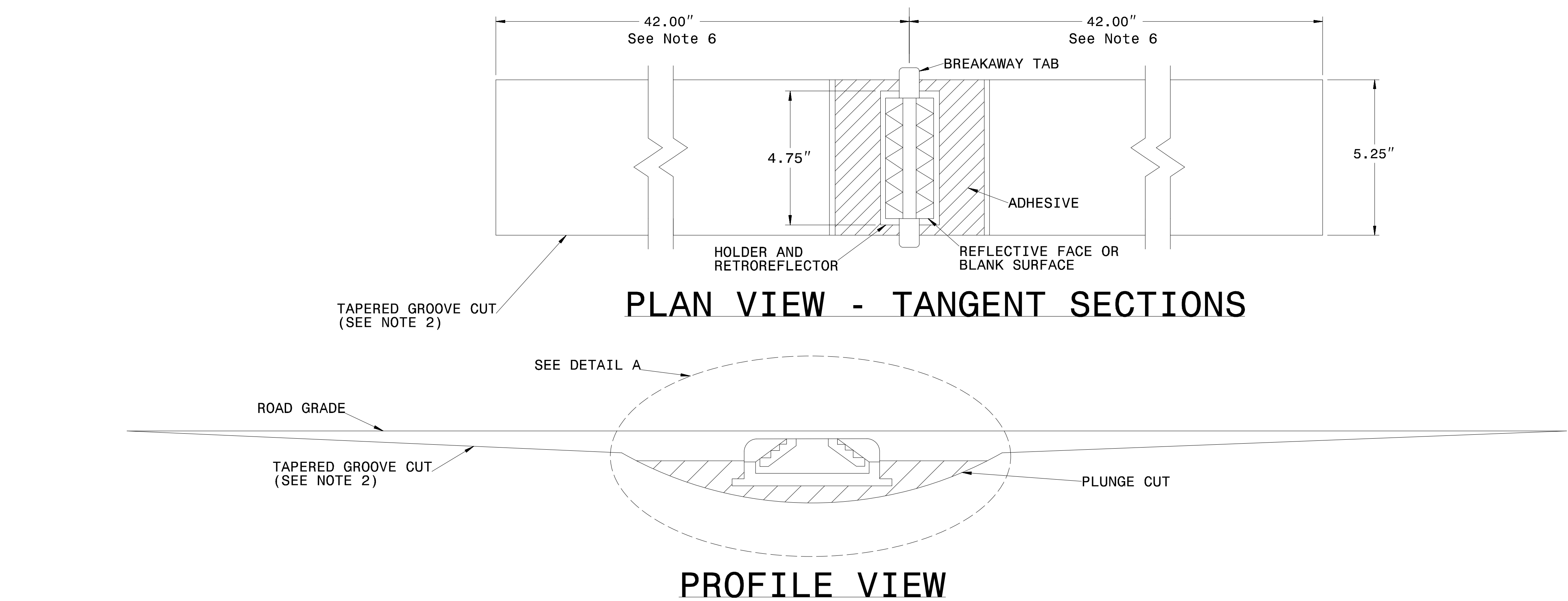


PLAN PREPARED BY: THIGPEN ENGINEERING

A. Matthew Thigpen, PE President

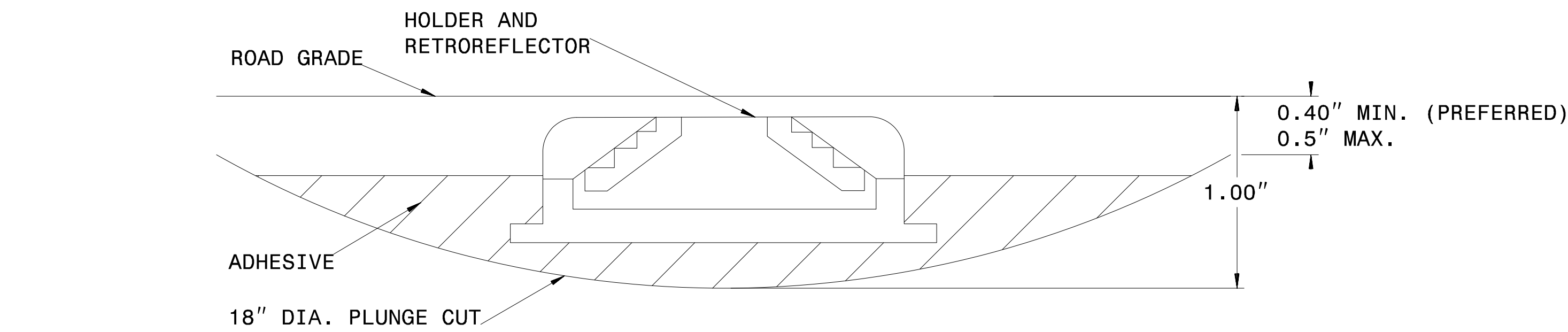




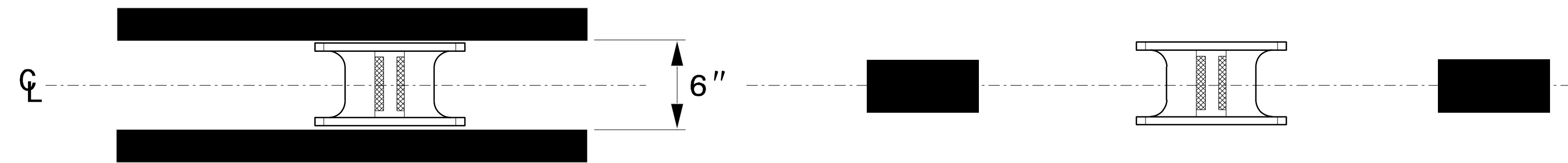


NOTES:

1. ALL GROOVE EDGES SHALL BE AT LEAST 2 INCHES FROM ANY SEAM OR PAVEMENT JOINT
2. GROOVE CUTS MAY BE TAPERED OR BEVELED. TAPERED CUTS SHALL START AT ROAD LEVEL ON EACH END AND TAPER AT A FIXED RATE AS SHOWN ON THE PROFILE VIEW. BEVELED GROOVE CUTS SHALL BE 0.5" MAXIMUM DEPTH (0.4" PREFERRED), AND SHALL BE 0.4" MINIMUM DEPTH AT BOTH ENDS OF THE PLUNGE CUT.
3. GROOVE AND PLUNGE CUT SHALL BE CLEAN AND DRY PRIOR TO PLACEMENT OF ADHESIVE.
4. THE EPOXY ADHESIVE SHALL BE THOROUGHLY MIXED UNTIL IT IS UNIFORM IN COLOR, AND APPLIED IN COLOR, AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. MARKER SHALL BE INSTALLED AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH THE BREAKWAY TABS RESTING ON THE PAVEMENT SURFACE. THE EPOXY SHALL BE FILLED TO THE LEVEL OF THE TOP OF THE MARKER HOLDER. EPOXY SHALL NOT TOUCH THE RETROREFELCTOR.
6. TOTAL GROOVE LENGTH MAY BE SHORTENED TO 54" ON SHARP CURVES IF APPROVED BY THE ENGINEER. GROOVES SHALL NOT OVERLAP WITH LOOP DETECTOR WIRES.

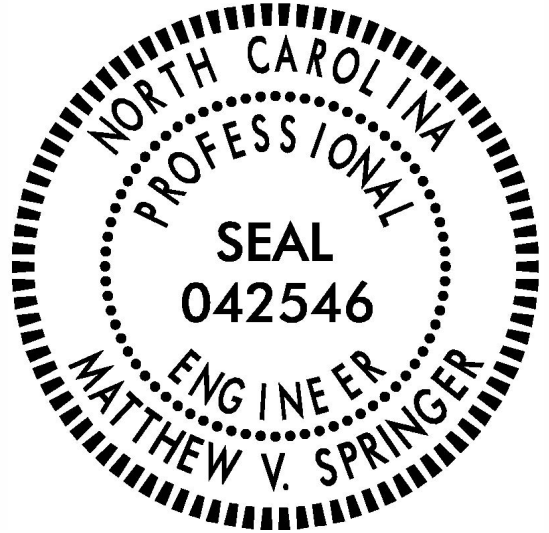
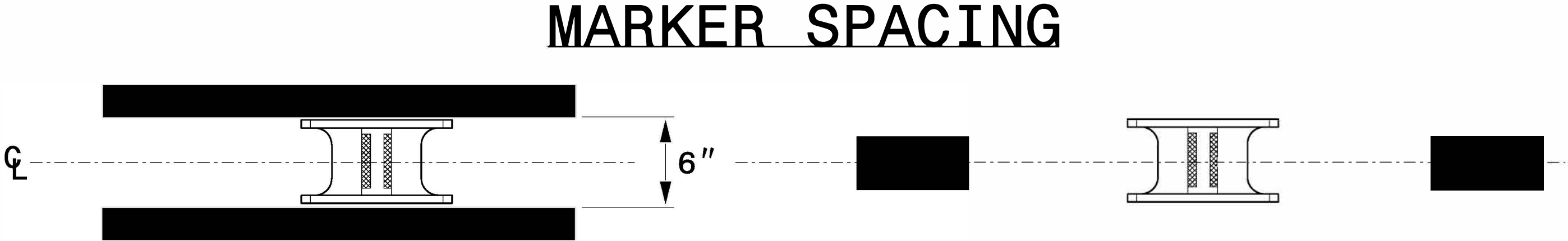
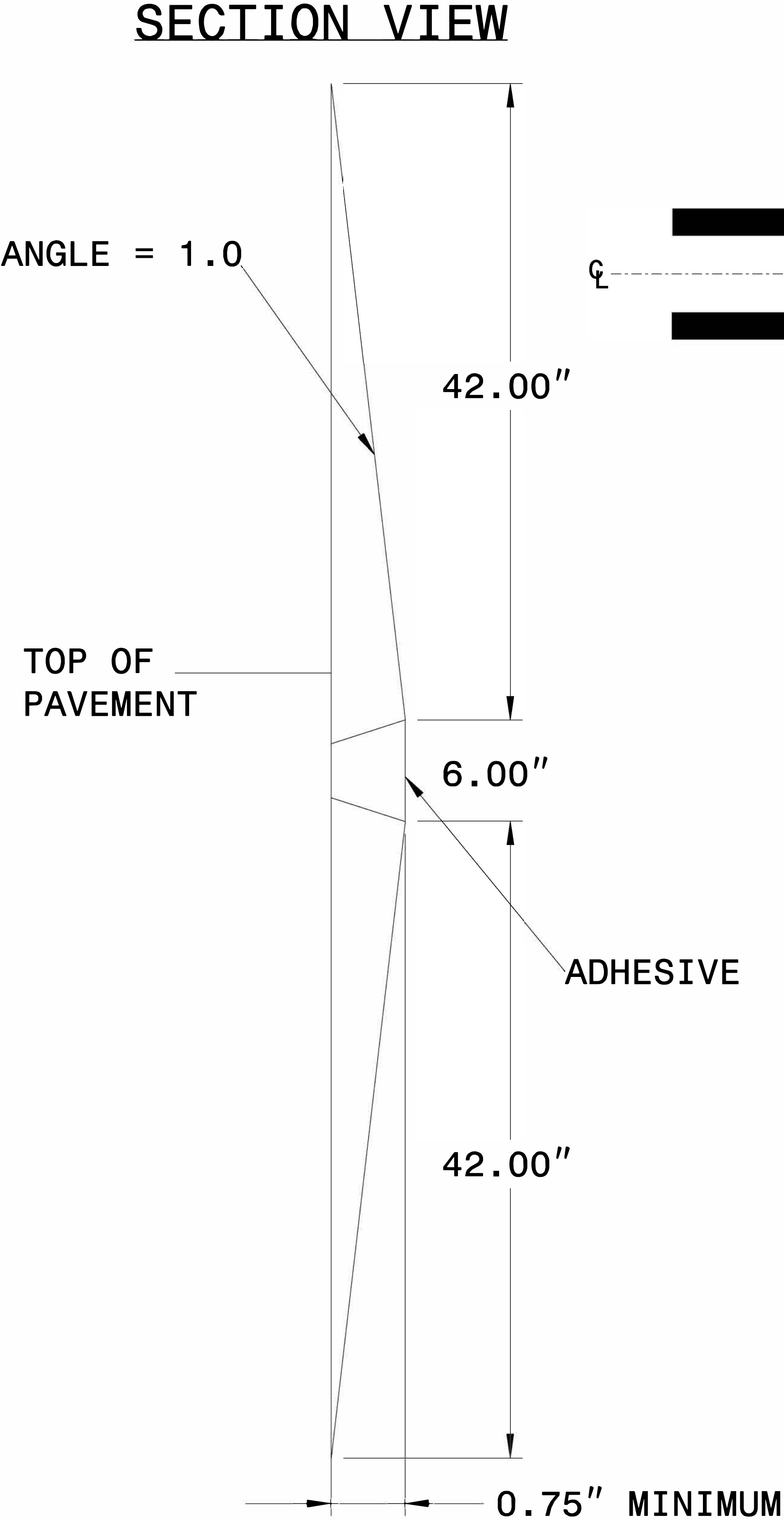
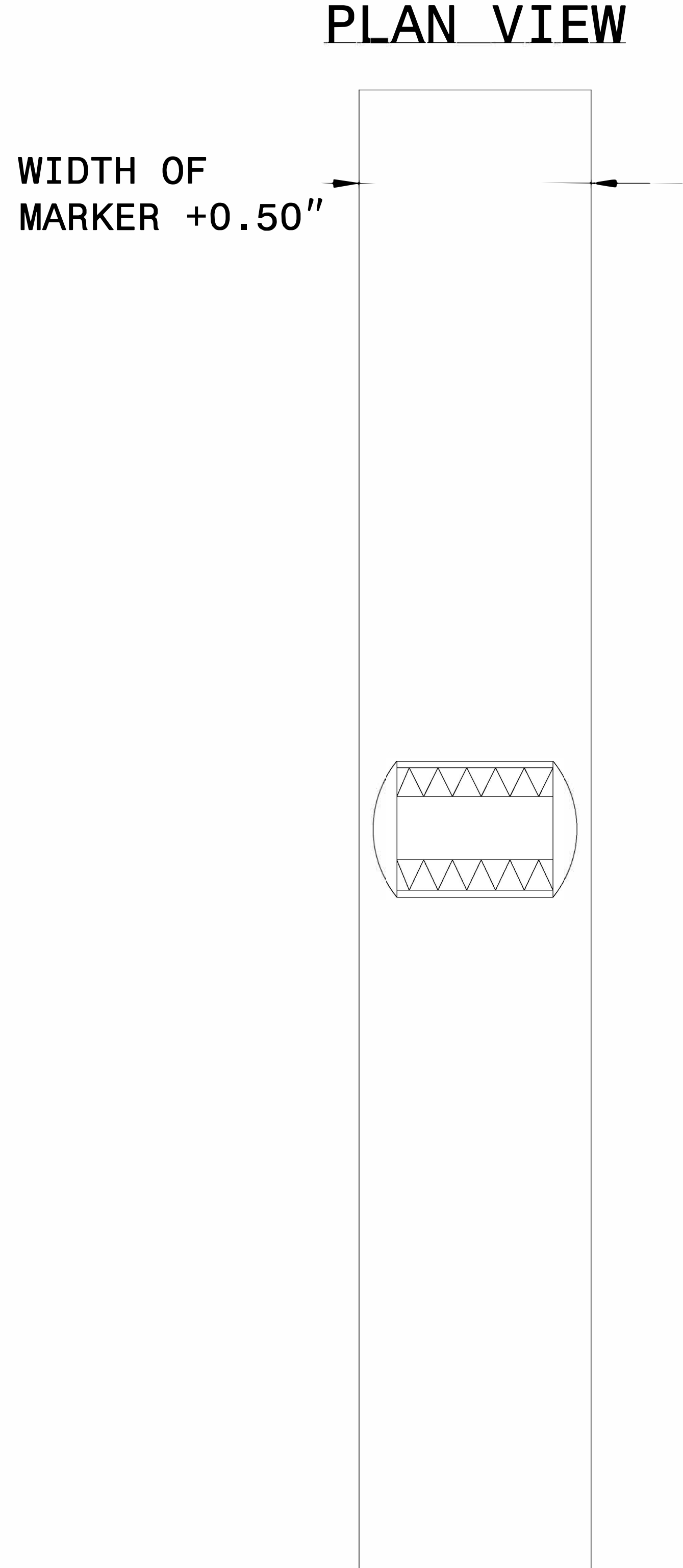


DETAIL A



MARKER SPACING

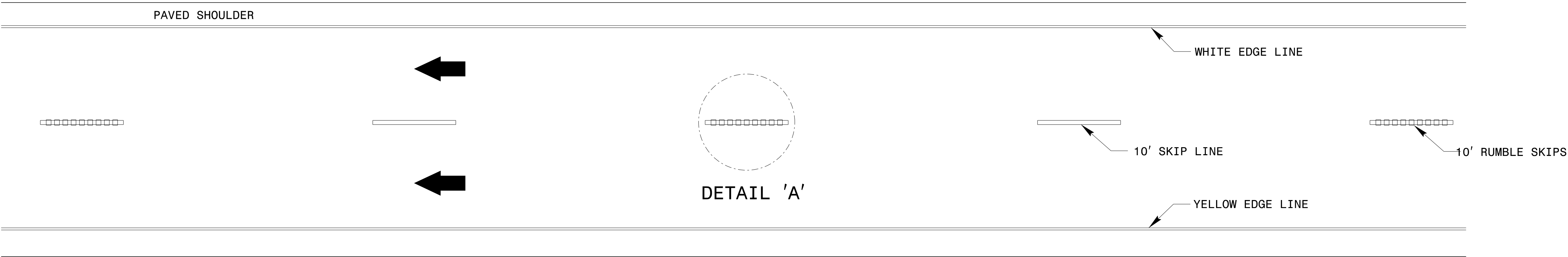




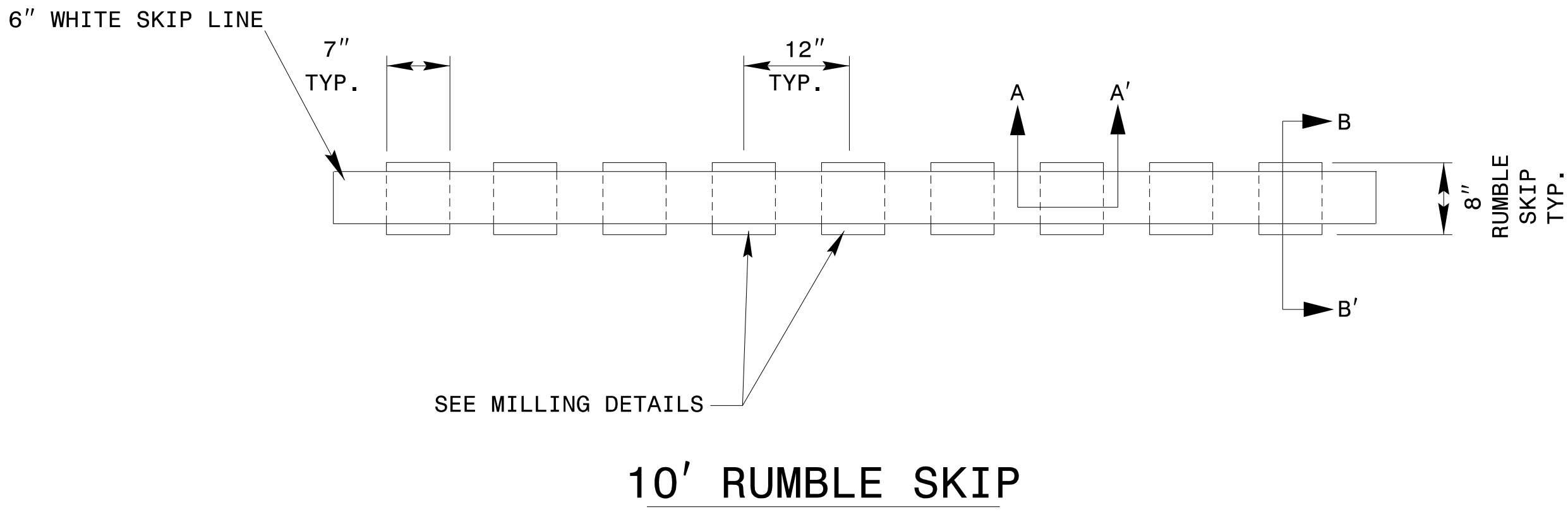
- NOTES:**
1. THE PAVEMENT SHALL BE SAW CUT TO THE DIMENSIONS SHOWN.
  2. THE SAW CUT AREA MUST BE DRY AND FREE OF DUST. DIRT OR ANY MATERIAL WHICH WILL ADVERSELY AFFECT THE BOND OF THE ADHESIVE.
  3. INSTALL MARKERS WITH APPROVED ADHESIVE. ADHESIVE SHOULD NOT BE ALLOWED TO BUILD UP IN FRONT OF MARKER LENS.
  4. THE MARKER AND THE ADHESIVE PAD SHALL NOT EXCEED THE TOP OF THE PAVEMENT SURFACE. DEPTH = 0.75" MINIMUM.
  5. RECESSED MARKERS INSTALLED ON CONCRETE PAVEMENT SHOULD BE INSTALLED A MINIMUM OF 2" FROM THE PAVEMENT JOINT OR EDGE



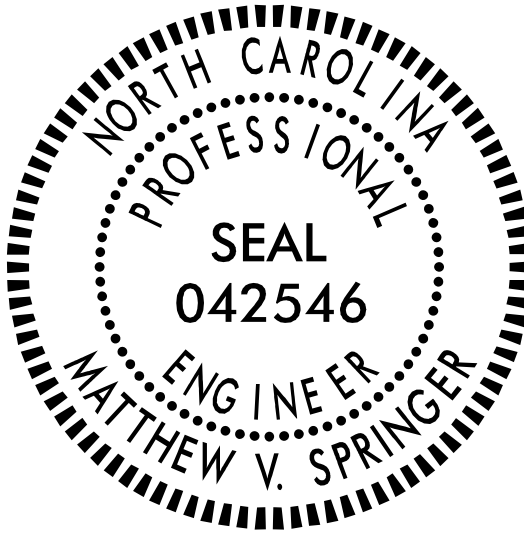
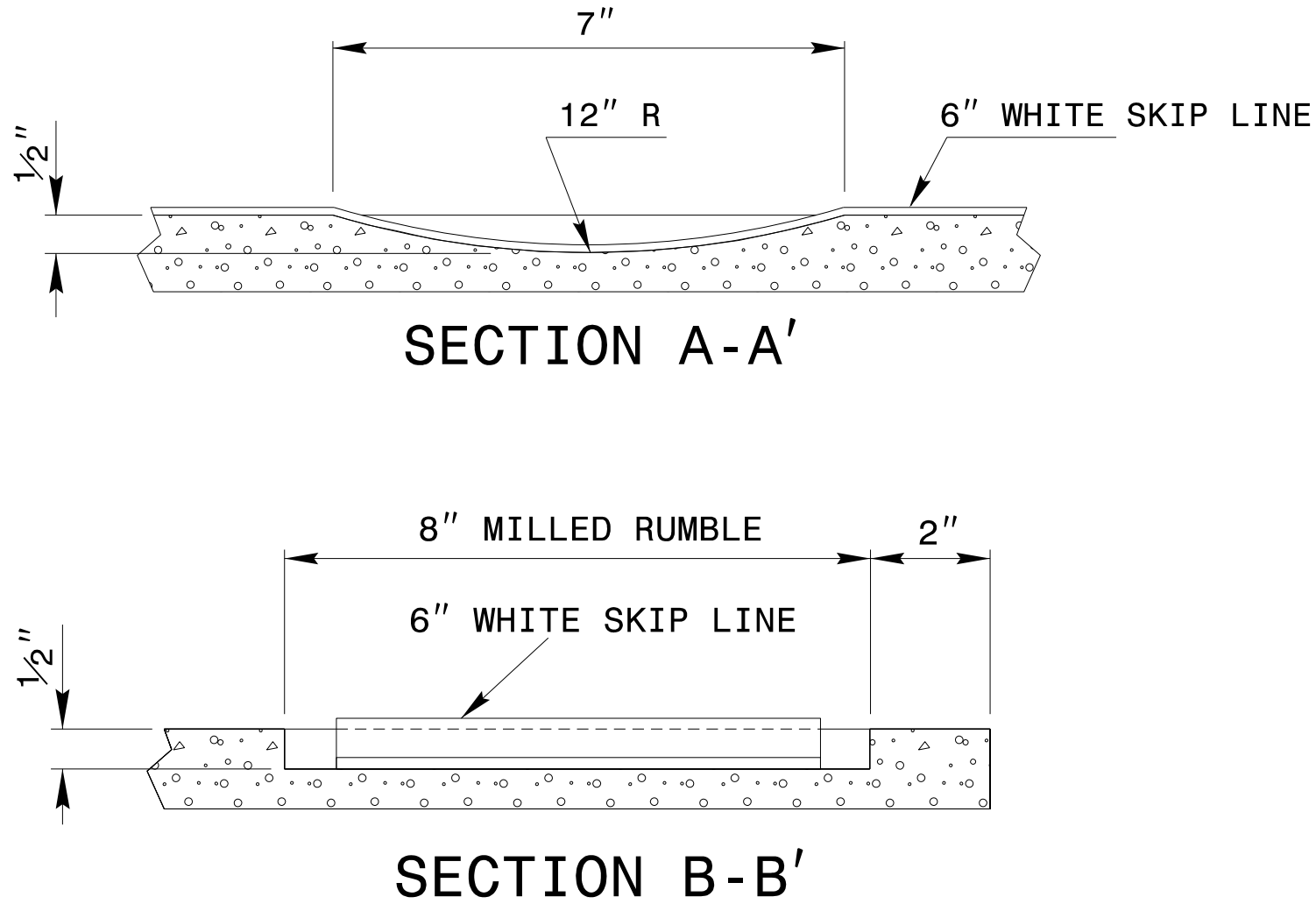
LANE TREATMENT



DETAIL 'A'



MILLING/MARKING DETAILS



- NOTES:
- 1) USING A VACUUM IN THE SAME OPERATION, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
  - 2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF PAVEMENT MARKING.
  - 3) MILL RUMBLES EVERY OTHER SKIP AS SHOWN.
  - 4) SEE PLANS FOR MARKING THICKNESS

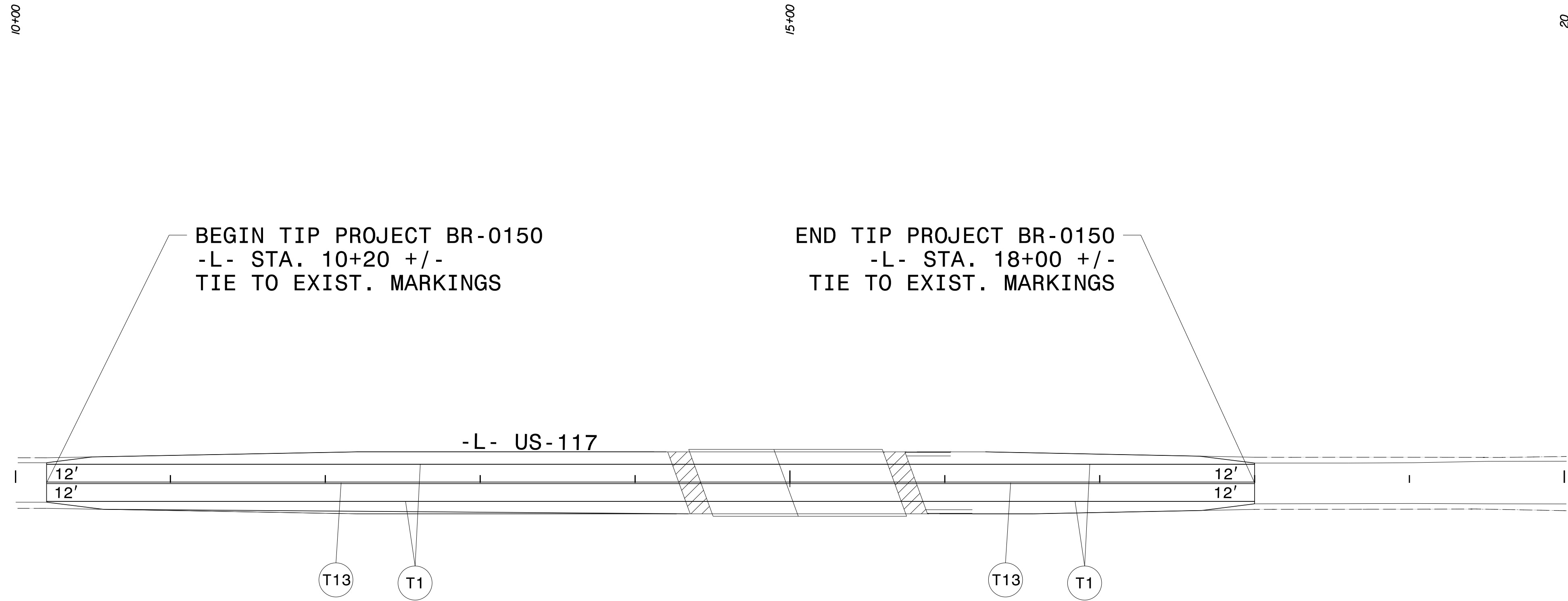
CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT  
Office 919-707-8950 FAX 919-250-4119

DETAIL OF MILLED  
RUMBLE SKIPS

|              |          |       |            |
|--------------|----------|-------|------------|
| ORIGINAL BY: | rgwatson | DATE: | 02-06-2024 |
| MODIFIED BY: |          | DATE: |            |
| CHECKED BY:  |          | DATE: |            |
| FILE SPEC.:  |          |       |            |



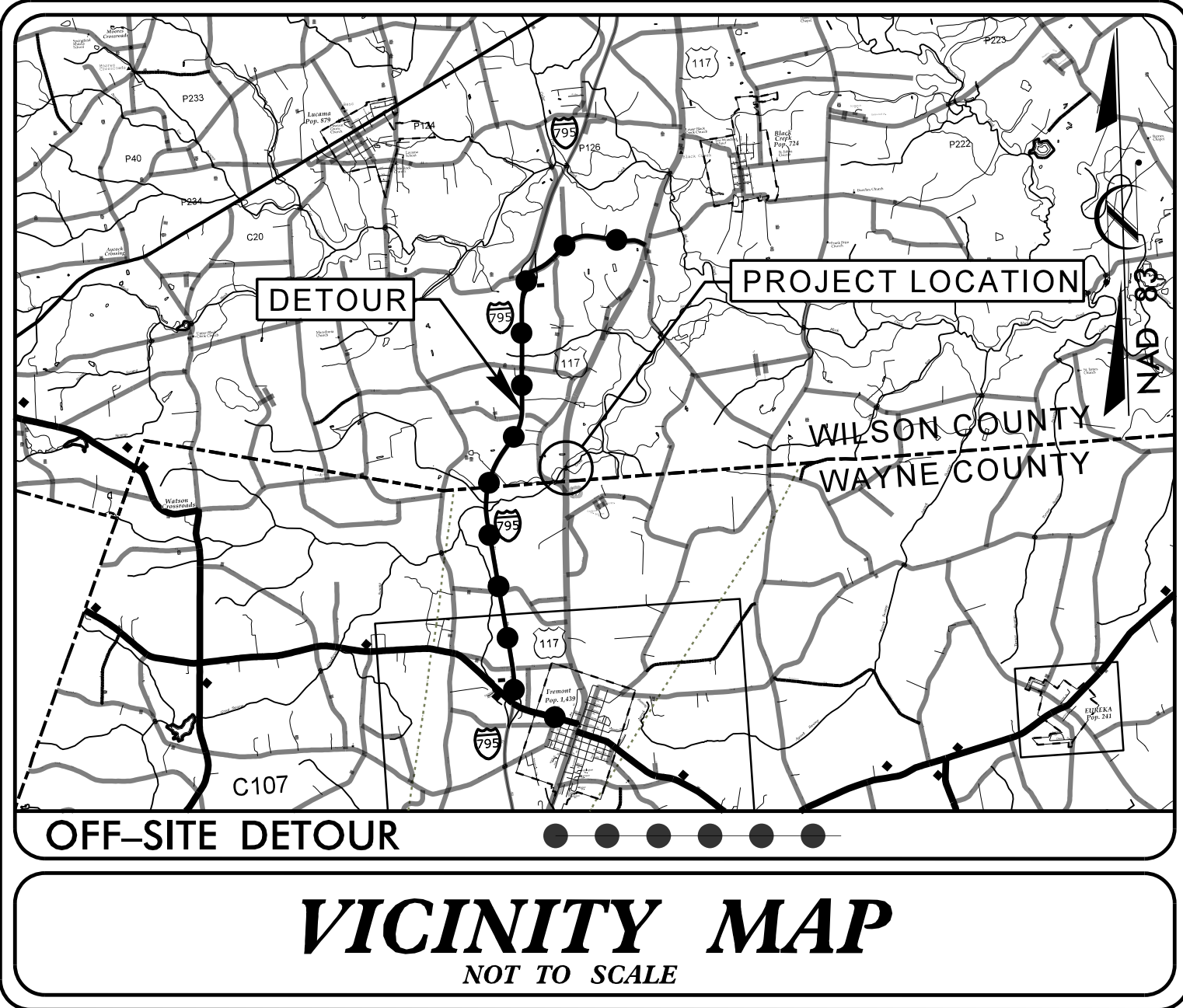
6/28/2026  
C:\Users\Watt.Thigpen\OneDrive\Projects\00055\_BR-0150\BR-0150\Traffic\Pavement Marking\BR0150\_fc\_tmp04.dgn  
User:Watt.Thigpen



|                                                                                                     |           |
|-----------------------------------------------------------------------------------------------------|-----------|
| TIP NO.                                                                                             | SHEET NO. |
| BR-0150                                                                                             | PMP-5     |
| APPROVED: <div>DocuSigned by:<br/>Matthew Thigpen<br/>7202285FD315433...</div>                      |           |
| DATE: 6/28/2026                                                                                     |           |
| SEAL<br><div>North Carolina<br/>Professional Engineer<br/>Seal<br/>034343<br/>Matthew Thigpen</div> |           |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                    |           |



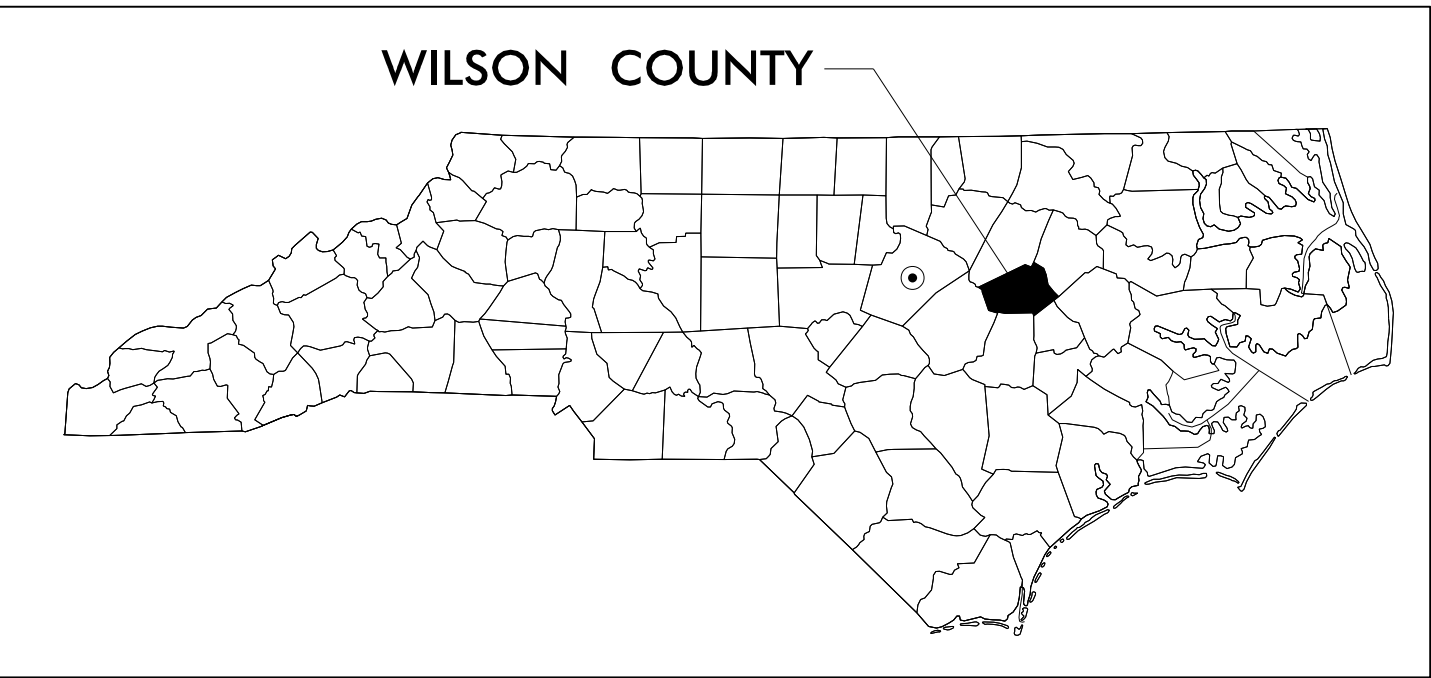
TIP PROJECT: BR-0150



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
WILSON COUNTY  
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

LOCATION: REPLACE BRIDGE NO. 970023 ON US117  
OVER GREAT SWAMP CREEK

TYPE OF WORK: GRADING, PAVING, DRAINAGE  
AND STRUCTURE



| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | BR-0150                     | EC-1        | 7            |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 67150.1.1       | N/A                         | PE          |              |
| 67150.2.1       | N/A                         | R/W & UTIL  |              |
| 67150.3.1       | N/A                         | CONST.      |              |
|                 |                             |             |              |

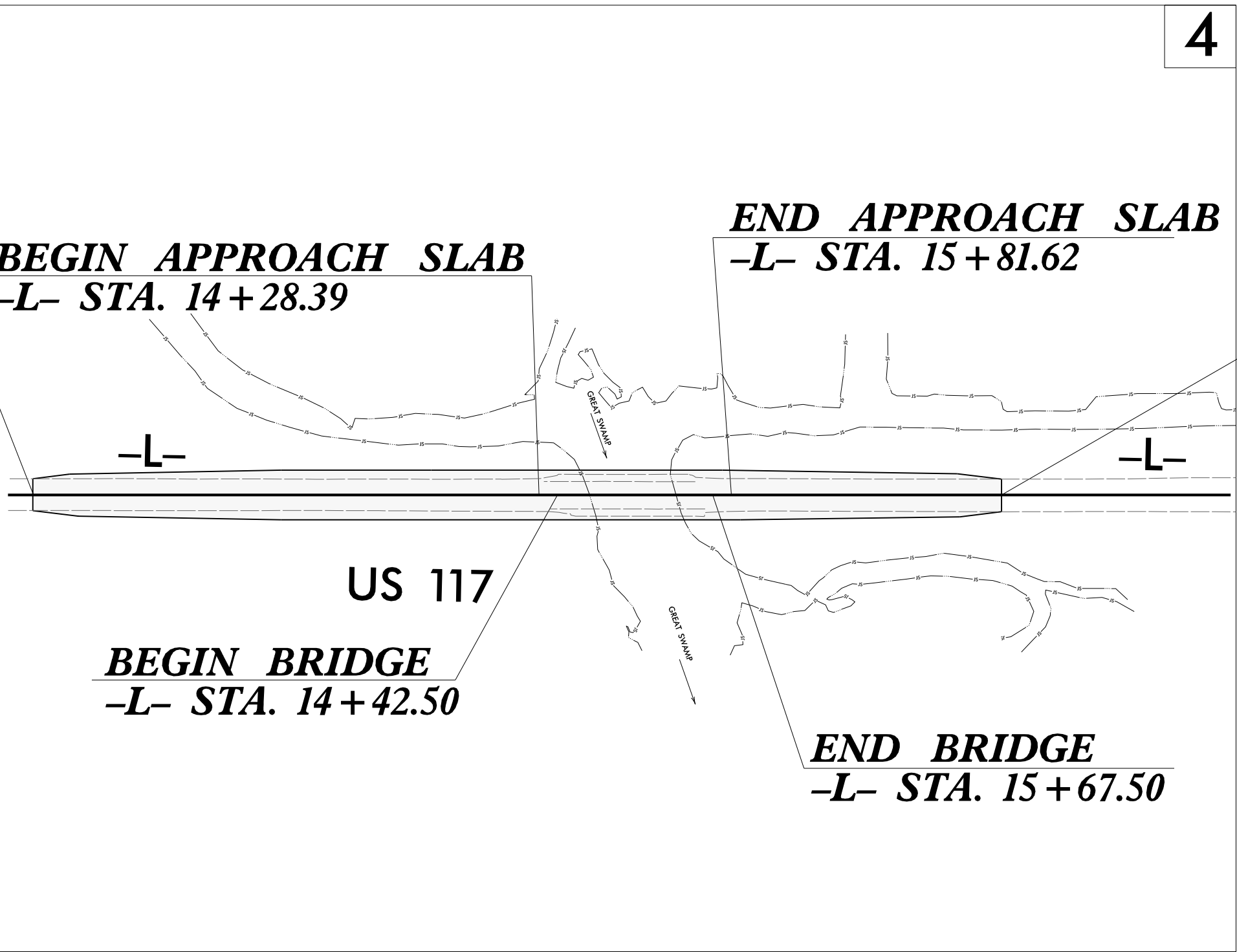
BEGIN TIP  
PROJECT BR-0150  
-L- PCC STA. 10+20.00

BEGIN APPROACH SLAB  
-L- STA. 14+28.39

END APPROACH SLAB  
-L- STA. 15+81.62

END TIP PROJECT BR-0150  
-L- PCC STA. 18+00.00

TO FREMONT



TO WILSON

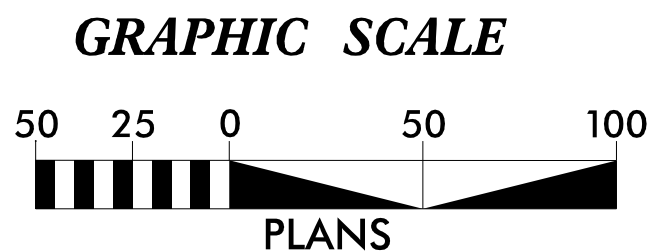
- CLEARING AND GRUBBING PHASE
- FINAL PHASE
- BOTH PHASES

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

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

THIS PROJECT HAS  
BEEN DESIGNED TO  
SENSITIVE WATERSHED  
STANDARDS.

ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT  
Refer To E. C. Special Provisions  
for Special Considerations.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH  
THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000  
GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019  
AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF  
ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

ARCADIS

Design & Consultancy  
for natural and  
built assets

Prepared in the Office of:  
ARCADIS G&M of North Carolina, Inc.  
175 REGENCY WOODS PL., SUITE 400,  
CARY, NC 27518  
NCBELS LICENSE NO. C-1869  
919-854-1282

Designed by:  
PRABHASH JOSHI 4551  
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C.  
Department of Transportation - Raleigh, N. C., dated January 2024  
and the latest revision thereto are applicable to this project and by  
reference hereby are considered a part of these plans.



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

EROSION & SEDIMENT CONTROL LEGEND

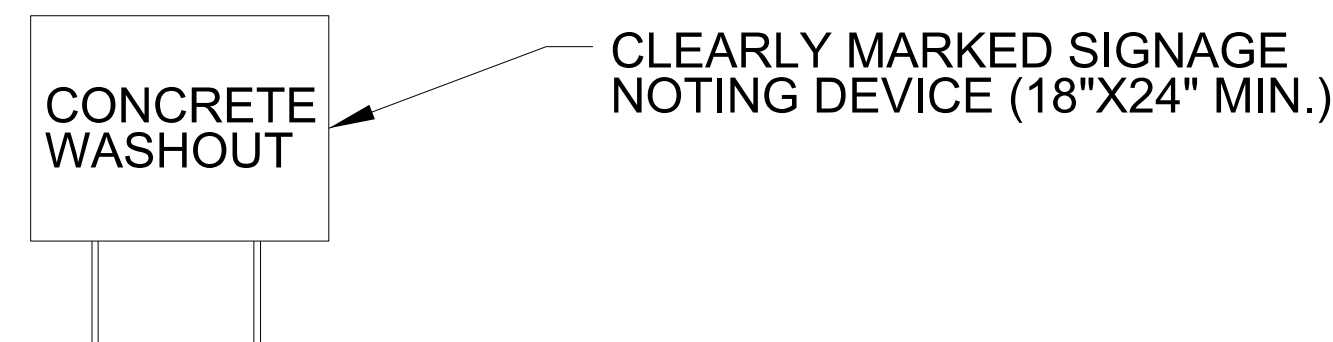
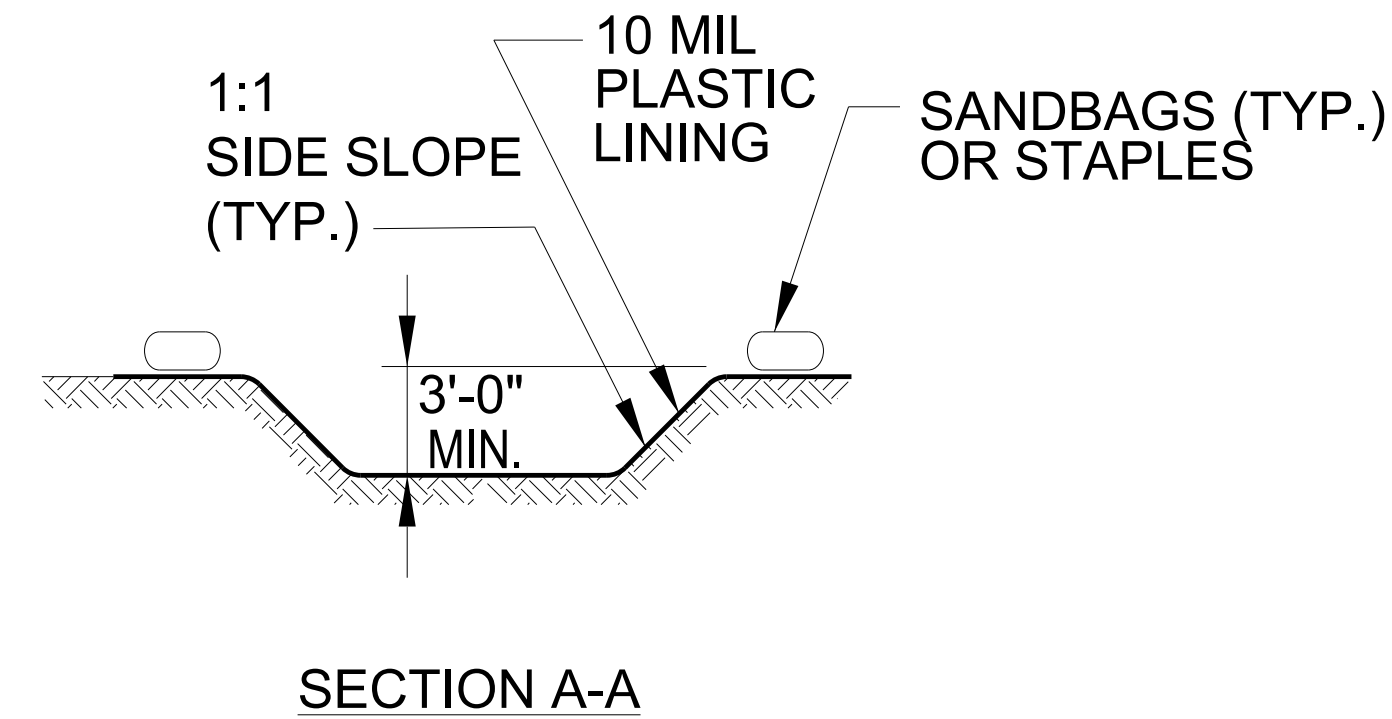
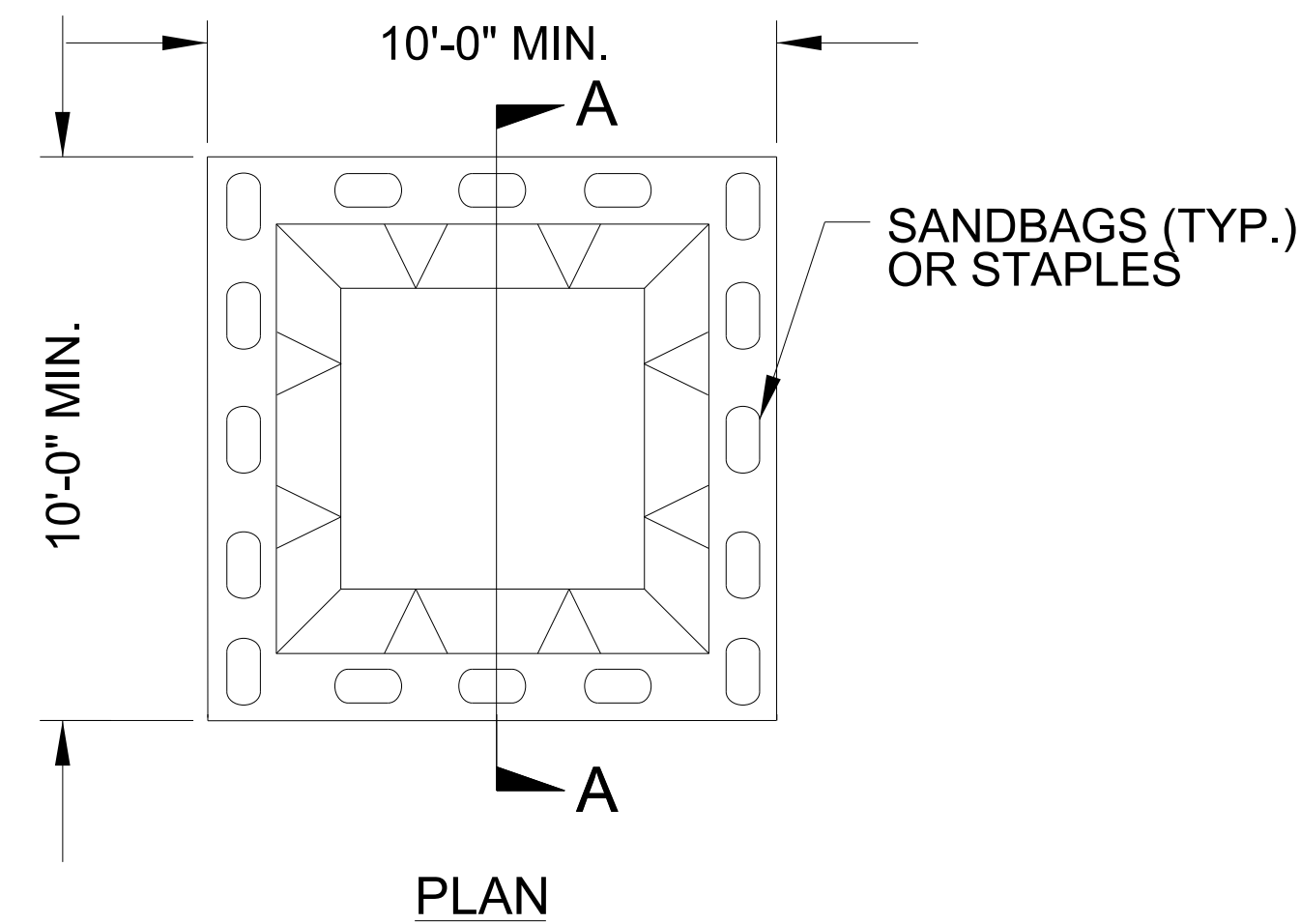
| Std. #  | Description                      | Symbol |
|---------|----------------------------------|--------|
| 1605.01 | Temporary Silt Fence             |        |
| 1606.01 | Special Sediment Control Fence   |        |
| 1622.01 | Temporary Berms and Slope Drains |        |
| 1630.02 | Silt Basin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

