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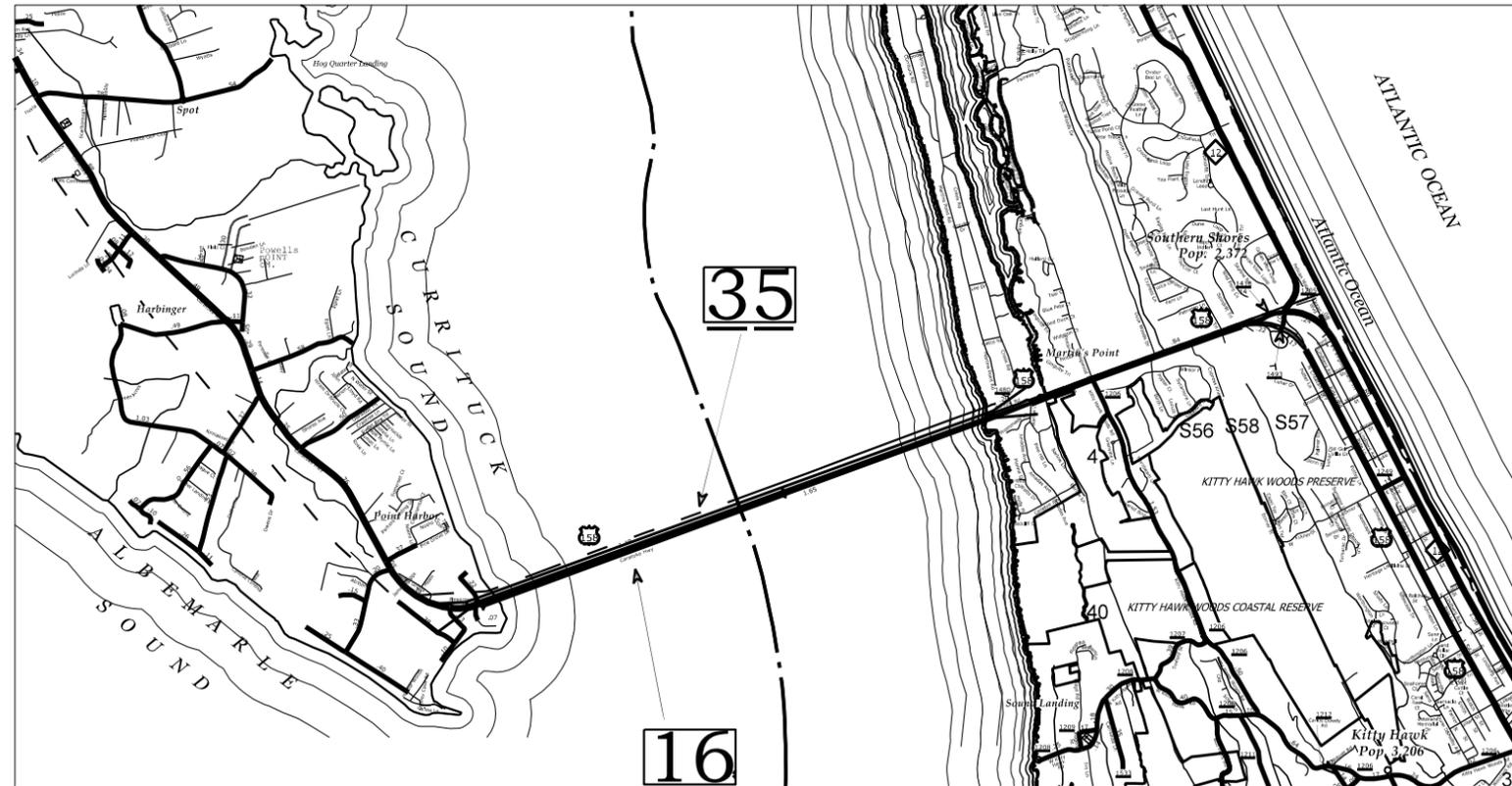
See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**CURRITUCK & DARE
COUNTIES**

LOCATION: BRIDGE 16 ON US 158 EBL OVER CURRITUCK SOUND
TYPE OF WORK: BRIDGE DECK PRESERVATION WITH POLYESTER
POLYMER CONCRETE DECK OVERLAY,
BRIDGE REHABILITATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5937	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
46479.1.1		P.E.	
46479.2.1		RW & UTIL.	
46479.3.1		CONST.	



DocuSigned by:
Samuel Cullum
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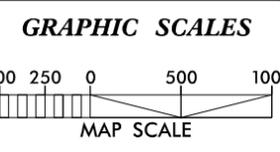


12/19/2016

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TIP PROJECT: B-5937

CONTRACT: C203930



DESIGN DATA
ADT 2011 = 8000

PROJECT LENGTH

LENGTH STRUCTURE PROJECT - 2.83 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

HELEN SHYU, P.E.
WORK ZONE TRAFFIC CONTROL ENGINEER

LETTING DATE:
FEBRUARY 21, 2017

TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

ROADWAY ENGINEER

SIGNATURE: _____ P.E.

KCA STRUCTURES DESIGN ENGINEER
KISINGER CAMPO & ASSOCIATES
SAMUEL L. CULLUM, P.E.

SIGNATURE: _____ P.E.



\$\$\$\$SYTIME\$\$\$\$\$\$\$\$DN\$\$\$\$\$\$\$USERNAME\$\$\$\$\$

09/08/99

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1A	INDEX OF SHEETS
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S-270	PILE JACKET DETAILS (2 OF 3)
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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5937	1A	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
46749.1.1		P.E.	
46749.2.1		RW & UTIL.	
46749.3.1		CONST.	

TIP PROJECT: B-5937

CONTRACT: C203930

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TMP-1	TITLE SHEET, VICINITY, INDEX OF SHEETS, AND LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS
TMP-1A	MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES
TMP-2	LEGEND, TEMPORARY PAVEMENT MARKING SCHEDULE AND PHASING
TMP-3 THRU TMP-8	TRAFFIC CONTROL DETAILS

INDEX OF SHEETS - PMP PLANS

PMP-1 THRU PMP-5	PAVEMENT MARKING PLANS
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KCA
KISINGER CAMPO & ASSOCIATES

09/08/99

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STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15B.13.37	2	287

TIP PROJECT: 15B.13.37

SUMMARY OF QUANTITIES - GENERAL & ROADWAY

Item Number	Sec #	Description	Quantity	Unit
ROADWAY ITEMS				
0000100000-N	800	MOBILIZATION	Lump Sum	LS
1330000000-E	607	INCIDENTAL MILLING	242	SY
1525000000-E	610	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A	20	TON
4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	307	SF
4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	64	SF
4415000000-N	1115	FLASHING ARROW BOARD	2	EA
4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
4430000000-N	1130	DRUMS	219	EA
4445000000-E	1145	BARRICADES (TYPE III)	120	LF
4480000000-N	1165	TMA	2	EA
4510000000-N	SP	LAW ENFORCEMENT	64	HR
4520000000-N	1266	TUBULAR MARKERS (FIXED)	764	EA
4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	98	EA
4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES TYPE 4 (4")	72,168	LF
4805000000-N	1205	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOLS TYPE 4	18	EA
4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	49,493	LF
4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	15	EA

CONTRACT: C203930

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STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 SUMMARY OF QUANTITIES - STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5937	S-1	

TIP PROJECT: B-5937

CONTRACT: C203930

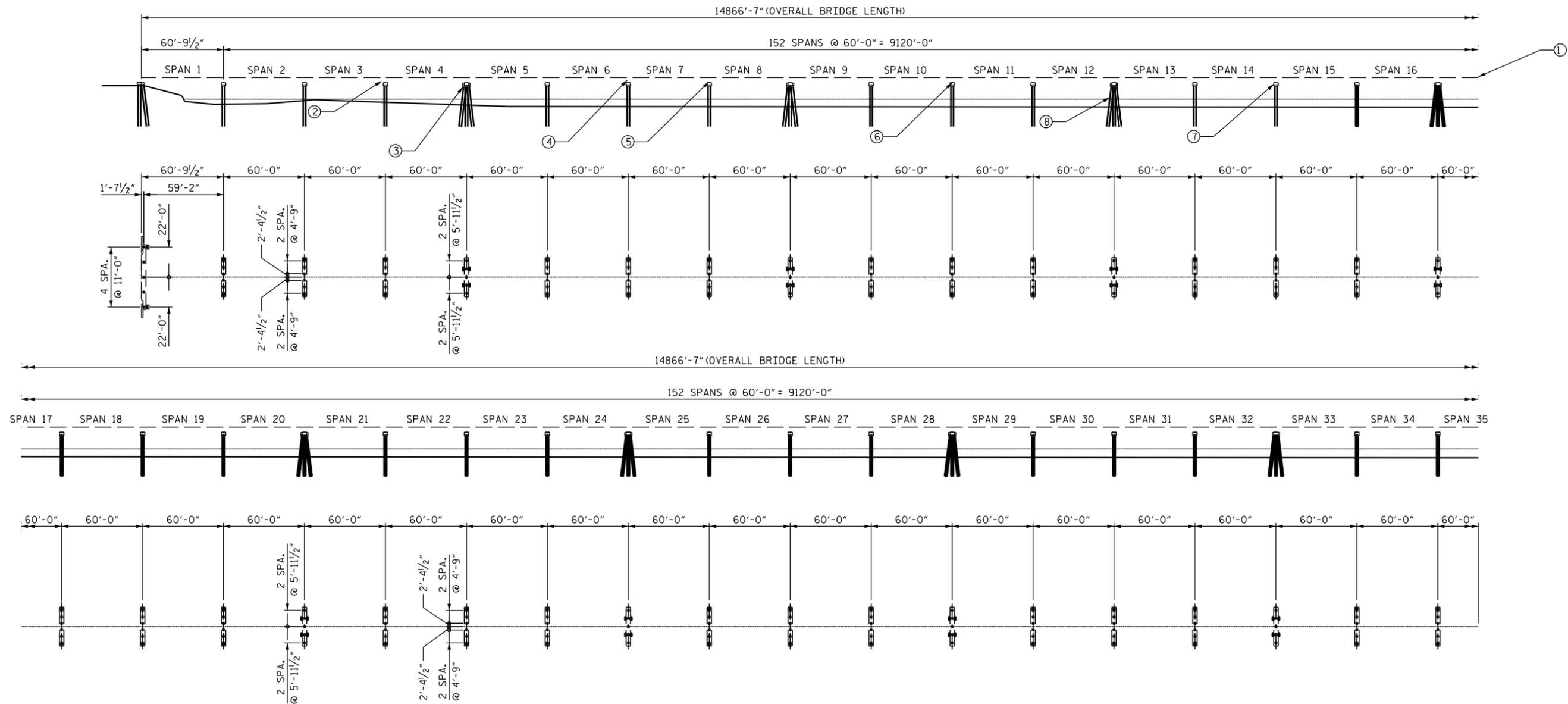
Item Number	Sec #	Description	Quantity	Unit
828000000-E	400	APPROX. 4200 LBS STRUCTURAL STEEL	Lump Sum	LS
886000000-N	SP	GENERIC STRUCTURE ITEM PAINTING CONTAINMENT (BRIDGE NO. 260016)	Lump Sum	LS
886000000-N	SP	GENERIC STRUCTURE ITEM PLASTIC LUMBER FENDER BOARDS	Lump Sum	LS
886000000-N	SP	GENERIC STRUCTURE ITEM COATING OF PILE TOPS AND TIN HAT REPLACEMENT	Lump Sum	LS
815600000-E	SP	CONCRETE WEARING SURFACE	1,260	SF
816100000-E	420	GROOVING BRIDGE FLOORS	369,442	SF
888100000-E	SP	CLASS "AA" CONCRETE (BRIDGE) - CHANNEL BENT FOOTING RESTORATION	95	CY
822400000-E	425	EPOXY COATED REINFORCING STEEL (BRIDGE)	10,398	LB
886000000-N	SP	POLLUTION CONTROL	Lump Sum	LS
855900000-E	SP	CLASS II, SURFACE PREPARATION	49.8	SY
866400000-E	SP	SHOTCRETE REPAIRS (DIAPHRAGM, DECK)	328	CF
866400000-E	SP	SHOTCRETE REPAIRS (PILE BENTS)	2,821	CF
886700000-E	SP	GENERIC STRUCTURE ITEM SILICONE JOINT SEALANT	9,109	LF
886700000-E	SP	GENERIC STRUCTURE ITEM CATHODIC PROTECTION INTEGRAL PILE JACKET (NON-STRUCTURAL), 16 TO 30 INCH	1,683	LF
886700000-E	SP	GENERIC STRUCTURE ITEM CATHODIC PROTECTION INTEGRAL PILE JACKET (STRUCTURAL), 16 TO 30 INCH	561	LF

Item Number	Sec #	Description	Quantity	Unit
886700000-E	SP	GENERIC STRUCTURE ITEM PILE WRAPS (WATERLINE FOOTINGS)	740	LF
886700000-E	SP	GENERIC STRUCTURE ITEM REMOVAL AND REPLACEMENT OF SHEAR KEYWAYS	405	LF
888100000-E	SP	GENERIC STRUCTURE ITEM PPC MATERIALS	1435	CY
888200000-E	SP	CONCRETE REPAIRS (PPC GIRDERS)	210	CF
889200000-E	SP	GENERIC STRUCTURE ITEM TOP OF CAP EPOXY COATINGS	19,088	SF
889200000-E	SP	GENERIC STRUCTURE ITEM CATHODIC PROTECTION SYSTEM, ZINC ALUMINUM SPRAY	60,924	SF
889200000-E	SP	GENERIC STRUCTURE ITEM REMOVAL OF EXISTING CONCRETE WEARING SURFACE	1,260	SF
889300000-E	SP	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK	46,263	SY
889300000-E	SP	GENERIC STRUCTURE ITEM SHOTBLASTING BRIDGE DECK	46,263	SY
889300000-E	SP	GENERIC STRUCTURE ITEM PLACING AND FINISHING PPC OVERLAY	46,263	SY
889700000-N	SP	GENERIC STRUCTURE ITEM BEAM END EPOXY COATINGS	1,980	EA
889700000-N	SP	GENERIC STRUCTURE ITEM CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA (BRIDGE NO. 260016)	1,980	EA
889700000-N	SP	GENERIC STRUCTURE ITEM FENDER PILE WRAPS	46	EA
889700000-N	SP	GENERIC STRUCTURE ITEM 3/4" DIAMETER STAINLESS STEEL FASTENERS	372	EA
889700000-N	SP	GENERIC STRUCTURE ITEM EPOXY MATERIAL	25	GA
889700000-N	SP	GENERIC STRUCTURE ITEM INJECT AND SEAL CRACK	250	LF

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 KISINGER CAMPO
 & ASSOCIATES



SCOPE LEGEND:

- ① PPC OVERLAY (TYP)
- ② SUPERSTRUCTURE CONCRETE REPAIRS (TYP)
- ③ SUBSTRUCTURE CONCRETE REPAIRS (TYP)
- ④ BEAM END EPOXY COATINGS (TYP)
- ⑤ CLEAN AND COAT BEARINGS (TYP)
- ⑥ TOP OF PILE BENT EPOXY COATING (TYP)
- ⑦ GALVANIC METALIZING OF PILE BENT CAPS (TYP)
- ⑧ GALVANIC CATHODIC PROTECTION PILE JACKETS (TYP)

NOTE: THESE REPAIRS TYPICAL THROUGHOUT BRIDGE.

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

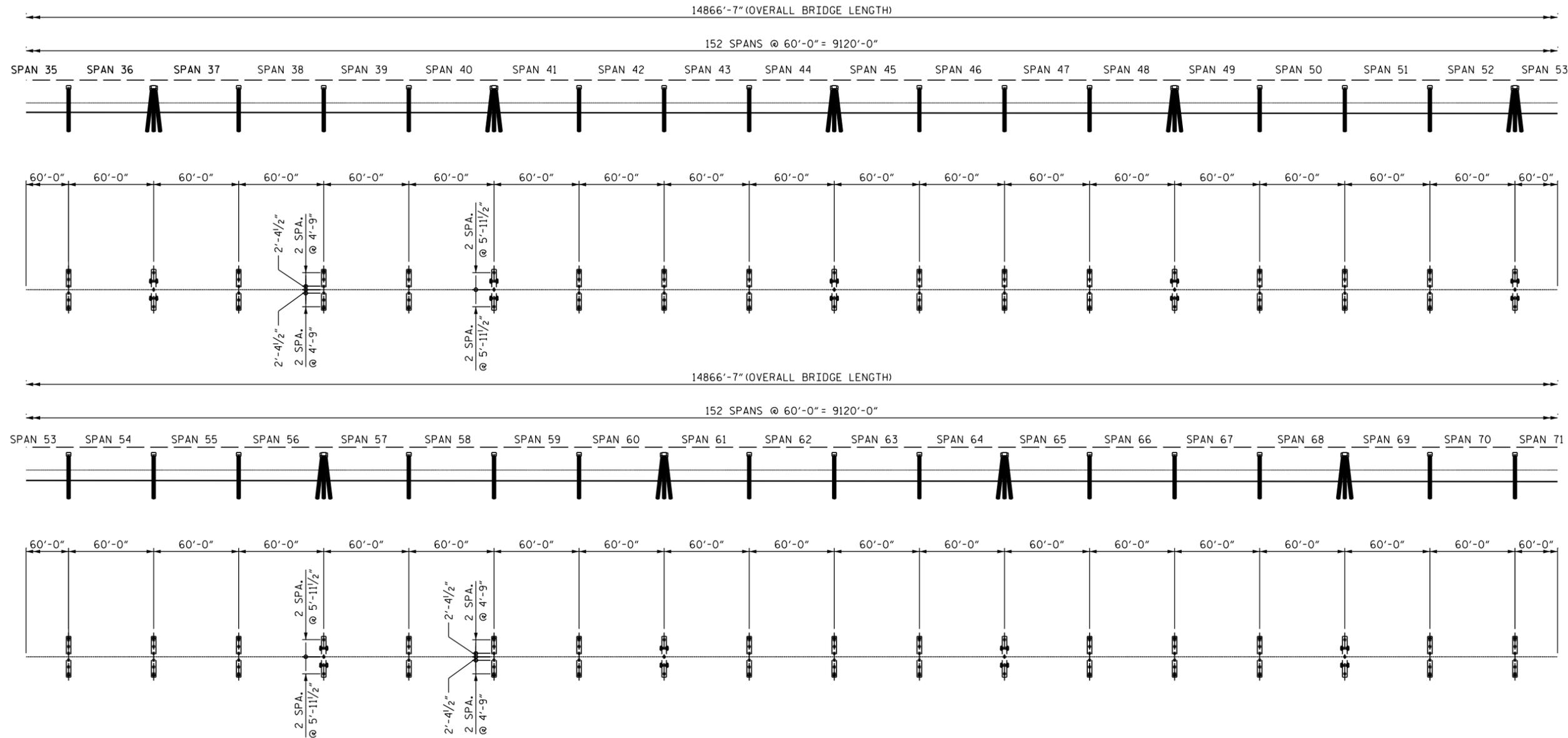
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Samuel Cullum
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 (1 OF 7)

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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

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 STATION: BRIDGE NO. 16

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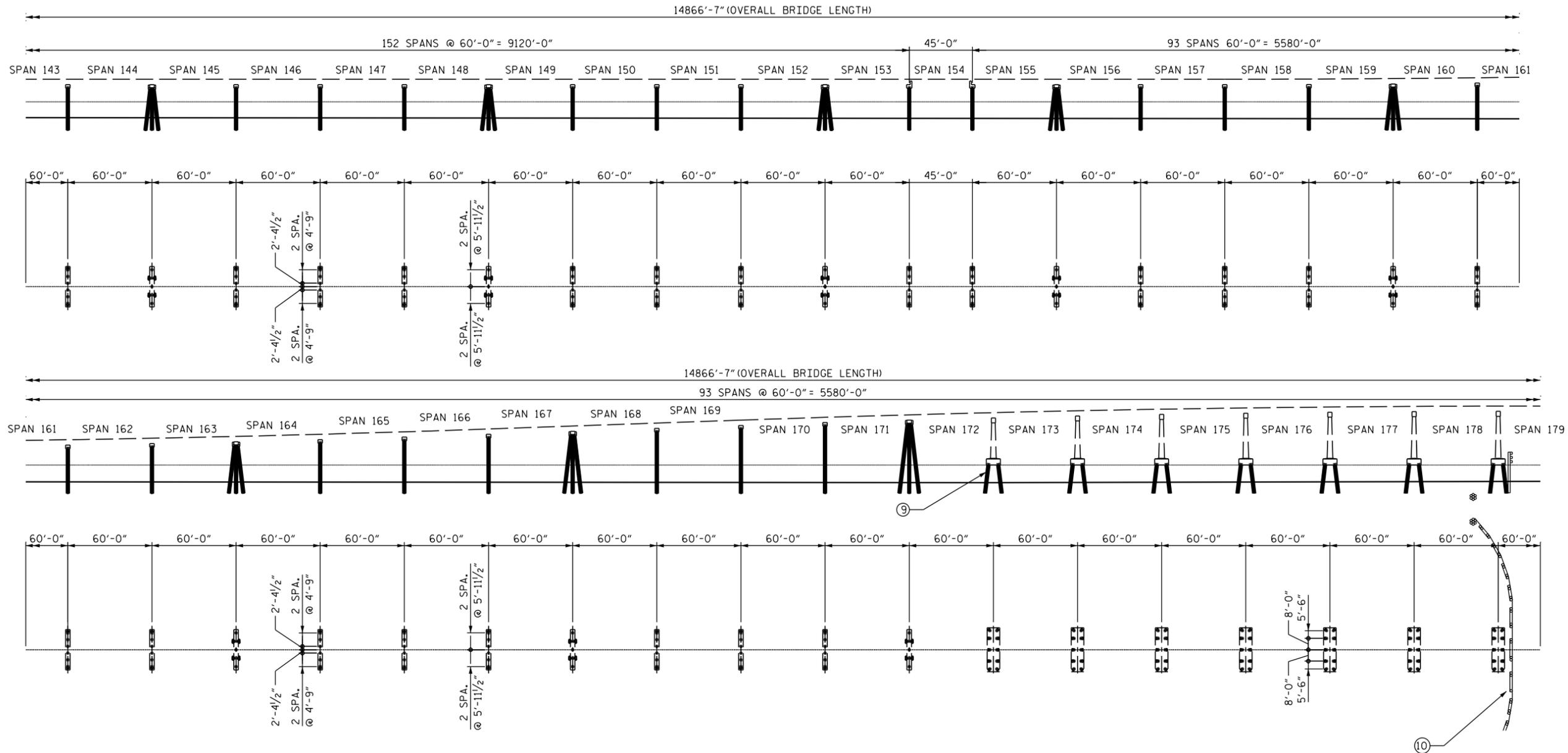
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 (2 OF 7)

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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1			3			S-4
2			4			TOTAL SHEETS



SCOPE LEGEND:

- ⑨ WATERLINE FOOTER PILE STRENGTHENING
- ⑩ FENDER REPAIRS

SCOPE ITEMS ① THROUGH ⑧ ARE DETAILED ON GENERAL DRAWING SHEET 1.

NOTES:

1. CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE FOOTINGS, AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR.
2. FOR CALCIUM NITRITE CORROSION INHIBITOR, SEE STANDARD SPECIFICATIONS.
3. ALL BAR SUPPORTS USED IN THE BENT CAPS, COLUMNS, PILE CAPS, FOOTINGS) AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
4. THE CONCRETE IN THE FOOTINGS OF BENT NOS. 172-185 SHALL CONTAIN SILICA FUME. SILICA FUME SHALL BE SUBMITTED FOR 5% OF THE PORTLAND CEMENT BY WEIGHT. IF THE OPTION OF ARTICLE 1024-1 OF THE STANDARD SPECIFICATIONS TO PARTIALLY SUBSTITUTE CLASS F FLY ASH FOR PORTLAND CEMENT EXERCISED, THEN THE RATE OF FLY ASH SUBSTITUTION SHALL BE REDUCED TO 1.0 LB (1.0 KG) OF FLY ASH PER 1.0 LB (1.0 KG) OF CEMENT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

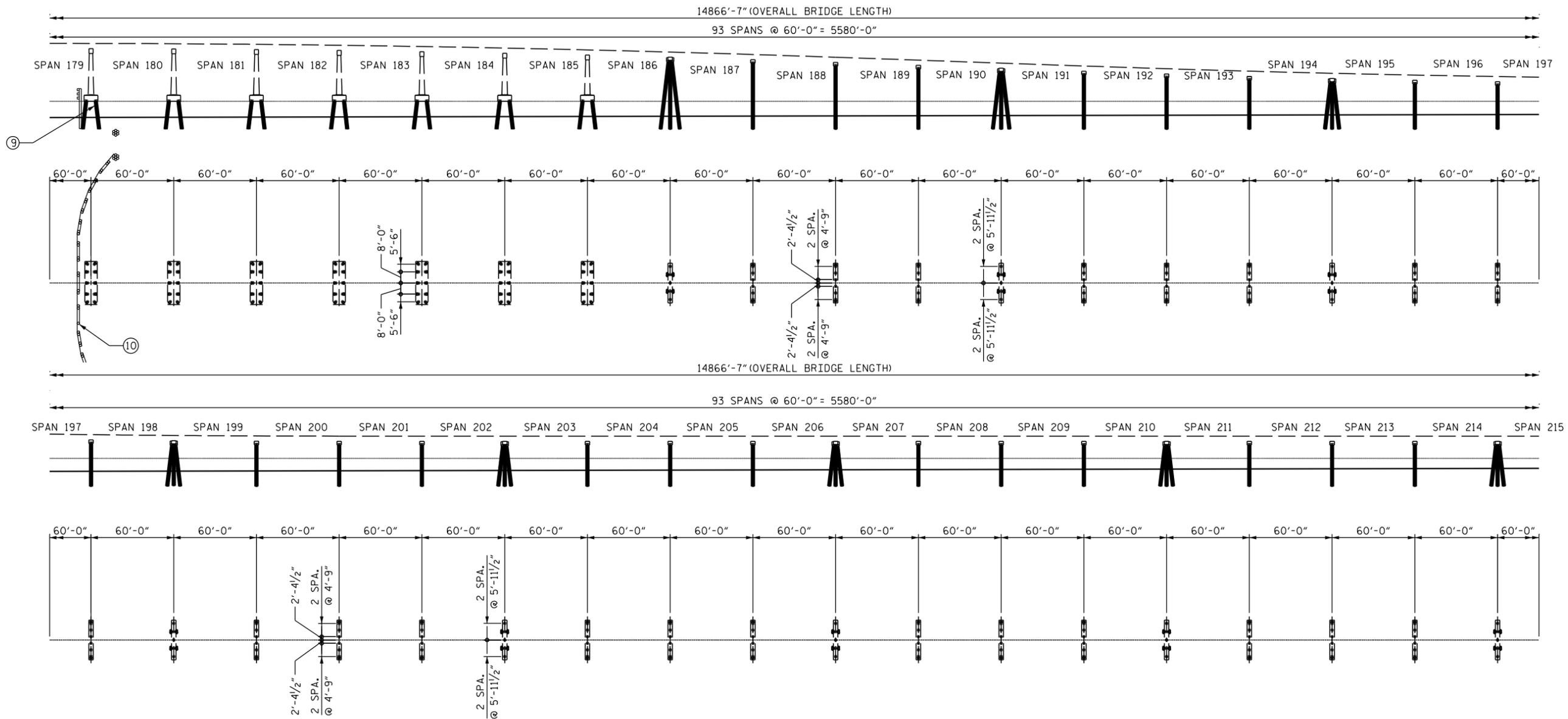
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 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 043571
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 (5 OF 7)

DRAWN BY: J. B. HANNA DATE: 07-16
 CHECKED BY: S. L. CULLUM DATE: 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE: 07-16

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1			3			S-7
2			4			TOTAL SHEETS



SCOPE LEGEND:

- ⑨ WATERLINE FOOTER PILE STRENGTHENING
- ⑩ FENDER REPAIRS

SCOPE ITEMS ① THROUGH ⑧ ARE DETAILED ON GENERAL DRAWING SHEET 1.

NOTES:

1. CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE FOOTINGS, AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR.
2. FOR CALCIUM NITRITE CORROSION INHIBITOR, SEE STANDARD SPECIFICATIONS.
3. ALL BAR SUPPORTS USED IN THE BENT CAPS, COLUMNS, PILE CAPS, FOOTINGS) AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
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DocuSigned by:

Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 (6 OF 7)

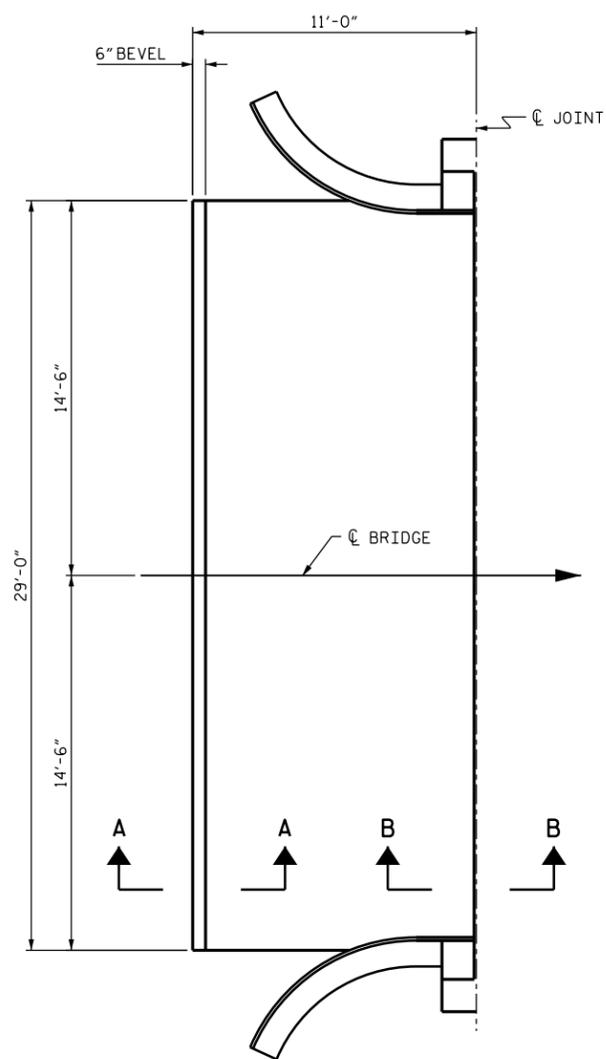
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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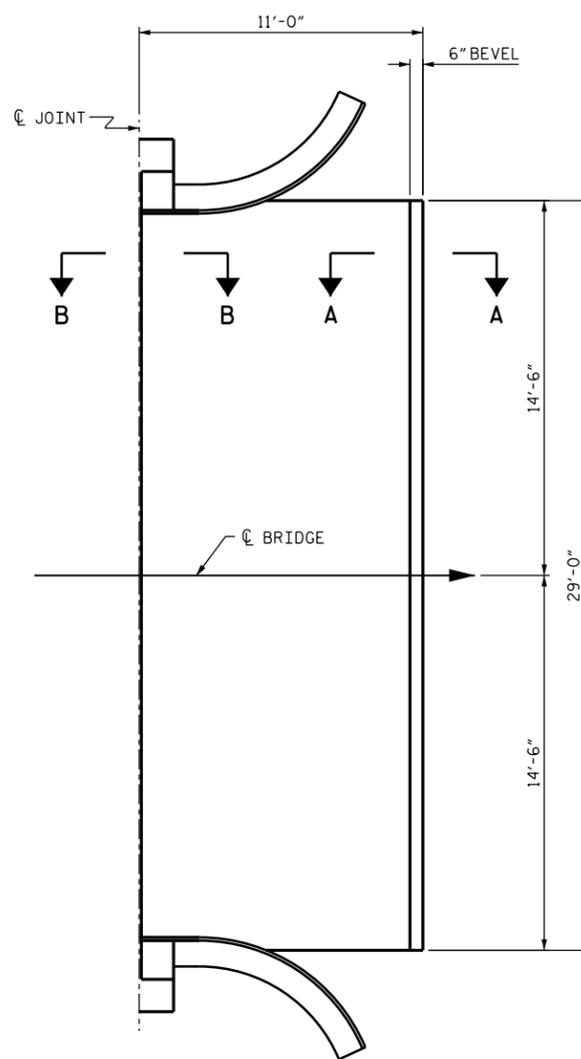
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HARBINGER ←

→ KITTY HAWK



APPROACH SLAB 1



APPROACH SLAB 2

PLAN

NOTES

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 1 7/8" PER THE EXISTING BRIDGE PLANS. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING SCARIFICATION.

CURRENT AVERAGE COVER IS EXPECTED TO BE FROM 1" TO 1 1/2" BASED ON VISUAL INSPECTION.

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET.

* MINOR QUANTITIES OF CLASS II AREAS ARE ANTICIPATED, PARTICULARLY NEAR JOINTS. HOWEVER, DUE TO THEIR SMALL SIZE, THE CLASS II LOCATIONS HAVE NOT BEEN DELINEATED ON THESE PLANS. THE CLASS II QUANTITIES INDICATED ARE ANTICIPATED TO BE SUFFICIENT FOR THE ACTUAL QUANTITIES ENCOUNTERED.

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
APPROACH SLAB 1		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	35 SY	
CLASS II SURFACE PREPARATION	0.2 SY *	
SHOTBLASTING BRIDGE DECK	35 SY	
PPC MATERIALS	1.1 CY	
PLACING & FINISHING PPC OVERLAY	35 SY	
BRIDGE DECK GROOVING	252 SF	
APPROACH SLAB 2		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	35 SY	
CLASS II SURFACE PREPARATION	0.2 SY *	
SHOTBLASTING BRIDGE DECK	35 SY	
PPC MATERIALS	1.1 CY	
PLACING & FINISHING PPC OVERLAY	35 SY	
BRIDGE DECK GROOVING	252 SF	

PROJECT NO. B-5937
CURRITUCK COUNTY

BRIDGE NO. 16

SHEET 1 OF 4

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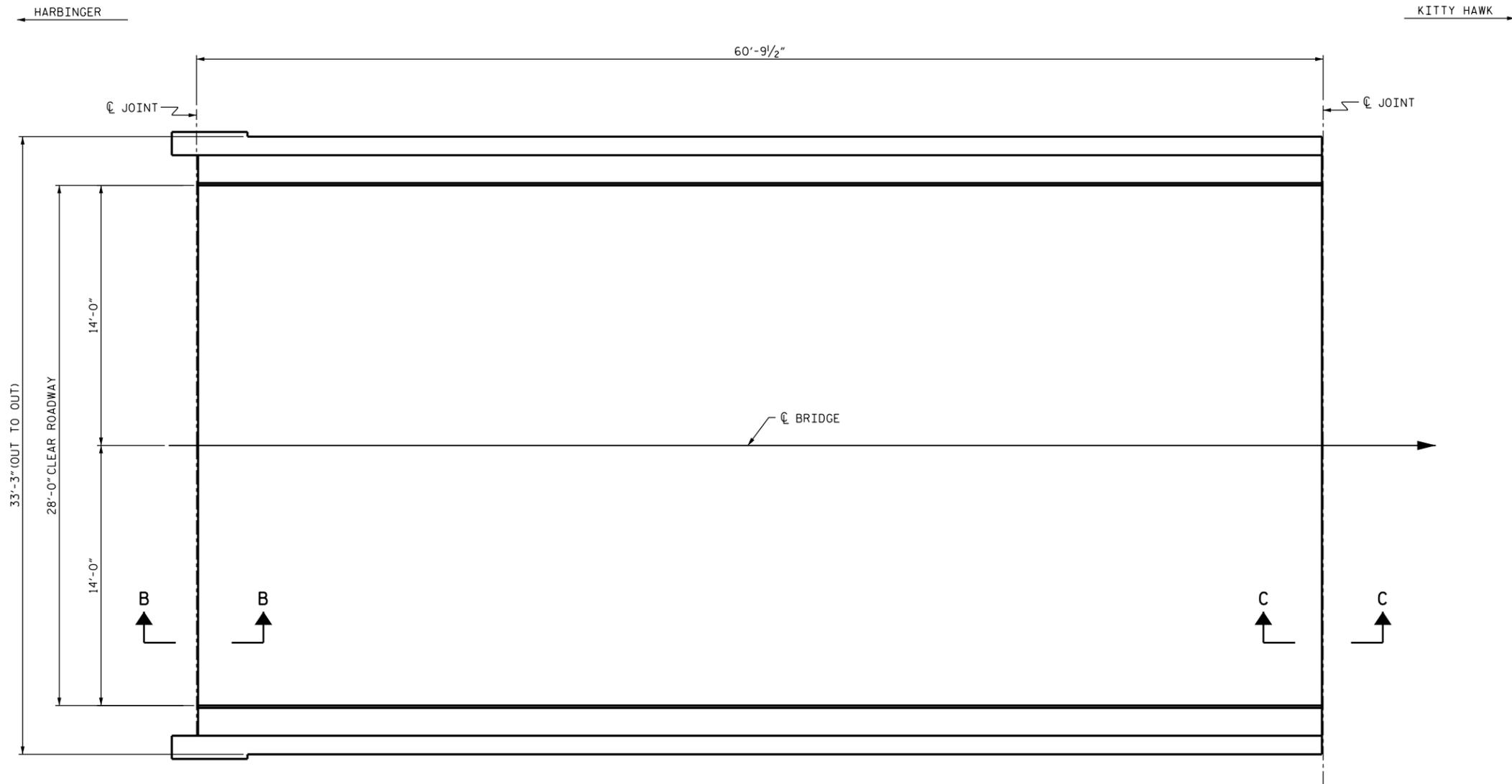
STATE OF NORTH CAROLINA
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 RALEIGH

PLAN OF SPAN
 FOR APPROACH SLABS
 1 & 2

DRAWN BY : CL BRIGHT DATE : 10/16
 CHECKED BY : T. SHERRILL DATE : 10/16

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1			3			S-10
2			4			TOTAL SHEETS 287

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PLAN

NOTES

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 1 1/8" PER THE EXISTING BRIDGE PLANS. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING SCARIFICATION.

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FOR SECTION B-B AND C-C, SEE "JOINT DETAILS" SHEET.

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AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
SPAN 1		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	189 SY	
CLASS II SURFACE PREPARATION	0.2 SY *	
SHOTBLASTING BRIDGE DECK	189 SY	
PPC MATERIALS	5.9 CY	
PLACING & FINISHING PPC OVERLAY	189 SY	
BRIDGE DECK GROOVING	1510 SF	
SPAN 248		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	189 SY	
CLASS II SURFACE PREPARATION	0.2 SY *	
SHOTBLASTING BRIDGE DECK	189 SY	
PPC MATERIALS	5.9 CY	
PLACING & FINISHING PPC OVERLAY	189 SY	
BRIDGE DECK GROOVING	1510 SF	

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

DocuSigned by:

Timothy M. Sherrill

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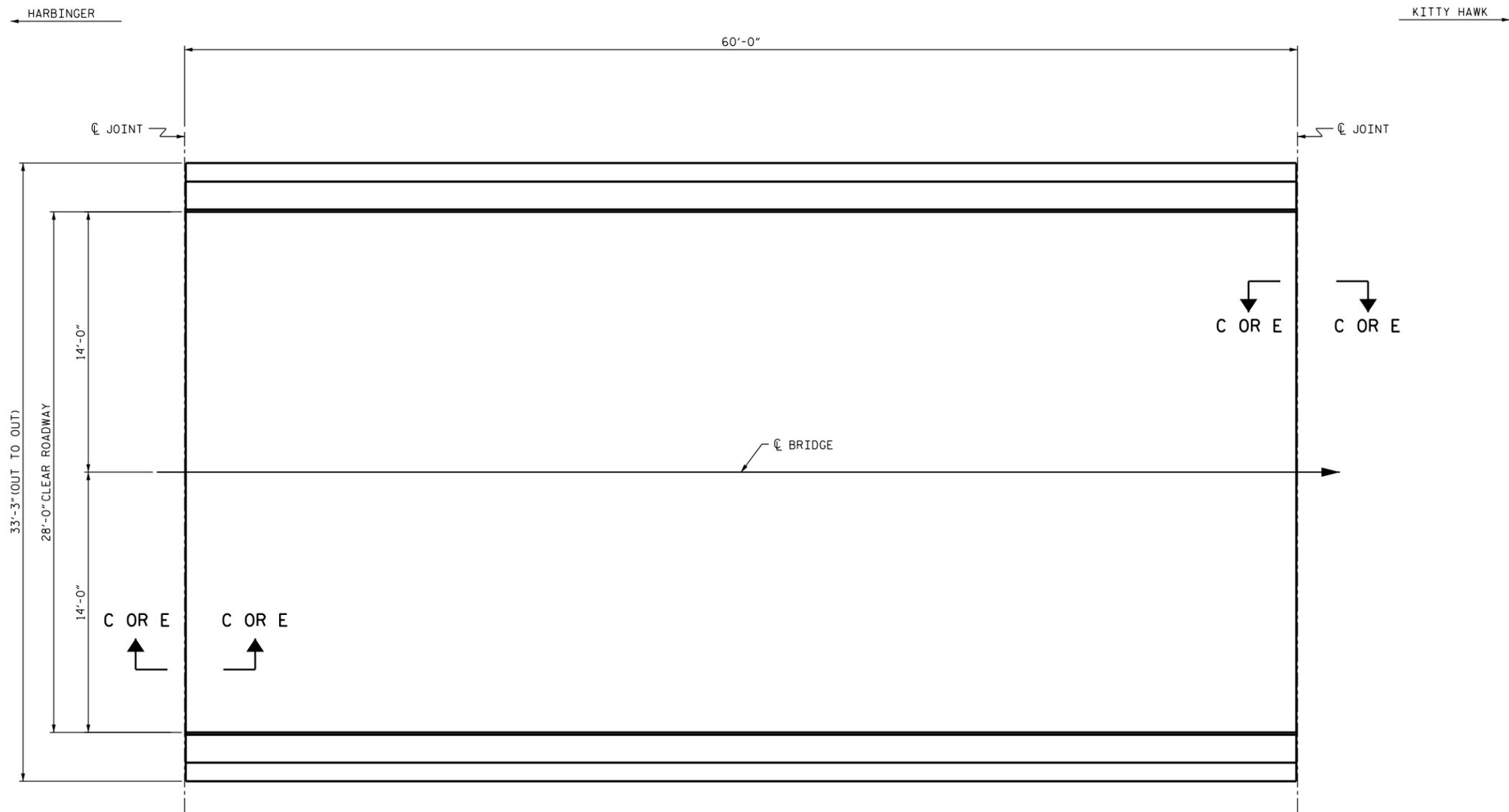
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPAN
 FOR SPANS 1 & 248

DRAWN BY : CL BRIGHT DATE : 10/16
 CHECKED BY : T. SHERRILL DATE : 10/16

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2			4			TOTAL SHEETS 287



PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
SPANS 2-153 & 155-247		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	187 SY	
CLASS II SURFACE PREPARATION	0.2 SY *	
SHOTBLASTING BRIDGE DECK	187 SY	
PPC MATERIALS	5.8 CY	
PLACING & FINISHING PPC OVERLAY	187 SY	
BRIDGE DECK GROOVING	1489 SF	

QUANTITIES SHOWN IN TABLE ARE FOR ONE SPAN OTHER SPANS SIMILAR.

NOTES

- REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.
- CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 1 1/4" PER THE EXISTING BRIDGE PLANS. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING SCARIFICATION.
- CURRENT AVERAGE COVER IS EXPECTED TO BE FROM 1" TO 1 1/2" BASED ON VISUAL INSPECTION.
- FOR SECTION C-C, SEE "JOINT DETAILS" SHEET, S-15.
- FOR SECTION E-E, JOINT DETAILS AT BENTS 153 AND 154 ONLY, SEE "TYPICAL SECTION & JOINT DETAILS SPAN 154" SHEET, S-16.
- * MINOR QUANTITIES OF CLASS II AREAS ARE ANTICIPATED, PARTICULARLY NEAR JOINTS. HOWEVER, DUE TO THEIR SMALL SIZE, THE CLASS II LOCATIONS HAVE NOT BEEN DELINEATED ON THESE PLANS. THE CLASS II QUANTITIES INDICATED ARE ANTICIPATED TO BE SUFFICIENT FOR THE ACTUAL QUANTITIES ENCOUNTERED.

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

SHEET 3 OF 4

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494C...

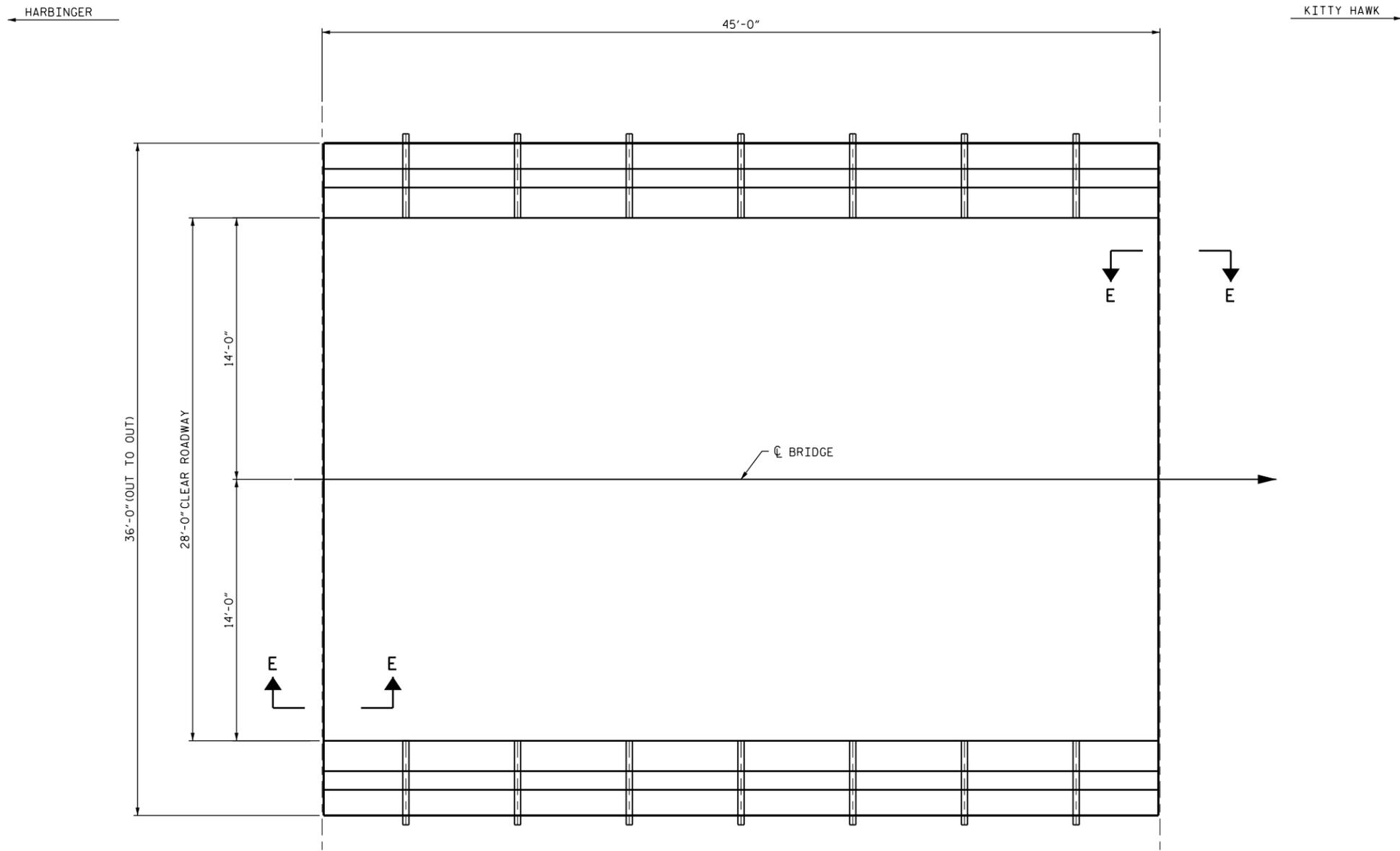


12/8/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**PLAN OF SPAN
 FOR SPANS 2 - 153
 & 155 - 247**

DRAWN BY :	CL BRIGHT	DATE :	10/16
CHECKED BY :	T. SHERRILL	DATE :	10/16

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			287



AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
SPAN 154		
	ESTIMATE	ACTUAL
REMOVAL OF EXISTING CONCRETE WEARING SURFACE	1260 SF	
REMOVAL AND REPLACEMENT OF SHEAR KEYS	405 LF	
CONCRETE WEARING SURFACE	1260 SF	
BRIDGE DECK GROOVING	1113 SF	

PLAN

NOTES

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

THE EXISTING LMC OVERLAY IS TO BE FULLY REMOVED.
FOR SECTION E-E, SEE "JOINT DETAILS" SHEET.

PROJECT NO. B-5937
CURRITUCK COUNTY
BRIDGE NO. 16

DocuSigned by: *Timothy M. Sherrill*
AD50B1D977494C...
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SEAL
18565
ENGINEER
TIMOTHY M. SHERRILL

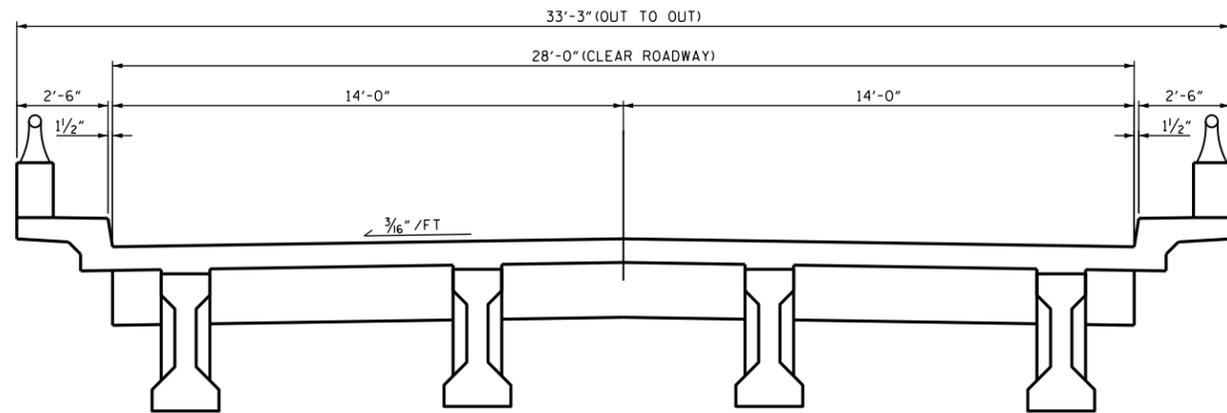
12/8/2016

PLAN OF SPAN
FOR SPAN 154

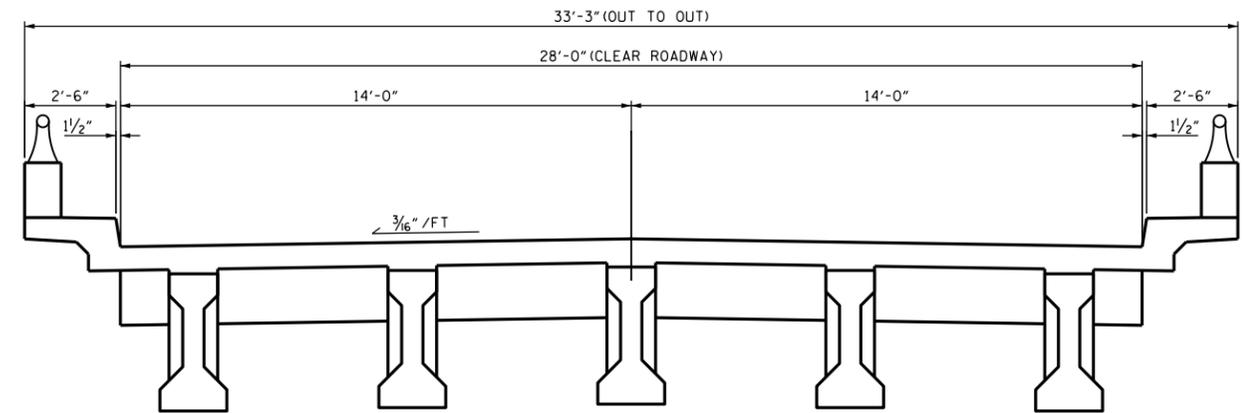
DRAWN BY : CL BRIGHT DATE : 10/16
CHECKED BY : T. SHERRILL DATE : 10/16

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-13
2			4			287

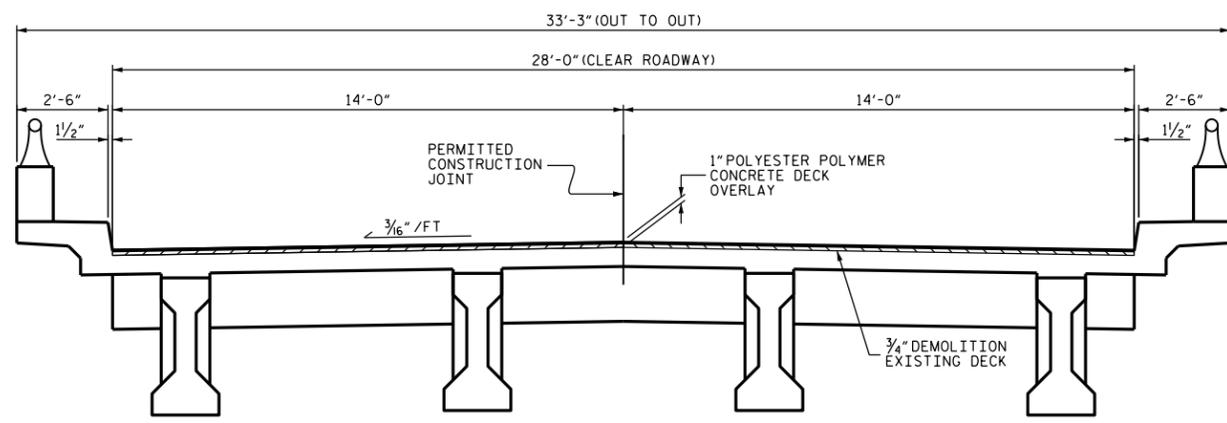
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



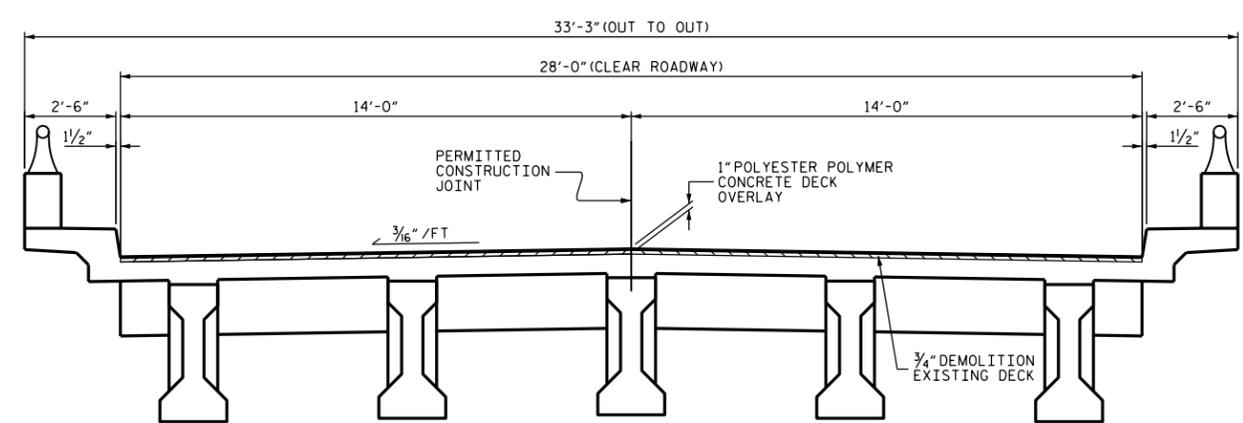
TYPICAL SECTION
(EXISTING SPANS 1-152 & 156-248)



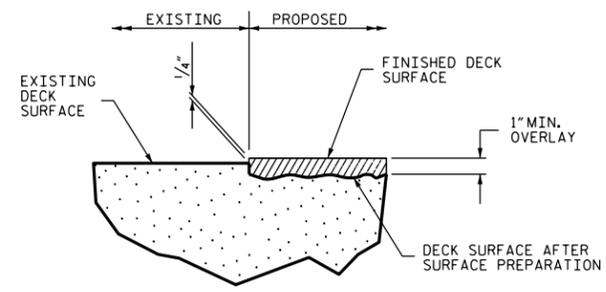
TYPICAL SECTION
(EXISTING SPANS 153 & 155)



TYPICAL SECTION
(PROPOSED SPANS 1-152 & 156-248)



TYPICAL SECTION
(PROPOSED SPANS 153 & 155)



DETAIL FOR PPC OVERLAY
(SHOWN @ GUTTER LINE)

NOTES

ONLY LONGITUDINAL CONSTRUCTION JOINTS SHALL BE ALLOWED IN THE PPC OVERLAY AND ONLY AT THE PERMITTED LOCATION SHOWN.

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

DocuSigned by:

Timothy M. Sherrill

AD50B1D9774940C...



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

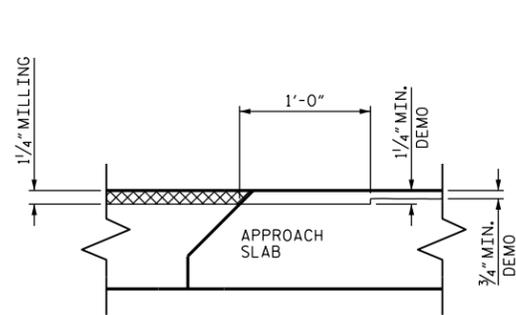
TYPICAL SECTIONS
 SPANS 1-152,
 153 & 155,
 156-248

12/8/2016

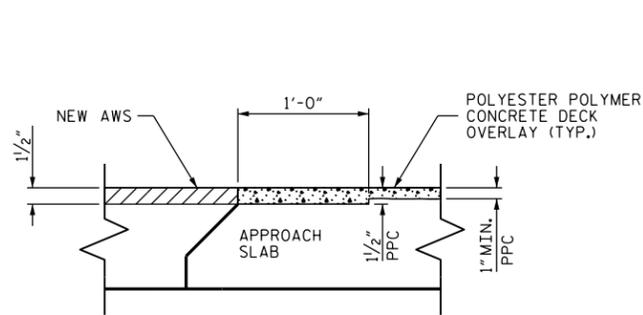
DRAWN BY : CL BRIGHT DATE : 09/16
 CHECKED BY : TIM SHERRILL DATE : 10/16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

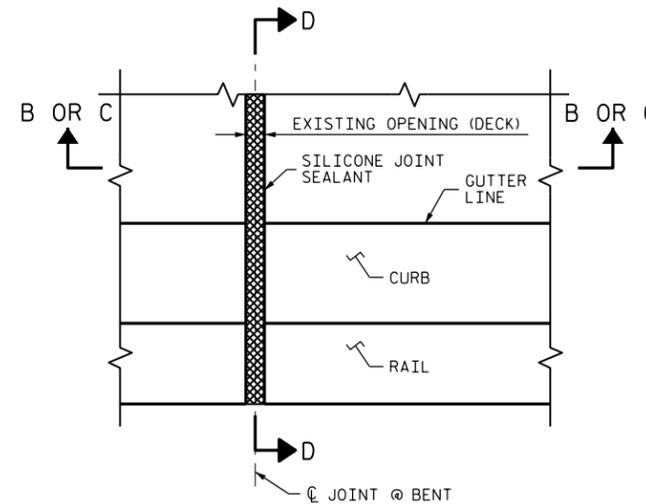
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-14
2			4			TOTAL SHEETS 287



SECTION A-A
(EXISTING)

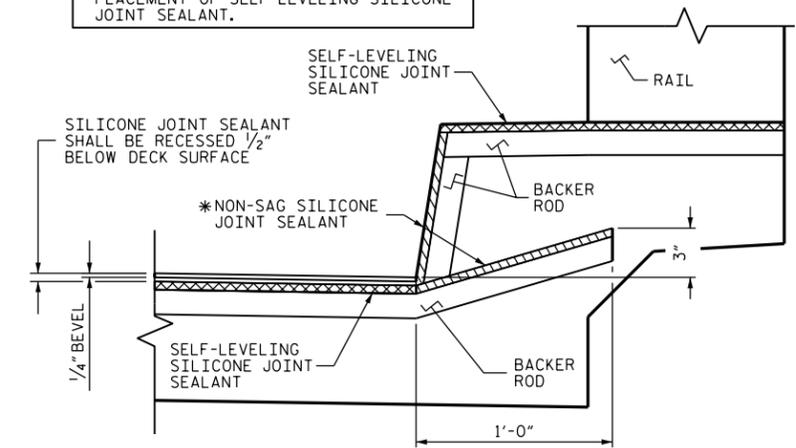


SECTION A-A
(PROPOSED)

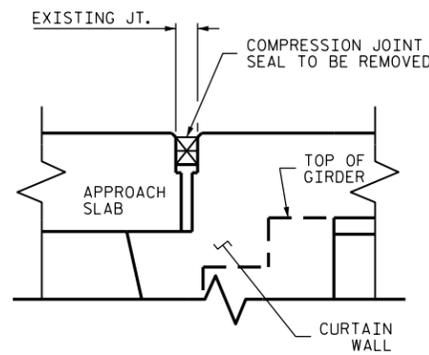


NOTES
FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
TOTAL JOINT REPLACEMENT = 36.58 LF PER JOINT

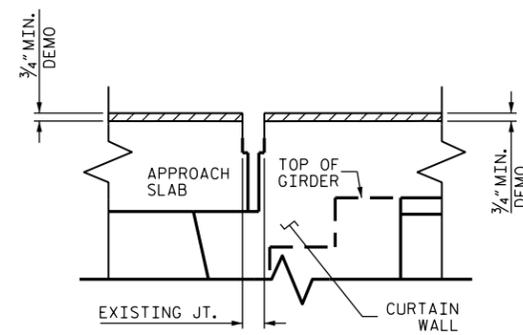
*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



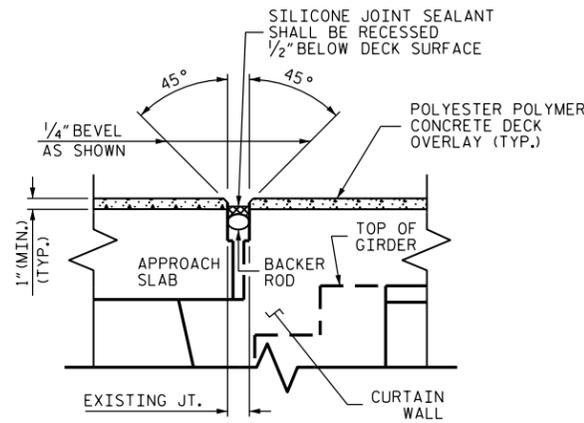
SECTION D-D
(PROPOSED)



SECTION B-B
(EXISTING)

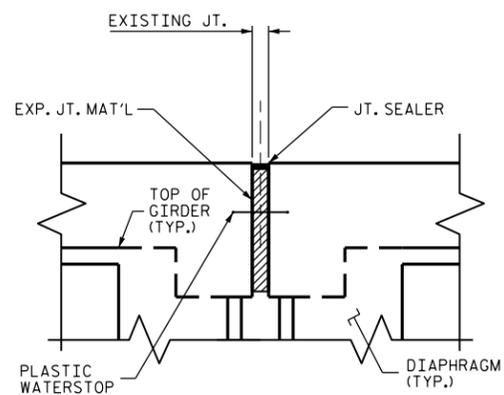


SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)

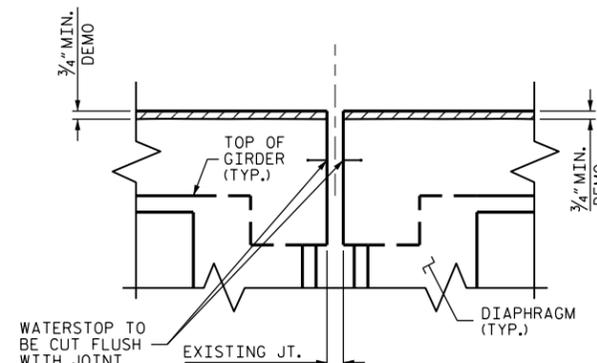


SECTION B-B
(PROPOSED JOINT SEAL)

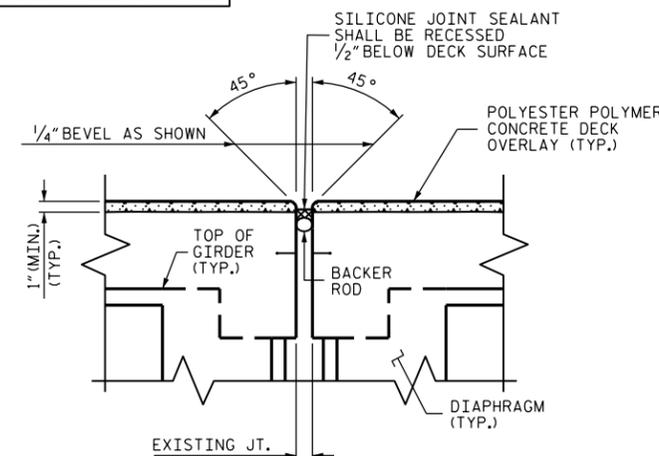
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.



SECTION C-C
(EXISTING)



SECTION C-C
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION C-C
(PROPOSED JOINT SEAL)

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.

PROJECT NO. B-5937
CURRITUCK COUNTY
BRIDGE NO. 16

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494C...



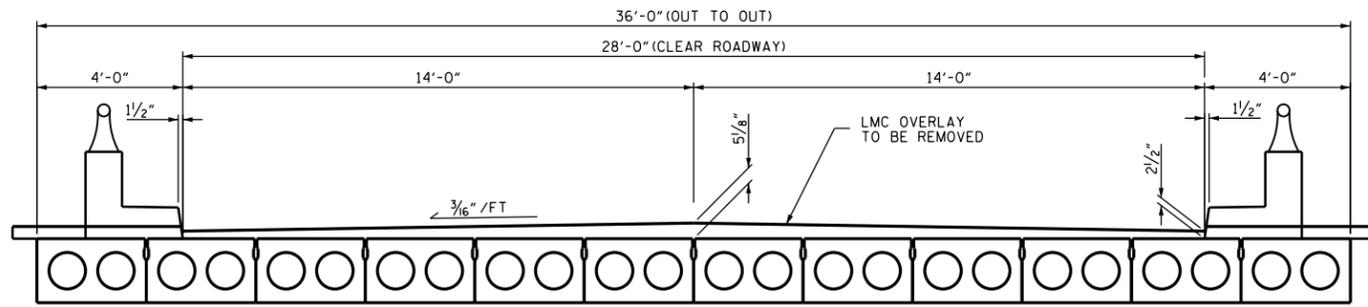
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
JOINT DETAILS
APPROACH SLABS,
SPANS 1-153 & 155,
156-248

12/8/2016

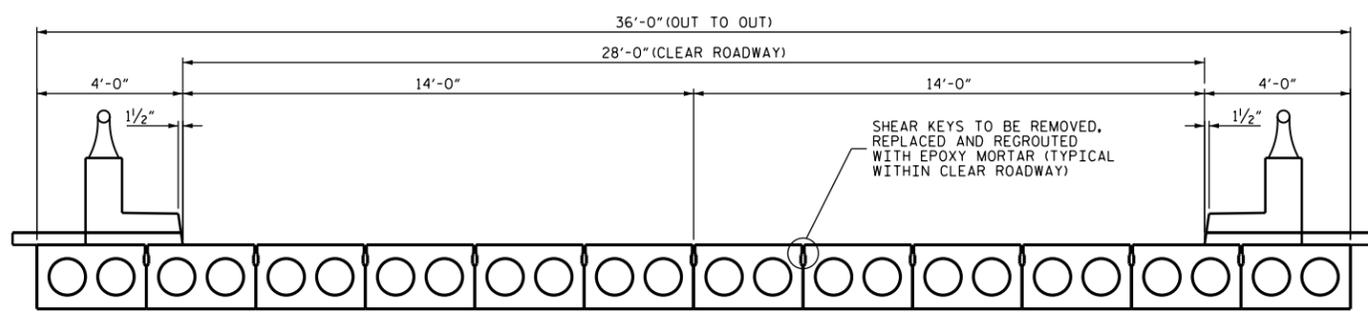
DRAWN BY : CL BRIGHT DATE : 10/16
CHECKED BY : T. SHERRILL DATE : 10/16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
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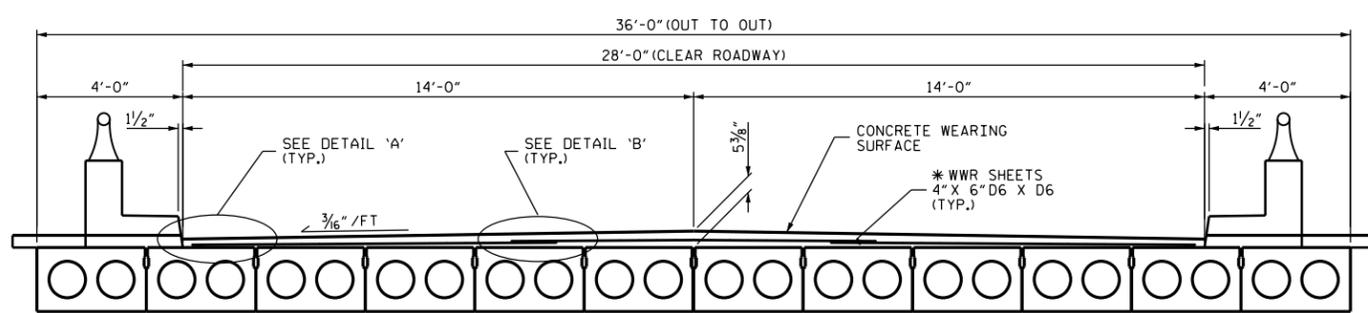
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15	
1			3			TOTAL	287
2			4			SHEETS	



TYPICAL SECTION
(EXISTING SPAN 154)



TYPICAL SECTION
(AFTER REMOVAL OF LMC OVERLAY)



TYPICAL SECTION
(PROPOSED SPAN 154)

BILL OF MATERIAL FOR CONCRETE WEARING SURFACE					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
WWR	12	6 X 4 D6/D6	STR	12'-4" X 10'-0"	1572
GALVANIZED WWR				LBS.	1572
CONCRETE WEARING SURFACE				SQ.FT.	1260

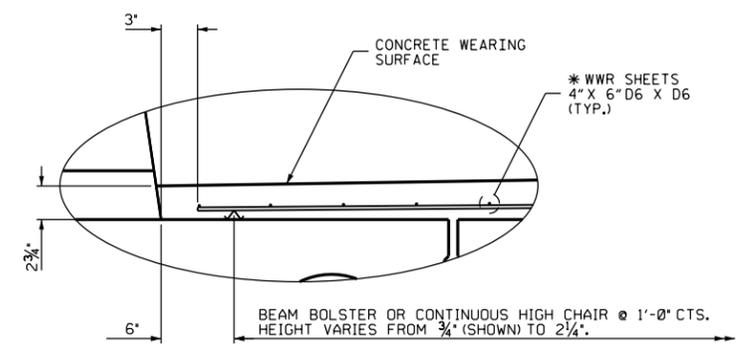
NOTES

THE COST OF THE 4" X 6" D6 X D6 WWR SHEETS CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE.

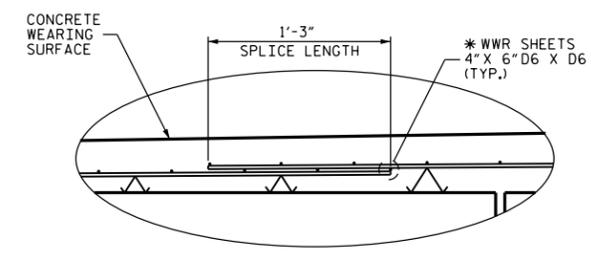
*WWR SHEETS SHALL BE GALVANIZED.

FOR CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.

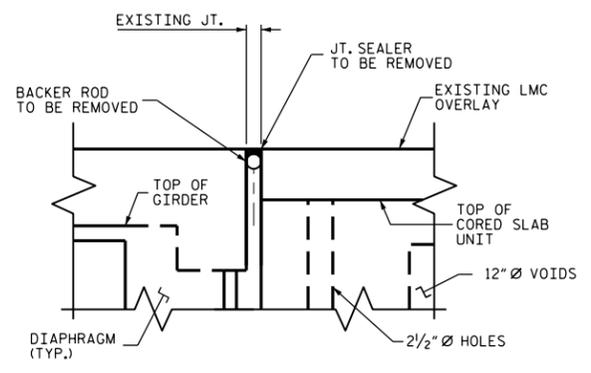
FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.



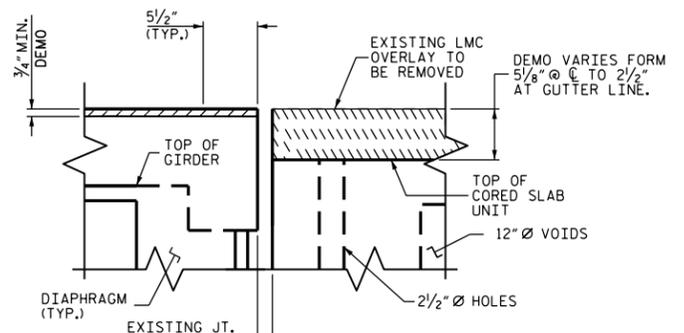
DETAIL 'A'



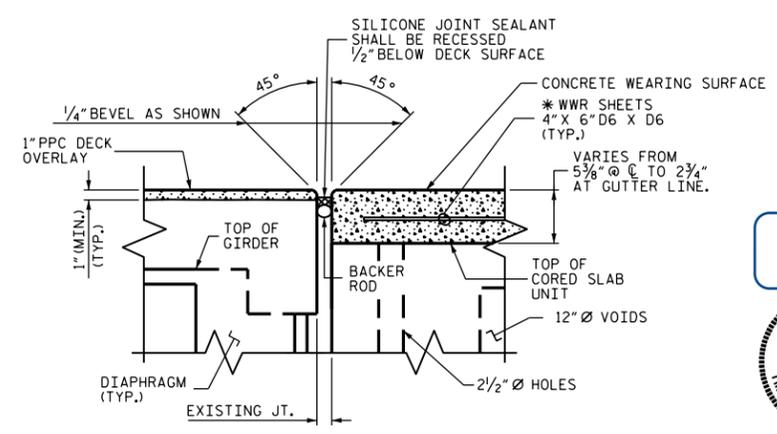
DETAIL 'B'
(TRAVERSE SPLICE)



SECTION E-E
(EXISTING)



SECTION E-E
(MINIMUM DEMOLITION)



SECTION E-E
(PROPOSED)

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

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

DocuSigned by:

Timothy M. Sherrill



12/8/2016

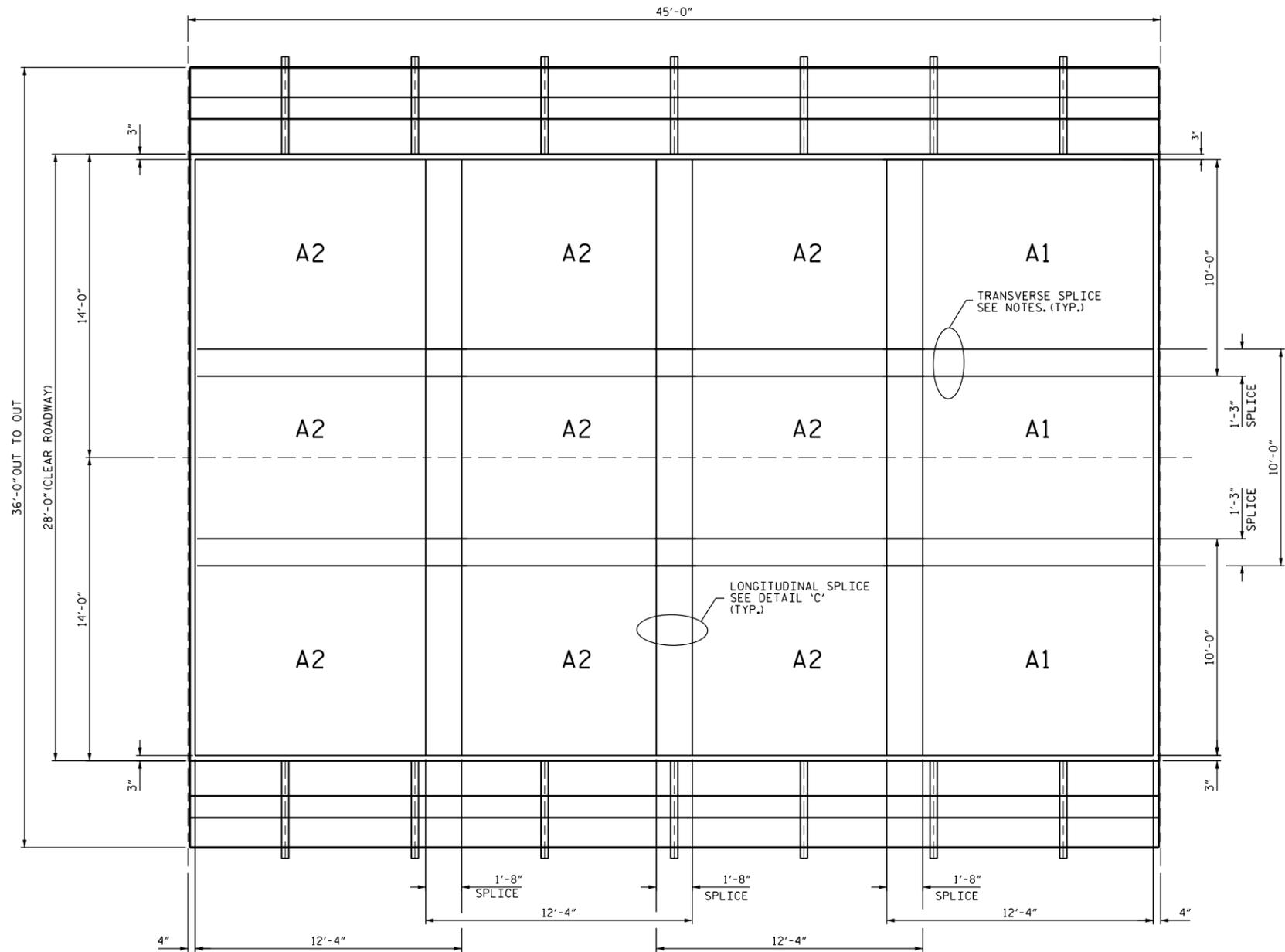
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION & JOINT DETAILS
 SPAN 154

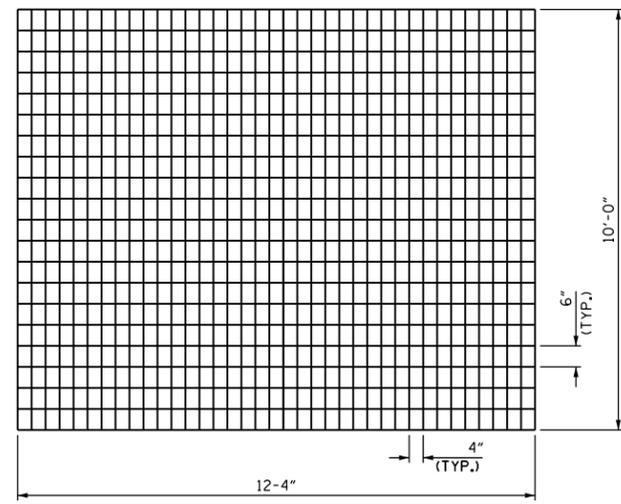
DRAWN BY: CL BRIGHT DATE: 09/16
 CHECKED BY: TIM SHERRILL DATE: 10/16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

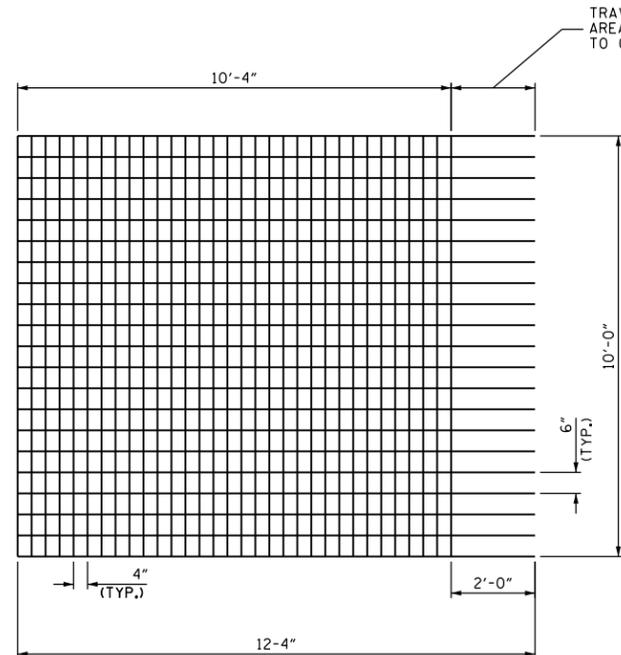
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			16
2			4			287



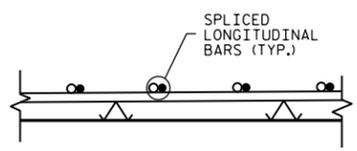
PLAN VIEW



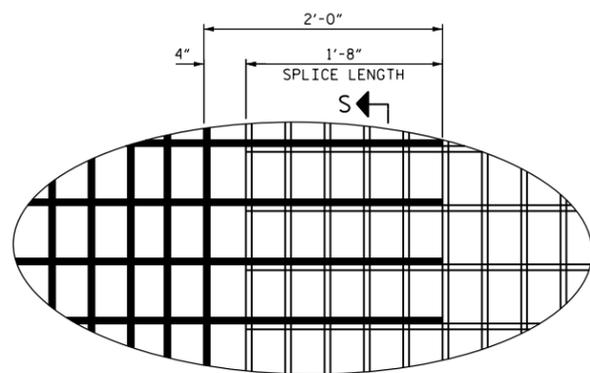
* WWR SHEET DETAILS - (A1)
(3 REQUIRED)



* WWR SHEET DETAILS - (A2)
(9 REQUIRED)



SECTION S-S



DETAIL 'C'
(LONGITUDINAL SPLICE)

NOTES

CUSTOM WELDED WIRE REINFORCING (* WWR) SHEETS SHALL BE PROVIDED:
 6 X 4 D6/D6 (GRADE 70) 10'-0" (+0,+0) X 12'-6" (+0,+0)
 12 SHEETS REQUIRED- FOR WWR SHEET LAYOUT SEE PLAN VIEW.

FOR SHEETS A1 AND A2 SEE "WWR SHEET DETAILS" THIS SHEET.

FOR TRANSVERSE SPLICE, SEE "TYPICAL SECTION & JOINT DETAILS SPAN 154" SHEET.

ALTERNATIVELY, THE CONTRACTOR MAY PROPOSE TO USE COMMONLY AVAILABLE * WWR SHEETS, INSTEAD OF CUSTOM FABRICATED SHEETS. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED * WWR SHEETS SIZES, INFORMATION AND LAYOUT. SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH THE WIRE REINFORCEMENT INSTITUTE REQUIREMENTS. AT LONGITUDINAL SPLICES, TRAVERSE WIRES ON ONE SHEET BEING SPLICED SHALL BE REMOVED WITHIN THE SPLICE SECTION.

MINIMUM REINFORCING SHALL BE AS FOLLOWS:
 TRANSVERSE: 0.180 SQ. INCHES/ FT
 LONGITUDINAL: 0.0120 SQ. INCHES/ FT

* WWR SHEET SHALL BE GALVANIZED.
 NO WWR ROLLS SHALL BE ALLOWED.

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

DocuSigned by:
Trinity M. Spill
 AD50B1D977494DC...
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18565
 TROY M. SHERRILL

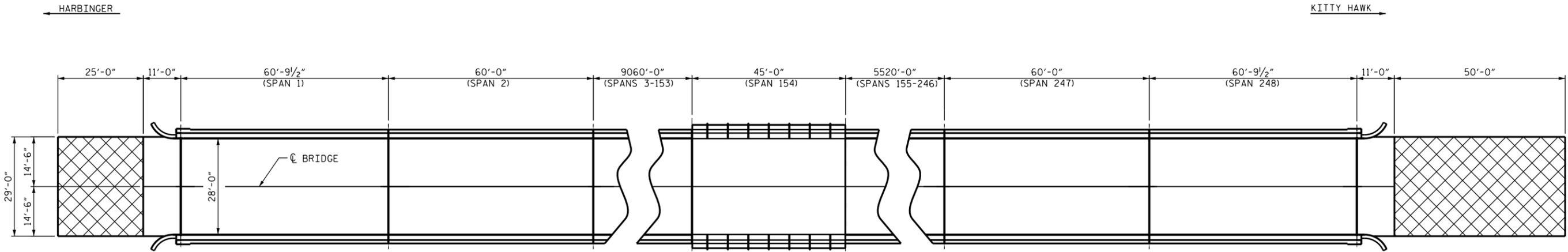
12/8/2016

WELDED WIRE REINFORCING LAYOUT AND DETAILS SPAN 154

DRAWN BY : CL BRIGHT DATE : 09/16
 CHECKED BY : TIM SHERRILL DATE : 10/16

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-17
1			3			TOTAL SHEETS
2			4			287

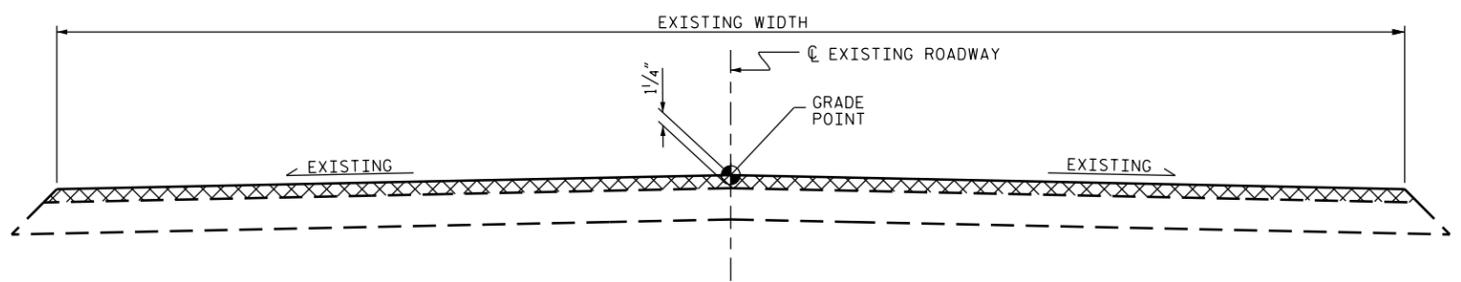


PLAN

INCIDENTAL MILLING

NOTES

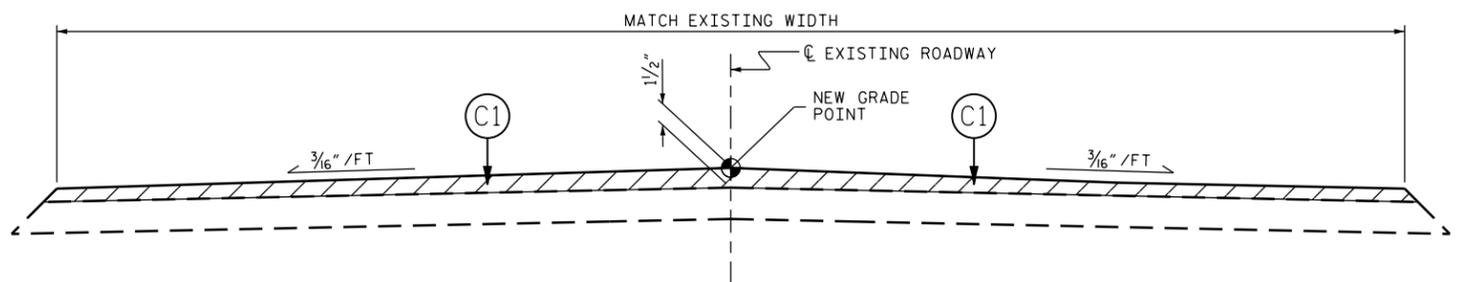
INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED 1" DUE TO SETTLEMENT OF THE EXISTING APPROACH.



TYPICAL ROADWAY MILLING SECTION
(MILL TO 3/4" DEPTH)

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 2" IN DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	242 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A	20.0 TONS	



TYPICAL ROADWAY SECTION

PROJECT NO. B-5937
CURRITUCK COUNTY
 BRIDGE NO. 16

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC



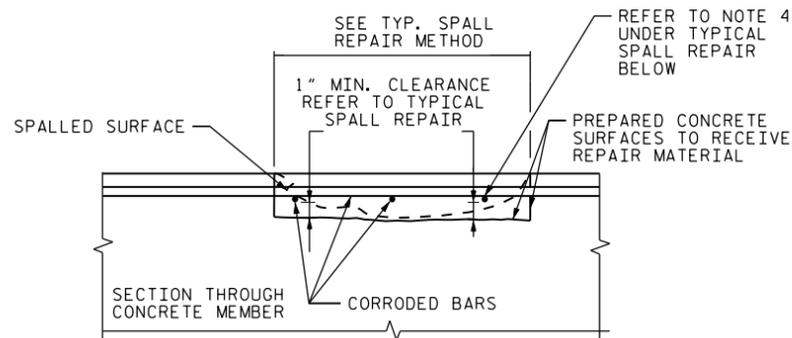
12/8/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**APPROACH MILLING &
 TYPICAL ROADWAY
 SECTIONS**

DRAWN BY : C. BRIGHT DATE : 10/16
 CHECKED BY : T. SHERRILL DATE : 10/16
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

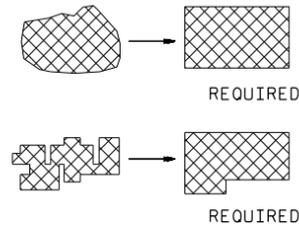
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-18
2			4			TOTAL SHEETS 287



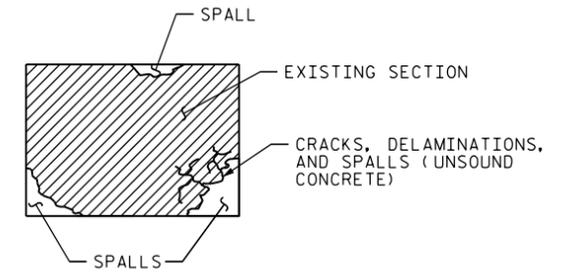
EXPOSING AND UNDERCUTTING REINFORCING STEEL

APPLICABLE TO HORIZONTAL, VERTICAL, AND OVERHEAD LOCATIONS

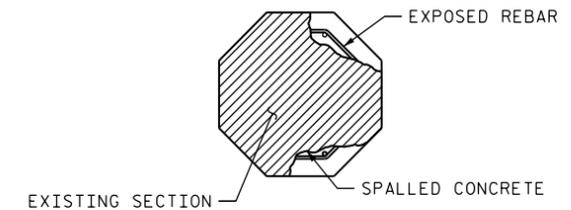


SIMPLE PATCH CONFIGURATION

AT CORNER LOCATIONS PROVIDE RIGHT ANGLE CUTS. PATCH CONFIGURATION SHALL BE KEPT AS SIMPLE AS POSSIBLE. INDIVIDUAL REPAIR AREAS WITHIN 2 FEET SHALL BE JOINED AT THE DIRECTION OF THE ENGINEER.



TYPICAL DELAMINATIONS AND SPALLS



TYPICAL SPALL WITH EXPOSED REBAR

TYPICAL SPALL REPAIR

1. FOR CONCRETE RESTORATION, REMOVE AND REPAIR UNSOUND CONCRETE FROM AREAS TO BE REPAIRED IN ACCORDANCE WITH THIS SHEET AND THE PROJECT SPECIAL PROVISIONS. AREAS WELL ADHERED TO EXISTING STRAND OR REINFORCEMENT SHALL REMAIN.
2. ALL REPAIRS SHALL BE MARKED FOR APPROVAL OF APPROXIMATE PERIMETER PRIOR TO INITIATION OF WORK.
3. THE CONTRACTOR SHALL SUBMIT A PLAN FOR CONTROL AND DISPOSAL OF DEBRIS TO THE ENGINEER FOR APPROVAL.
4. ANY REINFORCEMENT WHICH IS LOOSE SHALL BE SECURED IN PLACE BY TYING TO OTHER SECURED BARS OR BY OTHER APPROVED METHODS. LAP SPLICES SHALL BE INSTALLED IN ACCORDANCE WITH THE TABLE. REFER TO GENERAL NOTES FOR DOWEL DETAIL (IF NECESSARY).
5. CLEAN EXPOSED REBARS AND ANY LOOSE CONCRETE OR ABRASIVES BY SANDBLASTING OR APPROVED ALTERNATE. CLEANED STEEL SHALL NOT BE LEFT EXPOSED FOR MORE THAN 72 HOURS PRIOR TO ENCAPSULATION OF CONCRETE.
6. AN APPROVED CEMENTITIOUS BASED BONDING AGENT SHALL BE USED ON ALL EXPOSED CONCRETE SURFACES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BEFORE THE REPAIR MATERIAL IS APPLIED.
7. FILL VOIDS WITH REPAIR MATERIAL IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND NCDOT SPECIFICATIONS. NOTE THAT ANY REPAIR MATERIAL APPLIED TO OVERHEAD LOCATIONS SHALL BE SPECIFICALLY DESIGNATED FOR OVERHEAD USE BY THE MANUFACTURER'S SPECIFICATIONS.

REBAR SIZE	LAP SPLICE LENGTH
4	1'-9"
5	2'-2"
6	2'-7"
7	3'-6"
8	4'-6"
9	5'-10"
10	7'-4"

TYPICAL CRACK REPAIR METHOD

1. OBTAIN ENGINEER'S APPROVAL TO CARRY OUT CRACK REPAIR (IN LIEU OF SPALL REPAIR) FOR CASES WHERE ADJACENT CONCRETE IS OTHERWISE SOUND AND CRACKING IS NOT A RESULT OF CORRODING REINFORCEMENT.
2. ADDRESS CRACKS IN NEW CONSTRUCTION IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS. ADDRESS EXISTING CRACKS IN ACCORDANCE WITH THIS SHEET AND PROJECT SPECIAL PROVISIONS.
3. REMOVE UNSOUND CONCRETE FROM CRACK AREA.
4. THE CONTRACTOR SHALL SUBMIT A PLAN FOR CONTROL AND DISPOSAL OF DEBRIS TO THE ENGINEER FOR APPROVAL.
5. FOR CRACKS UP TO 1/8" USE AN EPOXY RESIN WITH MINIMUMS OF VISCOSITY OF 325 CPS, 28 DAY COMPRESSIVE STRENGTH OF 13000 PSI. FOR CRACKS 1/8" TO 1/4", USE AN INJECTION GEL OR EQUAL NON-SAG PASTE WITH 28 DAY COMPRESSIVE STRENGTH OF 10000 PSI.
6. TO SEAL CRACK SURFACES PRIOR TO CRACK INJECTION, USE INJECTION GEL WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 12000 PSI.
7. ENGINEER TO APPROVE CRACK AND CAP SEAL MATERIAL PRIOR TO BEGINNING OF CONSTRUCTION.
8. APPLY CLASS II FINISH AT COMPLETION OF CRACK REPAIR TO REMOVE FINS OR KNOBS.

CONCRETE REPAIR NOTES

1. PERFORM A SOUNDING SURVEY IN THE PRESENCE OF THE ENGINEER TO IDENTIFY ALL LOCATIONS IN NEED OF CONCRETE REPAIR.
2. GAIN CONCURRENCE ON ALL REPAIR AREAS AT EACH LOCATION PRIOR TO COMMENCING WORK AT THE BENT.
3. THE DETERIORATED AREAS SHOWN ON OTHER PAGES ARE BASED ON INFRARED SURVEYS, BRIDGE INSPECTION REPORT, AND PARTIAL FIELD REVIEWS OF THE STRUCTURE. AS SUCH, THEY ARE FOR INFORMATIONAL PURPOSES AND SUBJECT TO CHANGE BASED ON CONTINUED DETERIORATION.
4. GENERALLY EXTEND REPAIR AREAS 2"-3" INTO SOUND CONCRETE BEYOND EDGE OF SPALLS AND SQUARE OFF AREAS IN ACCORDANCE WITH DETAILS ON THIS SHEET.

REPAIR AREA	APPROVED MATERIAL
BEAMS	CONCRETE REPAIRS (PPC GIRDERS)
PIER FOOTINGS	CLASS "AA" CONCRETE (BRIDGE)...
OTHER SUBSTRUCTURE	SHOTCRETE, OR CONTRACTOR OPTION

SEE PPMC PLANS AND PSP FOR TOP OF DECK CONCRETE REPAIRS.

PRESTRESSED GIRDER REPAIR NOTE

IF AFTER UNSOUND CONCRETE REMOVAL ON GIRDERS, MORE THAN 50% SECTION LOSS IS NOTED ON THE PRESTRESSING STRANDS, OR A SEVERED PRESTRESSING STRAND IS ENCOUNTERED, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONCRETE REPAIR.

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
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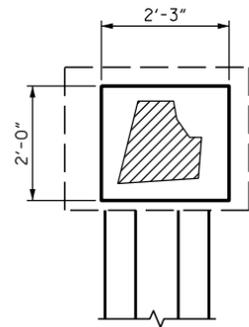
3/14/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 CONCRETE RESTORATION
 DETAILS

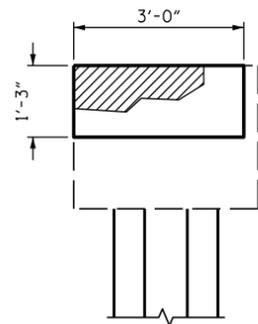
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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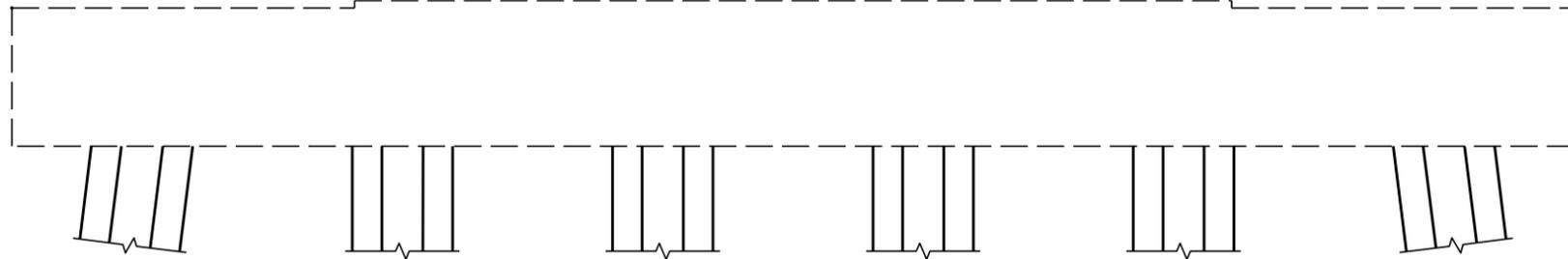
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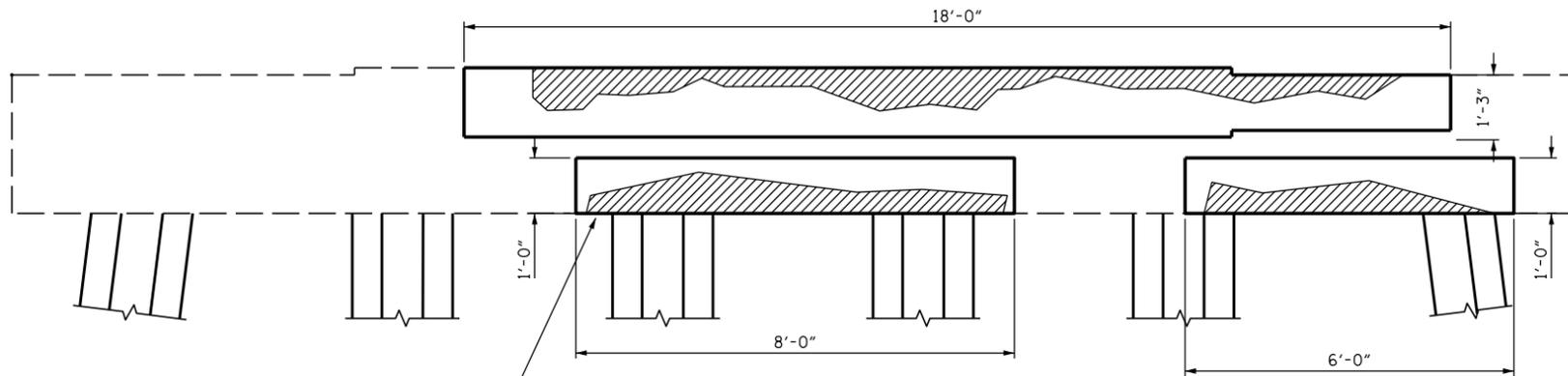
SIDE VIEW
NORTH FACE



SIDE VIEW
SOUTH FACE

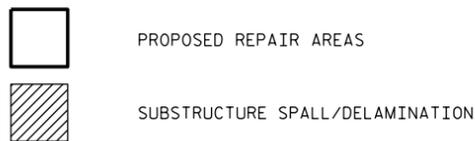


ELEVATION
WEST FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum



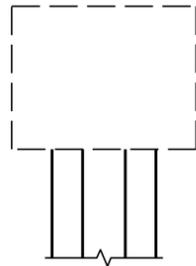
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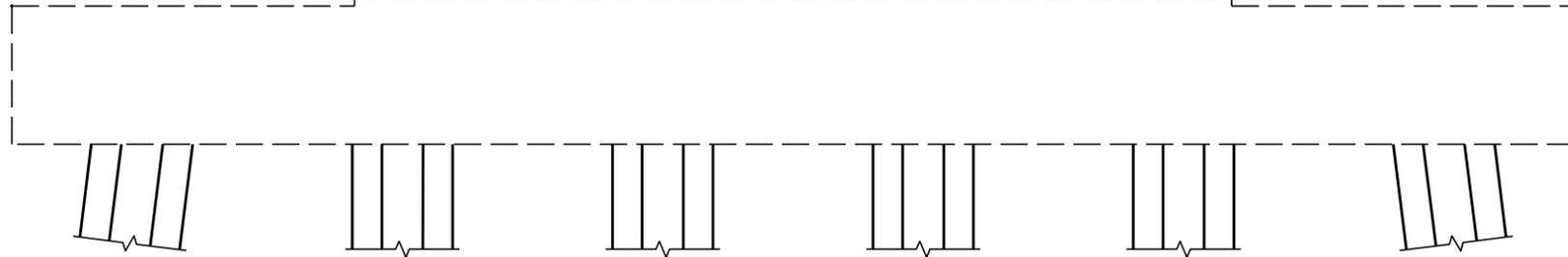
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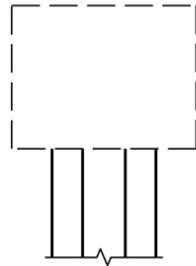
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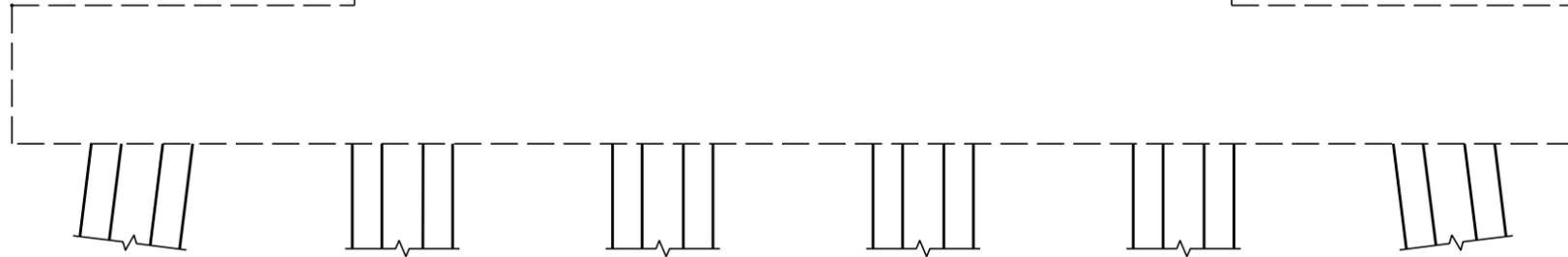
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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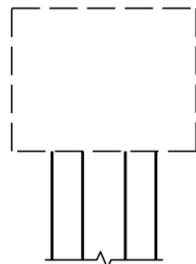
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 2

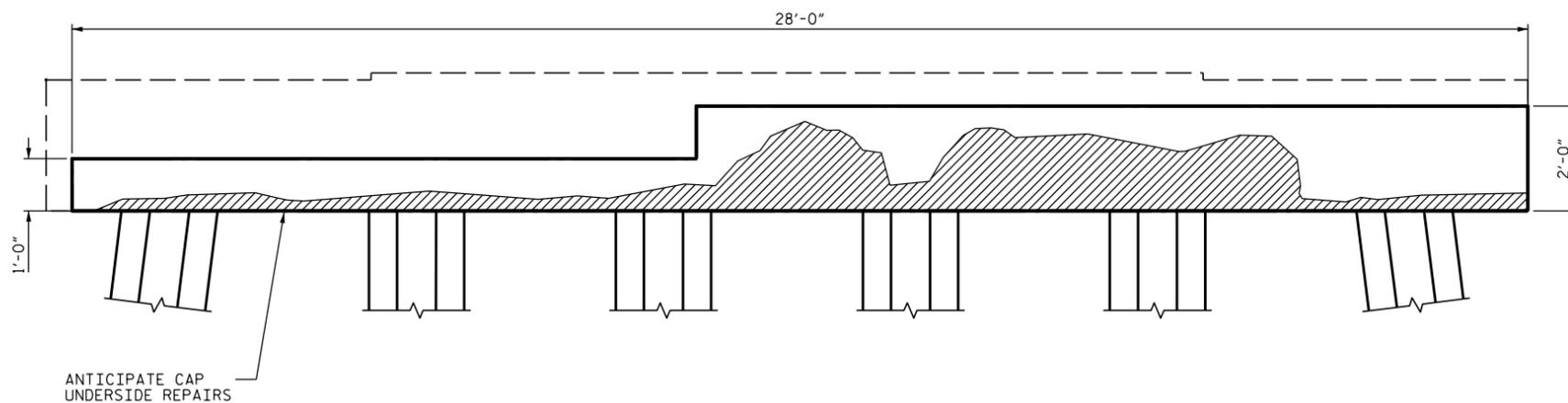
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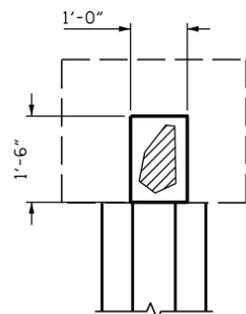
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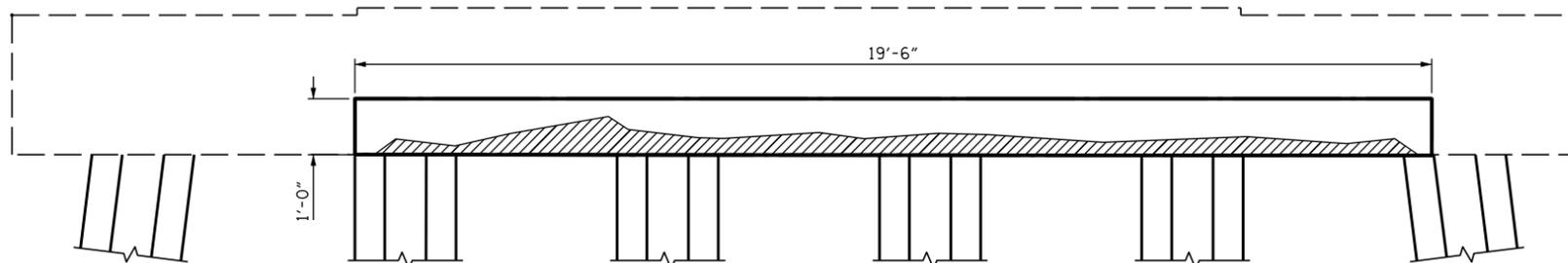
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NORTH FACE



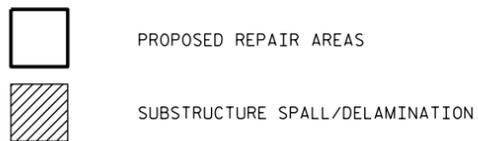
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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 16097695C75A467...

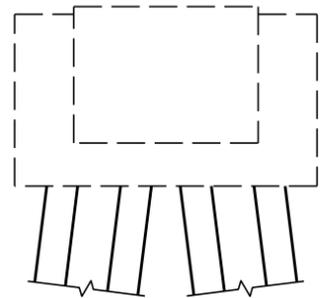
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 3

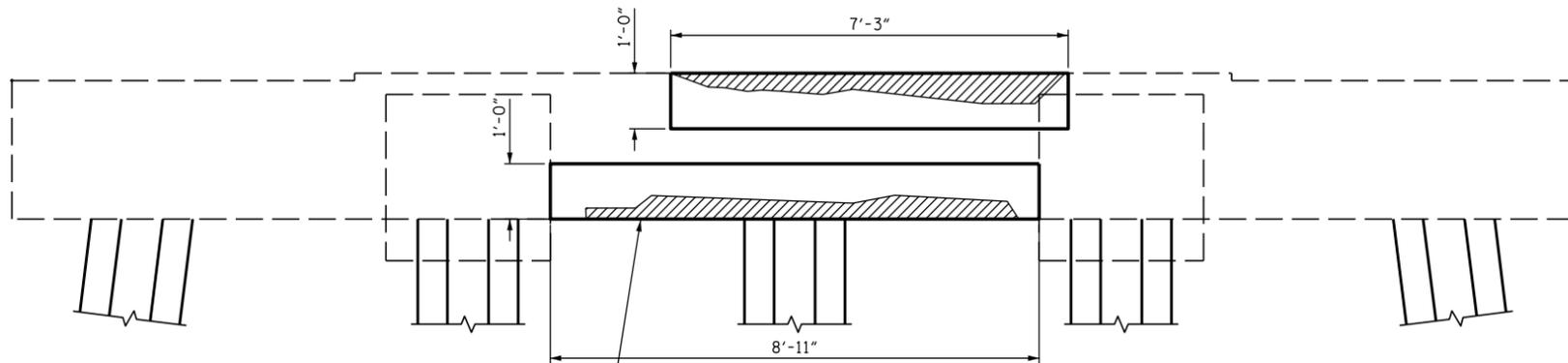
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 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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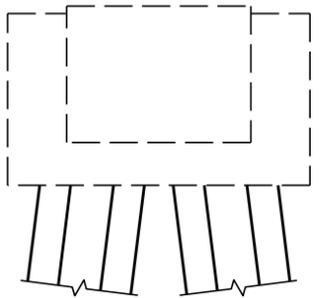
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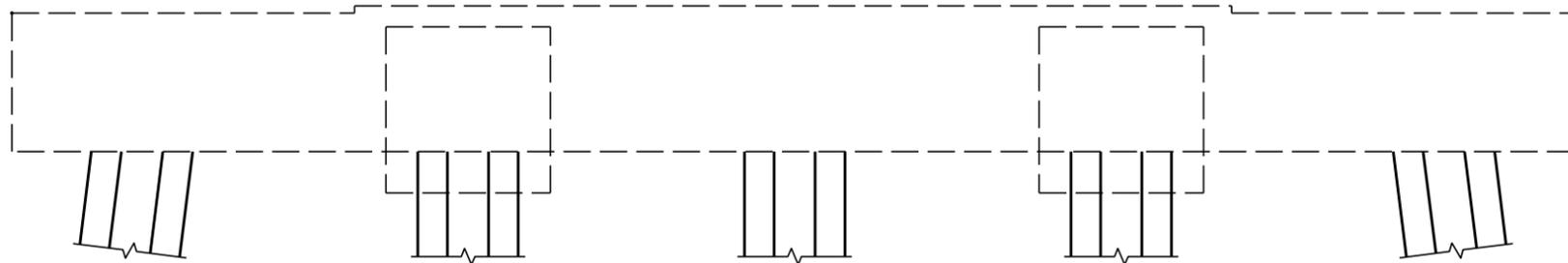
SIDE VIEW
NORTH FACE



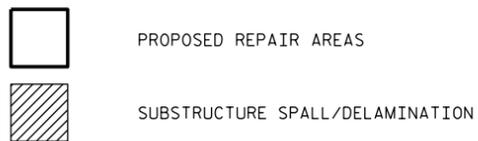
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19097095C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM

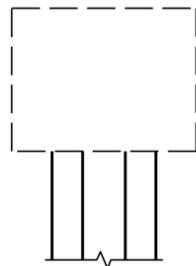
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 4

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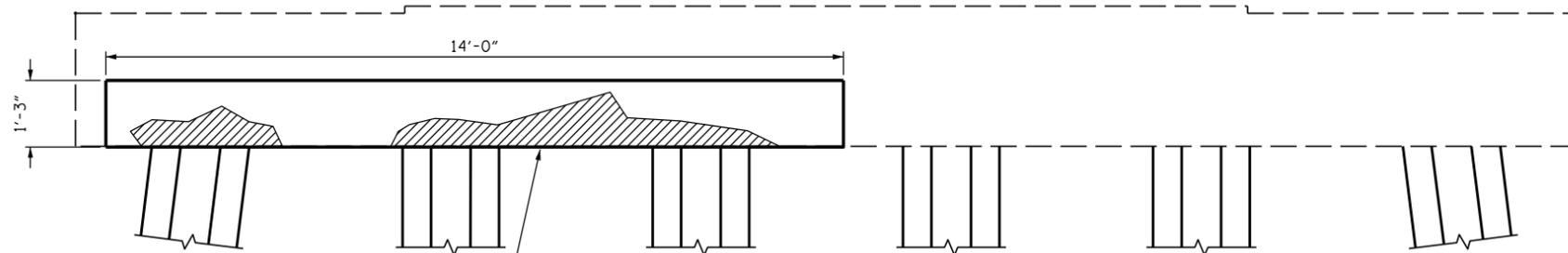
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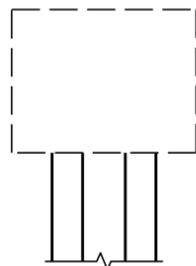


SIDE VIEW
NORTH FACE

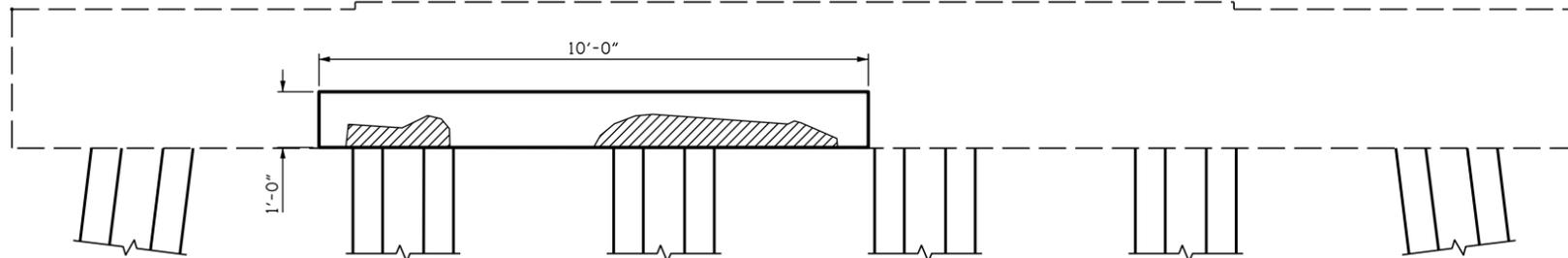


ELEVATION
WEST FACE

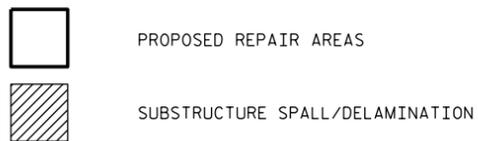
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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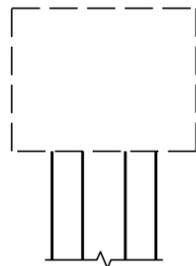
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 5**

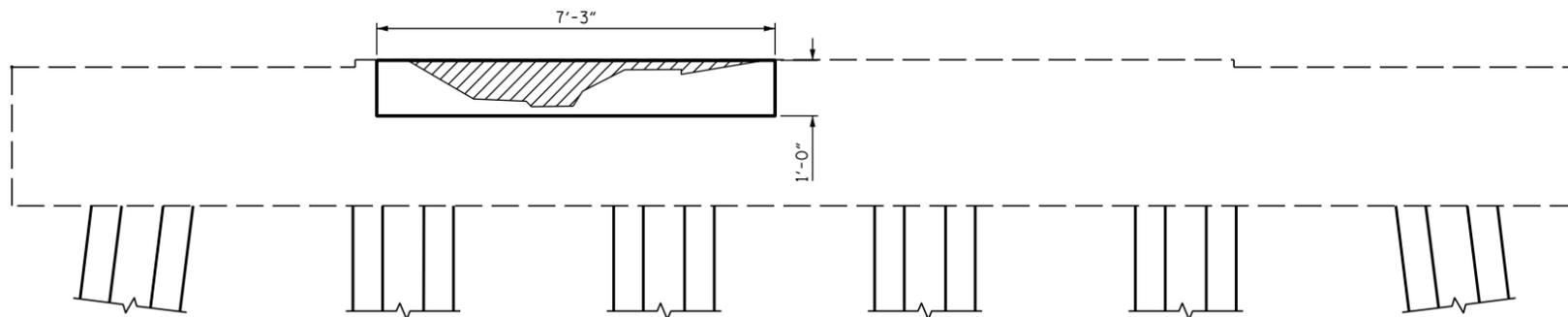
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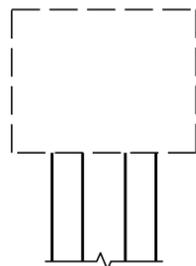
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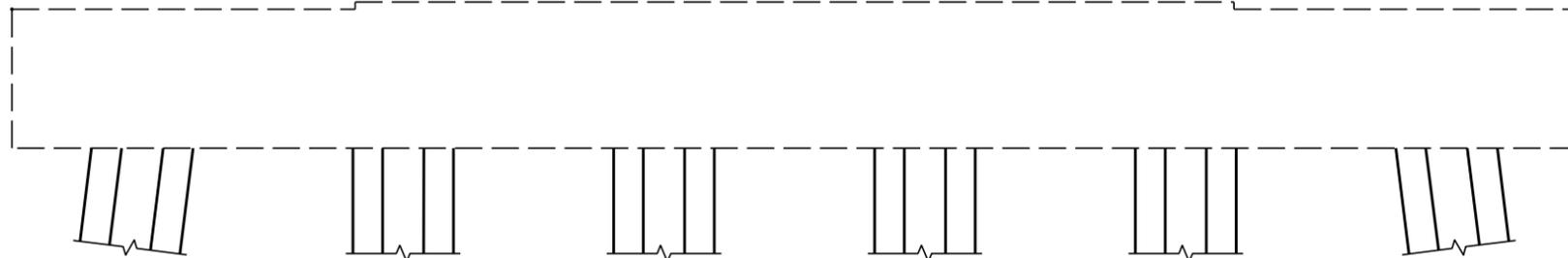
SIDE VIEW
NORTH FACE



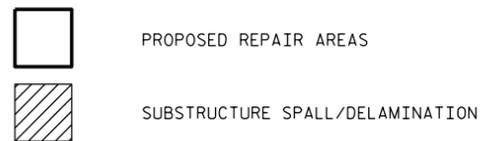
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

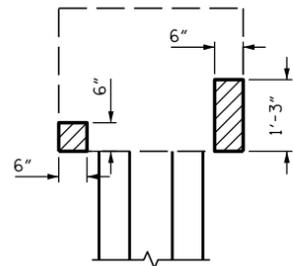
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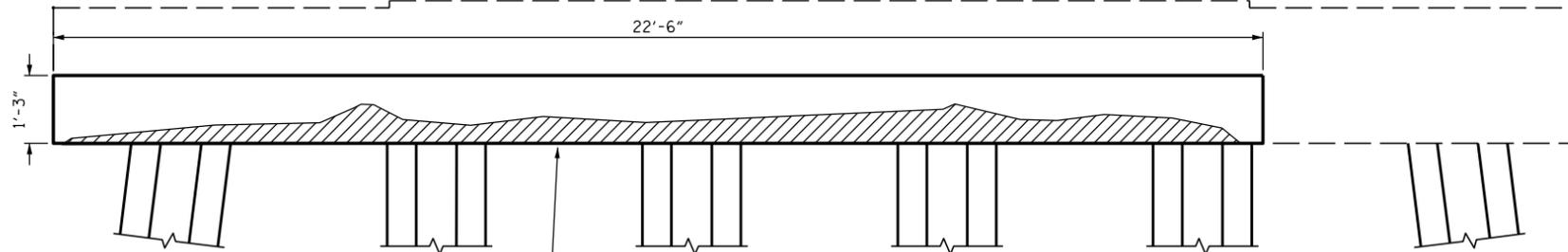
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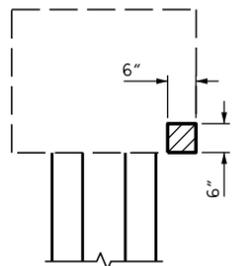
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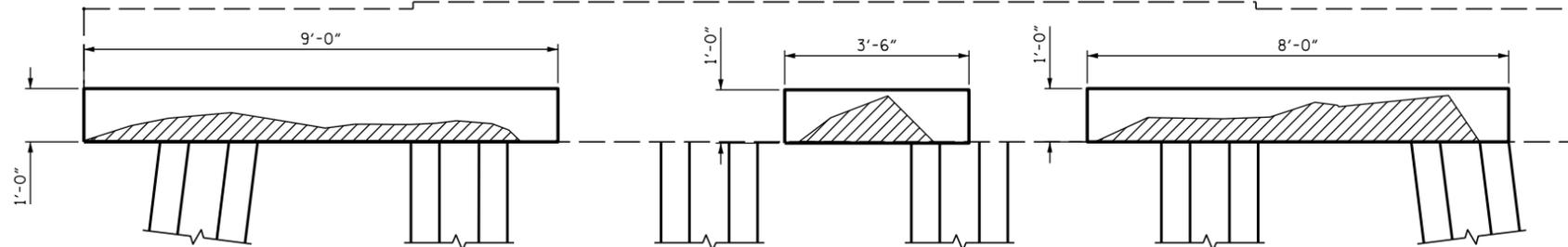
SIDE VIEW
NORTH FACE



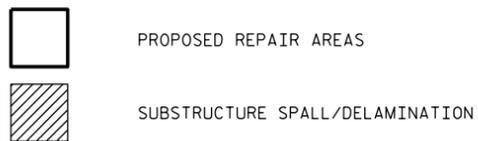
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 16097695C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SAMUEL L. CULLUM
 SEAL
 043571

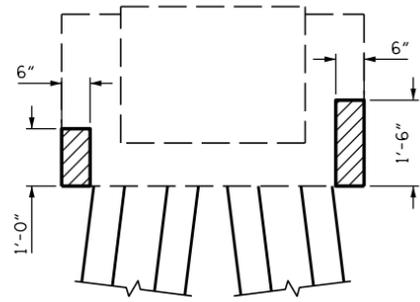
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 7

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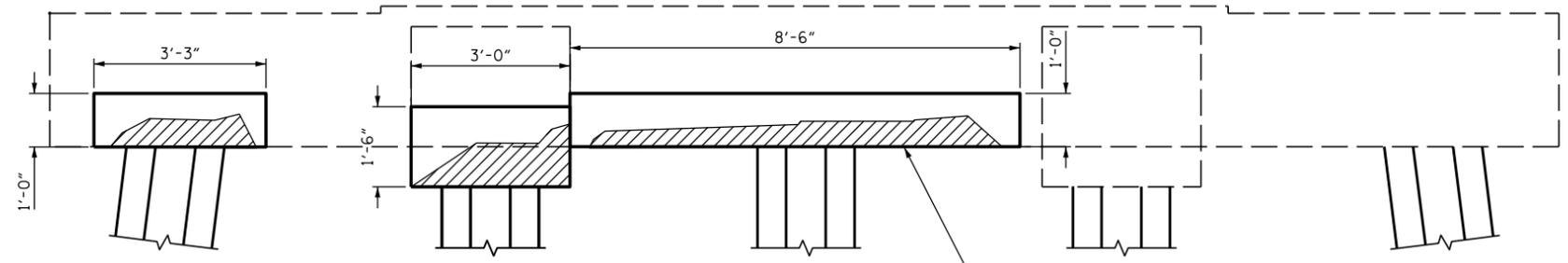
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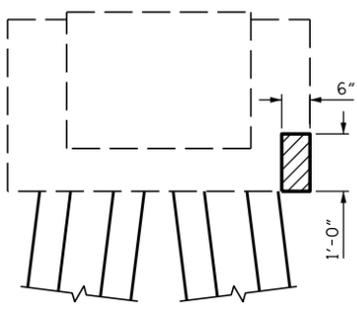


SIDE VIEW
NORTH FACE

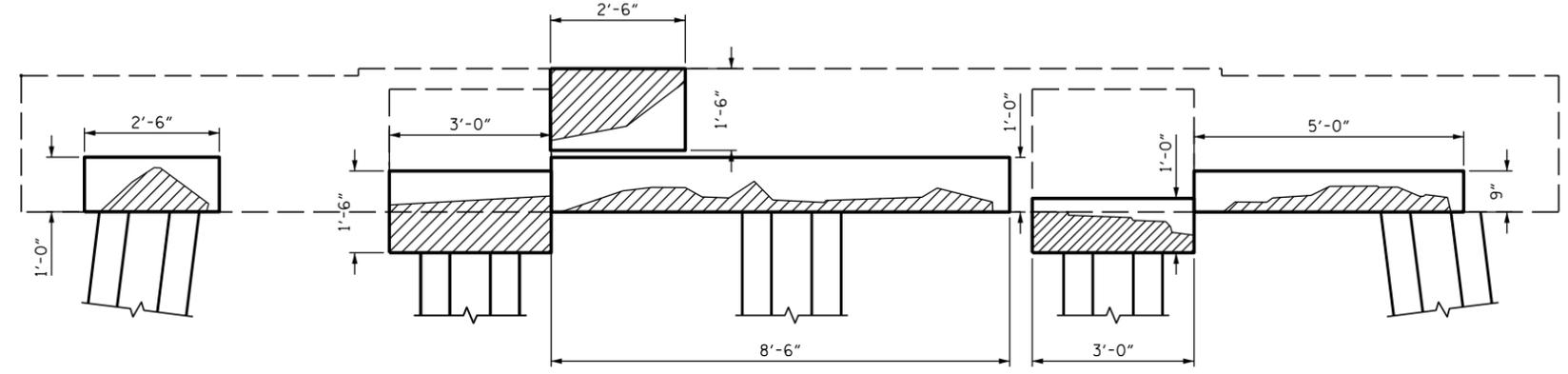


ELEVATION
WEST FACE

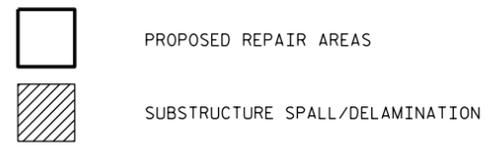
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16



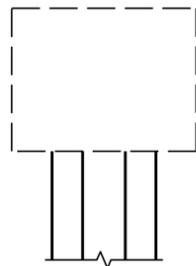
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 8**

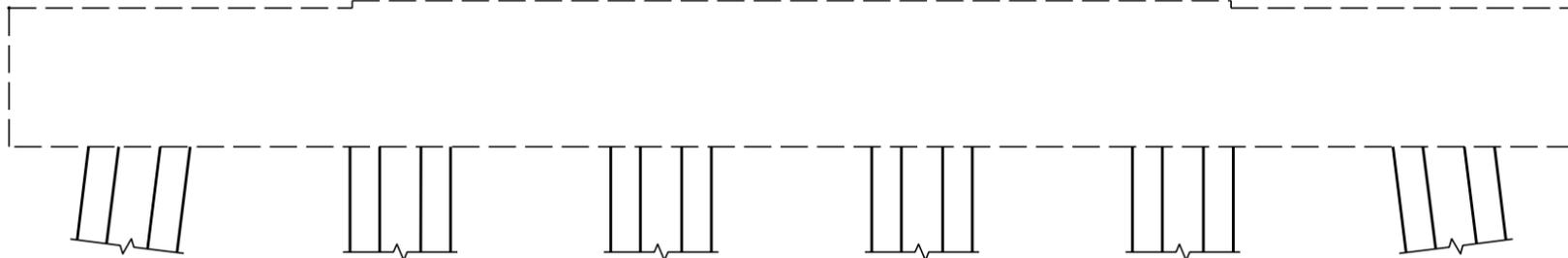
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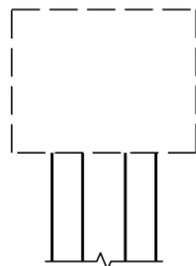
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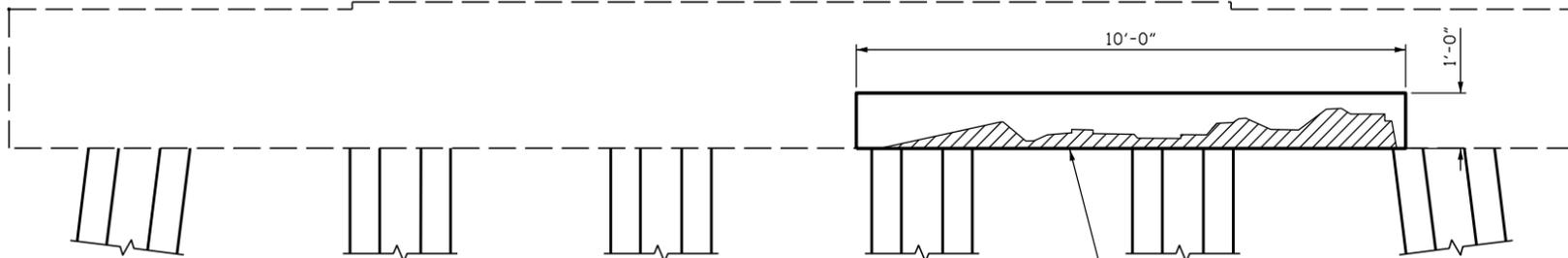
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum



12/13/2016

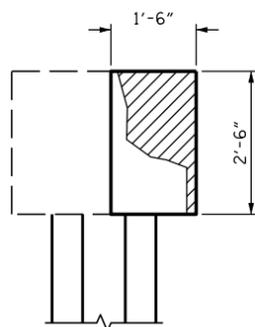
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 9

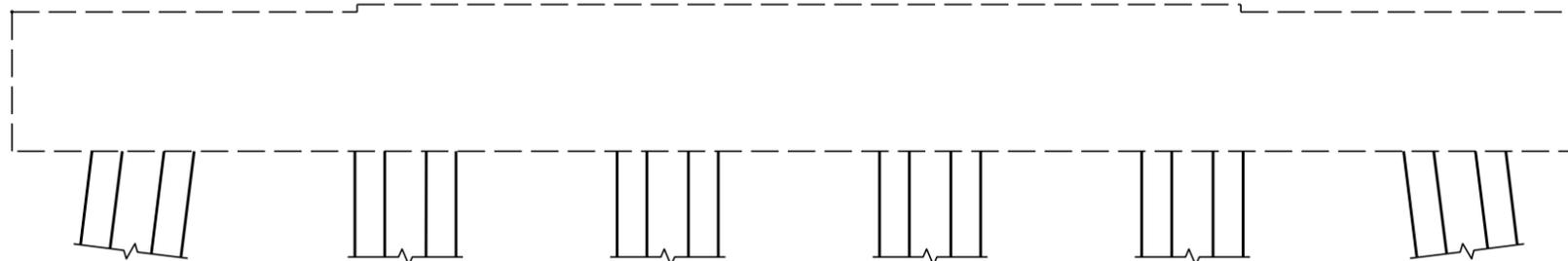
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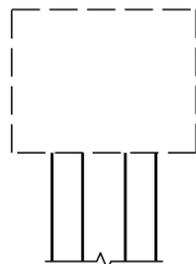
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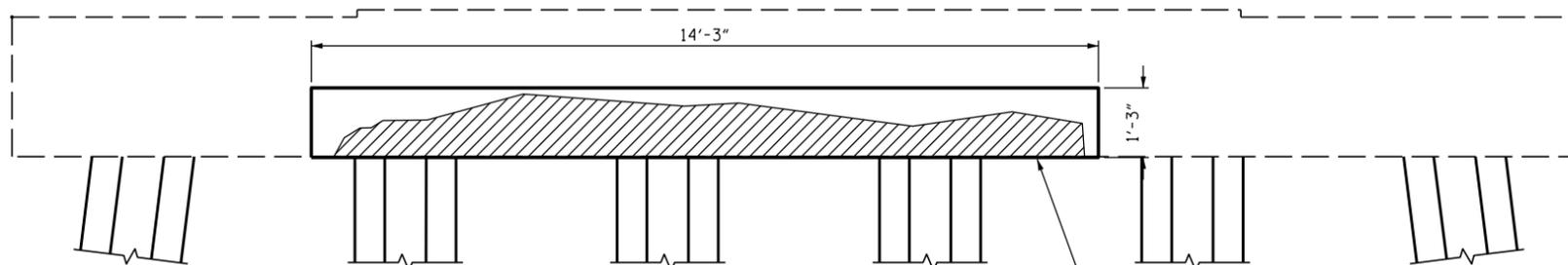
SIDE VIEW
NORTH FACE



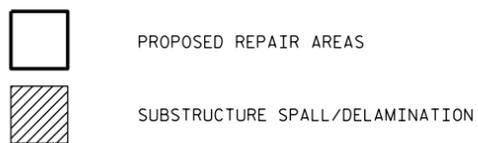
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum



12/13/2016

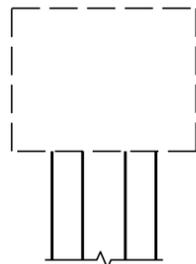
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 10

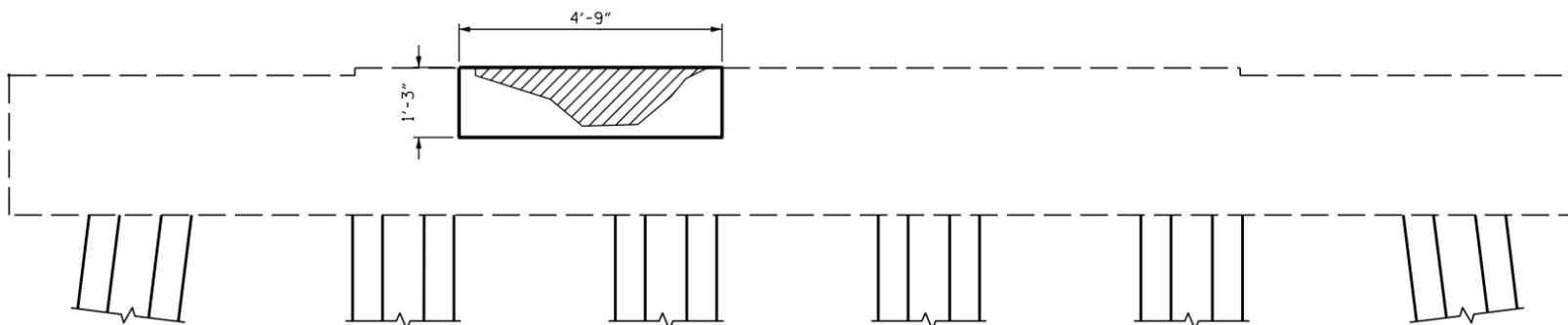
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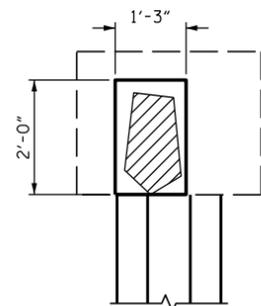
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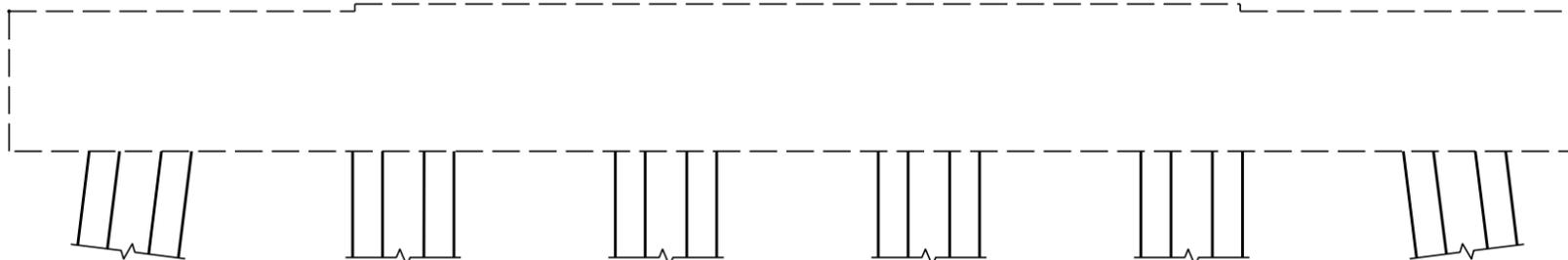
SIDE VIEW
NORTH FACE



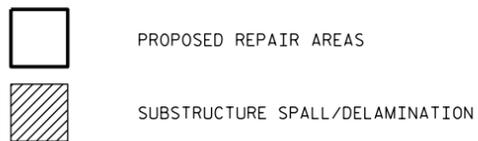
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 16097695C75A467...

 12/13/2016

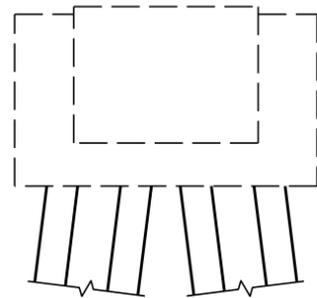
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 11

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

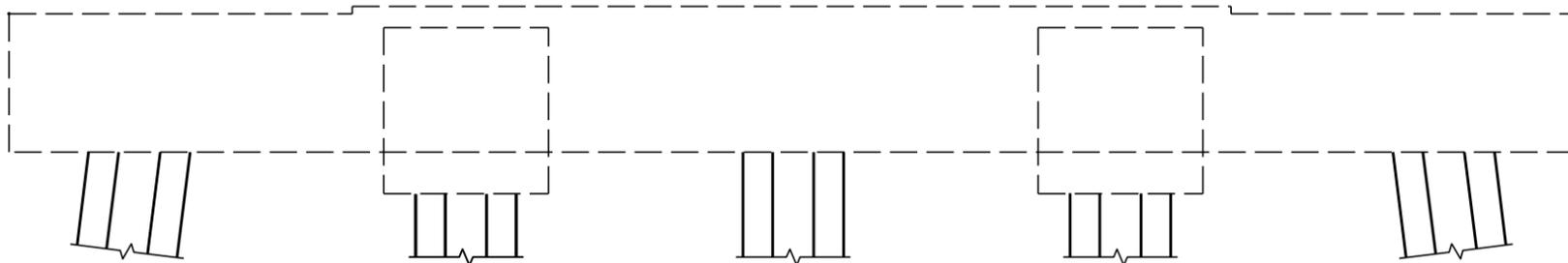
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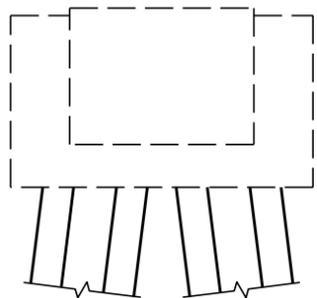
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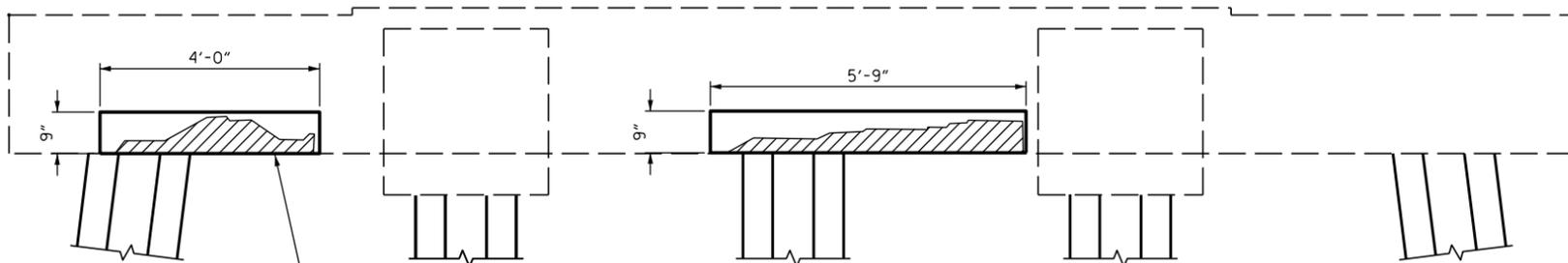
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum



12/13/2016

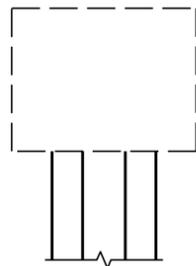
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 12

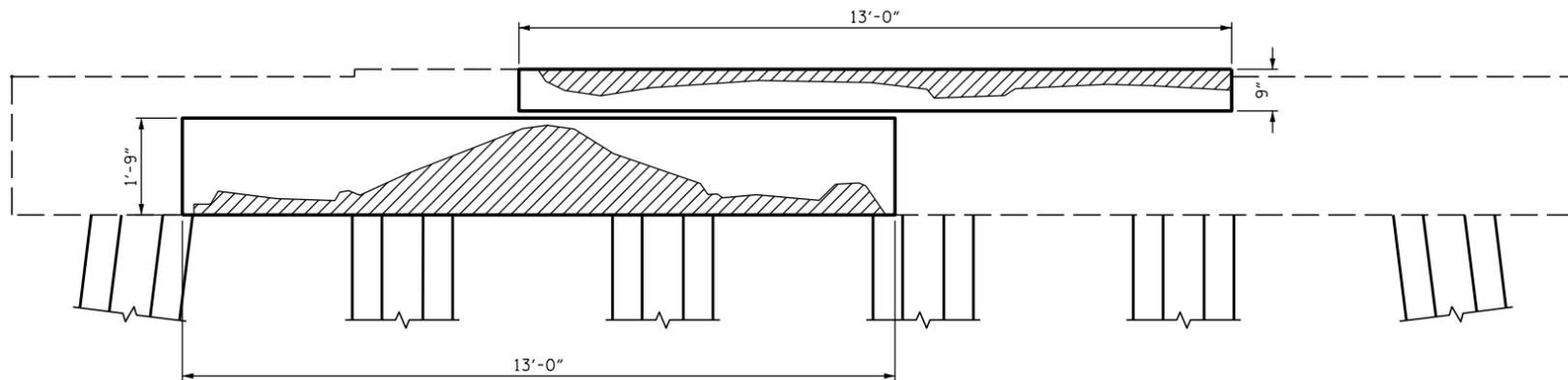
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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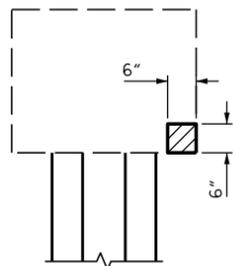
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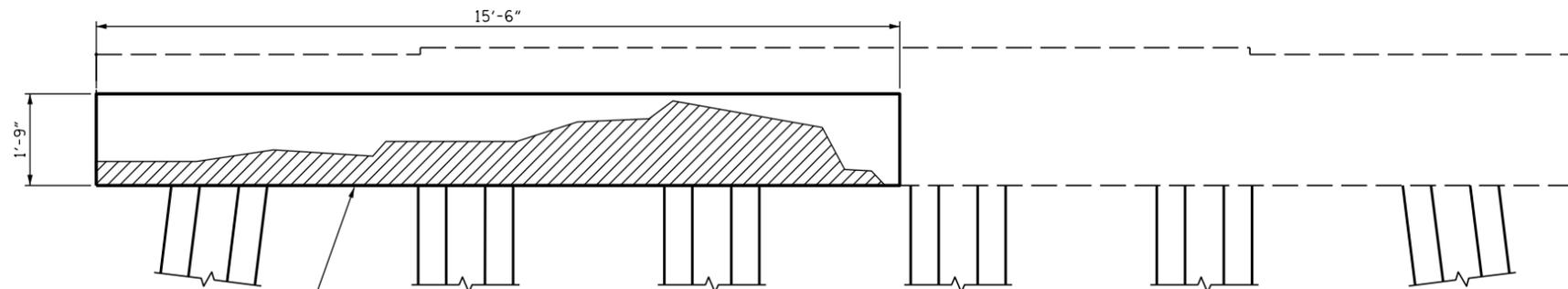
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 16097695C75A467...

 12/13/2016

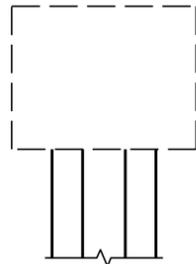
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 13**

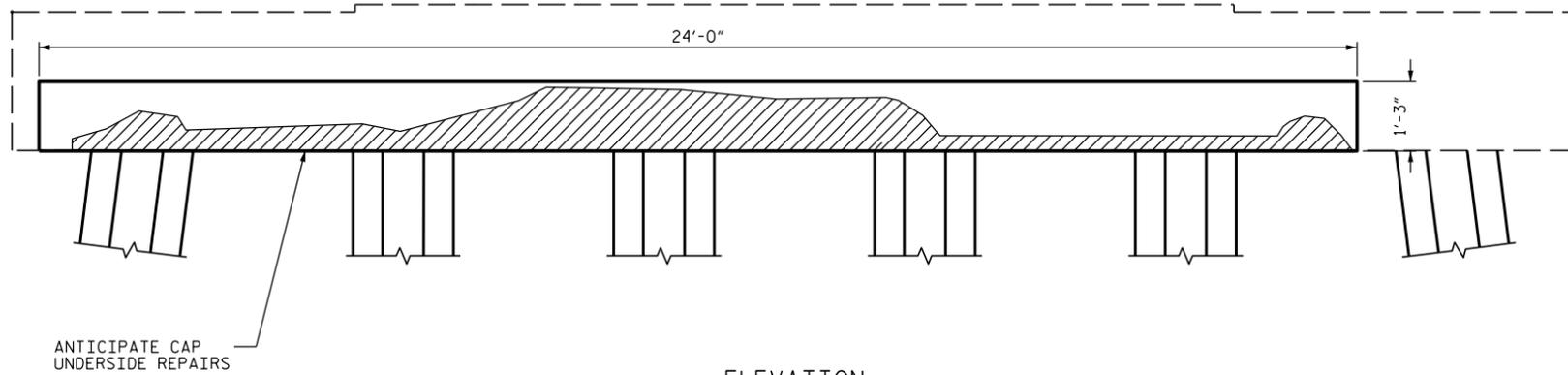
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DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

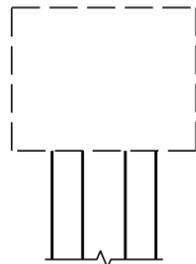
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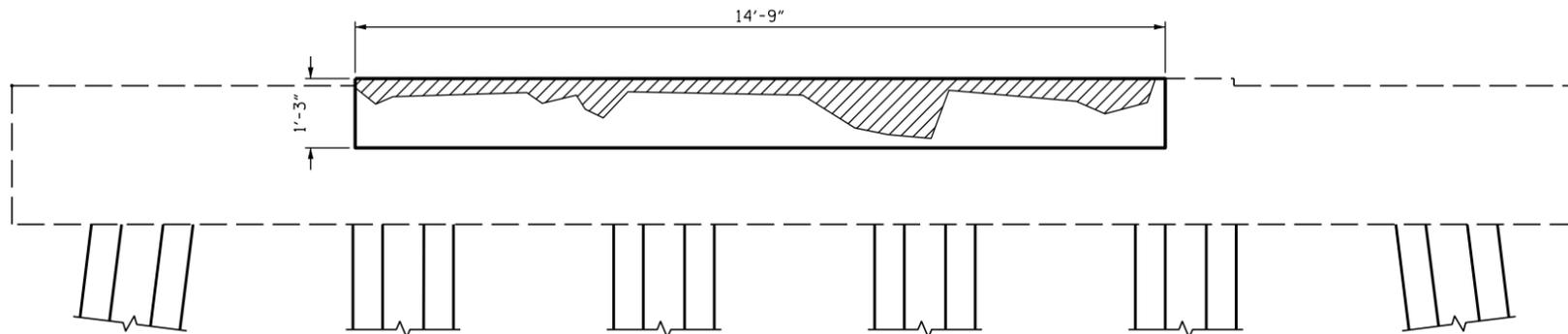
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NORTH FACE



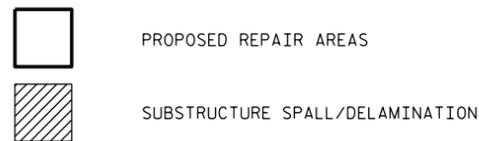
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 16097695C75A467...

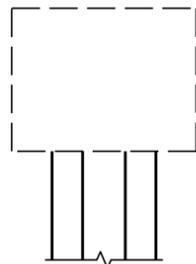
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 14

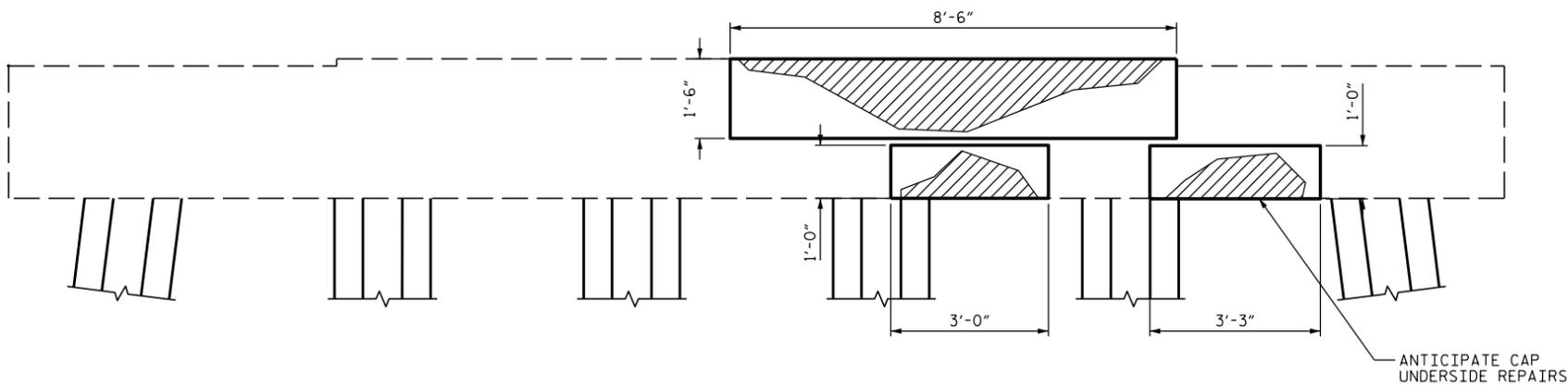
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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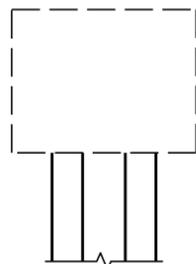
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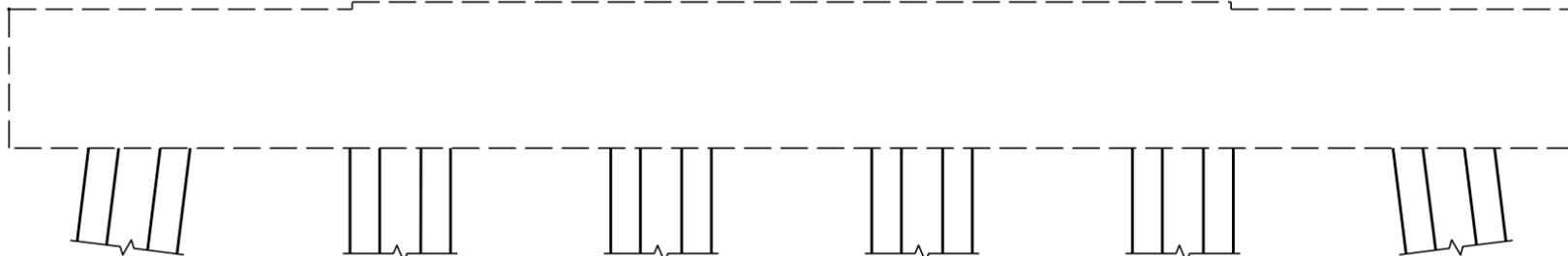
SIDE VIEW
NORTH FACE



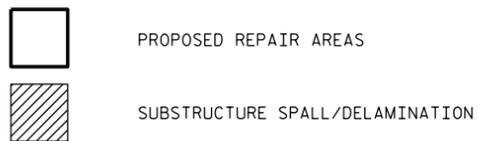
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
 16097695C75A467...

