

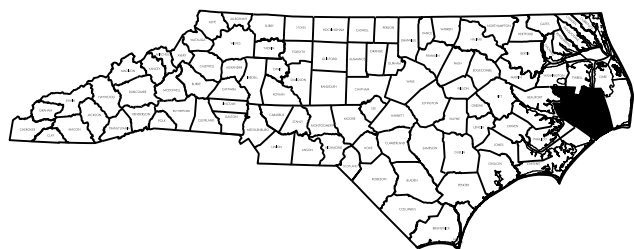
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TIP NO: B-5942

CONTRACT

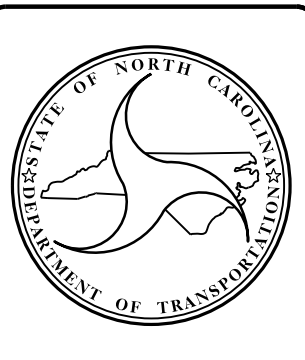
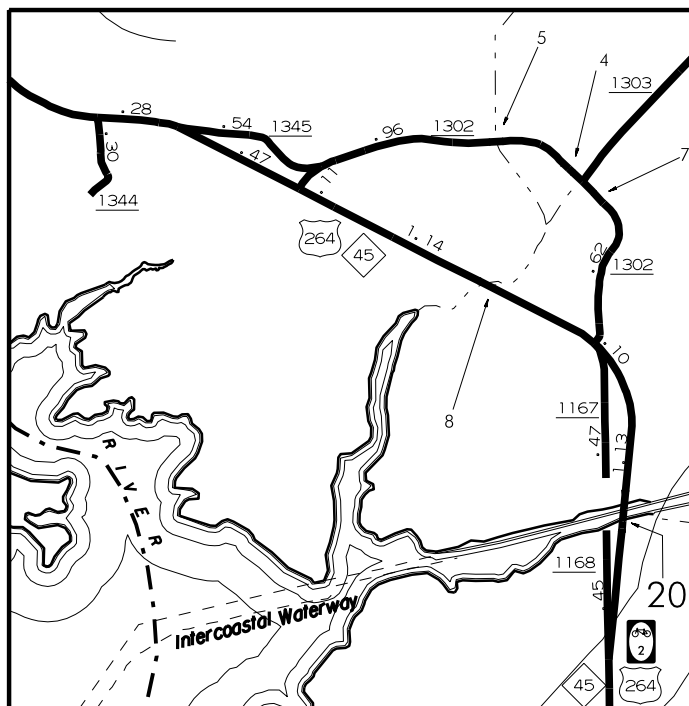


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
HYDE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5942		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46481.1.1		PE	
46481.3.1		CONST.	

LOCATION: BRIDGE #20 ON US264 OVER INTERCOASTAL WATERWAY

TYPE OF WORK: BRIDGE PRESERVATION – GIRDER AND SUBSTRUCTURE REPAIRS



DESIGN DATA
HYDE COUNTY
ADT 2013 = 2,200

PROJECT LENGTH
HYDE COUNTY
BRIDGE #20 = 0.29 MILE

Prepared in the Office of:
STRUCTURES MANAGEMENT UNIT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
2012 STANDARD SPECIFICATIONS

LETTING DATE:
MAY 17, 2017

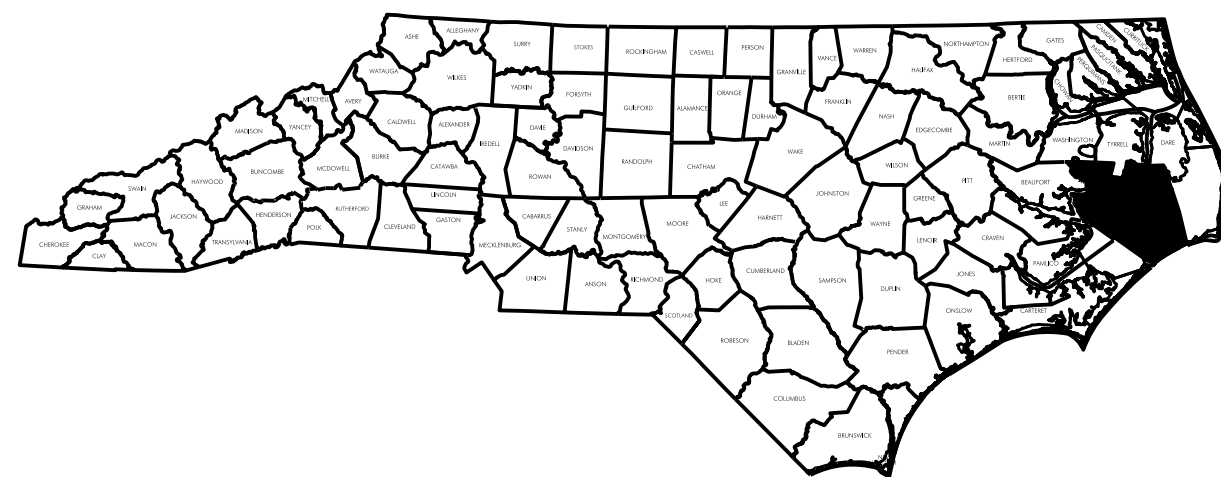
TIMOTHY M. SHERRILL, P.E.
PROJECT ENGINEER

DocuSigned by:
Brandon Green
2C7028B6B5...

BRANDON L. GREEN
PROJECT DESIGN ENGINEER
3/7/2017

PROJECT: B-5942

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HYDE COUNTY

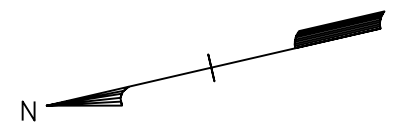
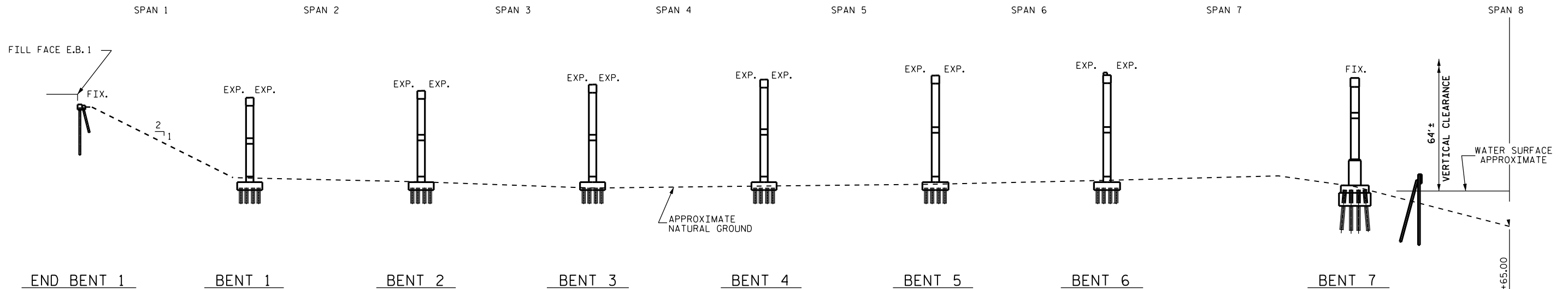
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5942	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46481.1.1		P.E.	
46481.3.1		CONST.	

LOCATION: BRIDGE #20 ON US264 OVER INTERCOASTAL WATERWAY

TYPE OF WORK: BRIDGE PRESERVATION – GIRDER AND SUBSTRUCTURE REPAIRS

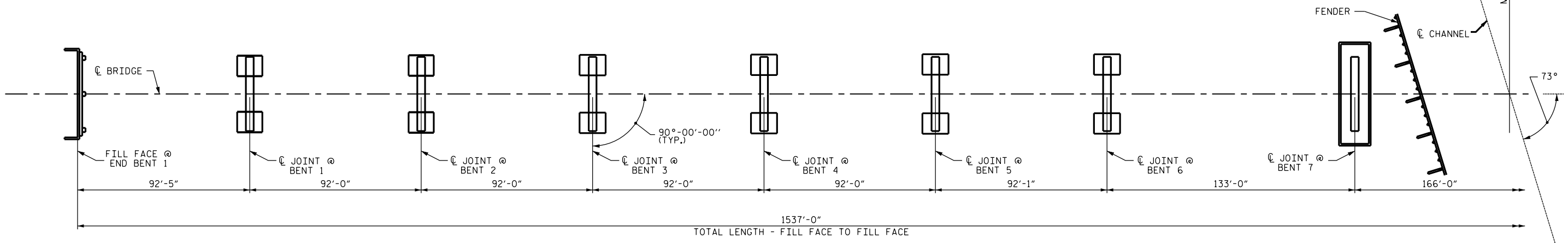
INDEX OF SHEETS

<i>1</i>	<i>TITLE SHEET</i>
<i>1A</i>	<i>INDEX OF SHEETS</i>
<i>S-1 THRU S-30</i>	<i>STRUCTURAL PLANS – BRIDGE NO. 20</i>
<i>SN</i>	<i>STANDARD NOTES</i>



PARTIAL SECTION ALONG BRIDGE

NOTE:
APPROXIMATE NATURAL GROUND AND WATER SURFACE ELEVATION ARE FROM THE 9/9/15 ROUTINE INSPECTION REPORT.



PARTIAL PLAN
(PILES NOT SHOWN FOR CLARITY)

SCOPE OF WORK

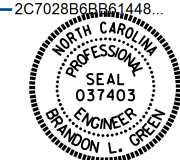
- SAWCUT AND CHIP OUT UNSOUND CONCRETE IN SPALLED AND DELAMINATED AREAS OF GIRDERS AND SUBSTRUCTURE.
- APPLY REPAIR MATERIAL IN PREPARED AREAS OF GIRDERS.
- APPLY EPOXY OVER POPOUTS IN PREPARED AREAS OF GIRDERS.
- APPLY SHOTCRETE IN PREPARED AREAS OF SUBSTRUCTURE.
- EPOXY INJECT CRACKS IN SUBSTRUCTURE.
- CLEAN AND COAT FOUNDATIONS WITH EPOXY.
- APPLY TEXTURED COATING IN PREPARED AREAS OF SUBSTRUCTURE.

PROJECT No. B-5942
HYDE COUNTY
 BRIDGE No. 20

SHEET 1 OF 3

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

DocuSigned by:
Brandon Green



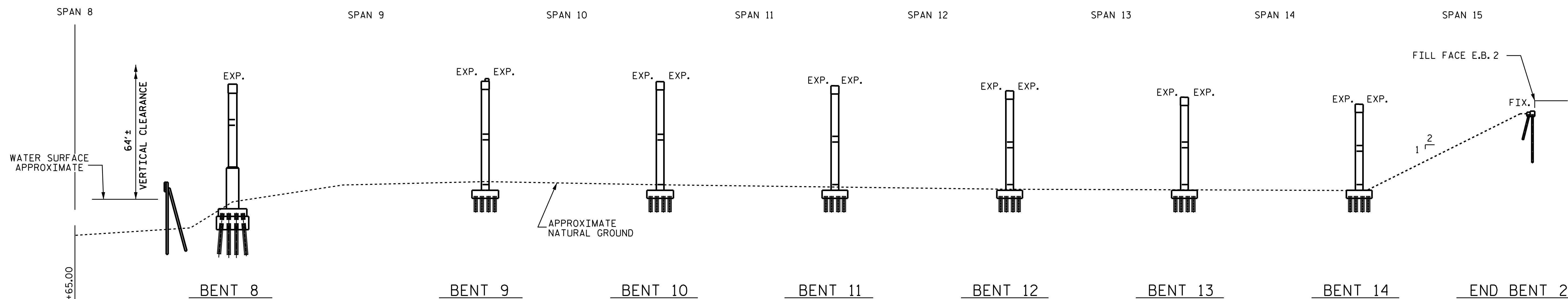
3/7/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE ON U.S. 264
 OVER INTRACOASTAL
 WATERWAY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

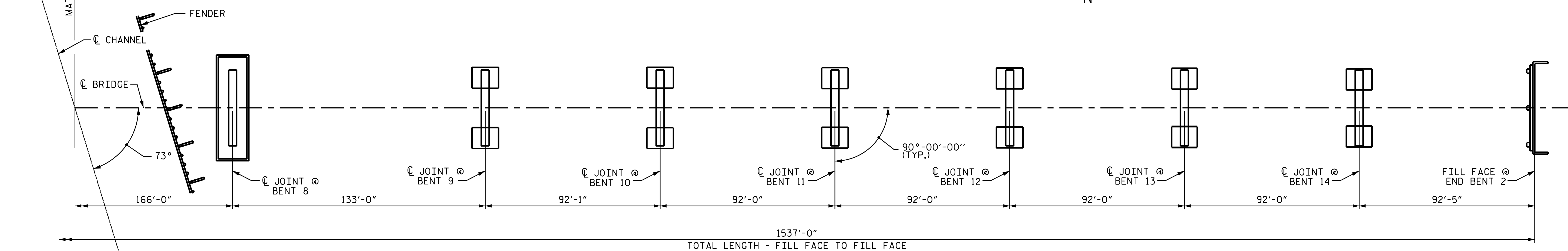
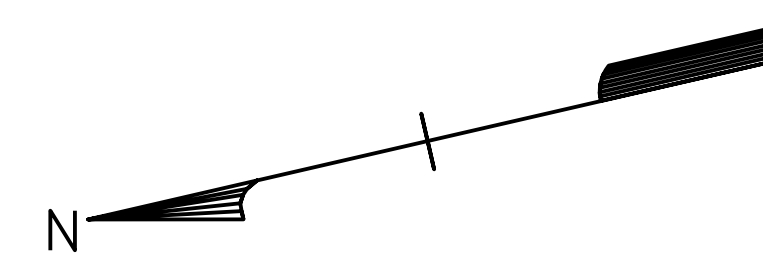
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NO.	DATE	BY	DATE	NO.	TOTAL SHEETS
1		3		S-1	30
2		4			

DRAWN BY :	R.W. WRIGHT	DATE :	10/15
CHECKED BY :	P.C. BREWER	DATE :	10/15
DESIGN ENGINEER OF RECORD :		DATE :	



NOTE:
 APPROXIMATE NATURAL GROUND AND WATER SURFACE ELEVATION ARE FROM THE 9/9/15 ROUTINE INSPECTION REPORT.

PARTIAL SECTION ALONG BRIDGE



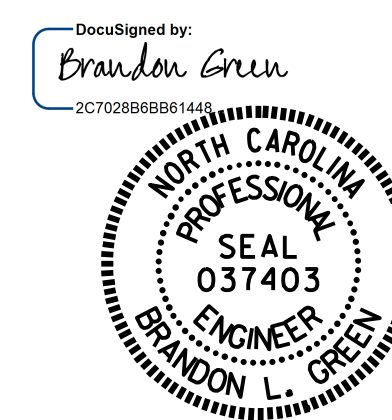
PARTIAL PLAN

(PILES NOT SHOWN FOR CLARITY)

PROJECT No. B-5942
HYDE COUNTY
 BRIDGE No. 20

SHEET 2 OF 3

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS



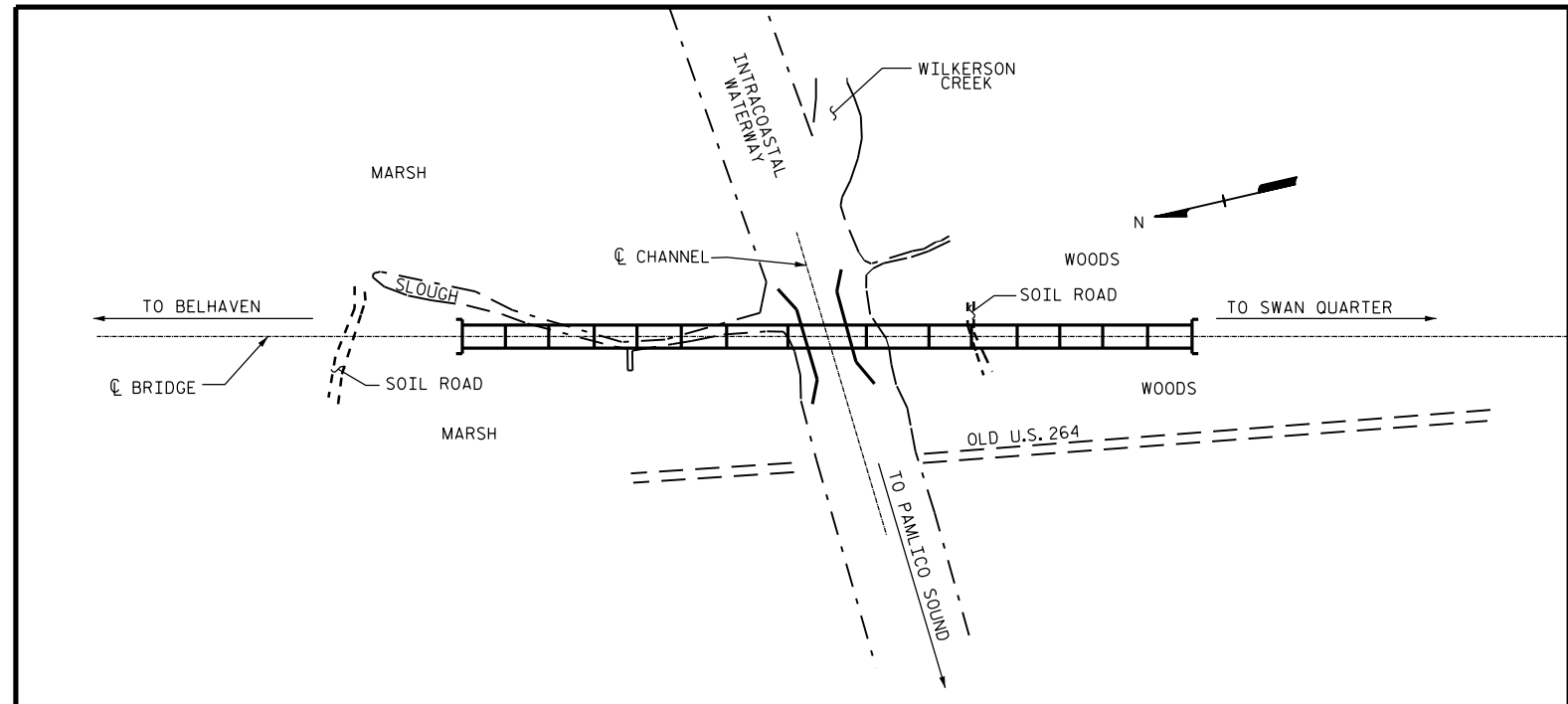
3/7/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE ON U.S. 264
 OVER INTRACOASTAL
 WATERWAY

DRAWN BY : R.W. WRIGHT DATE : 10/15
 CHECKED BY : P.C. BREWER DATE : 10/15
 DESIGN ENGINEER OF RECORD: DATE :

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET	
No.	By:	DATE:	No.	By:	DATE:	S-2	
1			3			TOTAL SHEETS	
2			4			30	



LOCATION SKETCH

NOTES

- 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.
- 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 UNDER STRUCTURE WORK PLATFORM, SEE SPECIAL PROVISIONS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING, SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL						
SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	REPAIRS TO PRESTRESSED CONCRETE GIRDERS	EPOXY COATING	EPOXY COATING POPOUTS	TEXTURED COATING	UNDER STRUCTURE WORK PLATFORM
CU. FT.	LIN. FT.	CU. FT.	SQ. FT.	EA.	SQ. FT.	LUMP SUM
139.2	84.5	192.5	9,130	285	1,072	LUMP SUM

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 3 OF 3

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

DocuSigned by:
Brandon Green

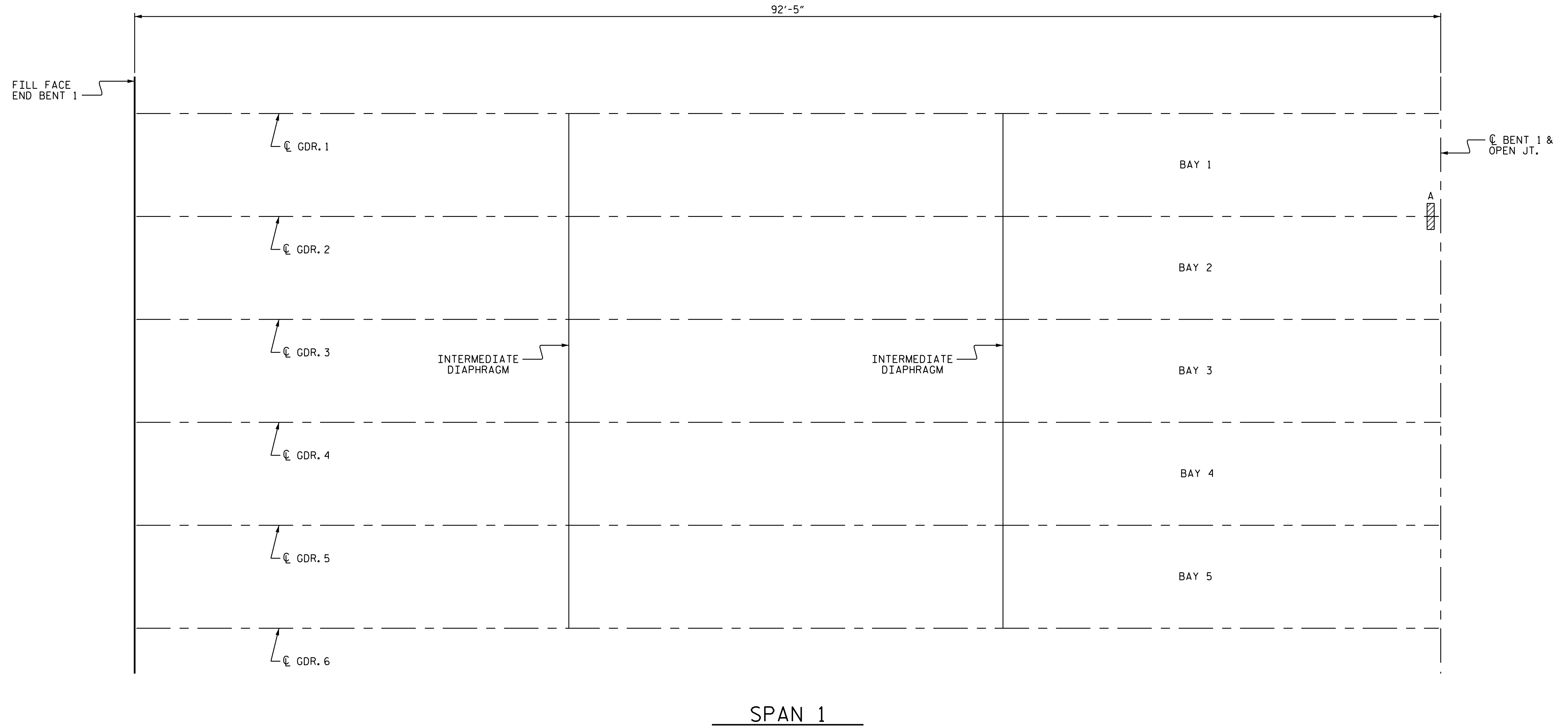


3/7/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE ON U.S. 264
 OVER INTRACOASTAL
 WATERWAY

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			30

DRAWN BY :	R.W. WRIGHT	DATE :	10/15
CHECKED BY :	P.C. BREWER	DATE :	10/15
DESIGN ENGINEER OF RECORD:	-	DATE :	-



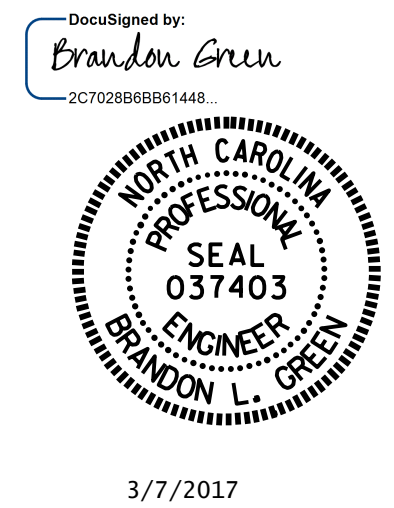
SPAN 1

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
1	2	92'-5"	BTM. OF GDR.	4" X 1'-10"	A

NOTE:
 FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 1 OF 11



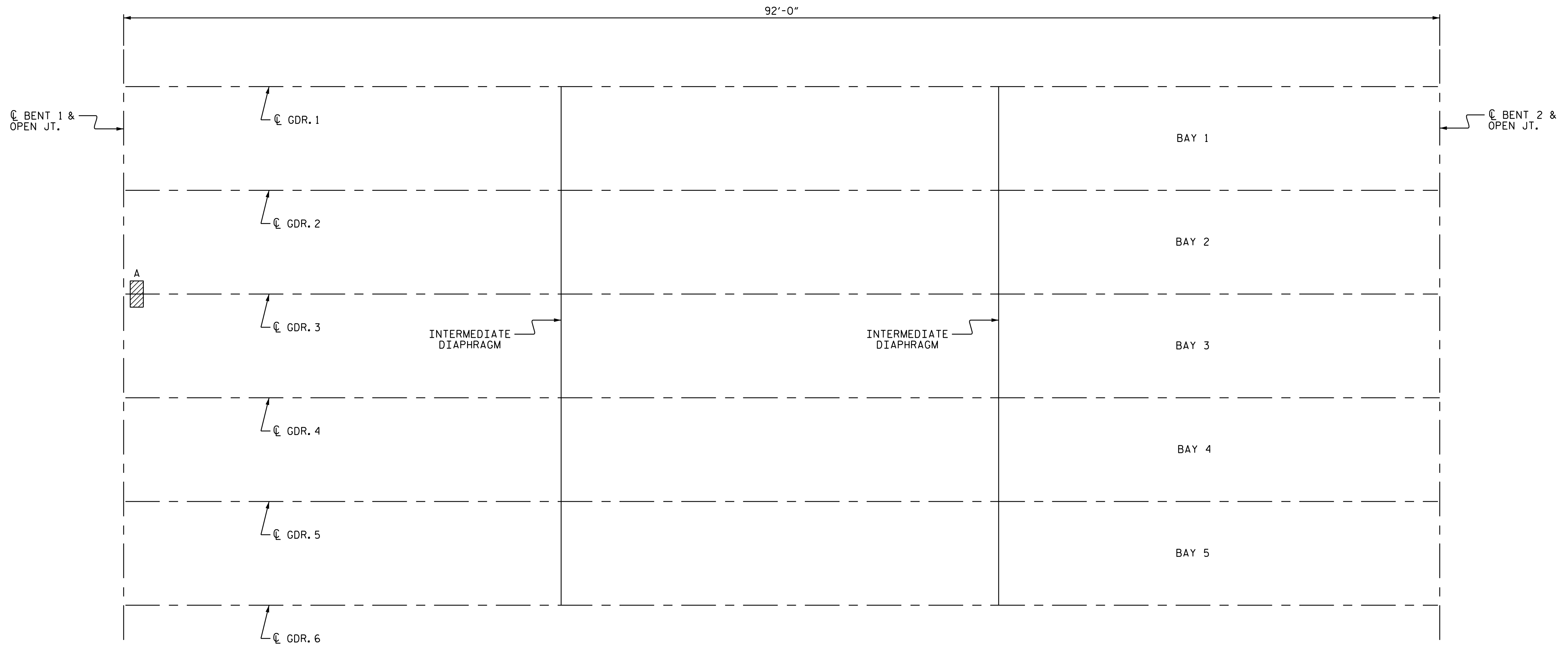
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PRESTRESSED
 GIRDER REPAIR
 SPAN 1**

