

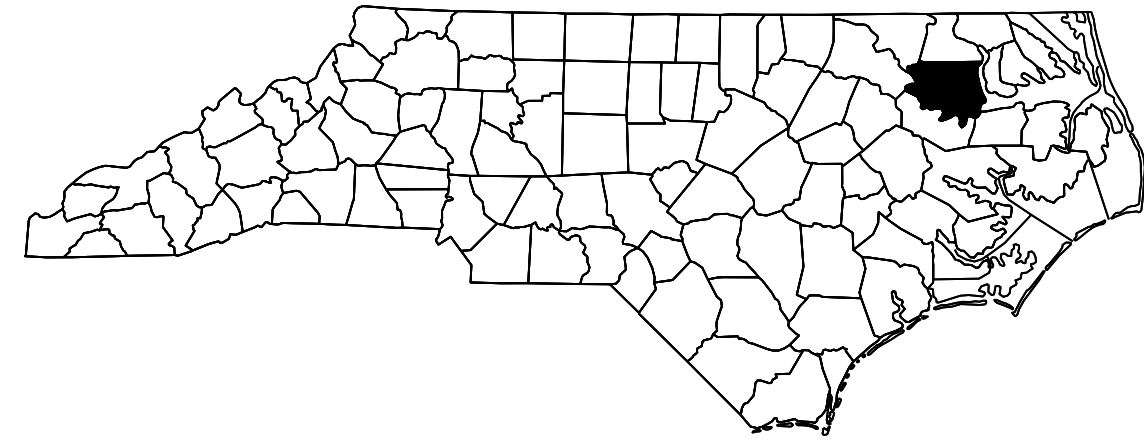
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PROJECT: B-5941

CONTRACT: DA000365



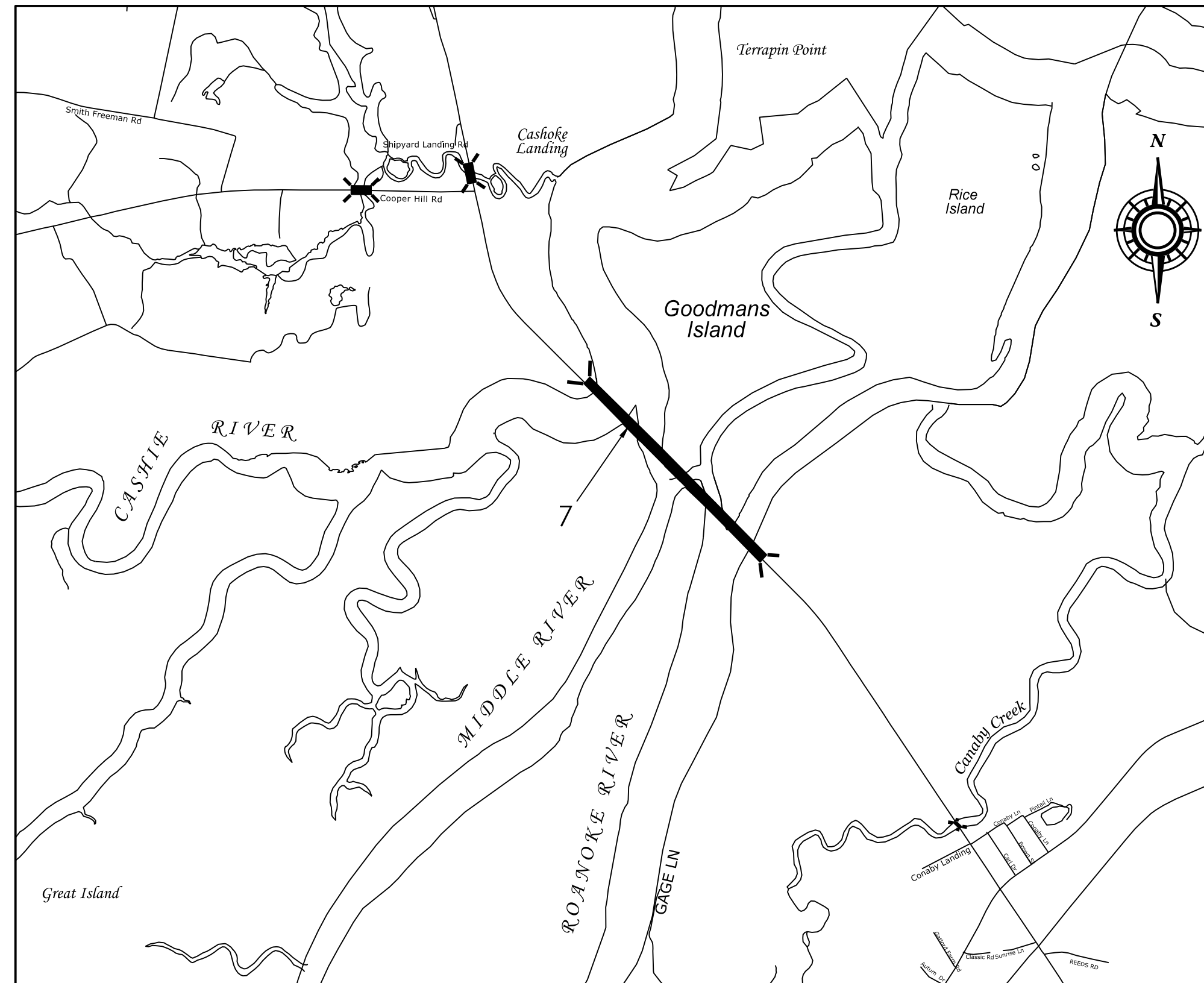
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

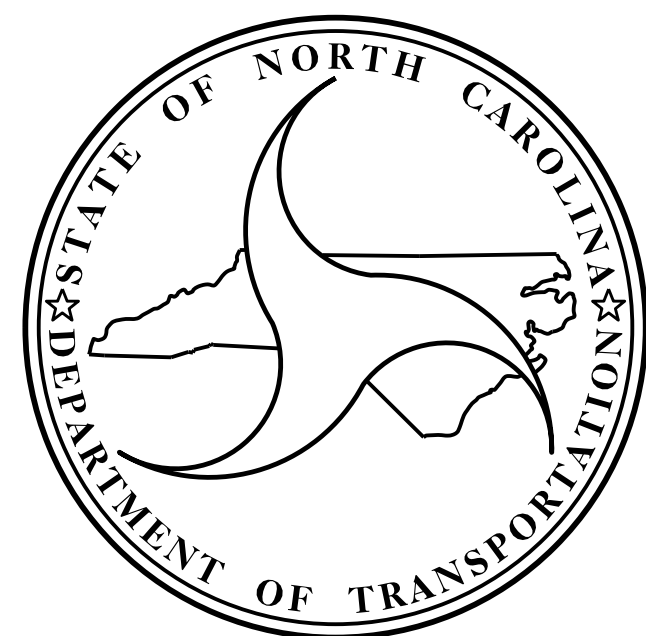
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5941	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46480.1.1	—	P.E.	
46480.3.1	—	CONSTR.	

LOCATION: **BERTIE COUNTY:**
**BRIDGE #7 ON NC 45 ACROSS ROANOKE, MIDDLE AND CASHIE RIVERS
BETWEEN PLYMOUTH AND MERRY HILL**

TYPE OF WORK: **BRIDGE PRESERVATION WITH CONCRETE SUPERSTRUCTURE & SUBSTRUCTURE REPAIR,
PILE ENCAPSULATION AND FENDER REPLACEMENT.**



VICINITY MAP - BERTIE CO.



DESIGN DATA

BERTIE COUNTY
BRIDGE #7 ADT 2012 = 4100

PROJECT LENGTH

BERTIE COUNTY
#7 = 1.11 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

ERIC B. NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JULY 19, 2017

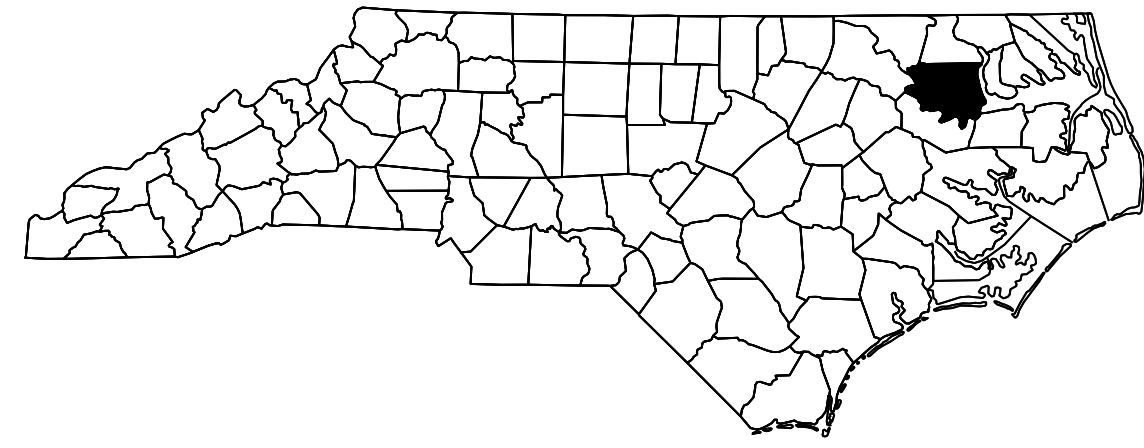


6/5/2017
DocuSigned by:
Greg Niskey
884E468CCE5B486...

GREGORY W. DICKEY, P.E.
PROJECT DESIGN ENGINEER

PROJECT: B-5941

CONTRACT: DA000365



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

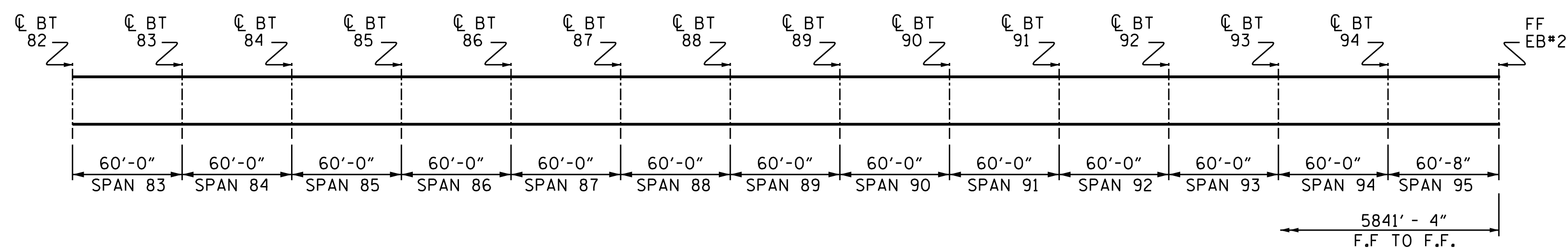
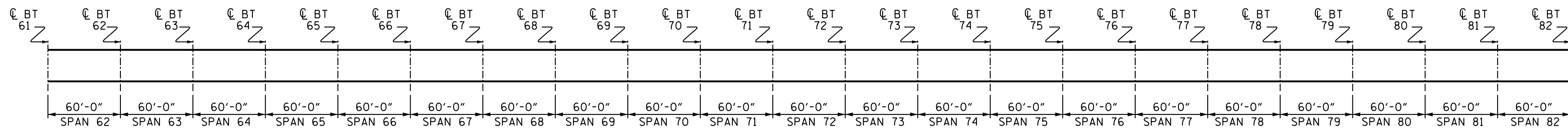
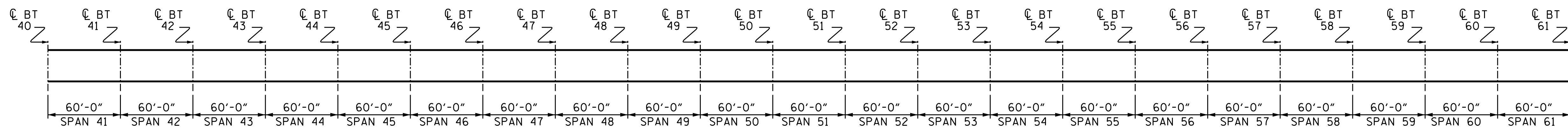
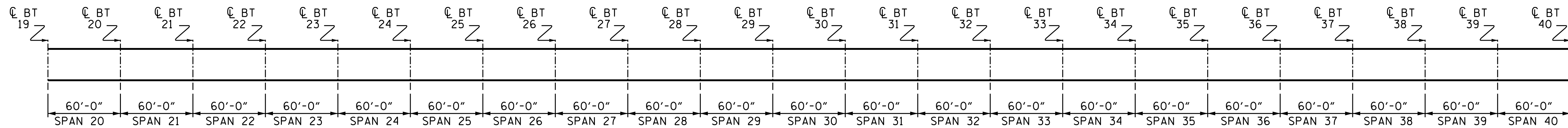
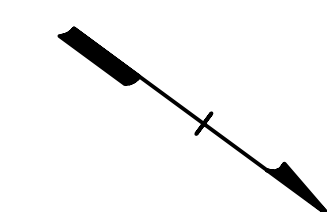
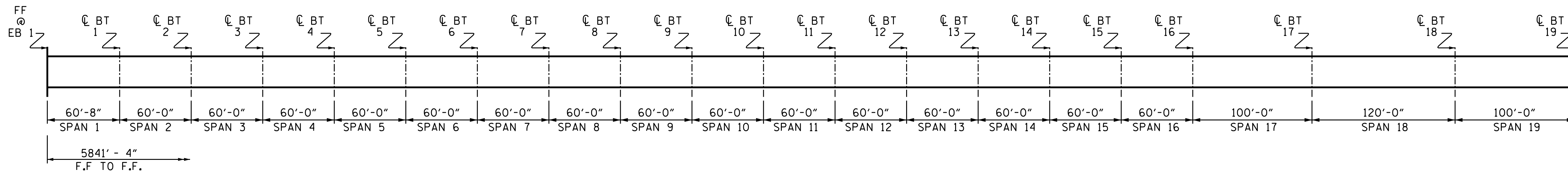
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5941	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46480.1.1	—	P.E.	
46480.3.1	—	CONSTR.	

LOCATION: **BERTIE COUNTY:**
BRIDGE #7 OVER ROANOKE, MIDDLE AND CASHIE RIVERS
BETWEEN PLYMOUTH AND MERRY HILL

TYPE OF WORK: **BRIDGE PRESERVATION WITH CONCRETE SUPERSTRUCTURE & SUBSTRUCTURE REPAIR,**
PILE ENCAPSULATION AND FENDER REPLACEMENT.

INDEX OF SHEETS

- | | |
|-----------------------|-------------------------------------|
| <i>1</i> | <i>TITLE SHEET</i> |
| <i>1A</i> | <i>INDEX OF SHEETS</i> |
| <i>S-1</i> | <i>BILL OF MATERIAL</i> |
| <i>S-2 THRU S-108</i> | <i>STRUCTURAL PLANS - BERTIE #7</i> |
| <i>F1 THRU F5</i> | <i>FENDER SYSTEM</i> |
| <i>SN</i> | <i>STANDARD NOTES</i> |



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 1 OF 2

SCOPE OF WORK:

- REMOVE AND REPAIR UNSOUND CONCRETE ON DECK.
- REMOVE AND REPLACE DAMAGED BRIDGE DECK JOINTS WITH NEW SILICONE JOINT SEALS.
- SHOTCRETE, GIRDER AND EPOXY COATING SUPERSTRUCTURE REPAIRS.
- CLEAN AND PAINT BEARINGS WITH HRCSA.
- SHOTCRETE SUBSTRUCTURE REPAIRS.
- PILE ENCAPSULATION.
- REPLACE FENDER SYSTEM.



6/5/2017
 Documented by: *Breg Dickey*
 884E468BC8E9486

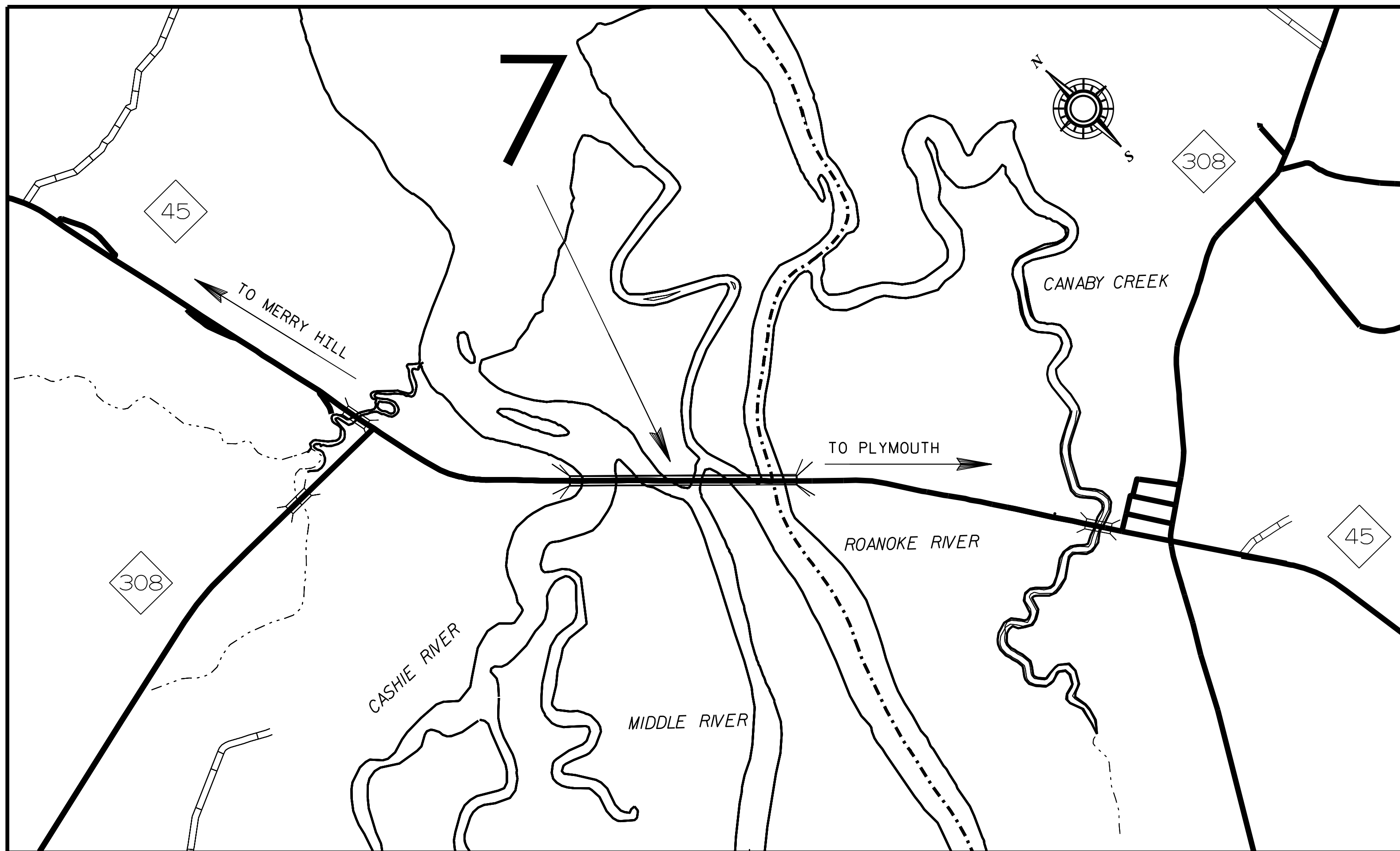
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 BRIDGE #7 ON NC45
 OVER THE
 ROANOKE RIVER**

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

DRAWN BY : P. D. BRYANT DATE : 10/2016
 CHECKED BY : R. WEISZ DATE : 3/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED



GENERAL 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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL

FOR CONCRETE REPAIRS FOR DECK, SEE SPECIAL PROVISIONS

FOR BRIDGE JOINT REMOVAL, SEE SPECIAL

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR REPAIRS TO PRESTRESSED GIRDERS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING OF EXISTING BEARINGS WITH HRCSA, SEE SPECIAL PROVISIONS.

FOR PILE ENCAPSULATION, SEE SPECIAL PROVISIONS.

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

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

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.

FOR WORK IN, OVER, OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.

FOR FENDER SYSTEM WORK, SEE SHT NO. F1 THRU F5.

FOR SPLICING OF PRESTRESSING STRANDS, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

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

TOTAL BILL OF MATERIAL

BRIDGE	MOBILIZATION	Δ REINFORCING STEEL	BRIDGE JOINT REMOVAL	SILICONE JOINT SEALANT	DECK REPAIR	GIRDER REPAIR	SHOTCRETE REPAIRS	EPOXY COATING	PILE ENCAPSULATION	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA	POLLUTION CONTROL	PAINTING CONTAINMENT	REMOVAL OF EXISTING FENDER SYSTEM	10" X 6" TREATED LUMBER	15" TREATED TIMBER PILE	HARDWARE	Δ SPLICING OF PRESTRESSING STRANDS
	LUMP SUM	LB	LF	LF	CF	CF	CF	SF	LF	EA	LUMP SUM	LUMP SUM	LUMP SUM	LF	LF	LB	EACH
BERTIE #7	LUMP SUM	10	875	875	15.5	35.7	898.7	54.6	736	752	LUMP SUM	LUMP SUM	LUMP SUM	1536	7320	4493	10

Δ A QUANTITY IS NOT ANTICIPATED, A TOKEN PAY ITEM IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED REPAIRS ARE ENCOUNTERED.

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 2 OF 2



6/5/2017

DocSigned by: *Gregory W. Dickey*

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

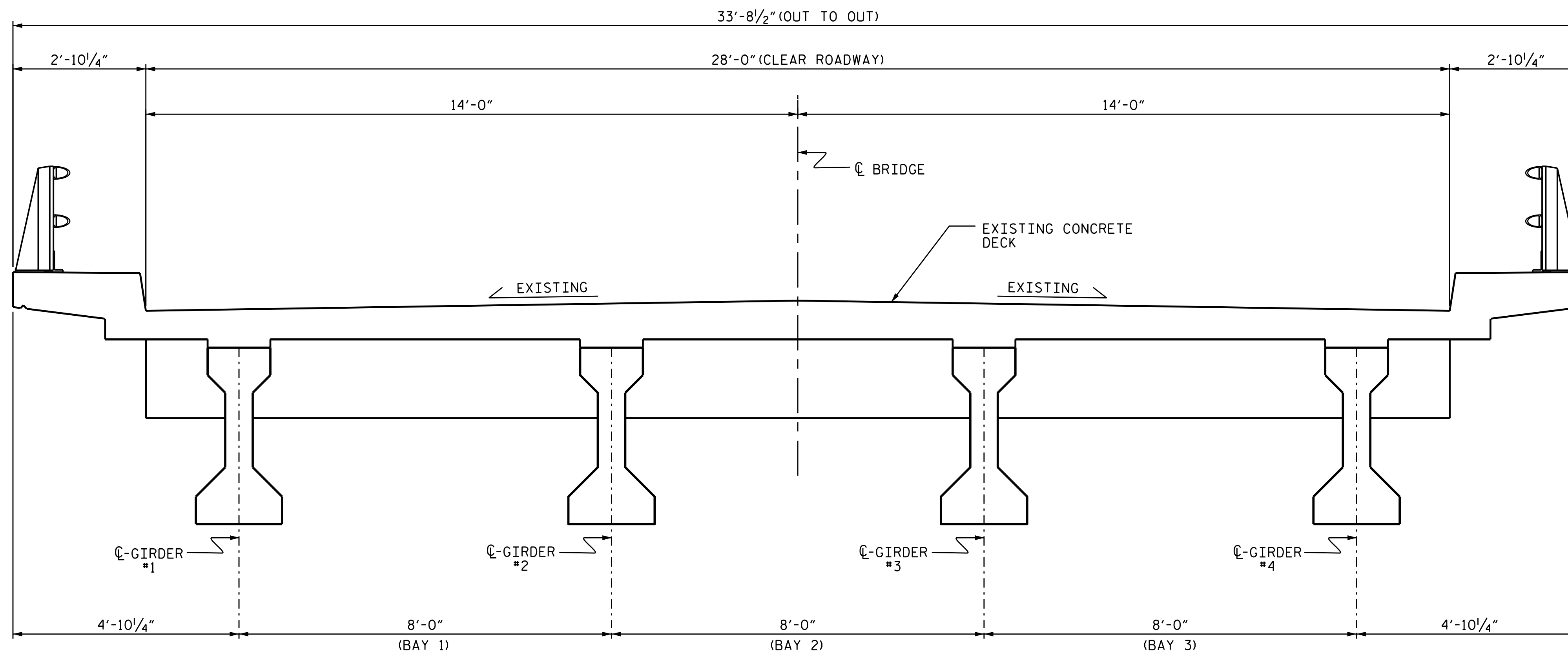
GENERAL DRAWING
 BRIDGE #7 ON NC45
 OVER THE
 ROANOKE RIVER

DRAWN BY : M.A. LEE DATE : 12/2016
 CHECKED BY : R. WEISZ DATE : 3/2017

05-JUN-2017 13:11
 R:\Structures\DCN\400.009.B5941.SMU.S3.GD2.dgn
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DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

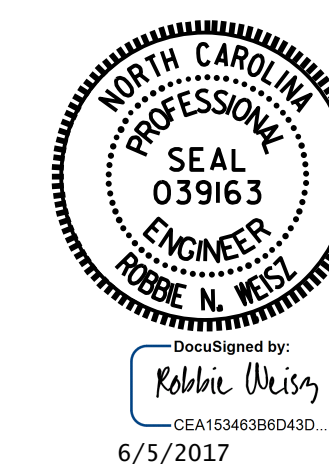
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			



TYPICAL SECTION

(EXISTING) (LOOKING NORTH)
 (SPANS 1-16 & 20-95, SPANS 17-19 SIMILAR)

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

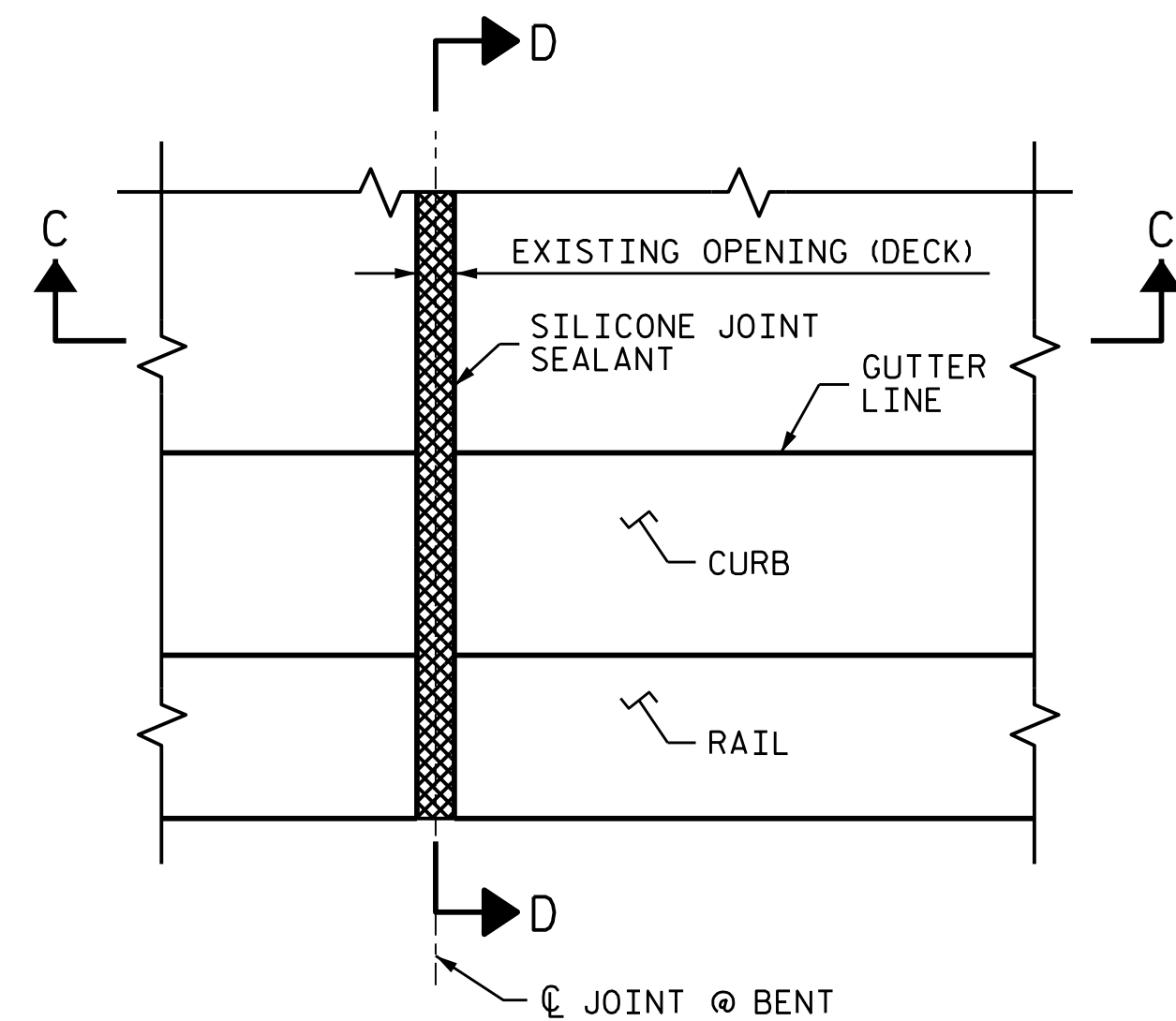
DRAWN BY : P.D. BRYANT DATE : 03/17
 CHECKED BY : R. WEISZ DATE : 03/17

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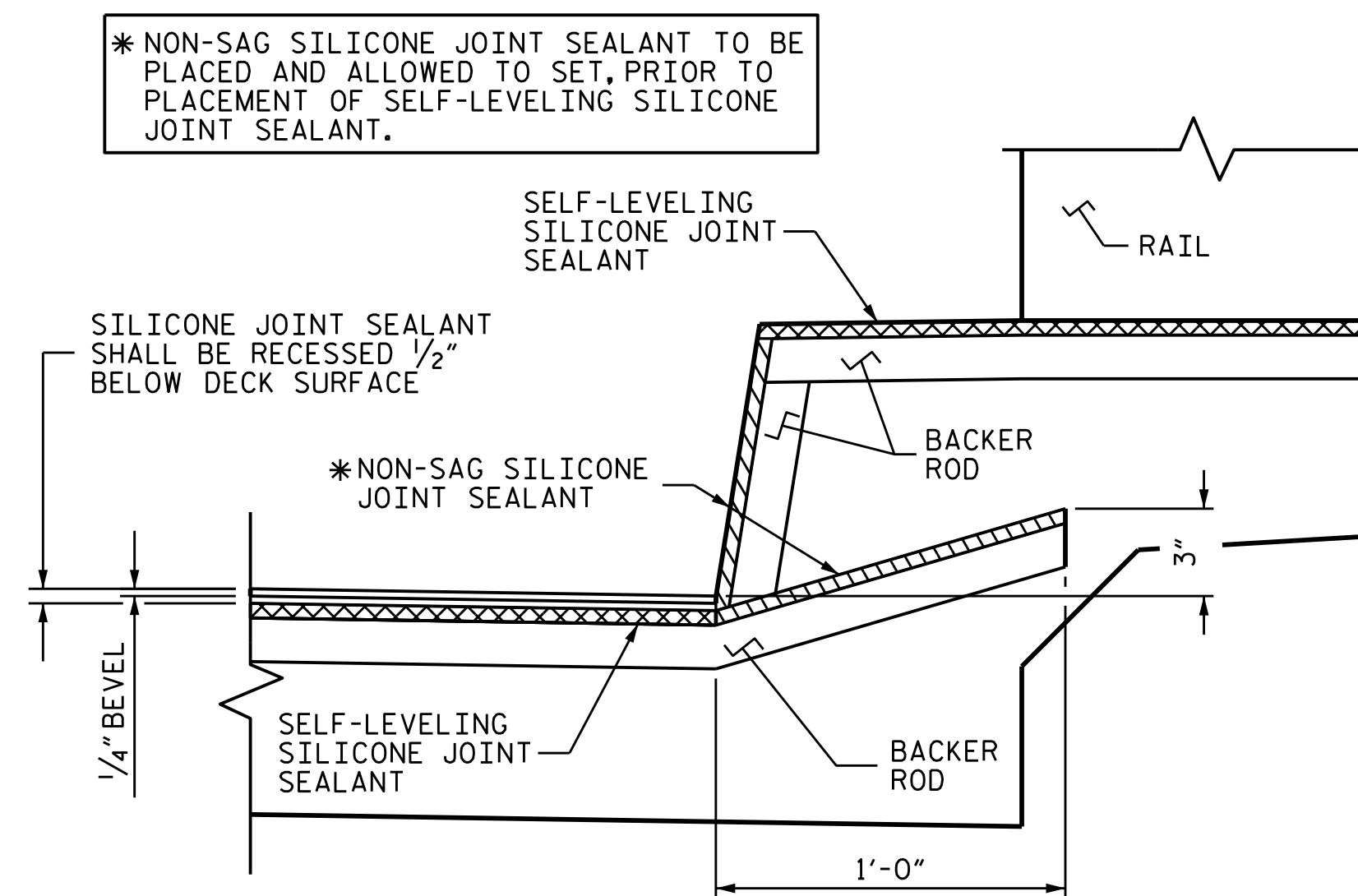
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			

NOTES

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
TOTAL JOINT REPLACEMENT = 35 LF PER JOINT



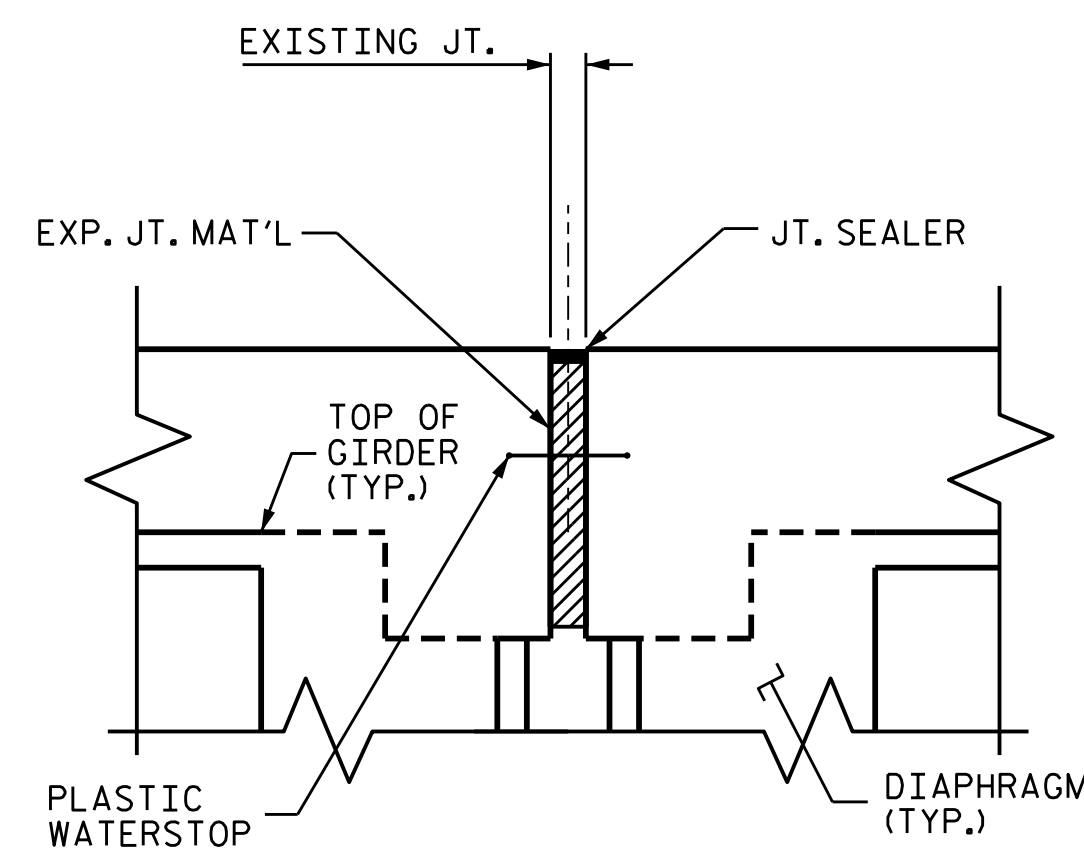
PLAN



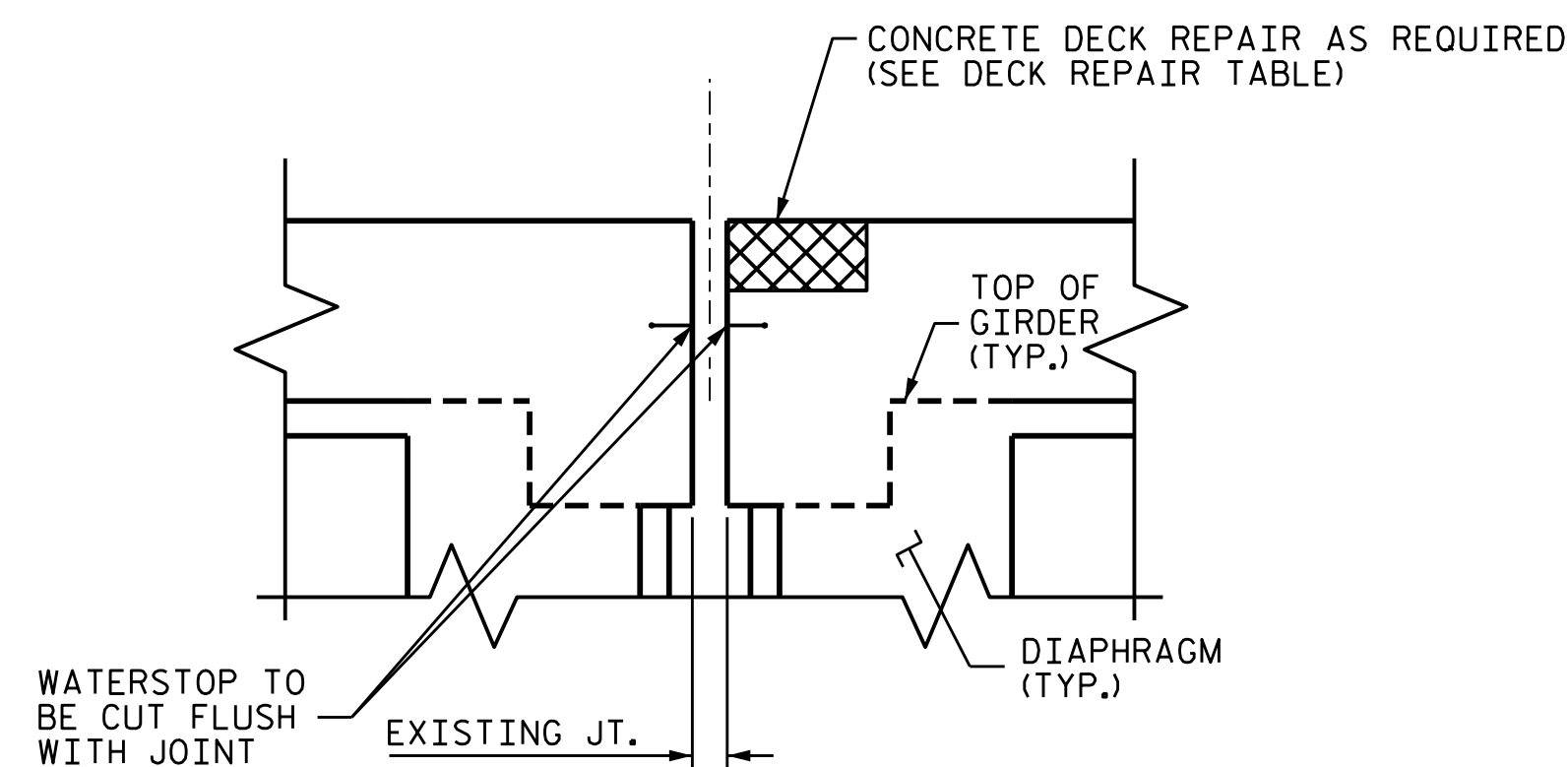
SECTION D-D
(PROPOSED)

JOINT SEAL DETAIL AT BENT

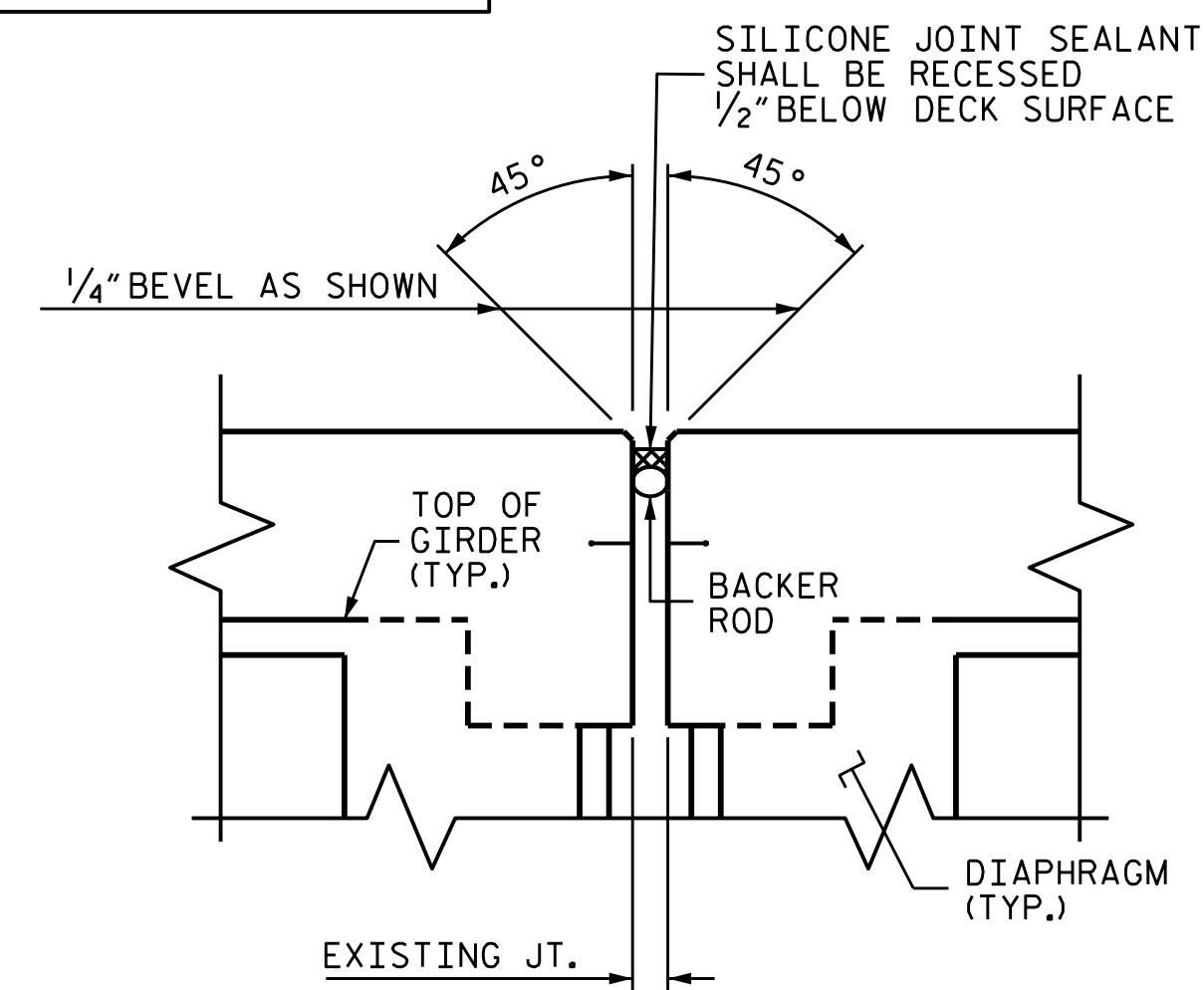
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.



SECTION C-C
(EXISTING)



SECTION C-C
(MINIMUM EXISTING
JOINT DEMOLITION)

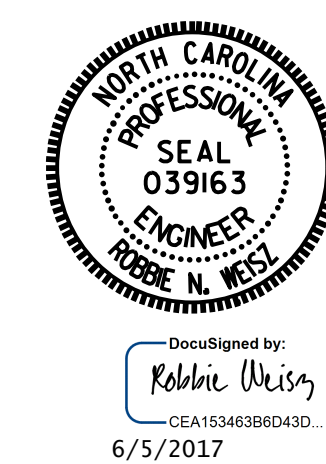


SECTION C-C
(PROPOSED JOINT
SEAL)

BENT	JOINT REMOVAL	DECK REPAIR
2	35 L.F.	-
5	35 L.F.	0.15 C.F.
12	35 L.F.	0.9 C.F.
15	35 L.F.	-
16	35 L.F.	2.25 C.F.
19	35 L.F.	-
20	35 L.F.	1.75 C.F.
29	35 L.F.	1.9 C.F.
33	35 L.F.	0.9 C.F.
36	35 L.F.	1.65 C.F.
42	35 L.F.	2.75 C.F.
44	35 L.F.	1.5 C.F.
45	35 L.F.	1.75 C.F.
46	35 L.F.	-
54	35 L.F.	-
67	35 L.F.	-
75	35 L.F.	-
77	35 L.F.	-
80	35 L.F.	-
82	35 L.F.	-
83	35 L.F.	-
86	35 L.F.	-
90	35 L.F.	-
93	35 L.F.	-
94	35 L.F.	-

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT REPAIR
DETAIL

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

DRAWN BY : M.A.LEE DATE : 3/2017
CHECKED BY : R.N.WEISZ DATE : 4/2017

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

GIRDER, DIAPHRAGM, & UNDERDECK REPAIR TABLES							
SPAN	MEMBER	BENT/SPAN LOCATION	APPROX. REPAIR AREA (S.F.)	ACTUAL REPAIR AREA (S.F.)	LOCATION	BAY	REPAIR TYPE
2	2	@ BENT 2	1		BOTTOM FLANGE	-	GIRDER REPAIR
2	3	@ BENT 2	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
3	DIA.	@ BENT 2	6		INT. DIA.	3	SHOTCRETE
3	DIA.	@ BENT 2	1.5		INT. DIA.	2	SHOTCRETE
3	1	@ BENT 2	2		BOTTOM FLANGE	-	GIRDER REPAIR
4	1	@ BENT 4	1		BOTTOM FLANGE	-	GIRDER REPAIR
4	3	@ BENT 4	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
4	DECK	MIDSPAN	21		BOTTOM OF DECK	LT. EXT.	EPOXY COATING
5	1	@ BENT 5	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
6	1	@ BENT 5	1.5		BOTTOM FLANGE	LT. EXT.	GIRDER REPAIR
6	2	@ BENT 5	1		BOTTOM FLANGE	-	GIRDER REPAIR
7	4	@ BENT 6	1		BOTTOM FLANGE	-	GIRDER REPAIR
7	4	@ BENT 6	1		BOTTOM FLANGE	-	GIRDER REPAIR
8	2	@ BENT 7	1		BOTTOM FLANGE	-	GIRDER REPAIR
9	DIA.	@ BENT 8	2		EXT. DIA.	LT. EXT.	EPOXY COATING
9	2	@ BENT 9	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
10	1	@ BENT 10	1		BOTTOM FLANGE	-	GIRDER REPAIR
10	2	@ BENT 9	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
11	2	@ BENT 10	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
11	1	@ BENT 11	1		WEB	-	GIRDER REPAIR
11	2	@ BENT 11	1		BOTTOM FLANGE	-	GIRDER REPAIR
11	2	@ BENT 10	1		BOTTOM FLANGE	-	GIRDER REPAIR
11	DECK	MIDSPAN	16		BOTTOM OF DECK	RT. EXT.	EPOXY COATING
12	DIA.	@ BENT 11	2		INT. DIA.	3	SHOTCRETE
12	DIA.	@ BENT 11	2		INT. DIA.	1	SHOTCRETE
12	DIA.	@ BENT 11	3		EXT. DIA.	LT. EXT.	SHOTCRETE
12	DIA.	@ BENT 12	3		EXT. DIA.	LT. EXT.	SHOTCRETE
12	1	@ BENT 12	3		BOTTOM FLANGE	-	GIRDER REPAIR
12	3	@ BENT 12	1		BOTTOM FLANGE	-	GIRDER REPAIR
13	3	@ BENT 12	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
13	4	@ BENT 12	1		BOTTOM FLANGE	-	GIRDER REPAIR
13	DIA.	@ BENT 12	3		DIAPHRAGM	1	SHOTCRETE
13	2	@ BENT 13	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
13	2	@ BENT 13	1		BOTTOM FLANGE	-	GIRDER REPAIR
14	2	@ BENT 13	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
14	3	@ BENT 14	1		BOTTOM FLANGE	-	GIRDER REPAIR
15	4	@ BENT 15	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
16	2	@ BENT 15	3.8		BOTTOM FLANGE	-	GIRDER REPAIR
17	DECK	MIDSPAN	2.3		BOTTOM OF DECK	LT. EXT.	EPOXY COATING
21	1	@ BENT 22	1		BOTTOM FLANGE	-	GIRDER REPAIR
21	DIA.	@ BENT 22	4		EXT. DIA.	LT. EXT.	EPOXY COATING
22	1	@ BENT 21	1		BOTTOM FLANGE	-	GIRDER REPAIR
23	1	@ BENT 23	1		BOTTOM FLANGE	-	GIRDER REPAIR
23	4	@ BENT 23	3		BOTTOM FLANGE	-	GIRDER REPAIR
25	2	@ BENT 24	1		BOTTOM FLANGE	-	GIRDER REPAIR
25	1	@ BENT 25	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
25	4	@ BENT 25	1		BOTTOM FLANGE	-	GIRDER REPAIR

GIRDER, DIAPHRAGM, & UNDERDECK REPAIR TABLES							
SPAN	MEMBER	BENT/SPAN LOCATION	APPROX. REPAIR AREA (S.F.)	ACTUAL REPAIR AREA (S.F.)	LOCATION	BAY	REPAIR TYPE
26	3	@ BENT 25	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
26	1	@ BENT 26	1		BOTTOM FLANGE	-	GIRDER REPAIR
27	DIA.	@ BENT 26	8		DIAPHRAGM	3	SHOTCRETE
27	3	@ BENT 26	1		BOTTOM FLANGE	-	GIRDER REPAIR
28	3	@ BENT 28	1		BOTTOM FLANGE	-	GIRDER REPAIR
30	2	@ BENT 29	1		BOTTOM FLANGE	-	GIRDER REPAIR
31	3	@ BENT 30	4		BOTTOM FLANGE	-	GIRDER REPAIR
31	3	@ BENT 30	1		WEB	-	GIRDER REPAIR
32	DIA.	@ BENT 31	4		DIAPHRAGM	LT. EXT.	SHOTCRETE
33	4	@ BENT 32	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
33	DIA.	@ BENT 33	4		DIAPHRAGM	RT. EXT.	SHOTCRETE
39	2	@ BENT 38	1		BOTTOM FLANGE	-	GIRDER REPAIR
40	DIA.	@ BENT 39	4		DIAPHRAGM	3	SHOTCRETE
45	2	@ BENT 45	1		BOTTOM FLANGE	-	GIRDER REPAIR
46	3	@ BENT 45	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
48	2	@ BENT 48	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
49	DIA.	@ BENT 48	1		EXT. DIA.	LT. EXT.	EPOXY COATING
50	DIA.	@ BENT 49	3		EXT. DIA.	RT. EXT.	EPOXY COATING
51	1	@ BENT 51	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
51	DECK	MIDSPAN	2.3		BOTTOM OF DECK	RT. EXT.	EPOXY COATING
52	4	@ BENT 52	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
53	1	@ BENT 52	1		BOTTOM FLANGE	LT. EXT.	GIRDER REPAIR
53	4	@ BENT 52	1		BOTTOM FLANGE	-	GIRDER REPAIR
54	DECK	MIDSPAN	3		BOTTOM OF DECK	3	EPOXY COATING
60	1	@ BENT 59	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
61	1	@ BENT 60	2		BOTTOM FLANGE	-	GIRDER REPAIR
61	1	@ BENT 61	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
67	3	@ BENT 67	1		BOTTOM FLANGE	-	GIRDER REPAIR
67	3	@ BENT 67	1		BOTTOM FLANGE	-	GIRDER REPAIR
67	4	@ BENT 66	1		BOTTOM FLANGE	-	GIRDER REPAIR
68	2	@ BENT 67	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
70	3	@ BENT 69	1		BOTTOM FLANGE	-	GIRDER REPAIR
72	DIA.	@ BENT 71	3		EXT. DIA.	LT. EXT.	SHOTCRETE
72	DIA.	@ BENT 71	4		INT. DIA.	2	SHOTCRETE
76	1	@ BENT 76	1		BOTTOM FLANGE	-	GIRDER REPAIR
77	DIA.	@ BENT 77	6		INT. DIA.	3	SHOTCRETE
77	1	@ BENT 76	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
77	4	@ BENT 76	1		BOTTOM FLANGE	-	GIRDER REPAIR
77	4	@ BENT 77	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
82	2	@ BENT 81	1		BOTTOM FLANGE	-	GIRDER REPAIR
82	2	@ BENT 82	2.3		BOTTOM FLANGE	-	GIRDER REPAIR
83	2	@ BENT 83	1		BOTTOM FLANGE	-	GIRDER REPAIR
85	2	@ BENT 84	1		BOTTOM FLANGE	-	GIRDER REPAIR
86	3	@ BENT 86	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
88	2	@ BENT 87	1		BOTTOM FLANGE	-	GIRDER REPAIR
88	3	@ BENT 88	1		BOTTOM FLANGE	-	GIRDER REPAIR
88	3	@ BENT 88	1		BOTTOM FLANGE	-	GIRDER REPAIR

REPAIR QUANTITY TABLE					
SPANS 1-88	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
DIAPHRAGMS	53.5	15.6			
GIRDGER REPAIR	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDERS	101.7	29.7			
EPOXY COATING	AREA SF		AREA SF		
UNDERDECK OR EXT. DIA.	54.6				

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT FOR DIAPHRAGM REPAIRS AND 1" CL TO SAWCUT FOR GIRDER REPAIRS. SEE REPAIR DETAILS SHEET S-103 & S-104.

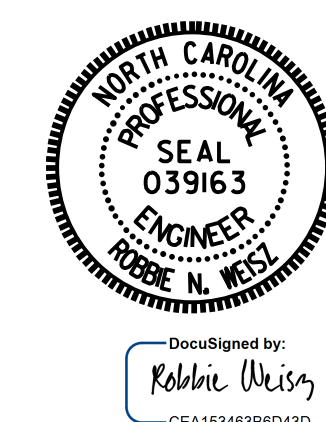
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR GIRDER REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 1 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GIRDER, DIAPHRAGM & UNDERDECK REPAIRS

DRAWN BY: M.A. LEE DATE: 12/2016
CHECKED BY: R. WEISZ DATE: 3/2017

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

GIRDER, DIAPHRAGM, & UNDERDECK REPAIR TABLES							
SPAN	MEMBER	BENT/SPAN LOCATION	APPROX. REPAIR AREA (S.F.)	ACTUAL REPAIR AREA (S.F.)	LOCATION	BAY	REPAIR TYPE
88	4	@ BENT 88	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
89	4	@ BENT 89	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
89	2	@ BENT 88	1		BOTTOM FLANGE	-	GIRDER REPAIR
89	3	@ BENT 88	1		BOTTOM FLANGE	-	GIRDER REPAIR
89	3	@ BENT 88	1		BOTTOM FLANGE	-	GIRDER REPAIR
89	3	@ BENT 89	1		BOTTOM FLANGE	-	GIRDER REPAIR
90	4	@ BENT 89	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
90	3	@ BENT 90	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
91	2	@ BENT 90	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
92	2	@ BENT 91	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
92	4	@ BENT 91	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
93	3	@ BENT 92	1		BOTTOM FLANGE	-	GIRDER REPAIR
93	2	@ BENT 93	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
94	1	@ BENT 94	1.5		BOTTOM FLANGE	-	GIRDER REPAIR
95	2	@ BENT 94	1		BOTTOM FLANGE	-	GIRDER REPAIR
95	2	@ BENT 94	1		BOTTOM FLANGE	-	GIRDER REPAIR

REPAIR QUANTITY TABLE					
SPANS 88-95	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
DIAPHRAGMS	0.0	0.0			
GIRDGER REPAIR	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDERS	20.5	6.0			
EPOXY COATING	AREA SF		AREA SF		
UNDERDECK OR EXT. DIA.	0.0				

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT FOR DIAPHRAGM REPAIRS AND 1" TO SAWCUT FOR GIRDER REPAIRS. SEE REPAIR DETAILS SHEET S-103 & S-104.

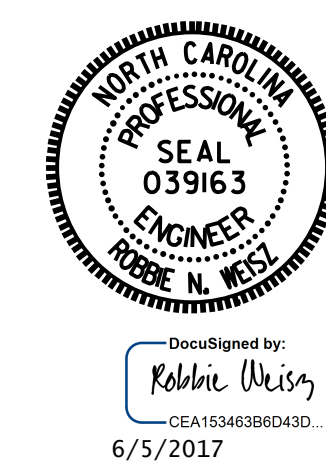
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR GIRDER REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GIRDER, DIAPHRAGM
& UNDERDECK REPAIRS

DRAWN BY : M.A. LEE DATE : 12/2016
CHECKED BY : R. WEISZ DATE : 3/2017

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

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	10.0	5.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		

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.

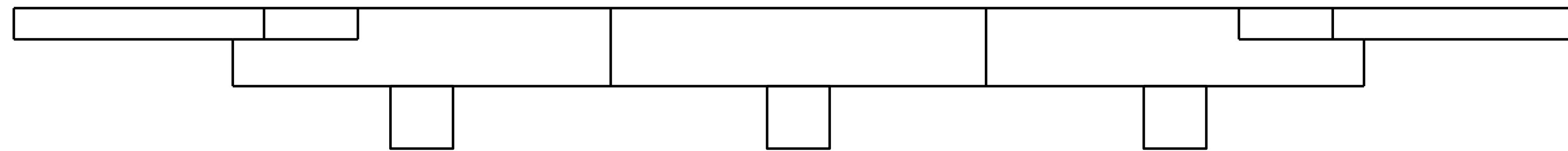
NOTES:

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.

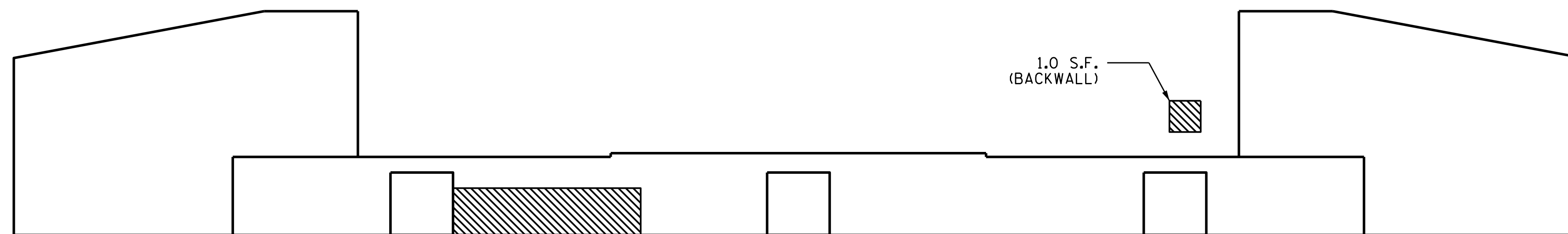
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR



PLAN
TOP OF CAP



ELEVATION
NORTH SIDE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 1 OF 96



DocuSigned by:
 Robbie Weisz
 CS-1534838B8D43D...
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 1

DRAWN BY : M.A. LEE DATE : 3/2017
 CHECKED BY : R. WEISZ DATE : 4/2017

05-JUN-2017 13:13
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-7
2			4			TOTAL SHEETS

NOTES:

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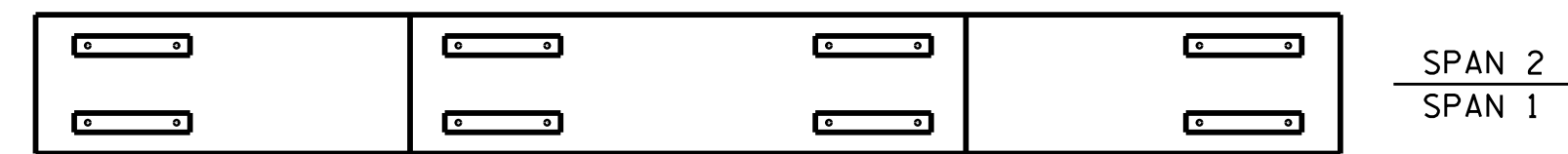
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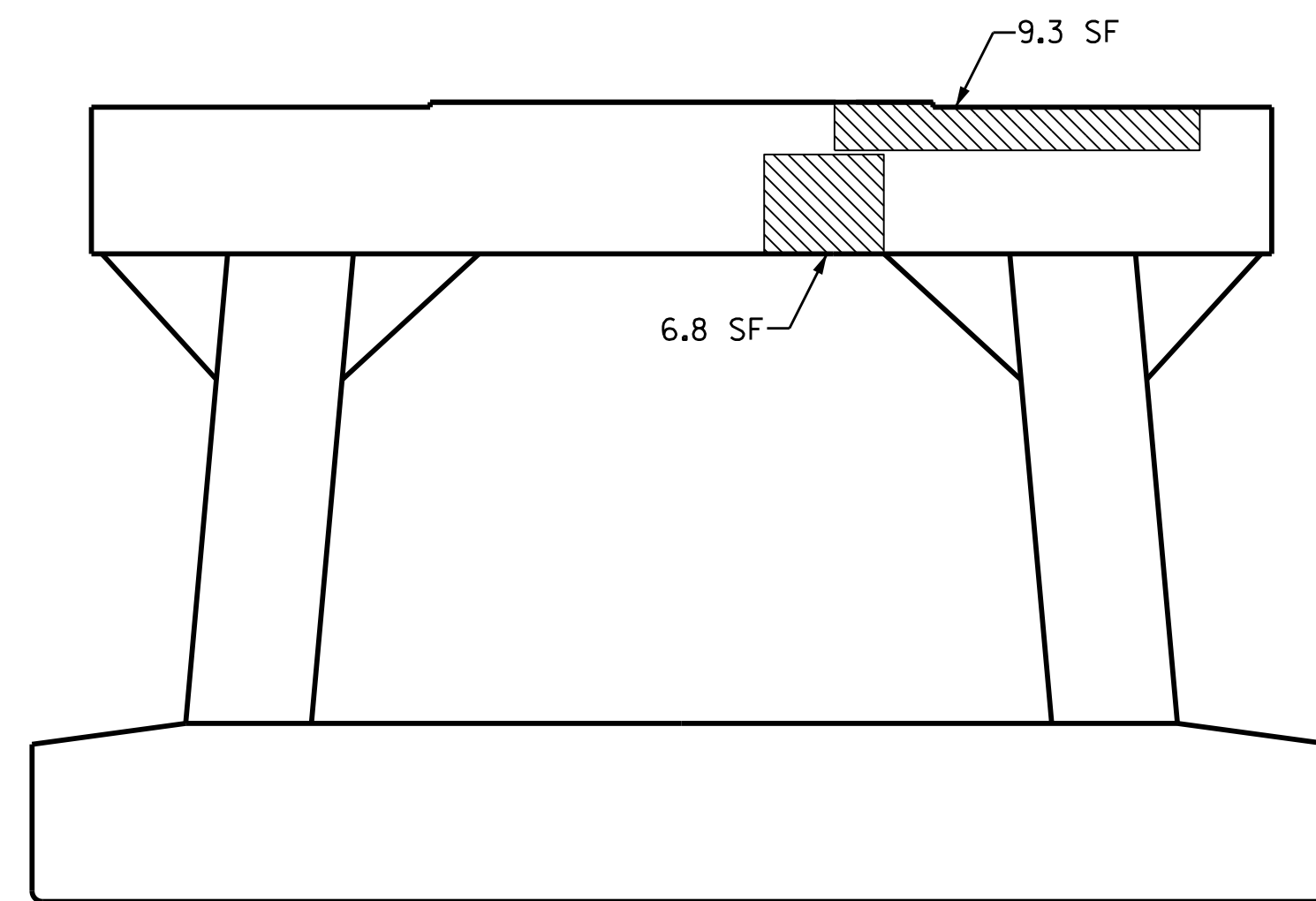
REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	48.9	24.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

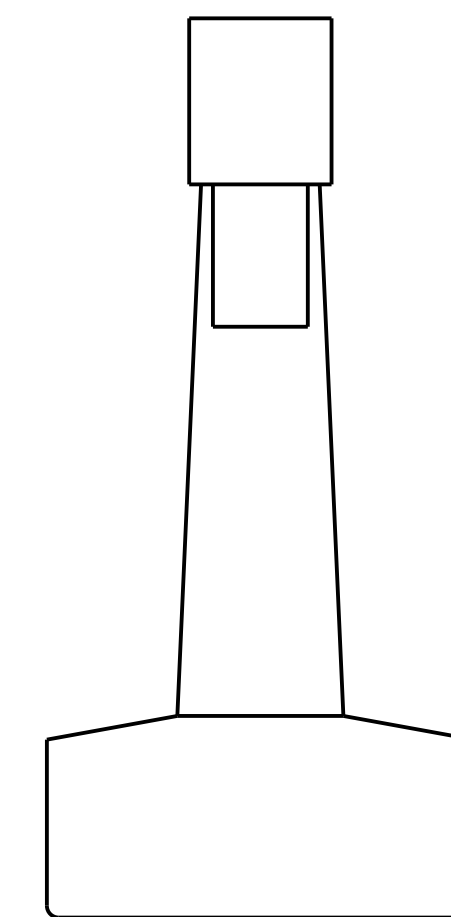
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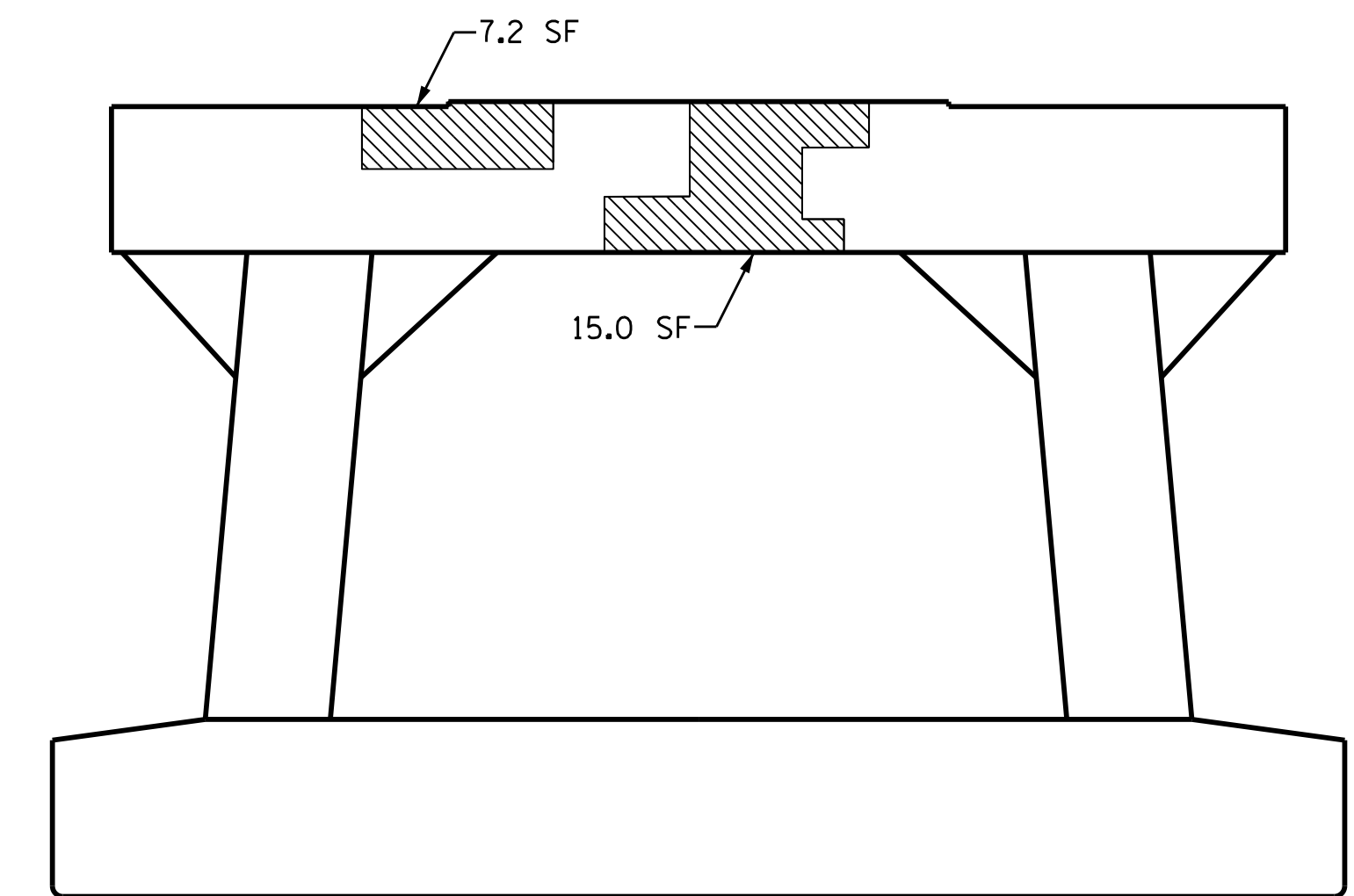
PLAN
TOP OF CAP



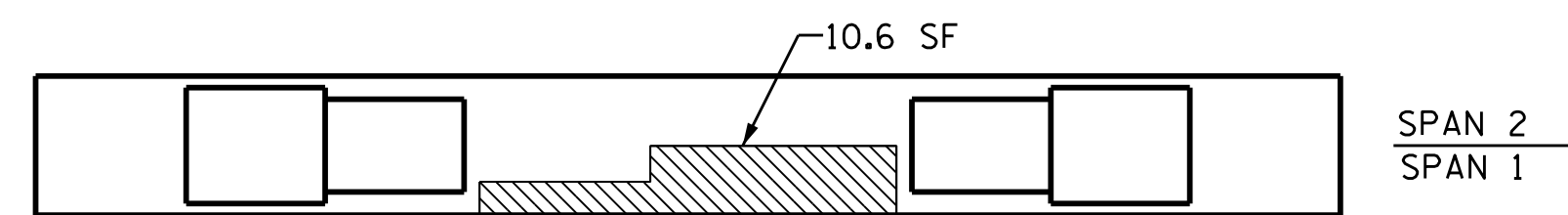
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

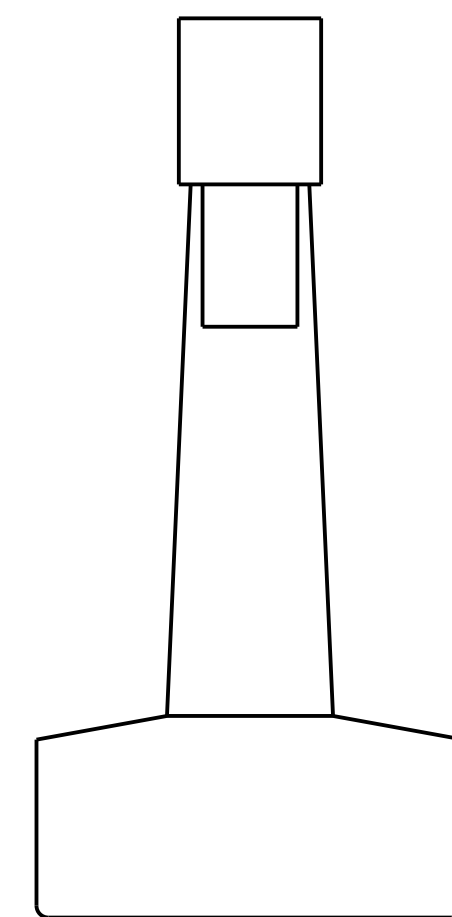


ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR



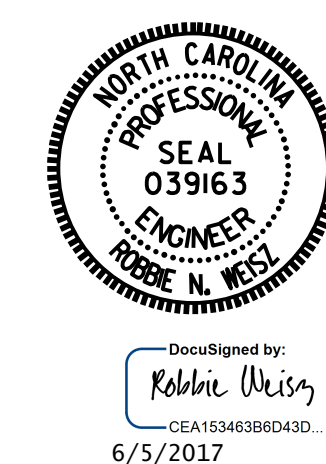
END VIEW
WEST SIDE

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 2 OF 96



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 1

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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

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.

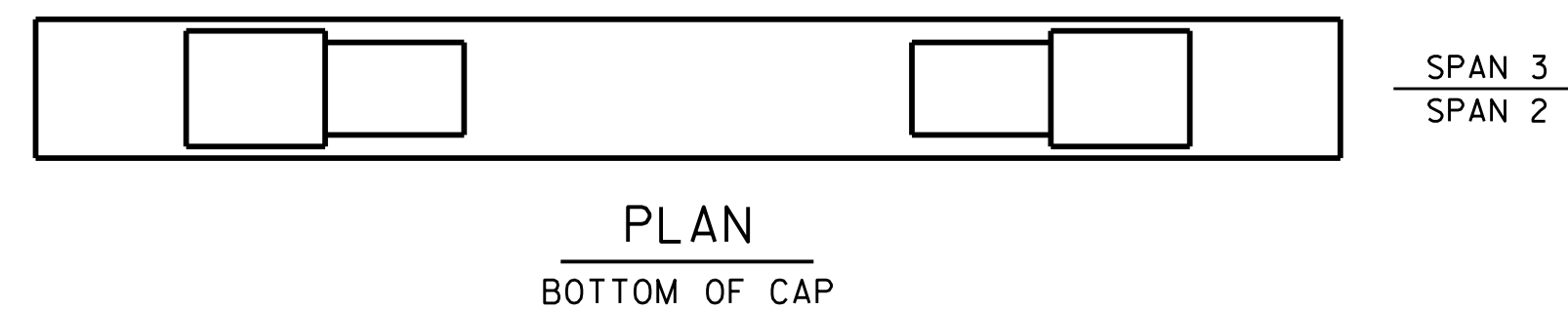
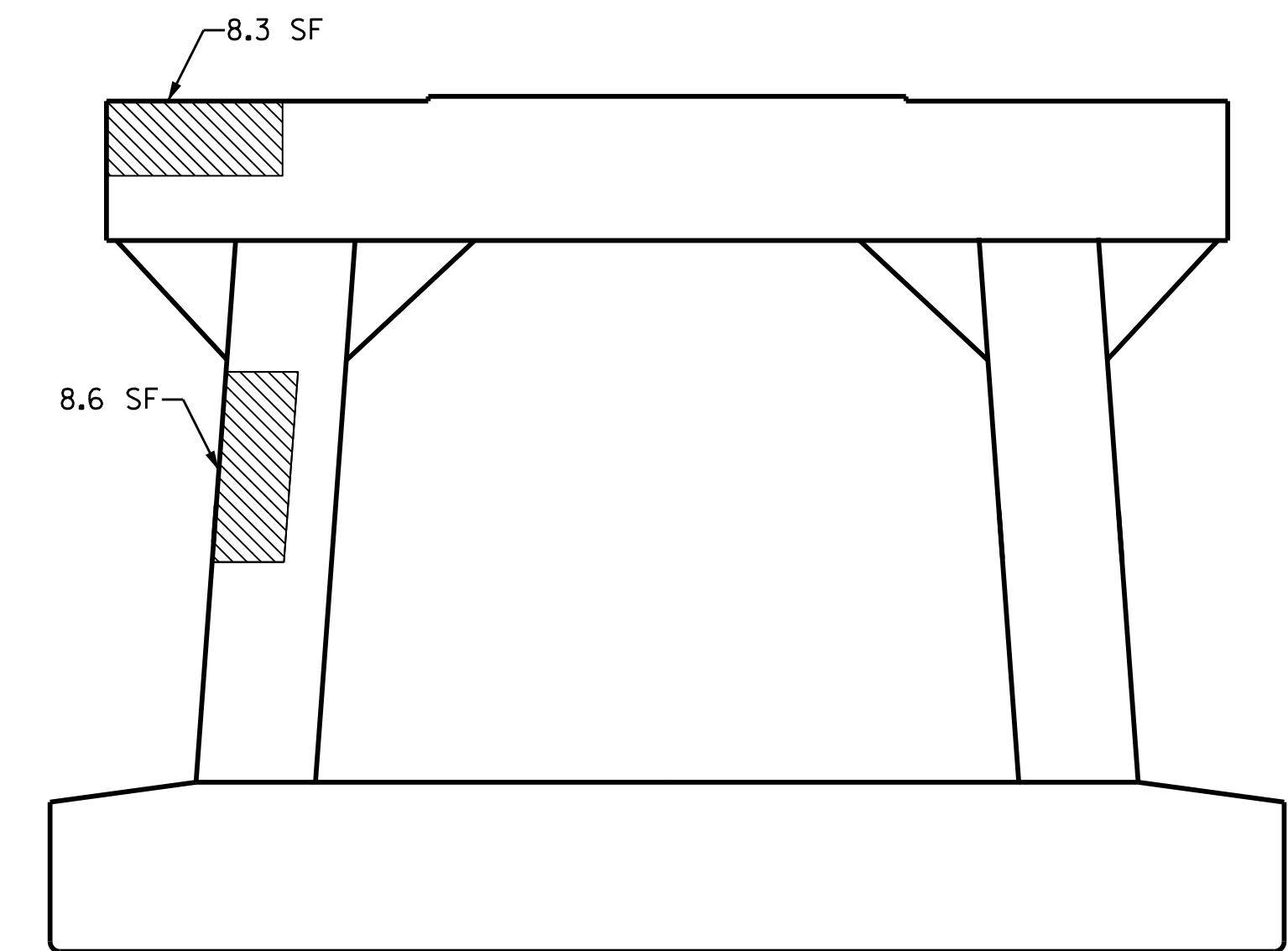
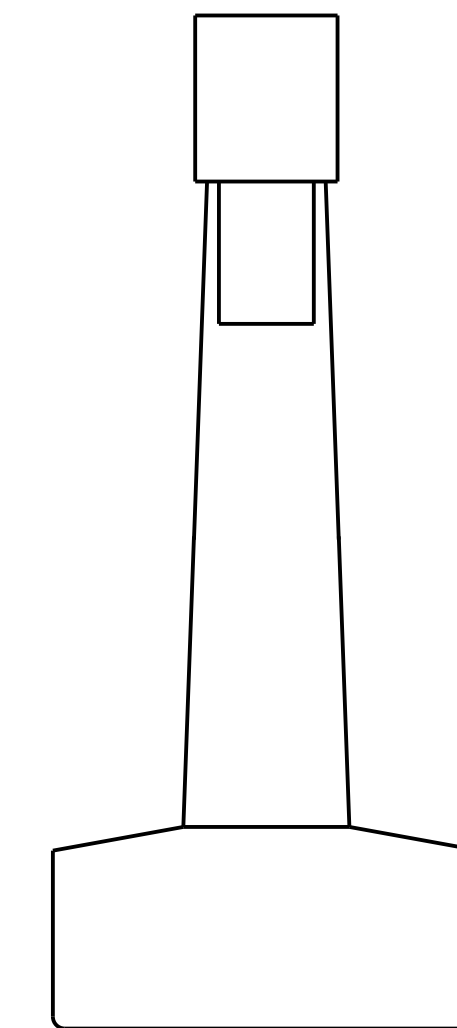
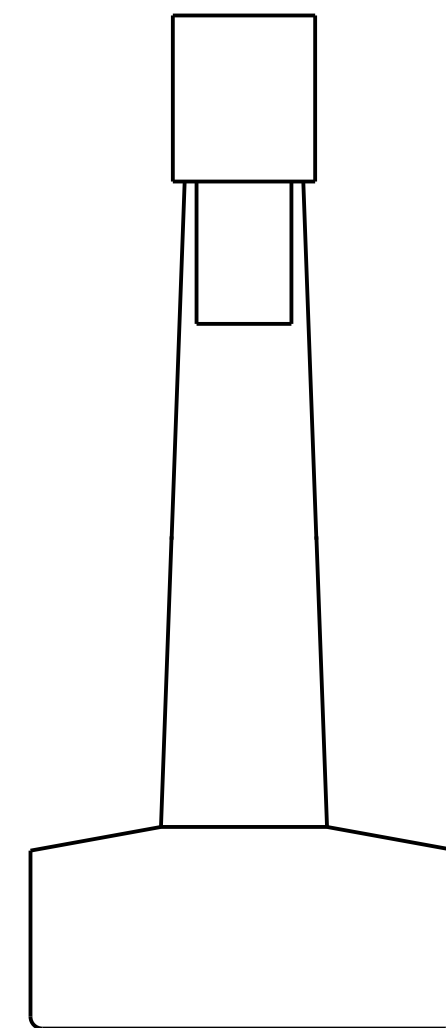
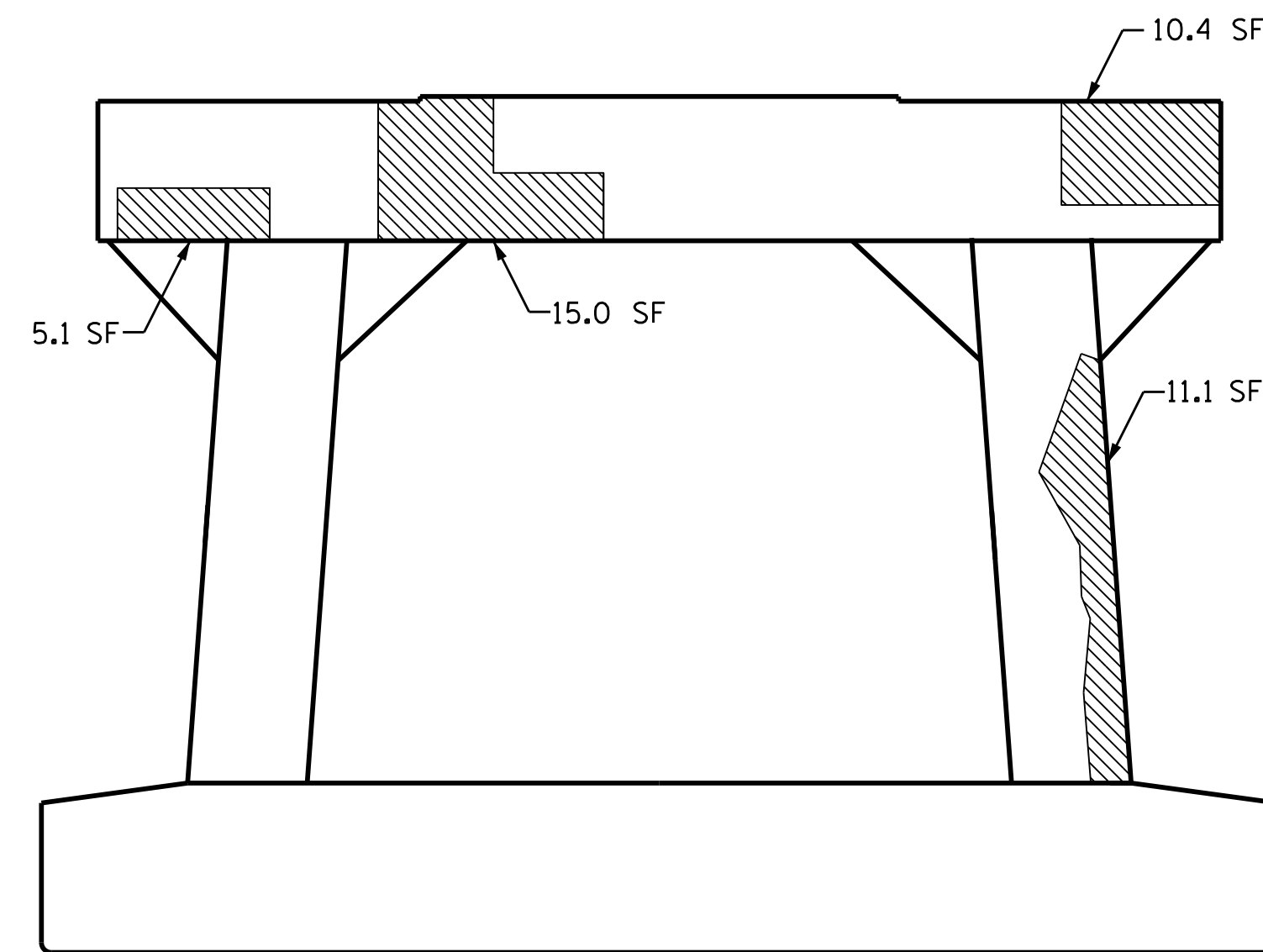
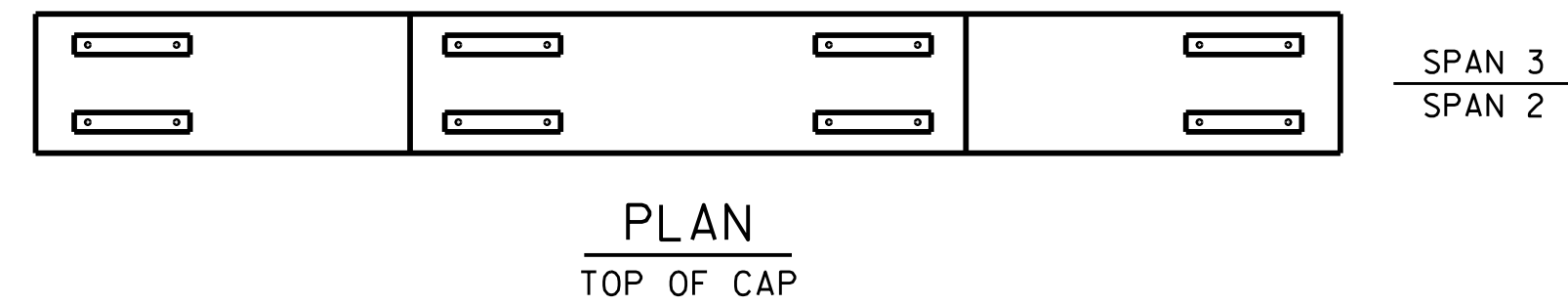
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	38.8	19.4		
COLUMN	19.7	9.8		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.



▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 3 OF 96



DocuSigned by:
 Robbie Weisz
 CEA153ME8B043D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
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NOTES:

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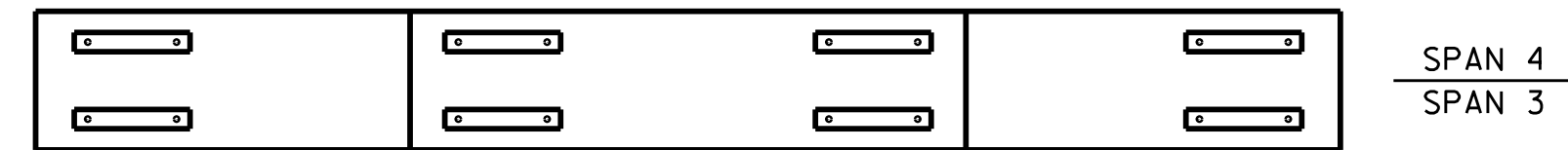
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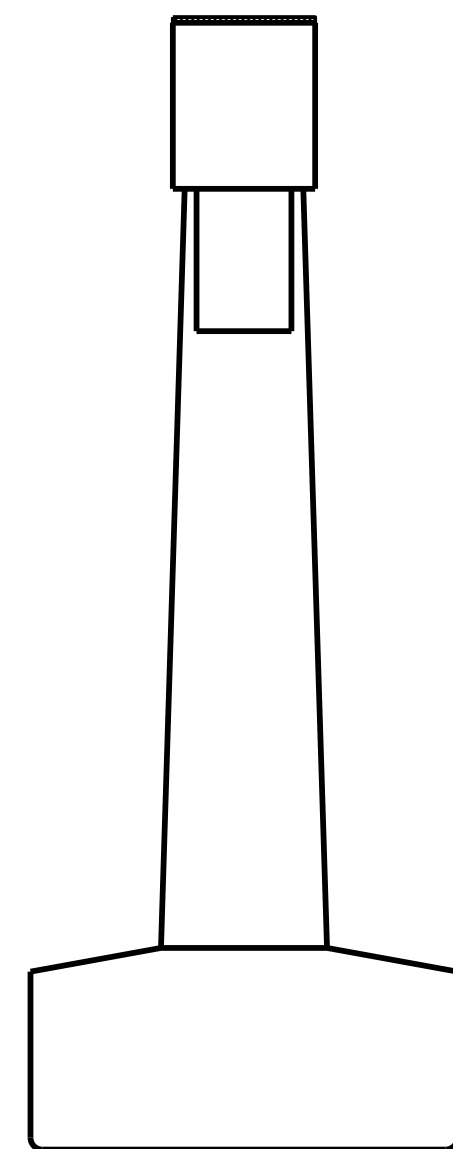
REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	49.0	24.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

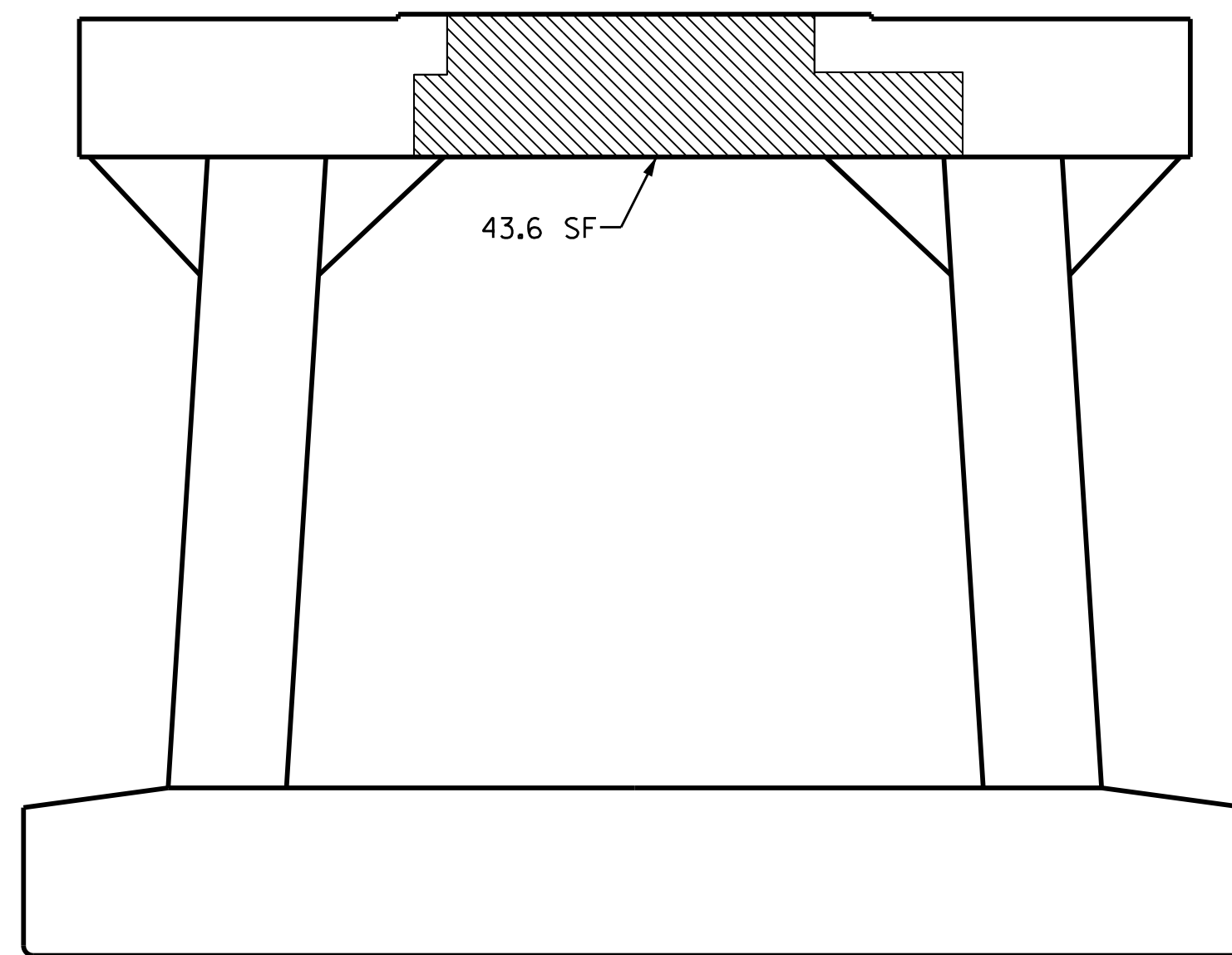
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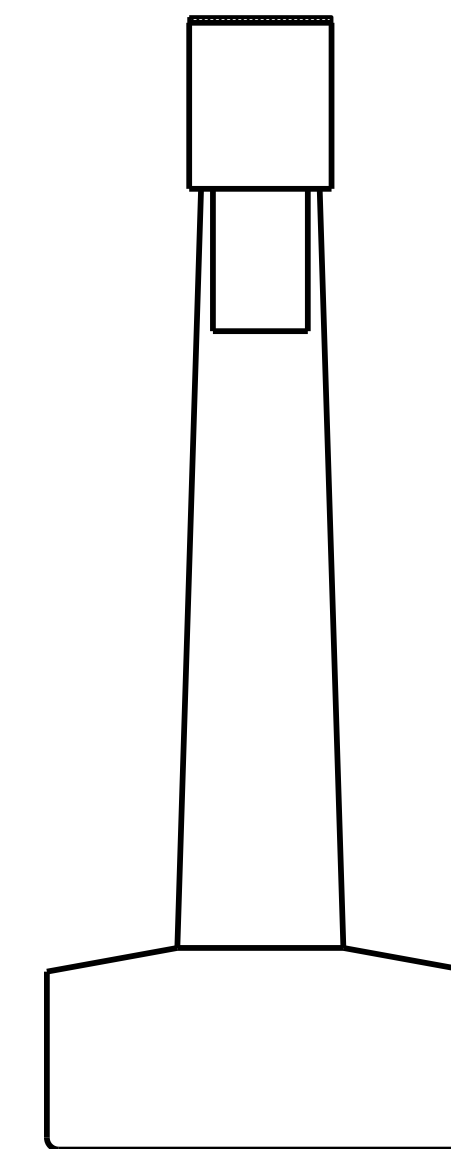
PLAN
TOP OF CAP



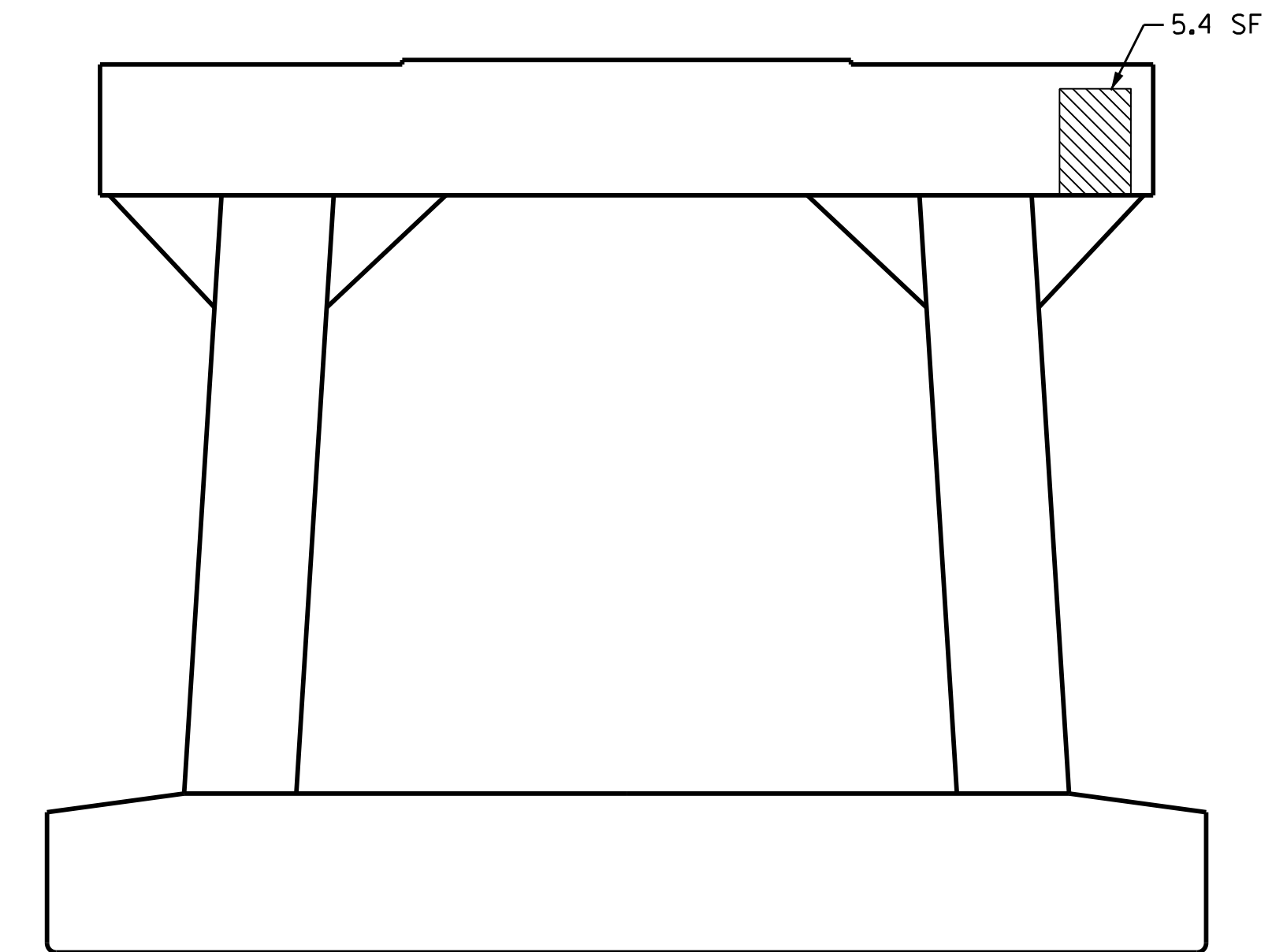
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 4 OF 96



DocuSigned by:
Robbie Weisz
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 3**

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-10
2			4			

NOTES:

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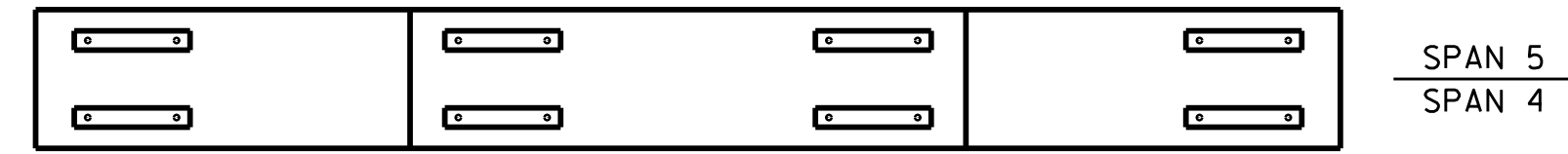
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

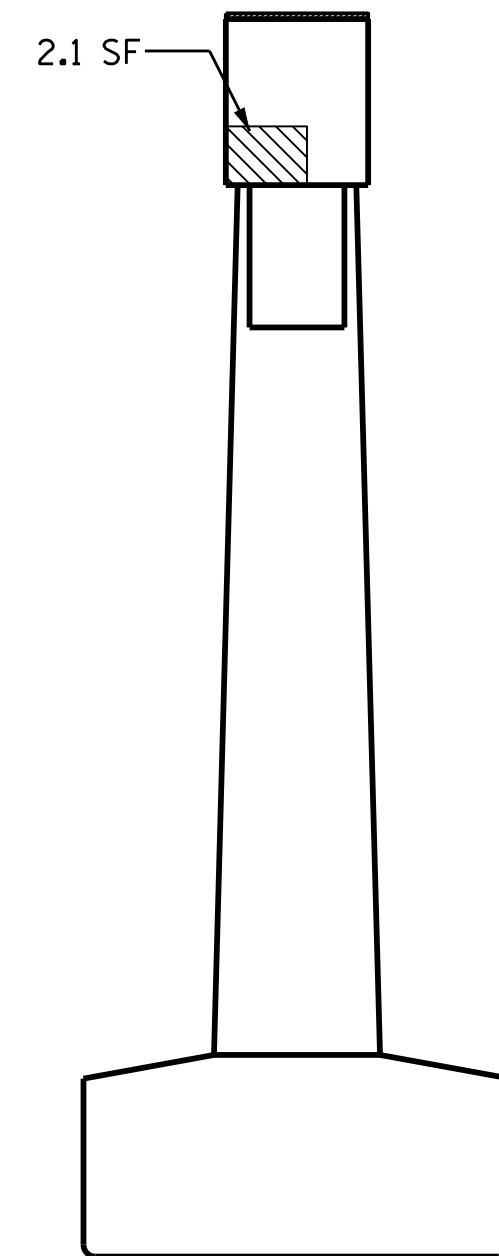
REPAIR QUANTITY TABLE

REPAIRS BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	24.0	12.0		
COLUMN	17.4	8.7		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

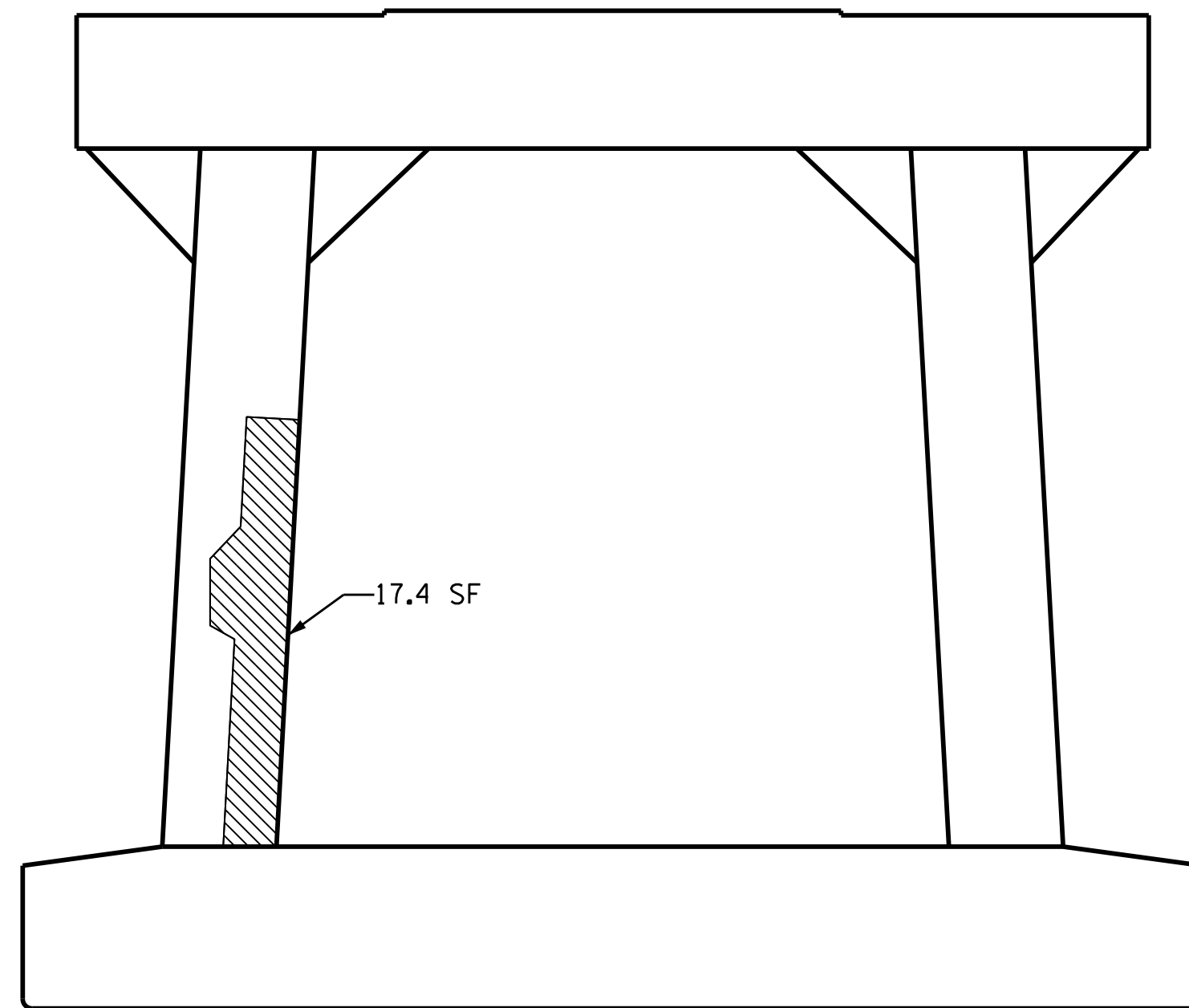
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



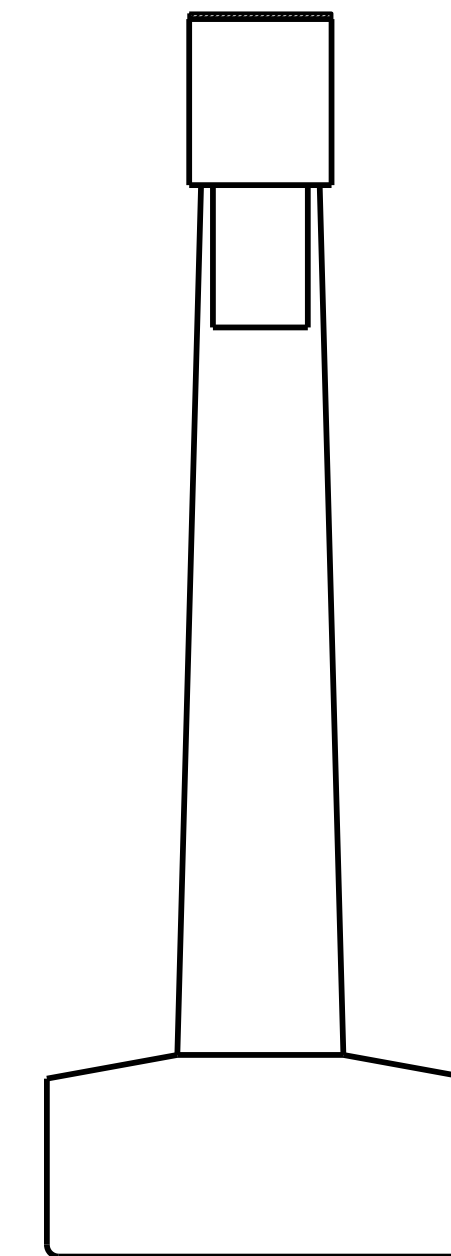
PLAN
TOP OF CAP



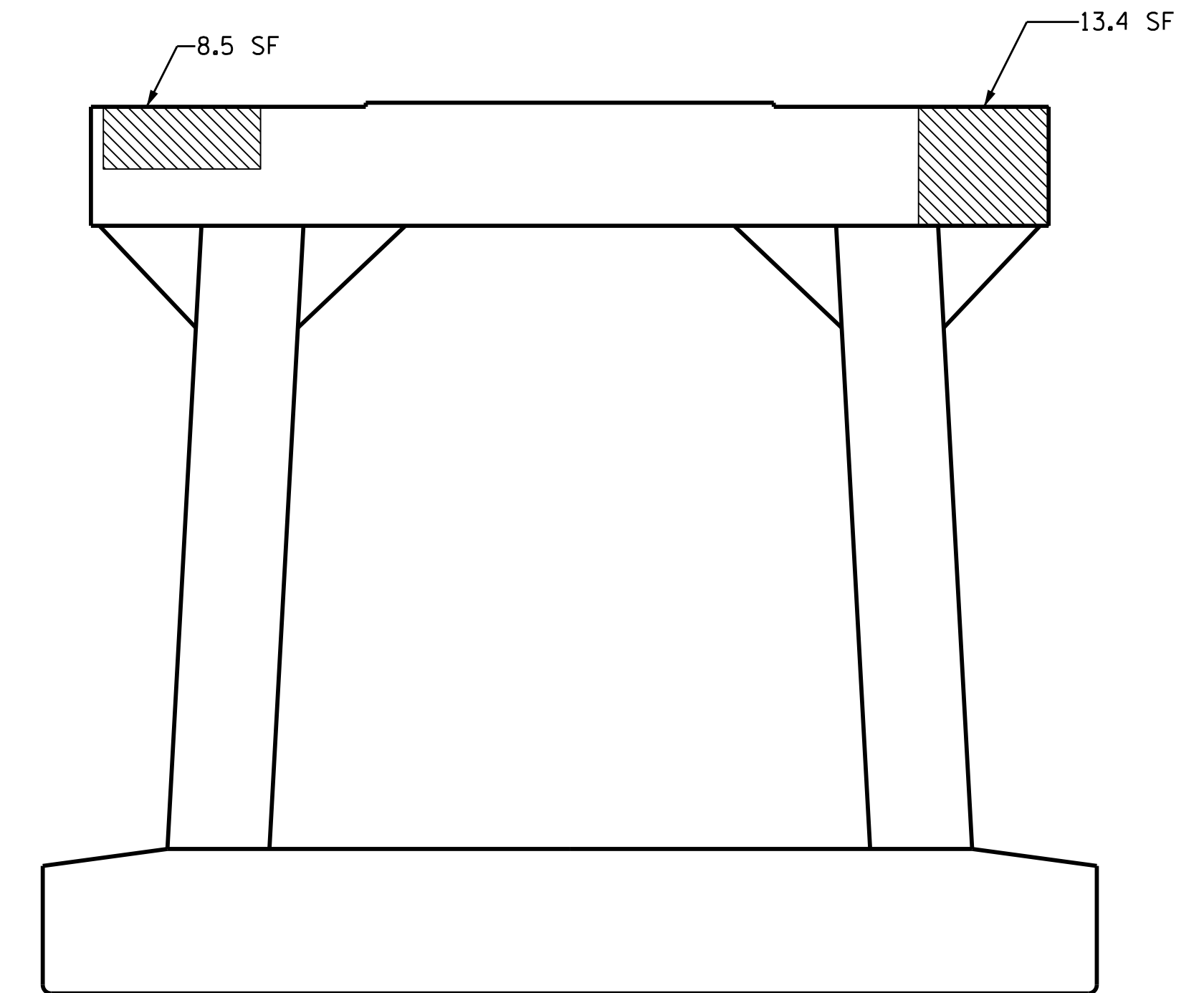
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 5 OF 96



DocuSigned by:
 Robbie Weisz
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
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1			3			S-11
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	19.0	9.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

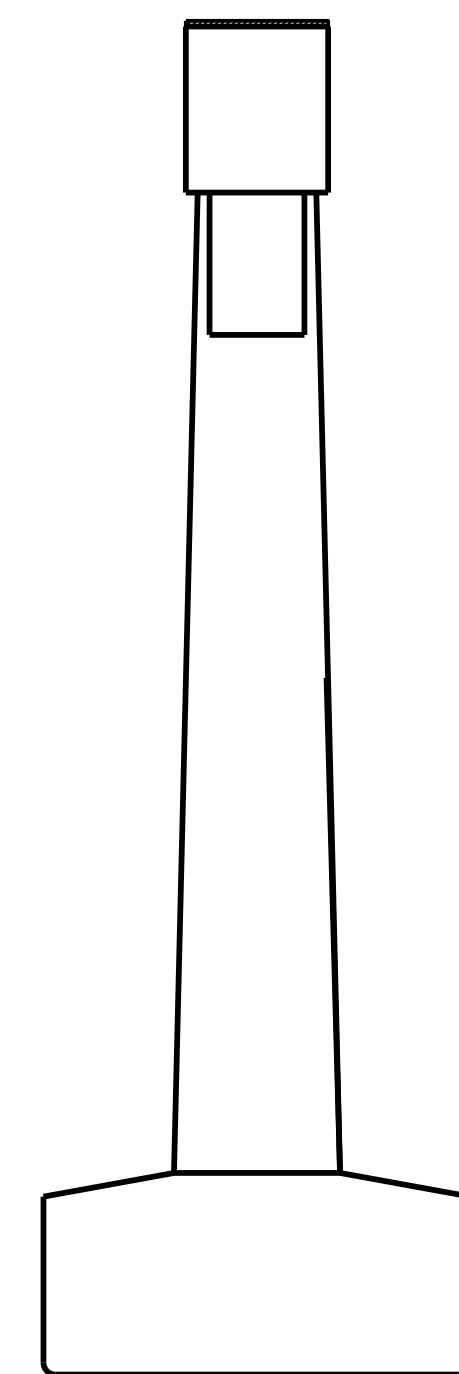
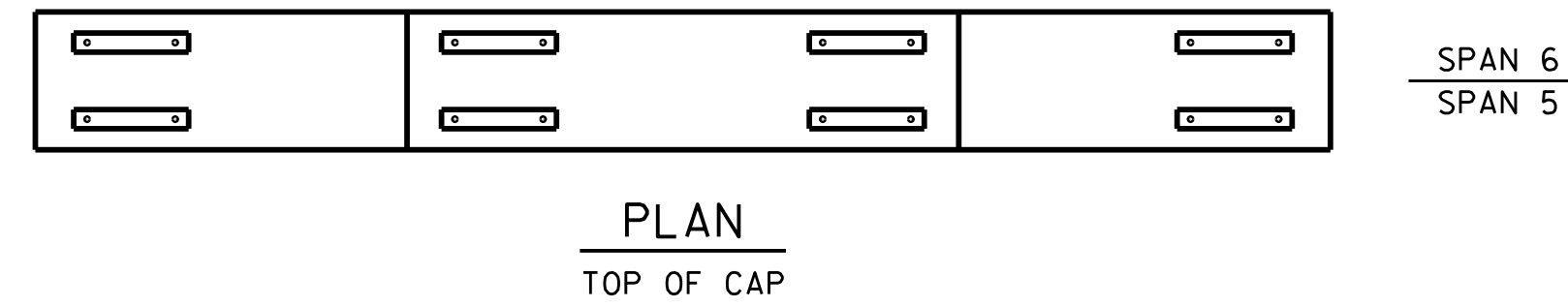
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

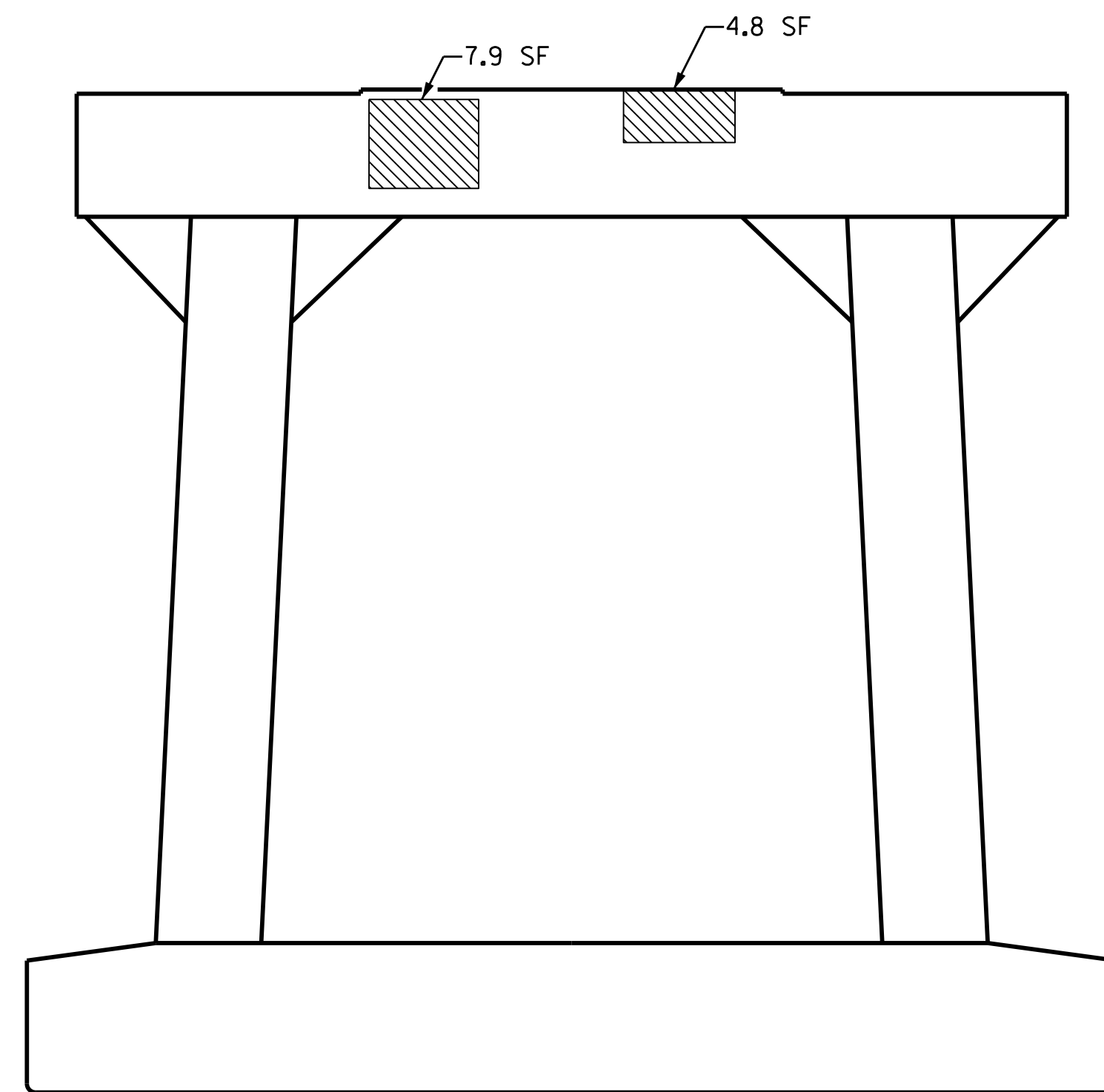
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

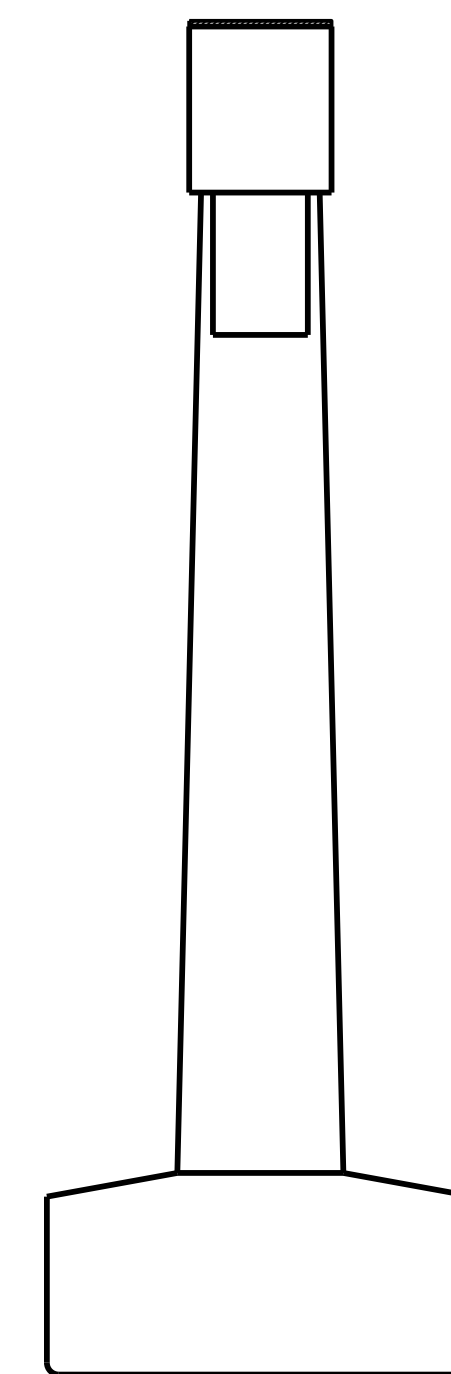
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



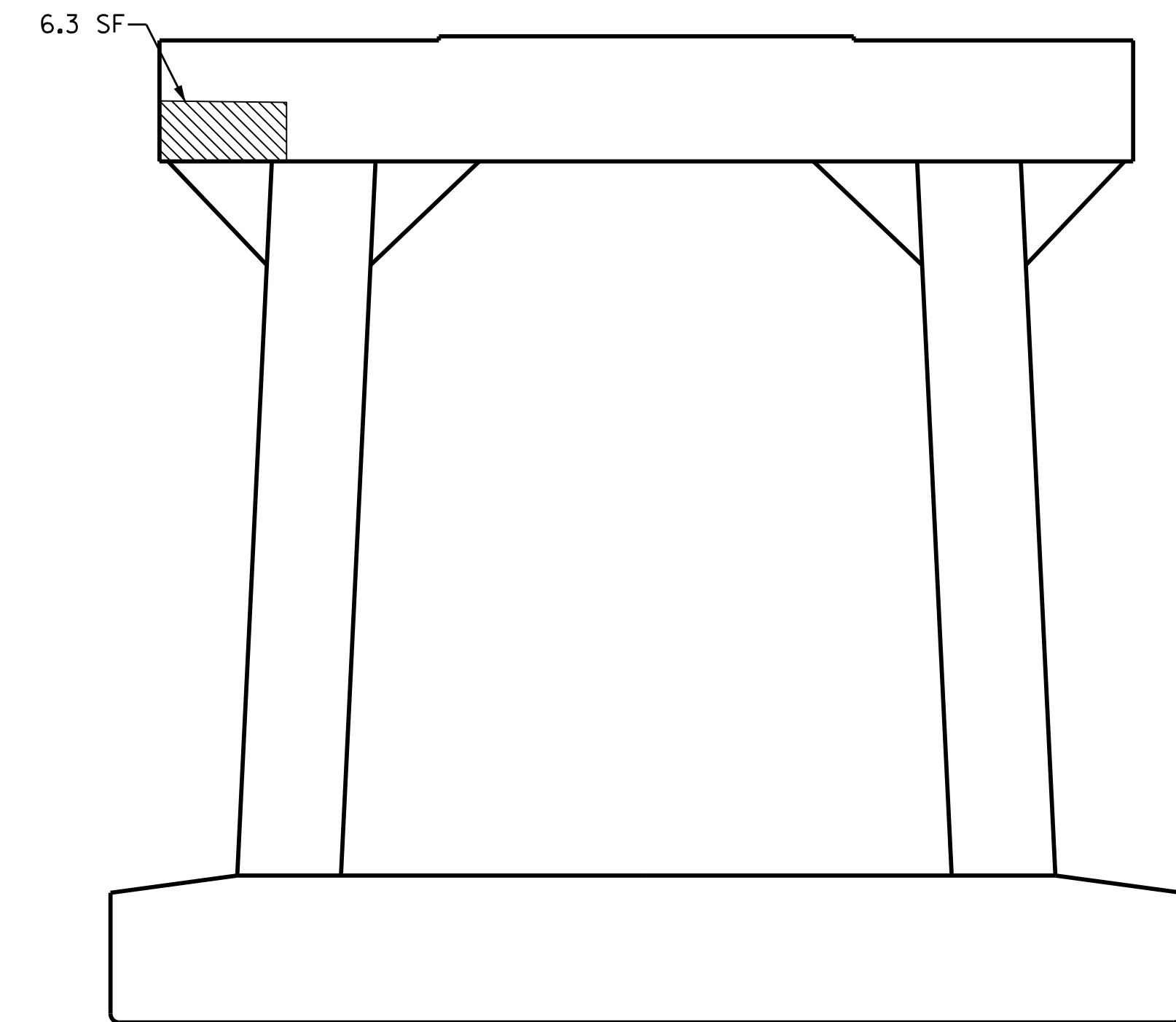
END VIEW
WEST SIDE



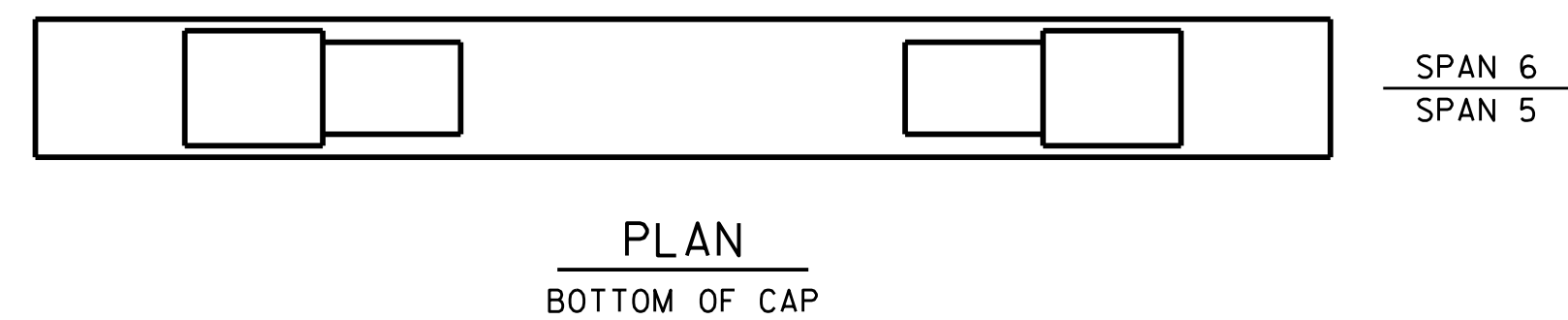
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

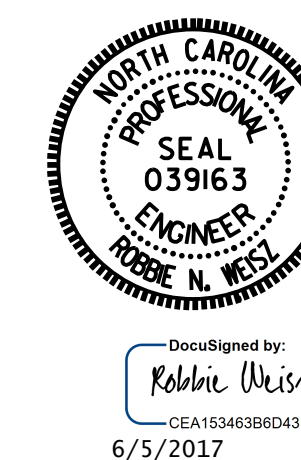


ELEVATION
NORTH SIDE



- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 6 OF 96



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 5

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

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

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 CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

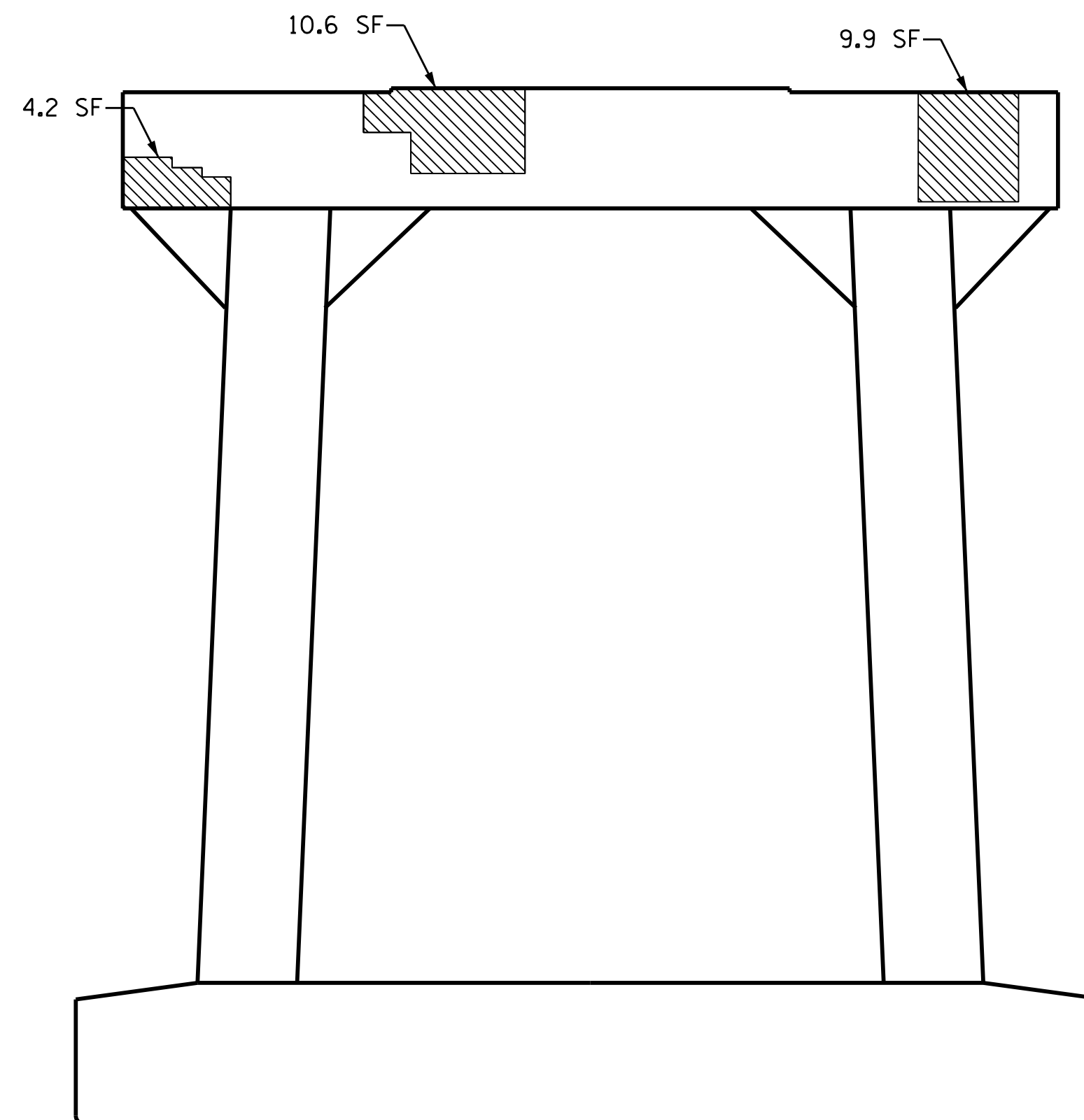
REPAIRS BENT 6	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	38.2	19.1		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.

