

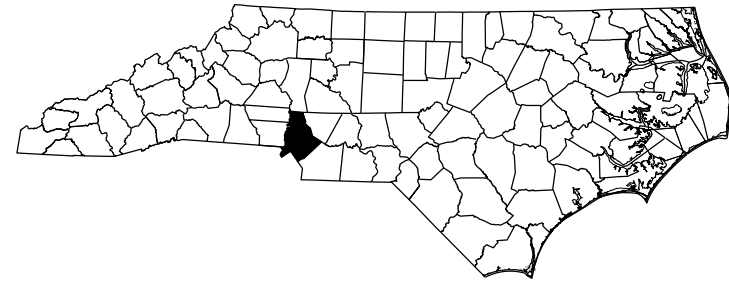
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**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
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PROJECT: I-5768

CONTRACT NO.:



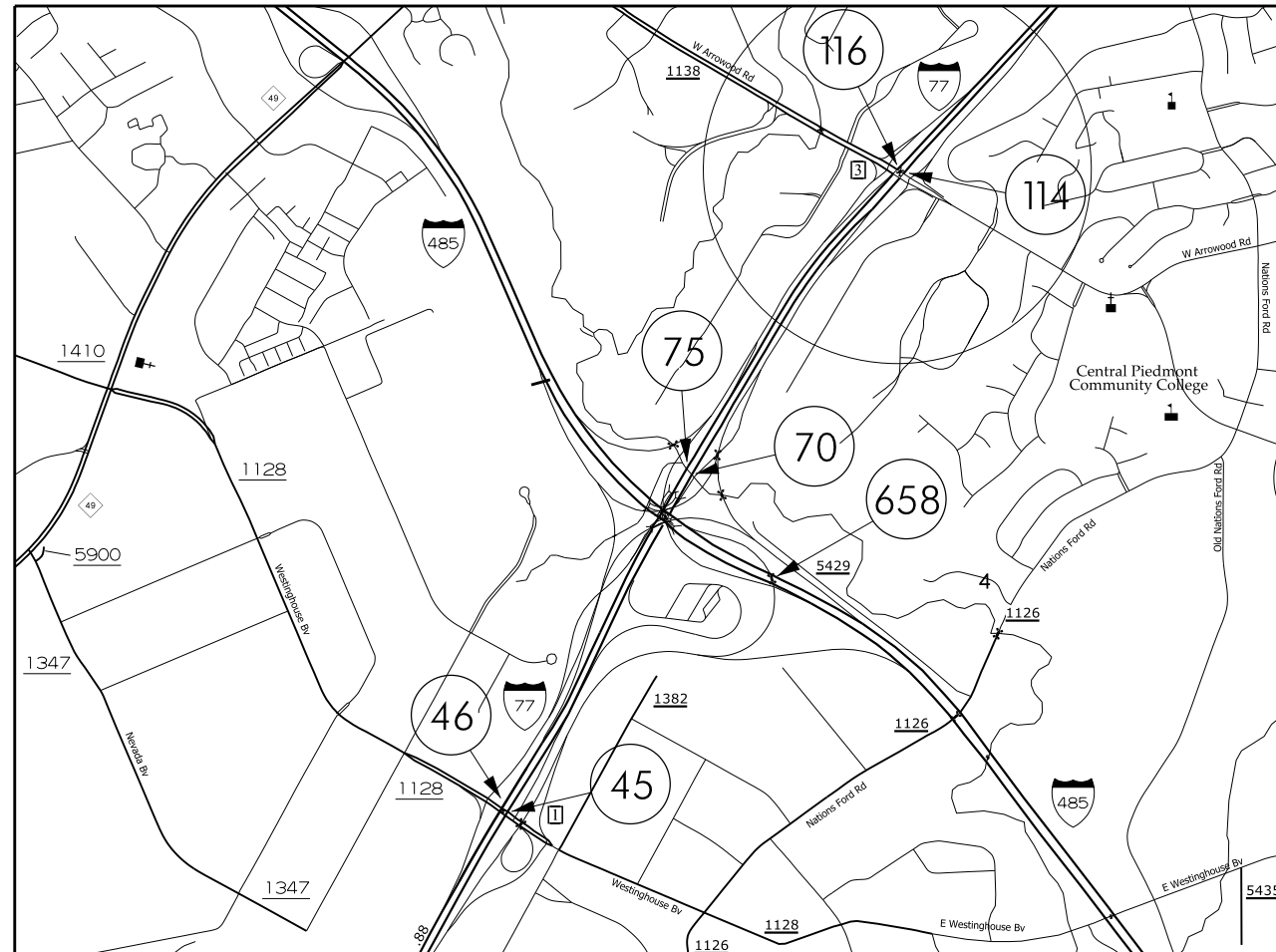
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

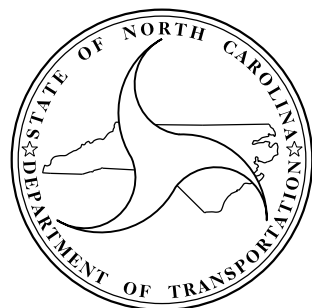
**LOCATION: BRIDGE #45 AND #46 ON I-77 OVER SR 1128
BRIDGE #70 AND #75 ON I-77 OVER SUGAR CREEK
BRIDGE #114 AND #116 ON I-77 OVER W. ARROWOOD ROAD
BRIDGE #658 ON I-77 RAMP OVER I-485 AND I-77 RAMP**

TYPE OF WORK: BRIDGE PRESERVATION - EPOXY OVERLAY SYSTEM, JOINT DEMOLITION, JOINT SEAL REPAIR AND PAINTING STRUCTURAL STEEL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5768	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53011.1.1		P.E.	
53011.3.1	—	CONST.	



STRUCTURES



DESIGN DATA

BRIDGE #45 - ADT 2013 - 55,500
BRIDGE #46 - ADT 2013 - 55,500
BRIDGE #70 - ADT 2013 - 40,750
BRIDGE #75 - ADT 2012 - 40,750
BRIDGE #114 - ADT 2013 - 56,000
BRIDGE #116 - ADT 2013 - 56,000
BRIDGE #658 - ADT 2012 - 21,750

PROJECT LENGTH

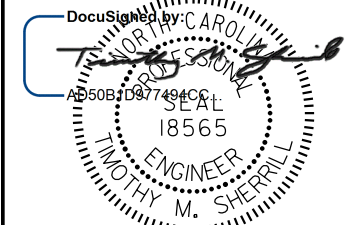
BRIDGE #45 - 0.03 MILE
BRIDGE #46 - 0.03 MILE
BRIDGE #70 - 0.03 MILE
BRIDGE #75 - 0.03 MILE
BRIDGE #114 - 0.05 MILE
BRIDGE #116 - 0.05 MILE
BRIDGE #658 - 0.07 MILE

Prepared in the Office of:
**DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

E. E. MURRAY, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
October 11, 2016

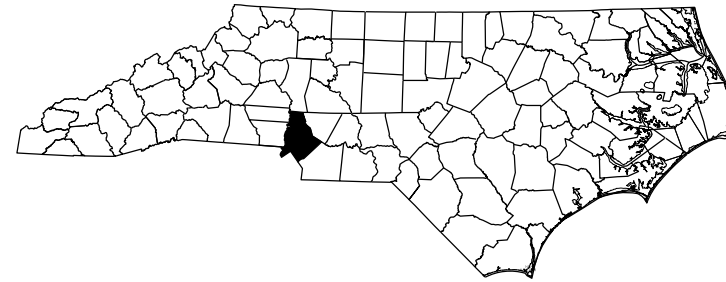


8/12/2016
TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5768

CONTRACT NO:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



MECKLENBURG COUNTY

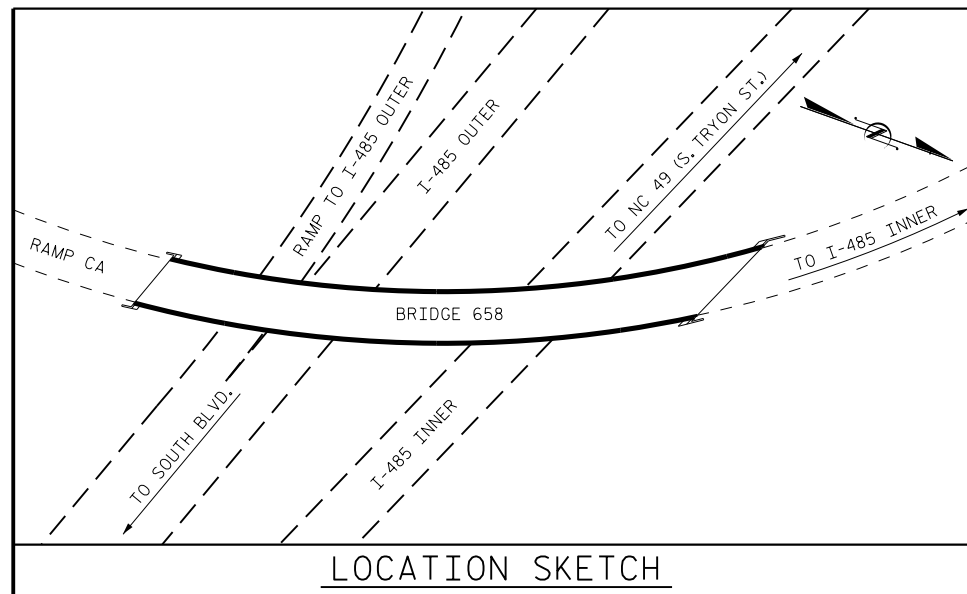
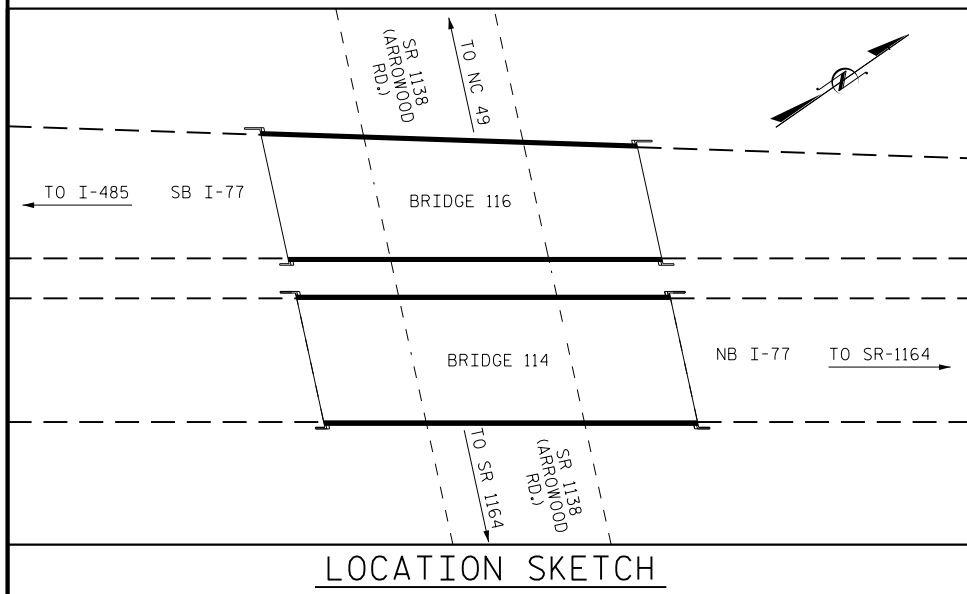
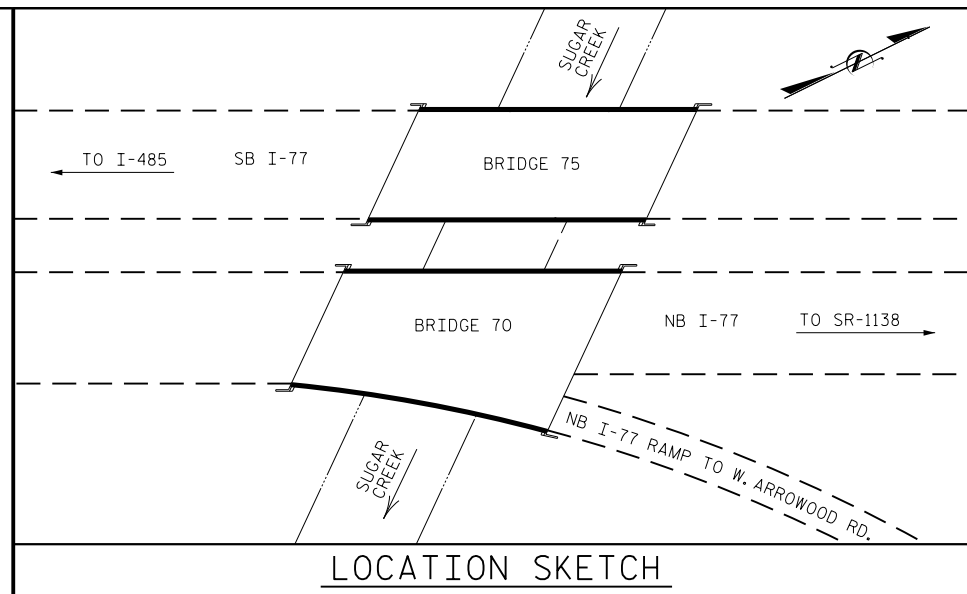
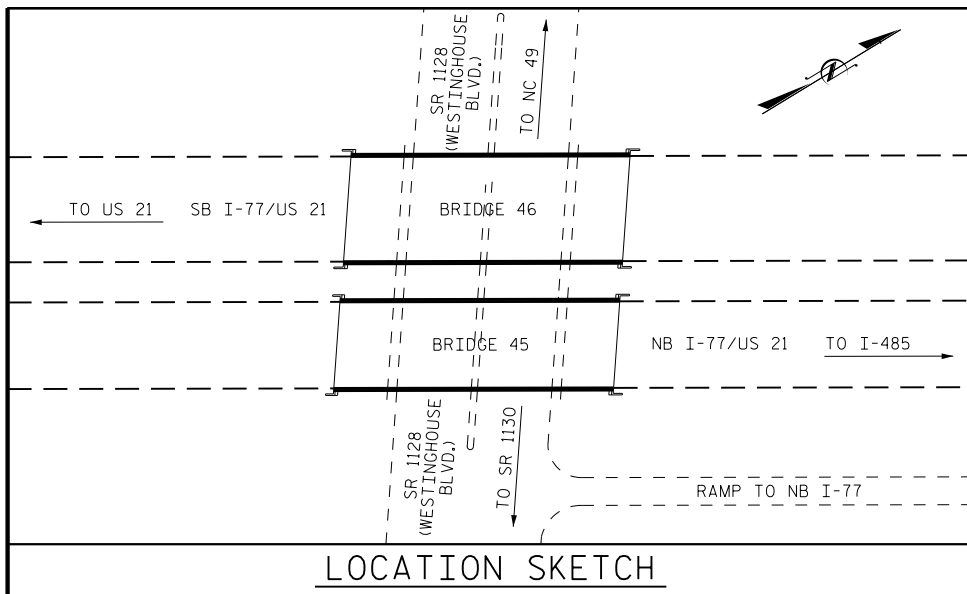
LOCATION: BRIDGE #45 AND #46 ON I-77 OVER SR 1128
BRIDGE #70 AND #75 ON I-77 OVER SUGAR CREEK
BRIDGE #114 AND #116 ON I-77 OVER W.ARROWOOD ROAD
BRIDGE #658 ON I-77 RAMP OVER I-485 AND I-77 RAMP

TYPE OF WORK: BRIDGE PRESERVATION - EPOXY OVERLAY SYSTEM, JOINT DEMOLITION, JOINT SEAL REPAIR
AND PAINTING STRUCTURAL STEEL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5768	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53011.1.1		P.E.	
53011.3.1	—	CONST.	

