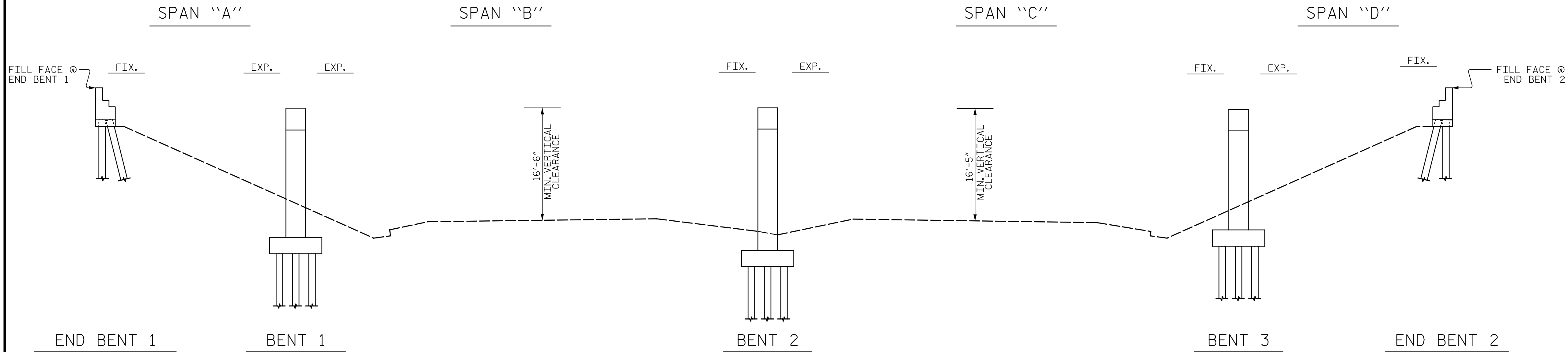


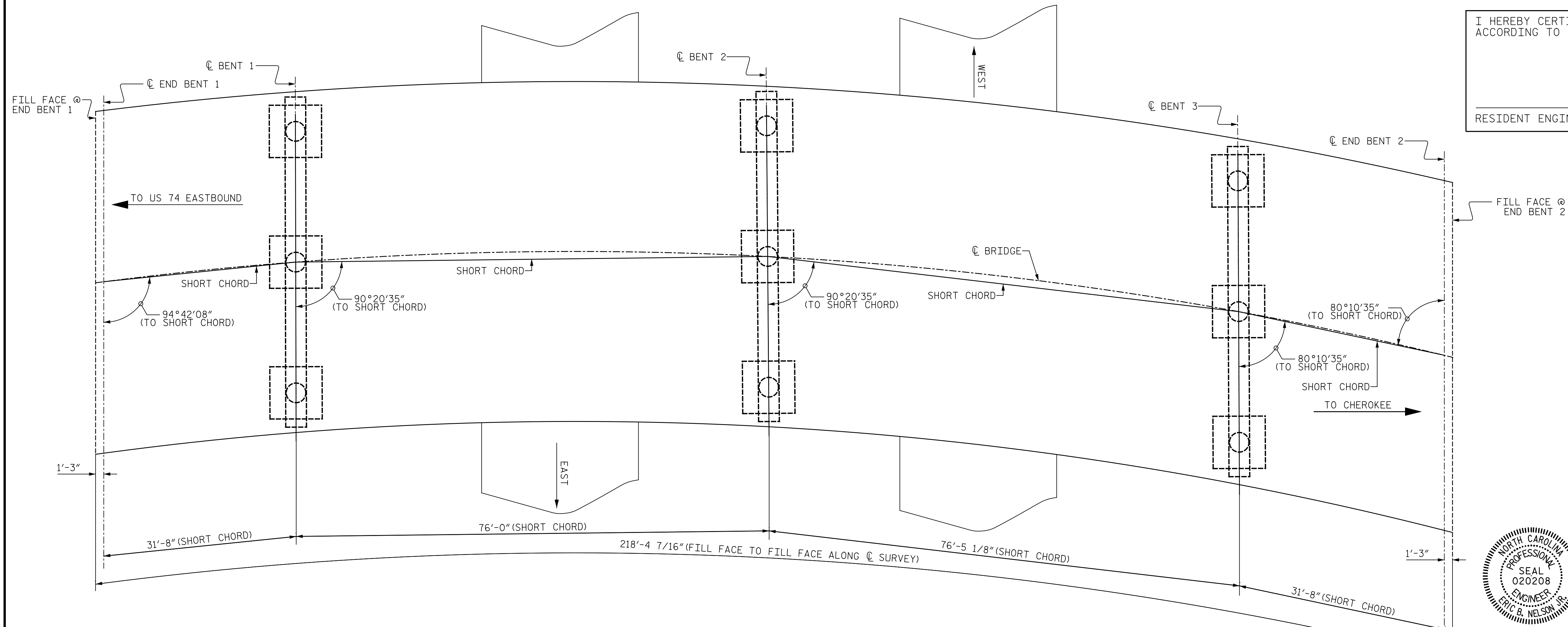
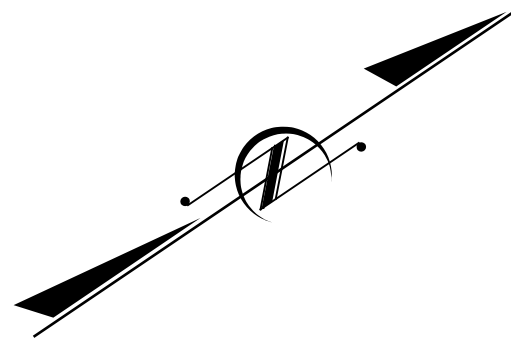
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SECTION ALONG CL BRIDGE
(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN
(PILES NOT SHOWN FOR CLARITY)

NOTE:
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/26/2016.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

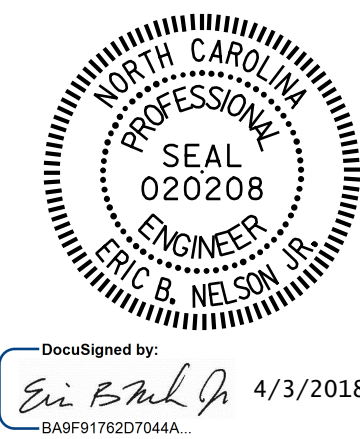
- SCOPE OF WORK
- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH (LMC-VES)
 - REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

- CONSTRUCTION SEQUENCE
- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK OVERLAY SURFACE PREPARATON AND PLACE LMC-VES OVERLAY.
 - 2.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
 - 3.) INSTALL NEW BRIDGE DECK JOINTS.
 - 4.) GROOVE LMC-VES.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5

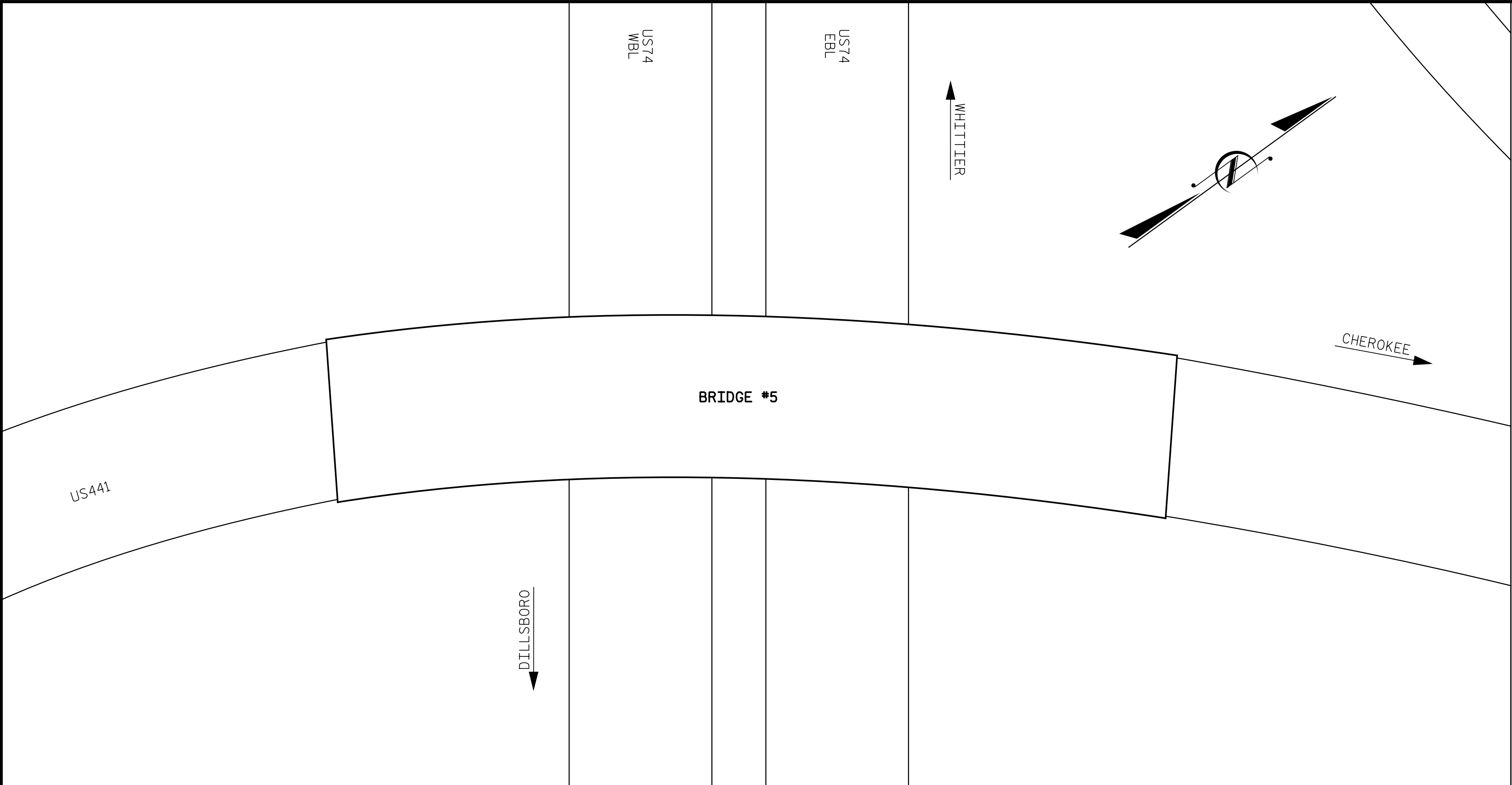


REVISIONS						SHEET NO. S-54
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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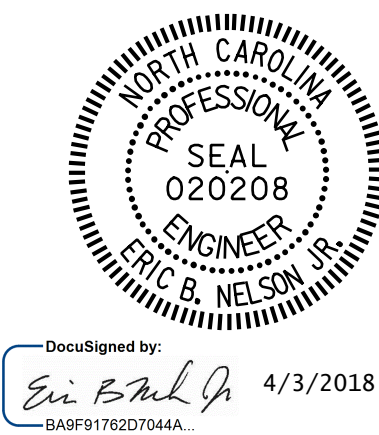
LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR REMOVE AND REPLACE BRIDGE DECK ISLAND, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5

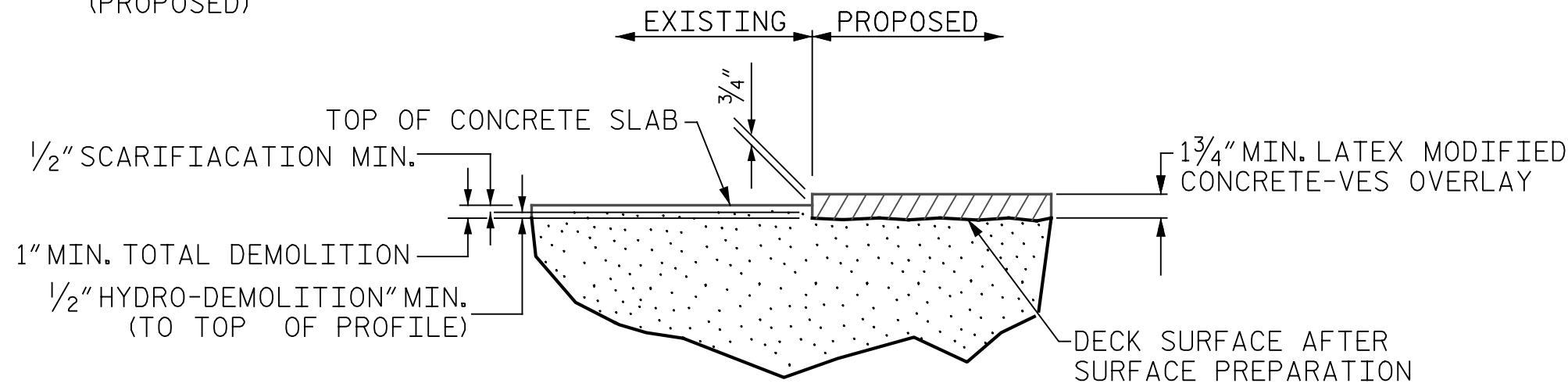
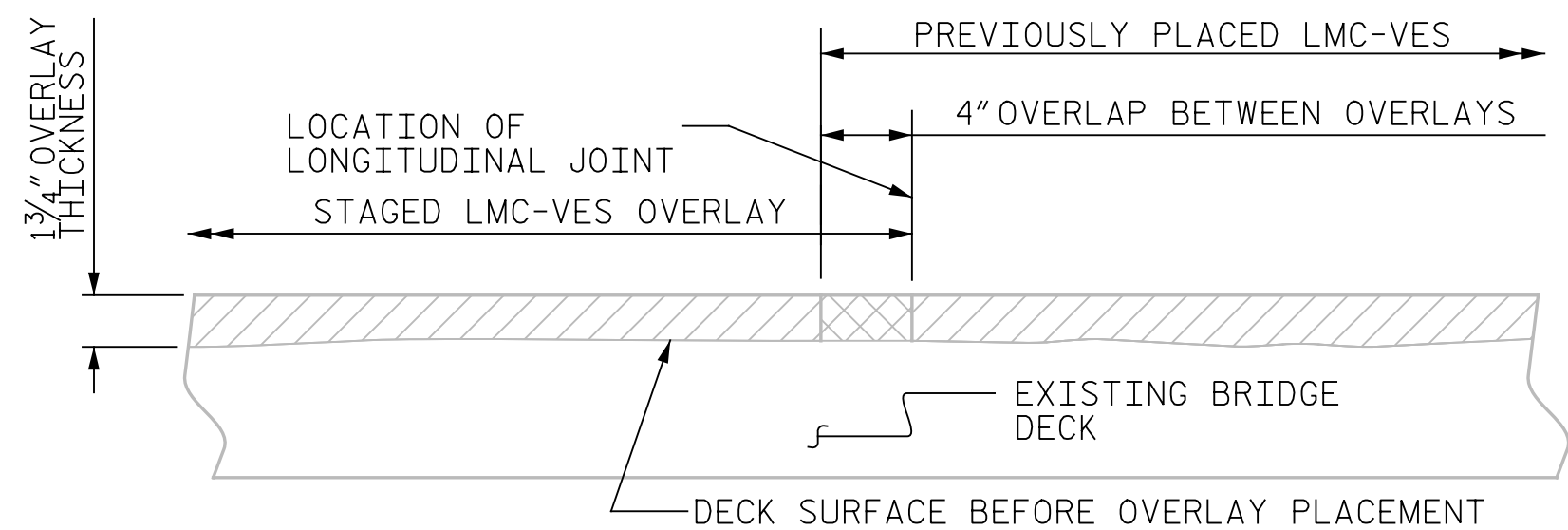
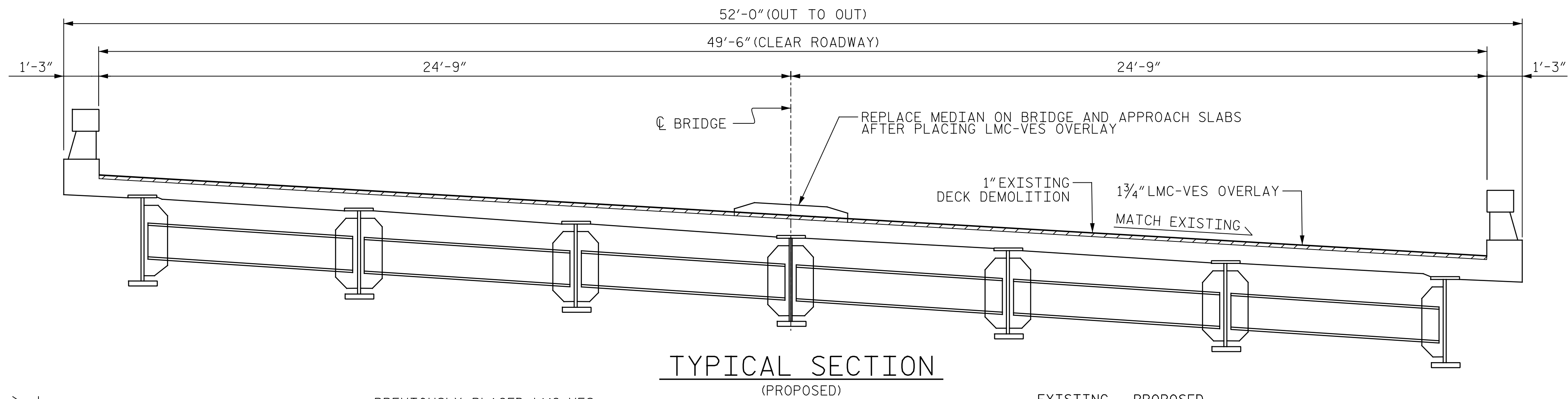
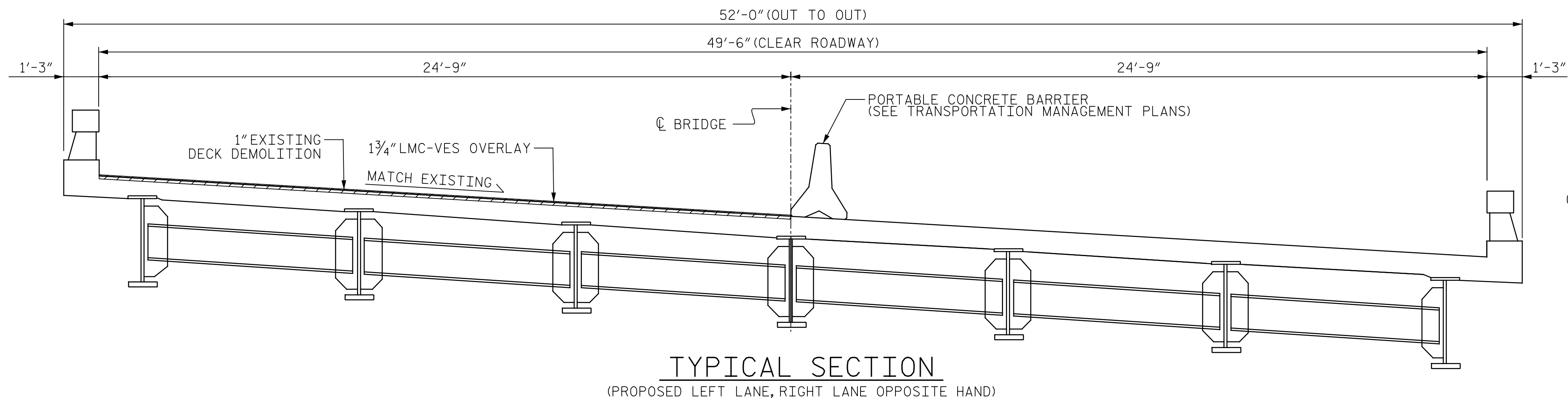
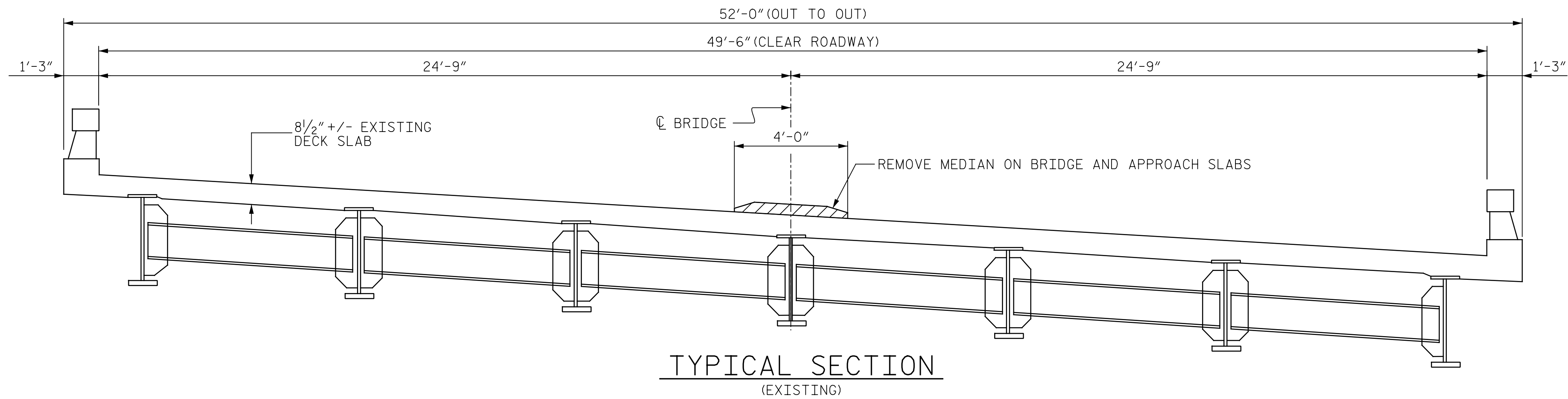


PLANS PREPARED BY:
 **Gannett Fleming**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised** NC Lic. No. F-0270

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-55		
GENERAL DRAWING						BRIDGE #5 ON US441 OVER US74		
REVISIONS						TOTAL SHEETS 142		
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

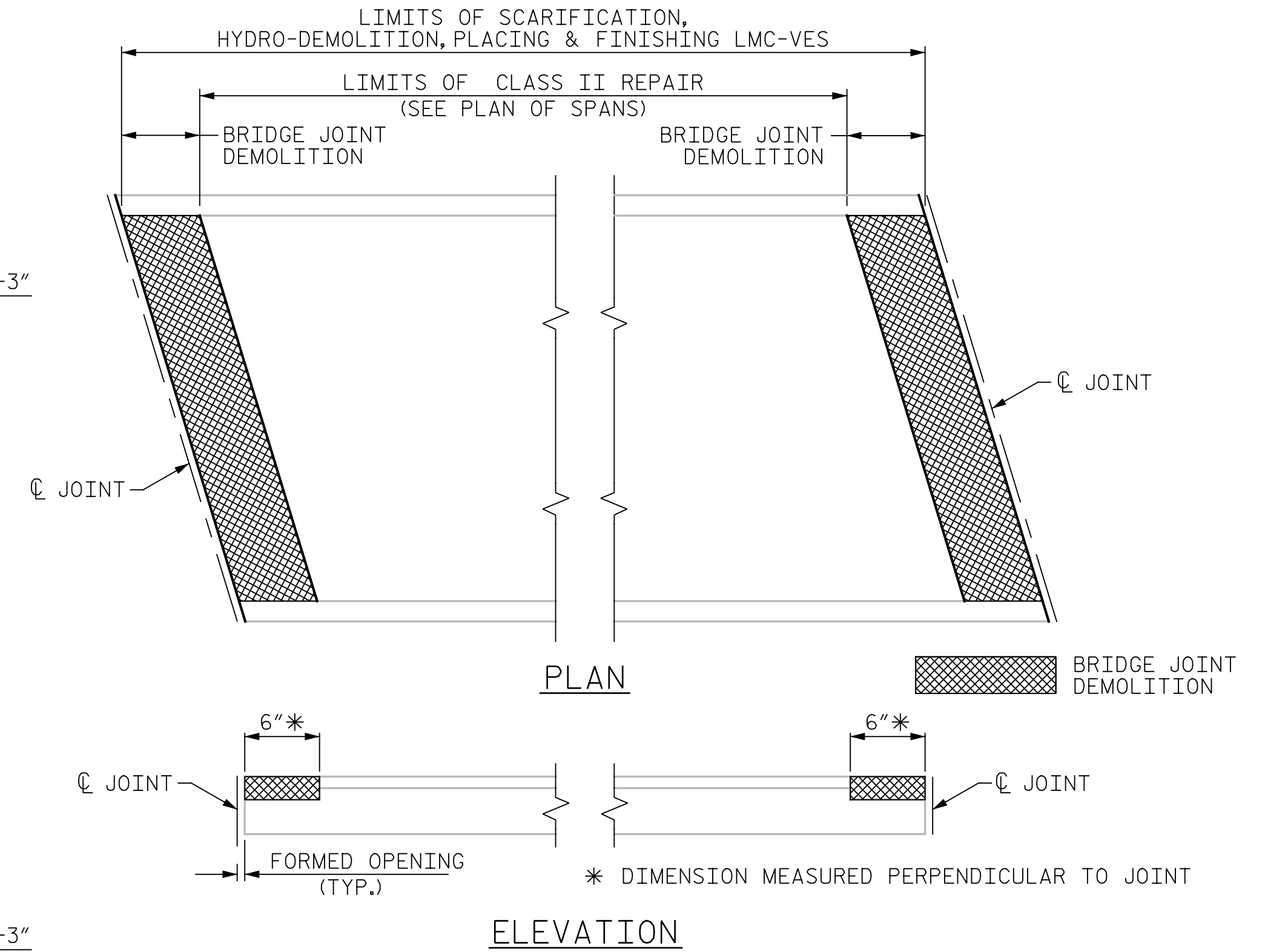


DETAIL FOR LATEX MODIFIED CONCRETE - VES OVERLAY

NOTE:

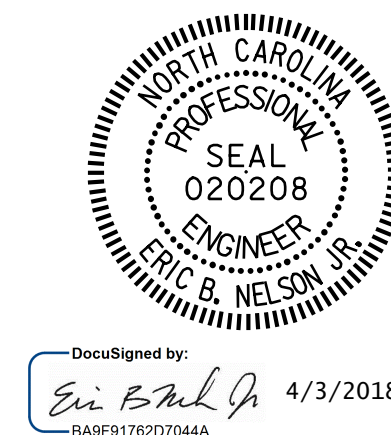
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC-VES PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC-VES OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC-VES STAGE, THE PREVIOUSLY PLACED LMC-VES SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC-VES. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC-VES SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC-VES STAGE PLACEMENT.



PAY LIMITS FOR OVERLAY BID ITEMS

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & OVERLAY DETAILS

STAGED LMC-VES OVERLAY CONSTRUCTION JOINT

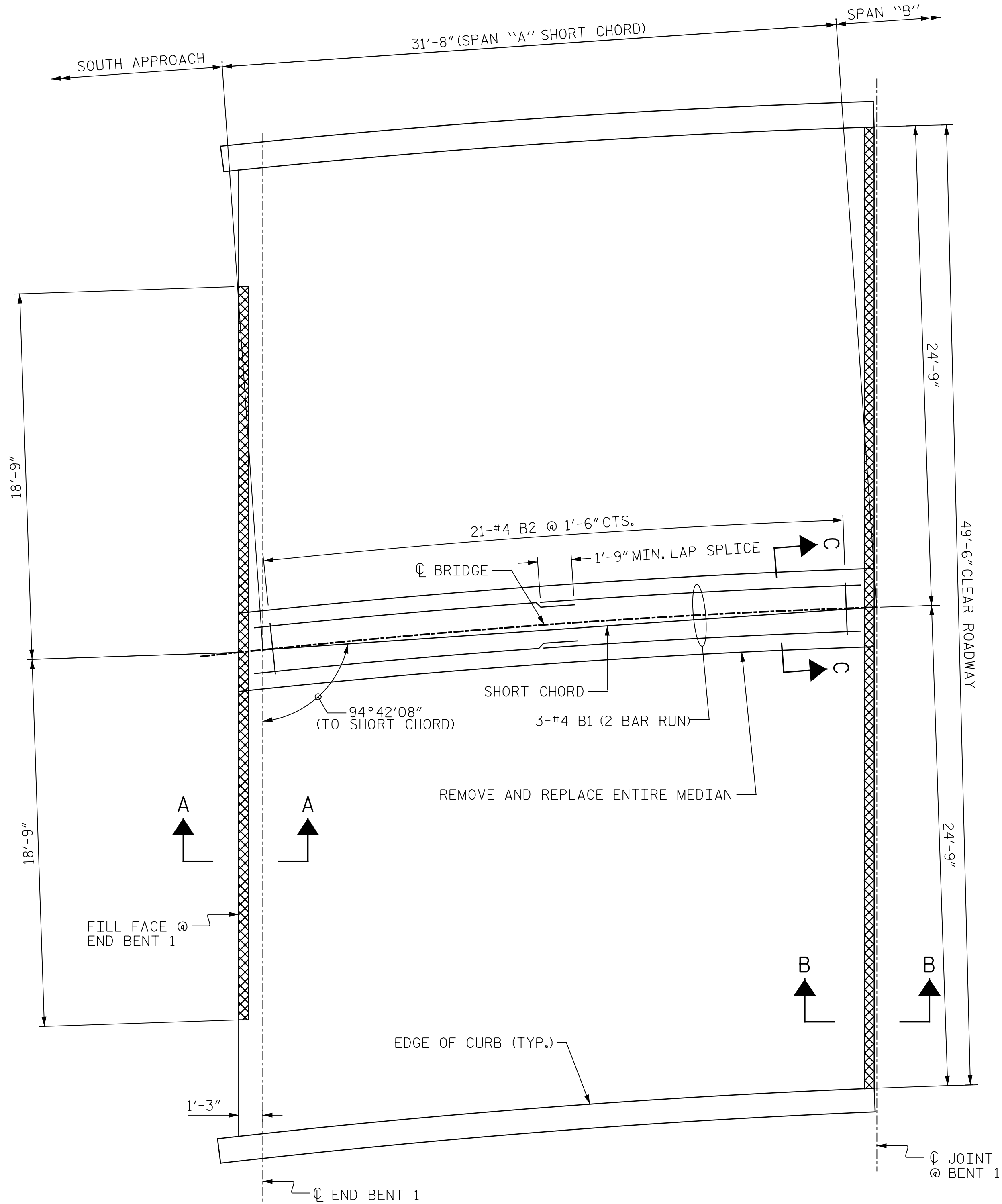
DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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REVISIONS						SHEET NO. S-56
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1			3			TOTAL SHEETS 142
2			4			



PLAN OF SPAN "A"
(SEE SHEET NO. S-61 FOR SECTIONS A-A, B-B, AND C-C)

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	182 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	182 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	43.5 SF	
GROOVING BRIDGE DECK	1248 SF	

BILL OF MATERIAL FOR
CONCRETE MEDIAN

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	6	#4	STR.	16'-7"	66
B2	21	#4	STR.	2'-7"	36
REINFORCING STEEL					102 LBS.
CLASS AA CONCRETE					1.8 C.Y.

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE MEDIAN STRIP IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT A SPACING OF 8 FT. TO 10 FT. BETWEEN EXPANSION JOINTS. NO CONTRACTION JOINTS WILL BE REQUIRED FOR SEGMENTS LESS THAN 10 FEET IN LENGTH.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD SCOPING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



DocuSigned by:
Eric B. Nelson Jr. 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

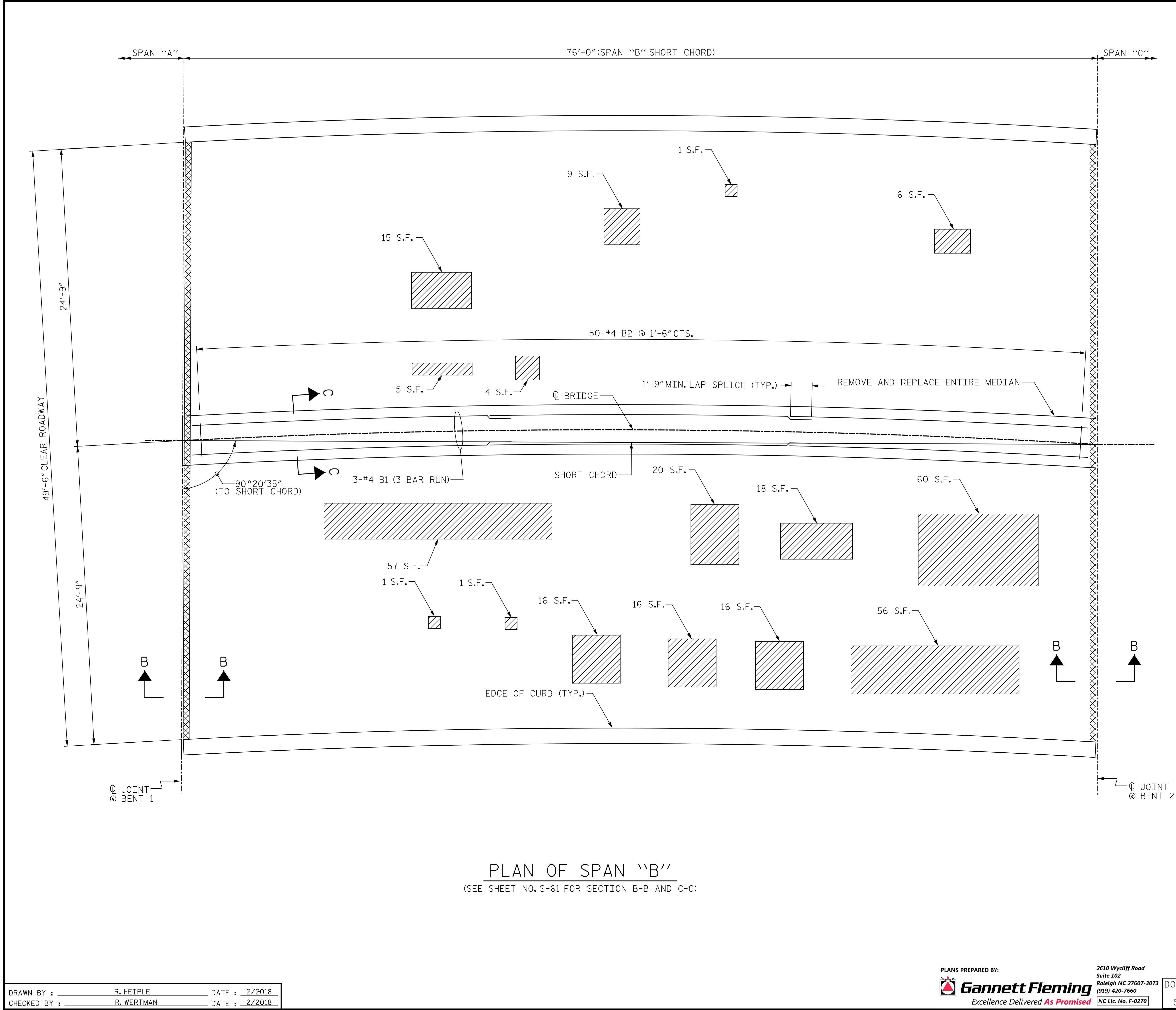
SURFACE PREPARATION
SPAN "A"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-57
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	419 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	419 SY	
CLASS II SURFACE PREPARATION	33.4 SY	
BRIDGE JOINT DEMOLITION	49.5 SF	
GROOVING BRIDGE DECK	2951 SF	

BILL OF MATERIAL FOR
CONCRETE MEDIAN

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	9	#4	STR.	26'-0"	156
B2	50	#4	STR.	2'-7"	86
REINFORCING STEEL					242 LBS.
CLASS AA CONCRETE					4.2 C.Y.

NOTES:

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- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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1			3			TOTAL SHEETS 142
2			4			

SUMMARY OF QUANTITIES FOR SPAN "C"			ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK			421 SY	
HYDRO-DEMOLITION OF BRIDGE DECK			421 SY	
CLASS II SURFACE PREPARATION			13.9 SY	
BRIDGE JOINT DEMOLITION			49.9 SF	
GROOVING BRIDGE DECK			2968 SF	

BILL OF MATERIAL FOR
CONCRETE MEDIAN

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	9	#4	STR.	26'-2"	157
B2	50	#4	STR.	2'-7"	86

REINFORCING STEEL 243 LBS.

CLASS AA CONCRETE 4.2 C.Y.

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

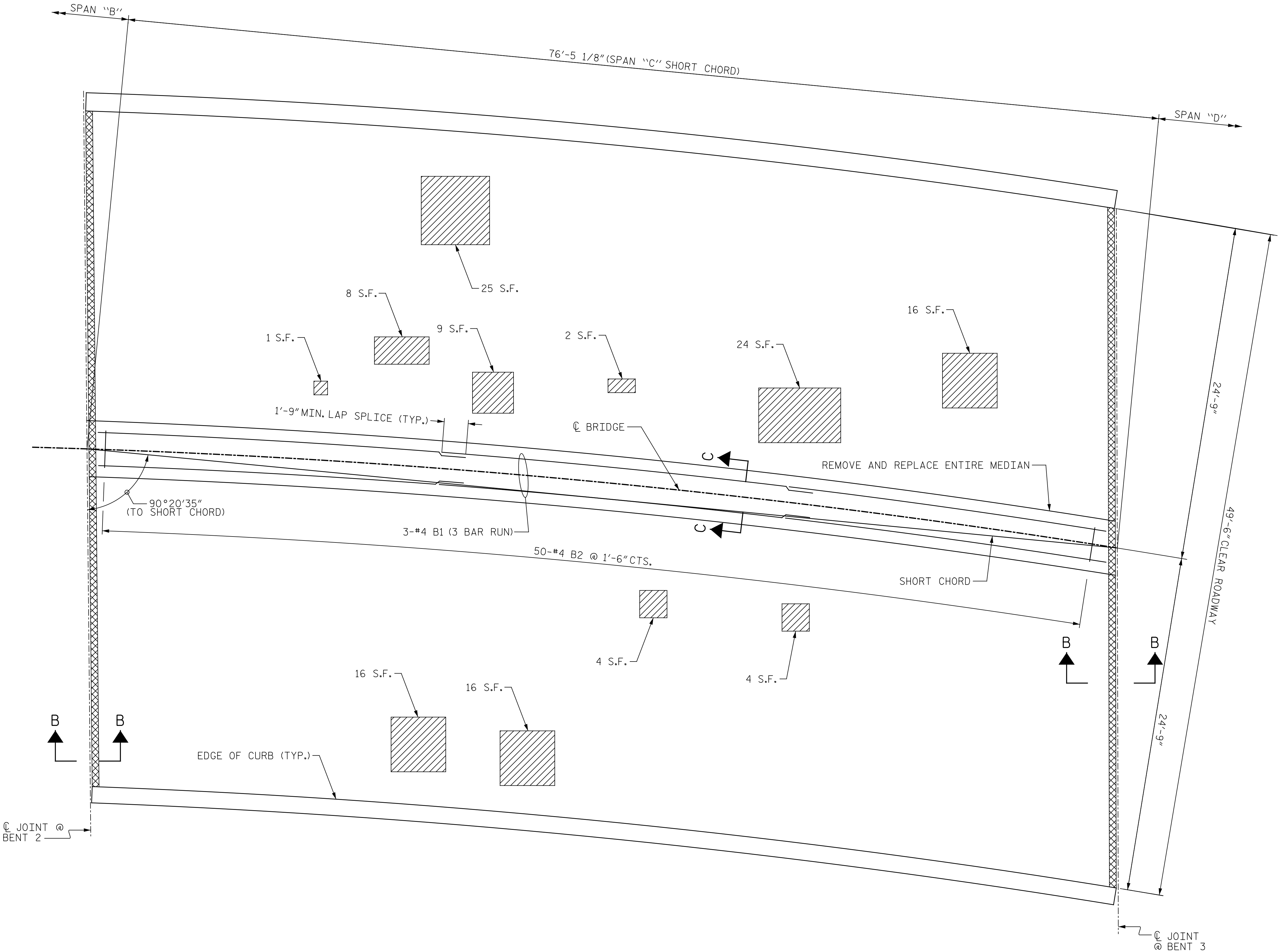
SURFACE PREPARATION
SPAN "C"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-59
1			3			TOTAL SHEETS
2			4			142



DocuSigned by
Eric B. Nelson, Jr.
4/3/2018

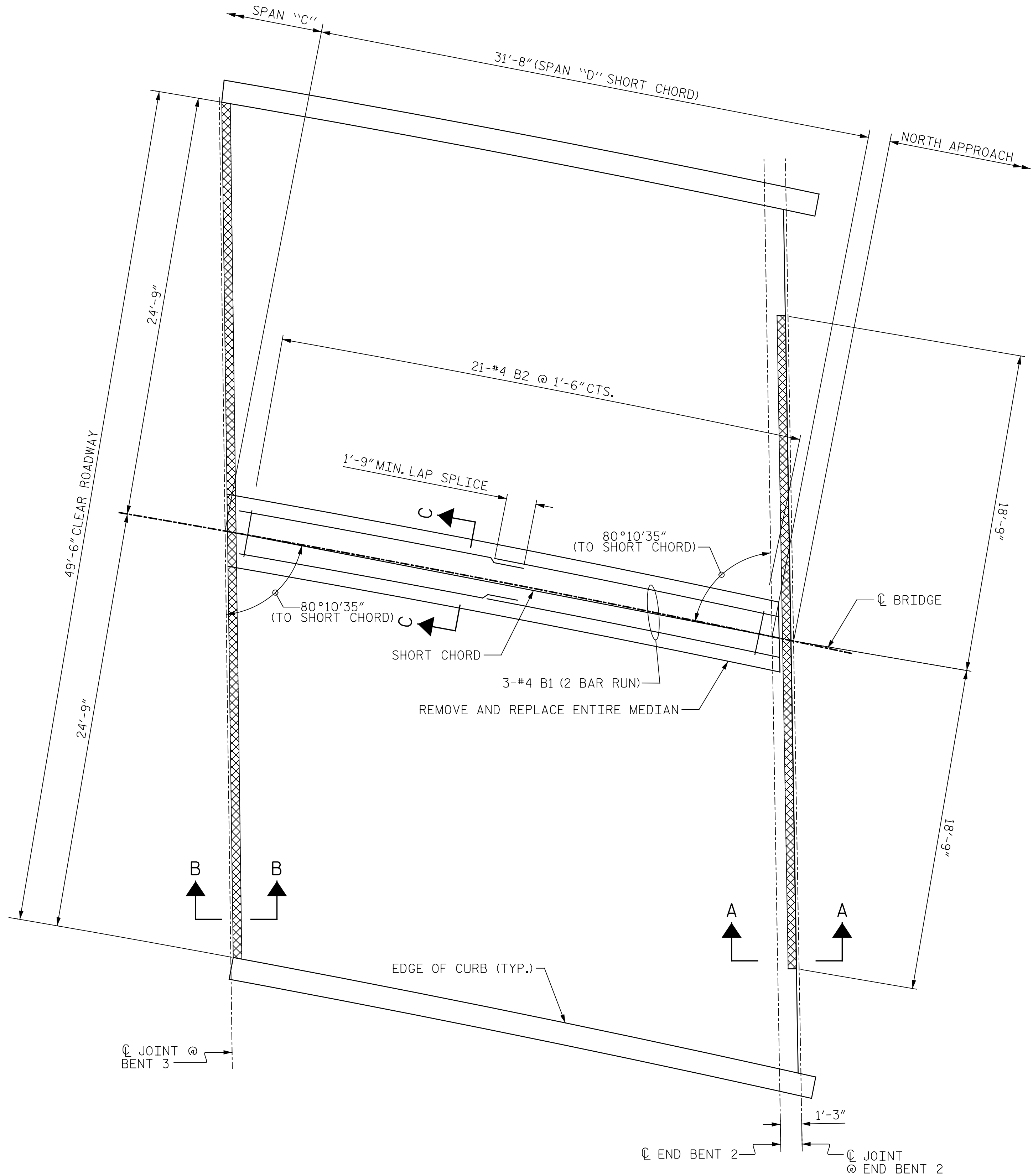
PLAN OF SPAN "C"
(SEE SHEET NO. S-61 FOR SECTION B-B AND C-C)



DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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PLAN OF SPAN "D"
(SEE SHEET NO. S-61 FOR SECTIONS A-A, B-B, AND C-C)

SUMMARY OF QUANTITIES FOR SPAN "D"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	182 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	182 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	44.2 SF	
GROOVING BRIDGE DECK	1248 SF	

BILL OF MATERIAL FOR
CONCRETE MEDIAN

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	6	#4	STR.	16'-7"	66
B2	21	#4	STR.	2'-7"	36
REINFORCING STEEL					102 LBS.
CLASS AA CONCRETE					1.8 C.Y.

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD SCOPING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

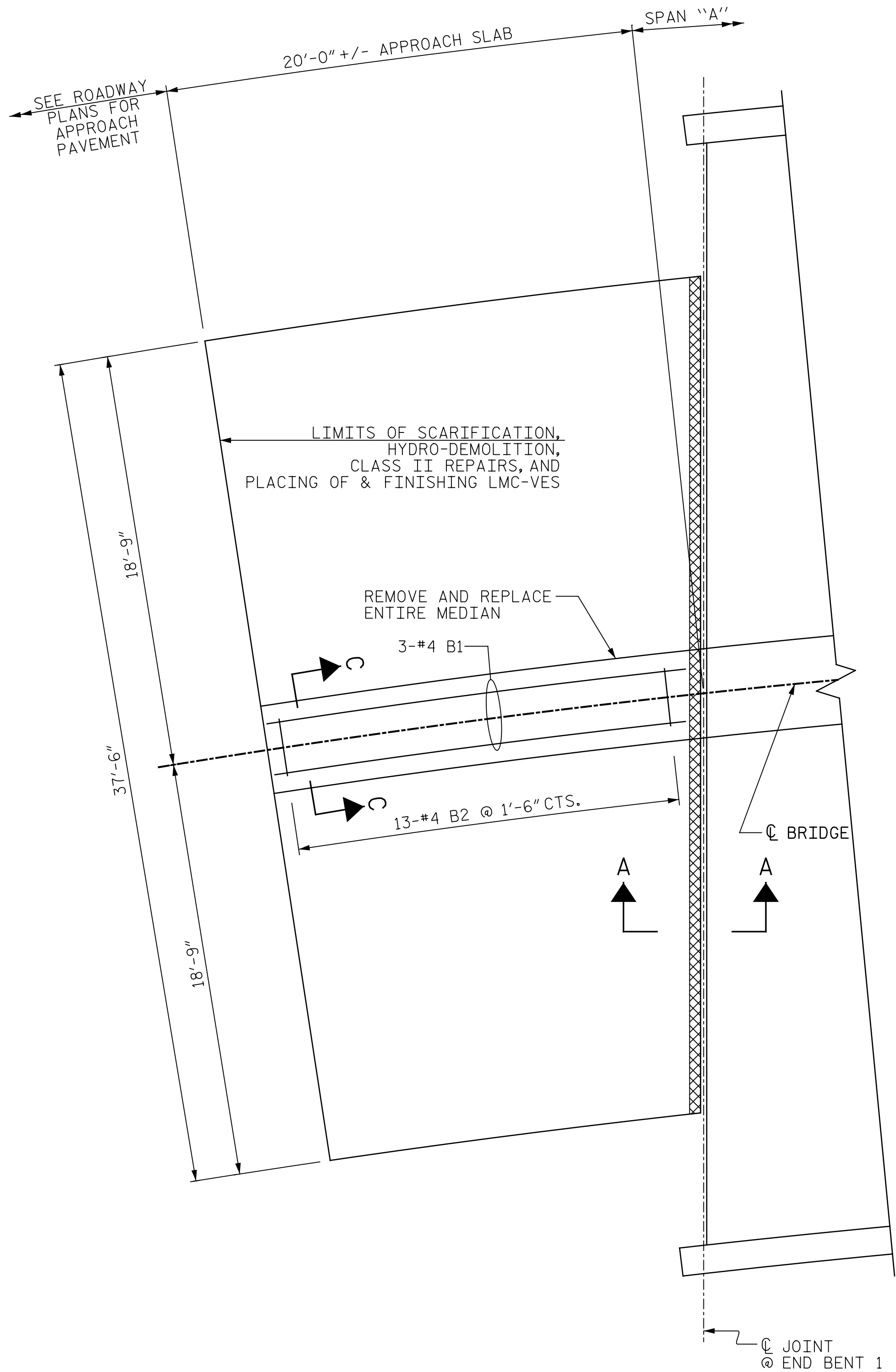
SURFACE PREPARATION
SPAN "D"

REVISIONS						SHEET NO. S-60
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

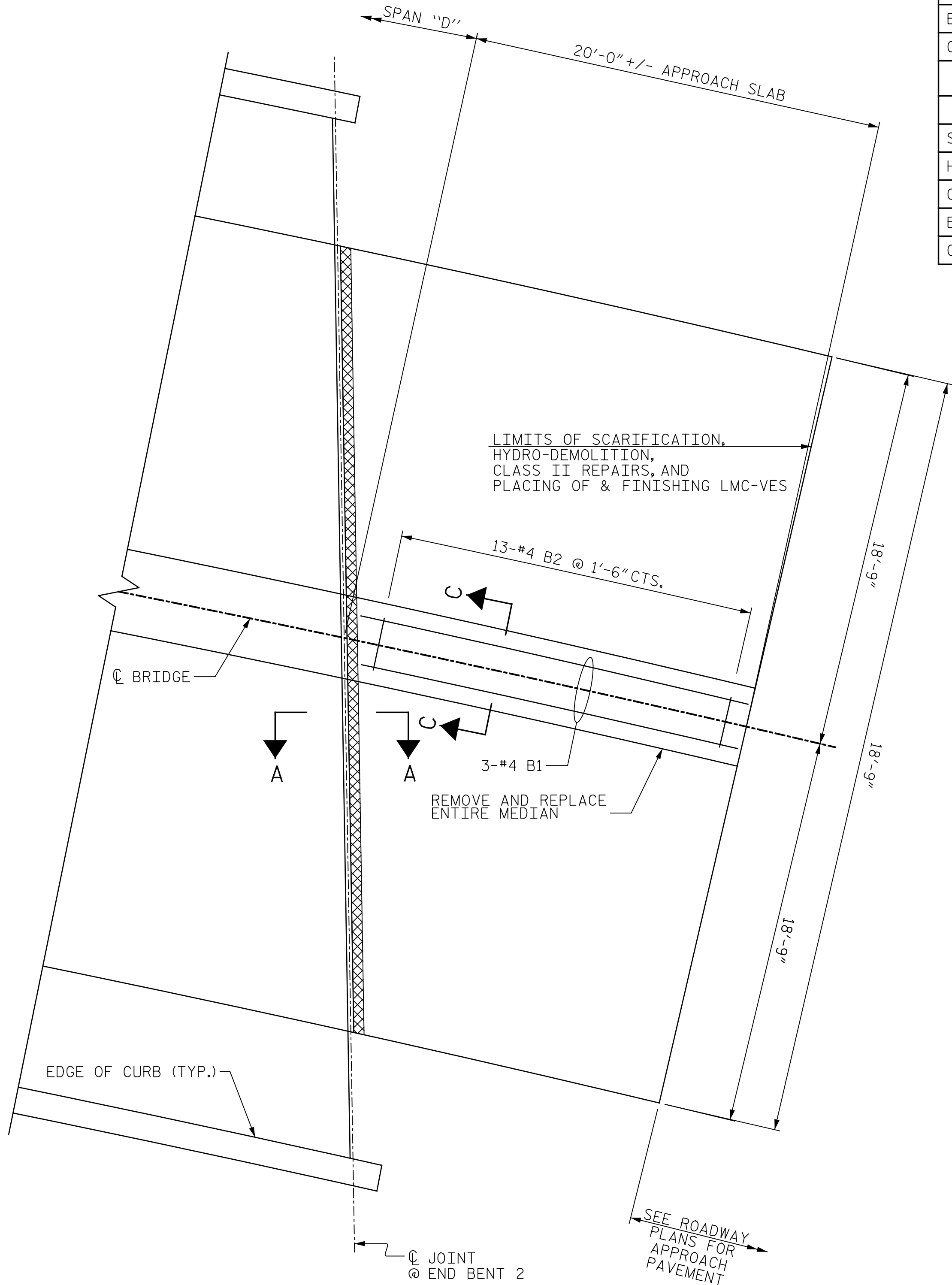
DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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PLAN OF SOUTH APPROACH SLAB
(SEE SHEET NO. S-61 FOR SECTION A-A AND C-C)



PLAN OF NORTH APPROACH SLAB
(SEE SHEET NO. S-61 FOR SECTION A-A AND C-C)

SUMMARY OF QUANTITIES FOR SOUTH APPROACH		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	84 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	84 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	18.8 SF	
GROOVING BRIDGE DECK	590 SF	
SUMMARY OF QUANTITIES FOR NORTH APPROACH		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	84 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	84 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	19.0 SF	
GROOVING BRIDGE DECK	590 SF	

BILL OF MATERIAL FOR
CONCRETE MEDIAN FOR
ONE APPROACH SLAB

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	3	#4	STR.	18'-10"	38
B2	13	#4	STR.	2'-7"	22
REINFORCING STEEL					60 LBS.
CLASS AA CONCRETE					1.1 C.Y.