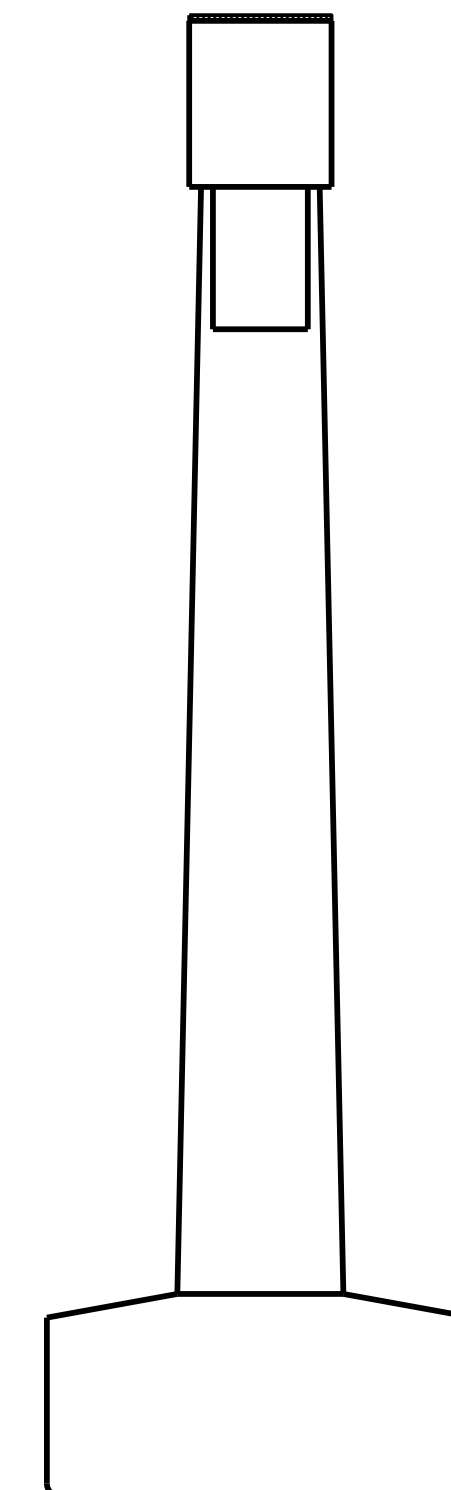


SPAN 7
SPAN 6

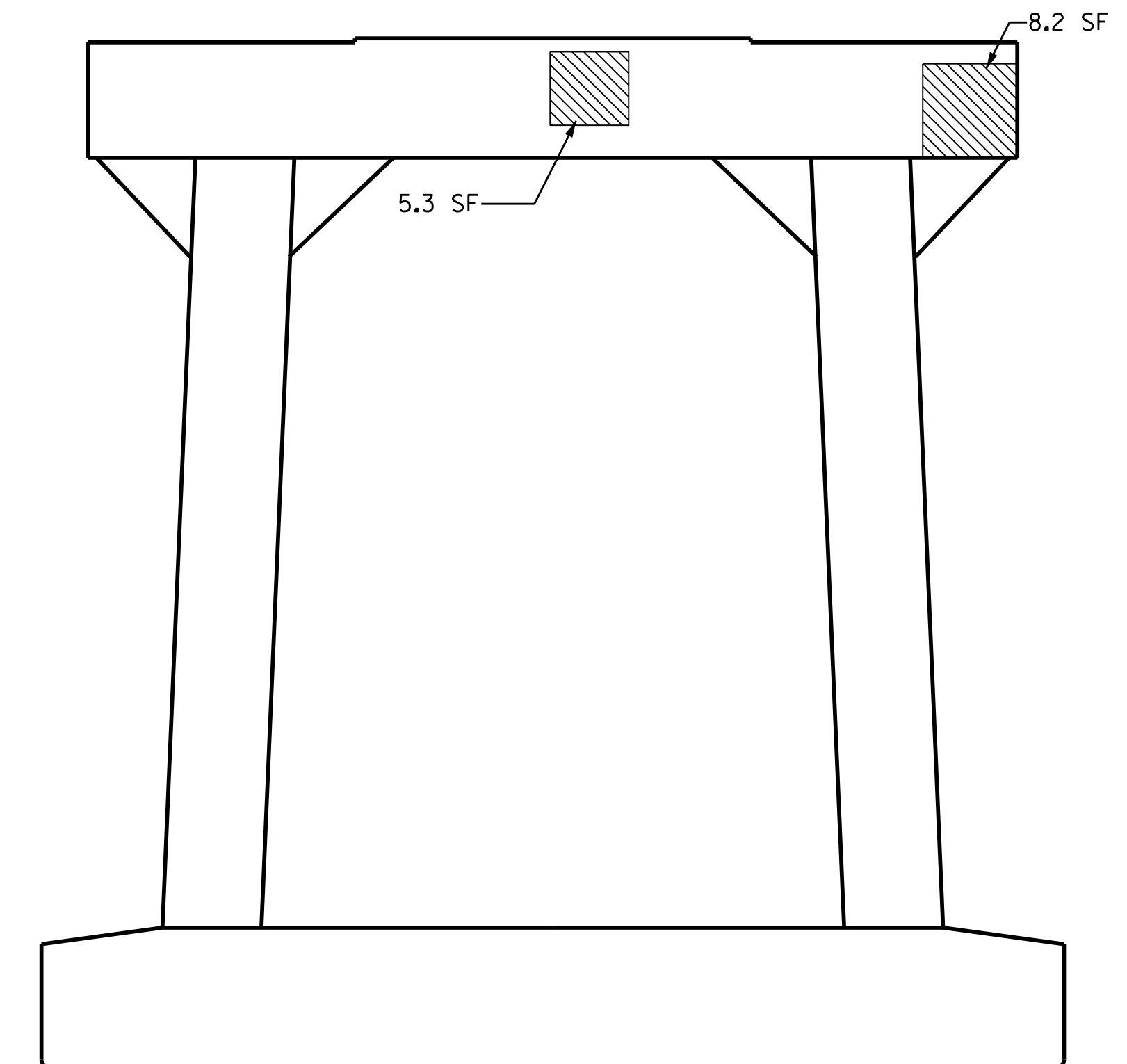
PLAN
TOP OF CAP



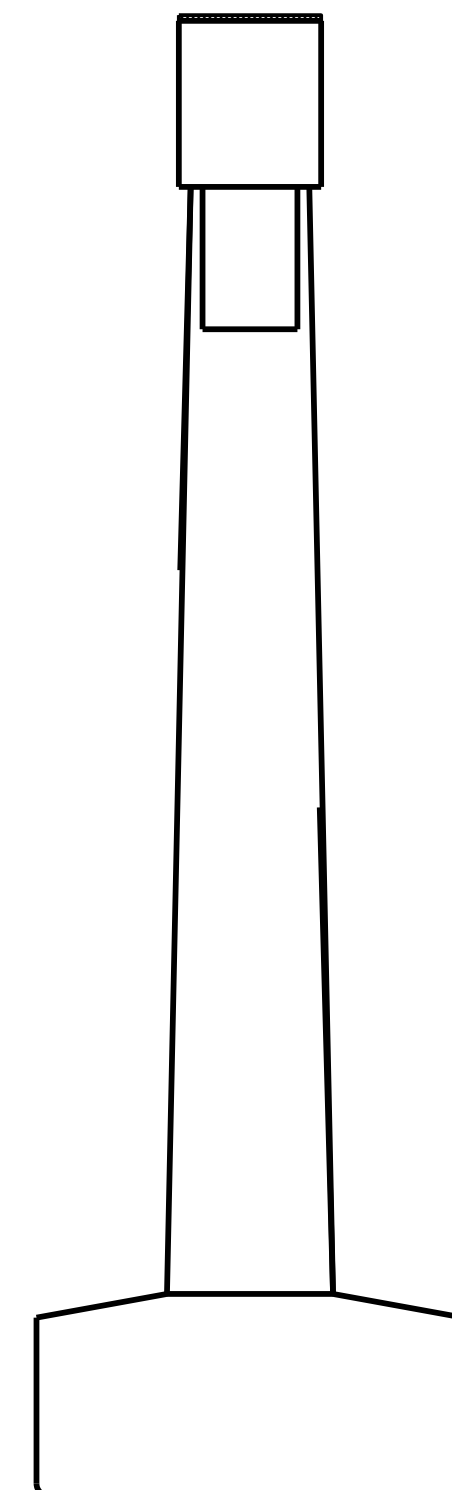
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE

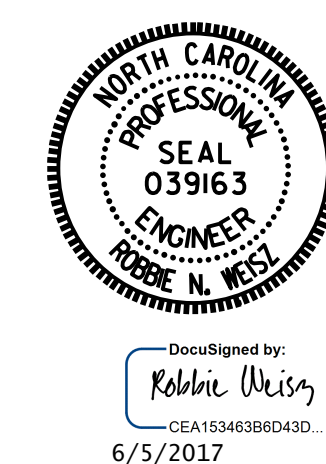


SPAN 7
SPAN 6

PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 7 OF 96



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE BENT 6

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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1			3			TOTAL SHEETS	
2			4				

REPAIR QUANTITY TABLE

REPAIRS BENT 7	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	27.3	13.7		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

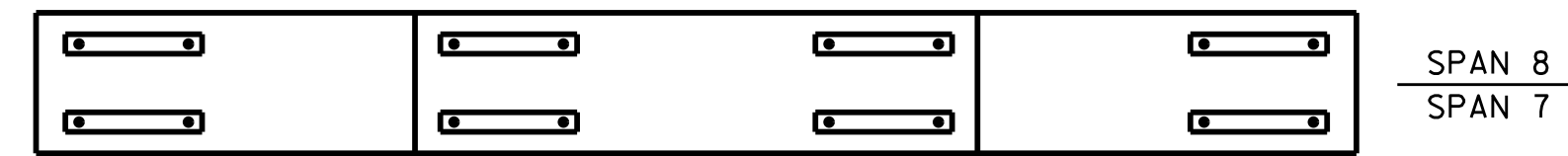
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

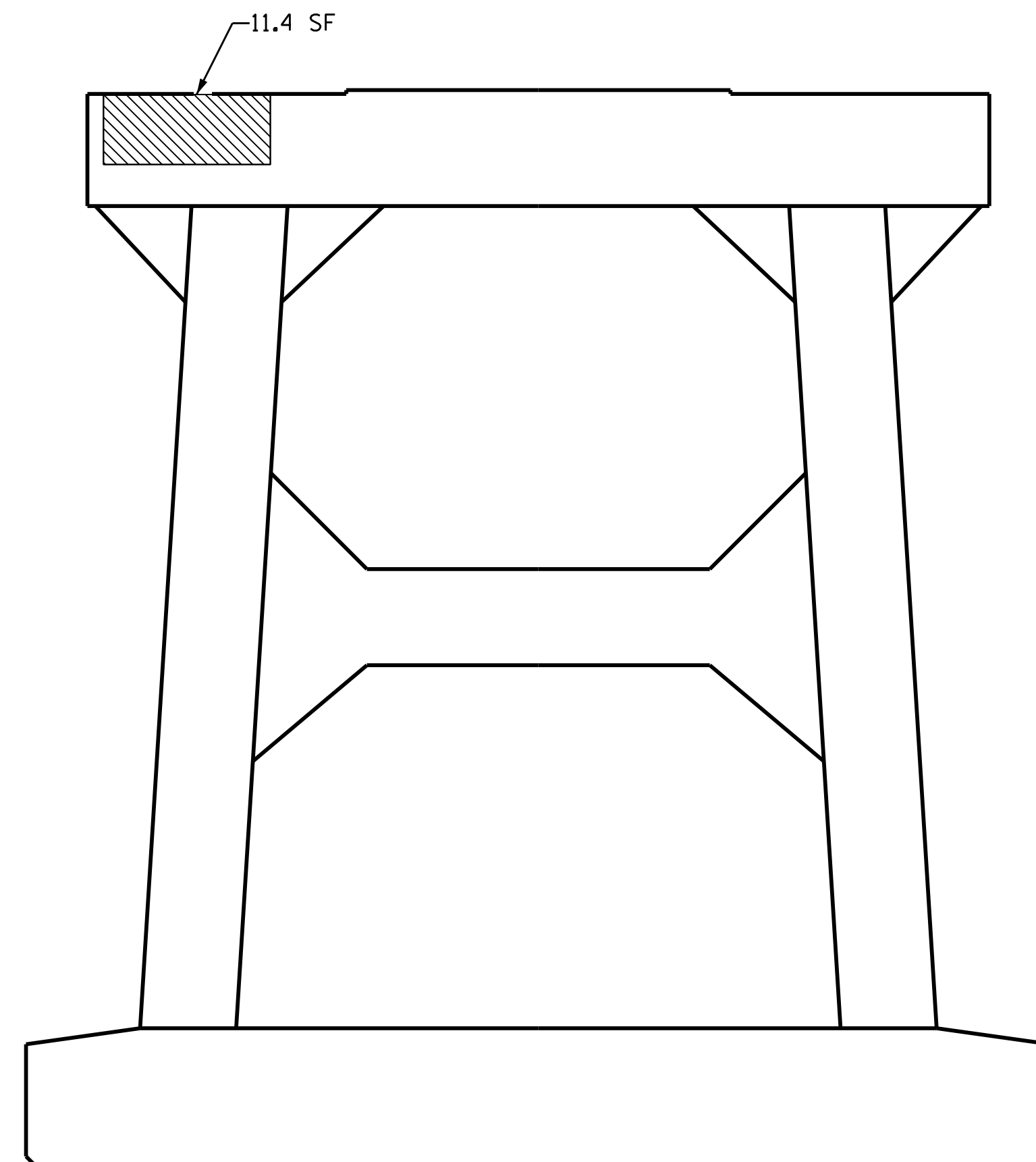
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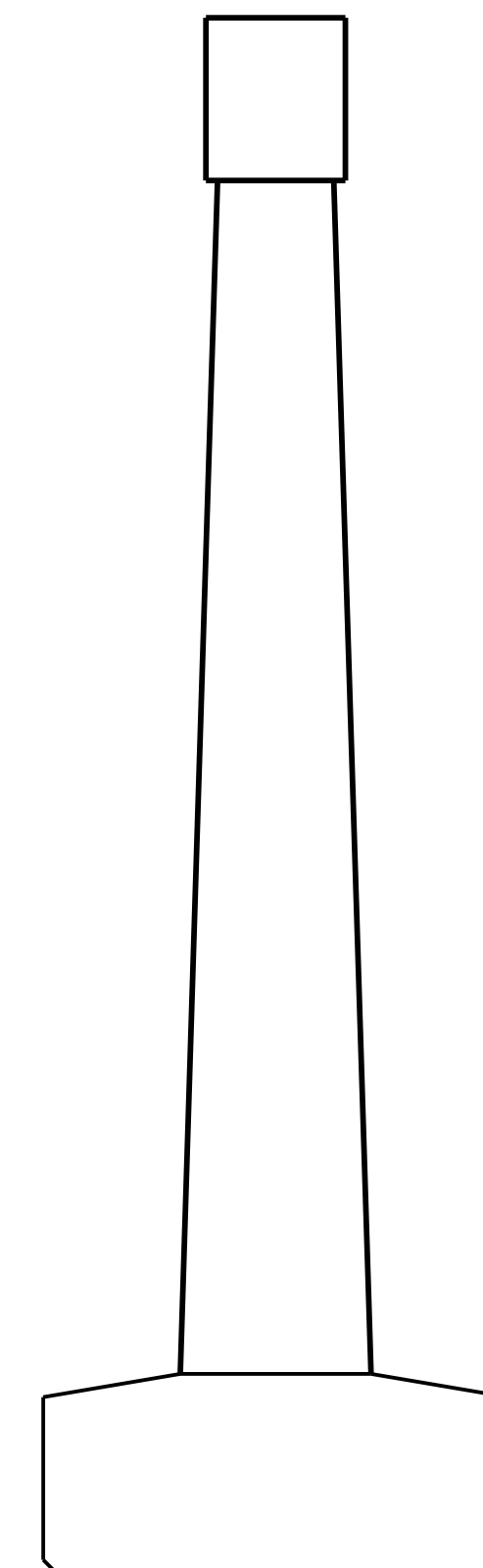
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



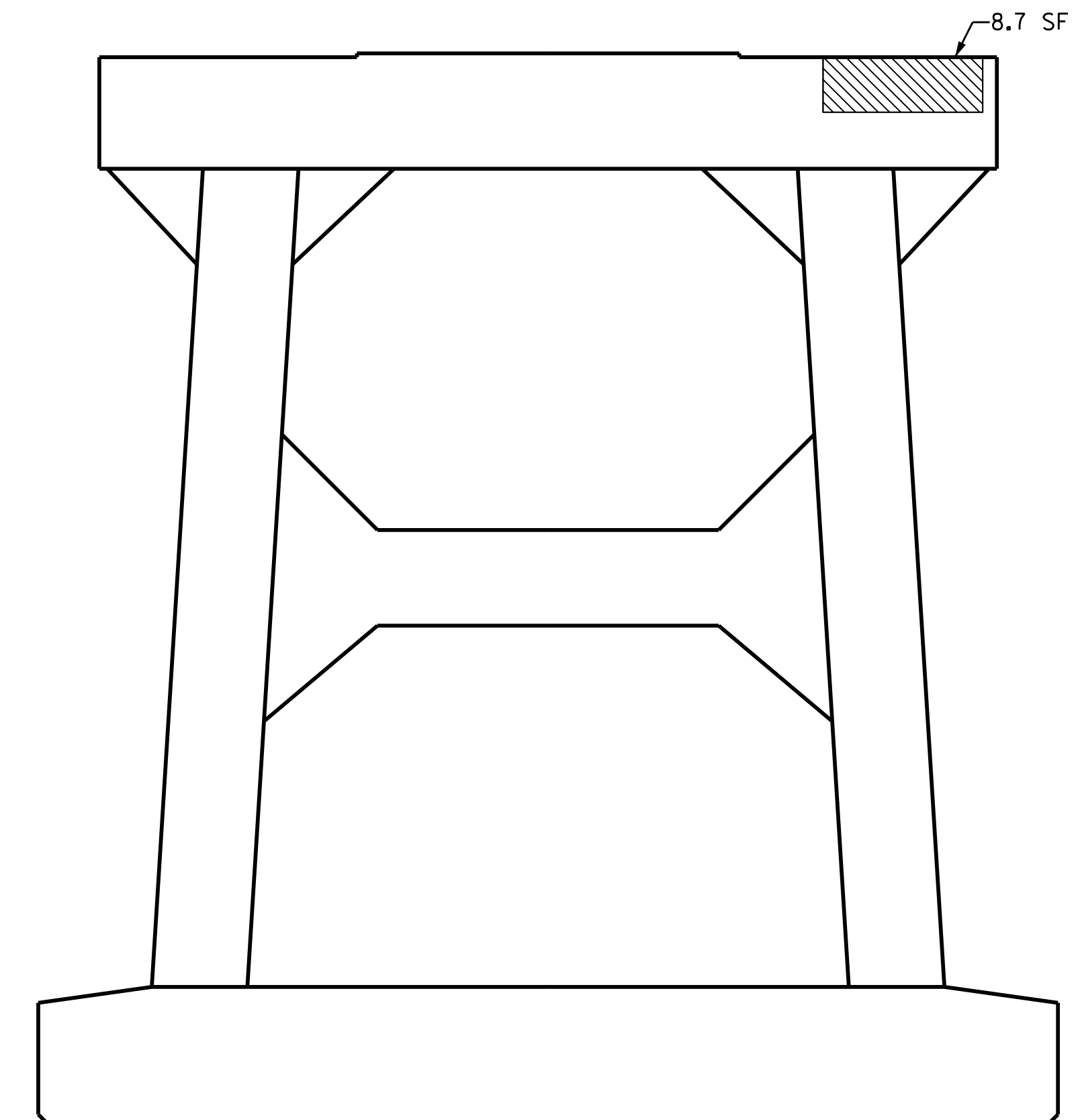
PLAN
TOP OF CAP



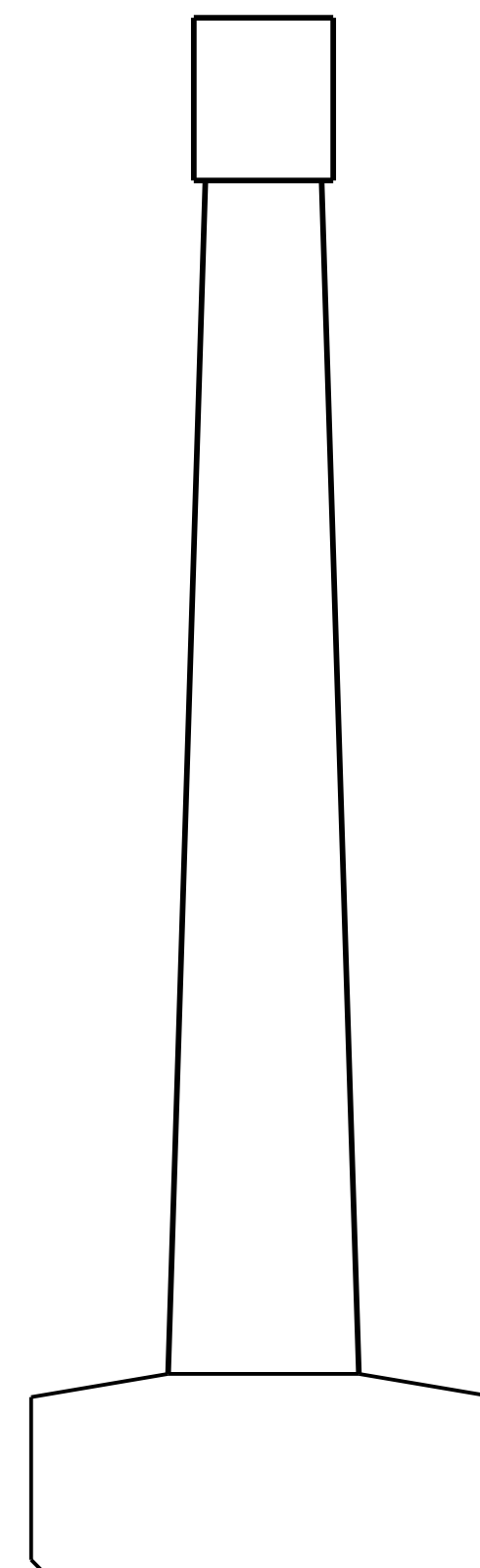
ELEVATION
SOUTH SIDE



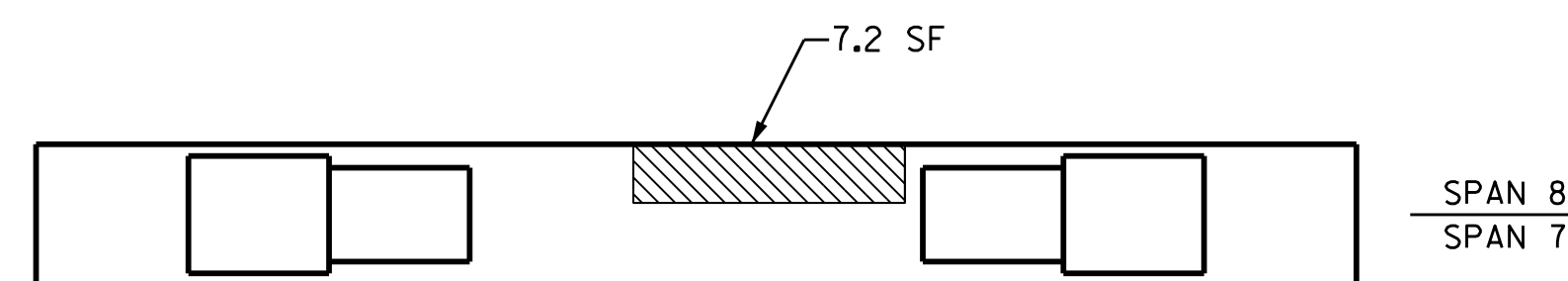
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 8 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 7



DocuSigned by:
 Robbie Weisz
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

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1			3			S-14
2			4			

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.

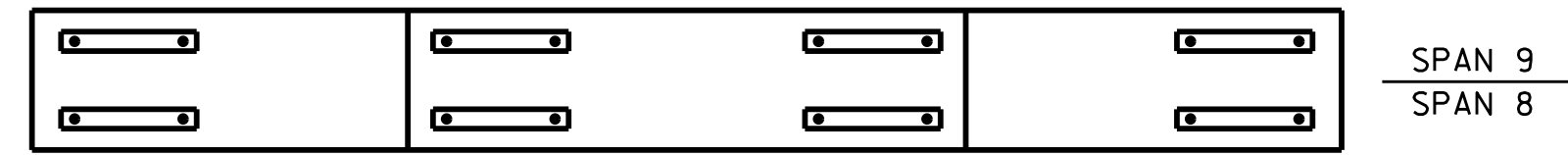
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

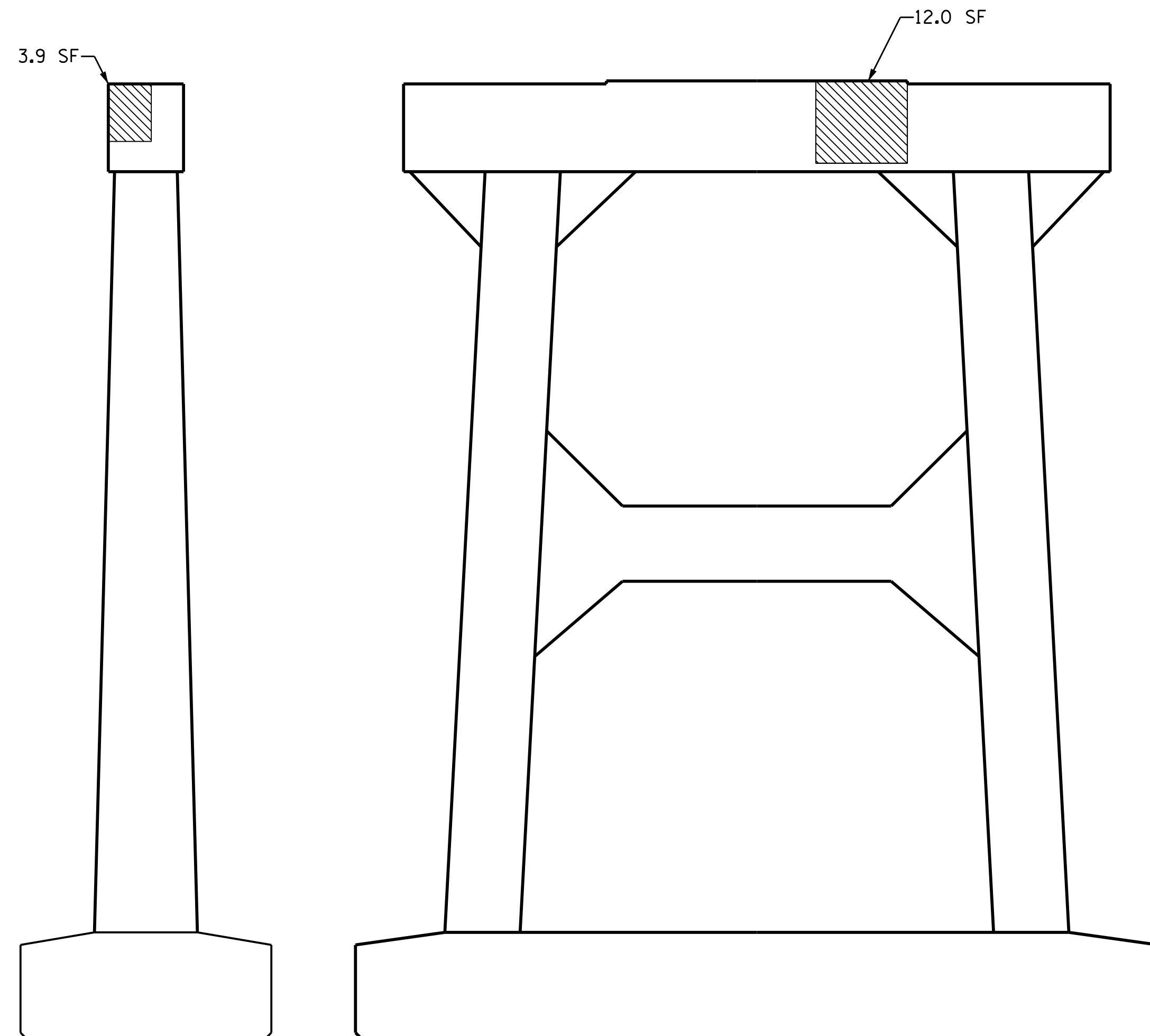
REPAIR QUANTITY TABLE

REPAIRS BENT 8	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.0	8.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.

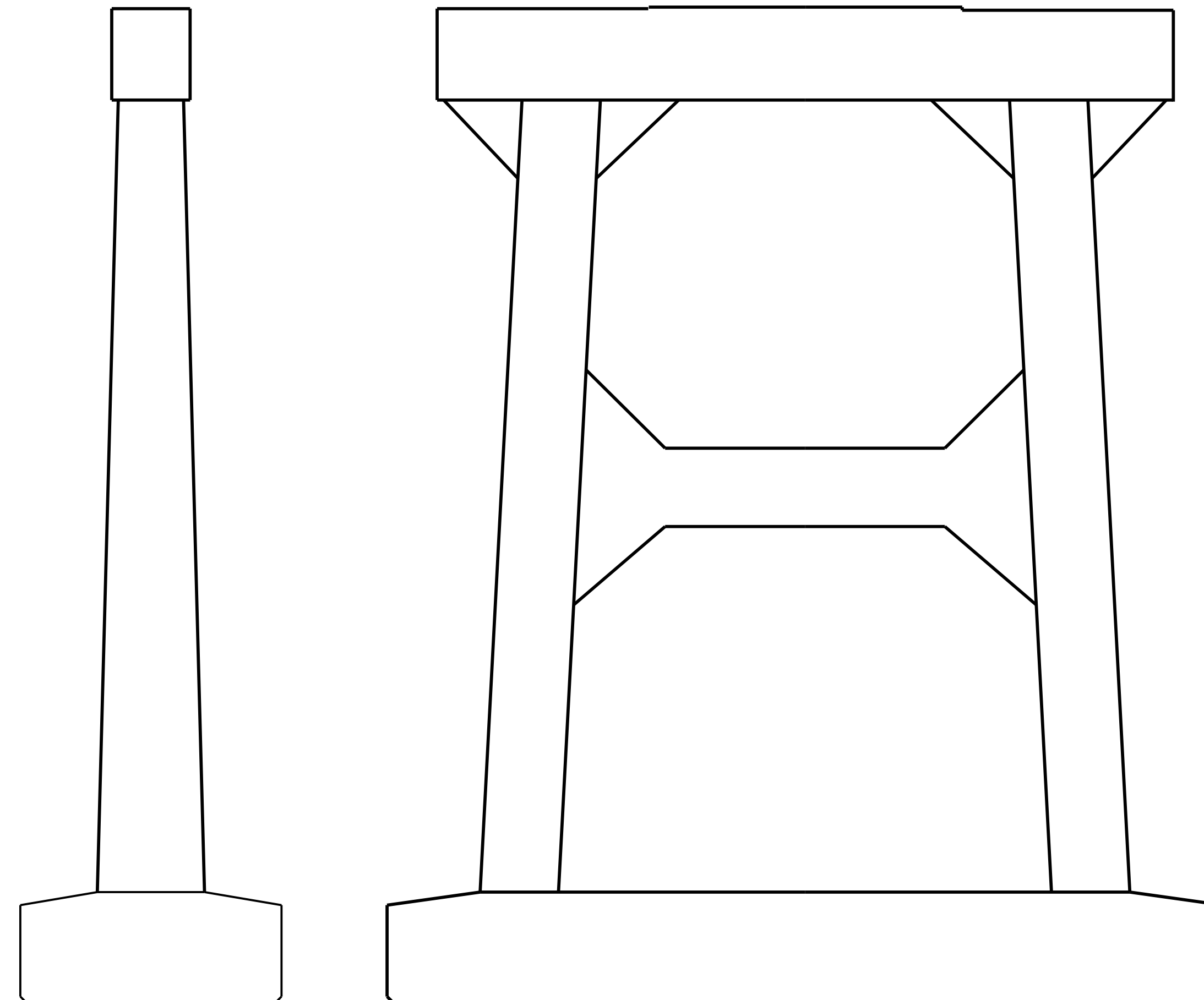


PLAN
TOP OF CAP



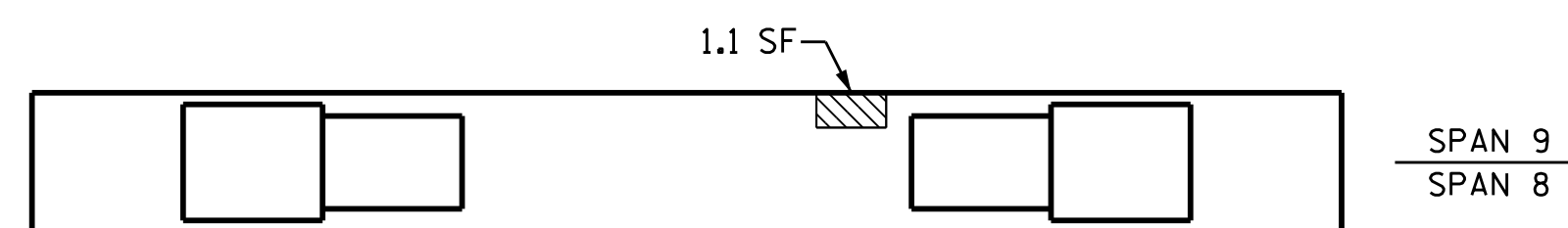
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



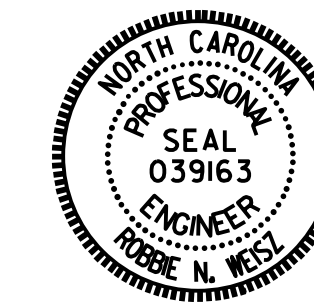
END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA1534838B6D43D...
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 9 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 8

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

05-JUN-2017 13:13
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1				3			S-15	
2				4			TOTAL SHEETS	

REPAIR QUANTITY TABLE

REPAIRS BENT 9	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.4	2.2		
COLUMN	41.1	20.6		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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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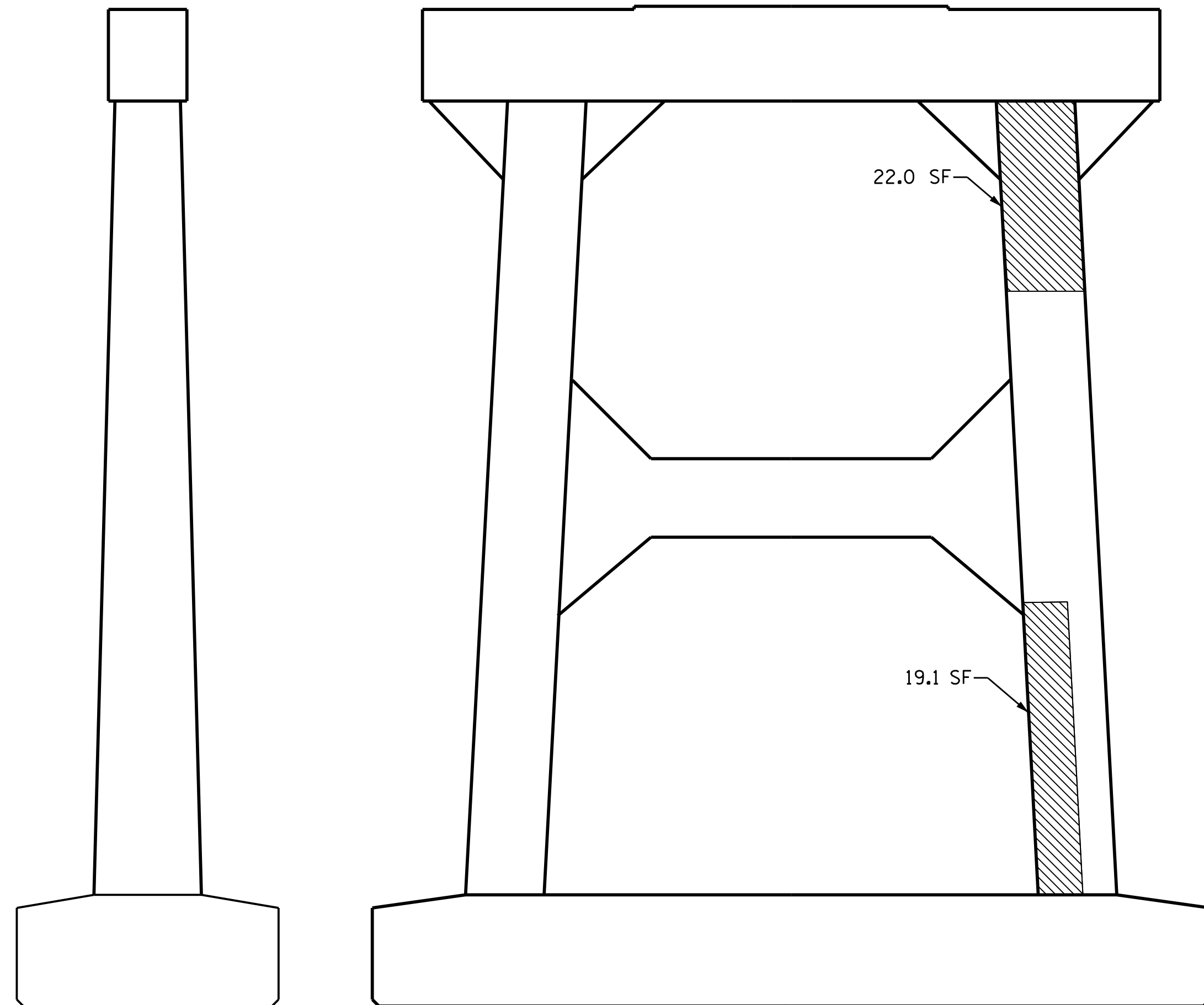
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

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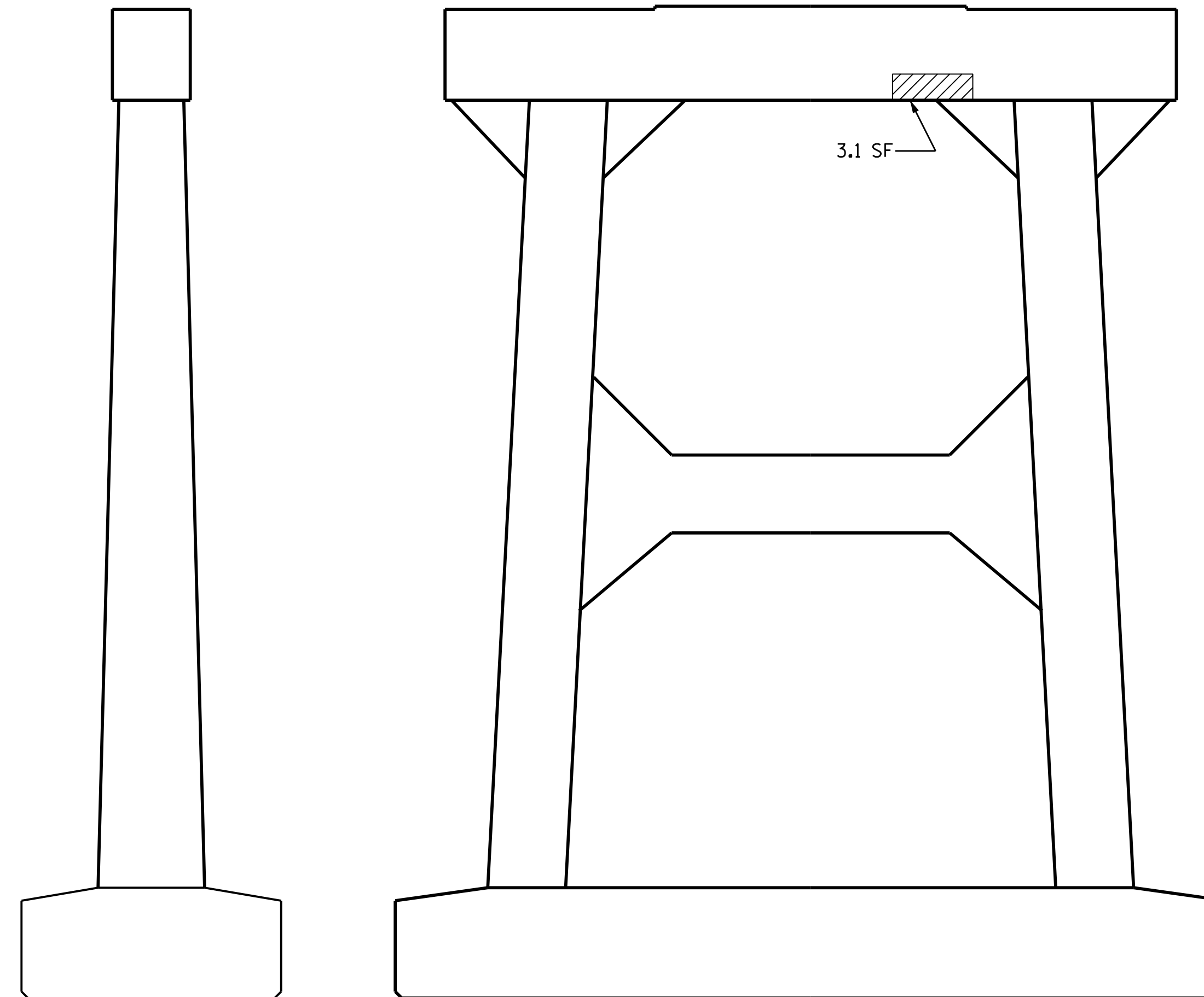
SPAN 10
SPAN 9

PLAN
TOP OF CAP



END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

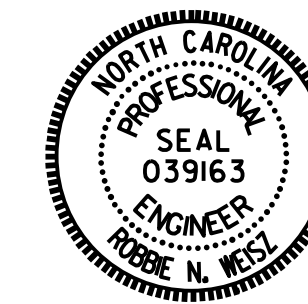
ELEVATION
NORTH SIDE



SPAN 10
SPAN 9

PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1534638BD43D...
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 10 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 9

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

05-JUN-2017 13:13
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gdickey

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-16
2			4			TOTAL SHEETS

REPAIR QUANTITY TABLE

REPAIRS BENT 10	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	17.3	8.7		
COLUMN	7.5	3.8		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

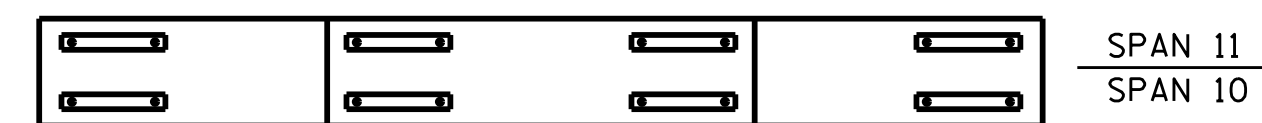
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NOTES:

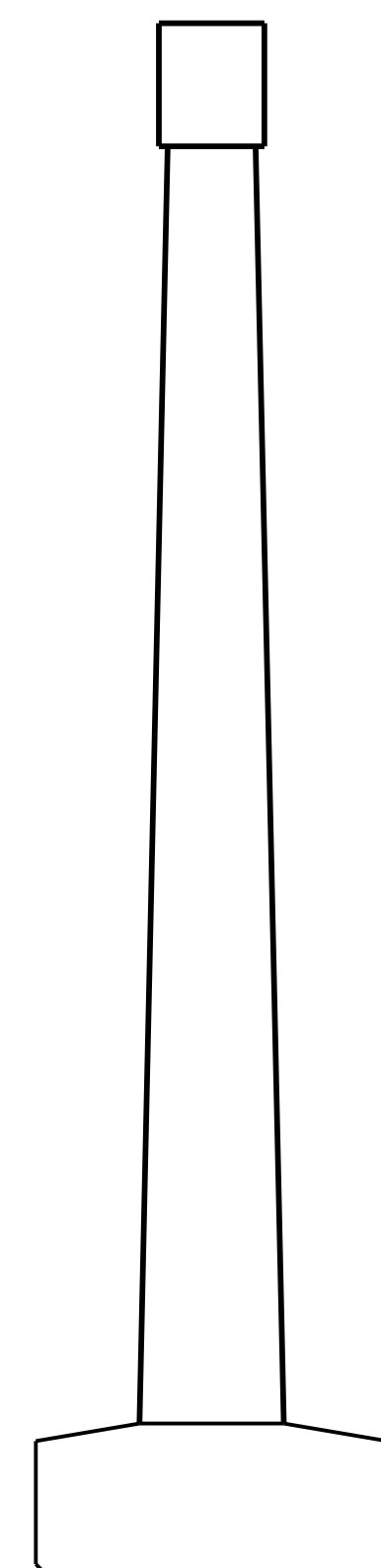
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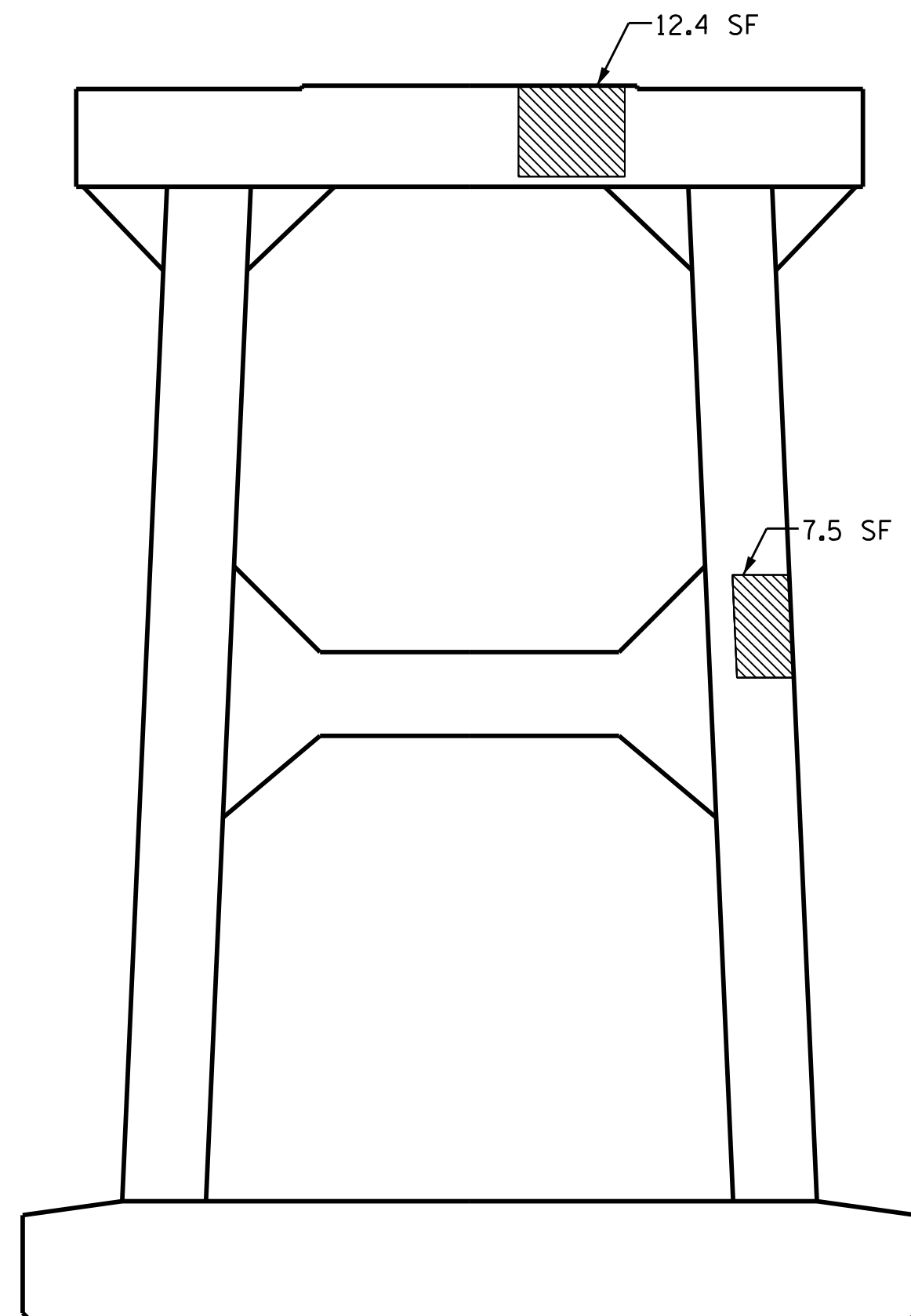
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



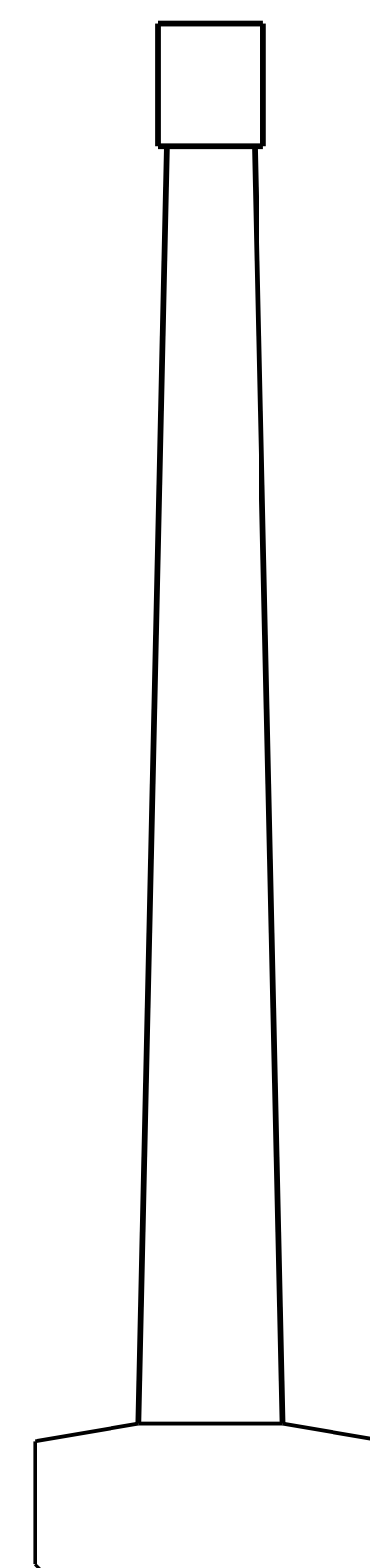
PLAN
TOP OF CAP



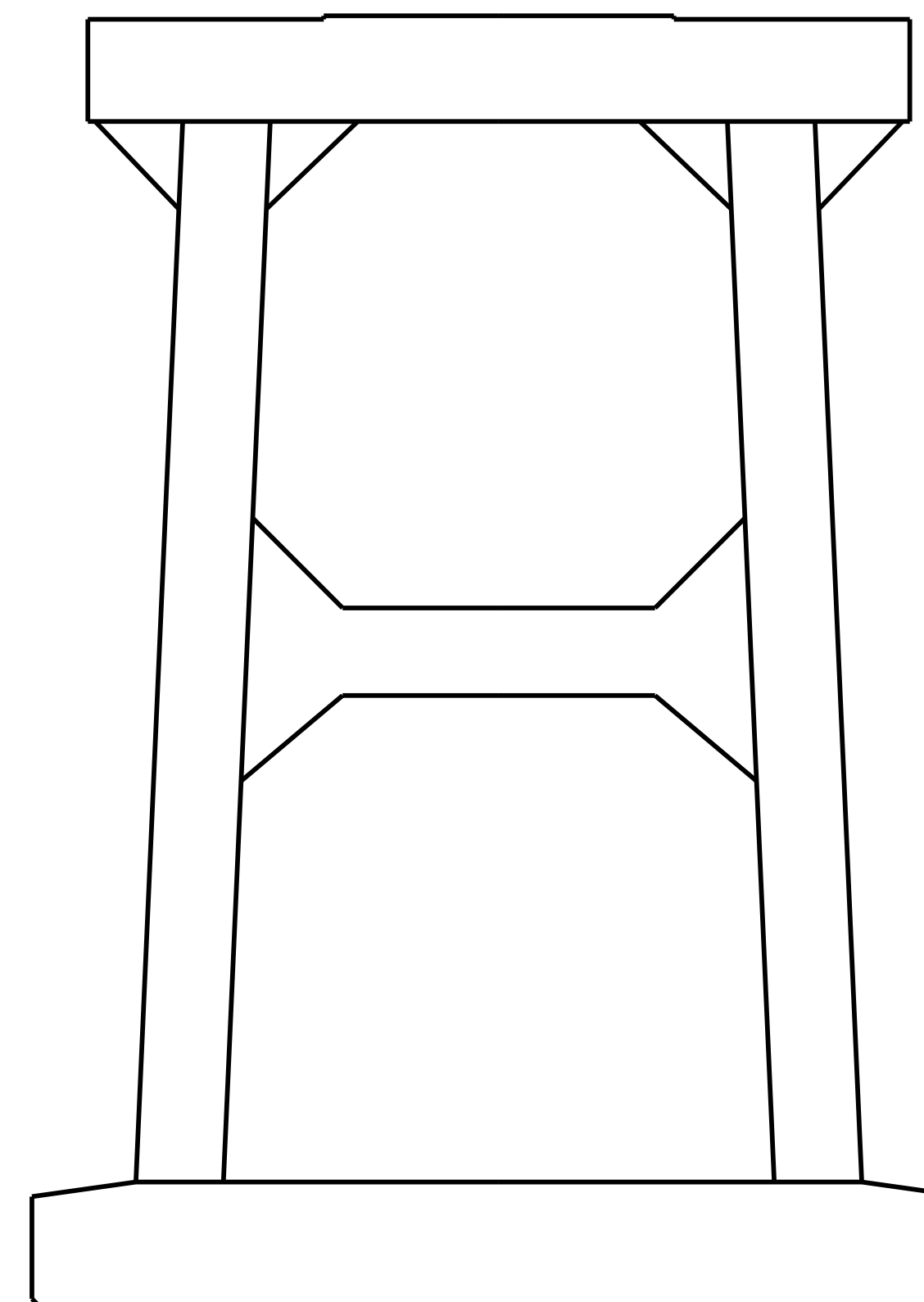
END VIEW
WEST SIDE



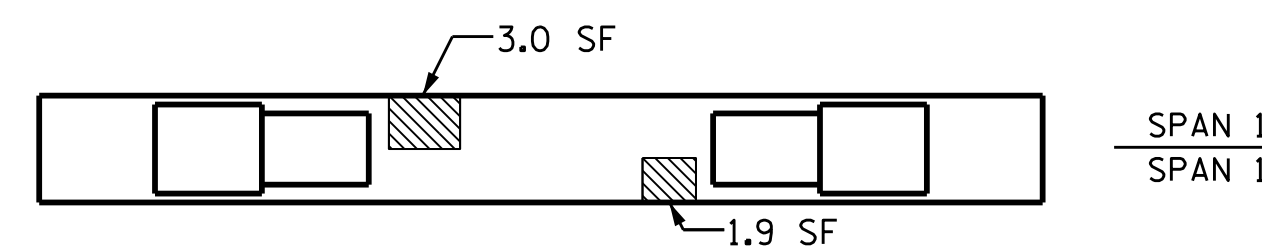
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 11 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 10



DocuSigned by:
 Robbie Weisz
 CEA153E83B043D
 6/5/2017

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DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

REPAIR QUANTITY TABLE

REPAIRS BENT 11	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	11.9	6.0		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

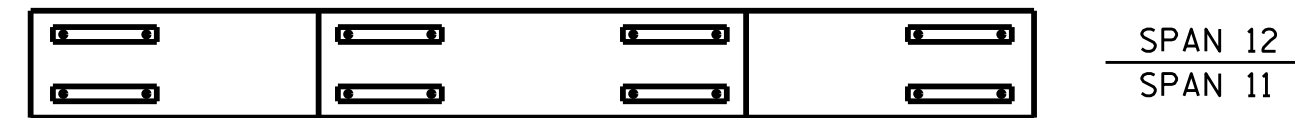
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NOTES:

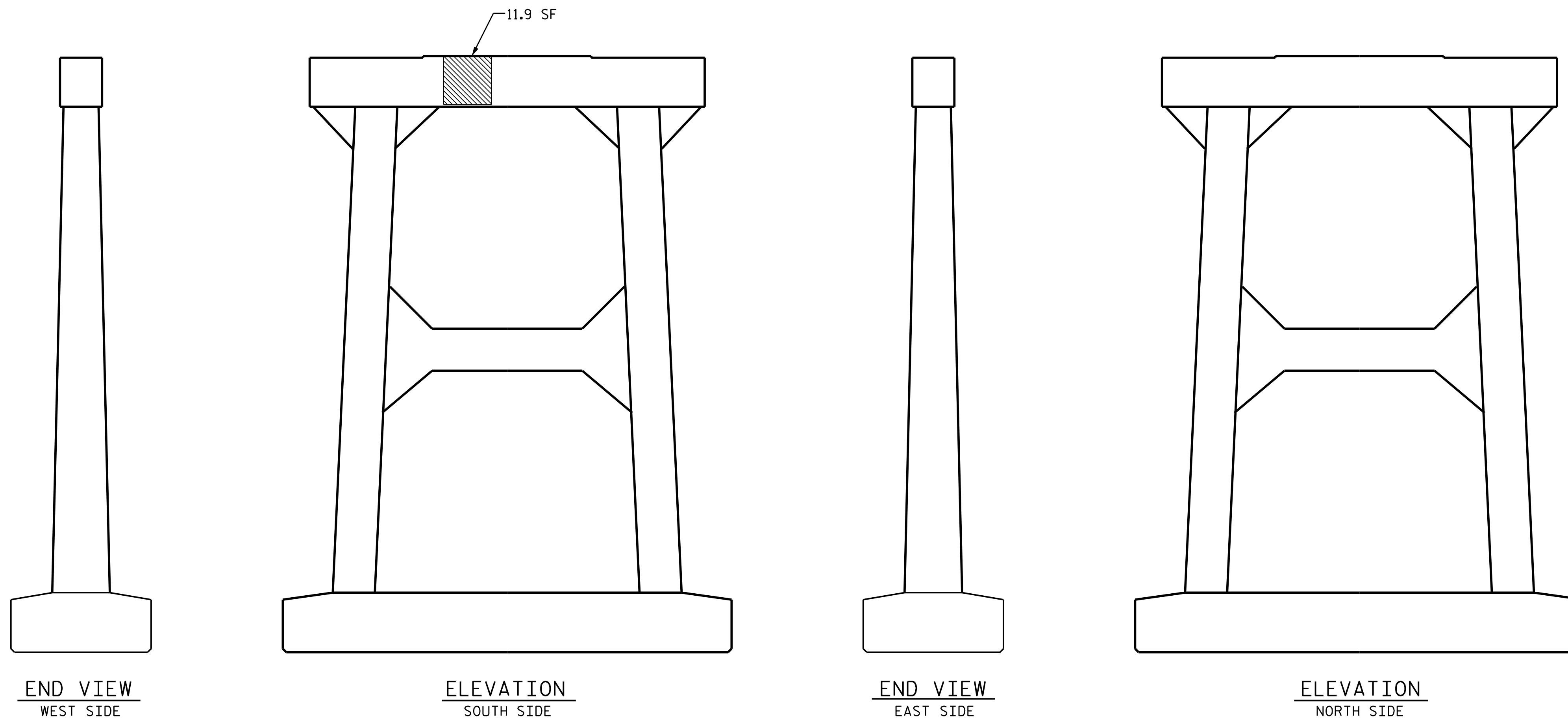
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



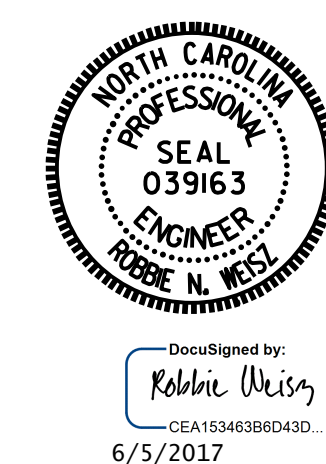
PLAN
TOP OF CAP



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 12 OF 96



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 11

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
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REVISIONS						SHEET NO.
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1			3			
2			4			

NOTES:

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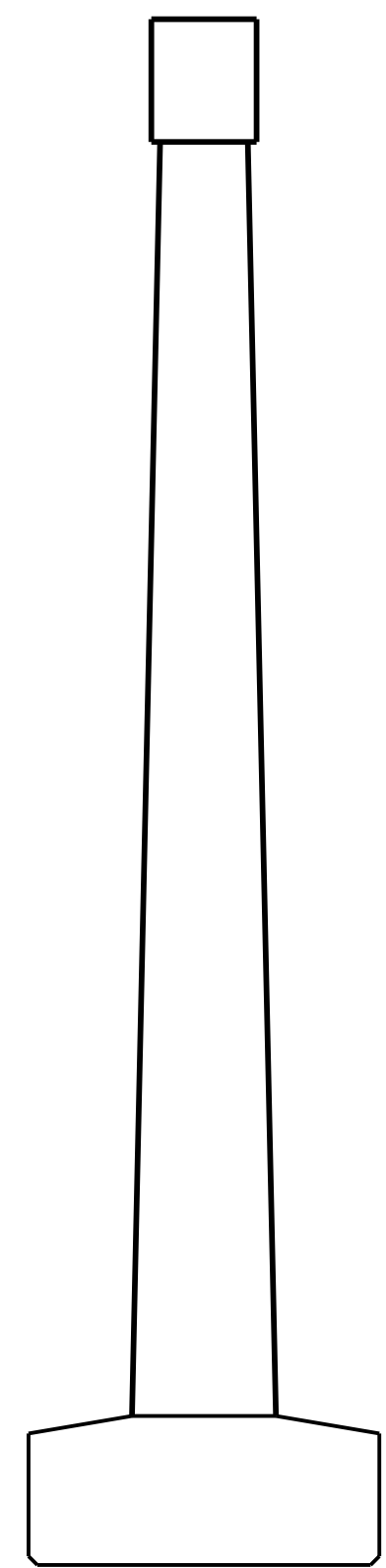
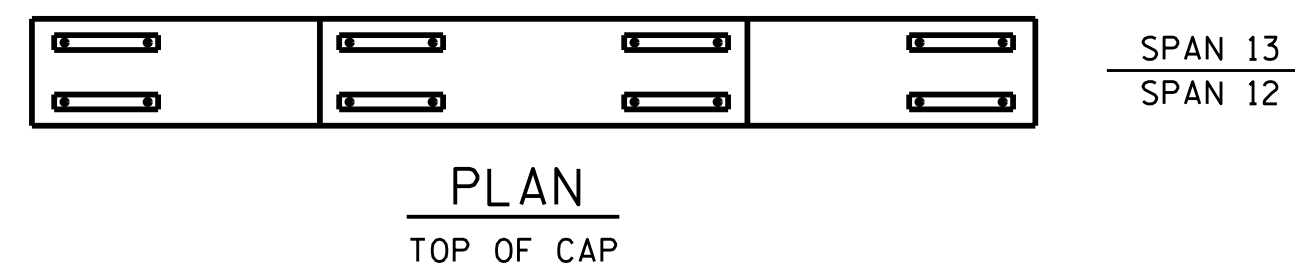
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

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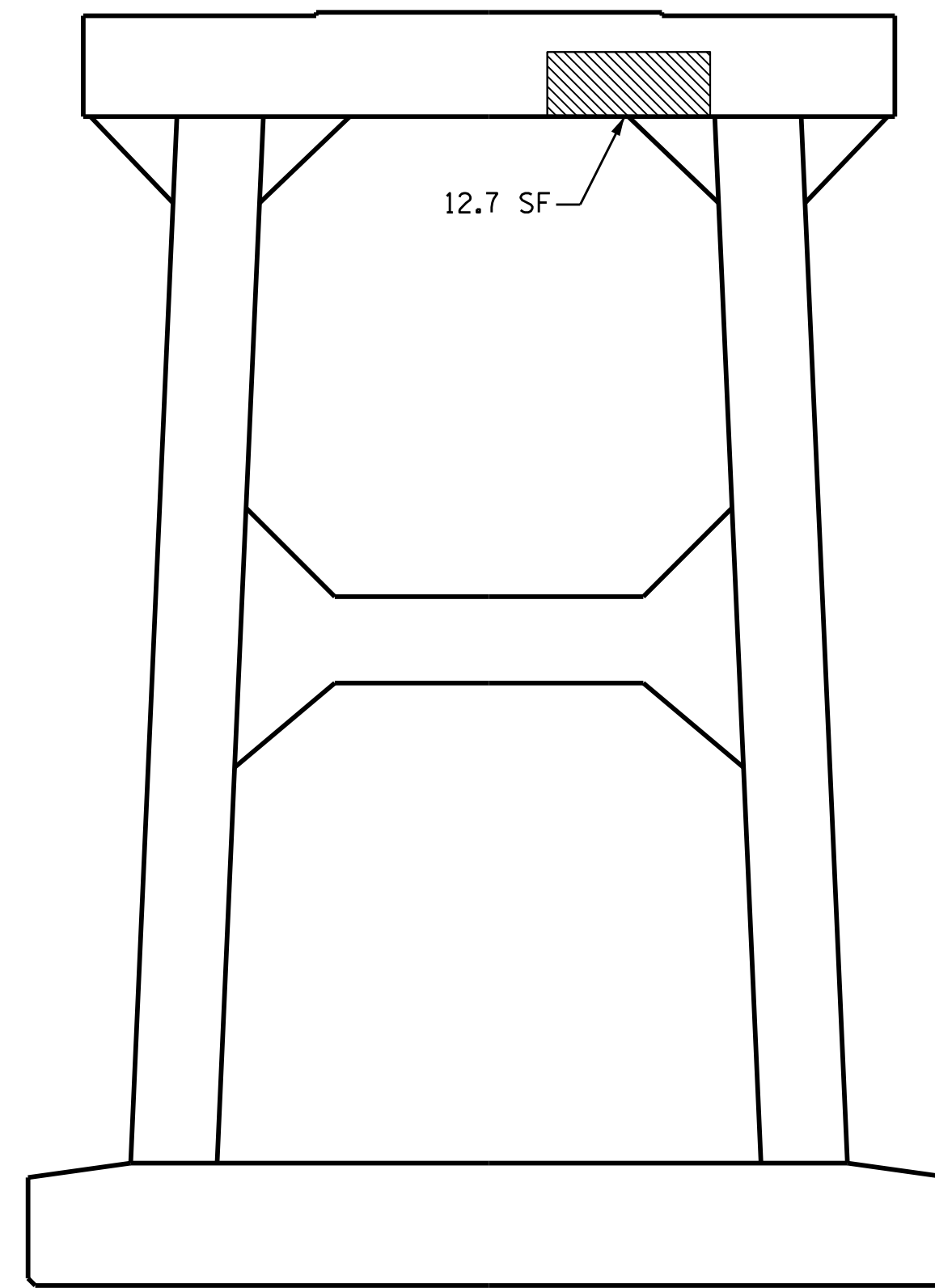
REPAIR QUANTITY TABLE

REPAIRS BENT 12	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	15.4	7.7		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

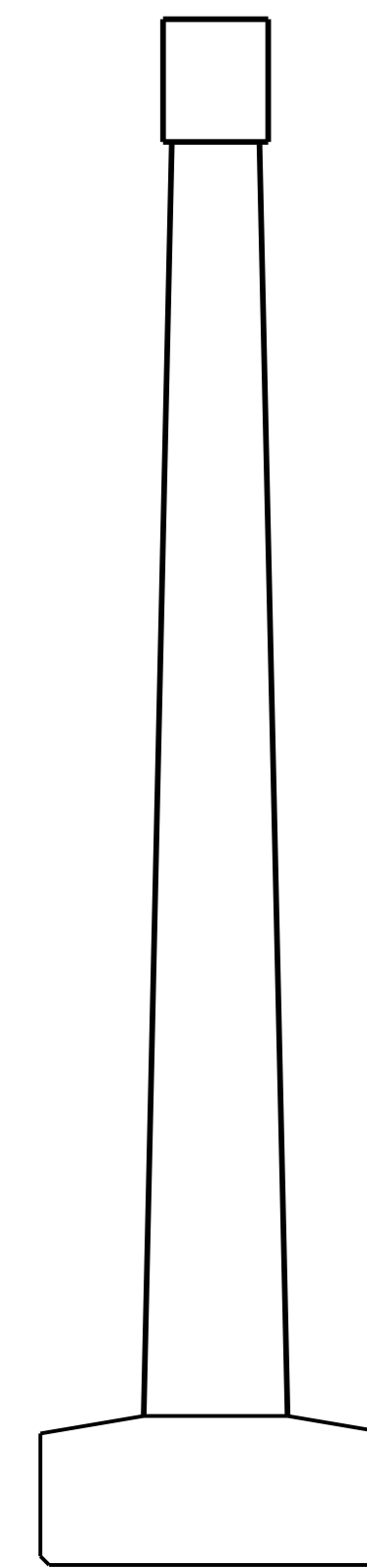
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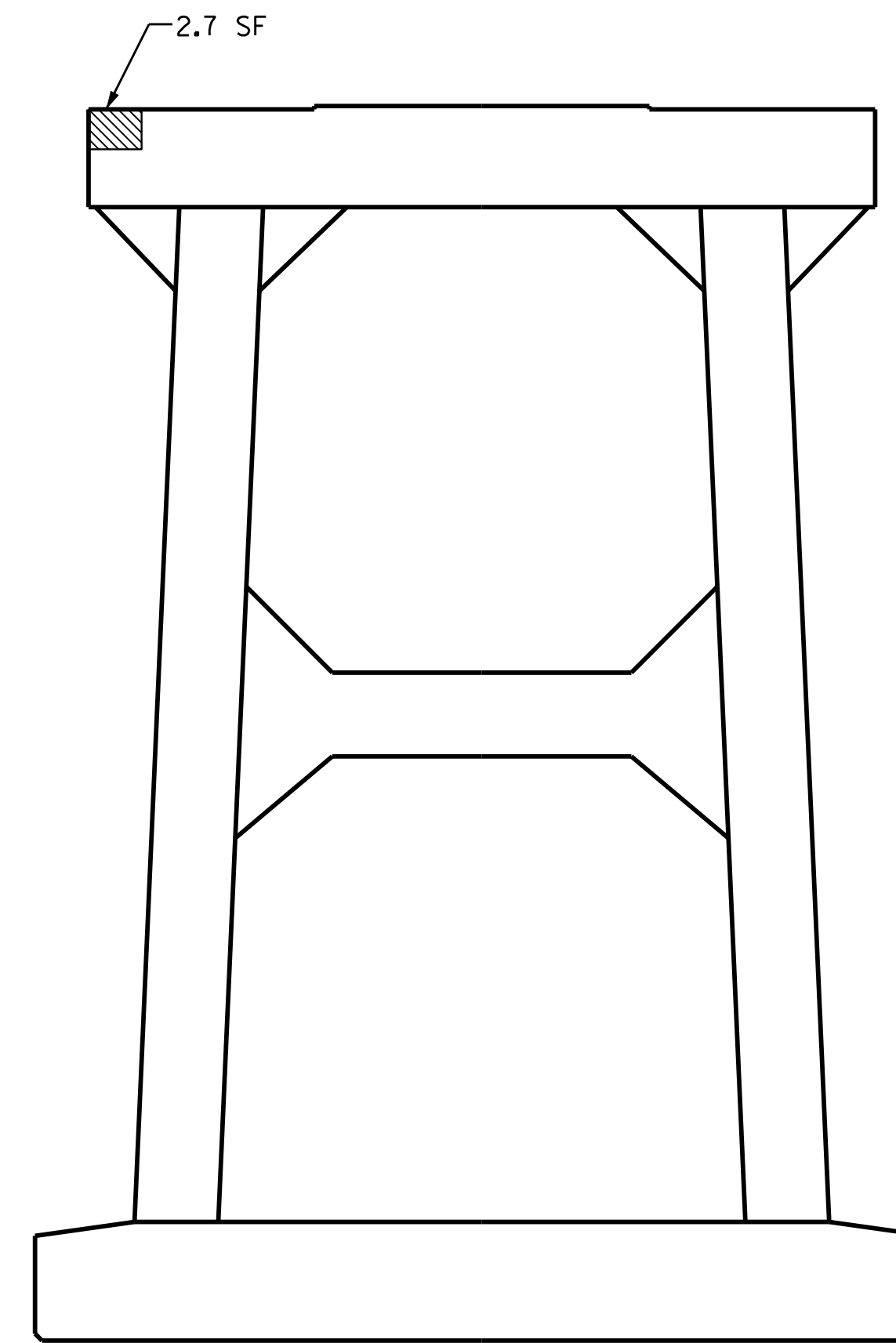
END VIEW
WEST SIDE



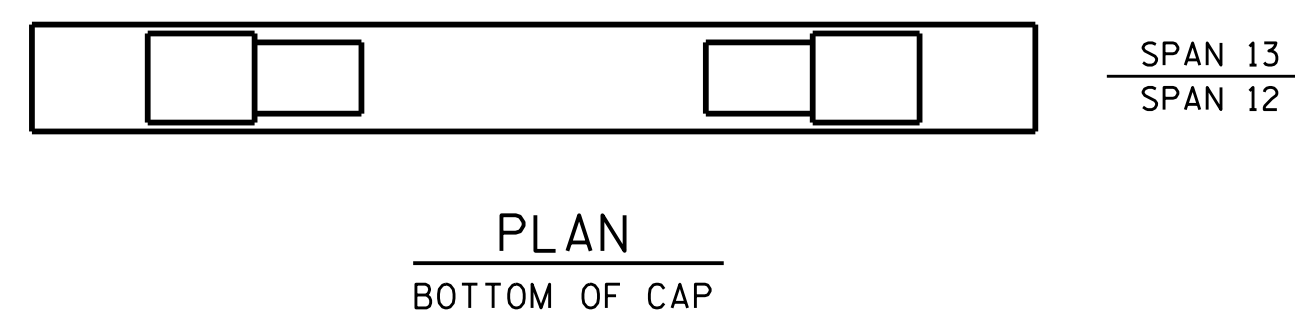
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



▨ - SHOTCRETE REPAIR

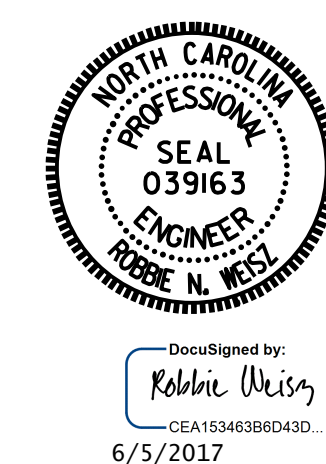
PROJECT NO. B-5941
BERTIE COUNTY

BRIDGE NO. 7

SHEET 13 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 12



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Robbie Weisz
6/5/2017

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1				3			S-19	
2				4			TOTAL SHEETS	

NOTES:

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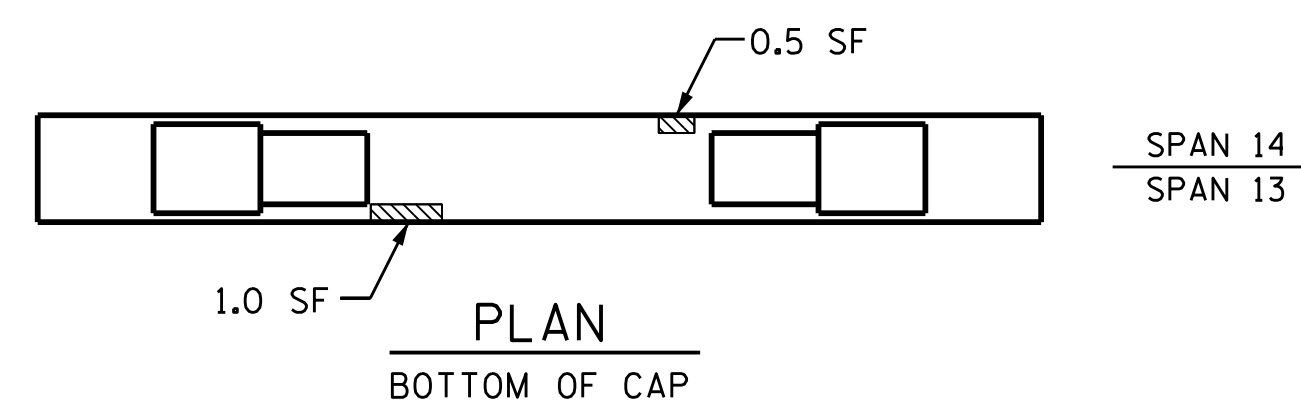
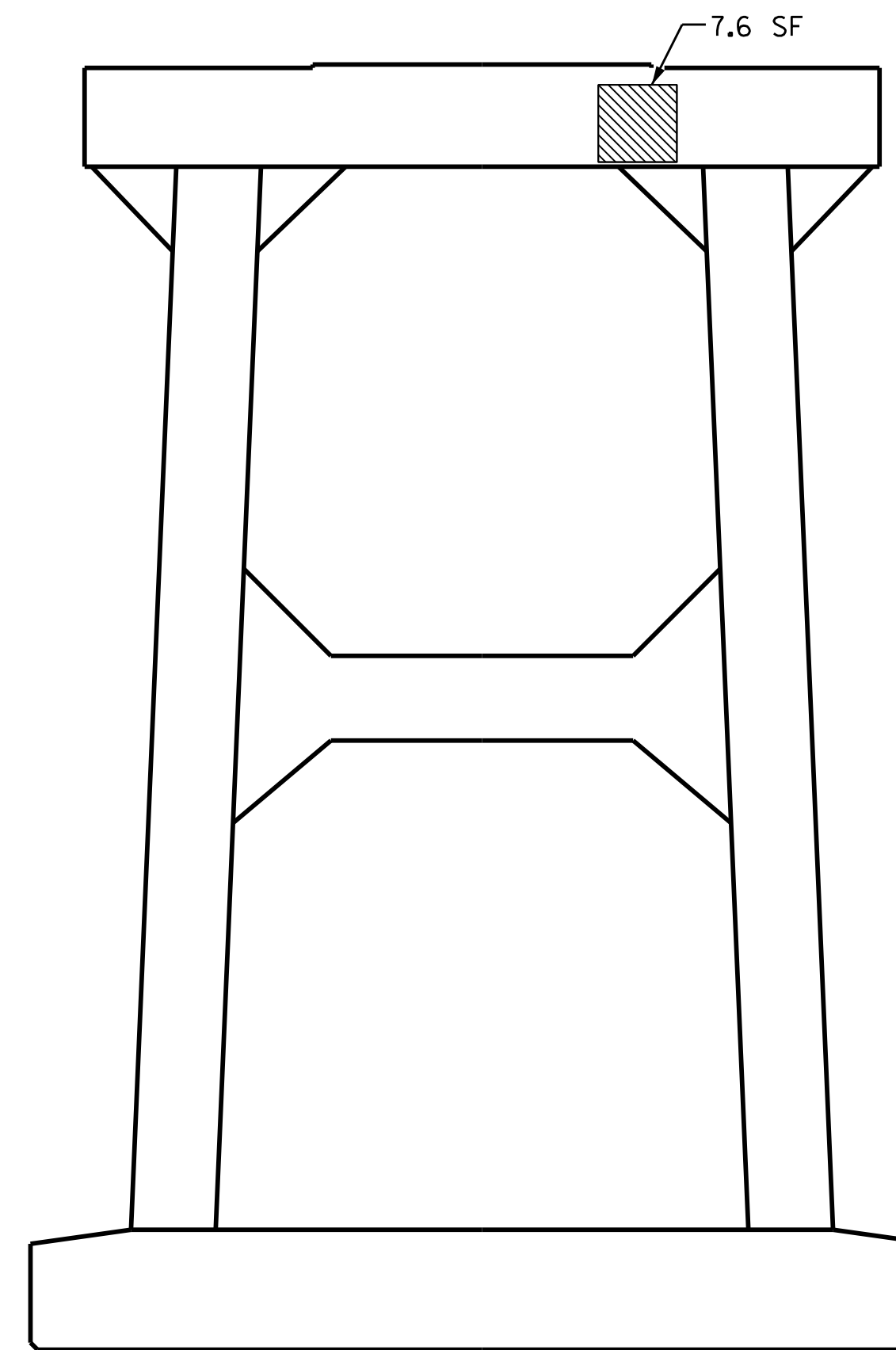
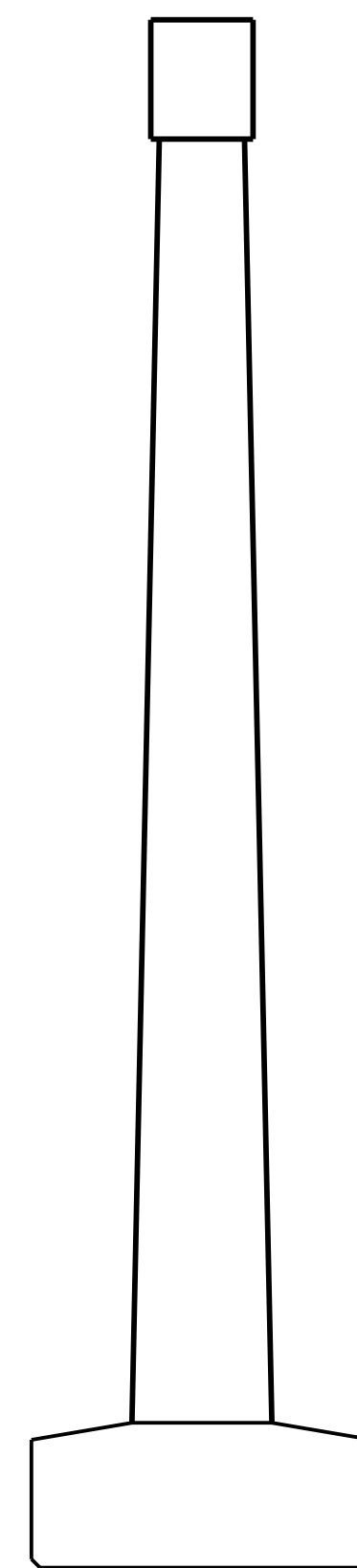
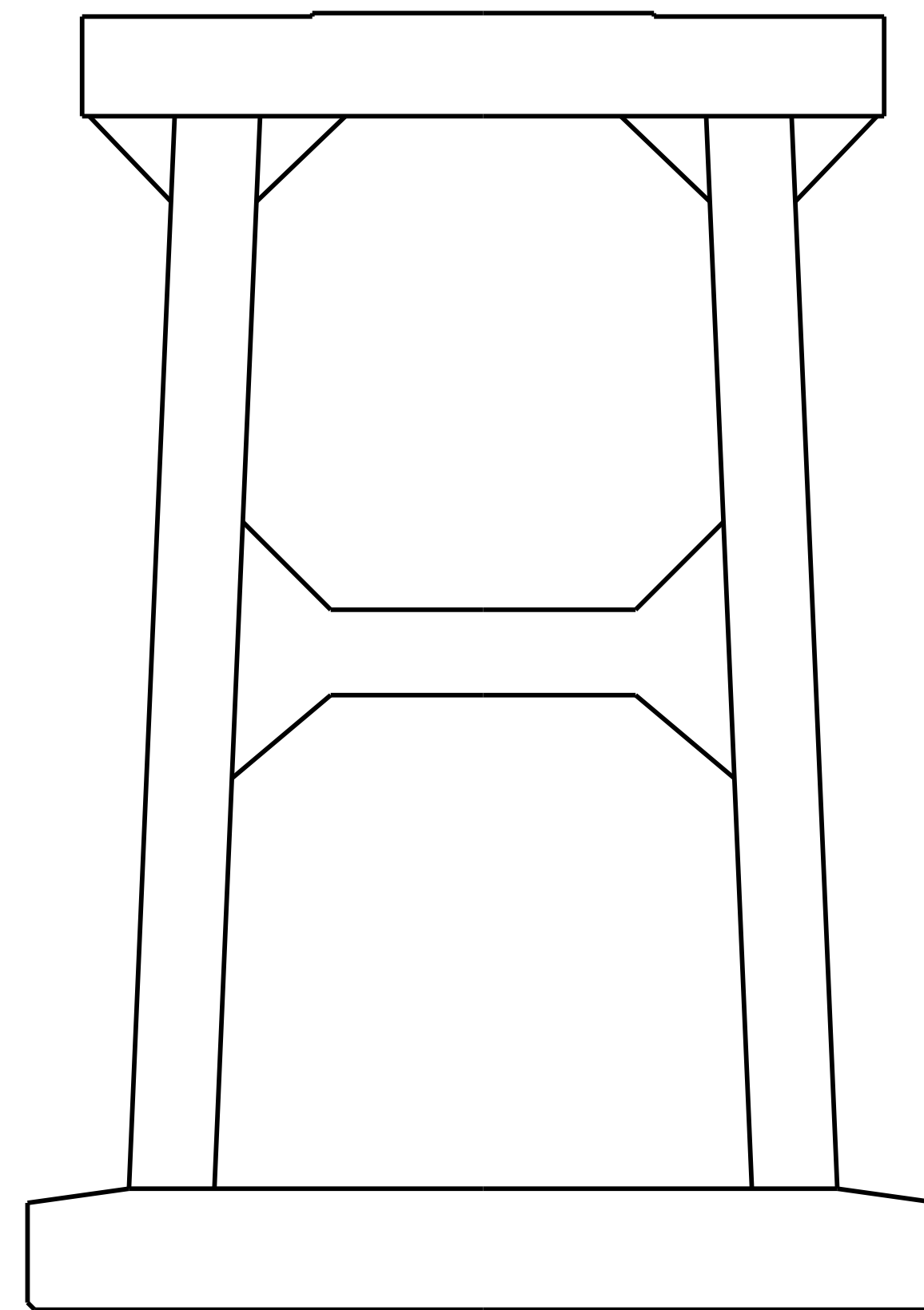
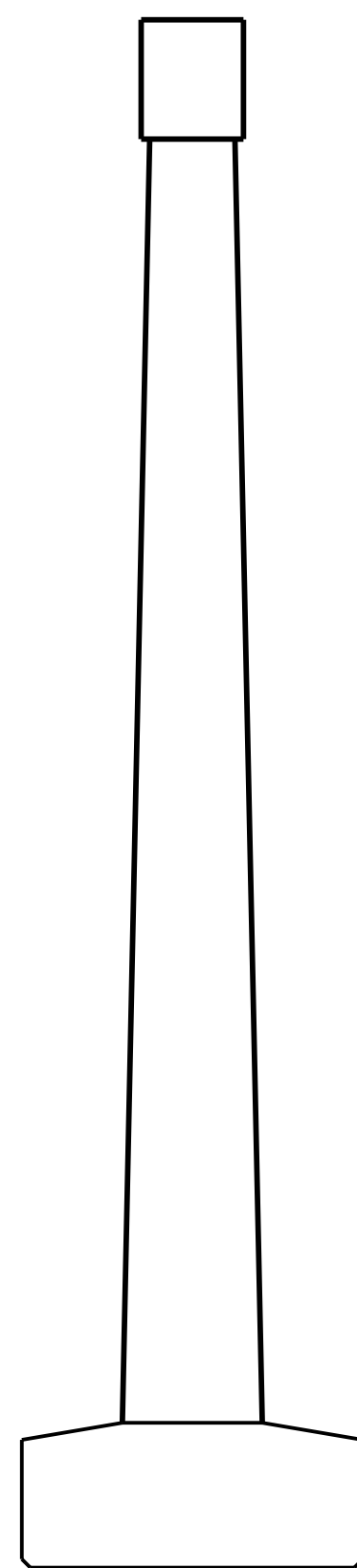
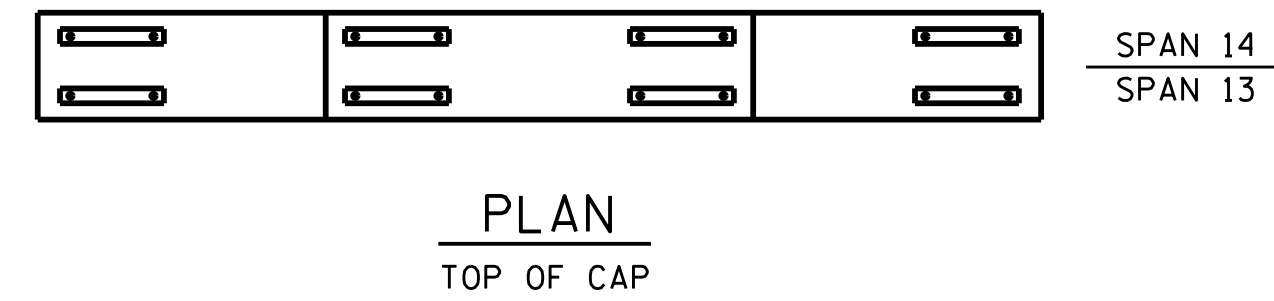
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

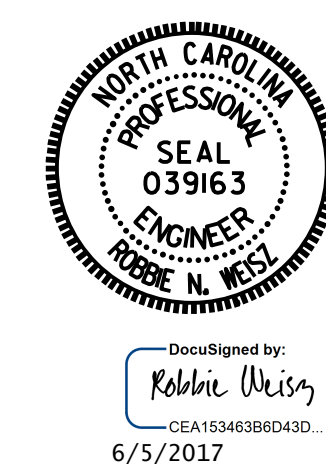
REPAIRS BENT 13	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.1	4.6		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.



▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 14 OF 96



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 13**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

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

REPAIR QUANTITY TABLE

REPAIRS BENT 14	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	46.9	23.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

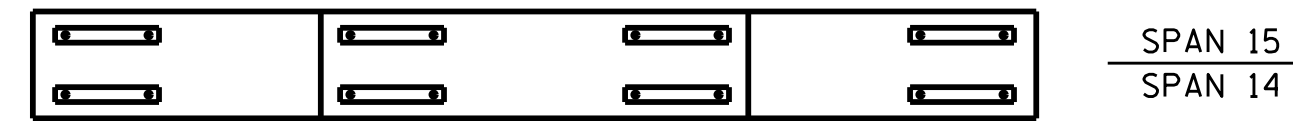
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NOTES:

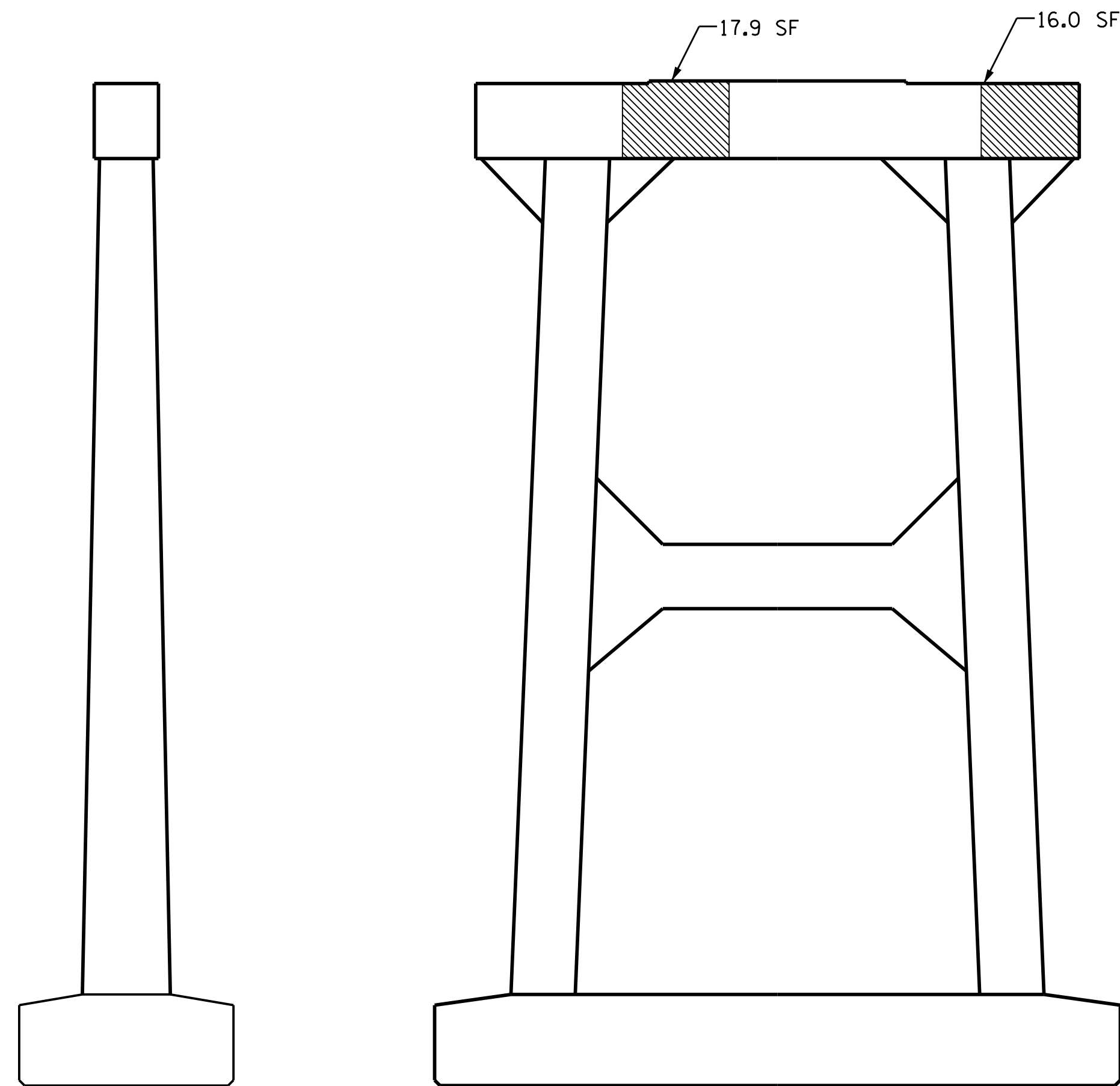
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

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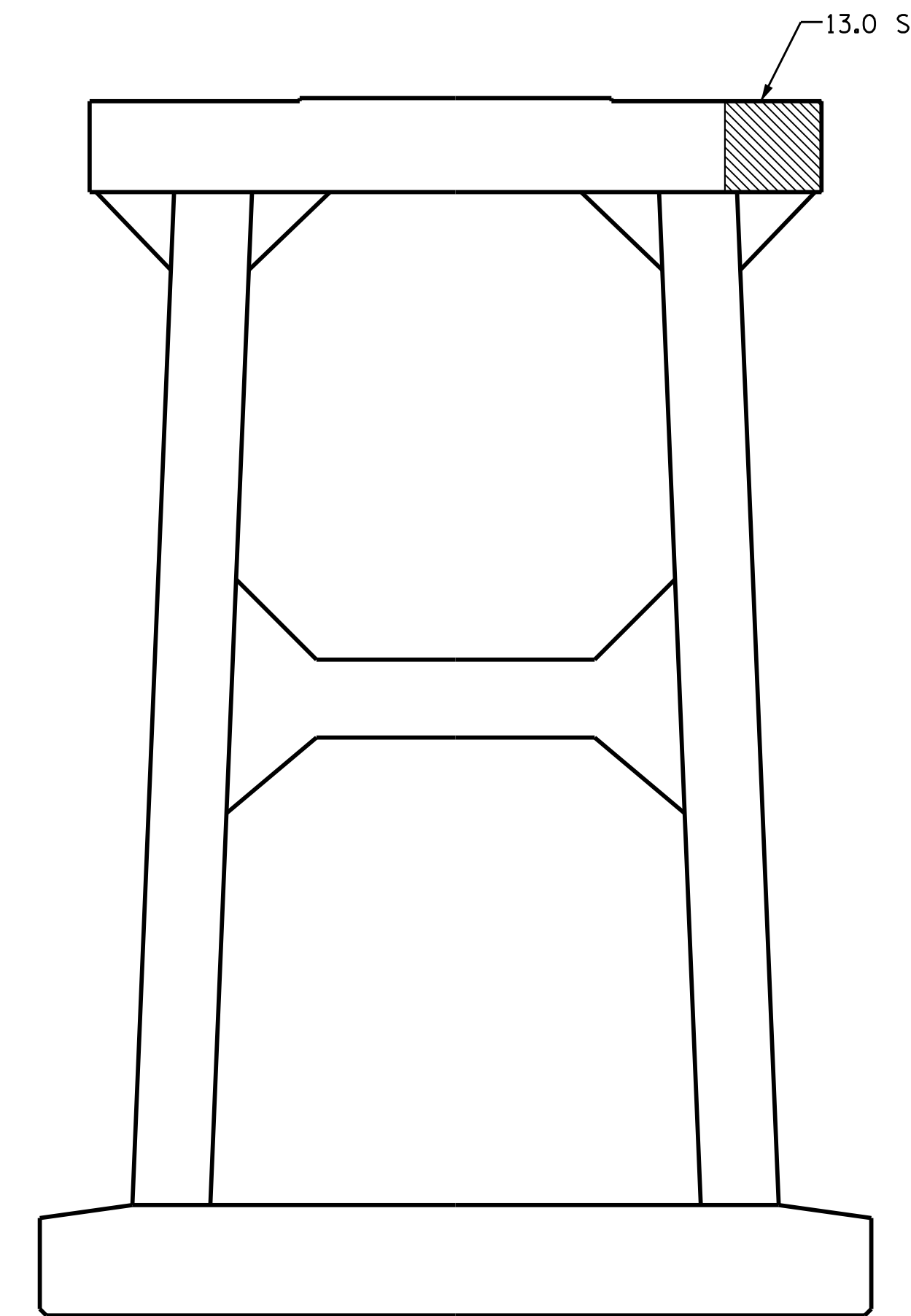
PLAN
TOP OF CAP



END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY

BRIDGE NO. 7

SHEET 15 OF 96



DocuSigned by:
Robbie Weisz
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 14

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CHECKED BY : R. N. WEISZ DATE : 10/2016

05-JUN-2017 13:13
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NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-21	
2				4			TOTAL SHEETS	

NOTES:

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REPAIR QUANTITY TABLE

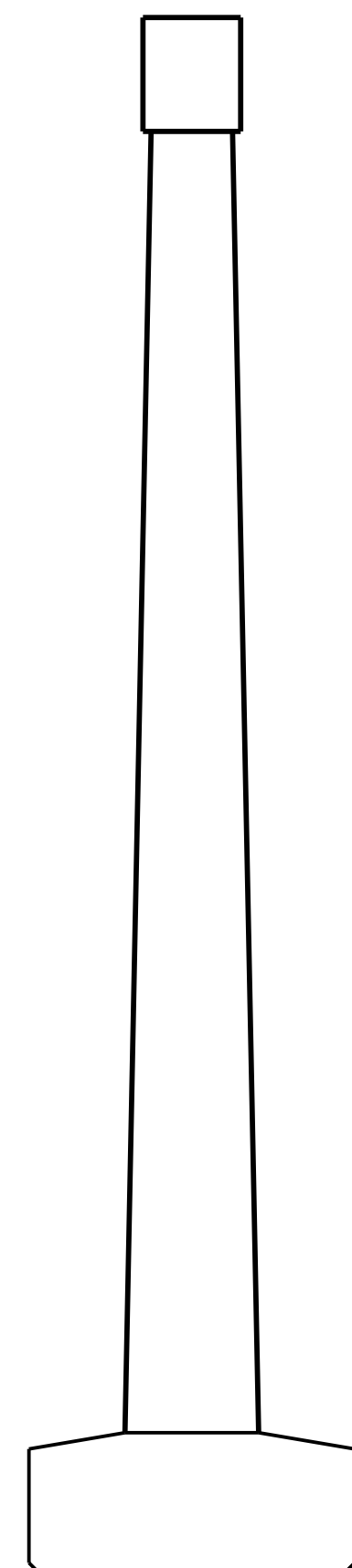
REPAIRS BENT 15	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	3.5	1.8		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.

