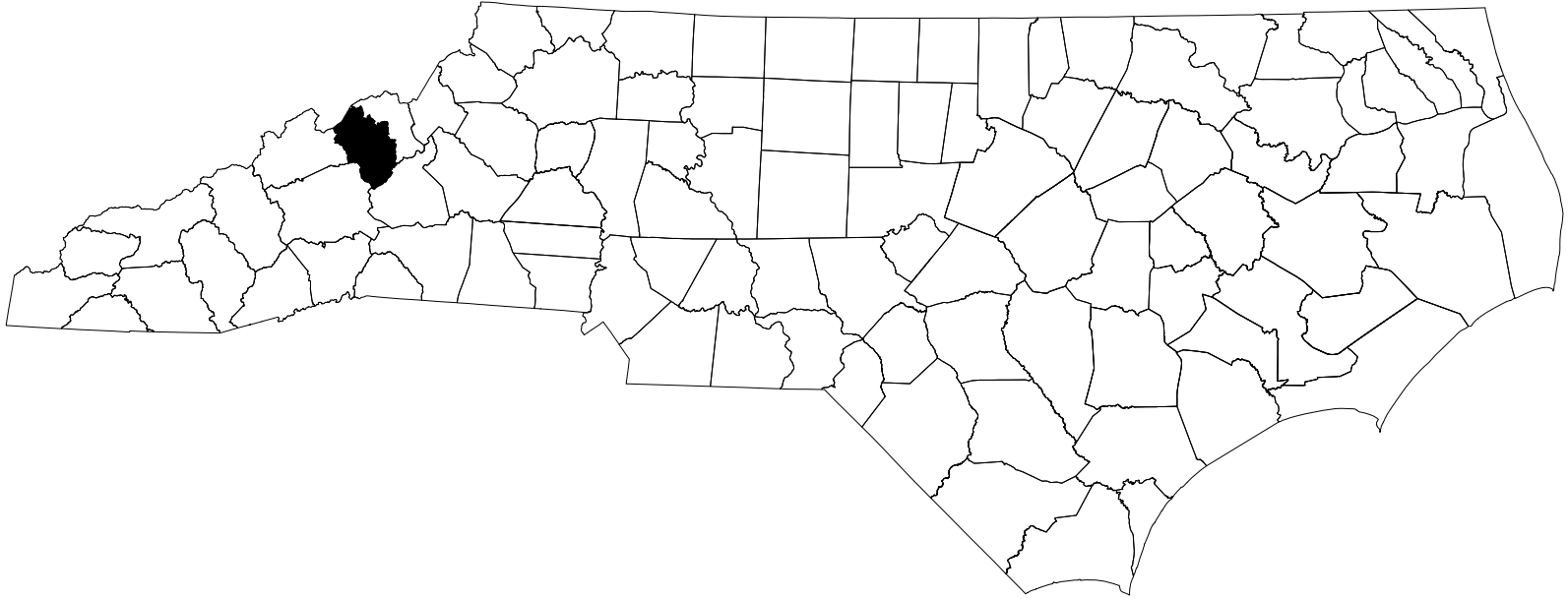


CONTRACT: DM00485

PROJECT: DF18313.2100483.PR  
DF18313.2100650.PR



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

YANCEY COUNTY

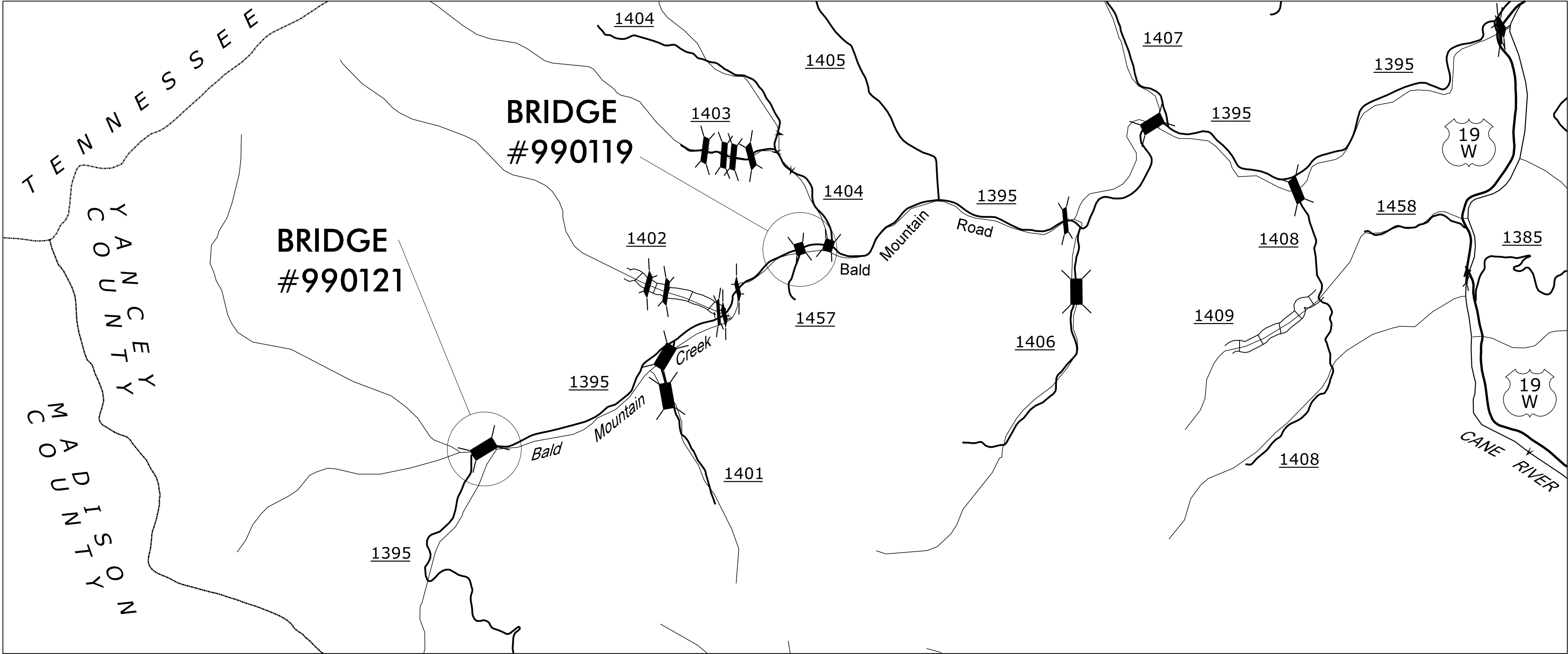
LOCATION:

BRIDGE #990119 ON SR 1395 (BALD MOUNTAIN RD) OVER BALD MOUNTAIN CREEK

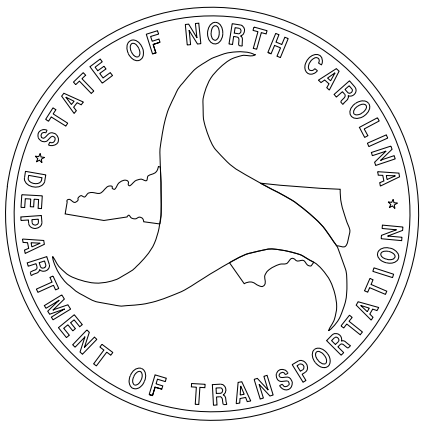
BRIDGE #990121 ON SR 1395 (BALD MOUNTAIN RD) OVER BALD MOUNTAIN CREEK

TYPE OF WORK: BRIDGE REPAIR

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18313.2100483.PR / DF18313.2100650.PR	1	9
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
DF18313.2100483.PR	N/A	BRIDGE 990119	
DF18313.2100650.PR	N/A	BRIDGE 990121	



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
EC-2A	ONSITE CONCRETE WASHOUT DETAIL
S1-1 THRU S1-3	STRUCTURE PLANS (#990119)
S2-1 THRU S2-3	STRUCTURE PLANS (#990121)
STRUCTURE STANDARD NOTES	

NCDOT CONTACT: JOEL M. DAVIS

PLANS PREPARED BY:	PLANS PREPARED FOR:
TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  DIVISION 13 20 Old 74 Asheville, NC 28803
LETTING DATE: JUNE 4, 2025	MARSHALL G. CHEEK, JR., PE PROJECT ENGINEER
2024 STANDARD SPECIFICATIONS	