NOTES:

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- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
APPROACH SLABS

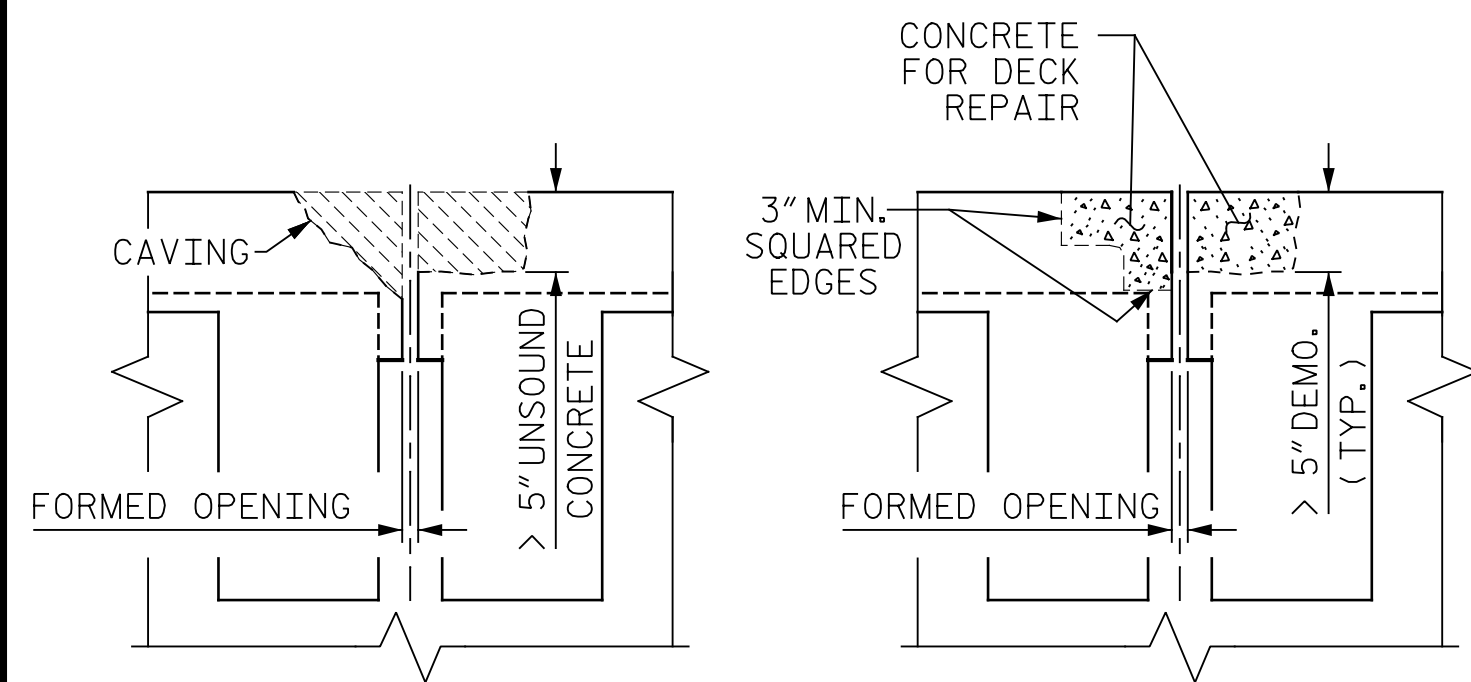
REVISIONS						SHEET NO. S-61
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : R. FISHER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

NO DEFICIENCIES NOTED DURING FIELD SCOPING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

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Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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JOINT DEMOLITION
FOR CAVING OR
UNFOUND CONCRETE

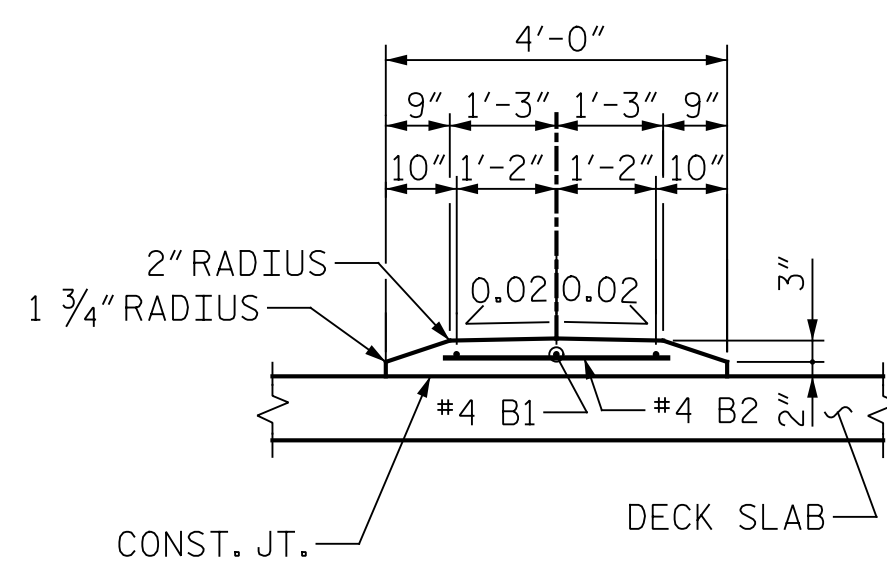
REPAIRED JOINT

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

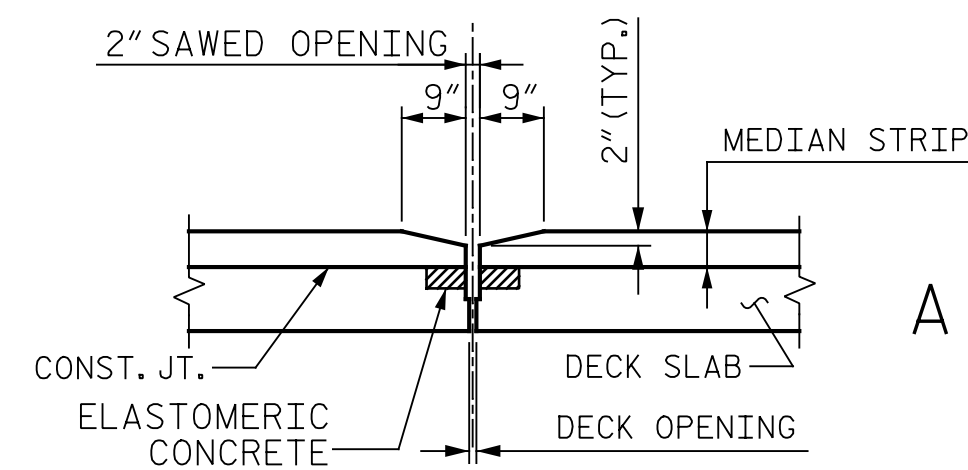
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

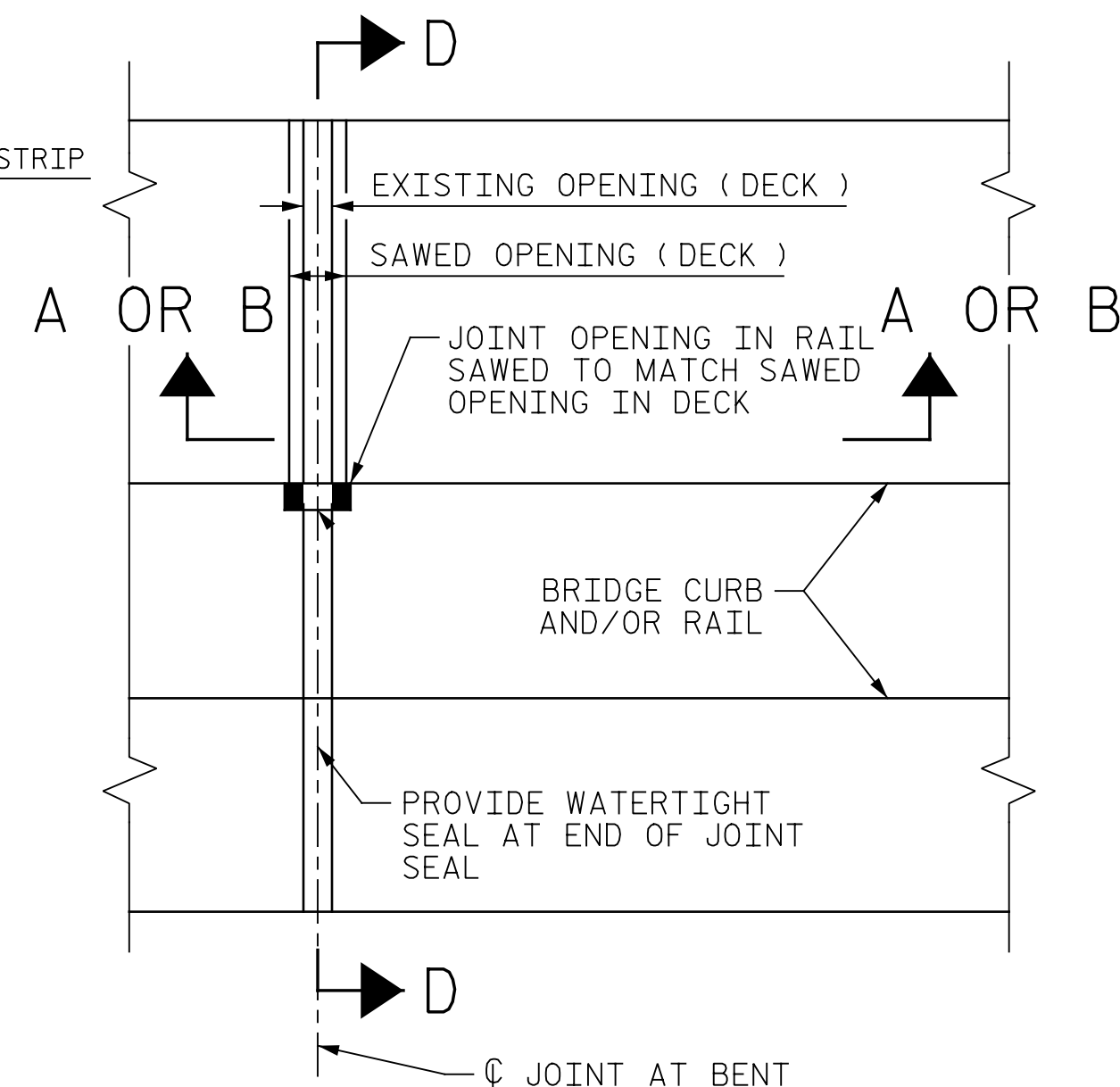


SECTION C-C



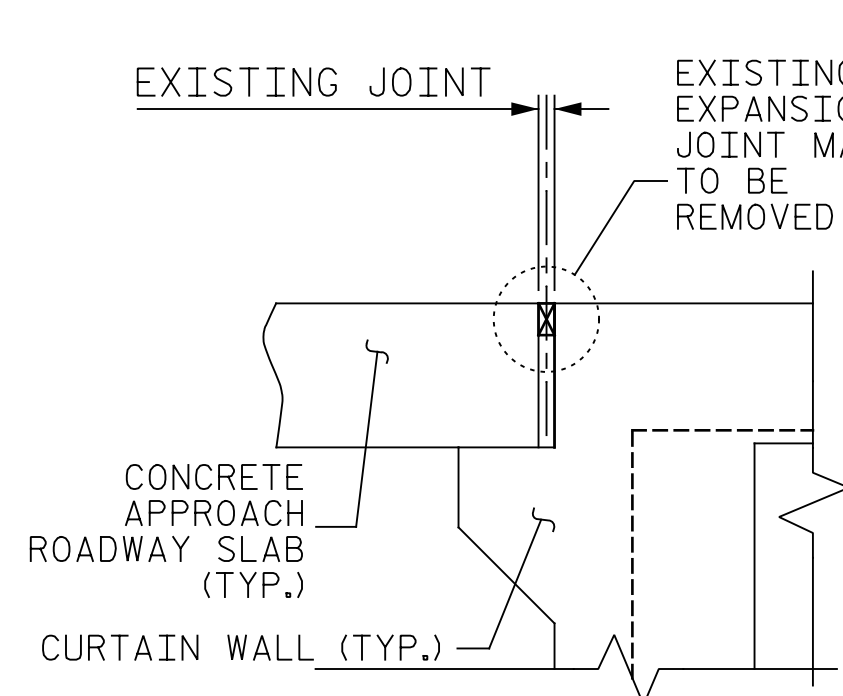
DETAIL AT SAWED JOINT

PERMANENT CONCRETE MEDIAN STRIP

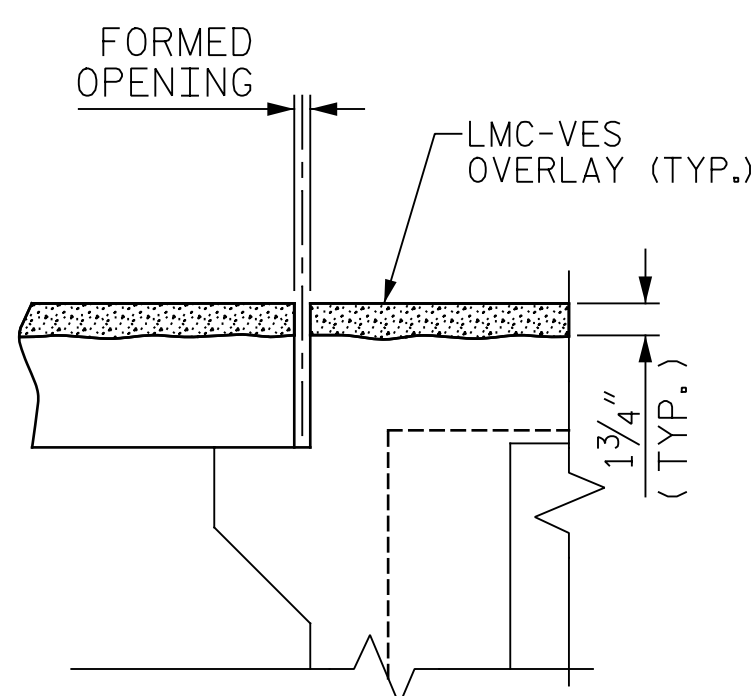


PLAN

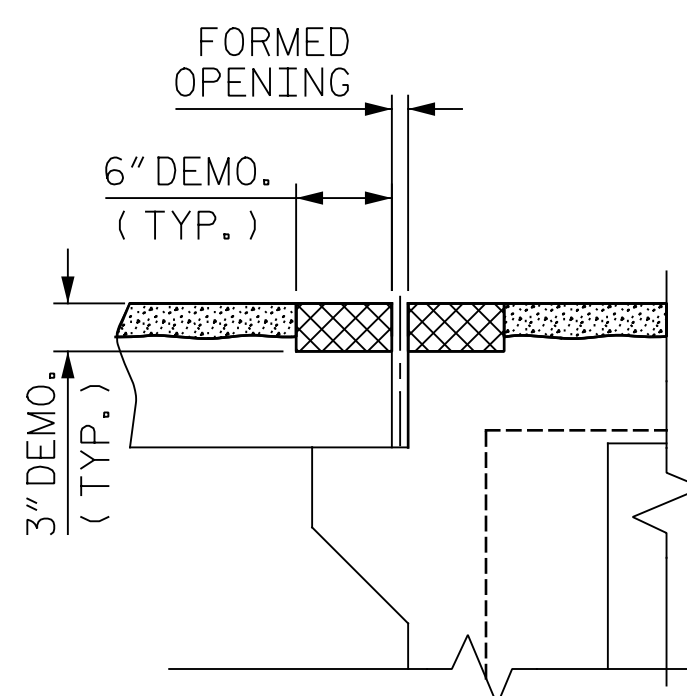
*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



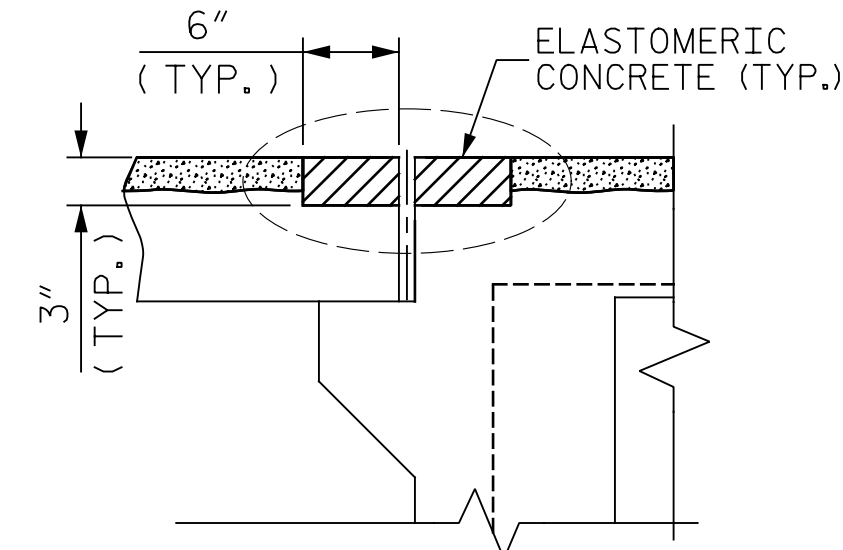
EXISTING



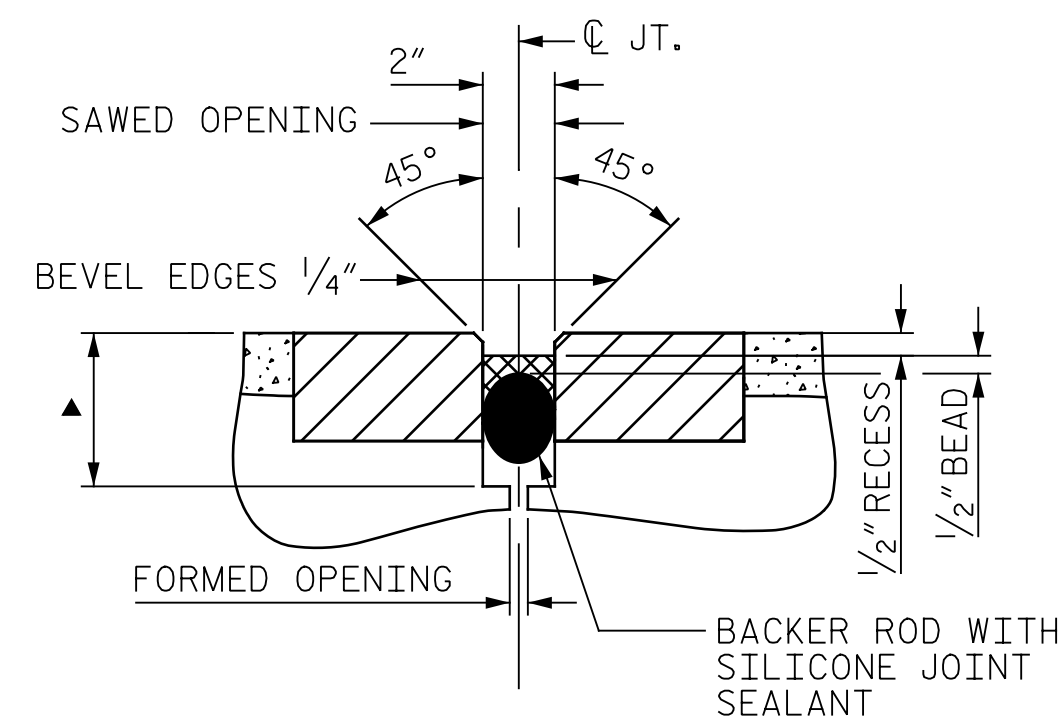
PROPOSED
LMC-VES OVERLAY



MINIMUM
JOINT DEMOLITION

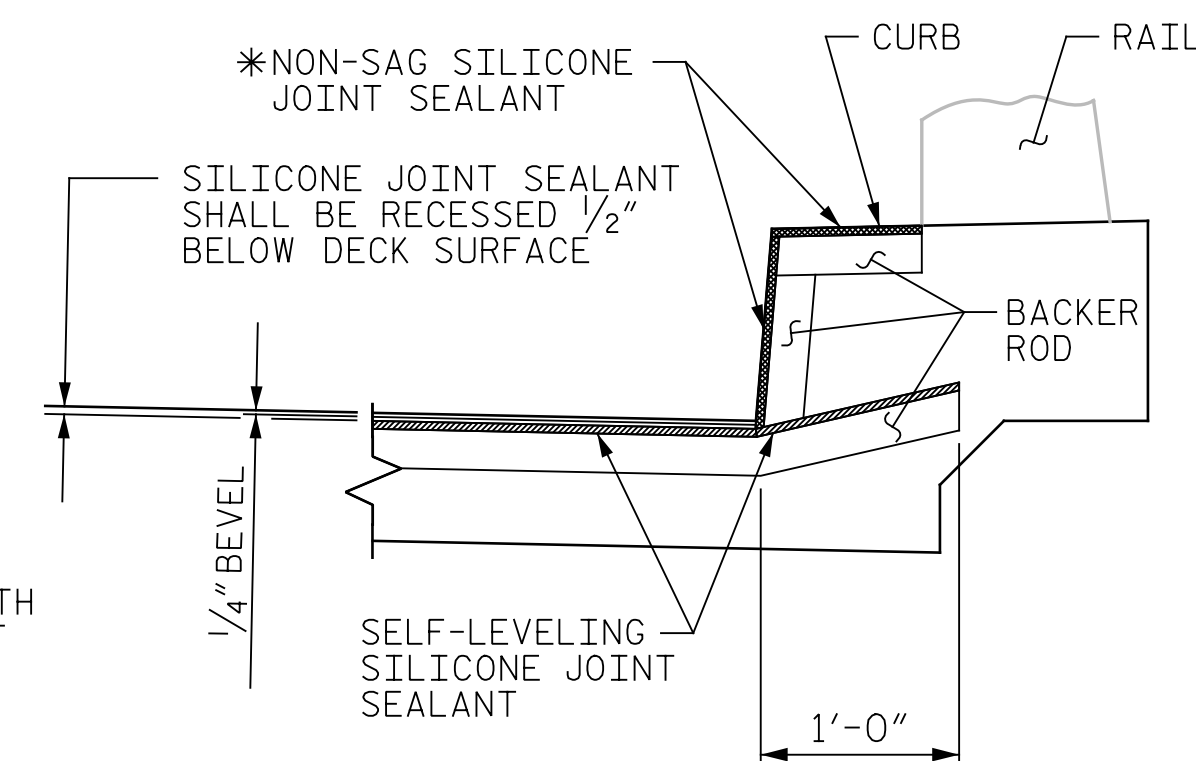


PROPOSED JOINT
PRE-SAWED DIMENSIONS



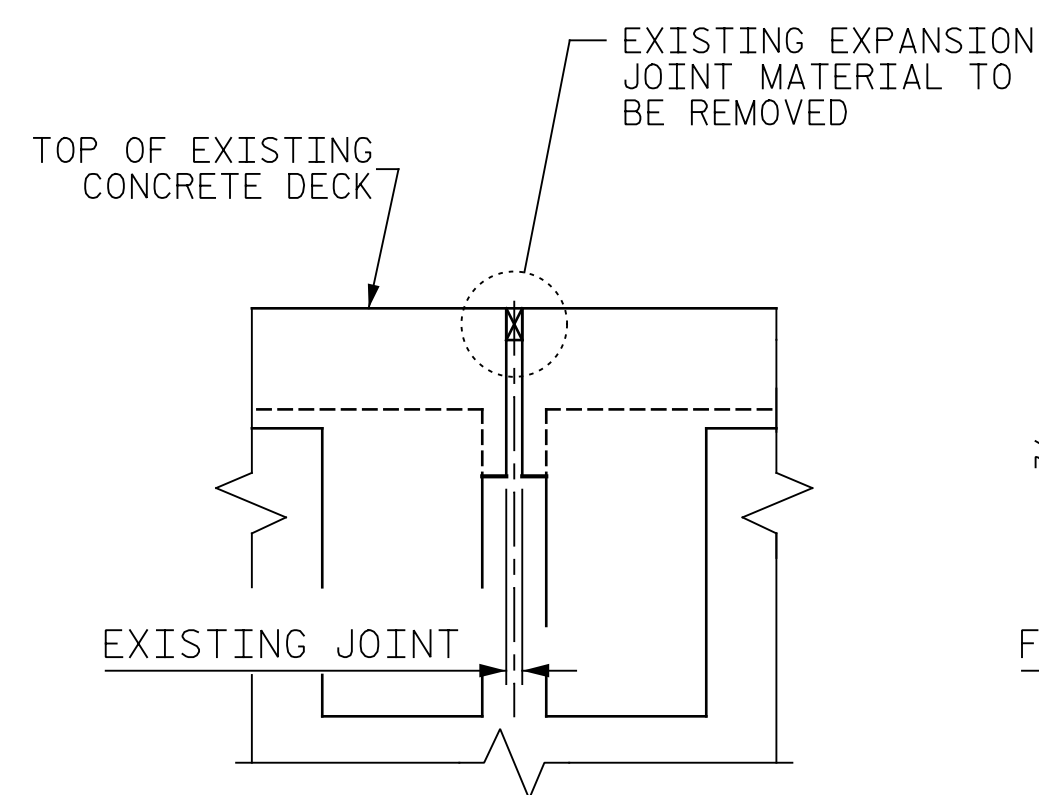
DETAIL A

(PROPOSED JOINT WITH SAWED DIMENSIONS)

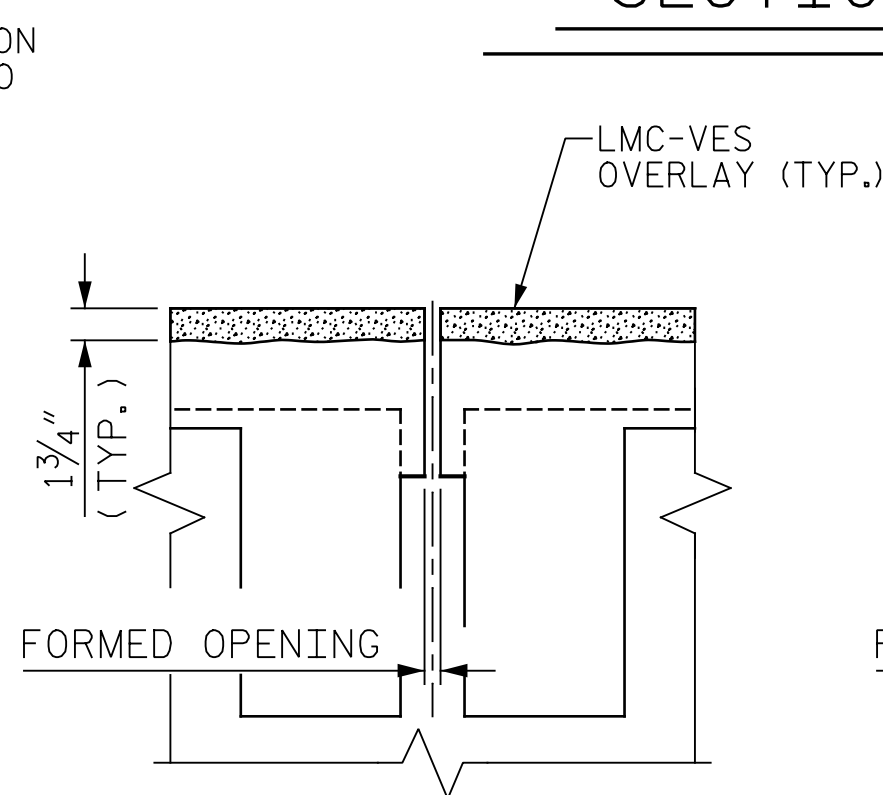


SECTION D-D

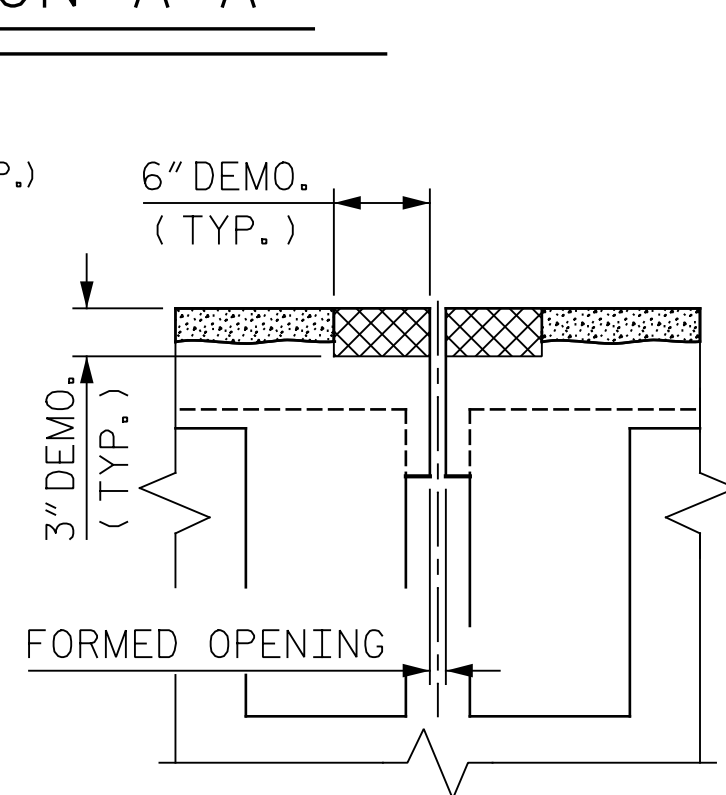
JOINT SEAL DETAILS AT BENT



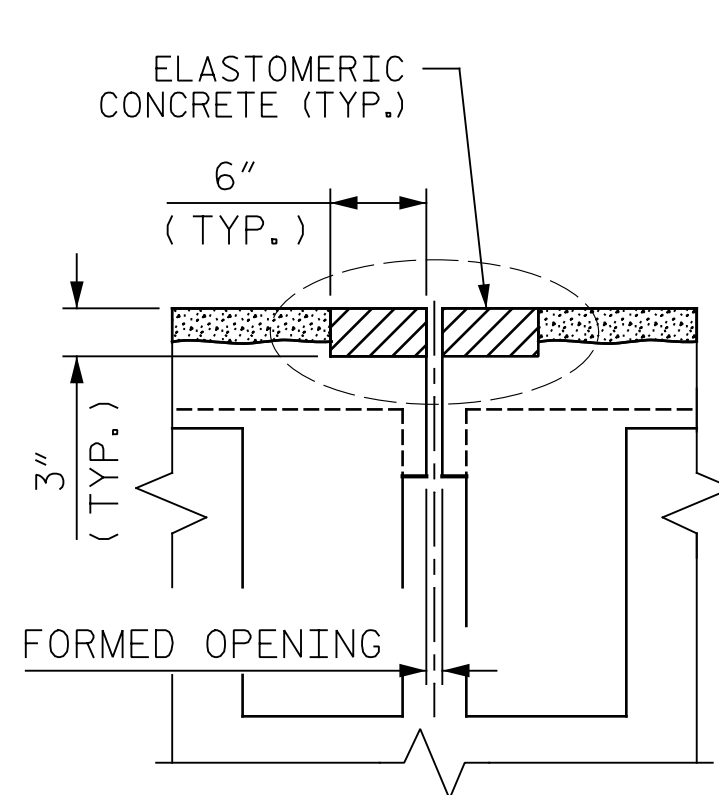
EXISTING



PROPOSED
LMC-VES OVERLAY



MINIMUM
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS

ELASTOMERIC CONCRETE	
END BENT 1	11.0 CF
BENT 1	12.4 CF
BENT 2	12.4 CF
BENT 3	12.6 CF
END BENT 2	11.0 CF

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5

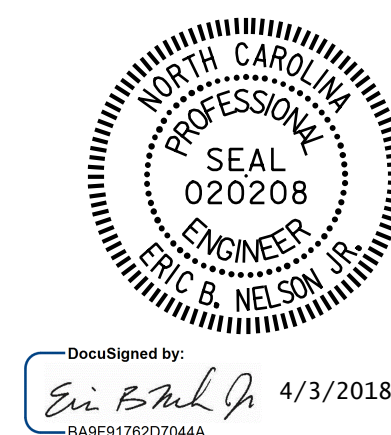
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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DocuSigned by:
Eric B. Nelson
4/3/2018

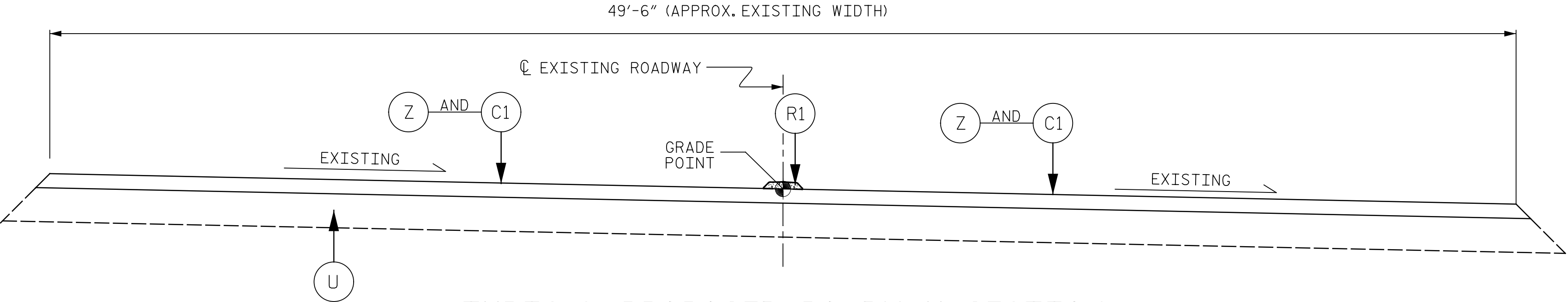
REVISIONS						SHEET NO. S-62
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL & CONCRETE MEDIAN STRIP

PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
R1	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

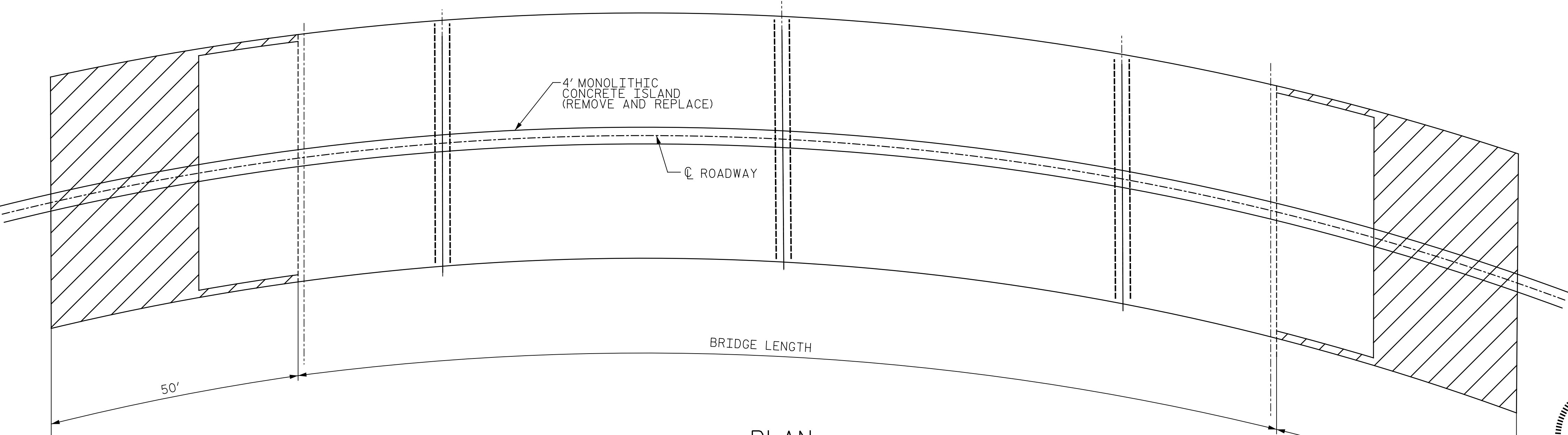
SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	384 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	33 TONS	
ASPHALT BINDER FOR PLANT MIX	2 TONS	



TYPICAL PROPOSED ROADWAY SECTION

NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



PLAN

INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 5



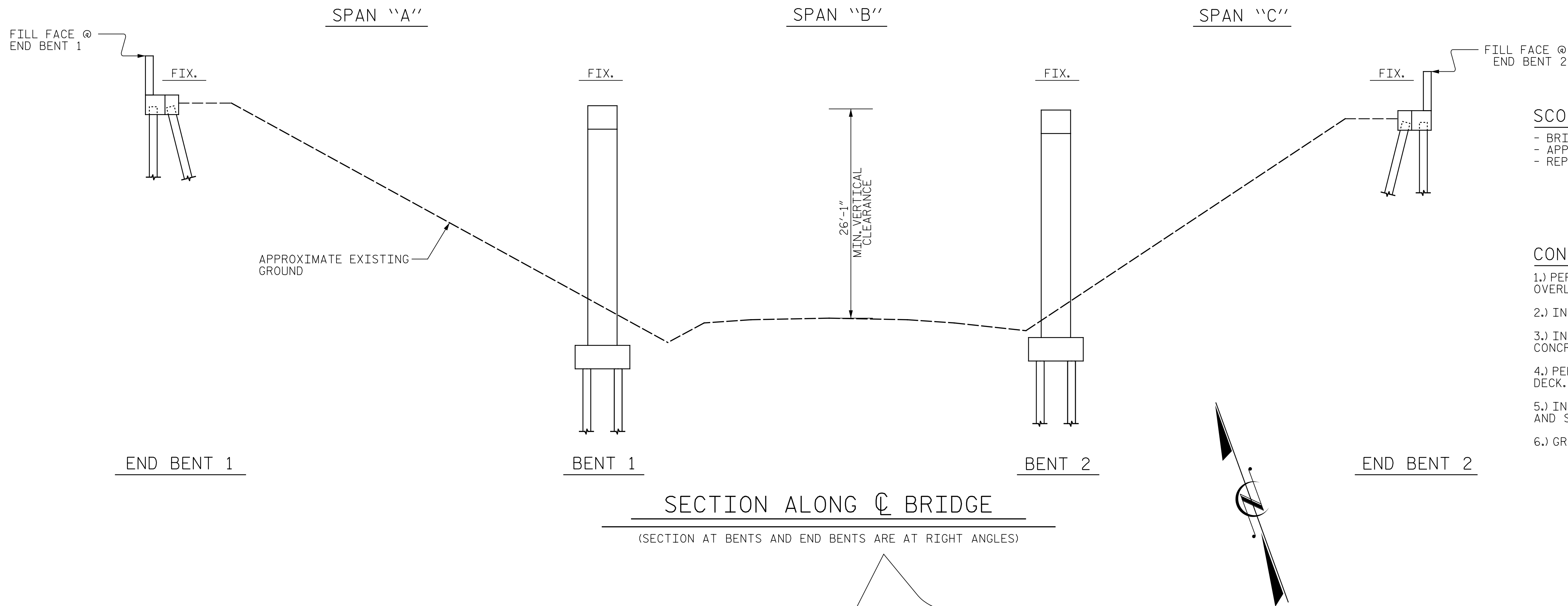
DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-63
TOTAL SHEETS					142

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

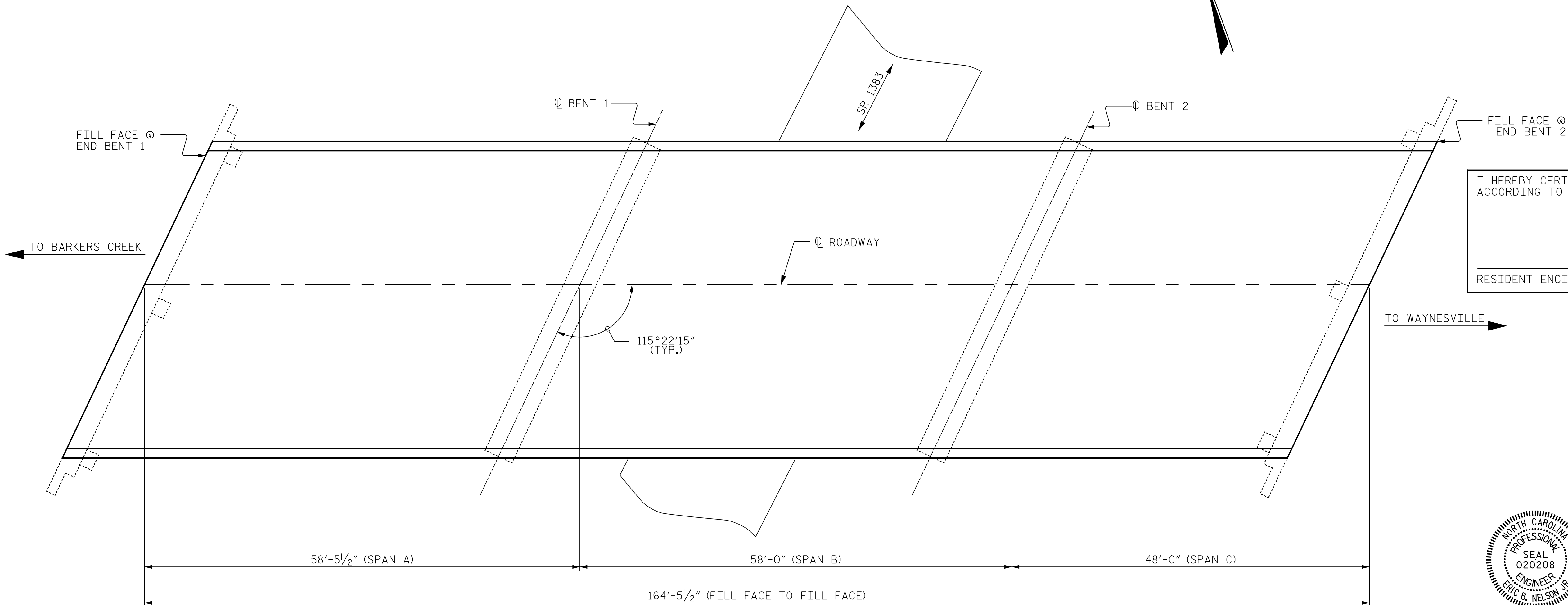
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Gannett Fleming
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(919) 420-7660
NC Lic. No. F-0270

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SECTION ALONG ϕ BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN

(PILES NOT SHOWN FOR CLARITY)

NOTE:

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 11/16/2015.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE
- APPROACH SLAB WIDENING AND CONCRETE HEADER
- REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

CONSTRUCTION SEQUENCE

- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK OVERLAY SURFACE PREPARATON AND PLACE LMC OVERLAY.
- 2.) INSTALL CONSTRUCTION JOINTS AT BENTS.
- 3.) INSTALL APPROACH SLAB WIDENING AND APPROACH SLAB CONCRETE HEADER TO MATCH NEW DECK GRADE.
- 4.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
- 5.) INSTALL ELASTOMERIC CONCRETE AND FOAM JOINTS AT BENTS AND SILICONE JOINTS AT END BENTS.
- 6.) GROOVE LMC.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

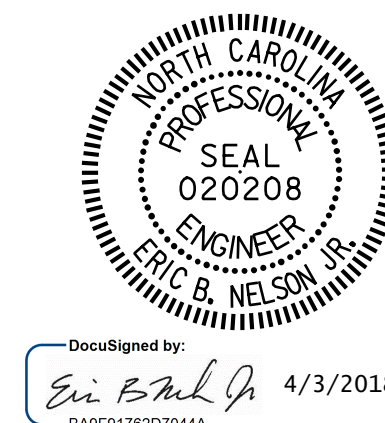
RESIDENT ENGINEER

DATE

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE #85 ON US23, US74
NBL OVER SR1383



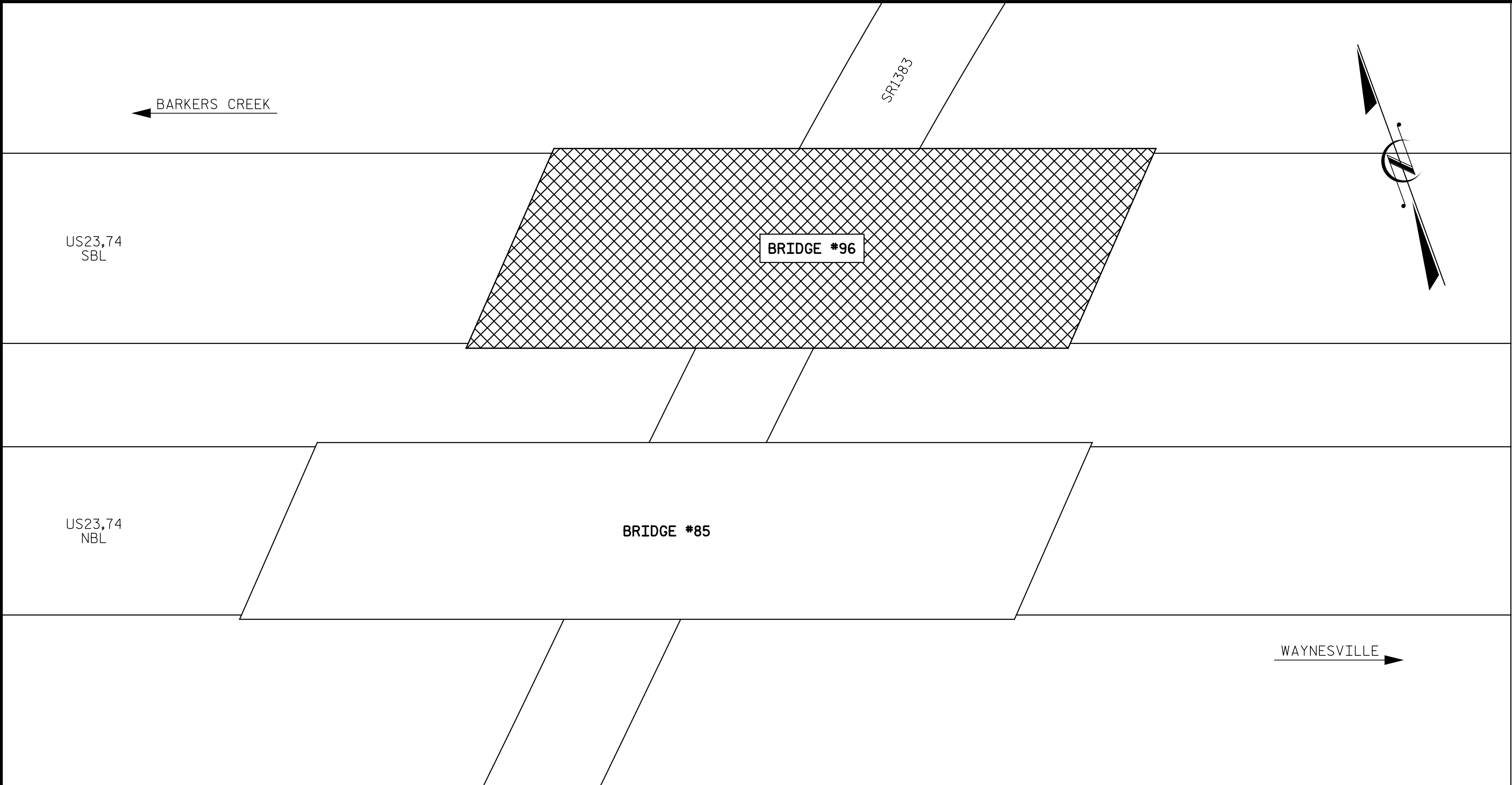
DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:
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Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-64	
1			3			TOTAL SHEETS	
2			4			142	

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



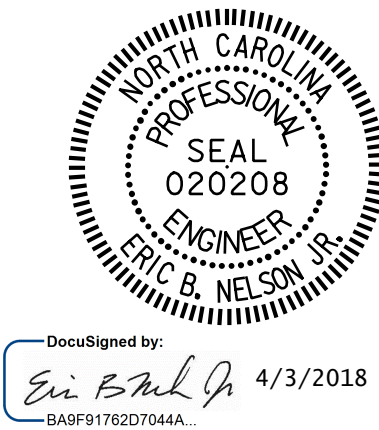
LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85



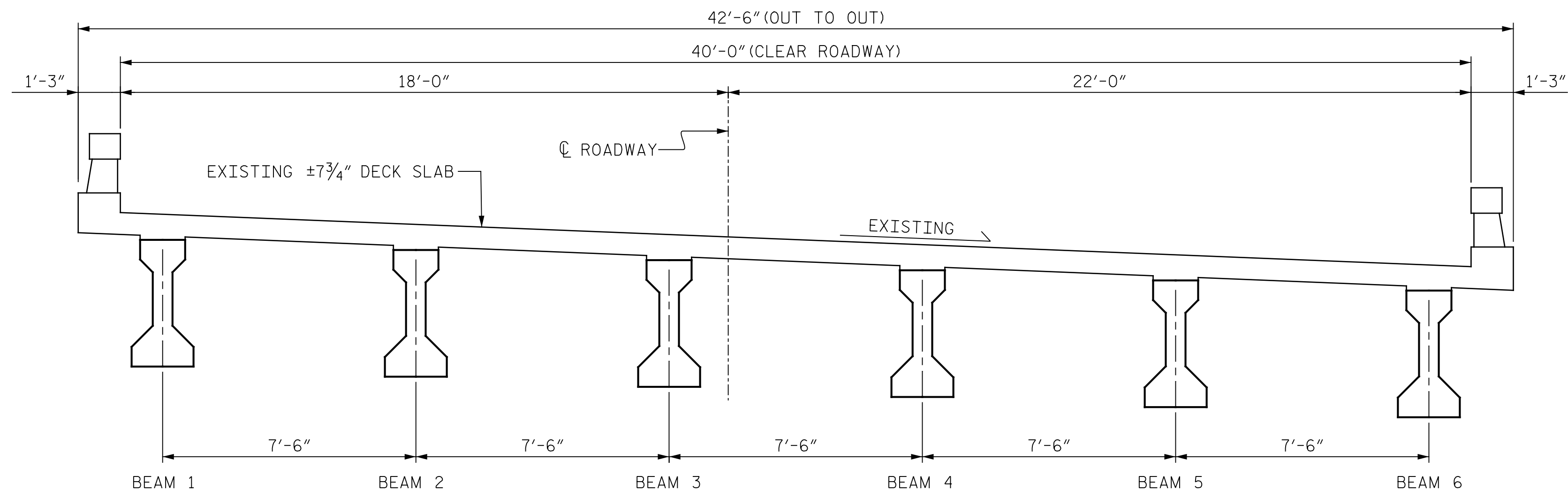
DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

PLANS PREPARED BY:
 Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270
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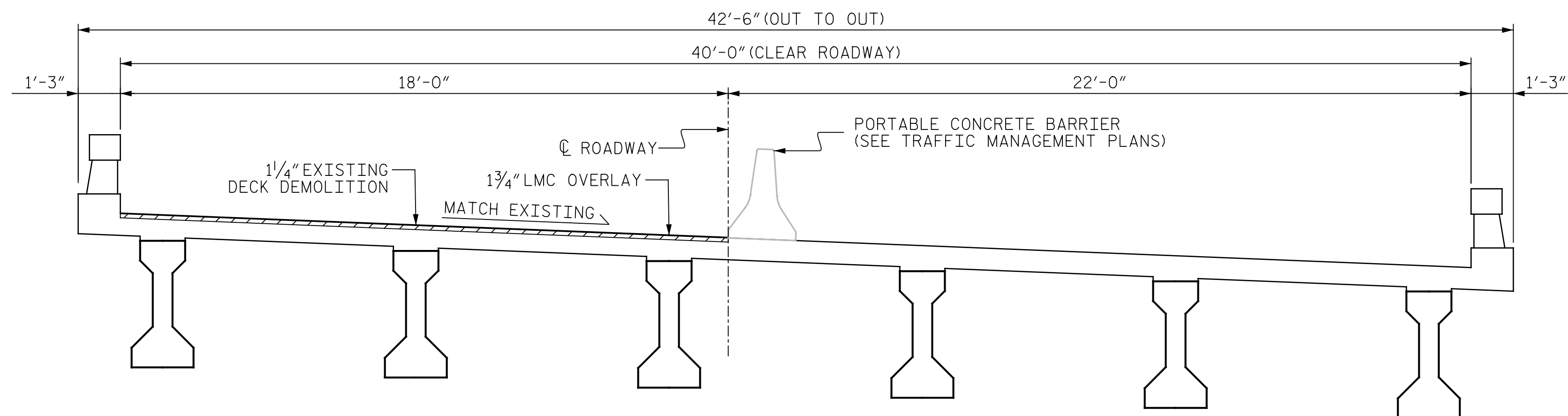
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-65		
GENERAL DRAWING BRIDGE #85 ON US23, US74 NBL OVER SR1383						TOTAL SHEETS 142		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

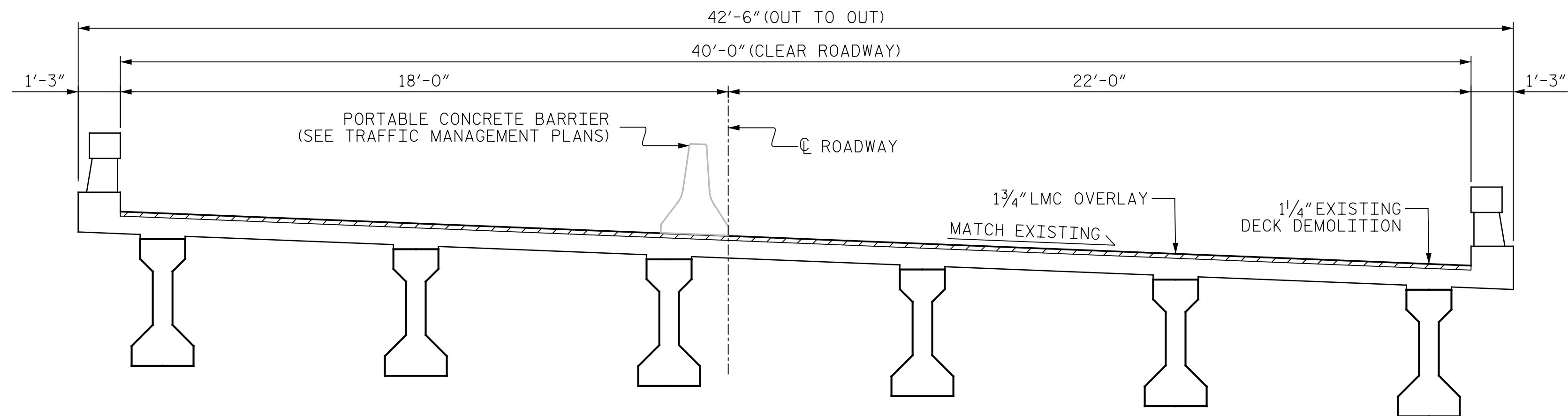
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



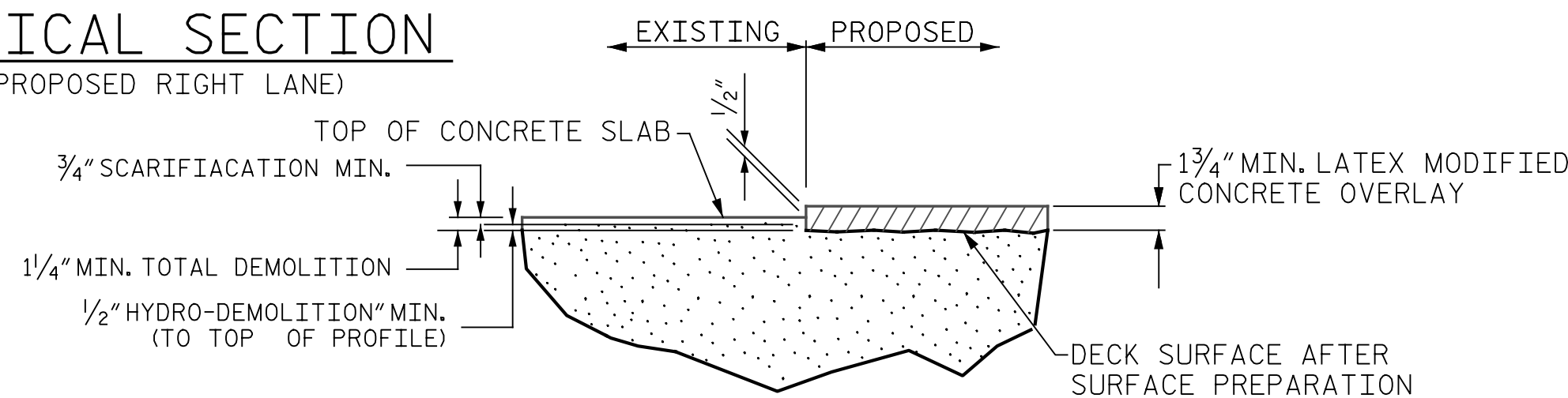
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED LEFT LANE)



TYPICAL SECTION
(PROPOSED RIGHT LANE)

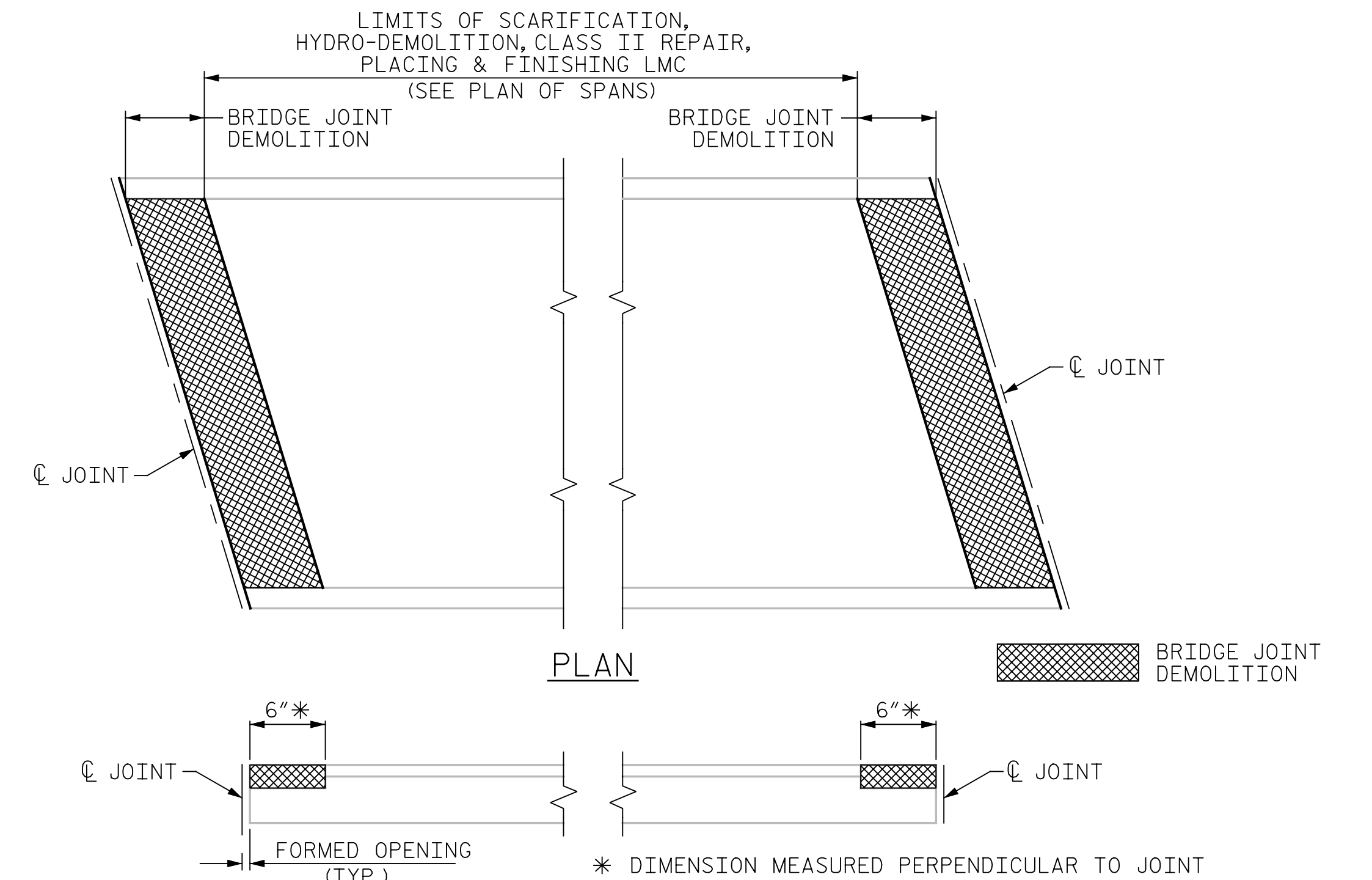


DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY

NOTE:

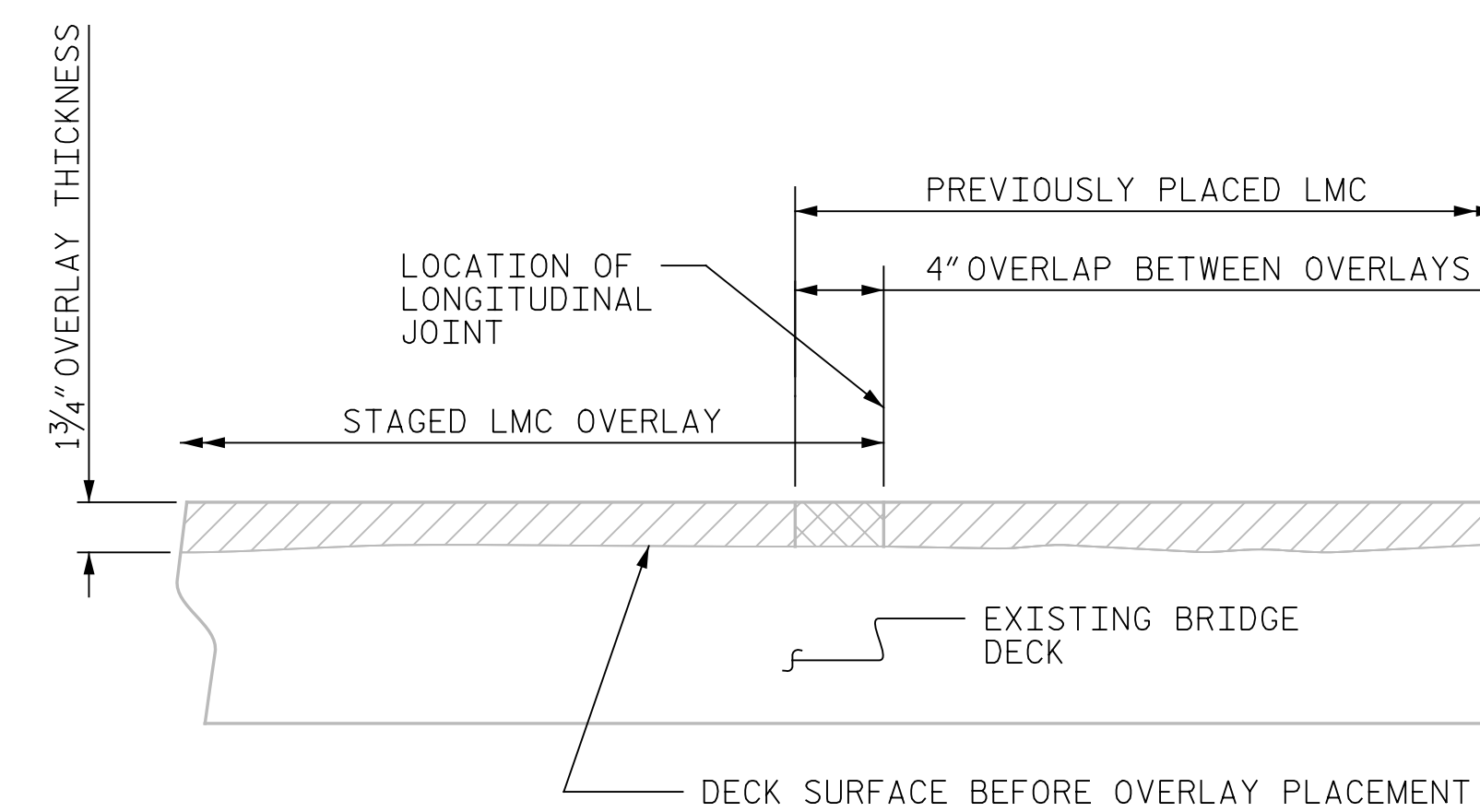
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.