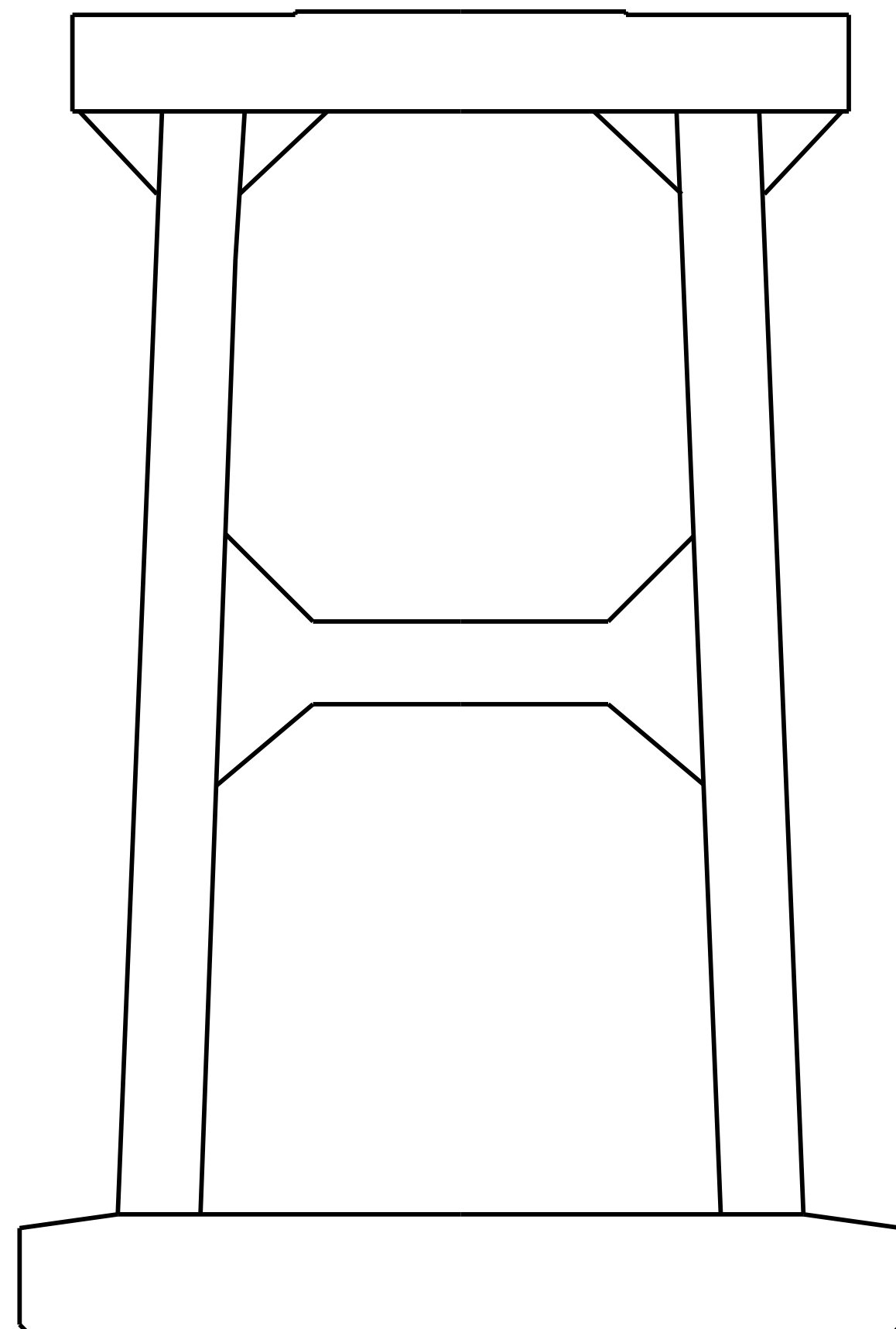


SPAN 16
SPAN 15

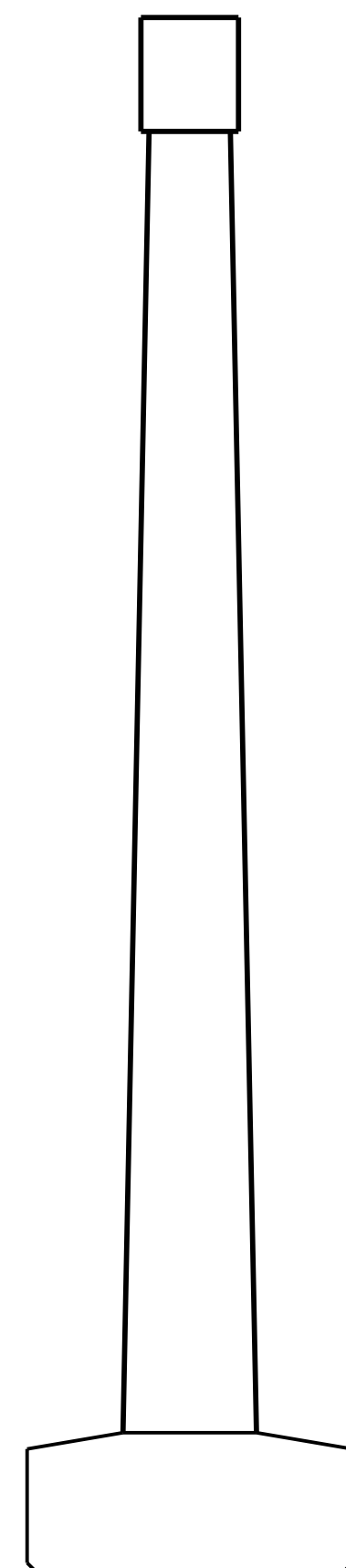
PLAN
TOP OF CAP



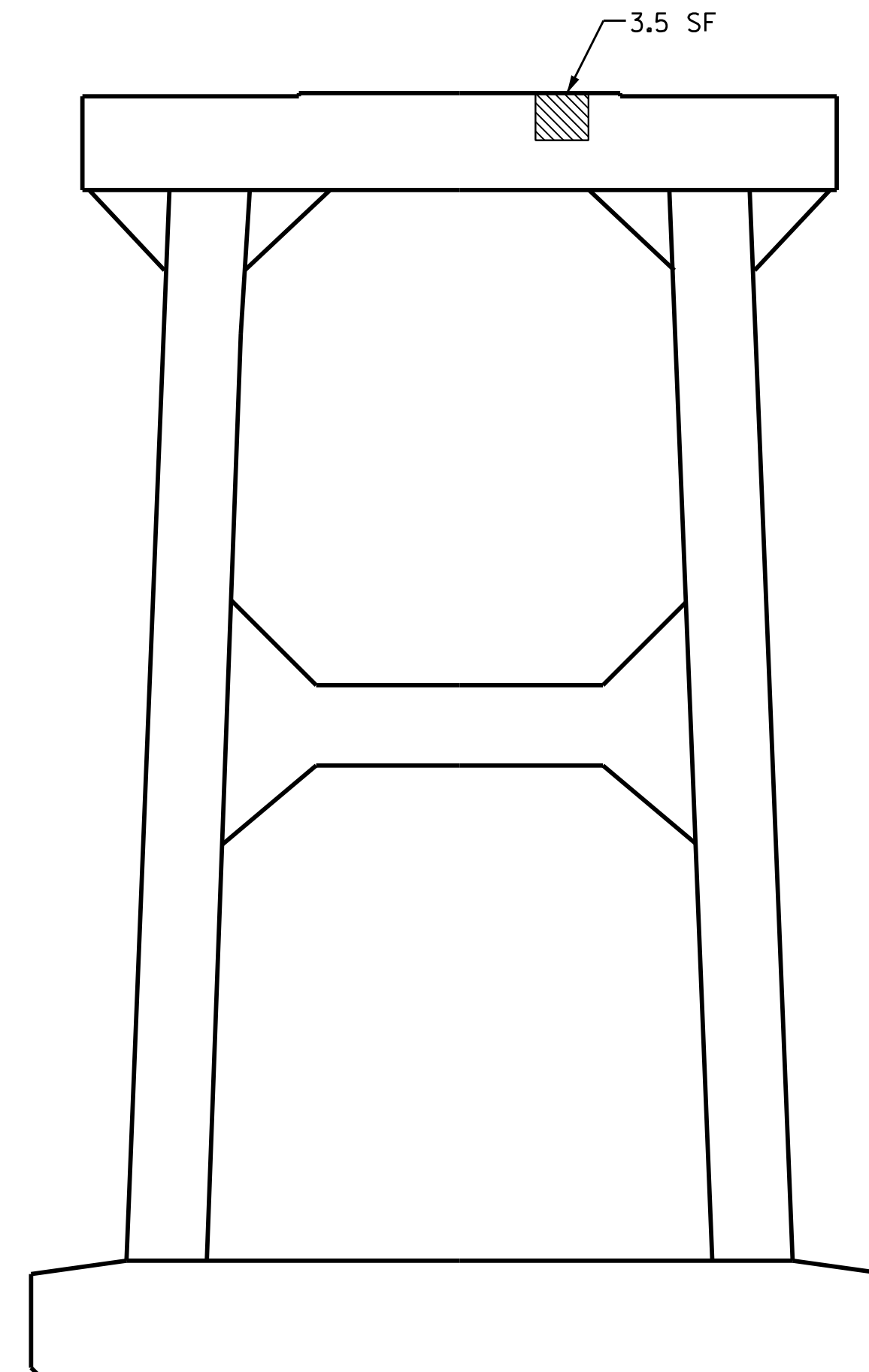
END VIEW
WEST SIDE



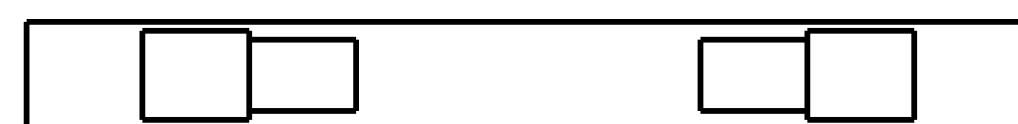
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



SPAN 16
SPAN 15

PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY

BRIDGE NO. 7

SHEET 16 OF 96



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Robbie Weisz
CSA153838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 15

REVISIONS						SHEET NO.
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1			3			S-22
2			4			

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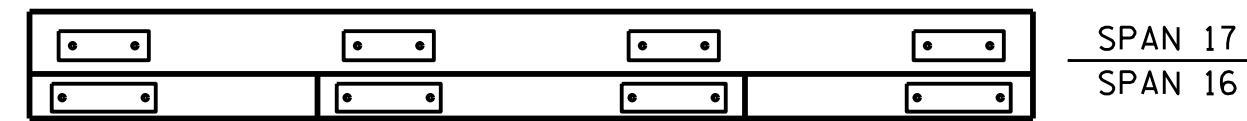
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

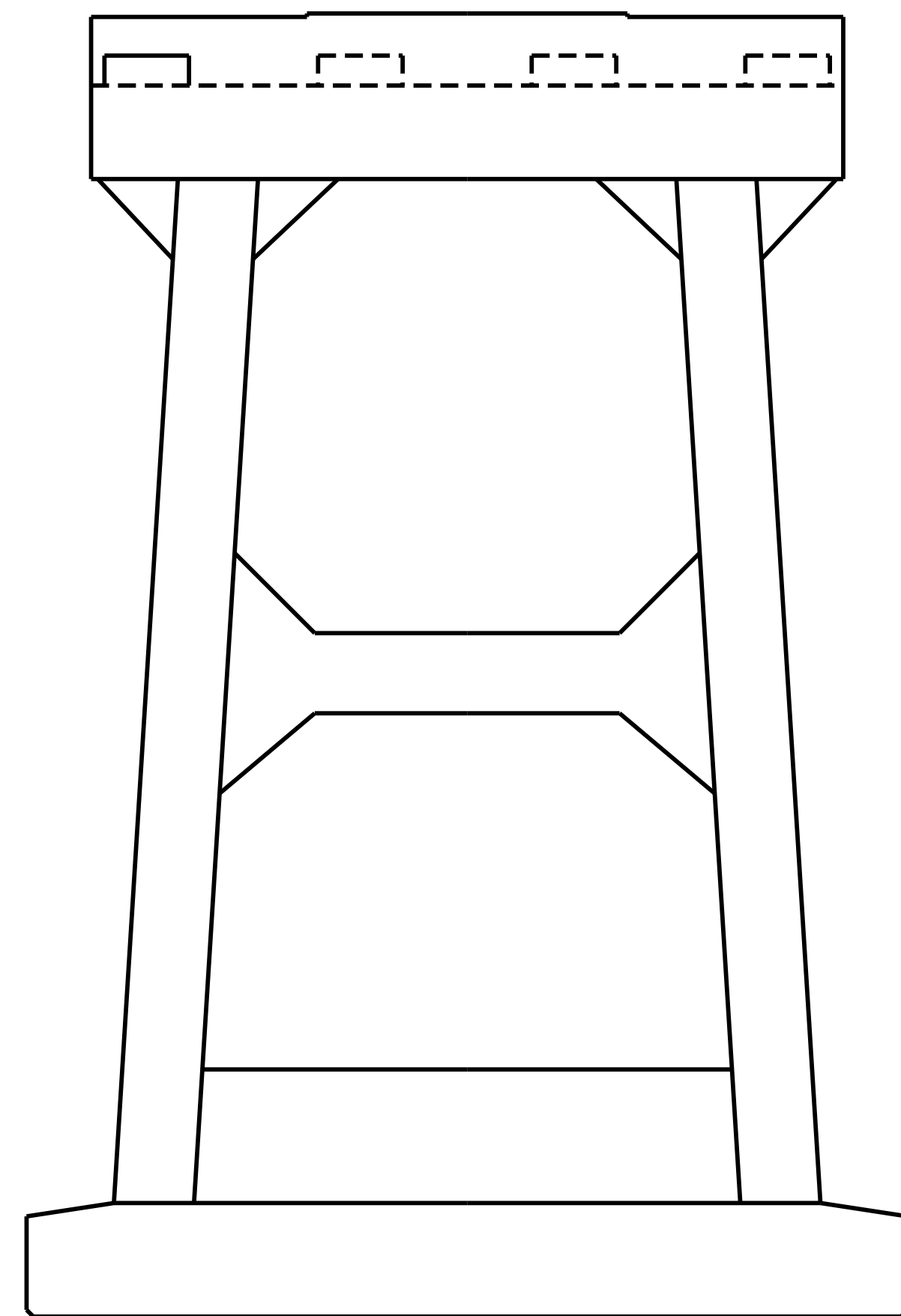
REPAIR QUANTITY TABLE

REPAIRS BENT 16	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	10.0	5.0		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

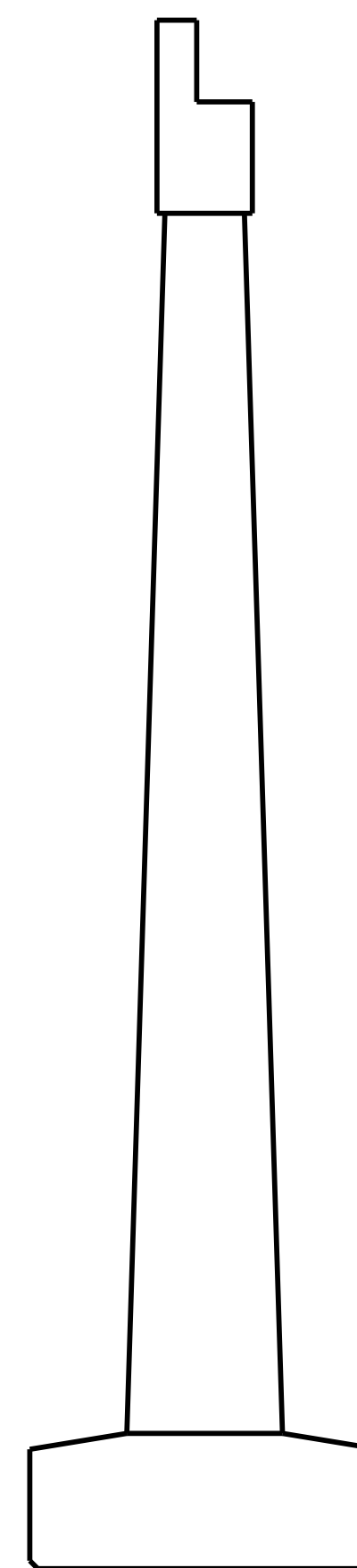
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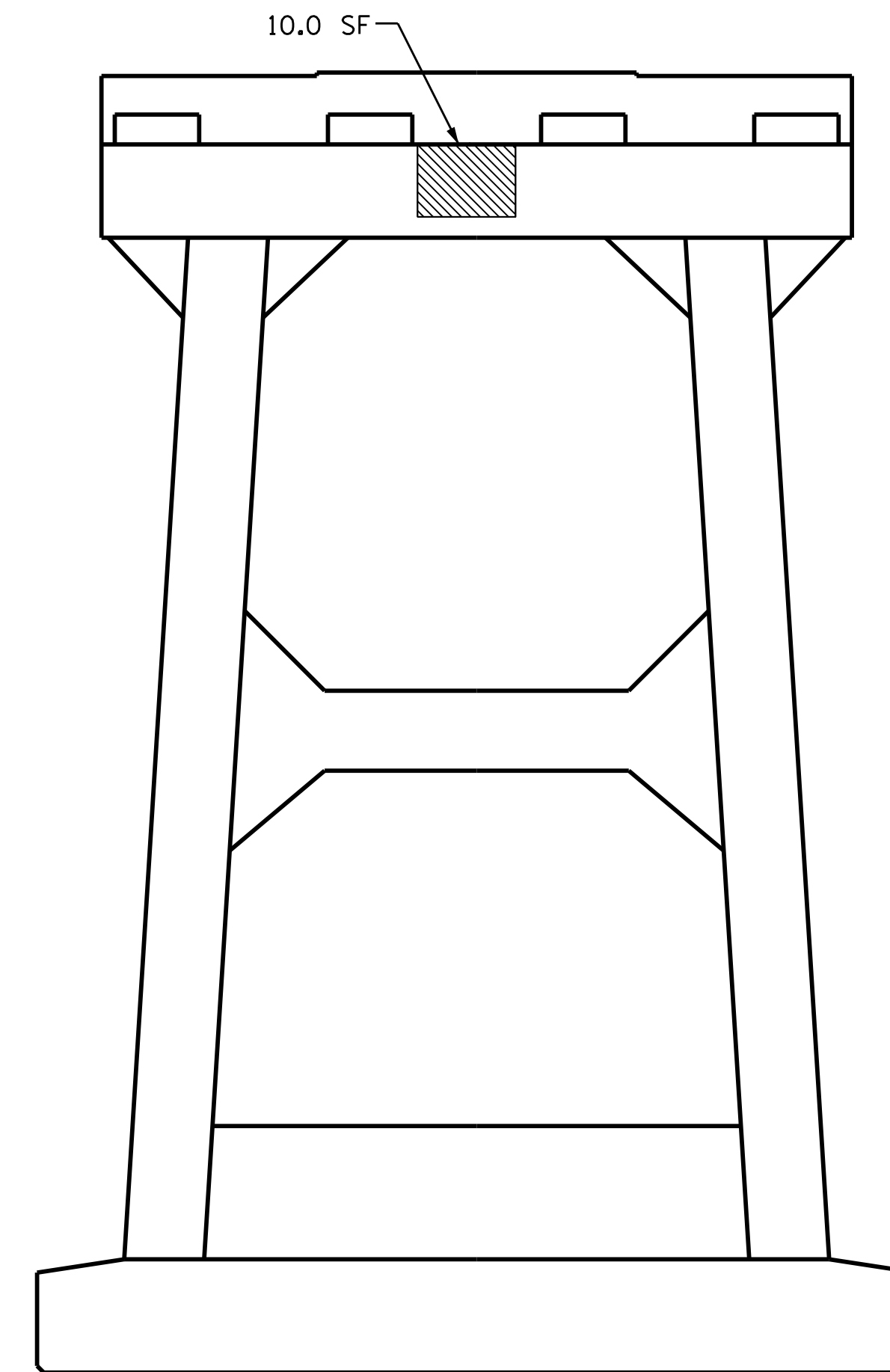
PLAN
TOP OF CAP



ELEVATION
SOUTH SIDE

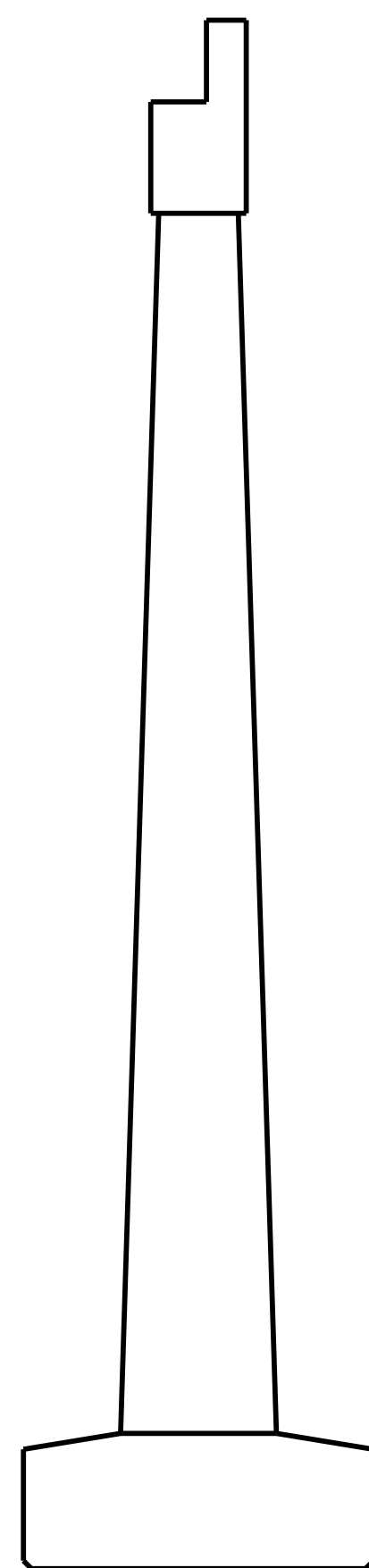


ELEVATION
EAST SIDE

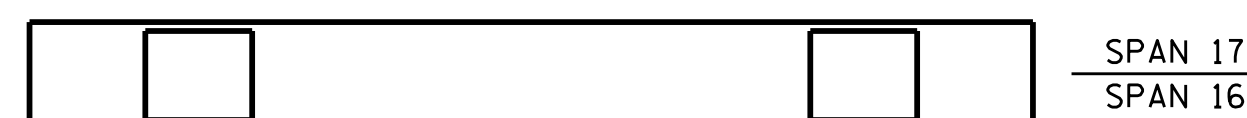


ELEVATION
NORTH SIDE

▨ - SHOTCRETE REPAIR



END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5941
BERTIE COUNTY

BRIDGE NO. 7

SHEET 17 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 16



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Robbie Weisz
CSA153ME38043D
6/5/2017

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1			3		
2			4		

SHEET NO.
S-23
TOTAL SHEETS

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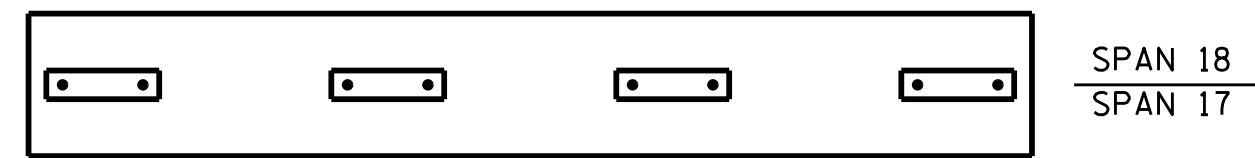
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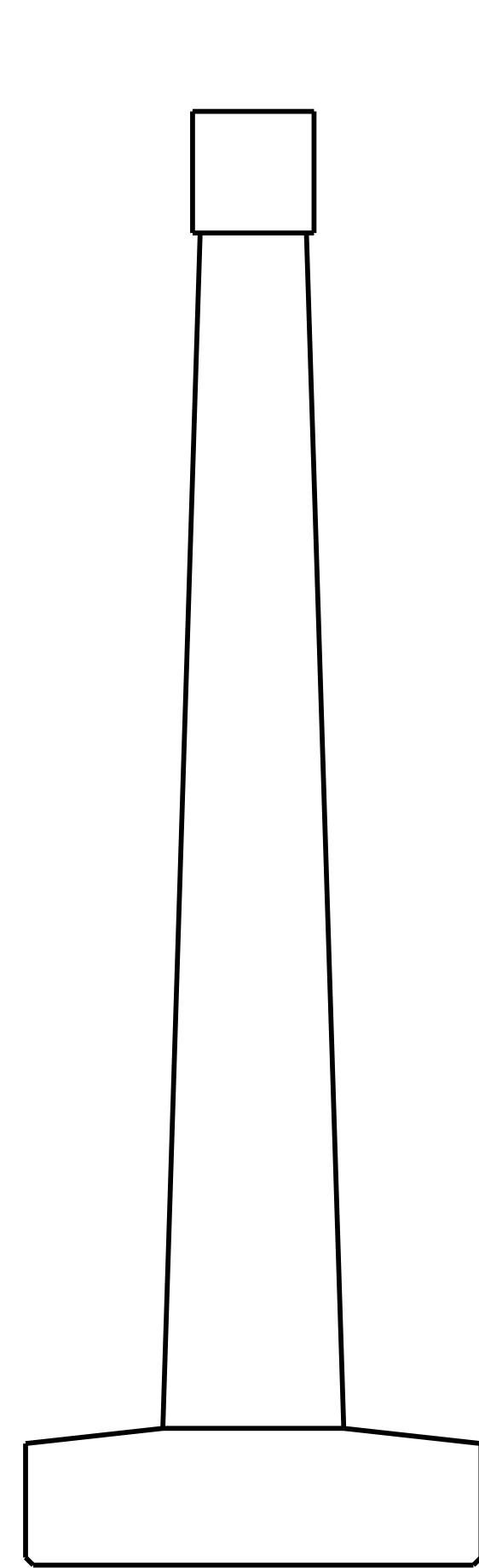
REPAIR QUANTITY TABLE

REPAIRS BENT 17	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	34.9	17.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

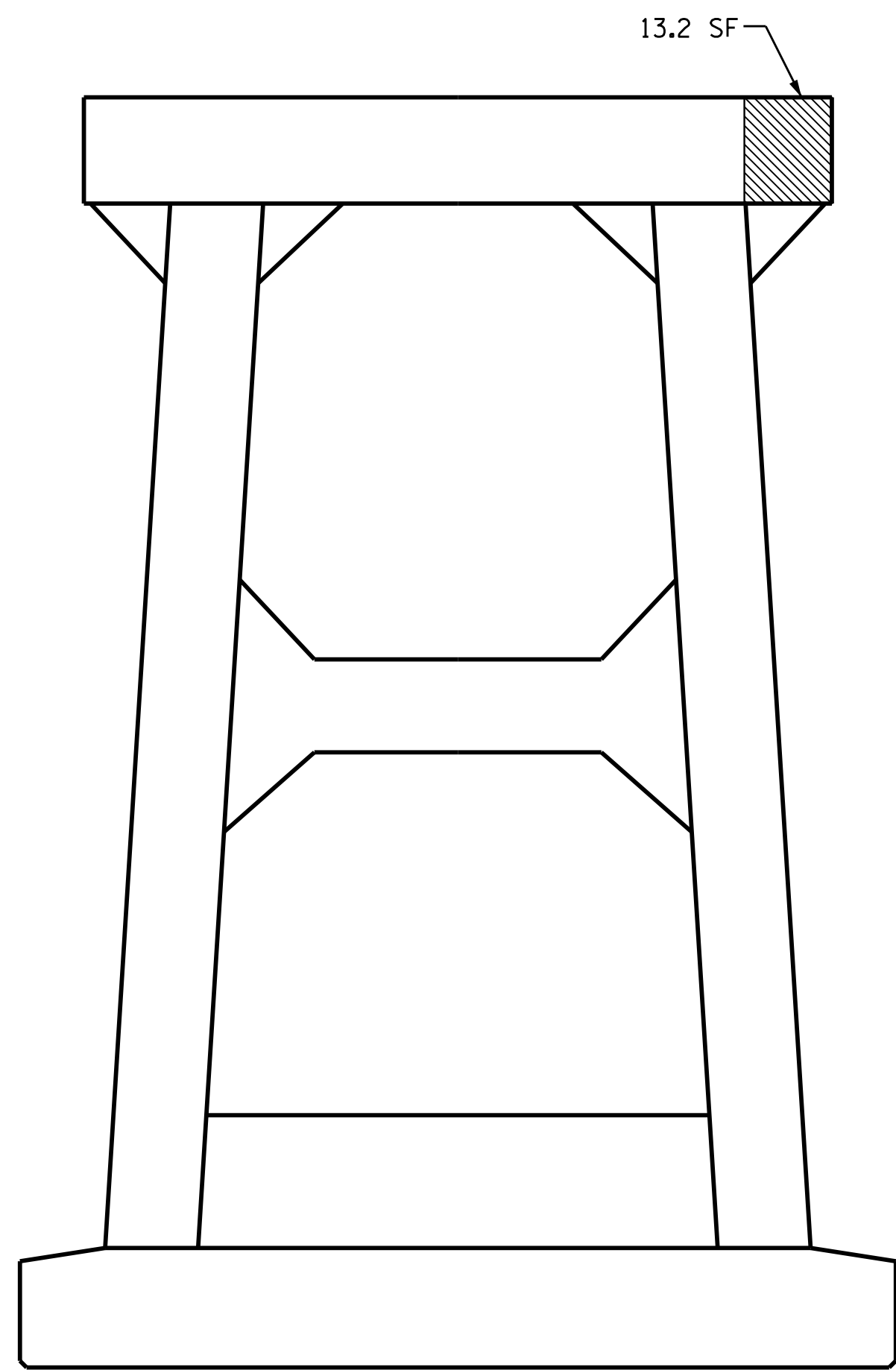
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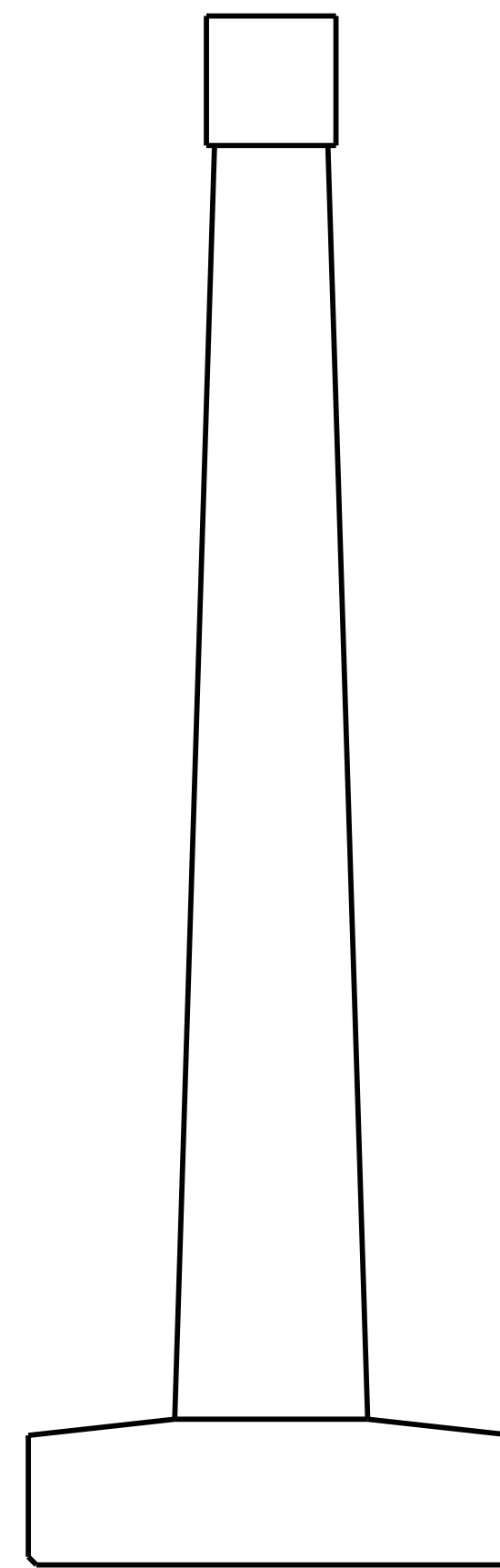
PLAN
TOP OF CAP



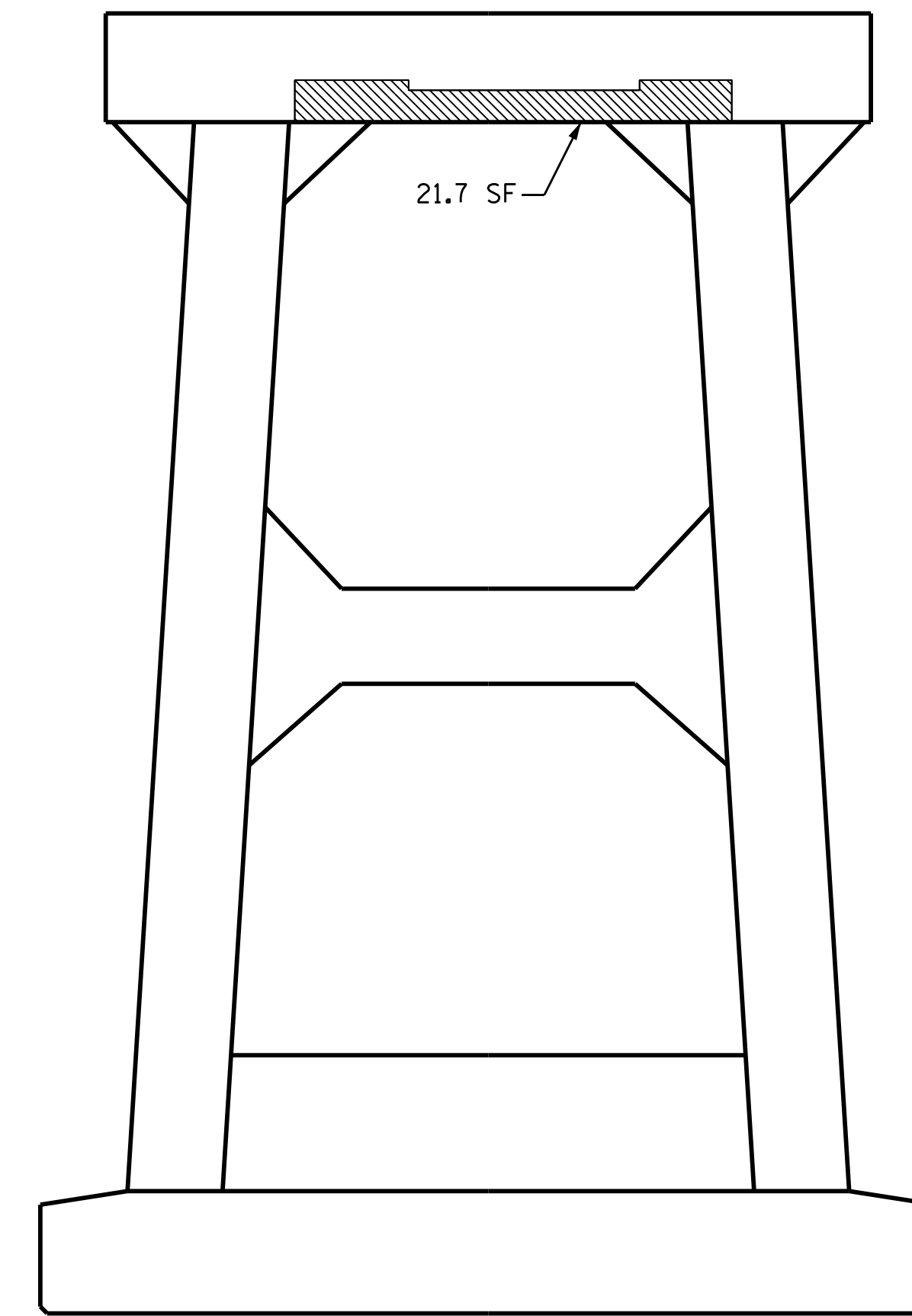
END VIEW
WEST SIDE



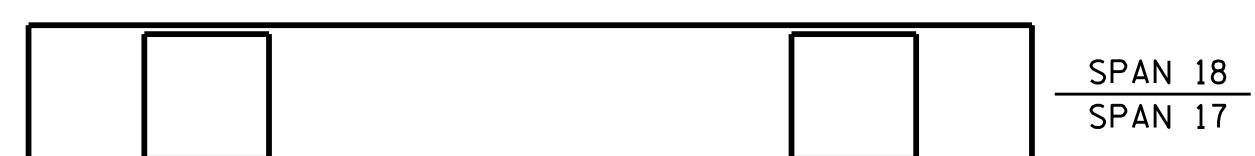
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

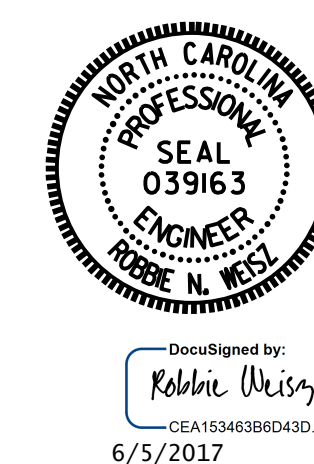


ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR



PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 18 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 17**

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

NOTES:

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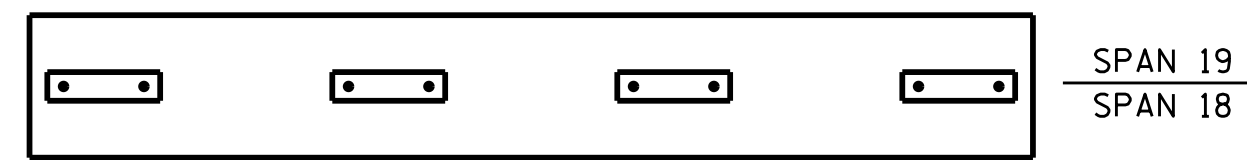
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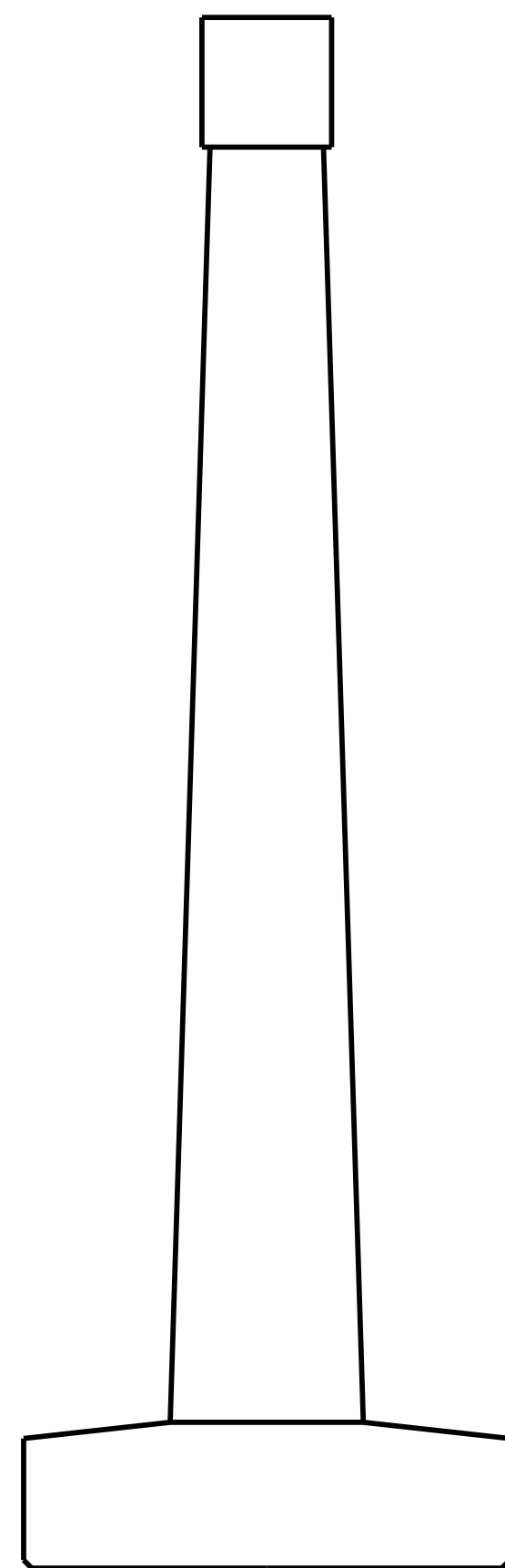
REPAIR QUANTITY TABLE

REPAIRS BENT 18	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	14.3	7.2		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

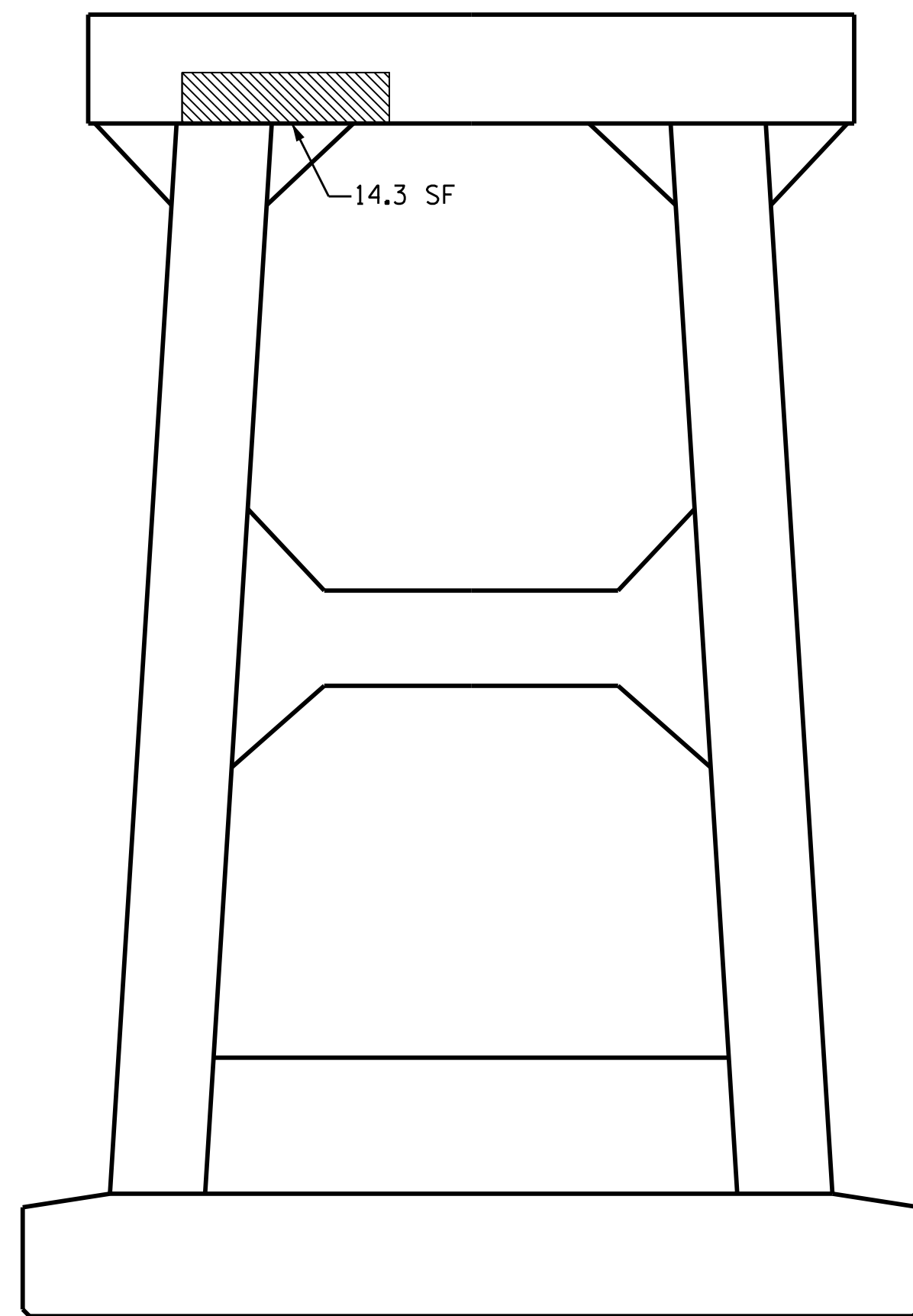
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



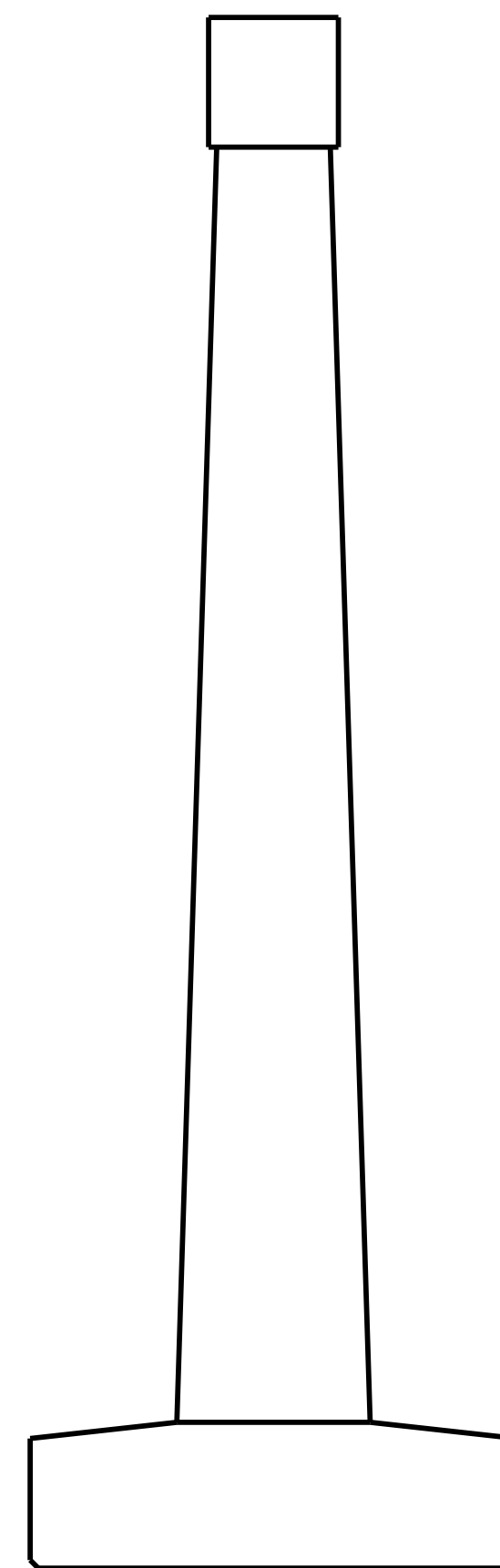
PLAN
TOP OF CAP



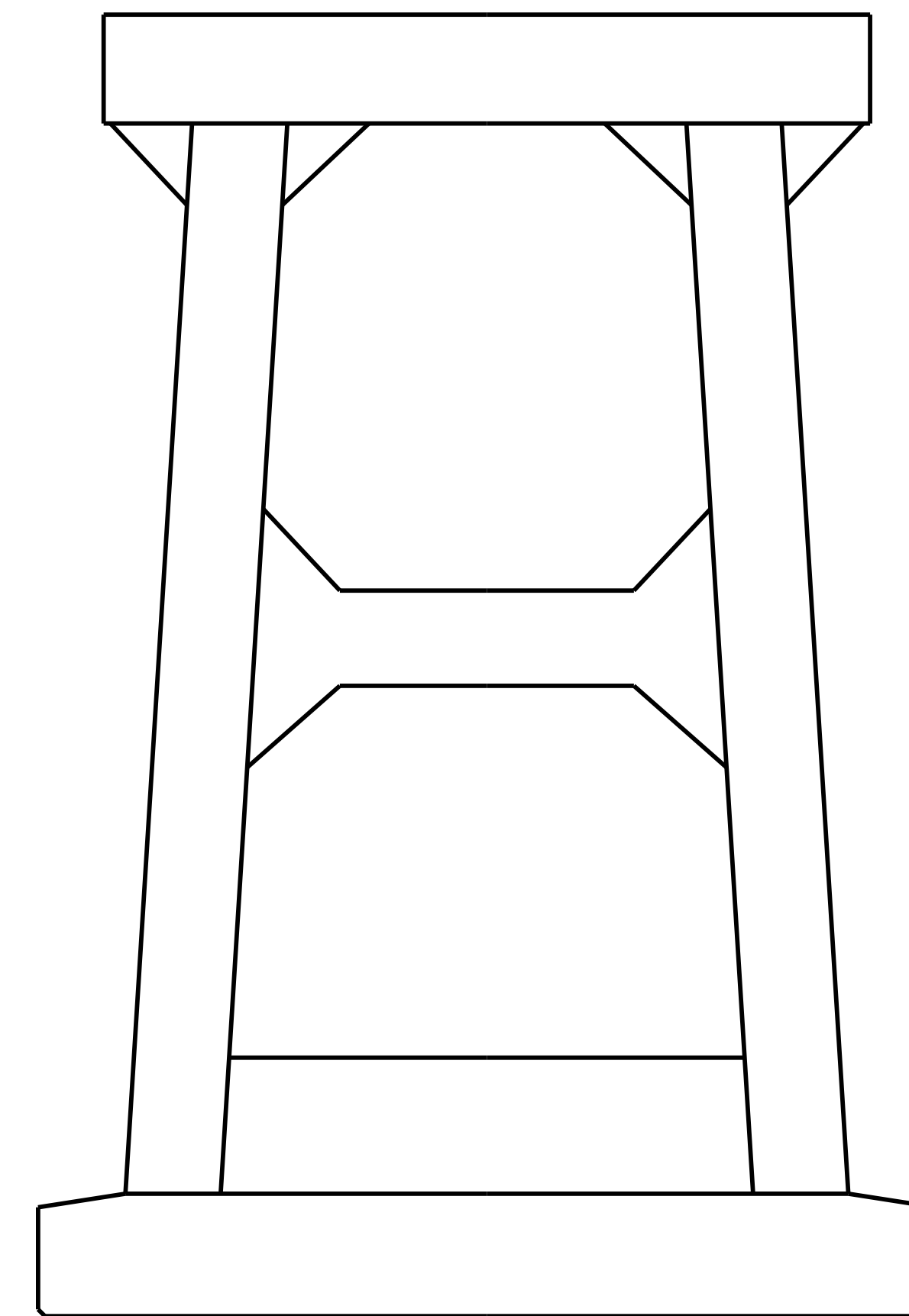
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 19 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 18



DocuSigned by:
Robbie Weisz
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-25
2			4			

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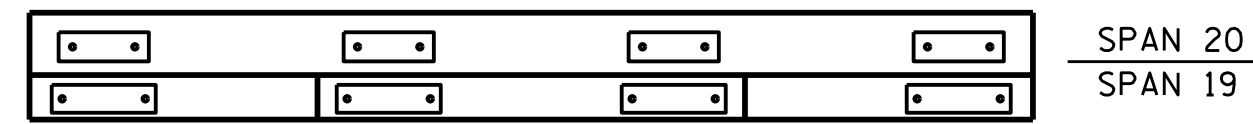
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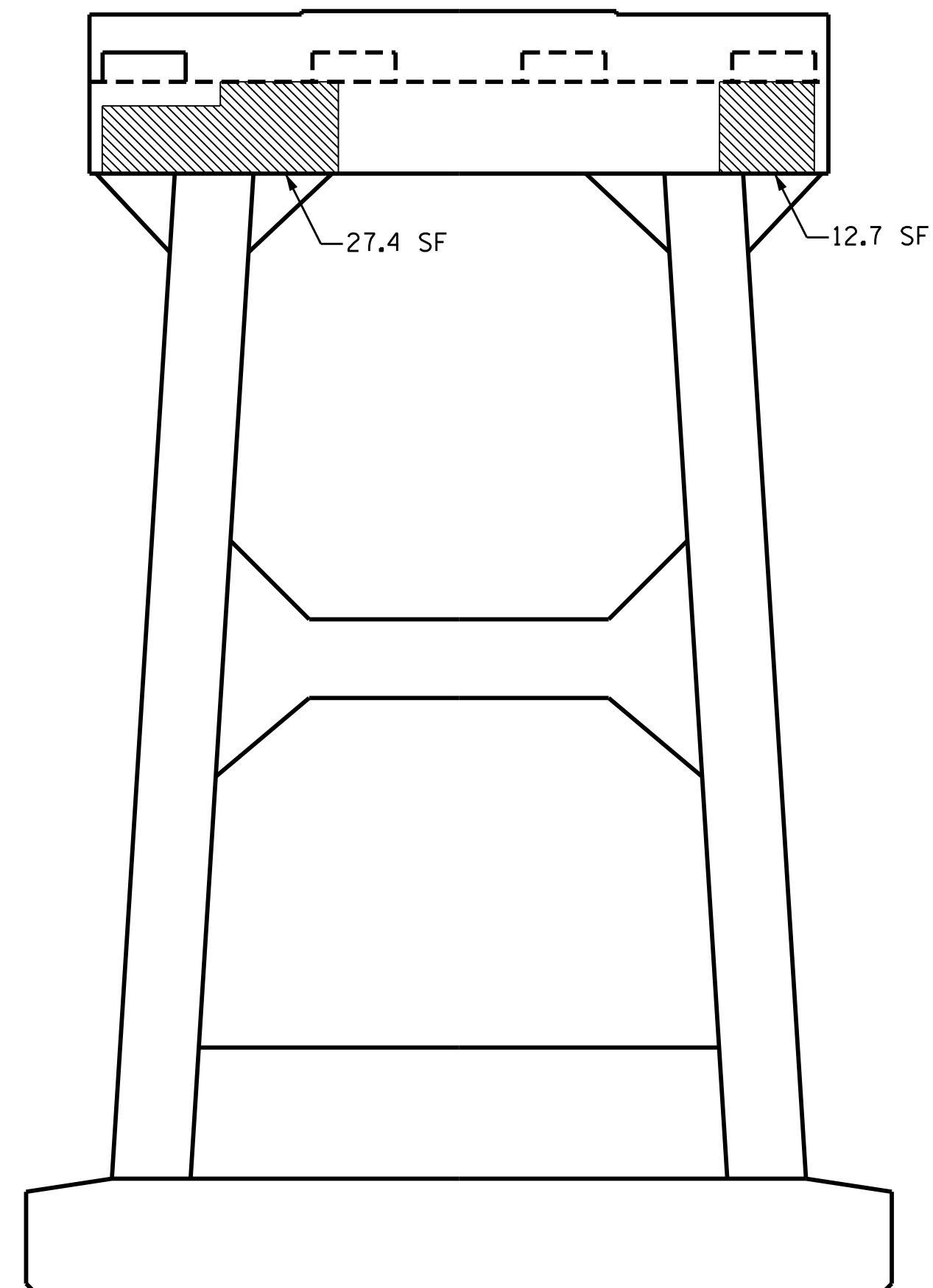
REPAIR QUANTITY TABLE

REPAIRS BENT 19	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	60.6	30.3		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

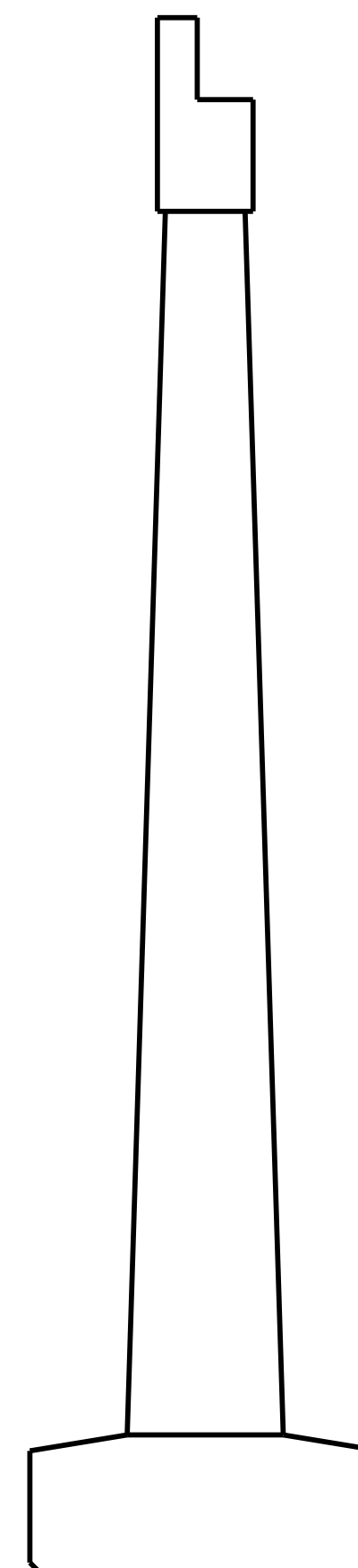
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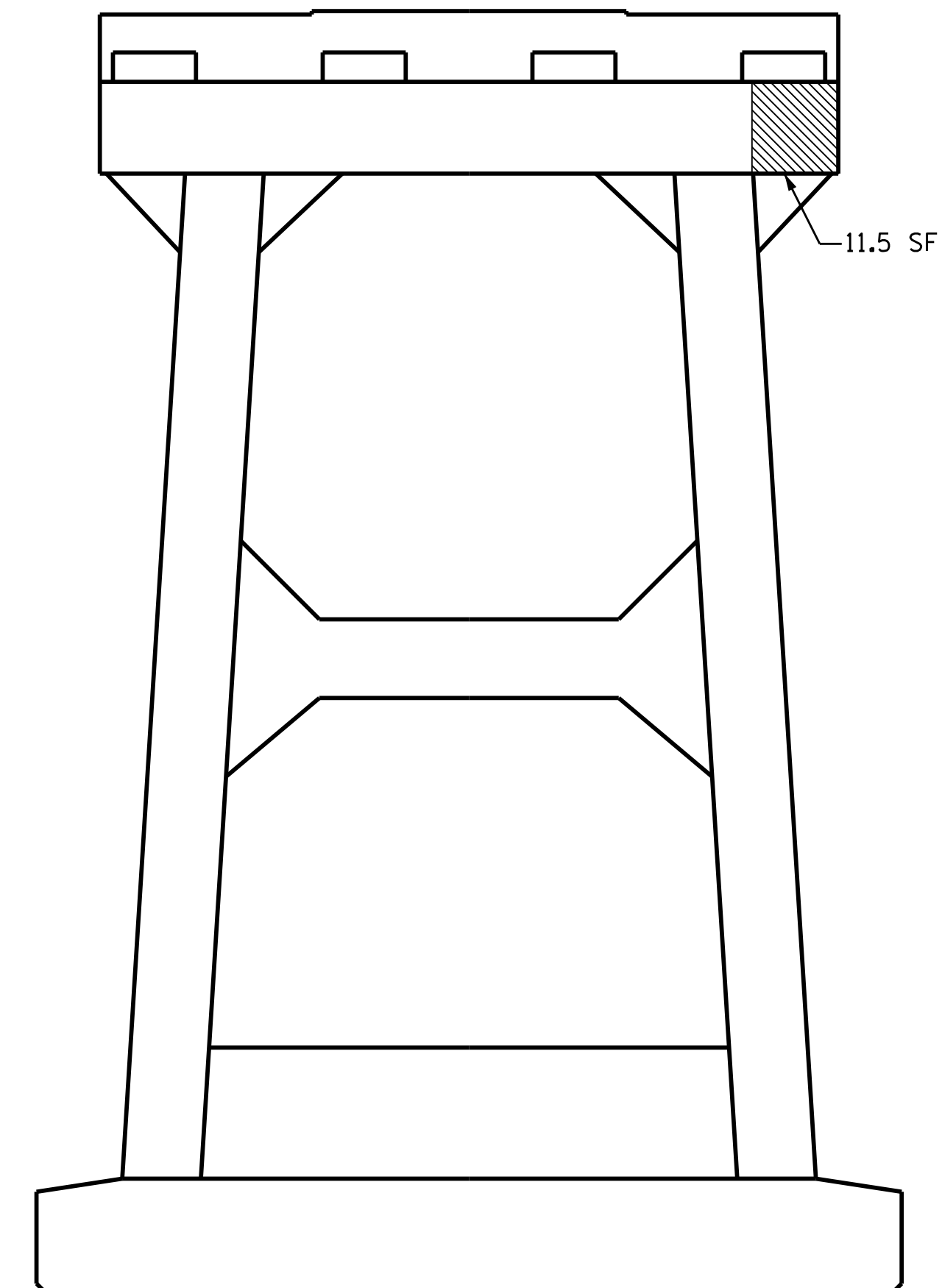
PLAN
TOP OF CAP



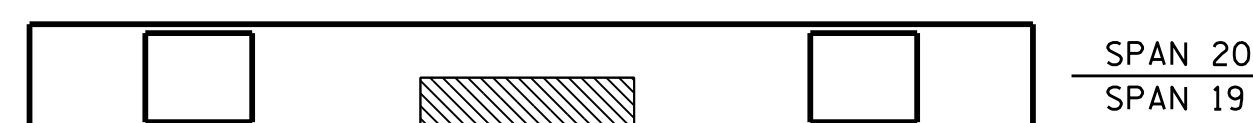
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

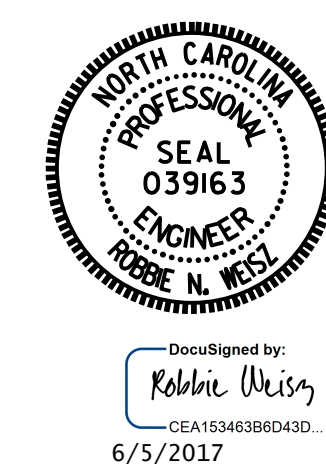


ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 20 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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**SUBSTRUCTURE
 BENT 19**

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

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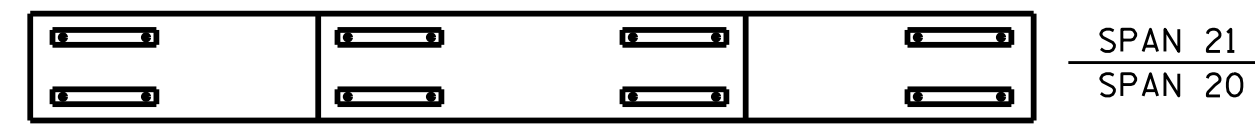
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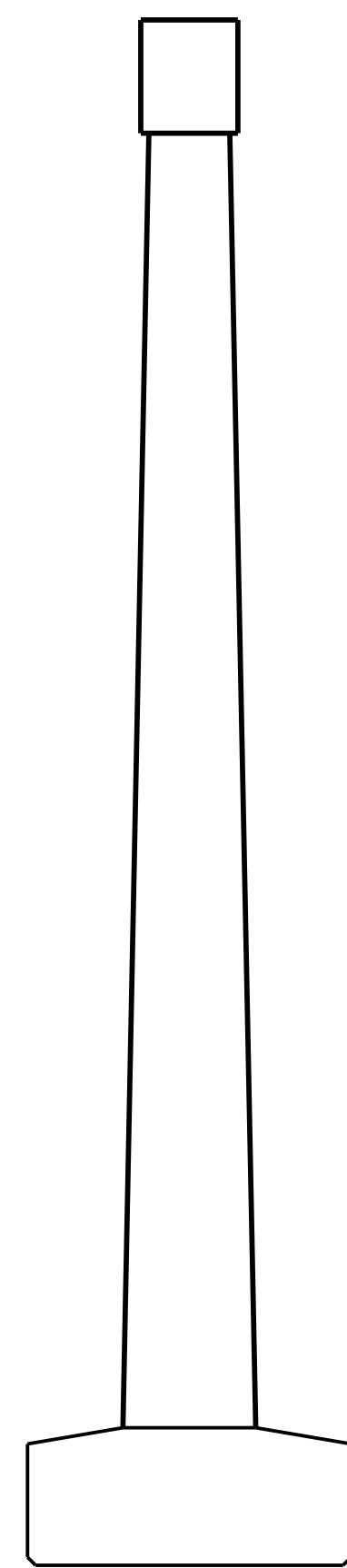
REPAIR QUANTITY TABLE

REPAIRS BENT 20	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.0	2.0		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

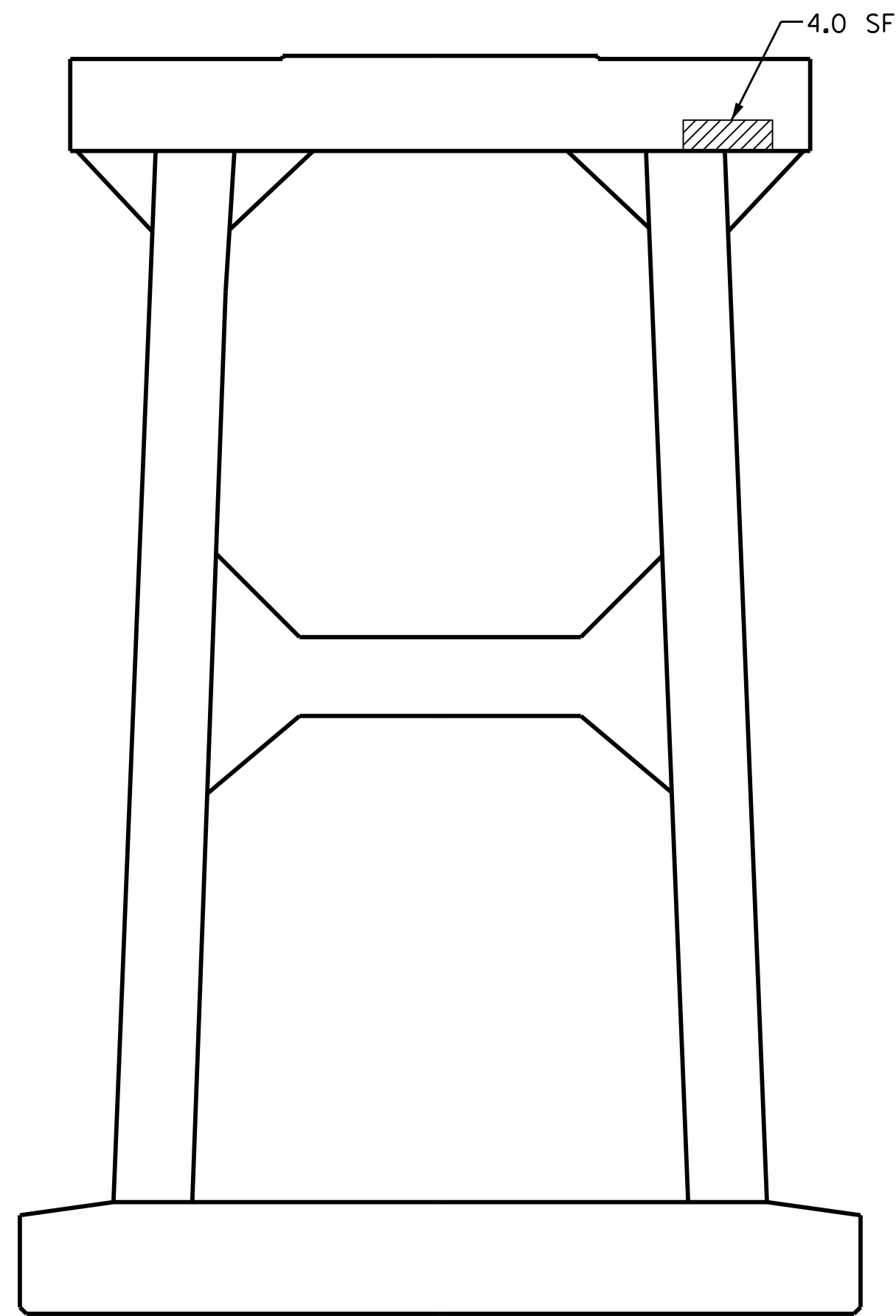
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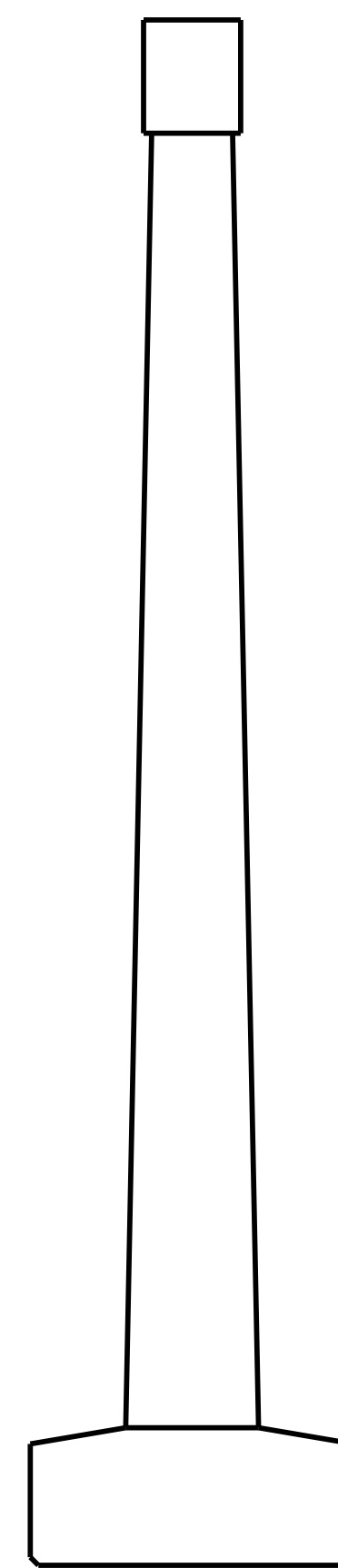
PLAN
TOP OF CAP



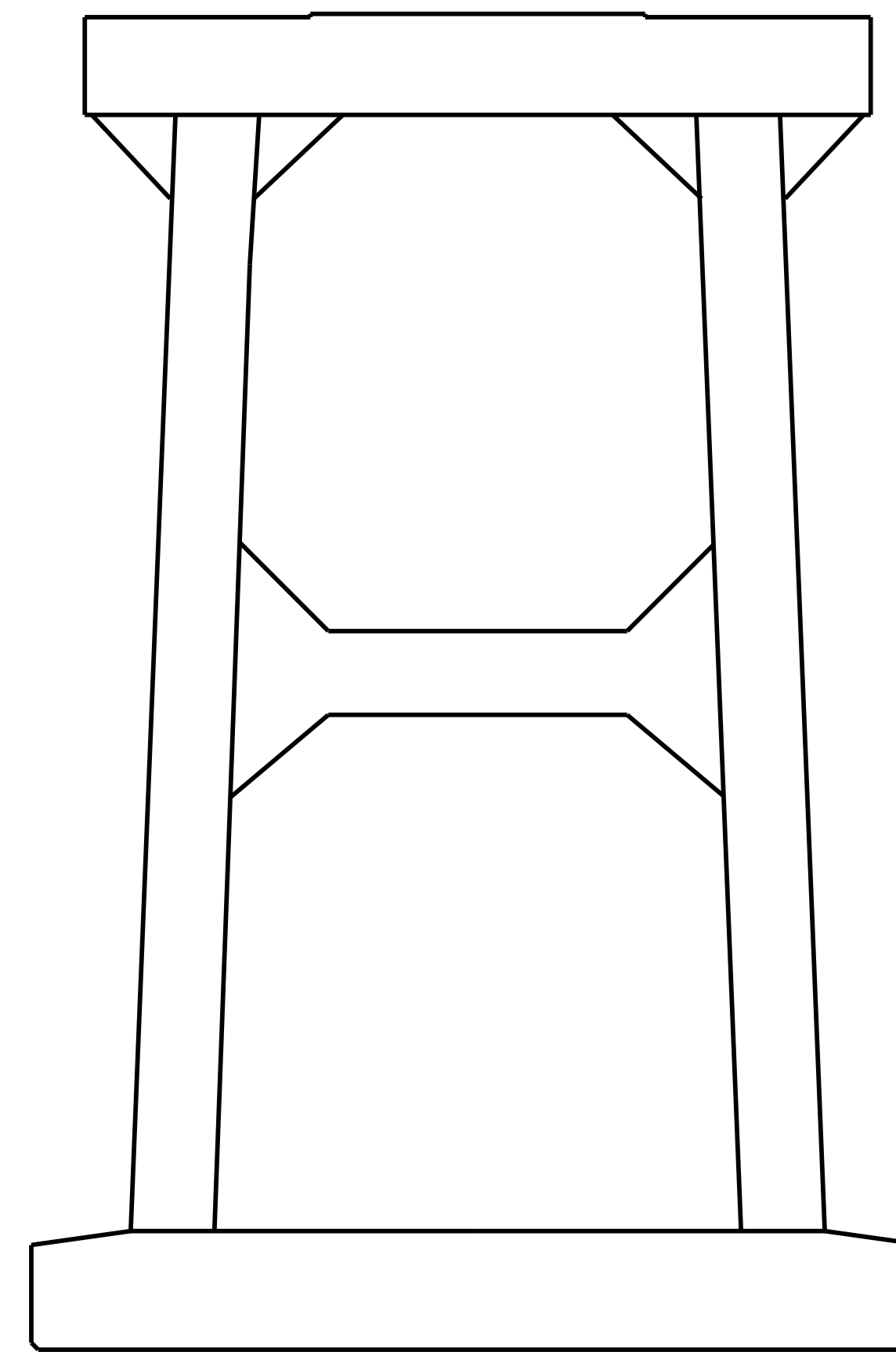
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY

BRIDGE NO. 7

SHEET 21 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 20



DocuSigned by:
Robbie Weisz
CSA153M38B043D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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

REPAIR QUANTITY TABLE

REPAIRS BENT 21	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.6	8.8		
COLUMN	9.2	4.6		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

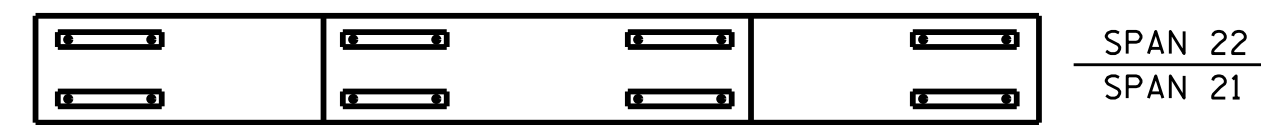
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

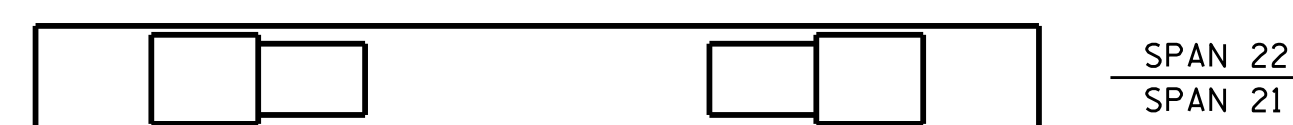
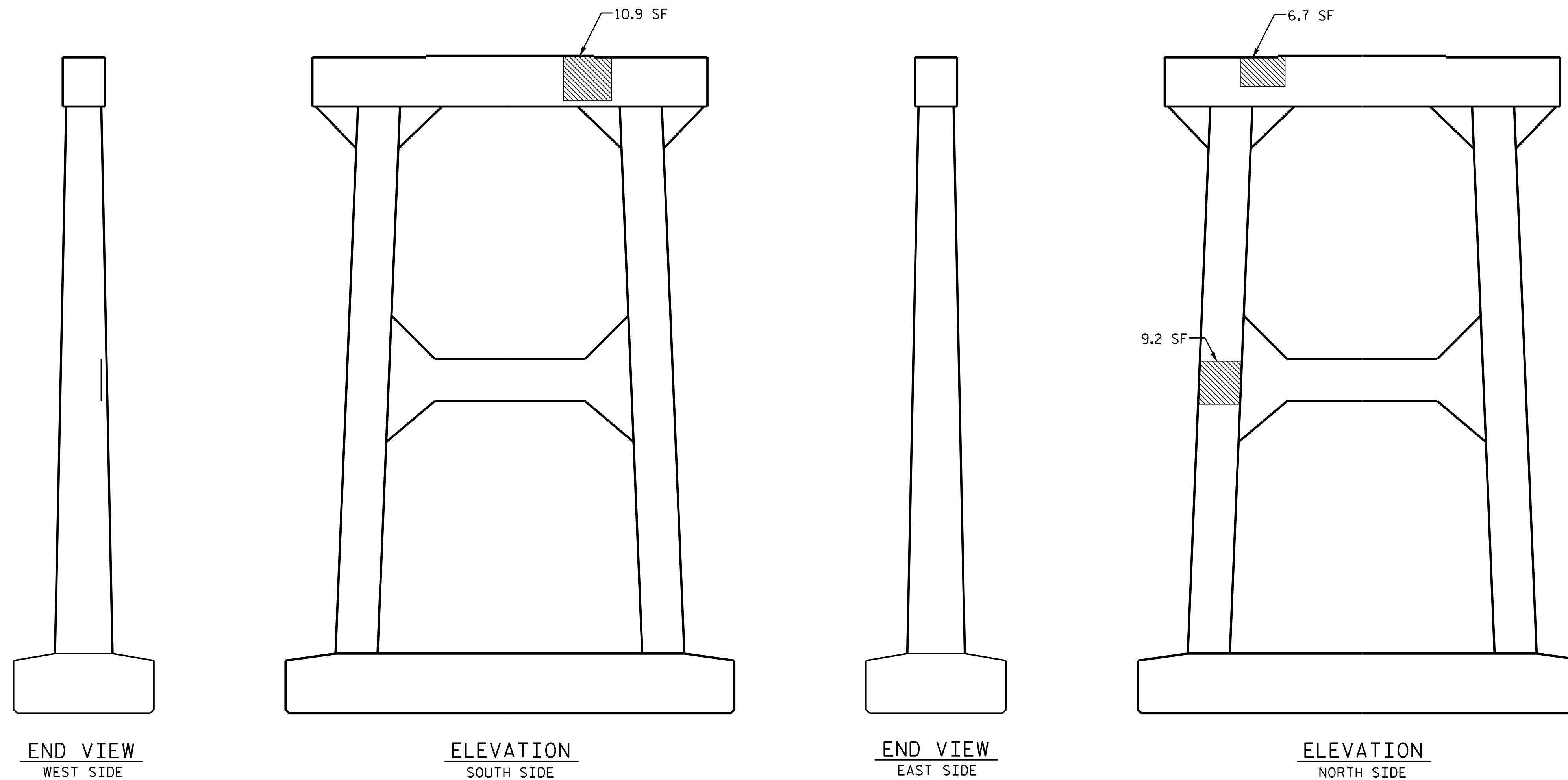
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 22 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 21



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 CEA153E83B043D
 6/5/2017

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REPAIR QUANTITY TABLE

REPAIRS BENT 22	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	7.5	3.8		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

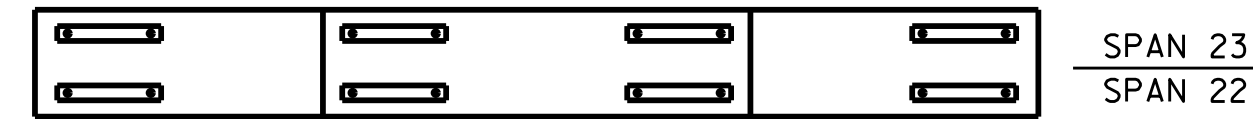
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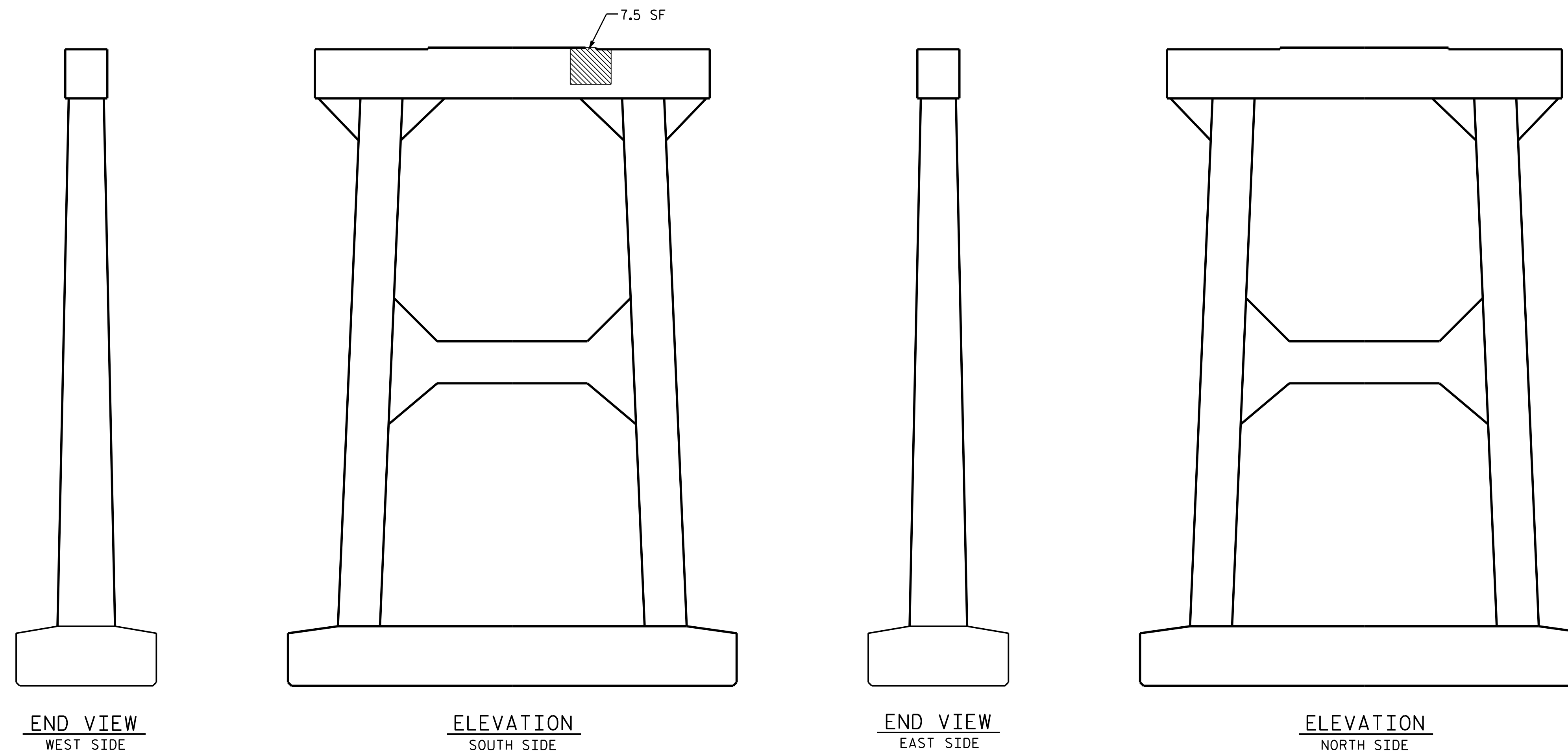
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PLAN
TOP OF CAP

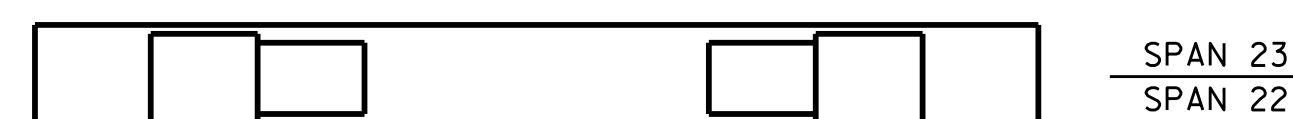


END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



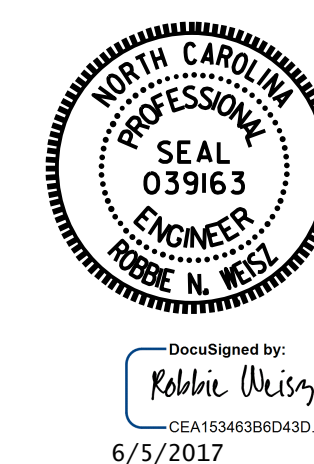
PLAN
BOTTOM OF CAP

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 23 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 22



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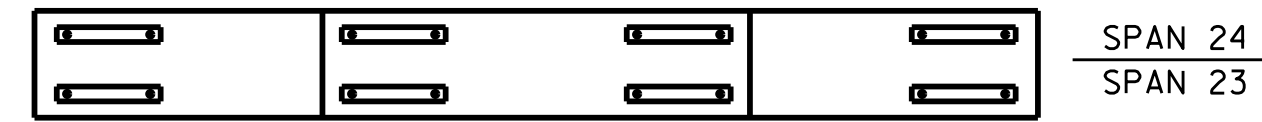
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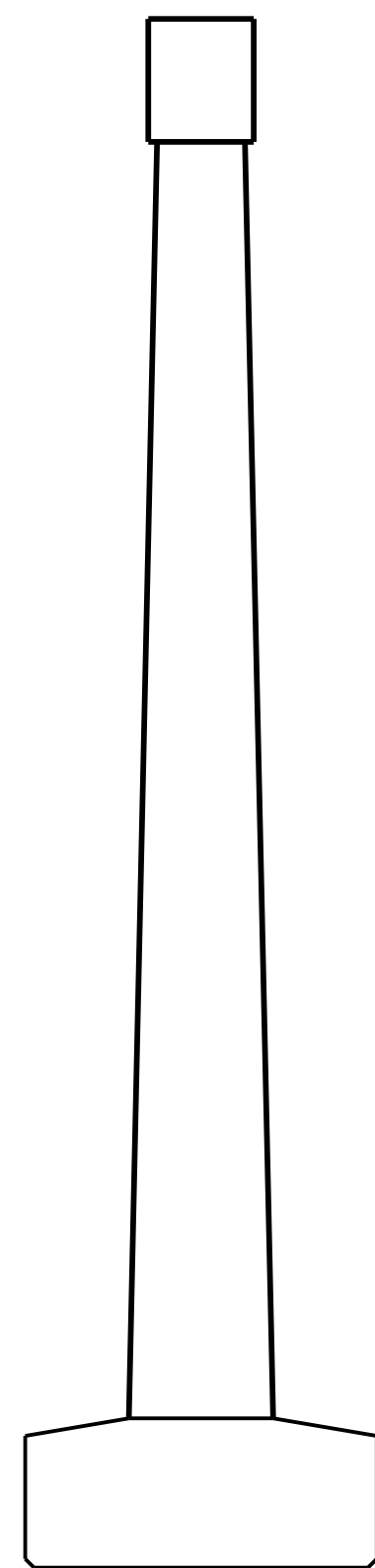
REPAIR QUANTITY TABLE

REPAIRS BENT 23	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.0	4.5		
COLUMN	0.0	0.0		
STRUT	32.1	16.0		
FOOTER	0.0	0.0		

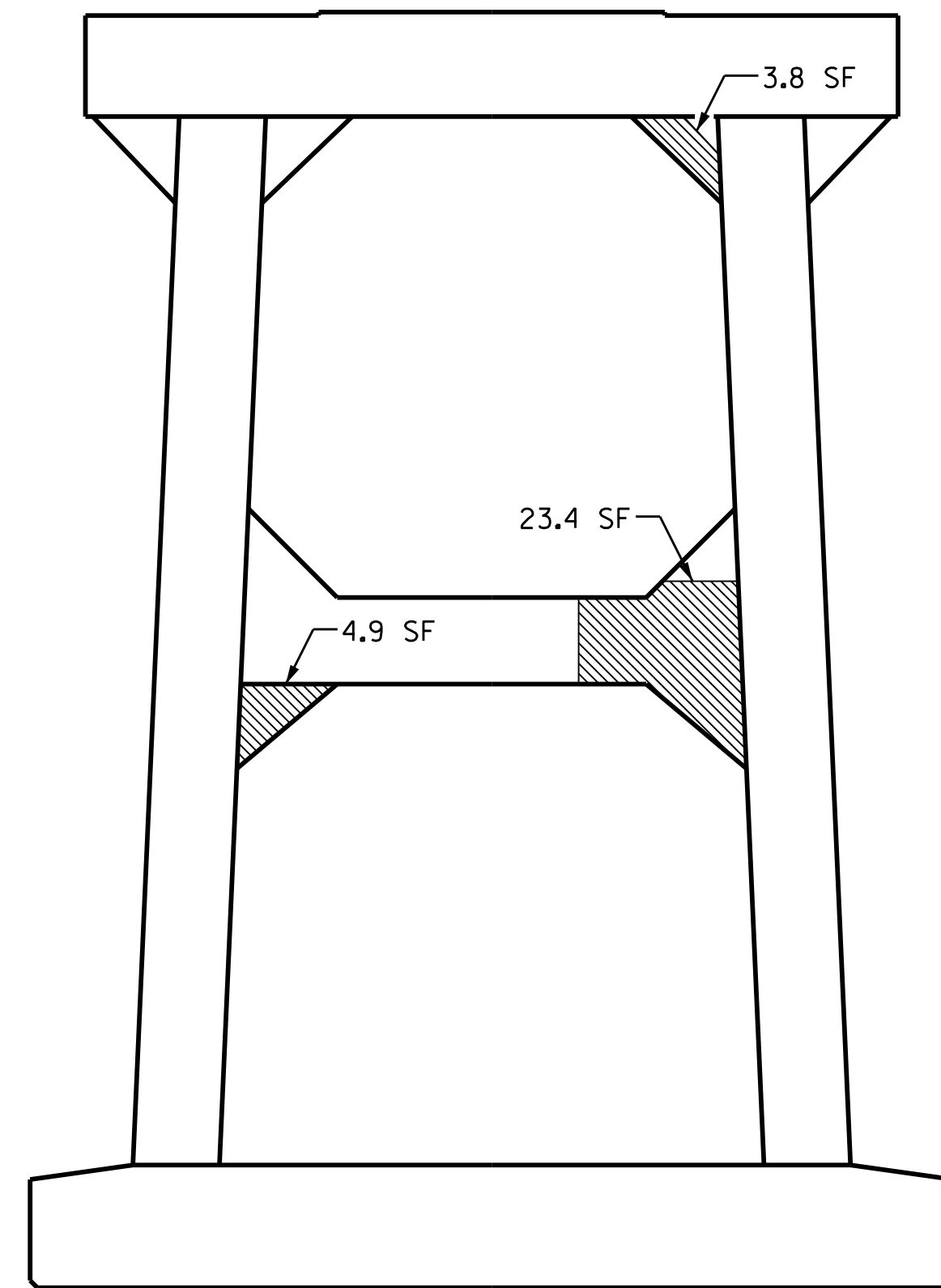
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



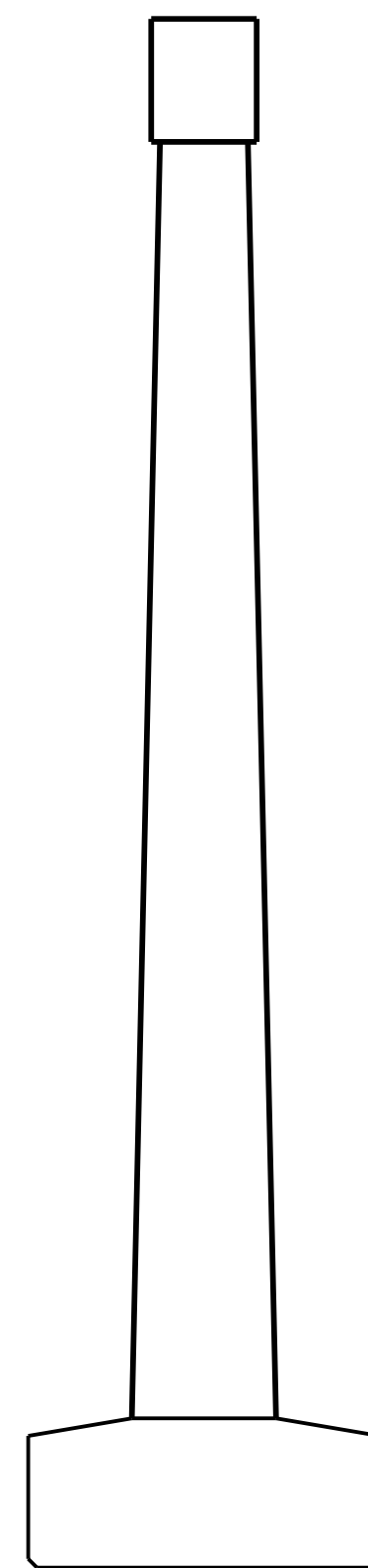
PLAN
TOP OF CAP



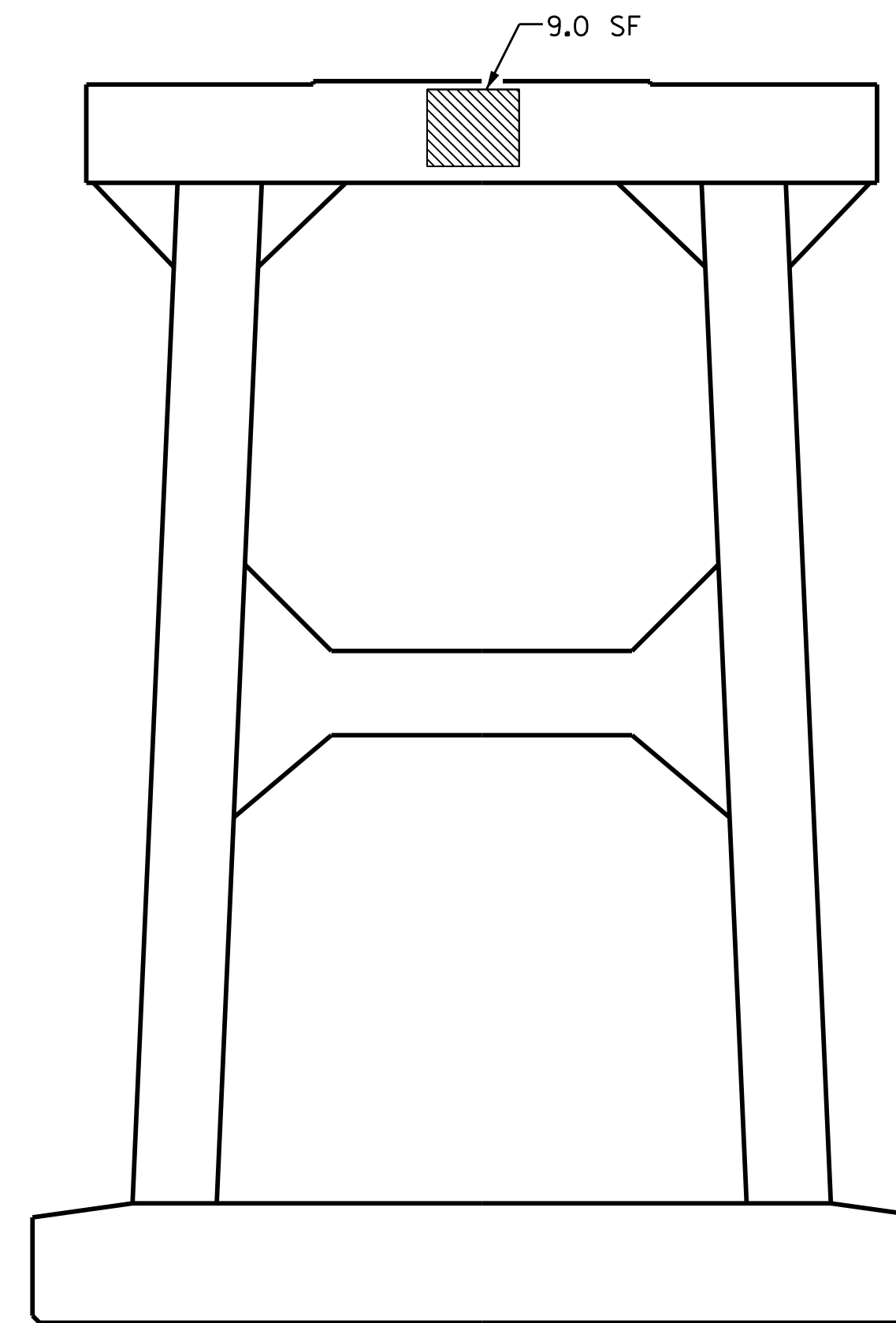
END VIEW
WEST SIDE



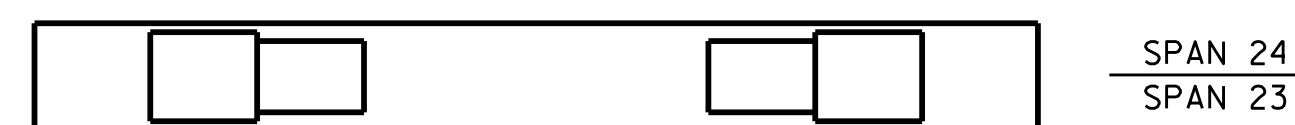
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 24 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 23



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6/5/2017

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1				3			S-30	
2				4			TOTAL SHEETS	

REPAIR QUANTITY TABLE

REPAIRS BENT 24	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	57.9	29.0		
COLUMN	11.9	6.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

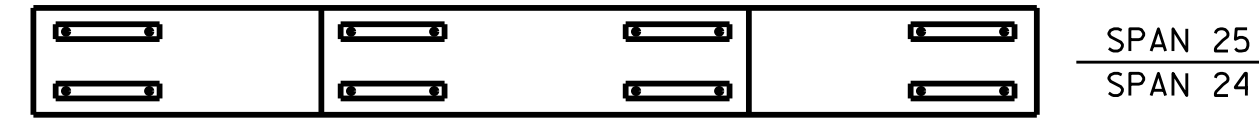
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NOTES:

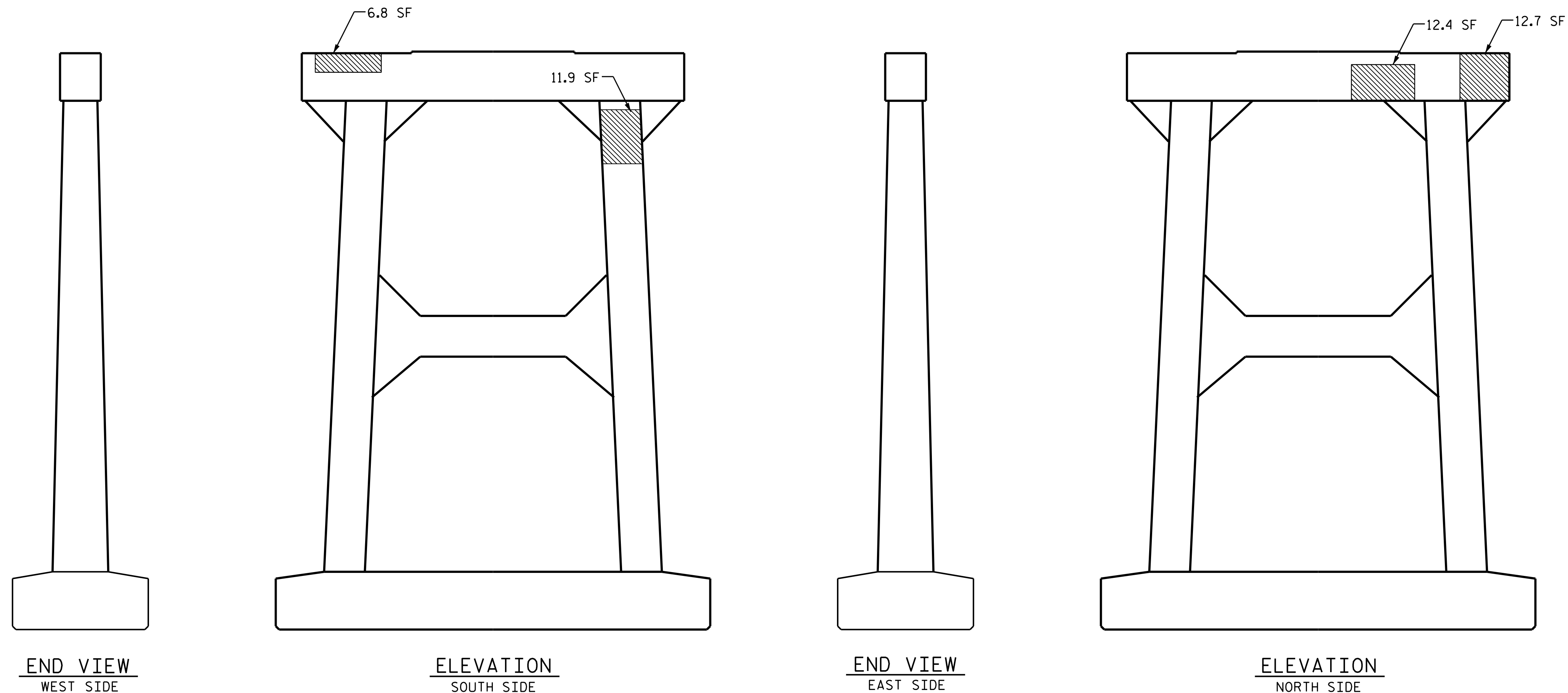
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP



END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



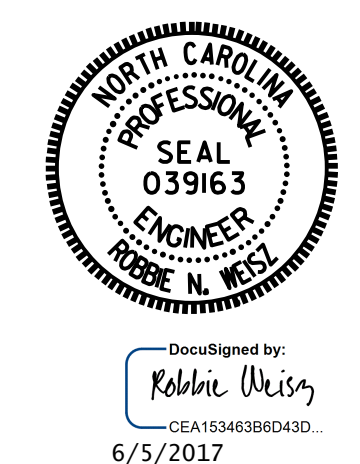
PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. 15B.13.38
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 25 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 24



REVISIONS						SHEET NO.
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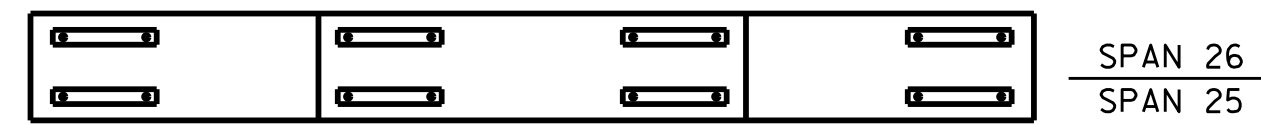
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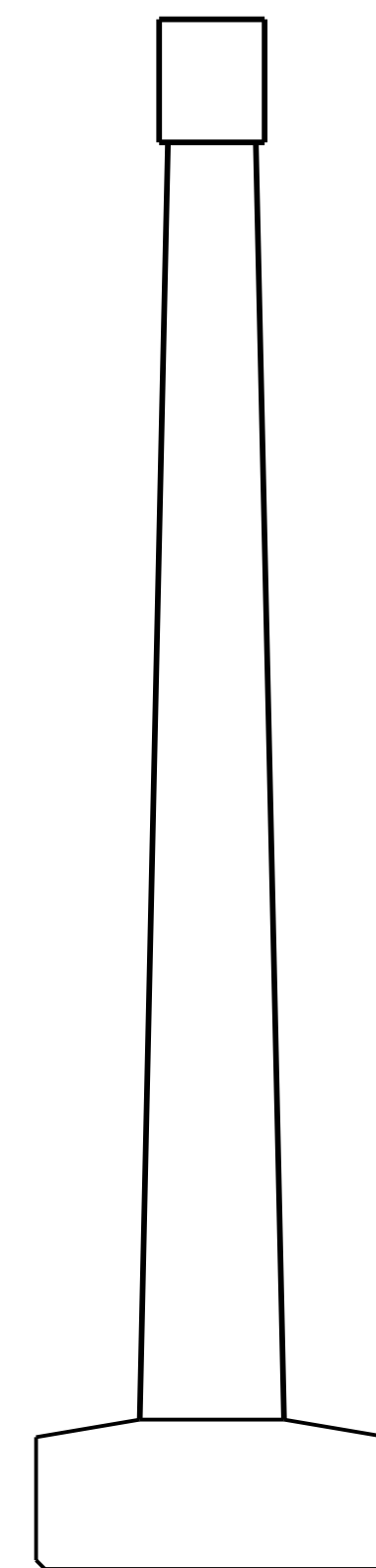
REPAIR QUANTITY TABLE

REPAIRS BENT 25	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	41.3	20.7		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

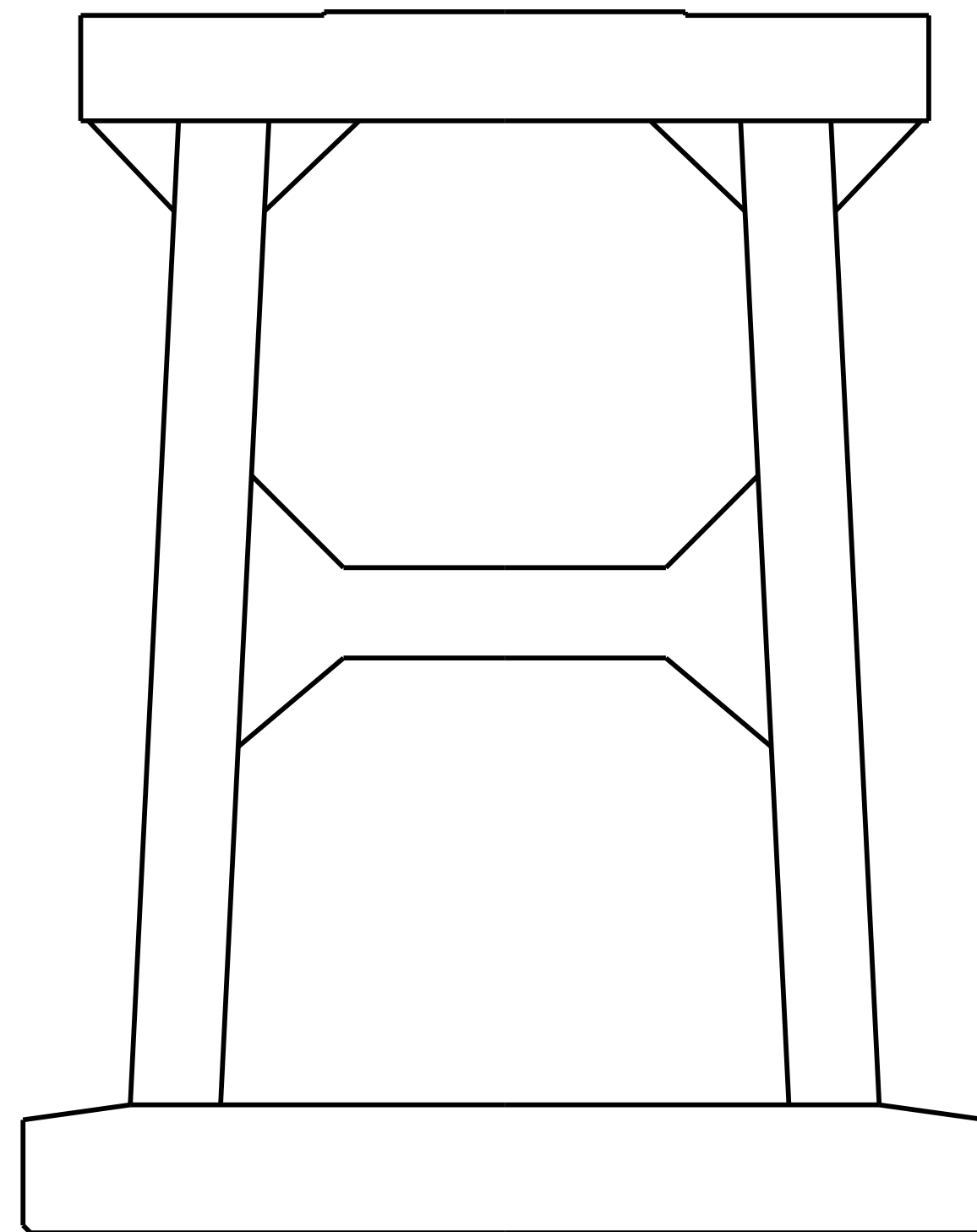
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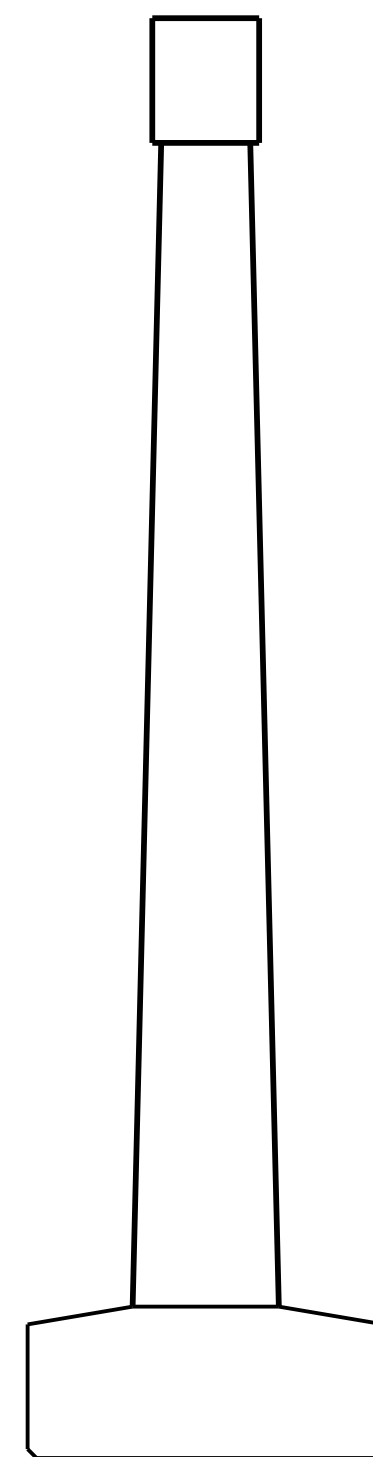
PLAN
TOP OF CAP



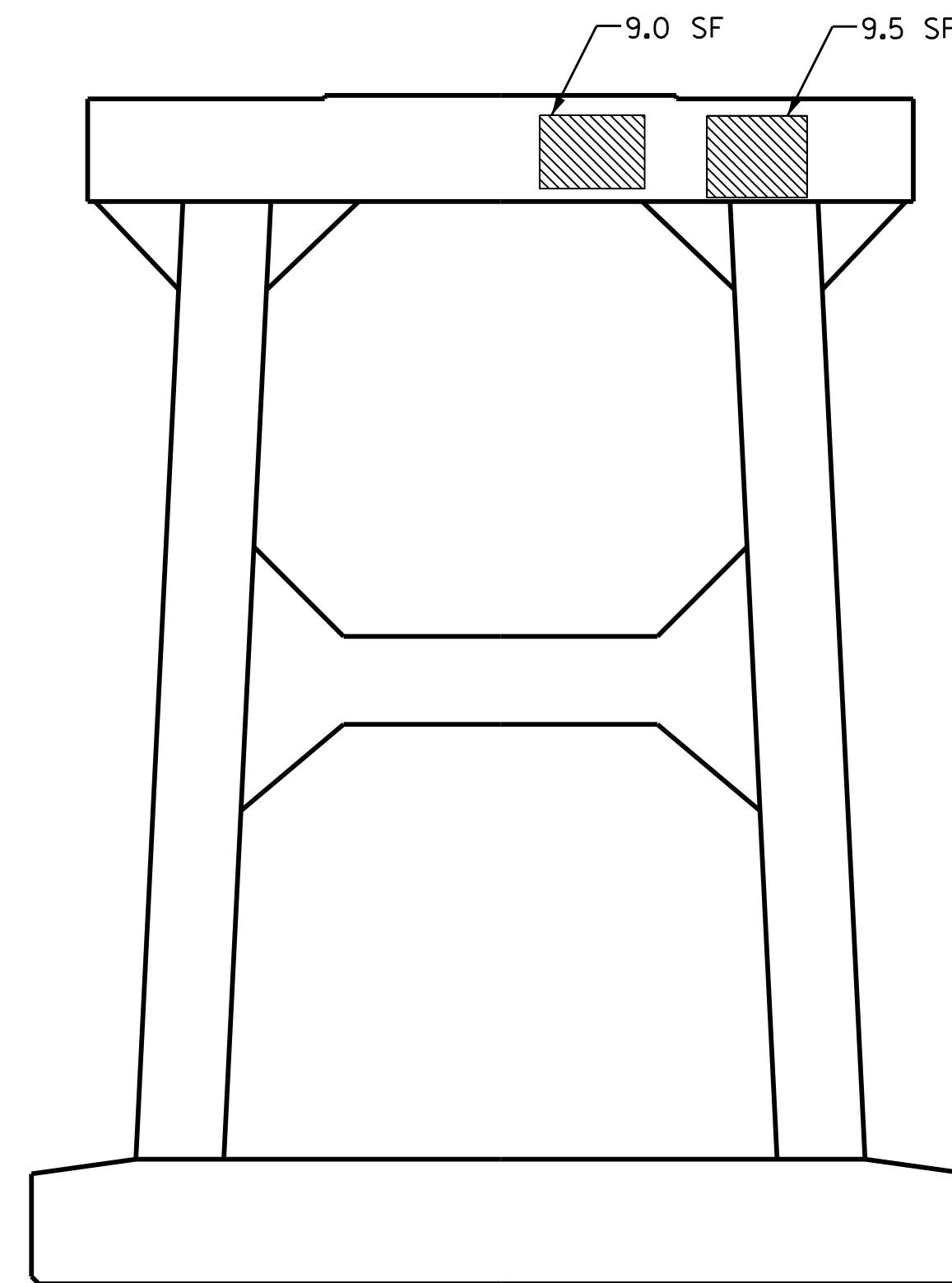
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WEST SIDE



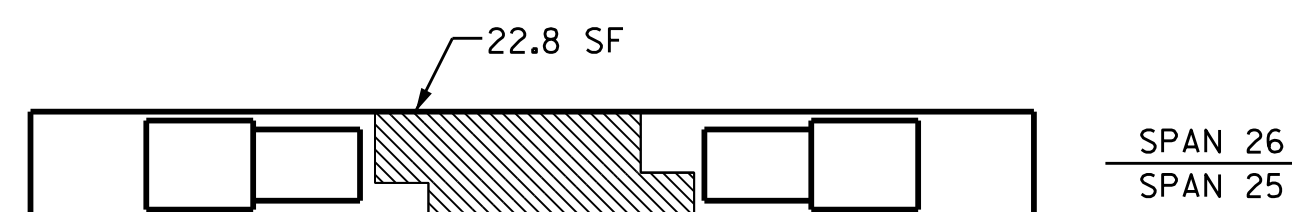
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 26 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 25



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CSA153838043D
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S-32

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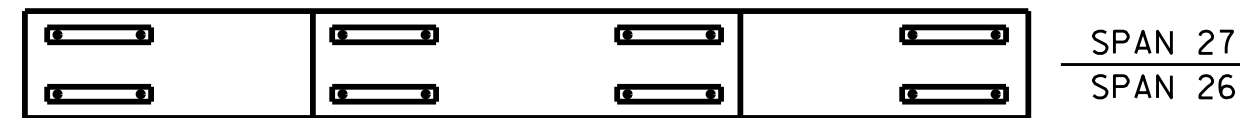
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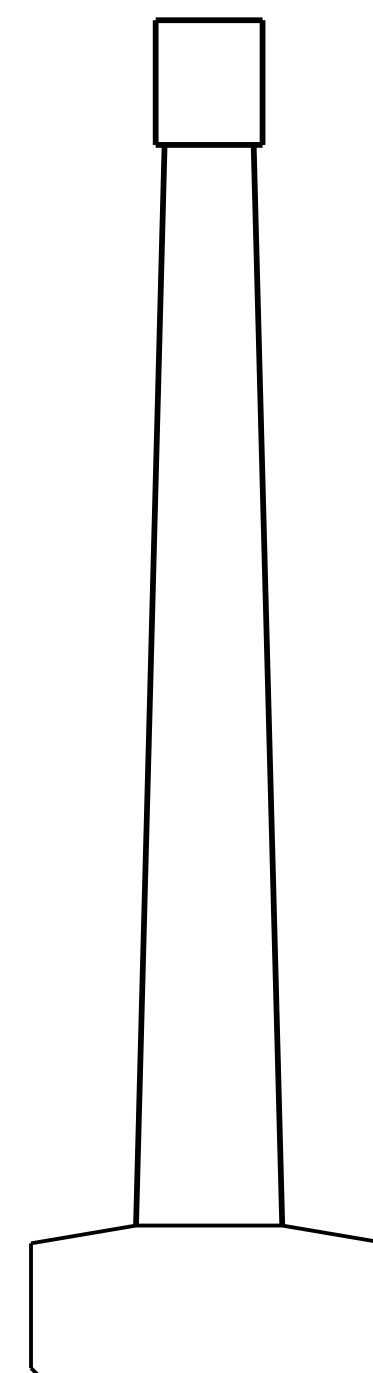
REPAIR QUANTITY TABLE

REPAIRS BENT 26	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	48.6	24.3		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

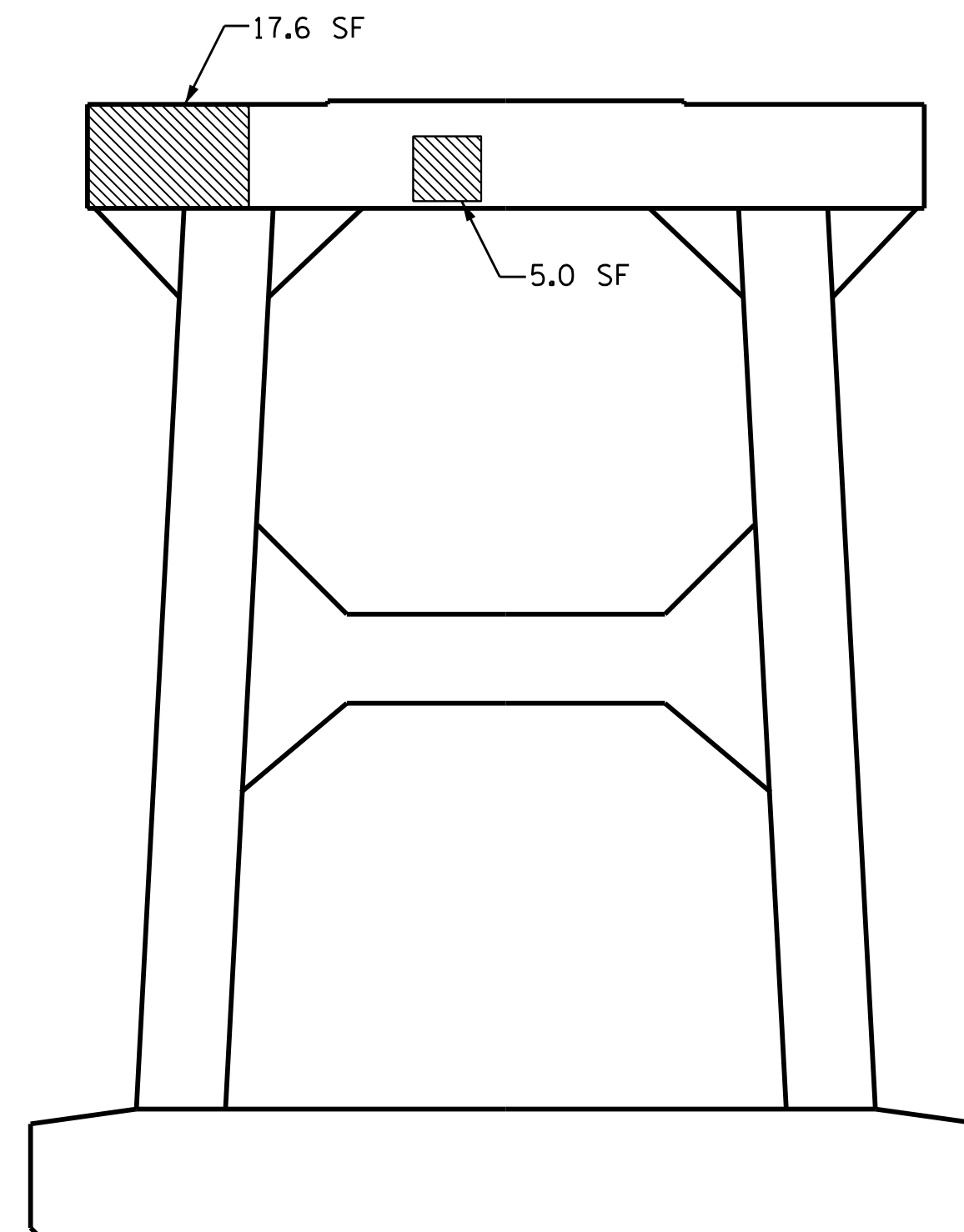
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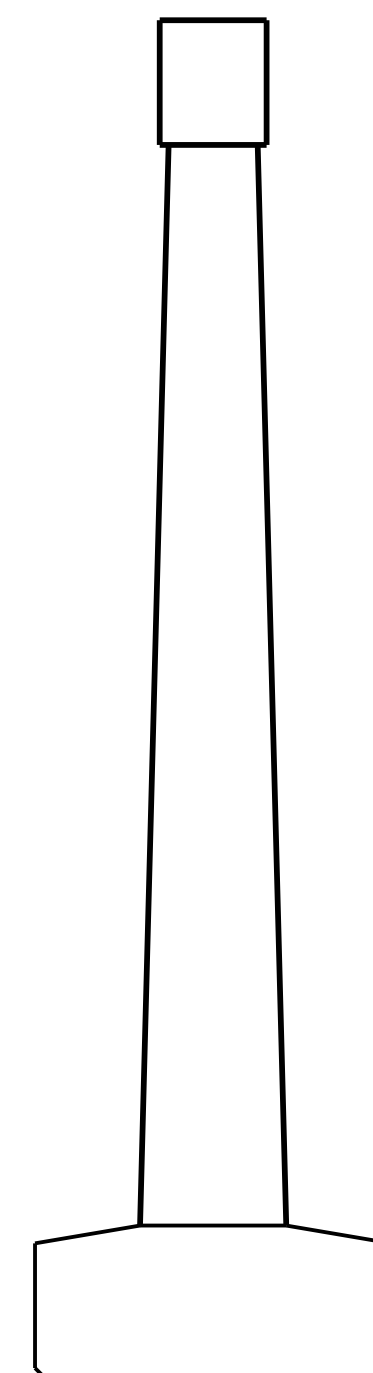
PLAN
TOP OF CAP



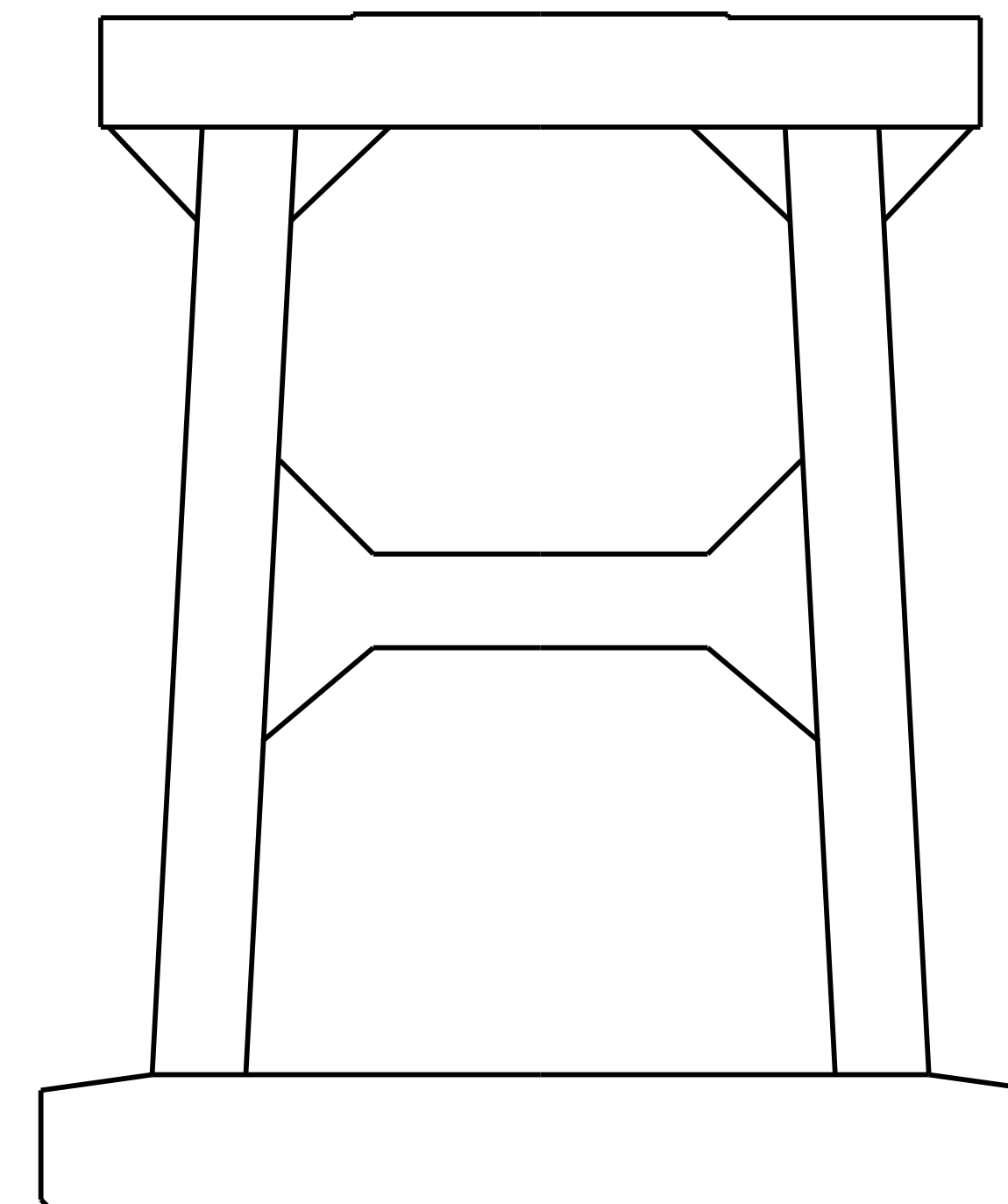
END VIEW
WEST SIDE



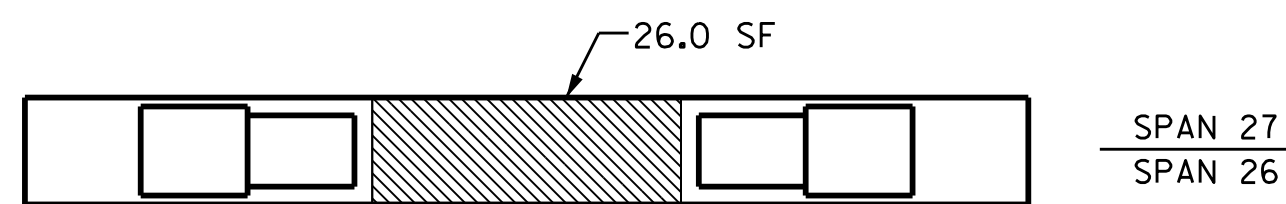
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 27 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 26



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REPAIR QUANTITY TABLE

REPAIRS BENT 27	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	30.4	15.2		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

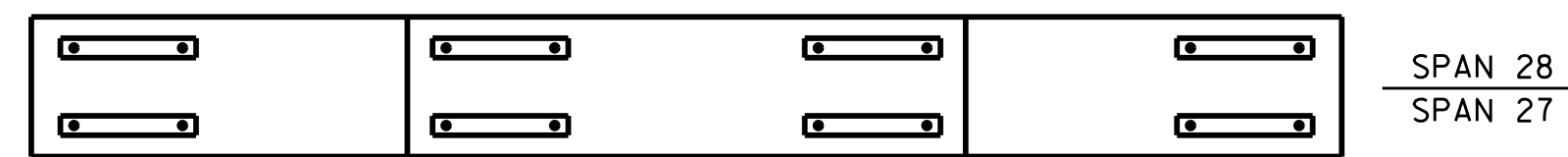
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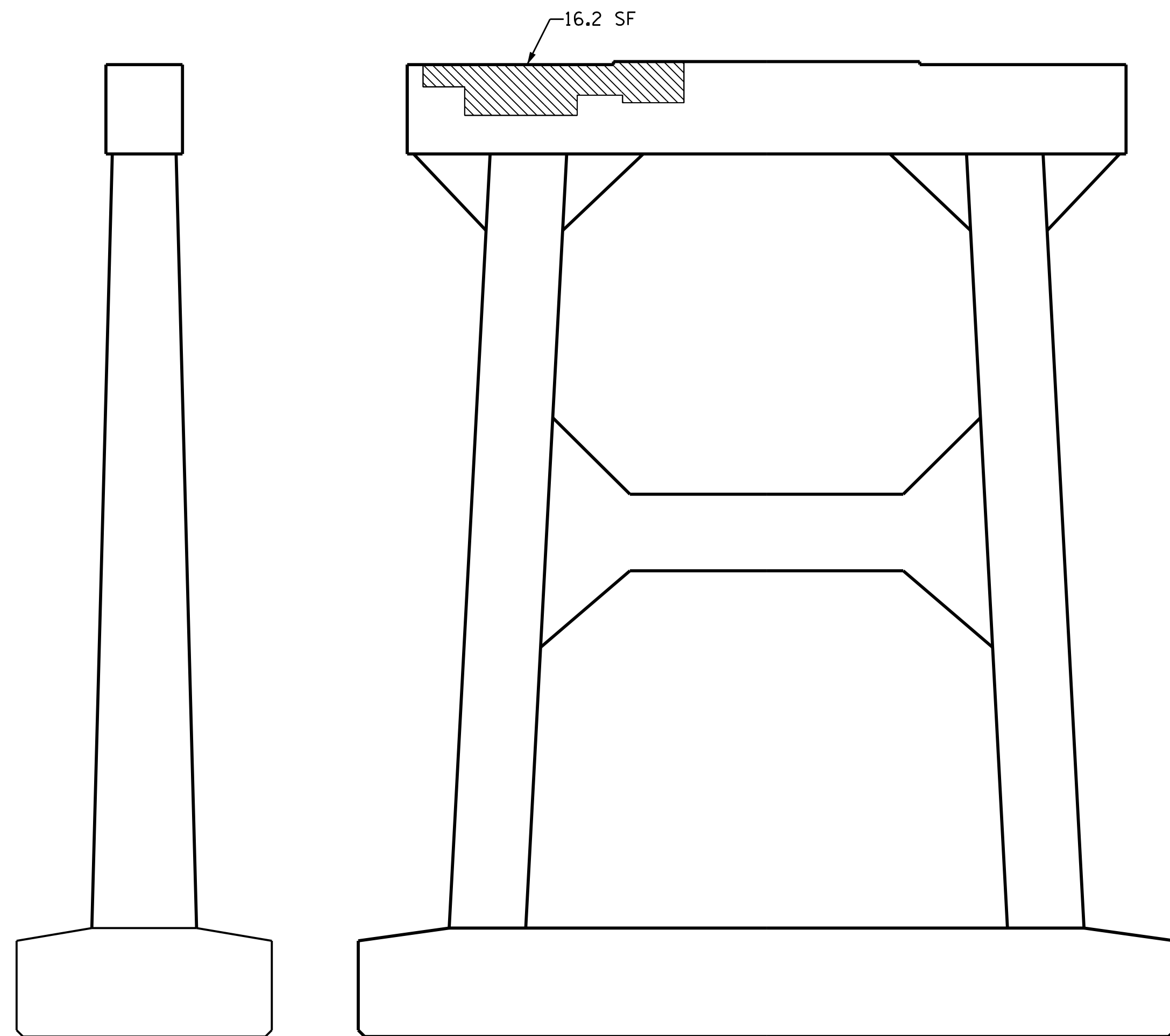
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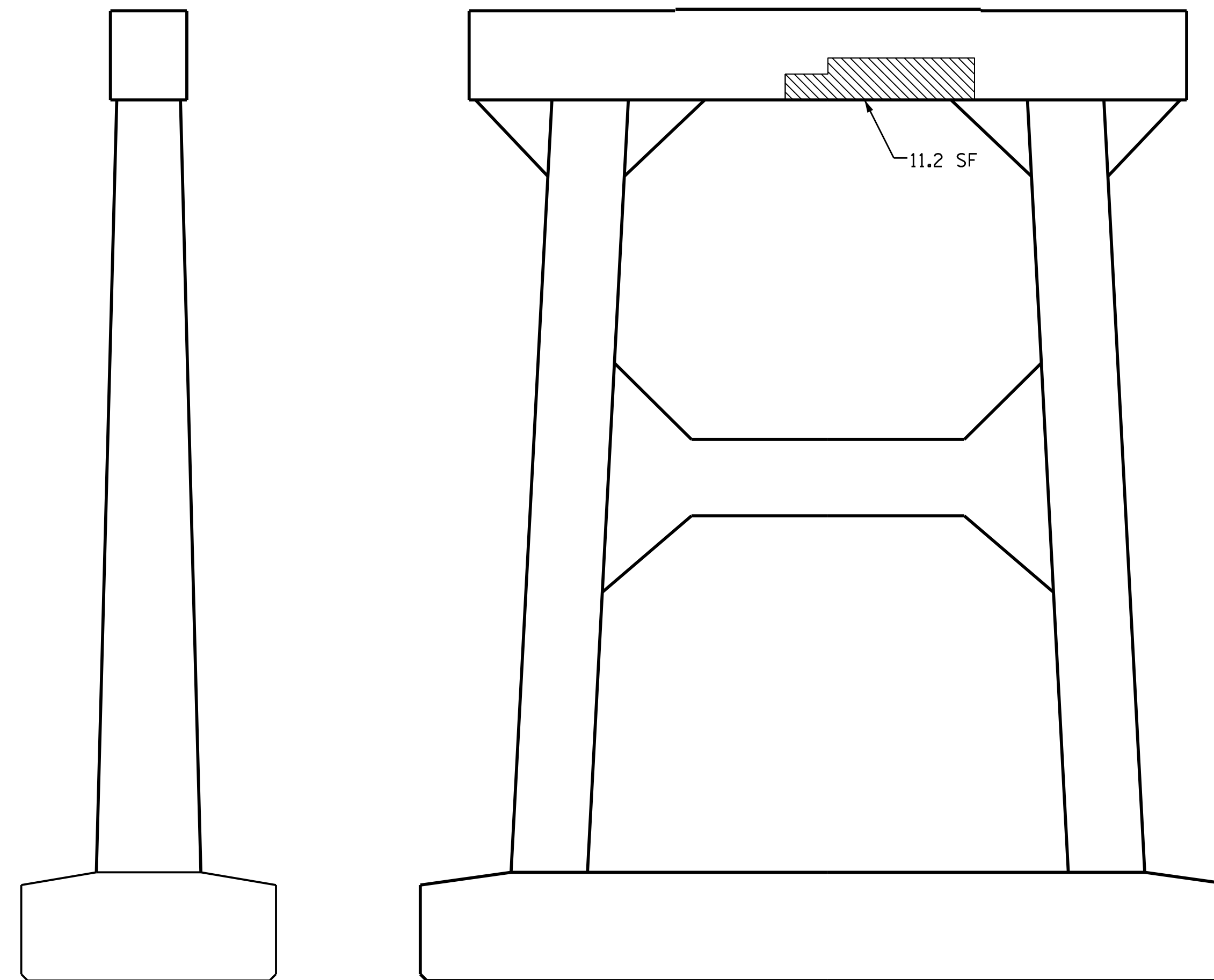


PLAN
TOP OF CAP



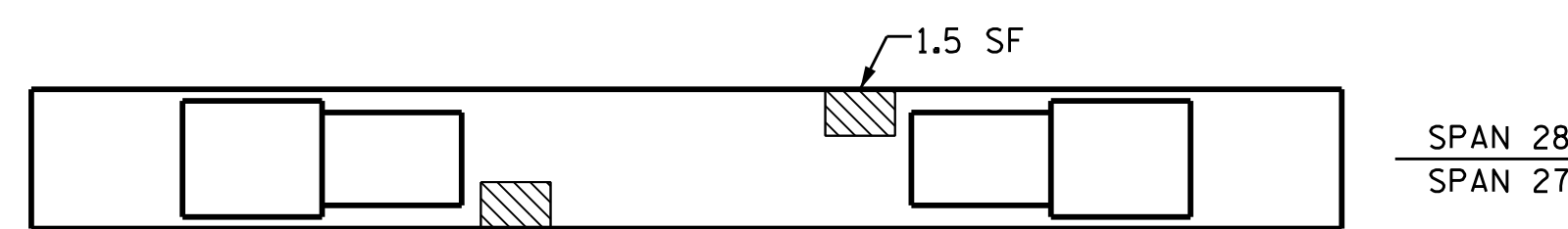
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WEST SIDE

ELEVATION
SOUTH SIDE



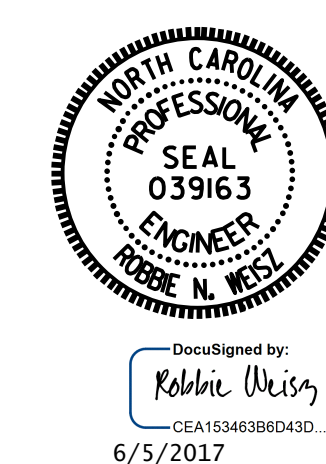
END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 28 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 27

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-34
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 28	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	53.0	26.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

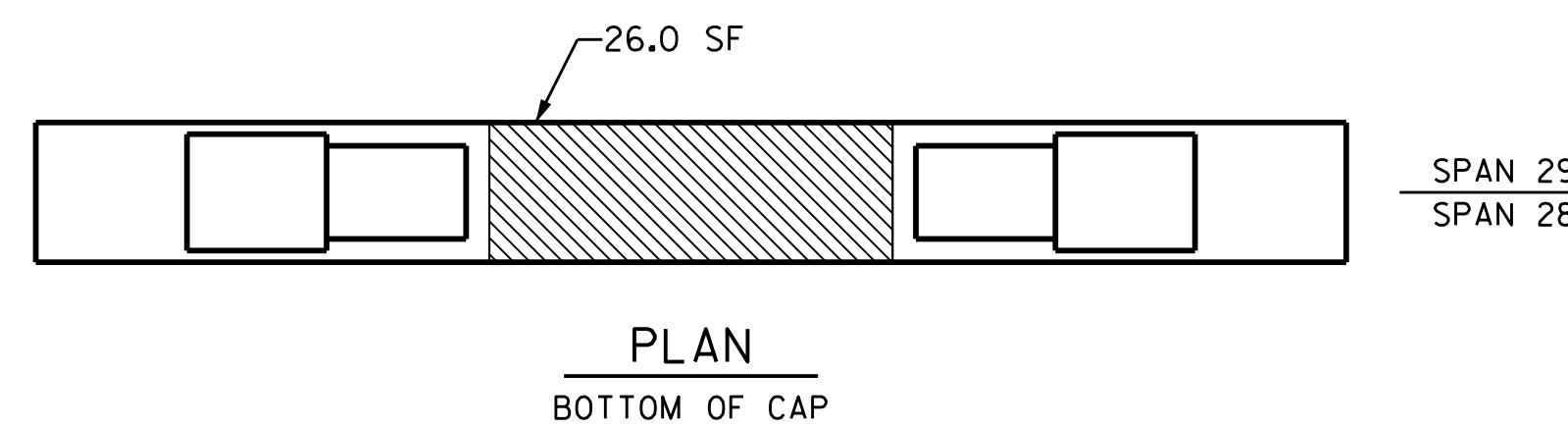
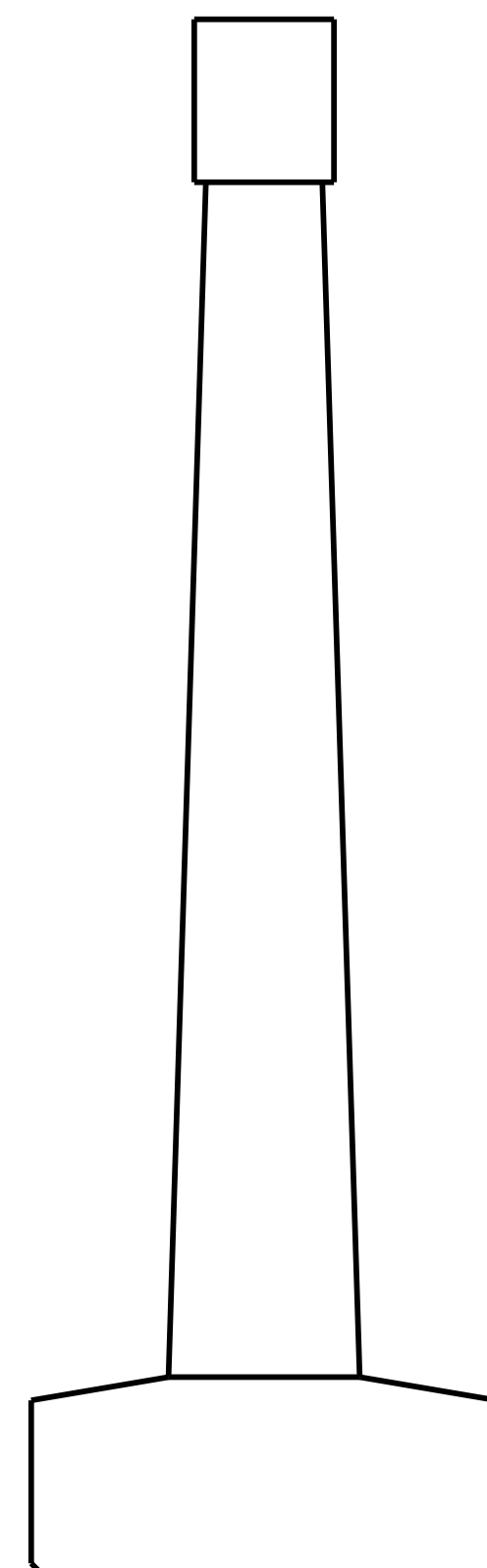
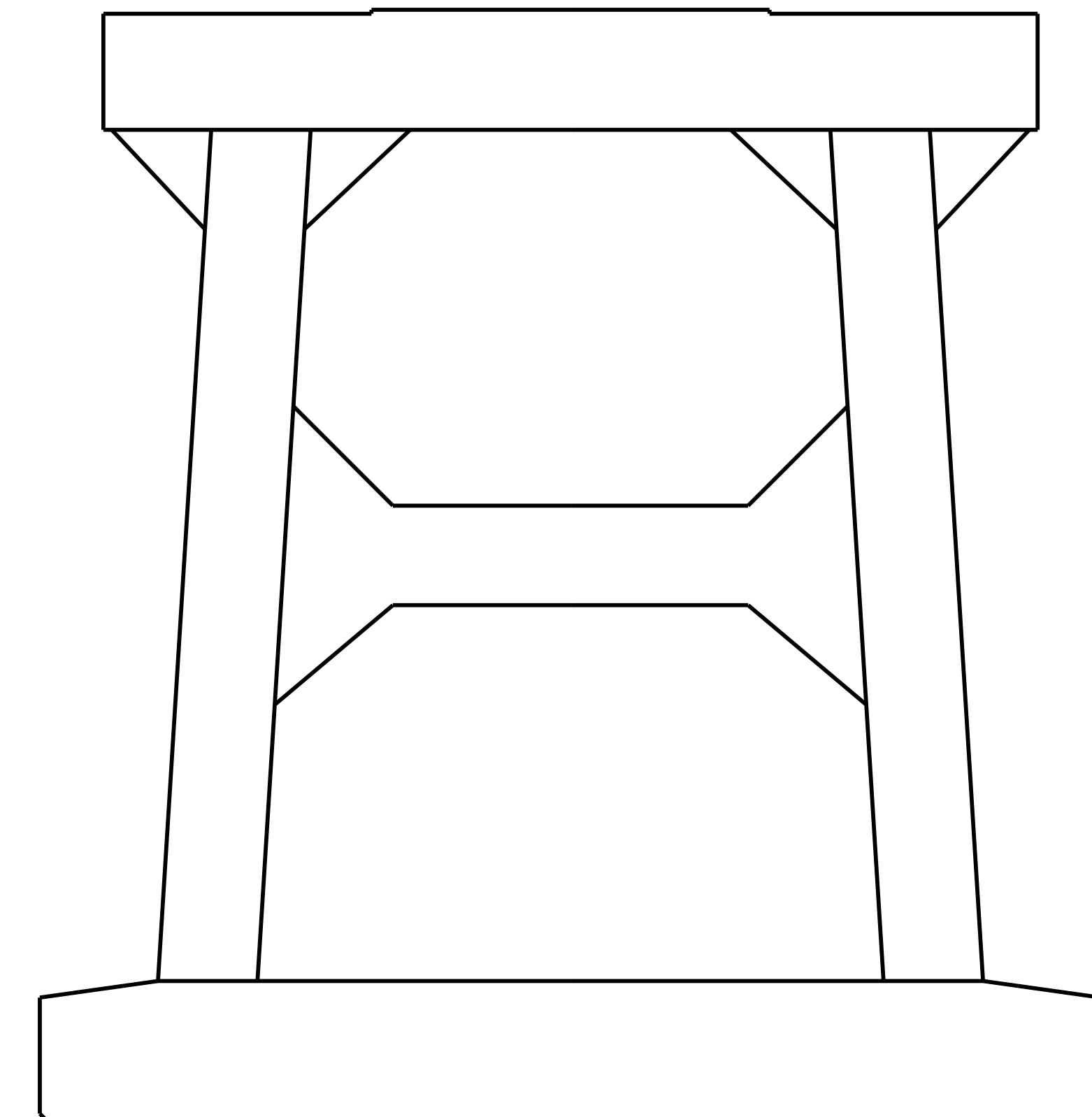
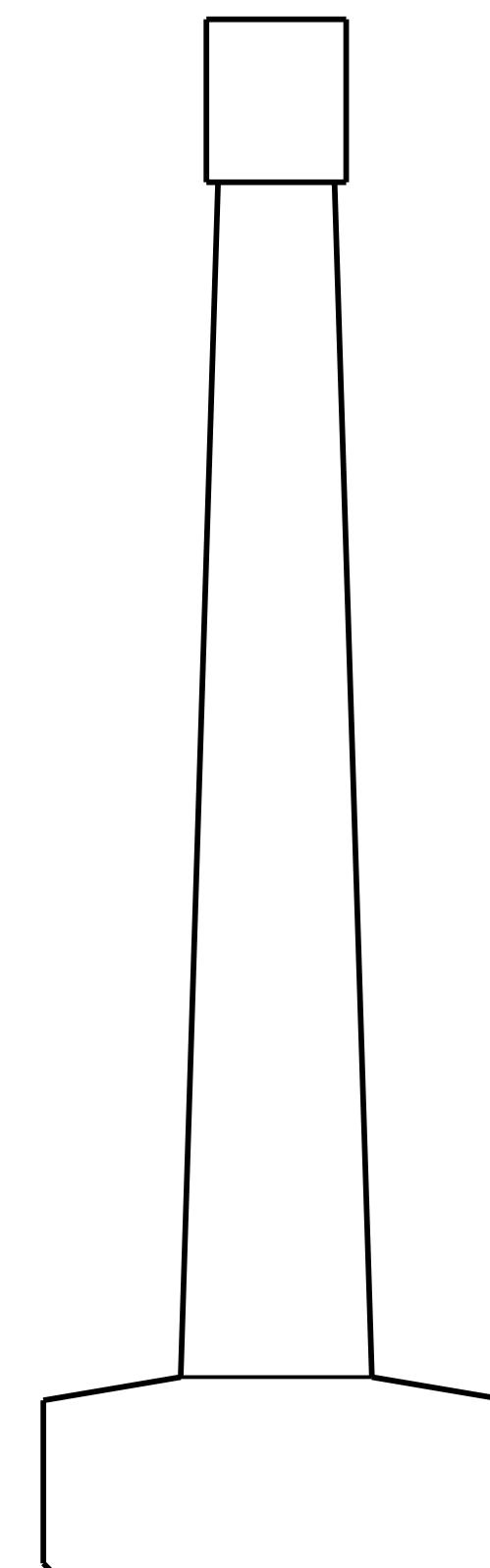
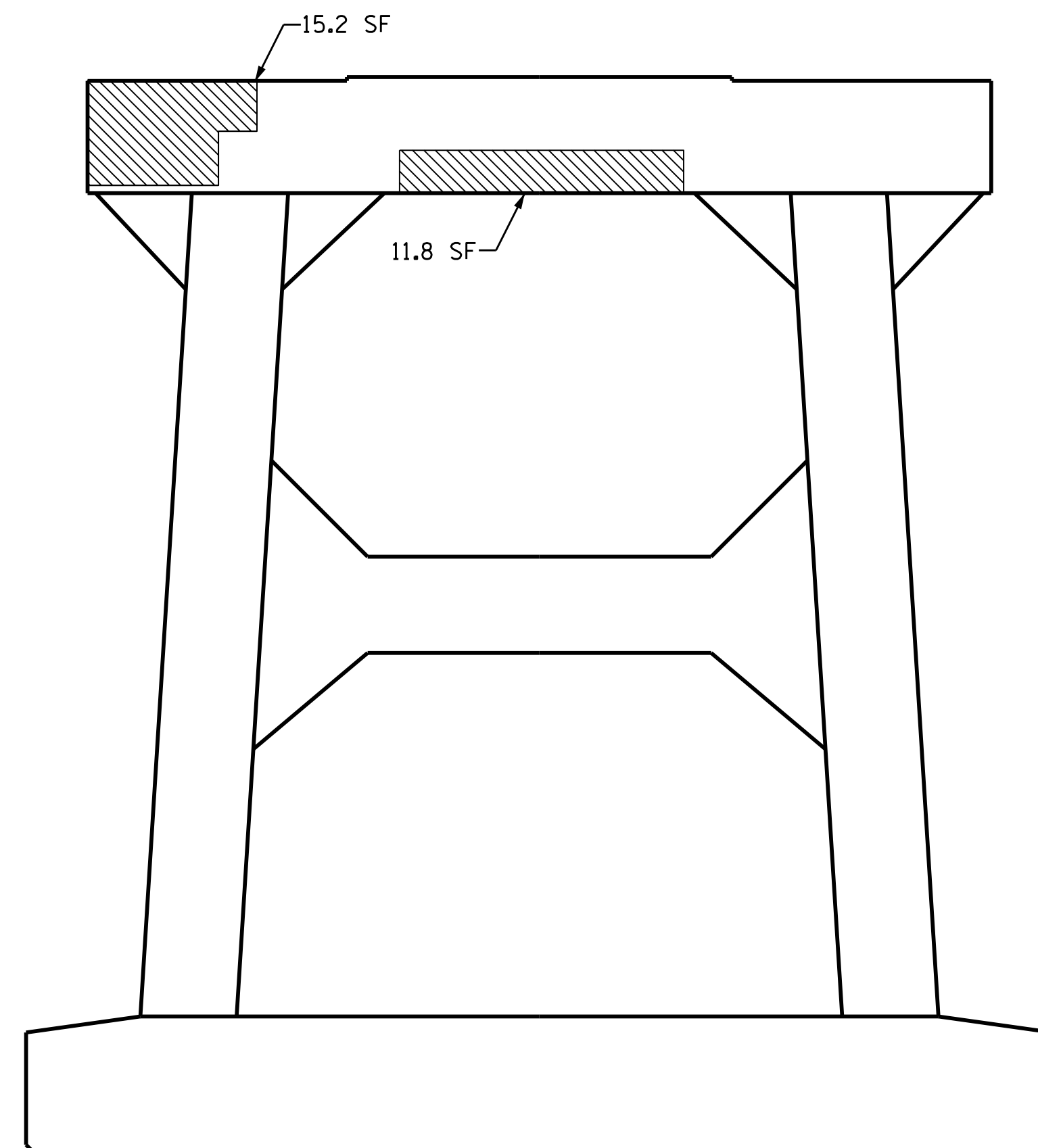
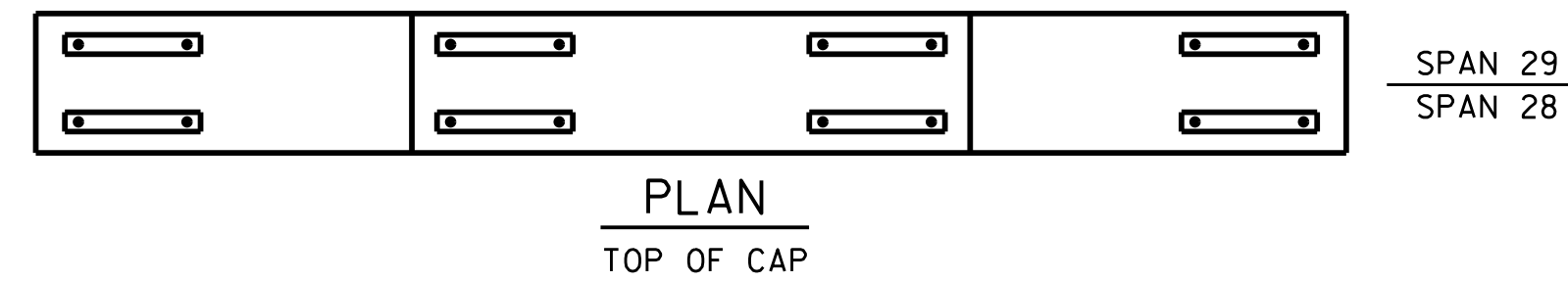
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

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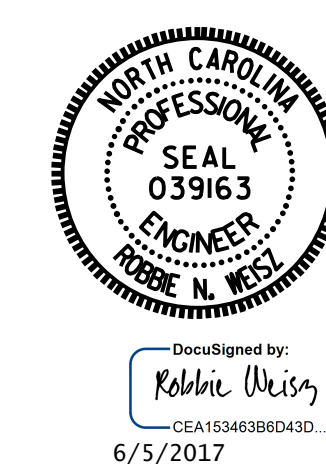
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 29 OF 96



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 28

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S-35
2			4			TOTAL SHEETS

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

NOTES:

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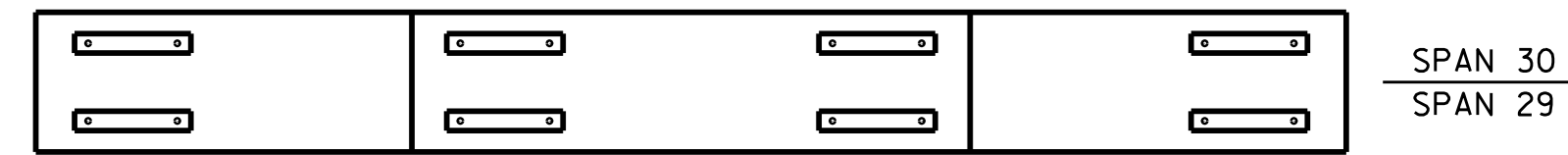
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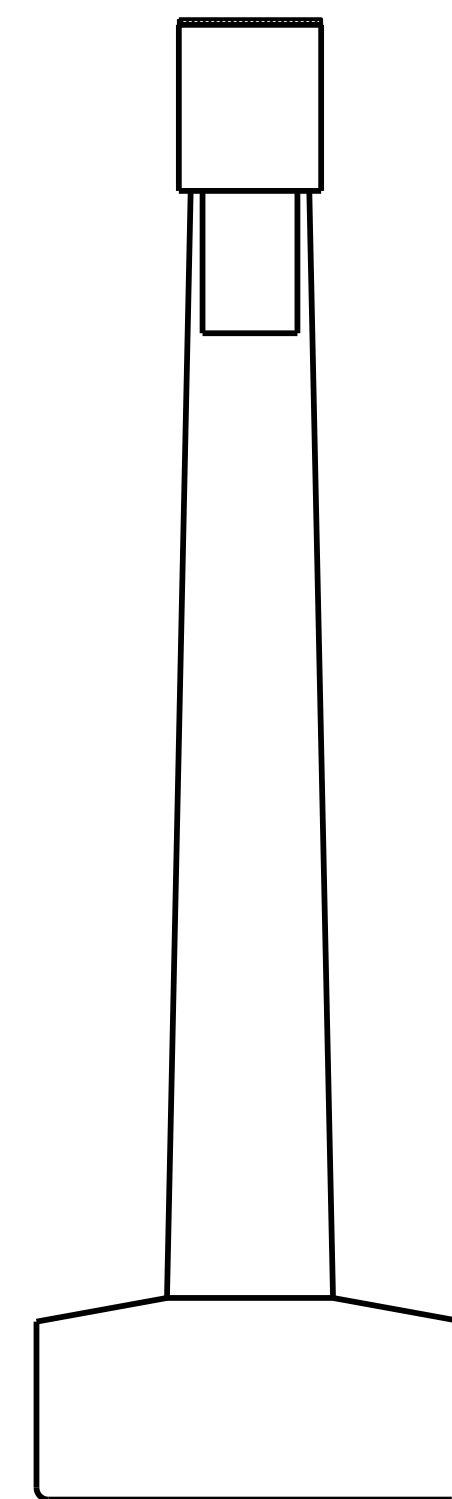
REPAIR QUANTITY TABLE

REPAIRS BENT 29	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	22.1	11.1		
COLUMN	4.8	2.4		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

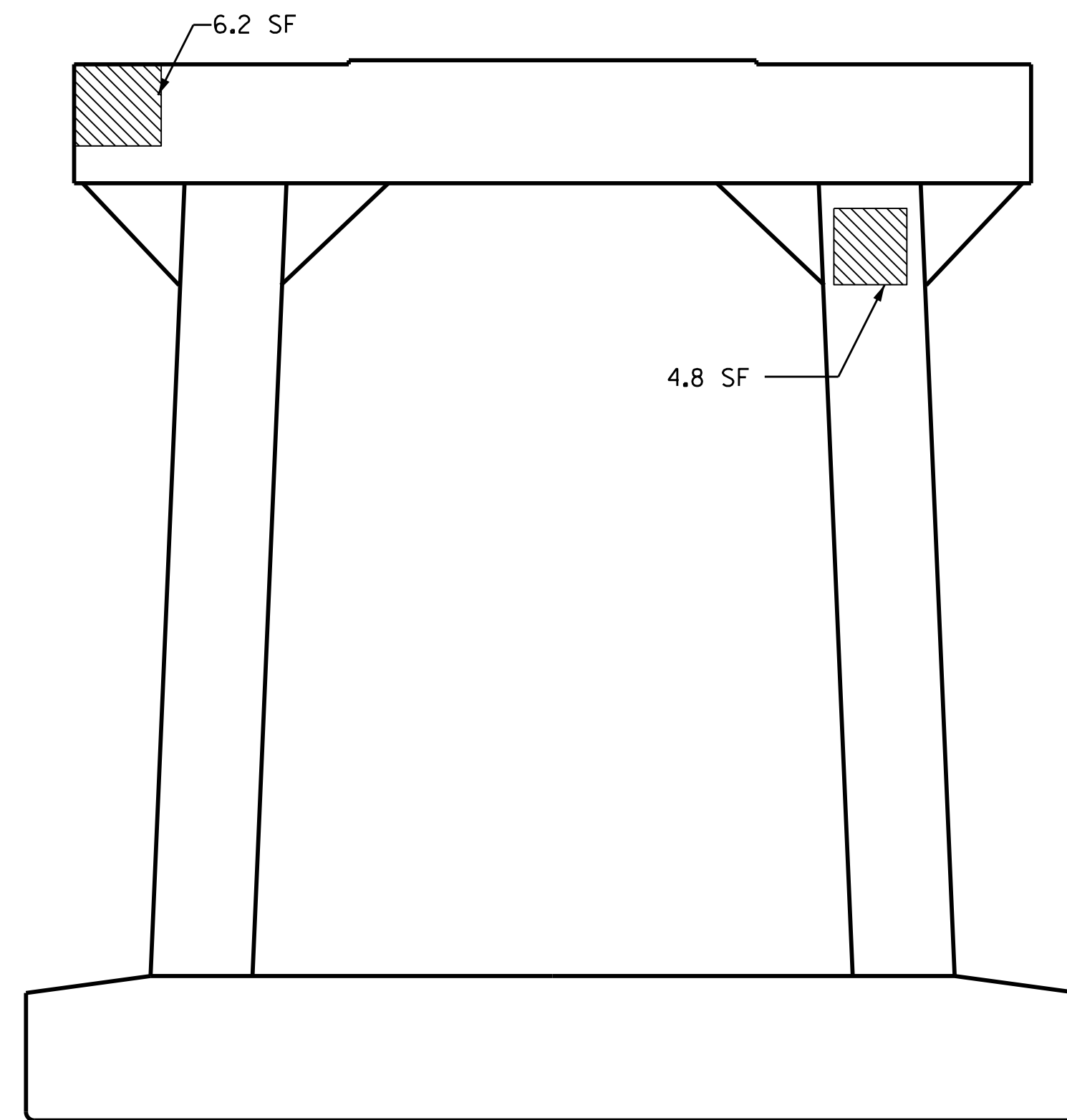
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



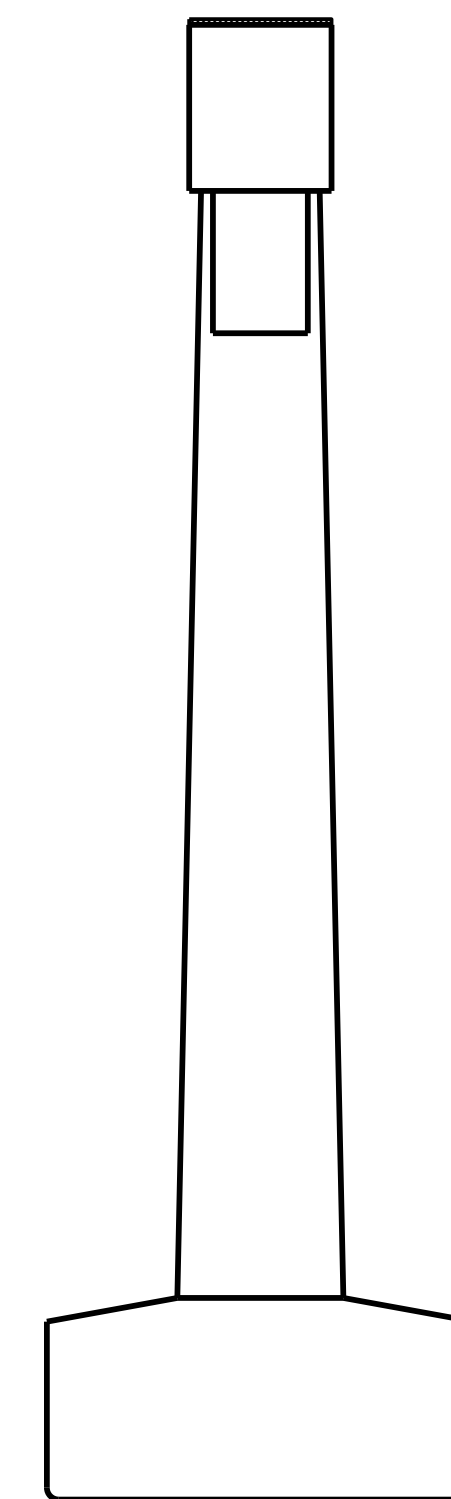
PLAN
TOP OF CAP



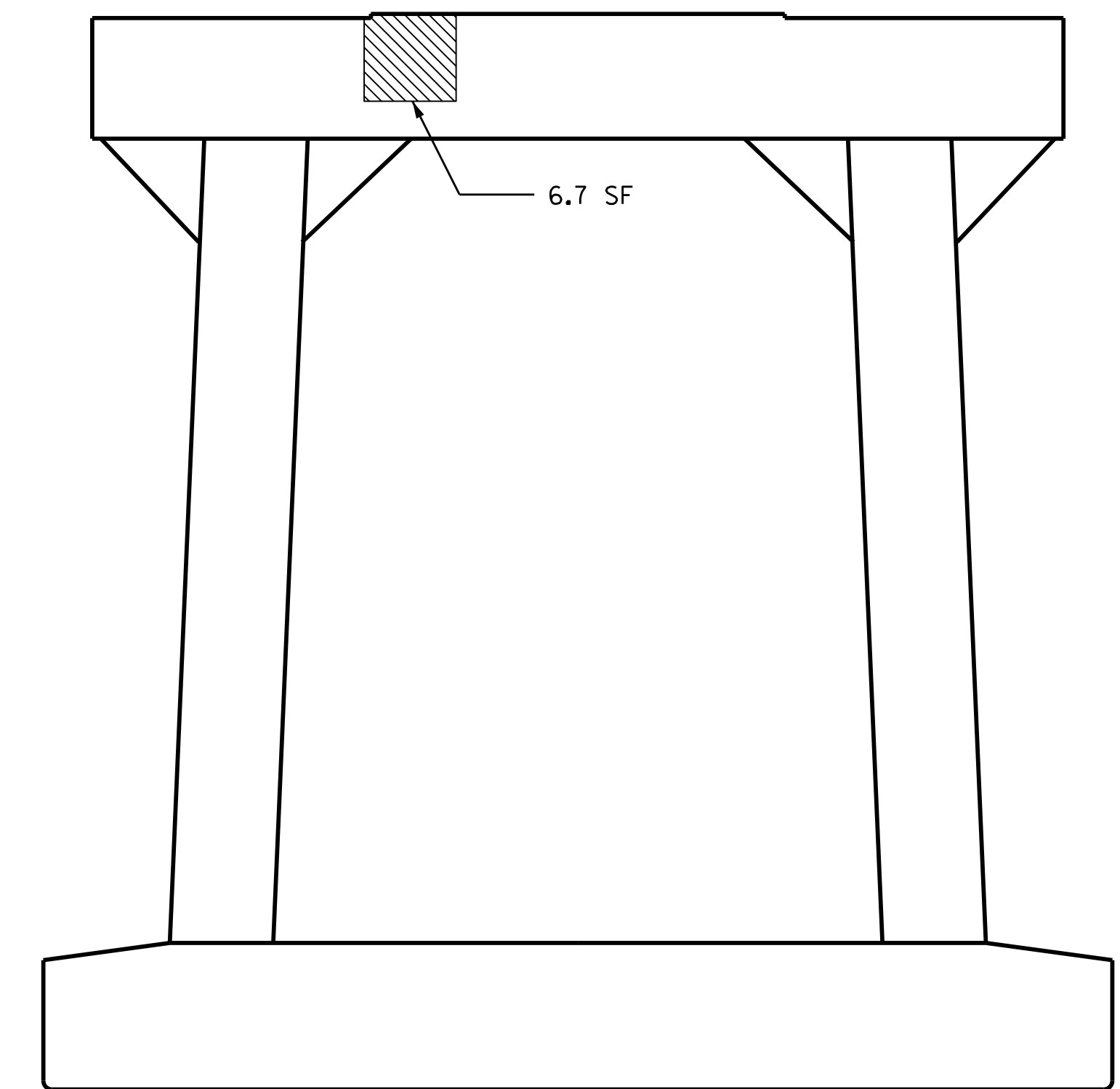
END VIEW
WEST SIDE



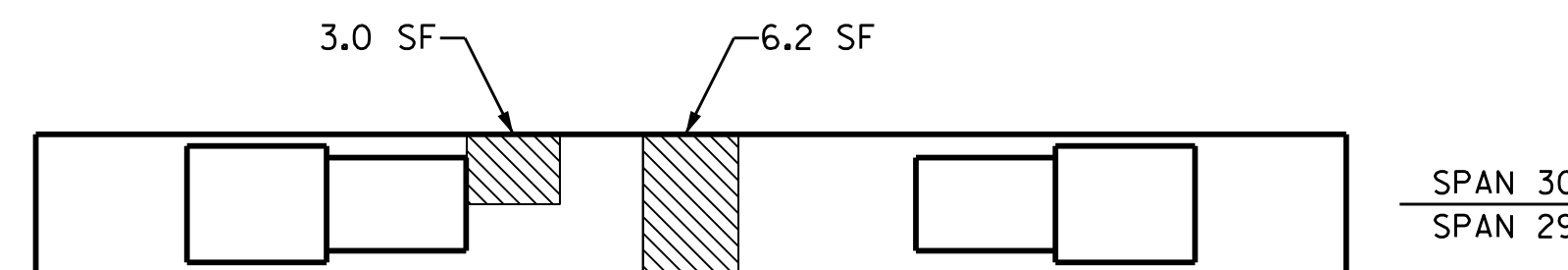
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



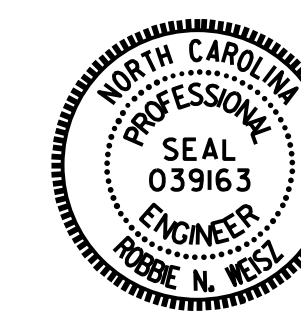
ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 30 OF 96



DocuSigned by:
Robbie Weisz
CSA1534838BD43D...
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 29**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-36
1			3			TOTAL SHEETS
2			4			

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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SIGNATURES COMPLETED

NOTES:

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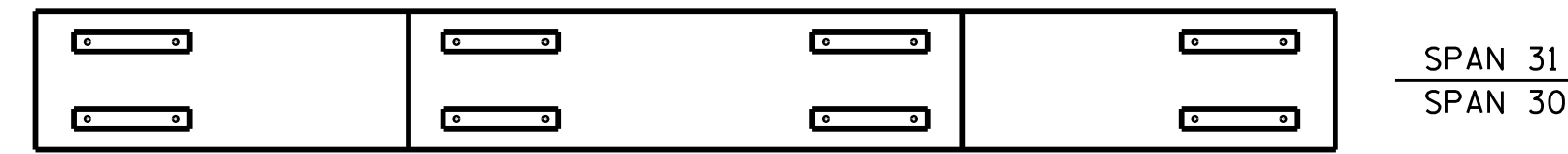
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

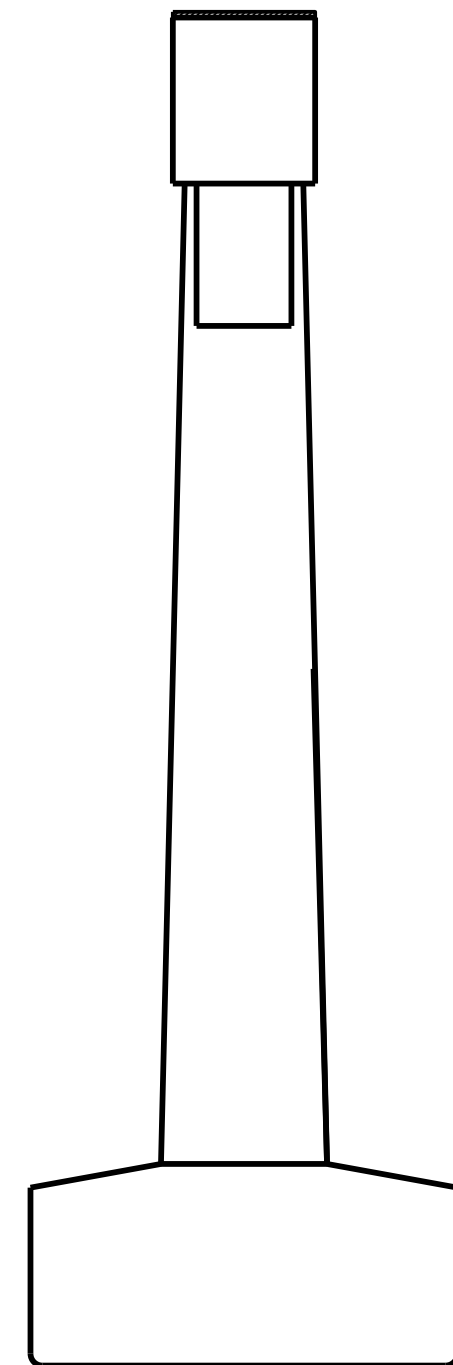
REPAIR QUANTITY TABLE

REPAIRS BENT 30	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	26.6	13.3		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

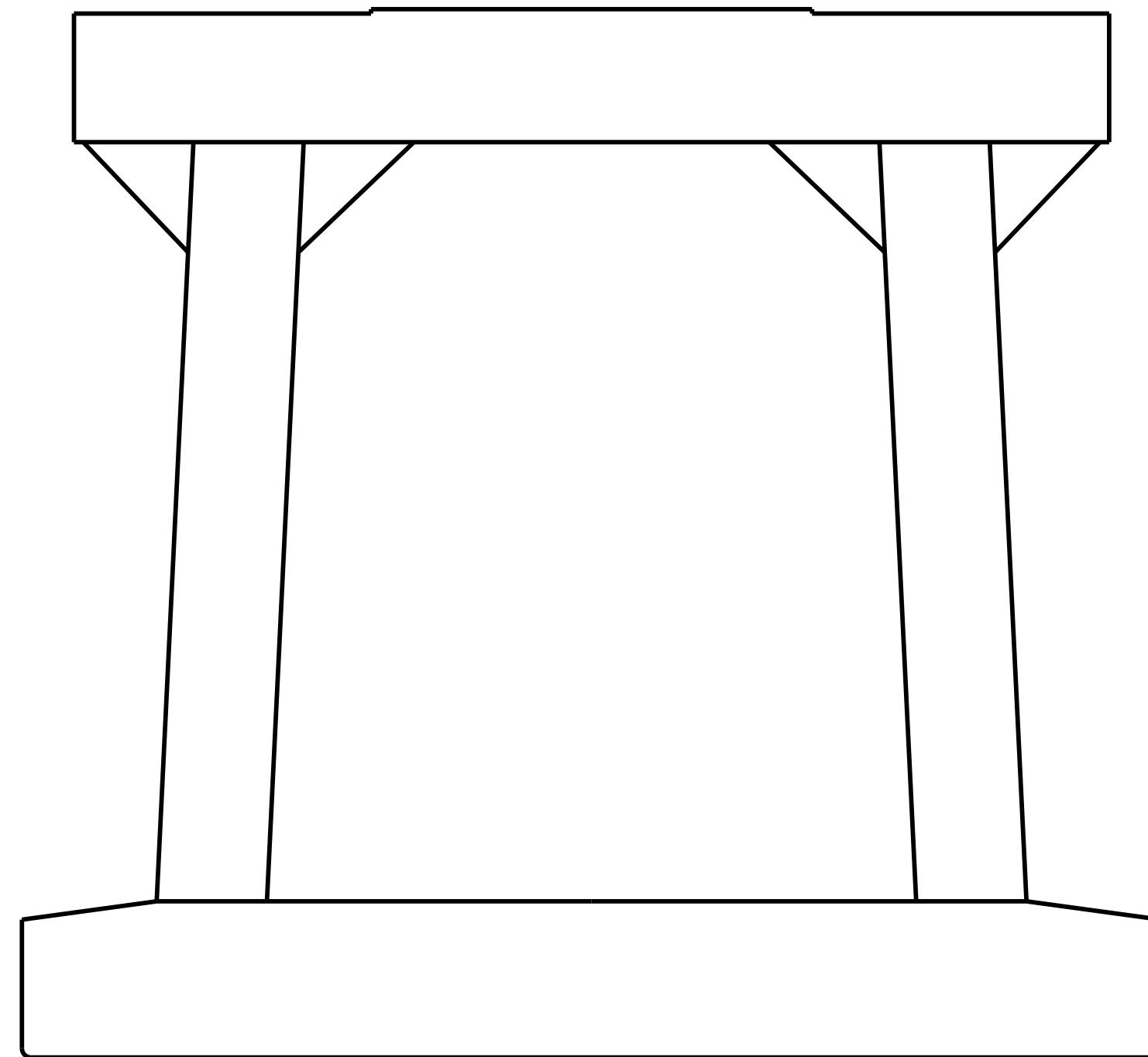
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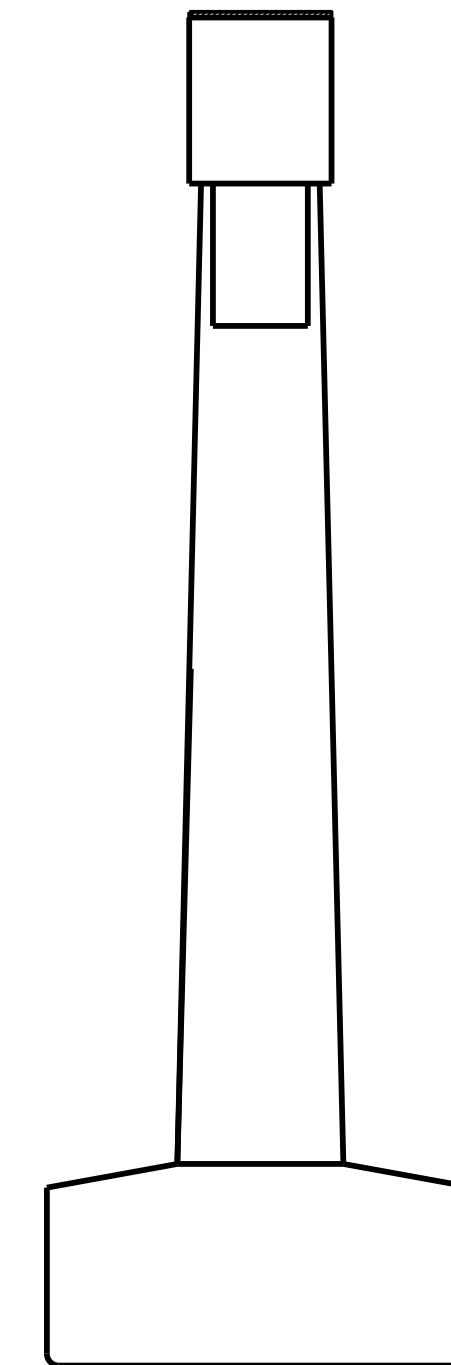
PLAN
TOP OF CAP



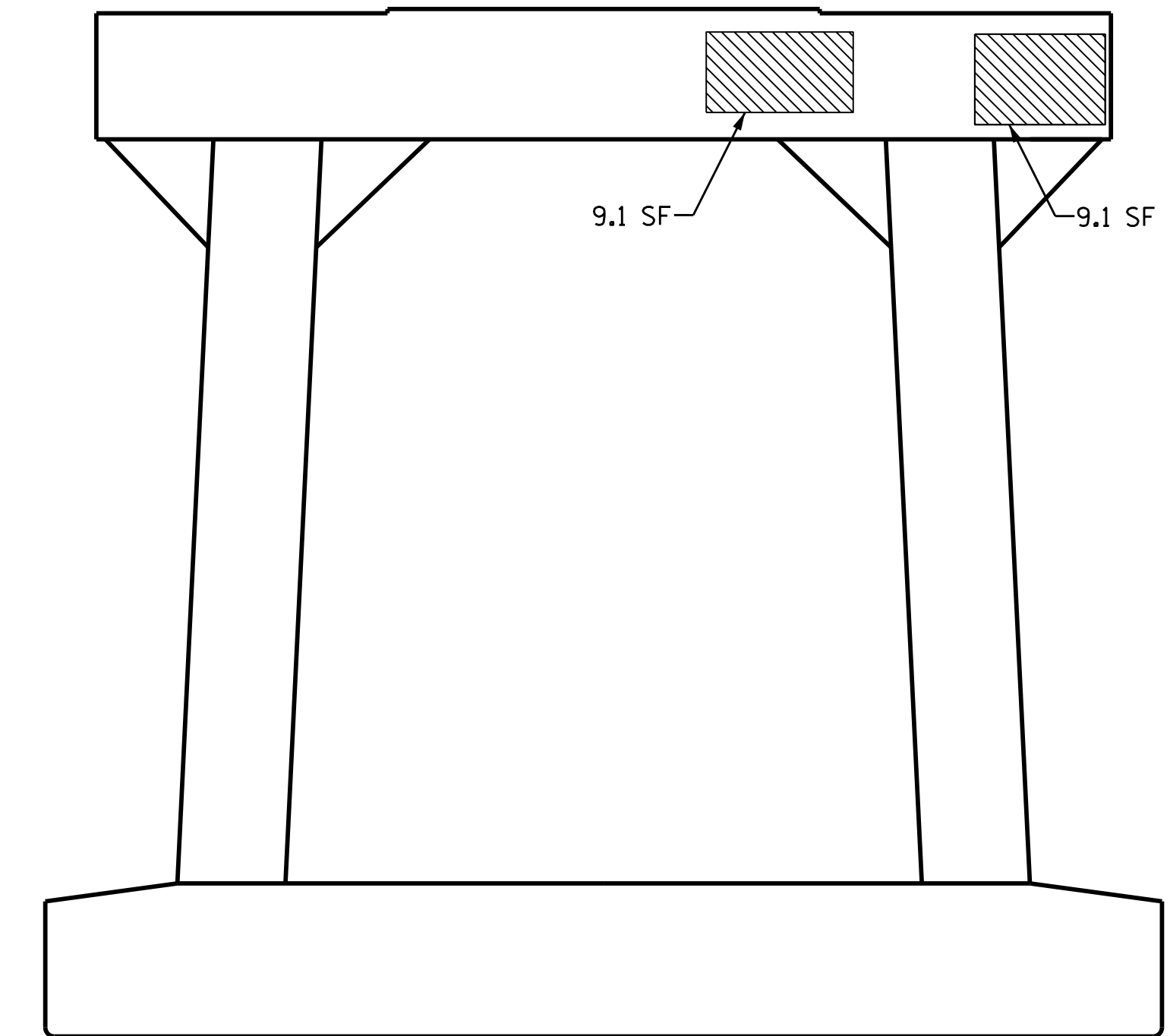
END VIEW
WEST SIDE



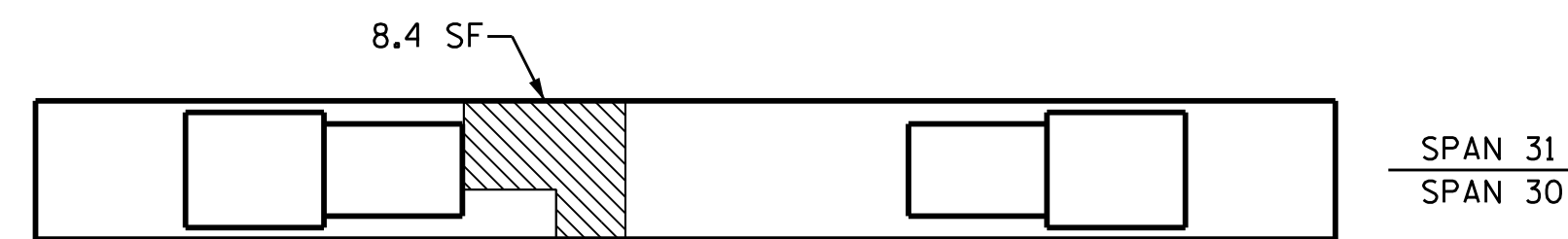
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 31 OF 96



DocuSigned by:
Robbie Weisz
CSA15346388D43D...
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 30**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

05-JUN-2017 13:13
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-37
1			3			TOTAL SHEETS
2			4			

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.

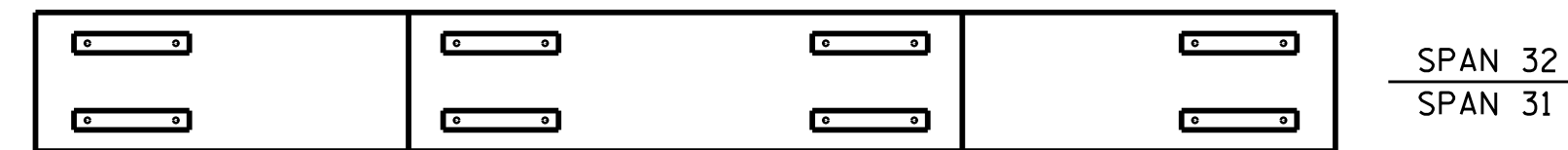
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

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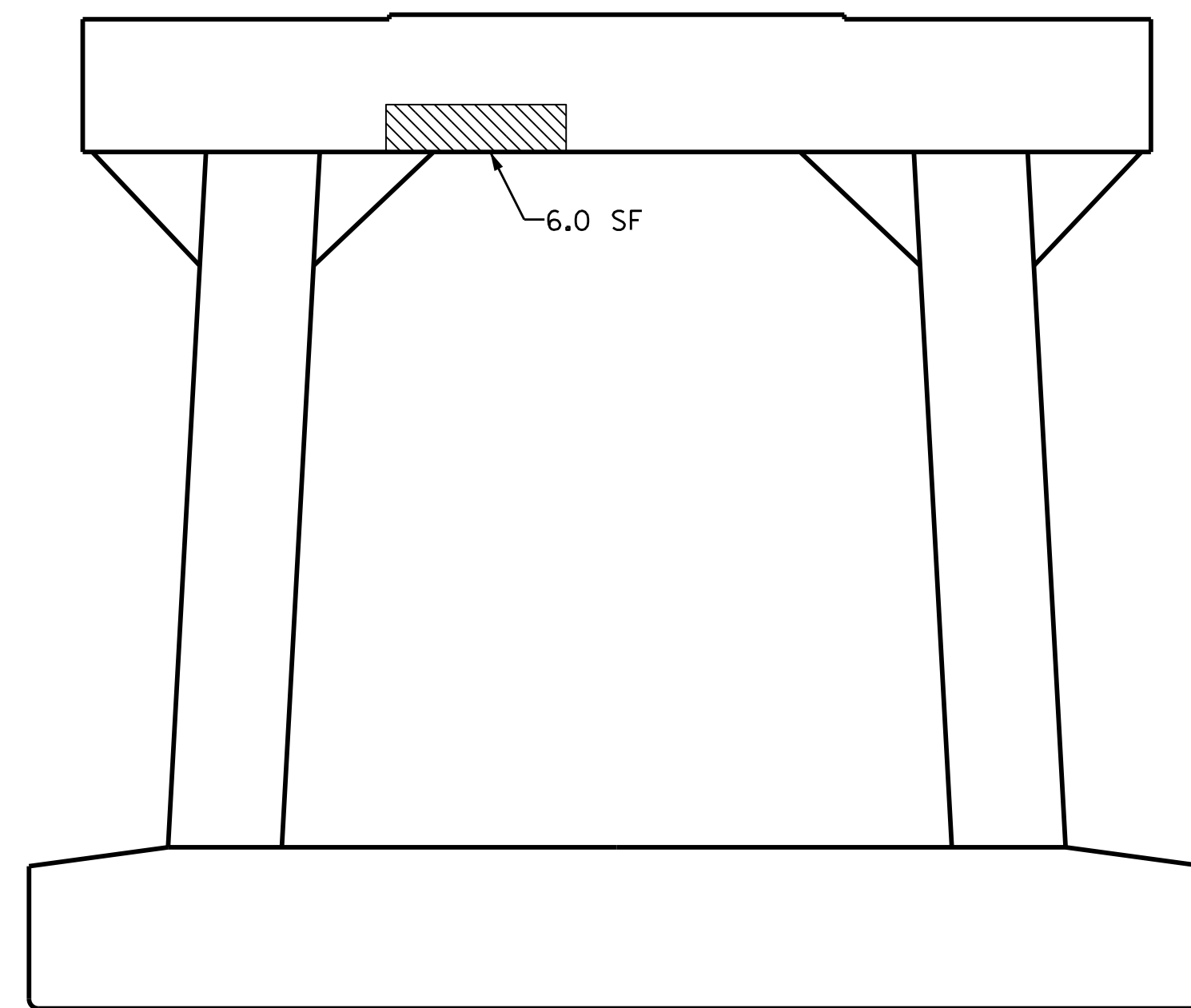
REPAIR QUANTITY TABLE

REPAIRS BENT 31	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.9	11.0		
COLUMN	0.0	0.0		
STRUT	2.9	1.5		
FOOTER	0.0	0.0		

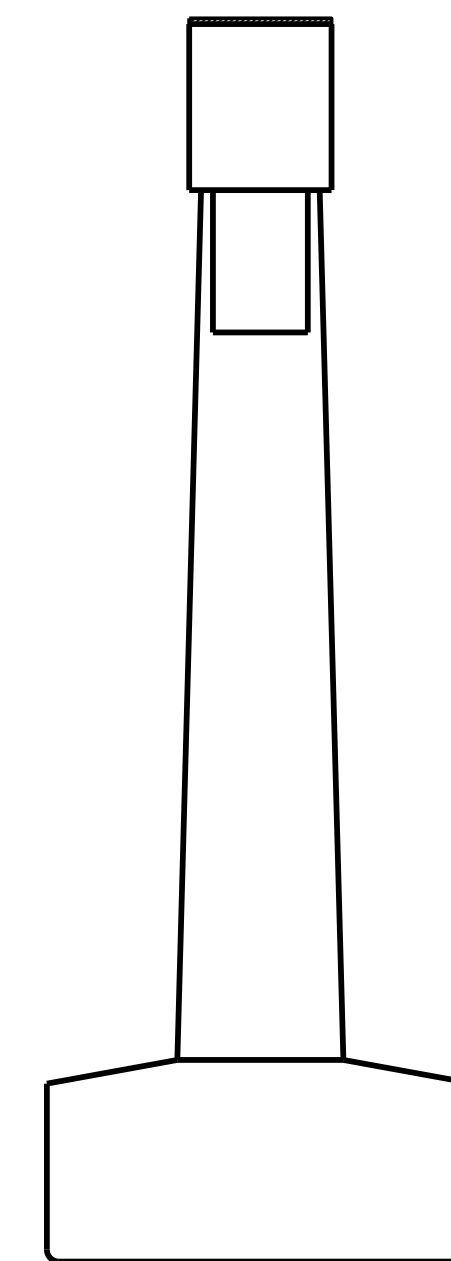
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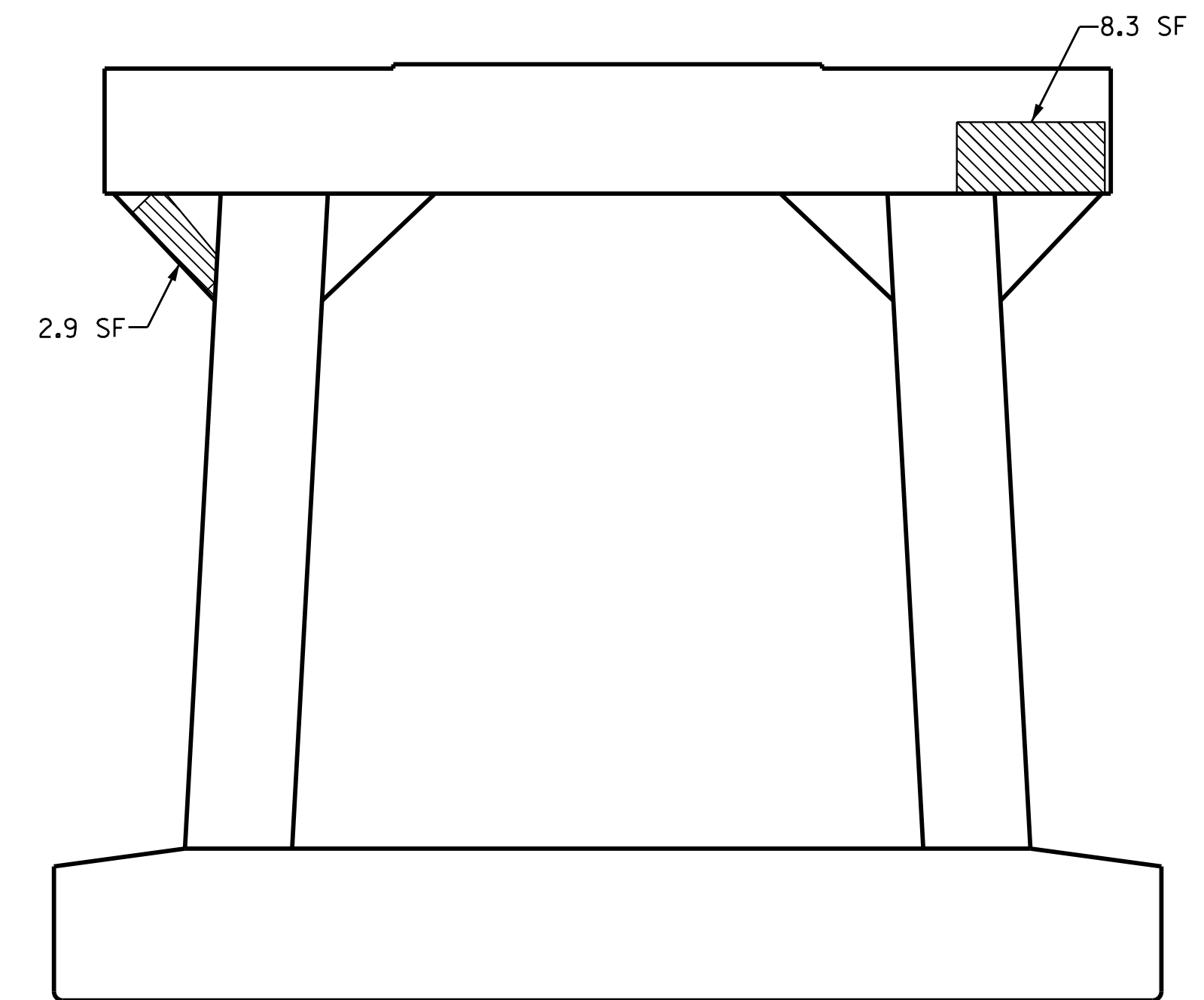
PLAN
TOP OF CAP



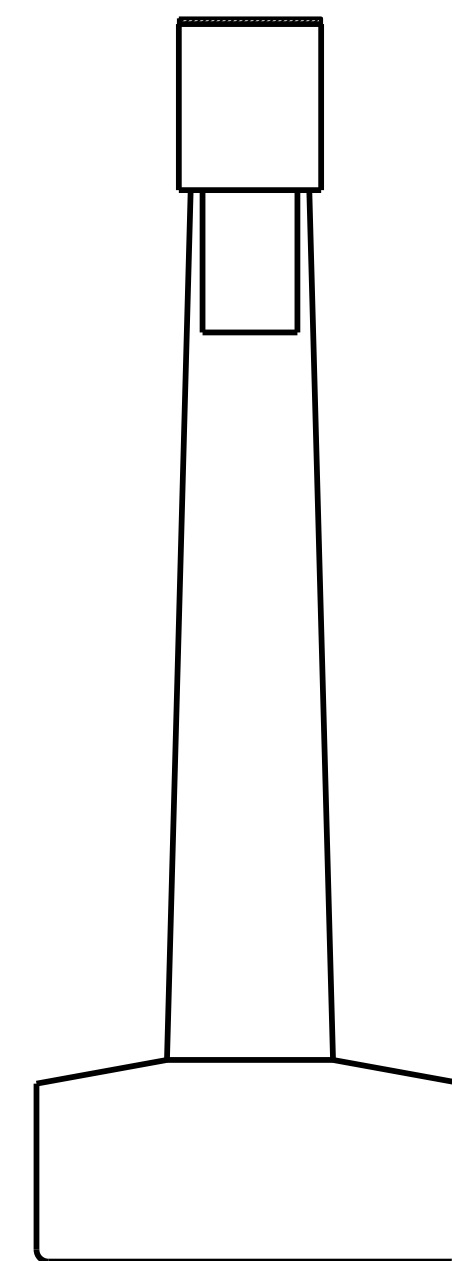
ELEVATION
SOUTH SIDE



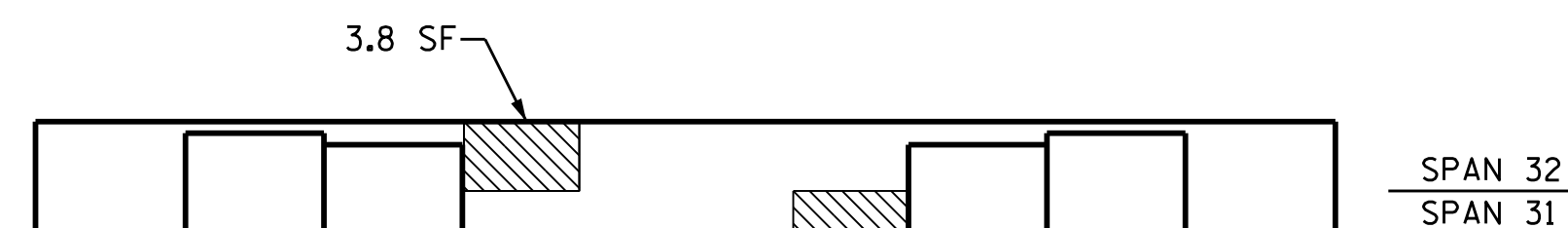
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



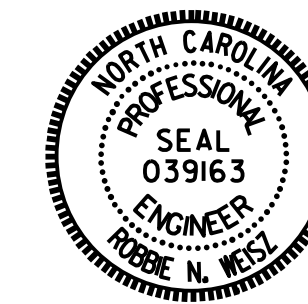
END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 32 OF 96



DocuSigned by:
 Robbie Weisz
 CS-15348380430...
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 31**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-38
1			3			TOTAL SHEETS
2			4			

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 SIGNATURES COMPLETED

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

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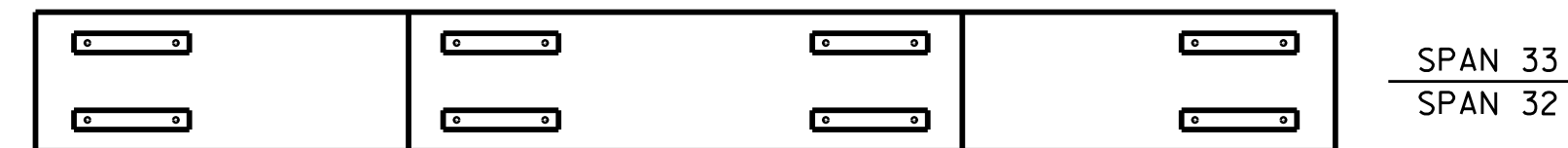
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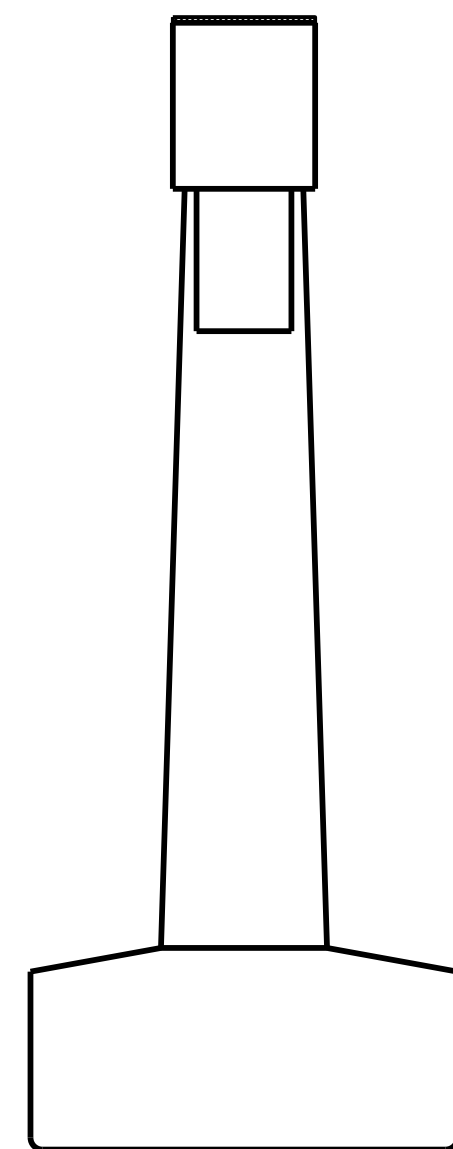
REPAIR QUANTITY TABLE

REPAIRS BENT 32	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	25.4	12.7		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

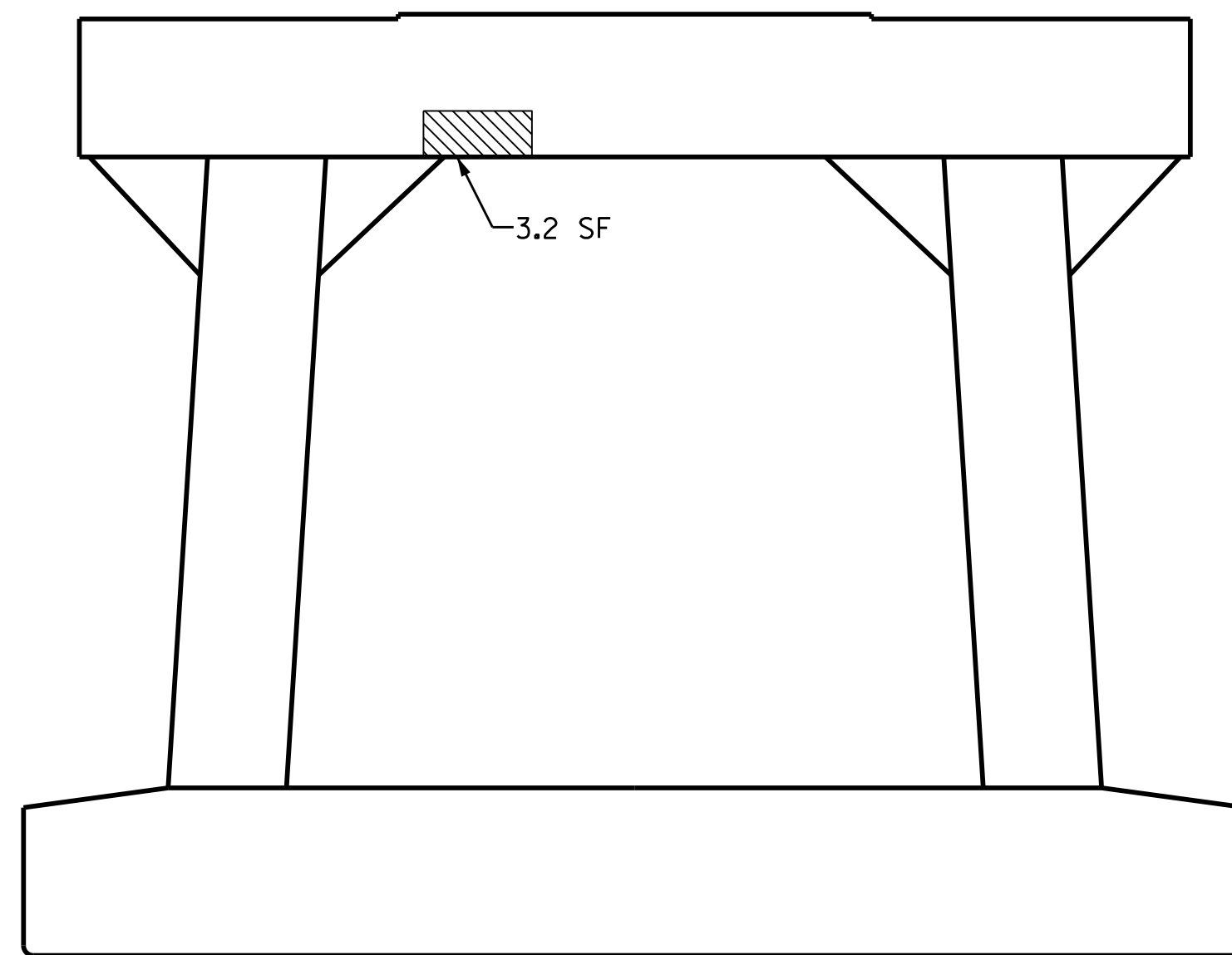
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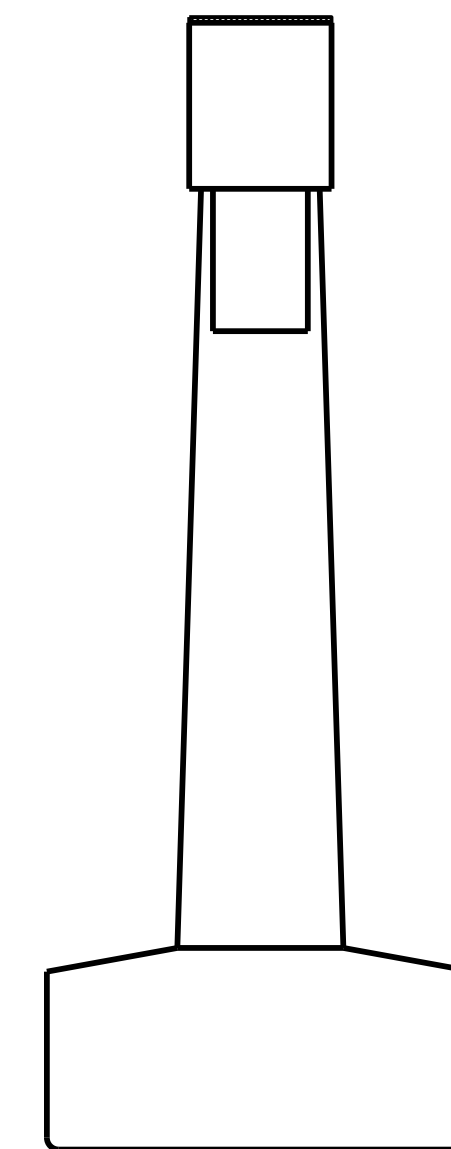
PLAN
TOP OF CAP



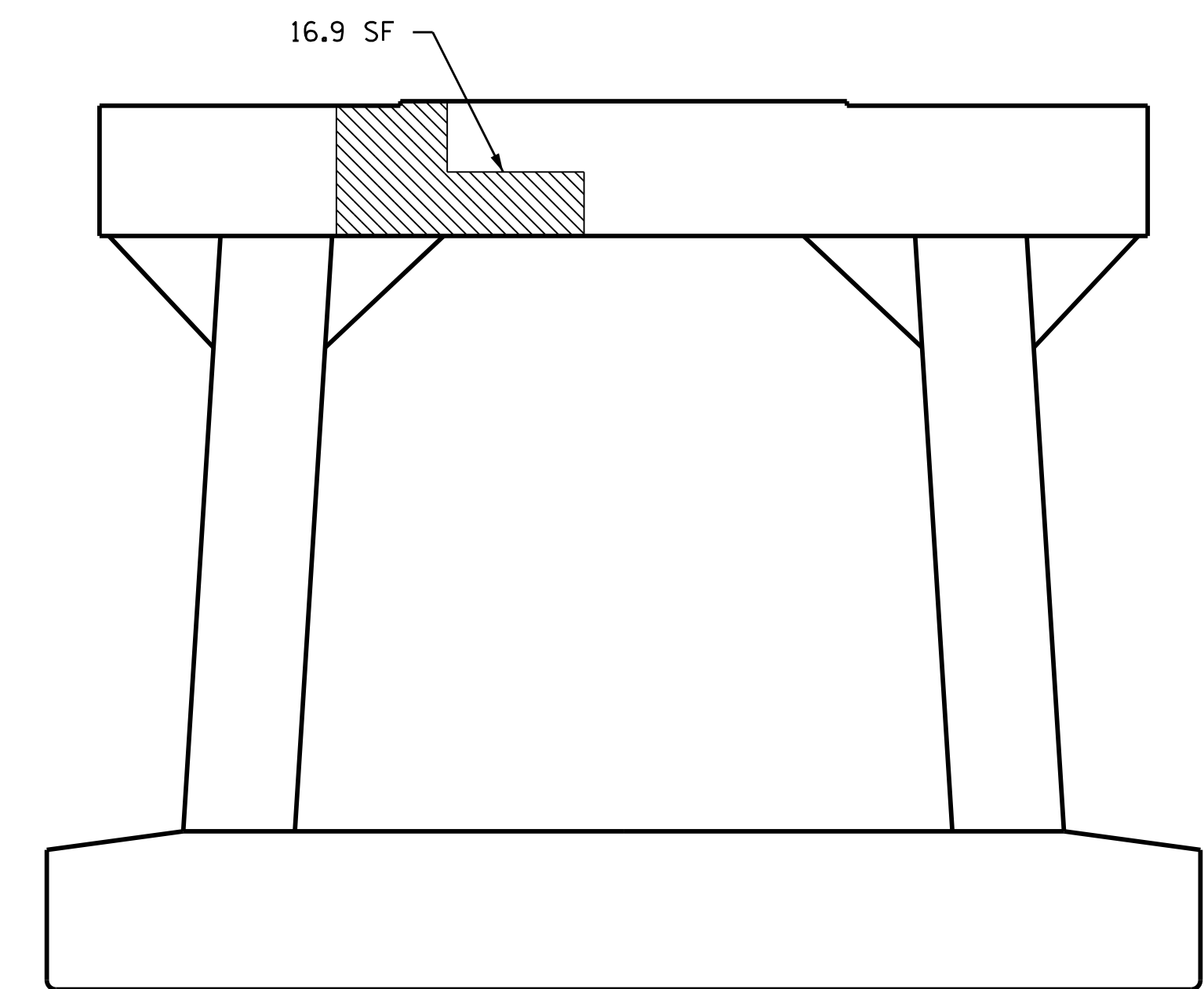
END VIEW
WEST SIDE



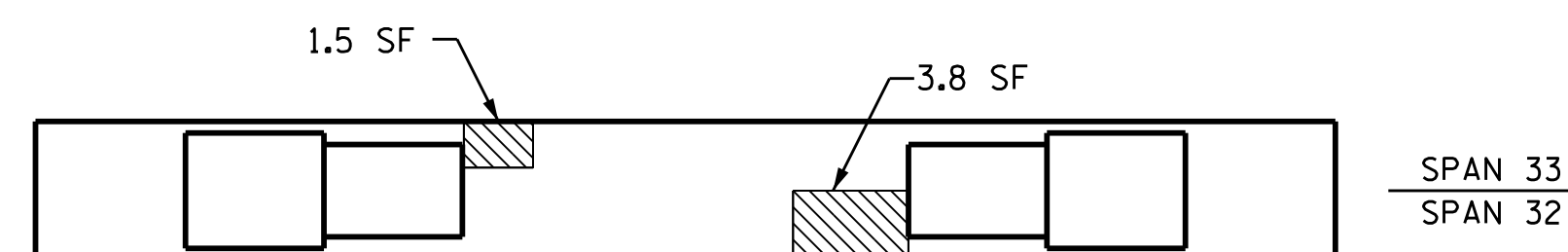
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



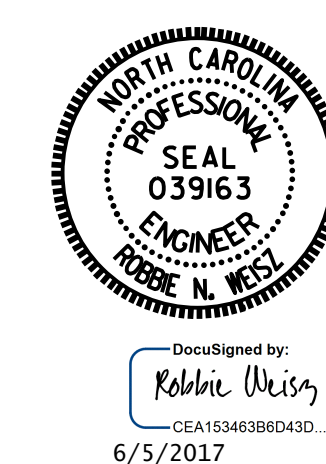
ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 33 OF 96



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 32**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S-39
2			4			TOTAL SHEETS

NOTES:

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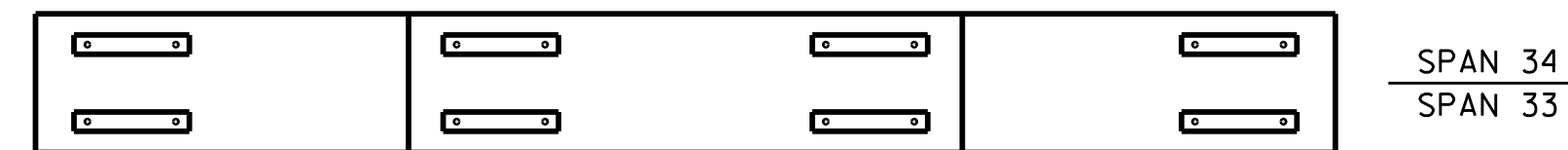
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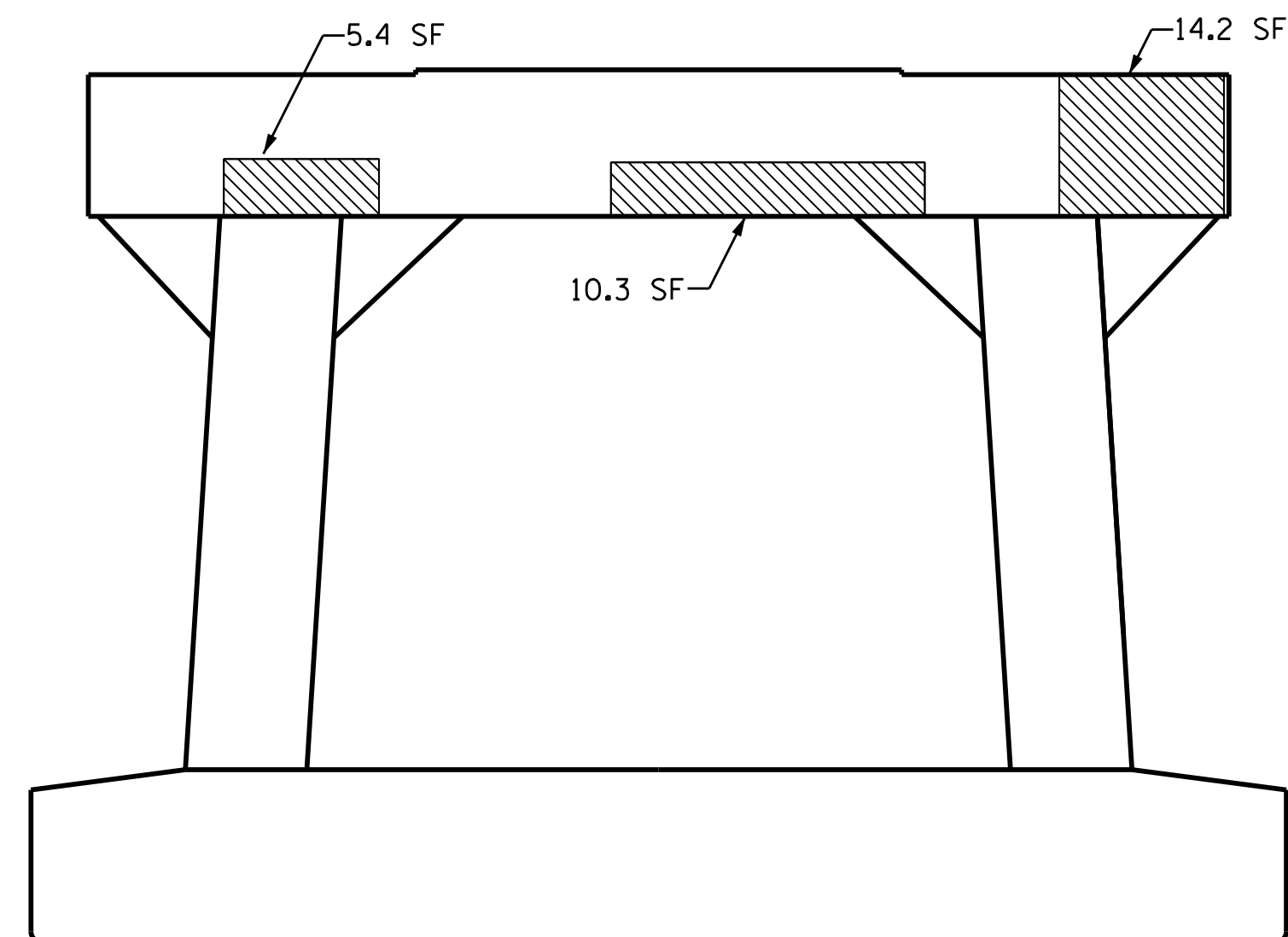
REPAIR QUANTITY TABLE

REPAIRS BENT 33	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	36.2	18.1		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

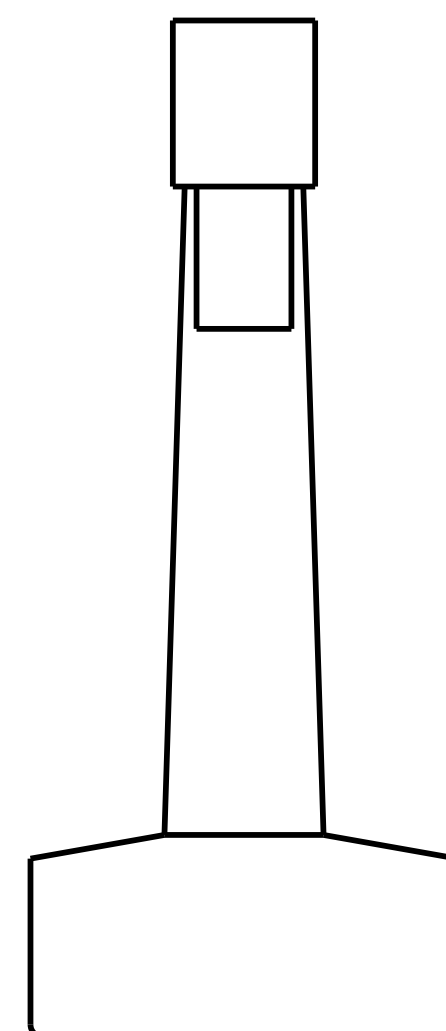
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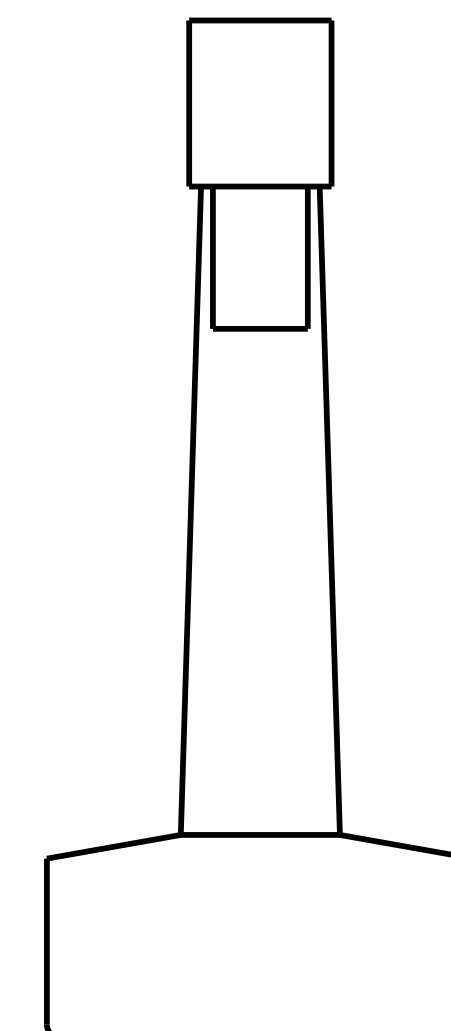
PLAN
TOP OF CAP



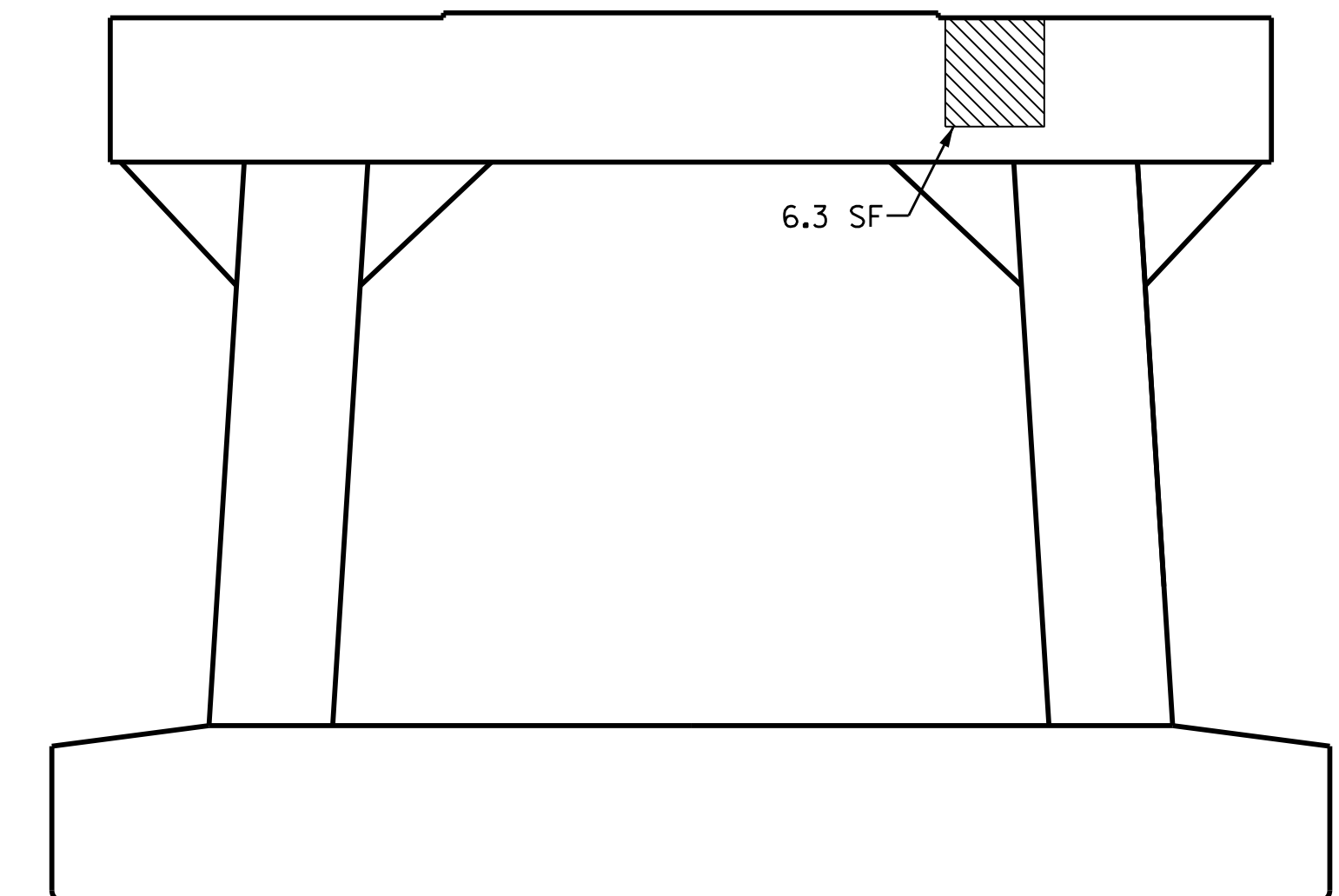
ELEVATION
SOUTH SIDE



END VIEW
WEST SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

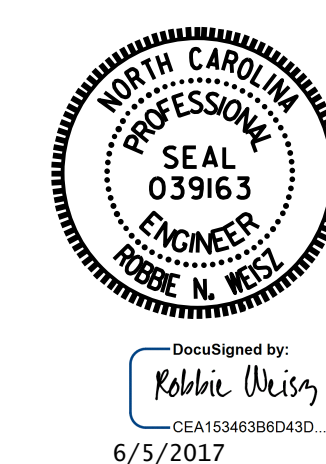
▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 34 OF 96



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 33

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
CHECKED BY : R. N. WEISZ DATE : 10/2016

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-40
1			3			TOTAL SHEETS
2			4			

NOTES:

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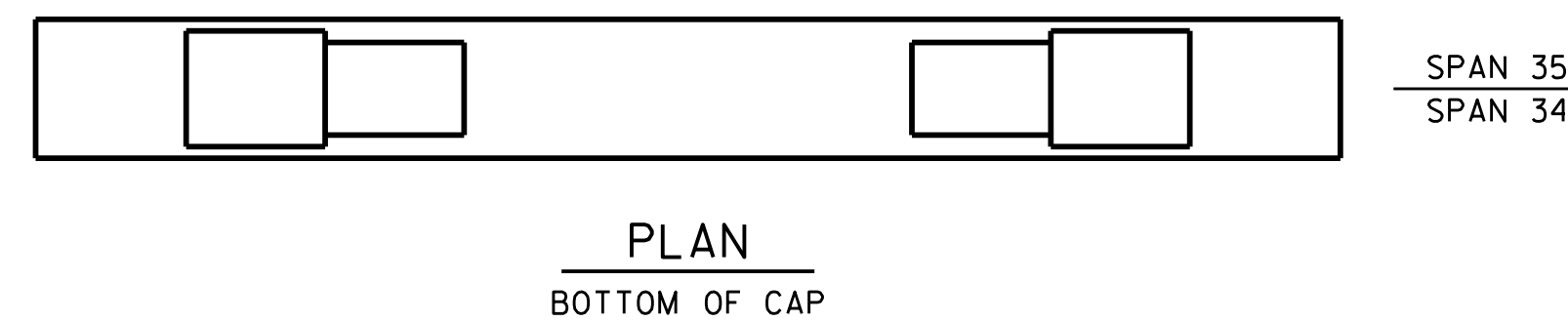
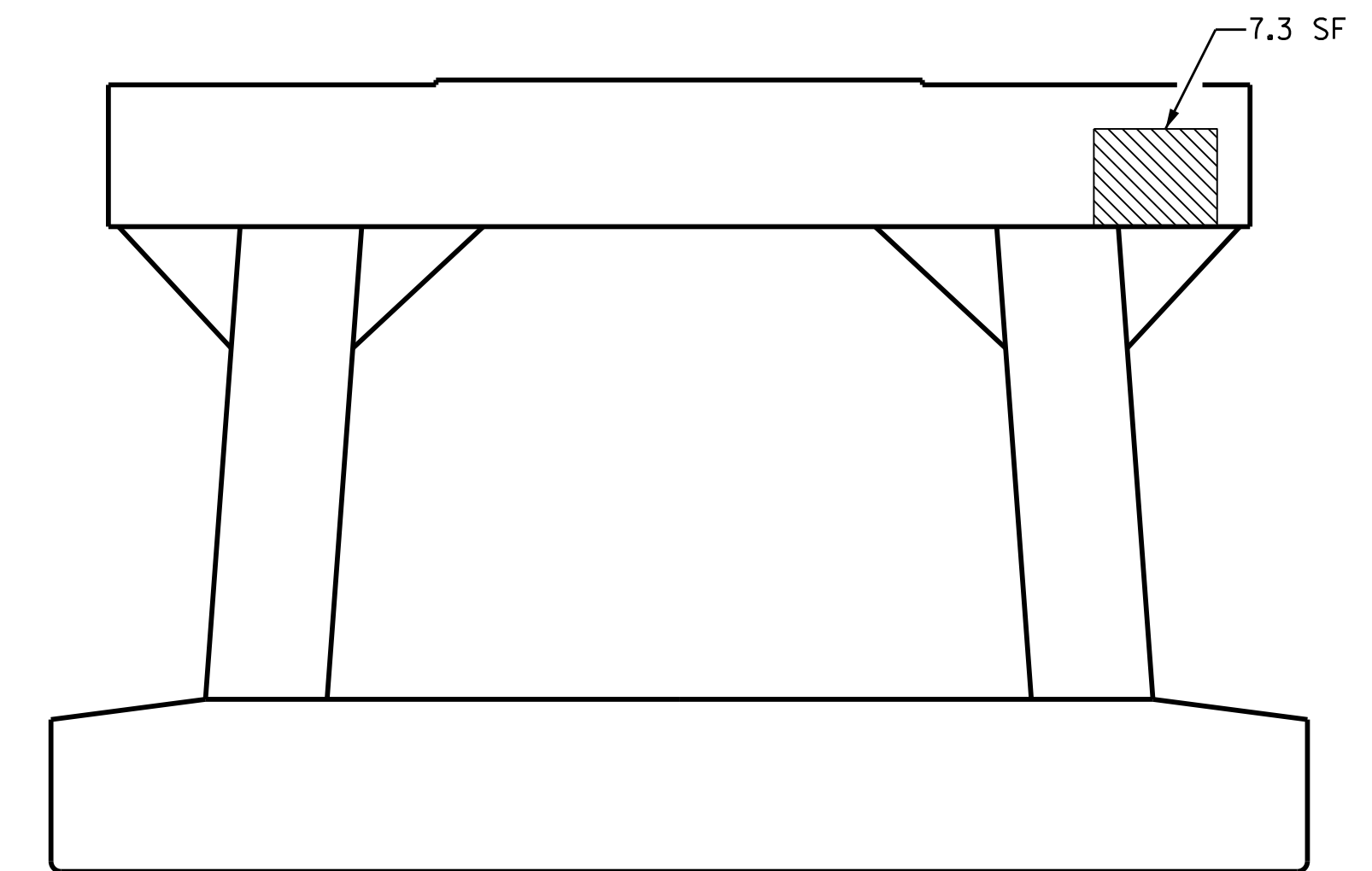
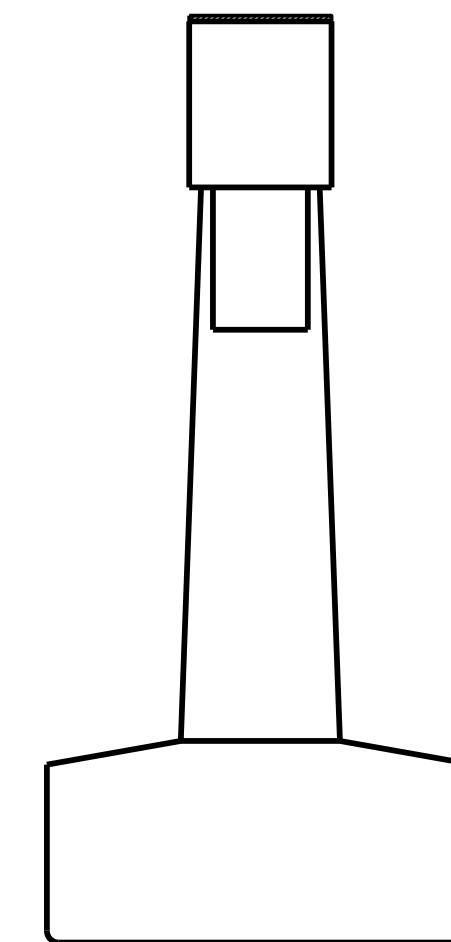
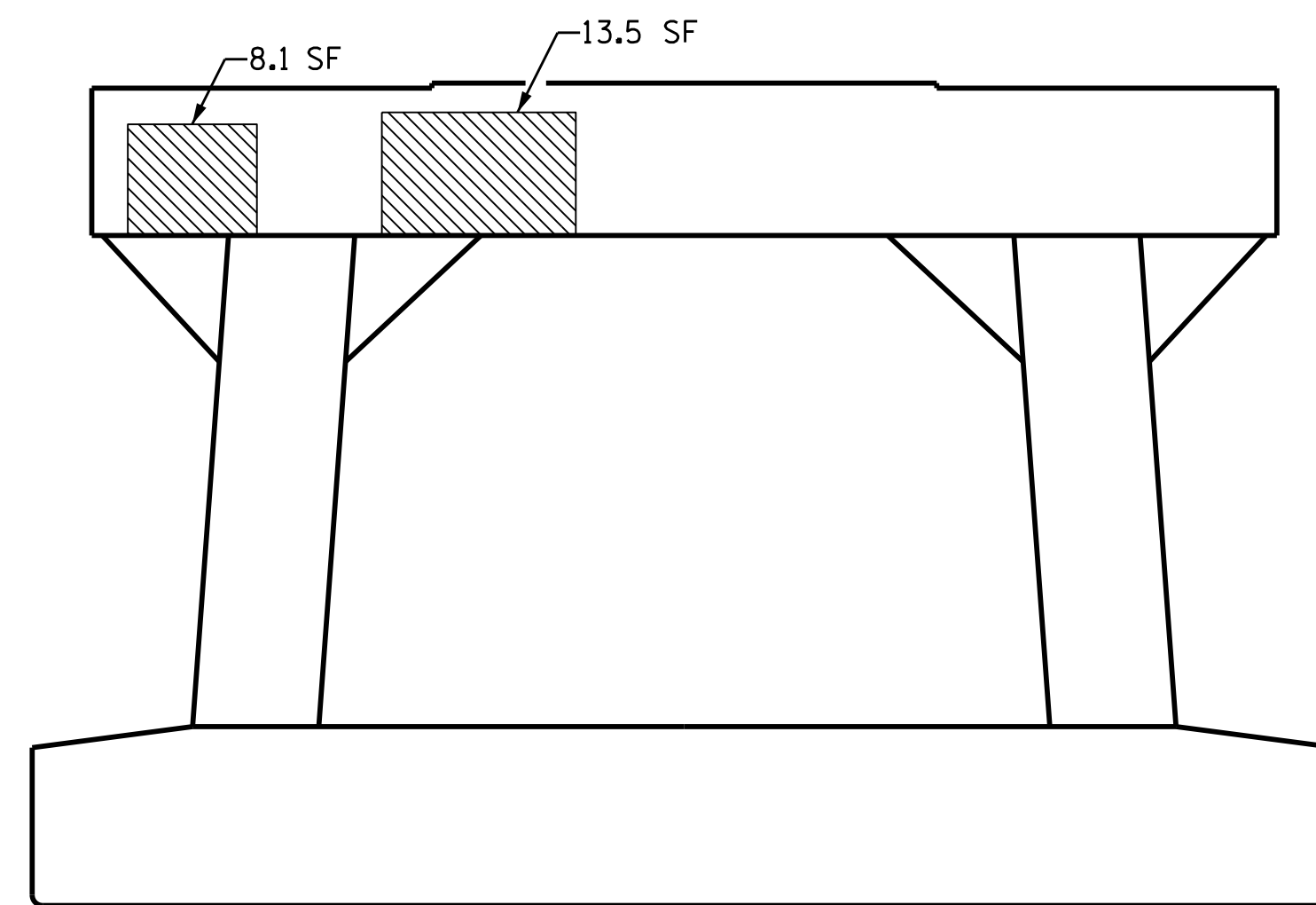
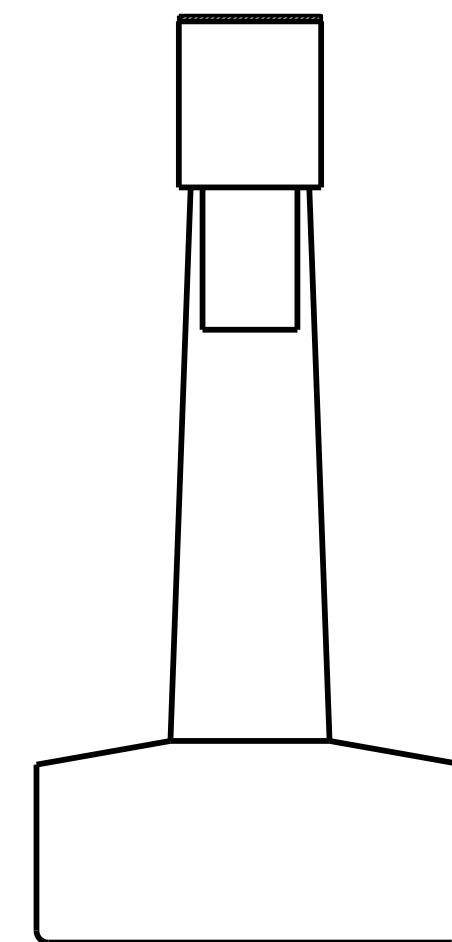
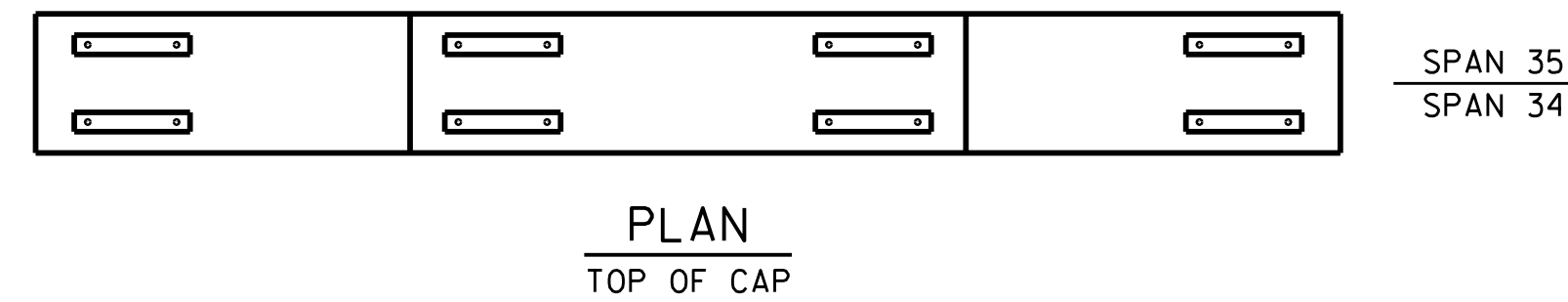
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 34	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	28.9	14.5		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		

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.



▨ - SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 35 OF 96



DocuSigned by:
 Robbie Weisz
 CS-1534838B043D...
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 34**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 09/2016
 CHECKED BY : R. N. WEISZ DATE : 10/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-41
1			3			TOTAL SHEETS
2			4			

NOTES:

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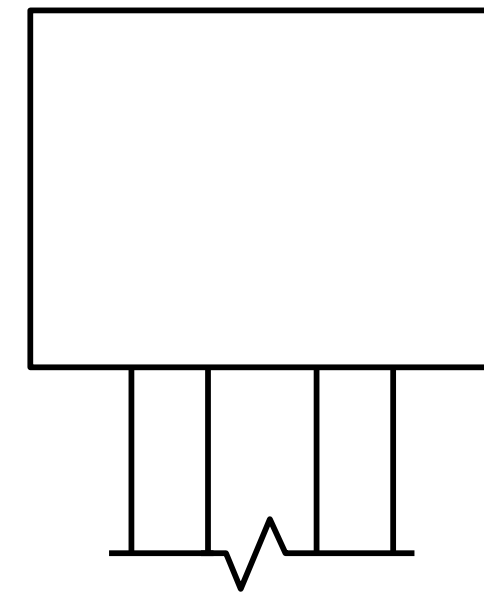
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

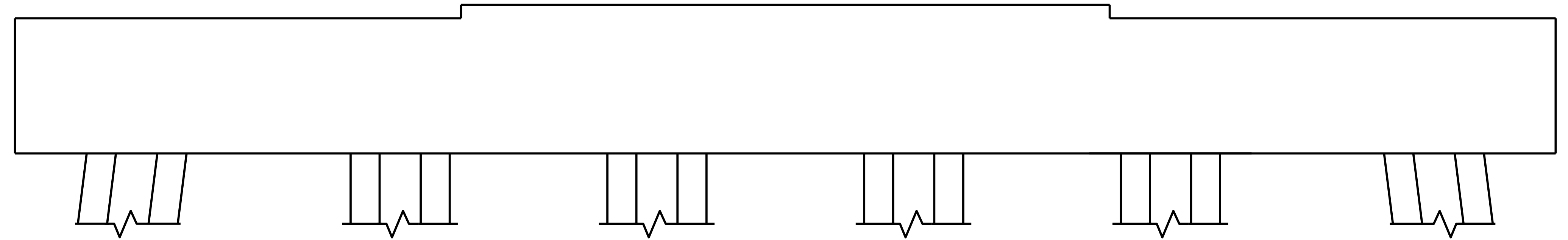
REPAIR QUANTITY TABLE

REPAIRS BENT 35	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

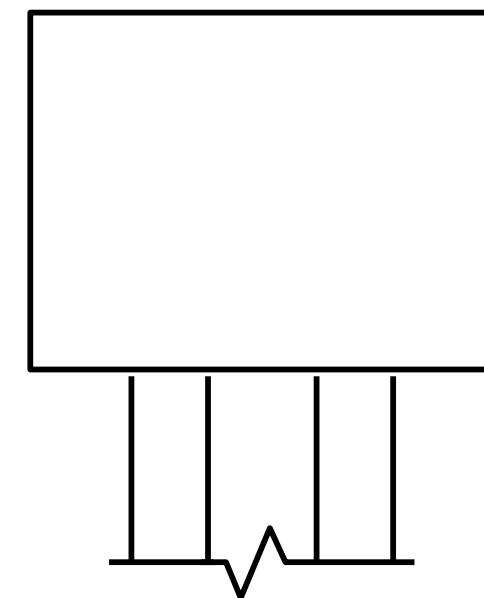
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



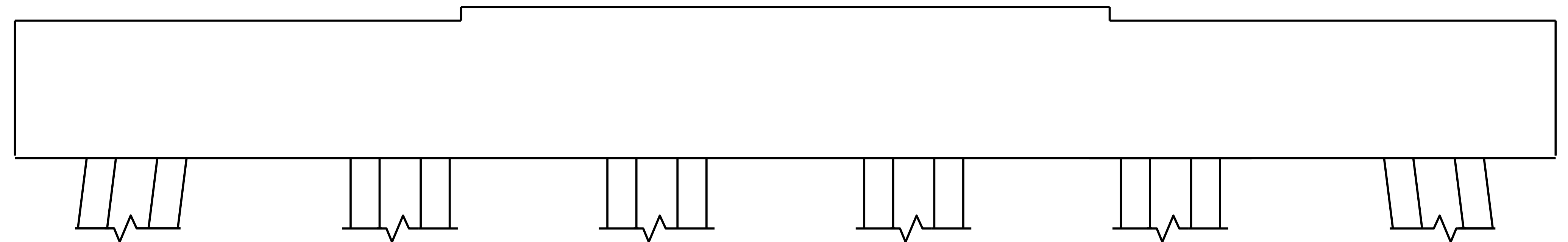
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 36 OF 96



DocuSigned by:
Robbie Weisz
CSA153M838D43D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 35**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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	BY:	DATE:	NO.		BY:	DATE:	TOTAL SHEETS	
1			3			5-42		
2			4					

REPAIR QUANTITY TABLE

REPAIRS BENT 36	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.2	3.1		
PILES	0.0	0.0		

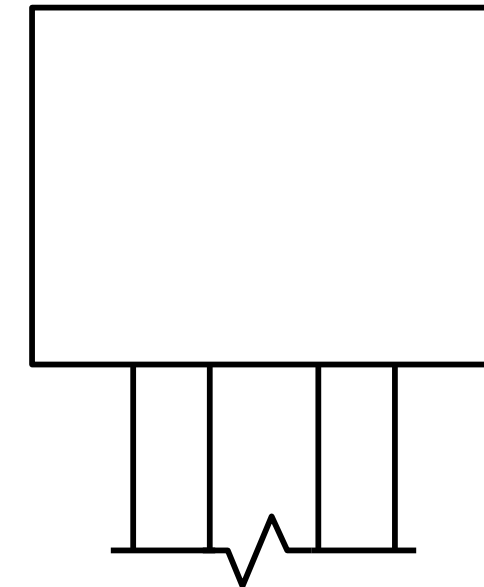
NOTES:

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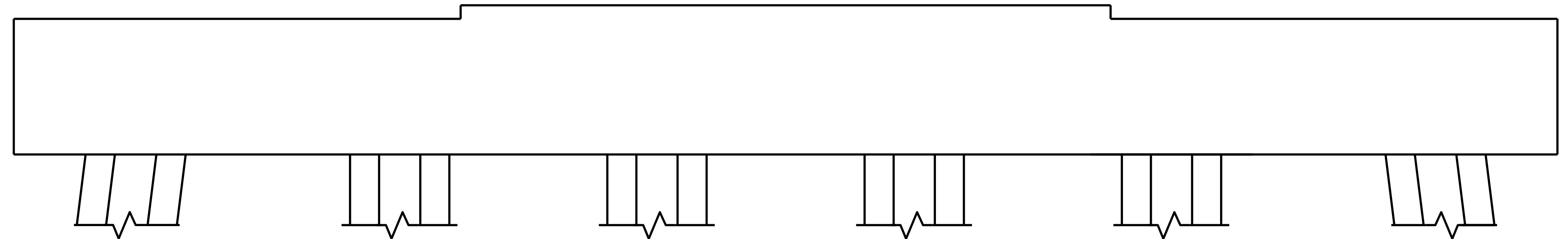
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

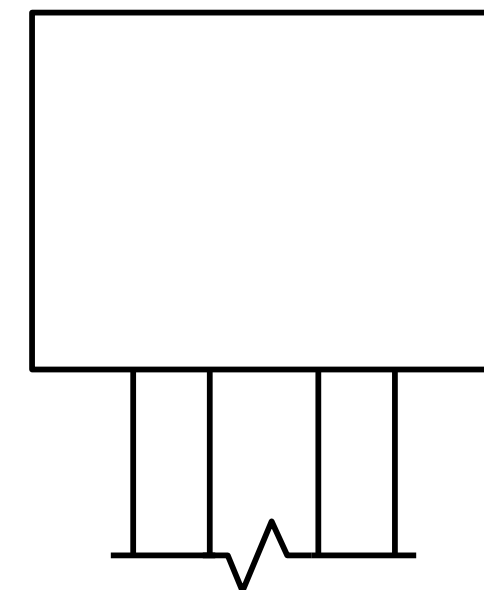
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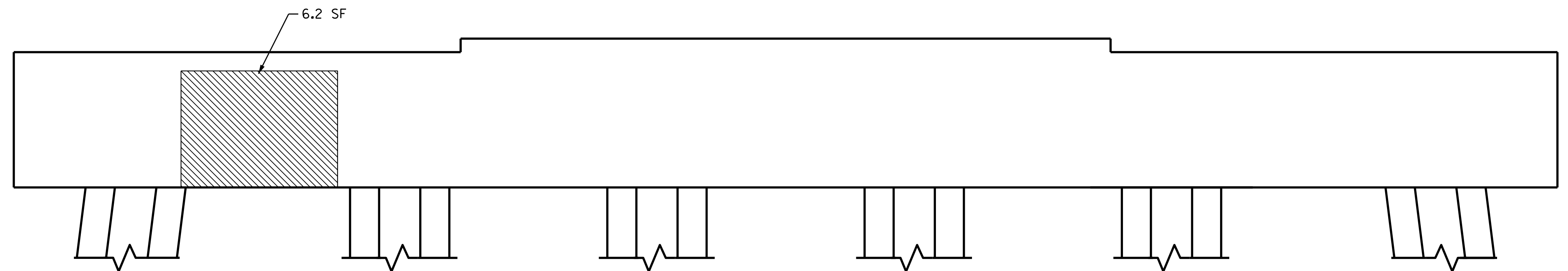
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 37 OF 96



DocuSigned by:
Robbie Weisz
CSA153838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 36

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-43	
2				4			TOTAL SHEETS	

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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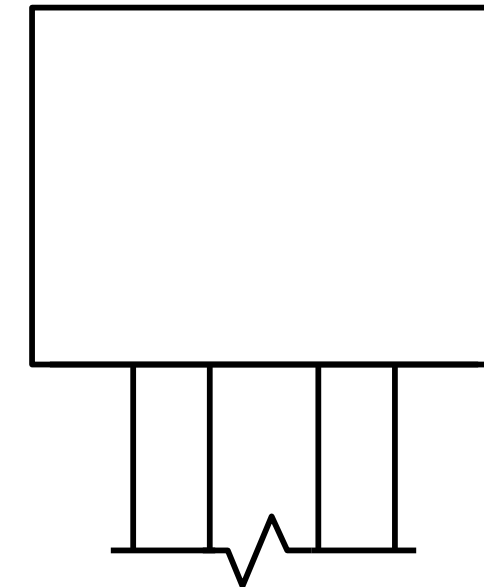
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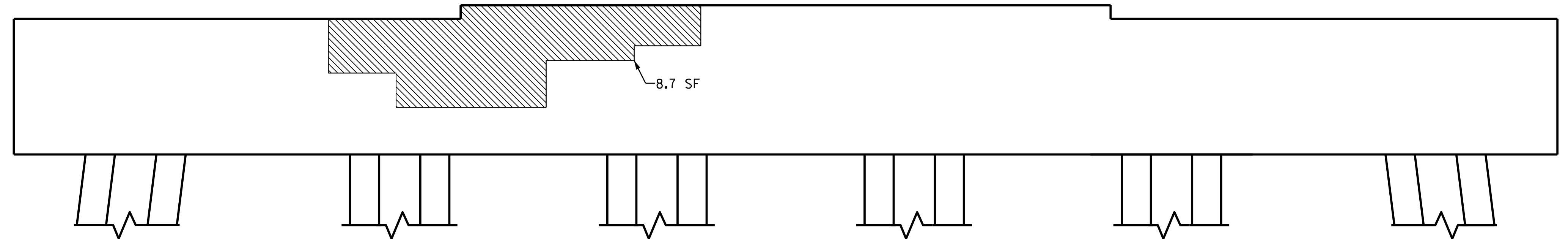
REPAIR QUANTITY TABLE

REPAIRS BENT 37	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	12.7	6.4		
PILES	0.0	0.0		

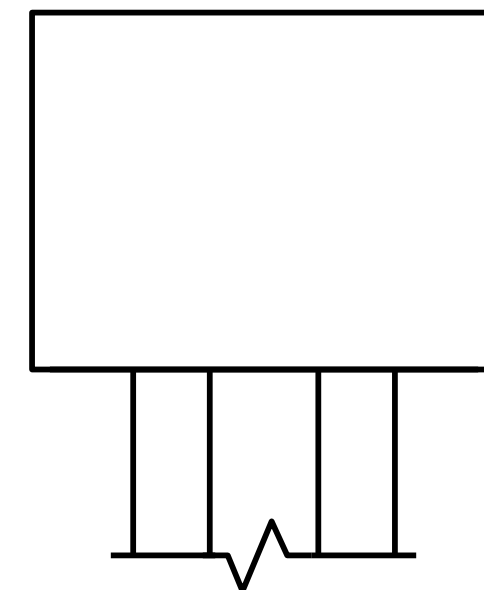
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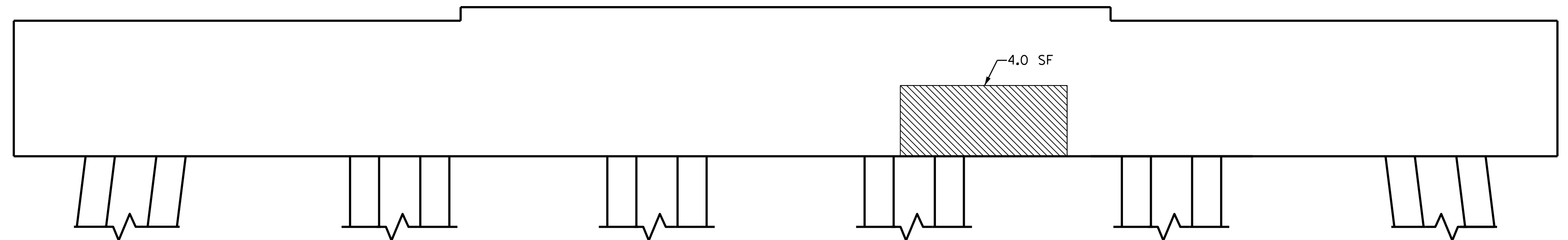
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 38 OF 96



DocuSigned by:
Robbie Weisz
CSA153M838D43D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 37**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S-44 TOTAL SHEETS
2			4	

NOTES:

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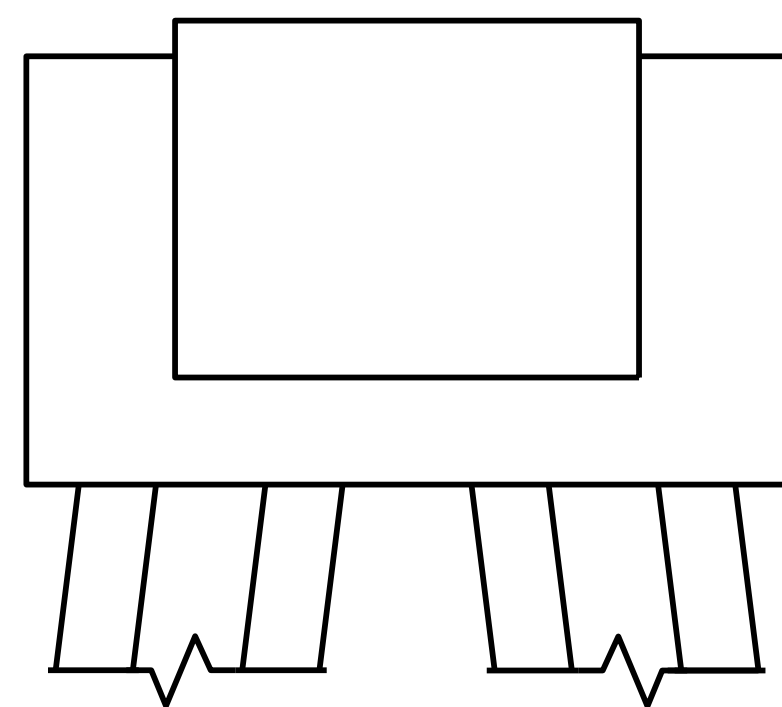
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

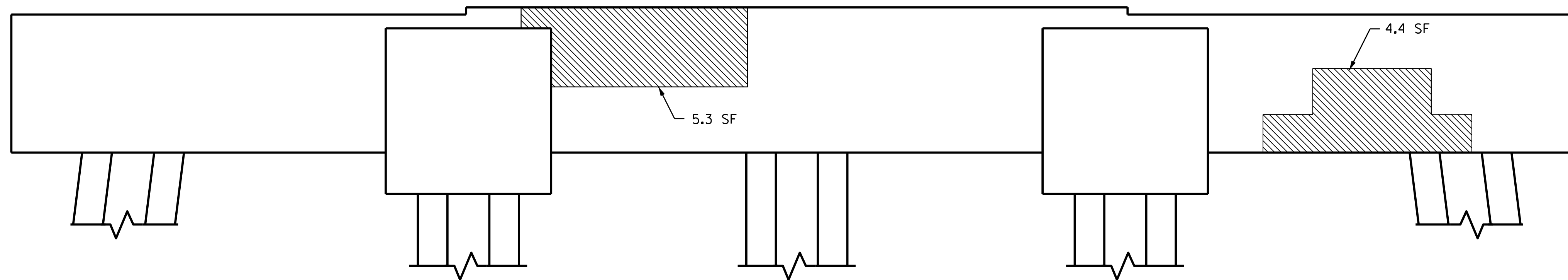
REPAIR QUANTITY TABLE

REPAIRS BENT 38	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	12.6	6.3		
PILES	0.0	0.0		

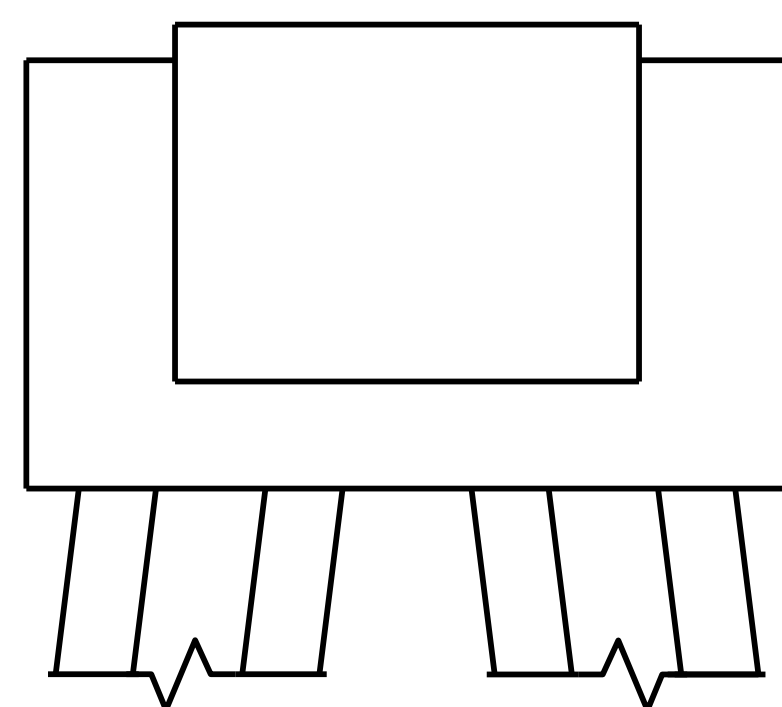
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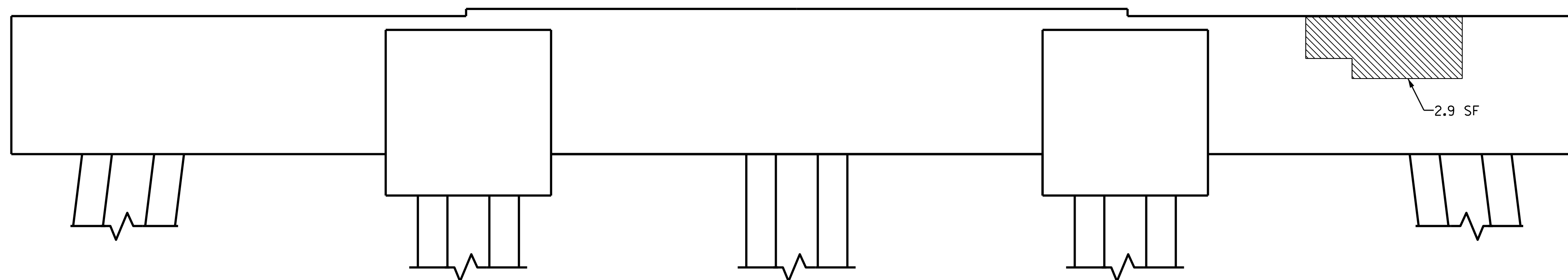
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 39 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CEA153E8B8D43D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 38**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-45
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 39	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	11.3	5.7		
PILES	0.0	0.0		

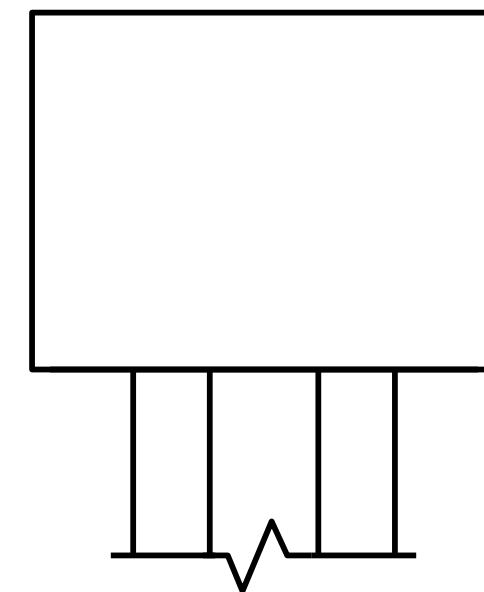
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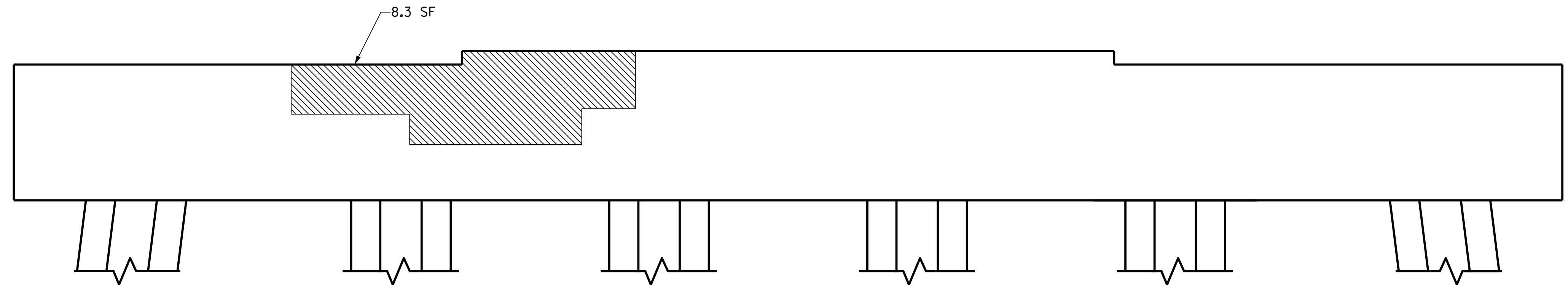
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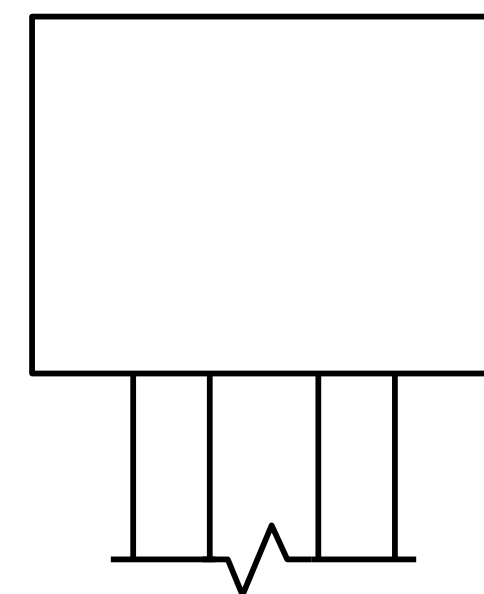
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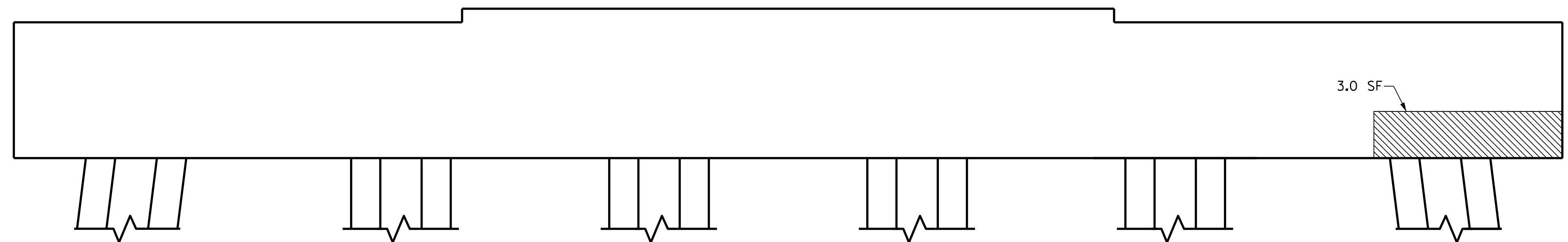
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 40 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 39



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 CEA153E8B8D43D
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO. S-46
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 40	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	15.2	7.6		
PILES	0.0	0.0		

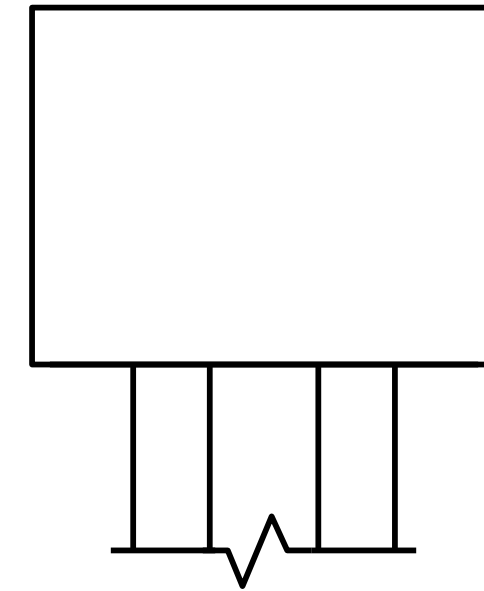
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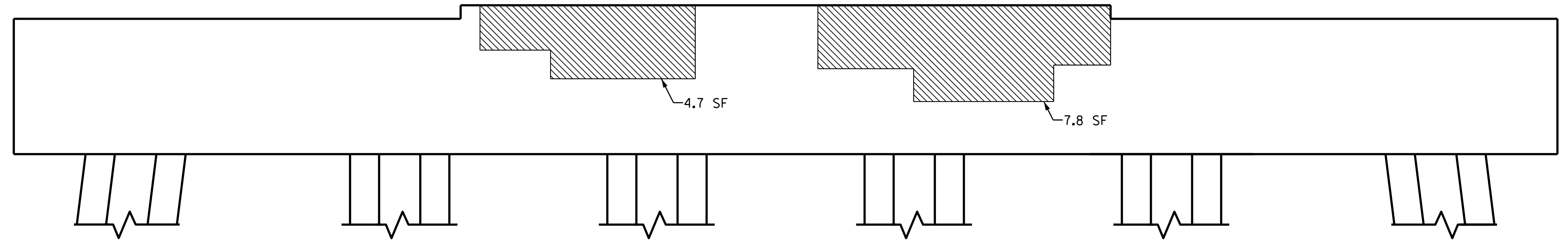
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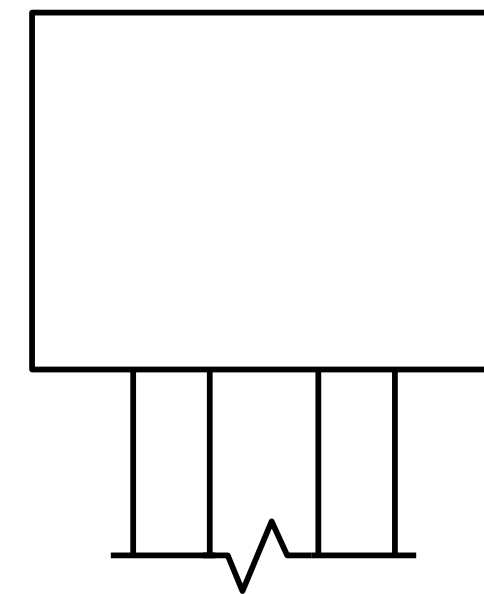
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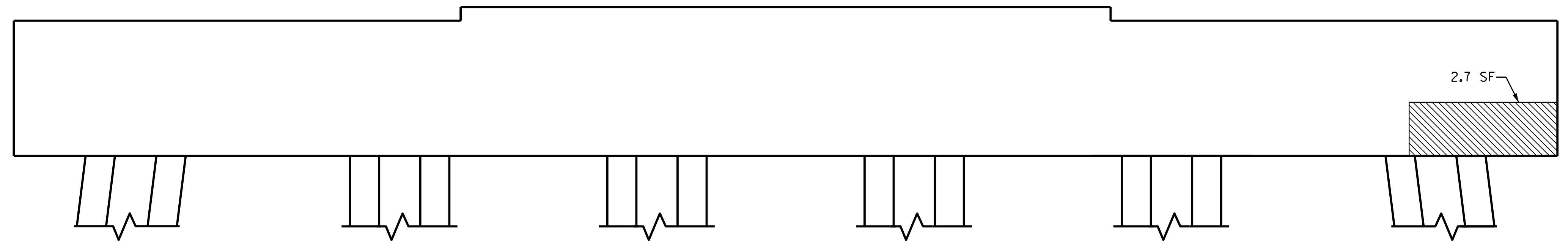
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941

BERTIE COUNTY

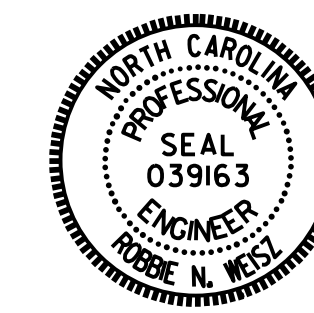
BRIDGE NO. 7

SHEET 41 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 40

- SHOTCRETE REPAIR



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CSA1536838043D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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NO.	REVISIONS						SHEET NO. S-47 TOTAL SHEETS
	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

NOTES:

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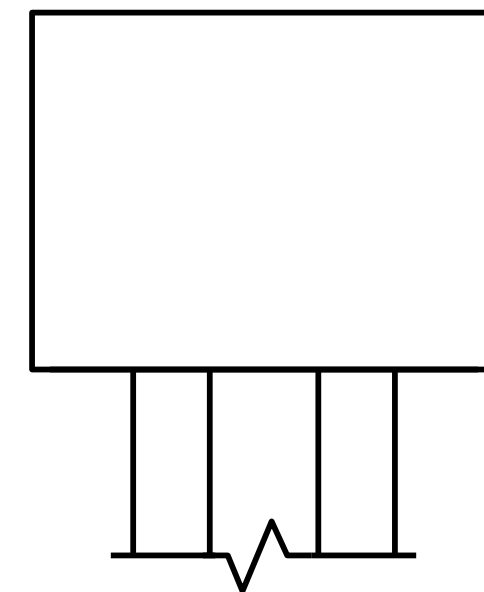
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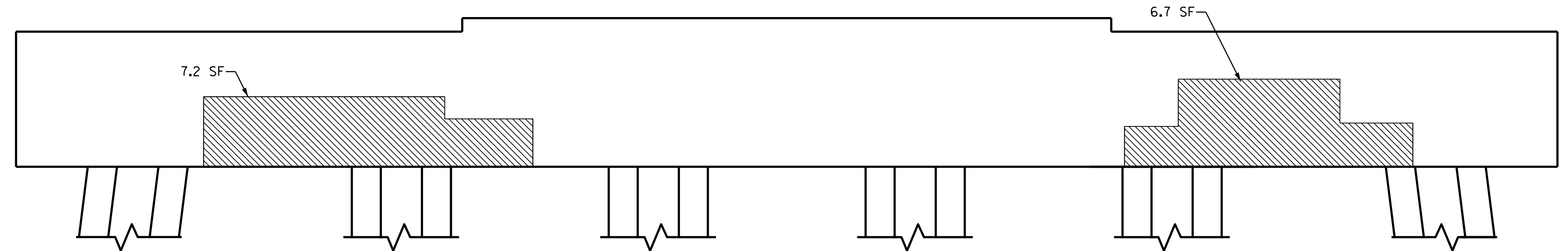
REPAIR QUANTITY TABLE

REPAIRS BENT 41	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.9	9.0		
PILES	0.0	0.0		

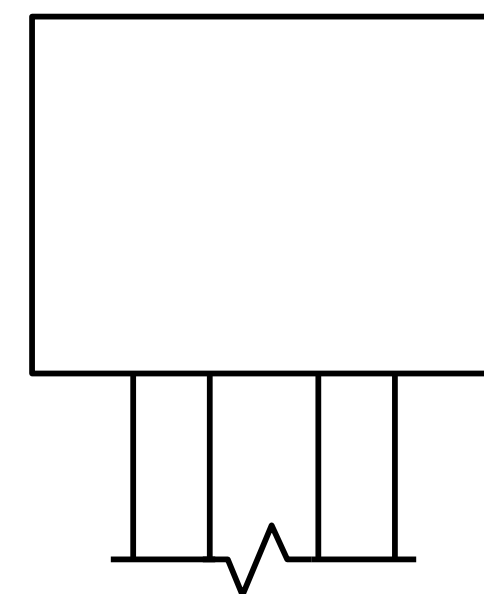
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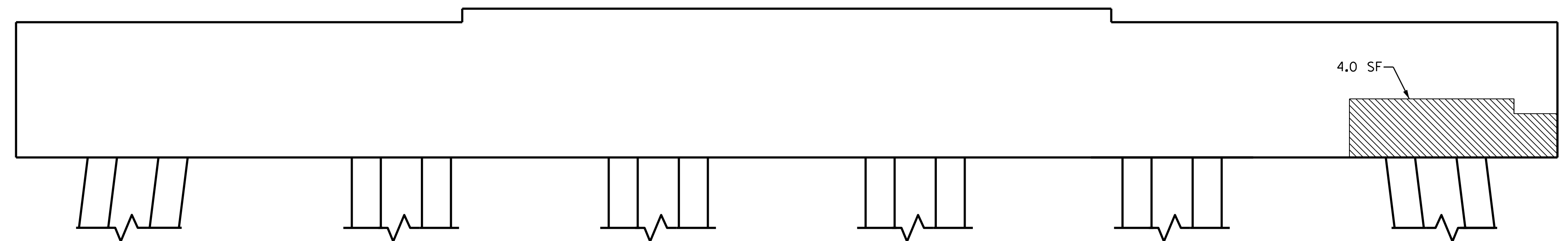
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941

BERTIE COUNTY

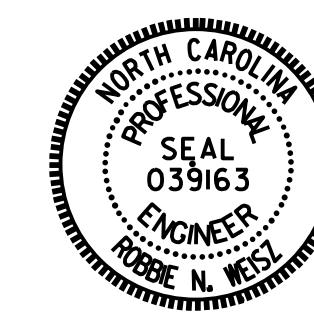
BRIDGE NO. 7

SHEET 42 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 41**

- SHOTCRETE REPAIR



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CSA153M838D43D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-48
2			4			

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.

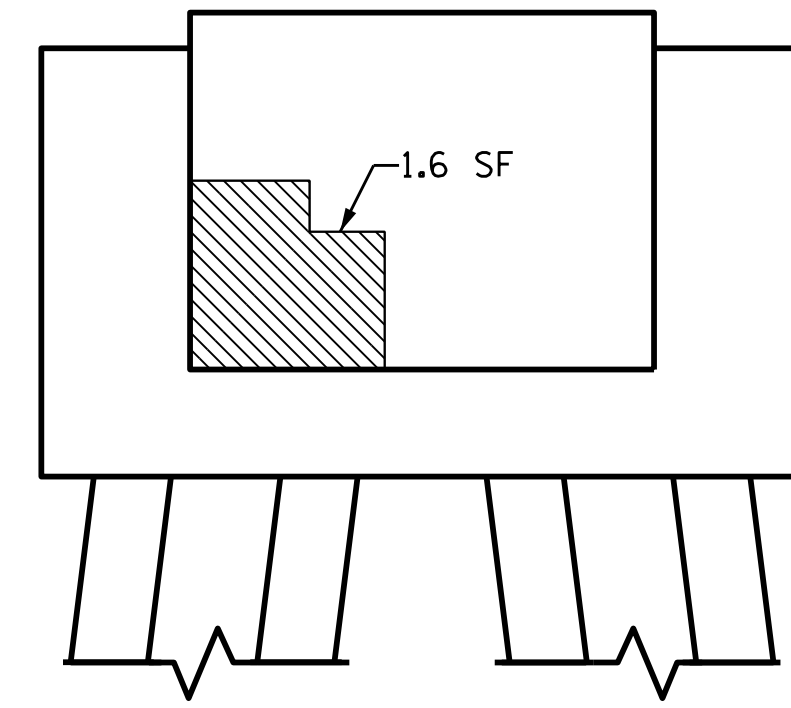
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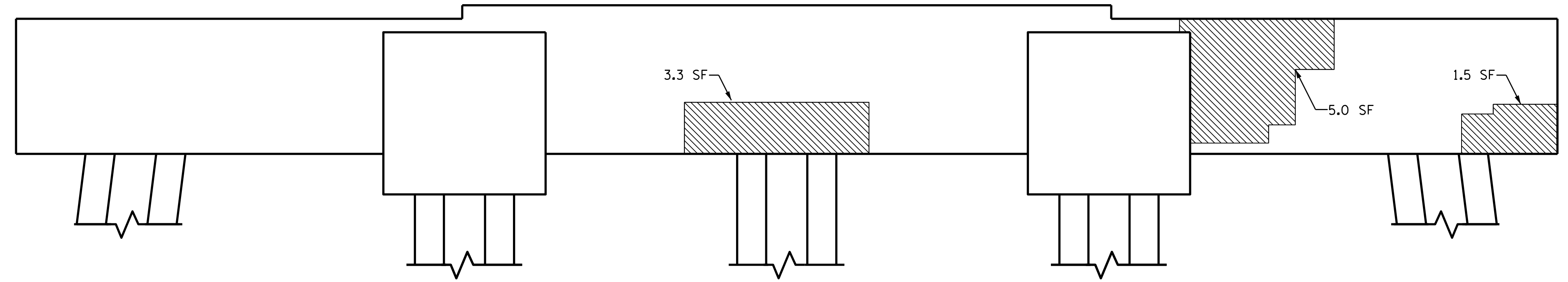
REPAIR QUANTITY TABLE

REPAIRS BENT 42	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	15.6	7.8		
PILES	0.0	0.0		

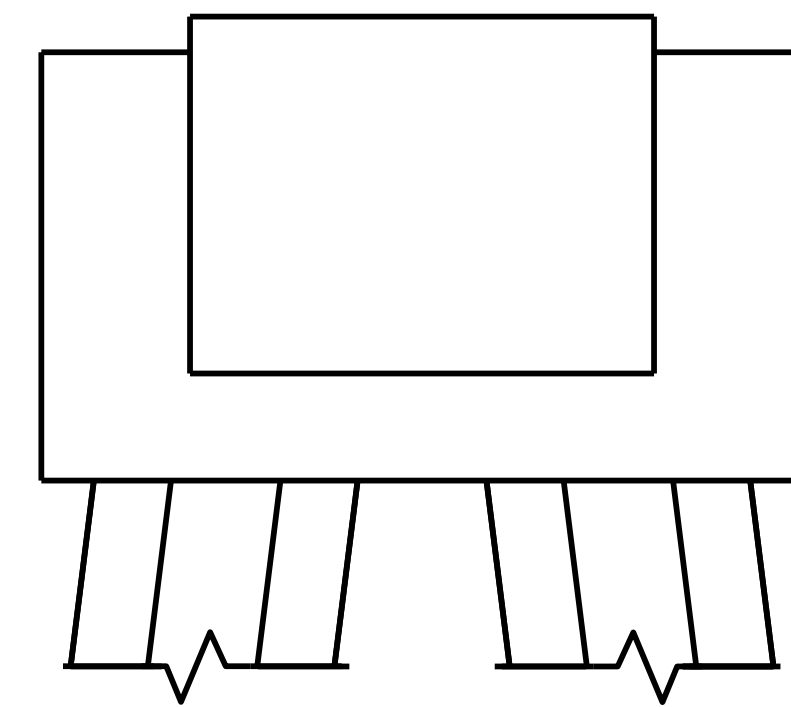
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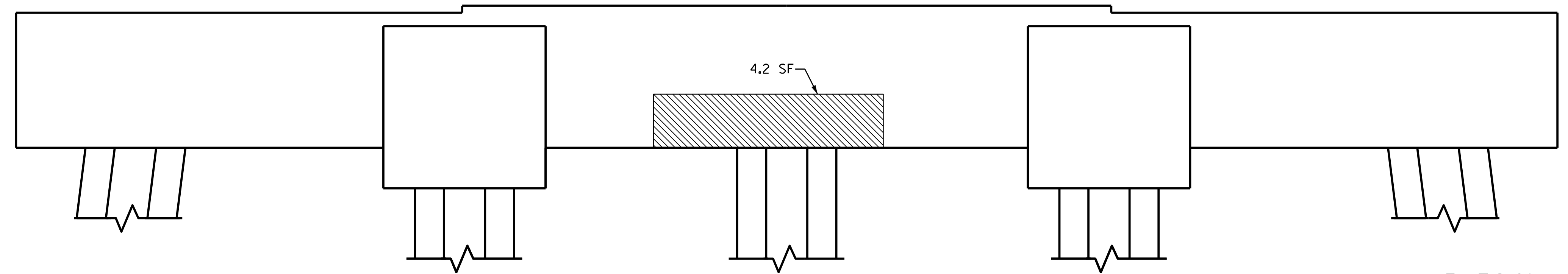
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE

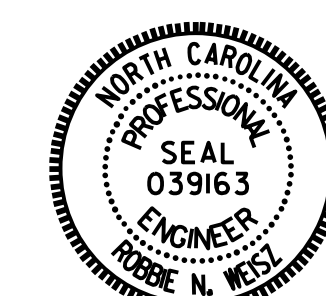


ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 43 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 42**



DocuSigned by:
 Robbie Weisz
 CS-A153838043D
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO. S-49
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

NOTES:

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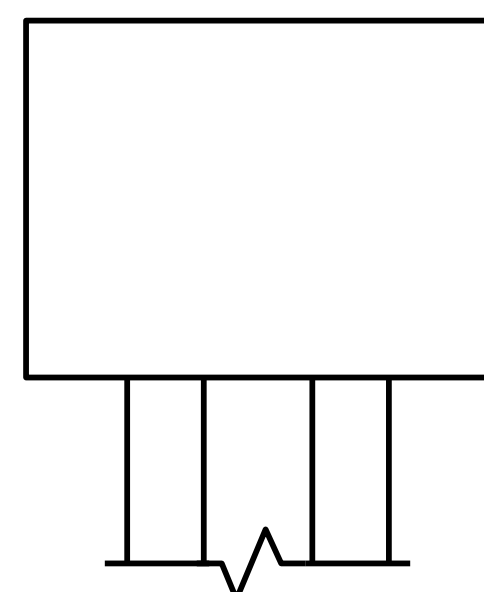
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

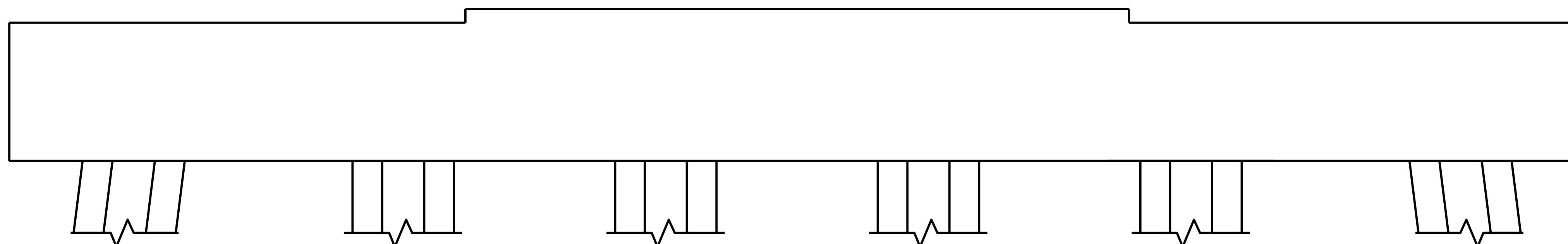
REPAIR QUANTITY TABLE

REPAIRS BENT 43	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

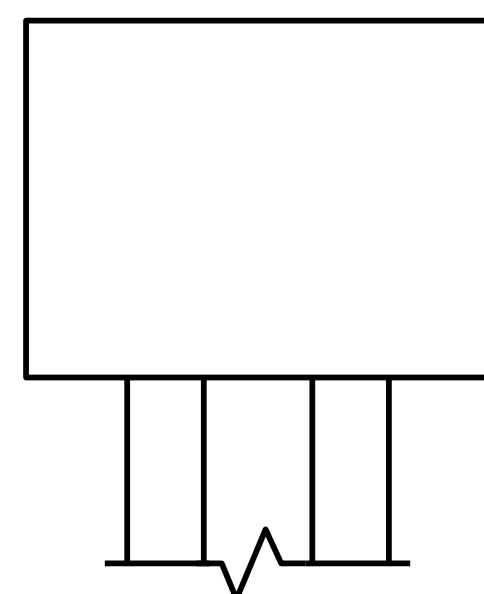
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



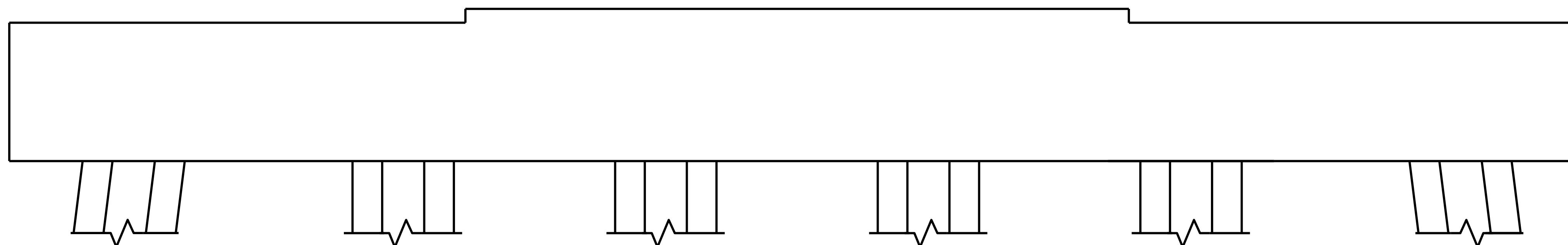
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

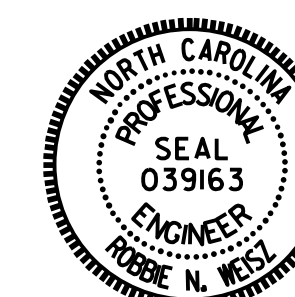
PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7

SHEET 44 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 43**

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1536838043D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-50
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 44	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	1.8	0.9		
PILES	0.0	0.0		

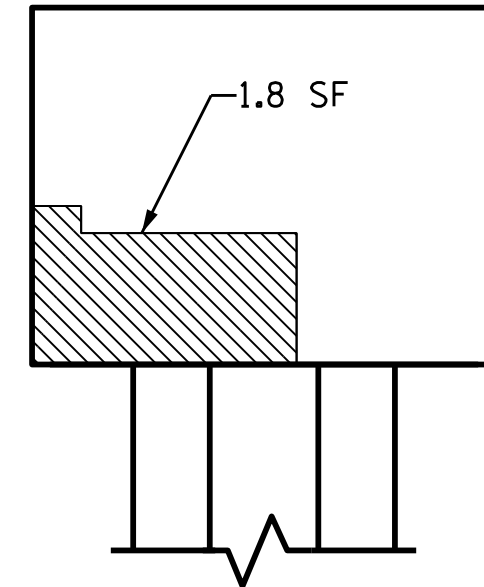
NOTES:

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.

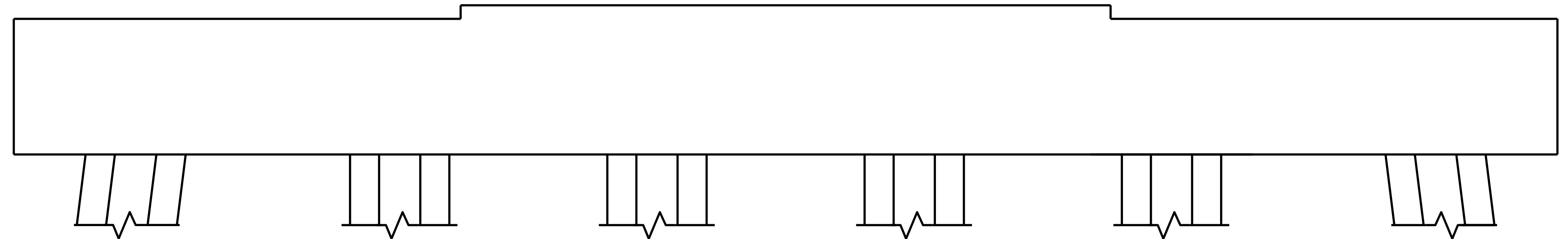
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

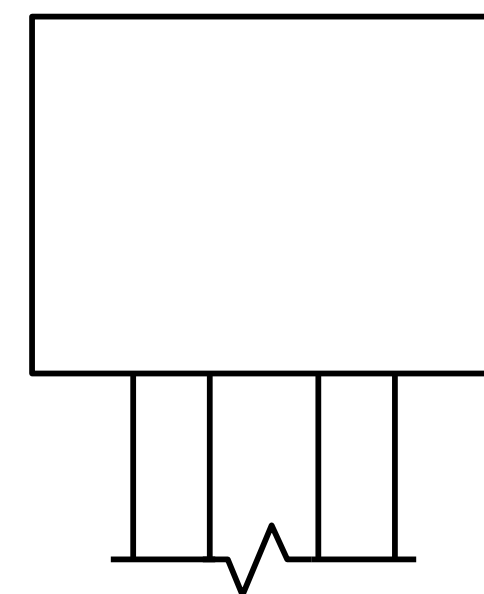
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



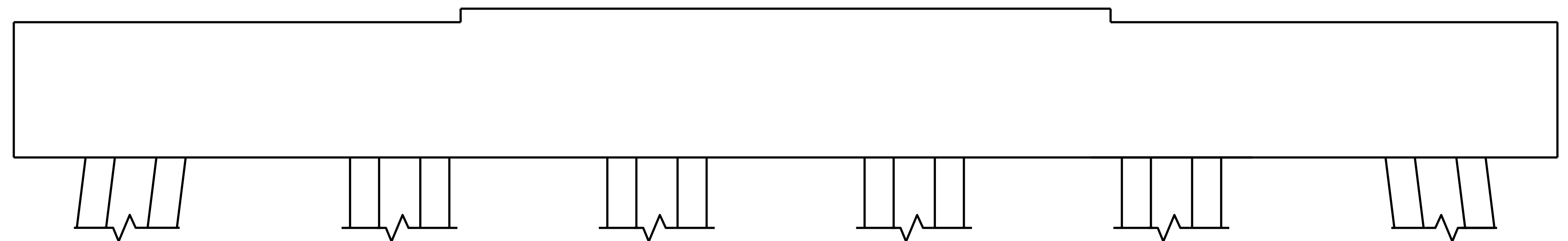
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941

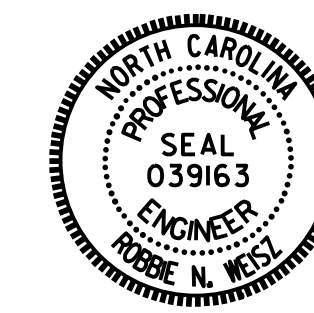
BERTIE COUNTY

BRIDGE NO. 7

SHEET 45 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 44



DocuSigned by:
Robbie Weisz
6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-51
1			3			TOTAL SHEETS
2			4			

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.

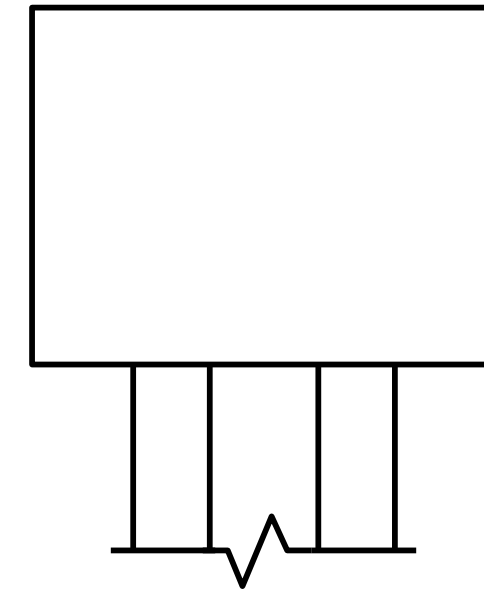
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

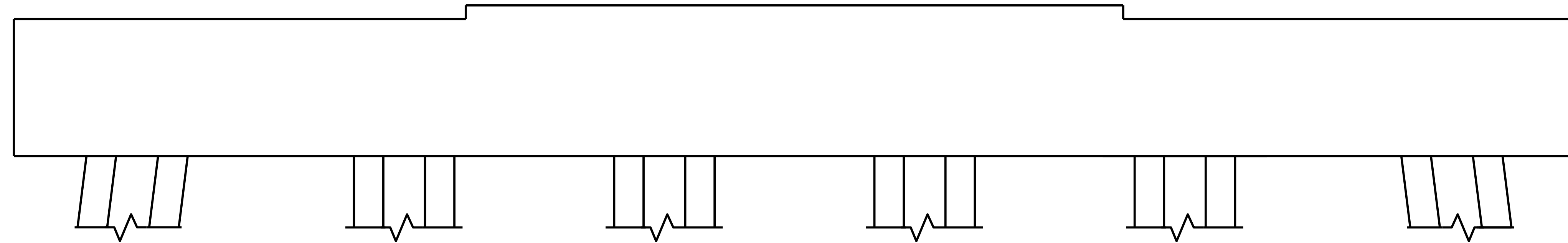
REPAIR QUANTITY TABLE

REPAIRS BENT 45	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

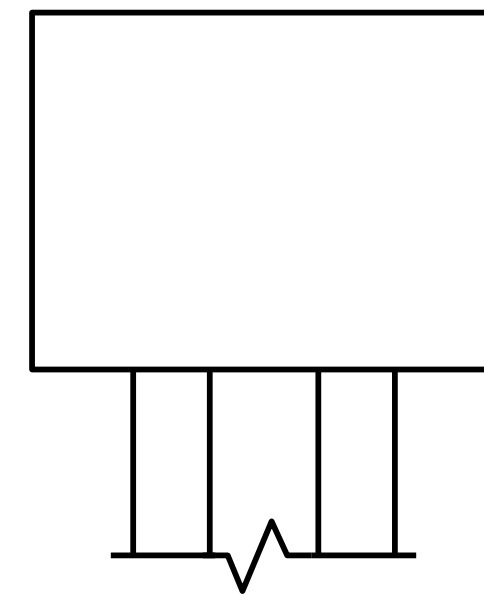
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



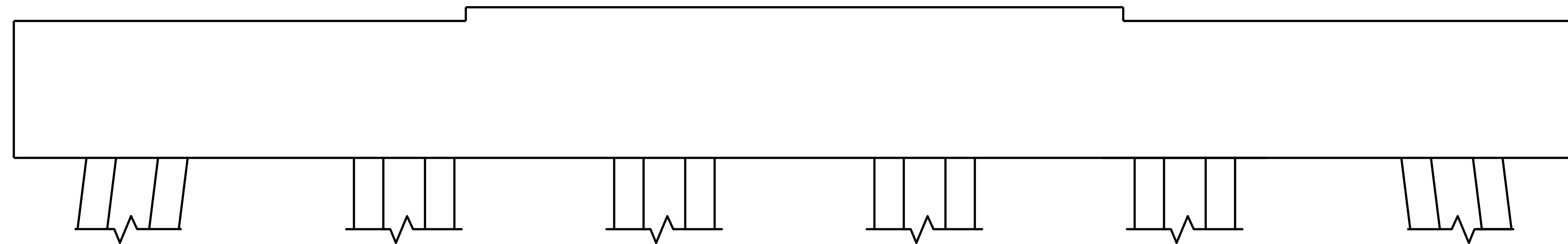
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941

BERTIE COUNTY

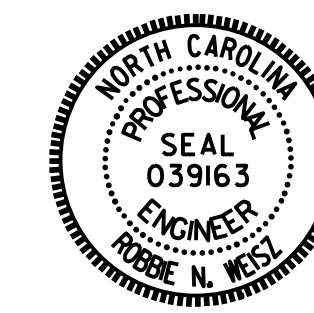
BRIDGE NO. 7

SHEET 46 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 45**

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1536838043D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-52
2			4			

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.

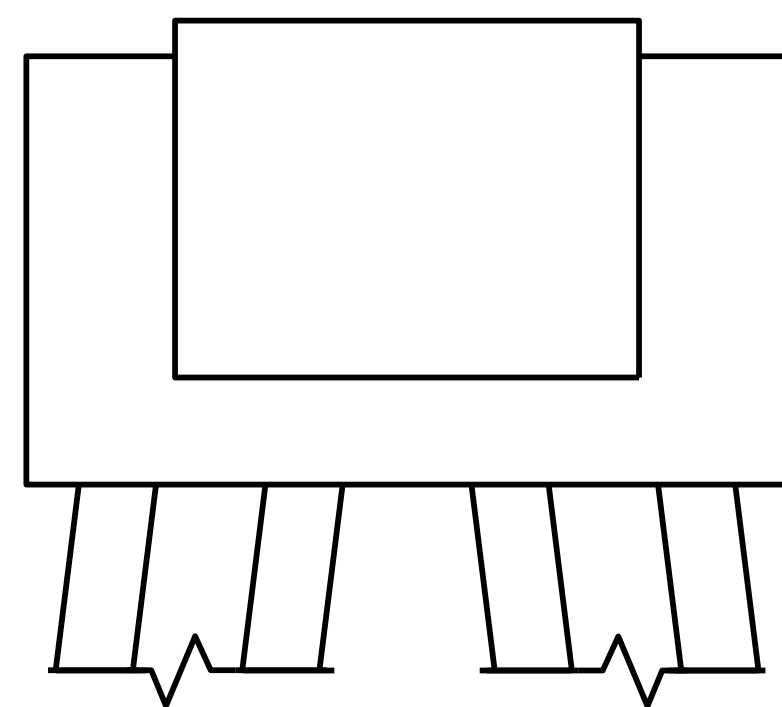
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

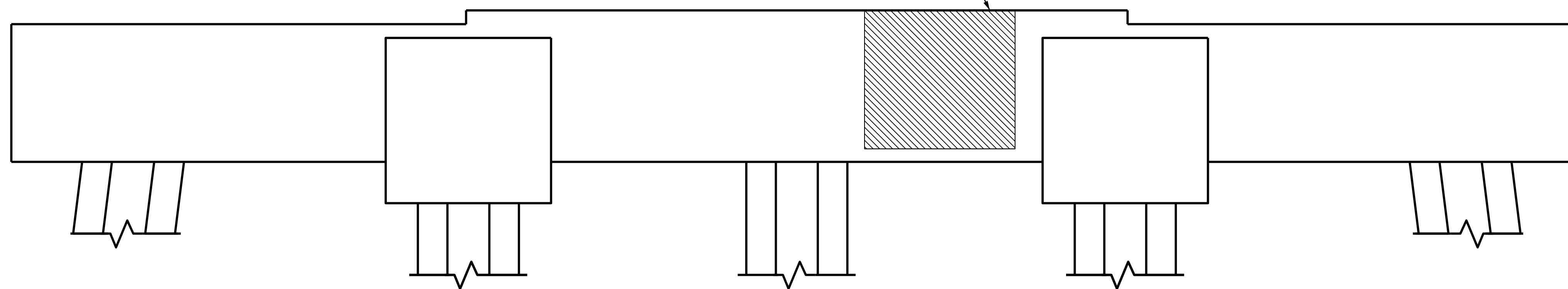
REPAIR QUANTITY TABLE

REPAIRS BENT 46	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.9	3.5		
PILES	0.0	0.0		

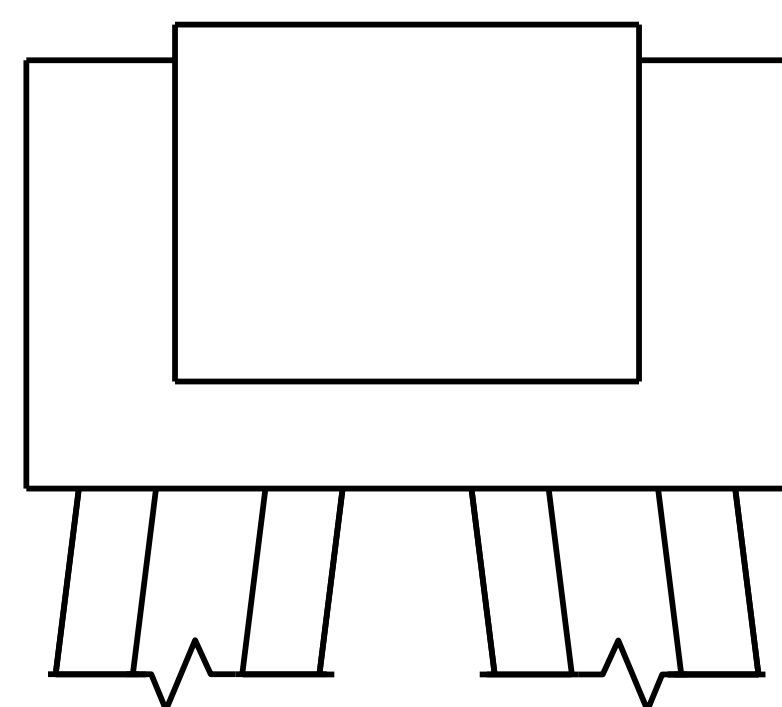
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



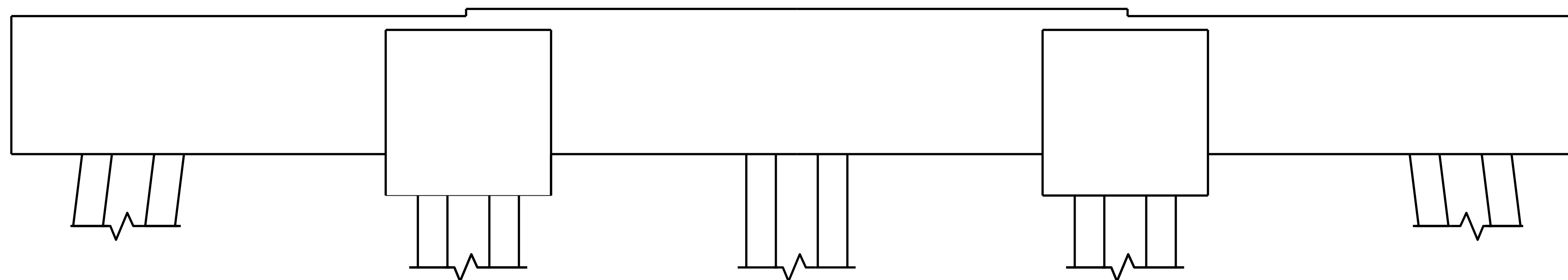
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 47 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 46**



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Robbie Weisz
CSA1538588043D
6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-53
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 47	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	35.6	17.8		
PILES	0.0	0.0		

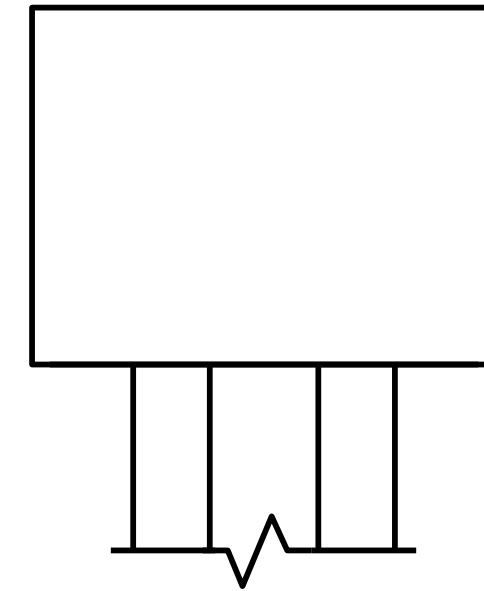
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

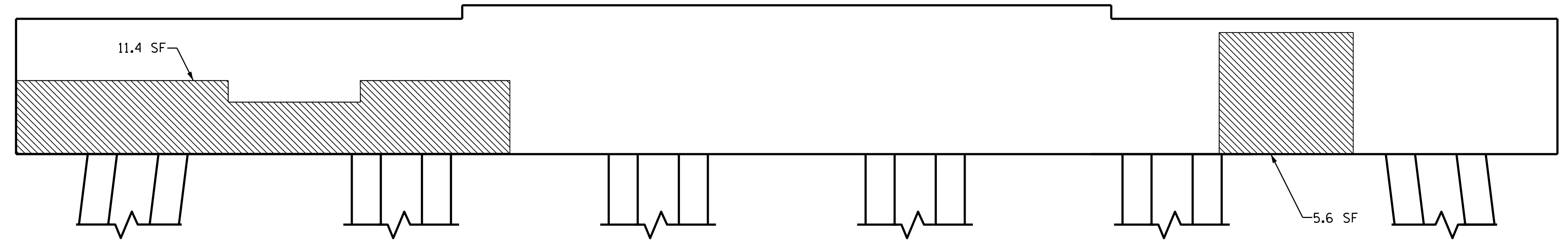
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

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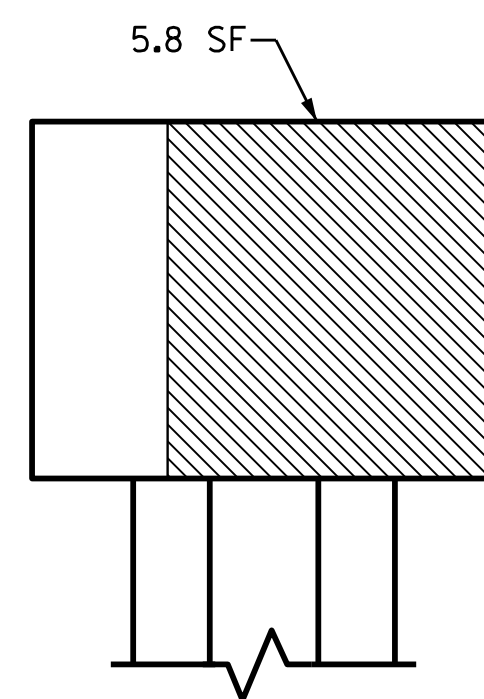
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



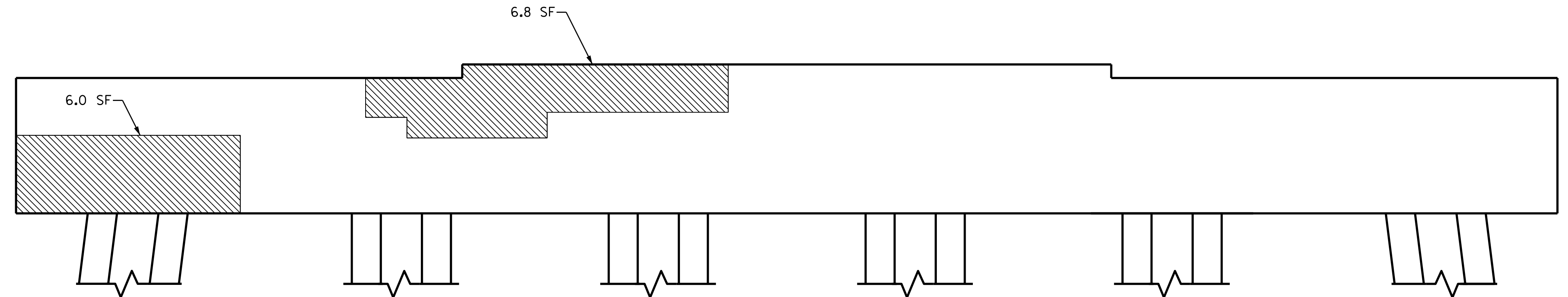
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



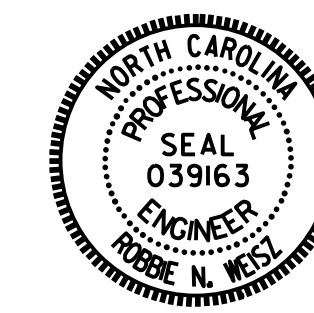
END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 48 OF 96



DocuSigned by:
 Robbie Weisz
 CEA153E8B8D43D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT 47

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

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DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

REPAIR QUANTITY TABLE

REPAIRS BENT 48	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	18.6	9.3		
PILES	0.0	0.0		

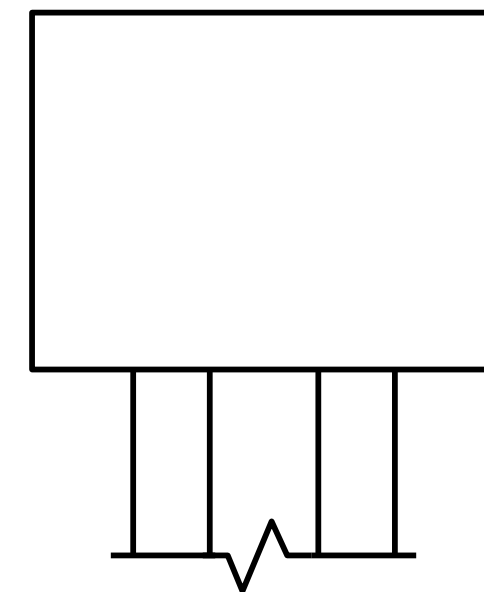
NOTES:

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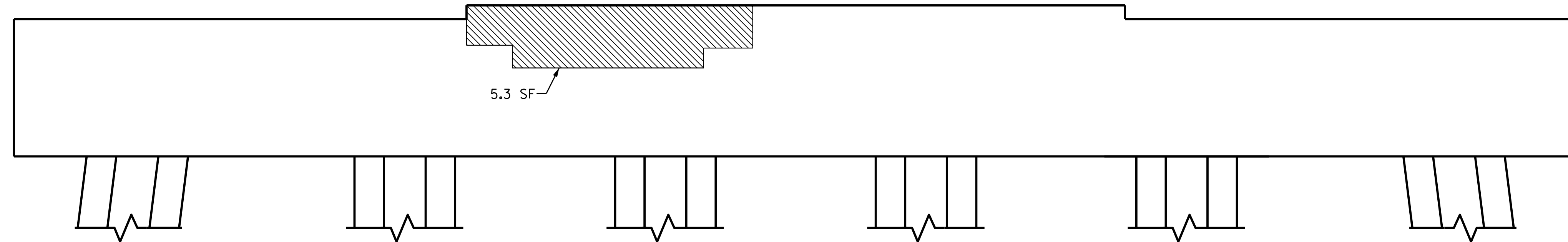
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

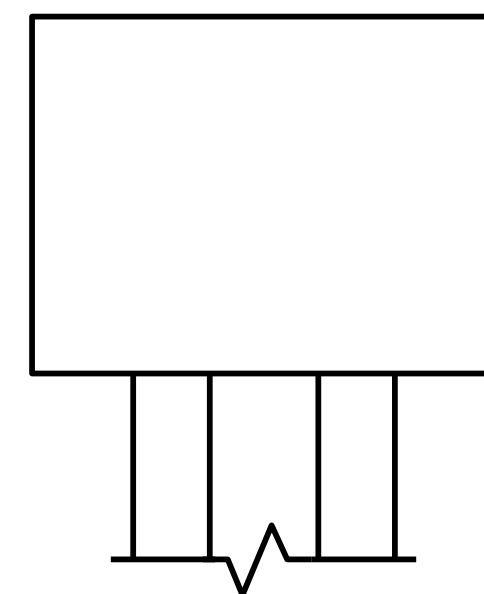
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



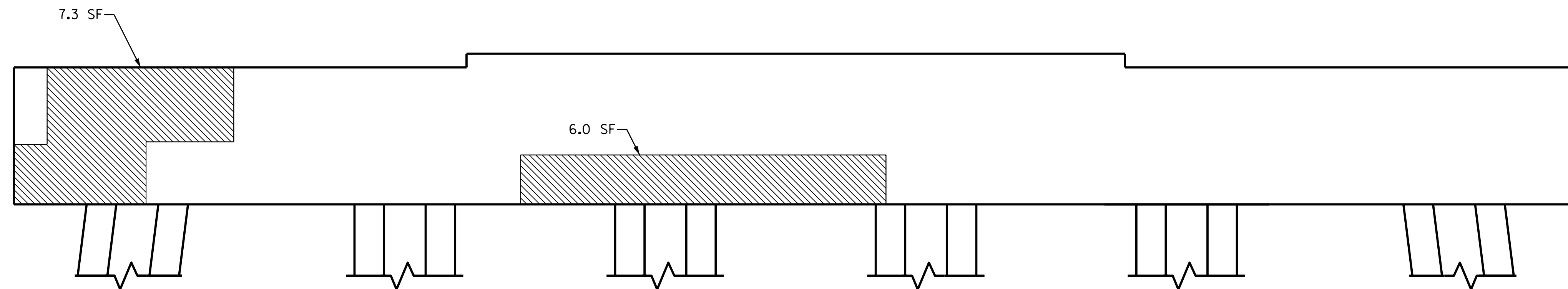
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 49 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 48



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

05-JUN-2017 13:13
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-55
1			3			TOTAL SHEETS
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 49	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.5	10.8		
PILES	0.0	0.0		

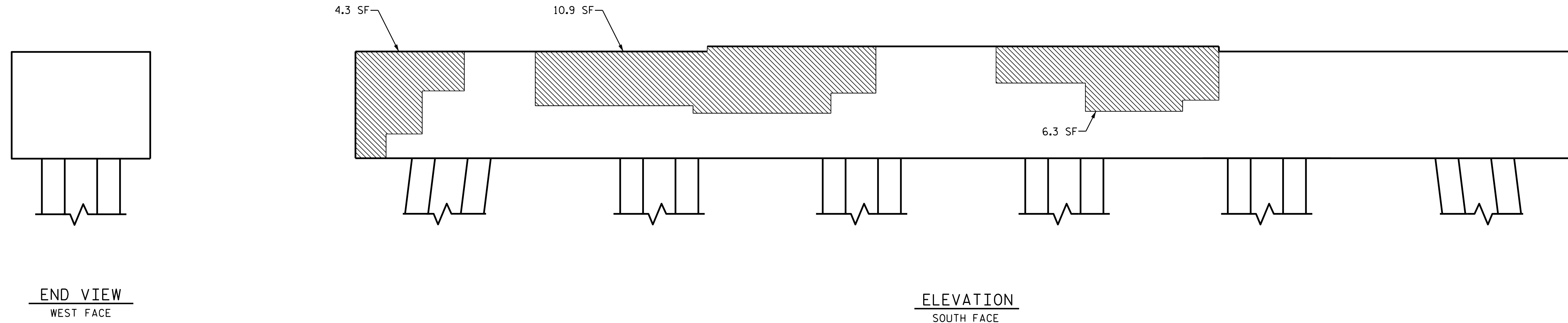
NOTES:

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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

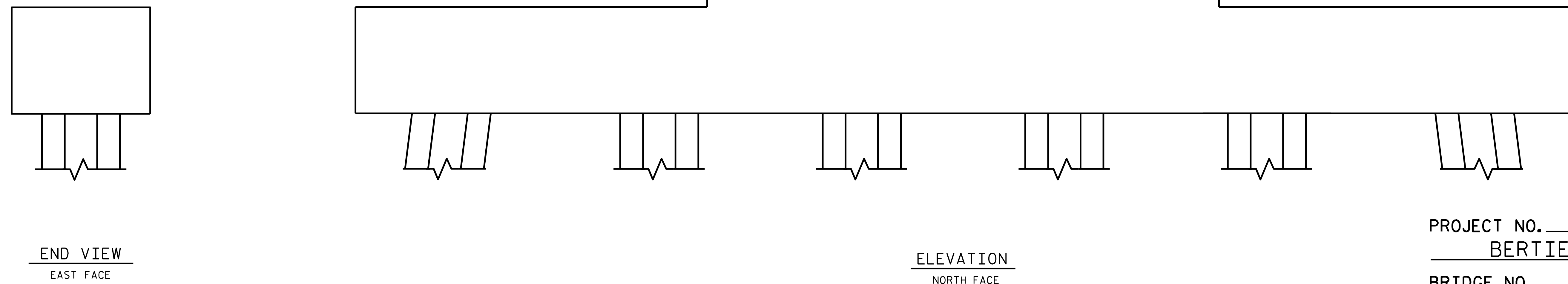
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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.



END VIEW
WEST FACE

ELEVATION
SOUTH FACE

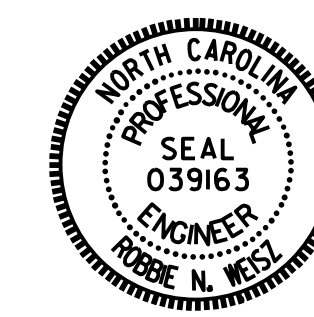


END VIEW
EAST FACE

ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 50 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CS-A153E838D43D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 49**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

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 FINAL UNLESS ALL
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NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-56	
2				4			TOTAL SHEETS	

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.

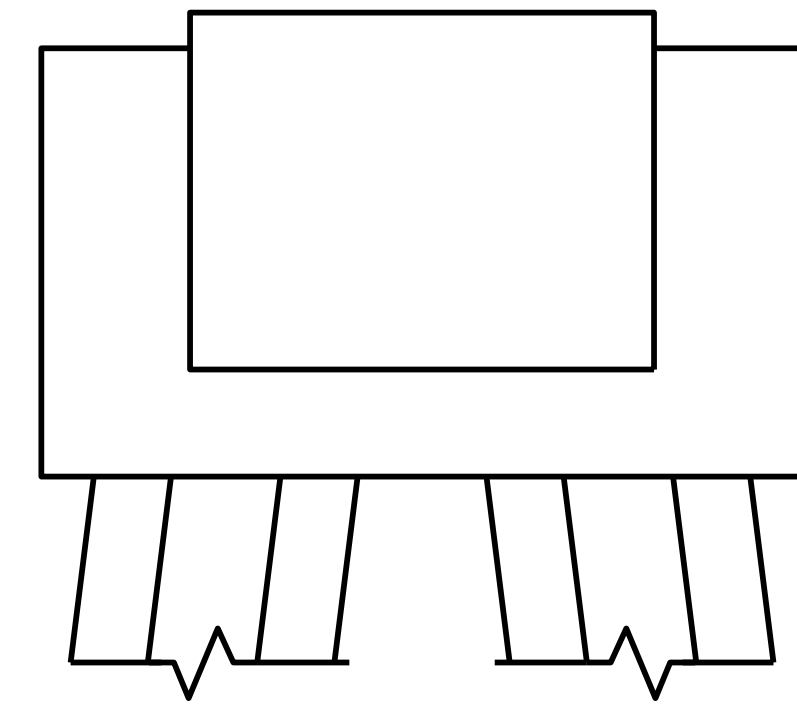
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

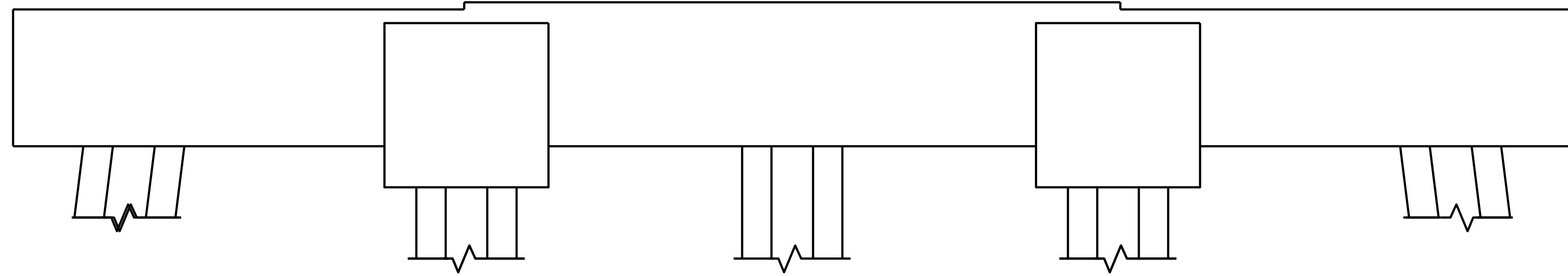
REPAIR QUANTITY TABLE

REPAIRS BENT 50	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

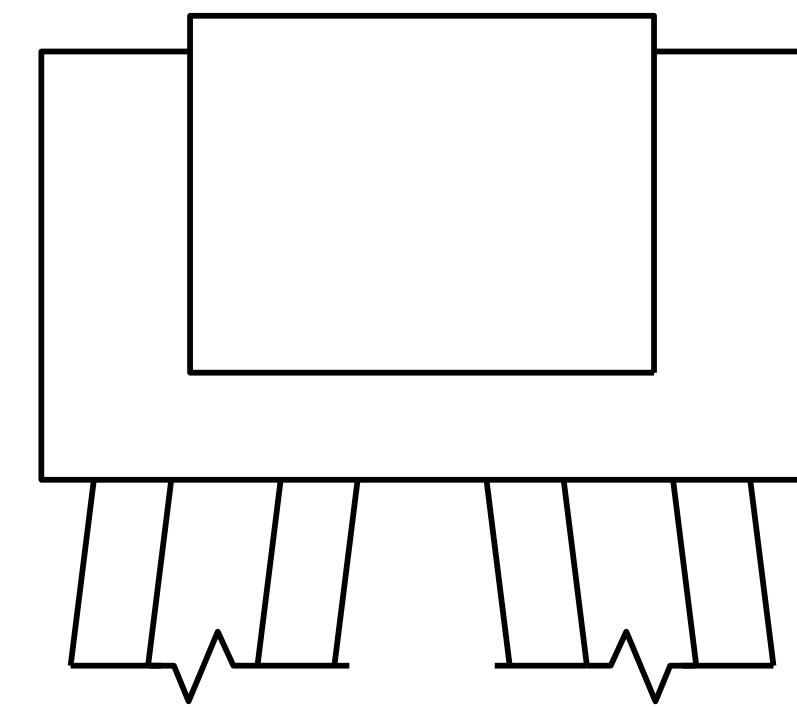
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



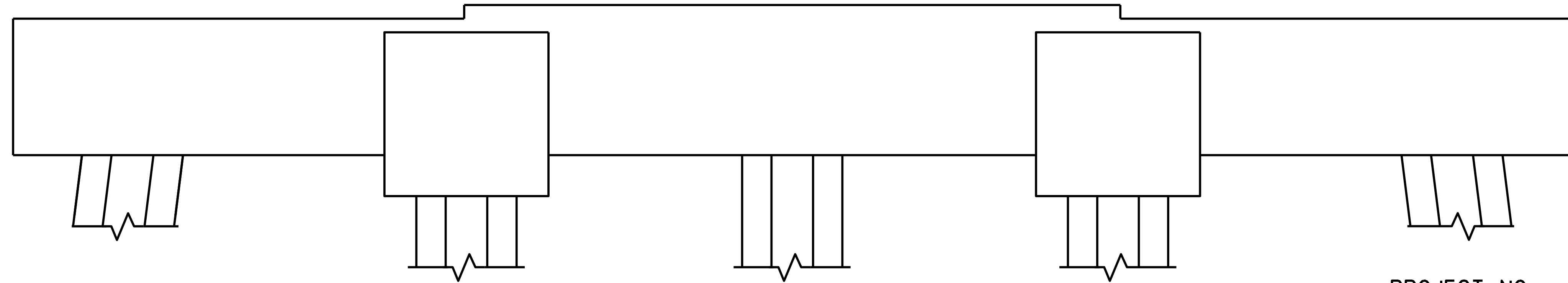
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE

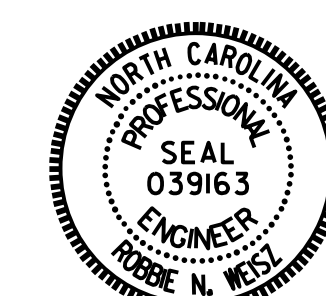


ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 51 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 50**



DocuSigned by:
Robbie Weisz
CSA153838043D
6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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

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.

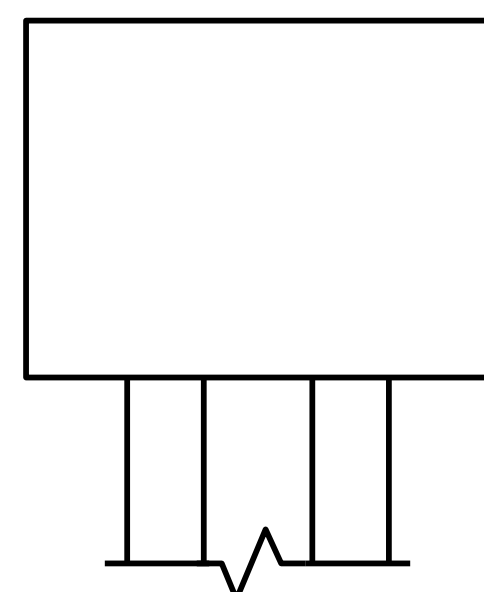
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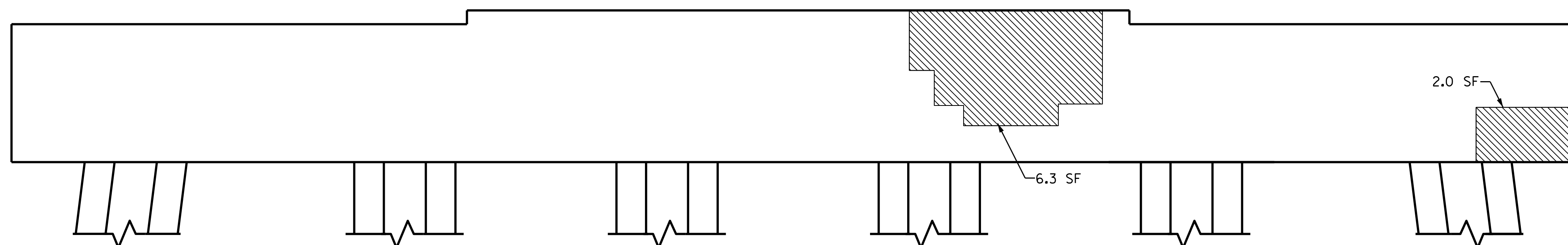
REPAIR QUANTITY TABLE

REPAIRS BENT 51	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	8.3	4.2		
PILES	0.0	0.0		

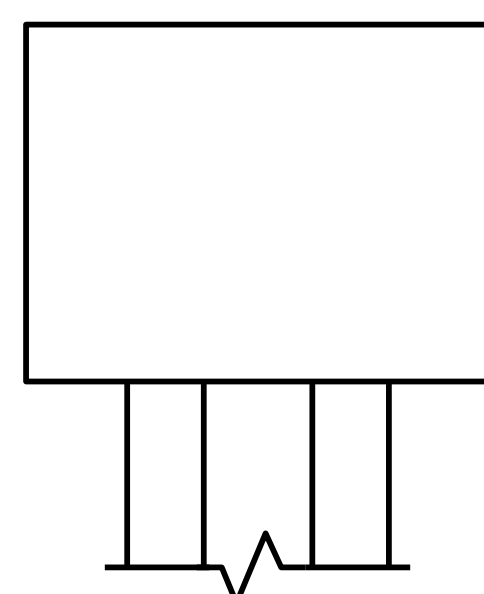
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



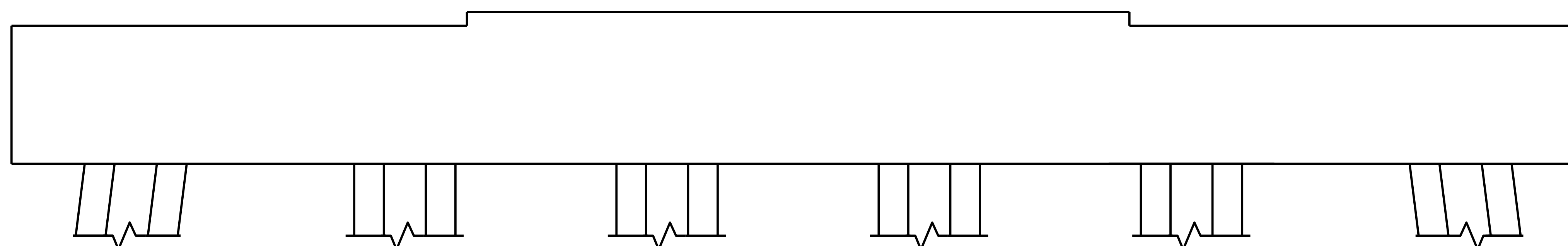
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 52 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 51**



DocuSigned by:
Robbie Weisz
CSA153838043D
6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-58
1			3			TOTAL SHEETS
2			4			

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.

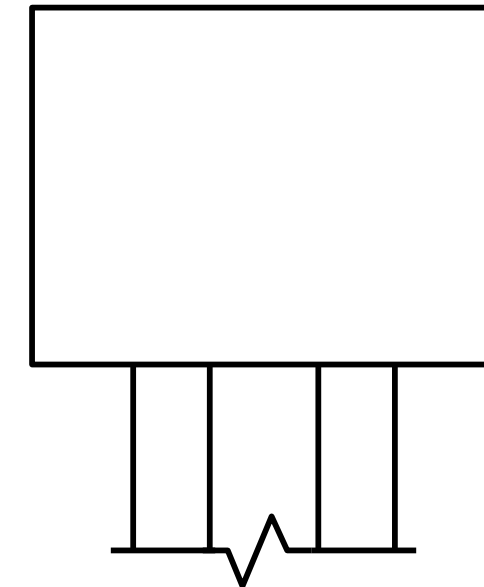
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

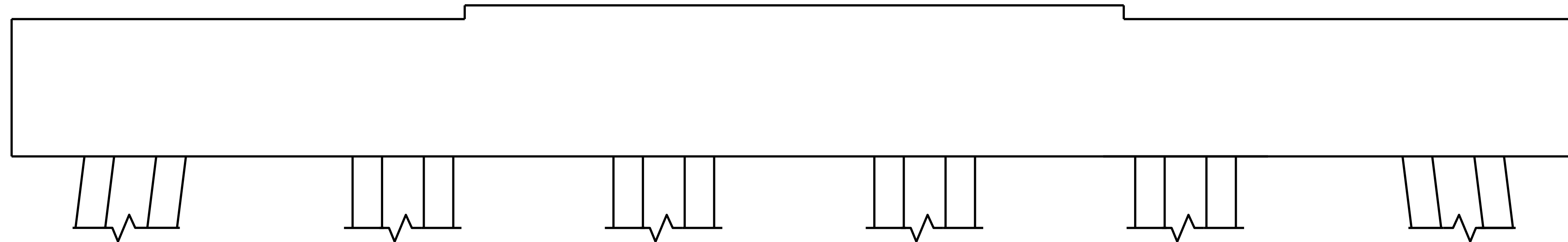
REPAIR QUANTITY TABLE

REPAIRS BENT 52	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

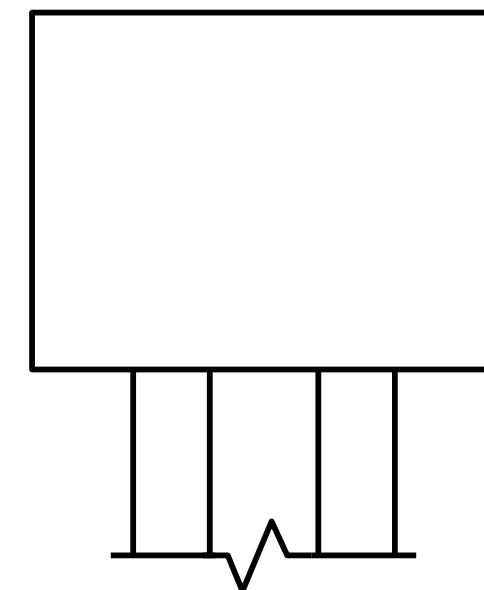
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



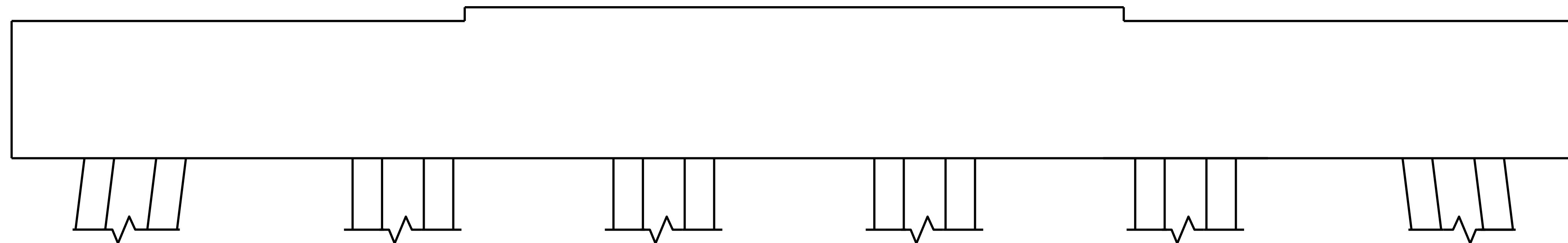
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



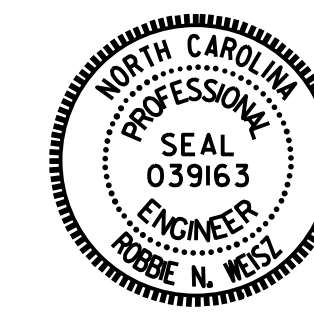
END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 53 OF 96



DocuSigned by:
Robbie Weisz
CSA15345838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 52**

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

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DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

REPAIR QUANTITY TABLE

REPAIRS BENT 53	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.4	3.2		
PILES	0.0	0.0		

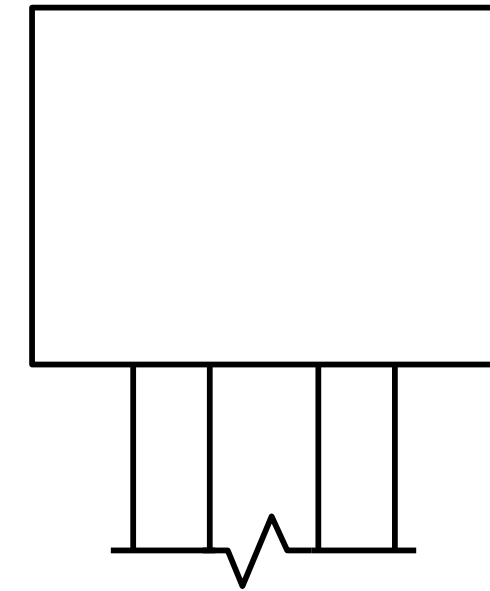
NOTES:

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.

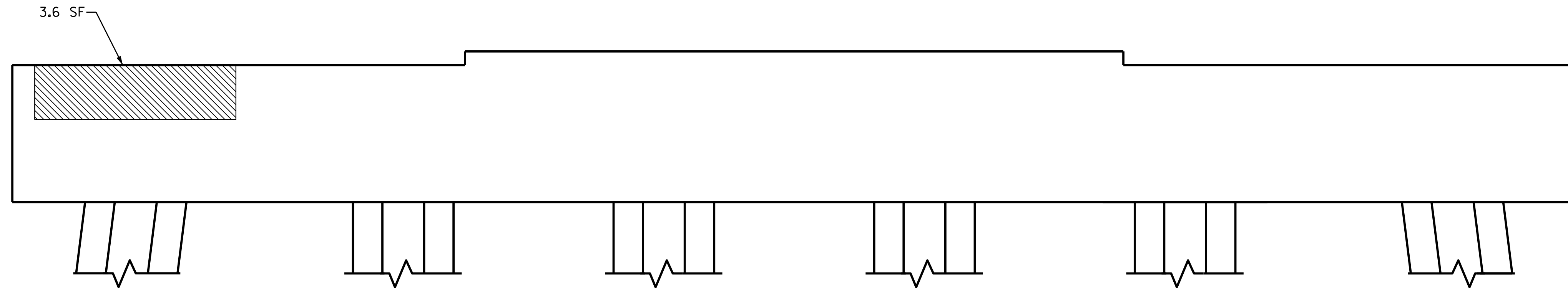
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

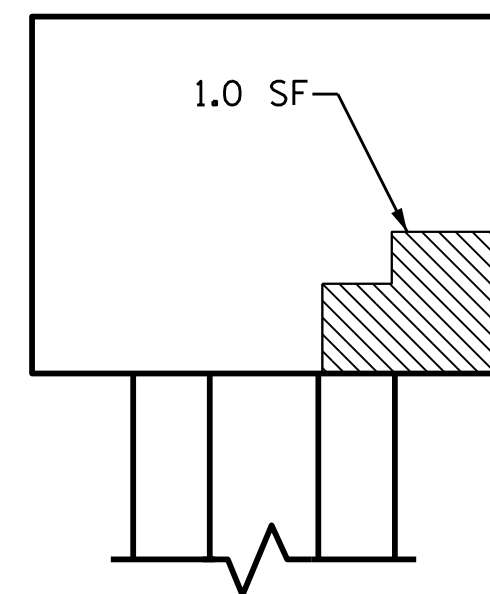
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



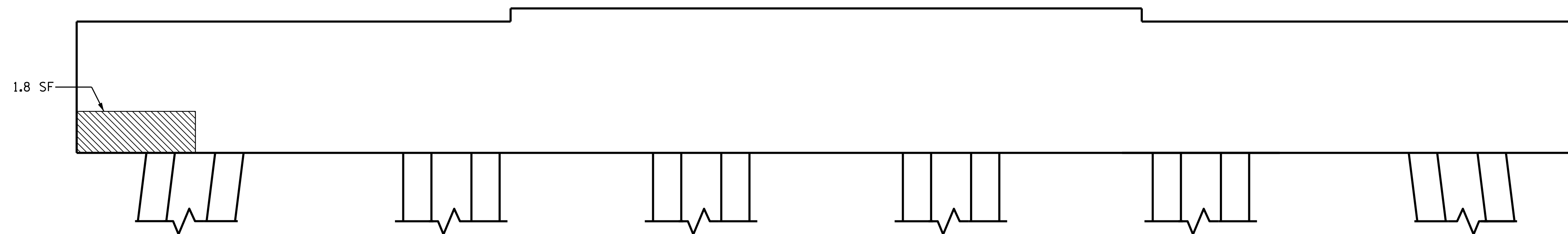
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 54 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 53



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

▨ - SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

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

SHEET NO.
S-60
 TOTAL SHEETS

REPAIR QUANTITY TABLE

REPAIRS BENT 54	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	18.9	9.5		
PILES	0.0	0.0		

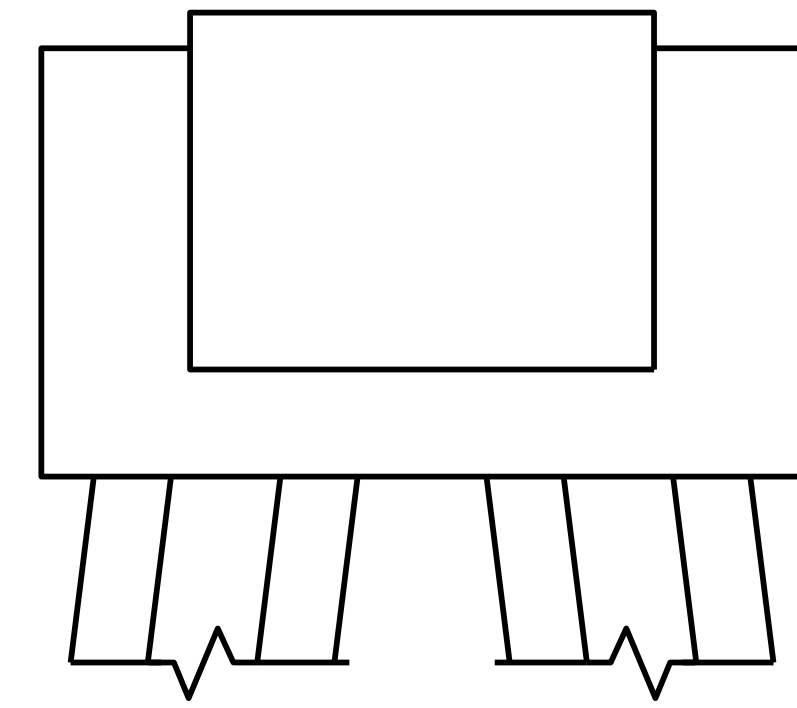
NOTES:

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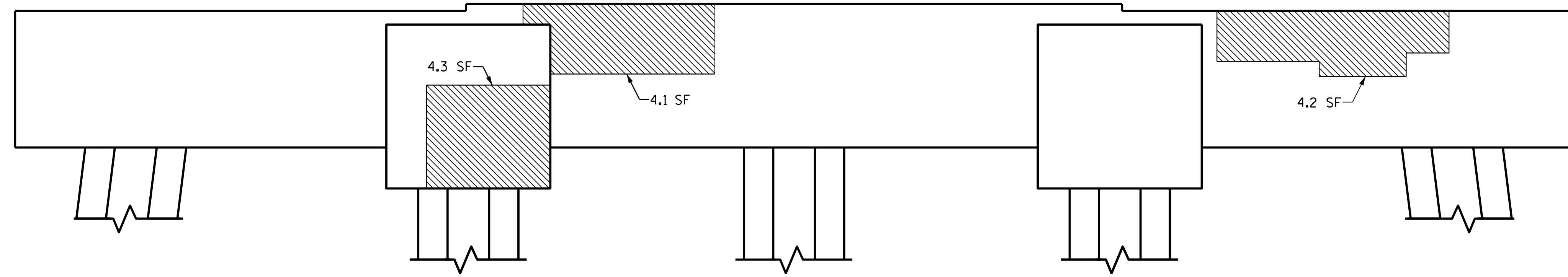
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

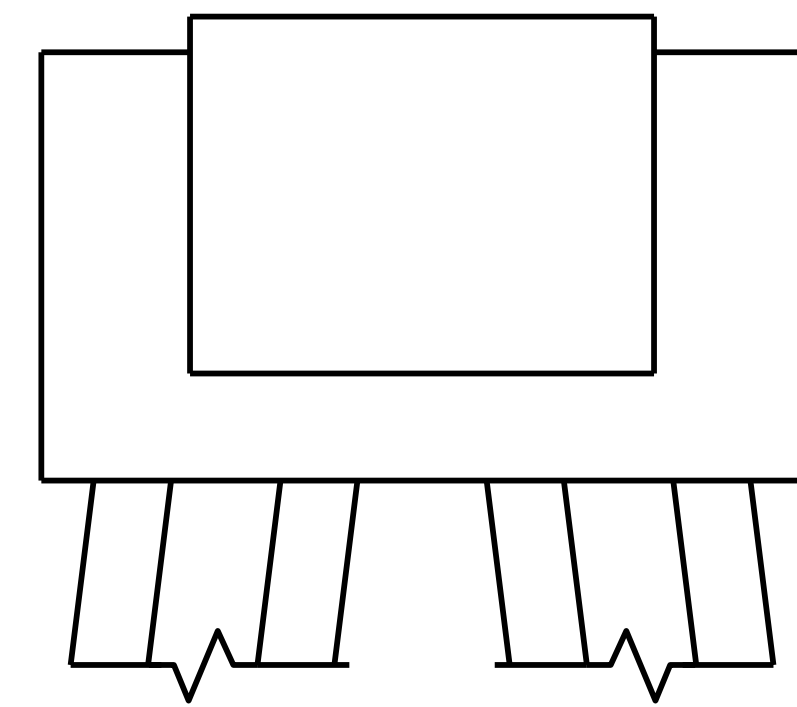
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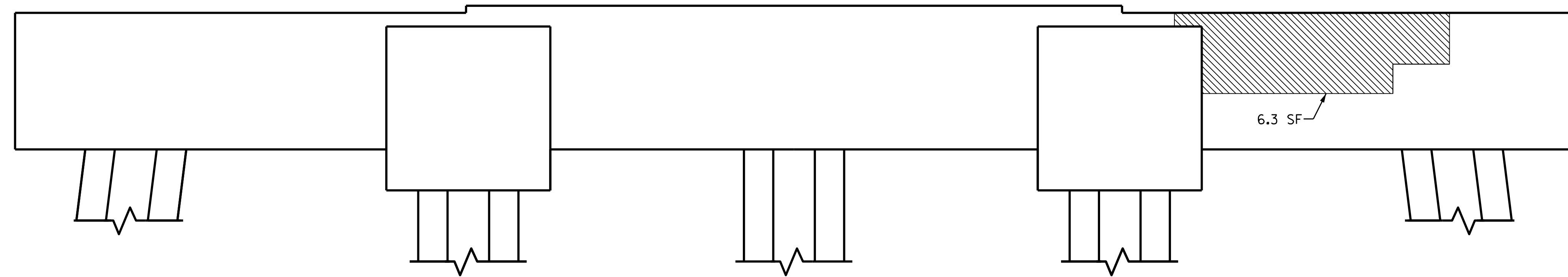
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 55 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 54



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

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

REPAIR QUANTITY TABLE

REPAIRS BENT 55	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	14.9	7.5		
PILES	0.0	0.0		

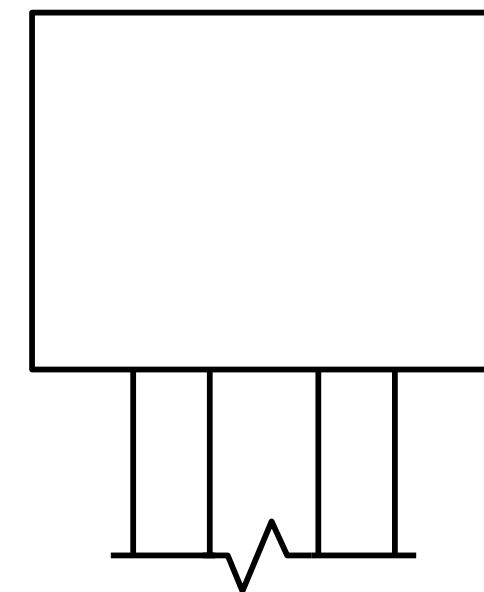
NOTES:

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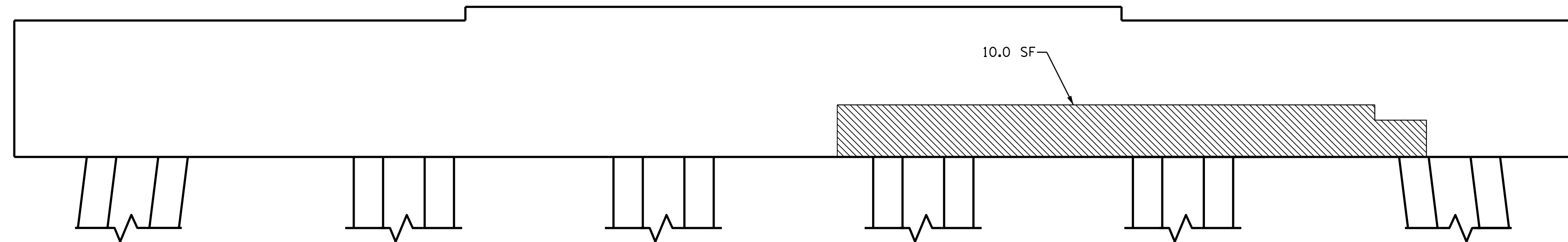
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

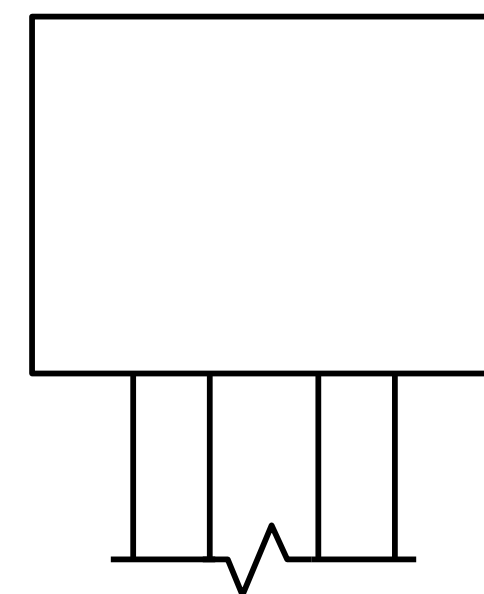
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



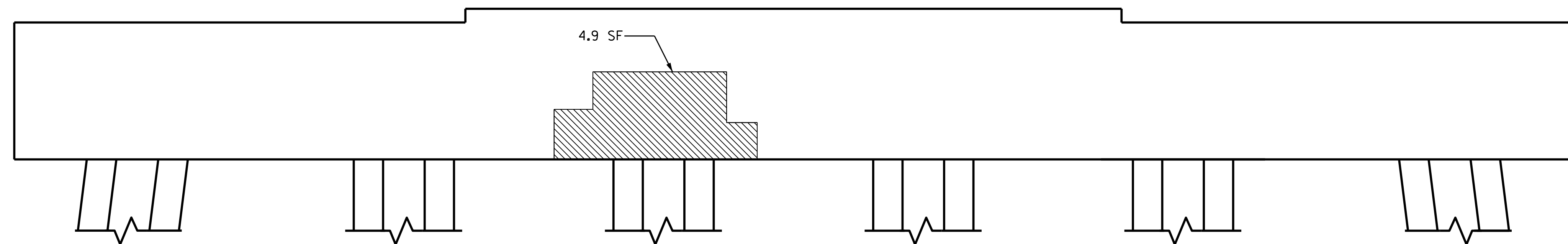
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE

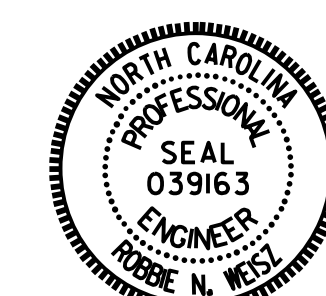


ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 56 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 BENT 55



DocuSigned by:
 Robbie Weisz
 CS-A153E838D43D
 6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 11/2016

05-JUN-2017 13:14
 R:\Structures\DCN\400.055.B5941.SMU.S45 THRU S102.BENTS35thru94.DGN
 gdickey

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

REPAIR QUANTITY TABLE

REPAIRS BENT 56	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.6	8.8		
PILES	0.0	0.0		

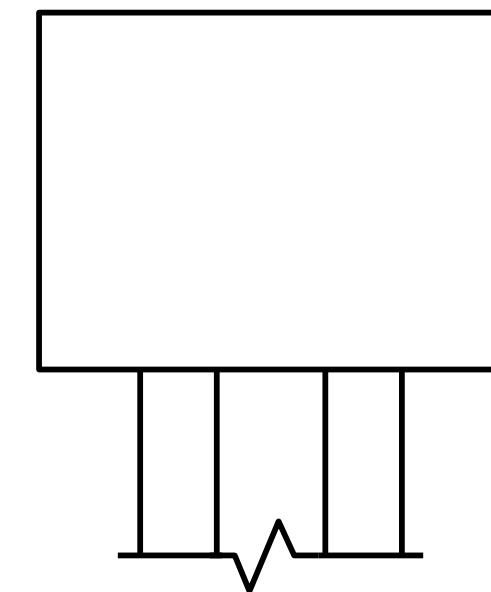
NOTES:

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.