INDEX OF SHEETS

1	TITLE SHEET
1A	INDEX OF SHEETS
S-1 - S-21	STRUCTURAL PLANS
SN	STANDARD NOTES



NOTES:

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.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM 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.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.

FOR EPOXY OVERLAY SYSTEM - MECHANICALLY DISTRIBUTED, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING STRUCTURES, SEE SPECIAL PROVISIONS.

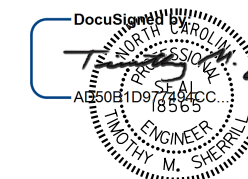
FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

—TOTAL BILL OF MATERIAL—

BRIDGE NO.	POLLUTION CONTROL	FOAM JOINT SEALS	CLEANING AND PAINTING EXISTING WEATHERING STEEL BRIDGE NO...	PAINTING CONTAINMENT FOR BRIDGE NO...	BRIDGE JOINT DEMOLITION	EXPANSION JOINT SEAL REPAIR	* CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM - MECHANICALLY DISTRIBUTED	ELASTOMERIC CONCRETE
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.	LN. FT.	SQ. FT.	SQ. FT.	CU. FT.
45	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	56	56	3	11,228	14
46	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	136	--	3	13,601	34
70	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	182	--	3	16,362	46
75	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	154	--	3	13,941	39
114	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	--	82	3	20,978	--
116	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	--	75	3	20,078	--
658	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	--	88	3	12,823	--
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	528	301	21	109,011	133

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 45, 46, 70, 75,
114, 116, & 658



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 LOCATION SKETCHES
 &
 TOTAL BILL OF MATERIAL

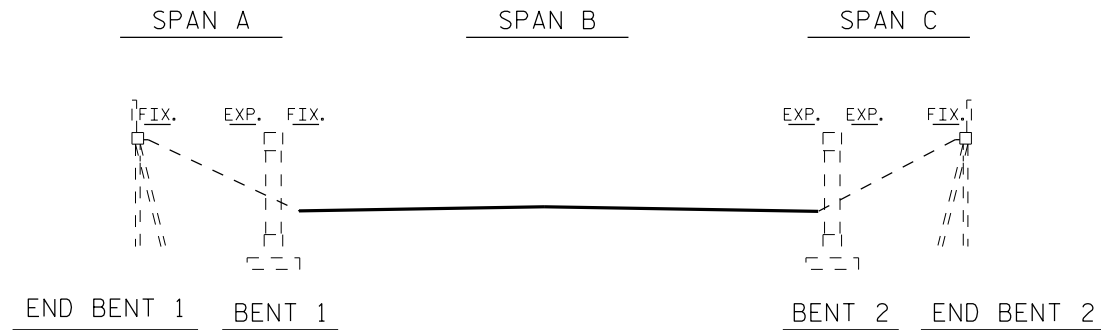
8/12/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			21

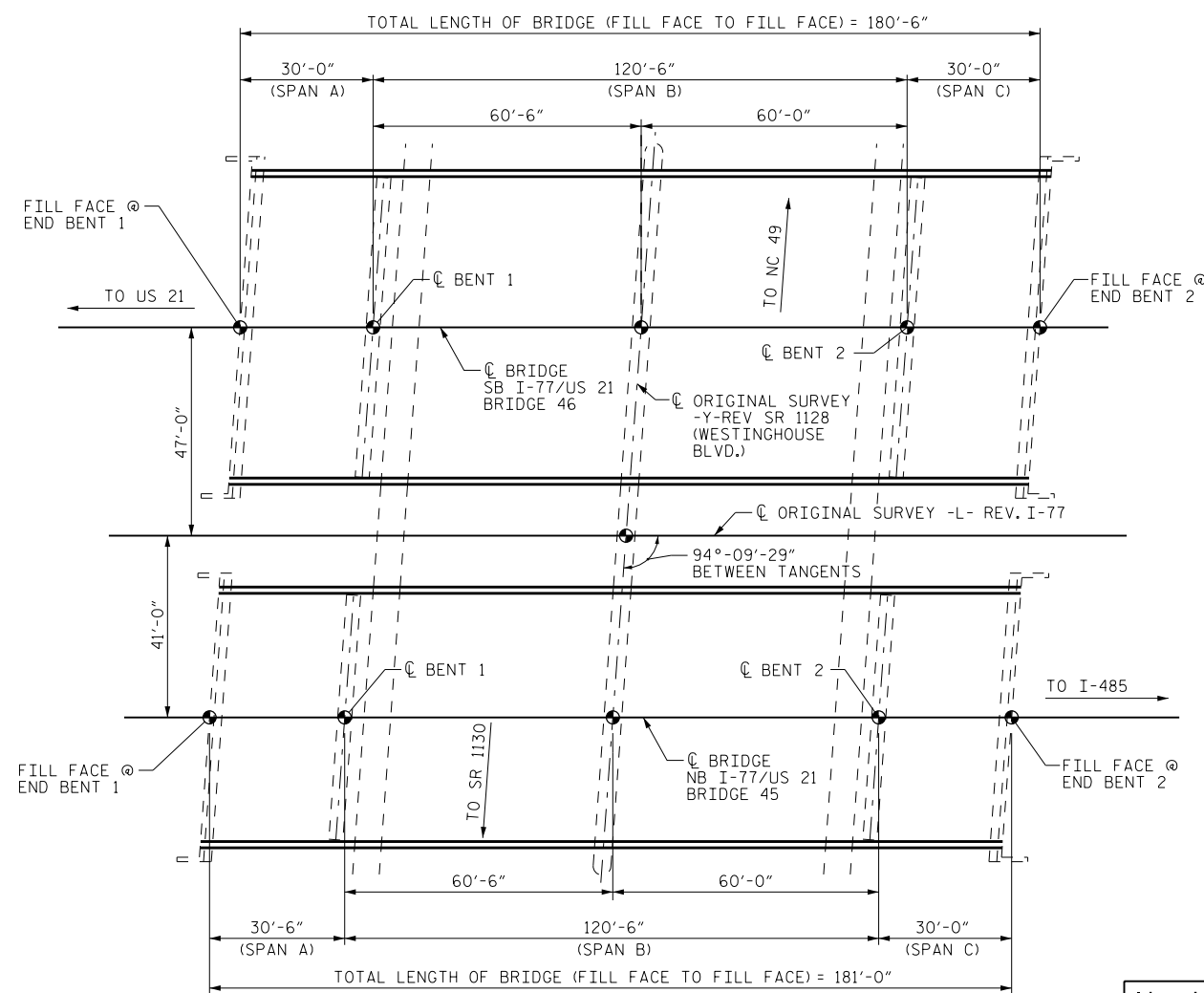
DRAWN BY : D.V. JOYNER DATE : 7/2016
 CHECKED BY : W. C. SMITH DATE : 7/2016

650
640
630
620
610



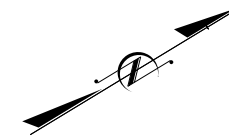
ELEVATION

SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES



PLAN

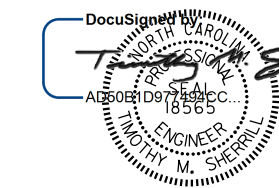
COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY



I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

8/12/2016



PROJECT NO. I-5768
MECKLENBURG COUNTY
BRIDGE NO.: 45 & 46

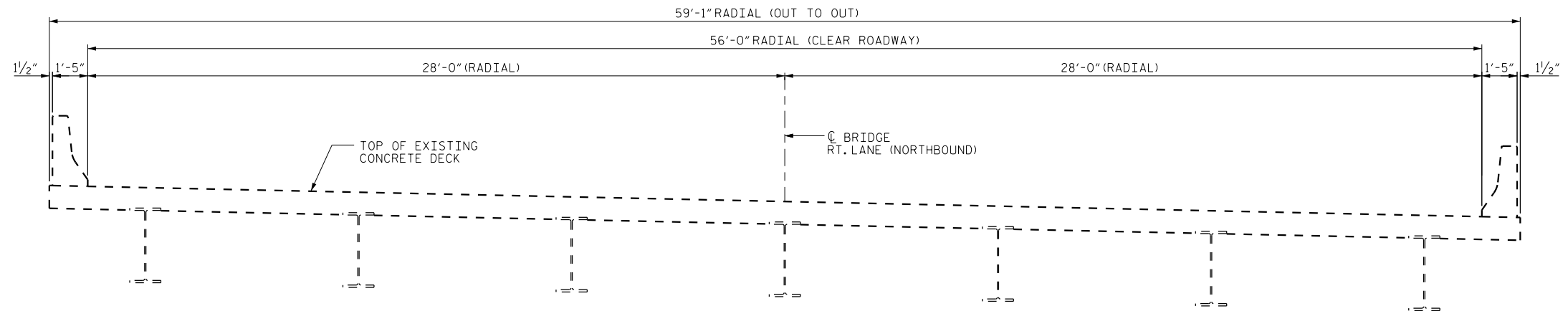
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
BRIDGE OVER SR 1128
ON I-77/US 21
BETWEEN US 21 AND
I-485

DRAWN BY : D.V. JOYNER DATE : 5/2016
CHECKED BY : W. SMITH DATE : 5/2016

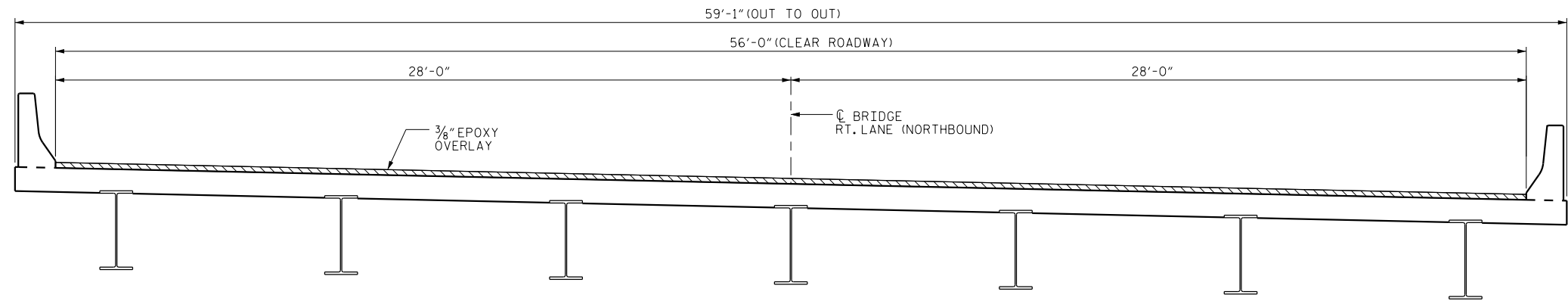
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wsmith

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

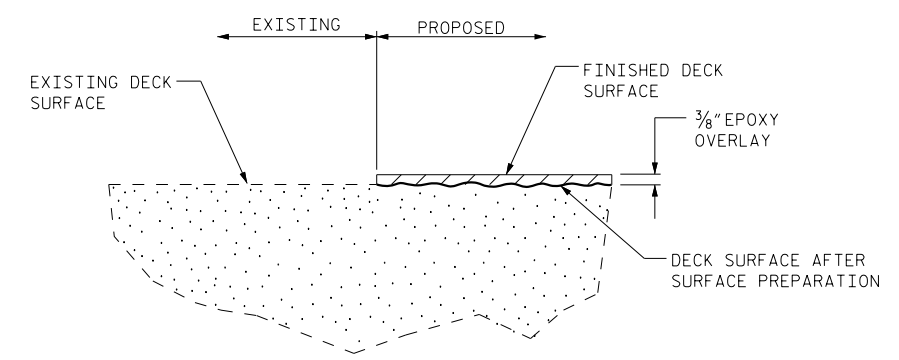
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-2
2			4			TOTAL SHEETS 21



TYPICAL SECTION
 (EXISTING)

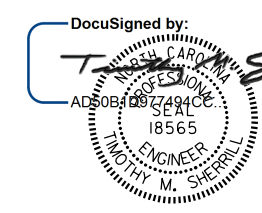


TYPICAL SECTION
 (PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 45



8/12/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY CONCRETE
 DETAILS

DRAWN BY : D.V. JOYNER DATE : 5/2016
 CHECKED BY : W. SMITH DATE : 7/2016

12-AUG-2016 11:37
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 wsmith

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED



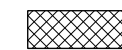
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			21