STRUCTURAL ENGINEER

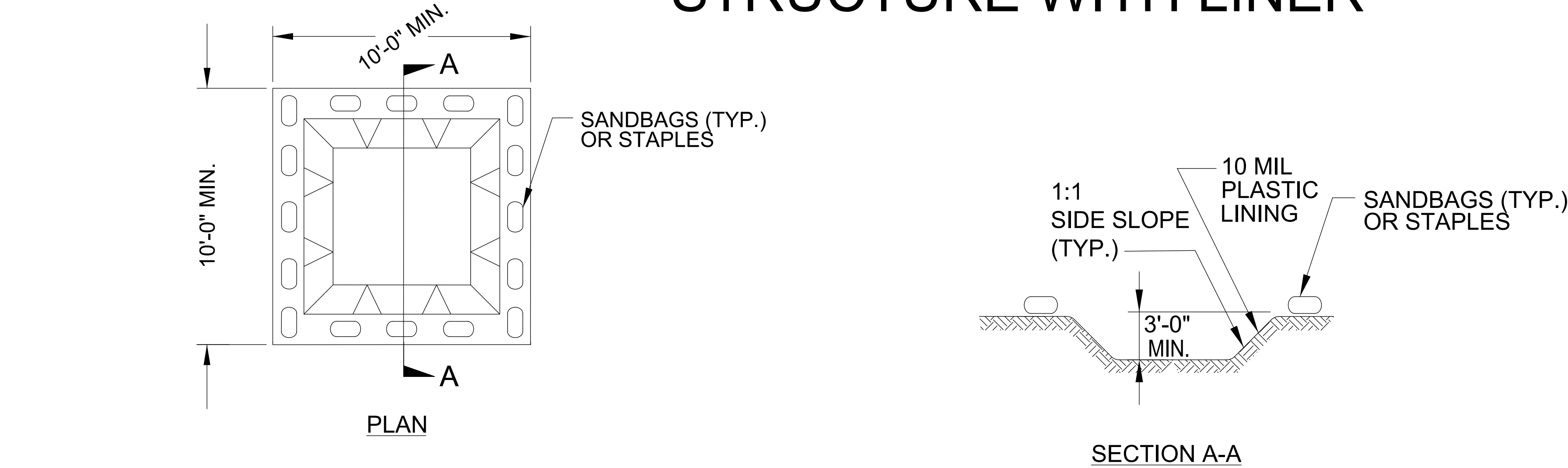
5/21/2025

Signed by:  
Marshall G. Cheek, Jr.  
P.E.  
SIGNATURE:



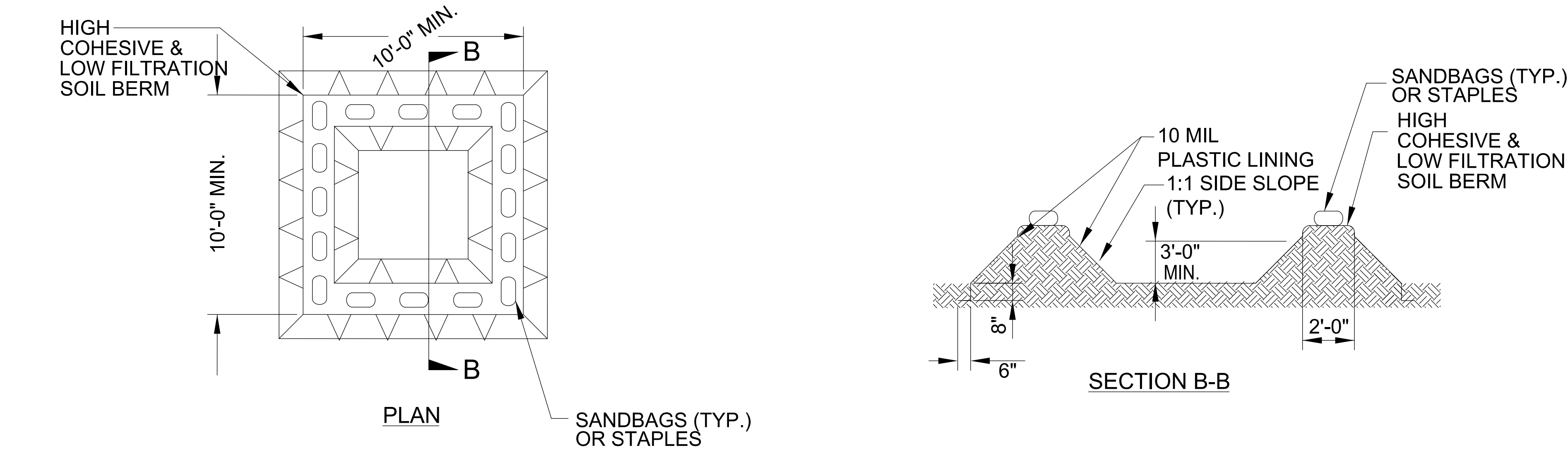
# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
DF18313.2100483.PR / DF18313.2100650.PR	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

BELOW GRADE WASHOUT STRUCTURE  
NOT TO SCALE



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

ABOVE GRADE WASHOUT STRUCTURE  
NOT TO SCALE

NOTES:

EXISTING DIMENSIONS AND BRIDGE CONDITIONS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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.

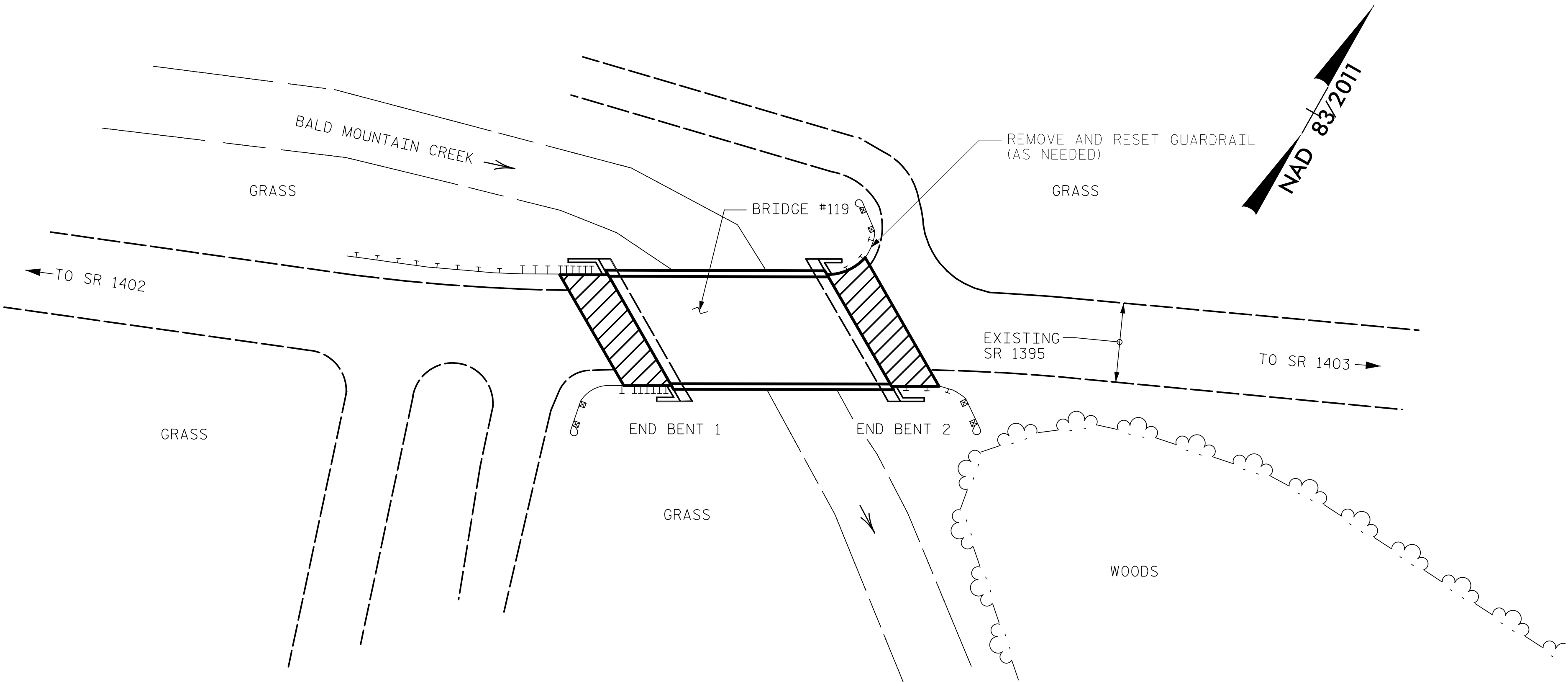
IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR FLOWABLE FILL, SEE SPECIAL PROVISIONS.

UNLESS OTHERWISE NOTED, ALL WORK SHOWN SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, JANUARY 2024.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

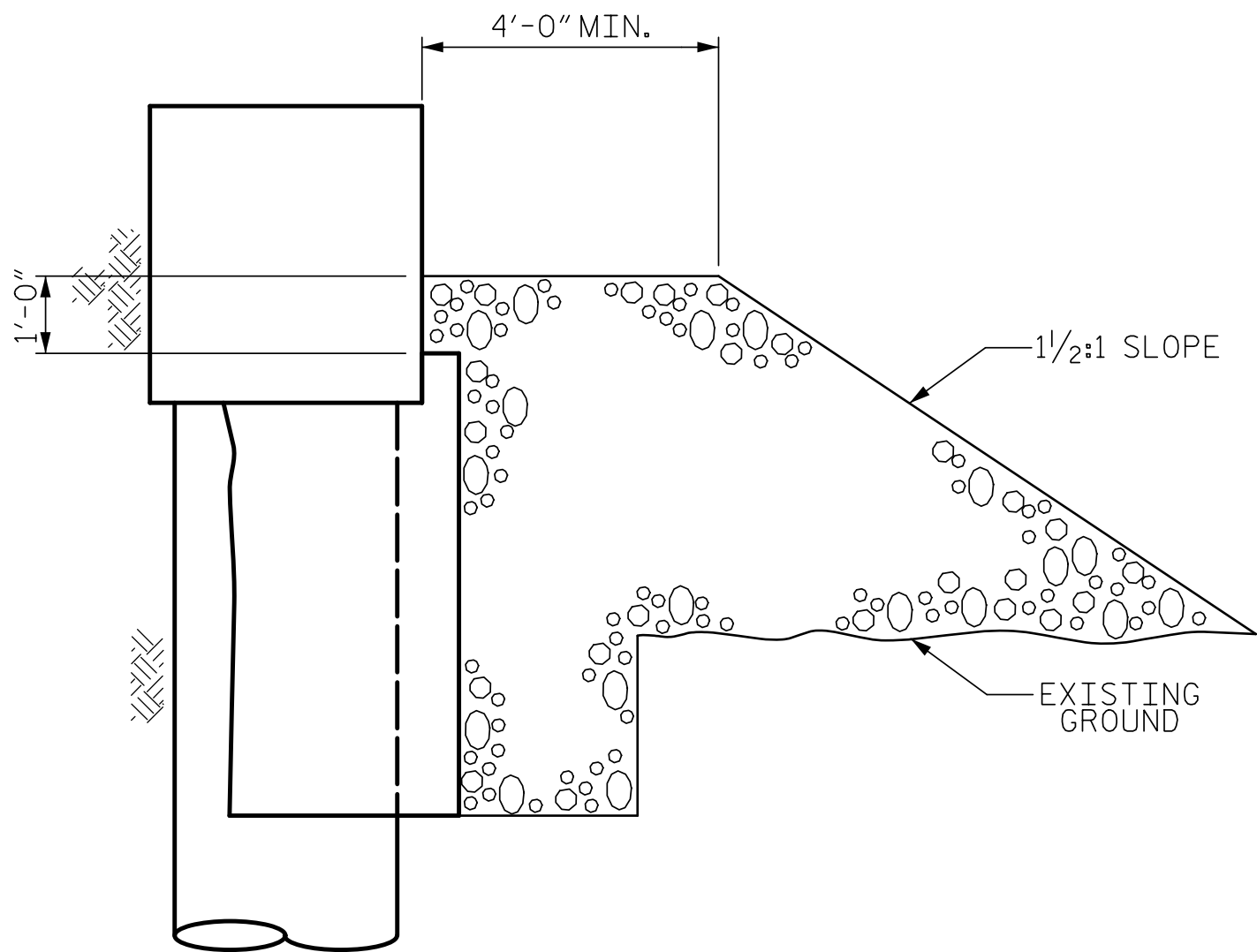
FOR OTHER DESIGN DATA, SEE STANDARD NOTES SHEET.



LOCATION SKETCH

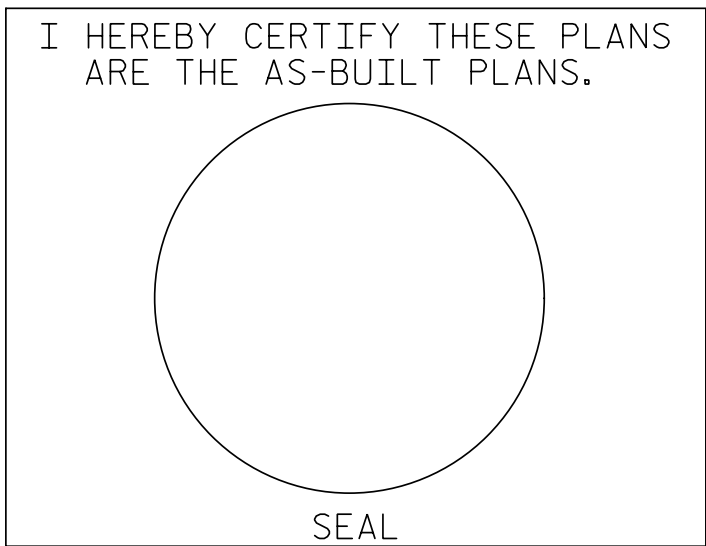
TOTAL BILL OF MATERIAL					
ITEM	MOBILIZATION	FOUNDATION EXCAVATION AT END BENT 1	FOUNDATION EXCAVATION AT END BENT 2	FLOWABLE FILL	RIP RAP CLASS II
	LUMP SUM	LUMP SUM	LUMP SUM	C.Y.	TONS
ESTIMATED TOTALS	LUMP SUM	LUMP SUM	LUMP SUM	50	200

NOTE: QUANTITIES SHOWN ARE ESTIMATED FROM THE BEST INFORMATION AVAILABLE.



RIP RAP PLACEMENT

CLASS II RIP RAP AT THE PROJECT SITE SHALL BE STOCKPILED FOR USE FOLLOWING THE SCOUR REPAIR. THE EXISTING RIP RAP SHALL BE SUPPLEMENTED WITH ADDITIONAL CLASS II RIP RAP AS NECESSARY. THE ENTIRE WORK TO STOCKPILE AND REPLACE THE EXISTING RIP RAP SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOUNDATION EXCAVATION. RIP RAP SHALL BE PLACED TO A LEVEL OF 1 FOOT ABOVE THE BOTTOM OF THE END BENT CAP OR AS DIRECTED BY THE ENGINEER. IN ADDITION, RIP RAP SHALL BE PLACED ALONG END BENT 2 WING AND THE BANK SLOPES ADJACENT TO THE END BENTS AS DIRECTED BY THE ENGINEER.

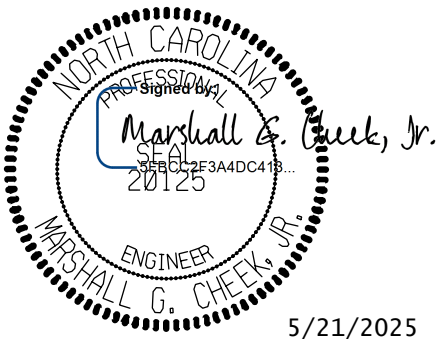


PROJECT NO. DF18313.2100483.PR

YANCEY COUNTY

BRIDGE NO. 119

SHEET 1 OF 3



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #119 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1402 AND SR 1403

DRAWN BY : NMW  
CHECKED BY : MGC  
DATE : 1/25  
DATE : 2/25

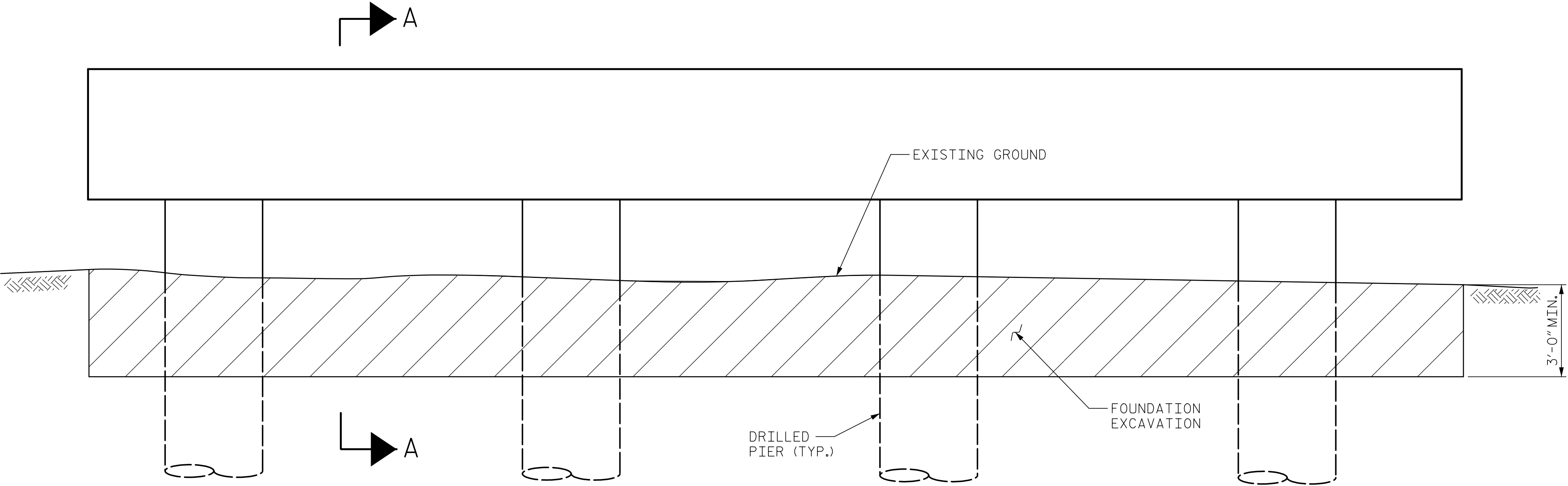
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-1
2			4			TOTAL SHEETS 3