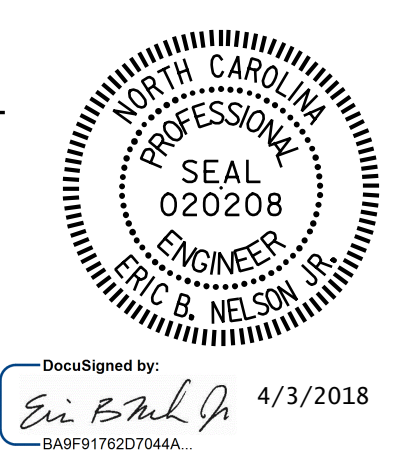
ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



STAGED LMC OVERLAY
CONSTRUCTION JOINT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION & OVERLAY DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-66					TOTAL SHEETS 142

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
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Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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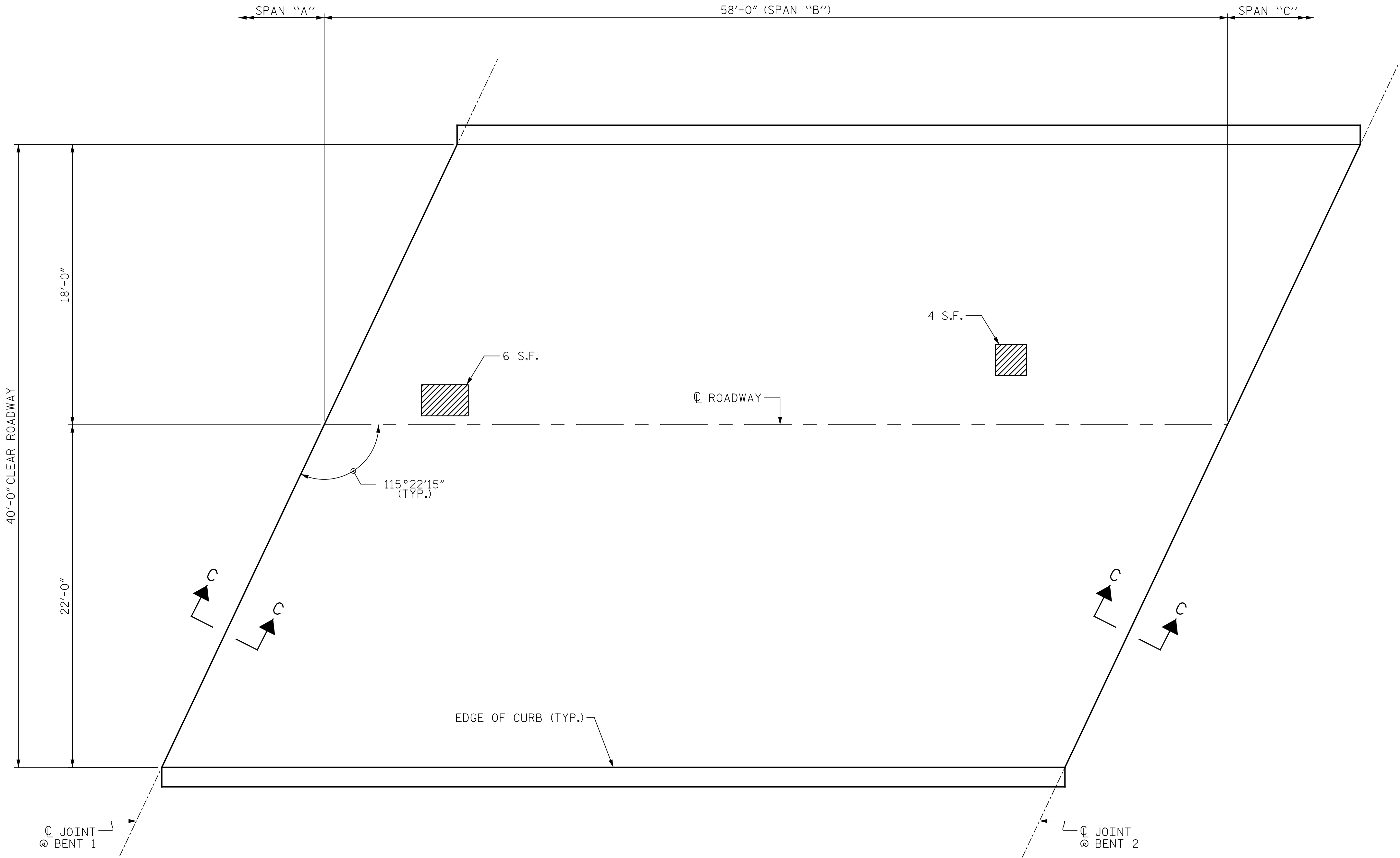
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	258 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	258 SY	
CLASS II SURFACE PREPARATION	1.2 SY	
BRIDGE JOINT DEMOLITION	-	
GROOVING BRIDGE DECK	2134 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

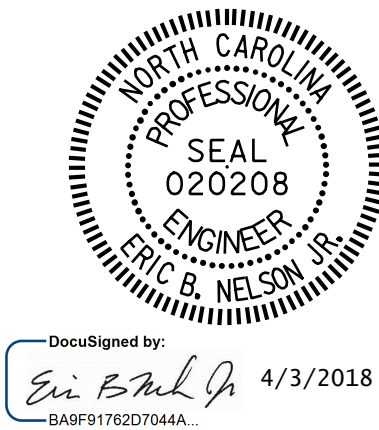
PRIOR TO PLACEMENT OF CONCRETE OVERLAY OVER THE CONTINUOUS DECK SPANS, THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE FOR APPROVAL BY THE ENGINEER.



- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85

PLAN OF SPAN "B"
(SEE SHEET NO. S-69 FOR SECTION C-C)

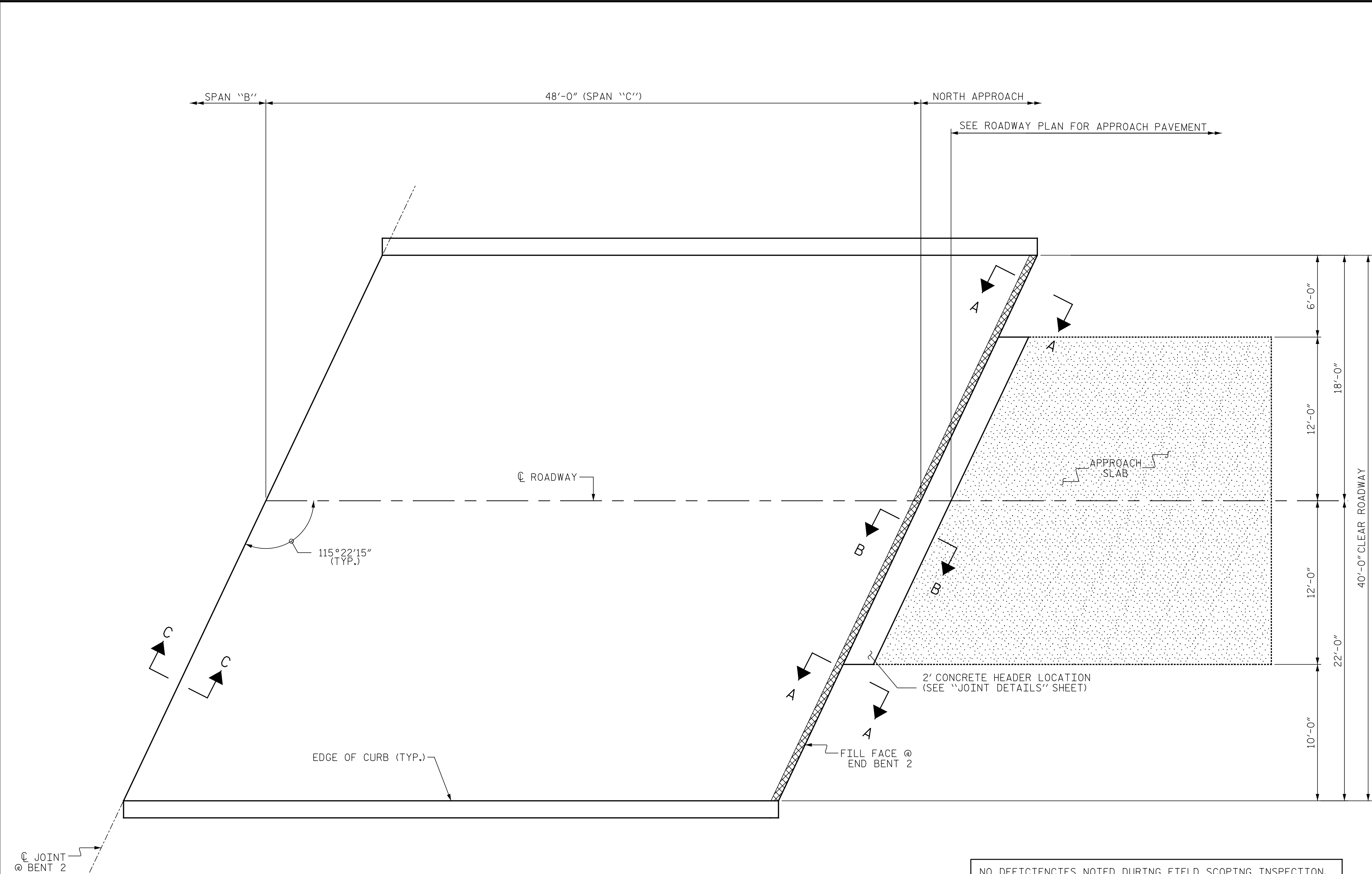


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "B"					
REVISIONS					SHEET NO. S-68
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS 142					

DRAWN BY : R. HEIPLE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
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SUMMARY OF QUANTITIES FOR SPAN 'C'		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	221 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	214 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	22.2 SF	
GROOVING BRIDGE DECK	1746 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

PRIOR TO PLACEMENT OF CONCRETE OVERLAY OVER THE CONTINUOUS DECK SPANS, THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE FOR APPROVAL BY THE ENGINEER.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN 'C'

(SEE SHEET NO. S-69 FOR SECTIONS A-A, B-B, AND C-C)

PROJECT NO. 14BPR.3.1

JACKSON COUNTY

BRIDGE NO. 85



DocuSigned by:
Eric B. Nelson 4/3/2018

DRAWN BY : R. HEIPLE DATE : 2/2018

CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:

Gannett Fleming

Excellence Delivered *As Promised*

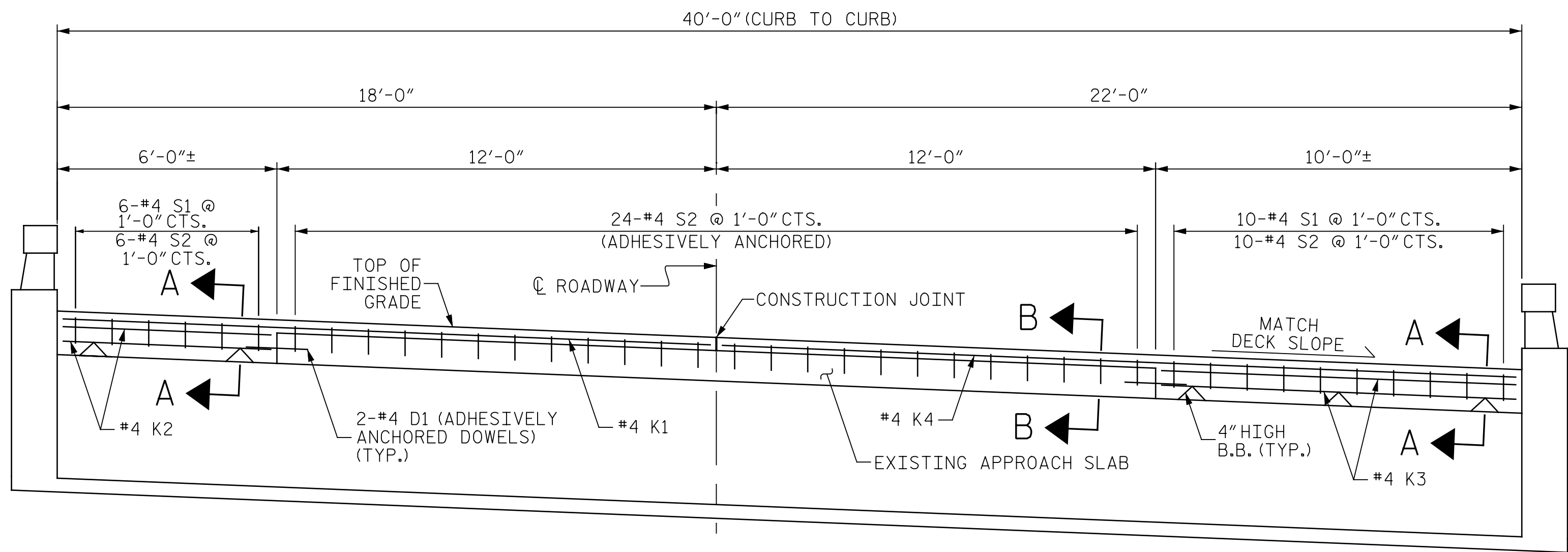
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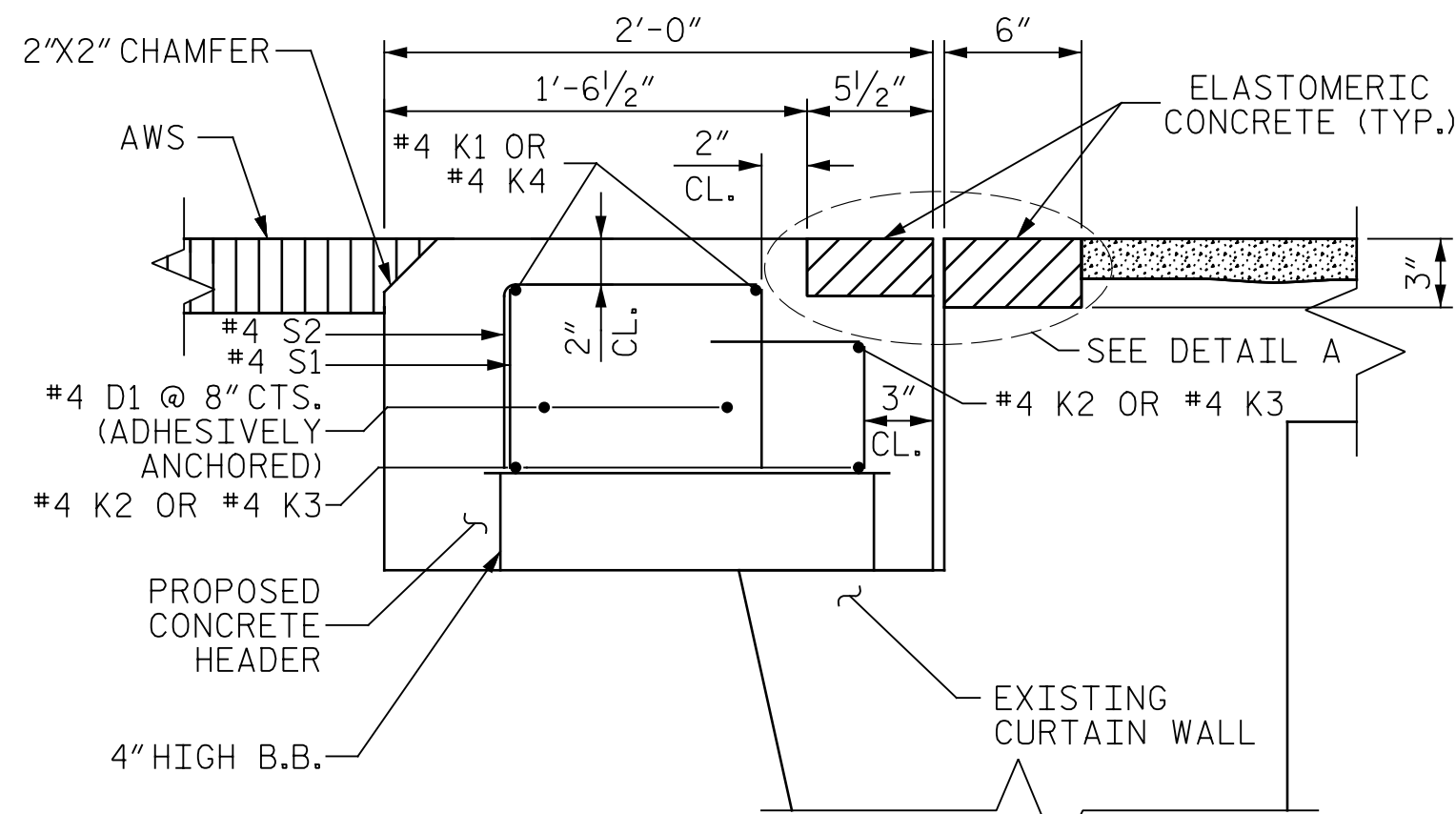
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN 'C'

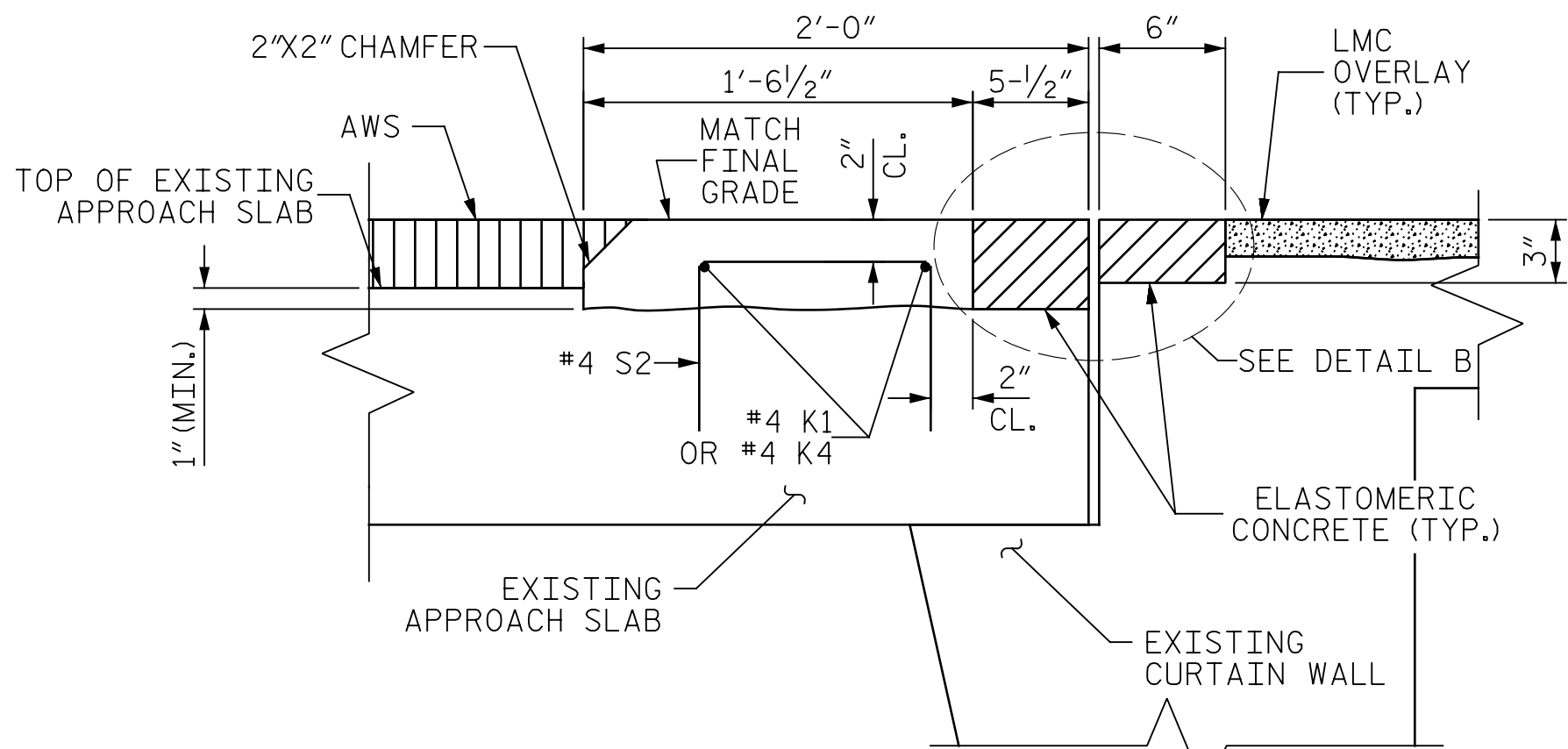
REVISIONS						SHEET NO. S-69
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



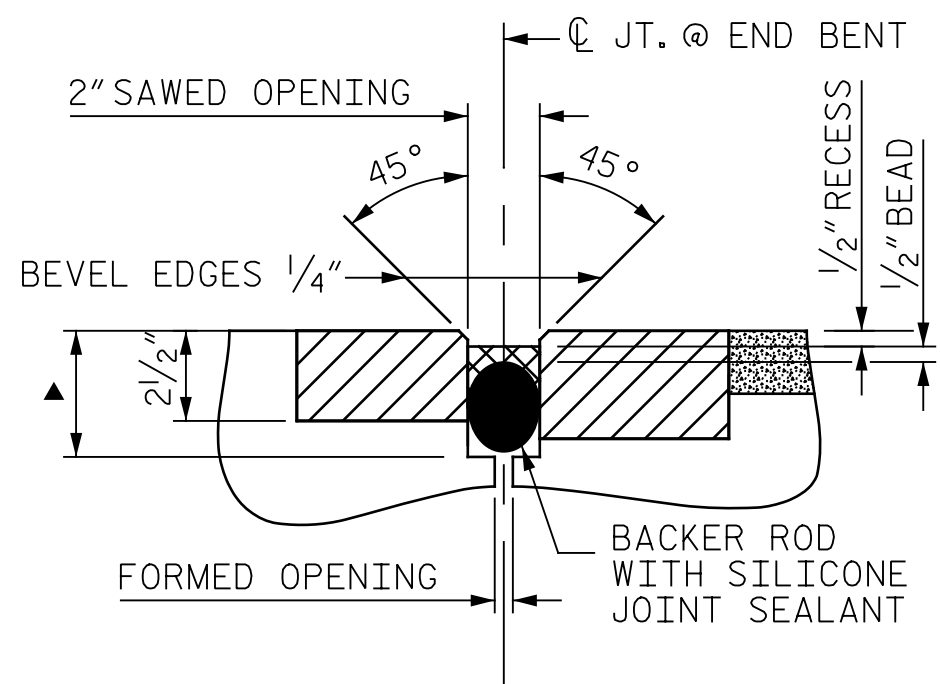
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

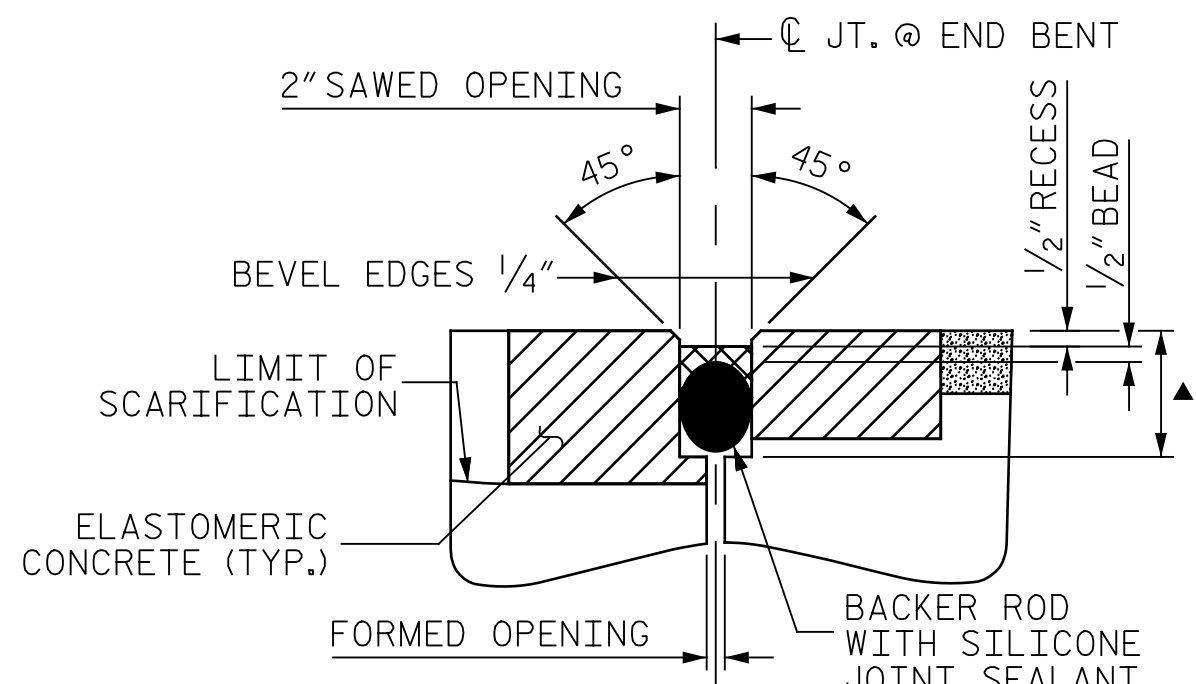


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

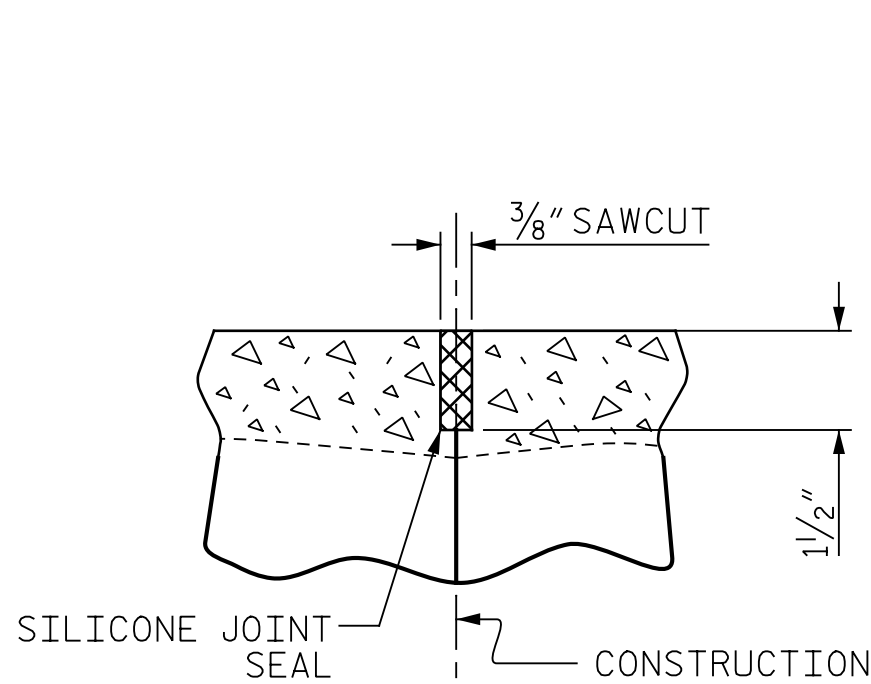


DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)



DETAIL C
(PROPOSED JOINT WITH SAWED DIMENSIONS)

NOTES

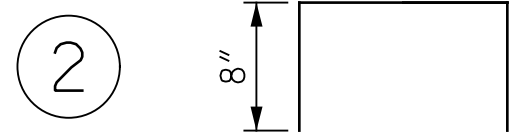
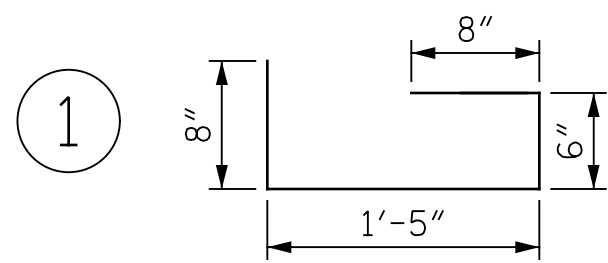
THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	2	#4	STR	19'-6"	26
K2	3	#4	STR	6'-2"	13
K3	3	#4	STR	10'-9"	22
K4	2	#4	STR	24'-0"	32

S1	16	#4	1	3'-3"	35
S2	40	#4	2	2'-5"	65

REINFORCING STEEL 197 LBS

CLASS AA CONCRETE 2.0 CY

ELASTOMERIC CONCRETE 11.3 CF

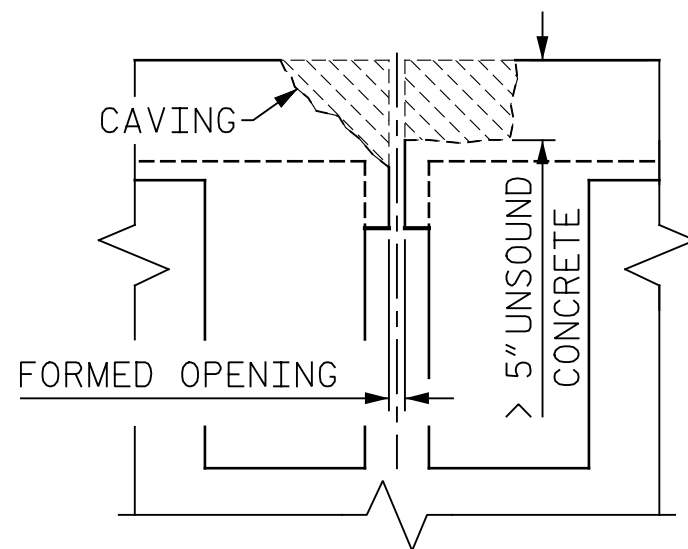
NOTE:

RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

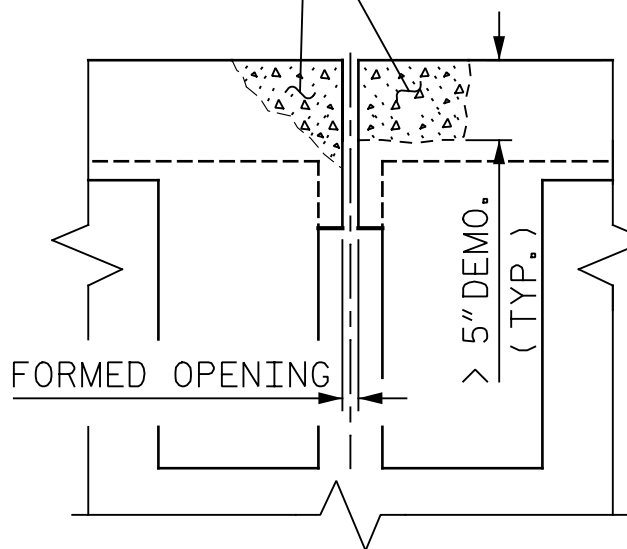
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVER SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

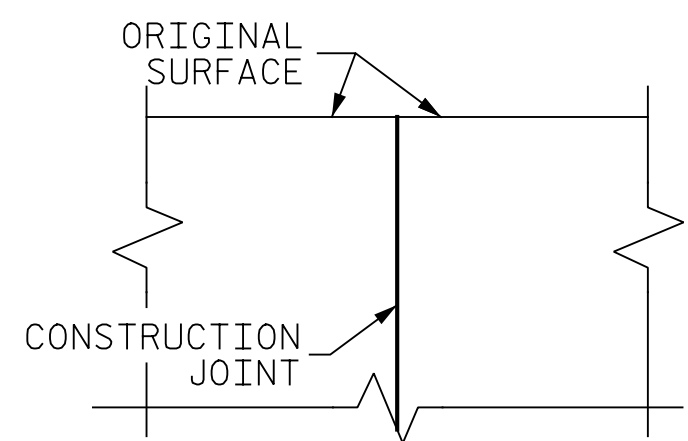


JOINT DEMOLITION
FOR CAVING OR
UNSOND CONCRETE

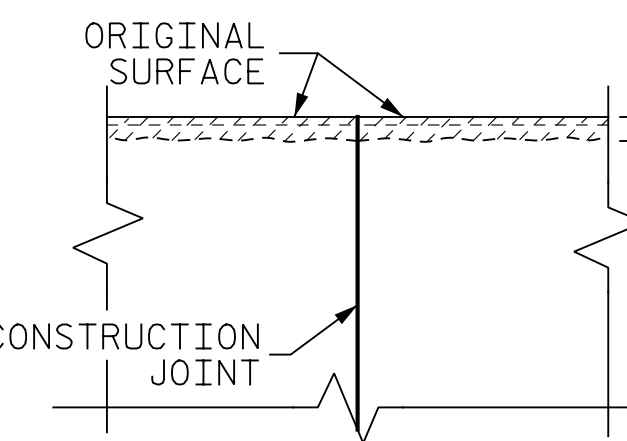


REPAIRED JOINT

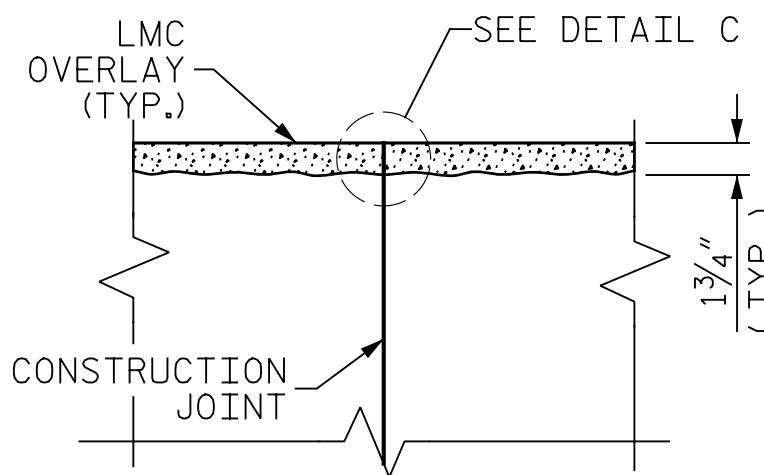
CONCRETE FOR DECK REPAIR DETAIL (FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)



SECTION C-C
(EXISTING)



SECTION C-C
(MINIMUM EXISTING
JOINT DEMOLITION)



SECTION C-C
(PROPOSED)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO. S-70
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

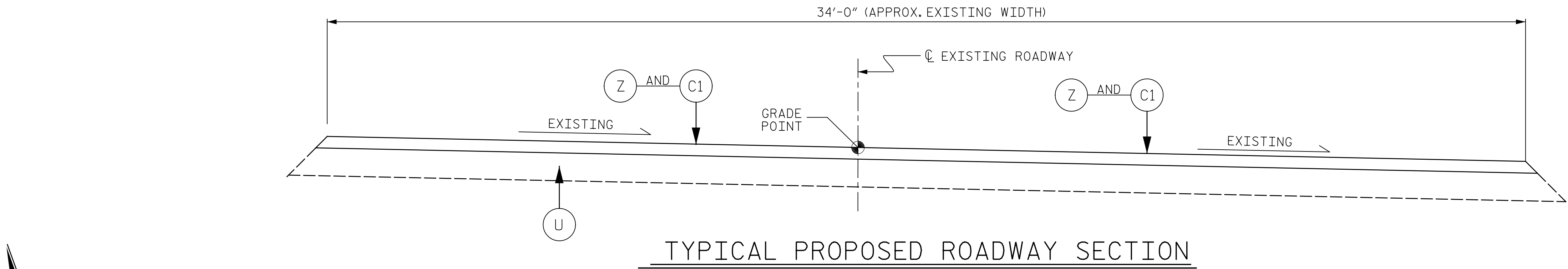
DRAWN BY: M. SPENCER DATE: 2/2018
CHECKED BY: R. WERTMAN DATE: 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

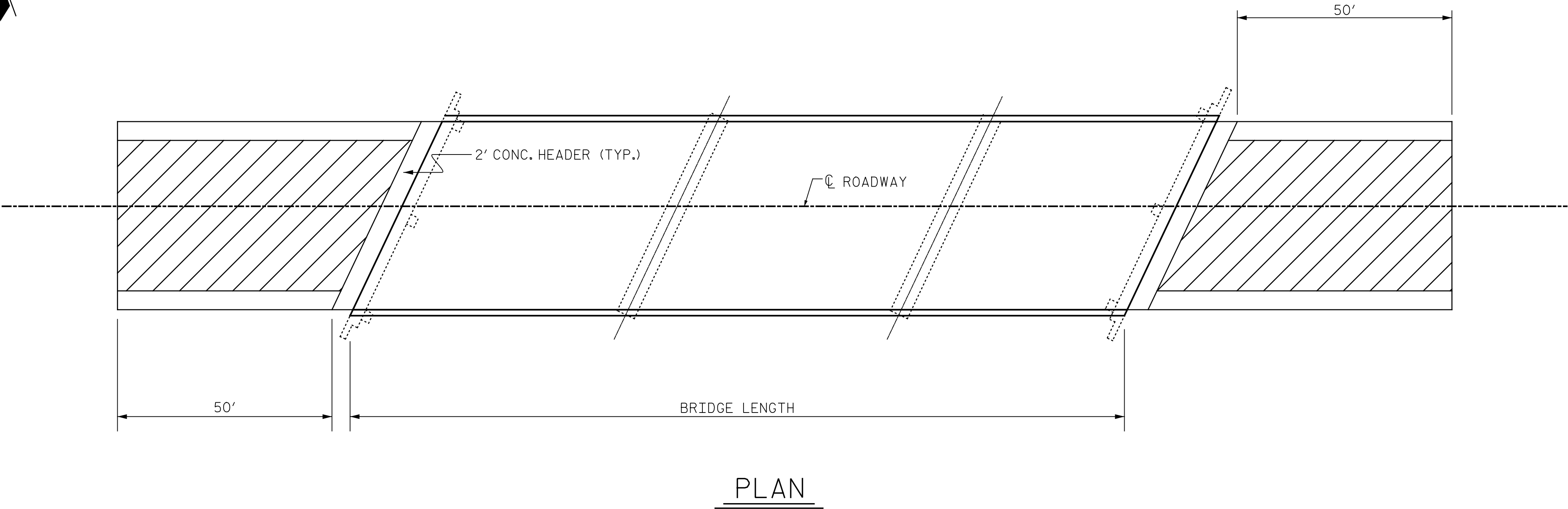
PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	439 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	37 TONS	
ASPHALT BINDER FOR PLANT MIX	2.5 TONS	



NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 85



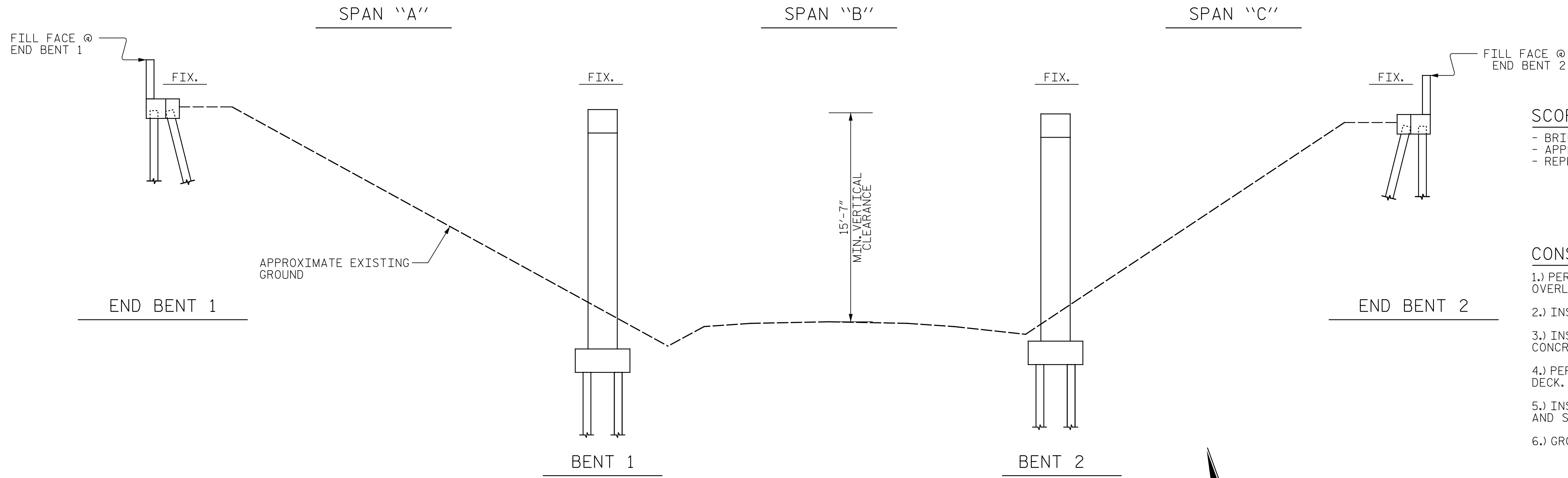
DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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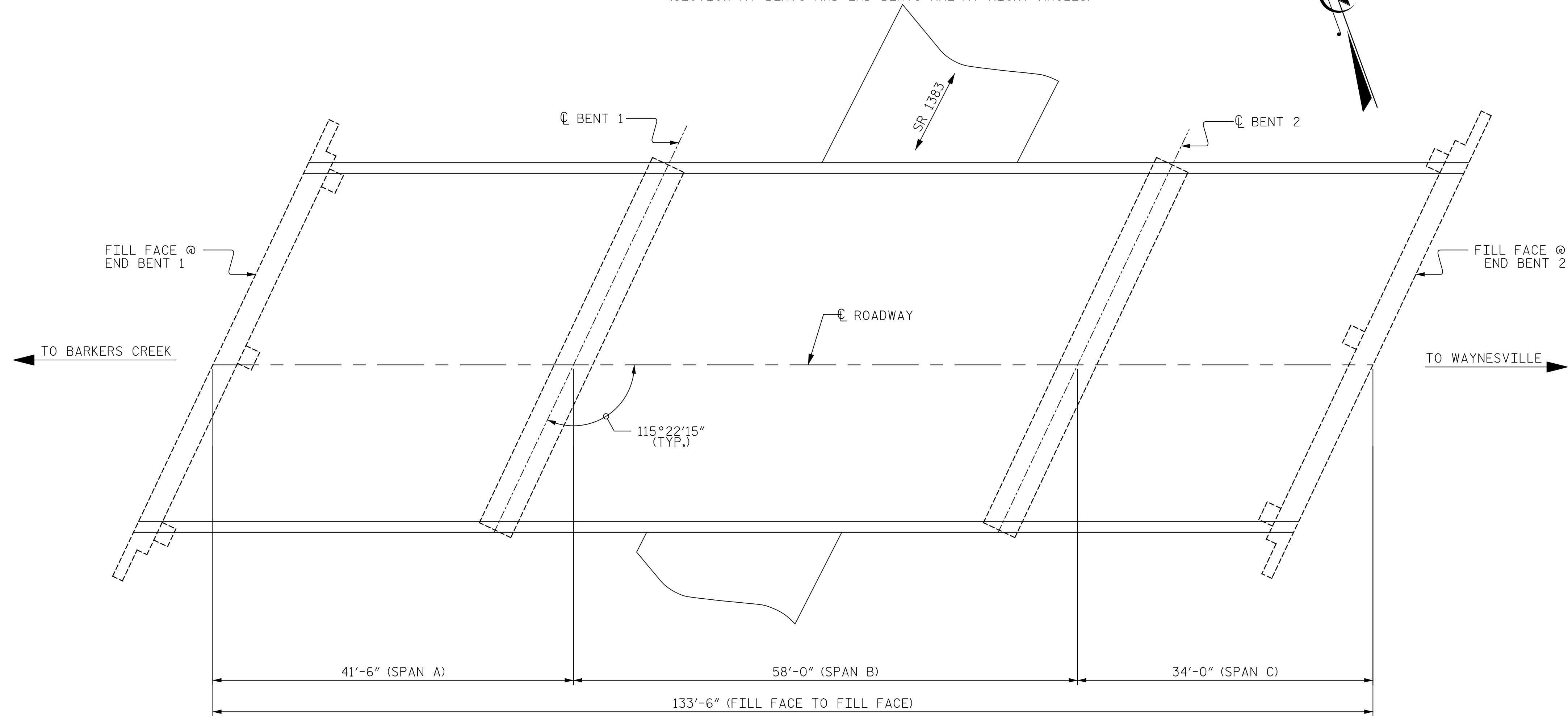
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-71
2			4			TOTAL SHEETS 142



SECTION ALONG ϕ BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN

(PILES NOT SHOWN FOR CLARITY)

NOTE:

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 11/16/2015.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE
- APPROACH SLAB WIDENING AND CONCRETE HEADER
- REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

CONSTRUCTION SEQUENCE

- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK OVERLAY SURFACE PREPARATON AND PLACE LMC OVERLAY.
- 2.) INSTALL CONSTRUCTION JOINTS AT BENTS.
- 3.) INSTALL APPROACH SLAB WIDENING AND APPROACH SLAB CONCRETE HEADER TO MATCH NEW DECK GRADE.
- 4.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
- 5.) INSTALL ELASTOMERIC CONCRETE AND FOAM JOINTS AT BENTS AND SILICONE JOINTS AT END BENTS.
- 6.) GROOVE LMC.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

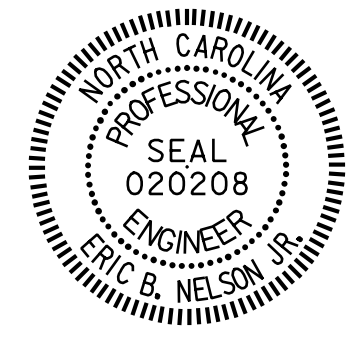
RESIDENT ENGINEER

DATE

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE #96 ON US23, US74
SBL OVER SR1383



DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:

Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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REVISIONS

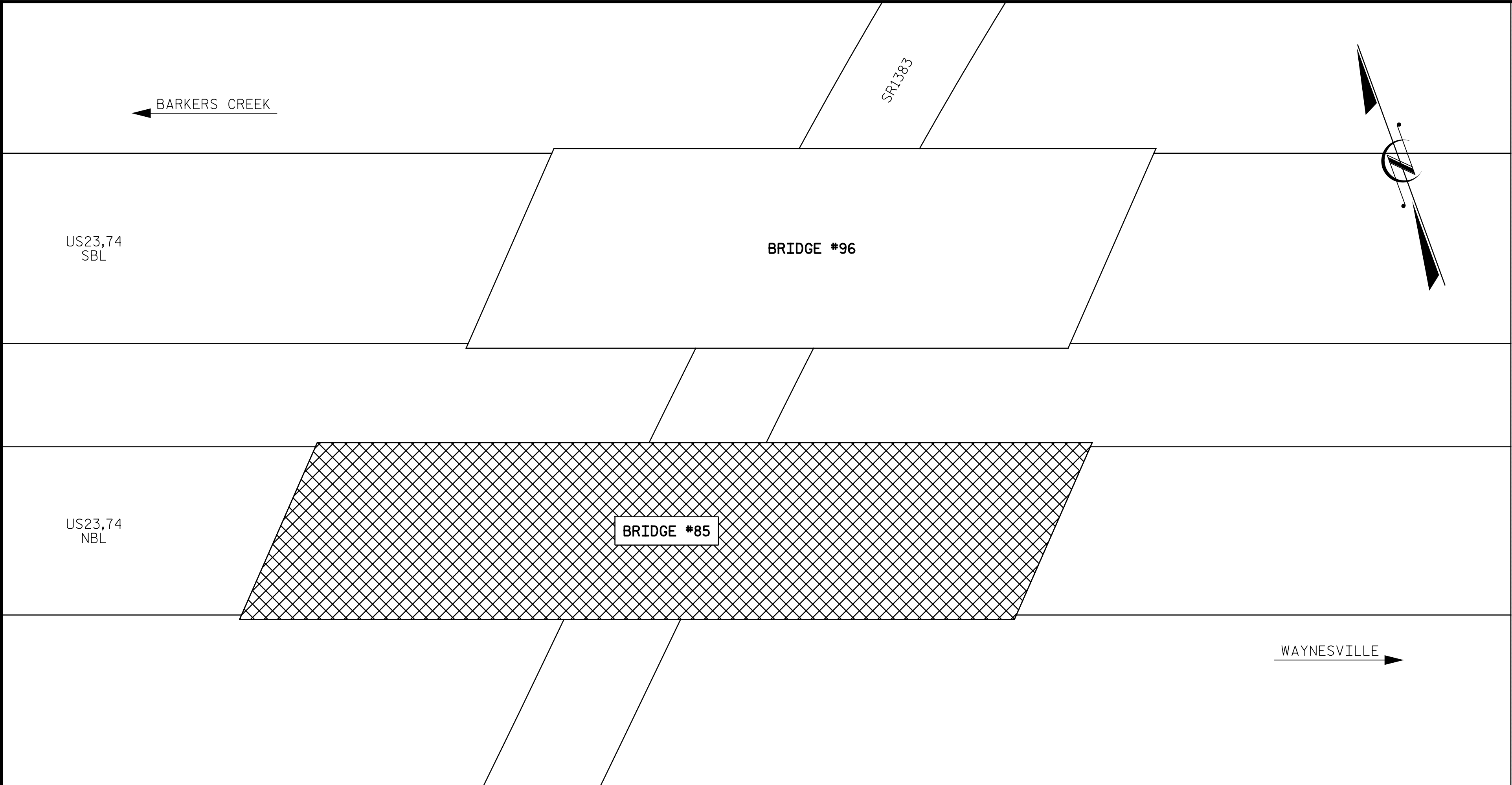
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
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SHEET NO.