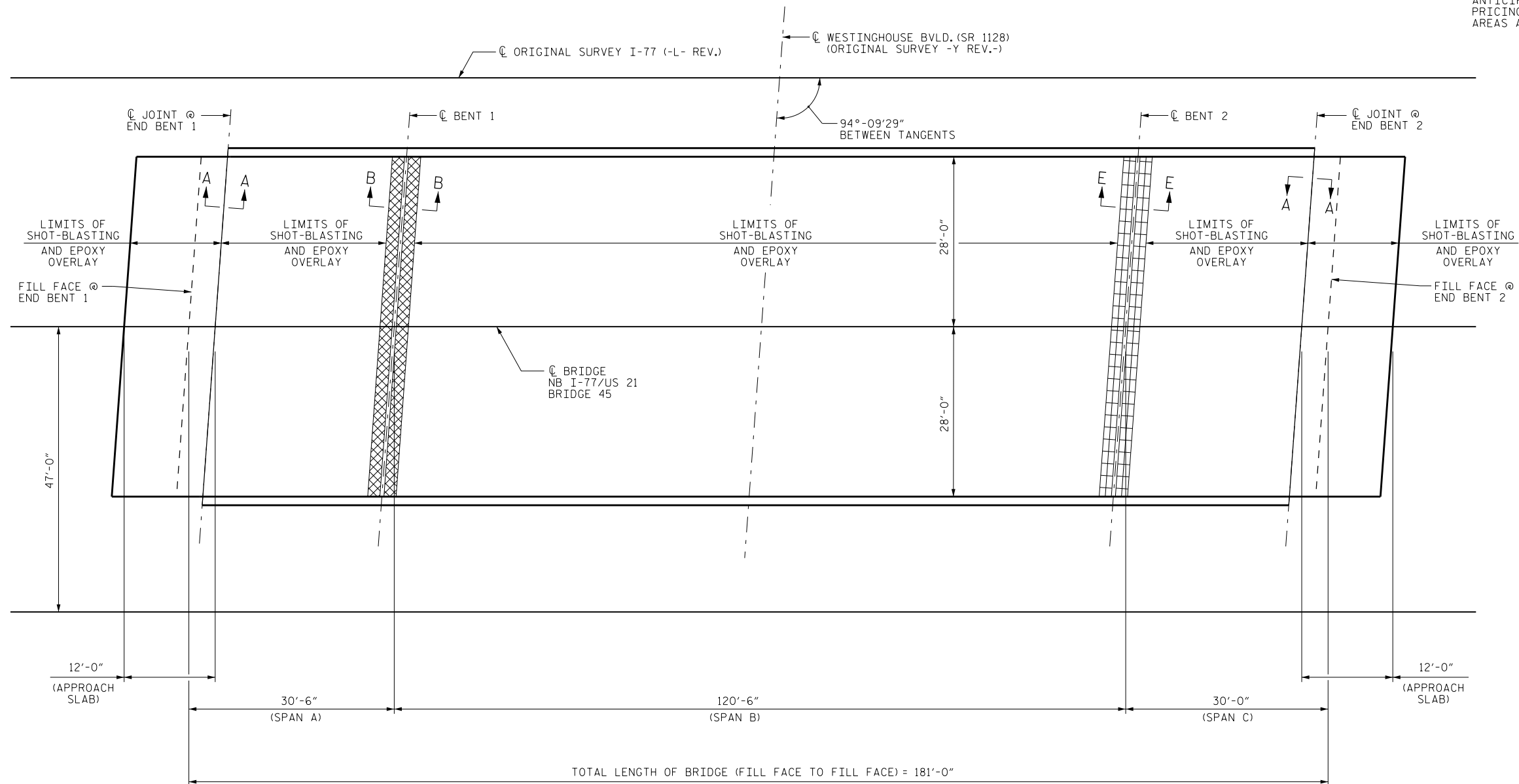
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SQ. FT.	
EPOXY OVERLAY SYSTEM	11,228 SQ. FT.	
BRIDGE JOINT DEMOLITION	56 SQ. FT.	
BRIDGE JOINT REPAIR	56 LN. FT.	

NOTE:

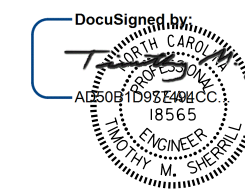
* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

-  EPOXY OVERLAY
-  EXISTING BRIDGE JOINT REPAIR
-  BRIDGE JOINT DEMOLITION



PLAN - SPANS A, B, AND C
(FOR SECTIONS A-A, B-B, & E-E, SEE JOINT DETAILS SHEET S-20 AND S-21)

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 45



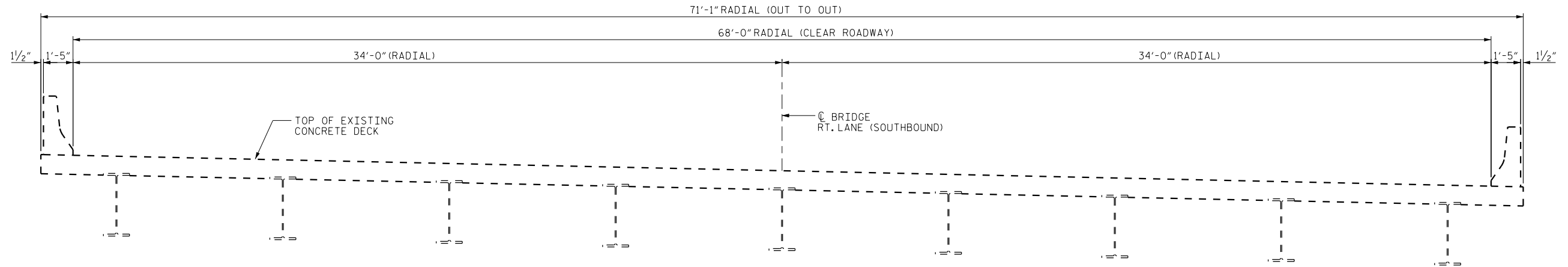
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (NORTHBOUND)

8/12/2016

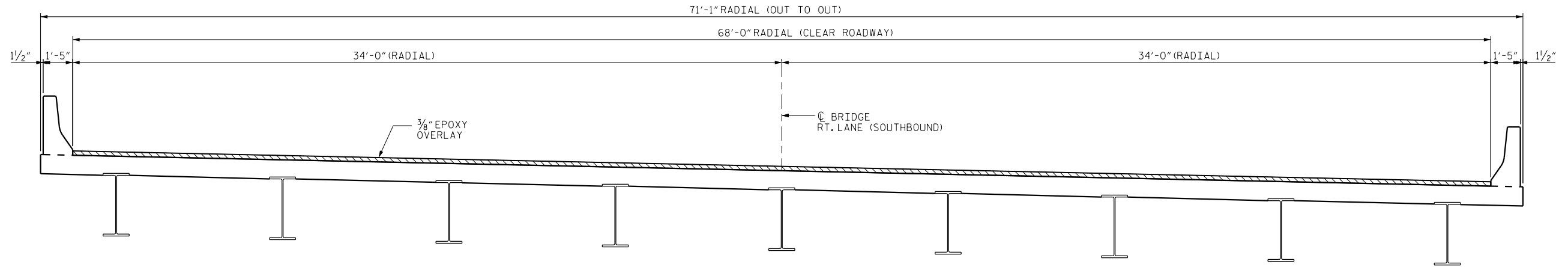
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			21

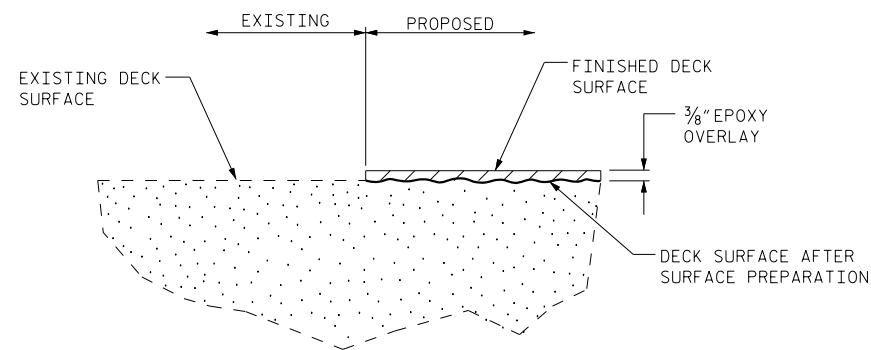
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 6/2016



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 46

DocuSigned by
 T. J. JOYNER
 PROFESSIONAL ENGINEER
 ACC. ID: 97744000
 18565
 W. MOSELEY M. SHERRELL

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY CONCRETE
 DETAILS

8/12/2016

DRAWN BY : D.V. JOYNER DATE : 5/2016
 CHECKED BY : W. SMITH DATE : 8/2016

12-AUG-2016 11:37
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 wsmith

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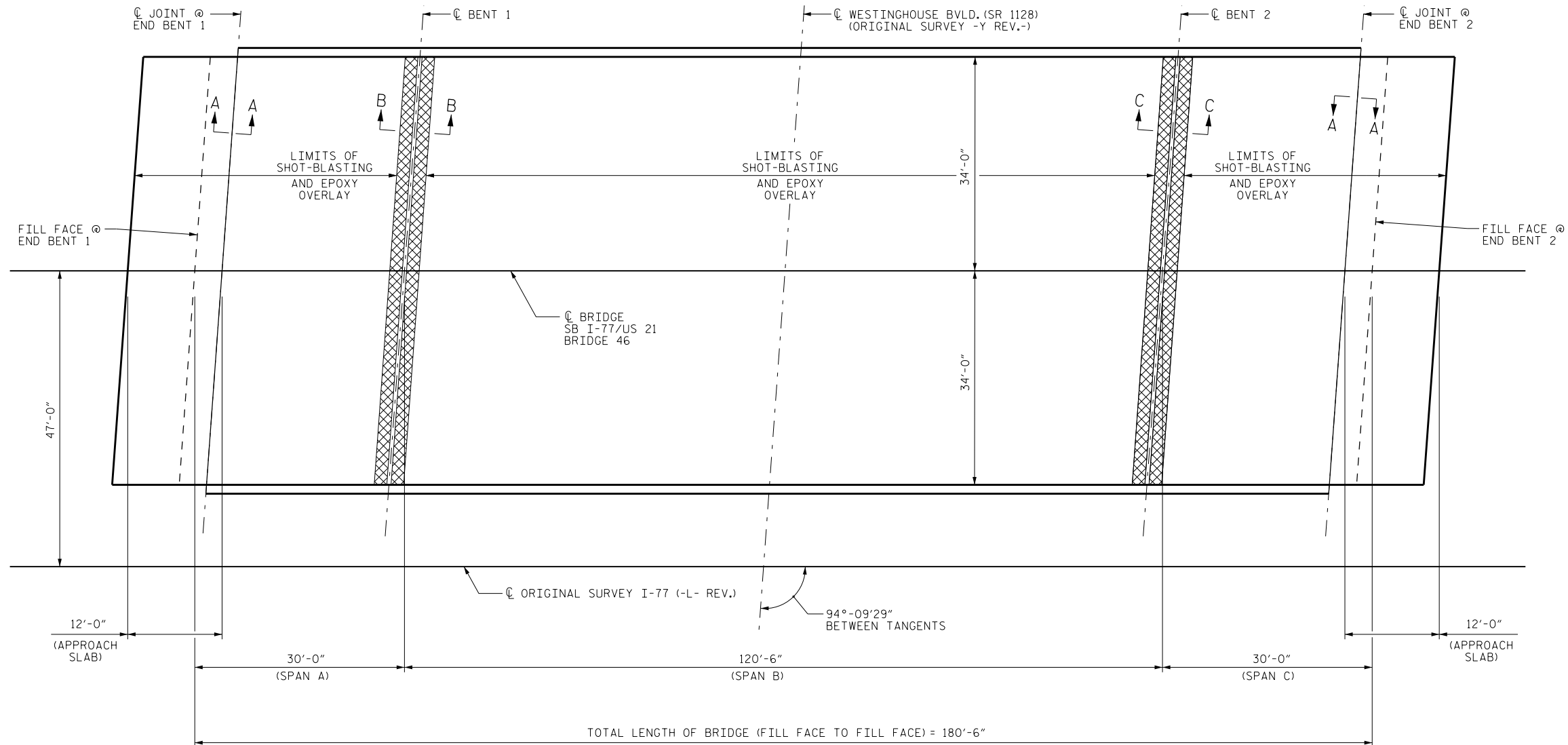
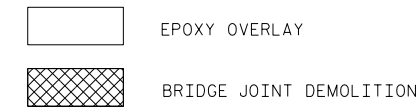
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-5
2			4			TOTAL SHEETS 21

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SQ. FT.	
EPOXY OVERLAY SYSTEM	13,601 SQ. FT.	
BRIDGE JOINT DEMOLITION	136 SQ. FT.	

NOTE:

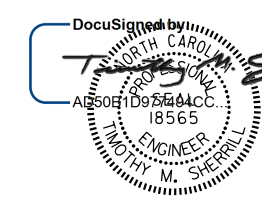
* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 46

SHEET 1 OF 2

PLAN - SPANS A, B, AND C
 (FOR SECTIONS A-A, B-B, & C-C, SEE JOINT DETAILS SHEET S-20)



8/12/2016

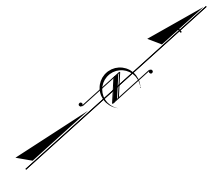
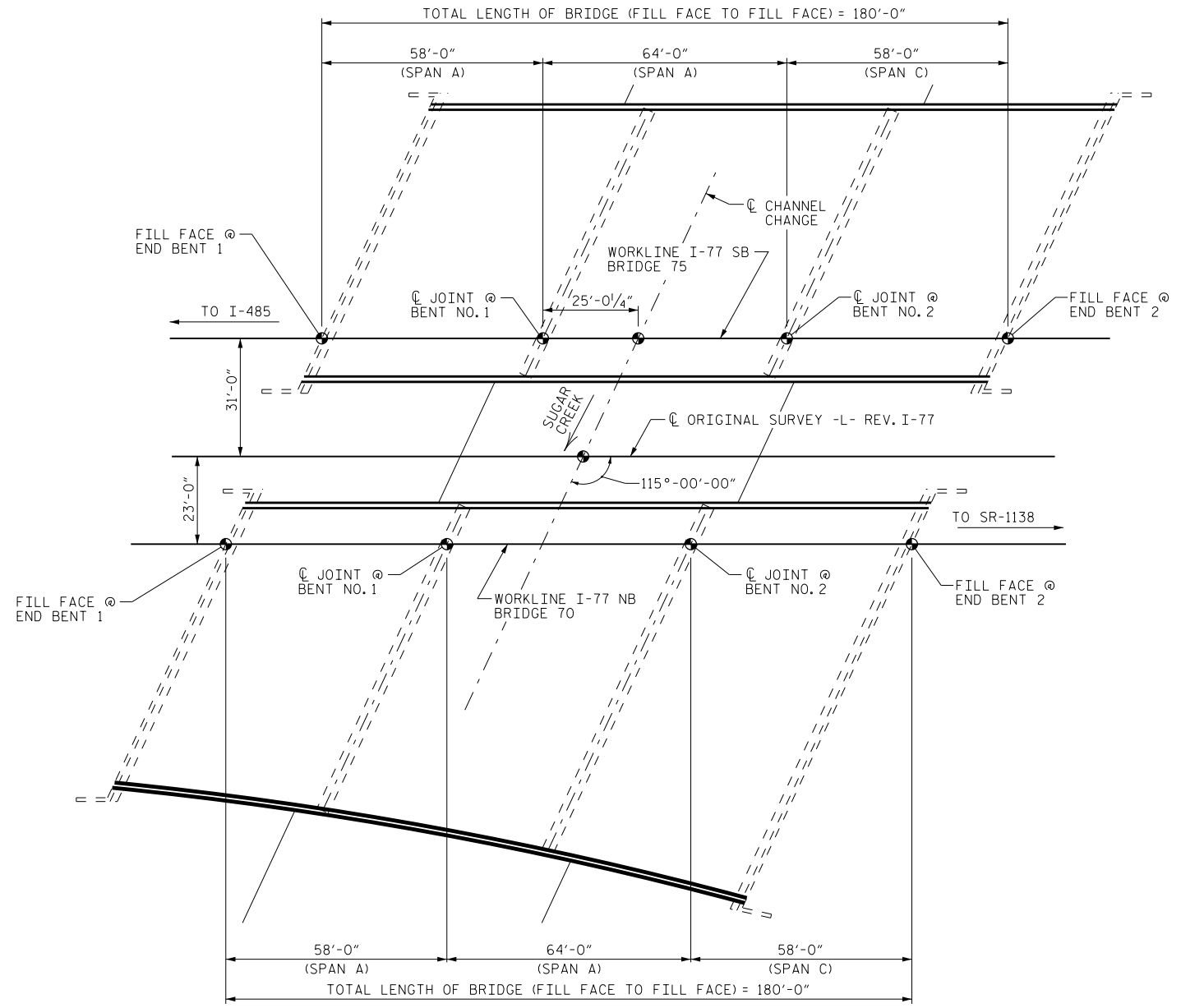
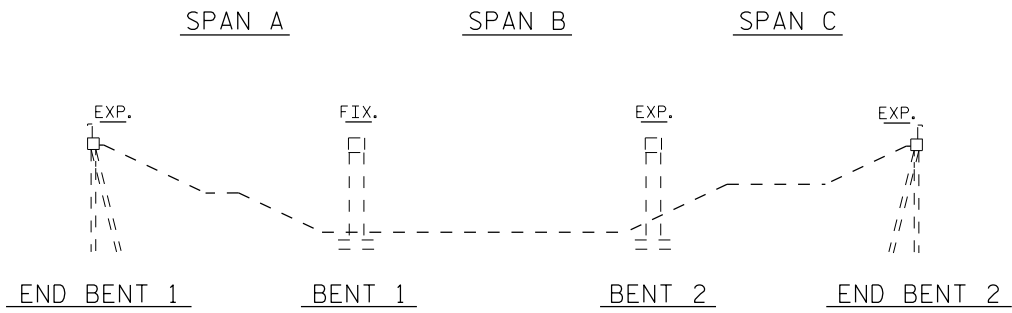
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SURFACE PREPARATION & EPOXY OVERLAY
 (SOUTHBOUND)

DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016

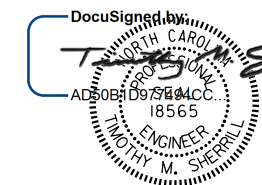
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-6
2			4			TOTAL SHEETS 21

580
570
560
550
540



PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO.: 70 & 75



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
BRIDGE OVER SUGAR
CREEK ON I-77/US 21
BETWEEN I-485 AND
SR 1138

8/12/2016

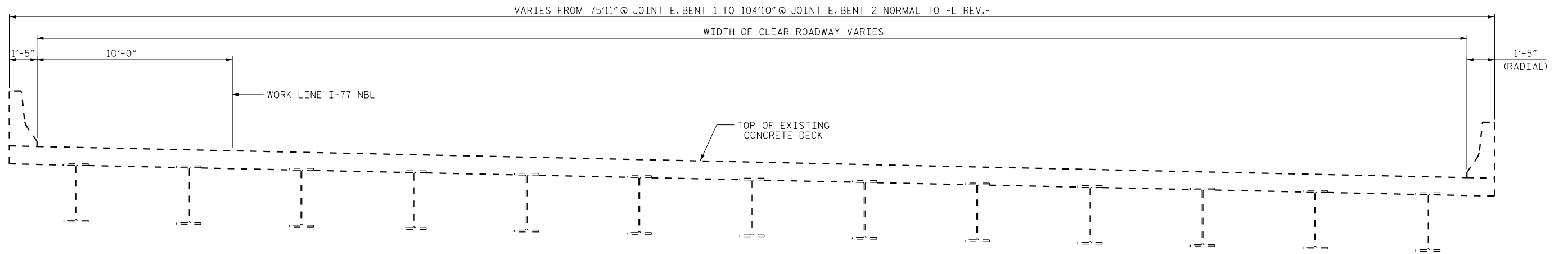
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			21

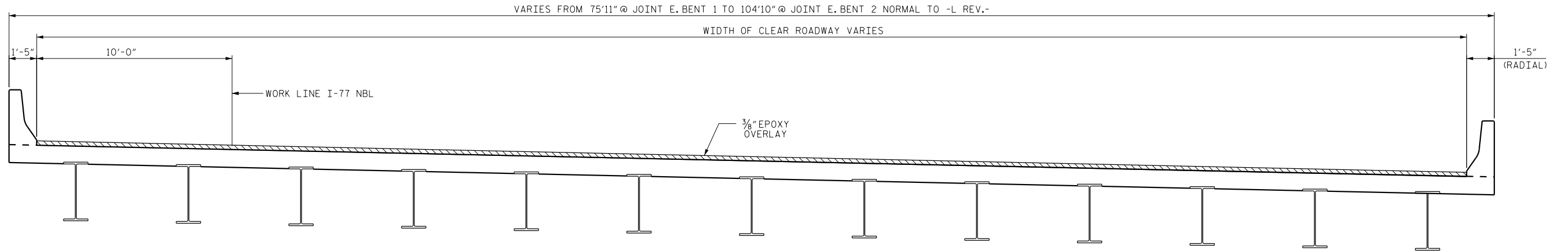
DRAWN BY : D.V. JOYNER DATE : 5/2016
 CHECKED BY : W. SMITH DATE : 5/2016

PLAN

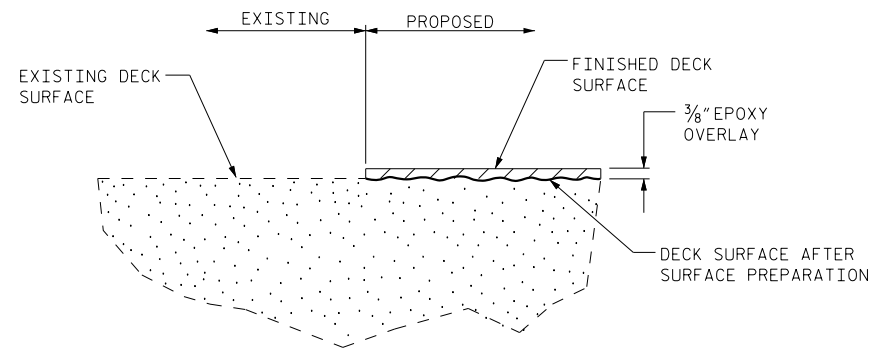
COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY



TYPICAL SECTION
(EXISTING)

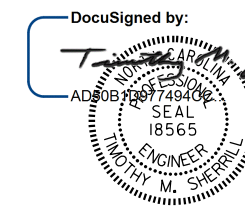


TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 70



8/12/2016

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUPERSTRUCTURE TYPICAL SECTION & EPOXY CONCRETE DETAILS						S-8
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	21
1			3			
2			4			

DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W. SMITH DATE : 8/2016

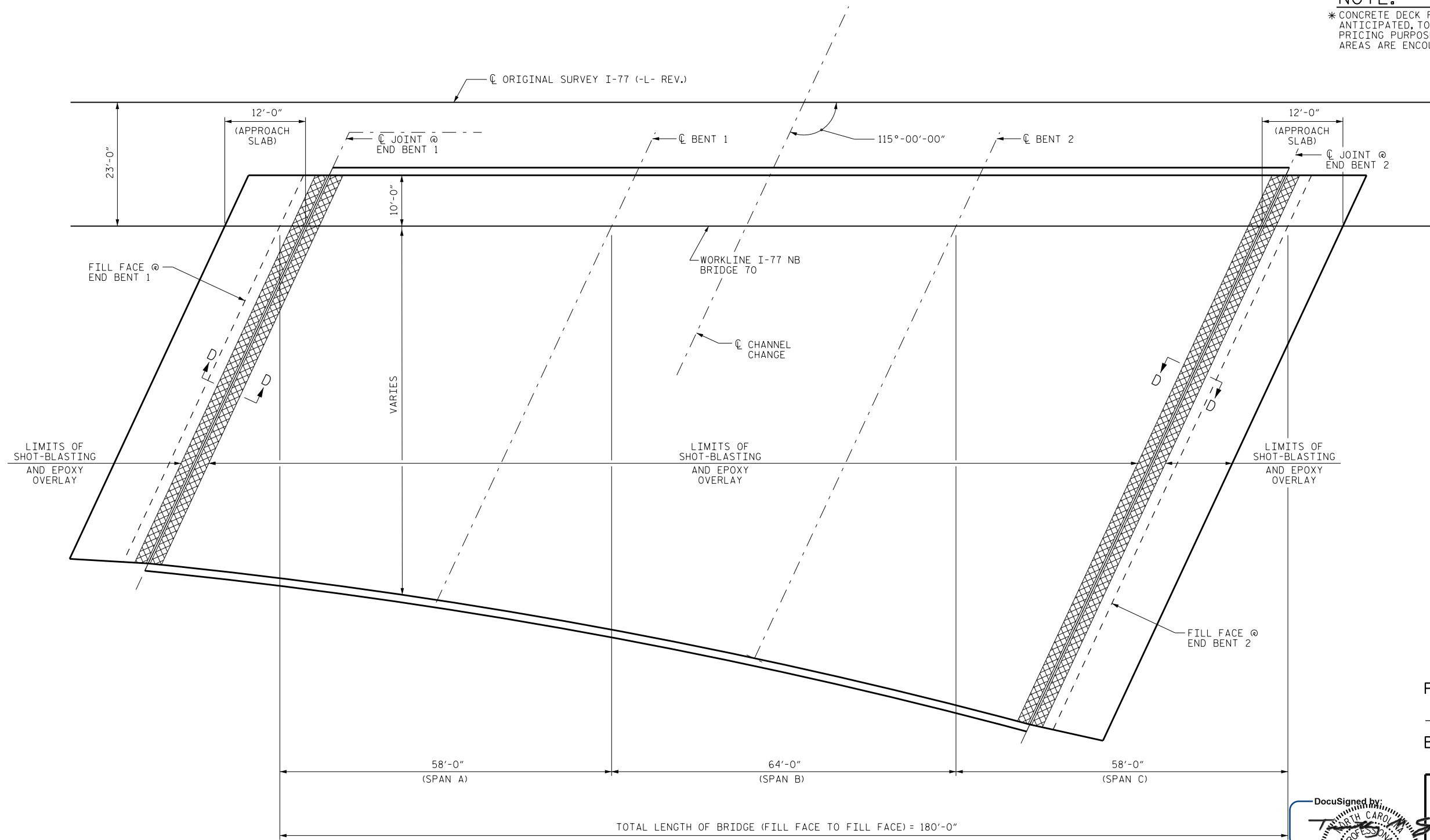
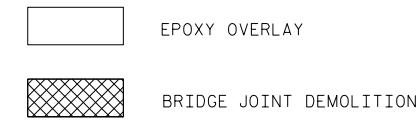
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FINAL UNLESS ALL
SIGNATURES COMPLETED

SUMMARY OF QUANTITIES

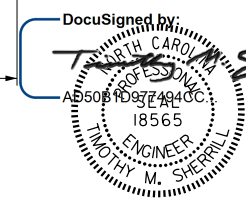
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SQ. FT.	
EPOXY OVERLAY SYSTEM	16,362 SQ. FT.	
BRIDGE JOINT DEMOLITION	182 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 70



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SURFACE PREPARATION & EPOXY OVERLAY
 (NORTHBOUND)

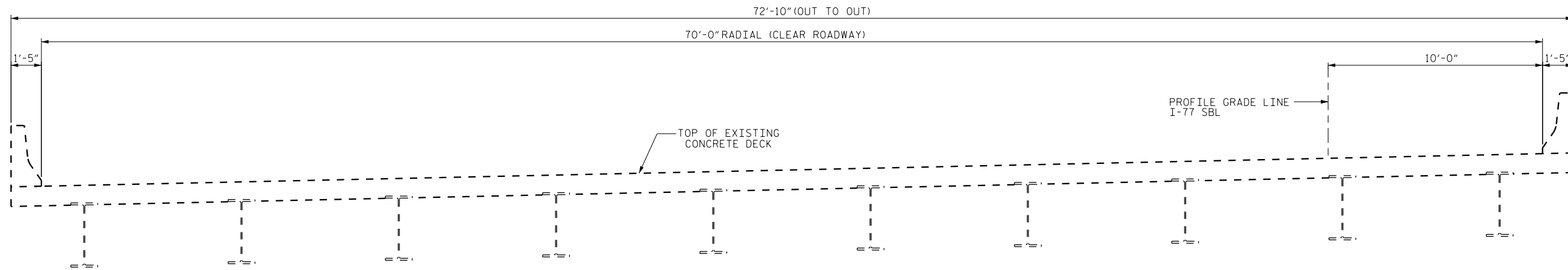
PLAN - SPANS A, B, AND C
 (FOR SECTIONS D-D SEE JOINT DETAILS SHEET S-21)

8/12/2016

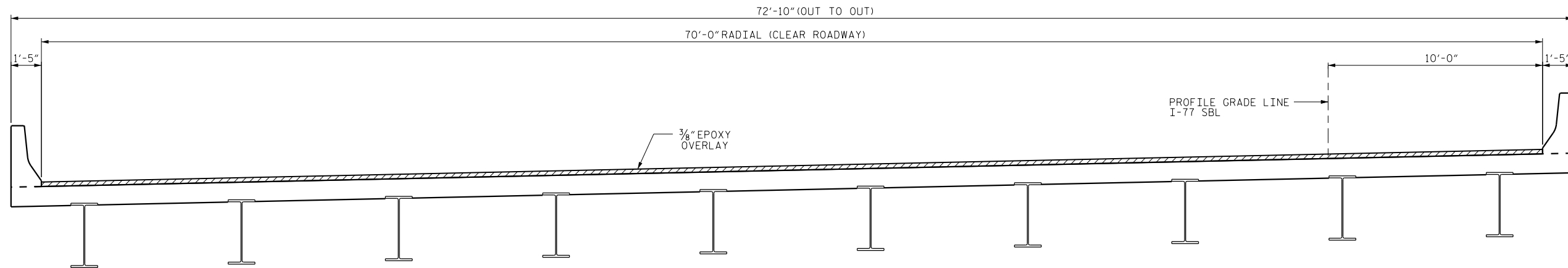
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS 21
2			4			