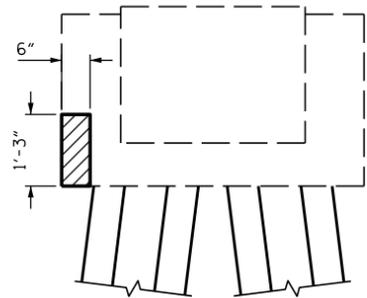
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 15

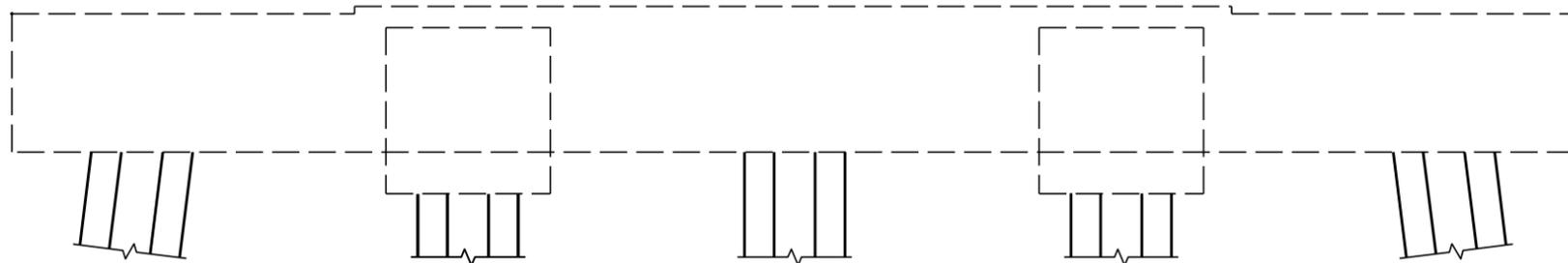
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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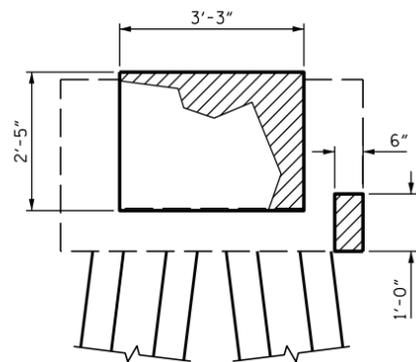
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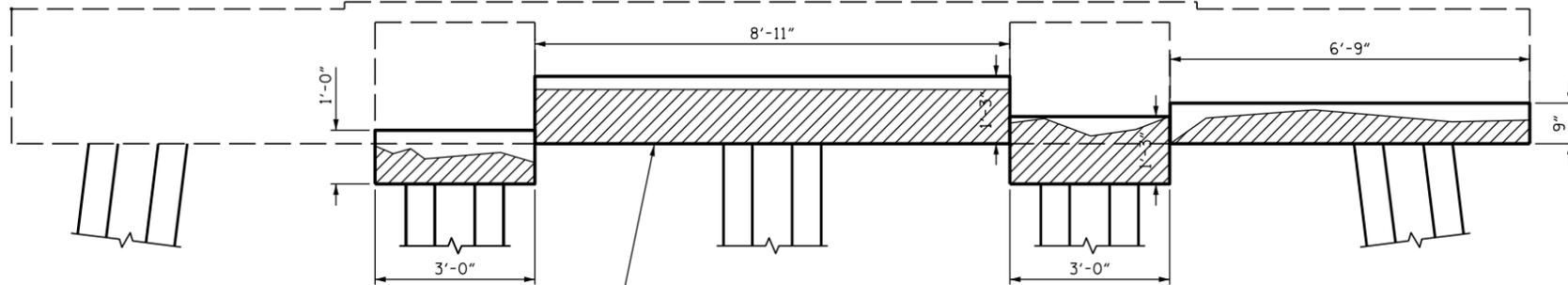
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum



12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

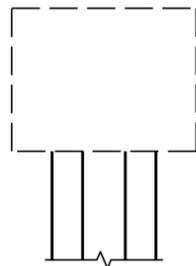
**SUBSTRUCTURE CONC.
 REPAIR - BENT 16**

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

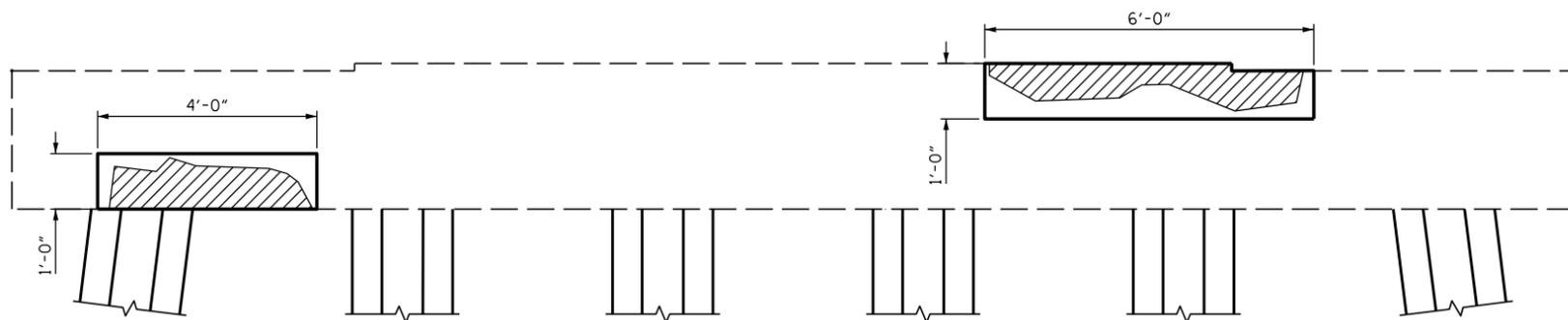
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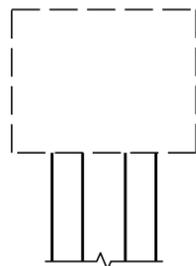
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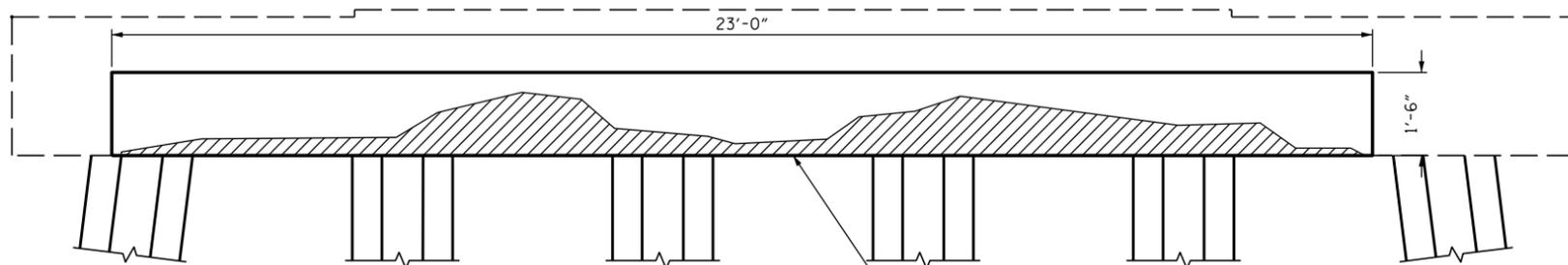
SIDE VIEW
NORTH FACE



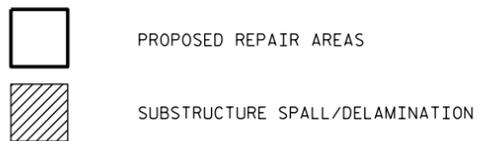
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum



12/13/2016

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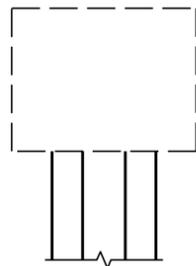
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 17**

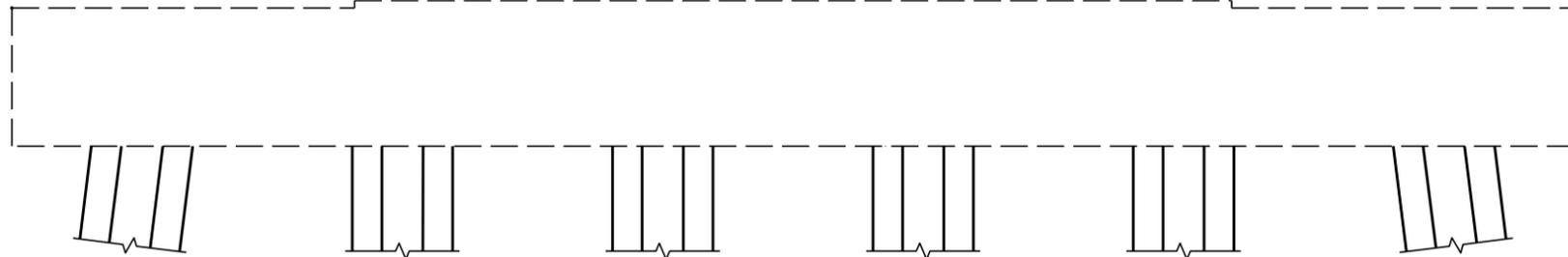
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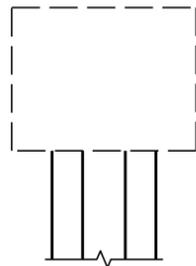
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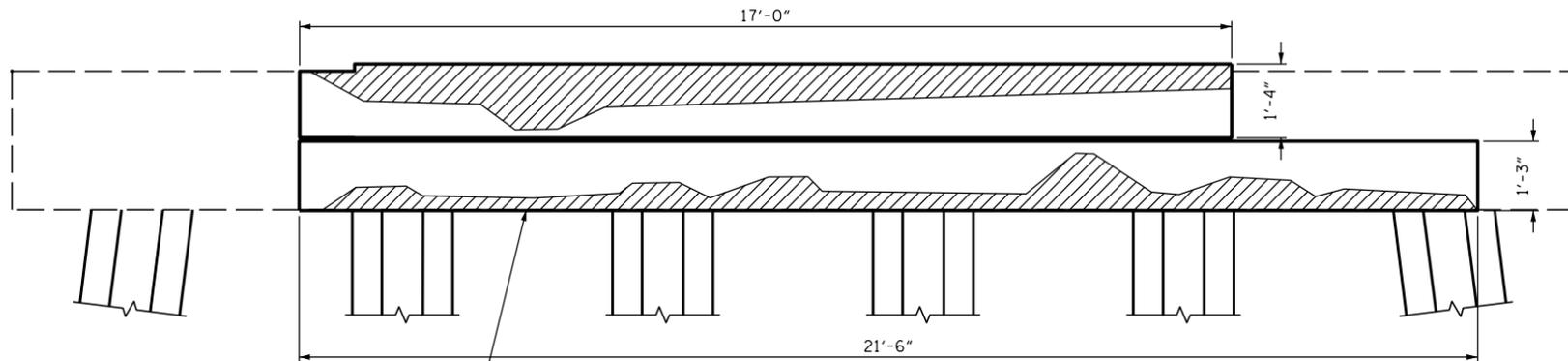
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum



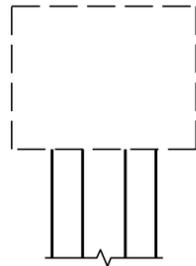
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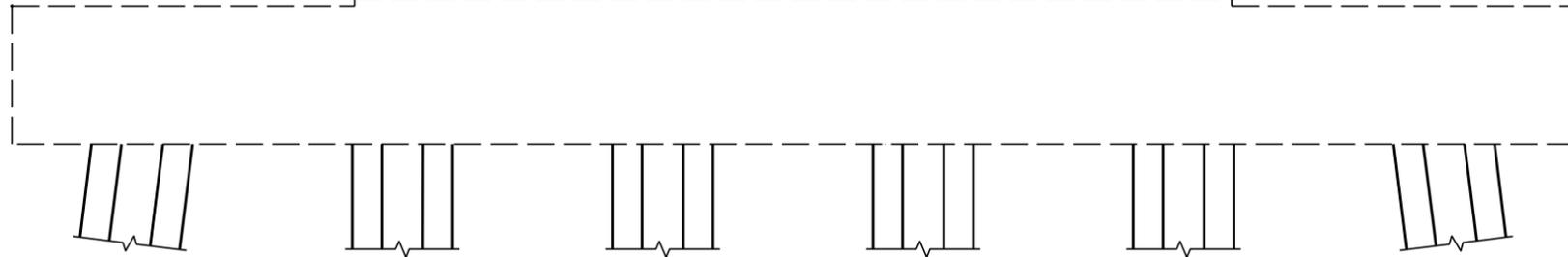
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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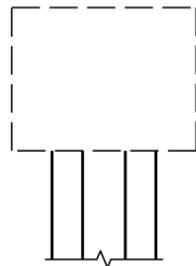
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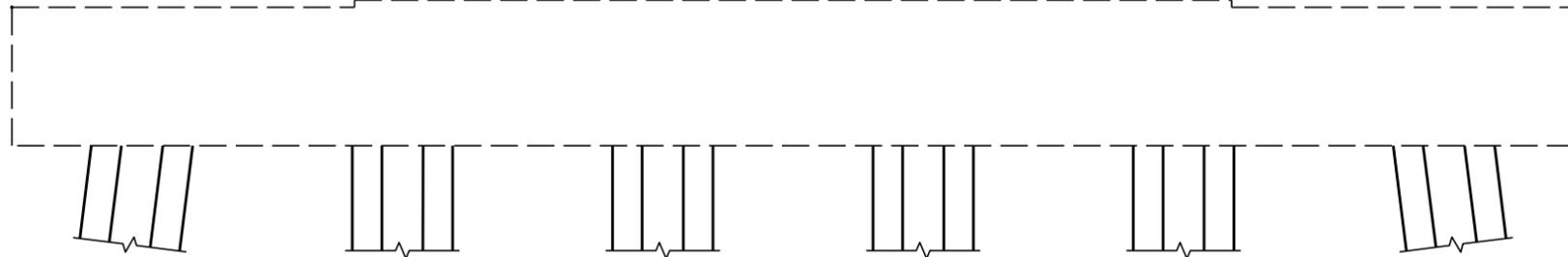
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum



12/13/2016

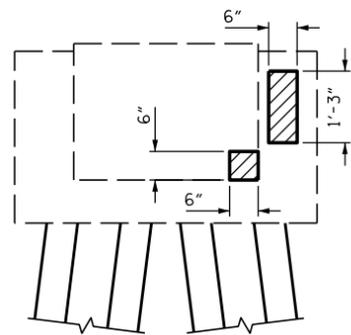
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 19

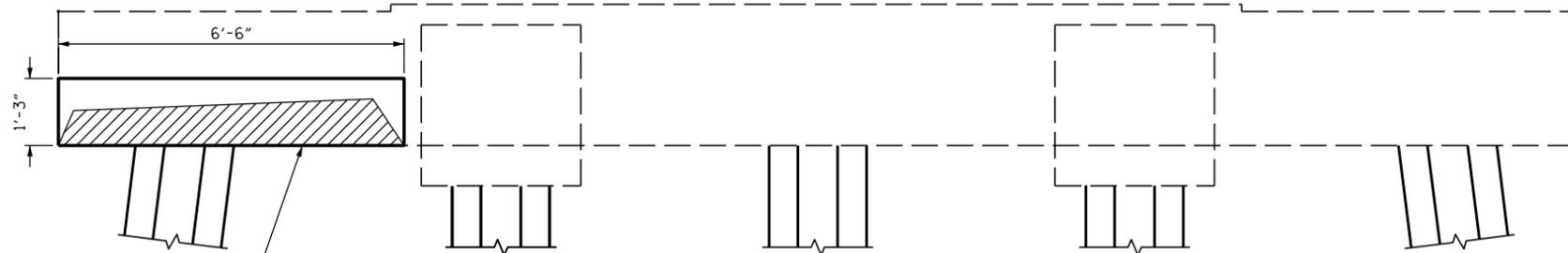
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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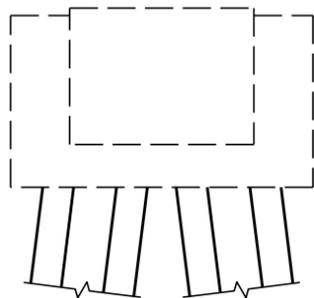
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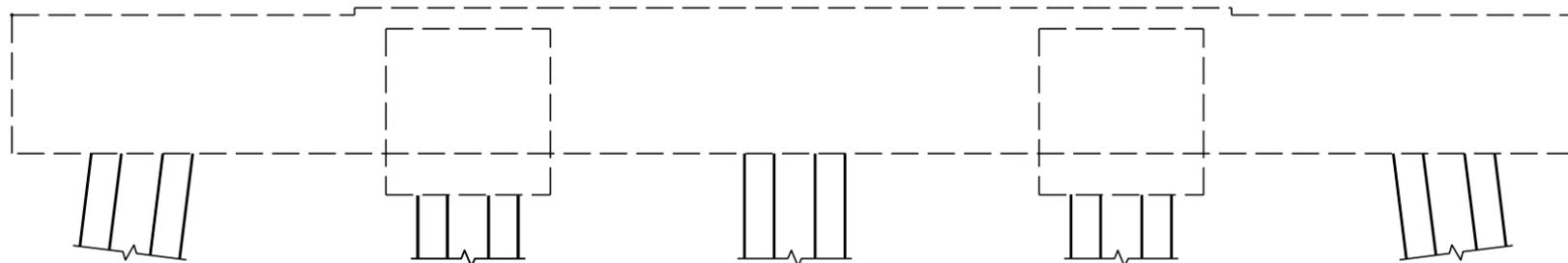
SIDE VIEW
NORTH FACE



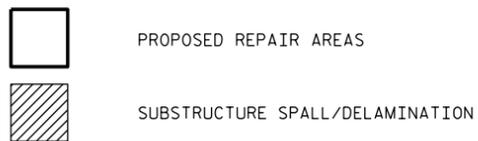
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum



12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

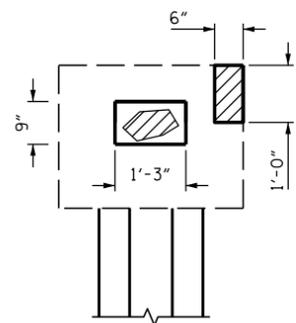
**SUBSTRUCTURE CONC.
 REPAIR - BENT 20**

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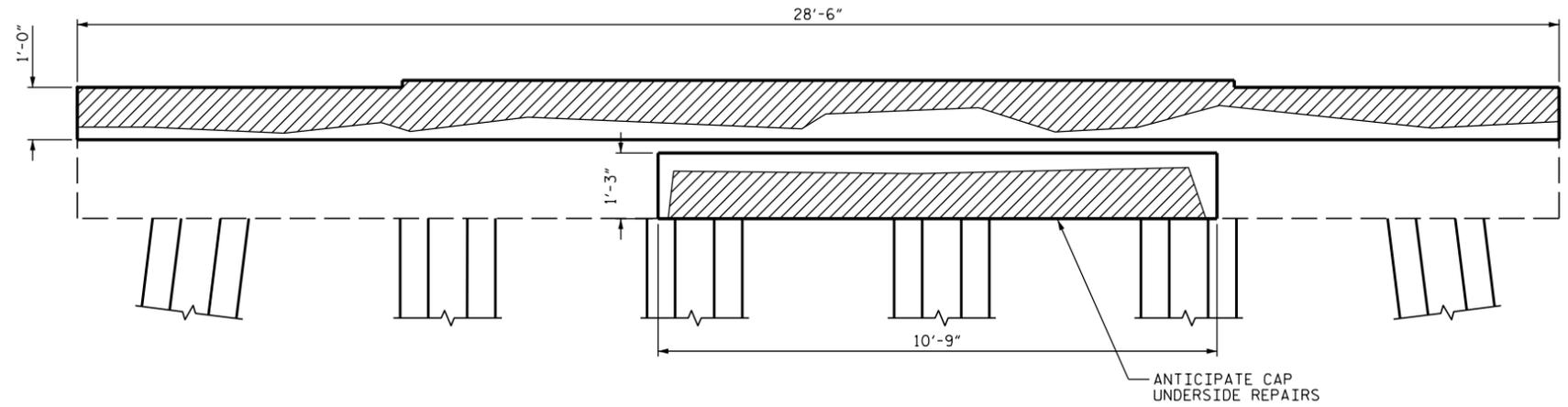
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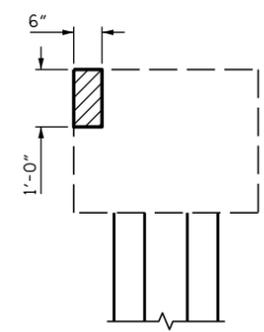
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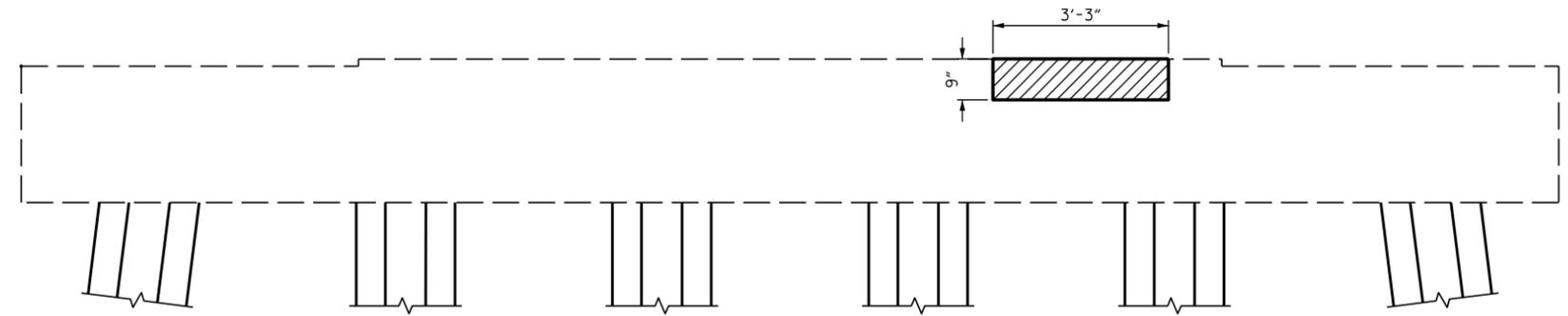
SIDE VIEW
NORTH FACE



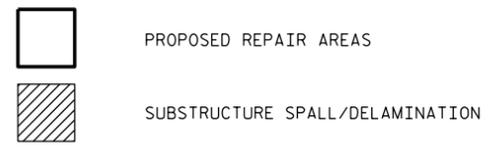
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 16097695C75A467...



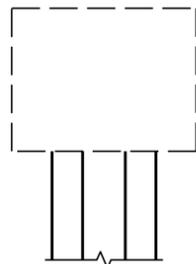
12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 21

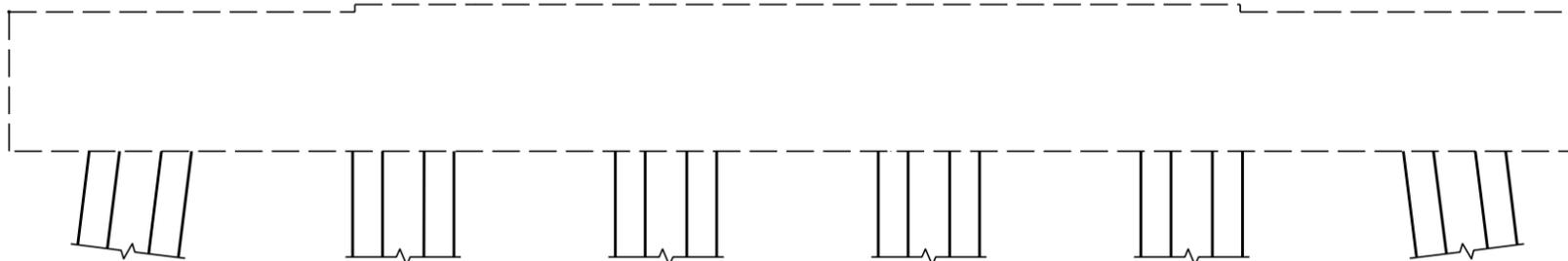
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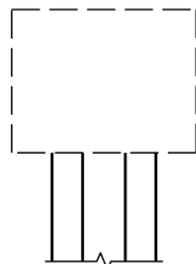
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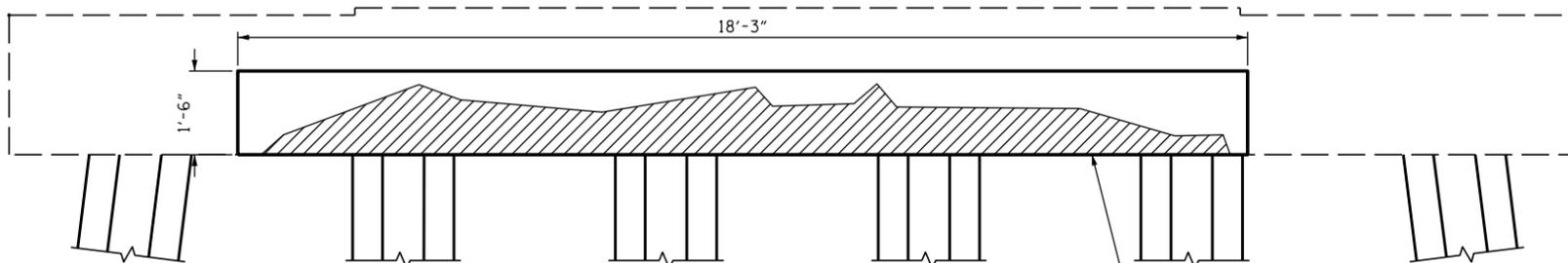
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum

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12/13/2016

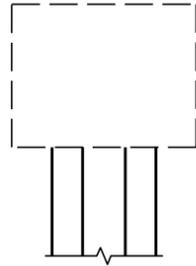
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 22

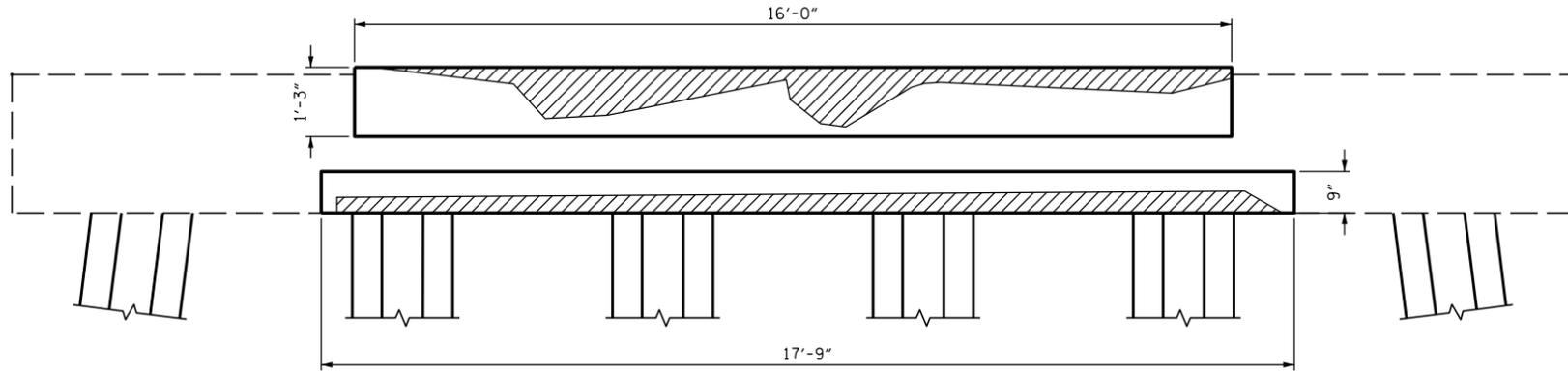
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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DOCUMENT NOT CONSIDERED
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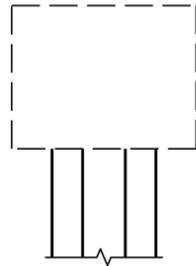
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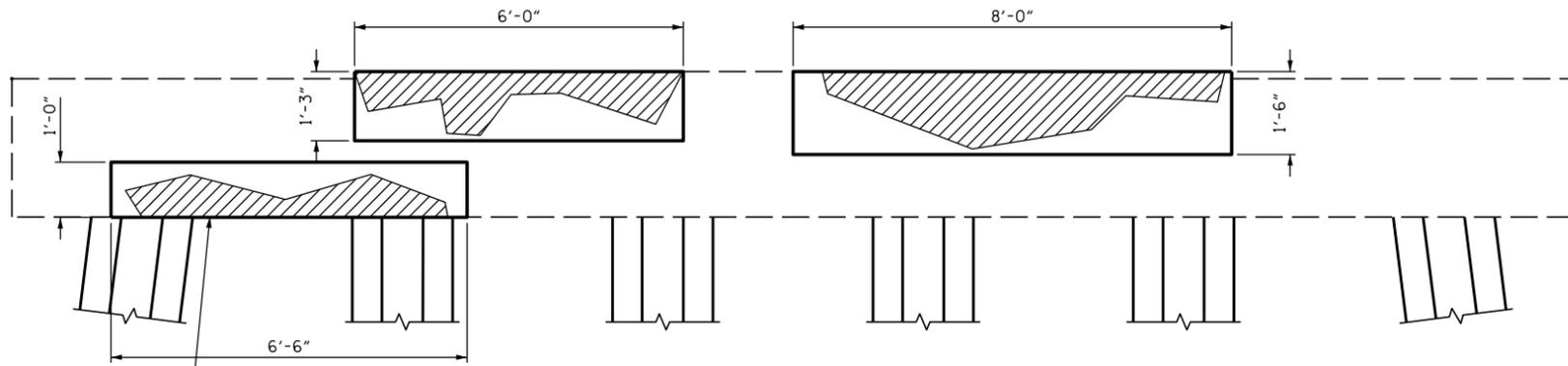
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

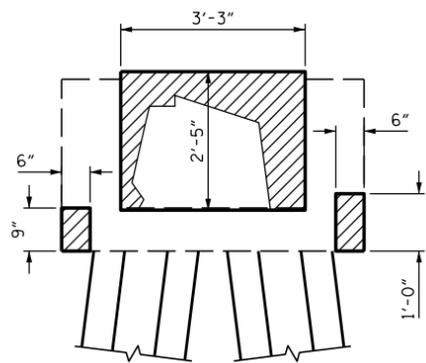
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 23

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

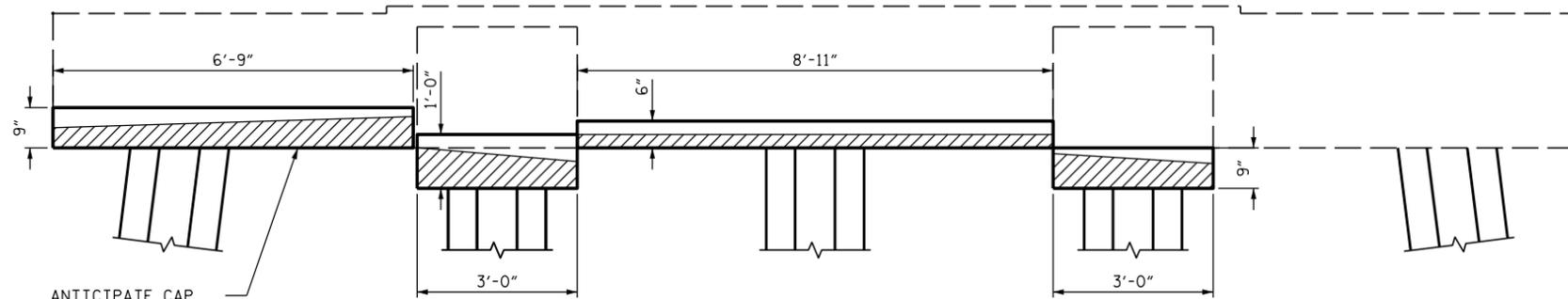
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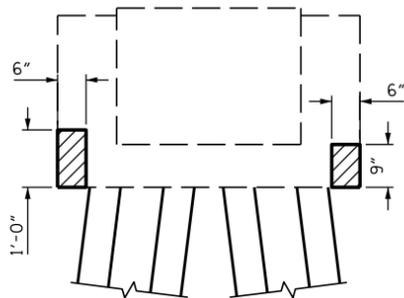
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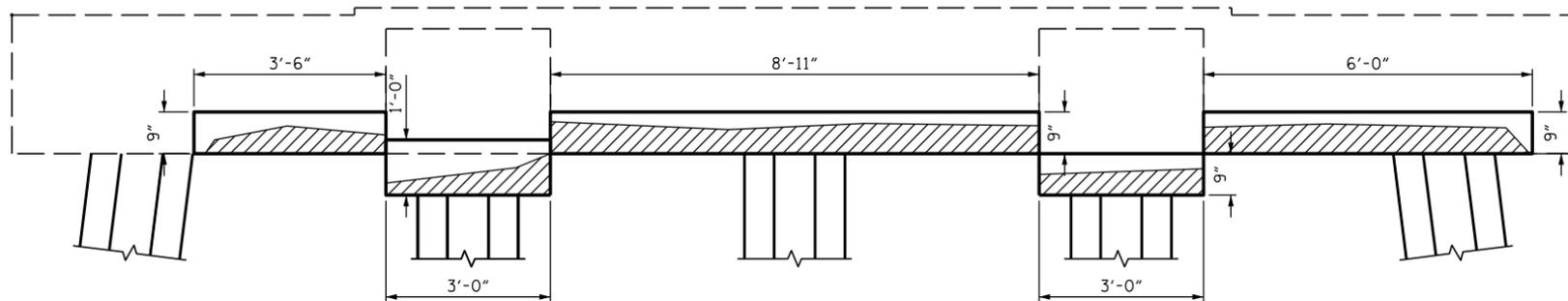
SIDE VIEW
NORTH FACE



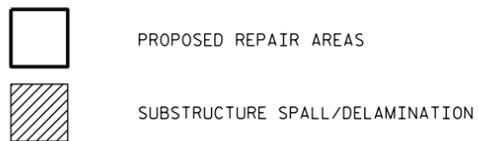
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

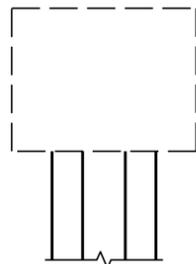
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 24

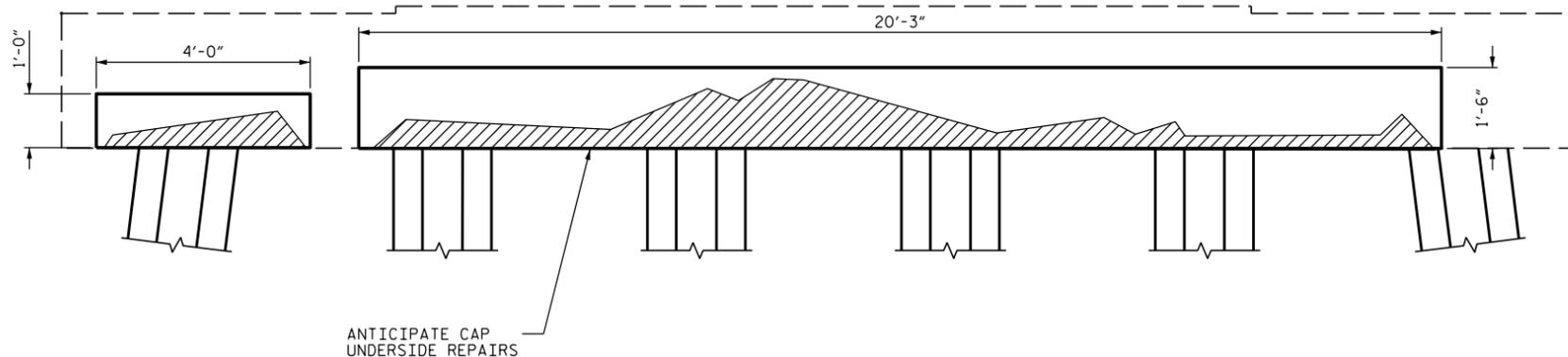
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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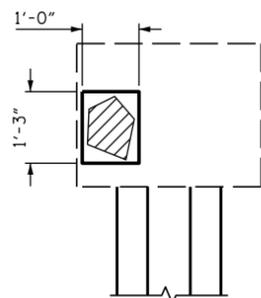
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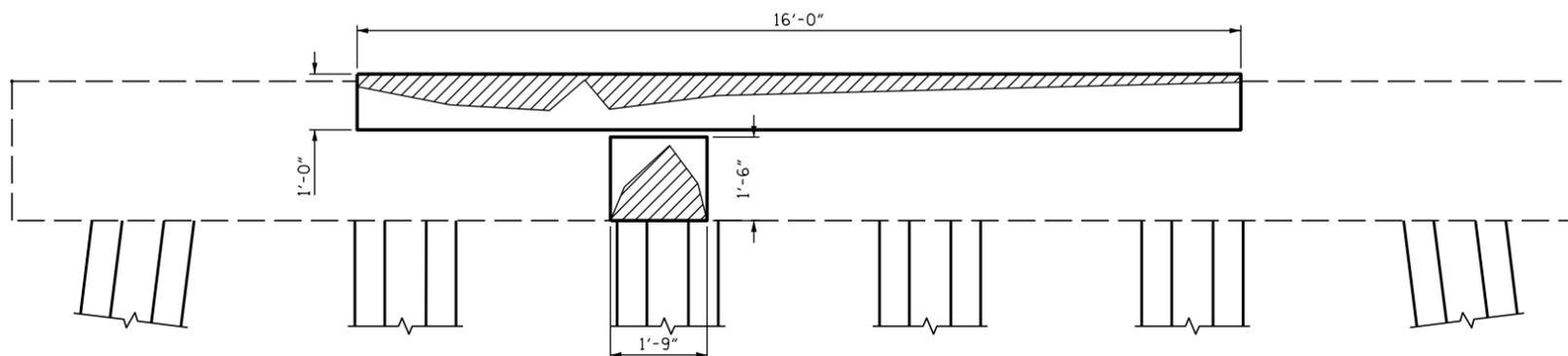
SIDE VIEW
NORTH FACE



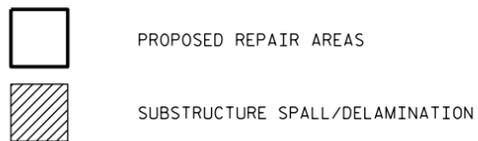
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

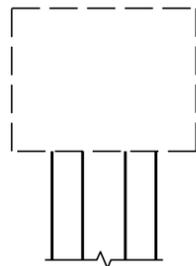
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 25

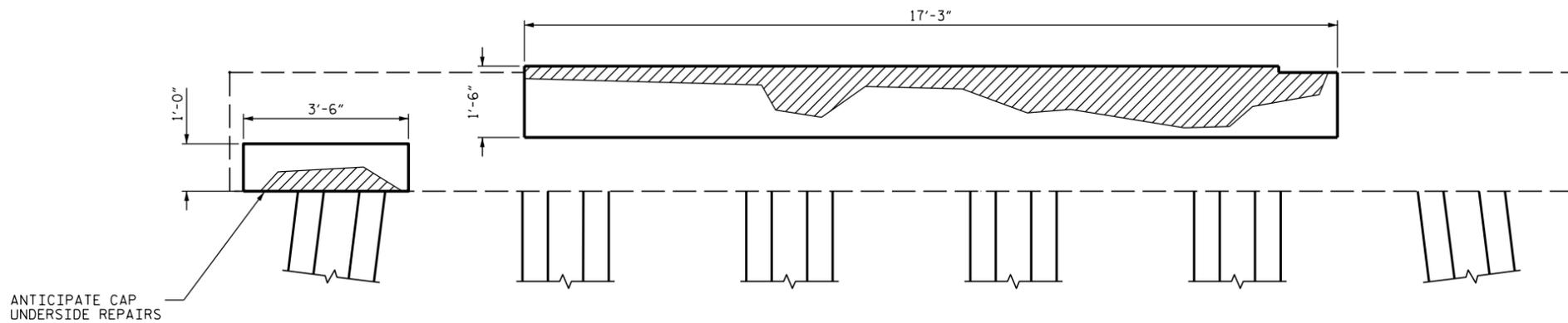
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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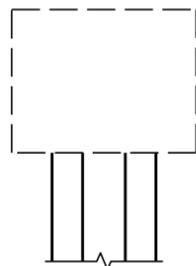
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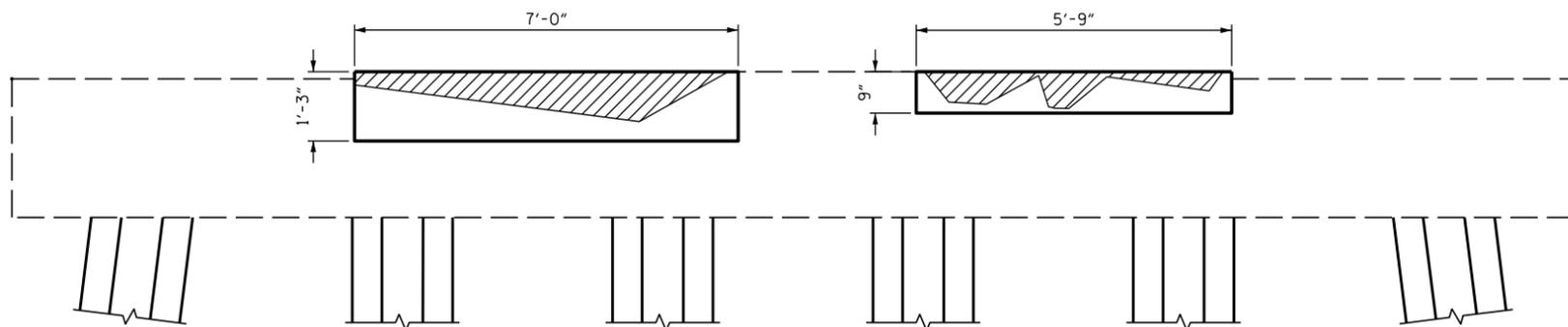
SIDE VIEW
NORTH FACE



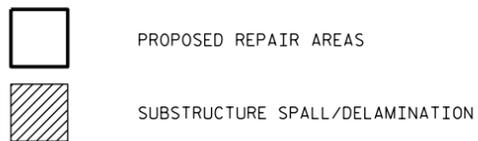
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

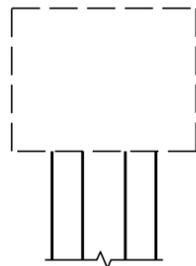
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 26

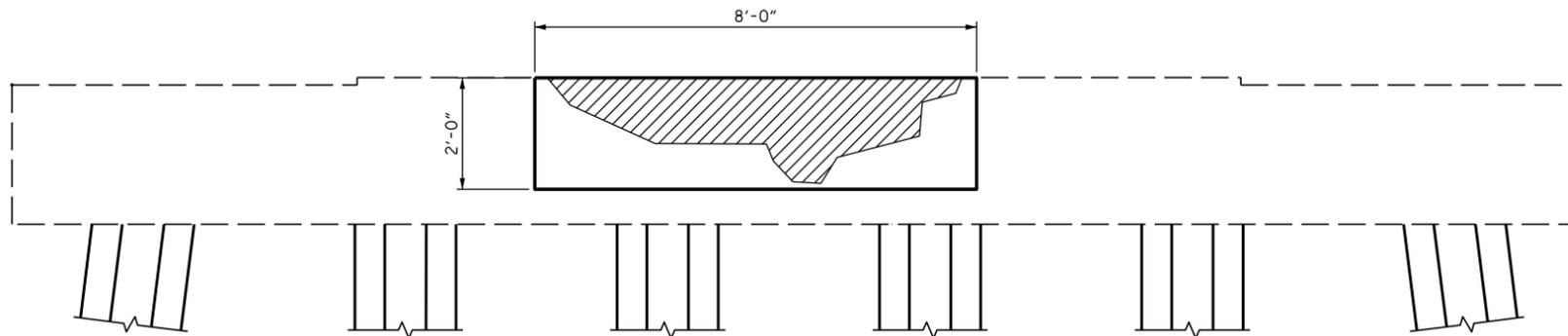
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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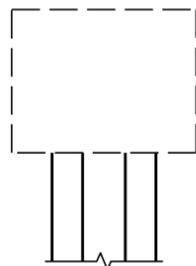
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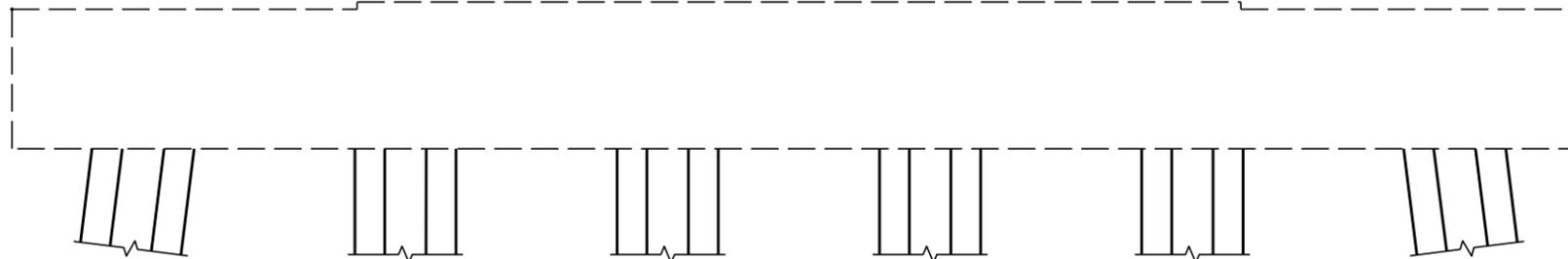
SIDE VIEW
NORTH FACE



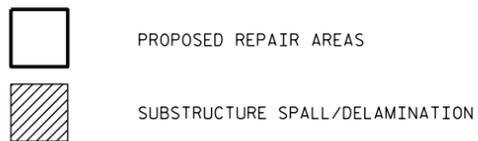
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

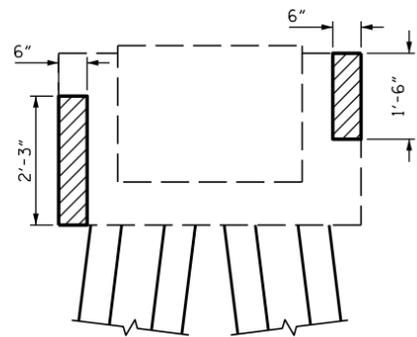
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 27

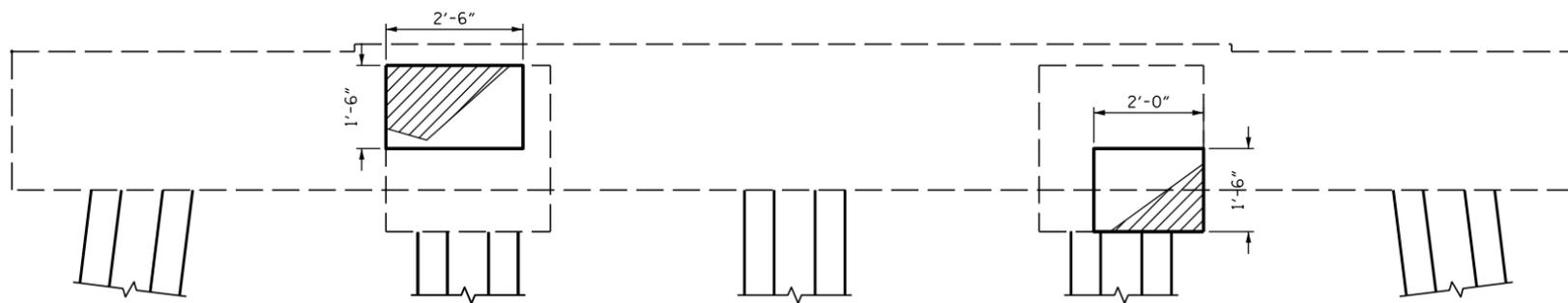
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DRAWN BY : J. H. DUKE DATE : 07-16
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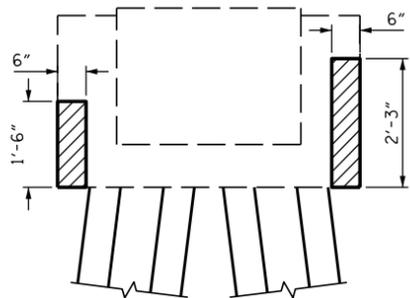
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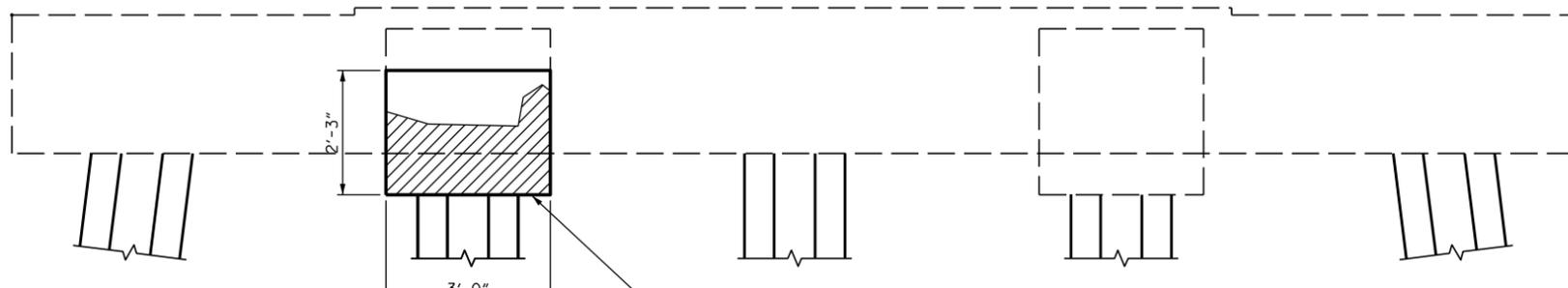
SIDE VIEW
NORTH FACE



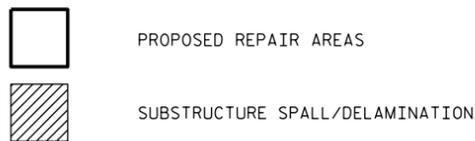
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

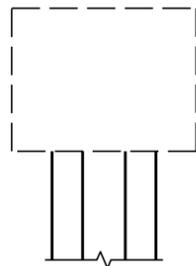
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 28

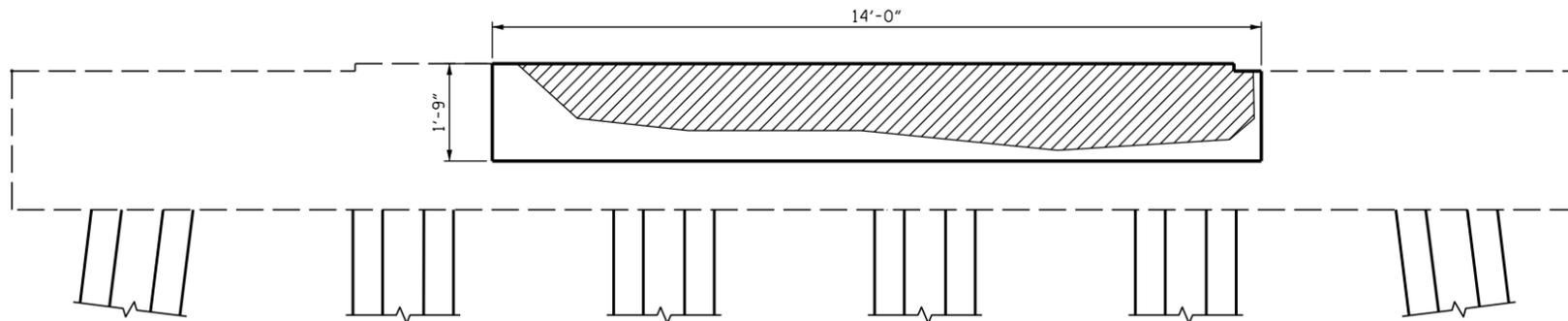
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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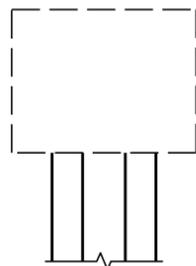
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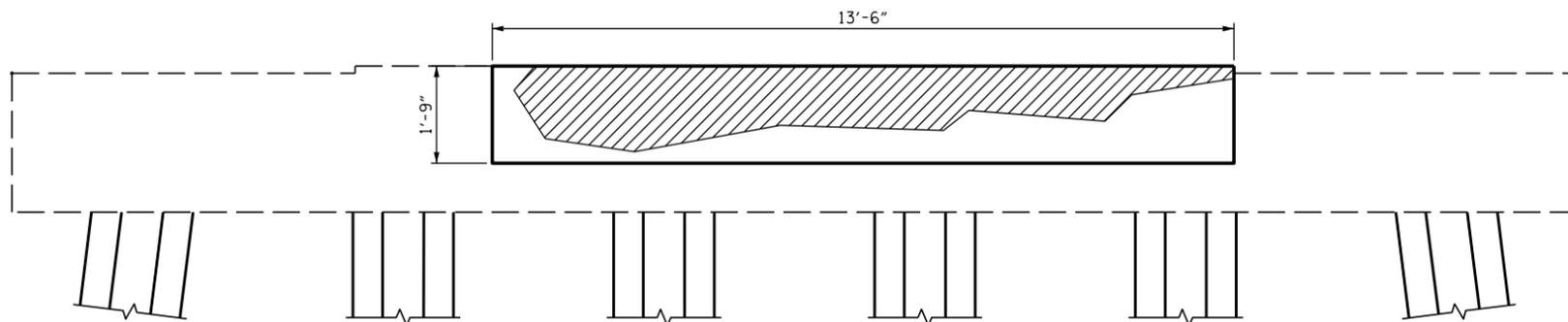
SIDE VIEW
NORTH FACE



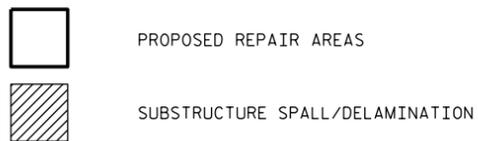
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

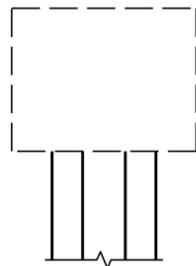
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 29

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

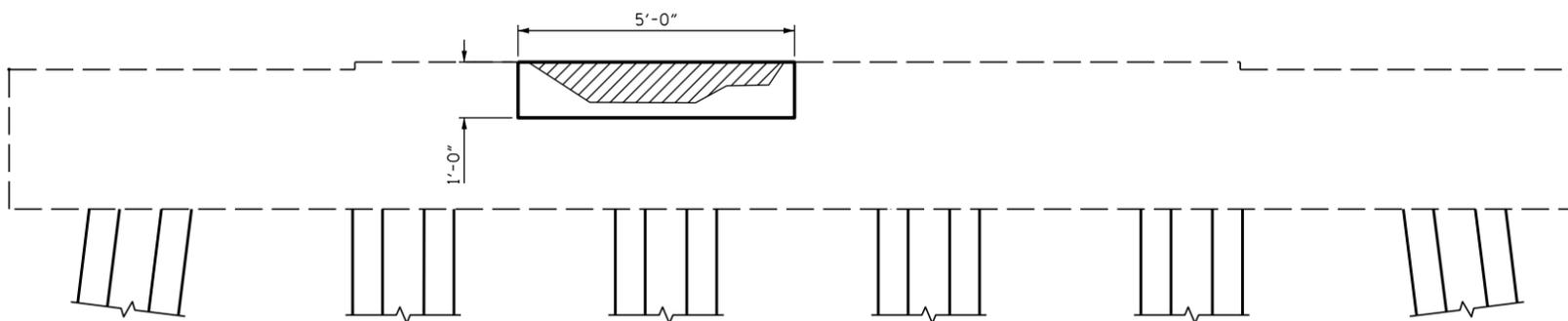
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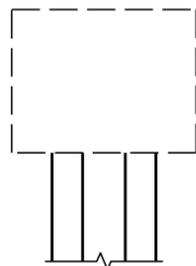
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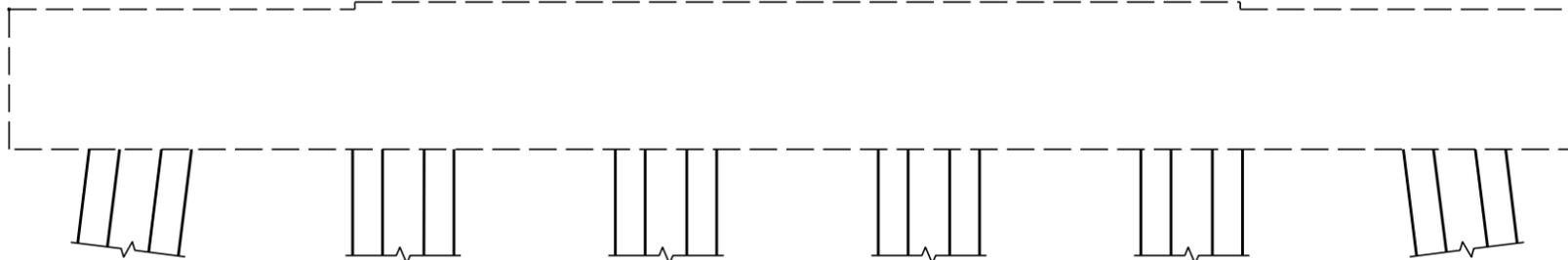
SIDE VIEW
NORTH FACE



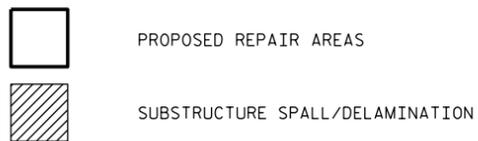
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

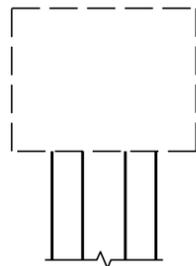
DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

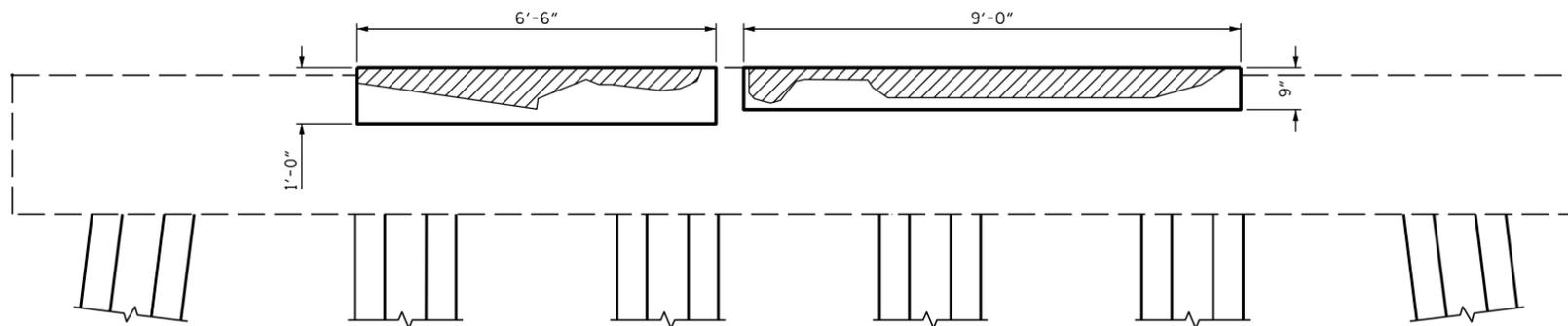
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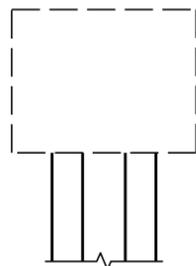
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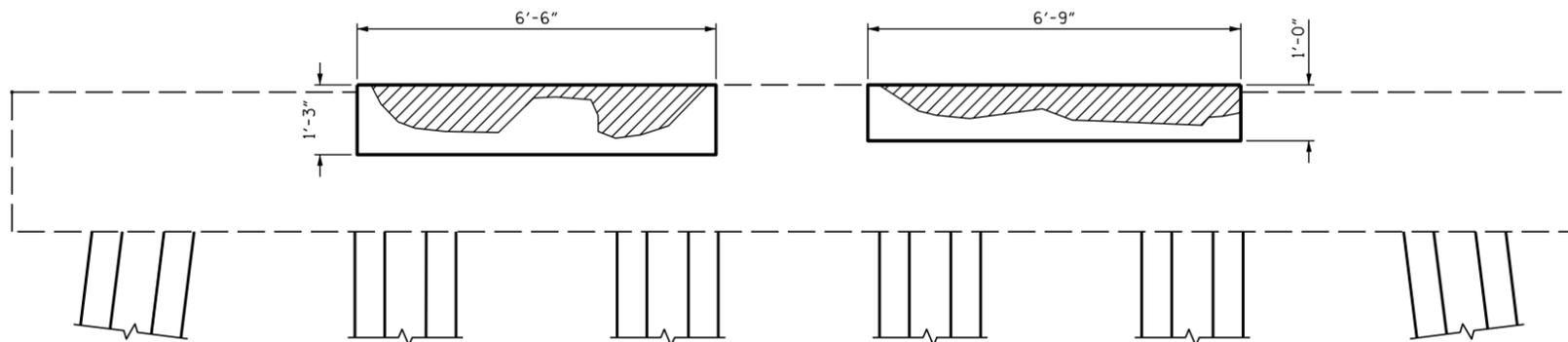
SIDE VIEW
NORTH FACE



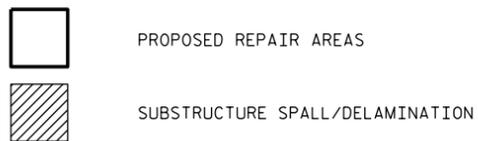
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
10007095C75A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

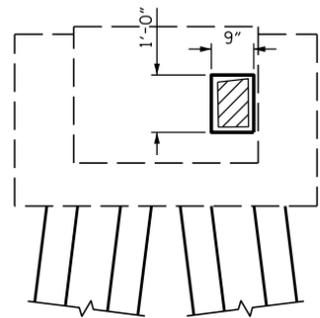
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 31

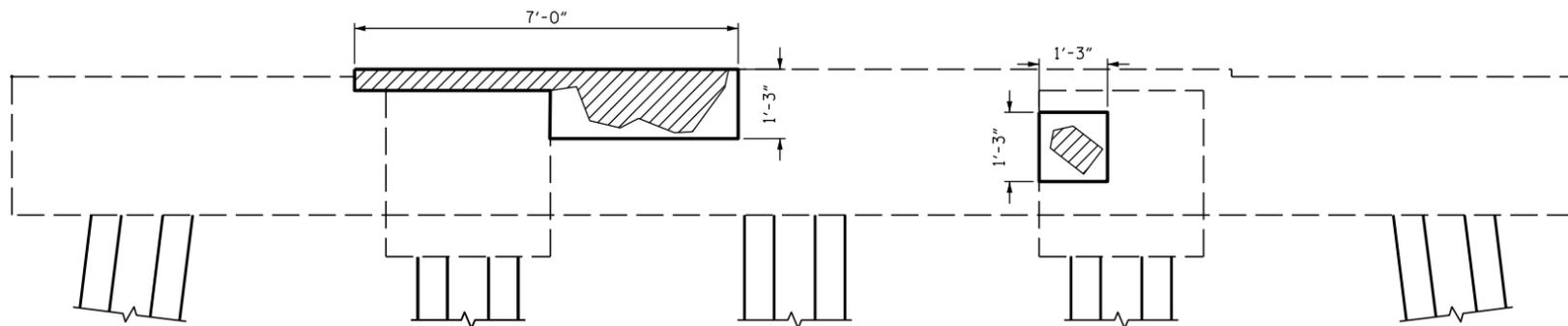
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CHECKED BY : S. L. CULLUM DATE : 07-16
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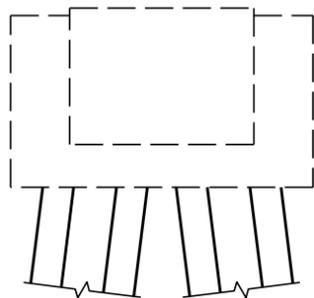
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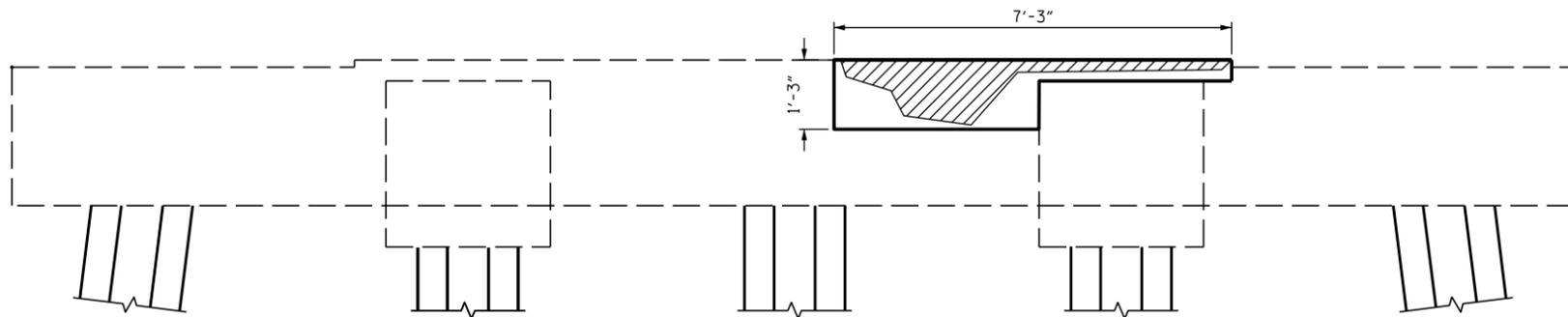
SIDE VIEW
NORTH FACE



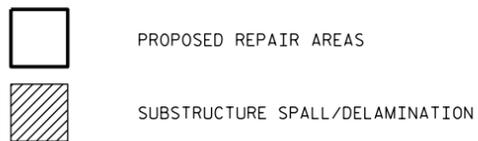
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

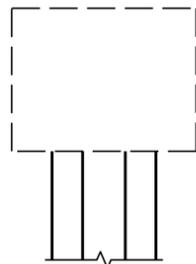
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 32

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
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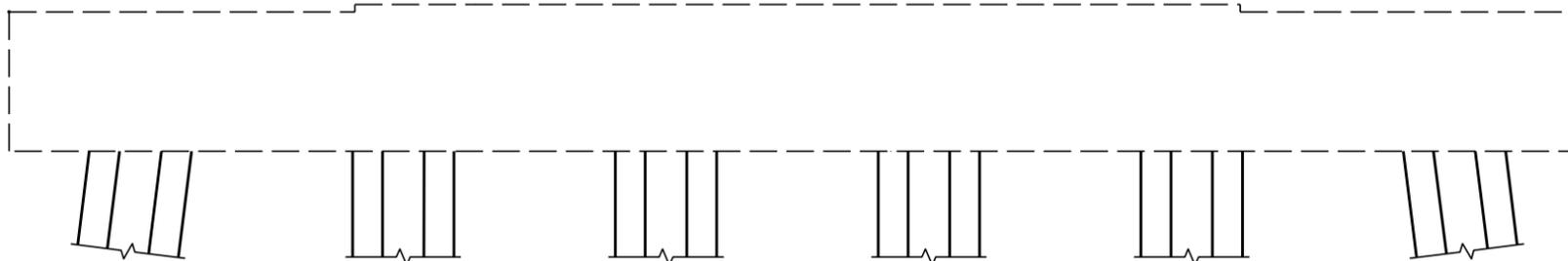
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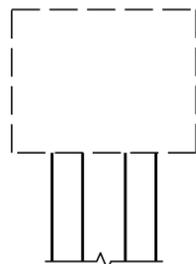
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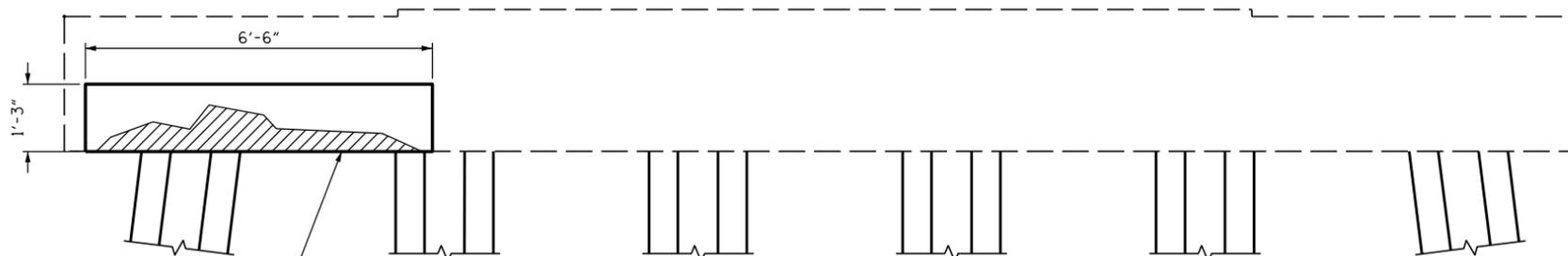
SIDE VIEW
NORTH FACE



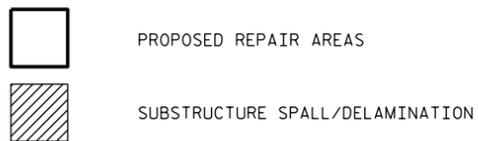
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

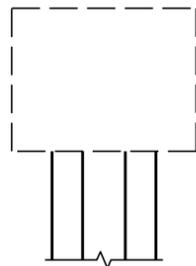
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 33

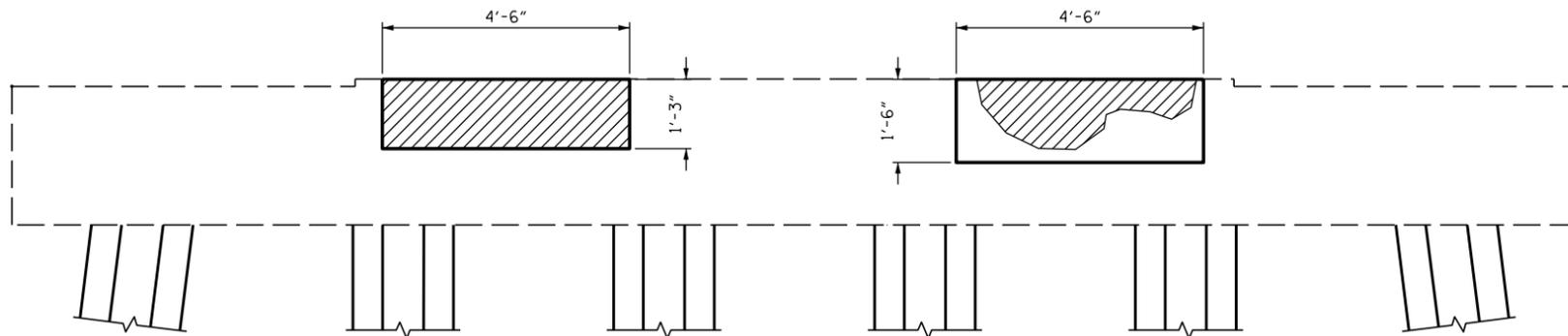
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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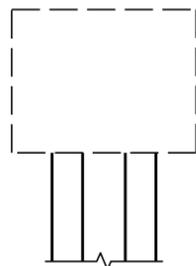
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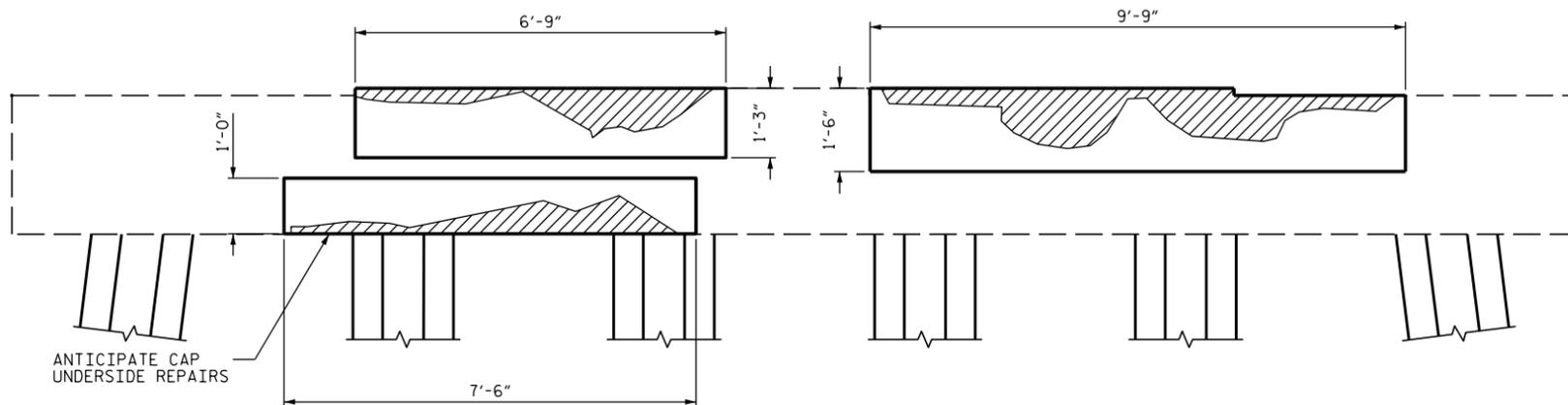
SIDE VIEW
NORTH FACE



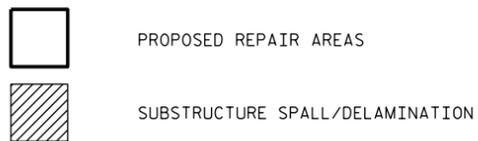
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

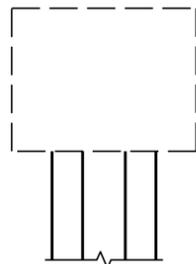
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 34

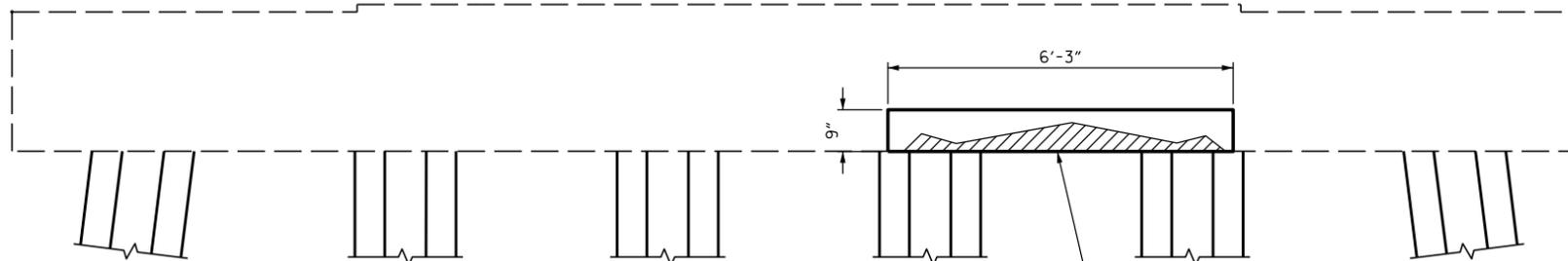
DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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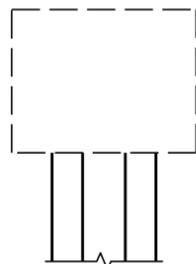
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2			4			



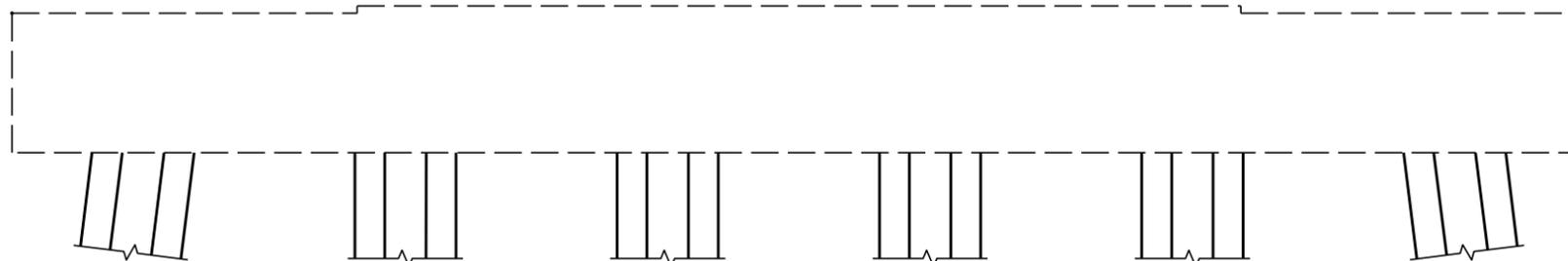
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

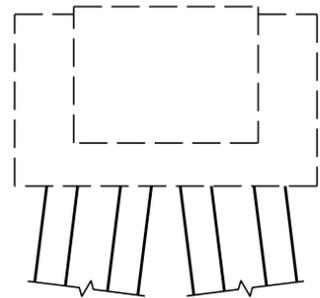
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 35

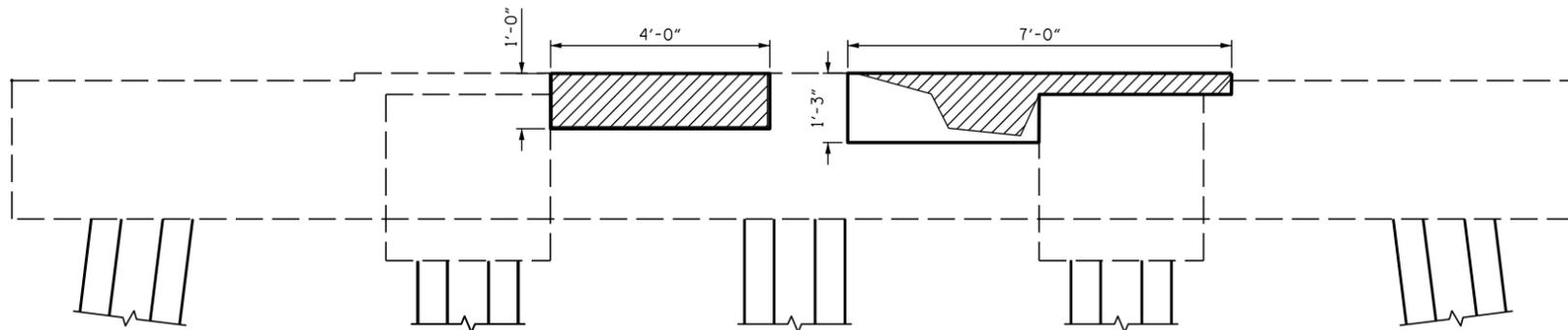
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

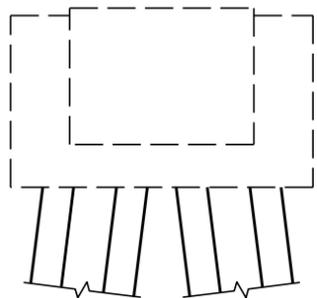
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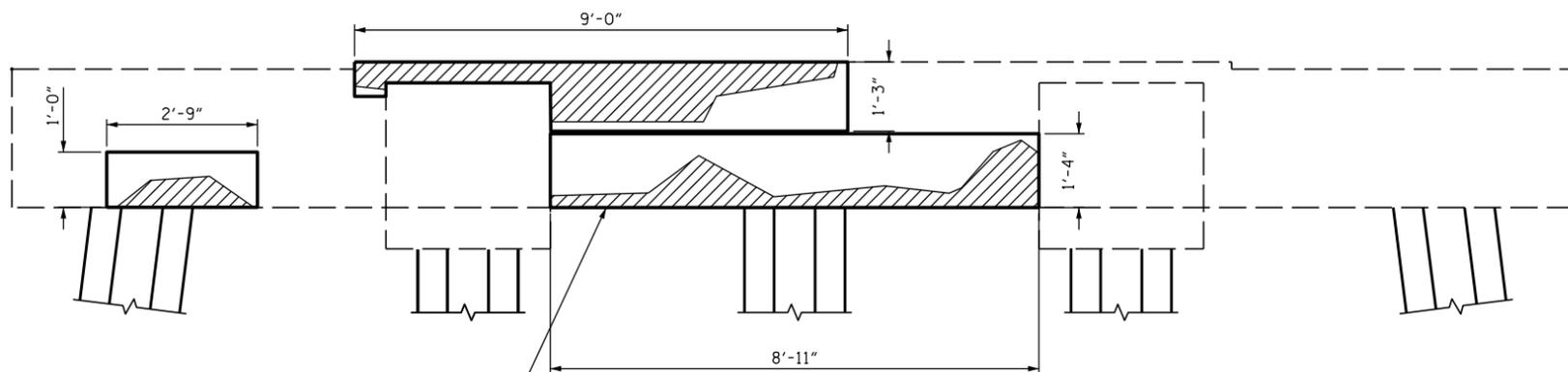
SIDE VIEW
NORTH FACE



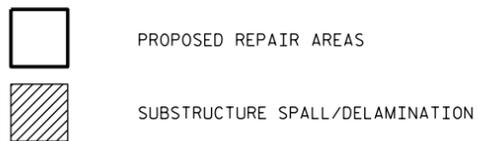
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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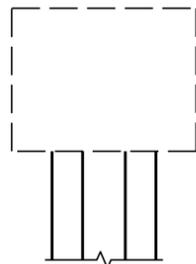
DocuSigned by:
 Samuel Cullum
 10007095C75A467...

 12/13/2016

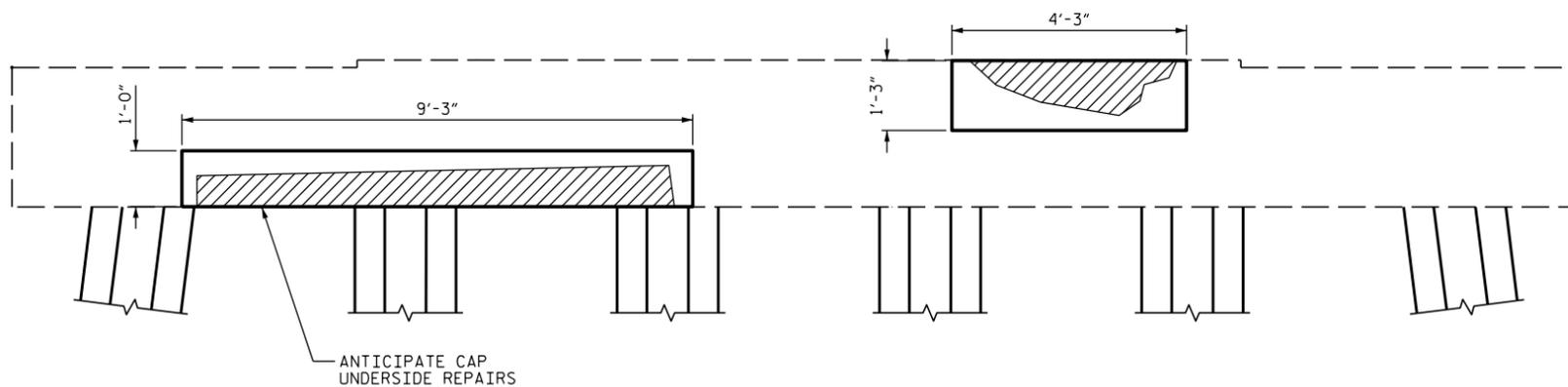
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 36						S-55
REVISIONS						TOTAL SHEETS
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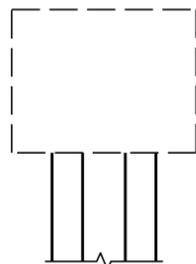
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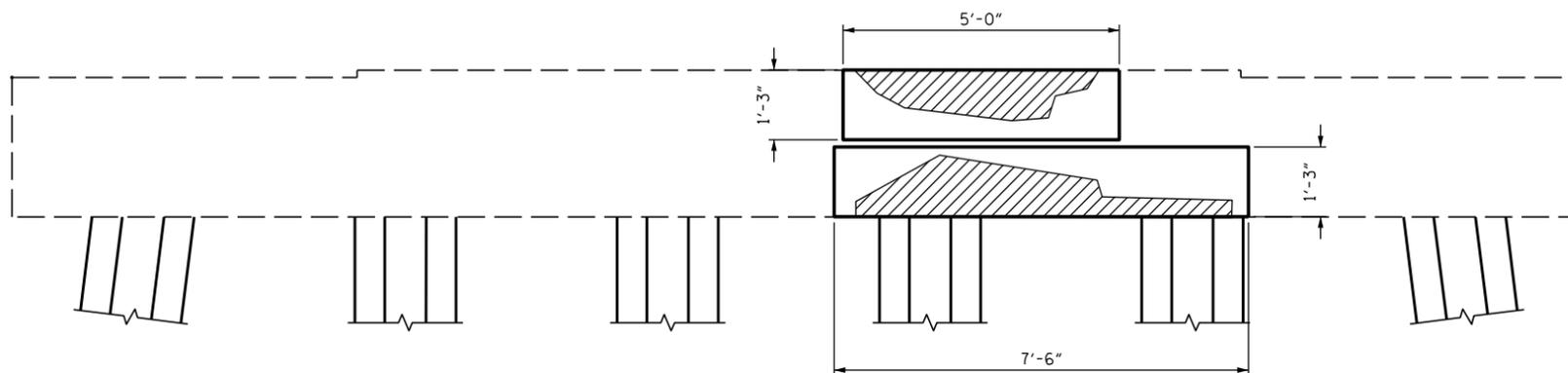
SIDE VIEW
NORTH FACE



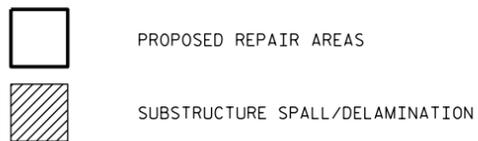
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

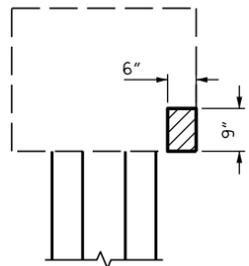
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 37

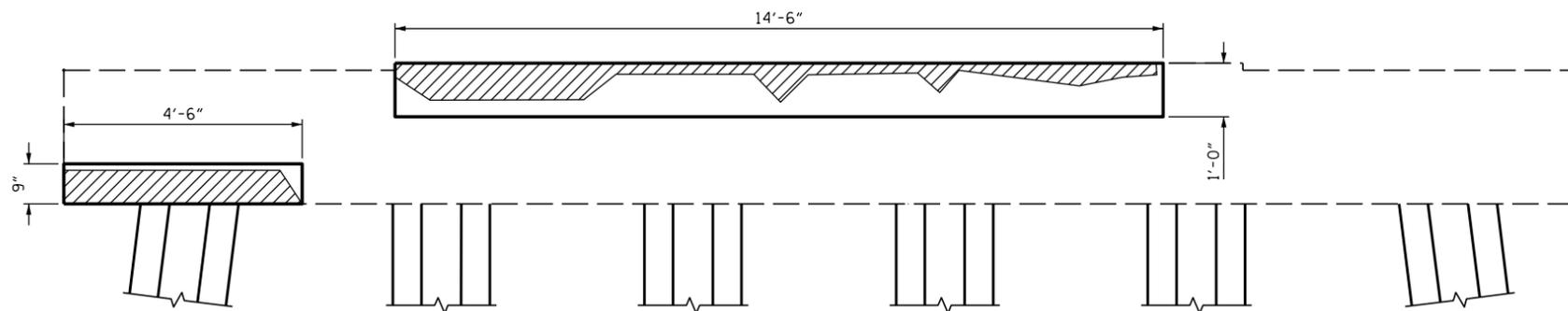
DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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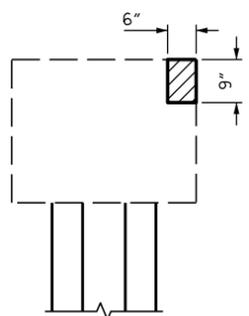
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



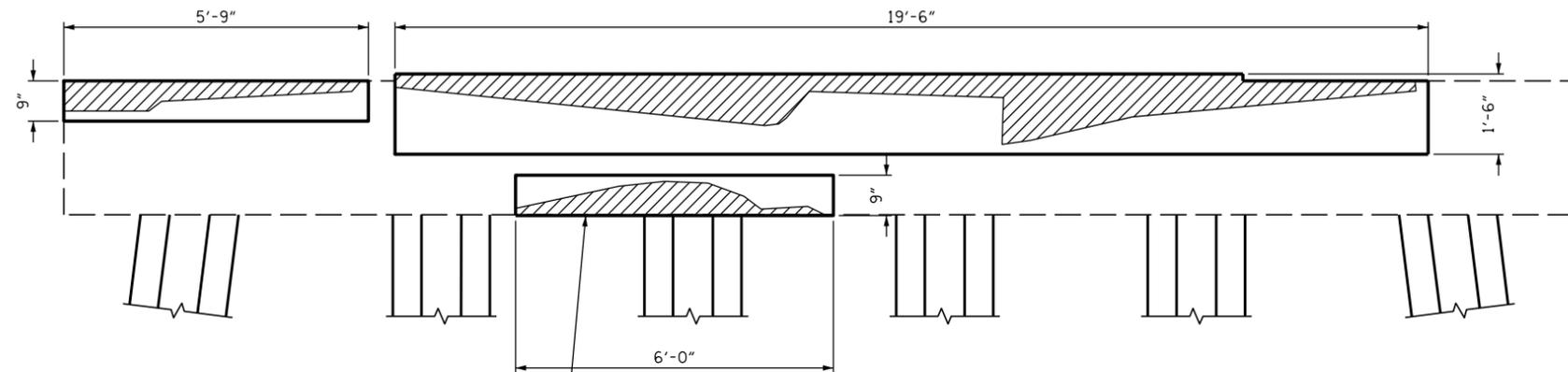
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

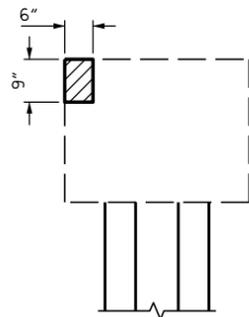
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 38

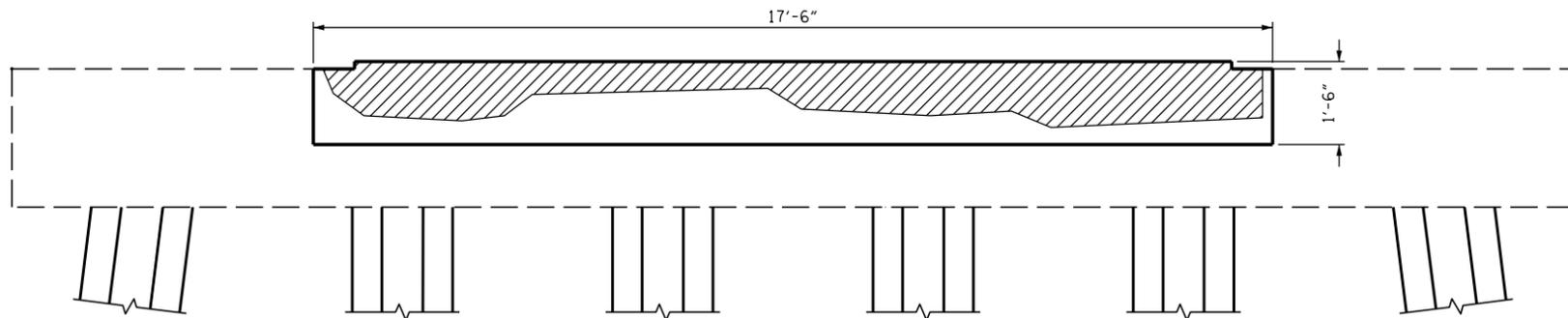
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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DOCUMENT NOT CONSIDERED
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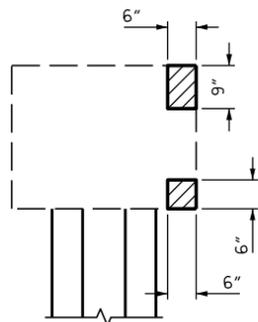
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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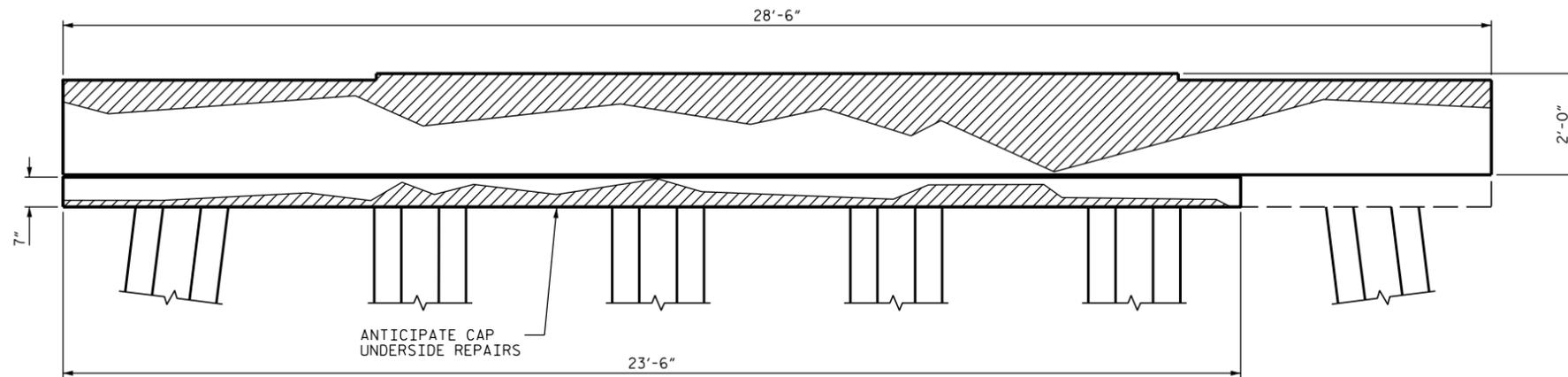
SIDE VIEW
NORTH FACE



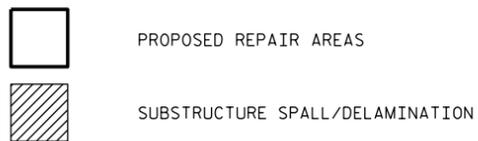
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

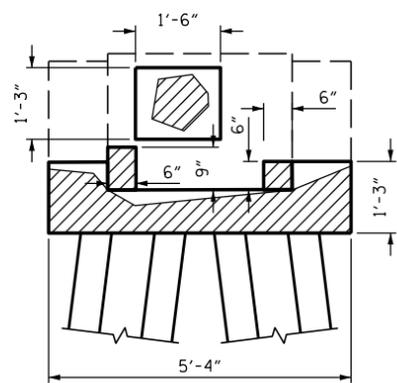
 12/13/2016

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 39						S-58
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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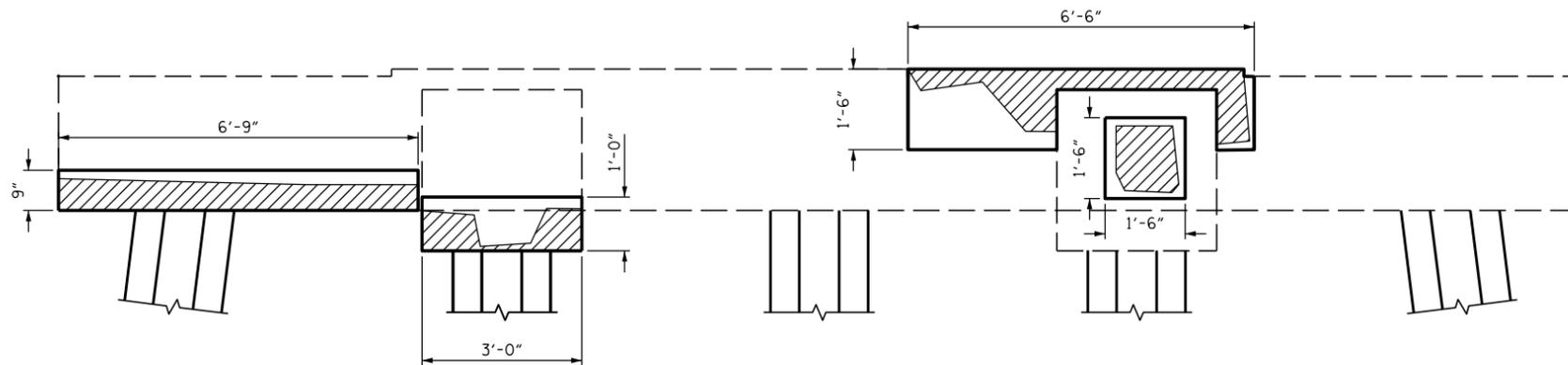
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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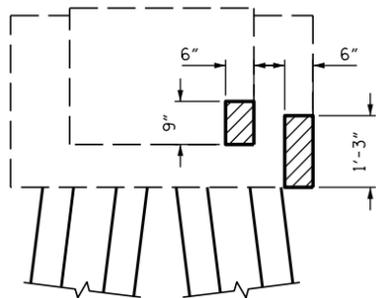
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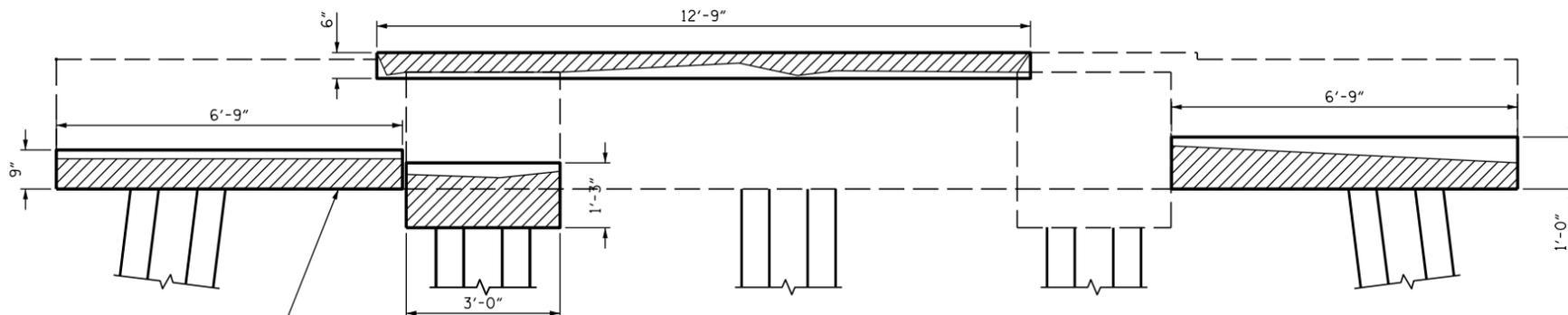
SIDE VIEW
NORTH FACE



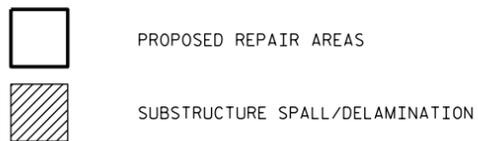
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

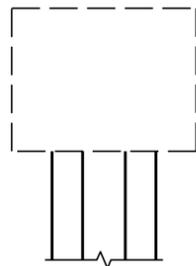
DocuSigned by:
Samuel Cullum
 10007095C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 40

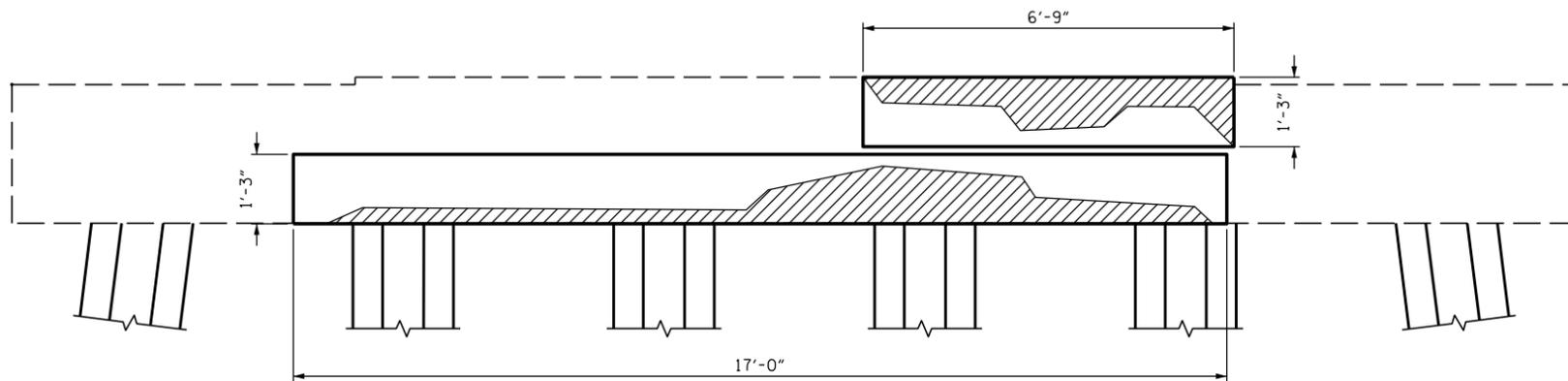
DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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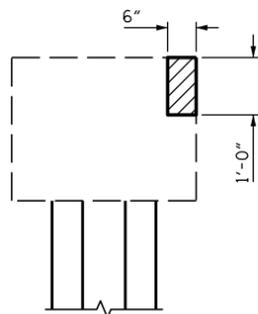
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



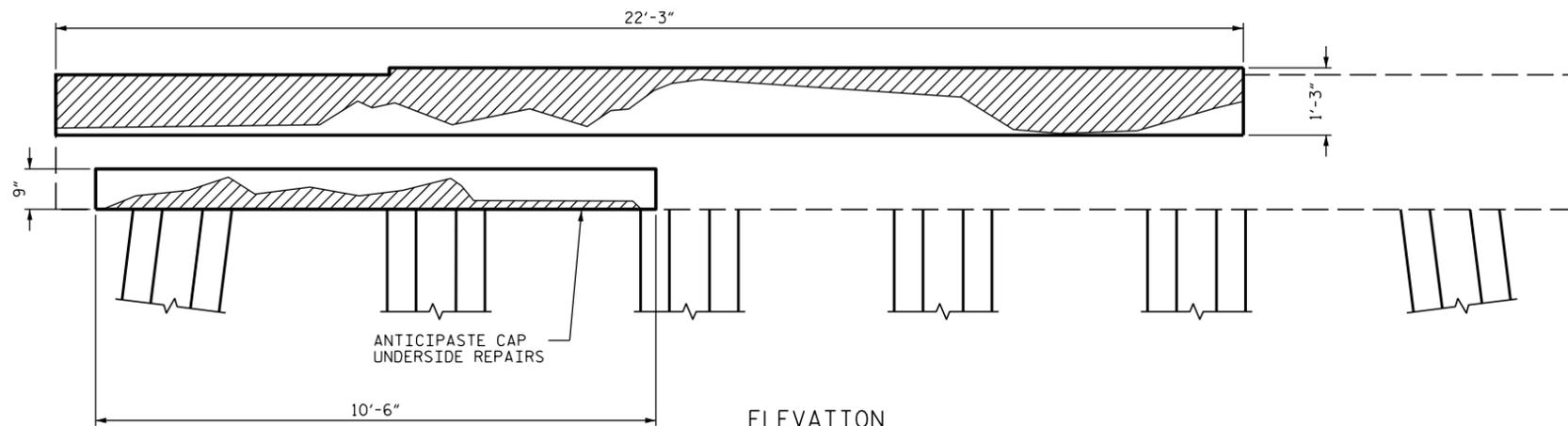
SIDE VIEW
NORTH FACE



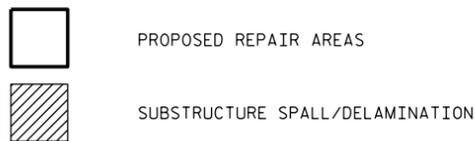
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
10007095C75A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

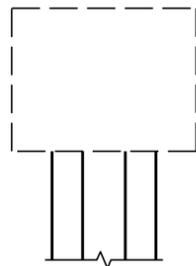
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 41

DRAWN BY : J. H. DUKE DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

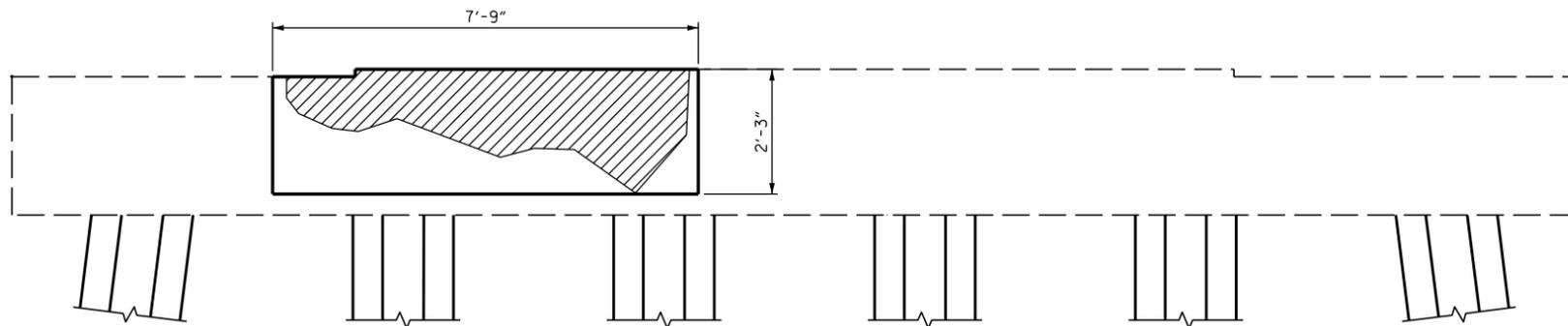
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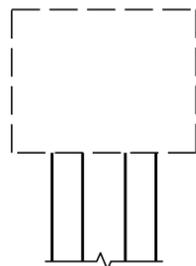
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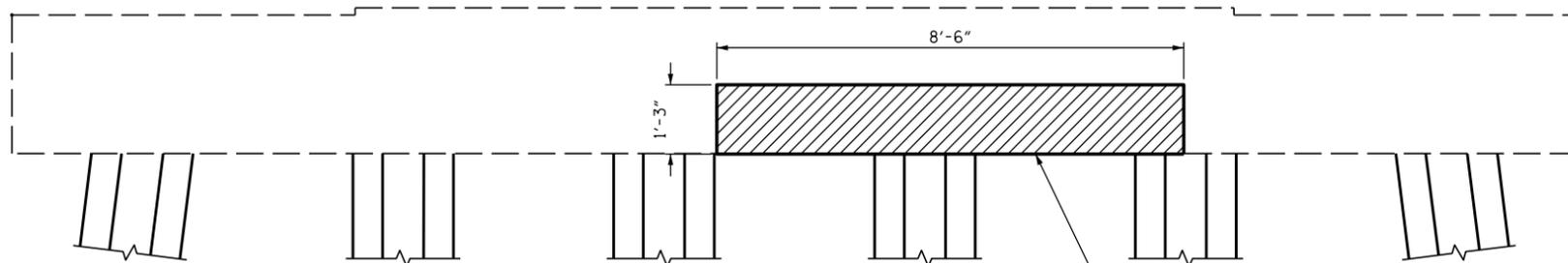
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

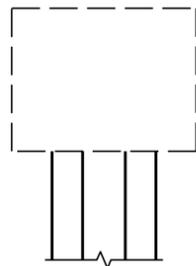
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SUBSTRUCTURE CONC.
 REPAIR - BENT 42

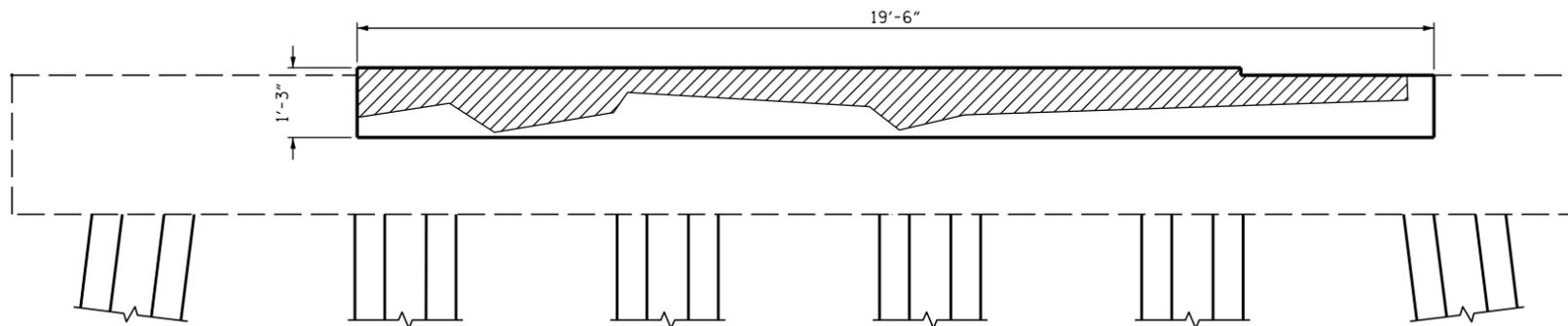
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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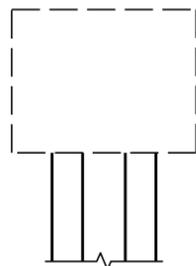
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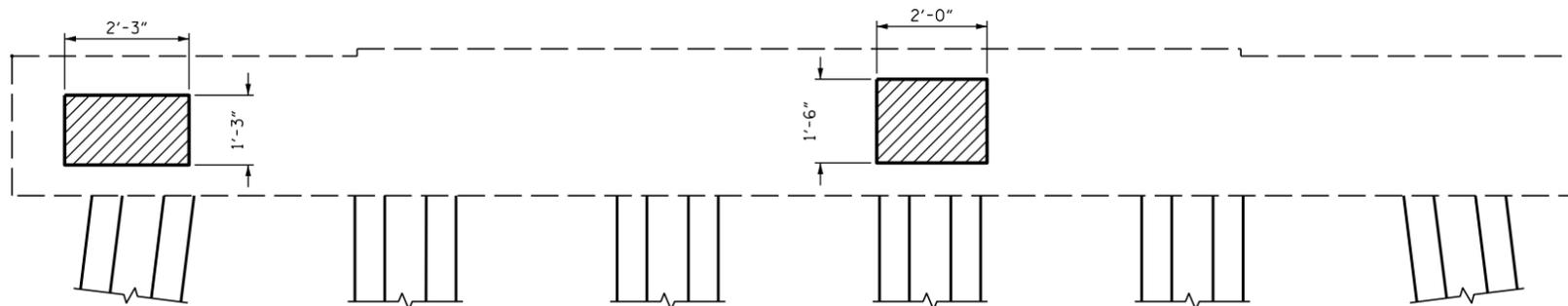
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

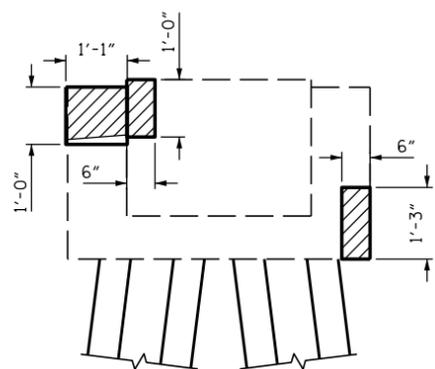
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Samuel Cullum
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 12/13/2016

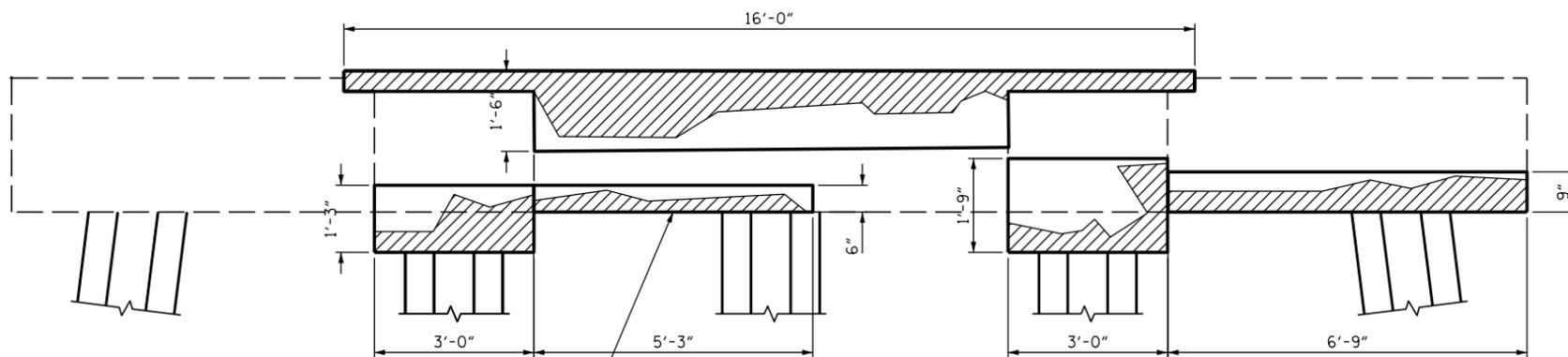
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
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SHEET NO. S-62					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
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TOTAL SHEETS					

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

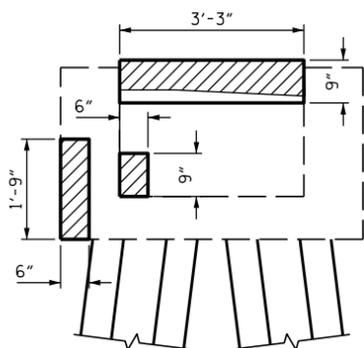
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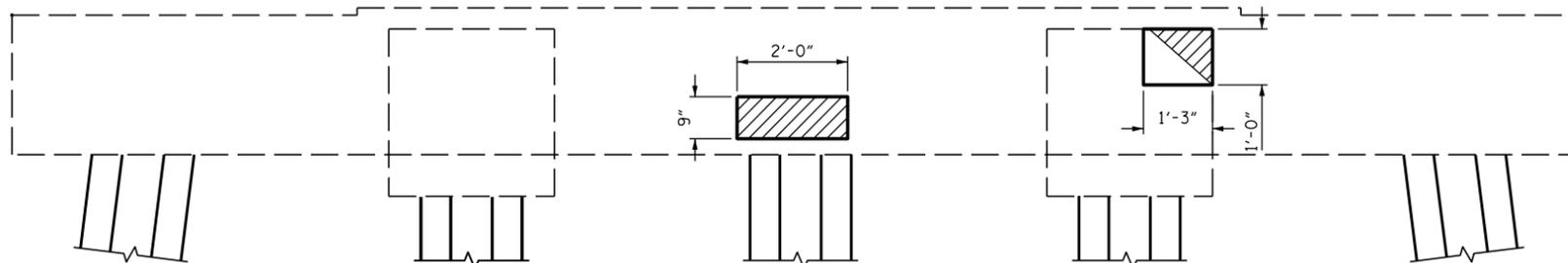
SIDE VIEW
NORTH FACE



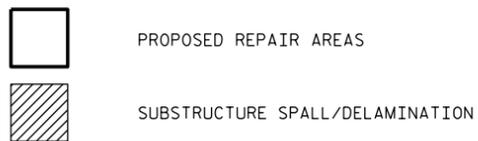
ANTICIPATE CAP
UNDERSIDE REPAIRS
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
10007095C75A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

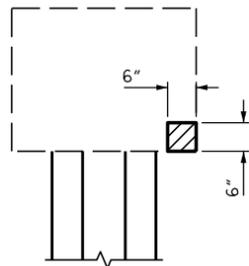
SUBSTRUCTURE CONC.
REPAIR - BENT 44

DRAWN BY : J. H. DUKE DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
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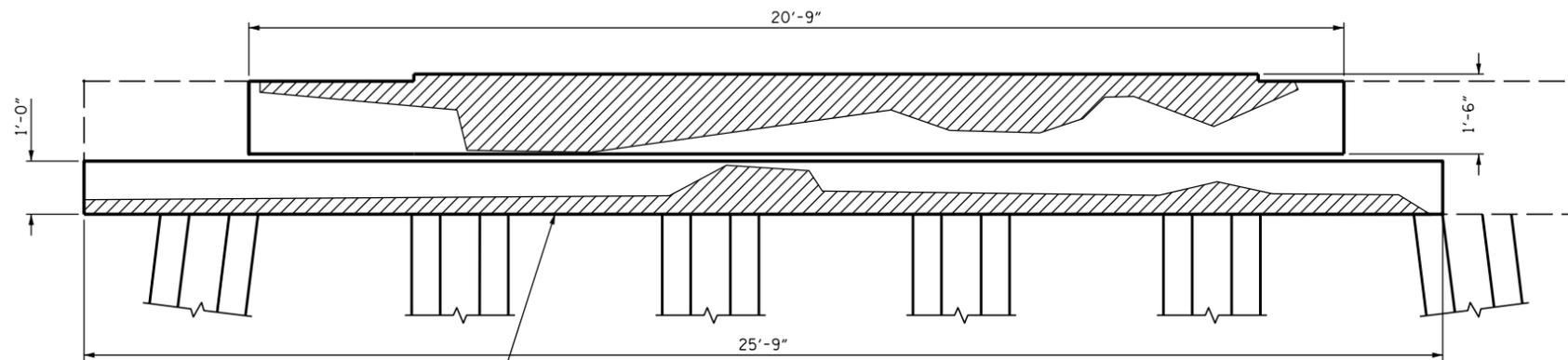
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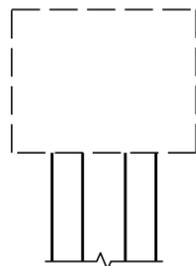


SIDE VIEW
NORTH FACE

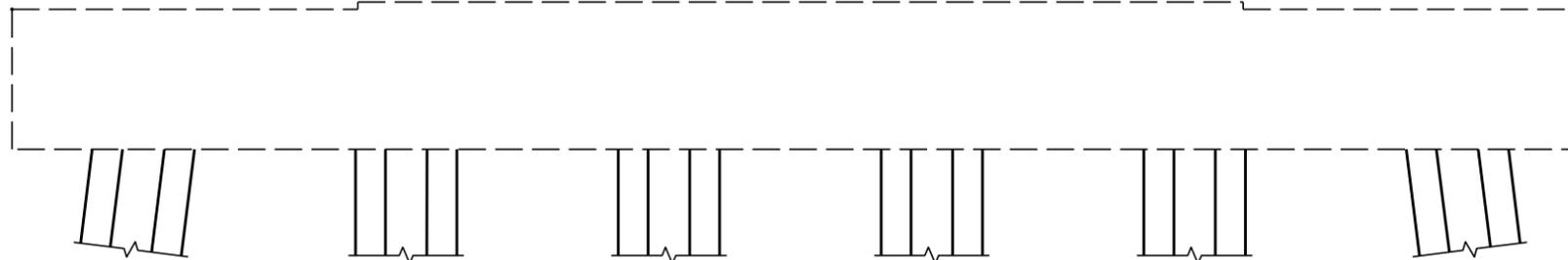


ANTICIPATE CAP
UNDERSIDE REPAIRS

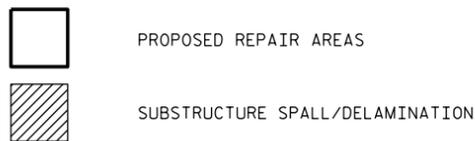
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
10007095C75A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

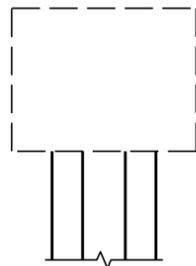
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 45						S-64
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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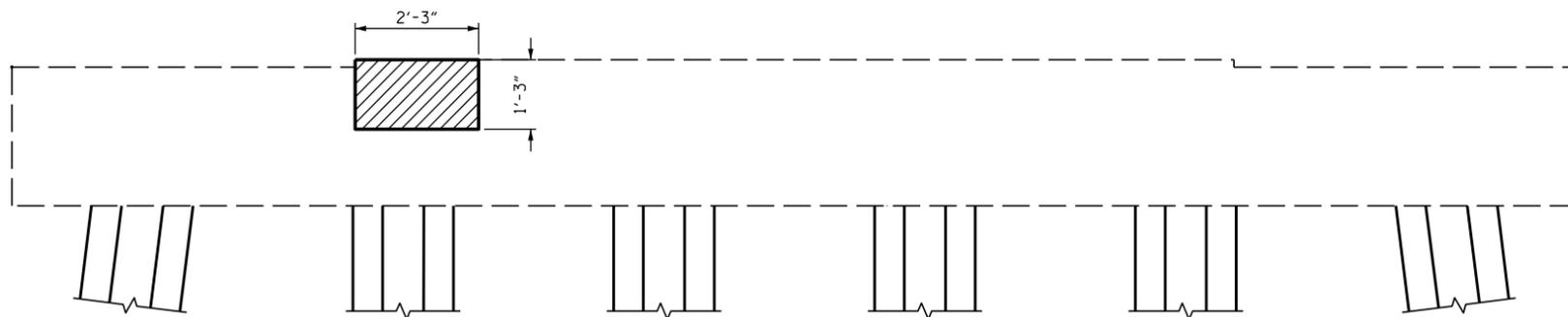
DRAWN BY : J. H. DUKE DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

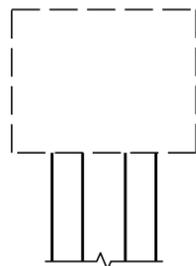
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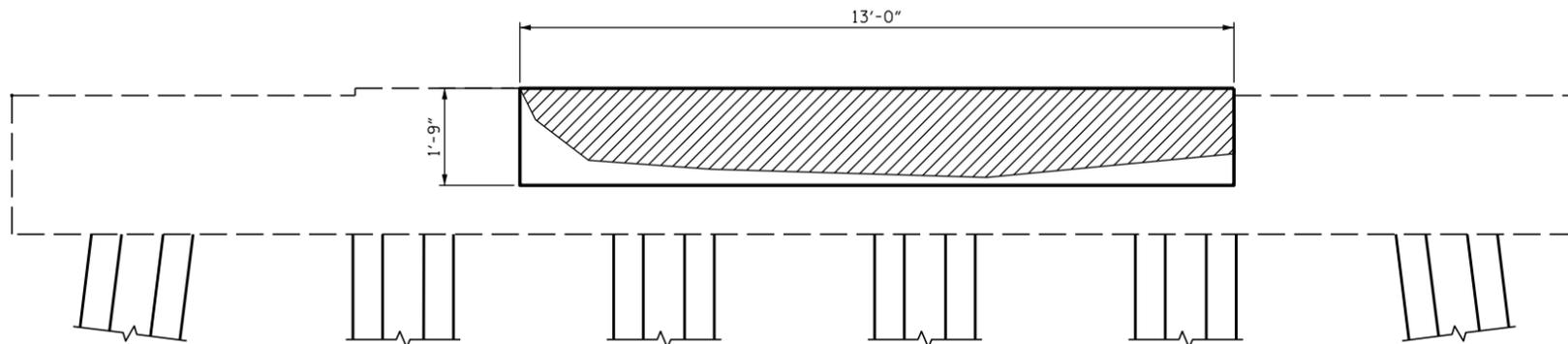
SIDE VIEW
NORTH FACE



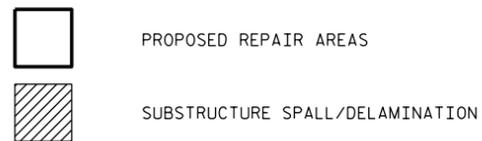
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

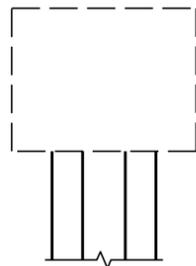
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 46

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

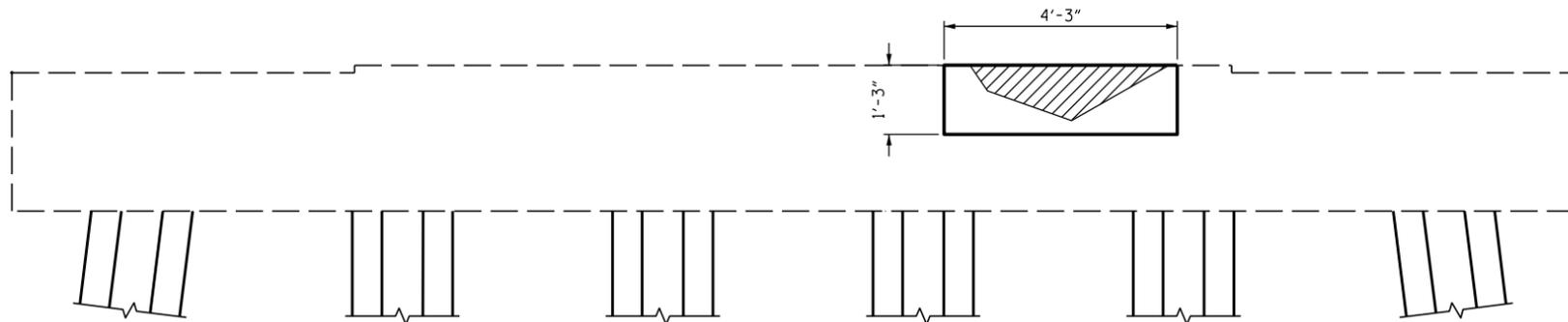
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

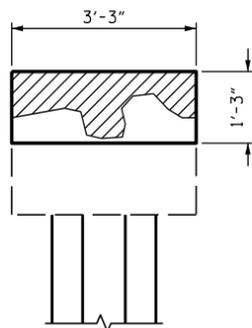
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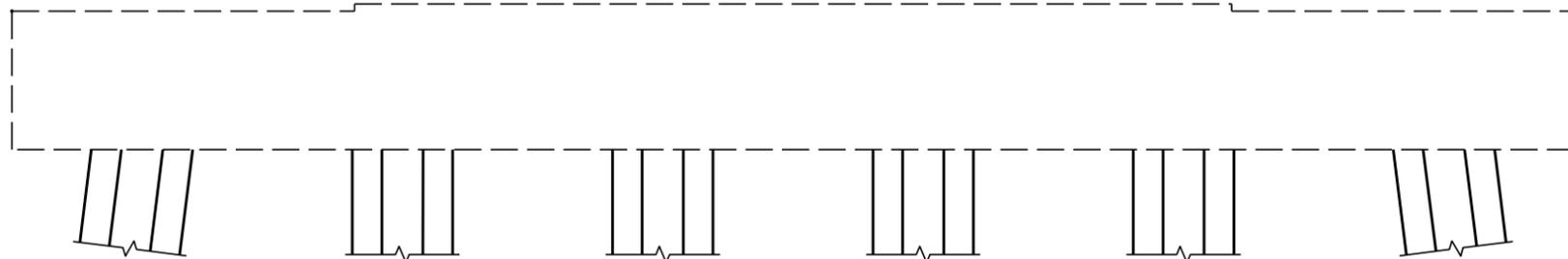
SIDE VIEW
NORTH FACE



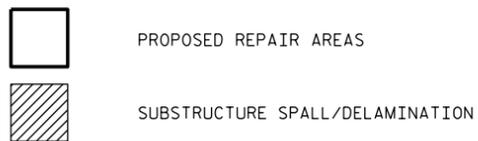
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

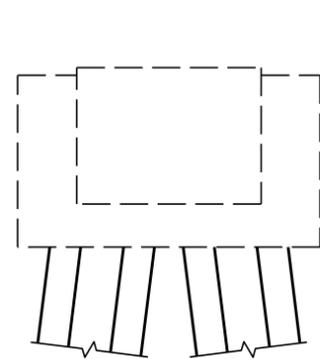
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 47

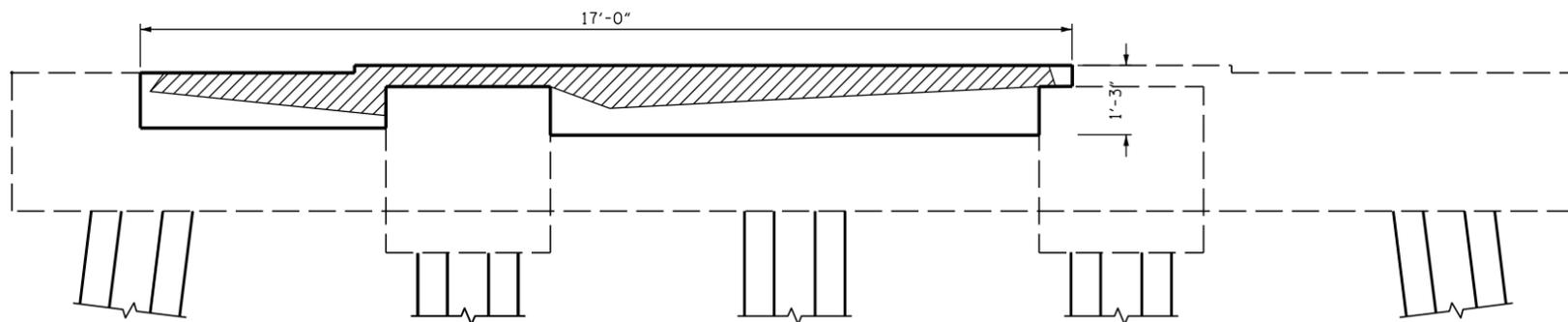
DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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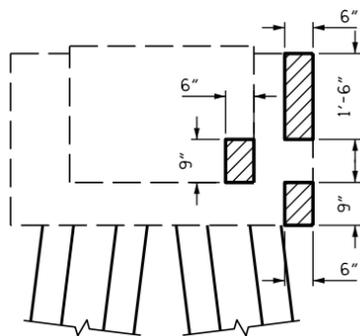
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



SIDE VIEW
NORTH FACE

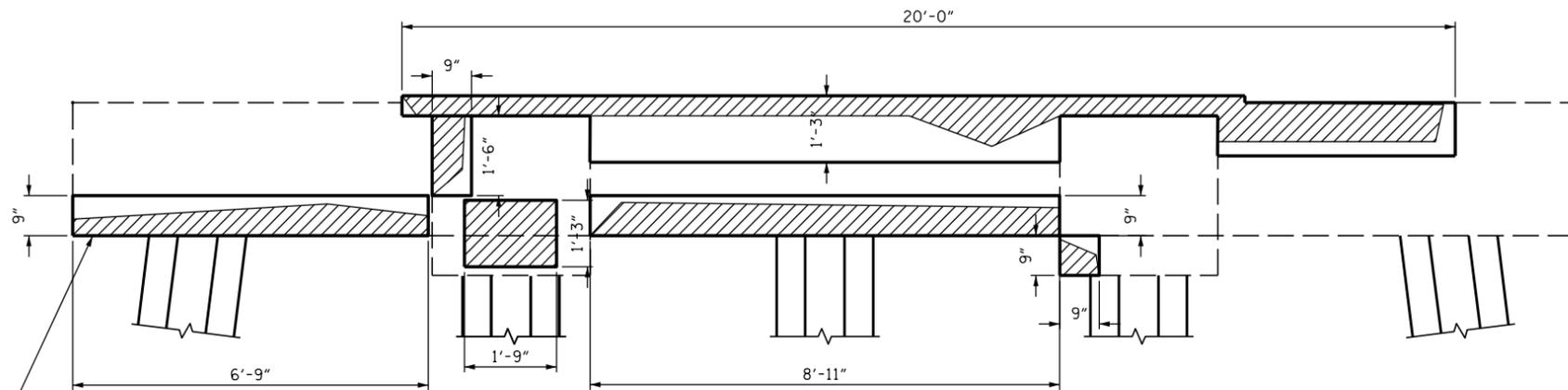


ELEVATION
WEST FACE

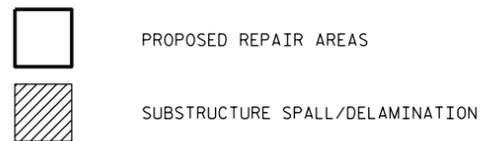


SIDE VIEW
SOUTH FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

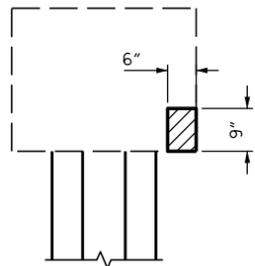
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 48

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

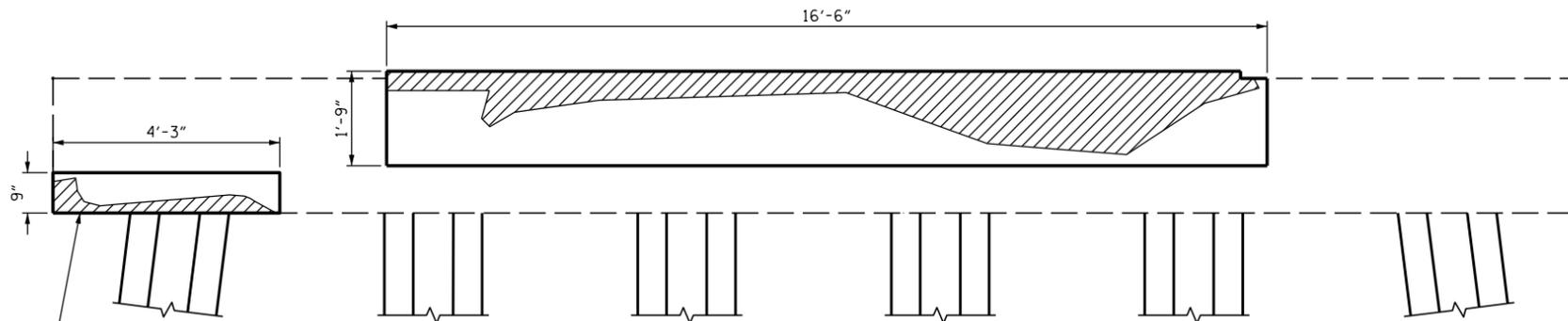
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

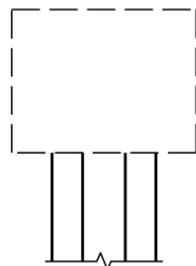
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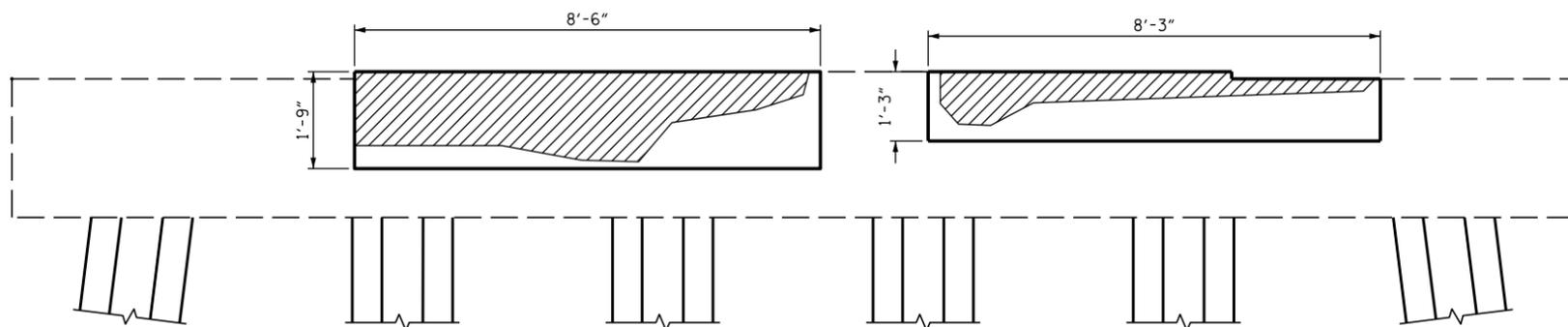
SIDE VIEW
NORTH FACE



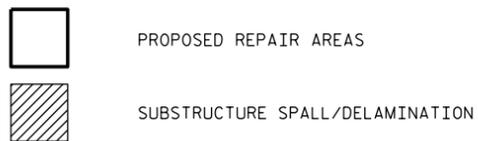
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
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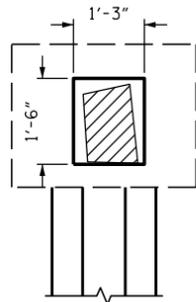
 12/13/2016

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 49						S-68
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

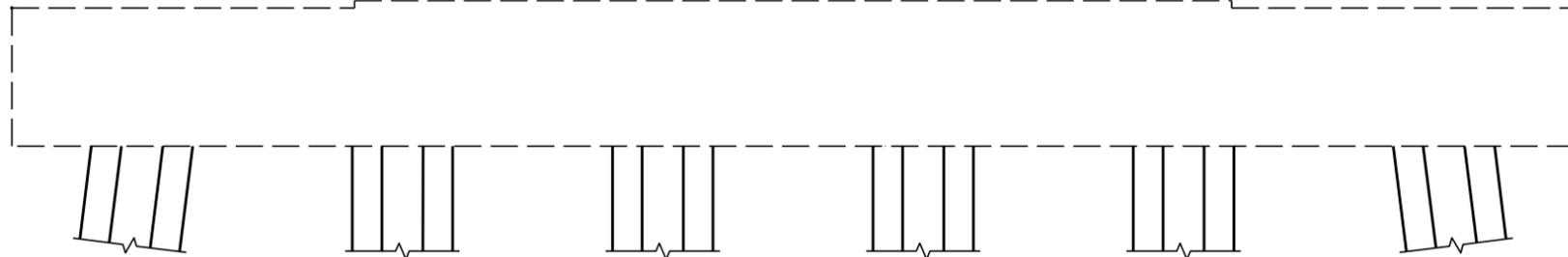
DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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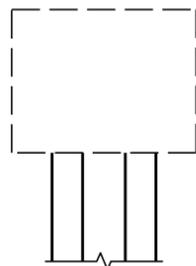
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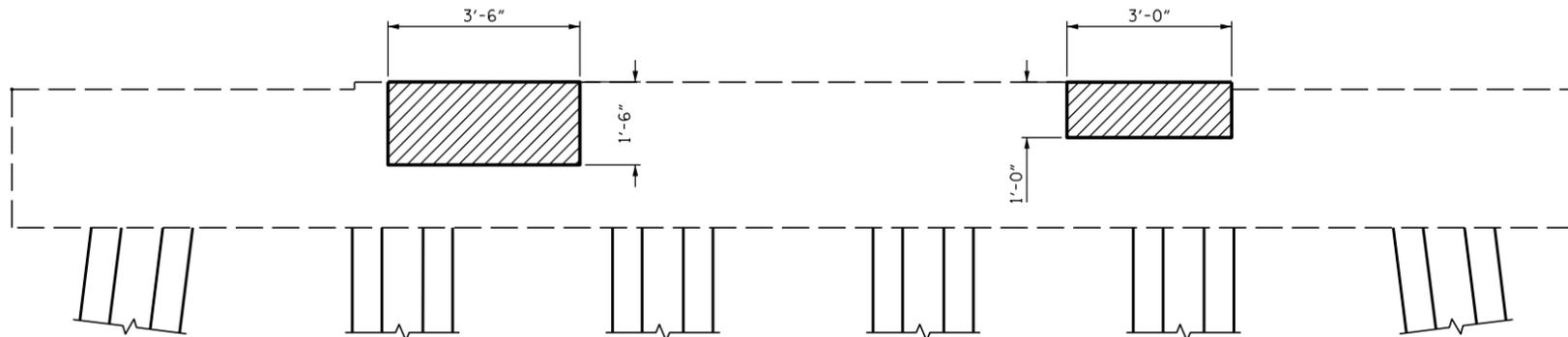
SIDE VIEW
NORTH FACE



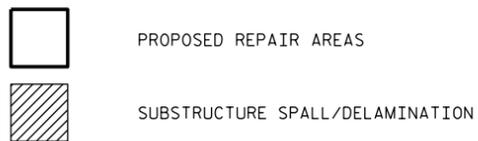
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

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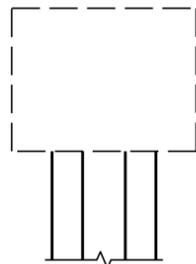
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 50

DRAWN BY : J. H. DUKE DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

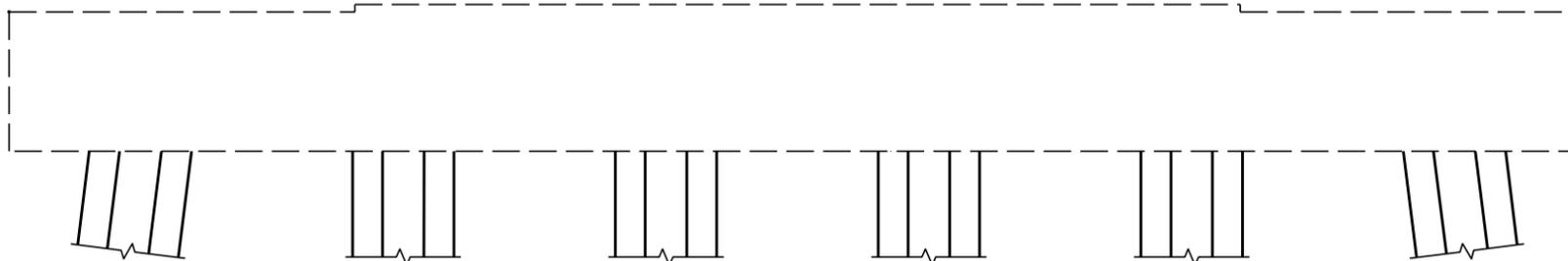
DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

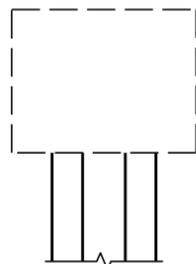
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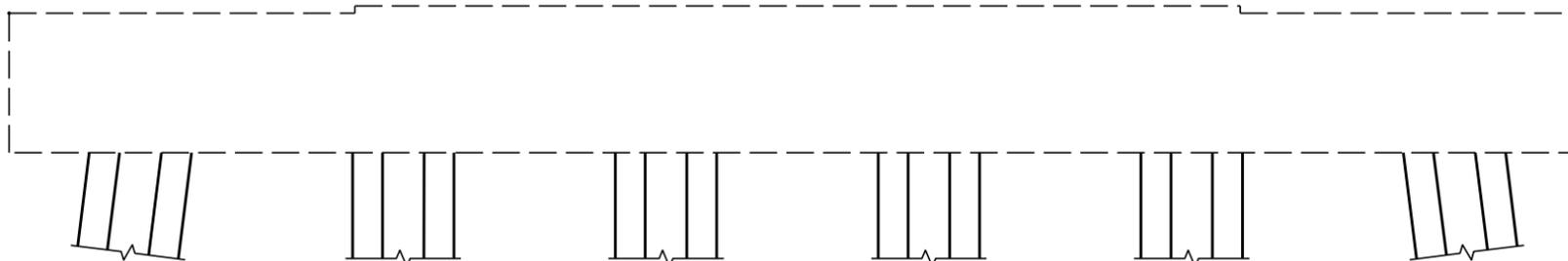
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:

Samuel Cullum

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12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

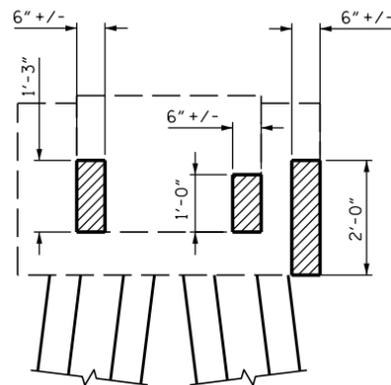
SUBSTRUCTURE CONC.
 REPAIR - BENT 51

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

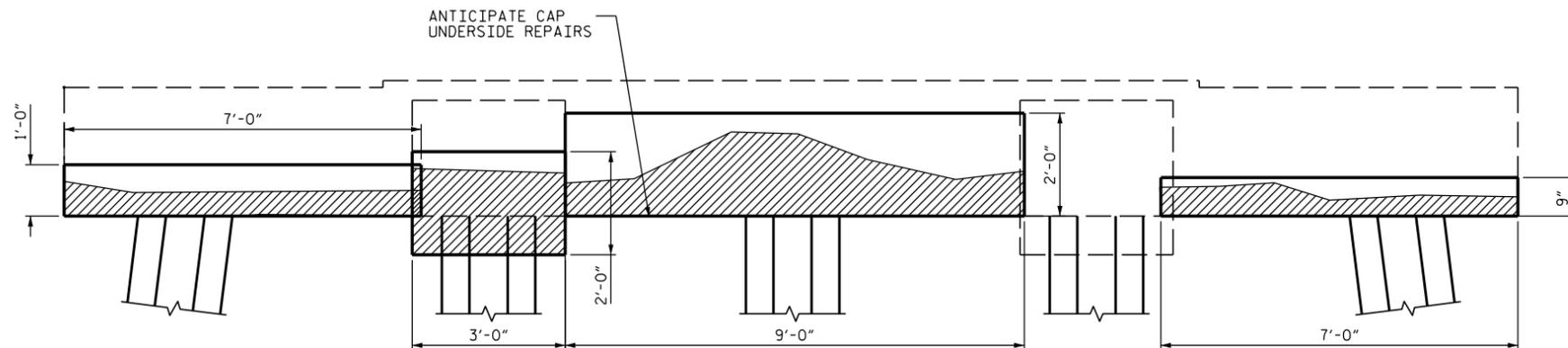
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DOCUMENT NOT CONSIDERED
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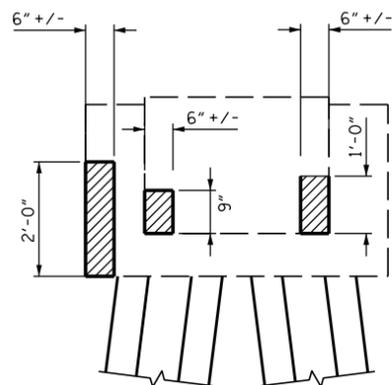
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-70
2			4			



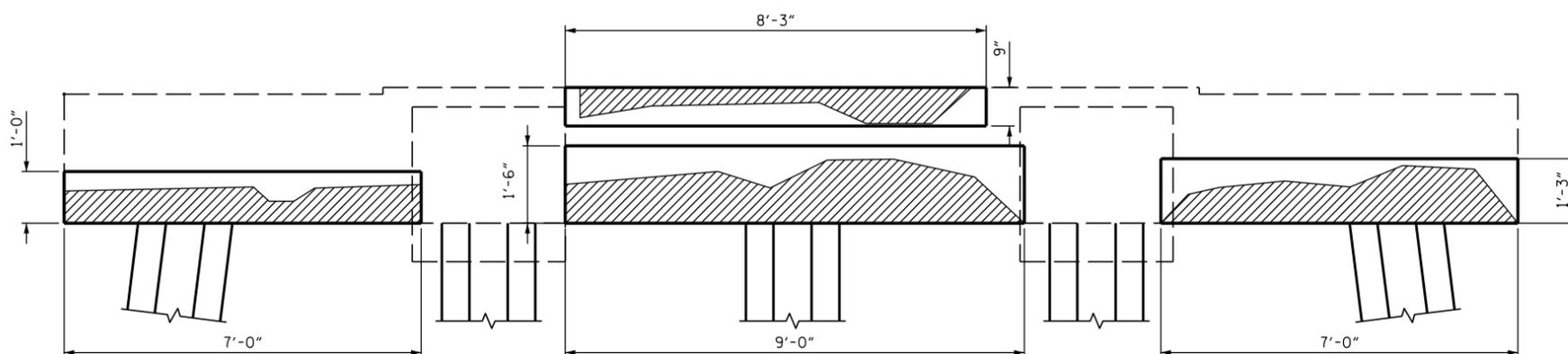
SIDE VIEW
NORTH FACE



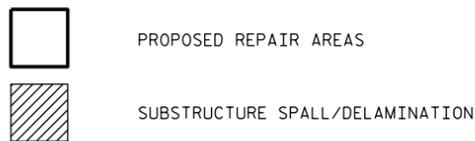
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

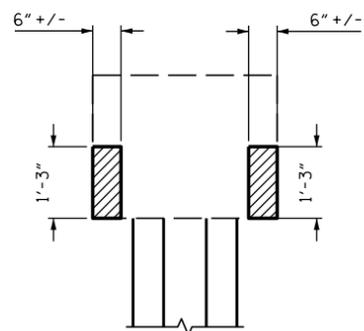
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 52

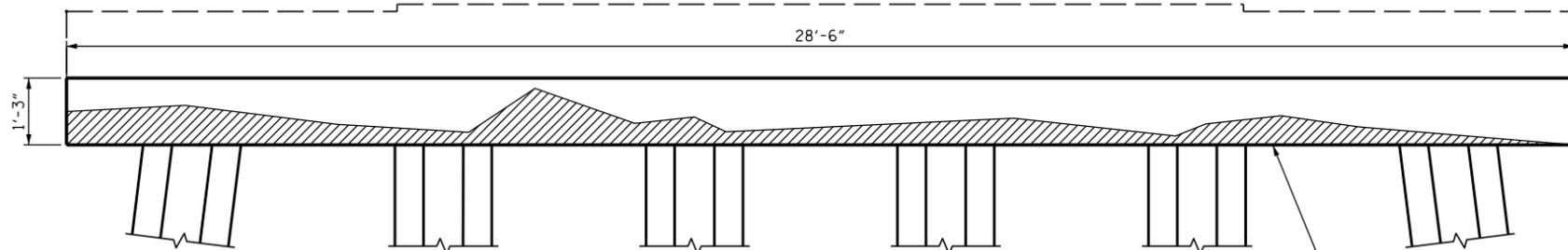
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

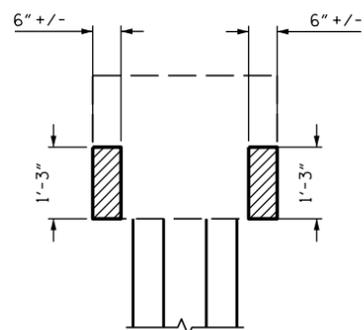
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2			4			



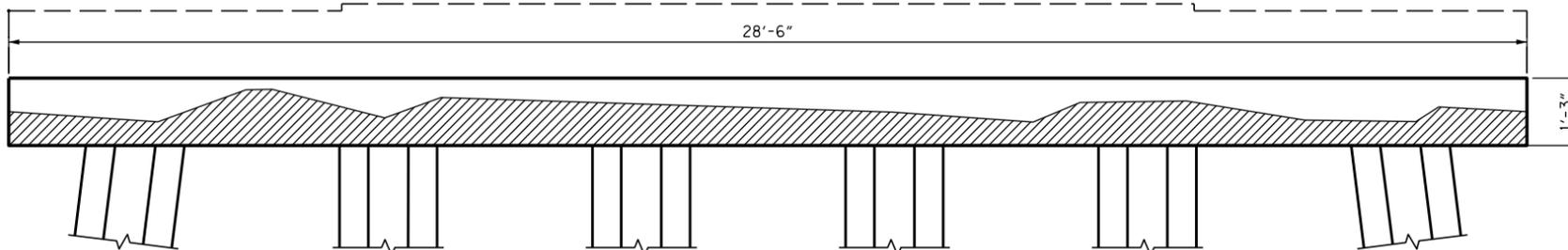
SIDE VIEW
NORTH FACE



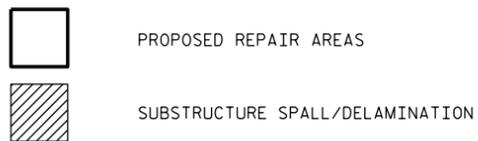
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

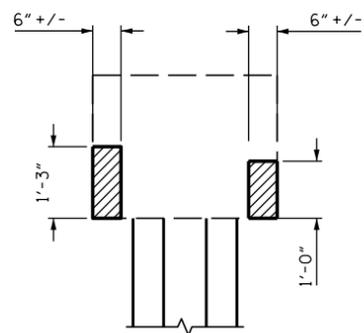
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 53

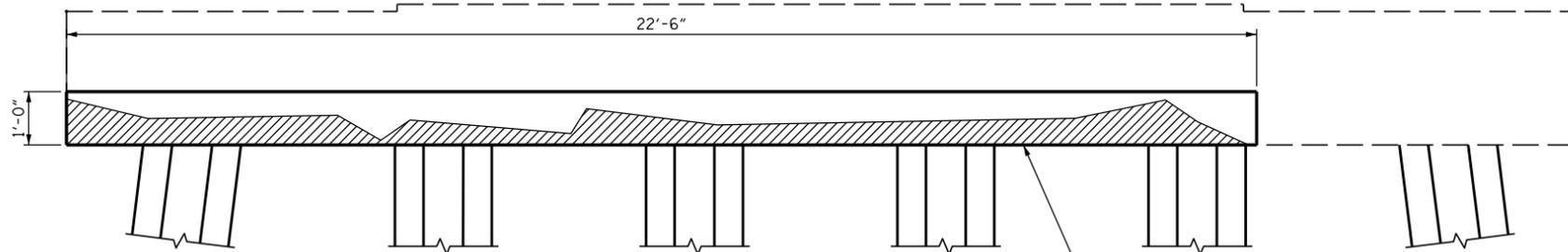
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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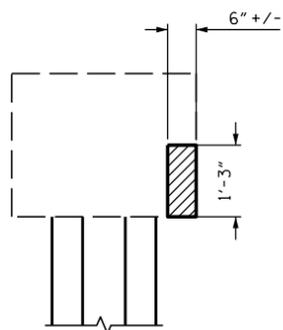
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2			4			TOTAL SHEETS



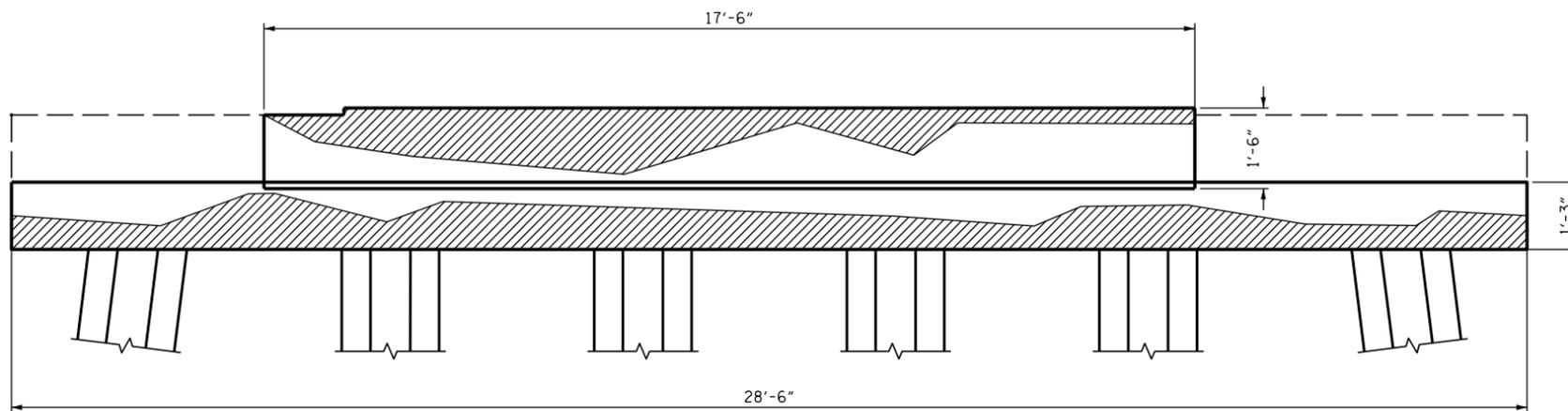
SIDE VIEW
NORTH FACE



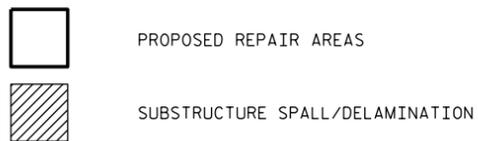
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

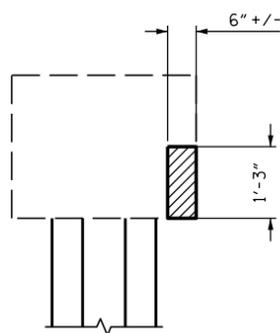
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 54

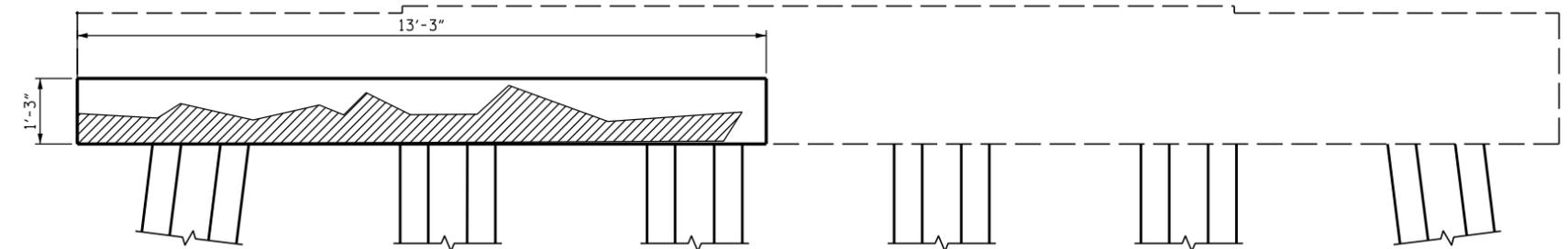
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

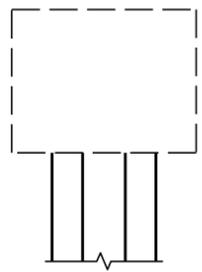
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2			4			



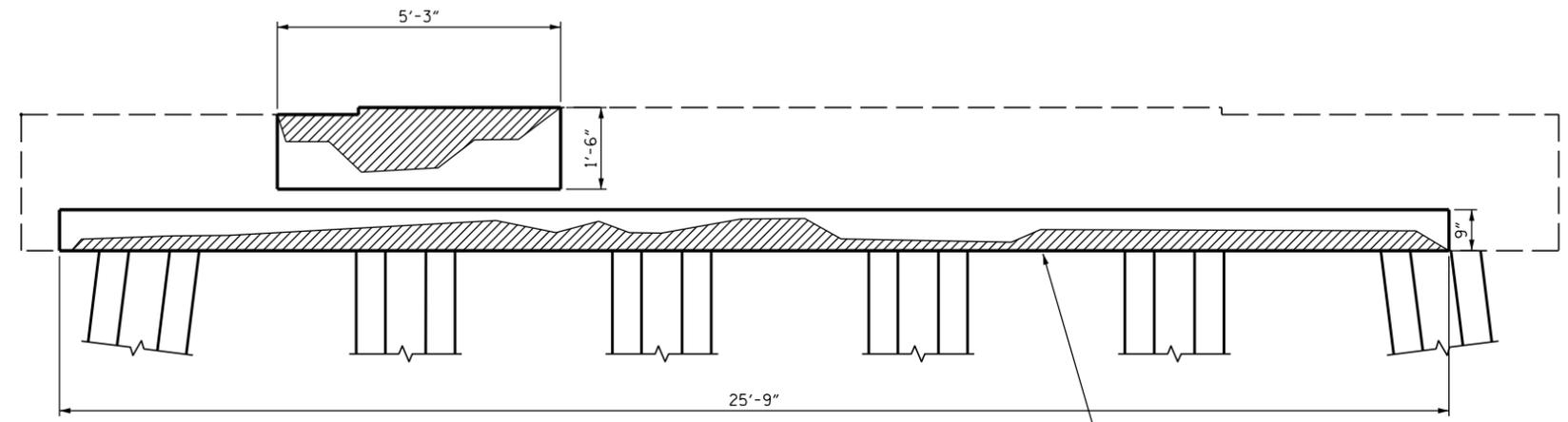
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

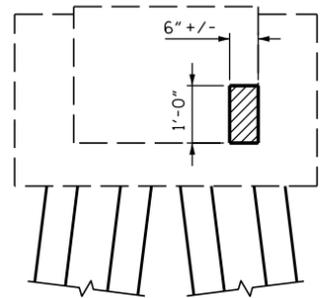
**SUBSTRUCTURE CONC.
 REPAIR - BENT 55**

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

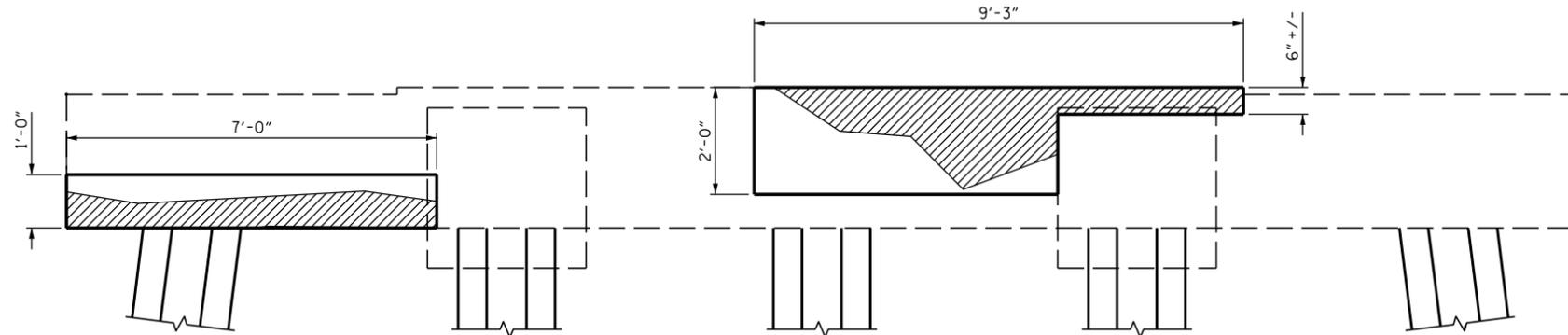
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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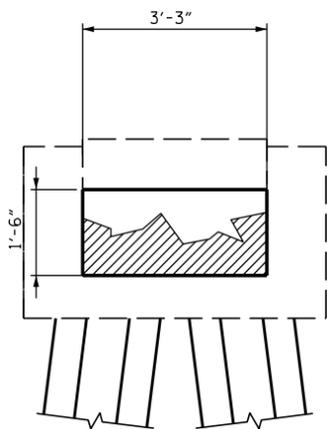
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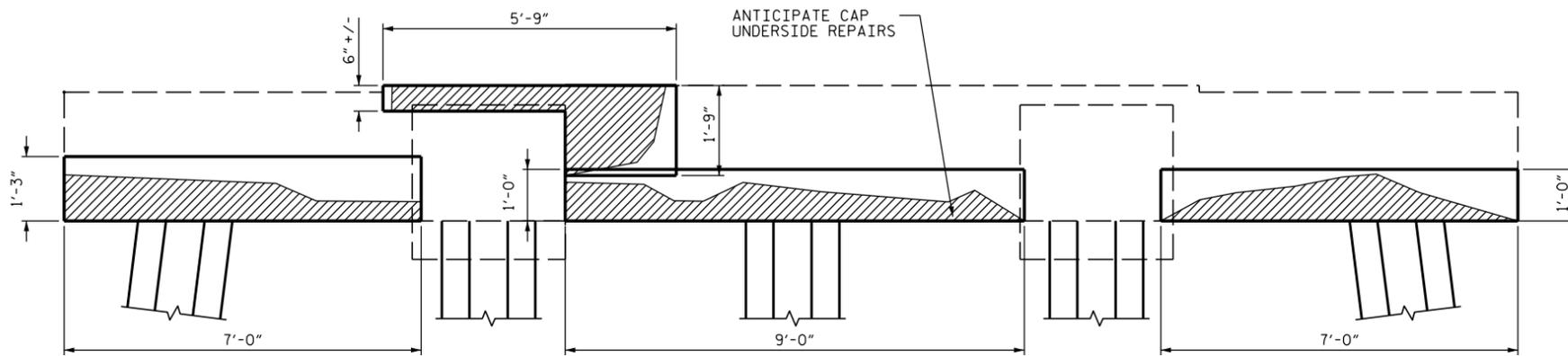
SIDE VIEW
NORTH FACE



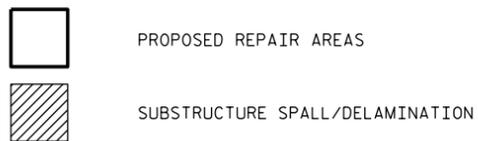
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

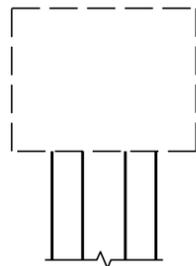
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 56

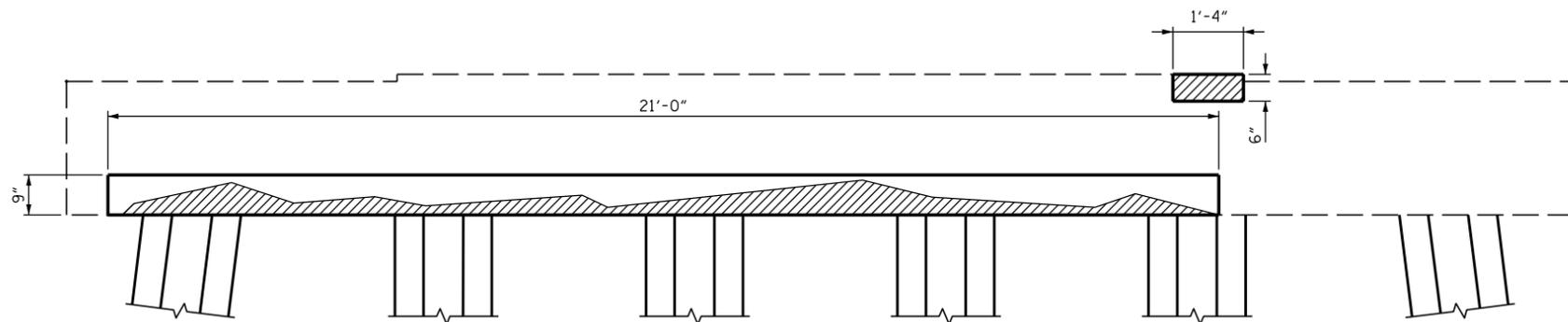
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

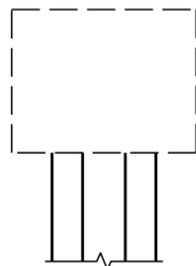
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



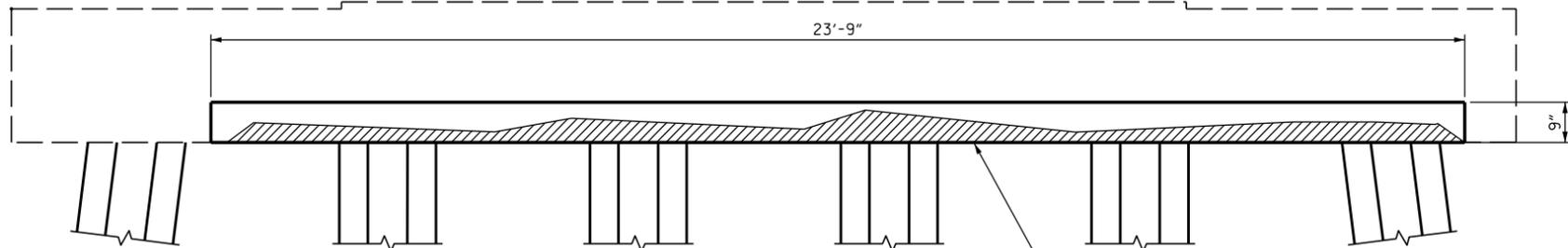
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

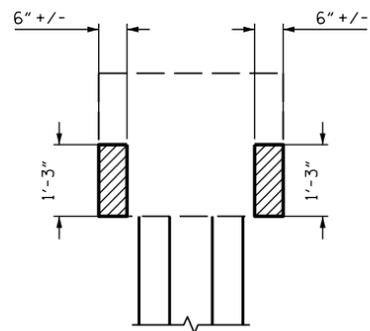
DocuSigned by:
Samuel Cullum
 10007095C75A467...