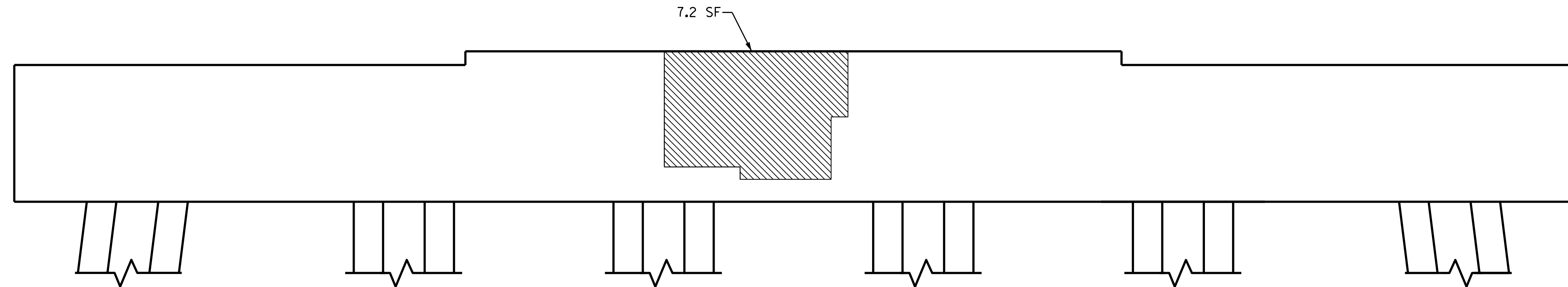
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

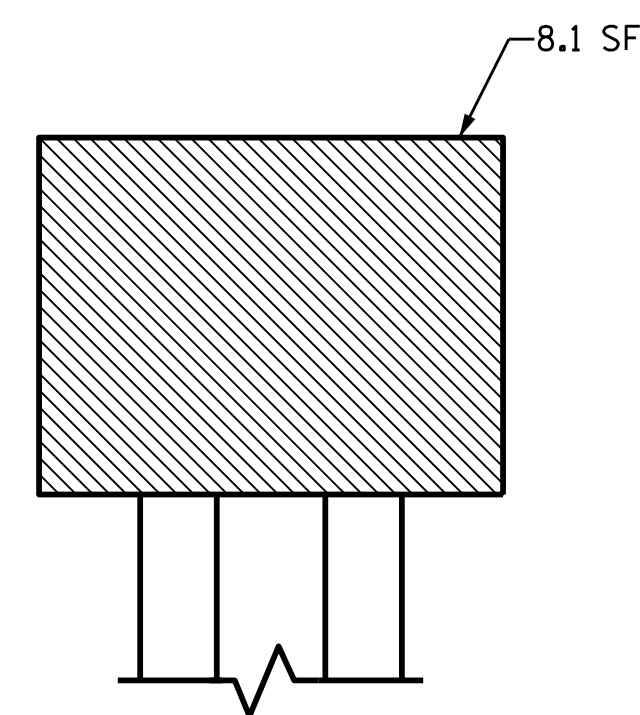
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



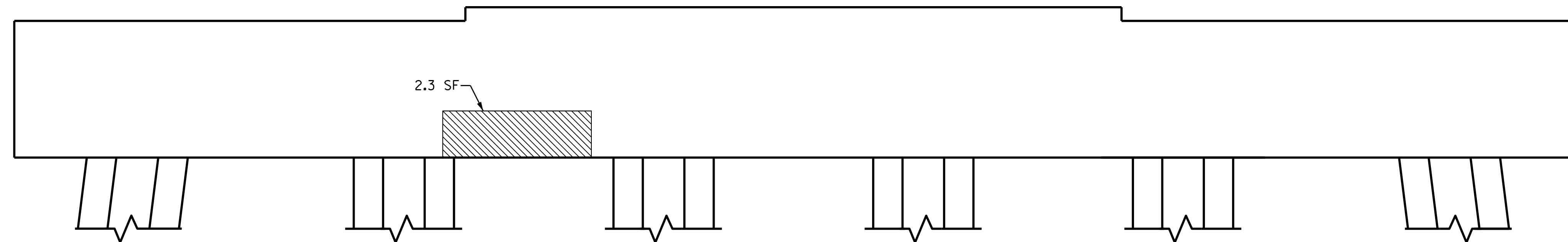
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA153638043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 57 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 56**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-63
2			4			

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.

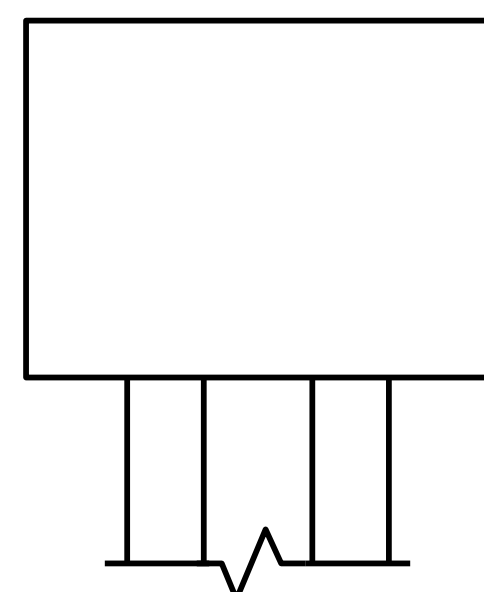
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

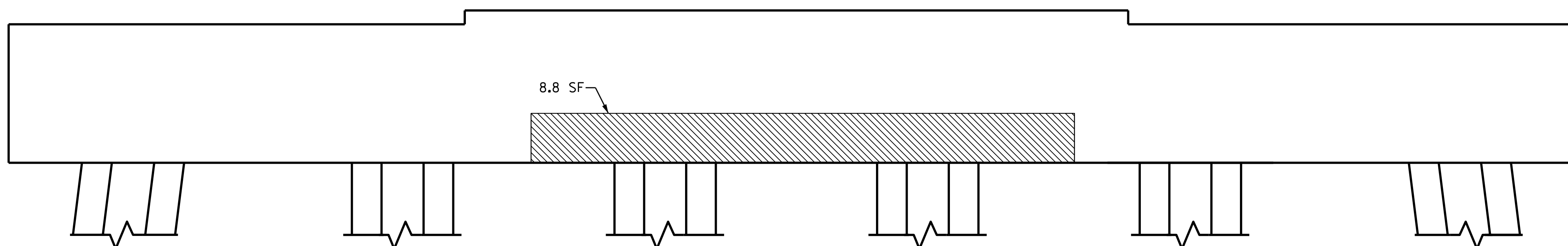
REPAIR QUANTITY TABLE

REPAIRS BENT 57	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	10.0	5.0		
PILES	0.0	0.0		

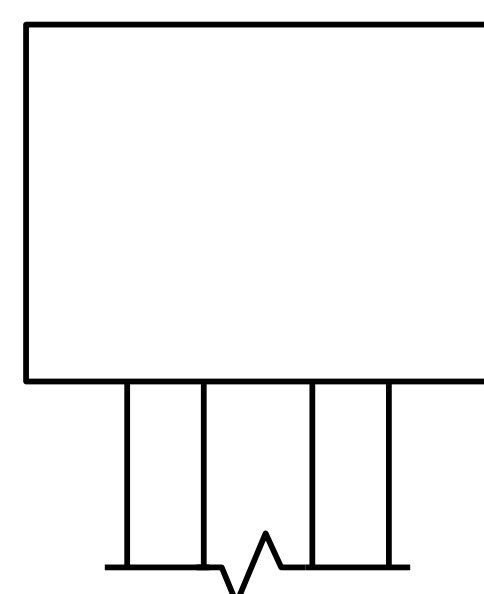
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



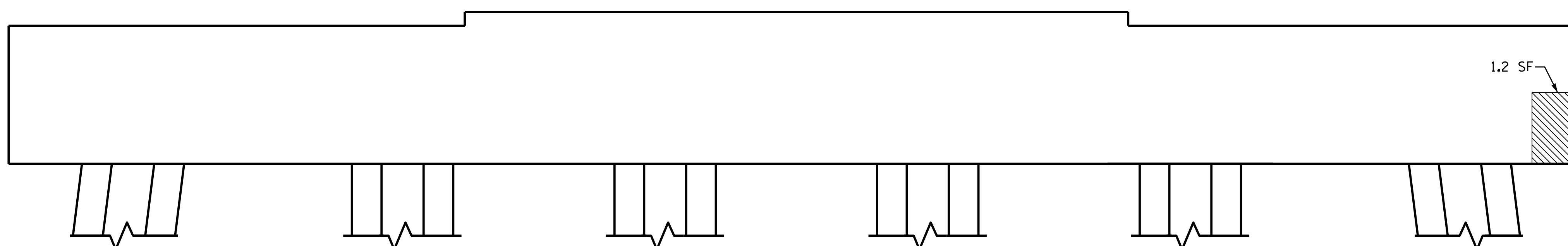
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



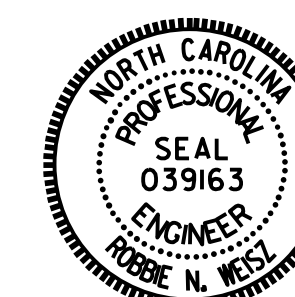
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 58 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1536838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 57**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 4/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-64
2			4			

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.

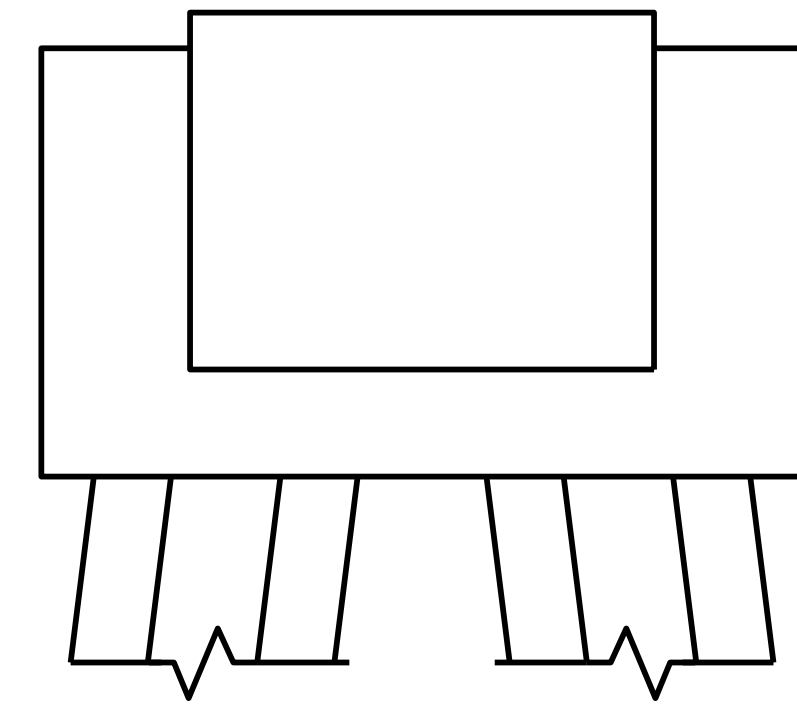
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

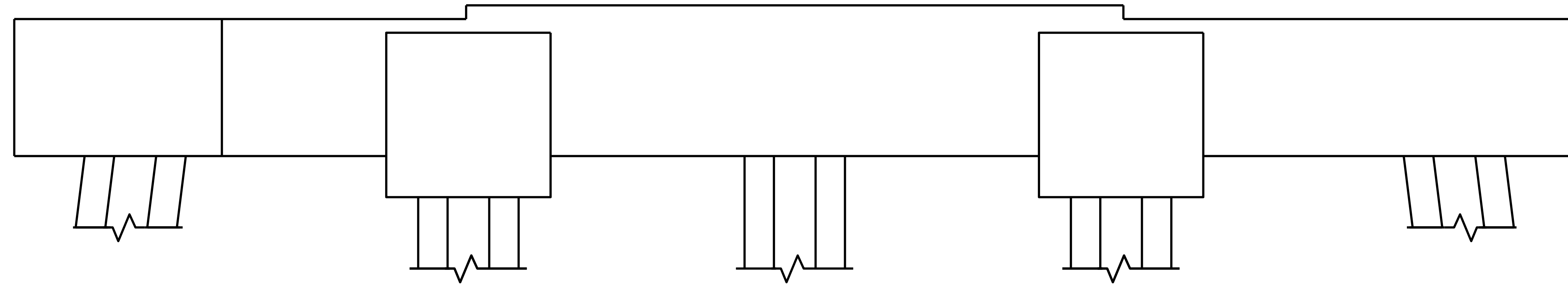
REPAIR QUANTITY TABLE

REPAIRS BENT 58	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

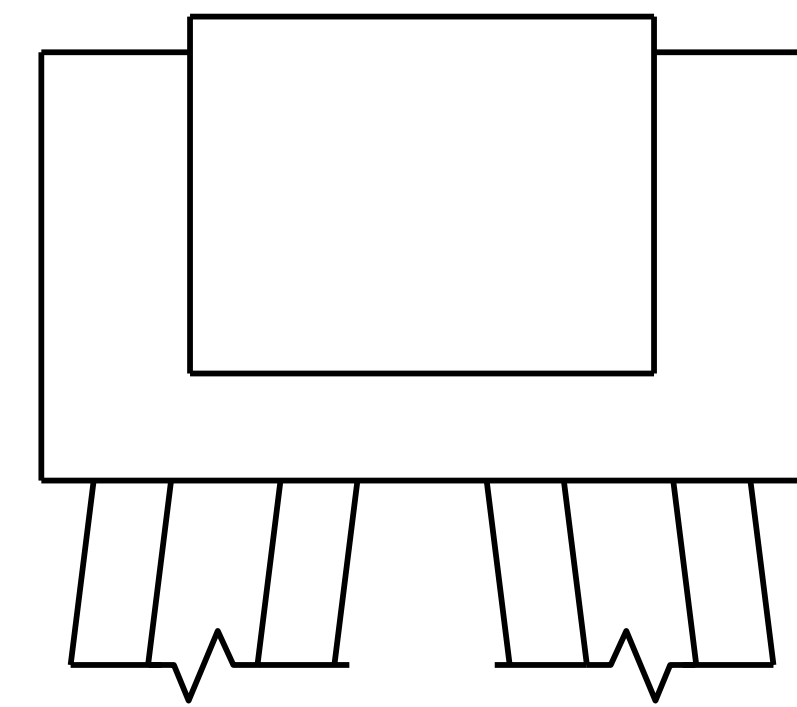
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



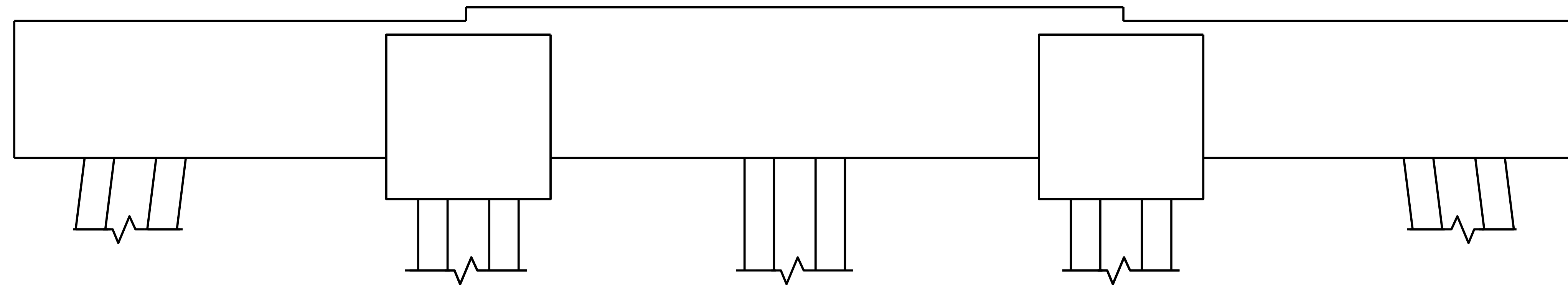
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE

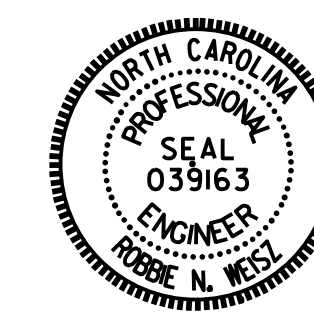


ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 59 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 58**



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

- SHOTCRETE REPAIR

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-65 TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

NOTES:

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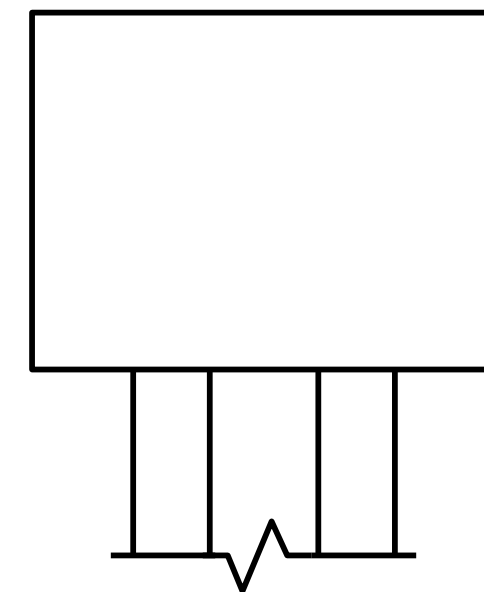
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

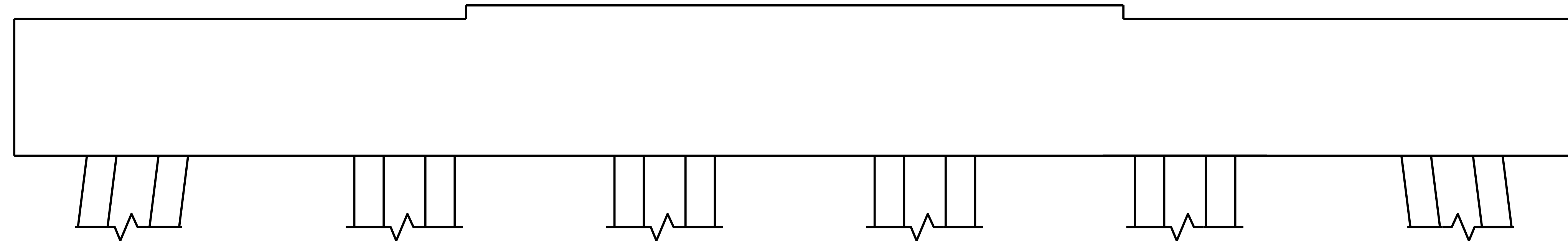
REPAIR QUANTITY TABLE

REPAIRS BENT 59	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	12.2	6.1		
PILES	0.0	0.0		

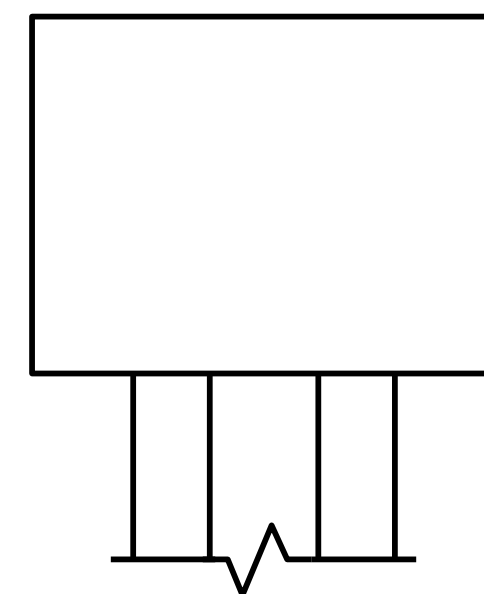
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



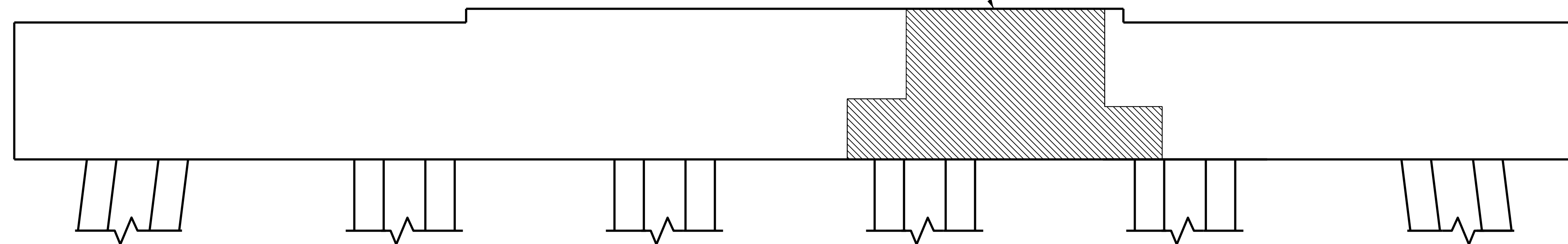
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 60 OF 96



DocuSigned by:
Robbie Weisz
CSA153858043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 59**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-66
2			4			

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 11/2016

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SIGNATURES COMPLETED

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.

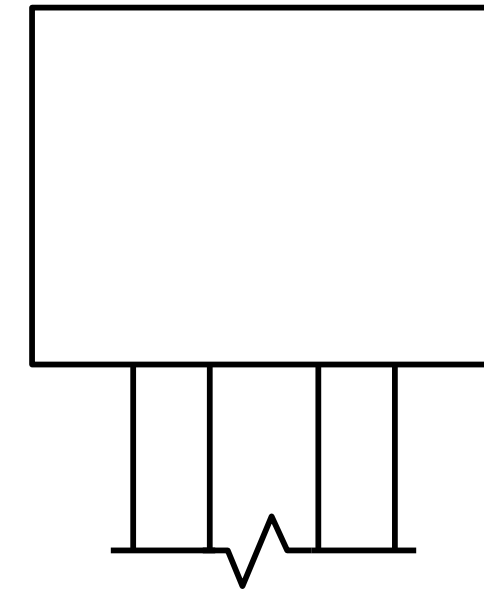
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

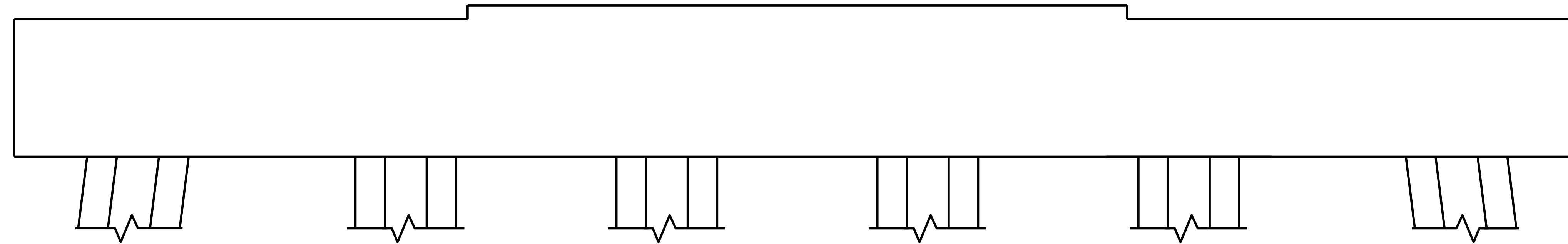
REPAIR QUANTITY TABLE

REPAIRS BENT 60	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	8.6	4.3		
PILES	0.0	0.0		

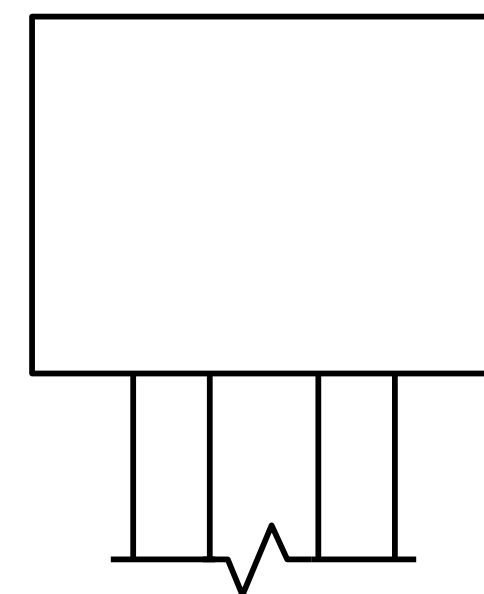
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



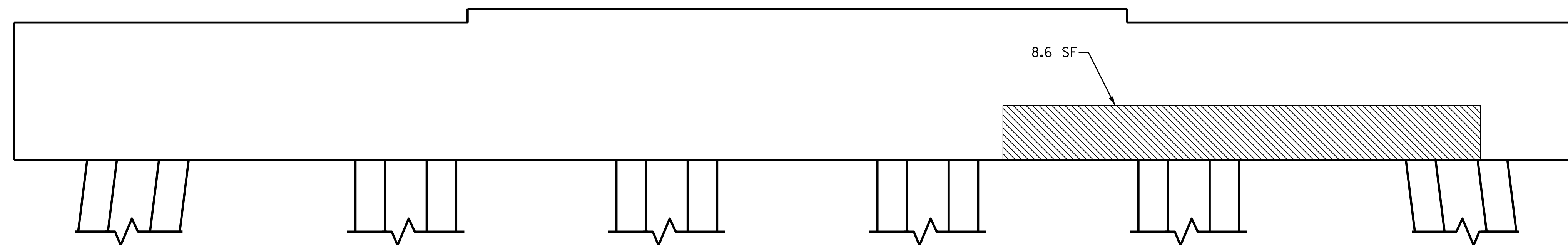
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 61 OF 96



DocuSigned by:
Robin Weisz
CSA153858043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 60**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-67
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 61	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	5.6	2.8		
PILES	0.0	0.0		

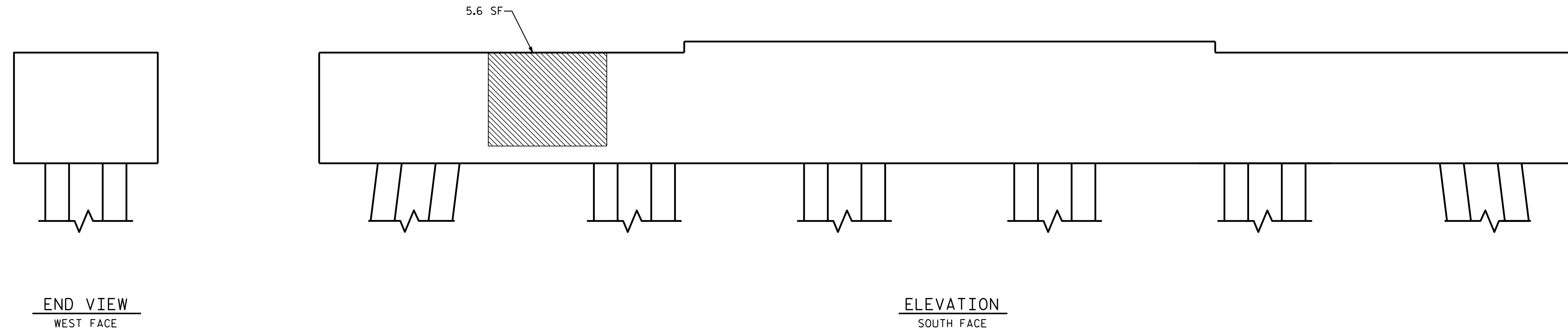
NOTES:

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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

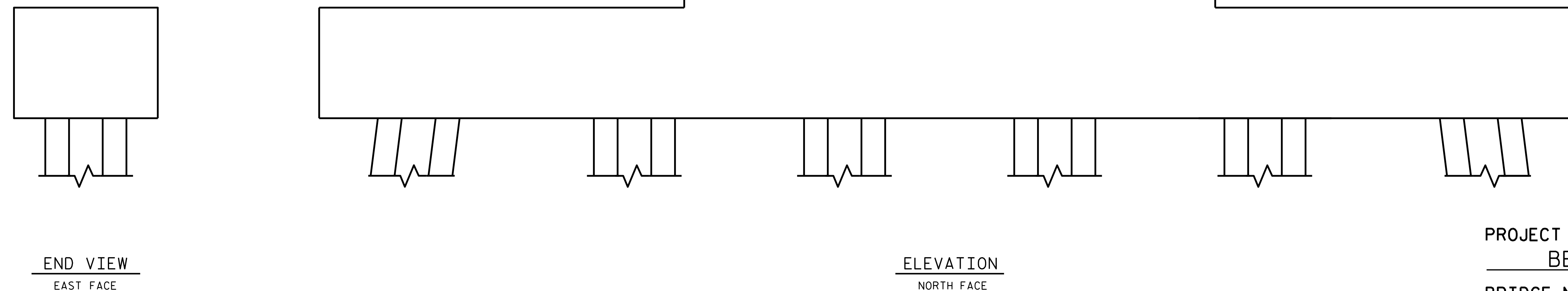
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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.



END VIEW
WEST FACE

ELEVATION
SOUTH FACE

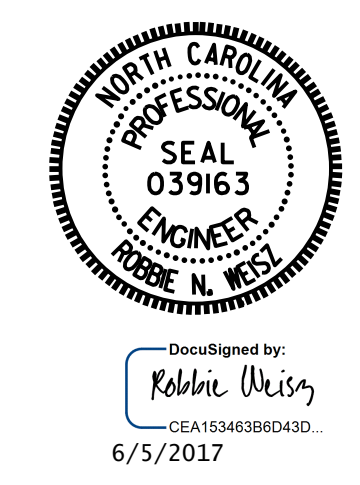


END VIEW
EAST FACE

ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 62 OF 96

- SHOTCRETE REPAIR



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 61**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-68
2			4			

NOTES:

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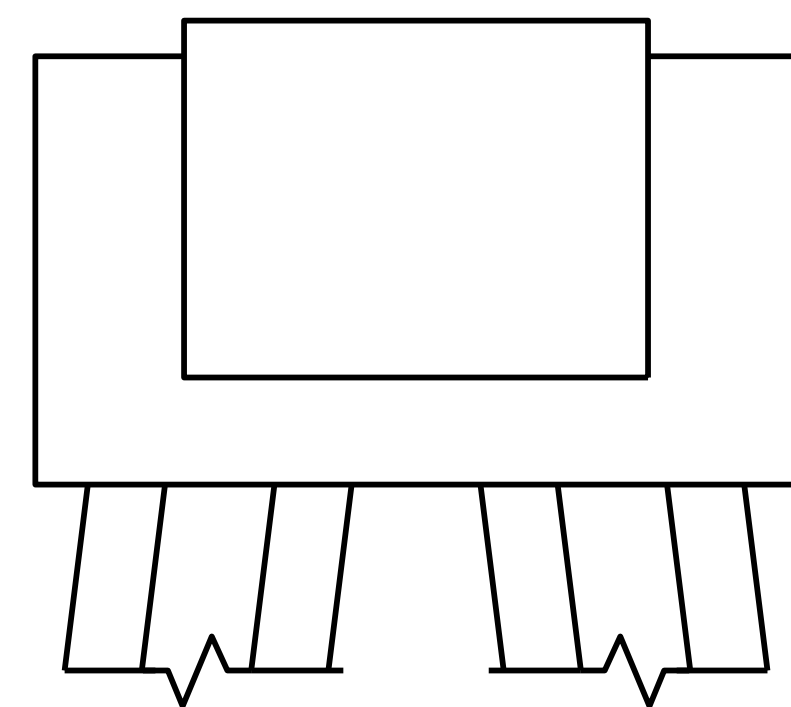
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

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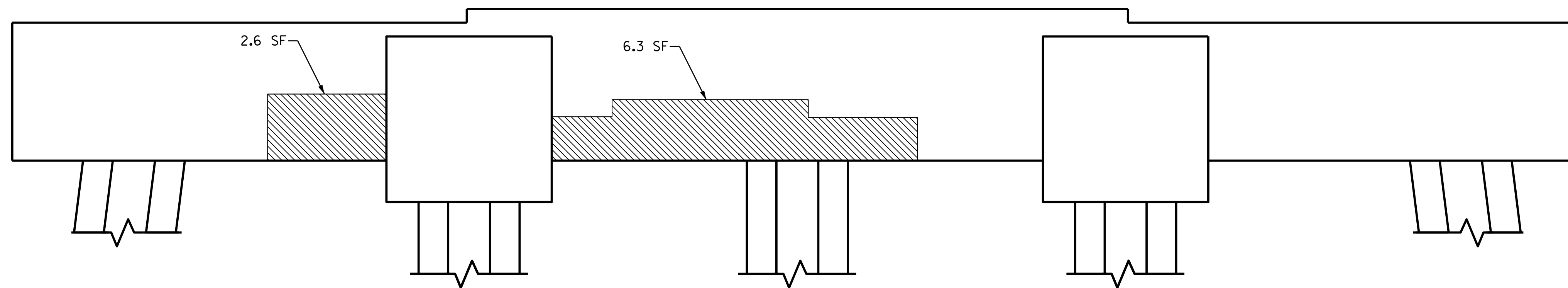
REPAIR QUANTITY TABLE

REPAIRS BENT 62	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	8.9	4.5		
PILES	0.0	0.0		

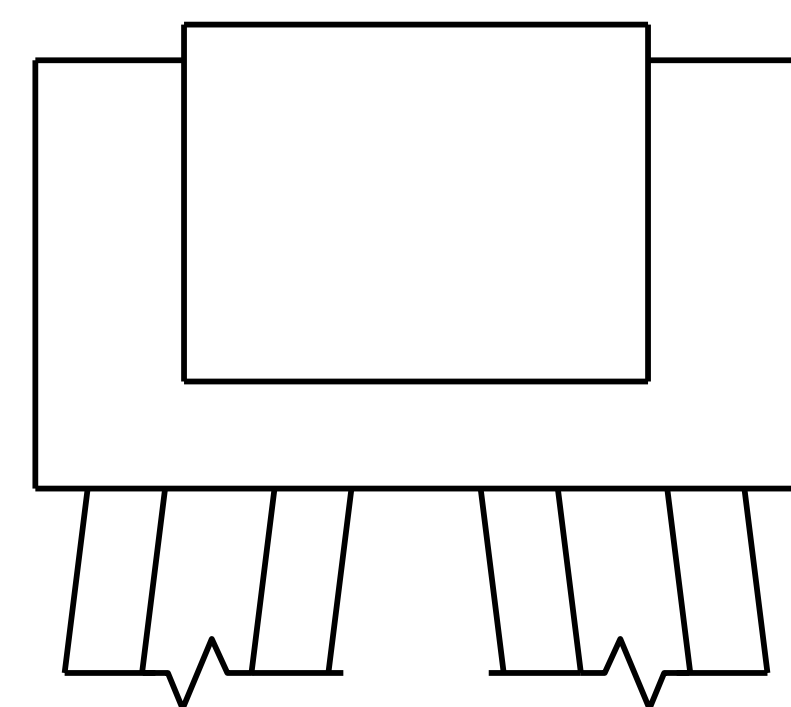
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



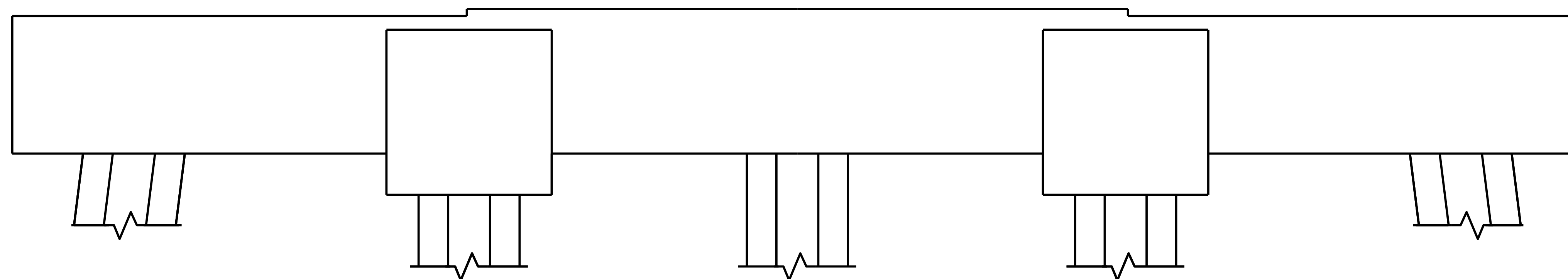
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 63 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 62**

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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

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.

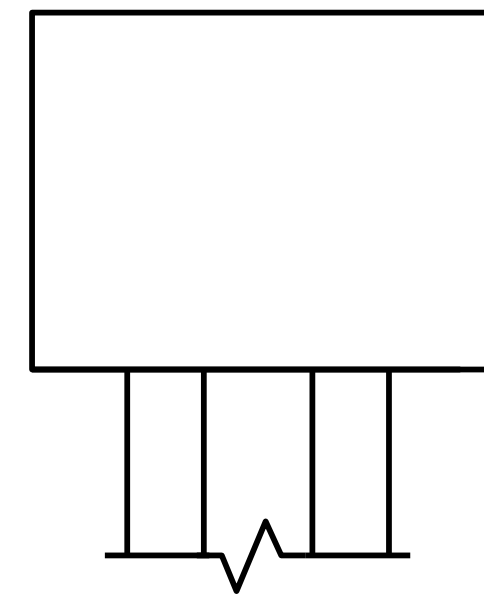
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

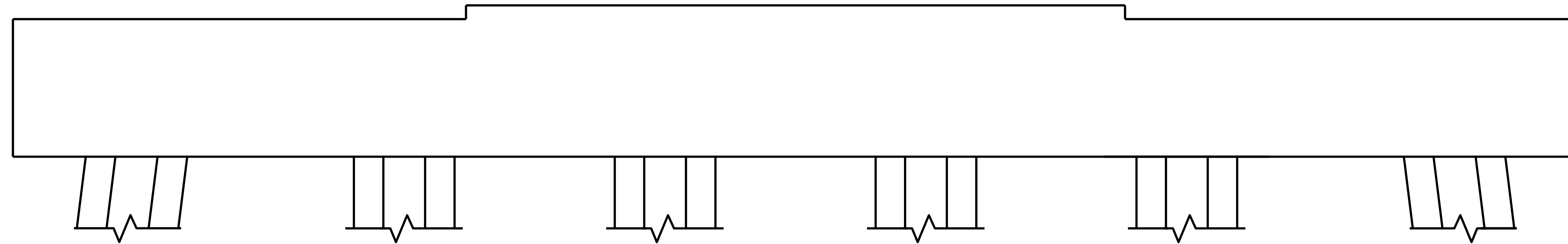
REPAIR QUANTITY TABLE

REPAIRS BENT 63	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	8.6	4.3		
PILES	0.0	0.0		

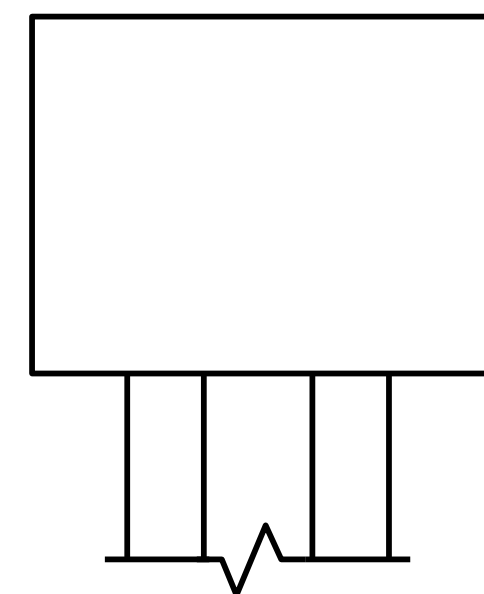
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



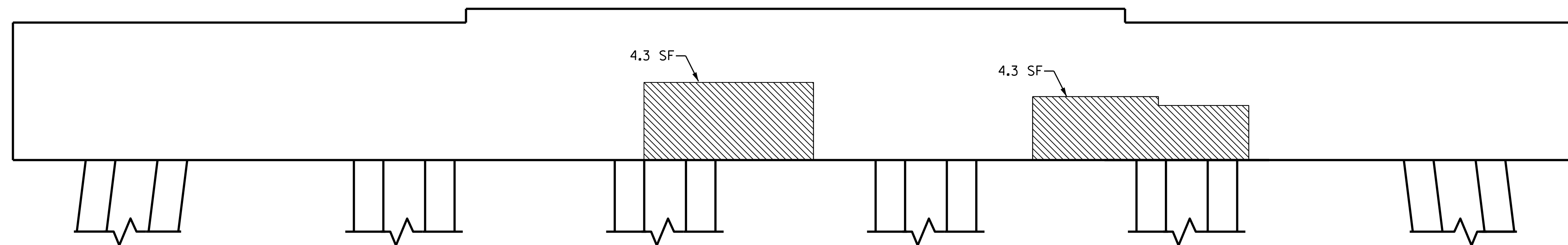
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

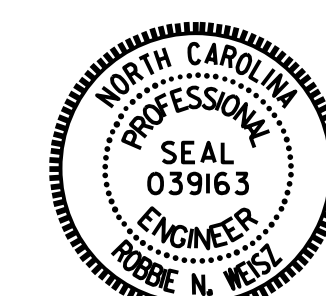


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 64 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 63**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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FINAL UNLESS ALL
SIGNATURES COMPLETED

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

REPAIR QUANTITY TABLE

REPAIRS BENT 64	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.4	4.7		
PILES	0.0	0.0		

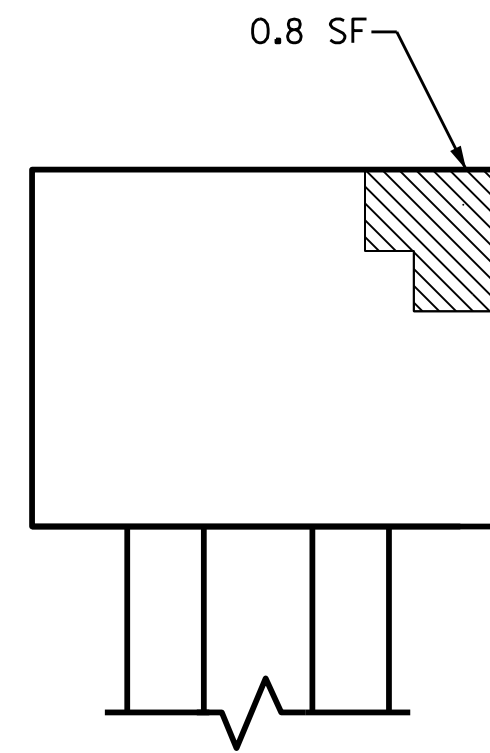
NOTES:

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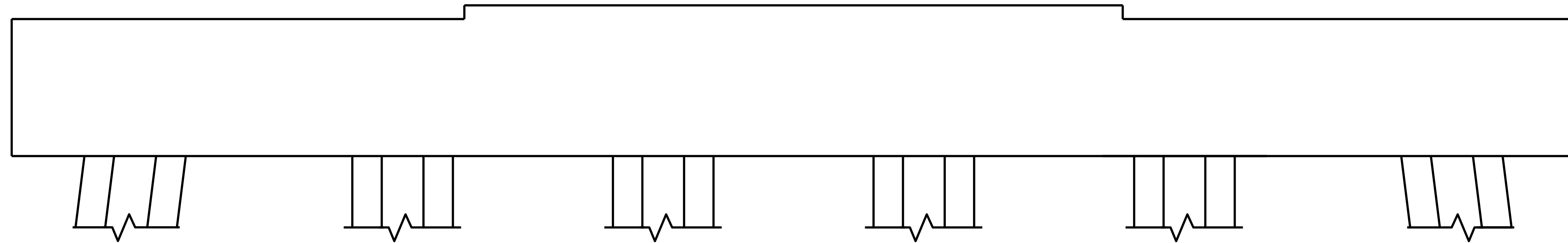
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

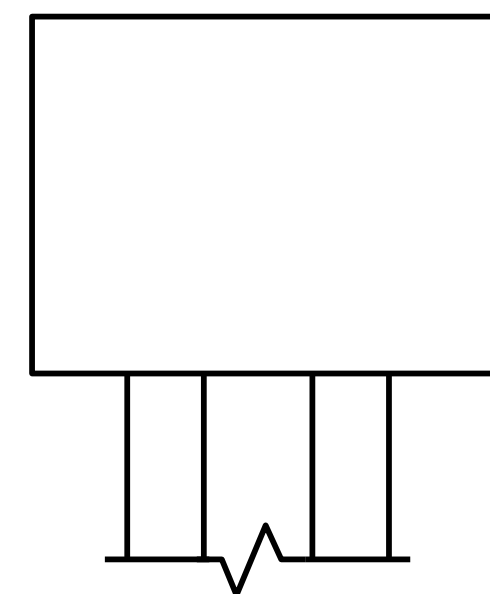
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



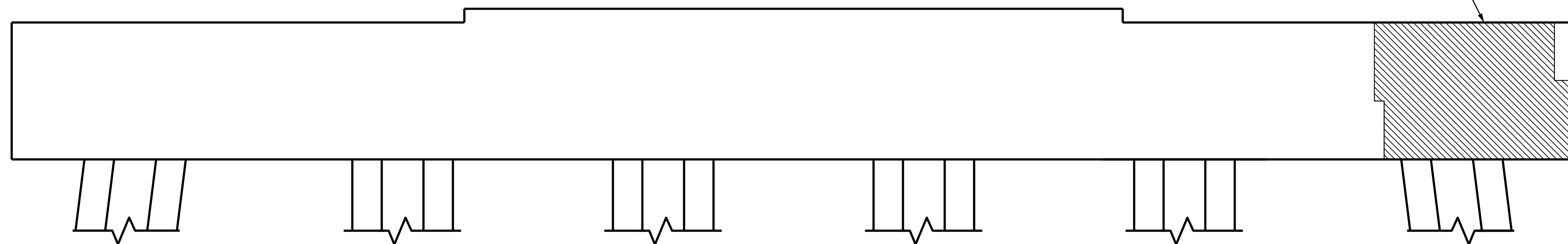
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



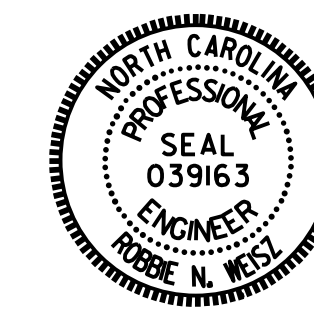
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 65 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 64**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

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

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.

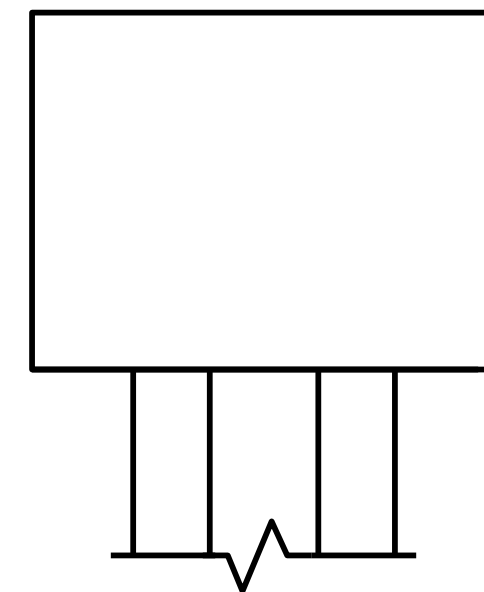
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

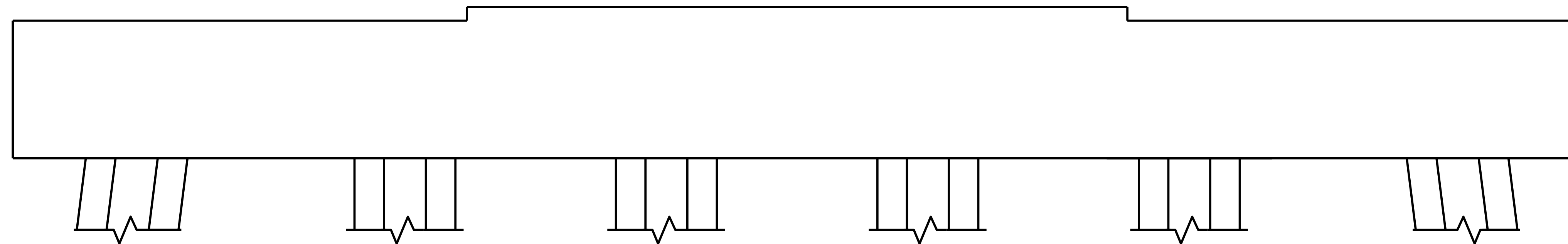
REPAIR QUANTITY TABLE

REPAIRS BENT 65	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	10.5	5.3		
PILES	0.0	0.0		

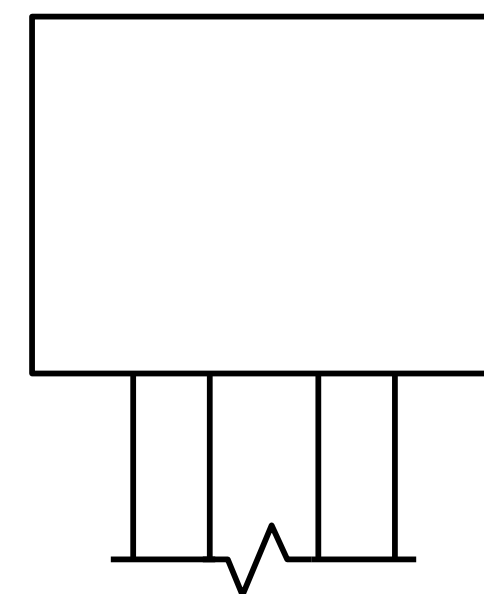
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



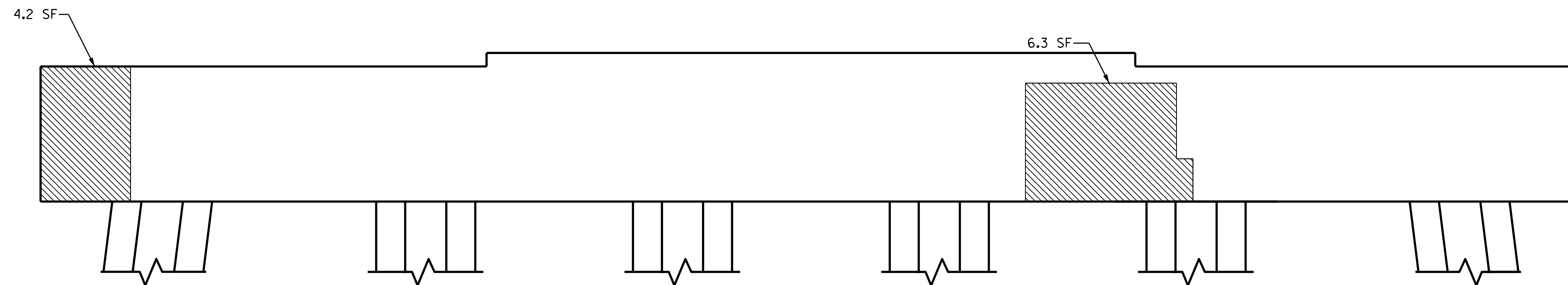
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

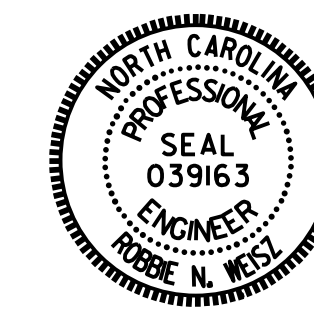


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



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Robbie Weisz
CSA153838043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 66 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 65**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-72	
2				4			TOTAL SHEETS	

NOTES:

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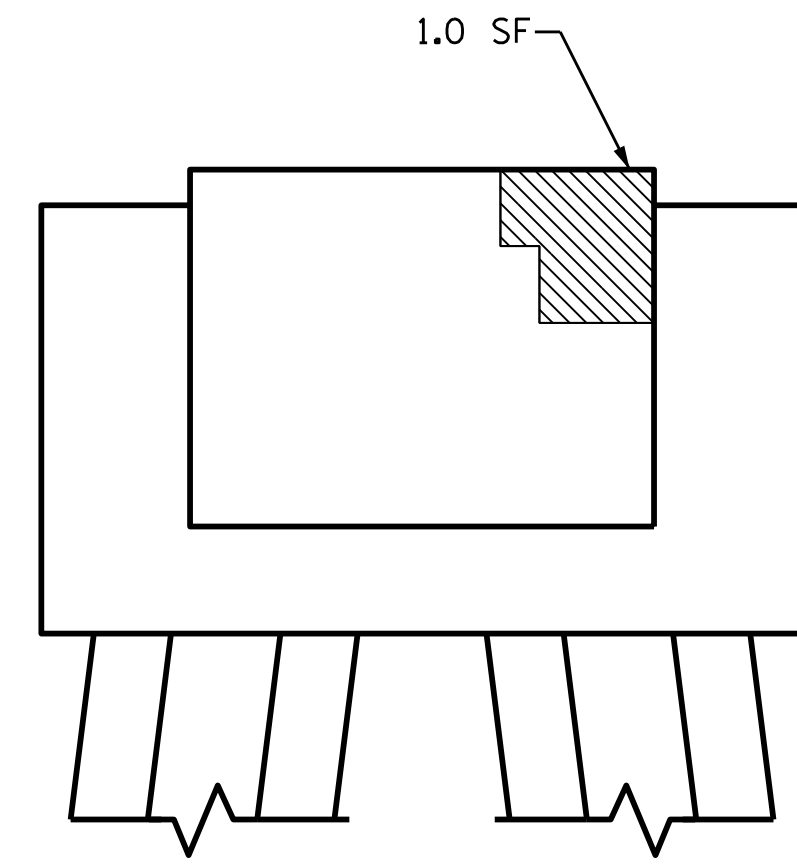
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

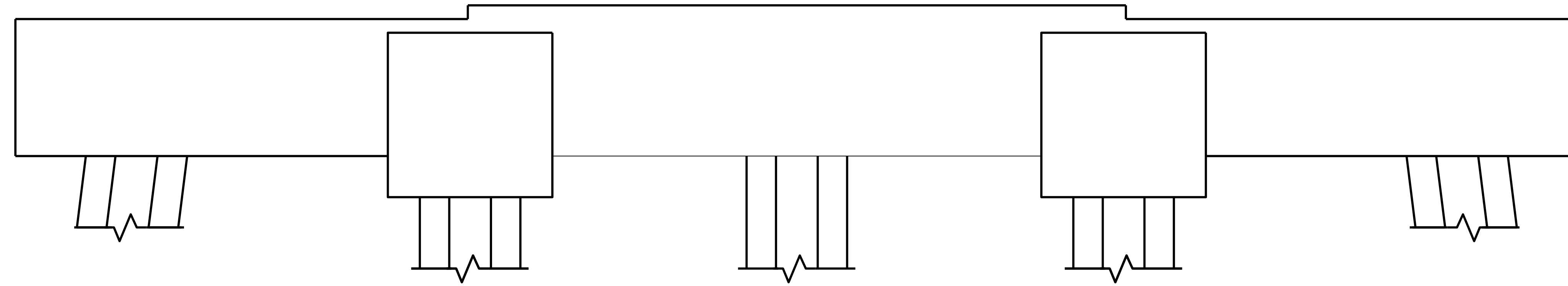
REPAIR QUANTITY TABLE

REPAIRS BENT 66	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	8.7	4.4		
PILES	0.0	0.0		

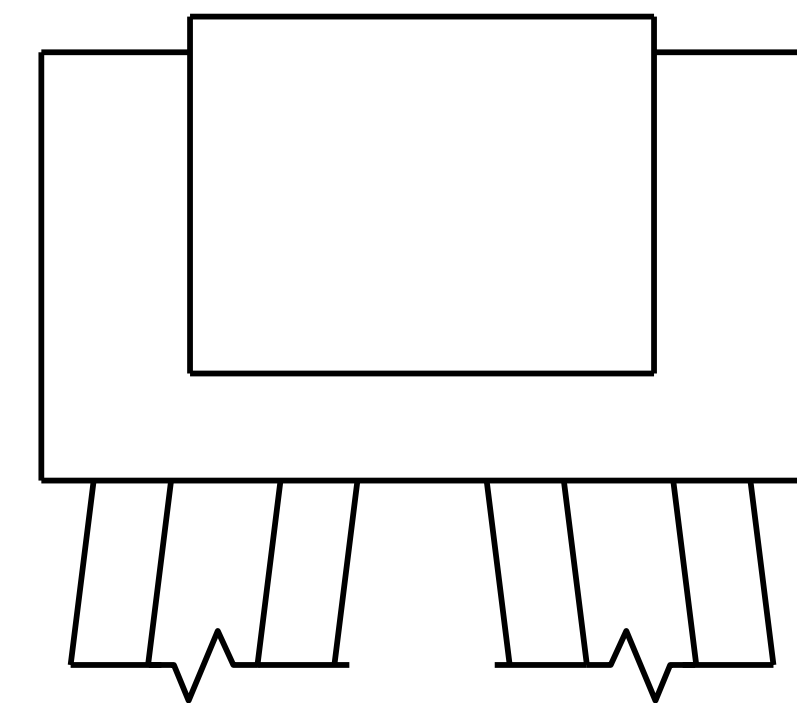
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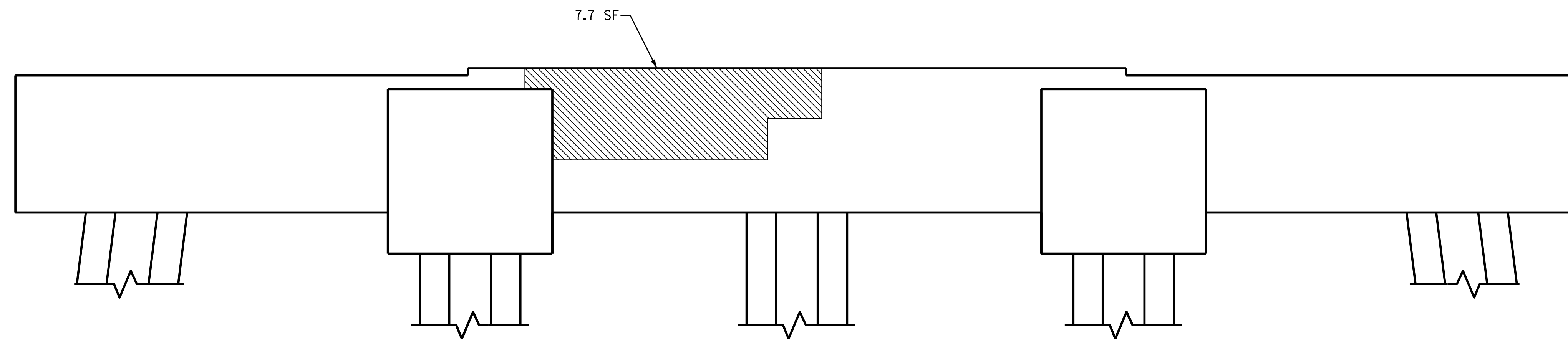
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

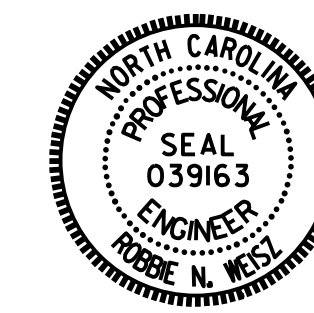


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA153M838D43D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 67 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 66**

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

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SIGNATURES COMPLETED

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

NOTES:

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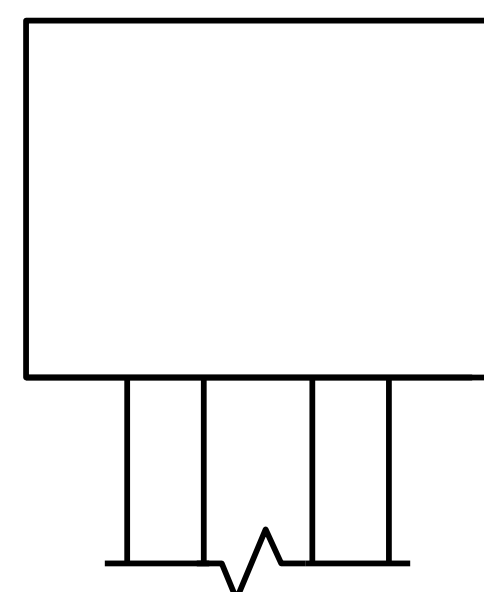
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

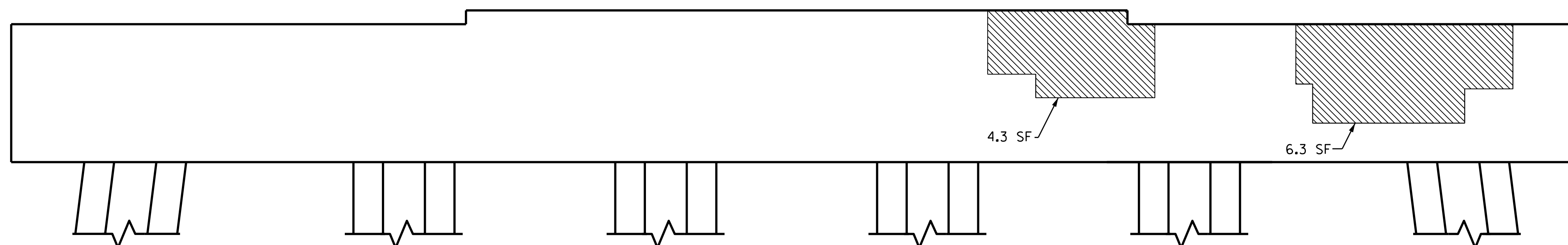
REPAIR QUANTITY TABLE

REPAIRS BENT 67	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	25.1	12.6		
PILES	0.0	0.0		

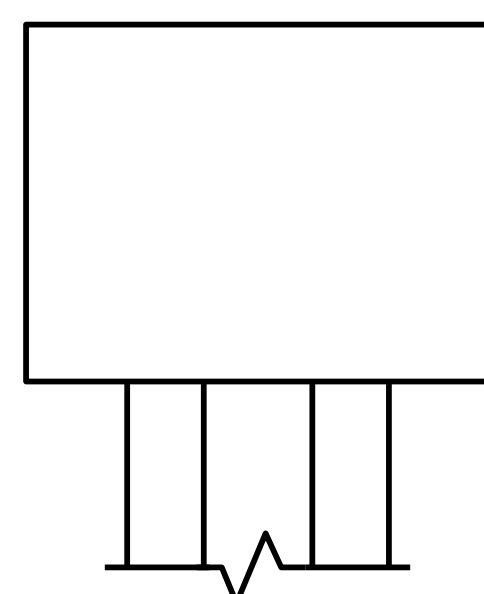
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



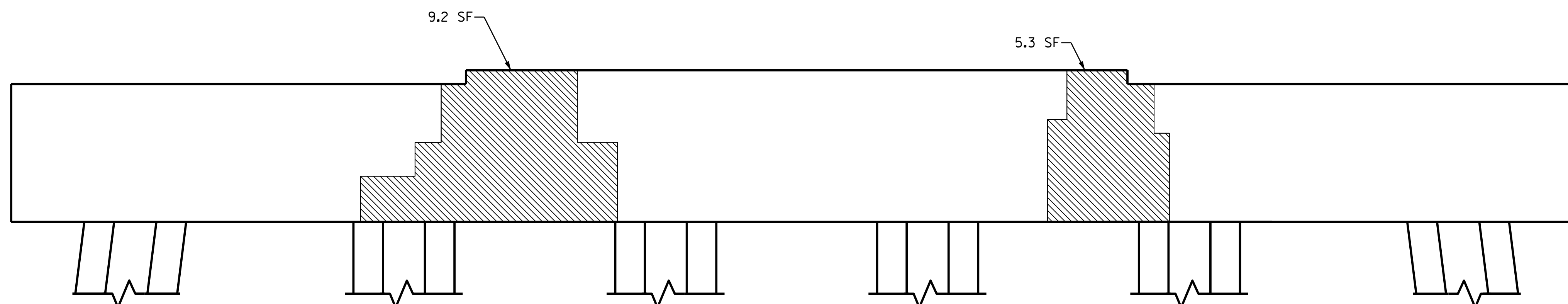
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 68 OF 96



DocuSigned by:
Robbie Weisz
CSA153M838D43D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 67**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-74
2			4			

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.

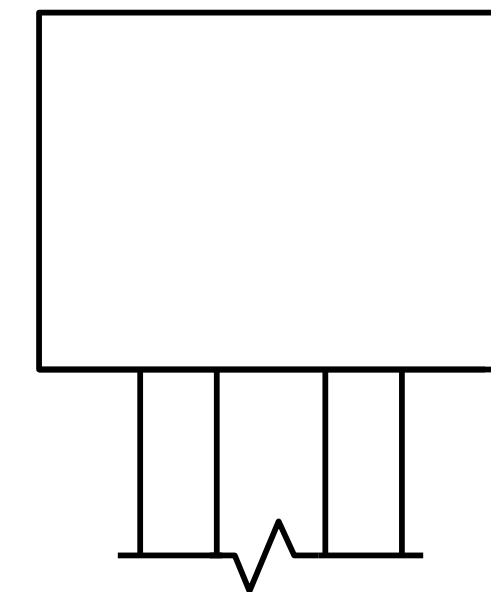
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

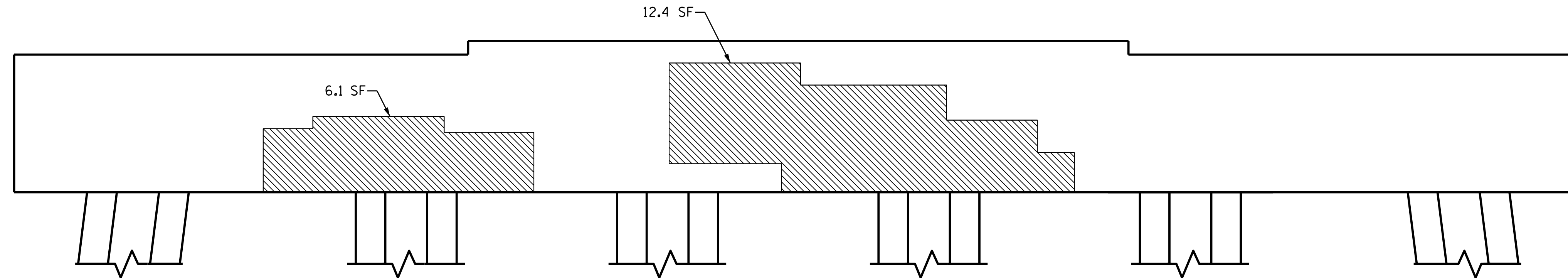
REPAIR QUANTITY TABLE

REPAIRS BENT 68	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	18.5	9.3		
PILES	0.0	0.0		

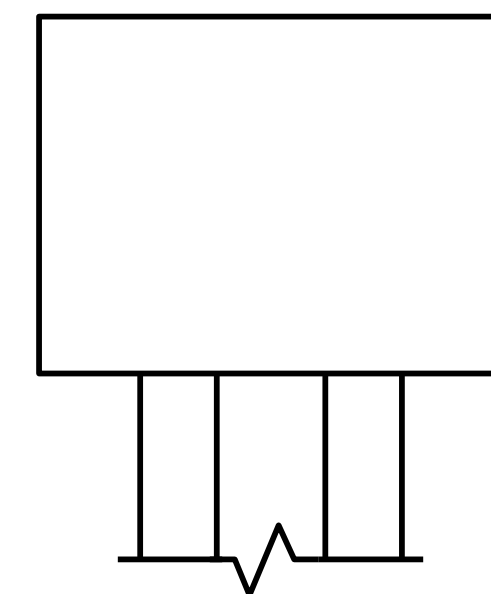
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



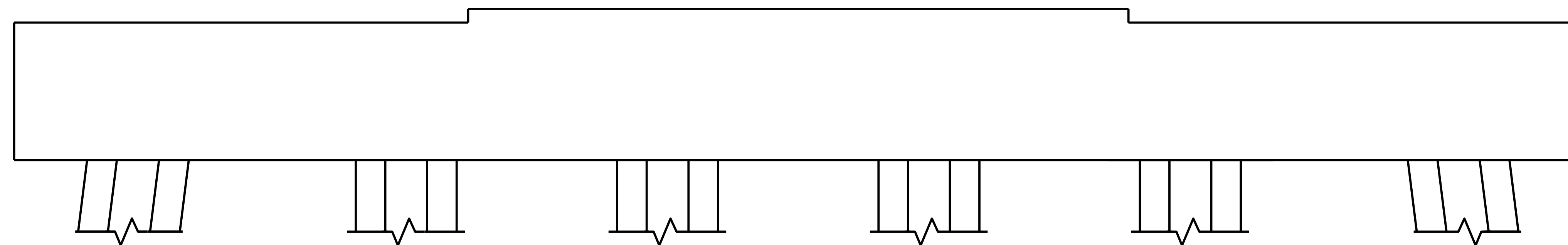
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

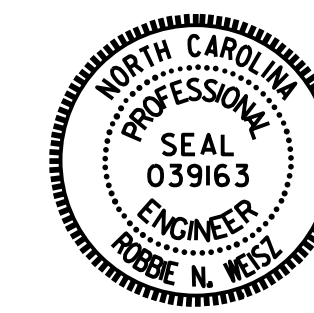


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA1538588043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 69 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 68**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

REPAIR QUANTITY TABLE

REPAIRS BENT 69	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.1	4.6		
PILES	0.0	0.0		

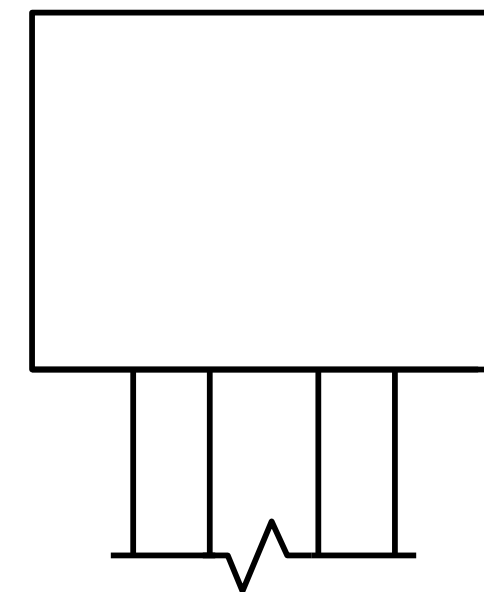
NOTES:

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.

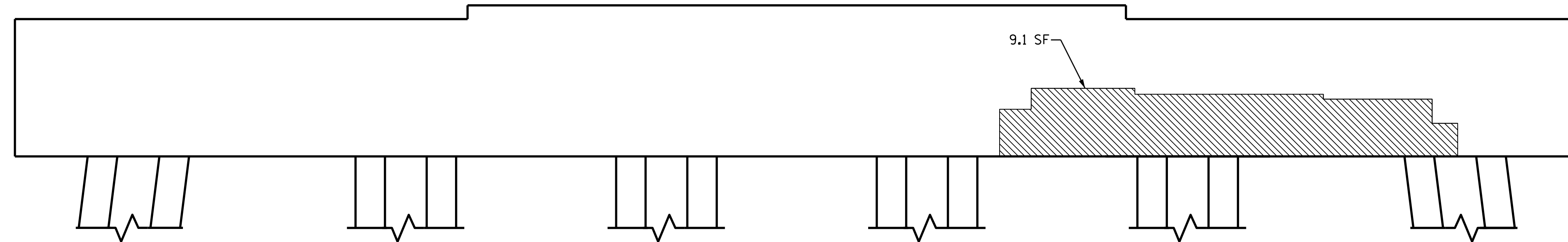
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

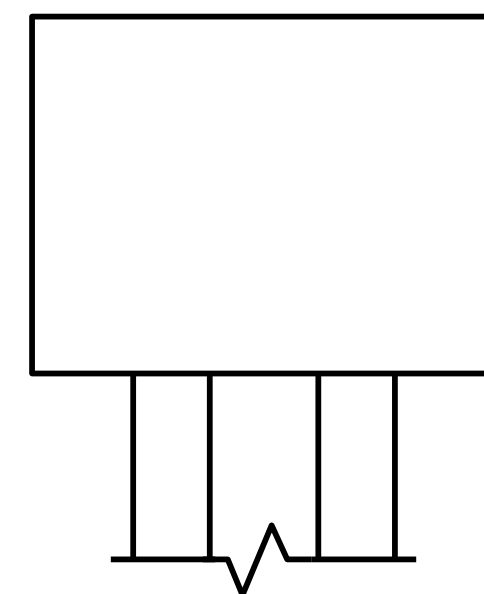
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



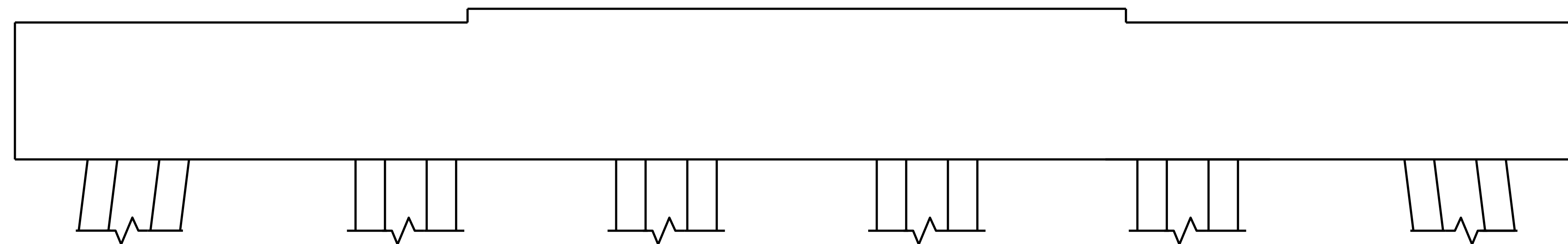
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

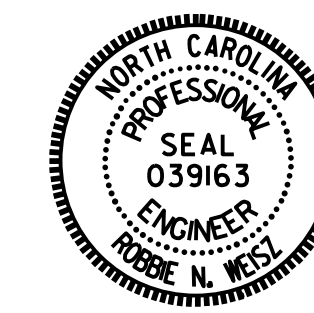


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



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Robin Weisz
CSA1536838043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 70 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**SUBSTRUCTURE
BENT 69**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

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.

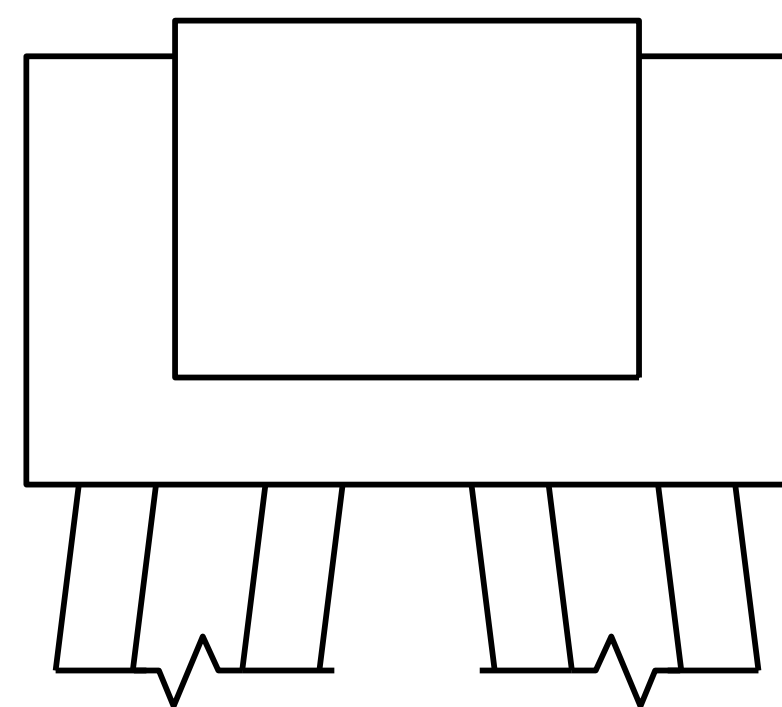
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

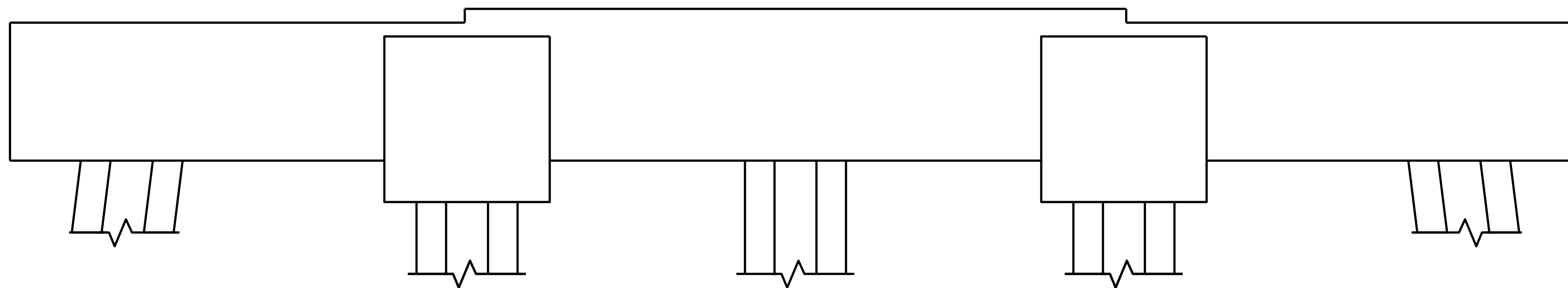
REPAIR QUANTITY TABLE

REPAIRS BENT 70	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	2.5	1.3		
PILES	0.0	0.0		

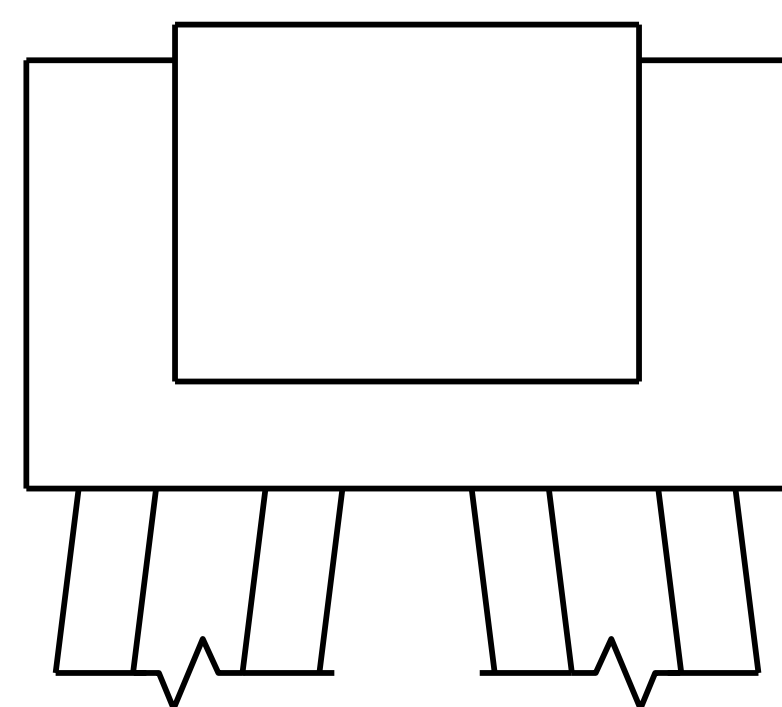
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



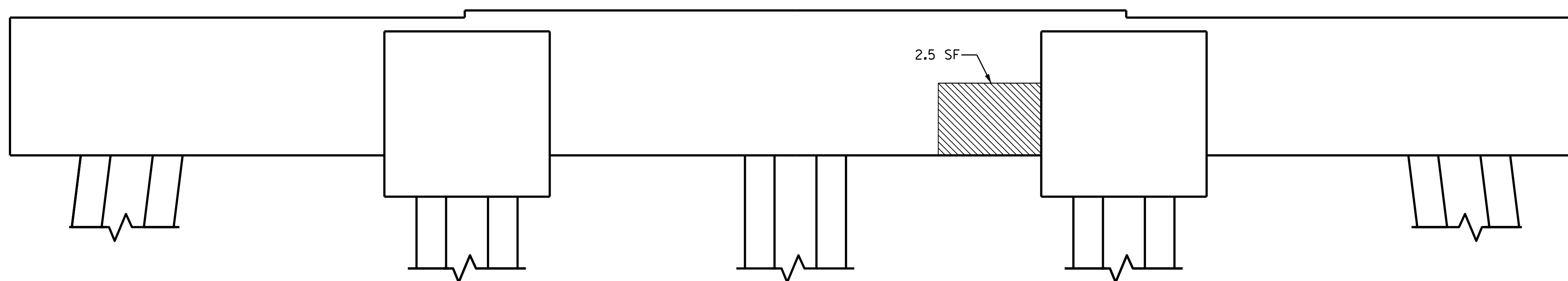
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA153858043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 71 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 70**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

REPAIR QUANTITY TABLE

REPAIRS BENT 71	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	14.9	7.5		
PILES	0.0	0.0		

NOTES:

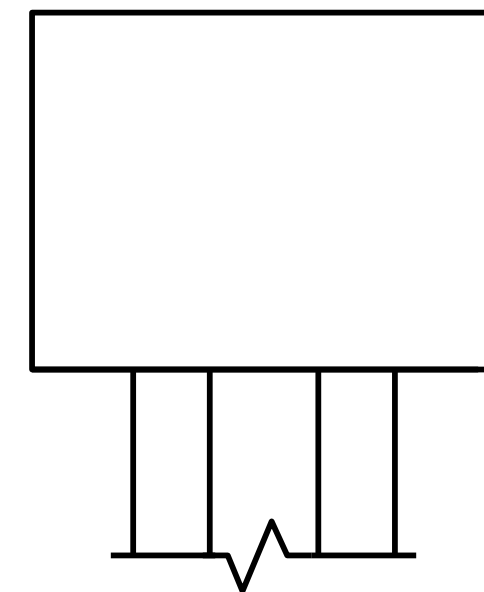
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

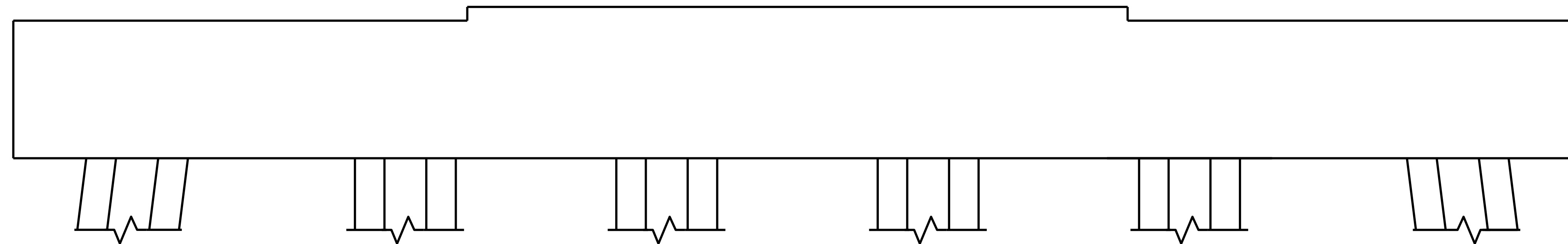
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

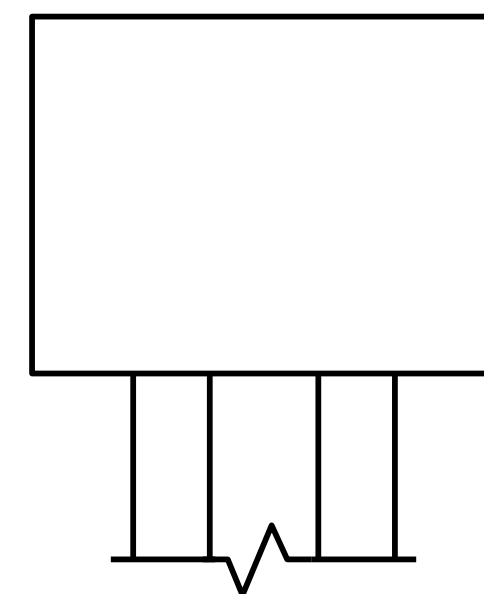
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



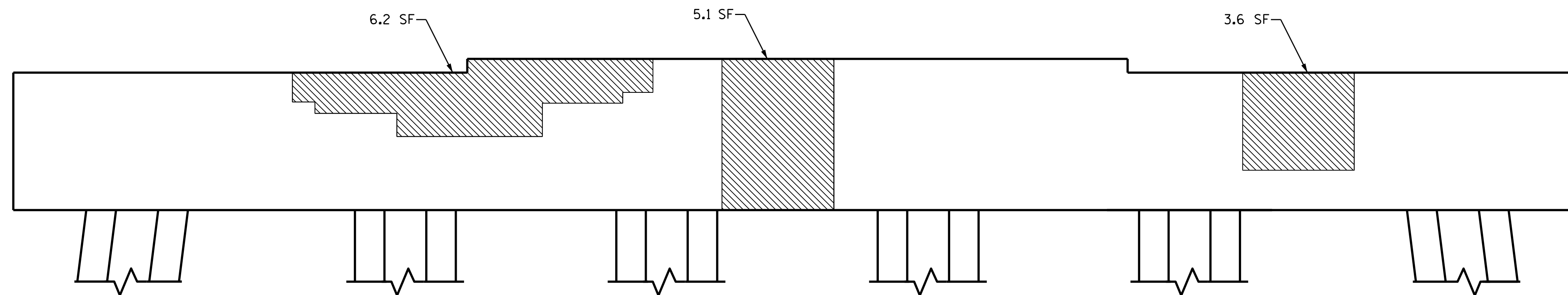
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

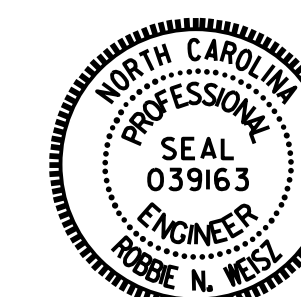


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



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CSA153858043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 72 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 71

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

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.

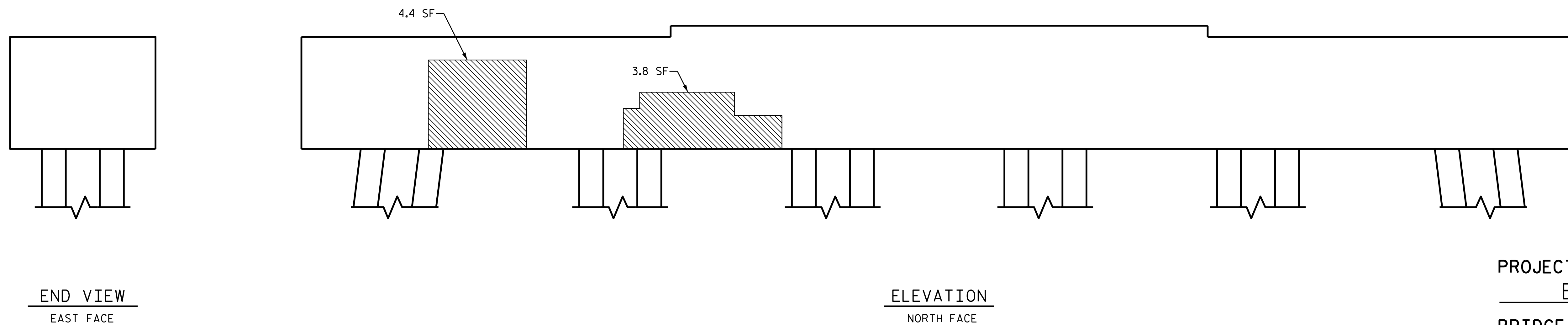
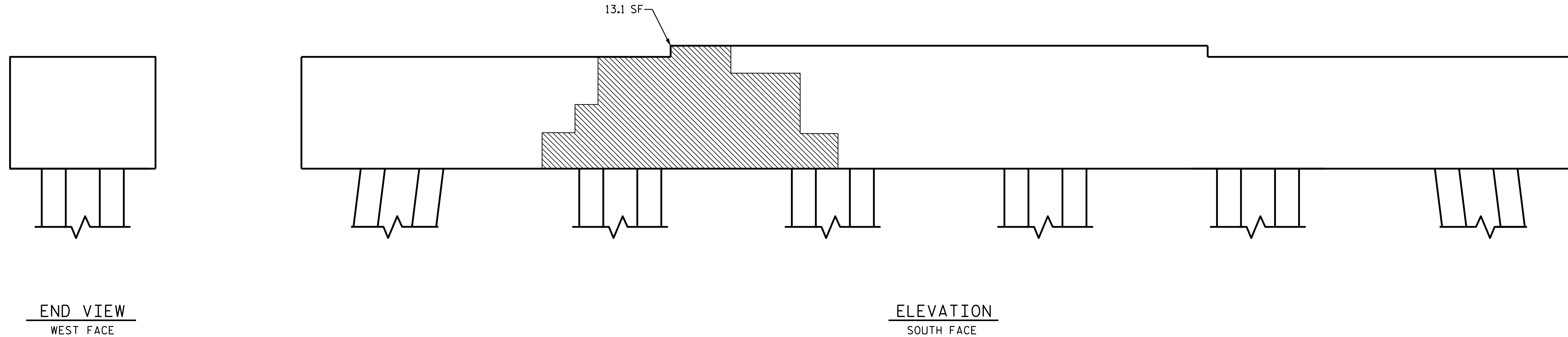
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

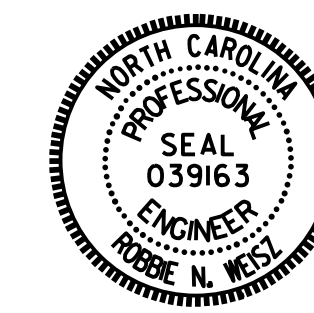
REPAIR QUANTITY TABLE

REPAIRS BENT 72	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.3	10.7		
PILES	0.0	0.0		

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.



▨ - SHOTCRETE REPAIR



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6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 73 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 72**

DRAWN BY : P. D. BRYANT DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-79
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 73	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	23.9	12.0		
PILES	0.0	0.0		

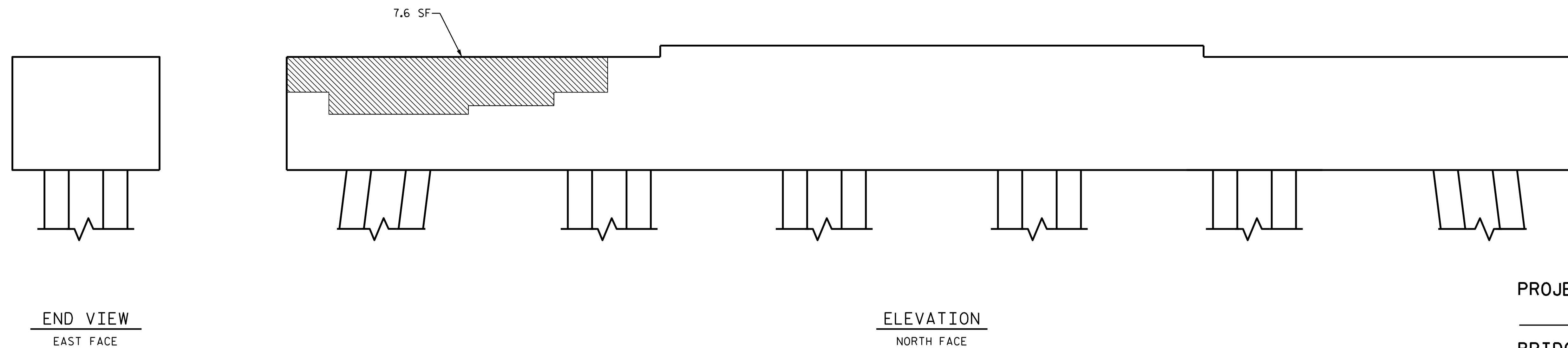
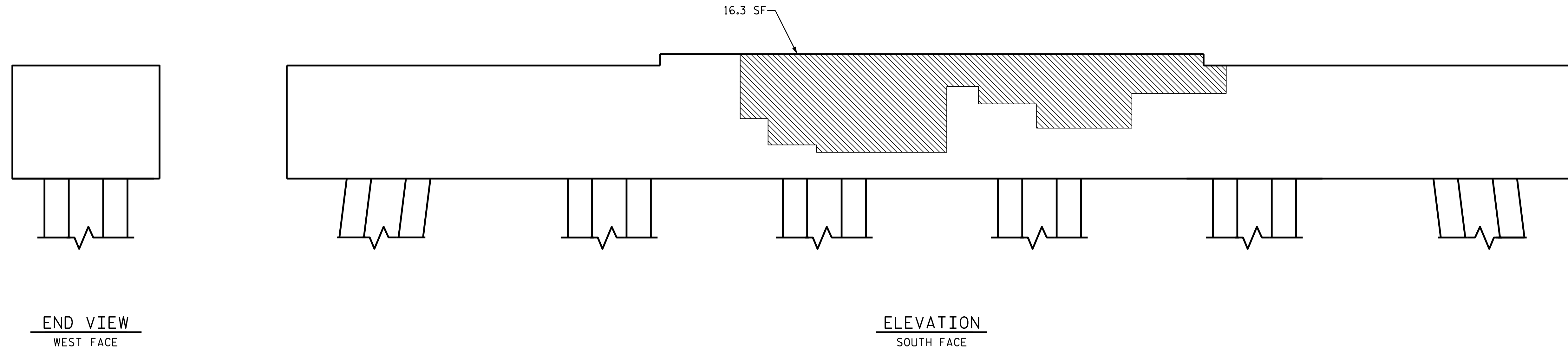
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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.



▨ - SHOTCRETE REPAIR



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6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 74 OF 96

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 73**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:	DESCRIPTION		BY:	DATE:	DESCRIPTION	
1				3			S-80	
2				4			TOTAL SHEETS	

REPAIR QUANTITY TABLE

REPAIRS BENT 74	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	27.4	13.7		
PILES	0.0	0.0		

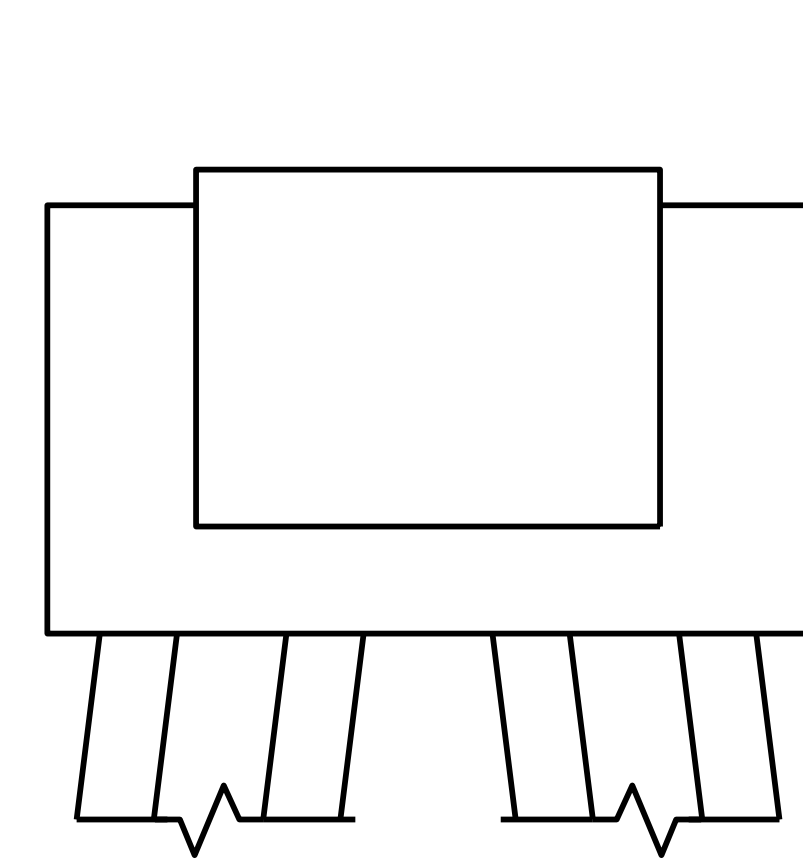
NOTES:

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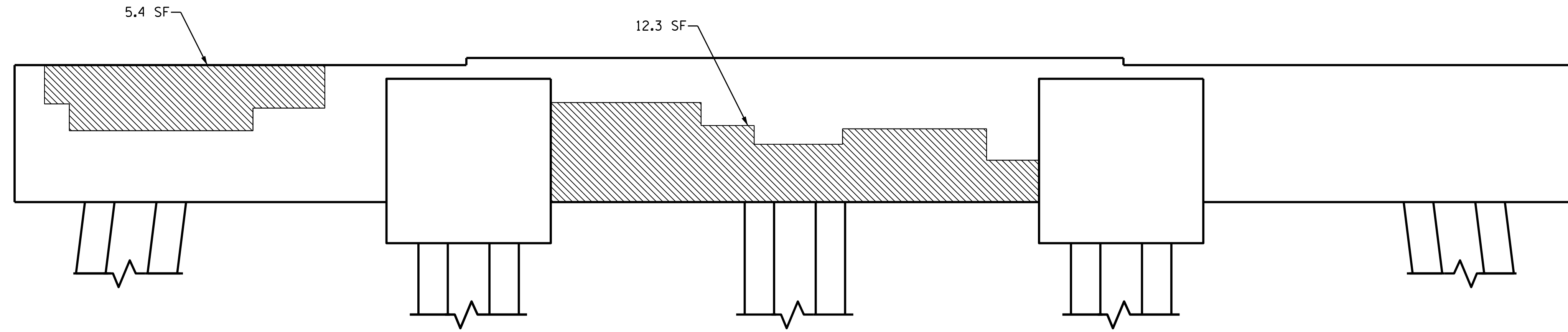
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

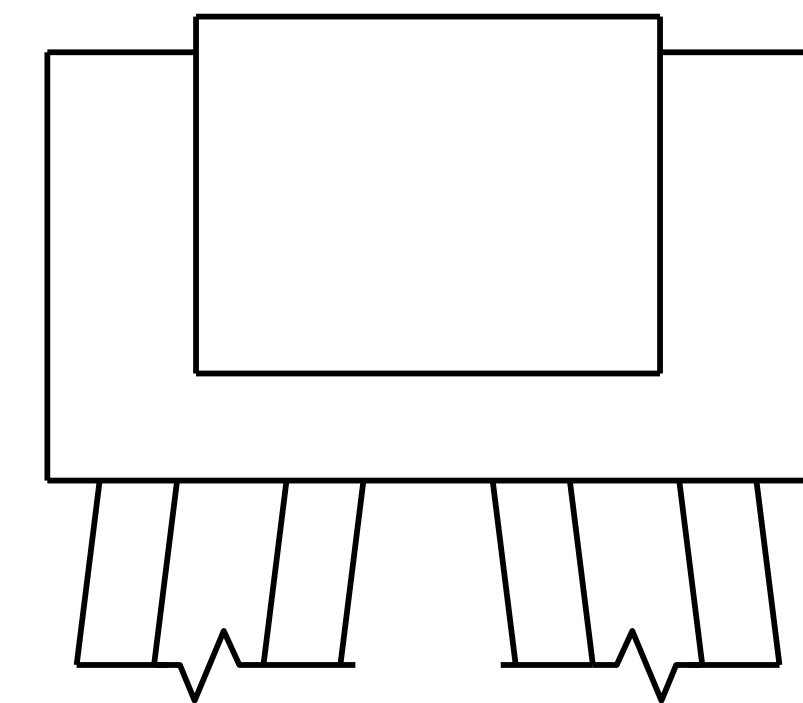
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



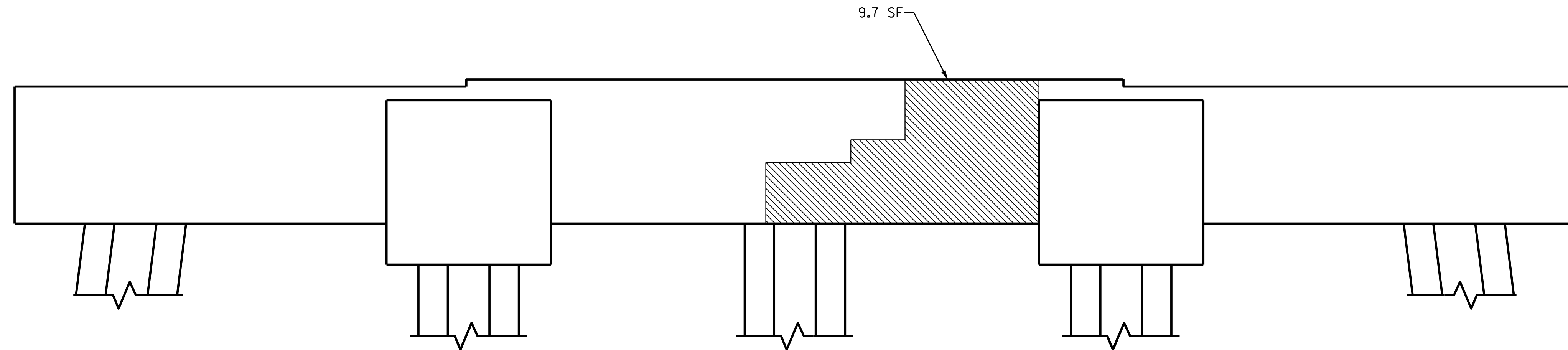
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

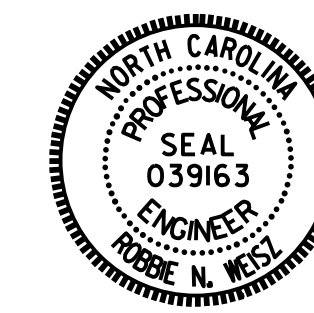


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA1536838043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 75 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 74

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-81
1			3			TOTAL SHEETS
2			4			

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SIGNATURES COMPLETED

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

NOTES:

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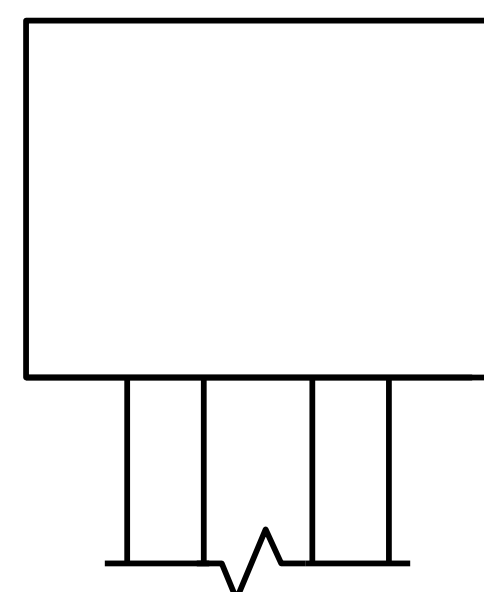
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

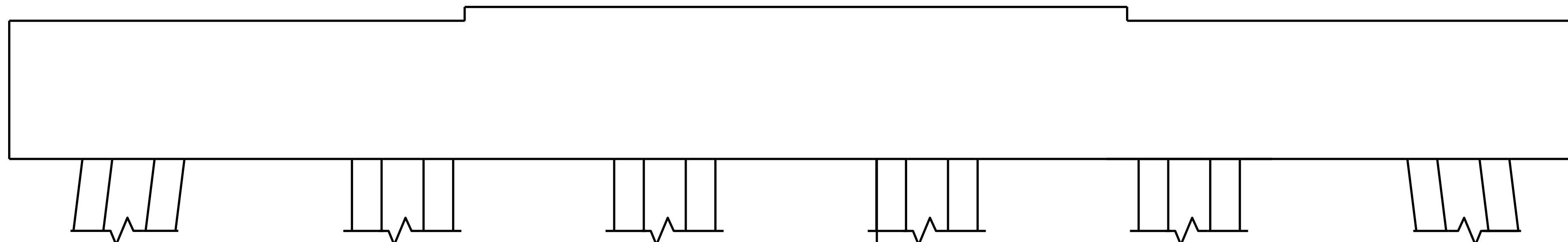
REPAIR QUANTITY TABLE

REPAIRS BENT 75	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

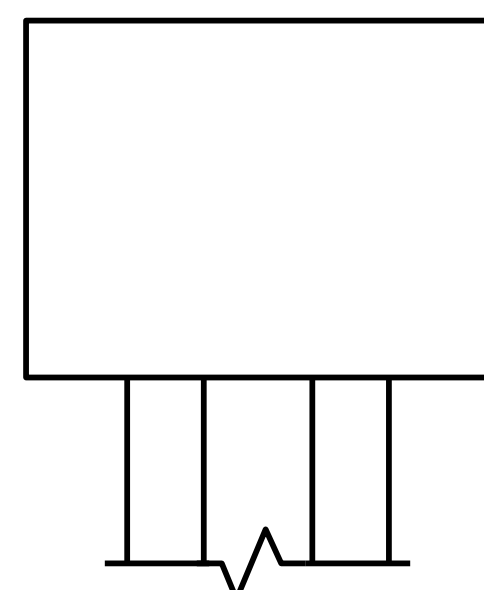
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



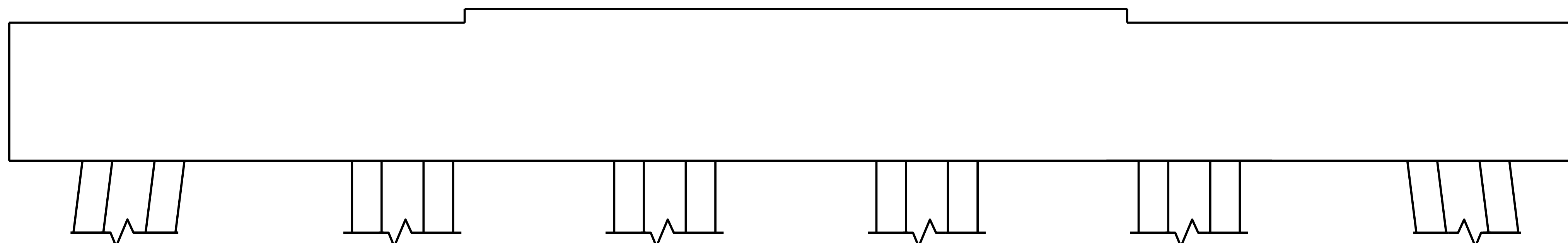
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



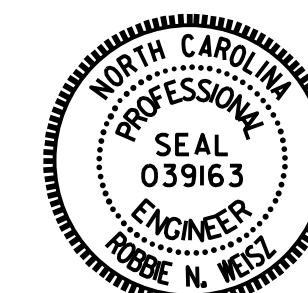
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 76 OF 96

▨ - SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 75**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-82
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 76	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	18.0	9.0		
PILES	0.0	0.0		

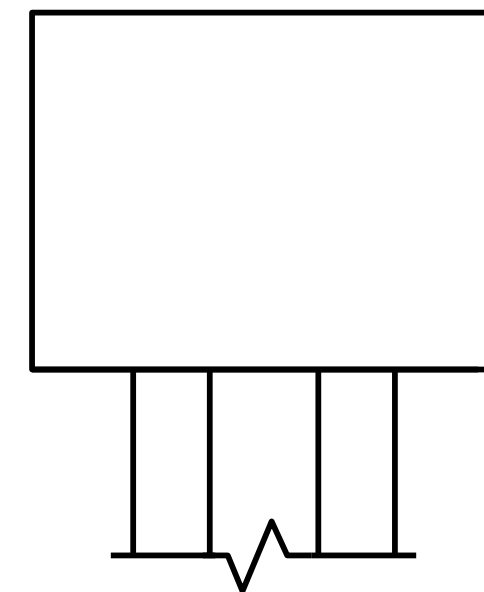
NOTES:

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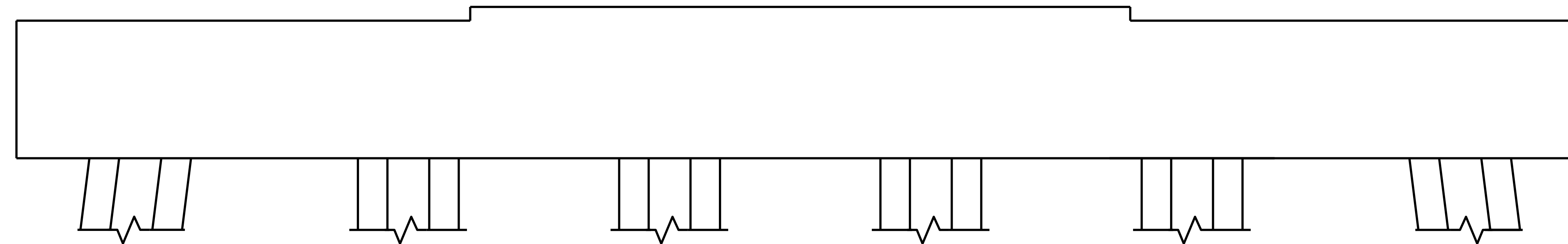
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

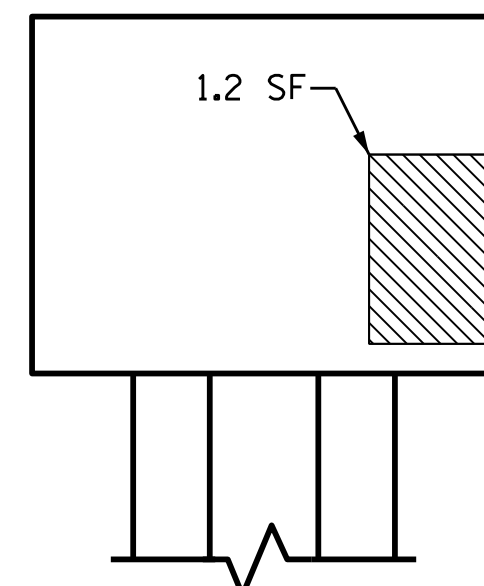
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



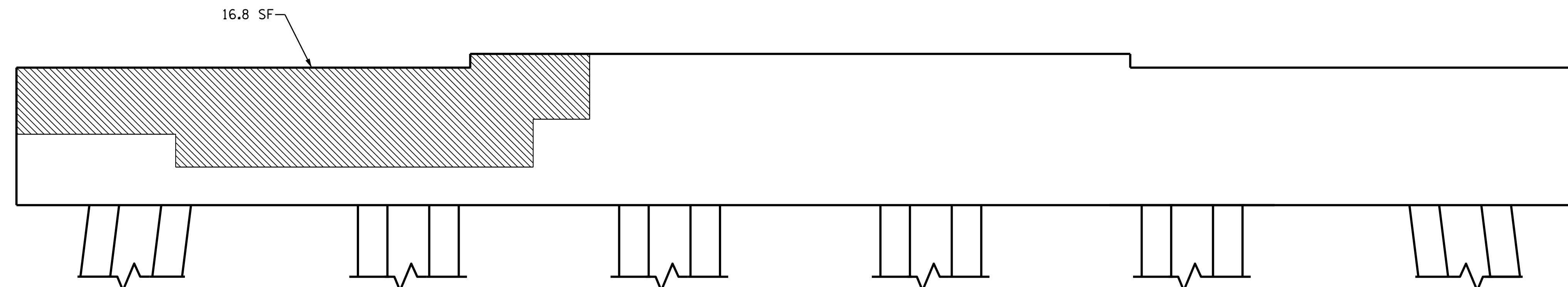
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 77 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CEA153E8B8D43D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 76

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-83
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 77	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.4	8.7		
PILES	0.0	0.0		

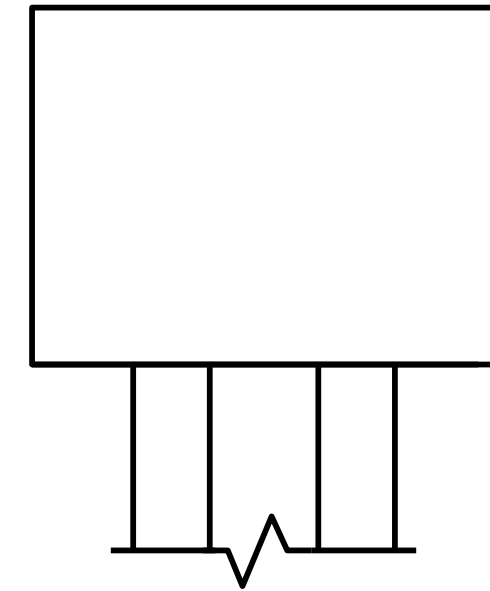
NOTES:

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.