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



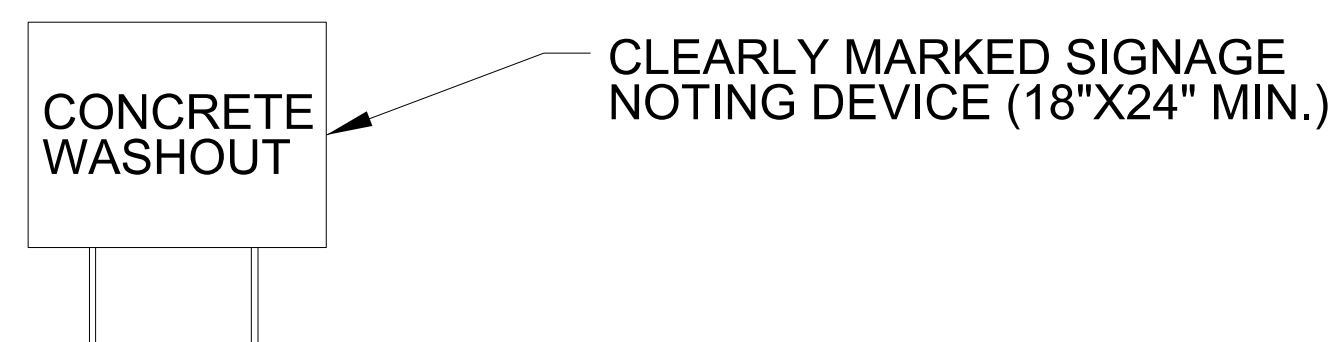
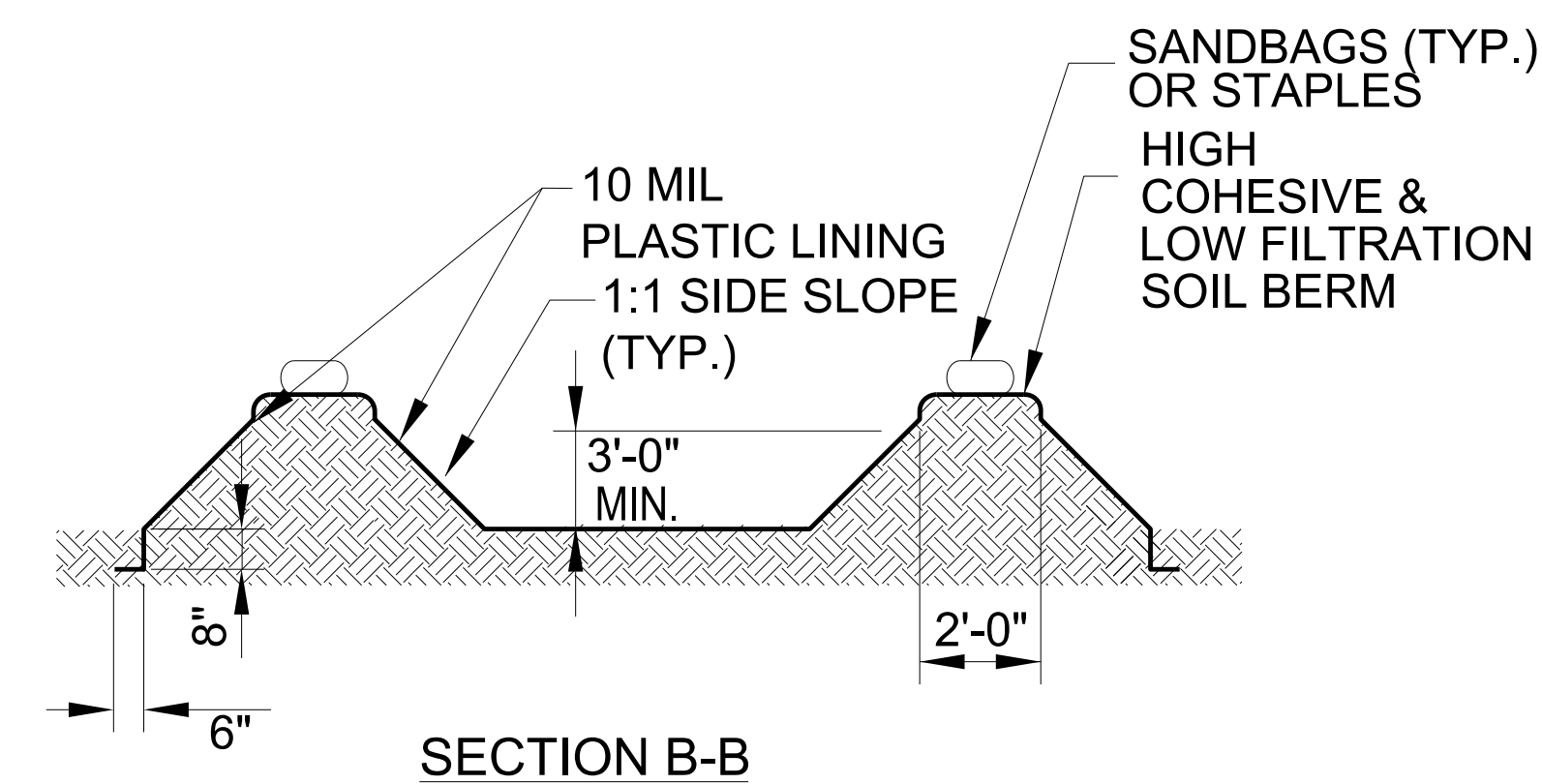
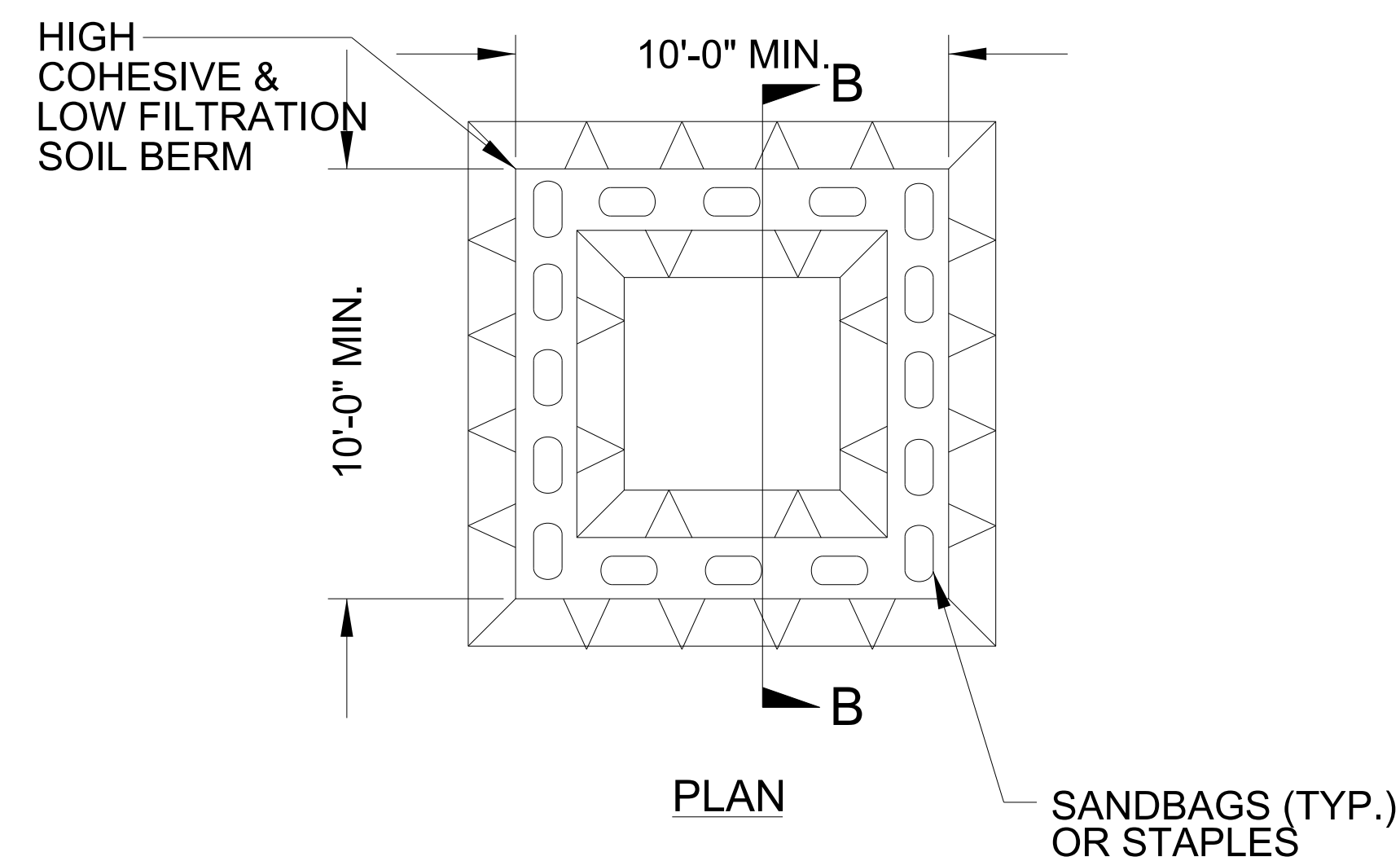
# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

| PROJECT REFERENCE NO.      |  | SHEET NO.              |  |
|----------------------------|--|------------------------|--|
| BR-0150                    |  | EC-02A                 |  |
| ROADWAY DESIGN<br>ENGINEER |  | HYDRAULICS<br>ENGINEER |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |
|                            |  |                        |  |



**BELOW GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



**ABOVE GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

# SOIL STABILIZATION TIMEFRAMES

|                                                                                                                                                                       |                                |                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------|
| <b>PROJECT REFERENCE NO.</b>                                                                                                                                          |                                | <b>SHEET NO.</b>                                        |
| <i>BR-0150</i>                                                                                                                                                        |                                | <i>EC-03</i>                                            |
|                                                                                                                                                                       |                                |                                                         |
| <b>ROADWAY DESIGN<br/>ENGINEER</b>                                                                                                                                    | <b>HYDRAULICS<br/>ENGINEER</b> |                                                         |
|                                                                                                                                                                       |                                |                                                         |
|  <b>ARCADIS</b>                                                                    |                                | Design & Consultancy<br>for natural and<br>built assets |
| ARCADIS G&M of North Carolina Inc.<br>175 REGENCY WOODS PL., SUITE 400, CARY, NC 27518<br>NCELS LICENSE NO. C-1869<br>FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION |                                |                                                         |

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

\$SYTIME\$  
\$DGN\$\$\$  
\$USERNAME\$\$\$



NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

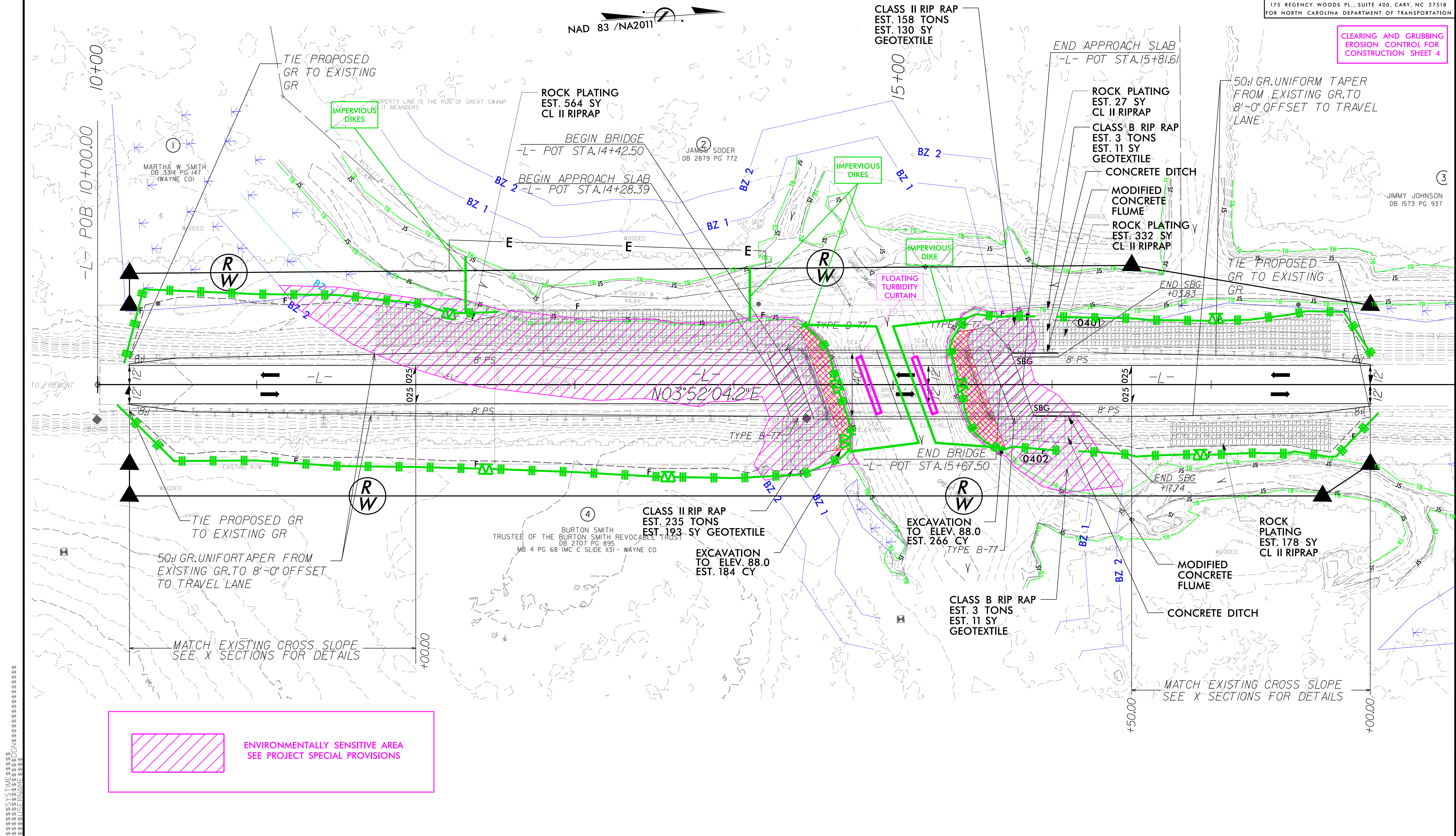
NOTE:  
IMPERVIOUS DIKE FOR DEWATERING AS DIRECTED BY ENGINEER.

NOTE:  
UTILIZE TURBIDITY CURTAIN DURING BRIDGE REMOVAL AND CONSTRUCTION WHERE APPLICABLE

NOTE:  
UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

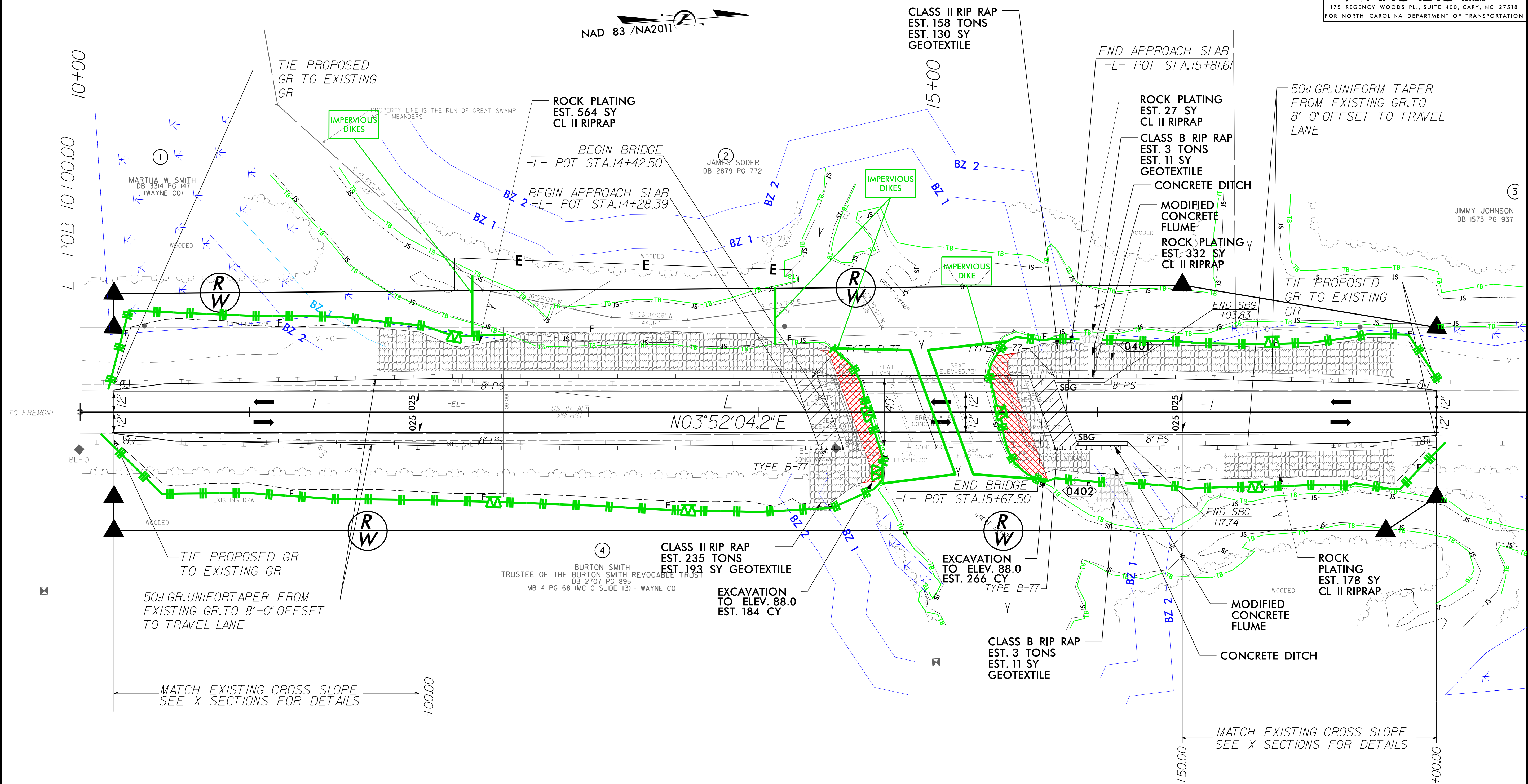
NOTE:  
UTILIZE PUMP AROUND OPERATION WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4





|                                                                                                                                                              |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| PROJECT REFERENCE NO.                                                                                                                                        | SHEET NO.              |
| BR-0150                                                                                                                                                      | EC-05/CONST.04         |
| ROADWAY DESIGN<br>ENGINEER                                                                                                                                   | HYDRAULICS<br>ENGINEER |
|  <b>ARCADIS</b>   Design & Consultancy<br>for natural and<br>built assets |                        |
| 175 REGENCY WOODS PL., SUITE 400, CARY, NC 27518<br>FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                                                          |                        |



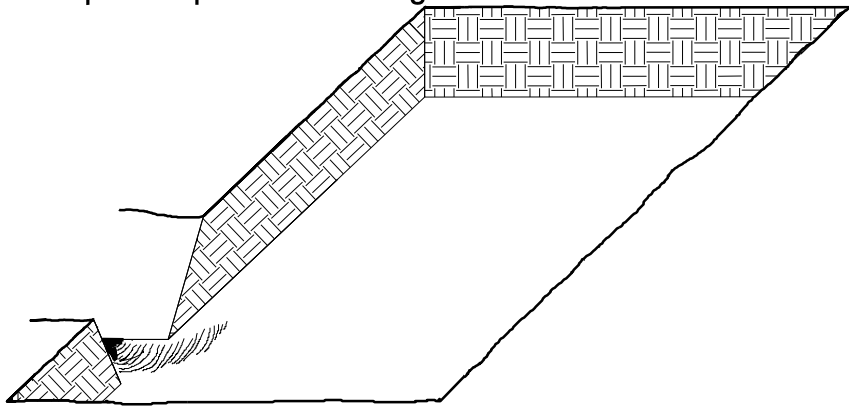


PLANTING DETAILS

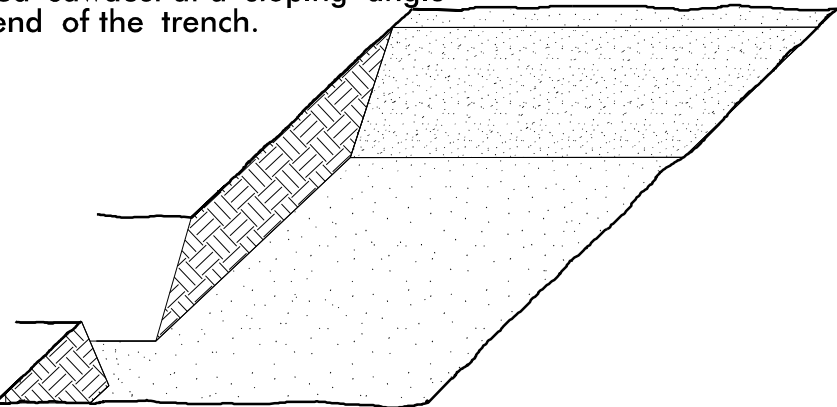
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

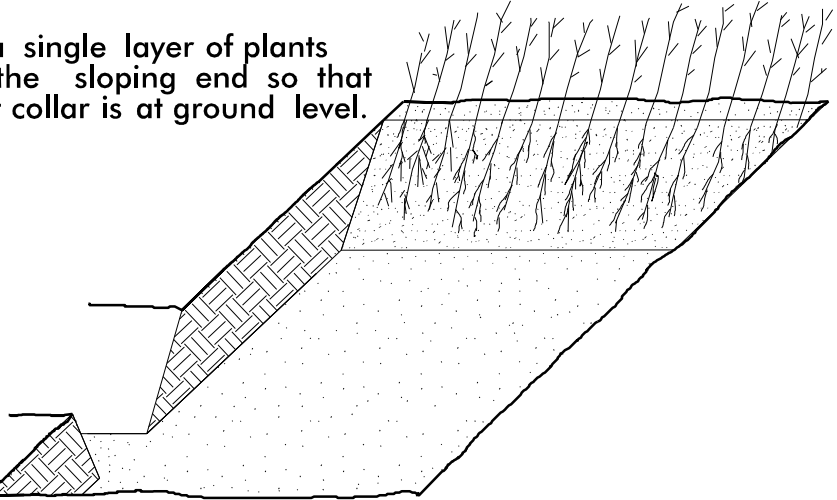
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



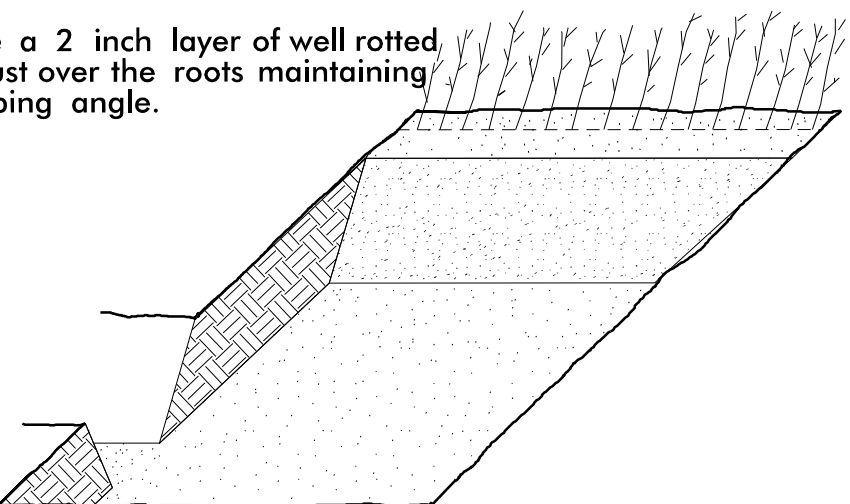
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

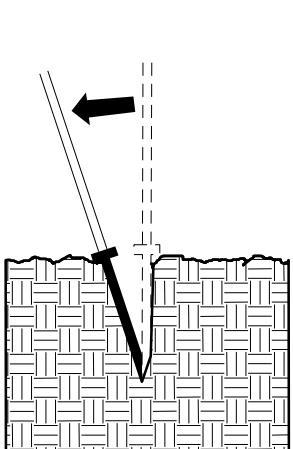


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

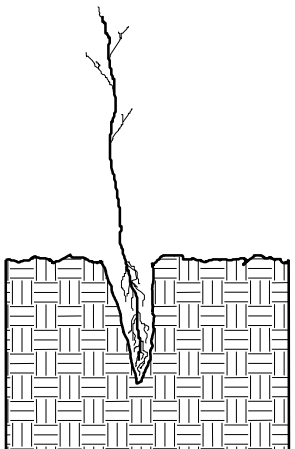


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

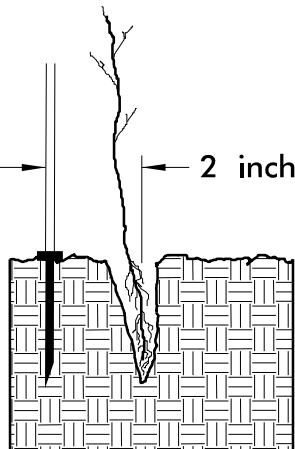
DIBBLE PLANTING METHOD  
USING THE KBC PLANTING BAR



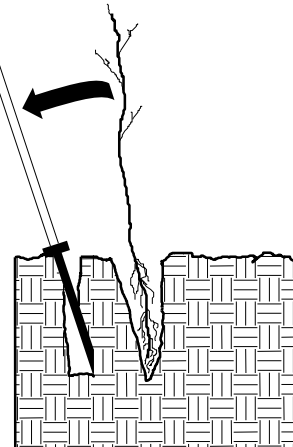
1. Insert planting bar as shown and pull handle toward planter.



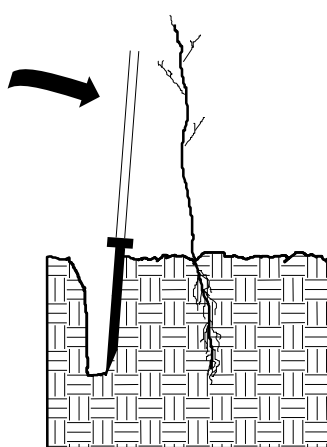
2. Remove planting bar and place seedling at correct depth.



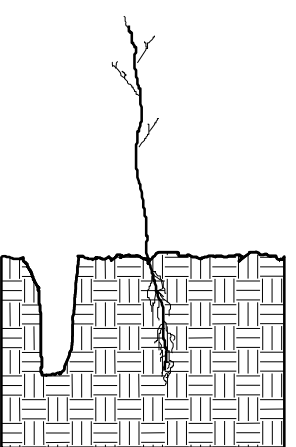
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



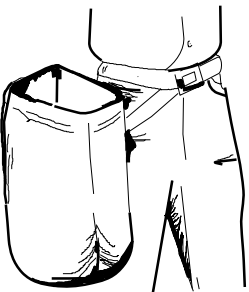
5. Push handle forward firming soil at top.



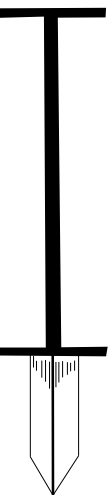
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG  
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR  
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING  
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

- ☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

|                             |                   |                  |
|-----------------------------|-------------------|------------------|
| 40% LIRIODENDRON TULIPIFERA | TULIP POPLAR      | 12 in – 18 in BR |
| 30% PLATANUS OCCIDENTALIS   | AMERICAN SYCAMORE | 12 in – 18 in BR |
| 30% BETULA NIGRA            | RIVER BIRCH       | 12 in – 18 in BR |



T.I.P.: BR-0150

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN  
WILSON COUNTY

LOCATION: BRIDGE NO. 23 ON US-117 OVER GREAT SWAMP CREEK

ROADWAY STANDARD DRAWING

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

| STD. NO. | TITLE                               |
|----------|-------------------------------------|
| 903.20   | WOOD SIGN SUPPORTS                  |
| 904.10   | ORIENTATION OF GROUND MOUNTED SIGNS |

SUMMARY OF QUANTITIES

| ITEM NO.   |           | ITEM DESCRIPTION                                     | QUANTITY | UNIT |
|------------|-----------|------------------------------------------------------|----------|------|
| DESC. NO.  | SECT. NO. |                                                      |          |      |
| 4082000000 | 903       | SUPPORTS, WOOD                                       | 38       | L.F. |
| 4116100000 | 904       | SIGN ERECTION, RELOCATE SIGN TYPE B (GROUND MOUNTED) | 1        | EA.  |
| 4141000000 | 907       | DISPOSAL OF SUPPORT, WOOD                            | 2        | EA.  |
| 4155000000 | 907       | DISPOSAL OF SIGN SYSTEM, U-CHANNEL                   | 4        | EA.  |

GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- . ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

PROJECT NOTES

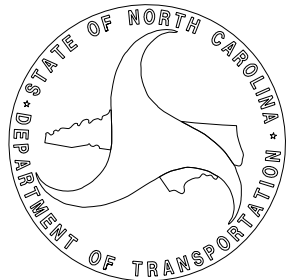
1. DISPOSAL OF SIGN SYSTEM, U CHANNEL
2. DISPOSAL OF SUPPORT, WOOD
3. SIGN ERECTION, RELOCATE SIGN TYPE B (GROUND MOUNTED)

INDEX

| SHEET NO. | DESCRIPTION         |
|-----------|---------------------|
| SIGN-1    | TITLE SHEET         |
| SIGN-2    | SUPPORT INFORMATION |
| SIGN-3    | SIGN DETAIL SHEET   |

PLAN SUBMITTED TO: N.C.D.O.T. SIGNING AND DELINEATION UNIT

|                 |                                                 |
|-----------------|-------------------------------------------------|
| Mitch Eaton, PE | SIGNING AND DELINEATION REGIONAL ENGINEER       |
| Stacey Johns    | SIGNING AND DELINEATION PROJECT DESIGN ENGINEER |



PLAN PREPARED BY: THIGPEN ENGINEERING

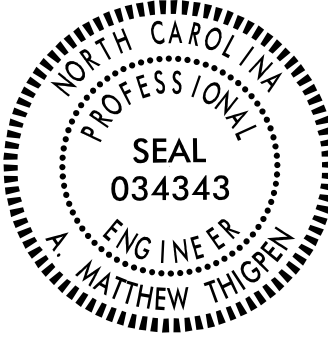
A. Matthew Thigpen, PE President



|                                                                             |                     |
|-----------------------------------------------------------------------------|---------------------|
| TIP NO.<br>BR-0150                                                          | SHEET NO.<br>SIGN-1 |
| APPROVED: <div>DocuSigned by:<br/>Matthew Thigpen<br/>7202285FD315433</div> |                     |
| DATE: 6/28/2026                                                             |                     |
| SEAL<br>                                                                    |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED            |                     |



6/28/2026 C:\Users\Matt.Thigpen\OneDrive\Projects\100055\_BR-0150\BR-0150\Traffic\Signing\2018\_PEF\_Engseed\_06-21-21.dgn User:Matt.Thigpen

|                                                                                     |           |
|-------------------------------------------------------------------------------------|-----------|
| TIP NO.                                                                             | SHEET NO. |
| BR-0150                                                                             | SIGN-2    |
| APPROVED: <div>DocuSigned by:<br/><i>Matthew Thigpen</i><br/>7202285FD315433</div>  |           |
| DATE: 6/28/2026                                                                     |           |
| SEAL                                                                                |           |
|  |           |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                    |           |

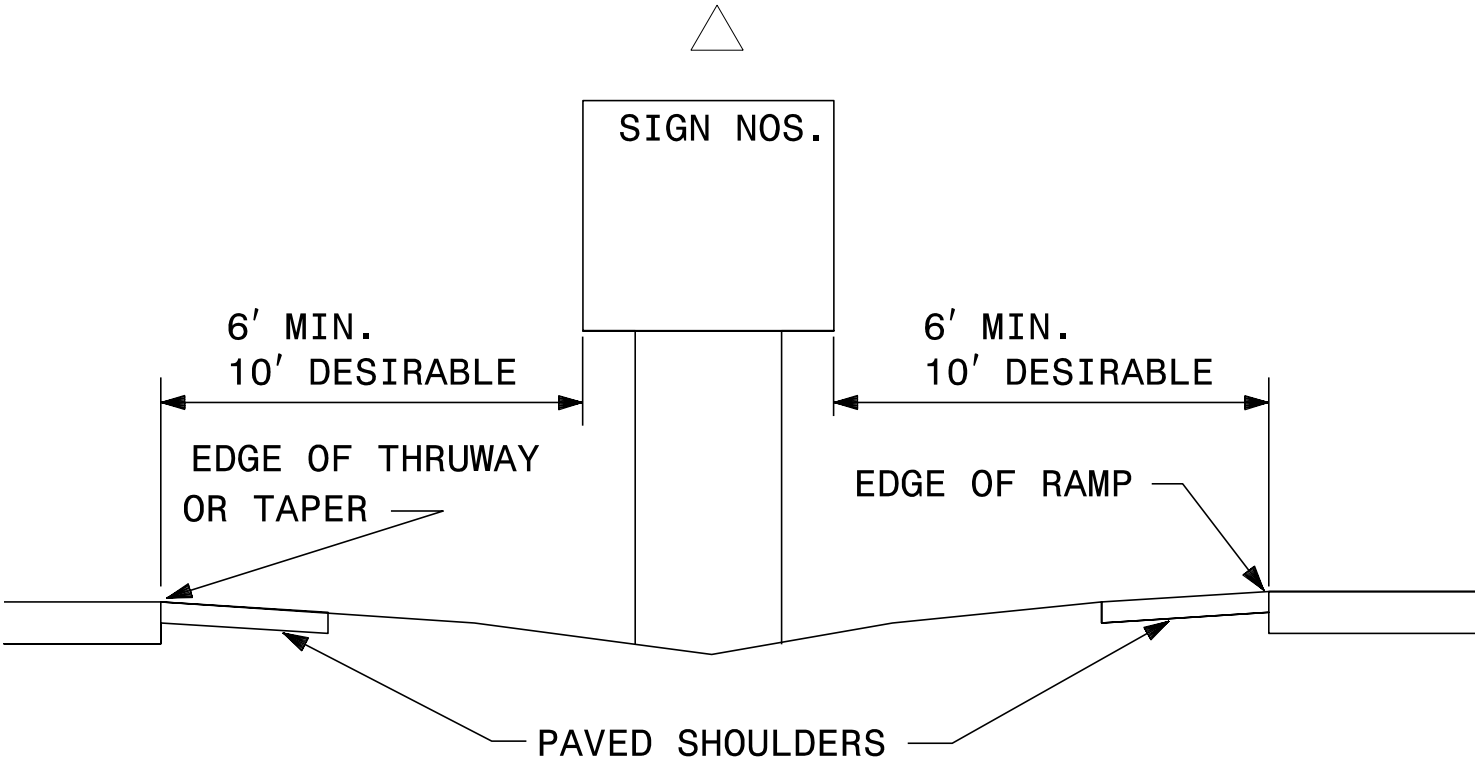
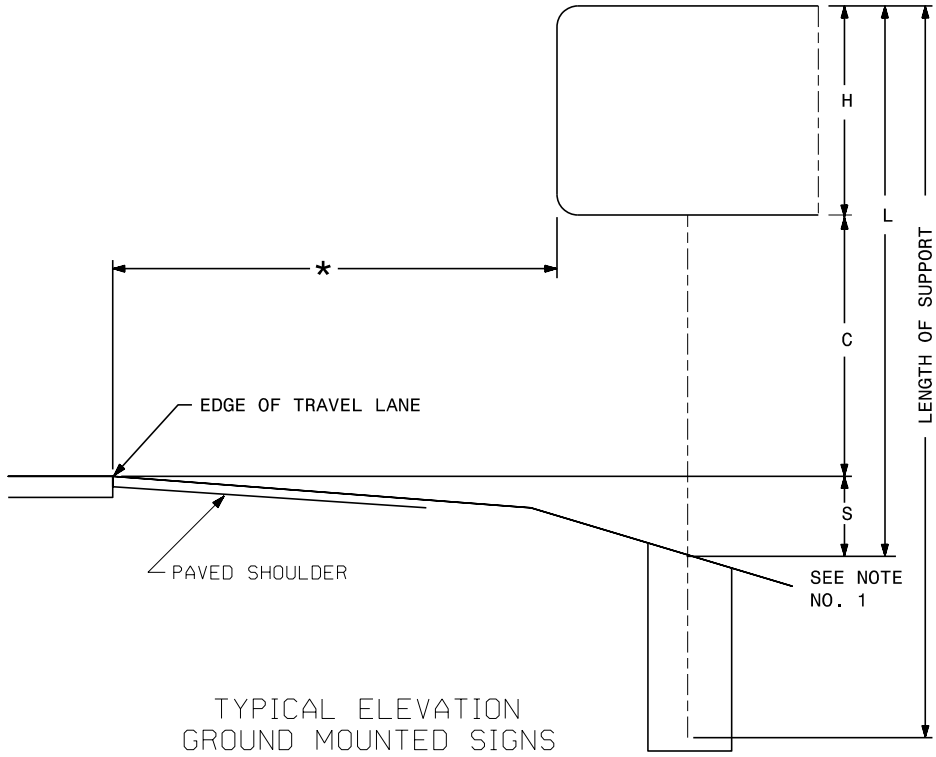
| Version: 3.2 |      |            |   | Posted: 7/5/2023 |                    |                          |                 |                            |                      |                    |                                   |                    |             |        |                |                   |       |       |                     |        |      |                    |        |       |                         |                                               |
|--------------|------|------------|---|------------------|--------------------|--------------------------|-----------------|----------------------------|----------------------|--------------------|-----------------------------------|--------------------|-------------|--------|----------------|-------------------|-------|-------|---------------------|--------|------|--------------------|--------|-------|-------------------------|-----------------------------------------------|
| SIGN         |      |            |   |                  | ROADWAY<br>STATION | NUMBER<br>OF<br>SUPPORTS | BEAM<br>SECTION | SUPPORT<br>TYPE<br>BA or S | ATTACHMENT<br>METHOD | MOUNTING<br>METHOD | HORIZONTAL<br>CLEARANCE*<br>(ft.) | SUPPORT<br>SPACING | LENGTH (ft) |        |                | LEFT SUPPORT (ft) |       |       | CENTER SUPPORT (ft) |        |      | RIGHT SUPPORT (ft) |        |       | WOOD<br>SUPPORT<br>(LF) | FIELD<br>VERIFIED<br>SEE NOTE 2<br>(mm/dd/yy) |
| NUMBER       | TYPE | SIZE (in.) |   |                  |                    |                          |                 |                            |                      |                    |                                   |                    | SNS HT      | MTG HT | EMBED-<br>MENT |                   |       |       |                     |        |      |                    |        |       |                         |                                               |
|              |      | w          | x | h                |                    |                          |                 |                            |                      |                    |                                   |                    |             |        |                | H                 | C     | S     | L                   | LENGTH | S    | L                  | LENGTH |       |                         |                                               |
| 101          | B    | 77         | x | 42               | 1300               | 2                        | 4in x 6in       | S                          | N/A                  | N/A                | 30.00                             | 3.76               | 3.50        | 7.00   | 4.50           | 2.88              | 13.38 | 17.88 | 0.00                | 0.00   | 0.00 | 4.22               | 14.72  | 19.22 | 37.10                   | _____                                         |

TOTAL  
37.10

USE: 38.00

NOTES

1. DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL LANE.
2. FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (\*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (\*) ARTICLE 1072-1. (\*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES
3. PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.
4. IF GROUNDWATER IS ENCOUNTERED AT A DEPTH SHALLOWER THAN 7 FEET, THE SIGN FOUNDATION MUST BE REDESIGNED BASED UPON THE ACTUAL FIELD CONDITIONS. THE FOUNDATION DESIGN DOES NOT APPLY TO VERY SOFT OR LOOSE SOIL, MUCK, WEATHERED ROCK, OR HARD ROCK.



TYPE "A" AND TYPE "B"  
GROUND MOUNTED SIGNS



6/28/2026  
C:\Users\Matt Thigpen\OneDrive\Projects\100055\_BR-0150\Traffic\Signing\BR0150\_to\_tnp04.dgn  
User:Matt Thigpen

BEGIN SIGNING PROJECT BR-0150  
-L- STA. 10+20 +/-

10+00

WELCOME  
TO  
WILSON COUNTY

SEE NOTE 2, 3

SEE NOTE 1

SEE NOTE 1

15+00

SEE NOTE 1

SEE NOTE 1

END SIGNING PROJECT BR-0150  
-L- STA. 18+00 +/-

20

|                                                                                                                                                                        |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| TIP NO.<br>BR-0150                                                                                                                                                     | SHEET NO.<br>SIGN-3 |
| APPROVED: <br><small>DocuSigned by:<br/>Matthew Thigpen<br/>7202285FD315432</small> |                     |
| DATE: 6/28/2026                                                                                                                                                        |                     |
| SEAL<br>                                                                            |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                                                                       |                     |



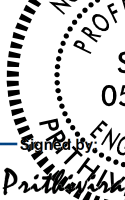
|                            |                  |
|----------------------------|------------------|
| <b>PROJ. REFERENCE NO.</b> | <b>SHEET NO.</b> |
| BR-0150                    | X-001            |

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

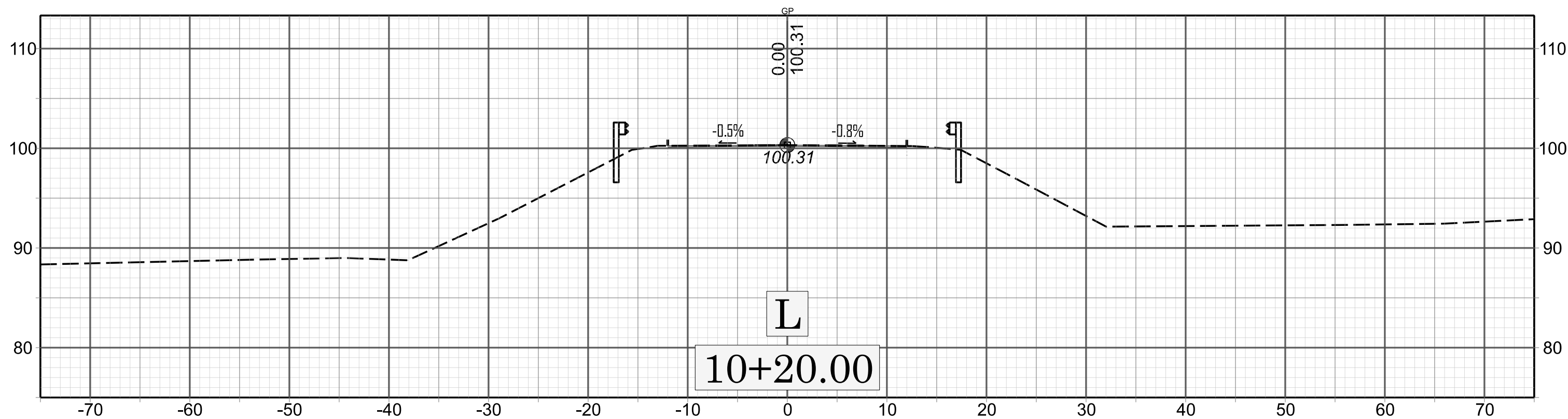
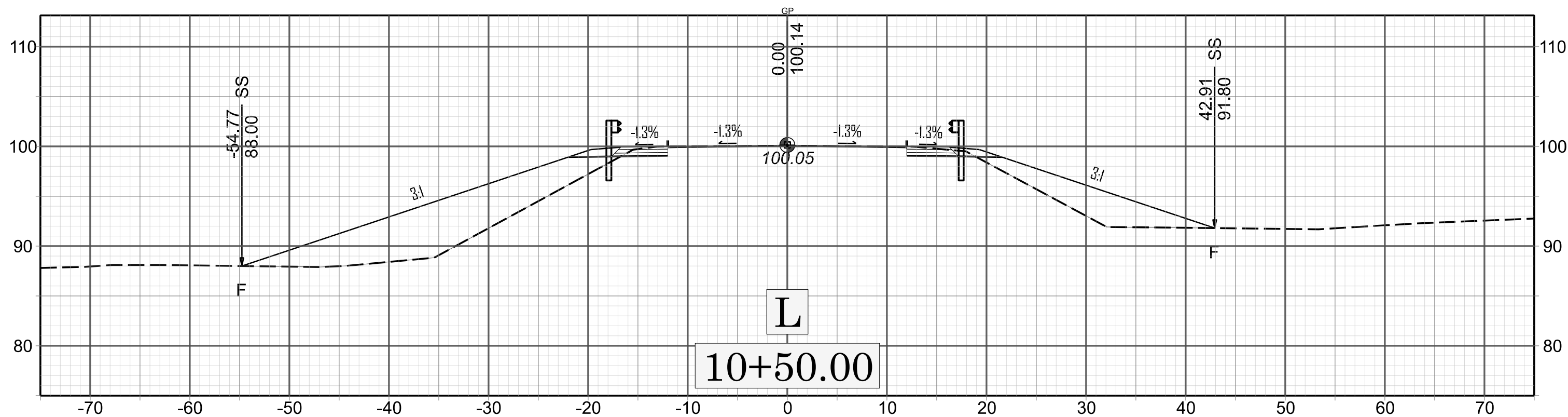
## *CROSS-SECTION SUMMARY*

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

**NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT**

|                                                                                                      |     |
|------------------------------------------------------------------------------------------------------|-----|
| BR-0150                                                                                              |     |
| X                                                                                                    | 001 |
| NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>WILSON COUNTY                                      |     |
|                   |     |
| ROADWAY DESIGN UNIT                                                                                  |     |
| ROADWAY DESIGN<br>ENGINEER                                                                           |     |
|                   |     |
| 7/7/2026                                                                                             |     |
| HYDRAULICS<br>ENGINEER                                                                               |     |
|                   |     |
| 7/6/2026                                                                                             |     |
| PREPARED BY<br>   |     |
| 175 REGENCY WOODS PLACE,<br>SUITE 400, WARRIOR, NC 27519<br>Phone: 919-854-1282<br>License #: C-0220 |     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETE                                      |     |

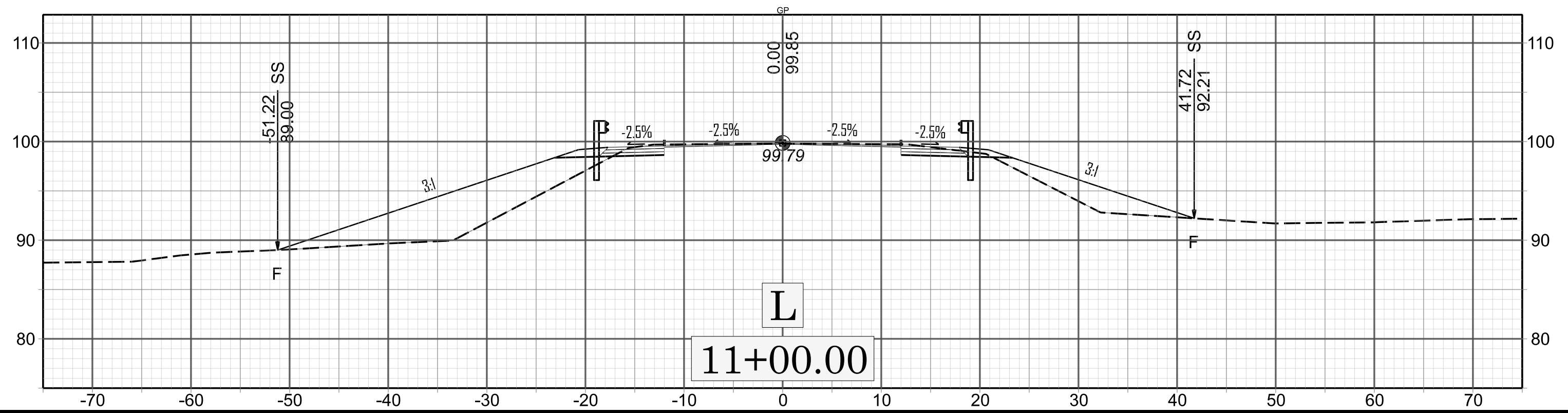
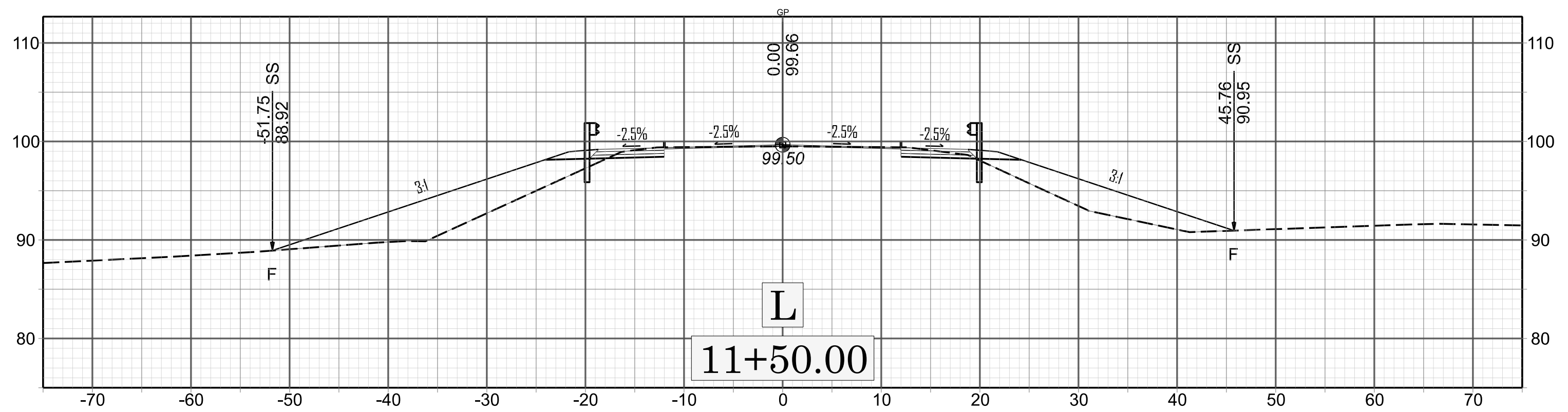
## REVISIONS