 12/13/2016

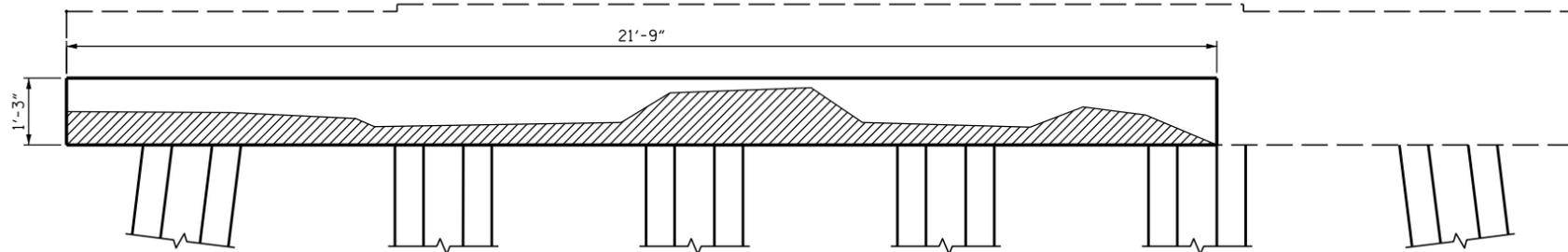
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 57					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-76
					TOTAL SHEETS

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

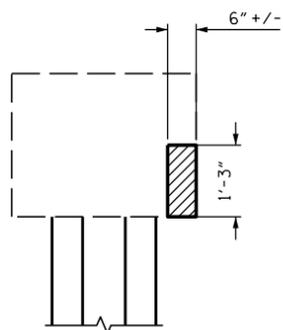
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 FINAL UNLESS ALL
 SIGNATURES COMPLETED



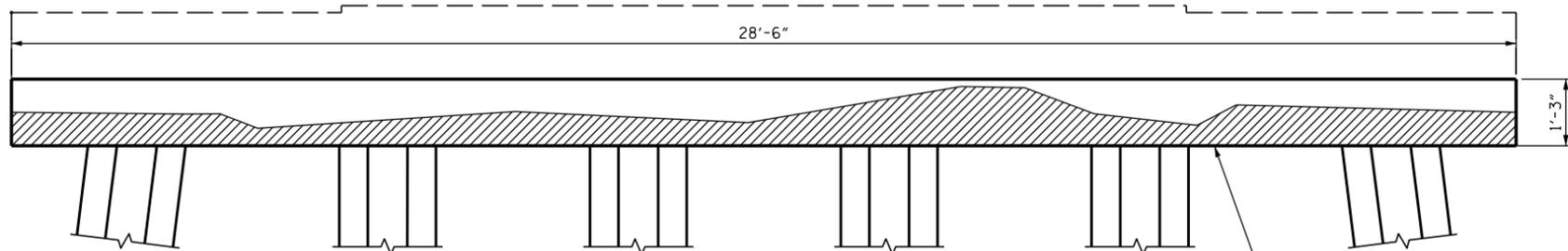
SIDE VIEW
NORTH FACE



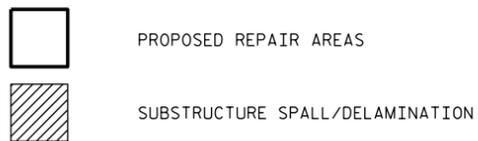
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
10007095C75A467...
NORTH CAROLINA
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ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

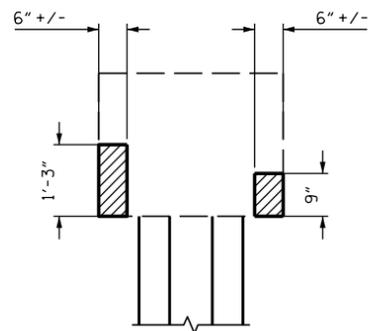
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 58

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

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

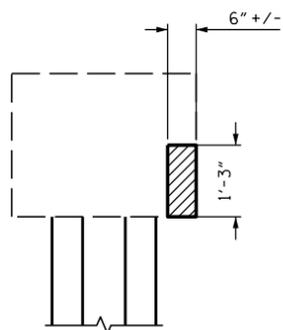
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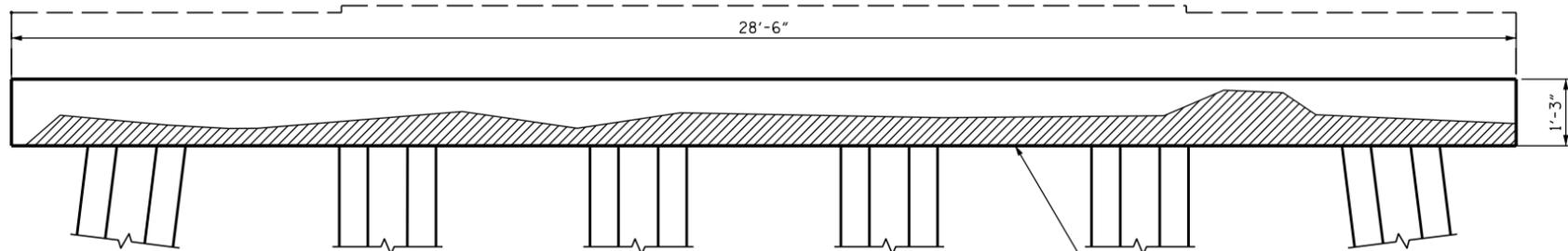
SIDE VIEW
NORTH FACE



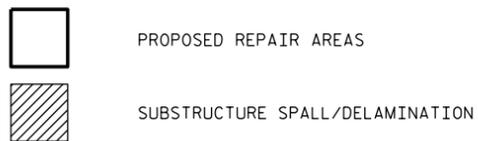
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

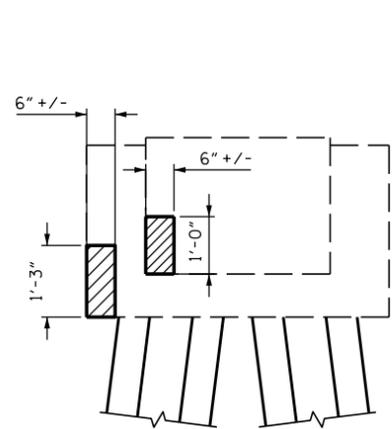
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Samuel Cullum
 10007095C75A467...

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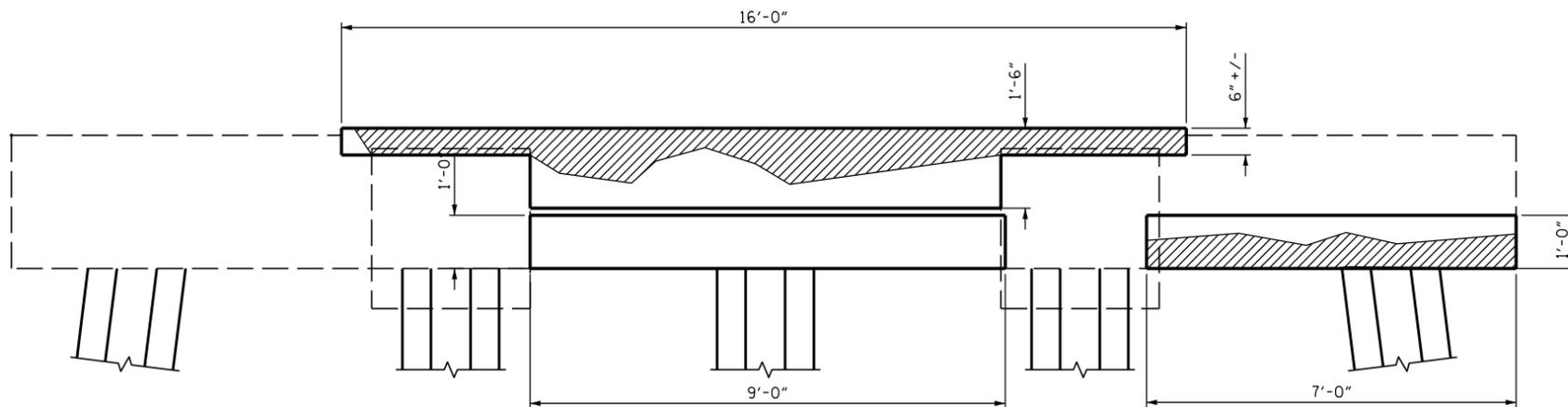
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 59						S-78
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

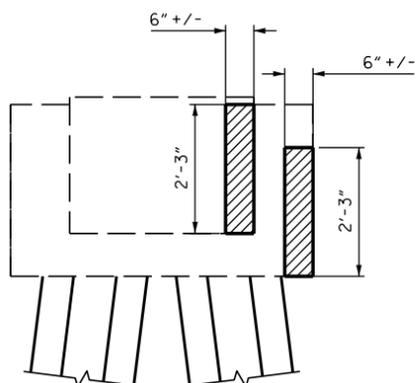
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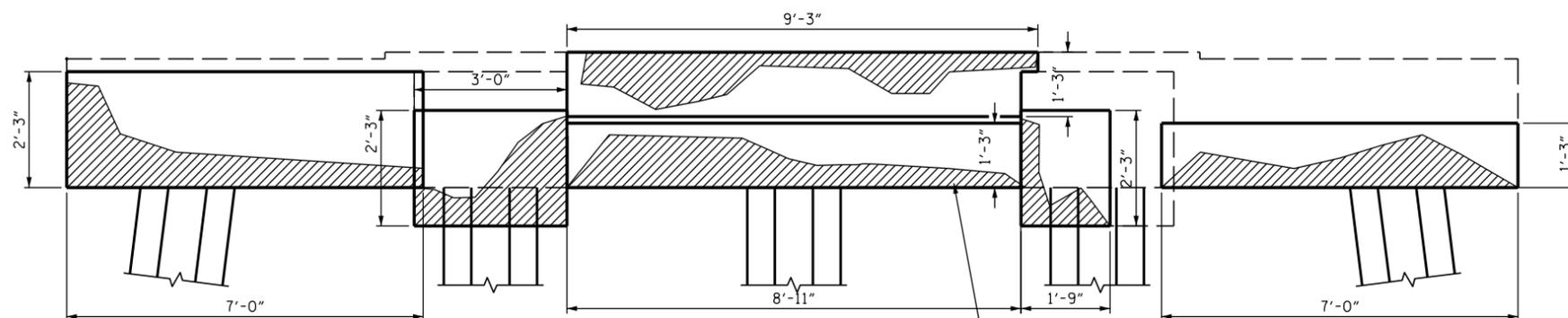
SIDE VIEW
NORTH FACE



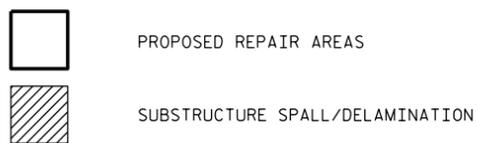
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 10007095C75A467...

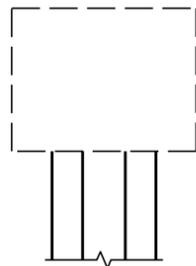
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 60

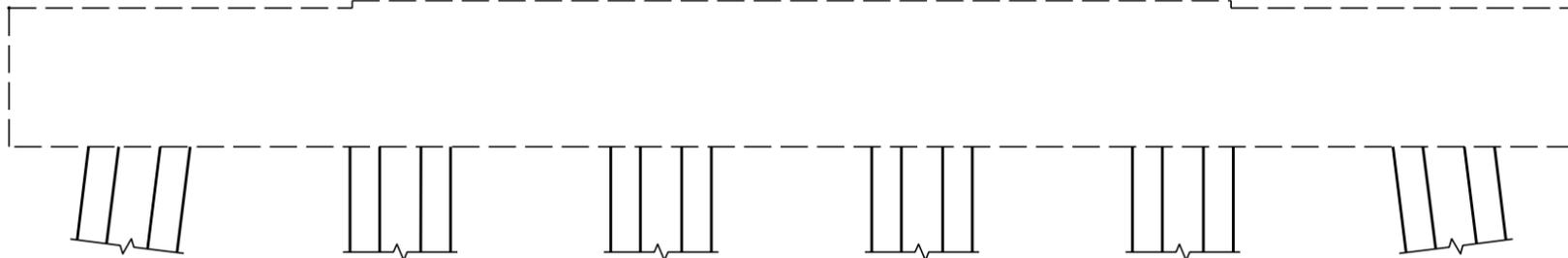
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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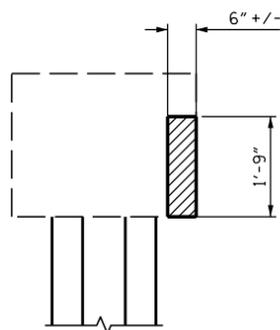
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



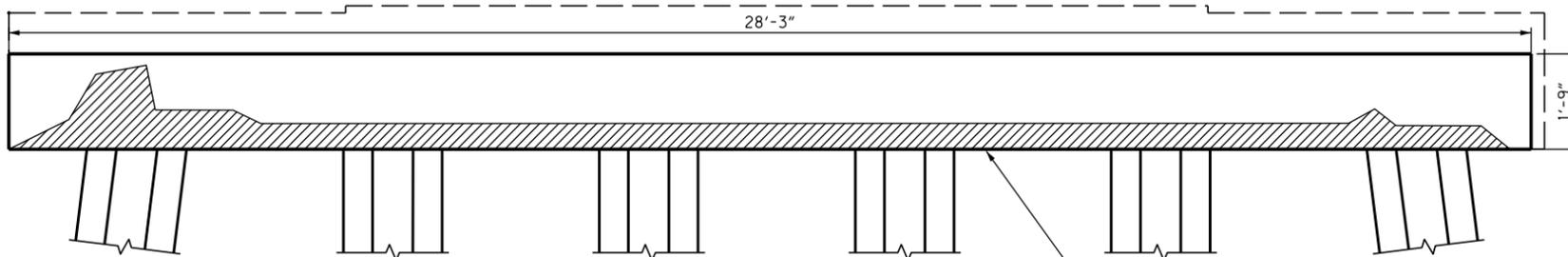
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

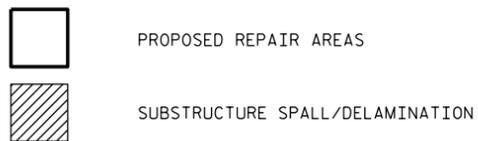


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
 10007095C75A467...

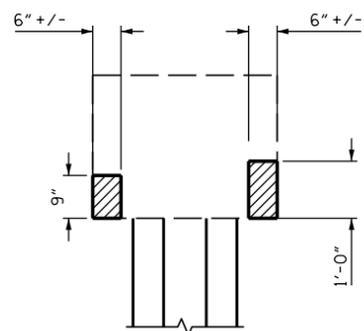
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 61

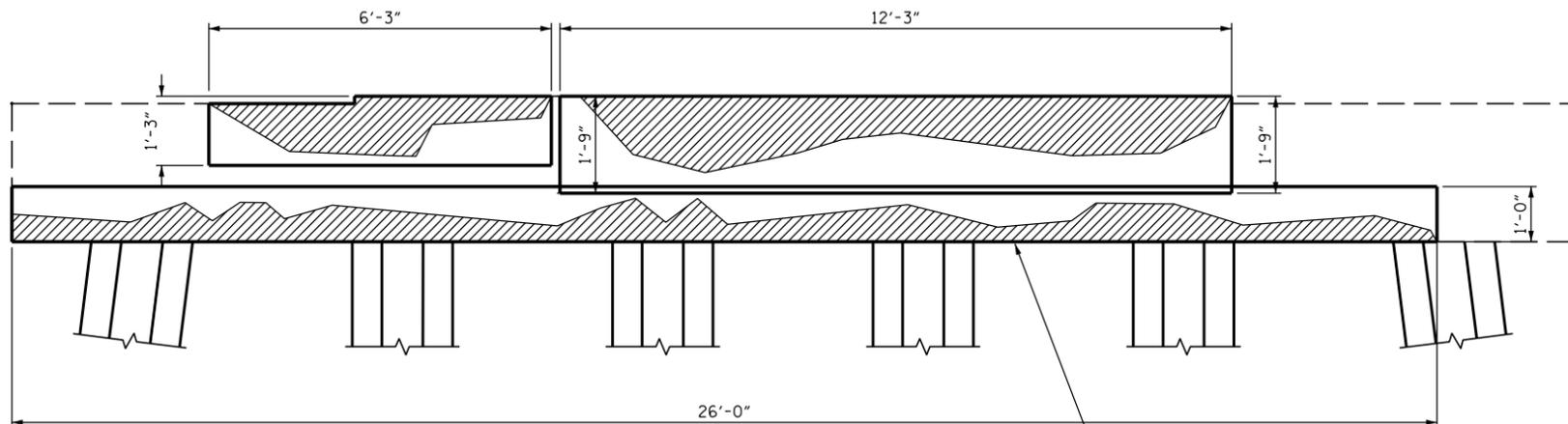
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

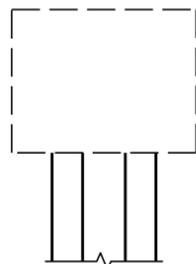


SIDE VIEW
NORTH FACE

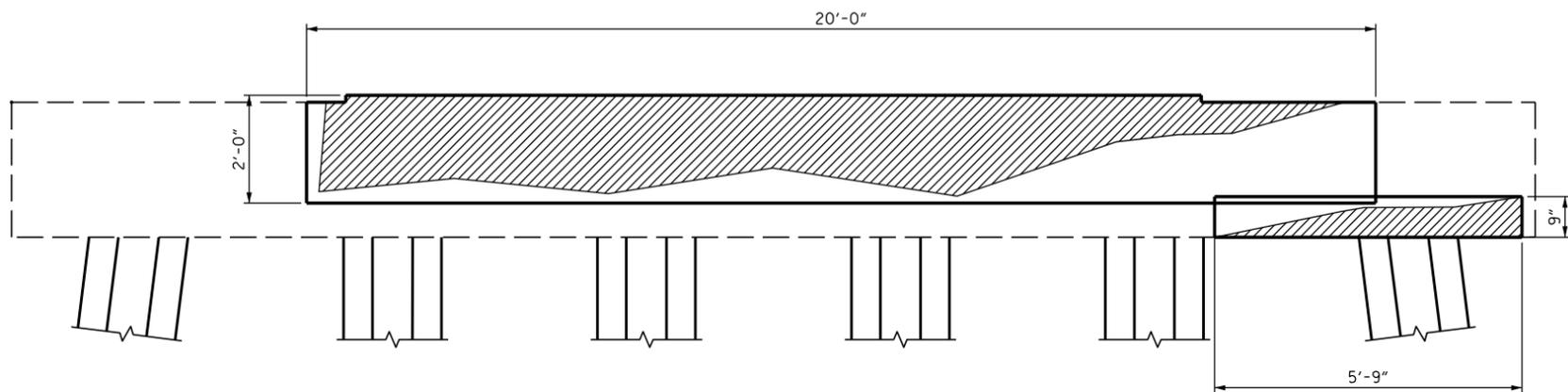


ELEVATION
WEST FACE

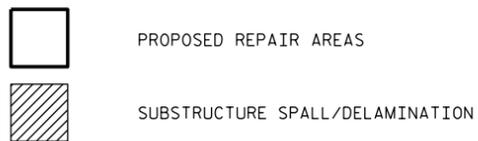
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19CG036675A487...
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SEAL
043571
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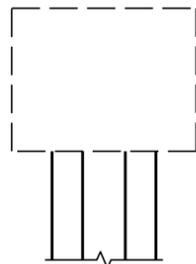
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 62

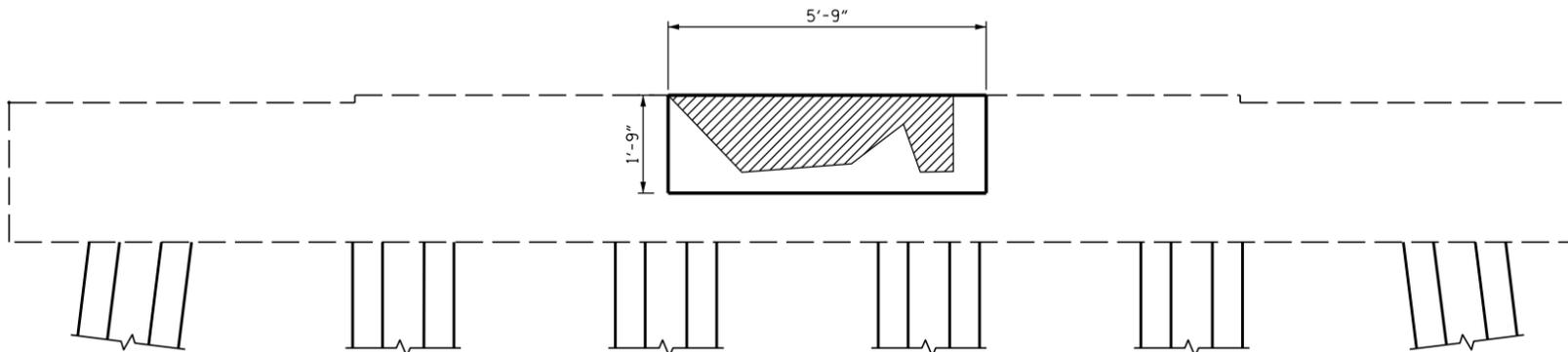
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

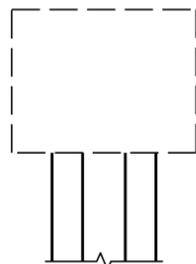
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-81
2			4			TOTAL SHEETS



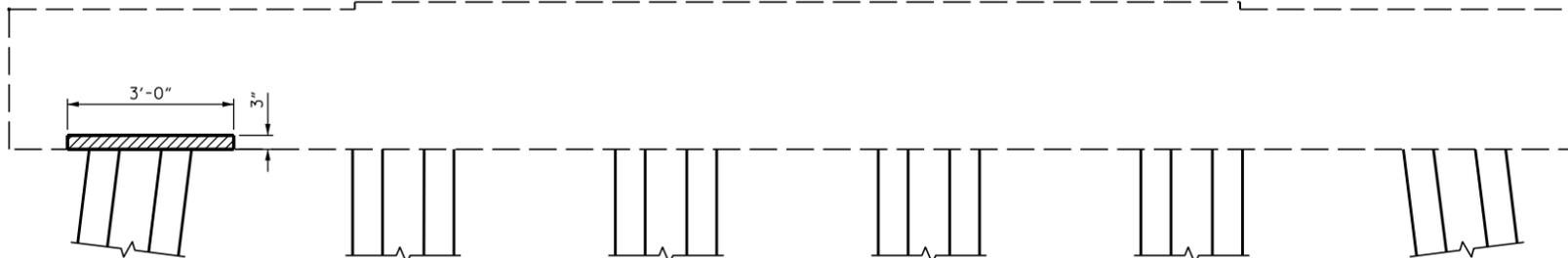
SIDE VIEW
NORTH FACE



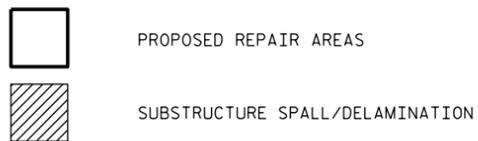
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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043571
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PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

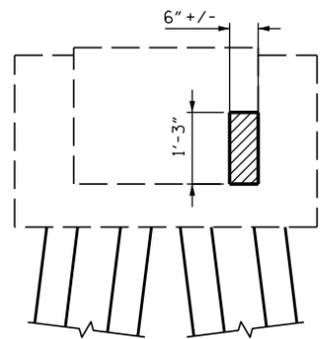
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 63

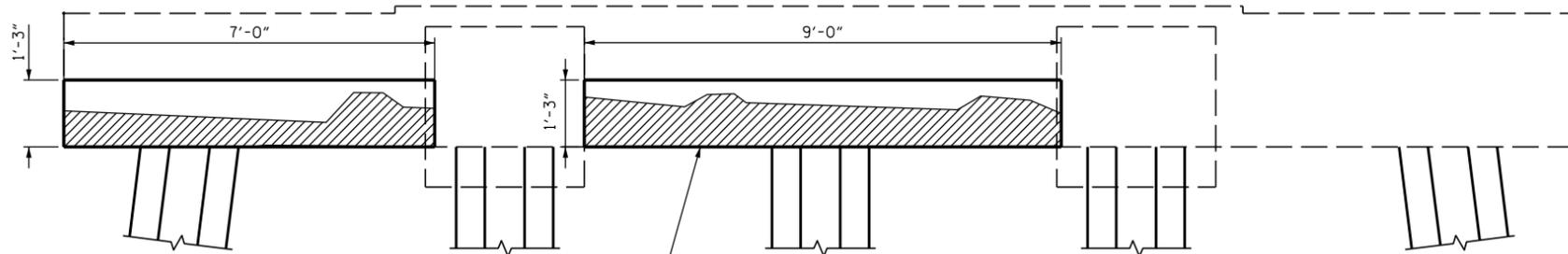
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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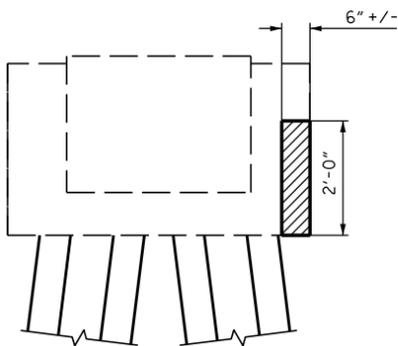
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2			4			



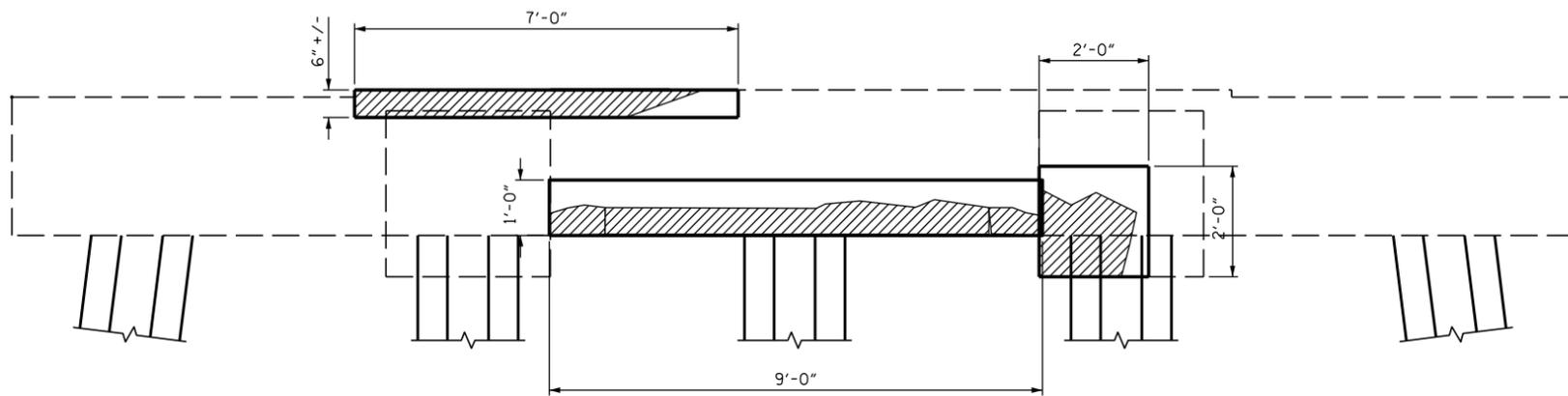
SIDE VIEW
NORTH FACE



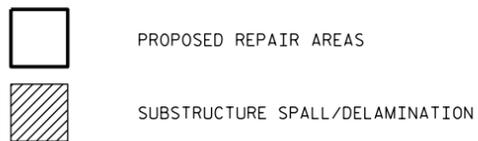
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



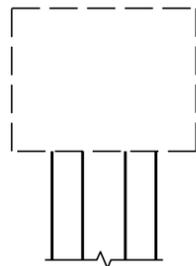
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SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

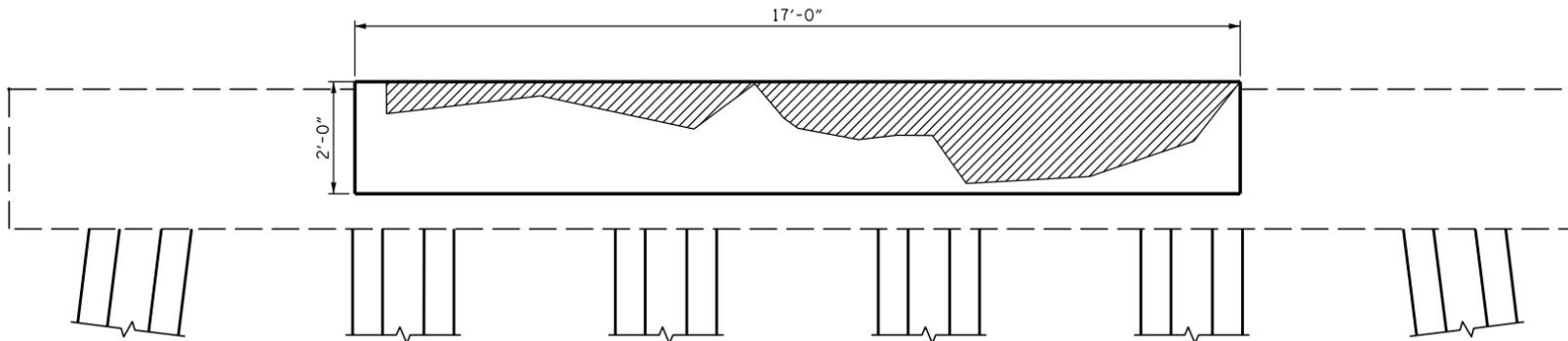
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
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2			4			

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

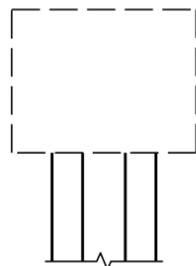
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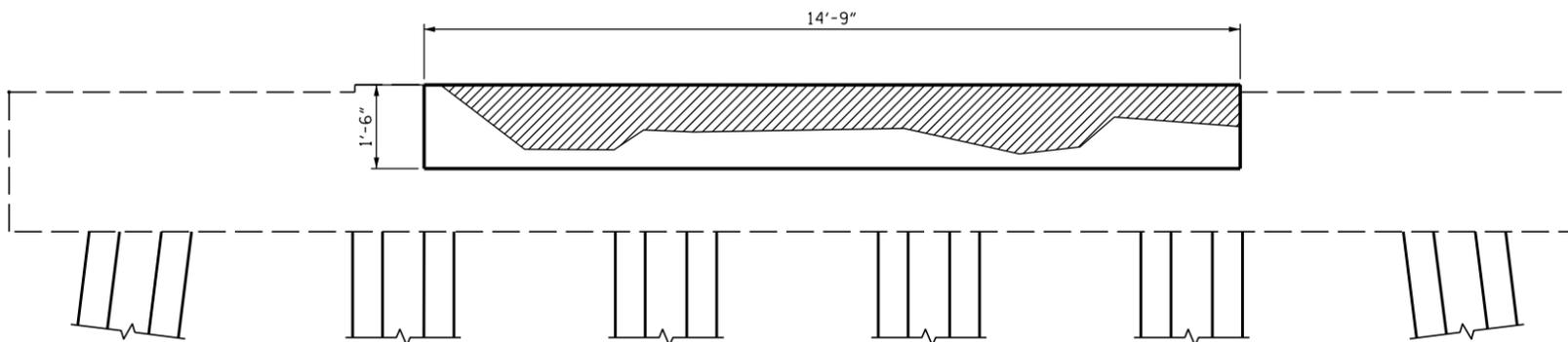
SIDE VIEW
NORTH FACE



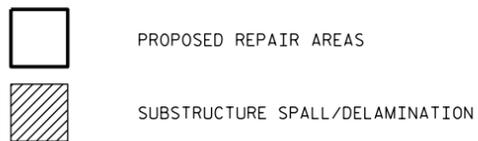
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C6703675A467...
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SEAL
043571
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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

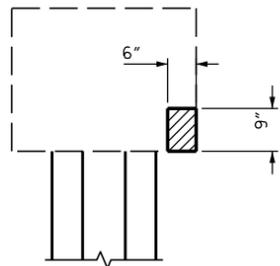
SUBSTRUCTURE CONC.
REPAIR - BENT 65

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

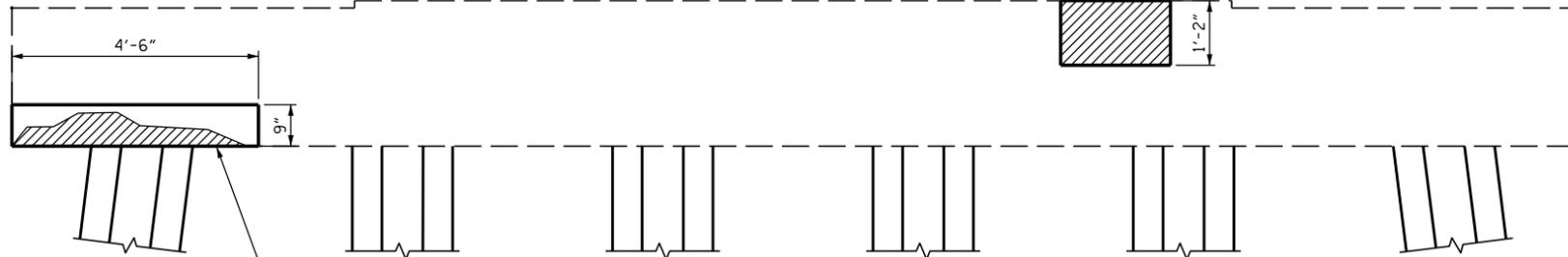
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FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

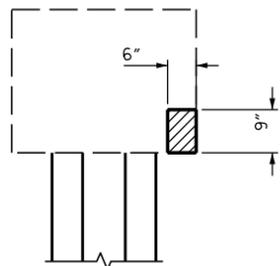
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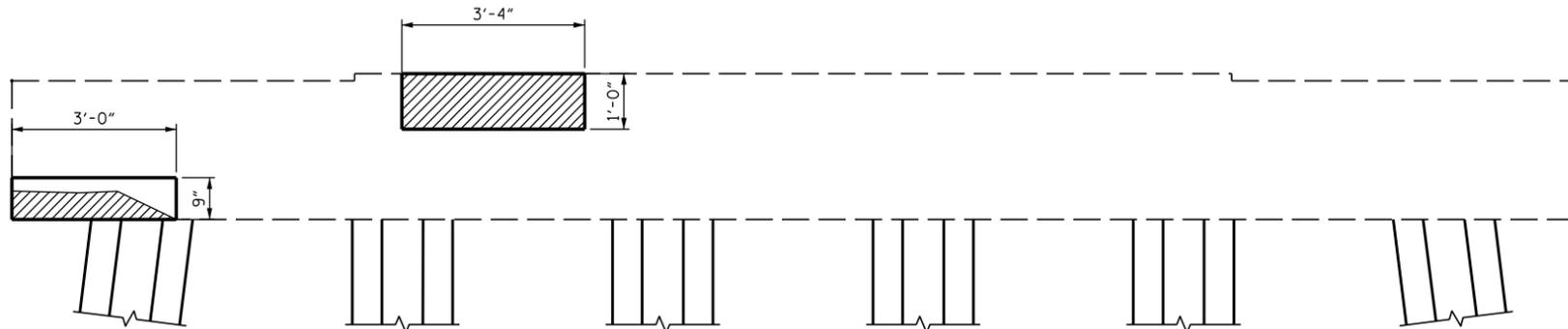
SIDE VIEW
NORTH FACE



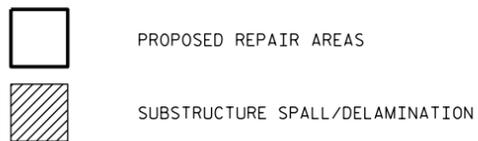
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

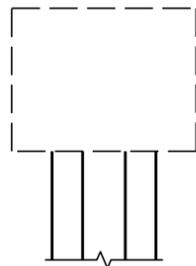
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 *****USERNAME*****

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 Samuel Cullum
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 ENGINEER
 SEAL
 043571
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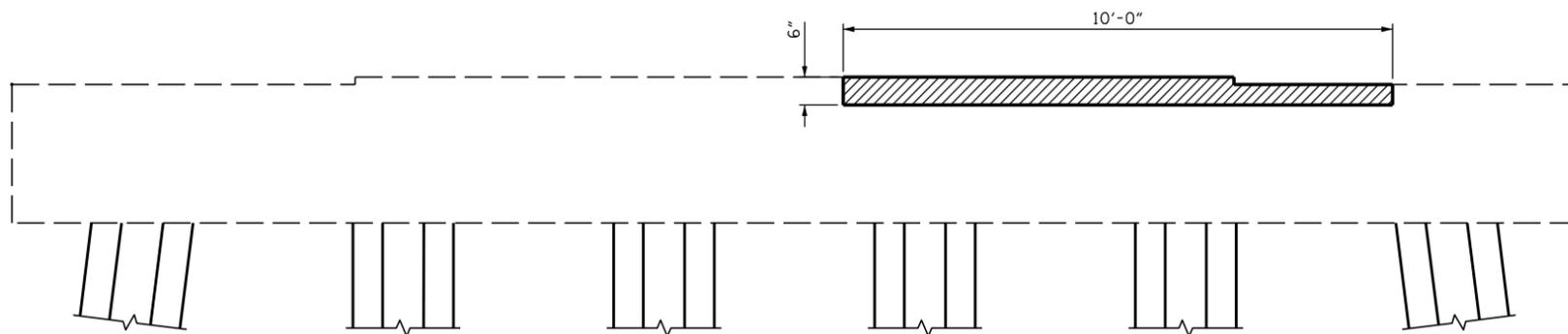
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 66						S-85
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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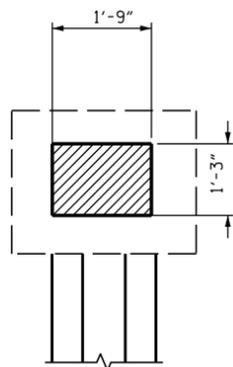
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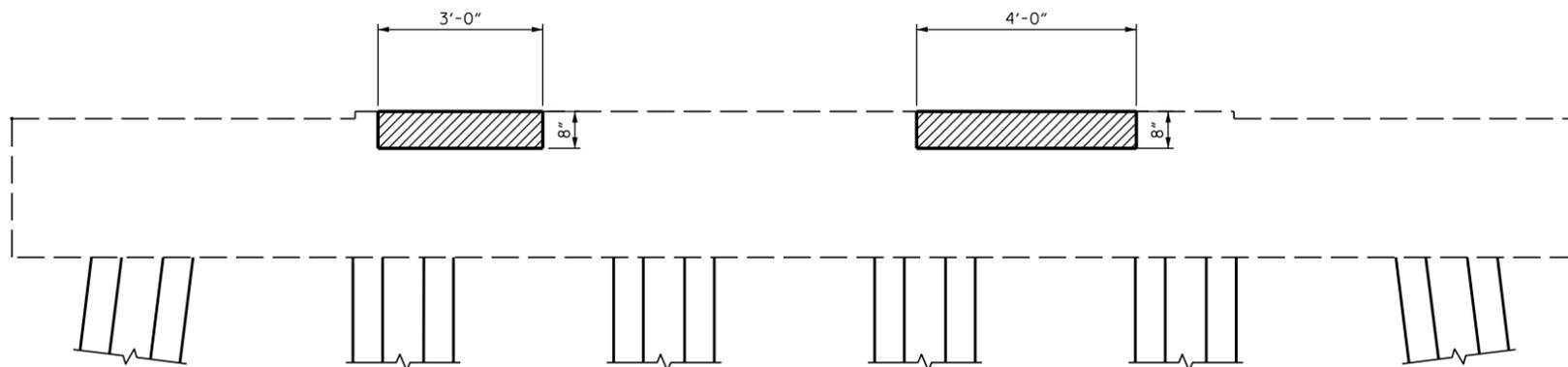
SIDE VIEW
NORTH FACE



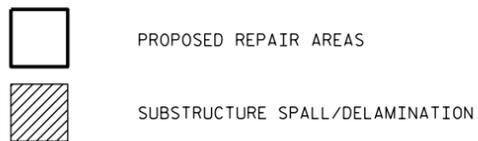
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C68036675A467...
NORTH CAROLINA
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ENGINEER
SEAL
043571
SAMUEL L. CULLUM
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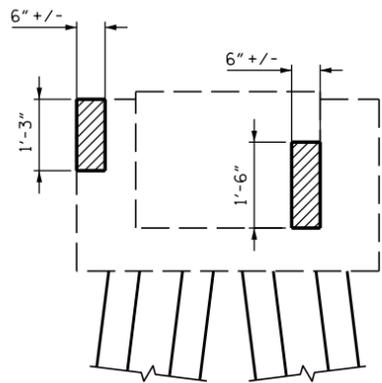
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 67

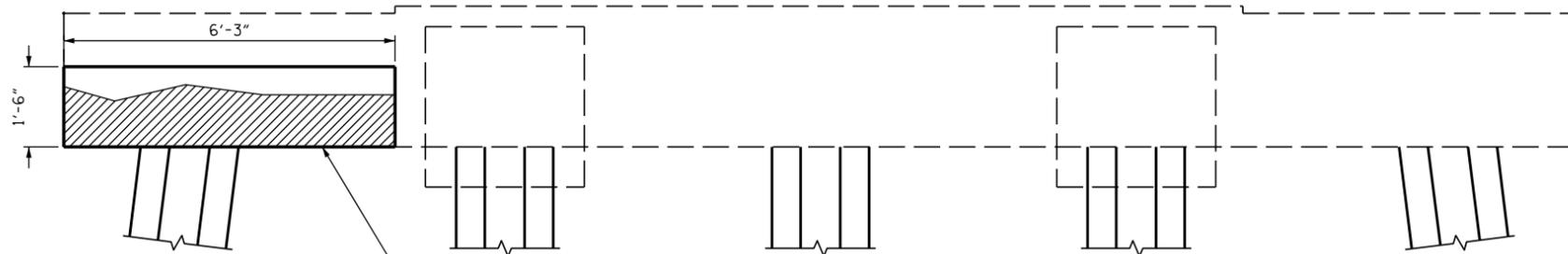
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

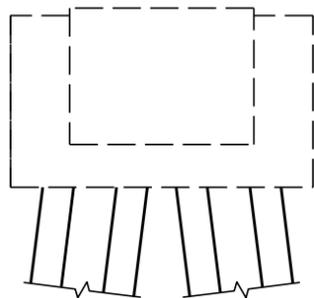
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-86
2			4			TOTAL SHEETS



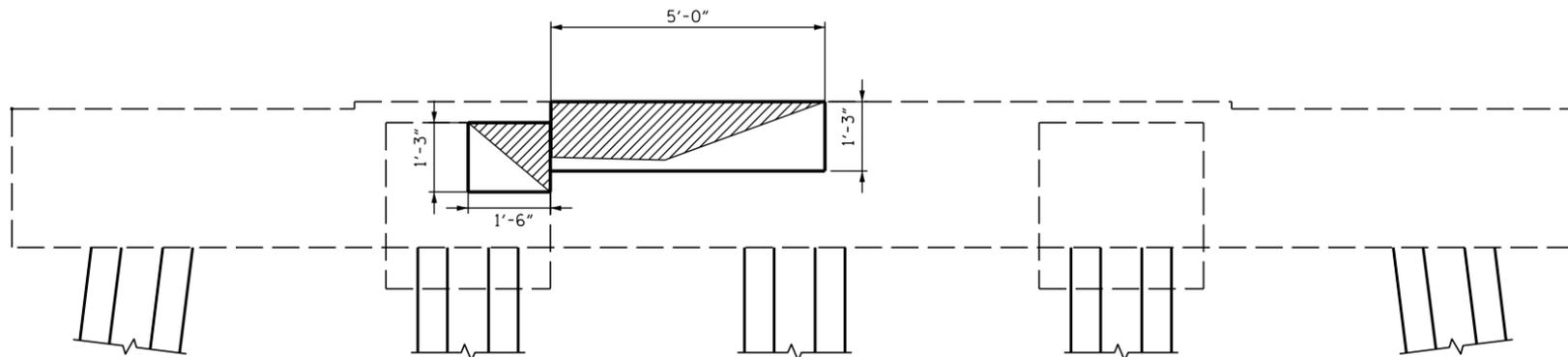
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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 19C6703675A467...

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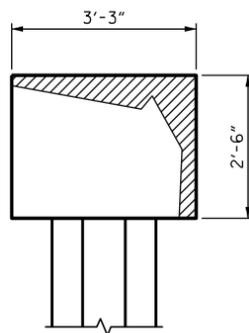
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 68**

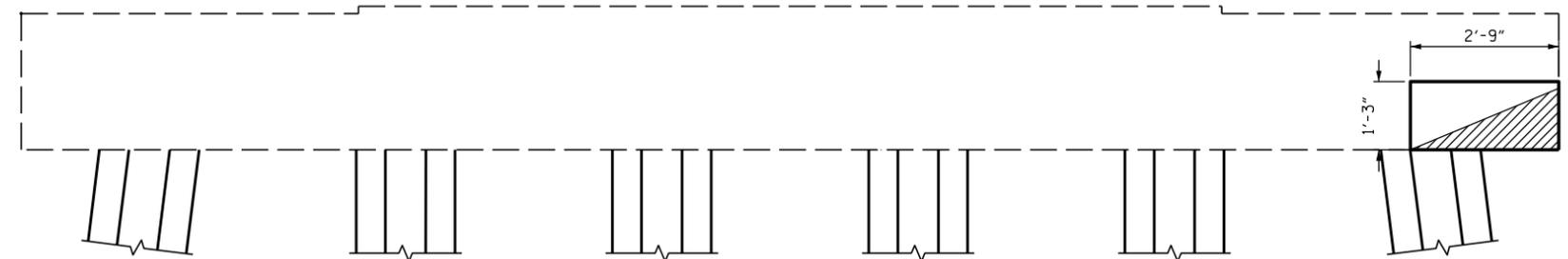
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

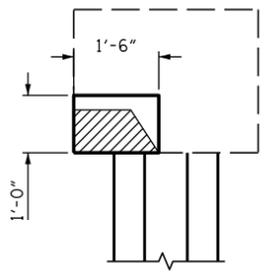
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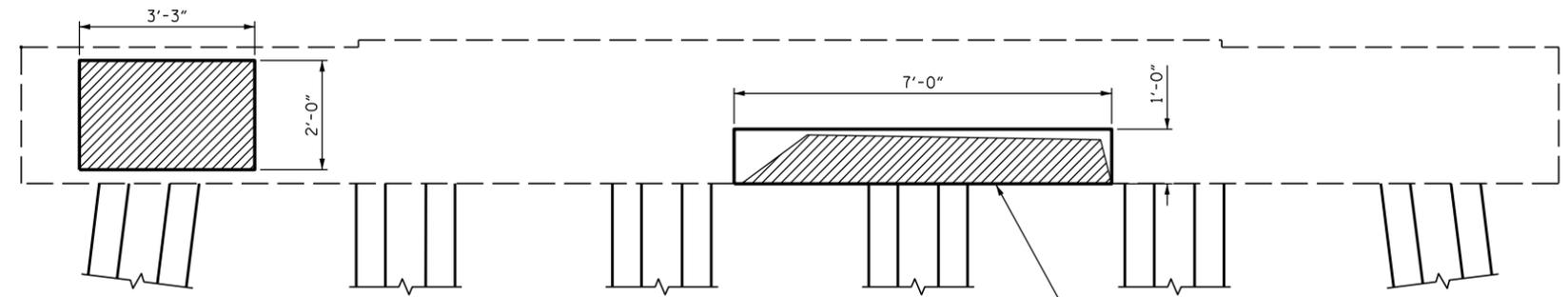
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19CG036675A467...

12/13/2016

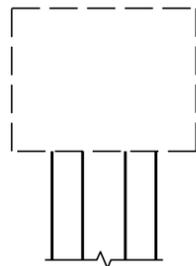
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 69					
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2			4		
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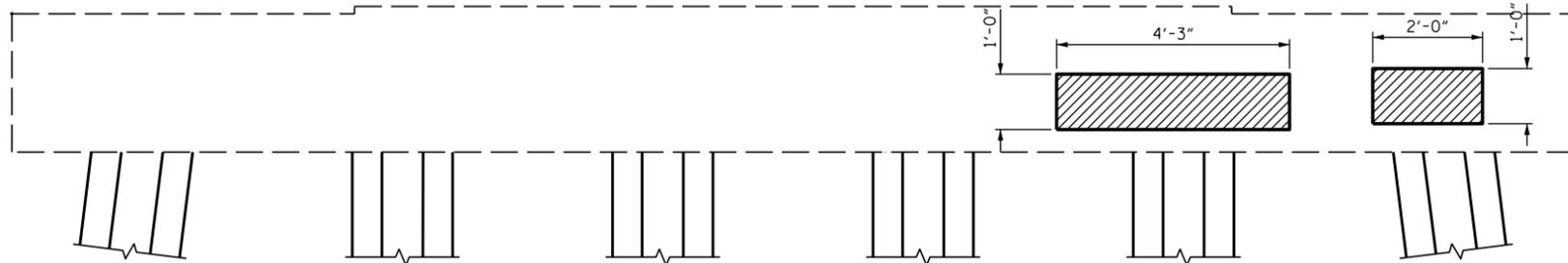
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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SIGNATURES COMPLETED

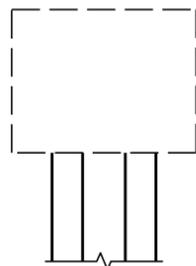
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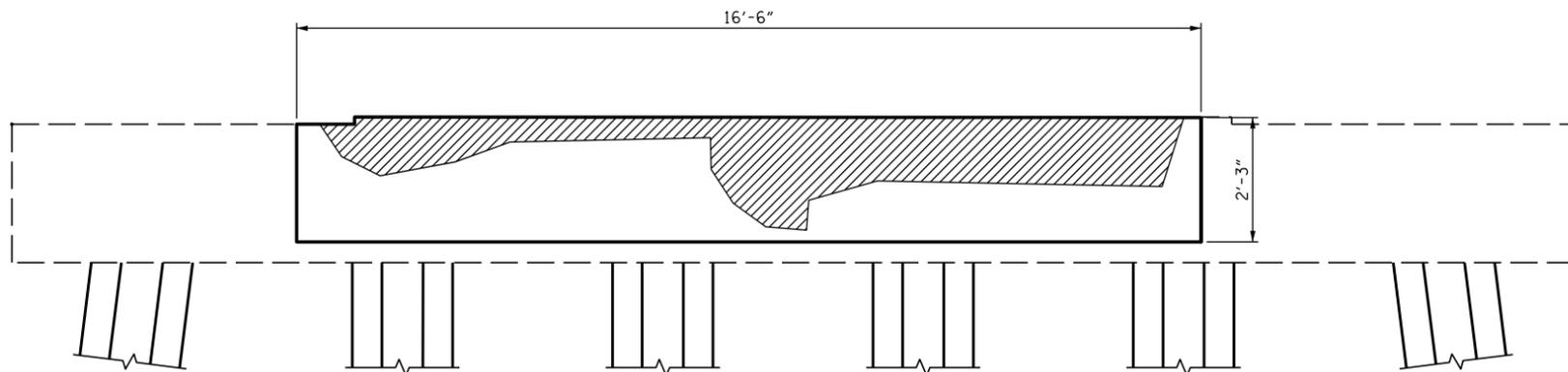
SIDE VIEW
NORTH FACE



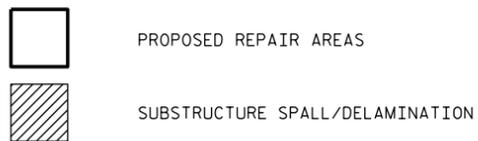
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C68036675A487...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

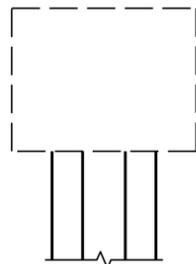
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 70						S-89
REVISIONS						TOTAL SHEETS
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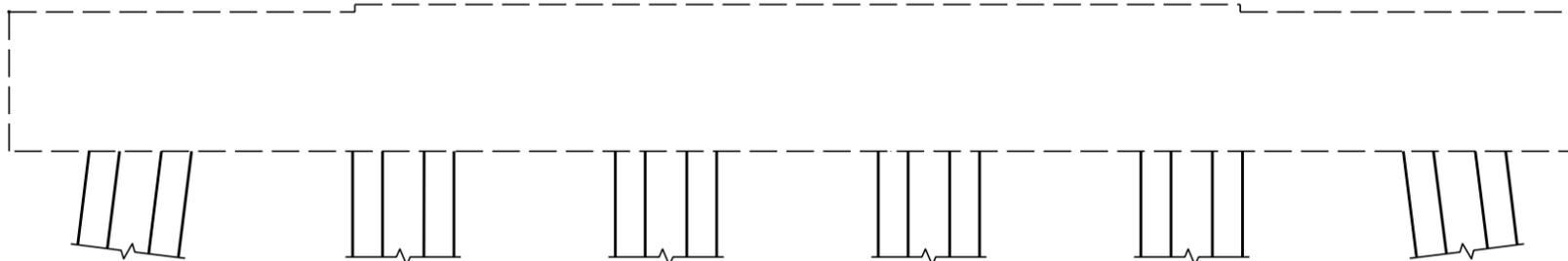
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CHECKED BY : S. L. CULLUM DATE : 07-16
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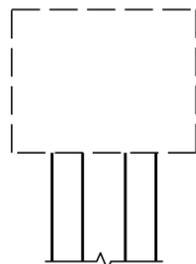
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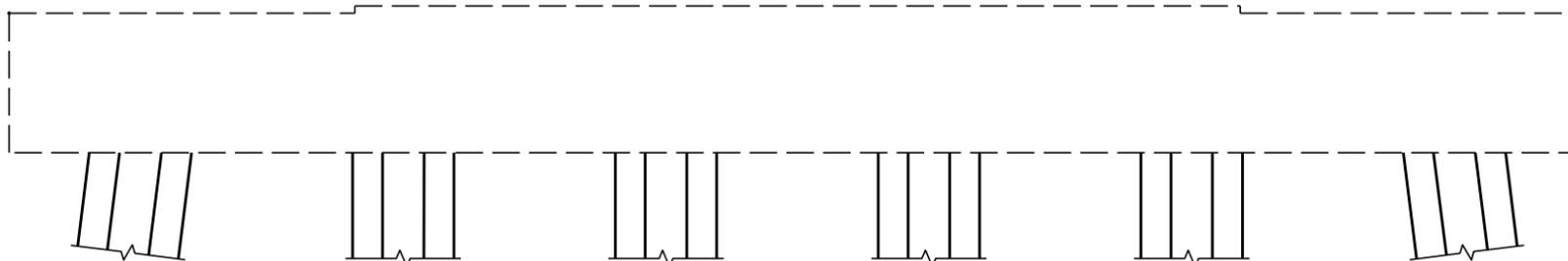
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
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 *****USERNAME*****

DocuSigned by:

Samuel Cullum

19C4036075A487...



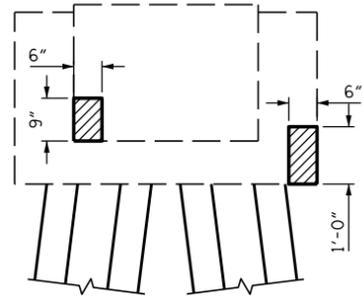
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

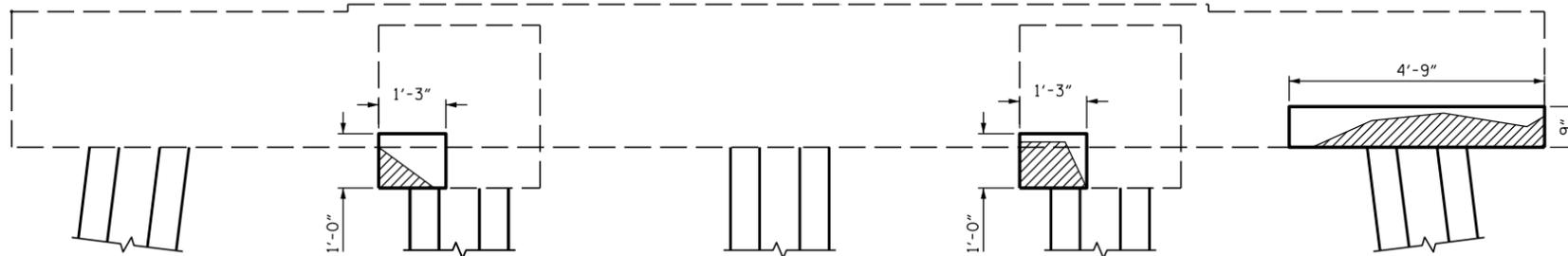
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 71

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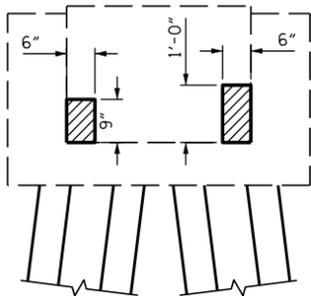
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			TOTAL SHEETS



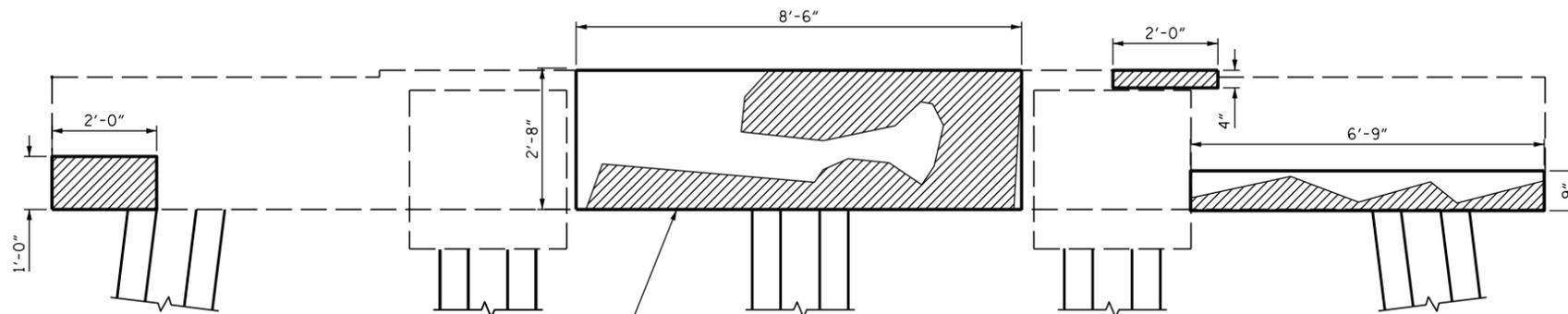
SIDE VIEW
NORTH FACE



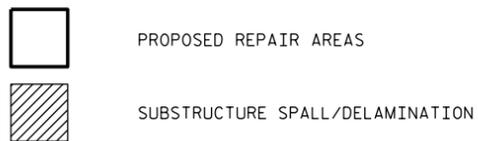
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



ANTICIPATE CAP
UNDERSIDE REPAIRS

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum



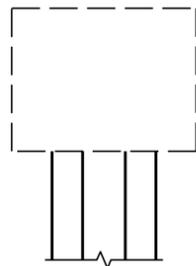
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 72

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

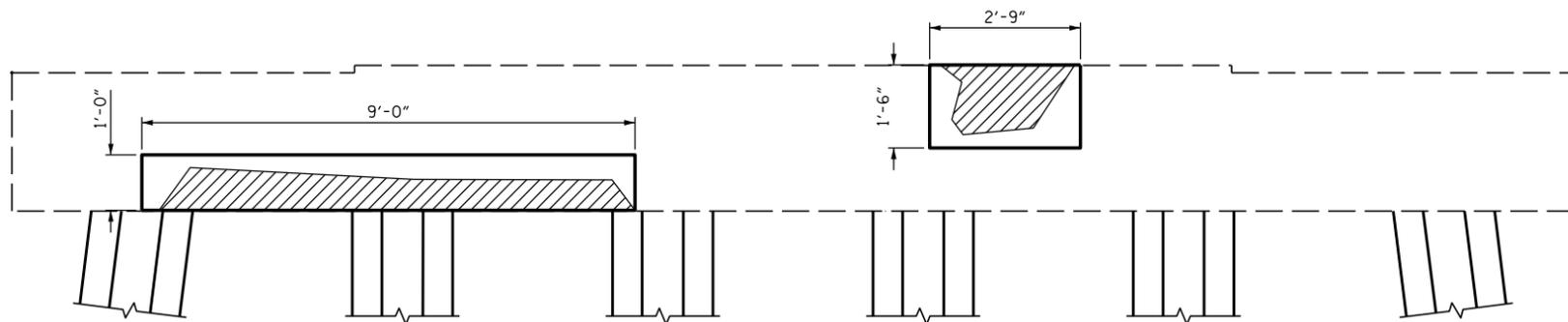
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

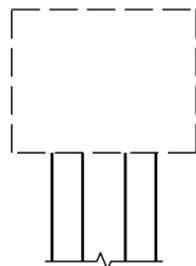
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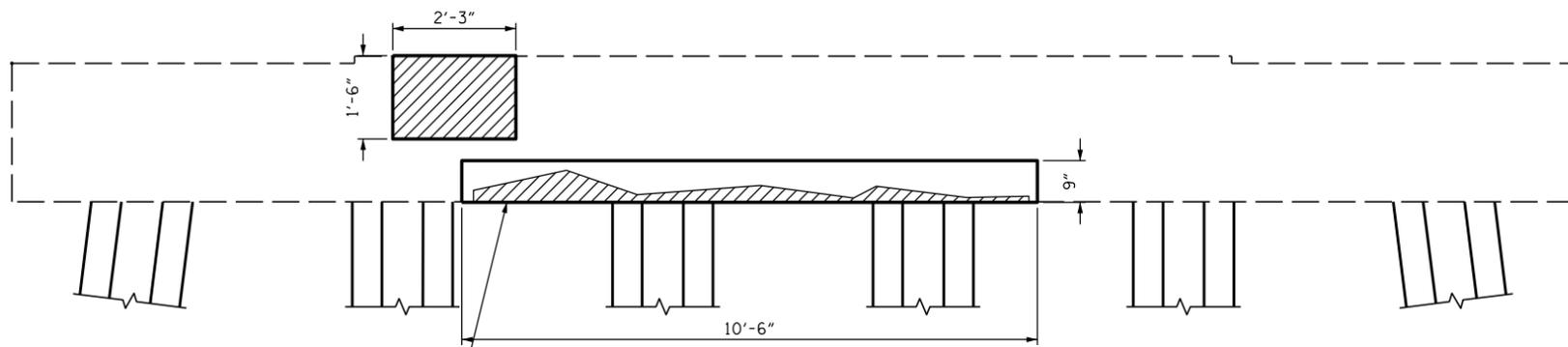
SIDE VIEW
NORTH FACE



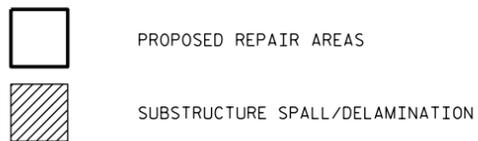
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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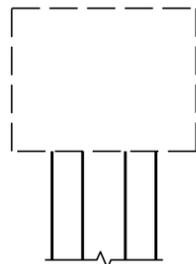
DocuSigned by:
 Samuel Cullum
 19C48036675A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

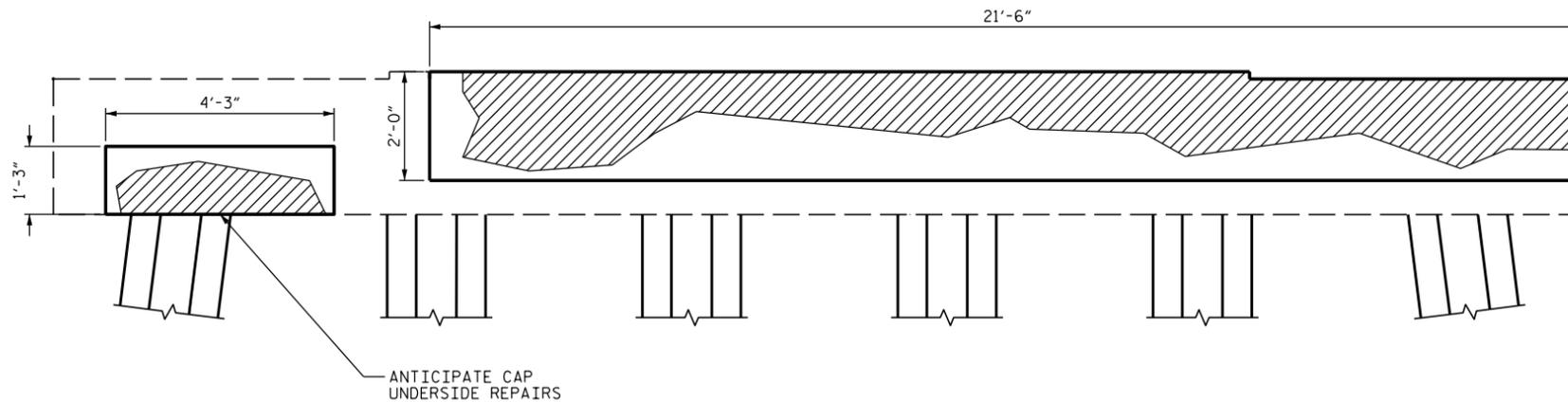
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 73

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

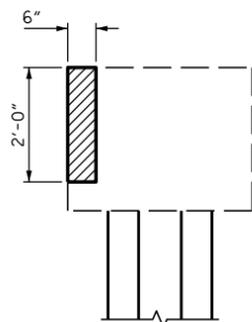
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



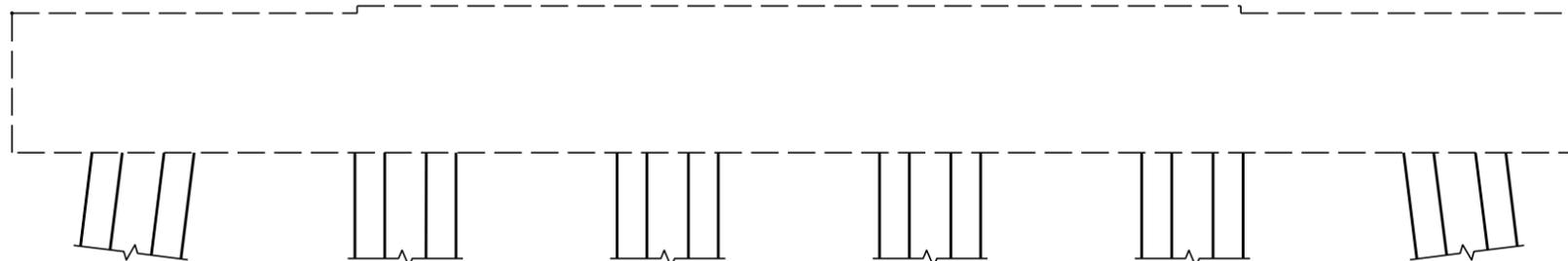
SIDE VIEW
NORTH FACE



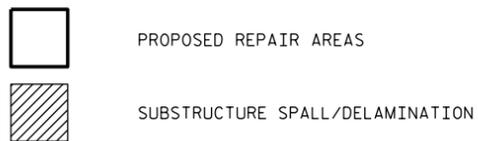
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C9036675A487...

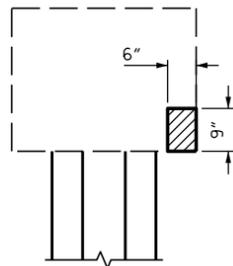
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 74

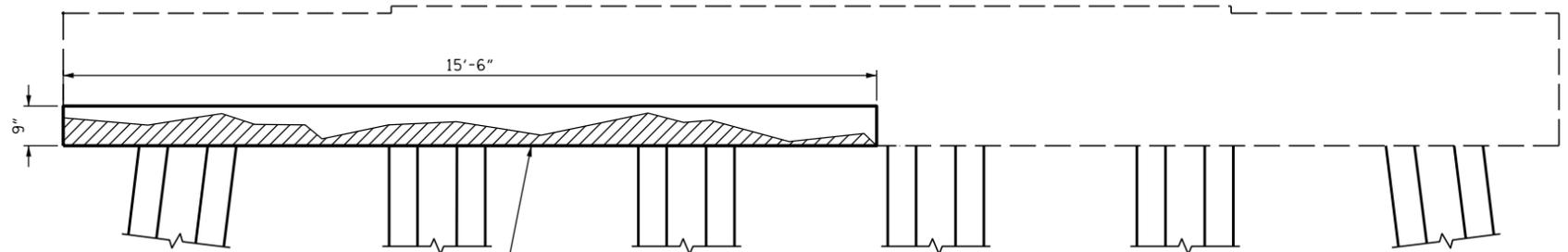
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

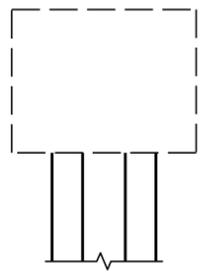


SIDE VIEW
NORTH FACE

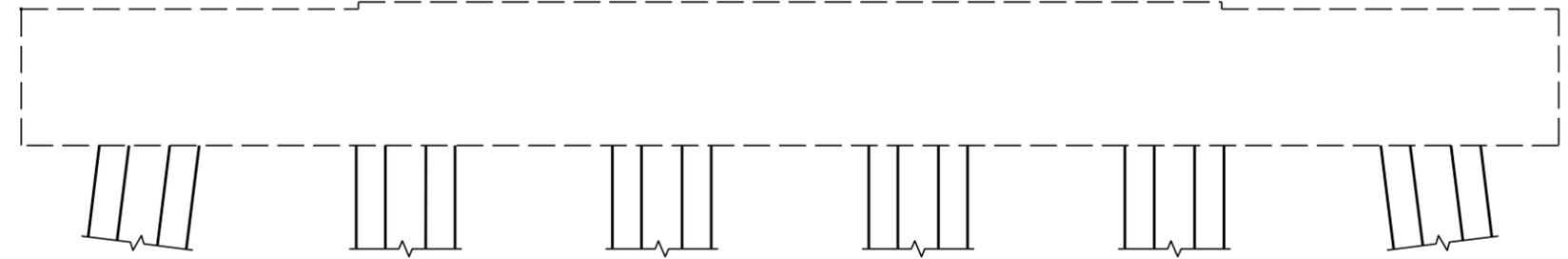


ANTICIPATE CAP
UNDERSIDE REPAIRS

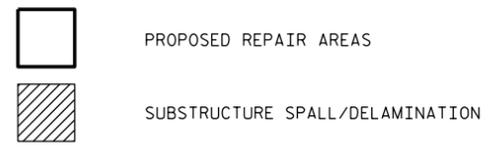
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C4703675A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

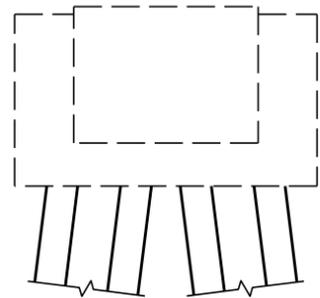
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 75

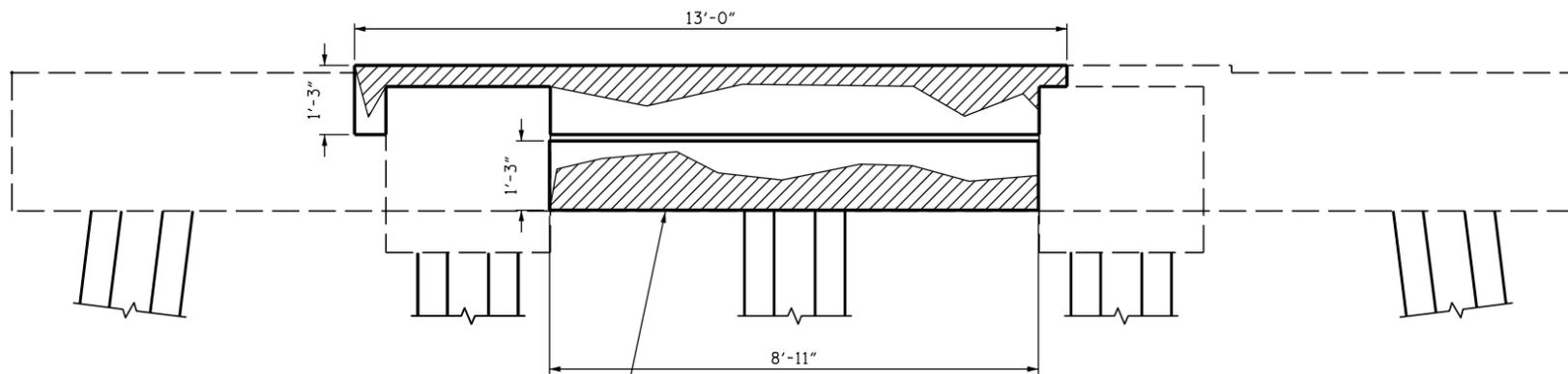
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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SIGNATURES COMPLETED

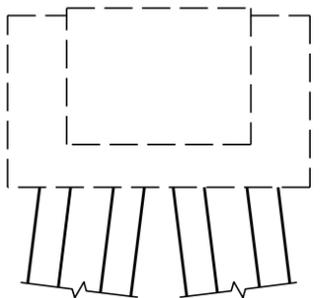
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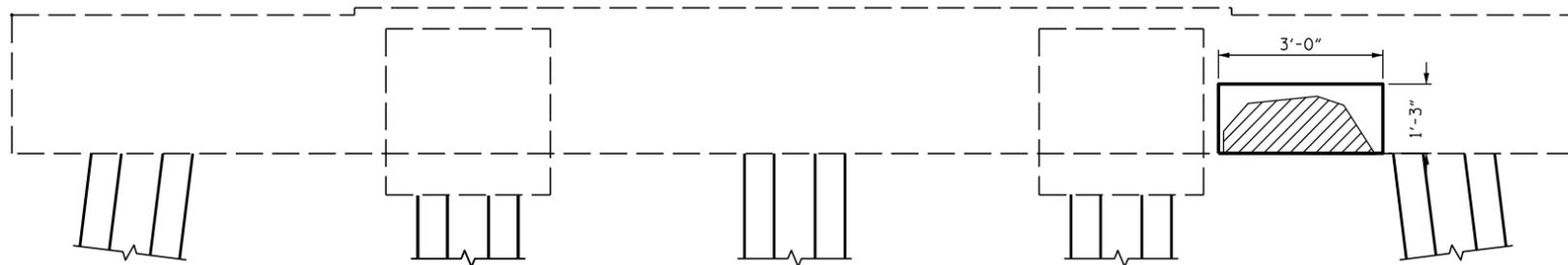
SIDE VIEW
NORTH FACE



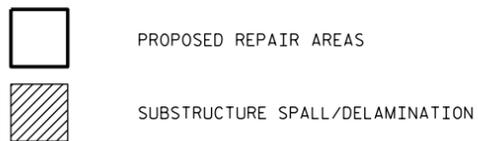
ELEVATION
WEST FACE
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C4803675A467...
NORTH CAROLINA
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ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

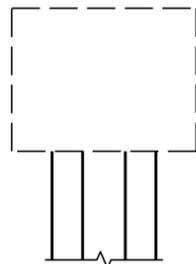
SUBSTRUCTURE CONC.
REPAIR - BENT 76

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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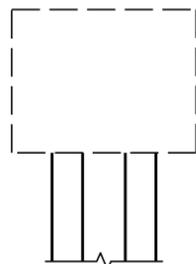
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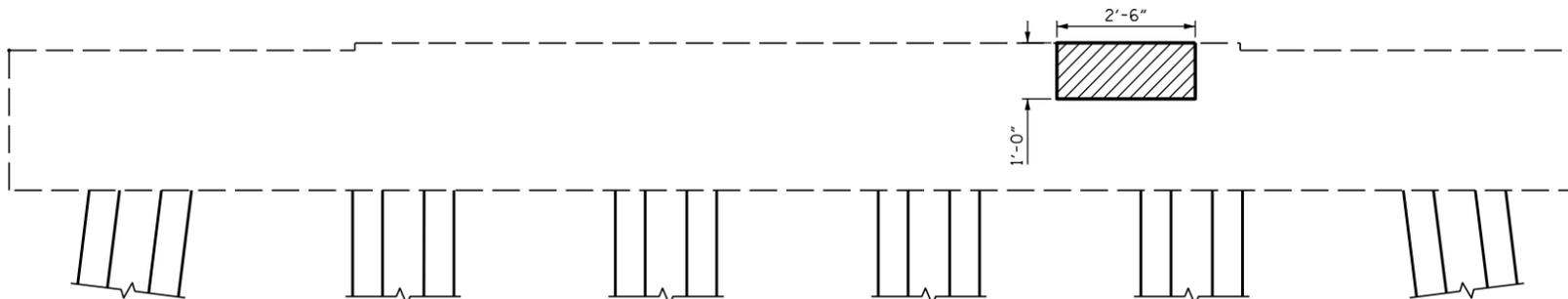
SIDE VIEW
NORTH FACE



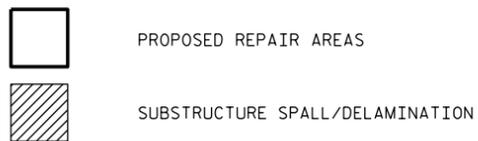
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C4F036675A487...

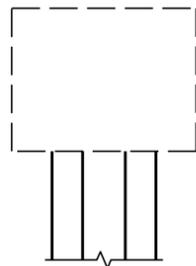
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 77

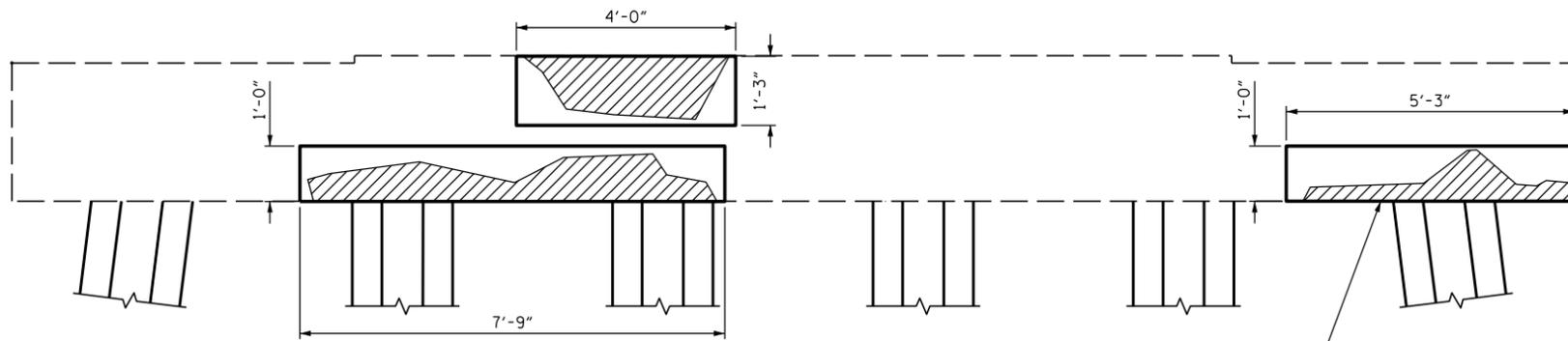
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
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DOCUMENT NOT CONSIDERED
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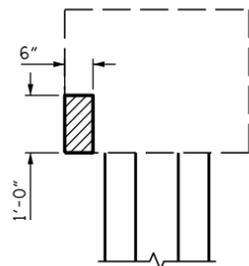
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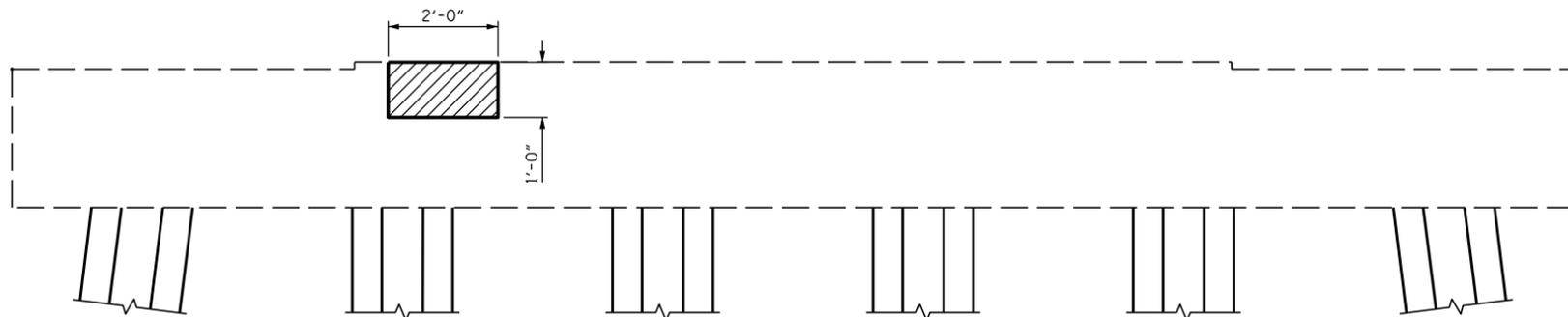
SIDE VIEW
NORTH FACE



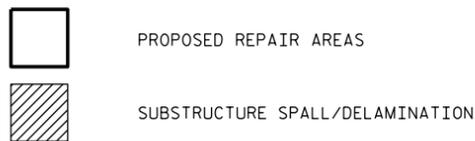
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C6703675A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

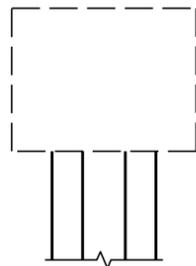
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 78

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

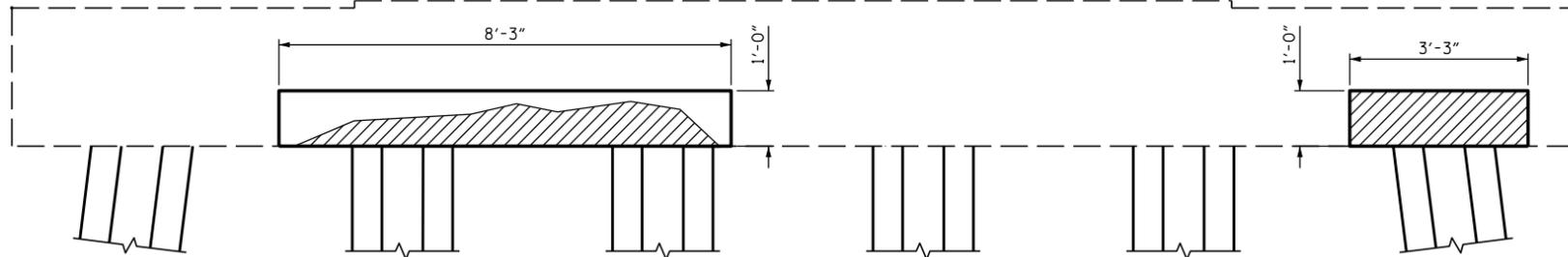
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2			4			

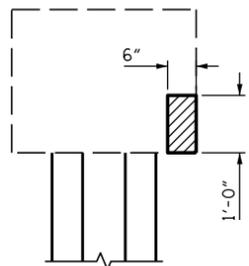
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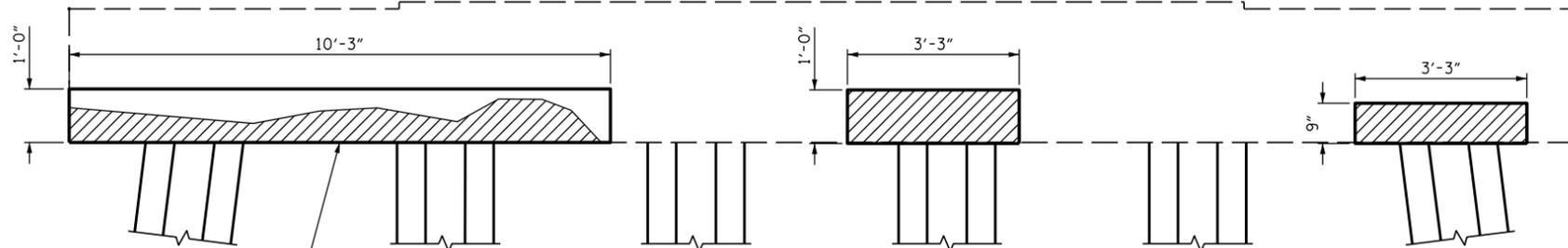
SIDE VIEW
NORTH FACE



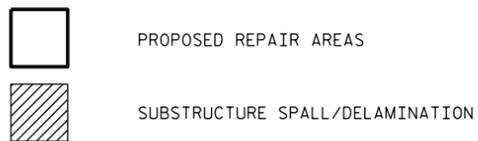
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C4036675A487...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

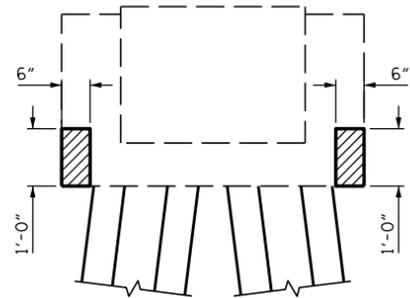
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 79

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

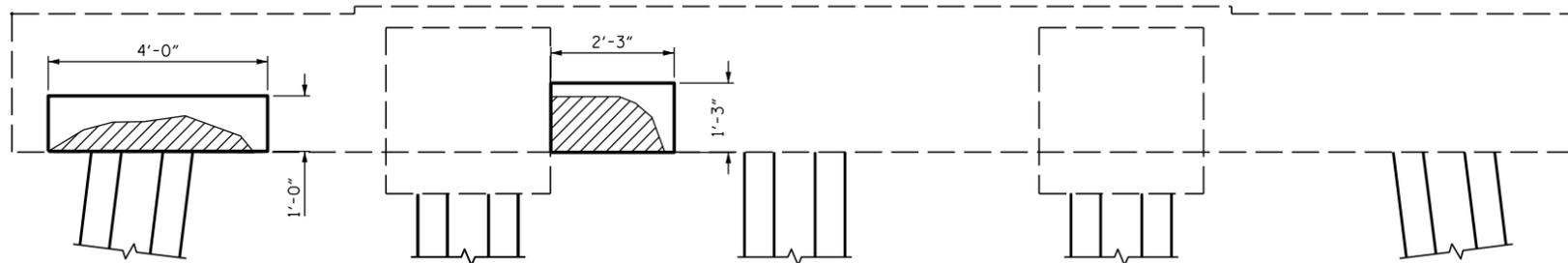
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SIGNATURES COMPLETED

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2			4			

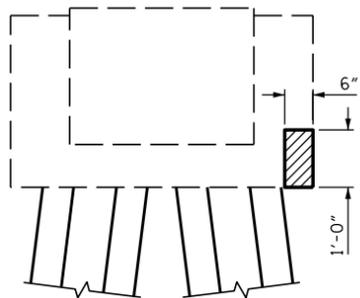
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*****SDGN*****
*****USERNAME*****



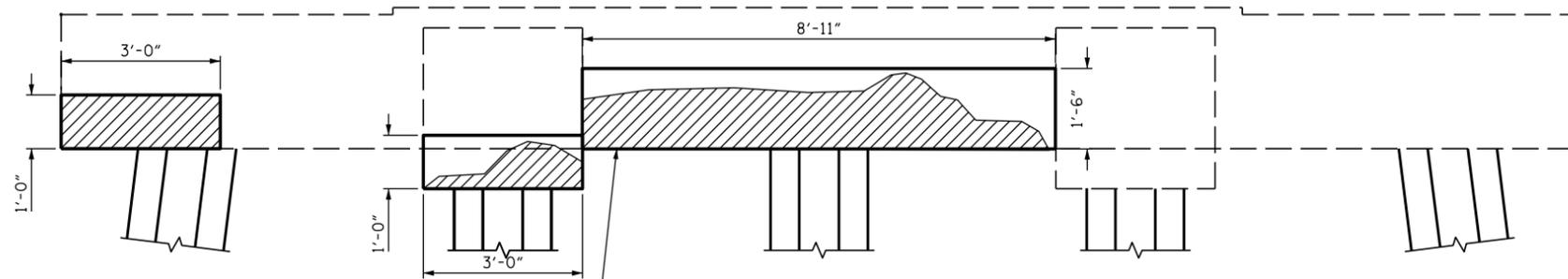
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

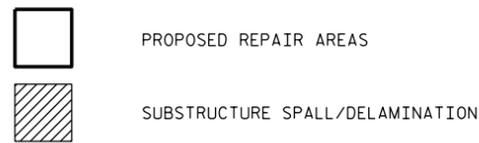


SIDE VIEW
SOUTH FACE



ANTICIPATE CAP
UNDERSIDE REPAIRS

ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



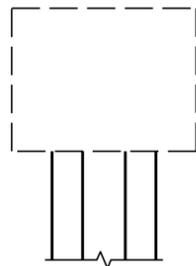
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 80					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-99
TOTAL SHEETS					9

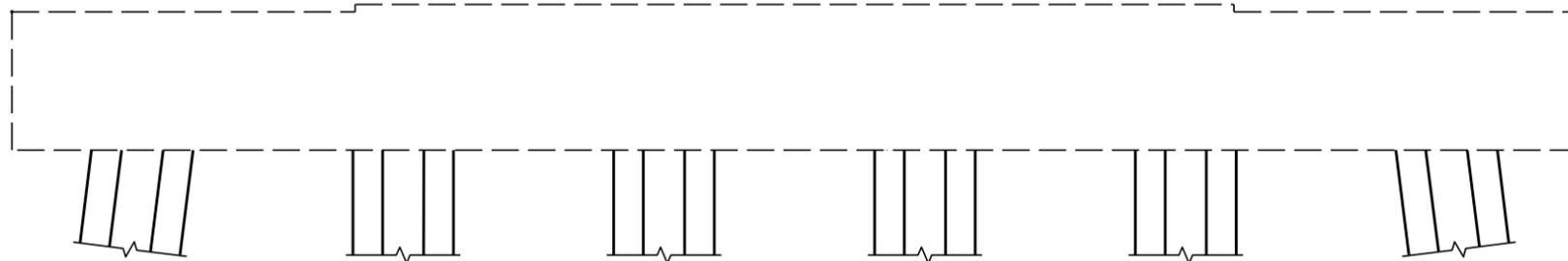
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

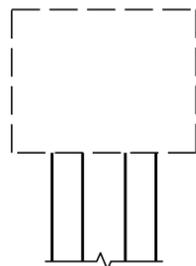
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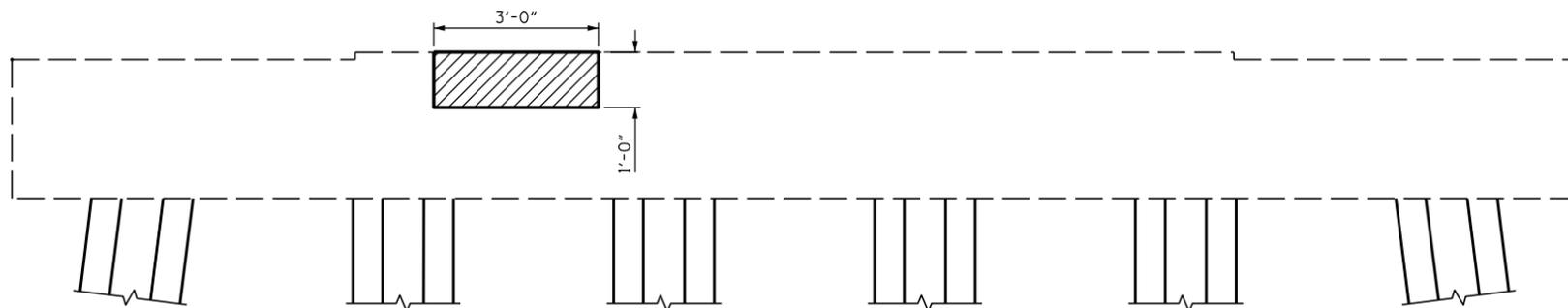
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:

Samuel Cullum

19C4036675A487...



12/13/2016

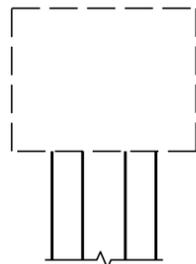
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 81

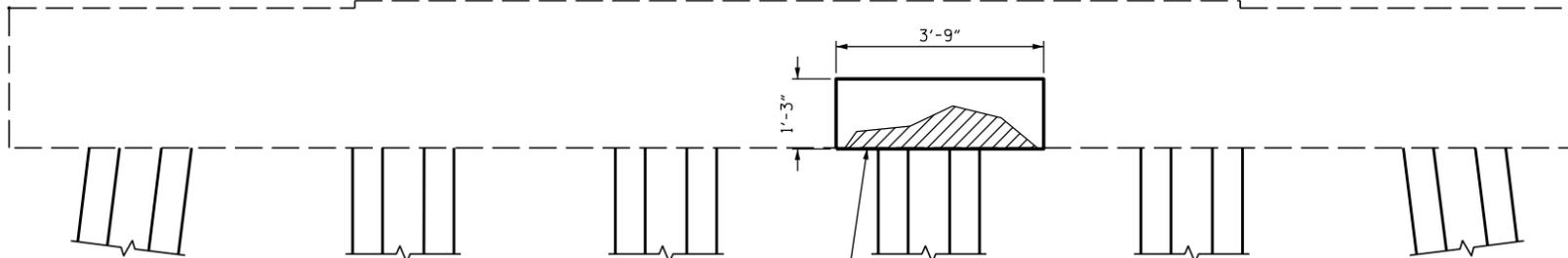
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-100
2			4			

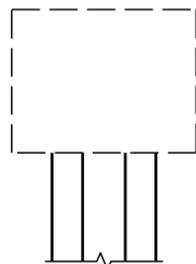


SIDE VIEW
NORTH FACE

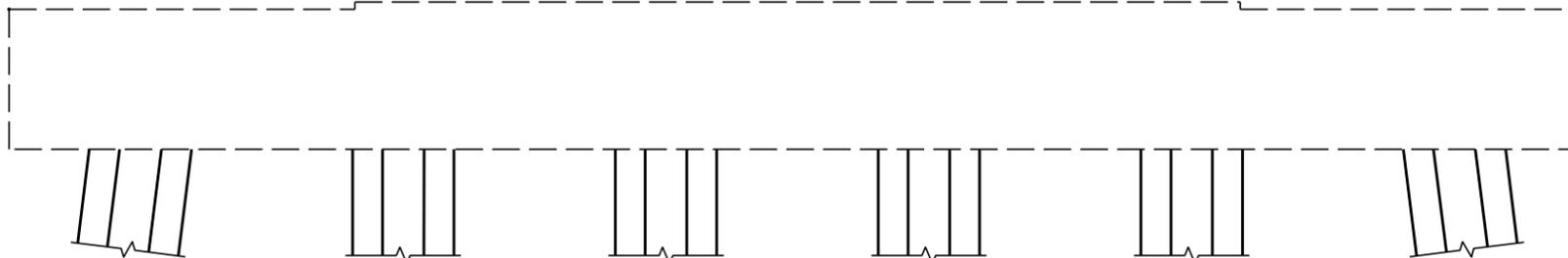


ANTICIPATE CAP
UNDERSIDE REPAIRS

ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:

Samuel Cullum

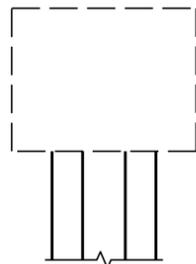


PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

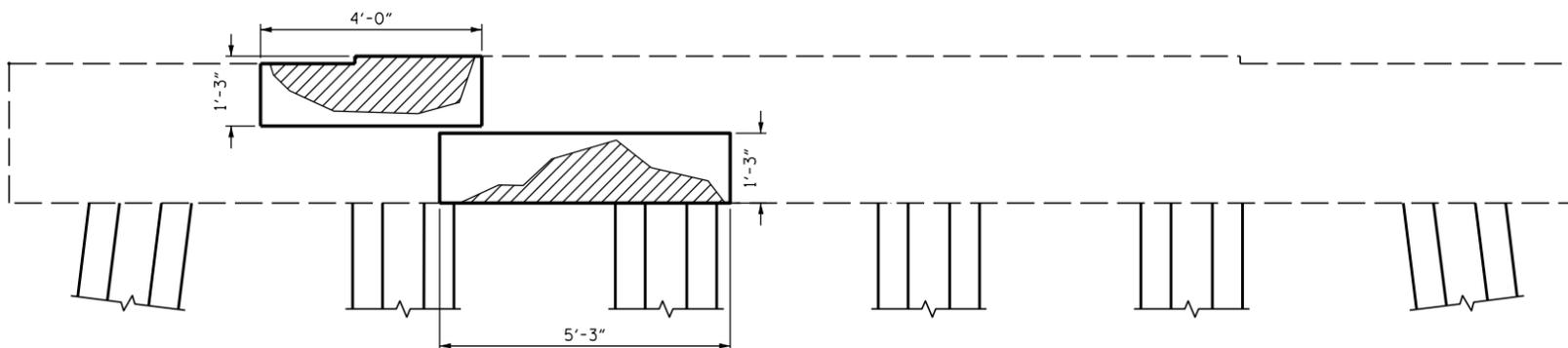
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 82

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

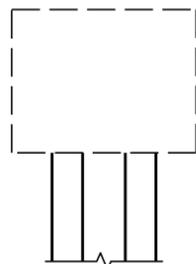
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-101
2			4			



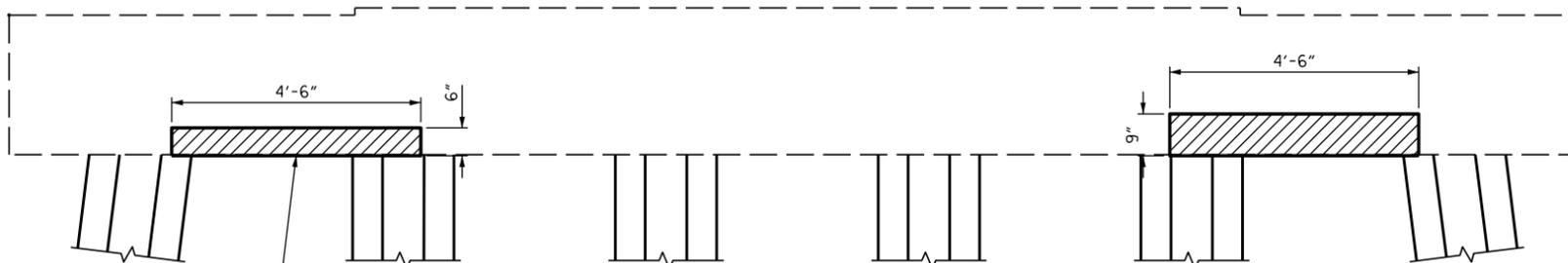
SIDE VIEW
NORTH FACE



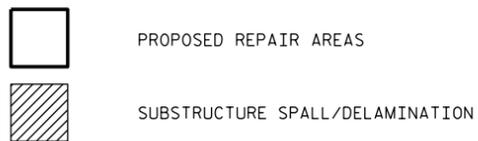
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum

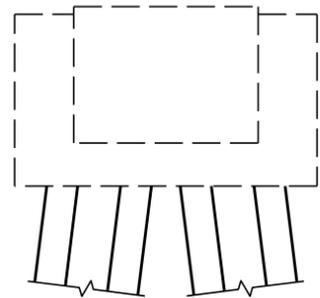


PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

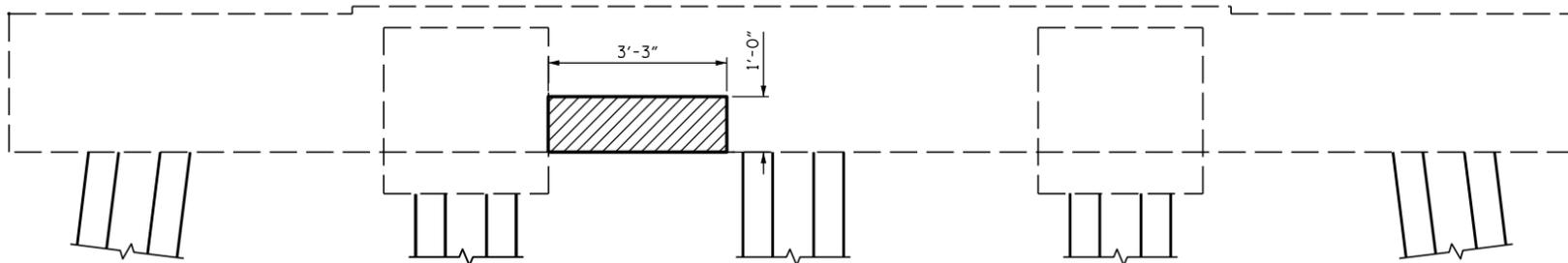
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 83

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

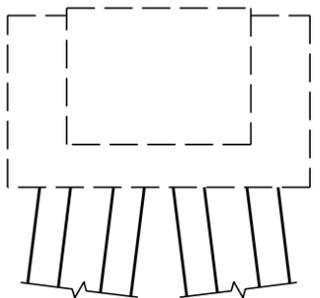
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-102
2			4			TOTAL SHEETS



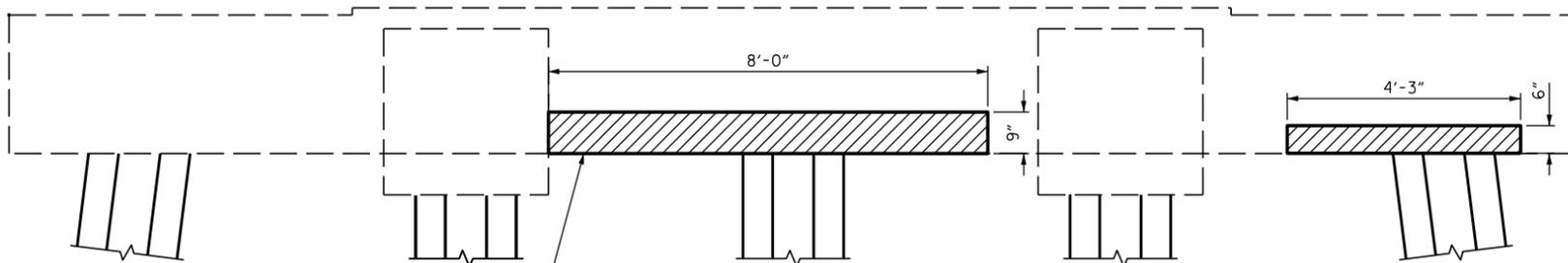
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum

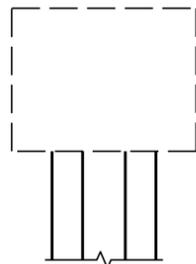


PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

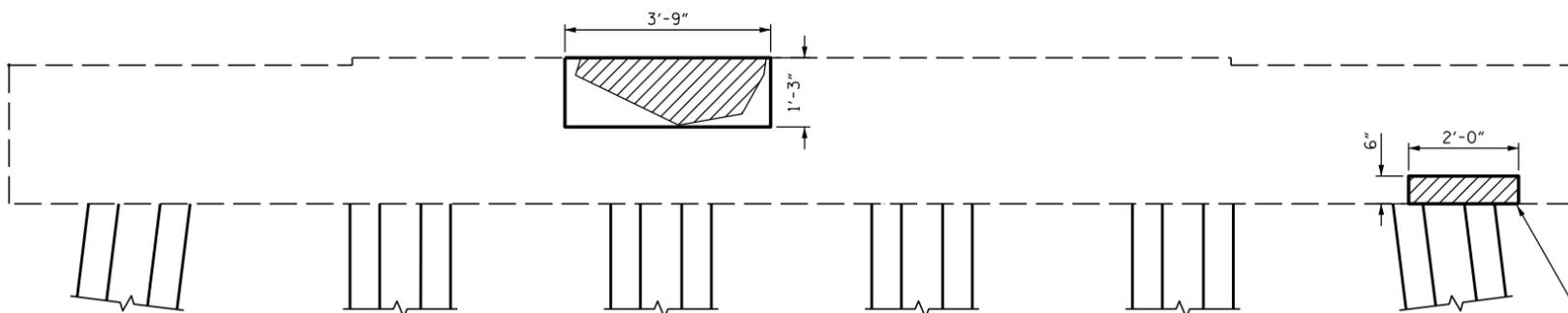
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 84

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

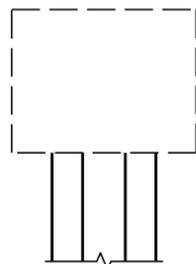


SIDE VIEW
NORTH FACE

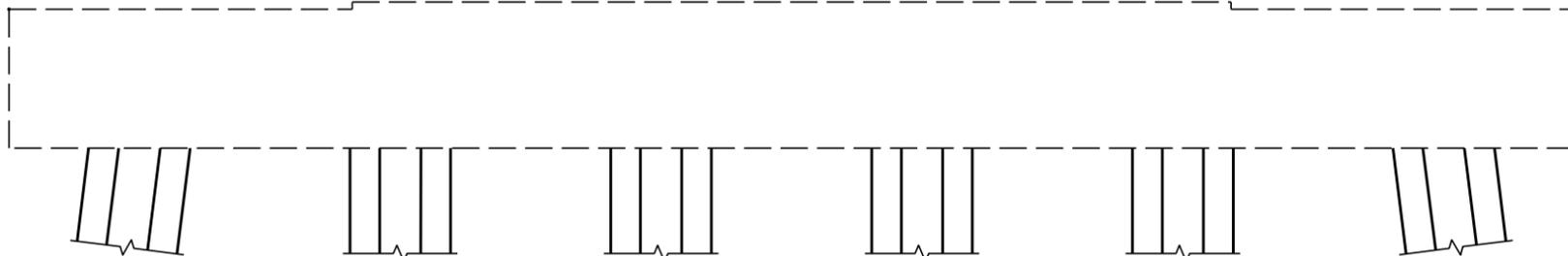


ELEVATION
WEST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

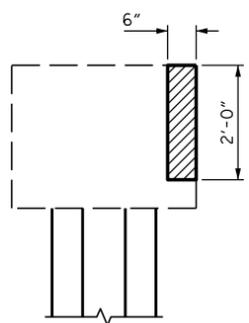
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 85

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

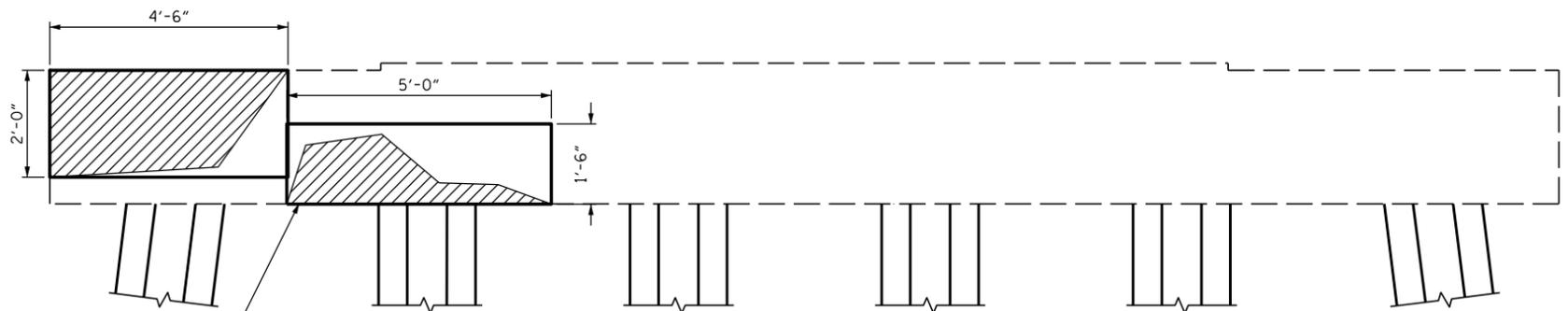
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

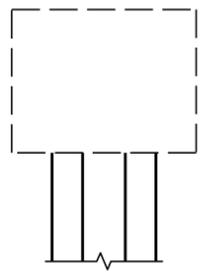
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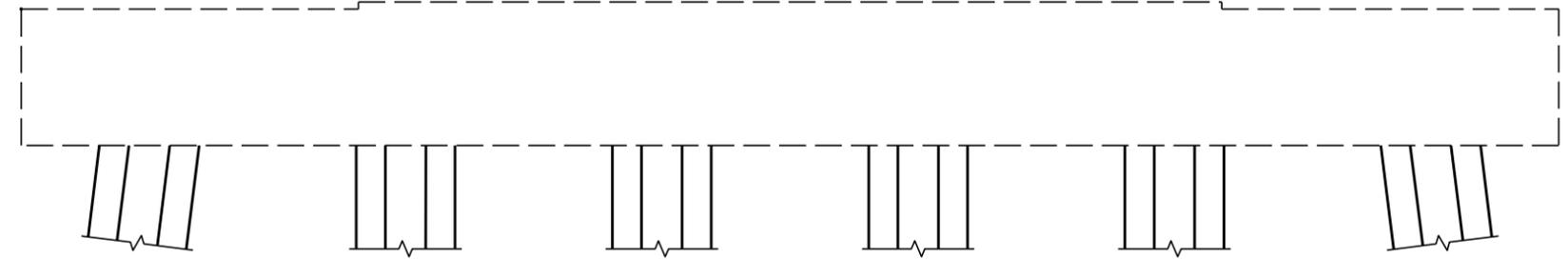
SIDE VIEW
NORTH FACE



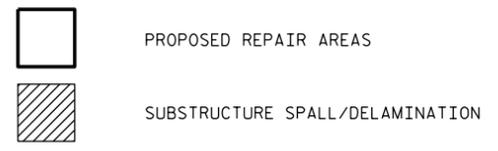
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C9703675A487...
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

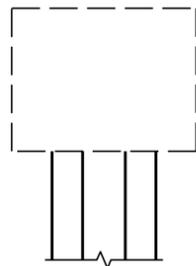
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 86

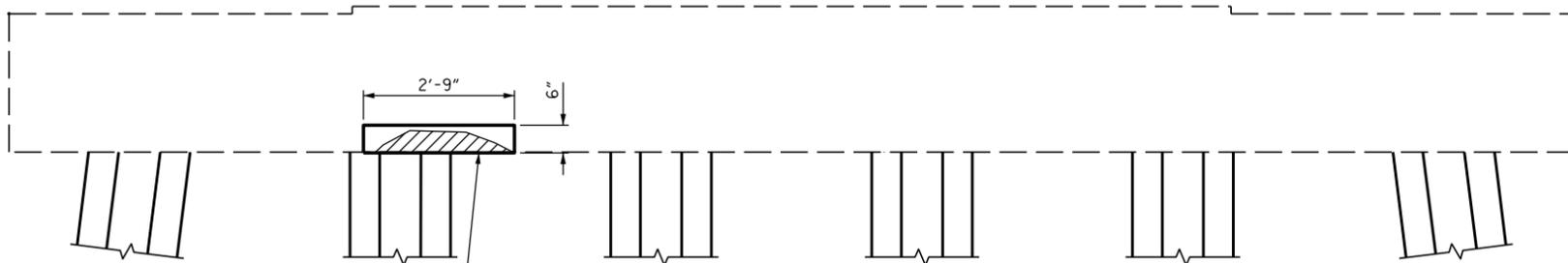
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DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

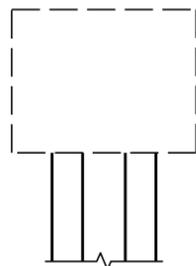


SIDE VIEW
NORTH FACE

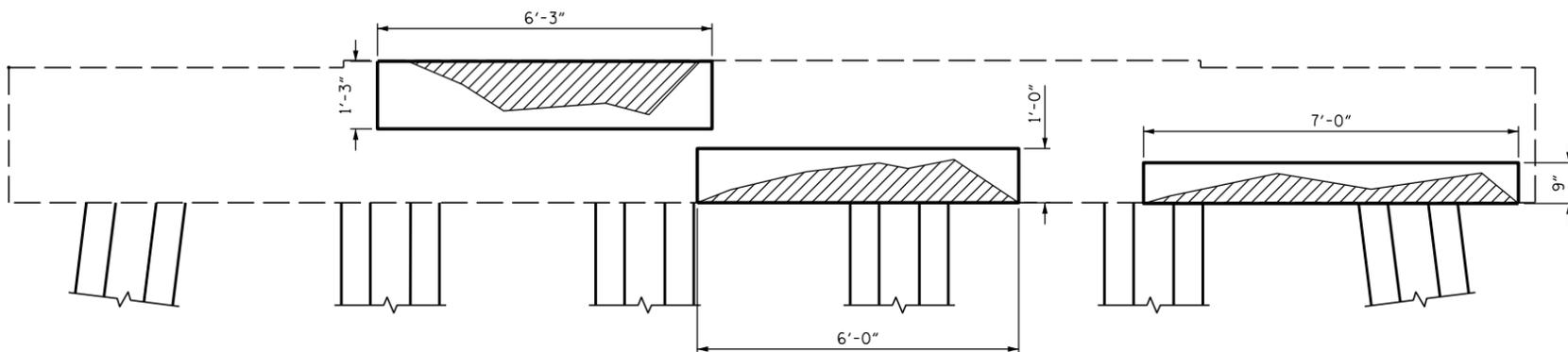


ANTICIPATE CAP
UNDERSIDE REPAIRS

ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEMTIME*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum



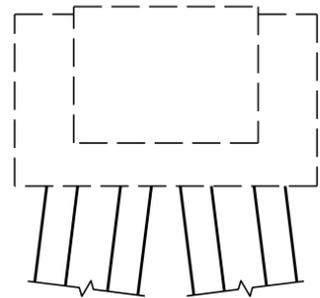
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

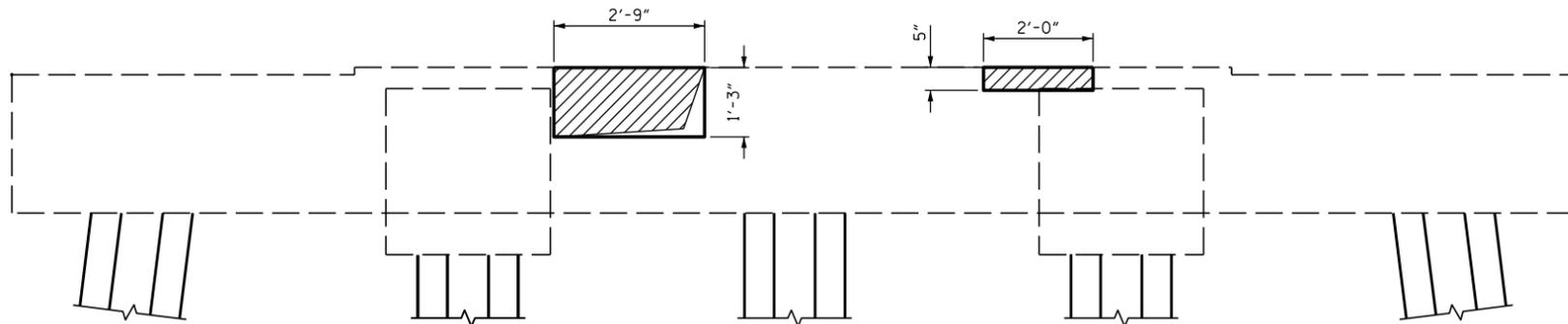
SUBSTRUCTURE CONC.
 REPAIR - BENT 87

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

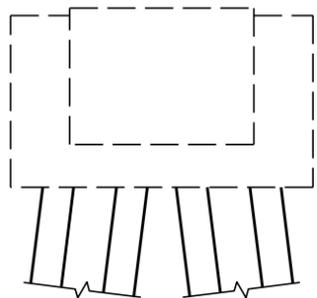
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-106
2			4			



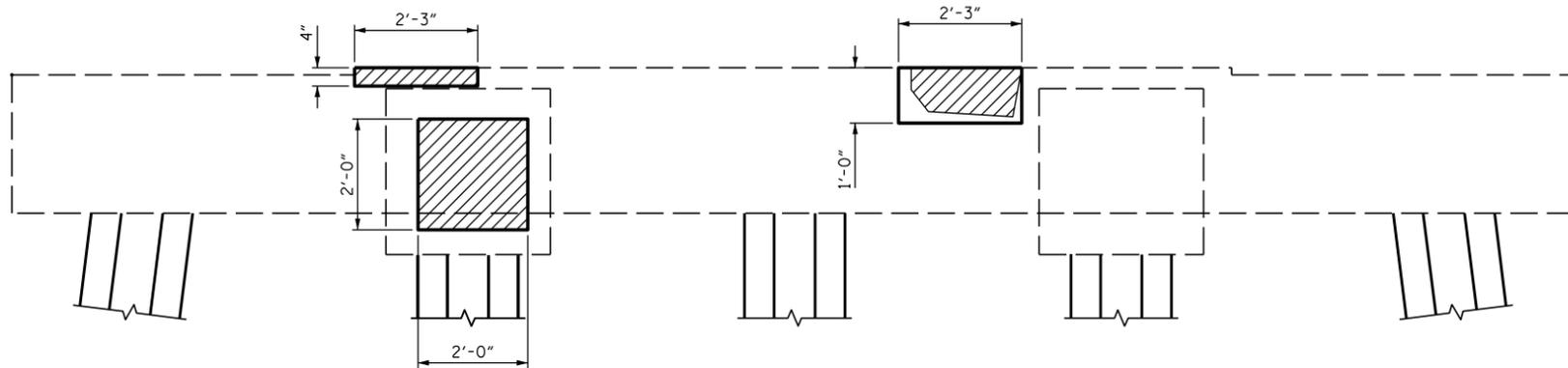
SIDE VIEW
NORTH FACE



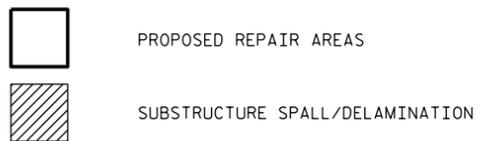
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19CG036075A487...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

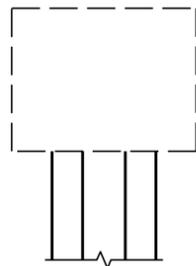
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 88

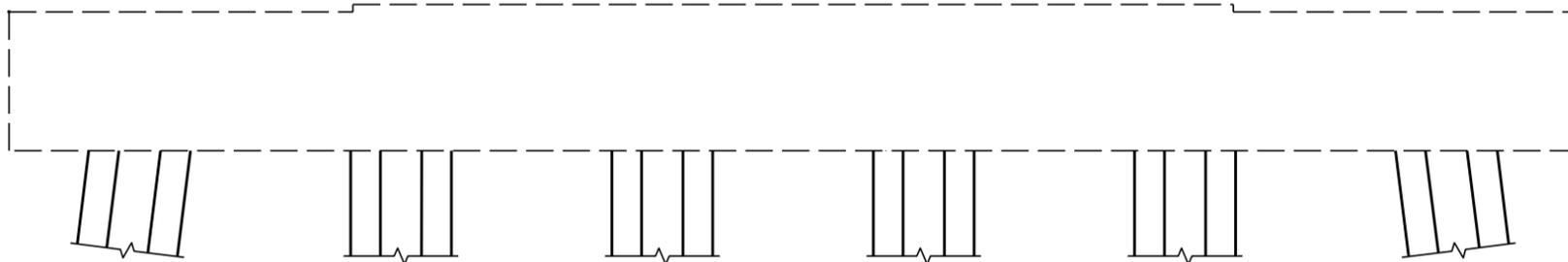
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

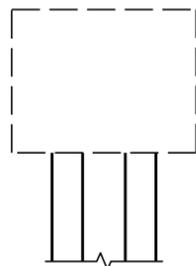
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-107
2			4			



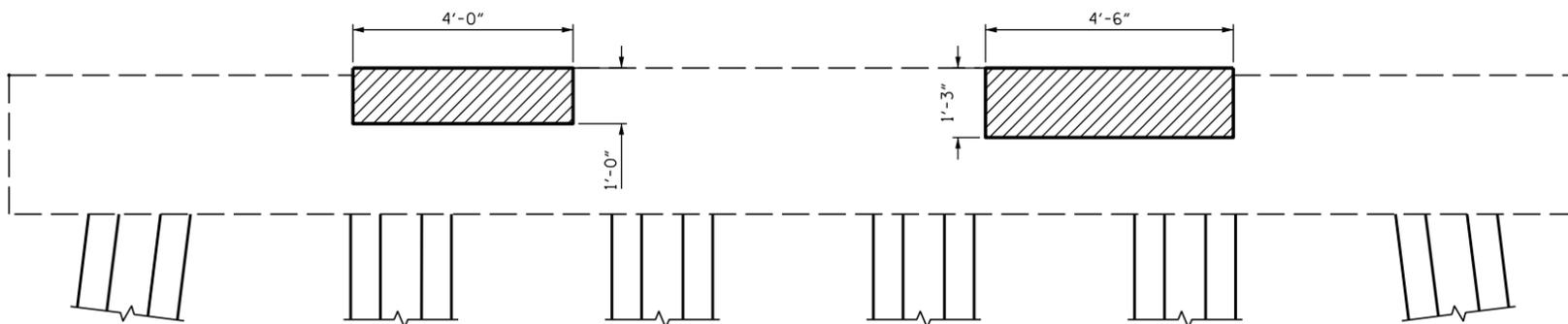
SIDE VIEW
NORTH FACE



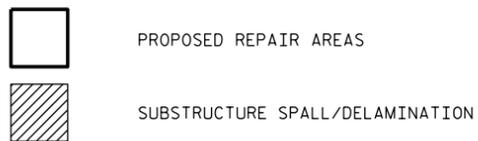
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C6703675A487...

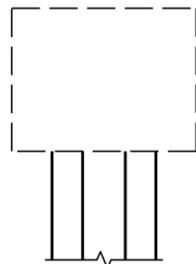
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 89

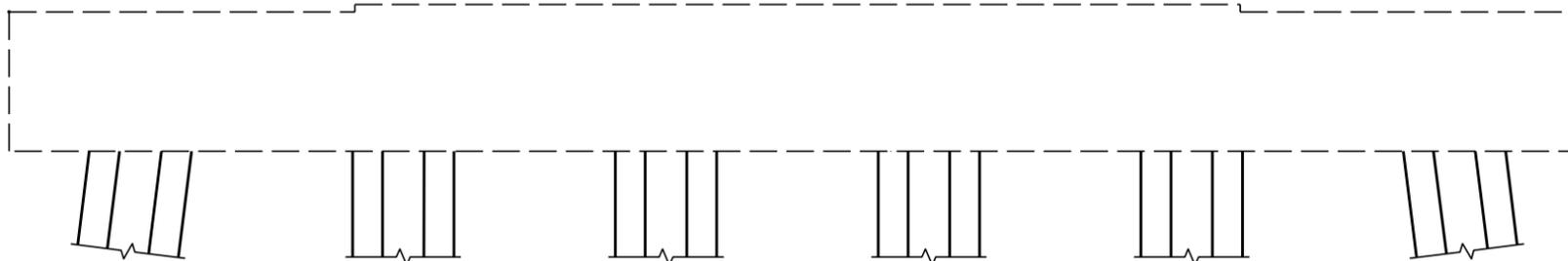
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

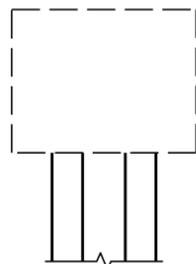
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1			3			S-108
2			4			



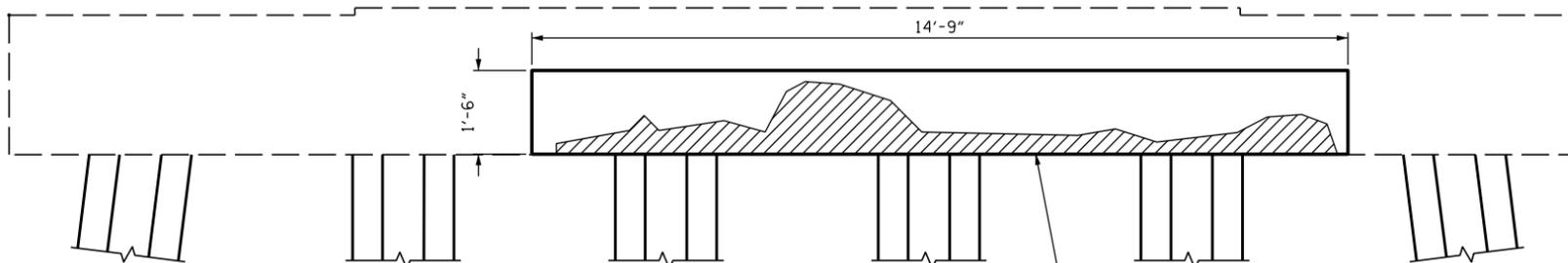
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:

Samuel Cullum

19C4036075A487...



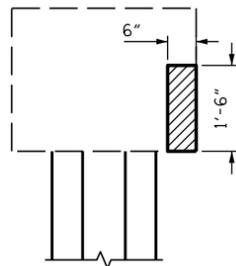
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

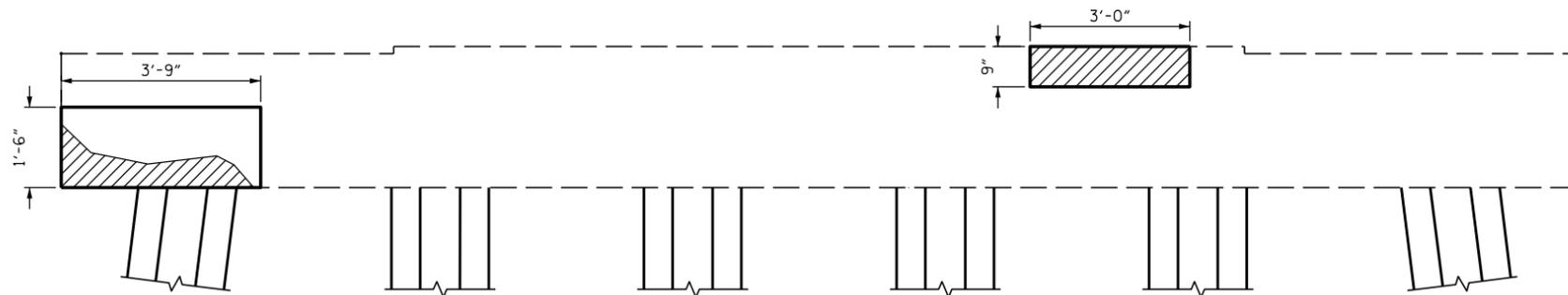
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 90

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

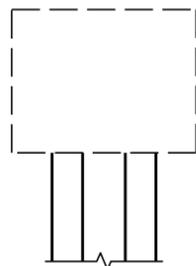
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-109
2			4			



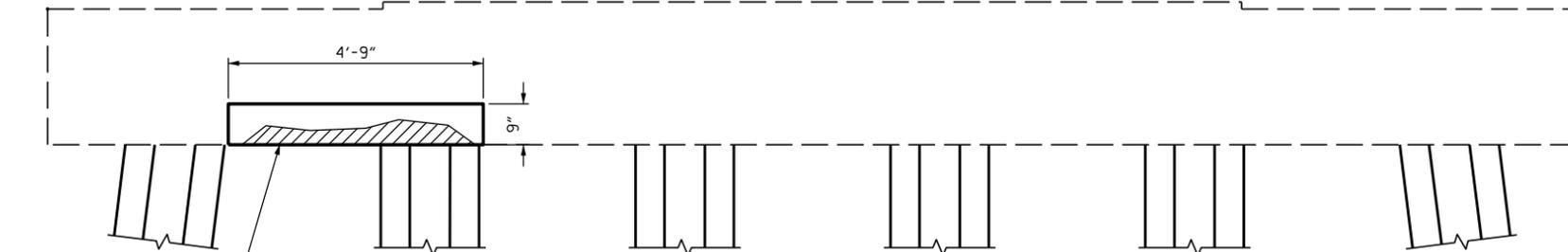
SIDE VIEW
NORTH FACE



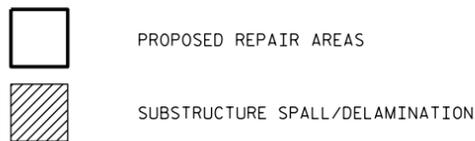
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
 Samuel Cullum



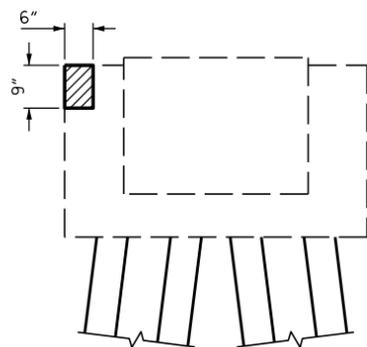
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 91

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

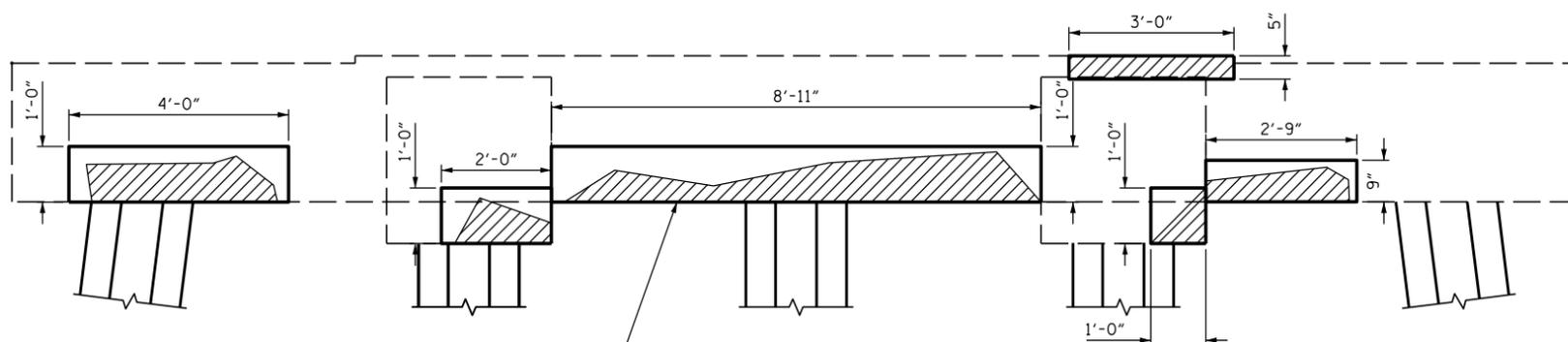
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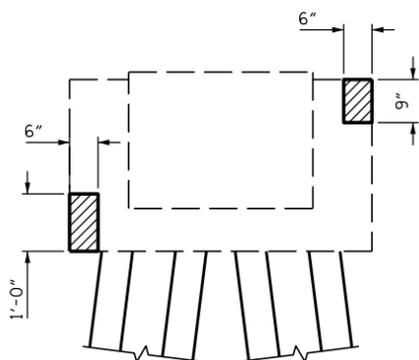
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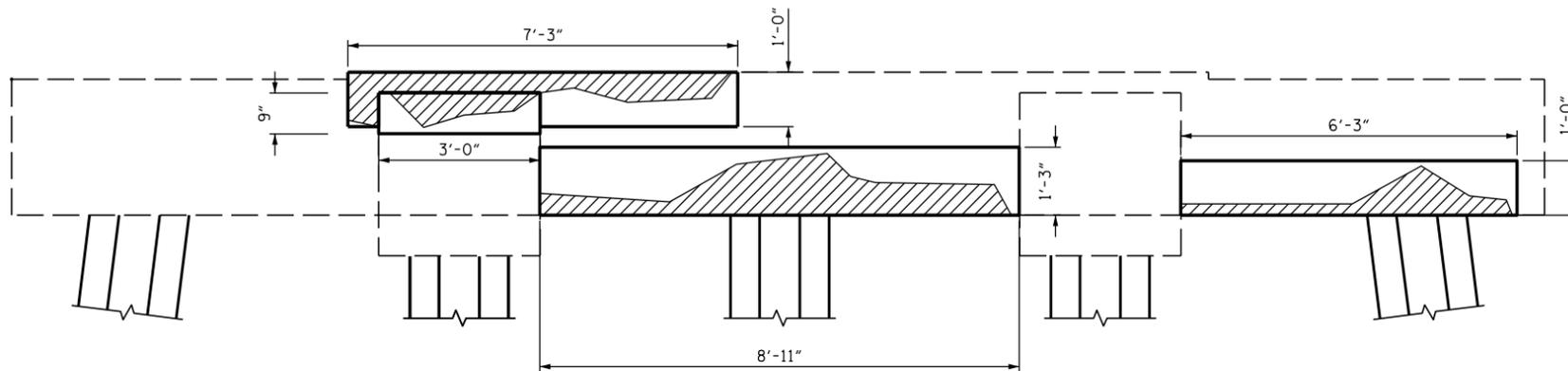
SIDE VIEW
NORTH FACE



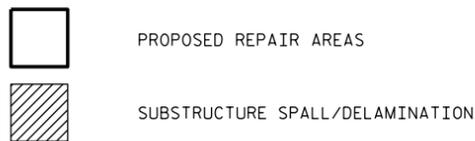
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C4703675A487...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

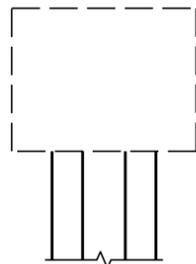
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 92

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

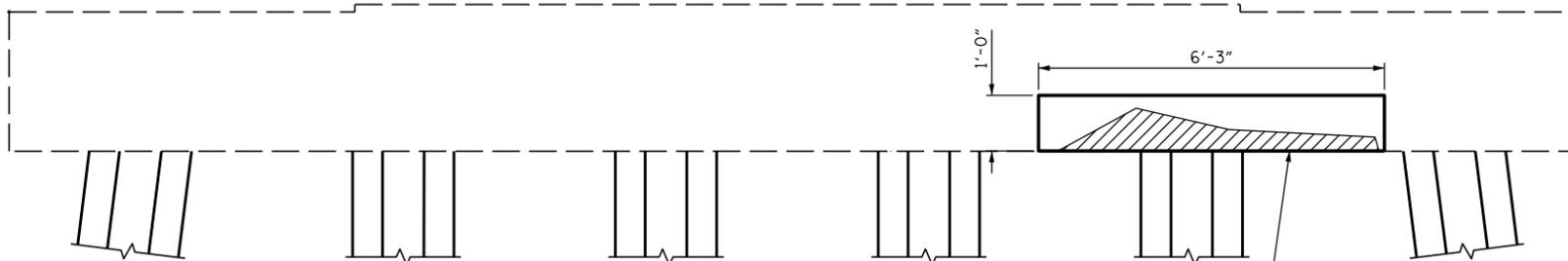
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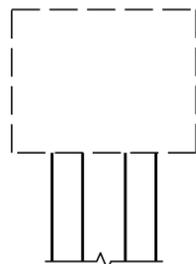


SIDE VIEW
NORTH FACE

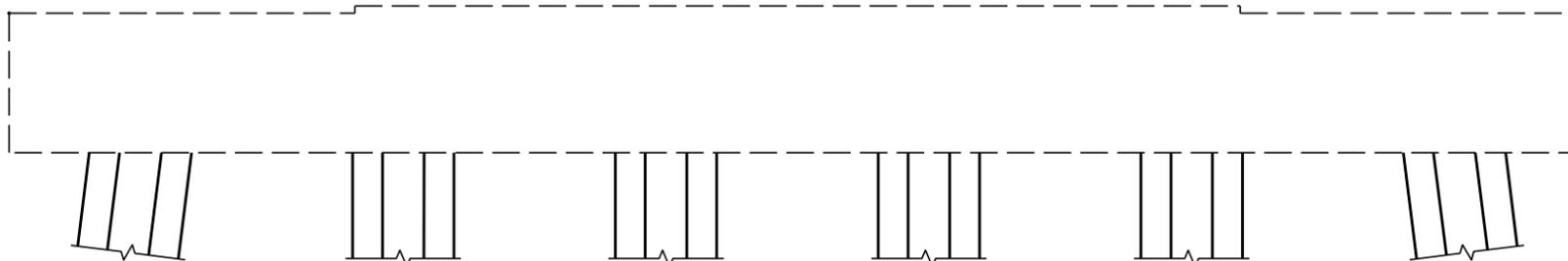


ELEVATION
WEST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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 *****SDGN*****
 *****USERNAME*****

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Samuel Cullum

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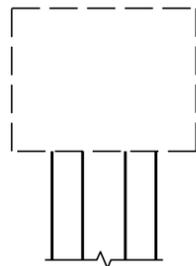
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

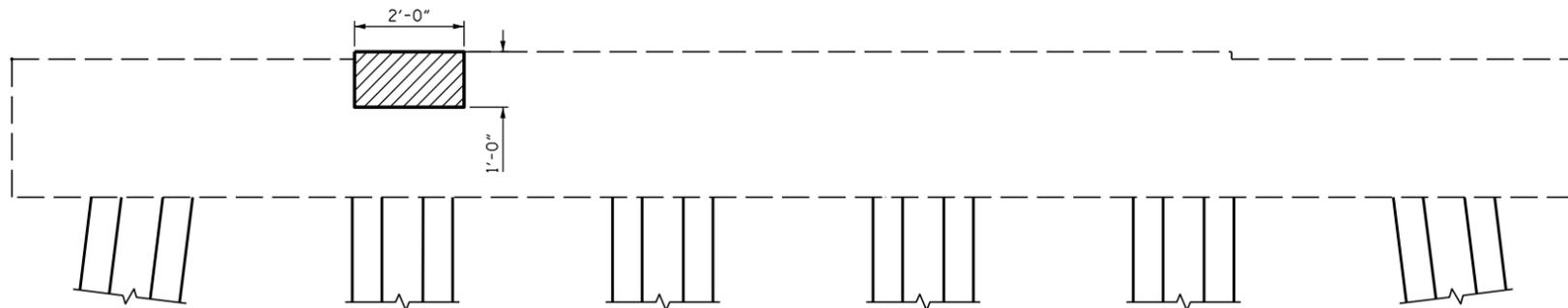
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 93

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

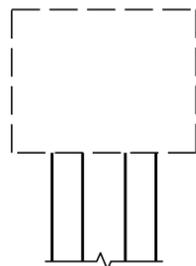
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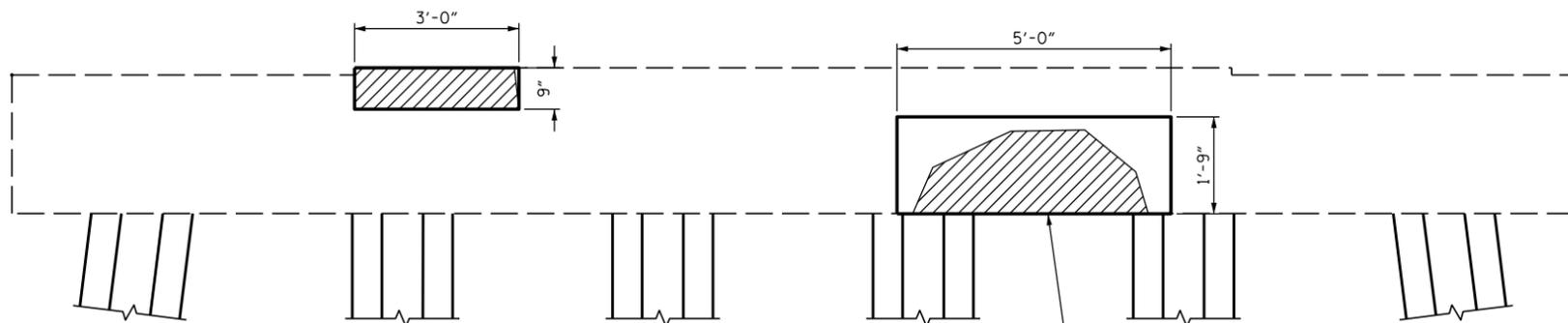
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

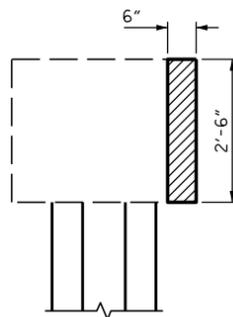
SUBSTRUCTURE CONC.
 REPAIR - BENT 94

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

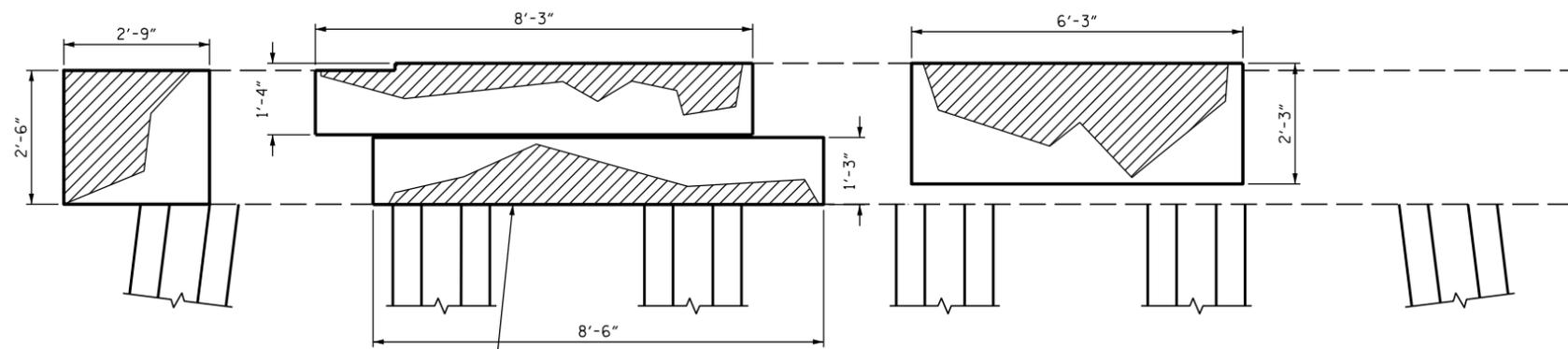
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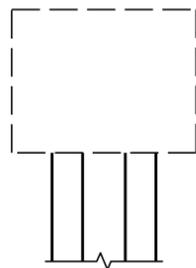


SIDE VIEW
NORTH FACE

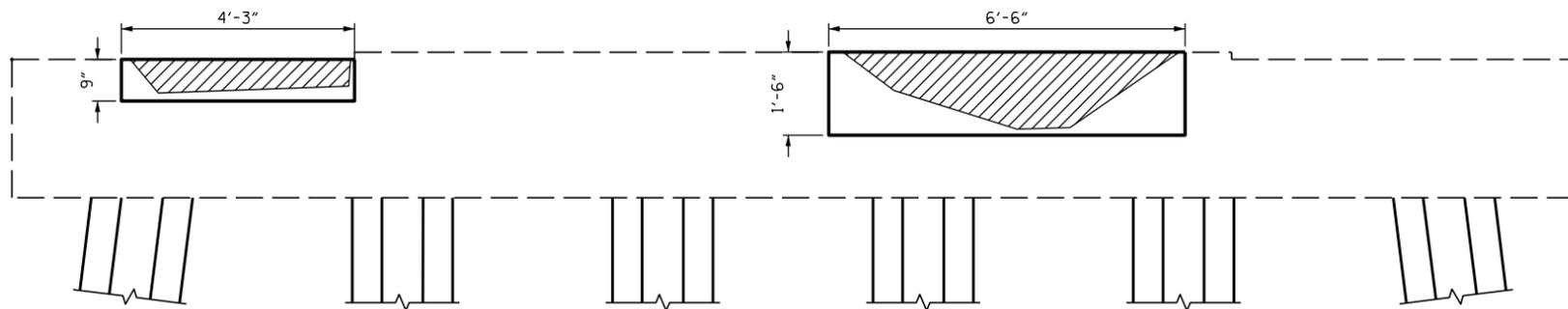


ANTICIPATE CAP
UNDERSIDE REPAIRS

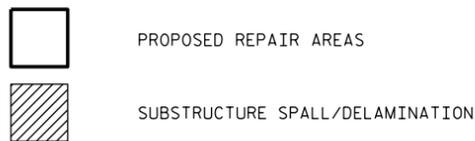
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C48036075A487...
NORTH CAROLINA
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ENGINEER
SEAL
043571
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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

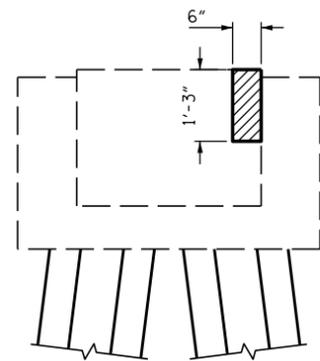
SUBSTRUCTURE CONC.
REPAIR - BENT 95

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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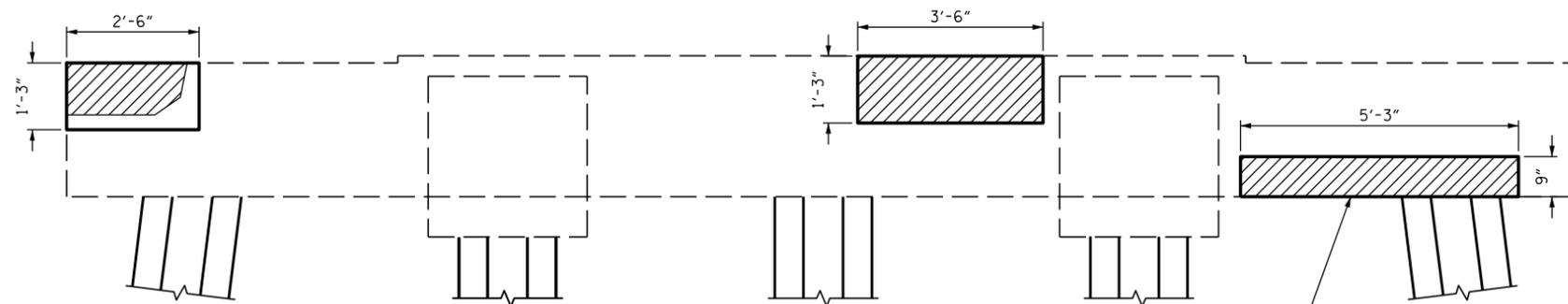
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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FINAL UNLESS ALL
SIGNATURES COMPLETED

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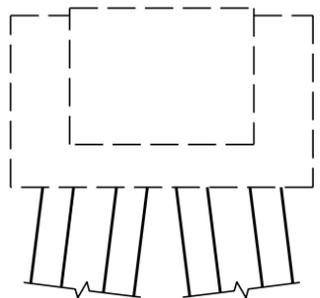


SIDE VIEW
NORTH FACE

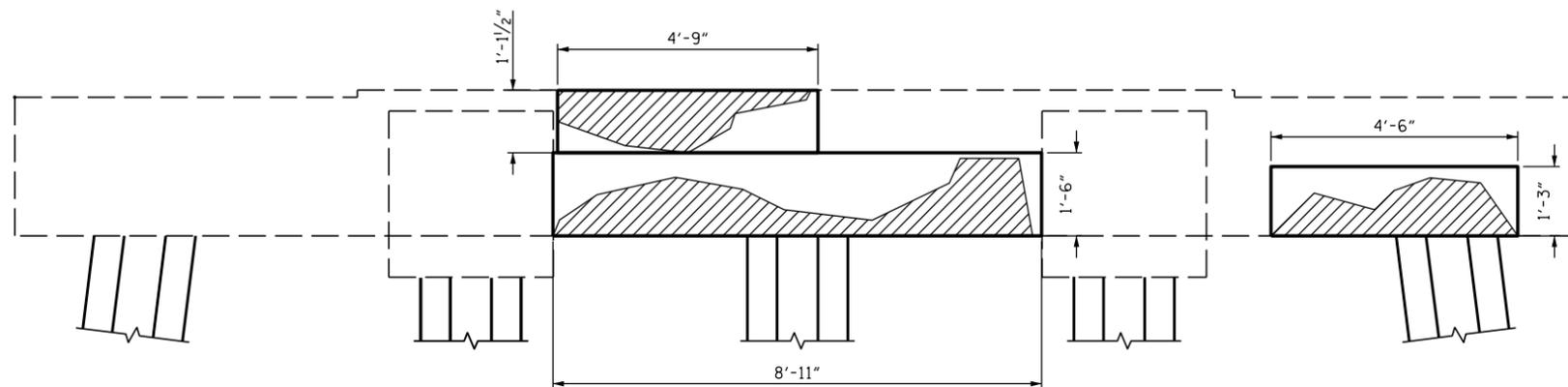


ELEVATION
WEST FACE

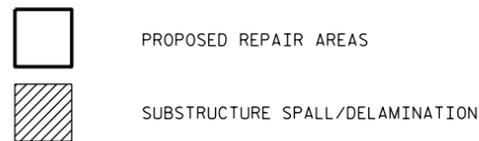
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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 19C4803675A487...

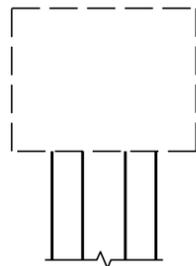
 12/13/2016

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 96						S-115
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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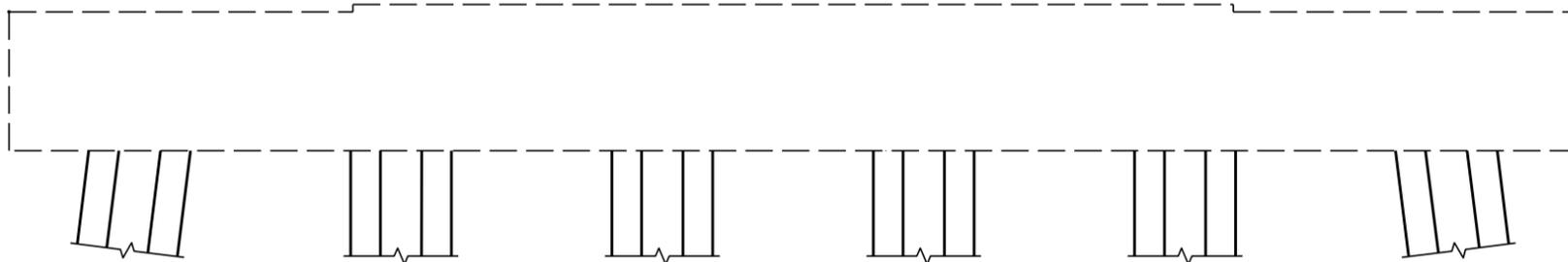
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 CHECKED BY : S. L. CULLUM DATE : 07-16
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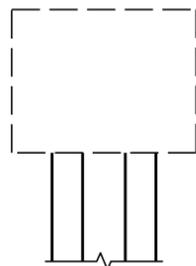
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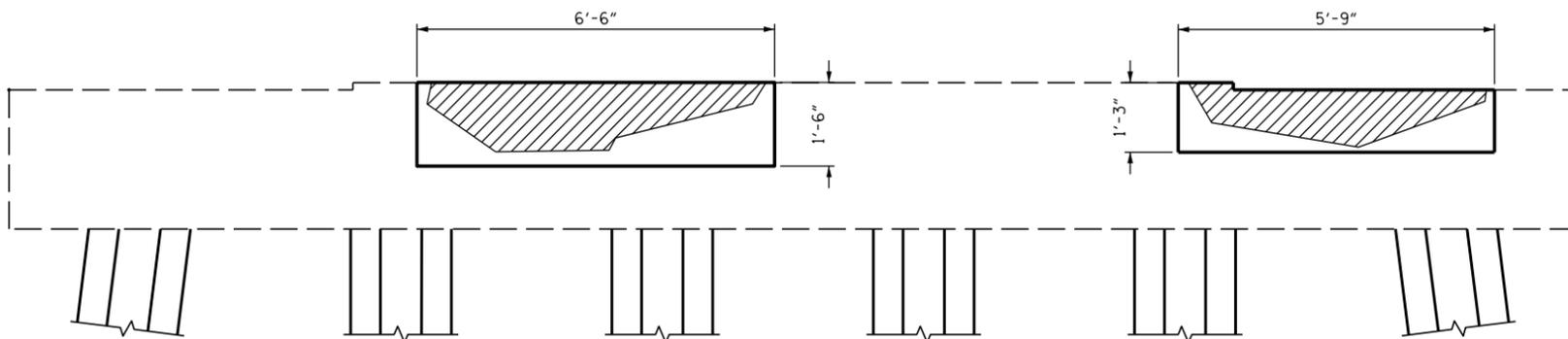
SIDE VIEW
NORTH FACE



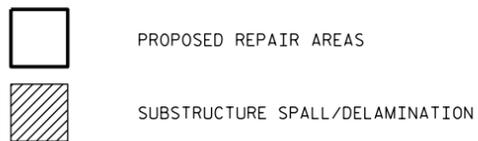
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C4703675A487...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
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12/13/2016

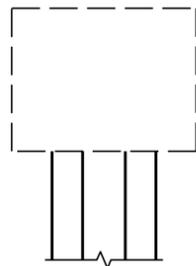
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 97

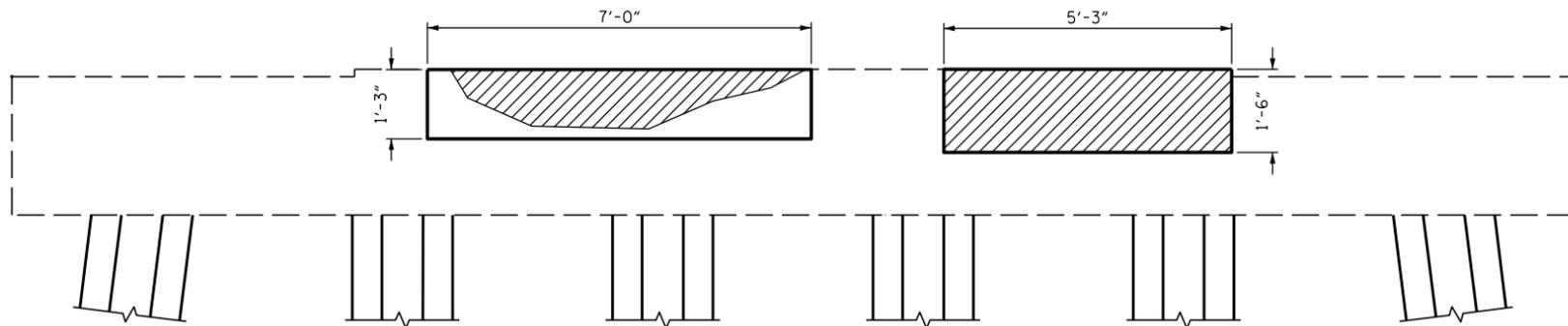
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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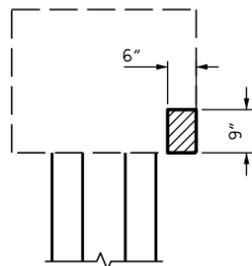
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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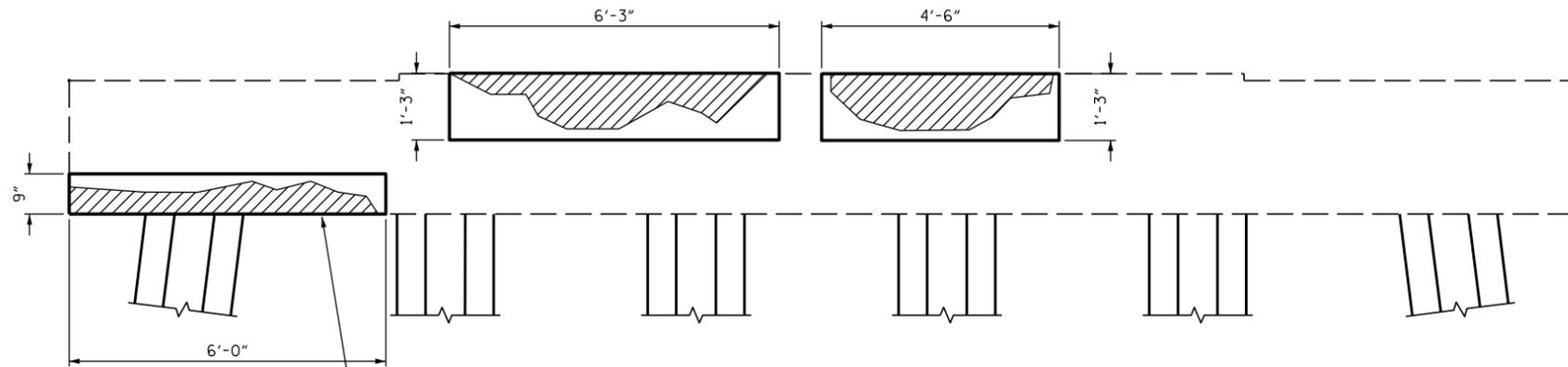
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

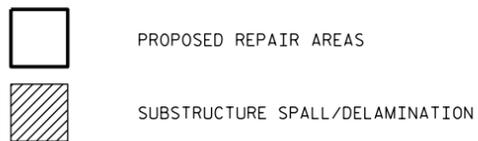


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

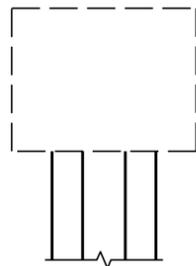
**SUBSTRUCTURE CONC.
 REPAIR - BENT 98**

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

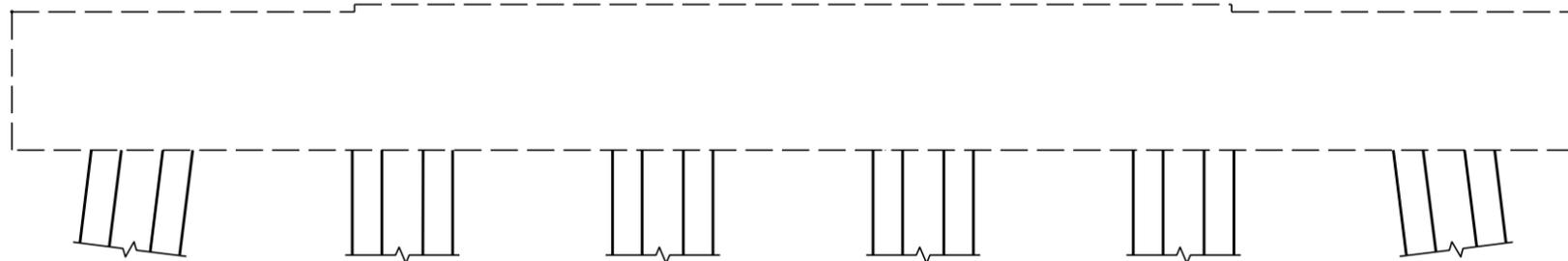
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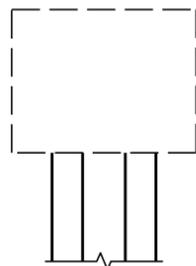
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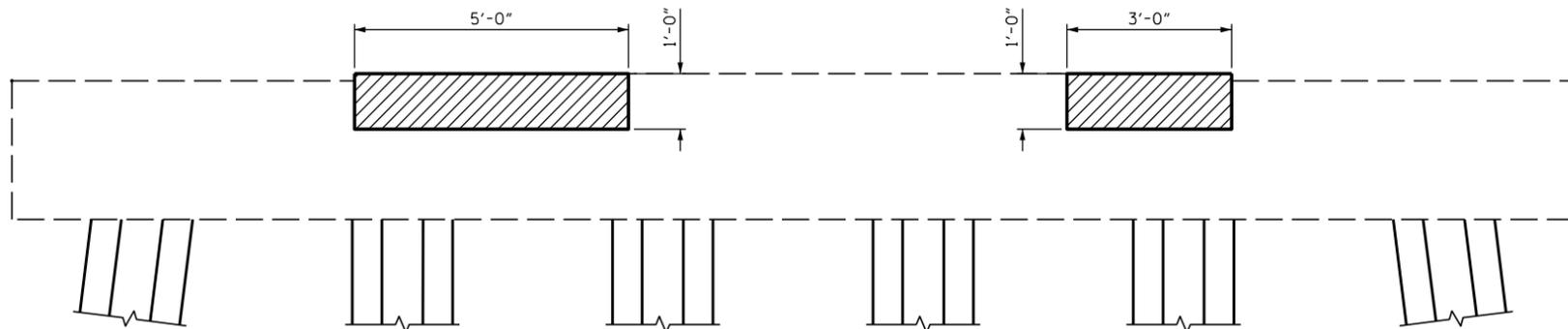
SIDE VIEW
NORTH FACE



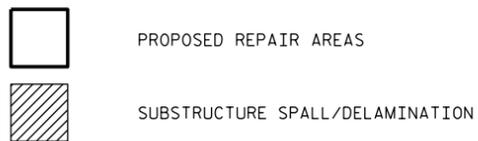
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C4703675A487...
NORTH CAROLINA
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ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

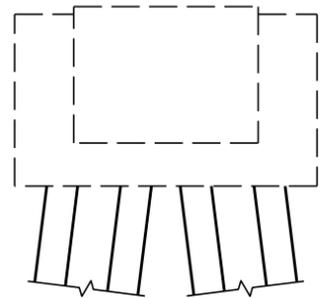
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 99

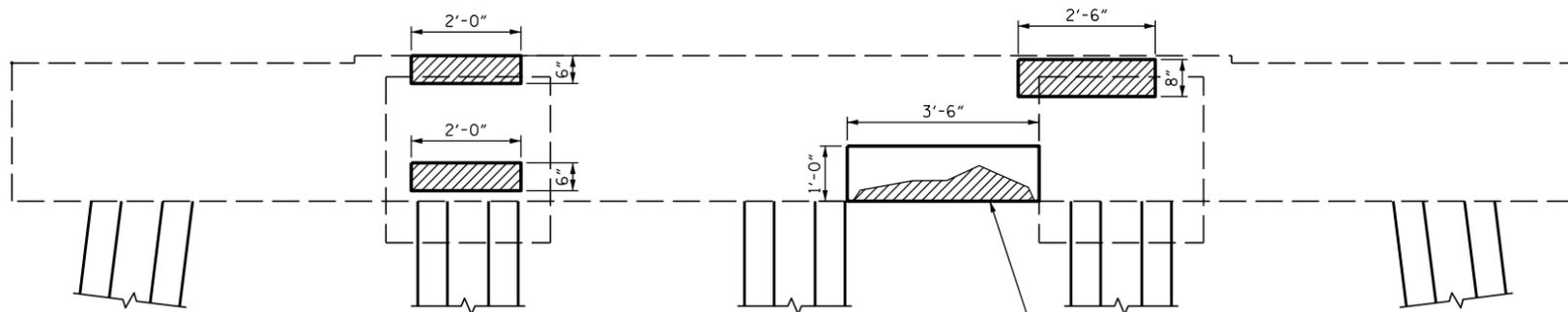
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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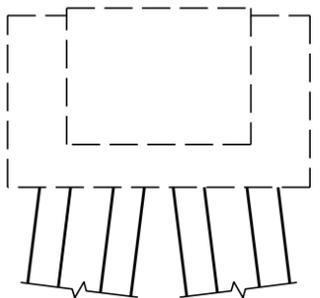
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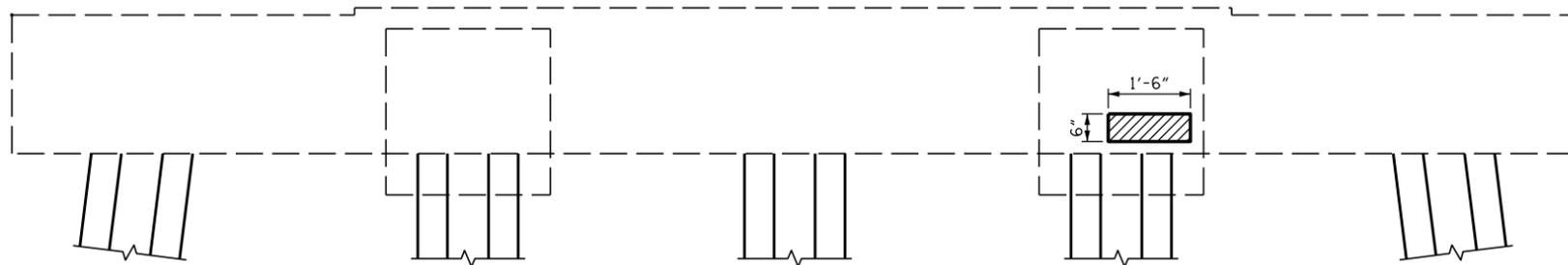
SIDE VIEW
NORTH FACE



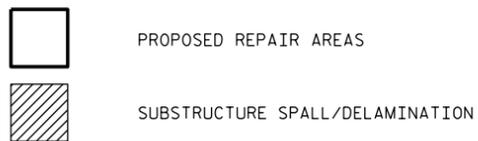
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

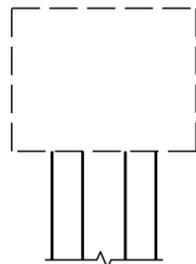


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 100

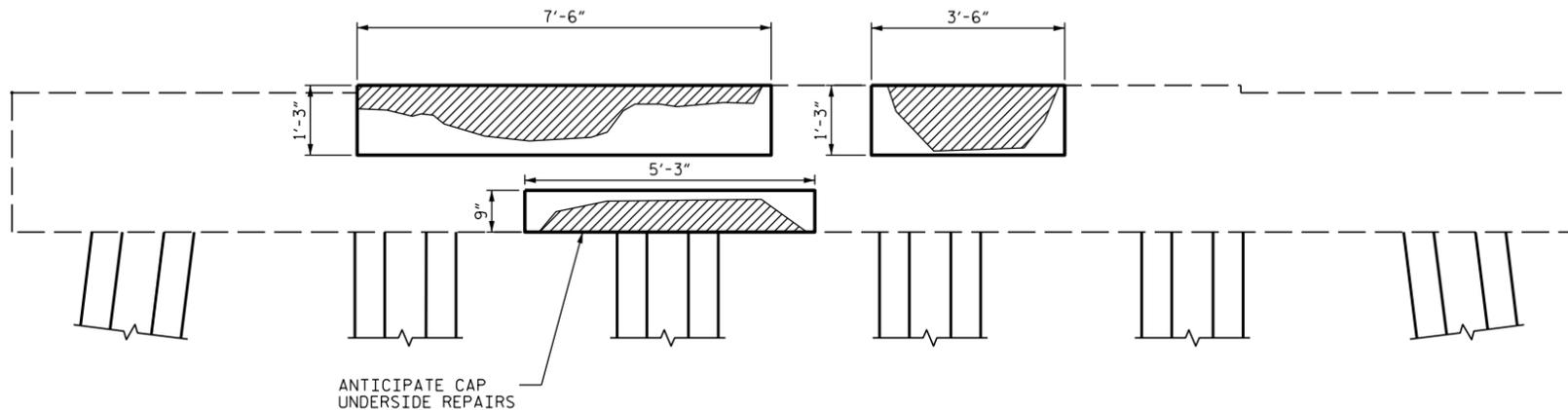
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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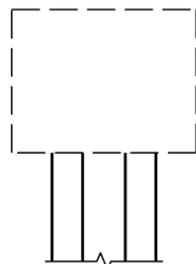
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2			4			TOTAL SHEETS



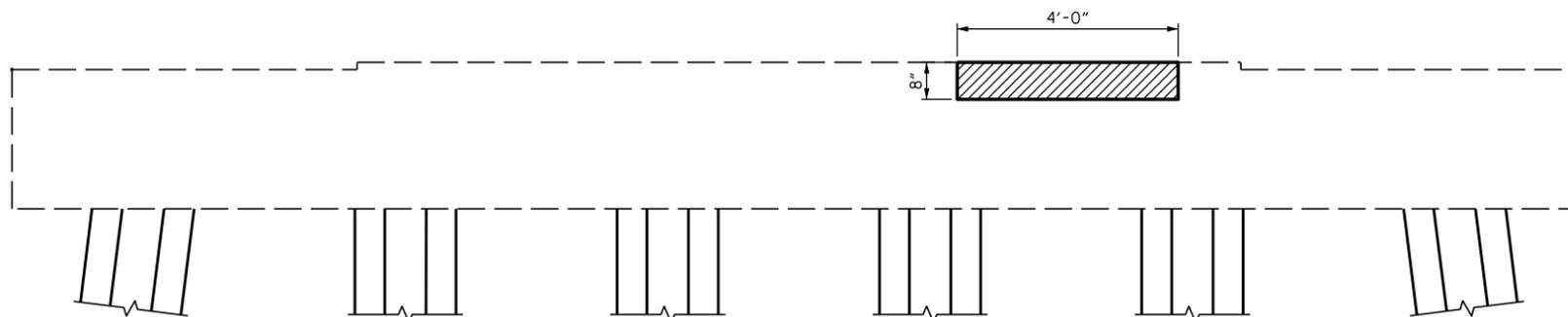
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum
 19C9703675A487...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

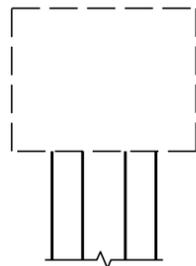
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

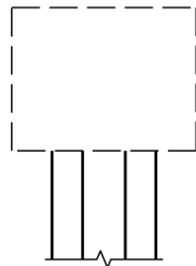
SUBSTRUCTURE CONC.
 REPAIR - BENT 101

DOCUMENT NOT CONSIDERED
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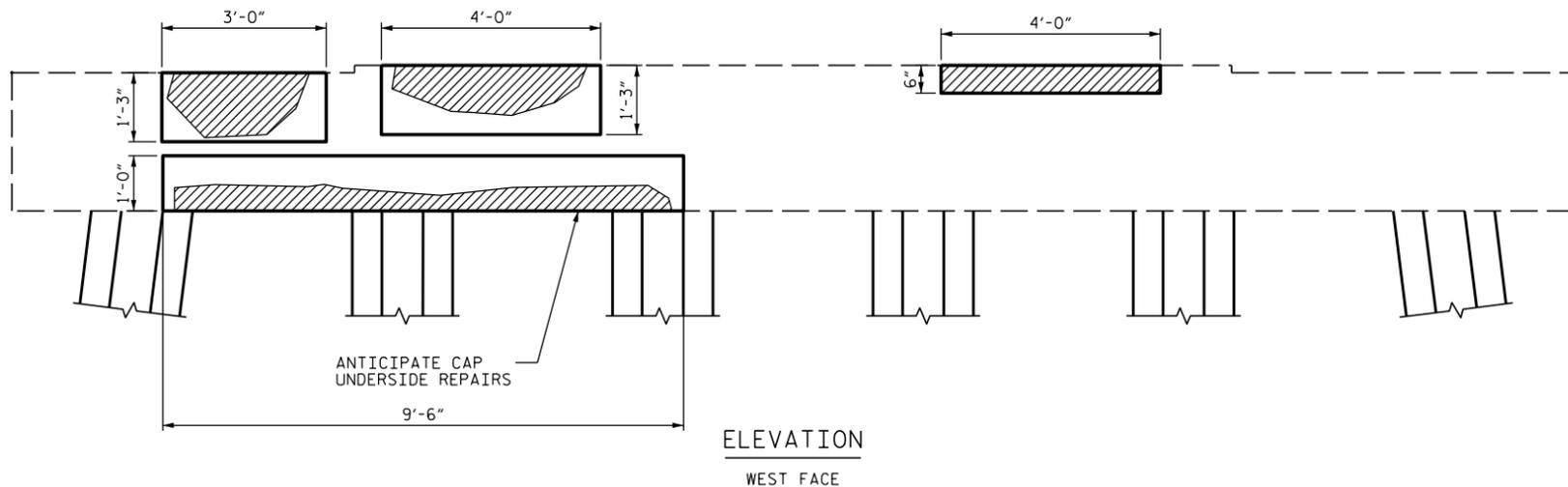
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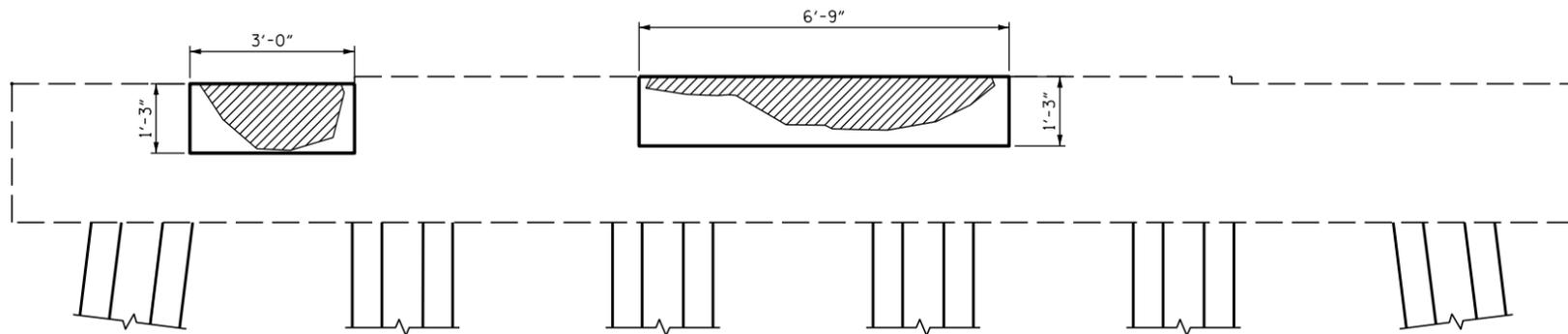
SIDE VIEW
NORTH FACE



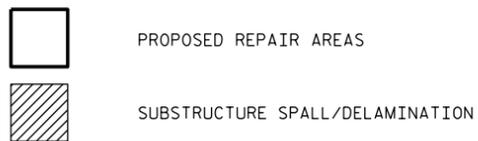
SIDE VIEW
SOUTH FACE



ELEVATION
WEST FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C97095C75A467...
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043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

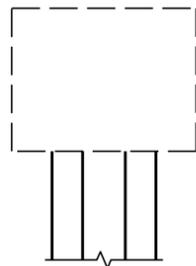
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 102

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

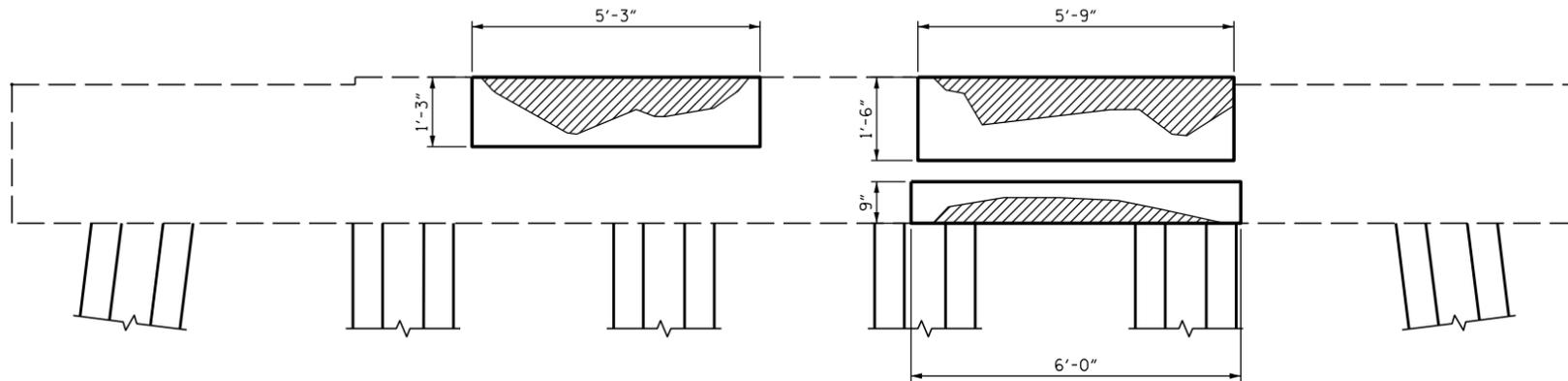
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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2			4			

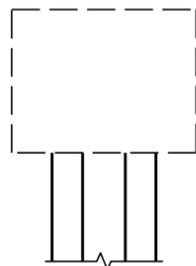
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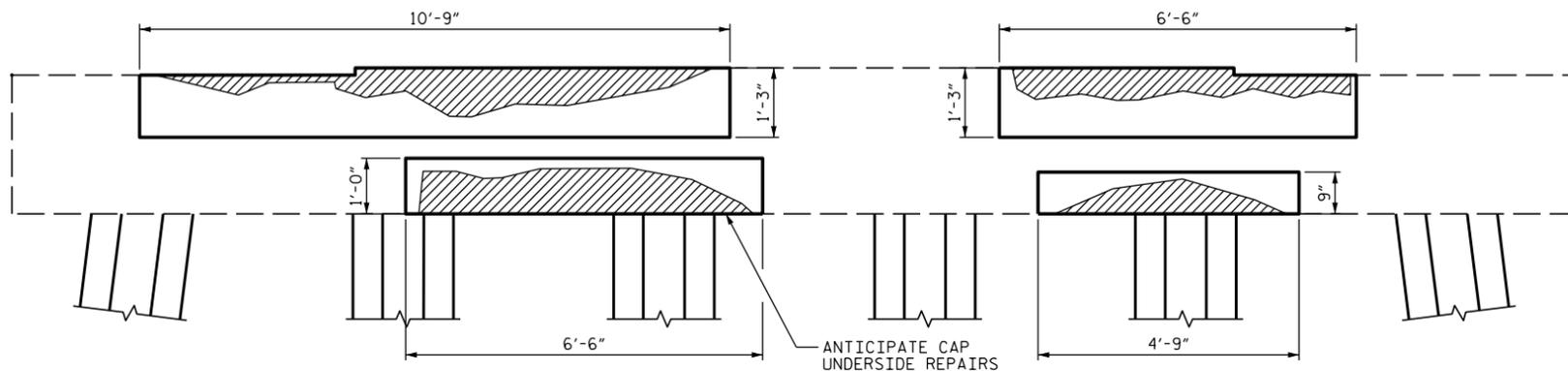
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

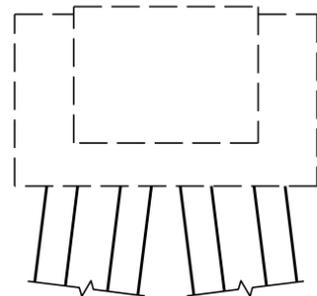
SUBSTRUCTURE CONC.
REPAIR - BENT 103

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

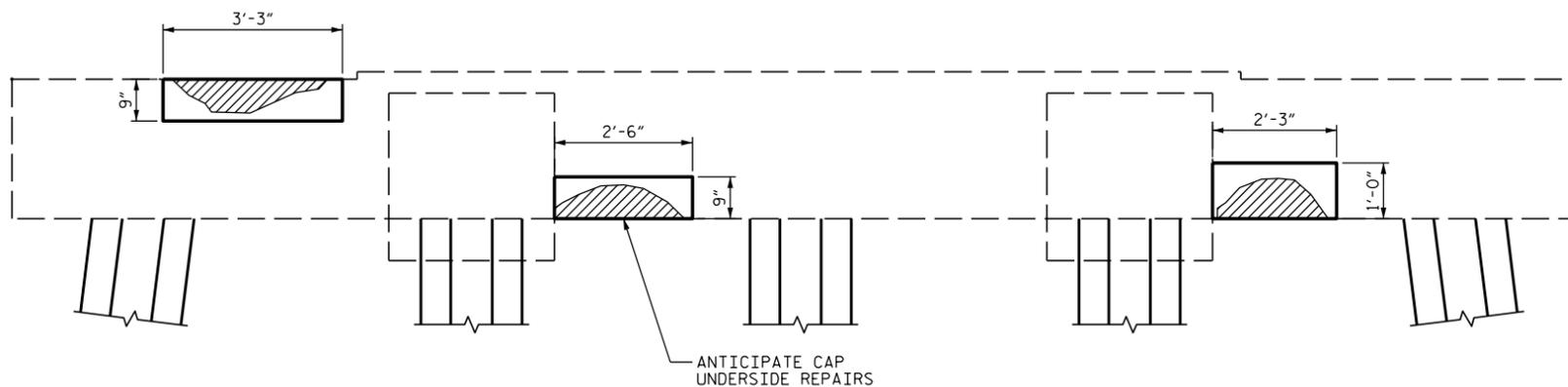
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SIGNATURES COMPLETED

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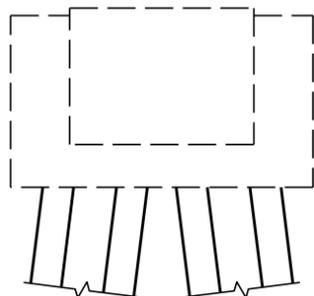
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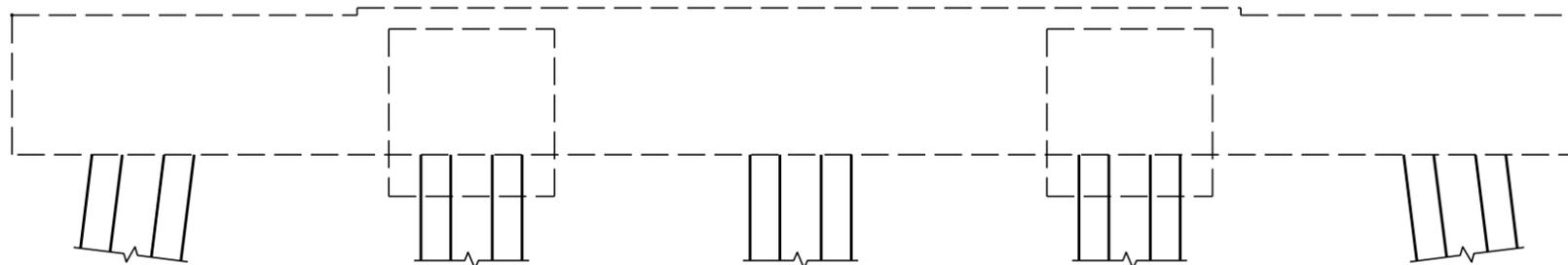
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

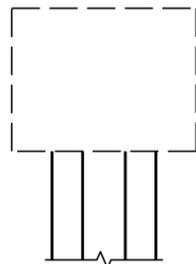
SUBSTRUCTURE CONC.
 REPAIR - BENT 104

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

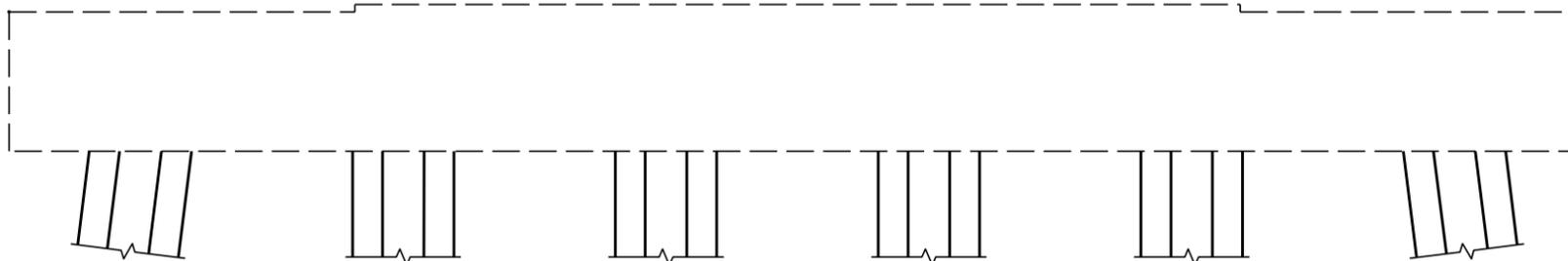
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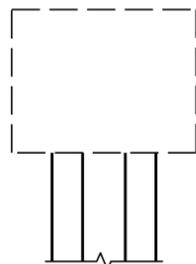
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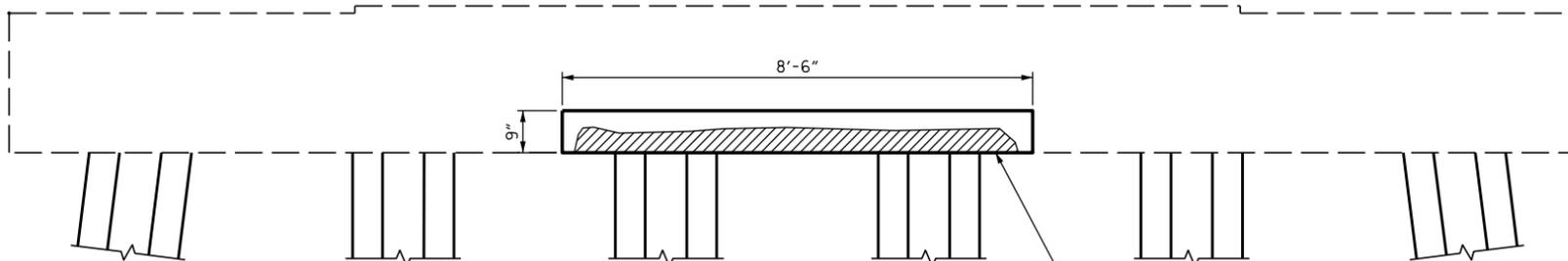
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

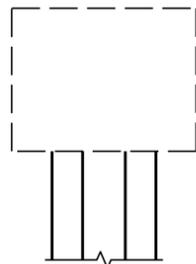
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 105

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

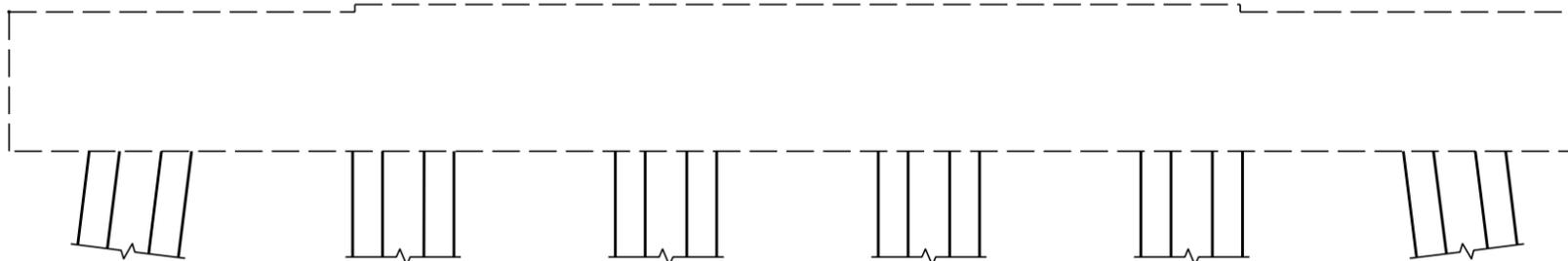
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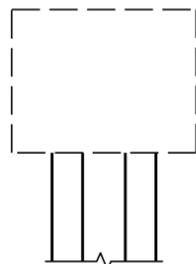
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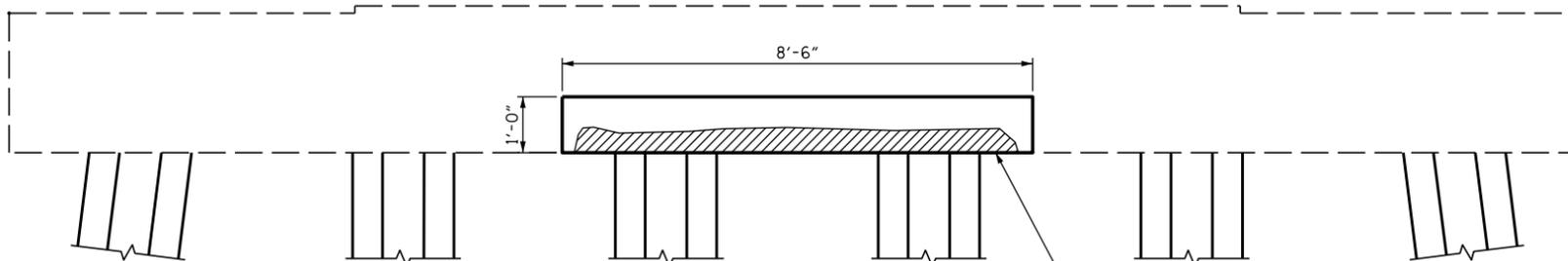
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum

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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

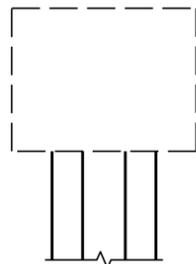
 SUBSTRUCTURE CONC.
 REPAIR - BENT 106

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

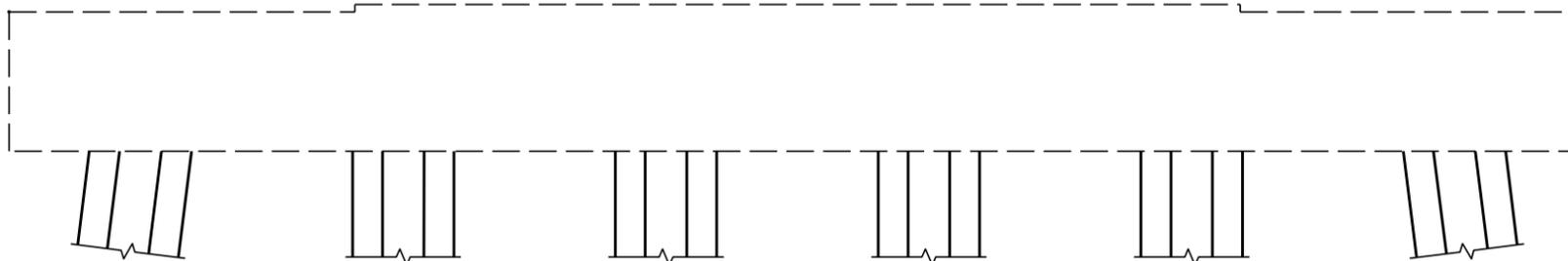
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DOCUMENT NOT CONSIDERED
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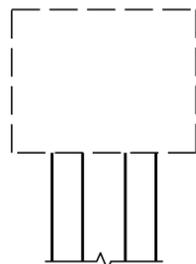
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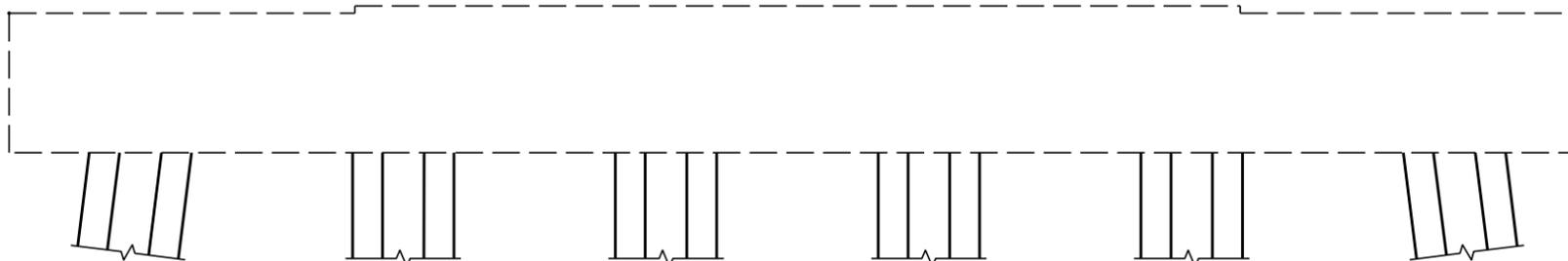
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

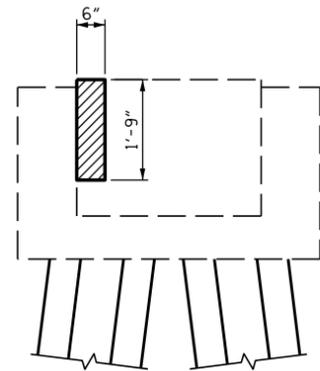
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 107

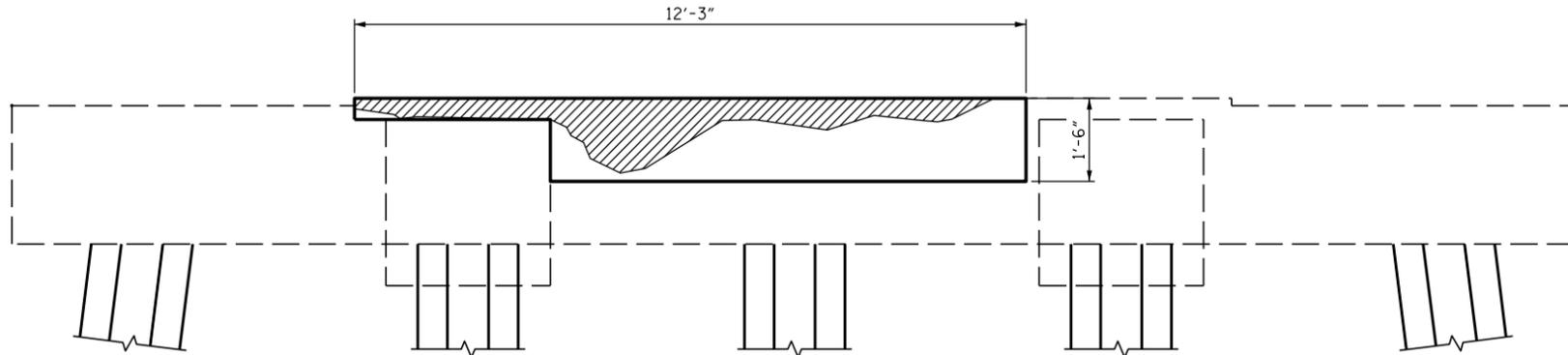
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

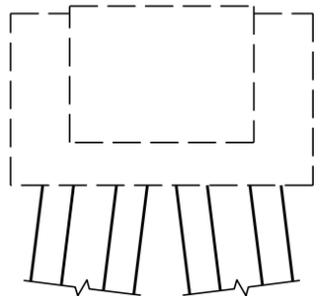
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2			4			



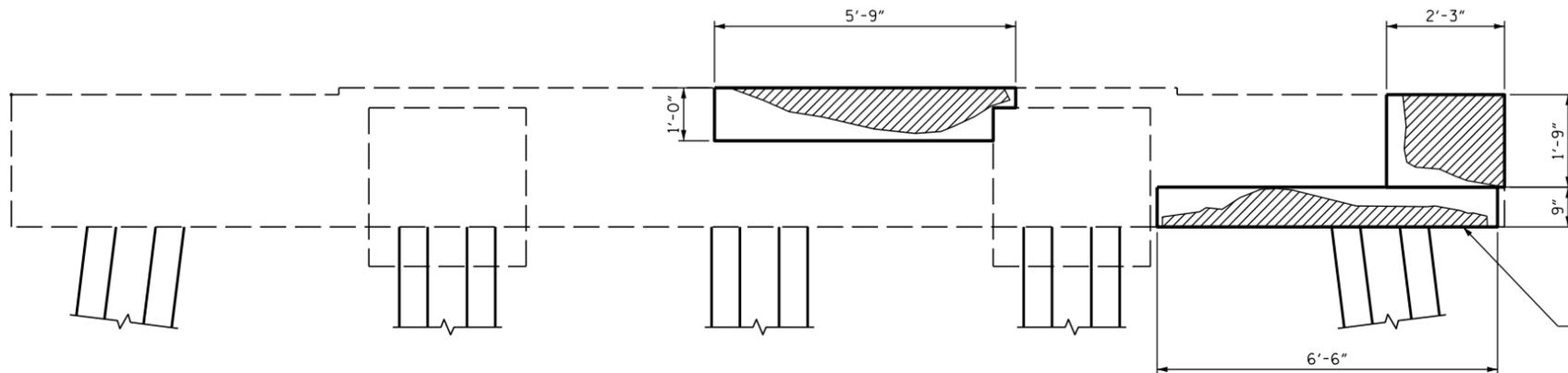
SIDE VIEW
NORTH FACE



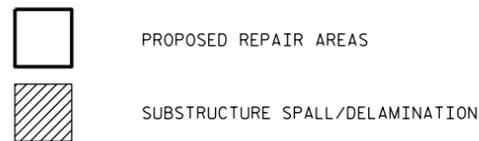
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



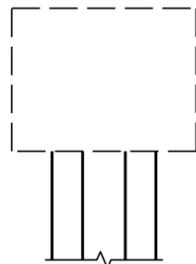
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 108

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

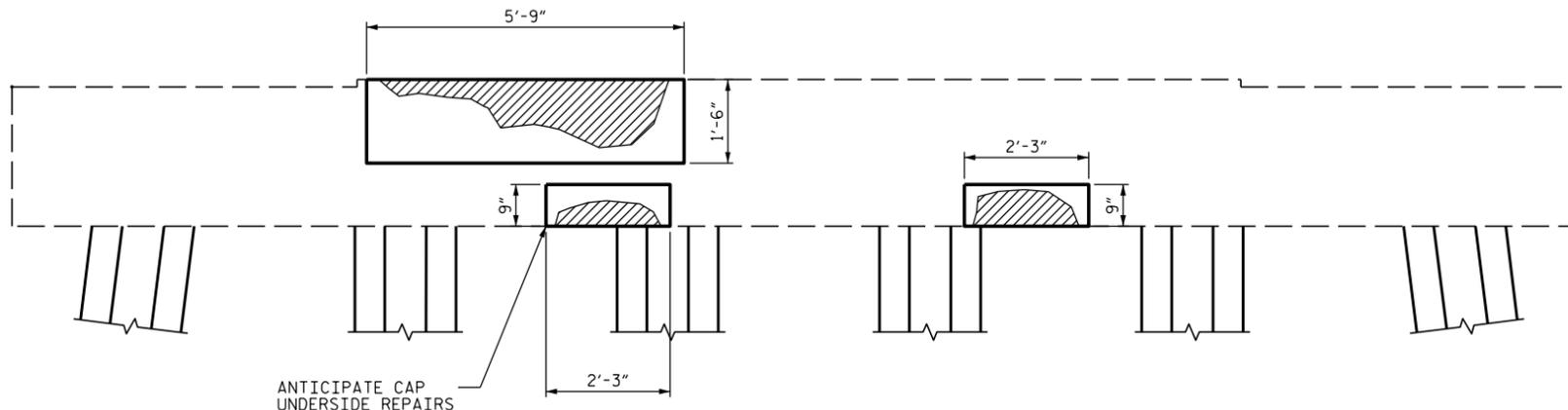
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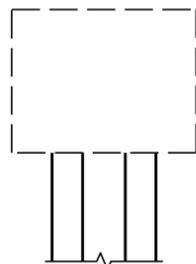
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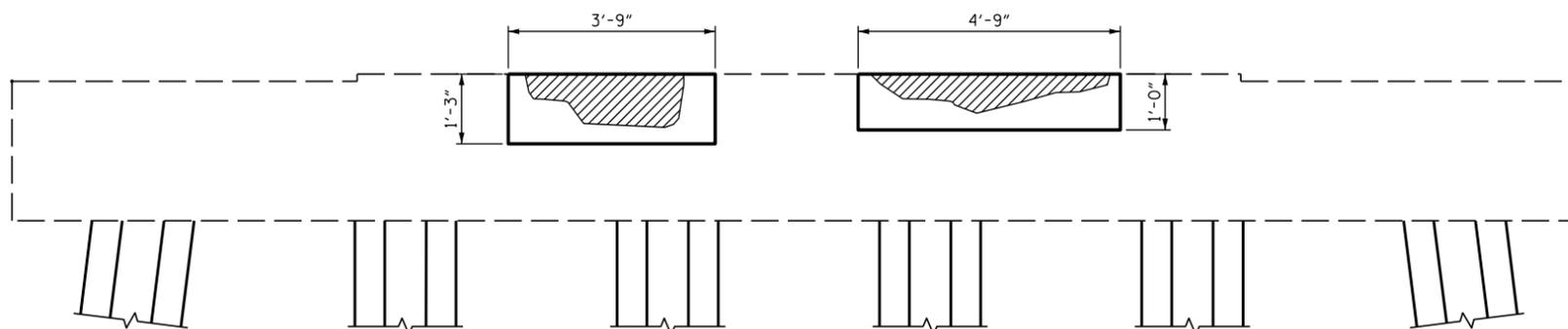
SIDE VIEW
NORTH FACE



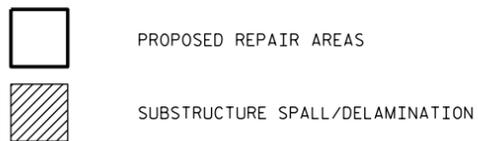
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

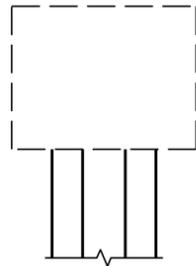
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 109

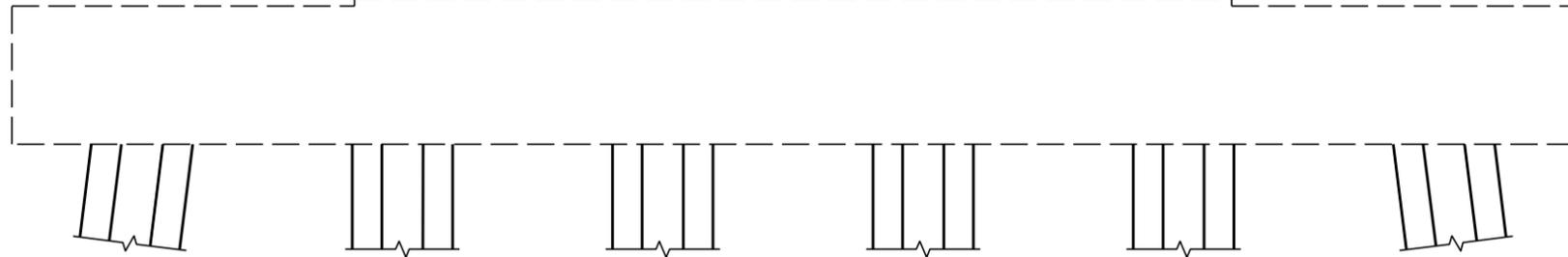
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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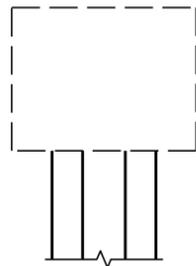
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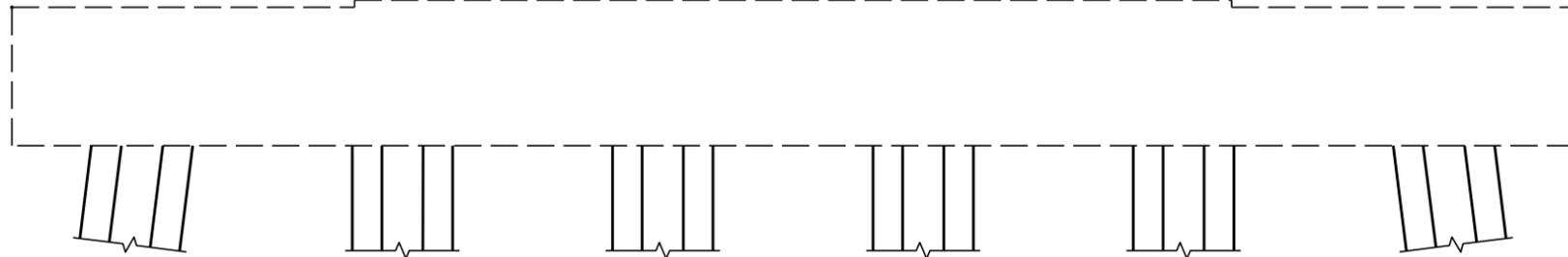
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

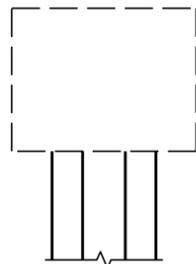
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE CONC.
 REPAIR - BENT 110

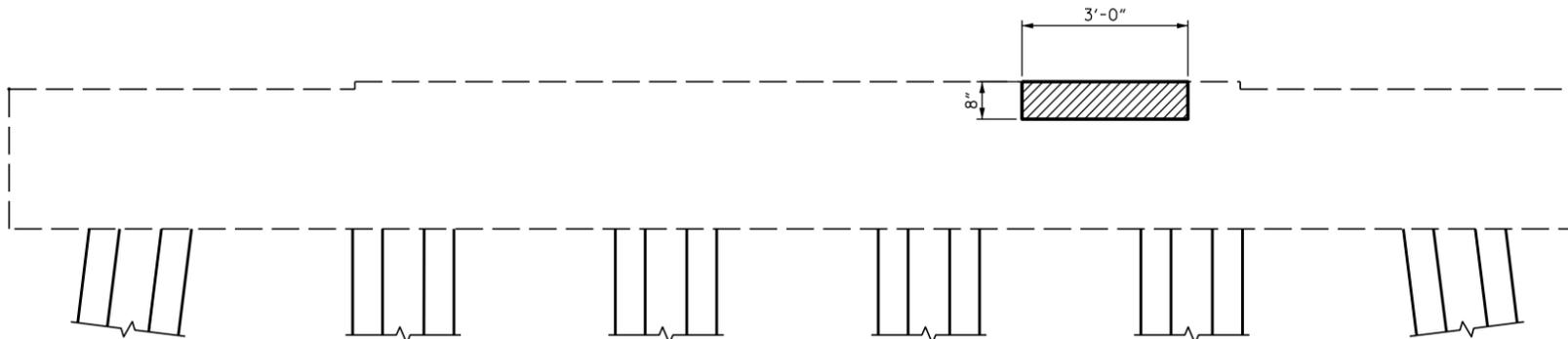
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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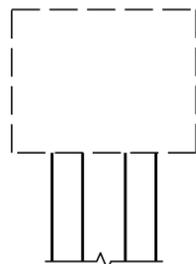
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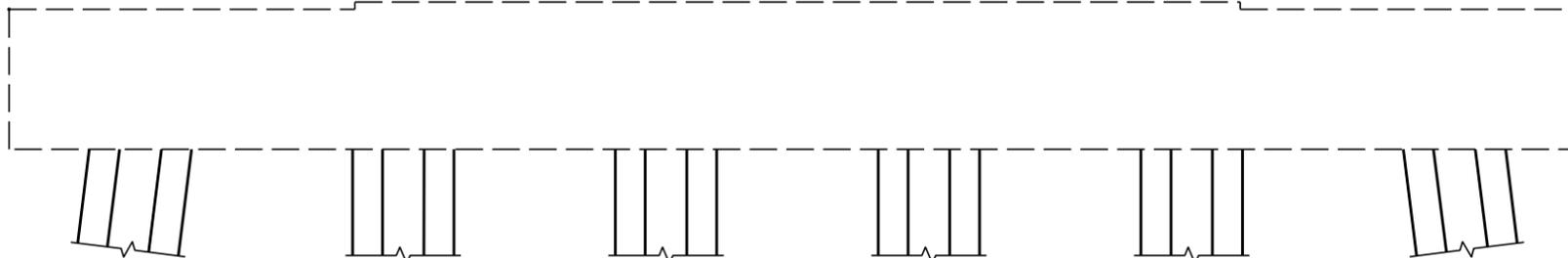
SIDE VIEW
NORTH FACE



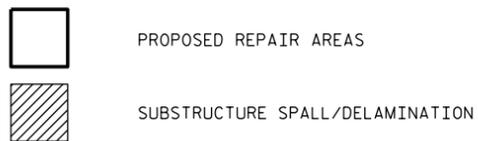
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

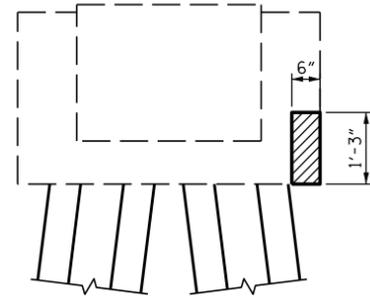
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 111

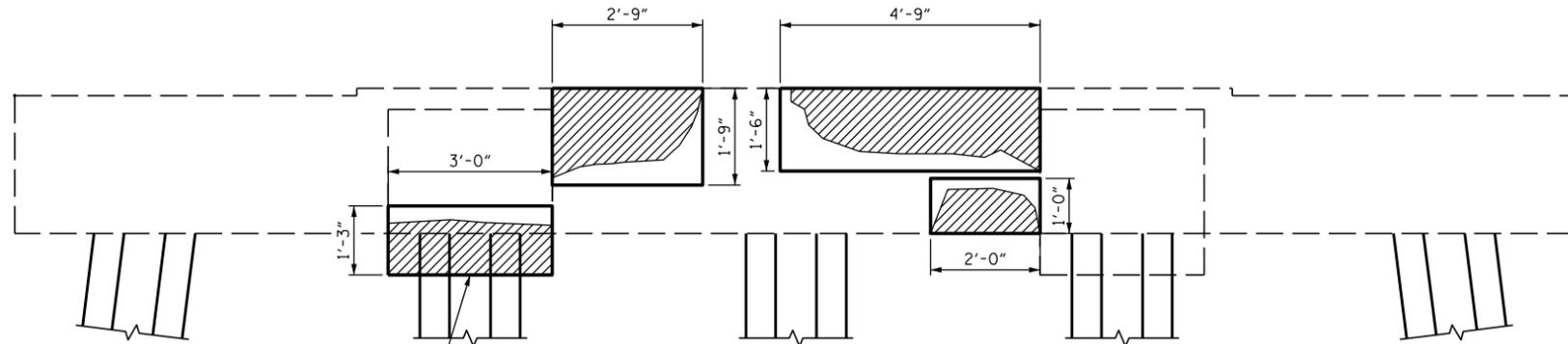
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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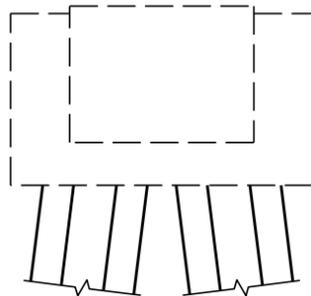


SIDE VIEW
NORTH FACE

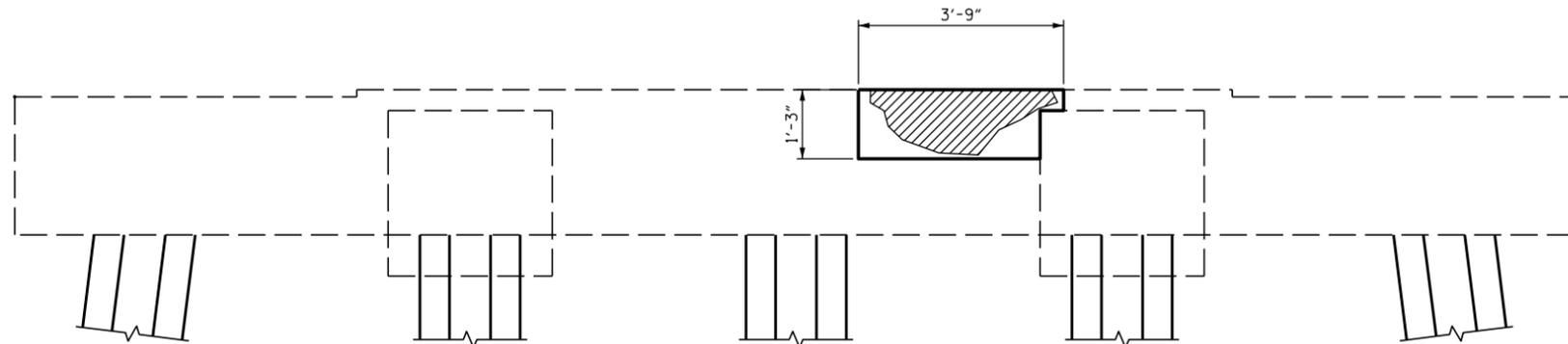


ANTICIPATE CAP
UNDERSIDE REPAIRS

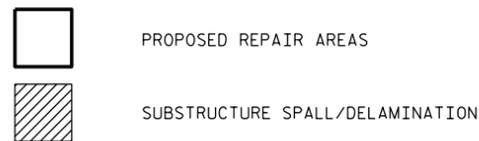
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

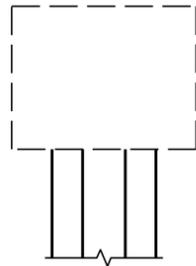
SUBSTRUCTURE CONC.
REPAIR - BENT 112

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

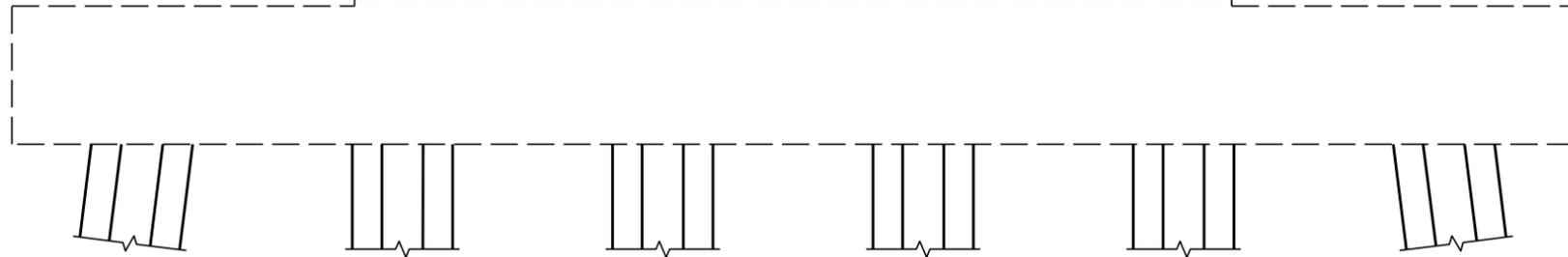
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SIGNATURES COMPLETED

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2			4			

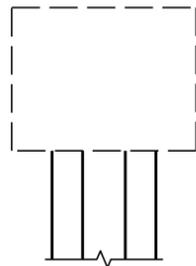
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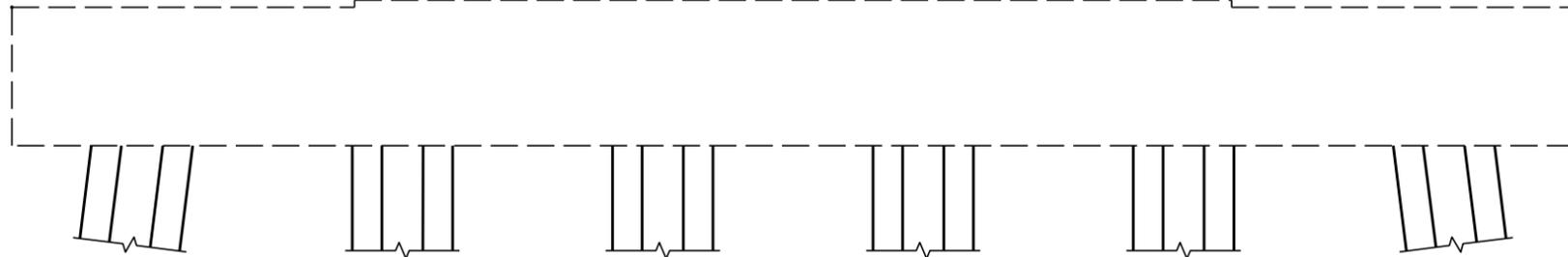
SIDE VIEW
NORTH FACE



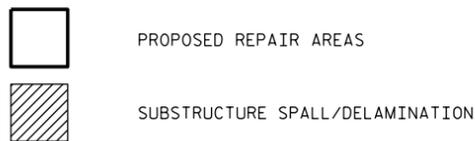
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

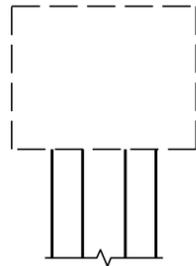
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 113

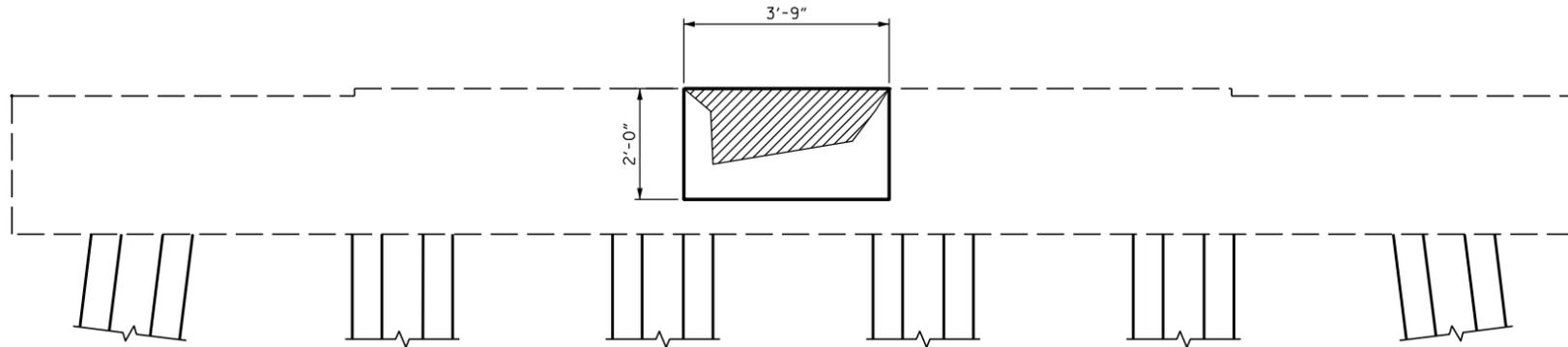
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

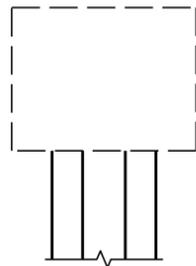
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2			4			



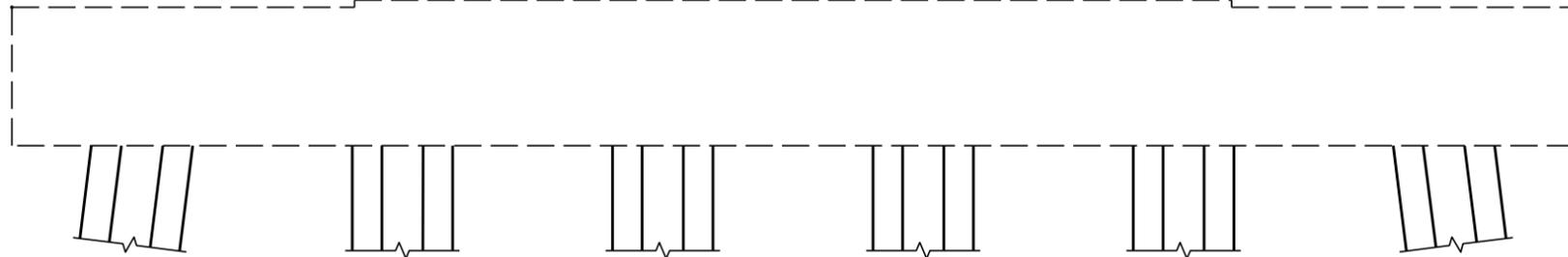
SIDE VIEW
NORTH FACE



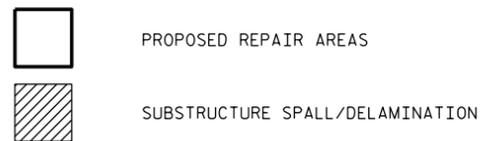
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



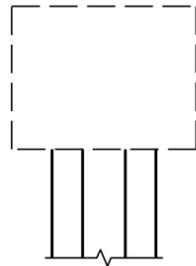
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 114

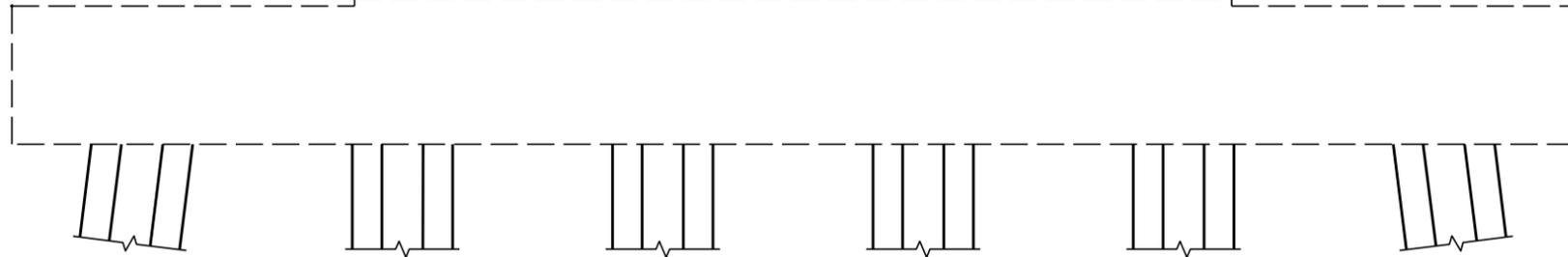
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
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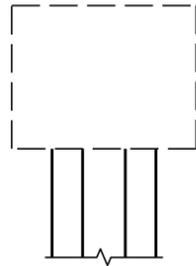
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-133
2			4			



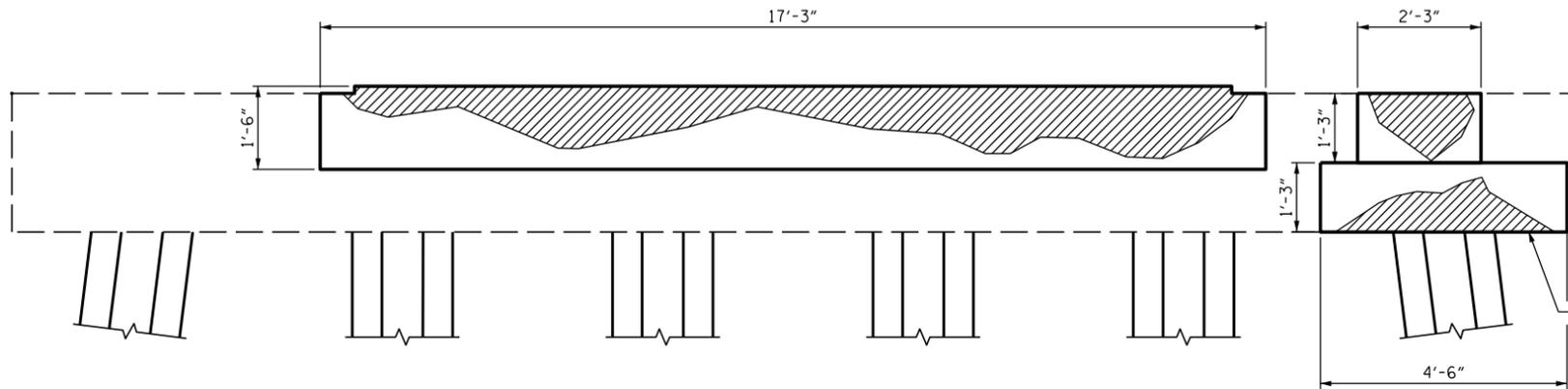
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

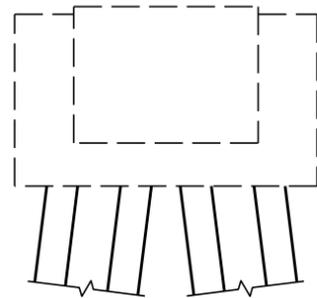
SUBSTRUCTURE CONC.
REPAIR - BENT 115

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

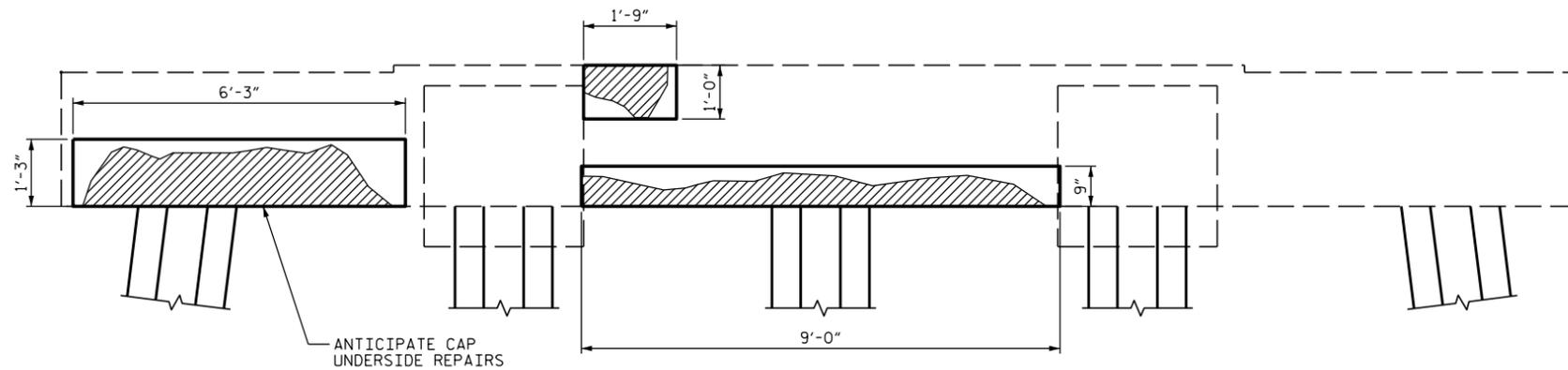
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FINAL UNLESS ALL
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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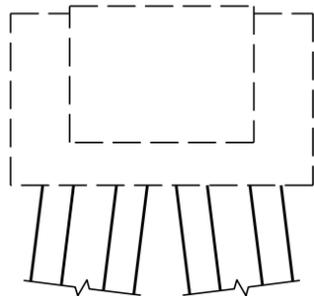
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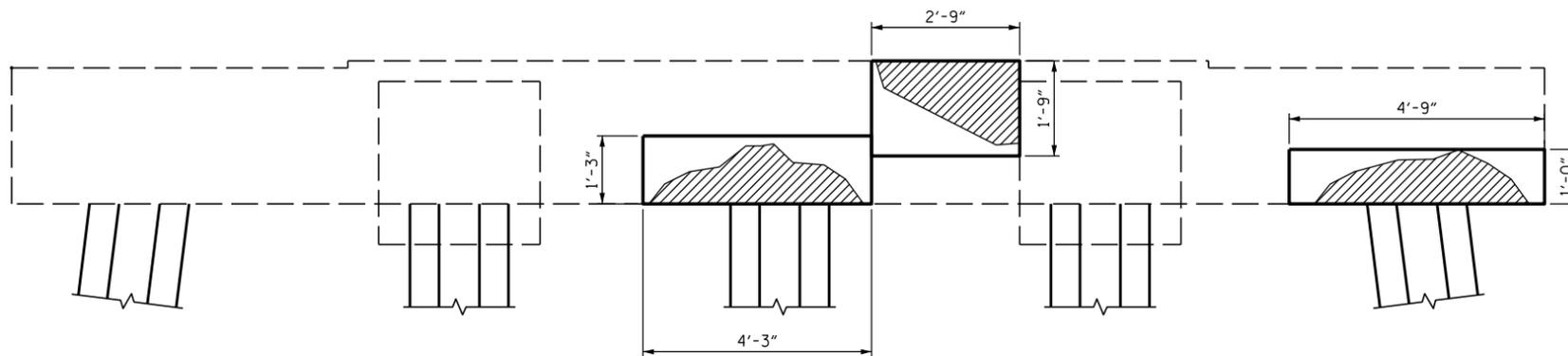
SIDE VIEW
NORTH FACE



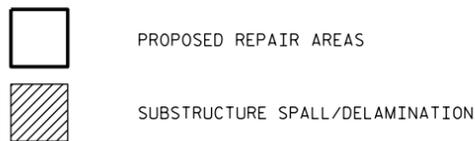
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

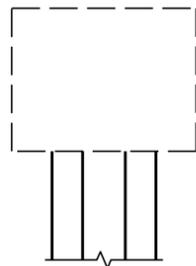
SUBSTRUCTURE CONC.
 REPAIR - BENT 116

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

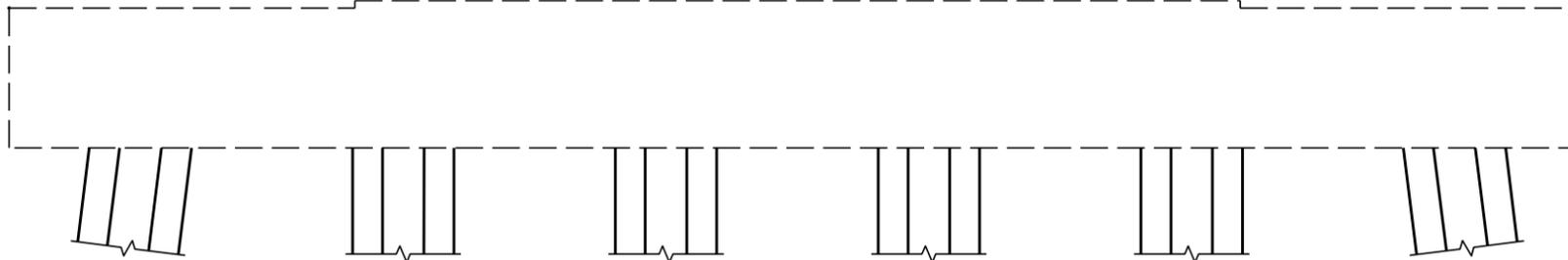
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2			4			

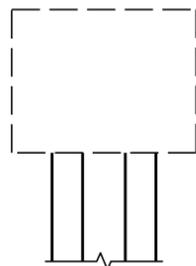
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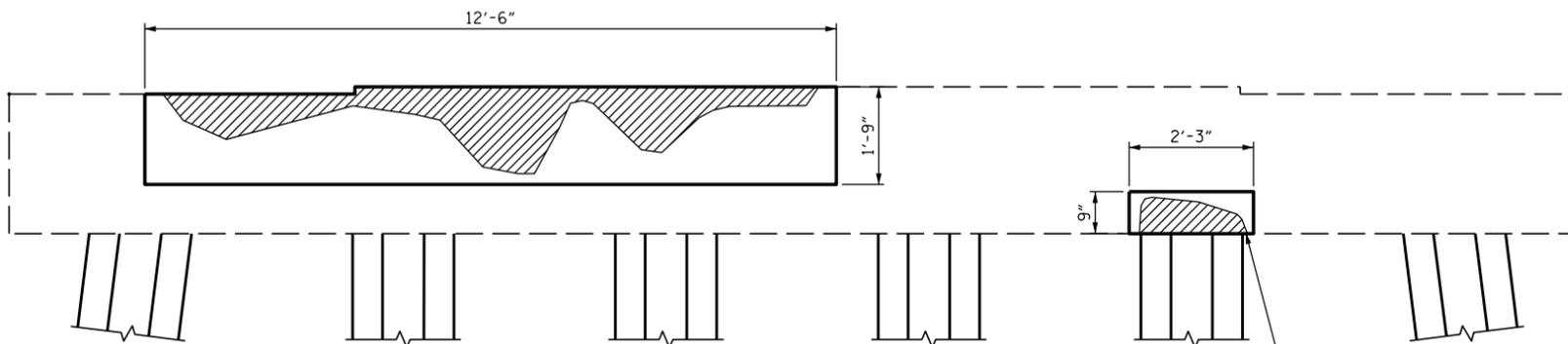
SIDE VIEW
NORTH FACE



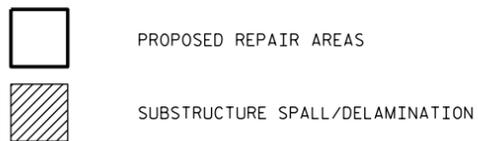
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum



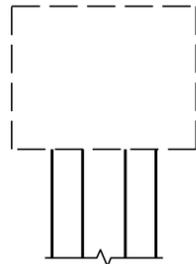
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 117

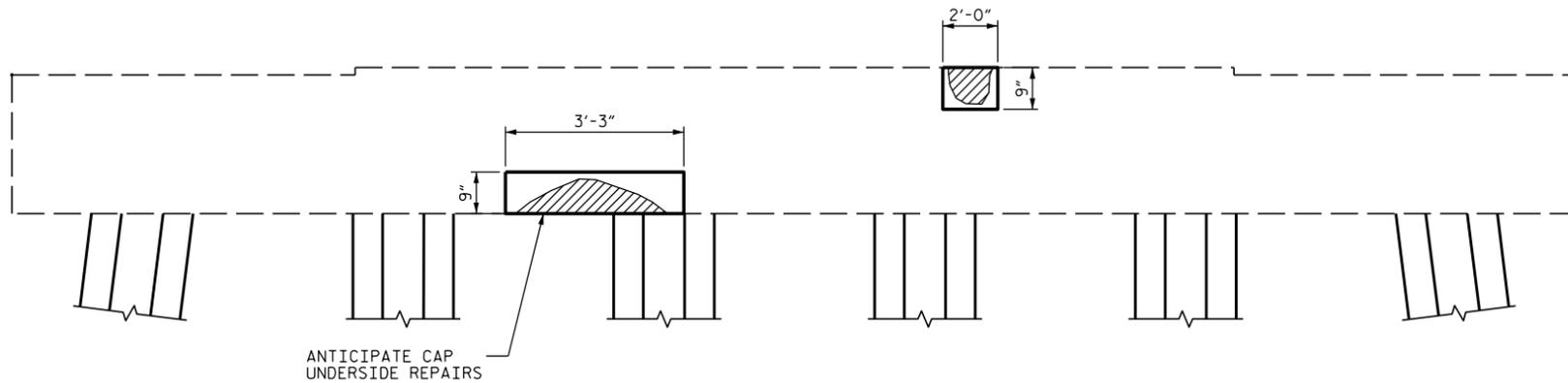
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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 SIGNATURES COMPLETED

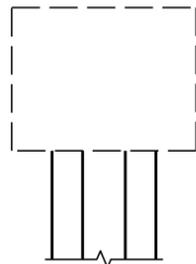
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-136
2			4			



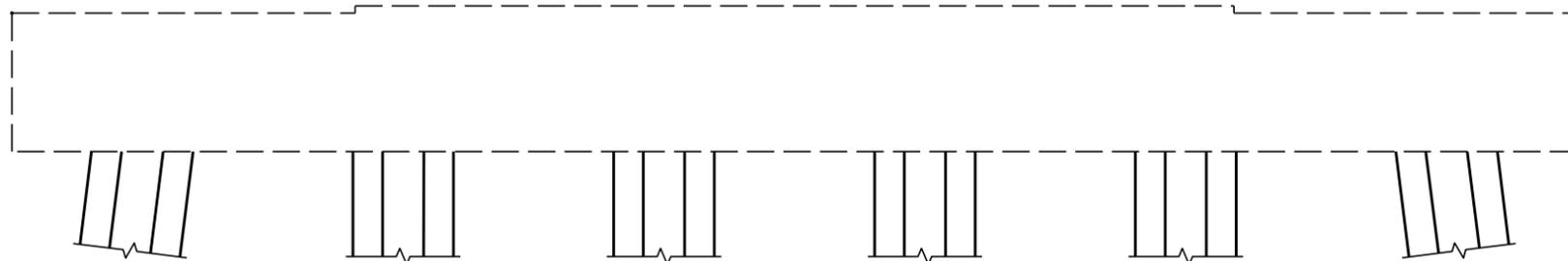
SIDE VIEW
NORTH FACE



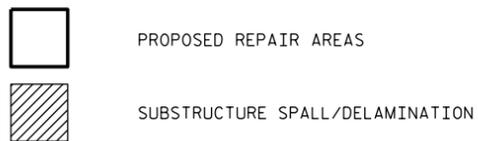
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



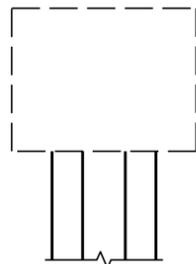
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 118

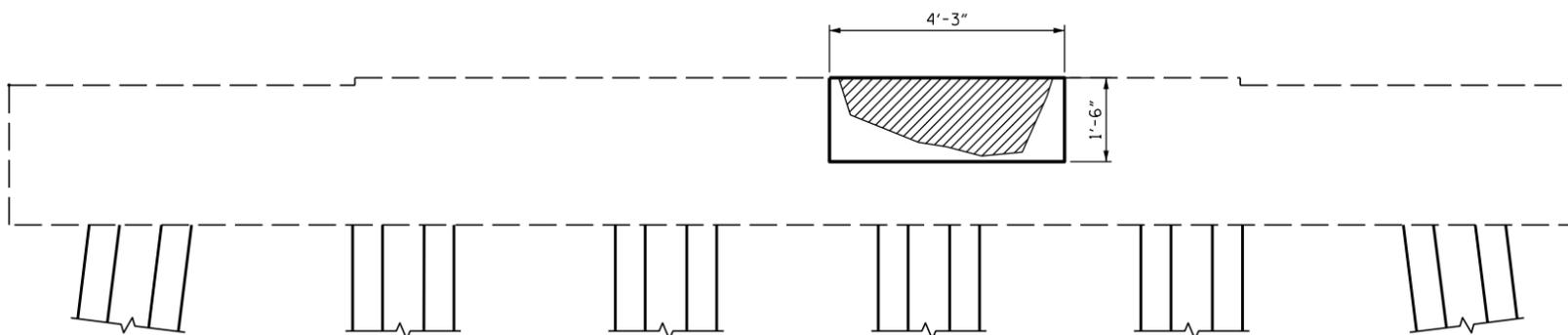
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

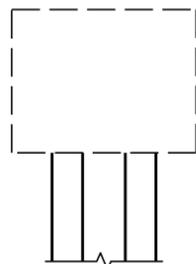
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-137
2			4			



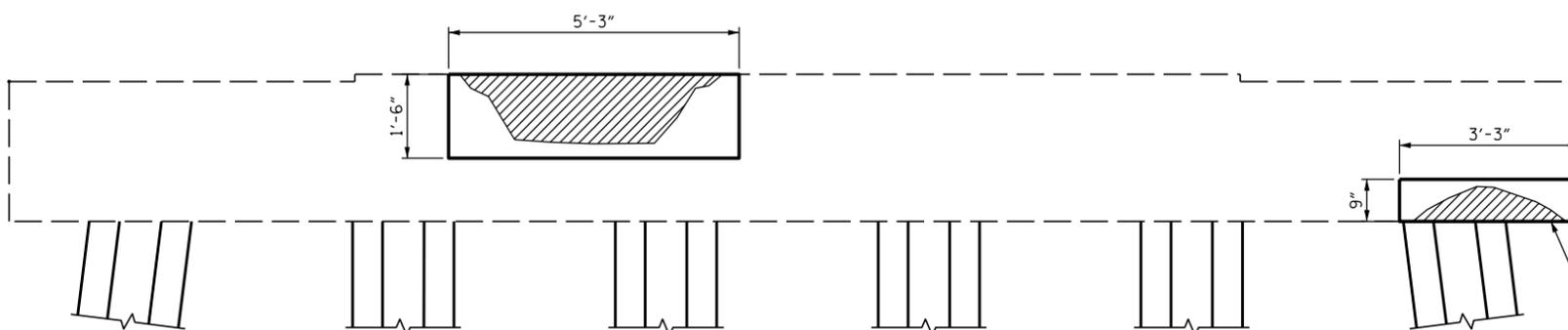
SIDE VIEW
NORTH FACE



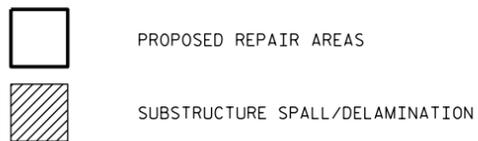
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE

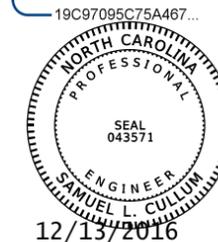


ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

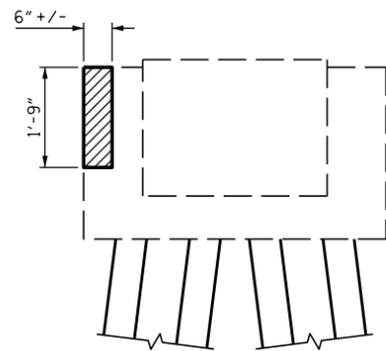


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 119

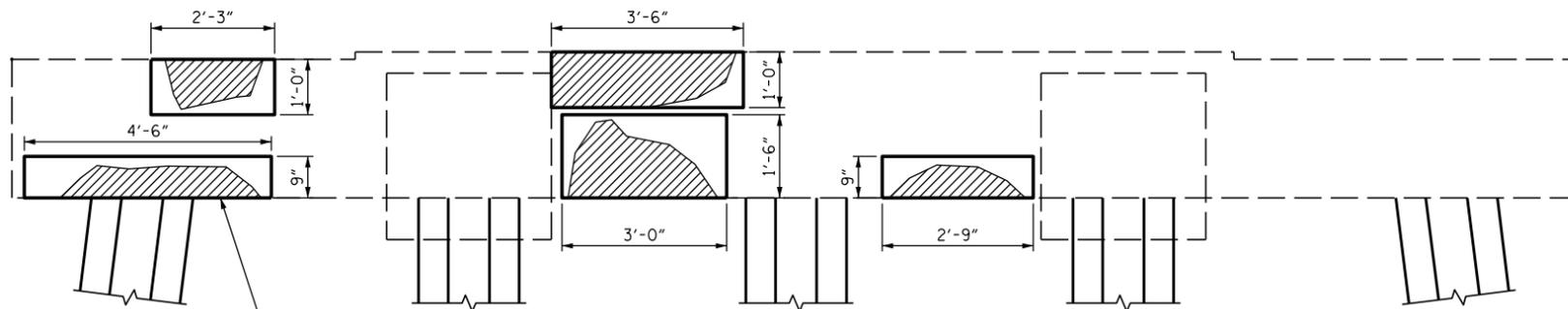
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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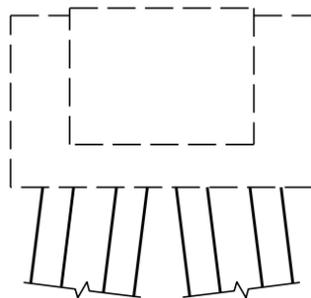
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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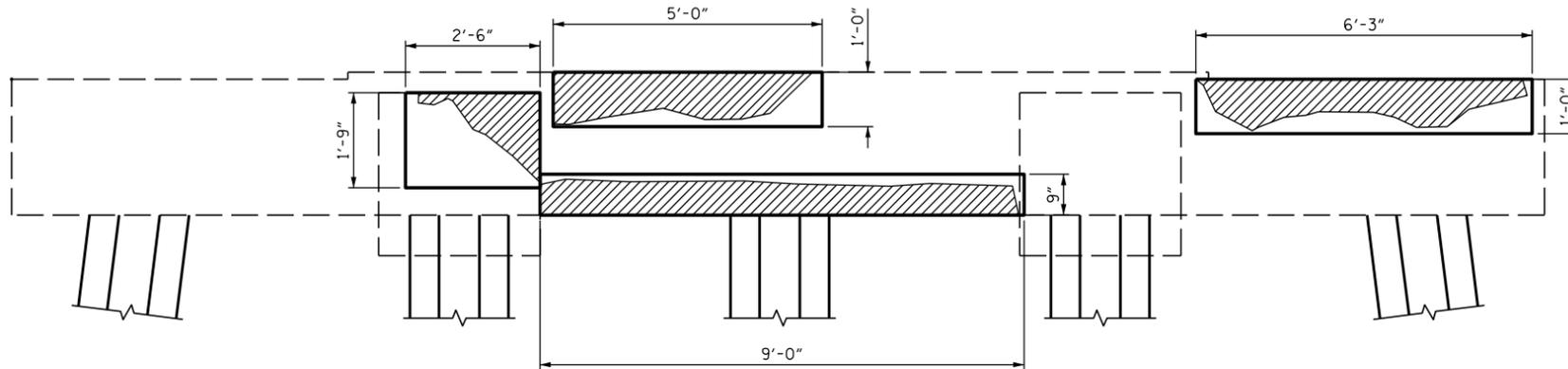
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

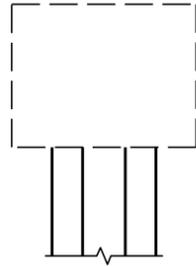
**SUBSTRUCTURE CONC.
 REPAIR - BENT 120**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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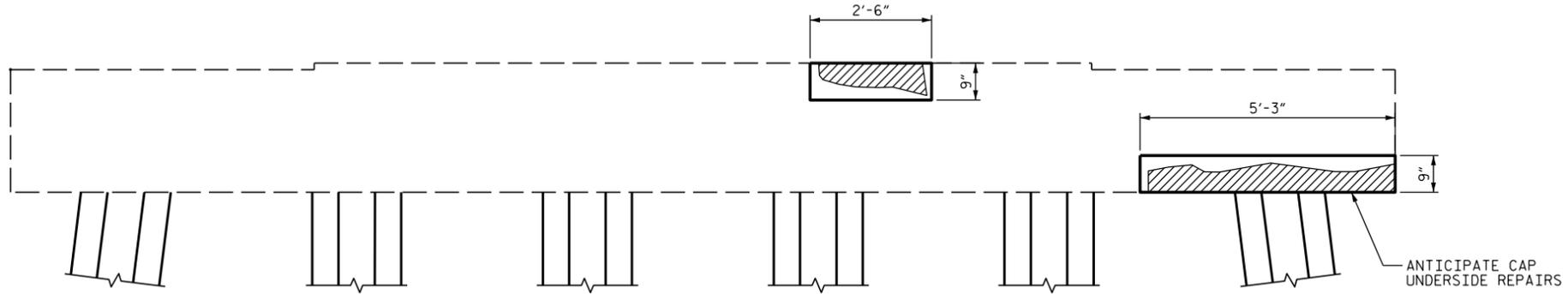
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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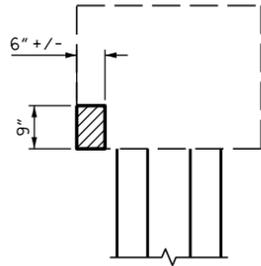
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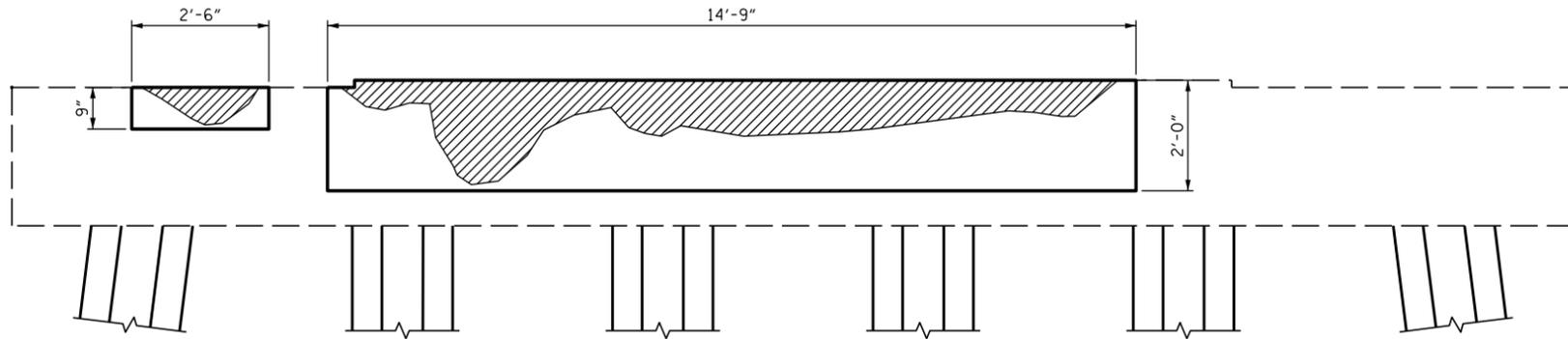
SIDE VIEW
NORTH FACE



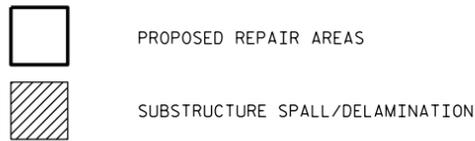
ELEVATION
WEST FACE



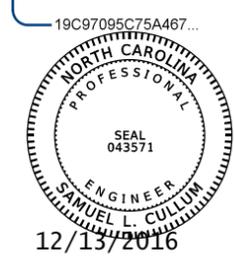
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum



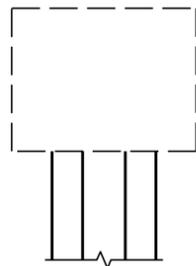
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 121

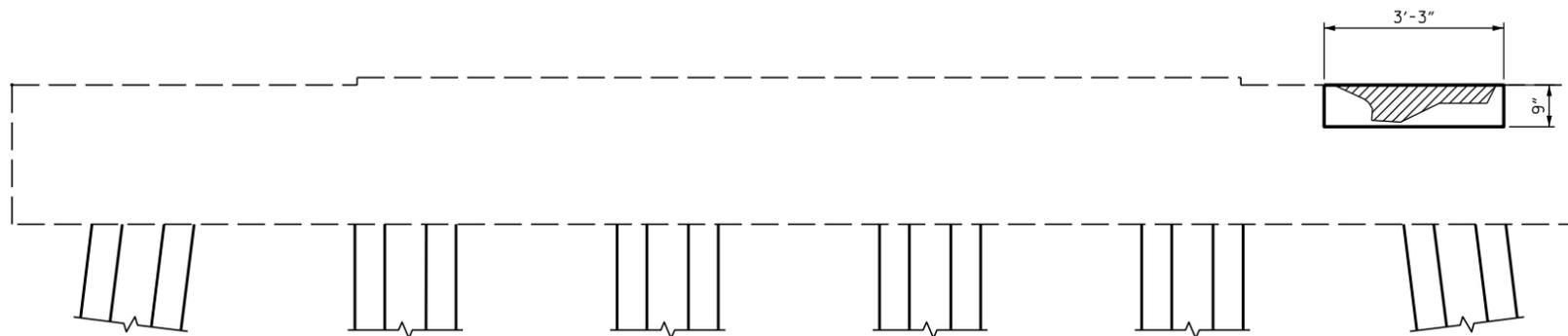
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

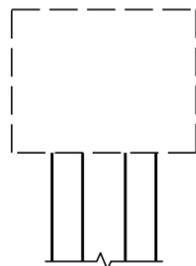
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2			4			TOTAL SHEETS



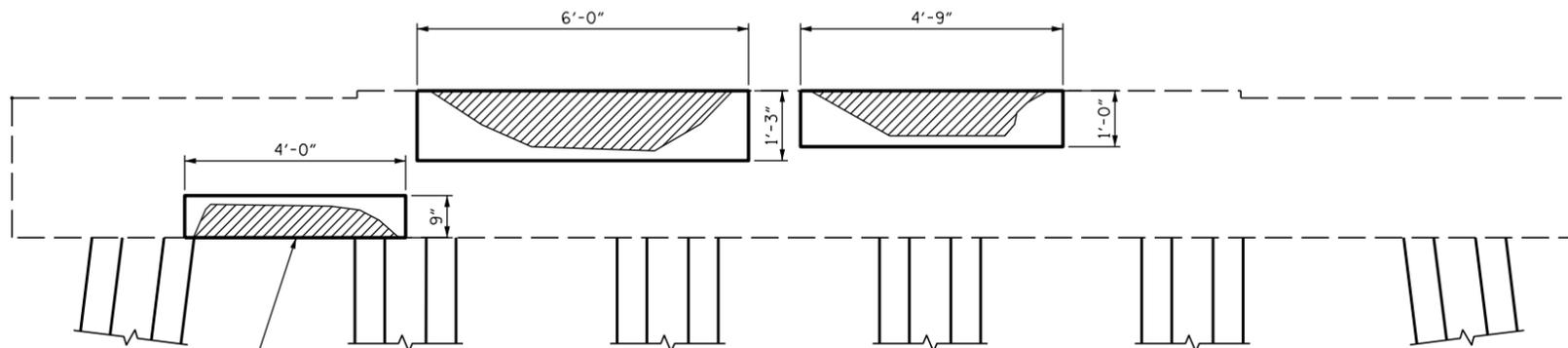
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

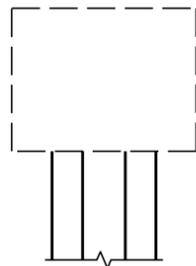
SUBSTRUCTURE CONC.
REPAIR - BENT 122

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

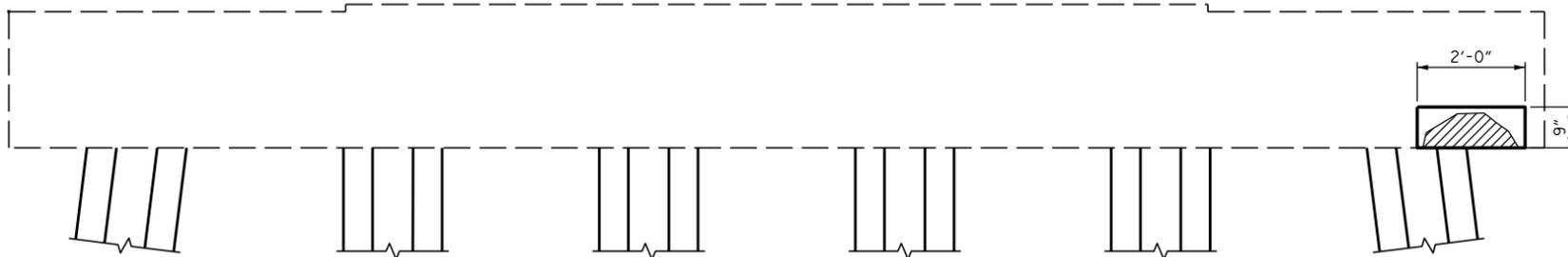
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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2			4			

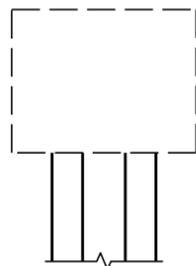
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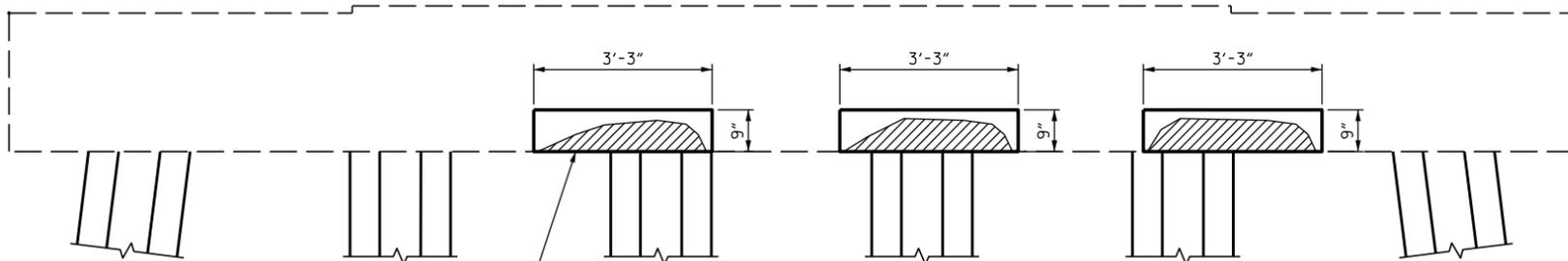
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

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Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

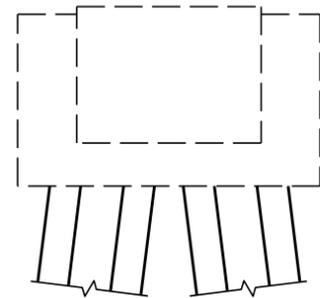
SUBSTRUCTURE CONC.
REPAIR - BENT 123

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

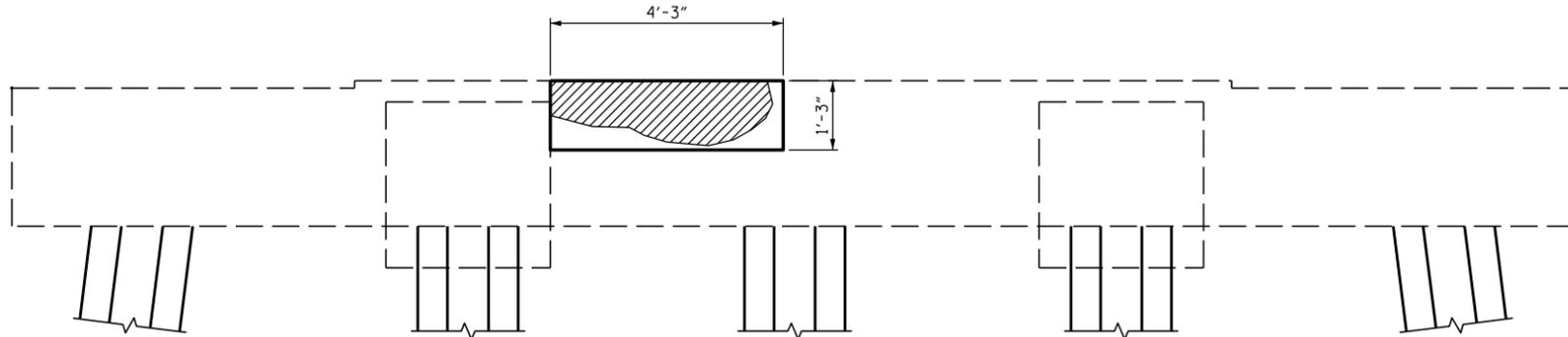
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SIGNATURES COMPLETED

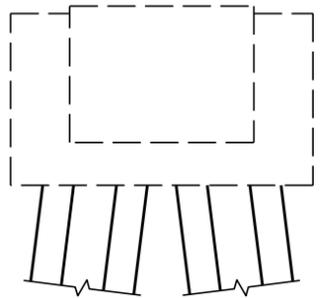
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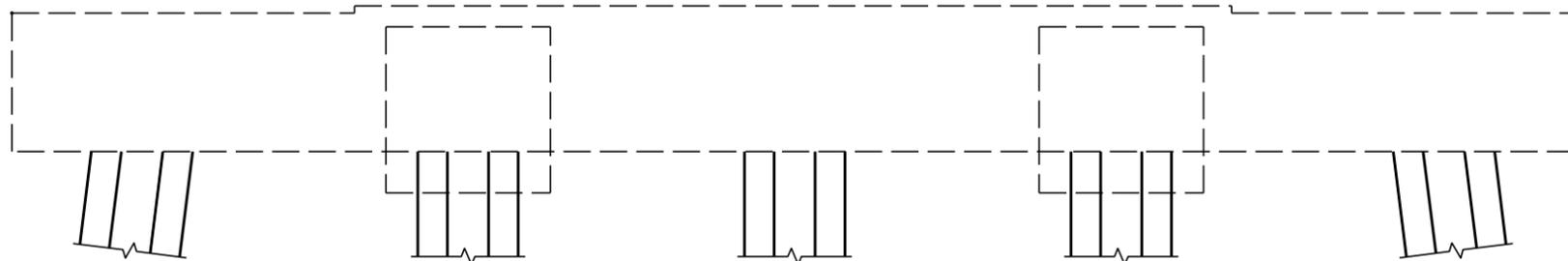
SIDE VIEW
NORTH FACE



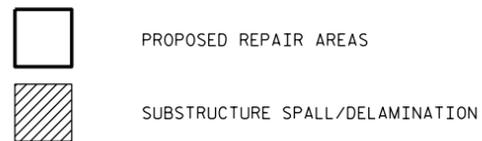
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

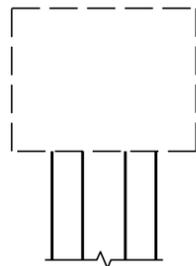
SUBSTRUCTURE CONC.
REPAIR - BENT 124

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

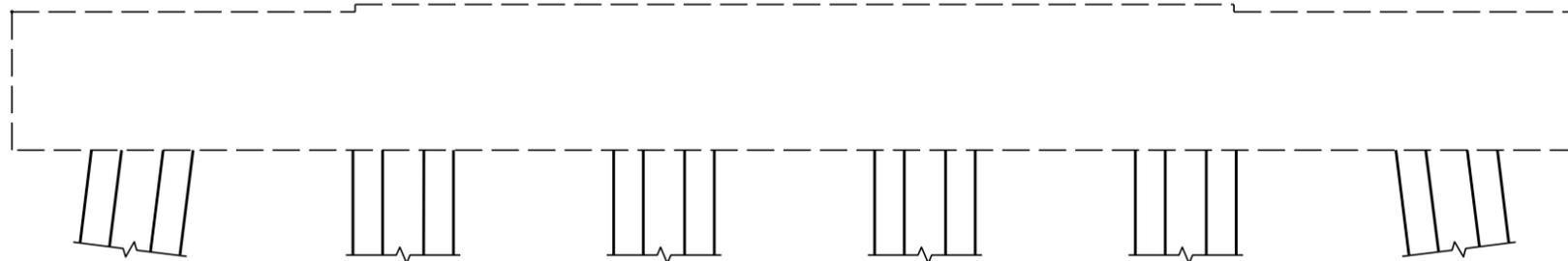
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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2			4			

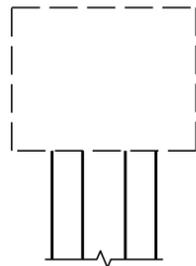
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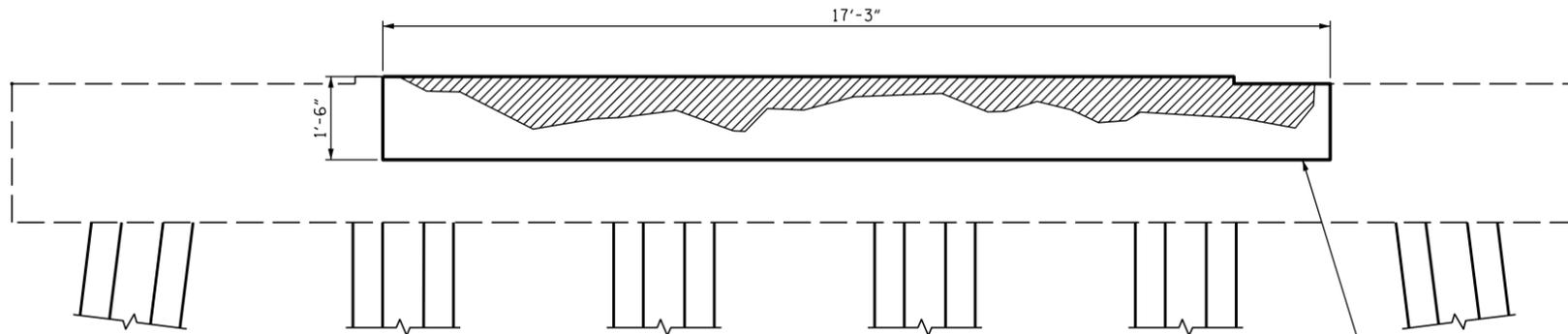
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum

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12/13/2016

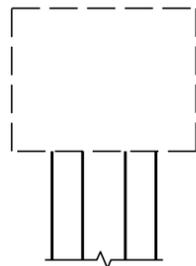
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

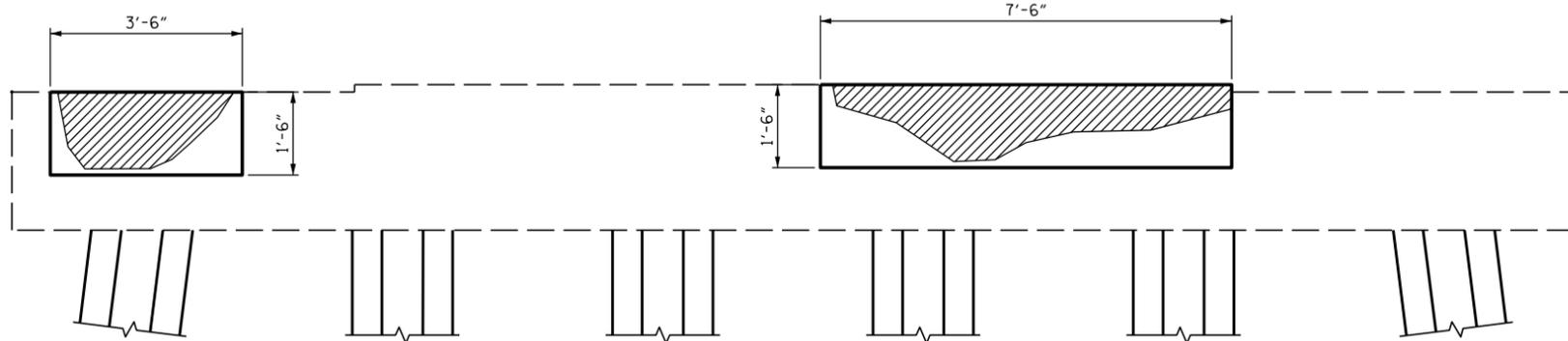
SUBSTRUCTURE CONC.
 REPAIR - BENT 125

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

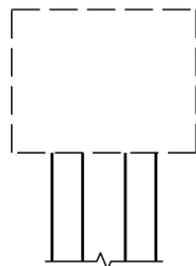
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



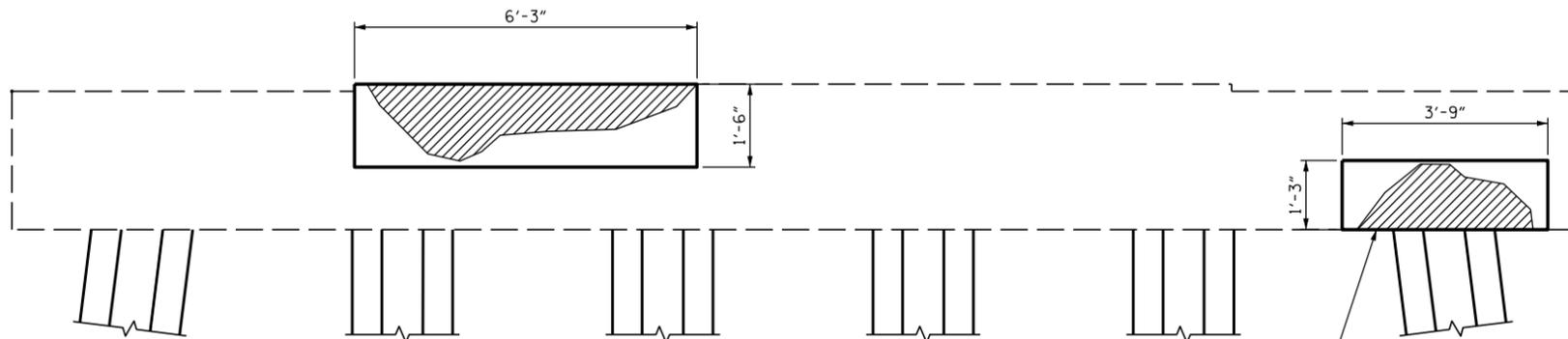
SIDE VIEW
NORTH FACE



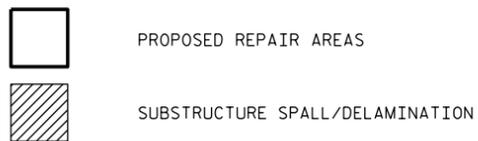
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

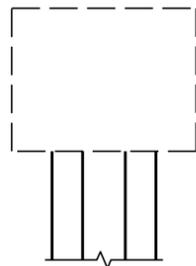
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 126**

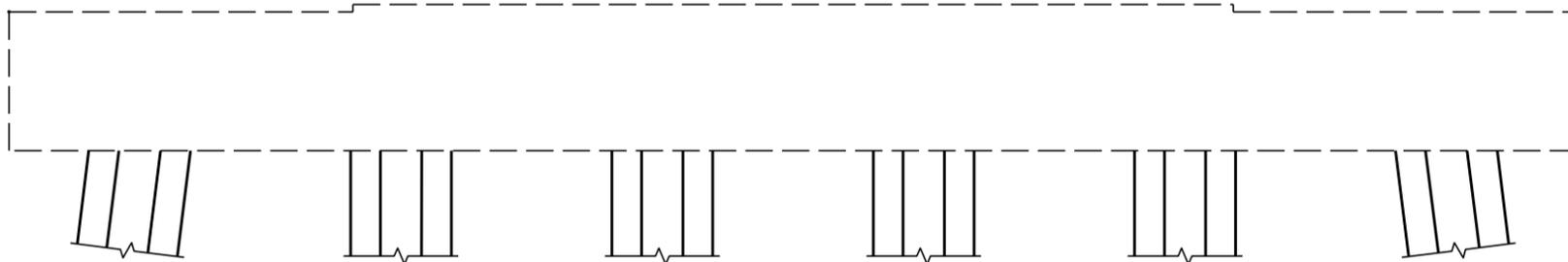
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

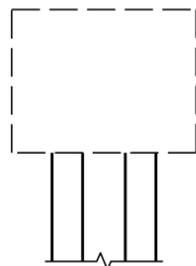
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



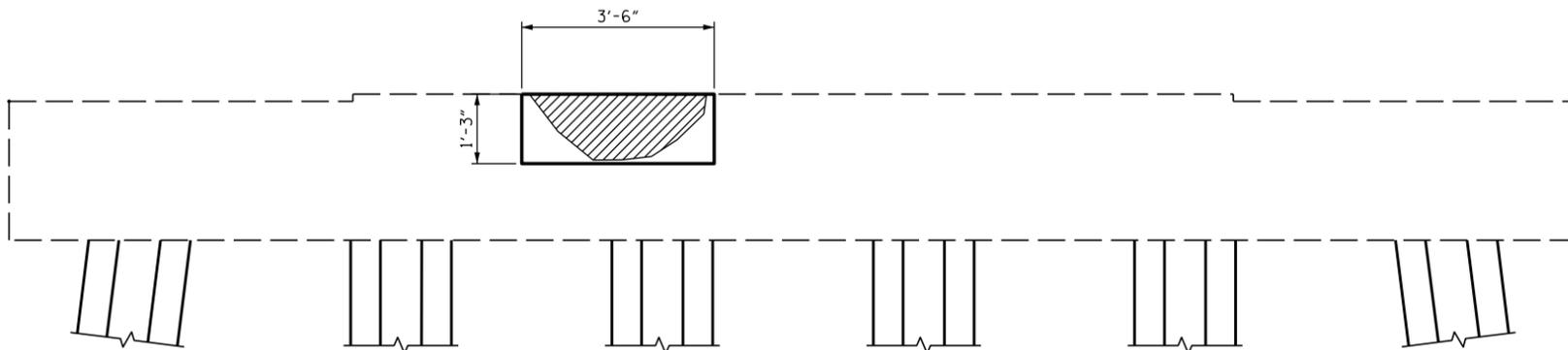
SIDE VIEW
NORTH FACE



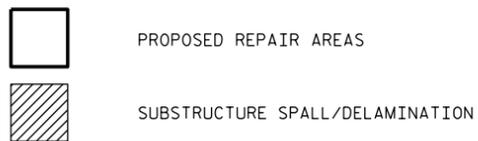
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

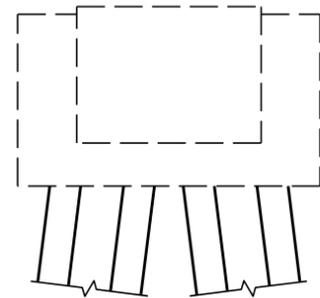
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 127

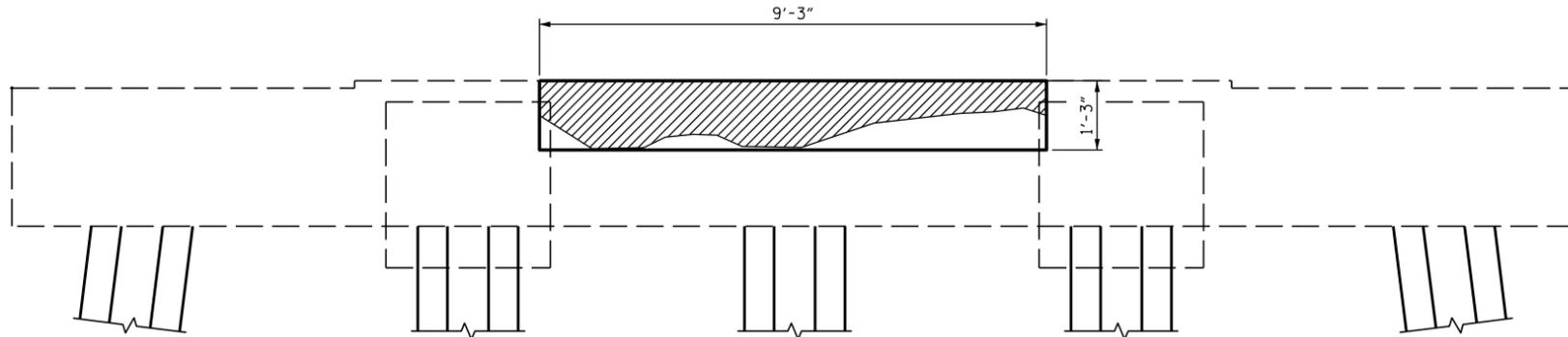
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

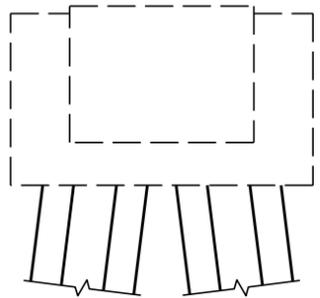
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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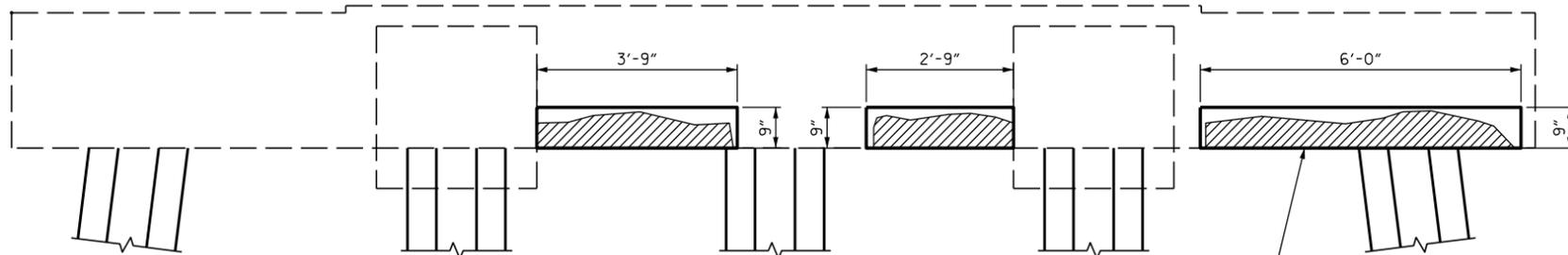
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

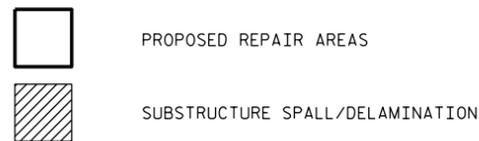


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

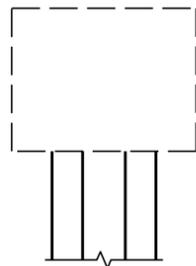
SUBSTRUCTURE CONC.
REPAIR - BENT 128

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

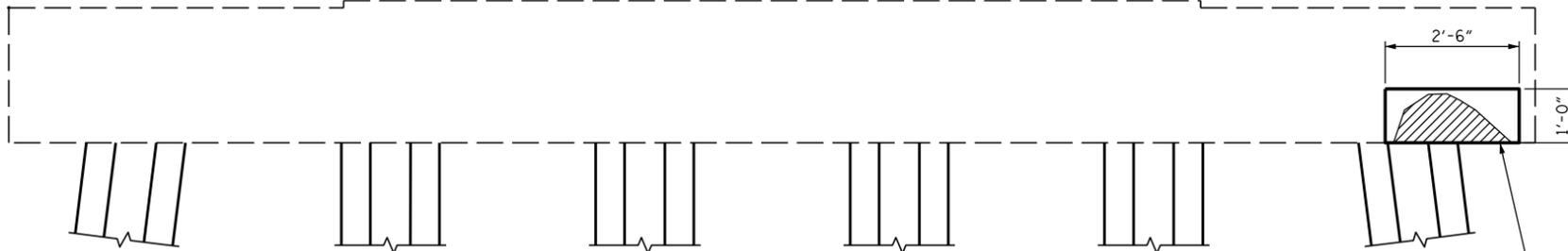
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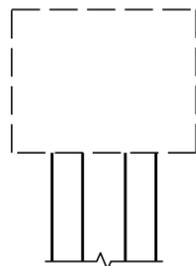


SIDE VIEW
NORTH FACE

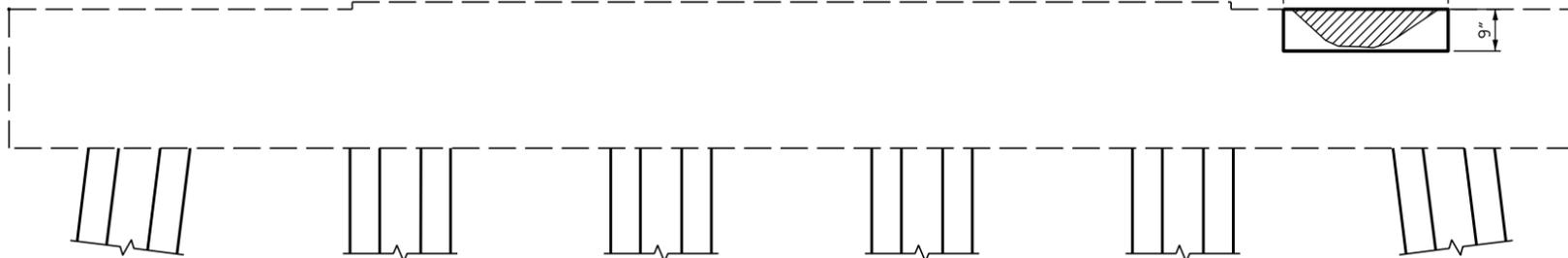


ELEVATION
WEST FACE

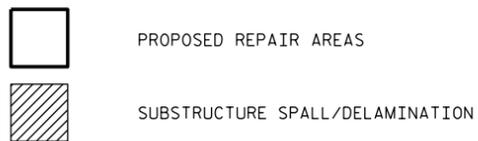
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
043571
SAMUEL L. CULLUM
12/13/2016

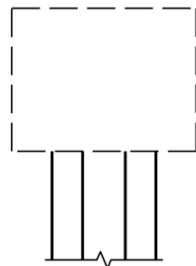
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 129

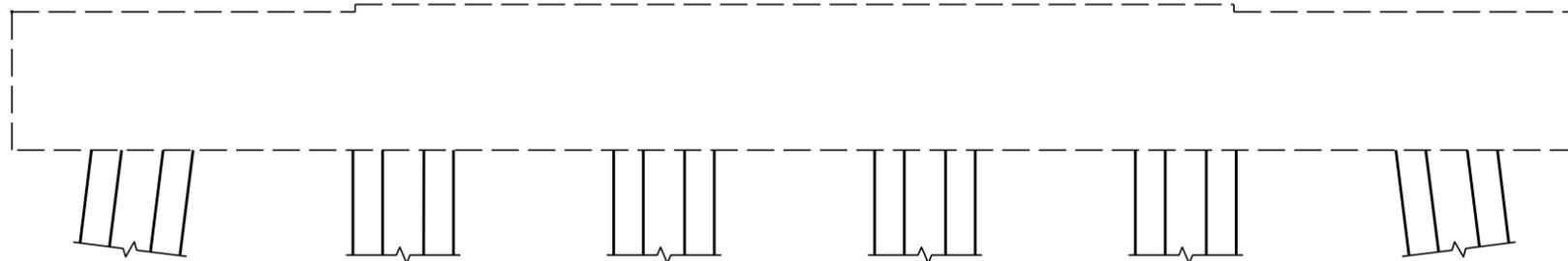
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

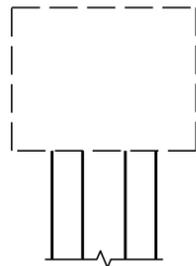
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



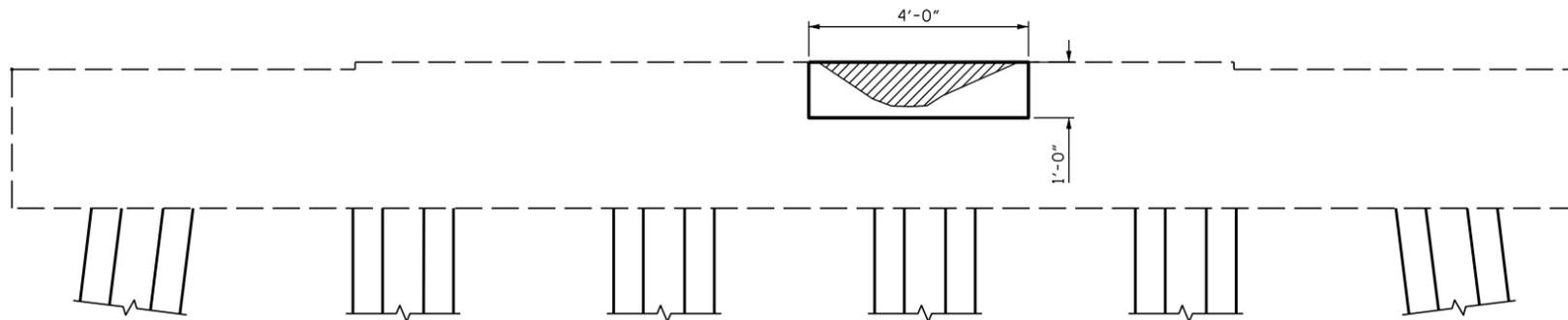
SIDE VIEW
NORTH FACE



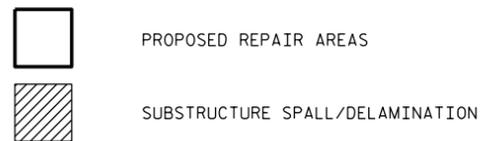
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

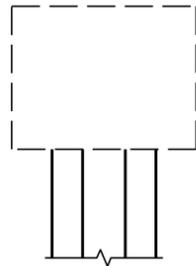
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 130

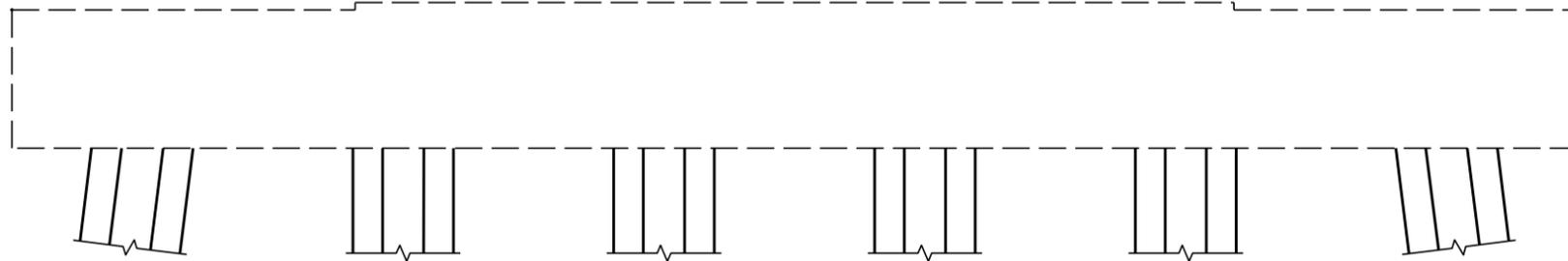
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

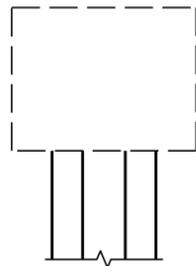
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2			4			



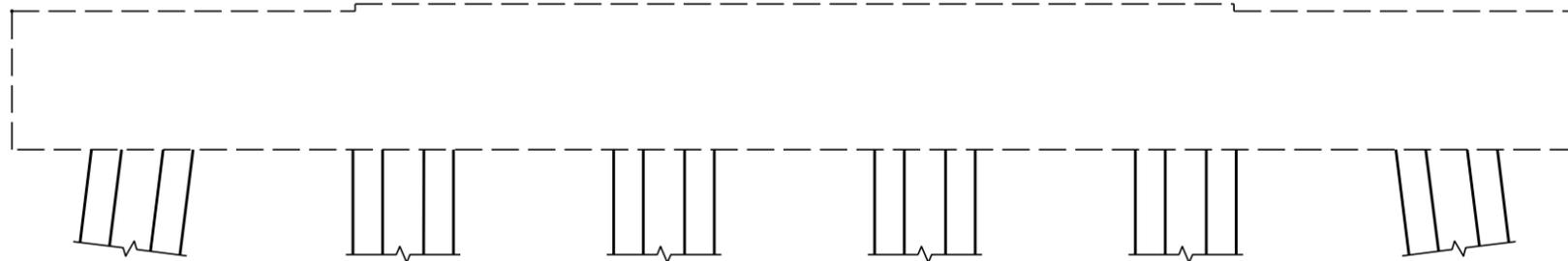
SIDE VIEW
NORTH FACE



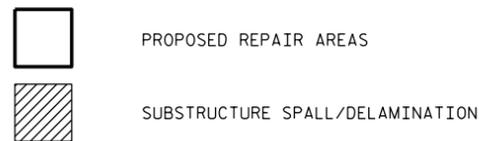
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

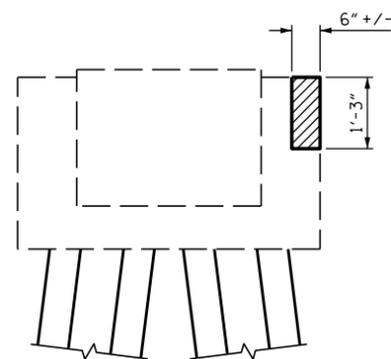
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 131

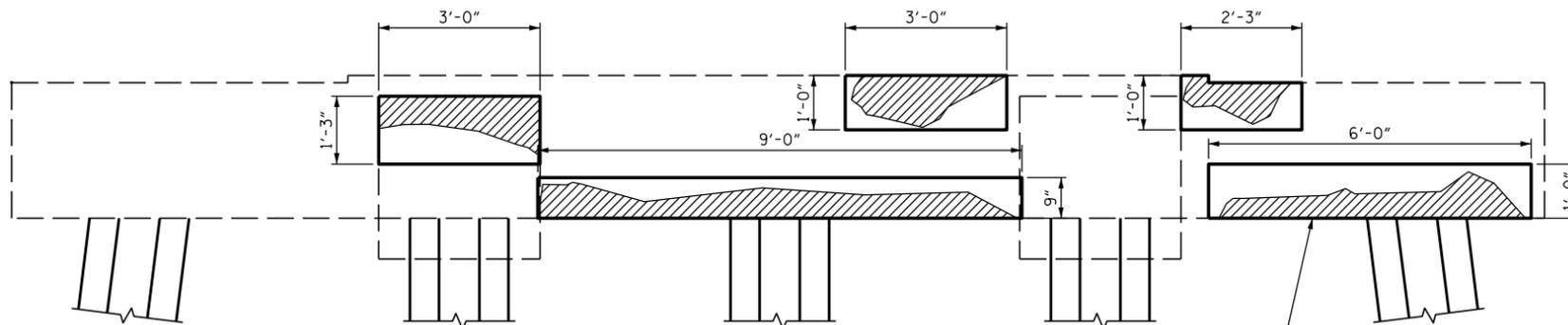
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

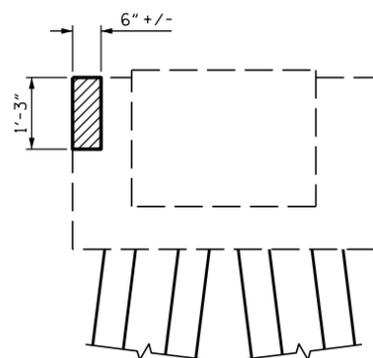


SIDE VIEW
NORTH FACE

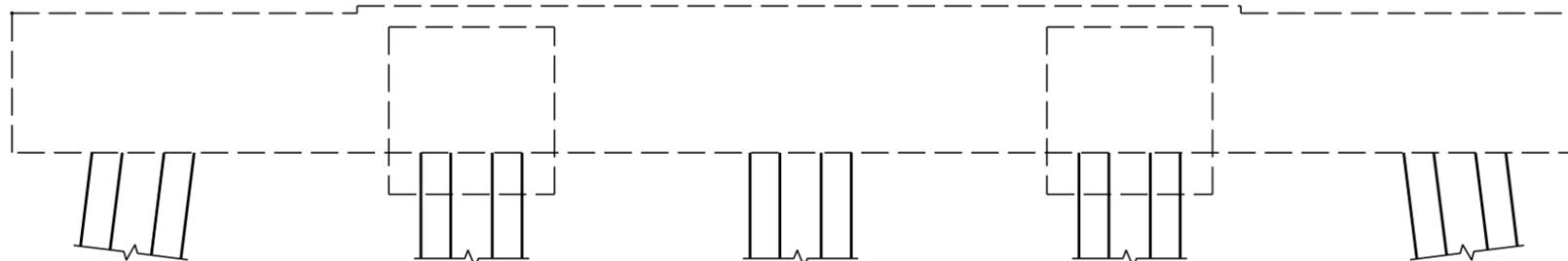


ELEVATION
WEST FACE

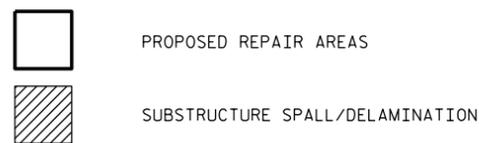
ANTICIPATE CAP
UNDERSIDE REPAIRS



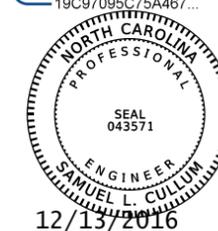
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

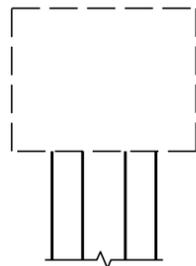
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 132

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

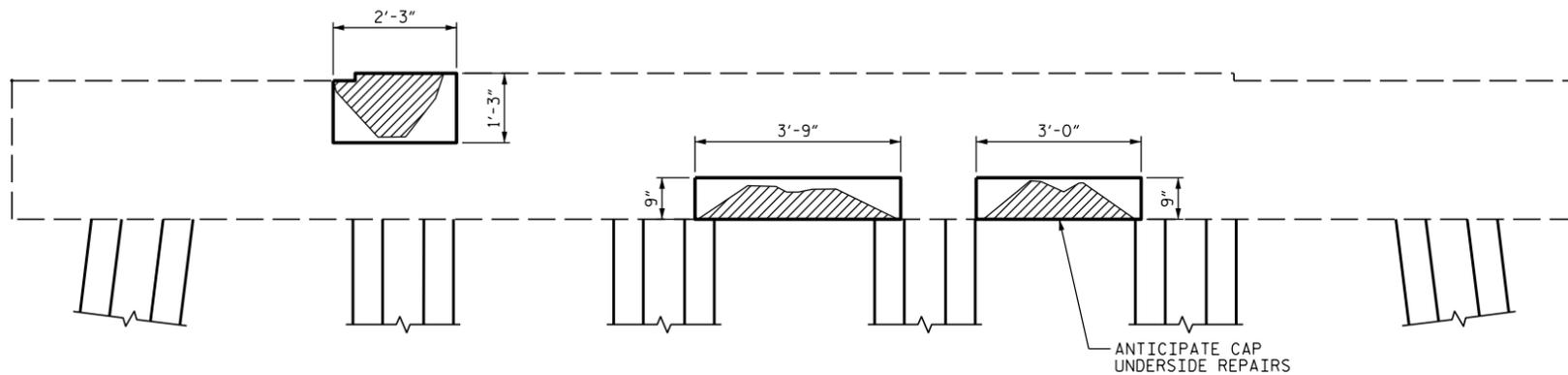
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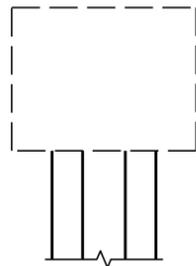
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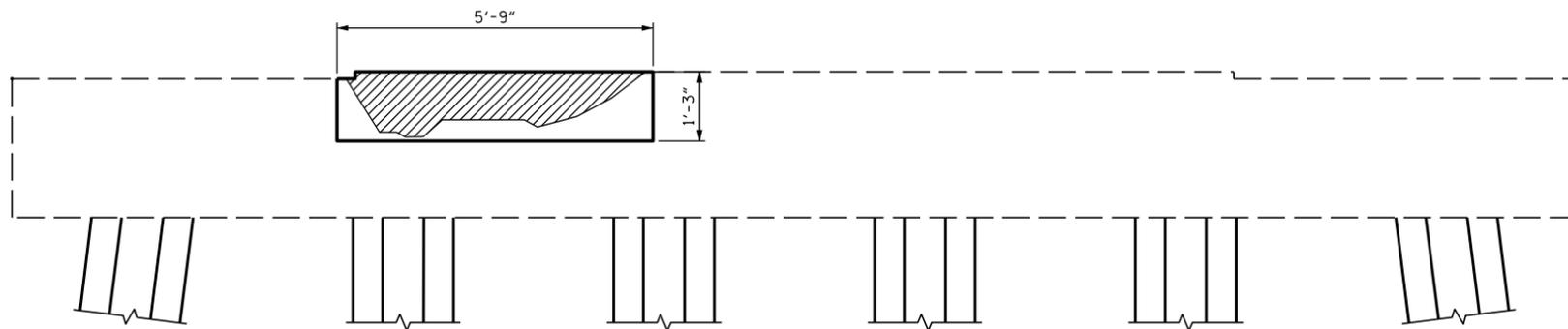
SIDE VIEW
NORTH FACE



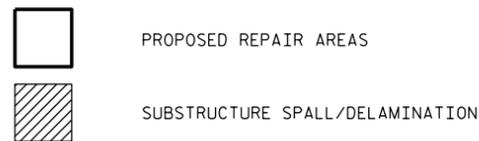
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

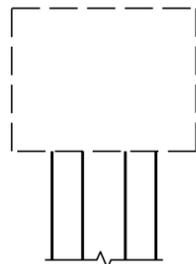
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 133

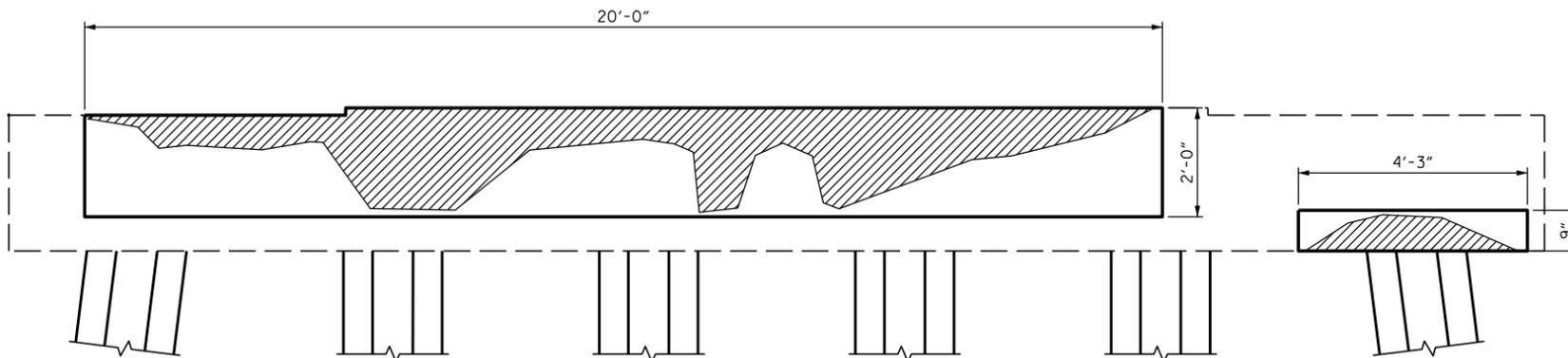
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
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SIGNATURES COMPLETED

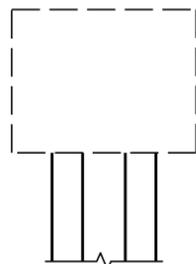
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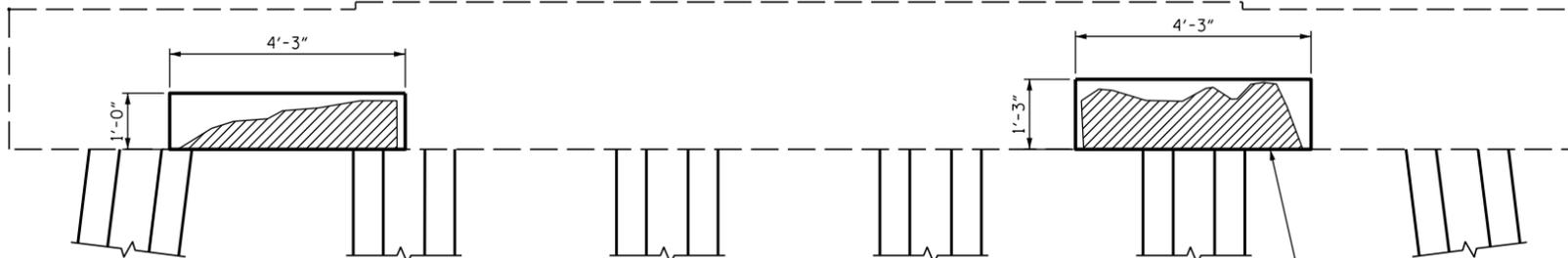
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

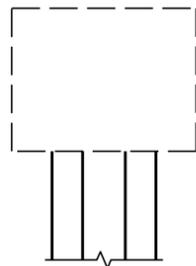
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 134						S-153
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

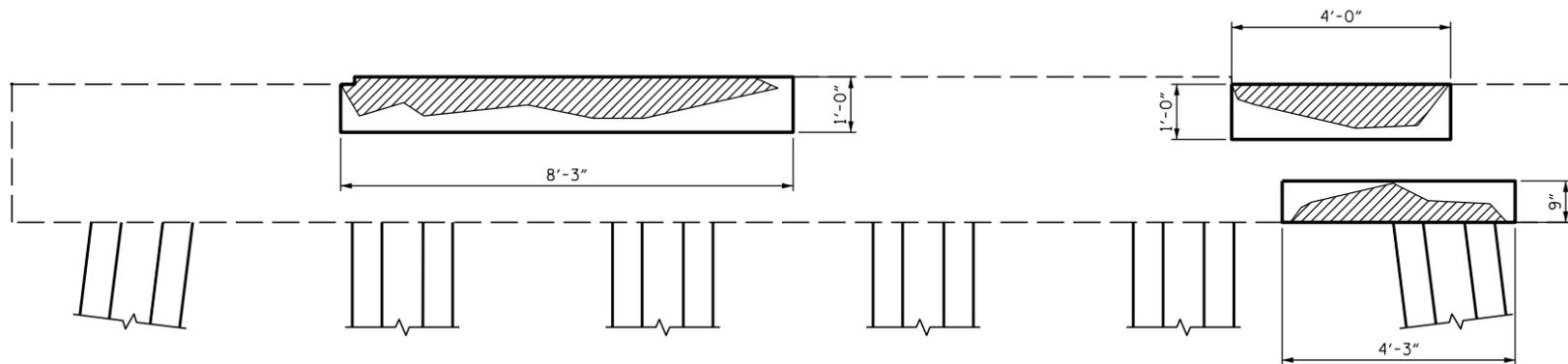
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
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SIGNATURES COMPLETED

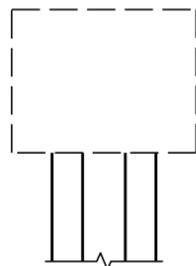
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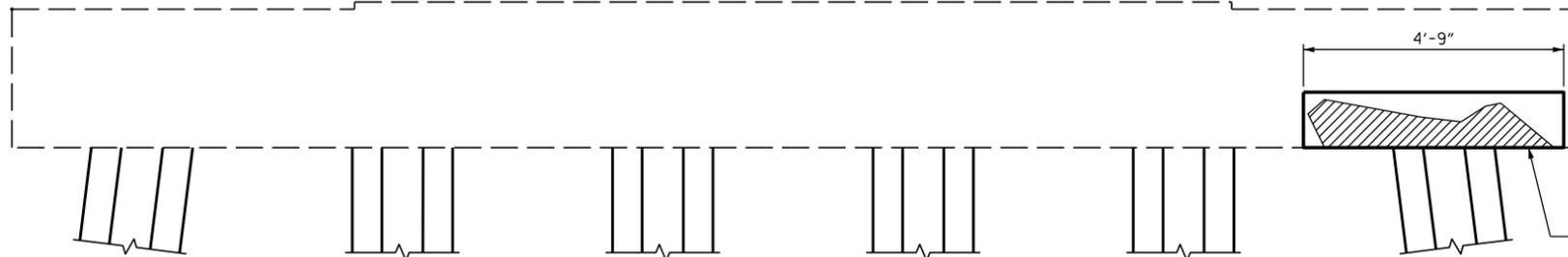
SIDE VIEW
NORTH FACE



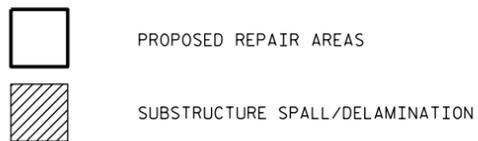
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

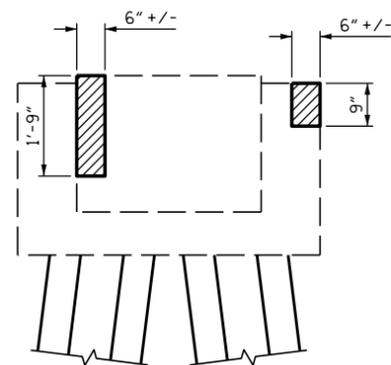
SUBSTRUCTURE CONC.
REPAIR - BENT 135

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

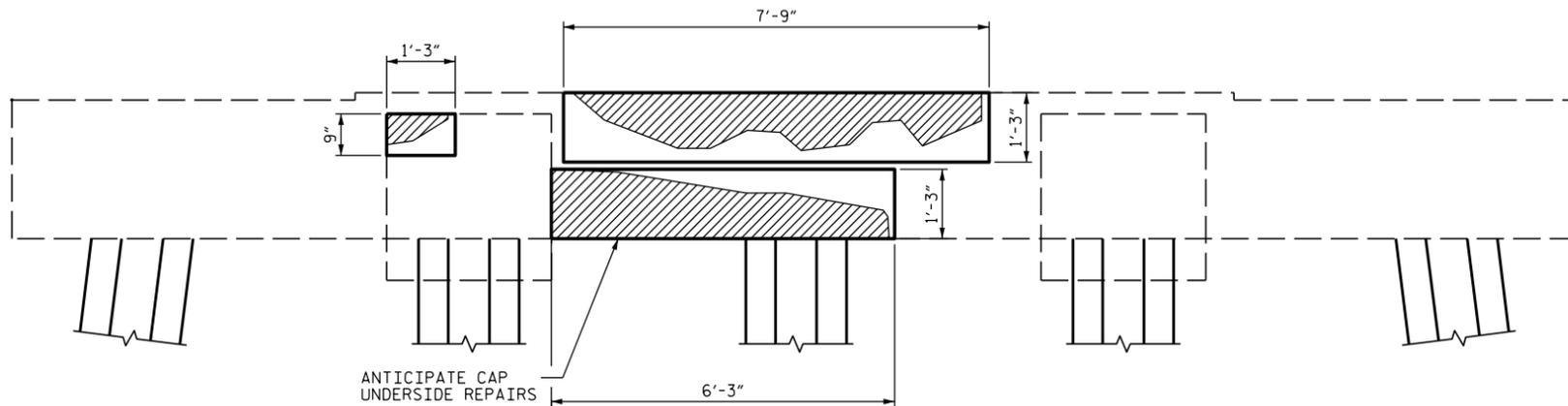
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
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2			4			TOTAL SHEETS

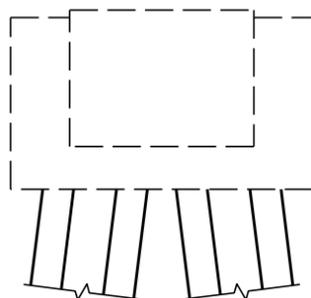
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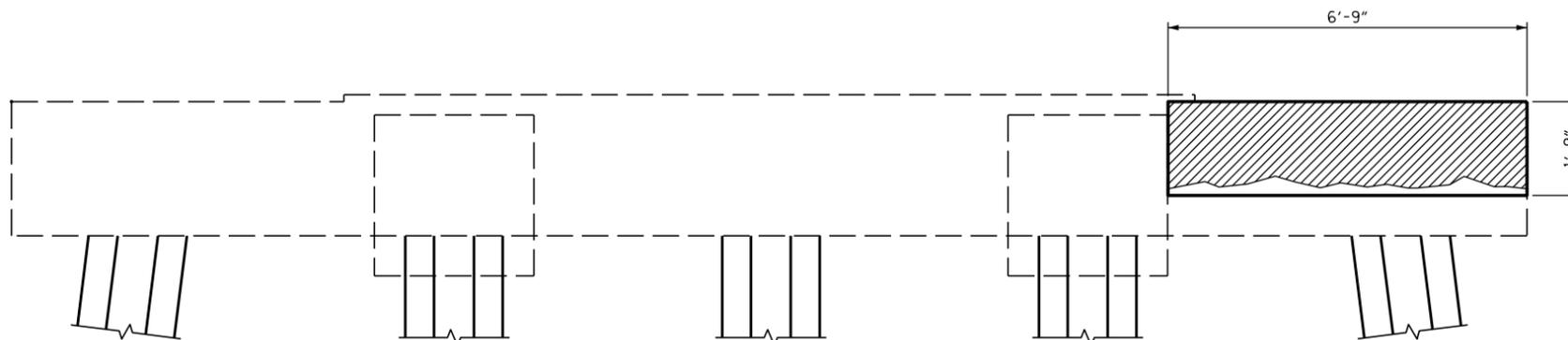
SIDE VIEW
NORTH FACE



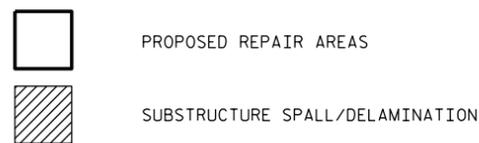
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



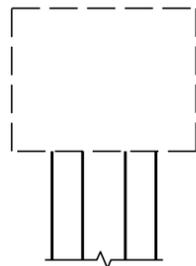
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 136						S-155
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

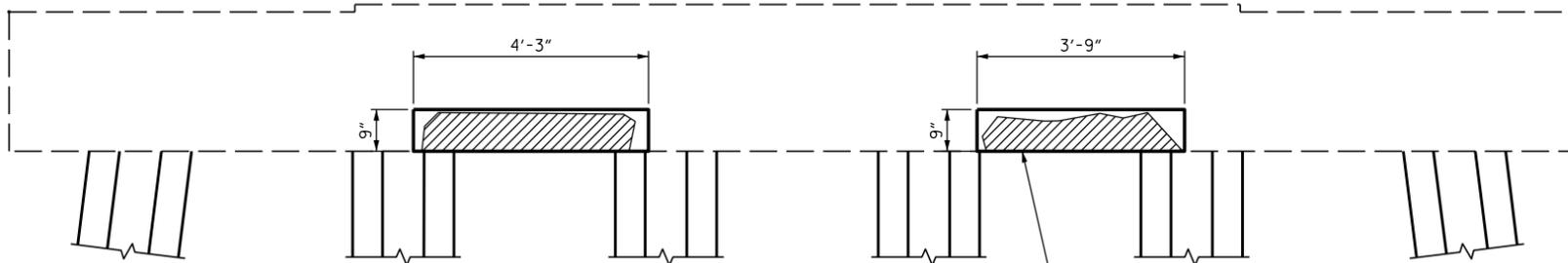
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

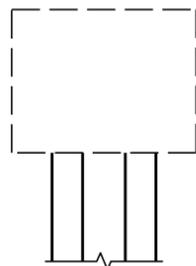
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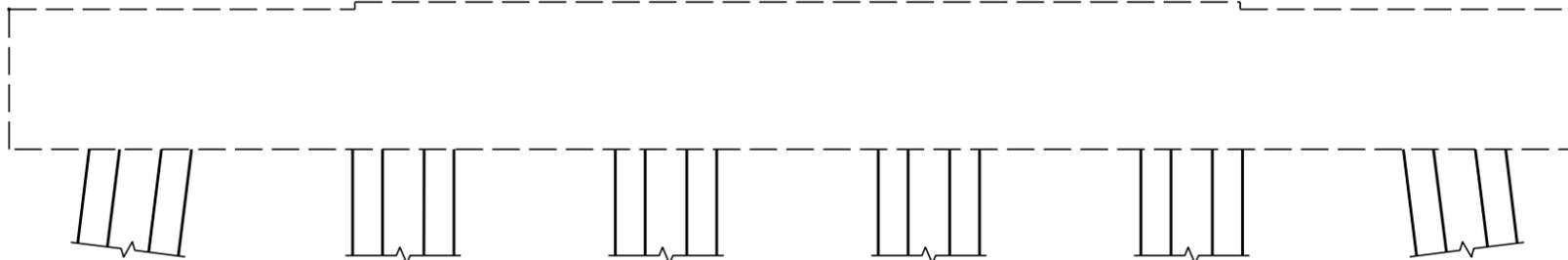
SIDE VIEW
NORTH FACE



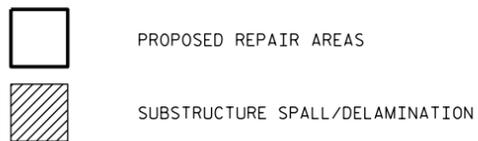
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

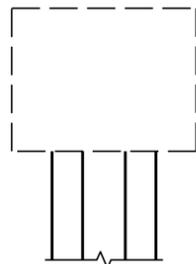
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 137

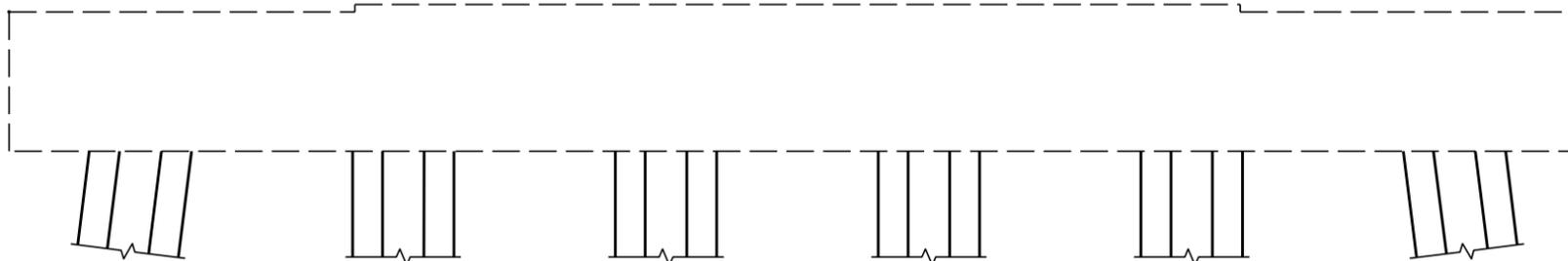
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

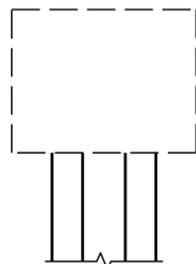
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



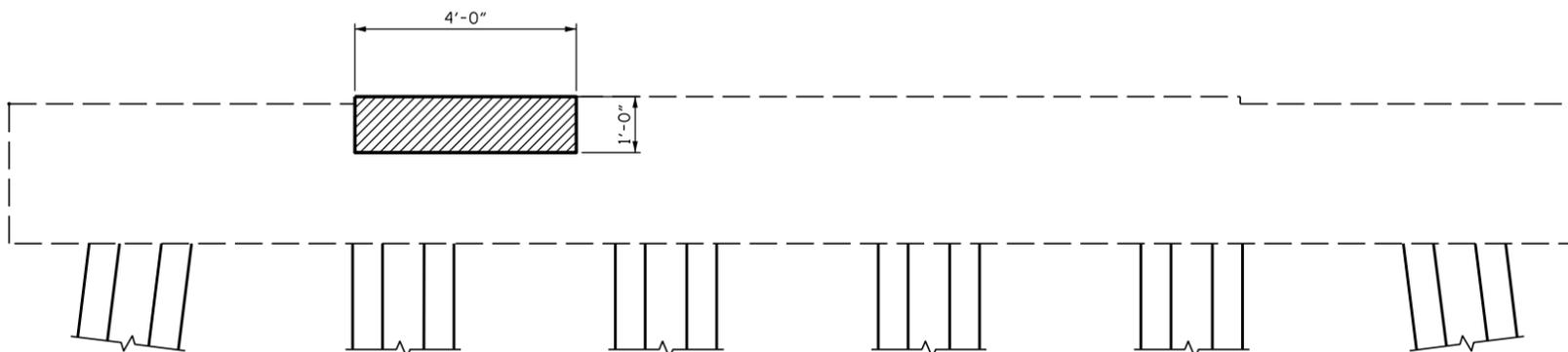
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

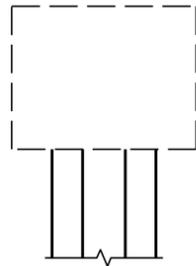
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 138

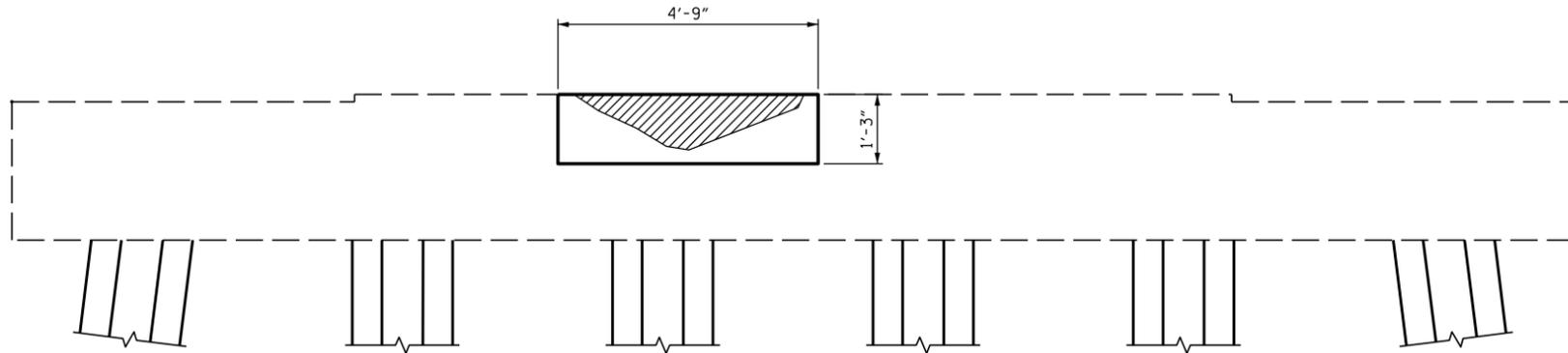
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

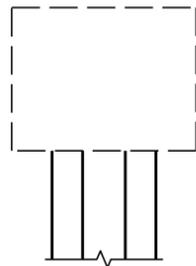
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



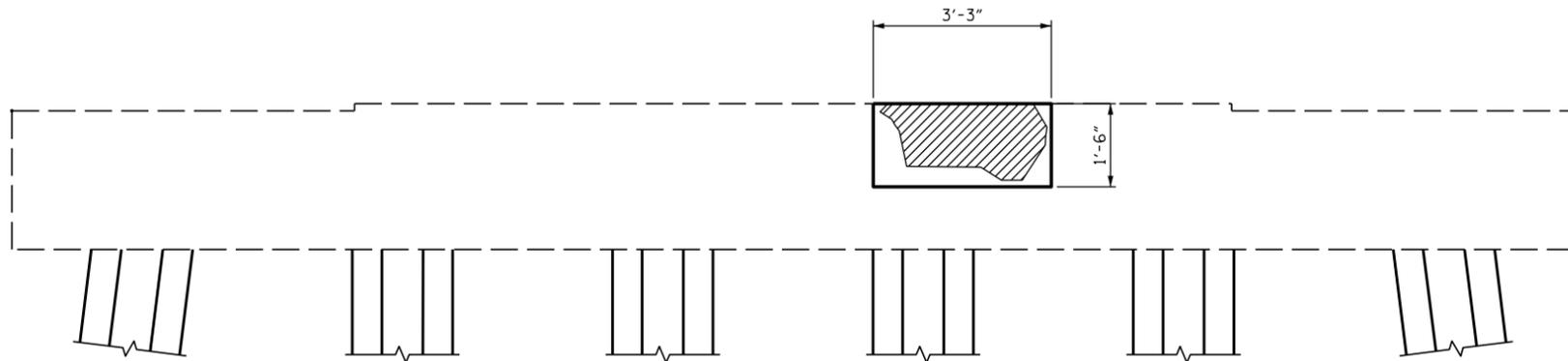
SIDE VIEW
NORTH FACE



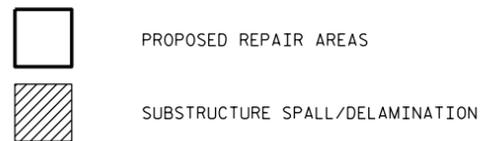
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

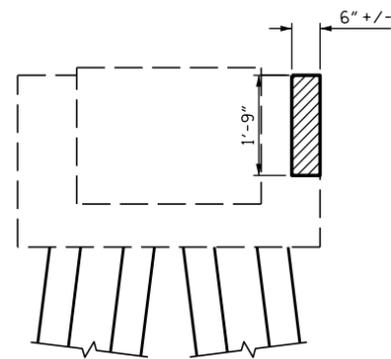
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 139**

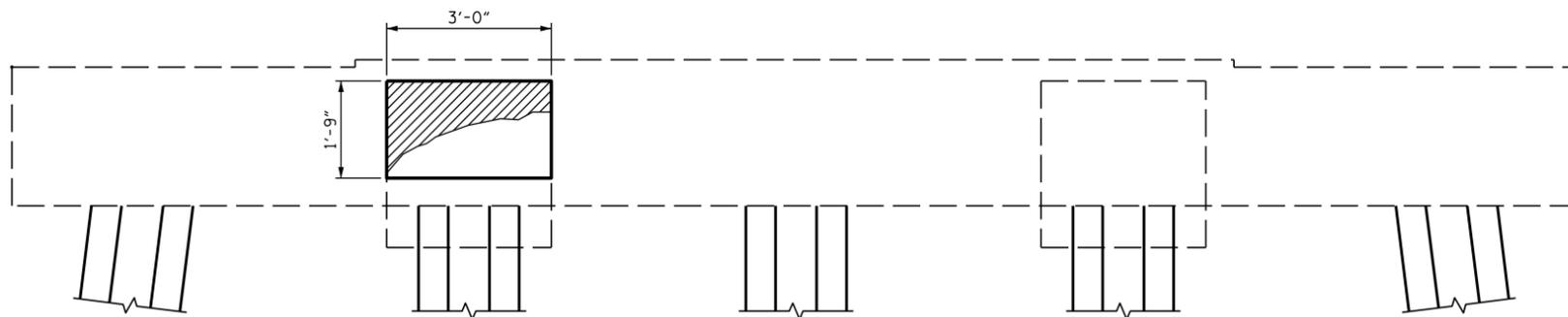
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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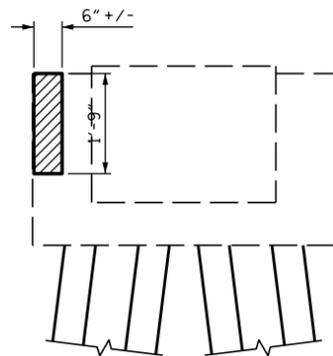
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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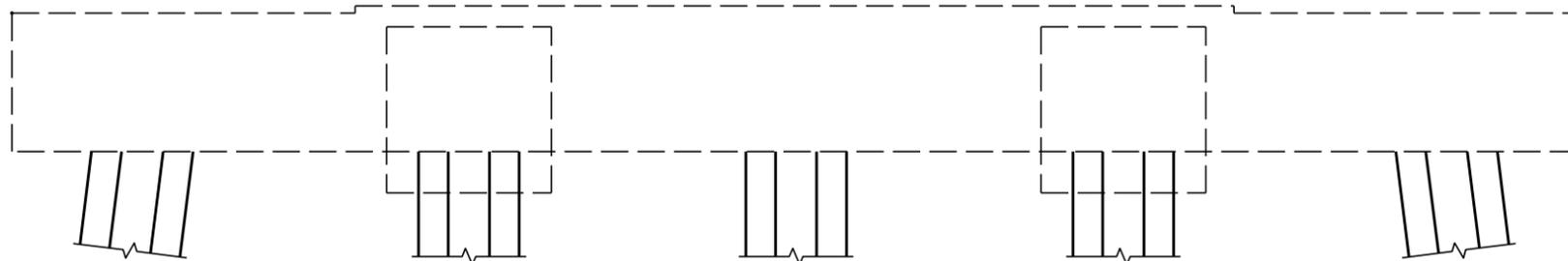
SIDE VIEW
NORTH FACE



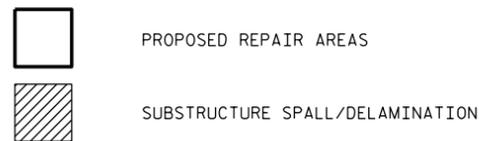
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

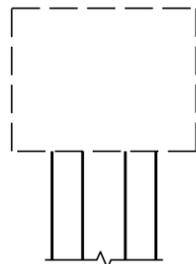
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 140**

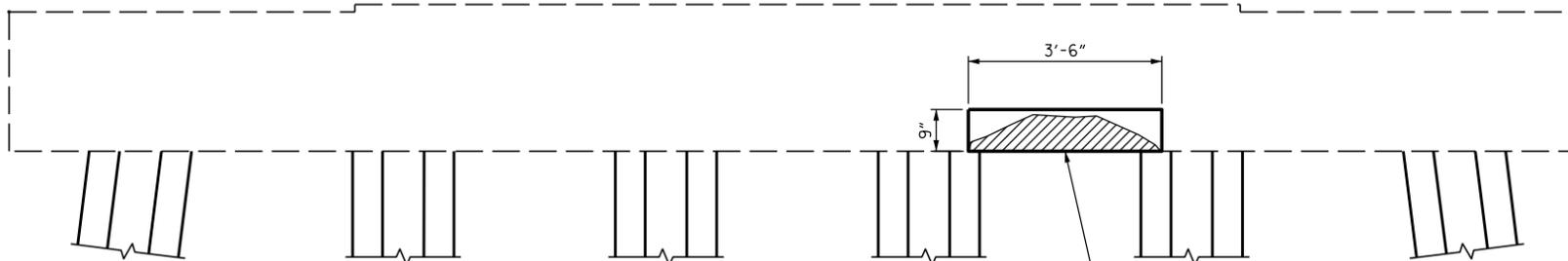
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

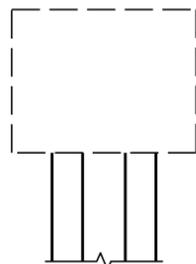
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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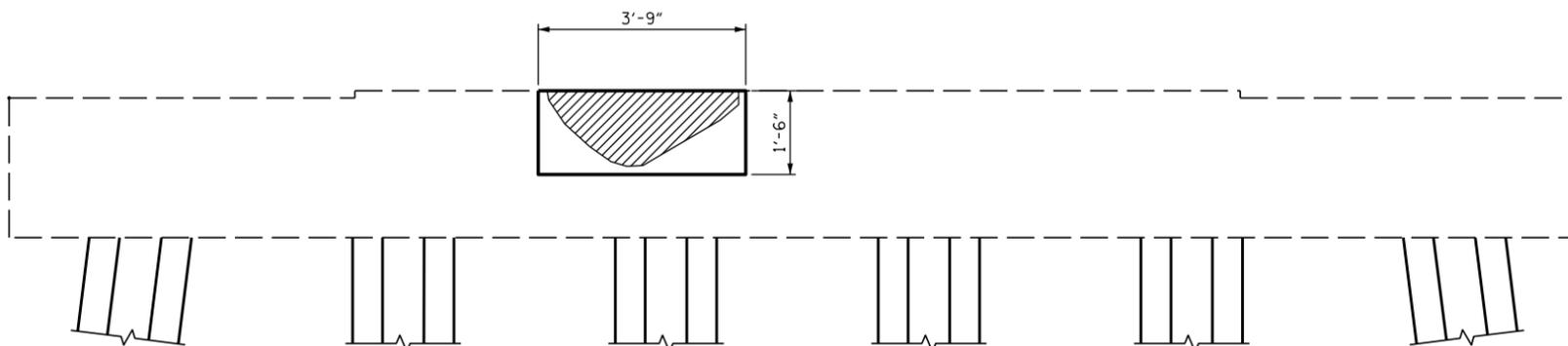
SIDE VIEW
NORTH FACE



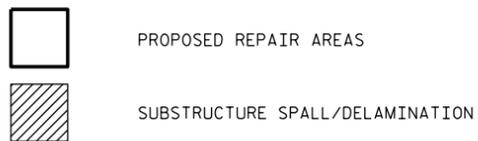
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

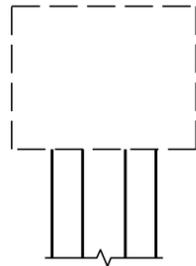
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 141

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

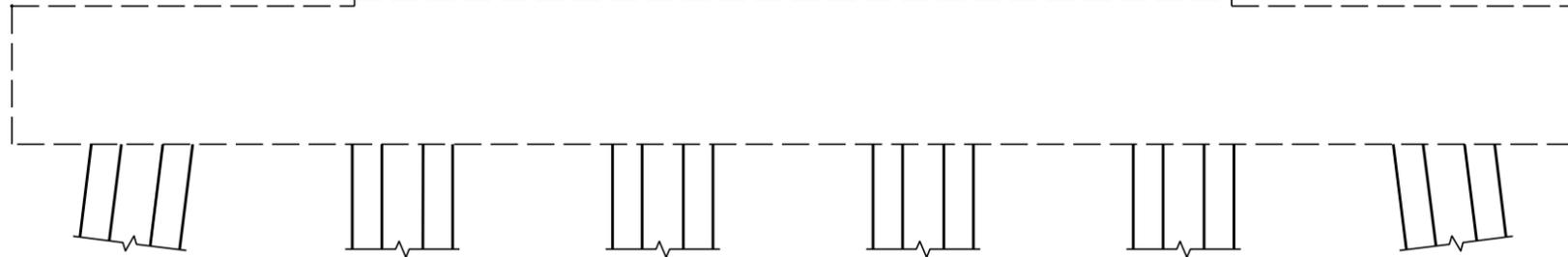
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2			4			

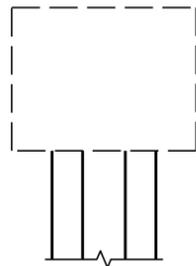
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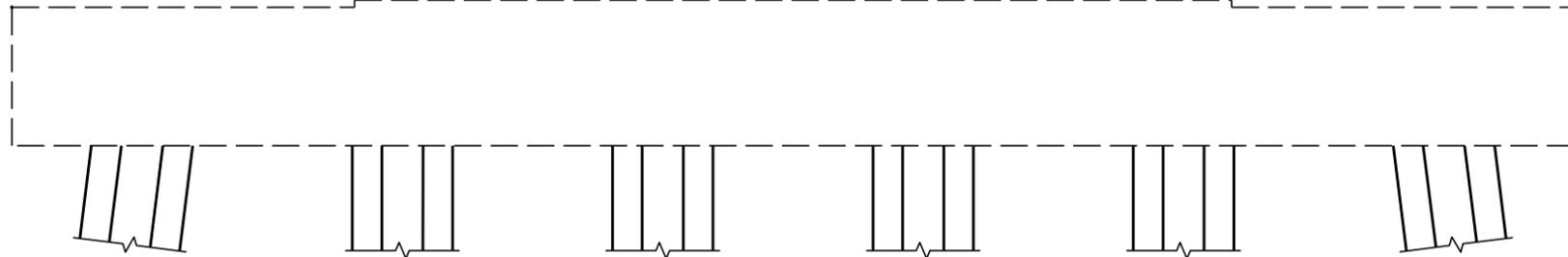
SIDE VIEW
NORTH FACE



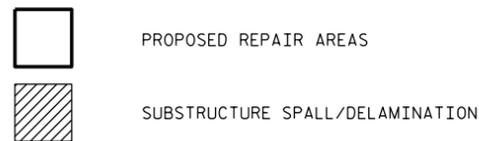
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

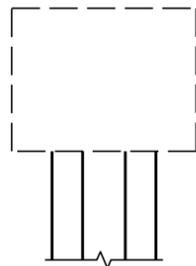
SUBSTRUCTURE CONC.
REPAIR - BENT 142

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

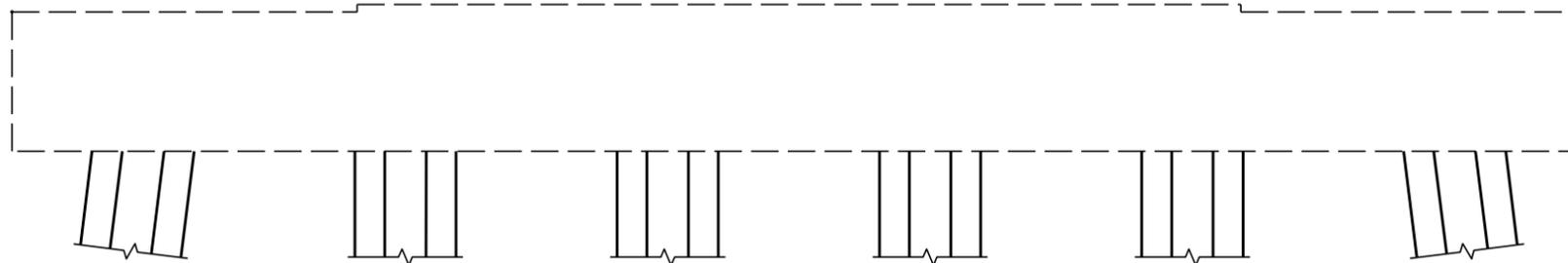
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SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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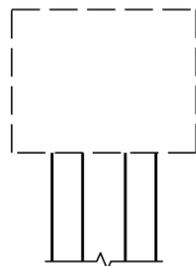
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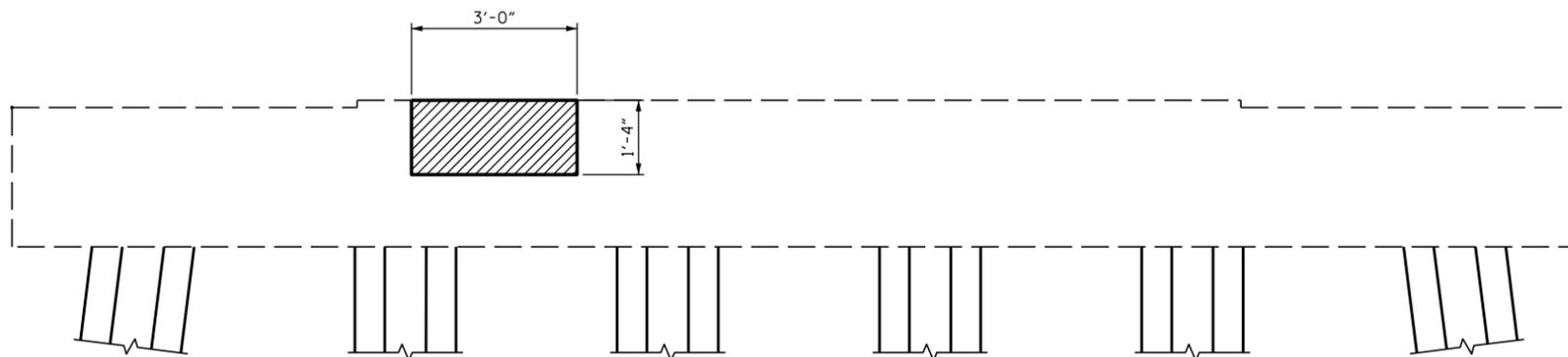
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

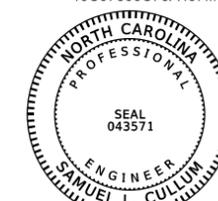


PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

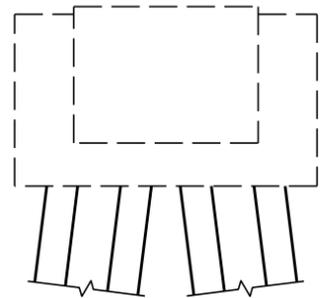
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 143

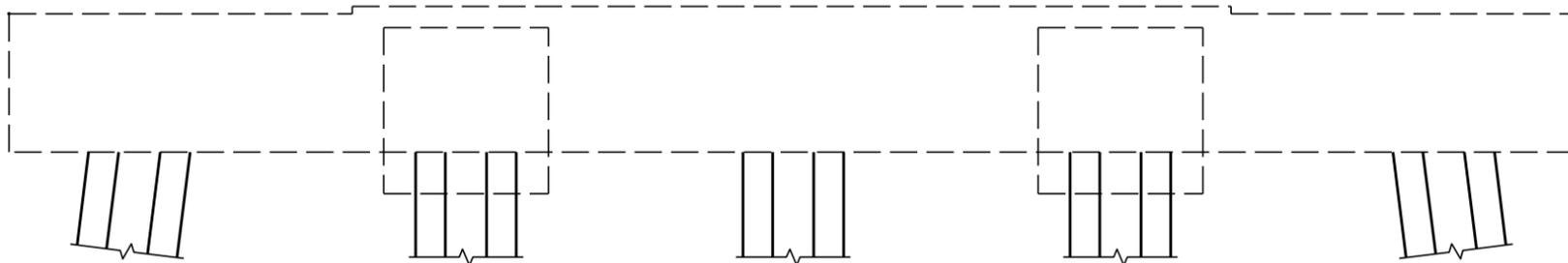
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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FINAL UNLESS ALL
SIGNATURES COMPLETED

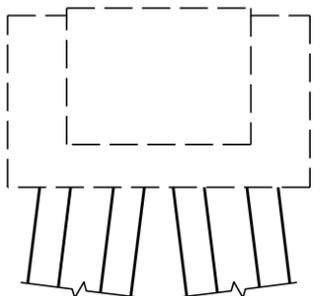
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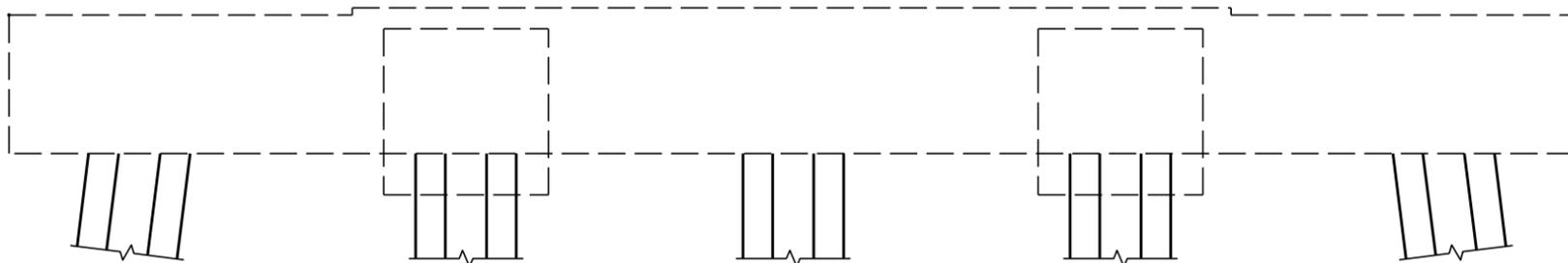
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
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 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

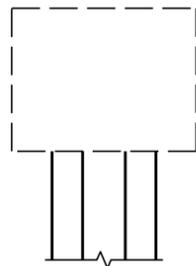


12/13/2016

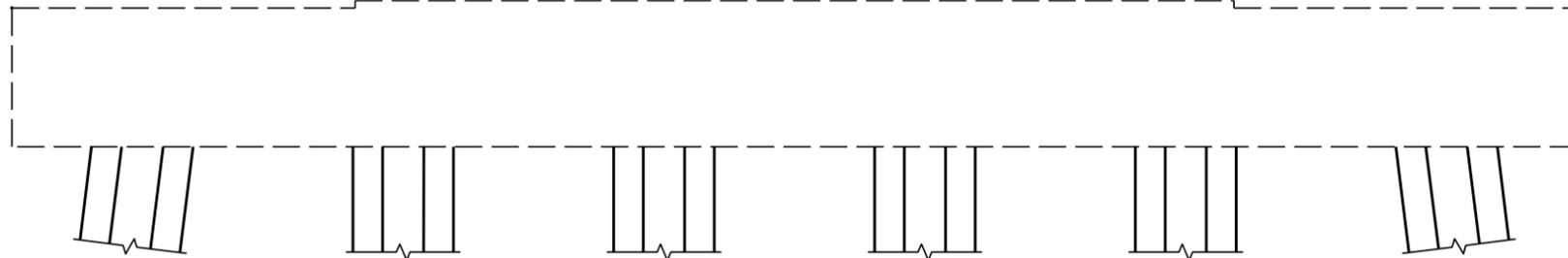
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 144						S-163
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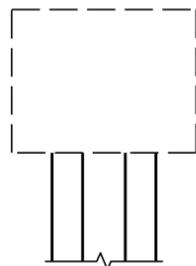
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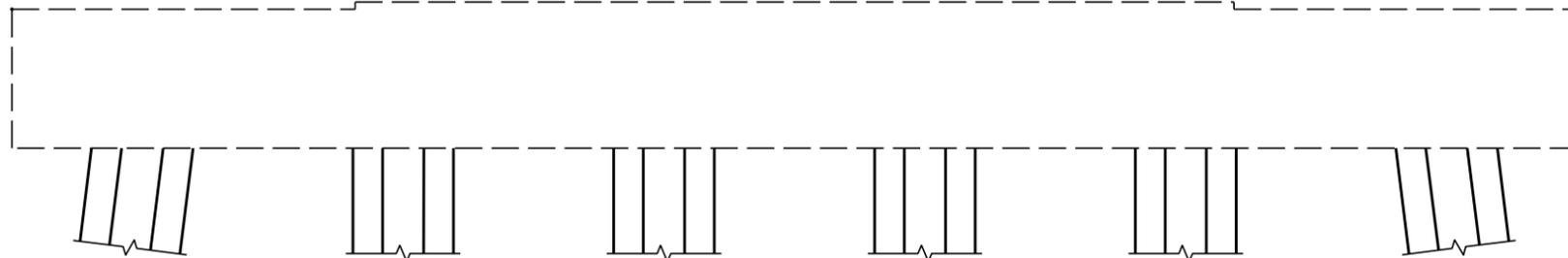
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
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 *****USERNAME*****

DocuSigned by:
 Samuel Cullum
 19C97095C75A467...



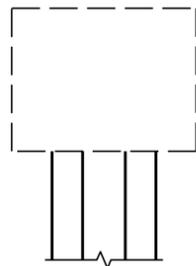
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

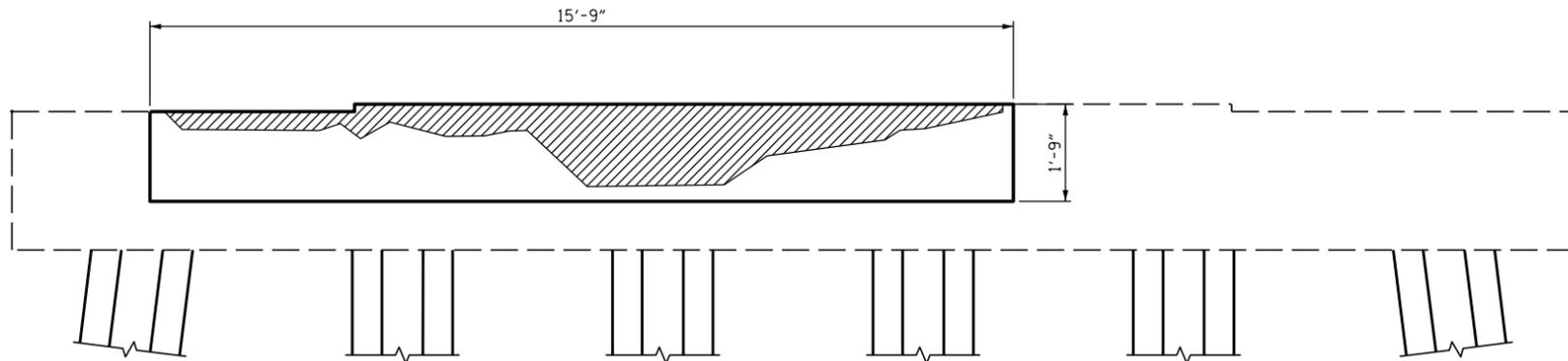
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 145

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

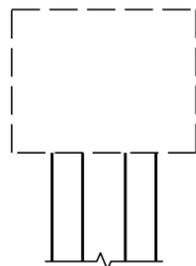
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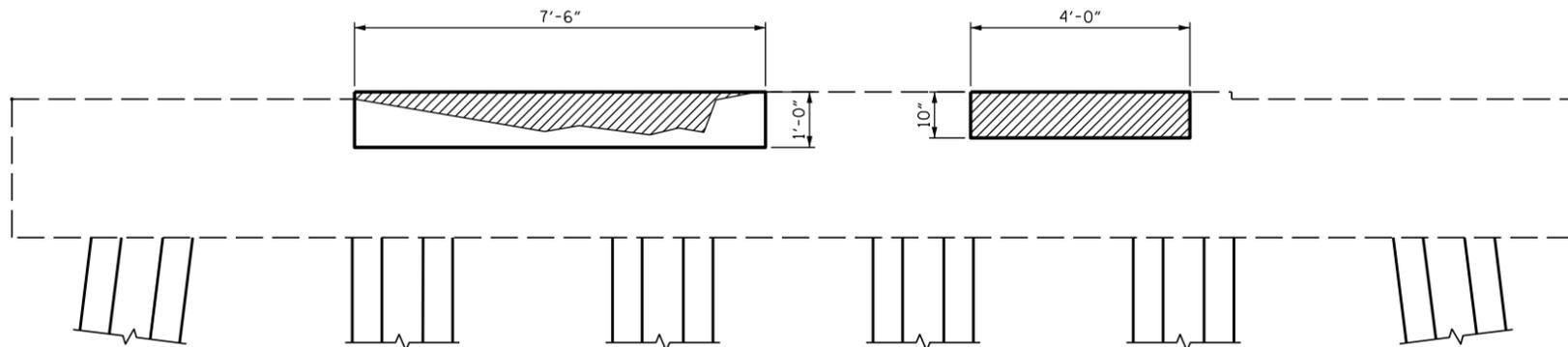
SIDE VIEW
NORTH FACE



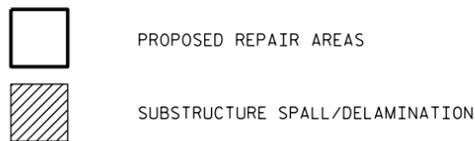
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

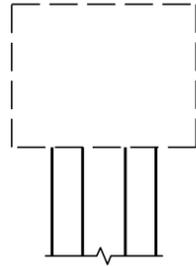
SUBSTRUCTURE CONC.
REPAIR - BENT 146

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

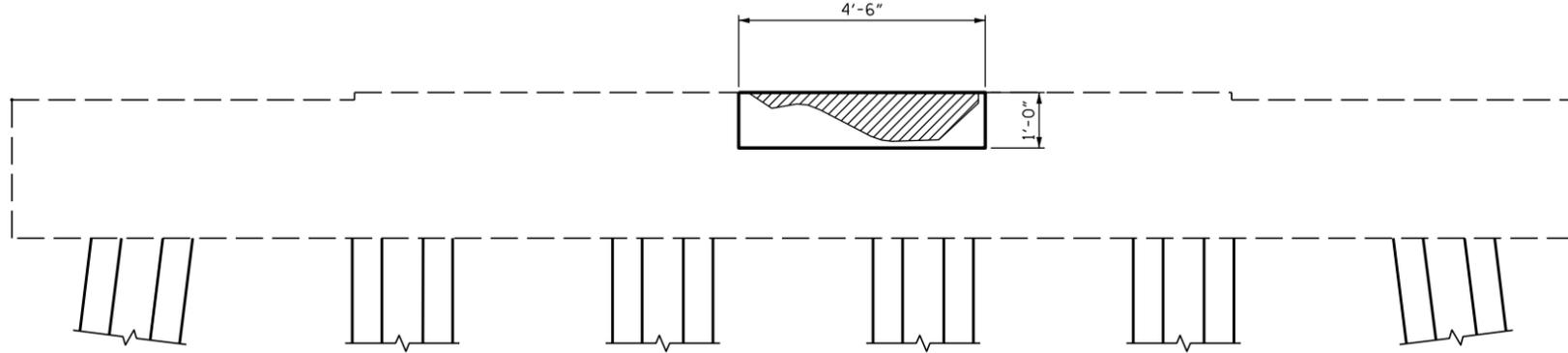
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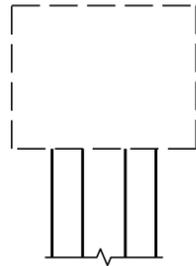
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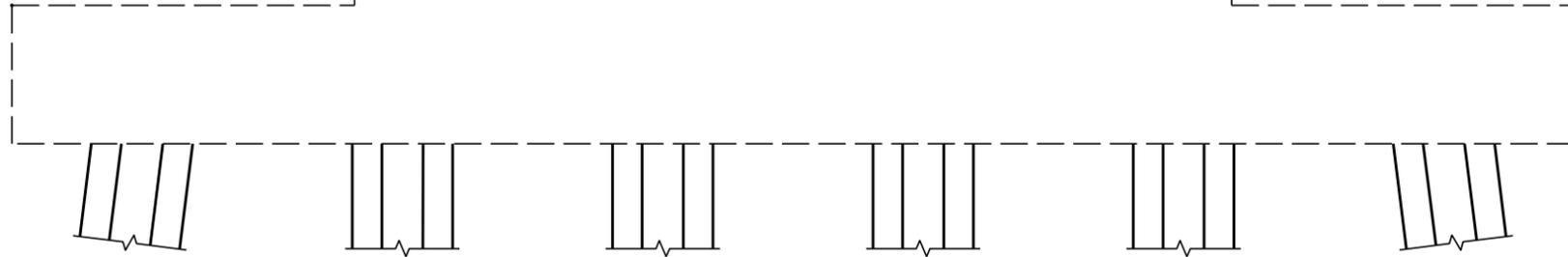
SIDE VIEW
NORTH FACE



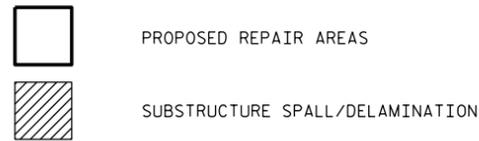
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



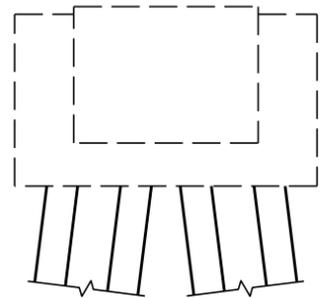
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

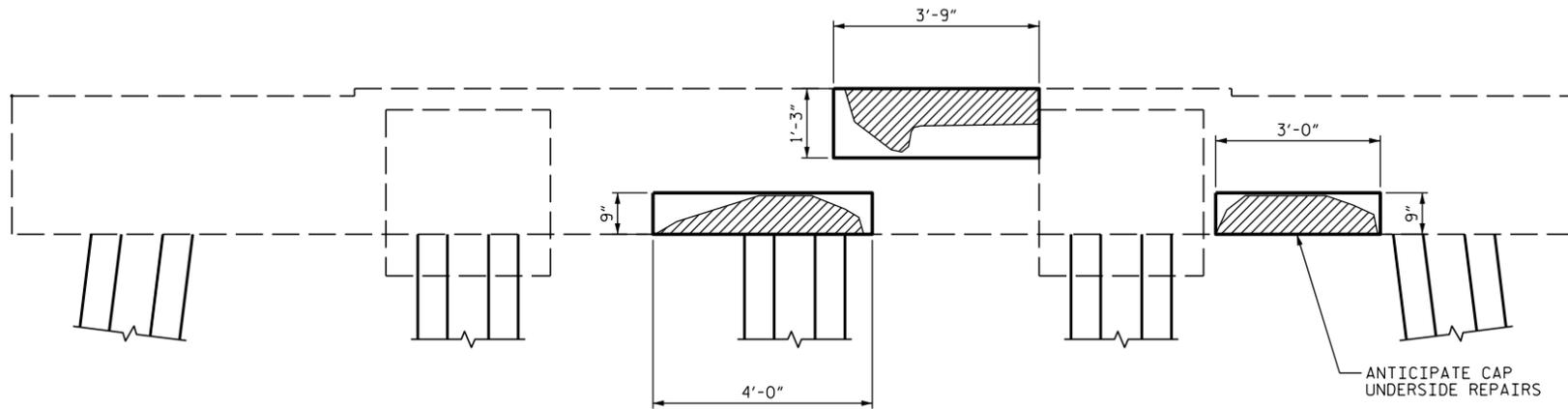
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 147						S-166
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			4

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

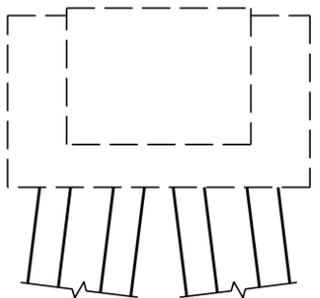
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FINAL UNLESS ALL
SIGNATURES COMPLETED



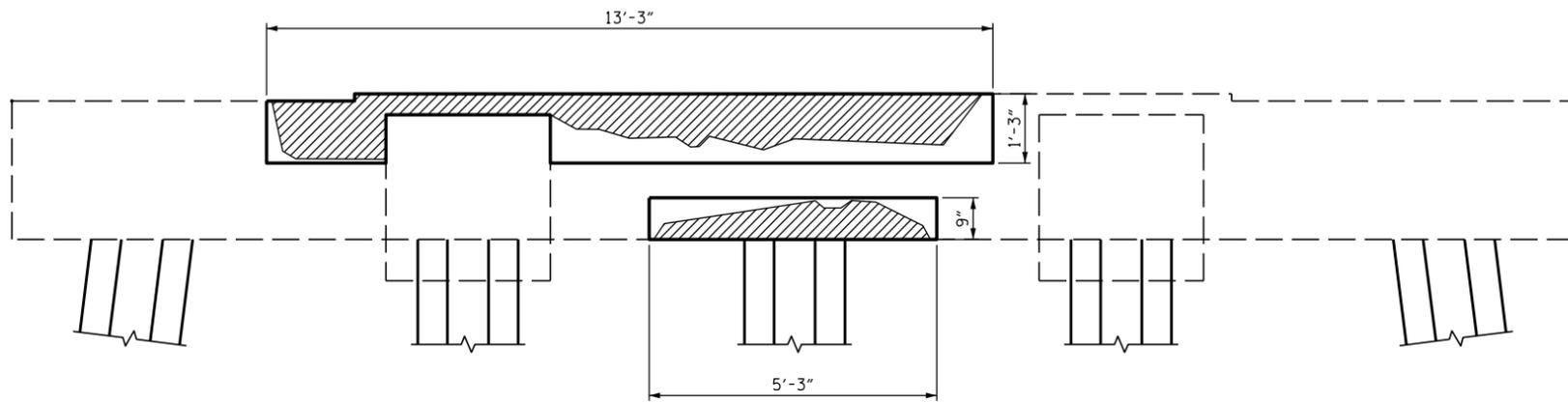
SIDE VIEW
NORTH FACE



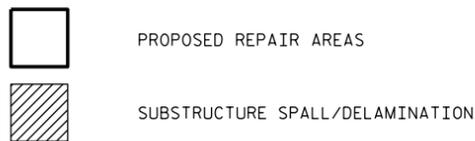
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

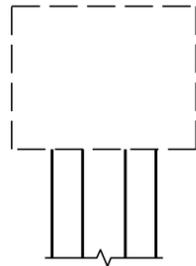
SUBSTRUCTURE CONC.
REPAIR - BENT 148

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

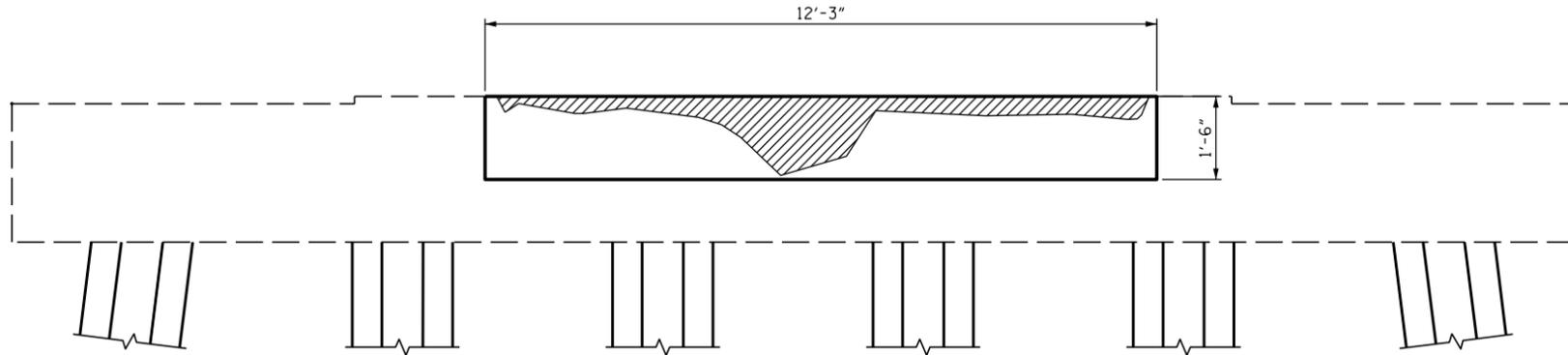
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FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

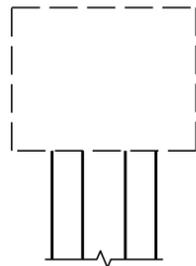
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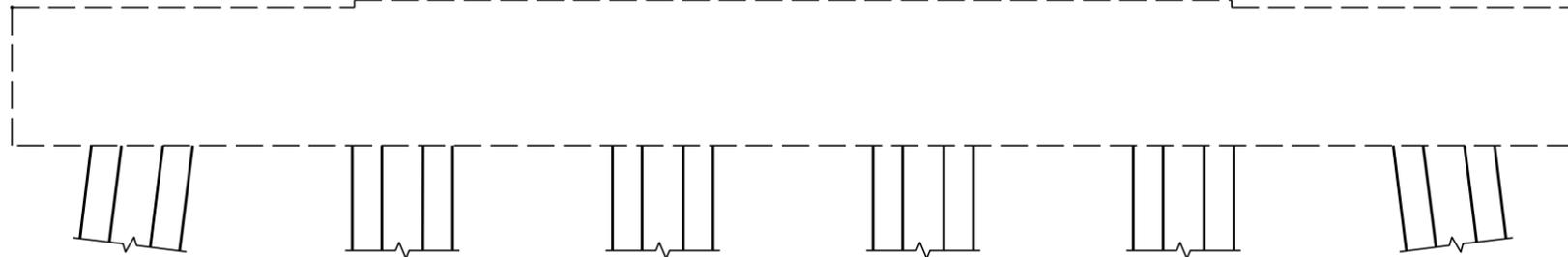
SIDE VIEW
NORTH FACE



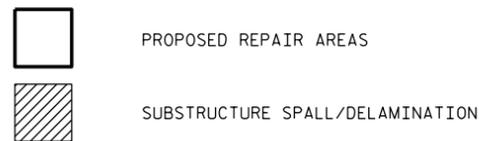
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



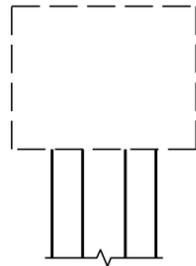
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 149						S-168
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

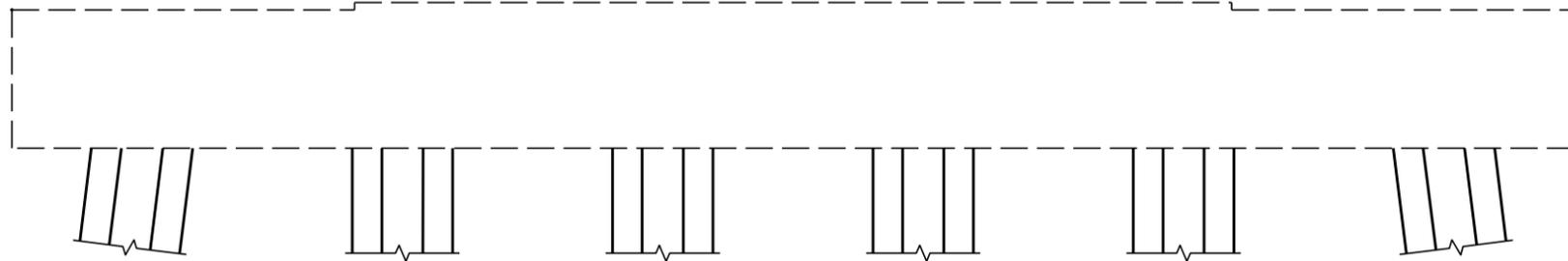
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

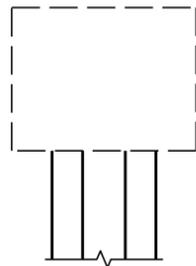
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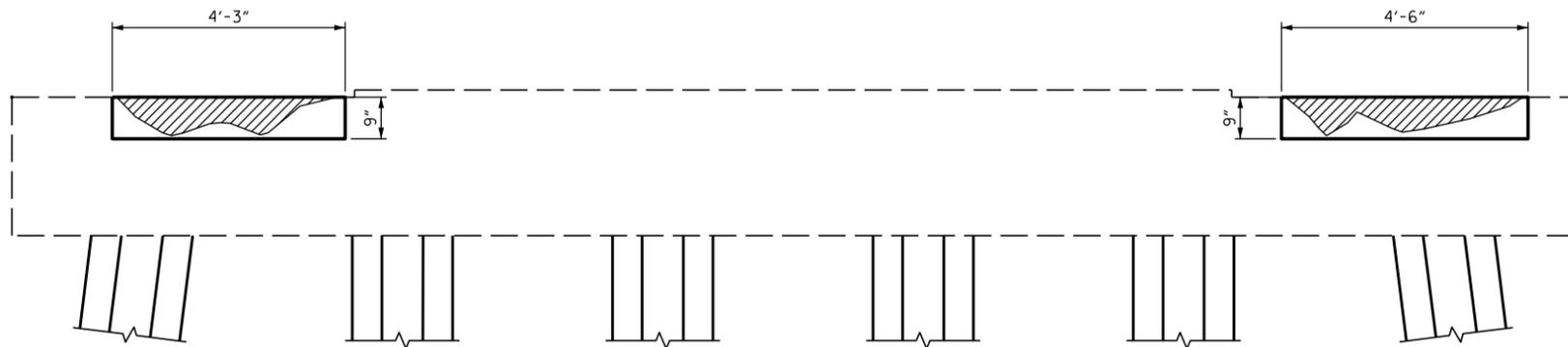
SIDE VIEW
NORTH FACE



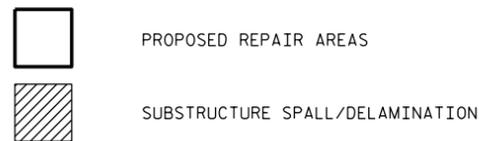
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

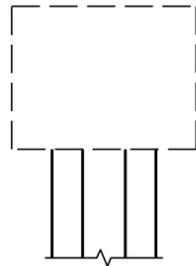
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 150						S-169
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			4

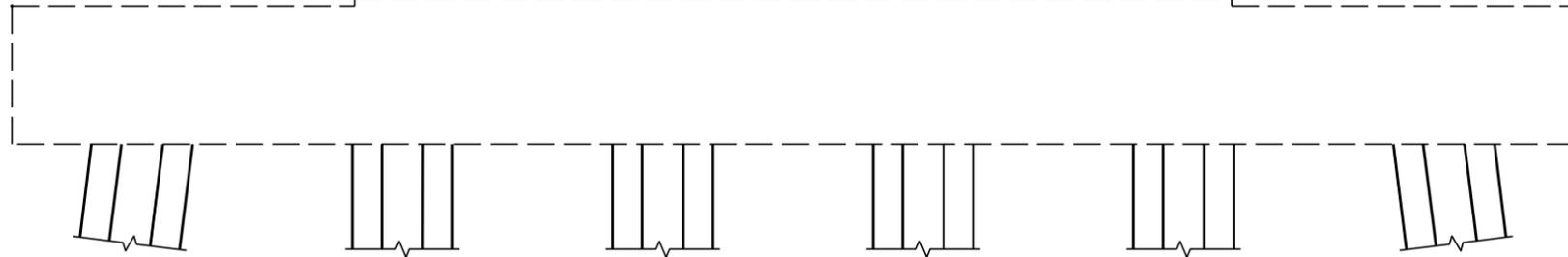
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

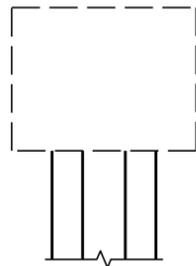
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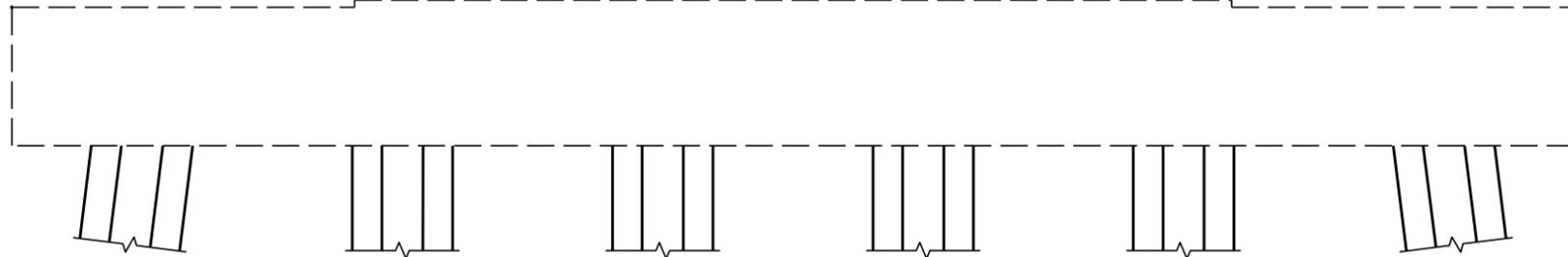
SIDE VIEW
NORTH FACE



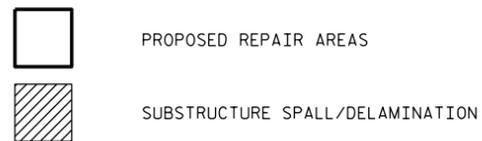
ELEVATION
WEST FACE



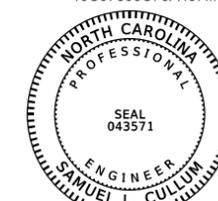
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

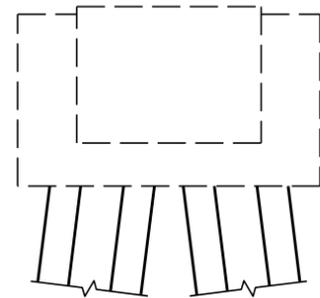
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 151

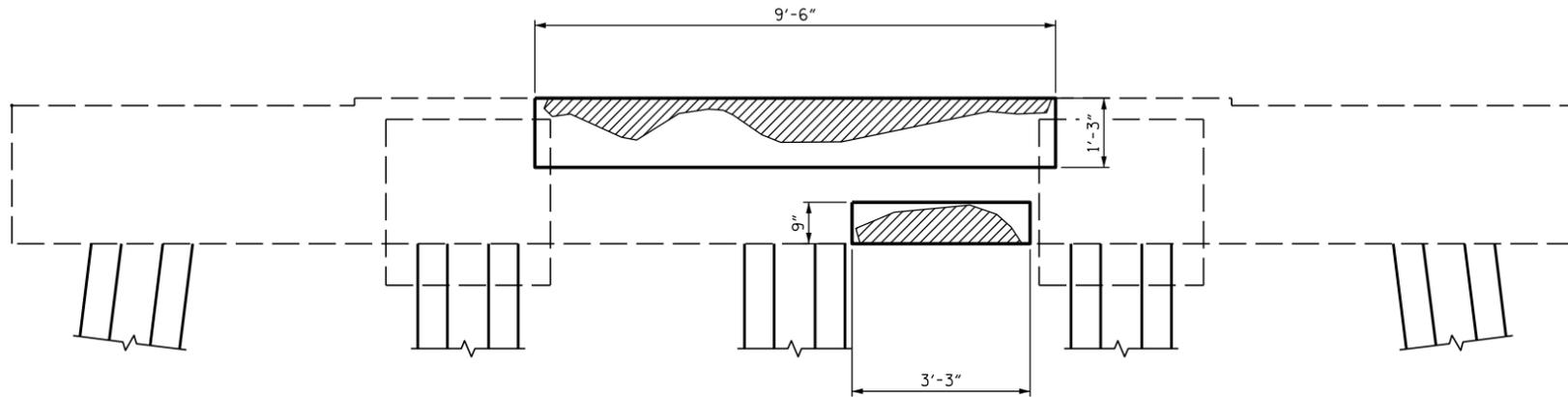
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

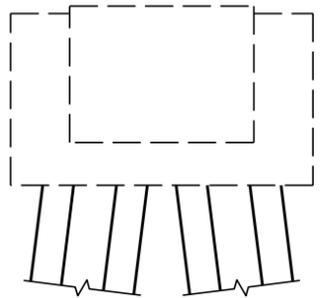
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-170
2			4			



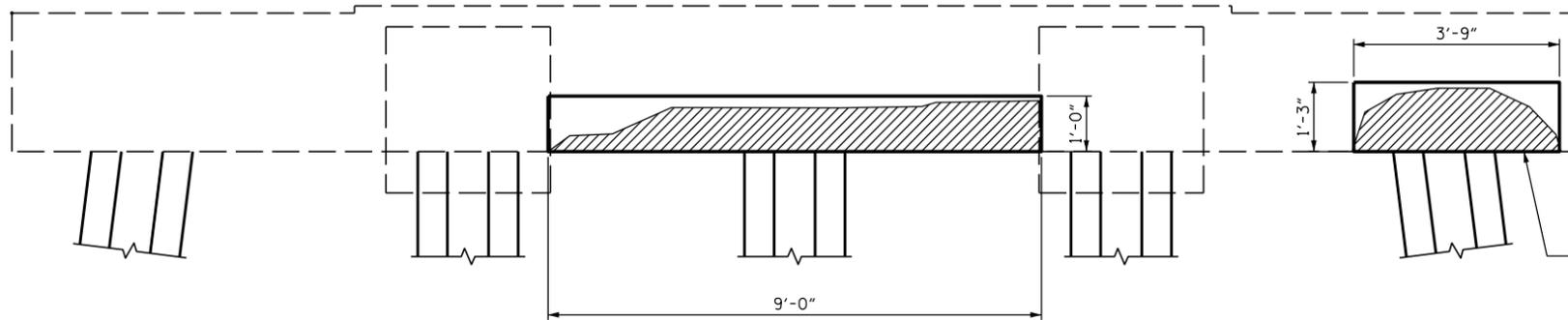
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

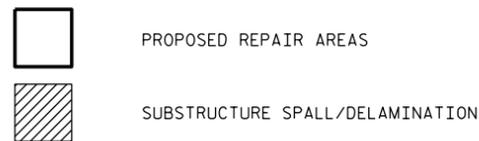


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
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12/13/2016

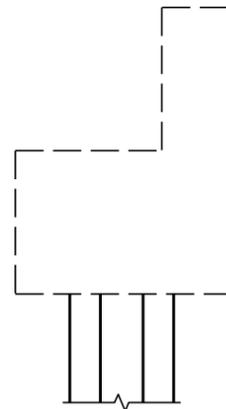
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 152

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

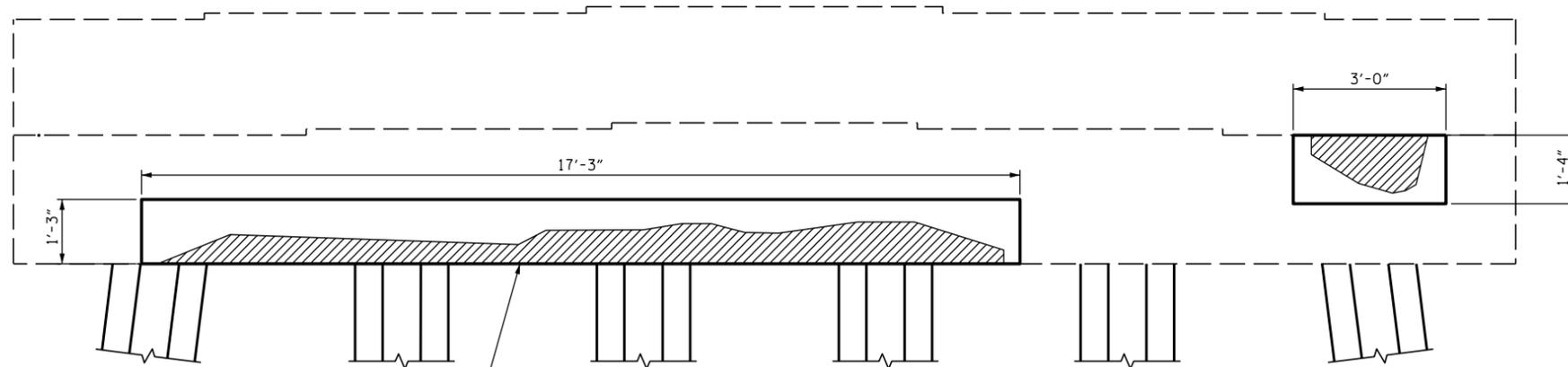
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-171
2			4			TOTAL SHEETS

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

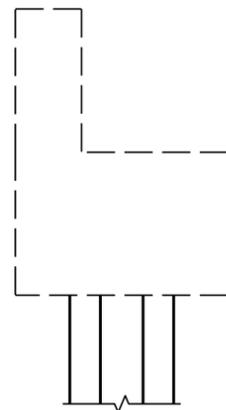


SIDE VIEW
NORTH FACE

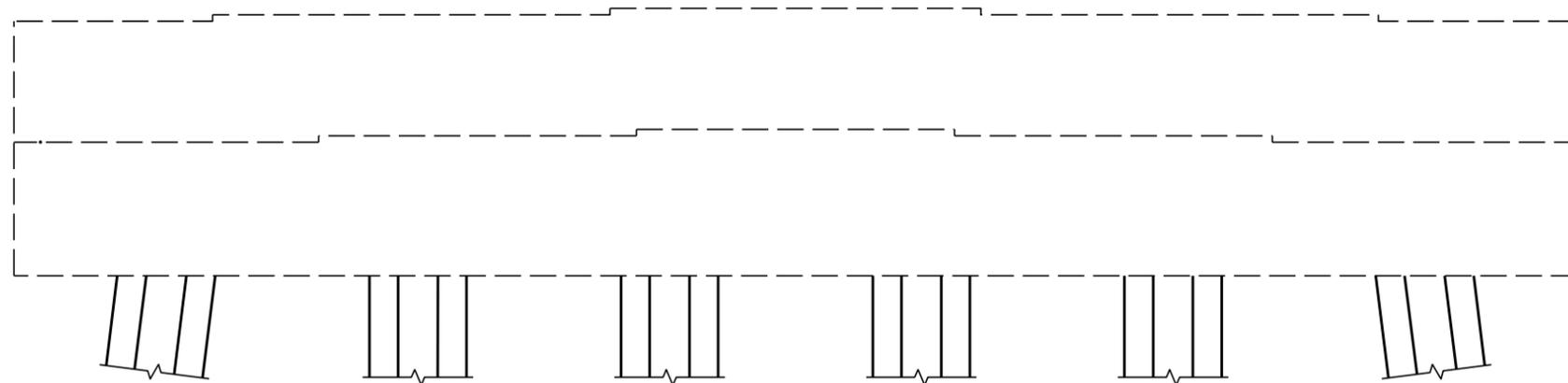


ANTICIPATE CAP
UNDERSIDE REPAIRS

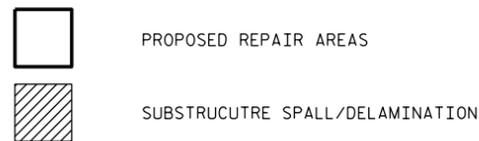
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
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19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

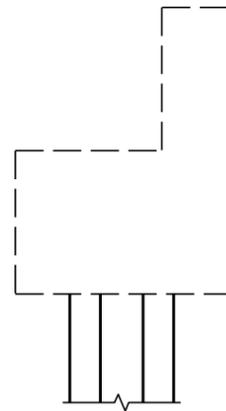
SUBSTRUCTURE CONC.
REPAIR - BENT 153

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

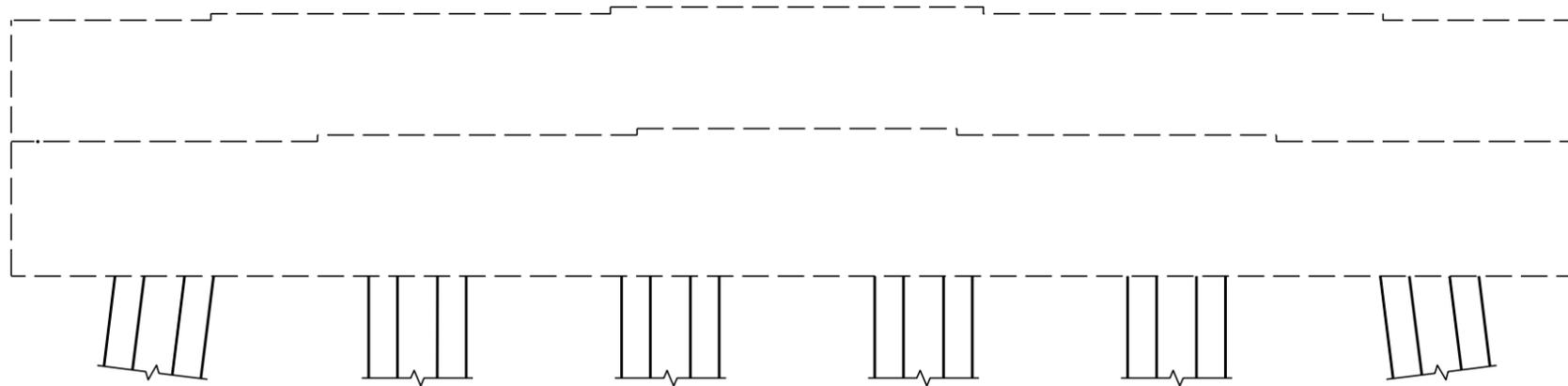
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-172
2			4			

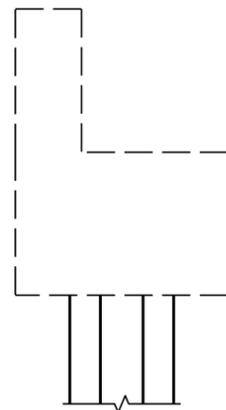
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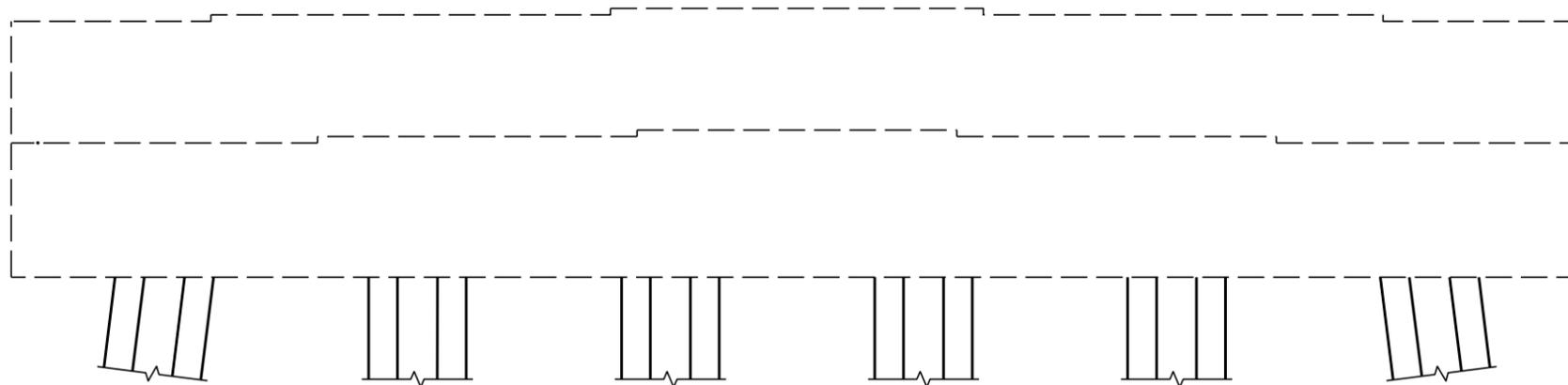
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCUTRE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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 19C97095C75A467...



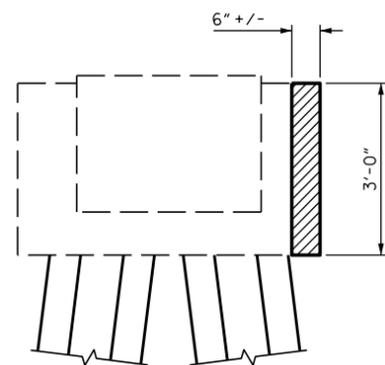
12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 154

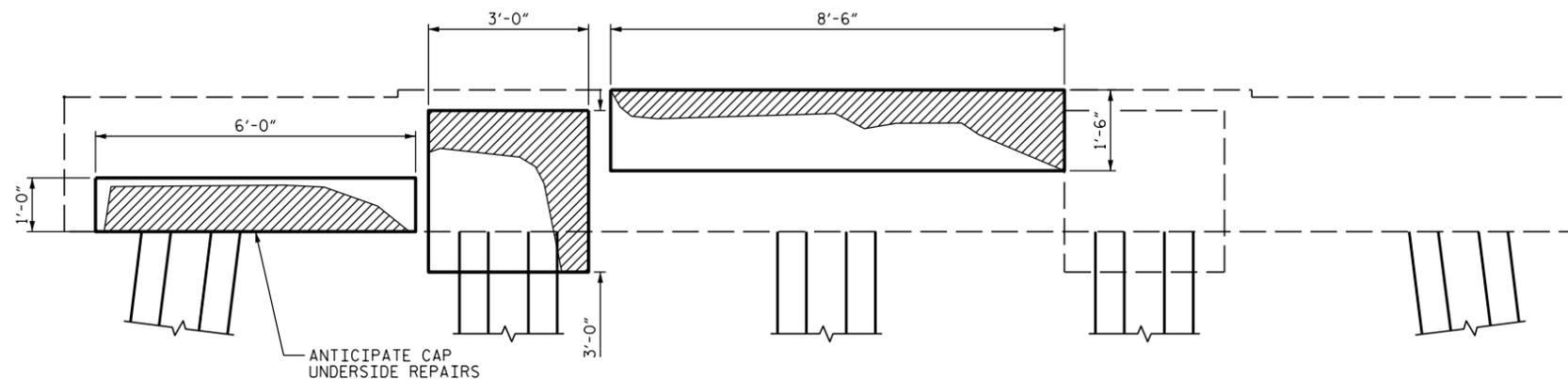
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

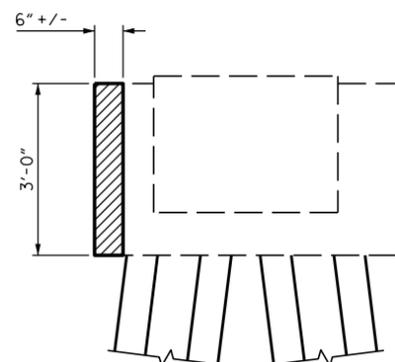
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-173
2			4			



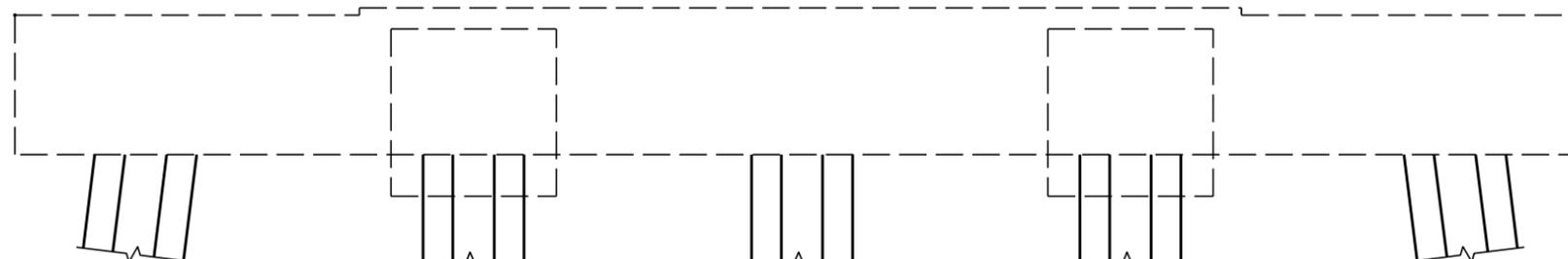
SIDE VIEW
NORTH FACE



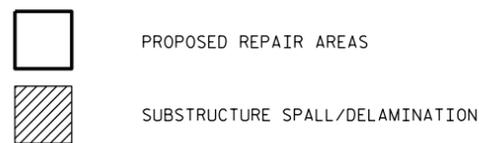
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

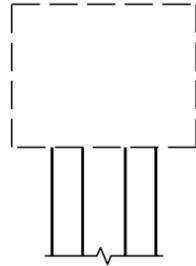
SUBSTRUCTURE CONC.
REPAIR - BENT 155

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

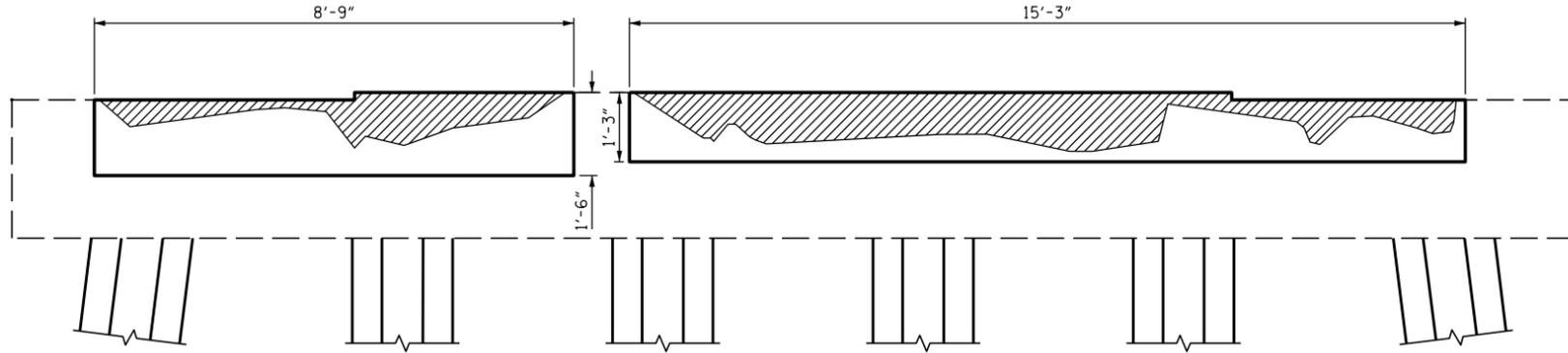
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

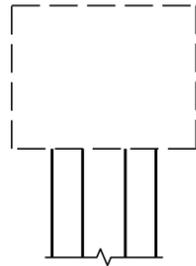
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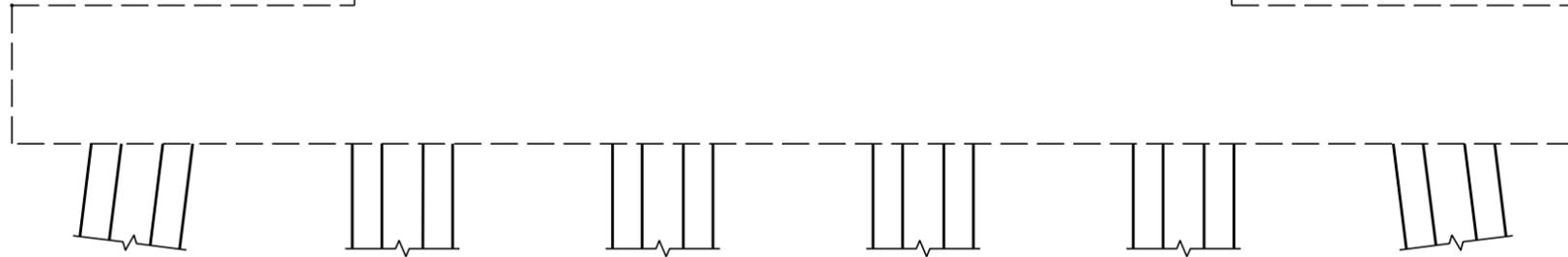
SIDE VIEW
NORTH FACE



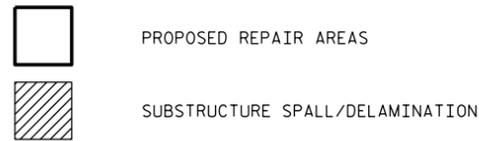
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
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19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

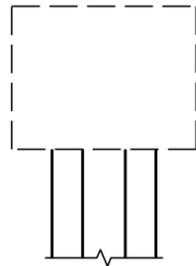
SUBSTRUCTURE CONC.
REPAIR - BENT 156

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

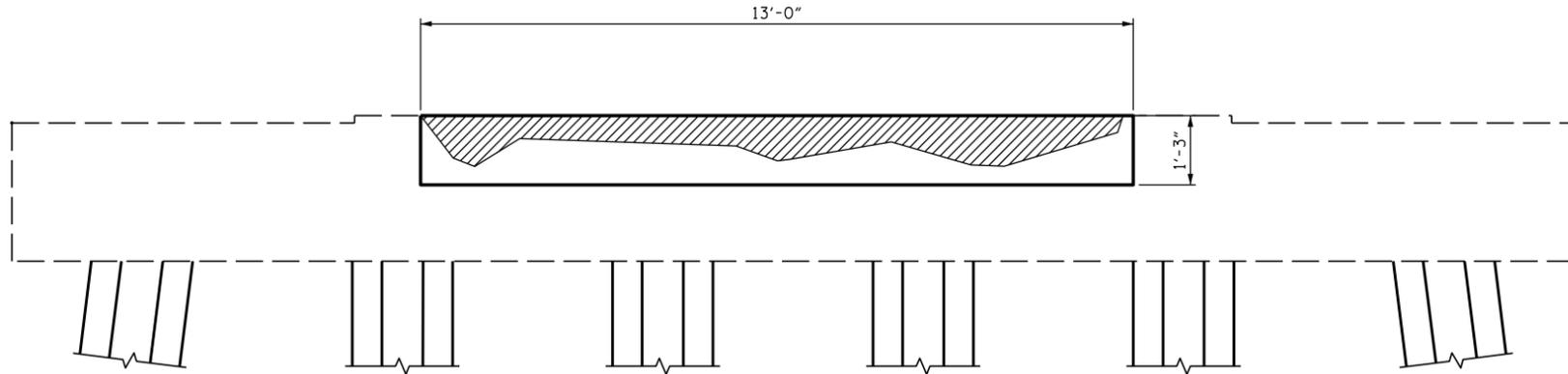
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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

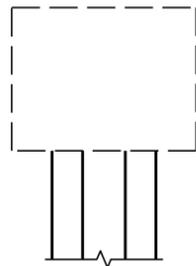
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-175
2			4			



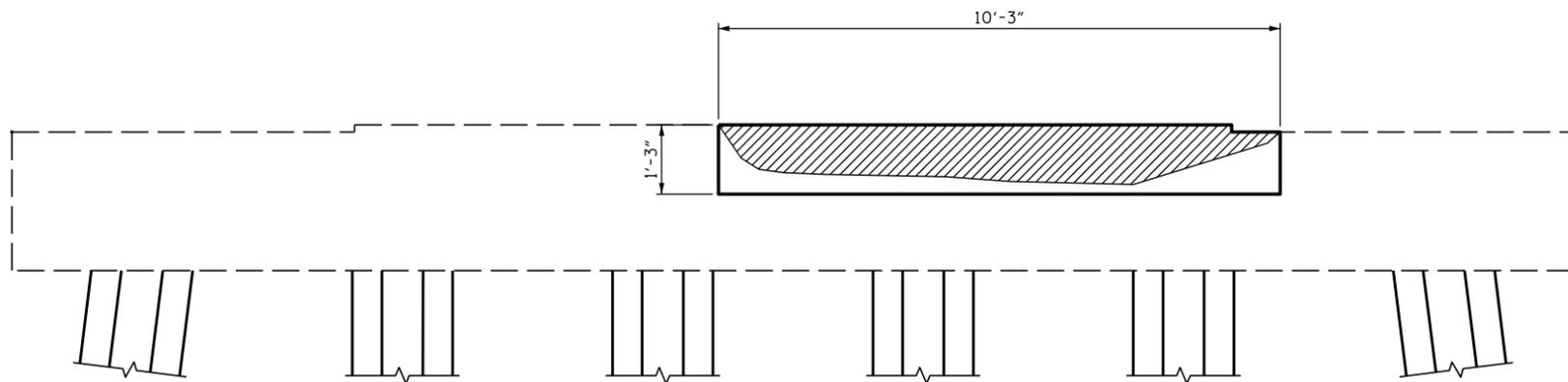
SIDE VIEW
NORTH FACE



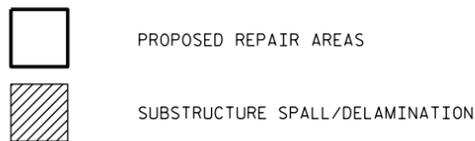
ELEVATION
WEST FACE



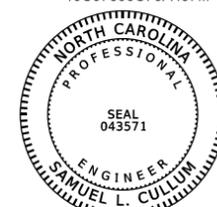
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

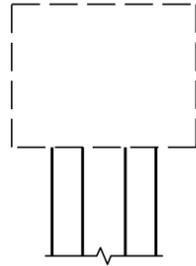
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 157

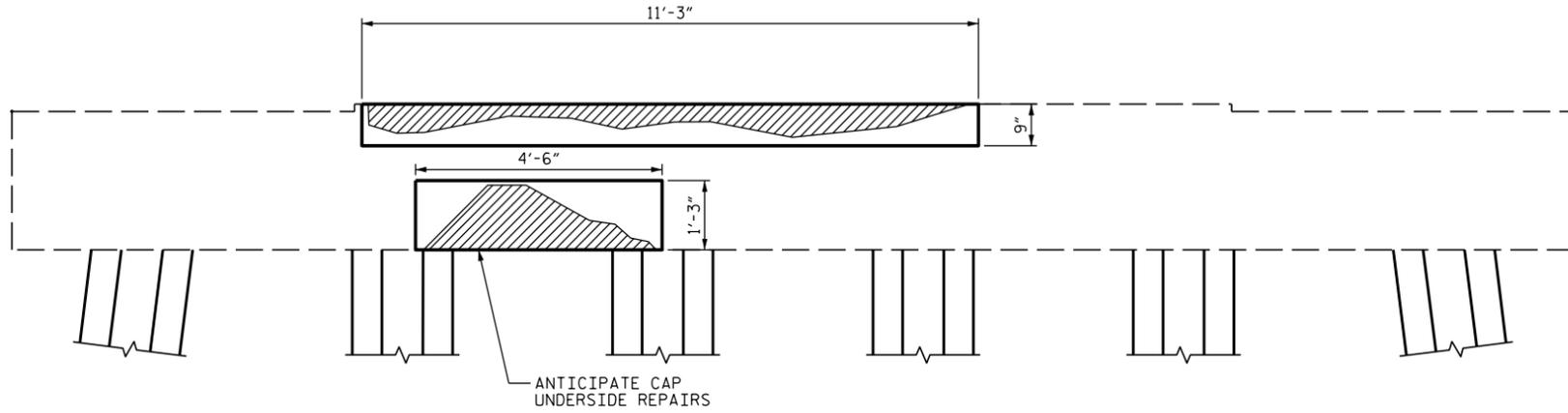
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

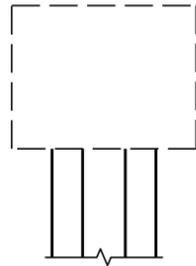
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-176
2			4			



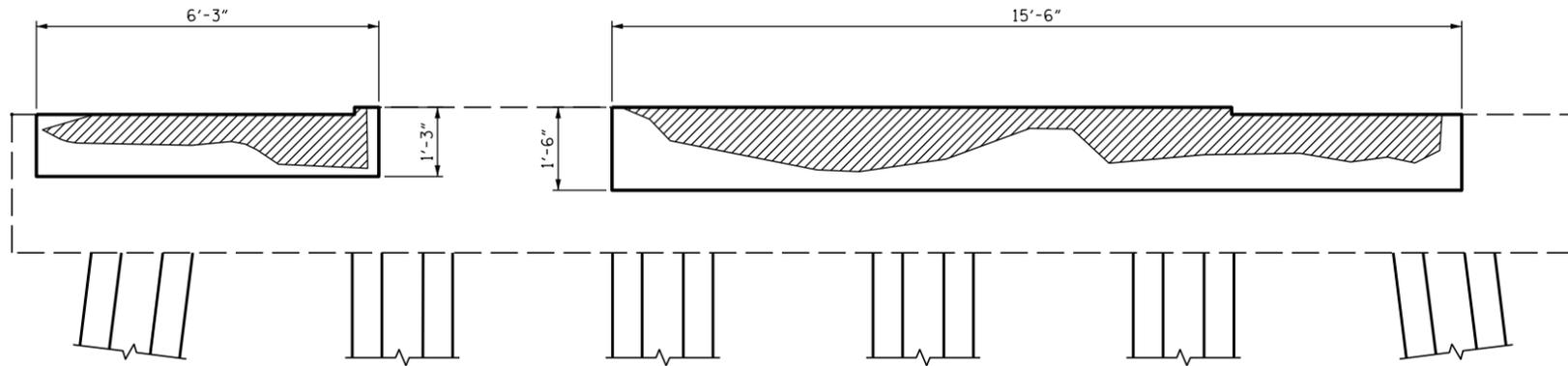
SIDE VIEW
NORTH FACE



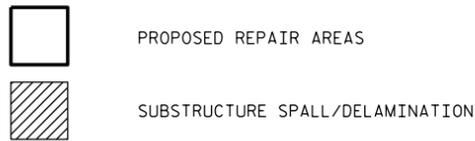
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
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19C97095C75A467...



12/13/2016

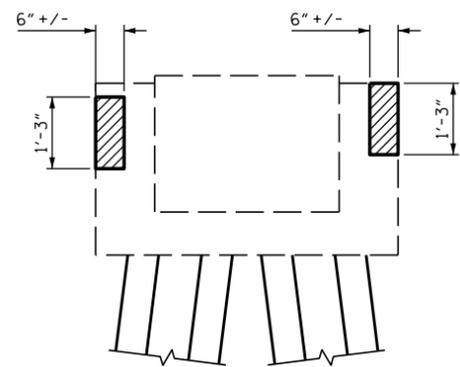
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 158						S-177
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			4
2			4			

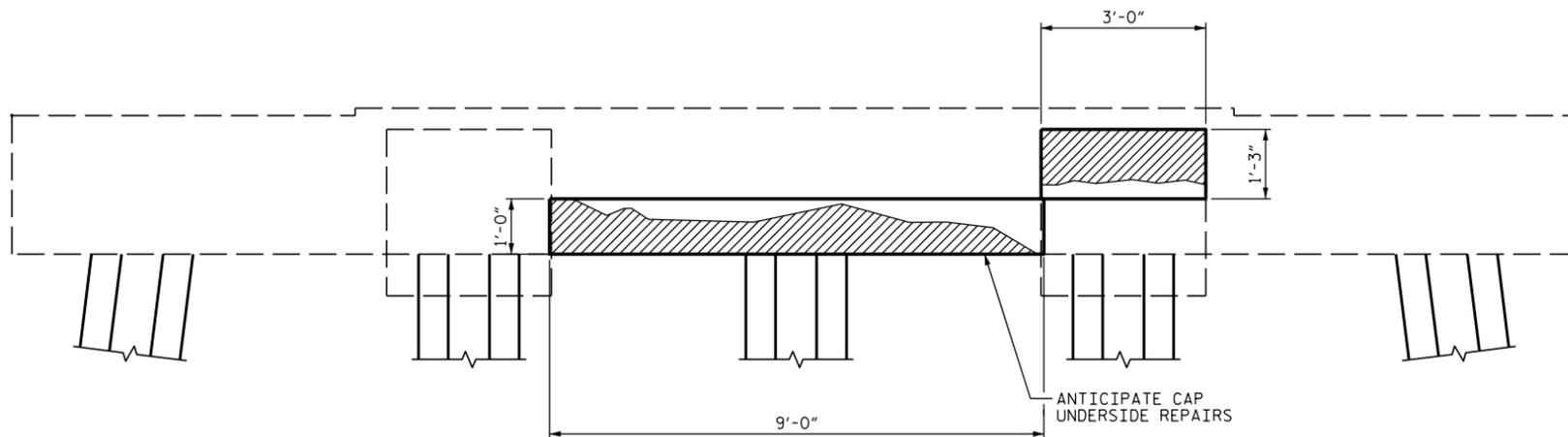
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

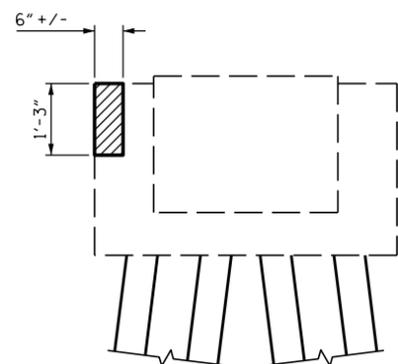
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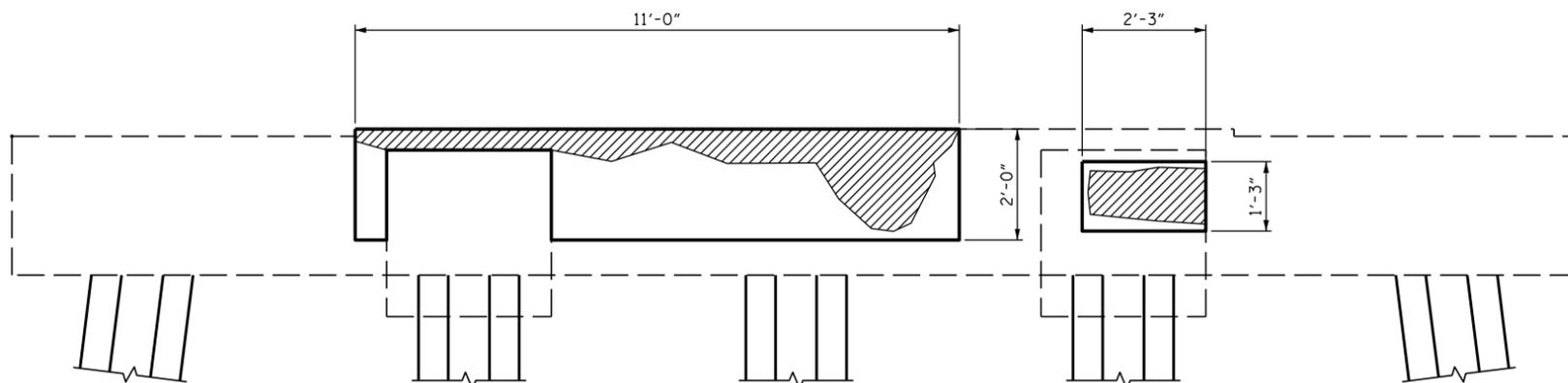
SIDE VIEW
NORTH FACE



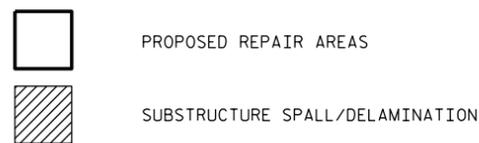
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

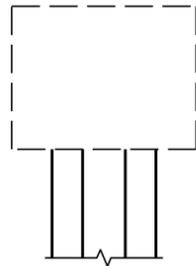
SUBSTRUCTURE CONC.
REPAIR - BENT 159

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

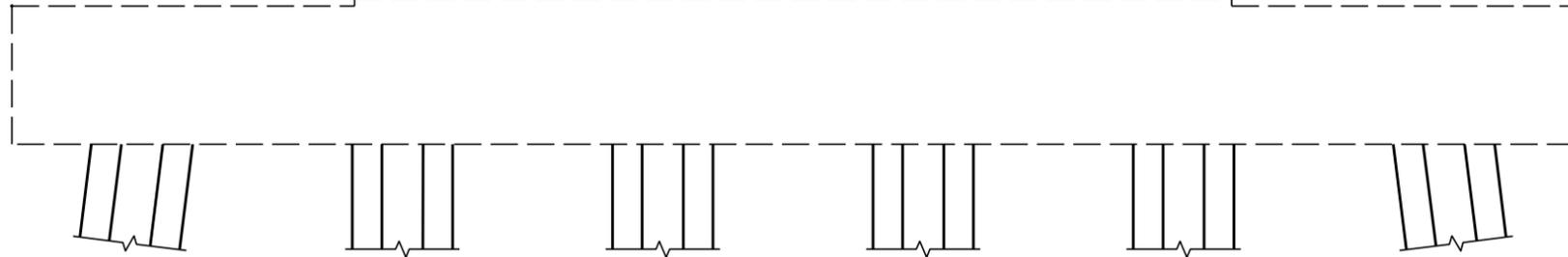
*****SYSTEM*****
*****SDGN*****
*****USERNAME*****

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

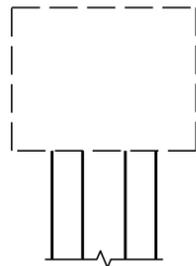
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



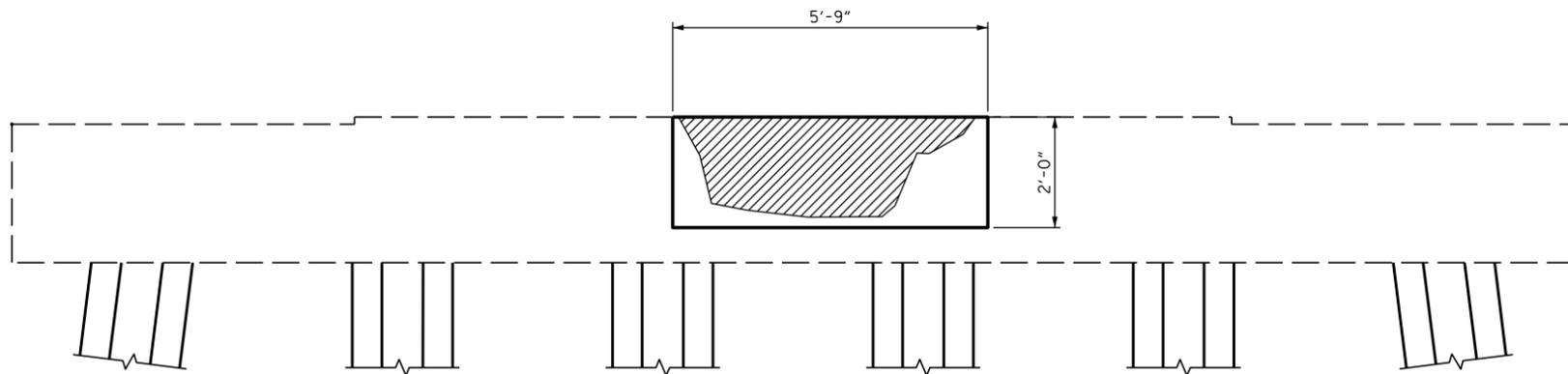
SIDE VIEW
NORTH FACE



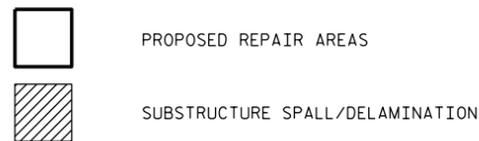
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

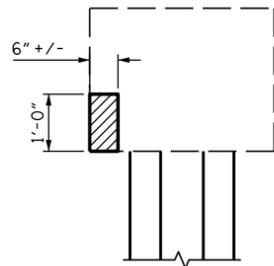
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 160

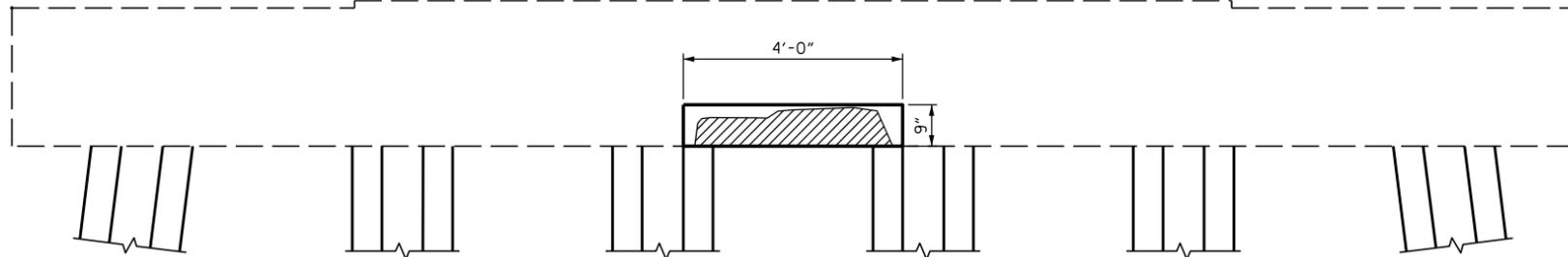
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

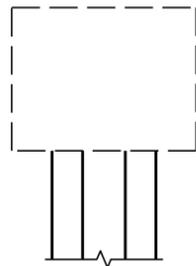
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-179
2			4			



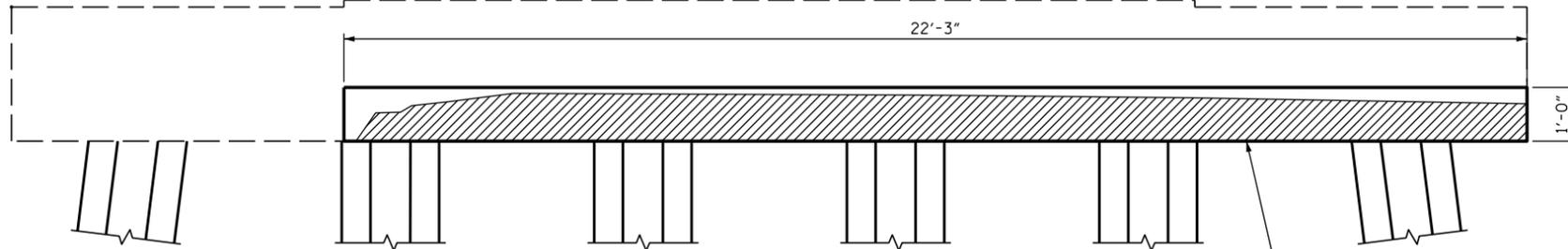
SIDE VIEW
NORTH FACE



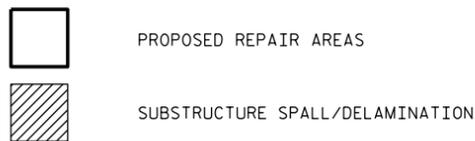
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

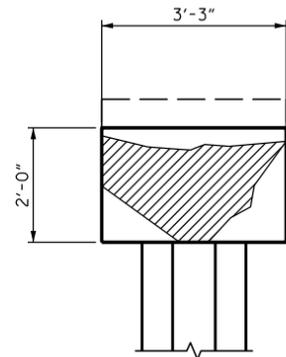
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 161

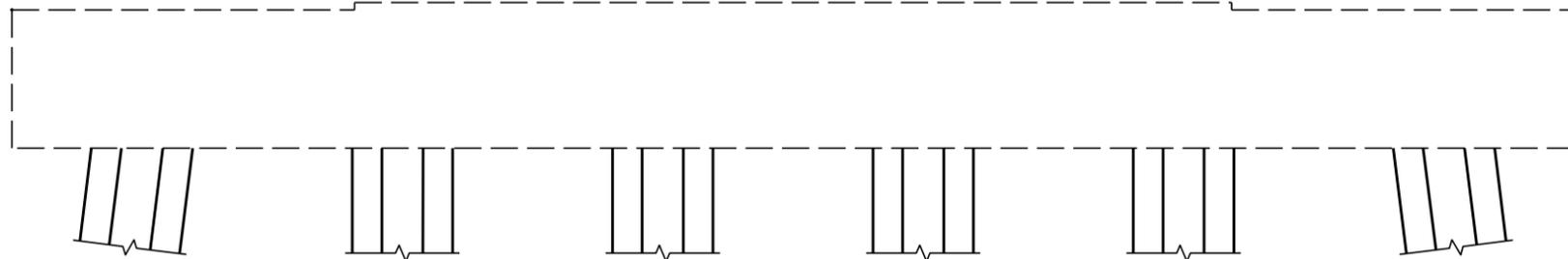
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-180
2			4			TOTAL SHEETS

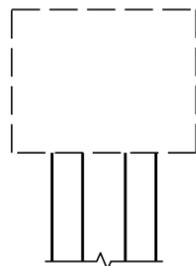
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



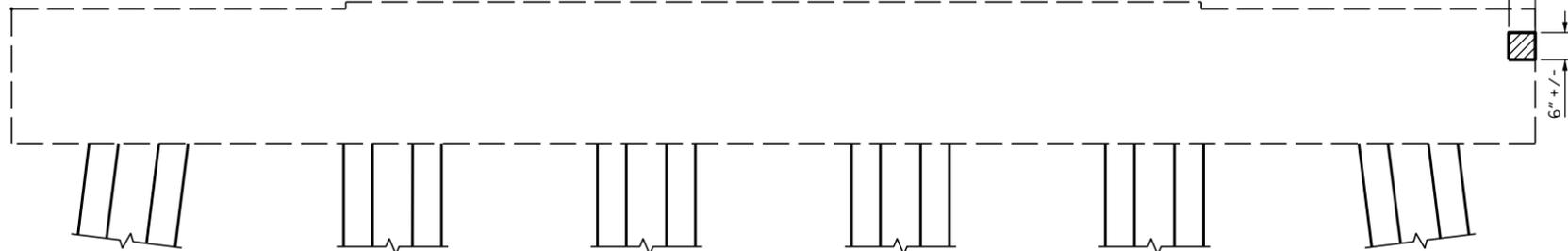
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



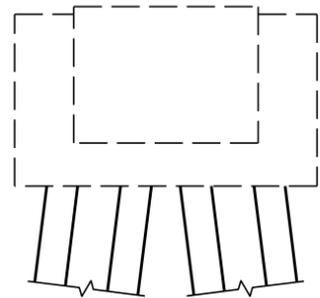
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

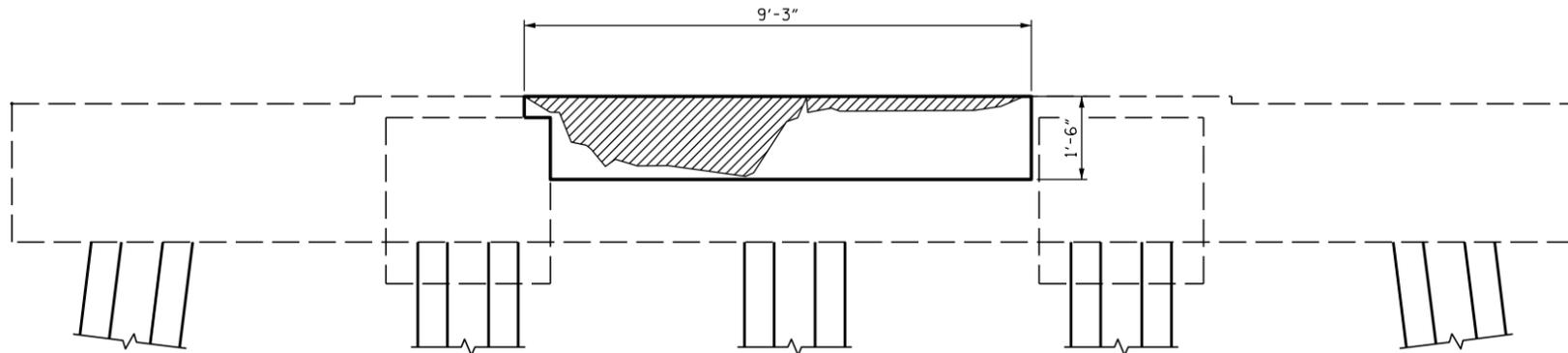
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 162					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-181 TOTAL SHEETS

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

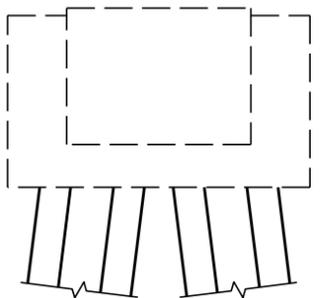
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FINAL UNLESS ALL
SIGNATURES COMPLETED



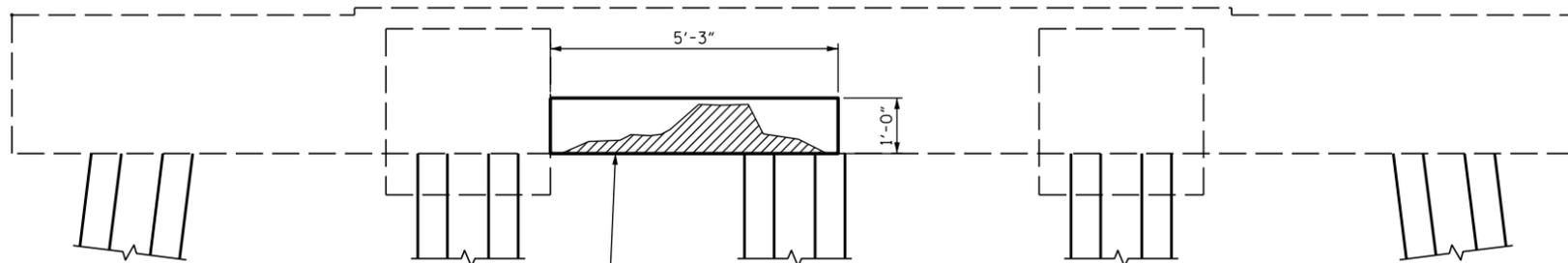
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



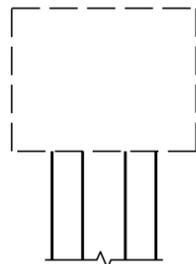
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

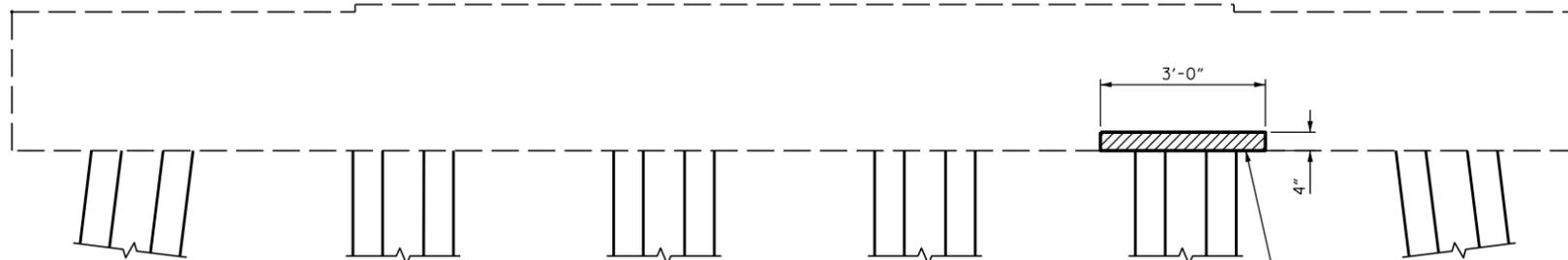
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 163					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-182 TOTAL SHEETS

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

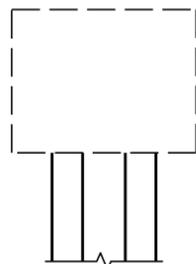


SIDE VIEW
NORTH FACE

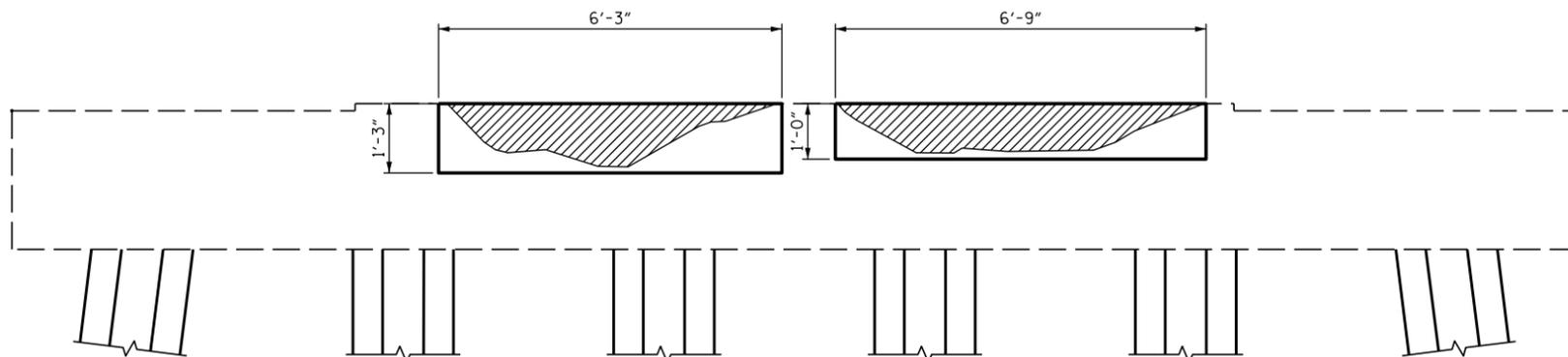


ELEVATION
WEST FACE

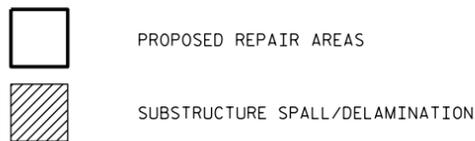
ANTICIPATE CAP
UNDERSIDE REPAIRS



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C97095C75A467...



12/13/2016

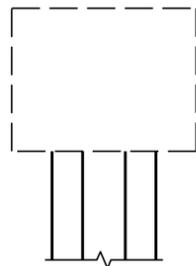
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 164						S-183
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

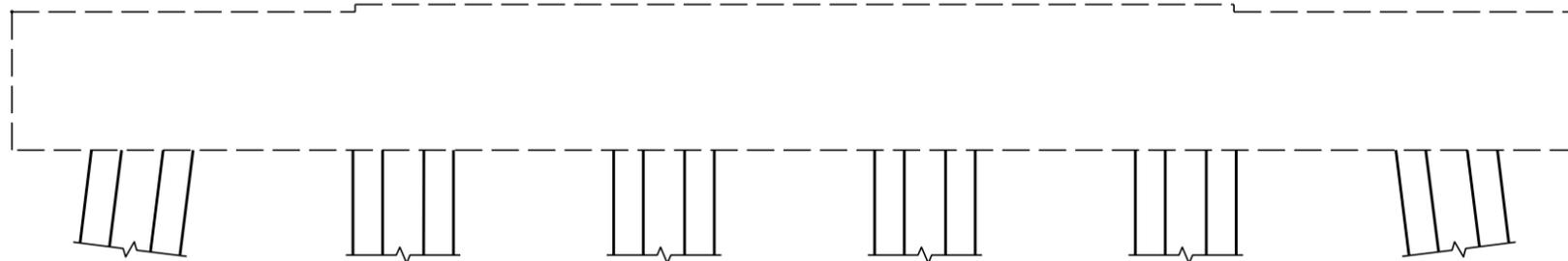
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

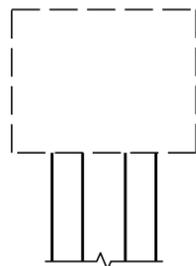
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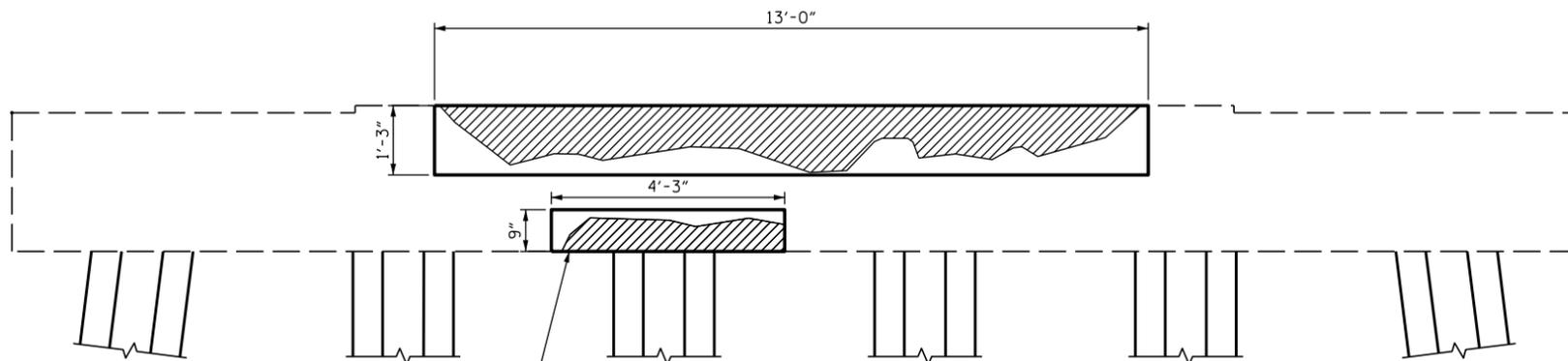
SIDE VIEW
NORTH FACE



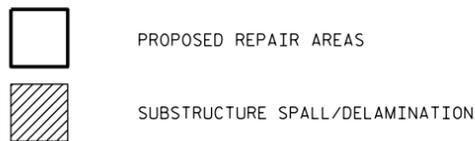
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



ANTICIPATE CAP
UNDERSIDE REPAIRS

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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

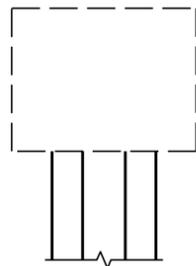
SUBSTRUCTURE CONC.
REPAIR - BENT 165

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

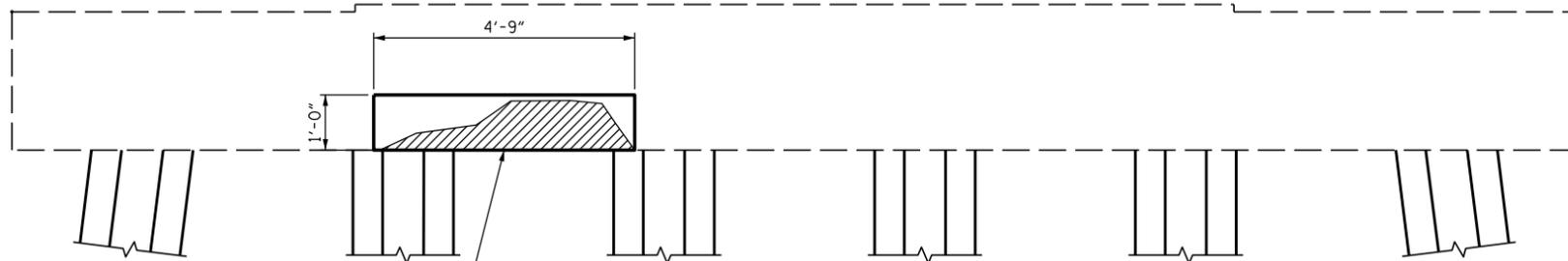
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FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

*****SYSTEM*****
*****SDGN*****
*****USERNAME*****

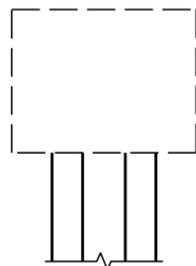


SIDE VIEW
NORTH FACE

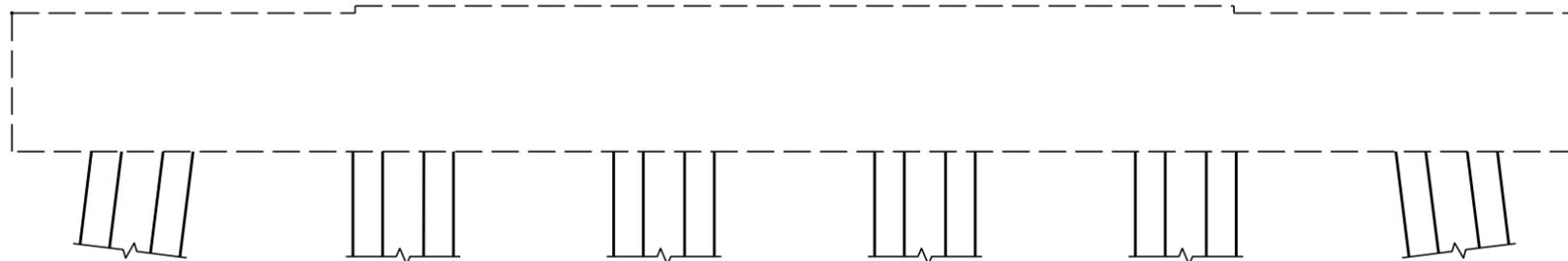


ANTICIPATE CAP
UNDERSIDE REPAIRS

ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
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12/13/2016

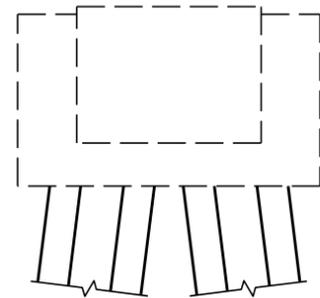
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 166						S-185
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

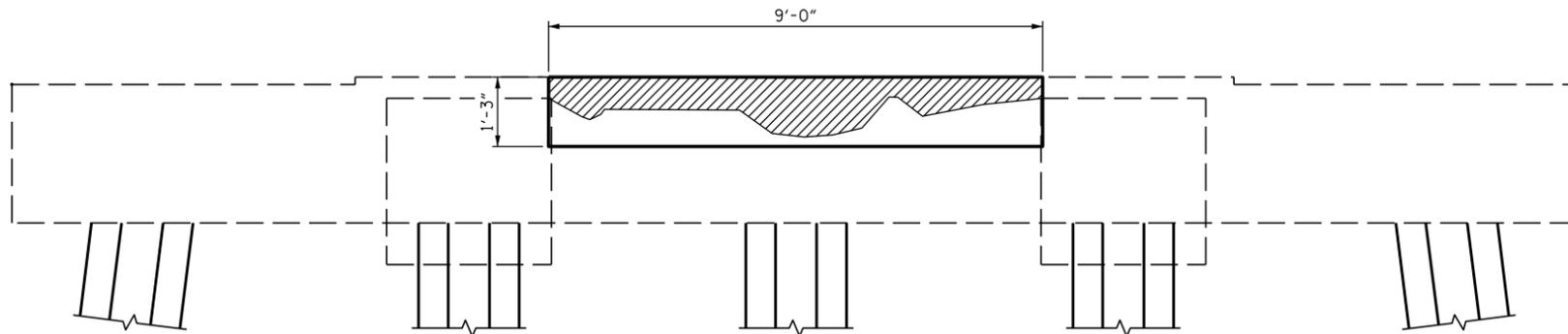
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

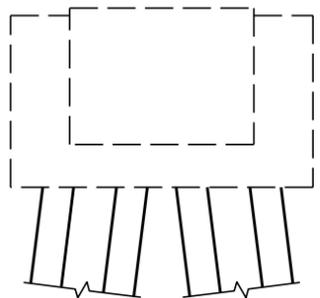
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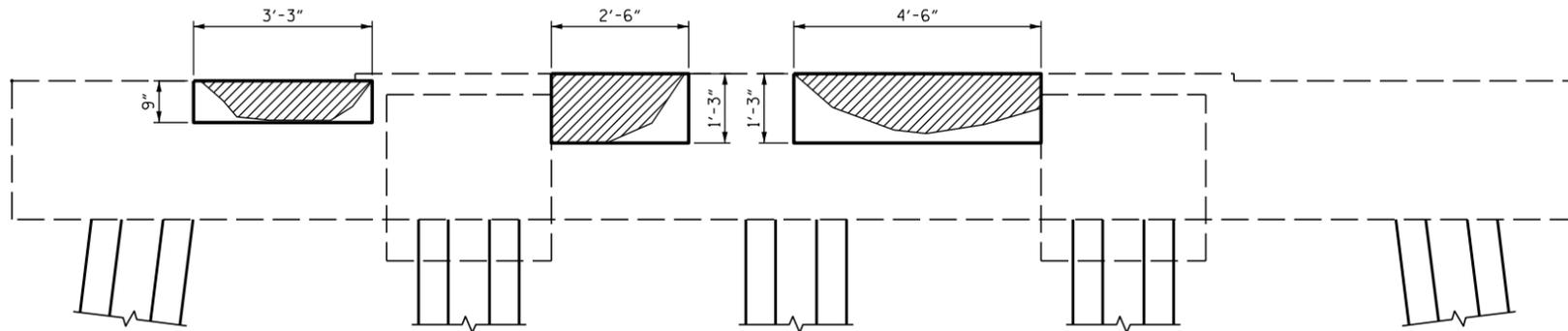
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



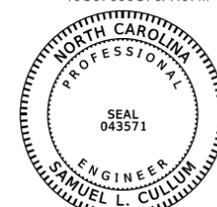
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

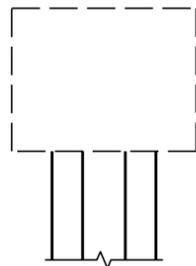
SUBSTRUCTURE CONC.
REPAIR - BENT 167

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

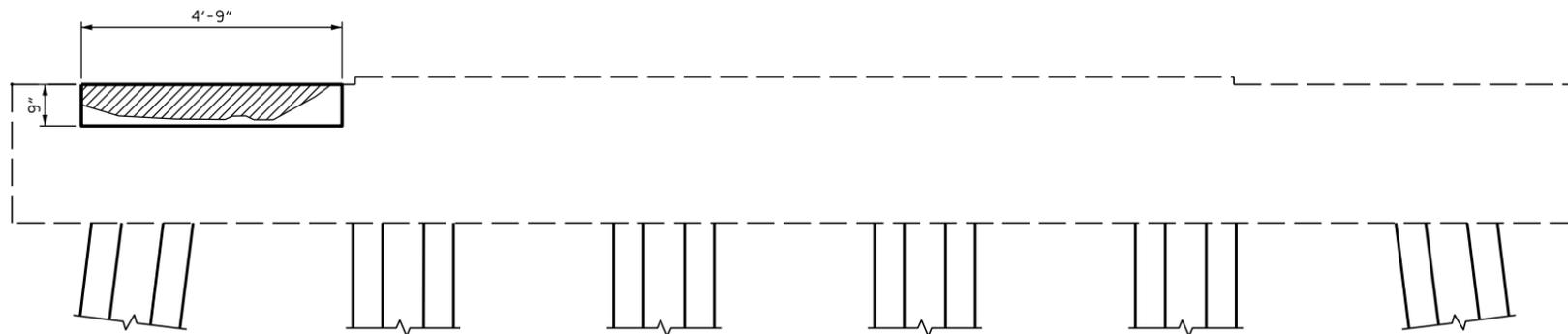
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*****USERNAME*****

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

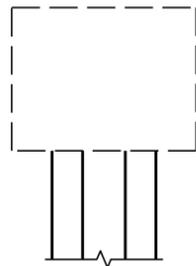
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



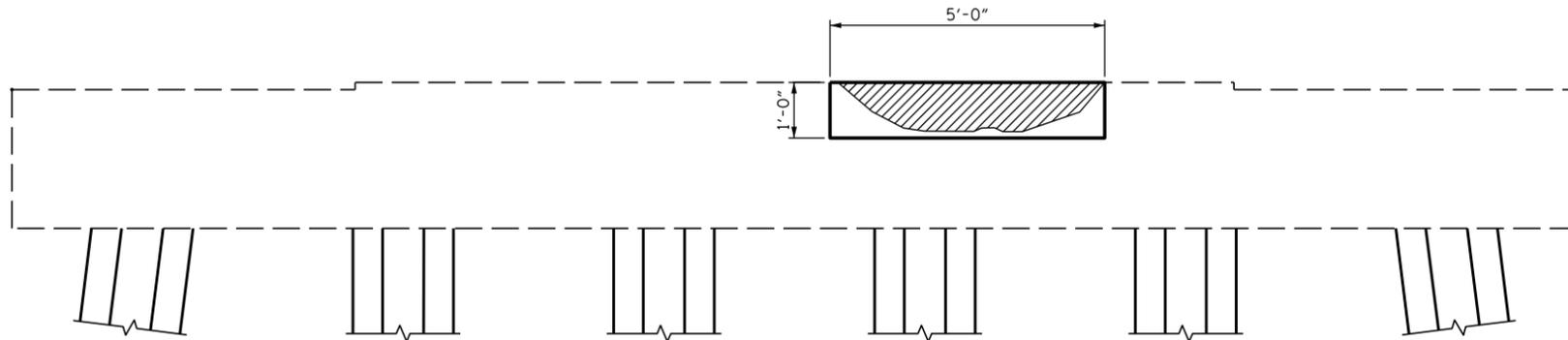
SIDE VIEW
NORTH FACE



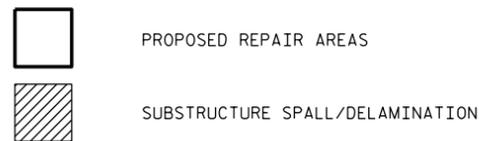
ELEVATION
WEST FACE



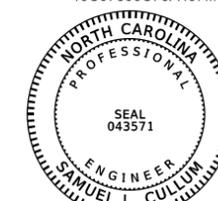
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

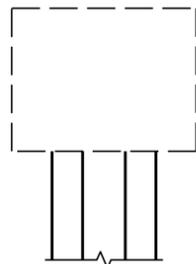
SUBSTRUCTURE CONC.
REPAIR - BENT 168

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

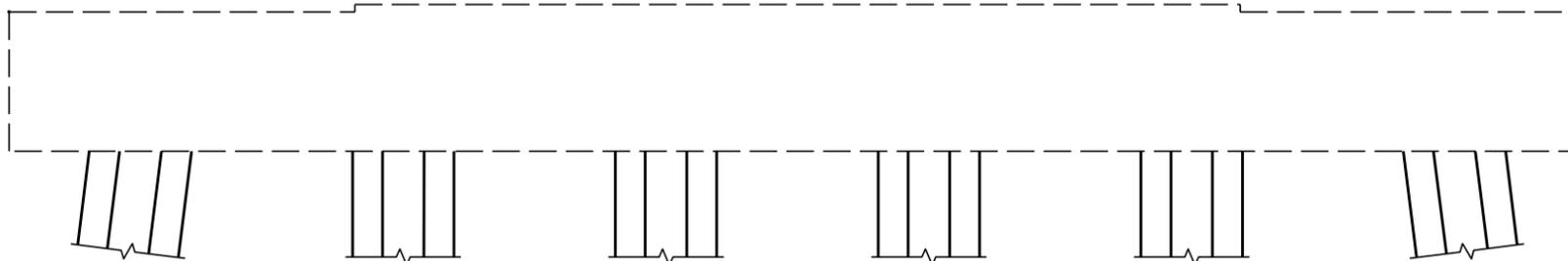
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

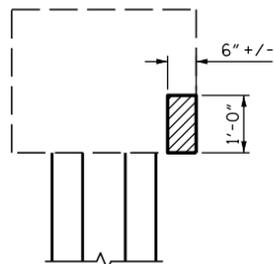
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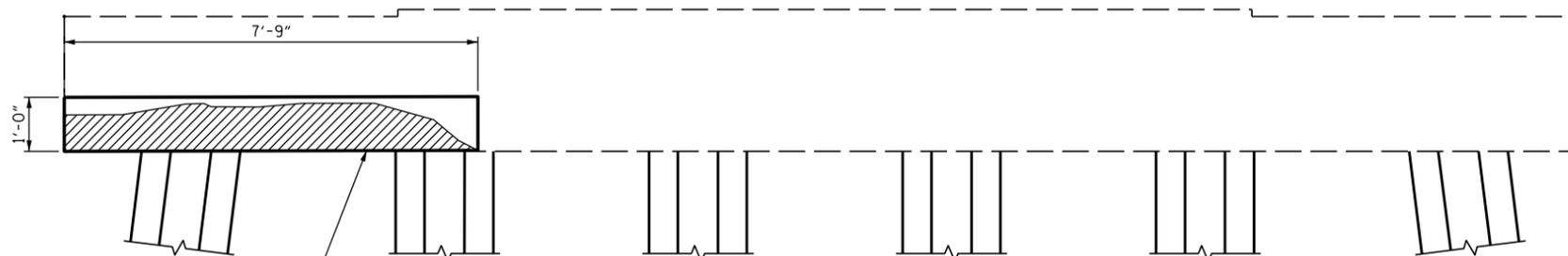
SIDE VIEW
NORTH FACE



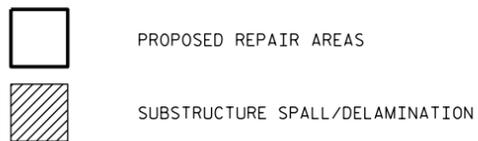
ELEVATION
WEST FACE



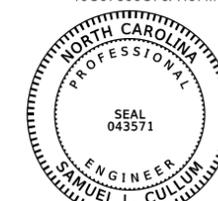
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

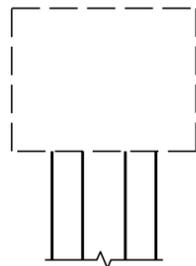
SUBSTRUCTURE CONC.
REPAIR - BENT 169

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

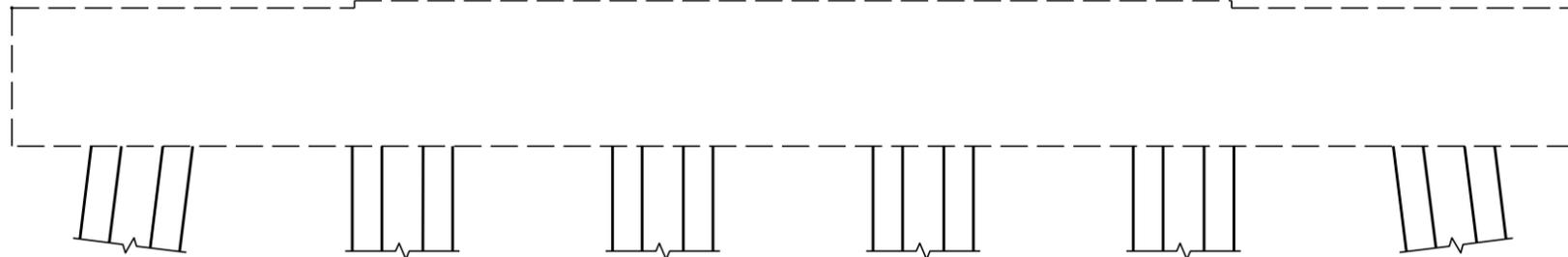
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*****USERNAME*****

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

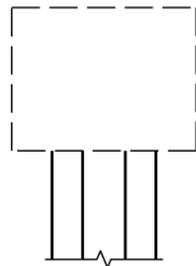
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



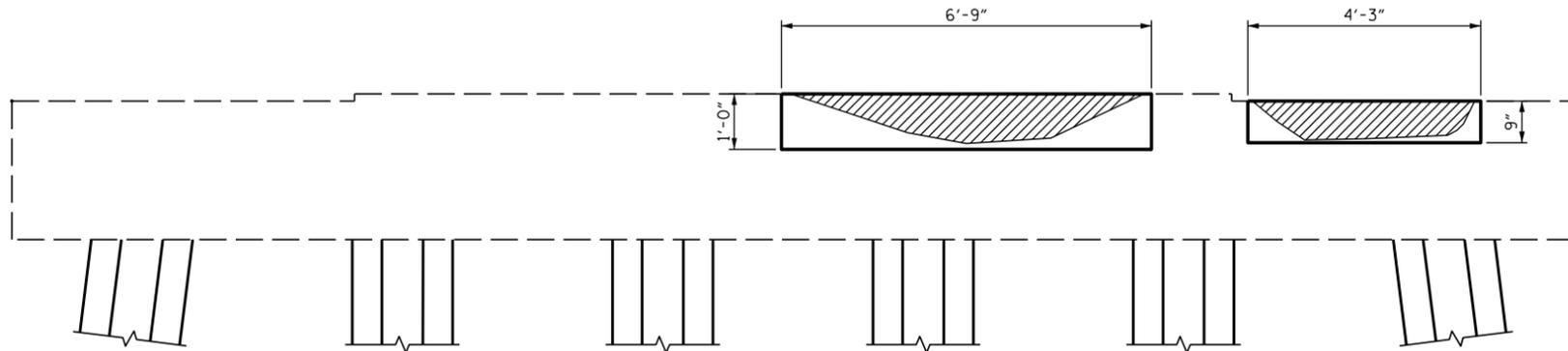
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



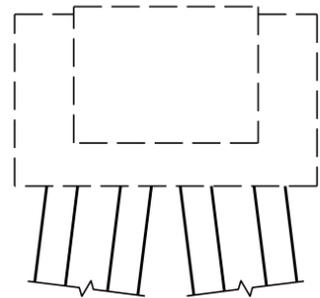
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

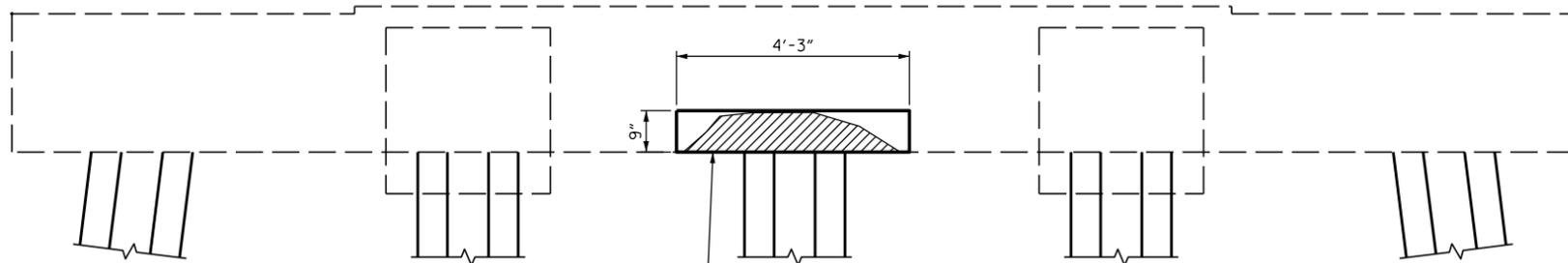
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 170						S-189
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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SIGNATURES COMPLETED

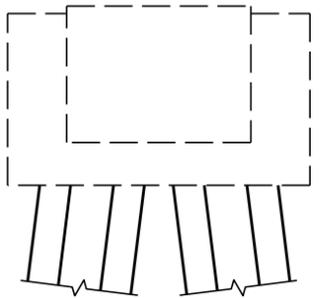


SIDE VIEW
NORTH FACE

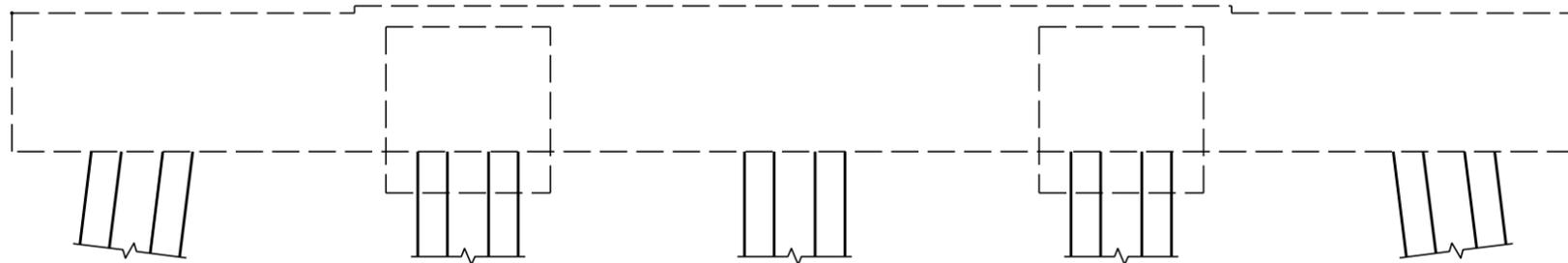


ANTICIPATE CAP
UNDERSIDE REPAIRS

ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



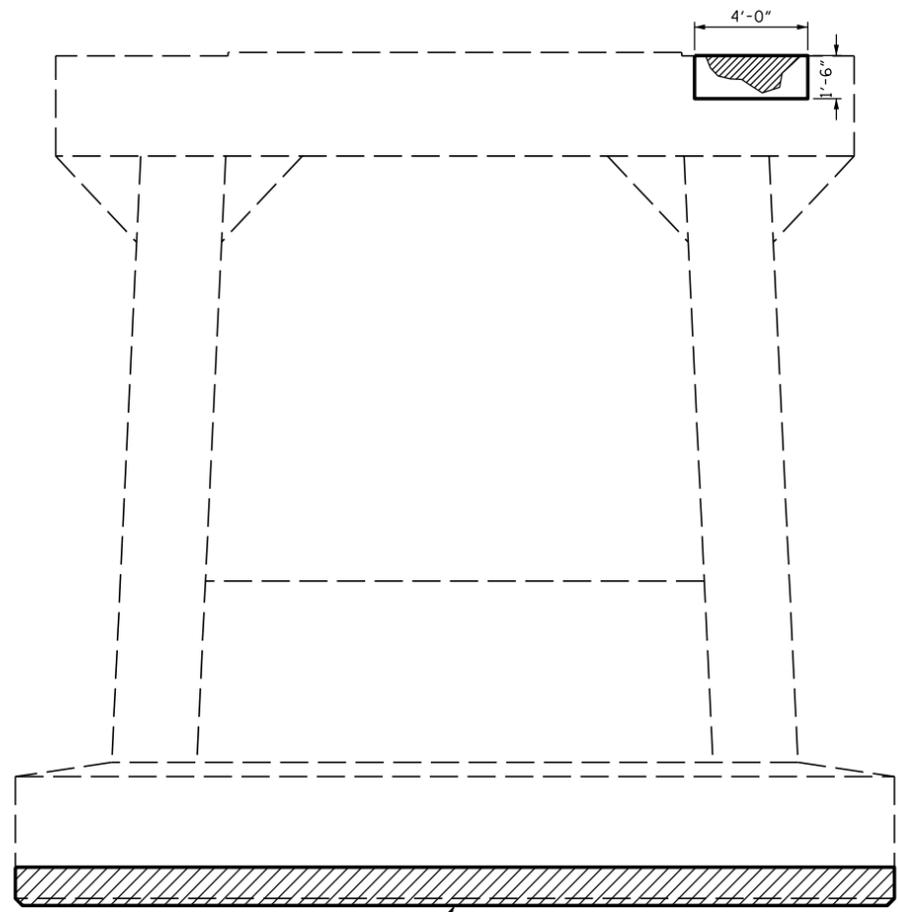
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

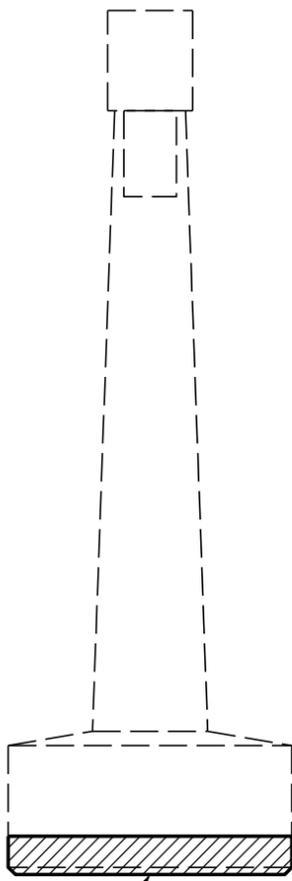
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 171

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

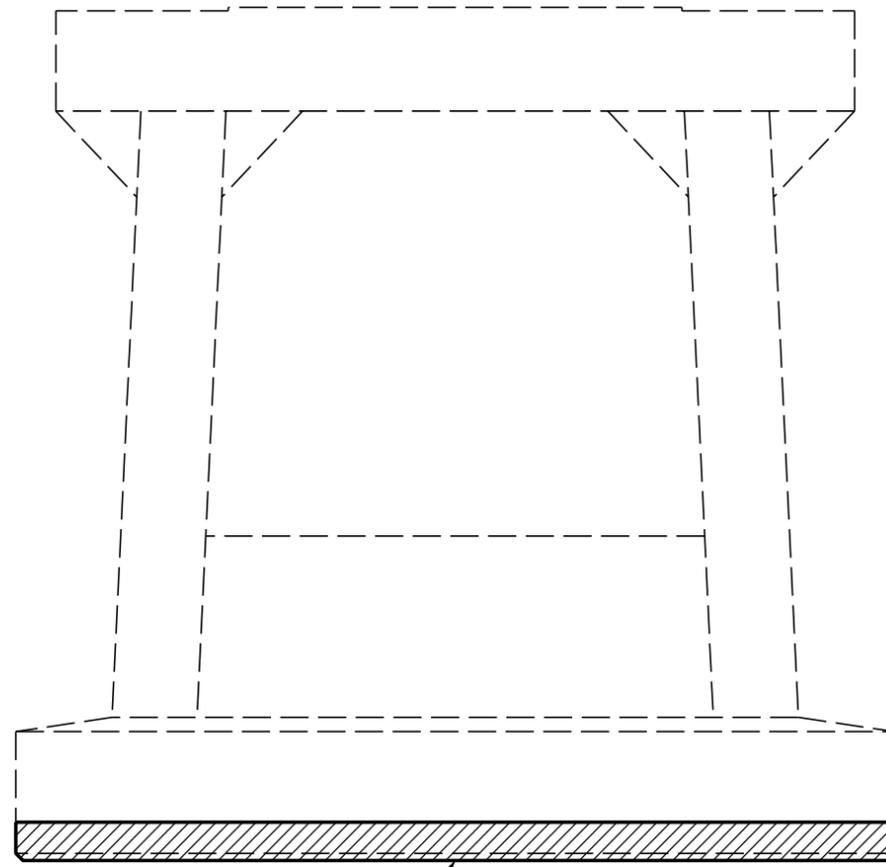
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



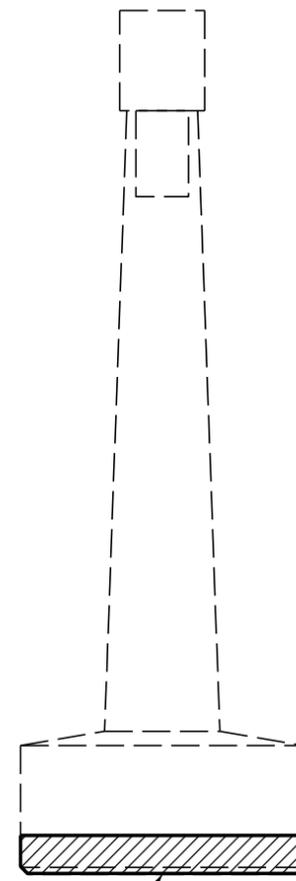
SEE NOTE BELOW
ELEVATION
 WEST FACE



SEE NOTE BELOW
SIDE VIEW
 SOUTH FACE



SEE NOTE BELOW
ELEVATION
 EAST FACE



SEE NOTE BELOW
SIDE VIEW
 NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

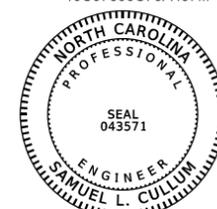


PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

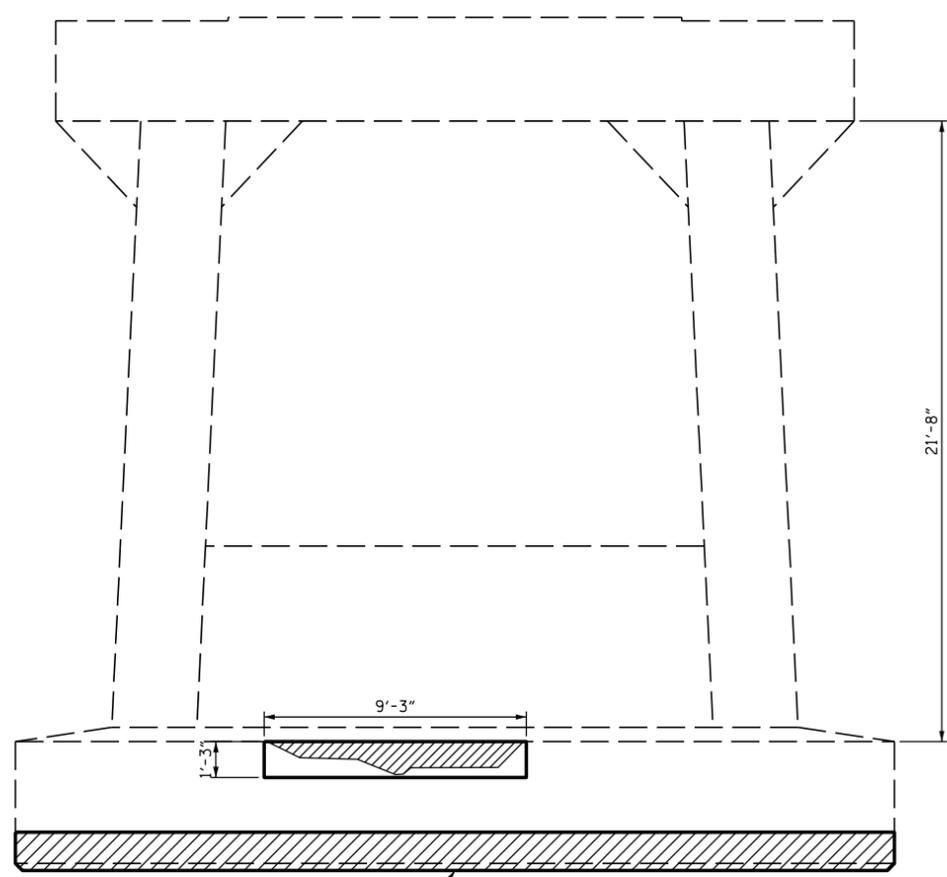
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 172**

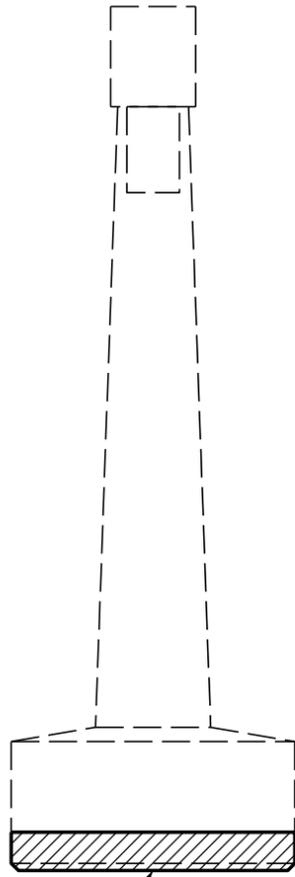
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

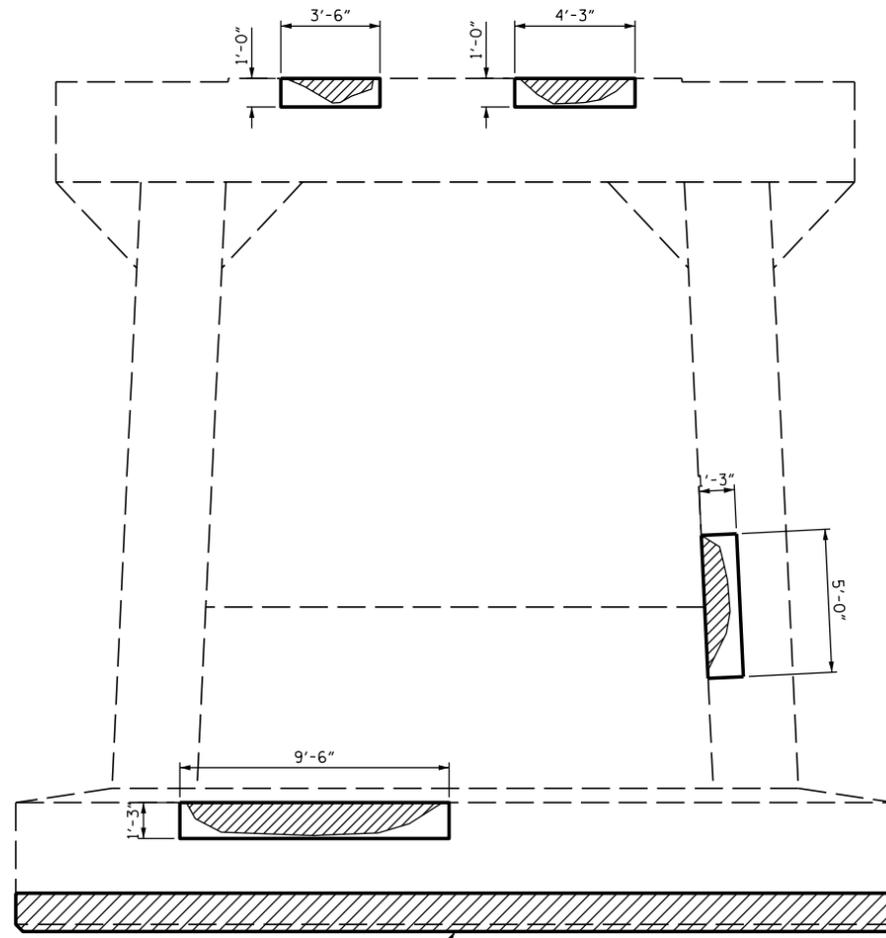
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



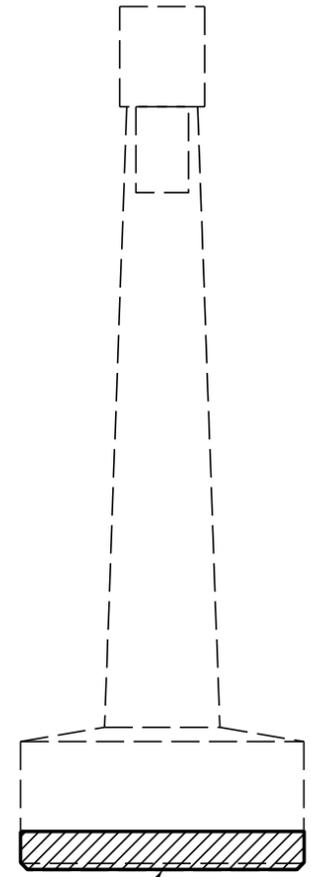
SEE NOTE BELOW
ELEVATION
 WEST FACE



SEE NOTE BELOW
SIDE VIEW
 SOUTH FACE



SEE NOTE BELOW
ELEVATION
 EAST FACE



SEE NOTE BELOW
SIDE VIEW
 NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

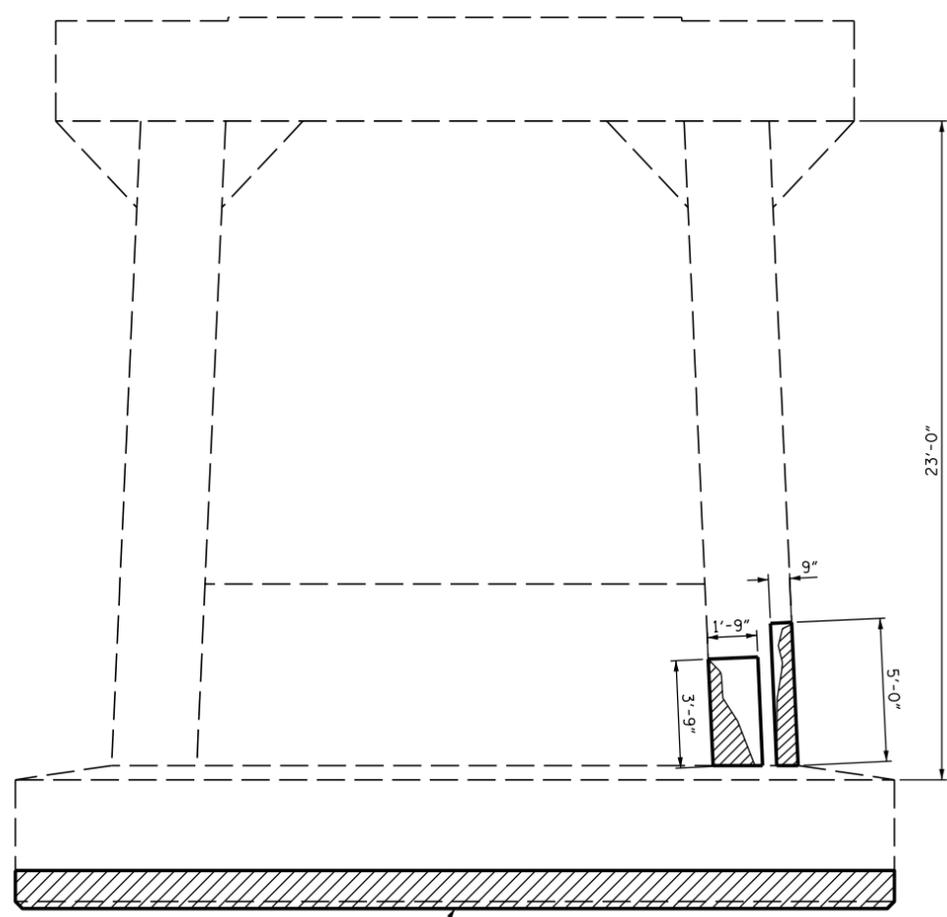
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 173**

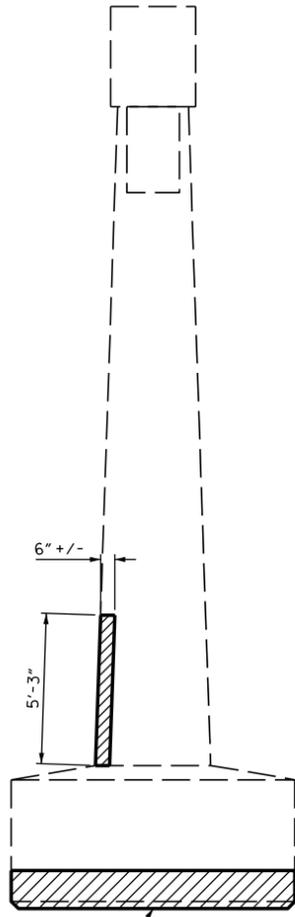
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

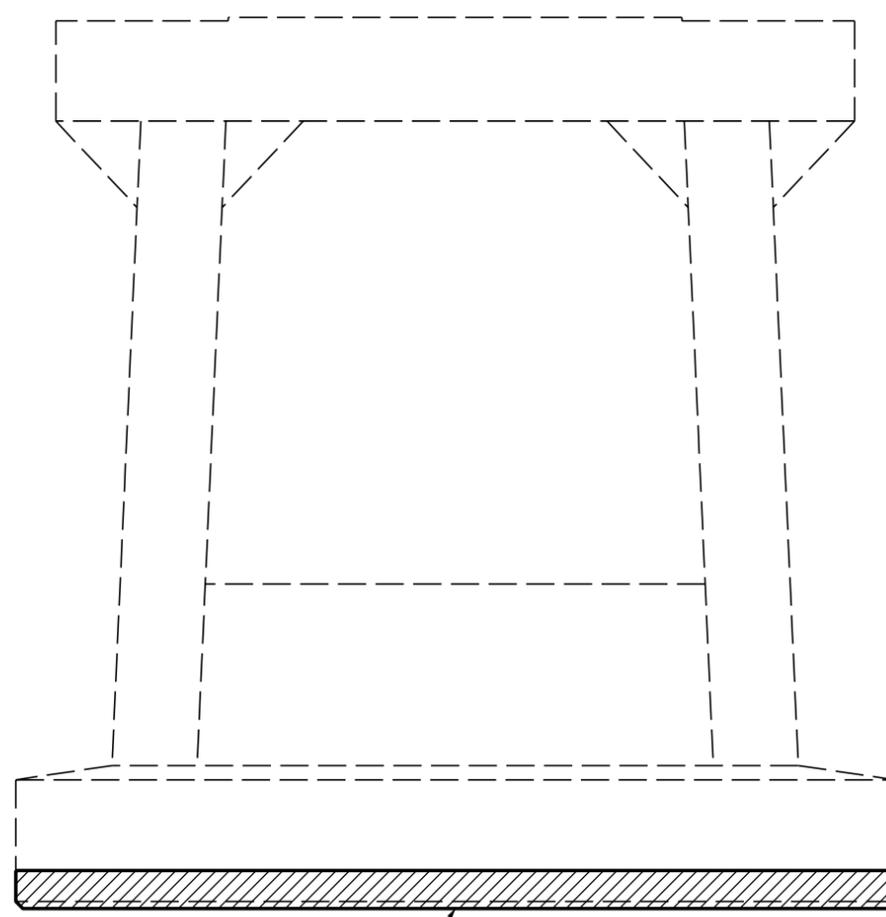
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



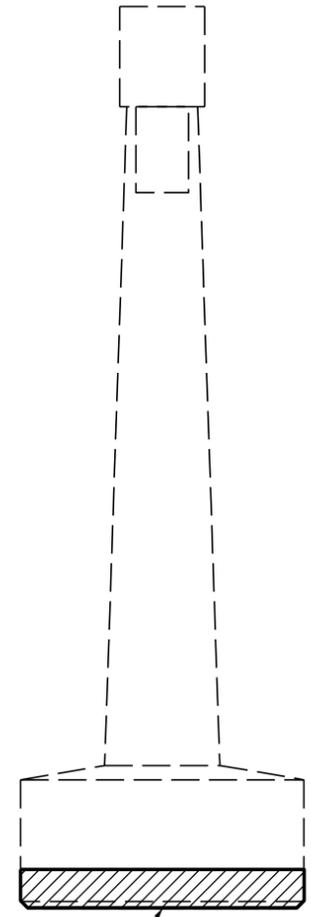
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

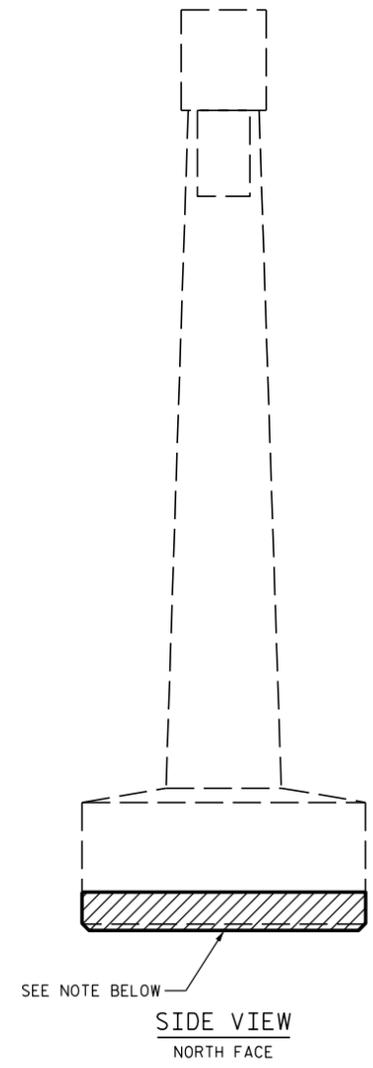
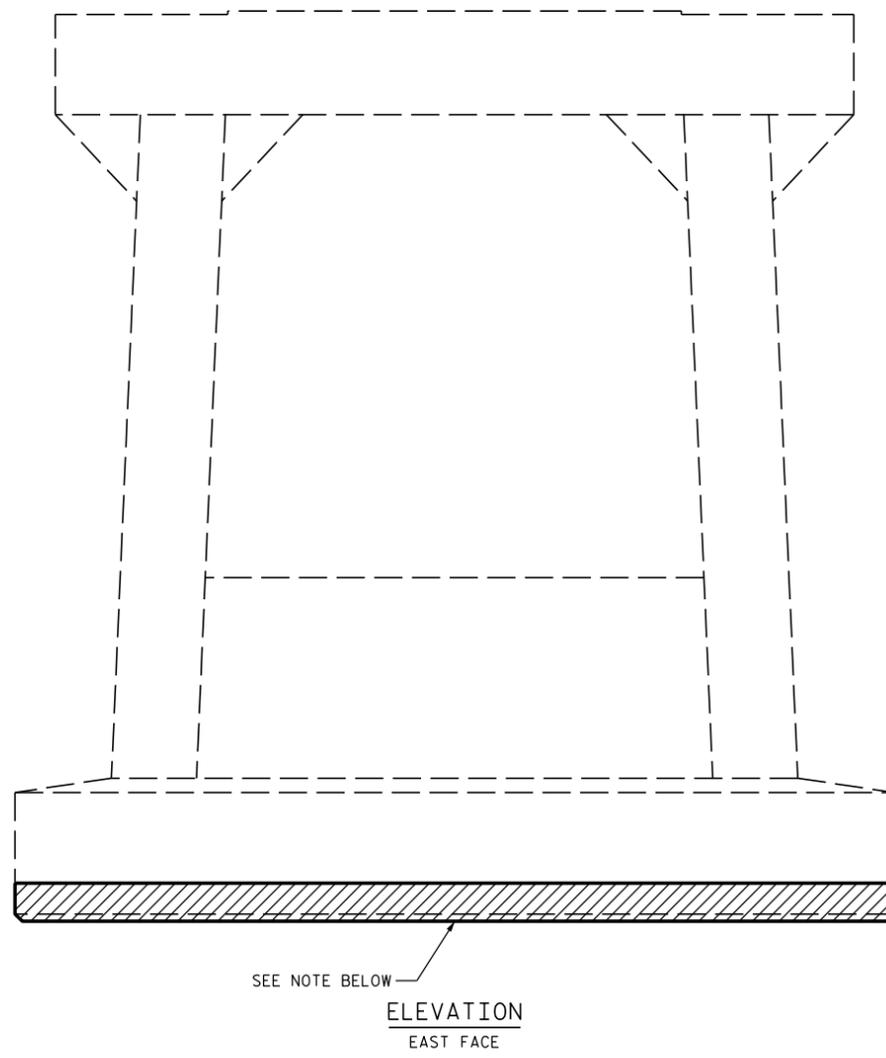
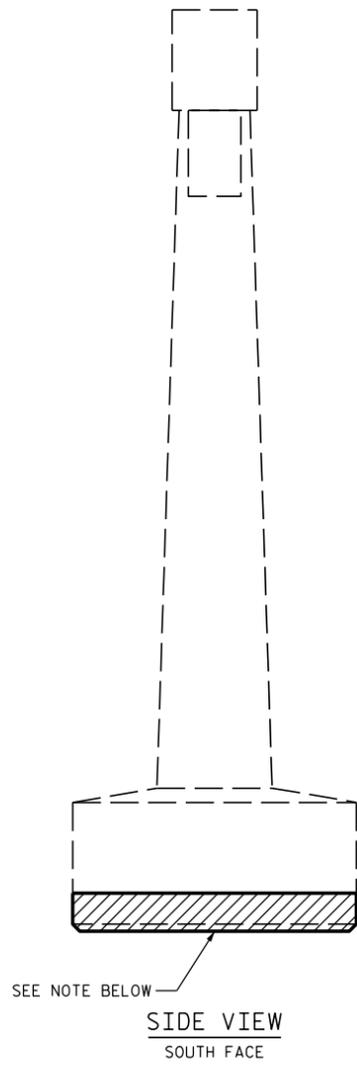
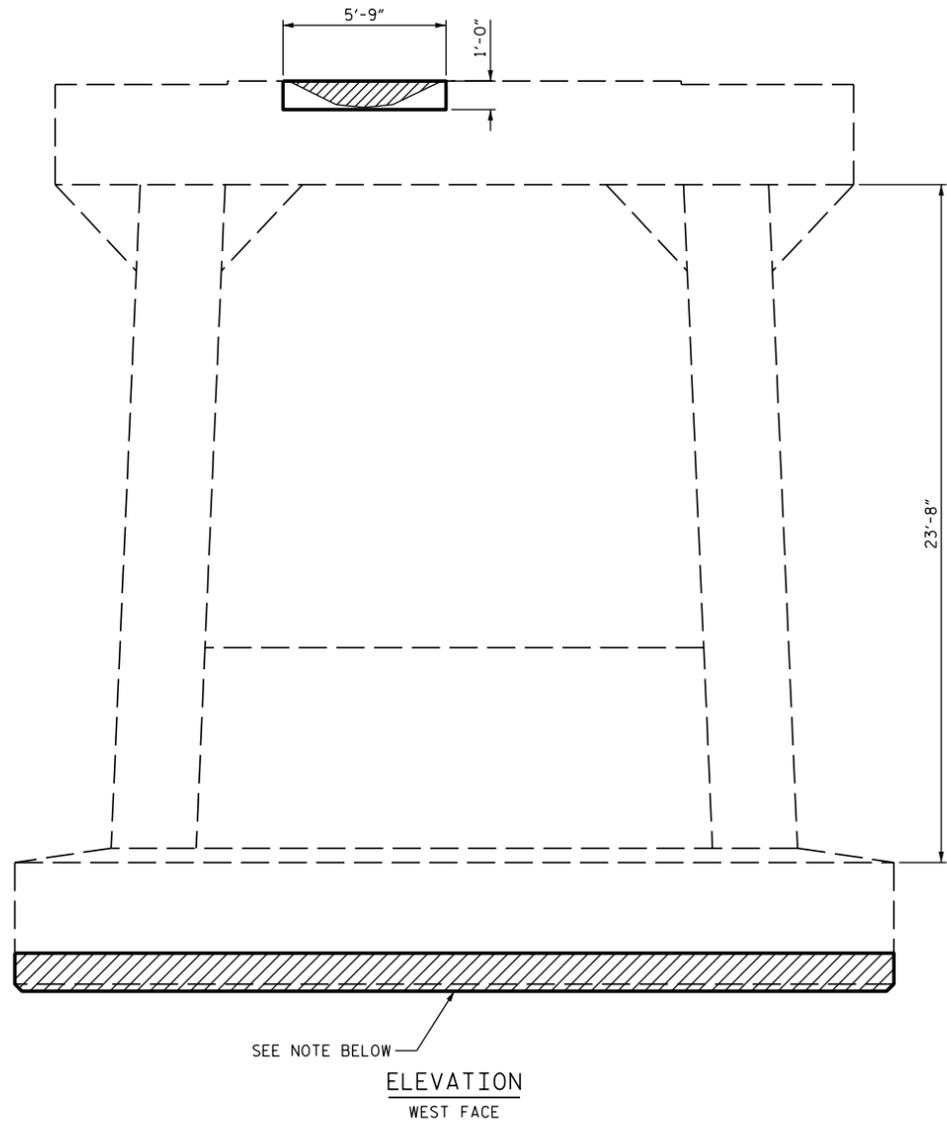
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 174

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-193
2			4			TOTAL SHEETS



NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

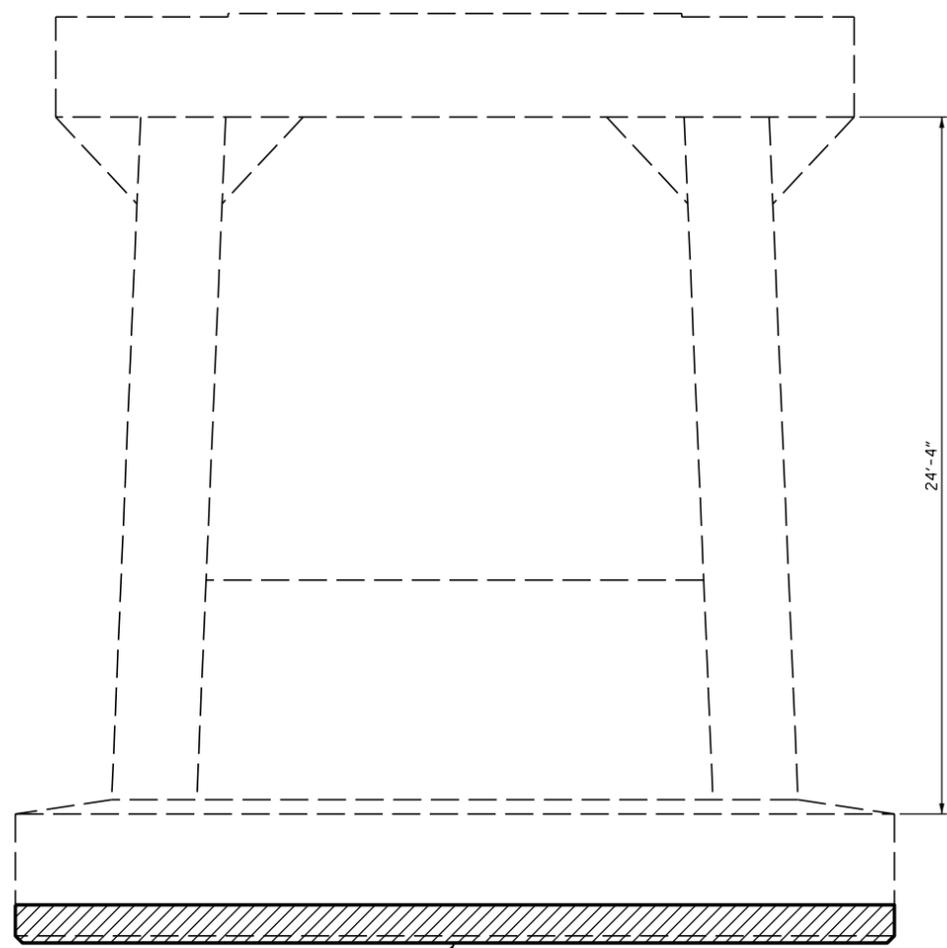
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 175**

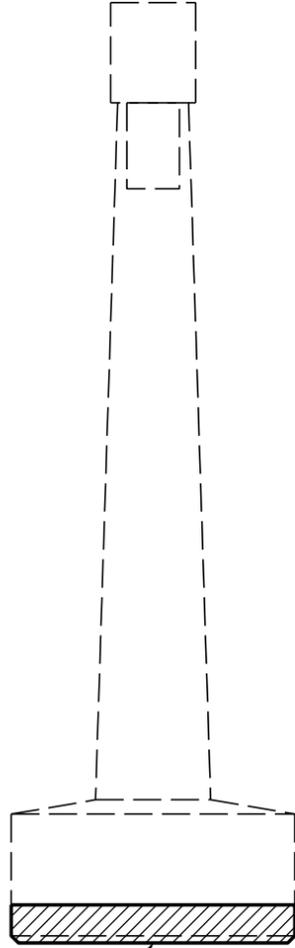
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-194
2			4			

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

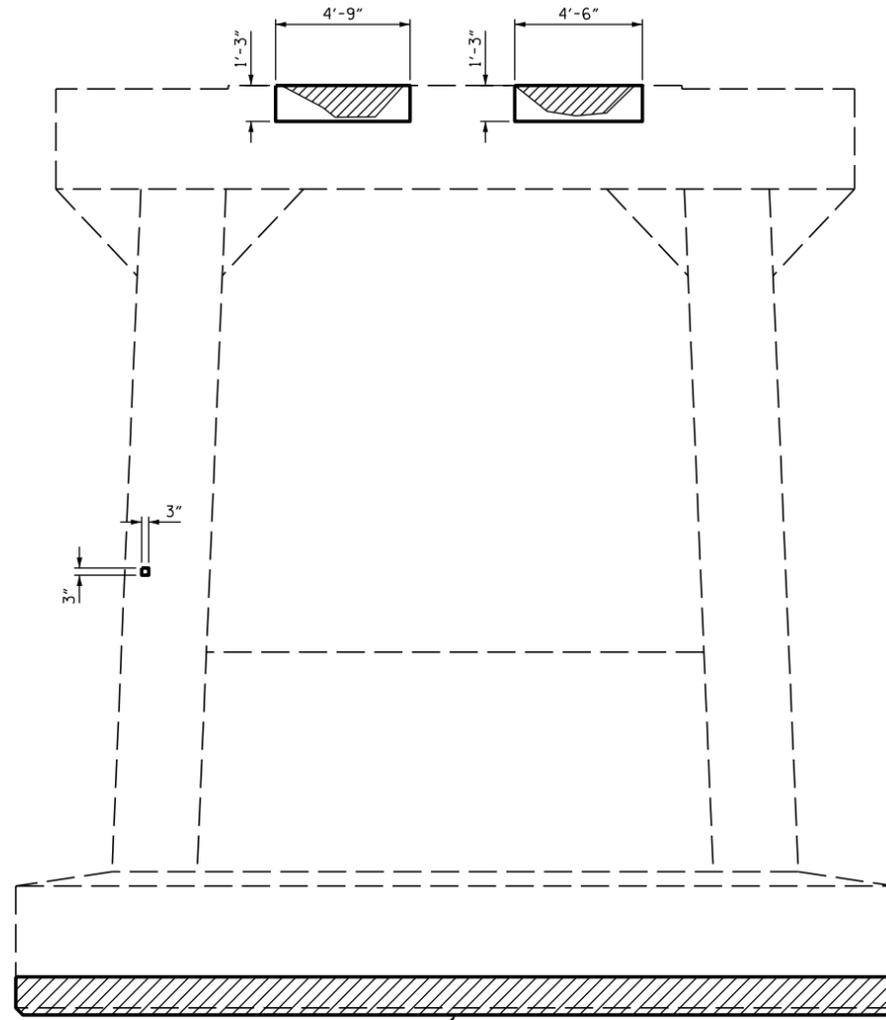
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 FINAL UNLESS ALL
 SIGNATURES COMPLETED



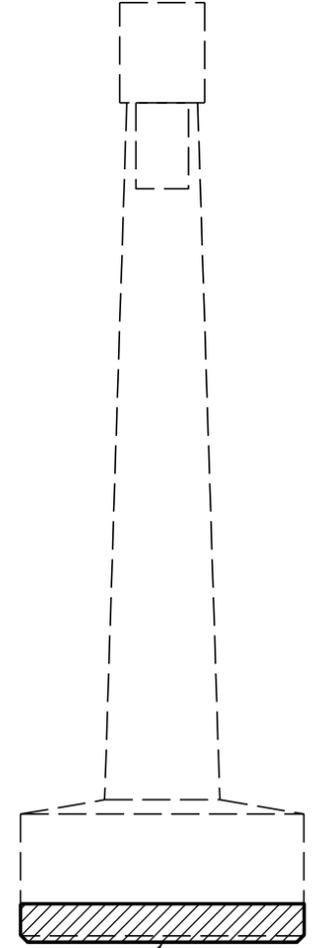
SEE NOTE BELOW
ELEVATION
 WEST FACE



SEE NOTE BELOW
SIDE VIEW
 SOUTH FACE



SEE NOTE BELOW
ELEVATION
 EAST FACE



SEE NOTE BELOW
SIDE VIEW
 NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET



PROPOSED REPAIR AREAS

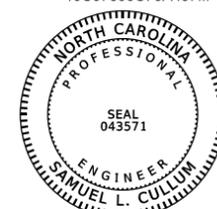


SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

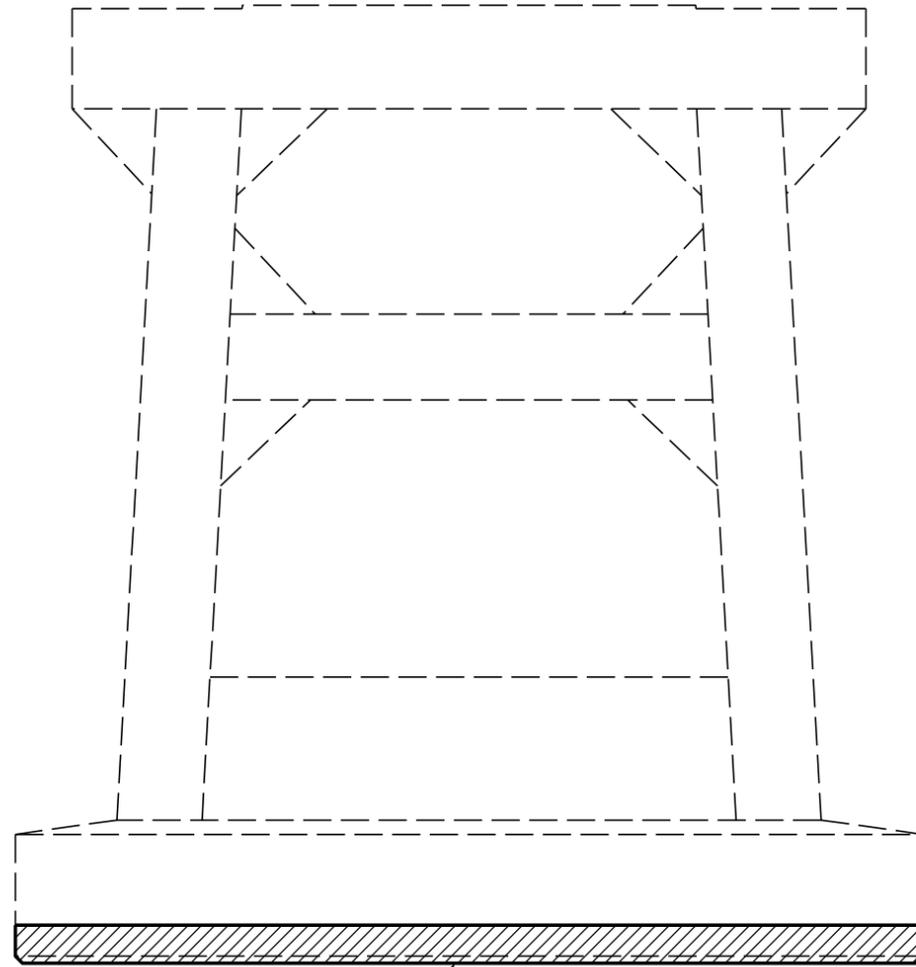


12/13/2016

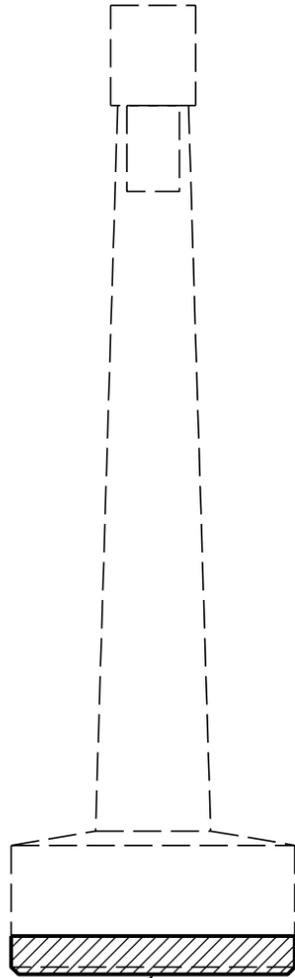
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 SIGNATURES COMPLETED

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

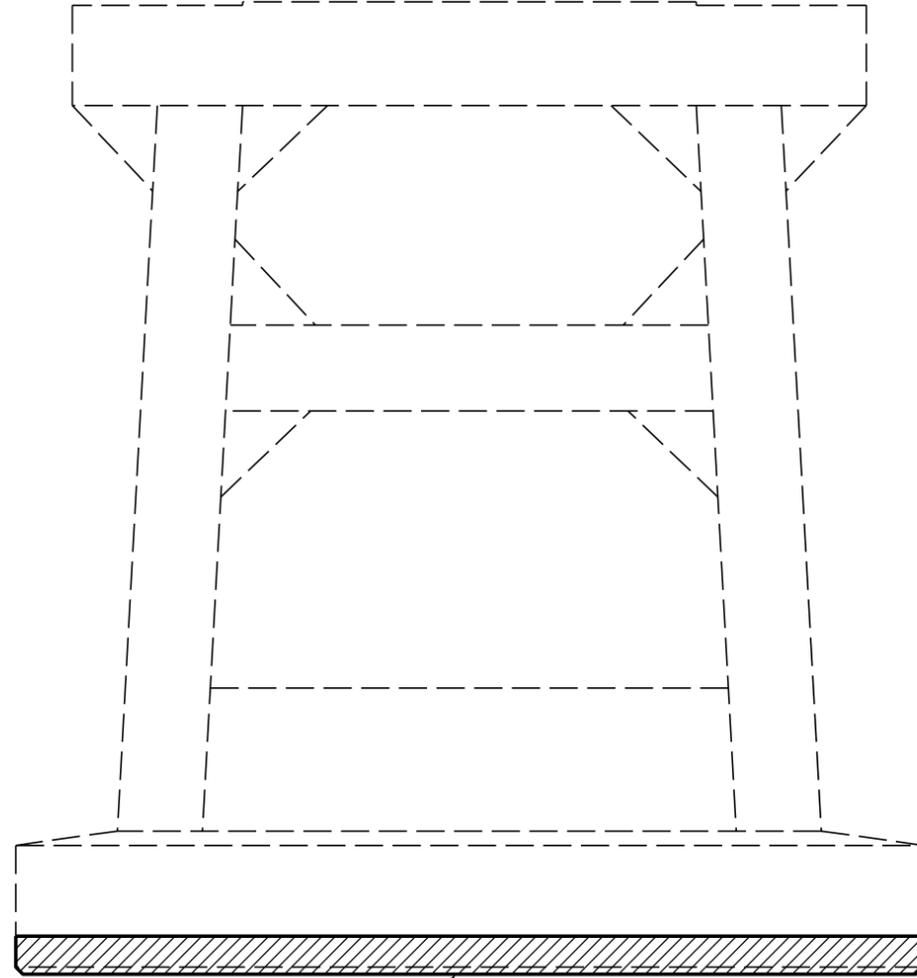
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 176						S-195
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			



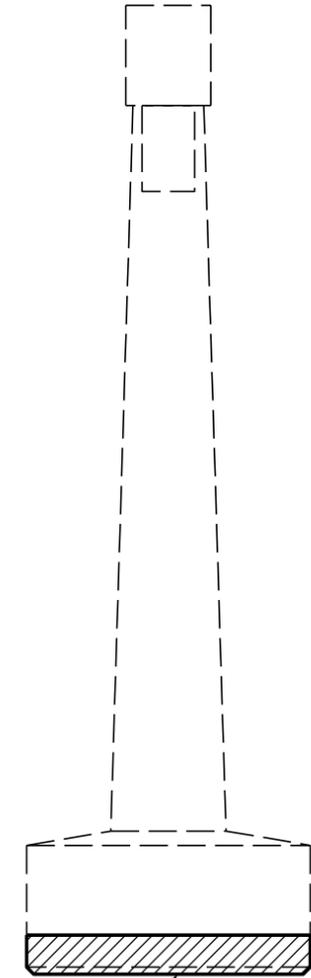
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

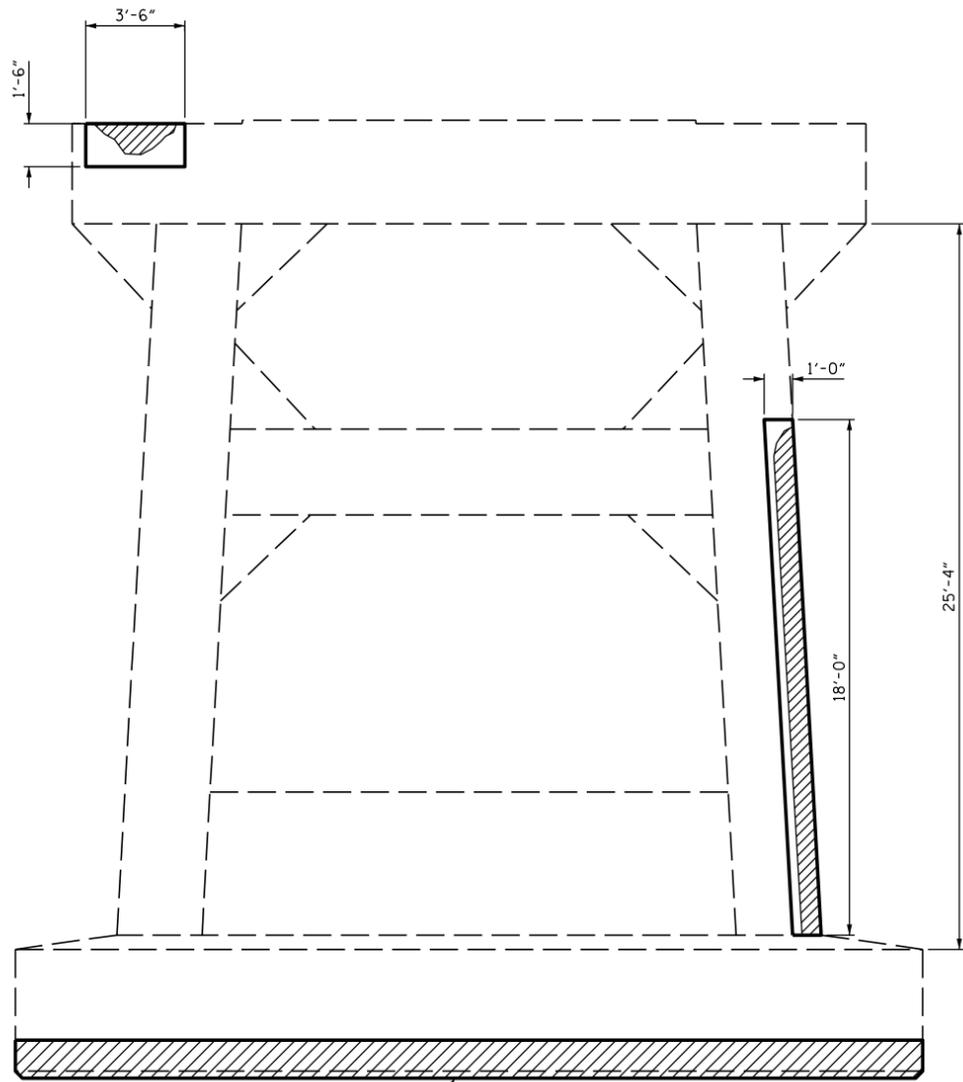
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 177

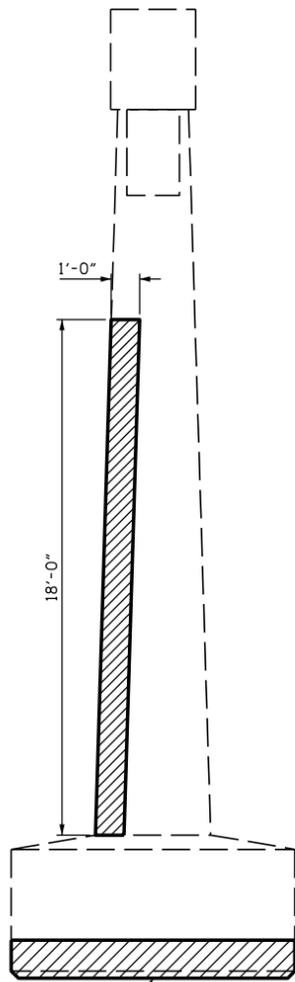
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

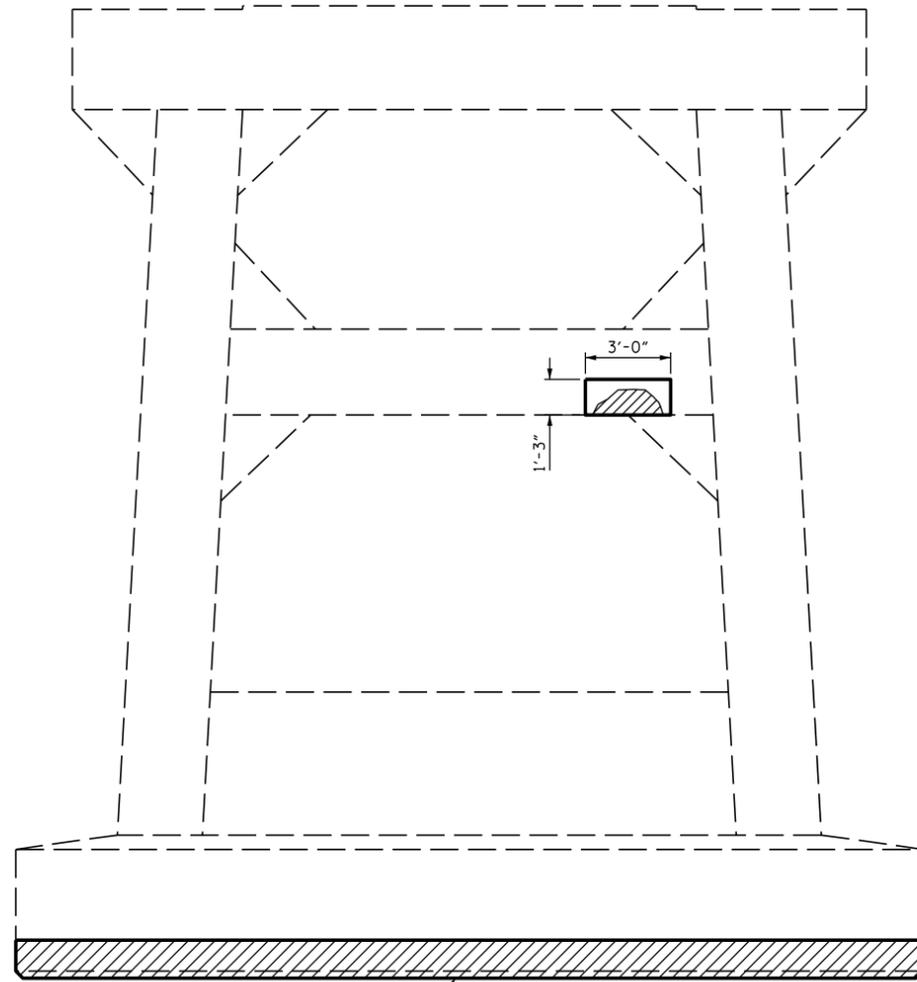
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-196
2			4			TOTAL SHEETS



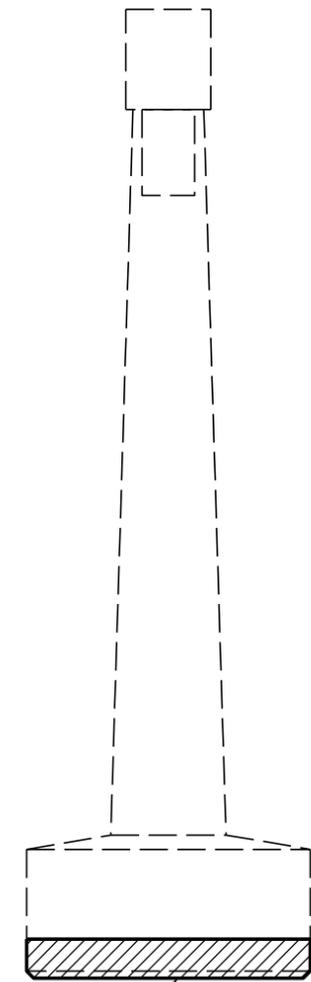
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET



PROPOSED REPAIR AREAS

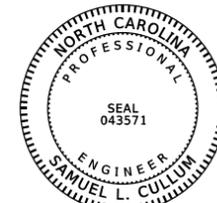


SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



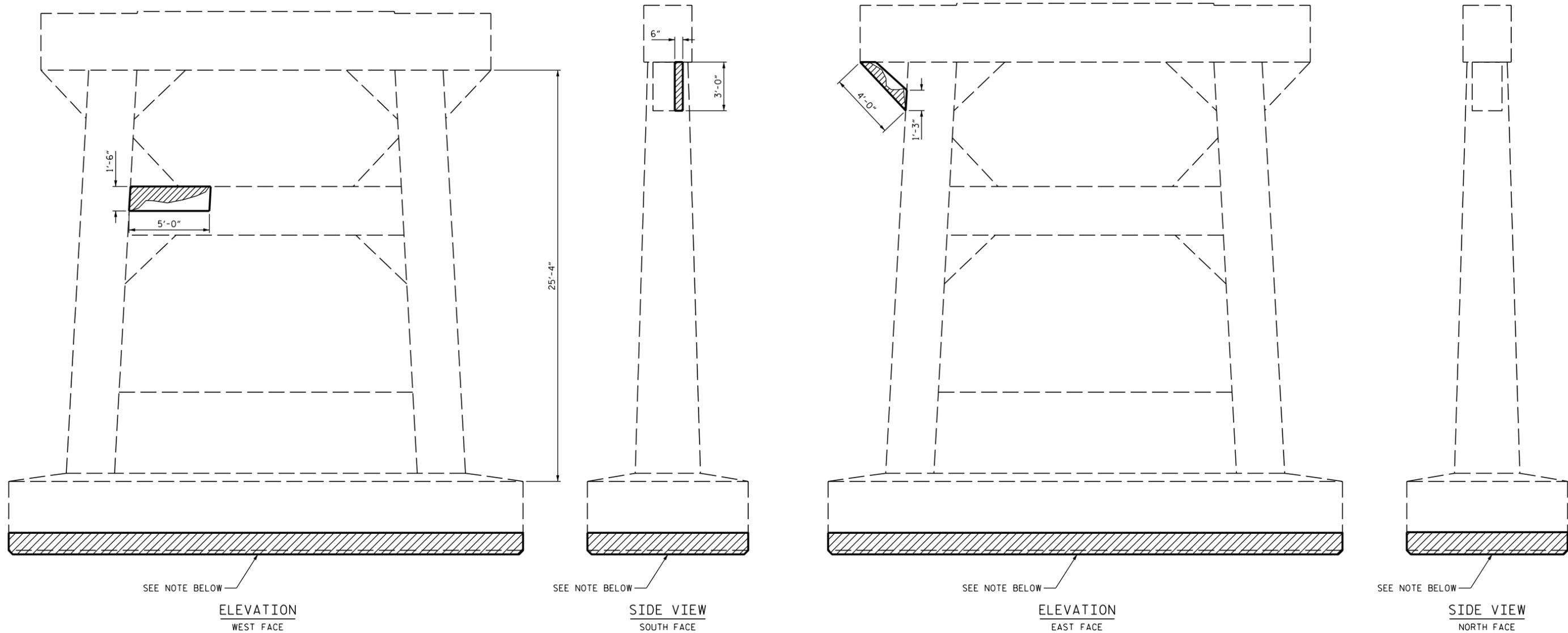
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 178

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-197
2			4			TOTAL SHEETS



NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

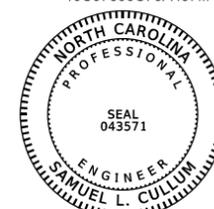


PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

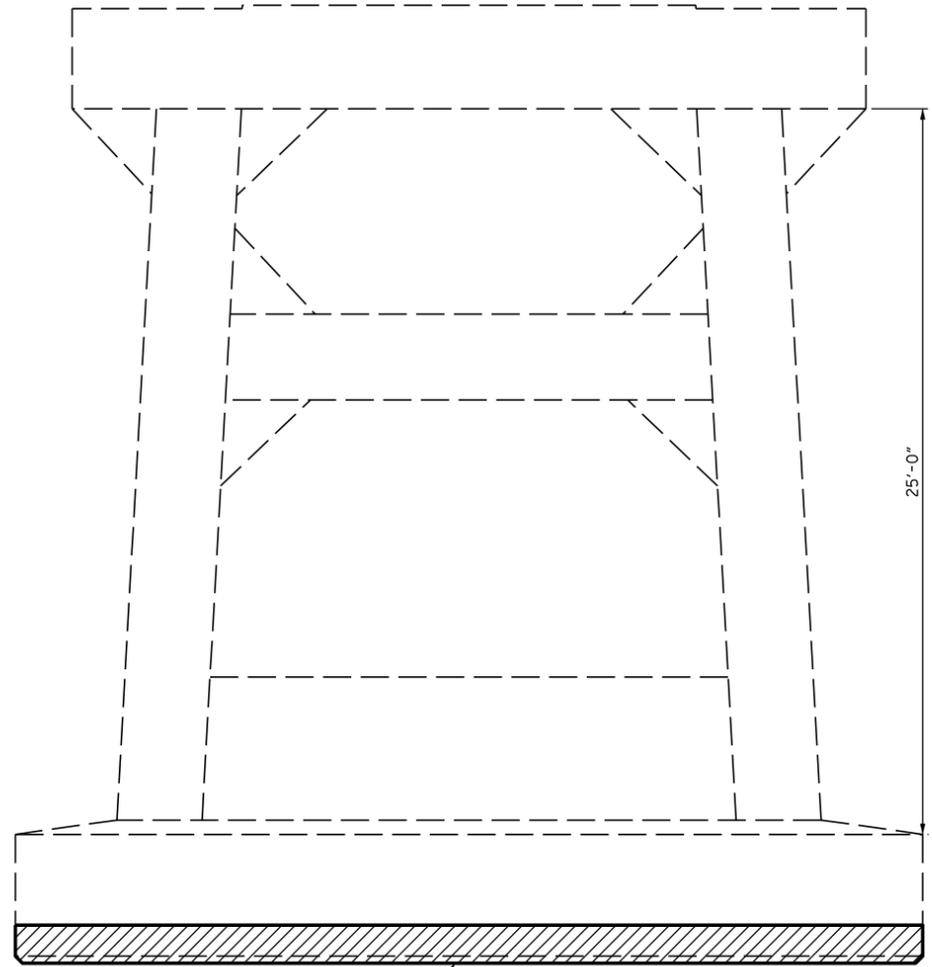
SUBSTRUCTURE CONC.
REPAIR - BENT 179

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NO.	BY:	DATE:	NO.	BY:	DATE:	
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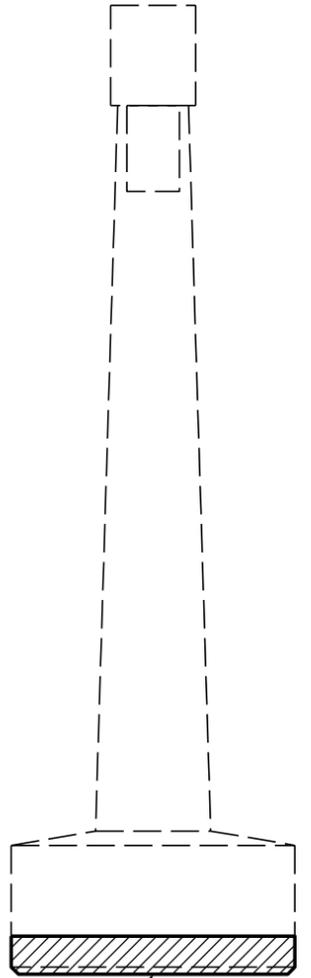
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

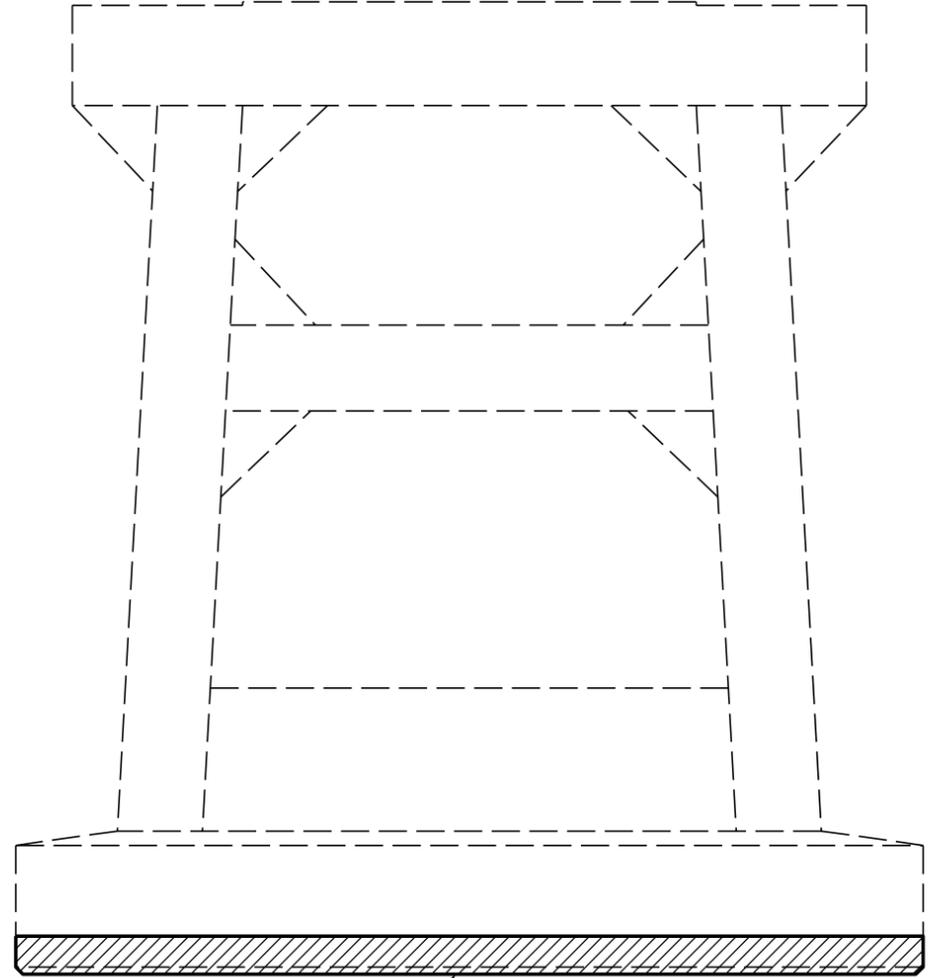
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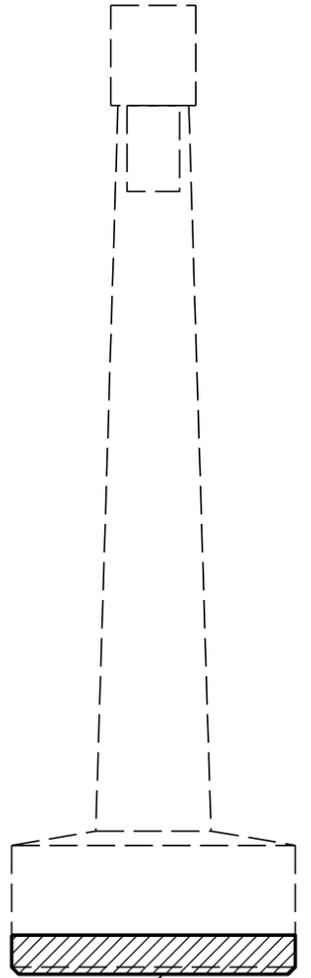
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

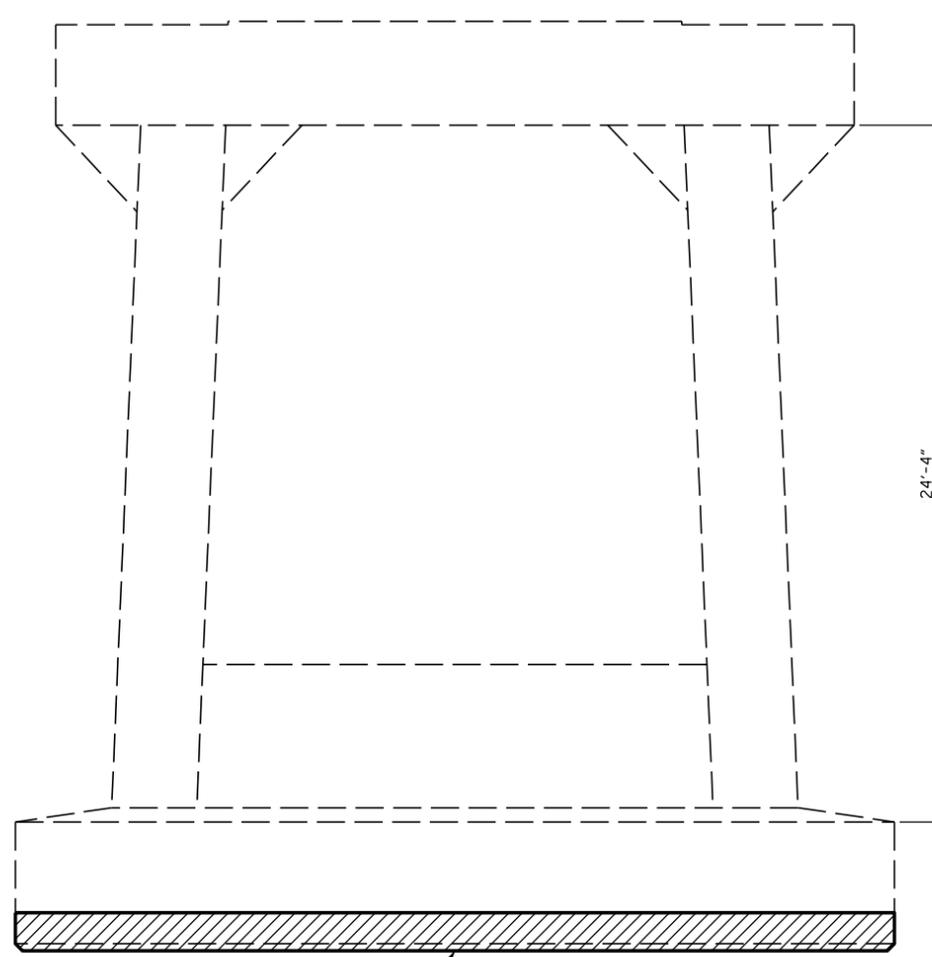
**SUBSTRUCTURE CONC.
REPAIR - BENT 180**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS

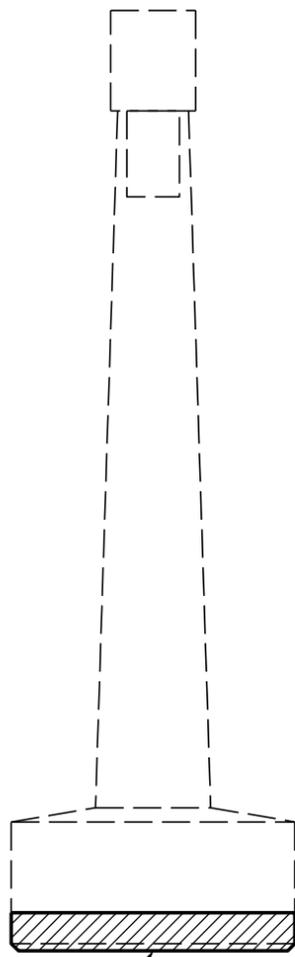
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

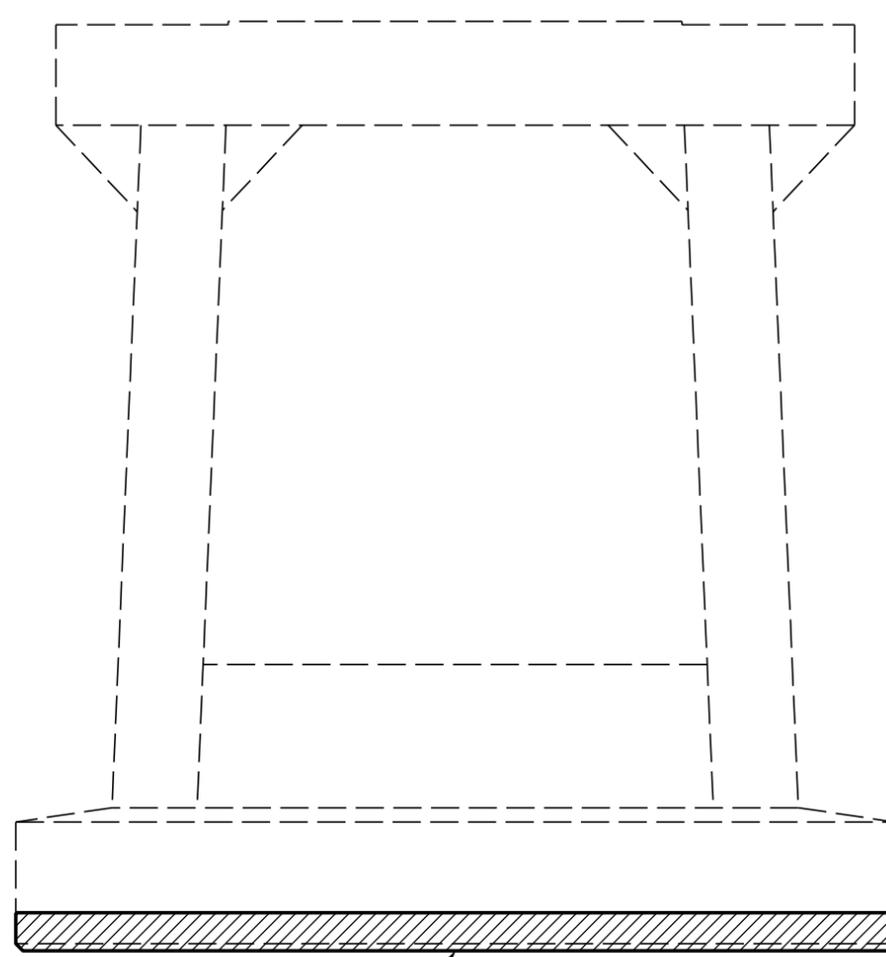
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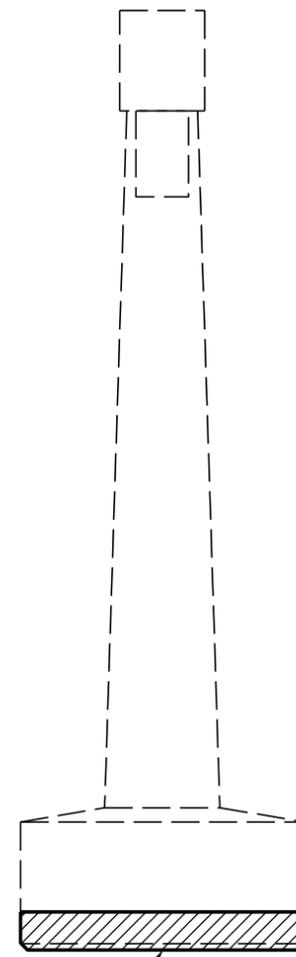
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

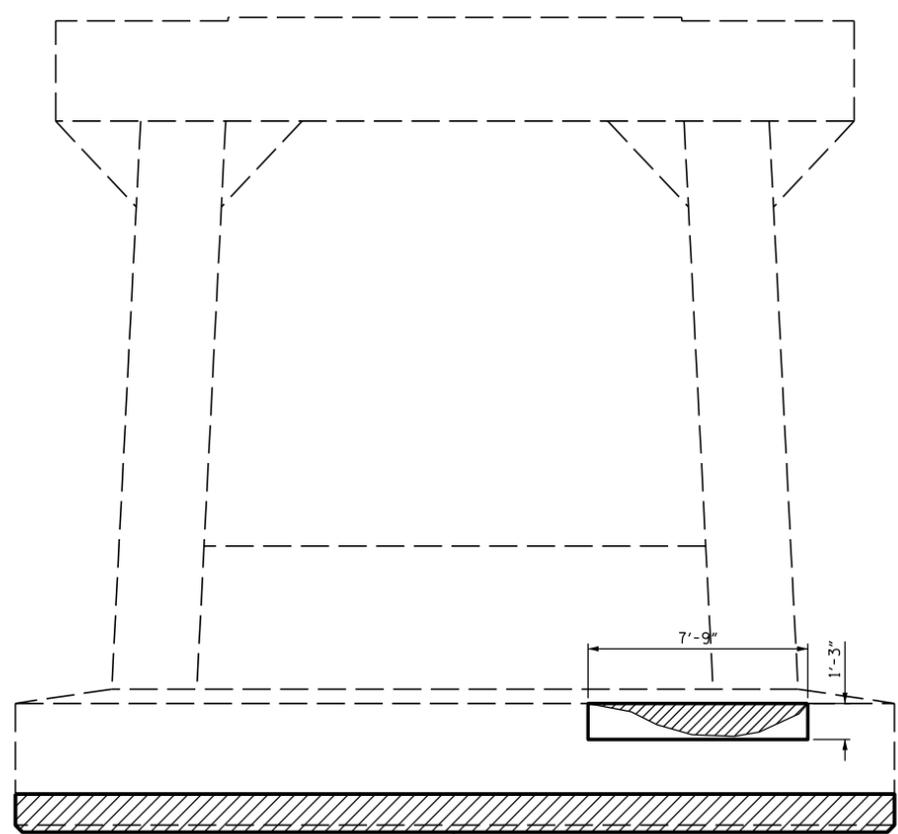
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 181**

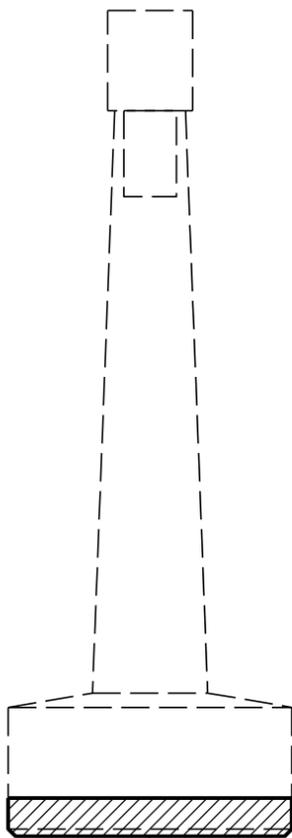
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

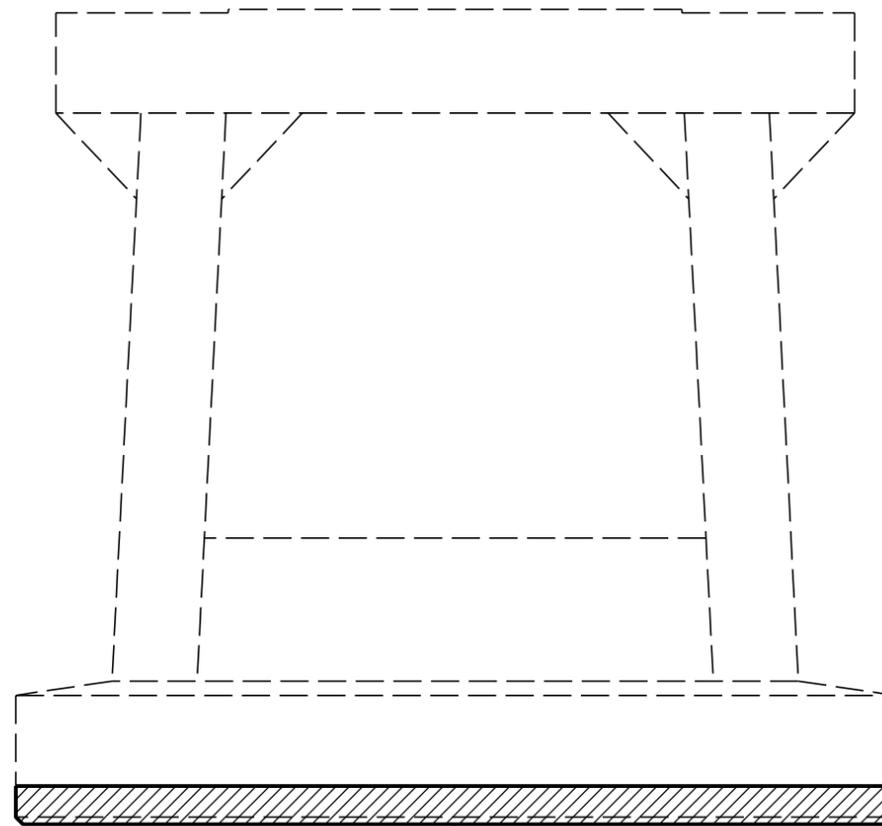
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



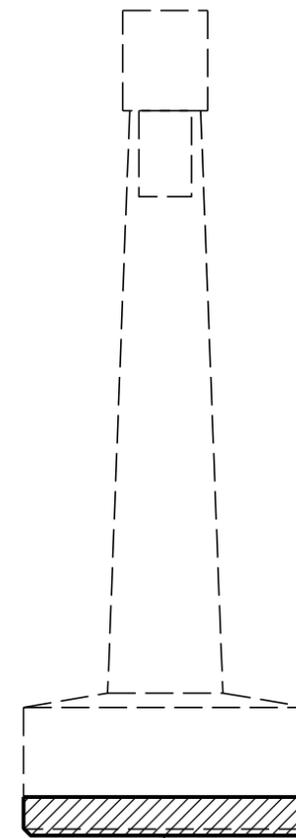
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...



12/13/2016

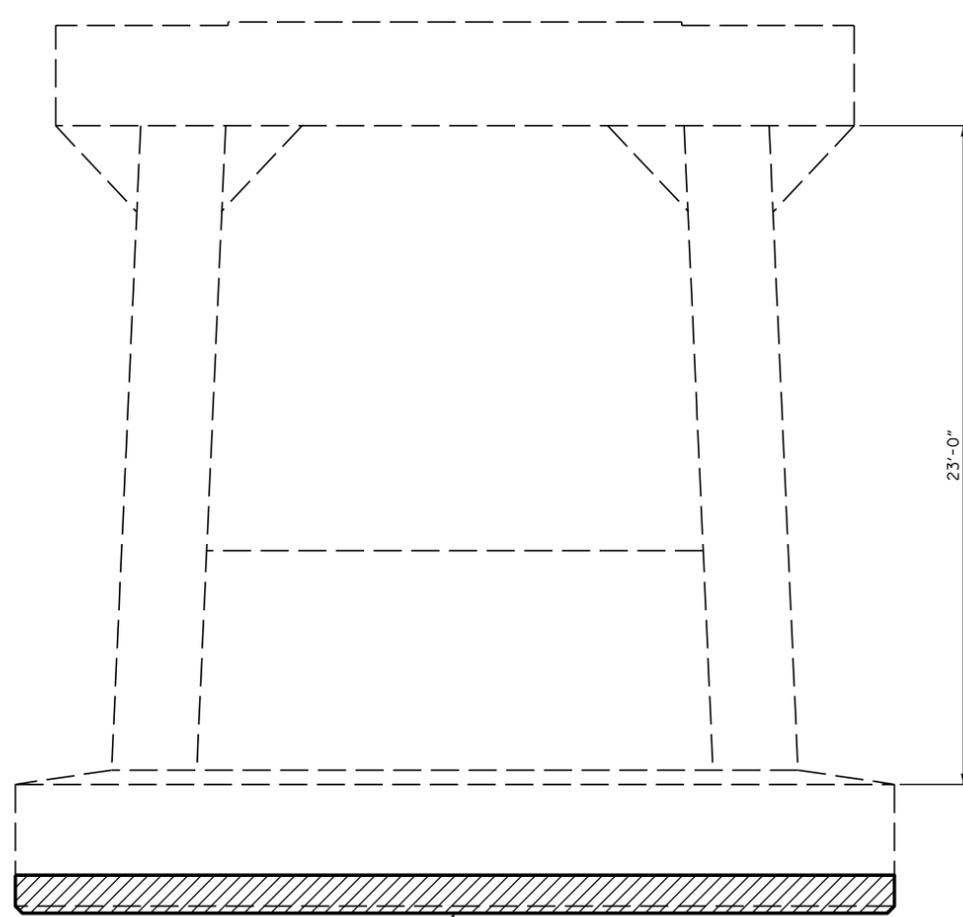
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

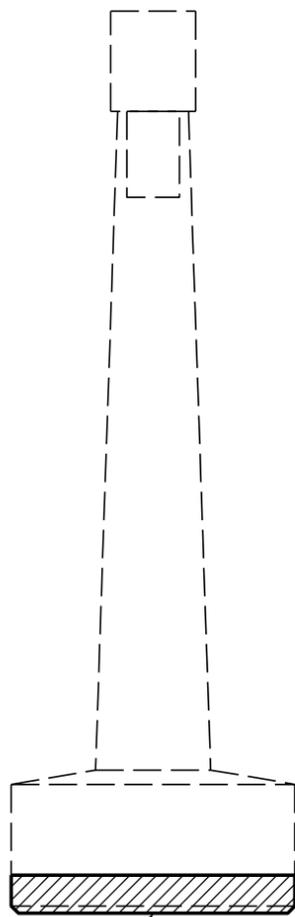
SUBSTRUCTURE CONC.
 REPAIR - BENT 182

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

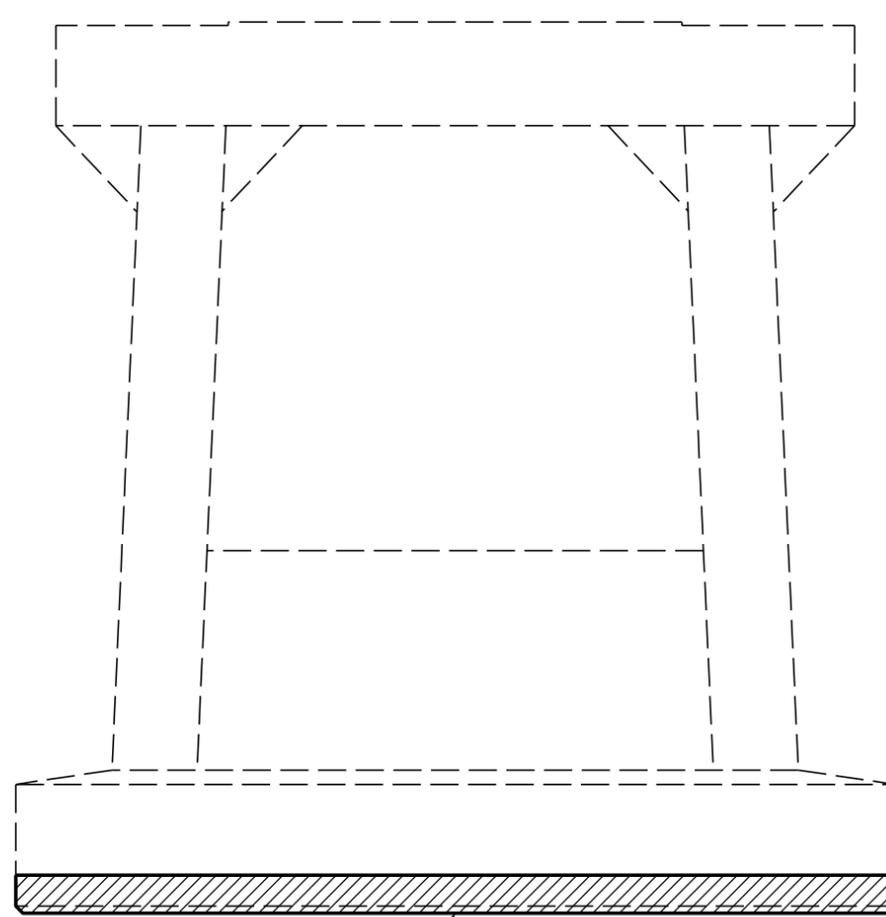
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-201
1			3			TOTAL SHEETS
2			4			



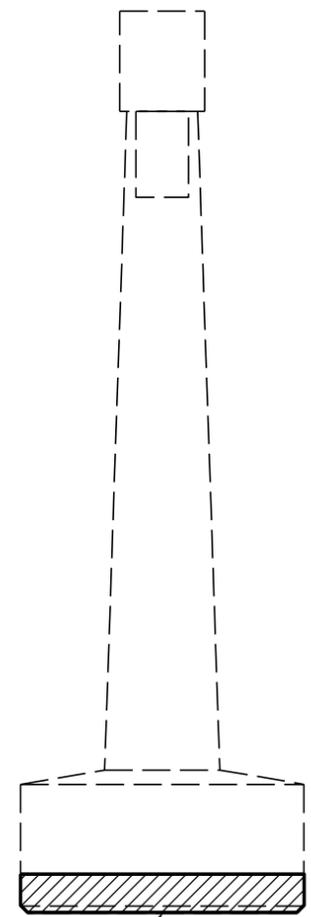
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE

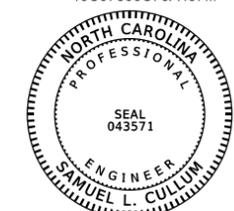


SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

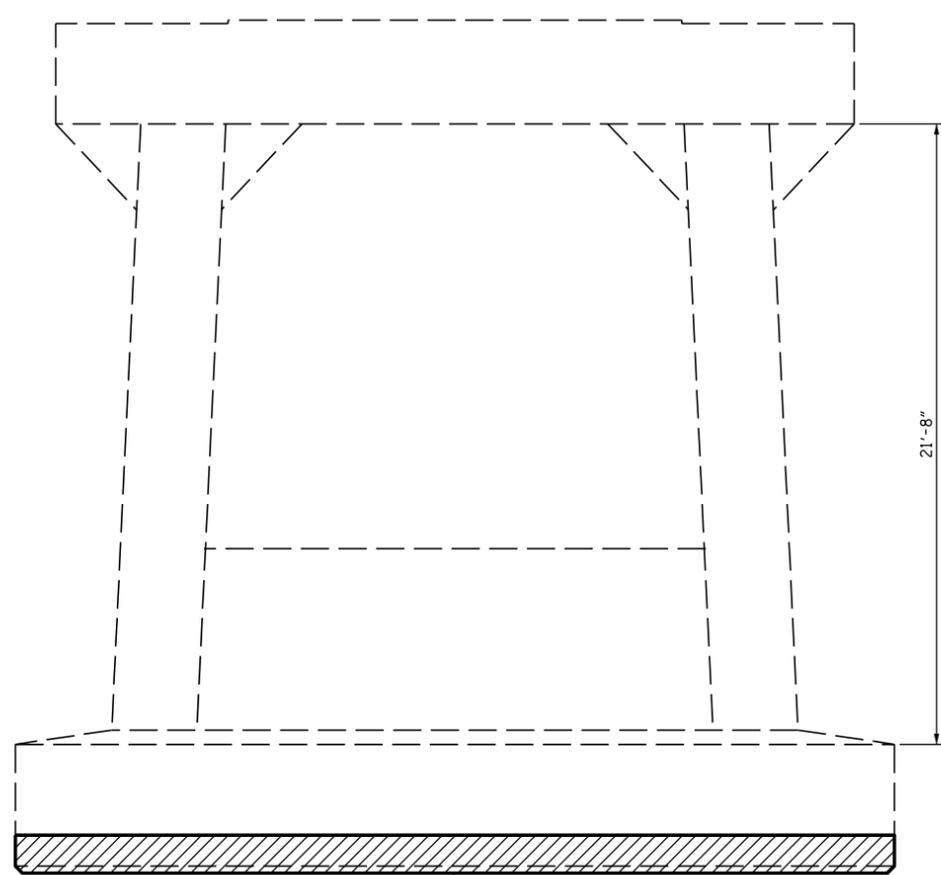
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 183**

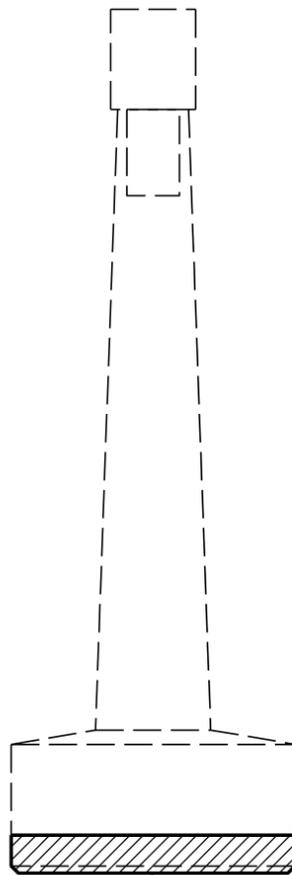
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

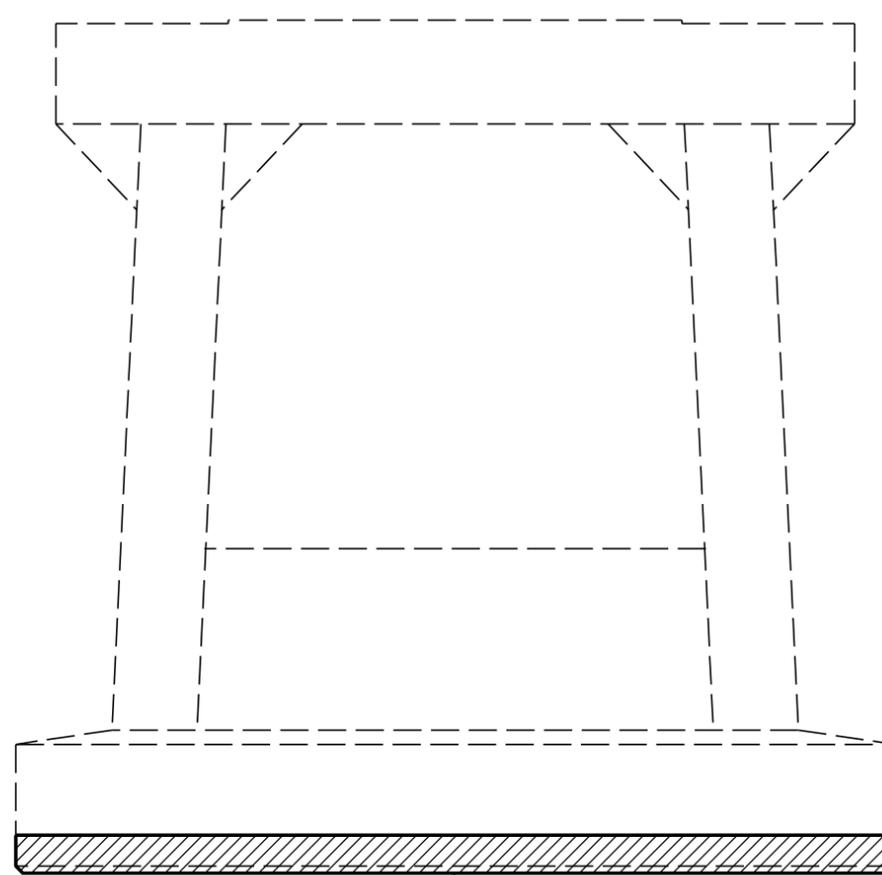
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-202
2			4			



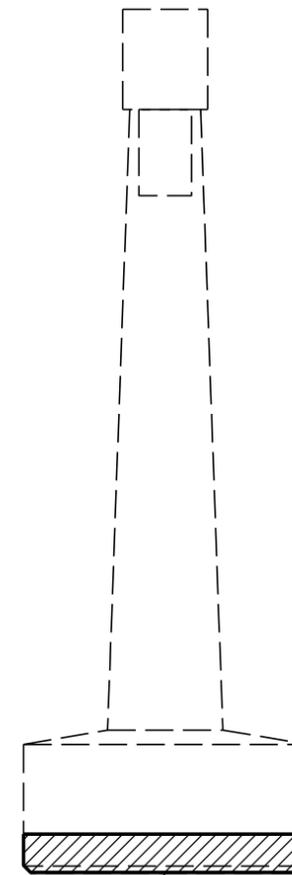
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
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 19C97095C75A467...



12/13/2016

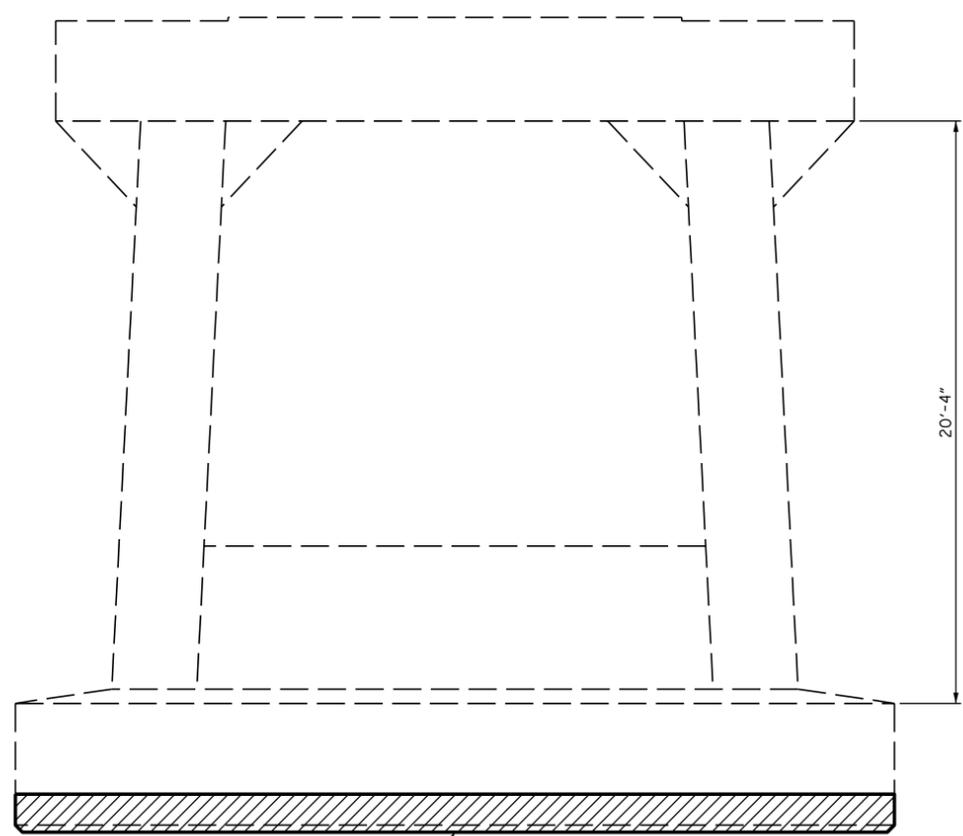
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

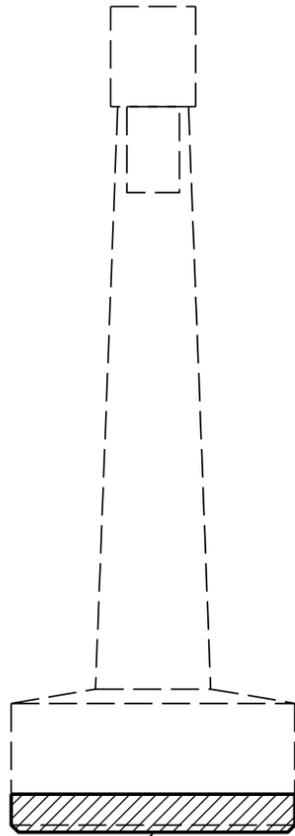
SUBSTRUCTURE CONC.
 REPAIR - BENT 184

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

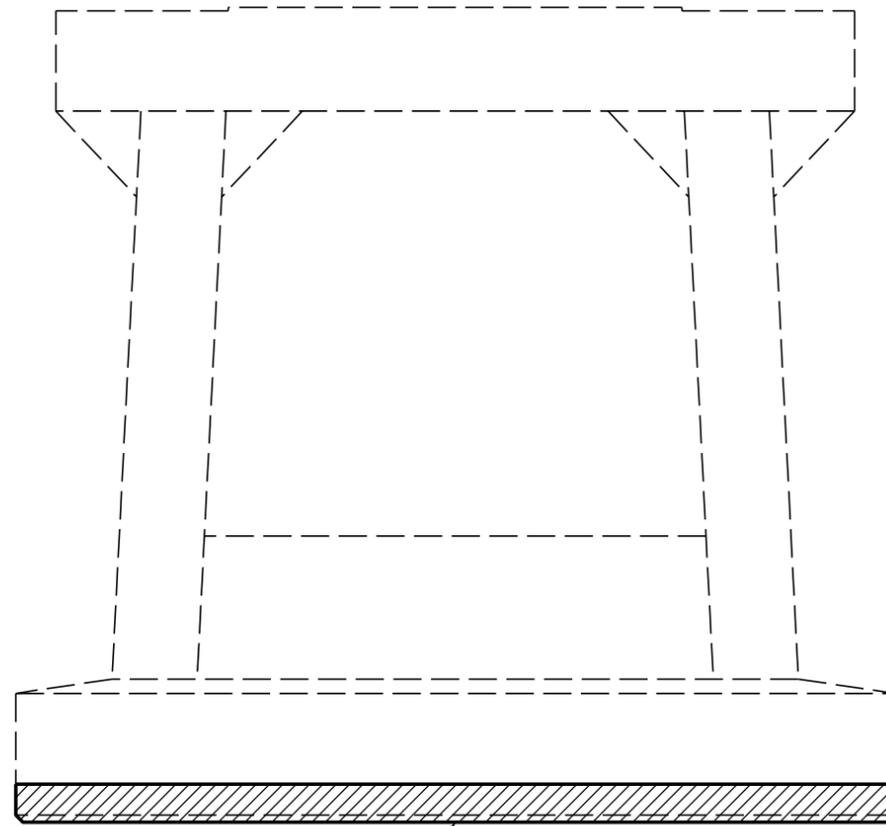
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



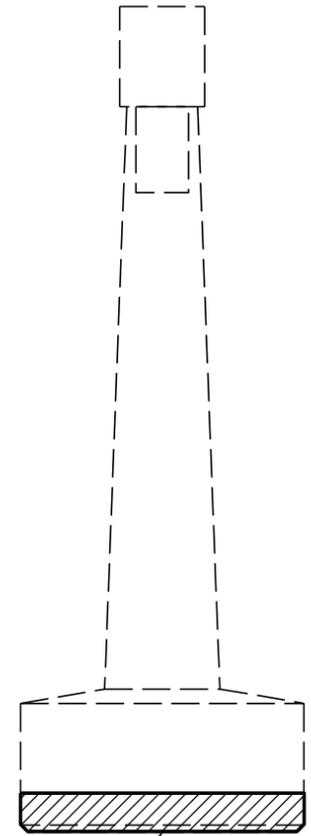
SEE NOTE BELOW
ELEVATION
WEST FACE



SEE NOTE BELOW
SIDE VIEW
SOUTH FACE



SEE NOTE BELOW
ELEVATION
EAST FACE



SEE NOTE BELOW
SIDE VIEW
NORTH FACE

NOTE - SEE CHANNEL BENT FOOTING RESTORATION SHEET

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

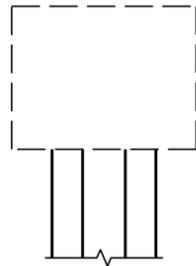
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 185

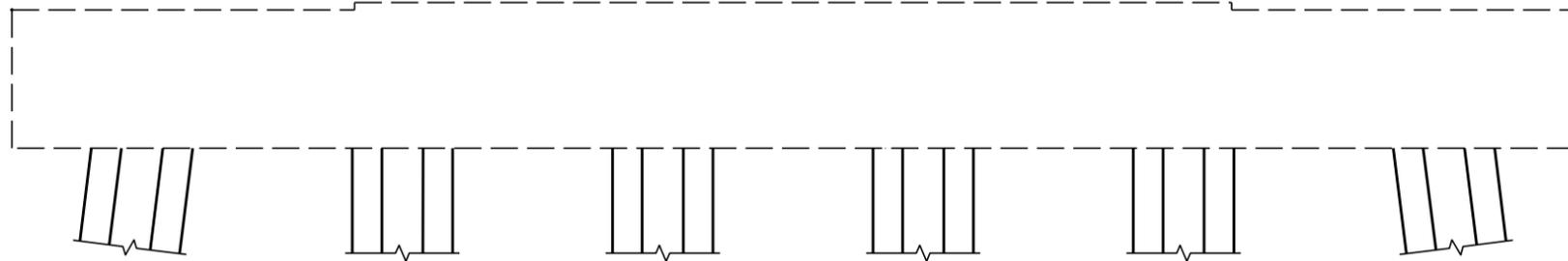
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

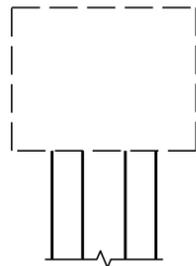
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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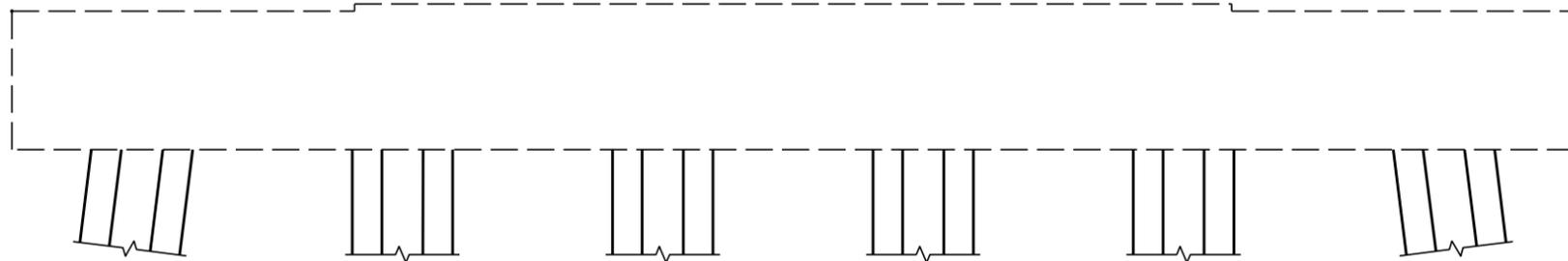
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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 *****SDGN*****
 *****USERNAME*****

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 Samuel Cullum
 19C97095C75A467...

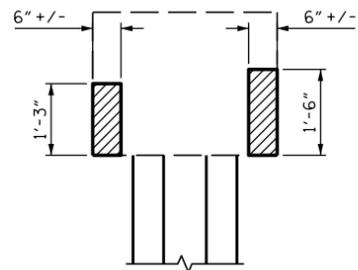


12/13/2016

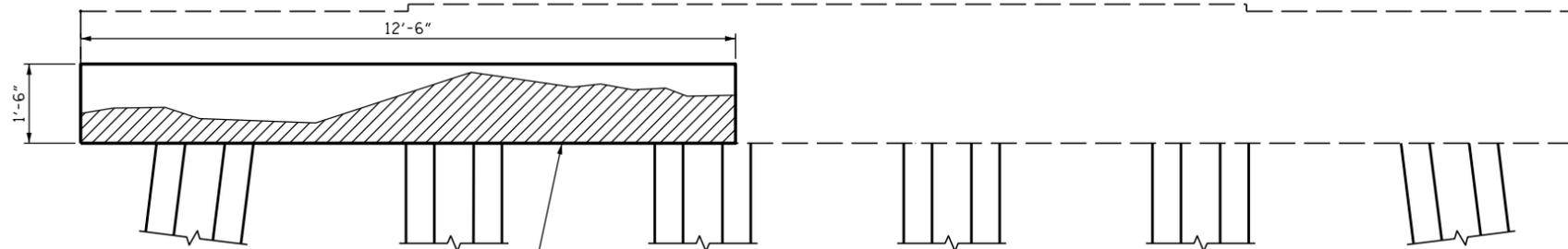
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 186						S-205
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

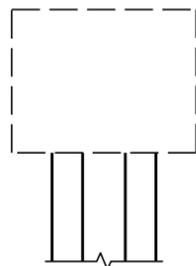


SIDE VIEW
NORTH FACE

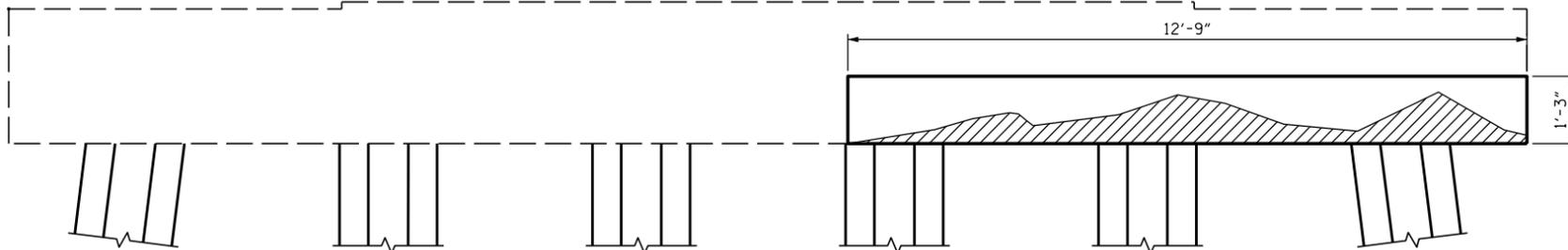


ANTICIPATE CAP
UNDERSIDE REPAIRS

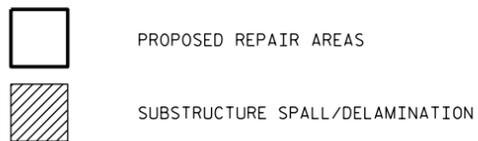
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

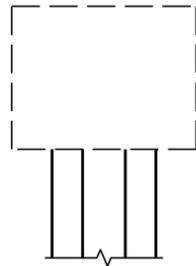
SUBSTRUCTURE CONC.
REPAIR - BENT 187

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

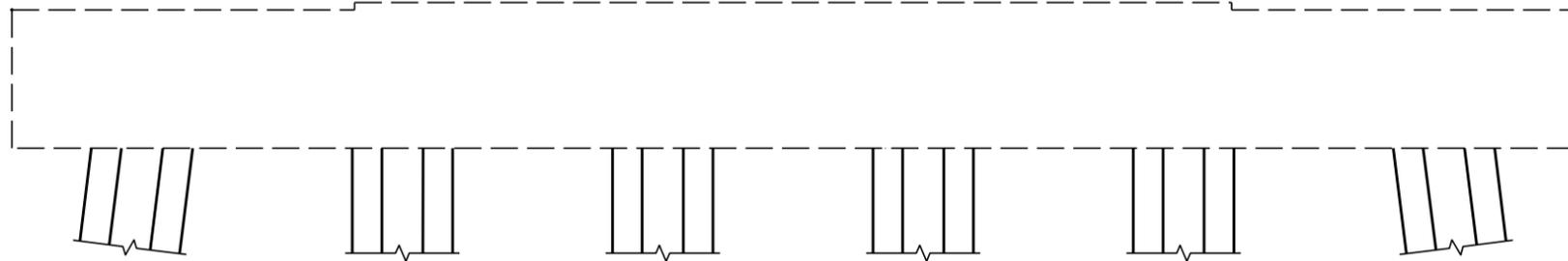
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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

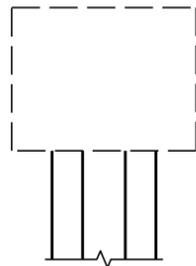
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



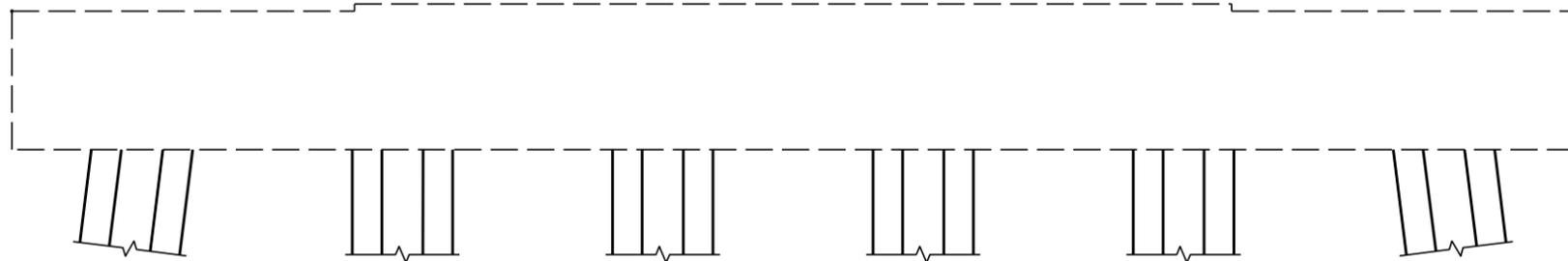
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



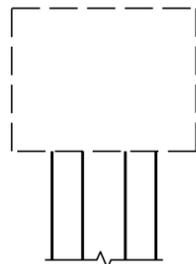
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 188						S-207
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

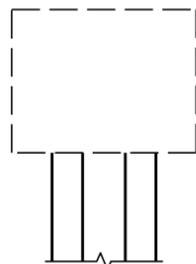
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FINAL UNLESS ALL
SIGNATURES COMPLETED



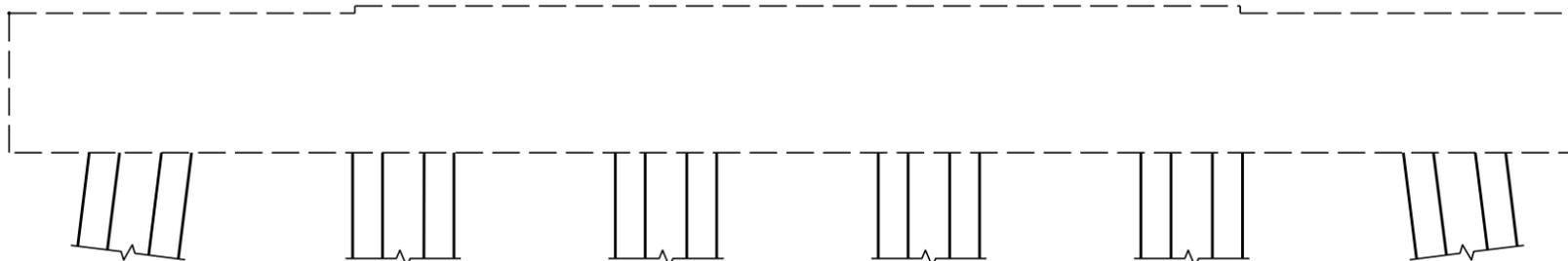
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS

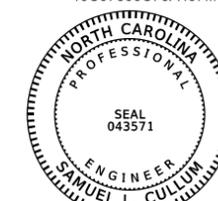


SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum
 19C97095C75A467...

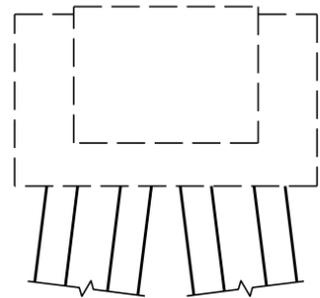


12/13/2016

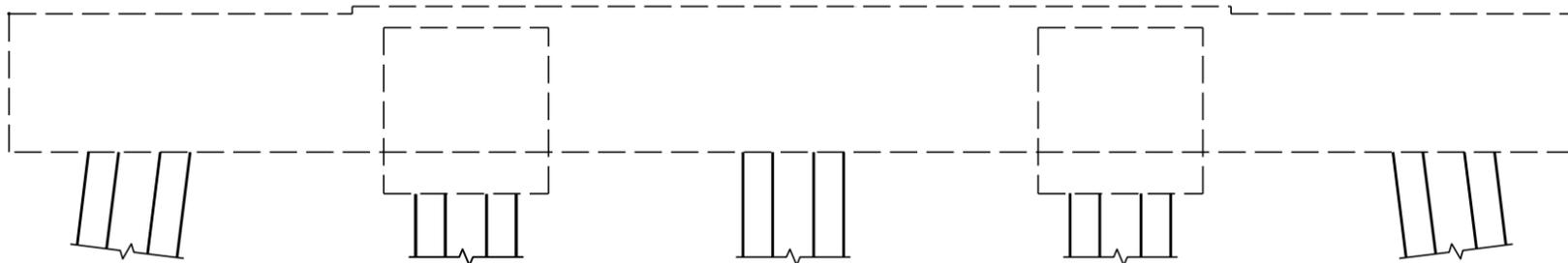
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 189						S-208
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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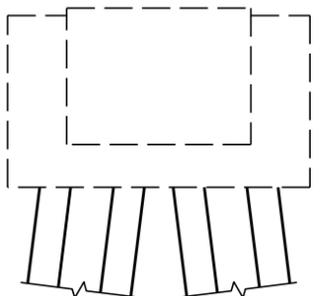
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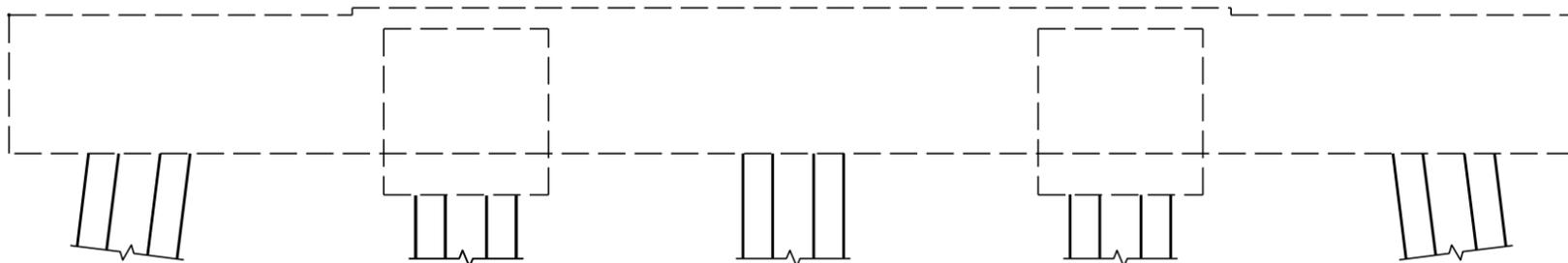
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

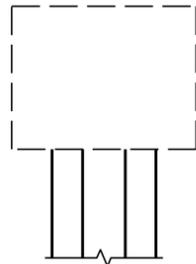


12/13/2016

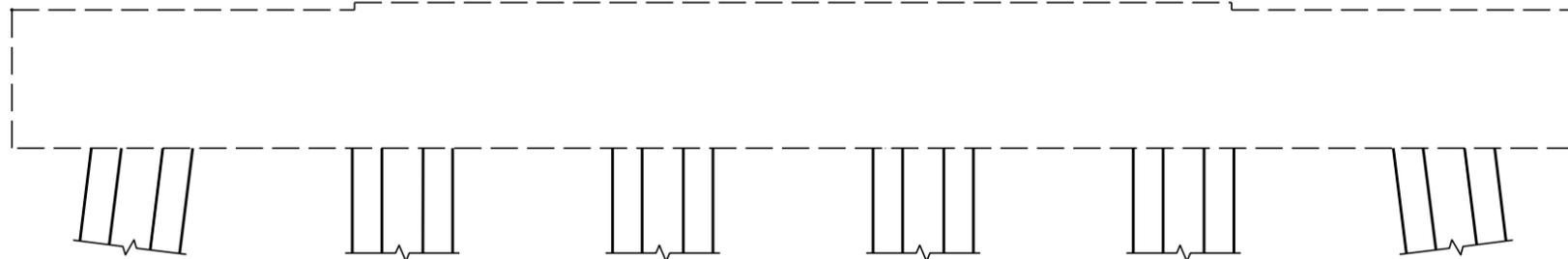
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 190						S-209
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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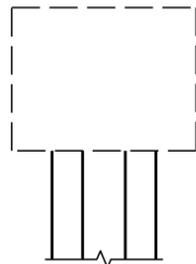
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 SIGNATURES COMPLETED



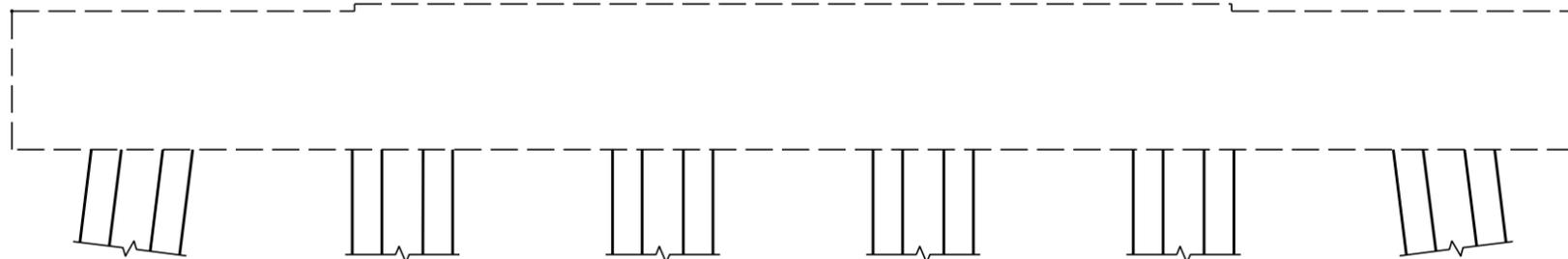
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

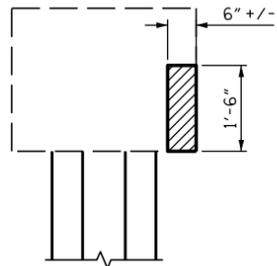


12/13/2016

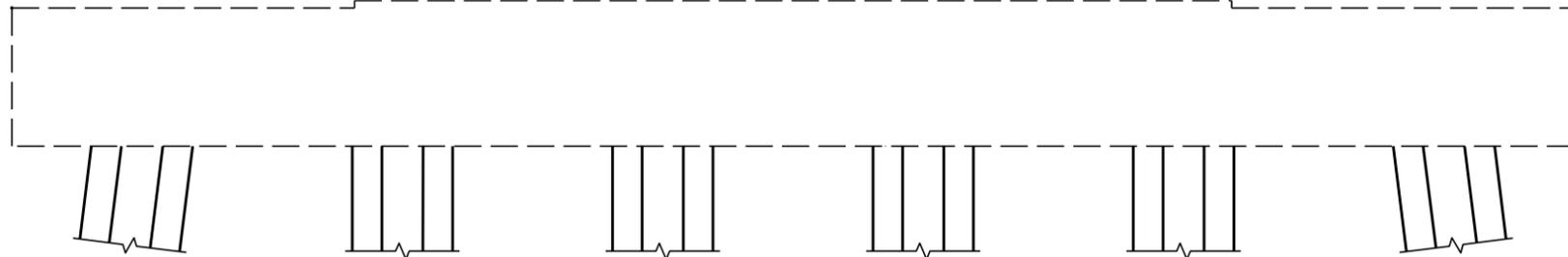
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 191						S-210
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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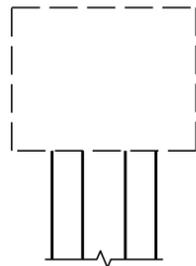
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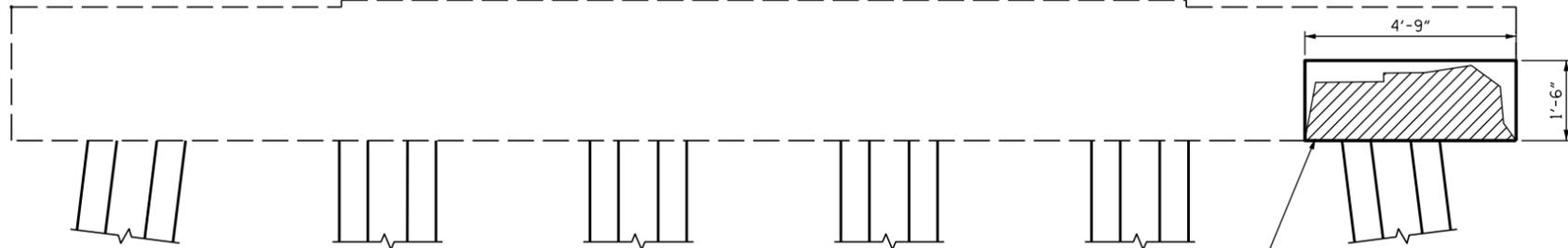
SIDE VIEW
NORTH FACE



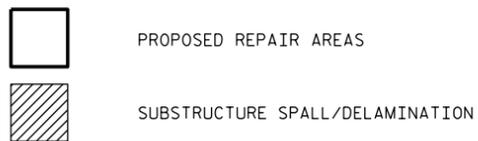
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

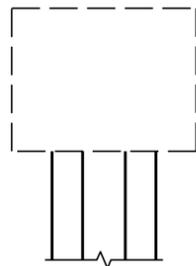
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 192**

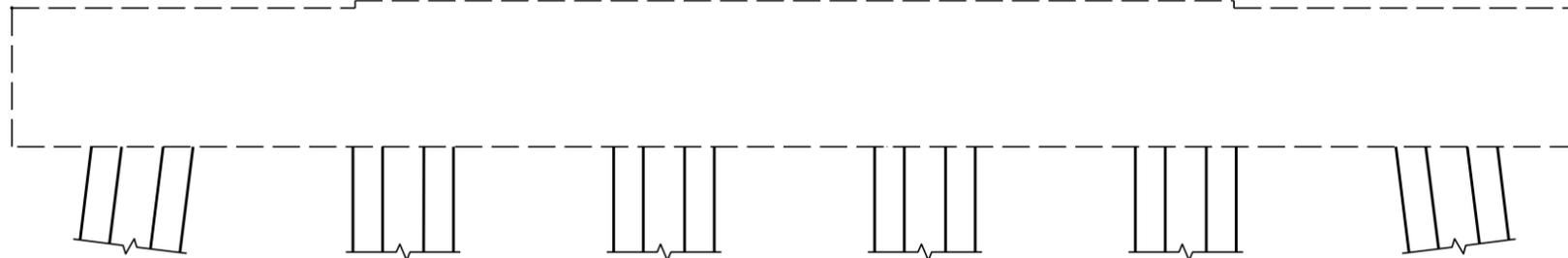
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

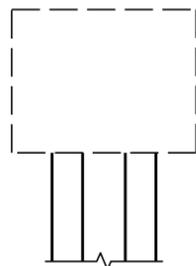
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



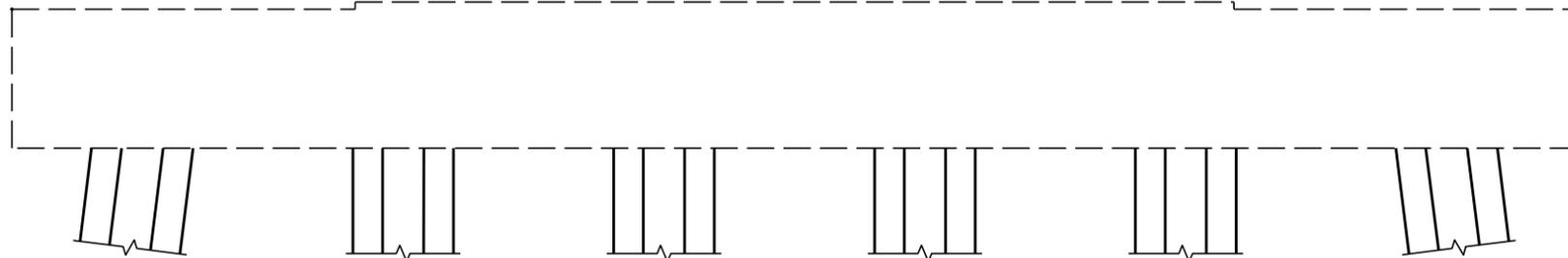
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

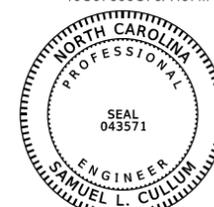


PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

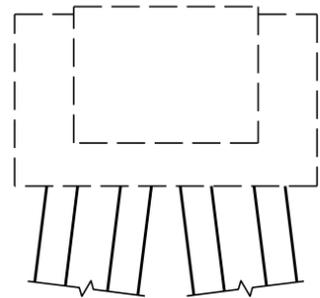
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 193**

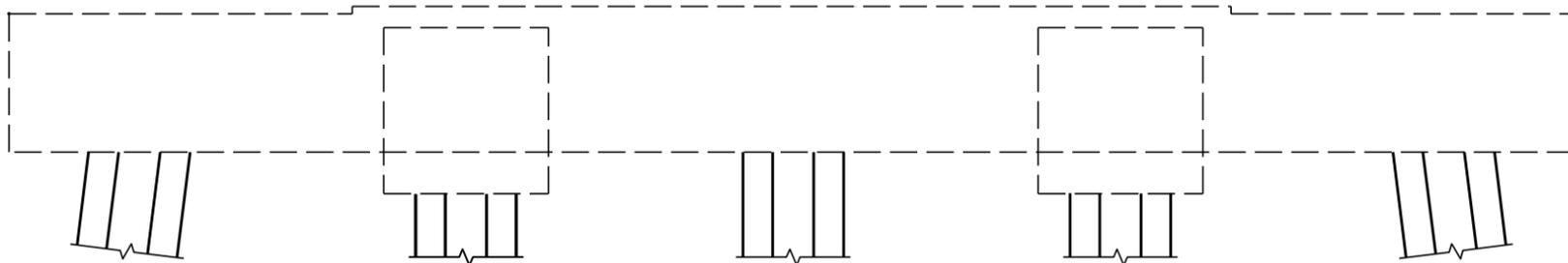
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

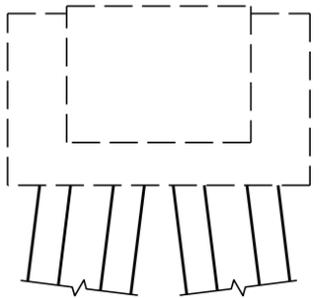
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



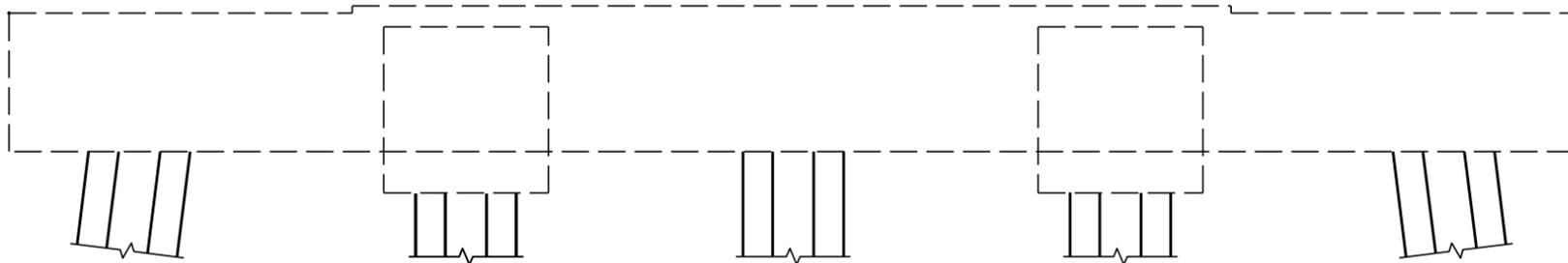
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

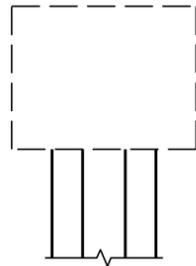


12/13/2016

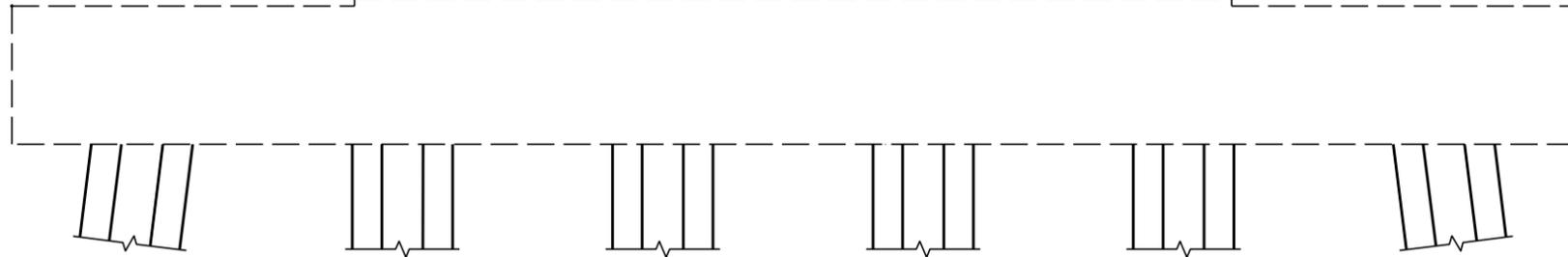
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 194						S-213
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			4

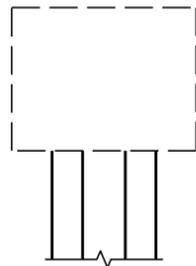
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED



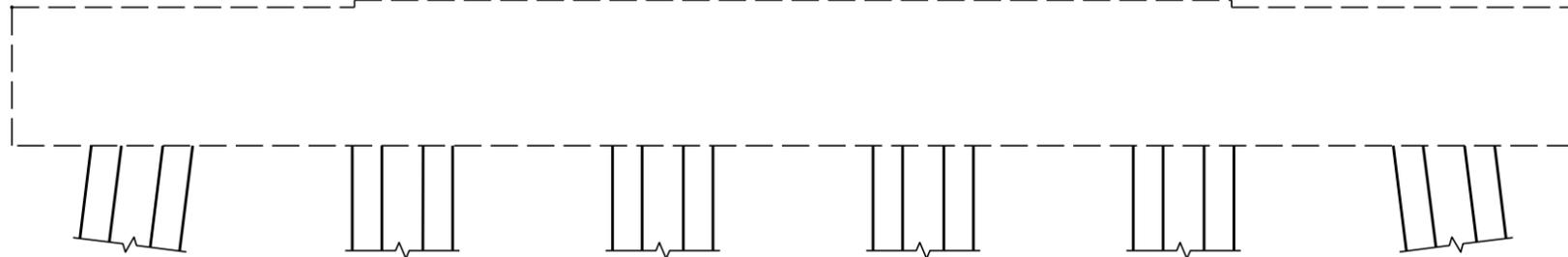
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum
 19C97095C75A467...



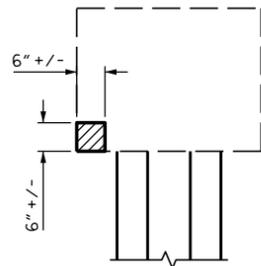
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

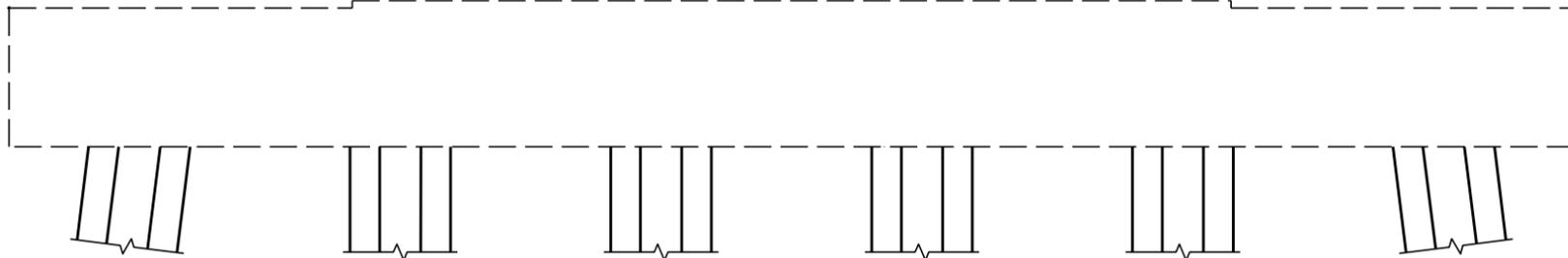
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 195

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

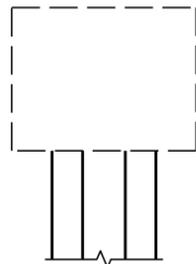
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-214
1			3			TOTAL SHEETS
2			4			



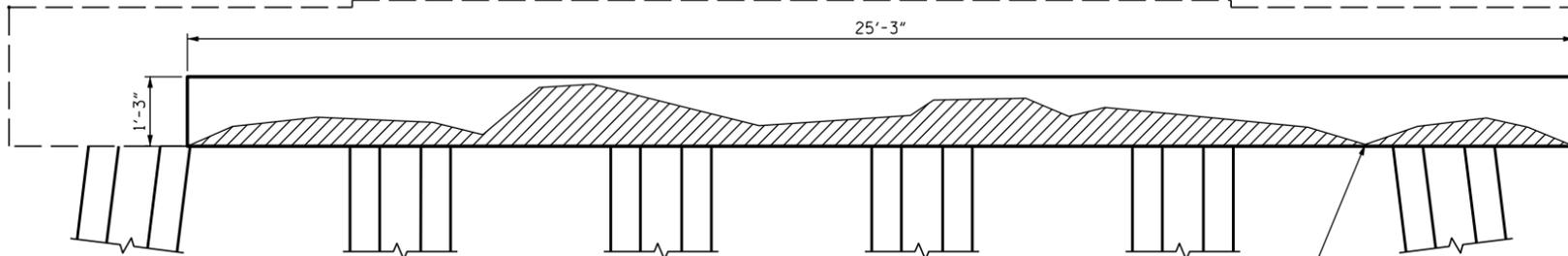
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

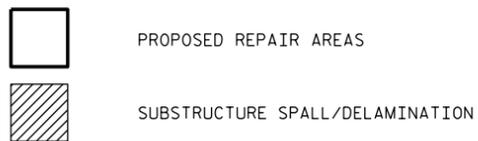


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



DocuSigned by:
Samuel Cullum
19C97095C75A467...



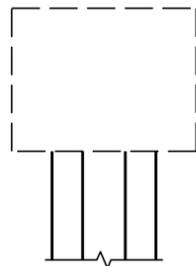
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

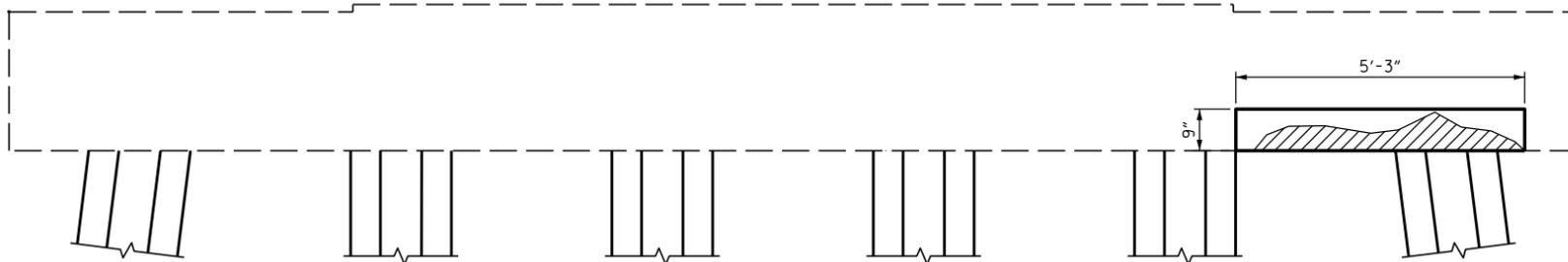
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 196						S-215
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
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DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

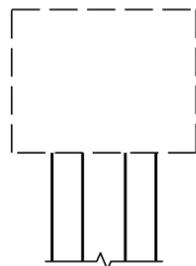
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FINAL UNLESS ALL
SIGNATURES COMPLETED



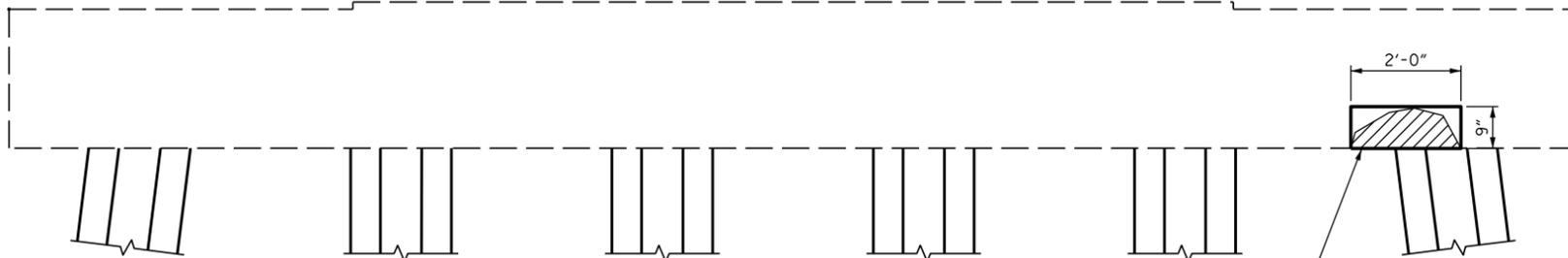
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

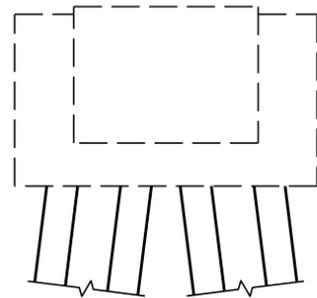
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

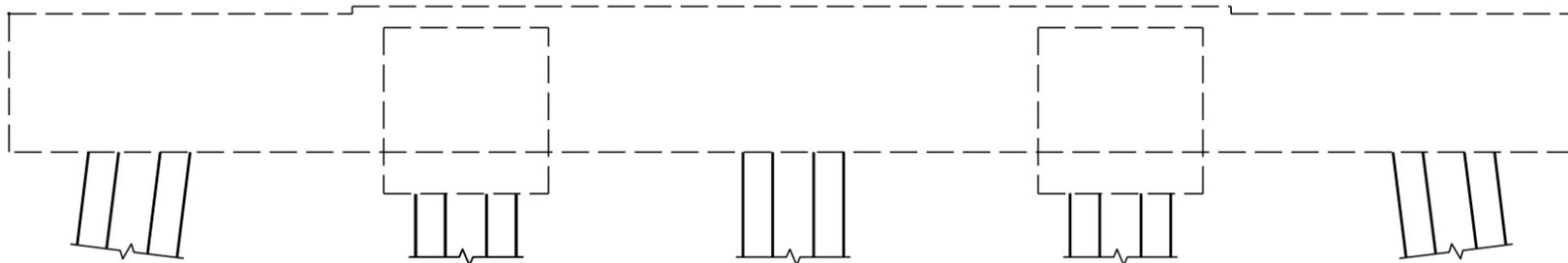
SUBSTRUCTURE CONC.
 REPAIR - BENT 197

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

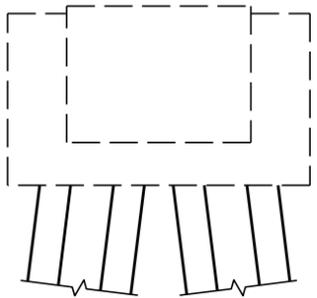
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



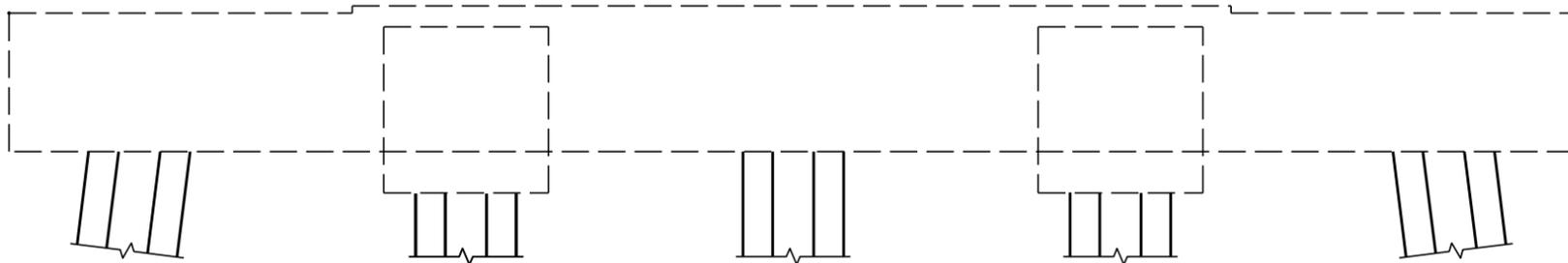
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

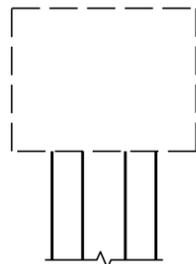
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

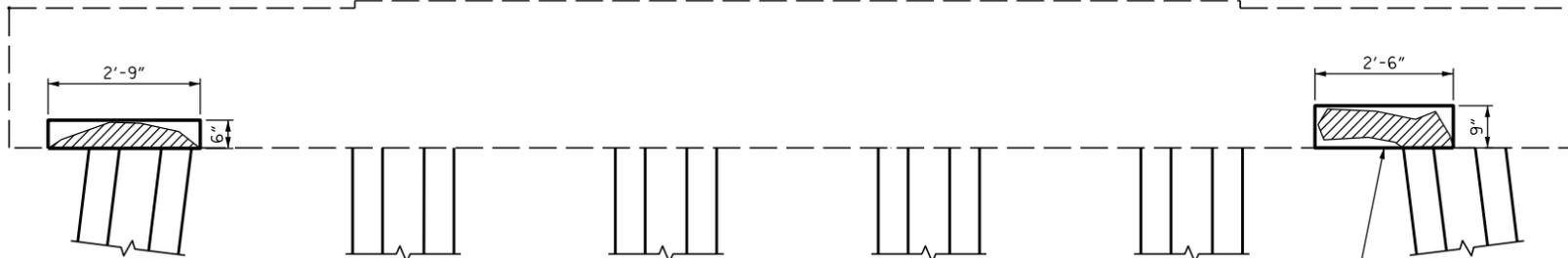
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 198						S-217
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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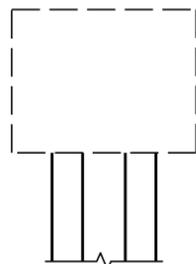
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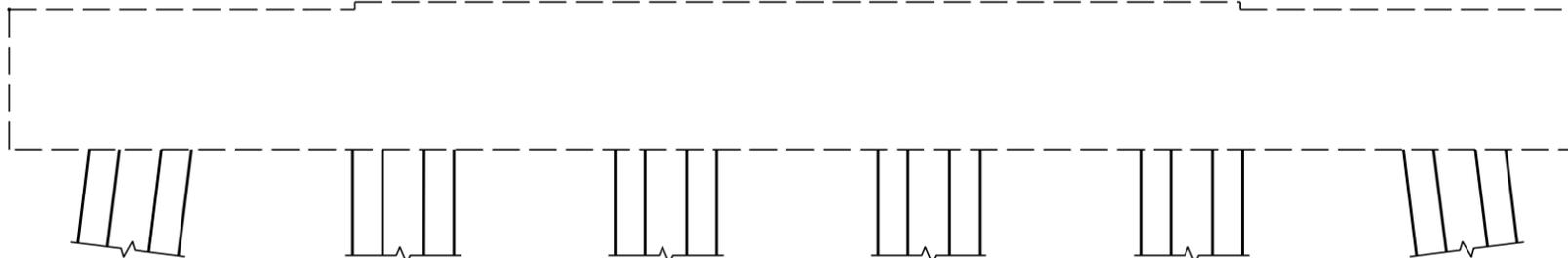
SIDE VIEW
NORTH FACE



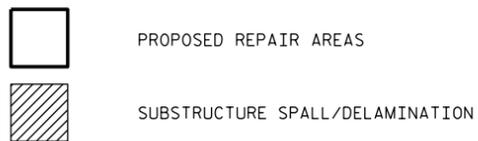
ELEVATION
WEST FACE



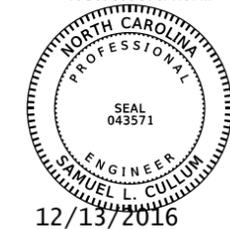
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

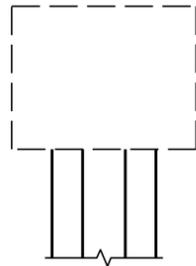
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 199

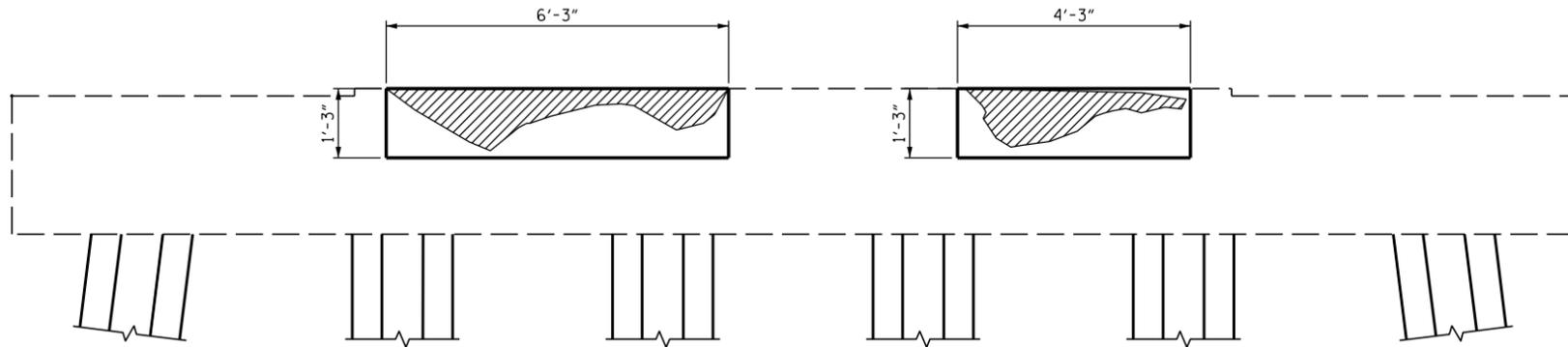
DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

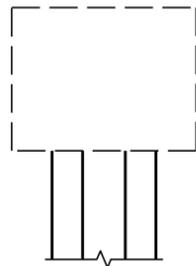
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-218
2			4			TOTAL SHEETS



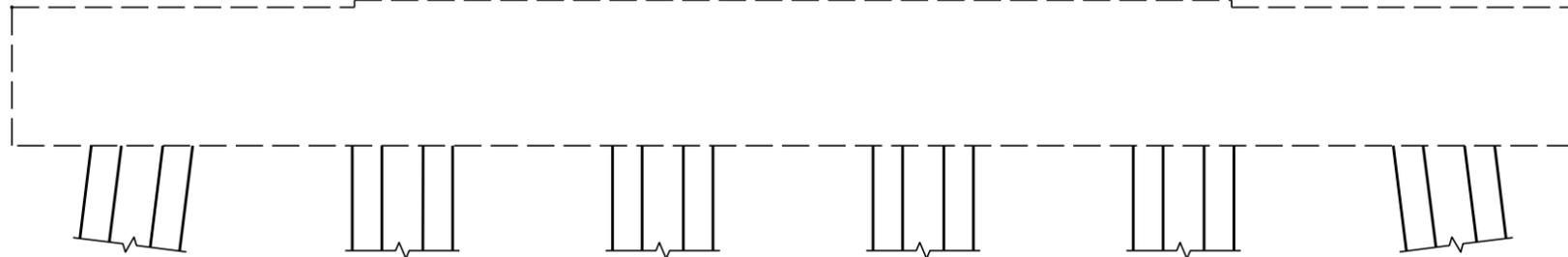
SIDE VIEW
NORTH FACE



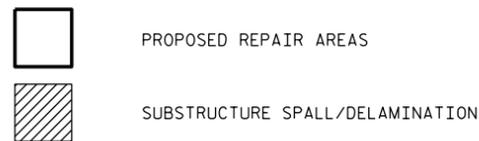
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

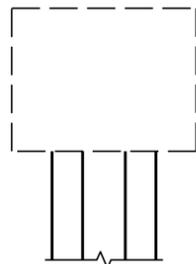
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 200						S-219
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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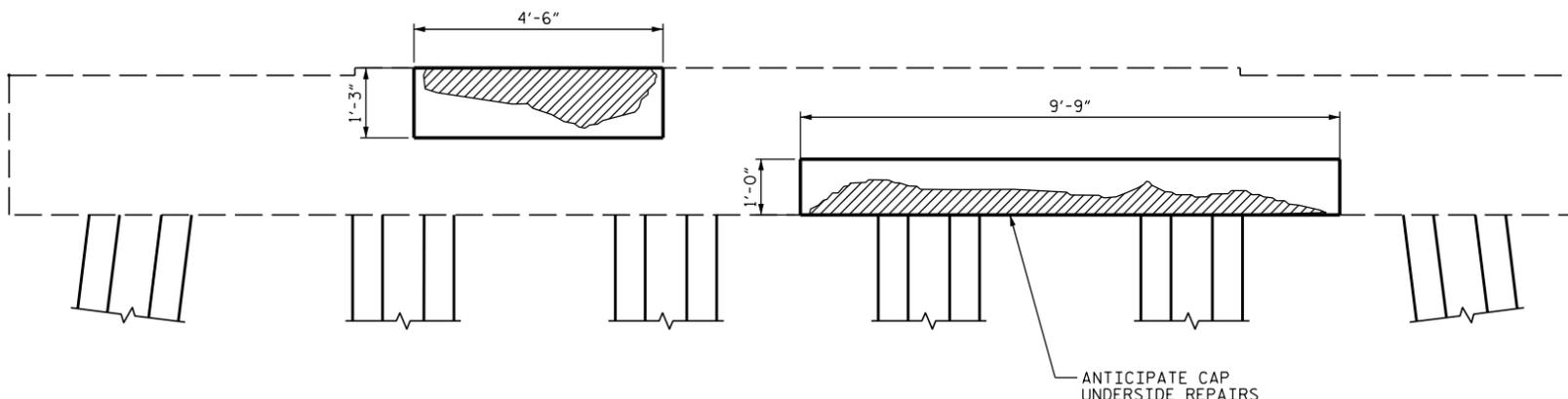
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

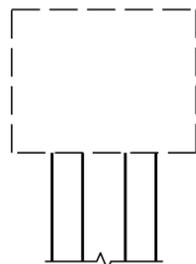
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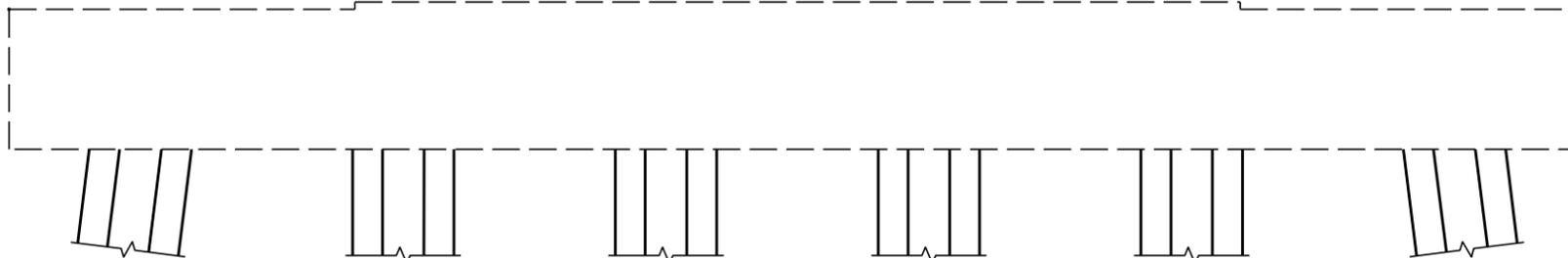
SIDE VIEW
NORTH FACE



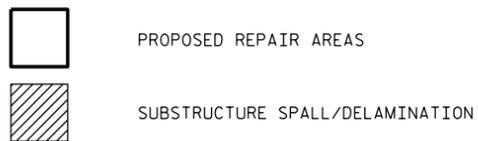
ELEVATION
WEST FACE



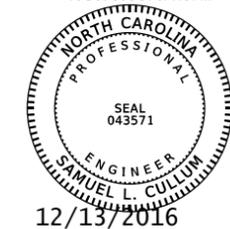
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

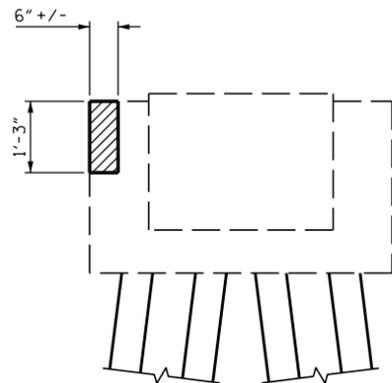
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 201

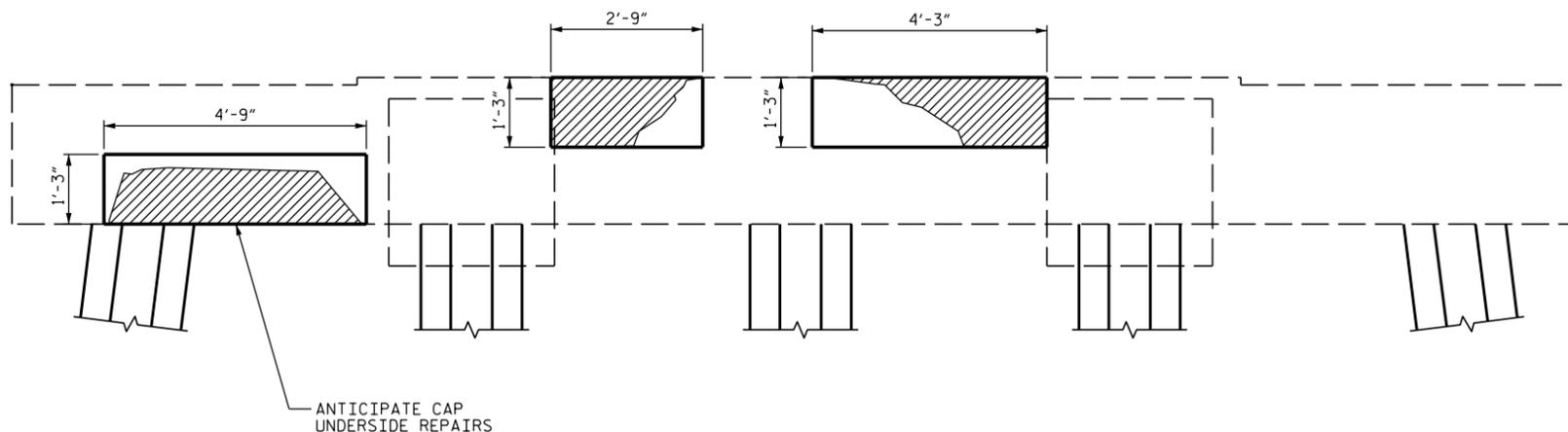
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

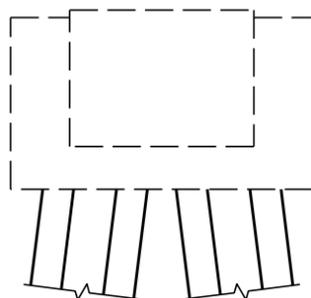
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



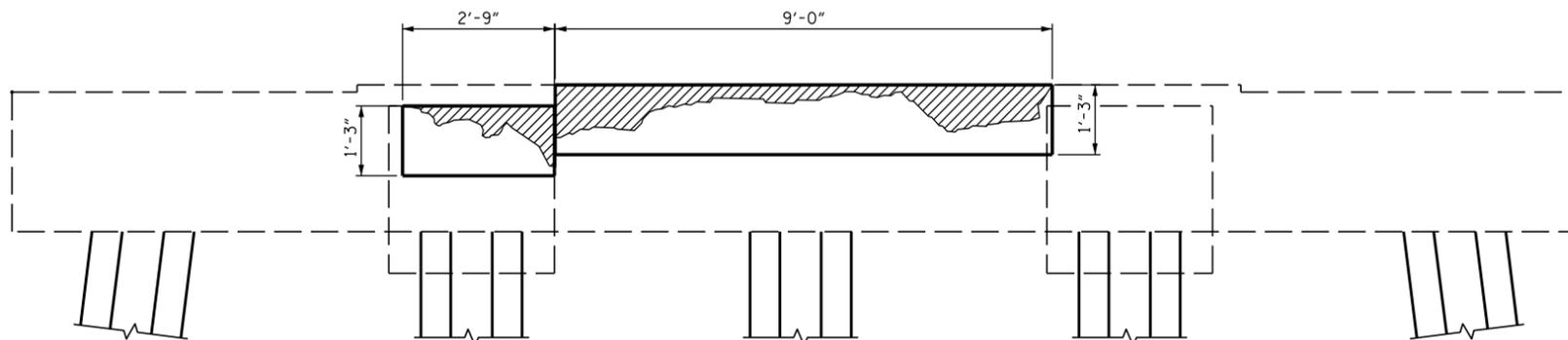
SIDE VIEW
NORTH FACE



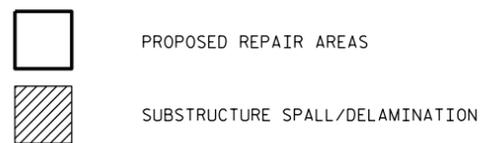
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



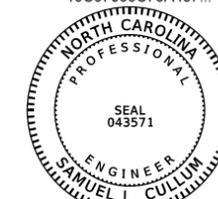
ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

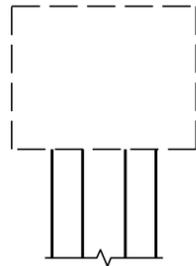
SUBSTRUCTURE CONC.
 REPAIR - BENT 202

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

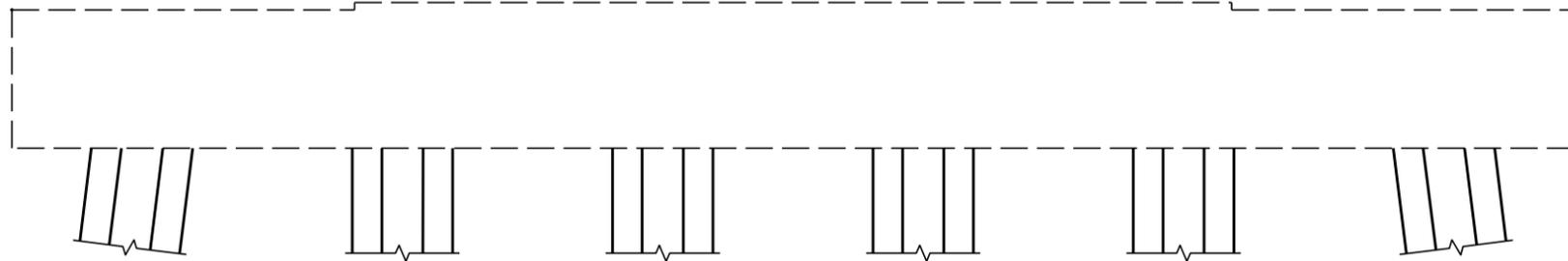
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DOCUMENT NOT CONSIDERED
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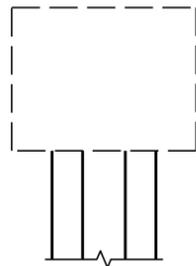
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



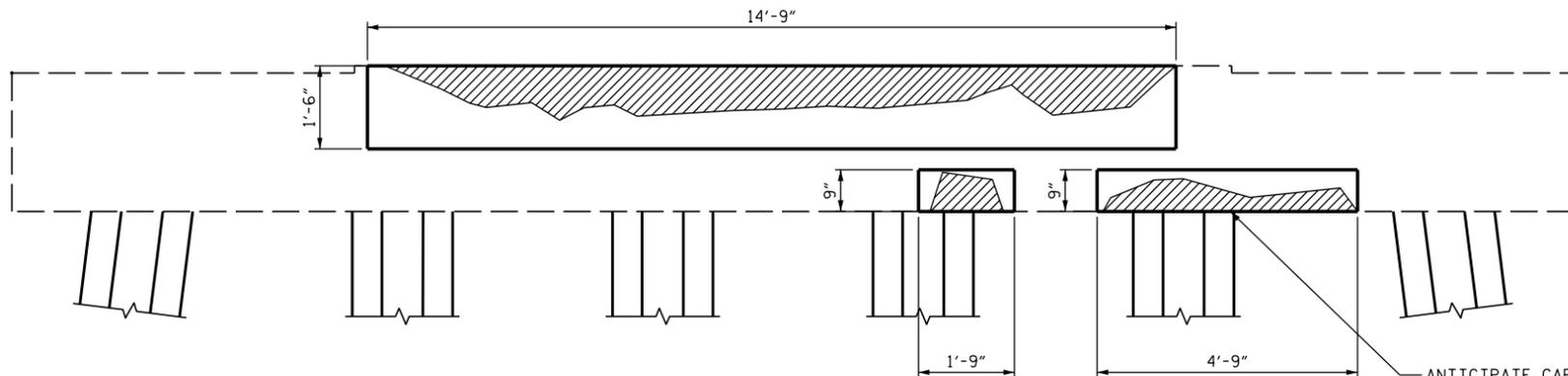
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

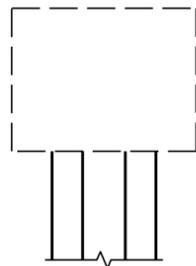
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 203**

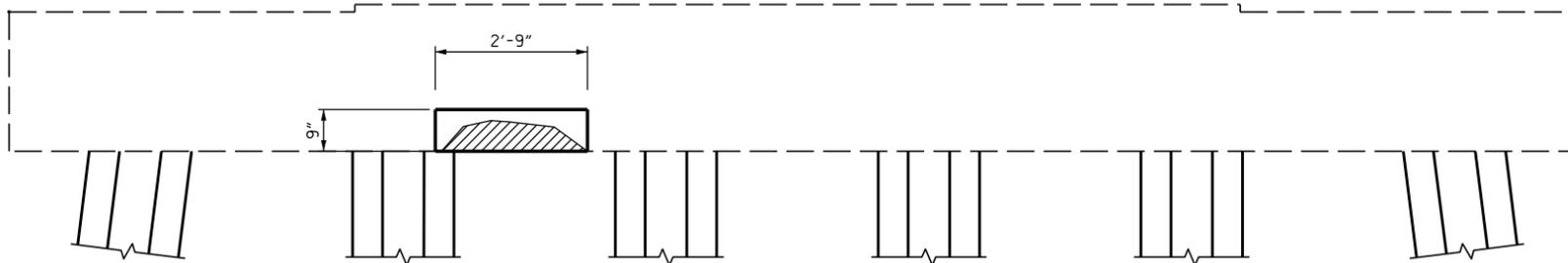
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
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DOCUMENT NOT CONSIDERED
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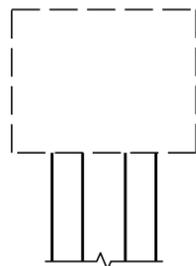
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-222
2			4			TOTAL SHEETS



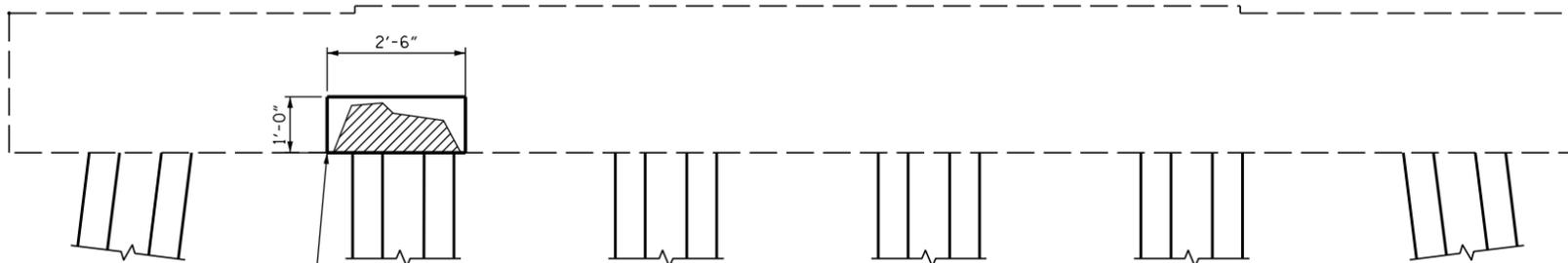
SIDE VIEW
NORTH FACE



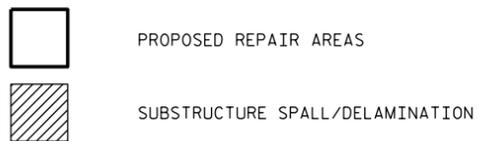
ELEVATION
WEST FACE



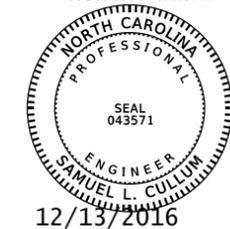
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

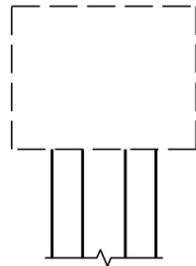
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 204

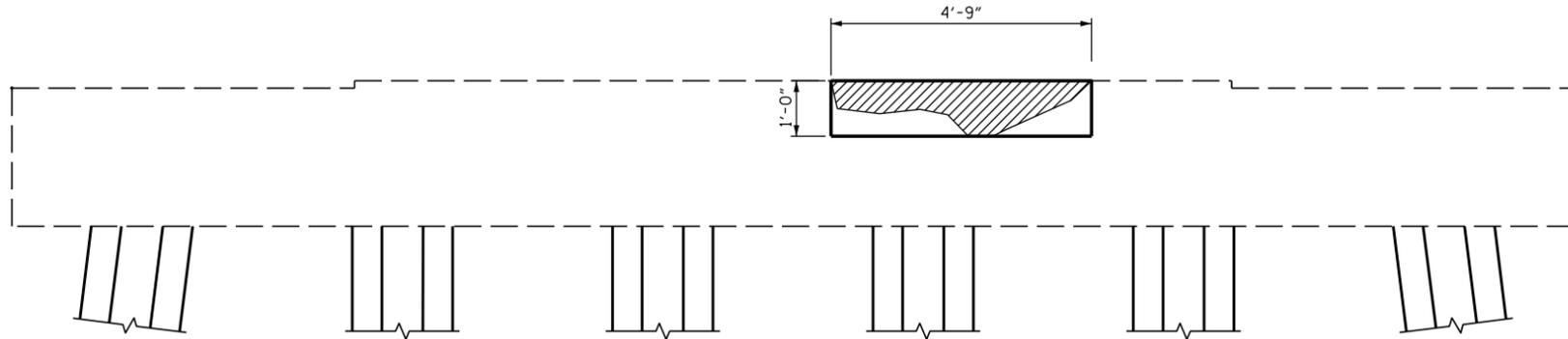
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

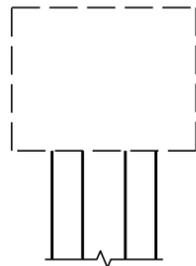
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-223
2			4			TOTAL SHEETS



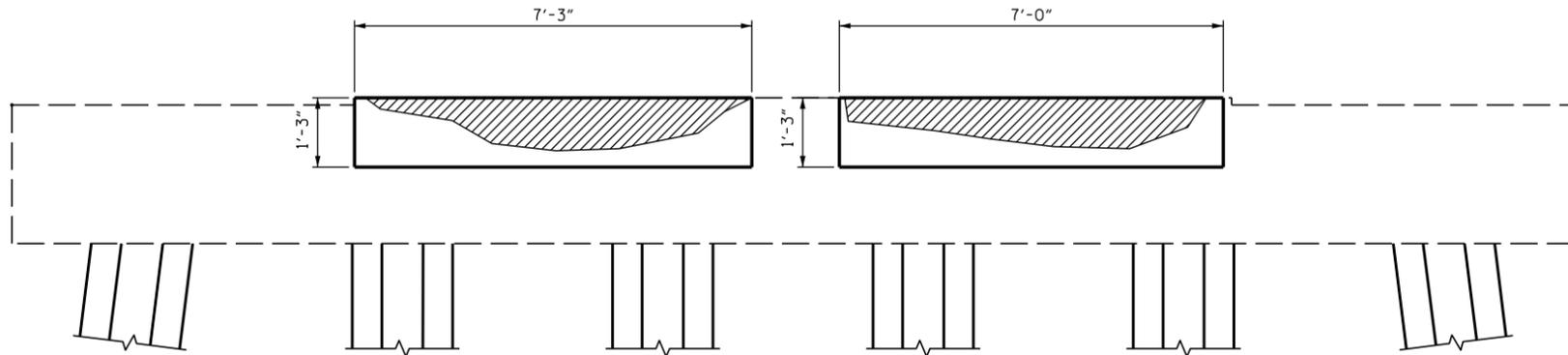
SIDE VIEW
NORTH FACE



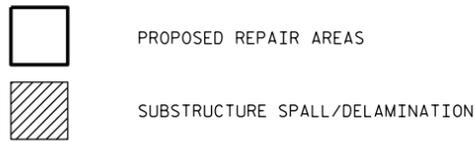
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

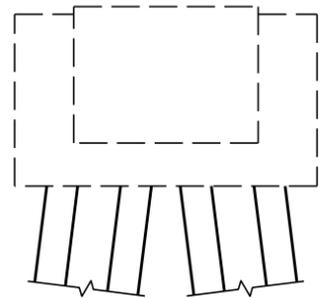
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 205						S-224
REVISIONS						TOTAL SHEETS
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2			4			4

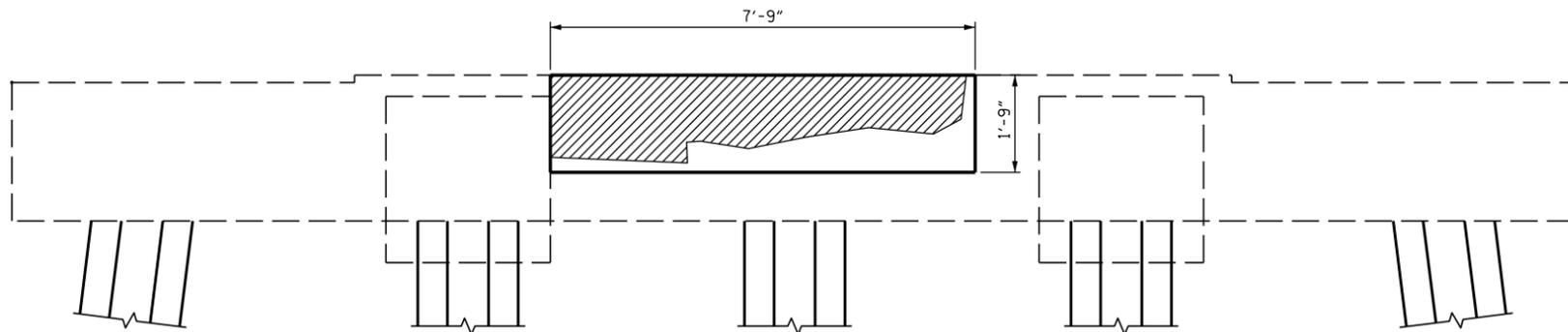
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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FINAL UNLESS ALL
SIGNATURES COMPLETED

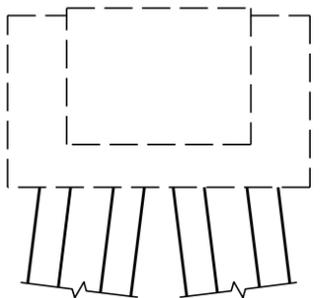
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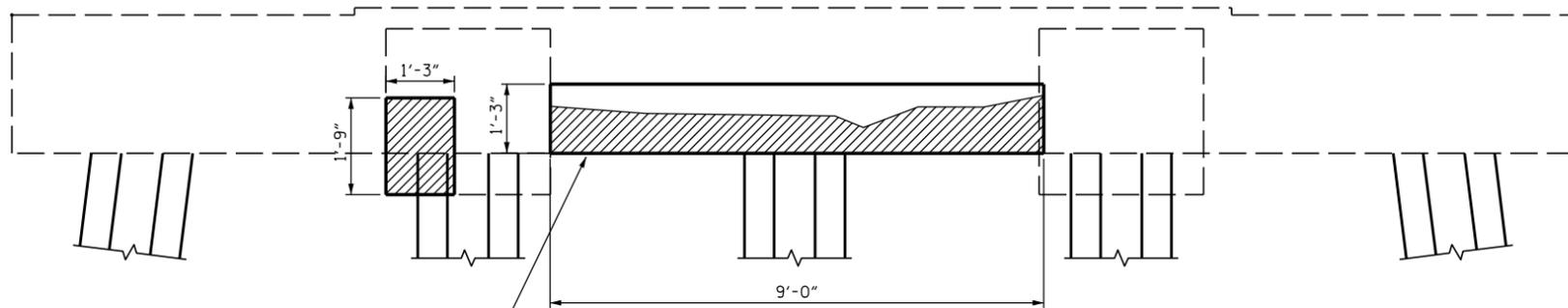
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

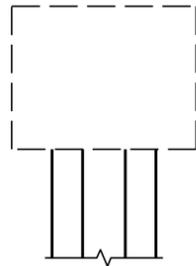
*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
 Samuel Cullum
 19C97095C75A467...
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 SEAL
 043571
 SAMUEL L. CULLUM
 12/13/2016

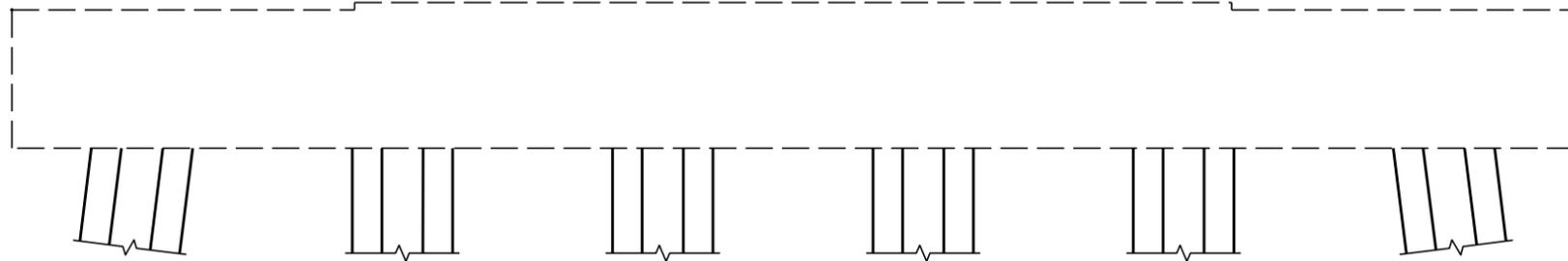
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 206						S-225
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			4

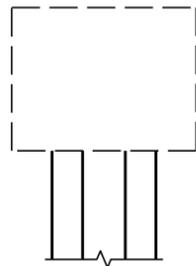
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 SIGNATURES COMPLETED



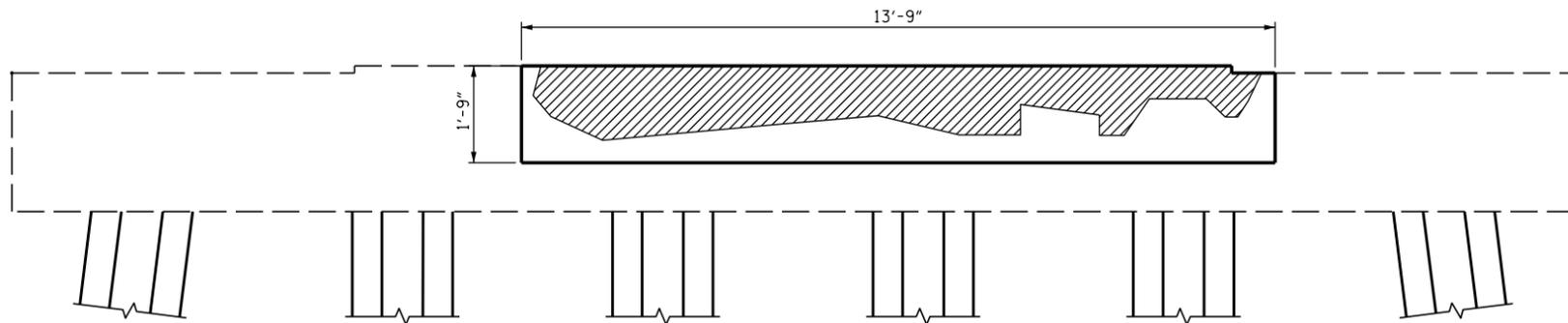
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

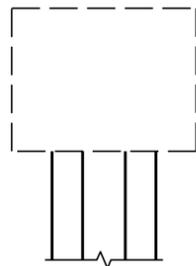
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE CONC. REPAIR - BENT 207					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-226
					TOTAL SHEETS

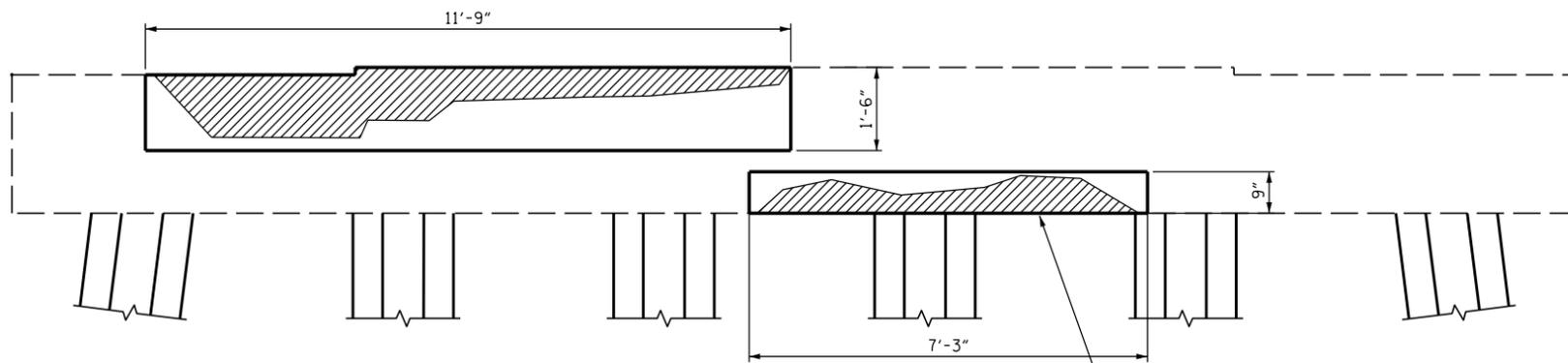
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

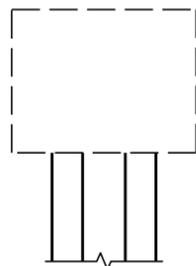
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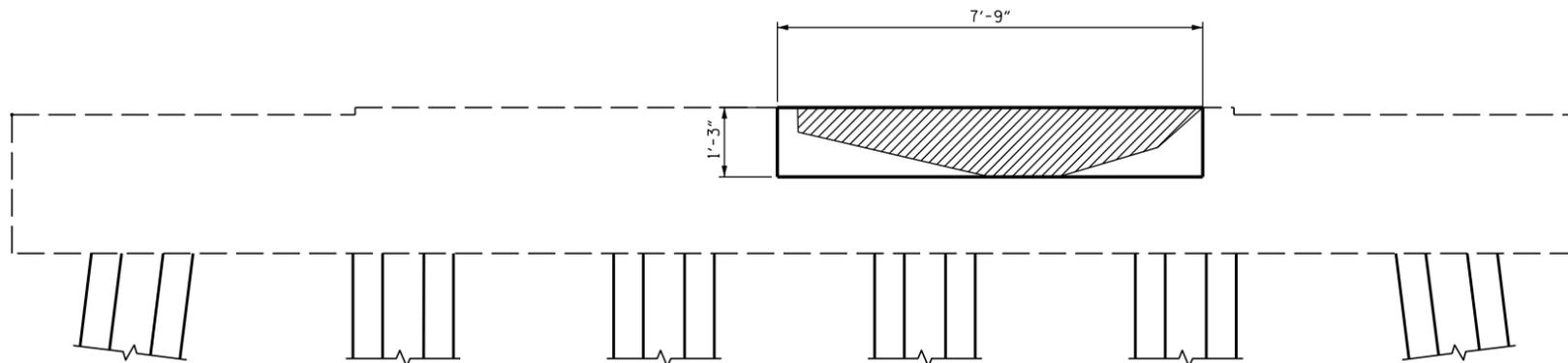
SIDE VIEW
NORTH FACE



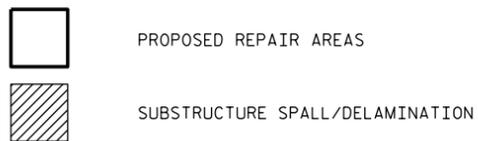
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

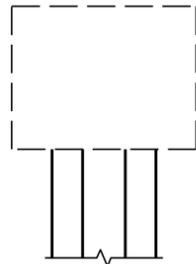
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 208

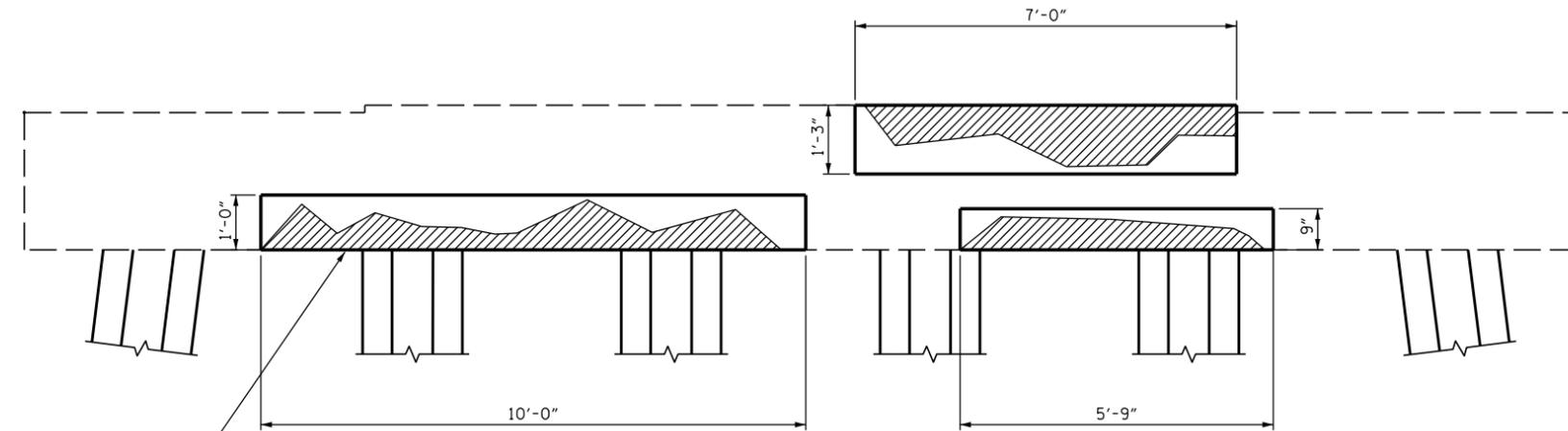
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

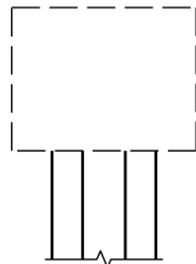


SIDE VIEW
NORTH FACE

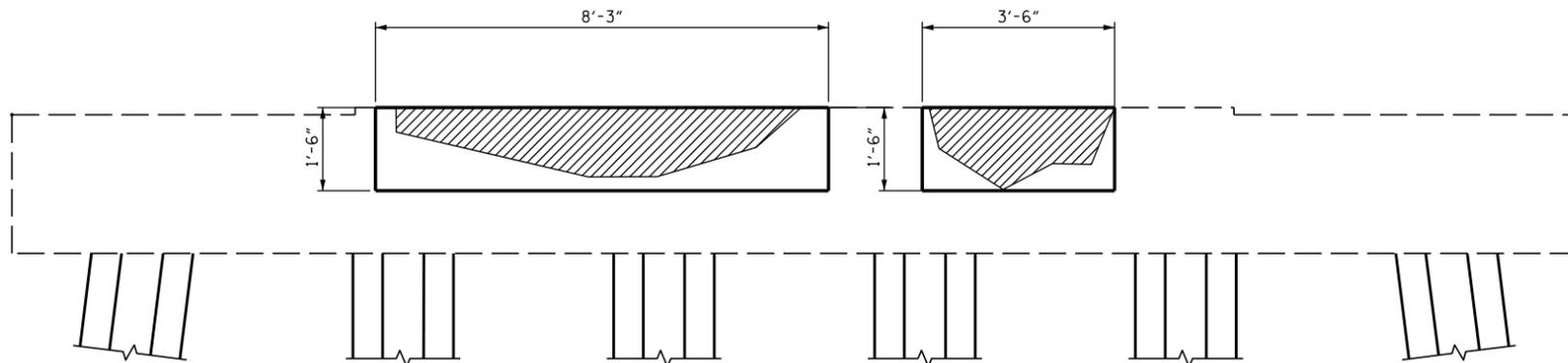


ANTICIPATE CAP
UNDERSIDE REPAIRS

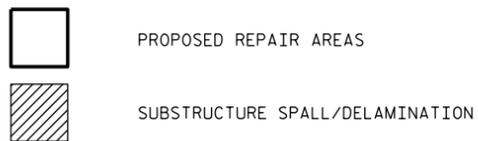
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
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12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

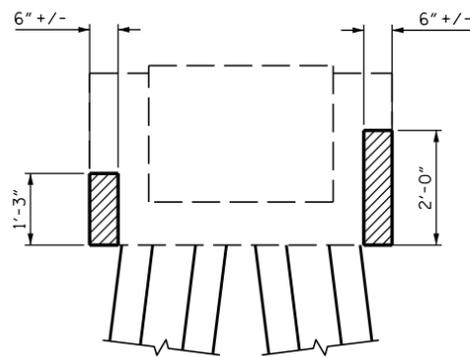
SUBSTRUCTURE CONC.
 REPAIR - BENT 209

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

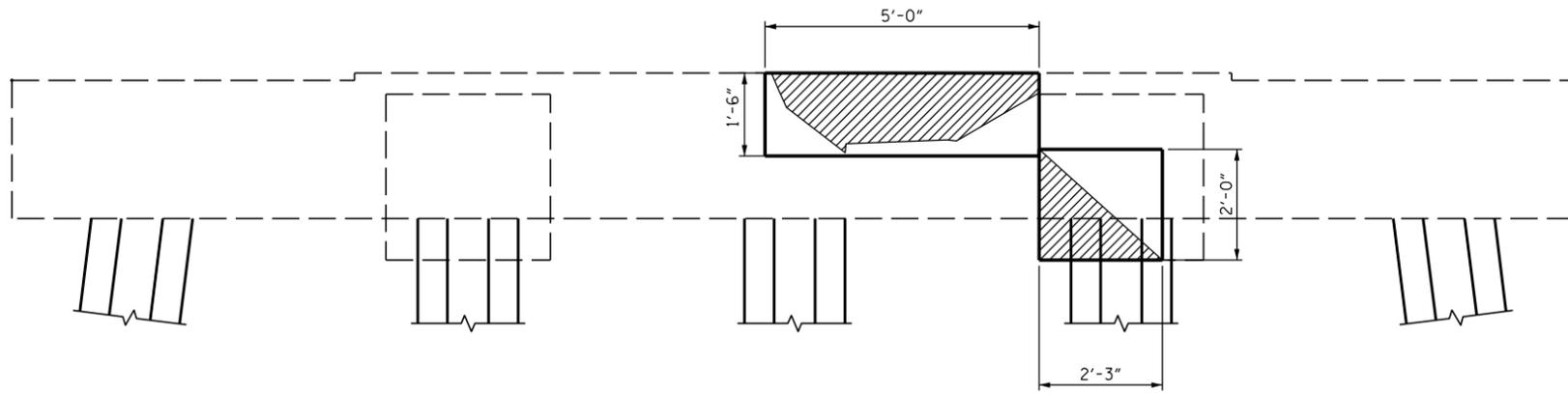
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS

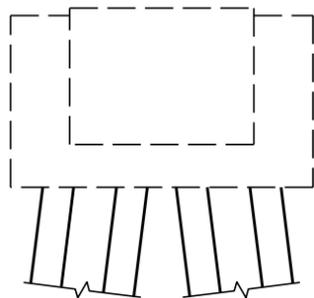
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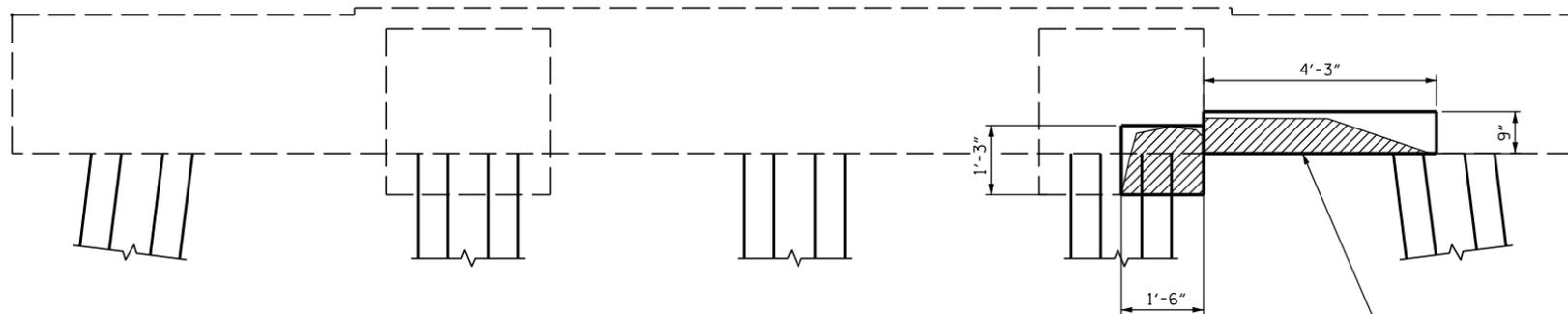
SIDE VIEW
NORTH FACE



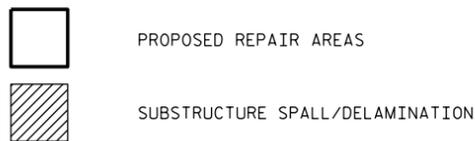
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

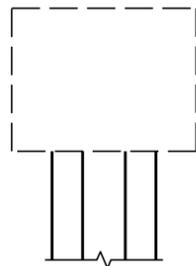
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 210

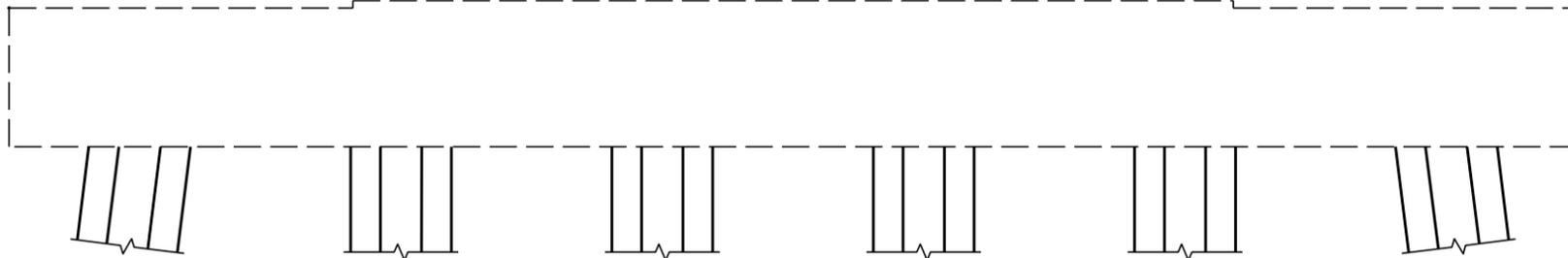
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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SIGNATURES COMPLETED

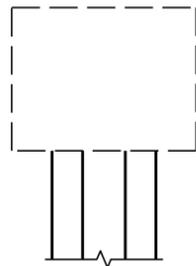
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-229
2			4			TOTAL SHEETS



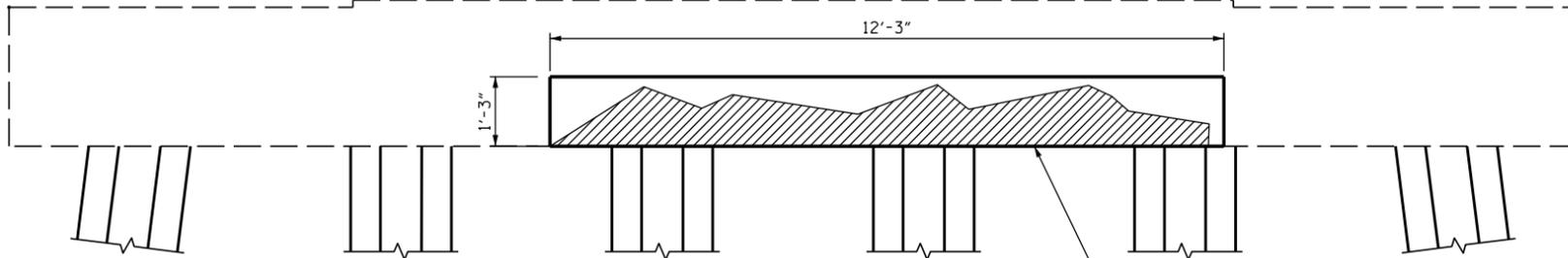
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
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 *****USERNAME*****

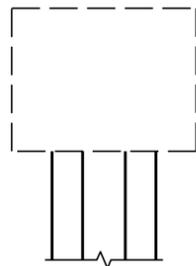
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

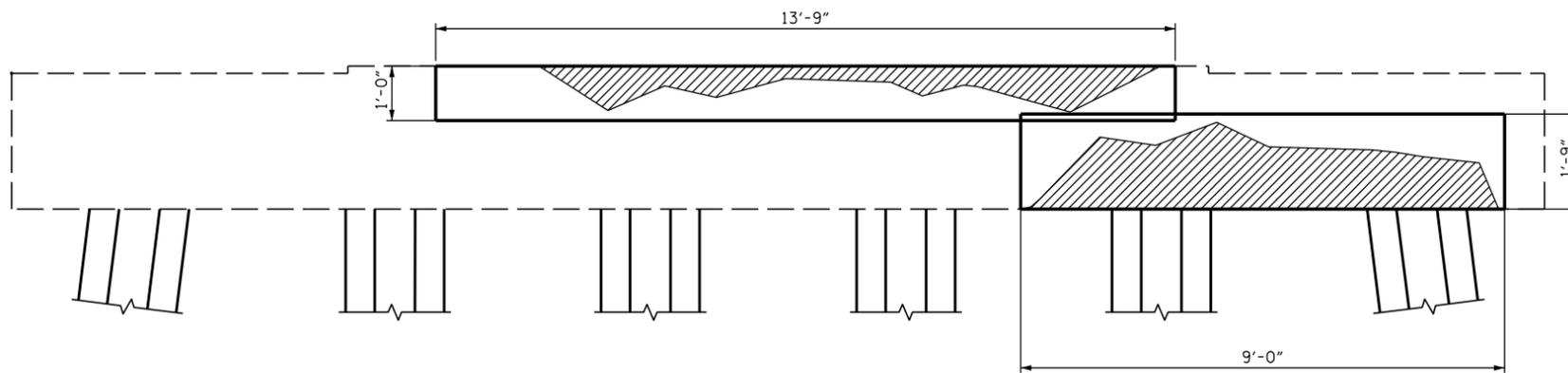
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 211						S-230
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

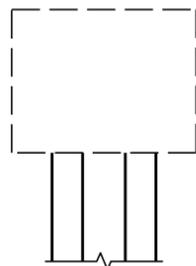
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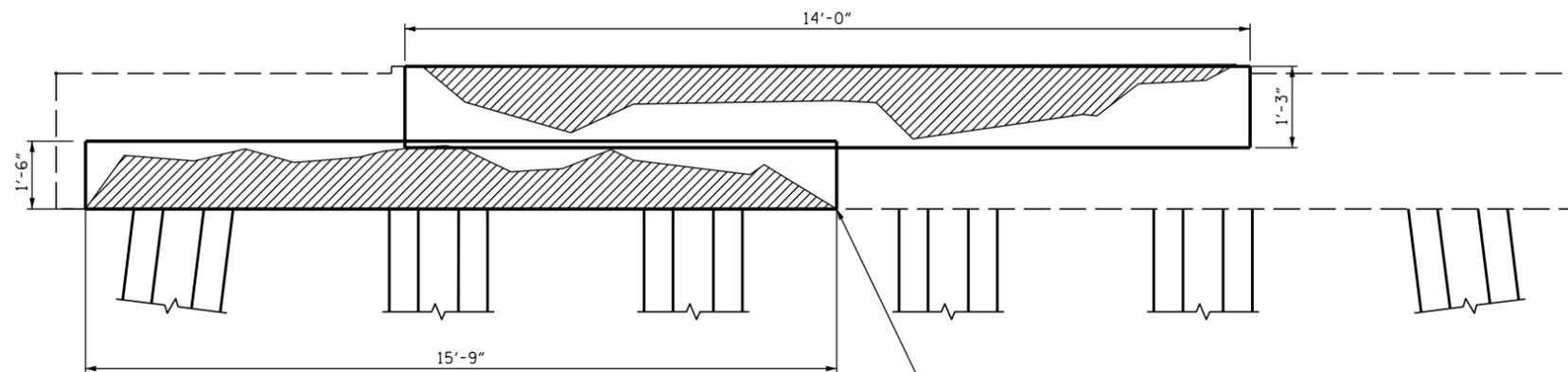
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



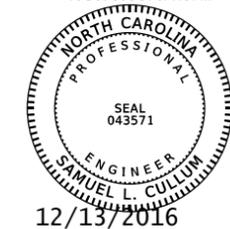
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

- PROPOSED REPAIR AREAS
- SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

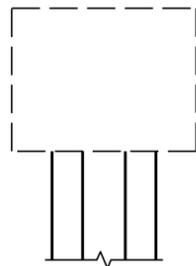
SUBSTRUCTURE CONC.
REPAIR - BENT 212

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

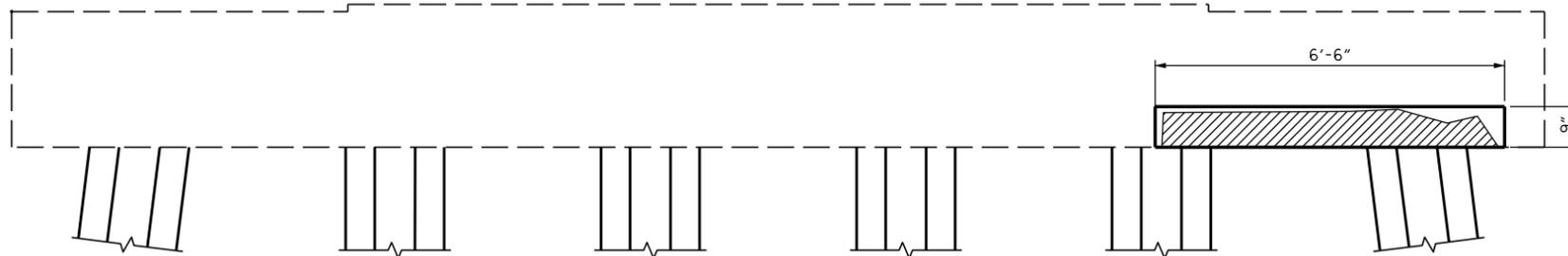
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SIGNATURES COMPLETED

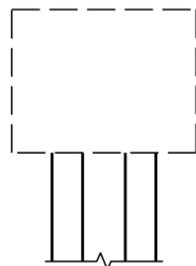
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



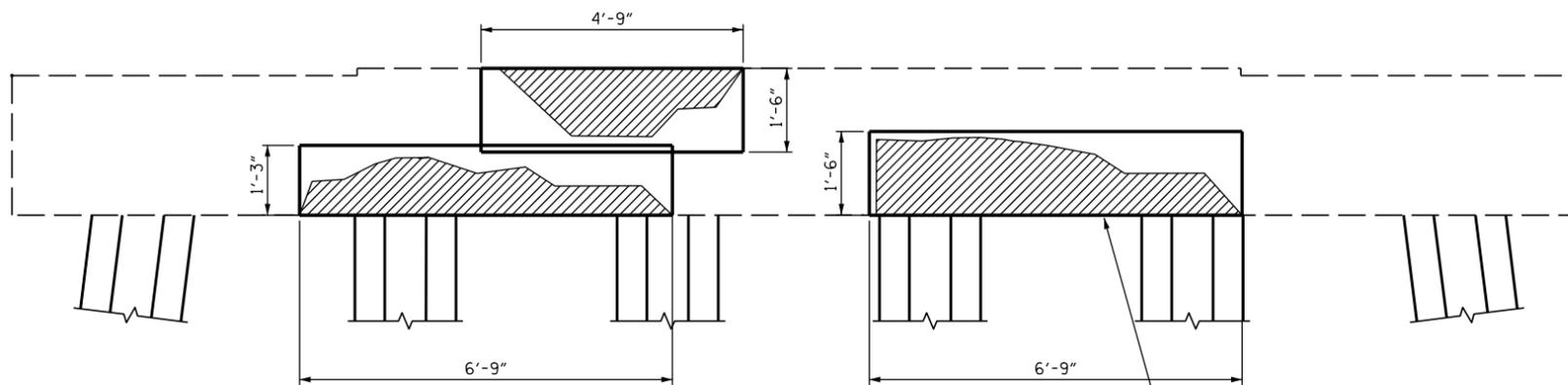
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE

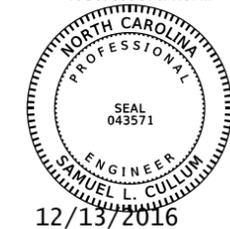


ELEVATION
EAST FACE



PROPOSED REPAIR AREAS
SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

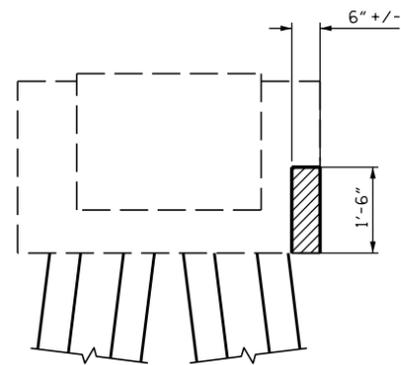
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 213

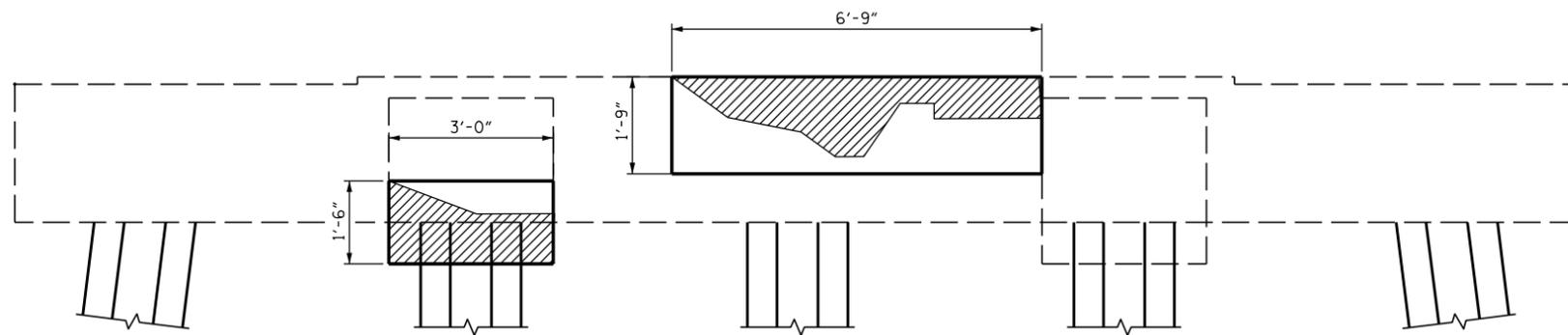
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

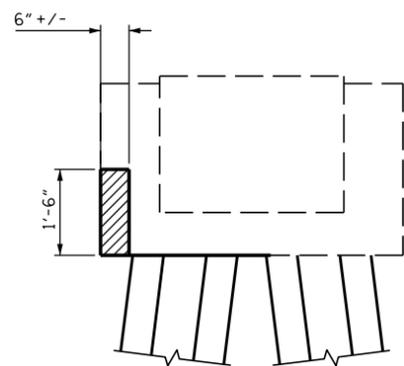
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2			4			TOTAL SHEETS



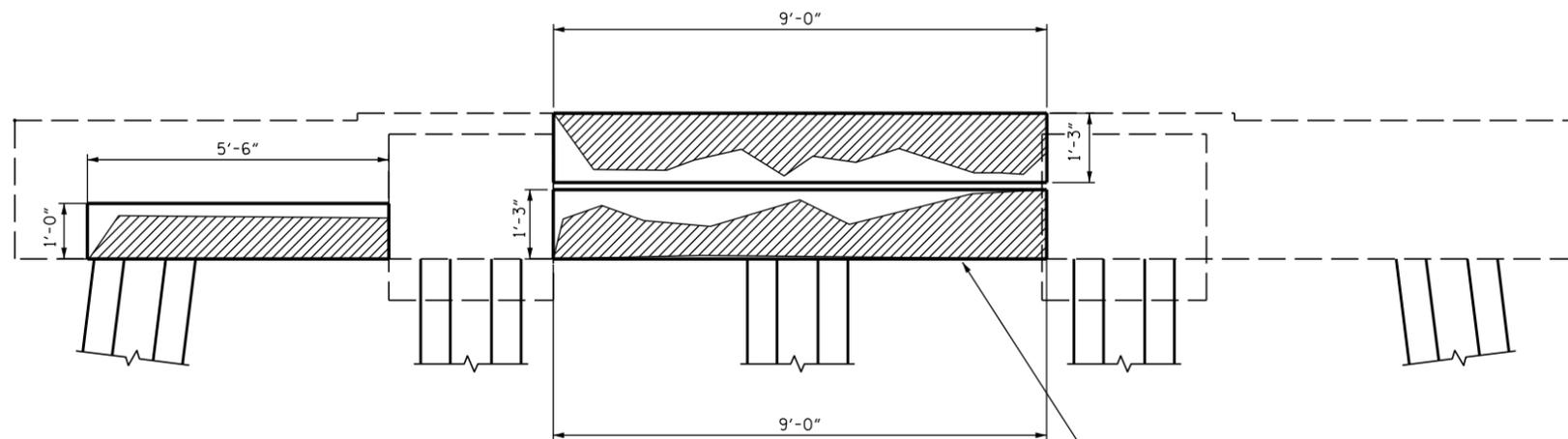
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

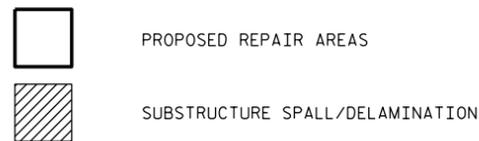


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

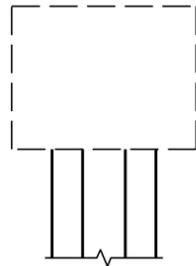
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 214

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

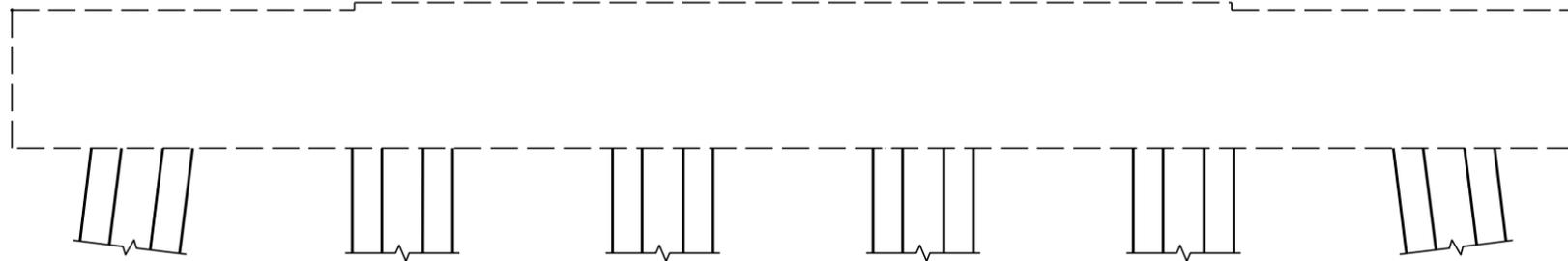
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

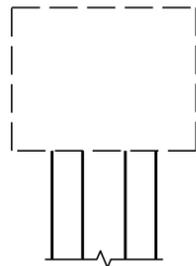
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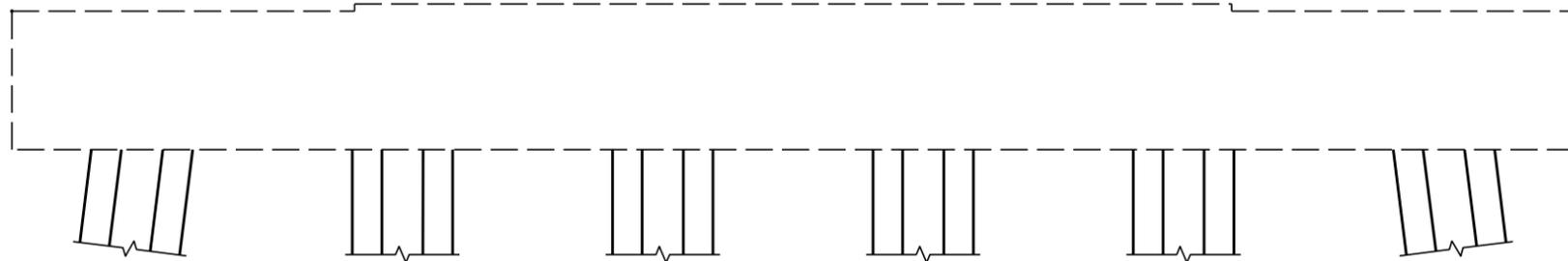
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

DocuSigned by:
Samuel Cullum



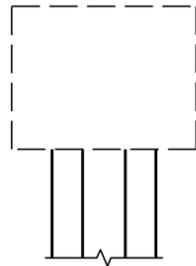
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

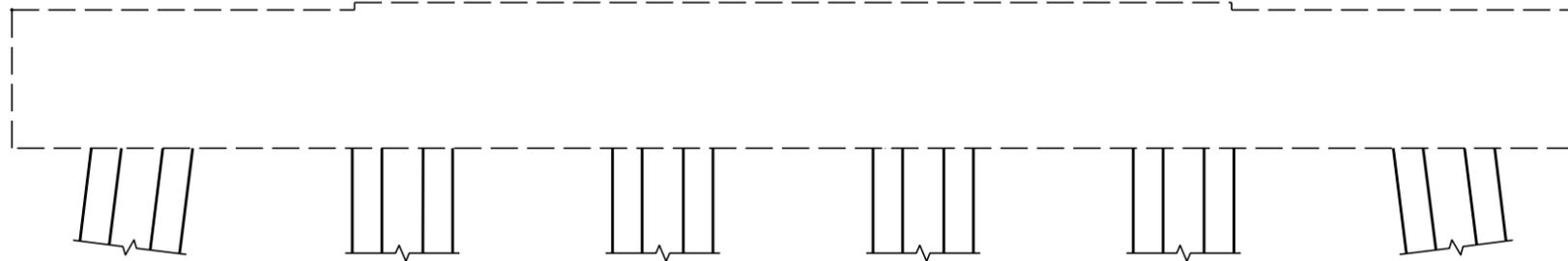
SUBSTRUCTURE CONC.
 REPAIR - BENT 215

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

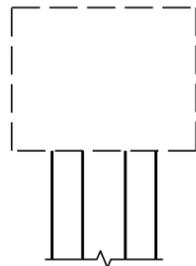
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED



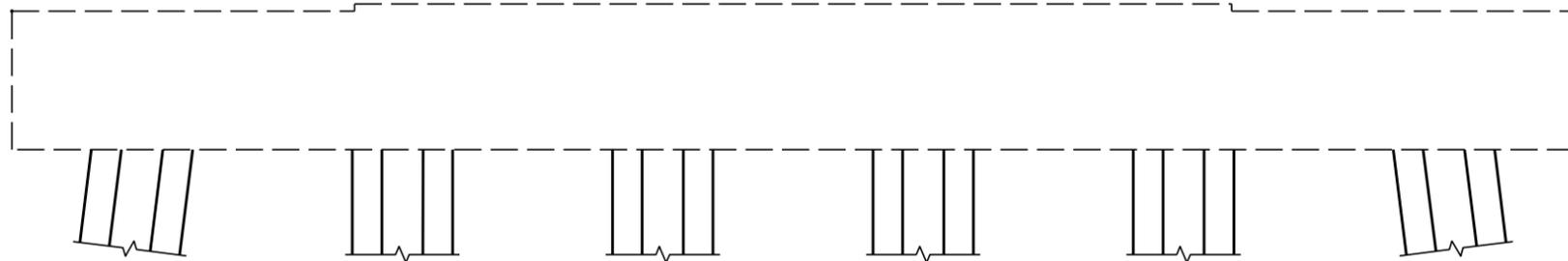
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

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Samuel Cullum

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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

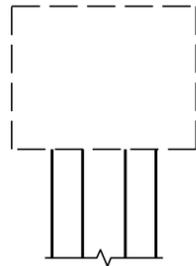
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 216

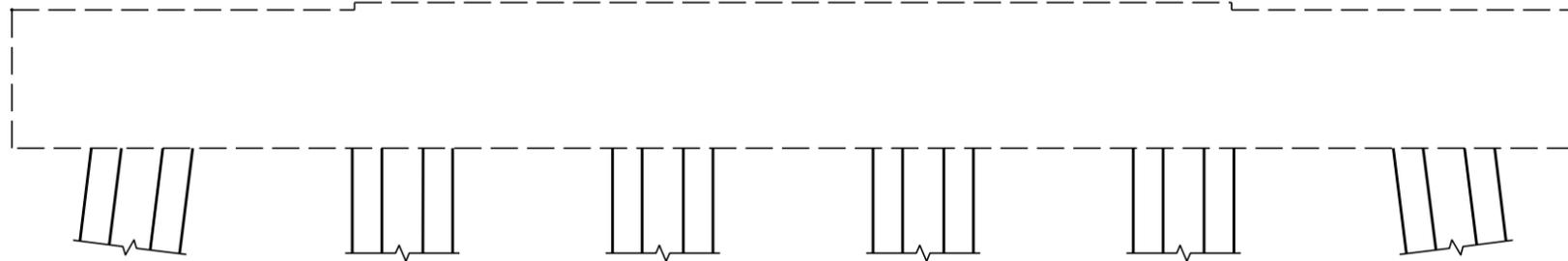
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

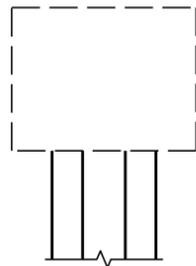
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-235
2			4			



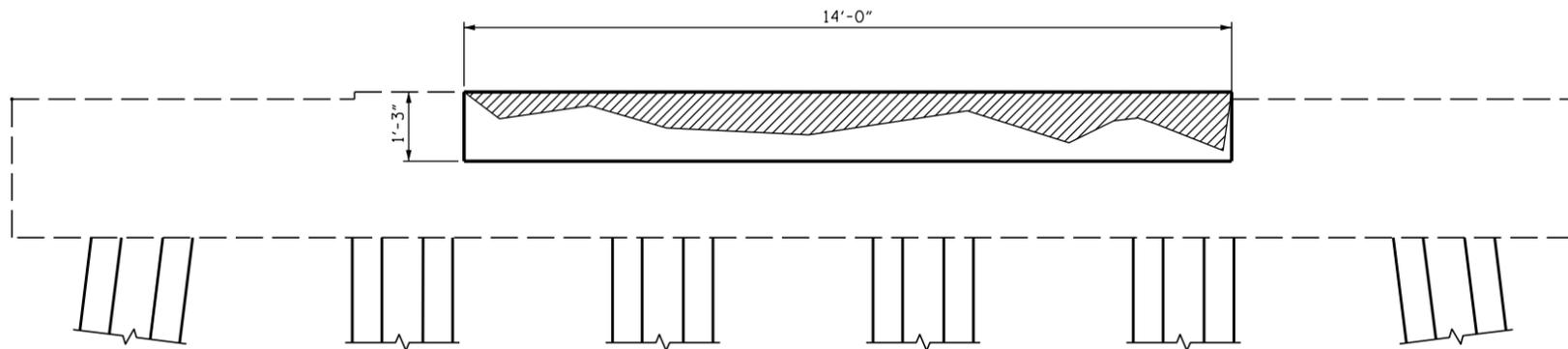
SIDE VIEW
NORTH FACE



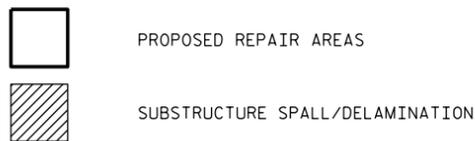
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



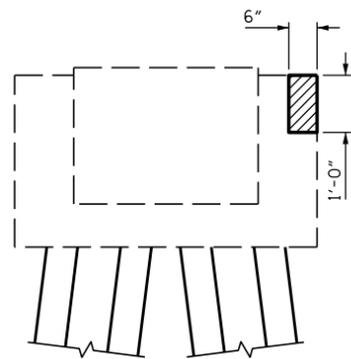
DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

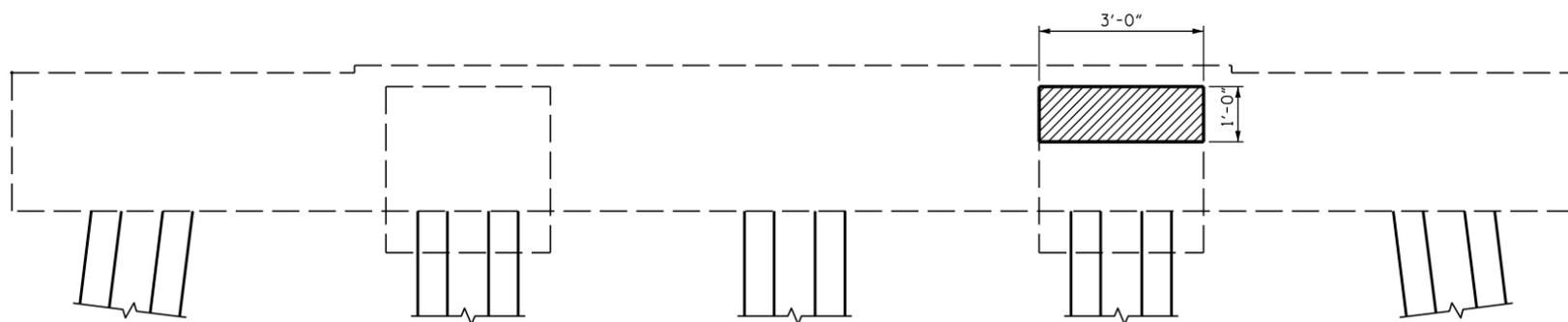
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 217						S-236
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

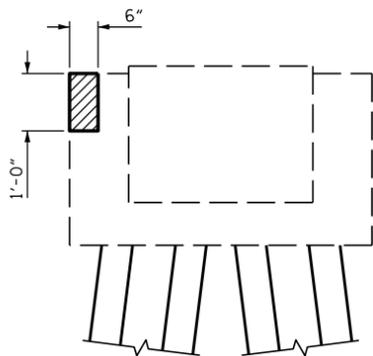
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FINAL UNLESS ALL
SIGNATURES COMPLETED



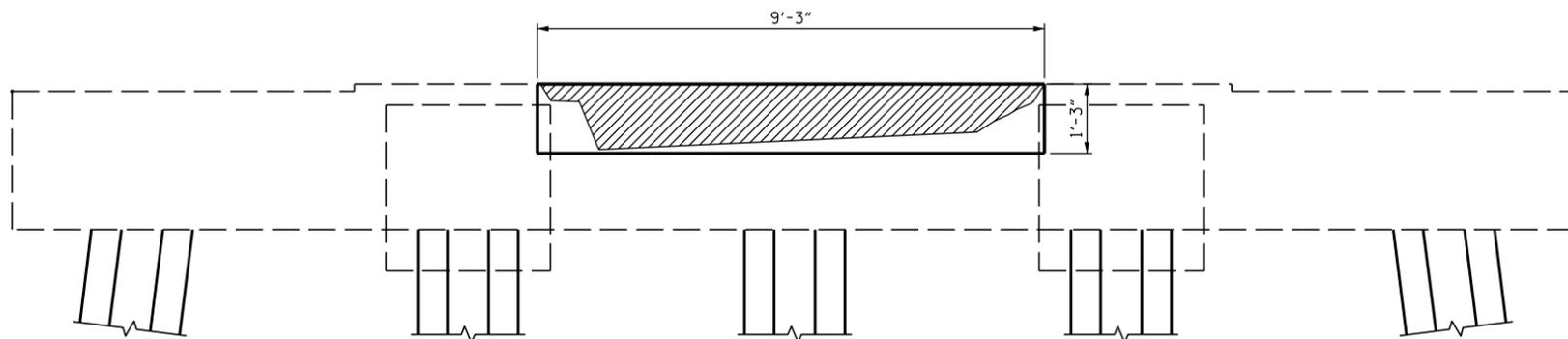
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

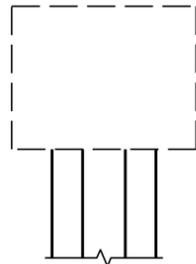
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

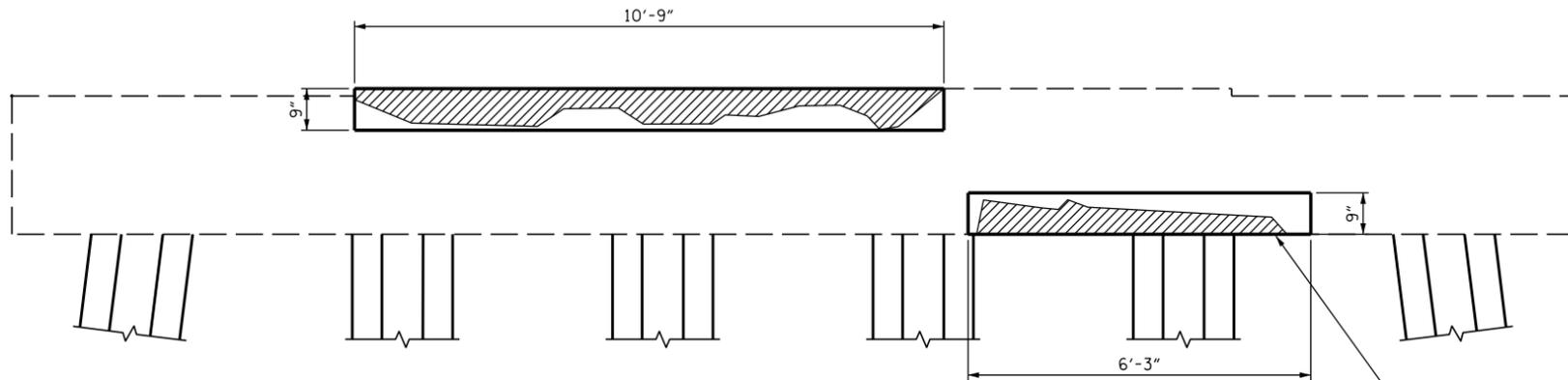
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 218						S-237
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

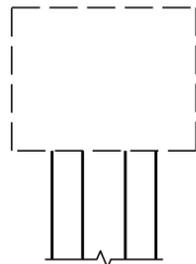
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 FINAL UNLESS ALL
 SIGNATURES COMPLETED



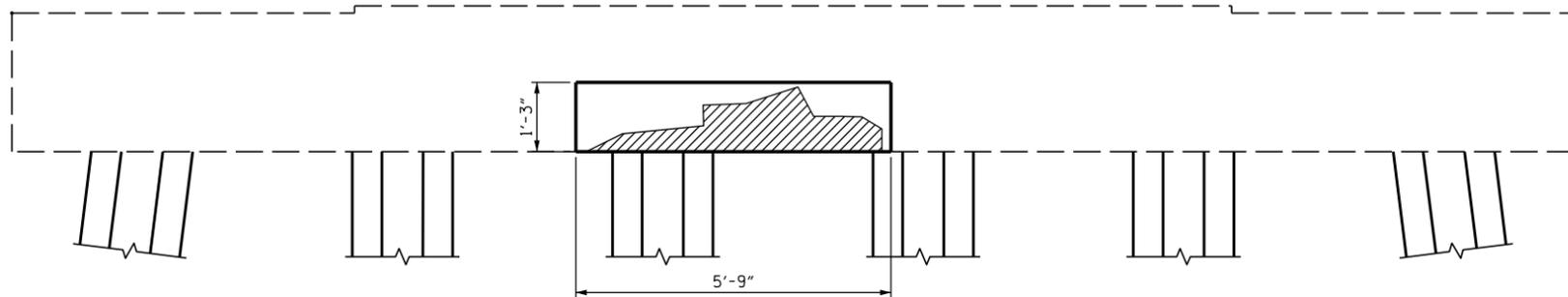
SIDE VIEW
NORTH FACE



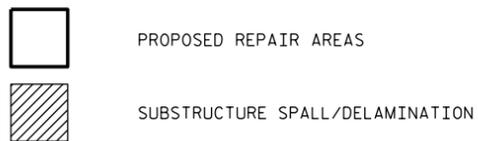
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...
SEAL
043571
ENGINEER
SAMUEL L. CULLUM
12/13/2016

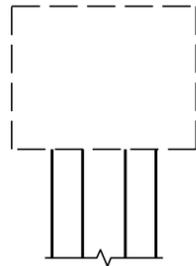
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE CONC.
REPAIR - BENT 219

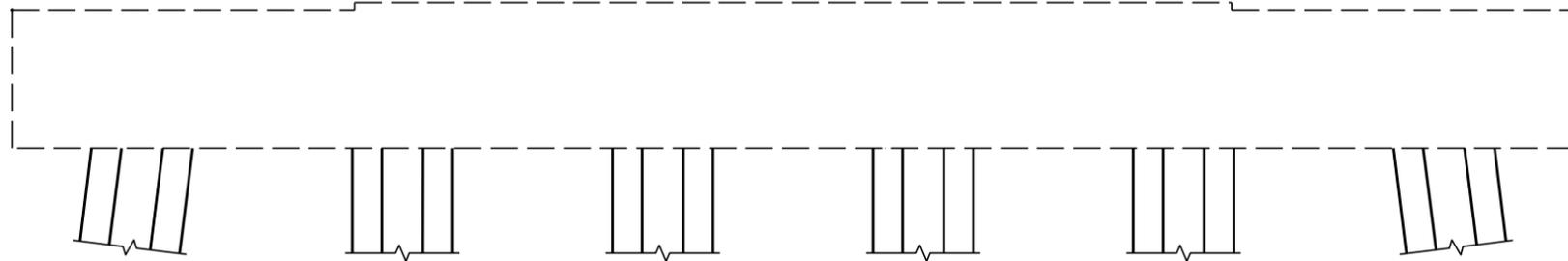
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

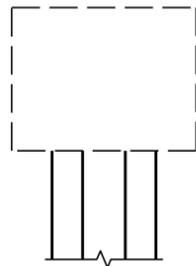
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-238
2			4			TOTAL SHEETS



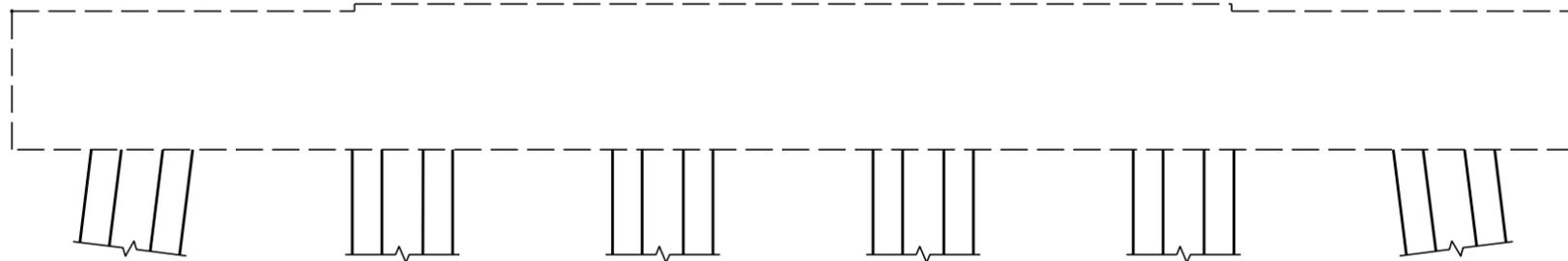
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

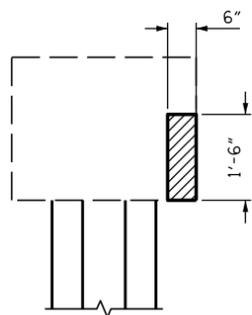
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 220**

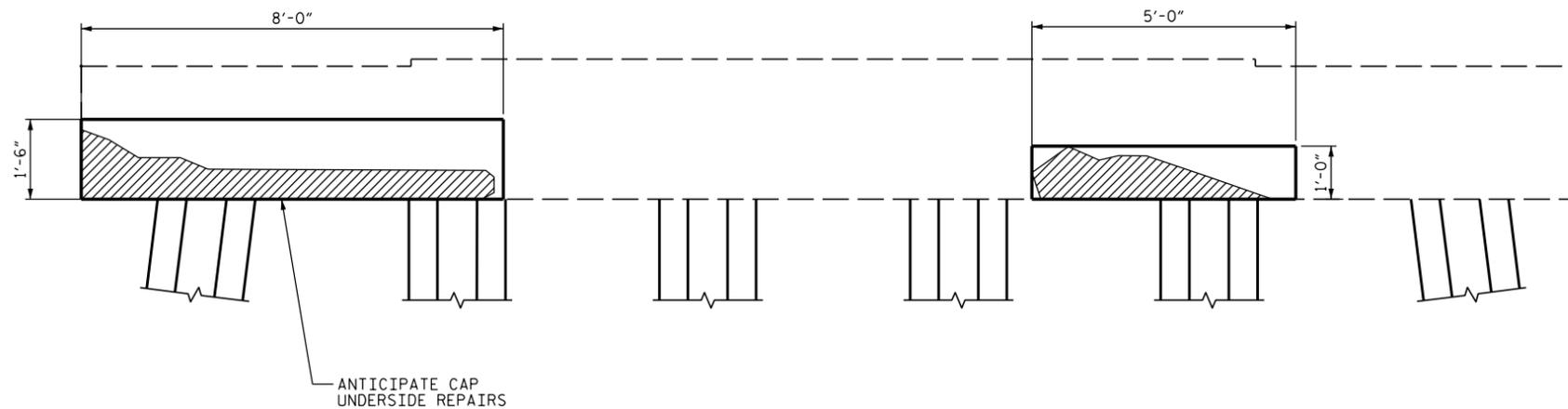
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

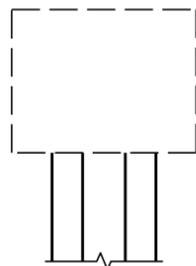
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-239
2			4			



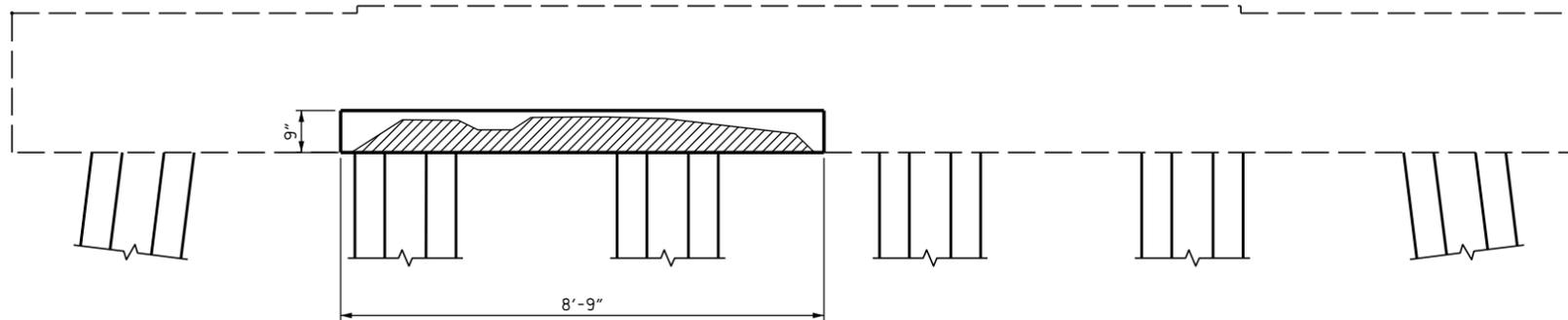
SIDE VIEW
NORTH FACE



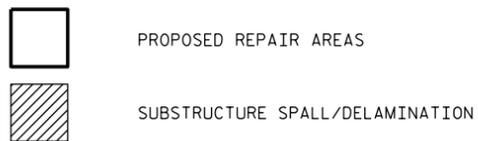
ELEVATION
WEST FACE



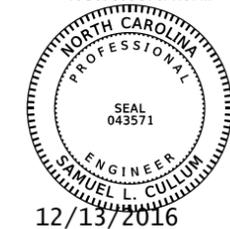
SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

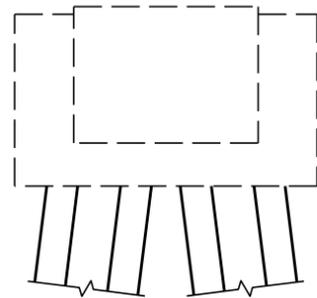
SUBSTRUCTURE CONC.
REPAIR - BENT 221

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

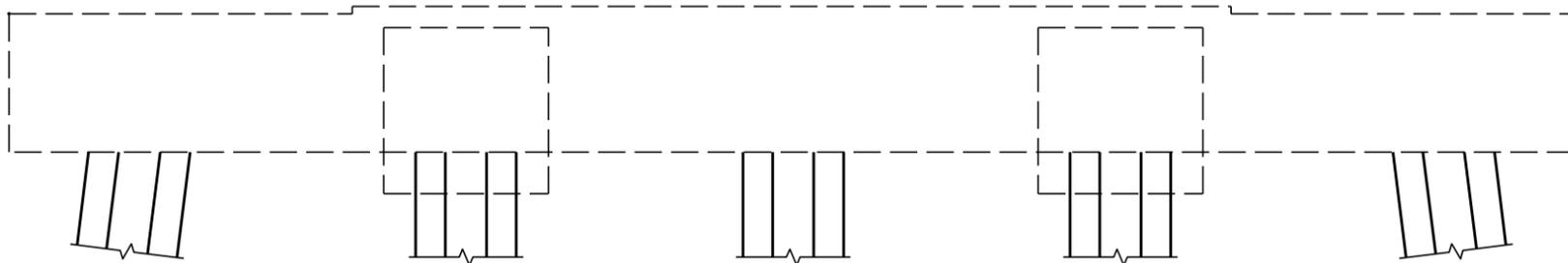
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DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

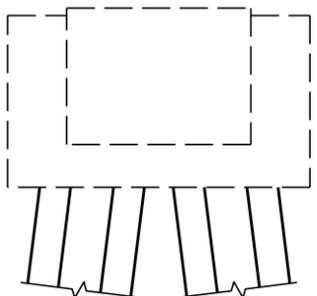
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-240
2			4			



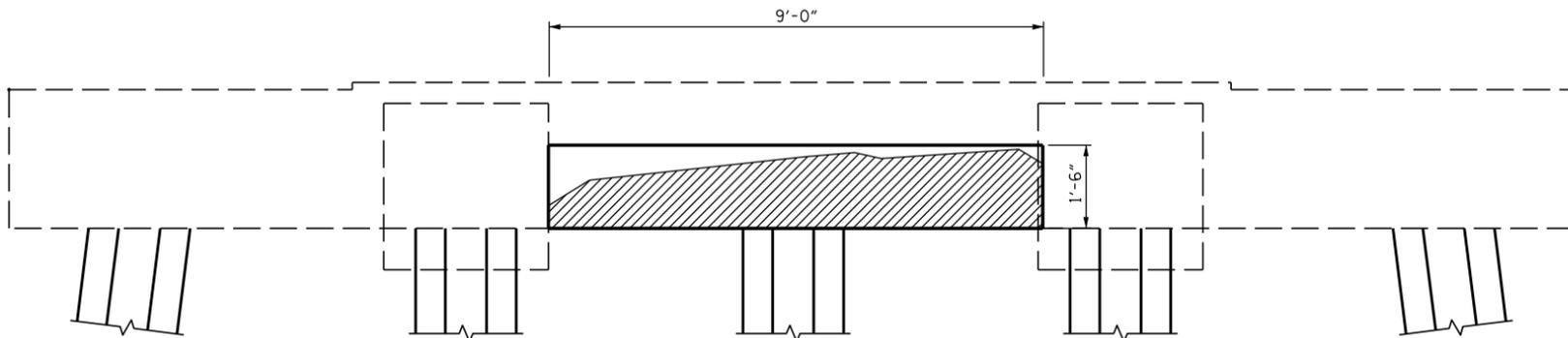
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

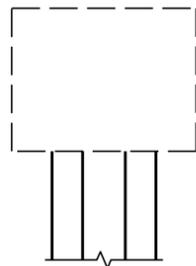
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

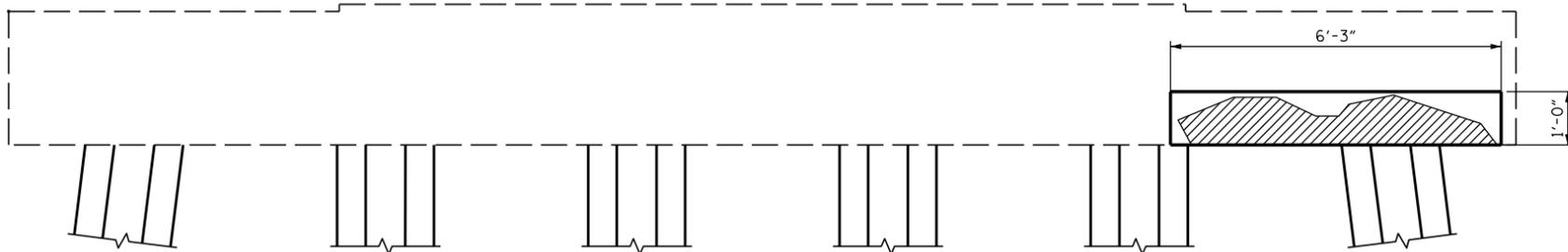
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 222						S-241
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

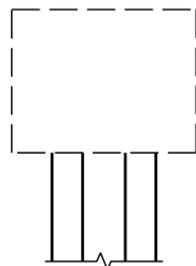
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 SIGNATURES COMPLETED



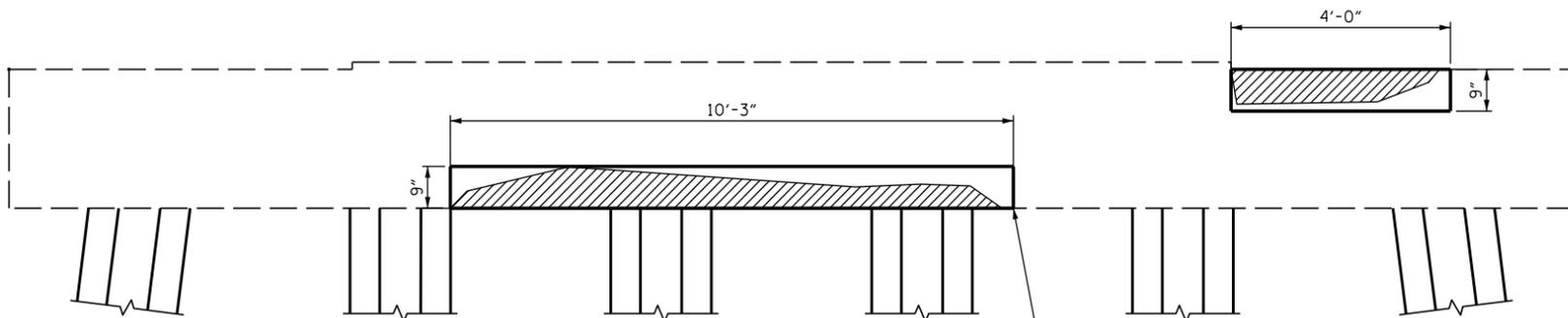
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
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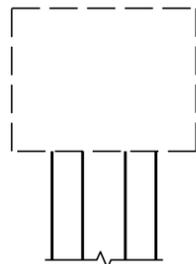


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 223

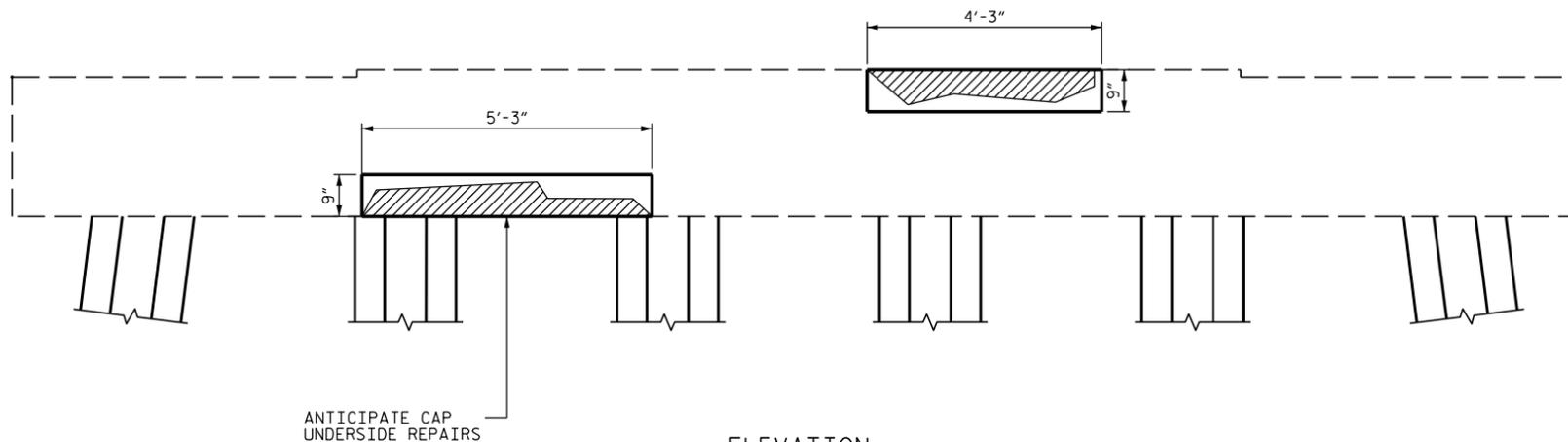
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

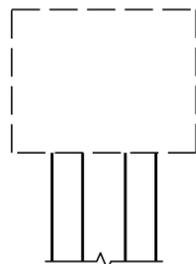
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-242
2			4			TOTAL SHEETS



SIDE VIEW
NORTH FACE



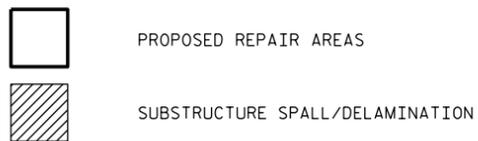
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

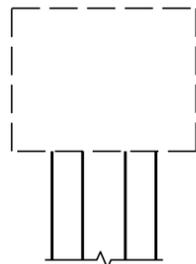
SUBSTRUCTURE CONC.
 REPAIR - BENT 224

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

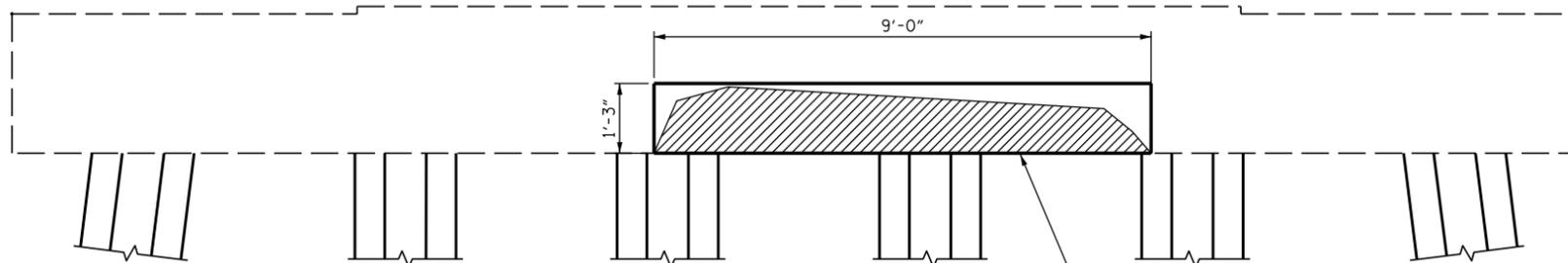
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 *****USERNAME*****

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

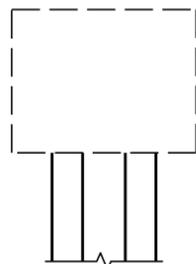
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-243
2			4			TOTAL SHEETS



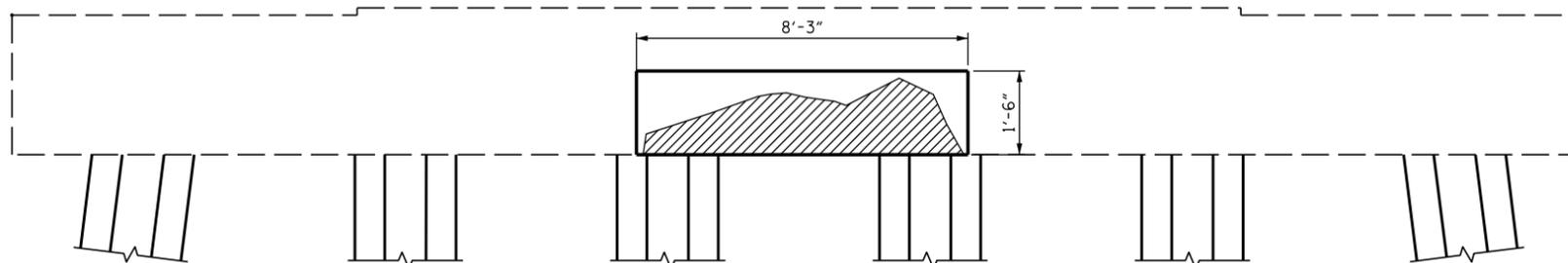
SIDE VIEW
NORTH FACE



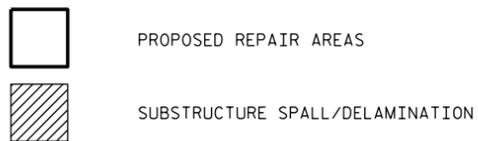
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE

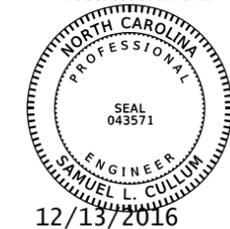


ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

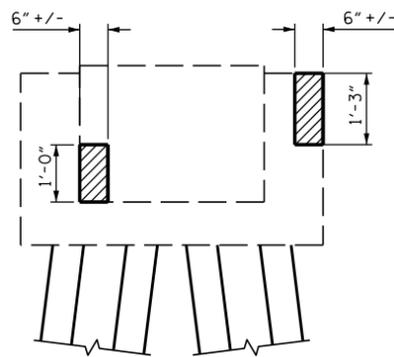


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 225

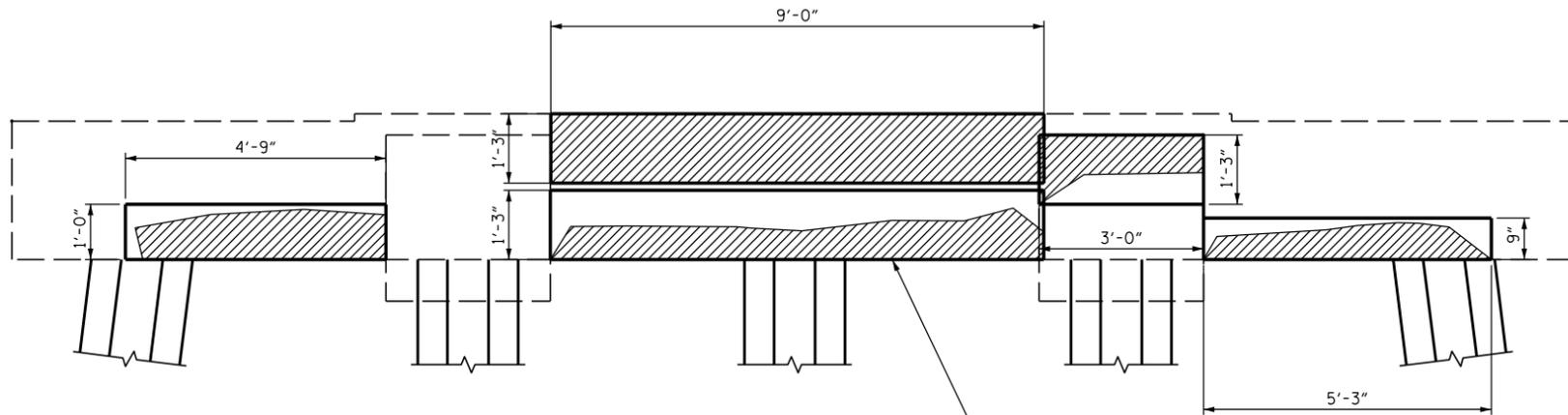
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

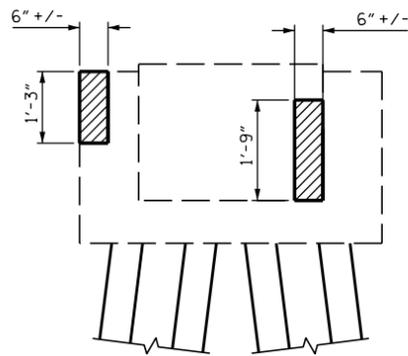
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-244
2			4			TOTAL SHEETS



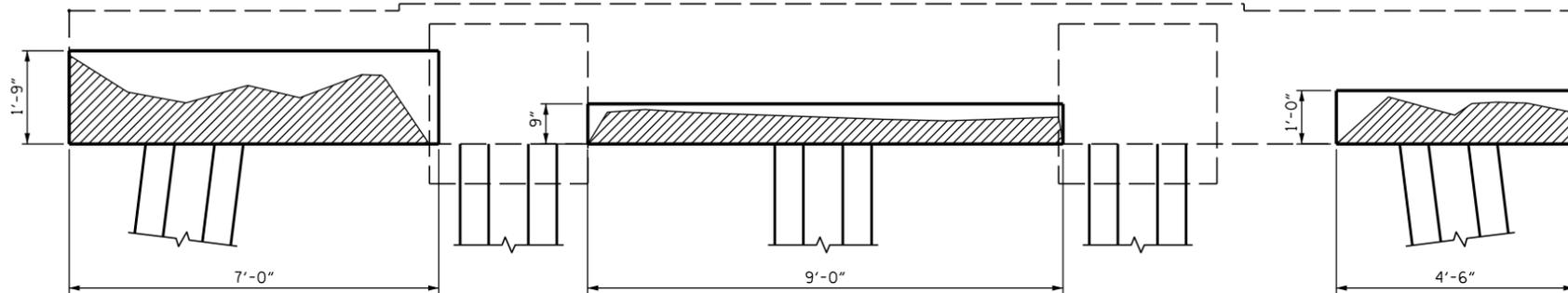
SIDE VIEW
NORTH FACE



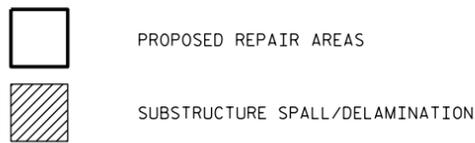
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

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12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

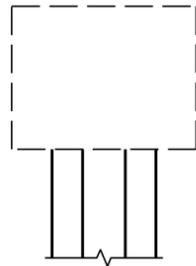
**SUBSTRUCTURE CONC.
 REPAIR - BENT 226**

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

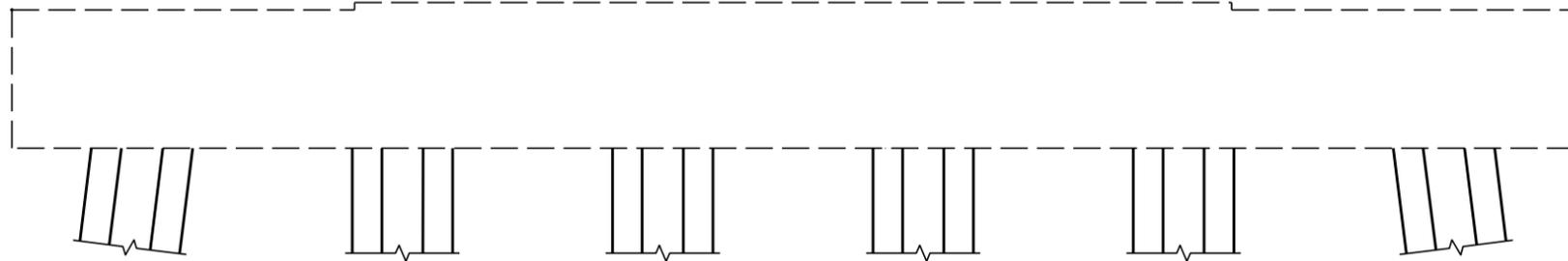
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-245
2			4			TOTAL SHEETS

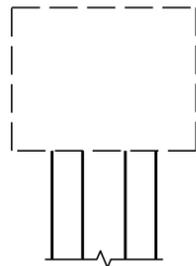
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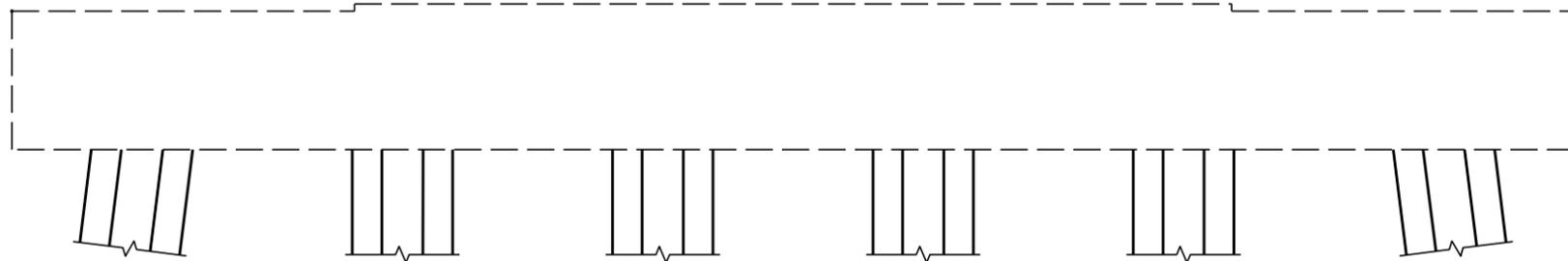
SIDE VIEW
NORTH FACE



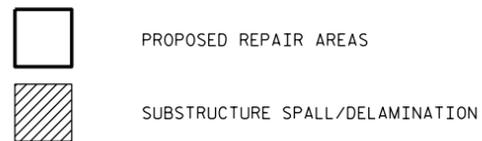
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

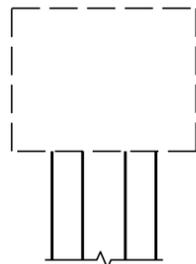
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

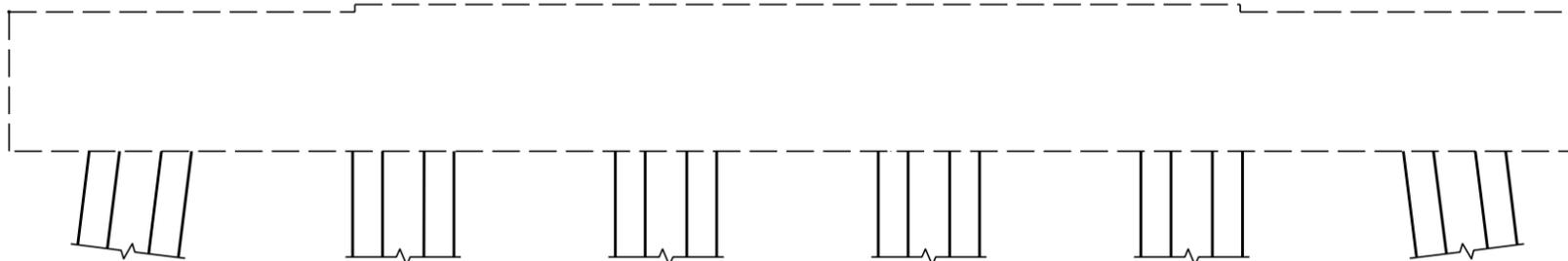
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 227						S-246
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			3
2			4			4

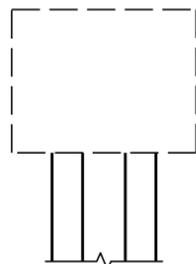
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED



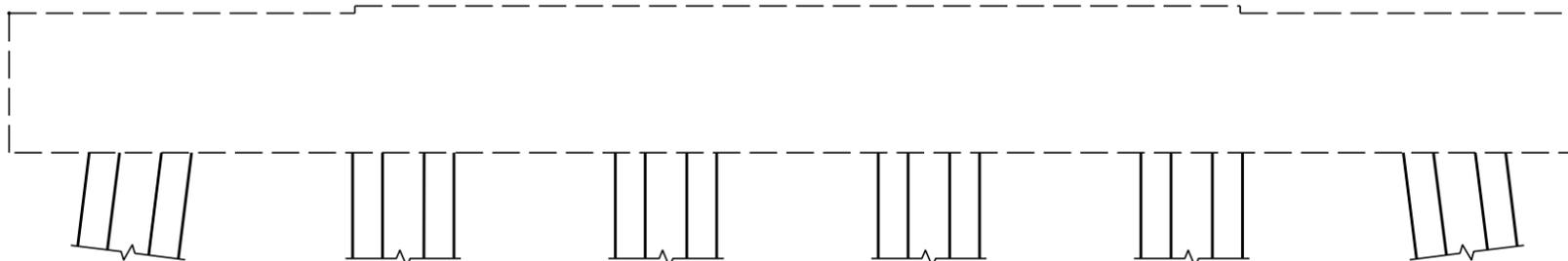
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

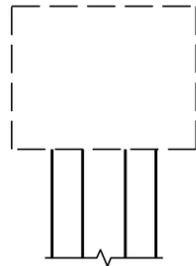
SUBSTRUCTURE CONC.
REPAIR - BENT 228

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

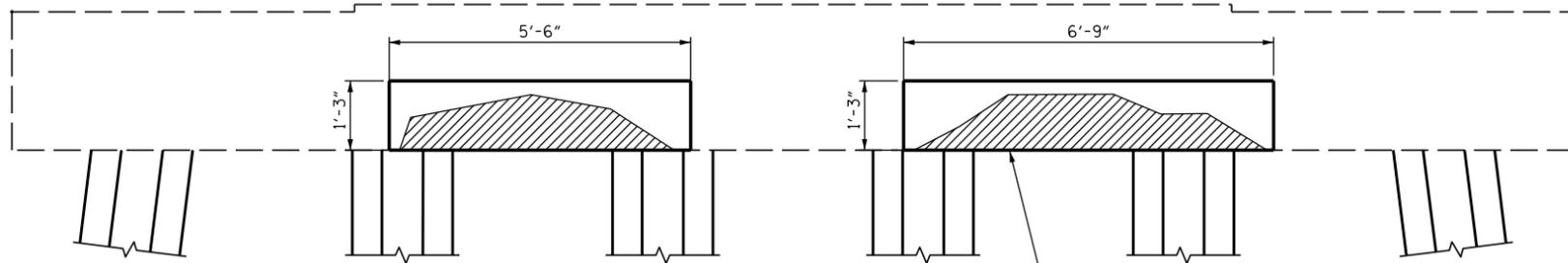
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FINAL UNLESS ALL
SIGNATURES COMPLETED

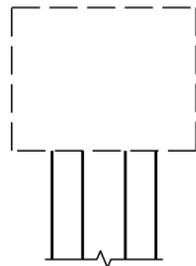
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-247
2			4			TOTAL SHEETS



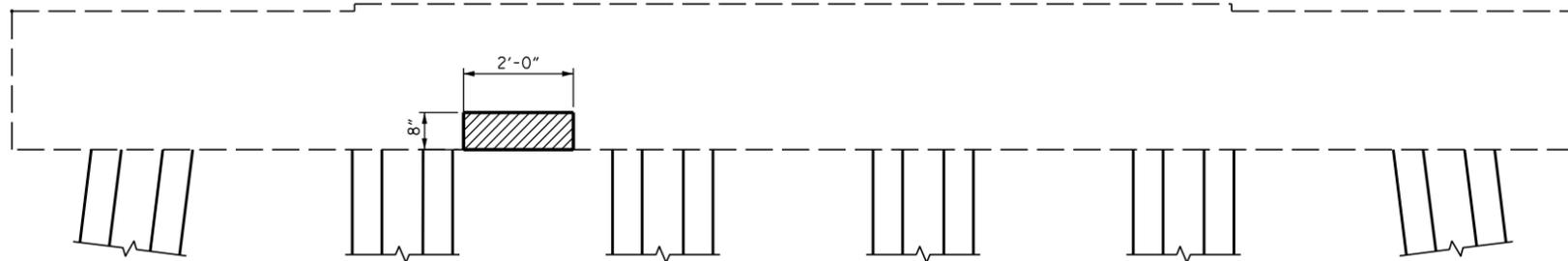
SIDE VIEW
NORTH FACE



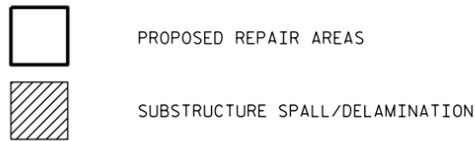
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum
19C97095C75A467...

12/13/2016

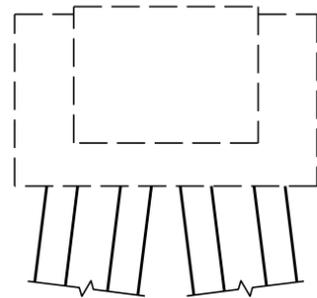
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 229						S-248
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

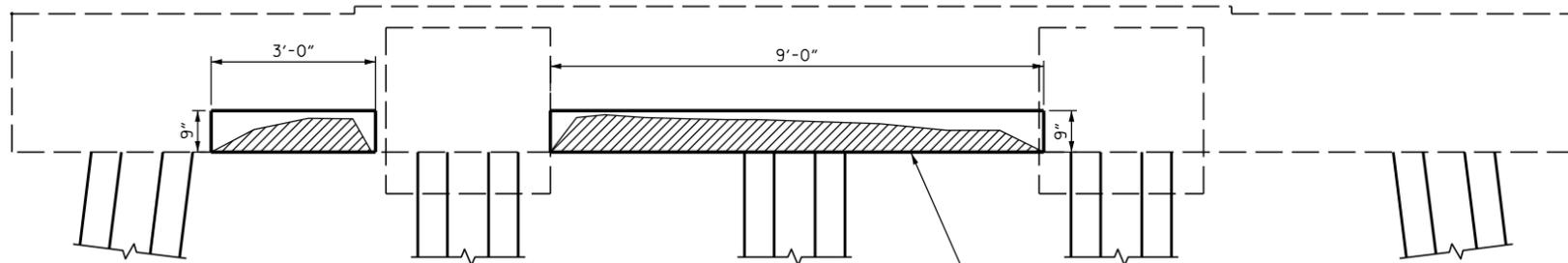
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

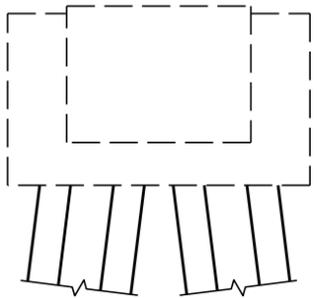
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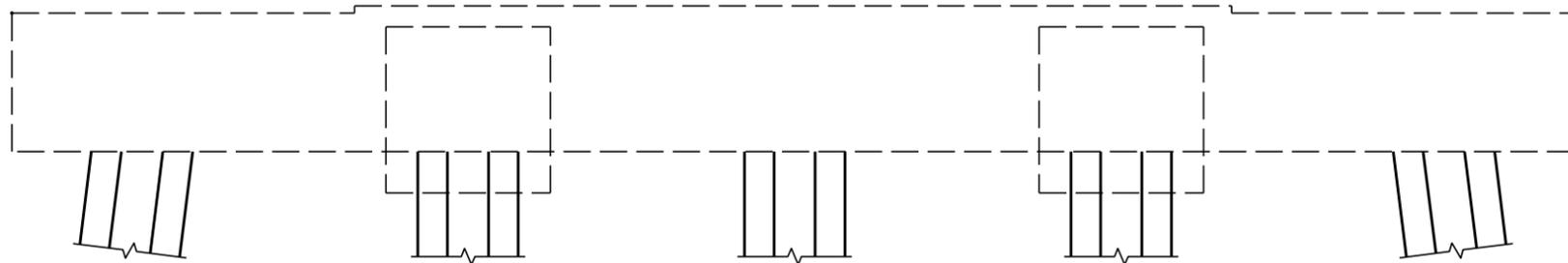
SIDE VIEW
NORTH FACE



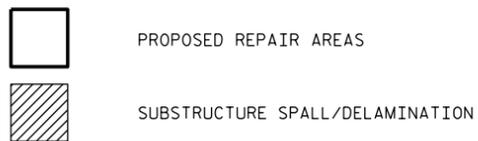
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
 19C97095C75A467...

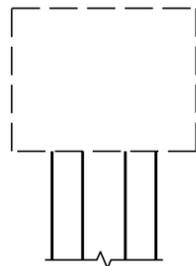
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 230

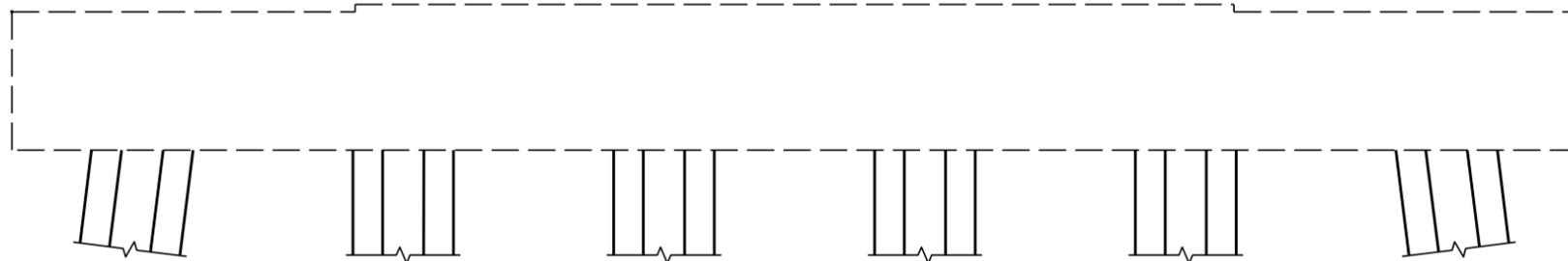
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

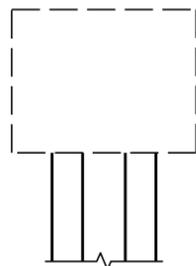
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



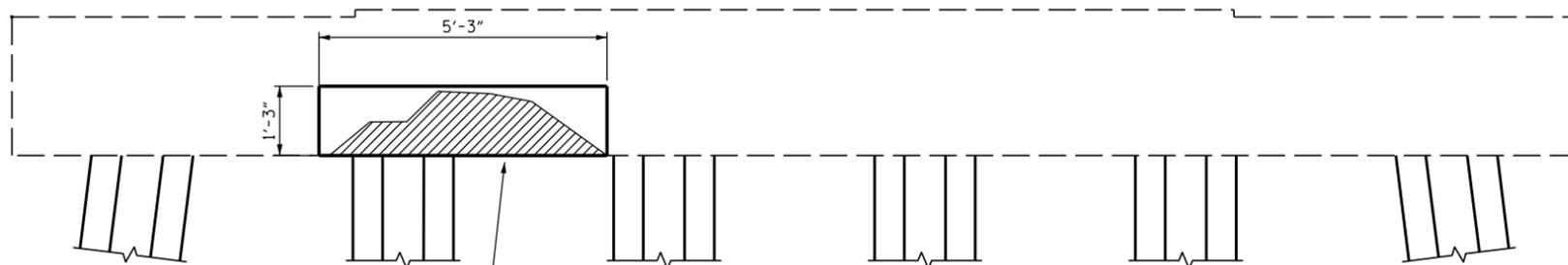
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

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PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

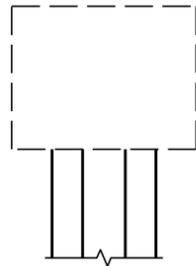
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SUBSTRUCTURE CONC.
 REPAIR - BENT 231

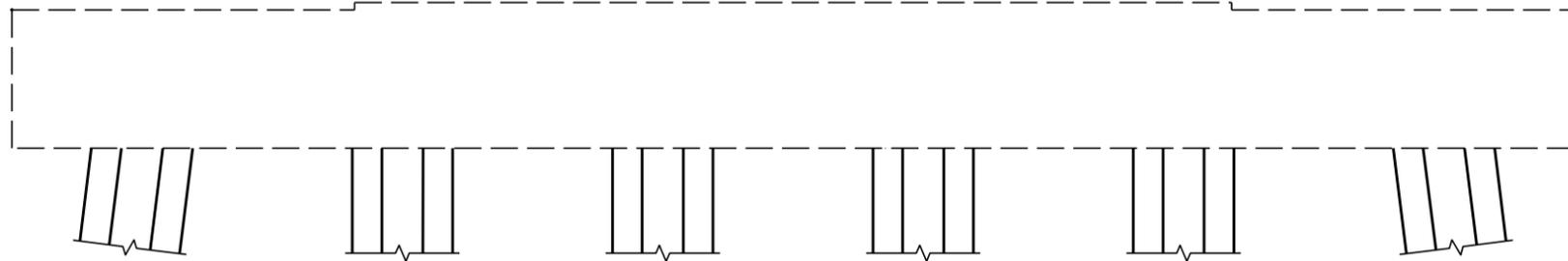
DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

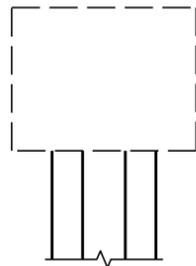
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



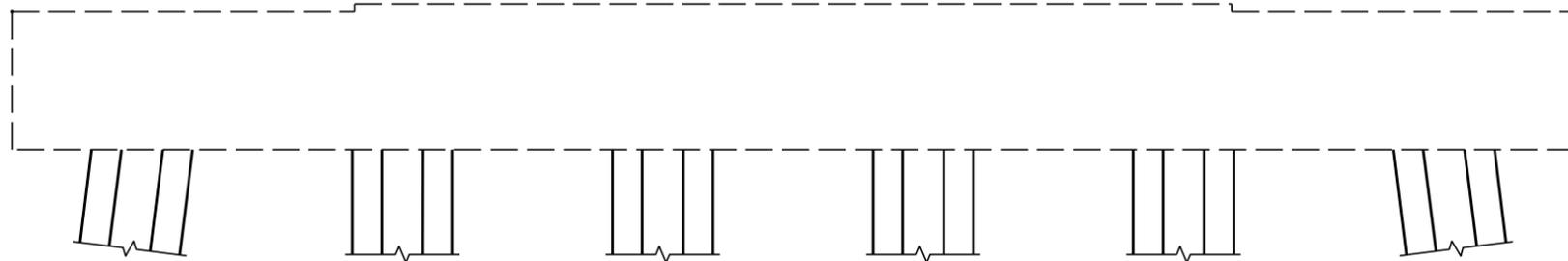
SIDE VIEW
NORTH FACE



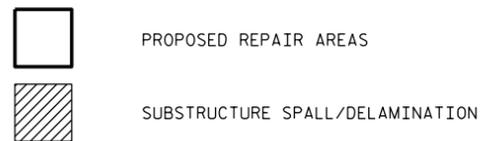
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

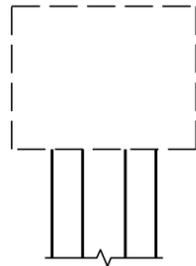
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE CONC.
REPAIR - BENT 232**

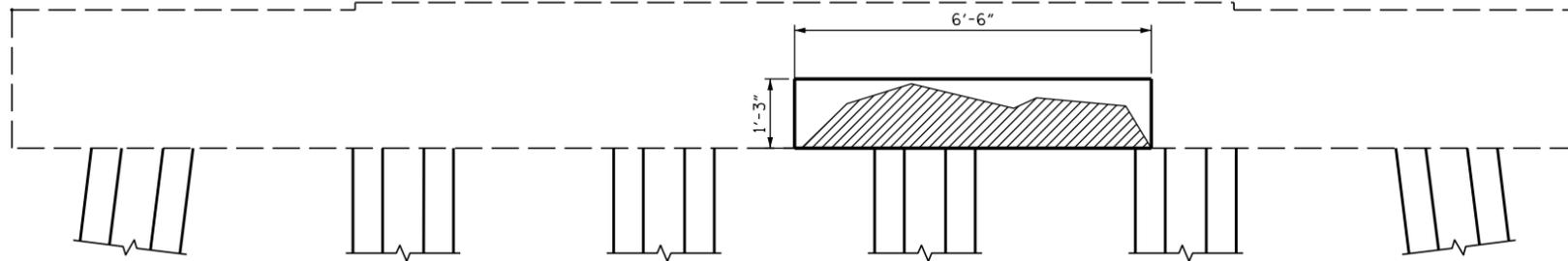
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

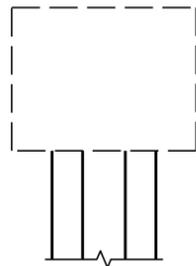
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



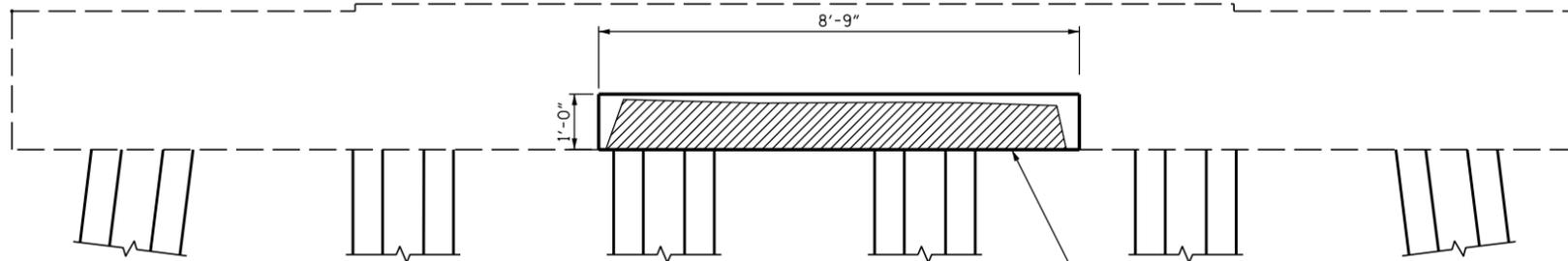
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

-  PROPOSED REPAIR AREAS
-  SUBSTRUCTURE SPALL/DELAMINATION

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Samuel Cullum
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PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

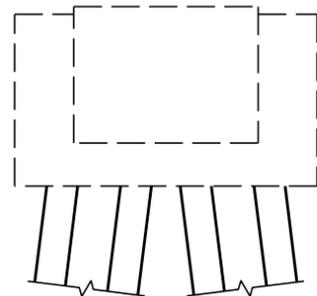
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 233

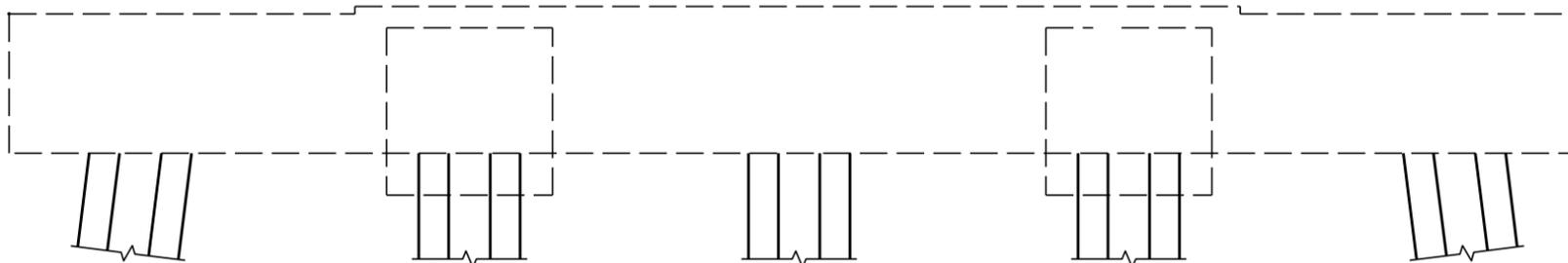
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
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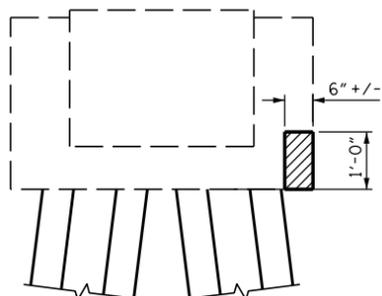
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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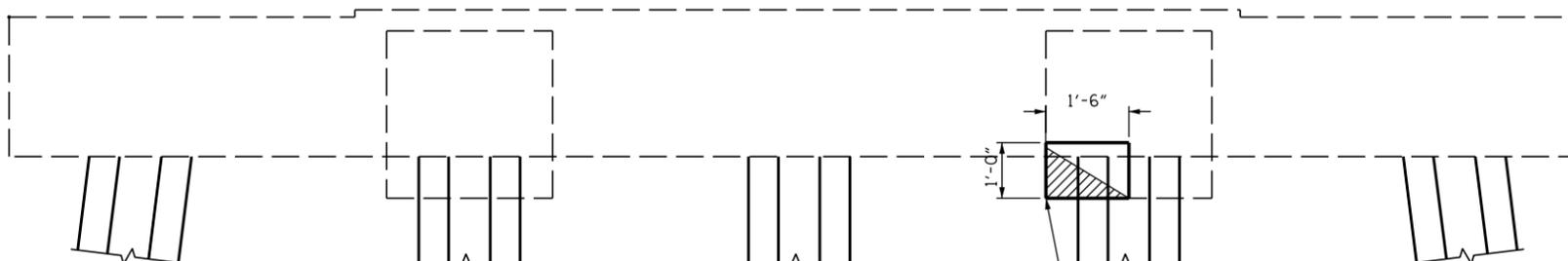
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

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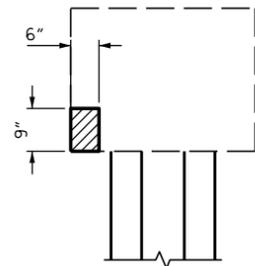
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

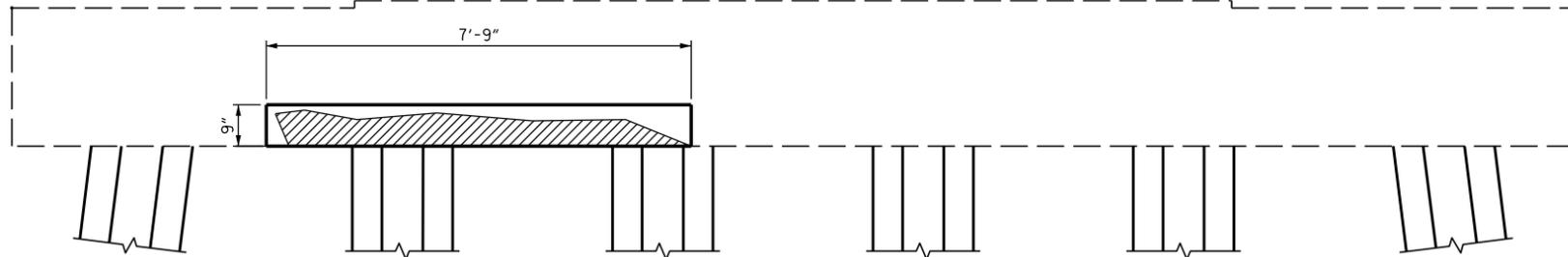
SUBSTRUCTURE CONC.
 REPAIR - BENT 234

DOCUMENT NOT CONSIDERED
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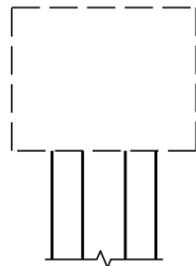
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2			4			



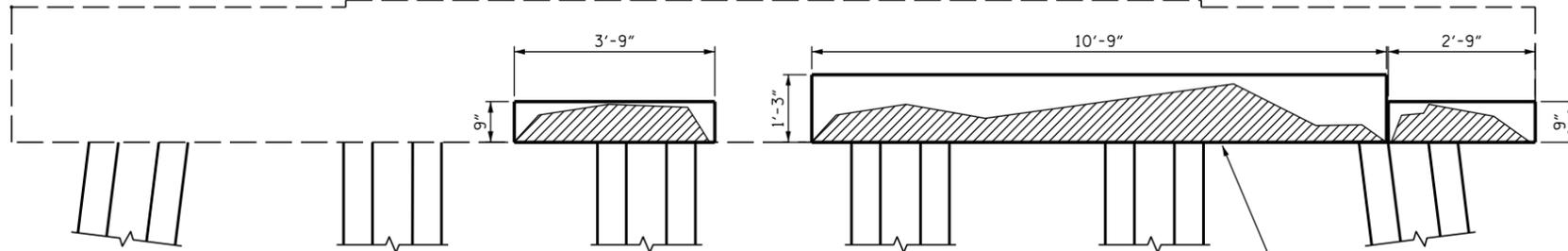
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE

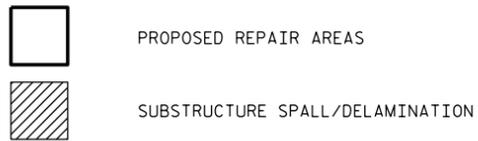


SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

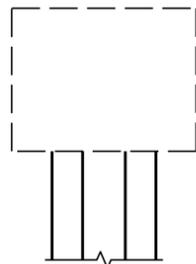
SUBSTRUCTURE CONC.
 REPAIR - BENT 235

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

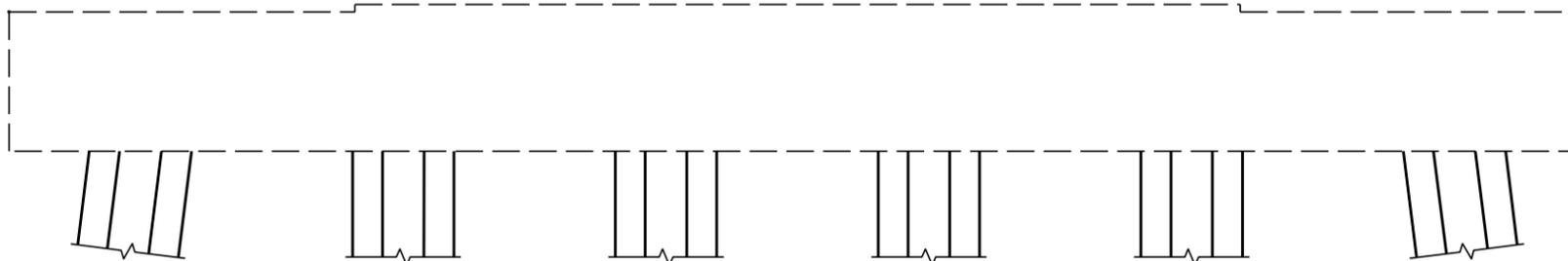
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2			4			TOTAL SHEETS

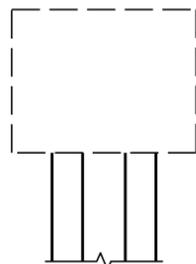
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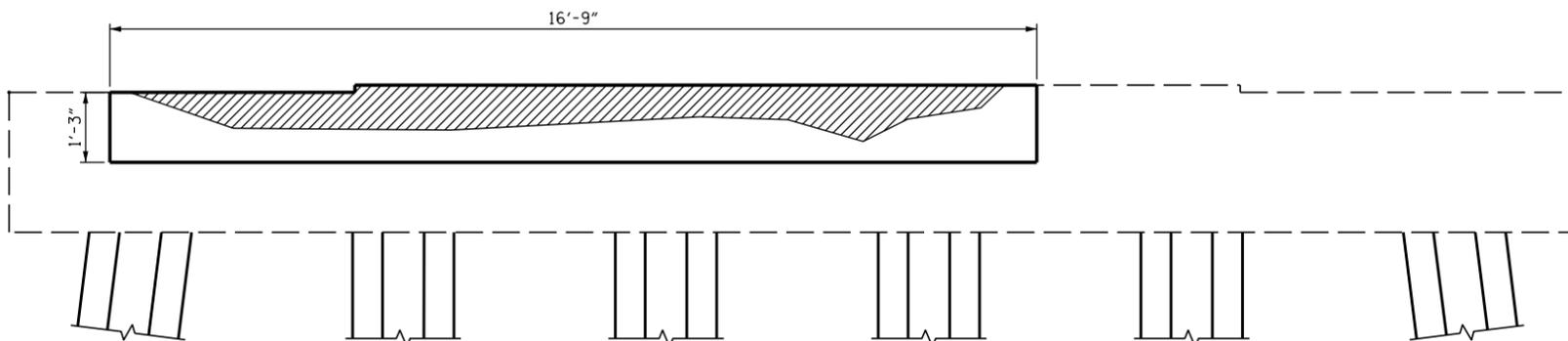
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
 *****SDGN*****
 *****USERNAME*****

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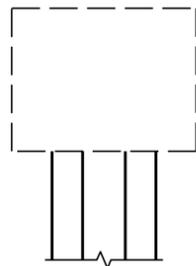
12/13/2016

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

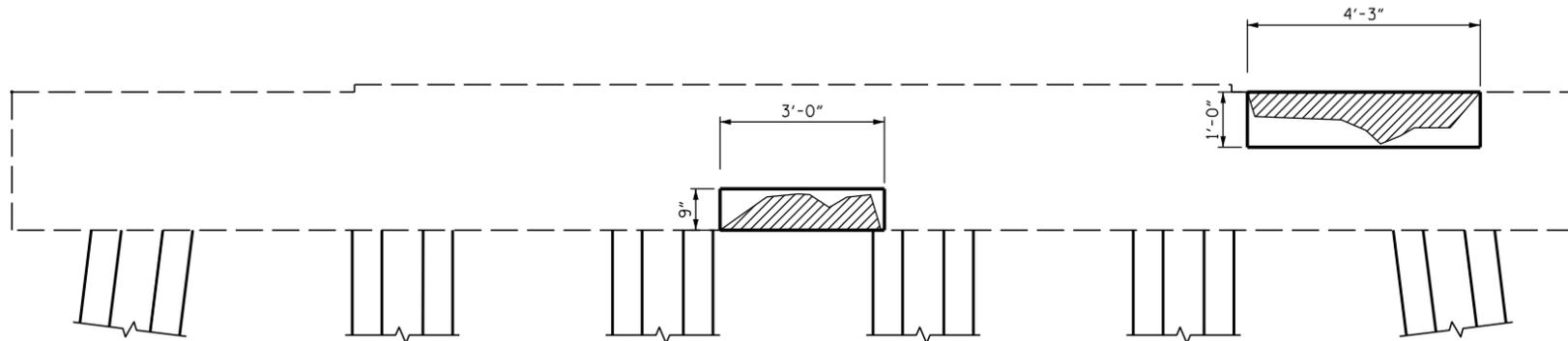
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 236

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

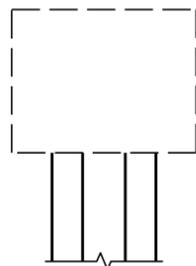
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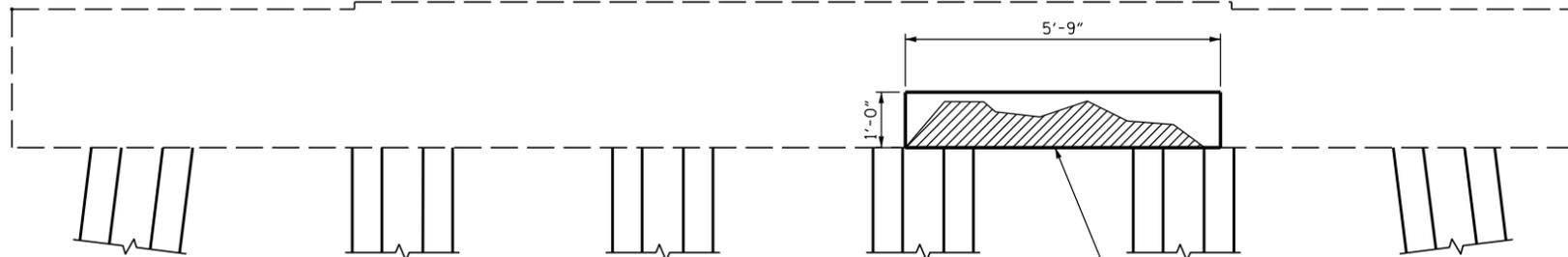
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

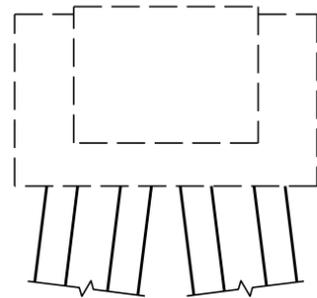
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 237

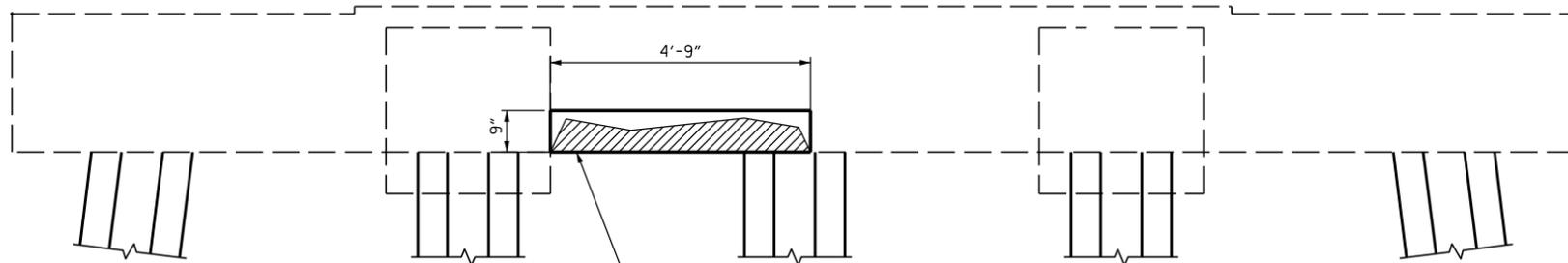
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

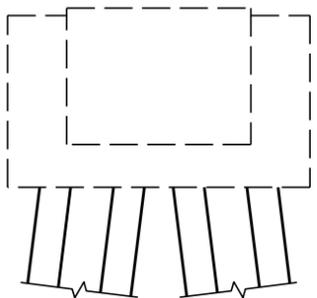
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2			4			TOTAL SHEETS



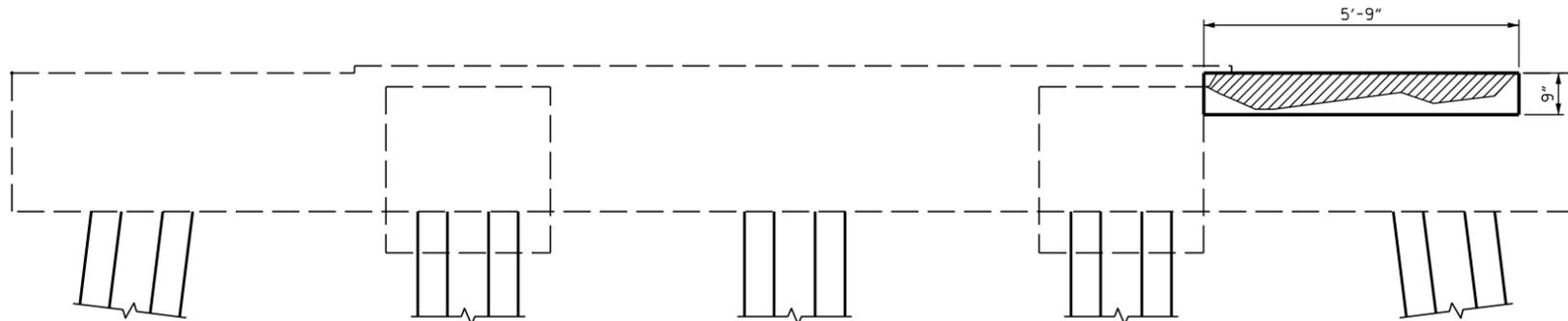
SIDE VIEW
NORTH FACE



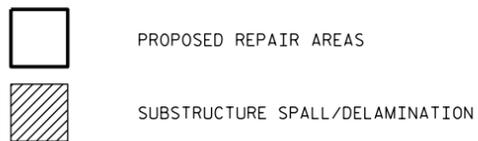
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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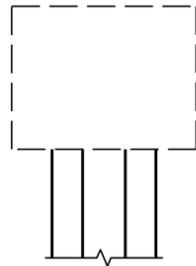
DocuSigned by:
 Samuel Cullum
 19C97095C75A467...

 12/13/2016

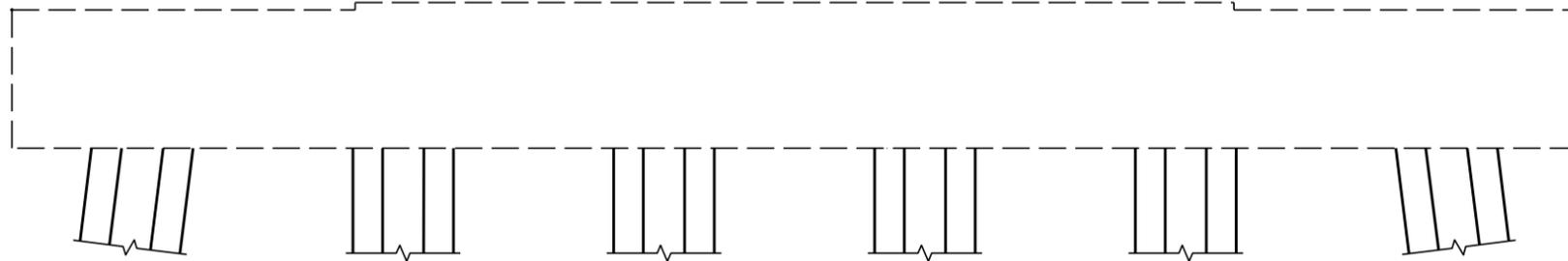
PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 238						S-257
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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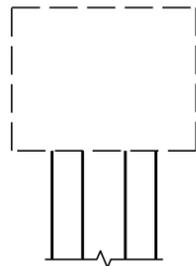
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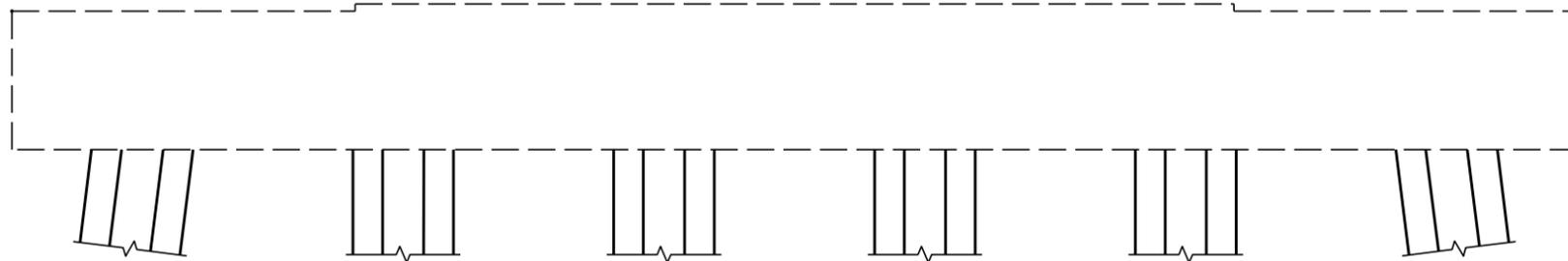
SIDE VIEW
NORTH FACE



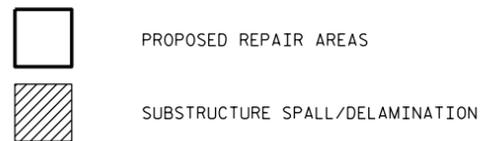
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

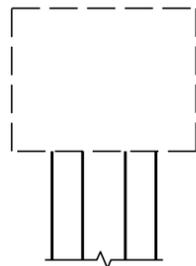
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 239

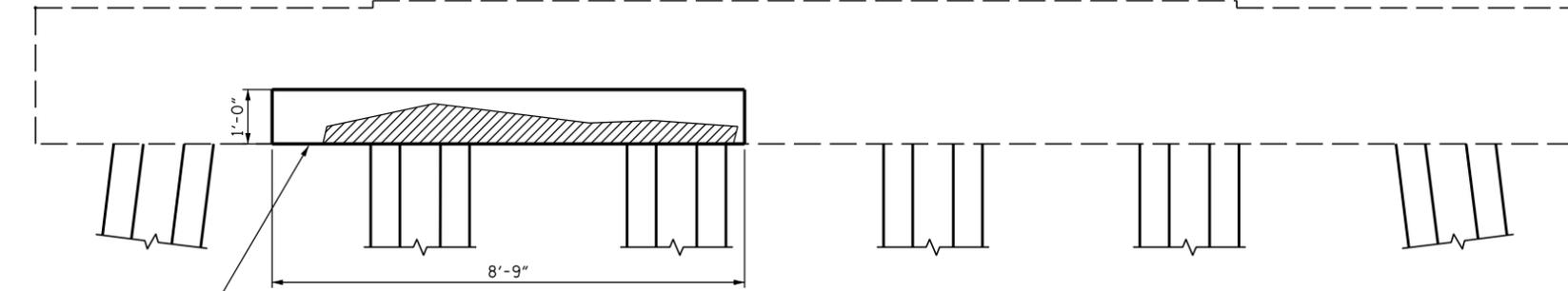
DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

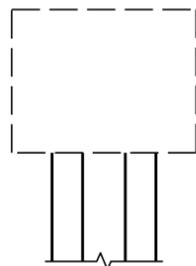
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2			4			TOTAL SHEETS



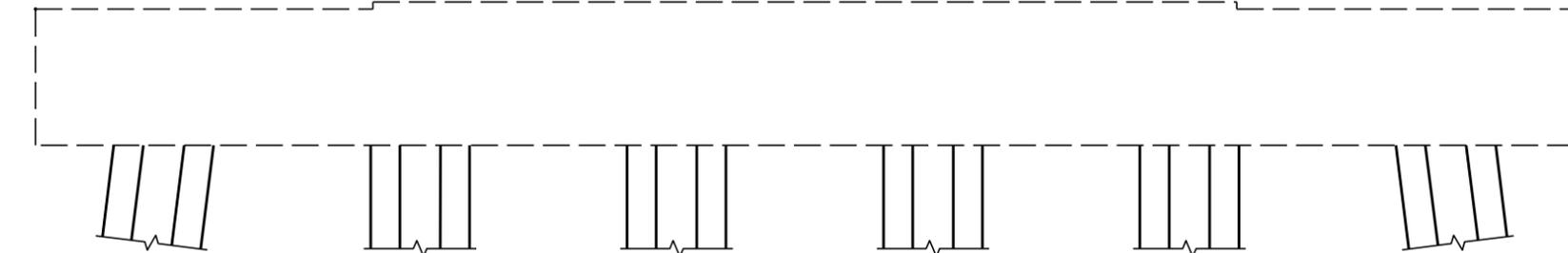
SIDE VIEW
NORTH FACE



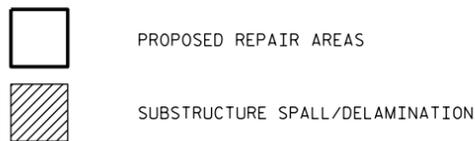
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

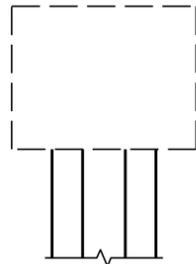
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

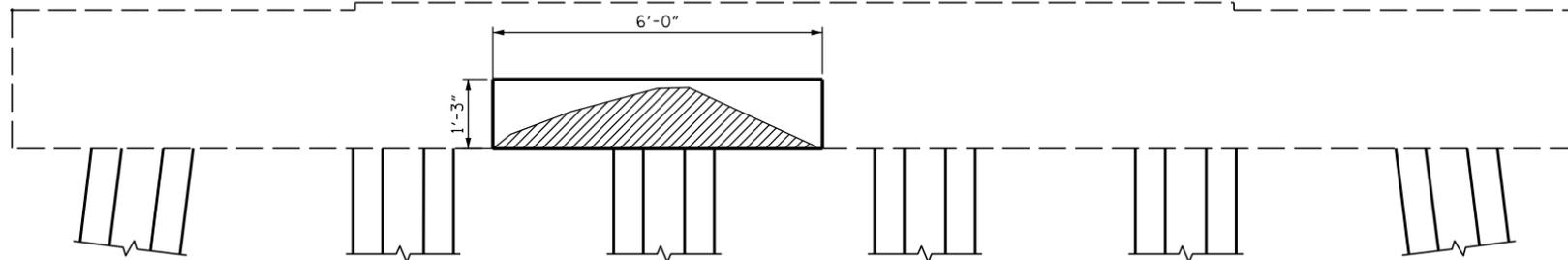
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 240						S-259
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

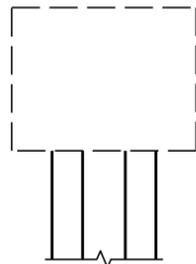
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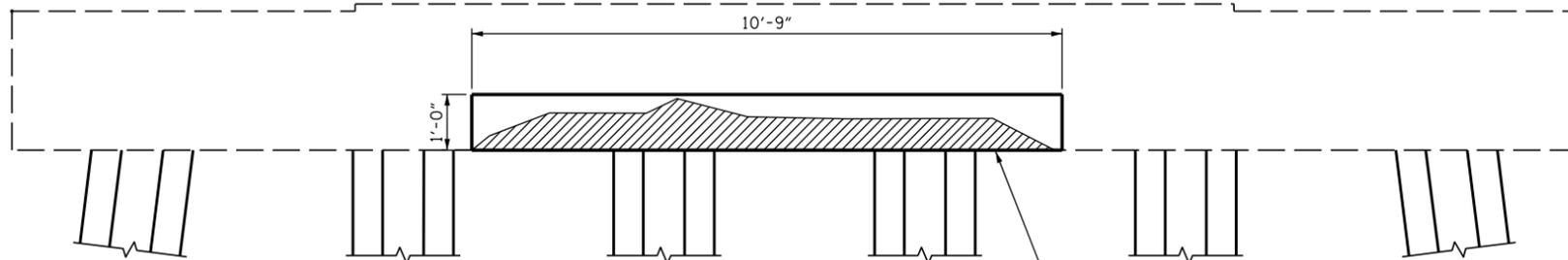
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE

ANTICIPATE CAP
UNDERSIDE REPAIRS



PROPOSED REPAIR AREAS

SUBSTRUCTURE SPALL/DELAMINATION

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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

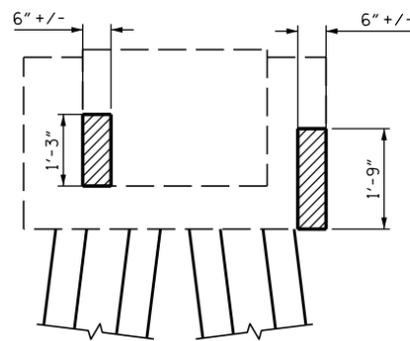
SUBSTRUCTURE CONC.
REPAIR - BENT 241

DRAWN BY : T. S. CHILDRESS DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

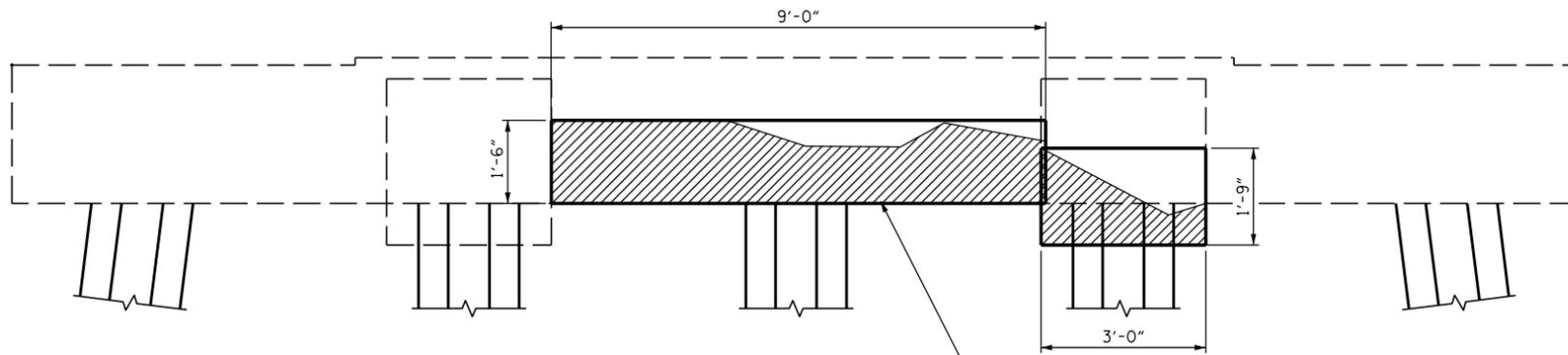
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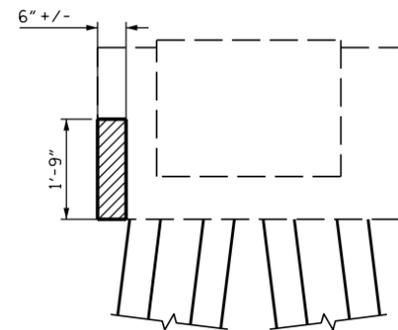
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS



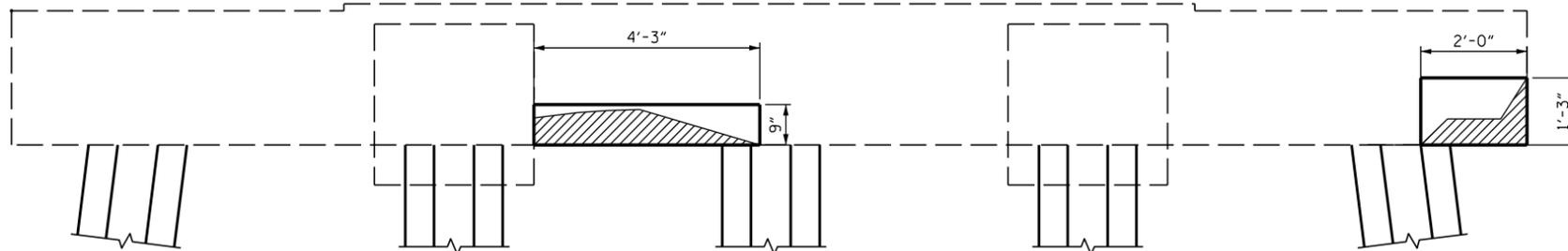
SIDE VIEW
NORTH FACE



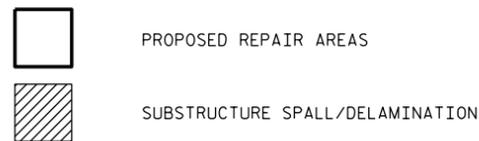
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum

19C97095C75A467...



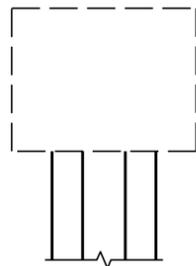
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE CONC.
 REPAIR - BENT 242**

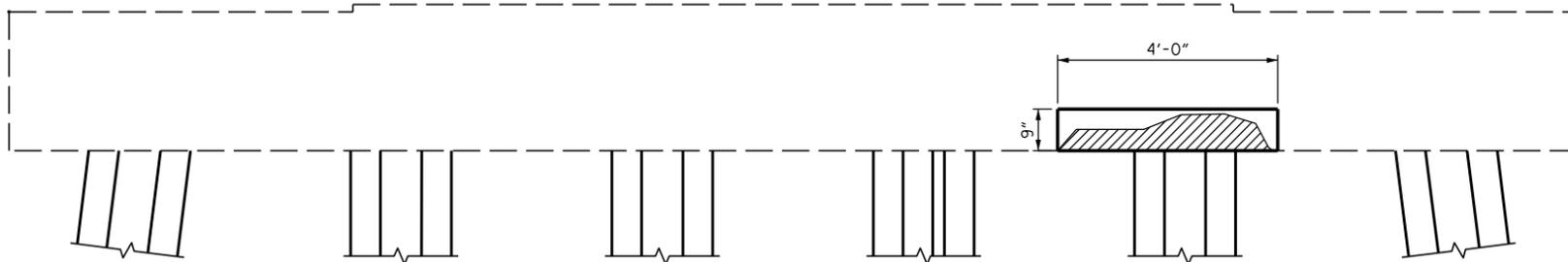
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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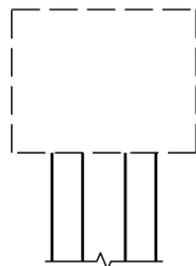
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			



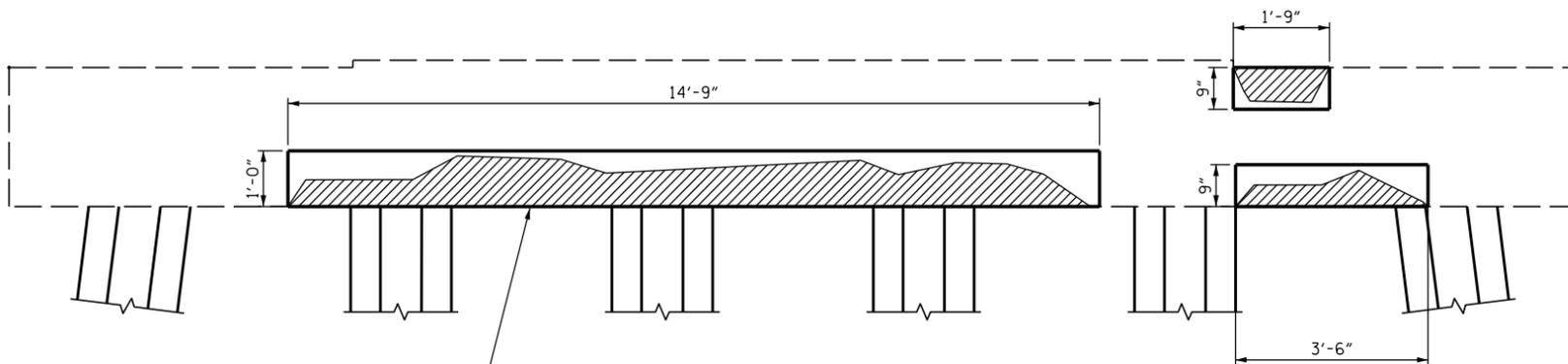
SIDE VIEW
NORTH FACE



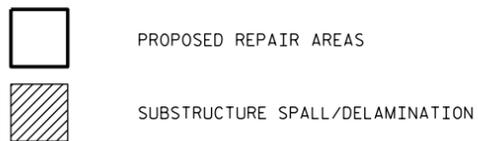
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
 19C97095C75A467...

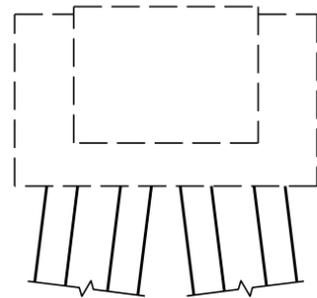


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 243

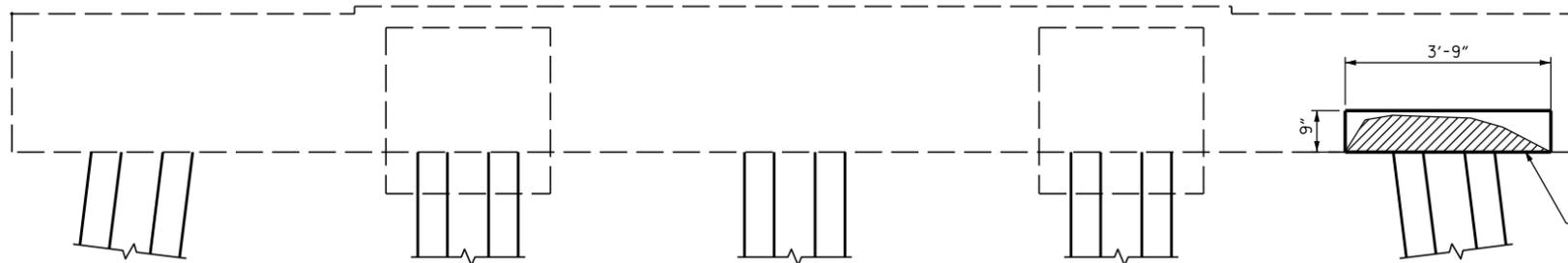
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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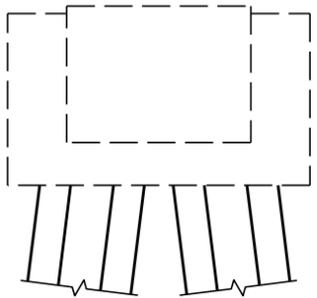
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-262
2			4			TOTAL SHEETS



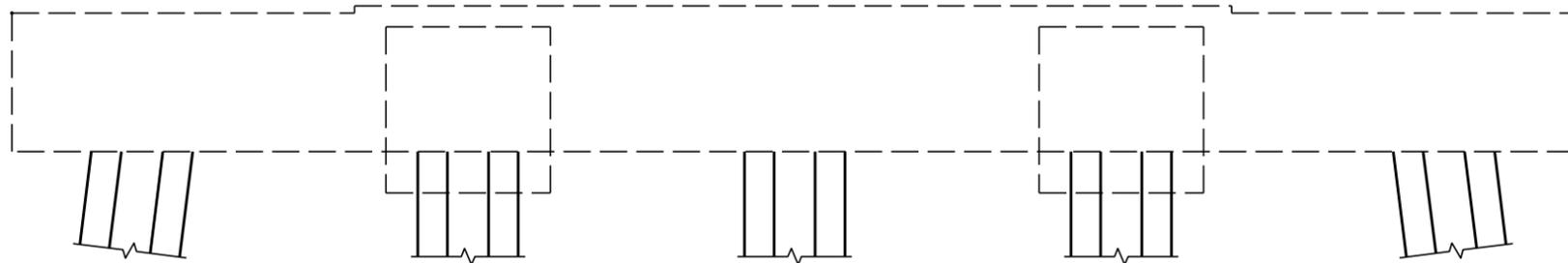
SIDE VIEW
NORTH FACE



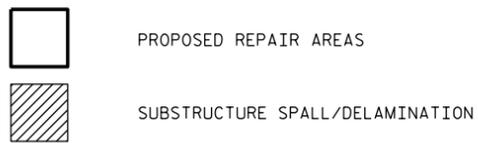
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
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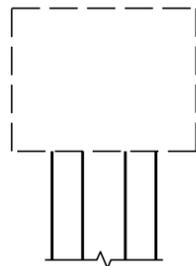
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE CONC.
 REPAIR - BENT 244

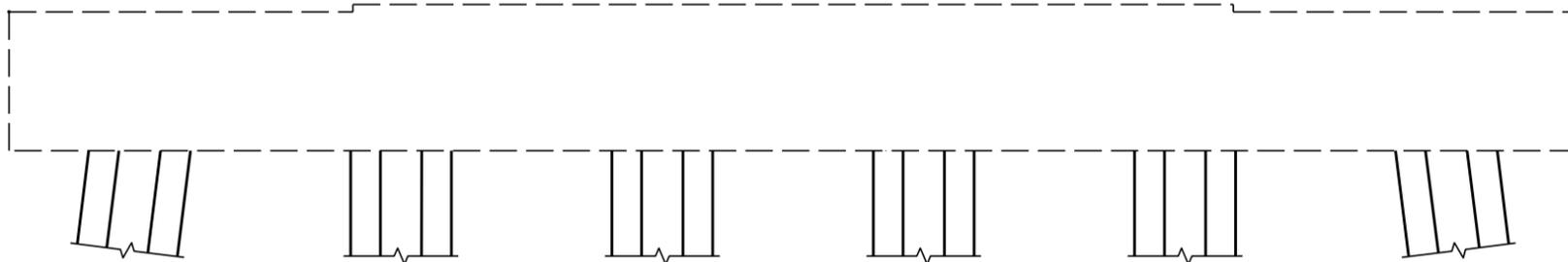
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 CHECKED BY : S. L. CULLUM DATE : -
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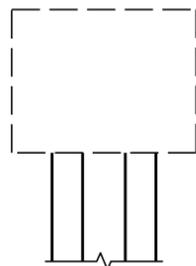
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-263
2			4			TOTAL SHEETS



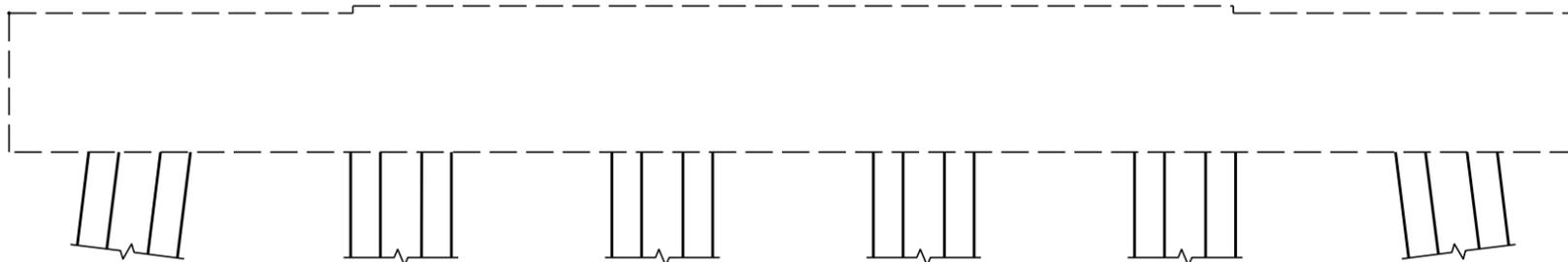
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

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Samuel Cullum



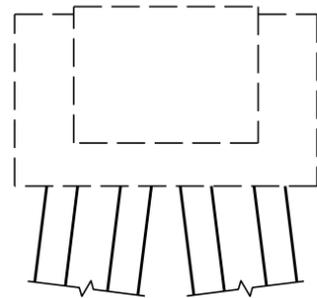
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 245						S-264
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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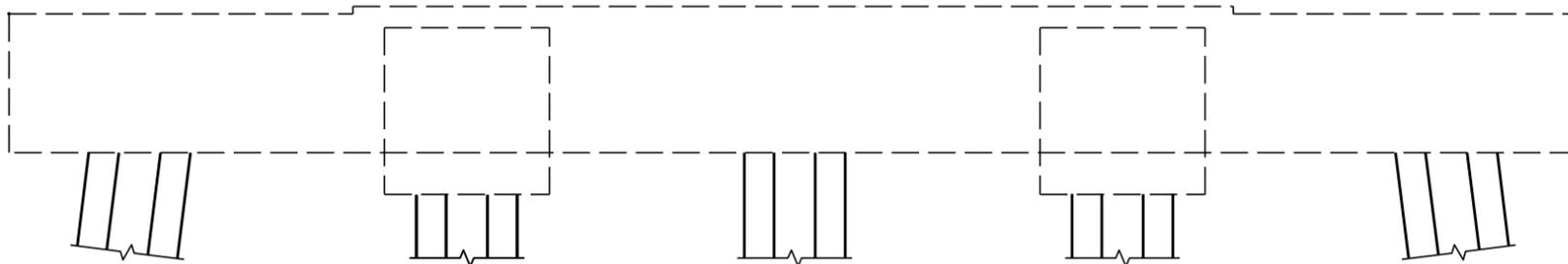
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 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
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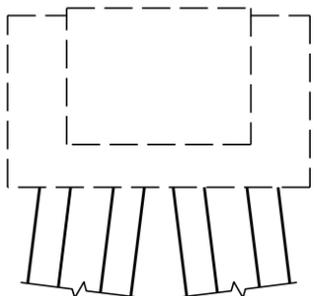
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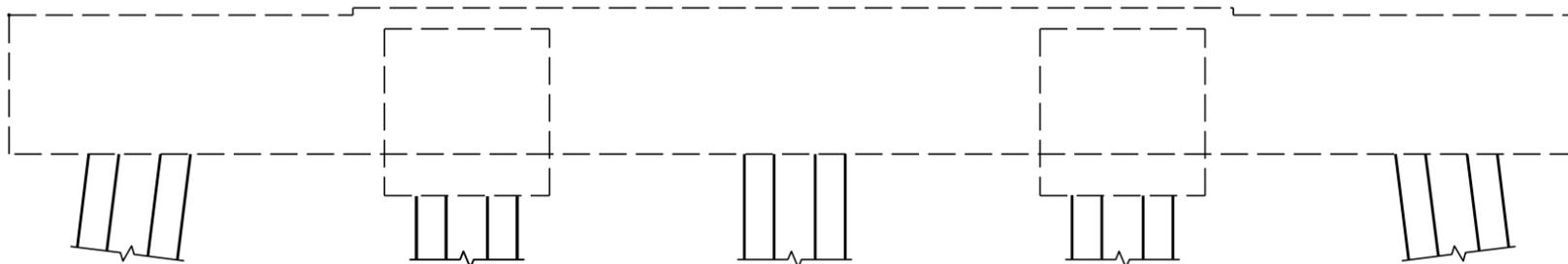
SIDE VIEW
NORTH FACE



ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



PROPOSED REPAIR AREAS



SUBSTRUCTURE SPALL/DELAMINATION

DRAWN BY : T. S. CHILDRESS DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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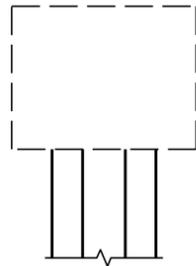
DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

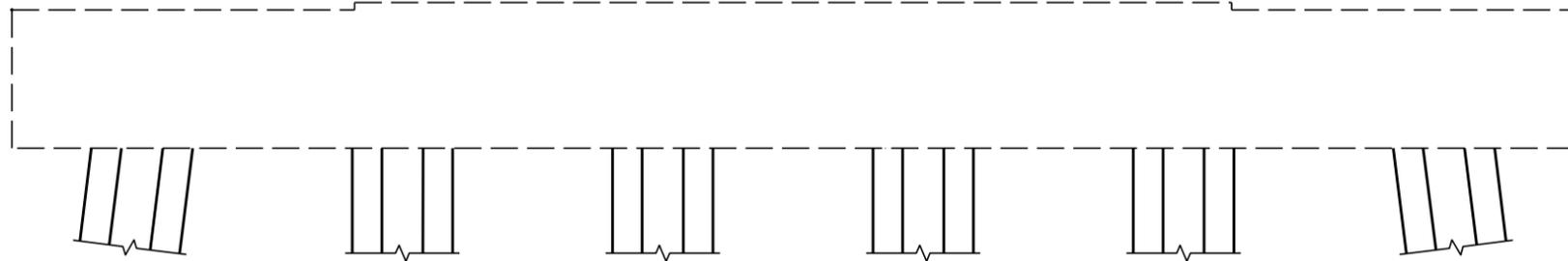
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE CONC. REPAIR - BENT 246						S-265
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
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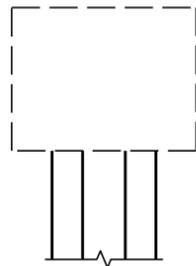
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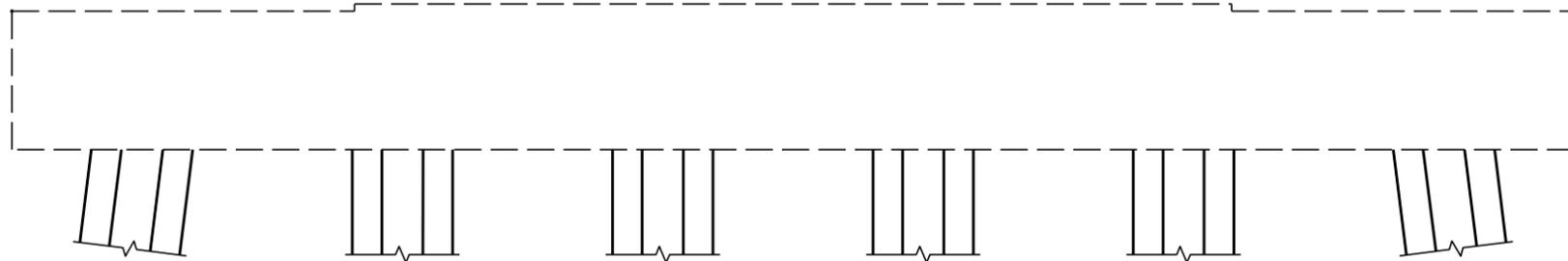
SIDE VIEW
NORTH FACE



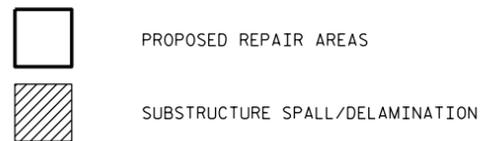
ELEVATION
WEST FACE



SIDE VIEW
SOUTH FACE



ELEVATION
EAST FACE



DocuSigned by:
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12/13/2016

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

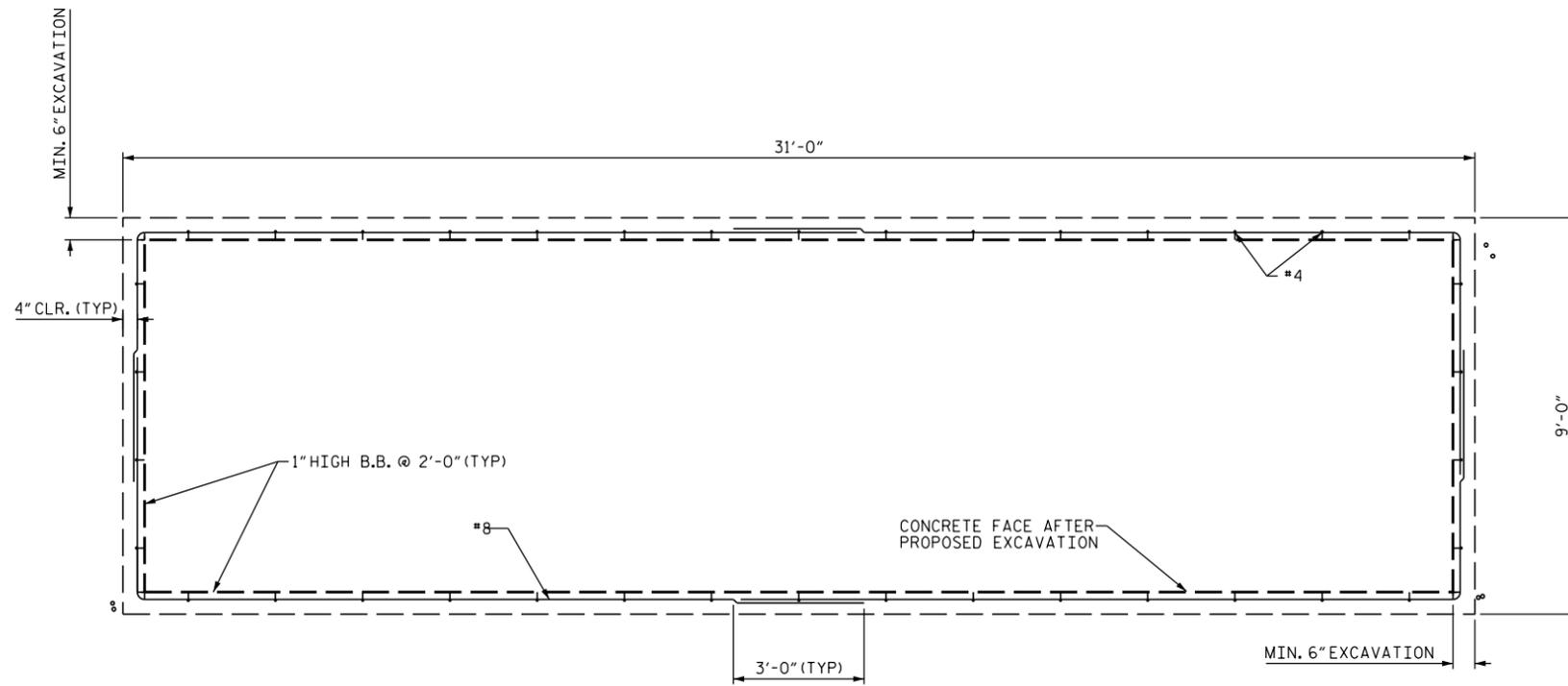
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE CONC.
REPAIR - BENT 247

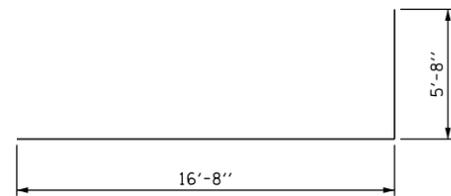
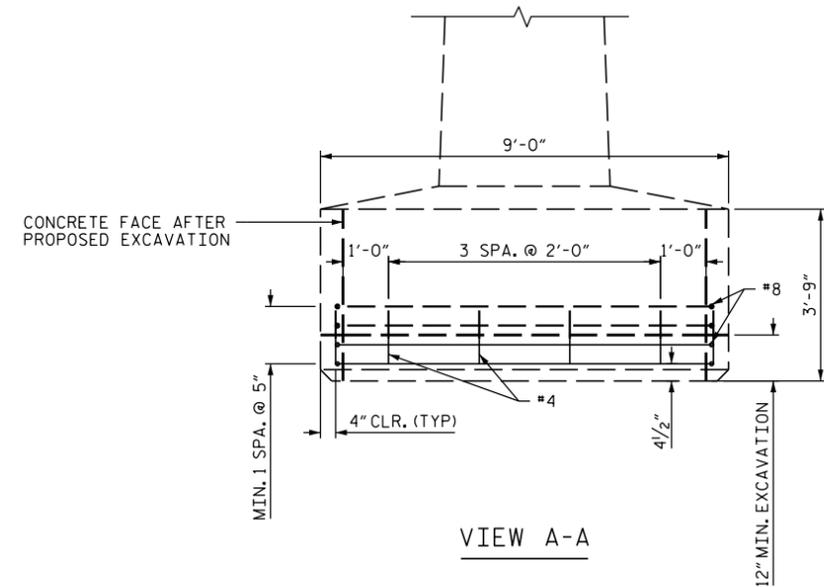
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CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-266
2			4			TOTAL SHEETS



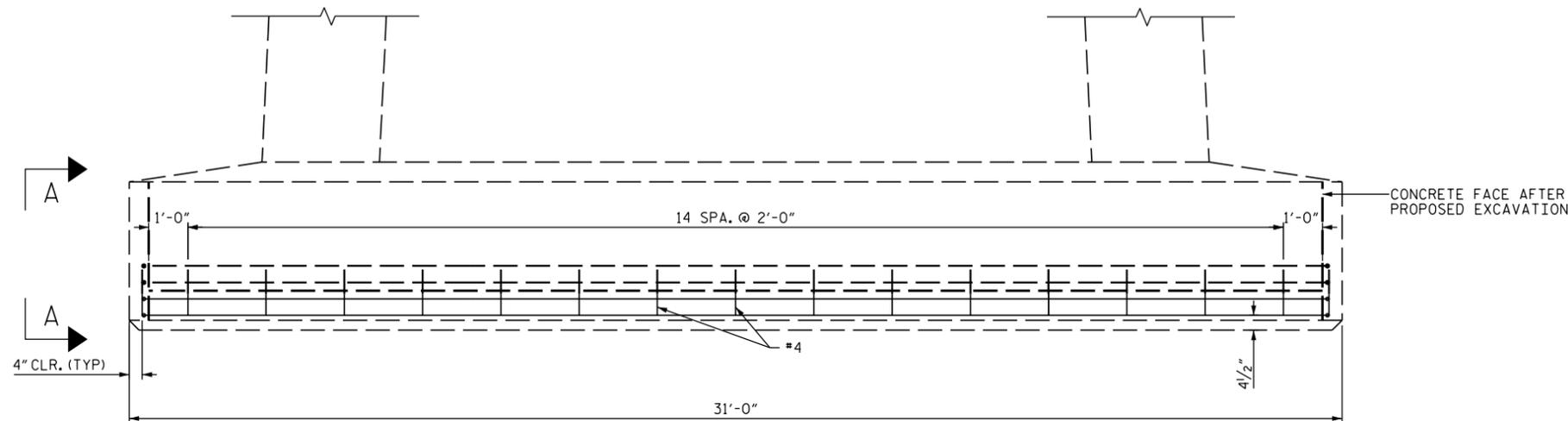
TYPICAL FOOTING SHOWN - PLAN
BENTS 172-176, 181-185



TYPICAL #8 HOOKED BAR

NOTES:

1. WORK THIS SHEET WITH SUBSTRUCTURE CONCRETE REPAIR SHEETS FOR BENTS 172-185.
2. REMOVE UNSOUND CONCRETE FOR A MINIMUM HEIGHT OF 12" (FROM THE BOTTOM OF FOOTING) AND MINIMUM DEPTH OF 6" ON ALL SIDES OF THE FOOTING AS SHOWN ON THE PLANS. EXTEND REPAIR AREA VERTICALLY BASED ON SOUNDING IN THE PRESENCE OF THE ENGINEER AND IN ACCORDANCE WITH PSP FOR CONCRETE RESTORATION.
3. CONCRETE REPAIR MATERIAL MAY BE APPROVED BAG MIX OR AA CONCRETE PER THE STANDARD SPECIFICATIONS WITH THE ADDITION OF STANDARD CORROSION REDUCING ADMIXTURES PER THE SPECIFICATIONS.
4. SEQUENCE REPAIRS SUCH THAT THEY DO NOT TAKE PLACE AT THE SAME TIME AS PROPOSED PILE STRENGTHENING AT EACH PIER.
5. BENTS 177-180 WILL HAVE SIMILAR REPAIRS PERFORMED BUT THE DIMENSIONS ARE 32'-0" X 10'-0"



TYPICAL FOOTING SHOWN - ELEVATION
BENTS 172-176, 181-185

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

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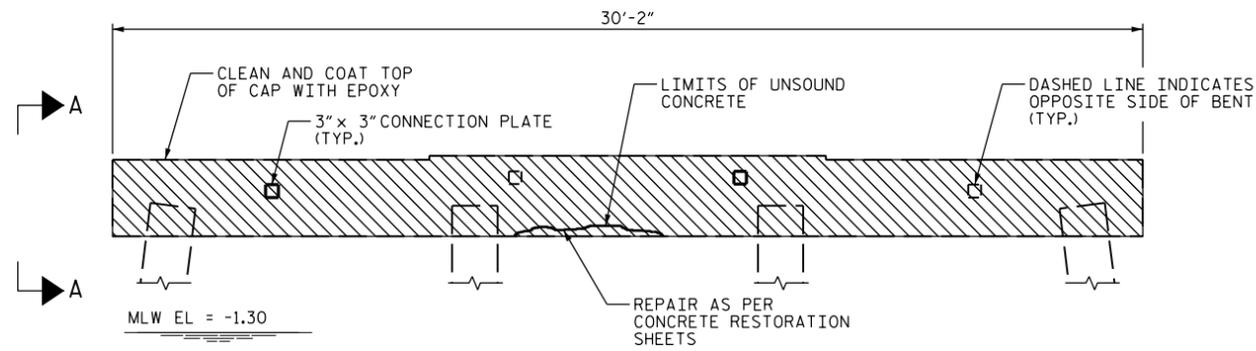
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CHANNEL BENT FOOTING RESTORATION

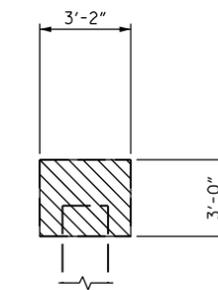
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1			3			S-267
2			4			

DRAWN BY : J. B. HANNA DATE : 10-16
CHECKED BY : S. L. CULLUM DATE : 10-16
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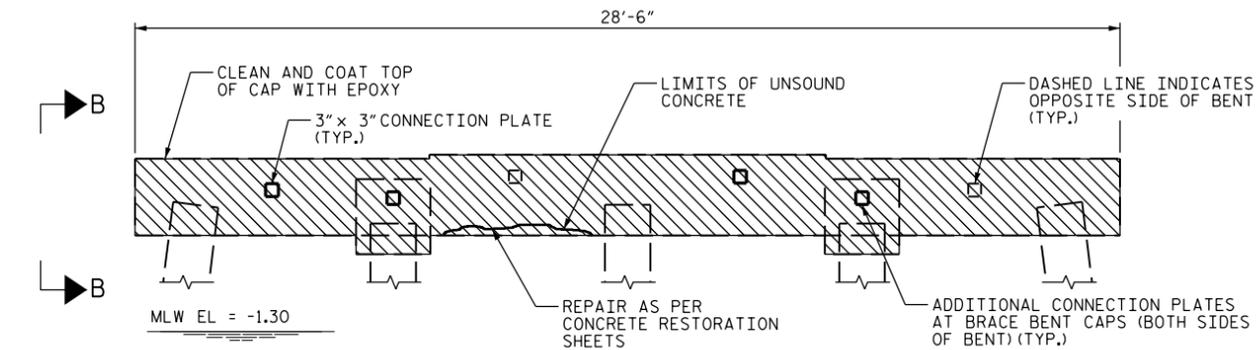
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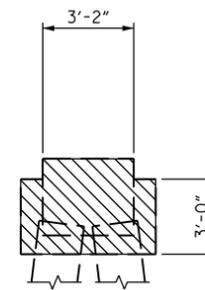
ELEVATION
(TYPE A BENT SHOWN - OTHERS SIMILAR)



VIEW A-A



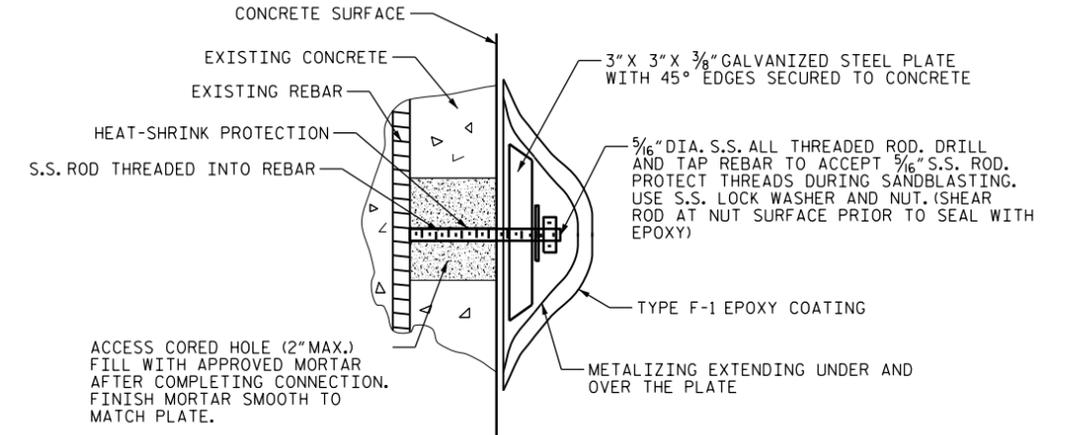
ELEVATION



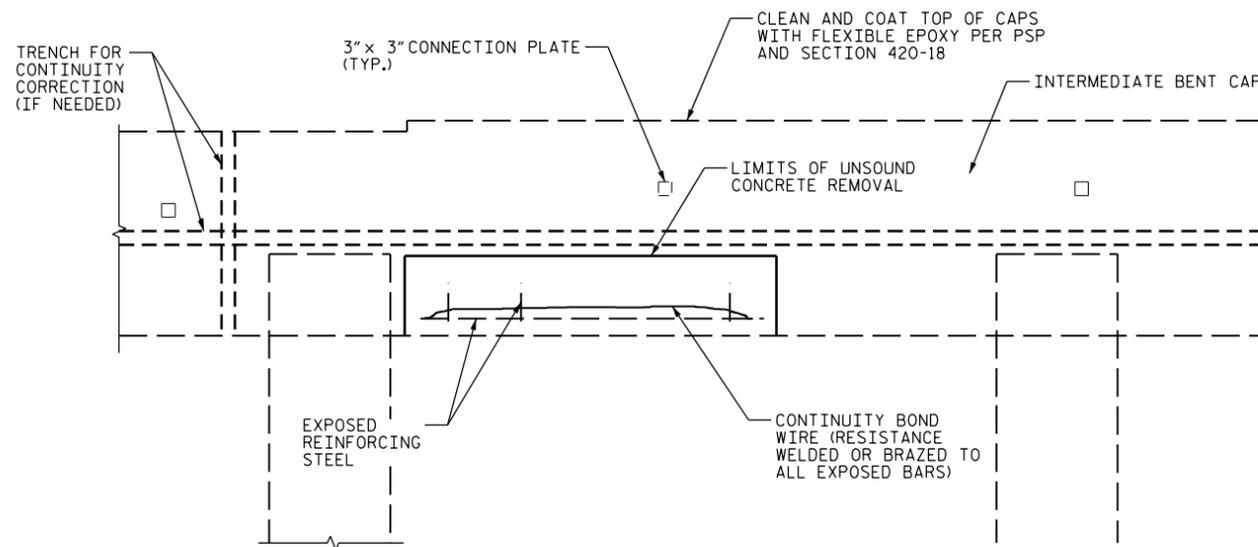
VIEW B-B

CONSTRUCTION NOTES:

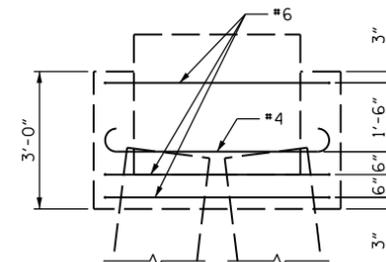
1. REMOVE ALL UNSOUND CONCRETE FROM THE INTERMEDIATE BENT CAPS IN ACCORDANCE WITH CONCRETE REPAIR SHEET AND PROJECT SPECIAL PROVISIONS FOR CONCRETE REPAIR.
2. THE CONTRACTOR SHALL SUBMIT A PLAN FOR CONTROL AND DISPOSAL OF DEBRIS TO THE ENGINEER FOR APPROVAL.
3. FOR SPALLS OR DELAMINATIONS ON THE CAPS GREATER THAN 2'-0" WIDE OR LONG AND GREATER THAN 1" DEEP, RESTORE CONCRETE TO ORIGINAL PROFILE IN ACCORDANCE WITH CONCRETE REPAIR SHEET AND PROJECT SPECIAL PROVISIONS FOR CONCRETE REPAIR. FOR ANY CONCRETE AREAS THAT WOULD BE ISOLATED FROM PROPOSED CONTINUITY BY EXISTING SUPERFICIAL CRACKING, FILL CRACKS WITH EPOXY PRIOR TO METALIZING PER PROJECT SPECIAL PROVISIONS FOR EPOXY INJECTION OF CRACKS.
4. ALL VERTICAL FACES AND THE UNDERSIDE OF THE CAP SHALL BE METALIZED. CONNECTION BETWEEN PLATE AND REINFORCING STEEL SHALL BE PROVIDED VIA A 5/16" DIAMETER STAINLESS STEEL ALL THREADED ROD AS DESCRIBED IN THE CONNECTION PLATE DETAIL. THE CONNECTION PLATES SHALL BE LOCATED IN AREAS OF SOUND CONCRETE AS DETAILED IN THE PROJECT SPECIAL PROVISIONS FOR CATHODIC PROTECTION AND SHALL BE INSTALLED ON DIFFERENT BARS.
5. CHECK INTERBAR CONTINUITY. REINFORCING BARS REQUIRING CONTINUITY CORRECTION SHALL BE MADE CONTINUOUS USING STEEL WIRE RESISTANCE WELDED OR BRAZED TO EVERY REBAR. ALL EXPOSED BARS SHALL BE MADE CONTINUOUS. COAT ALL CONTINUITY CORRECTION WELDS WITH NON-CONDUCTIVE EPOXY.
6. CHECK ELECTRICAL CONTINUITY BETWEEN ALL PLATES IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS FOR CATHODIC PROTECTION.
7. METALIZE AND PLACE CONNECTION PLATES IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS FOR CATHODIC PROTECTION.
8. APPLY A ZINC SILICATE OVERCOAT TO THE METALIZED AREAS AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS FOR CATHODIC PROTECTION-INTERMEDIATE BENT METALIZING. THE ENGINEER MUST APPROVE THE METALIZING PRIOR TO THE OVERCOAT APPLICATION.
9. SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL METALIZING REQUIREMENTS AND ACCEPTANCE CRITERIA. (PSP; CATHODIC PROTECTION-INTERMEDIATE BENT METALIZING)
10. COAT TOP OF CAPS PER SECTION 420-18, NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. CLEAN TOPS OF CAPS PRIOR TO EPOXY APPLICATION PER PSP FOR EPOXY PROTECTIVE COATINGS MANUFACTURER RECOMMENDATIONS.
11. SEQUENCE CLEANING AND COATING IN ORDER TO AVOID DELETERIOUS SUBSTANCES INHIBITING PROPOSED COATINGS.
12. THE VERTICAL FACE STEP BEHIND THE AASHTO GIRDERS AT BENTS 153 AND 154 ARE NOT TO BE METALIZED. CLEAN AND COAT WITH EPOXY PROTECTIVE COATING PER PSP AND SECTION 420-18.