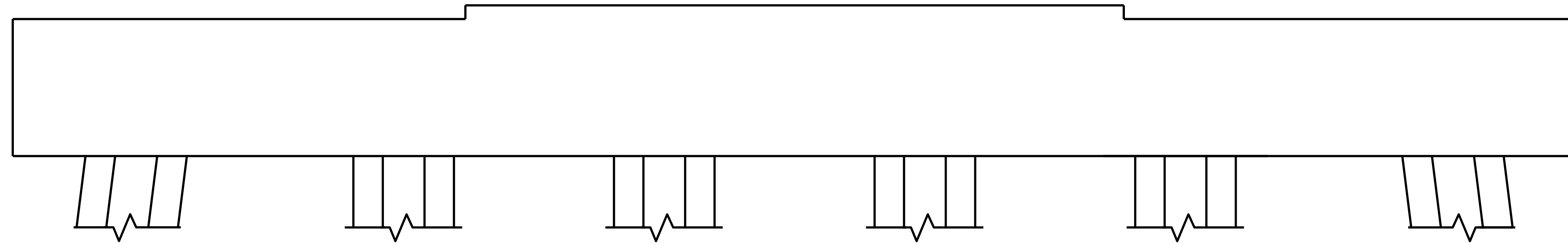
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

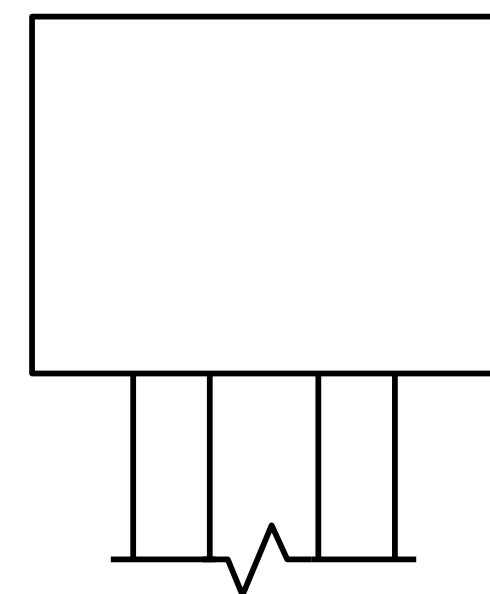
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



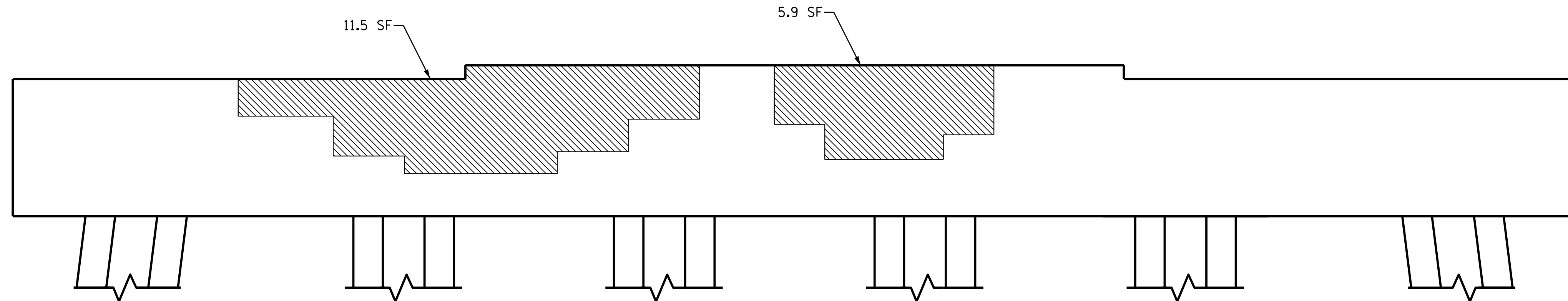
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



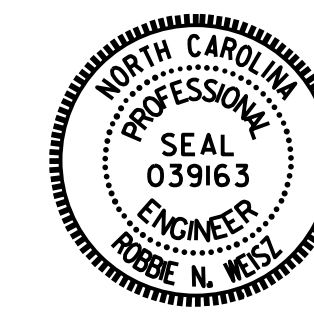
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 78 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 77**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-84
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 78	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	11.5	5.8		
PILES	0.0	0.0		

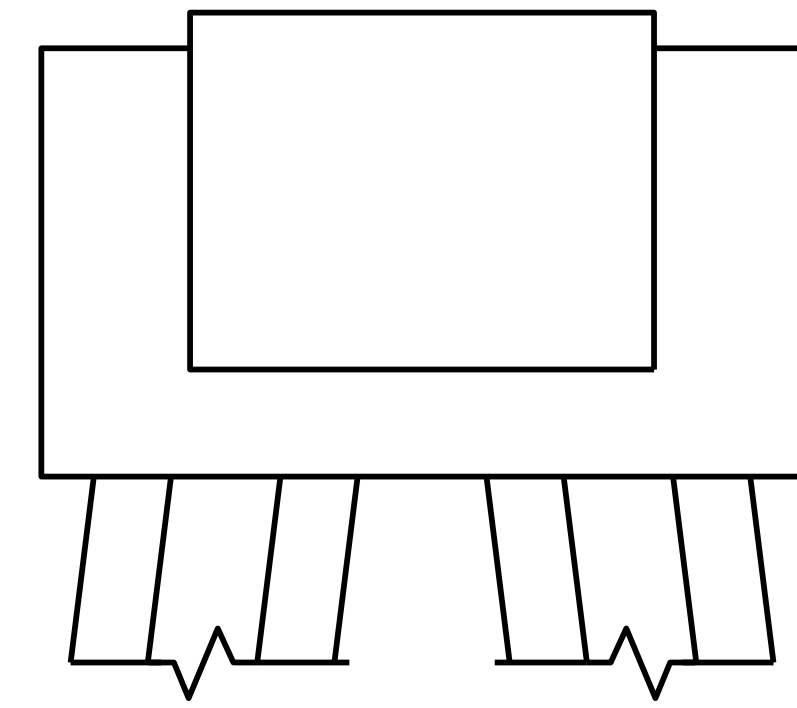
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

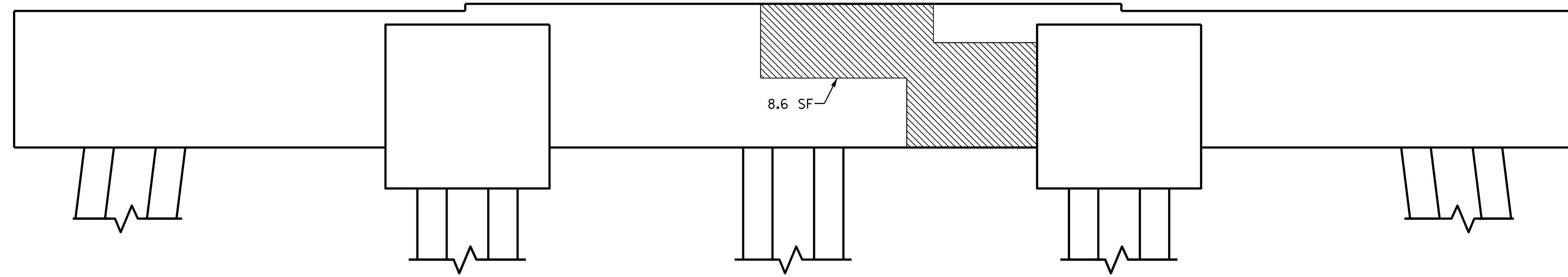
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

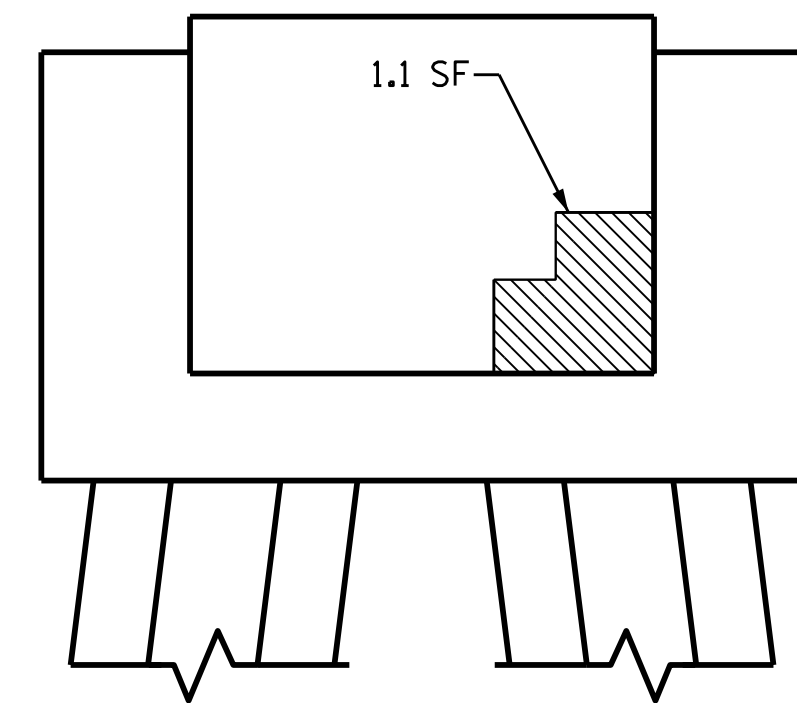
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



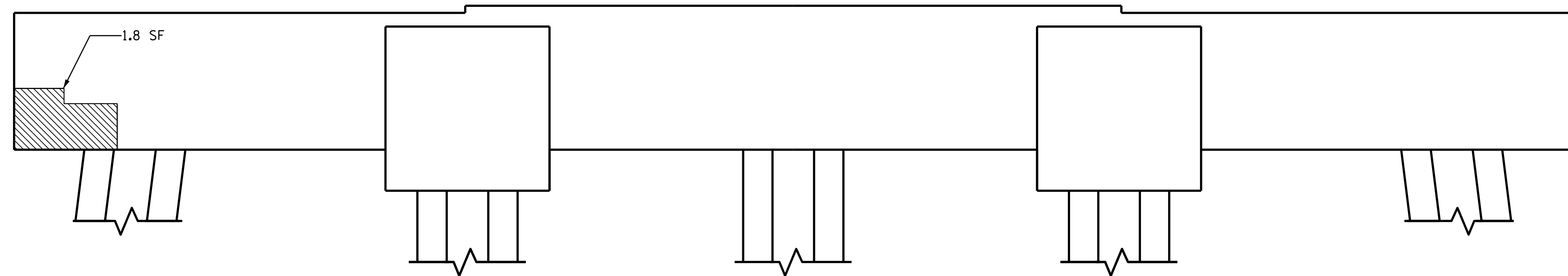
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

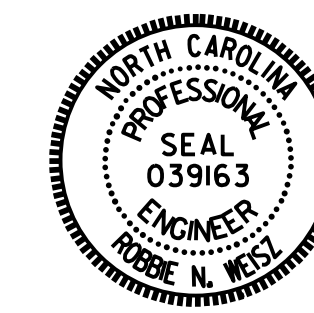


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 79 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE BENT 78

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

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.

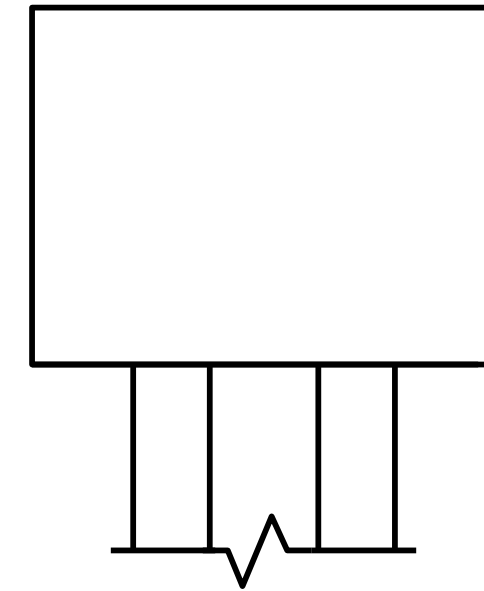
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

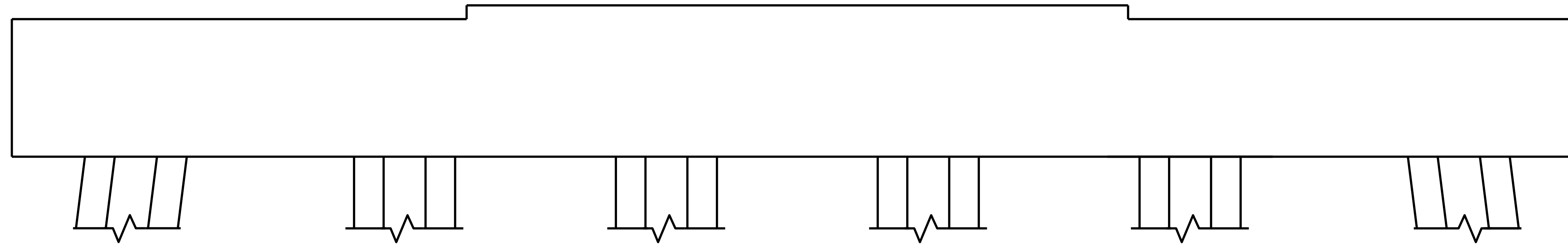
REPAIR QUANTITY TABLE

REPAIRS BENT 79	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

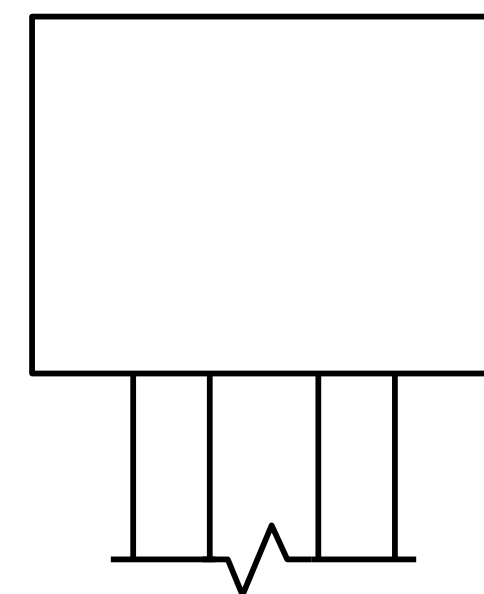
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



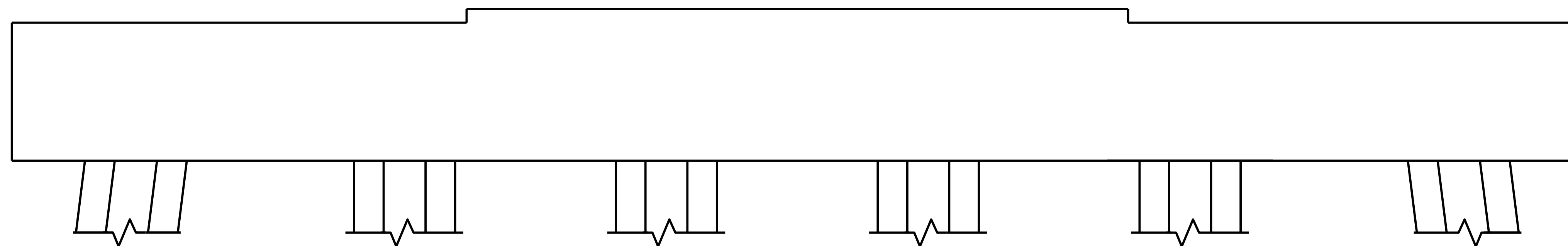
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



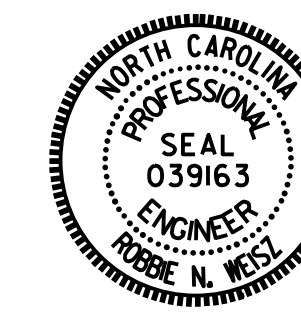
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 80 OF 96

 - SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA15345838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 79**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

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.

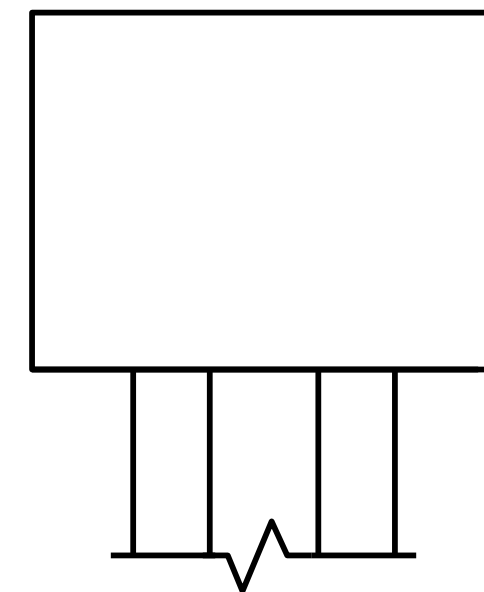
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

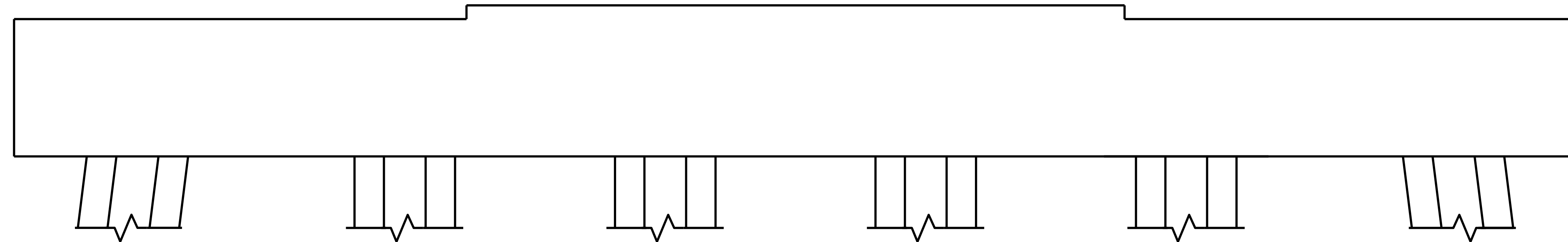
REPAIR QUANTITY TABLE

REPAIRS BENT 80	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.8	10.9		
PILES	0.0	0.0		

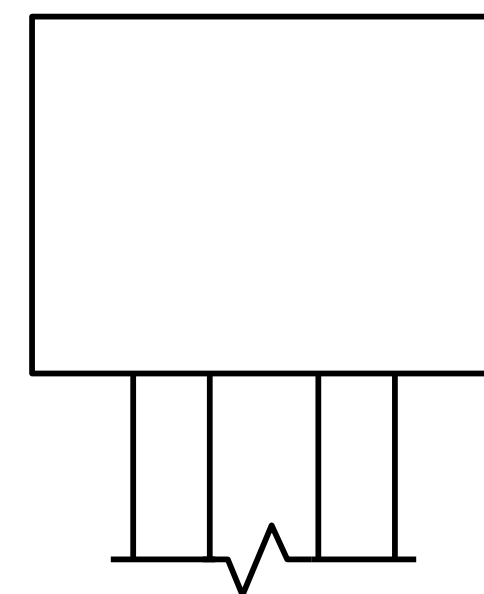
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



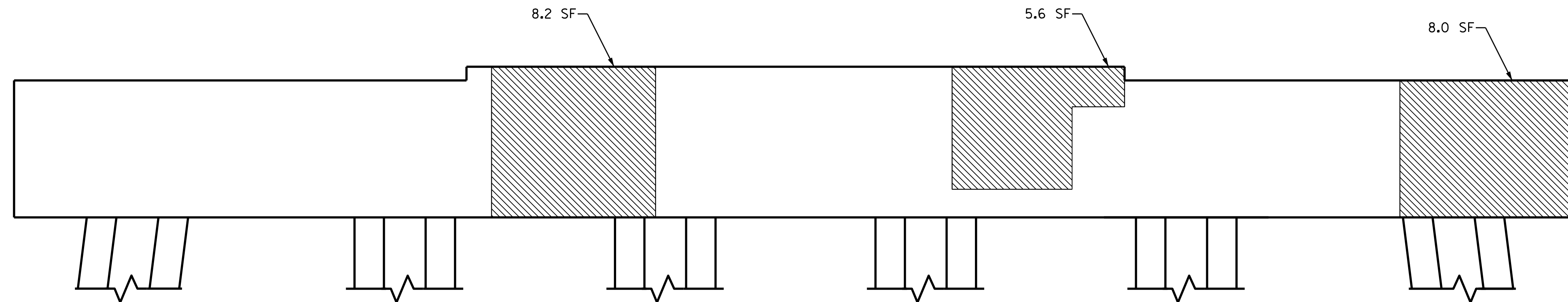
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

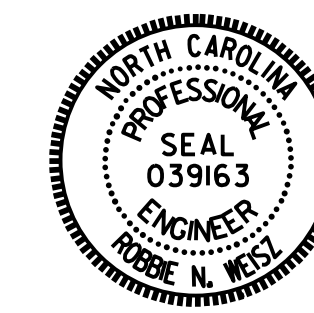


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



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Robbie Weisz
CSA153858043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 81 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 80**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-87
2			4			

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.

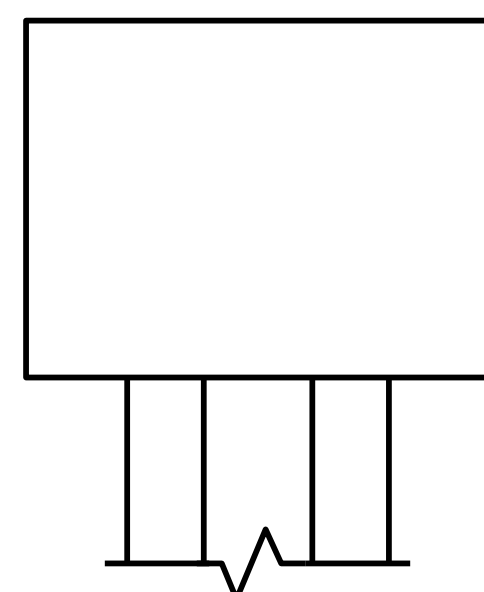
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

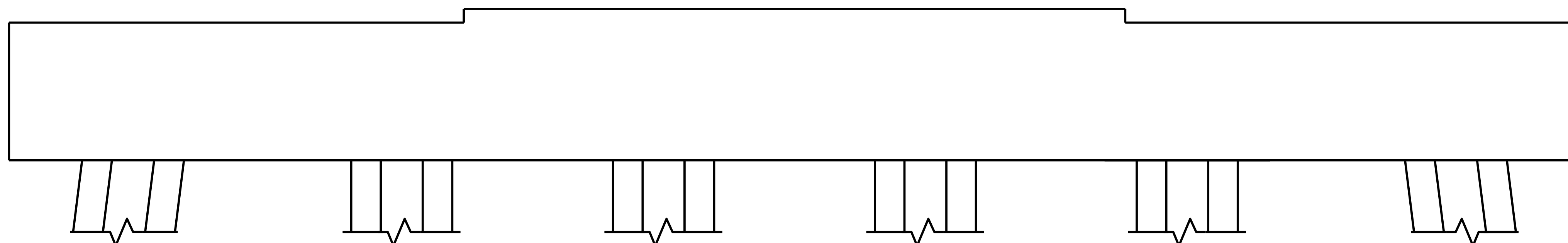
REPAIR QUANTITY TABLE

REPAIRS BENT 81	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.8	3.4		
PILES	0.0	0.0		

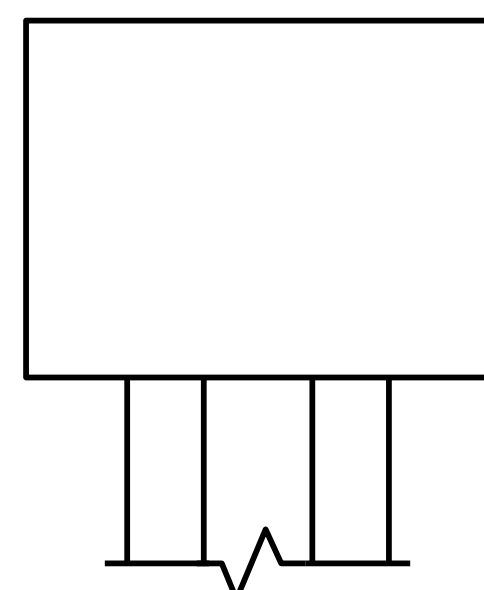
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



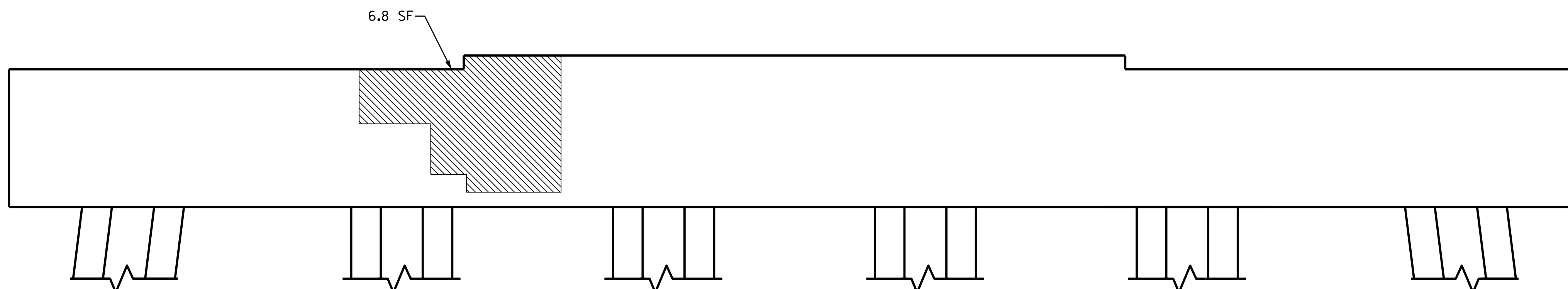
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1536838043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 82 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**SUBSTRUCTURE
BENT 81**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-88
1			3			TOTAL SHEETS
2			4			

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.

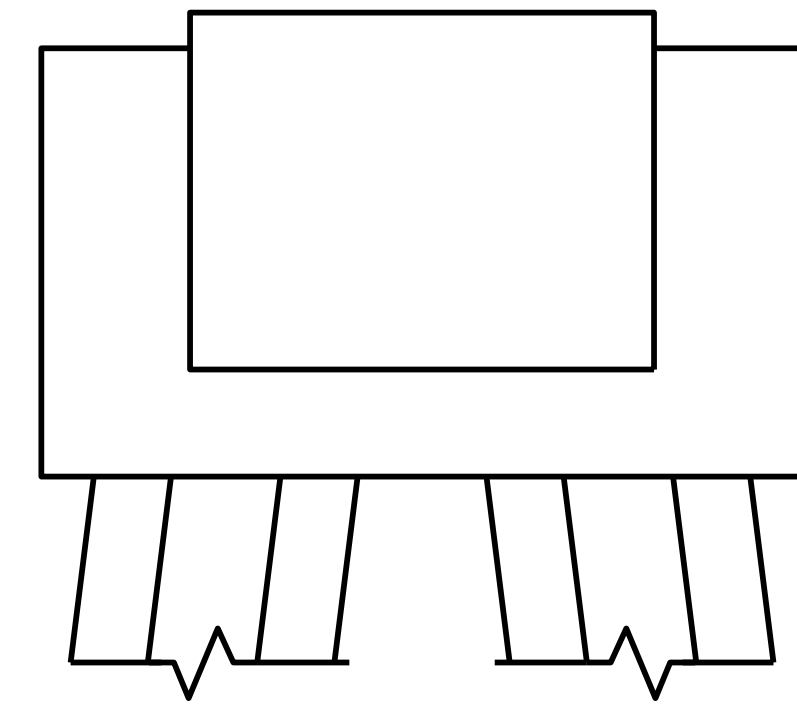
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

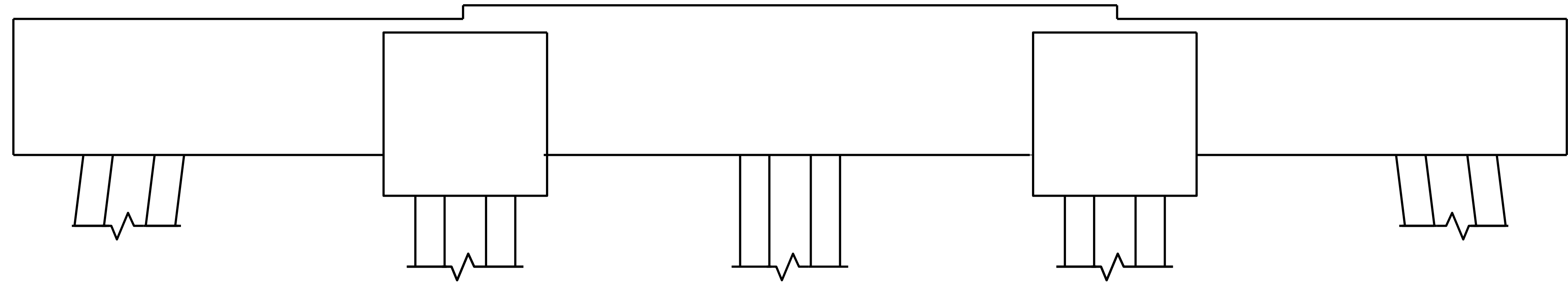
REPAIR QUANTITY TABLE

REPAIRS BENT 82	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

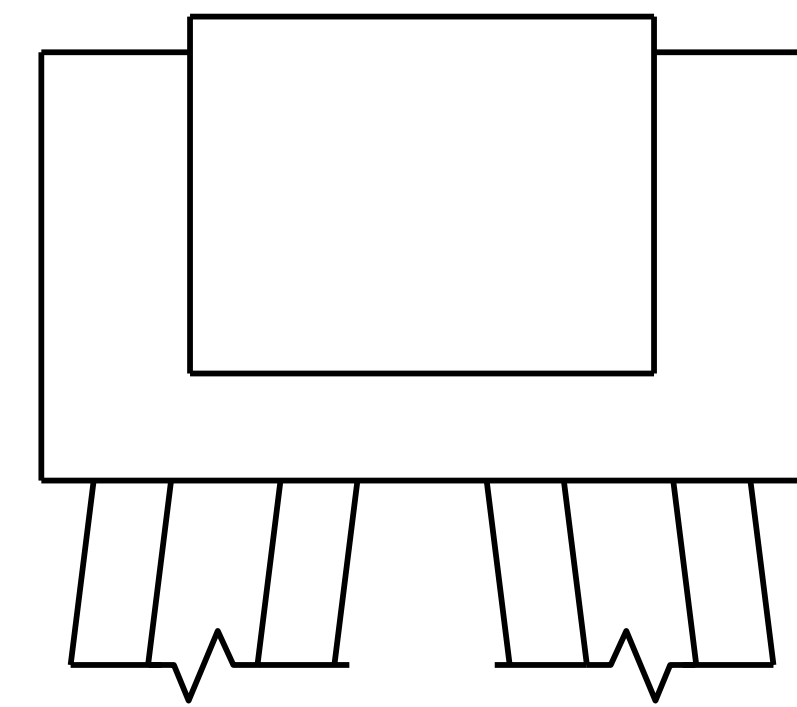
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



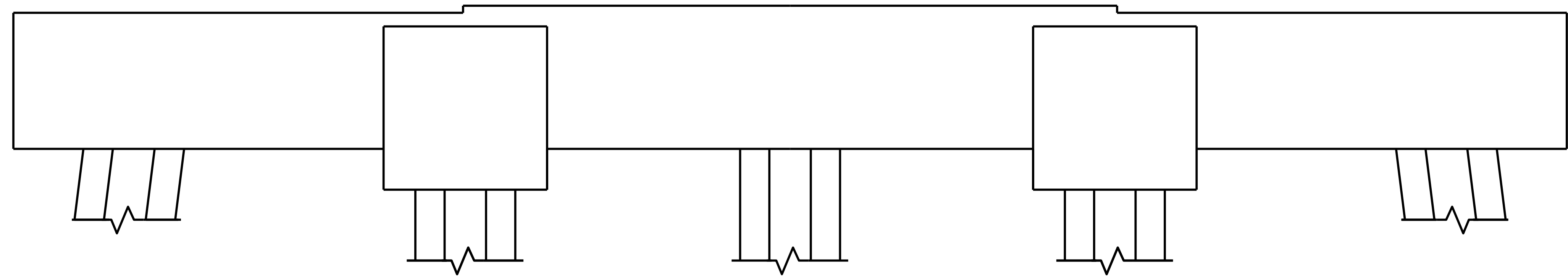
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

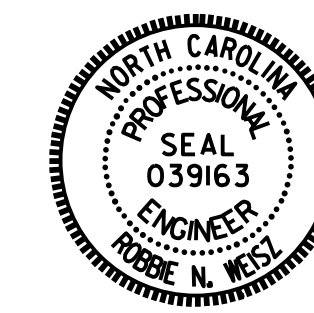


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA153838043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 83 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 82**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

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.

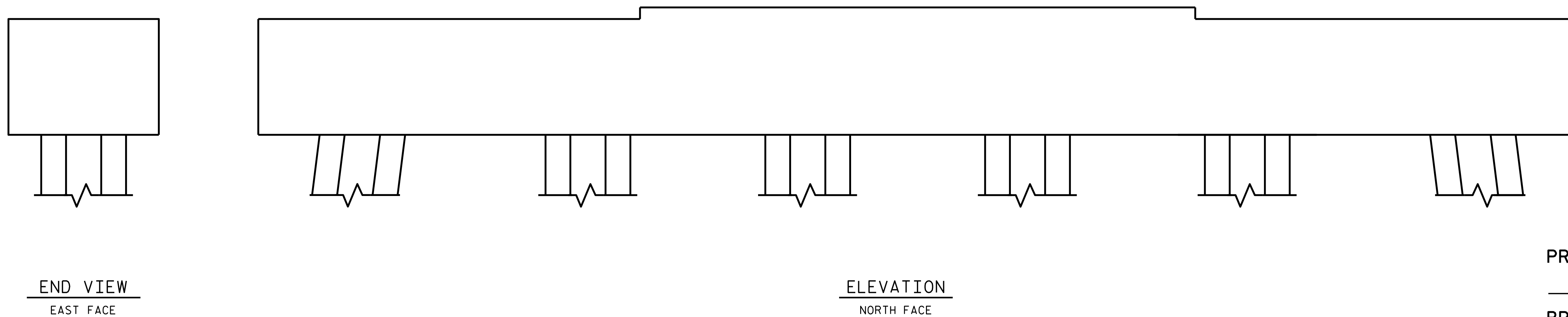
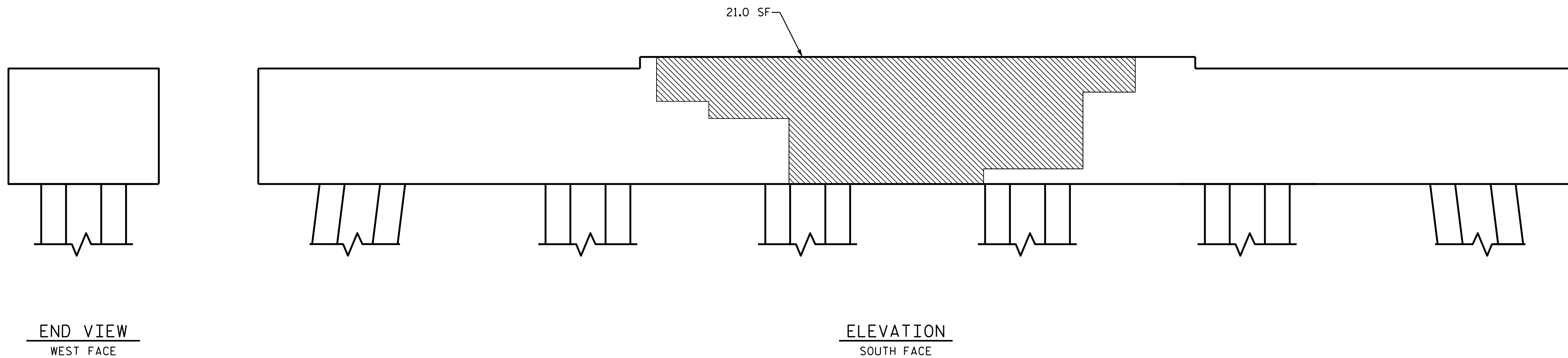
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 83	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.0	10.5		
PILES	0.0	0.0		

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.



- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538638043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 84 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 83**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:	BY:		DATE:	TOTAL SHEETS		
1			3				S-90	
2			4					

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.

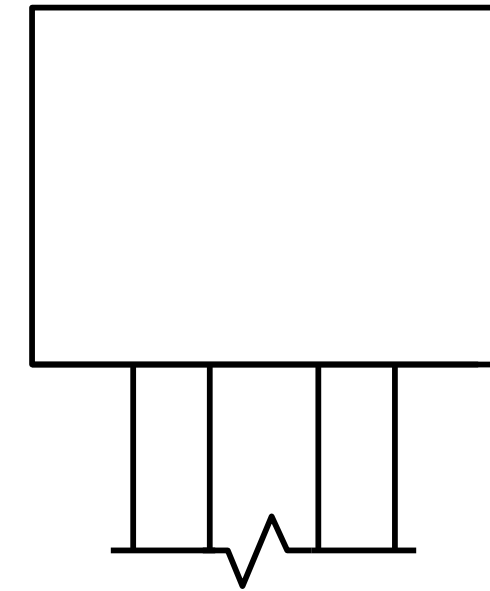
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

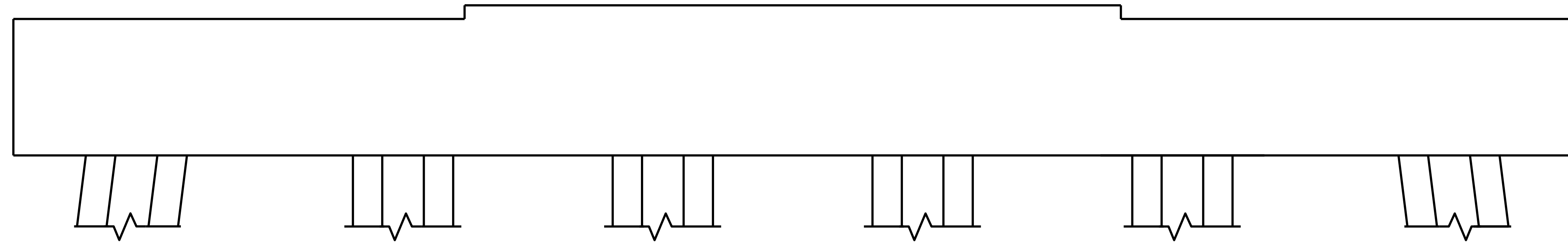
REPAIR QUANTITY TABLE

REPAIRS BENT 84	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

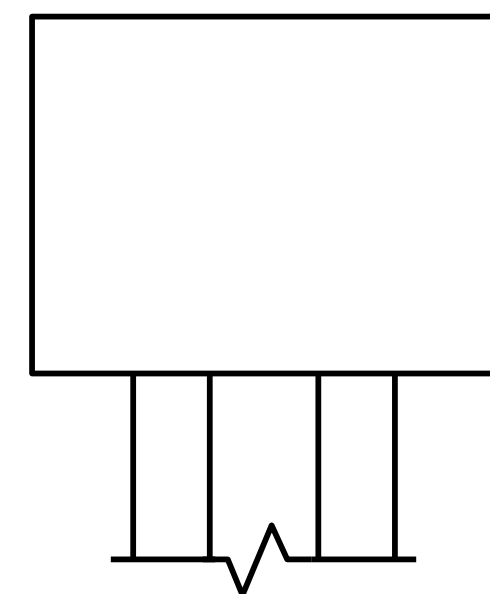
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



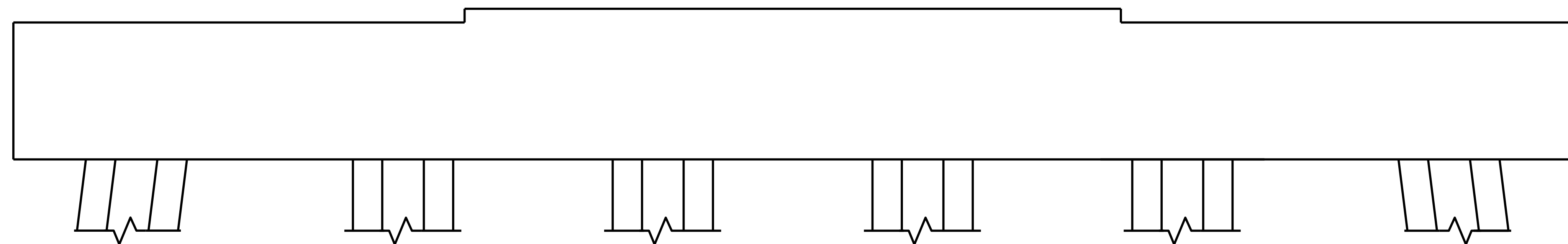
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



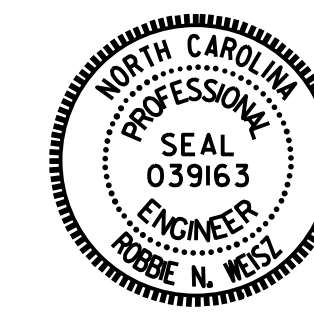
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 85 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 84**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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

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.

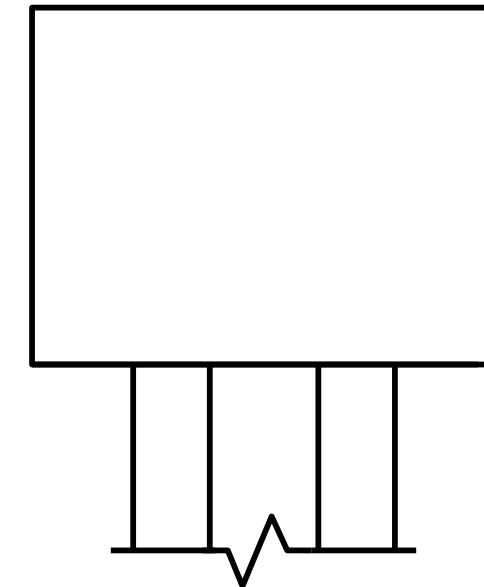
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

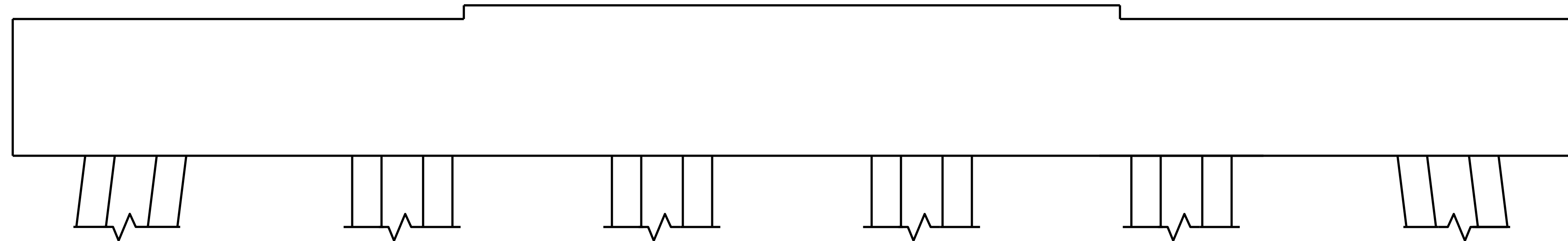
REPAIR QUANTITY TABLE

REPAIRS BENT 85	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

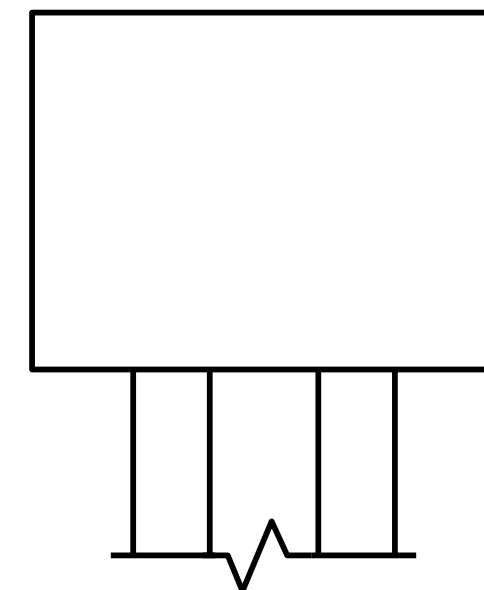
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



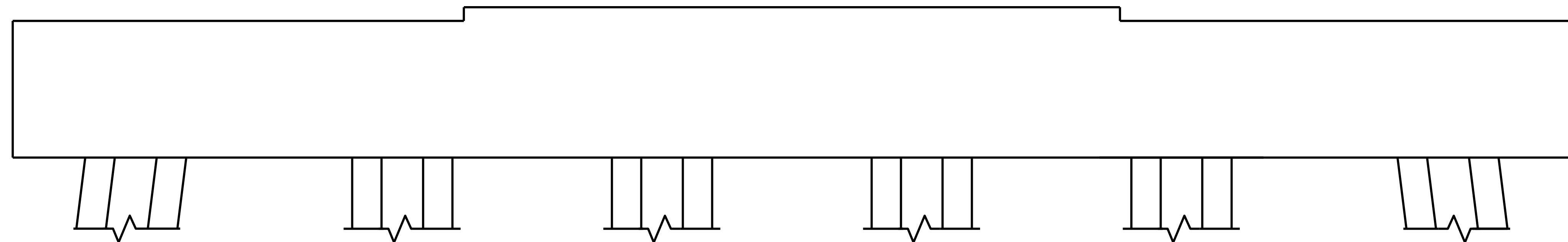
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



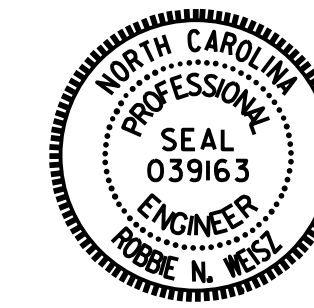
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 86 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA153838043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 85**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-92
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 86	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.4	10.7		
PILES	0.0	0.0		

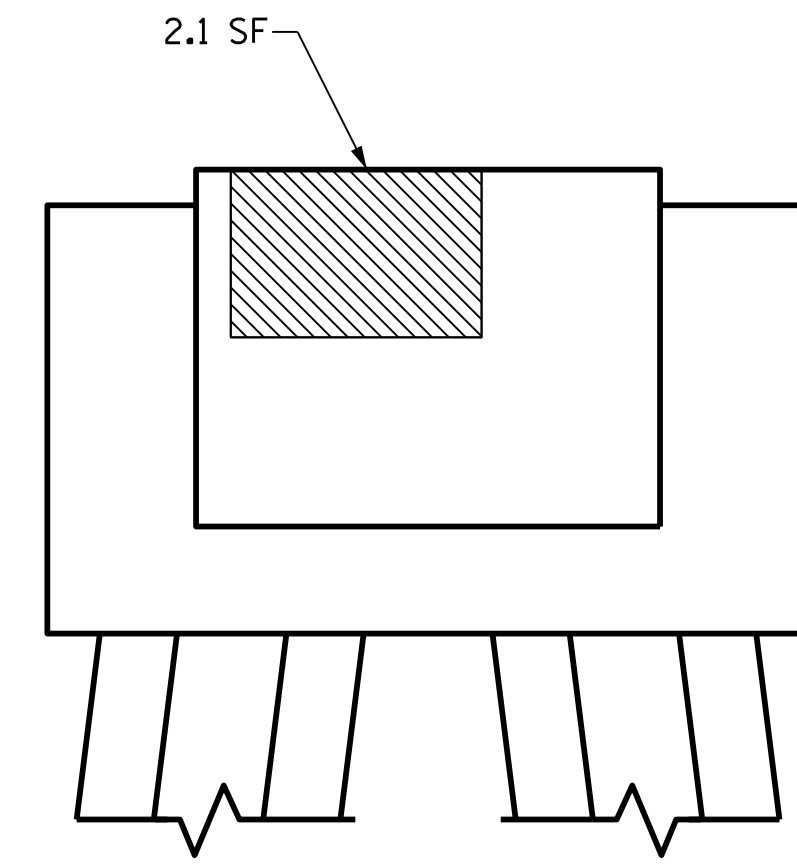
NOTES:

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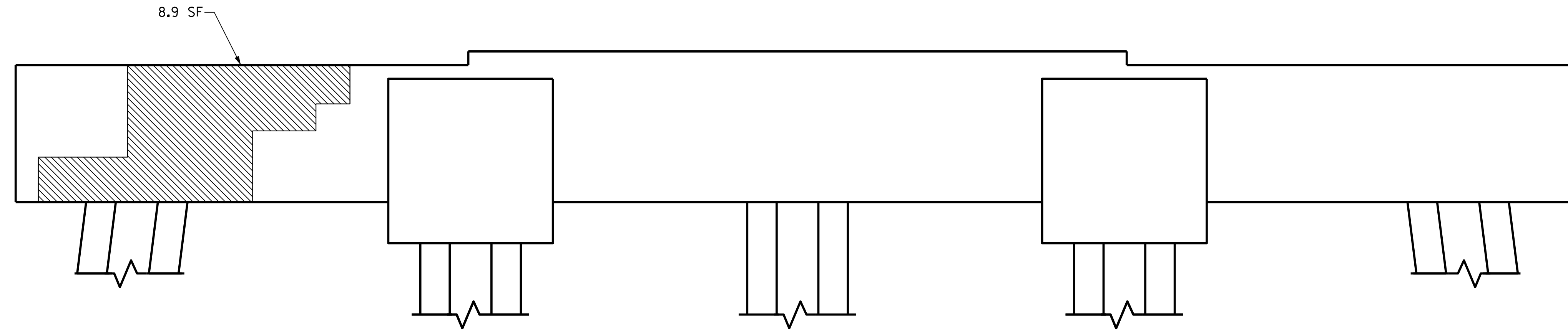
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

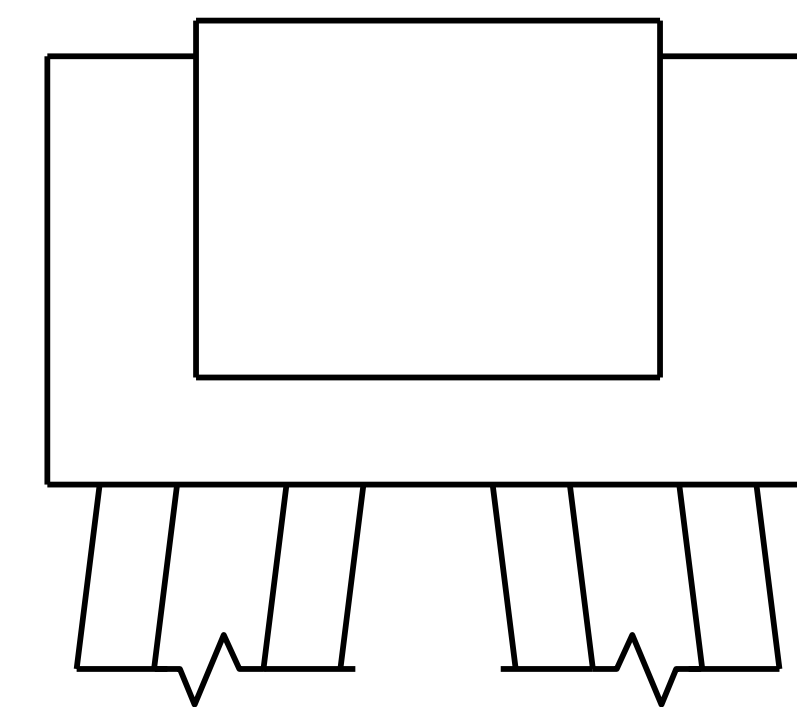
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



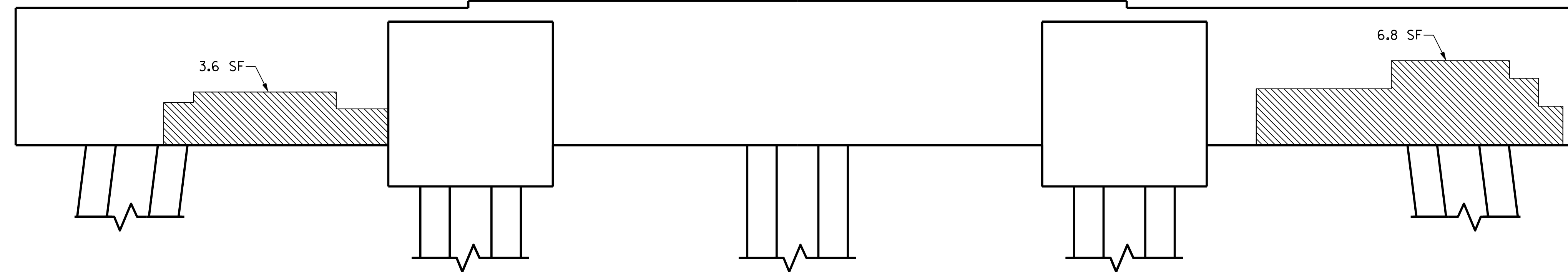
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

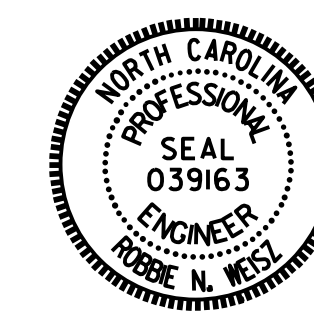


END VIEW
EAST FACE



ELEVATION
NORTH FACE

▨ - SHOTCRETE REPAIR



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Robbie Weisz
CSA1538588043D
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 87 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 86

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

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DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

REPAIR QUANTITY TABLE

REPAIRS BENT 87	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	14.3	7.2		
PILES	0.0	0.0		

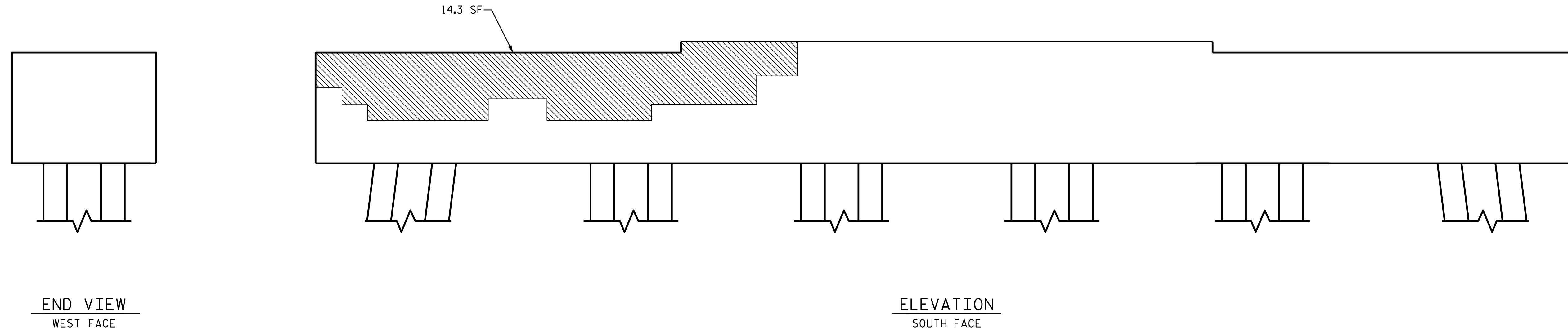
NOTES:

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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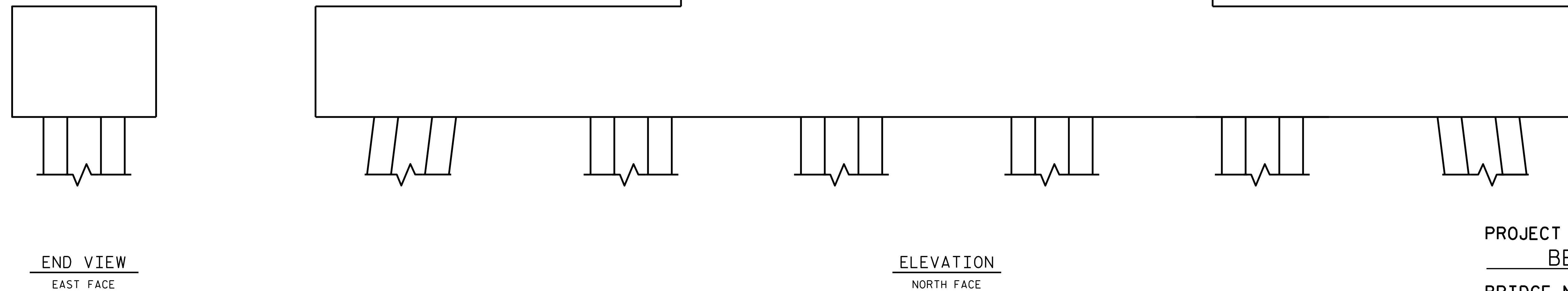
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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.



END VIEW
WEST FACE

ELEVATION
SOUTH FACE



END VIEW
EAST FACE

ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 88 OF 96

▨ - SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CS-A153E83B043D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 87**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-94
1			3			TOTAL SHEETS
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 88	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	11.4	5.7		
PILES	0.0	0.0		

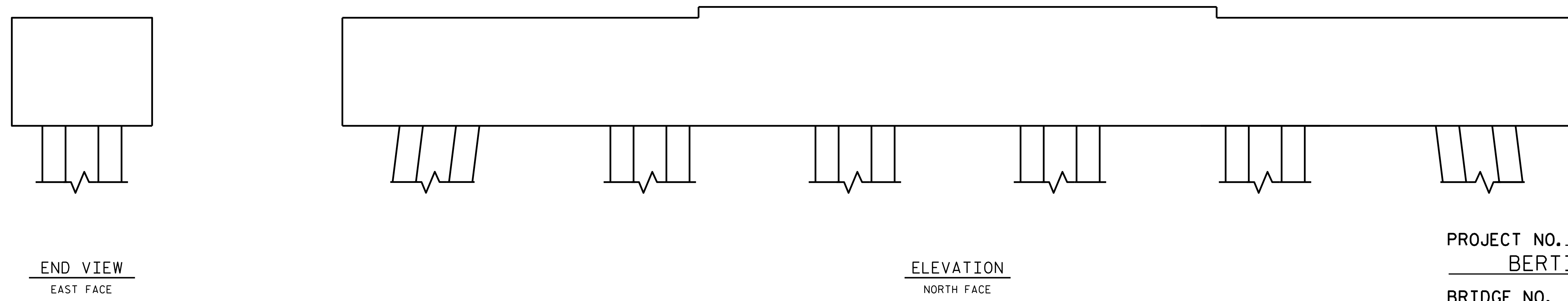
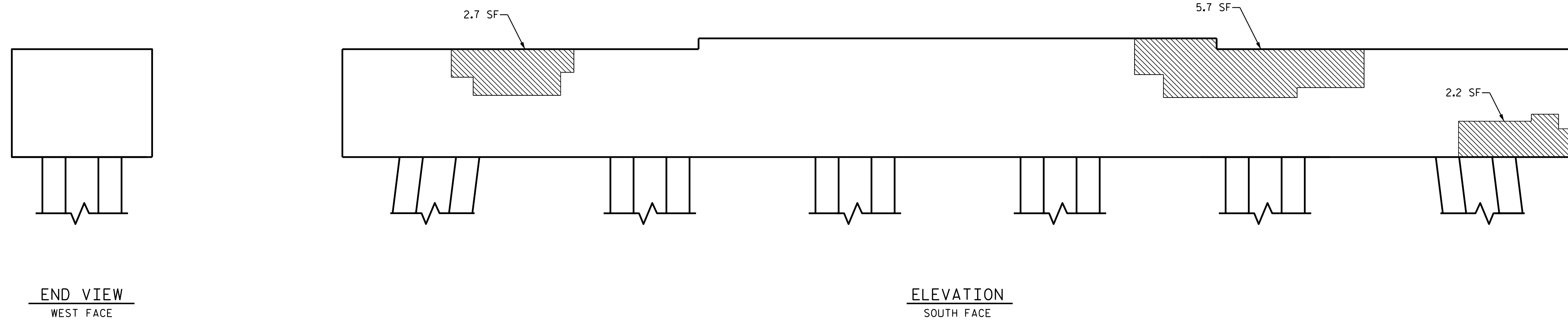
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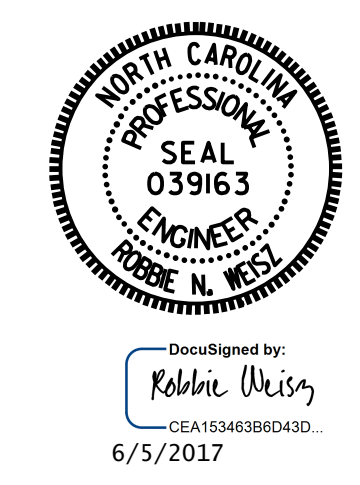
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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.



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 89 OF 96

- SHOTCRETE REPAIR



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 88**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

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

REPAIR QUANTITY TABLE

REPAIRS BENT 89	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILES	0.0	0.0		

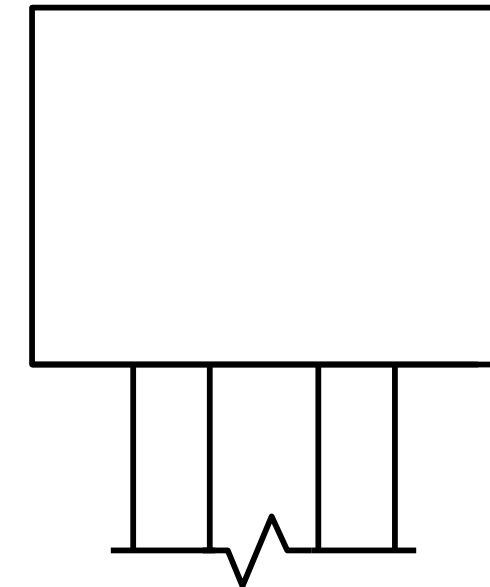
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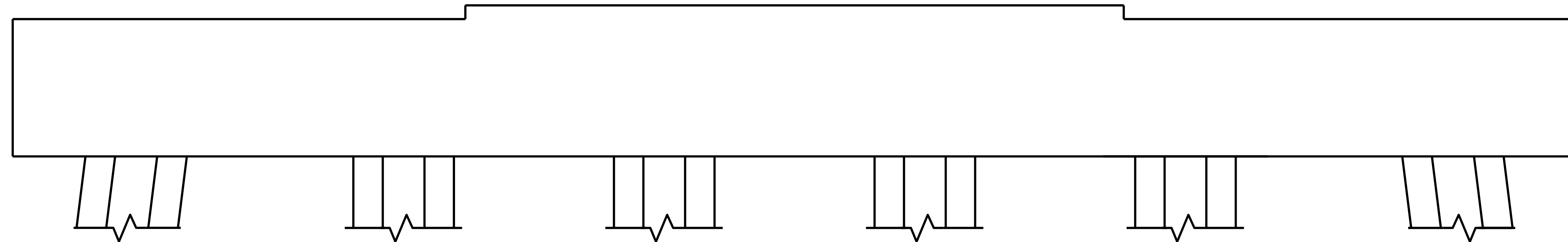
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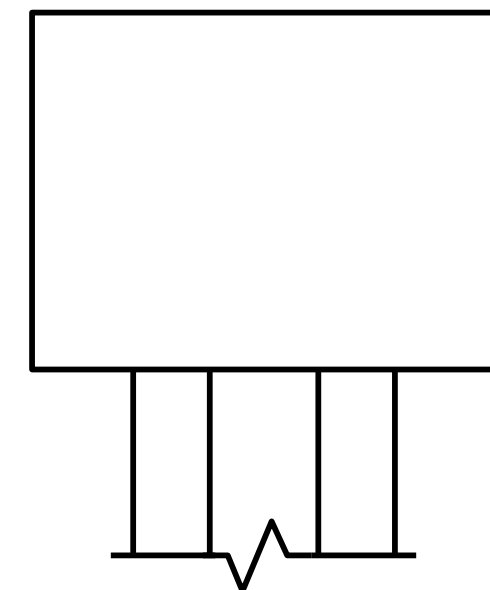
NO REPAIRS NOTED DURING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



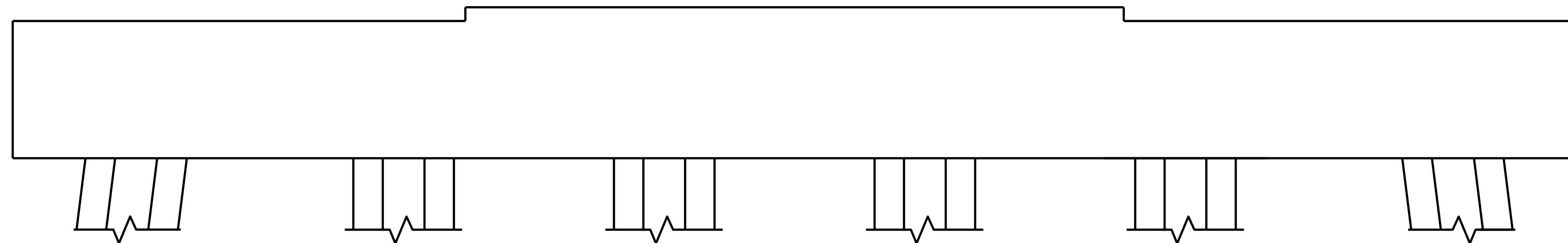
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 90 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CEA153E838D43D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 89**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

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

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.

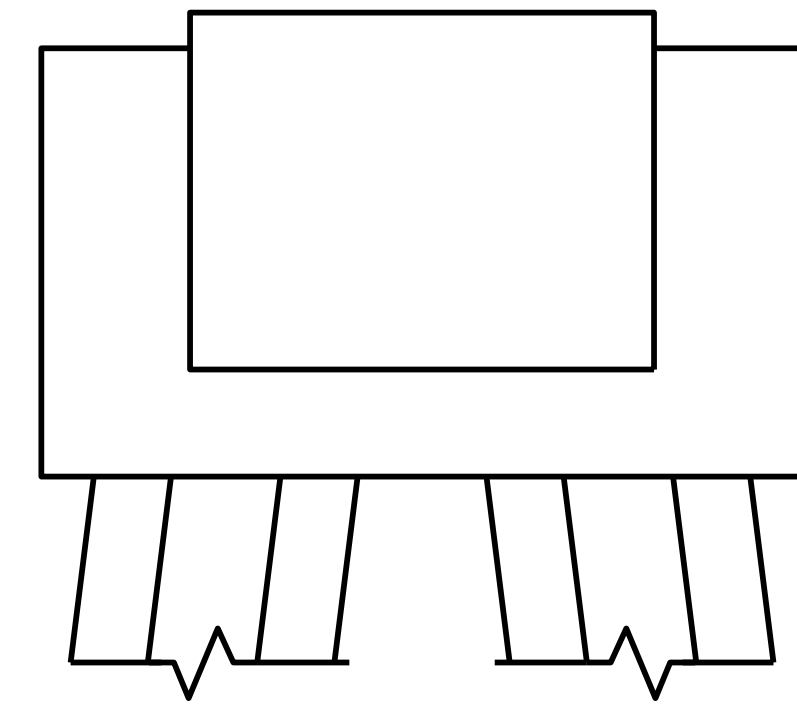
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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

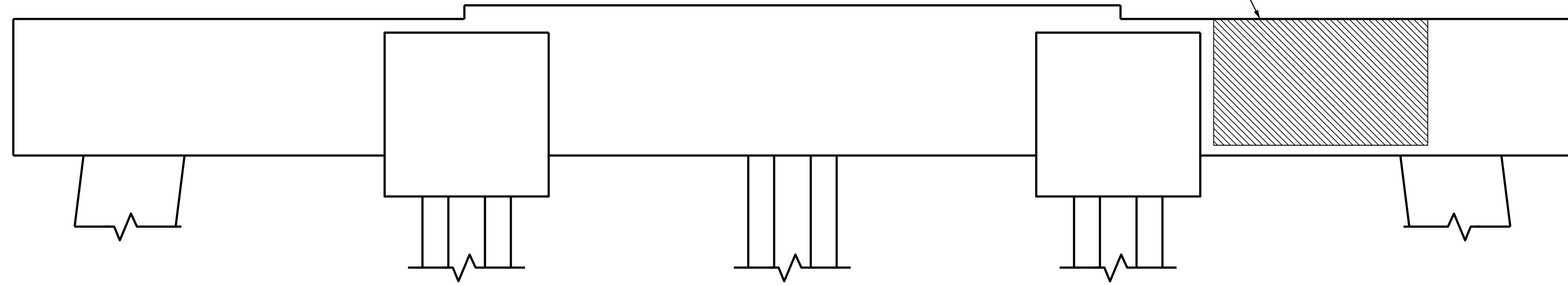
REPAIR QUANTITY TABLE

REPAIRS BENT 90	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.0	4.5		
PILES	0.0	0.0		

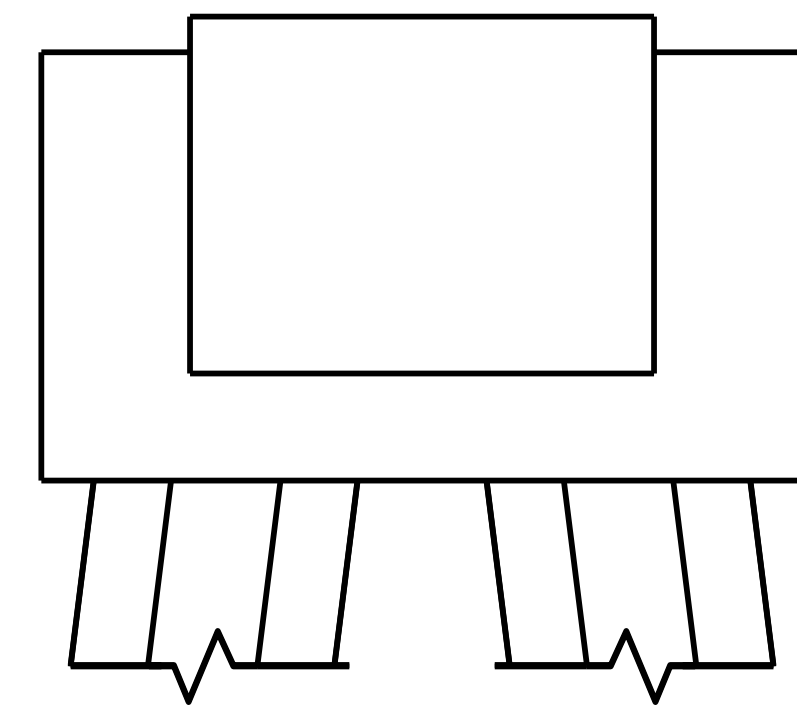
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



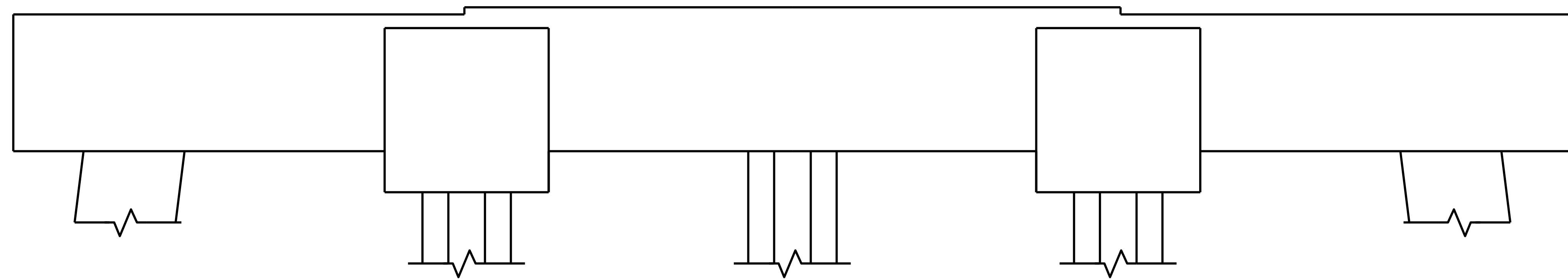
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 91 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 90**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-97
1			3			TOTAL SHEETS
2			4			

NOTES:

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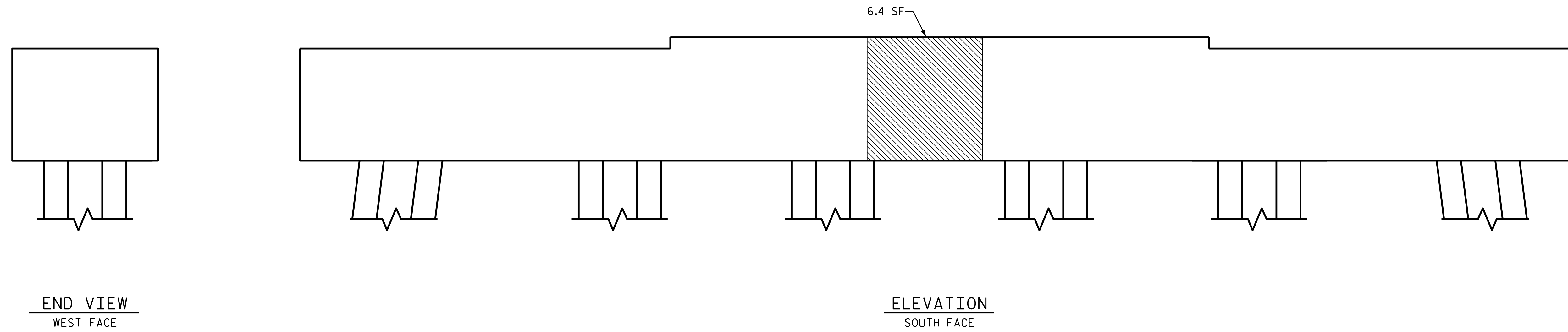
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

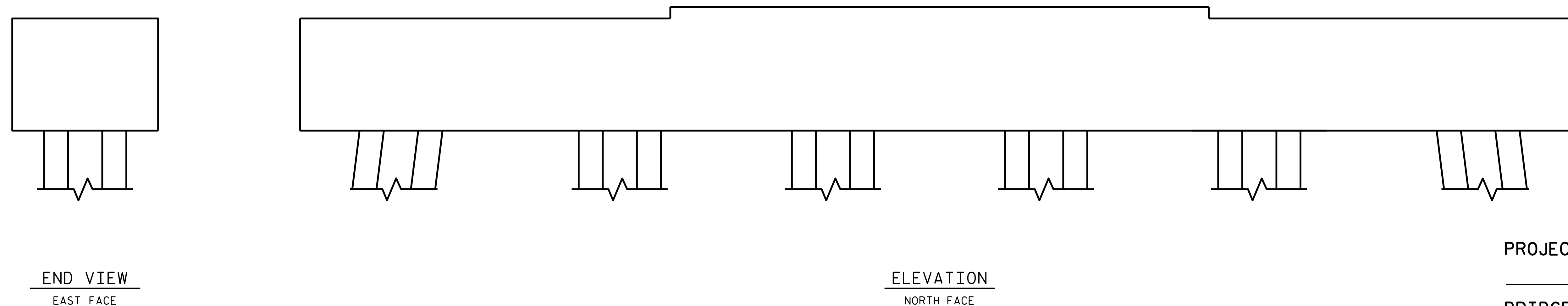
REPAIRS BENT 91	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.4	3.2		
PILES	0.0	0.0		

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.



END VIEW
WEST FACE

ELEVATION
SOUTH FACE



END VIEW
EAST FACE

ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 92 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
CSA1538588043D
6/5/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 91**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-98
1			3			TOTAL SHEETS
2			4			

REPAIR QUANTITY TABLE

REPAIRS BENT 92	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.5	2.3		
PILES	0.0	0.0		

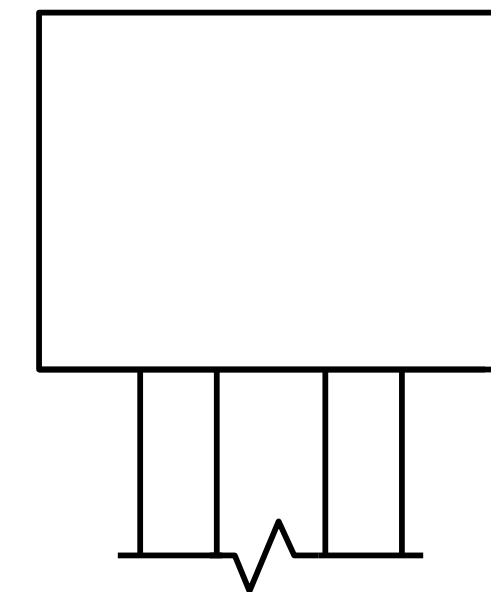
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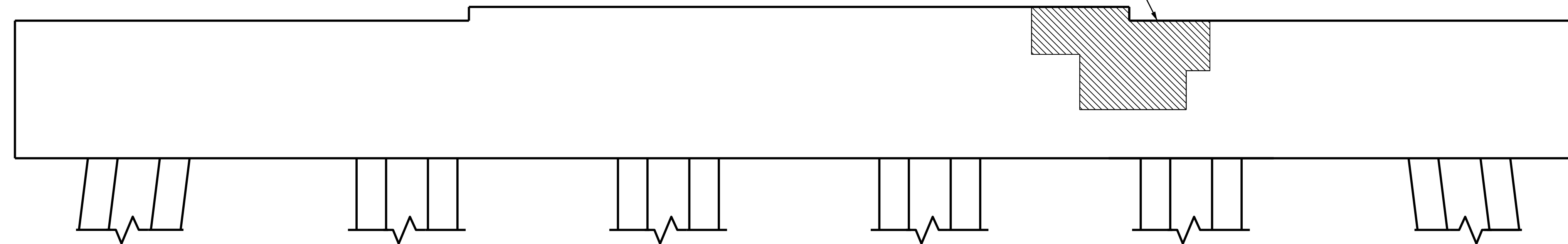
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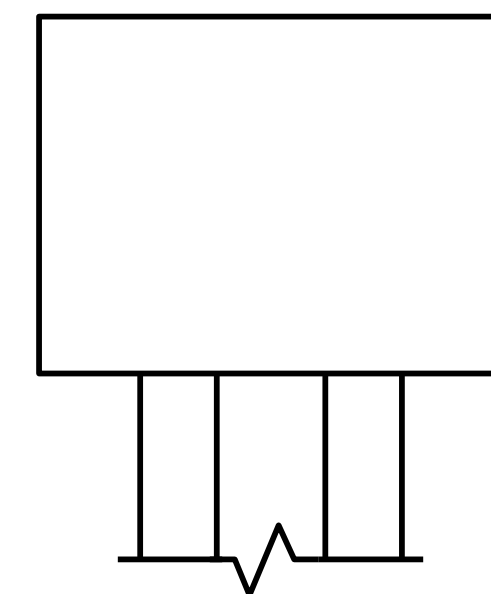
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



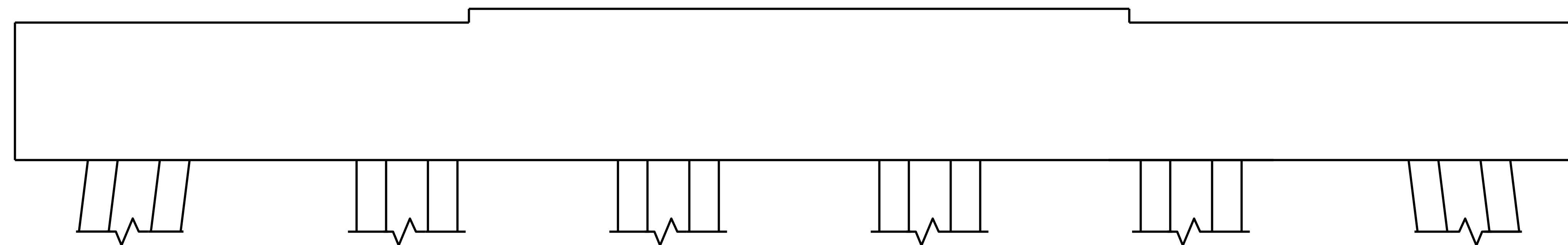
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



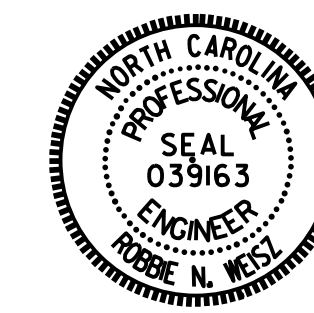
END VIEW
EAST FACE



ELEVATION
NORTH FACE

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7
 SHEET 93 OF 96

- SHOTCRETE REPAIR



DocuSigned by:
 Robbie Weisz
 CEA153E8B043D
 6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 92**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
 CHECKED BY : R. N. WEISZ DATE : 12/2016

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-99
1			3			TOTAL SHEETS
2			4			

NOTES:

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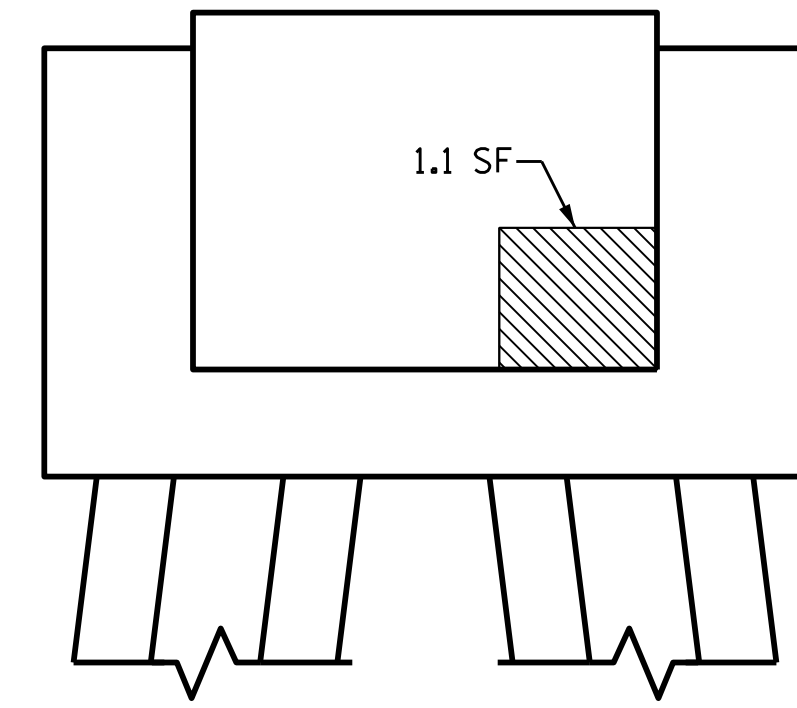
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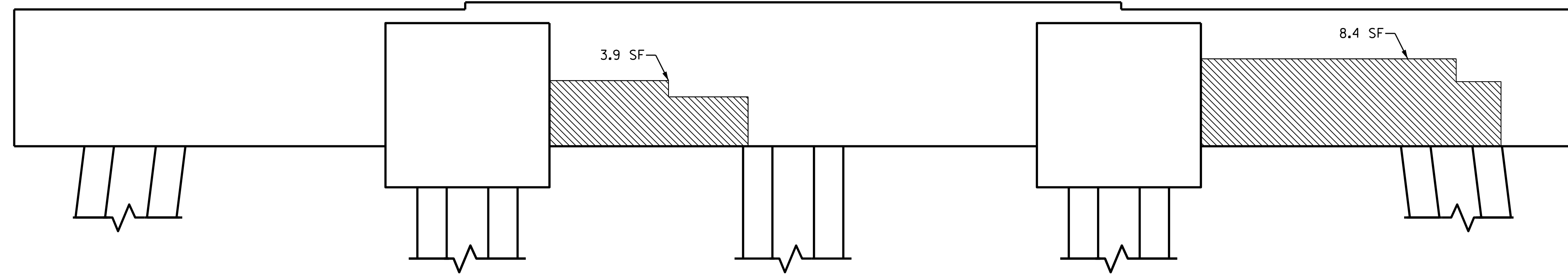
REPAIR QUANTITY TABLE

REPAIRS BENT 93	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	13.4	6.7		
PILES	0.0	0.0		

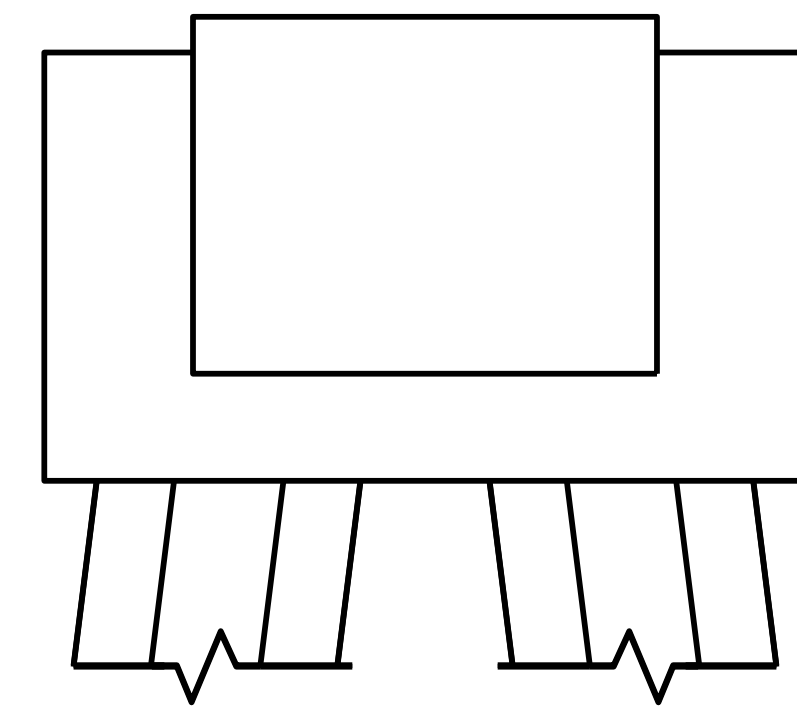
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



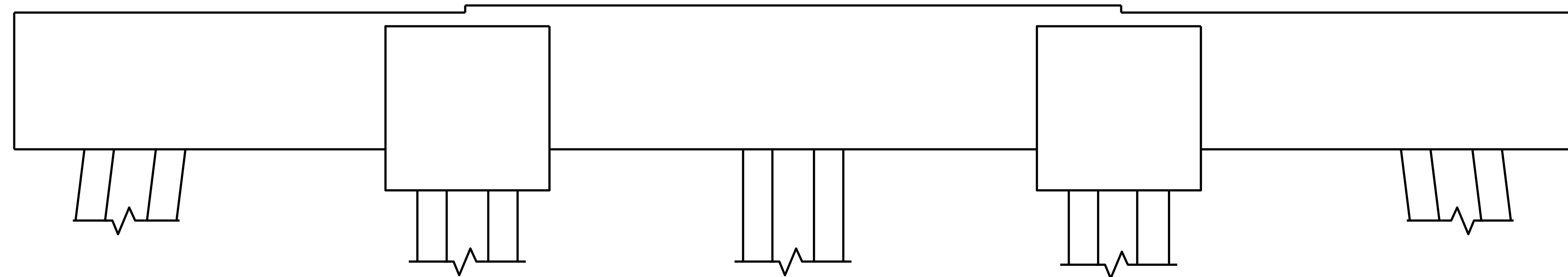
END VIEW
WEST FACE



ELEVATION
SOUTH FACE



END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



DocuSigned by:
Robbie Weisz
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 94 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 93**

DRAWN BY : P. D. BRYANT / S. I. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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2			4			

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.

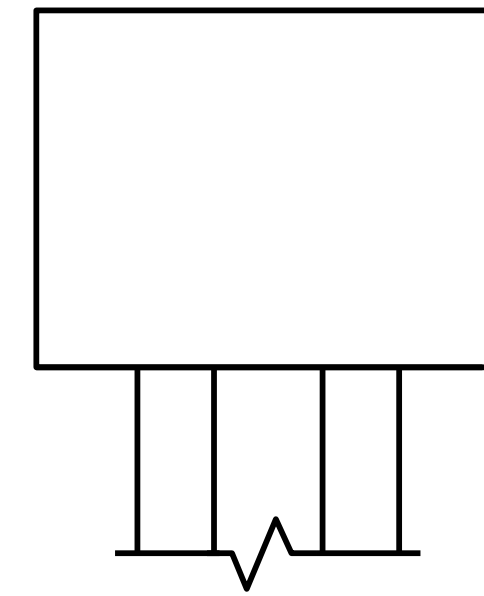
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP & COLUMN & GIRDER REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

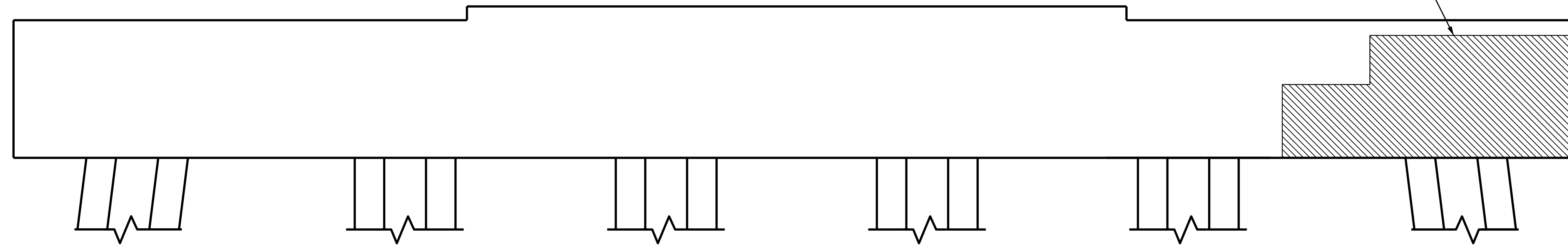
REPAIR QUANTITY TABLE

REPAIRS BENT 94	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	27.3	13.7		
PILES	0.0	0.0		

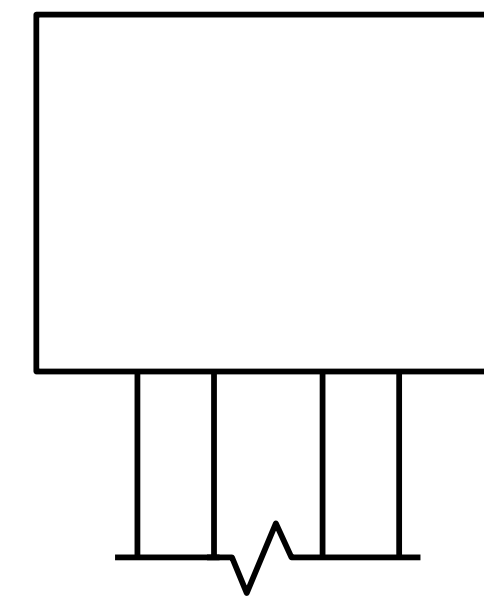
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



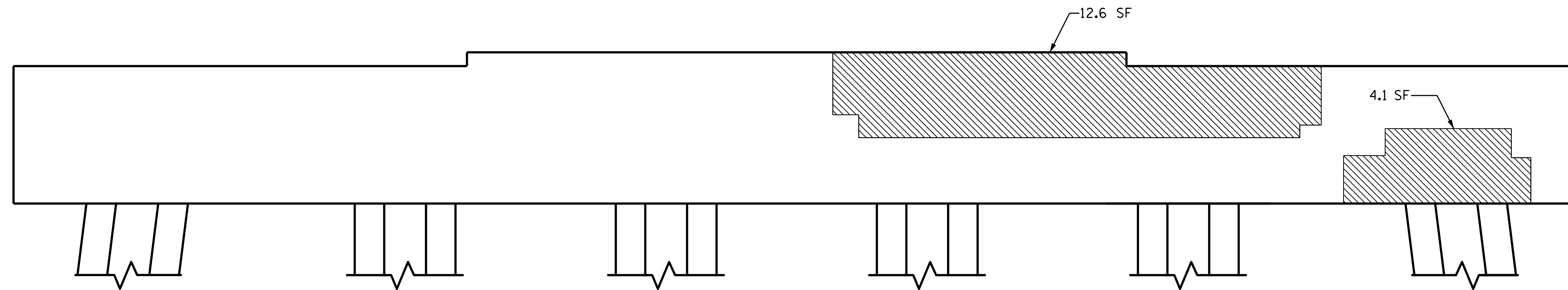
END VIEW
WEST FACE



ELEVATION
SOUTH FACE

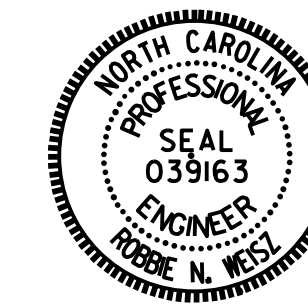


END VIEW
EAST FACE



ELEVATION
NORTH FACE

- SHOTCRETE REPAIR



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Robbie Weisz
6/5/2017

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7
SHEET 95 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 94**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 10/2016
CHECKED BY : R. N. WEISZ DATE : 12/2016

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2				4			TOTAL SHEETS	

REPAIR QUANTITY TABLE

REPAIRS END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	13.3	6.7		
CAP (HORIZONTAL, CORNER)	0.0	0.0		

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.

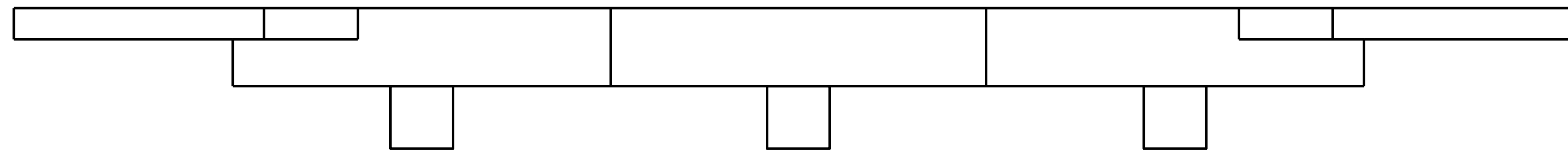
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

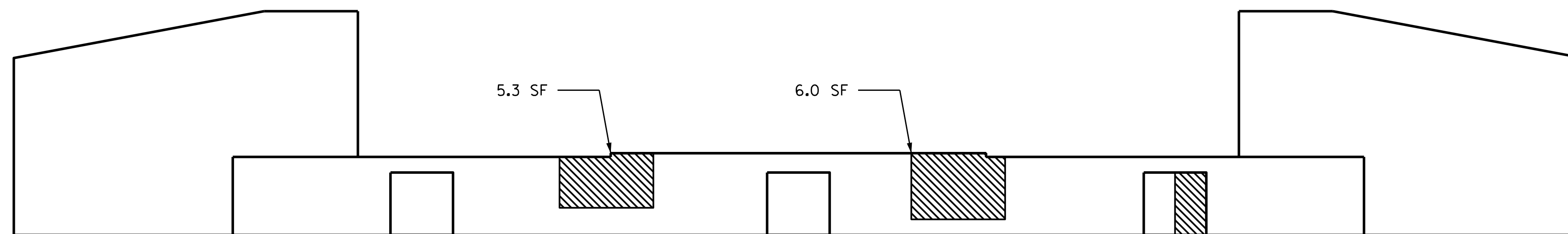
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR



PLAN
TOP OF CAP



ELEVATION
SOUTH SIDE

PROJECT NO. B-5941

BERTIE COUNTY

BRIDGE NO. 7

SHEET 96 OF 96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2



DocuSigned by:
Robbie Weisz
6/5/2017

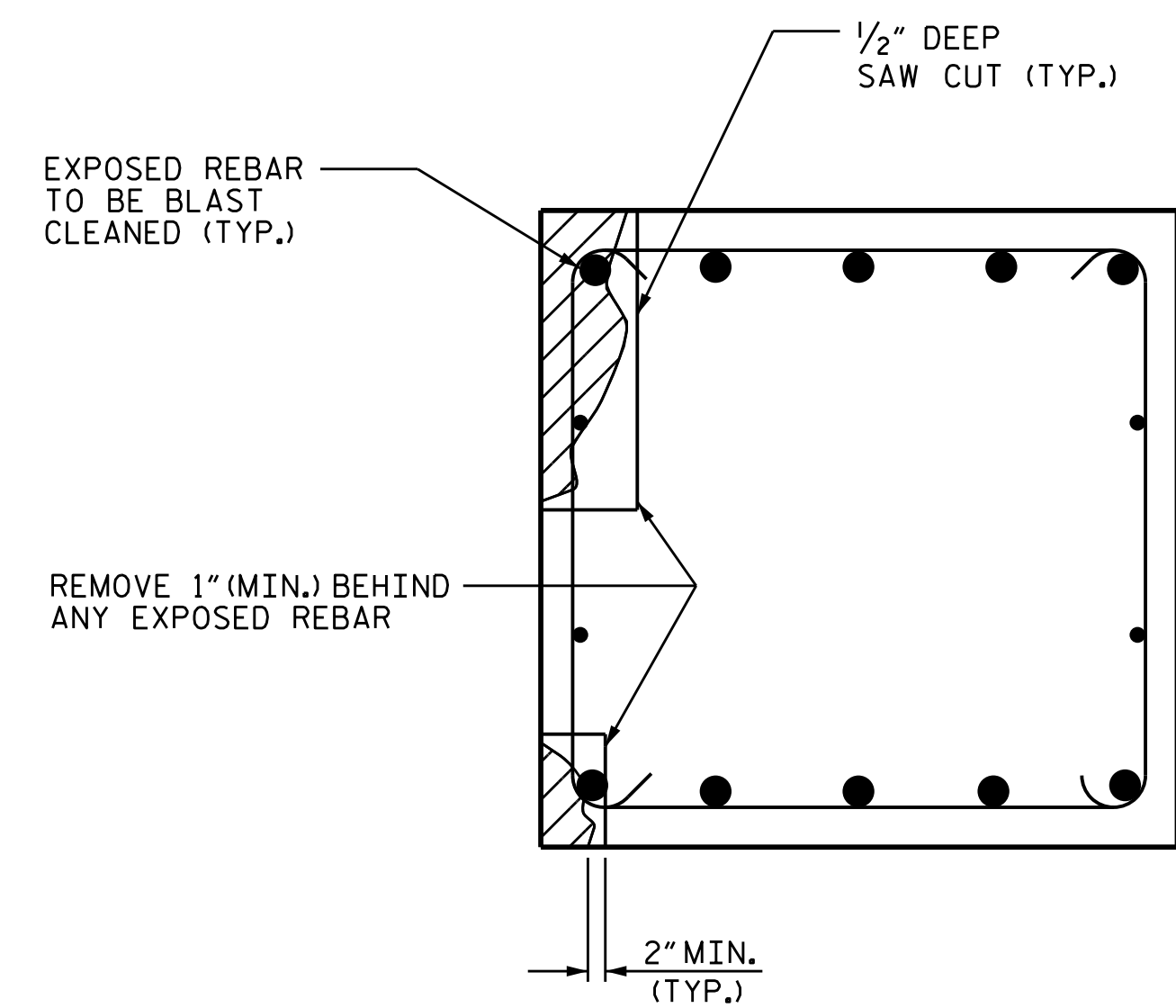
DRAWN BY : M.A. LEE DATE : 3/2017
CHECKED BY : R. WEISZ DATE : 4/2017

05-JUN-2017 13:14
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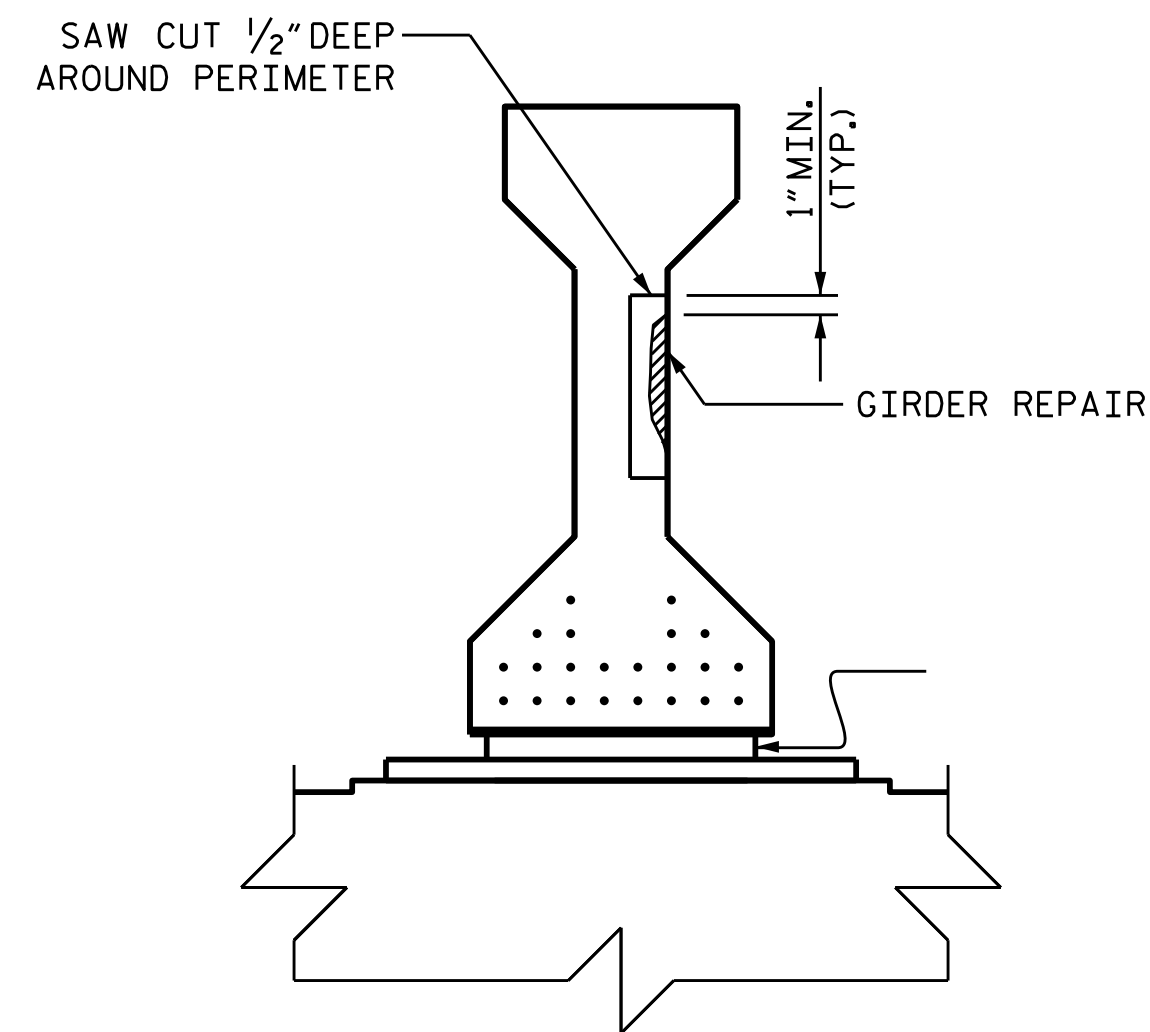
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2			4		

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S-102
TOTAL SHEETS

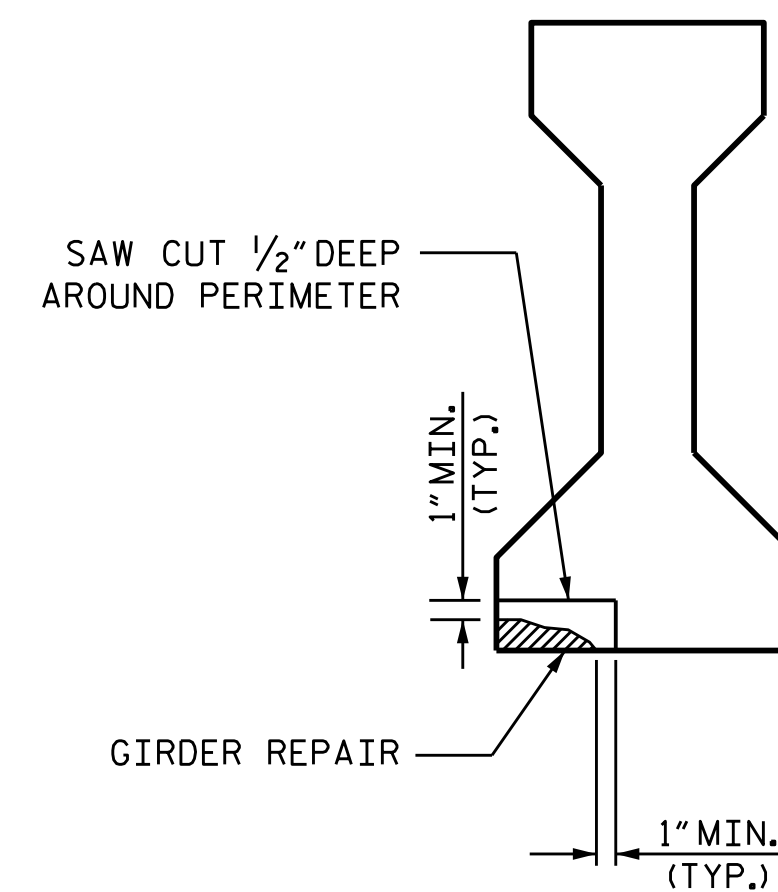


SECTION A-A



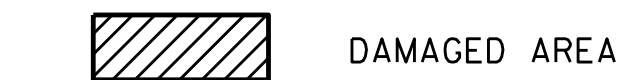
SECTION B-B

(IF MORE THAN HALF THE CIRCUMFERENCE OF REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESSED STRANDS.)



SECTION C-C

(ALL UNSOUND CONCRETE MUST BE REMOVED. HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS. PRESTRESSED STRANDS NOT SHOWN FOR CLARITY.)



NOTES

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

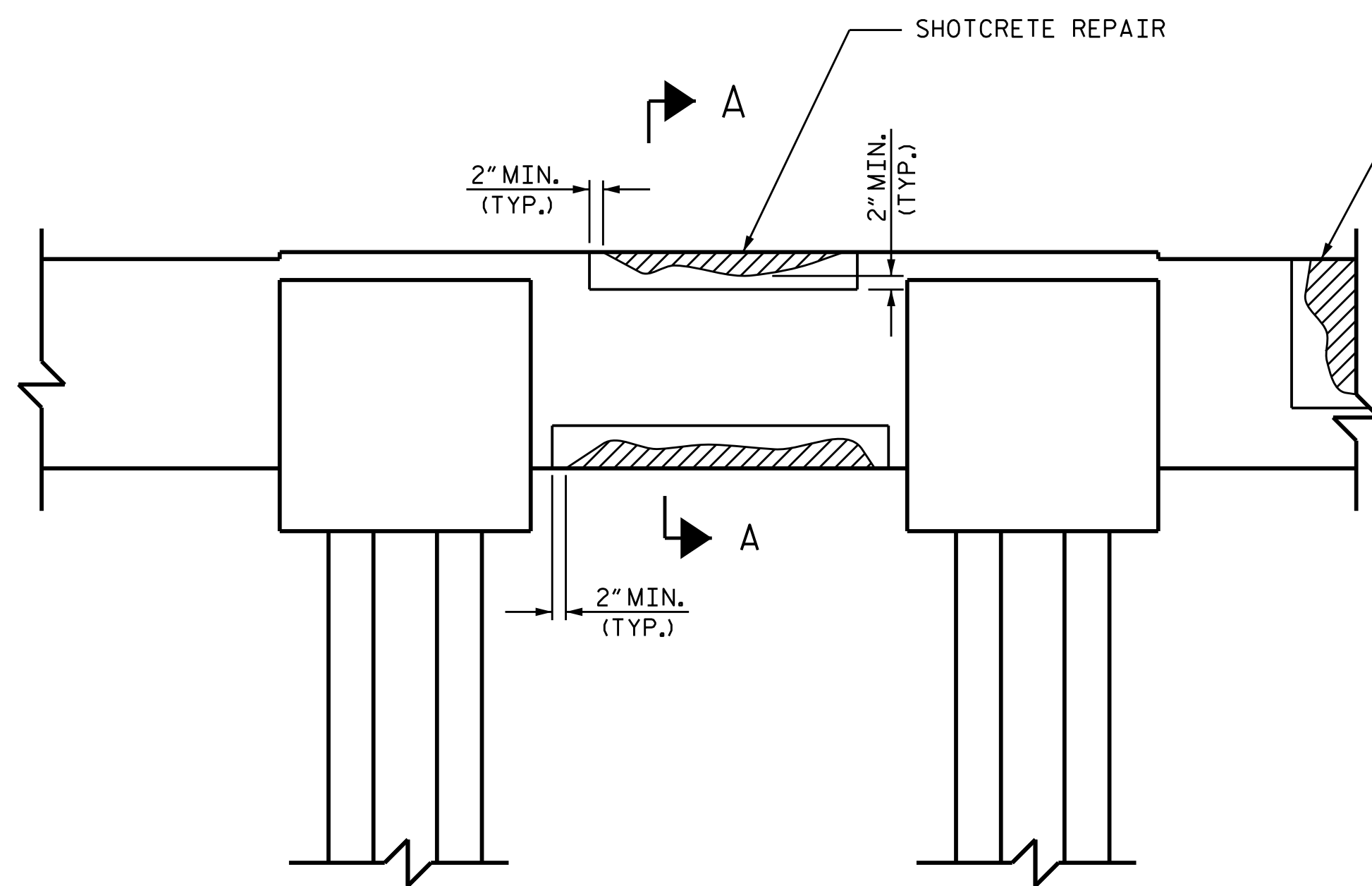
CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL AND PRESTRESSED TENDONS SHALL NOT BE DAMAGED.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

FOR REPAIRS TO PRESTRESSED GIRDERS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

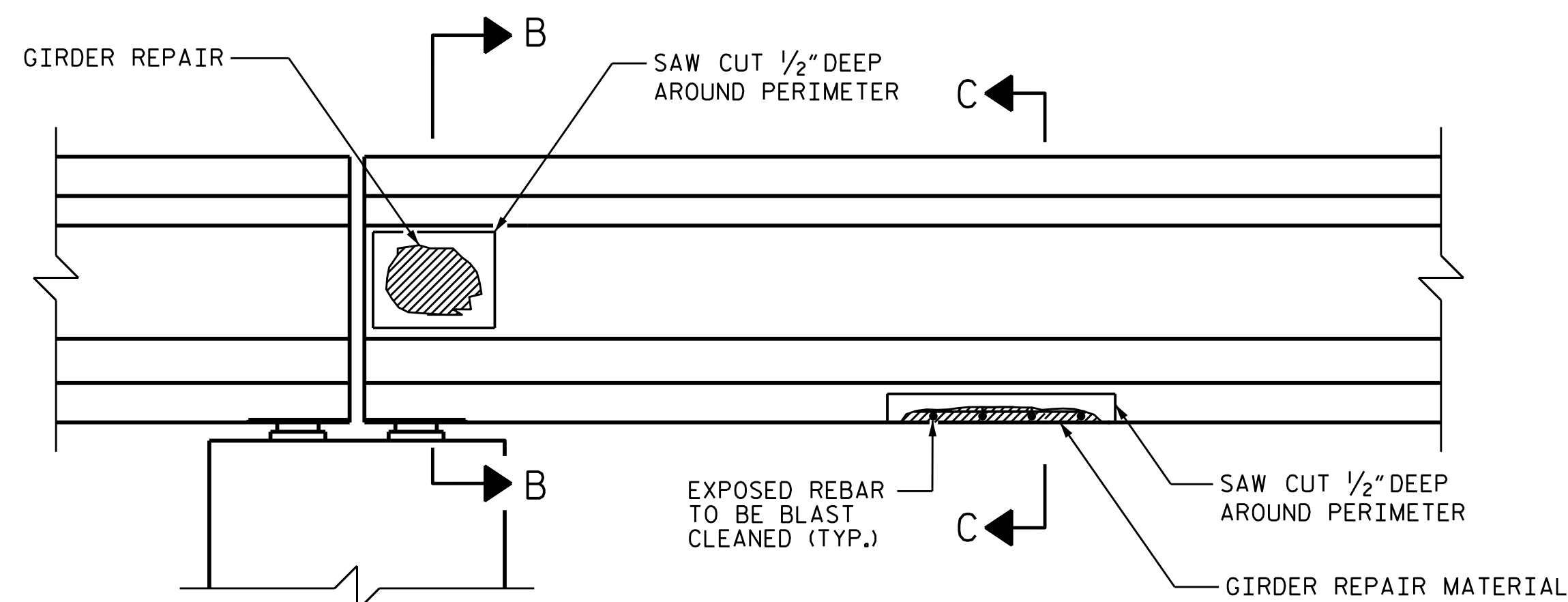
GIRDER REPAIR MATERIAL MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.



BENT CAP REPAIRS

CAP REPAIR

SPALLED, DELAMINATED OR CRACKED CONCRETE (REMOVE UNTIL SOUND CONCRETE IS FOUND AND 1" MIN. BEHIND ANY EXPOSED REBAR) (TYP.)

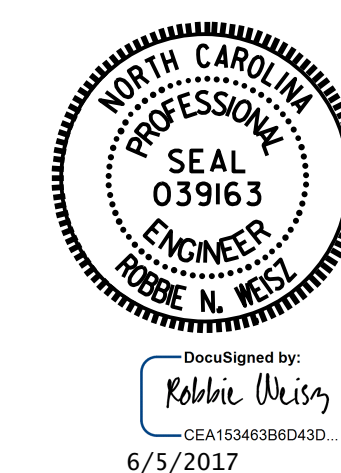


ELEVATION

CONCRETE GIRDER REPAIR DETAIL

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 1 OF 2



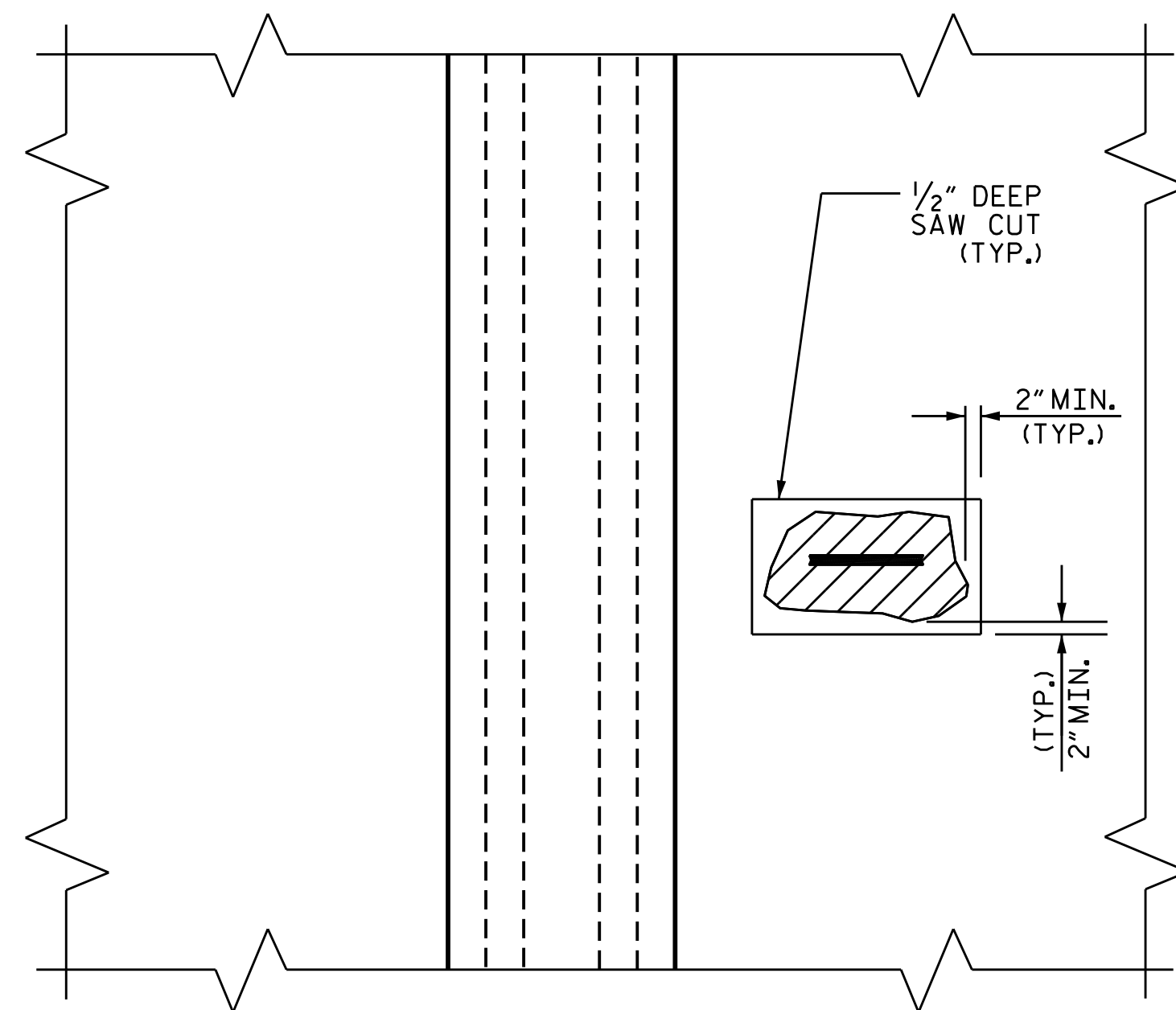
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL CAP & COLUMN
 & GIRDER REPAIR
 DETAILS

DRAWN BY : R.N.WEISZ DATE : 12/2016
 CHECKED BY : G.DICKEY DATE : 3/2017

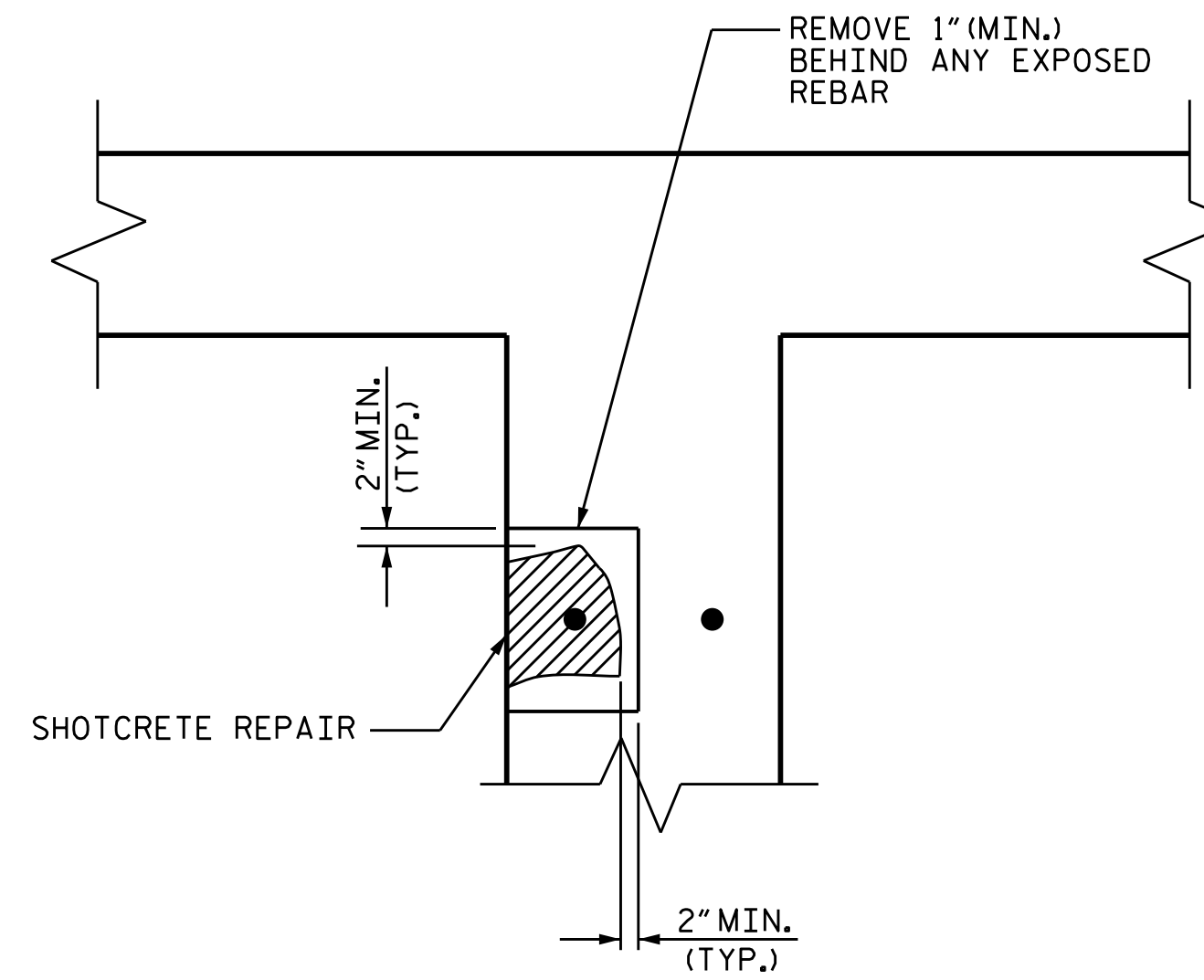
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2			4			



SECTION D-D



SECTION E-E

 DAMAGED AREA

NOTES

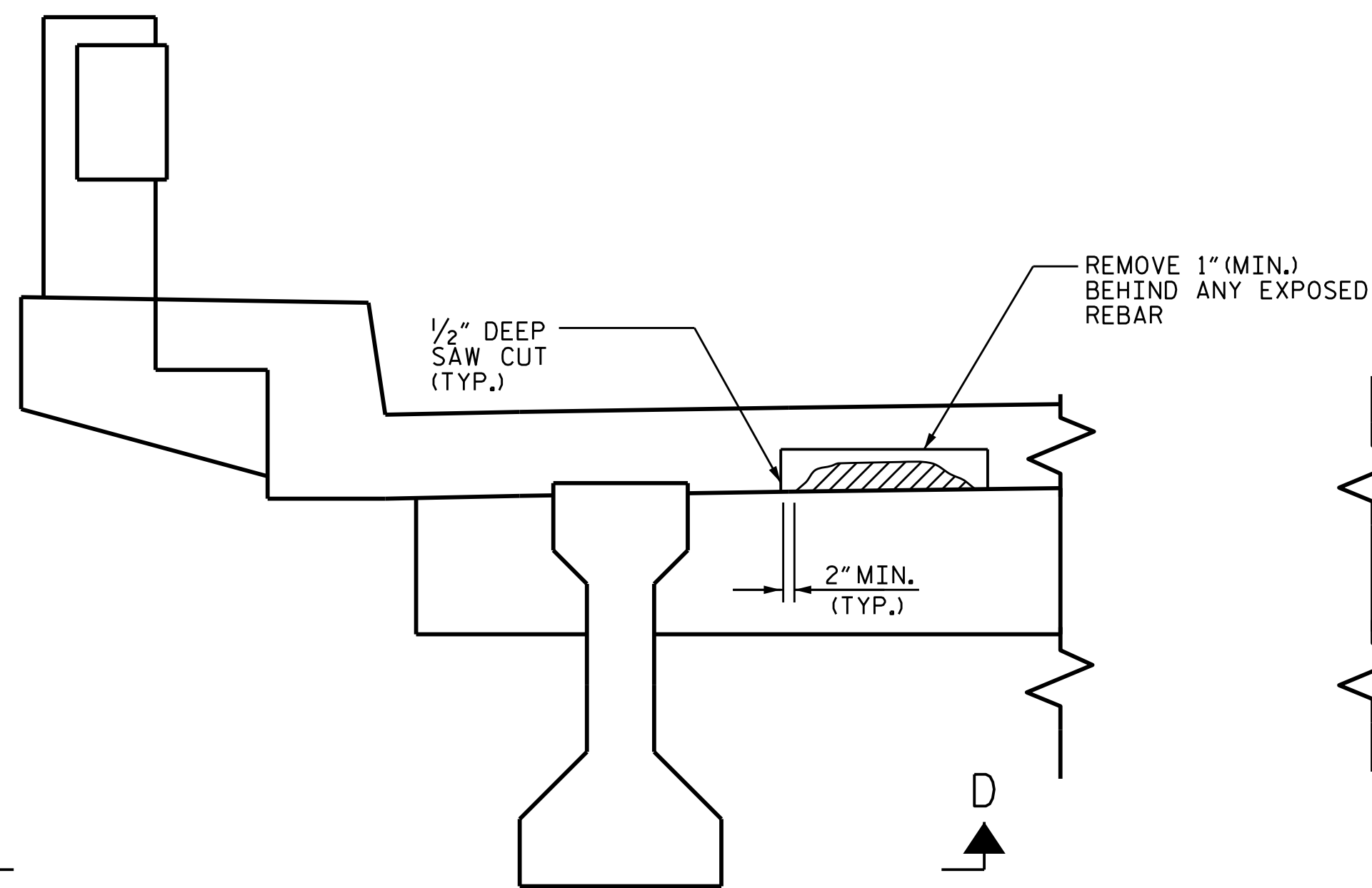
CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL OR PRESTRESSED TENDONS.

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

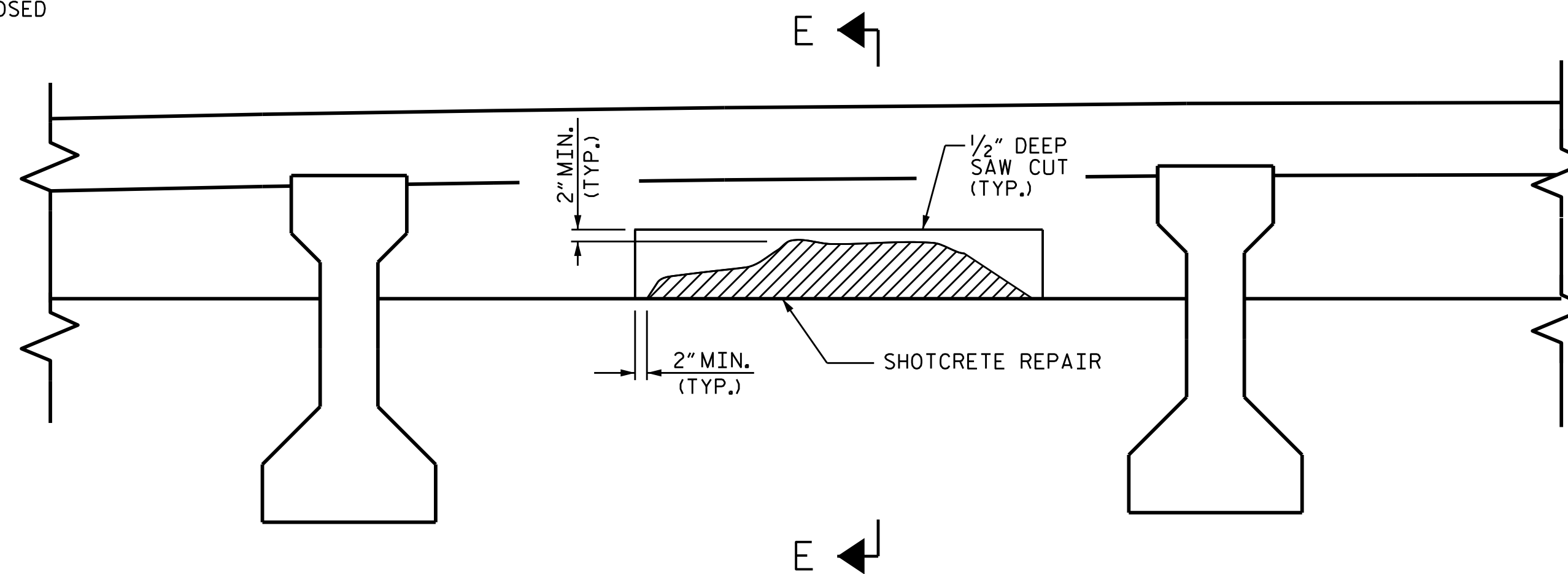
CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

GIRDER REPAIR MATERIAL MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.



TYPICAL SECTION



TYPICAL SECTION

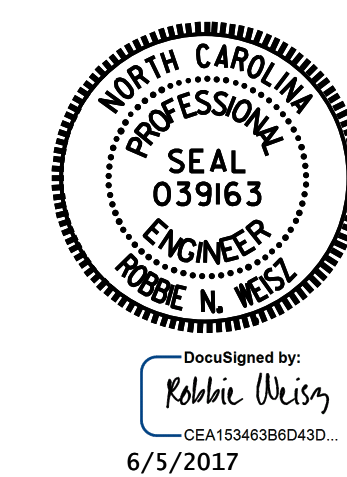
UNDERDECK DETAILS

* REFER TO REPAIR TABLE ON SHT'S S-5 & S-6 FOR SPECIFIED REPAIR MATERIAL. IF EPOXY COATING IS SPECIFIED REFER TO EPOXY COATING SPECIAL PROVISION.

INTERIOR DIAPHRAGM REPAIR DETAILS

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

SHEET 2 OF 2



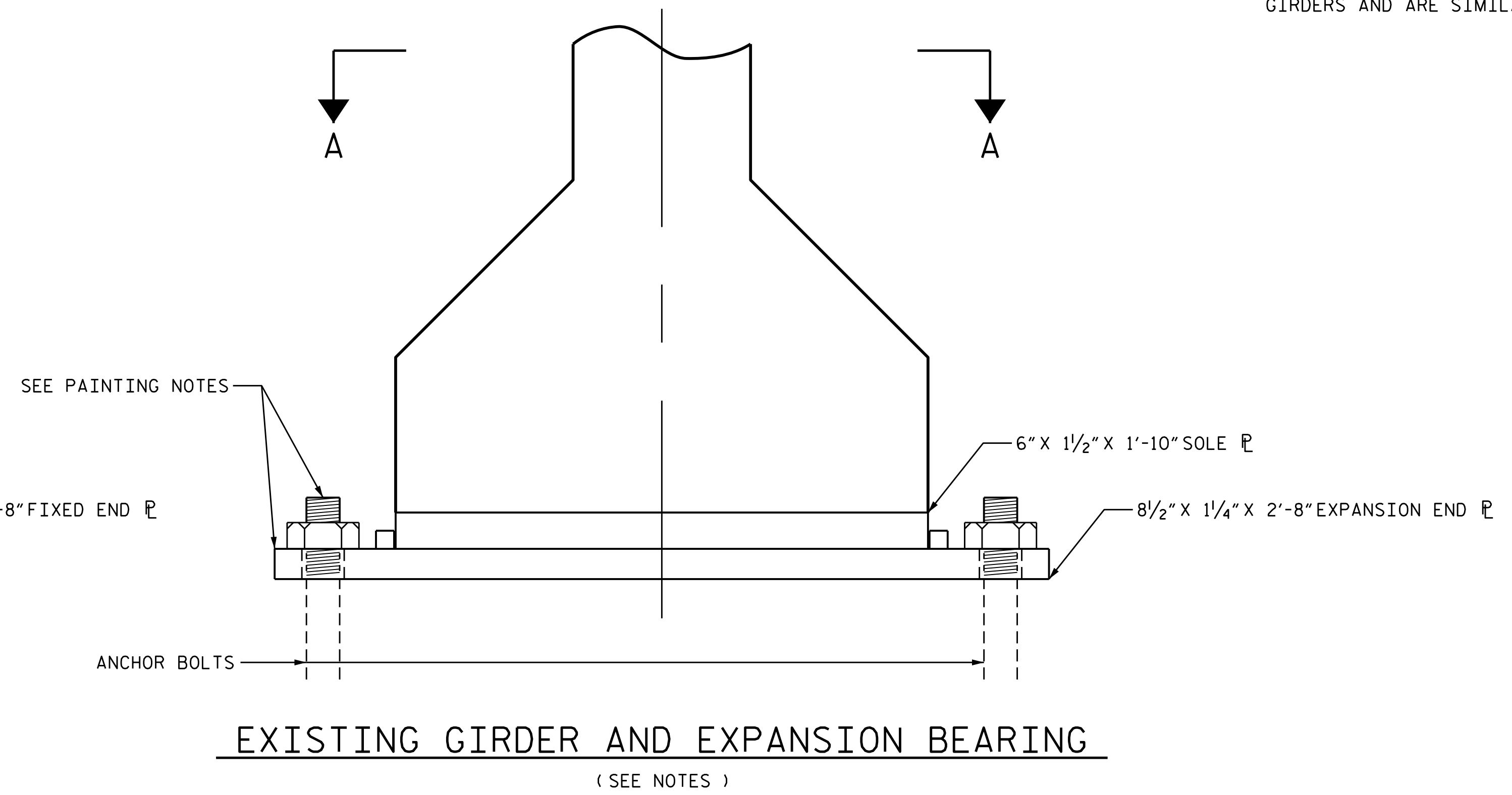
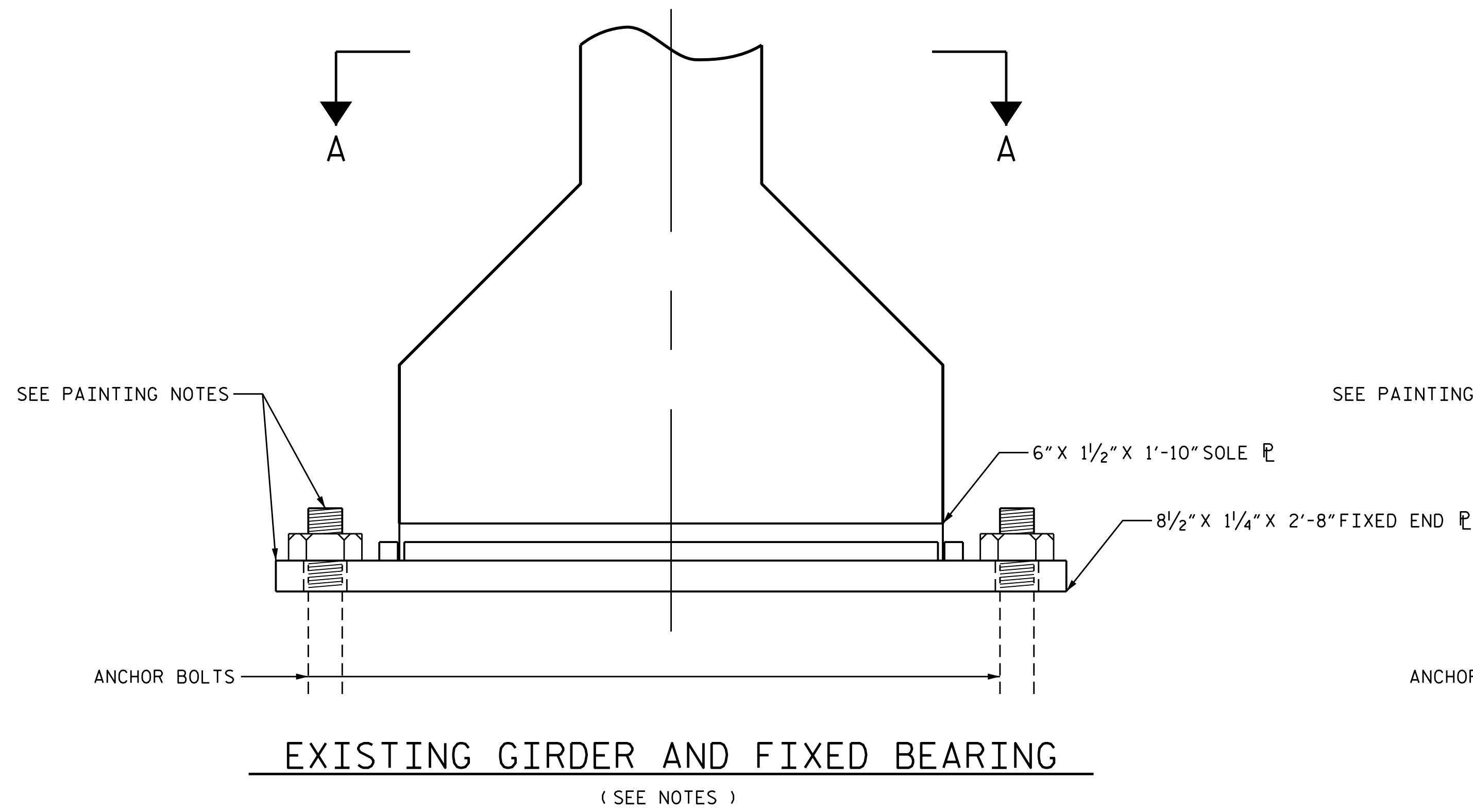
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL UNDERDECK &
 DIAPHRAGM
 REPAIR DETAILS

DRAWN BY : R.WEISZ DATE : 12/2016
 CHECKED BY : G.DICKEY DATE : 3/2017

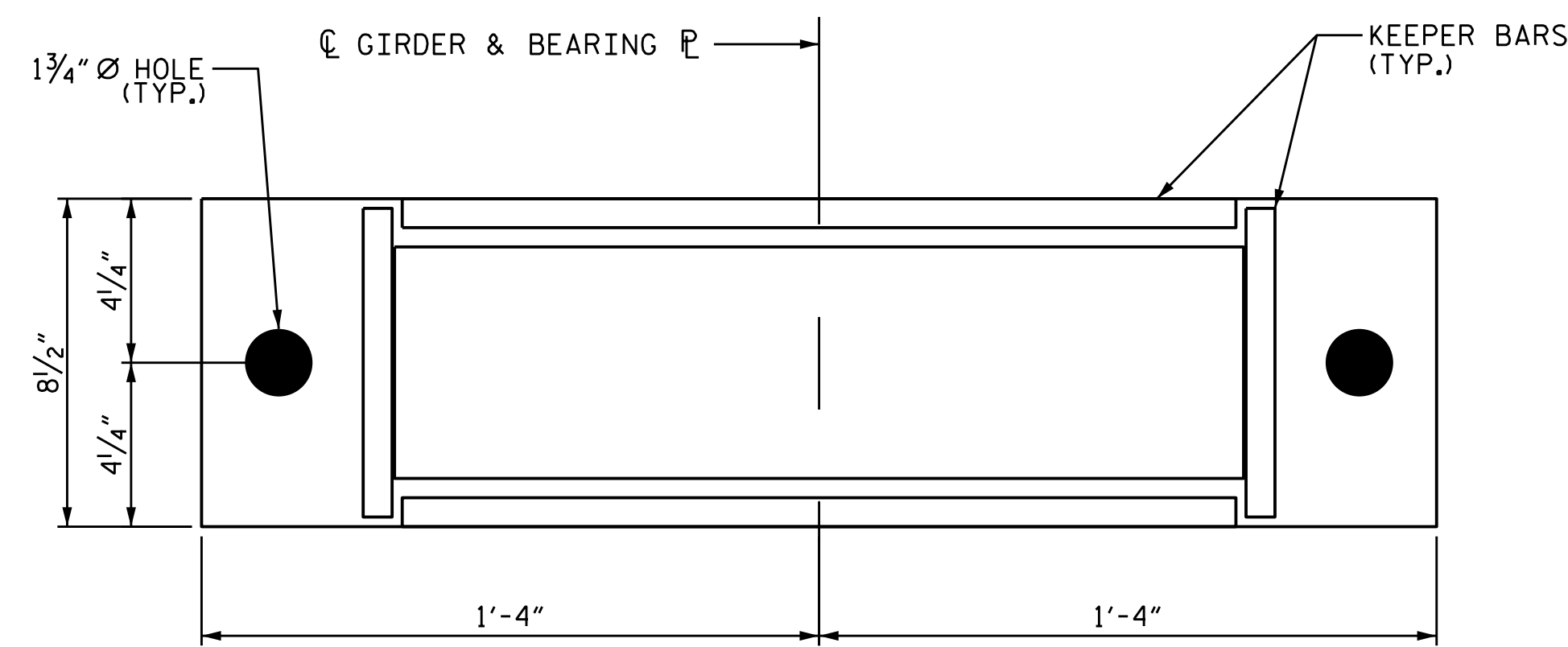
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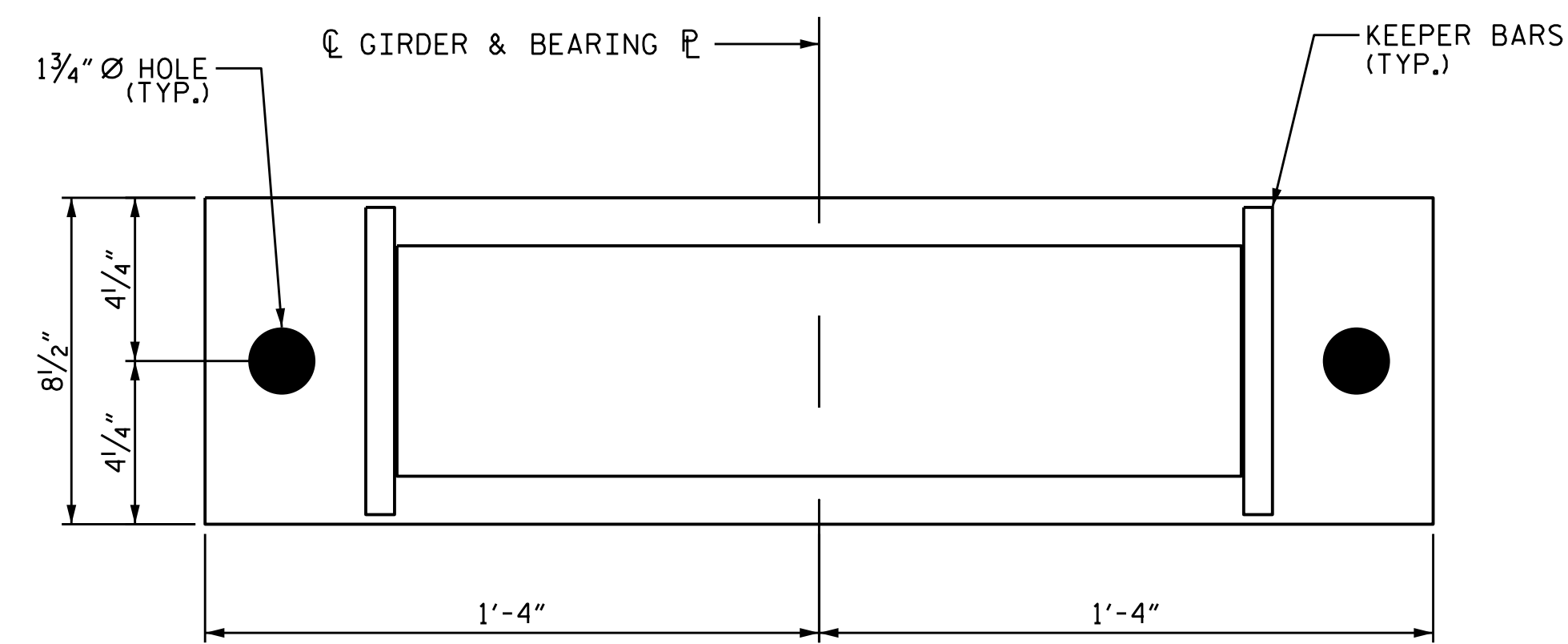
NOTES:
 FOR CLEANING AND PAINTING OF BEARINGS WITH HRCSA, SEE SPECIAL PROVISION.
 BEARINGS AT BENT 16-19 ARE FOR STEEL PLATE GIRDERS AND ARE SIMILAR IN SIZE.



CLEANING AND PAINTING BEARINGS WITH HRCSA
EACH
752

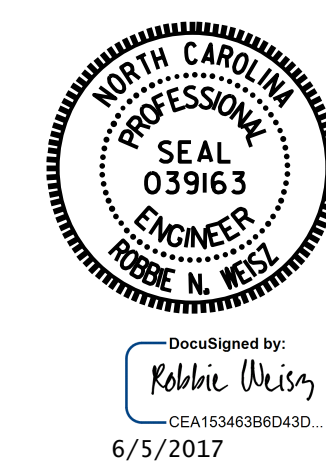


SECTION A-A



SECTION A-A

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 CLEANING AND PAINTING OF BEARINGS

DRAWN BY : M.A. LEE DATE : 3/2017
 CHECKED BY : R. WEISZ DATE : 4/2017

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1			3			TOTAL SHEETS
2			4			

SUMMARY OF QUANTITIES

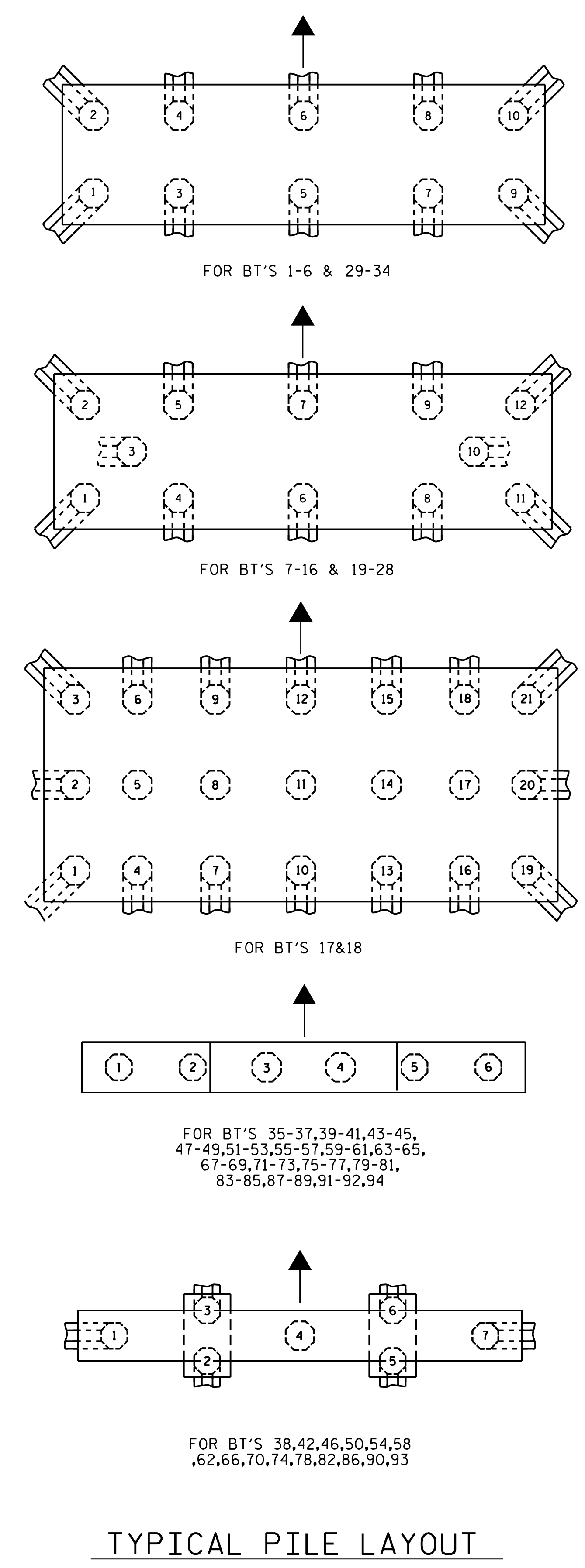
	QUANTITIES	
	ESTIMATE	ACTUAL
BENTS 1 - 94	LF	LF
PILE ENCAPSULATION	736	

SEE SHT S-107 & S-108 FOR PILE ENCAPSULATION.
FOR PILE ENCAPSULATION, SEE SPECIAL PROVISIONS.

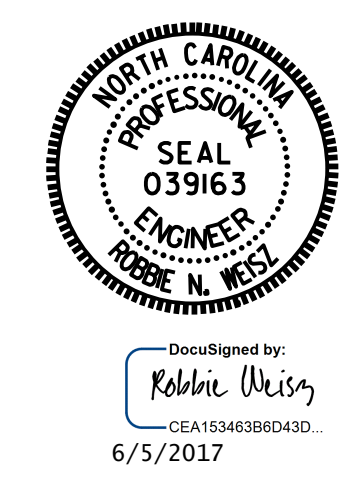
PILE ENCAPSULATION			
BENT	PILE	REPAIR LENGTH	
		EST. LF	ACTUAL LF
1	9	3	
3	3	3	
4	1	3	
7	1	3	
7	2	3	
7	3	3	
7	4	3	
7	5	3	
7	6	3	
7	7	3	
7	8	3	
7	9	3	
7	10	3	
7	11	3	
7	12	3	
11	1	5	
11	2	5	
12	1	6	
12	2	6	
12	3	6	
12	4	6	
12	5	6	
12	6	6	
12	7	6	
12	8	6	
12	9	6	
12	10	6	
12	11	6	
12	12	6	
14	2	7	
16	6	7	
16	7	7	
18	1	7	
18	2	7	
18	3	7	
18	4	7	
18	5	7	
18	6	7	
18	7	7	
18	8	7	
18	9	7	
18	10	7	
18	11	7	
18	12	7	
18	13	7	

PILE ENCAPSULATION			
BENT	PILE	REPAIR LENGTH	
		EST. LF	ACTUAL LF
18	14	7	
18	15	7	
18	16	7	
18	17	7	
18	18	7	
18	19	7	
18	20	7	
18	21	7	
19	6	3	
19	7	3	
21	1	4	
23	1	5	
23	2	5	
23	3	5	
23	4	5	
23	6	5	
27	4	7	
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28	1	7	
29	1	7	
29	5	7	
30	4	7	
30	6	7	
30	7	7	
31	4	7	
36	1	6	
36	2	6	
36	3	6	
36	4	6	
36	5	6	
36	6	6	
39	1	6	
44	1	7	
44	2	7	
44	3	7	
44	4	7	
44	5	7	
44	6	7	
46	2	6	
46	4	6	
48	3	5	
48	6	5	
59	6	7	
60	2	7	
66	5	7	

PILE ENCAPSULATION			
BENT	PILE	REPAIR LENGTH	
		EST. LF	ACTUAL LF
66	6	7	
67	1	7	
67	2	7	
67	3	7	
67	4	7	
67	5	7	
69	3	6	
69	4	6	
69	5	6	
78	3	6	
78	7	6	
80	2	7	
80	3	7	
80	4	7	
82	4	7	
82	5	7	
82	6	7	
82	7	7	
85	1	7	
85	6	7	
86	1	7	
86	5	7	
86	6	7	
88	1	7	
88	2	7	
88	4	7	
90	3	7	
90	6	7	
91	1	7	
93	6	7	
93	6	7	
94	1	5	



TYPICAL PILE LAYOUT



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE ENCAPSULATION
 REPAIR TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-106
1			3			TOTAL SHEETS
2			4			

DRAWN BY : R.WEISZ DATE : 12/16
 CHECKED BY : G.DICKEY DATE : 04/17

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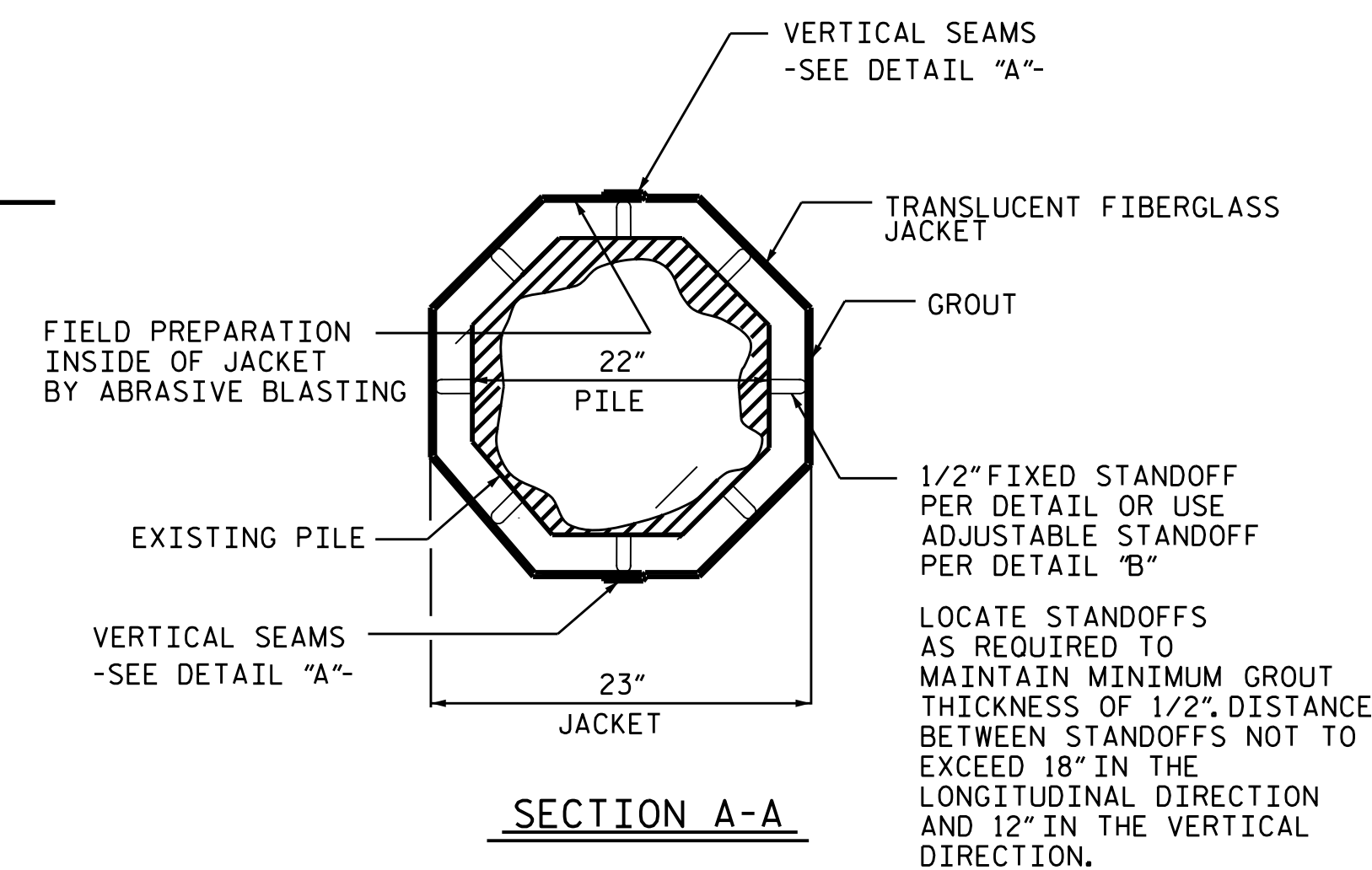
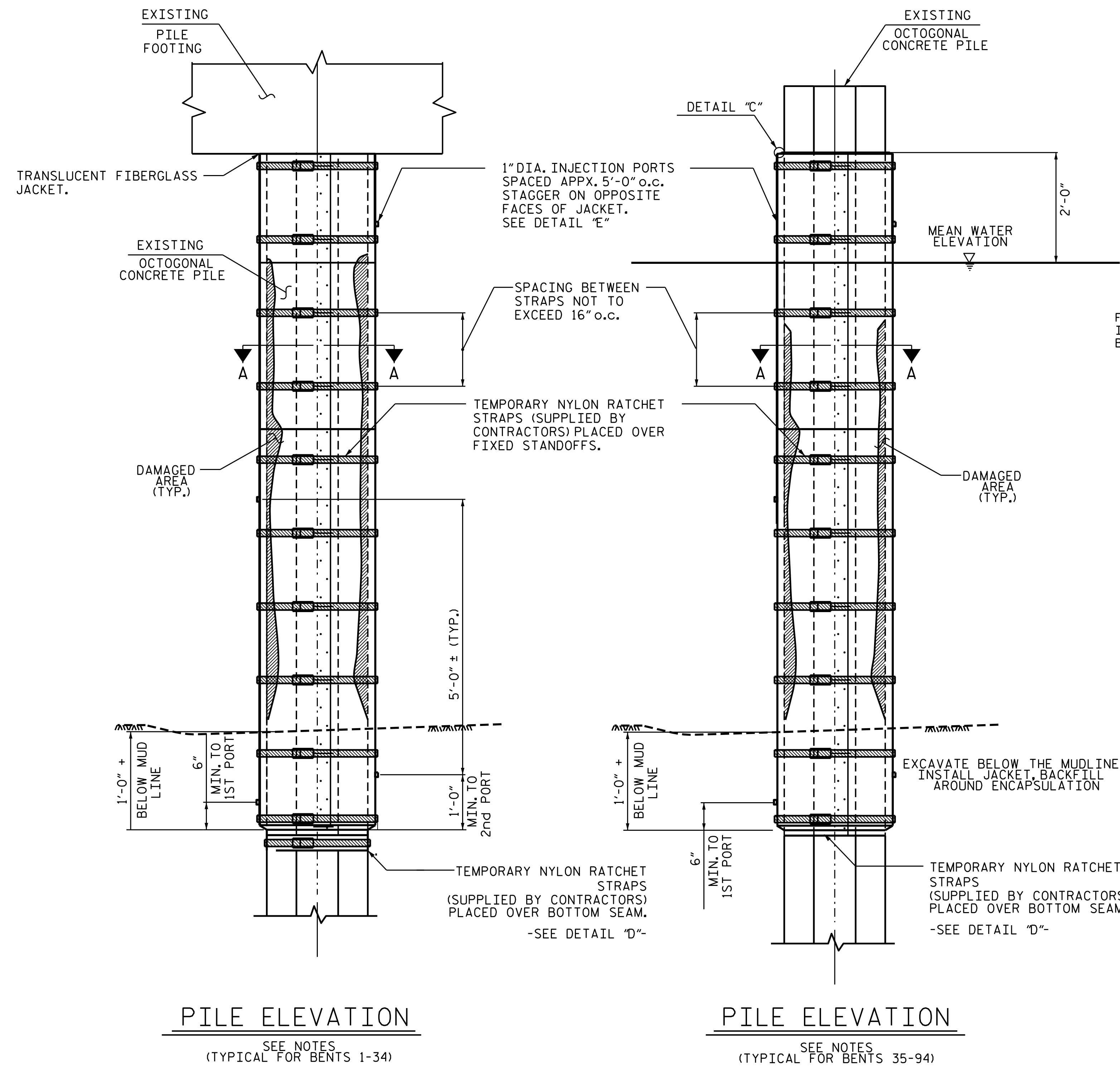
NOTES:

ALL EXISTING PILES ARE 22" OCTOGONAL PRESTRESSED CONCRETE PILES.

SEE PILE ENCAPSULATION TABLE FOR ESTIMATED ENCAPSULATION LENGTH.

FOR PILE ENCAPSULATION AT BENTS 1-34, PILE ENCAPSULATION SHALL START AT THE BOTTOM OF THE PILE FOOTING AND EXTEND 5 FEET BELOW MEAN WATER ELEVATION OR 1 FOOT BELOW MUDLINE, WHICHEVER COMES FIRST.

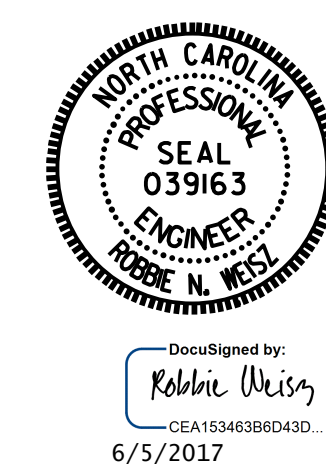
FOR PILE ENCAPSULATION AT BENTS 35-94, PILE ENCAPSULATION SHALL START 2 FEET ABOVE MEAN WATER ELEVATION AND EXTEND 5 FEET BELOW MEAN WATER ELEVATION OR 1 FOOT BELOW MUDLINE, WHICHEVER COMES FIRST.



REPAIR SEQUENCES

1. AFTER SURFACE PREPARATION, PLACE JACKET IN PROPER LOCATION AROUND PILE AND SEAL LONGITUDINAL SEAMS (SEE DETAIL "A"). INSTALL TEMPORARY BRACING.
2. CONFIRM SPACING BETWEEN JACKET AND PILE. INSTALL BOTTOM SEAL (SEE DETAIL "D"). ALLOW BOTTOM SEAL TO CURE APPX. 4 HOURS.
3. ATTACH GROUT HOSE TO LOWERMOST INJECTION PORT AND PUMP A-P-E GROUT FOR 30-sec. CHECK FOR LEAKS ALONG SEAMS AND BOTTOM SEAL. (OPTIONALLY ALLOW THIS GROUT TO CURE AND PROCEED WITH GROUT INJECTION FROM 2nd PORT.)
4. PLUG UPPER INJECTION PORTS AND PUMP GROUT INTO LOWER PORT UNTIL GROUT REACHES TOP OF JACKET. ONLY USE UPPER PORTS IF INJECTION BECOMES DIFFICULT.

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7



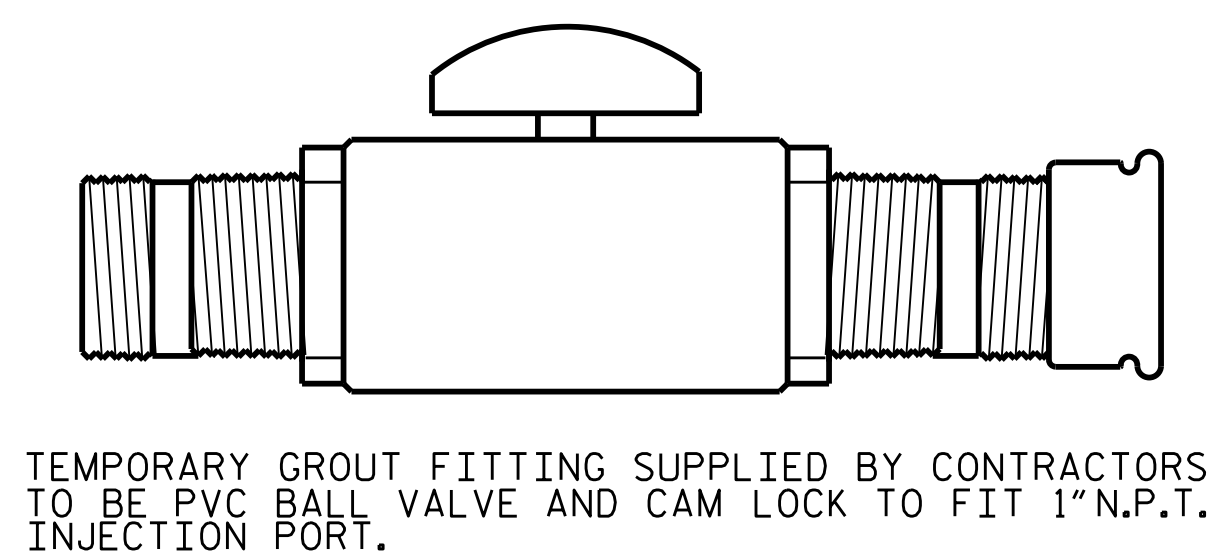
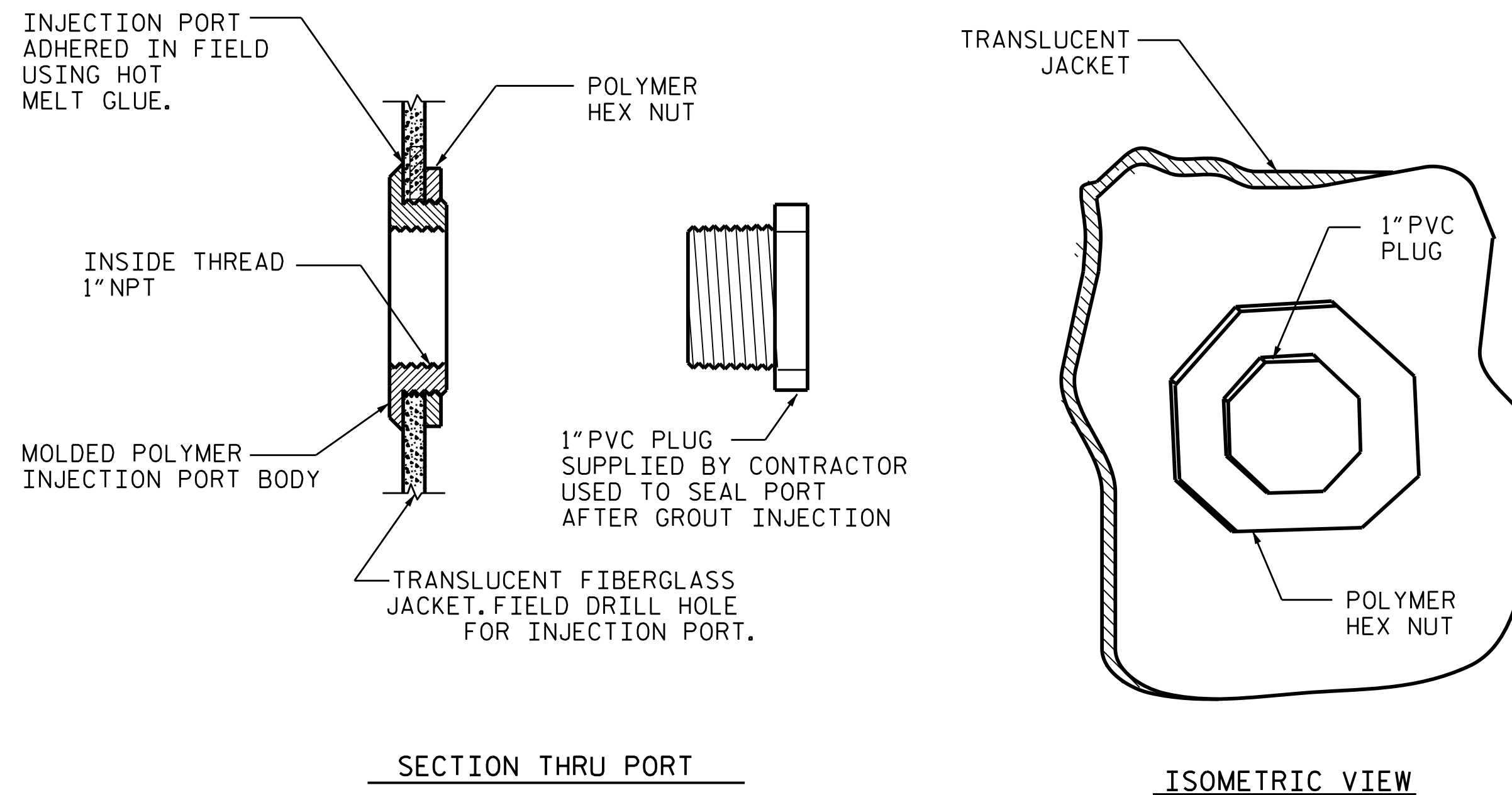
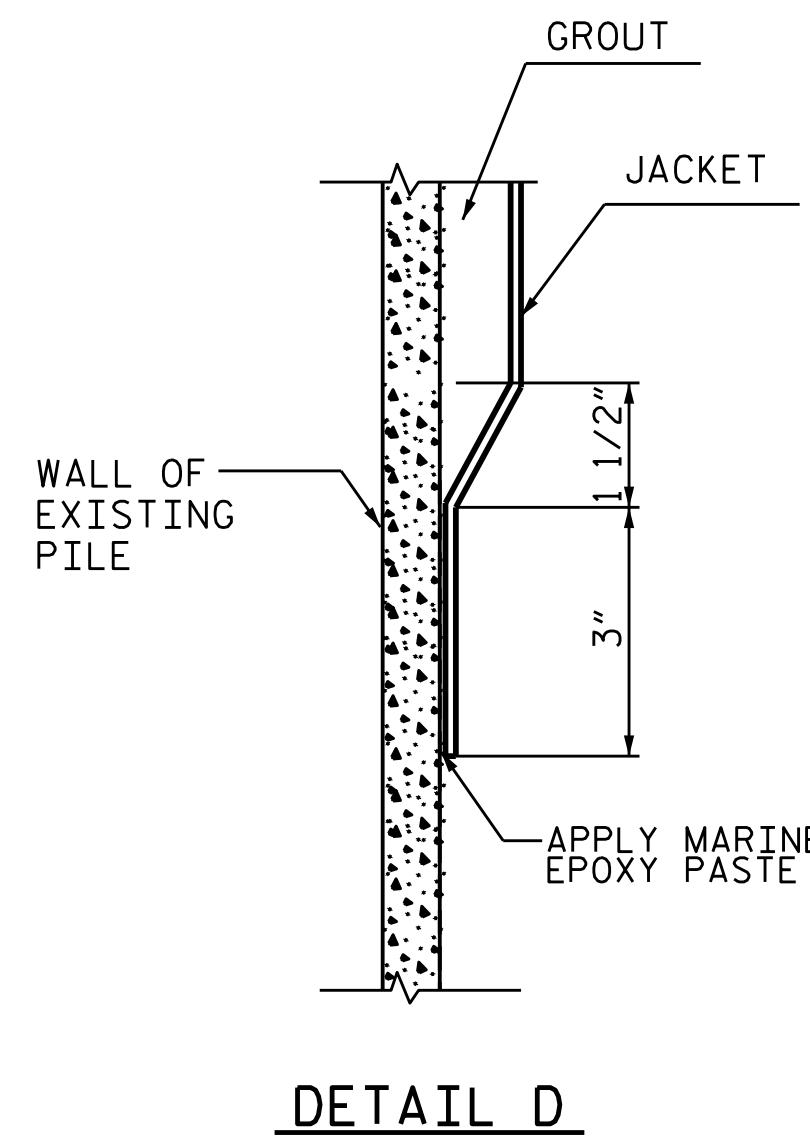
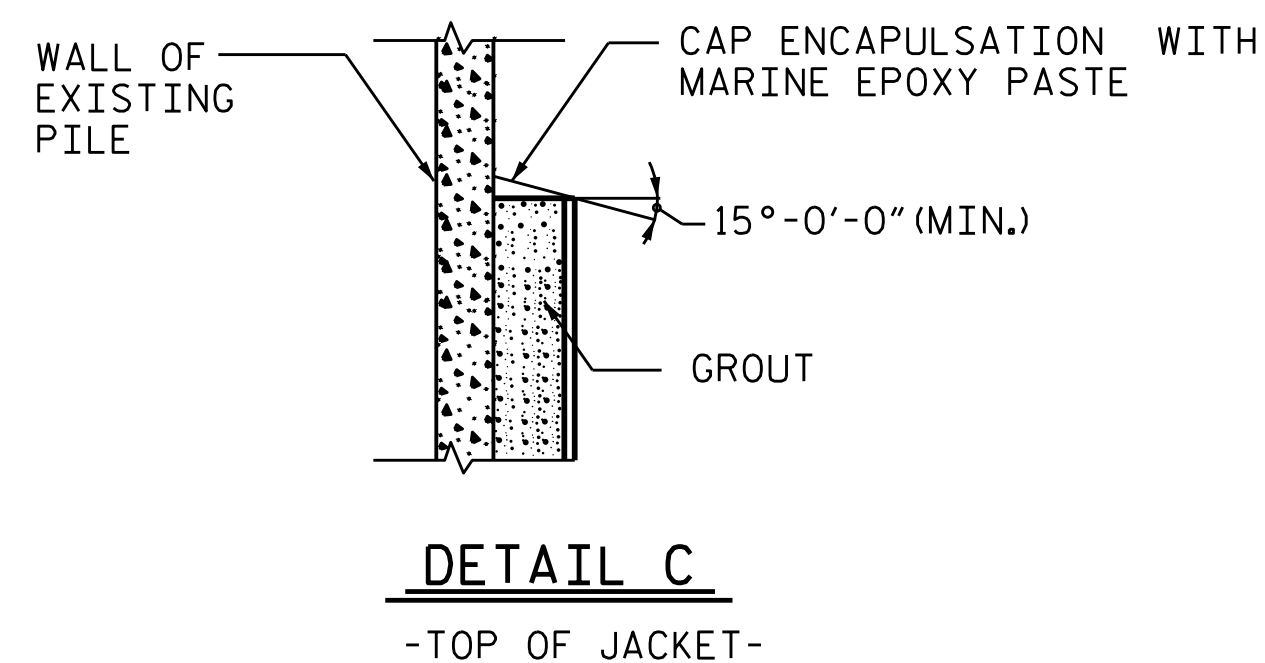
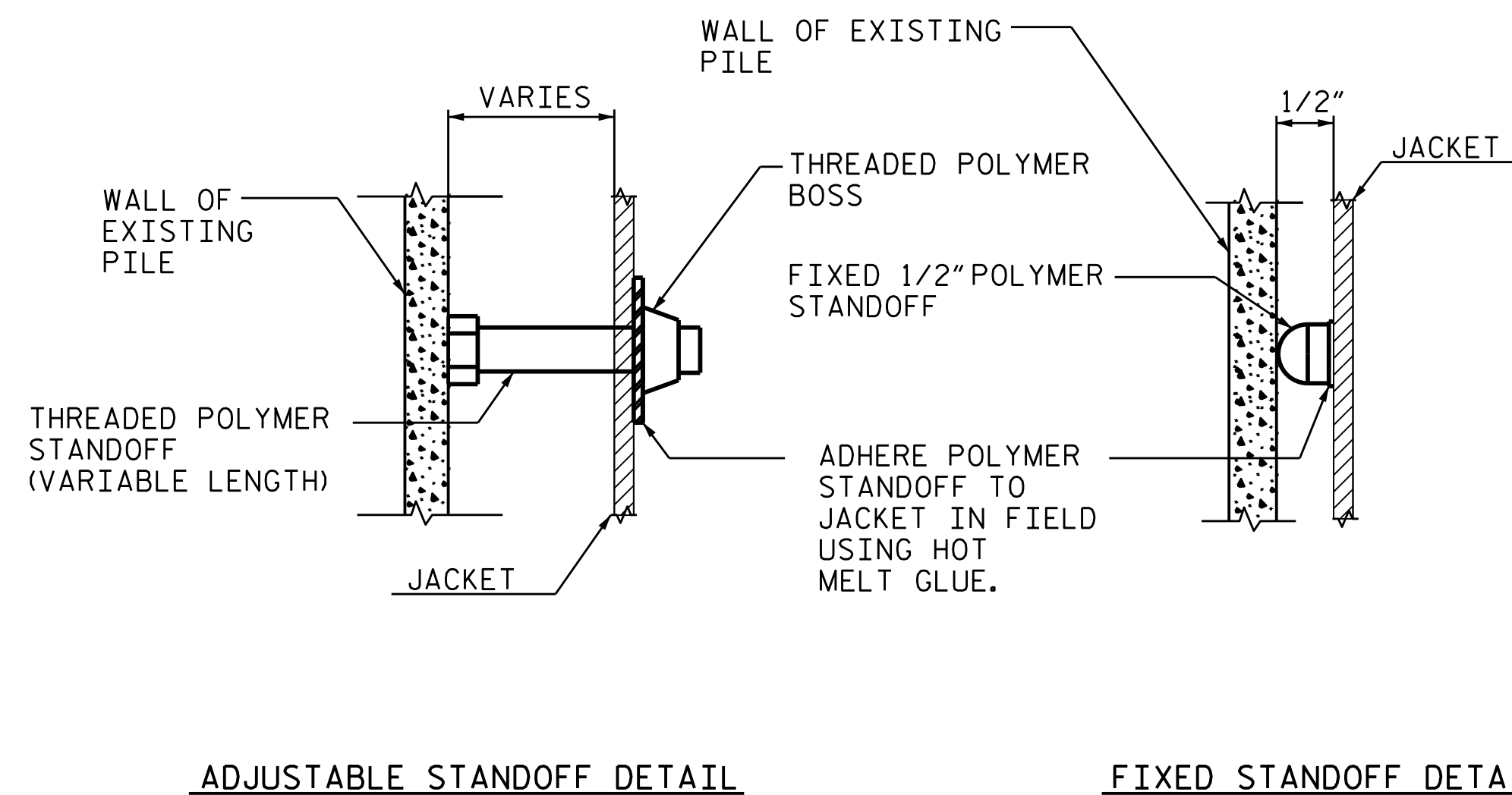
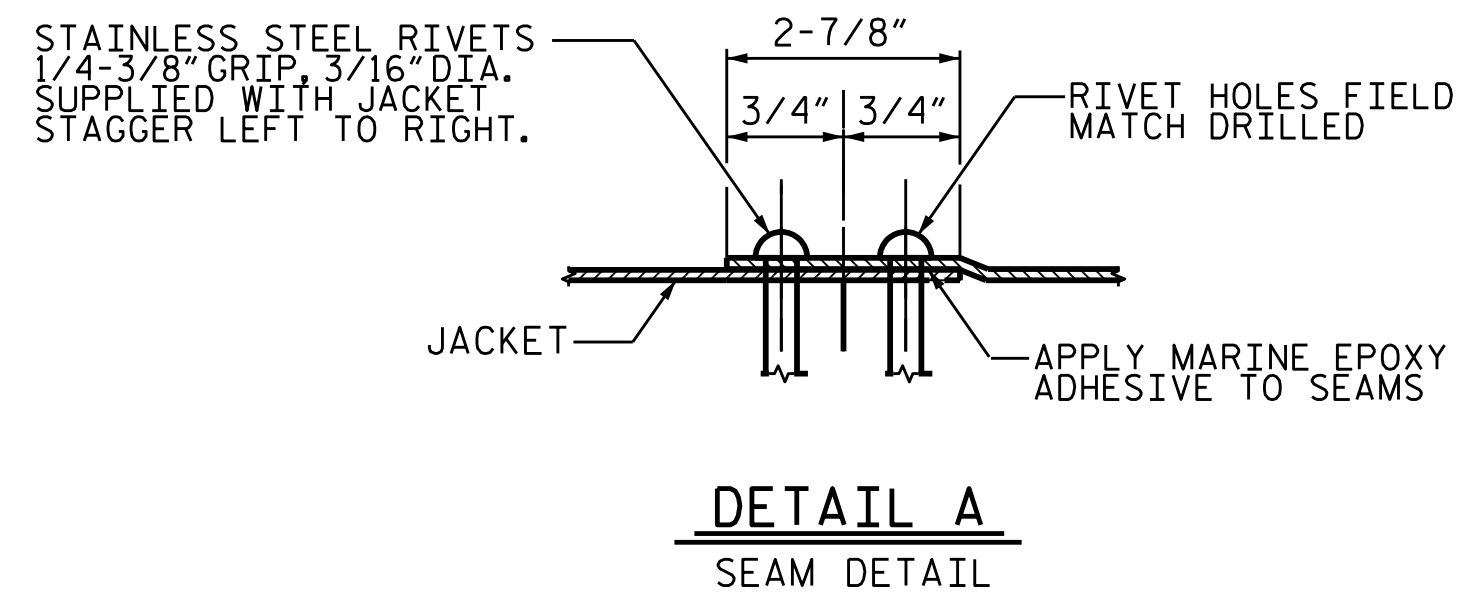
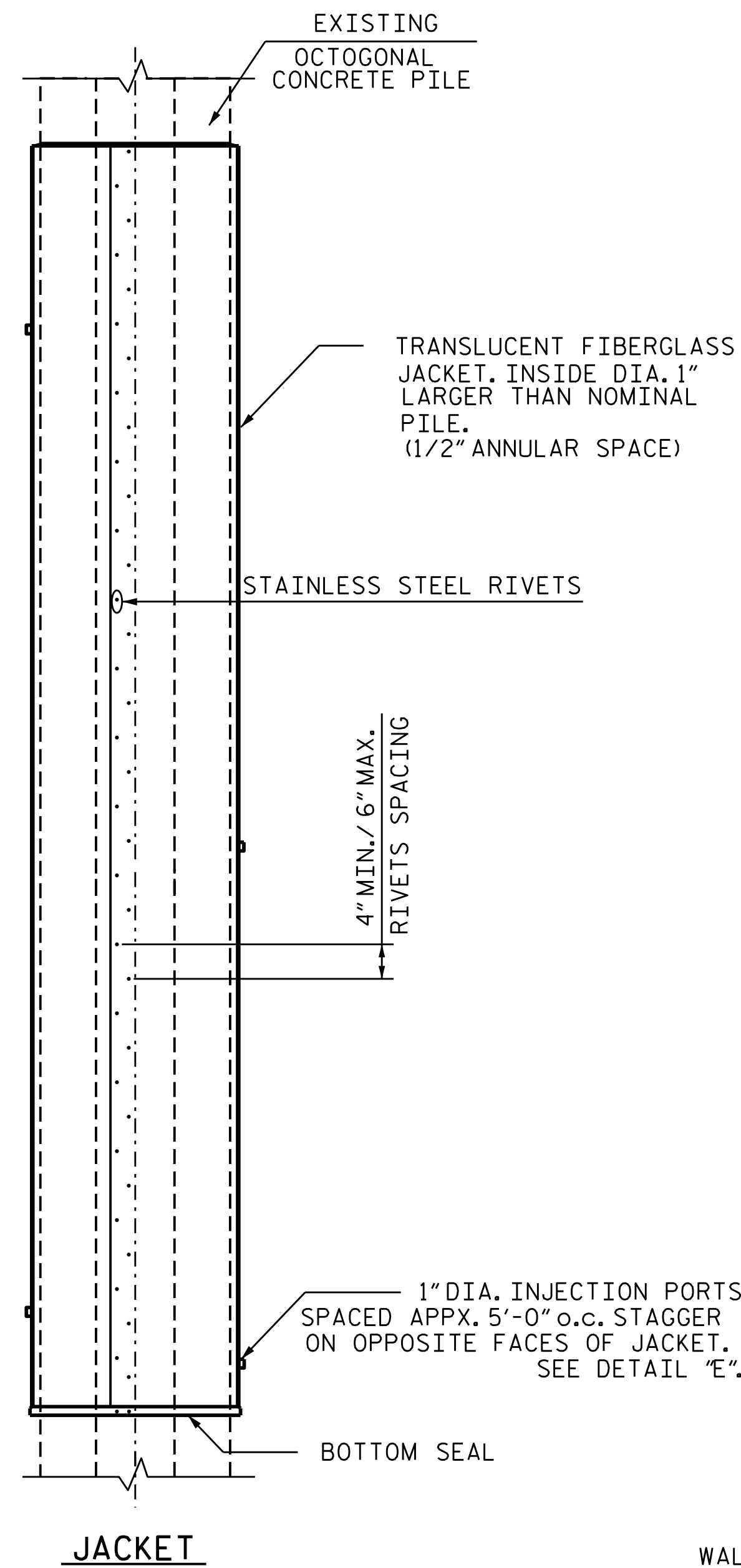
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE ENCAPSULATION

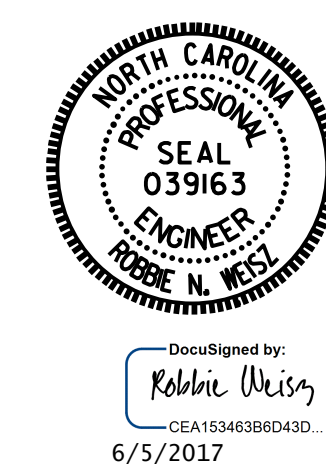
DRAWN BY : R. WEISZ DATE : 01/17
 CHECKED BY : G. DICKEY DATE : 04/17

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1			3			S-107
2			4			



PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7



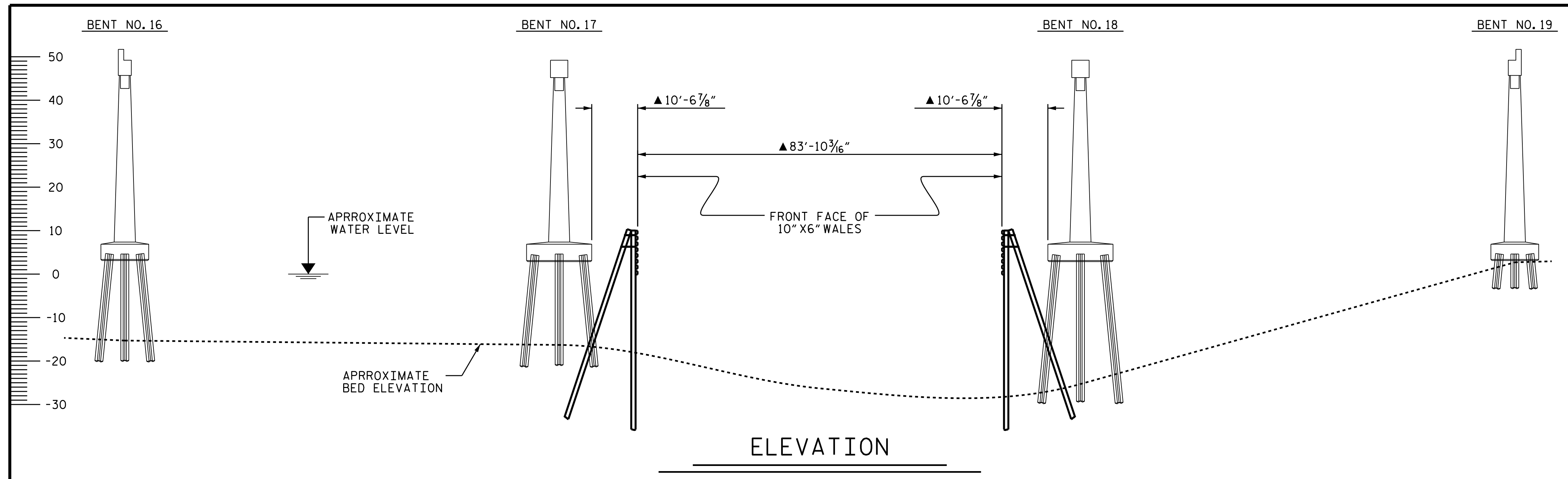
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE ENCAPSULATION DETAILS

DRAWN BY : R. WEISZ DATE : 01/17
 CHECKED BY : G. DICKEY DATE : 04/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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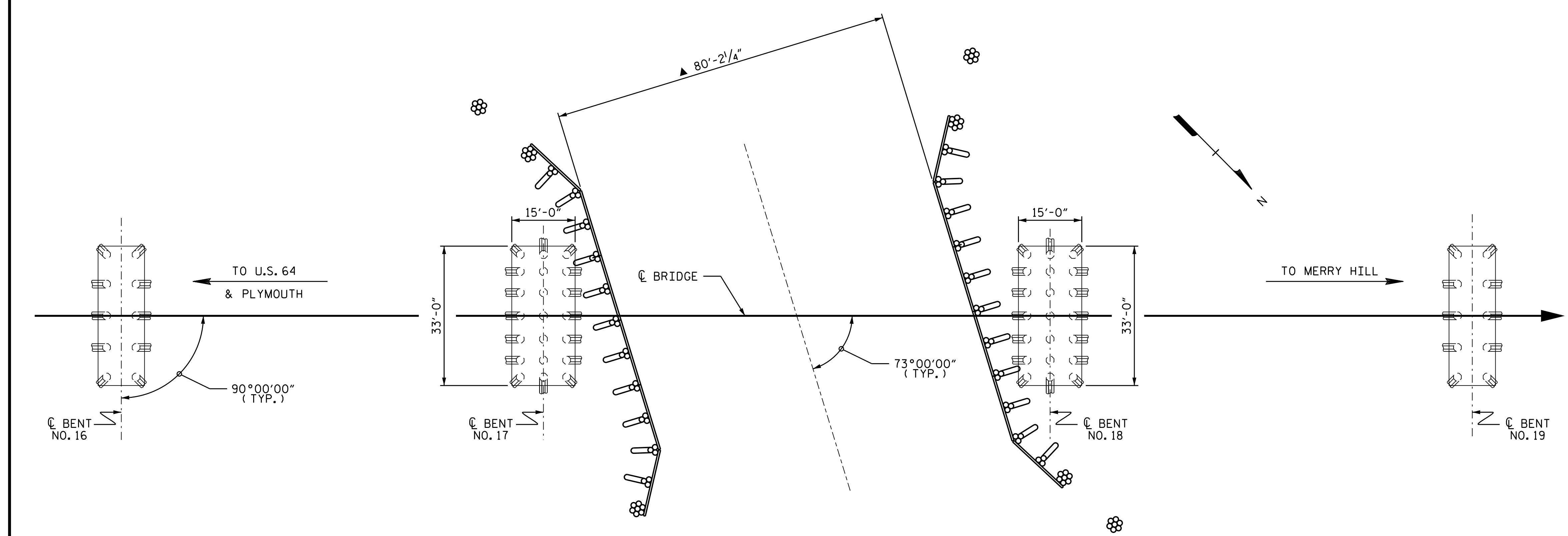


ELEVATION

TAKEN ALONG C OF BRIDGE

▲ DIMENSIONS SHALL BE FIELD VERIFIED

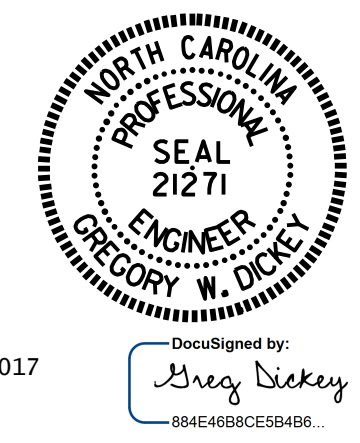
- GENERAL NOTES:**
- FOR COORDINATION WITH THE U.S. COAST GUARD, SEE SPECIAL PROVISIONS.
 - FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.
 - FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.
 - FOR REMOVAL OF EXISTING FENDER SYSTEM, SEE SPECIAL PROVISIONS.
 - FOR PILE DRIVING EQUIPMENT DATA SUBMITTAL, SEE SPECIAL PROVISIONS.
 - FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 - FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
 - FOR WORK IN, OVER OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.
 - FOR HARDWARE, SEE SPECIAL PROVISIONS.
 - FOR FENDER REPLACEMENT, SEE SPECIAL PROVISIONS.
 - FOR AS-BUILT PLANS, SEE SPECIAL PROVISIONS.
 - FOR LOCATION OF NEW FENDER SYSTEM, SEE SPECIAL PROVISIONS.
 - ALL BOLTS, WASHER, NUTS, AND ALL OTHER HARDWARE SHALL BE GALVANIZED AND SHALL BE GRADE A-307.
 - GALVANIZING SHALL BE DONE IN ACCORDANCE WITH SECTION 1076 OF NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES DATED JANUARY 2012.
 - ALL O.G. WASHERS SHALL CONFORM TO ASTM A47 CLASS 30.
 - ALL TREATED LUMBER SHALL CONFORM TO SECTION 1082 OF THE STANDARD SPECIFICATIONS OR AS NOTED ON THE PLANS.
 - INSTALL PILES TO AN ELEVATION OF 25' BELOW THE BED ELEVATION IF SUBSURFACE CONDITIONS ALLOW.
 - THE CONTRACTOR SHALL RELOCATE THE CLEARANCE MARKER AT BOTH ENDS OF THE FENDER SYSTEM TO THE LOCATION DESIGNATED BY THE ENGINEER.
 - THE CONTRACTOR SHALL VISIT THE JOB SITE AND CHECK THE MATERIALS AND THE QUANTITY NEEDED TO COMPLETE ALL THE WORK IN ACCORDANCE WITH THE PLANS, PROJECT SPECIAL PROVISIONS, AND THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012, EXCEPT AS OTHERWISE NOTED ON THE PLANS AND SPECIAL PROVISIONS.
 - AT LOCATIONS WHERE EXISTING AND PROPOSED PILING COINCIDE, SOME OR ALL OF EXISTING PILING MAY BE REQUIRED TO BE FULLY REMOVED. IF THE EXISTING PILING BREAKS UPON INITIAL EXTRACTION, WITH THE ENGINEER'S APPROVAL PROPOSED PILING MAY BE SHIFTED NOMINALLY TO AVOID BROKEN, EXISTING PILES.
 - THE PROPOSED FENDER FACE OF NEW FENDER SYSTEM SHALL MATCH THE EXISTING FENDER FACE OF THE EXISTING FENDER SYSTEM. DIMENSIONS SHOWN ON THE PLANS ARE FROM PRELIMINARY FIELD MEASUREMENTS AND SHALL BE FIELD VERIFIED PRIOR TO FABRICATING AND/OR OBTAINING MATERIALS.
 - ALL DOME HEAD TIMBER BOLTS SHALL BE TIGHTENED TO FULLY ENGAGE THE O.G. WASHER WITHOUT EXCESSIVE CRUSHING OF THE TIMBER FIBERS.



FENDER LAYOUT

NOTE: THE PROPOSED FENDER SYSTEM IS SIMILAR TO THE EXISTING FENDER. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE FOR ADDITIONAL INFORMATION ON THE EXISTING FENDER SYSTEM.

TOTAL BILL OF MATERIALS				
MOBILIZATION	REMOVAL OF EXISTING FENDER SYSTEM	10"X6" TREATED LUMBER	15" TREATED TIMBER PILE	HARDWARE
LUMP SUM	LUMP SUM	1,536 LIN. FT	7,320 LIN. FT	4,493 LBS



DocuSigned by:
Gregory W. Dickey
6/5/2017

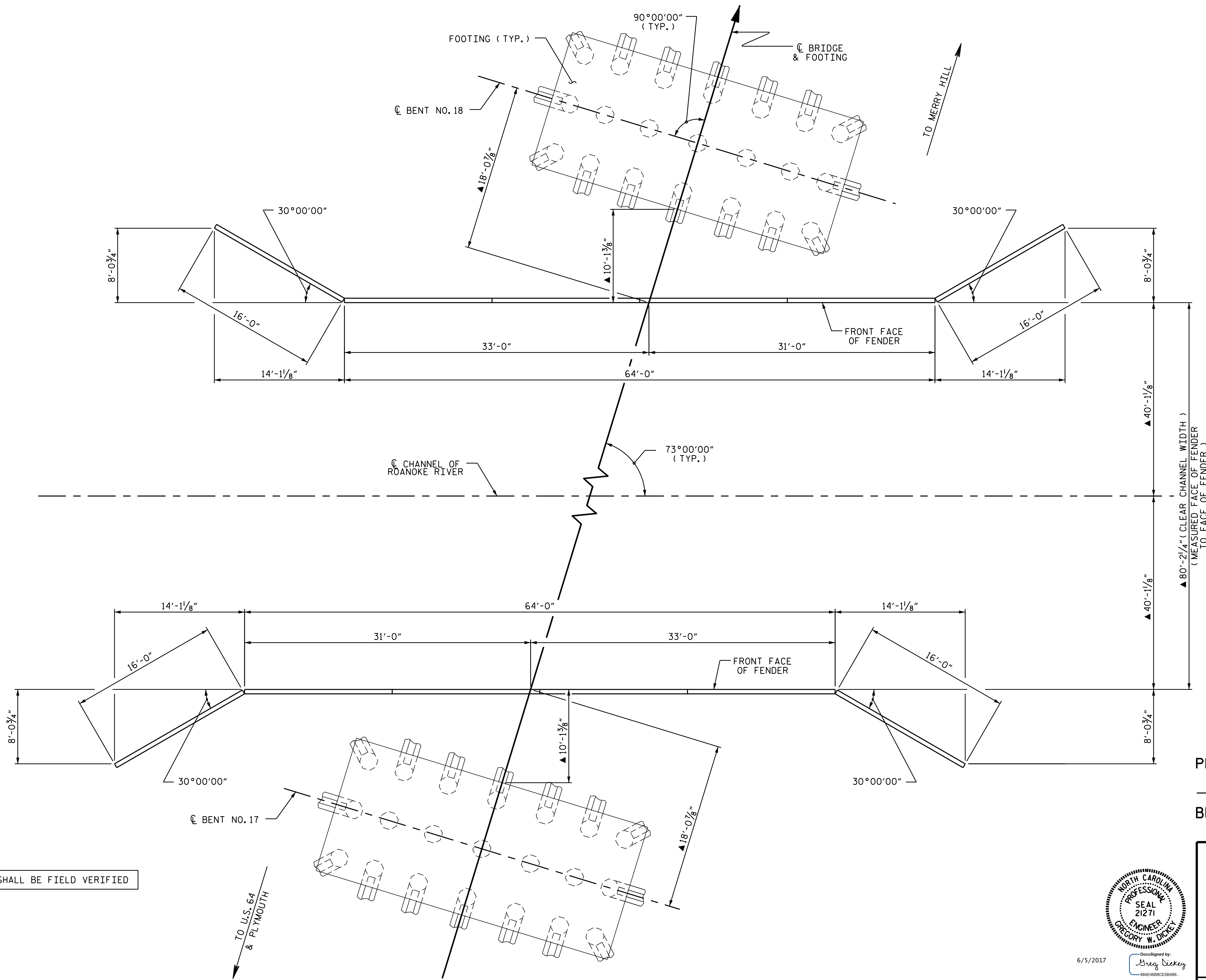
PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 FENDER SYSTEM
 FENDER LAYOUT
 PLAN

DRAWN BY : P. BRYANT/M. A. LEE DATE : 10/2014
 CHECKED BY : W. M. CLARKE DATE : 10/2014

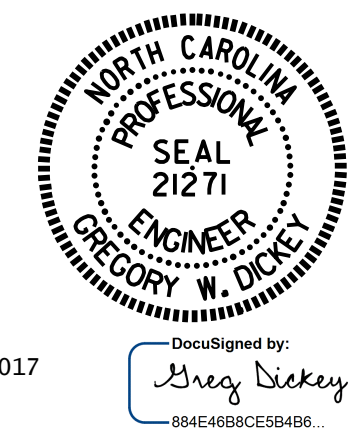
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▲ DIMENSION SHALL BE FIELD VERIFIED

PROJECT NO. B-5941
BERTIE COUNTY
 BRIDGE NO. 7



6/5/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 FENDER SYSTEM
 FENDER LAYOUT

DRAWN BY : M.A. LEE DATE : 10/2014
 CHECKED BY : W.M. CLARKE DATE : 10/2014

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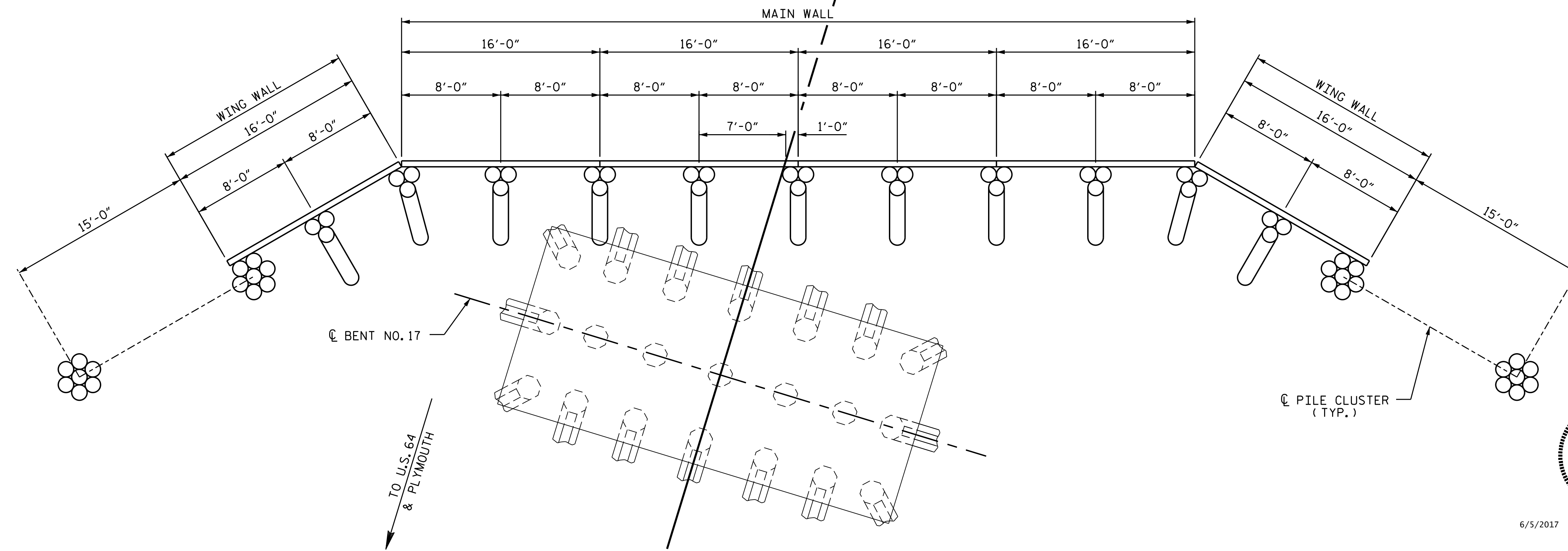
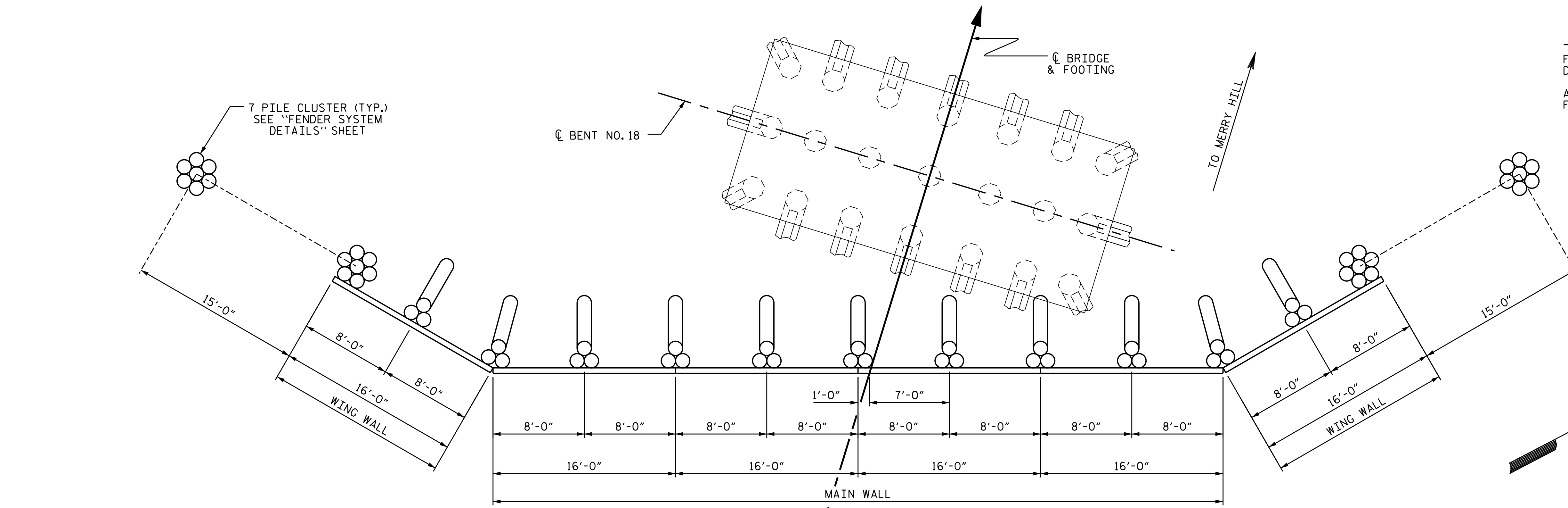
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FENDER LAYOUT

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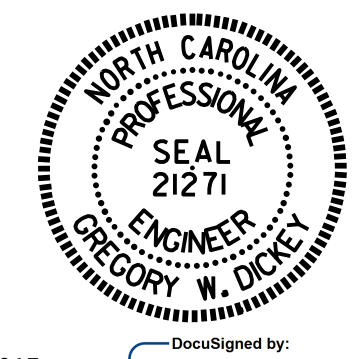
NOTES:

FOR FENDER TYPES SEE "FENDER SYSTEM DETAILS" SHEET.
ALL DIMENSIONS SHOWN ARE NORMAL TO FENDER FACE.



PILE LAYOUT

PROJECT NO. B-5941
BERTIE COUNTY
BRIDGE NO. 7



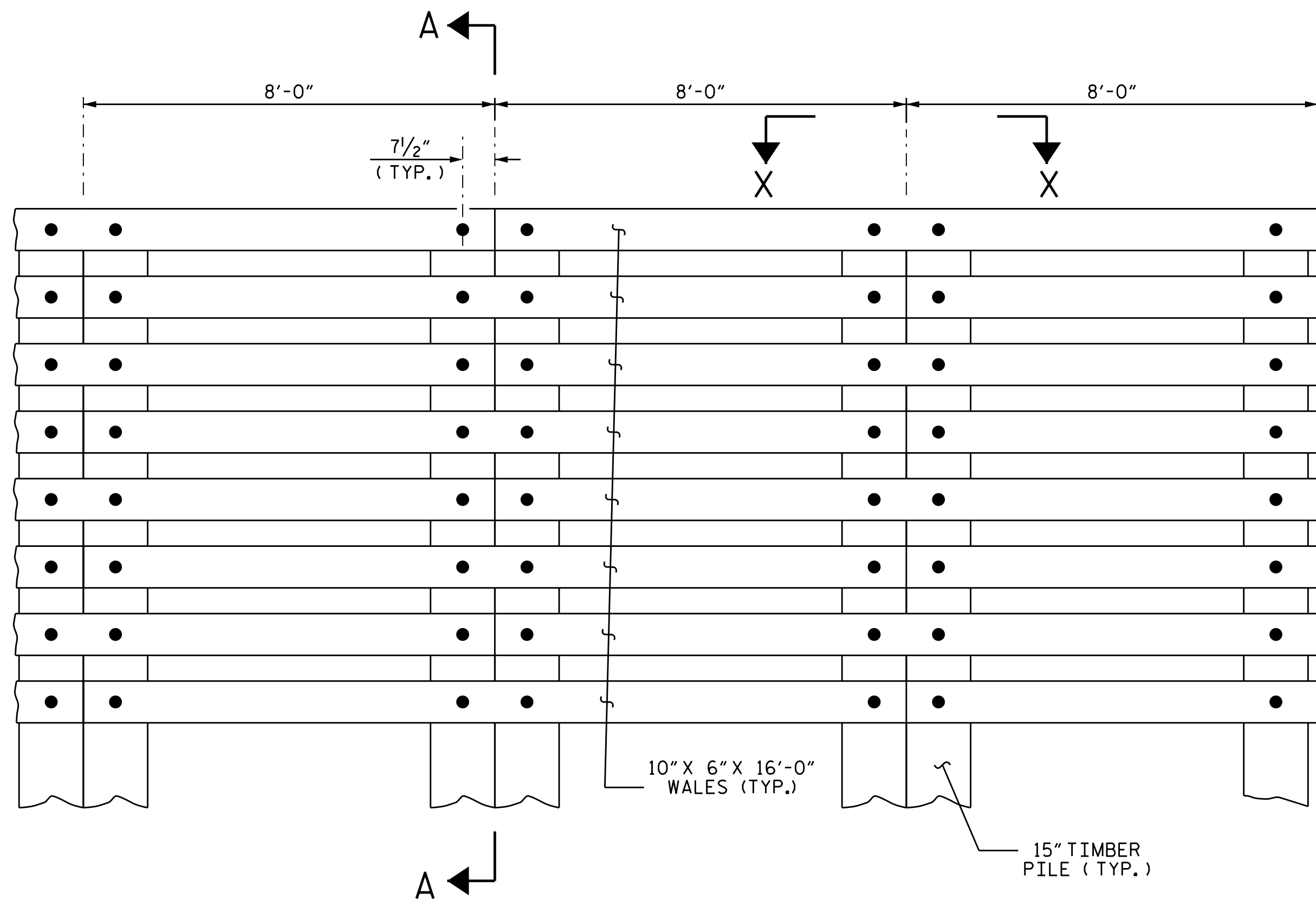
6/5/2017
DocuSigned by:
Gregory W. Dickey
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
FENDER SYSTEM
PILE LAYOUT

DRAWN BY : M.A. LEE DATE : 10/2014
CHECKED BY : W.M. CLARKE DATE : 10/2014

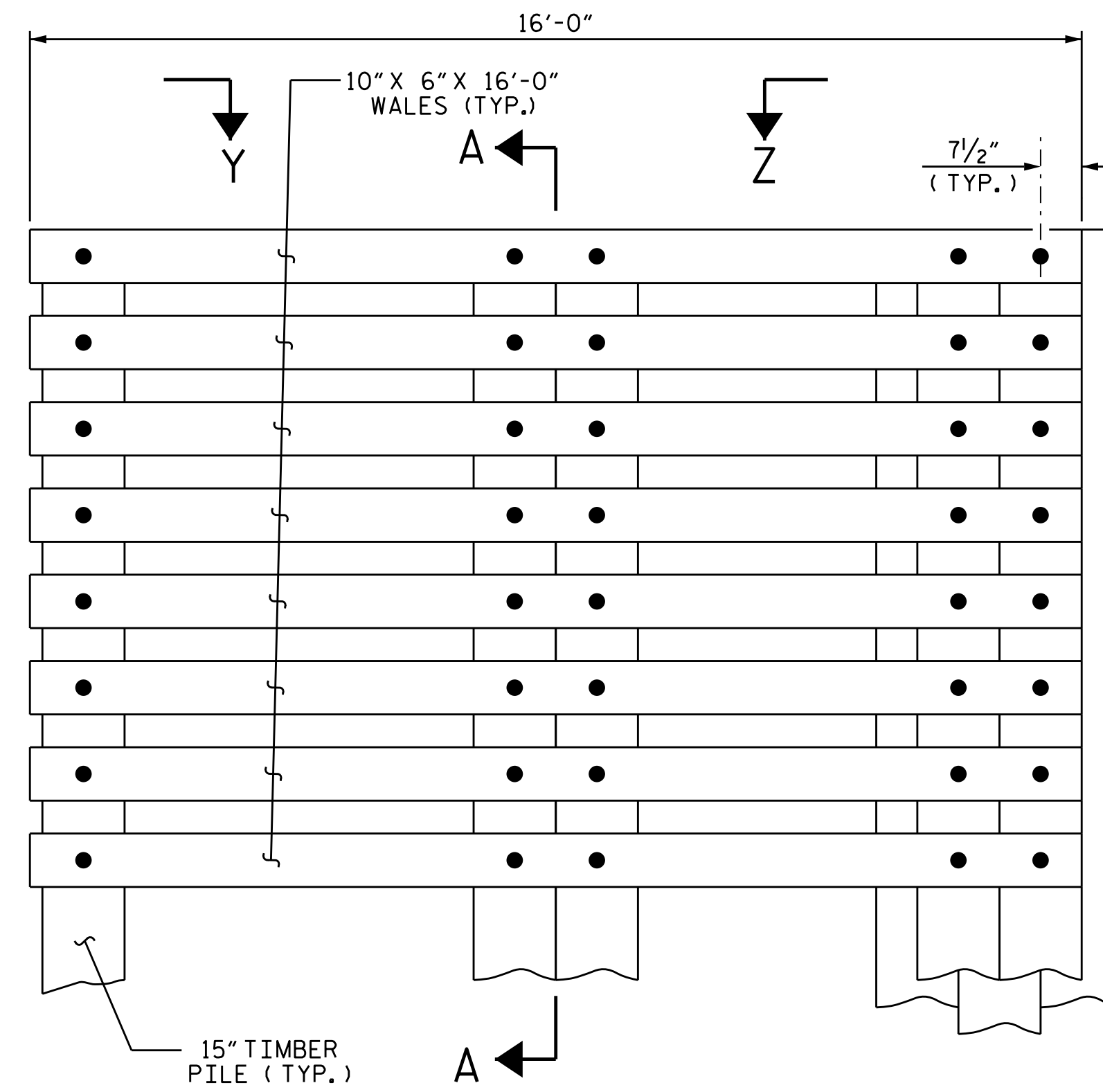
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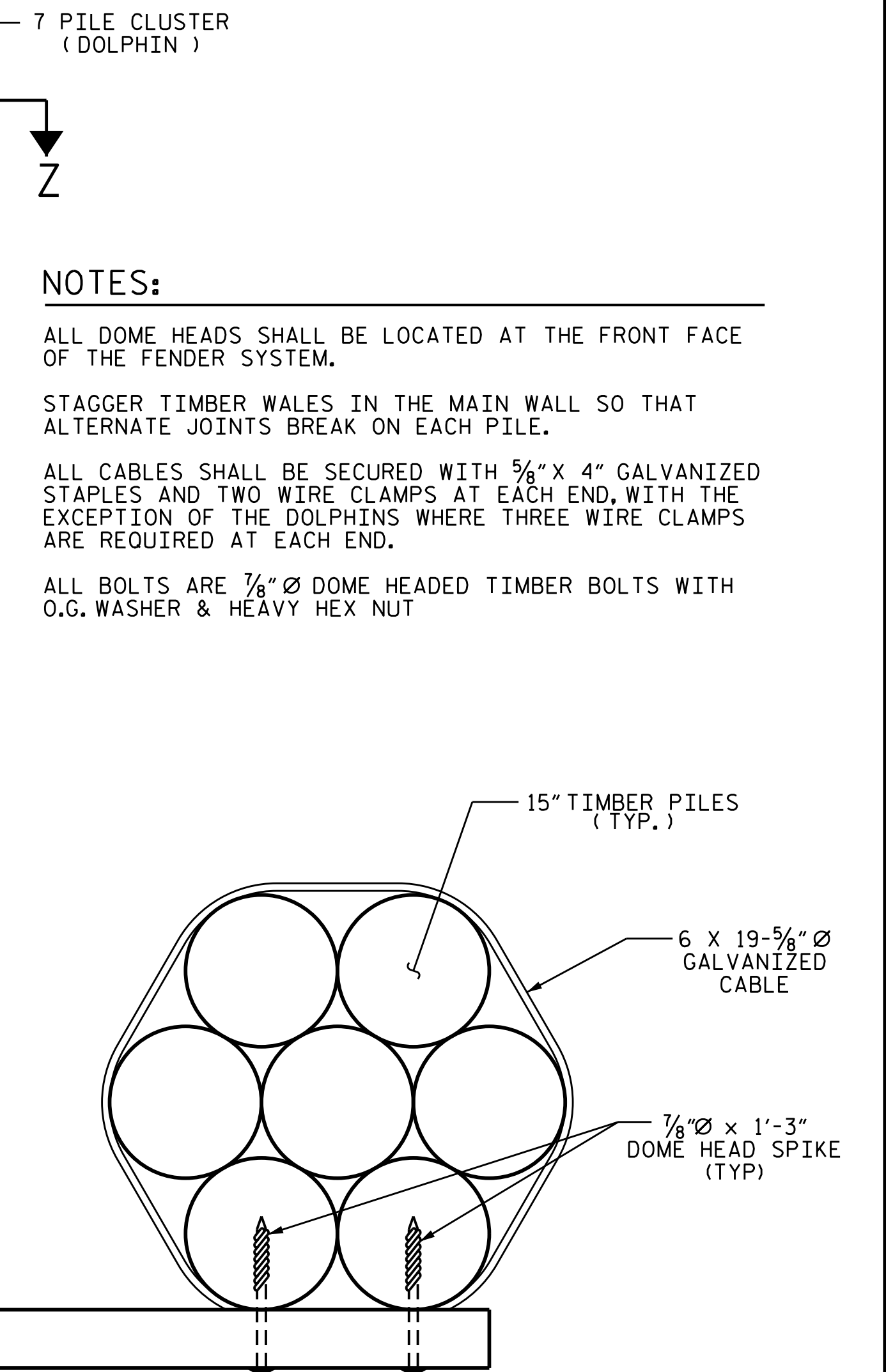
PARTIAL ELEV. VIEW OF MAIN WALL

LOOKING NORMAL TO FACE OF WALL
ADJACENT SECTION OF WALL NOT SHOWN FOR CLARITY



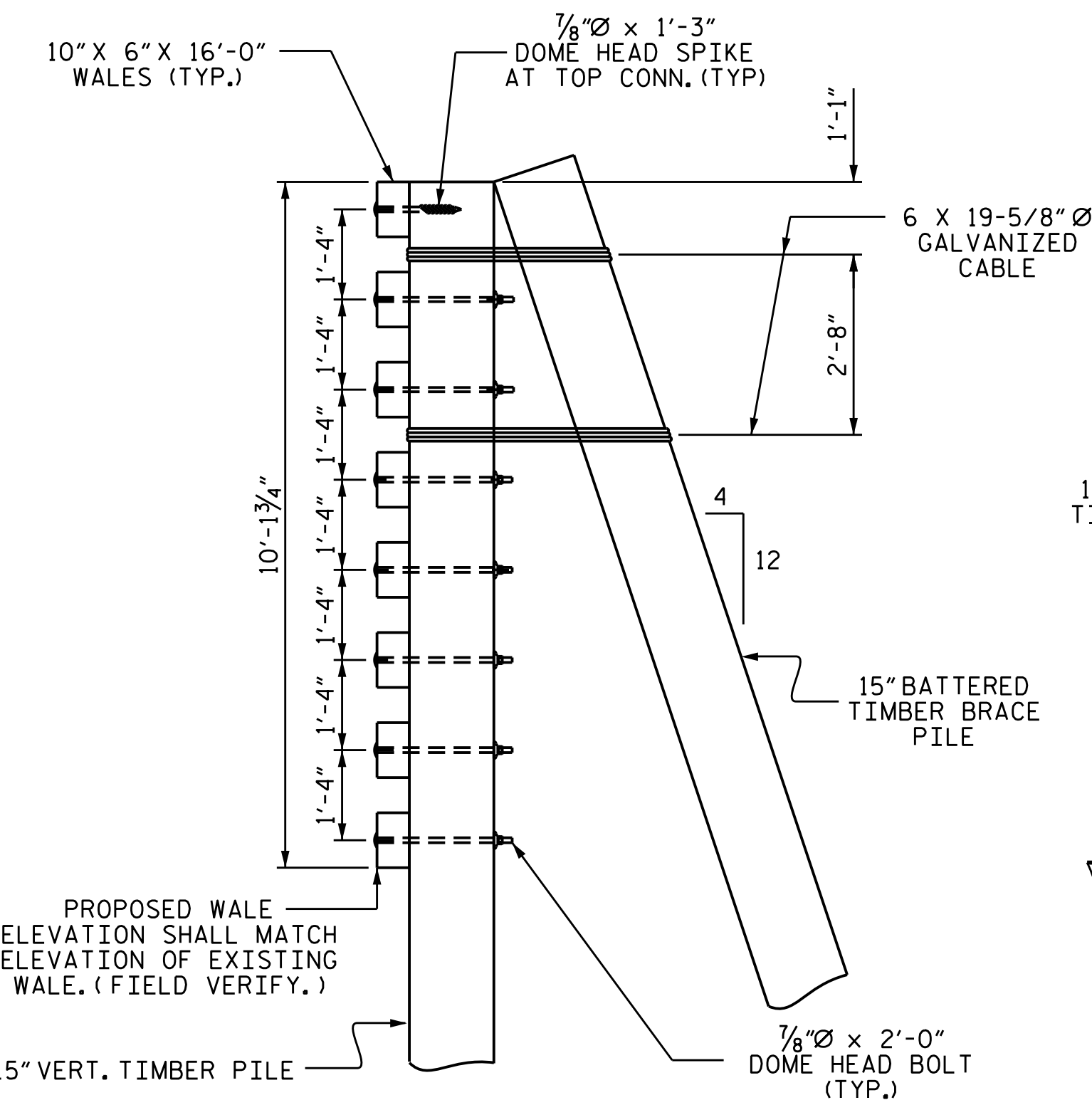
ELEV. VIEW OF WING WALL

LOOKING NORMAL TO FACE OF WALL
ADJACENT SECTION OF WALL NOT SHOWN FOR CLARITY

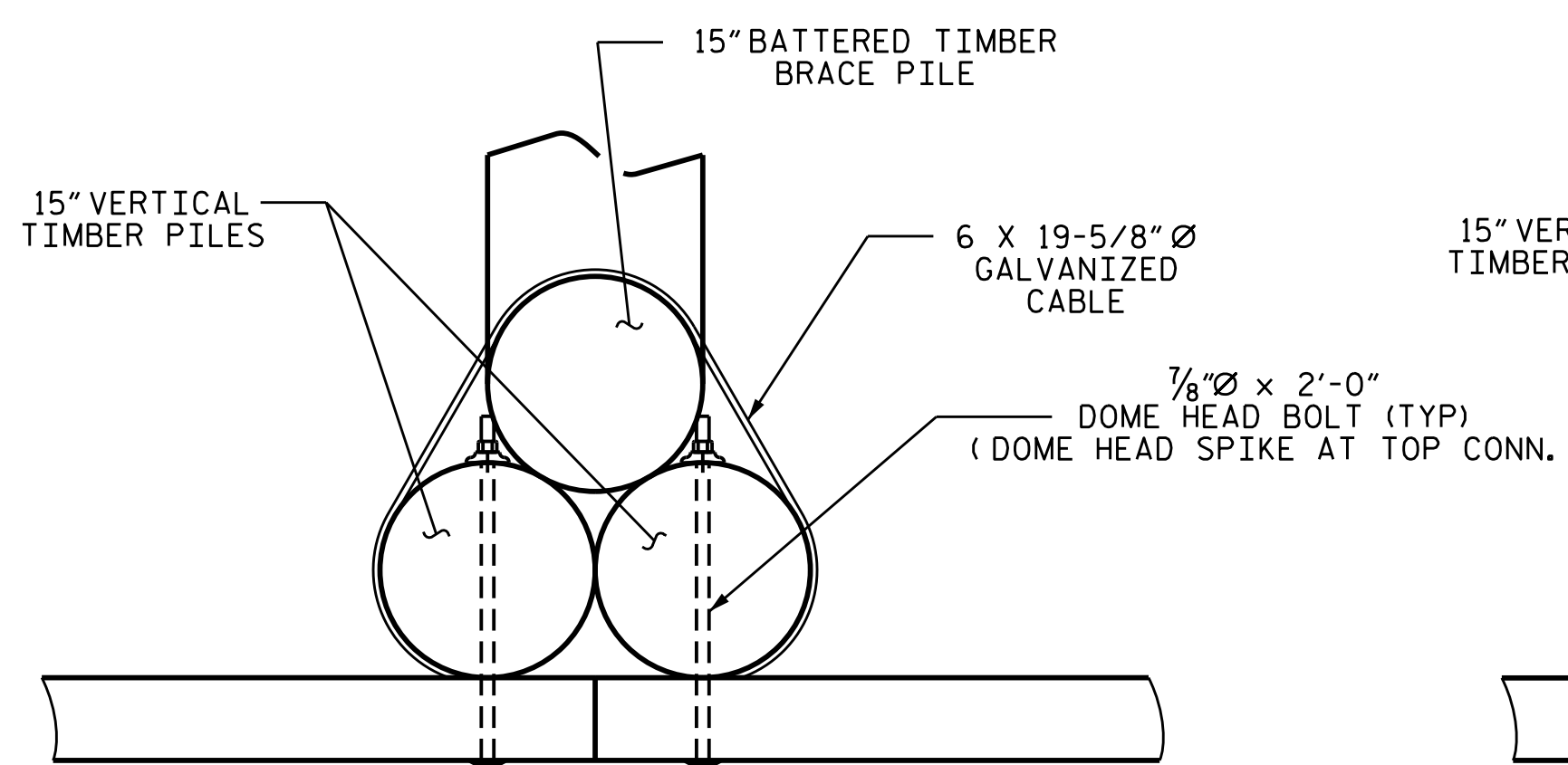


VIEW Z-Z

SIX (6) OUTSIDE PILES TO BE EQUALLY SPACED ON 6 FT. CIRCLE AND DRAWN TOGETHER AT TOP, WRAPPED WITH 3 TURNS OF 6 X 19-5/8" GALVANIZED CABLE AT 1'-6" AND 5'-6" FROM TOP OF CLUSTER. CABLE SHALL BE SECURED WITH 5/8" X 4" GALVANIZED STAPLES AND THREE WIRECLAMPS AT EACH END. ALL PILES SHALL BE VERTICAL.

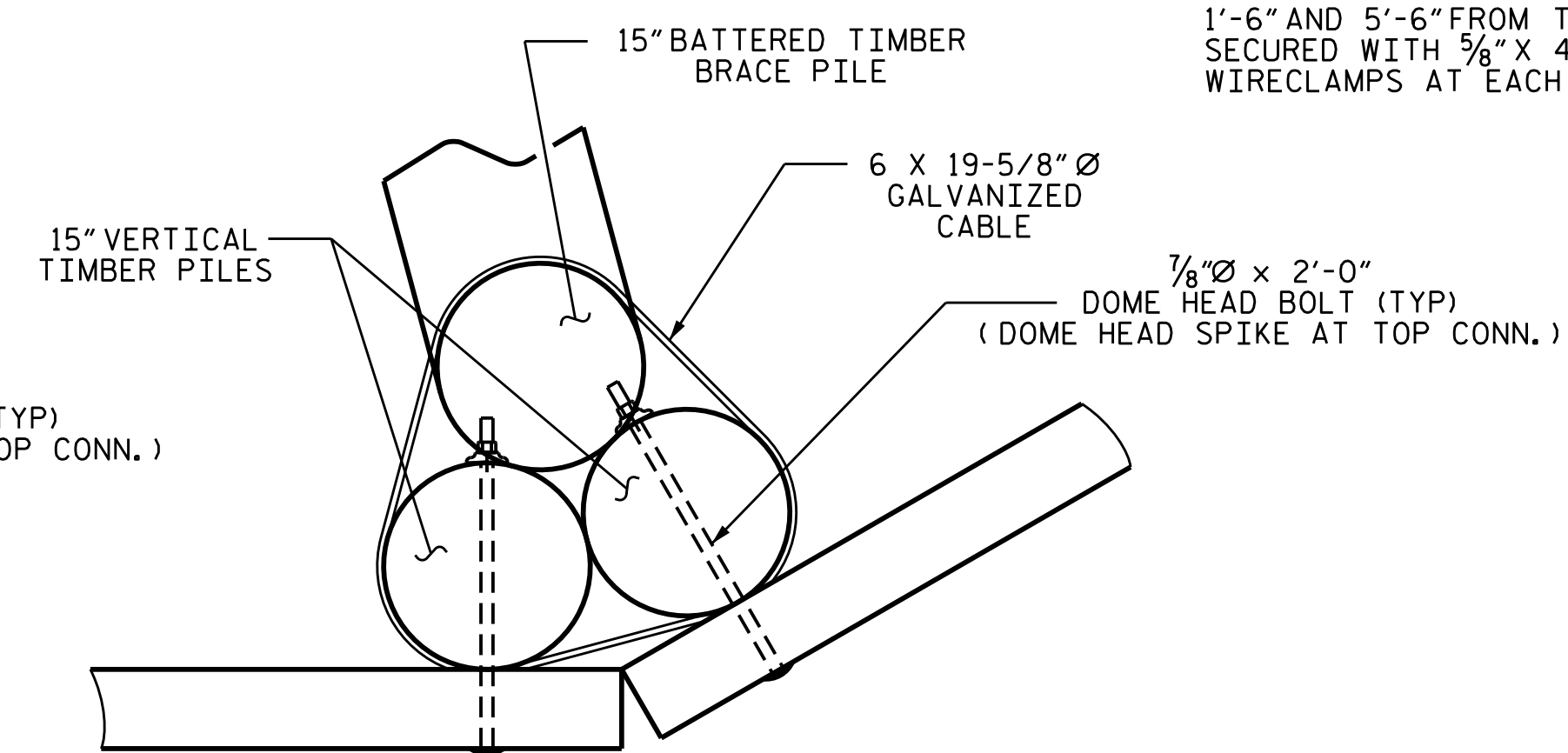


SECTION A-A



VIEW X-X

PILE CLUSTERS CONTAINING THREE PILES SHALL BE WRAPPED WITH THREE TURNS OF 6 X 19-5/8" GALVANIZED CABLE AT 1'-1" AND 3'-9" FROM TOP OF CLUSTER. CABLE SHALL BE SECURED WITH 5/8" X 4" GALVANIZED STAPLES AND TWO WIRECLAMPS AT EACH END.



VIEW Y-Y

PROJECT NO. B-5941

COUNTY BERTIE

BRIDGE NO. 7

SHEET 1 OF 2



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6/5/2017

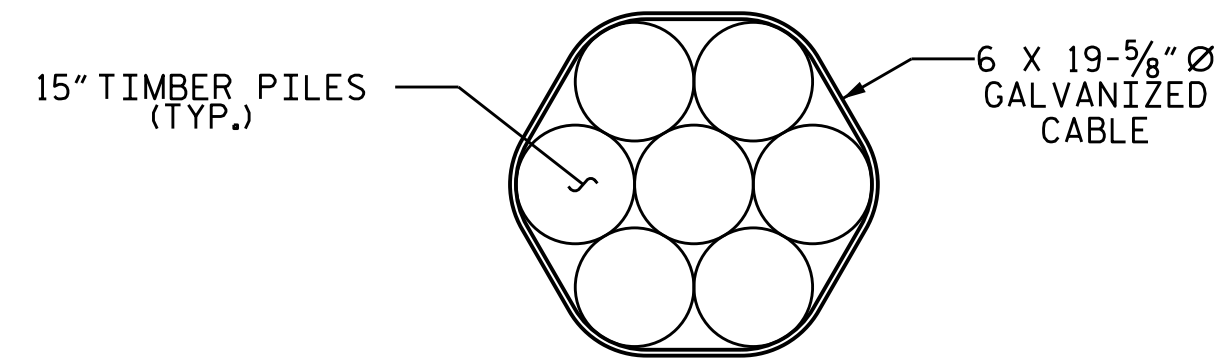
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
FENDER SYSTEM
FENDER SYSTEM
DETAILS

DRAWN BY : M.A.LEE DATE : 10/2014
CHECKED BY : W.M.CLARKE DATE : 10/2014

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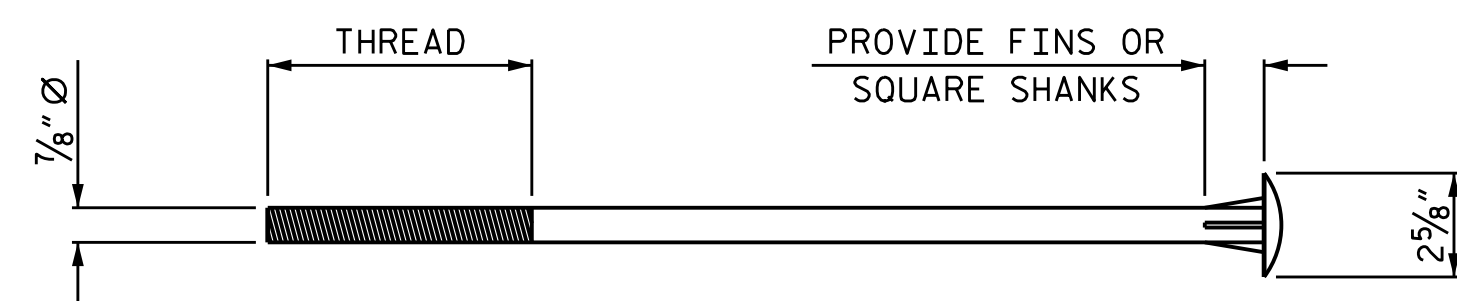
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DETAIL OF 7-PILE CLUSTER (DOLPHINS)

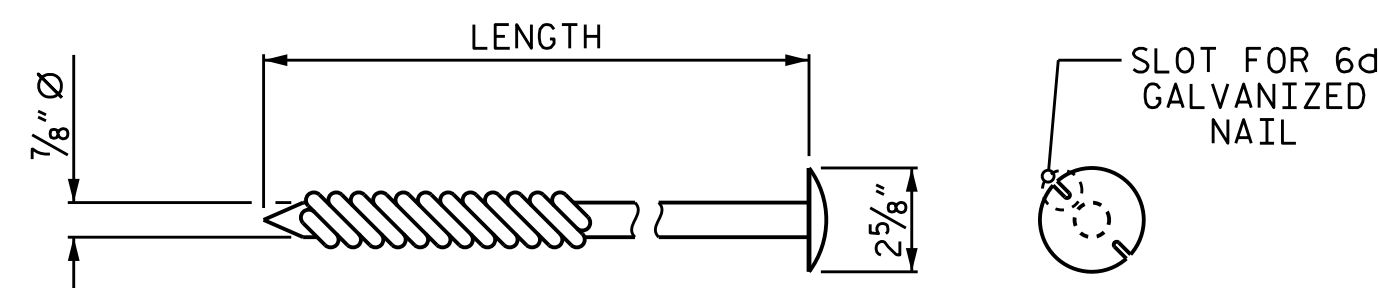
PILES 15' FROM ENDS OF FENDER SYSTEM

SIX (6) OUTSIDE PILES TO BE EQUALLY SPACED ON A 6 FT. CIRCLE AT TOP AND BATTERED AT 1/2:12. DRAW THE PILES TOGETHER AT THE TOP AND WRAP WITH 3 TURNS OF 6 X 19-5/8" Ø GALVANIZED CABLE AT 1'-6" AND 5'-6" FROM THE TOP OF THE CLUSTER. CABLE SHALL BE SECURED WITH 5/8" X 4" GALVANIZED STAPLES AND THREE WIRE ROPE CLAMPS AT EACH END.



TYPICAL DOME HEAD TIMBER BOLT

ALL BOLT HEADS MUST BE IN FULL CONTACT WITH THE SURFACE OF THE TIMBER PILES OR WALES.



TYPICAL DOME HEAD DRIVE SPIKE

ALL DRIVE SPIKE HEADS MUST BE IN FULL CONTACT WITH THE SURFACE OF THE TIMBER PILES OR WALES.

STRUCTURAL TIMBER					
ITEM	UNIT	LENGTH	SIZE	NO.	TOTAL
15" TREATED TIMBER PILE	LIN. FT.	60'-0"	15"	122	7,320'-0"
10" x 6" TREATED LUMBER	LIN. FT.	16'-0"	6" x 10"	96	1,536'-0"

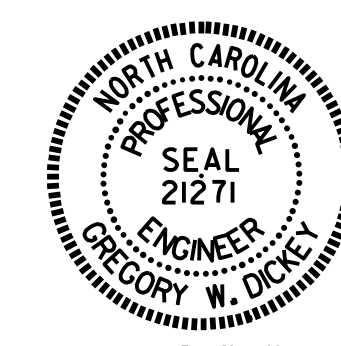
STRUCTURAL HARDWARE (GALVANIZED)			
ITEM	UNIT	NO.	TOTAL
6 X 19 - 5/8" Ø GALVANIZED CABLE	LIN. FT.	—	2,350'-0"
5/8" CABLE CLAMPS	LBS.	130	130 LBS
5/8" X 4" STAPLES	83 LBS/100	820	681 LBS
7/8" Ø X 15" DOME HEAD DRIVE SPIKE	240 LBS/100	108	260 LBS
6d COMMON NAIL	BOX	1	1 LBS.
7/8" Ø X 24" DOME HEAD TIMBER BOLT	427 LBS/100	308	1,315 LBS
O.G. WASHER	150 LBS/100	308	462 LBS.
7/8" HEAVY HEX NUT	30 LBS/100	308	93 LBS.

PROJECT NO. B-5941

COUNTY BERTIE

BRIDGE NO. 7

SHEET 2 OF 2



6/5/2017

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STATE OF NORTH CAROLINA
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DETAILS

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