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			30



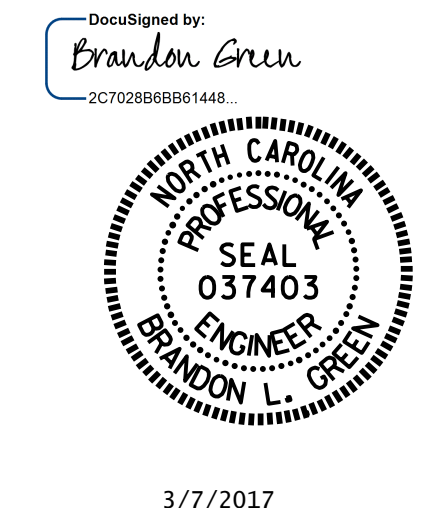
SPAN 2

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
2	3	0'-0"	BTM. OF GDR.	11" X 1'-4"	A

NOTE:
 FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 2 OF 11



3/7/2017

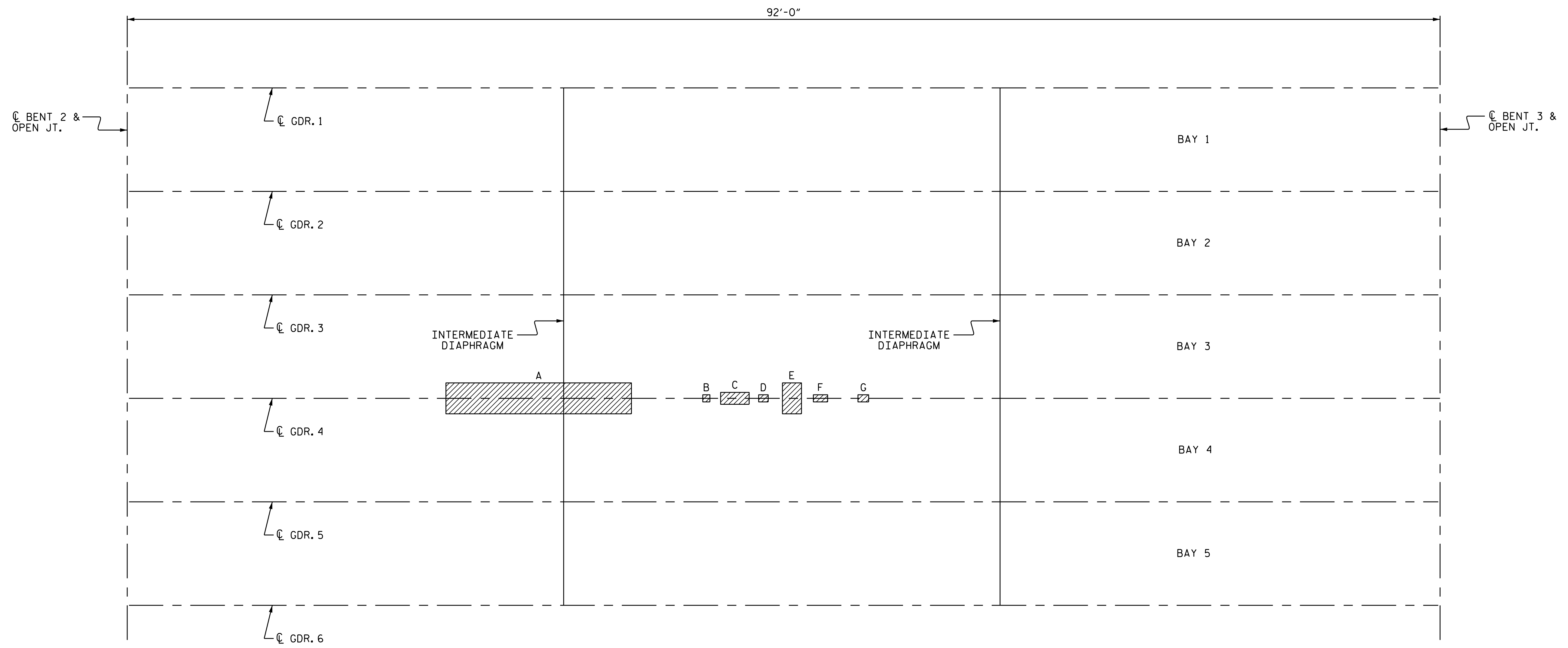
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PRESTRESSED
 GIRDER REPAIR
 SPAN 2**

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
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SPAN 3

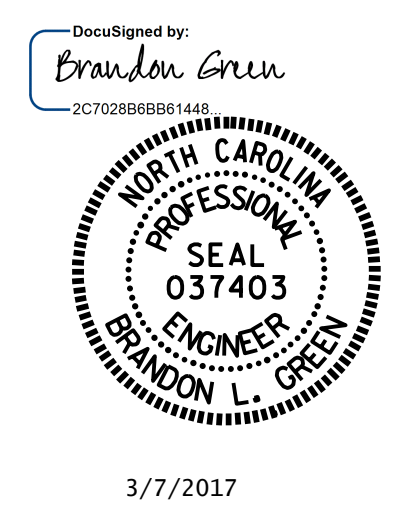
GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
3	4	28'-10"	BTM. OF GDR.	13'-0" X 2'-2"	A
3	4	40'-7"	BTM. OF GDR.	6" X 6"	B
3	4	42'-7"	BTM. OF GDR.	2'-0" X 10"	C
3	4	44'-7"	BTM. OF GDR.	8" X 6"	D
3	4	46'-7"	BTM. OF GDR.	1'-4" X 2'-2"	E
3	4	48'-7"	BTM. OF GDR.	1'-0" X 6"	F
3	4	51'-7"	BTM. OF GDR.	9" X 6"	G

GIRDER POPOUT LOCATIONS					
SPAN	GIRDER	BAY	LOCATION	REPAIR NUMBER/SIZE	
3	1	1	WEB	6 @ 3" X 3"	
3	2	1	WEB	14 @ 3" X 3"	
3	3	2	WEB	10 @ 3" X 3"	
3	3	3	WEB	1 @ 3" X 3"	
3	4	3	WEB	2 @ 3" X 3"	
3	4	4	WEB	5 @ 3" X 3"	
3	5	4	WEB	1 @ 3" X 1'-0"	
3	5	5	WEB	19 @ 3" X 3"	
3	6	5	WEB	7 @ 3" X 3"	

(FOR CLARITY, POPOUTS ARE NOT SHOWN IN PLAN VIEW)

NOTE:
 FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.
 FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISION.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20
 SHEET 3 OF 11

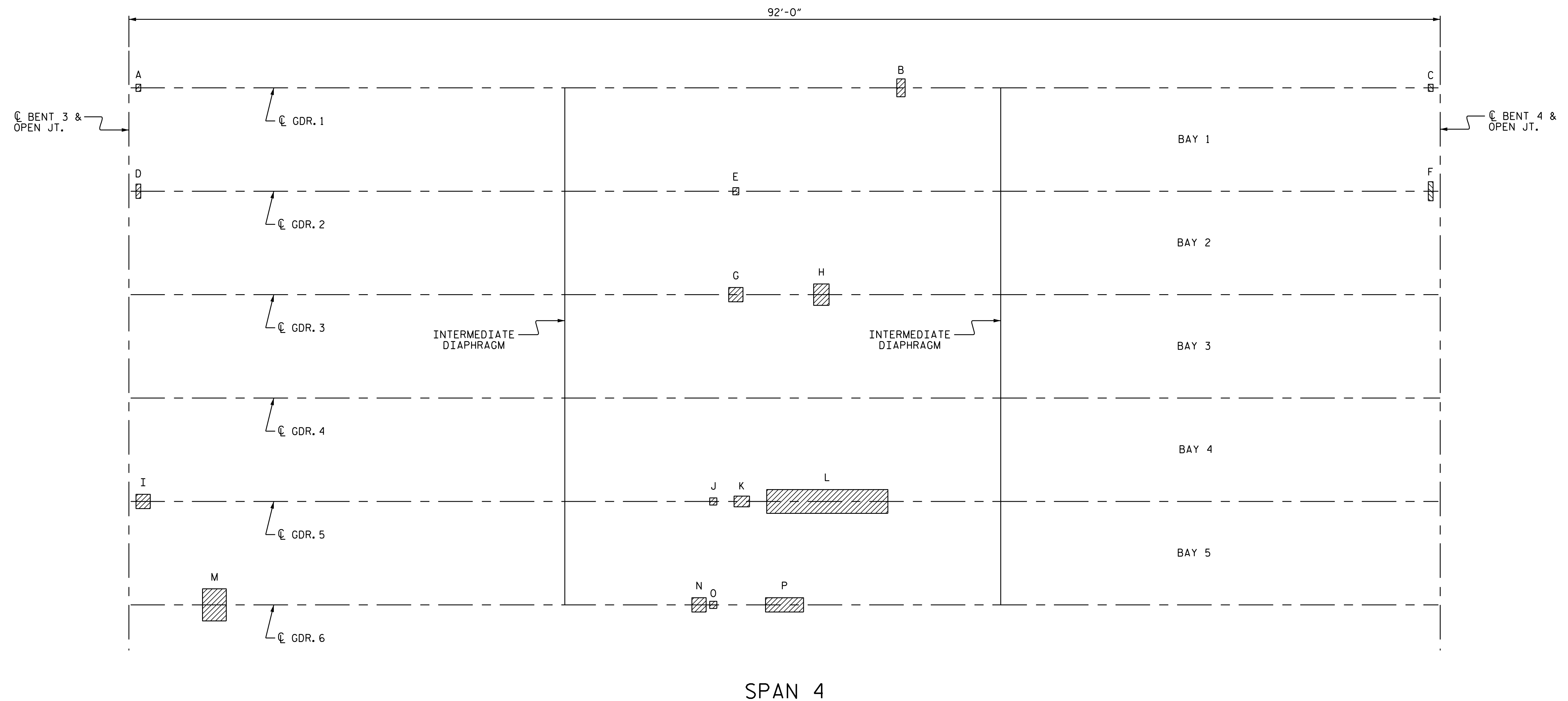


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PRESTRESSED
 GIRDER REPAIR
 SPAN 3**

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.		BY:	DATE:	TOTAL SHEETS	
1			3			S-6	30	
2			4					



SPAN 4

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
4	1	0'-0"	BTM. OF GDR.	4" X 6"	A
4	1	54'-2"	BTM. OF GDR.	7" X 1'-3"	B
4	1	92'-0"	BTM. OF GDR.	3" X 5"	C
4	2	0'-0"	BTM. OF GDR.	4" X 1'-0"	D
4	2	42'-7"	BTM. OF GDR.	5" X 6"	E
4	2	92'-0"	BTM. OF GDR.	4" X 1'-4"	F
4	3	42'-7"	BTM. OF GDR.	1'-0" X 1'-0"	G
4	3	48'-7"	BTM. OF GDR.	1'-1" X 1'-6"	H
4	5	0'-0"	BTM. OF GDR.	1'-0" X 1'-0"	I
4	5	41'-0"	BTM. OF GDR.	3" X 3"	J
4	5	43'-0"	BTM. OF GDR.	1'-1" X 9"	K
4	5	49'-0"	BTM. OF GDR.	8'-6" X 1'-8"	L
4	6	6'-0"	BTM. OF GDR.	1'-8" X 2'-3"	M
4	6	40'-0"	BTM. OF GDR.	1'-0" X 1'-0"	N
4	6	41'-0"	BTM. OF GDR.	6" X 6"	O
4	6	46'-0"	BTM. OF GDR.	2'-8" X 1'-0"	P

GIRDER POPOUT LOCATIONS					
SPAN	GIRDER	BAY	LOCATION	REPAIR NUMBER/SIZE	
4	1	1	WEB	3 @ 3" X 3"	
4	2	1	WEB	9 @ 3" X 3"	
4	3	2	WEB	3 @ 3" X 3"	
4	6	5	WEB	7 @ 3" X 3"	
4	6	EXT.	WEB	2 @ 3" X 3"	

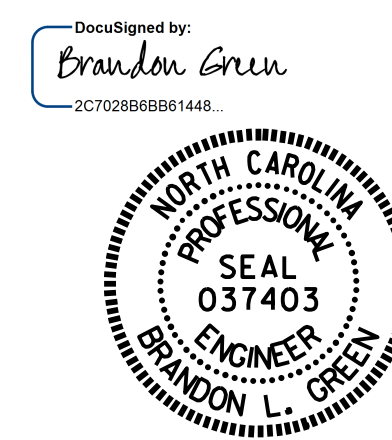
(FOR CLARITY, POPOUTS ARE NOT SHOWN IN PLAN VIEW)

NOTE:
FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISION.

PROJECT NO. B-5942
HYDE COUNTY
BRIDGE NO. 20

SHEET 4 OF 11



3/7/2017

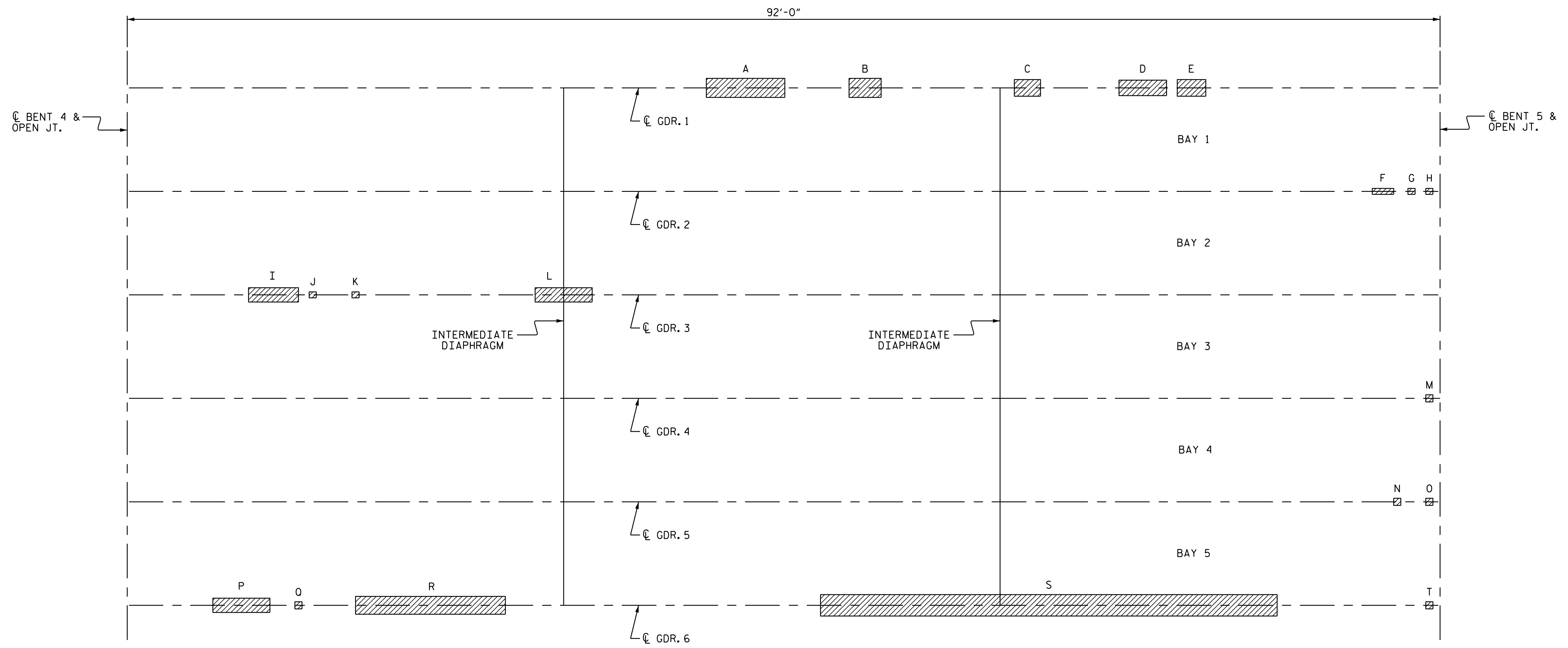
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRESTRESSED GIRDER REPAIR SPAN 4

DRAWN BY : P.C. BREWER DATE : 10-16
CHECKED BY : B. L. GREEN DATE : 10-16

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			30



SPAN 5

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
5	1	40'-7"	BTM. OF GDR.	5'-6" X 1'-4"	A
5	1	50'-7"	BTM. OF GDR.	2'-3" X 1'-4"	B
5	1	62'-2"	BTM. OF GDR.	1'-10" X 1'-2"	C
5	1	71'-2"	BTM. OF GDR.	3'-4" X 1'-1"	D
5	1	73'-7"	BTM. OF GDR.	2'-0" X 1'-2"	E
5	2	88'-0"	BTM. OF GDR.	1'-6" X 5"	F
5	2	90'-0"	BTM. OF GDR.	6" X 4"	G
5	2	92'-0"	BTM. OF GDR.	4" X 4"	H
5	3	12'-0"	BTM. OF GDR.	3'-6" X 1'-0"	I
5	3	13'-0"	BTM. OF GDR.	6" X 5"	J
5	3	16'-0"	BTM. OF GDR.	6" X 5"	K
5	3	30'-7"	BTM. OF GDR.	4'-0" X 1'-0"	L
5	4	92'-0"	BTM. OF GDR.	6" X 6"	M
5	5	89'-0"	BTM. OF GDR.	6" X 6"	N
5	5	92'-0"	BTM. OF GDR.	6" X 6"	O
5	6	6'-0"	BTM. OF GDR.	4'-0" X 1'-0"	P
5	6	12'-0"	BTM. OF GDR.	4" X 4"	Q
5	6	16'-0"	BTM. OF GDR.	10'-6" X 1'-3"	R
5	6	48'-7"	BTM. OF GDR.	32'-0" X 1'-6"	S
5	6	92'-0"	BTM. OF GDR.	6" X 3"	T

GIRDER POPOUT LOCATIONS					
SPAN	GIRDER	BAY	LOCATION	REPAIR NUMBER/SIZE	
5	1	EXT.	WEB	12 @ 3" X 6"	
5	1	1	WEB	16 @ 3" X 6"	
5	2	1	WEB	9 @ 3" X 6"	
5	2	2	WEB	23 @ 3" X 3"	
5	3	2	WEB	8 @ 3" X 6"	
5	3	3	WEB	22 @ 3" X 3"	
5	4	3	WEB	3 @ 3" X 3"	
5	4	4	WEB	13 @ 3" X 3"	
5	5	5	WEB	1 @ 3" X 3"	

(FOR CLARITY, POPOUTS ARE NOT SHOWN IN PLAN VIEW)

NOTE:

FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

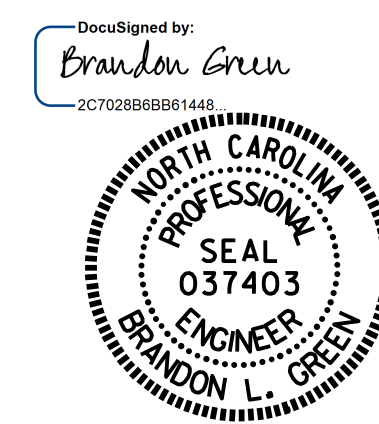
FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISION.

PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 5 OF 11



3/7/2017

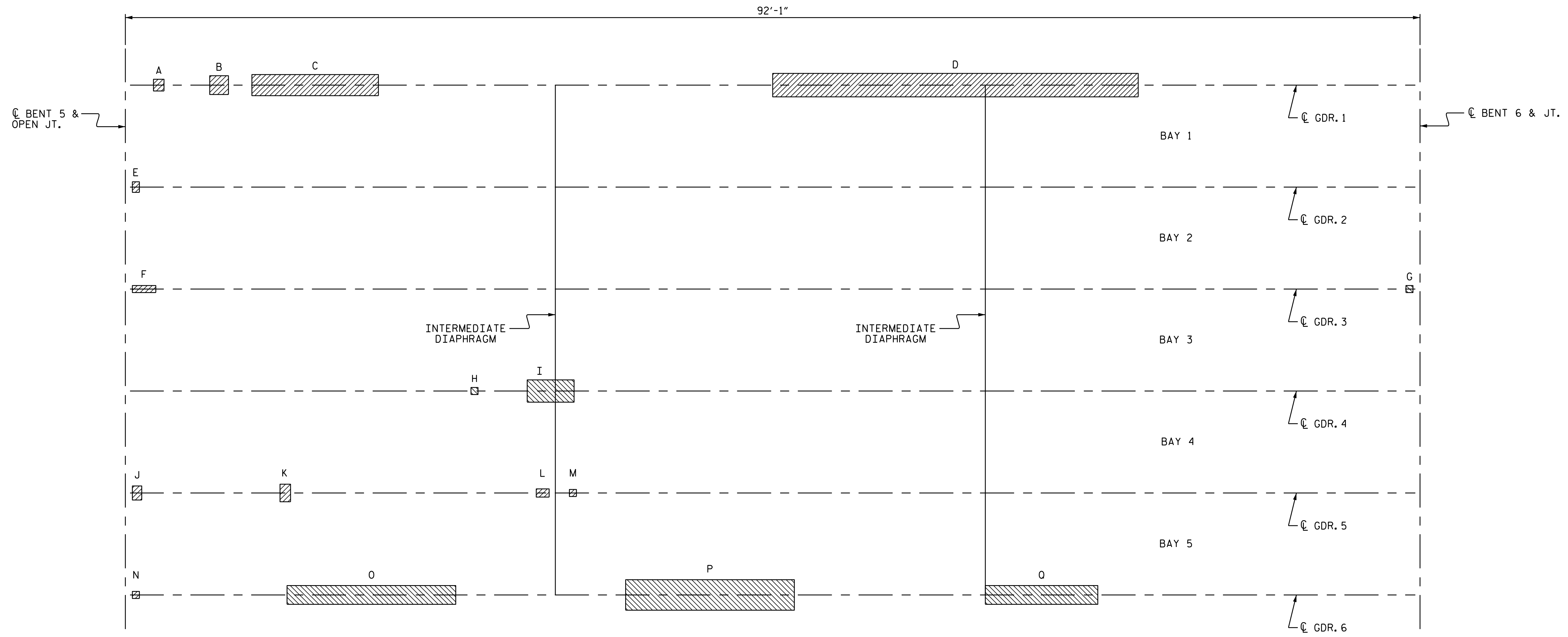
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**PRESTRESSED
GIRDER REPAIR
SPAN 5**

DRAWN BY : P.C. BREWER DATE : 10-16
CHECKED BY : B. L. GREEN DATE : 10-16

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			30



SPAN 6

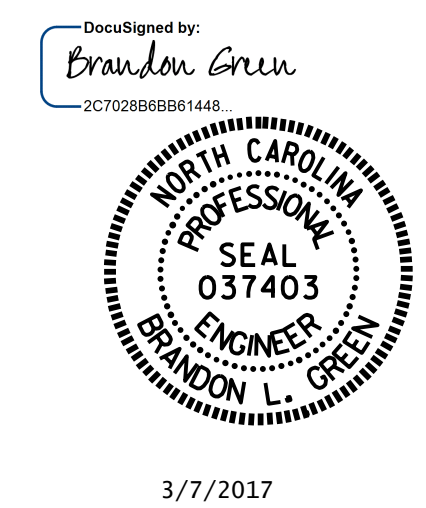
GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
6	1	2'-0"	BTM. OF GDR.	9" X 10"	A
6	1	6'-0"	BTM. OF GDR.	1'-4" X 1'-4"	B
6	1	9'-0"	BTM. OF GDR.	9'-0" X 1'-6"	C
6	1	46'-0"	BTM. OF GDR.	26'-0" X 1'-8"	D
6	2	92'-1"	BTM. FLG.	3" X 9"	E
6	3	0'-0"	BTM. OF GDR.	6" X 1'-8"	F
6	3	90'-1"	BTM. OF GDR.	4" X 4"	G
6	4	24'-7"	BTM. OF GDR.	4" X 4"	H
6	4	28'-7"	BTM. OF GDR.	3'-4" X 1'-7"	I
6	5	0'-0"	BTM. OF GDR.	8" X 1'-0"	J
6	5	11'-0"	BTM. OF GDR.	1'-3" X 9"	K
6	5	29'-7"	BTM. OF GDR.	9" X 1'-0"	L
6	5	31'-7"	BTM. OF GDR.	11" X 7"	M
6	6	0'-0"	BTM. OF GDR.	6" X 6"	N
6	6	11'-6"	BTM. OF GDR.	12'-0" X 1'-4"	O
6	6	35'-7"	BTM. OF GDR.	12'-0" X 2'-2"	P
6	6	61'-2"	BTM. OF GDR.	8'-0" X 1'-4"	Q

GIRDER POPOUT LOCATIONS					
SPAN	GIRDER	BAY	LOCATION	REPAIR NUMBER/SIZE	
6	1	1	WEB	2 @ 3" X 3"	
6	2	2	WEB	2 @ 3" X 3"	
6	3	2	WEB	12 @ 3" X 3"	
6	3	3	WEB	12 @ 3" X 3"	
6	4	3	WEB	39 @ 3" X 3"	
6	5	4	WEB	11 @ 3" X 3"	
6	5	5	WEB	7 @ 3" X 3"	
6	6	5	WEB	4 @ 3" X 3"	

(FOR CLARITY, POPOUTS ARE NOT SHOWN IN PLAN VIEW)

NOTE:
 FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.
 FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISION.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20
 SHEET 6 OF 11

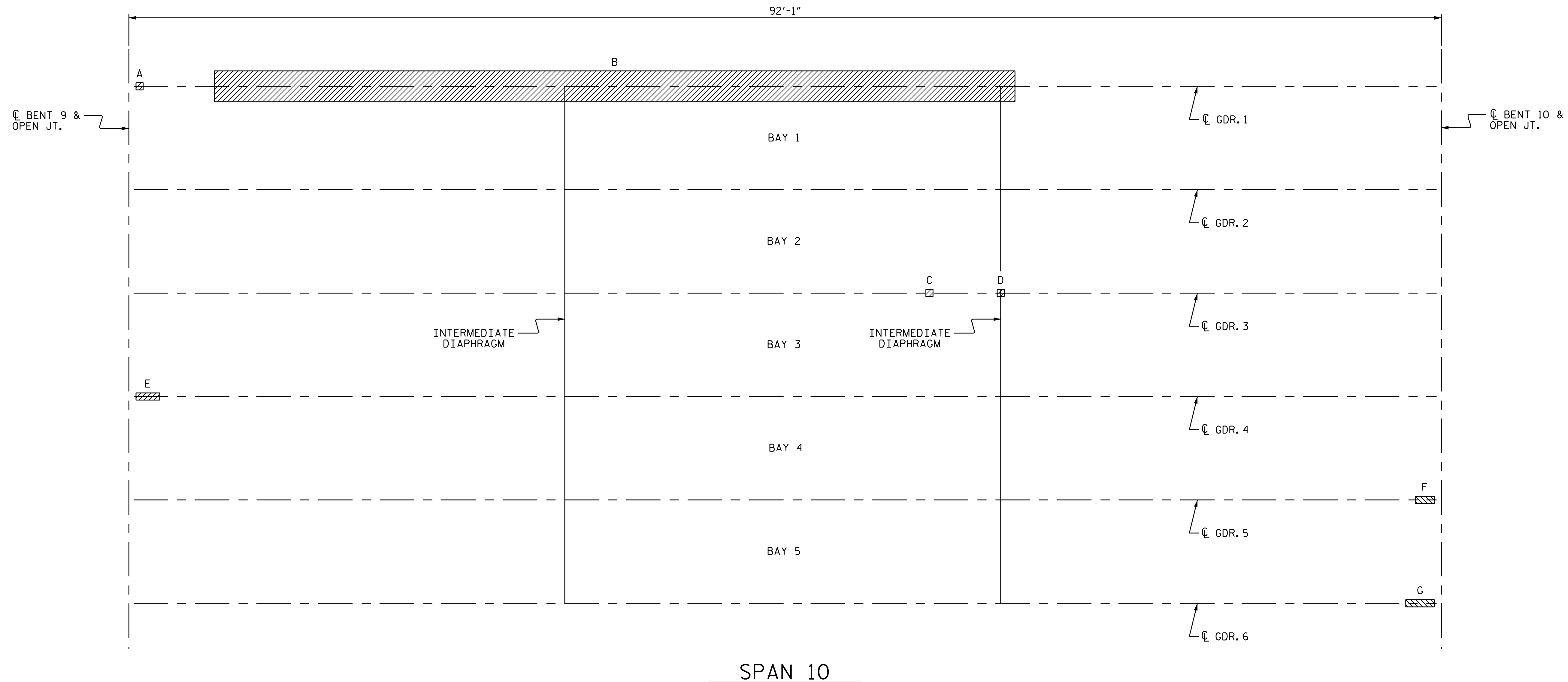


3/7/2017

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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1			3			TOTAL SHEETS
2			4			30



SPAN 10

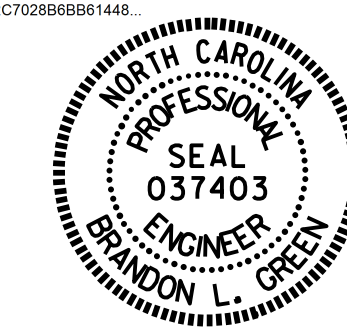
GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
10	1	0'-0"	BTM. OF GDR.	4" X 6"	A
10	1	34'-1"	BTM. OF GDR.	56'-2" X 2'-2"	B
10	3	56'-2"	BTM. OF GDR.	6" X 6"	C
10	3	61'-2"	BTM. OF GDR.	6" X 6"	D
10	4	0'-0"	BTM. OF GDR.	6" X 1'-8"	E
10	5	92'-1"	BTM. OF GDR.	3" X 1'-4"	F
10	6	92'-1"	BTM. OF GDR.	3" X 2'-0"	G

NOTE:
FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 7 OF 11

Decaliged by:
Brandon Green
 2070286881448



3/7/2017

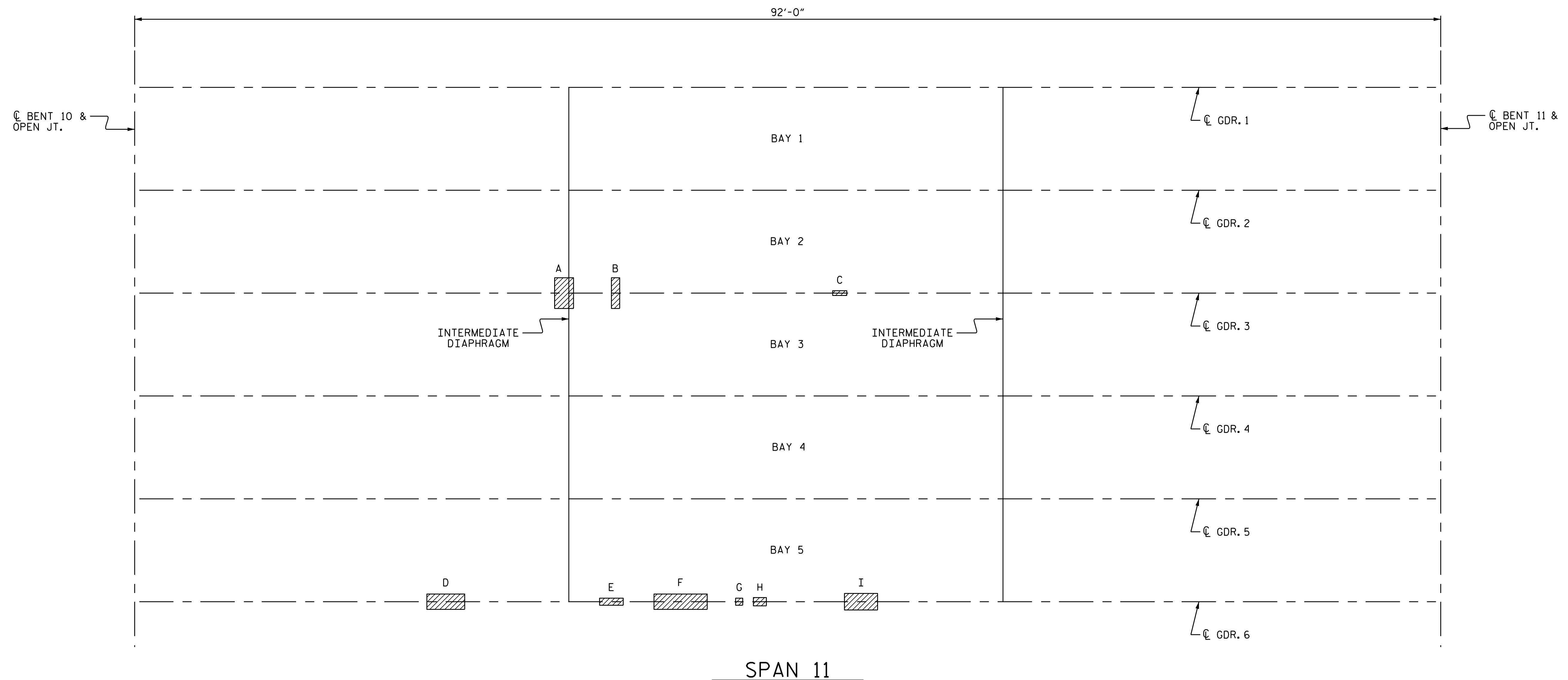
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRESTRESSED
 GIRDER REPAIR
 SPAN 10

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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2			4			30



SPAN 11

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
11	3	29'-7"	BTM. OF GDR.	1'-4" X 2'-2"	A
11	3	33'-7"	BTM. OF GDR.	7" X 2'-2"	B
11	3	49'-2"	BTM. OF GDR.	1'-0" X 4"	C
11	6	20'-7"	BTM. OF GDR.	2'-8" X 1'-1"	D
11	6	33'-7"	BTM. OF GDR.	1'-8" X 6"	E
11	6	36'-7"	BTM. OF GDR.	3'-9" X 1'-1"	F
11	6	42'-7"	BTM. OF GDR.	6" X 6"	G
11	6	43'-7"	BTM. OF GDR.	11" X 7"	H
11	6	51'-2"	BTM. OF GDR.	2'-4" X 1'-2"	I

NOTE:

FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 8 OF 11



3/7/2017

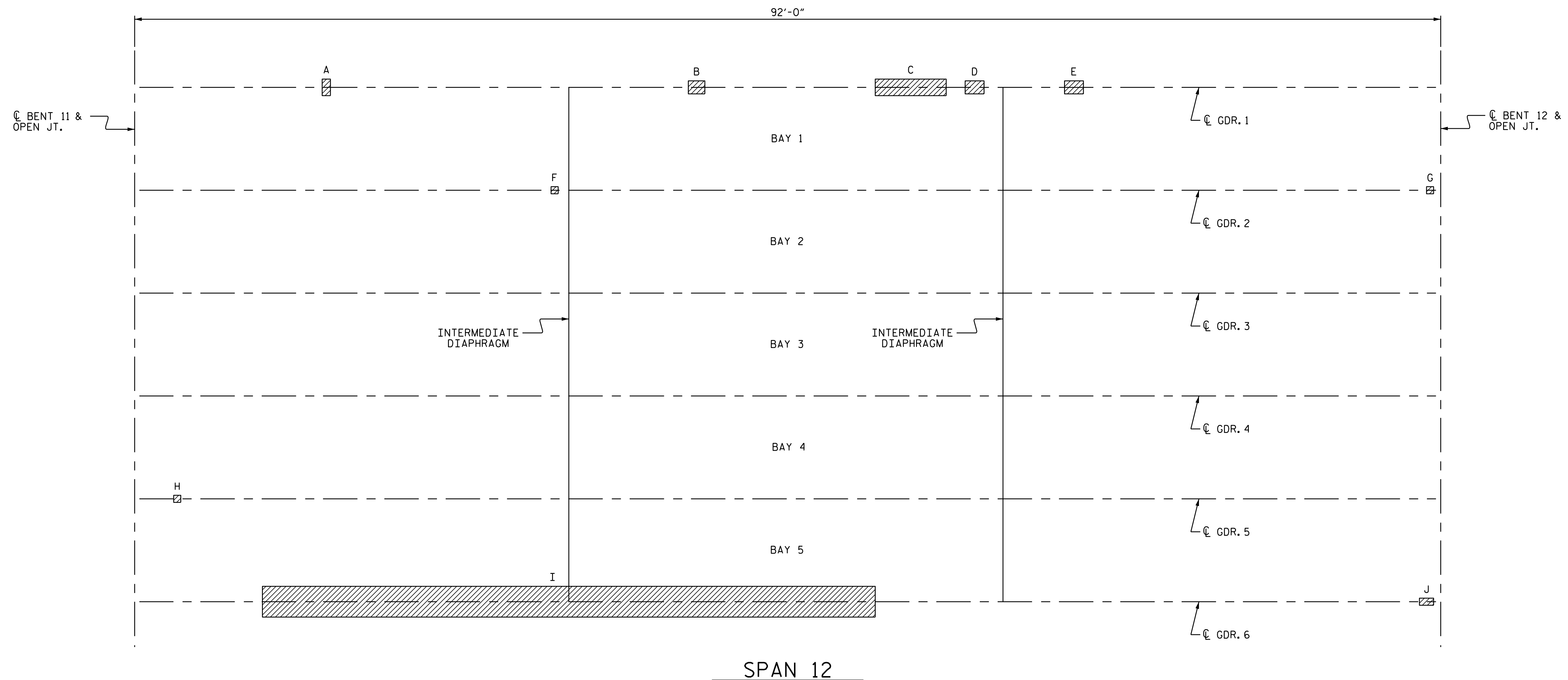
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRESTRESSED
GIRDER REPAIR
SPAN 11

DRAWN BY : P.C. BREWER DATE : 10-16
CHECKED BY : B. L. GREEN DATE : 10-16

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1			3			TOTAL SHEETS
2			4			30



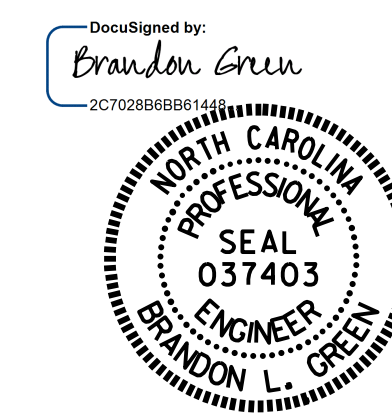
SPAN 12

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
12	1	13'-6"	BTM. OF GDR.	7" X 1'-2"	A
12	1	39'-7"	BTM. OF GDR.	1'-2" X 11"	B
12	1	55'-2"	BTM. OF GDR.	5'-0" X 1'-2"	C
12	1	59'-2"	BTM. OF GDR.	1'-4" X 11"	D
12	1	66'-2"	BTM. OF GDR.	1'-4" X 11"	E
12	2	29'-7"	BTM. OF GDR.	6" X 4"	F
12	2	92'-0"	BTM. OF GDR.	3" X 3"	G
12	5	3'-0"	BTM. OF GDR.	4" X 6"	H
12	6	30'-7"	BTM. OF GDR.	43'-2" X 2'-2"	I
12	6	92'-0"	BTM. OF GDR.	5" X 1'-0"	J

NOTE:
FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 9 OF 11



3/7/2017

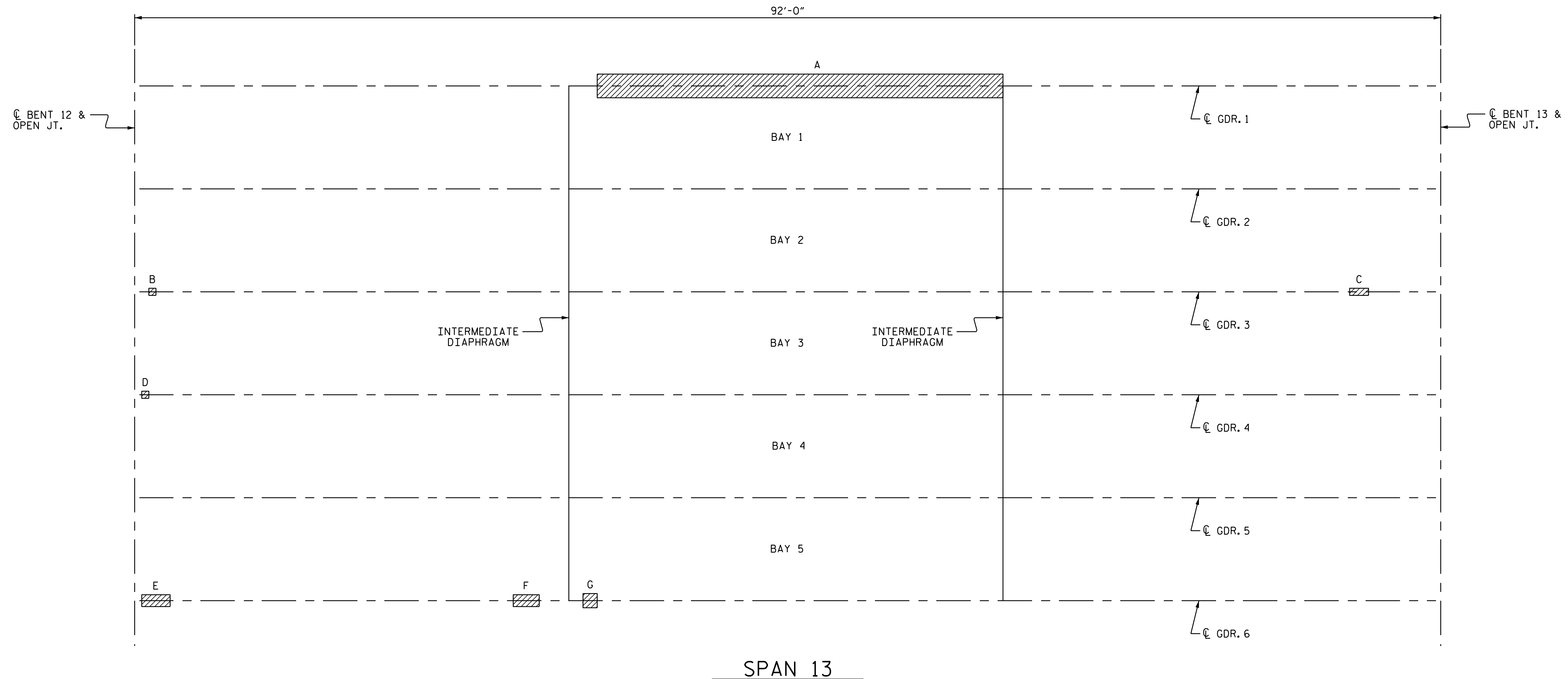
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PRESTRESSED
 GIRDER REPAIR
 SPAN 12**

DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			30



SPAN 13

GIRDER REPAIR LOCATIONS					
SPAN	GIRDER	DISTANCE ALONG SPAN	LOCATION	REPAIR SIZE (L X W)	LABEL
13	1	46'-10"	BTM. OF GDR.	28'-7" X 1'-8"	A
13	3	1'-0"	BTM. OF GDR.	5" X 6"	B
13	3	86'-0"	BTM. OF GDR.	1'-4" X 6"	C
13	4	0'-0"	BTM. OF GDR.	4" X 4"	D
13	6	0'-0"	BTM. OF GDR.	2'-0" X 10"	E
13	6	27'-7"	BTM. OF GDR.	1'-10" X 11"	F
13	6	31'-7"	BTM. OF GDR.	1'-0" X 1'-0"	G

GIRDER POPOUT LOCATIONS				
SPAN	GIRDER	BAY	LOCATION	REPAIR NUMBER/SIZE
13	2	2	WEB	8 @ 3" X 3"

(FOR CLARITY, POPOUTS ARE NOT SHOWN IN PLAN VIEW)

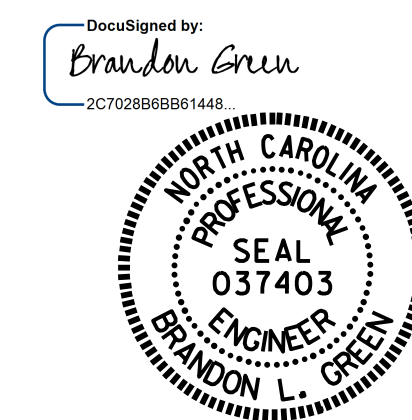
NOTE:

FOR GIRDER REPAIR DETAILS AND SEQUENCE, SEE "PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY" SHEET.

FOR EPOXY COATING POPOUTS, SEE SPECIAL PROVISION.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 10 OF 11



3/7/2017

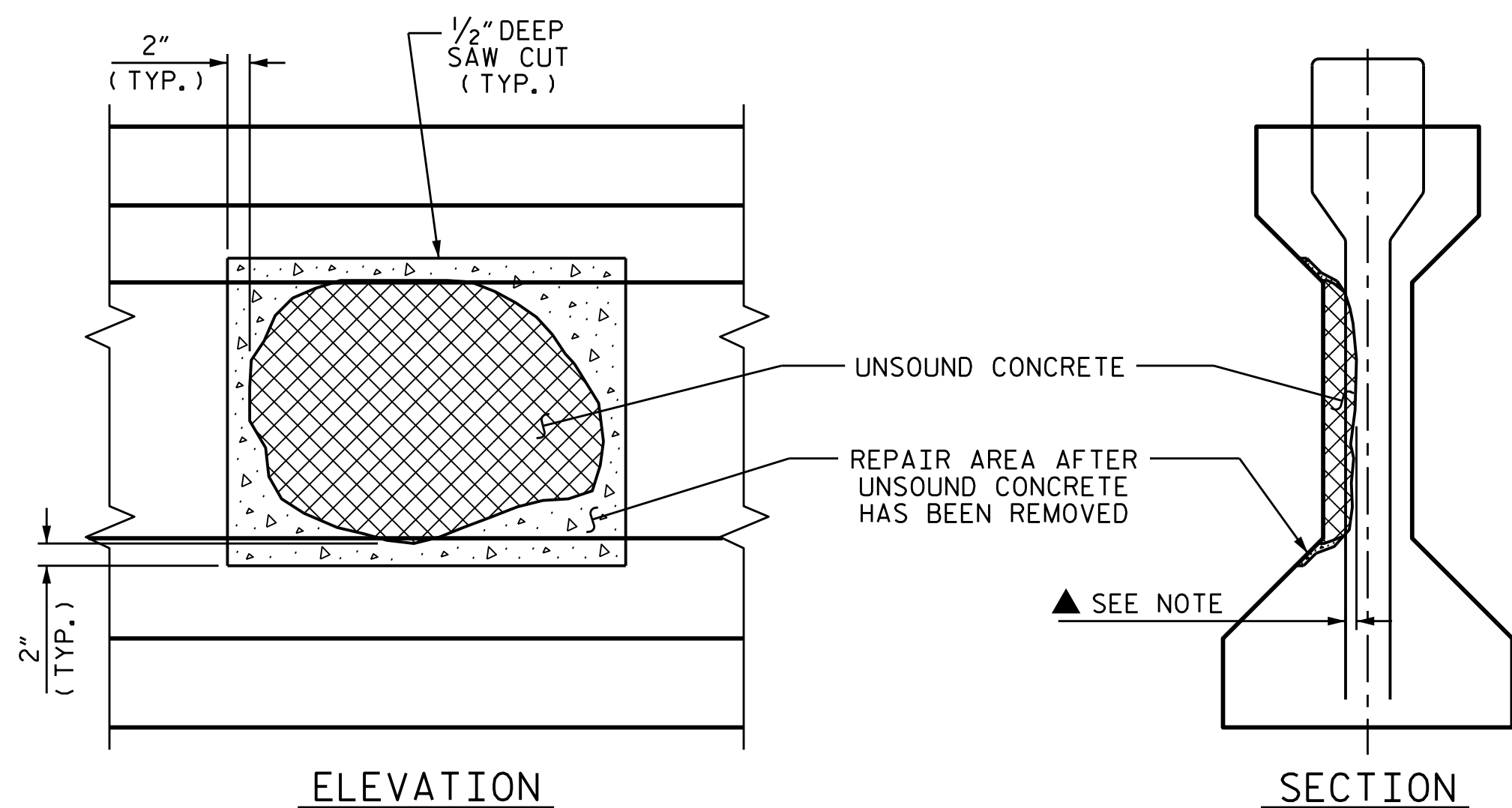
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PRESTRESSED
 GIRDER REPAIR
 SPAN 13**

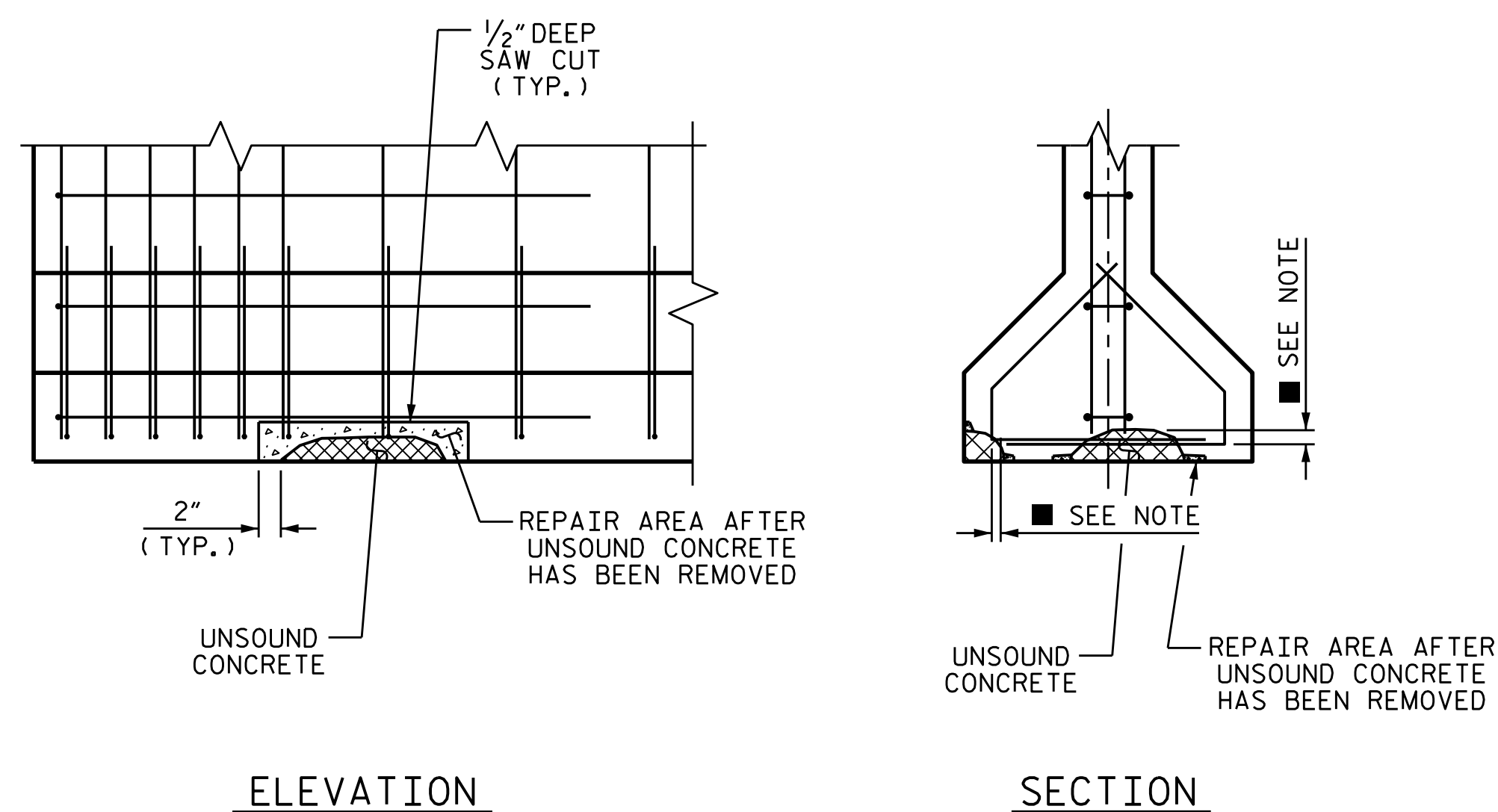
DRAWN BY : P.C. BREWER DATE : 10-16
 CHECKED BY : B. L. GREEN DATE : 10-16

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GIRDER WEB REPAIR



GIRDER FLANGE REPAIR

PRESTRESSED GIRDER REPAIR SEQUENCE:

1. SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION.
2. REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
3. REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM 1/2" DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED.
4. ▲ IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1" BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESSED STRANDS.
5. ■ ALL UNSOUND CONCRETE MUST BE REMOVED, HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
6. USE A WIRE BRUSH TO CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
7. REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
8. PREPARE SURFACE AND PLACE APPROVED REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.

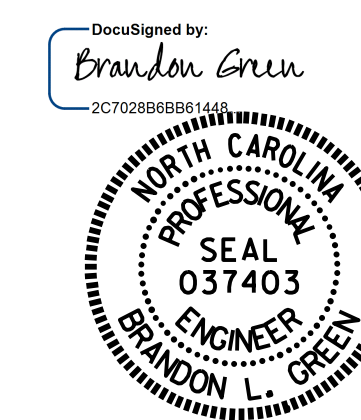
	GIRDER REPAIR QUANTITIES					GIRDER POPOUT QUANTITIES				
	QUANTITIES					QUANTITIES				
	ESTIMATE		ACTUAL			ESTIMATE		ACTUAL		
	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF	SPAN	NUMBER OF REPAIR LOCATIONS	AREA SF	NUMBER OF REPAIR LOCATIONS	AREA SF
SPAN 1	0.6	0.2				SPAN 1	0	0.0		
SPAN 2	1.2	0.4				SPAN 2	0	0.0		
SPAN 3	34.2	11.4				SPAN 3	65	4.3		
SPAN 4	28.5	9.5				SPAN 4	24	1.5		
SPAN 5	93.6	31.2				SPAN 5	107	9.5		
SPAN 6	121.8	40.6				SPAN 6	89	5.6		
SPAN 10	124.2	41.4				SPAN 10	0	0.0		
SPAN 11	15.9	5.3				SPAN 11	0	0.0		
SPAN 12	104.4	34.8				SPAN 12	0	0.0		
SPAN 13	53.1	17.7				SPAN 13	8	0.5		
SPAN 14	0.0	0.0				SPAN 14	0	0.0		
SPAN 15	0.0	0.0				SPAN 15	0	0.0		
TOTAL	577.5	192.5				TOTAL	285	21.4		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE.

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 11 OF 11



3/7/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRESTRESSED GIRDER REPAIR DETAILS AND SUMMARY

DRAWN BY : B. L. GREEN DATE : 10-16
 CHECKED BY : P. C. BREWER DATE : 10-16

02-MAR-2017 10:08
 R:\Structures\Plans\B5942.SMU. FinalPlans.dgn
 bgreen

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1			3			S-14
2			4			30

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
EPOXY RESIN INJECTION		LN. FT.			LN. FT.
CAP		0			
EPOXY COATING		SO. FT.			SO. FT.
TOP OF CAP		113			
REPAIRS END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
EPOXY RESIN INJECTION		LN. FT.			LN. FT.
CAP		0			
EPOXY COATING		SO. FT.			SO. FT.
TOP OF CAP		113			

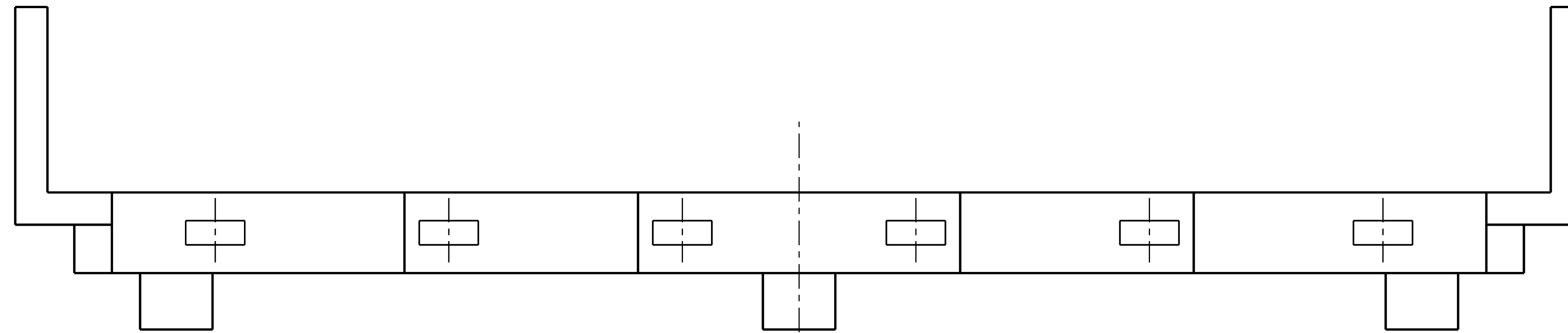
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

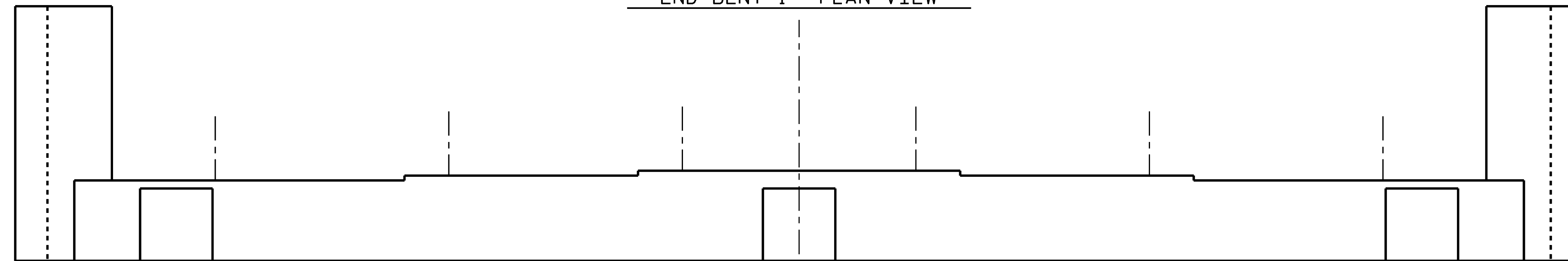
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

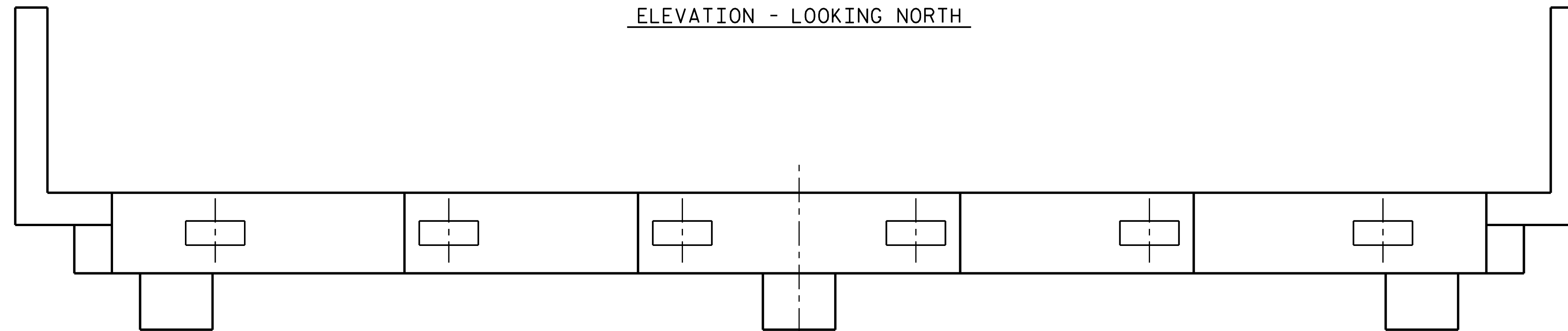
FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



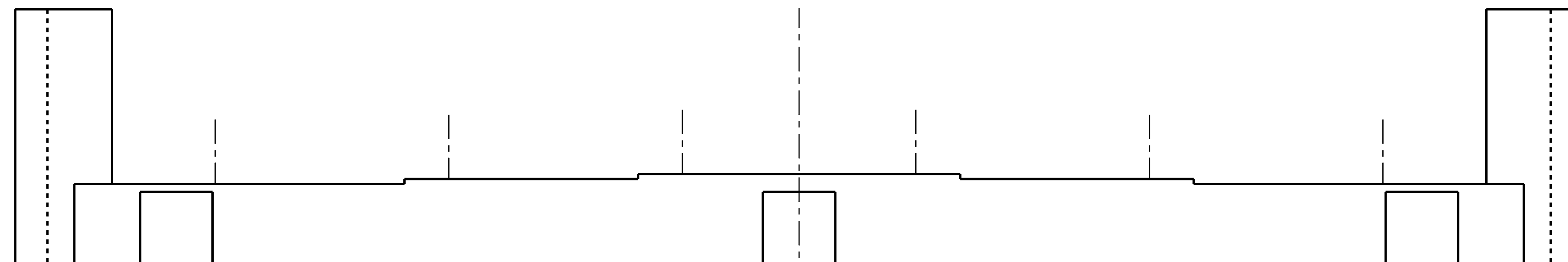
END BENT 1 - PLAN VIEW



ELEVATION - LOOKING NORTH



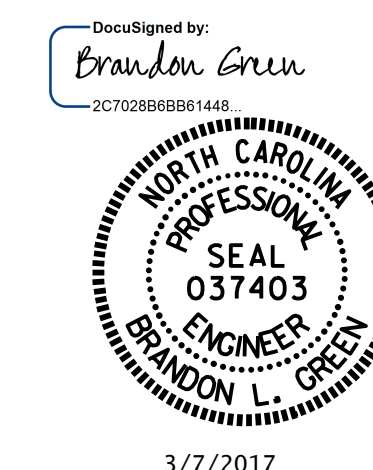
END BENT 2 - PLAN VIEW



ELEVATION - LOOKING SOUTH

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 END BENT 1 & 2



DRAWN BY : R.W. WRIGHT DATE : 10/15
 CHECKED BY : B.L. GREEN DATE : 11/15
 DESIGN ENGINEER OF RECORD: - DATE : -

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT.			LN. FT.
CAP		21.0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		714			

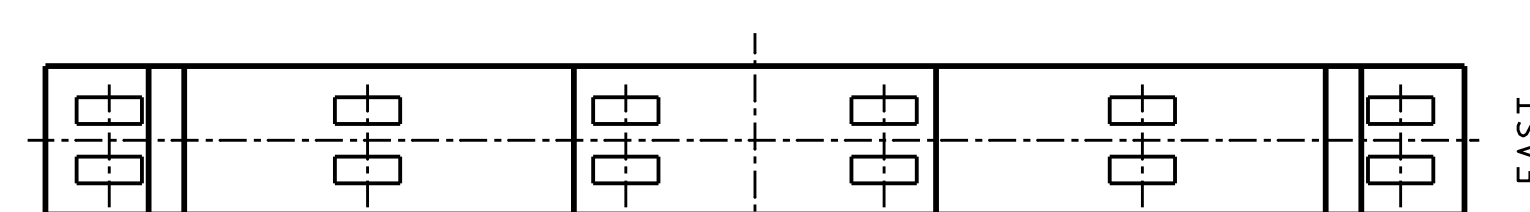
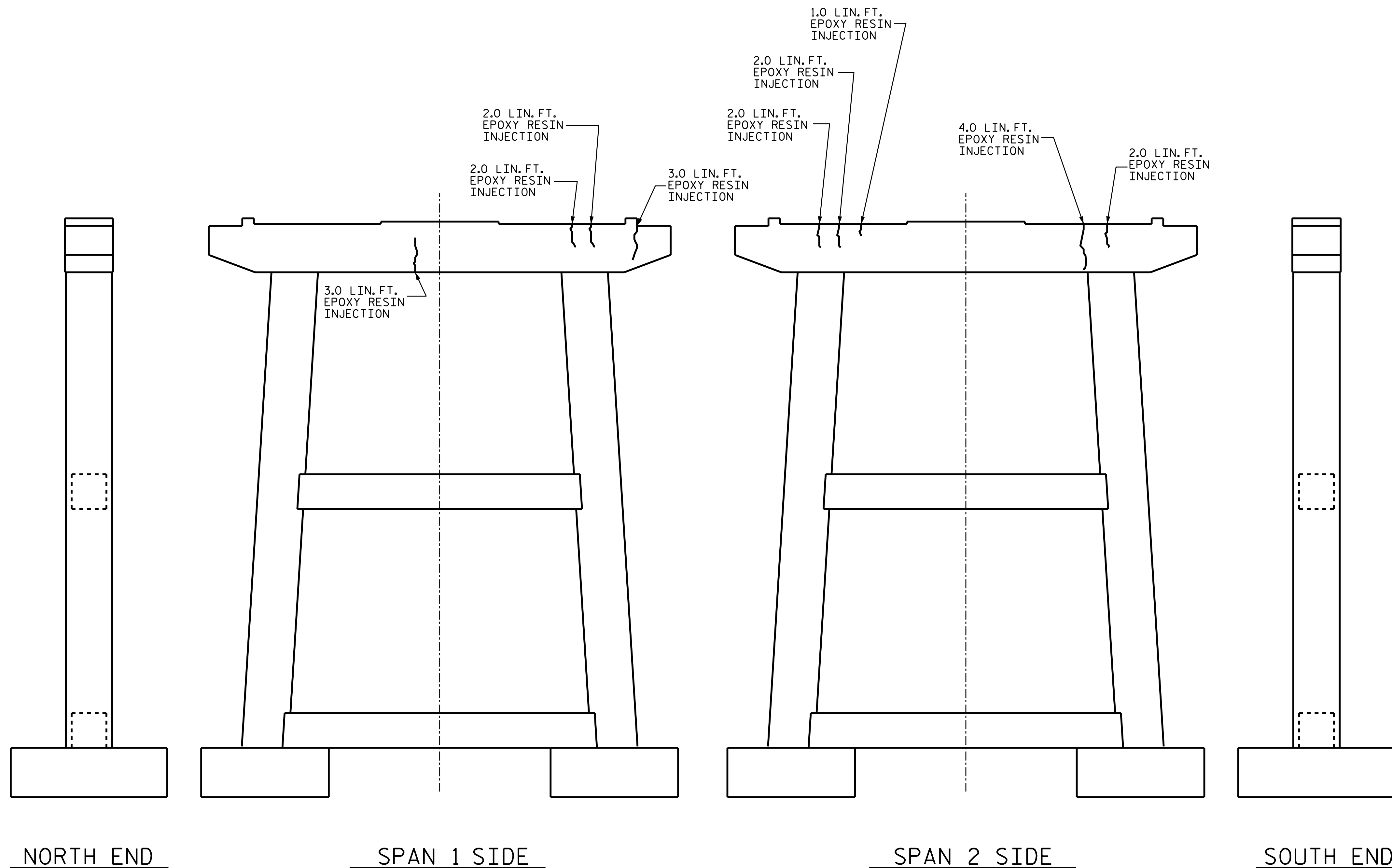
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

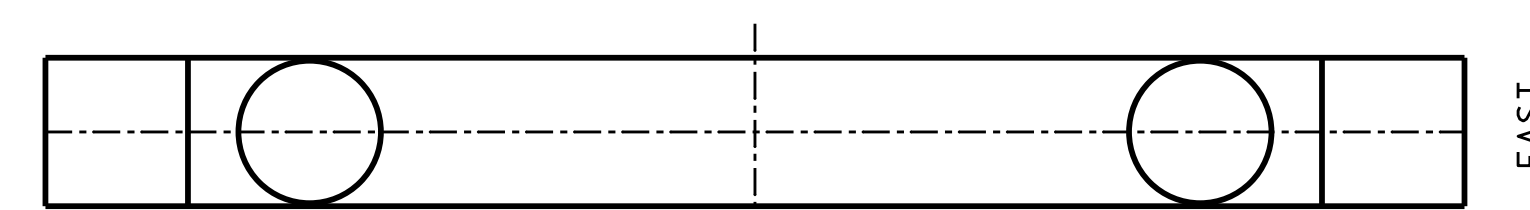
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



TOP OF CAP



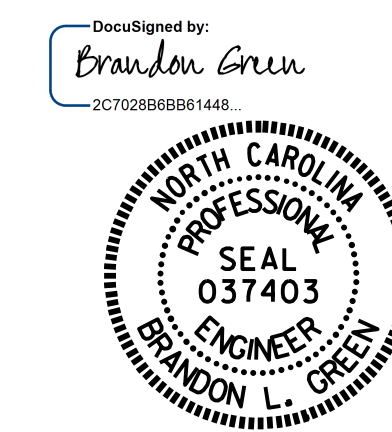
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PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 1 OF 15



3/7/2017

STATE OF WEST CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 1

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DESIGN ENGINEER OF RECORD: - DATE : -

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1			3			S-16
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		714			

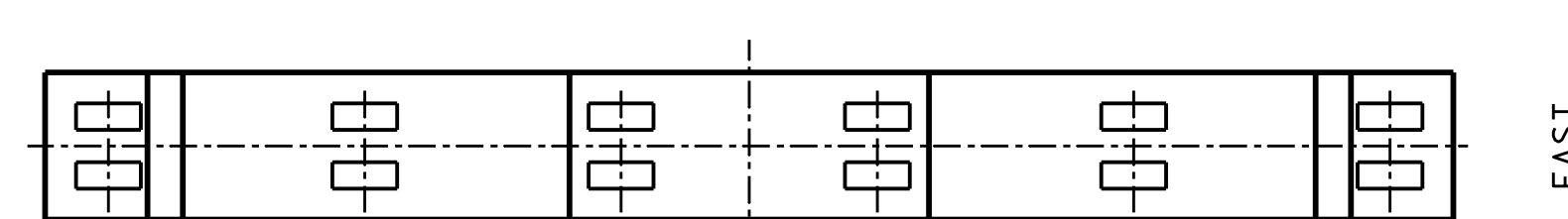
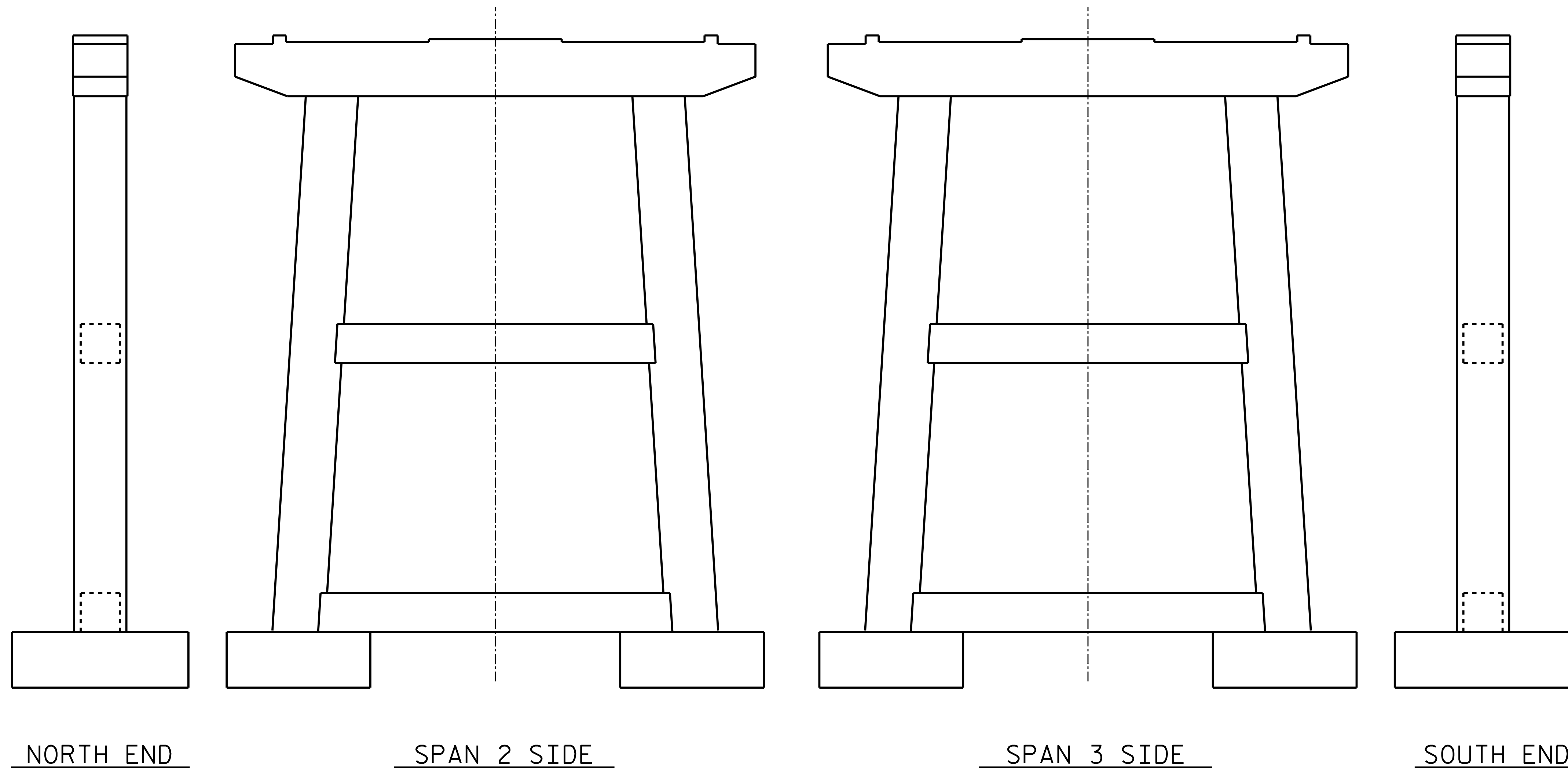
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

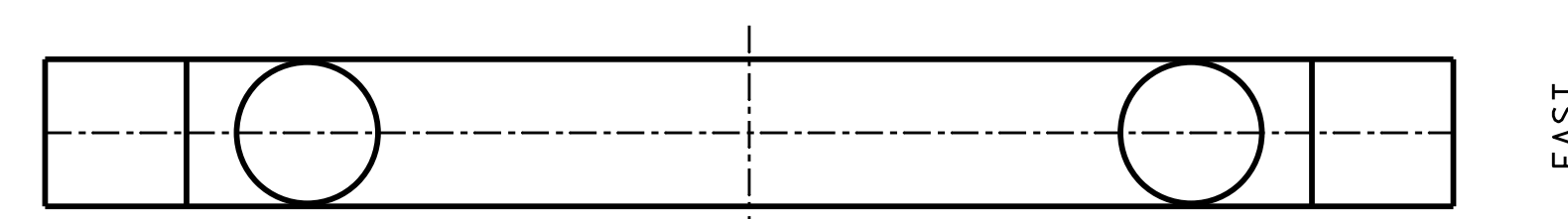
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FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



TOP OF CAP



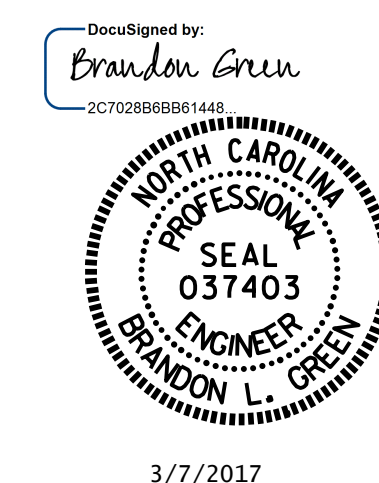
BOTTOM OF CAP

PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 2 OF 15



STATE OF WEST CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 2

DRAWN BY : R.W. WRIGHT DATE : 10/15
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1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		733			

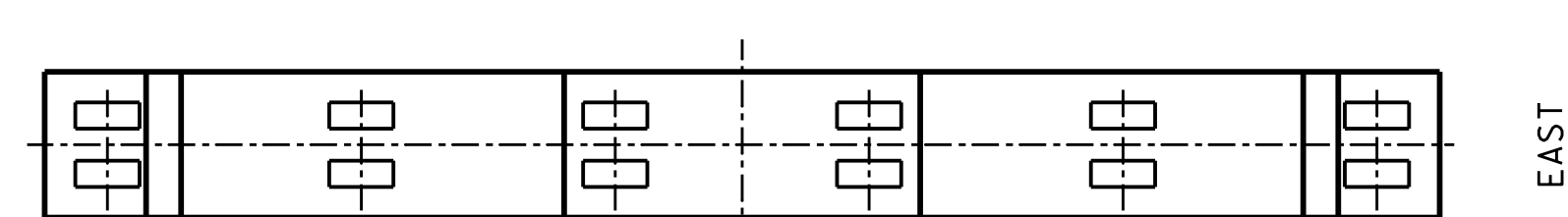
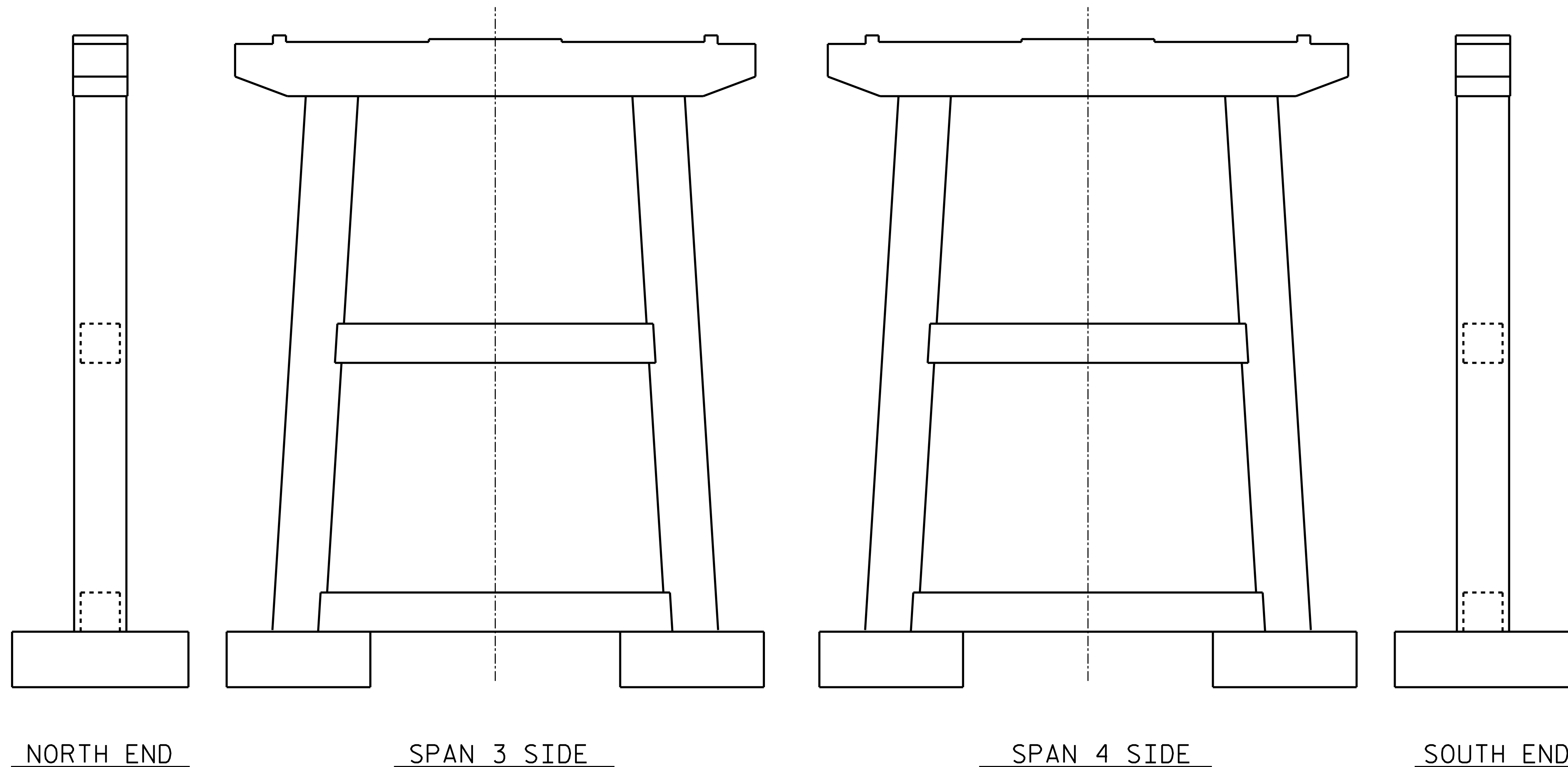
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

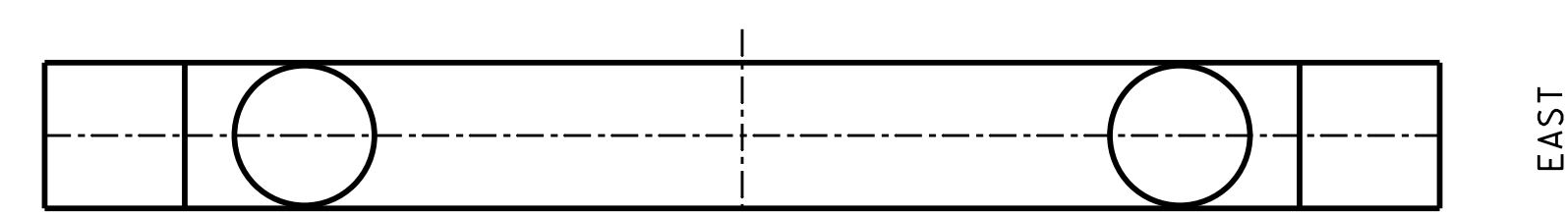
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FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



TOP OF CAP



BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 3 OF 15



3/7/2017

STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 3

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18
1			3			TOTAL SHEETS 30
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 4	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		3.0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		733			

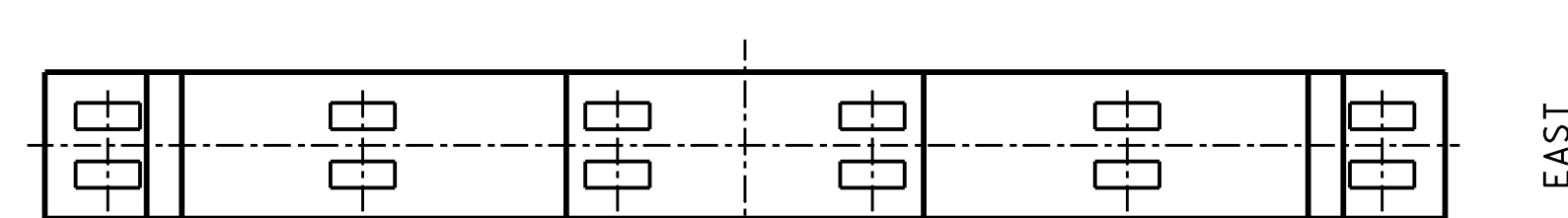
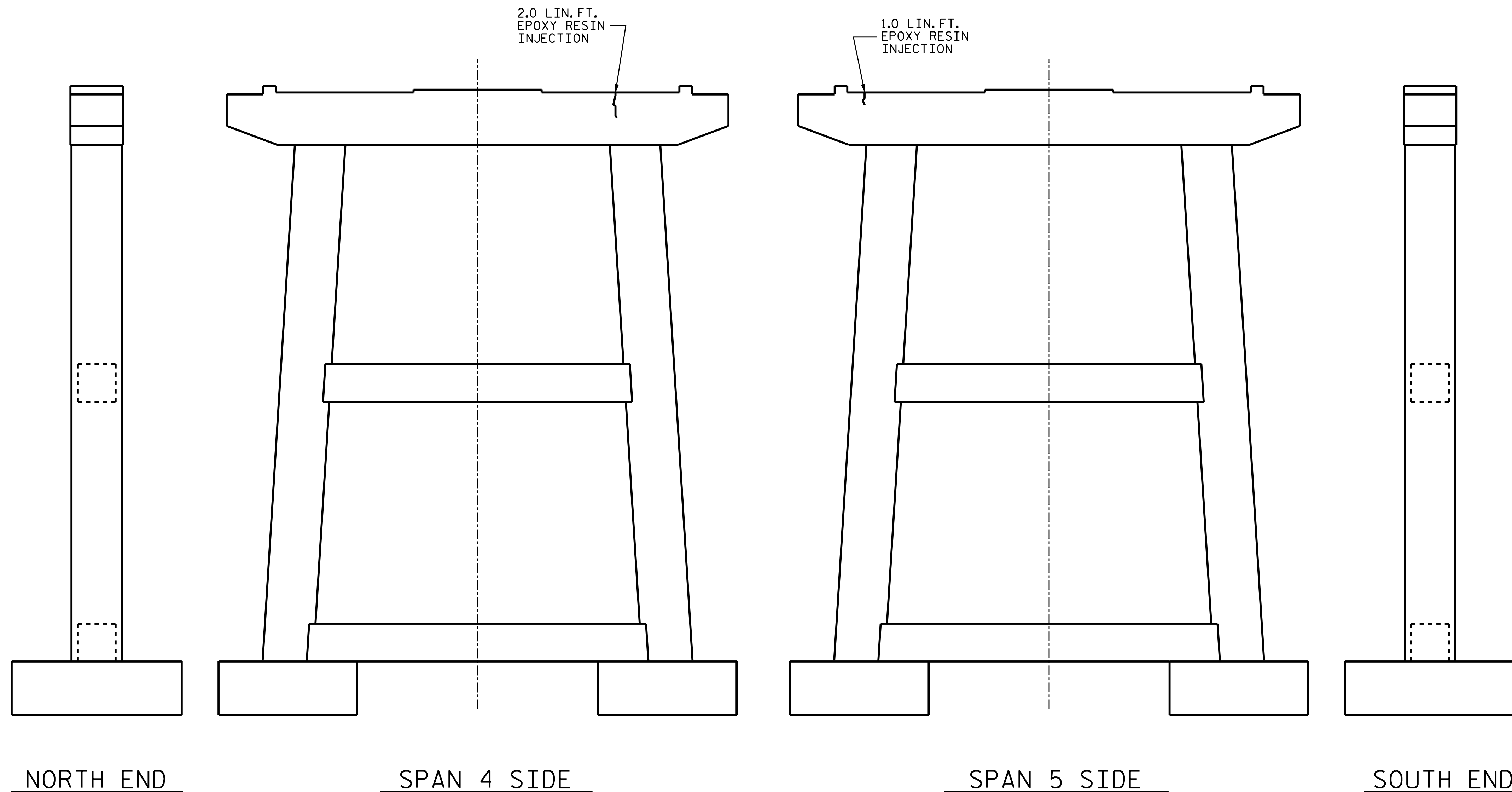
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NOTES:

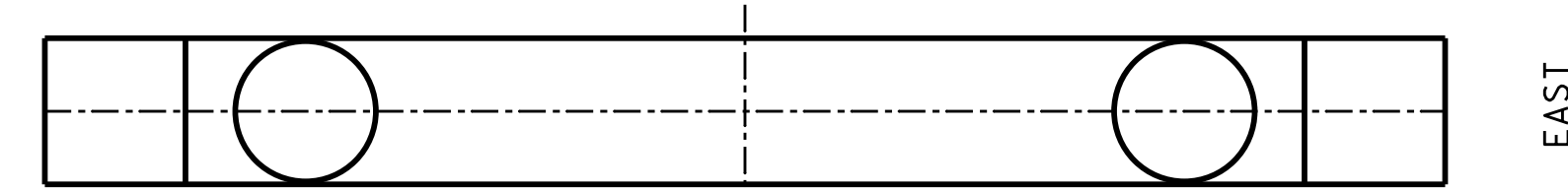
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FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



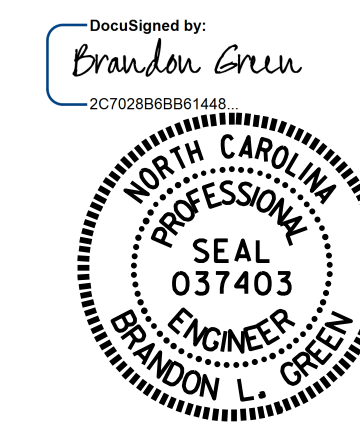
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BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 4 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
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 BENT 4

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-19
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 5	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		6.0			
COLUMN		0			
EPOXY COATING FOUNDATIONS		AREA SF			
TOP OF CAP		166			
FOOTINGS		733			

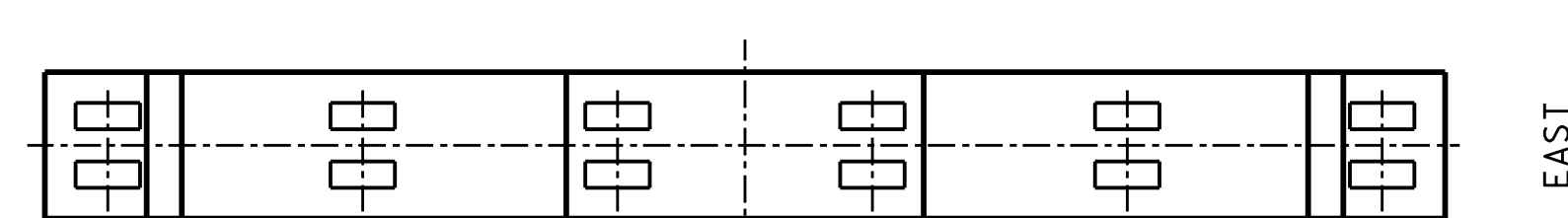
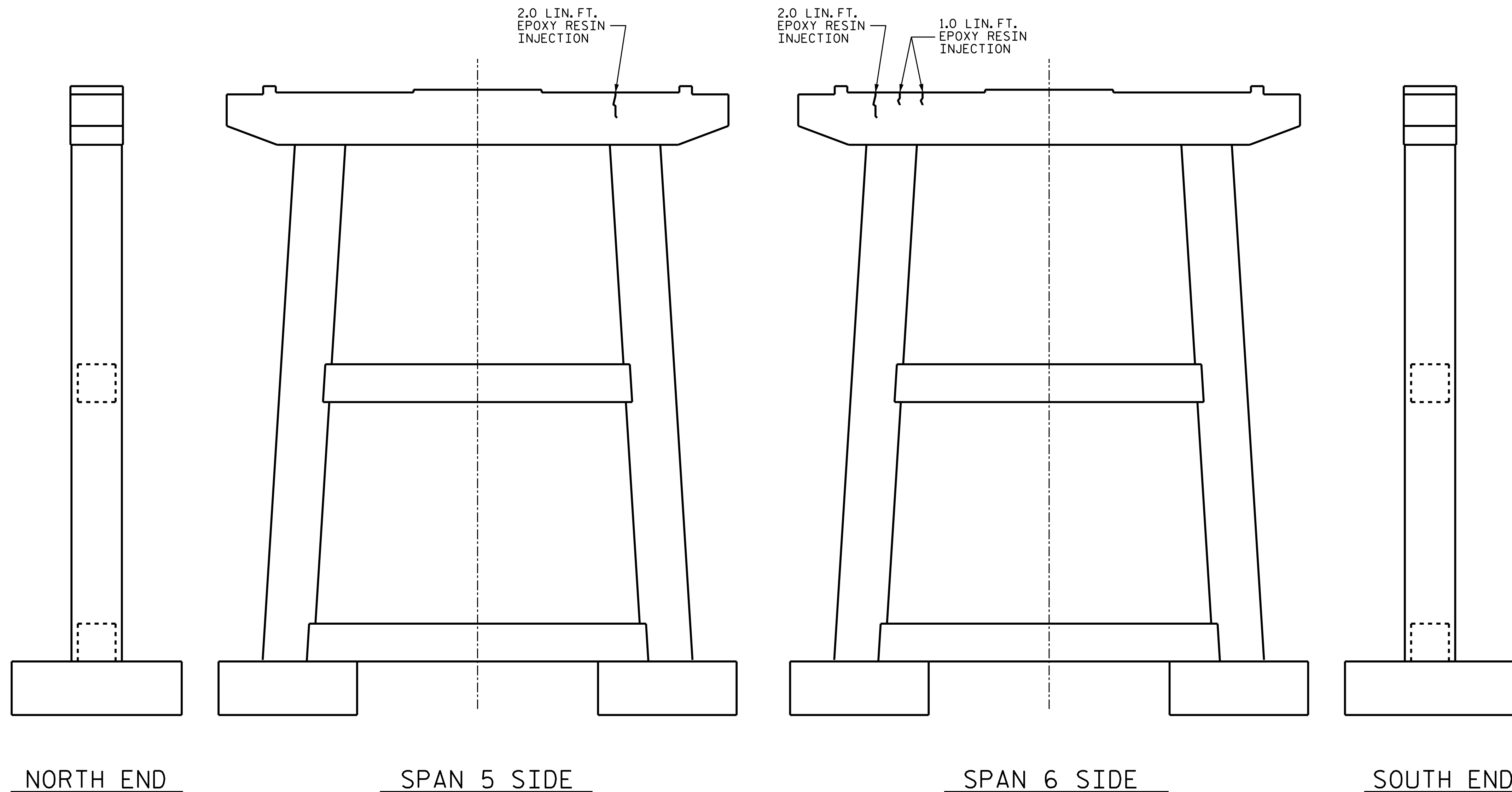
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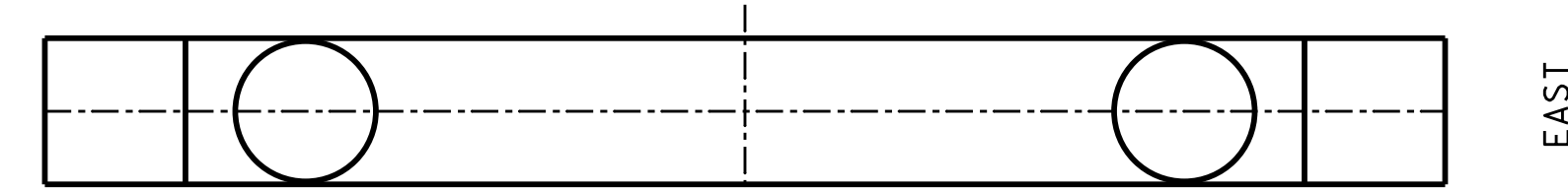
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FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



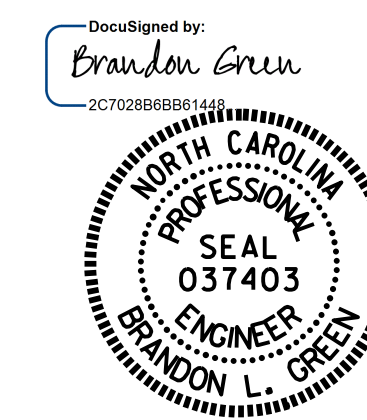
TOP OF CAP



BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 5 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 5

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 6	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0.3	0.2			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		10.0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		733			

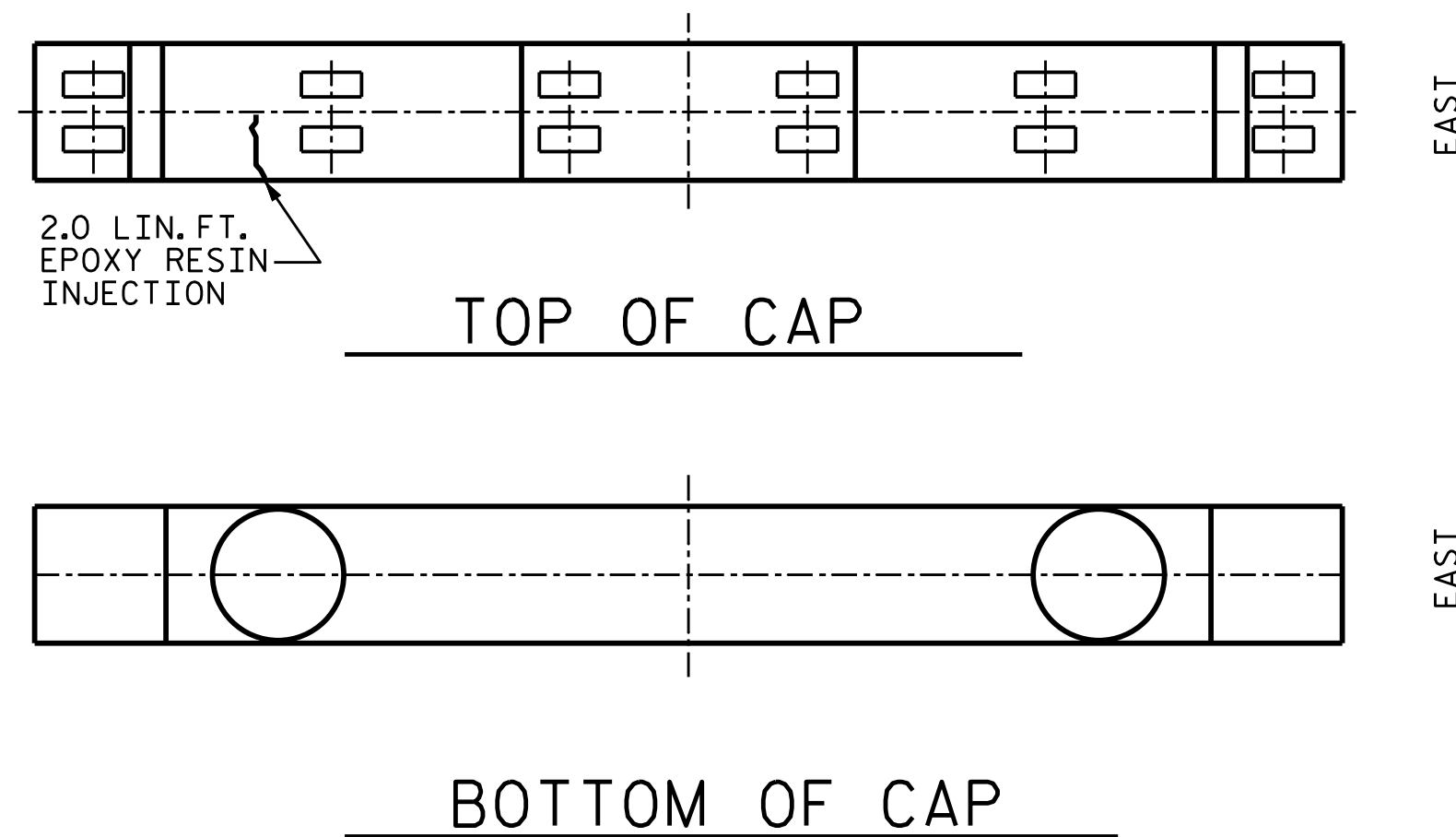
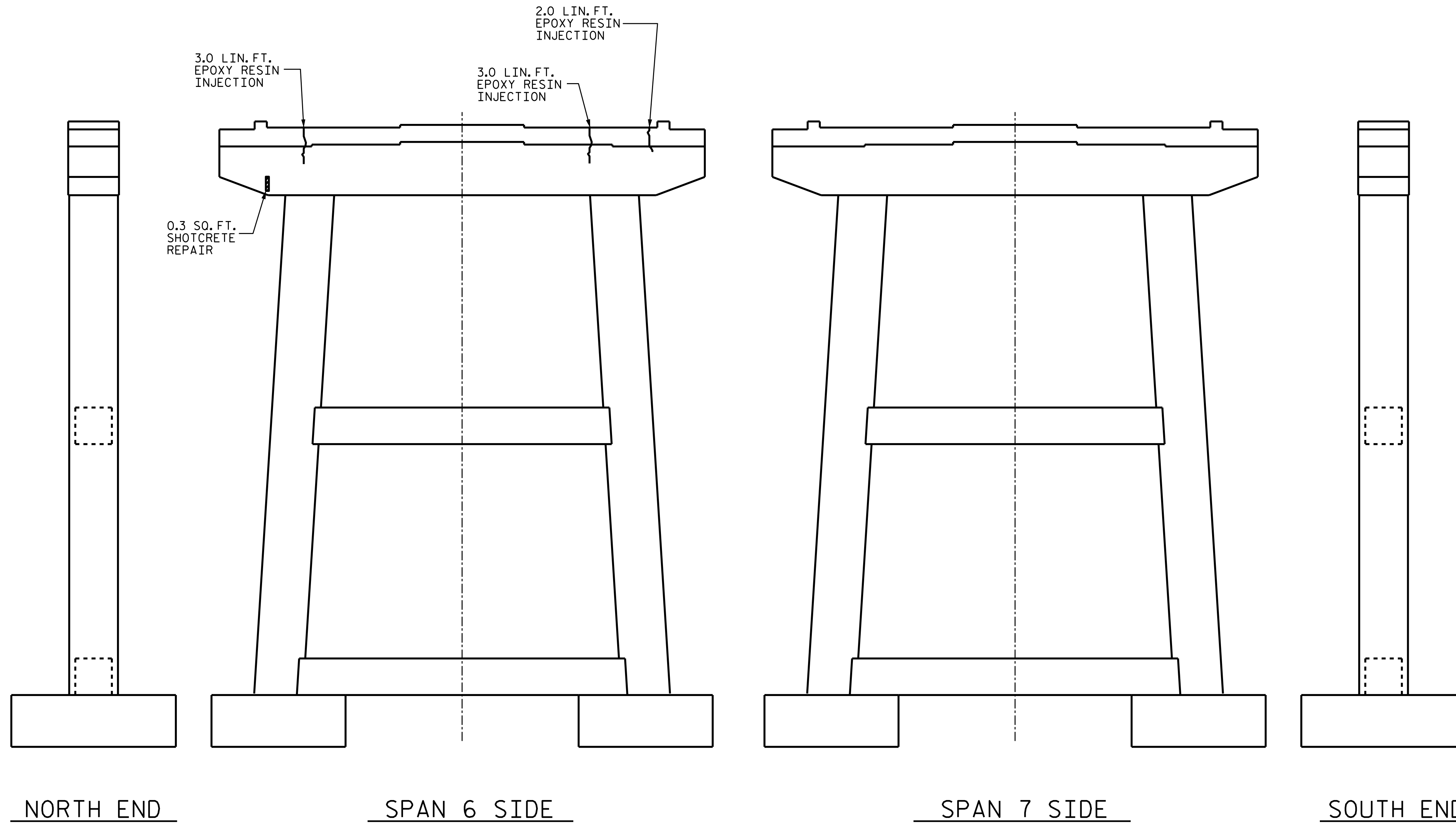
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FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 6 OF 15



3/7/2017

STATE OF WEST CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 6

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 7	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION			LN. FT		LN. FT
CAP			0		
COLUMN			0		
EPOXY COATING			AREA SF		
TOP OF CAP			186		
TOP OF BASE			177		
TEXTURED COATING			AREA SF		
SIDE FACES OF BASE			536		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

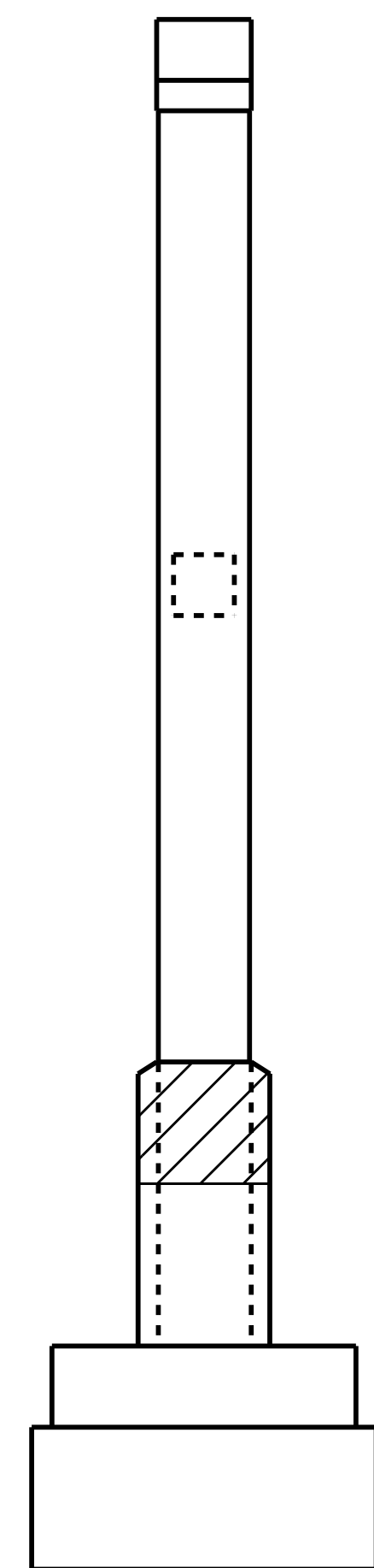
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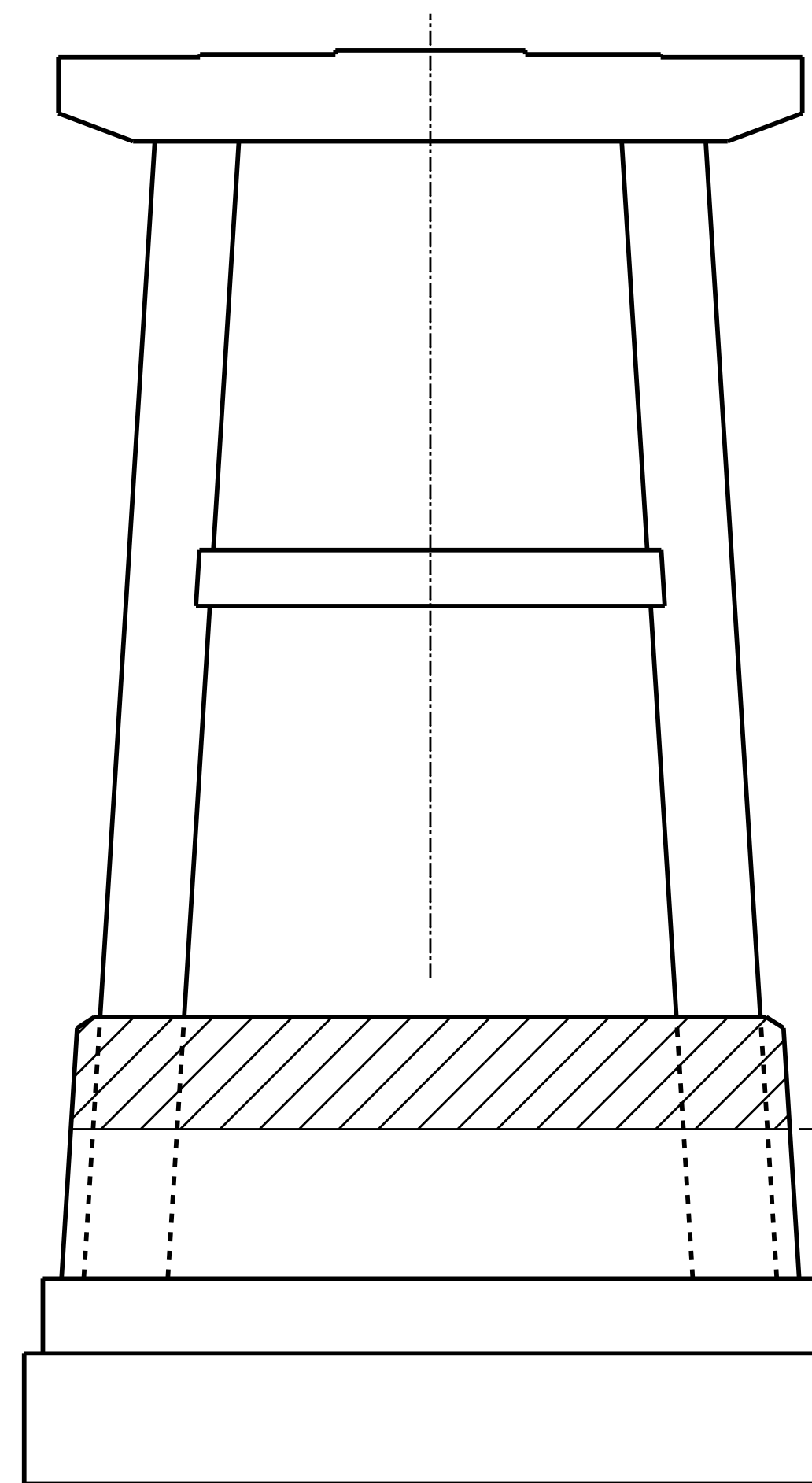
FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



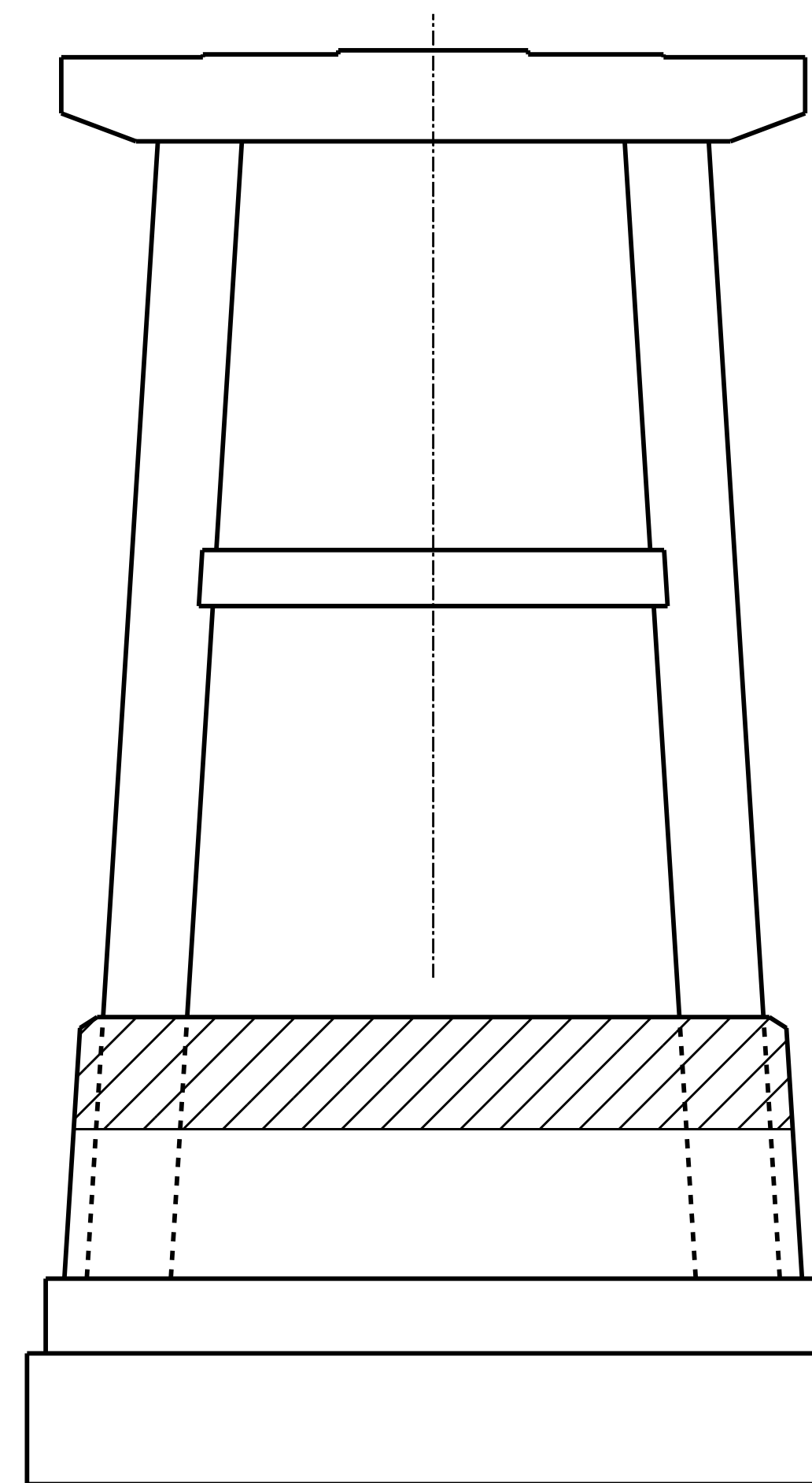
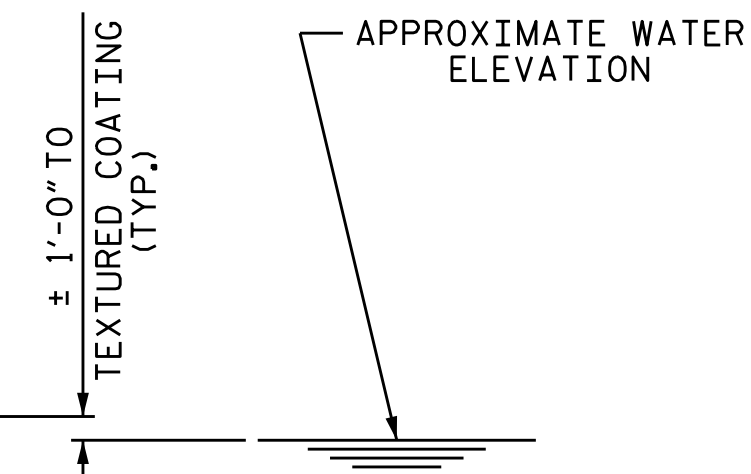
TEXTURED COATING



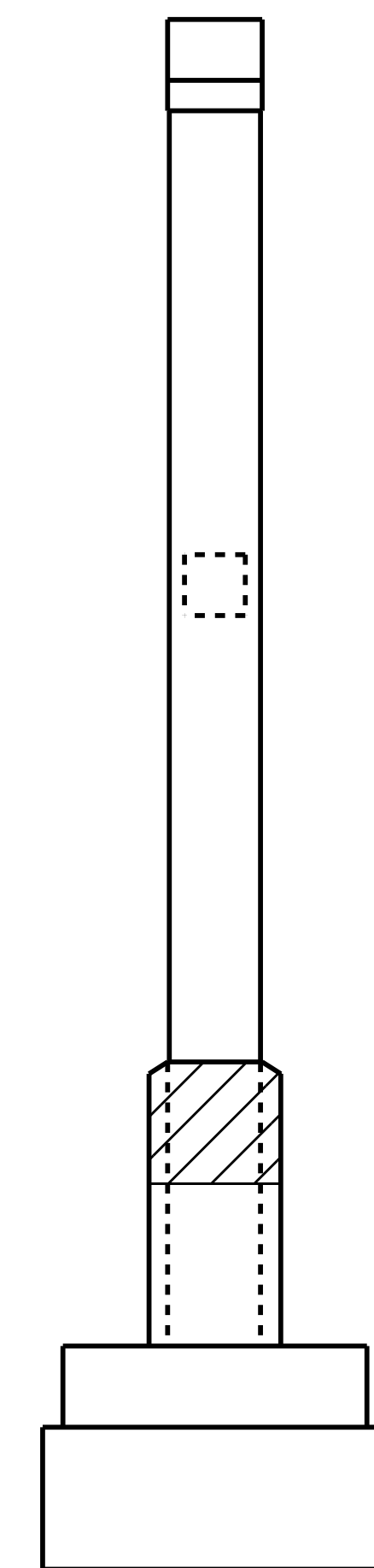
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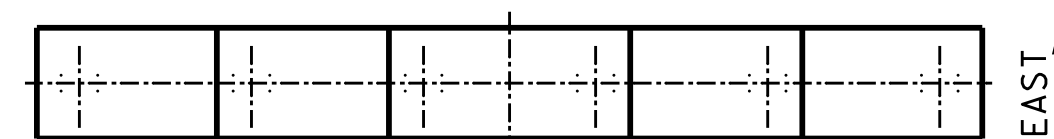
SPAN 7 SIDE



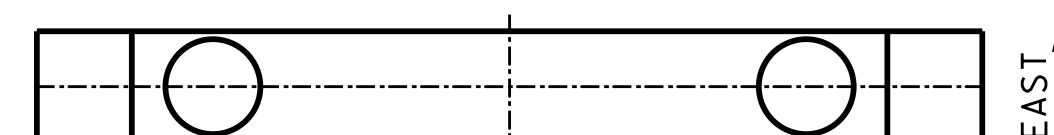
SPAN 8 SIDE



SOUTH END



TOP OF CAP



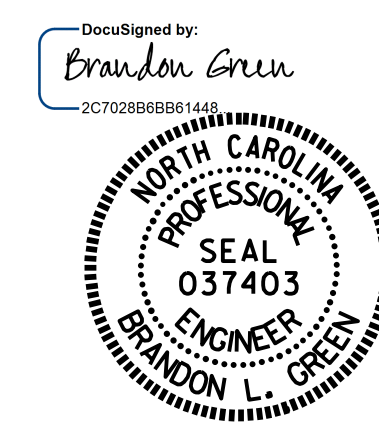
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PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 7 OF 15



3/7/2017

STATE OF WEST CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 7

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 8	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	9.7	4.1			
CAP (HORIZONTAL, CORNER)	3.0	1.3			
COLUMN	0	0			
EPOXY RESIN INJECTION			LN. FT		LN. FT
CAP			0		
COLUMN			0		
EPOXY COATING			AREA SF		
TOP OF CAP			186		
TOP OF BASE			177		
TEXTURED COATING			AREA SF		
SIDE FACES OF BASE			536		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

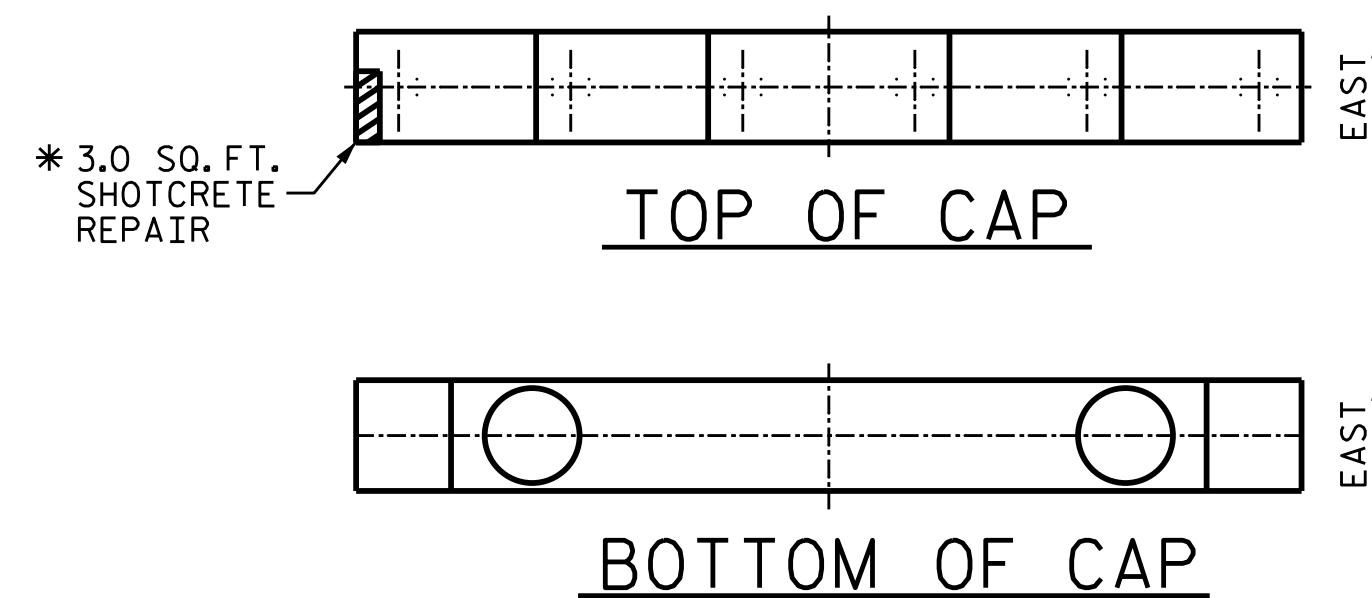
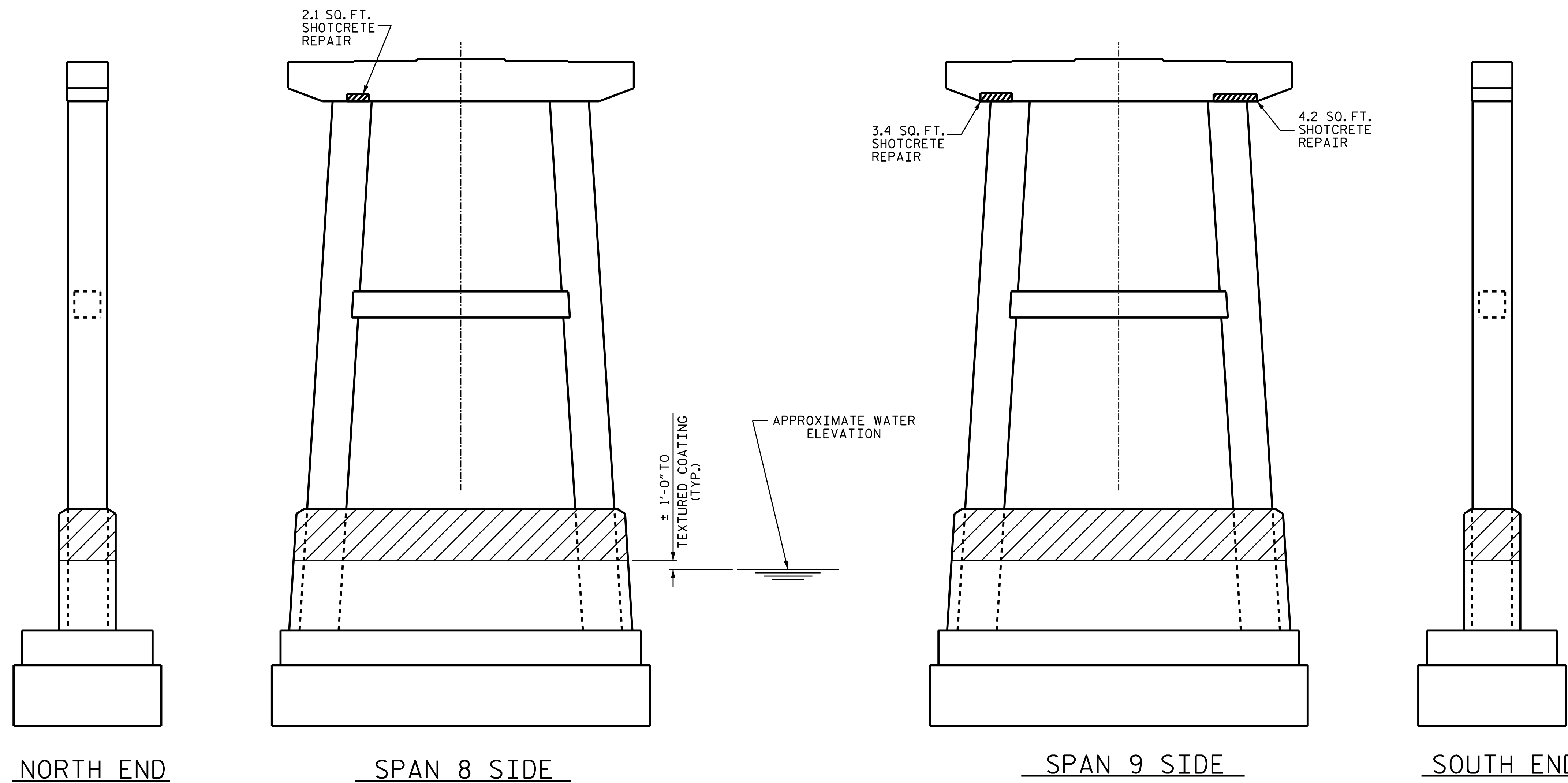
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FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.

* IF DEMO OF CAP EXTENDS TO AREA UNDER THE SOLE PLATE, BETWEEN THE ANCHOR BOLTS, STOP ALL WORK TO THIS AREA. CONTRACTOR SHALL SUBMIT FOR APPROVAL PLANS FOR NECESSARY SHORING, TRAFFIC CONTROL, AND/OR JACKING SHALL NOT CONTINUE UNTIL SUCH PLANS ARE APPROVED.

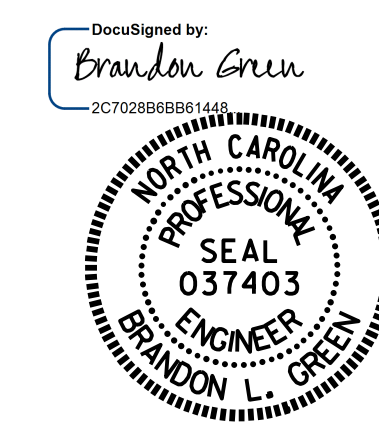


PROJECT NO. B-5942

HYDE COUNTY

BRIDGE NO. 20

SHEET 8 OF 15



STATE OF WEST CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 8

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 9	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		5.0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		308			

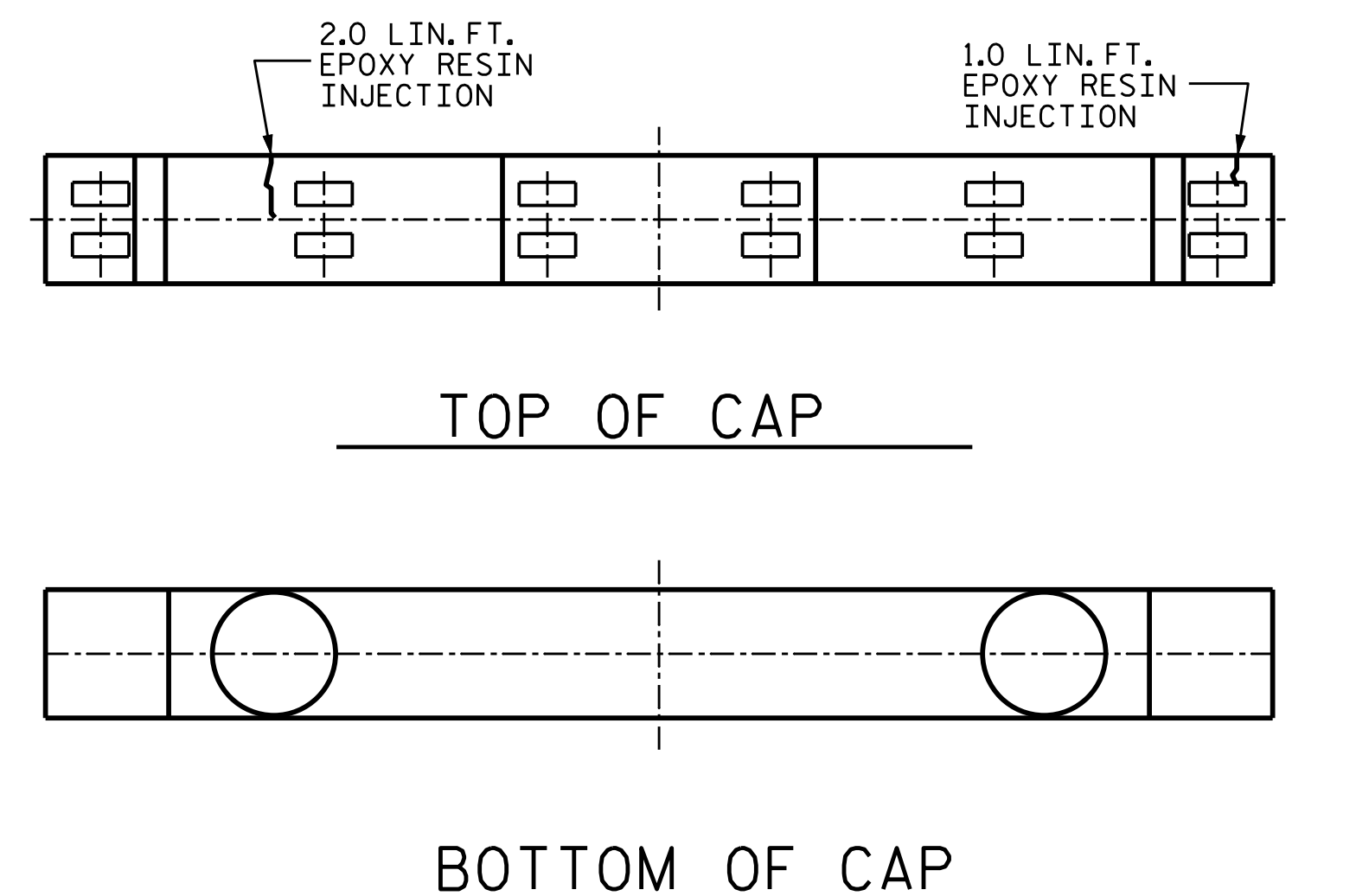
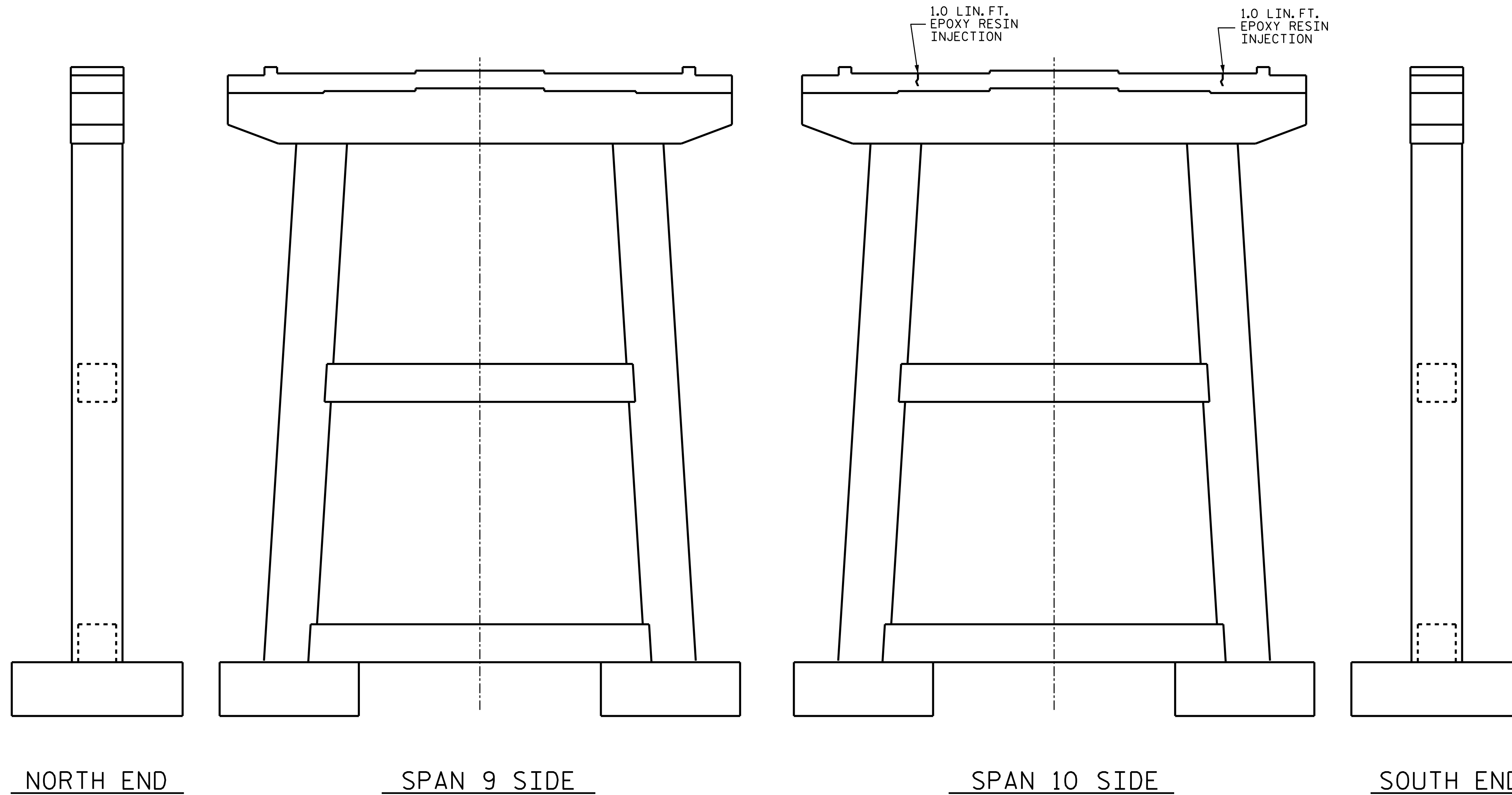
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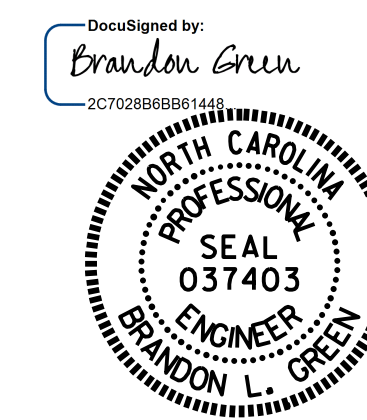
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 9 OF 15



3/7/2017

STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 9

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 10	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		308			

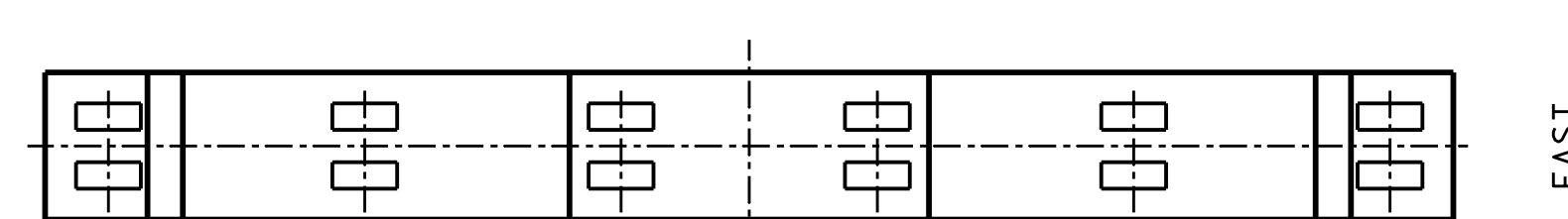
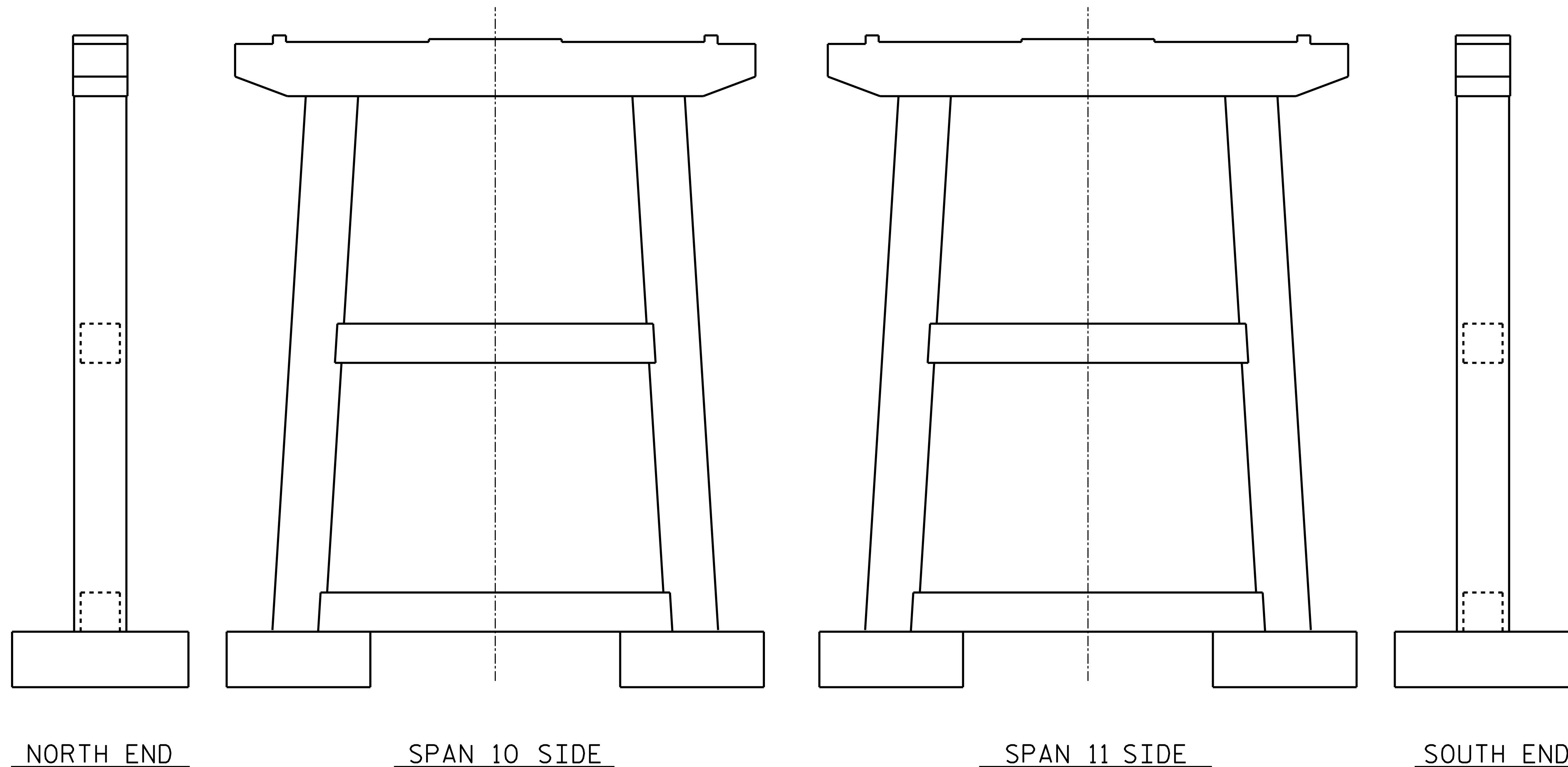
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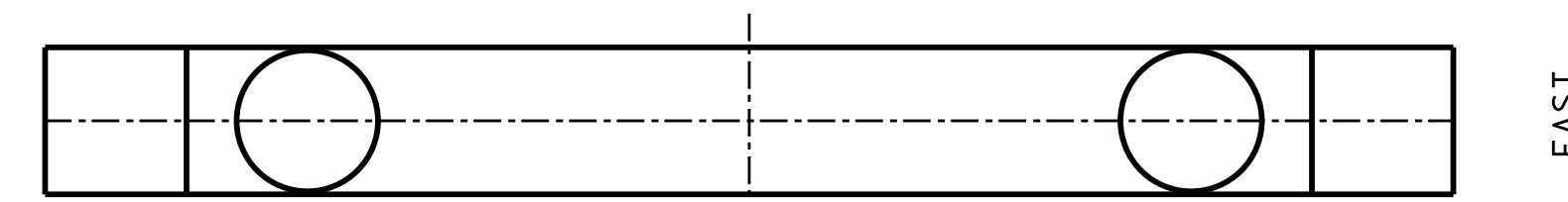
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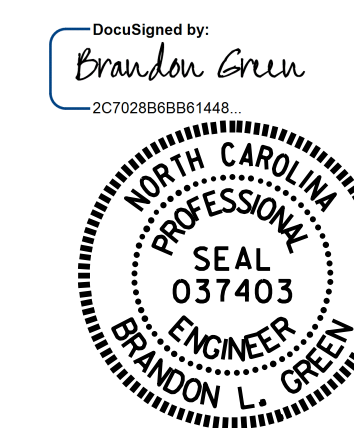
TOP OF CAP



BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 10 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 10

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1			3			S-25
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 11	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT.			LN. FT.
CAP		8.0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		308			

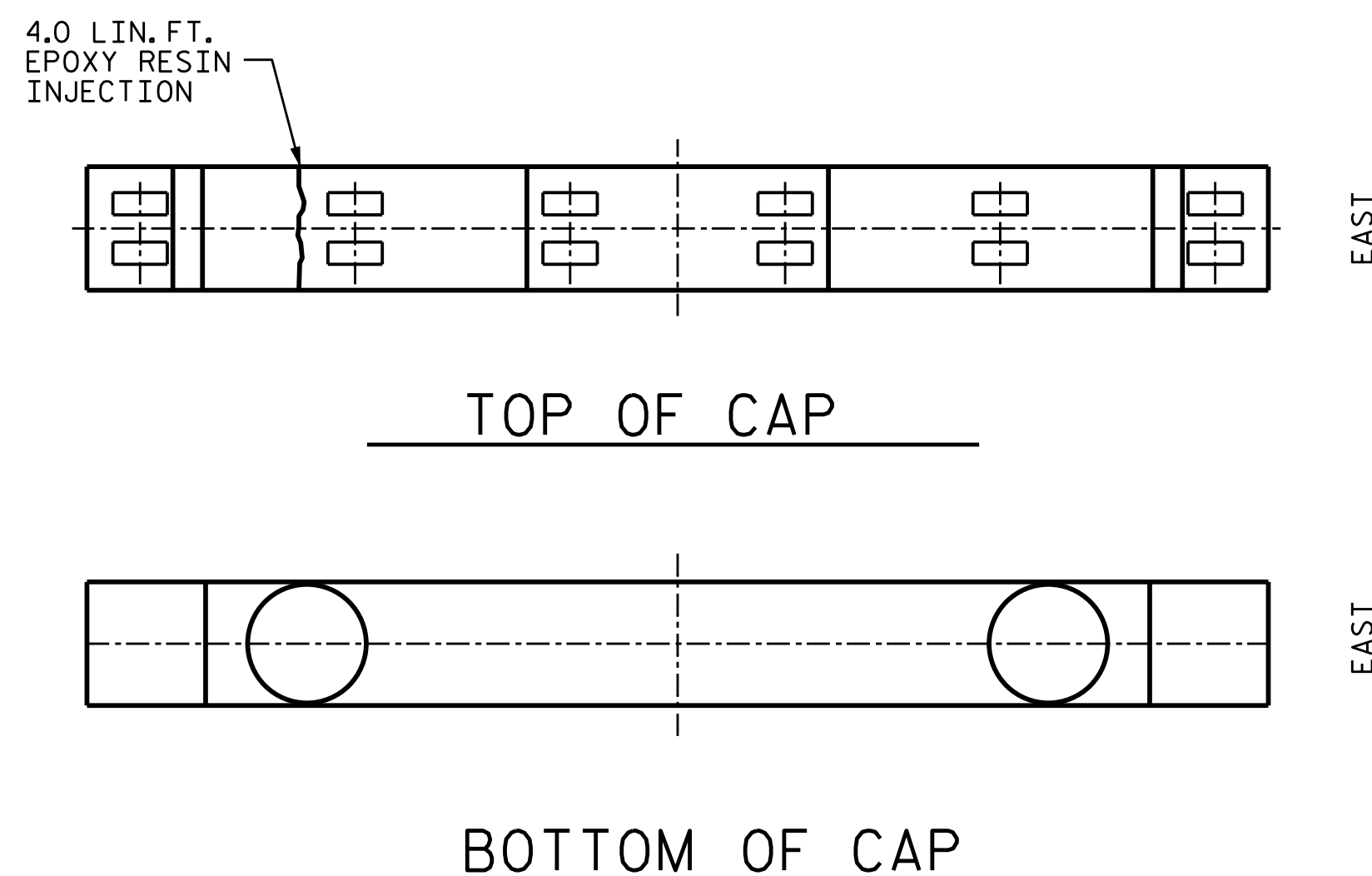
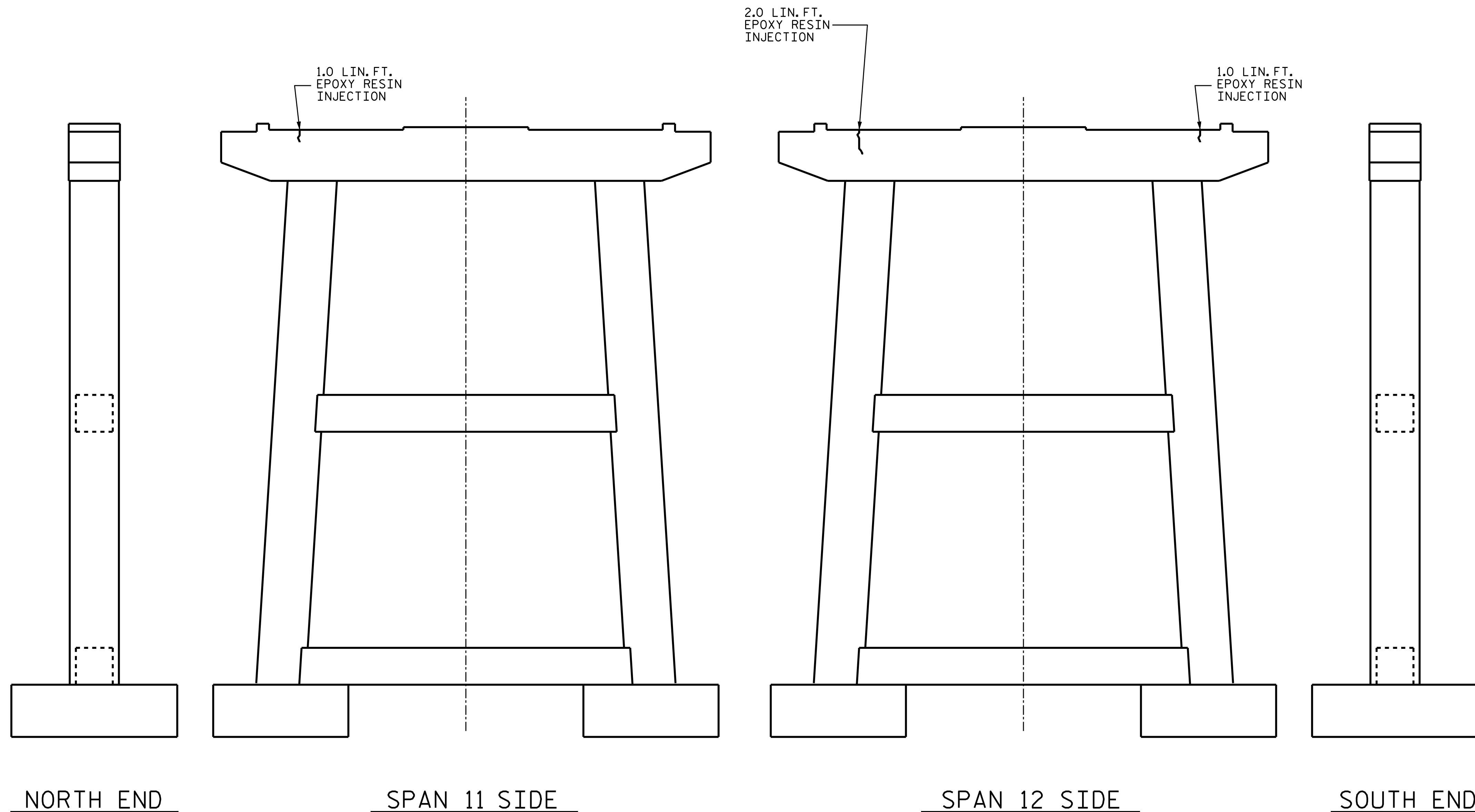
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

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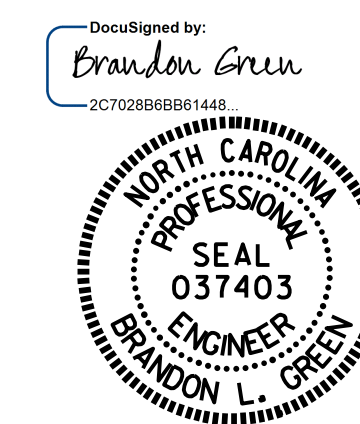
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 11 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 11

DRAWN BY : R.W. WRIGHT DATE : 10/15
 CHECKED BY : B. L. GREEN DATE : 11/15
 DESIGN ENGINEER OF RECORD: - DATE : -

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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-26
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 12	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	10.9	4.6			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		308			

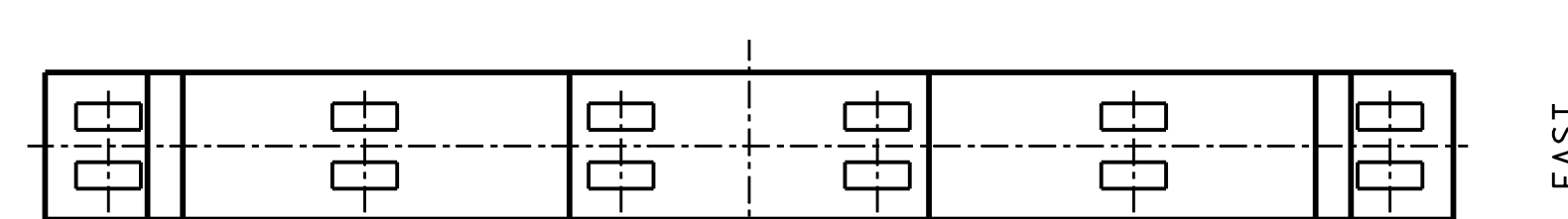
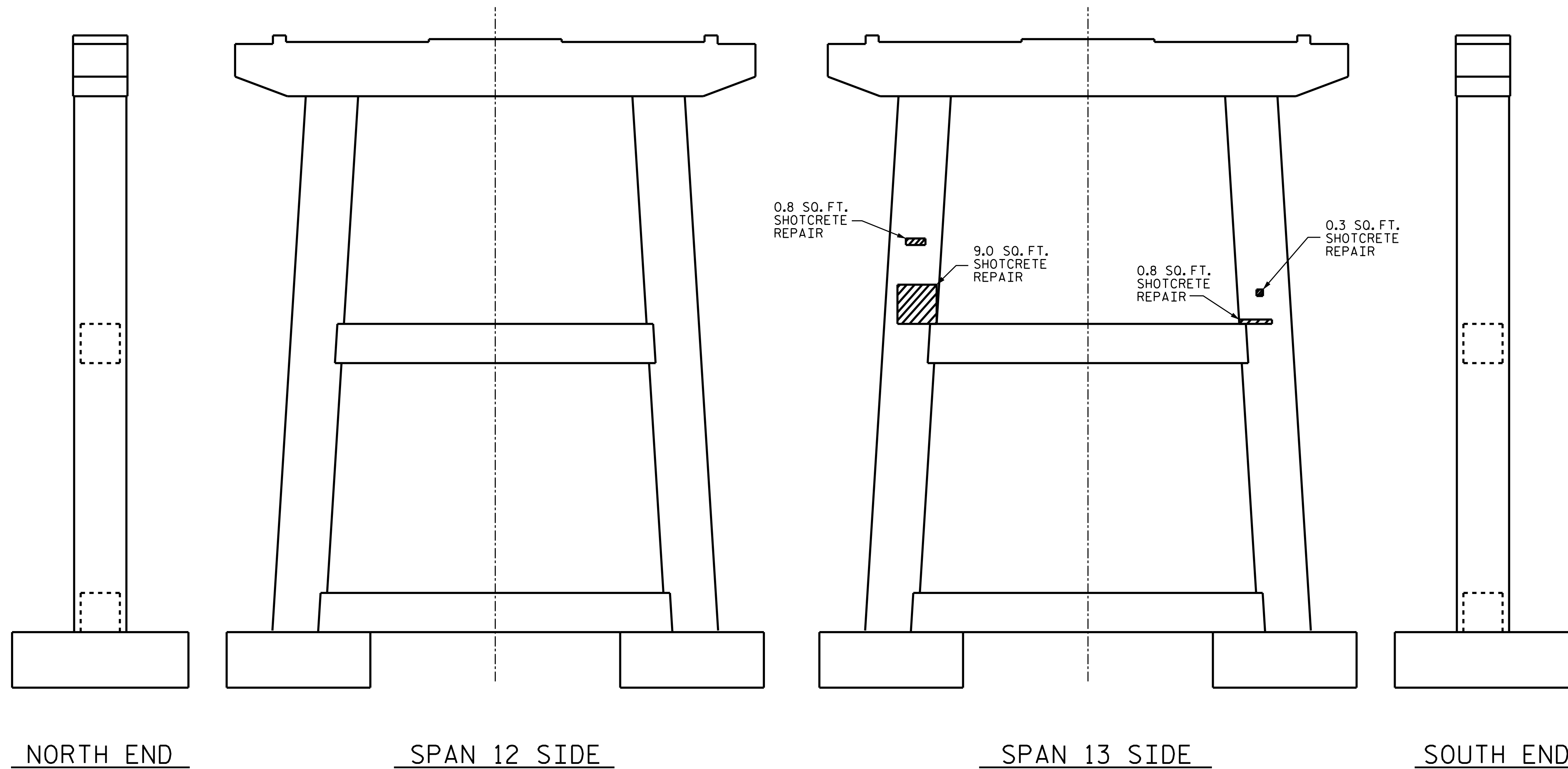
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

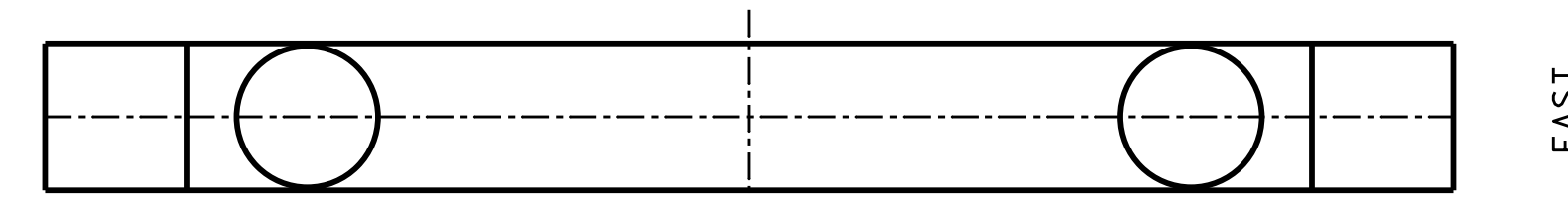
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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TOP OF CAP



BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 12 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 12

DRAWN BY : R.W. WRIGHT DATE : 10/15
 CHECKED BY : B.L. GREEN DATE : 11/15
 DESIGN ENGINEER OF RECORD: - DATE : -

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-27
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 13	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0	0			
CAP (HORIZONTAL, CORNER)	0	0			
COLUMN	2.7	1.2			
EPOXY RESIN INJECTION		LN. FT			LN. FT
CAP		0			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		297			

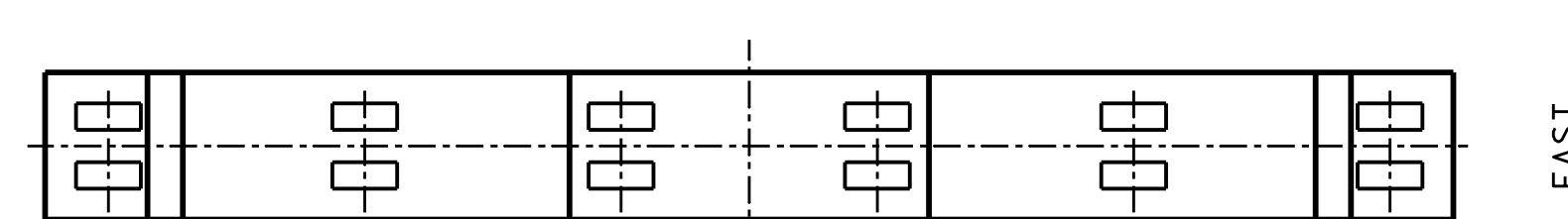
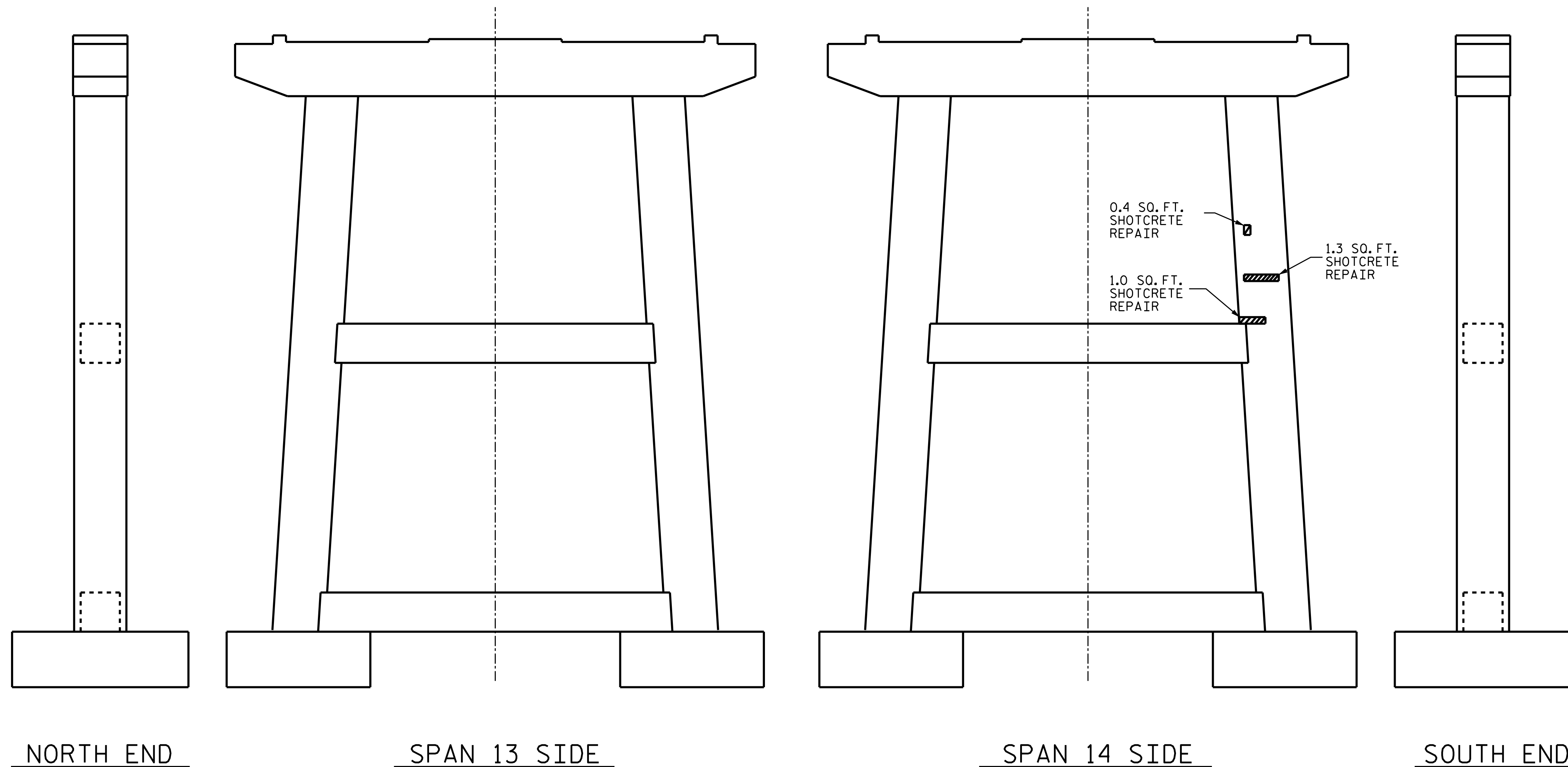
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NOTES:

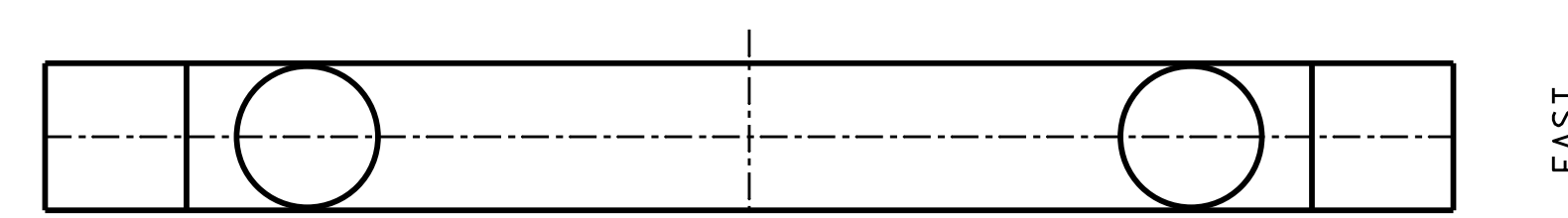
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FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



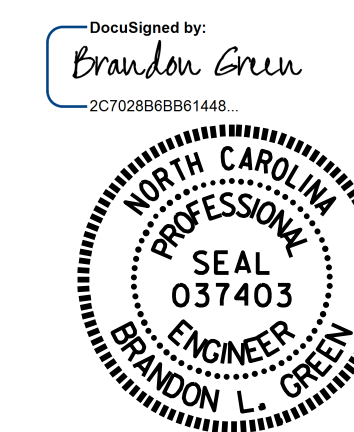
TOP OF CAP



BOTTOM OF CAP

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 13 OF 15



STATE OF WEST CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 13

DRAWN BY : R.W. WRIGHT DATE : 10/15
 CHECKED BY : B. L. GREEN DATE : 11/15
 DESIGN ENGINEER OF RECORD: - DATE : -

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-28
1			3			TOTAL SHEETS
2			4			30

REPAIR QUANTITY TABLE

REPAIRS BENT 14	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	8.8	3.7			
CAP (HORIZONTAL, CORNER)	17.5	7.3			
COLUMN	0	0			
EPOXY RESIN INJECTION		LN. FT.			LN. FT.
CAP		31.5			
COLUMN		0			
EPOXY COATING		AREA SF			
TOP OF CAP		166			
FOOTINGS		297			

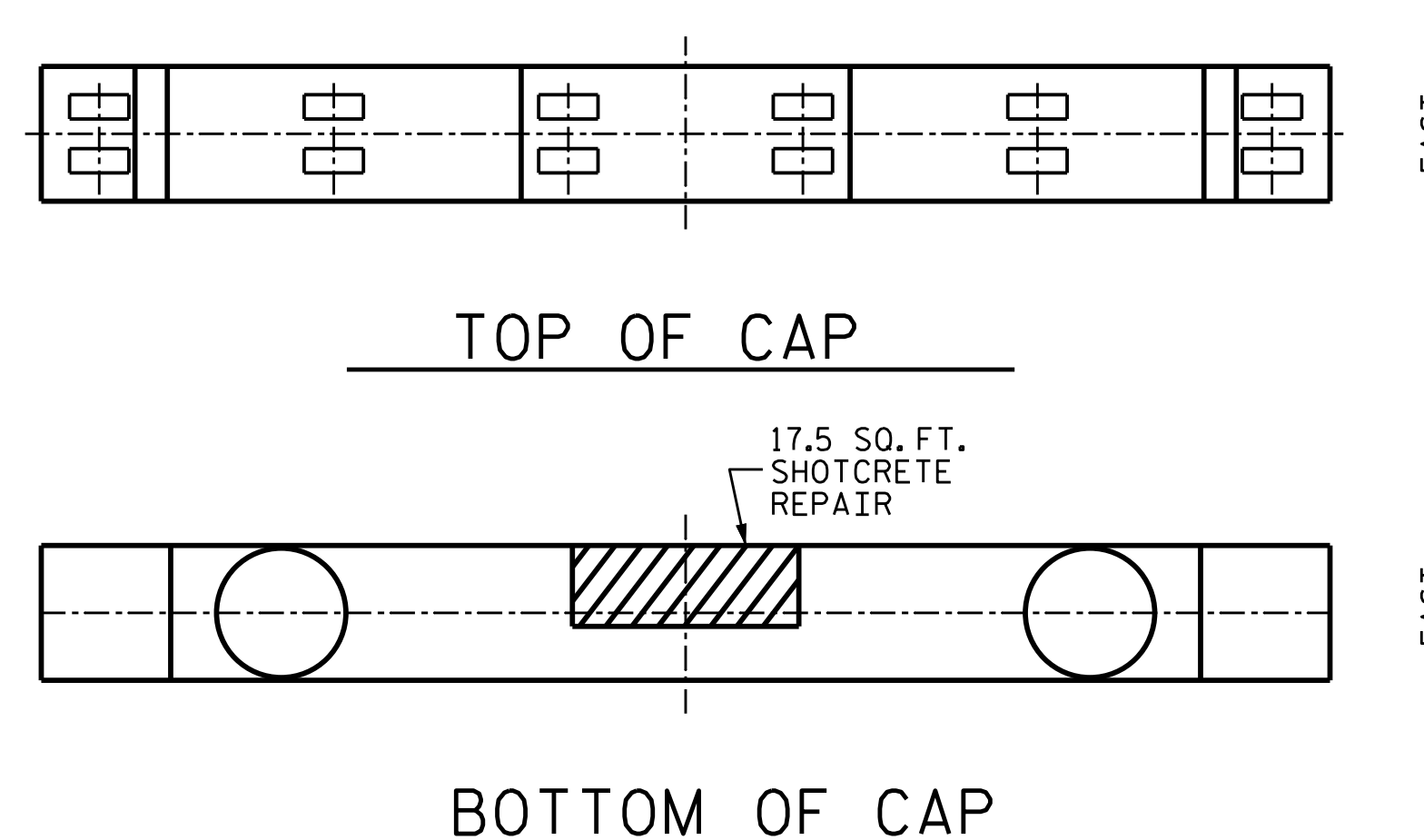
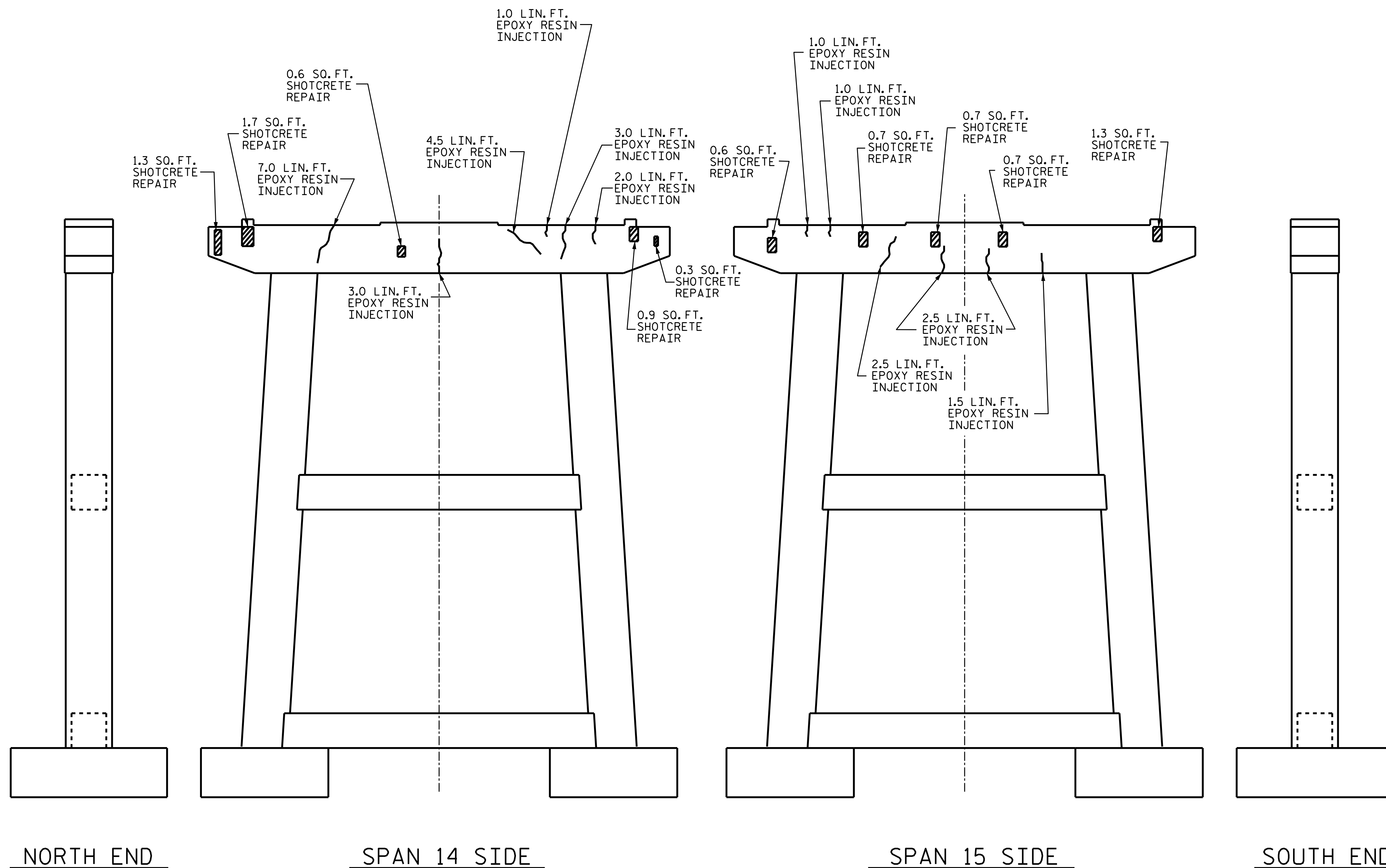
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

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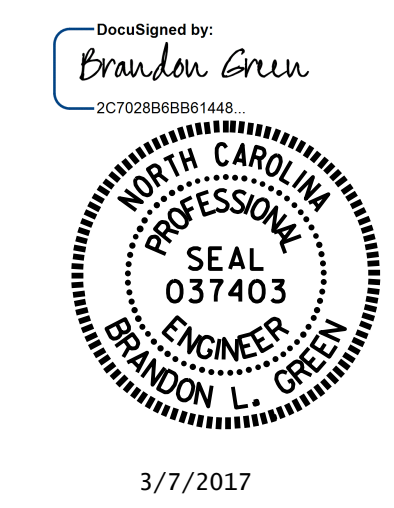
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SUBSTRUCTURE REPAIR DETAIL, SEE "SUBSTRUCTURE REPAIR DETAIL" SHEET.



PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 14 OF 15



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 14

DRAWN BY : R.W. WRIGHT DATE : 10/15
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-29
2			4			30

NOTES:

BENT DIAPHRAGMS AND OTHER CONCRETE COMPONENTS MAY BE REPAIRED UNDER SHOTCRETE REPAIRS OR CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

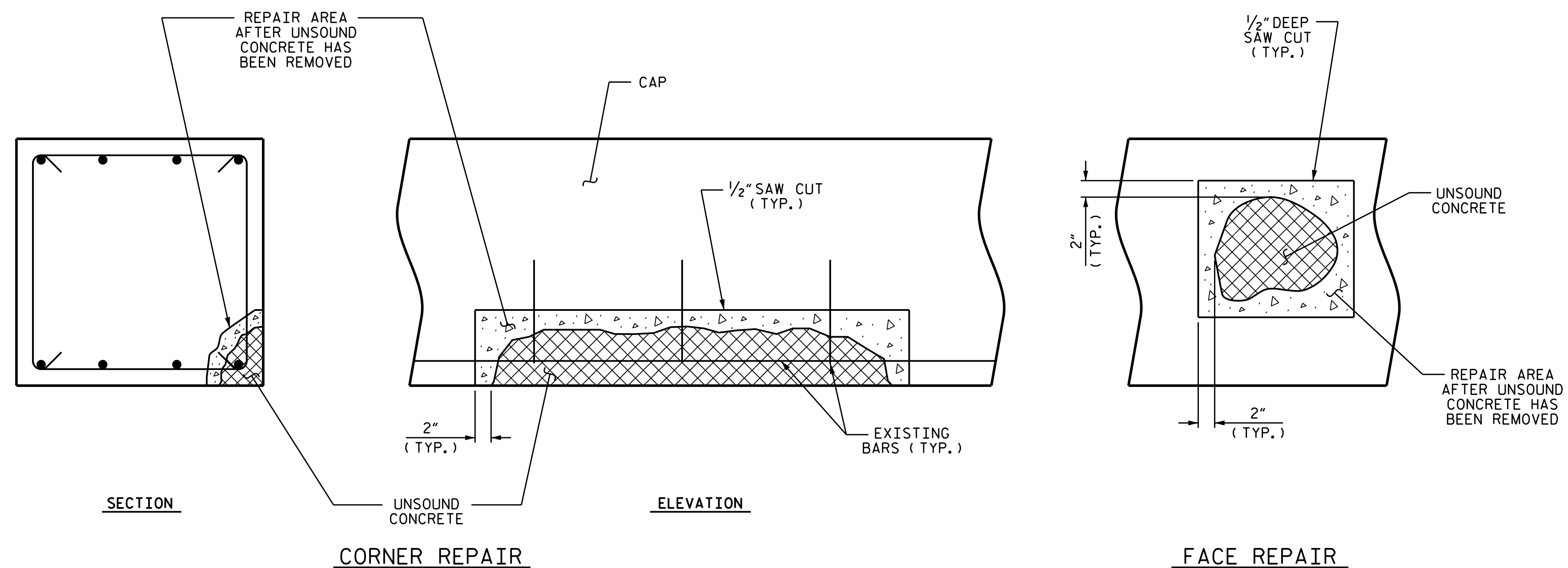
CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT BE DAMAGE EXISTING REINFORCING STEEL.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

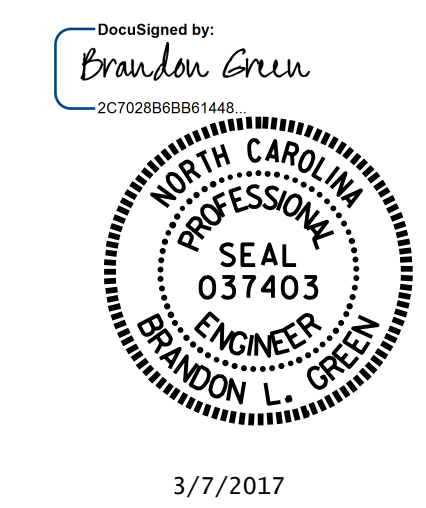
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



SUBSTRUCTURE REPAIR DETAIL

PROJECT NO. B-5942
HYDE COUNTY
 BRIDGE NO. 20

SHEET 15 OF 15



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR DETAIL

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1			3			S-30
2			4			30

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.
IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.
DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.
WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".
EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.
WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

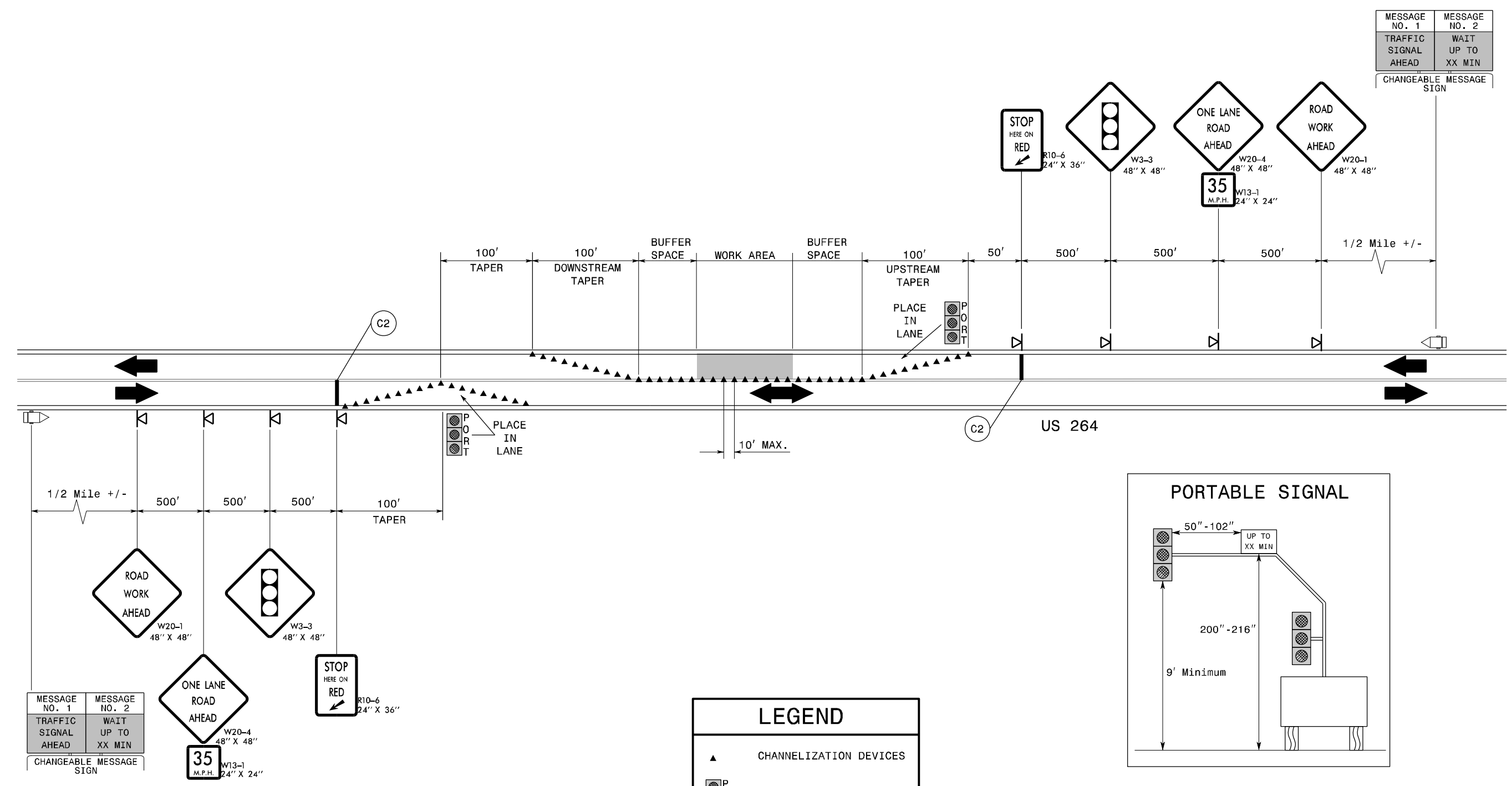
GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

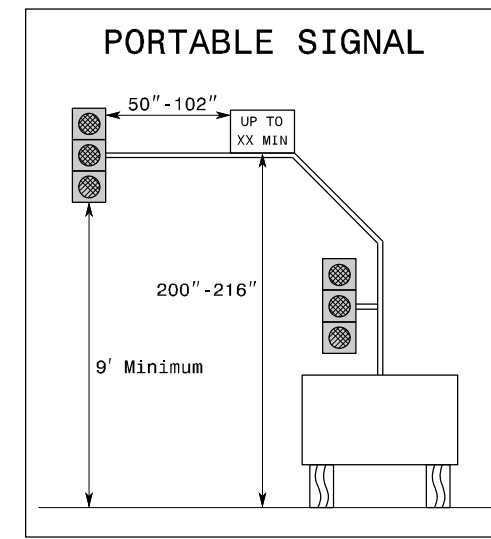
STD. NO. SN

PORTABLE SIGNAL AND SIGNING LAYOUT FOR BRIDGE WORK ON US 264



MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SIGNAL AHEAD	WAIT UP TO XX MIN
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SIGNAL AHEAD	WAIT UP TO XX MIN
CHANGEABLE MESSAGE SIGN	



LEGEND	
▲	CHANNELIZATION DEVICES
PORTABLE SIGNAL	PORTABLE SIGNAL
▷	PORTABLE SIGN
(C2)	COLD APPLIED PLASTIC PAVEMENT MARKING LINE, TYPE 4 (24")

DocuSigned by:
Steve Kite

APPROVED: 11/1/2016	SEAL		
DATE: 11/1/2016	SEAL		

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UNLESS ALL SIGNATURES COMPLETED**

PORTABLE SIGNAL AND SIGNING DETAIL

11/1/2016
 R:\Projects\11\Projects\B-5942\TrafficControl\TCP\B-5942 TMP-1.dgn
 User:mspringer