S-72

TOTAL
SHEETS
142

DRAWN BY : M.LEE DATE : 2/2018
CHECKED BY : R.WERTMAN DATE : 2/2018



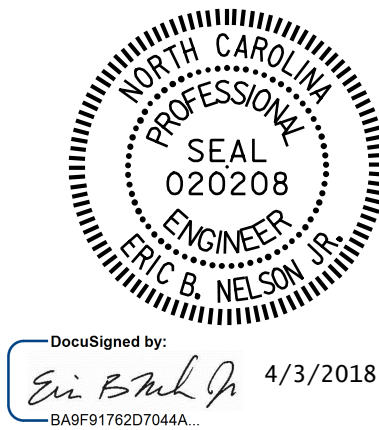
LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96



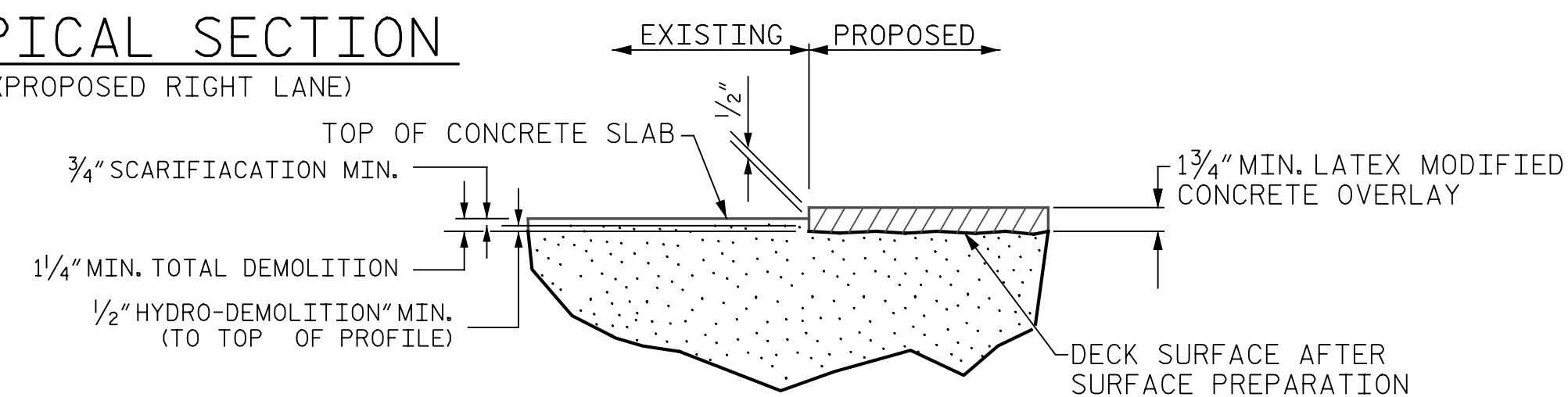
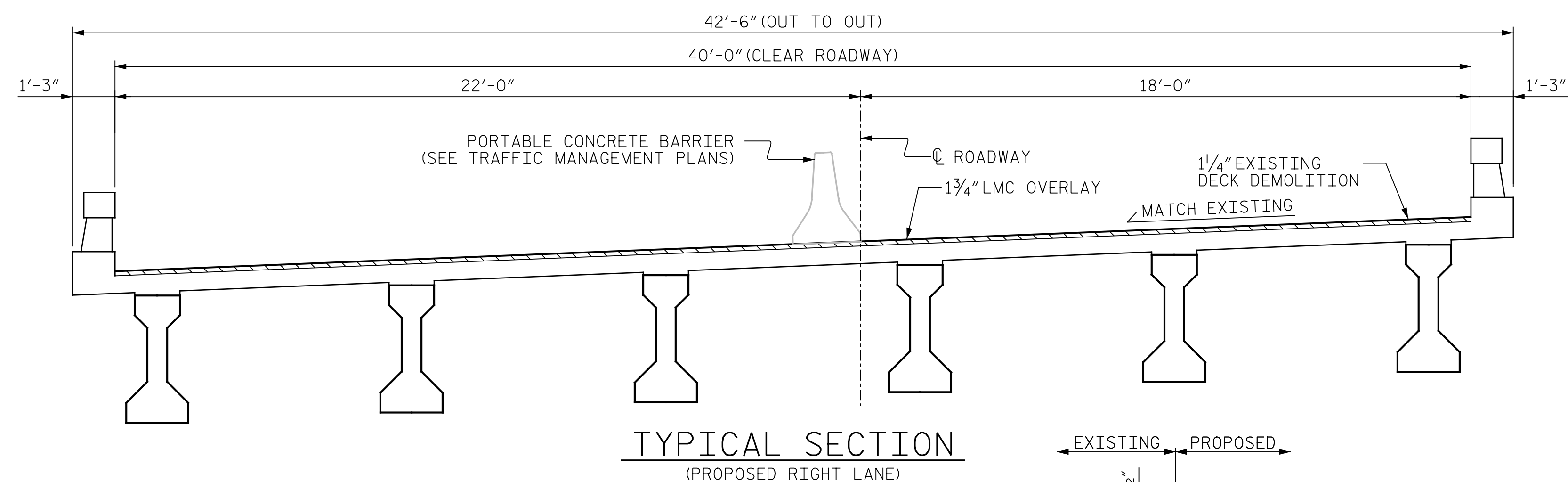
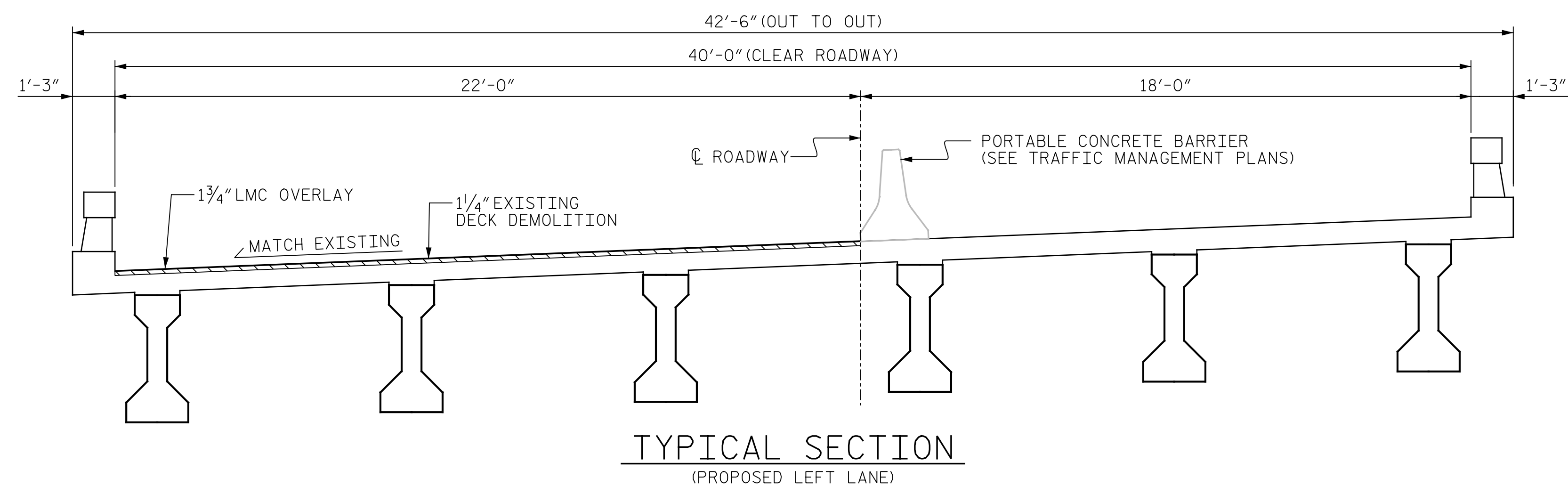
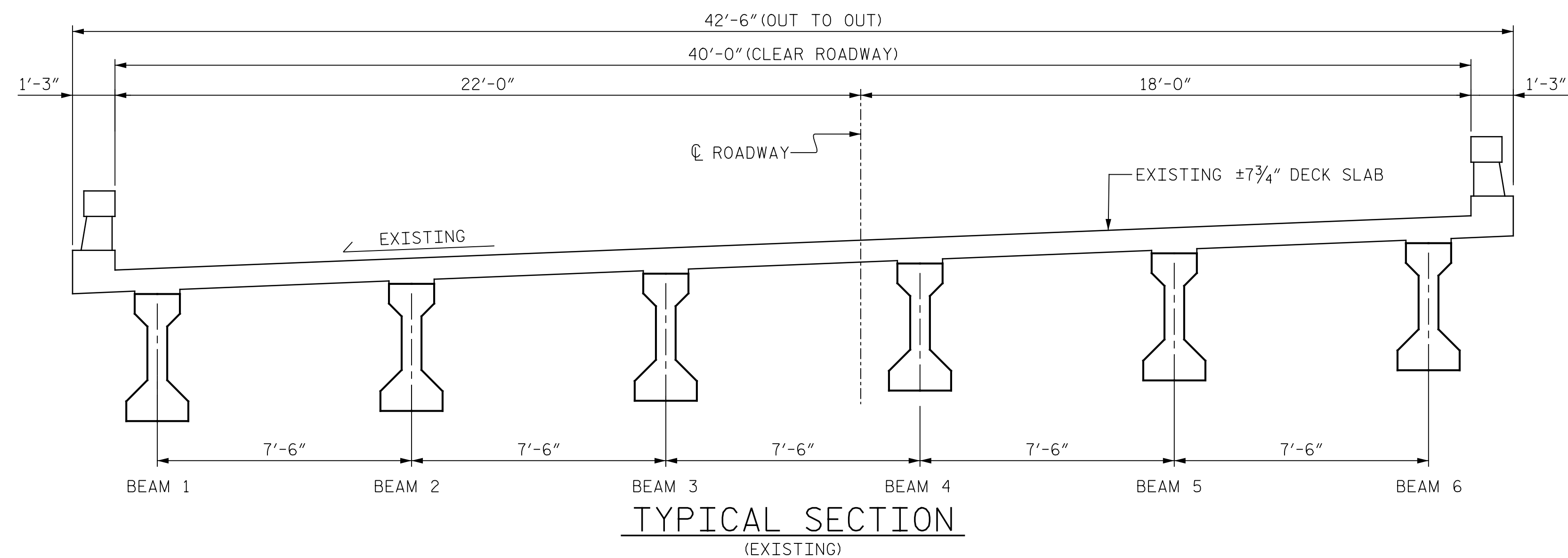
GENERAL DRAWING
BRIDGE #96 ON US23, US74
SBL OVER SR1383

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R.WERTMAN DATE : 2/2018

PLANS PREPARED BY:
 **Gannett Fleming**
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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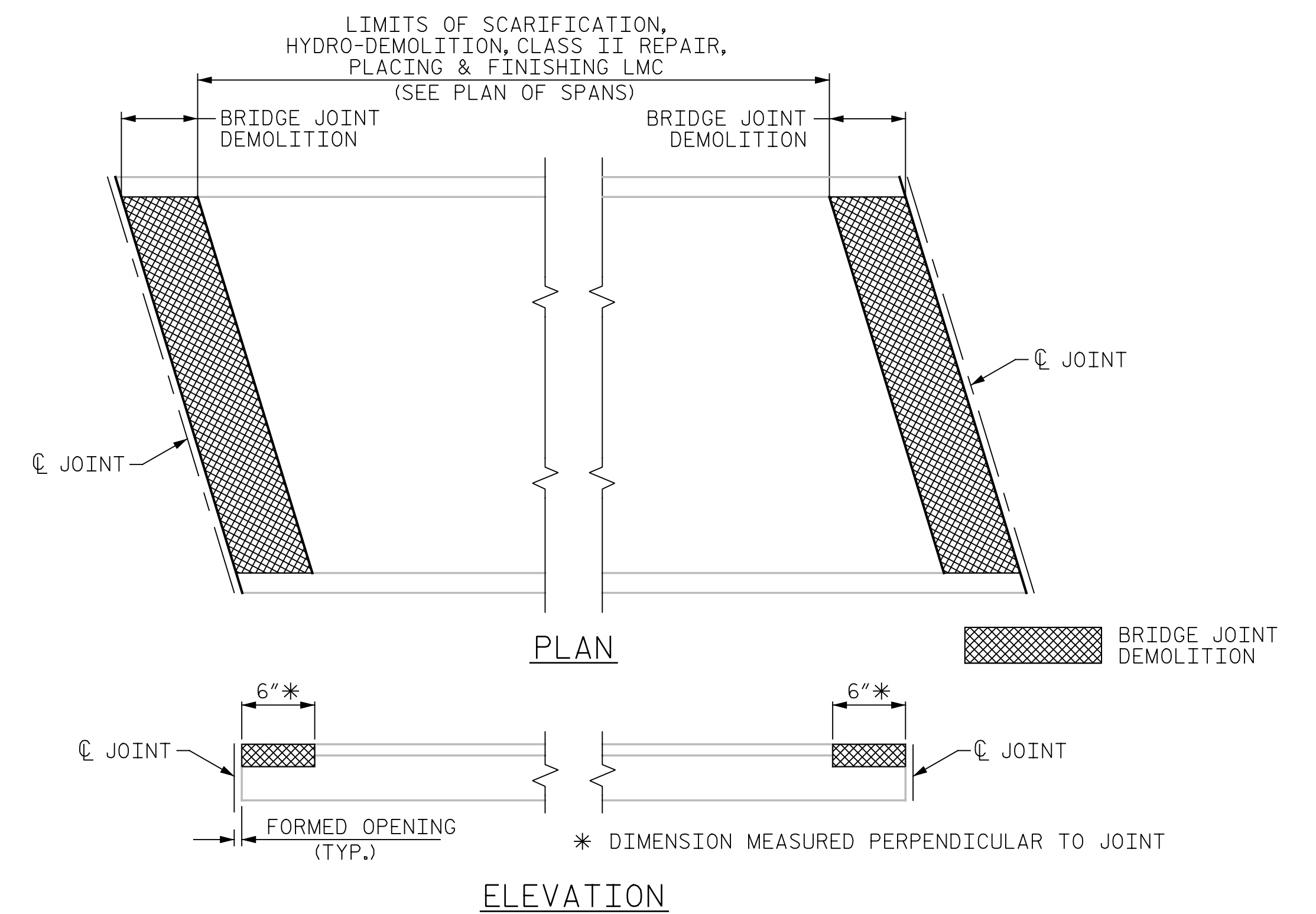
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-73	
1			3			TOTAL SHEETS 142	
2			4				



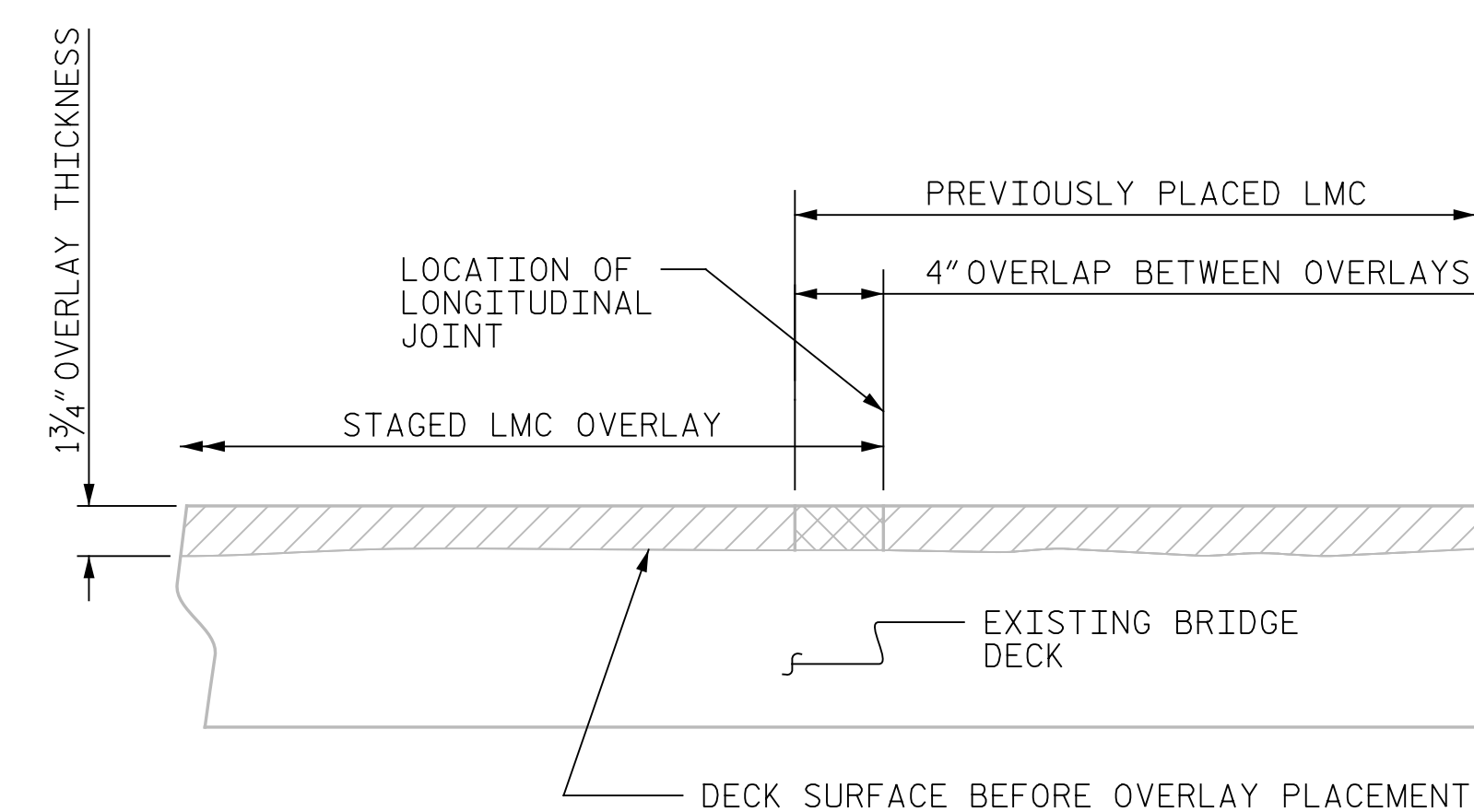
NOTE:

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING
AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE
PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.



PAY LIMITS FOR OVERLAY BID ITEMS



PROJECT NO. 14BPR.3.1
JACKSON COUNTY
 BRIDGE NO. 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & OVERLAY DETAILS

REVISONS						SHEET NO. S-74
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018


PLANS PREPARED BY:

 **Gannett Fleming**
*Excellence Delivered **As Promised***

2610 Wycliff Road
 Suite 102
 Raleigh NC 27607-
 (919) 420-7660

NC Lic. No. F-0270

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FINAL UNLESS ALL
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DocuSigned by:
Eri Bmk Jr 4/3/2018
B49C91782D70AAA

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	192 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	186 SY	
CLASS II SURFACE PREPARATION	0.7 SY	
BRIDGE JOINT DEMOLITION	22.2 SF	
GROOVING BRIDGE DECK	1505 SF	

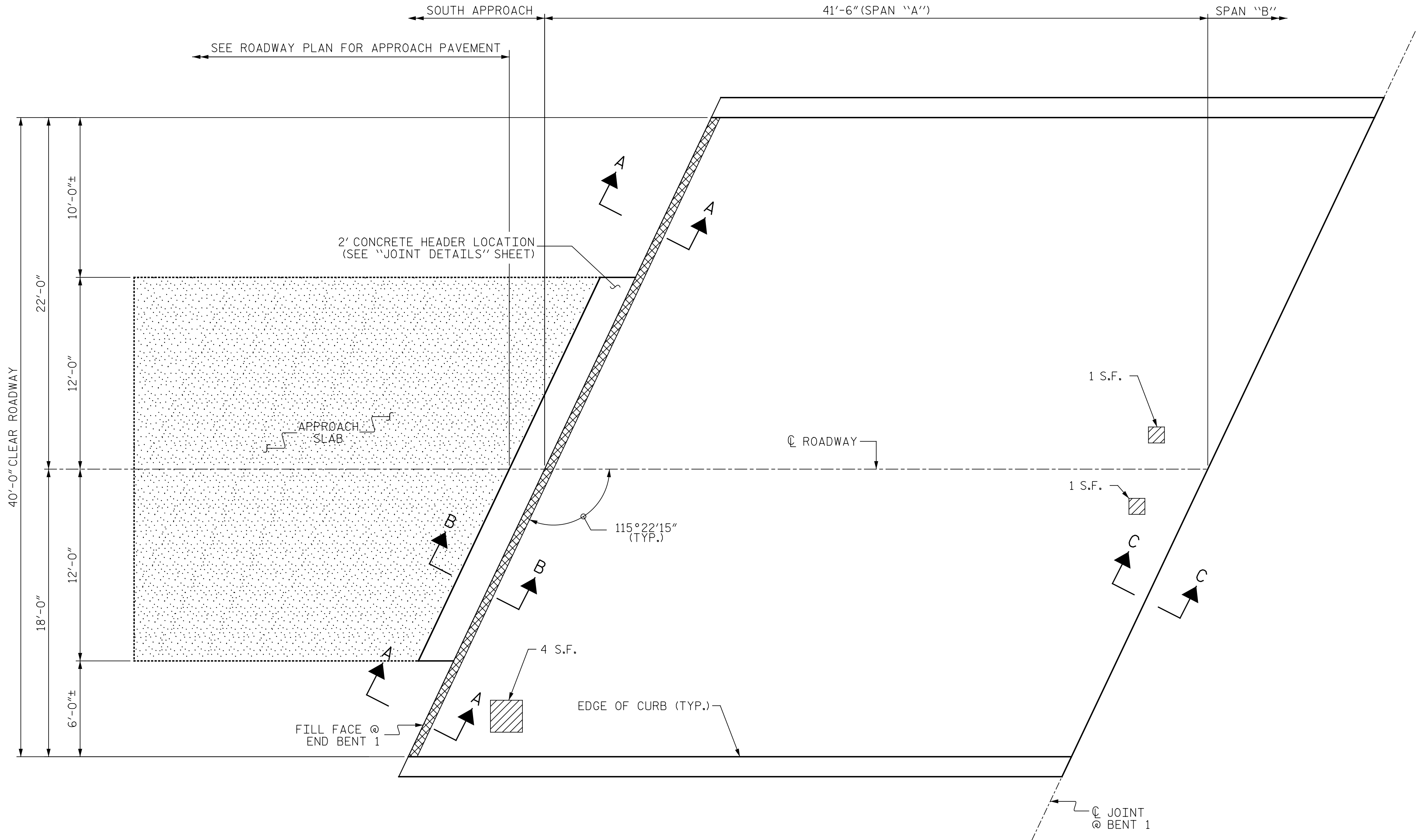
* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

PRIOR TO PLACEMENT OF CONCRETE OVERLAY OVER THE CONTINUOUS DECK SPANS, THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE FOR APPROVAL BY THE ENGINEER.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "A"
(SEE SHEET NO. S-77 FOR SECTIONS A-A, B-B, AND C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "A"

REVISIONS						SHEET NO. S-75
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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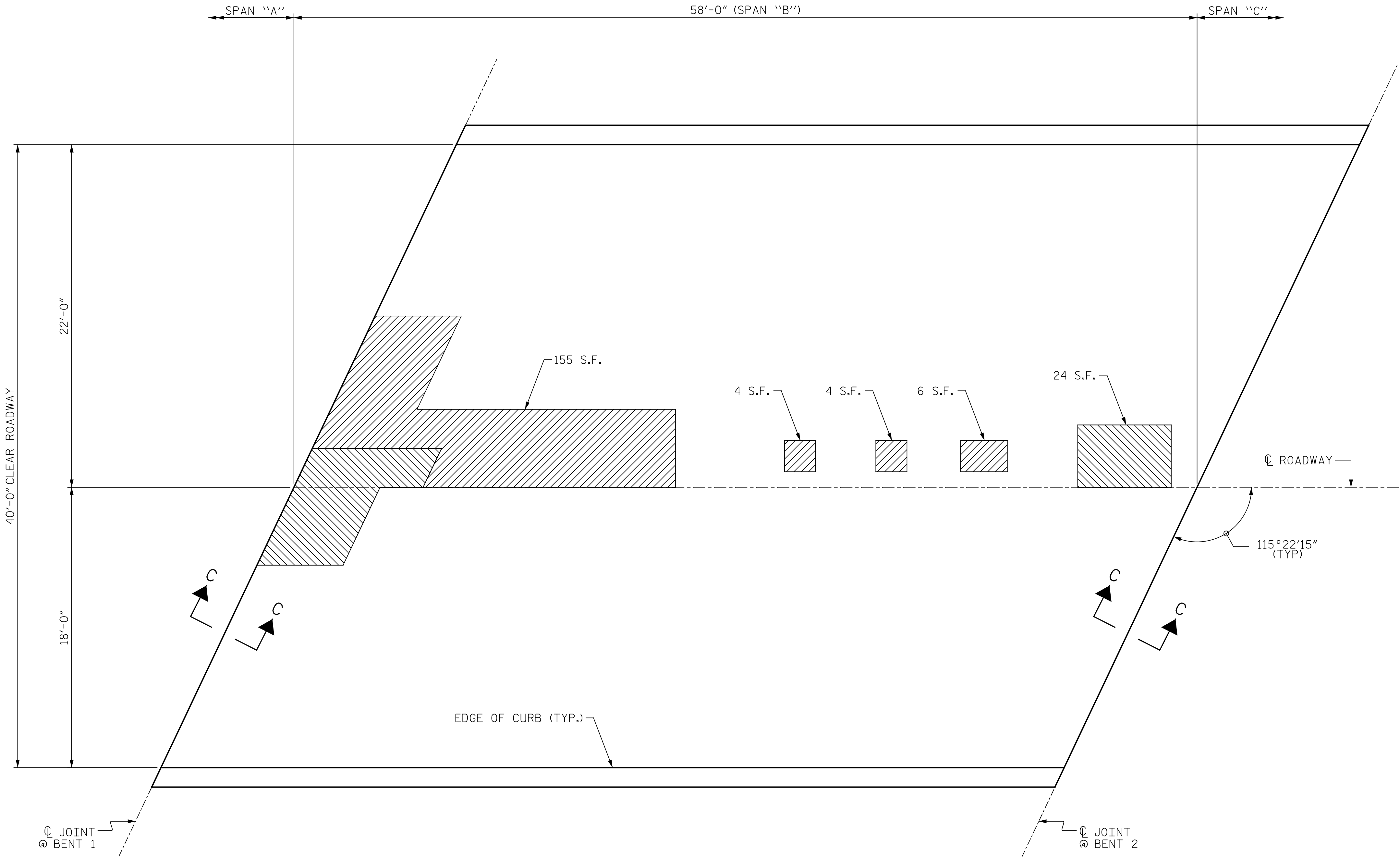
SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	258 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	258 SY	
CLASS II SURFACE PREPARATION	21.5 SY	
BRIDGE JOINT DEMOLITION	-	
GROOVING BRIDGE DECK	2134 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

PRIOR TO PLACEMENT OF CONCRETE OVERLAY OVER THE CONTINUOUS DECK SPANS, THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE FOR APPROVAL BY THE ENGINEER.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "B"
(SEE SHEET NO. S-77 FOR SECTION C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

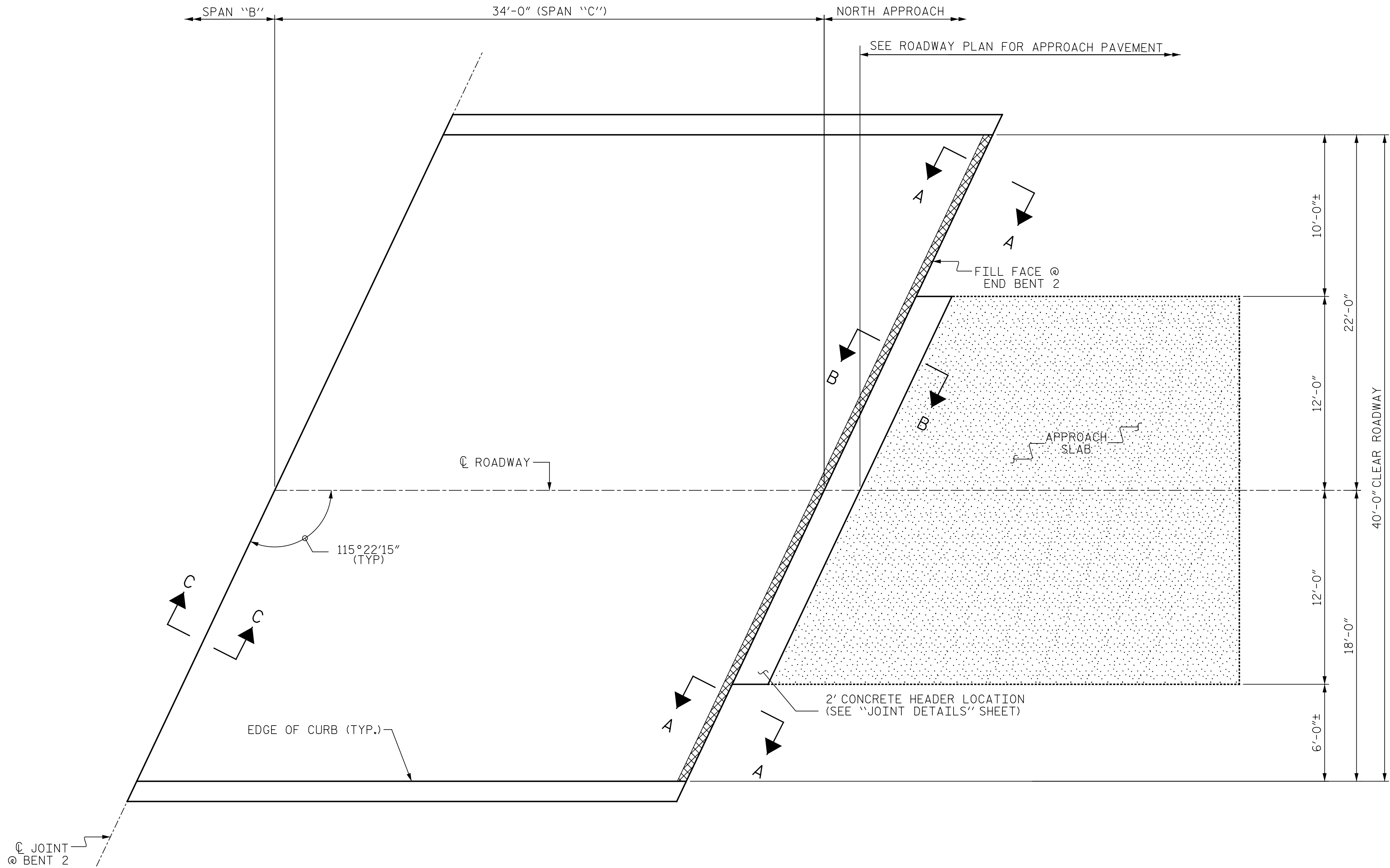
SURFACE PREPARATION
SPAN "B"

REVISIONS									SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:				S-76	
1			3						TOTAL SHEETS	
2			4						142	

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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SUMMARY OF QUANTITIES FOR SPAN 'C'		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	158 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	152 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	22.2 SF	
GROOVING BRIDGE DECK	1228 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

PRIOR TO PLACEMENT OF CONCRETE OVERLAY OVER THE CONTINUOUS DECK SPANS, THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE FOR APPROVAL BY THE ENGINEER.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD SCOPING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN 'C'

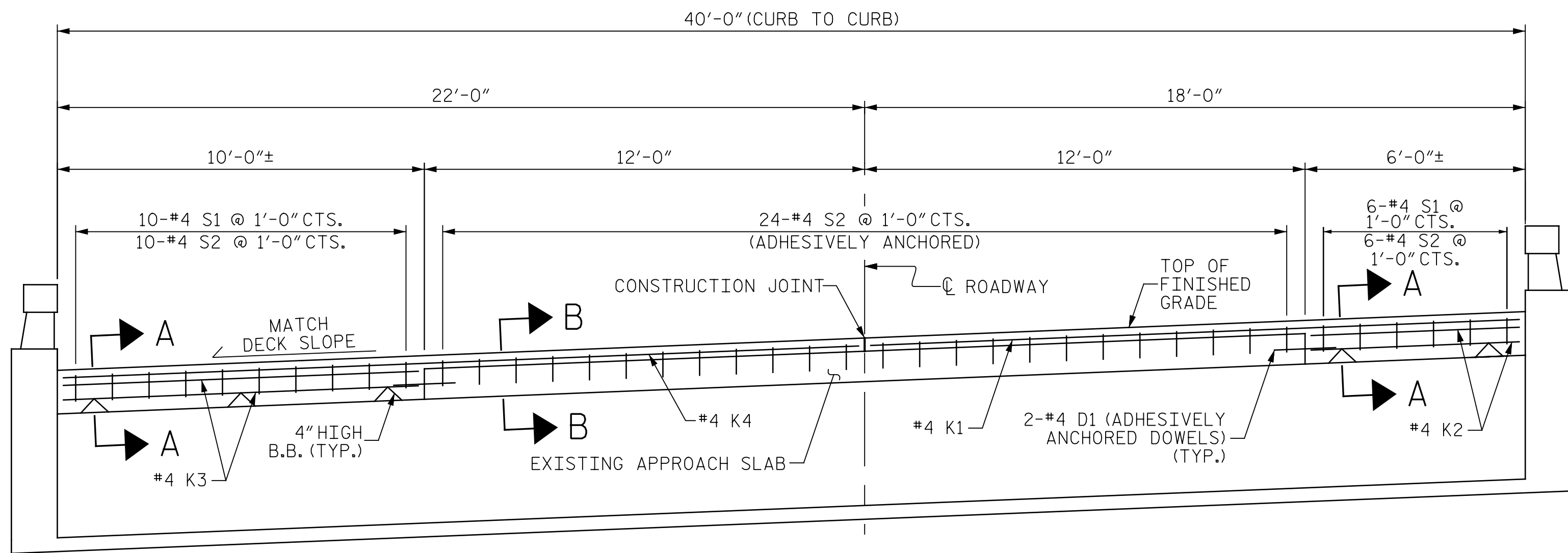
REVISIONS						SHEET NO. S-77
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

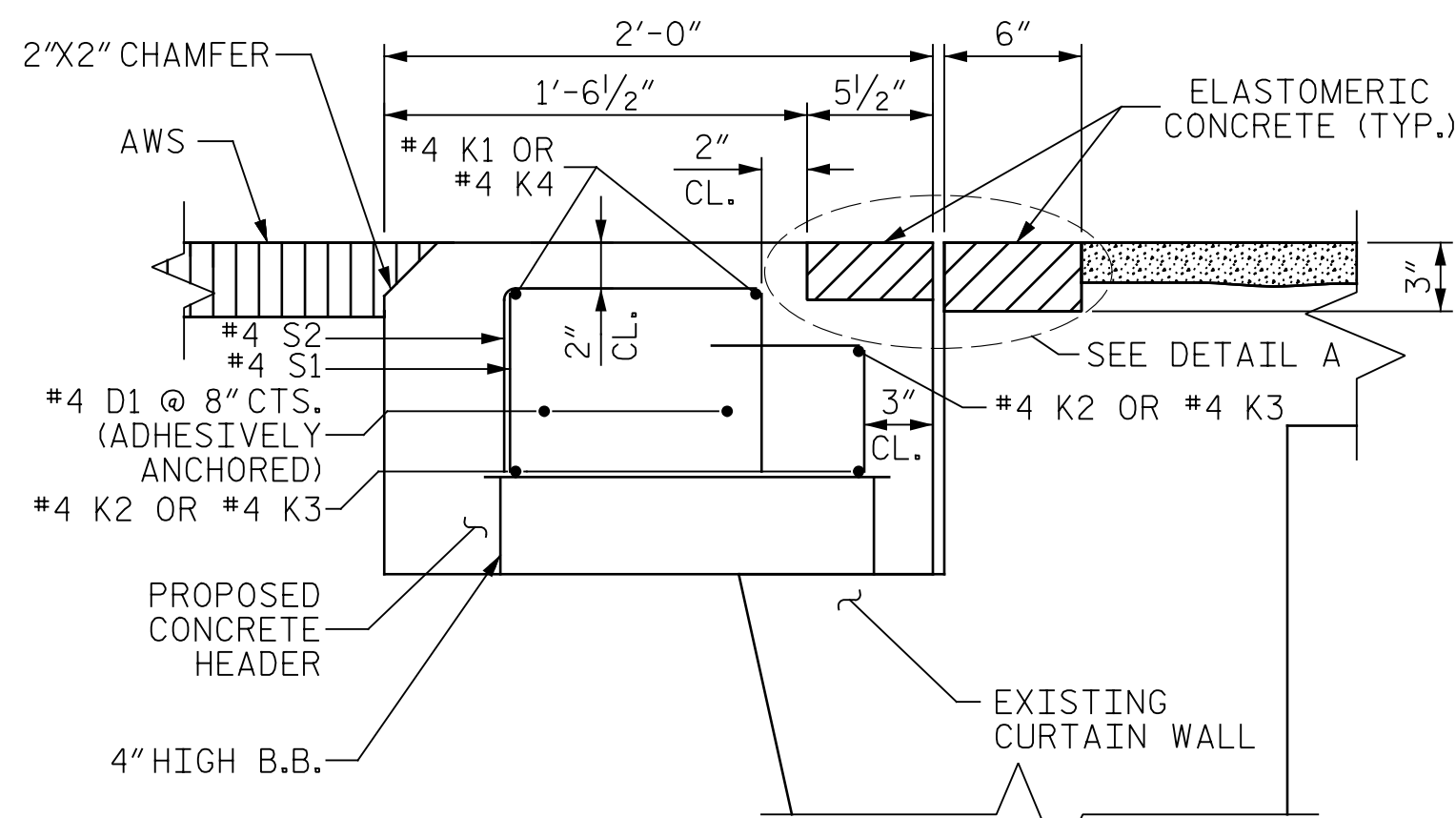
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

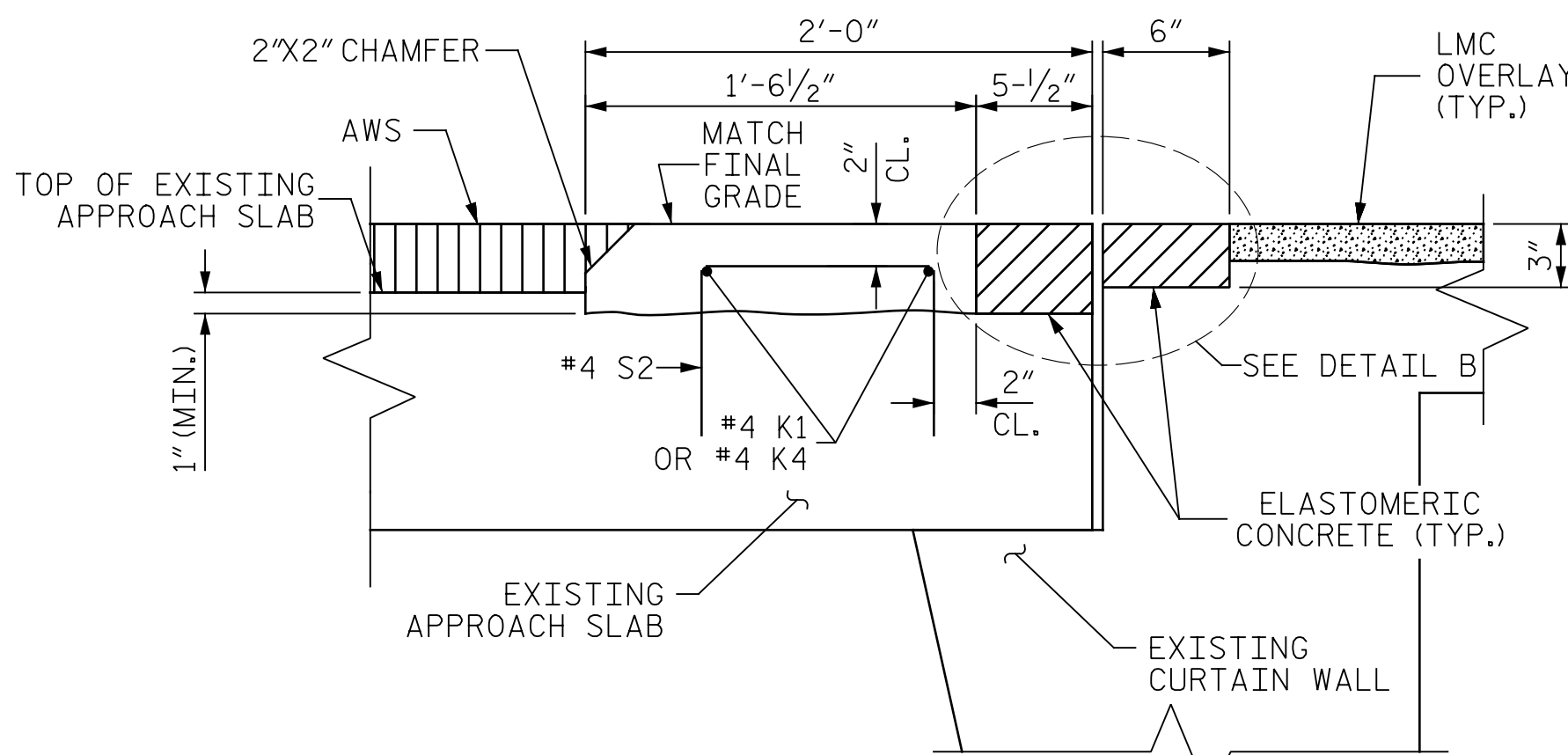
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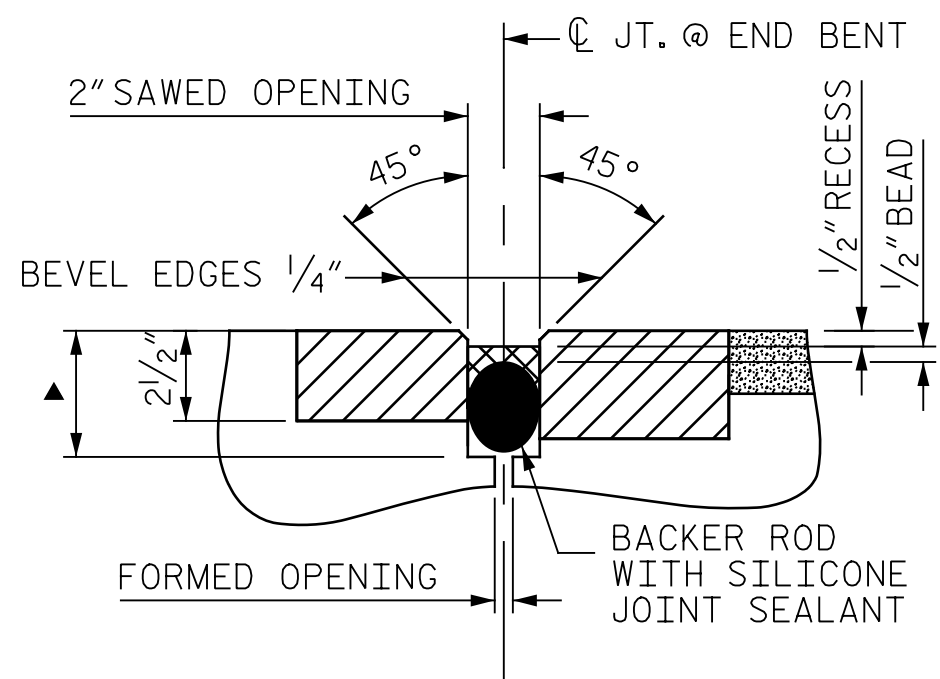
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

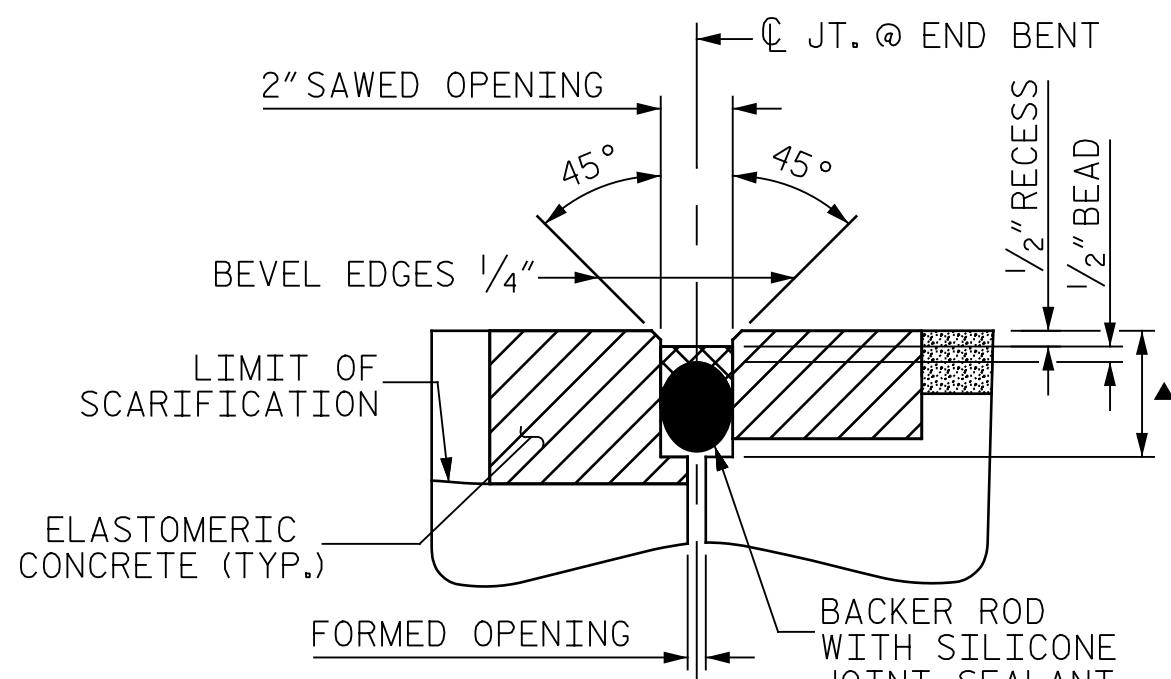


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

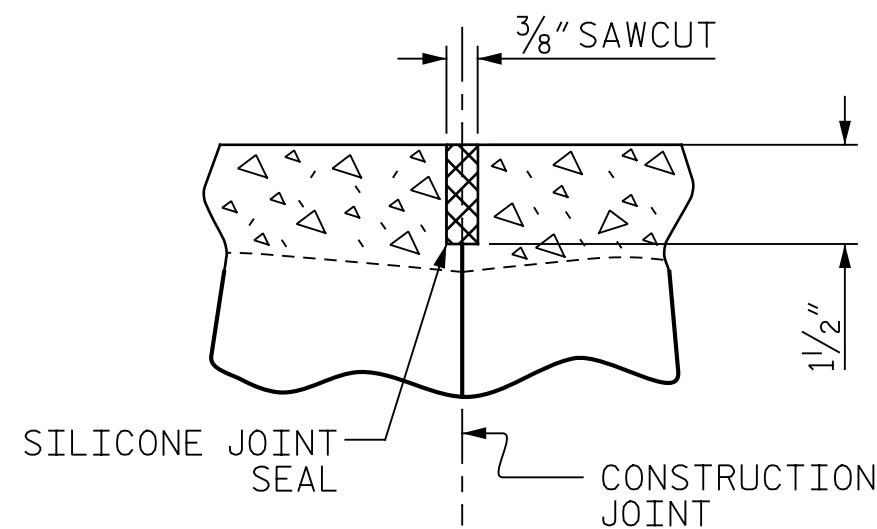


DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)



DETAIL C
(PROPOSED JOINT WITH SAWED DIMENSIONS)

NOTES

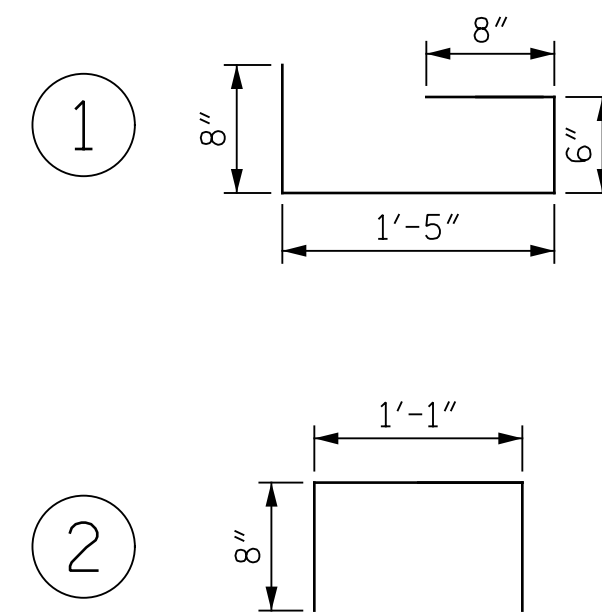
THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

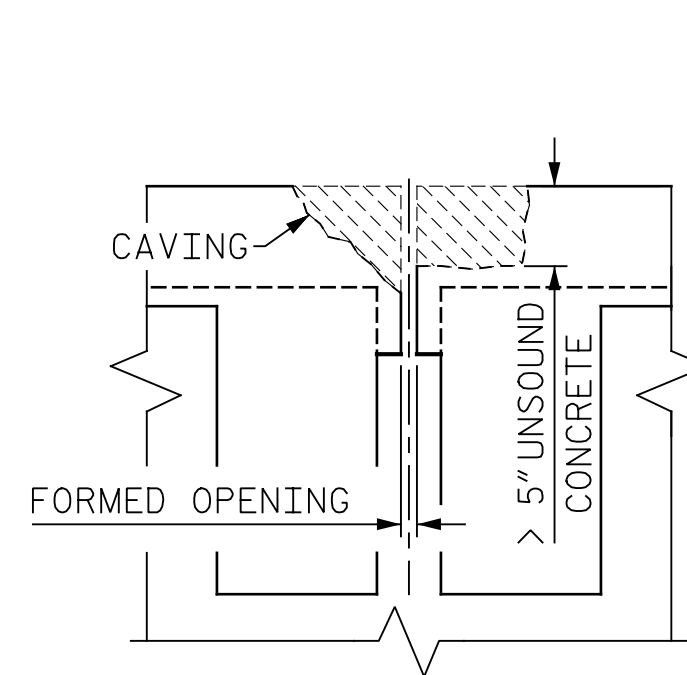
BAR TYPES



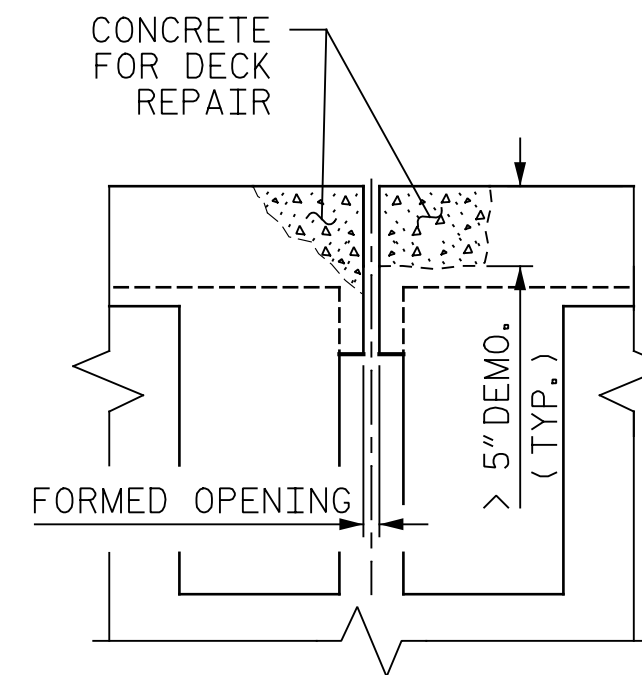
ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	2	#4	STR	19'-6"	26
K2	3	#4	STR	6'-2"	13
K3	3	#4	STR	10'-9"	22
K4	2	#4	STR	24'-0"	32
S1	16	#4	1	3'-3"	35
S2	40	#4	2	2'-5"	65
REINFORCING STEEL					197 LBS
CLASS AA CONCRETE					2.0 CY
ELASTOMERIC CONCRETE					11.3 CF



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



REPAIRED JOINT

NOTE:

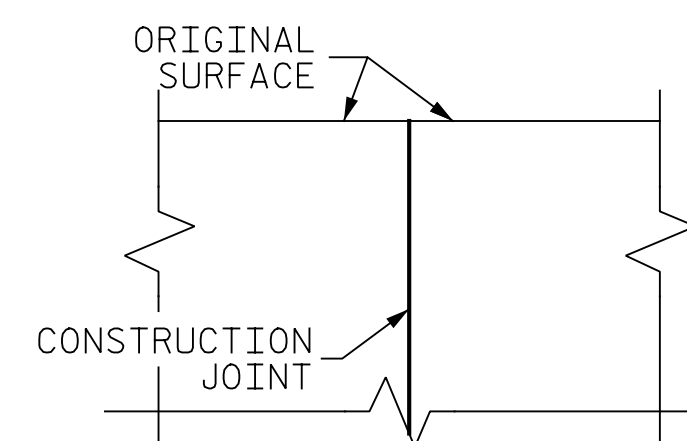
RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVER SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

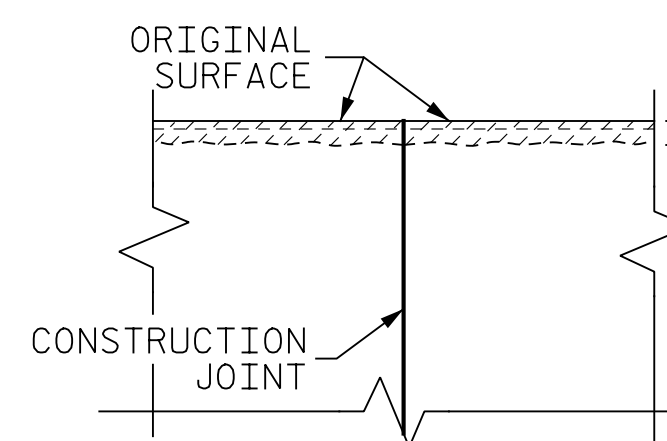
DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

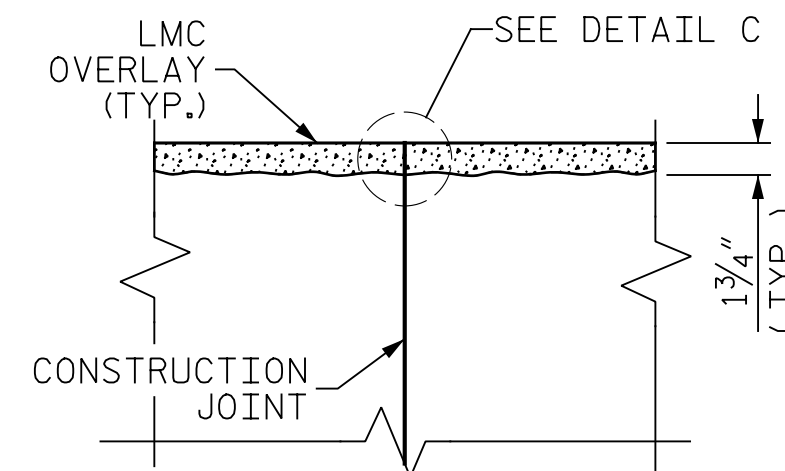
CONCRETE FOR DECK REPAIR DETAIL (FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)



SECTION C-C
(EXISTING)



SECTION C-C
(MINIMUM EXISTING
JOINT DEMOLITION)

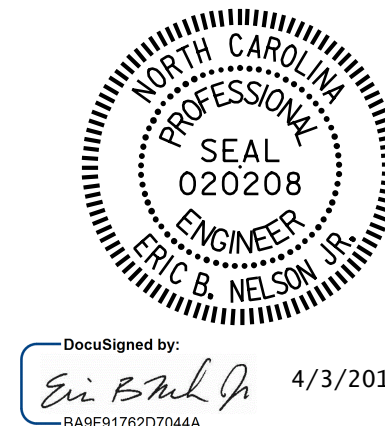


SECTION C-C
(PROPOSED)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS



DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

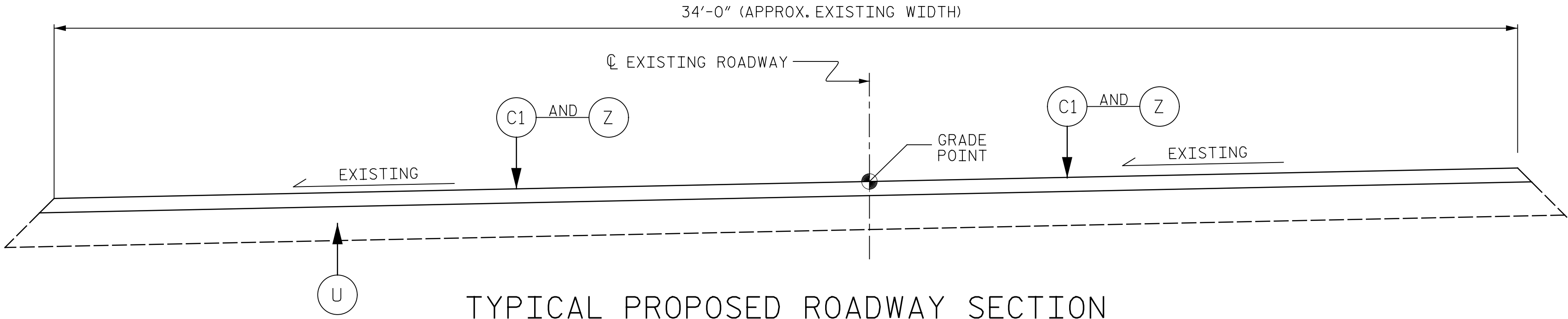
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-78
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

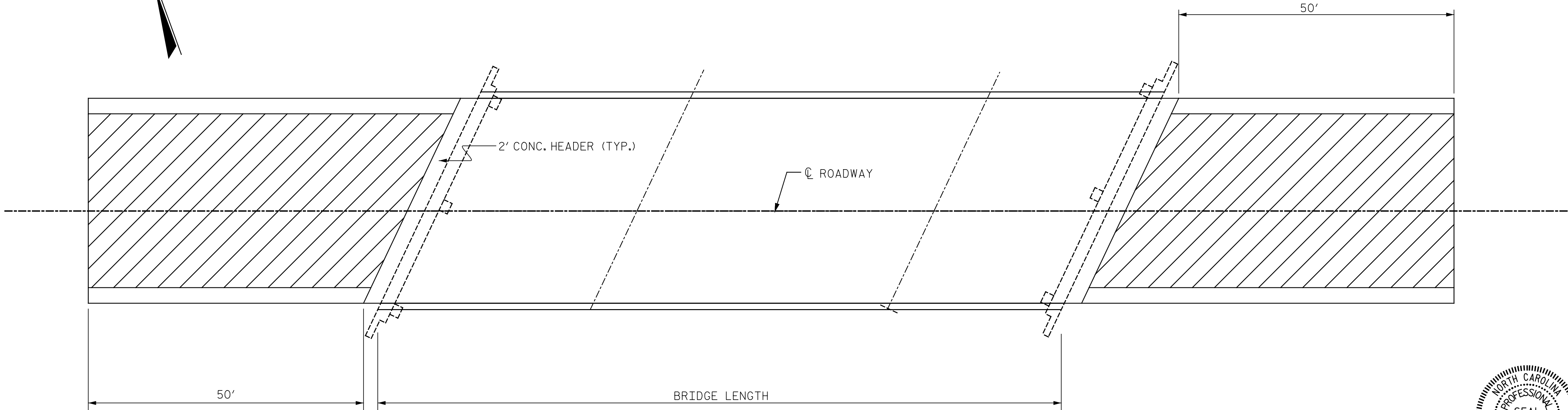
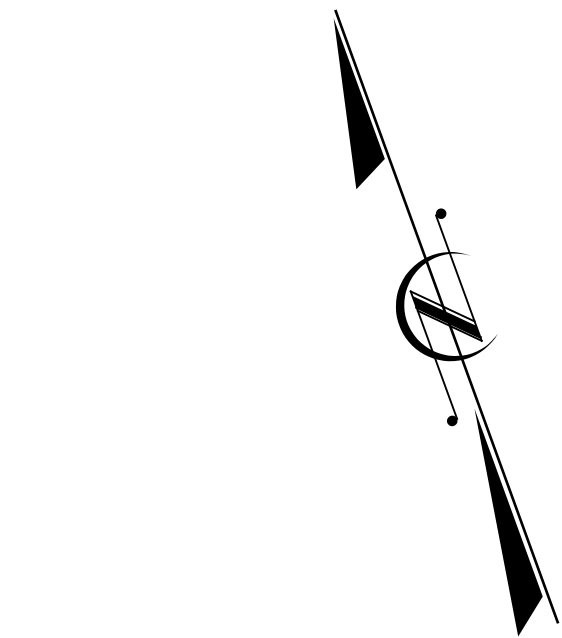
PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	438 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	37 TONS	
ASPHALT BINDER FOR PLANT MIX	2.5 TONS	



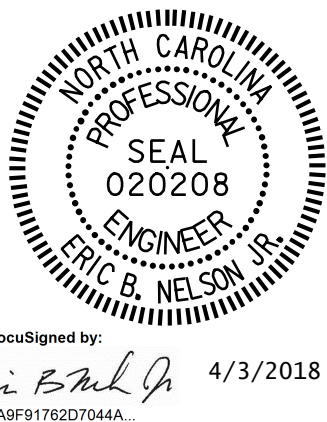
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 96



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH MILLING
AND TYPICAL ROADWAY
SECTIONS

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-79
2			4			TOTAL SHEETS 142

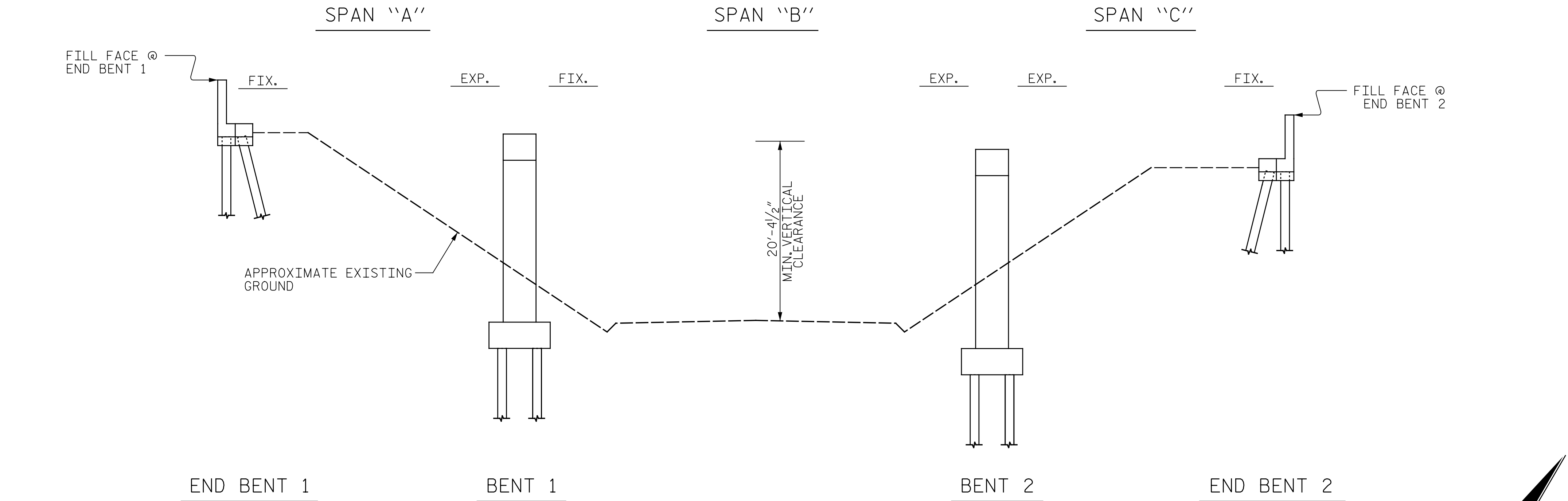
NOTE:
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/26/2016.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

- SCOPE OF WORK
- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE (LMC)
 - APPROACH SLAB WIDENING AND CONCRETE HEADER
 - REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

- CONSTRUCTION SEQUENCE
- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK SURFACE PREPARATON AND PLACE LMC OVERLAY
 - 2.) INSTALL APPROACH SLAB WIDENING AND APPROACH SLAB CONCRETE HEADER TO MATCH NEW DECK GRADE
 - 3.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
 - 4.) INSTALL ELASTOMERIC CONCRETE AND SILICONE JOINTS AT BENTS AND END BENTS.
 - 5.) GROOVE LMC.

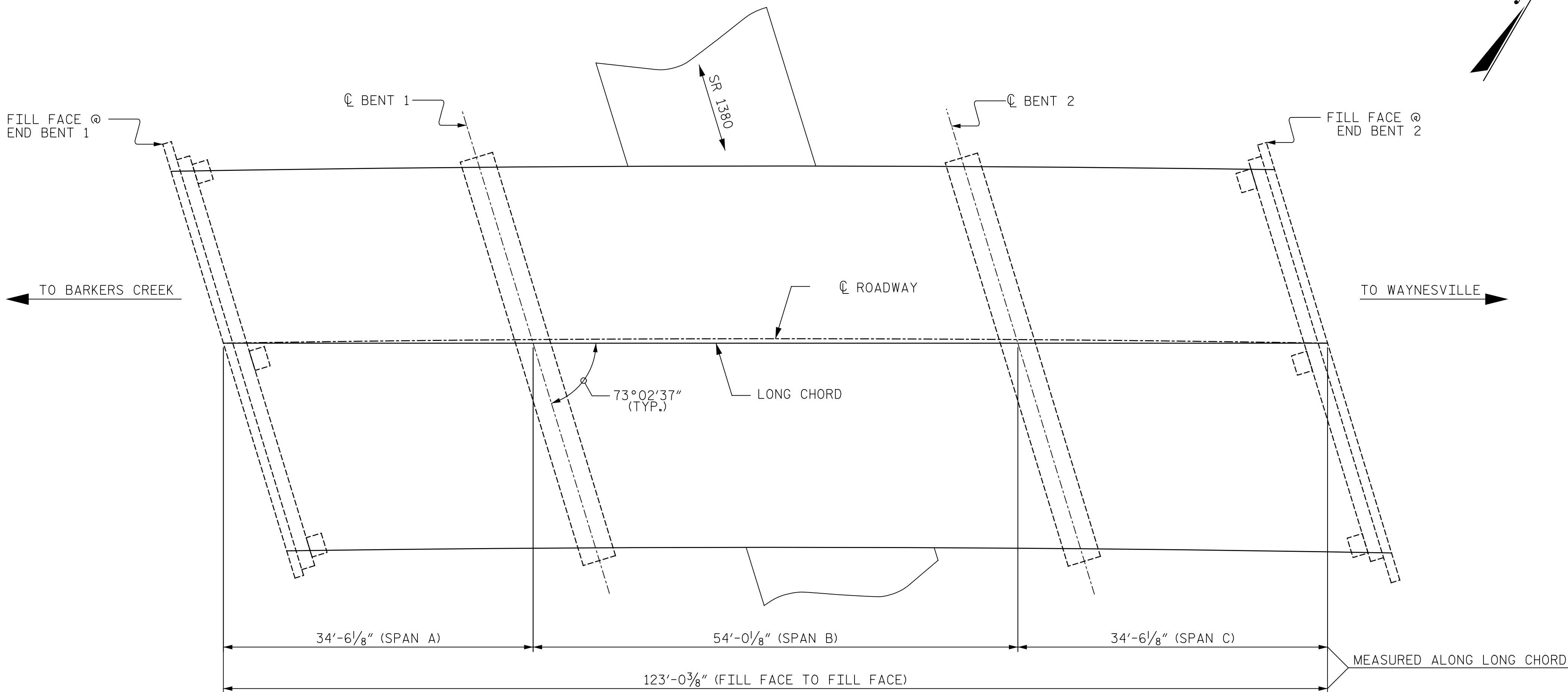
+

+



SECTION ALONG $\text{\textcircled{C}}$ BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN

(PILES NOT SHOWN FOR CLARITY)

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED
ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



DocuSigned by:
Eric B. Nelson Jr. 4/3/2018
BAG9F917620704A...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE #100 ON US23, US74
NBL OVER SR1380

REVISIONS						SHEET NO. S-80
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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FINAL UNLESS ALL
SIGNATURES COMPLETED



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO-DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



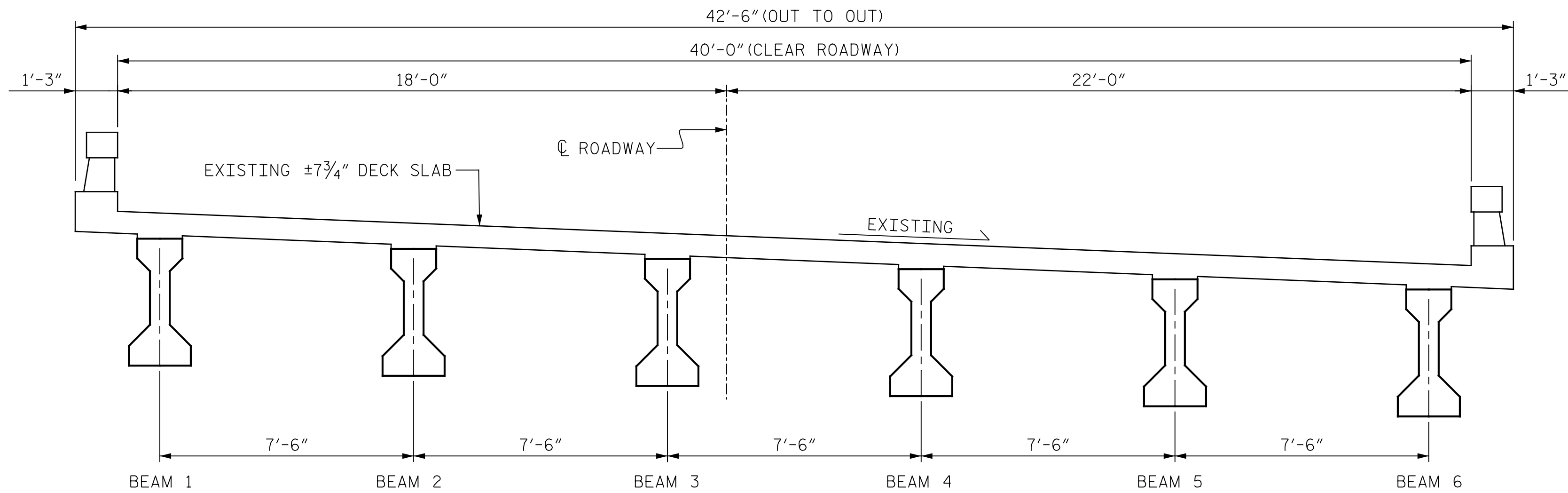
Signed by: *Eric B. Nelson, Jr.* 4/3/2018
BAPF9176207044A...

PLANS PREPARED BY:
 Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised** NC Lic. No. F-0270

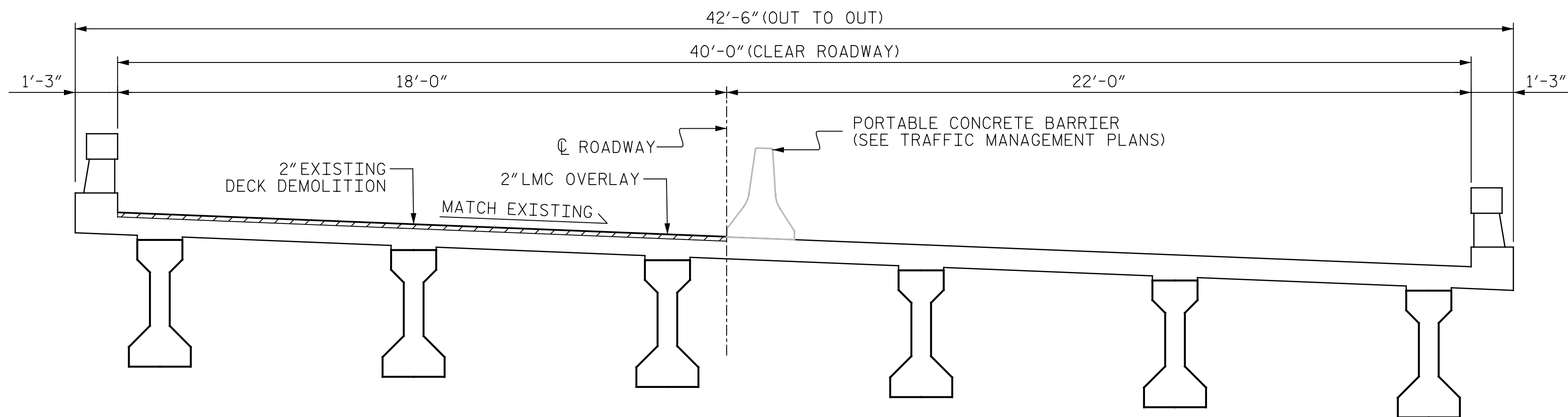
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-81		
GENERAL DRAWING BRIDGE #100 ON US23, US74 NBL OVER SR1380						TOTAL SHEETS 142		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

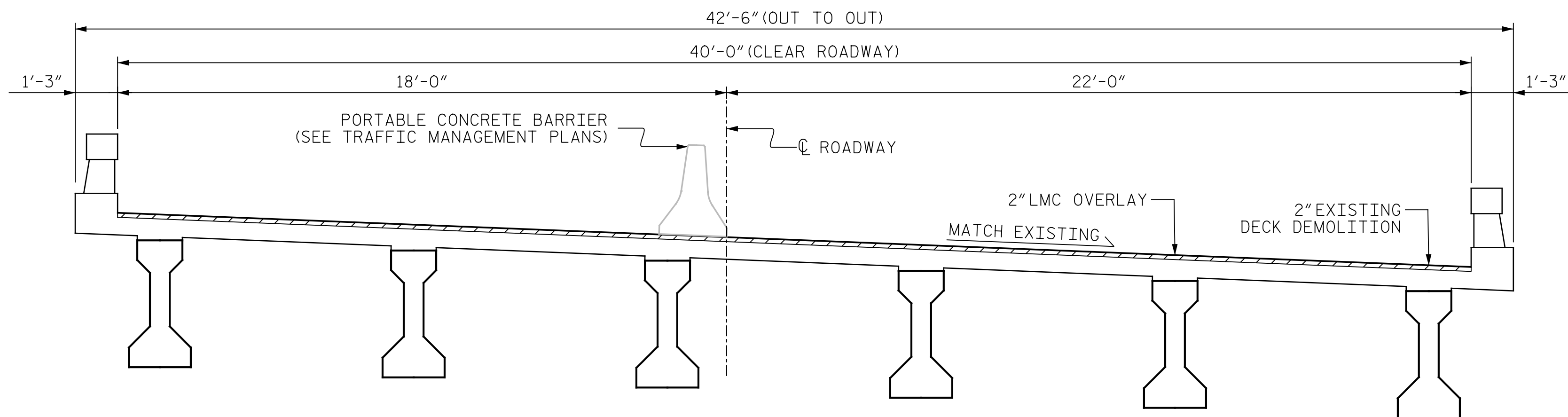
DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



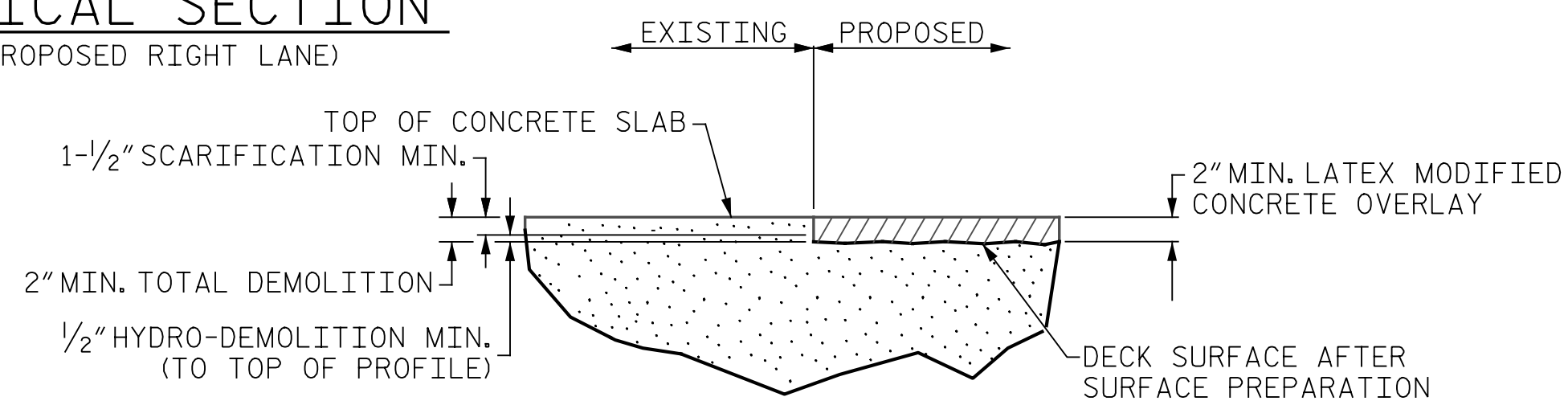
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED LEFT LANE)



TYPICAL SECTION
(PROPOSED RIGHT LANE)

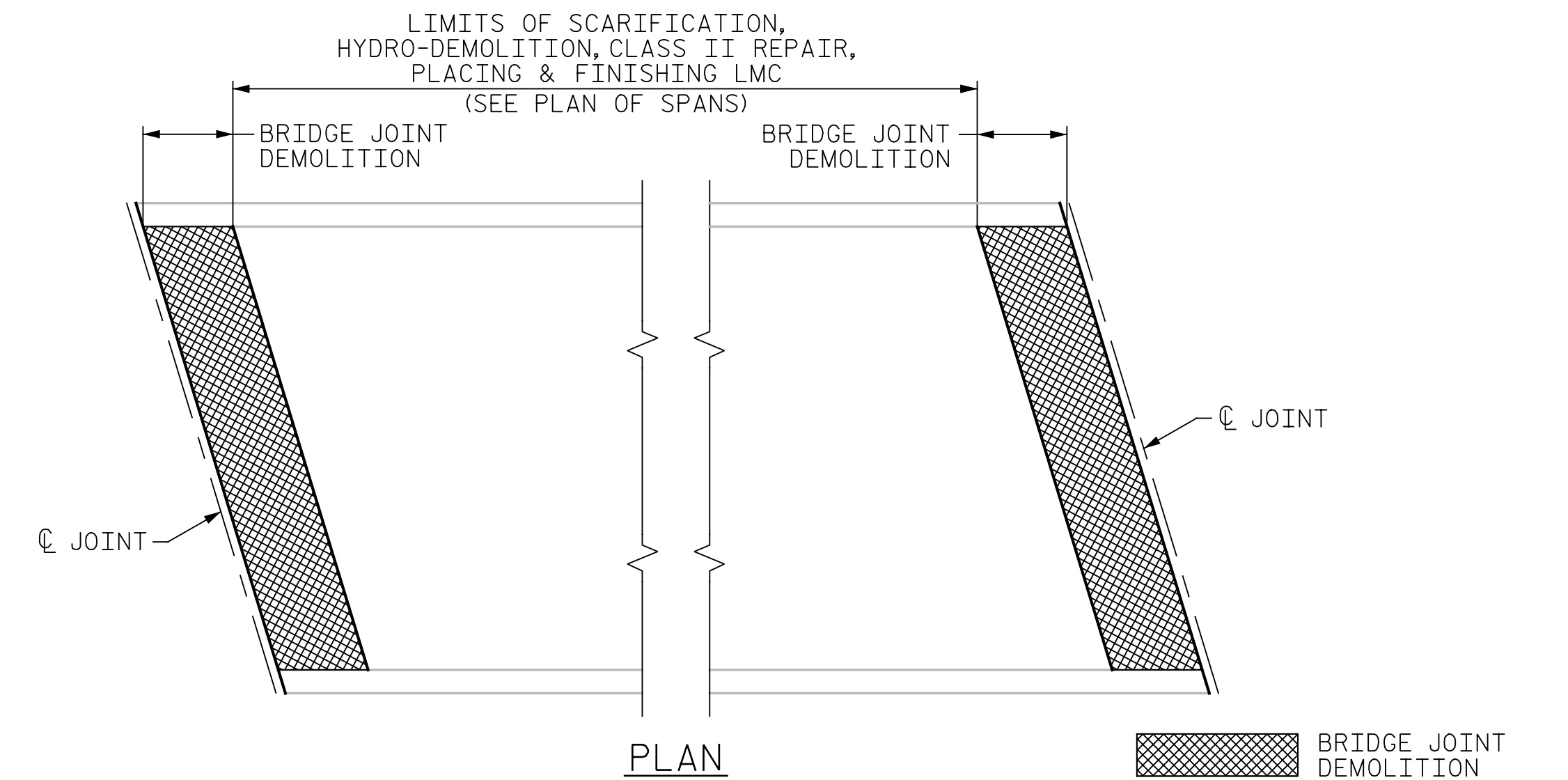


DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY

NOTE:

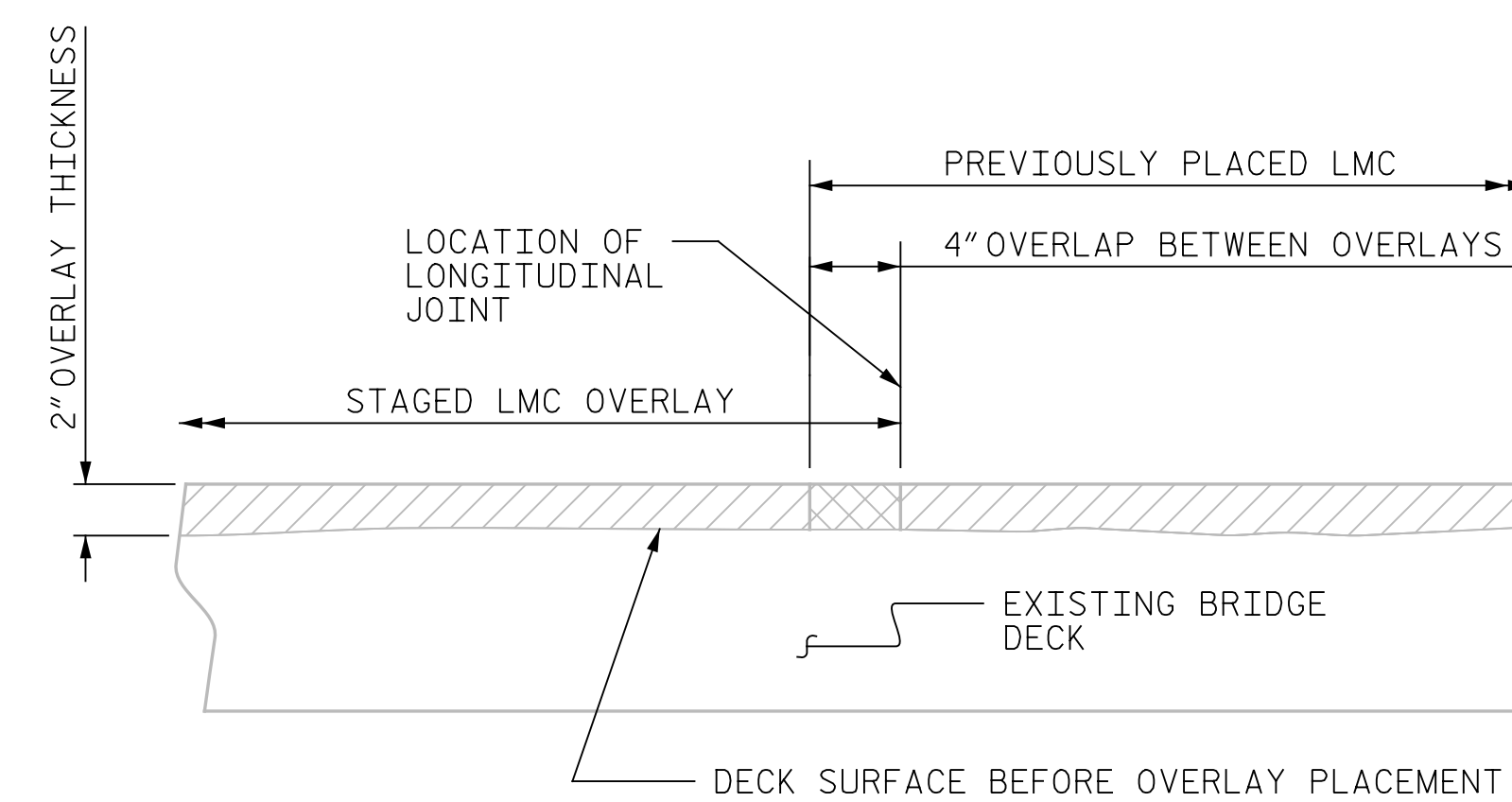
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.



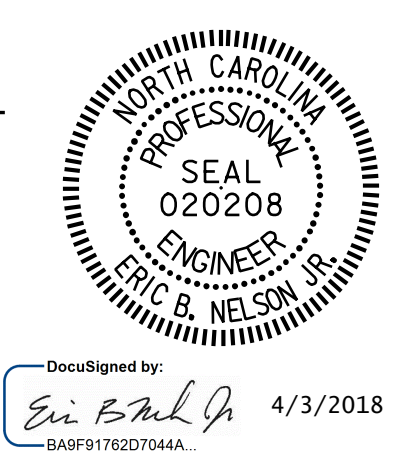
ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



STAGED LMC OVERLAY
CONSTRUCTION JOINT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION & OVERLAY DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-82					TOTAL SHEETS 142

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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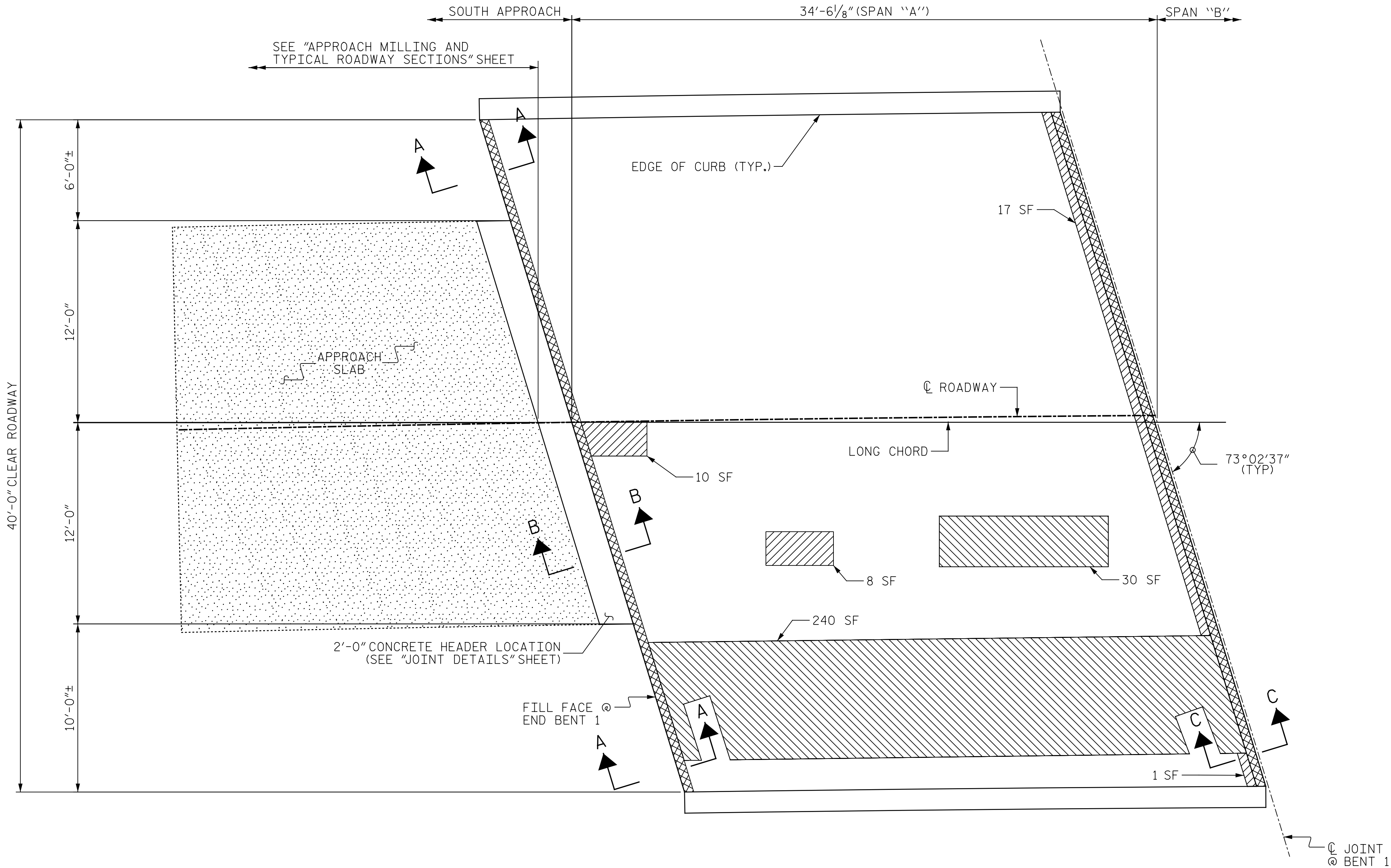
SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	160 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	155 SY	
CLASS II SURFACE PREPARATION	34.0 SY	
BRIDGE JOINT DEMOLITION	41.9 SF	
GROOVING BRIDGE DECK	1228 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "A"
(SEE SHEET NO. S-85 AND S-86 FOR SECTIONS A-A, B-B & C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



DocuSigned by:
Eric B. Nelson 4/3/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "A"					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-83					TOTAL SHEETS 142

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

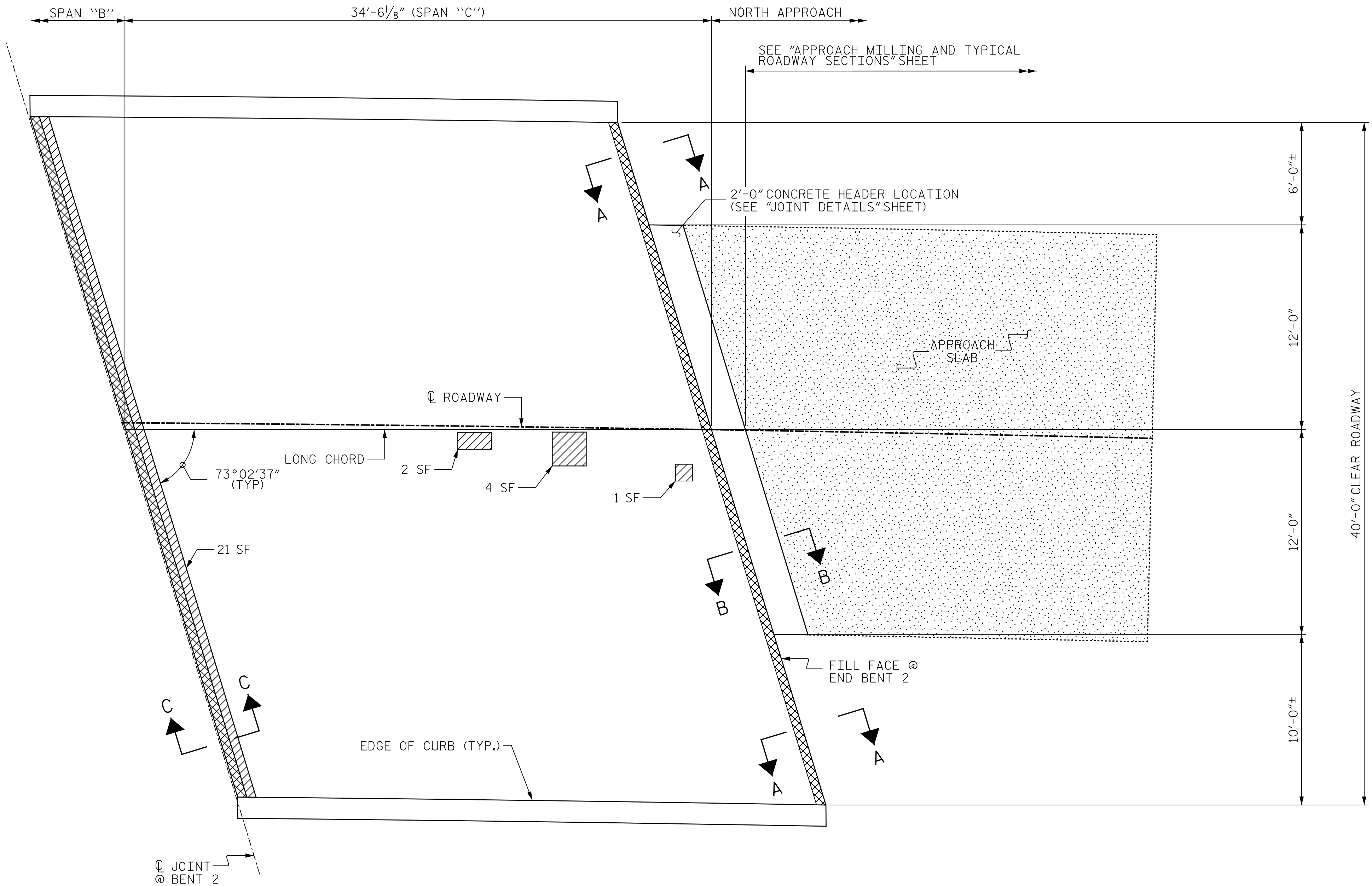
SUMMARY OF QUANTITIES FOR SPAN 'C'		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	160 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	155 SY	
CLASS II SURFACE PREPARATION	3.1 SY	
BRIDGE JOINT DEMOLITION	41.9 SF	
GROOVING BRIDGE DECK	1228 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN 'C'

(SEE SHEET NO. S-85 AND S-86 FOR SECTIONS A-A, B-B & C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

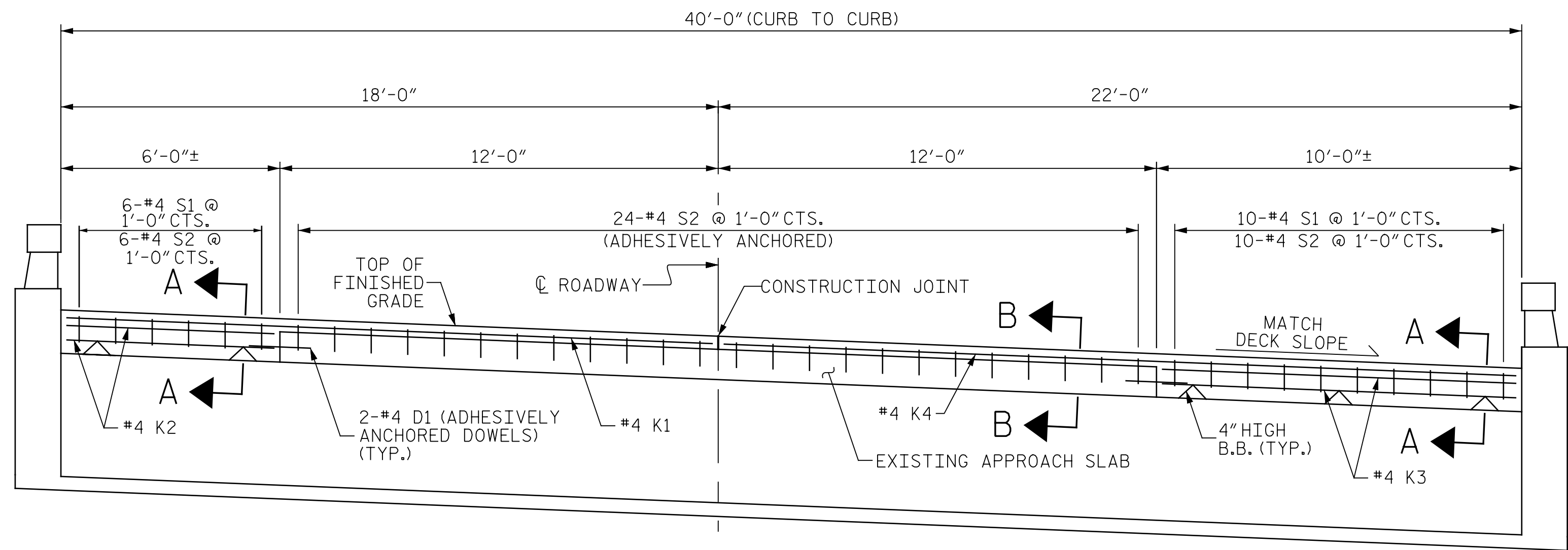
SURFACE PREPARATION
SPAN 'C'

REVISIONS						SHEET NO. S-85
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

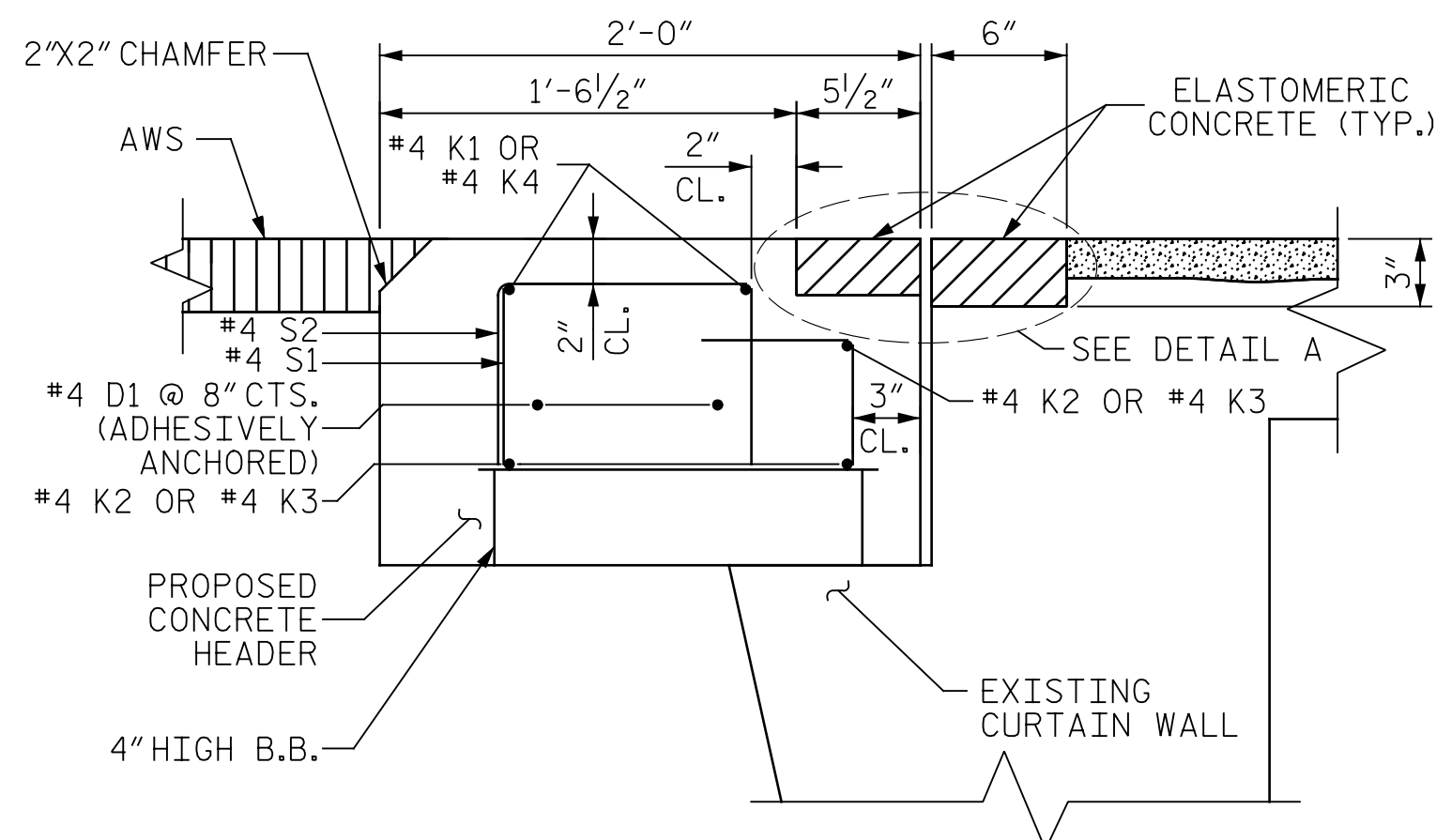
DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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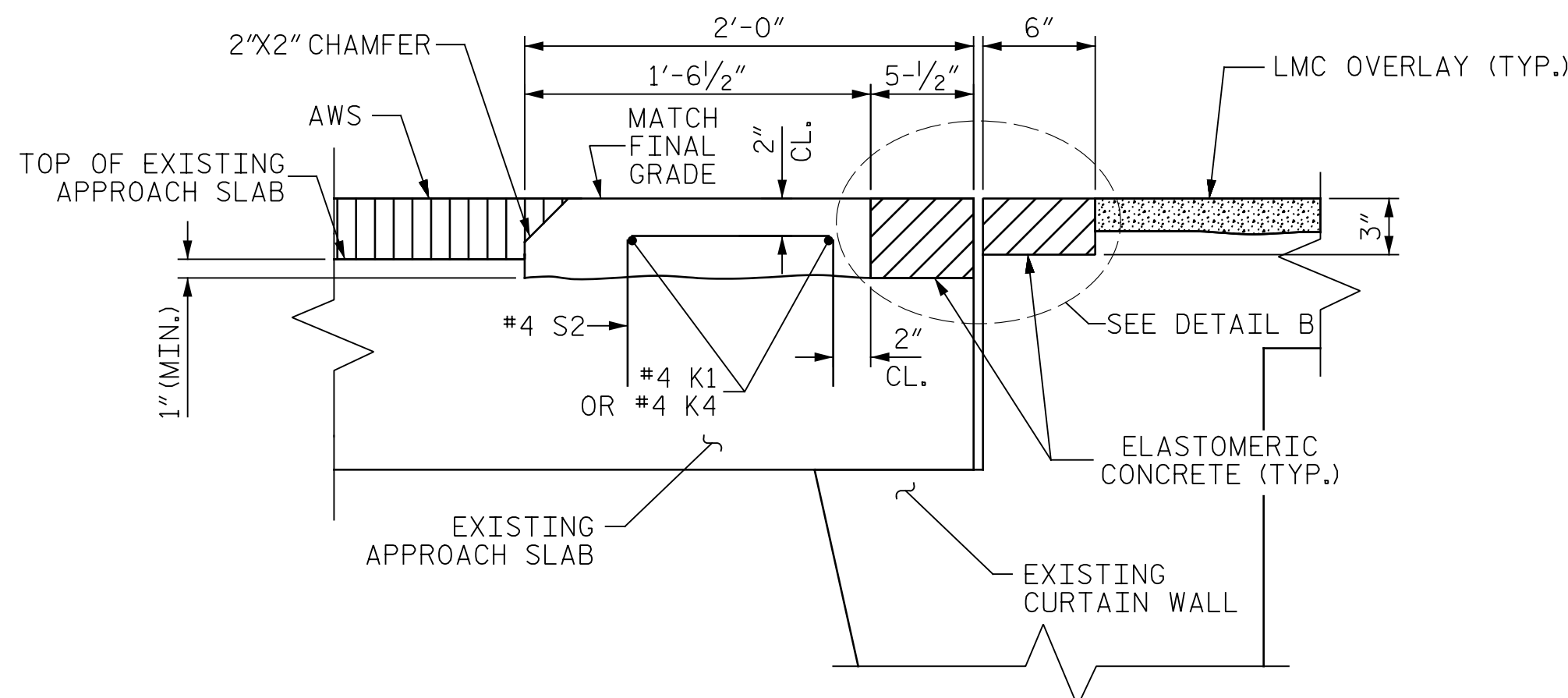
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FINAL UNLESS ALL
SIGNATURES COMPLETED



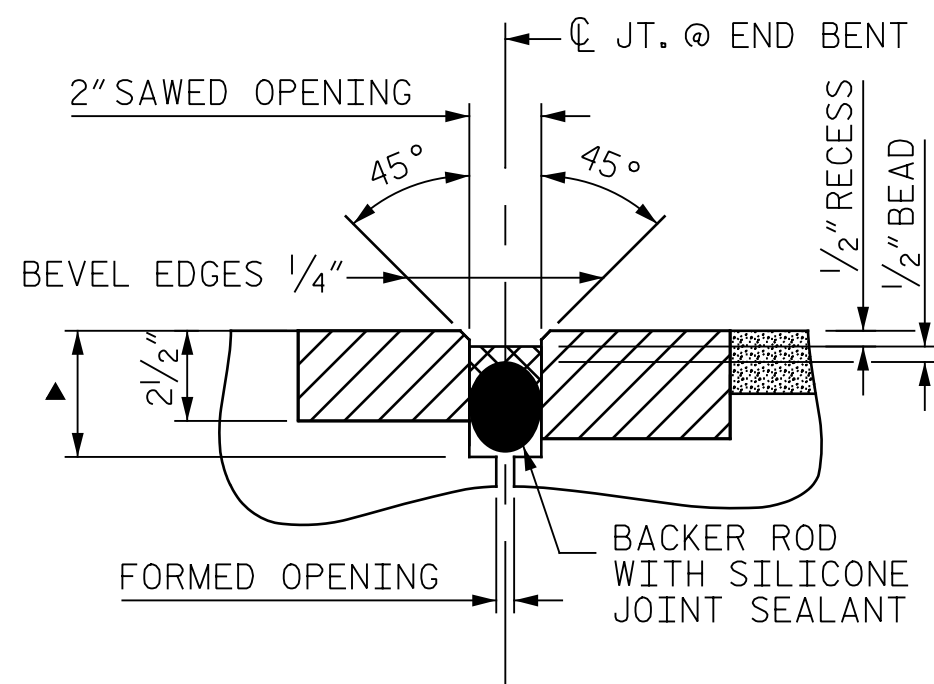
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

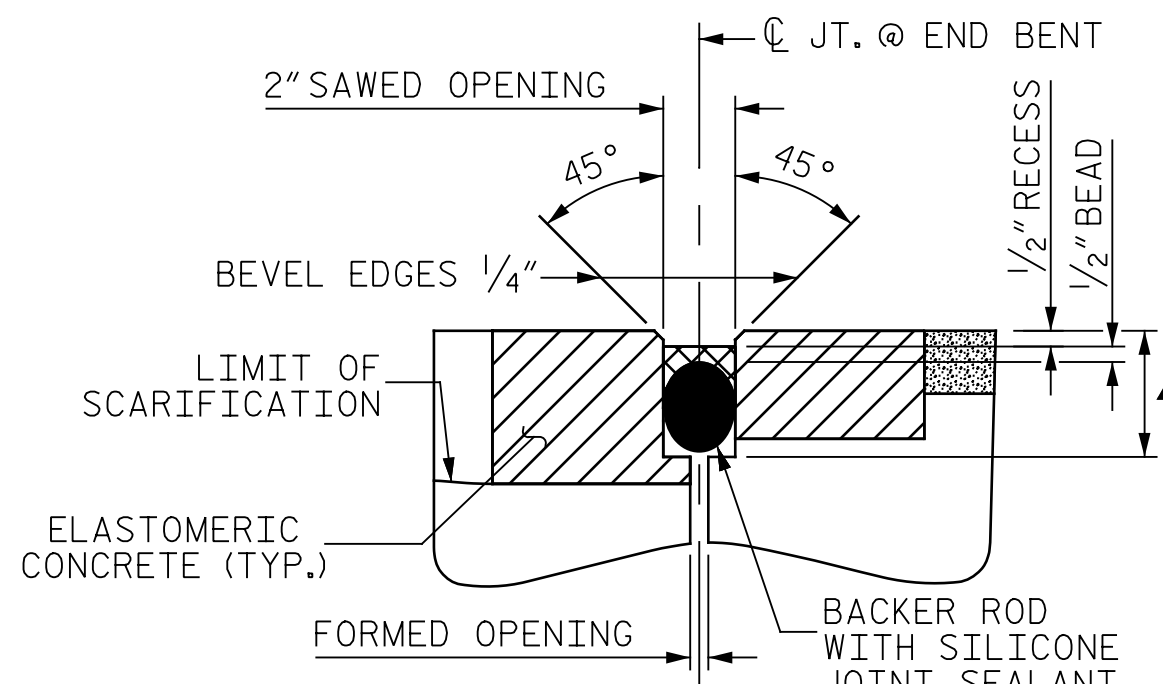


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



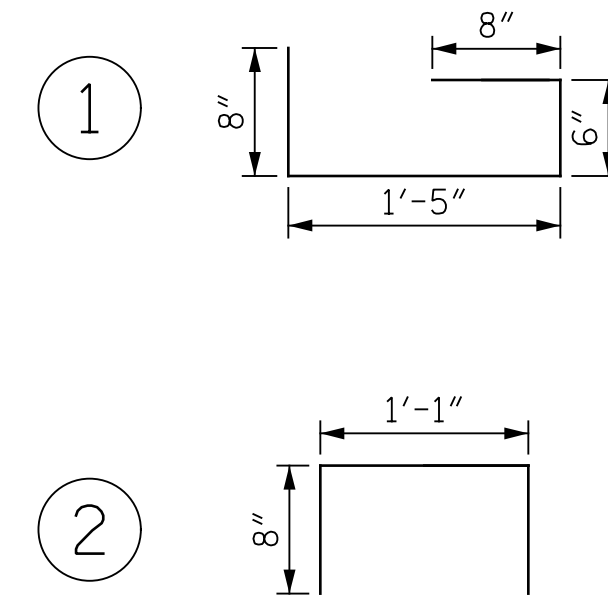
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4 LBS
K1	2	#4	STR	18'-5"	25 LBS
K2	3	#4	STR	5'-10"	12 LBS
K3	3	#4	STR	10'-0"	20 LBS
K4	2	#4	STR	22'-7"	31 LBS
S1	16	#4	1	3'-3"	35 LBS
S2	40	#4	2	2'-5"	65 LBS
REINFORCING STEEL					192 LBS
CLASS AA CONCRETE					1.9 CY
ELASTOMERIC CONCRETE					10.7 CF

NOTES

THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

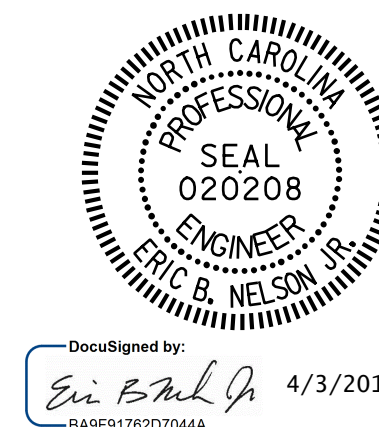
FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS



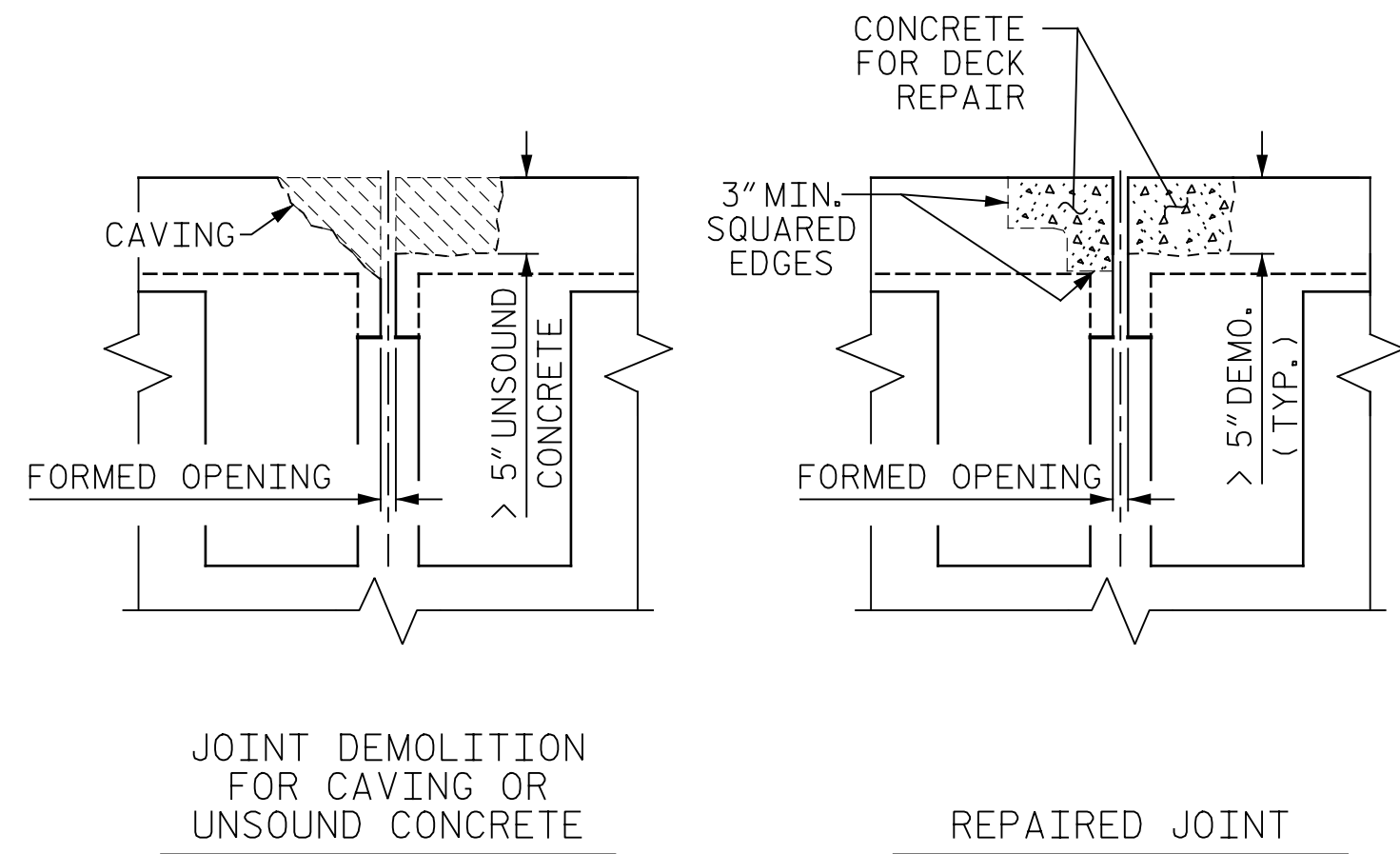
DocuSigned by:
Eric B. Nelson
046F91762D7044A
4/3/2018

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Gannett Fleming
Excellence Delivered As Promised
NC Lic. No. F-0270

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REVISIONS						SHEET NO. S-86
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



JOINT DEMOLITION FOR CAVING OR UNSOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

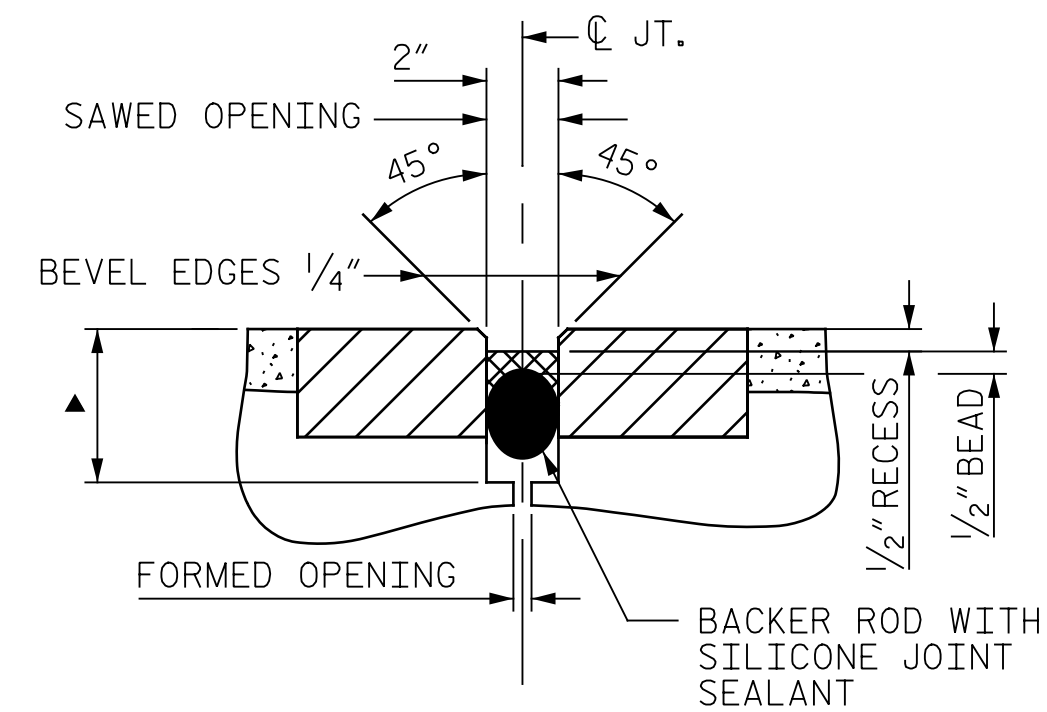
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

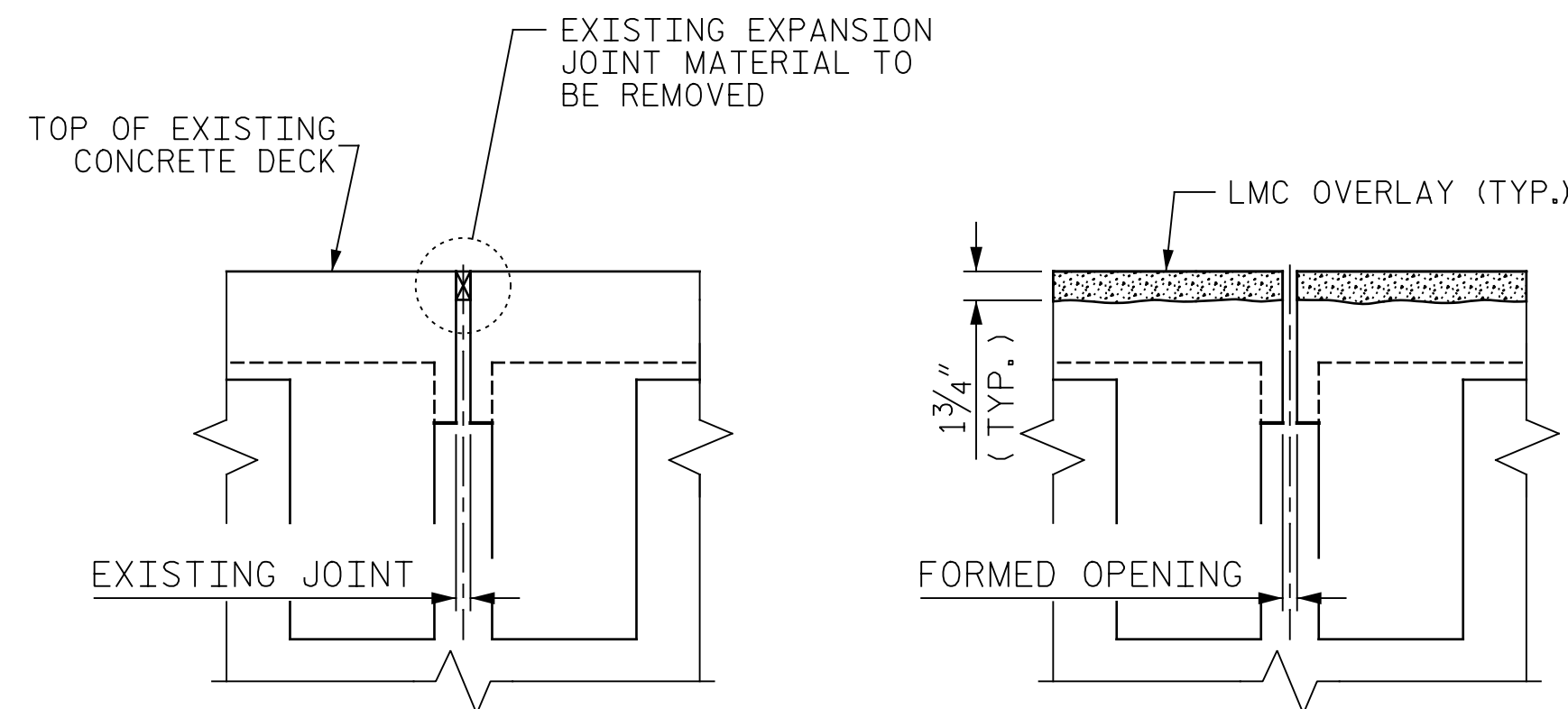
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS

DETAIL A

(PROPOSED JOINT WITH SAWED DIMENSIONS)



EXISTING

PROPOSED LMC OVERLAY

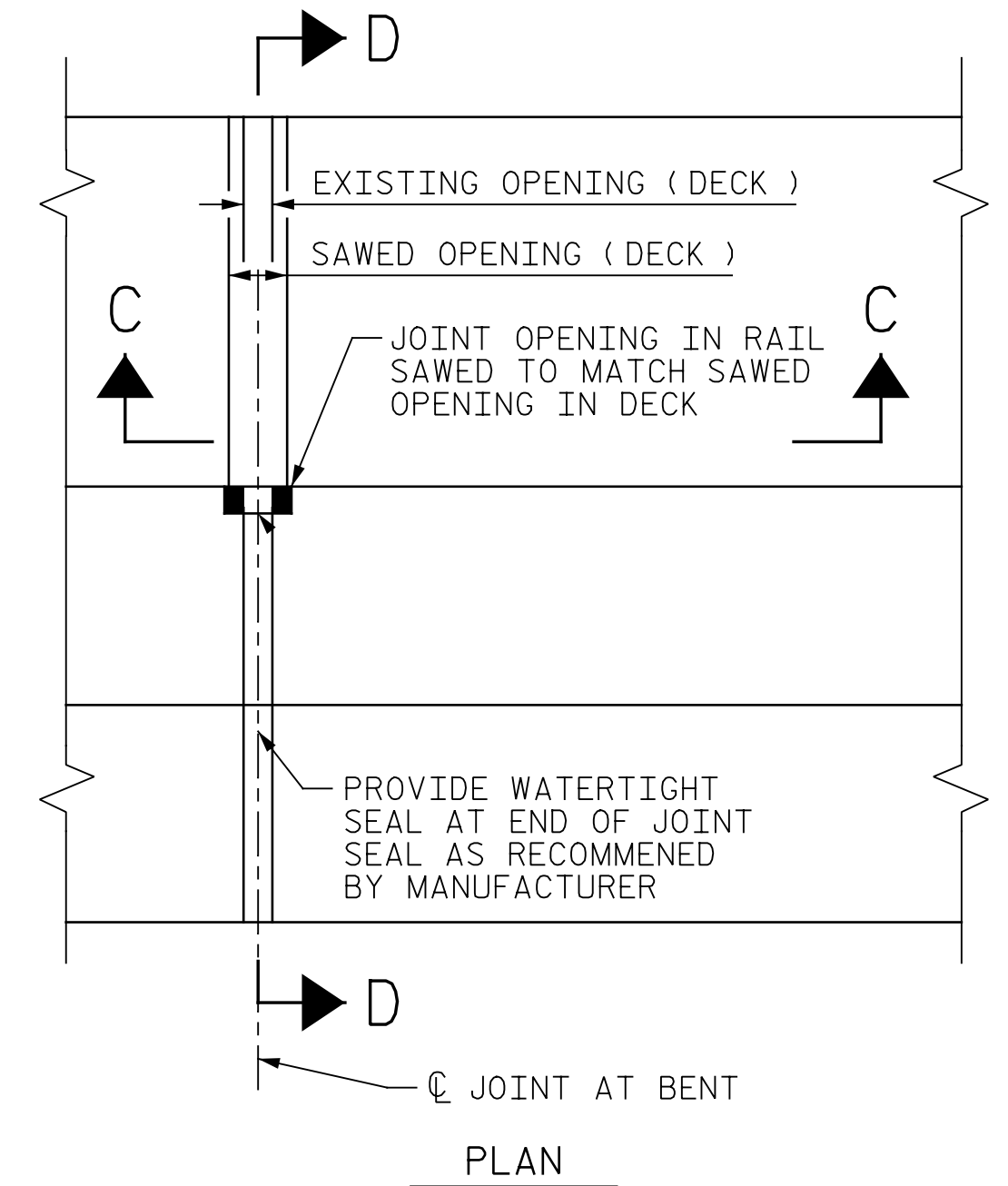
MINIMUM JOINT DEMOLITION

PROPOSED JOINT PRE-SAWED DIMENSIONS

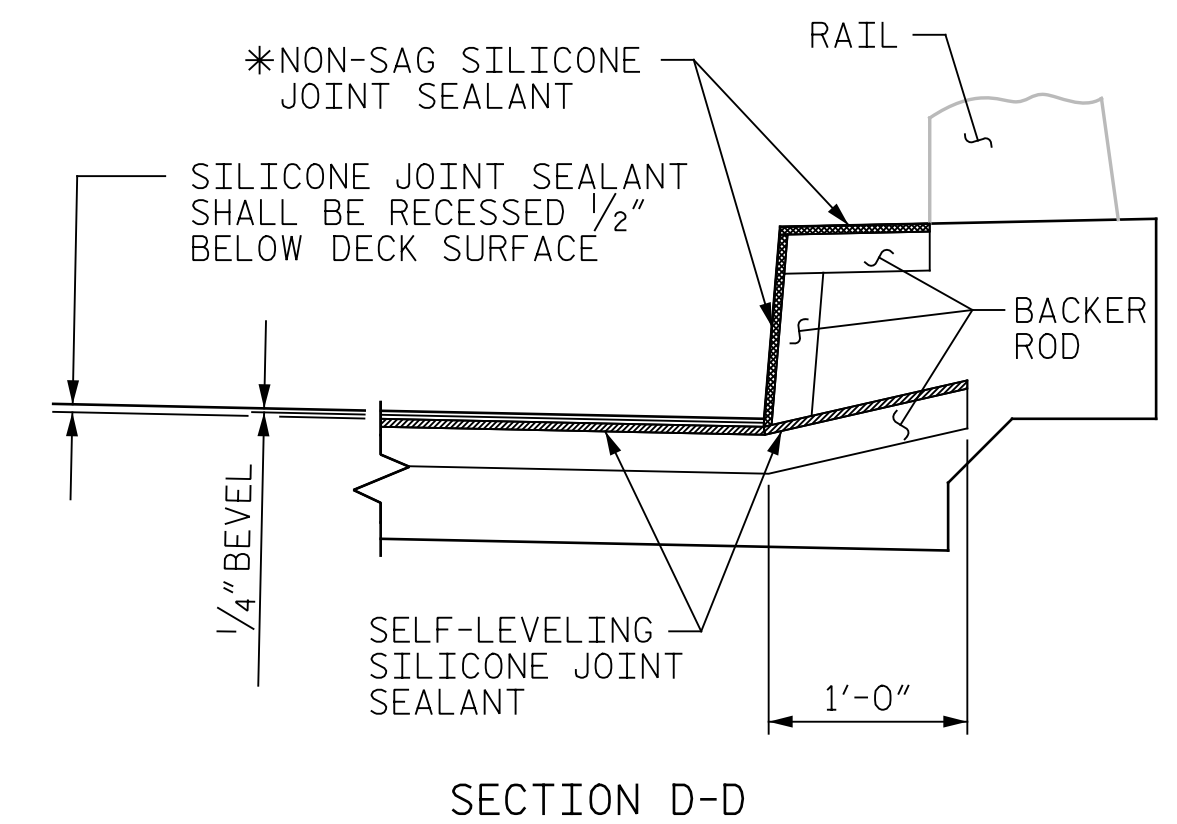
SECTION C-C

ELASTOMERIC CONCRETE	
BENT 1	10.5 CF
BENT 2	10.5 CF

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE



*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson 4/3/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

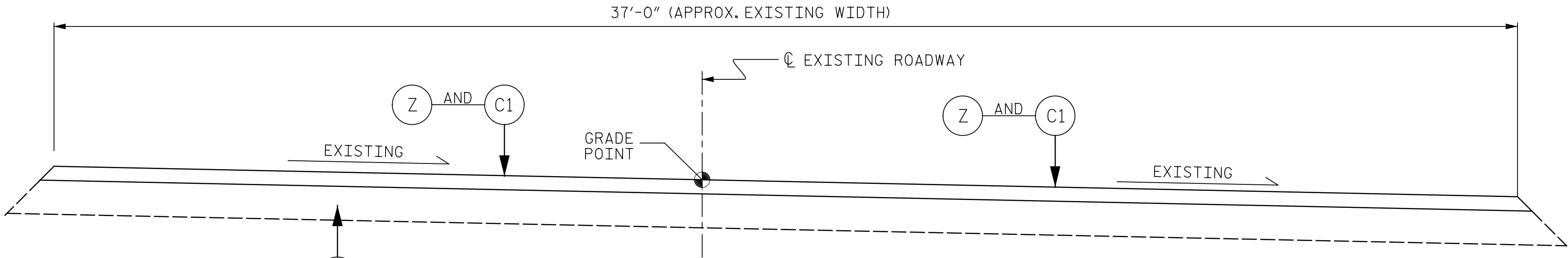
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
JOINT DETAILS						S-87	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	142	
1			3				
2			4				

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

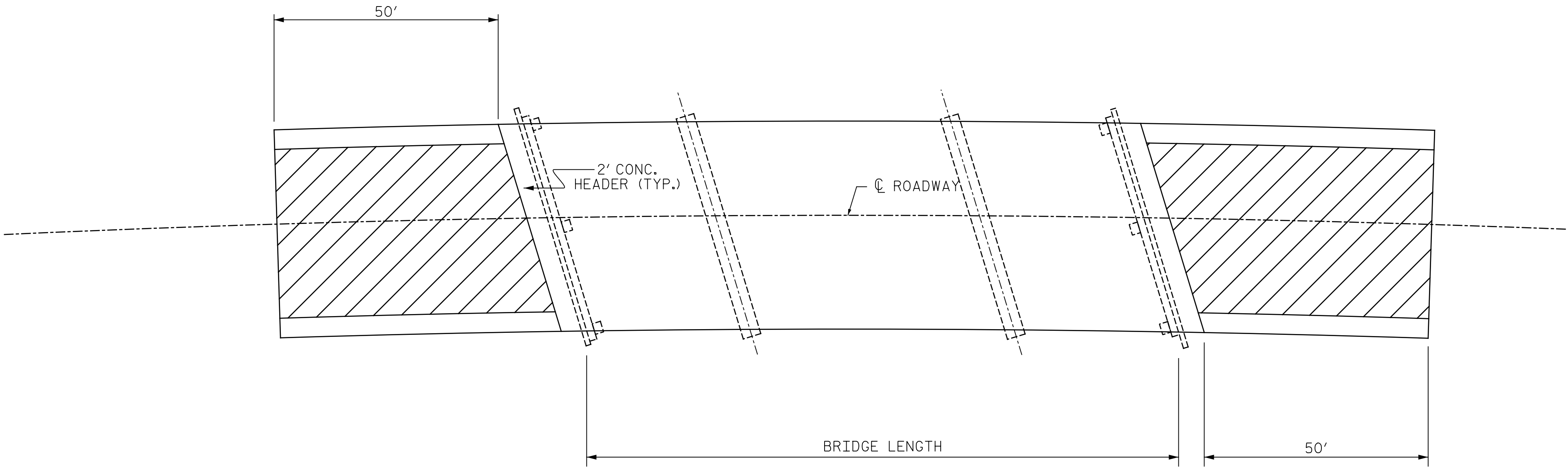
SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	459 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	39 TONS	
ASPHALT BINDER FOR PLANT MIX	2.5 TONS	



TYPICAL PROPOSED ROADWAY SECTION

NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



PLAN

INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 100



DocuSigned by:
Eric B. Nelson, Jr. 4/3/2018
B4BF91762D7044A...

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

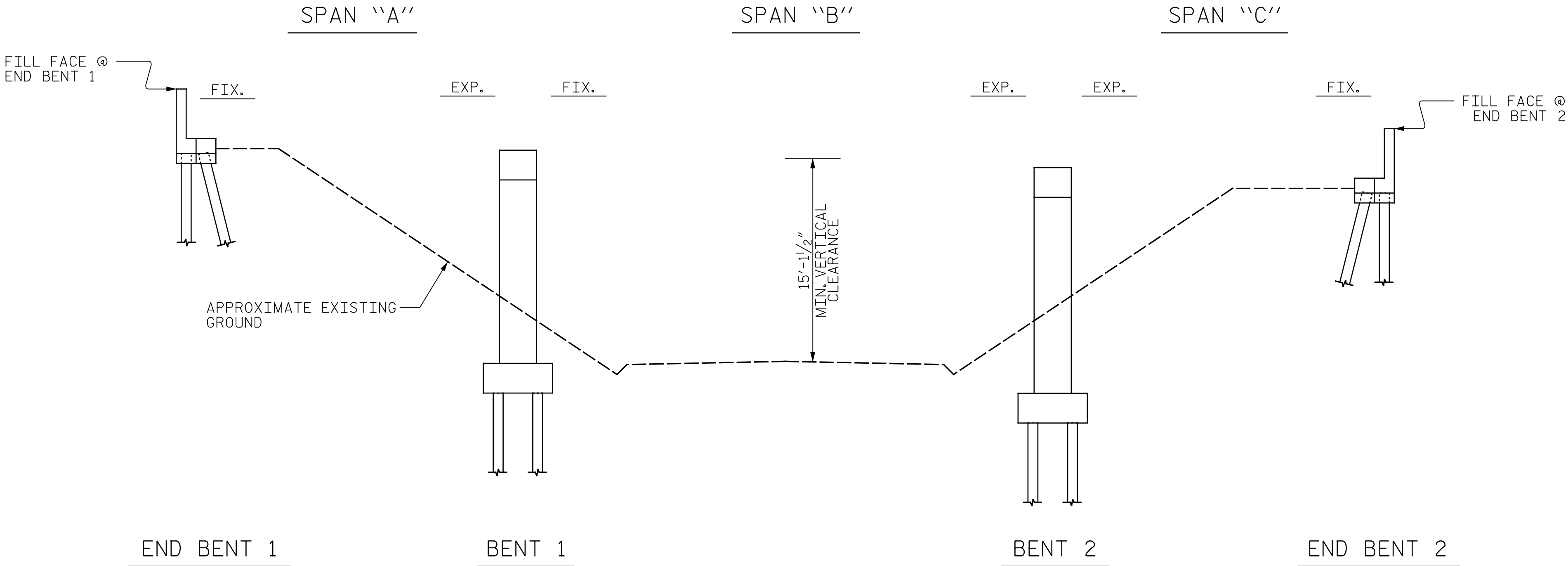
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS						S-88	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	142	
1			3				
2			4				

NOTE:
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/26/2016.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

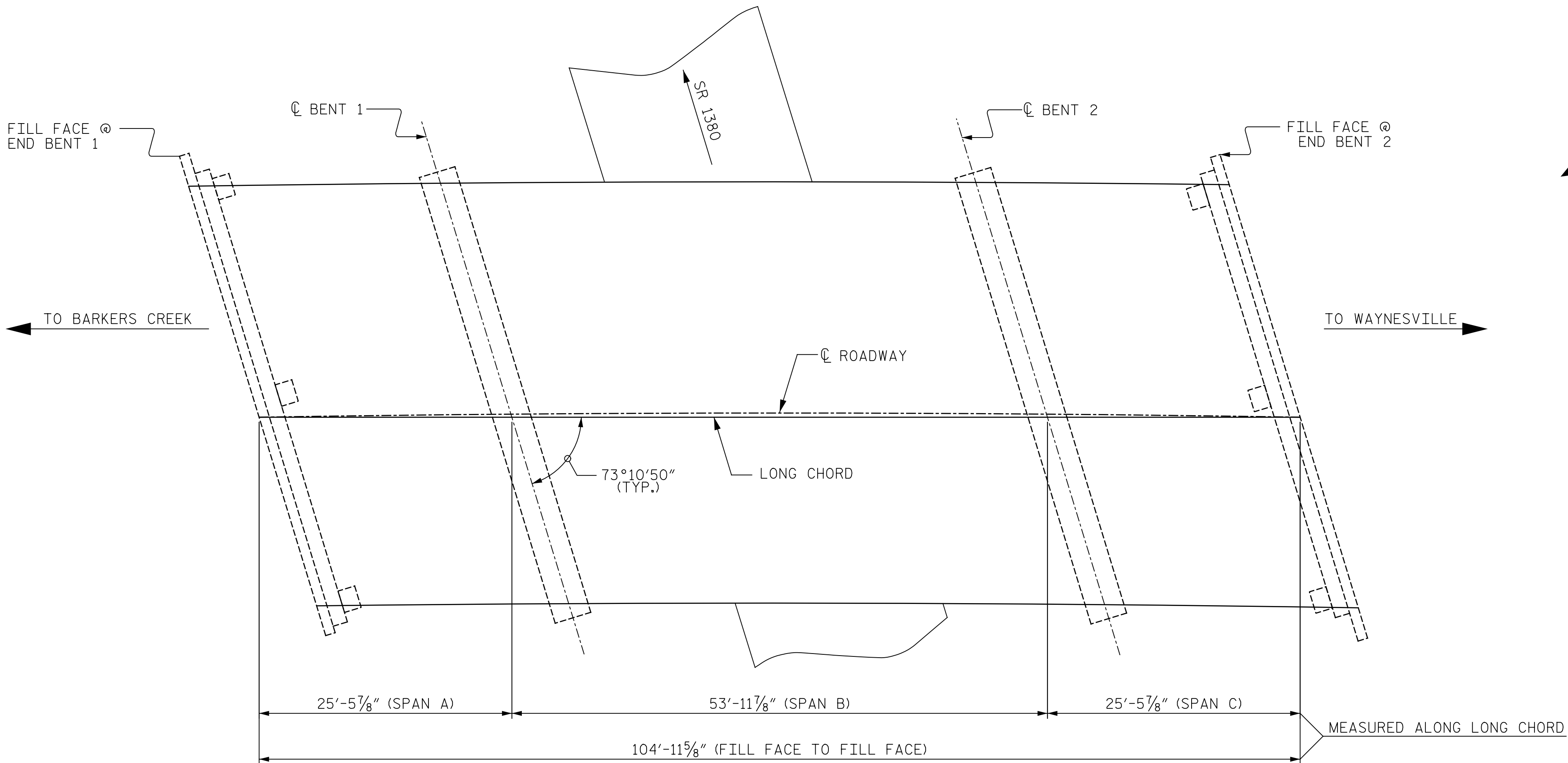
- SCOPE OF WORK
- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE (LMC)
 - APPROACH SLAB WIDENING AND CONCRETE HEADER
 - REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

- CONSTRUCTION SEQUENCE
- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK OVERLAY SURFACE PREPARATON AND PLACE LMC OVERLAY.
 - 2.) INSTALL APPROACH SLAB WIDENING AND APPROACH SLAB CONCRETE HEADER TO MATCH NEW DECK GRADE.
 - 3.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
 - 4.) INSTALL ELASTOMERIC CONCRETE AND SILICONE JOINTS AT BENTS AND END BENTS.
 - 5.) GROOVE LMC.



SECTION ALONG CL BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN

(PILES NOT SHOWN FOR CLARITY)

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER DATE

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE #104 ON US23, US74
SBL OVER SR1380



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

PLANS PREPARED BY:
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Gannett Fleming
Excellence Delivered As Promised
NC Lic. No. F-0270

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REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-89	TOTAL SHEETS
1			3				142
2			4				

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO-DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF OF HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



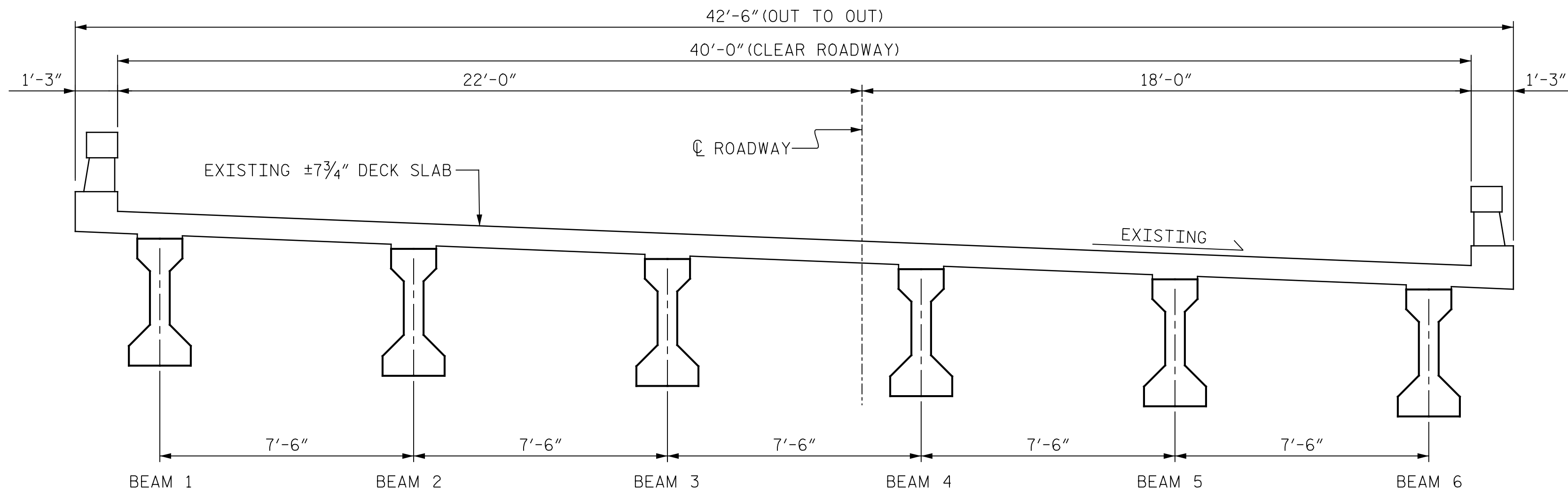
Signed by: *Eric B. Nelson Jr.* 4/3/2018
6A09F917E207044A

PLANS PREPARED BY:
 Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised** NC Lic. No. F-0270

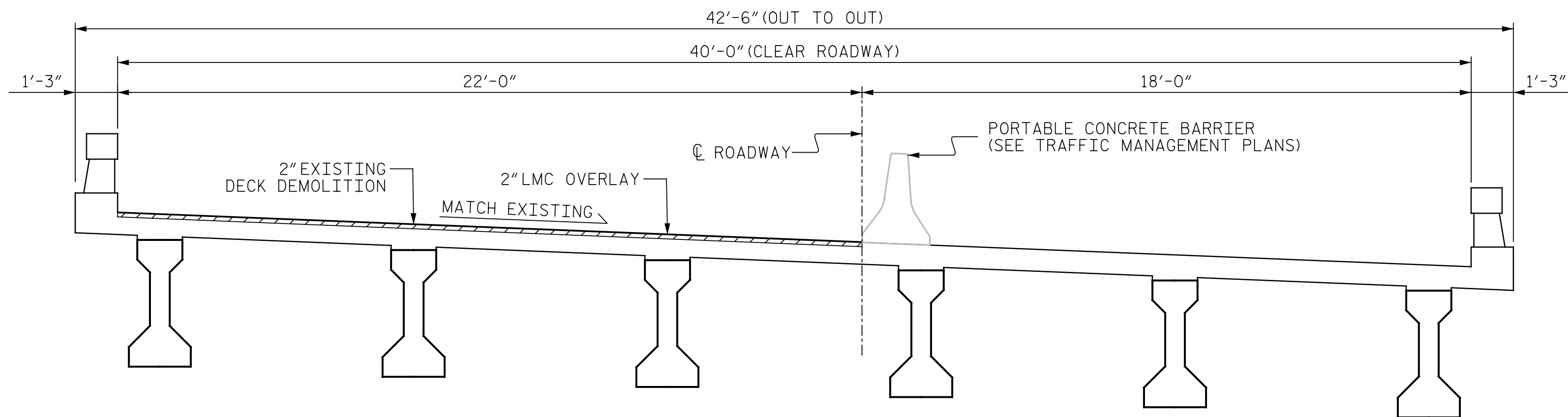
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-90		
GENERAL DRAWING BRIDGE #104 ON US23, US74 SBL OVER SR1380						TOTAL SHEETS 142		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

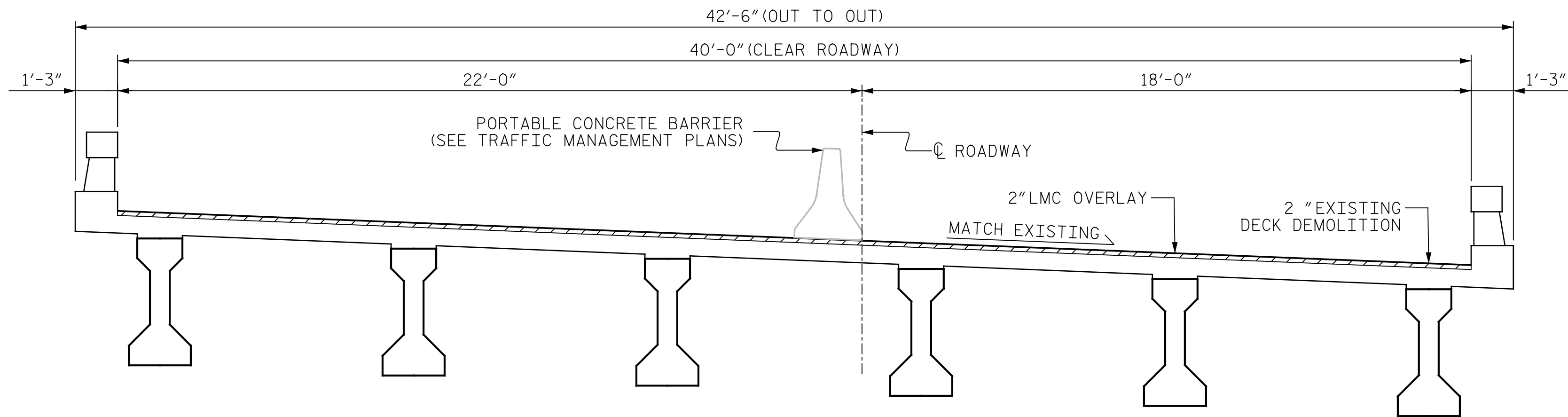
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



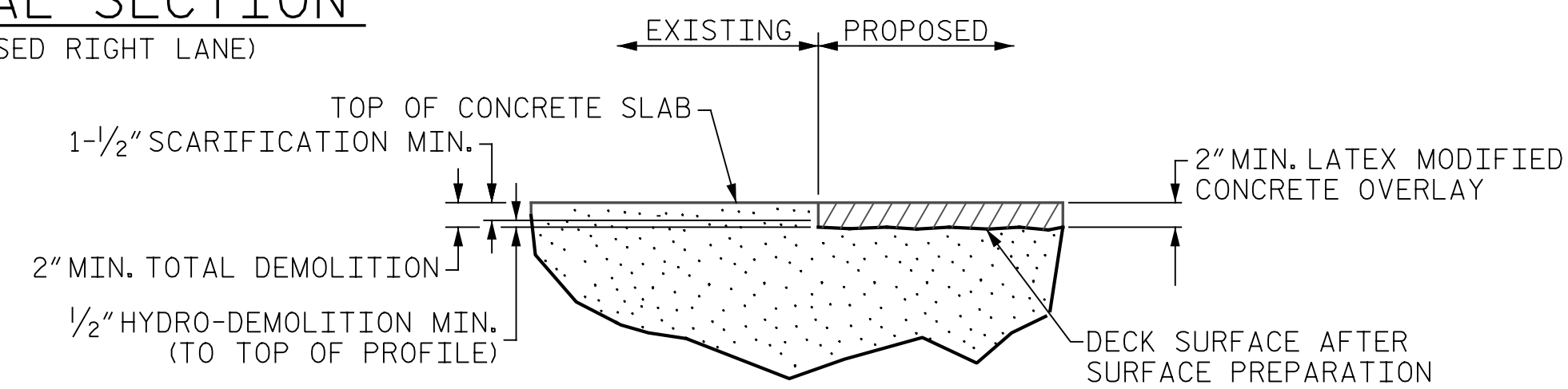
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED LEFT LANE)



TYPICAL SECTION
(PROPOSED RIGHT LANE)

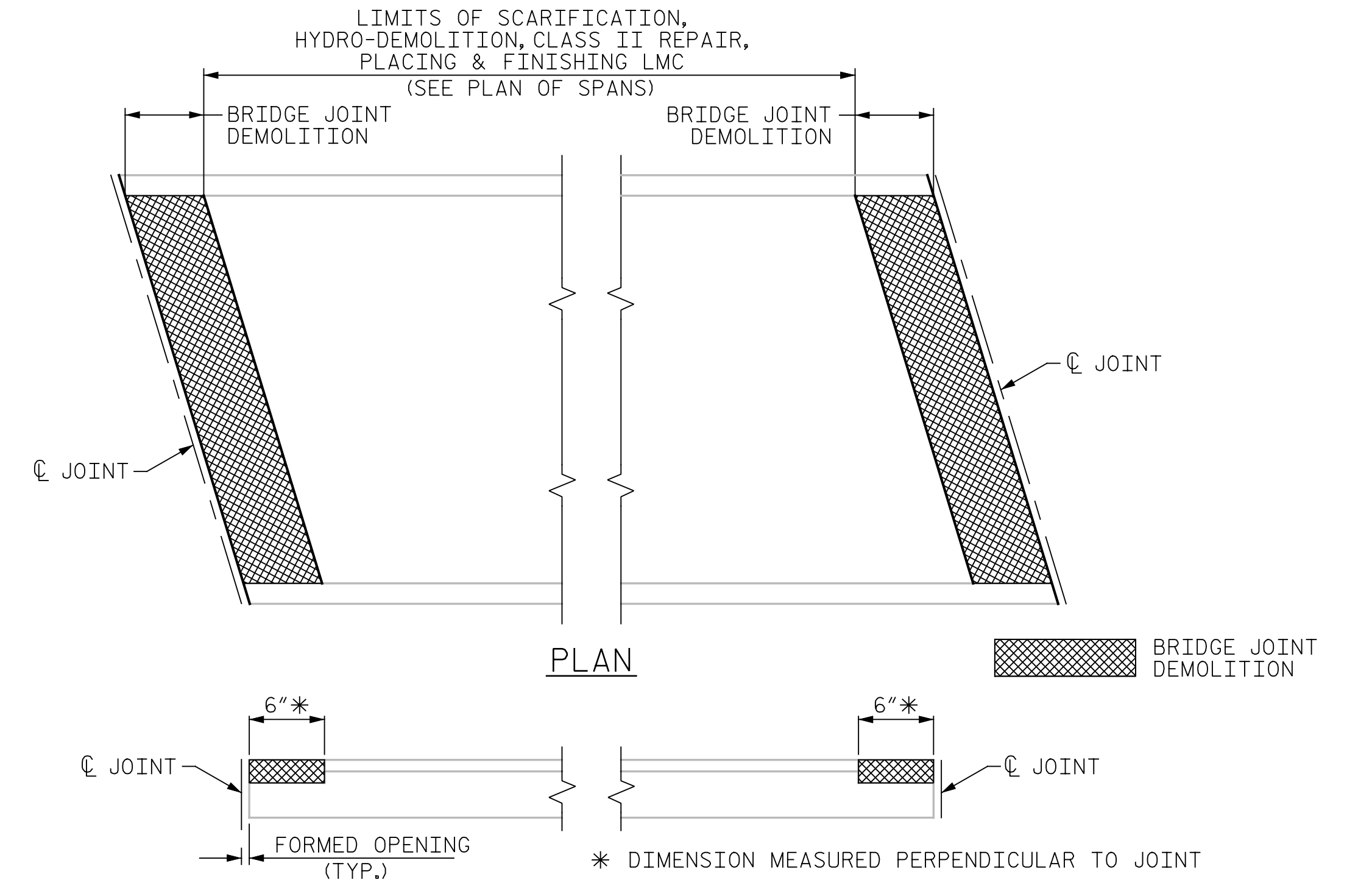


DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY

NOTE:

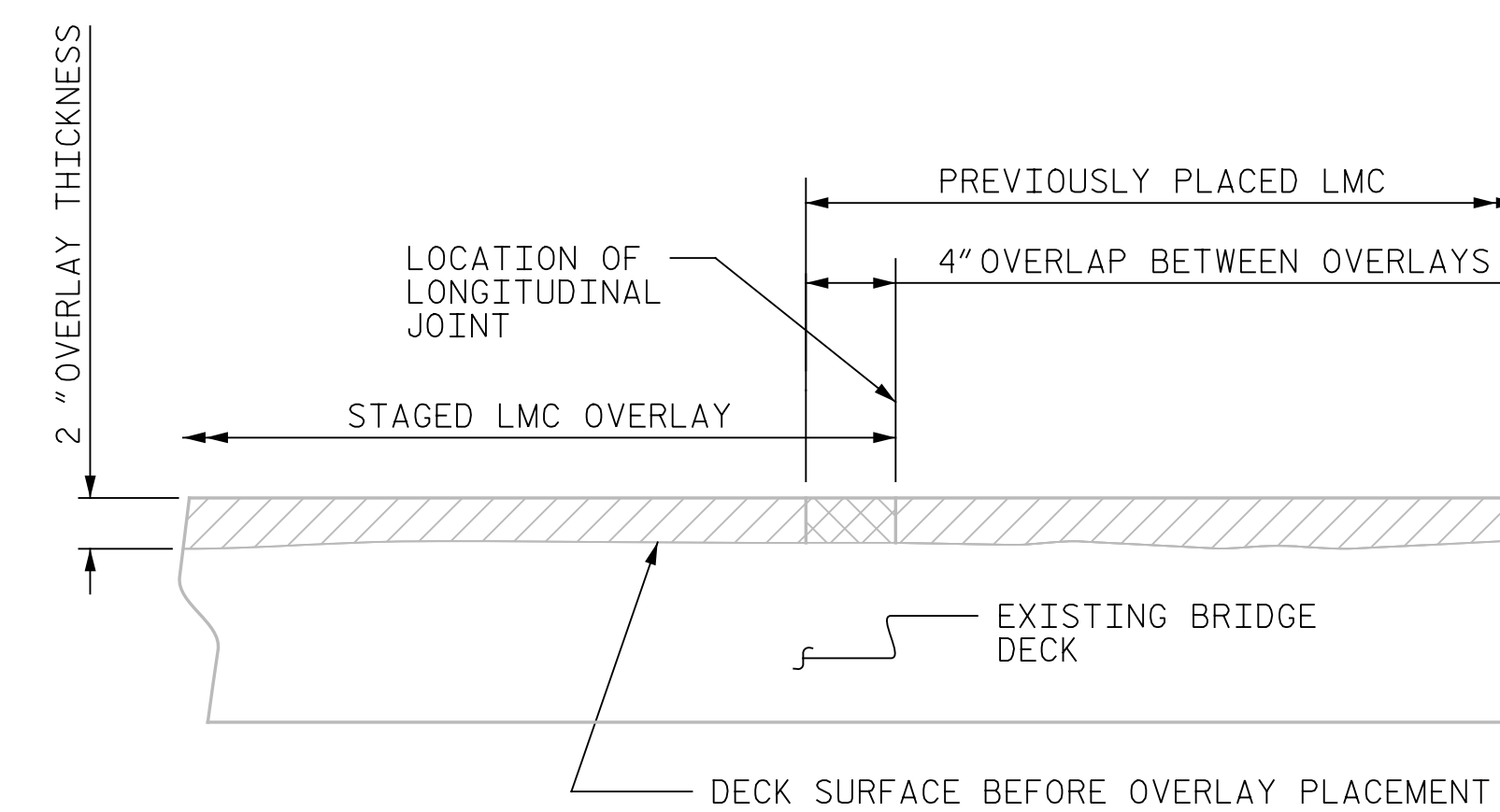
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.

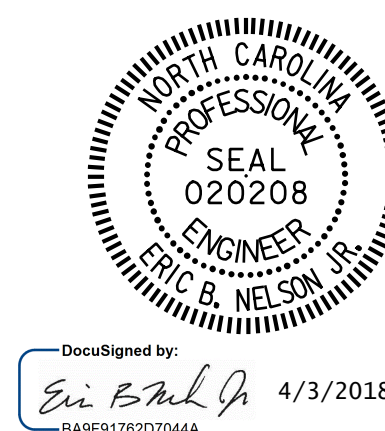


ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
&
OVERLAY DETAILS

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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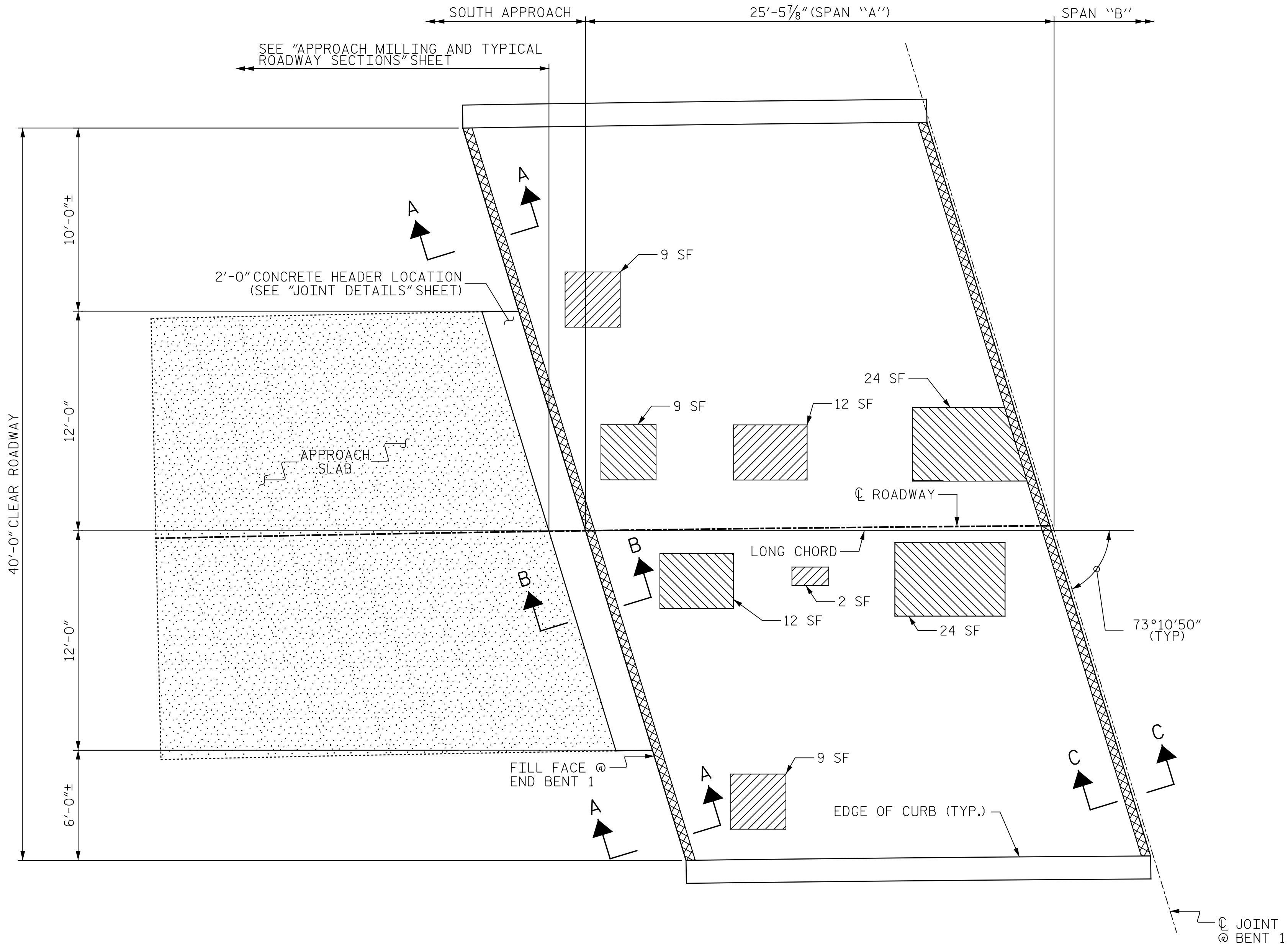
REVISIONS						SHEET NO. S-91
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	120 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	115 SY	
CLASS II SURFACE PREPARATION	11.3 SY	
BRIDGE JOINT DEMOLITION	41.9 SF	
GROOVING BRIDGE DECK	894 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN "A"
(SEE SHEET NO. S-94 AND S-95 FOR SECTIONS A-A, B-B AND C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "A"

REVISIONS						SHEET NO. S-92
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

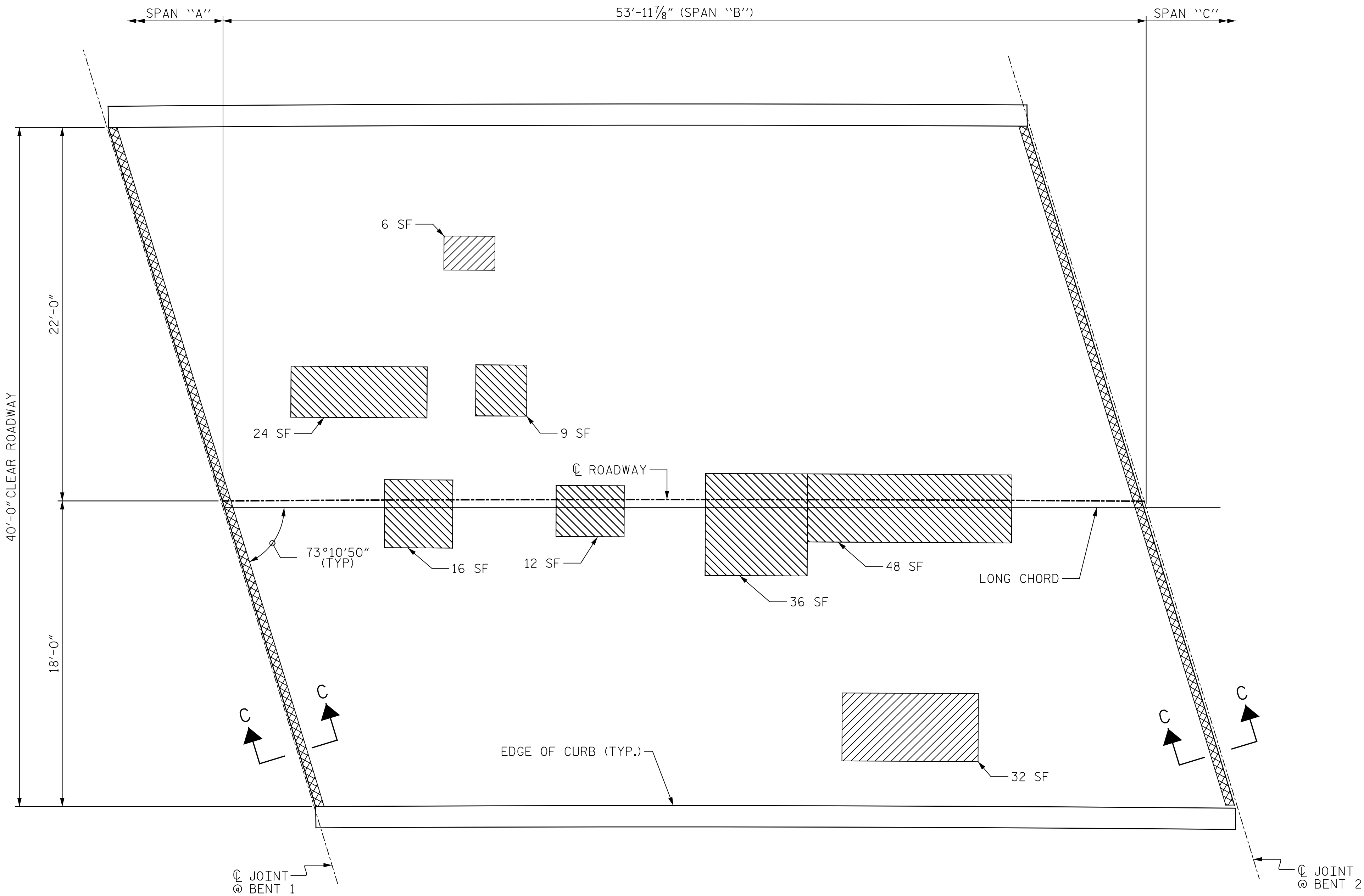
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	241 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	241 SY	
CLASS II SURFACE PREPARATION	20.3 SY	
BRIDGE JOINT DEMOLITION	41.9 SF	
GROOVING BRIDGE DECK	1949 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN "B"

(SEE SHEET NO. S-95 FOR SECTION C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

REVISIONS						SHEET NO. S-93
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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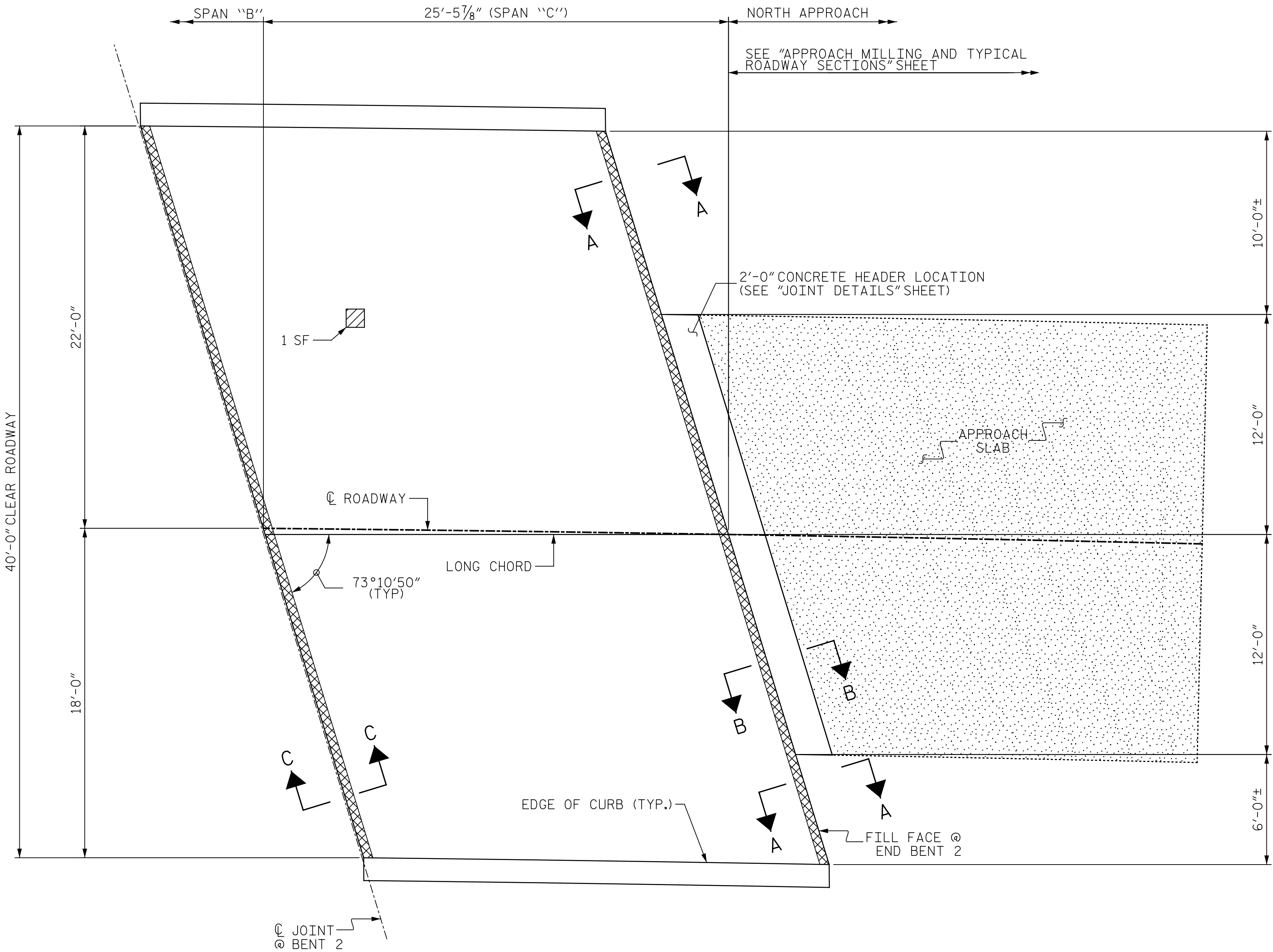
SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	120 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	115 SY	
CLASS II SURFACE PREPARATION	0.1 SY	
BRIDGE JOINT DEMOLITION	41.9 SF	
GROOVING BRIDGE DECK	894 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "C"
(SEE SHEET NO. S-94 SMF S-95 FOR SECTIONS A-A, B-B AND C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



DocuSigned by:
Eric B. Nelson Jr. 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

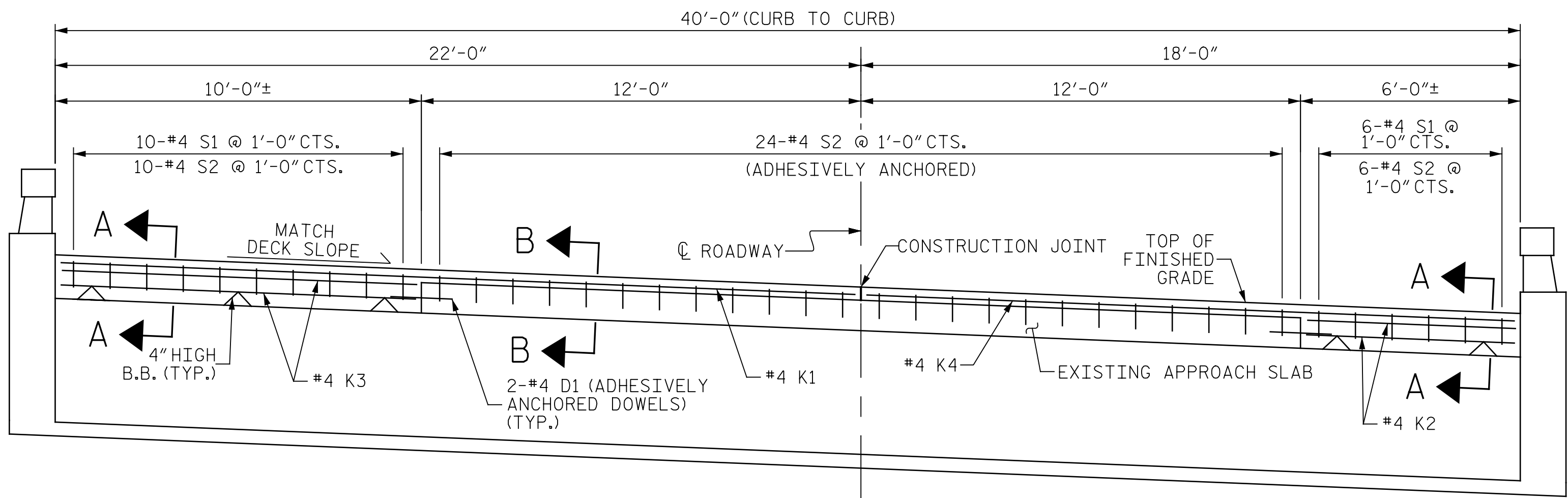
SURFACE PREPARATION
SPAN "C"

REVISIONS						SHEET NO. S-94
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

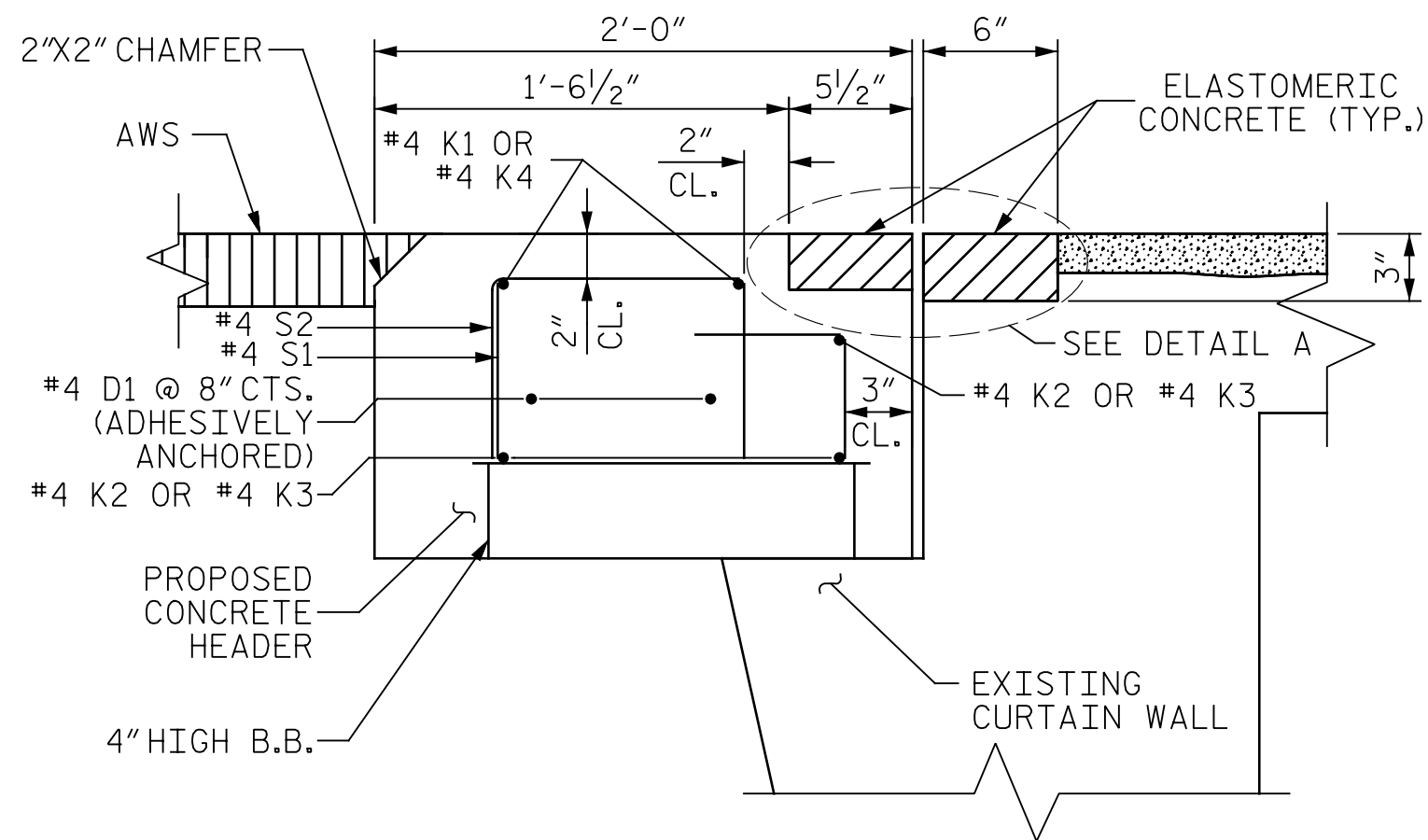
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

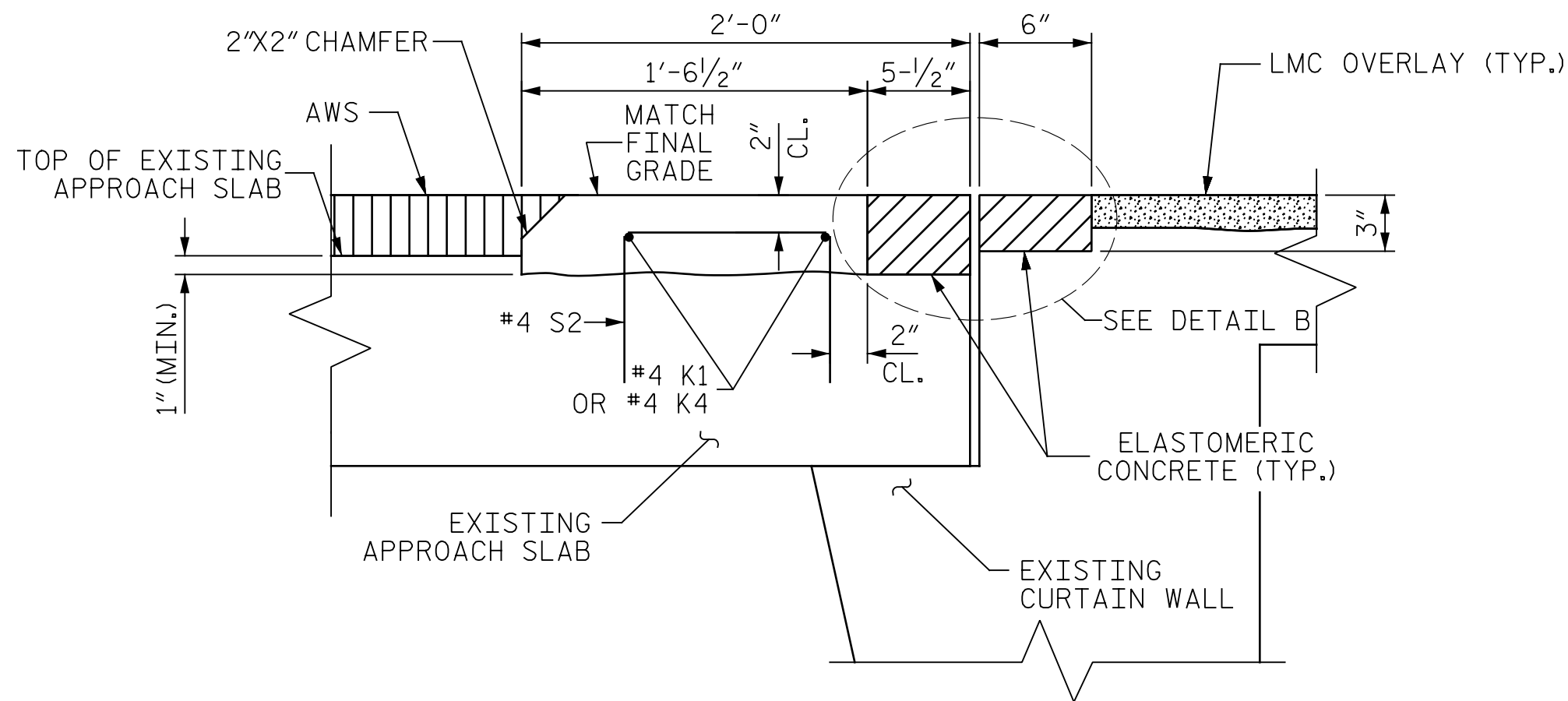
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



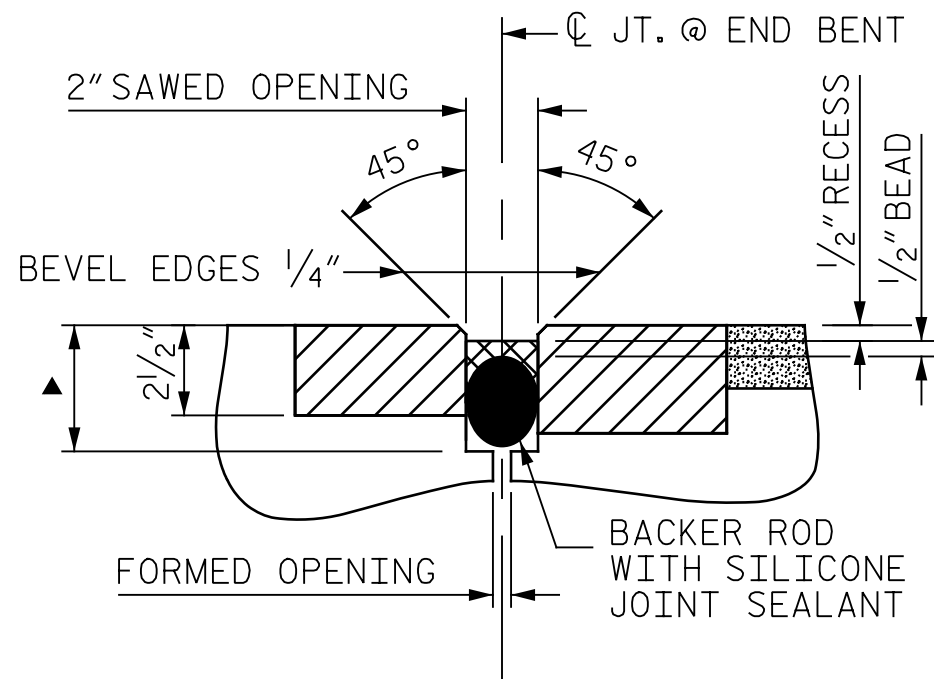
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

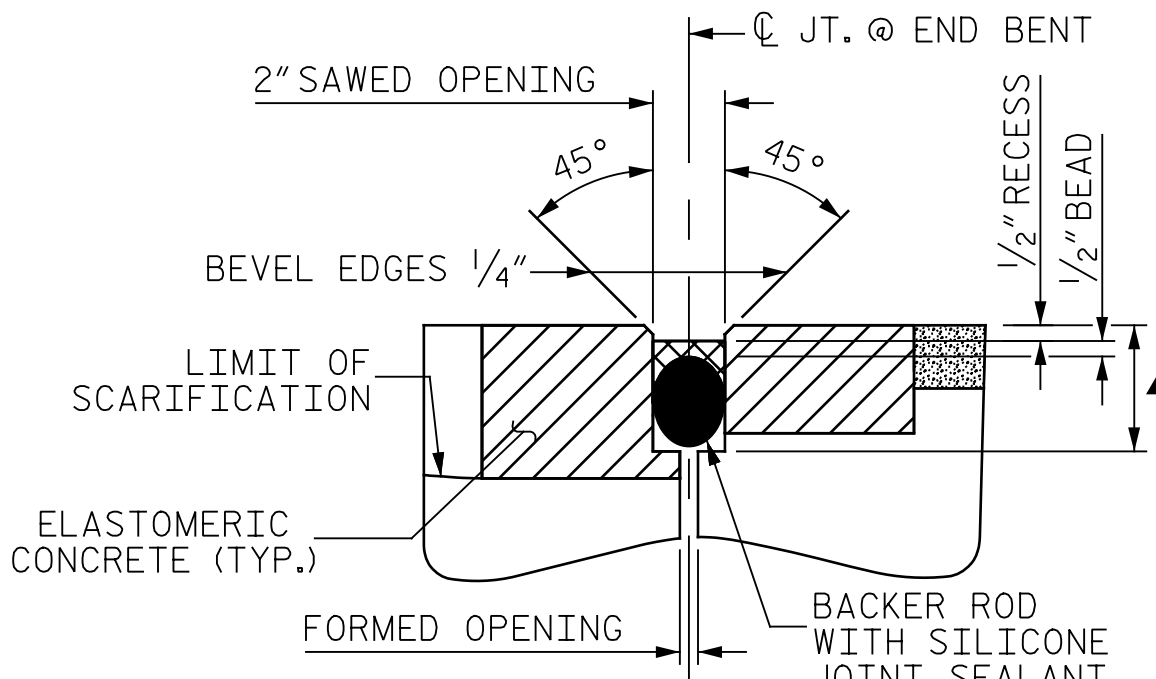


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



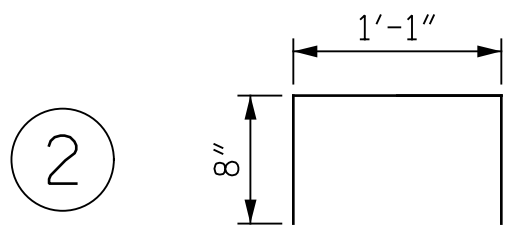
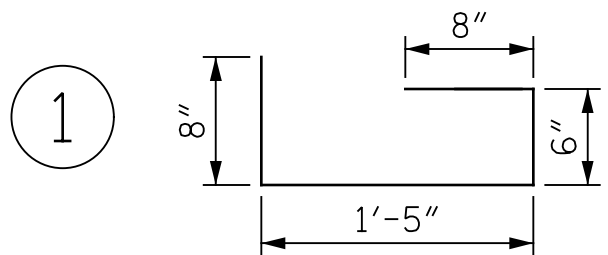
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	2	#4	STR	22'-7"	31
K2	3	#4	STR	5'-10"	12
K3	3	#4	STR	10'-0"	20
K4	2	#4	STR	18'-5"	25
S1	16	#4	1	3'-3"	35
S2	40	#4	2	2'-5"	65
REINFORCING STEEL					192 LBS
CLASS AA CONCRETE					1.9 CY
ELASTOMERIC CONCRETE					10.7 CF

NOTES

THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104

SHEET 1 OF 2



DocuSigned by:
Eric B. Nelson 4/3/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

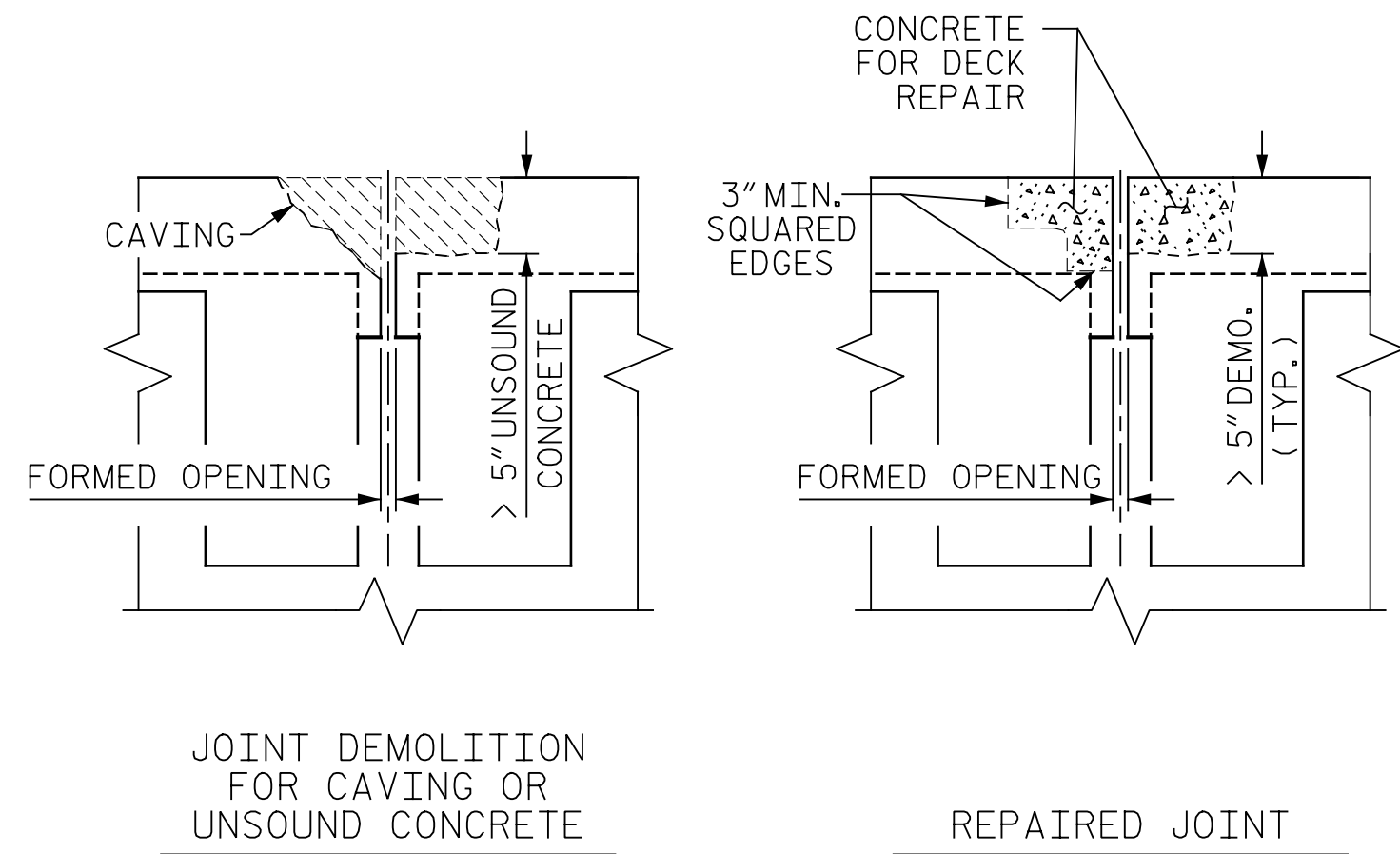
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-95	TOTAL SHEETS
1			3				142
2			4				

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

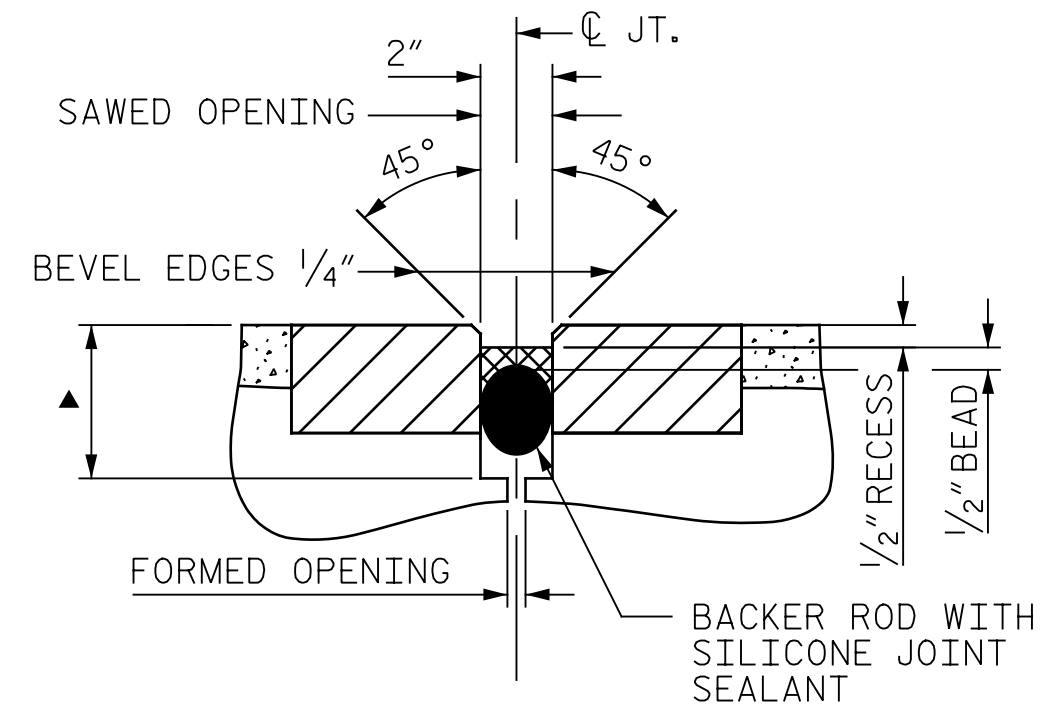
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

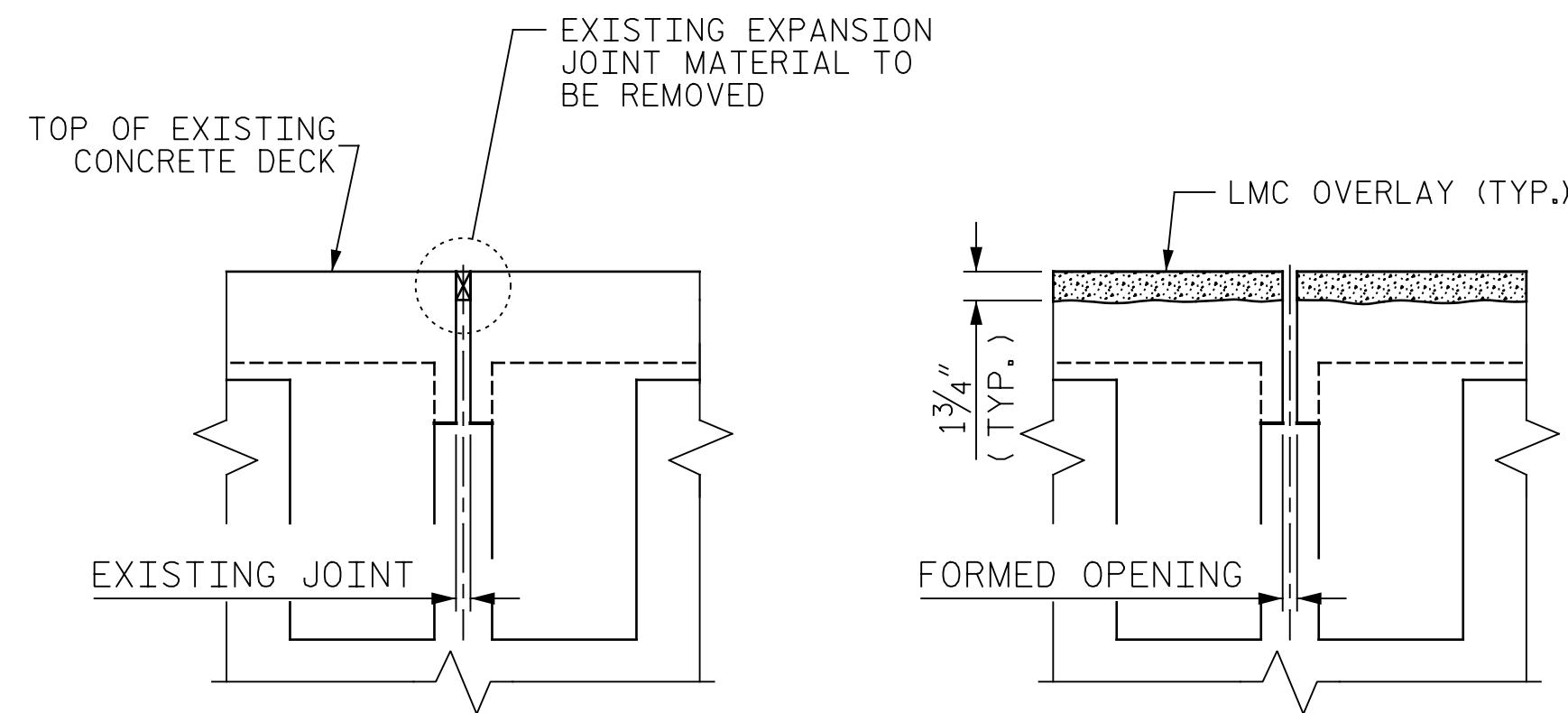
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS

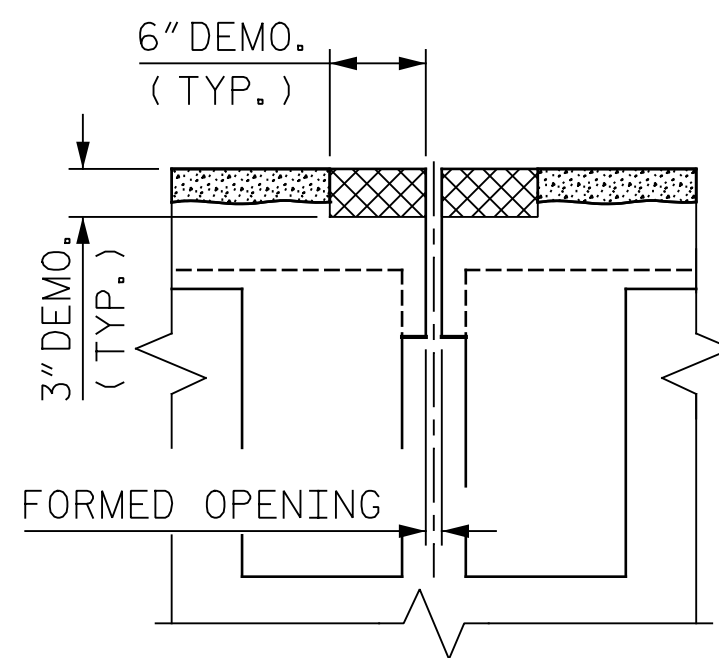
DETAIL A

(PROPOSED JOINT WITH SAWED DIMENSIONS)

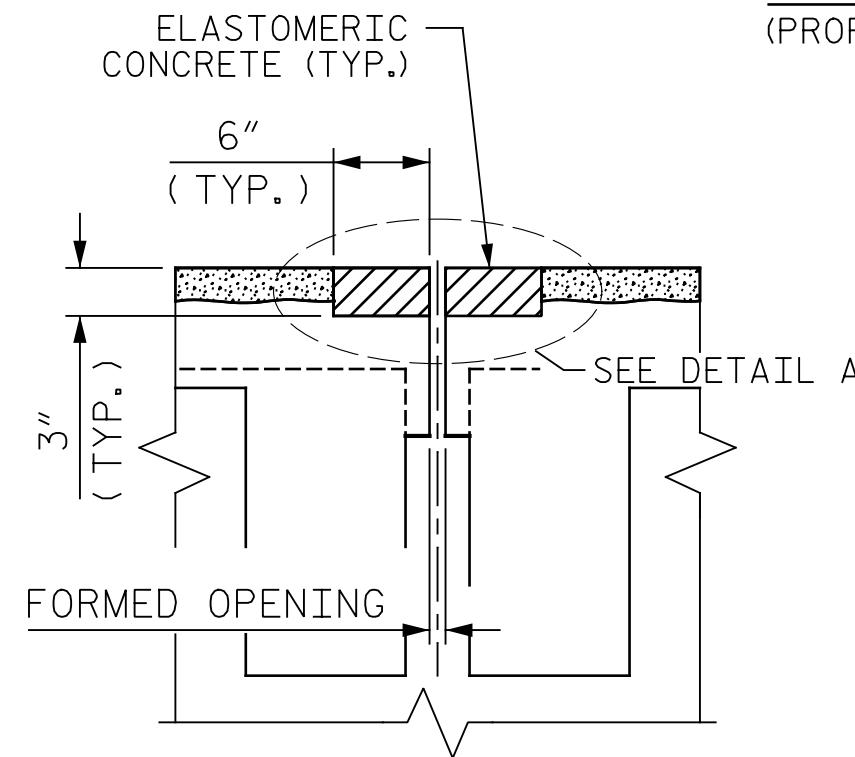


EXISTING

PROPOSED
LMC OVERLAY



MINIMUM
JOINT DEMOLITION

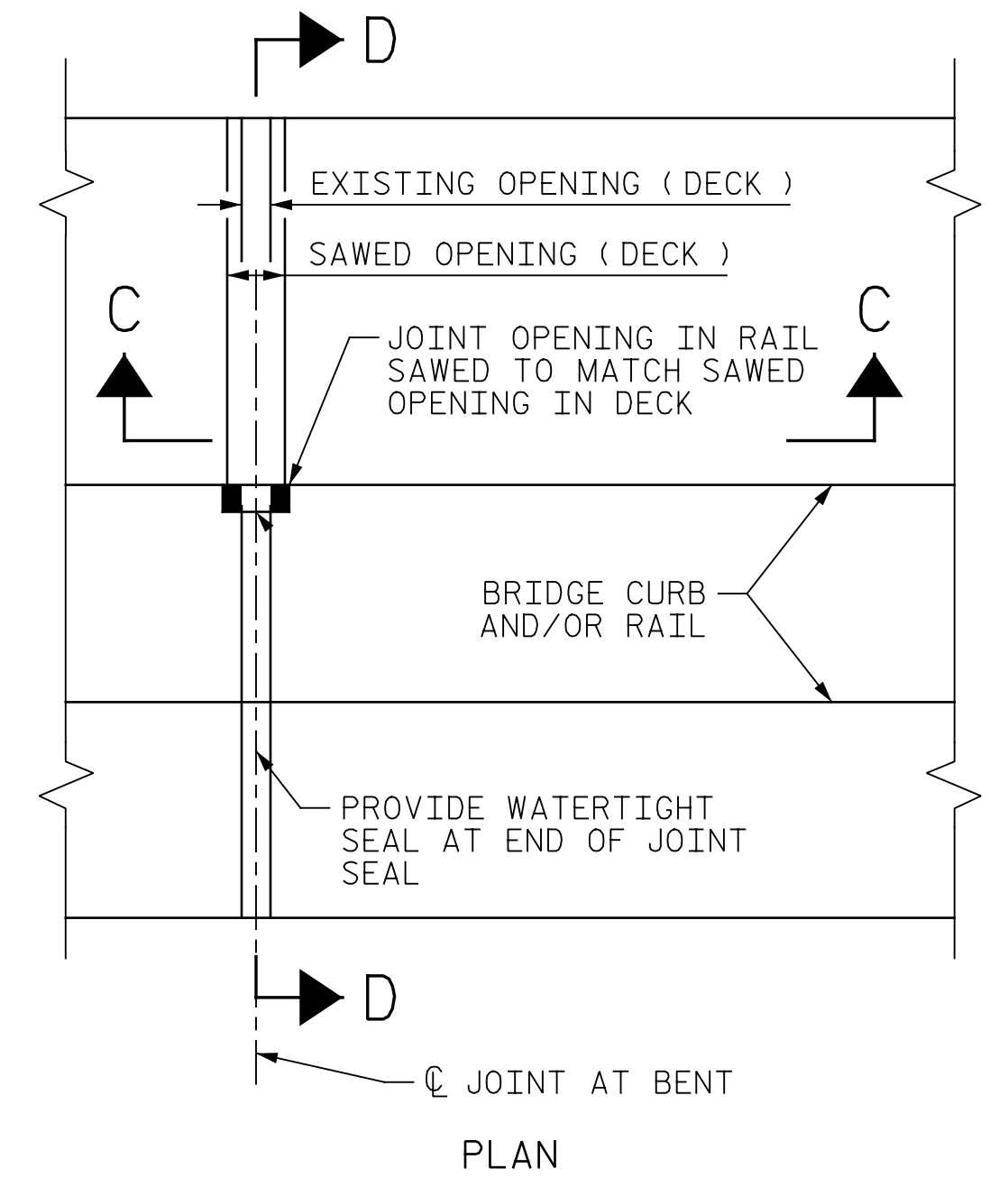


PROPOSED JOINT
PRE-SAWED DIMENSIONS

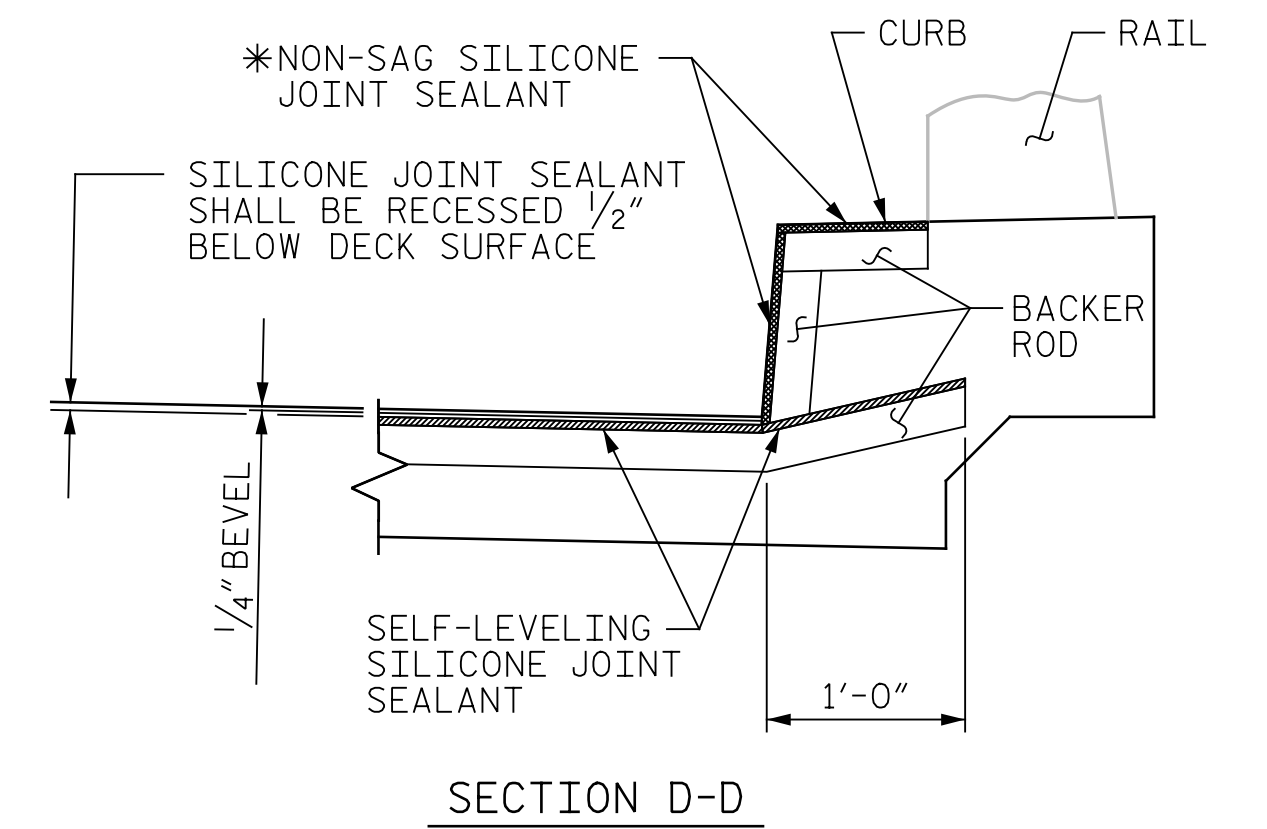
SECTION C-C

ELASTOMERIC CONCRETE	
BENT 1	10.5 CF
BENT 2	10.5 CF

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE



*SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL



DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

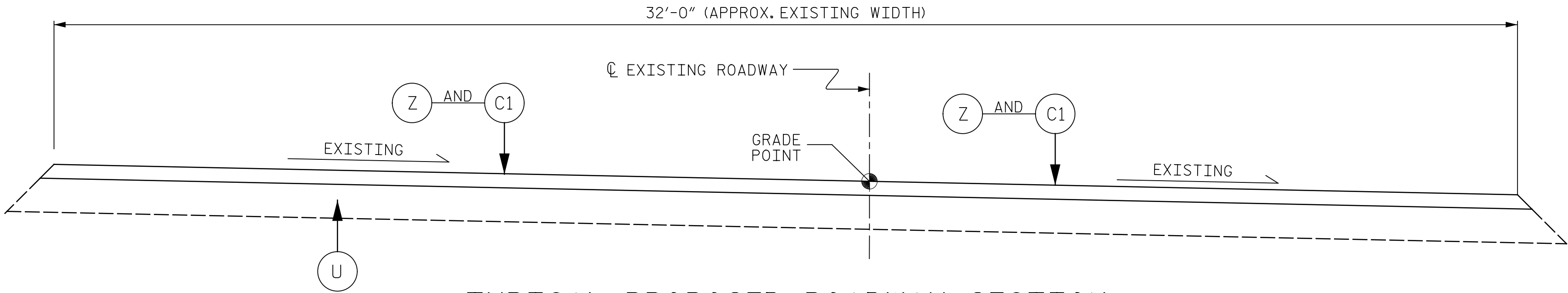
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SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-96
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	391 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	33 TONS	
ASPHALT BINDER FOR PLANT MIX	2 TONS	

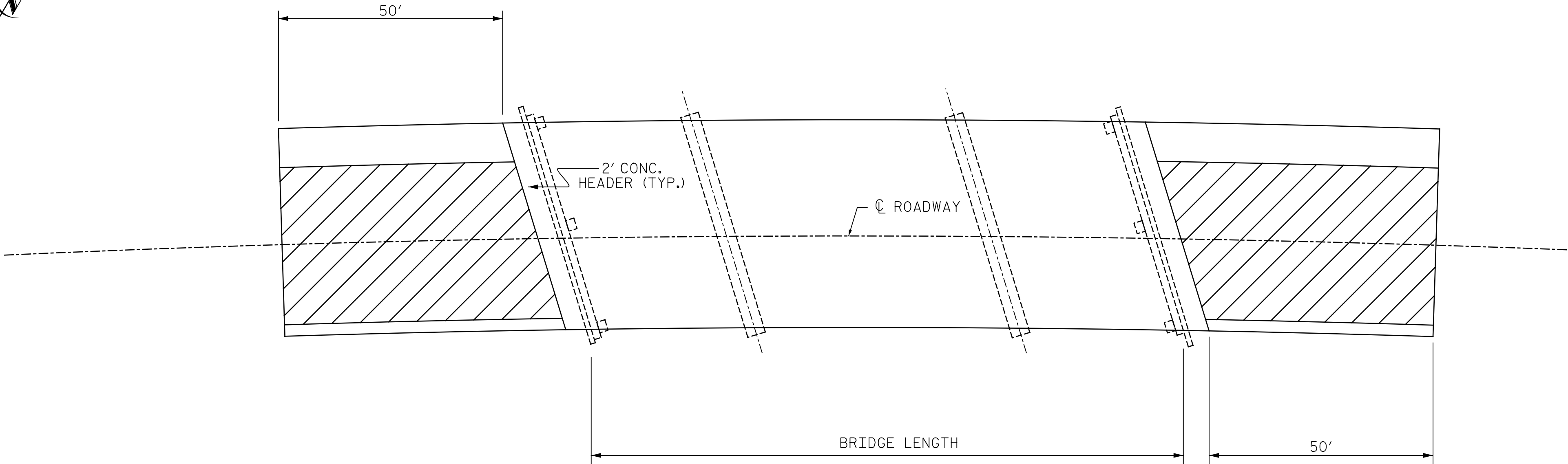


TYPICAL PROPOSED ROADWAY SECTION

NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.

INCIDENTAL MILLING



PLAN

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 104



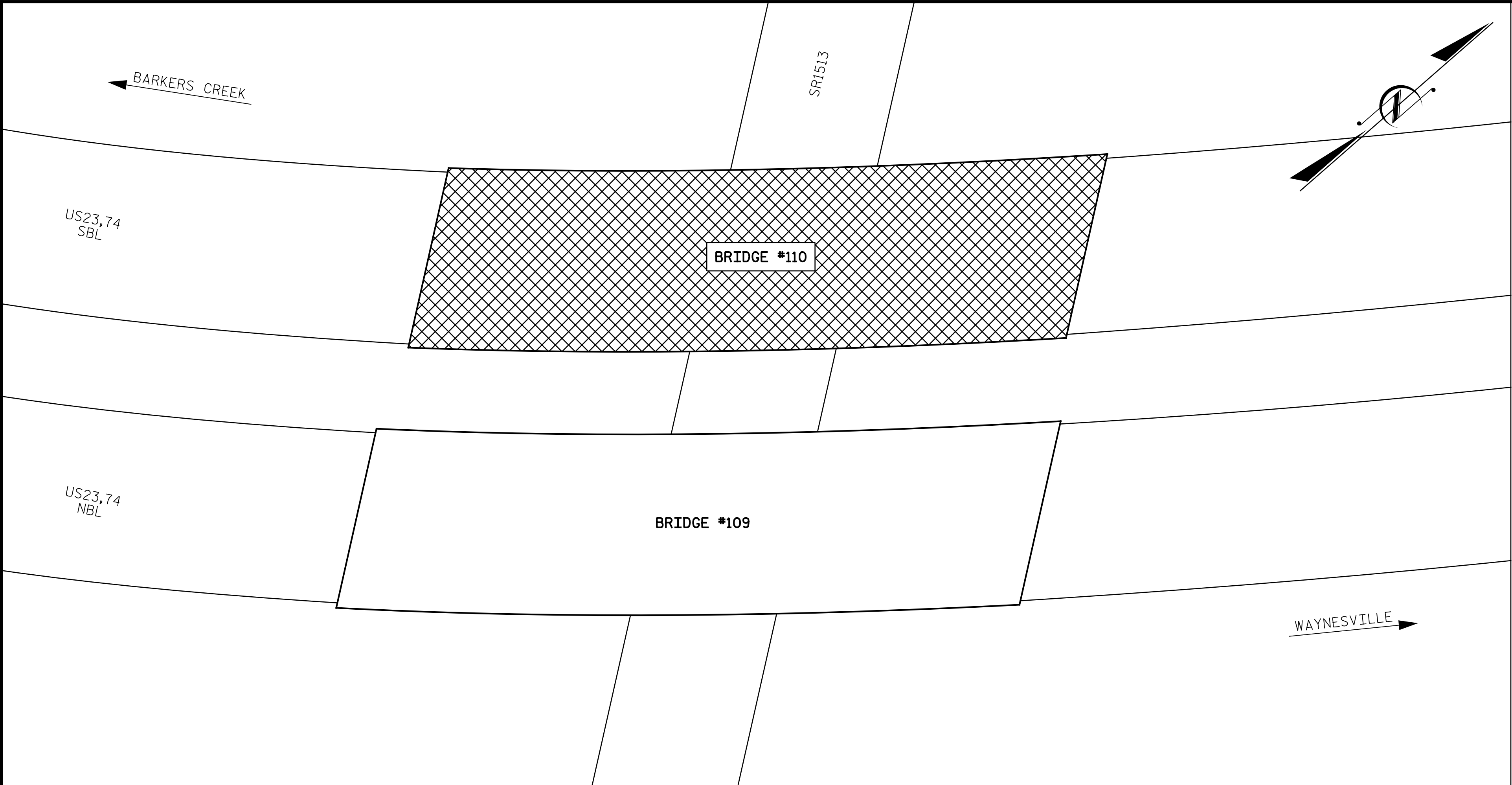
DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH							
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS							
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-97	
1			3			TOTAL SHEETS	
2			4			142	

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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FINAL UNLESS ALL
SIGNATURES COMPLETED



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO-DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF OF HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, CLASS II SURFACE PREPARATION, AND CLASS III SURFACE PREPARATION, SEE SPECIAL PROVISIONS.
- FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:

Gannett Fleming
Excellence Delivered **As Promised**

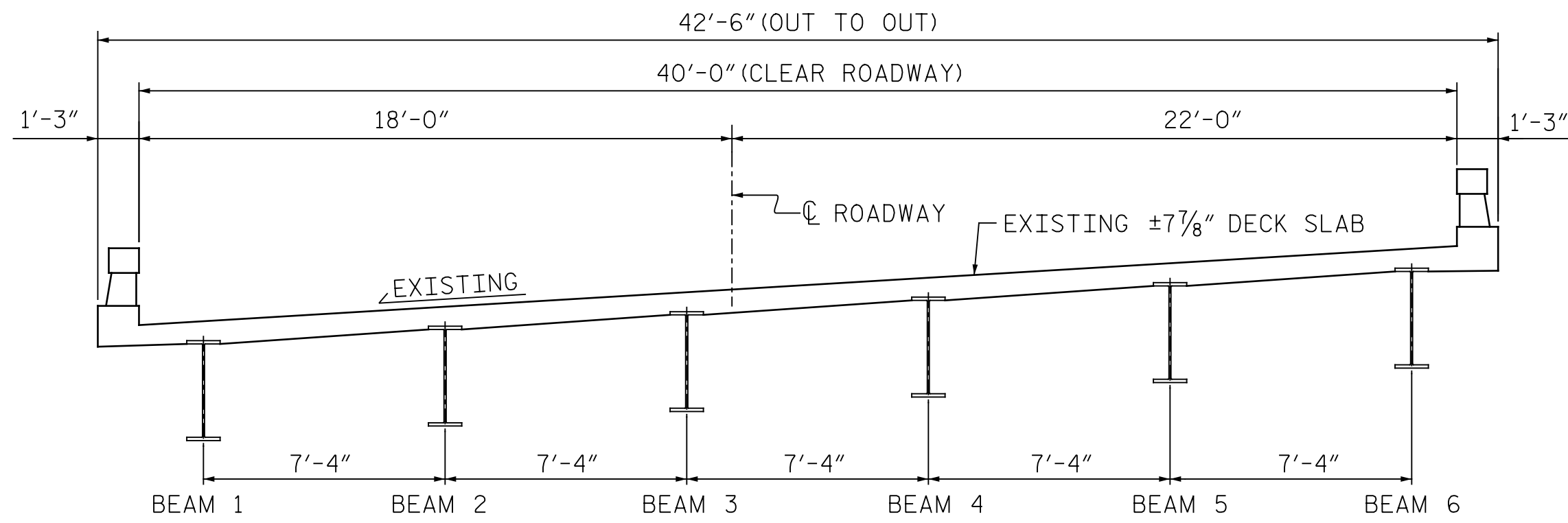
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DocuSigned by:
Eric B. Nelson 4/3/2018
049F911E2D7044A

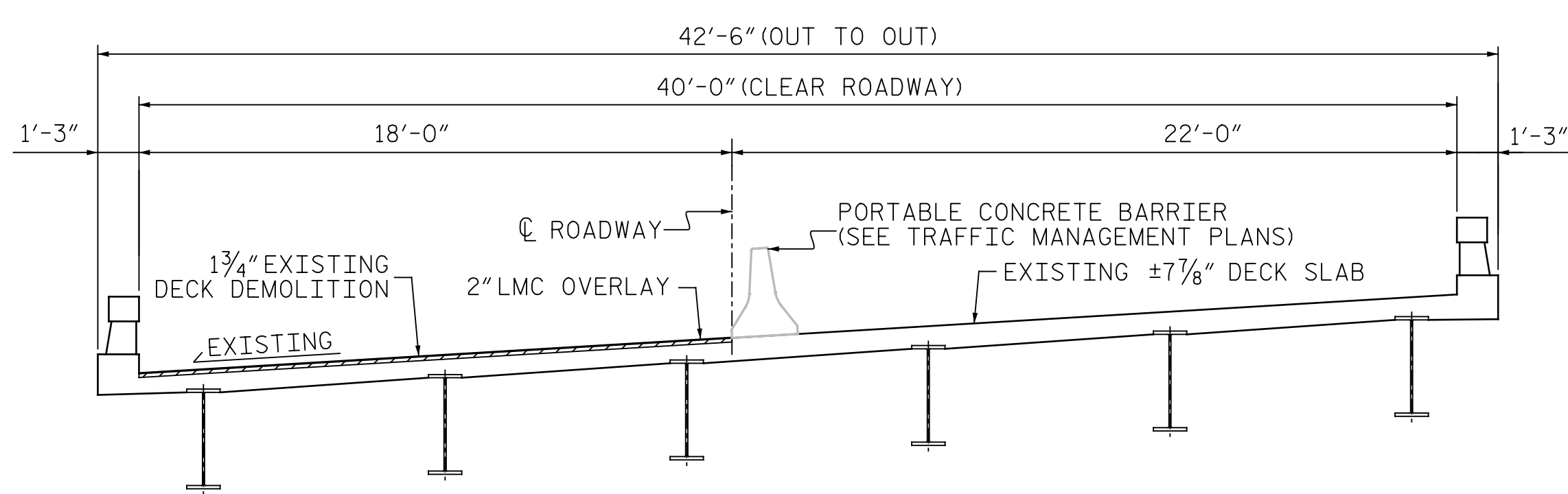
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109

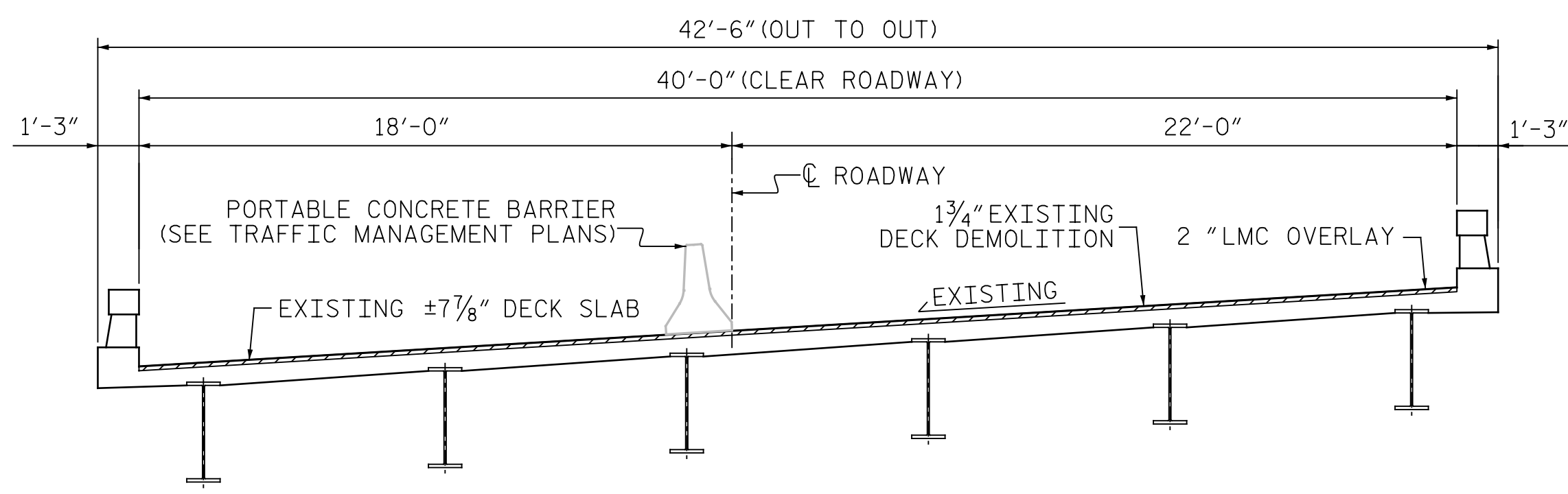
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-99		
GENERAL DRAWING BRIDGE #109 ON US23, US74 NBL OVER SR1513						TOTAL SHEETS 142		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					



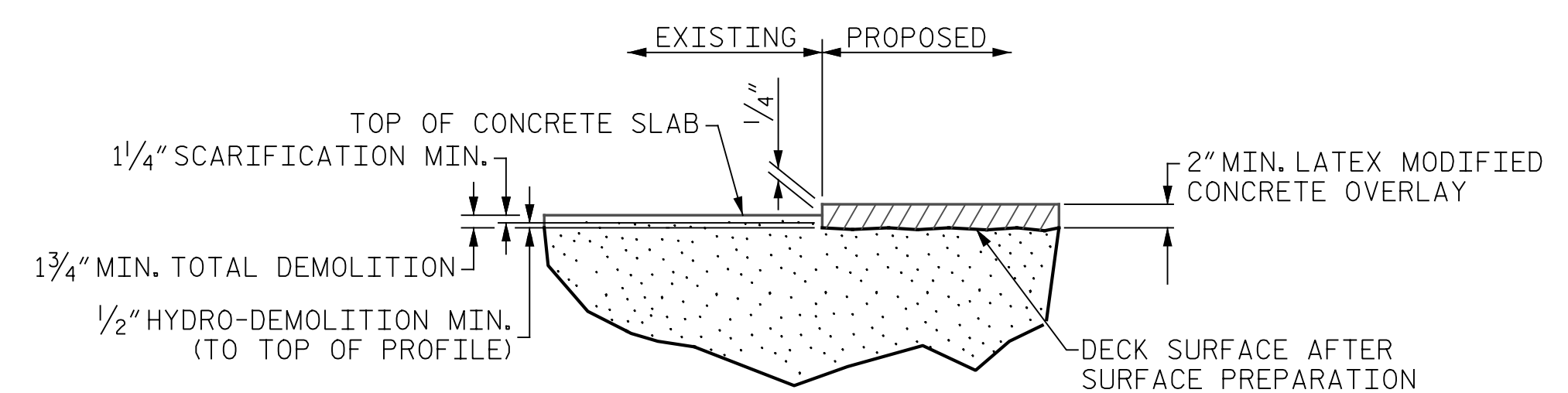
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED LEFT LANE)



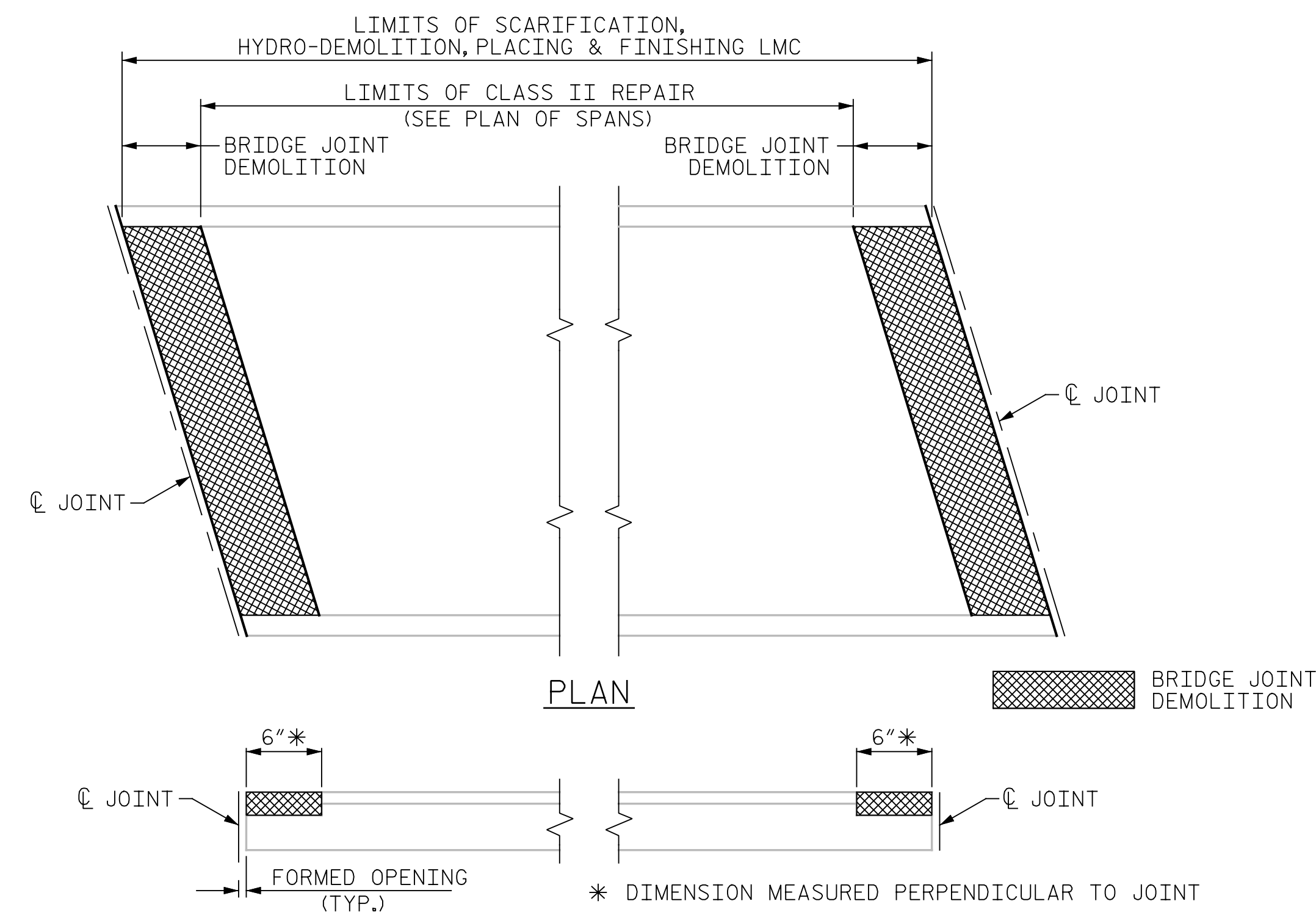
TYPICAL SECTION
(PROPOSED RIGHT LANE)



DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY

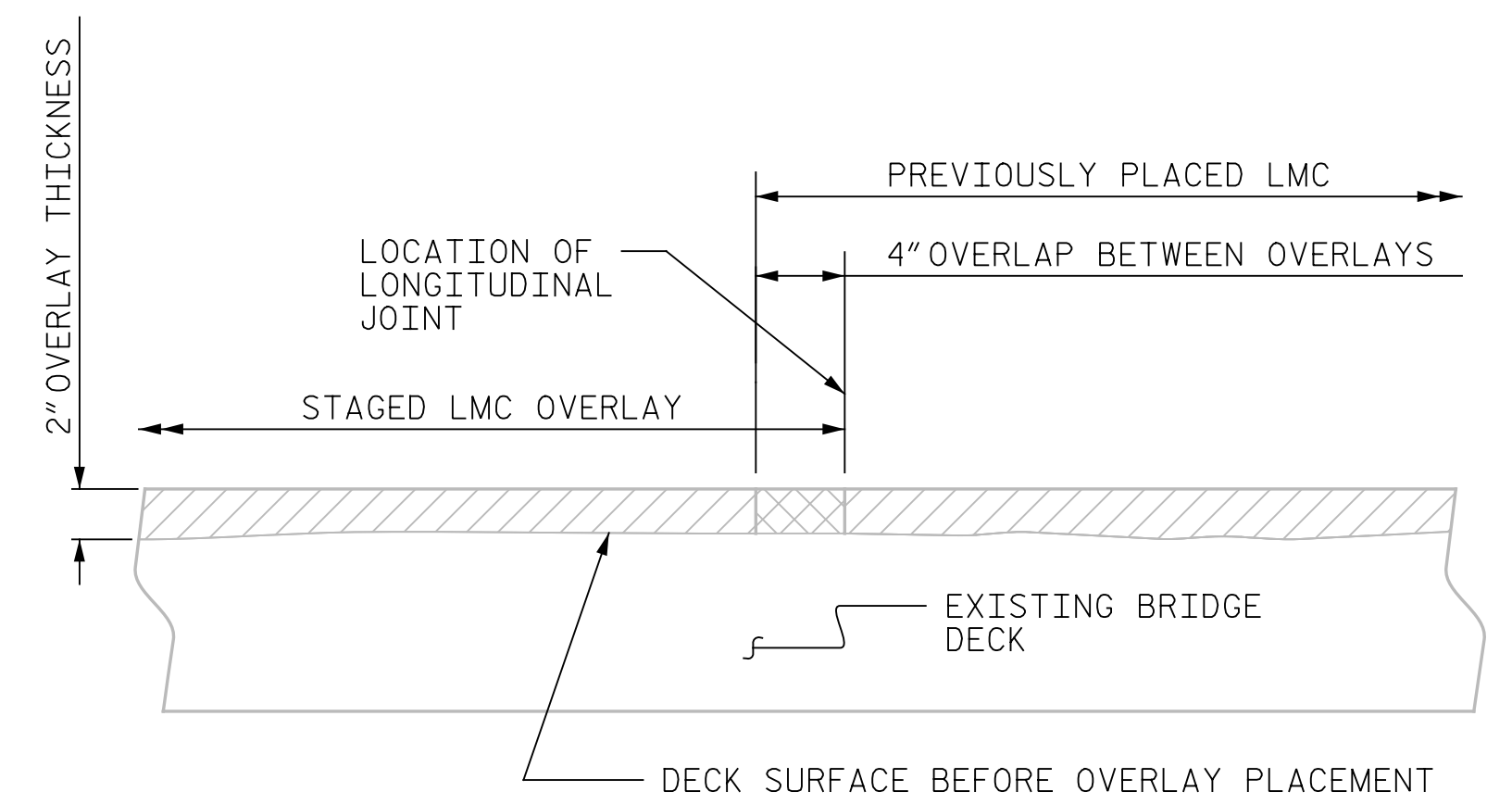
NOTE:
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.



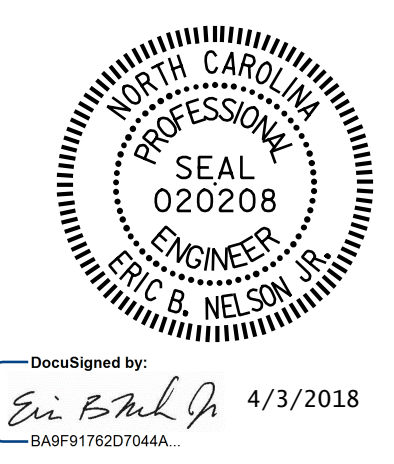
ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



STAGED LMC OVERLAY
CONSTRUCTION JOINT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION & OVERLAY DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-100					TOTAL SHEETS 142

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

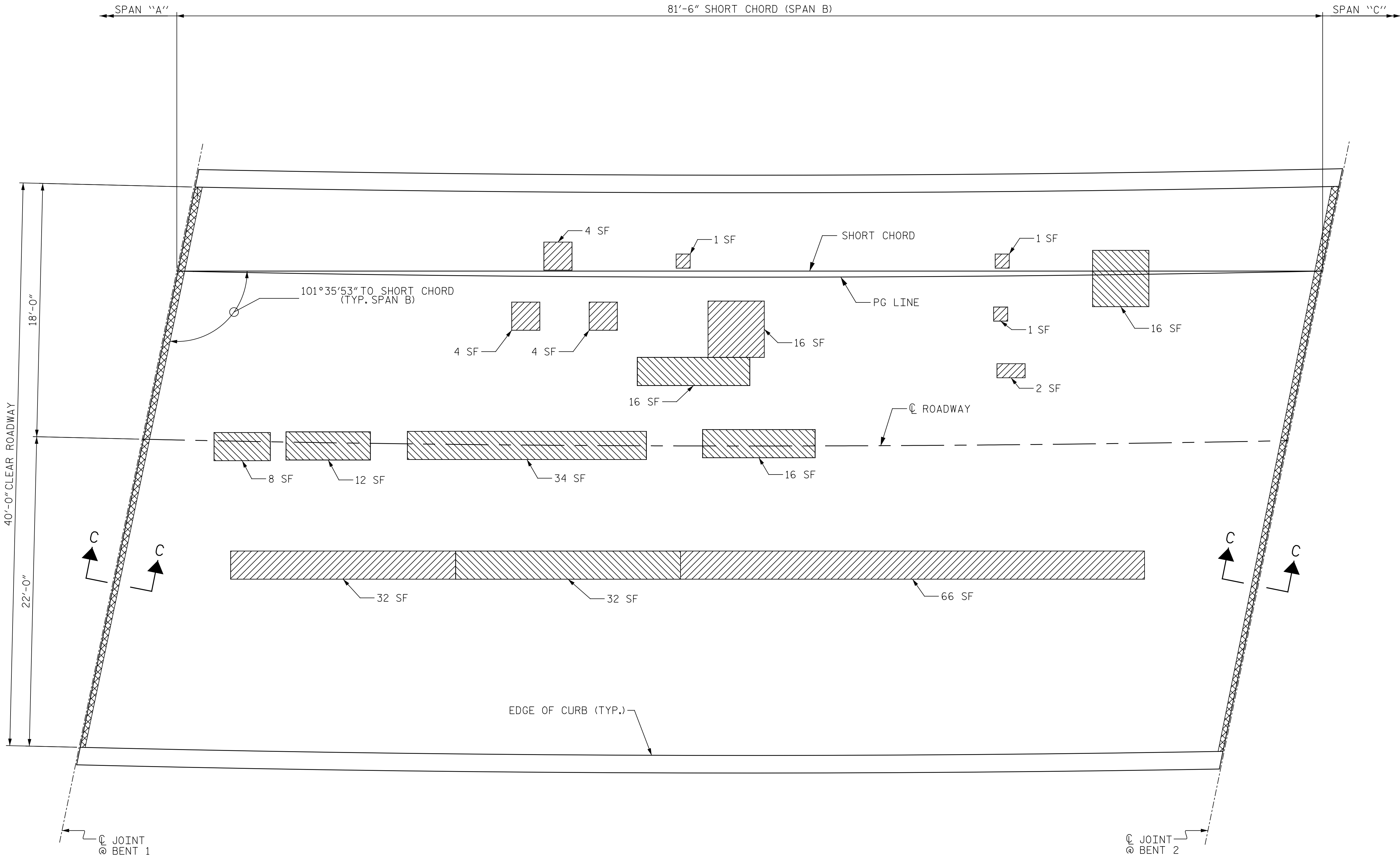
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	363 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	363 SY	
CLASS II SURFACE PREPARATION	29.4 SY	
BRIDGE JOINT DEMOLITION	41 SF	
GROOVING BRIDGE DECK	2967 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "B"

(SEE SHEET NO. S-104 FOR SECTION C-C)

PROJECT NO. 14BPR.3.1

JACKSON COUNTY

BRIDGE NO. 109



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

DRAWN BY : R. FISHER DATE : 2/2018

CHECKED BY : R. WERTMAN DATE : 2/2018

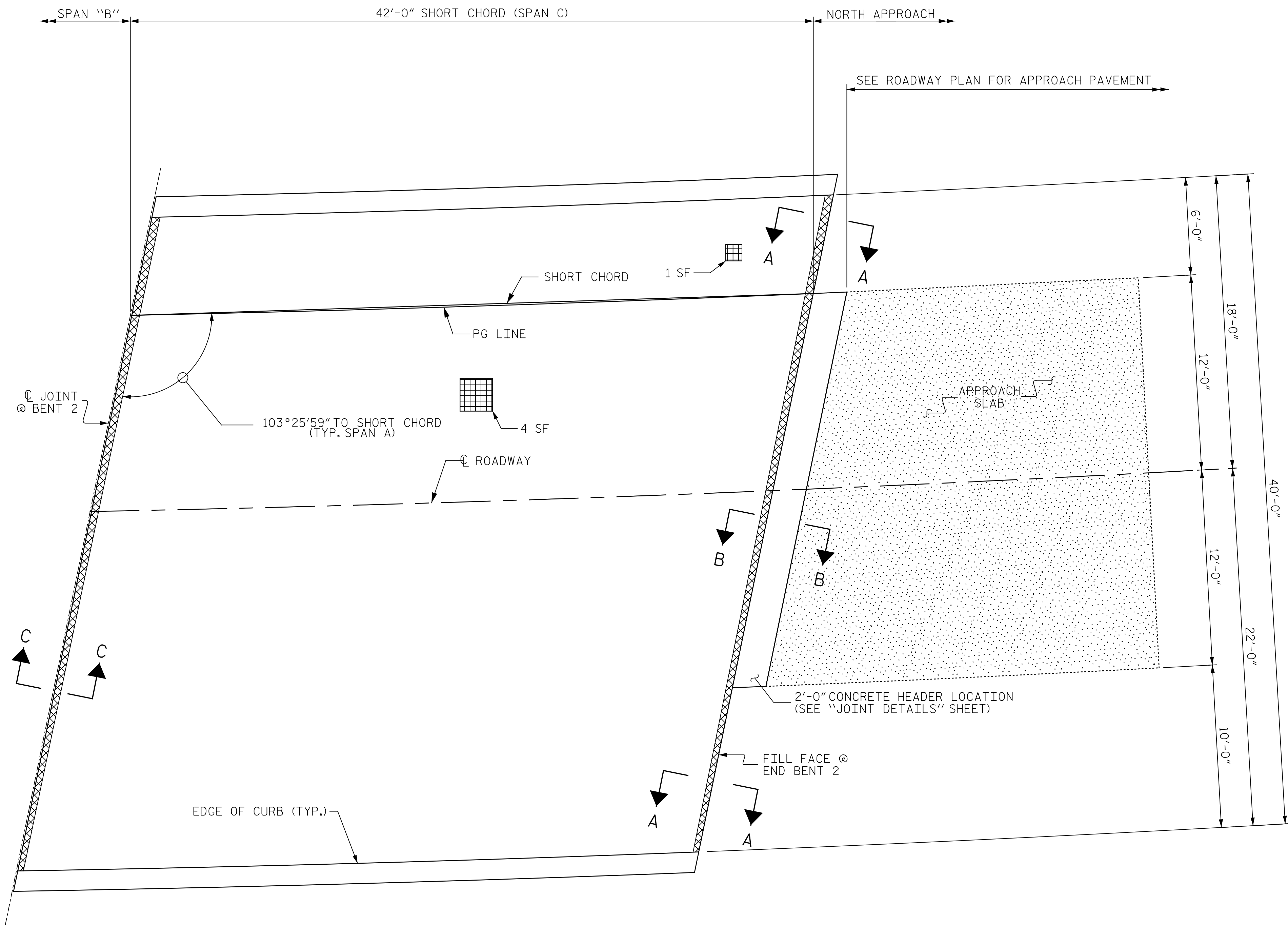
PLANS PREPARED BY:

Gannett Fleming

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-102
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



PLAN OF SPAN "C"
(SEE SHEET NO. S-103 AND S-104 FOR SECTIONS A-A, B-B, AND C-C)

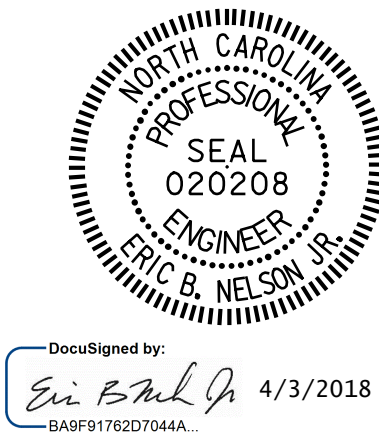
SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	192 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	187 SY	
CLASS III SURFACE PREPARATION	0.6 SY	
BRIDGE JOINT DEMOLITION	54 SF	
GROOVING BRIDGE DECK	1505 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109



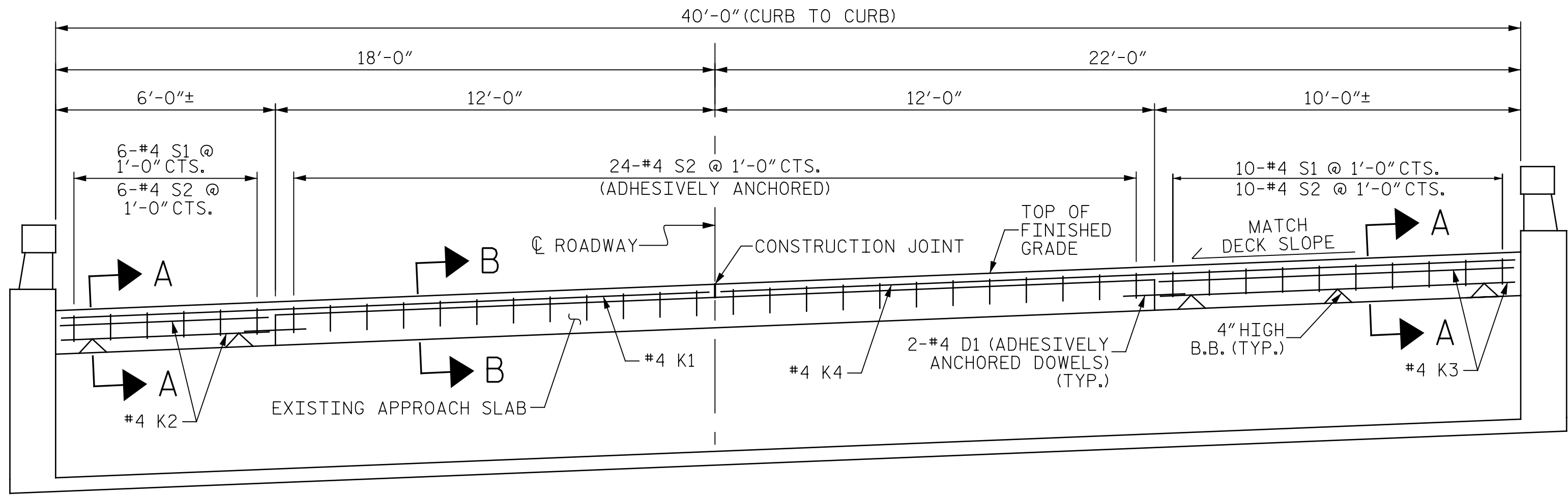
DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "C"					
REVISIONS					SHEET NO. S-103
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS 142					

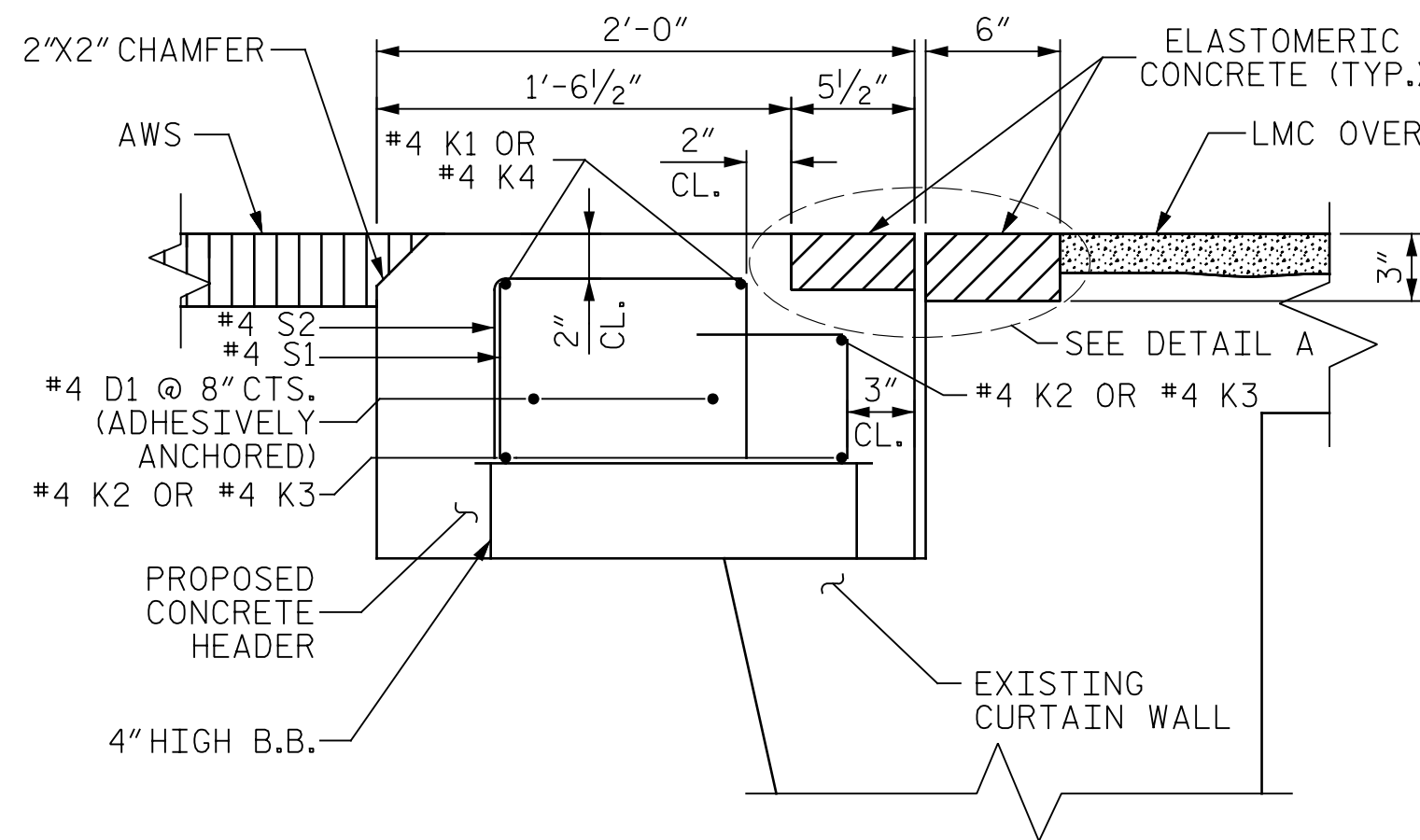
DRAWN BY : R. FISHER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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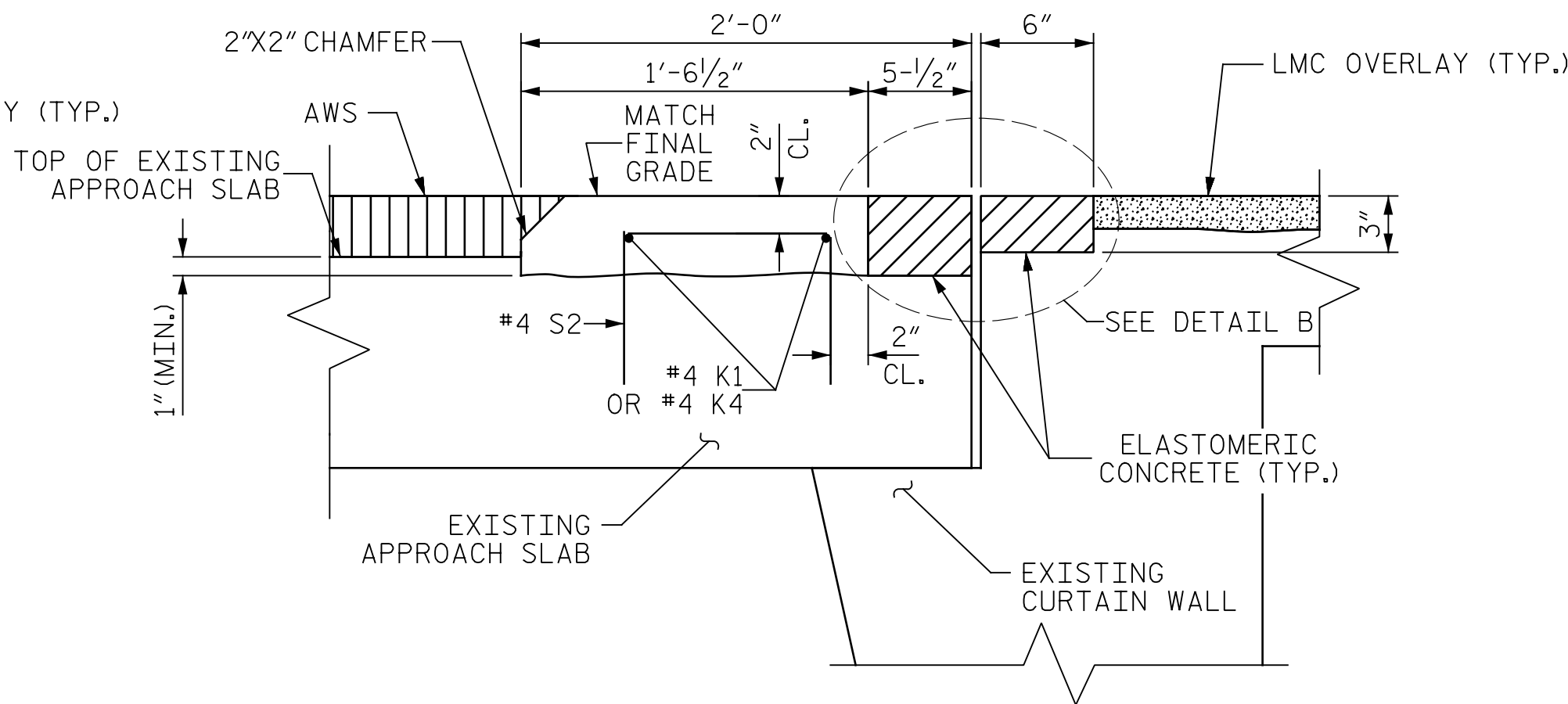
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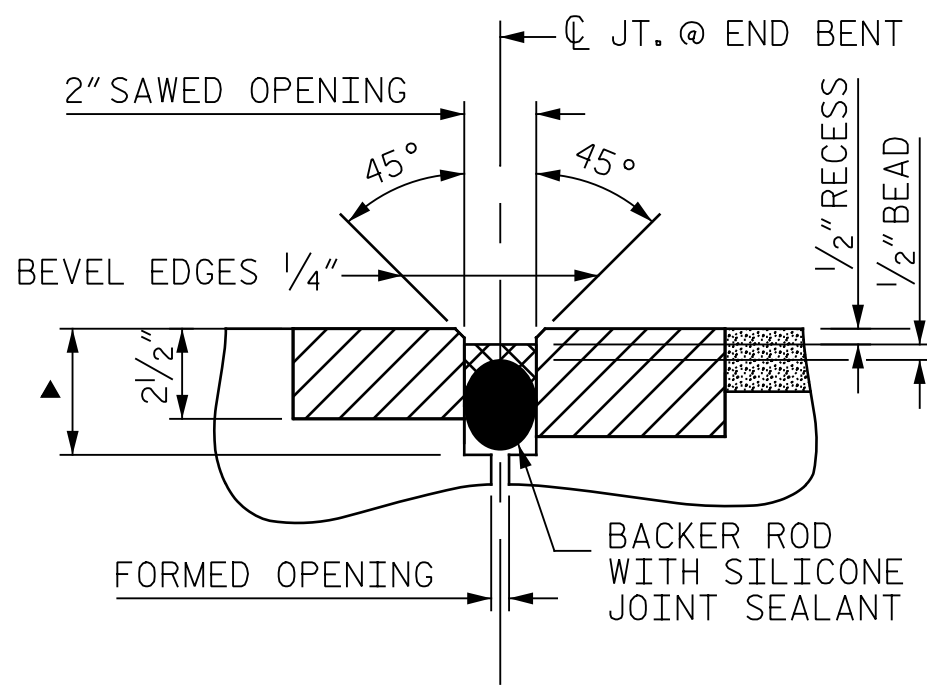
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

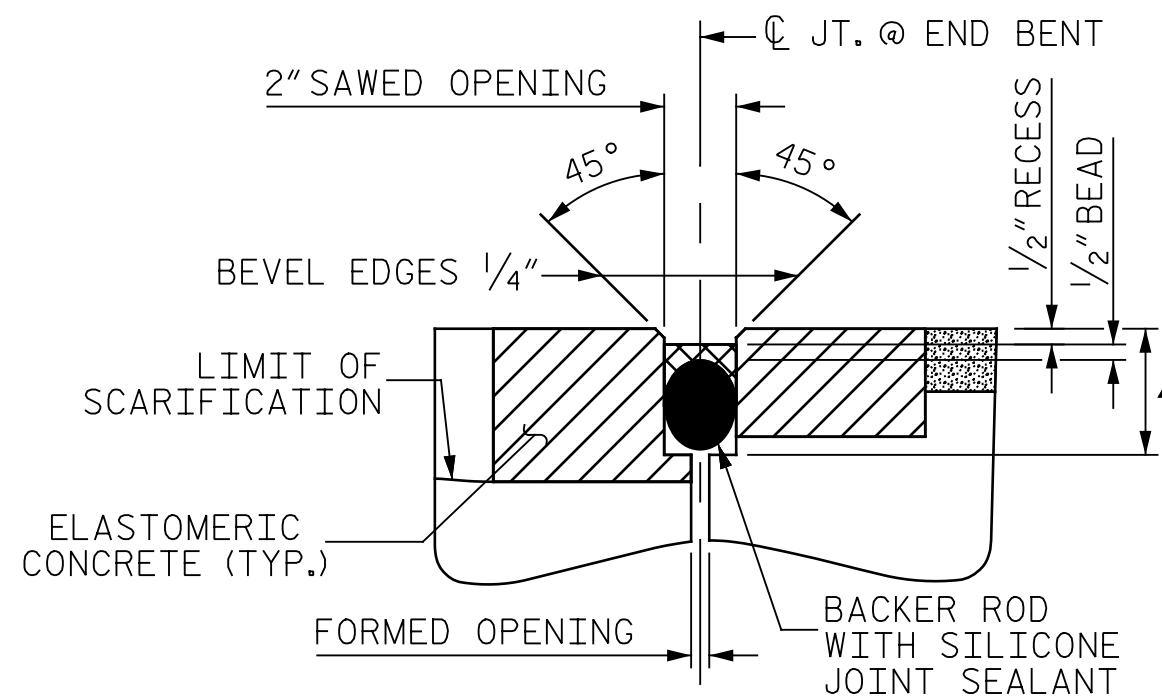


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



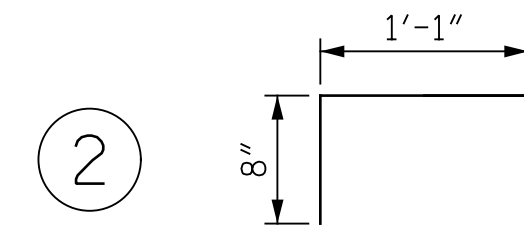
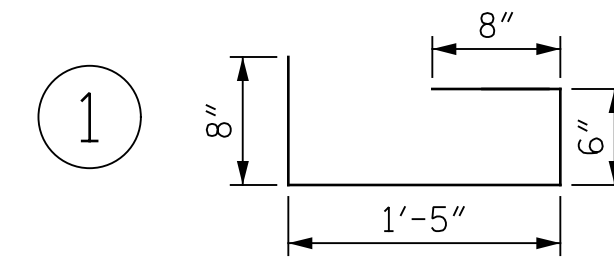
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	2	#4	STR	17'-10"	24
K2	3	#4	STR	5'-9"	12
K3	3	#4	STR	9'-9"	20
K4	2	#4	STR	22'-0"	30
S1	16	#4	1	3'-3"	35
S2	40	#4	2	2'-5"	65
REINFORCING STEEL					190 LBS
CLASS AA CONCRETE					1.9 CY
ELASTOMERIC CONCRETE					10.4 CF

NOTES

THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109

SHEET 1 OF 2



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

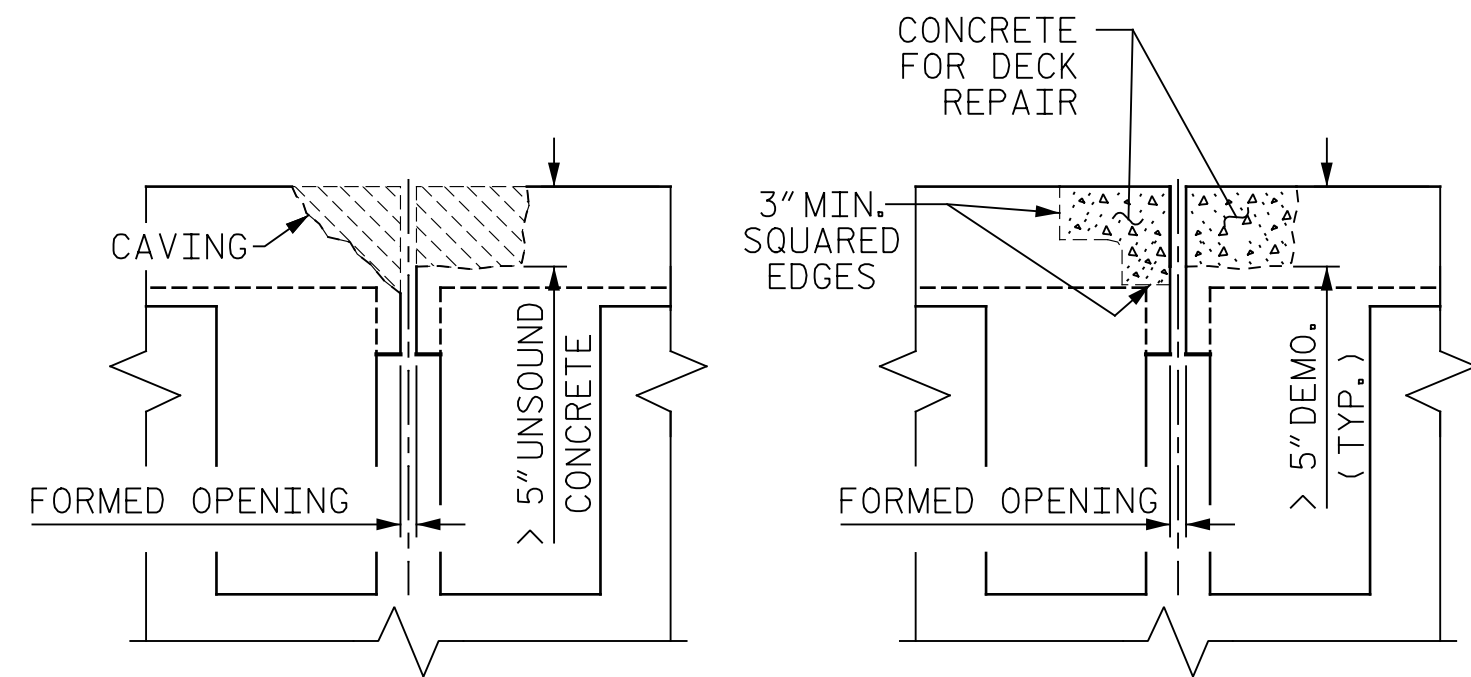
JOINT DETAILS

REVISIONS						SHEET NO. S-104
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

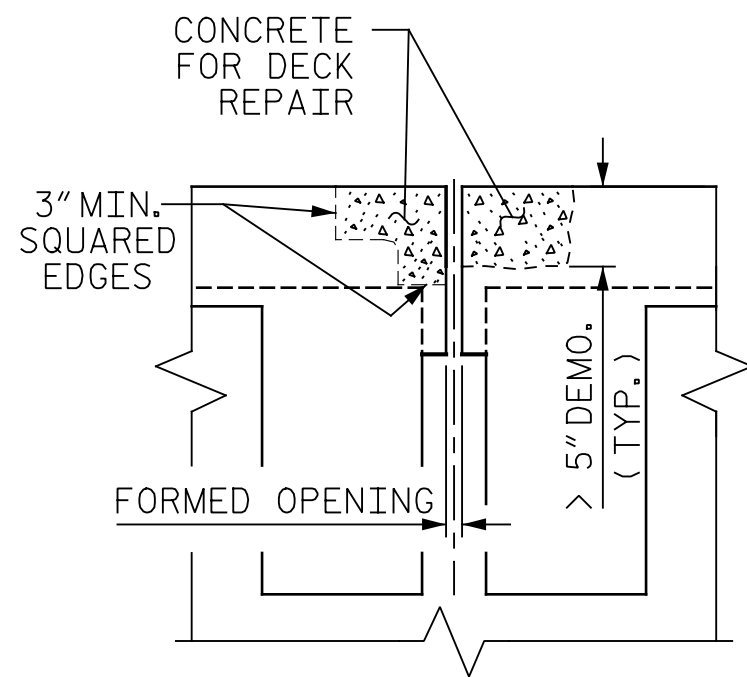
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

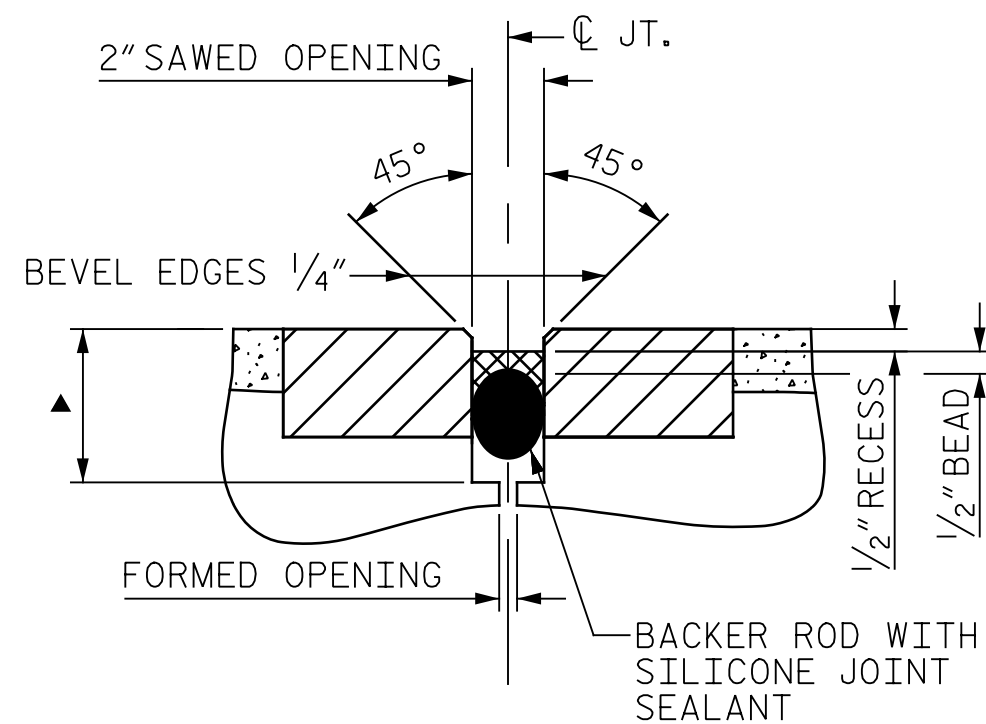
NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

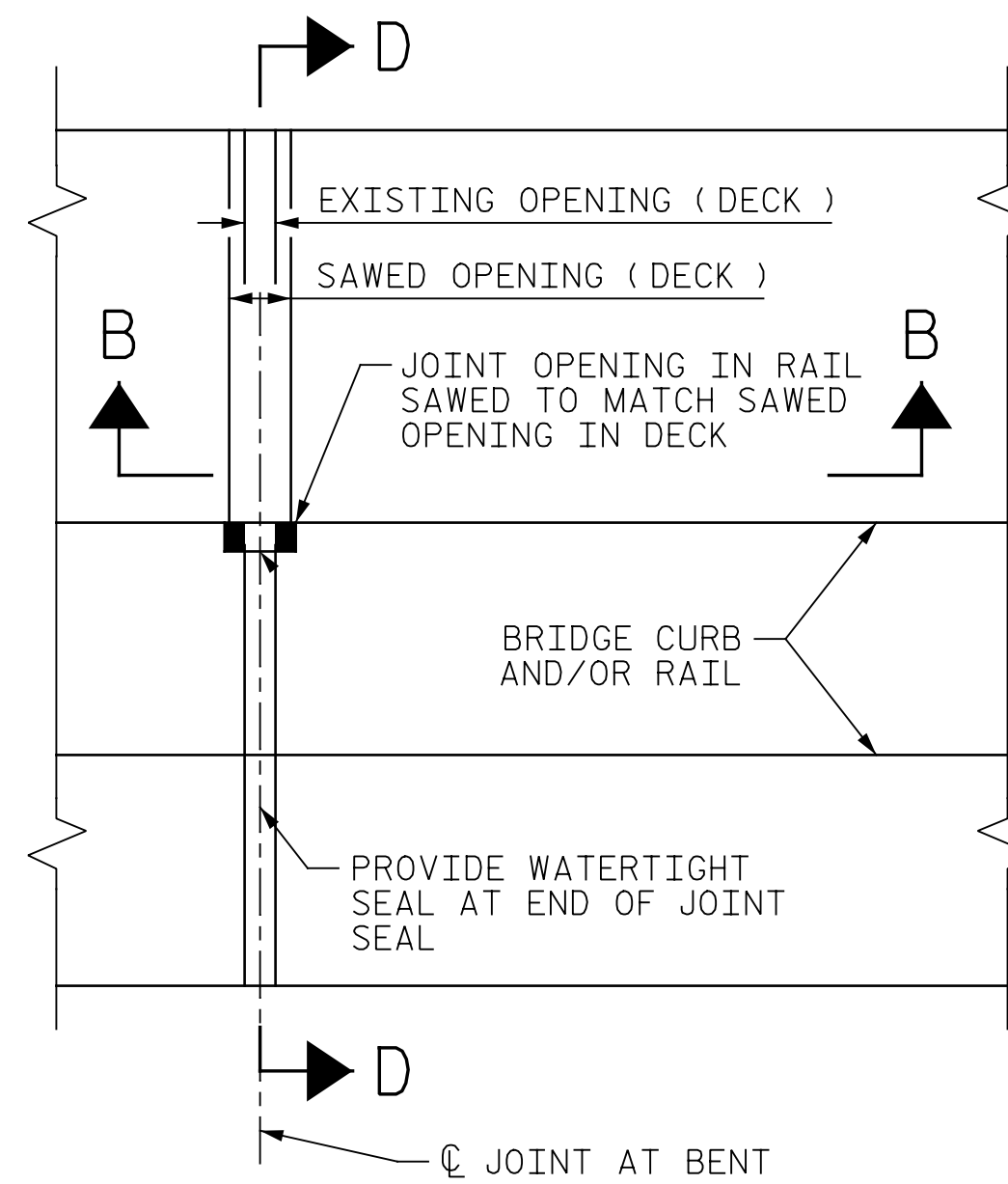
DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

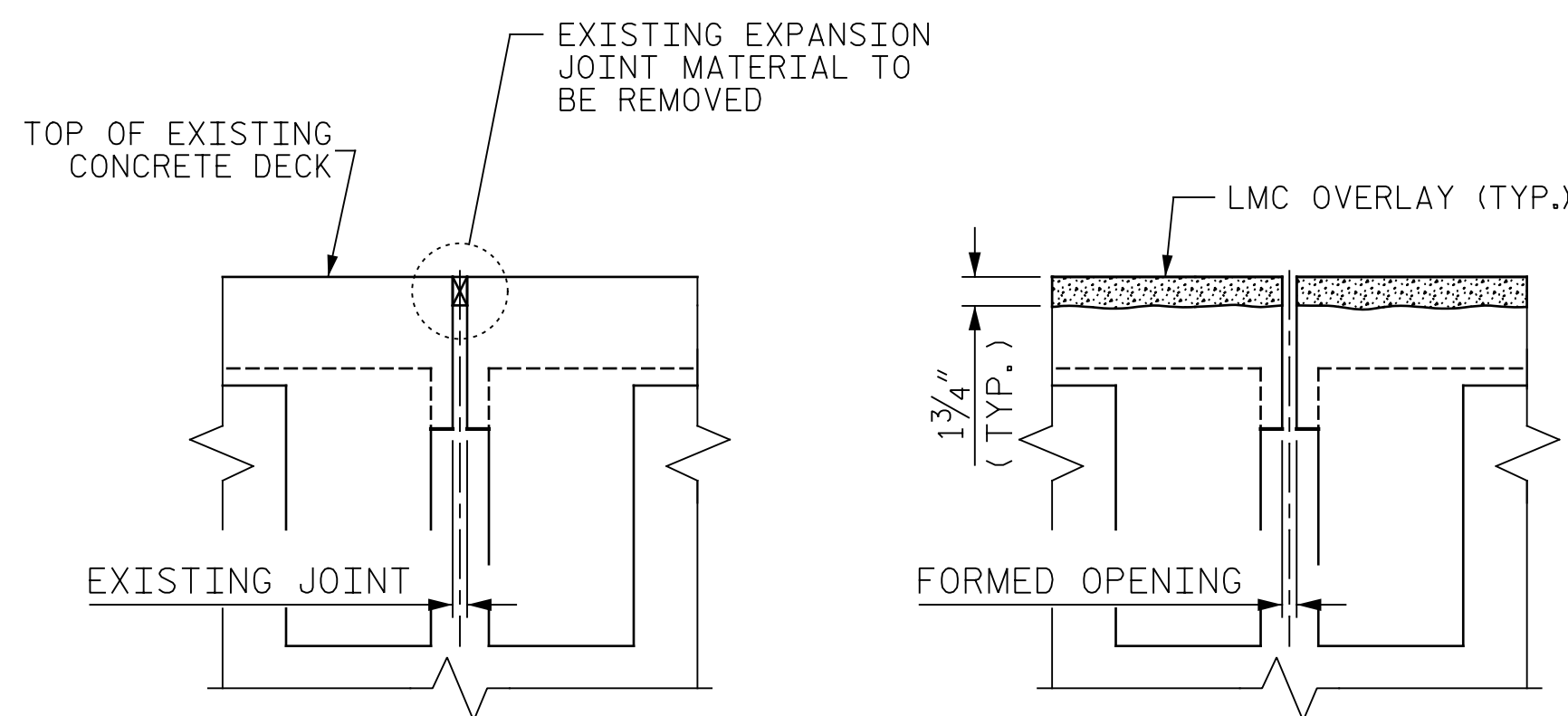
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



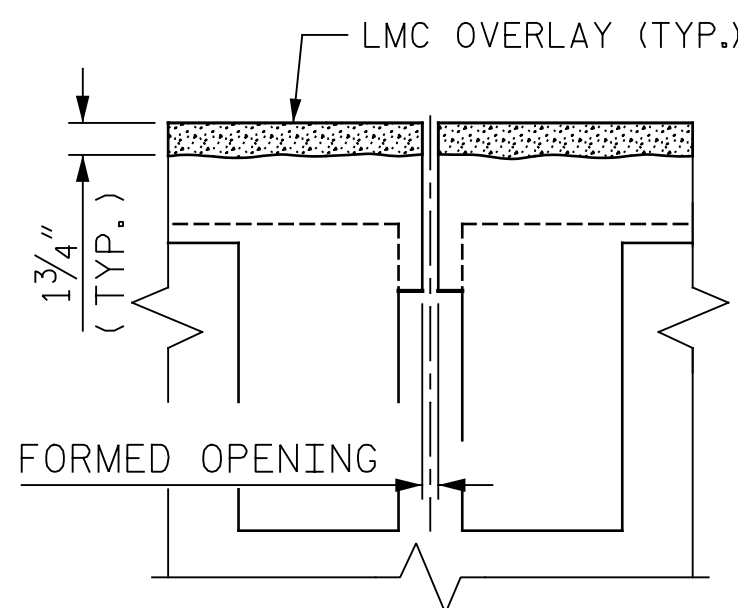
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)



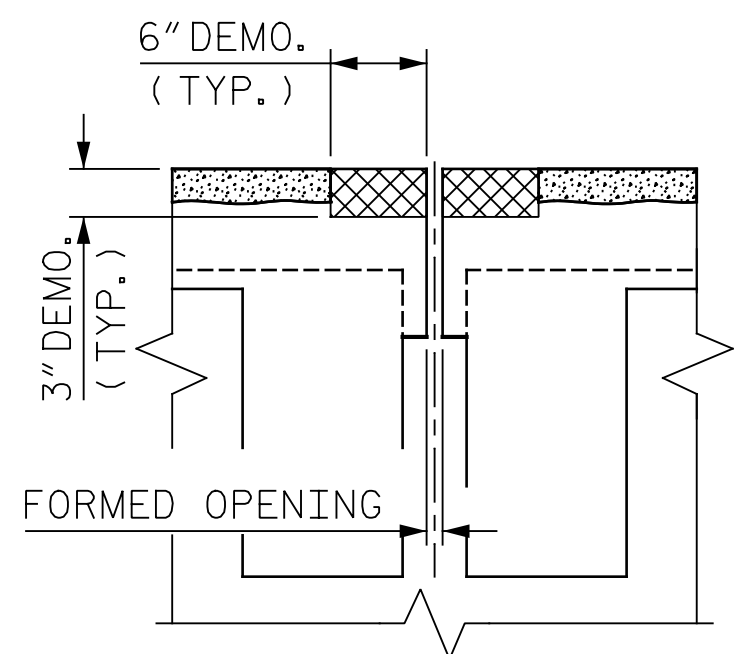
*SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



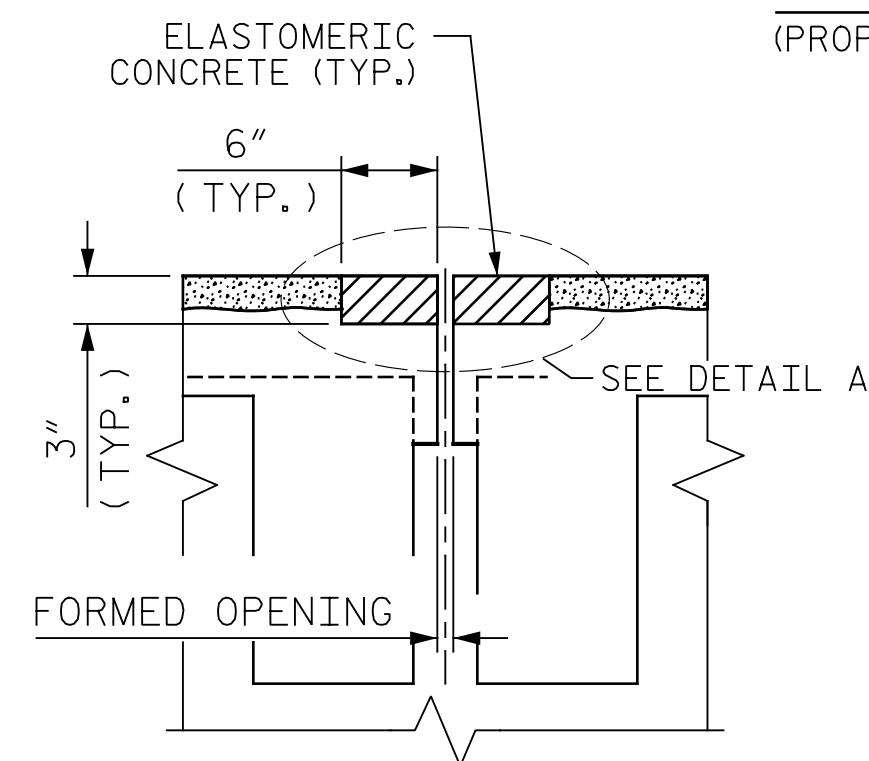
EXISTING



PROPOSED
LMC OVERLAY



MINIMUM
JOINT DEMOLITION

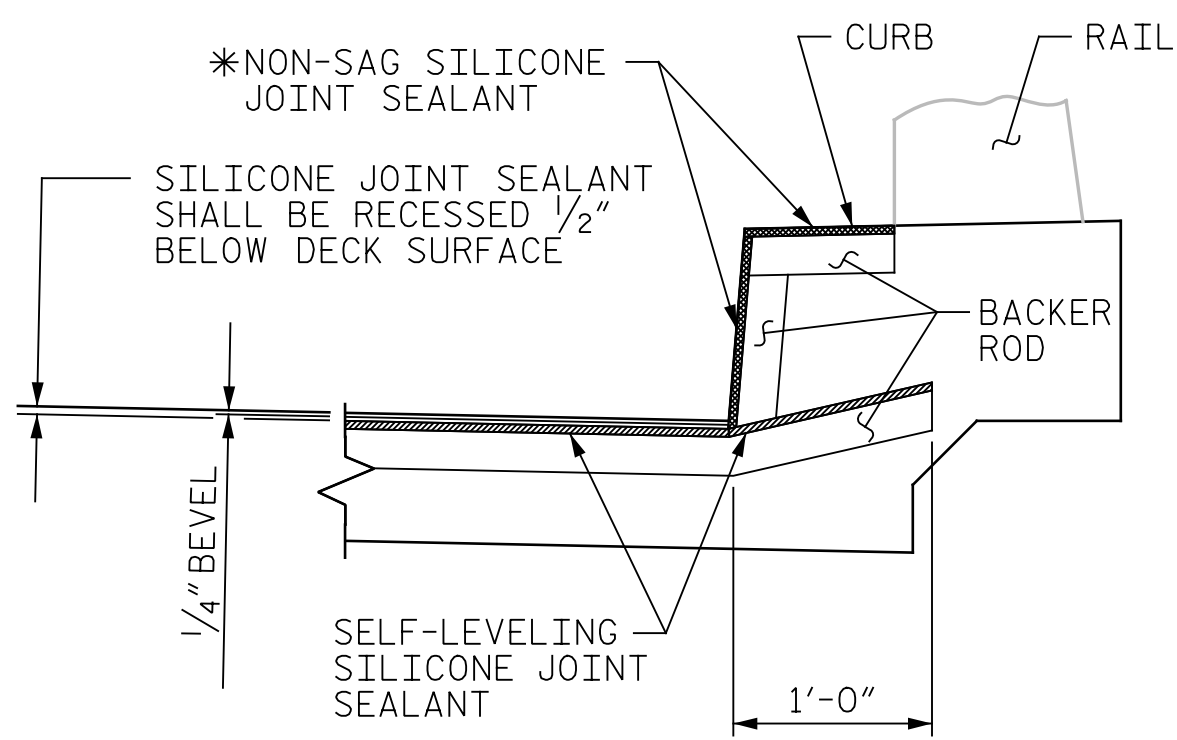


PROPOSED JOINT
PRE-SAWED DIMENSIONS

SECTION C-C

ELASTOMERIC CONCRETE	
BENT 1	10.3 CF
BENT 2	10.3 CF

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

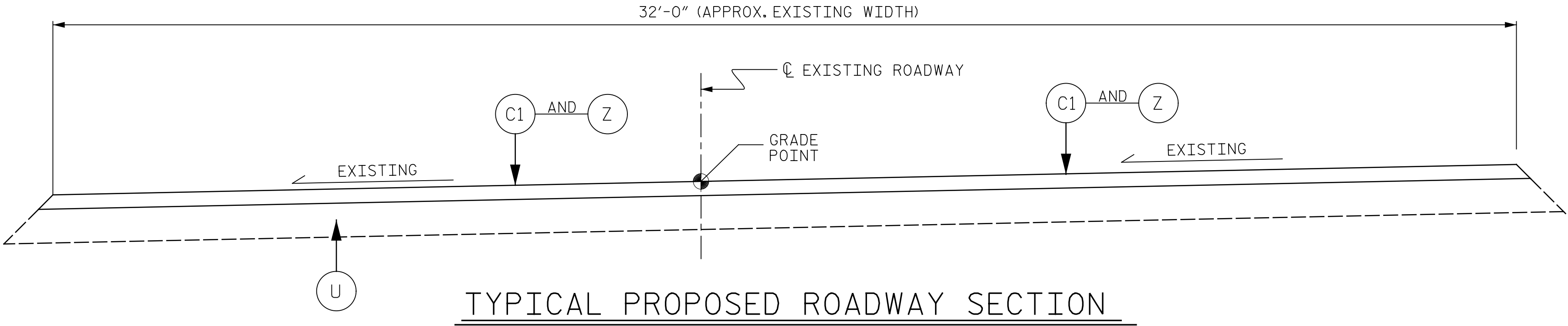
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FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-105					TOTAL SHEETS 142

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

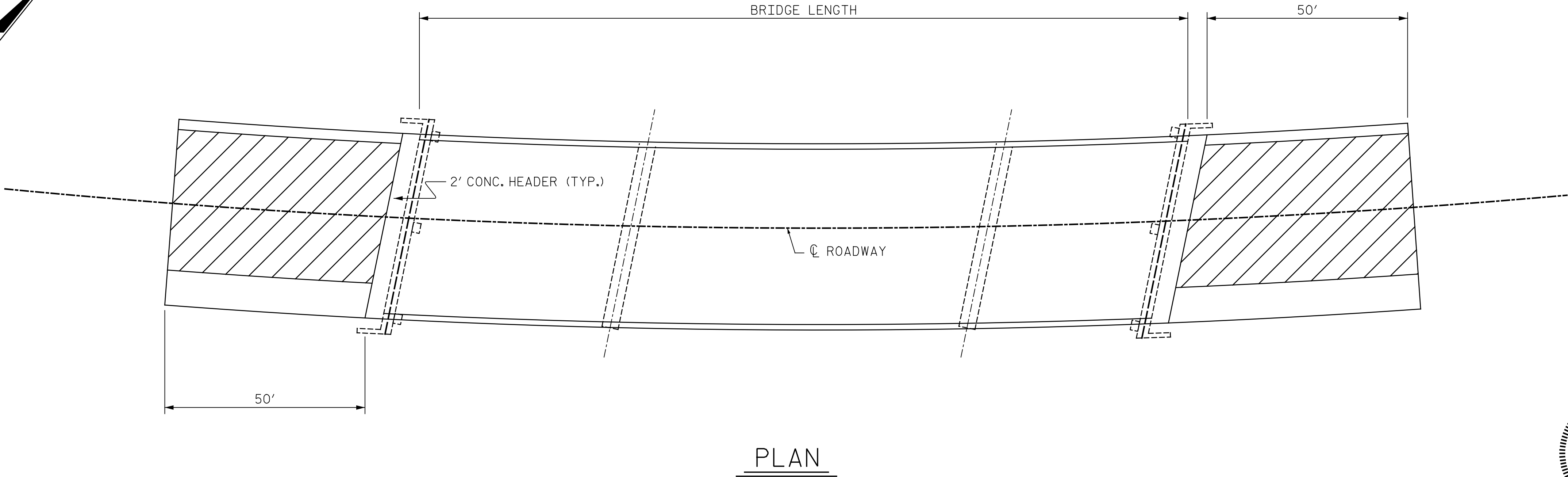
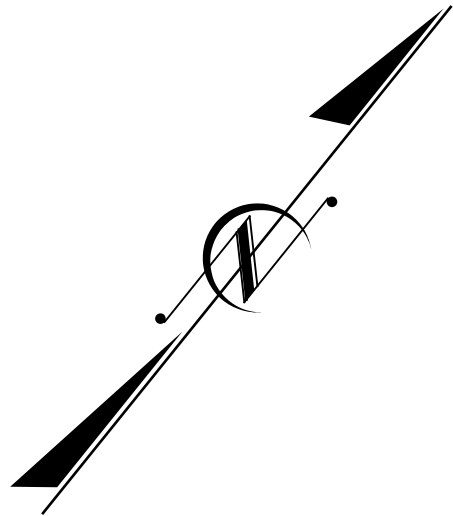
PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	379 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	32 TONS	
ASPHALT BINDER FOR PLANT MIX	2 TONS	



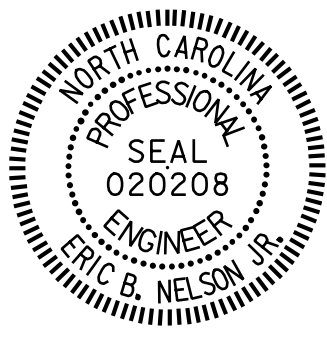
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 109



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-106					TOTAL SHEETS 142

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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