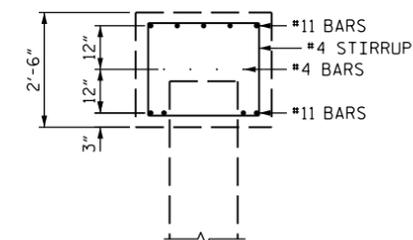
CONNECTION PLATE DETAIL FOR REBARS



CONTINUITY DETAIL



BASIC BENT CAP REINFORCING DETAIL
(FROM EXISTING PLANS - SEE FOR MORE DETAIL)
(ADDITIONAL BARS AT PILES)



BASIC BENT CAP REINFORCING DETAIL
(FROM EXISTING PLANS - SEE FOR MORE DETAIL)
(ADDITIONAL BARS AT PILES)

METALIZING NOTES:

1. NO METALIZING SHALL BE PERFORMED UNTIL THE CONCRETE RESTORATION HAS BEEN APPROVED BY THE ENGINEER. METALIZE AT NO LESS THAN 10 (TEN) DAYS AFTER PLACING CONCRETE, BUT NO MORE THAN 90 (NINETY) DAYS. CONNECT METALIZING CONNECTION PLATE IMMEDIATELY AFTER COMPLETING METALIZING.
2. APPLY A ZINC SILICATE OVERCOAT AT NO MORE THAN 72 HOURS AFTER METALIZING.
3. COAT CONNECTION PLATE WITH EPOXY AT NO MORE THAN 96 HOURS AFTER APPLICATION OF ZINC SILICATE OVERCOAT.

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Samuel Cullum
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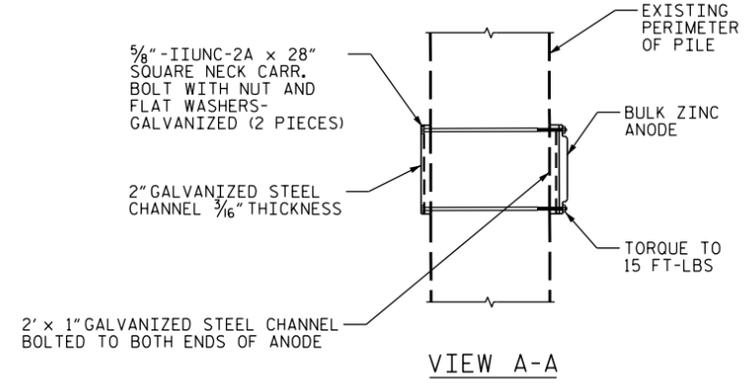
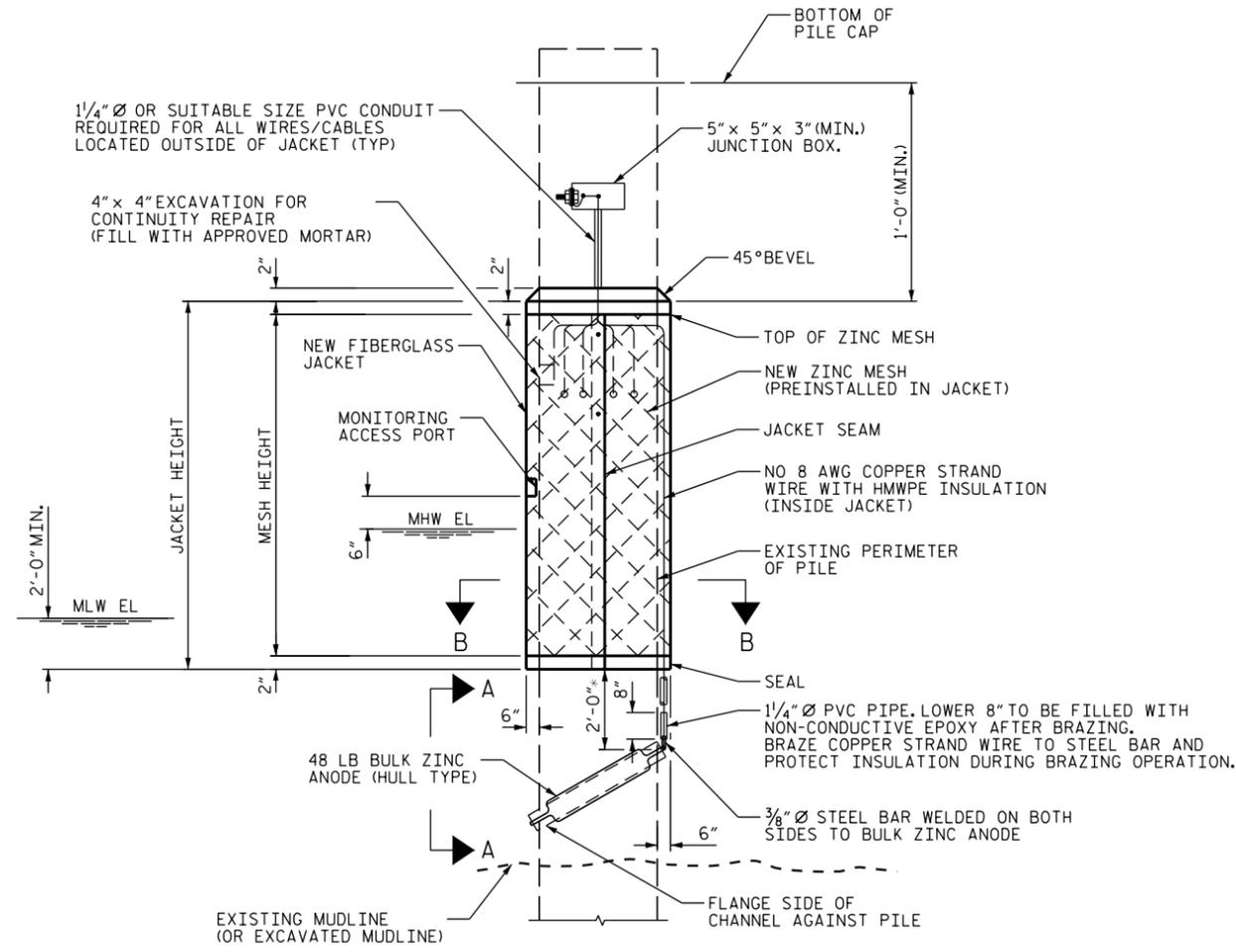
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-268
2			4			

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

DRAWN BY: J. B. HANNA DATE: 07-16
CHECKED BY: S. L. CULLUM DATE: 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE: 07-16

*****SYSTEM*****
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*****USERNAME*****

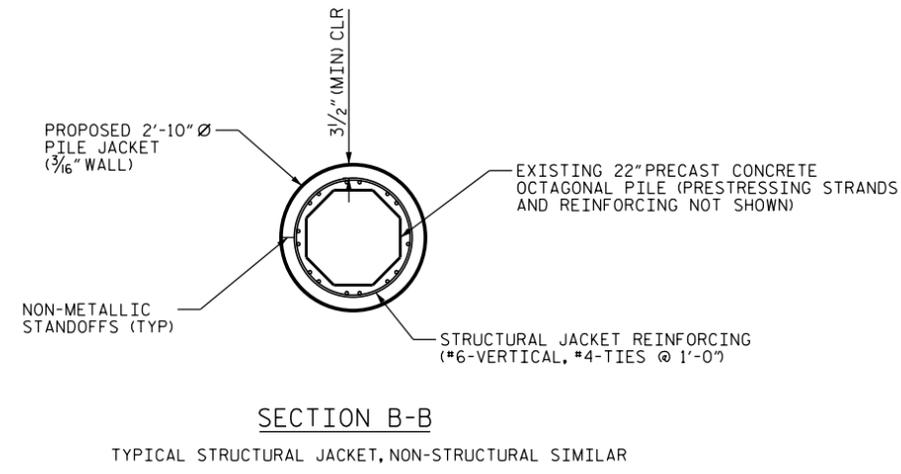


PILE JACKET NOTES:

1. PROVIDE A PUMPING PORT WITHIN 4" OF THE PILE JACKET BOTTOM OR GROUNDLINE TO APPLY FILLER. IF ADDITIONAL PUMPING PORTS ARE REQUIRED TO ENSURE PROPER FILLING, THEY SHALL BE LOCATED ABOVE THE BOTTOM PORT HOLE, STAGGERED ON ALTERNATING SIDES.
2. ALL CONDUIT, BULK ZINC ANODES, JUNCTION BOXES, AND CONNECTIONS SHALL BE PLACED ON THE EAST FACE OF PILES WEST OF THE CHANNEL AND THE WEST FACE EAST OF THE CHANNEL.
3. SEE PILE JACKET TABLES FOR PROPOSED JACKET LOCATIONS.

TYPICAL CATHODIC PILE JACKET
ELEVATION

* ADJUST AS NECESSARY TO KEEP BULK ZINC ANODE ABOVE THE MUDLINE



SECTION B-B
TYPICAL STRUCTURAL JACKET, NON-STRUCTURAL SIMILAR

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 043571
 SAMUEL L. CULLUM
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PILE JACKET
 DETAILS (1 OF 3)**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-269
2			4			

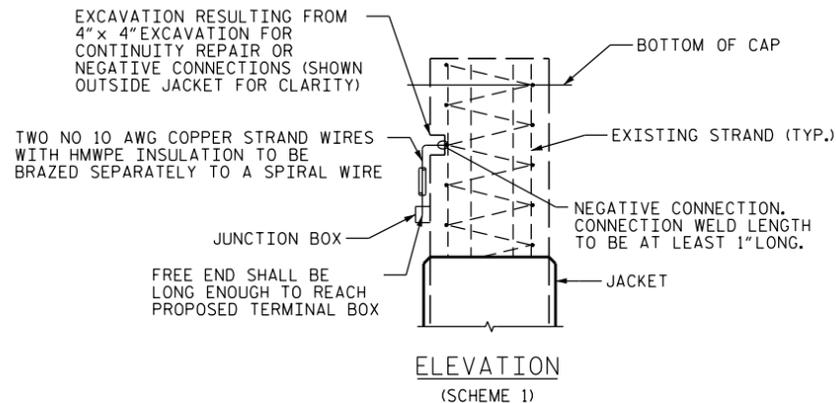
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

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*****SYSTEM*****
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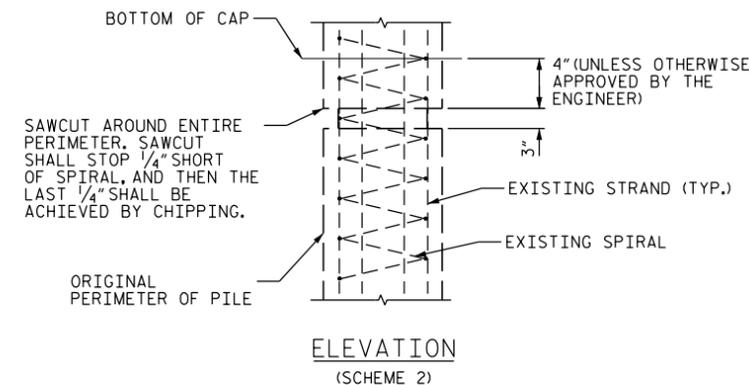
SEQUENCE OF CONSTRUCTION FOR PILE JACKETS

1. THE CONTRACTOR SHALL SURVEY AND LOCATE THE MEAN HIGH AND MEAN LOW WATER ELEVATIONS AT EACH PILE WITH SUBSEQUENT APPROVAL OF THE ENGINEER PRIOR TO THE INSTALLATION OF ANY JACKET.
2. CLEAN PILES IN ACCORDANCE WITH SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT A PLAN FOR CONTROL AND DISPOSAL OF DEBRIS TO THE ENGINEER FOR APPROVAL. ALL COSTS ASSOCIATED WITH DEBRIS REMOVAL SHALL BE INCIDENTAL TO JACKET COSTS.
3. PROVIDE CONTINUITY TEST FOR ALL PILES TO BE JACKETED IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
4. PERFORM INITIAL ELECTRICAL WORK AND ATTACH THE BULK ZINC ANODE TO THE PILE AS SHOWN IN VIEW A-A ON PILE JACKET DETAILS (1 OF 3) AND IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
5. POSITION SACRIFICIAL ZINC MESH/FIBERGLASS JACKET HALVES AROUND THE ENTIRE PILE PERIMETER FOR THE VERTICAL DISTANCE OF MESH HEIGHT AND SEAL HALVES TOGETHER IN PREPARATION FOR POUR AND ROUTE THE COPPER WIRES COMING OUT OF THE JACKET IN CONDUIT. INSTALL TEMPORARY HARDBACK BRACING AND CLAMP SYSTEM TO HOLD THE JACKET HALVES STABLE AND IN PLACE DURING FILL OPERATION.
6. THE TYPE OF JACKETS INSTALLED IS TO BE APPROVED BY THE ENGINEER AFTER THE REMOVAL OF UNSOUND CONCRETE AND PRIOR TO JACKET INSTALLATION. A STRUCTURAL JACKET IS REQUIRED WHEN EITHER OF THE TWO FOLLOWING IS PRESENT:
 - 1) 2 OR MORE STRANDS ON ONE SIDE OF A PILE EXHIBIT MORE THAN 30% CROSS-SECTIONAL AREA LOSS.
 - 2) THE TOTAL CROSS-SECTIONAL AREA OF STRANDS ON ONE SIDE OF THE BENT PILE EXHIBITS MORE THAN 10% SECTION LOSS.
 OTHERWISE, A NON-STRUCTURAL JACKET SHALL BE USED. AT THE ENGINEER'S DIRECTION, A #7 BAR MAY BE USED TO SUPPLEMENT AN INDIVIDUAL STRAND THAT HAS A SECTION LOSS OF MORE THAN 30% ON A PILE OTHERWISE SUITABLE FOR A NON-STRUCTURAL JACKET. THE NUMBER OF BARS SHALL BE LIMITED TO TWO PER PILE.
7. PLACE FILLER AS PER CONTRACT DOCUMENTS.
8. INSTALL JUNCTION BOX.
9. CONNECT THE FREE ENDS OF CABLES IN THE JUNCTION BOX TO THE ANODE OR CATHODE IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
10. PATCH AND FILL ANY REMAINING EXCAVATIONS WITH APPROVED MATERIAL.



SCHEME 1

1. EXCAVATE A 4" x 4" AREA AT EACH STRAND OF DISCONTINUITY SUCH THAT IT EXTENDS TO THE FIRST ADJACENT STRAND THAT IS CONTINUOUS. EXCAVATION AREA TO BE WITHIN THE TOP 2 FEET OF THE JACKET. EXCAVATION SHOWN OUTSIDE JACKET FOR CLARITY.
2. FOR ABOVE WATER INSTALLATION RESISTANCE WELD TWO MILD STEEL WIRES FROM ONE DISCONTINUOUS STRAND TO THE ADJACENT STRAND UNTIL A CONTINUOUS STRAND IS REACHED. COAT CONNECTION WITH NON-CONDUCTIVE EPOXY.
3. A MINIMUM OF TWO CONTINUITY CONNECTIONS SHALL BE MADE TO EACH DISCONTINUOUS STRAND.



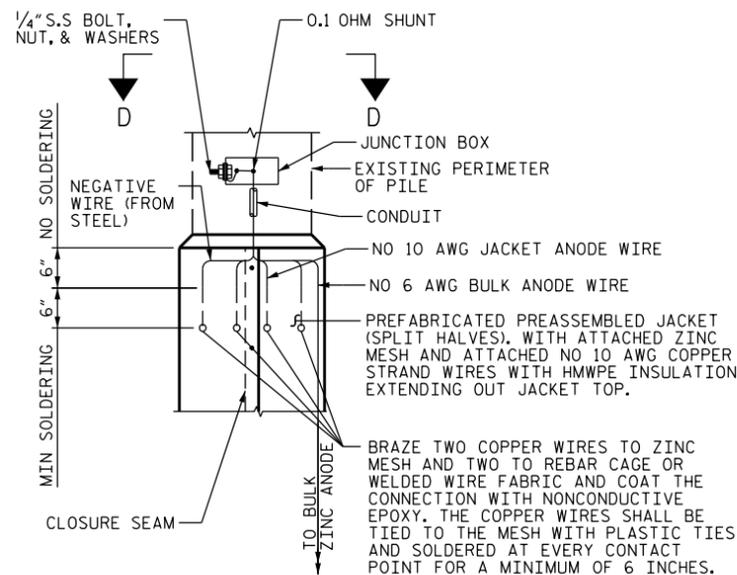
SCHEME 2

1. MAKE UNIFORM DEPTH AND HEIGHT SAW CUTS AROUND ENTIRE PILE PERIMETER KEEPING CLEAR OF EXISTING STRANDS. AFTER SAWCUTTING, CHIP AS NECESSARY TO EXPOSE STRANDS AND SPIRALS. AREA TO BE LOCATED WITHIN THE TOP 2 FEET OF THE JACKET. CLEAN AND PREPARE SAWCUTTING/CHIPPED AREA.
2. RESISTANCE WELD TWO MILD STEEL WIRES FROM ONE DISCONTINUOUS STRAND TO THE ADJACENT STRAND UNTIL A CONTINUOUS STRAND IS REACHED. COAT CONNECTION WITH NON-CONDUCTIVE EPOXY.
3. A MINIMUM OF TWO CONTINUITY CONNECTIONS SHALL BE MADE TO EACH DISCONTINUOUS STRAND.

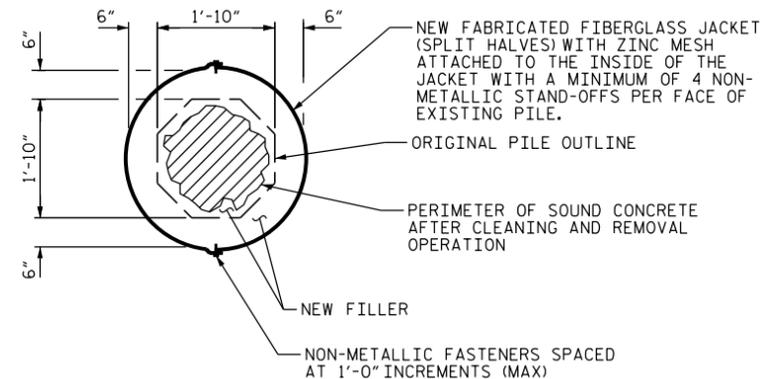
CONTINUITY CORRECTIONS

GENERAL

LOCATIONS OF EXCAVATIONS FOR CONTINUITY CORRECTIONS SHALL BE SELECTED BASED ON THE ALTERNATIVE RESULTING IN THE LEAST REMOVAL OF CONCRETE. IF POSSIBLE, ALL EXCAVATIONS TO EXPOSED REINFORCING STEEL SHALL BE MADE INSIDE THE JACKET LIMITS. CONTINUITY TEST AND CONTINUITY CORRECTION EXCAVATIONS SHALL BE SEALED PRIOR TO PLACEMENT OF THE JACKET.



JACKET DETAIL
(NON-STRUCTURAL SHOWN, STRUCTURAL SIMILAR)



VIEW D-D
PRESTRESSING STRANDS AND REINFORCING STEEL NOT SHOWN FOR CLARITY

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

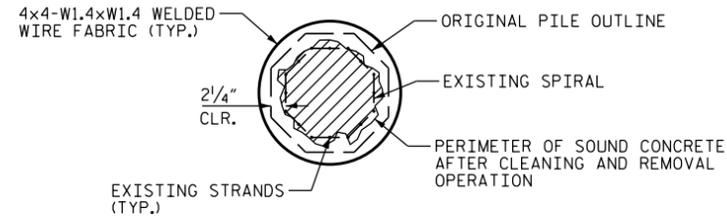
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**PILE JACKET
 DETAILS (2 OF 3)**

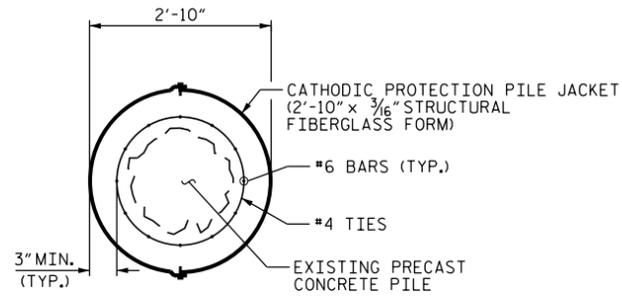
DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
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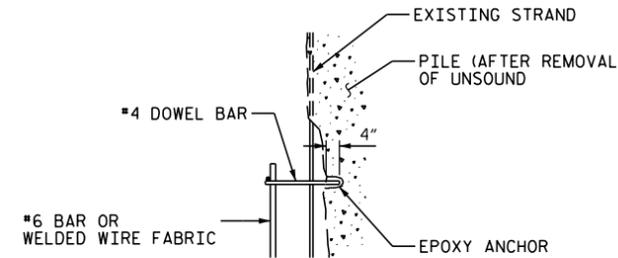
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-270
2			4			TOTAL SHEETS



SECTION E-E



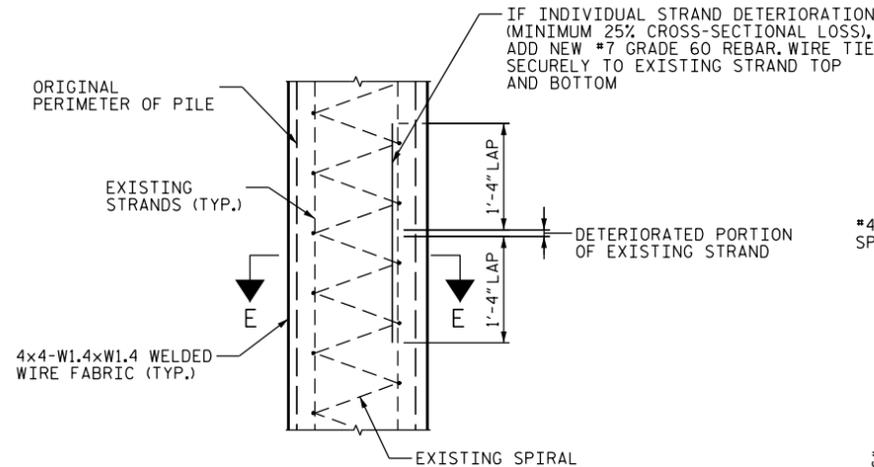
SECTION F-F



DETAIL A - DOWEL CONNECTION

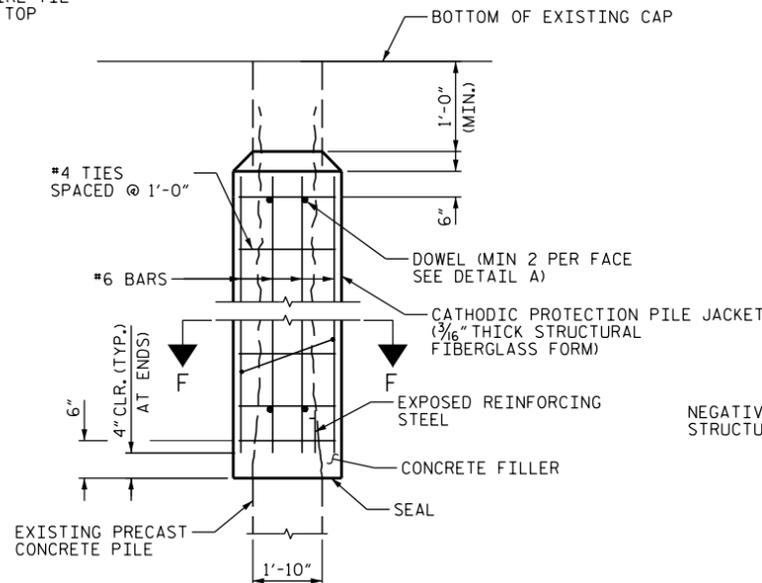
1. EMBED DOWEL WITH EPOXY AT A POINT WHERE STRAND IS INTACT AND CONTINUOUS WITH THE PILE LENGTH EXTENDING FROM THAT PARTICULAR END OF THE JACKET. MAINTAIN ELECTRICAL ISOLATION BETWEEN DOWEL AND EXISTING PILE REINFORCEMENT.
2. RESISTANCE WELD DOWEL AT #7 BAR OR WELDED WIRE FABRIC TO ESTABLISH CONDUCTIVE CONNECTION. FOR BELOW WATER JACKET USE MECHANICAL CONNECTION. CONTRACTOR TO SUBMIT DETAIL TO ENGINEER FOR APPROVAL.
3. COAT ALL RESISTANCE WELD CONNECTIONS WITH TWO COATS OF 100% SOLIDS NON-CONDUCTIVE EPOXY.
4. WIRE TIE ALL INTERSECTIONS OF REINFORCING CAGE.
5. FILLER FOR JACKETS SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS. REINFORCING FOR JACKETS SHALL BE AS DETAILED ON THIS SHEET.

NOTE:
PROVIDE ELECTRICAL CONTINUITY BETWEEN THE NEW AND EXISTING STEEL AT THE CONNECTION JUNCTION BOX (SEE JUNCTION BOX DETAIL).

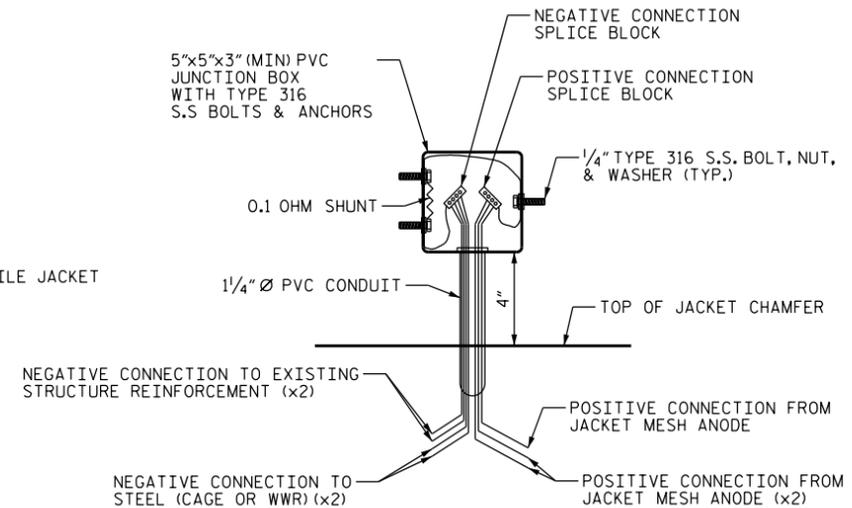


SCHEME 3
NON-STRUCTURAL CATHODIC PILE JACKET
(JACKET AND GROUT FILLER NOT SHOWN FOR CLARITY)

NOTE:
MINIMUM STEEL AREA REQUIREMENTS FOR NON-STRUCTURAL CASE 4x4-W1.4xW1.4 WELDED WIRE FABRIC OR GREATER.



SCHEME 4
STRUCTURAL CATHODIC PILE JACKET
(CATHODIC COMPONENTS NOT SHOWN FOR CLARITY)

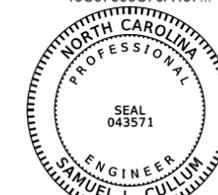


JUNCTION BOX DETAIL

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum

19C97095C75A467...



12/13/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE JACKET
DETAILS (3 OF 3)

DRAWN BY : J. B. HANNA DATE : 07-16
CHECKED BY : S. L. CULLUM DATE : 07-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

*****SYSTEM*****
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*****USERNAME*****

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-271
2			4			TOTAL SHEETS

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DRAWN BY : T.S. CHILDRESS DATE : 10-16
 CHECKED BY : S.L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S.L. CULLUM DATE : 07-16

*****SYSTEM*****
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 *****USERNAME*****

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

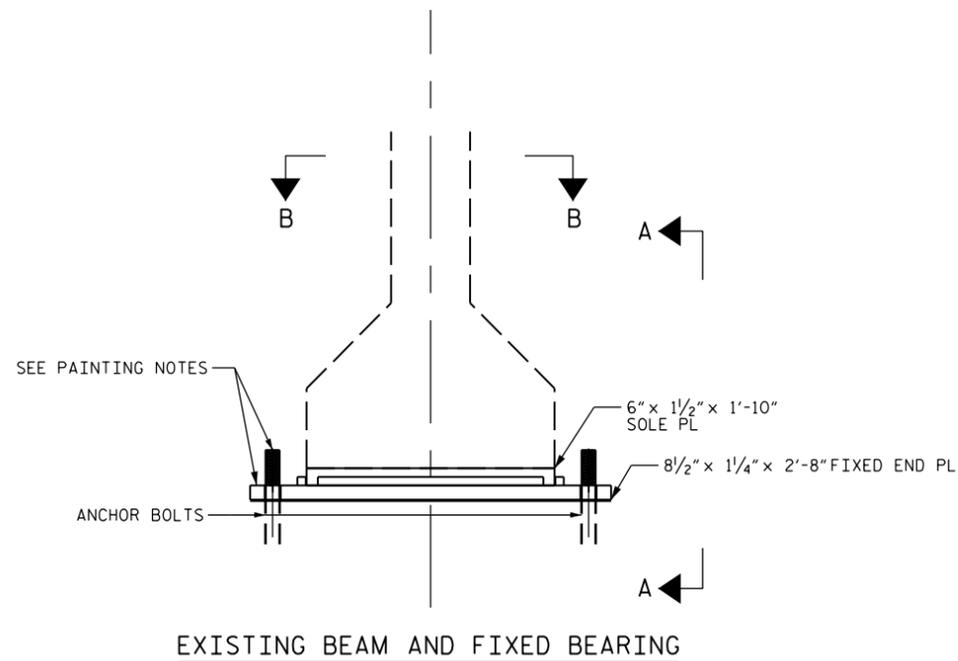
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

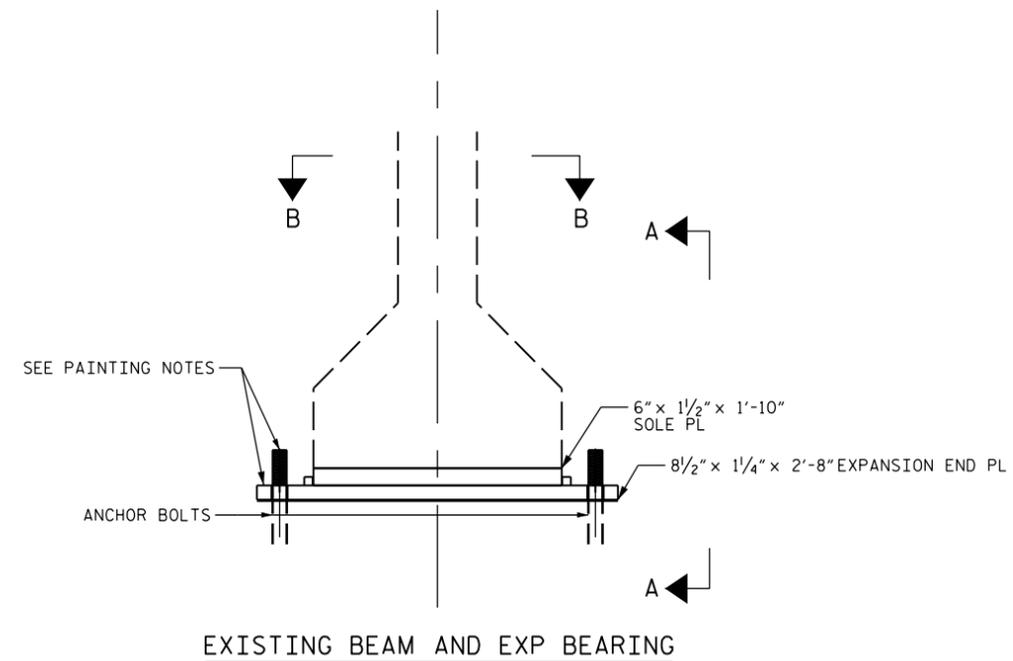
PILE JACKET DEFICIENCIES

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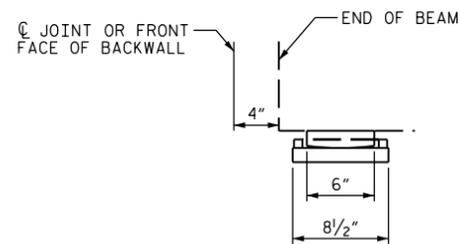
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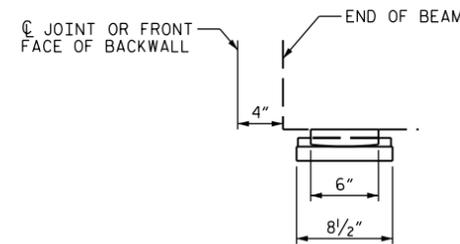
EXISTING BEAM AND FIXED BEARING



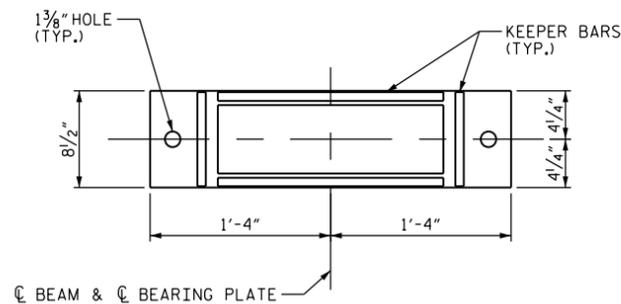
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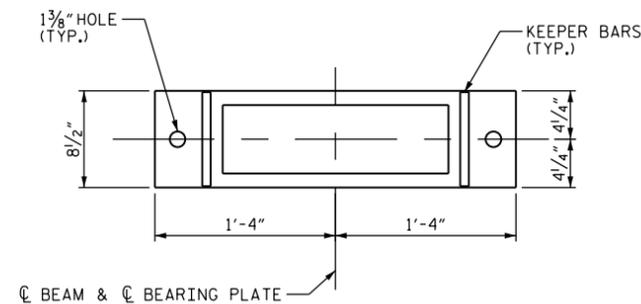
SECTION A-A



SECTION A-A



SECTION B-B



SECTION B-B

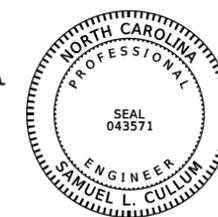
PAINING OF STRUCTURAL STEEL

1. CLEAN AND PAINT ALL EXPOSED AREAS OF PLATES, NUTS, BOLTS, AND WASHERS AT EACH BEARING IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS FOR COATING OF EXISTING BEARINGS.
2. DURING ALL CLEANING AND PAINTING OPERATIONS, THE CONTRACTOR SHALL ISOLATE THE WORK AREA WITH APPROPRIATE CONTAINMENT DEVICES (CANVASSES, TARPULINS, SCREENS, ETC.) IN ORDER TO PREVENT ANY GENERATED DEBRIS FROM CAUSING VIOLATIONS OF CURRENT FEDERAL, STATE AND LOCAL AIR AND WATER POLLUTION REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEGAL DISPOSAL OF ALL DEBRIS COLLECTED BY THE CONTAINMENT DEVICES.

DRAWN BY : J. B. HANNA DATE : 07-16
 CHECKED BY : S. L. CULLUM DATE : 07-16
 DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 07-16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

3/8/2017



PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CLEANING AND COATING OF BEARINGS

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-273
2			4			

*****SYSTEM*****
 *****SDGN*****
 *****USER*****

Currituck No. 16

Approx. proposed repair quantities from: 2016 GS survey, 2014 Routine Inspection Report

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	Depth(ft.)
1	Rt. Deck Overhang	20' from abutment	Abut. 1	Delam	1.75	1.25	0.3125
1	End Diaphragm	Abut. backwall bay 2	Abut. 1	Spalling/rebar exposed	0.5	0.25	0.3125
1	Girder 1	at bent, bottom right flange	1	Delam at bearing	0.75	0.75	0.1875
2	Girder 2	at bent, bottom right flange	1	Spalling/strands exposed behind bearing	1	0.5	0.1875
	End Diaphragm	at right overhang	1	Delam	0.5	0.25	0.3125
1	Int. Diaphragm	bay 1, East face	1	(x2)Spalling/rebar exposed	0.75	0.33	0.3125
	Int. Diaphragm	bay 2, bottom flange	1	Spalling/exposed steel	0.75	0.5	0.3125
1	Int. Diaphragm	bay 2, East face	1	Spalling/rebar exposed	0.75	0.25	0.3125
2	End Diaphragm	bay 3, bottom face	1	Delam	0.5	0.5	0.3125
2	Under Deck	bay 3	2	Spalling/rebar exposed	1.25	1.25	0.3125
	Int. Diaphragm	bay 1	2	(x4)Spalling/rebar exposed	1	1	0.3125
2	End Diaphragm	bay 3	2	Spalling/rebar exposed	2.25	1.5	0.3125
2	Girder 4	24' from bent, left flange	2	Delam at patch	2.25	0.5	0.1875
3	Girder 3	at bent	2	Spalling/rebar exposed	0.75	0.5	0.1875
3	Girder 2	at bent, both bottom flanges	3	Delam behind bearing	0.75	0.75	0.1875
3	End Diaphragm	at right overhang	3	Cracking	1	1	0.3125
3	Int. Diaphragm	bay 1, 20' from bent	3	Spalling(exposed metal form)	0.75	0.75	0.3125
3	Girder 4	24' from bent, bottom right flange	3	Delam at patch	2	1	0.1875
3	Girder 4	at bent, bottom right flange	3	Spalling/strands exposed behind bearing	1	0.75	0.1875
	Diaphragm	N face and S face	3	Cracking/spalling			0.3125
	Under Deck	bay 1	3	Spalling	0.75	0.75	0.3125
3	Lt. Deck Overhang	10' from bent, left overhang	3	Spalling/rebar exposed	0.5	0.5	0.3125
3	Under Deck	bay 2 at bent	3	Spalling/rebar exposed	0.5	0.5	0.3125
4	Lt. Deck Overhang	at bent	3	Delam under Rail	0.75	0.5	0.3125
4	End Diaphragm	at bent, left overhang	3	Spalling	0.75	0.5	0.3125
4	End Diaphragm	bay 3	3	Spalling/rebar exposed	0.75	0.5	0.3125
4	Int. Diaphragm	bay 1, bottom fac	3	Spalling/rebar exposed	0.5	0.25	0.3125
4	Under Deck	bay 1 near bent	4	Spalling/rebar exposed	1.5	1.5	0.3125
4	Girder 2	at bent, bottom face	4	Spalling/embedded bearing plate exposed	1.25	0.75	0.1875
4	Girder 3	6' from bent, bottom left face	4	Spalling/strands exposed	3.5	1	0.1875
4	Rt. Deck Overhang	at bent	4	Spalling/rebar exposed	0.75	0.75	0.3125
4	Rt. Deck Overhang	near bent	4	(x1)Spalling/(x1)Delam	0.75	0.75	0.3125
4	End Diaphragm	bay 3	4	Delam	0.75	0.75	0.3125
	Rt. Deck Overhang	1' from drain	4	Spalling/steel exposed	0.5	0.5	0.3125
4	End Diaphragm	bay 4	4	Spalling/rebar exposed	2	0.75	0.3125
6	Rt. Deck Overhang	at bent	5	Spalling/rebar exposed	1	0.75	0.3125
6	End Diaphragm	bay 3 at bent	5	Spalling/rebar exposed	2.25	0.75	0.3125
	Int. Diaphragm	bay 3	6	(x2)Delam	1	0.75	0.3125
6	Girder 1	at bent, bottom left flange	6	Spalling/strands exposed behind bearing	1	0.75	0.1875
6	End Diaphragm	at left overhang	6	Spalling/rebar exposed	1	0.75	0.3125
7	Girder 3	at bent, bottom left flange	6	Spalling/strands exposed behind bearing	1	1	0.1875
7	Rt. Deck Overhang	at bent	6	Spalling/rebar exposed	0.5	0.5	0.3125
7	End Diaphragm	bay 2 at bent	7	(x2)Spalling/rebar exposed	1.5	1.5	0.3125
7	Under Deck	bay 3	7	Spalling/rebar exposed	0.5	0.5	0.3125
7	Lt. Deck Overhang	at bent	7	Spalling/rebar exposed	1.25	1	0.3125
8	Lt. Deck Overhang	mid span	7	(x3)Spalling/rebar exposed	1.75	0.75	0.3125
8	Int. Diaphragm	bay 1	7	(x5)Spalling/rebar exposed	1.75	0.5	0.3125
9	End Diaphragm	at left overhang	8	Spalling/rebar exposed	0.75	0.75	0.3125
9	Int. Diaphragm	bay 1	8	Spalling/rebar exposed	1	0.33	0.3125
10	Rt. Deck Overhang	near drain pipe	9	Spalling/rebar exposed	0.5	0.5	0.3125
10	End Diaphragm	at left overhang	9	Spalling/rebar exposed	1	0.75	0.3125
10	Girder 2	20' from bent, bottom right flange	9	Delam/cracking at patch	1.75	1.2	0.1875
10	Girder 2	at bent, bottom left flange	9	Spalling/strands exposed behind bearing	1.25	1	0.1875
10	Lt. Deck Overhang	mid span	10	Spalling/rebar exposed	1	1	0.3125
10	Int. Diaphragm	bay 3	10	Spalling/rebar exposed	2	1.75	0.3125
11	End Diaphragm	bay 3	10	Delam/cracking/exposed steel	0.75	0.75	0.3125
11	Girder 2	at bent, both bottom flanges	10	Spalling/strands exposed behind bearing	1.75	1	0.1875
12	Int. Diaphragm	bay 1	11	Spalling/rebar exposed	1.25	0.75	0.3125
12	Under Deck	bay 2, 10' from bent	11	(x2)Spalling/rebar exposed; (x2)delam	1.5	1.5	0.3125
12	Girder 1	at bent, bottom right flange	12	Spalling/strands exposed behind bearing	1	1	0.1875
12	Int. Diaphragm	bay 3, E face	12	(x4)Spalling/rebar exposed	1.75	1	0.3125
12	Int. Diaphragm	bay 3, E face	12	(x2)Spalling/rebar exposed	1	0.75	0.3125
12	Under Deck	bay 3	12	(x2)Spalling/rebar exposed; delam	1.25	1.25	0.3125
12	Under Deck	bay 3, 10' from bent	12	(x4)Spalling/rebar exposed; delam	1.75	1.75	0.3125
13	Diaphragm	bay 3, W face	12	(x2)Spalling/rebar exposed	0.75	0.75	0.3125
13	Girder 3	at bent, bottom right flange	13	Spalling/strands exposed behind bearing	0.75	0.75	0.1875
14	Diaphragm	bay 2	13	(x3)Spalling/rebar exposed	1	1	0.3125
14	End Diaphragm	bay 3	14	Spalling/rebar exposed	1.75	1.75	0.3125
16	Girder 3	26' from bent	15	Delam at patches on each flange edge	2.5	1	0.1875
16	Girder 4	28' from bent, bottom left flange	16	Delam at patch	2	1	0.1875
17	Under Deck	bay 3	16	Spalling/rebar exposed	0.5	0.5	0.3125
17	Int. Diaphragm	bay 3, E face	16	(x2)Spalling/rebar exposed	1	1	0.3125
17	Girder 2	10' from bent, bottom right flange	16	Delam at patch	3.5	1.25	0.1875
17	Girder 1	2' from bent, bottom right flange	17	Cracking on edge - possible delam	1.75	0.5	0.1875
17	Girder 1	6' from bent bent, right web	17	Spalling/rebar exposed	0.5	0.33	0.1875
17	Girder 2	30' from bent, bottom left flange	17	Spalling, delam at patch	2.5	1	0.1875
17	Int. Diaphragm	bay 1	17	(x6)Spalling/rebar exposed	3	1	0.3125
17	Lt. Deck Overhang	8' from bent	17	Spalling/rebar exposed	1.25	0.5	0.3125
17	End Diaphragm	at left overhang	17	Delam, stress fractures	1	1.75	0.3125

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	Depth(ft.)
18	Lt. Deck Overhang	at drain	17	Delam	0.5	0.5	0.3125
18	Lt. Deck Overhang	at bent	18	Delam	0.5	0.5	0.3125
19	Lt. Deck Overhang	near bent	19	Delam	2	0.75	0.3125
20	End Diaphragm	bay 1	20	Delam	0.75	0.5	0.3125
20	Girder 1	17' from bent, bottom left flange	20	Spalling/strands exposed	1.5	0.75	0.1875
21	End Diaphragm	at right overhang	20	Spalling/rebar exposed; cracking	1	1	0.3125
21	End Diaphragm	bay 3	21	Spalling; cracking	6.5	1	0.3125
22	Under Deck	bay 2, 8' from bent	22	Delam	1.25	1.25	0.3125
23	End Diaphragm	at left overhang	22	Spalling	0.75	0.75	0.3125
23	End Diaphragm	at left overhang	23	Spalling/rebar exposed	1.25	0.5	0.3125
23	Girder 3	at bent, bottom left flange	23	Spalling/strands exposed behind bearing	1.25	0.75	0.1875
23	Girder 3	6' from bent, bottom right flange	23	Spalling/strands exposed	1.75	0.5	0.1875
24	End Diaphragm	at right overhang	24	Spalling/rebar exposed	1.75	1.25	0.3125
24	Girder 4	20' from bent, bottom flange	24	Delam at patch	1.75	0.5	0.1875
24	Under Deck	bay 2, near bent	24	(x2)Delam	1.75	1.75	0.3125
24	Under Deck	bay 1, near bent	24	(x2)Delam	2	1.25	0.3125
24	Lt. Deck Overhang	at bent	24	Spalling/rebar exposed	0.5	0.5	0.3125
	Under Deck	bay 1, near mid span	24	Spalling/steel exposed	0.5	0.75	0.3125
25	Under Deck	bay 3, 8' from bent	25	Delam	0.75	0.5	0.3125
25	Under Deck	bay 2, 10' from bent	25	Delam	1.5	1.5	0.3125
26	Under Deck	bay 1, 4' from bent	26	Spalling/rebar exposed	1.25	1.25	0.3125
	Lt. Deck Overhang		26	Spalling/rebar exposed	0.5	0.5	0.3125
27	Under Deck	bay 1, near int. diaphragm	26	Spalling/rebar exposed	0.5	0.5	0.3125
28	End Diaphragm	at right overhang, East face	27	Spalling/rebar exposed	1	0.33	0.3125
28	End Diaphragm	bay 2	27	Spalling/rebar exposed	0.75	0.5	0.3125
28	Under Deck	bay 2, 6' from bent	28	Delam	1.25	1.5	0.3125
29	Lt. Deck Overhang	at bent	28	Delam	1	1	0.3125
30	End Diaphragm	bay 2	29	Spalling/rebar exposed	0.5	0.5	0.3125
31	End Diaphragm	bay 1	31	Spalling/rebar exposed	1.75	0.5	0.3125
31	Under Deck	bay 1, near bent	31	Spalling/rebar exposed	0.5	0.5	0.3125
32	End Diaphragm	at left overhang	31	Spalling/rebar exposed	1.75	1.25	0.3125
32	End Diaphragm	bay 1	31	(x3)Spalling/rebar exposed	3	0.5	0.3125
32	Under Deck	bay 1, 4' from bent	32	Delam	1	0.75	0.3125
33	End Diaphragm	bay 1	32	Spalling/rebar exposed	0.5	0.25	0.3125
33	Girder 3	10' from bent, bottom right flange	33	Spalling/strands exposed	2	0.5	0.1875
33	Rt. Deck Overhang	at bent	33	Spalling/rebar exposed	1	0.75	0.3125
34	Girder 3	at bent, bottom right flange	33	Spalling/strands exposed behind bearing	1	0.75	0.1875
34	Under Deck	bay 2, 5' from bent	34	(x5)Spalling/rebar exposed & delam	2	2	0.3125
34	Girder 2	2' from bent, bottom face	34	Delam	1.75	1.5	0.1875
34	End Diaphragm	bay 1	34	Spalling	0.5	0.5	0.3125
35	Girder 3	1' from bent	34	Spalling/strand exposed	1.75	0.5	0.1875
35	Int. Diaphragm	bay 2	35	Spalling/rebar exposed	1	1	0.3125
35	End Diaphragm	at left overhang	35	Delam	1	0.75	0.3125
36	Int. Diaphragm	bay 2	35	Spalling/rebar exposed	1	1	0.3125
36	Lt. Deck Overhang	at bent	36	Spalling/rebar exposed	0.5	0.5	0.3125
37	End Diaphragm	bay 1	36	Spalling/rebar exposed	0.75	0.75	0.3125
38	End Diaphragm	bay 1	37	(x4)Spalling/rebar exposed	2.5	2	0.3125
38	Girder 3	3' from bent, bottom left flange	37	Spalling/strand exposed	2.25	0.5	0.1875
38	Girder 2	3' from bent	37	Spalling/strand exposed	1.25	0.5	0.1875
39	Girder 2	3' from bent, bottom left flange	38	Spalling	1.75	0.5	0.1875
39	Under Deck	bay 3, near bent	39	Spalling	0.5	0.5	0.3125
40	Girder 2	at bent, bottom right flange	39	Spalling/strands exposed behind bearing	1	1	0.1875
40	End Diaphragm	bay 3	40	Delam	1.5	0.5	0.3125
40	Under Deck	bay 2, near bent	40	Delam	0.75	0.75	0.3125
40	Lt. Deck Overhang	at bent	40	Spalling/rebar exposed	0.5	0.25	0.3125
41	End Diaphragm	at right overhang	40	Delam	0.5	0.5	0.3125
41	End Diaphragm	bay 2	41	Spalling/rebar exposed	2.25	0.75	0.3125
42	Under Deck	bay 2 4' & 6' from bent	42	Spalling/(x2)Delam	2.25	1.75	0.3125
42	Girder 4	4' from bent, bottom left flange	42	Spalling/strand exposed	2	0.5	0.1875
42	Under Deck	bay 2, 9' from bent	42	Delam	1.5	1.5	0.3125
42	Lt. Deck Overhang	mid span	42	Spalling/rebar exposed	0.75	0.75	0.3125
42	End Diaphragm	at left overhang	42	(x2)Spalling/rebar exposed	1.5	1.5	0.3125
43	Lt. Deck Overhang	at bent	43	Spalling/rebar exposed	0.75	0.5	0.3125
43	End Diaphragm	bay 2	43	Spalling/rebar exposed	1	1	0.3125
43	Under Deck	bay 1	43	Delam	1	1	0.3125
44	Under Deck	bay 2	43	Spalling/rebar exposed	0.5	0.5	0.3125
44	Under Deck	bay 1, near int. diaphragm	43	Spalling/rebar exposed	0.5	0.5	0.3125
45	Girder 2	4' from bent, bottom left flange	44	Delam	1.75	0.5	0.1875
45	Girder 3	6' from bent, bottom right flange	45	Delam/Spalling at patch	3	1	0.1875
45	Girder 1	20' from bent, bottom flange	45	Delam and cracking	1.5	0.5	0.1875
45	Lt. Deck Overhang	at drain pipe	45	Spalling/rebar exposed	1.25	1	0.3125
46	End Diaphragm	bay 1	45	Spalling/rebar exposed	1.75	1.75	0.3125
46	Lt. Deck Overhang	at bent	46	Spalling/rebar exposed	0.75	0.5	0.3125
46	Under Deck	bay 2, 4' from bent	46	Spalling/rebar exposed	1	1	0.3125
46	Girder 3	8' from bent	46	Delam at patch	2	1	0.1875
47	Girder 2	4' from bent, bottom right flange	47	Spalling	0.5	0.5	0.1875
47	Under Deck	bay 2	47	Delam	1	1	0.3125
48	Under Deck	bay 2	47	Spalling/rebar exposed	0.75	0.75	0.3125
48	Girder 3	10' from bent, bottom left flange	47	Spalling/strands exposed (100% loss)	3.5	1	0.1875

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
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Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
48	Girder 2	21' from bent	47	Delam at patch	3	1	0.75
48	Girder 2	30' from bent, bottom left flange	47	Spalling/rebar exposed strands exposed	2.5	0.75	0.33
48	Under Deck	bay 2, 5' from bent	48	Spalling/rebar exposed	1	1	0.167
49	Girder 4	10' from bent, bottom left flange	49	Delam at patch	2.5	0.75	0.75
51	Rt. Deck Overhang	at drain pipe	50	Delam	1.75	1	0.167
51	Int. Diaphragm	bay 3	51	Spalling/rebar exposed	1	0.333	0.167
52	Lt. Deck Overhang	3' from bent	51	Spalling/rebar exposed	1	0.75	0.167
52	Under Deck	bay 2	52	(x2)Delam	1.5	1.5	0.167
53	Girder 3	near bent, bottom left flange	52	Delam at patch	2	1	0.75
53	Girder 2	2' from bent, bottom left flange	53	Spalling/strands exposed	2.25	0.5	0.33
53	End Diaphragm	at left overhang	53	(x2)Spalling/rebar exposed	1.75	1.75	0.25
54	End Diaphragm	bay 3	53	Spalling/rebar exposed	2	1	0.5
55	Under Deck	bay 2, 8' from bent	55	Delam	1.5	1.5	0.167
55	Girder 3	8' from bent	55	Delam at patch	3.5	1	0.5
55	End Diaphragm	at left overhang	55	Spalling/rebar exposed	0.5	0.5	0.167
55	Girder 2	at bent, bottom right flange	55	Spalling/strands exposed behind bearing	1	0.5	0.5
56	Girder 2	10' from bent, bottom left flange	55	Delam at patch	2	1	0.5
56	Girder 3	mid span, left web	56	Spalling/rebar exposed	0.75	0.33	0.167
59	Girder 2	19' from bent, bottom face	59	Spalling/rebar exposed	0.75	0.5	0.167
59	End Diaphragm	bay 1	59	Spalling/rebar exposed	2.25	1	0.5
60	Under Deck	bay 1, 3' from bent	60	Delam	1.25	1.25	0.167
60	Under Deck	at right overhang	60	Spalling/rebar exposed	0.75	0.75	0.167
61	End Diaphragm	bay 2	61	Spalling/rebar exposed	2.25	1	1
62	Under Deck	bay 2, 4' from bent	61	Spalling/rebar exposed	1	0.75	0.167
63	End Diaphragm	bay 3	63	Delam	2.25	0.5	0.5
63	Under Deck	bay 2	63	Delam	1	1	0.167
65	End Diaphragm	bay 2	64	Spalling/rebar exposed	2	1	0.33
65	Lt. Deck Overhang	at bent	65	Delam	1	1	0.167
67	Under Deck	bay 2	66	(x1)Spalling/rebar exposed; (x2)Delam	2.5	1	0.167
68	Girder 4	at bent, bottom left flange	67	Delam	1.5	0.5	0.167
68	Under Deck	bay 2	68	Delam	1	1	0.167
68	Under Deck	bay 3, near mid span	68	Spalling/steel exposed	0.5	0.5	0.167
68	Under Deck	bay 2, 6' from bent	68	Delam	1.25	1	0.167
68	Girder 2	4' from bent, bottom right flange	68	Spalling/strands exposed	1.75	0.5	0.5
69	Under Deck	bay 1, 3' from bent	68	Delam	1	1	0.167
69	Under Deck	bay 2, 1' from bent	68	(x2)Spalling/rebar exposed; (x1)Delam	2	0.75	0.167
69	Girder 2	21' from bent, bottom left flange	69	Spalling/strand exposed at patch	2	0.75	0.167
69	Under Deck	left overhang, near mid span	69	Spalling/rebar exposed, delam	1.75	1.75	0.167
69	Girder 2	3' from bent	69	Loose patch	2	0.75	0.167
70	Int. Diaphragm	bay 3	70	Spalling/rebar exposed	0.75	0.5	0.167
70	Under Deck	bay 2	70	(x2)Delam	1.75	1	0.167
71	Under Deck	bay 2, 4' from bent	70	(x2)Spalling/rebar exposed	0.75	0.75	0.167
71	Under Deck	bay 1, 4' from bent	70	(x6)Spalling/rebar exposed	3	2	0.167
71	Girder 3	10' from bent, bottom right flange	71	Spalling/strands exposed	3.5	0.5	0.33
71	Under Deck	bay 1, 4' from bent	71	Delam	1.5	1.5	0.167
72	Under Deck	bay 3, 6' from bent	72	Delam	1	1	0.167
73	Lt. Deck Overhang	at bent, 1st deck drain	72	Spalling/rebar exposed	1	0.75	0.167
73	Under Deck	bay 3, 4' from bent	72	Spalling/rebar exposed; Delam	2.25	1.25	0.167
76	Under Deck	bay 2, 7' from bent	76	Delam	1.25	1.5	0.167
76	Lt. Deck Overhang	mid span	76	Spalling/rebar exposed	1	0.5	0.167
76	Rt. Deck Overhang	mid span	76	Spalling/rebar exposed	1	0.5	0.167
76	Rt. Deck Overhang	near mid span	76	(x4)Spalling/rebar exposed	2	1.25	0.25
77	End Diaphragm	bay 1	76	Spalling/rebar exposed	0.75	0.5	0.167
77	Under Deck	bay 2 at bent	76	Spalling/rebar exposed	1	1	0.167
78	Under Deck	bay 1, 2' from bent	78	Spalling/rebar exposed	1	1	0.167
79	Lt. Deck Overhang	2' from bent	78	(x3)Spalling/rebar exposed	2.75	1	0.167
79	Int. Diaphragm	bay 2, 20' from bent, bottom face	79	(x2)Spalling/rebar exposed	1.75	0.67	0.33
80	End Diaphragm	at bent	79	Spalling/steel exposed	0.75	0.75	0.25
80	Rt. Deck Overhang	mid span	80	Spalling/rebar exposed	1	0.75	0.25
80	Int. Diaphragm	bay 3	80	Spalling/rebar exposed	1.25	0.75	0.167
80	Lt. Deck Overhang	at bent	80	Spalling/rebar exposed	1	0.75	0.25
80	End Diaphragm	bay 2	80	(x2)Spalling/rebar exposed	1.75	0.5	0.167
81	Under Deck	bay 2, 1' from bent	80	Spalling/rebar exposed	1	1	0.167
82	Lt. Deck Overhang	10' from bent	82	Spalling/rebar exposed	1	1	0.167
83	Under Deck	bay 1, 6' from bent	83	Spalling/rebar exposed; delam	2	1.25	0.33
84	Lt. Deck Overhang	near mid span	83	Spalling/rebar exposed	0.75	0.5	0.167
84	Under Deck	left overhang, near mid span	84	Spalling/rebar exposed	1.5	0.75	0.167
85	Under Deck	bay 3	84	Delam	1	1	0.167
85	Rt. Deck Overhang	at bent	84	Spalling/rebar exposed	0.5	0.5	0.167
85	Under Deck	bay 3	85	(x2)Delam	1.75	1	0.167
87	Lt. Deck Overhang	1' from bent	86	Spalling/rebar exposed	0.75	0.75	0.167
88	Lt. Deck Overhang	near bent at deck drain	87	Spalling/rebar exposed	0.75	0.75	0.167
88	Under Deck	bay 1, 6' from bent	88	Spalling; Delam	1.5	0.75	0.167
88	Under Deck	bay 2, 10' from bent	88	Delam	0.75	0.75	0.167
88	Int. Diaphragm	bay 1	88	Spalling/rebar exposed	0.5	0.5	0.167
88	Girder 1	mid span, left web	88	Spalling/rebar exposed	0.5	0.5	0.167
89	Under Deck	bay 2, 4' from bent	88	Delam	0.75	0.75	0.167
89	Lt. Deck Overhang	at bent	89	Spalling/rebar exposed	0.75	0.75	0.167
90	Under Deck	bay 2, 1' from bent	89	Spalling/rebar exposed	0.75	0.75	0.167

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
90	Girder 4	3' from bent, bottom left flange	89	Spalling/strands exposed (90% loss)	2.25	0.5	0.33
90	Lt. Deck Overhang	at bent	90	Delam on Rail/Spalling on End Diaphragm	1.75	1.5	0.33
90	Rt. Deck Overhang	4' from bent	90	Spalling/rebar exposed	0.5	0.33	0.167
90	Rt. Deck Overhang	20' from bent	90	Spalling/rebar exposed	1.75	0.5	0.167
91	Int. Diaphragm	Common on many Flanges??	91	Spallingcommon on many Flanges??	0.5	0.5	0.167
92	Under Deck	bay 1, 4' from bent	92	Delam	1	1	0.167
92	Girder 2	at bent, bottom right flange	92	Delam at patch	2.5	0.75	0.167
92	Girder 2	at bent, bottom left flange	92	Delam behind bearing	0.75	1	0.167
92	Under Deck	bay 2, 6' from bent	92	Spalling/rebar exposed	1.25	0.75	0.167
93	Lt. Deck Overhang	near mid span	93	Spalling/rebar exposed	0.75	0.5	0.167
94	End Diaphragm	bay 3	94	Spalling/rebar exposed	0.5	0.5	0.167
94	End Diaphragm	at right overhang	94	Spalling/rebar exposed	1.25	0.75	0.25
95	Rt. Deck Overhang	at bent	95	Spalling/rebar exposed	0.75	0.5	0.167
95	End Diaphragm	at left overhang	95	Cracking	0.75	0.5	0.33
95	Diaphragm	bay 3, bottom face	95	Cracking/Delam	1.75	0.67	0.167
95	Girder 2	at bent, bottom left flange	95	Delam	0.75	0.75	0.167
96	Under Deck	bay 3	96	Spalling/rebar exposed	0.5	0.5	0.167
97	Under Deck	bay 2	96	Delam	1.75	1	0.167
97	Girder 2	at bent, bottom left flange	97	Delam/Spalling at patch	2.5	0.75	0.75
97	Girder 2	2' from bent, bottom right flange	97	Spalling/strand exposed (50% loss)	3.75	0.5	0.5
98	Girder 2	4' from bent, bottom face	97	Spalling/strands exposed	2.25	1.5	0.33
98	Under Deck	bay 2	98	Delam	1	1	0.167
98	Lt. Deck Overhang	near mid span	98	(x3)Spalling/rebar exposed	1.5	0.5	0.167
99	End Diaphragm	bay 3	99	Spalling/rebar exposed	1.5	0.5	0.167
99	Girder 2	2' from bent, bottom right flange	99	Spalling/strands exposed (50% loss)	3	1	1
99	Lt. Deck Overhang	2' from bent	99	Spalling/rebar exposed	0.75	0.75	0.167
100	Girder 2	5' from bent, bottom right flange	99	Delam at patch	2	1	0.5
100	Girder 3	3' from bent, bottom left flange	99	Delam at patch	1.75	1	0.167
100	Girder 1	21' from bent, bottom right flange	100	Spalling/strands exposed(50% loss);delam	3.5	1	0.5
100	Rt. Deck Overhang	maybe bay 1?	100	Spalling/steel exposed	0.75	0.5	0.167
100	Girder 3	at bent, bottom left flange	100	Cracking (maybe w/photo 143323)	1.25	0.5	0.167
100	Girder 3	6' from bent	100	Delam at patch	1	0.5	0.5
100	Under Deck	bay 2, 3' from bent	100	(x3)Delam	2	2	0.167
100	Under Deck	bay 1, 4' from bent	100	(x2)Delam;(x1)Spalling/steel exposed	2.5	2	0.167
101	Girder 2	3' from bent, bottom left flange	100	Spalling/strands exposed	2.5	0.5	0.5
101	End Diaphragm	bay 3	101	Delam/cracking	1.25	1.5	0.167
102	Girder 4	10' from bent	102	Delam at patch	2.5	1	0.5
103	Under Deck	bay 3, 4' from bent	102	Spalling/rebar exposed	1.25	1.5	0.25
103	Lt. Deck Overhang	at bent	103	Spalling/rebar exposed	0.75	0.75	0.167
103	Girder 3	at bent, bottom right flange	103	Spalling/strands exposed behind bearing	0.75	0.75	0.33
104	Girder 3	2' from bent, bottom right flange	103	Spalling/strands exposed	3	0.5	0.5
104	Girder 2	27' from bent	104	Delam	1.5	1	0.25
104	Girder 2	2' from bent	104	Delam	2.25	1.5	0.167
104	Girder 3	1' from bent	104	Delam	1.75	1	0.167
104	Girder 3	21' from bent, bottom face	104	Spalling/strands exposed	1.75	1	0.167
104	Girder 3	40' from bent, bottom face	104	Spalling/strands exposed	1.5	1	0.167
104	Girder 3	43' from bent, bottom face	104	Spalling/strands exposed	1	0.75	0.167
104	Girder 3	44' from bent, bottom face	104	Spalling/strands exposed	1.75	0.33	0.33
105	Int. Diaphragm	bay 2	105	Spalling/rebar exposed	1	0.5	0.167
105	Girder 1	6' from bent, bottom, right flange	105	Spalling/strand exposed at patch	3	1	0.25
105	Girder 4	30' from bent, bottom left flange	105	Delam	1.5	1	0.33
105	Rt. Deck Overhang	near mid span	105	Spalling/rebar exposed	0.75	0.5	0.167
105	Girder 4	4' from bent, bottom left flange	105	Spalling/strands exposed	1.5	0.75	0.5
106	Girder 2	10' from bent, bottom right flange	105	Delam at patch	2.75	0.75	0.5
108	End Diaphragm	bay 3	108	Delam	1.75	0.5	0.5
108	Lt. Deck Overhang	near mid span	108	Spalling/rebar exposed	0.5	0.5	0.167
108	Lt. Deck Overhang	10' from bent	108	Spalling/rebar exposed	0.5	0.5	0.167
109	Under Deck	bay 3, near bent	109	Spalling/rebar exposed	1	0.75	0.167
109	Girder 2	5' from bent, bottom right flange	109	Spalling/strand exposed	2.25	0.75	0.5
110	Int. Diaphragm	20' from bent	109	(x2)Spalling/rebar exposed	1.5	0.5	0.167
110	Int. Diaphragm	bay 2	110	Spalling/rebar exposed	1.25	0.5	0.167
110	Rt. Deck Overhang	near mid span	110	Spalling/rebar exposed	0.5	0.5	0.167
110	End Diaphragm	bay 3	110	Spalling/rebar exposed	1	0.75	0.167
111	Under Deck	bay 2, near bent	110	Spalling/steel exposed	0.5	0.5	0.167
111	Lt. Deck Overhang	30' from bent	111	(x3)Spalling/rebar exposed	2.5	1.5	0.25
111	Under Deck	bay 3 at bent	111	Spalling/steel exposed	0.5	0.5	0.167
112	Under Deck	bay 2	111	(x4)Spalling/rebar exposed	1.75	1.5	0.25
112	Girder 3	at bent, both bottom flanges	111	(x2)Delam	1.5	0.5	0.5
112	Lt. Deck Overhang	mid span	112	(x3)Spalling/rebar exposed;(x1)delam	2	2	0.25
112	Under Deck	bay 3	112	Spalling/rebar exposed	0.5	0.5	0.167
112	Under Deck	bay 2, 8' from bent	112	Spalling/rebar exposed	1	1	0.167
112	End Diaphragm	bay 1	112	(x4)Spalling/rebar exposed	2.25	0.167	0.167
112	Under Deck	bay 1 near bent	112	Spalling/rebar exposed	0.5	0.5	0.25
112	Under Deck	bay 1, near bent	112	Spalling/rebar exposed	1.5	1	0.167
113	Lt. Deck Overhang	at bent	112	Spalling/rebar exposed	1.5	1.5	0.167
113	Girder 2	2' from bent, bottom left flange	112	Delam at patch	2.75	1	0.167
113	Under Deck	bay 2, 4' from bent	112	(x3)Spalling/rebar exposed	2.5	0.75	0.167
113	Lt. Deck Overhang	near mid span	112	Spalling/rebar exposed	0.5	0.5	0.167
114	Under Deck	bay 3, 6' from bent	113	(x8)Spalling/rebar exposed	5.5	1.5	0.167

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
114	Girder 2	at bent, bottom left flange	113	Delam at patch	2.5	0.5	0.5
114	Lt. Deck Overhang	at bent	113	Delam	1	1	0.167
114	Lt. Deck Overhang	mid span	114	Spalling/rebar exposed	0.75	0.75	0.167
114	Under Deck	bay 3, 5' from bent	114	Spalling/rebar exposed	1.25	0.5	0.167
114	End Diaphragm	bay 1	114	Spalling/rebar exposed	0.5	0.5	0.167
115	Girder 2	4' from bent, bottom right flange	114	Delam	1.5	1	0.167
115	End Diaphragm	at left overhang	115	Spalling/rebar exposed	1.5	0.5	0.5
115	Girder 3	2' from bent, bottom right flange	115	Delam at patch	1.75	0.5	0.5
115	Girder 4	8' from bent, bottom face	115	Delam at patch	6	1.25	0.5
115	Under Deck	bay 1, near bent	115	Spalling/rebar exposed	0.5	0.5	0.167
116	Under Deck	bay 2	116	Spalling/rebar exposed	0.5	0.5	0.167
116	Under Deck	bay 3	116	Delam	1	0.75	0.167
116	Under Deck	bay 3	116	Delam	0.75	0.75	0.167
116	Int. Diaphragm	bay 2	116	(x2)Spalling/rebar exposed	2	0.5	0.167
116	Under Deck	bay 2, near bent	116	Spalling/rebar exposed; delam	5	1	0.167
116	Lt. Deck Overhang	mid span	116	Spalling/rebar exposed	0.75	0.75	0.167
116	Lt. Deck Overhang	mid span	116	Spalling/rebar exposed	1	1	0.167
116	Under Deck	bay 1	116	Spalling/steel exposed	0.5	0.5	0.167
117	Rt. Deck Overhang	at bent	116	Delam	1	1	0.167
117	Rt. Deck Overhang	at bent	116	Delam	0.75	0.75	0.167
117	Under Deck	bay 1, near bent	116	(x1)Spalling/rebar exposed; (x1)Delam	2	1.5	0.167
117	Girder 1	4' from bent, bottom right flange	116	Spalling/strand exposed	2	0.5	0.5
117	Girder 3	17' from bent, bottom face	116	Spalling/steel exposed	0.5	0.5	0.167
117	Girder 2	1' from bent, bottom left flange	117	Spalling	2.25	0.5	0.5
118	Under Deck	bay 3	117	Delam	1	1	0.167
118	Int. Diaphragm	bay 2, bottom face	118	Spalling/rebar exposed	1.75	0.75	0.5
118	Lt. Deck Overhang	near bent	118	Spalling/rebar exposed	0.5	0.5	0.167
118	Under Deck	bay 1	118	Delam	0.75	0.5	0.167
119	Girder 3	12' from bent, bottom left flange	119	Spalling/strands exposed	1.25	0.5	0.5
119	Under Deck	bay 2, 8' from bent	119	(x3)Spalling/rebar exposed	2.5	1	0.167
119	End Diaphragm	bay 2	119	Spalling/rebar exposed	2	1	0.5
120	End Diaphragm	bay 2	119	Spalling/rebar exposed	2	1	0.5
120	Girder 3	at bent, bottom left flange	119	Spalling/strands exposed behind bearing	1	0.75	0.25
120	Girder 3	at bent, bottom face	120	Delam at patch	1.25	0.5	0.5
120	Lt. Deck Overhang	at bent, both spans	120	(x2)Spalling/rebar exposed;(x2)Delam	1.75	0.75	0.25
120	Under Deck	bay 1, 2' & 6' from bent	120	(x2)Spalling/rebar exposed	1.75	1.5	0.167
120	Under Deck	bay 2, 5' from bent	120	Spalling/rebar exposed;delam	1	0.75	0.167
120	Girder 2	at bent, bottom right flange	120	Spalling/strands exposed	1.5	0.5	0.5
120	Girder 3	at bent, bottom face	120	Delam	2	1.75	0.167
120	Rt. Deck Overhang	at bent, both spans	120	Spalling/rebar exposed; delam	1.5	1.5	0.167
121	Girder 4	16' from bent, bottom left flange	121	Spalling; delam at patch	1	0.5	0.5
121	Under Deck	bay 3, near bent	121	(x2)Delam	1.5	1.5	0.167
121	Under Deck	bay 2, near bent	121	Delam	1	1	0.167
121	Under Deck	bay 2, near bent	121	(x3)Spalling/rebar exposed	1.5	1	0.167
121	Girder 3	at bent, bottom flange	121	Delam at patch	2	1	0.33
121	Girder 2	at bent, bottom flange	121	Delam at patch	2	1	0.33
121	Lt. Deck Overhang	near mid span	121	Spalling/rebar exposed; delam	5	2	0.167
121	Lt. Deck Overhang	near bent	121	Spalling/steel exposed	0.75	0.33	0.167
122	Under Deck	bay 1, near bent	121	Spalling/rebar exposed	0.75	0.75	0.167
122	Under Deck	bay 1, near bent	122	(x2)Spalling/rebar exposed; delam	1.75	1	0.167
122	Under Deck	bay 3, 12' from bent	122	Spalling/rebar exposed	1	0.75	0.167
122	Under Deck	bay 3, 4' from bent	122	Spalling/rebar exposed	1.75	1.75	0.167
122	Under Deck	bay 2, near bent	122	Spalling/rebar exposed; delam	4	1	0.167
122	Girder 2	8' from bent, bottom face	122	Spalling/strands exposed	1.25	0.75	0.25
123	Girder 3	at bent, bottom right flange	123	Spalling; delam at patch	1.5	0.5	0.5
123	End Diaphragm	bay 1	123	Spalling/rebar exposed	1.75	1	0.25
124	Girder 4	16' from bent	123	Delam and cracking	1	0.5	0.5
124	Rt. Deck Overhang	near mid span	123	Spalling/rebar exposed	0.75	0.33	0.167
124	Under Deck	bay 3	123	(x2)Delam	1.25	1.25	0.167
124	Lt. Deck Overhang	mid span	124	(x3)Spalling/rebar exposed	1.75	0.75	0.167
124	Girder 3	4' from bent	124	Delam at patch	1.5	0.5	0.5
124	Girder 3	1' from bent, bottom left flange	124	Delam at patch	0.75	0.75	0.167
124	Girder 1	at bent, bottom right flange	124	Spalling/strands exposed	2	0.75	0.5
124	Girder 2	4' from bent, bottom right flange	124	Spalling; delam	1.5	0.5	0.5
124	Under Deck	bay 1	124	Spalling/rebar exposed	0.75	0.75	0.167
124	Girder 2	near bent, bottom left flange	124	Delam at patch	1.25	0.5	0.5
125	Rt. Deck Overhang	at bent	124	Spalling/rebar exposed	0.5	0.5	0.167
125	End Diaphragm	bay 2	124	Spalling/rebar exposed	1	0.75	0.5
125	Lt. Deck Overhang	at bent	124	Spalling/rebar exposed	0.75	0.5	0.167
125	Under Deck	bay 3	124	Spalling/rebar exposed; delam	1	1	0.167
125	Girder 3	at bent, bottom left flange	124	Spalling/strands exposed (10% loss)	3	0.5	0.33
125	Girder 4	1' from bent, bottom right flange	124	Delam at patch	2.5	0.75	0.5
125	Girder 2	24' from bent, bottom left flange	124	Spalling/strands exposed	1.75	0.5	0.5
125	Lt. Deck Overhang	6' from bent	125	Spalling/rebar exposed	0.5	0.5	0.167
126	Girder 2	6' & 8' from bent, bottom right flange	125	(x2)Spalling/strands exposed (10% loss)	4.25	0.5	0.5
126	Under Deck	bay 1, near bent	126	Spalling/rebar exposed	1	1	0.167
126	Girder 4	8' from bent, bottom face	126	Spalling/steel exposed	0.5	0.5	0.167
126	Girder 2	at bent, bottom left flange	126	Spalling/strands exposed behind bearing	1	1	0.33
126	Girder 2	at bent, bottom right flange	126	Delam at patch	1	0.5	0.5

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
126	Girder 1	1' from bent, bottom right flange	126	Delam	1	0.5	0.5
126	Girder 2	17' from bent	126	Delam at patch	4	0.75	0.75
126	Girder 2	at bent, bottom right flange	126	Delam behind bearing	0.75	0.75	0.25
127	Girder 2	at bent, bottom right flange	126	Spalling/strands exposed behind bearing	0.75	0.75	0.25
127	Lt. Deck Overhang	near bent	126	Spalling/rebar exposed	0.75	0.75	0.167
127	Under Deck	bay 3, 6' from bent	126	Spalling/rebar exposed	0.75	0.75	0.167
127	Lt. Deck Overhang	6' from bent	126	Delam	1	1	0.167
127	Lt. Deck Overhang	2' from bent	126	Spalling/rebar exposed	2.25	2.25	0.25
127	Girder 2	21' from bent, bottom left flange	126	Spalling/strands exposed	1.75	0.75	0.5
127	Girder 4	18' from bent, bottom left flange	126	Delam at patch	1.25	0.5	0.5
127	Girder 2	6' from bent, bottom right flange	127	Spalling; delam at patch	2	0.75	0.5
127	Lt. Deck Overhang	5' from bent	127	Spalling/rebar exposed	1.5	1.5	0.167
127	Girder 4	12' from bent, bottom left flange	127	Delam at patch	1	0.5	0.5
127	Under Deck	bay 2, 8' from bent	127	(x3)Spalling/rebar exposed	3.5	1.5	0.167
128	Girder 4	1' from bent, bottom left flange	127	Spalling/strands exposed (30% loss)	3	1	0.5
128	Under Deck	bay 1, 4' from bent	128	(x3)Spalling/rebar exposed	2	0.75	0.25
128	Under Deck	bay 3	128	Spalling/rebar exposed	0.5	0.5	0.167
128	Girder 4	25' from bent, bottom face	128	Spalling/strands broken	5	1	1
129	Girder 2	at bent, bottom left flange	128	Cracking	0.75	0.5	0.167
129	Girder 4	at bent, bottom left flange	128	Spalling/strands exposed (20% loss)	3.25	1	0.5
129	Girder 4	22' from bent, bottom face	128	Spalling/broken strands	7	1	1
129	Lt. Deck Overhang	near bent	128	Spalling/rebar exposed	1.25	0.5	0.167
129	Girder 2	6' from bent, bottom face	129	Spalling	1.75	1.75	0.167
129	Girder 3	10' from bent	129	Delam at patch	1	0.5	0.5
129	Girder 1	mid span, bottom face	129	Spalling/rebar exposed	1	0.75	0.167
129	Under Deck	bay 2, 5' from bent	129	Spalling/rebar exposed	1	1.25	0.167
130	Girder 2	6' from bent	129	Spalling	1.5	0.75	0.167
130	Girder 2	5' from bent, bottom face	130	Delam	2.25	0.75	0.5
130	Lt. Deck Overhang	near bent	130	(x2)Spalling/rebar exposed	1.5	1.5	0.167
130	Lt. Deck Overhang	near bent	130	Delam	1	1	0.167
131	End Diaphragm	at left overhang	130	Spalling/rebar exposed	1	0.5	0.167
132	Girder 4	8' from bent, bottom left flange	131	Delam	1.25	0.5	0.5
132	Under Deck	bay 2	131	(x2)Spalling/rebar exposed	1	0.75	0.167
132	Under Deck	bay 2	132	(x4)Spalling/rebar exposed	2	1.5	0.167
132	Under Deck	bay 2	132	Spalling/rebar exposed	0.5	0.5	0.167
133	Lt. Deck Overhang	near mid span	133	Delam	0.75	0.75	0.167
133	Under Deck	bay 3, at bent	133	Spalling/rebar exposed	0.75	0.75	0.167
134	Under Deck	bay 3	133	Spalling/rebar exposed	0.75	0.75	0.167
134	Girder 1	10' from bent, bottom right flange	133	Spalling/strands exposed	3	0.75	0.33
134	Girder 2	at bent, bottom face	134	Spalling/strands exposed (90% loss)	3.5	1.25	0.5
134	Under Deck	bay 2, 8' from bent	134	Spalling/rebar exposed	1.25	1.25	0.167
134	Rt. Deck Overhang	near bent	134	Spalling/rebar exposed	1	0.5	0.167
134	Rt. Deck Overhang	at bent	134	Delam	0.75	0.75	0.167
135	Girder 2	at bent, bottom left flange	134	Spalling/strands exposed behind bearing	1.25	0.75	0.167
135	Under Deck	bay 1, 5' from bent	135	Spalling/rebar exposed	1.25	1.25	0.167
136	Under Deck	bay 3, at bent	135	Spalling/rebar exposed	1.25	1	0.167
136	Rt. Deck Overhang	5' from bent	136	Spalling/rebar exposed	0.75	0.5	0.167
137	Girder 2	at bent, bottom right flange	136	Spalling/strands exposed behind bearing	1	0.5	0.33
137	Girder 3	at bent, bottom flange	136	Delam, possibly at patch	1	1	0.167
137	Girder 4	12' from bent, bottom left flange	136	Spalling/strands exposed	2.25	0.33	0.33
137	End Diaphragm	bay 2	136	Spalling/rebar exposed	2.75	1.25	1
137	Girder 2	21' from bent, bottom right flange	136	Spalling/strands exposed (10% loss)	1.5	0.5	0.33
137	Rt. Deck Overhang	10' from bent	137	Spalling/rebar exposed	1	0.75	0.167
137	Under Deck	bay 1, near bent	137	(x3)Spalling/rebar exposed	1.5	1	0.167
137	Lt. Deck Overhang	near bent	137	Delam	1	1	0.167
138	Under Deck	bay 3, near mid span	137	Spalling/steel exposed	0.5	0.5	0.167
138	Girder 2	18' from bent, bottom face	137	Spalling/strands exposed (40% loss)	3.25	1	0.33
138	Girder 2	21' from bent, bottom face	137	Spalling/strands exposed (10% loss)	2.5	0.75	0.167
138	Girder 3	8' from bent	137	Delam at patch	2.5	1	0.75
138	Girder 4	2' from bent, bottom left flange	137	Spalling/strands exposed (20% loss)	3	1.25	0.167
138	Under Deck	bay 3	138	Spalling/steel exposed	0.5	0.5	0.167
138	Under Deck	bay 2	138	Spalling/rebar exposed	0.5	0.5	0.167
138	Girder 2	10' from bent	138	Delam at patch	1.25	0.5	0.5
138	End Diaphragm	at left overhang	138	Spalling/rebar exposed	1	0.75	0.33
139	Girder 1	1' from bent, bottom right flange	138	Spalling/strands exposed	1.75	0.5	0.5
139	Rt. Deck Overhang	at bent	138	Spalling/rebar exposed	0.5	0.5	0.167
139	Under Deck	bay 1, at bent	139	Delam	0.75	0.75	0.167
139	Under Deck	bay 1	139	Spalling	0.75	0.75	0.167
139	Girder 4	2' from bent, bottom left flange	139	Spalling/strands exposed (20% loss)	2	0.5	0.5
140	Under Deck	bay 2	139	Spalling/rebar exposed	0.5	0.5	0.167
140	Lt. Deck Overhang	both span, at bent	140	Spalling/rebar exposed	1.25	1	0.167
140	Under Deck	bay 2, 6' from bent	140	(x2)Spalling/rebar exposed	0.75	0.75	0.167
140	Girder 2	at bent	140	Spalling/strand exposed;delam at patch	1.5	0.5	0.5
140	Lt. Deck Overhang	near mid span	140	Spalling/rebar exposed	0.75	0.5	0.167
140	Lt. Deck Overhang	N Face	140	Spalling/rebar exposed	1.25	0.75	0.167
141	Under Deck	bay 1, 2' from bent	140	(x3)Spalling/rebar exposed	3	1.25	0.25
141	End Diaphragm	bay 3	140	Spalling/rebar exposed	0.5	0.5	0.167
141	End Diaphragm	bay 1	140	Delam and cracking	1.5	0.5	0.25
141	Girder 2	3' from bent, bottom right flange	140	Delam at patch	2.5	1	0.75

DRAWN BY : _____ DATE : ____-____-____
 CHECKED BY : _____ DATE :

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)	Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
142	Under Deck	bay 3, 2' from bent	141	Spalling/rebar exposed	0.5	0.5	0.167	151	Girder 4	6' from bent, bottom left flange	151	Delam	3.5	1.5	0.25
142	Under Deck	bay 1, 3' from bent	141	Spalling/rebar exposed	1.25	0.75	0.167	151	Lt. Deck Overhang	5' from bent	151	Spalling/rebar exposed	1.75	1.5	0.167
142	Girder 2	17' from bent	141	Delam/cracking	1	0.5	0.5	151	Rt. Deck Overhang	at bent	151	Spalling/rebar exposed; delam	1.5	1	0.167
142	Under Deck	bay 1, 3' from bent	141	Spalling/rebar exposed	2.25	1	0.167	152	Under Deck	bay 1, near bent	152	Spalling/rebar exposed	0.75	0.75	0.167
142	Under Deck	bay 2, 6' from bent	141	Spalling/rebar exposed	5.5	2.25	0.25	152	Girder 3	1' from bent, bottom face	152	Delam at patch	1	0.5	0.5
142	Under Deck	bay 1, 2' from bent	142	Spalling/steel exposed	0.5	0.5	0.167	152	End Diaphragm	at bent	152	Delam	0.75	0.75	0.167
142	Girder 3	at bent	142	Delam at patch	1	0.5	0.5	153	Under Deck	bay 3, 2' from bent	152	Spalling/rebar exposed	1.25	1	0.167
143	Lt. Deck Overhang	1' from bent	142	(x2)Spalling/rebar exposed	1	0.5	0.167	153	Girder 3	16' from bent	152	Spalling/strand exposed; delam at patch	3	0.75	0.75
143	Girder 1	33' from bent, bottom left flange	143	Spalling/strands exposed (100% loss)	2	0.75	0.75	153	Girder 2	19', 20', 23' from bent	153	Spalling/strands exposed (30% loss)	4	2.5	0.25
143	Under Deck	bay 2, 8' from bent	143	Spalling/steel exposed	0.5	0.5	0.167	155	Girder 3	8' from bent	154	Rust spot	0.25	0.25	0.167
144	Girder 4	4' from bent, bottom left flange	143	Spalling/stands exposed (20% loss)	2	0.5	0.5	155	Girder 2	20' from bent	154	Delam	2	0.5	0.5
144	Girder 2	8' from bent, bottom face	143	Delam	1	0.75	0.167	155	Lt. Deck Overhang	N face	155	Delam	0.5	0.5	0.167
144	Under Deck	bay 1, near bent	143	Spalling/rebar exposed	1	0.75	0.167	155	End Diaphragm	bay 4	155	Delam	1	0.75	0.167
144	Lt. Deck Overhang	at bent	143	Delam at patch	1	0.75	0.167	155	Girder 3	8' from bent	155	Delam	0.75	0.5	0.5
144	Girder 2	3' from bent, bottom face	144	Spalling/strands exposed (10% loss)	1.25	1.5	0.167	155	Girder 5	24' from bent, bottom face	155	Exposed steel on bottom face	0.25	0.25	0.167
144	Under Deck	bay 1, 5' from bent	144	Delam	1	1	0.167	155	End Diaphragm	bay 3	155	Spalling/rebar exposed	0.75	0.5	0.167
145	Rt. Deck Overhang	S Face	144	Spalling/rebar exposed	0.5	0.5	0.167	155	Under Deck	bay 3	155	(x2) Delam	1.5	1.25	0.167
145	Under Deck	bay 2	145	Delam	1	1	0.167	155	Under Deck	bay 2	155	(x3)Spalling/rebar exposed	1.5	1.25	0.167
145	Under Deck	bay 1	145	Spalling/rebar exposed	0.75	0.75	0.167	156	Under Deck	bay 2, 6' from bent	155	Spalling/rebar exposed; delam	2.25	1	0.167
145	Lt. Deck Overhang	mid span	145	Spalling/rebar exposed	1	0.75	0.167	156	Under Deck	bay 2	155	Spalling/rebar exposed	1	1	0.167
145	Rt. Deck Overhang	near mid span	145	(x2)Spalling/rebar exposed	1.5	0.5	0.167	156	Girder 2	1' from bent, bottom right flange	155	Delam	1.25	1	0.5
145	Girder 3	1' from bent, bottom face	145	Spalling/strands exposed (100% loss)	3.25	0.5	1	156	Girder 3	2' from bent, bottom left flange	155	Spall/delam at patch	1	0.5	0.5
145	Girder 3	1' from bent, bottom right flange	145	Delam at patch	2.75	1.5	0.5	156	Girder 3	20' & 23' from bent, bottom left flange	155	(x2)Spalling/strands exposed (10% loss)	3.25	0.75	0.5
145	Girder 1	6' from bent	145	Delam	1.25	0.5	0.5	156	Girder 2	18' from bent, bottom right flange	155	Spalling/strands exposed (10% loss)	2.25	0.25	0.167
146	Under Deck	bay 3, 6' from bent	145	(x2)Delam	1.5	1	0.167	156	Girder 4	4' from bent, bottom left flange	156	Delam	2.25	1	0.33
146	Girder 1	10' from bent, bottom face	145	Spalling/strands exposed (10% loss)	1.5	2	0.167	156	Girder 4	10' from bent, bottom left flange	156	Spalling/strands exposed	3.25	0.5	0.5
146	Girder 2	at bent, bottom left flange	145	Spalling/strands exposed (10% loss)	3	0.75	0.5	156	Girder 3	10' from bent	156	Delam	1.75	1	0.5
146	Girder 2	3' from bent, bottom right flange	145	Delam at patch	1.5	0.5	0.5	156	Girder 4	4' from bent, bottom left flange	156	Delam behing bearing	2.25	1	0.167
146	Under Deck	bay 3, near bent	145	Spalling/rebar exposed	2	0.5	0.167	157	Girder 2	at bent	156	Delam	0.5	0.5	0.167
146	Girder 1	22' from bent, bottom face	145	Delam	1.75	0.75	0.167	157	Girder 2	10' from bent, bottom face	156	Delam	3.5	1.5	0.167
146	Under Deck	bay 1, near bent	145	(x5)Spalling/rebar exposed	2.5	1	0.25	157	Under Deck	bay 3, 2' from bent	156	Spalling/rebar exposed	0.75	0.75	0.167
146	Under Deck	bay 3, 3' from bent	146	Spalling/rebar exposed; delam	1.25	1.25	0.167	157	Lt. Deck Overhang	at bent	156	(x2)Spalling/rebar exposed	2.5	0.75	0.167
146	Under Deck	bay 2	146	Delam	1	1	0.167	157	Girder 1	2' from bent, bottom face	156	Spalling/strands exposed	3.5	1	0.75
146	Lt. Deck Overhang	N Face	147	Spalling/rebar exposed	0.75	0.75	0.167	157	Span Shot	Between Bents 156 and 157	156	Spallingw/rust present, Delams	0	0	0
147	Girder 2	at bent, bottom left flange	147	Delam at patch	2	0.75	0.75	157	Span Shot	Between Bents 156 and 157	156	Spallingw/rust present, Delams	0	0	0
147	Girder 2	2' from bent, bottom right flange	147	Spalling/strands exposed	1.75	0.75	0.75	157	Girder 2	12' from bent, bottom left flange	156	Spalling/strands exposed (20% loss)	3.25	1.25	0.5
147	Rt. Deck Overhang	S Face	147	Spalling/rebar exposed	0.5	0.5	0.167	157	Girder 2	5' from bent, bottom face	156	Spalling/strands exposed (50% loss)	3.75	1.5	0.25
147	End Diaphragm	at bent	147	Spalling/rebar exposed; delam	1.75	1	0.167	157	Girder 2	20' from bent	156	Spalling/strands exposed (10% loss)	4.5	0.5	0.167
147	Lt. Deck Overhang	12' from bent	147	Spalling/rebar exposed	0.75	0.75	0.167	157	Girder 1	3' from bent	156	Spalling/strands exposed (20% loss)	5.75	1	0.25
148	Girder 2	3' from bent, bottom face	147	Delam/cracking	0.75	0.5	0.167	157	Girder 2	17' from bent	156	Delam at patch	3	1.5	0.5
148	Girder 3	8' from bent, bottom right flange	147	Spalling/strands exposed (10% loss)	2	0.5	0.5	157	Girder 2	10' from bent, bottom face	156	Delam	3.5	1.5	0.167
148	Girder 3	1' from bent, bottom face	147	Delam	3	1.5	0.75	157	Girder 2	2' from bent, bottom right face	156	Spalling/strands exposed	4	0.75	0.75
148	Under Deck	bay 1, 5' from bent	148	Spalling/rebar exposed	1	1	0.167	157	Girder 2	21' from bent	156	Spalling/strands exposed	4	1	0.75
148	Girder 3	15' from bent, bottom face	148	Delam	3.5	1.5	0.167	157	Lt. Deck Overhang	at bent	157	Spalling/rebar exposed	0.5	0.5	0.167
149	Lt. Deck Overhang	N Face	148	(x2)Delam	1	1	0.167	157	Girder 4	25' from bent	157	Spalling/strand exposed	2	0.75	0.5
149	Lt. Deck Overhang	N Face	148	Delam	0.75	0.75	0.167	157	Under Deck	bay 2, 3' & 5' from bent	157	Spalling/rebar exposed	3	3	0.167
149	Lt. Deck Overhang	mid span	148	Spalling	0.75	0.5	0.167	157	Girder 2	1' from bent	157	Delam at patch	1	0.5	0.5
149	Under Deck	2' from bent	148	Spalling/rebar exposed	0.75	0.75	0.167	157	Girder 2	4' from bent, bottom left flange	157	Delam	5.25	1.5	0.167
149	Lt. Deck Overhang	1' from bent	148	(x2) Spalling/rebar exposed	0.75	0.75	0.167	158	Girder 2	9' from bent, bottom left flange	157	Delam	3.5	1	0.167
149	Under Deck	bay 2, 8' from bent	148	Spalling/rebar exposed	1.75	0.75	0.167	158	Under Deck	bay 2	158	Spalling/rebar exposed	1	1	0.167
149	Girder 3	15' from bent, bottom right flange	148	Spalling/strands exposed (20% loss)	4.5	0.75	0.5	158	Girder 2	1' from bent, bottom left flange	158	Delam at patch	1.25	0.5	0.5
149	Under Deck	bay 3, 4' from bent	148	Spalling/rebar exposed	1.5	1	0.167	158	Girder 3	22' from bent, bottom left flange	158	Spalling/strands exposed (10% loss)	2	0.5	0.25
149	Under Deck	bay 3	149	Spalling/steel exposed	0.5	0.5	0.167	158	Girder 3	19' from bent, bottom right flange	158	Spalling/strands exposed (10% loss)	2	0.5	0.5
149	Under Deck	bay 1	149	(x2)Delam	1.75	1.5	0.167	159	Girder 2	at bent, bottom right flange	158	Spalling/strands exposed behind bearing	0.75	0.5	0.167
149	End Diaphragm	bay 1	149	Spalling/steel exposed	0.5	0.5	0.167	159	Girder 2	26' from bent	158	Spalling/steel exposed	0.25	0.25	0.167
149	Lt. Deck Overhang	8' from bent	149	Delam	1	0.75	0.167	159	Lt. Deck Overhang	at drain pipe	158	Delam	1.25	1.25	0.167
149	Lt. Deck Overhang	10' from bent	149	Delam	0.75	0.75	0.167	159	Girder 2	12' from bent	158	Spalling/strands exposed; delam	2	0.5	0.5
149	Lt. Deck Overhang	20' from bent	149	Spalling/rebar exposed	0.75	0.75	0.167	159	Under Deck	bay 2	159	Spalling/rebar exposed; delam	2	1.25	0.167
149	Lt. Deck Overhang	5' from bent	149	Spalling/rebar exposed	0.75	0.75	0.167	159	Under Deck	bay 2	159	Spalling/rebar exposed	1.75	1	0.167
149	Lt. Deck Overhang	28' from bent	149	Delam	0.5	0.5	0.167	159	Under Deck	bay 2	159	Spalling/rebar exposed; delam	2	1.25	0.167
149	Under Deck	bay 2	149	Spalling/steel exposed	0.5	0.5	0.167	159	Girder 2	1' from bent, bottom right flange	159	Spalling/strands exposed (10% loss)	3	1	0.5
149	Under Deck	bay 2	149	Spalling/rebar exposed	0.5	0.5	0.167	159	Lt. Deck Overhang	near bent	159	Spalling/rebar exposed	1	0.75	0.167
149	Girder 4	16' from bent, bottom left flange	149	Spalling/strands exposed	2.25	0.75	0.5	159	Lt. Deck Overhang	near bent	159	Delam	1	1	0.167
149	Girder 3	10' from bent, bottom left flange	149	Spalling/strands exposed (20% loss)	4.5	1	0.5	160	Lt. Deck Overhang	near bent	159	Spalling/rebar exposed	0.75	0.75	0.167
149	Lt. Deck Overhang	2' from bent	149	Spalling/rebar exposed	0.5	0.5	0.167	160	Lt. Deck Overhang	near bent	159	Spalling/rebar exposed	0.75	0.75	0.167
150	Lt. Deck Overhang	3' from bent	149	Spalling/rebar exposed	0.5	0.5	0.167	160	Girder 2	1' from bent	159	Delam at patch	1	0.5	0.5
150	Girder 1	6' from bent, bottom right flange	149	(x2)Delam	3.5	0.75	0.75	160	Girder 1	10' from bent	159	Delam at patch	1	0.5	0.5
150	Girder 4	18' from bent, bottom left flange	150	Spalling/strands exposed (60% loss)	2.5	0.75	0.5	160	Girder 2	20' from bent	159	Delam at patch	1.75	0.5	0.5
150	Girder 2	4' from bent, bottom flange	150	Rust spot	0.25	0.25	0.167	160	Girder 2	28' from bent	159	Delam at patch	1	0.5	0.5
150	Girder 3	6' from bent, bottom left flange	150	Spalling/strands exposed (10% loss)	3.75	1	0.167	160	Girder 1	30' from bent	159	Delam at patch	2.5	1	0.75
150	Girder 2	15' from bent	150	Spalling/strand exposed	1.5	0.75	0.5	160	End Diaphragm	at right overhang	160	Spalling/rebar exposed	0.5	0.5	0.167
151	Girder 2	24' from bent, bottom face	150	Spalling/steel exposed	0.25	0.25	0.167	161	Girder 4	16' from bent	160	Spalling/strands exposed	2	0.5	0.5
151	Girder 3	5' from bent, bottom right flange	150	Delam	2	1	0.167	161	End Diaphragm	bay 1	161	Delam	1.5	0.5	0.5
151	Girder 3	3' from bent, bottom left flange	150	Delam	1.5	0.75	0.167	162	Girder 3	24' from bent, bottom face	162	Delam	0.75	0.75	0.167
151	Girder 2	1' from bent	150	Spalling/strands exposed (10% loss)	1.5	0.5	0.5	163	Under Deck	bay 3	163	Spalling/steel exposed	0.5	0.5	0.167
151	Lt. Deck Overhang	both spans, at bent	151	(x2)Spalling/rebar exposed	2.5	1.5	0.167	163	Girder 1	5' from bent	163	Delam	2	0.75	0.5
151	Girder 4	23' from bent	151	Spalling	1.5	0.5	0.167	163	Girder 3	at bent, right web	163	Cracking	2	2	0.167
151	Girder 4	19' from bent, bottom face	151	Spalling/strands exposed (30% loss)	2.25	0.75	0.167	164	Under Deck	bay 3, near mid span	163	Spalling/rebar exposed	0.5	0.5	0.167
151	Under Deck	bay 2, near bent	151	(x2)Spalling/rebar exposed; delam	1.75	1	0.25	164	Girder 2	at bent, left face	163	Spalling/rebar exposed	1.5	0.5	0.167

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

DocuSigned by:
Samuel Cullum
 19C97095C75A467...

 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE DEFICIENCIES
 (4 OF 6)

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

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
164	Under Deck	mid span	164	Spalling/rebar exposed	1.5	0.5	0.167
165	End Diaphragm	bay 3	164	(x4)Spalling/rebar exposed	3	0.5	0.167
165	Girder 2	1' from bent	165	Delam	1	0.5	0.5
165	Under Deck	bay 2, 1' from bent	165	Delam	1	1	0.167
166	Girder 4	1' from bent	165	Delam at patch	2	0.75	0.75
167	End Diaphragm	bay 1	166	Spalling/rebar exposed	1.75	1.5	0.167
168	End Diaphragm	bay 1	167	Spalling/rust spot	4	0.5	0.5
168	Girder 3	20' from bent	167	Spalling/strands exposed (10% loss)	2	0.5	0.5
168	Girder 3	3' from bent	168	Delam at patch	2	0.75	0.5
169	Girder 4	30' from bent	168	Exposed steel on bottom face	0.25	0.25	0.167
171	Girder 1	20' from bent	170	Delam at patch	2.5	1	0.5
171	Girder 3	26' from bent, bottom face	171	Exposed steel	0.25	0.25	0.167
172	End Diaphragm	bay 3	171	Spalling/rebar exposed	1.5	0.5	0.167
172	End Diaphragm	bay 1	172	Spalling/rebar exposed	1.25	1	0.75
173	Girder 4	at bent, bottom left flange	173	Spalling/strands exposed	1.5	1	0.5
173	Girder 4	21' from bent, bottom face	173	Delam	2	1.5	0.167
173	Girder 3	28' from bent	173	Delam at patch	3	1.75	0.75
173	End Diaphragm	bay 1	173	Spalling/rebar exposed	1	1	0.75
174	Under Deck	bay 2	174	Spalling/steel exposed	0.5	0.5	0.167
174	Under Deck	bay 3	174	Spalling/steel exposed	0.25	0.25	0.167
175	Girder 3	at bent, bottom right flange	174	Spalling/strands exposed (10% loss)	3.75	0.5	0.5
175	Girder 3	23' from bent, bottom face	175	Spalling/steel exposed	0.5	0.5	0.167
176	Under Deck	bay 2, 3' from bent	175	Spalling/rebar exposed	1	1	0.167
176	Girder 3	27' from bent, bottom face	176	Spalling	0.5	0.5	0.167
178	Girder 3	at bent, bottom left flange	177	Spalling/strands exposed	1.5	0.75	0.33
178	Under Deck	bay 3	177	Delam	1.25	1.25	0.167
178	Under Deck	bay 3	178	Spalling/steel exposed	0.75	0.5	0.167
178	Under Deck	bay 2	178	Spalling/rebar exposed	0.5	0.5	0.167
178	Girder 2	24' from bent, bottom face	178	Spalling/strand exposed	1.25	1	0.167
178	Girder 3	22' from bent, bottom face	178	Spalling	1.5	0.33	0.167
180	End Diaphragm	bay 1	180	Spalling/steel exposed	1	1	0.167
181	End Diaphragm	bay 1	180	Spalling/steel exposed	1	1	0.167
181	Girder 4	1' from bent	180	Spalling/strand exposed	1	0.5	0.5
182	Under Deck	bay 2, near mid span	181	Spalling/rebar exposed	0.5	0.5	0.167
182	Girder 2	20' from bent	182	Spalling/strand exposed	1.5	0.75	0.167
183	Girder 1	24' from bent, bottom face	182	Spalling/strands exposed (90% loss)	2.25	1.25	0.25
183	Girder 2	30' from bent, bottom face	183	Spalling/strands exposed	2	0.5	0.167
183	Girder 2	22' from bent	183	Spalling/strand exposed	1.5	0.75	0.5
183	Girder 2	18' from bent, bottom left flange	183	(x2)Spalling/strands exposed (10% loss)	2.25	1	0.33
183	Girder 4	18' from bent	183	Spalling/strand exposed	1	1	0.167
183	Girder 2	30' from bent	183	Spalling/strands exposed	1.25	1	0.25
184	Girder 2	20' from bent, bottom left flange	183	Spalling/strands exposed (10% loss)	2	0.5	0.167
184	Girder 2	18' from bent, bottom right flange	183	Spalling/strands exposed (10% loss)	2.25	1	0.33
184	Girder 2	25' from bent, bottom left flange	183	Spalling/strands exposed (10% loss)	1.5	1	0.167
184	Girder 4	mid span, bottom face	184	Spalling	1.5	0.5	0.167
185	Girder 3	9' from bent, bottom face	184	Spalling/steel exposed	0.25	0.25	0.167
	Girder 1	at bent	186	Spalling/strand exposed	1	1	0.167
186	Girder 2	21' from bent, bottom right flange	186	Spalling/strands exposed (10% loss)	2	0.75	0.33
	Girder 3	at bent both spans maybe?	186	Spalling/Delam at bearing	1	1	0.167
	Girder 4	at bent both spans maybe?	186	Spalling/Delam at bearing	1	1	0.167
186	Girder 3	at bent, bottom right flange	186	Spalling/strands exposed behind bearing	1.25	0.5	0.167
186	Girder 4	at bent, bottom right flange	186	Spalling/strands exposed behind bearing	1.25	0.75	0.167
186	Girder 4	at bent, bottom left flange	186	Spalling/strands exposed behind bearing	1.25	0.75	0.167
	Girder 2	at bent	187	Spalling/strands exposed	1	1	0.167
	Girder 3	at bent	187	Spalling/strands exposed	1	1	0.167
187	Girder 2	1' from bent, bottom left flange	186	Spalling/strand exposed	1	1	0.167
189	Girder 4	18' from bent, bottom left flange	189	Spalling/strands exposed (10% loss)	2.25	0.5	0.33
191	Girder 2	16' from bent, bottom right flange	191	Delam	1.25	0.5	0.167
191	Girder 4	19' from bent, bottom face	191	Spalling/steel exposed	0.5	0.5	0.167
192	Girder 2	18' from bent, bottom face	192	Delam	1	1	0.167
192	End Diaphragm	bay 2	192	Spalling/rebar exposed	0.75	0.75	0.167
192	Under Deck	bay 2	192	Spalling/rebar exposed	0.5	0.5	0.167
193	Girder 1	19' from bent, bottom right flange	193	Spalling/strands exposed (10% loss)	2.25	0.5	0.5
195	Girder 1	15' from bent, bottom right flange	195	Delam	1	0.25	0.167
196	Under Deck	bay 2, 5' from bent	195	Spalling/rebar exposed	0.75	0.75	0.167
196	Girder 3	at bent, bottom right flange	196	Delam at patch	2.5	0.75	0.5
197	Girder 4	at bent, bottom left flange	197	Spalling/strands exposed (20% loss)	2.25	1	0.5
197	Girder 1	21' from bent, bottom right flange	197	Spalling/strands exposed (10% loss)	1.25	0.5	0.167
198	Girder 3	12' from bent	197	Delam at patch	4	1	0.75
198	Girder 3	18' from bent	198	Delam at patch	1.5	1	0.167
198	Girder 1	at bent, bottom right flange	198	Delam at patch	2	0.5	0.5
199	Girder 2	at bent, bottom right flange	198	Spalling/strands exposed behind bearing	0.75	0.75	0.5
199	Underdeck	bay 3	198	Spalling/rebar exposed	2	0.75	0.167
199	Girder 4	24' from bent, bottom face	198	Spalling/strands exposed (10% loss)	1.5	1.25	0.167
199	Girder 1	1' from bent	198	Spalling/strands exposed at patch	1.5	0.75	0.75
199	Girder 1	at bent, bottom right flange	199	Spalling/strands exposed behind bearing	0.75	0.75	0.167
201	Girder 3	9' from bent	200	Delam at patch	1.75	0.5	0.5
201	Girder 3	5' from bent	200	Delam at patch	1.5	0.75	0.75
201	Girder 3	4' from bent	200	Delam at patch	3	1	0.75

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
201	Girder 4	1' from bent	200	Delam at patch	1.25	0.5	0.5
201	Girder 4	10' from bent	201	Delam at patch	1.75	0.5	0.5
202	Girder 2	18' from bent, bottom left flange	201	Spalling/strands exposed (10% loss)	1.75	0.5	0.5
203	Girder 4	26' from bent, bottom face	202	Spalling	1	0.75	0.167
203	Girder 4	6' from bent, bottom face	202	Spalling/strands exposed (20% loss)	2.5	1.75	0.5
203	Girder 3	15' from bent	202	Delam at patch	5	1	0.75
203	Girder 4	5' from bent	203	Delam at patch	2.25	0.5	0.5
203	Girder 4	1' from bent	203	Delam at patch	2	0.75	0.5
204	Girder 2	2' from bent, bottom right flange	204	Spalling/strands exposed (10% loss)	2.25	0.5	0.5
204	Girder 1	2' from bent	204	Delam	2.25	0.75	0.5
205	Girder 2	at bent, bottom right flange	204	Spalling/strands exposed behind bearing	0.75	0.75	0.5
205	Girder 3	9' from bent	204	Delam	1.25	1	0.167
205	Girder 2	at bent	204	Delam at patch	1.5	0.75	0.5
205	End Diaphragm	bay 2	205	Delam/cracking	4	0.67	0.25
205	End Diaphragm	bay 3	205	Spalling/rebar exposed	1.25	1	0.75
206	Girder 1	2' from bent	205	Delam at patch	3.5	0.75	0.75
206	Girder 1	1' from bent, bottom right flange	206	Spalling/strands exposed (10% loss)	3.75	1	0.25
206	Girder 2	1' from bent	206	Delam	1.5	0.5	0.5
207	Under Deck	bay 1	206	Spalling/rebar exposed, delam	1.75	0.75	0.167
208	Girder 3	8' from bent	207	Delam	1.75	1.25	0.33
208	Girder 2	20' from bent, bottom right flange	208	Spalling/strands exposed (10% loss)	2	0.33	0.33
208	Girder 2	at bent	208	Delam	2	0.5	0.5
208	Under Deck	bay 2, 5' from bent	208	Spalling/rebar exposed	1.5	1	0.167
209	End Diaphragm	bay 2	208	Spalling/rebar exposed; cracking	3.5	0.75	0.5
209	End Diaphragm	bay 1	208	Delam/cracking	4	0.67	0.5
209	Girder 3	19' from bent, bottom face	209	Delam	1	0.5	0.167
209	Girder 4	1' from bent, bottom left flange	209	Spalling/strands exposed	2.5	0.5	0.5
209	Girder 3	2' from bent	209	Delam at patch	1.25	0.75	0.5
210	Under Deck	bay 1, near bent	209	Spalling/rebar exposed	0.5	0.5	0.167
210	Girder 2	1' from bent	209	Delam at patch	1.75	0.5	0.5
210	Girder 2	5' from bent	209	Delam	1.5	1	0.25
210	Girder 4	6' from bent, bottom left flange	209	Spalling/strands exposed (20% loss)	2.25	0.75	0.5
211	Girder 2	1' from bent, bottom left flange	210	Delam on edge of girder	1.75	0.33	0.33
211	End Diaphragm	bay 3	211	Delam	2	0.75	0.167
212	Girder 2	25' from bent, bottom face	211	Delam	1.5	0.75	0.167
212	Girder 2	20' from bent, bottom left flange	212	Spalling/strands exposed (20% loss)	2.25	0.75	0.33
212	Girder 2	at bent, behind bearing	212	Spalling/strands exposed	0.75	0.75	0.5
214	Girder 2	18' from bent	213	Delam	1.5	1	0.167
214	Girder 4	5' from bent	213	Delam	0.75	0.5	0.167
214	Girder 3	at bent, behind bearing	214	Delam	0.75	0.75	0.167
216	Int. Diaphragm	bay 3	216	Spalling/rebar exposed	1.25	0.33	0.167
217	Girder 2	20' from bent, bottom left flange	216	Spalling/strands exposed (10% loss)	2.25	0.5	0.167
217	Girder 1	19' from bent, bottom left flange	217	Spalling/strands exposed	2	0.5	0.5
218	Girder 3	3' from bent, bottom left flange	217	Spalling/strands exposed (10% loss)	2.25	0.5	0.5
218	Girder 2	20' from bent, bottom face	217	Delam	0.5	0.5	0.167
218	Girder 3	13' from bent	218	(x2)Delam at patch	3	0.75	0.75
218	Girder 3	12' from bent, bottom left flange	218	Spalling/strands exposed	1.25	0.5	0.33
	End Diaphragm	at right overhang	218	Spalling/rebar exposed	1	0.75	0.167
219	Girder 2	20' from bent, bottom left flange	218	Spalling/strands exposed	2.25	0.5	0.33
	Girder 2	at bent, bottom face	219	Cracking	1	0.25	0.25
221	Girder 4	1' from bent, bottom left flange	220	Spalling/strands exposed (90% loss)	3.25	0.75	0.75
222	Girder 1	18' from bent	222	Spalling	0.25	0.25	0.167
222	Girder 1	at bent, bottom left flange	222	Spalling/strands exposed behind bearing	0.75	0.75	0.5
222	Girder 3	1' from bent, bottom left flange	222	Delam	1.75	0.5	0.5
222	Girder 2	1' from bent, bottom right flange	222	Delam	1.75	0.5	0.5
223	Girder 3	at bent, bottom left flange	223	Delam	1.75	0.5	0.5
223	Girder 3	25' from bent, bottom right flange	223	Delam	1.75	0.5	0.5
223	Girder 3	mid span, bottom right flange	223	Spalling/strands exposed	1.75	0.5	0.33
224	Girder 2	15' from bent, bottom right flange	223	Delam	1.75	0.5	0.5
224	Girder 2	at bent, bottom right flange	223	Delam	1.75	0.5	0.5
	Rt. Deck Overhang	S face	223	Delam	1	0.75	0.167
	Girder 1	at bent, ehind bearing	224	Spalling/strands exposed	0.75	0.75	0.5
224	Girder 3	1' from bent, bottom right flange	224	Spalling/strands exposed (10% loss)	2.25	0.75	0.75
225	Girder 1	23' from bent, bottom face	224	Spalling/strands exposed	1.25	1	0.33
225	Girder 4	1.5' from bent	224	Delam	2.25	0.5	0.5
	Girder 4	at bent, behind bearing	225	Spalling/strands exposed	0.75	0.75	0.5
226	Girder 3	2' from bent, bottom left flange	225	Delam	2.25	0.5	0.5
226	Girder 3	at bent, bottom right flange	225	Spalling/strands exposed (10% loss)	1.75	0.5	0.5
226	Girder 3	6' from bent, bottom right flange	226	Delam	2.5	0.5	0.5
227	Under Deck	bay 3, at bent	226	Spalling/rebar exposed	1	1	0.167
227	Girder 4	11' from bent	226	Spalling/strand exposed at patch	2	0.5	0.5
228	Girder 1	at bent, bottom right flange	228	Delam at patch	1.75	0.5	0.5
229	Girder 2	20' from bent	228	Delam/cracking at patch	2.25	0.33	0.75
229	Girder 2	25' from bent	229	Spalling/strands exposed (10% loss)	1	0.5	0.167
231	Girder 4	20' from bent	231	Delam/Spalling	1.25	0.25	0.25
232	Girder 3	12' from bent	231	Delam/Spalling at patch	3	0.75	0.25
232	Girder 2	1' from bent, bottom left flange	232	Delam	3.75	0.5	0.5
232	Girder 1	15' from bent	232	Delam	1.5	0.75	0.167
233	Girder 2	at bent, bottom left flange	233	Spalling/strands exposed behind bearing	0.5	0.5	0.33

Span #	Component	Location (ft. from nearest bent, etc)	Bent #	Defect Description	Length(ft.)	Width(ft.)	*Depth(ft.)
234	Girder 3	at bent, bottom left flange	234	Spalling/strands exposed behind bearing	0.5	0.5	0.167
234	Girder 4	at bent, bottom left flange	234	Spalling/strands exposed behind bearing	0.5	0.5	0.167
235	Girder 1	at bent, bottom right flange	235	Spalling/strands exposed behind bearing	0.75	0.5	0.25
236	Girder 3	3' from bent	235	Delam	0.25	0.25	0.167
235	Girder 2	2' from bent, right face	235	Spalling/rebar exposed	0.5	0.33	0.167
235	Girder 4	at bent, bottom right flange	235	Spalling/strands exposed behind bearing	0.75	0.75	0.33
236	Girder 3	at bent, bottom left flange	236	Spalling/strands exposed behind bearing	0.5	0.5	0.33
237	Girder 1	mid span, bottom face	237	Spalling	0.75	0.33	0.167
238	Girder 1	at bent, bottom left flange	238	Spalling/strands exposed behind bearing	0.75	0.5	0.25
238	Girder 2	17' from bent	238	(x2)Delam	1	0.5	0.167
239	Girder 2	20' from bent	239	Spalling/strands exposed	2.5	0.5	0.5
239	Girder 2	22' from bent	239	Spalling/strand exposed	0.75	0.5	0.167
240	Girder 3	20' from bent	239	Spalling	0.5	0.167	0.167
240	Girder 3	at bent, bottom left flange	240	Spalling/strands exposed behind bearing	1	0.75	0.5
241	Girder 3	1' from bent, bottom left flange	241	Delam	1.25	1	0.167
241	Girder 3	at bent, bottom right flange	241	Spalling/strands exposed behind bearing	0.75	0.5	0.25
242	Girder 3	at bent, bottom right flange	242	Spalling/strands exposed behind bearing	0.75	0.75	0.5
246	Girder 3	at bent, bottom left flange	246	Spalling/strands exposed behind bearing	0.75	0.75	0.25
247	Rt. Deck Overhang	at bent	247	Spalling/rebar exposed	0.75	0.33	0.167
248	Lt. Deck Overhang	10' from bent	247	Spalling/rebar exposed	2.5	2.25	0.25

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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Samuel Cullum
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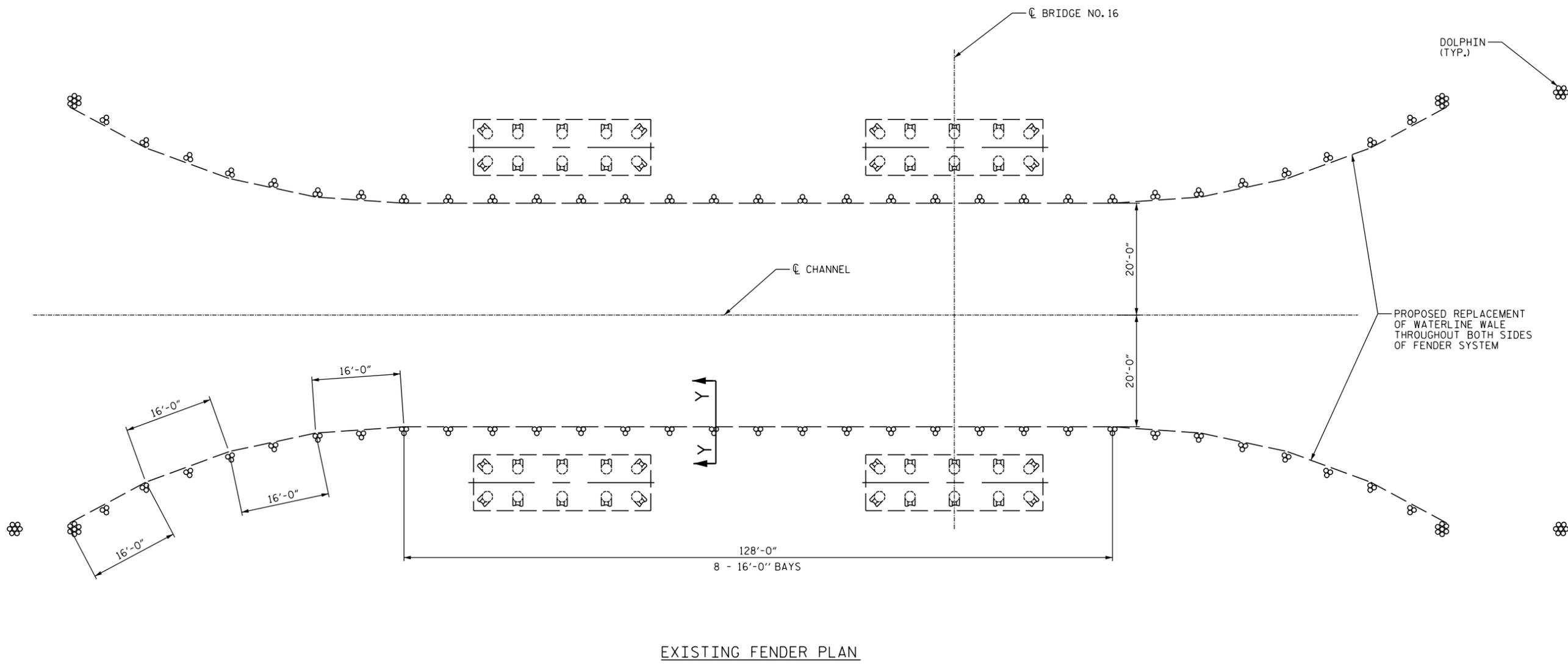
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE DEFICIENCIES
 (6 OF 6)

DRAWN BY : T.S. CHILDRESS DATE : 10-16
 CHECKED BY : - DATE : -
 DESIGN ENGINEER OF RECORD: - DATE : -

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1			3			S-279
2			4			TOTAL SHEETS



EXISTING FENDER PLAN

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

NOTE:
 SEE FENDER REPAIR DETAILS SHEET
 FOR WORK TO BE PERSORMED.

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 19C97095C75A467...



12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

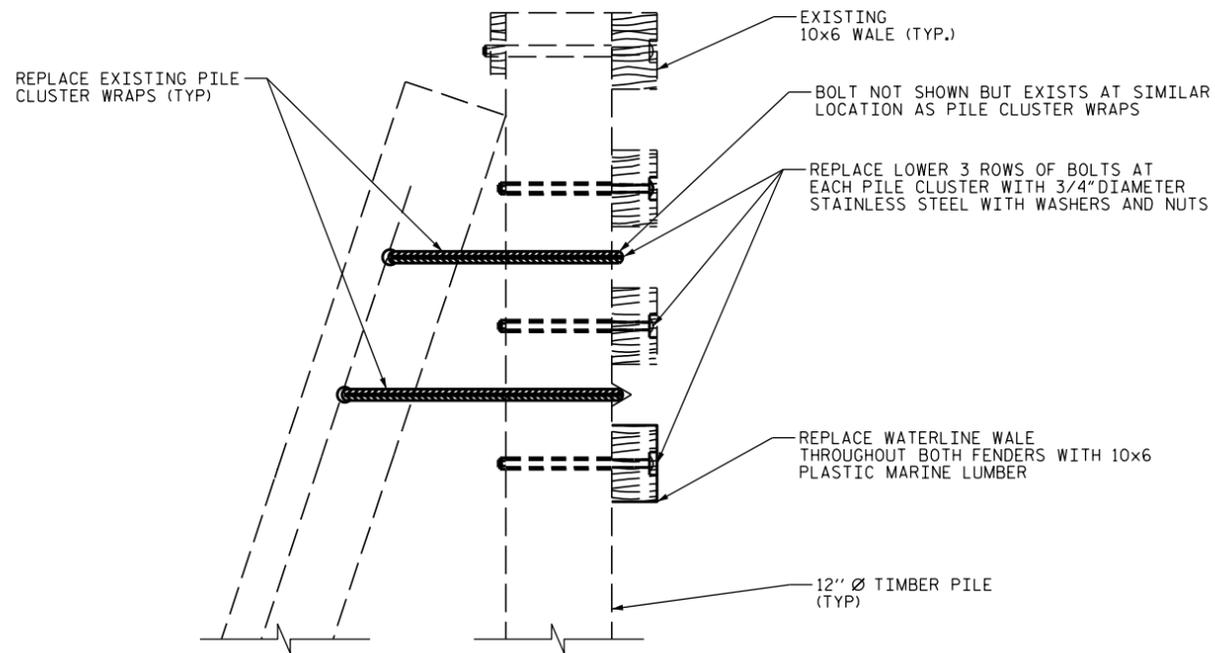
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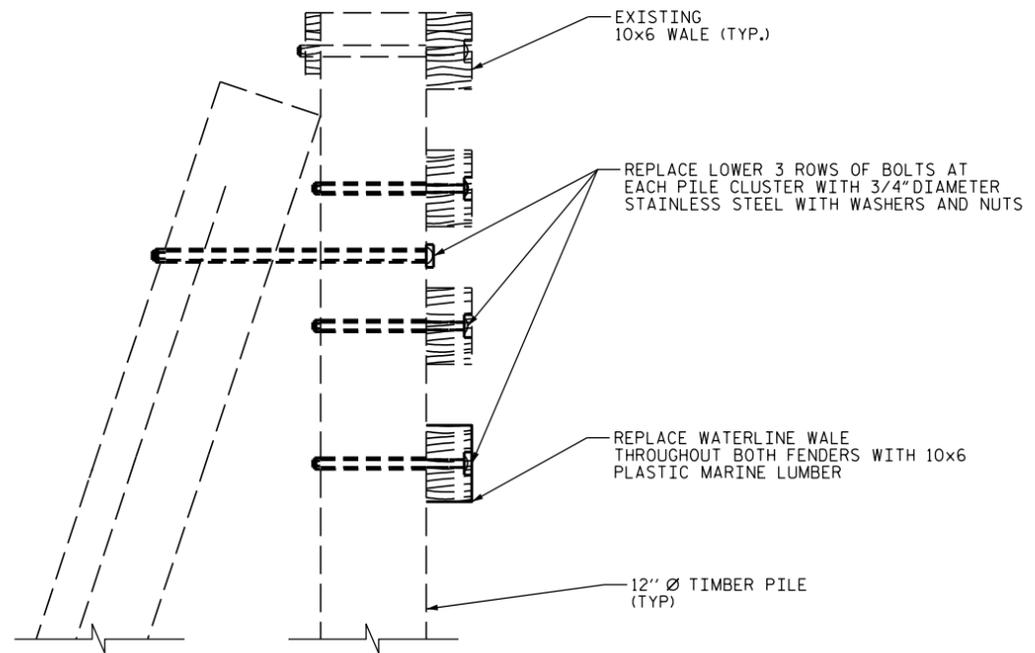
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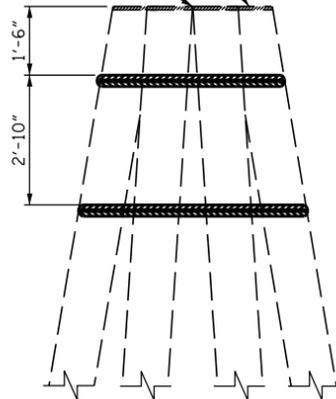
SECTION Y-Y
DETAIL OF TYPICAL 3-PILE CLUSTER



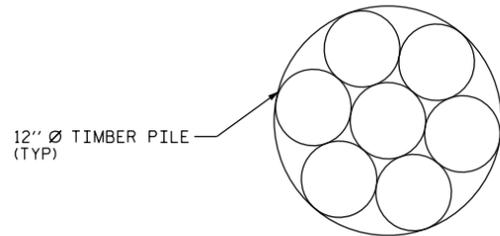
SECTION Y-Y
DETAIL OF TYPICAL 3-PILE CLUSTER
(WITHOUT WRAPS / WITHOUT WRAPS SHOWN)

TREAT EXISTING TOP OF
TIMBER WITH COPPER
NAPHTHENATE PILES PER
PROJECT SPECIAL PROVISIONS

REPLACE TIN
HATS IN KIND
(TIN NAILS)



ELEVATION OF DOLPHIN



PLAN OF EXIST. 7-PILE DOLPHIN

FENDER BILL OF MATERIALS						
REMOVAL/DISPOSAL OF EXISTING MATERIALS	10X6 PLASTIC MARINE LUMBER	PILE CLUSTER WRAPS	3/4" DIA. STAINLESS STEEL BOLTS (LENGTH TO FIT)	3/4" DIA. STAINLESS STEEL WASHERS	3/4" DIA. STAINLESS STEEL NUTS	COATING OF PILE TOPS & TIN HAT REPLACEMENT
LUMP SUM	LS (LF)	EACH	EACH	EACH	EACH	LUMP SUM
LUMP SUM	1 (512)	46	372	372	372	LUMP SUM

FENDER NOTES:

1. REPLACE WATERLINE WALES WITH PLASTIC LUMBER FENDER BOARDS PER CONTRACT DOCUMENTS.
2. ALL BOLTS, ANCHORS, WASHERS AND CLIPS TO BE 304 OR 316 STAINLESS STEEL.
3. WIRE ROPE SHALL BE 1/2" DIAMETER 6x19, 6x25, OR 6x37 CLASS IWRC TYPE 316 STAINLESS STEEL WIRE ROPE WITH A MINIMUM BREAKING STRENGTH OF 18,000 LBS.
4. WIRE ROPE SHALL BE PVC COATED WITH 90 DUROMETER (SHORE A HARDNESS) POLY-VINYL CHLORIDE COLORED BLACK.
5. USE STAINLESS STEEL PILE CLUSTER WRAP HARDWARE THAT FITS APPROVED WIRE ROPE SYSTEM.
6. SUBMIT ALL MATERIALS TO ENGINEER FOR APPROVAL.
7. CONTRACTOR TO FIELD VERIFY QUANTITIES WITH THE ENGINEER PRIOR TO ORDERING MATERIALS.
8. PROPOSED FENDER REPAIRS ARE BASED ON EXISTING PLANS AND CURSORY FIELD REVIEW. FIELD ADJUST AS NECESSARY TO FIT AS-BUILT CONDITIONS.
9. REPLACE ALL PILE CLUSTER WRAPS STILL INTACT. TYPICAL CONDITION IS 2 WRAP LOCATIONS PER PILE CLUSTER. EACH PILE WRAP LOCATION CONSISTS OF 3 WRAPS.
10. CUT TIMBER TO FIT. DIMENSIONS SHALL BE DETERMINED VIA EXISTING PLANS AND FIELD MEASUREMENTS. REMOVAL AND DISPOSAL OF ALL PORTIONS NECESSARY TO COMPLETE PROPOSED WORK WILL BE CONSIDERED INCIDENTAL TO PAY ITEMS FOR FENDER REPAIR.
11. COAT TOPS OF ALL TIMBER PILES WITH COPPER NAPHTHENATE (2% COPPER) PRESERVATIVE TREATMENT. REPLACE TIN HATS ONLY AT LOCATIONS WHERE TIN HATS EXIST AT TIME OF BID. SECURE TIN HATS WITH TIN NAILS.

DocuSigned by:
Samuel Cullum

19C97095C75A467...

 ENGINEER
 SAMUEL L. CULLUM
 12/13/2016

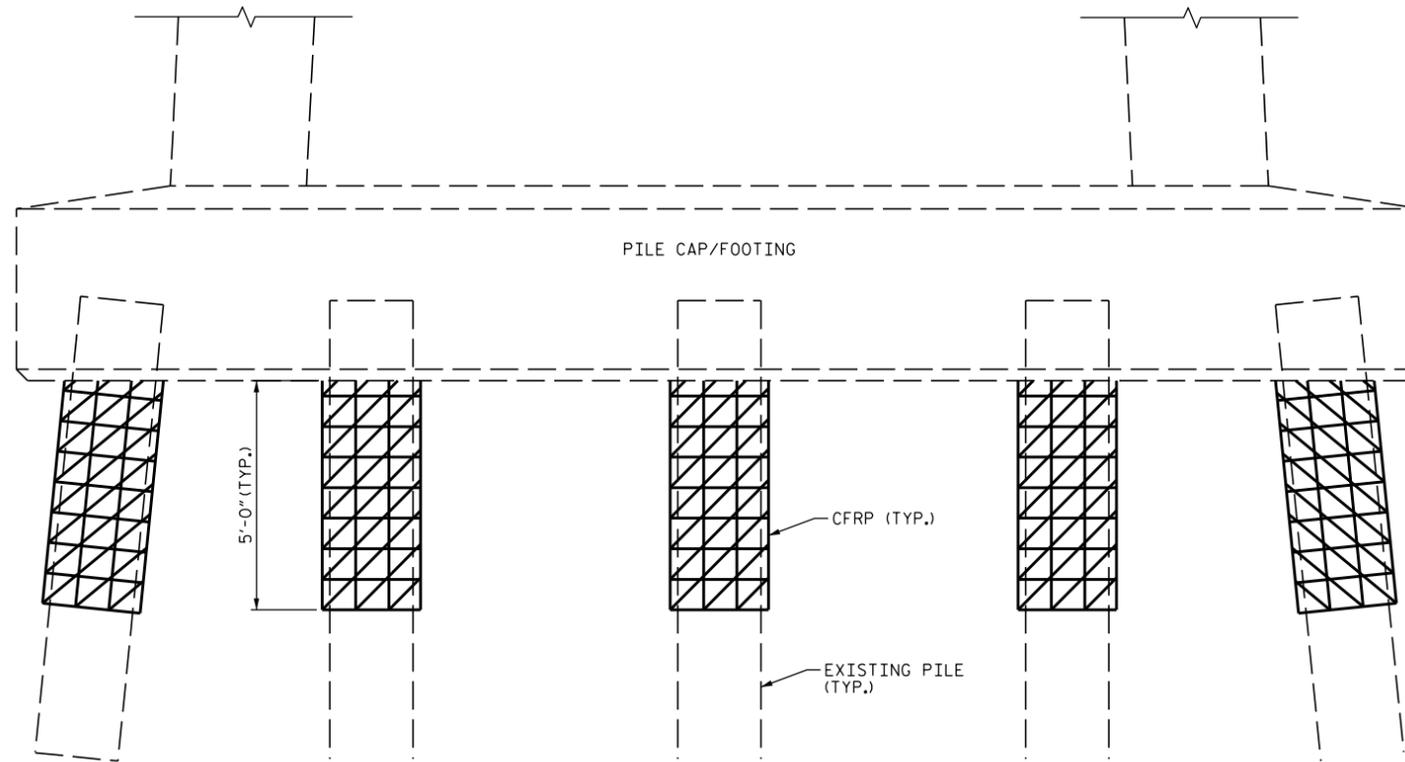
PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 FENDER REPAIR DETAILS

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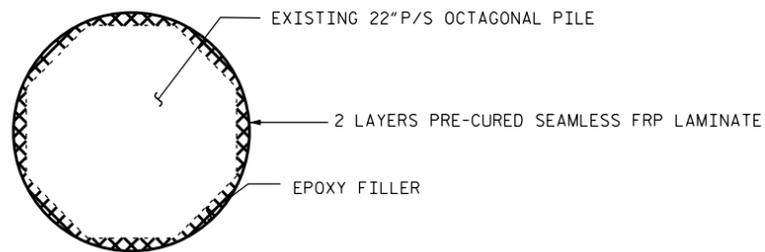
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1			3			S-281
2			4			TOTAL SHEETS



TYPICAL FOOTING SHOWN - ELEVATION

BENTS 172-176, 181-185
BENTS 177-180 SIMILAR



PILE SECTION DETAIL

NOTES:

1. PRE-CURED LAMINATE WITH EPOXY FILLER SHALL CONSIST OF A MINIMUM OF TWO LAYERS OF BI-DIRECTIONAL FABRIC.
2. EACH LAYER SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIAL PROVISIONS FOR PILE STRENGTHENING.
3. PRIOR TO REPAIRS, ALL CONCRETE DEFECTS WITHIN THE PROPOSED WRAP FOOTPRINT SHALL BE REPAIRED IN ACCORDANCE WITH CONTRACT DOCUMENTS.

PROJECT NO. B-5937
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STATION: BRIDGE NO. 16

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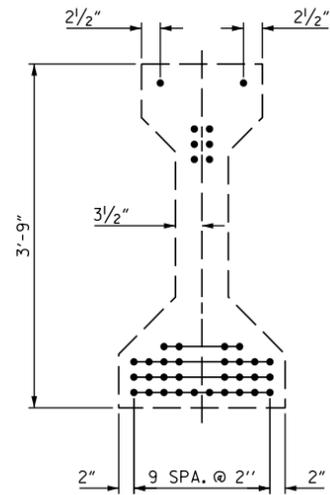
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE STRENGTHENING -
CHANNEL BENTS

DRAWN BY : J. B. HANNA DATE : 10-16
CHECKED BY : S. L. CULLUM DATE : 10-16
DESIGN ENGINEER OF RECORD: S. L. CULLUM DATE : 10-16

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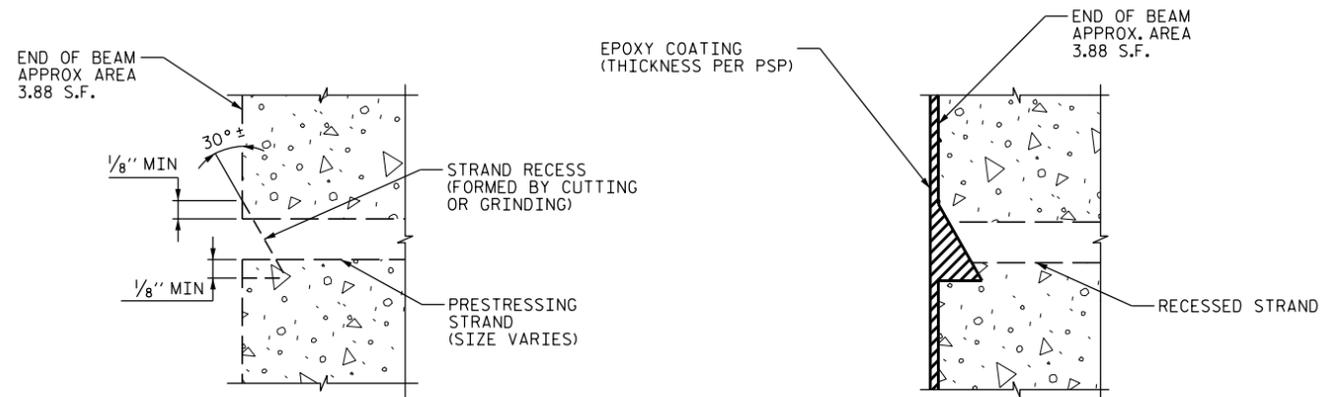
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-282
2			4			



STANDARD PATTERN AT BEAM END

NOTES:

1. CLEAN AND COAT THE BEAM ENDS IN ACCORDANCE WITH PROJECT SPECIAL PROVISION FOR "BEAM END EPOXY COATING".
2. PREPARE BEAM ENDS TO RECEIVE COATING TO A MINIMUM CONCRETE SURFACE PROFILE (CSP) OF CSP 3 PER ICRI GUIDELINES 310.2. CLEAN AND ROUGHEN CONCRETE SURFACES TO MAKE ABSORPTIVE BY MECHANICAL MEANS OR ABRASIVE BLASTING.
3. UPON COMPLETION OF MECHANICAL/BLASTING SURFACE PREP, WASH THOROUGHLY WITH WATER AND ALLOW TO DRY. TEST MOISTURE CONTENT PER PSP PRIOR TO EPOXY APPLICATION.
4. APPLY TWO LAYERS OF TYPE 4A EPOXY PER SECTION 1081.
5. ALL BLAST MEDIA AND DEBRIS SHALL BE CONTAINED, REMOVED FROM THE SITE AND DISPOSED OFF-SITE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



TYPICAL SECTION SHOWING CUT STRAND RECESS LIMITS

TYPICAL SECTION AFTER PROTECTING

PROJECT NO. B-5937
 CURRITUCK/DARE COUNTY
 STATION: BRIDGE NO. 16

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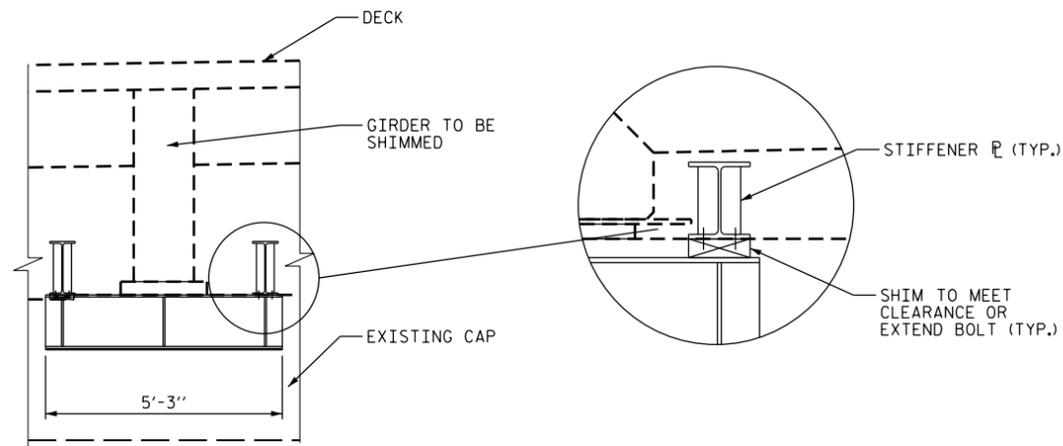
 12/13/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BEAM END COATING DETAILS

DRAWN BY : T.S. CHILDRESS DATE : 10-16
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-283
2			4			



PARTIAL SECTION

REPAIR NOTES:

1. WITH THE BEAMS SHIMMED AND SECURED, THE CONTRACTOR SHALL REMOVE AND REPAIR ALL UNSOUND CONCRETE IN ACCORDANCE WITH CONTRACT DOCUMENTS.
2. CRACKS IN OTHERWISE SOUND CONCRETE (AS APPROVED BY THE ENGINEER) SHALL BE INJECTED WITH EPOXY IN ACCORDANCE WITH THE CONCRETE RESTORATION DETAILS SHEET.
3. UPON CURING REPAIR CONCRETE TO A MINIMUM OF 3.4 KSI, REMOVE SHIMS, AND RETURN BEAMS TO ORIGINAL BEARING CONDITION.
4. USE SUPPLEMENTAL BEAM BRACE DETAIL WHEN CAP CONCRETE REPAIR IS ANTICIPATED TO EXPOSE 10% OR MORE OF THE MASONRY PLATE, OR WHEN INSTABILITY OF THE BEARING IS ANTICIPATED. THE ENGINEER SHALL APPROVE USAGE OF THE FRAME IN COORDINATION WITH THE CONTRACTOR.

SHIM NOTES:

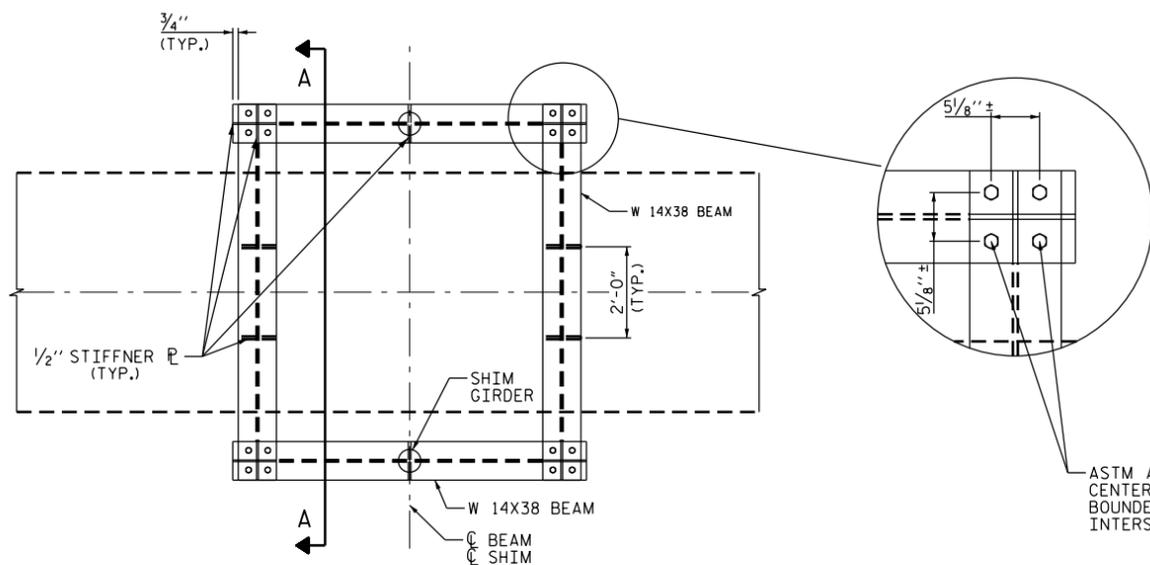
1. SHIMMING OF THE SUPERSTRUCTURE AT PILE BENTS MAY BE NECESSARY TO FACILITATE CAP CONCRETE REPAIR.
2. IF AS-BUILT CONDITIONS OF THE PEDESTALS INDICATE THAT THE FRAME AS DETAILED WILL NOT CLEAR THE PEDESTALS, THE CONTRACTOR SHALL USE SHIM PLATES OR EXTEND BOLTS TO ADJUST FOR CLEARANCE. LOOSEN ANCHOR BOLTS WHERE REQUIRED.
3. SHIM SHALL BE PLACED SYMMETRICALLY AT THE CENTERLINE OF EACH GIRDER.

FRAME NOTES:

1. ALL BOLTS SHALL BE 7/8" A325 HIGH STRENGTH FRICTION TYPE BOLTS AND ALL HOLES SHALL BE 1/16".
2. DAMAGED BOLTS FOUND DURING RELOCATION OF THE FRAME SHALL NOT BE REUSED.
3. A HALF INCH MINIMUM SHIM PLATE SHALL BE USED. A THICKER SHIM PLATE SHALL BE REQUIRED TO LOWER THE ELEVATION OF THE W BEAM FOR JACKING CLEARANCE.
4. ALL STEEL SECTIONS, BEARING PLATES, STIFFENERS, AND BRACINGS SHALL BE ASTM A709 GRADE 50 STEEL.
5. THE SHIMS SHALL BE CONCENTRICALLY PLACED ABOUT THE WEB OF THE W BEAMS, AND THE CONTRACTOR SHALL DETERMINE THE NEED FOR A CONNECTION BETWEEN THE SHIMS AND THE W BEAMS SO THAT THE GIRDERS DO NOT SHIFT DURING THE REPAIR PROCEDURE.
6. BEARING STRIP SHALL BE PLAIN ELASTOMERIC PADS.

PAY ITEM NOTES:

STEEL SHIMS, TIMBER LAGGING & WEDGES, BEARING STRIPS, AND ALL LABOR AND MATERIALS NECESSARY TO INSTALL AND REMOVE BEAM BRACE FRAMES SHALL BE INCIDENTAL TO THE STRUCTURAL STEEL PAY ITEM.



PARTIAL PLAN
SUPPLEMENTAL BEAM BRACE DETAILS -
PILE BENT CAPS

ASTM A325 BOLTS WITH OVERSIZE HOLES
CENTERED WITHIN EACH QUADRANT
BOUNDED BY STEEL MEMBER WEB-FLANGE
INTERSECTIONS.

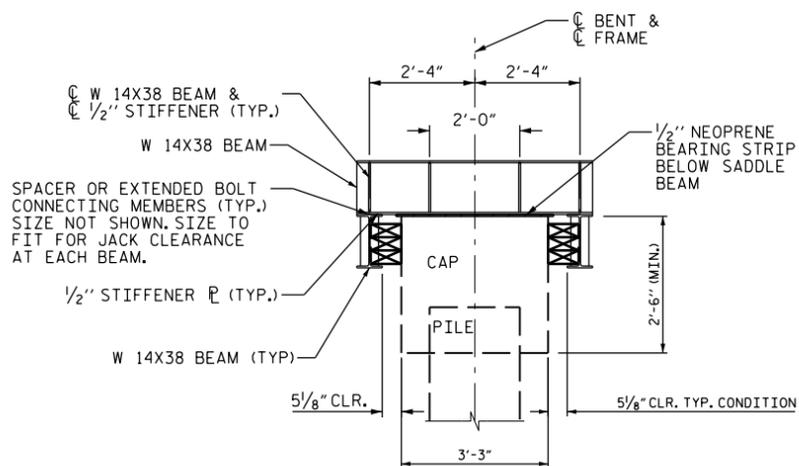
TYPICAL INTERIOR BEAM BILL OF MATERIALS (SINGLE FRAME)

W14X38 BEAM	W14X38 BEAM	STIFF. WEIGHT	ROD/BOLTS/ NUTS/WASHER	TOTAL STEEL
LIN. FT.	LBS.	LBS.	LBS.	LBS.
19.9	754	168	128	1050

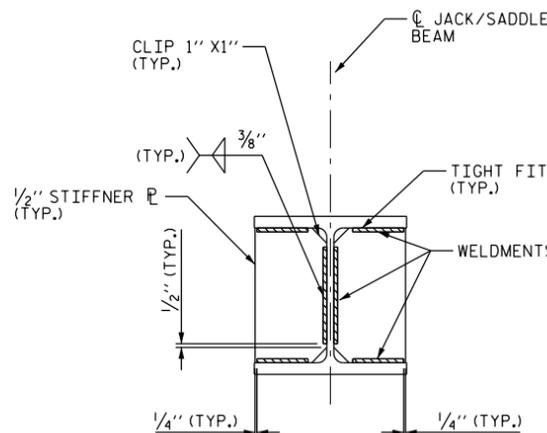
LEGEND:

- TIMBER LAGGING TO BE PLACED BETWEEN FACE OF PILE CAP AND WEB OF BEAMS. TIMBER SHALL BE SECURED TO PREVENT ROTATION OF FRAMES UNDER LIVE LOAD. ADD TIMBER AND WEDGES AS NEEDED TO PROVIDE A TIGHT FIT BETWEEN CAP AND FRAME.

PROJECT NO. B-5937
CURRITUCK/DARE COUNTY
STATION: BRIDGE NO. 16



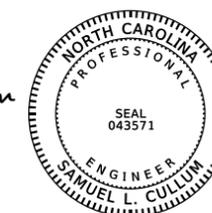
SECTION A-A



WELD TERMINATION DETAIL

DocuSigned by:
Samuel Cullum
19C97095C75A467...

3/8/2017



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPPLEMENTAL BEAM BRACE
DETAIL- PILE BENTS

DRAWN BY : TSC DATE : 10-16
CHECKED BY : SLC DATE : -
DESIGN ENGINEER OF RECORD: SLC DATE : -

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-284
1			3			TOTAL SHEETS
2			4			