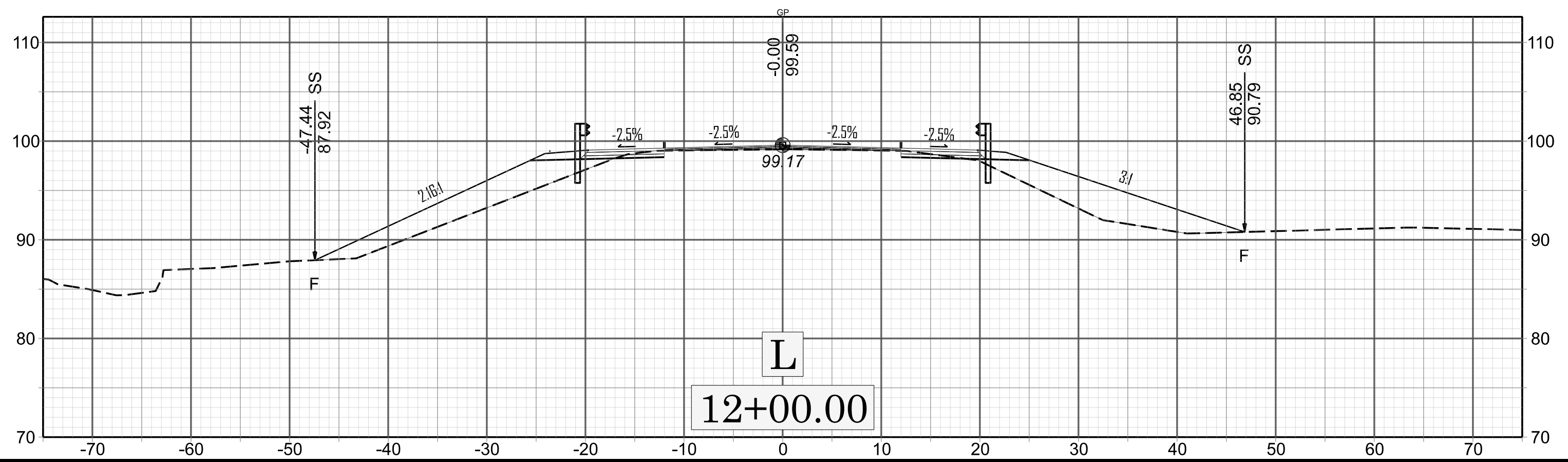
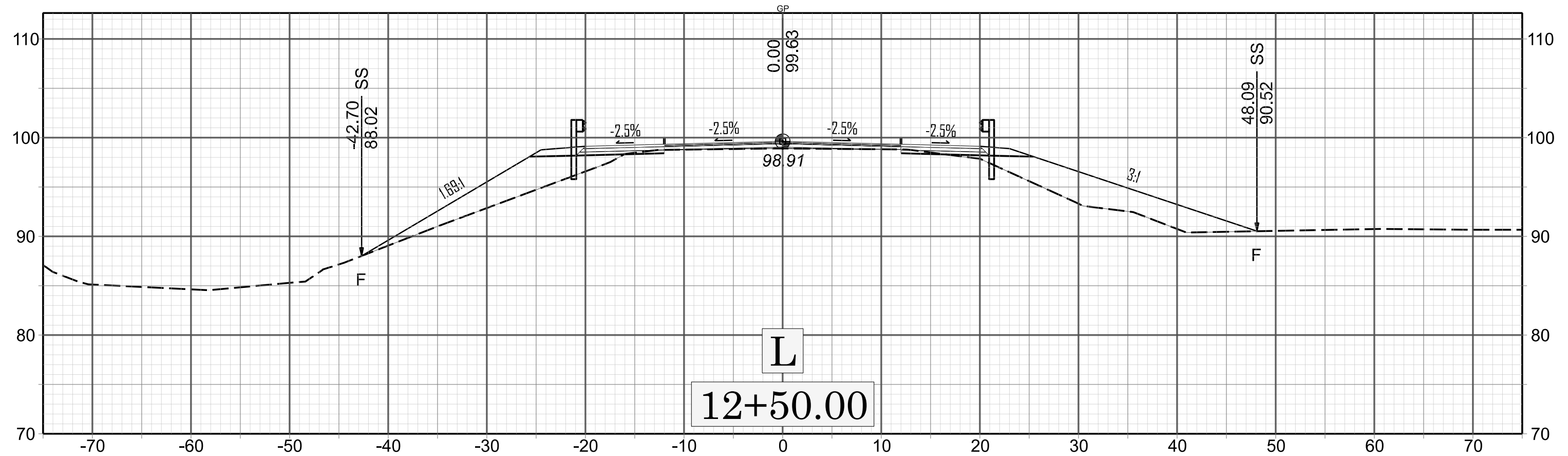




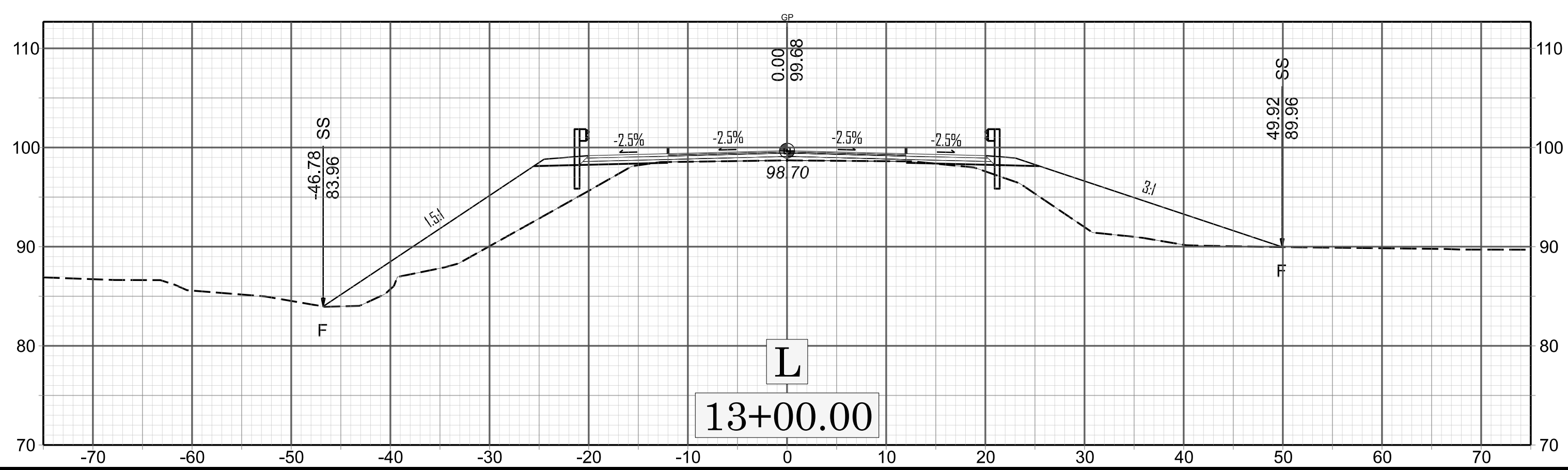
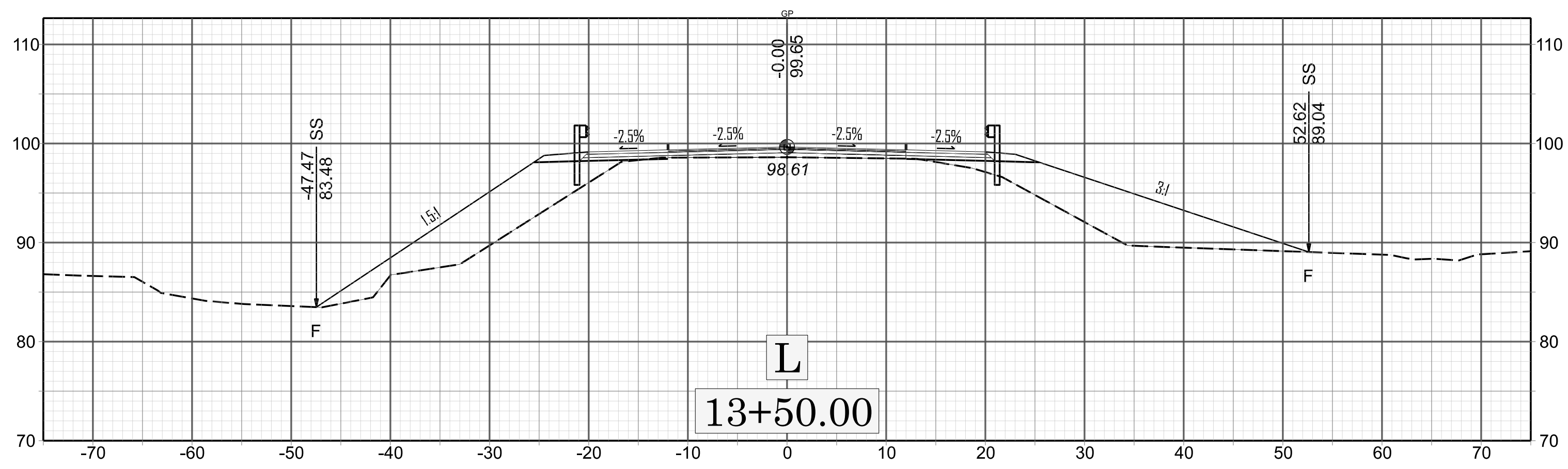


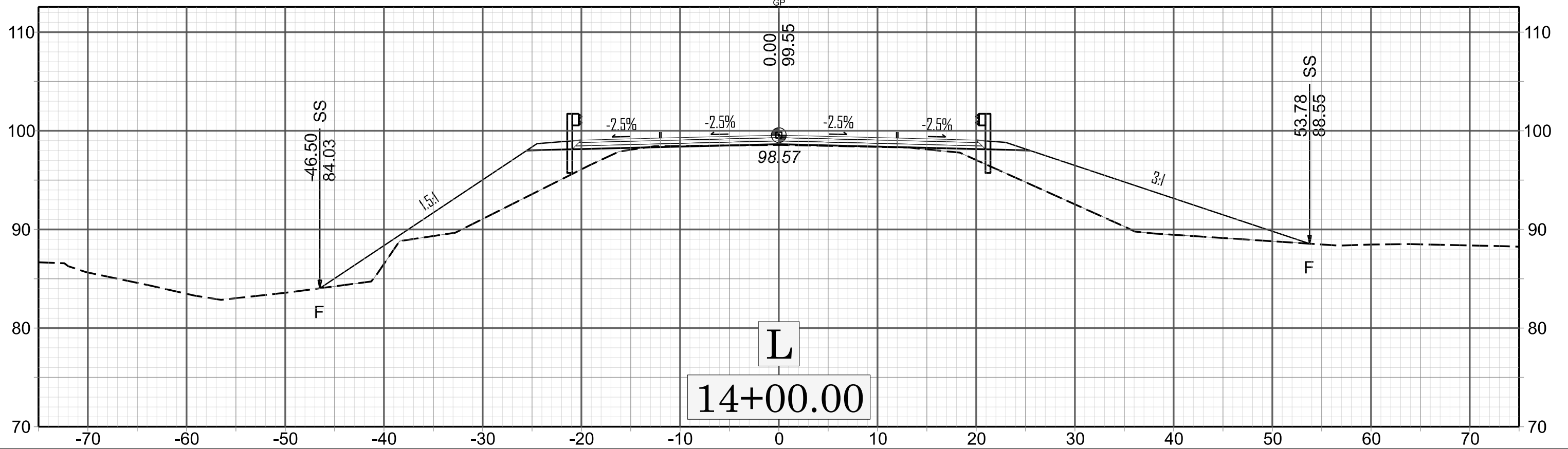
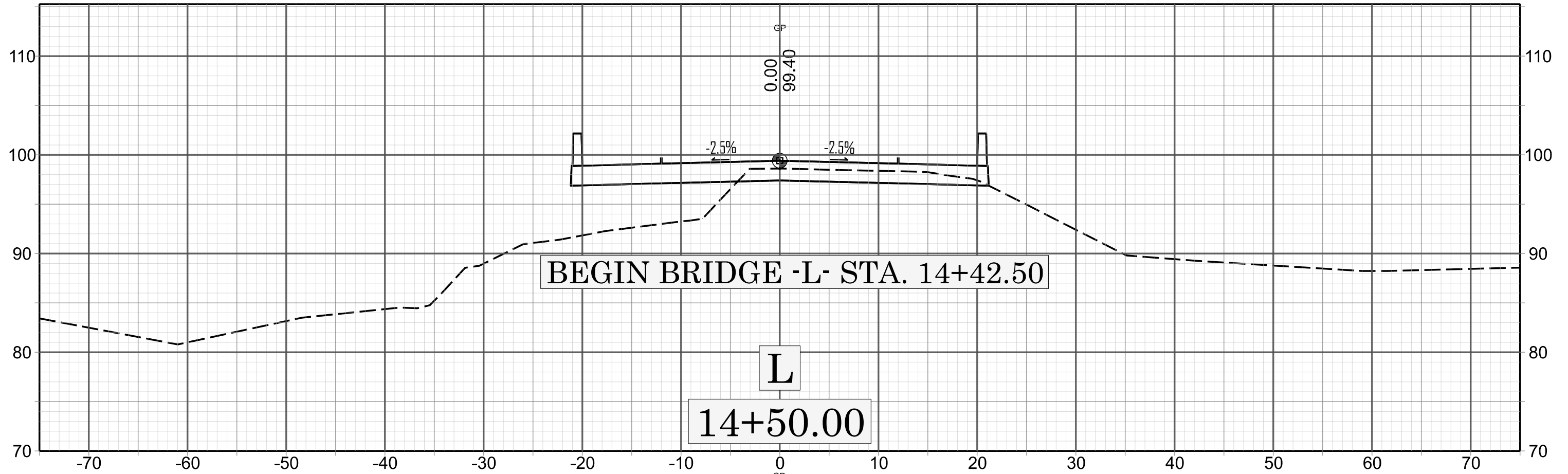
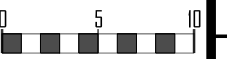
BR-0150  
X 003





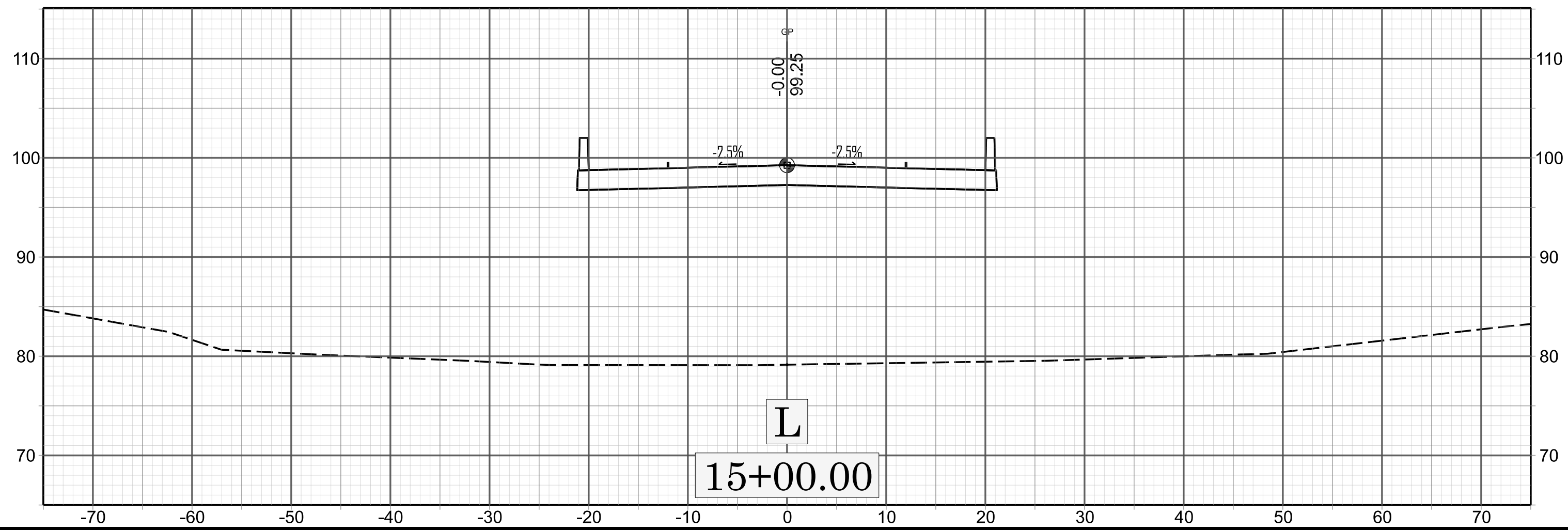




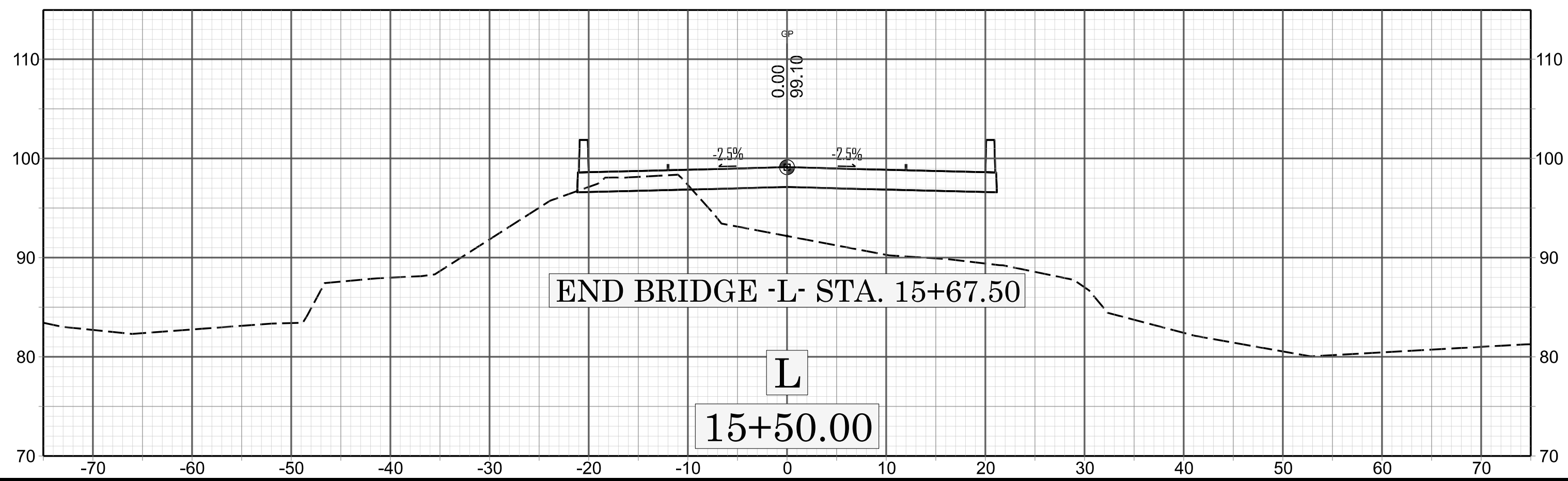
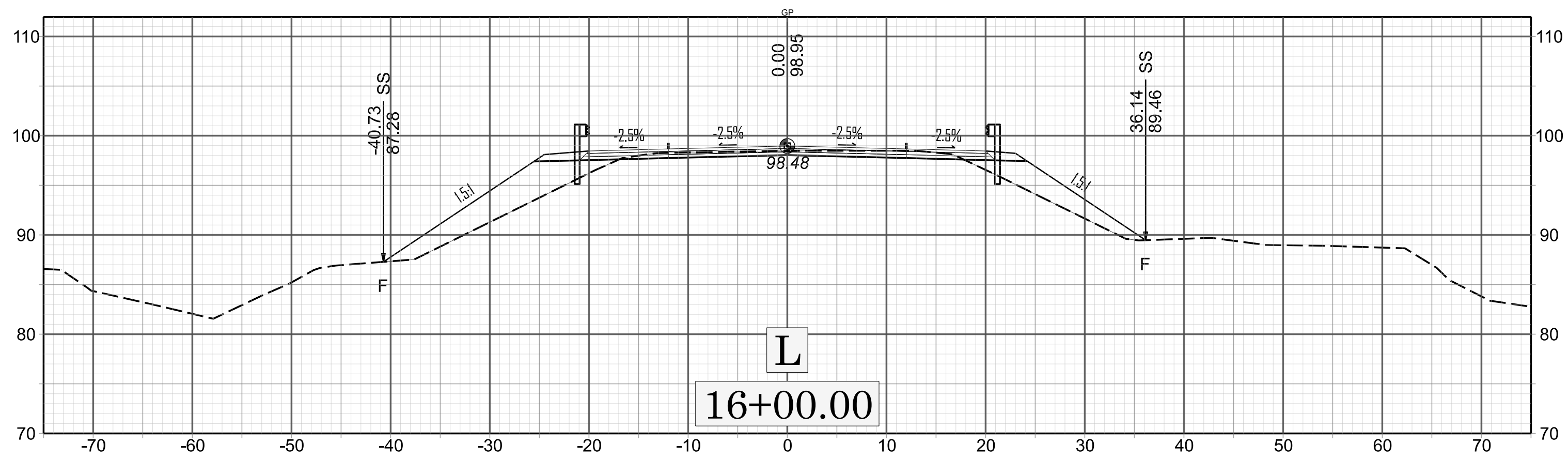




BR-0150  
X 007



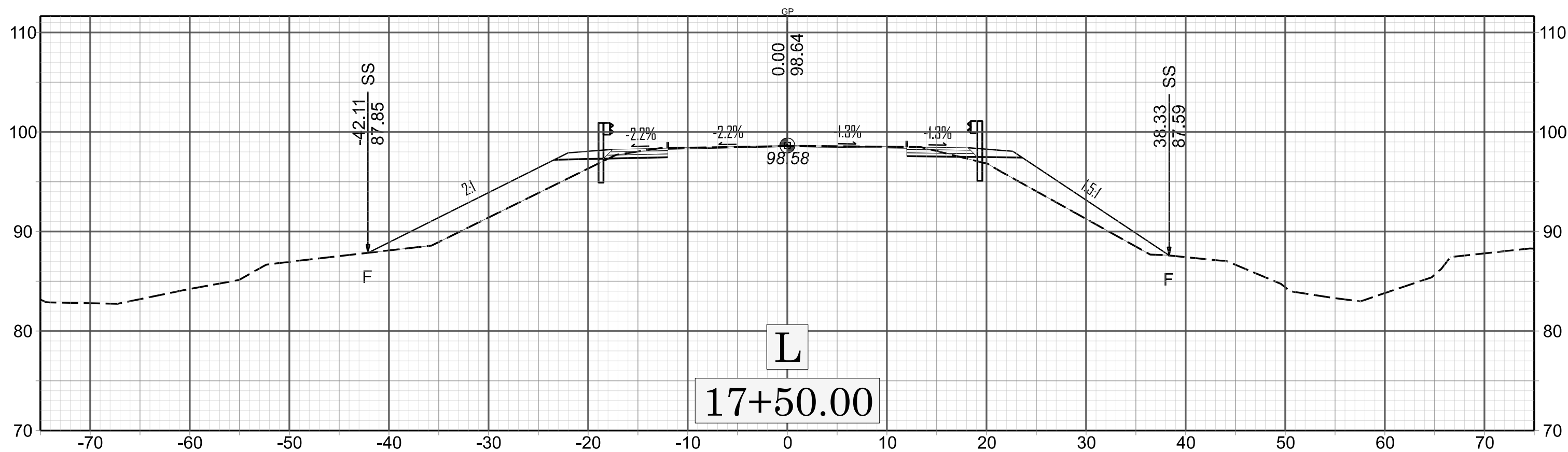
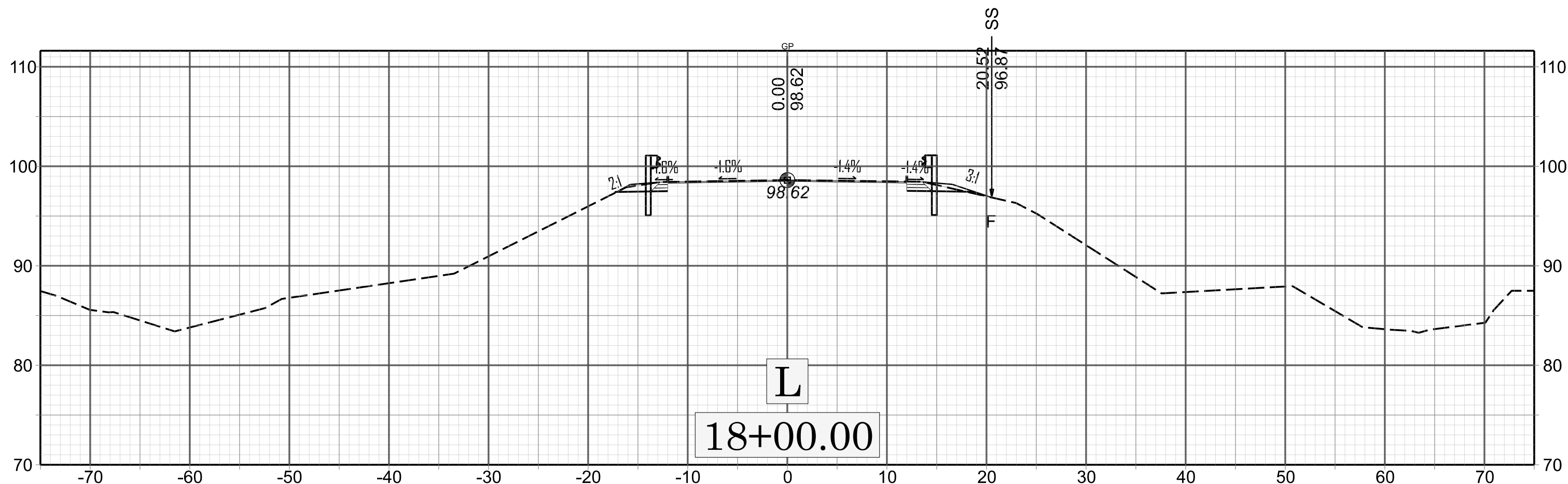








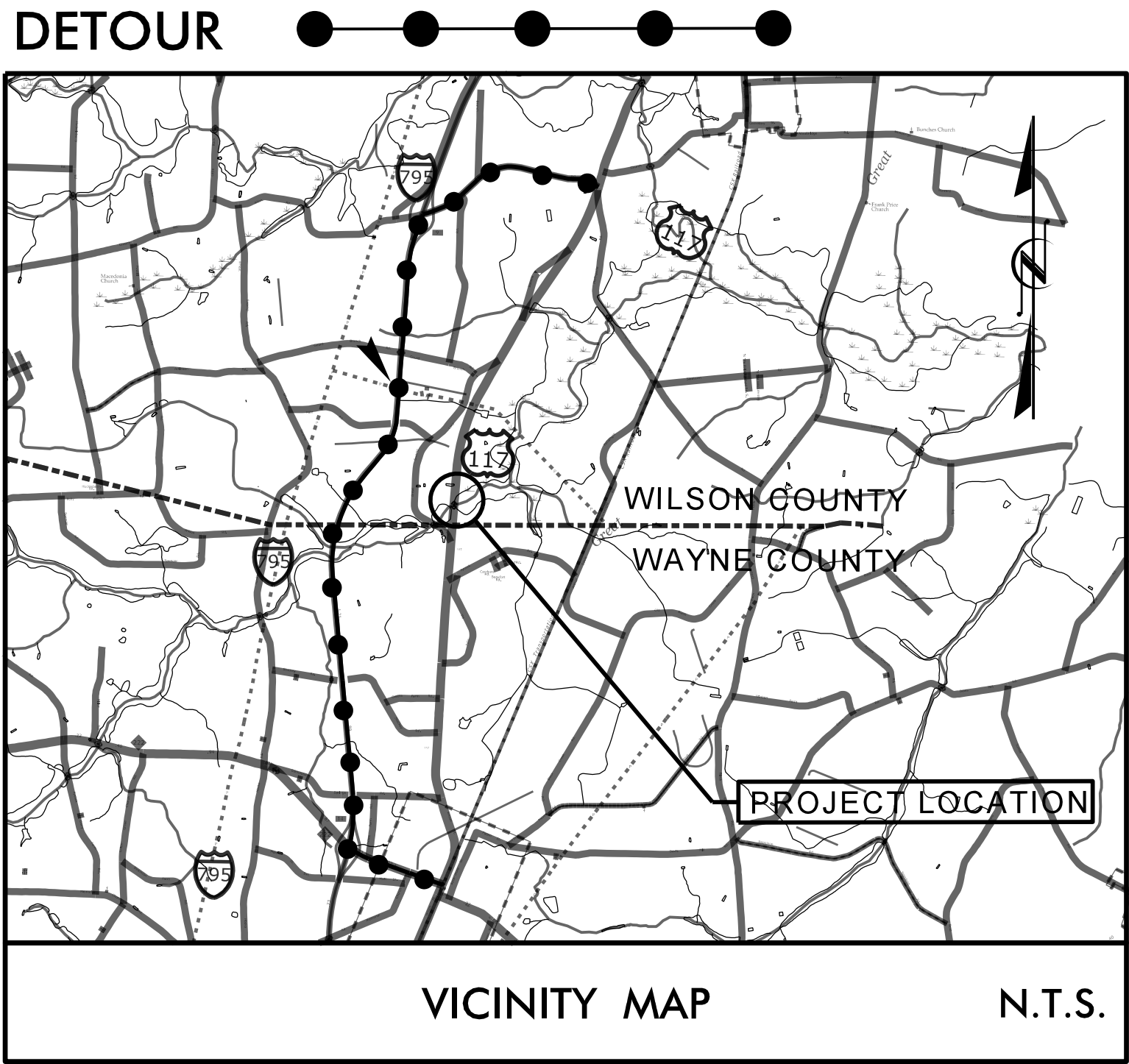
BR-0150  
X min





TIP PROJECT: BR-0150

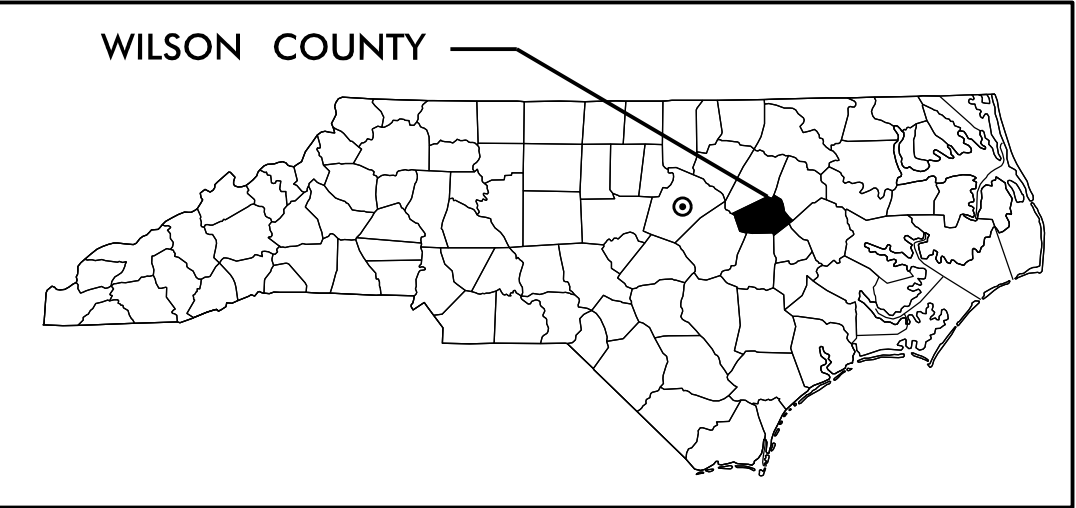
CONTRACT: 6300069443



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**WILSON COUNTY**

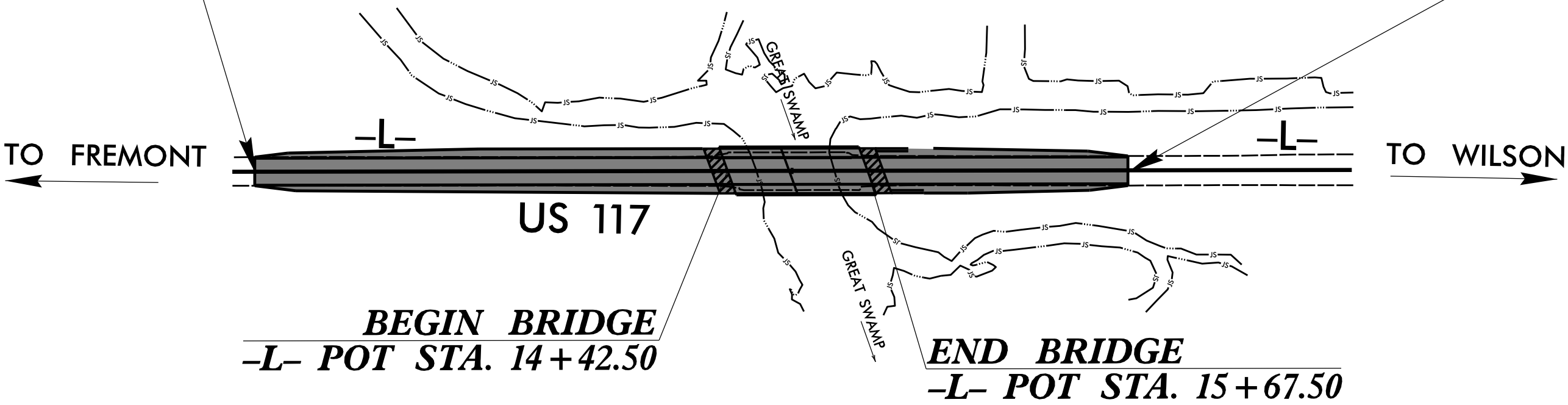
LOCATION: BRIDGE NO. 970023 OVER GREAT SWAMP CREEK ON US 117  
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.        | TOTAL SHEETS |
|-----------------|-----------------------------|------------------|--------------|
| N.C.            | BR-0150                     |                  |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION      |              |
| 67150.1.1       | N /A                        | PE               |              |
| 67150.1.2       | N /A                        | R /W & UTILITIES |              |
| 67150.1.3       | N /A                        | CONST.           |              |
|                 |                             |                  |              |
|                 |                             |                  |              |
|                 |                             |                  |              |
|                 |                             |                  |              |

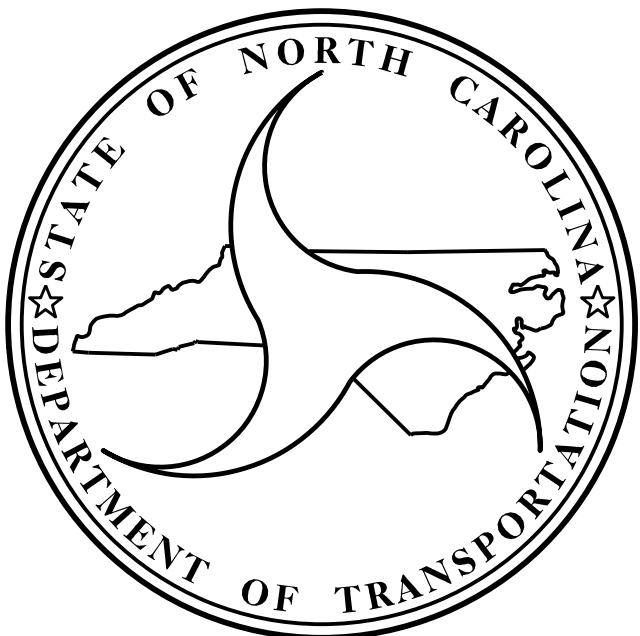


BEGIN PROJECT BR-0150  
-L- POT STA. 10 + 20.00

END PROJECT BR-0150  
-L- POT STA. 18 + 00.00



STRUCTURES



DESIGN DATA

ADT (2029)= 2,000  
ADT (2049)= 3,150  
K = 10 %  
D = 50 %  
T = 11% \*\*  
\* V = 60 MPH  
\*\* (TTST 7 %, DUAL 4 %)  
FUNC CLASS=RURAL MINOR ARTERIAL  
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0150 = 0.124 MILES  
LENGTH STRUCTURE TIP PROJECT BR-0150 = 0.024 MILES  
TOTAL LENGTH TIP PROJECT BR-0150 = 0.148 MILES

NCDOT CONTACT: RACHEL EVANS, PE  
PROJECT ENGINEER - NCDOT DIVISION 4

Prepared in the Office of:  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400, CARY, NC, 27518  
Phone: 919-854-1282, License #: C-1869

2024 STANDARD SPECIFICATIONS

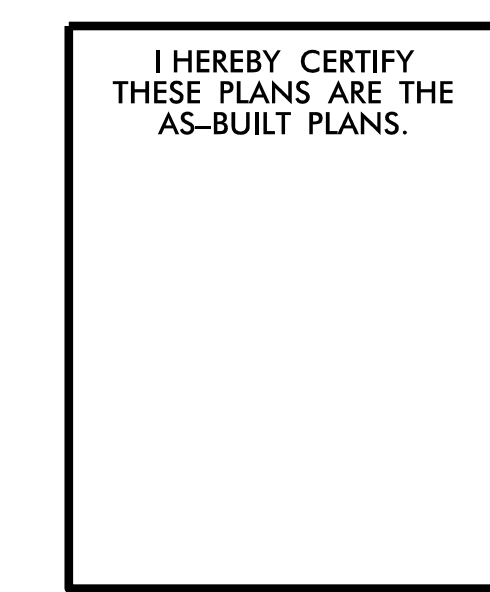
ROW DATE :  
JANUARY 20, 2025

LETTING DATE :  
JANUARY 27, 2032

K. ZAK HAMIDI, PE  
PROJECT ENGINEER

GINA HOOVER, PE  
PROJECT DESIGN ENGINEER

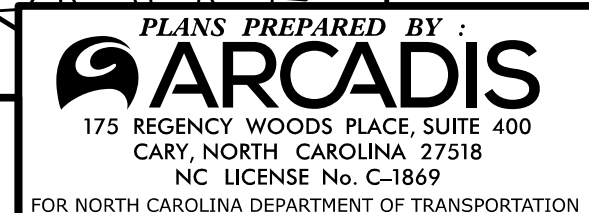




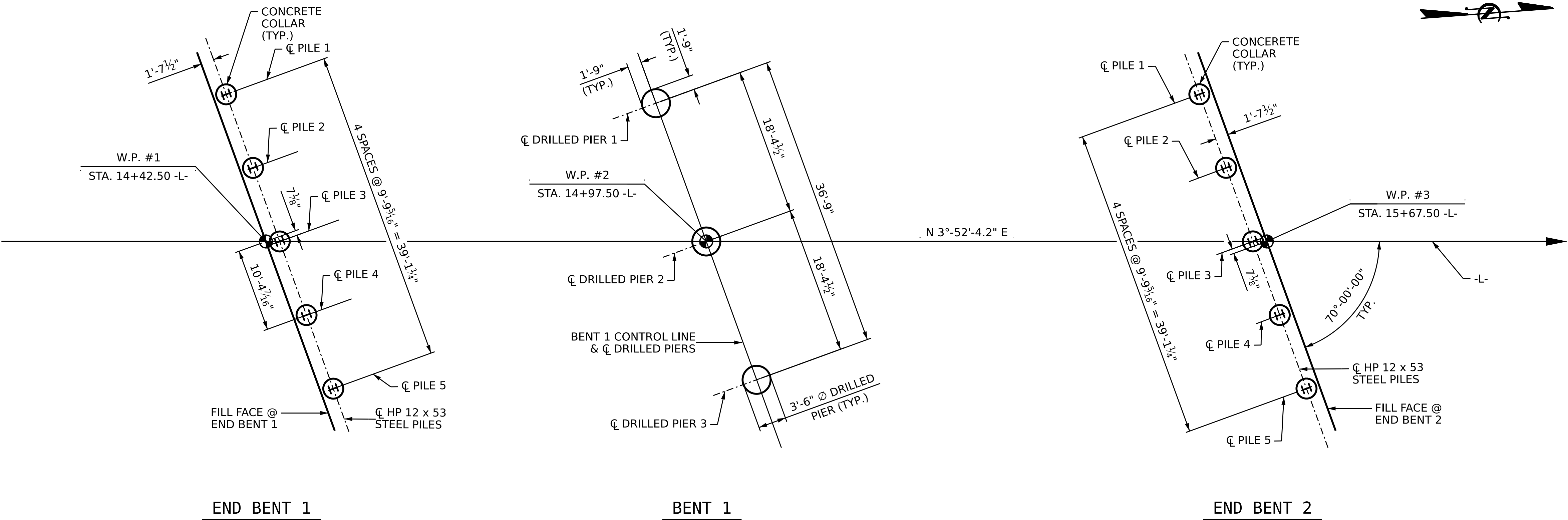
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



ON







FOUNDATION LAYOUT

NOTES

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 40,000 FT-LBS PER BLOW TO 76,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT 1 AND END BENT 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS. A WAITING PERIOD IS NOT REQUIRED FOR THE CONSTRUCTION OF END BENT 1 AND END BENT 2.

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 2 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
BRIDGE OVER GREAT  
SWAMP ON US 117 ALT. BETWEEN  
SR 1637 (WATSON RD) AND  
SR 1637 (GREAT SWAMP LOOP)

| REVISIONS |     |       |     |     |       | SHEET No.          |
|-----------|-----|-------|-----|-----|-------|--------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                    |

DRAWN BY : A. T. SOLANKI DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24

PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

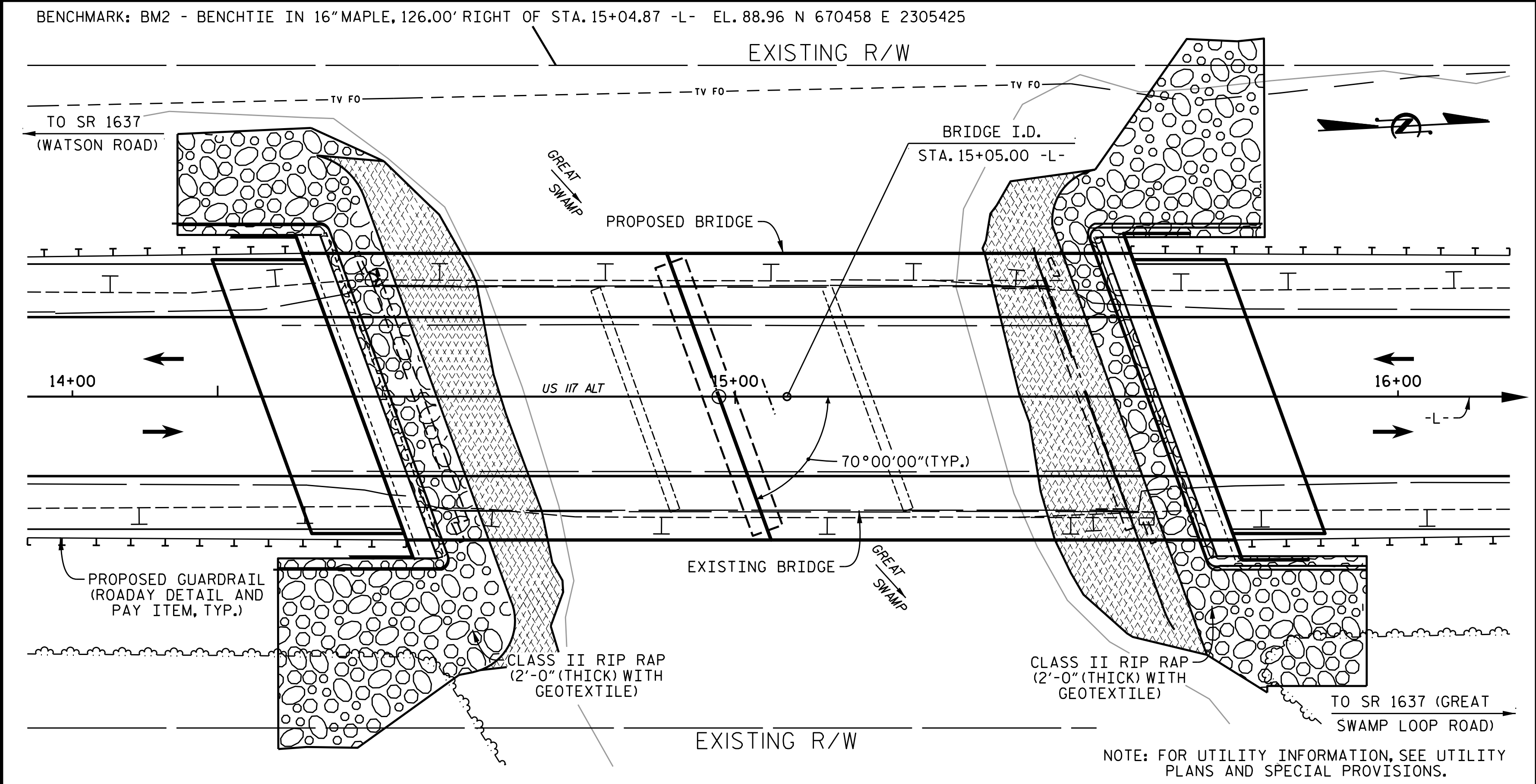
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
046289  
ENGINEER  
G. P. HOOVER  
7/8/2025









LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL 93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 37 FT LEFT AND 41 FT RIGHT OF CENTERLINE OF ROADWAY AT END BENT #1 AND 34 FT LEFT AND 40 FT RIGHT OF CENTERLINE OF ROADWAY AT END BENT #2 AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF 3 SPANS @ 34'-6", 35'-0", & 34'-6" WITH A CLEAR ROADWAY WIDTH OF 34'-0" ON RC DECK GIRDER; END BENT 1 & 2 AND INTERIOR BENTS CONSISTING OF RC CAP ON SPREAD FOOTINGS AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."

THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 IS 75.0 FT. (LT & CTL) AND 74.0 FT. (RT). SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

|                | REMOVAL OF EXISTING STRUCTURE AT STA. 15+05.00 -L- | ASBESTOS ASSESSMENT | 3'-6" Ø DRILLED PIERS | PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIERS | SPT TESTING | CSL TESTING | UNCLASSIFIED STRUCTURE EXCAVATION AT STA. 15+05.00 -L- | REINFORCED CONCRETE DECK SLAB | GROOVING BRIDGE FLOORS | CLASS A CONCRETE | BRIDGE APPROACH SLABS AT STA. 15+05.00 -L- |
|----------------|----------------------------------------------------|---------------------|-----------------------|--------------------------------------------------|-------------|-------------|--------------------------------------------------------|-------------------------------|------------------------|------------------|--------------------------------------------|
|                | LUMP SUM                                           | LUMP SUM            | LIN. FT.              | LIN. FT.                                         | EACH        | EACH        | LUMP SUM                                               | SQ. FT.                       | SQ. FT.                | CU. YDS.         | LUMP SUM                                   |
| SUPERSTRUCTURE |                                                    |                     |                       |                                                  |             |             |                                                        | 5,330                         | 6,205                  |                  |                                            |
| END BENT 1     |                                                    |                     |                       |                                                  |             |             |                                                        |                               |                        | 36.1             |                                            |
| BENT 1         |                                                    |                     | 148.5                 | 51.0                                             | 1           | 1           |                                                        |                               |                        | 42.5             |                                            |
| END BENT 2     |                                                    |                     |                       |                                                  |             |             |                                                        |                               |                        | 36.1             |                                            |
|                |                                                    |                     |                       |                                                  |             |             |                                                        |                               |                        |                  |                                            |
| TOTAL          | LUMP SUM                                           | LUMP SUM            | 148.5                 | 51.0                                             | 1           | 1           | LUMP SUM                                               | 5,330                         | 6,205                  | 114.7            | LUMP SUM                                   |

|                | REINFORCING STEEL | SPIRAL COLUMN REINFORCING STEEL | FIB 36" PRESRESSED CONCRETE GIRDERS |          | PILE DRIVING EQUIPMENT SETUP FOR HP 12 x 53 STEEL PILES | HP 12 x 53 STEEL PILES |          | DYNAMIC PILE TESTING | CONCRETE BARRIER RAIL | RIP RAP CLASS II (2'-0" THICK) | GEOTEXTILE FOR DRAINAGE | ELASTOMERIC BEARINGS |
|----------------|-------------------|---------------------------------|-------------------------------------|----------|---------------------------------------------------------|------------------------|----------|----------------------|-----------------------|--------------------------------|-------------------------|----------------------|
|                | LBS.              | LBS.                            | No.                                 | LIN. FT. | EACH                                                    | No.                    | LIN. FT. | EACH                 | LIN. FT.              | TON                            | SQ. YD.                 | LUMP SUM             |
| SUPERSTRUCTURE |                   |                                 | 10                                  | 605.83   |                                                         |                        |          |                      | 246.5                 |                                |                         |                      |
| END BENT 1     | 5,148             |                                 |                                     |          | 5                                                       | 5                      | 275.0    |                      |                       | 218                            | 193.4                   |                      |
| BENT 1         | 15,882            | 3,681                           |                                     |          |                                                         |                        |          |                      |                       |                                |                         |                      |
| END BENT 2     | 5,148             |                                 |                                     |          | 5                                                       | 5                      | 225.0    |                      |                       | 216                            | 192.2                   |                      |
|                |                   |                                 |                                     |          |                                                         |                        |          |                      |                       |                                |                         |                      |
| TOTAL          | 26,178            | 3,681                           | 10                                  | 605.83   | 10                                                      | 10                     | 500.0    | 1                    | 246.5                 | 434                            | 385.6                   | LUMP SUM             |

PROJECT NO. **BR-0150**

**WILSON** COUNTY

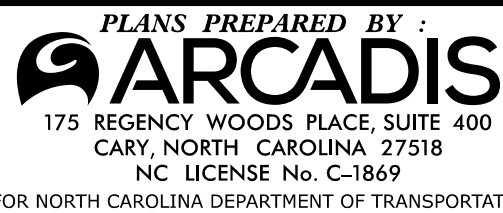
STATION: **15 + 05.00 -L-**

SHEET 4 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
BRIDGE OVER GREAT  
SWAMP ON US 117 ALT. BETWEEN  
SR 1637 (WATSON RD) AND  
SR 1637 (GREAT SWAMP LOOP)

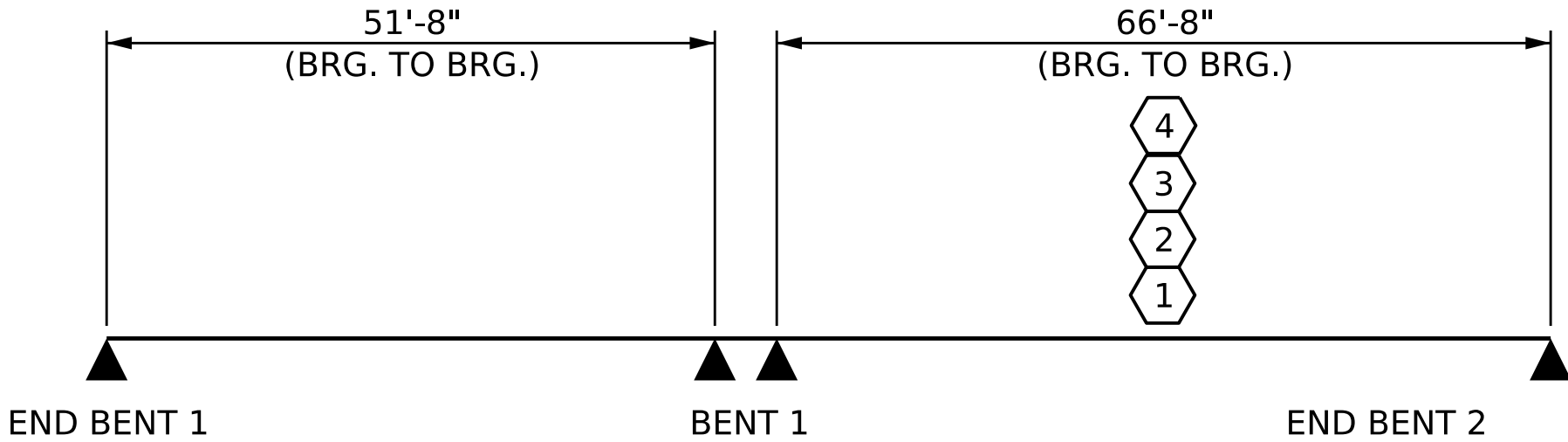
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



DRAWN BY : C. P. McGRAW DATE : 8-24  
CHECKED BY : A. K. PASCHAL DATE : 8-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 8-24



| LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS |                                         |                   |                      |                                 |                                   |               |                             |                              |               |      |                    |                                           |                              |               |      |                 |                         |                                           |                              |               |      |                    |                |                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------|-------------------|----------------------|---------------------------------|-----------------------------------|---------------|-----------------------------|------------------------------|---------------|------|--------------------|-------------------------------------------|------------------------------|---------------|------|-----------------|-------------------------|-------------------------------------------|------------------------------|---------------|------|--------------------|----------------|-------------------------------------------|
| LOAD TYPE                                                                         |                                         | VEHICLE           | WEIGHT (W)<br>(TONS) | CONTROLLING<br>LOAD RATING<br>Ⓔ | MINIMUM<br>RATING FACTORS<br>(RF) | TONS = W x RF | STRENGTH I LIMIT STATE      |                              |               |      |                    |                                           |                              |               |      |                 | SERVICE III LIMIT STATE |                                           |                              |               |      |                    | COMMENT NUMBER |                                           |
|                                                                                   |                                         |                   |                      |                                 |                                   |               | LIVE-LOAD<br>FACTORS (γ LL) | MOMENT                       |               |      |                    | SHEAR                                     |                              |               |      | LIVE-LOAD γ LL) | MOMENT                  |                                           |                              |               |      |                    |                |                                           |
|                                                                                   |                                         |                   |                      |                                 |                                   |               |                             | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN | GIRDER<br>LOCATION | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN |                 | GIRDER<br>LOCATION      | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN | GIRDER<br>LOCATION |                | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) |
| DESIGN<br>LOAD                                                                    |                                         | HL-93 (INVENTORY) | N/A                  | Ⓐ                               | 1.59                              | --            | 1.75                        | 0.792                        | 1.81          | B    | E                  | 33.3                                      | 0.967                        | 1.59          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.10          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | HL-93 (OPERATING) | N/A                  |                                 | 2.06                              | --            | 1.35                        | 0.792                        | 2.35          | B    | E                  | 33.3                                      | 0.967                        | 2.06          | B    | I               | 3.1                     | N/A                                       | --                           | --            | B    | I                  |                | --                                        |
|                                                                                   |                                         | HS-20 (INVENTORY) | 36.000               | Ⓑ                               | 1.98                              | 71.28         | 1.75                        | 0.792                        | 2.34          | B    | E                  | 33.3                                      | 0.967                        | 1.98          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.43          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | HS-20 (OPERATING) | 36.000               |                                 | 2.57                              | 92.5          | 1.35                        | 0.792                        | 3.03          | B    | E                  | 33.3                                      | 0.967                        | 2.57          | B    | I               | 3.1                     | N/A                                       | --                           | --            | B    | I                  |                | --                                        |
| LEGAL<br>LOAD                                                                     | SINGLE VEHICLE<br>(SV)                  | SNSH              | 13.500               |                                 | 4.95                              | 66.83         | 1.40                        | 0.814                        | 6.20          | A    | I                  | 33.3                                      | 0.967                        | 5.88          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 3.17          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNGARBS2          | 20.000               |                                 | 3.73                              | 74.60         | 1.40                        | 0.814                        | 4.85          | A    | I                  | 33.3                                      | 0.967                        | 4.19          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 2.38          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNAGRIS2          | 22.000               |                                 | 3.54                              | 77.88         | 1.40                        | 0.792                        | 4.64          | B    | E                  | 33.3                                      | 0.967                        | 3.89          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 2.27          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNCOTTS3          | 27.250               |                                 | 2.46                              | 67.04         | 1.40                        | 0.814                        | 3.09          | A    | I                  | 33.3                                      | 0.967                        | 2.93          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.58          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNAGGRS4          | 34.925               |                                 | 2.07                              | 72.29         | 1.40                        | 0.814                        | 2.67          | A    | I                  | 33.3                                      | 0.967                        | 2.44          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.33          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNS5A             | 35.550               |                                 | 2.03                              | 72.17         | 1.40                        | 0.814                        | 2.61          | A    | I                  | 33.3                                      | 0.967                        | 2.48          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.30          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNS6A             | 39.950               |                                 | 1.87                              | 74.71         | 1.40                        | 0.814                        | 2.43          | A    | I                  | 33.3                                      | 0.967                        | 2.26          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.19          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | SNS7B             | 42.000               |                                 | 1.78                              | 74.76         | 1.40                        | 0.814                        | 2.31          | A    | I                  | 33.3                                      | 0.967                        | 2.23          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.14          | B    | I                  | 33.3           | --                                        |
|                                                                                   | TRUCK TRACTOR<br>SEMI-TRAILER<br>(TTST) | TNAGRIT3          | 33.000               |                                 | 2.28                              | 75.24         | 1.40                        | 0.814                        | 2.97          | A    | I                  | 33.3                                      | 0.967                        | 2.69          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.46          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNT4A             | 33.075               |                                 | 2.29                              | 75.74         | 1.40                        | 0.814                        | 3.00          | A    | I                  | 33.3                                      | 0.967                        | 2.62          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.46          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNT6A             | 41.600               |                                 | 1.88                              | 78.21         | 1.40                        | 0.792                        | 2.46          | B    | E                  | 33.3                                      | 0.967                        | 2.38          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.20          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNT7A             | 42.000               |                                 | 1.89                              | 79.38         | 1.40                        | 0.792                        | 2.48          | B    | E                  | 33.3                                      | 0.839                        | 2.14          | A    | E               | 47.1                    | 0.80                                      | 0.967                        | 1.21          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNT7B             | 42.000               |                                 | 1.96                              | 82.32         | 1.40                        | 0.792                        | 2.57          | B    | E                  | 33.3                                      | 0.967                        | 2.17          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.25          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNAGRIT4          | 43.000               |                                 | 1.86                              | 79.98         | 1.40                        | 0.792                        | 2.44          | B    | E                  | 33.3                                      | 0.967                        | 2.10          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.19          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNAGT5A           | 45.000               |                                 | 1.75                              | 78.75         | 1.40                        | 0.792                        | 2.30          | B    | E                  | 33.3                                      | 0.967                        | 2.09          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.12          | B    | I                  | 33.3           | --                                        |
|                                                                                   |                                         | TNAGT5B           | 45.000               | Ⓒ                               | 1.73                              | 77.85         | 1.40                        | 0.792                        | 2.27          | B    | E                  | 33.3                                      | 0.967                        | 2.00          | B    | I               | 3.1                     | 0.80                                      | 0.967                        | 1.11          | B    | I                  | 33.3           | --                                        |
| EMERGENCY<br>VEHICLE (EV)                                                         | EV2                                     | 28.750            |                      | 2.64                            | 75.90                             | 1.30          | 0.761                       | 2.83                         | B             | I    | 33.3               | 0.967                                     | 3.16                         | B             | I    | 3.1             | 0.80                    | 0.967                                     | 1.69                         | B             | I    | 33.3               | --             |                                           |
|                                                                                   | EV3                                     | 43.000            | Ⓓ                    | 1.72                            | 73.96                             | 1.40          | 0.814                       | 2.41                         | A             | I    | 33.3               | 0.967                                     | 2.13                         | B             | I    | 3.1             | 0.80                    | 0.967                                     | 1.10                         | B             | I    | 33.3               | --             |                                           |



LRFR SUMMARY

LOAD FACTORS:

| DESIGN<br>LOAD<br>RATING<br>FACTORS | LIMIT STATE | γ DC | γ DW |
|-------------------------------------|-------------|------|------|
|                                     | STRENGTH I  | 1.25 | 1.50 |
|                                     | SERVICE III | 1.00 | 1.00 |

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

- 
- 
- 
- 

| #                                          | CONTROLLING LOAD RATING          |
|--------------------------------------------|----------------------------------|
| ①                                          | DESIGN LOAD RATING (HL-93)       |
| ②                                          | DESIGN LOAD RATING (HS-20)       |
| ③                                          | LEGAL LOAD RATING **             |
| ④                                          | EMERGENCY VEHICLE LOAD RATING ** |
| ** SEE CHART FOR VEHICLE TYPE              |                                  |
| GIRDER LOCATION                            |                                  |
| I - INTERIOR GIRDER<br>E - EXTERIOR GIRDER |                                  |

PROJECT NO. BR-0150  
WILSON COUNTY  
BRIDGE NO. 15 + 05.00 -L-

|                            |  |                 |        |
|----------------------------|--|-----------------|--------|
| ASSEMBLED BY: C. P. McGRAW |  | DATE : 12-23    |        |
| CHECKED BY : G. P. HOOVER  |  | DATE : 8-24     |        |
| DRAWN BY : MAA 1/08        |  | REV. 11/12/08RR | MAA/GM |
| CHECKED BY : GM/DI 2/08    |  | REV. 10/1/11    | MAA/GM |
|                            |  | REV. 04/23      | BNB/AM |

c:\pwwork\arcadis\p01\gina.hoover\0156519\Div.4.980023.smu.lr1.dgn  
GHOover

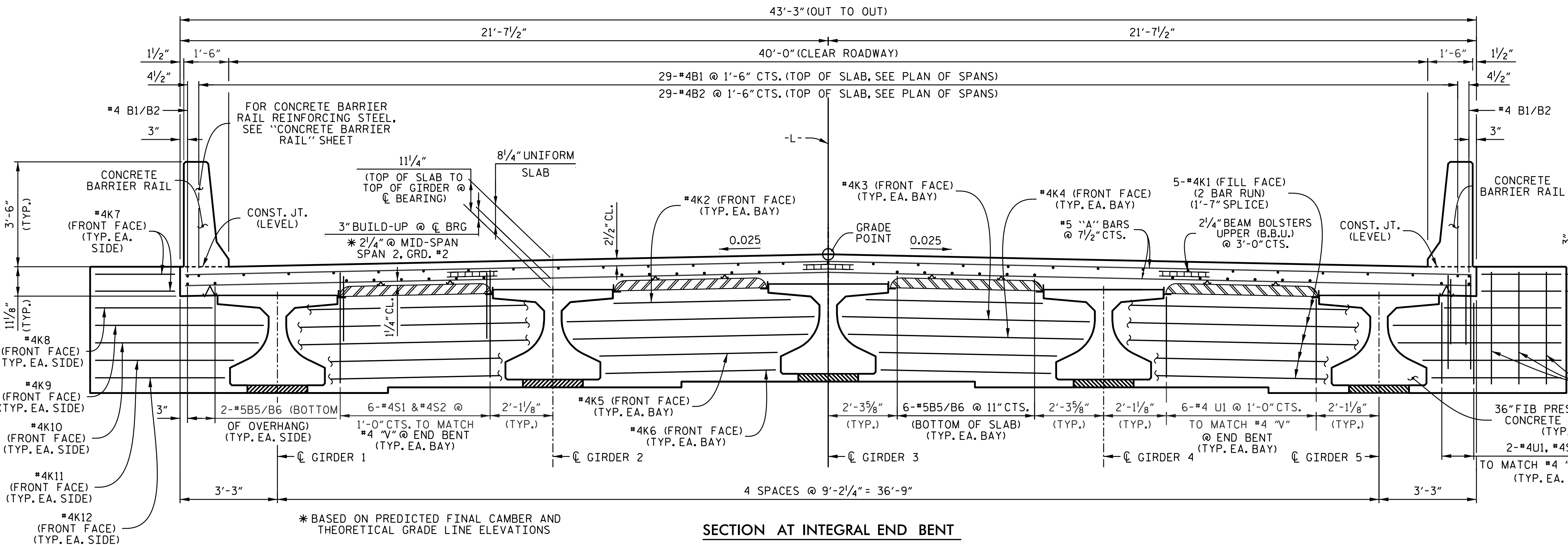
PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

|                                                                                 |     |       |     |     |       |              |  |
|---------------------------------------------------------------------------------|-----|-------|-----|-----|-------|--------------|--|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH              |     |       |     |     |       | STANDARD     |  |
| LRFR SUMMARY FOR<br>PRESTRESSED<br>CONCRETE GIRDERS<br>(NON-INTERSTATE TRAFFIC) |     |       |     |     |       |              |  |
| REVISIONS                                                                       |     |       |     |     |       | SHEET NO.    |  |
| NO.                                                                             | BY: | DATE: | NO. | BY: | DATE: | S-5          |  |
| 1                                                                               |     |       | 3   |     |       | TOTAL SHEETS |  |
| 2                                                                               |     |       | 4   |     |       | 26           |  |

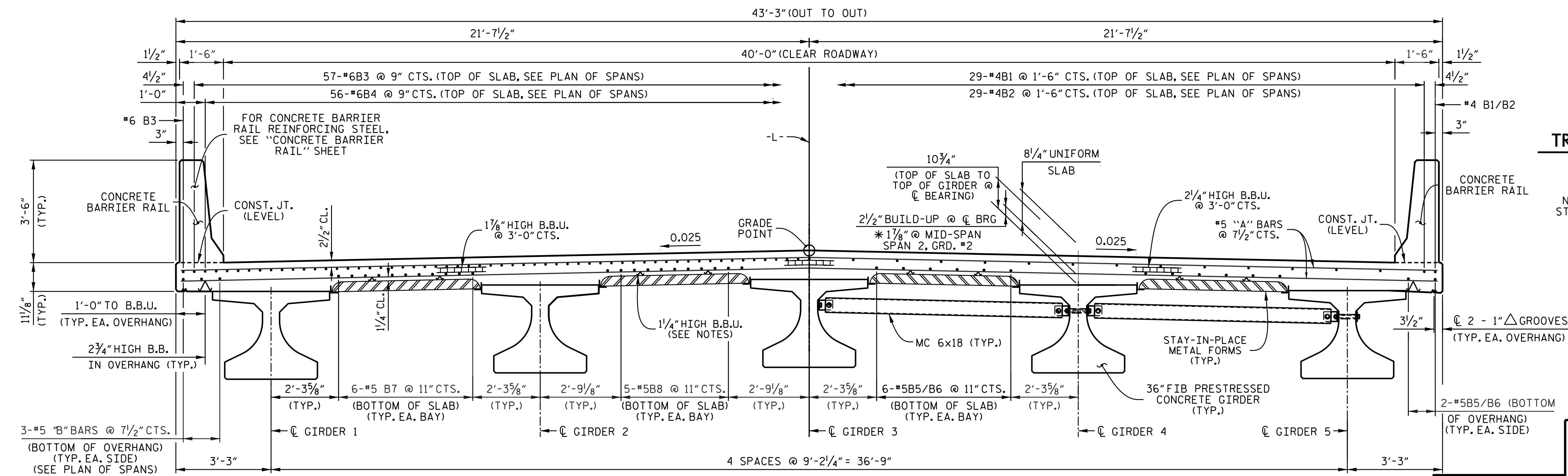


FILE: c:\pwworking\carolina\p1\jma\hooover\107156519.Dwg, 4/9/2023, mm, 11 dgm  
DATE: 7/20/23 4:53:56 PM



SECTION AT INTEGRAL END BENT

TYPICAL SECTION



HALF SECTION LINK SLAB AT BENT

TYPICAL SECTION

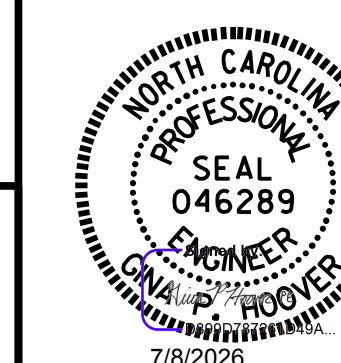
HALF SECTION AT INTERMEDIATE DIAPHRAGMS

\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS

DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24

PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



NOTES

PROVIDE 1 1/4" HIGH BEAM BOLSTERS UPPER AT 4'-0" CTS. ATOP THE METAL STAY-IN-PLACE FORMS TO SUPPORT THE BOTTOM MAT OF "A" BARS. WHEN USING REMOVABLE FORMS, PROVIDE CONTINUOUS HIGH CHAIRS FOR METAL DECK (C.H.C.M.) @ 4'-0" CTS. WITH A HEIGHT TO SUPPORT THE BOTTOM MAT OF "A" BARS A CLEAR DISTANCE OF 2 1/2" ABOVE THE TOP OF THE REMOVABLE FORM.

LONGITUDINAL STEEL MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO AVOID INTERFERENCE WITH STIRRUPS IN PRESTRESSED CONCRETE GIRDERS.

PREVIOUSLY CAST CONCRETE IN SPAN SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE SPAN.

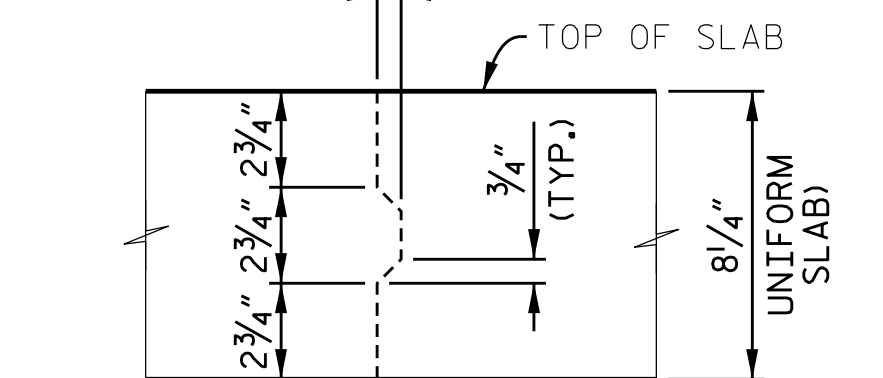
BARRIER RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

#4U2 TO MATCH #4 "V" @ END BENT (TYP. EA. SIDE)

36" FIB PRESTRESSED CONCRETE GIRDER (TYP.)

2-#4U1, #4S1 & S2 TO MATCH #4 "V" END BENT (TYP. EA. END)

CL TRANSVERSE CONST. JT.



TRANSVERSE CONSTRUCTION

JOINT DETAIL

REINFORCING STEEL IN SLAB NOT SHOWN. LONGITUDINAL REINFORCING STEEL SHALL BE CONTINUOUS THRU JOINT.

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 1 OF 2

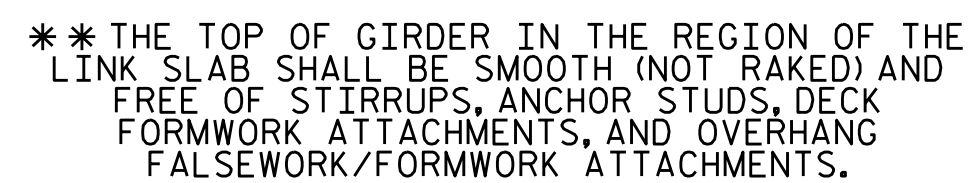
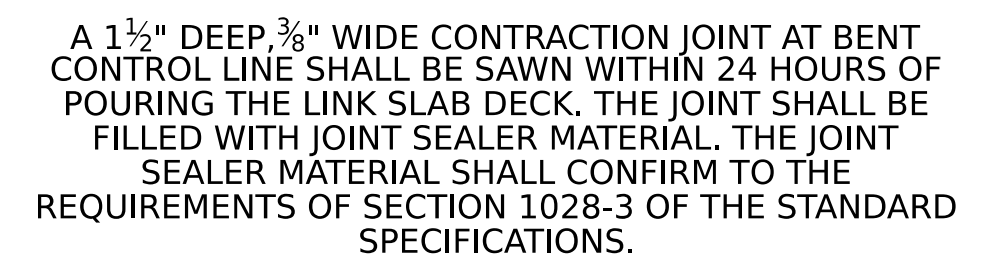
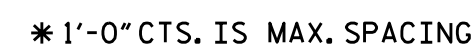
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION

| REVISIONS |     |       |     |     |       | SHEET No.          |
|-----------|-----|-------|-----|-----|-------|--------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                    |



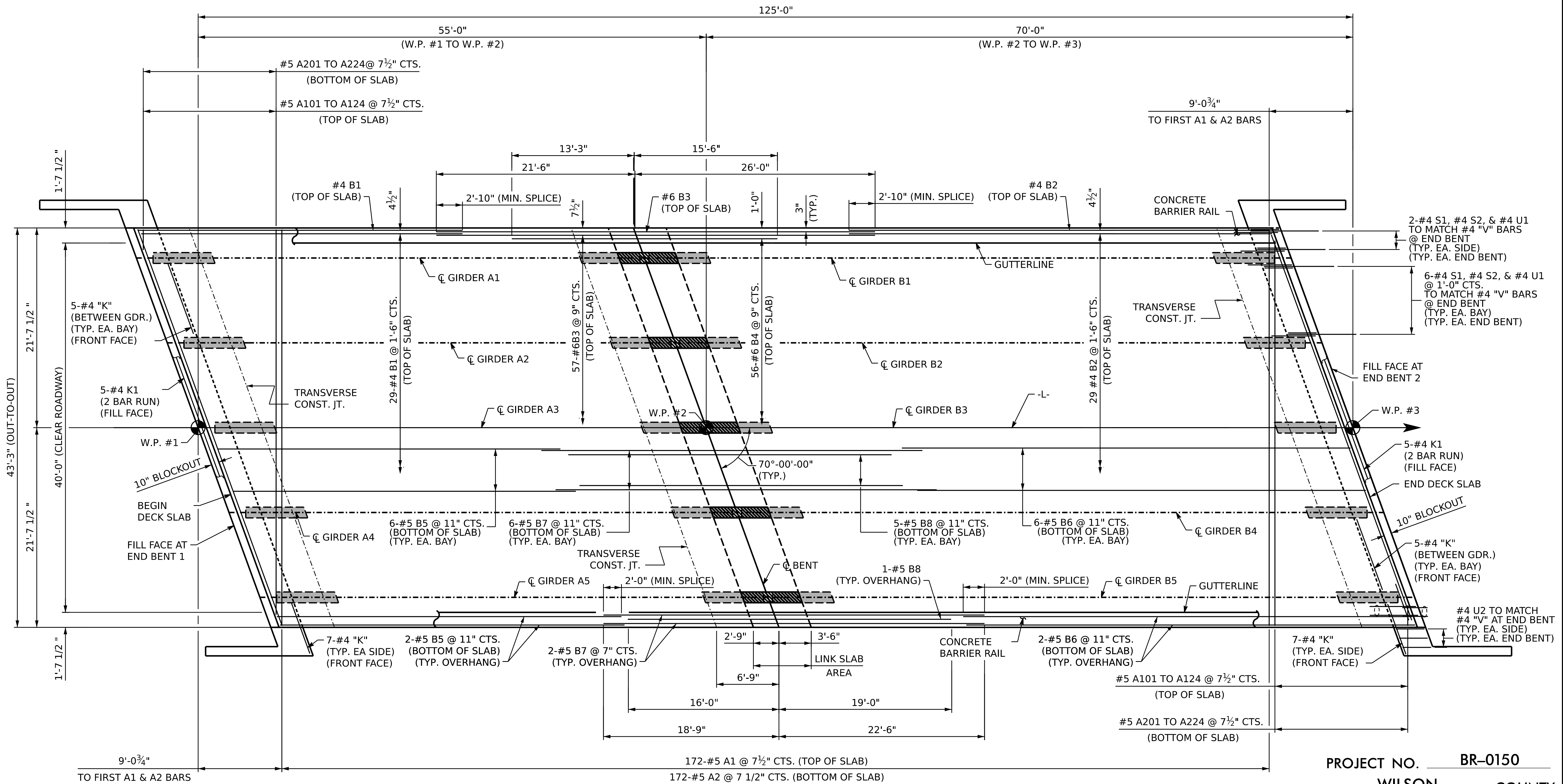


| REVISIONS |     |       |          |     |       | SHEET No.<br><b>S-7</b>      |
|-----------|-----|-------|----------|-----|-------|------------------------------|
| No.       | BY: | DATE: | No.      | BY: | DATE: |                              |
| <b>1</b>  |     |       | <b>3</b> |     |       | TOTAL<br>SHEETS<br><b>26</b> |
| <b>2</b>  |     |       | <b>4</b> |     |       |                              |

**PLANS PREPARED BY :**  
 **ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

|                   |                     |        |             |
|-------------------|---------------------|--------|-------------|
| DRAWN BY :        | <u>C. P. McGRAW</u> | DATE : | <u>5-24</u> |
| CHECKED BY :      | <u>G. P. HOOVER</u> | DATE : | <u>5-24</u> |
| DESIGN ENGINEER : | <u>G. P. HOOVER</u> | DATE : | <u>5-24</u> |





PLAN OF SPAN

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 1 OF 2

| REVISIONS    |     |       |     |     |       | SHEET No. |
|--------------|-----|-------|-----|-----|-------|-----------|
| No.          | BY: | DATE: | No. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-8       |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 26        |

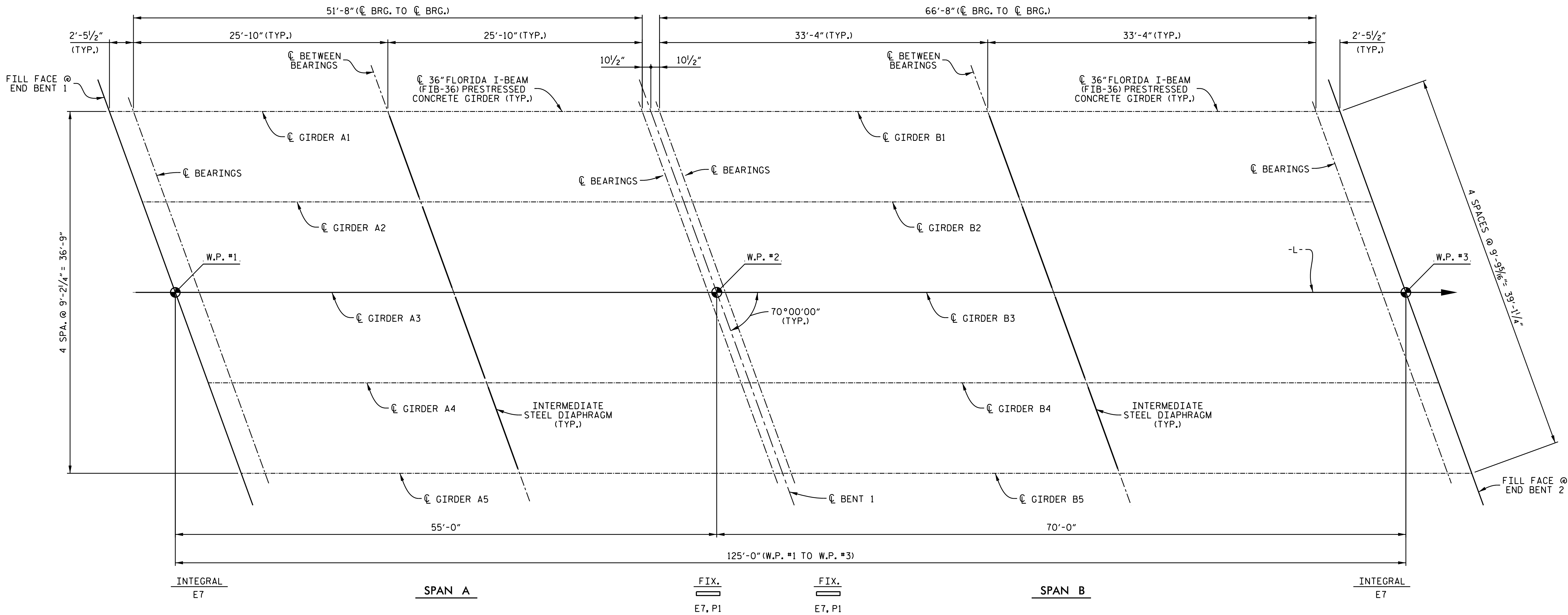
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. 0486277  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24





FRAMING PLAN

NOTES

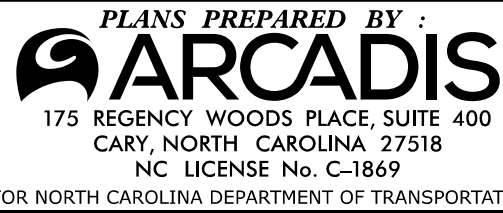
FOR INTERMEDIATE STEEL DIAPHRAGMS, SEE "INTERMEDIATE STEEL DIAPHRAGMS FOR 36" FIB PRESTRESSED CONCRETE GIRDERS" SHEET.

FOR ELASTOMERIC BEARING DETAILS, SEE "ELASTOMERIC BEARING DETAILS FIB SUPERSTRUCTURE" SHEET.

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

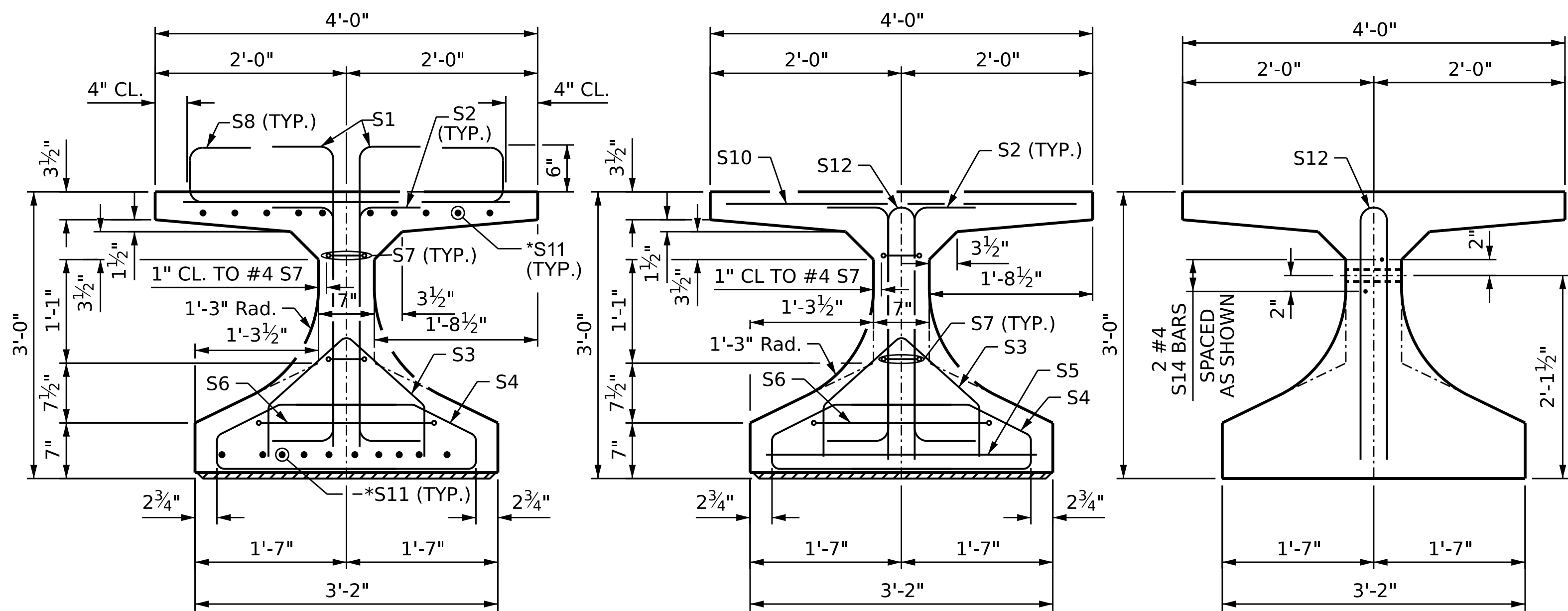
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |       |
|--------------------------------------------------------------------|-----|-------|-----|-----|-------|
| SUPERSTRUCTURE                                                     |     |       |     |     |       |
| FRAMING PLAN                                                       |     |       |     |     |       |
| REVISIONS                                                          |     |       |     |     |       |
| No.                                                                | BY: | DATE: | No. | BY: | DATE: |
| 1                                                                  |     |       | 3   |     |       |
| 2                                                                  |     |       | 4   |     |       |
| SHEET No.                                                          |     |       |     |     | S-9   |
| TOTAL SHEETS                                                       |     |       |     |     | 26    |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24





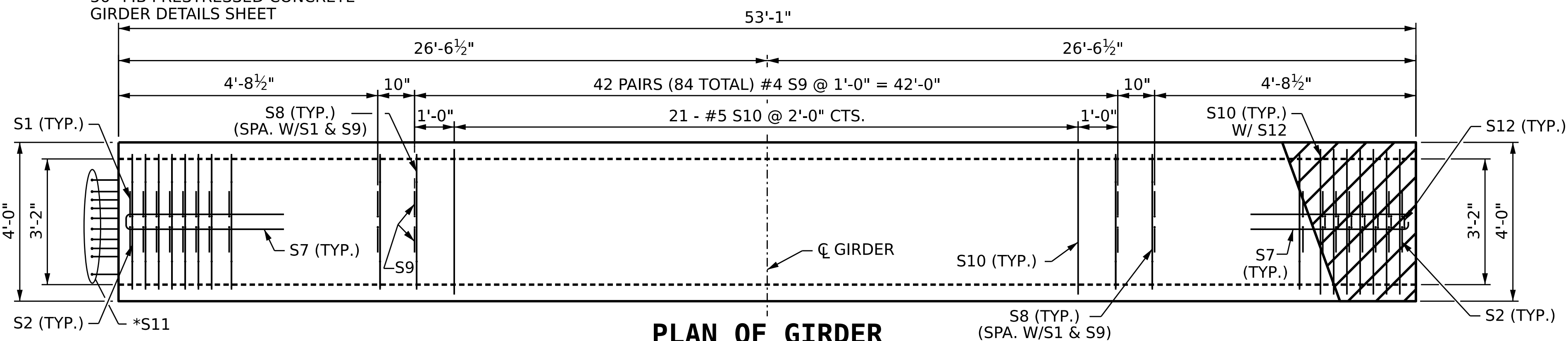
## SECTION A-A

\* FOR S11 BARS, SEE DETAIL "C" OF  
36" FIB PRESTRESSED CONCRETE  
GIRDER DETAILS SHEET

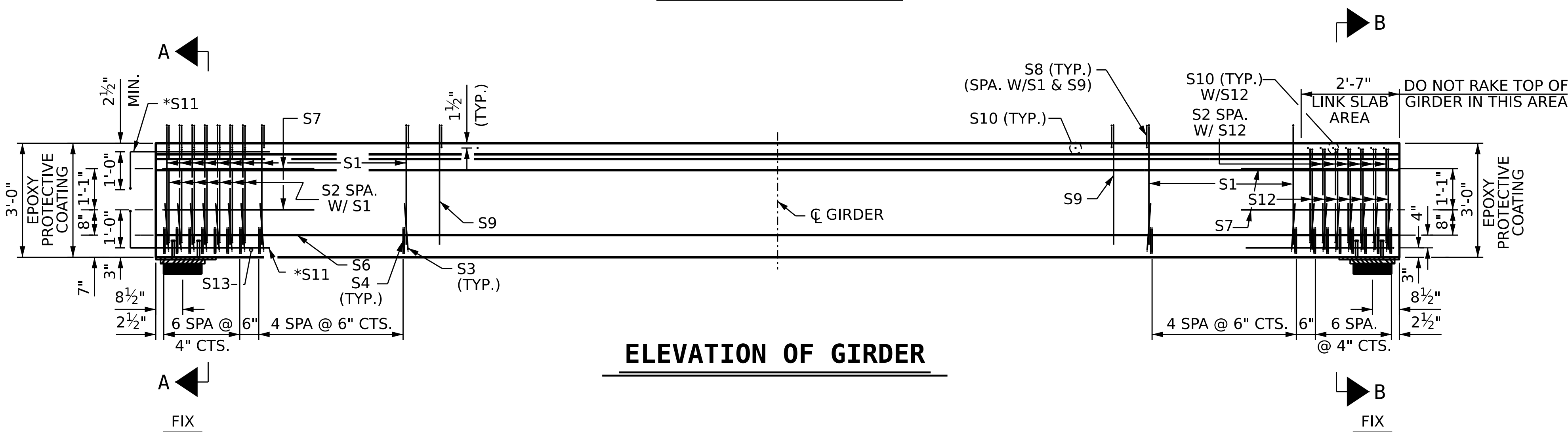
## SECTION B-B

## SECTION C-C

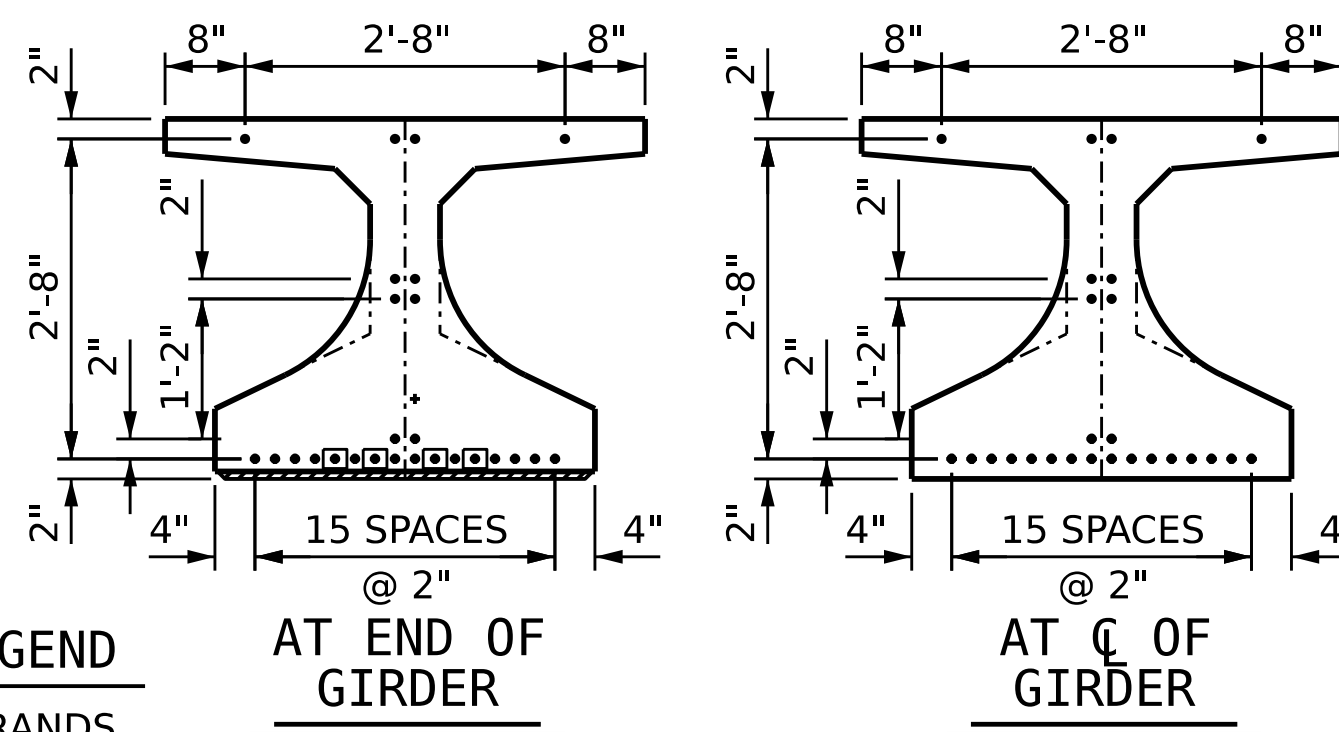
(S8, S9 AND S10 BARS NOT SHOWN)



## PLAN OF GIRDER



## ELEVATION OF GIRDER

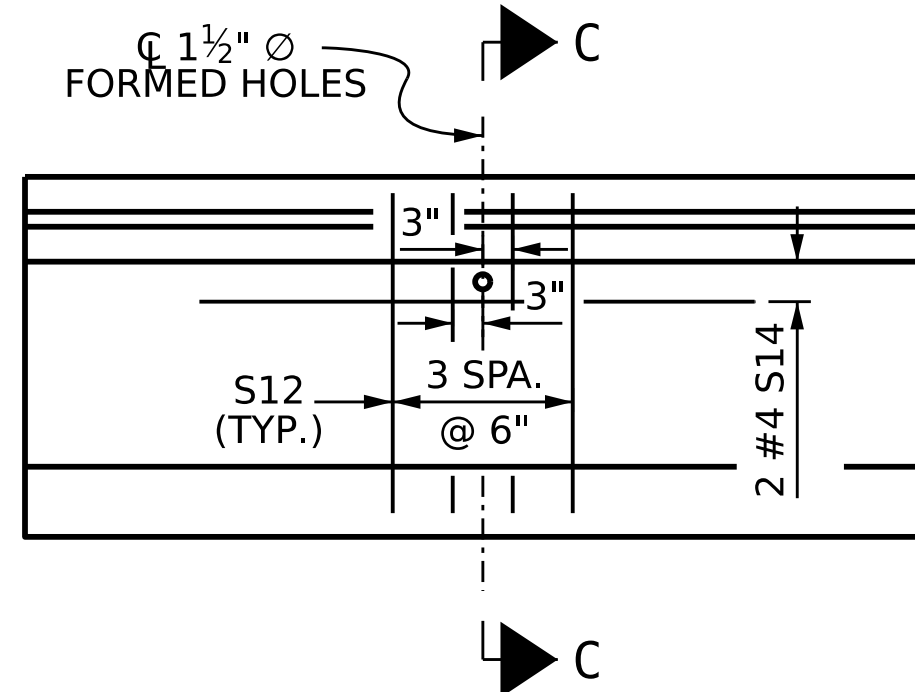


### 0.6" Ø LOW RELAXARION STRAND LAYOUT

Ø 1½" Ø FORMED  
- HOLE. (SEE FRAMING  
PLAN FOR LOCATION)

## DEBONDING LEGEND

- FULLY BONDED STRANDS
- ▣ STRANDS DEBONDED FOR 3'-0" FROM END OF GIRDER

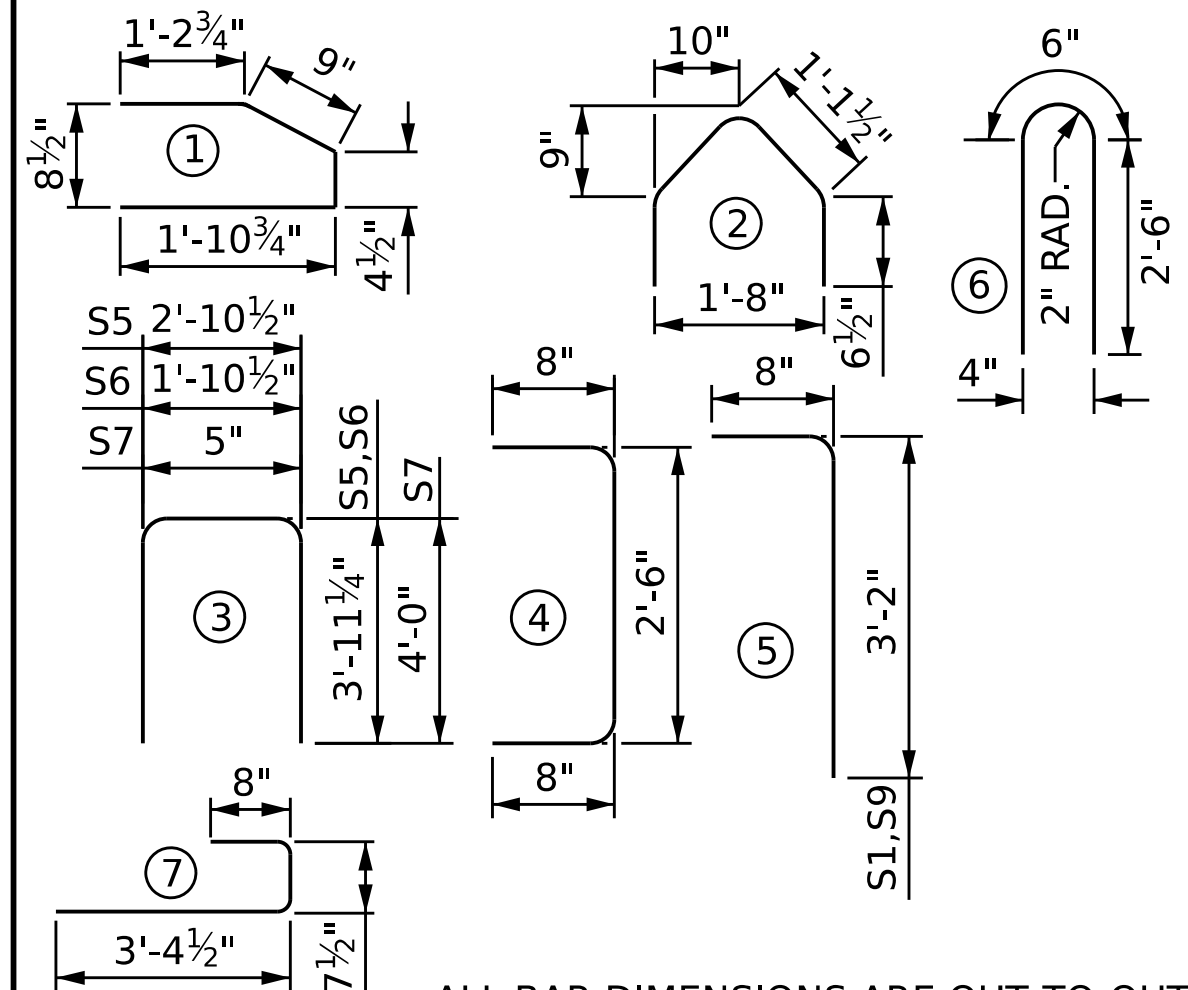


## PARTIAL ELEVATION

SHOWING INTERMEDIATE STEEL DIAPHRAGM  
REINFORCING STEEL FOR GIRDER Nos. 1-5  
(FOR ALL EXTERIOR GIRDERS AND INTERIOR  
GIRDERS WITH  $70^\circ \leq \text{SKEW} \leq 110^\circ$ )

|           |     |   |    |     |       |    |
|-----------|-----|---|----|-----|-------|----|
| EXT. GDR. | S14 | 2 | #4 | STR | 8'-0" | 11 |
| INT. GDR. | S14 | 4 | #4 | STR | 8'-0" | 21 |

## BAR TYPES



ALL BAR DIMENSIONS ARE OUT-TO-OUT

QUANTITIES FOR ONE GIRDER

|              |                      |                       |                        |    |
|--------------|----------------------|-----------------------|------------------------|----|
| ERIOR<br>0") | REINFORCING<br>STEEL | 6,000 PSI<br>CONCRETE | 0.6" Ø<br>L.R. STRANDS |    |
|              | LB.                  | C.Y.                  | No.                    |    |
|              | EXT. GDR.            | 1,451                 | 11.13                  | 26 |
|              | INT. GDR.            | 1,461                 | 11.13                  | 26 |

GIRDERS REQUIRED

| NUMBER | LENGTH | TOTAL LENGTH |
|--------|--------|--------------|
| 5      | 53'-1" | 265'-5"      |
|        |        |              |

PROJECT NO. BR-0150

WILSON COUNTY

BRIDGE NO. 15+05.00 -L-

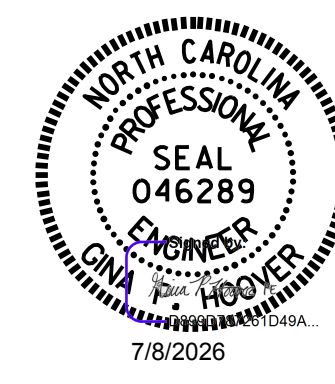
SHEET 1 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

36" FIB PRESTRESSED  
CONCRETE GIRDER  
INTEGRAL END BENT  
LINK SLAB  
SPAN A

| REVISIONS |     |       |     |     |       | SHEET NO.<br><br>S-10 |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                       |

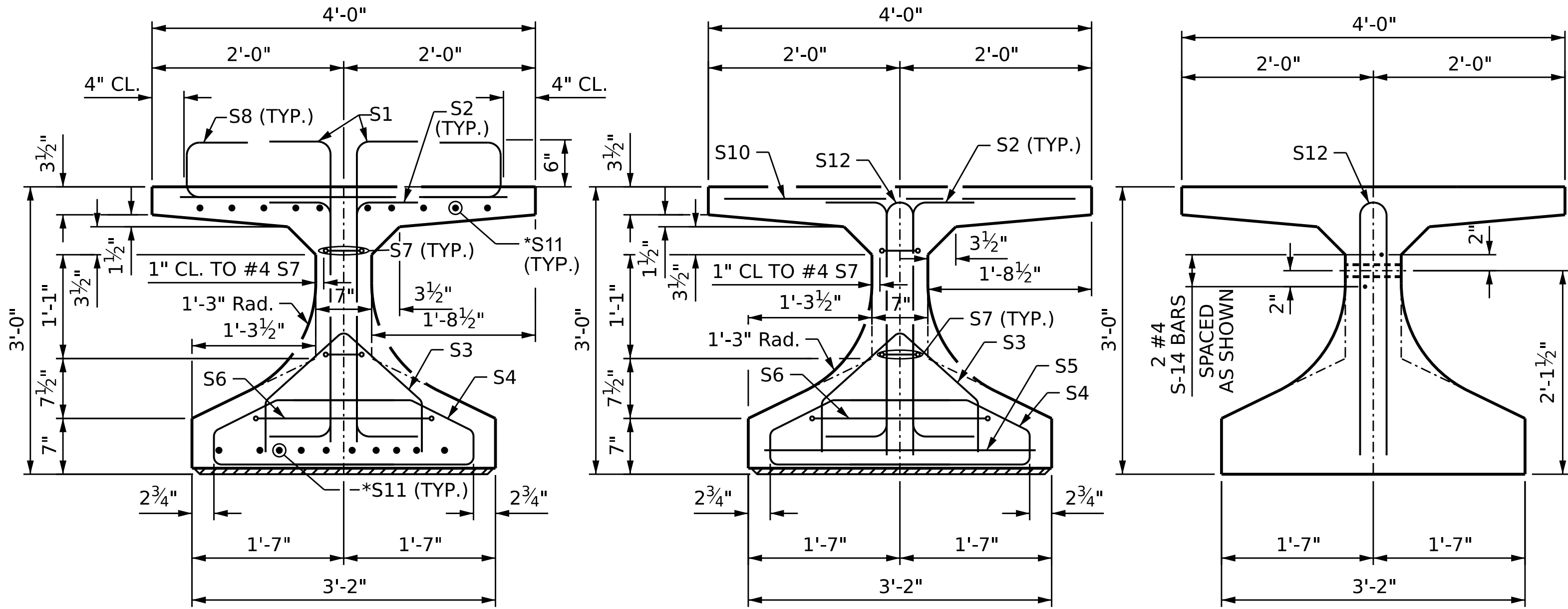
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**PLANS PREPARED BY :**  
 **ARCADIS**  
 175 REGENCY WOODS PLACE, SUITE 400  
 CARY, NORTH CAROLINA 27518  
 NC LICENSE No. C-1869  
 FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRAWN BY : C. P. McGRAW      DATE : 8-24  
 CHECKED BY : G. P. HOOVER      DATE : 7-25  
 DESIGN ENGINEER : G. P. HOOVER      DATE : 7-25

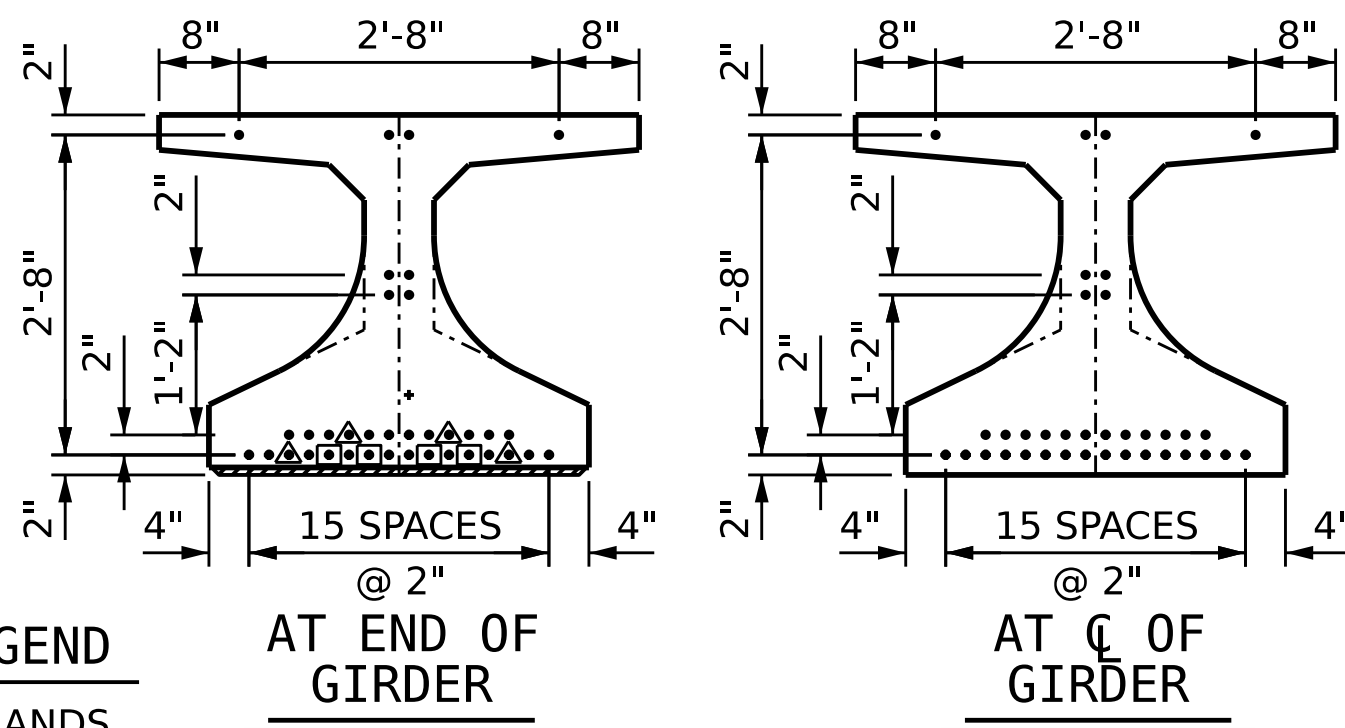




1 1/2" Ø FORMED HOLE. (SEE FRAMING PLAN FOR LOCATION)

DEBONDING LEGEND

- FULLY BONDED STRANDS
- STRANDS DEBONDED FOR 3'-0" FROM END OF GIRDER
- STRANDS DEBONDED FOR 6'-0" FROM END OF GIRDER



0.6" Ø LOW RELAXATION STRAND LAYOUT

EXT. GDR.  
INT. GDR.

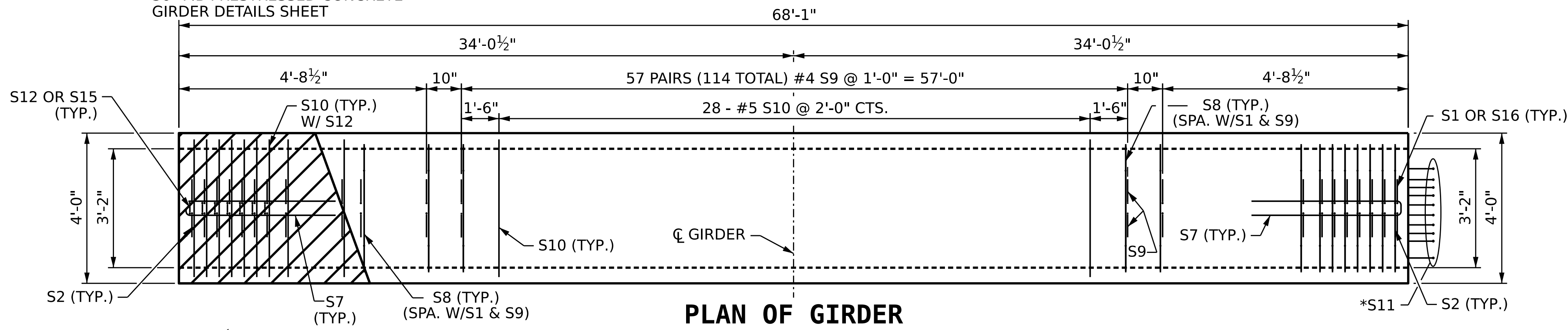
SECTION A-A

\* FOR S11 BARS. SEE DETAIL "C" OF 36" FIB PRESTRESSED CONCRETE GIRDER DETAILS SHEET

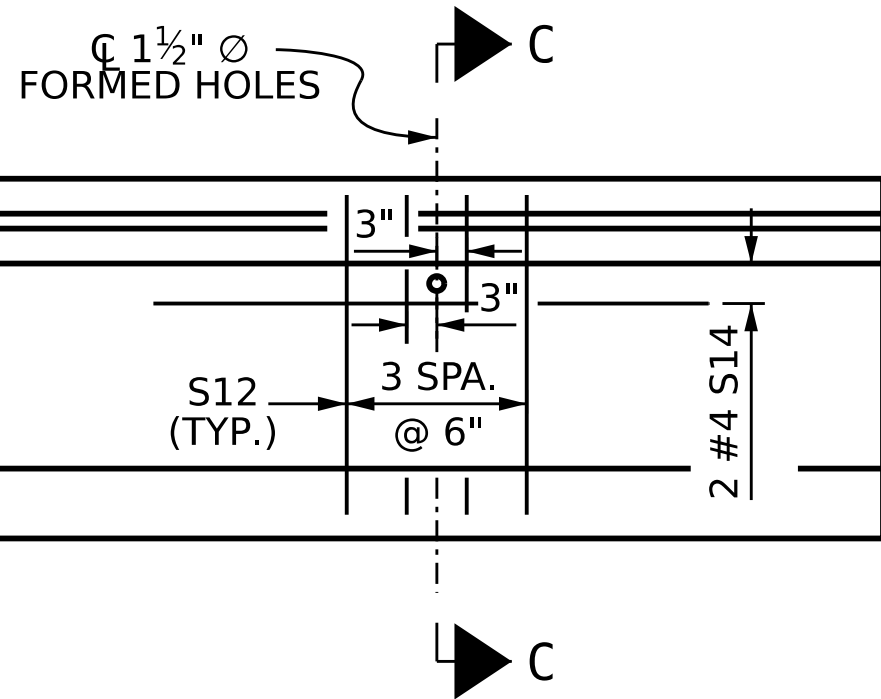
SECTION B-B

SECTION C-C

(S8, S9 AND S10 BARS NOT SHOWN)

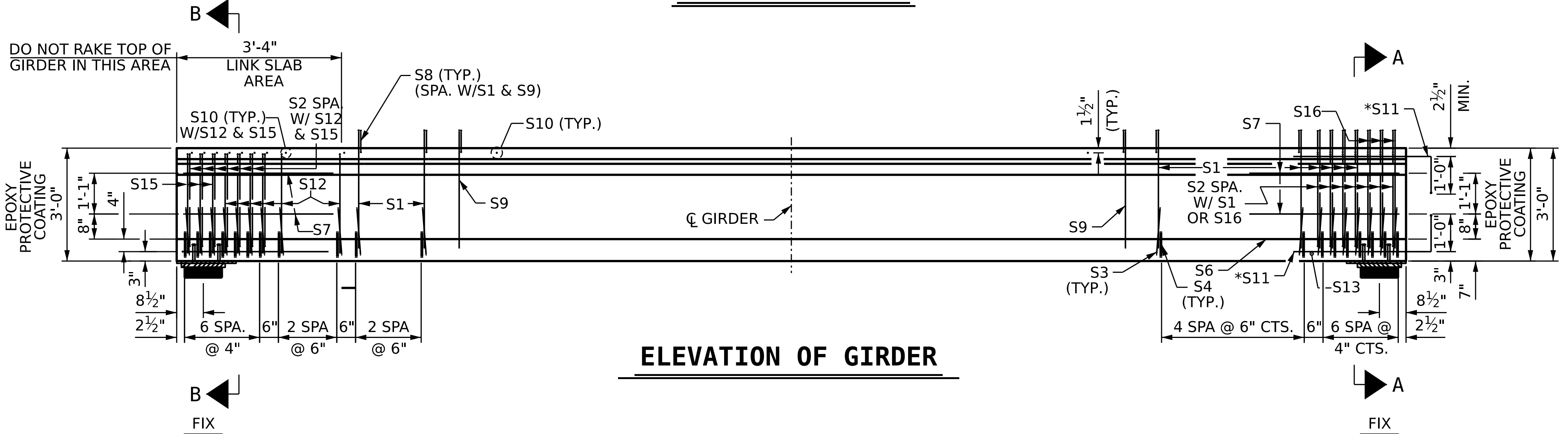


PLAN OF GIRDER



PARTIAL ELEVATION

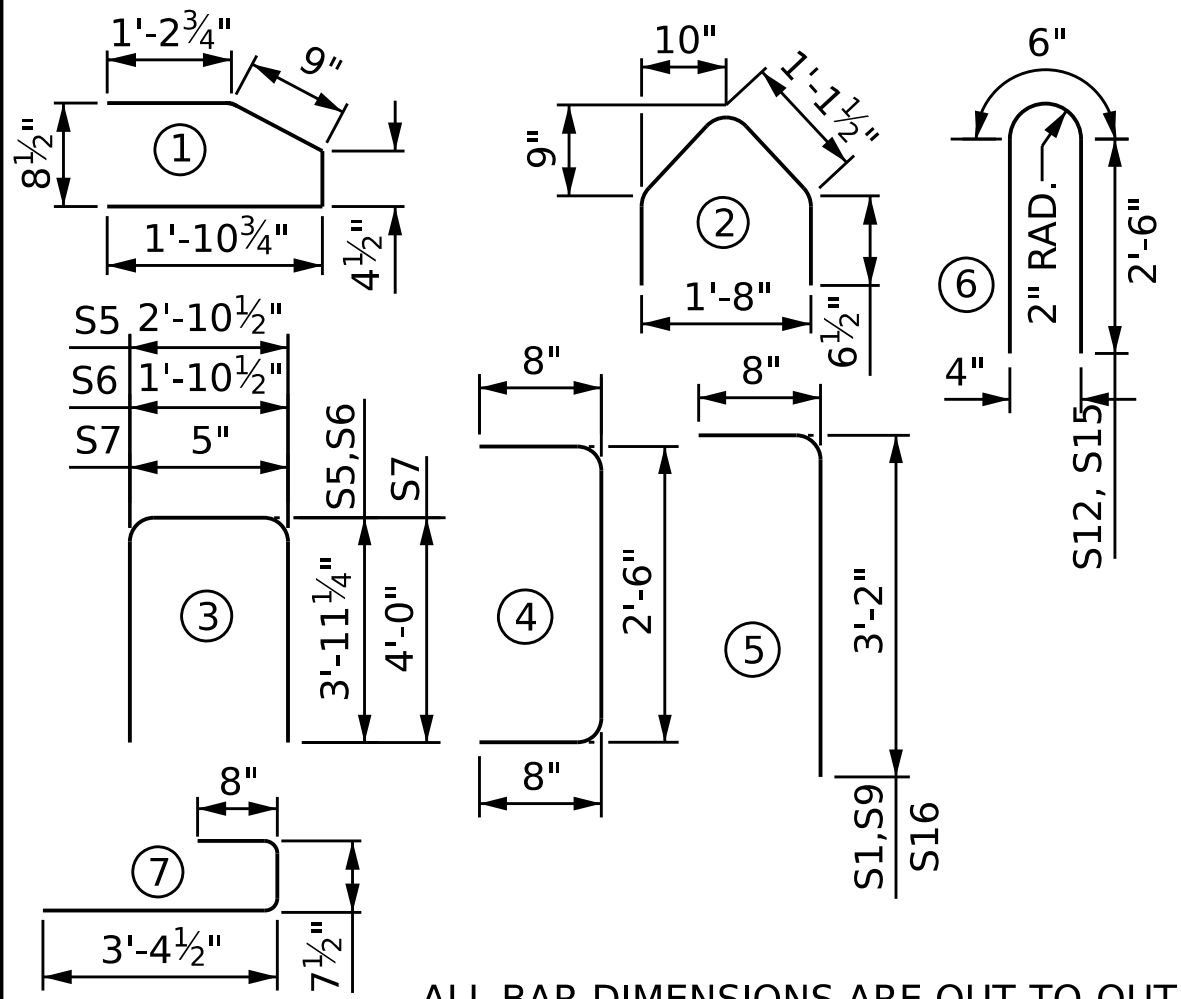
SHOWING INTERMEDIATE STEEL DIAPHRAGM REINFORCING STEEL FOR GIRDER NOS. 1-5 (FOR ALL EXTERIOR GIRDERS AND INTERIOR GIRDERS WITH 70° ≤ SKEW ≤ 110°)



ELEVATION OF GIRDER

| 0.6"Ø L. R. GRADE 270 STRANDS |        |                                     |      |                                     |        |
|-------------------------------|--------|-------------------------------------|------|-------------------------------------|--------|
| AREA (SQUARE INCHES)          |        | ULTIMATE STRENGTH (LBS. PER STRAND) |      | APPLIED PRESTRESS (LBS. PER STRAND) |        |
| 0.217                         |        | 58,600                              |      | 43,950                              |        |
| REINFORCING STEEL FOR ONE GDR |        |                                     |      |                                     |        |
| BAR                           | NUMBER | SIZE                                | TYPE | LENGTH                              | WEIGHT |
| S1                            | 24     | #5                                  | 5    | 3'-10"                              | 96     |
| S2                            | 28     | #5                                  | 4    | 3'-10"                              | 112    |
| S3                            | 24     | #3                                  | 2    | 3'-4"                               | 30     |
| S4                            | 48     | #3                                  | 1    | 4'-3"                               | 77     |
| S5                            | 1      | #5                                  | 3    | 10'-9"                              | 11     |
| S6                            | 2      | #5                                  | 3    | 9'-9"                               | 20     |
| S7                            | 4      | #4                                  | 3    | 8'-5"                               | 22     |
| S8                            | 73     | #5                                  | 7    | 4'-8"                               | 355    |
| S9                            | 116    | #4                                  | 5    | 3'-10"                              | 297    |
| S10                           | 37     | #5                                  | STR  | 3'-8"                               | 142    |
| * S11                         | 20     | #6                                  | STR  | 4'-8"                               | 140    |
| S12                           | 11     | #5                                  | 6    | 5'-6"                               | 63     |
| S13                           | 1      | #3                                  | STR  | 2'-10"                              | 1      |
| S14                           | 2      | #4                                  | STR  | 8'-0"                               | 11     |
| S14                           | 4      | #4                                  | STR  | 8'-0"                               | 21     |
| S15                           | 3      | #6                                  | 6    | 5'-6"                               | 25     |
| S16                           | 6      | #6                                  | 5    | 3'-10"                              | 35     |

BAR TYPES



QUANTITIES FOR ONE GIRDER

| REINFORCING STEEL | 6,000 PSI CONCRETE | 0.6" Ø L.R. STRANDS |
|-------------------|--------------------|---------------------|
| LB.               | C.Y.               | No.                 |
| EXT. GDR.         | 1,437              | 36                  |
| INT. GDR.         | 1,447              | 36                  |

GIRDERS REQUIRED

| NUMBER | LENGTH | TOTAL LENGTH |
|--------|--------|--------------|
| 5      | 68'-1" | 340'-5"      |

PROJECT NO. BR-0150

WILSON COUNTY

BRIDGE NO. 15 + 05.00 -L-

SHEET 2 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

36" FIB PRESTRESSED  
CONCRETE GIRDER  
INTEGRAL END BENT  
LINK SLAB  
SPAN B

| REVISIONS    |     |       |     | SHEET NO. |
|--------------|-----|-------|-----|-----------|
| NO.          | BY: | DATE: | NO. | S-11      |
| 1            |     |       | 3   |           |
| 2            |     |       | 4   |           |
| TOTAL SHEETS |     |       |     | 26        |

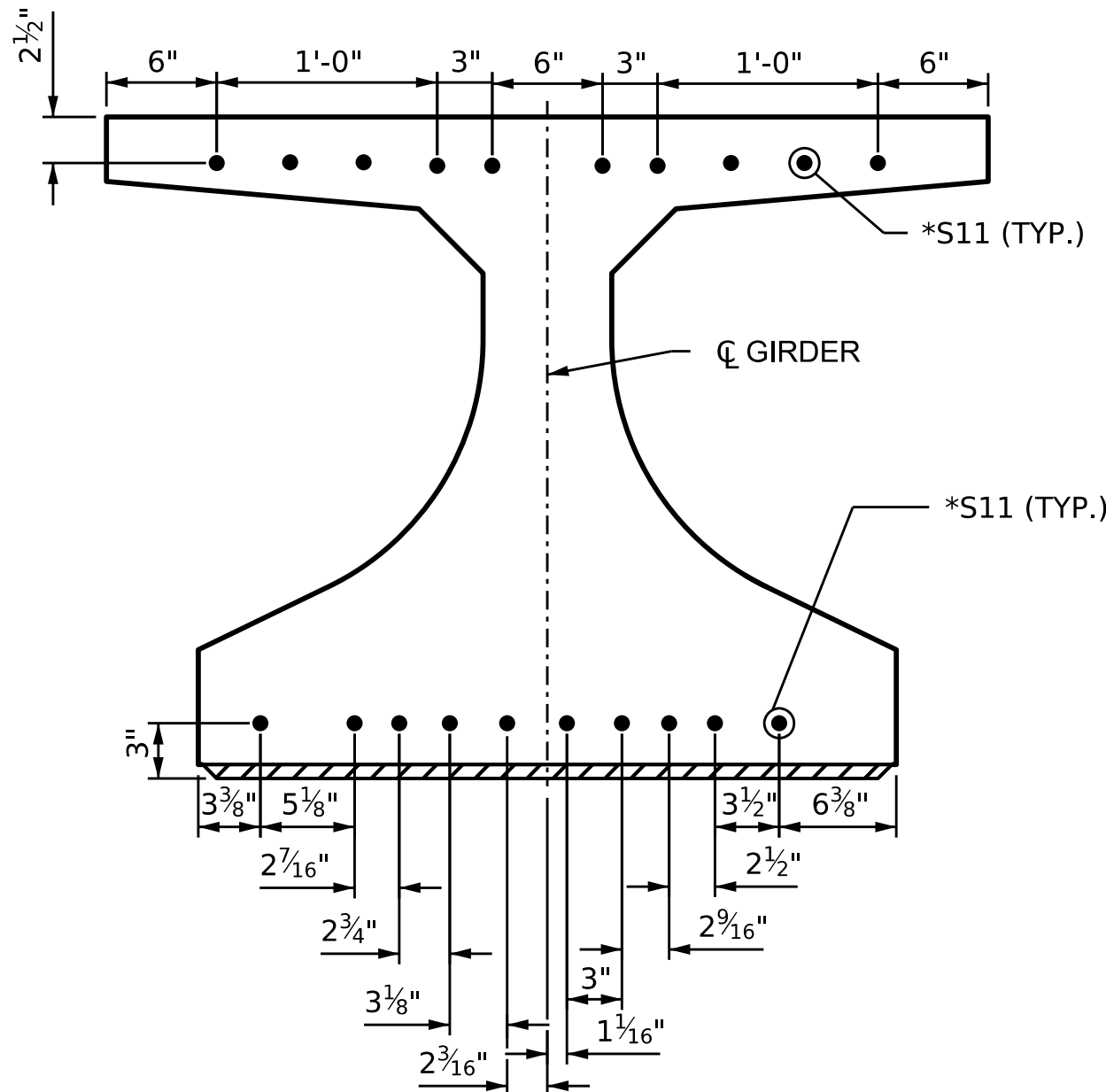
DRAWN BY: C. P. McGRAW  
CHECKED BY: G. P. HOOVER  
DESIGN ENGINEER: G. P. HOOVER  
DATE: 8-24  
DATE: 7-25  
DATE: 7-25

PLANS PREPARED BY:  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

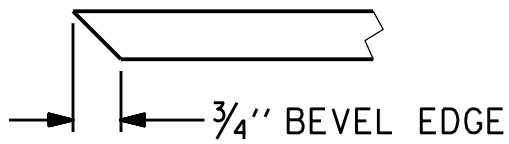




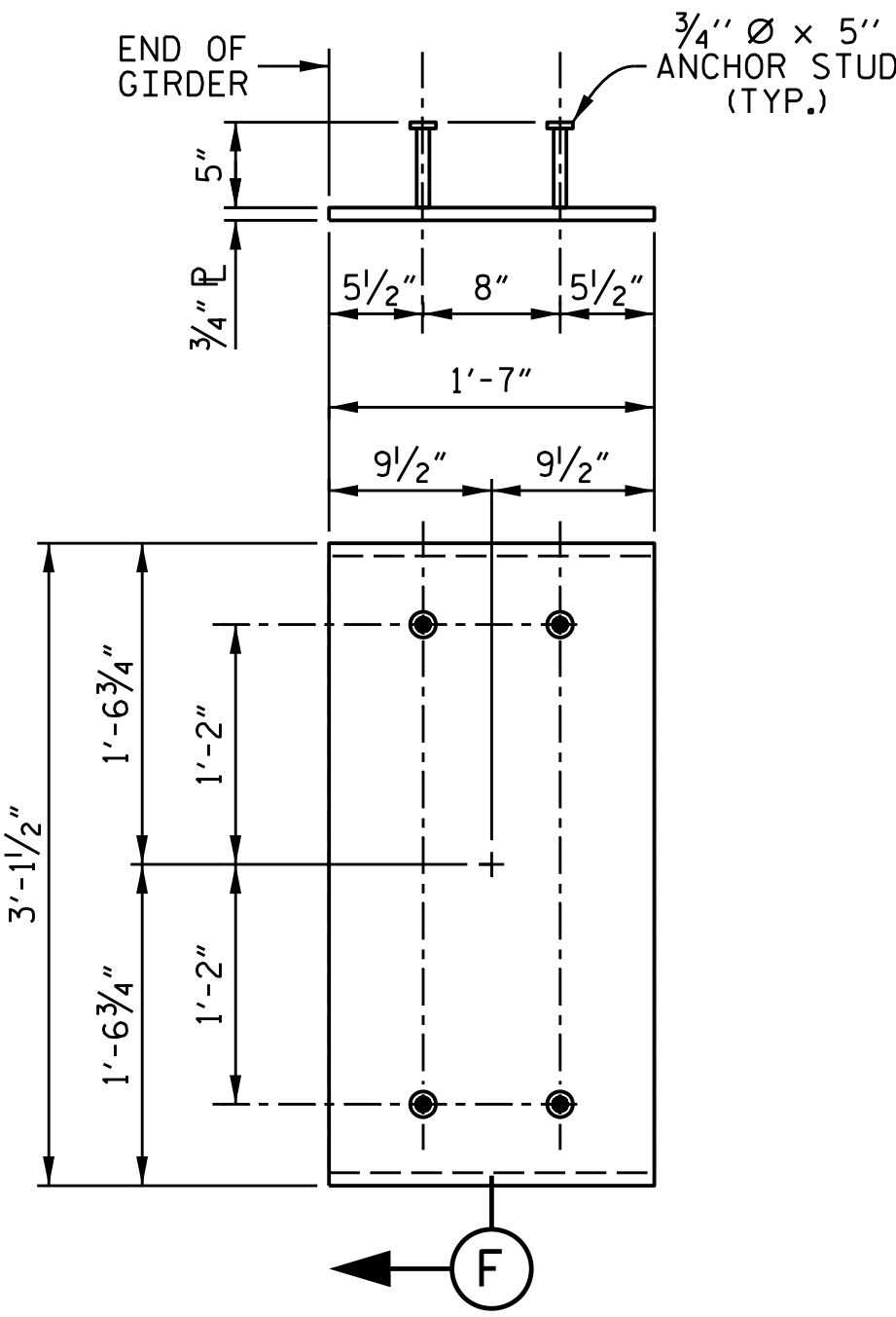


DETAIL "C"  
(FOR FLORIDA I-BEAM)

\* NOTE: S11 BARS SHALL BE BENT BEFORE SHIPMENT. HEAT BENDING SHALL NOT BE ALLOWED.



SECTION "F"  
(SEE NOTES)



EMBEDDED PLATE "B-1" DETAILS  
FOR FIB GIRDER  
(2 REQUIRED PER GIRDER)

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL SHALL BE GRADE 60.

APPLY EPOXY PROTECTIVE COATING TO END OF GIRDER SURFACES INDICATED IN ELEVATION VIEW.

EMBEDDED PLATE "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THROUGH 1020 OR APPROVED EQUAL, AND SHALL MEET THE TYPE "B" REQUIREMENTS OF SUBSECTION 7.3 OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

AT ENDS OF GIRDERS TO BE EMBEDDED IN CONCRETE DIAPHRAGMS OR END WALLS, PRESTRESSING STRANDS MAY EXTEND A MAXIMUM OF 2" BEYOND THE GIRDER ENDS. OTHERWISE, PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE GIRDER ENDS.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 4,800 PSI.

DEPENDING ON THE TYPE OF SYSTEM USED TO SUPPORT THE DECK SLAB FORMS, PRESET ANCHORS MAY BE NECESSARY IN THE PRESTRESSED CONCRETE GIRDER.

THE TOP SURFACE OF THE GIRDER, EXCLUDING THE OUTSIDE 4", SHALL BE RAKED TO A DEPTH OF 1/4".

WHEN DRAPED STRANDS ARE DETAILED, THE LONGITUDINAL LOCATION OF THE HOLD DOWN DEVICES SHALL BE WITHIN 6" OF THE LOCATION SHOWN AND THE CENTER OF GRAVITY OF THE GROUP OF DRAPED STRANDS SHALL BE LOCATED WITHIN 1/2" OF THE THEORETICAL LOCATION SHOWN.

THE CONTRACTOR HAS THE OPTION TO PROVIDE, AT NO ADDITIONAL COST TO THE DEPARTMENT, 2 ADDITIONAL STRANDS AT THE TOP OF THE GIRDER TO FACILITATE TYING OF THE REINFORCING STEEL. THESE STRANDS SHALL BE PULLED TO A LOAD OF 4,500 LBS.

THE FOUR STRANDS IN THE TOP FLANGE SHALL BE PULLED TO A LOAD OF 10,000 LBS.

CAMBER AND DEAD LOAD DEFLECTIONS

| SPAN A                               |        |       |       |         |        |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |       |
|--------------------------------------|--------|-------|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|-------|
| GIRDERS 1 & 5                        | ℄ BRG. | 0.05  | 0.10  | 0.15    | 0.20   | 0.25   | 0.30   | 0.35   | 0.40   | 0.45   | 0.50   | 0.55   | 0.60   | 0.65  | 0.70   | 0.75   | 0.80   | 0.85   | 0.90   | 0.95  | ℄ BRG. |       |
| CAMBER (GIRDER ALONE IN PLACE)       | †      | 0.000 | 0.024 | 0.045   | 0.064  | 0.081  | 0.094  | 0.106  | 0.115  | 0.121  | 0.125  | 0.126  | 0.125  | 0.121 | 0.115  | 0.106  | 0.094  | 0.081  | 0.064  | 0.045 | 0.024  | 0.000 |
| DEFLECTION DUE TO SUPERIMPOSED D.L.* | †      | 0.000 | 0.013 | 0.024   | 0.034  | 0.042  | 0.049  | 0.055  | 0.060  | 0.063  | 0.065  | 0.066  | 0.065  | 0.063 | 0.060  | 0.055  | 0.049  | 0.042  | 0.034  | 0.024 | 0.013  | 0.000 |
| FINAL CAMBER                         | †      | 0     | 1⁄8"  | 1⁄4"    | 3⁄8"   | 1⁄2"   | 5⁄16"  | 5⁄8"   | 11⁄16" | 11⁄16" | 3⁄4"   | 11⁄16" | 11⁄16" | 5⁄8"  | 5⁄8"   | 9⁄16"  | 7 "    | / "    | 1⁄4"   | 1⁄8"  | 0      |       |
| GIRDERS 2 THRU 4                     | ℄ BRG. | 0.05  | 0.10  | 0.15    | 0.20   | 0.25   | 0.30   | 0.35   | 0.40   | 0.45   | 0.50   | 0.55   | 0.60   | 0.65  | 0.70   | 0.75   | 0.80   | 0.85   | 0.90   | 0.95  | ℄ BRG. |       |
| CAMBER (GIRDER ALONE IN PLACE)       | †      | 0.000 | 0.024 | 0.045   | 0.064  | 0.081  | 0.094  | 0.106  | 0.115  | 0.121  | 0.125  | 0.126  | 0.125  | 0.121 | 0.115  | 0.106  | 0.094  | 0.081  | 0.064  | 0.045 | 0.024  | 0.000 |
| DEFLECTION DUE TO SUPERIMPOSED D.L.* | †      | 0.000 | 0.013 | 0.025   | 0.036  | 0.045  | 0.052  | 0.059  | 0.063  | 0.067  | 0.069  | 0.070  | 0.069  | 0.067 | 0.063  | 0.059  | 0.052  | 0.045  | 0.036  | 0.025 | 0.013  | 0.000 |
| FINAL CAMBER                         | †      | 0     | 1⁄8"  | 3⁄16" " | 5⁄16"  | 7⁄16"  | 1⁄2"   | 9⁄16"  | 5⁄8"   | 5⁄8"   | 11⁄16" | 11⁄16" | 11⁄16" | 5⁄8"  | 5⁄8"   | 9⁄16"  | 1⁄2"   | 7⁄16"  | 5⁄16"  | 1⁄4"  | 1⁄8"   | 0     |
| SPAN B                               |        |       |       |         |        |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |       |
| GIRDERS 1 & 5                        | ℄ BRG. | 0.05  | 0.10  | 0.15    | 0.20   | 0.25   | 0.30   | 0.35   | 0.40   | 0.45   | 0.50   | 0.55   | 0.60   | 0.65  | 0.70   | 0.75   | 0.80   | 0.85   | 0.90   | 0.95  | ℄ BRG. |       |
| CAMBER (GIRDER ALONE IN PLACE)       | †      | 0.000 | 0.059 | 0.112   | 0.159  | 0.199  | 0.233  | 0.261  | 0.283  | 0.299  | 0.308  | 0.311  | 0.308  | 0.299 | 0.283  | 0.261  | 0.233  | 0.199  | 0.159  | 0.112 | 0.059  | 0.000 |
| DEFLECTION DUE TO SUPERIMPOSED D.L.* | †      | 0.000 | 0.034 | 0.065   | 0.092  | 0.115  | 0.135  | 0.151  | 0.164  | 0.173  | 0.178  | 0.180  | 0.178  | 0.173 | 0.164  | 0.151  | 0.135  | 0.115  | 0.092  | 0.065 | 0.034  | 0.000 |
| FINAL CAMBER                         | †      | 0     | 5⁄16" | 9⁄16"   | 13⁄16" | 1"     | 13⁄16" | 15⁄16" | 17⁄16" | 11⁄2"  | 19⁄16" | 19⁄16" | 19⁄16" | 11⁄2" | 17⁄16" | 15⁄16" | 13⁄16" | 1"     | 13⁄16" | 9⁄16" | 5⁄16"  | 0     |
| GIRDERS 2 THRU 4                     | ℄ BRG. | 0.05  | 0.10  | 0.15    | 0.20   | 0.25   | 0.30   | 0.35   | 0.40   | 0.45   | 0.50   | 0.55   | 0.60   | 0.65  | 0.70   | 0.75   | 0.80   | 0.85   | 0.90   | 0.95  | ℄ BRG. |       |
| CAMBER (GIRDER ALONE IN PLACE)       | †      | 0.000 | 0.059 | 0.112   | 0.159  | 0.199  | 0.233  | 0.261  | 0.283  | 0.299  | 0.308  | 0.311  | 0.308  | 0.299 | 0.283  | 0.261  | 0.233  | 0.199  | 0.159  | 0.112 | 0.059  | 0.000 |
| DEFLECTION DUE TO SUPERIMPOSED D.L.* | †      | 0.000 | 0.036 | 0.069   | 0.097  | 0.122  | 0.143  | 0.160  | 0.173  | 0.183  | 0.188  | 0.190  | 0.188  | 0.183 | 0.173  | 0.160  | 0.143  | 0.122  | 0.097  | 0.069 | 0.036  | 0.000 |
| FINAL CAMBER                         | †      | 0     | 1⁄4"  | 1⁄2"    | 3⁄4"   | 15⁄16" | 11⁄16" | 11⁄4"  | 15⁄16" | 13⁄8"  | 17⁄16" | 17⁄16" | 17⁄16" | 13⁄8" | 15⁄16" | 11⁄4"  | 17⁄16" | 15⁄16" | 3⁄4"   | 1⁄2"  | 1⁄4"   | 0     |

\* INCLUDES FUTURE WEARING SURFACE

ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT "FINAL CAMBER", WHICH IS GIVEN IN INCHES (FRACTION FORM).

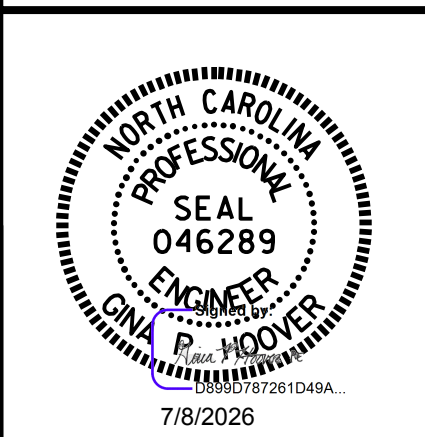
PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
36" FIB PRESTRESSED  
CONCRETE GIRDER DETAILS

| REVISIONS |     |       |     |     |       | SHEET No.<br>S-12  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                    |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 7-23  
DESIGN ENGINEER : G. P. HOOVER DATE : 7-23



STRUCTURAL STEEL NOTES

ALL INTERMEDIATE DIAPHRAGM STEEL AND CONNECTOR PLATES SHALL BE AASHTO M270 GRADE 50 OR APPROVED EQUAL.

TENSION ON THE ASTM A325 BOLTS THROUGH THE ANGLE MEMBER SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TENSION ON THE ASTM A449 BOLTS THROUGH THE GIRDER WEB SHALL BE SNUG TIGHTENED FOLLOWED BY AN ADDITIONAL 1/4 TURN.

THE PLATES, BENT PLATES, AND ANGLES SHALL BE GALVANIZED OR METALLIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

FOR METALLIZATION, APPLY AN 8 MIL THICK 99.99 PERCENT ZINC (W-Zn-1) THERMAL SPRAYED COATING WITH A 0.5 MIL THICK SEAL COAT TO ALL STEEL DIAPHRAGM SURFACES IN ACCORDANCE WITH THE THERMAL SPRAYED COATINGS SPECIAL PROVISION AND SECTION 442 OF THE STANDARD SPECIFICATIONS.

GALVANIZE THE HIGH STRENGTH BOLTS, NUTS, WASHERS AND DIRECT TENSION INDICATORS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

USE AN ASTM F436 HARDENED WASHER WITH STANDARD AND SLOTTED HOLES UNDER EACH BOLT HEAD AND NUT.

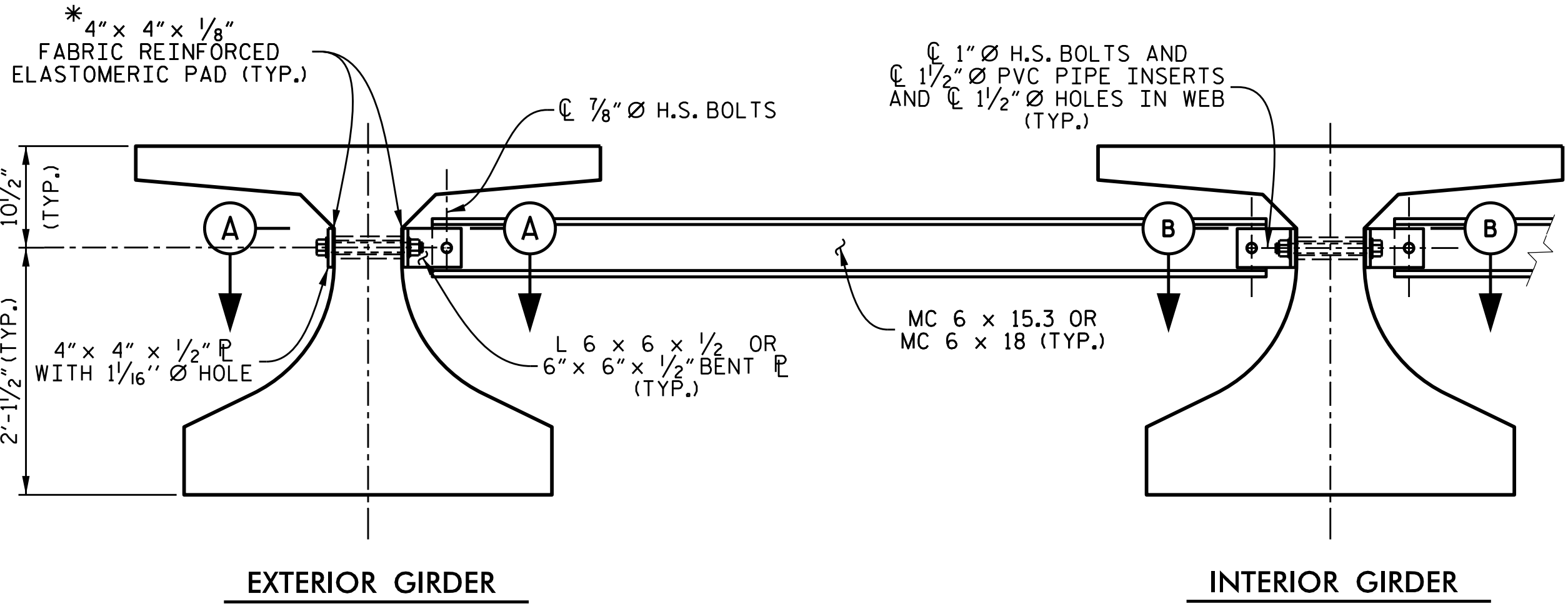
FOR BOLTS THROUGH THE GIRDER WEB, PROVIDE SUFFICIENT LENGTH OF THREADS ON ALL BOLTS TO ACCOMMODATE WASHERS AND THE THICKNESS OF CONNECTING MEMBER PLUS AT LEAST 1/4" PROJECTION BEYOND THE NUT.

INTERMEDIATE DIAPHRAGM ASSEMBLY SHALL COMPLY WITH SECTION 1072 OF THE STANDARD SPECIFICATIONS.

SUBMIT TWO SETS OF WORKING DRAWINGS FOR THE INTERMEDIATE DIAPHRAGM ASSEMBLY FOR REVIEW, COMMENTS AND ACCEPTANCE. AFTER REVIEW, COMMENTS, AND ACCEPTANCE, SUBMIT SEVEN SETS FOR DISTRIBUTION.

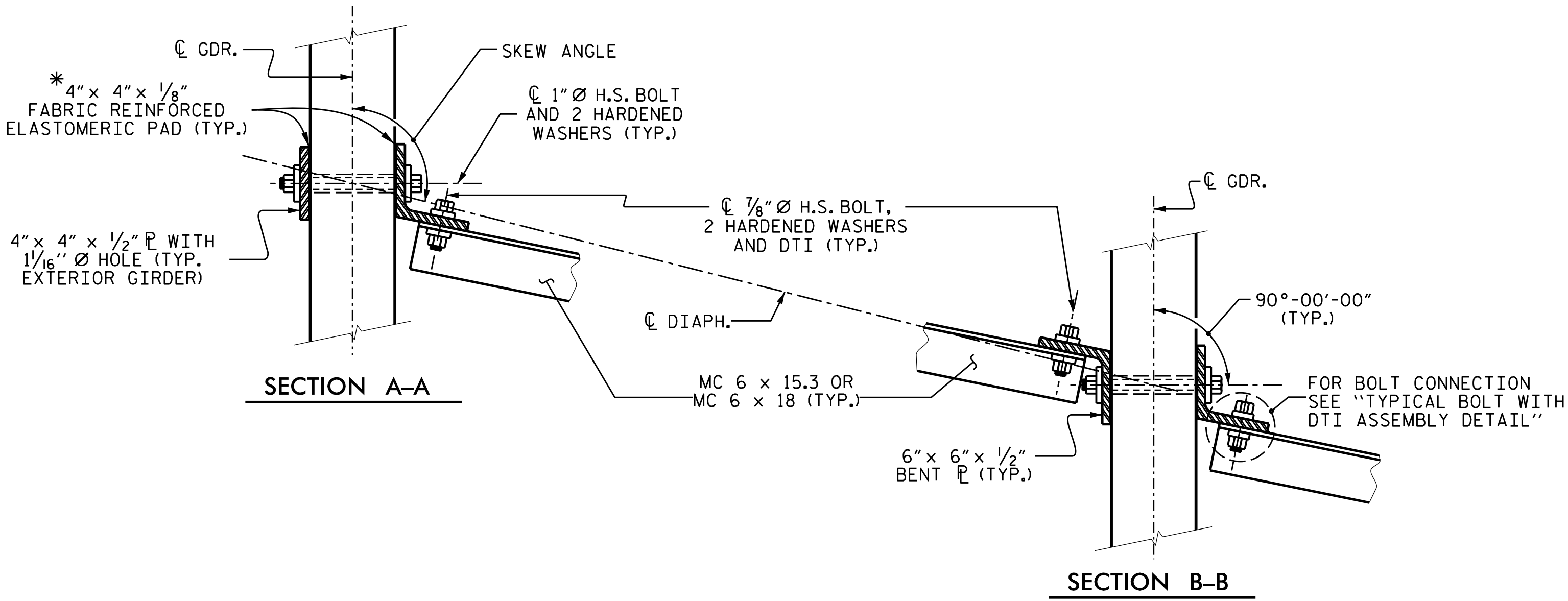
IN THE EXTERIOR BAYS, PLACE TEMPORARY STRUTS BETWEEN PRESTRESSED GIRDERS ADJACENT TO THE STEEL DIAPHRAGMS. STRUTS SHALL REMAIN IN PLACE 3 DAYS AFTER CONCRETE IS PLACED.

THE COST OF THE STEEL DIAPHRAGMS AND ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE GIRDERS.

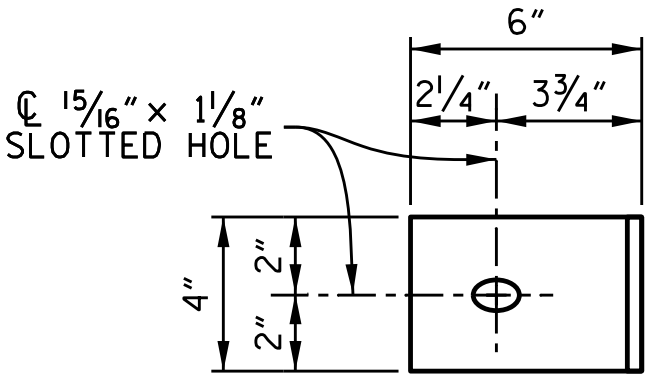


PART SECTION AT INTERMEDIATE DIAPHRAGM  
(36" FLORIDIA I-BEAM)

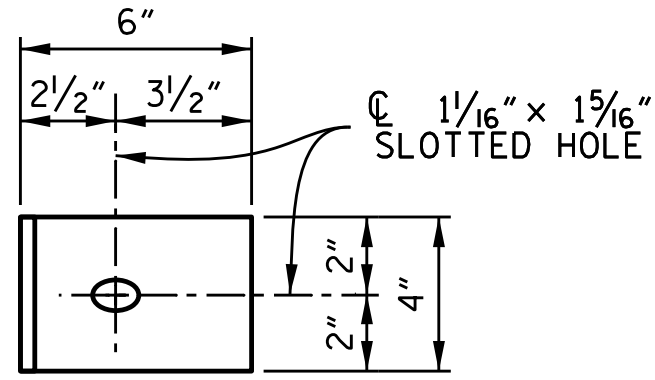
\*PLACE ELASTOMERIC PADS AS NECESSARY TO PROVIDE A FLAT MOUNTING SURFACE BETWEEN THE STEEL AND CONCRETE



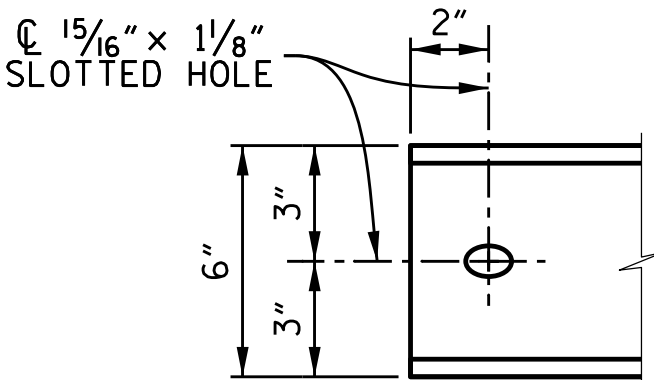
CONNECTION DETAILS  
(90° < SKEW ≤ 110° SHOWN  
70° ≤ SKEW < 90° SIMILAR)



DIAPHRAGM FACE



WEB FACE



CHANNEL END

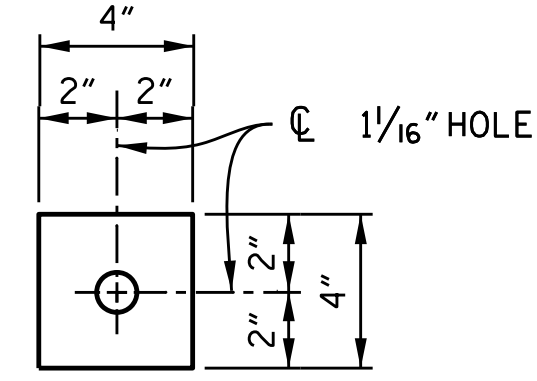
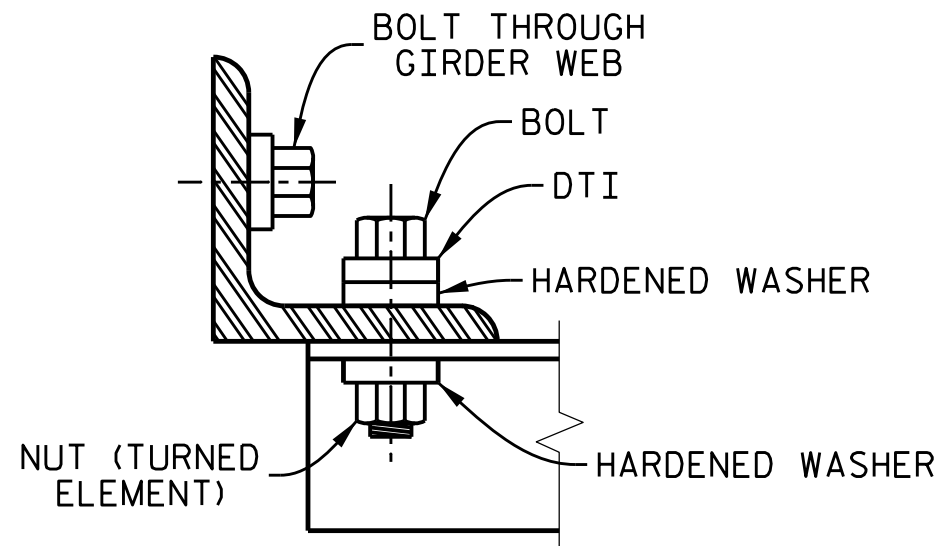


PLATE DETAILS



TYPICAL BOLT WITH DTI ASSEMBLY DETAIL

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
INTERMEDIATE STEEL DIAPHRAGMS  
FOR 36" FLORIDIA I-BEAM  
PRESTRESSED CONCRETE GIRDERS

| REVISIONS |     |       |     |     |       | SHEET No.<br>5-13 |
|-----------|-----|-------|-----|-----|-------|-------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                   |
| 1         |     |       | 3   |     |       | TOTAL SHEETS      |
| 2         |     |       | 4   |     |       | 26                |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24



NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF ½ TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

THE 2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

STEEL SOLE PLATES, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PRIOR TO WELDING, GRIND THE GALVANIZED SURFACE OF THE PORTION OF THE EMBEDDED PLATE AND SOLE PLATE THAT ARE TO BE WELDED. AFTER WELDING, DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

WHEN WELDING THE SOLE PLATE TO THE EMBEDDED PLATE IN THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

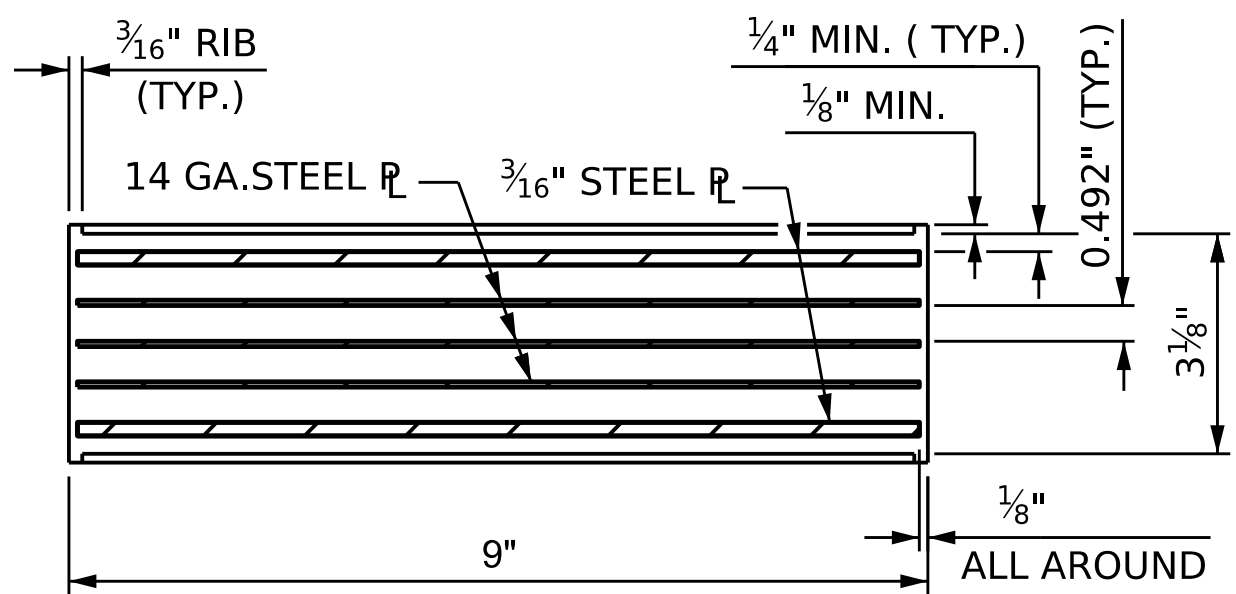
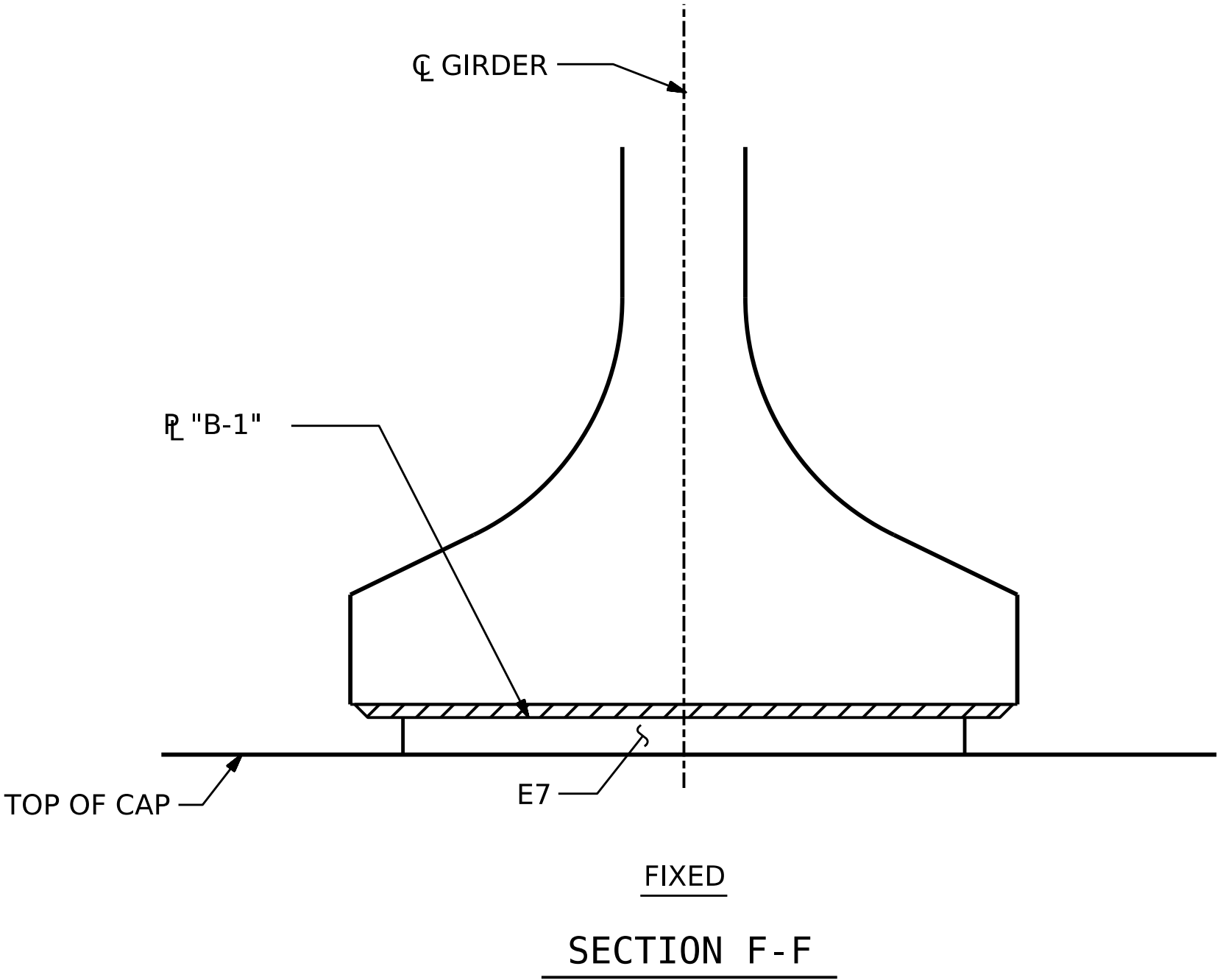
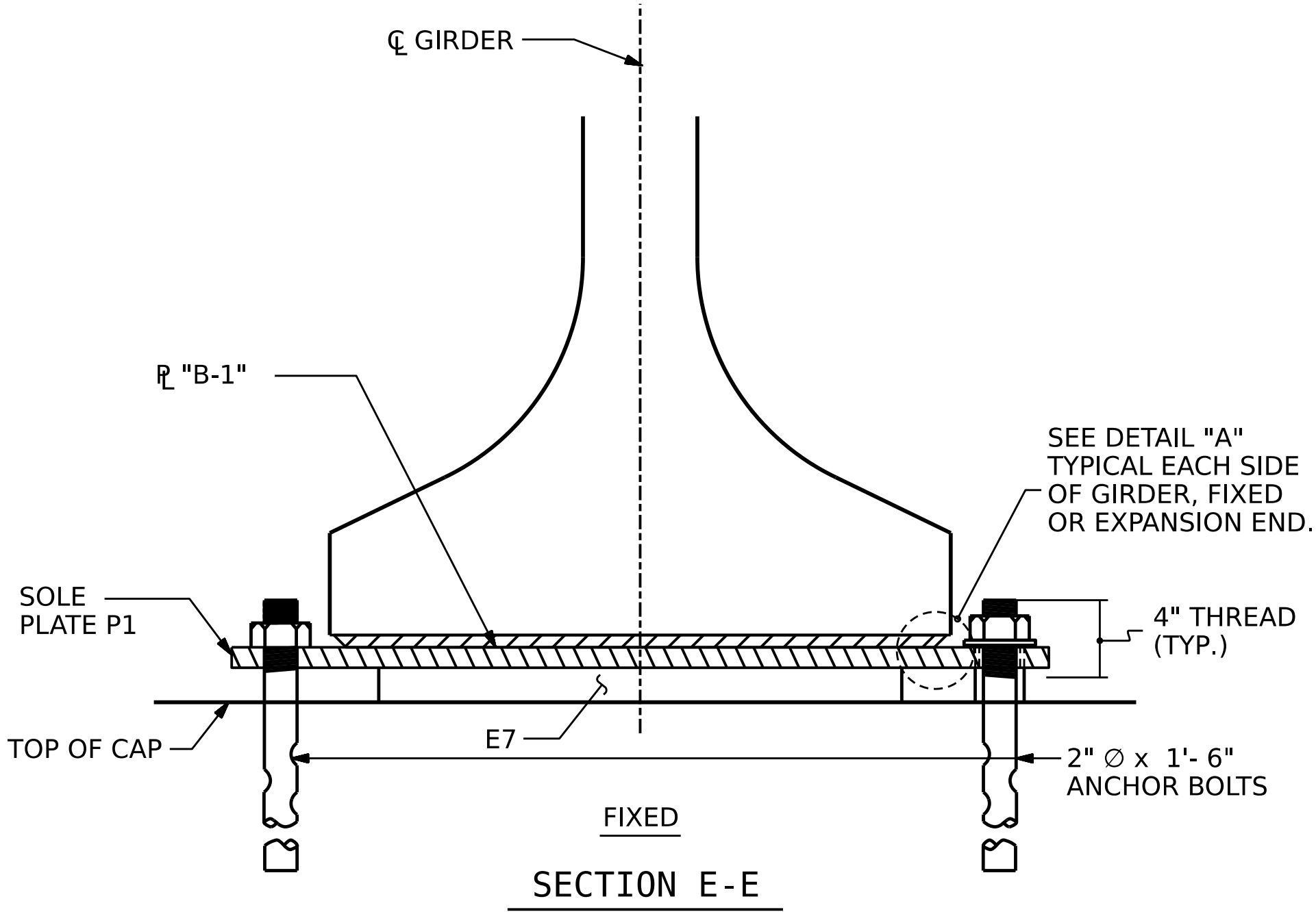
SOLE PLATE "P", BOLTS, NUTS, WASHERS, AND PIPE SLEEVE SHALL BE INCLUDED IN THE PAY ITEM FOR PRESTRESSED CONCRETE GIRDERS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. NO SHOP DRAWINGS ARE REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

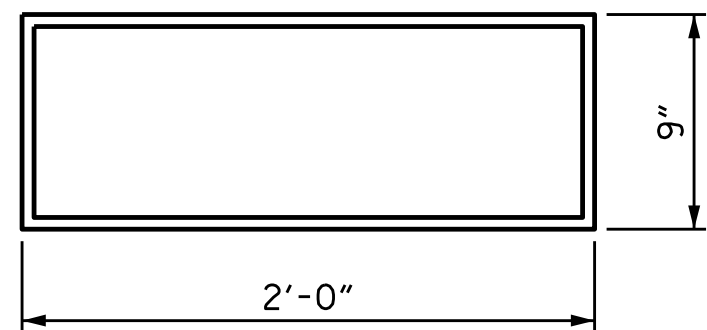
ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

THE ELASTOMER IN THE STEEL REINFORCED BEARINGS SHALL HAVE A SHEAR MODULUS OF 0.160 KSI, IN ACCORDANCE WITH AASHTO M251.

ALL SOLE PLATES SHALL BE AASHTO M270 GRADE 36.

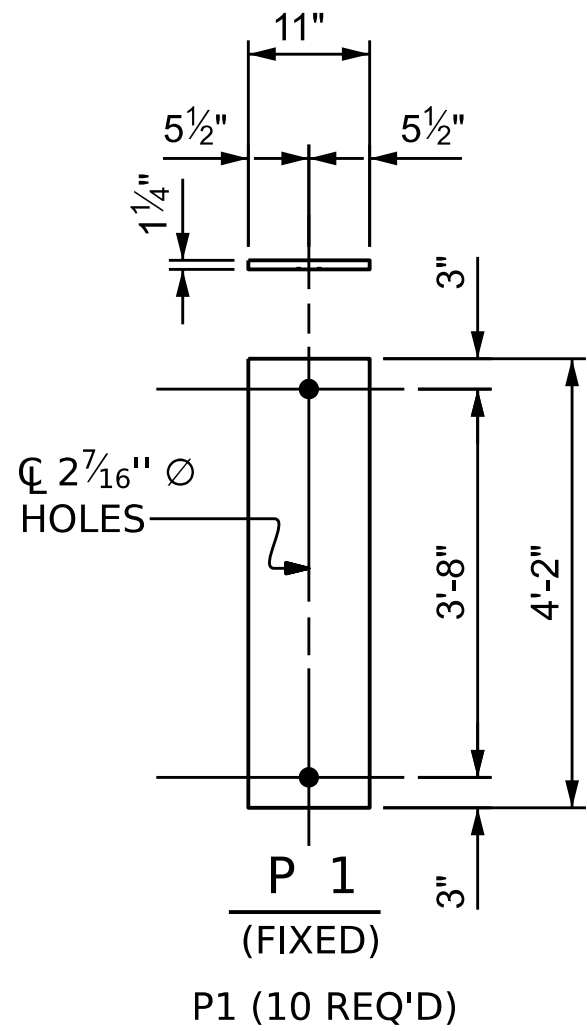


TYPICAL SECTION OF ELASTOMERIC BEARINGS

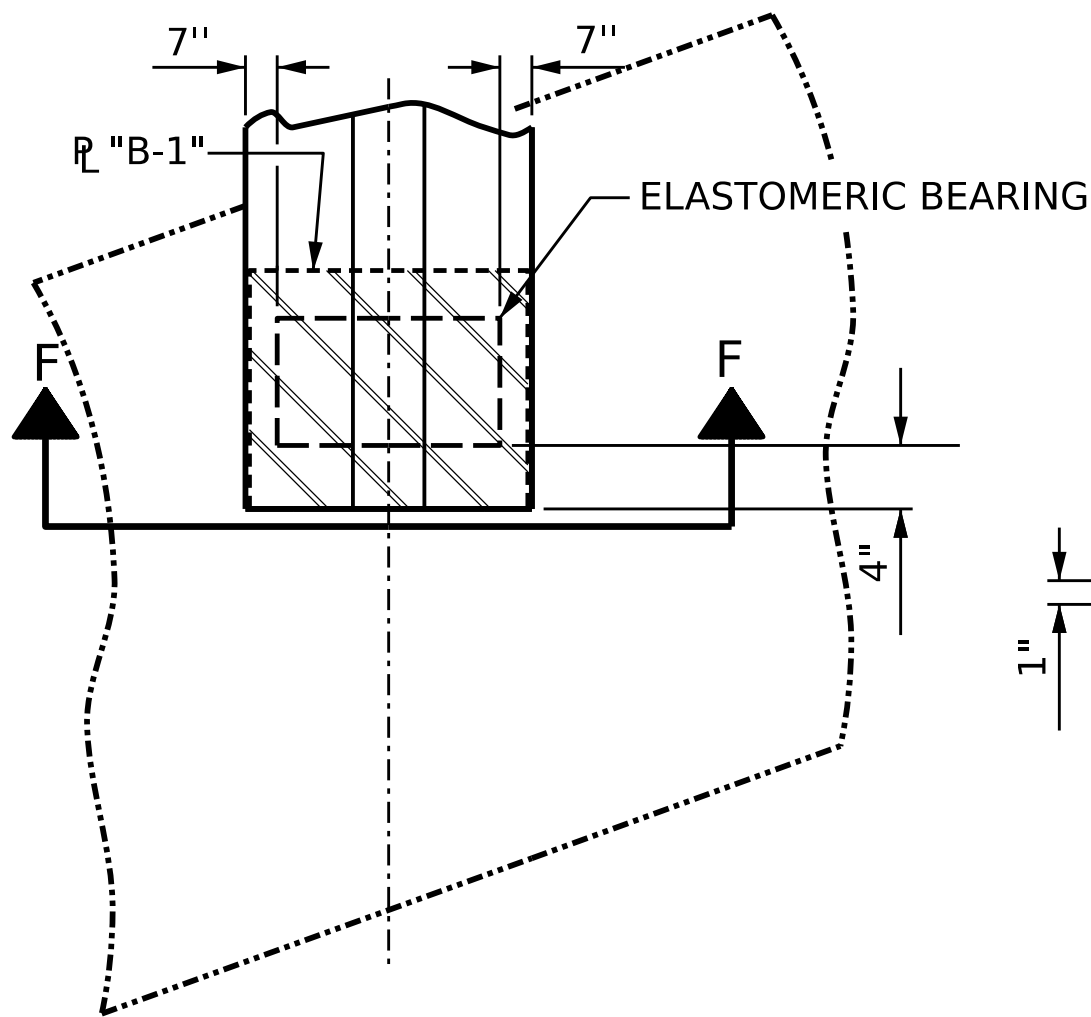


E7 (20 REQ'D)  
PLAN VIEW OF  
ELASTOMERIC BEARING

**TYPE VIII**

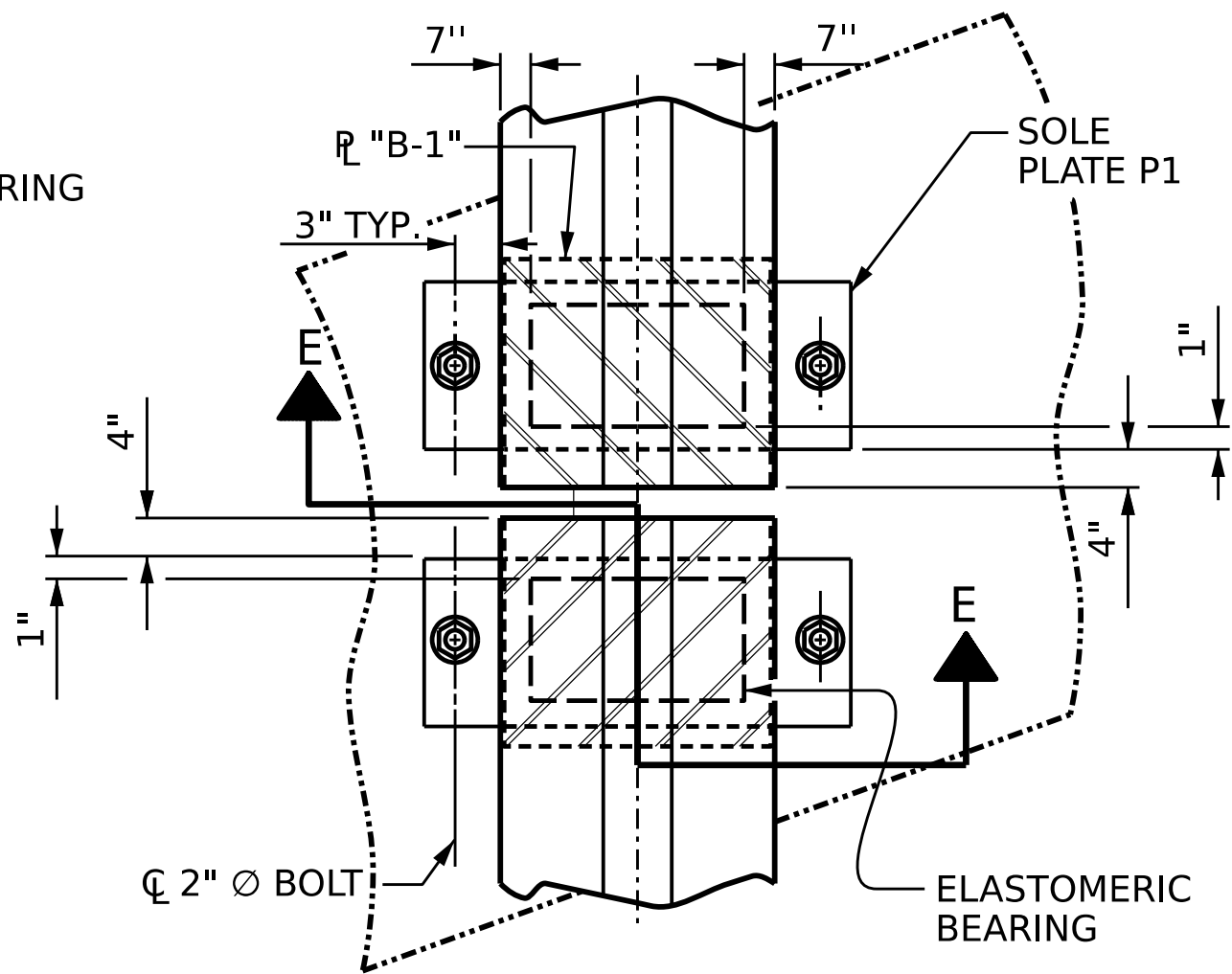


**SOLE PLATE DETAILS ("P")**



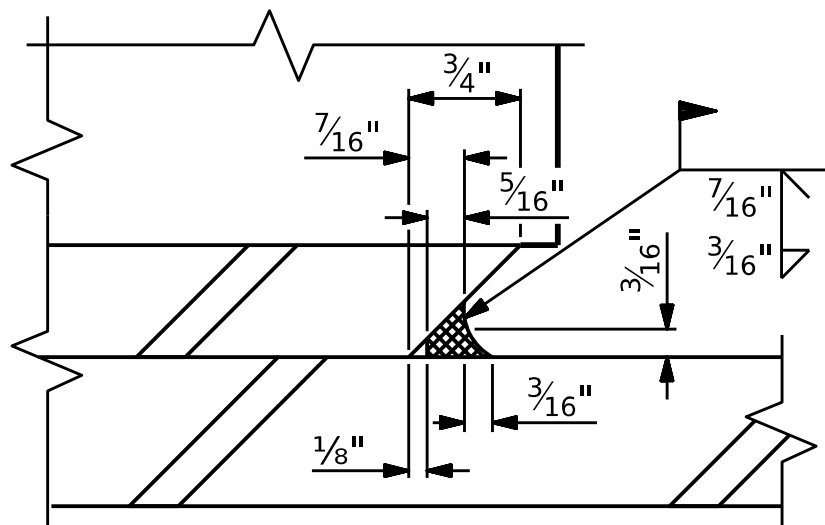
TYPICAL PLAN

(SHOWING INTEGRAL END BENT)



TYPICAL PLAN

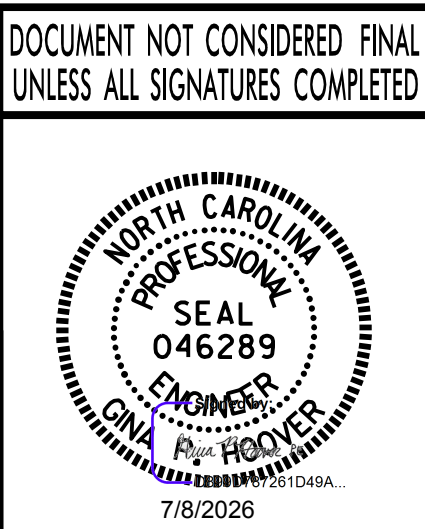
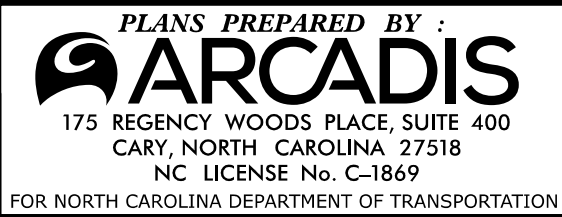
(SHOWING BENT)  
(FIXED BEARING)



**DETAIL "A"**

|                                       |         |
|---------------------------------------|---------|
| MAXIMUM ALLOWABLE<br>SERVICE LOADS    |         |
| D.L.+L.L. (NO IMPACT)                 |         |
| TYPE VIII                             | 390 K   |
| MAXIMUM ALLOWABLE<br>EXPANSION LENGTH |         |
| TYPE VIII                             | 225 FT. |

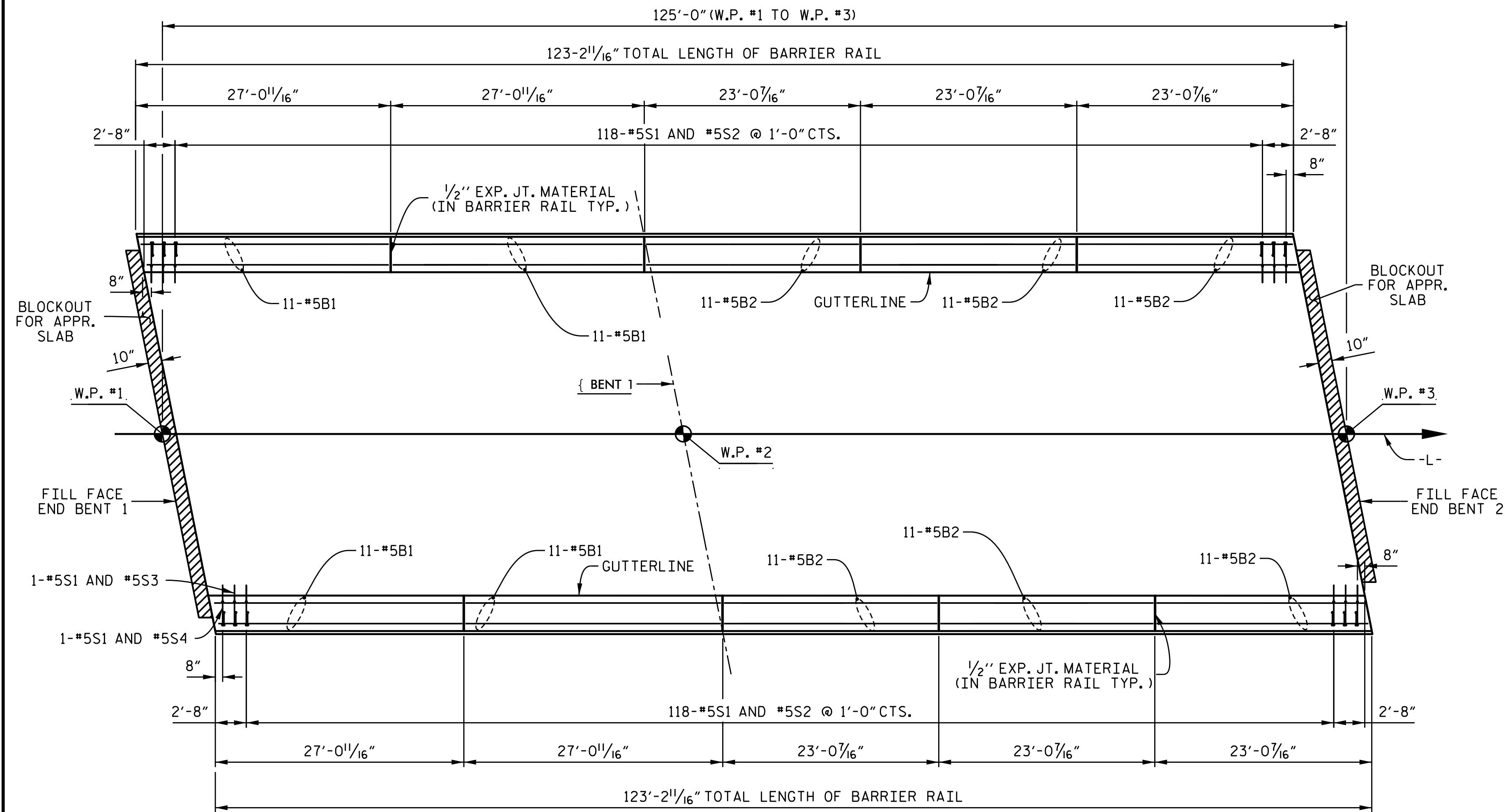
DRAWN BY : C. P. McGRAW DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24



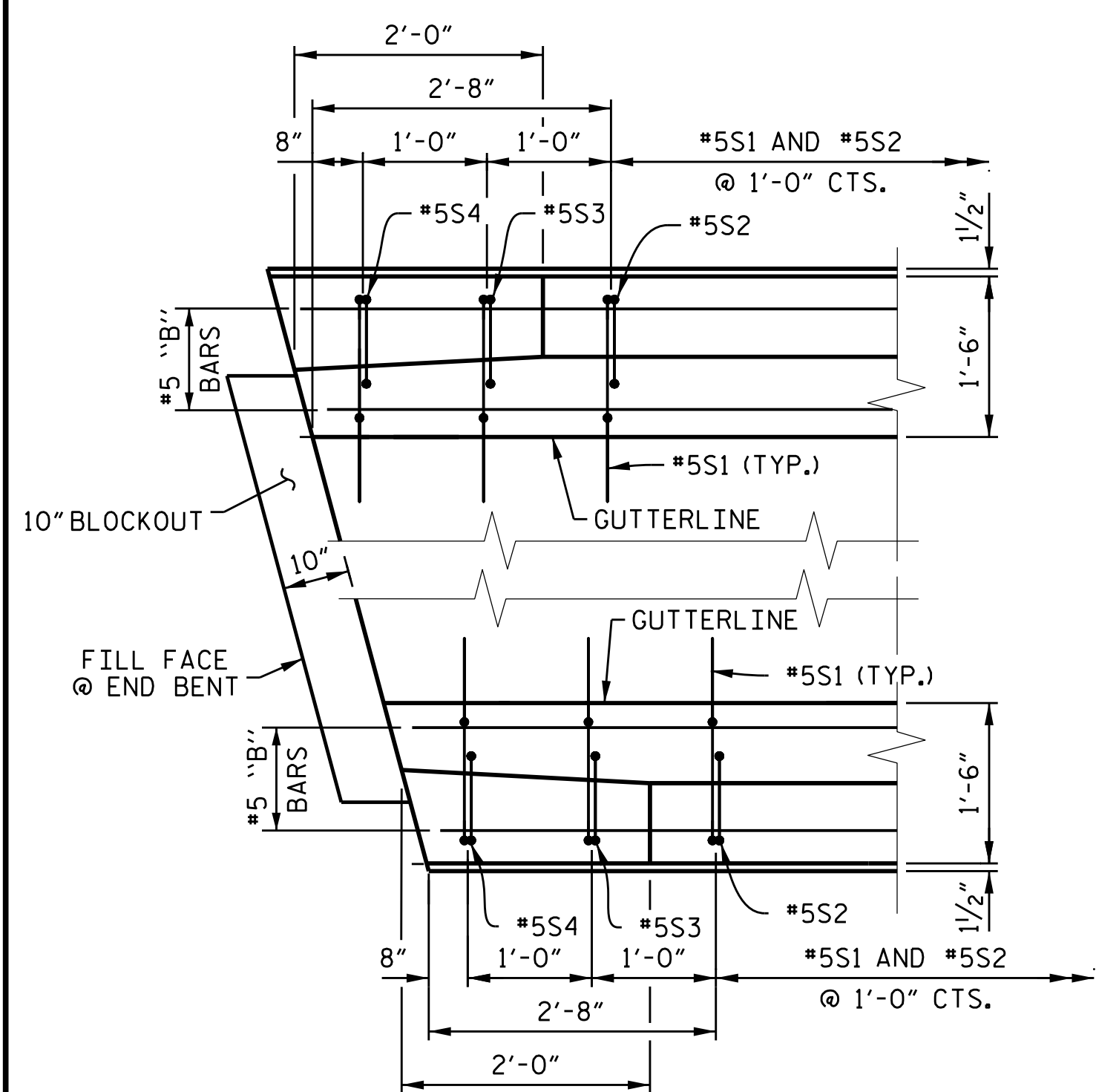
PROJECT NO. **BR-0150**  
**WILSON** COUNTY  
STATION: **15 + 05.00 -L-**

|                                                                    |     |       |     |     |           |
|--------------------------------------------------------------------|-----|-------|-----|-----|-----------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |           |
| <b>ELASTOMERIC BEARING<br/>DETAILS</b>                             |     |       |     |     |           |
| <b>FIB SUPERSTRUCTURE</b>                                          |     |       |     |     |           |
| REVISIONS                                                          |     |       |     |     | SHEET No. |
| No.                                                                | BY: | DATE: | No. | BY: | DATE:     |
| 1                                                                  |     |       | 3   |     |           |
| 2                                                                  |     |       | 4   |     |           |
| TOTAL SHEETS                                                       |     |       |     |     | 26        |

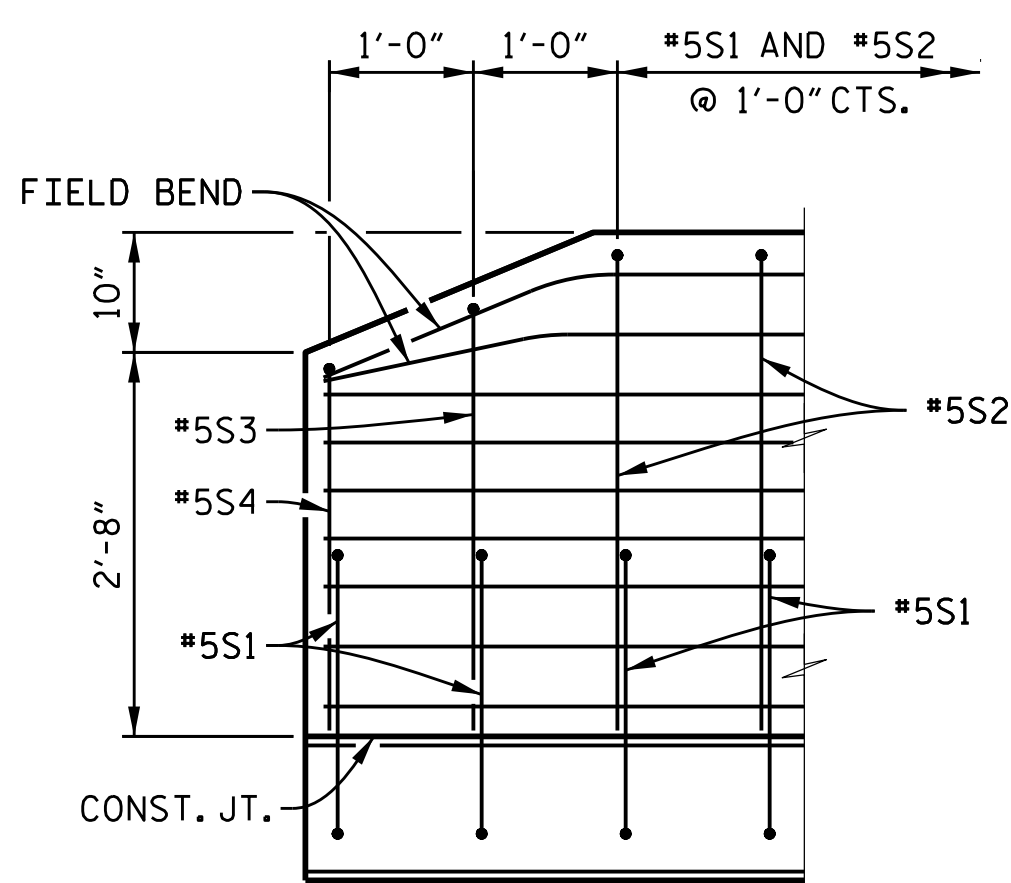




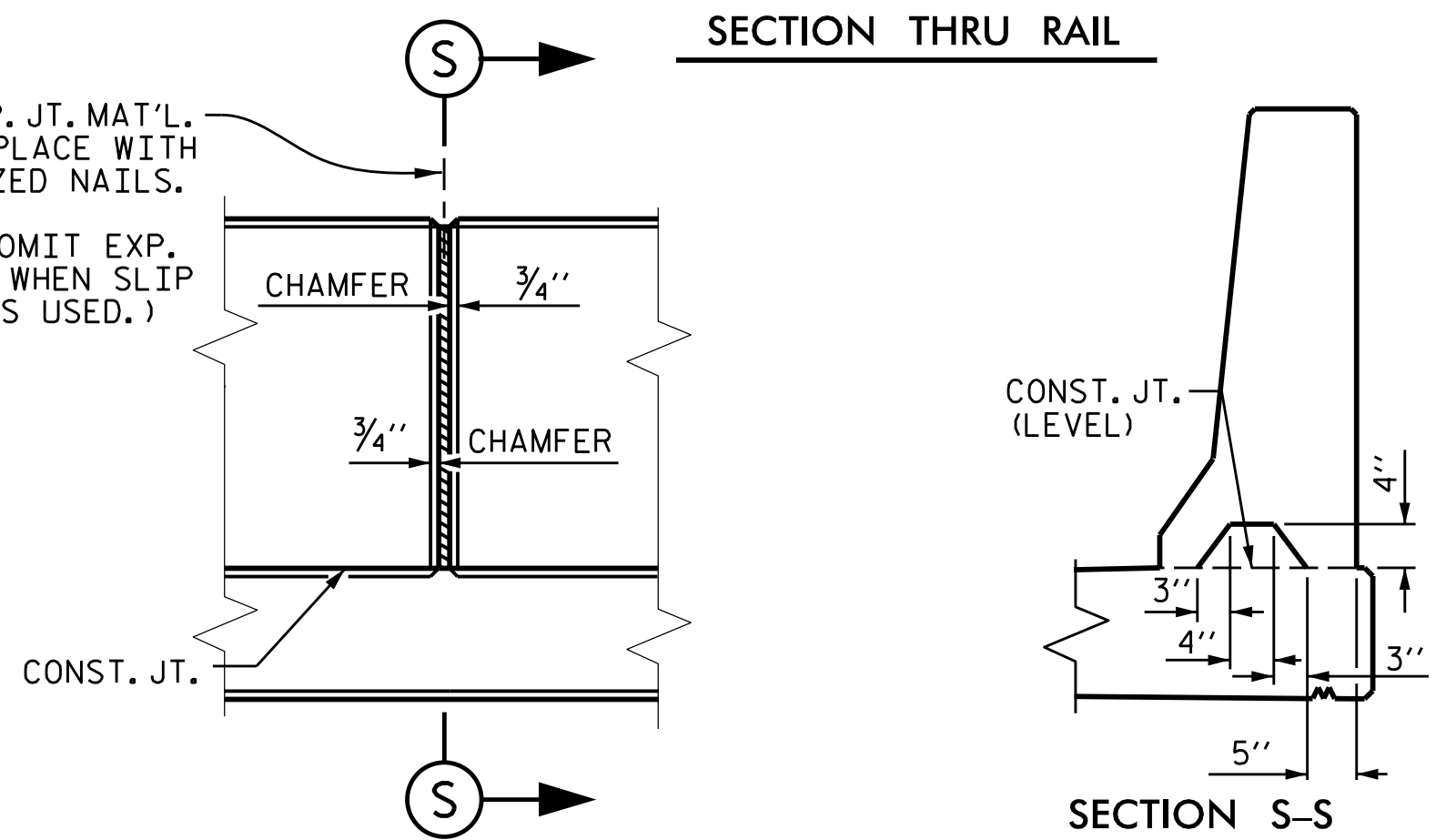
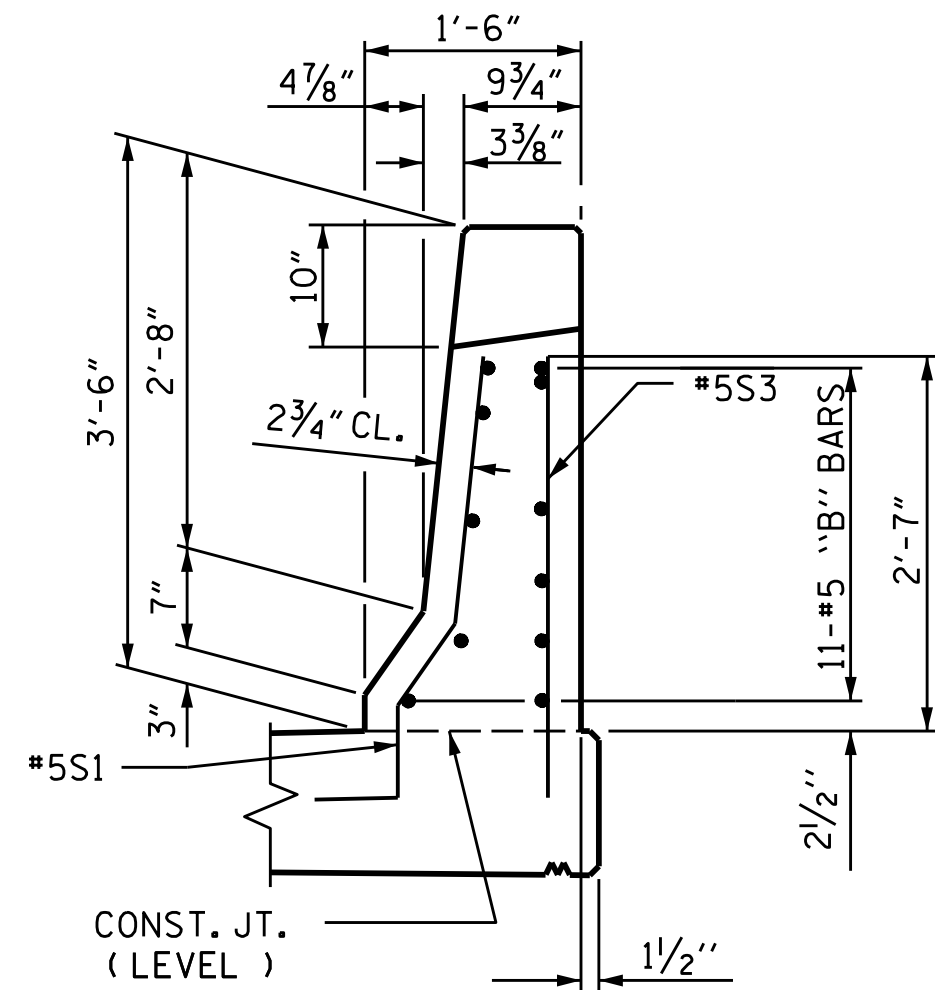
PLAN OF BARRIER RAIL



END BENT 1 SHOWN, END BENT 2 SIMILAR



END OF RAIL DETAILS



NOTES

THE BARRIER RAIL IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

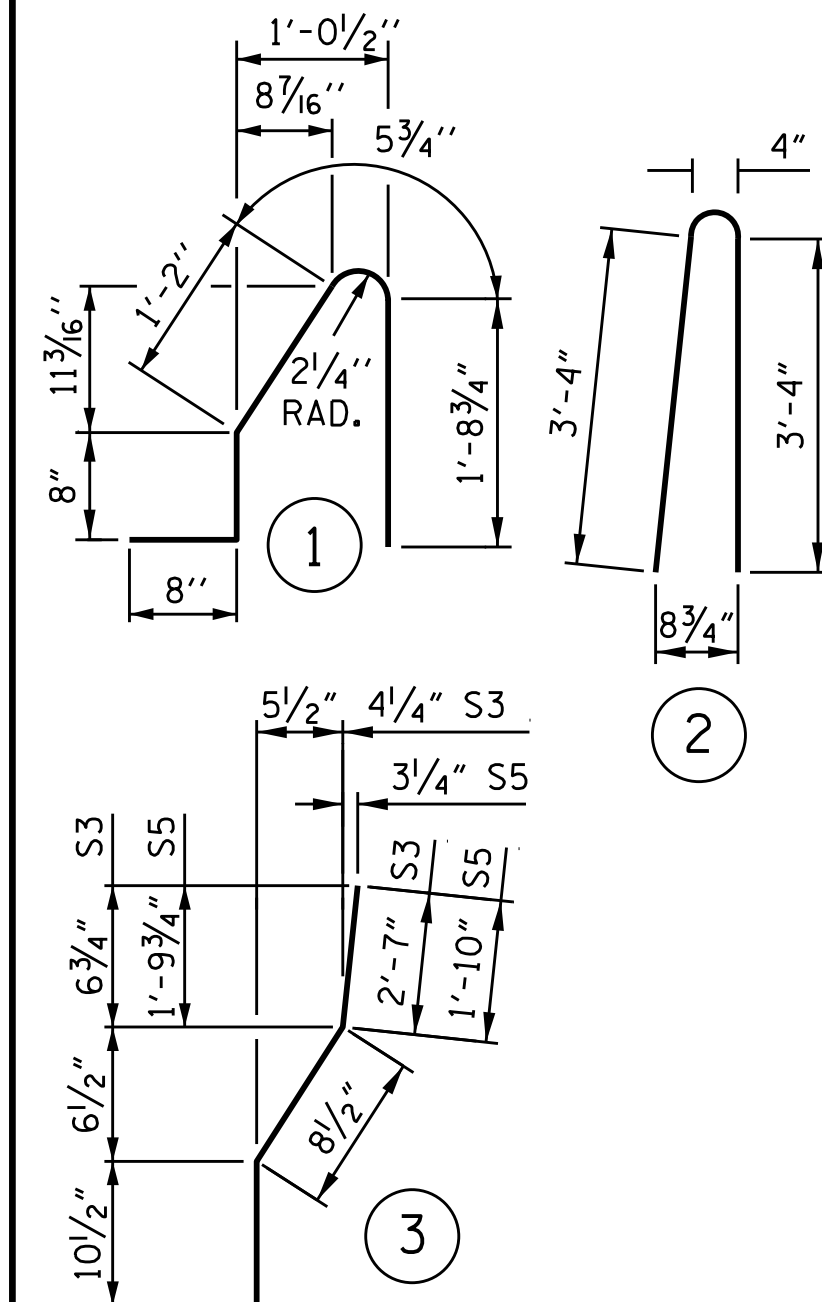
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5S3 THRU #5S6 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5S3 THRU #5S6 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS, THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

THE #5S1 AND #5S2 BARS MAY BE SHIFTED AS NECESSARY TO CLEAR EXPANSION JOINTS IN RAIL.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

FOR CONCRETE BARRIER RAIL ONLY

| BAR | No. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| *B1 | 44  | #5   | STR  | 26'-8" | 1,224  |
| *B2 | 66  | #5   | STR  | 22'-8" | 1,560  |
| *S1 | 246 | #5   | 1    | 4'-8"  | 1,197  |
| *S2 | 238 | #5   | 2    | 7'-0"  | 1,738  |
| *S3 | 4   | #5   | 3    | 4'-2"  | 15     |
| *S4 | 4   | #5   | STR  | 4'-0"  | 17     |

\*EPOXY COATED REINFORCING STEEL 5,751 LBS.

CLASS "AA" CONCRETE 33.5 CU. YDS.

CONCRETE BARRIER RAIL 246.5 LIN. FT.

SPLICE LENGTH

| BAR   | SIZE | LENGTH |
|-------|------|--------|
| B1,B2 | #5   | 3'-1"  |

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD

CONCRETE  
BARRIER RAIL

| REVISIONS |     |       |     |     |       | SHEET No.<br>S-15  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                    |

STD. No. CBRI



NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 1/8" Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 1/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

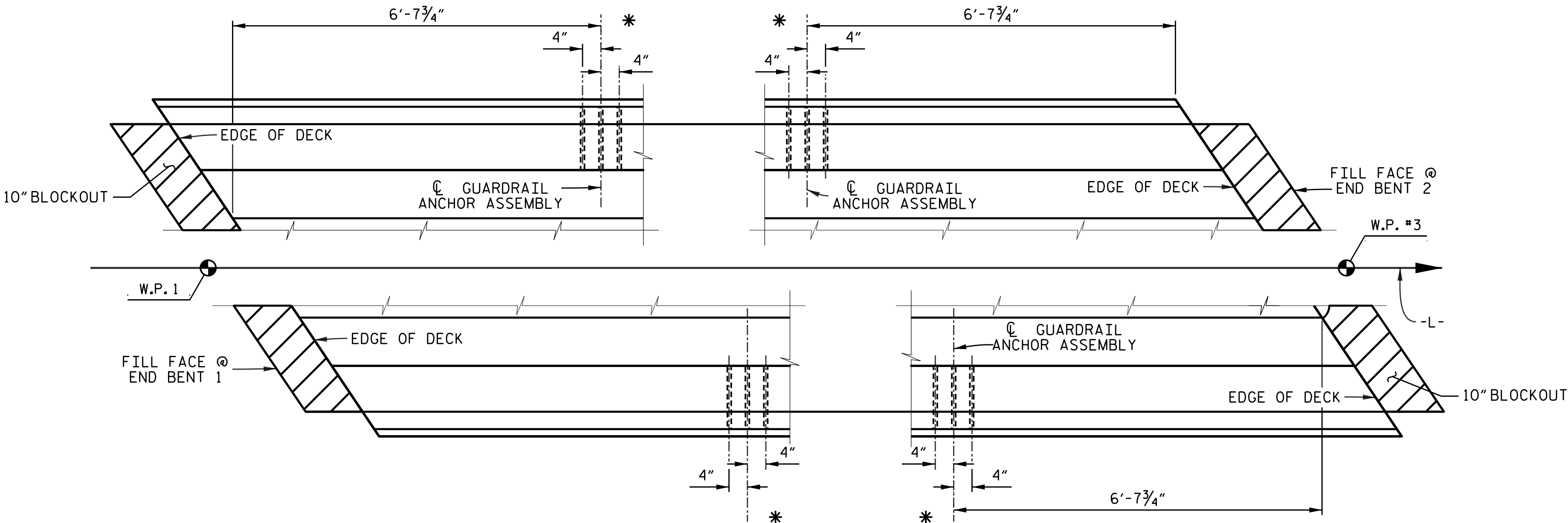
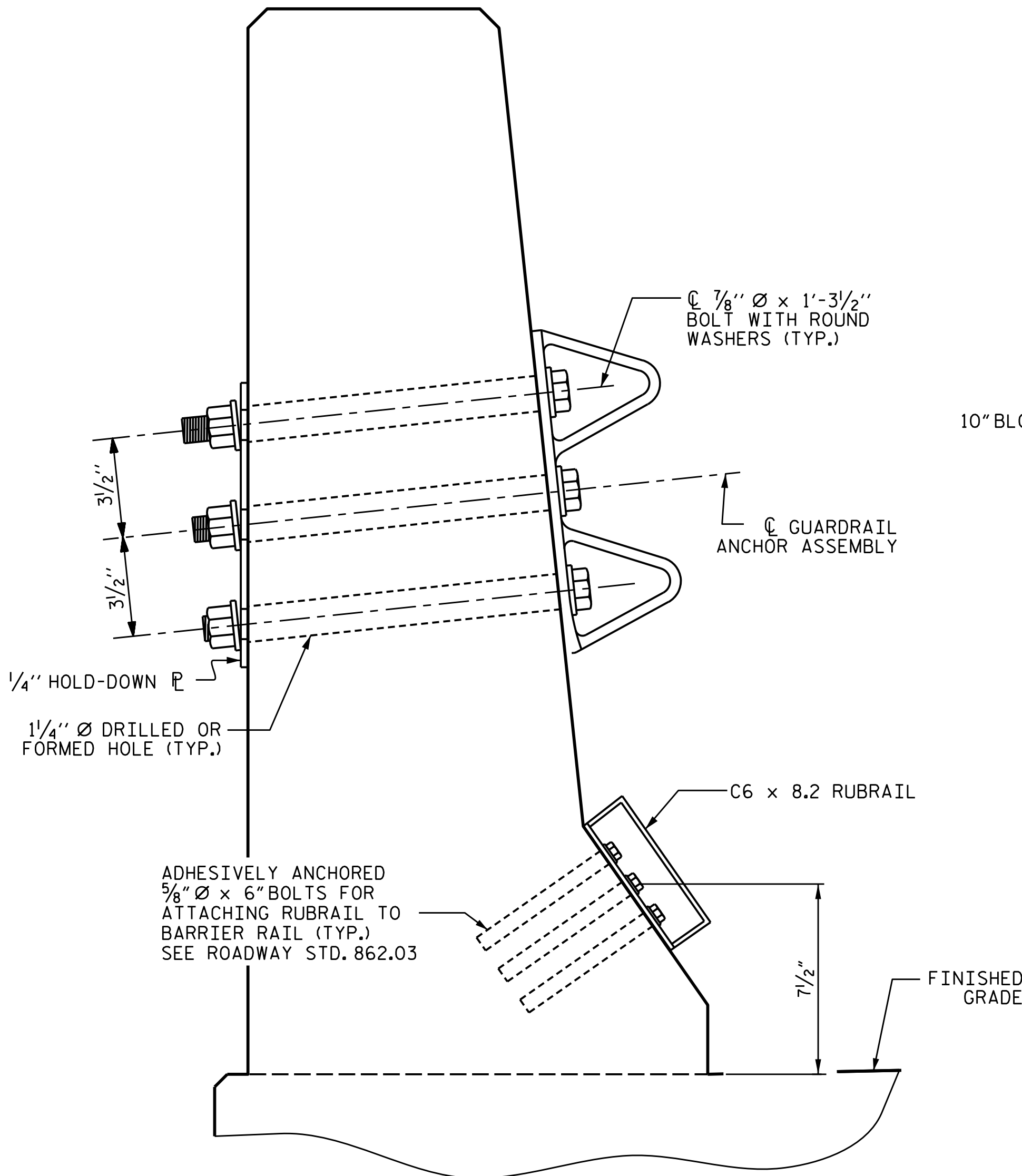
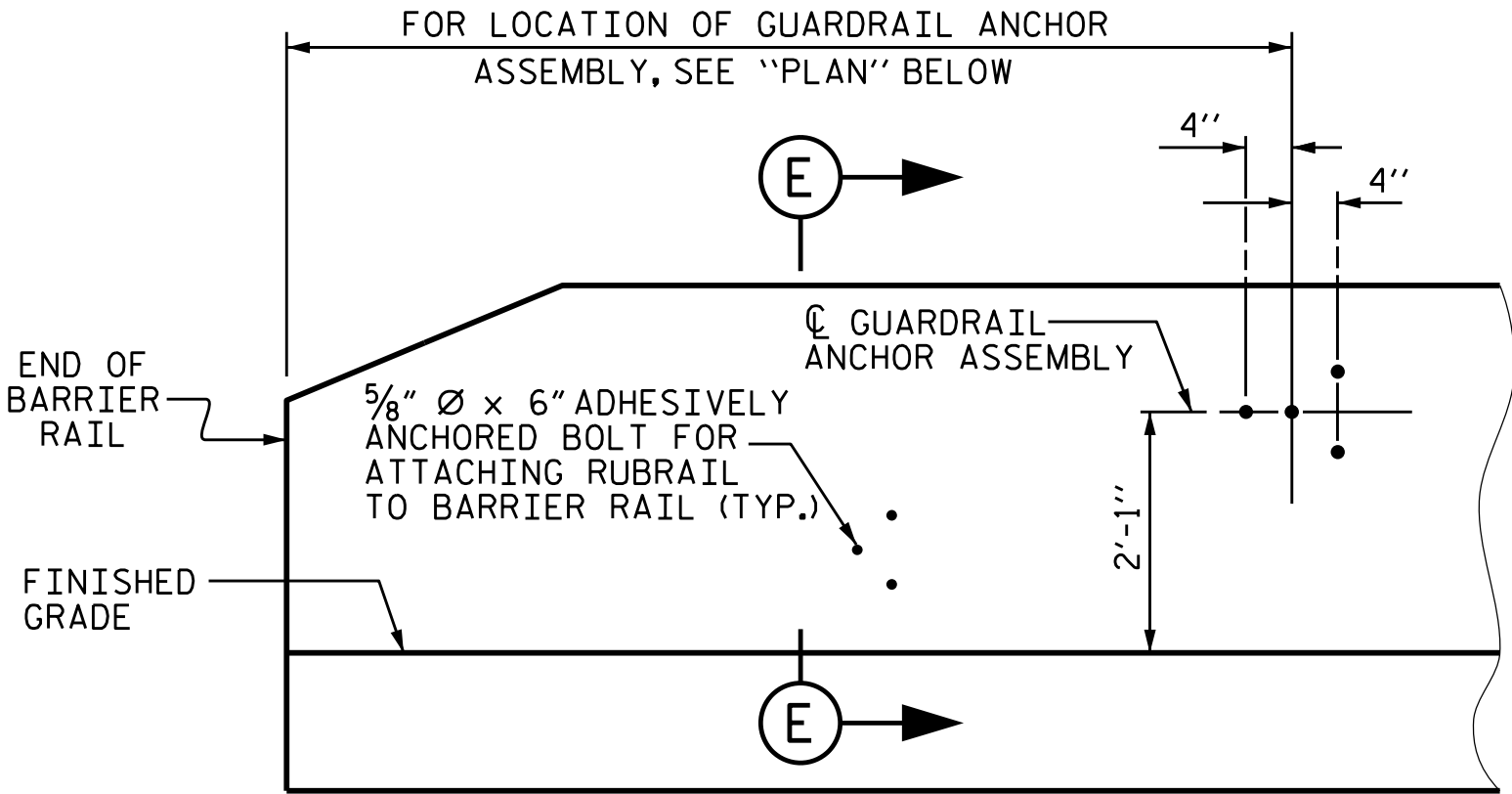
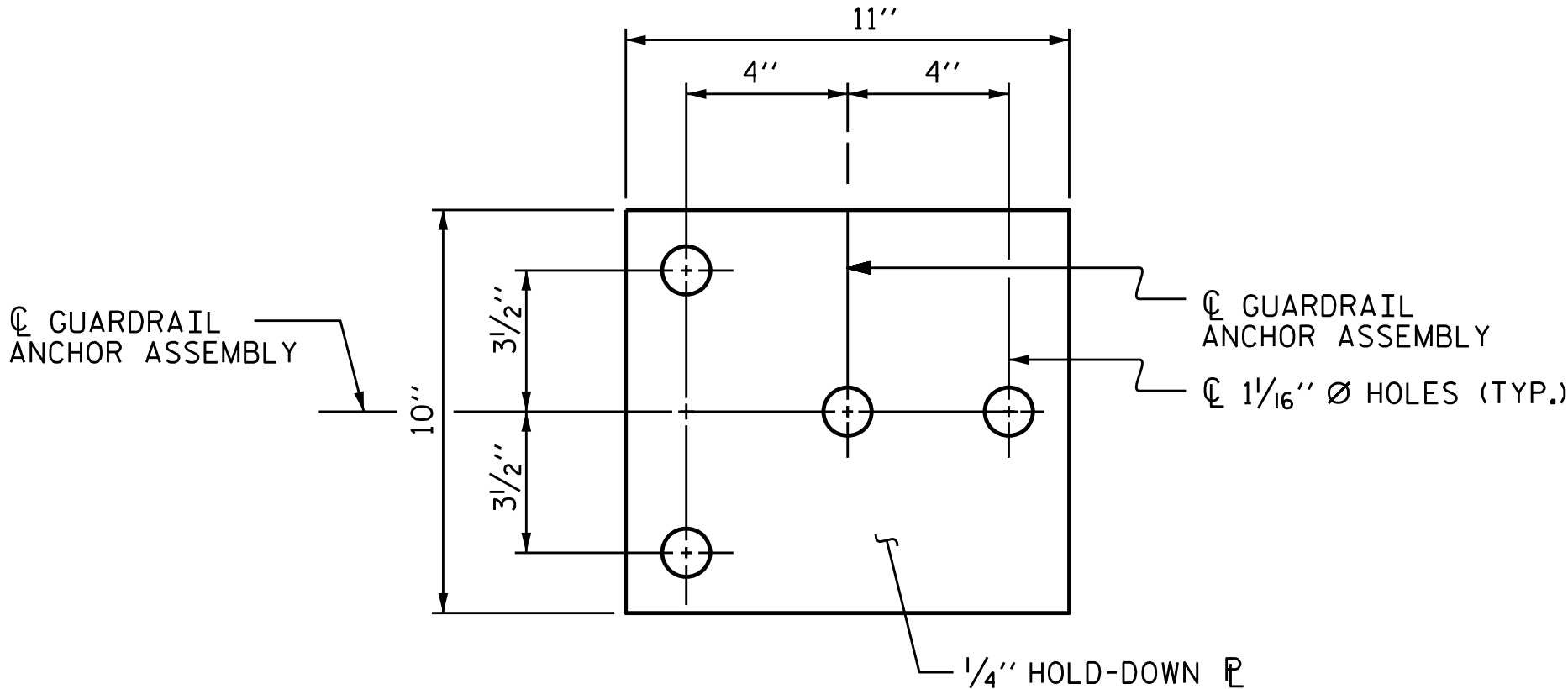
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 x 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 5/8" Ø x 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 5/8" Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.



LOCATION OF ANCHORS FOR GUARDRAIL

\* LOCATION OF GUARDRAIL ATTACHMENT

PROJECT NO. BR-0150

WILSON COUNTY

STATION: 15 + 05.00 -L-

| REVISIONS |     |       |     |     |       | SHEET No. |
|-----------|-----|-------|-----|-----|-------|-----------|
| No.       | BY: | DATE: | No. | BY: | DATE: |           |
| 1         |     |       | 3   |     |       | 5-16      |
| 2         |     |       | 4   |     |       |           |

TOTAL SHEETS 26

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL 046289  
G. P. HOOVER  
7/8/2026

PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

|                   |              |        |      |
|-------------------|--------------|--------|------|
| DRAWN BY :        | C. P. McGRAW | DATE : | 5-24 |
| CHECKED BY :      | G. P. HOOVER | DATE : | 5-24 |
| DESIGN ENGINEER : | G. P. HOOVER | DATE : | 5-24 |

|              |     |      |            |         |
|--------------|-----|------|------------|---------|
| DRAWN BY :   | TLA | 5/06 | REV. 6/13  | MAA/GM  |
| CHECKED BY : | GM  | 5/06 | REV. 12/17 | MAA/THC |
|              |     |      | REV. 6/22  | BNB/AAI |

FILE: c:\pwworkspace\p1\job\hoo\140156519.Dwg, 4/9/2023, 4:17:43 PM



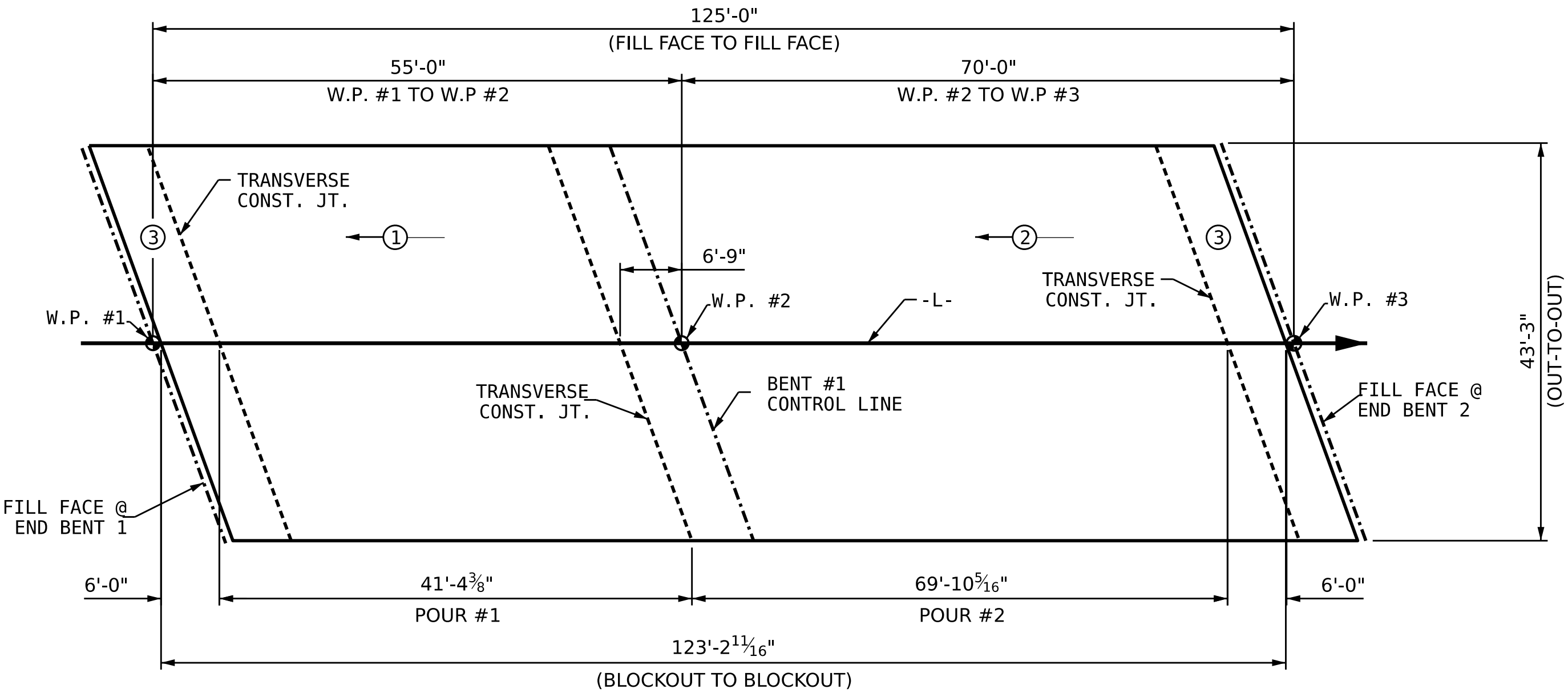
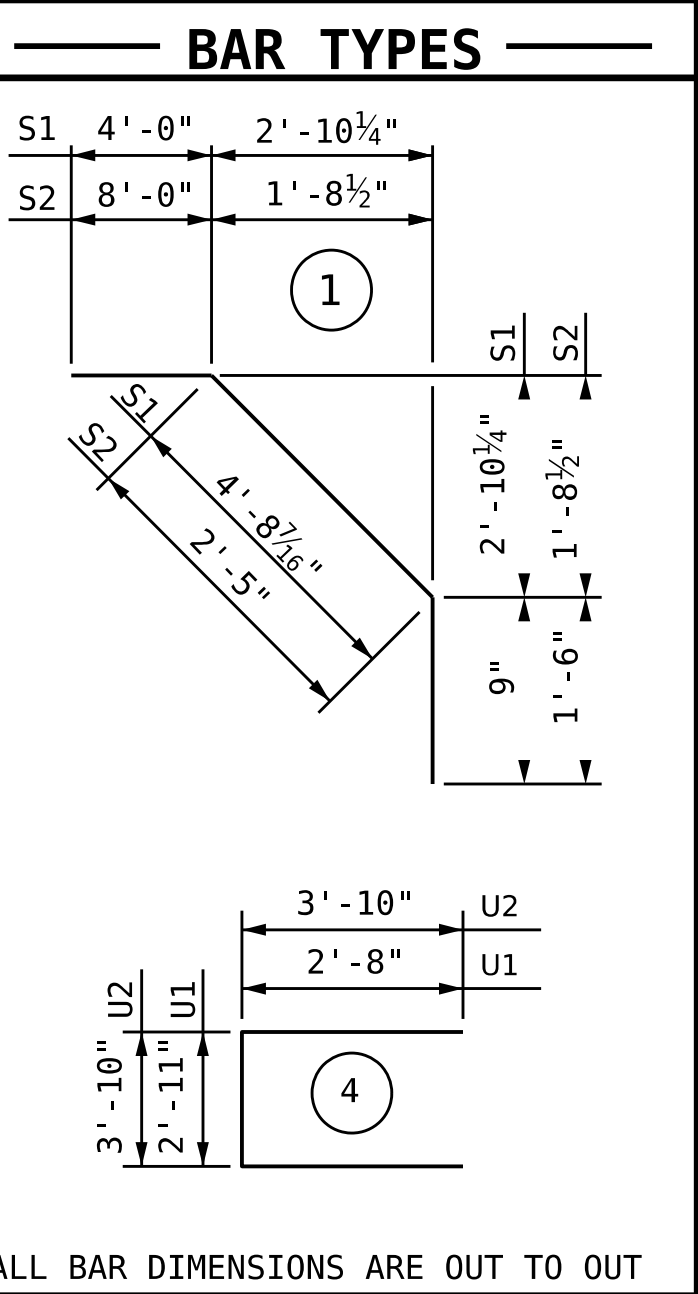
| SUPERSTRUCTURE REINFORCING STEEL<br>LENGTHS ARE BASED ON THE<br>FOLLOWING MINIMUM SPLICE LENGTHS |                                                                          |          |                 |          |                                   |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------|-----------------|----------|-----------------------------------|
| BAR<br>SIZE                                                                                      | SUPERSTRUCTURE<br>EXCEPT APPROACH<br>SLABS, PARAPET,<br>AND BARRIER RAIL |          | APPROACH SLABS  |          | PARAPET<br>AND<br>BARRIER<br>RAIL |
|                                                                                                  | EPOXY<br>COATED                                                          | UNCOATED | EPOXY<br>COATED | UNCOATED |                                   |
| #4                                                                                               | 1' - 11"                                                                 | 1' - 7"  | 1' - 11"        | 1' - 7"  | 2' - 6"                           |
| #5                                                                                               | 2' - 5"                                                                  | 2' - 0"  | 2' - 5"         | 2' - 0"  | 3' - 1"                           |
| #6                                                                                               | 2' - 10"                                                                 | 2' - 5"  | 3' - 7"         | 2' - 5"  | 3' - 8"                           |
| #7                                                                                               | 4' - 2"                                                                  | 2' - 9"  |                 |          |                                   |
| #8                                                                                               | 4' - 9"                                                                  | 3' - 2"  |                 |          |                                   |

| GROOVING BRIDGE FLOORS |             |
|------------------------|-------------|
| APPROACH SLABS         | 1173 SQ.FT. |
| BRIDGE DECK            | 5031 SQ.FT. |
| TOTAL                  | 6205 SQ.FT. |

| SUPERSTRUCTURE BILL OF MATERIAL |                      |                      |                                      |
|---------------------------------|----------------------|----------------------|--------------------------------------|
|                                 | CLASS AA<br>CONCRETE | REINFORCING<br>STEEL | EPOXY COATED<br>REINFORCING<br>STEEL |
|                                 | ( CU.YDS.)           | ( LBS.)              | ( LBS.)                              |
| POUR 1                          | 56.30                | 14,465 LBS           | 17,938 LBS                           |
| POUR 2                          | 95.08                |                      |                                      |
| POUR 3 **                       | 53.94                |                      |                                      |
| TOTALS **                       | 205.32               | 14,465 LBS           | 17,938 LBS                           |

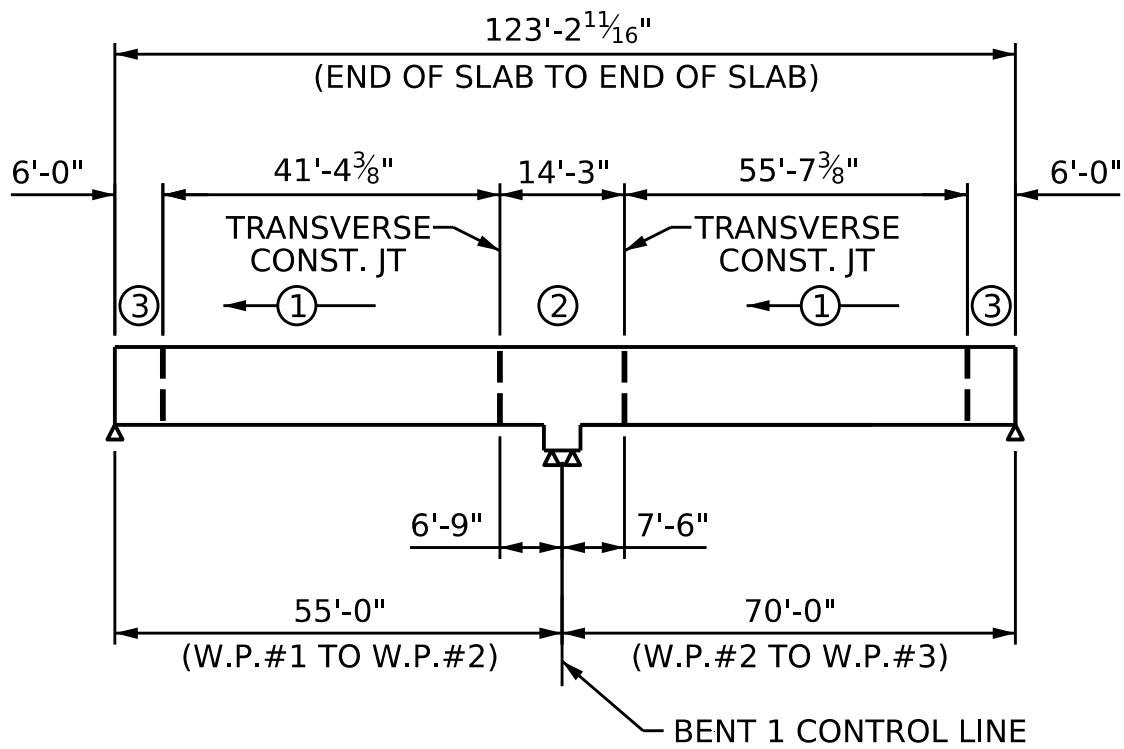
\*\* INCLUDES QUANTITIES FOR END BENT DIAPHRAGM

| BILL OF MATERIALS - SUPERSTRUCTURE |     |      |      |           |        |      |     |      |      |             |        |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
|------------------------------------|-----|------|------|-----------|--------|------|-----|------|------|-------------|--------|-----|-----|------|------|----------|--------|----------------------------|-----|------|------|-----------|--------------|-----|-----|------|------|--------|--------|
| BAR                                | NO. | SIZE | TYPE | LENGTH    | WEIGHT | BAR  | NO. | SIZE | TYPE | LENGTH      | WEIGHT | BAR | NO. | SIZE | TYPE | LENGTH   | WEIGHT | BAR                        | NO. | SIZE | TYPE | LENGTH    | WEIGHT       | BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
| *A1                                | 172 | #5   | STR  | 42' - 11" | 7,699  | A201 | 2   | #5   | STR  | 2' - 2' "   | 5      | *B1 | 31  | #4   | STR  | 36' - 2" | 749    | K1                         | 20  | #4   | STR  | 26' - 10" | 358          |     |     |      |      |        |        |
| A2                                 | 172 | #5   | STR  | 42' - 11" | 7,699  | A202 | 2   | #5   | STR  | 3' - 11' "  | 8      | *B2 | 31  | #4   | STR  | 46' - 8" | 966    | K2                         | 8   | #4   | STR  | 11' - 8"  | 62           |     |     |      |      |        |        |
| *A101                              | 2   | #5   | STR  | 2' - 2"   | 5      | A203 | 2   | #5   | STR  | 5' - 7' "   | 12     | *B3 | 59  | #6   | STR  | 47' - 6" | 4,209  | K3                         | 8   | #4   | STR  | 8' - 3"   | 44           |     |     |      |      |        |        |
| *A102                              | 2   | #5   | STR  | 3' - 11"  | 8      | A204 | 2   | #5   | STR  | 7' - 4' "   | 15     | *B4 | 56  | #6   | STR  | 28' - 9" | 2,418  | K4                         | 8   | #4   | STR  | 7' - 10"  | 42           |     |     |      |      |        |        |
| *A103                              | 2   | #5   | STR  | 5' - 7"   | 12     | A205 | 2   | #5   | STR  | 9' - 1' "   | 19     | B5  | 28  | #5   | STR  | 37' - 5" | 1,093  | K5                         | 8   | #4   | STR  | 5' - 11"  | 32           |     |     |      |      |        |        |
| *A104                              | 2   | #5   | STR  | 7' - 4"   | 15     | A206 | 2   | #5   | STR  | 10' - 9' "  | 22     | B6  | 28  | #5   | STR  | 52' - 2" | 1,523  | K6                         | 8   | #4   | STR  | 5' - 8"   | 30           |     |     |      |      |        |        |
| *A105                              | 2   | #5   | STR  | 9' - 1"   | 19     | A207 | 2   | #5   | STR  | 12' - 6' "  | 26     | B7  | 28  | #5   | STR  | 41' - 3" | 1,205  | K7                         | 8   | #4   | STR  | 2' - 7"   | 14           |     |     |      |      |        |        |
| *A106                              | 2   | #5   | STR  | 10' - 9"  | 22     | A208 | 2   | #5   | STR  | 14' - 2' "  | 30     | B8  | 22  | #5   | STR  | 35' - 0" | 803    | K8                         | 4   | #4   | STR  | 3' - 10"  | 10           |     |     |      |      |        |        |
| *A107                              | 2   | #5   | STR  | 12' - 6"  | 26     | A209 | 2   | #5   | STR  | 15' - 11' " | 33     |     |     |      |      |          |        | K9                         | 4   | #4   | STR  | 5' - 6"   | 15           |     |     |      |      |        |        |
| *A108                              | 2   | #5   | STR  | 14' - 2"  | 30     | A210 | 2   | #5   | STR  | 17' - 8' "  | 37     |     |     |      |      |          |        | K10                        | 4   | #4   | STR  | 5' - 4"   | 14           |     |     |      |      |        |        |
| *A109                              | 2   | #5   | STR  | 15' - 11" | 33     | A211 | 2   | #5   | STR  | 19' - 4' "  | 40     |     |     |      |      |          |        | K11                        | 4   | #4   | STR  | 4' - 6"   | 12           |     |     |      |      |        |        |
| *A110                              | 2   | #5   | STR  | 17' - 8"  | 37     | A212 | 2   | #5   | STR  | 21' - 1' "  | 44     |     |     |      |      |          |        | K12                        | 4   | #4   | STR  | 4' - 3"   | 11           |     |     |      |      |        |        |
| *A111                              | 2   | #5   | STR  | 19' - 4"  | 40     | A213 | 2   | #5   | STR  | 22' - 9' "  | 47     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A112                              | 2   | #5   | STR  | 21' - 1"  | 44     | A214 | 2   | #5   | STR  | 24' - 6' "  | 51     |     |     |      |      |          |        | *S1                        | 56  | #4   | 1    | 9' - 5"   | 354          |     |     |      |      |        |        |
| *A113                              | 2   | #5   | STR  | 22' - 9"  | 47     | A215 | 2   | #5   | STR  | 26' - 3' "  | 55     |     |     |      |      |          |        | *S2                        | 56  | #4   | 1    | 11' - 11" | 446          |     |     |      |      |        |        |
| *A114                              | 2   | #5   | STR  | 24' - 6"  | 51     | A216 | 2   | #5   | STR  | 27' - 11' " | 58     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A115                              | 2   | #5   | STR  | 26' - 3"  | 55     | A217 | 2   | #5   | STR  | 29' - 8' "  | 62     |     |     |      |      |          |        | U1                         | 56  | #4   | 4    | 8' - 3"   | 309          |     |     |      |      |        |        |
| *A116                              | 2   | #5   | STR  | 27' - 11" | 58     | A218 | 2   | #5   | STR  | 31' - 4' "  | 65     |     |     |      |      |          |        | U2                         | 12  | #4   | 4    | 11' - 6"  | 92           |     |     |      |      |        |        |
| *A117                              | 2   | #5   | STR  | 29' - 8"  | 62     | A219 | 2   | #5   | STR  | 33' - 1' "  | 69     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A118                              | 2   | #5   | STR  | 31' - 4"  | 65     | A220 | 2   | #5   | STR  | 34' - 10' " | 73     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A119                              | 2   | #5   | STR  | 33' - 1"  | 69     | A221 | 2   | #5   | STR  | 36' - 6' "  | 76     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A120                              | 2   | #5   | STR  | 34' - 10" | 73     | A222 | 2   | #5   | STR  | 38' - 3' "  | 80     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A121                              | 2   | #5   | STR  | 36' - 6"  | 76     | A223 | 2   | #5   | STR  | 40' - 0' "  | 83     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A122                              | 2   | #5   | STR  | 38' - 3"  | 80     | A224 | 2   | #5   | STR  | 41' - 8' "  | 87     |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A123                              | 2   | #5   | STR  | 40' - 0"  | 83     |      |     |      |      |             |        |     |     |      |      |          |        |                            |     |      |      |           |              |     |     |      |      |        |        |
| *A124                              | 2   | #5   | STR  | 41' - 8"  | 87     |      |     |      |      |             |        |     |     |      |      |          |        | REINFORCING STEEL          |     |      |      |           | = 14,465 LBS |     |     |      |      |        |        |
|                                    |     |      |      |           |        |      |     |      |      |             |        |     |     |      |      |          |        | *EPOXY COATED REINF. STEEL |     |      |      |           | = 17,938 LBS |     |     |      |      |        |        |



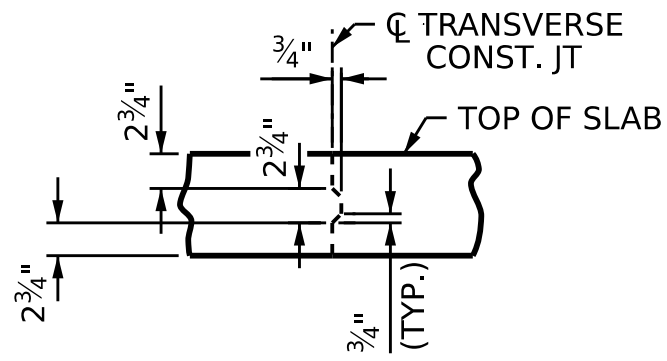
CONCRETE POURING SEQUENCE AND LAYOUT FOR  
COMPUTING AREA OF REINFORCED CONCRETE DECK SLAB

(SQ. FT. = 5,330 SQ. FT.)



OPTIONAL POURING SEQUENCE

POUR ② CANNOT BE STARTED UNTIL  
BOTH ADJACENT ① POURS REACH A  
MINIMUM OF 3000 PSI.



TRANSVERSE CONSTRUCTION JOINT DETAIL

NOTE: REINFORCING STEEL IN SLAB NOT  
SHOWN. LONGITUDINAL REINFORCING  
STEEL SHALL BE CONTINUOUS THRU. JOINT

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SUPERSTRUCTURE  
BILL OF MATERIAL

| REVISIONS |     |       |     |     |       | SHEET No.<br>S-17     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                       |

STD. NO. BOM2













SHEET 3 OF 4

| REVISIONS |     |       |     |     |       | SHEET No.<br>S-20     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                       |

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "ENGINEER" at the bottom, separated by small dots. Inside the ring, the word "PROFESSIONAL" is at the top and "SEAL" is at the bottom. In the center, the number "046289" is prominently displayed. Below the number, the name "GINA P. HOOPER" is written in a cursive script. At the very bottom of the seal, the date "7/8/2026" is stamped. The seal is blue ink on a white background.

**PLANS PREPARED BY :**  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE NO. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION







NOTES

STIRRUPS & U1 BARS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

HOOKS ON M1 BAR MAY BE TURNED AS NECESSARY FOR PLACING REINFORCING STEEL.

FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

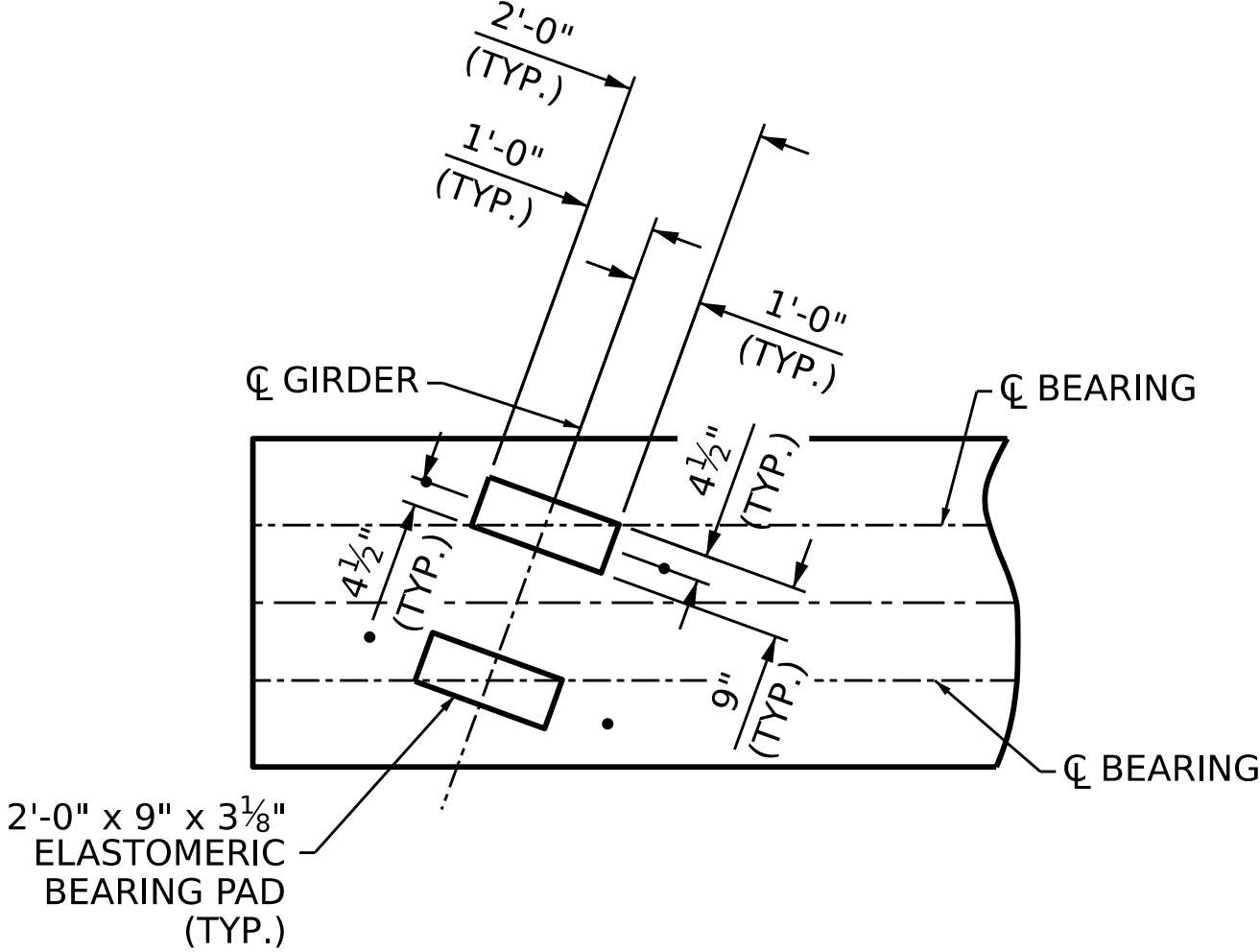
ALL STEEL IN THE DRILLED PIERS IS INCLUDED IN THE PAY ITEMS FOR "REINFOCING STEEL" AND "SPIRAL COLUMN REINFORCING STEEL."

INVERT ALTERNATE STIRRUPS.

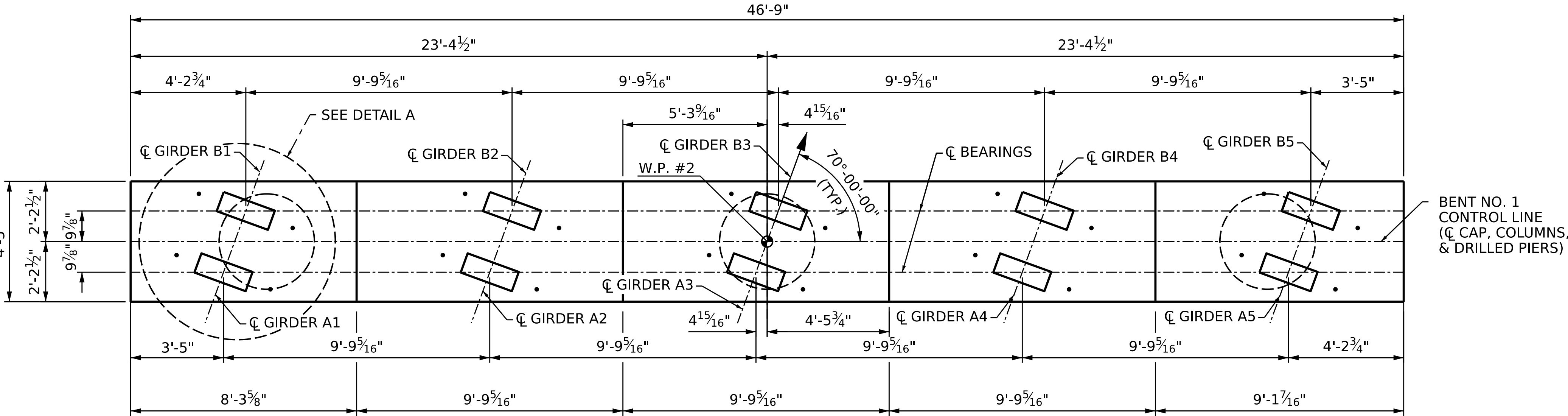
THE CONTRACTOR'S ATTENTION IS CALLED OT THE FACT THAT THE LONGITUDINAL REINFORCEMENT FOR DRILLED PIERS IS DETAILED WITH 3 FEET OF EXTRA LENGTH.

SPLICING OF THE LONGITUDINAL BARS IN THE DRILLED PIERS WILL NOT BE PERMITTED.

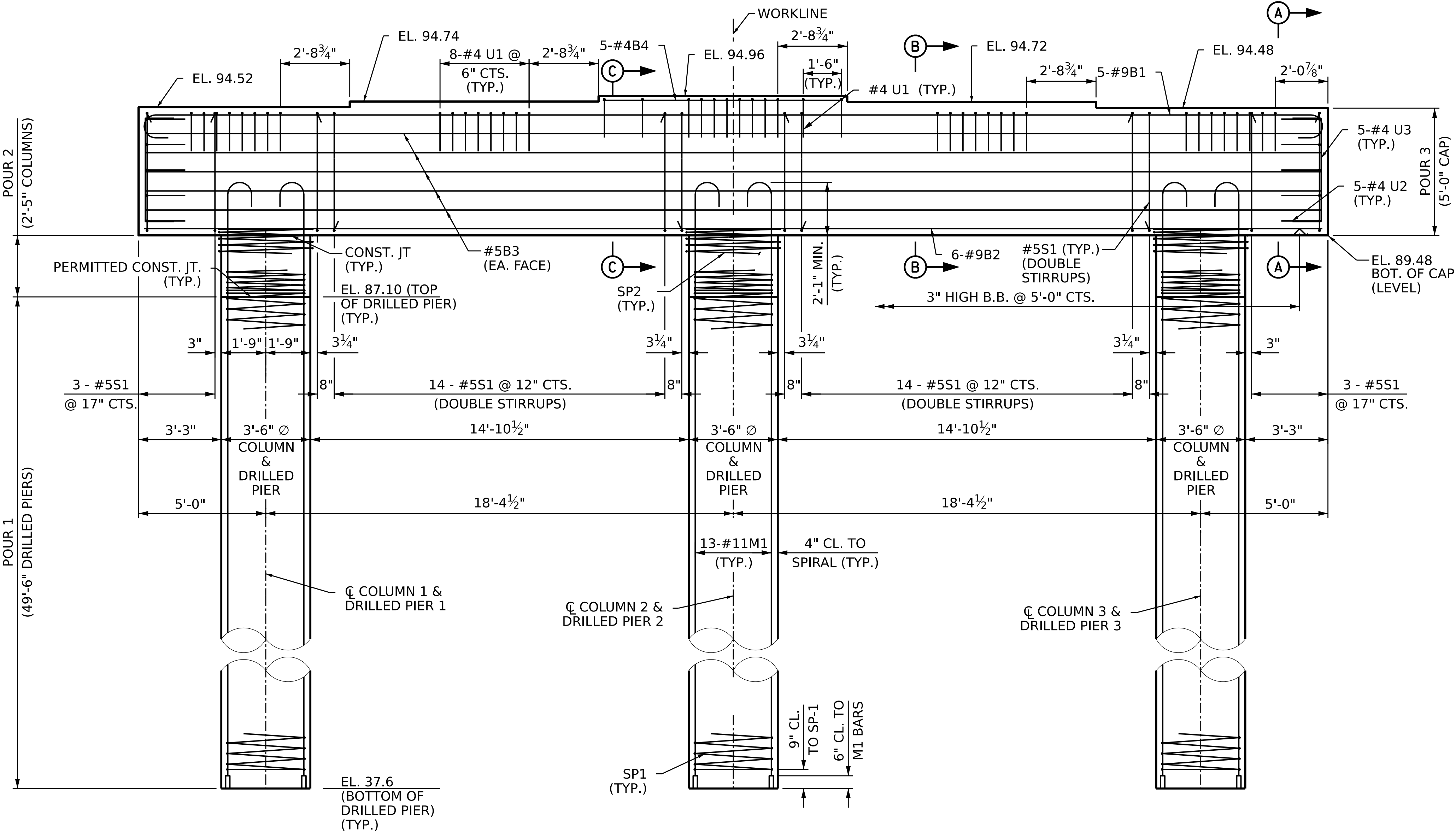
NO SEPARATE PAYMENT SHALL BE MADE FOR ANY ADDITIONAL STEEL REQUIRED IN CONSTRUCTION OF DRILLED PIER AS THIS IS CONSIDERED INCIDENTAL TO THE LINEAR FOOT PRICE OF DRILLED PIER.



DETAIL A

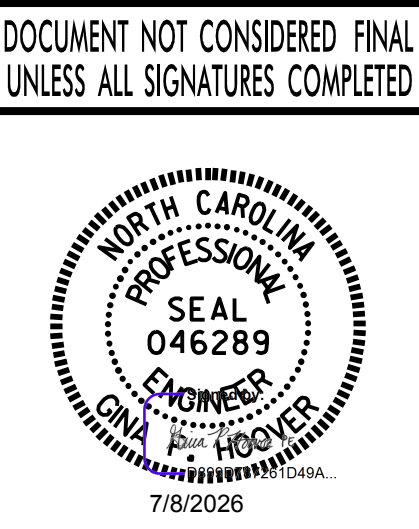
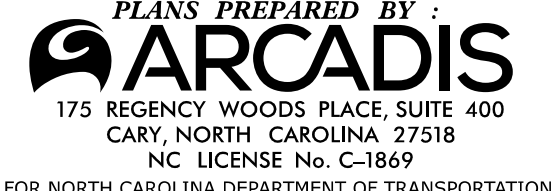


PLAN



ELEVATION

DRAWN BY : A. T. SOLANKI DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24

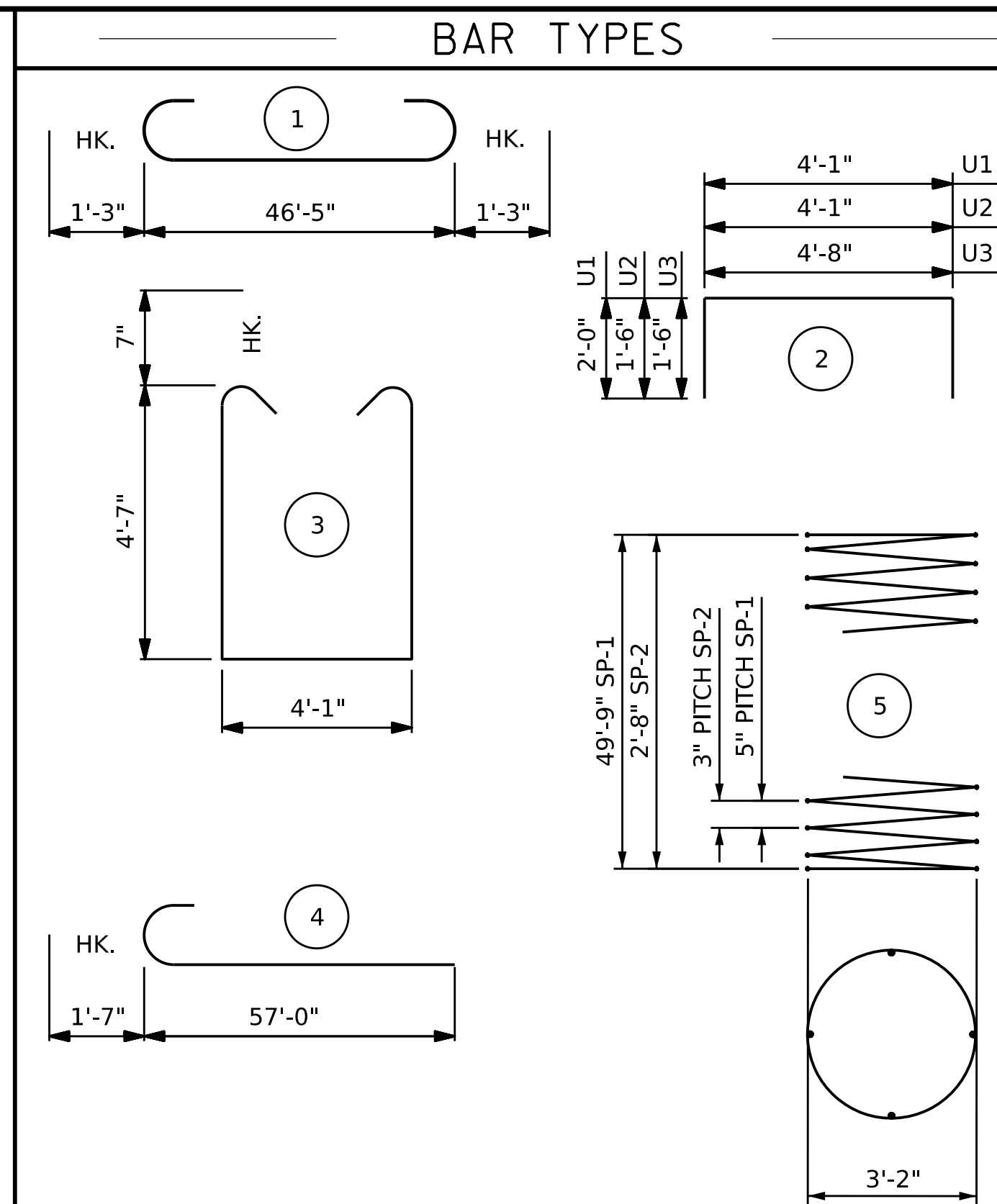
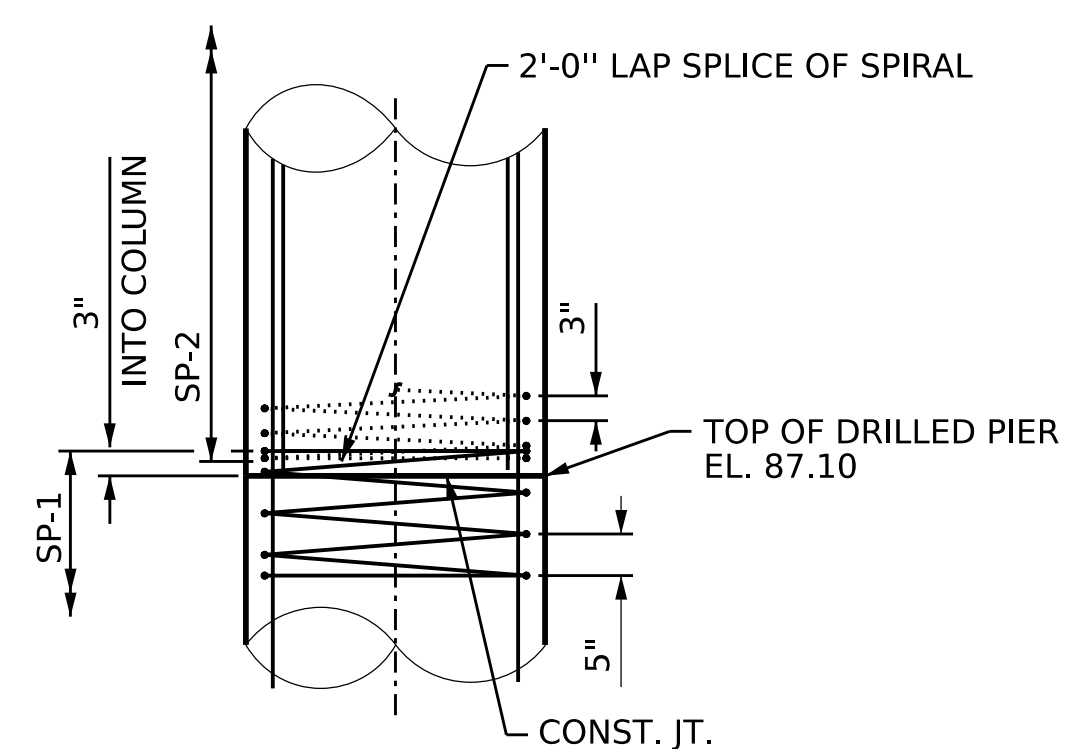
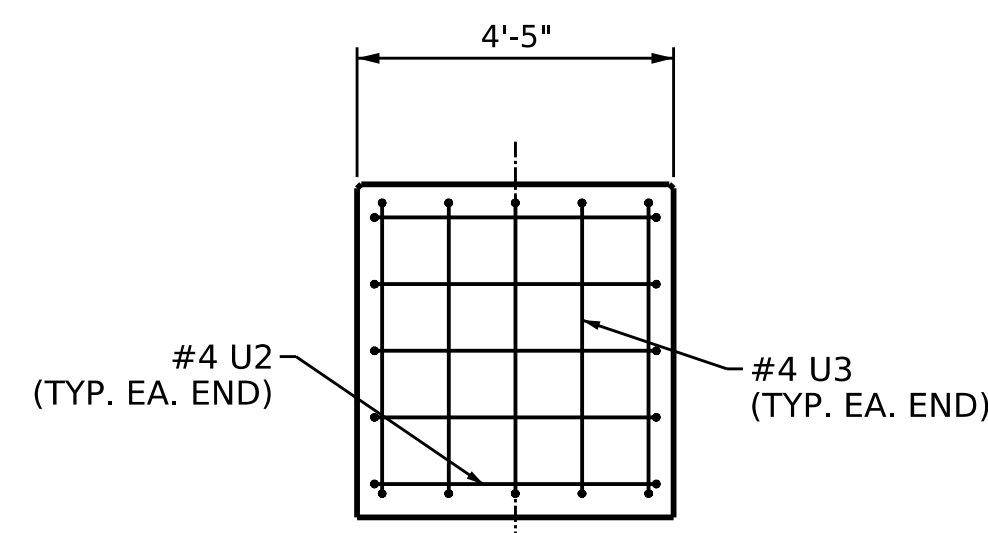
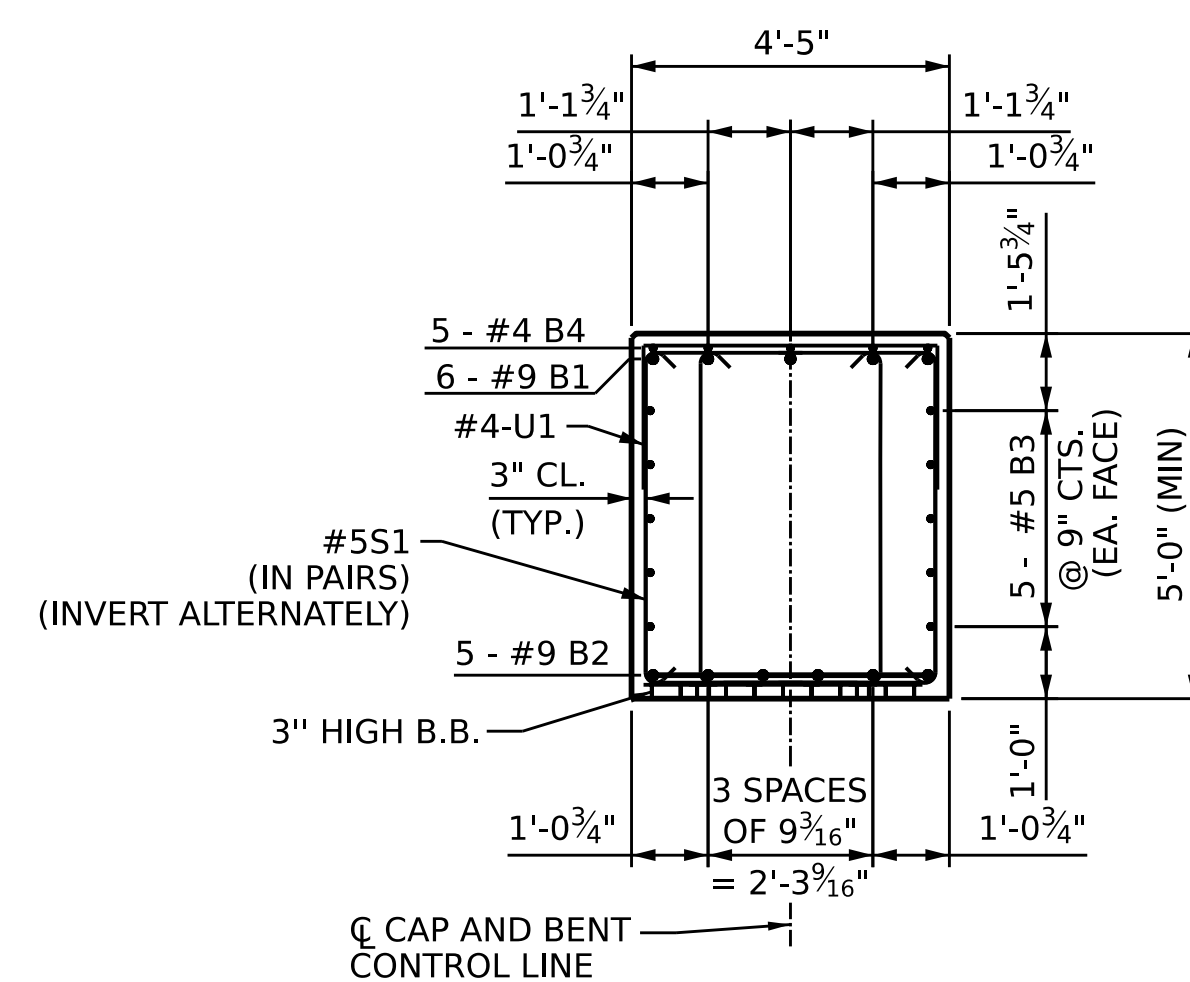
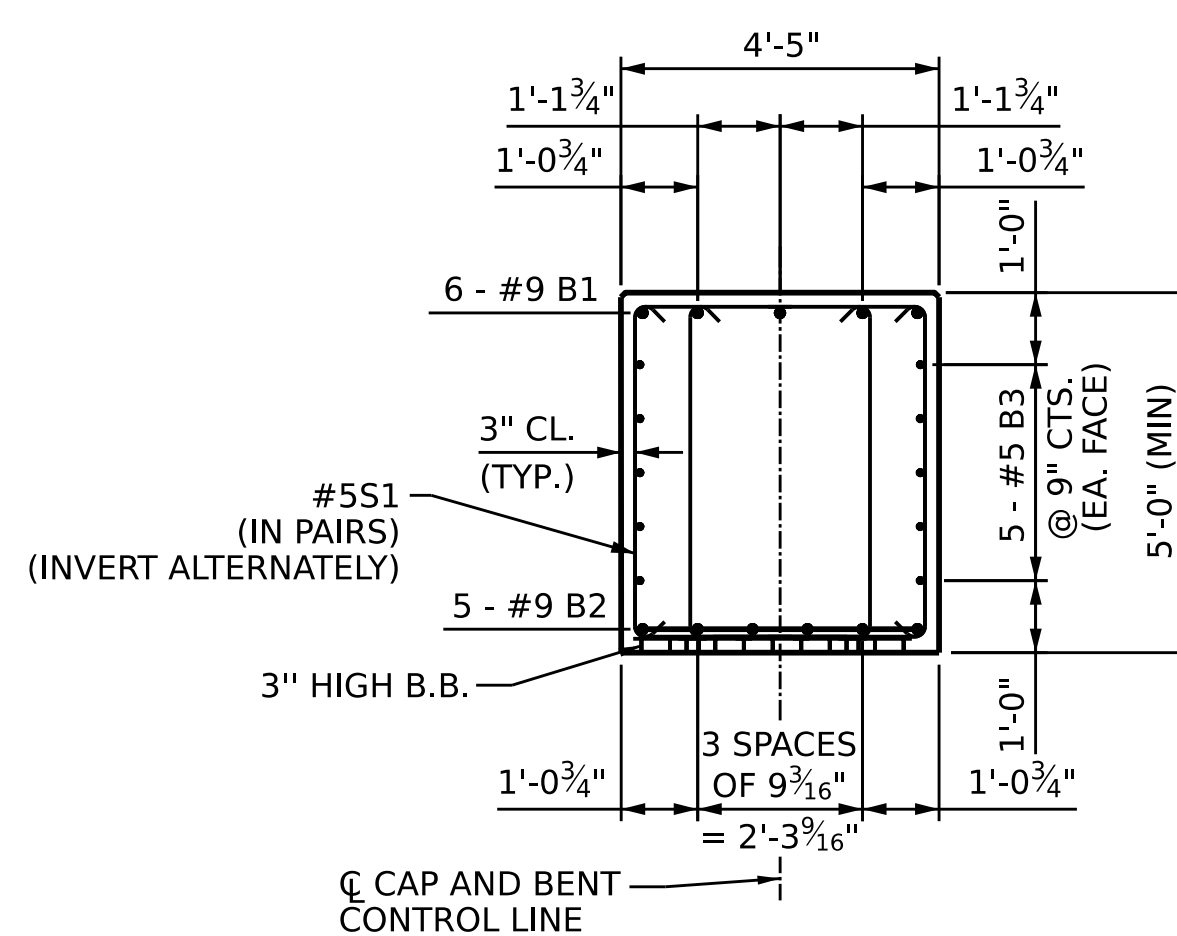
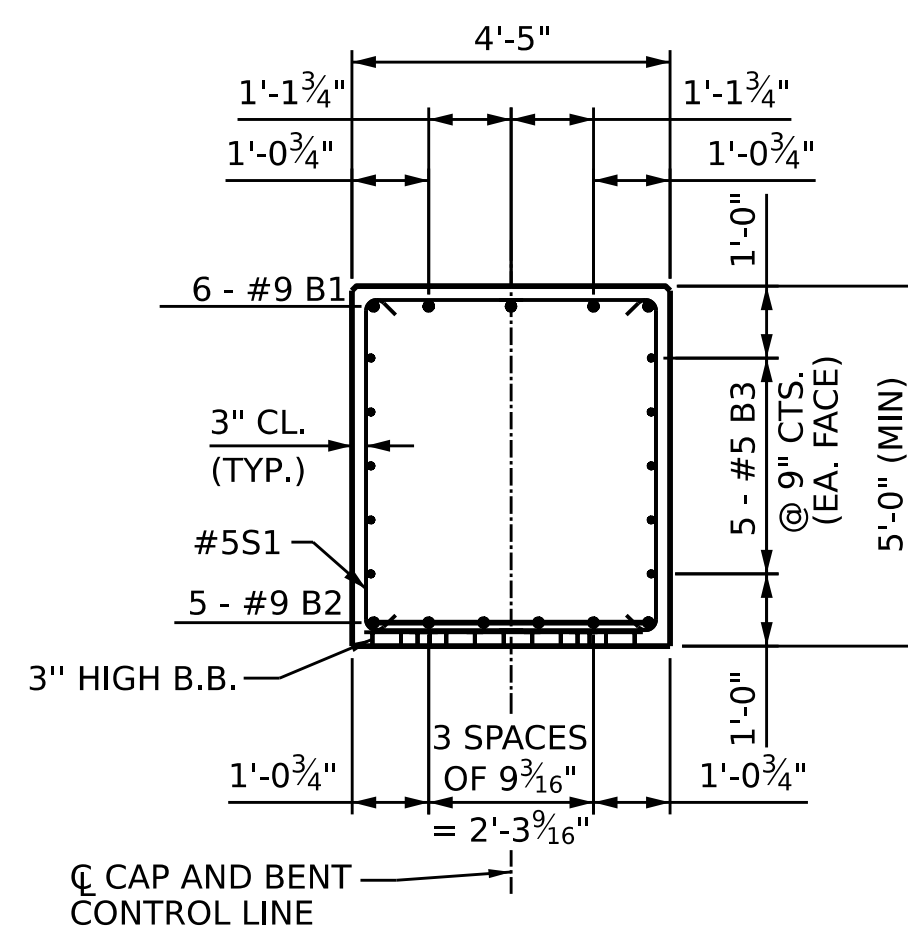
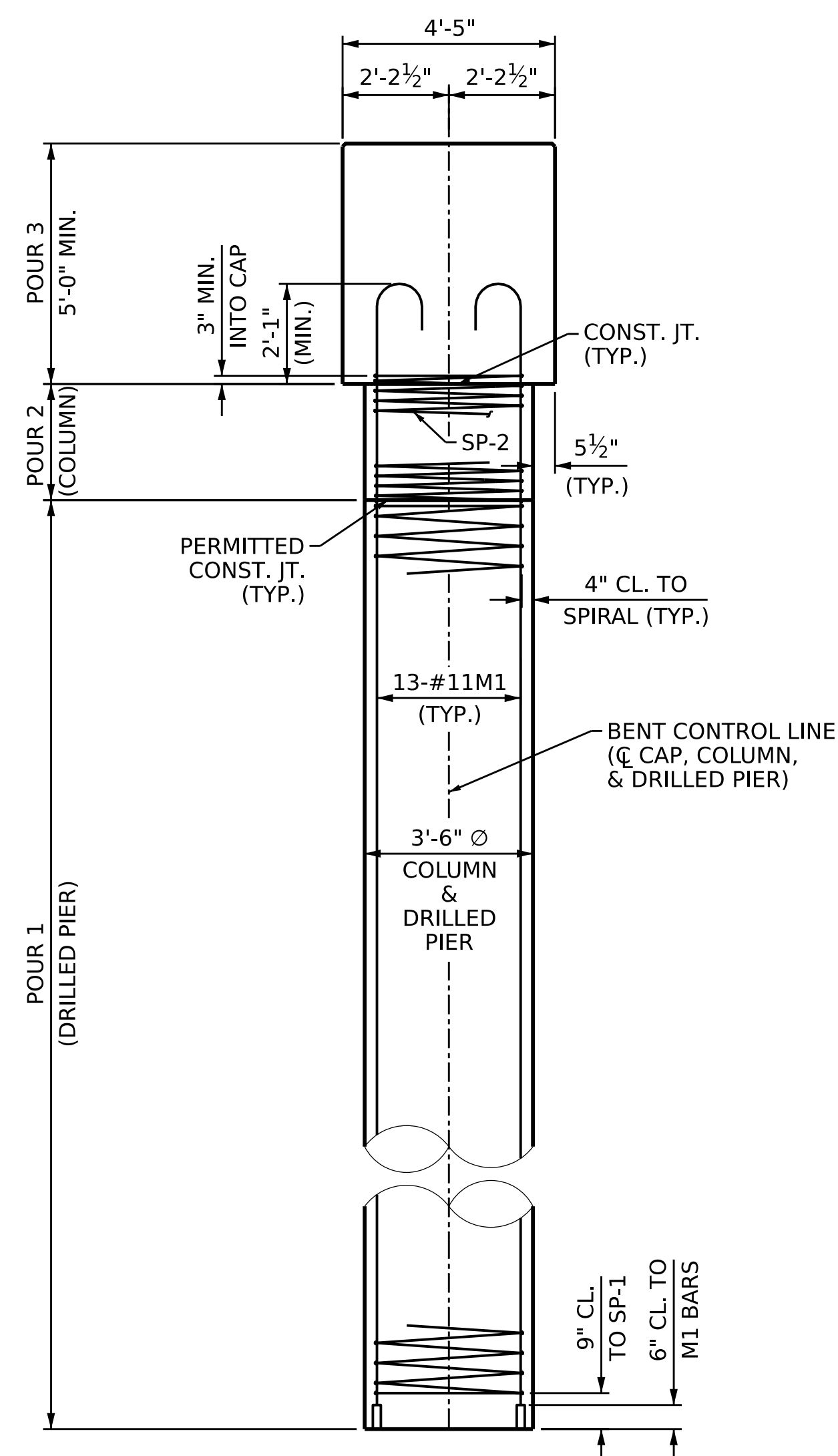
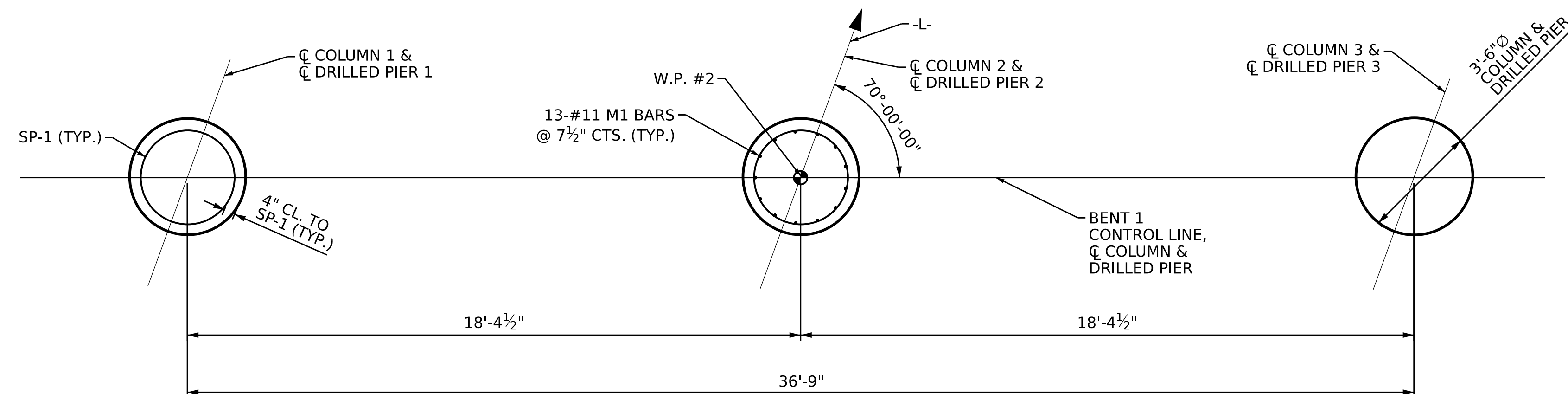


PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 1 OF 2

| REVISIONS |     |       |     |     |       | SHEET No.          |
|-----------|-----|-------|-----|-----|-------|--------------------|
| No.       | BY: | DATE: | No. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>26 |
| 2         |     |       | 4   |     |       |                    |

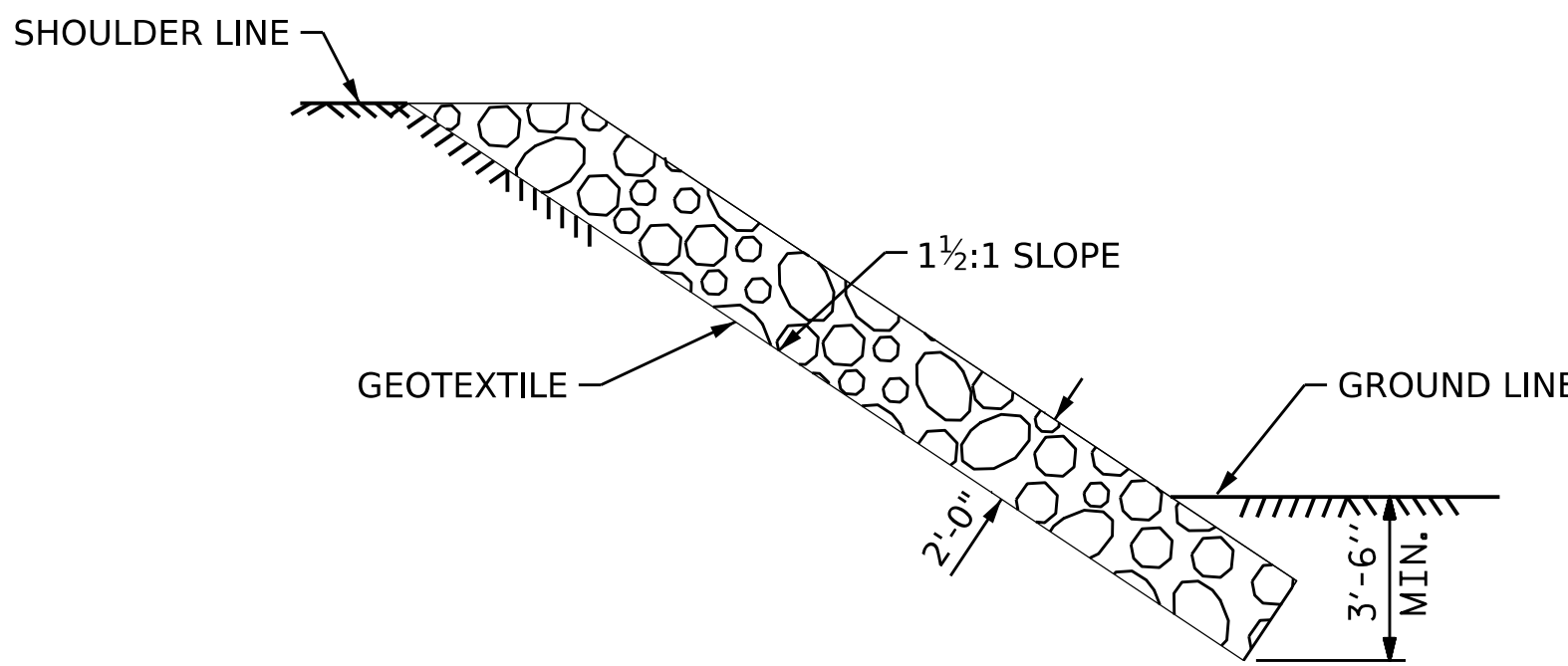
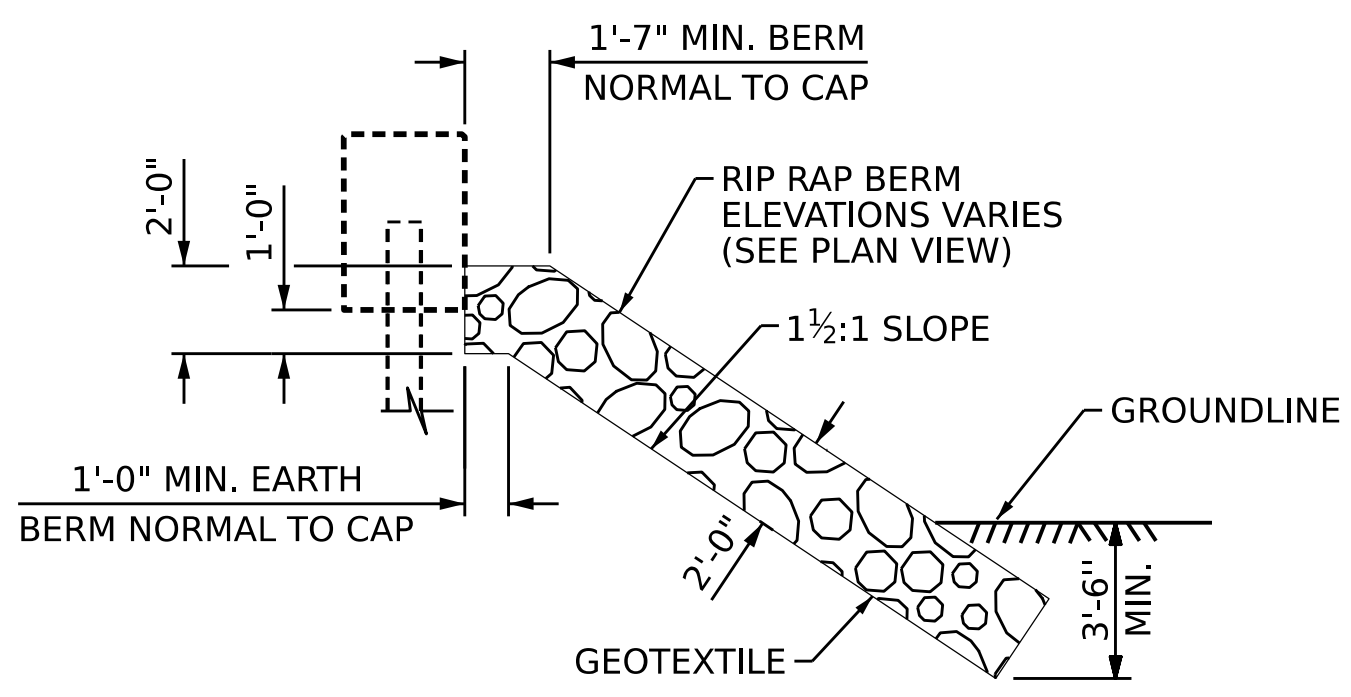
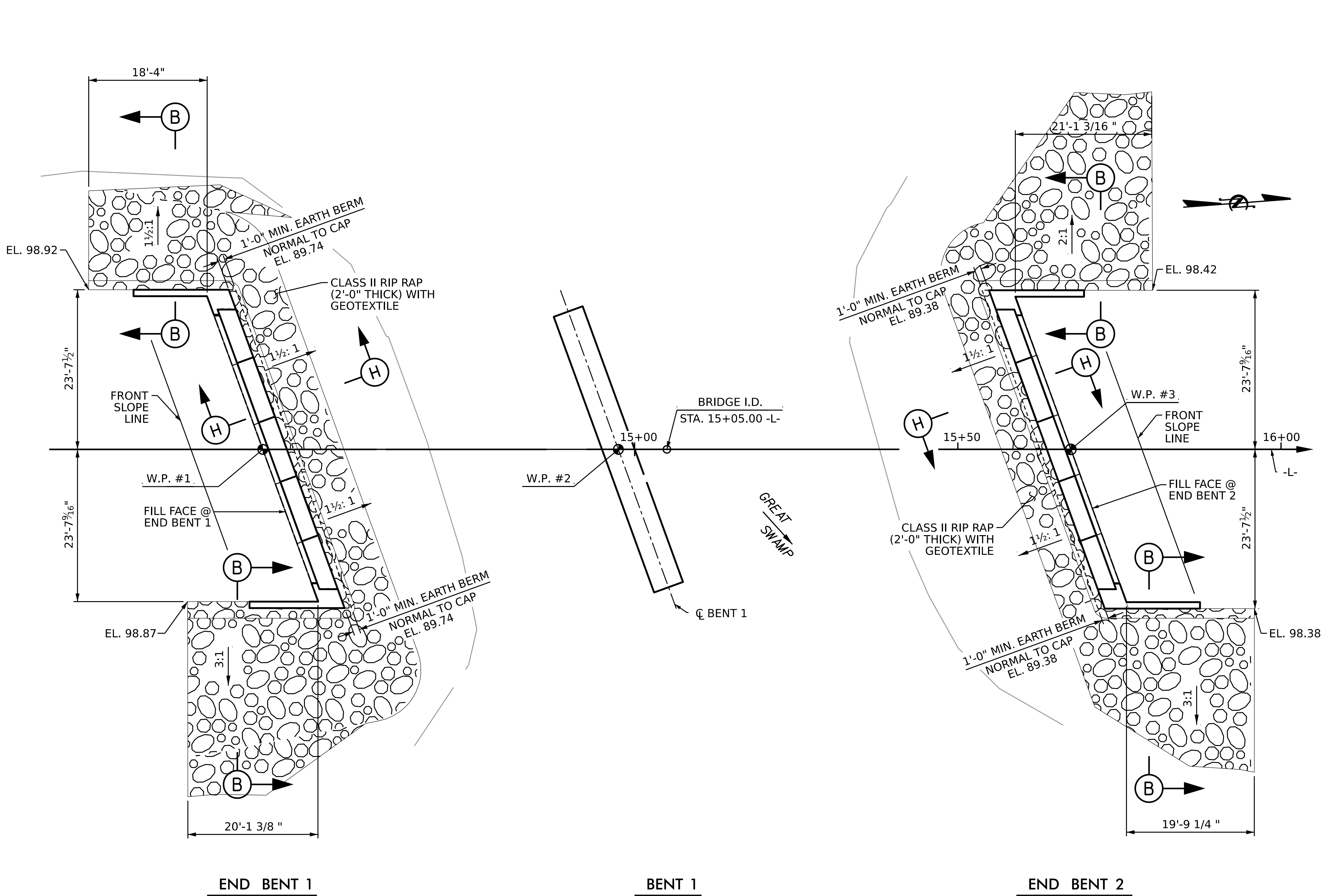




| BILL OF MATERIAL         |     |      |      |          |               |
|--------------------------|-----|------|------|----------|---------------|
| BAR                      | NO. | SIZE | TYPE | LENGTH   | WEIGHT        |
| B1                       | 5   | #9   | 1    | 48'-11"  | 832           |
| B2                       | 6   | #9   | STR  | 46'-5"   | 947           |
| B3                       | 10  | #5   | STR  | 46'-5"   | 484           |
| B4                       | 5   | #4   | STR  | 9'-5"    | 31            |
|                          |     |      |      |          |               |
| M1                       | 39  | #11  | 4    | 58'-7"   | 12,139        |
|                          |     |      |      |          |               |
| S1                       | 70  | #5   | 3    | 14'-5"   | 1,053         |
|                          |     |      |      |          |               |
| U1                       | 44  | #4   | 2    | 8'-1"    | 238           |
| U2                       | 10  | #4   | 2    | 7'-1"    | 47            |
| U3                       | 10  | #4   | 2    | 7'-8"    | 51            |
|                          |     |      |      |          |               |
| REINFORCING STEEL        |     |      |      |          | 15,822 LBS    |
|                          |     |      |      |          |               |
| SP-1                     | 3   | **   | 5    | 1056'-6" | 3,306         |
| SP-2                     | 3   | **   | 5    | 120'-0"  | 375           |
|                          |     |      |      |          |               |
| SPIRAL REINFORCING STEEL |     |      |      |          | 3,681 LBS.    |
|                          |     |      |      |          |               |
| CLASS A CONCRETE         |     |      |      |          |               |
| POUR #2 - COLUMN         |     |      |      |          | 2.6 CU. YDS.  |
| POUR #3 - CAP            |     |      |      |          | 39.9 CU. YDS. |
| TOTAL                    |     |      |      |          | 42.5 CU. YDS. |
|                          |     |      |      |          |               |
| DRILLED PIER CONCRETE    |     |      |      |          |               |
| POUR #1 - DRILLED PIER   |     |      |      |          | 52.9 CU. YDS. |

\*\* THE "SP-1", & "SP-2" SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR.





PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

| ESTIMATED QUANTITIES          |                                                  |                                                |
|-------------------------------|--------------------------------------------------|------------------------------------------------|
| BRIDGE @<br>STA. 15+05.00 -L- | RIP RAP<br>CLASS II<br>(2'-0" THICK)<br>( TONS ) | GEOTEXTILE<br>FOR DRAINAGE<br>( SQUARE YARDS ) |
| END BENT 1                    | 218                                              | 193.4                                          |
| END BENT 2                    | 216                                              | 192.2                                          |
| TOTAL                         | 434                                              | 385.6                                          |

DRAWN BY : A. T. SOLANKI DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24

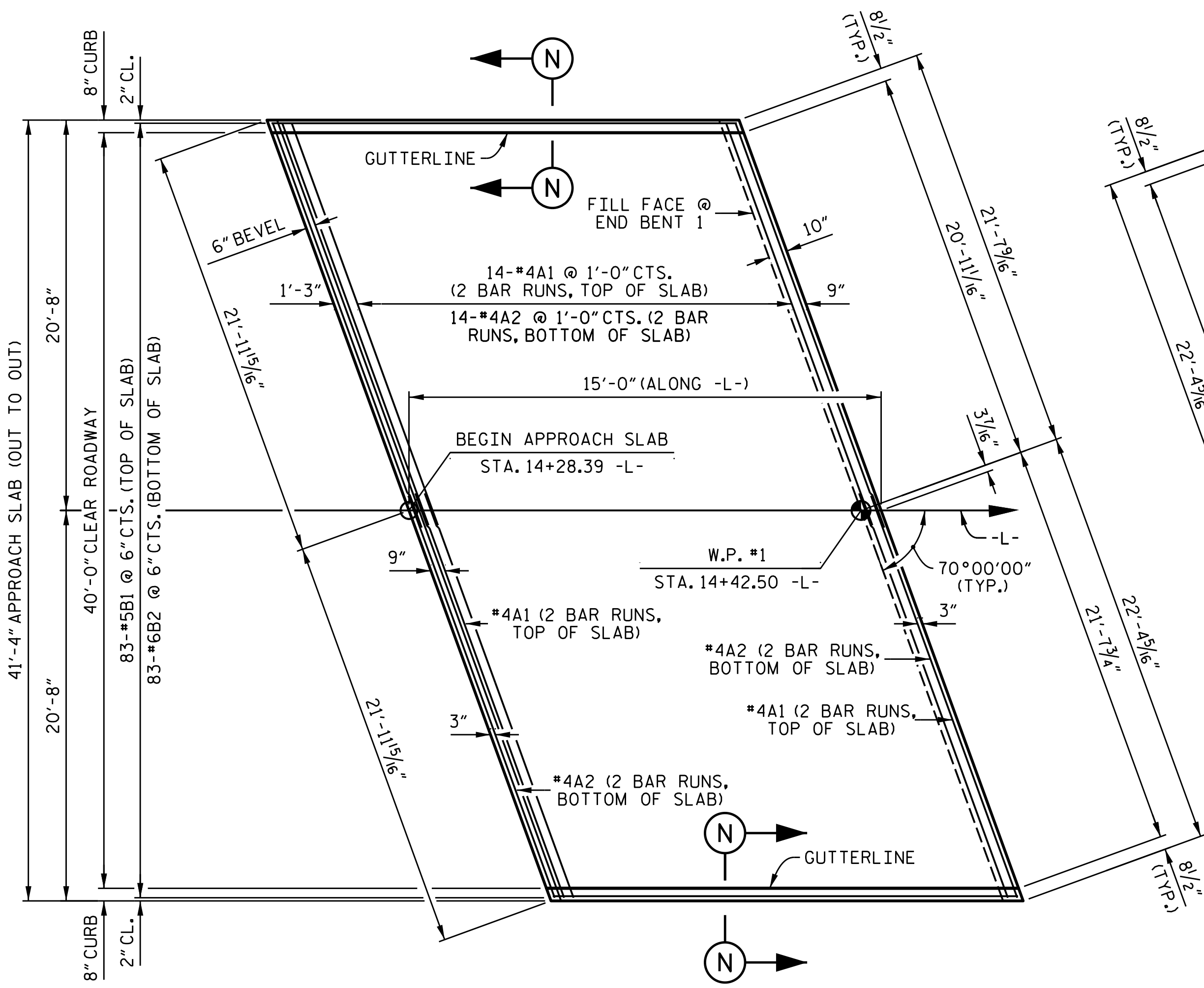
PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

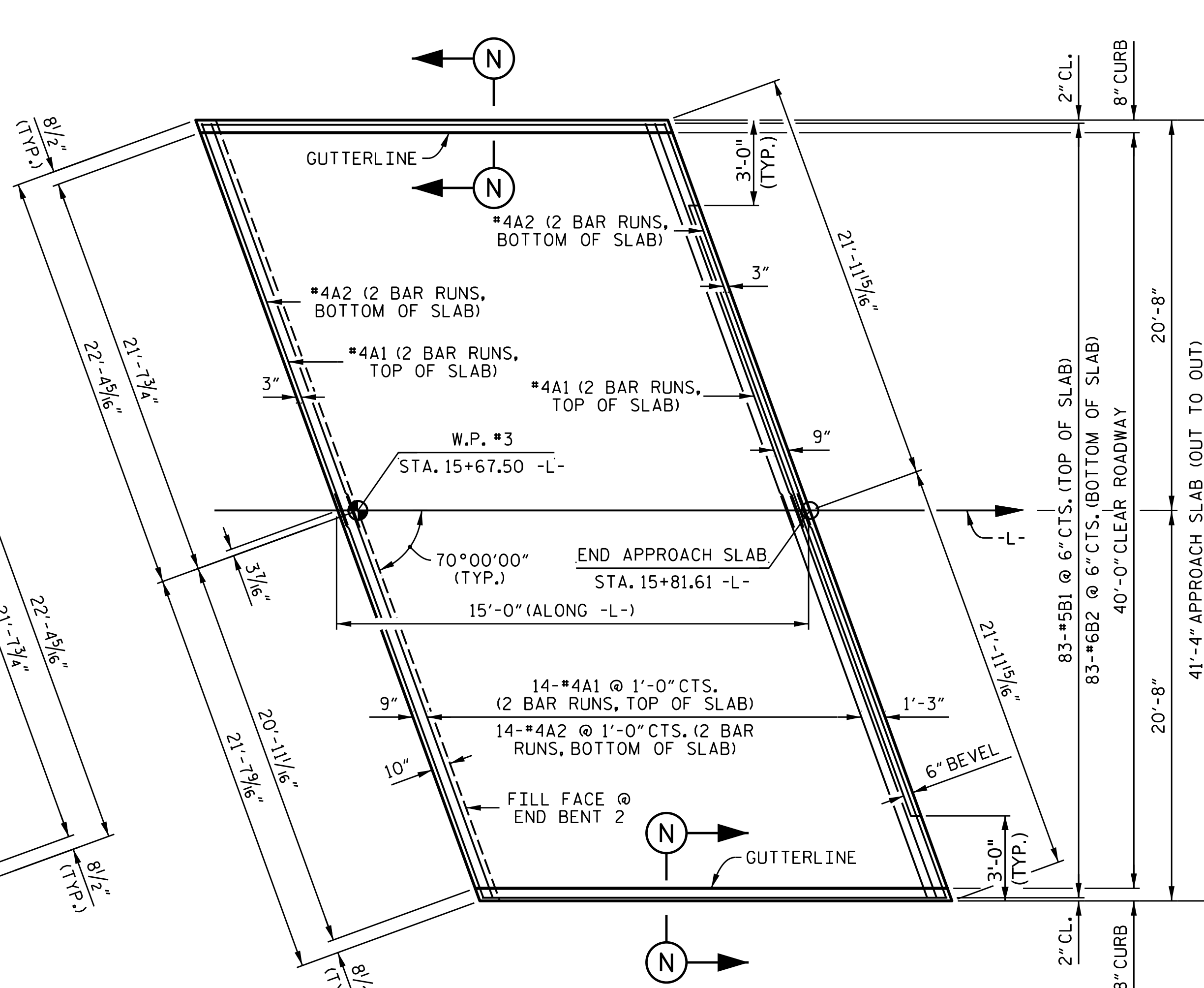


| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                              |
|--------------------------------------------------------------------|-----|-------|-----|-----|------------------------------|
| RIP RAP DETAILS                                                    |     |       |     |     |                              |
| REVISIONS                                                          |     |       |     |     |                              |
| No.                                                                | BY: | DATE: | No. | BY: | DATE:                        |
| 1                                                                  |     |       | 3   |     |                              |
| 2                                                                  |     |       | 4   |     |                              |
| SHEET No.<br><b>S-24</b>                                           |     |       |     |     | TOTAL<br>SHEETS<br><b>26</b> |

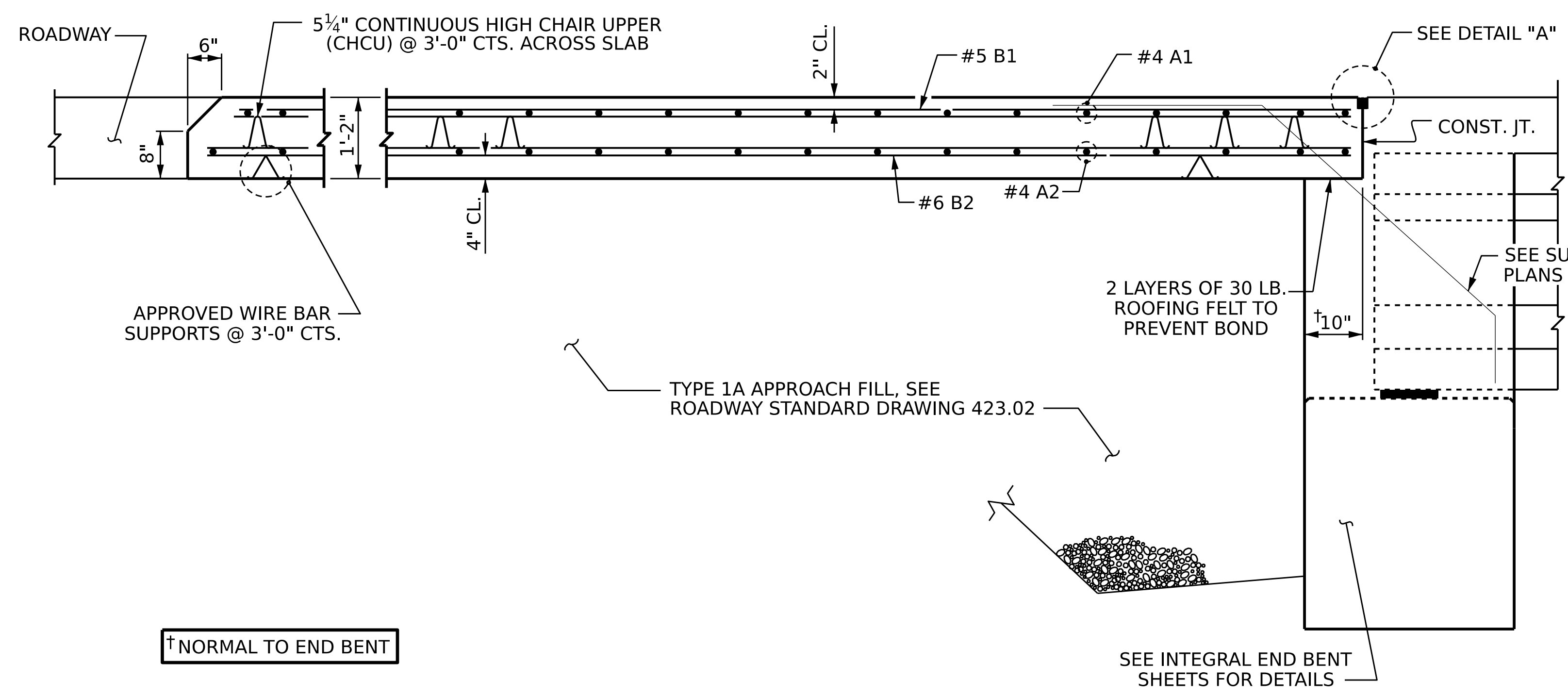




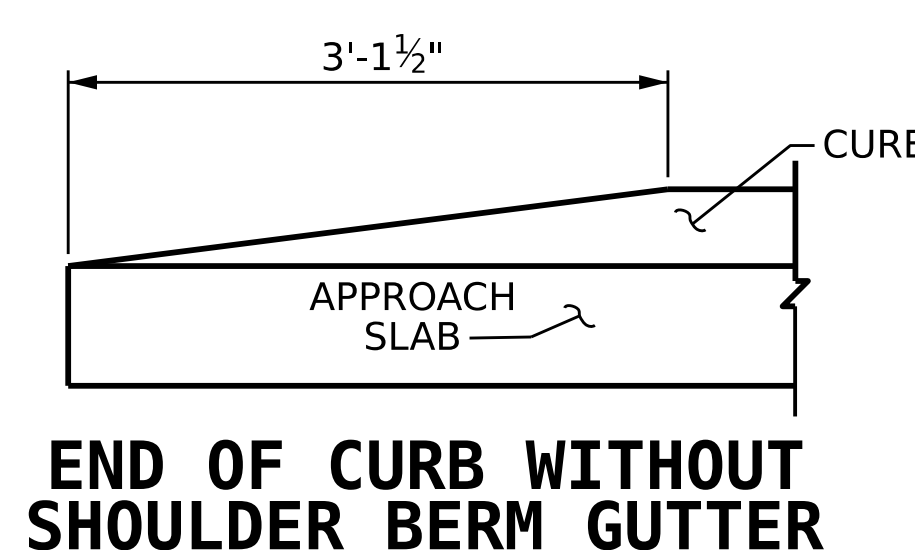
PLAN OF APPROACH SLAB AT END BENT 1



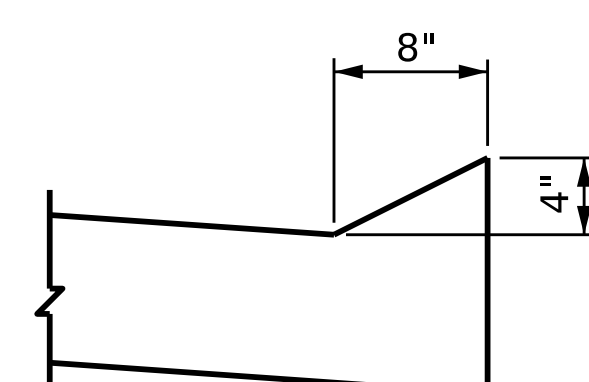
PLAN OF APPROACH SLAB AT END BENT 2



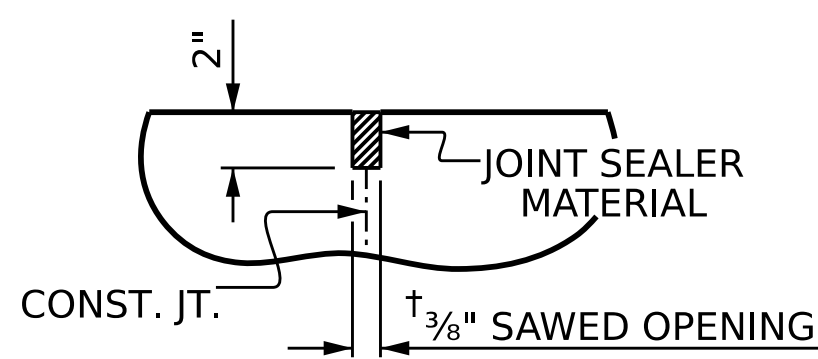
SECTION THRU SLAB



END OF CURB WITHOUT SHOULDER BERM GUTTER

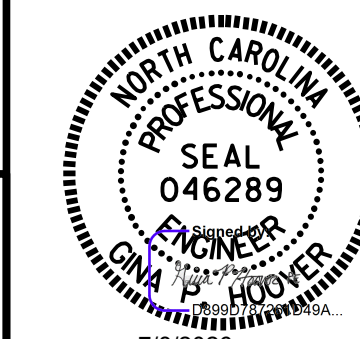


SECTION N-N



DETAIL "A"

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRAWN BY : A. T. SOLANKI DATE : 5-24  
CHECKED BY : G. P. HOOVER DATE : 5-24  
DESIGN ENGINEER : G. P. HOOVER DATE : 5-24

DRAWN BY : TLA 10/05  
CHECKED BY : GM 5/06  
REV. 12/17  
REV. 06/19  
REV. 07/23  
MAA/THC  
BNB/THC  
BNB/SNM

| SPLICE LENGTHS |      |        |
|----------------|------|--------|
| BAR            | SIZE | LENGTH |
| A1             | #4   | 2'-0"  |
| A2             | #4   | 1'-9"  |

| BILL OF MATERIAL                |     |      |      |        |               |  |
|---------------------------------|-----|------|------|--------|---------------|--|
| APPROACH SLAB AT END BENT 1     |     |      |      |        |               |  |
| BAR                             | No. | SIZE | TYPE | LENGTH | WEIGHT        |  |
| *A1                             | 32  | #4   | STR  | 22'-9" | 760           |  |
| A2                              | 32  | #4   | STR  | 22'-7" | 784           |  |
| *B1                             | 83  | #5   | STR  | 14'-2" | 2,092         |  |
| B2                              | 83  | #6   | STR  | 14'-8" | 3,075         |  |
| REINFORCING STEEL               |     |      |      |        | 3,859 LBS.    |  |
| *EPOXY COATED REINFORCING STEEL |     |      |      |        | 2,852 LBS.    |  |
| CLASS "AA" CONCRETE             |     |      |      |        | 26.7 CU. YDS. |  |
| APPROACH SLAB AT END BENT 2     |     |      |      |        |               |  |
| BAR                             | No. | SIZE | TYPE | LENGTH | WEIGHT        |  |
| *A1                             | 32  | #4   | STR  | 22'-9" | 760           |  |
| A2                              | 32  | #4   | STR  | 22'-7" | 784           |  |
| *B1                             | 83  | #5   | STR  | 14'-2" | 2,092         |  |
| B2                              | 83  | #6   | STR  | 14'-8" | 3,075         |  |
| REINFORCING STEEL               |     |      |      |        | 3,859 LBS.    |  |
| *EPOXY COATED REINFORCING STEEL |     |      |      |        | 2,852 LBS.    |  |
| CLASS "AA" CONCRETE             |     |      |      |        | 26.7 CU. YDS. |  |

NOTES

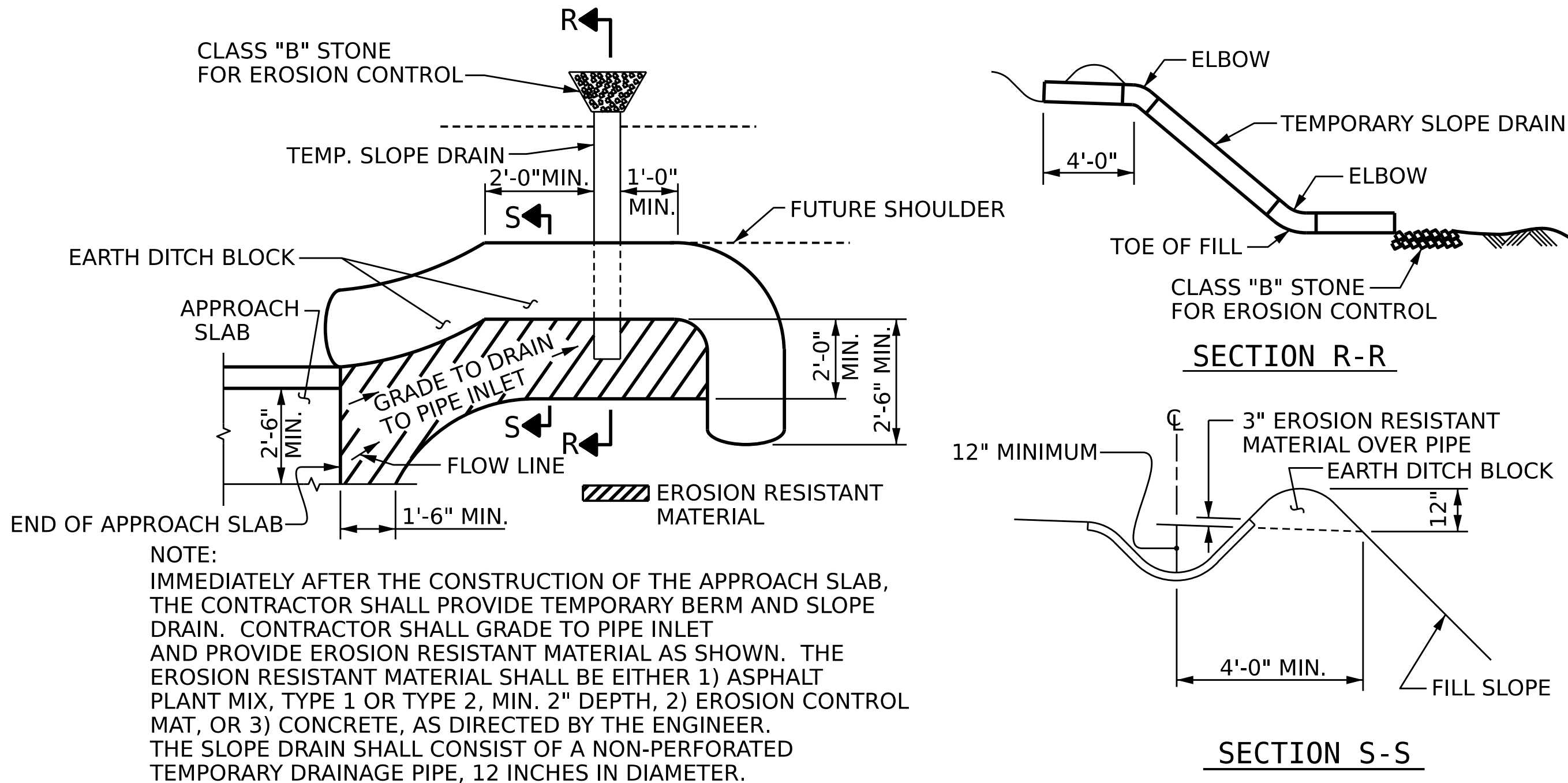
- FOR BRIDGE APPROACH FILL, SEE ROADWAY PLANS.
- APPROACH SLAB SHALL NOT BE CONSTRUCTED PRIOR TO COMPLETION OF THE BRIDGE DECK.
- AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.
- THE JOINT OPENING AT THE APPROACH SLAB/DECK INTERFACE SHALL BE SAWED NO MORE THAN 12 HOURS AFTER THE APPROACH SLAB IS CAST. THE JOINT SHALL BE CLEANED OF ALL DEBRIS BEFORE THE SEALANT IS APPLIED. THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1028-3 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. BR-0150  
WILSON COUNTY  
STATION: 15 + 05.00 -L-

SHEET 1 OF 2

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH      |     |       |     |     |               |
|-------------------------------------------------------------------------|-----|-------|-----|-----|---------------|
| STANDARD                                                                |     |       |     |     |               |
| BRIDGE APPROACH SLAB<br>FOR INTEGRAL ABUTMENT<br>WITH FLEXIBLE PAVEMENT |     |       |     |     |               |
| REVISIONS                                                               |     |       |     |     | SHEET No.     |
| No.                                                                     | BY: | DATE: | No. | BY: | DATE:         |
| 1                                                                       |     |       | 3   |     |               |
| 2                                                                       |     |       | 4   |     |               |
|                                                                         |     |       |     |     | TOTAL SHEETS  |
|                                                                         |     |       |     |     | 26            |
|                                                                         |     |       |     |     | STD. No. BAS5 |
|                                                                         |     |       |     |     | STR. #1       |

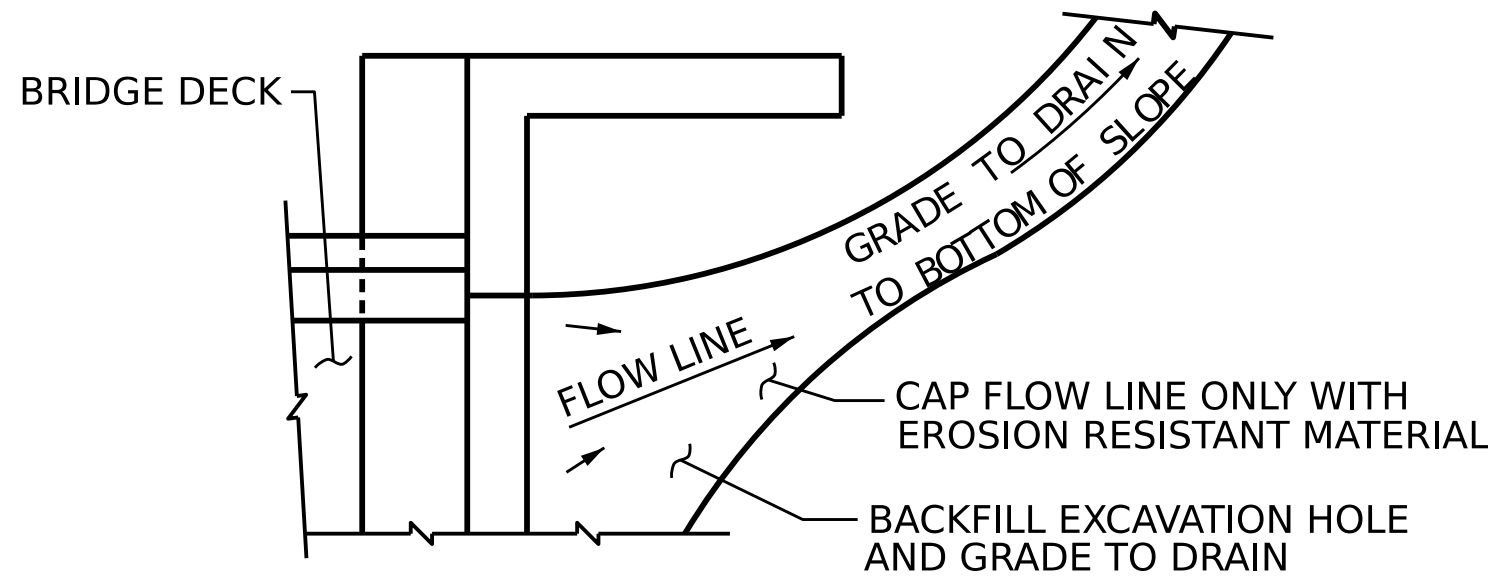




PLAN VIEW

TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

TEMPORARY DRAINAGE DETAIL

PROJECT NO. BR-0150

WILSON COUNTY

BRIDGE NO. 15 + 05.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

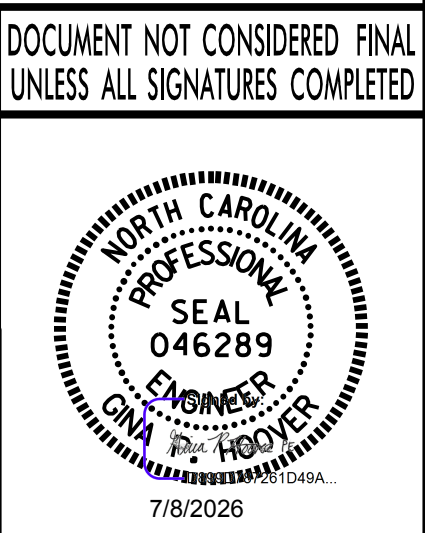
STANDARD

BRIDGE APPROACH  
SLAB DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO.    |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: | S-26         |
| 1         |     |       | 3   |     |       | TOTAL SHEETS |
| 2         |     |       | 4   |     |       | 26           |

|                   |               |        |      |
|-------------------|---------------|--------|------|
| DRAWN BY :        | A. T. SOLANKI | DATE : | 5-24 |
| CHECKED BY :      | G. P. HOOVER  | DATE : | 5-24 |
| DESIGN ENGINEER : | G. P. HOOVER  | DATE : | 5-24 |

PLANS PREPARED BY :  
**ARCADIS**  
175 REGENCY WOODS PLACE, SUITE 400  
CARY, NORTH CAROLINA 27518  
NC LICENSE No. C-1869  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION





STANDARD NOTES

DESIGN DATA:

|                                                                       |                                  |
|-----------------------------------------------------------------------|----------------------------------|
| SPECIFICATIONS                                                        | AASHTO (CURRENT)                 |
| LIVE LOAD                                                             | SEE PLANS                        |
| IMPACT ALLOWANCE                                                      | SEE AASHTO                       |
| STRESS IN EXTREME FIBER OF<br>STRUCTURAL STEEL - AASHTO M270 GRADE 36 | 20,000 LBS. PER SQ. IN.          |
| - AASHTO M270 GRADE 50W                                               | 27,000 LBS. PER SQ. IN.          |
| - AASHTO M270 GRADE 50                                                | 27,000 LBS. PER SQ. IN.          |
| REINFORCING STEEL IN TENSION - GRADE 60                               | 24,000 LBS. PER SQ. IN.          |
| CONCRETE IN COMPRESSION                                               | 1,200 LBS. PER SQ. IN.           |
| CONCRETE IN SHEAR                                                     | SEE AASHTO                       |
| STRUCTURAL TIMBER - TREATED OR UNTREATED<br>EXTREME FIBER STRESS      | 1,800 LBS. PER SQ. IN.           |
| COMPRESSION PERPENDICULAR TO GRAIN<br>OF TIMBER                       | 375 LBS. PER SQ. IN.             |
| EQUIVALENT FLUID PRESSURE OF EARTH                                    | 30 LBS. PER CU. FT.<br>(MINIMUM) |

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞" Ø SHEAR STUDS FOR THE ¾" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞" Ø STUDS FOR 4 - ¾" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" Ø STUDS ALONG THE BEAM AS SHOWN FOR ¾" Ø STUDS BASED ON THE RATIO OF 3 - ⅞"Ø STUDS FOR 4 - ¾" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST ⅝" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY ⅛" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.