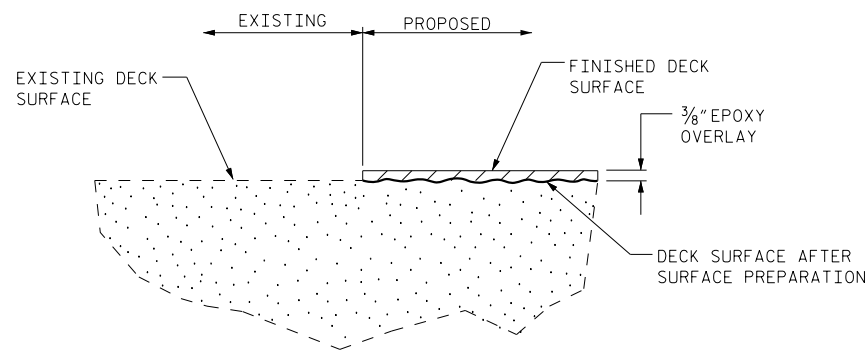
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016



TYPICAL SECTION
(EXISTING)

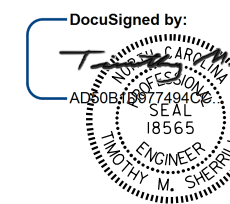


TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 75



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY CONCRETE
 DETAILS

8/12/2016

DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W. SMITH DATE : 8/2016

12-AUG-2016 11:37
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DOCUMENT NOT CONSIDERED
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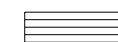

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
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2			4			21

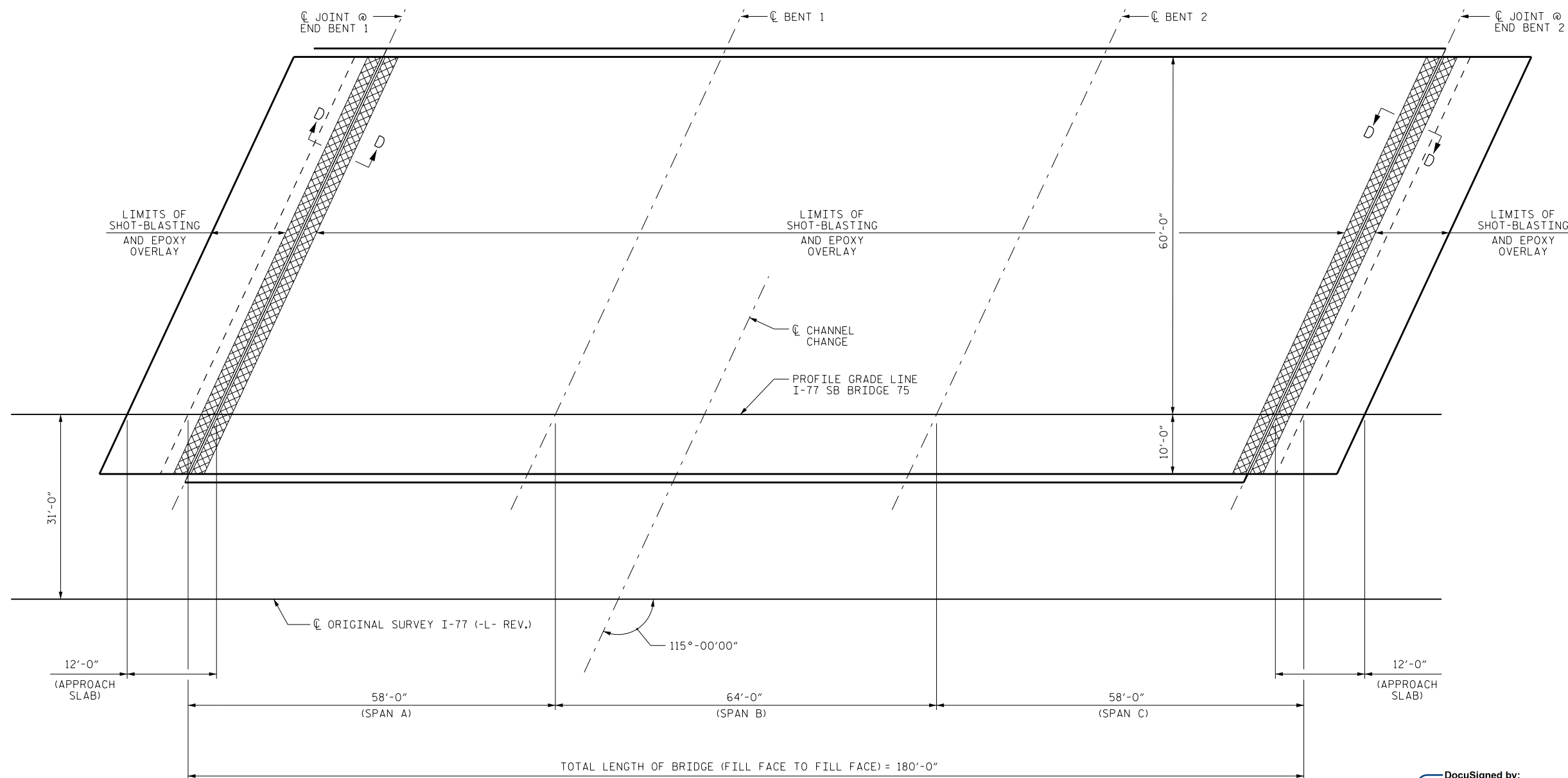
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SQ. FT.	
EPOXY OVERLAY SYSTEM	13,941 SQ. FT.	
BRIDGE JOINT DEMOLITION	154 SQ. FT.	

NOTE:

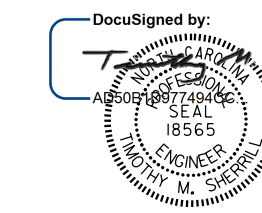
* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

-  EPOXY OVERLAY
-  EXISTING BRIDGE JOINT TO REMAIN
-  BRIDGE JOINT DEMOLITION



PLAN - SPANS A, B, AND C
(FOR SECTIONS D-D SEE JOINT DETAILS SHEET S-21)

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 75



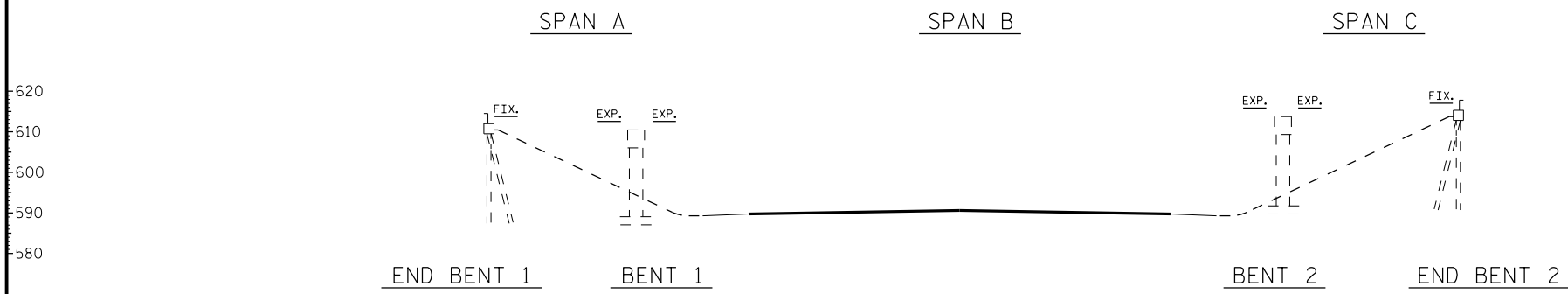
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (SOUTHBOUND)

8/12/2016

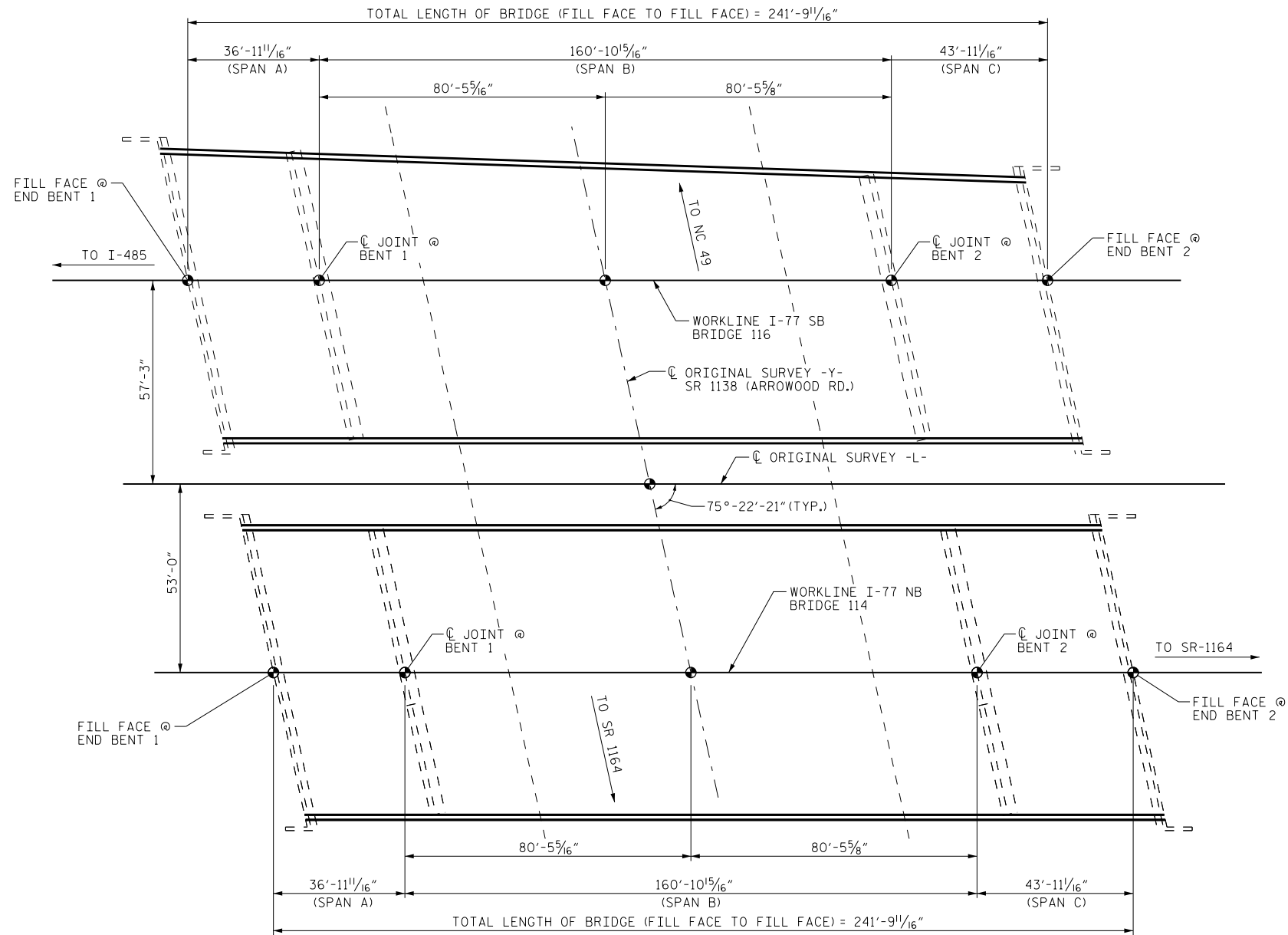
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			21

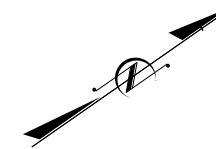


ELEVATION
SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES

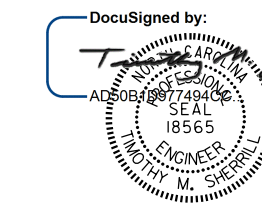


PLAN

COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY



PROJECT NO. I-5768
MECKLENBURG COUNTY
BRIDGE NO.: 114 & 116



8/12/2016

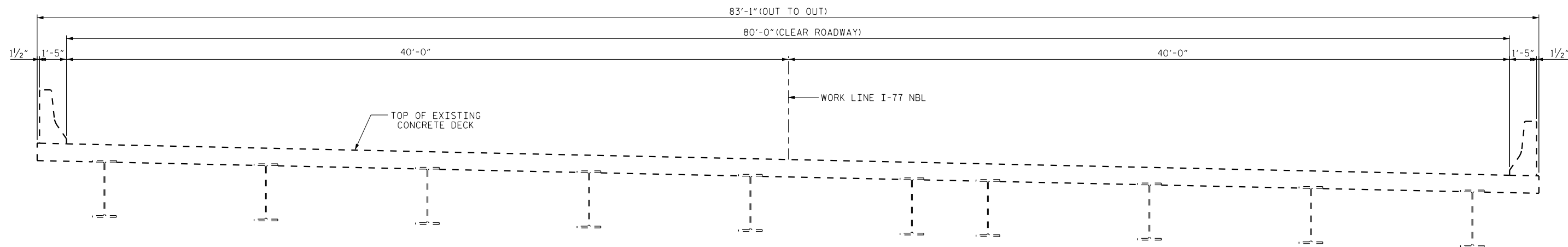
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
BRIDGE OVER SR 1138
ON I-77/US 21
BETWEEN I-485 AND
SR 1164

DRAWN BY : D.V. JOYNER DATE : 5/2016
CHECKED BY : W. SMITH DATE : 5/2016

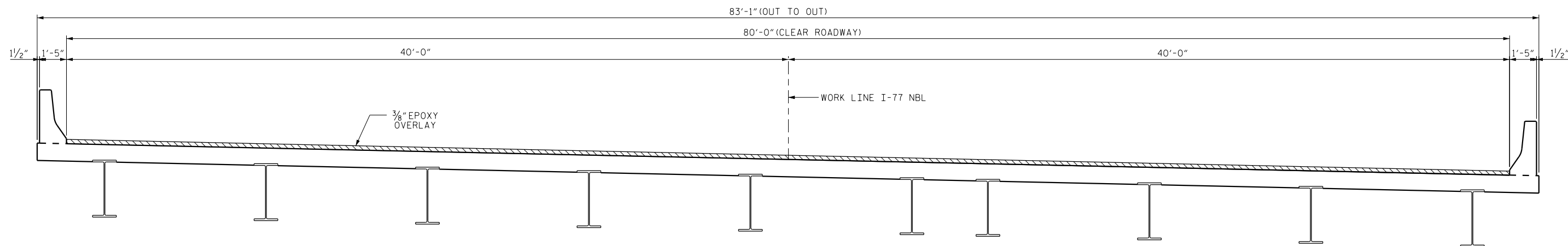
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wsmith