NOTES

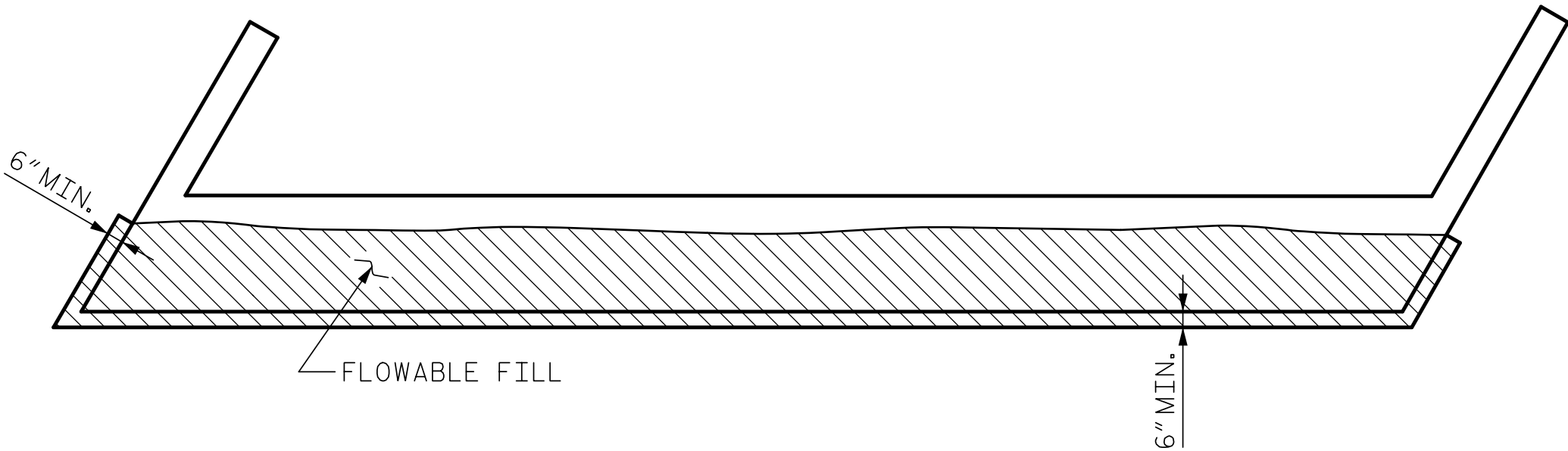
TEMPORARILY DEWATER AS NECESSARY TO PROVIDE ACCESS TO END BENT SCOUR AREAS.

THE MINIMUM EXCAVATION FOR PLACEMENT OF THE FLOWABLE FILL IS INDICATED. SHOULD ADDITIONAL EXCAVATION BE REQUIRED, DETERMINATION OF PAYMENT WILL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR FOUNDATION EXCAVATION.



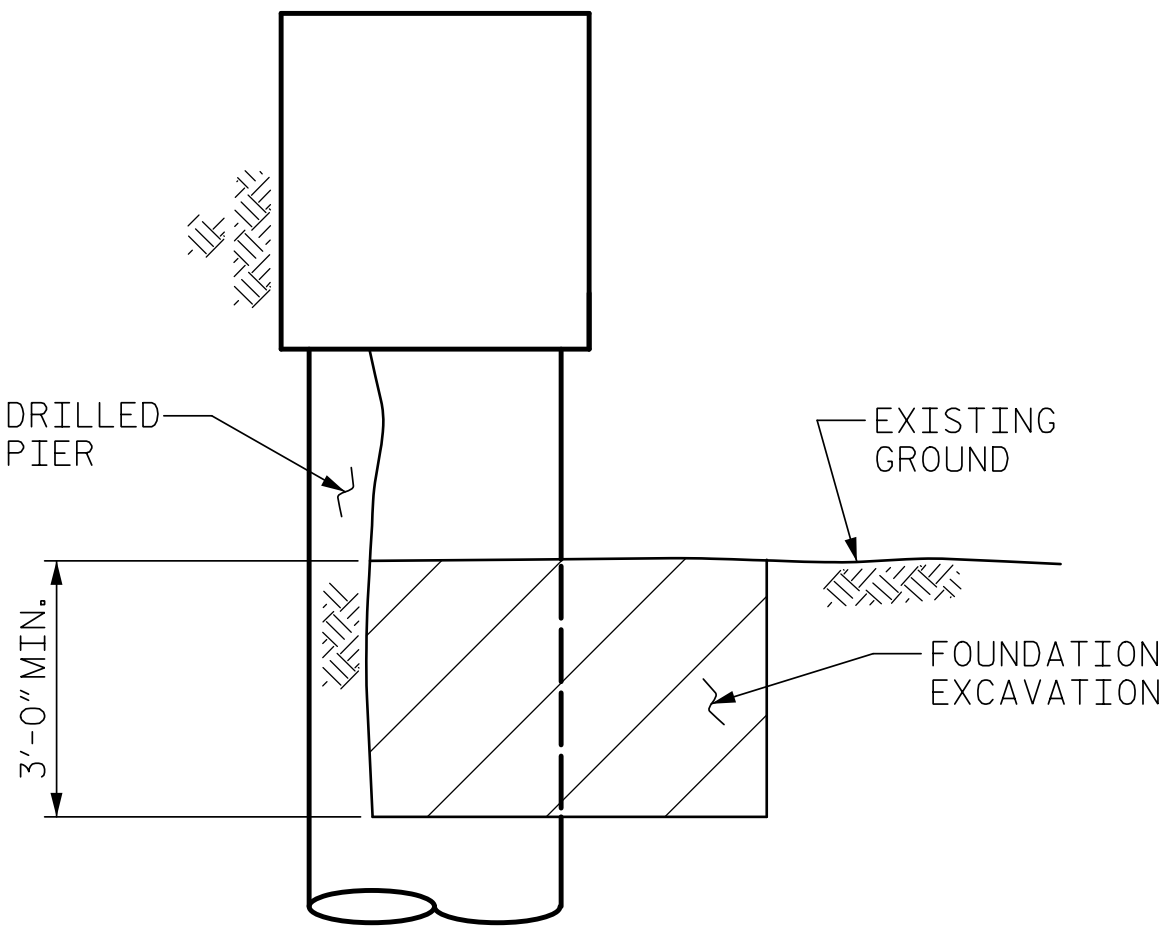
END BENT ELEVATION

WINGS NOT SHOWN IN ELEVATION FOR CLARITY. ELEVATION SHOWN IS TYPICAL OF CONDITIONS AT BOTH END BENTS.



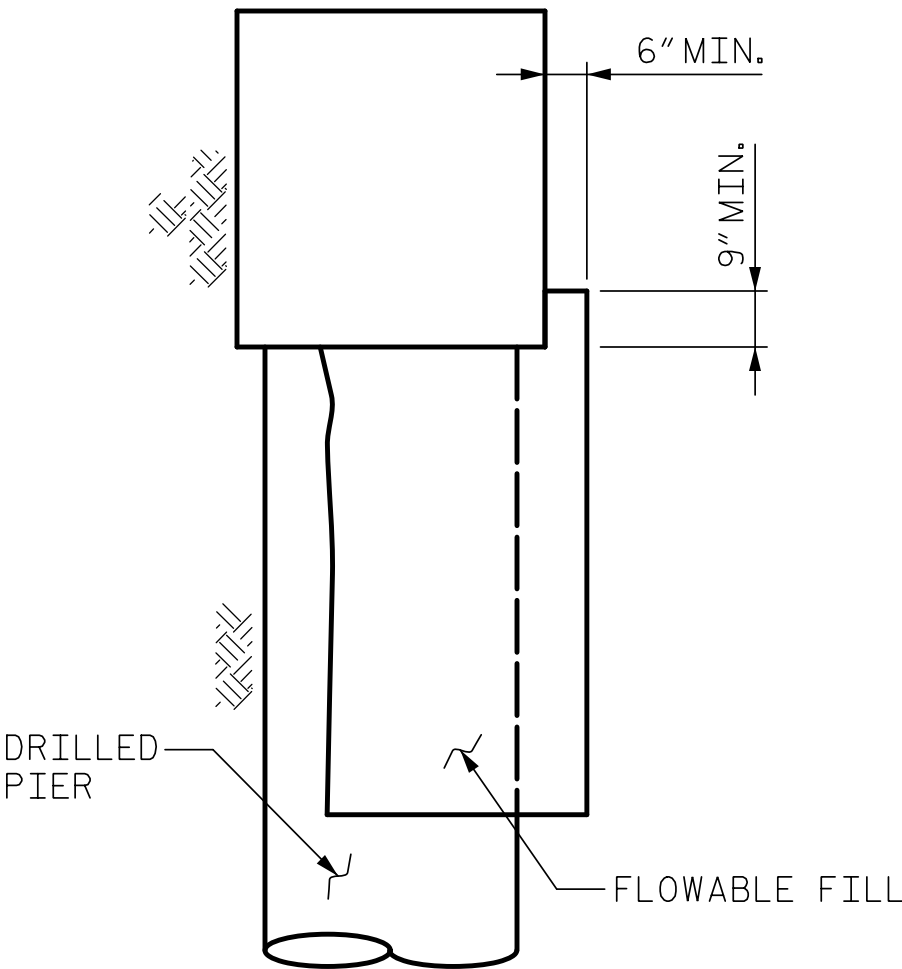
PLAN VIEW

SHOWING LIMITS OF FLOWABLE FILL



SECTION A-A

SHOWING LIMITS OF FOUNDATION EXCAVATION



SECTION A-A

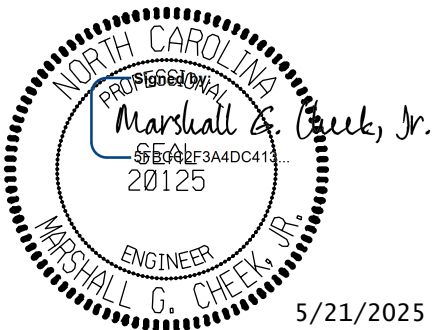
SHOWING LIMITS OF FLOWABLE FILL

PROJECT NO. DF18313.2100483.PR

YANCEY COUNTY

BRIDGE NO. 119

SHEET 2 OF 3



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #119 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1402 AND SR 1403

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



TGS ENGINEERS  
201 W. MARION ST STE 200  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.