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SIGNATURES COMPLETED

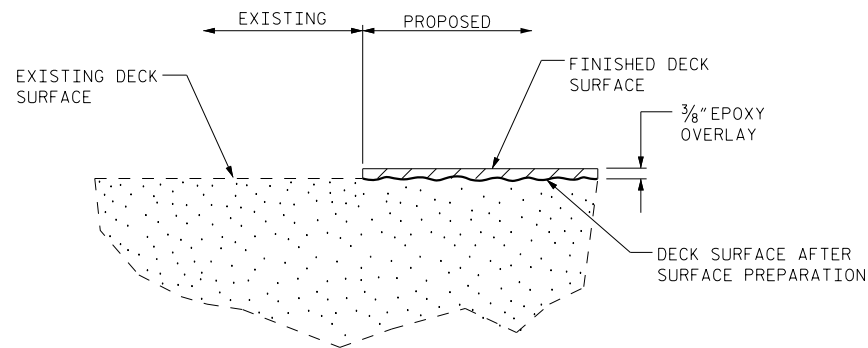
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TYPICAL SECTION
(EXISTING)

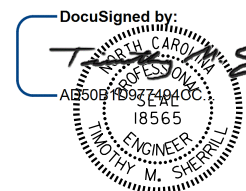


TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 114



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY CONCRETE
 DETAILS

8/12/2016

DRAWN BY: D.V. JOYNER DATE: 6/2016
 CHECKED BY: W. SMITH DATE: 8/2016

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

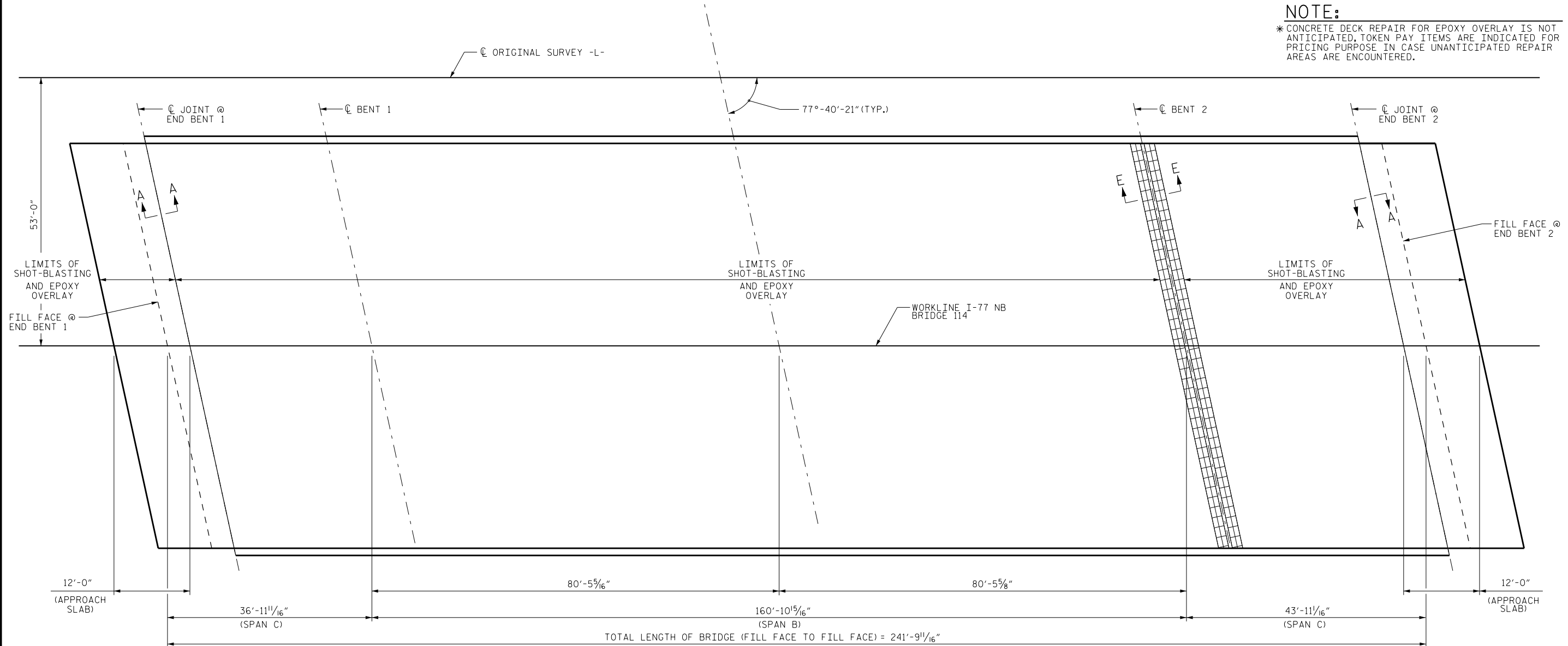
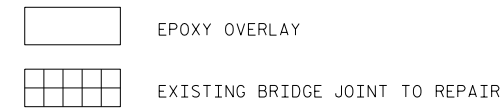
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			21

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SO. FT.	
EPOXY OVERLAY SYSTEM	20,978 SO. FT.	
BRIDGE JOINT REPAIR	82 LN. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 114

PLAN - SPANS A, B, AND C
 (FOR SECTIONS A-A AND E-E SEE JOINT DETAILS SHEET S-20 AND S-21)

DocuSigned by:

 STATE OF NORTH CAROLINA
 AD 5087109749406
 SEAL
 18565
 ENGINEER
 TIMOTHY M. SHERRILL

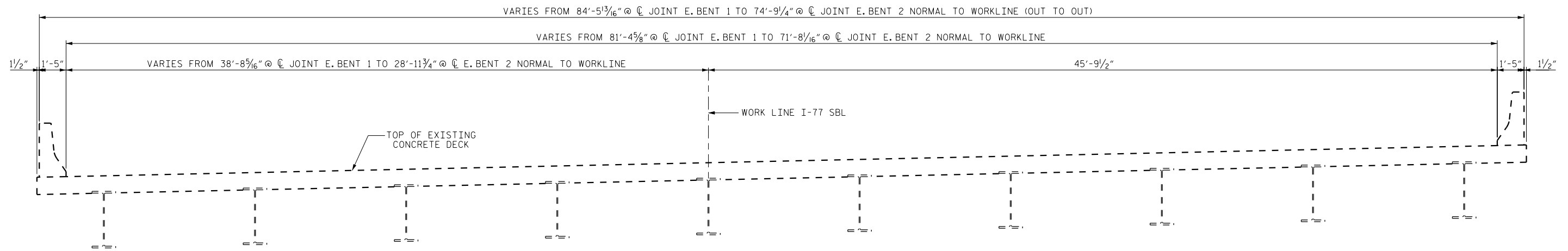
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (NORTHBOUND)

8/12/2016

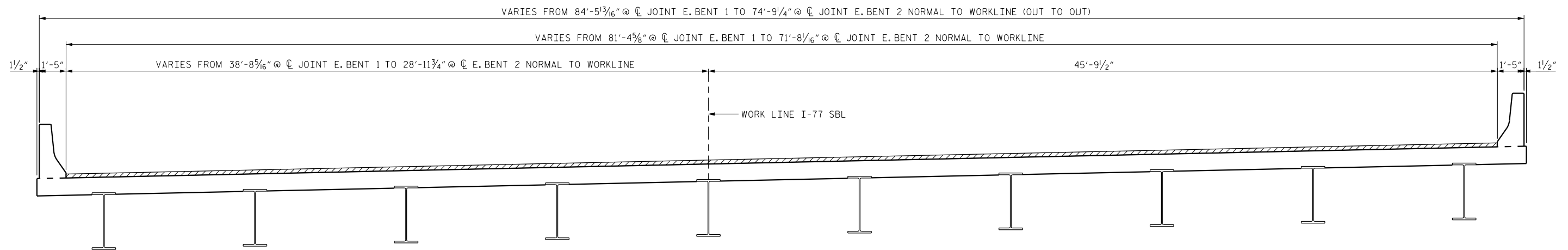
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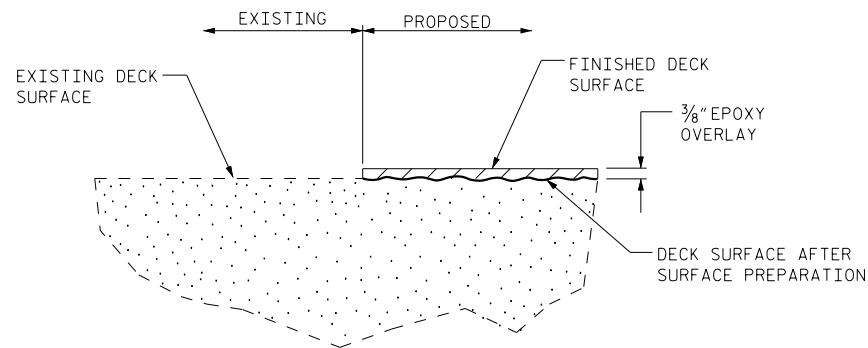
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016



TYPICAL SECTION
(EXISTING)

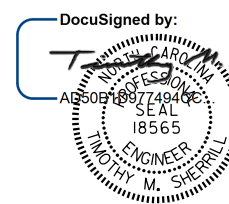


TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 116



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY CONCRETE
 DETAILS

8/12/2016

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
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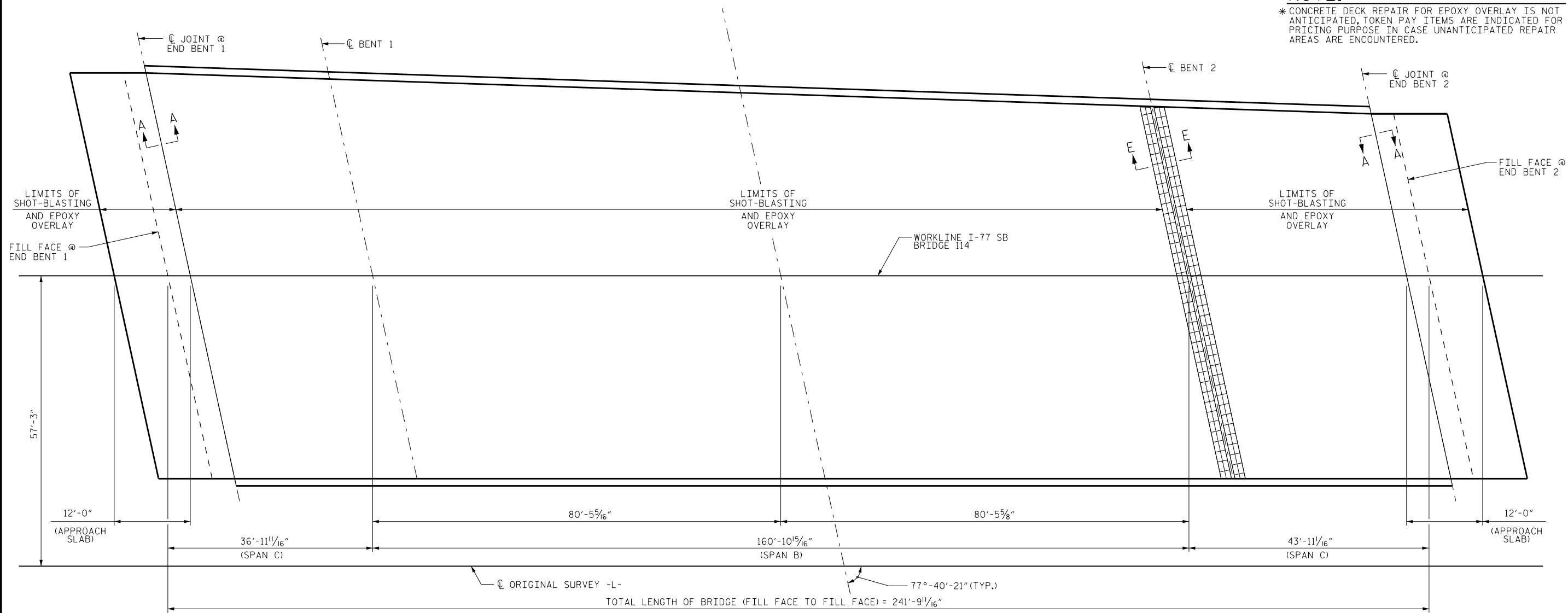
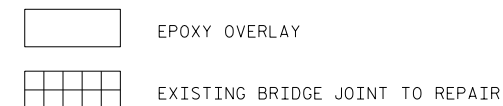
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W. SMITH DATE : 8/2016

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*3 SO. FT.	
EPOXY OVERLAY SYSTEM	20,078 SO. FT.	
BRIDGE JOINT REPAIR	75 LN. FT.	

NOTE:

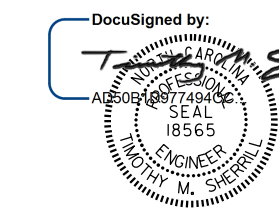
* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 116

PLAN - SPANS A, B, AND C

(FOR SECTIONS A-A AND E-E SEE JOINT DETAILS SHEET S-20 AND S-21)



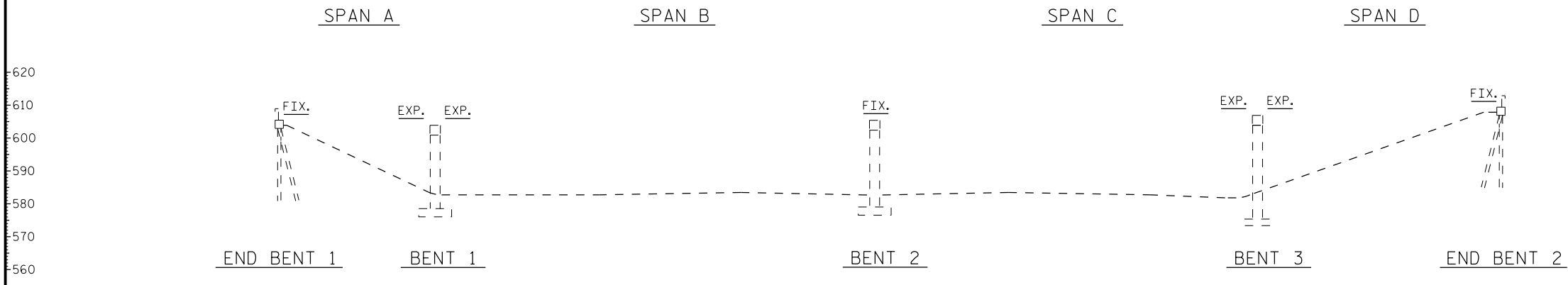
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SURFACE PREPARATION & EPOXY OVERLAY
 (SOUTHBOUND)

8/12/2016

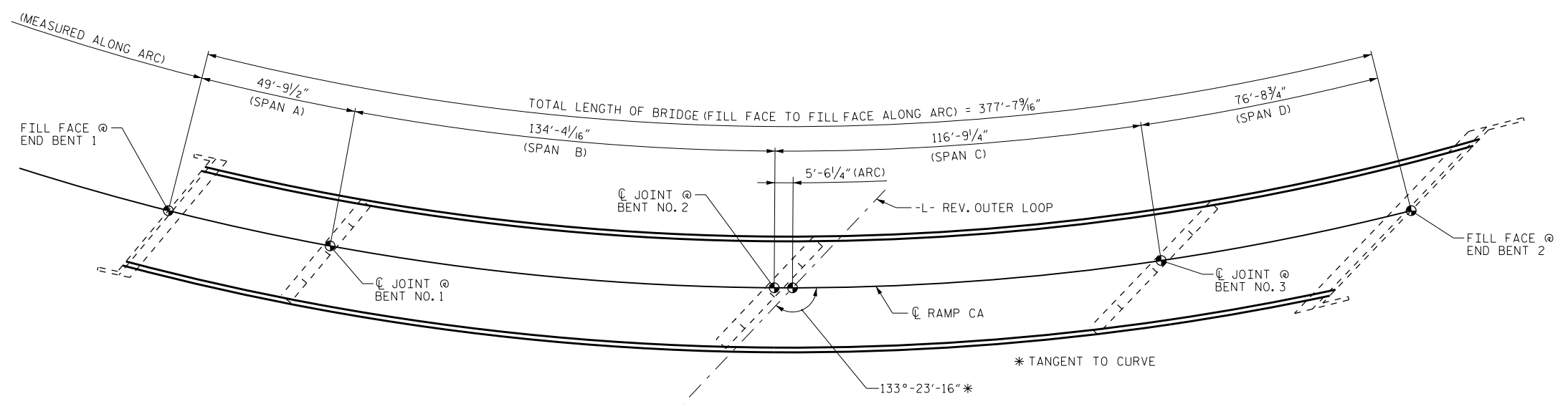
DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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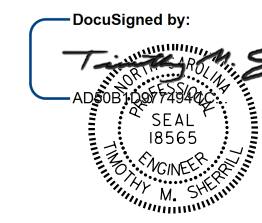
ELEVATION
SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES



PLAN
COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY



PROJECT NO. I-5768
MECKLENBURG COUNTY
BRIDGE NO.: 658



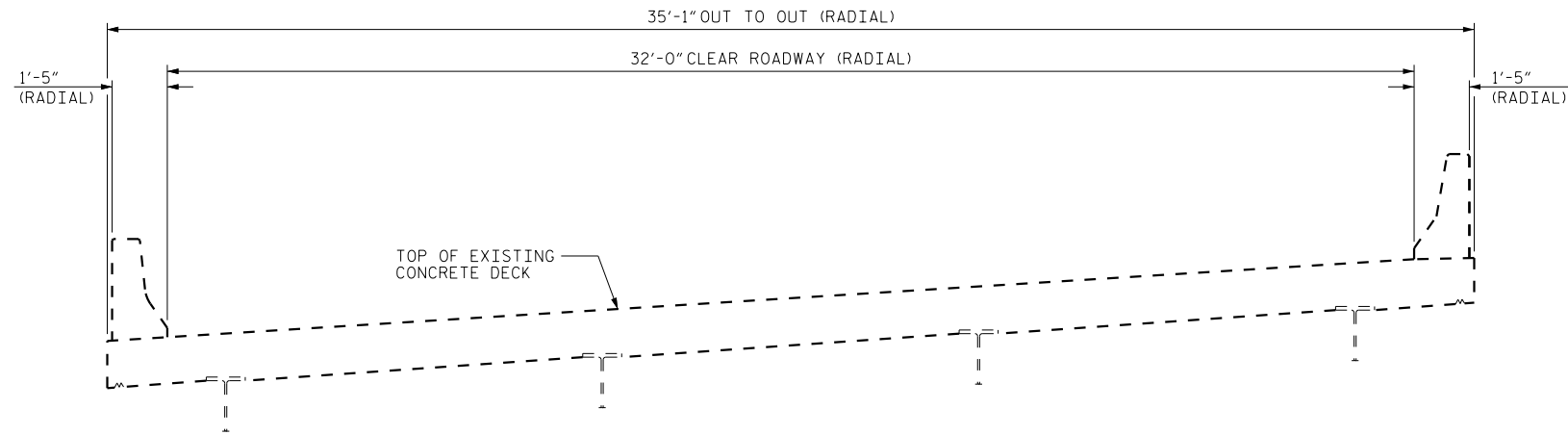
8/12/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
BRIDGE OVER I-485
ON CA RAMP
BETWEEN NB I-77 AND
I-485 INNER

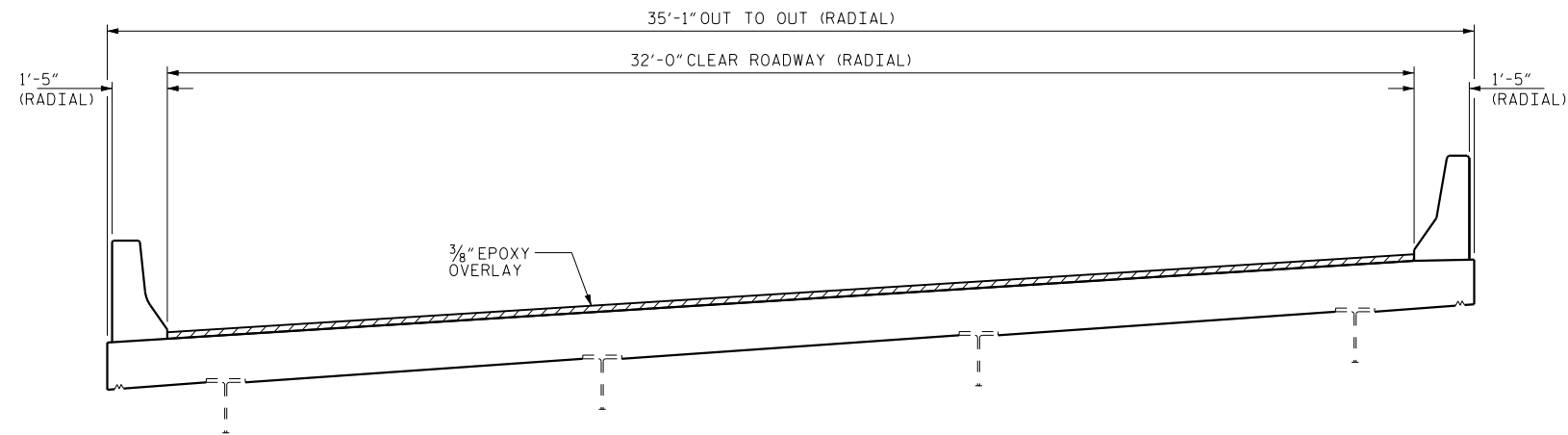
DRAWN BY : D.V. JOYNER DATE : 7/2016
CHECKED BY : W. SMITH DATE : 8/2016

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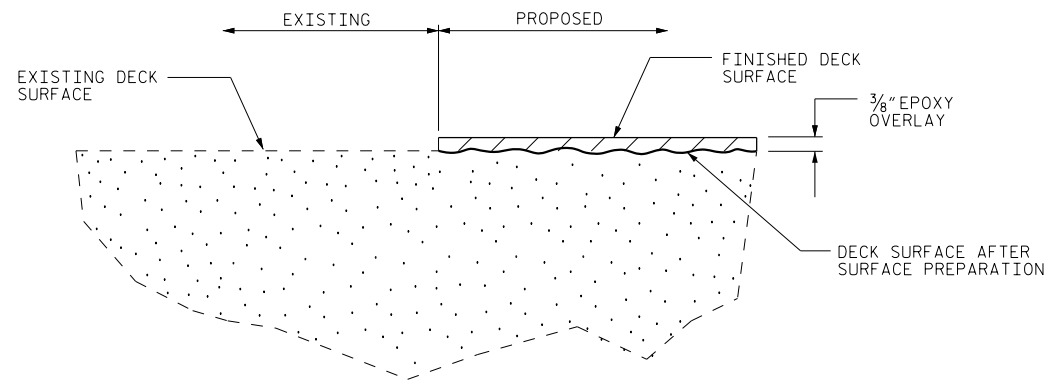
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TYPICAL SECTION
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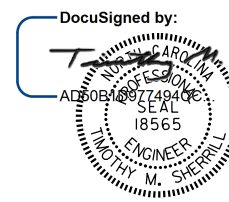


TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 658



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL SECTIONS
 &
 EPOXY OVERLAY
 DETAILS

8/12/2016

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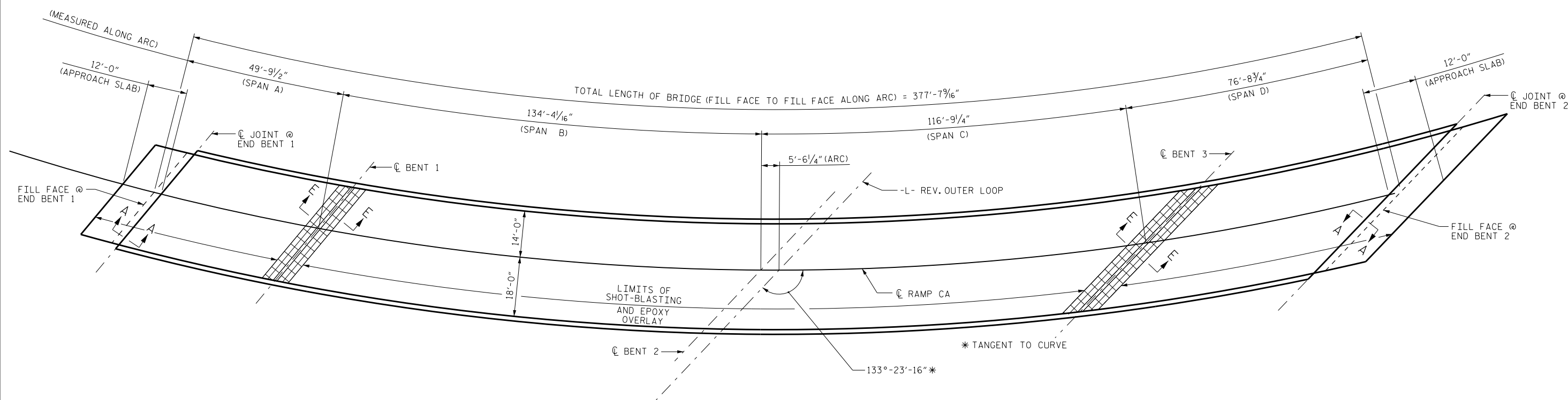
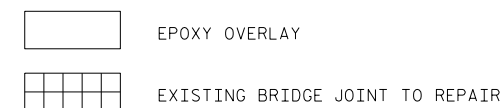
DRAWN BY : M. WELDON DATE : 7/2016
 CHECKED BY : W. C. SMITH DATE : 8/2016

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 3 SQ. FT.	
EPOXY OVERLAY SYSTEM	12,723 SQ. FT.	
BRIDGE JOINT REPAIR	88 LN. FT.	

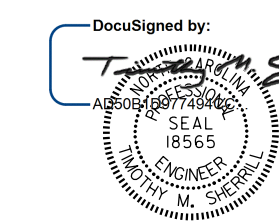
NOTE:

CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PAN OF SPANS A, B, C, AND D
(FOR SECTION A-A AND E-E, SEE SHEET S-20 AND S-21)

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO. 658



8/12/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

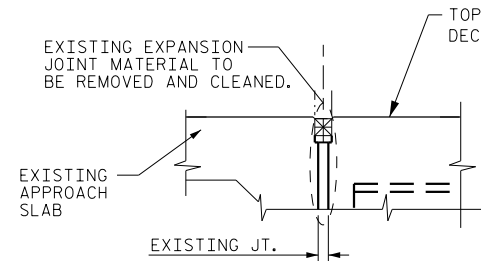
SURFACE PREPARATION & EPOXY OVERLAY

DRAWN BY : D.V. JOYNER DATE : 6/2016
 CHECKED BY : W.C. SMITH DATE : 8/2016

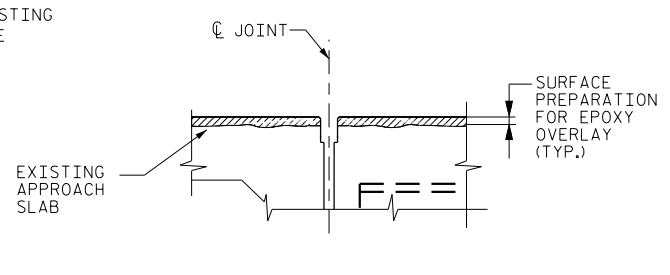
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2			4			TOTAL SHEETS 21

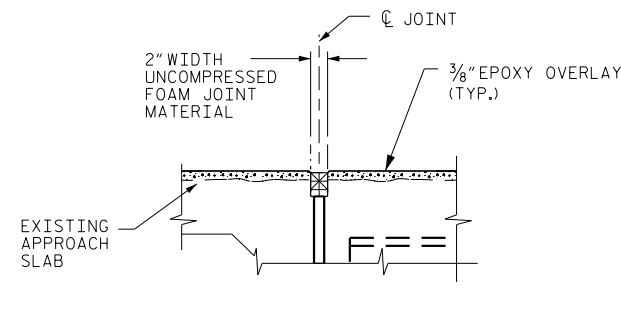
NOTES:
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2" FOR BRIDGES 45 AND 46 AT BENT #1.
 THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2 1/2" FOR BRIDGE 46 AT BENT #2.
 THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2" FOR END BENT 1 AND END BENT 2 FOR BRIDGES 45, 46, 114, 116, AND 658.