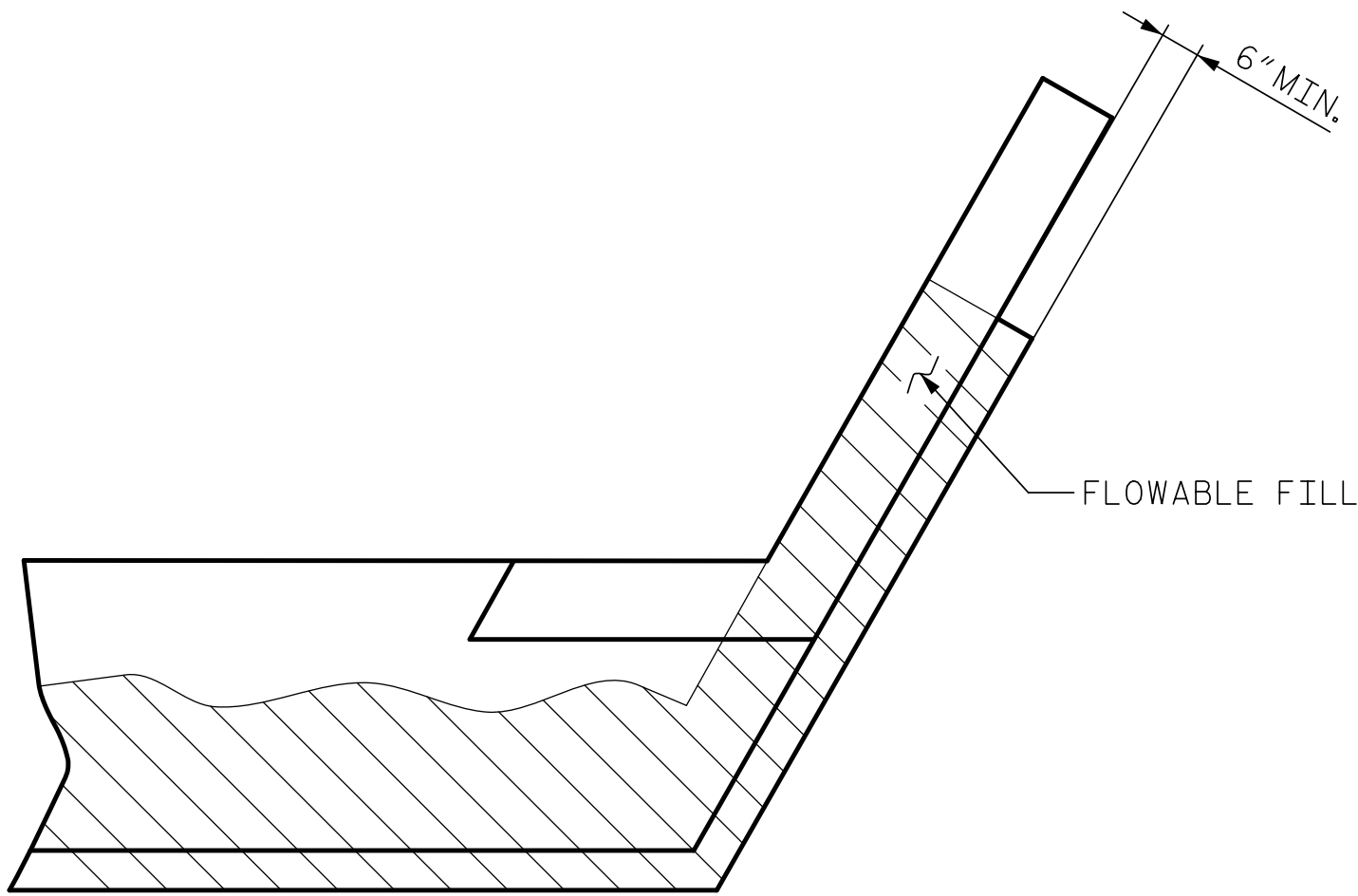
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TOTAL

SHEETS

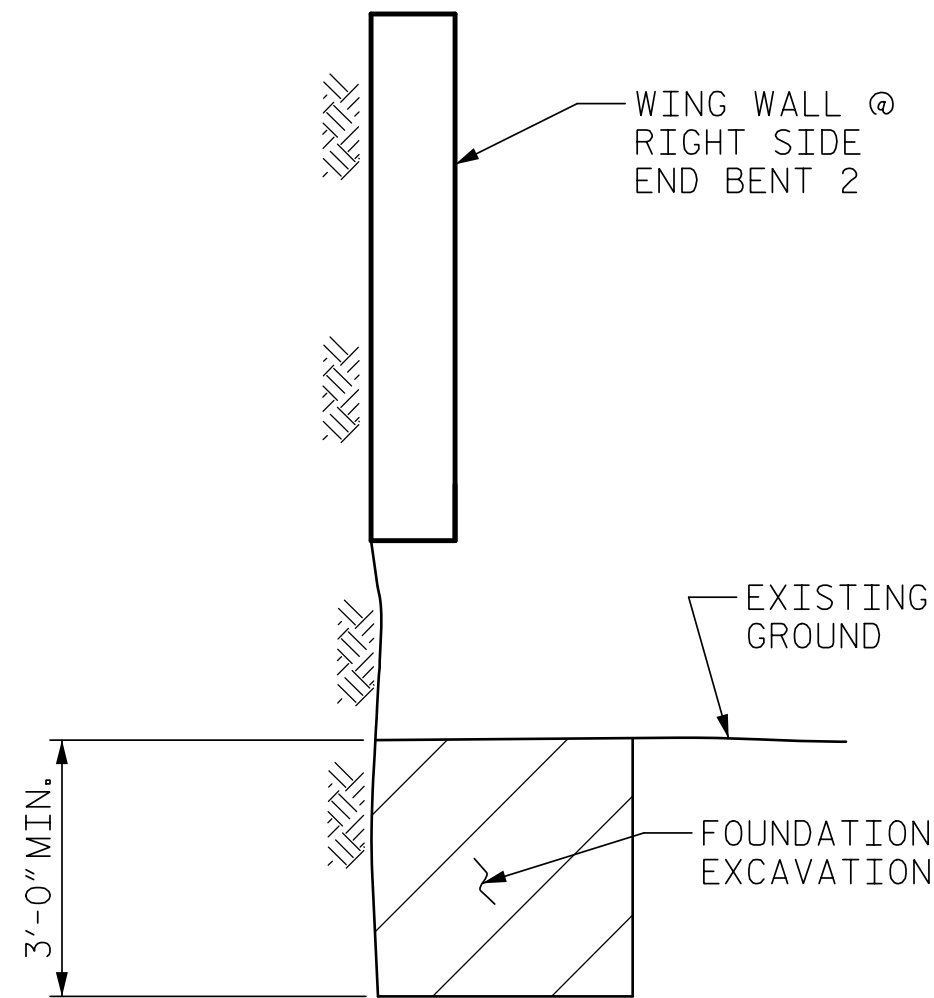
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DRAWN BY : NMW  
CHECKED BY : MGC  
DATE : 1/25  
DATE : 2/25



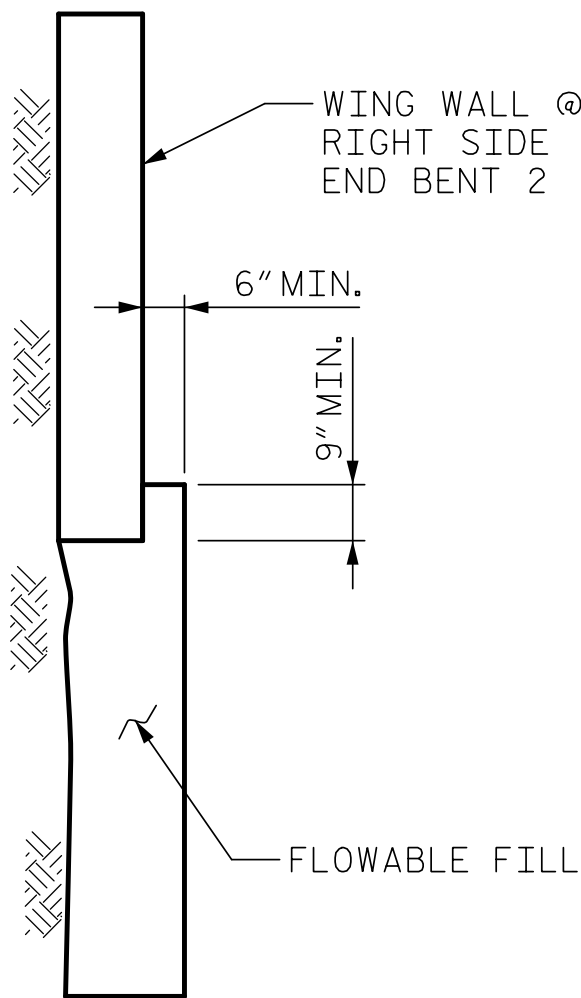
PLAN VIEW OF RIGHT WING AT END BENT 2

SHOWING APPROXIMATE LIMITS OF FLOWABLE FILL



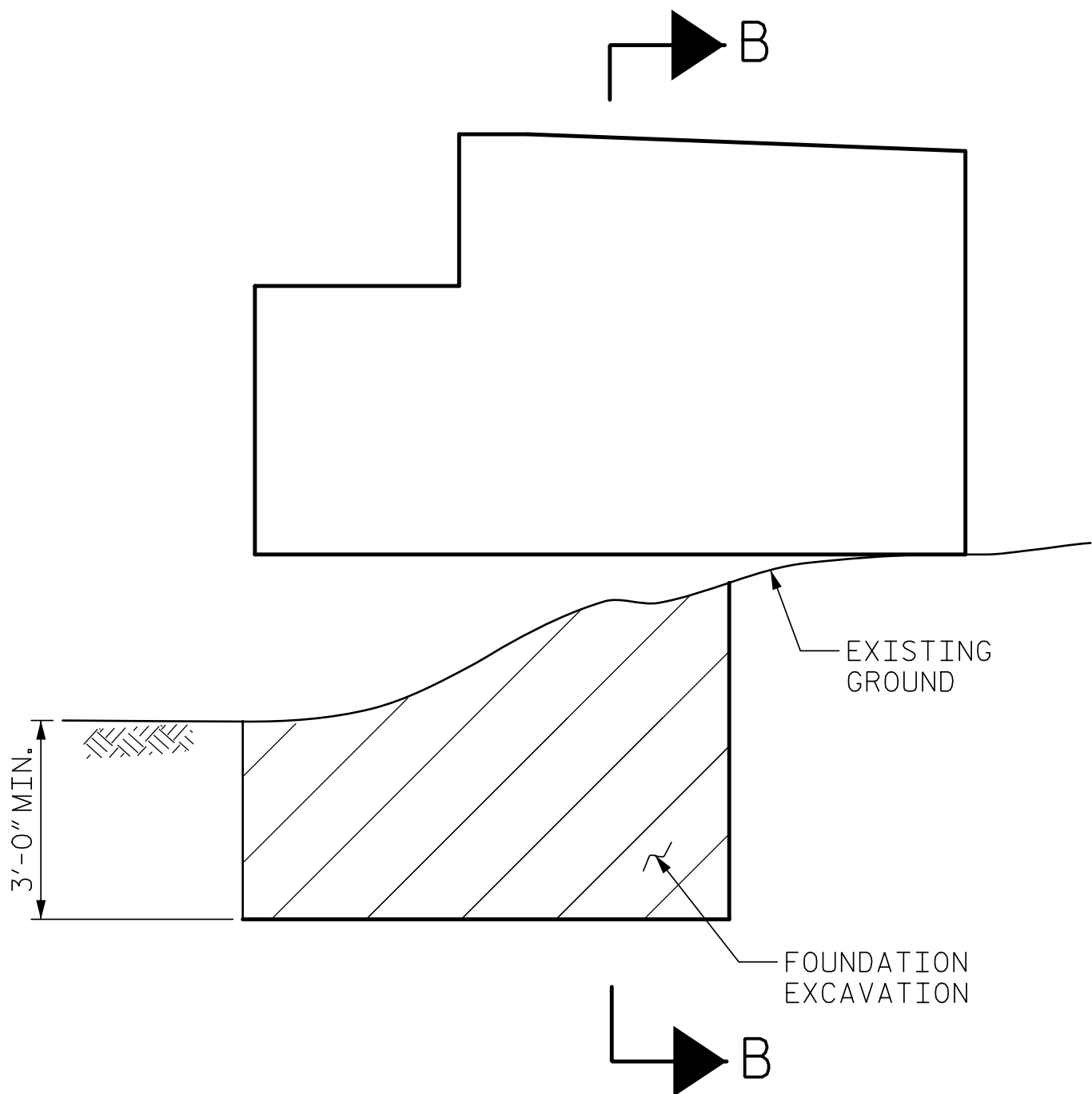
SECTION B-B

SHOWING LIMITS OF FOUNDATION EXCAVATION



SECTION B-B

SHOWING LIMITS OF FLOWABLE FILL



END BENT 2 RIGHT WING ELEVATION

## NOTES

THE AREA OF MINIMUM FOUNDATION EXCAVATION SHALL BE DETERMINED IN THE FIELD OR AS DIRECTED BY THE ENGINEER. DETERMINATION OF PAYMENT WILL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR FOUNDATION EXCAVATION.

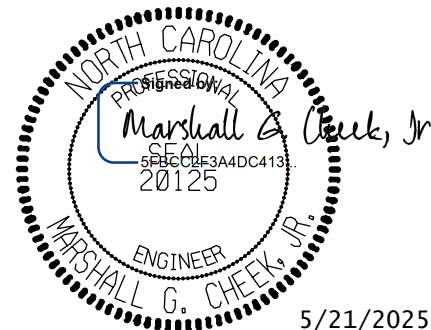
IN AREAS DETERMINED TO NOT REQUIRE FOUNDATION EXCAVATION, ANY LOOSE SOIL OR MATERIAL UNDERNEATH THE WING SHALL BE REMOVED. THE CONTRACTOR SHALL PLACE FLOWABLE FILL IN THESE AREAS AS DIRECTED BY THE ENGINEER.

PROJECT NO. DF18313.2100483.PR

YANCEY COUNTY

BRIDGE NO. 119

SHEET 3 OF 3



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS  
201 W. MARION ST STE 200  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #119 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1402 AND SR 1403

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-3
1			3			TOTAL SHEETS
2			4			3

DRAWN BY : NMW DATE : 1/25  
CHECKED BY : MGC DATE : 2/25

NOTES:

EXISTING DIMENSIONS AND BRIDGE CONDITIONS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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.

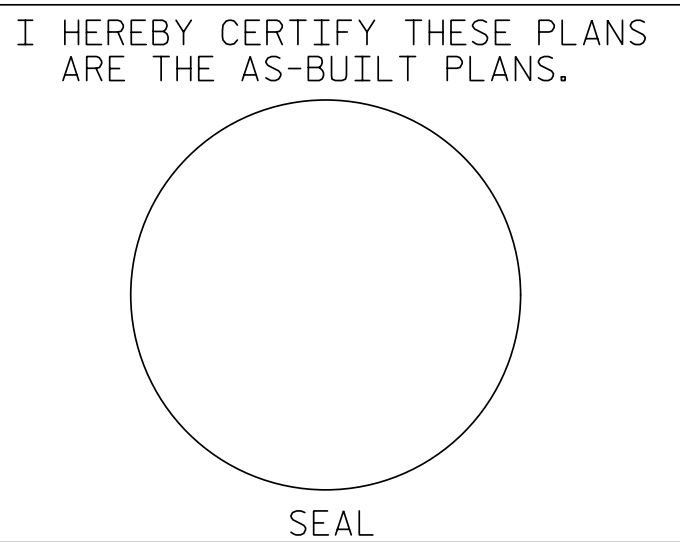
IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR FLOWABLE FILL, SEE SPECIAL PROVISIONS.

UNLESS OTHERWISE NOTED, ALL WORK SHOWN SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, JANUARY 2024.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

FOR OTHER DESIGN DATA, SEE STANDARD NOTES SHEET.



LOCATION SKETCH

TOTAL BILL OF MATERIAL				
ITEM	MOBILIZATION	FOUNDATION EXCAVATION AT END BENT 2	FLOWABLE FILL	RIP RAP CLASS II
	LUMP SUM	LUMP SUM	C.Y.	TONS
ESTIMATED TOTALS	LUMP SUM	LUMP SUM	23	100

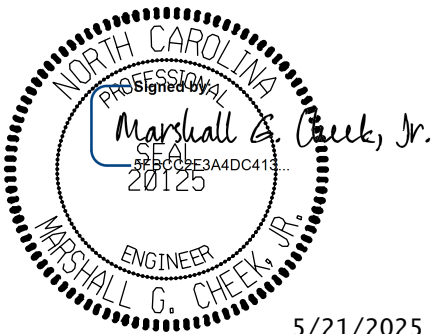
NOTE: QUANTITIES SHOWN ARE ESTIMATED FROM THE BEST INFORMATION AVAILABLE.

PROJECT NO. DF18313.2100650.PR

YANCEY COUNTY

BRIDGE NO. 121

SHEET 1 OF 3



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #121 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1396 AND SR 1401

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS  
201 W. MARION ST STE 200  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

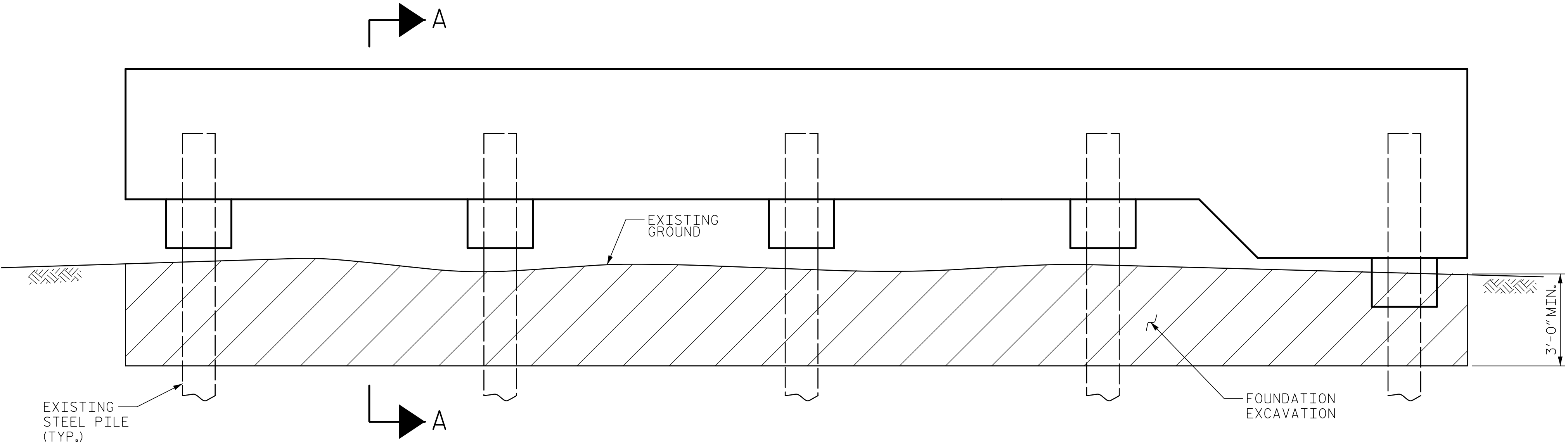
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2			4			3

DRAWN BY : NMW      DATE : 1/25  
CHECKED BY : MGC      DATE : 2/25

NOTES

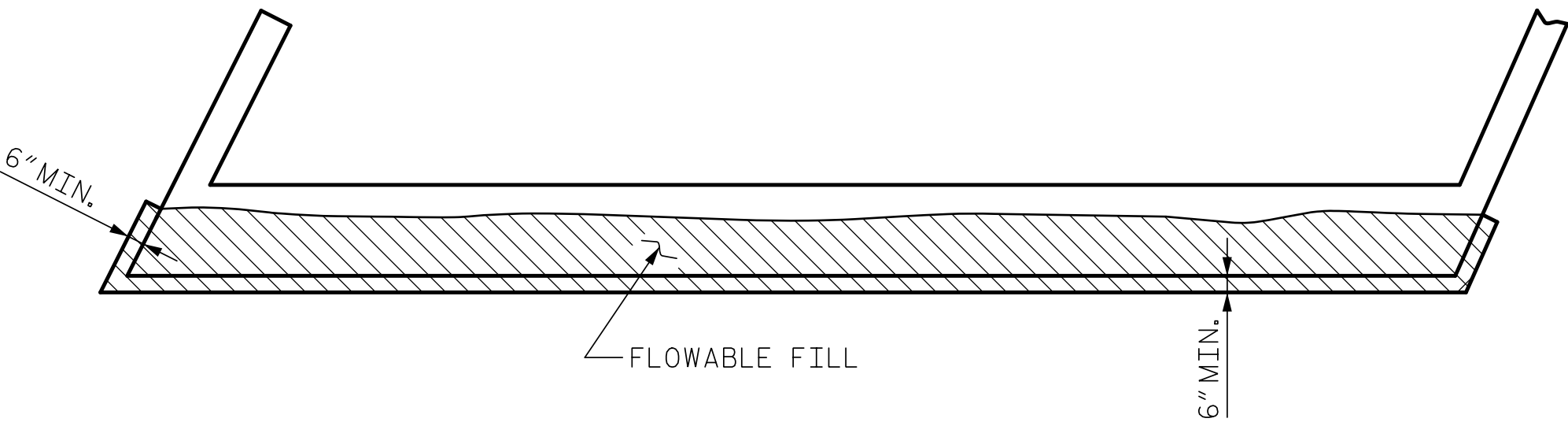
TEMPORARILY DEWATER AS NECESSARY TO PROVIDE ACCESS TO END BENT SCOUR AREAS.

THE MINIMUM EXCAVATION FOR PLACEMENT OF THE FLOWABLE FILL IS INDICATED. SHOULD ADDITIONAL EXCAVATION BE REQUIRED, DETERMINATION OF PAYMENT WILL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR FOUNDATION EXCAVATION.



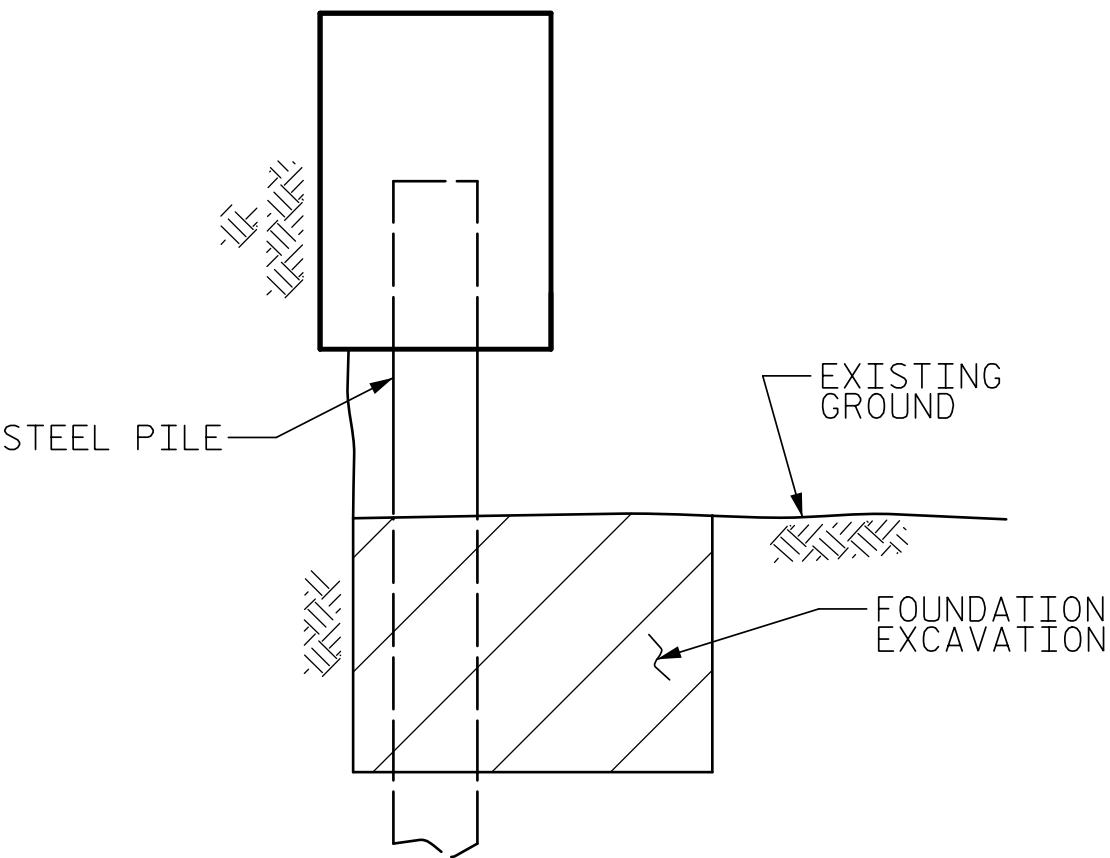
END BENT 2 ELEVATION

WINGS NOT SHOWN IN ELEVATION FOR CLARITY.



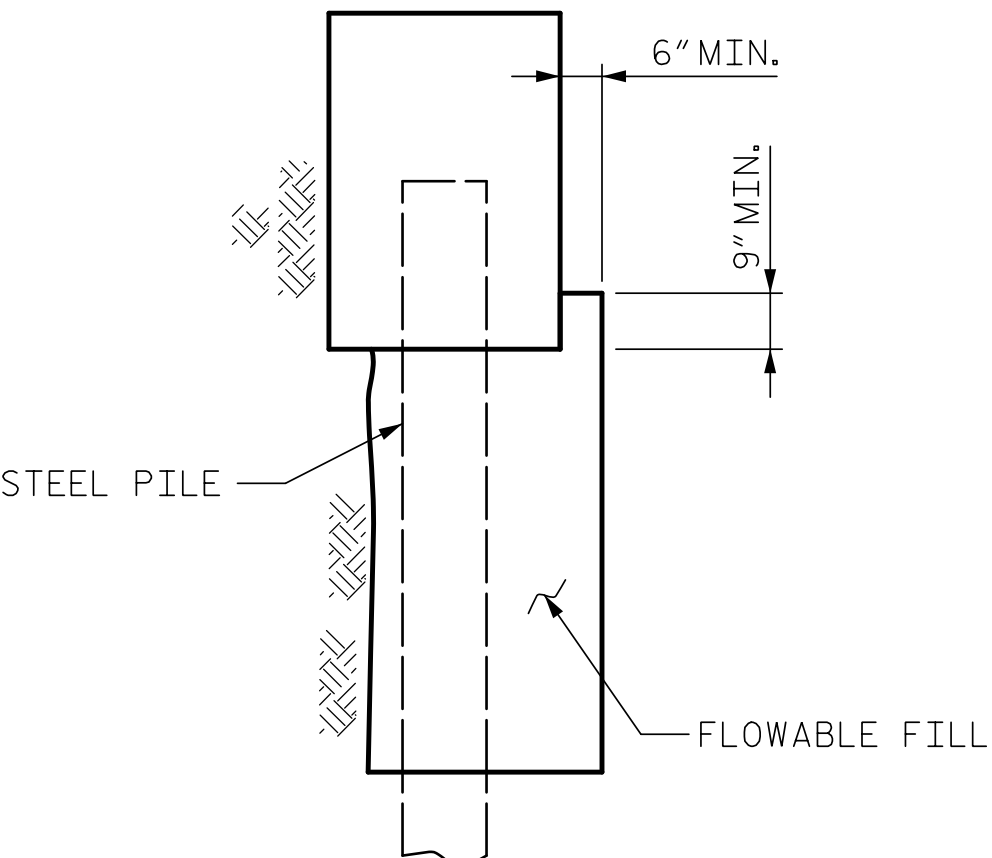
END BENT 2 PLAN VIEW

SHOWING LIMITS OF FLOWABLE FILL



SECTION A-A

SHOWING LIMITS OF FOUNDATION EXCAVATION



SECTION A-A

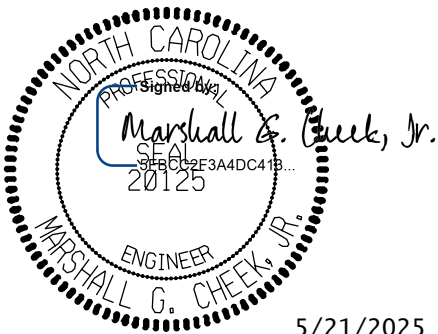
SHOWING LIMITS OF FLOWABLE FILL

PROJECT NO. DF18313.2100650.PR

YANCEY COUNTY

BRIDGE NO. 121

SHEET 2 OF 3



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #121 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1396 AND SR 1401

DOCUMENT NOT CONSIDERED FINAL  
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TGS ENGINEERS  
201 W. MARION ST STE 200  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
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SHEET NO.

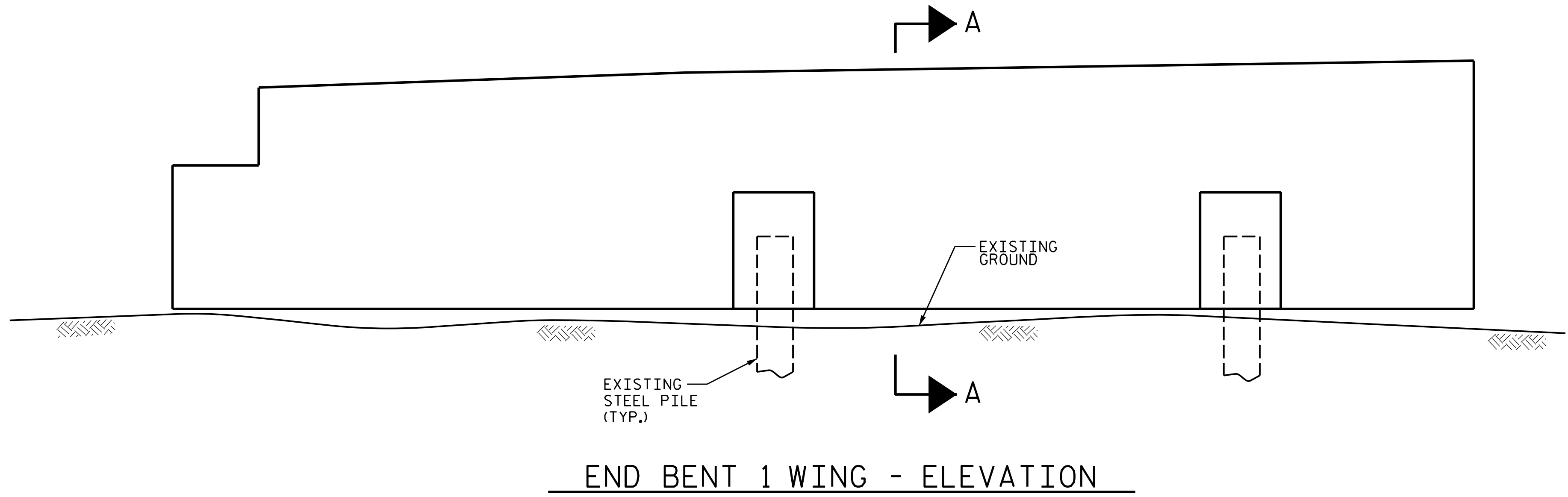
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TOTAL SHEETS

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DRAWN BY : NMW DATE : 12/24  
CHECKED BY : MGC DATE : 2/25

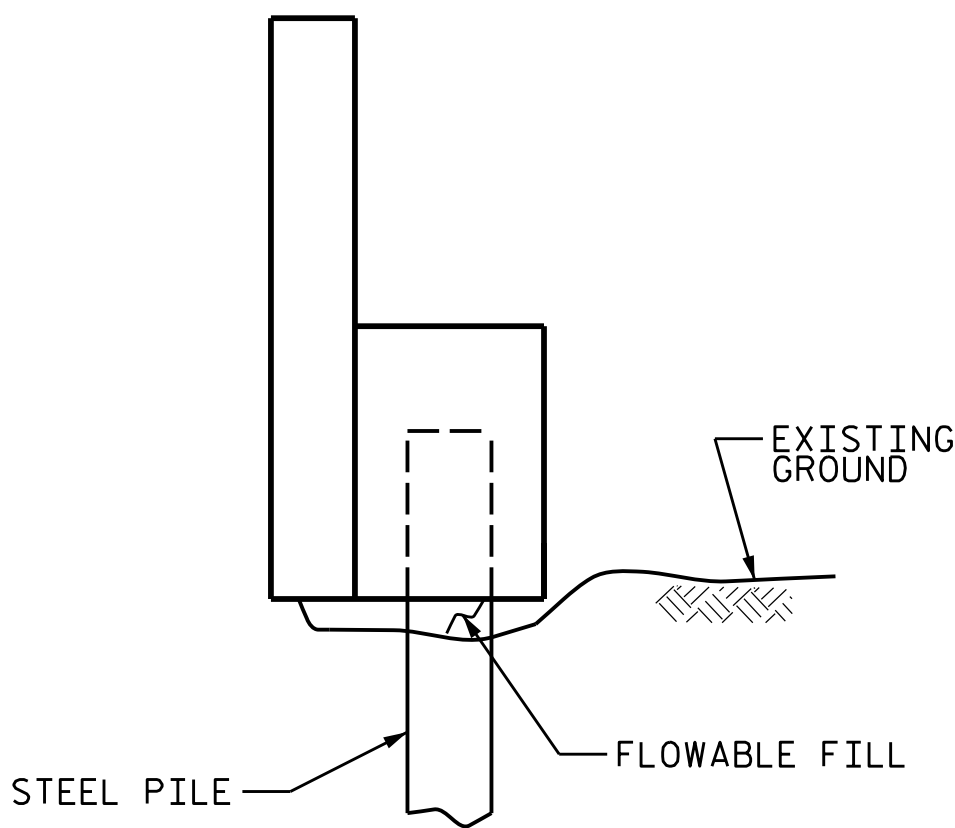




## NOTES

AFTER REMOVING ANY LOOSE SOIL AND MATERIAL IN THE SCOURED AREAS UNDERNEATH THE WING AND WING PILE BLOCKS, THE CONTRACTOR SHALL PLACE FLOWABLE FILL IN THE SCOURED AREAS AS DIRECTED BY THE ENGINEER.

AFTER PLACEMENT OF FLOWABLE FILL CLASS II RIP RAP SHALL BE PLACED ALONG THE FULL LENGTH OF THE WING AS DIRECTED BY THE ENGINEER.

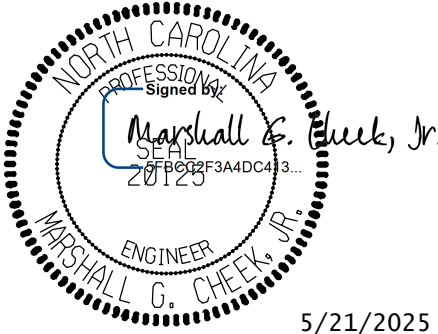


PROJECT NO. DF18313.2100650.PR

YANCEY COUNTY

BRIDGE NO. 121

SHEET 3 OF 3



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BRIDGE #121 ON SR 1395  
OVER BALD MOUNTAIN CREEK  
BETWEEN SR 1396 AND SR 1401

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TGS ENGINEERS  
201 W. MARION ST STE 200  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

### REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.

S2-3

TOTAL

SHEETS

3

DRAWN BY : NMW DATE : 12/24  
CHECKED BY : MGC DATE : 2/25



STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF 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 EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (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.