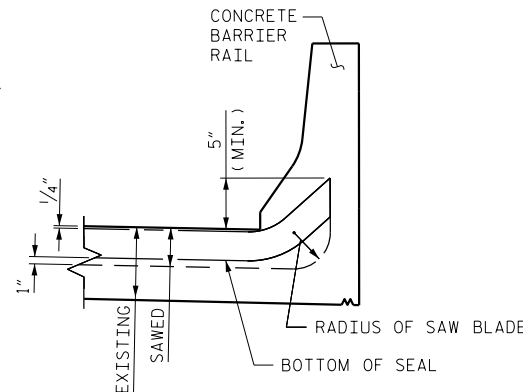
(EXISTING JOINT)



(MINIMUM EXISTING JOINT DEMOLITION)

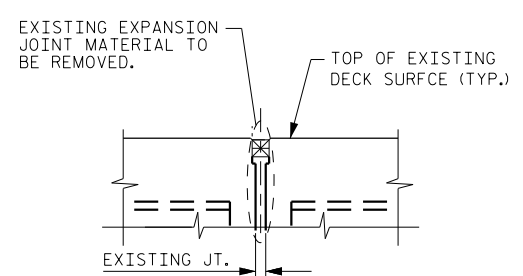


(PROPOSED JOINT)
 (BRIDGES 45, 46, 114, 116 & 658)

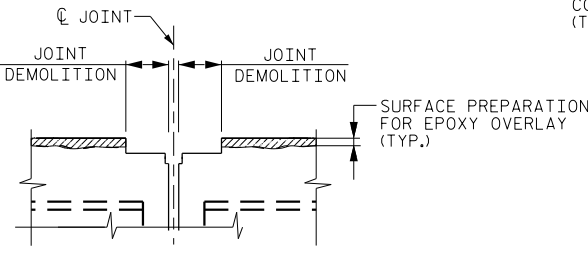


SECTION F-F
 @ BARRIER RAIL

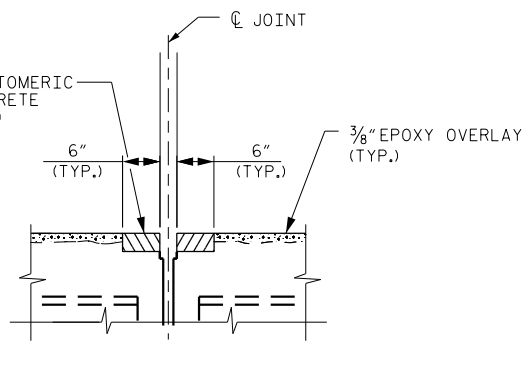
JOINT INSTALLATION SEQUENCE AT END BENTS
 SECTION A-A



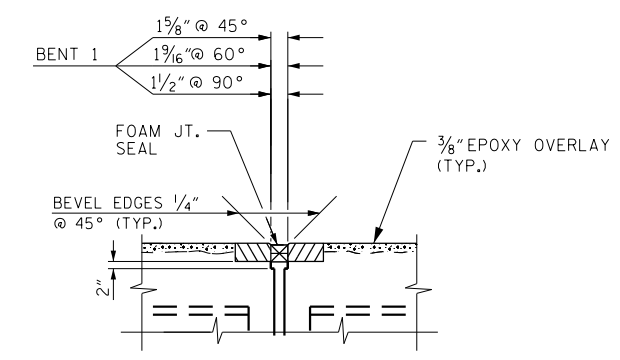
(EXISTING JOINT)



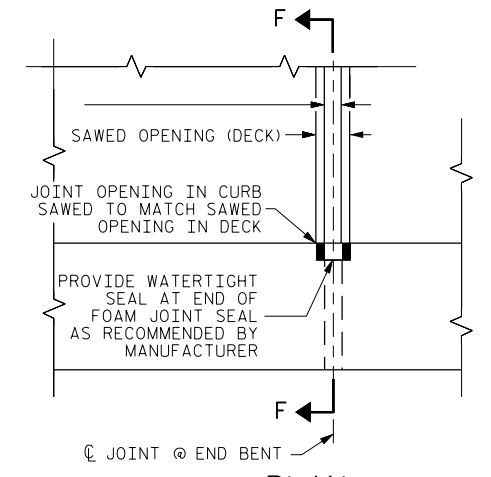
(MINIMUM EXISTING JOINT DEMOLITION)



PROPOSED JOINT

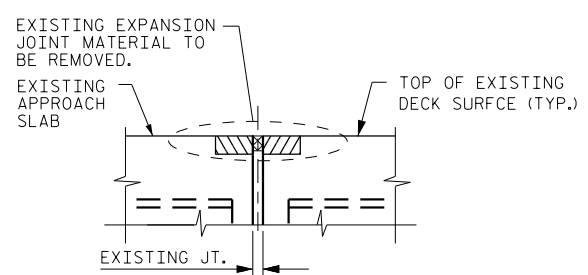


(PROPOSED FOAM JOINT SEAL EXPANSION)
 (BRIDGES 45 & 46)

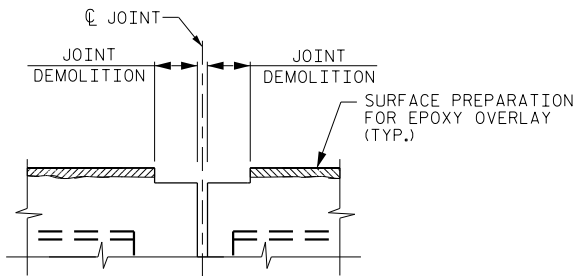


PLAN

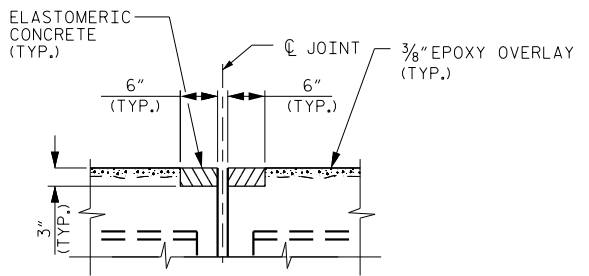
JOINT INSTALLATION SEQUENCE AT BENT #1
 SECTION B-B



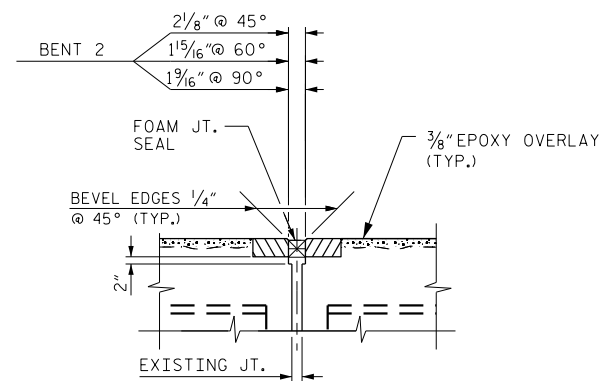
(EXISTING JOINT)



(MINIMUM EXISTING JOINT DEMOLITION)



(PROPOSED JOINT PRE-SAWED DIMENSIONS)

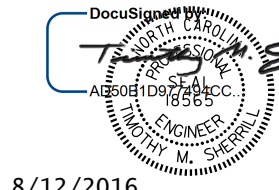


(PROPOSED FOAM JOINT SEAL EXPANSION)
 (BRIDGE 46)

JOINT INSTALLATION SEQUENCE AT BENT #2
 SECTION C-C

PROJECT NO. I-5768
 MECKLENBURG COUNTY
 BRIDGE NO.: 45, 46, 70, 75,
114, 116 & 658
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 JOINT DETAILS

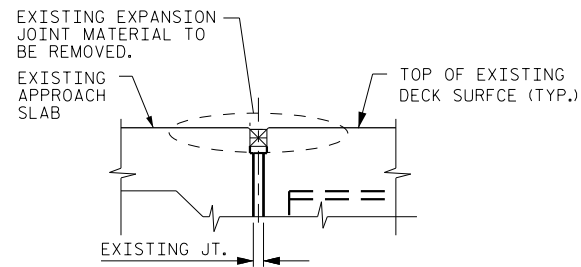


8/12/2016

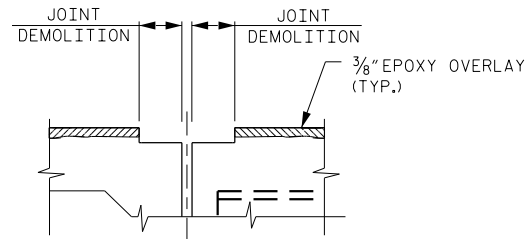
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2			4			

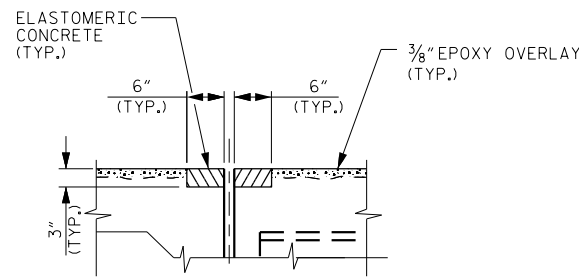
DRAWN BY : D.V. JOYNER DATE : 7/2016
 CHECKED BY : W. SMITH DATE : 8/2016



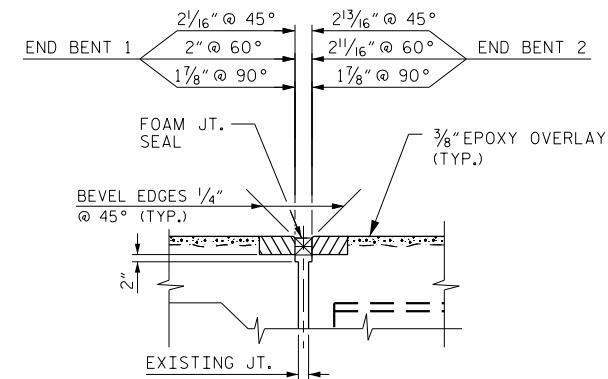
(EXISTING JOINT)



(MINIMUM EXISTING JOINT DEMOLITION)



(PROPOSED JOINT PRE-SAWED DIMENSIONS)



(PROPOSED FOAM JOINT SEAL EXPANSION)
(BRIDGE 70 & 75)

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2 1/2" FOR BRIDGES 70 & 75 AT END BENT 1 AND 3 1/4" FOR END BENT 2.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

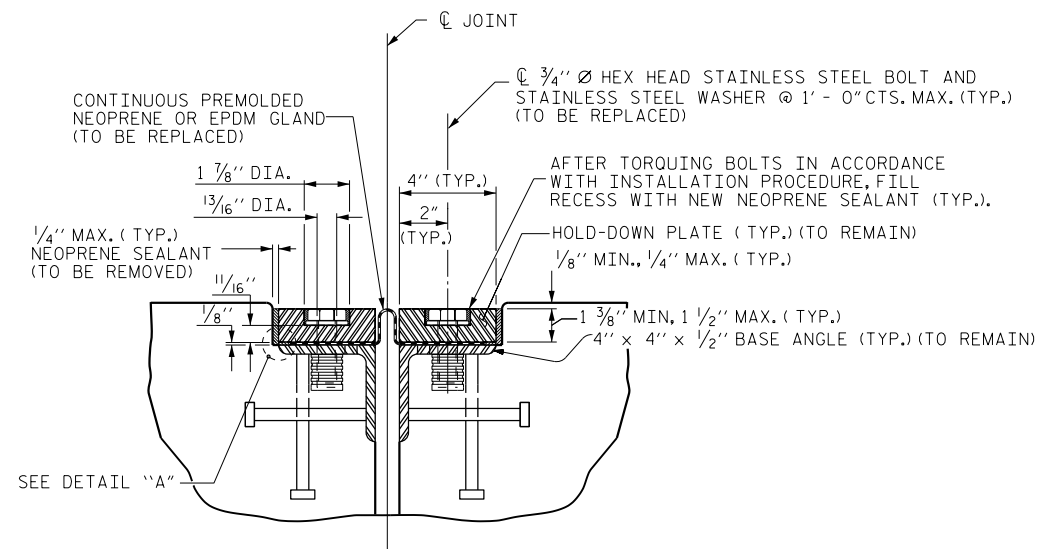
A PREMOLDED CORRUGATED OR NON-CORRUGATED GLAND SHALL BE USED FOR JOINTS SKEWED BETWEEN 50° THRU 130°. FOR JOINTS SKEWED LESS THAN 50° OR MORE THAN 130°, ONLY A CORRUGATED GLAND SHALL BE USED.

ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

FOR EXPANSION JOINT REPAIR PROCEDURE, SEE EXPANSION JOINT SEAL REPAIR SPECIAL PROVISION.

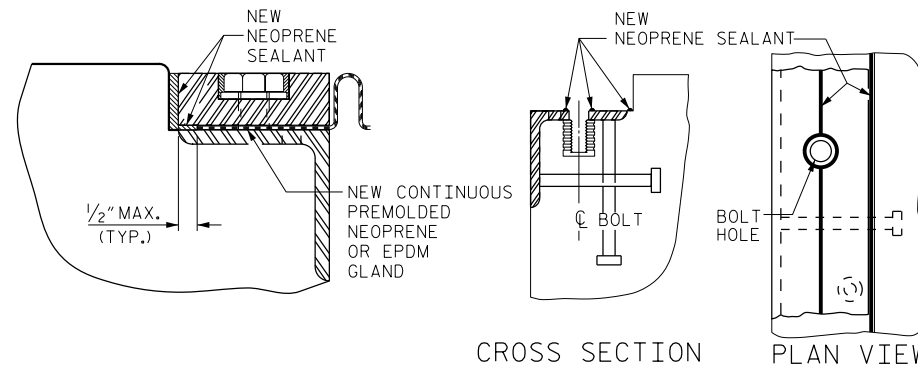
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION D-D



EXISTING EXPANSION JOINT REPAIR

SECTION E-E



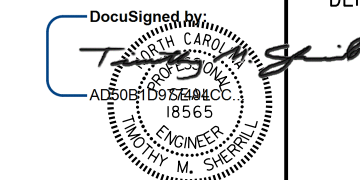
REPAIR INSTALLATION SKETCH

DETAIL "A"

MOVEMENT AND SETTING AT JOINT						
BRIDGE NO.	BENT NO.	SKEW ANGLE	TOTAL MOVEMENT (ALONG C RDWY)	PERPENDICULAR JOINT OPENING AT 45° F	PERPENDICULAR JOINT OPENING AT 60° F	PERPENDICULAR JOINT OPENING AT 90° F
45	2	94°00'-00"	1 3/4"	2 3/8"	1 7/8"	1 3/8"
114	2	77°40'-21"	1 7/8"	2 3/8"	1 5/16"	1 1/2"
116	2	77°40'-21"	1 7/8"	2 3/8"	1 5/16"	1 1/2"
658	1	119°22'-18"	2 7/8"	2 1/16"	1 5/16"	1 1/2"
658	3	142°08'-46"	2 1/4"	2"	1 11/16"	1 5/16"

PROJECT NO. I-5768
MECKLENBURG COUNTY
 BRIDGE NO.: 45, 46, 70, 75,
114, 116 & 658

SHEET 2 OF 2



8/12/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE JOINT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS 21
2			4			

DRAWN BY : D.V. JOYNER DATE : 7/2016
 CHECKED BY : W. SMITH DATE : 8/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED