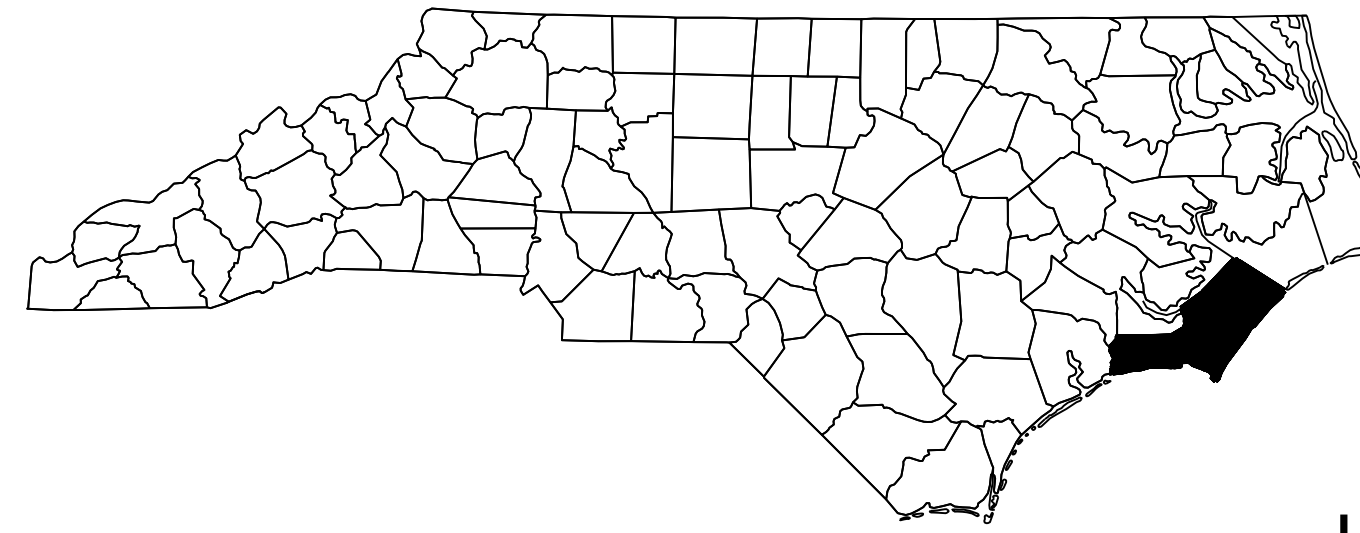


**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

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

**This file or an individual page
shall not be considered a certified document.**

CONTRACT: 203925 PROJECT: B-5938, B-5939



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CARTERET COUNTY

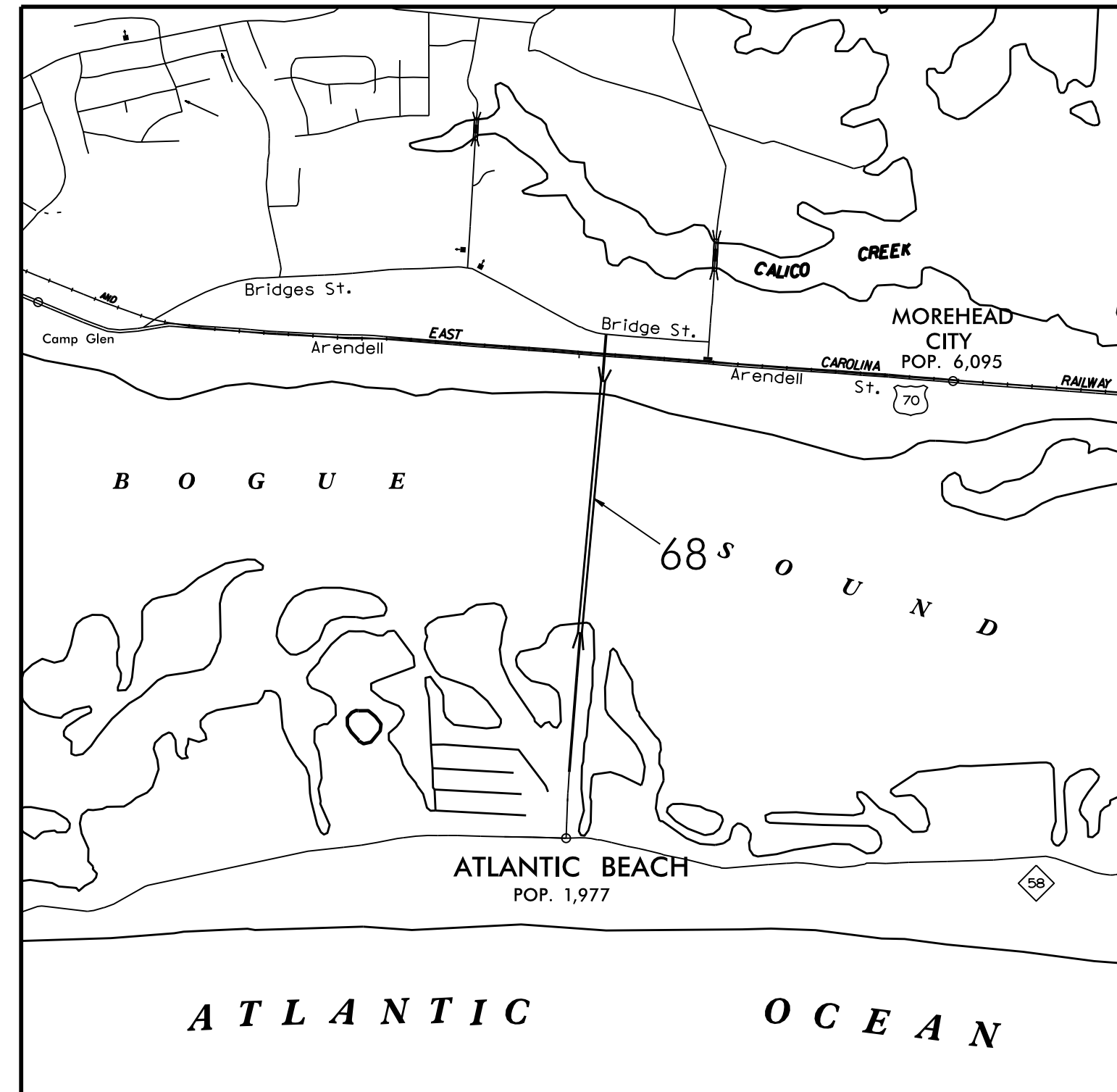
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-----------------|--------------|
| N.C. | B-5938, B-5939 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 46483.1.1 | | B-5938 (P.E.) | |
| 46484.1.1 | | B-5939 (P.E.) | |
| 46483.3.1 | | B-5938 (CONST.) | |
| 46484.3.1 | | B-5939 (CONST.) | |
| | | | |
| | | | |

LOCATION: CARTERET COUNTY:

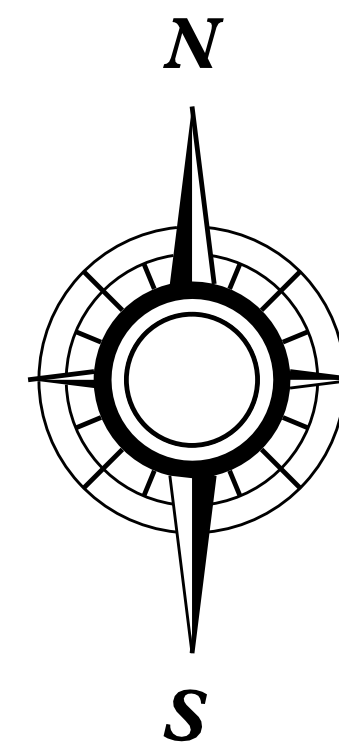
- BRIDGE #68 ON SR1182 OVER BOGUE SOUND AND INTRACOASTAL WATERWAY
- BRIDGE #6 ON NC58 OVER THE INTRACOASTAL WATERWAY.

TYPE OF WORK: BRIDGE PRESERVATION – POLYESTER POLYMER CONCRETE DECK OVERLAY, JOINT REPLACEMENT, SPAN RE-POSITIONING, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE GIRDERS, CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR, PILE ENCAPSULATION, FENDER SYSTEM, LIGHTING, 2-BAR METAL RAIL RETROFIT, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE PILES, FRP STRENGTHENING.

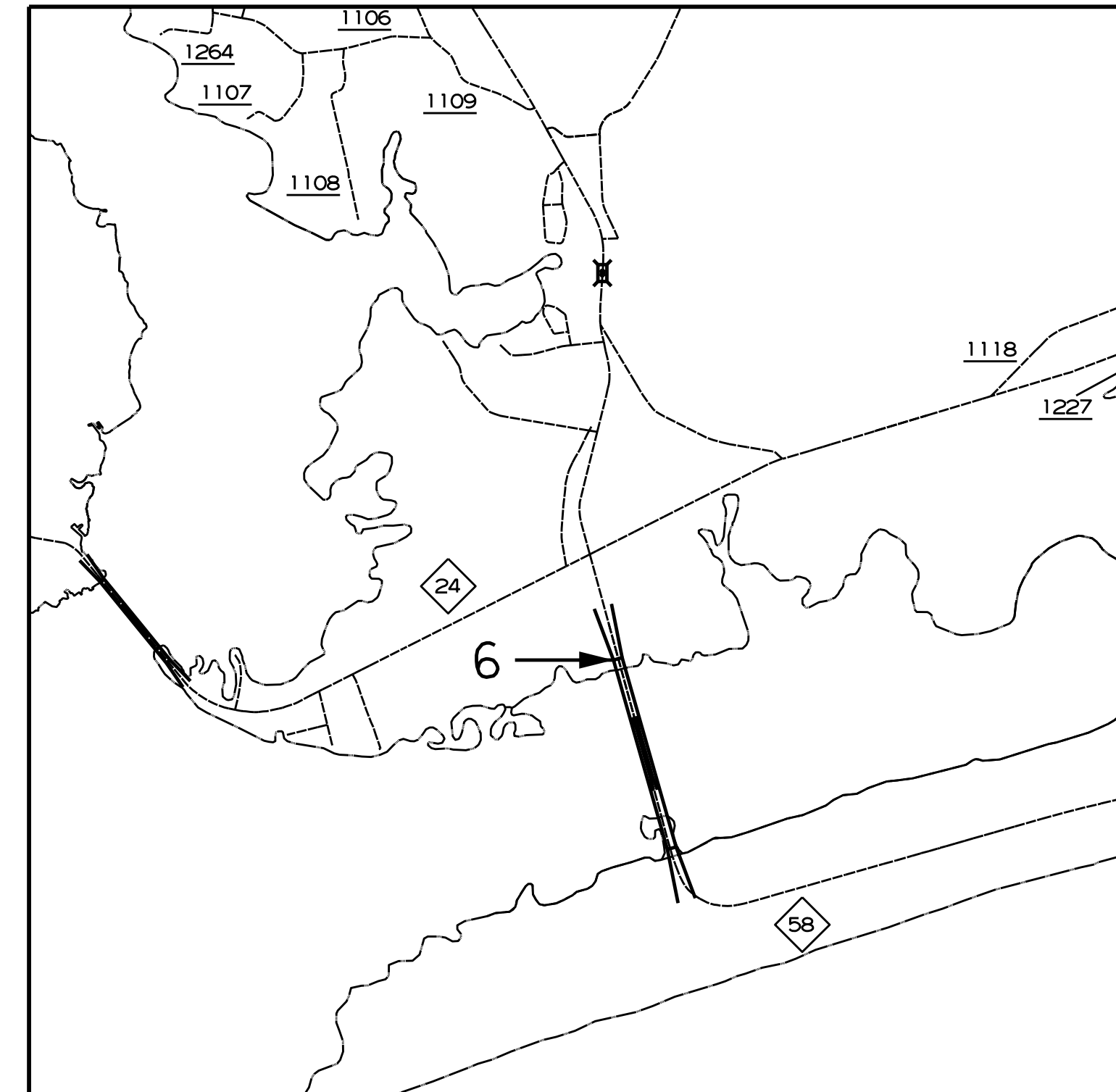
PART 1



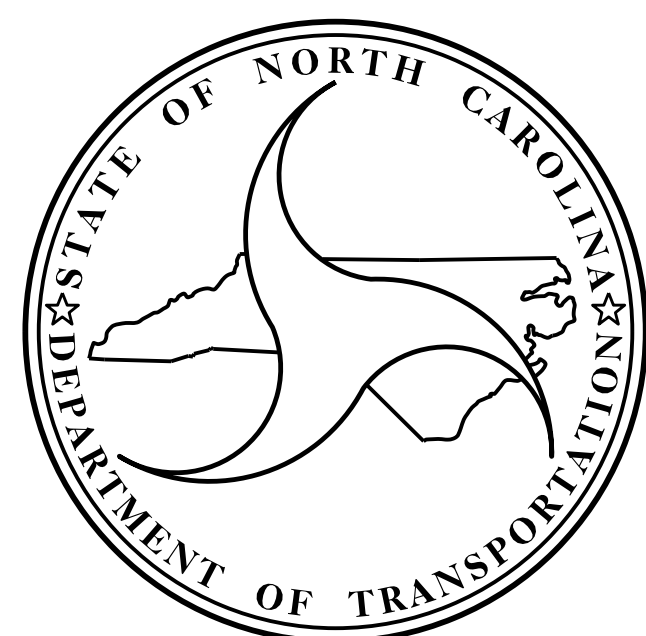
VICINITY MAP – CARTERET CO. #68



PART 2



VICINITY MAP – CARTERET CO. #6



DESIGN DATA

| | |
|---------------------|----------|
| CARTERET COUNTY | |
| BRIDGE #68 ADT 2013 | = 15,000 |
| BRIDGE #6 ADT 2013 | = 13,000 |

PROJECT LENGTH

| | |
|-----------------|-----------|
| CARTERET COUNTY | |
| BRIDGE #68 | 0.74 MILE |
| BRIDGE #6 | 0.87 MILE |

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

ERIC B. NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

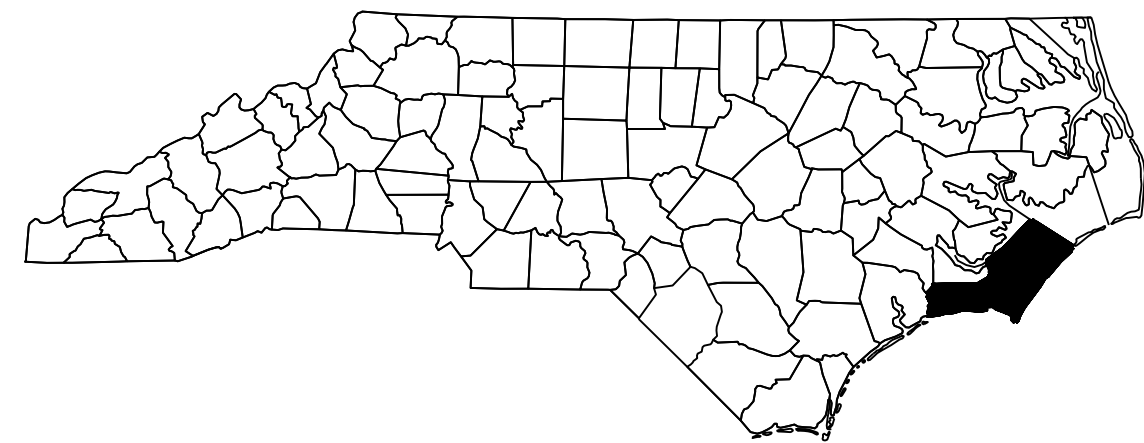
LETTING DATE:
APRIL 18, 2017



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

PROJECT: B-5938, B-5939

CONTRACT: 203925



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CARTERET COUNTY

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-----------------|--------------|
| N.C. | B-5938, B-5939 | 1A | |
| STATE PROJ. NO. | P.A. PROJ. NO. | DESCRIPTION | |
| 46483.1.1 | | B-5938 (P.E.) | |
| 46484.1.1 | | B-5939 (P.E.) | |
| 46483.3.1 | | B-5938 (CONST.) | |
| 46484.3.1 | | B-5939 (CONST.) | |
| | | | |
| | | | |

LOCATION: CARTERET COUNTY:
 -BRIDGE #68 ON SR1182 OVER BOGUE SOUND AND INTRACOASTAL WATERWAY
 -BRIDGE #6 ON NC58 OVER THE INTRACOASTAL WATERWAY.

TYPE OF WORK: BRIDGE PRESERVATION - POLYESTER POLYMER CONCRETE DECK OVERLAY, JOINT REPLACEMENT, SPAN RE-POSITIONING, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE GIRDERS, CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR, PILE ENCAPSULATION, FENDER SYSTEM, LIGHTING, 2-BAR METAL RAIL RETROFIT, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE PILES.

INDEX OF SHEETS

| | |
|-------------------------|---------------------------------|
| <i>1</i> | <i>COMBINED TITLE SHEET</i> |
| <i>1A</i> | <i>COMBINED INDEX OF SHEETS</i> |
| <i>1B</i> | <i>B-5938 TITLE SHEET</i> |
| <i>S1-1 THRU S1-97</i> | <i>B-5938 STRUCTURAL PLANS</i> |
| <i>F-1 THRU F-4</i> | <i>B-5938 FENDER SYSTEM</i> |
| <i>L-1 THRU L-6</i> | <i>B-5938 BRIDGE LIGHTING</i> |
| <i>1C</i> | <i>B-5939 TITLE SHEET</i> |
| <i>S2-1 THRU S2-131</i> | <i>B-5939 STRUCTURAL PLANS</i> |
| <i>SN</i> | <i>STANDARD NOTES</i> |

2012 ROADWAY ENGLISH STANDARD DRAWINGS

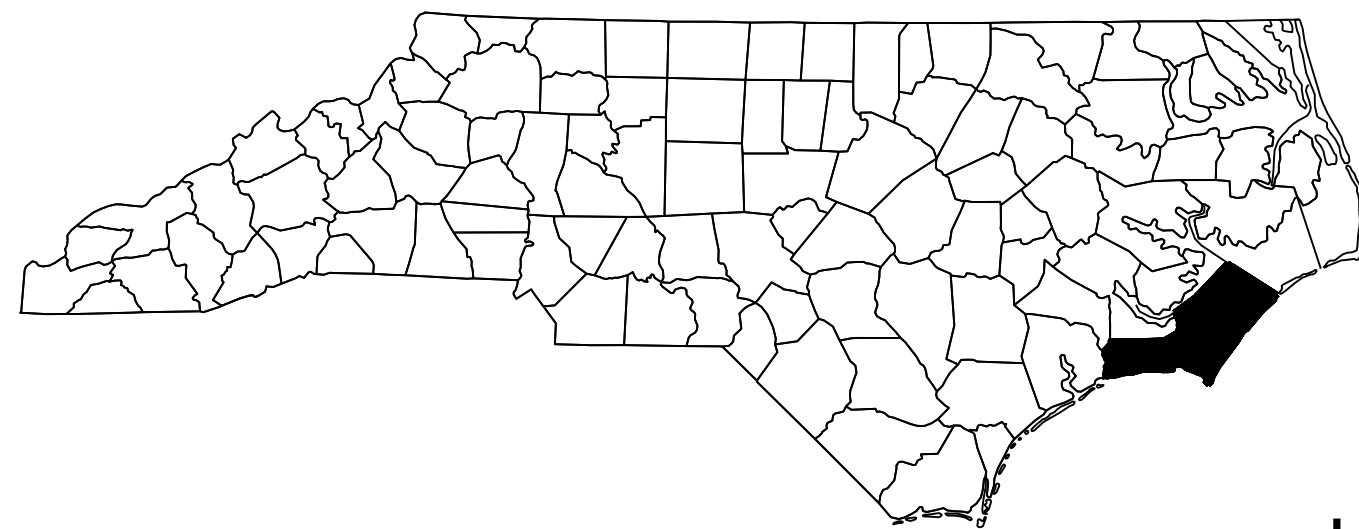
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C. Dated January, 2012 are applicable to this project and reference hereby are considered a part of these plans:

| STD.NO. | TITLE |
|---------------------------------|------------------------|
| DIVISION 8 - INCIDENTALS | |
| 862.02 | Guardrail Installation |
| 862.03 | Structure Anchor Units |

*EFF. 01-17-2012
REV. 02-29-2016*

PROJECT: B-5938

CONTRACT: 203925



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CARTERET COUNTY

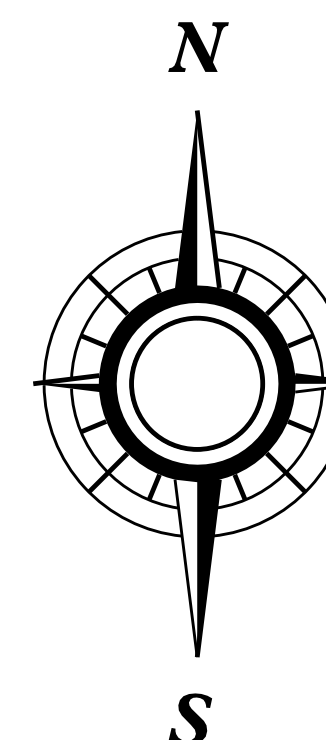
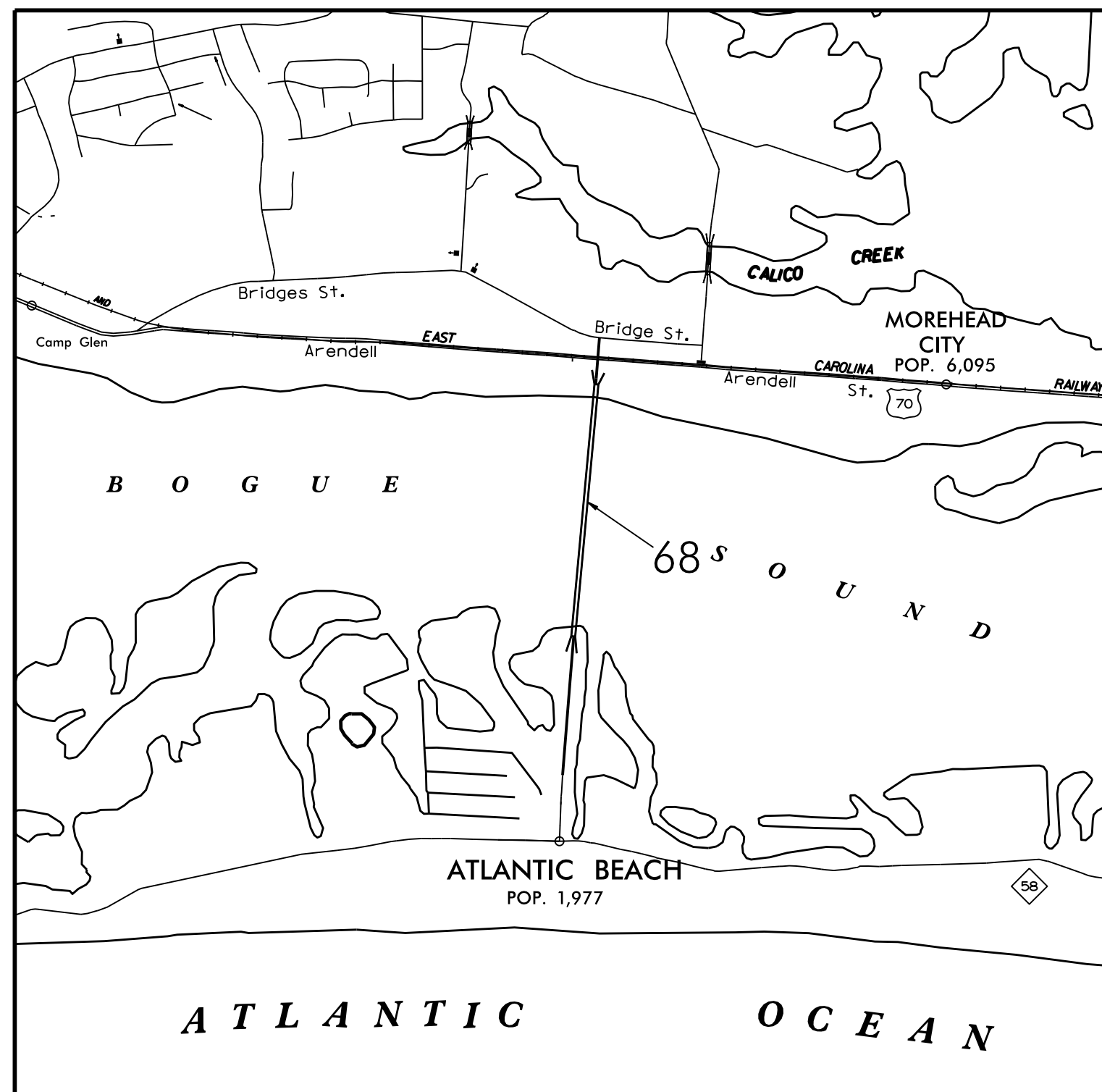
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | B-5938 | 1B | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 46483.1.1 | | P.E. | |
| 46483.3.1 | | CONST. | |
| | | | |
| | | | |
| | | | |
| | | | |

LOCATION: CARTERET COUNTY:

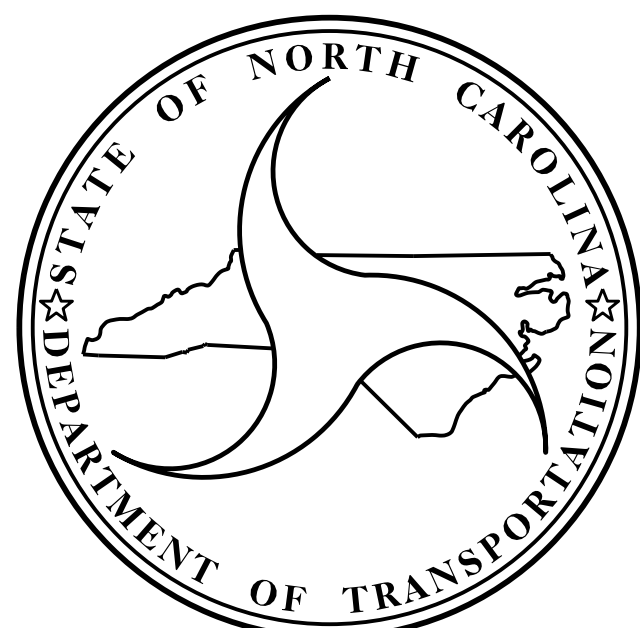
-BRIDGE #68 ON SR1182 OVER BOGUE SOUND AND INTRACOASTAL WATERWAY

TYPE OF WORK: BRIDGE PRESERVATION - POLYESTER POLYMER CONCRETE DECK OVERLAY, JOINT REPLACEMENT, SPAN RE-POSITIONING, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE GIRDERS, CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR, PILE ENCAPSULATION, FENDER SYSTEM, LIGHTING, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE PILES.

PART 1



VICINITY MAP - CARTERET CO. #68



DESIGN DATA

CARTERET COUNTY
BRIDGE #68 ADT 2013 = 15,000

PROJECT LENGTH

CARTERET COUNTY
BRIDGE #68 0.74 MILE

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

ERIC B. NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
APRIL 18, 2017



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

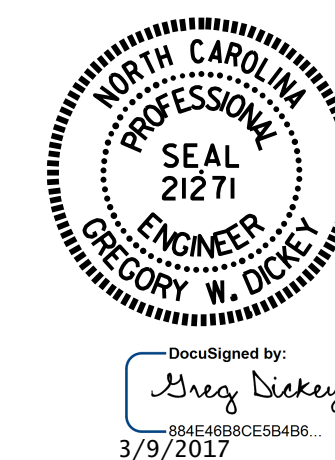
| * BRIDGE #68 TOTAL BILL OF MATERIAL | | | | | | | | | | | | | | |
|-------------------------------------|--------------------|---|------------------------------|--------------|----------------------|------------------------------|-------------------|-----------------------|-----------------------------------|------------------------|-------------------------|------------------------|-------------------------|------------------------|
| BRIDGE | INCIDENTAL MILLING | ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B | ASPHALT BINDER FOR PLANT MIX | MOBILIZATION | GROOVING BRIDGE DECK | CLASS II SURFACE PREPARATION | SHOTCRETE REPAIRS | EPOXY RESIN INJECTION | REMOVAL OF EXISTING FENDER SYSTEM | SILICONE JOINT SEALANT | 6" X 10" PLASTIC LUMBER | 4" X 6" PLASTIC LUMBER | 2" X 12" PLASTIC LUMBER | 2" X 6" PLASTIC LUMBER |
| CARTERET #68 | SY | TONS | TONS | LUMP SUM | SF | SY | CF | LF | LUMP SUM | LF | LF | LF | LF | LF |
| TOTAL | 455.4 | 38.3 | 2.3 | LUMP SUM | 218,738 | 17.6 | 91.9 | 897 | LUMP SUM | 280.3 | 448 | 336 | 1,045.3 | 1,792 |

| * BRIDGE #68 TOTAL BILL OF MATERIAL | | | | | | | | | | | | | | |
|-------------------------------------|----------------------|-----------------------------|--------------------|---------------------------|--------------------|---------------|------------------------------------|----------|---------------|-------------------------------|-----------------------------------|----------------------------------|--------------------------------------|------------------------|
| BRIDGE | BRIDGE JOINT REMOVAL | WIRE ROPE FOR FENDER SYSTEM | 14" COMPOSITE PILE | 10" X10" COMPOSITE LUMBER | PILE ENCAPSULATION | PPC MATERIALS | PRESTRESSED CONCRETE GIRDER REPAIR | HARDWARE | EPOXY COATING | TSA, FULL LENGTH (MONITORING) | TSA, FULL LENGTH (NON-MONITORING) | TSA, PARTIAL LENGTH (MONITORING) | TSA, PARTIAL LENGTH (NON-MONITORING) | SCARIFYING BRIDGE DECK |
| CARTERET #68 | LF | LF | LF | LF | LF | CY | CF | LBS. | SF | SF | SF | SF | SF | SY |
| TOTAL | 280.3 | 3,680 | 10,440 | 4,032 | 480.0 | 714.2 | 880.6 | 24,302 | 15,615 | 773.8 | 45717.8 | 393.4 | 13050.7 | 25,722 |

| * BRIDGE #68 TOTAL BILL OF MATERIAL | | | | | | | | |
|-------------------------------------|-----------------------------------|--------------------------|--|---------------------|--|--|--|---------------------------------|
| BRIDGE | PLACING AND FINISHING PPC OVERLAY | SHOTBLASTING BRIDGE DECK | BRIDGE JACKING FOR SPAN RE-POSITIONING | SPAN RE-POSITIONING | REPLACEMENT OF BRIDGE BEARINGS TYPE (P1) | REPLACEMENT OF BRIDGE BEARINGS TYPE (P2) | REPLACEMENT OF BRIDGE BEARINGS TYPE (P3) | SPLICING OF PRESTRESSING STRAND |
| CARTERET #68 | SY | SY | EACH | EACH | EACH | EACH | EACH | EACH |
| TOTAL | 25,722 | 25,722 | 2 | 2 | 8 | 10 | 10 | 20 |

* EXCLUDES TOTAL BILL OF MATERIAL FOR BRIDGE LIGHTING. FOR BRIDGE LIGHTING BILL OF MATERIAL, SEE SHEET L-1

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68



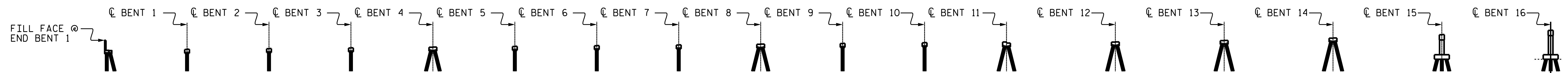
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TOTAL BILL OF MATERIAL

DRAWN BY : M.A.LEE DATE : 2/2017
 CHECKED BY : G.W.DICKEY DATE : 2/2017

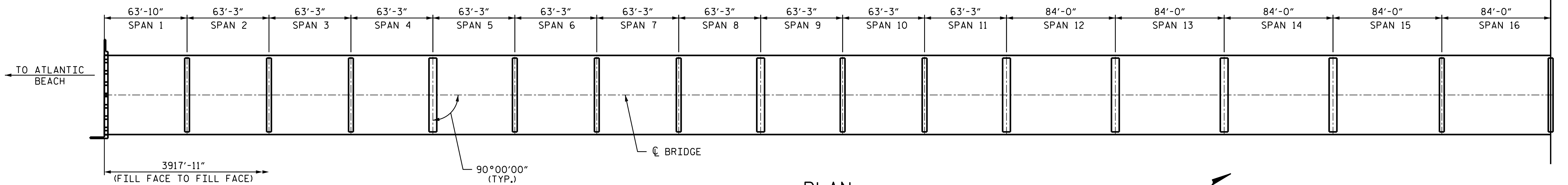
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | SHEET NO. |
| 1 | | | 3 | | | S1-1 |
| 2 | | | 4 | | | TOTAL SHEETS |



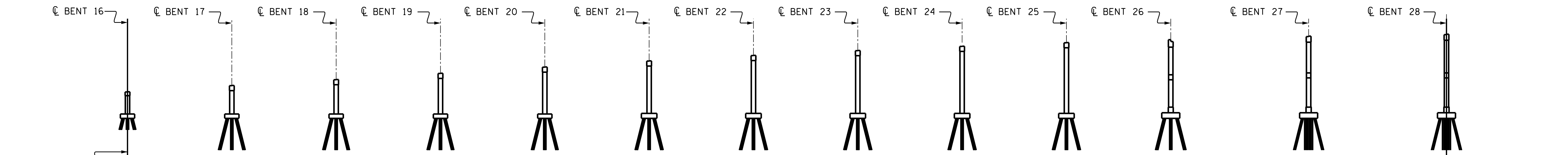
SECTION ALONG Q BRIDGE

(SECTIONS TAKEN AT RIGHT ANGLES)



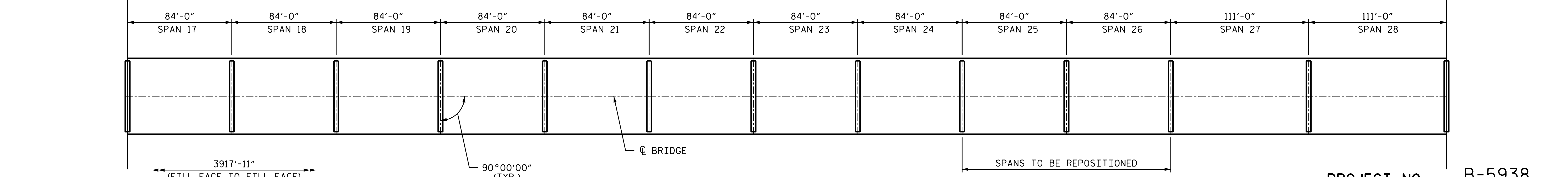
PLAN

(PILES NOT SHOWN FOR CLARITY)



SECTION ALONG Q BRIDGE

(SECTIONS TAKEN AT RIGHT ANGLES)

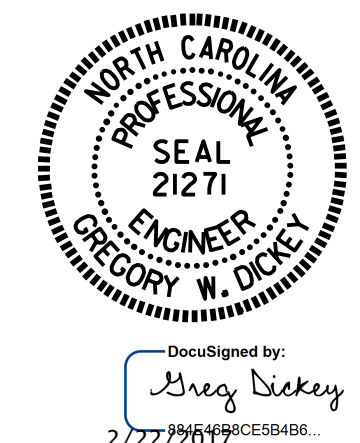


PLAN

(PILES NOT SHOWN FOR CLARITY)

SCOPE OF WORK:

- POLYESTER POLYMER CONCRETE DECK OVERLAY
- JOINT REPLACEMENT
- SPAN RE-POSITIONING
- CATHODIC PROTECTION FOR PRESTRESSED CONCRETE GIRDERS
- CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR
- PILE ENCAPSULATION
- FENDER SYSTEM
- LIGHTING



PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

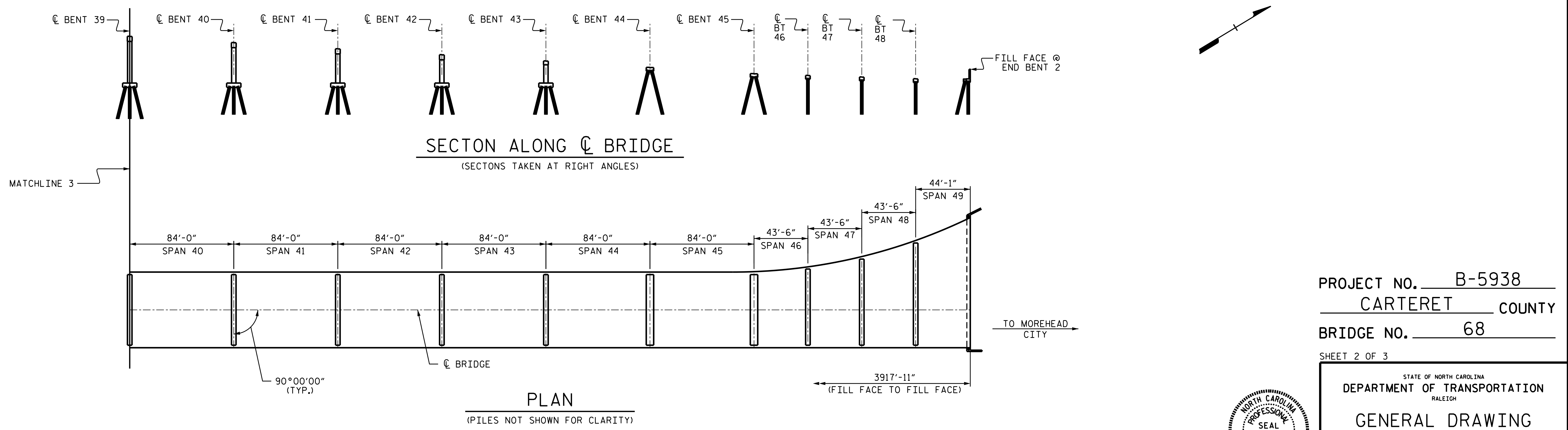
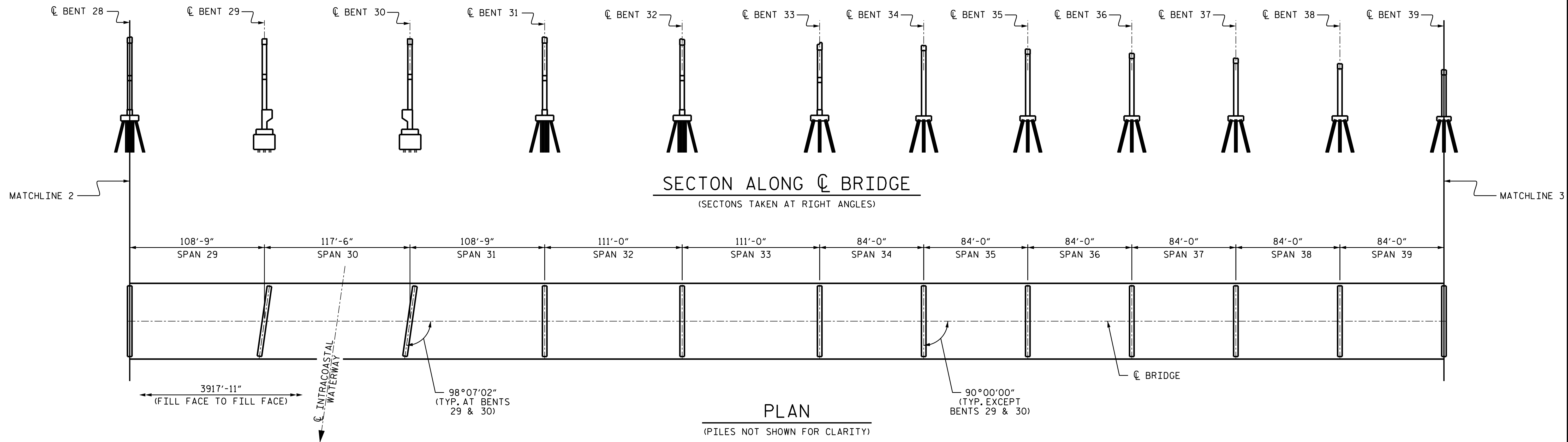
SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE 68 ON SR1182
 OVER BOGUE SOUND AND
 INTRACOASTAL WATERWAY

DRAWN BY : P. D. BRYANT DATE : 7/2016
 CHECKED BY : M. A. LEE DATE : 7/2016

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
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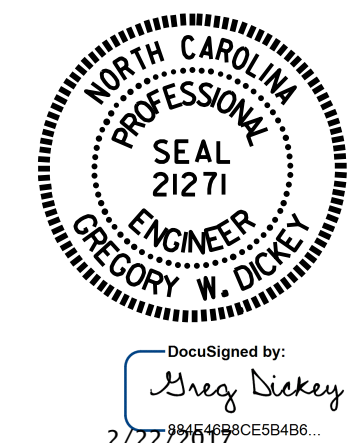
PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE 68 ON SR1182
 OVER BOGUE SOUND AND
 INTRACOASTAL WATERWAY

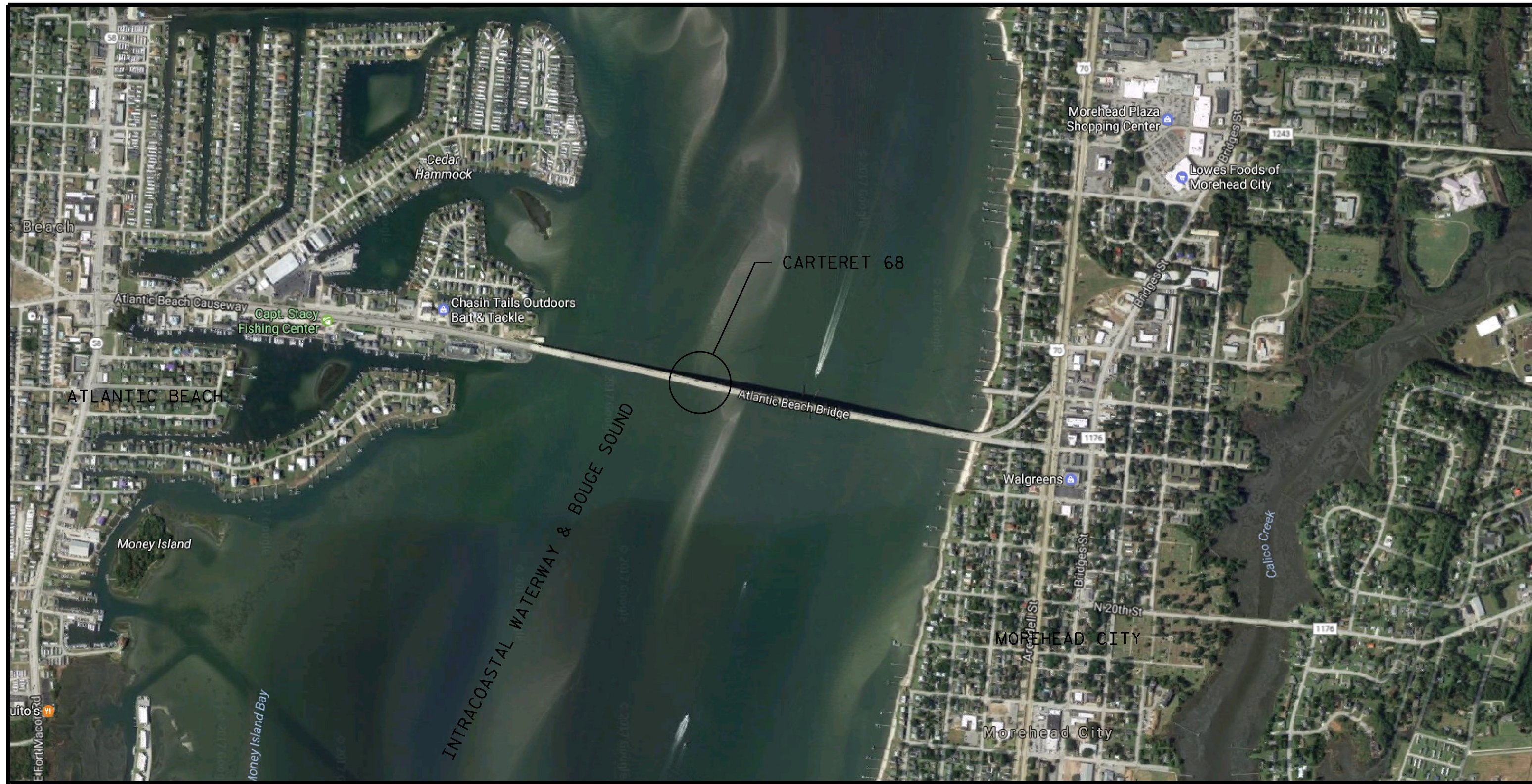


DocuSigned by:
 Greg Dickey
 2/22/2016 9:53:48 AM

DRAWN BY : P. D. BRYANT DATE : 7/2016
 CHECKED BY : M. A. LEE DATE : 7/2016

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-3 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | | |



LOCATION SKETCH

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

GENERAL NOTES

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR, DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

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

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING, AND CLASS II SURFACE PREPARATION SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

FOR POLYESTER POLYMER CONCRETE DECK OVERLAY, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT REMOVAL, SEE SPECIAL PROVISIONS.

FOR BEARING REPLACEMENT, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

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

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

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

FOR SPlicing OF PRESTRESSED CONCRETE GIRDER STRANDS, SEE SPECIAL PROVISIONS.

FOR TSA FULL LENGTH (NON-MONITORING), SEE SPECIAL PROVISIONS.

FOR TSA FULL LENGTH (MONITORING), SEE SPECIAL PROVISIONS.

FOR TSA PARTIAL LENGTH (NON-MONITORING), SEE SPECIAL PROVISIONS.

FOR TSA PARTIAL LENGTH (MONITORING), SEE SPECIAL PROVISIONS.

FOR PILE ENCAPSULATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING FOR SPAN REPOSITIONING, SEE SPECIAL PROVISIONS.

FOR SPAN REPOSITIONING, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT REMOVAL, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SECURING VESSELS, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.

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

FOR PRESTRESSED CONCRETE GIRDER REPAIRS, SEE SPECIAL PROVISIONS.

FOR THERMAL SPRAY ANODE (TSA) CATHODIC PROTECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 3 OF 3



DocuSigned by:
 Greg Dickey
 189E4498CE58486
 3/9/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE 68 ON SR1182
 OVER BOGUE SOUND AND
 INTRACOASTAL WATERWAY

DRAWN BY : M.A. LEE DATE : 2/2017
 CHECKED BY : G.W. DICKEY DATE : 2/2017

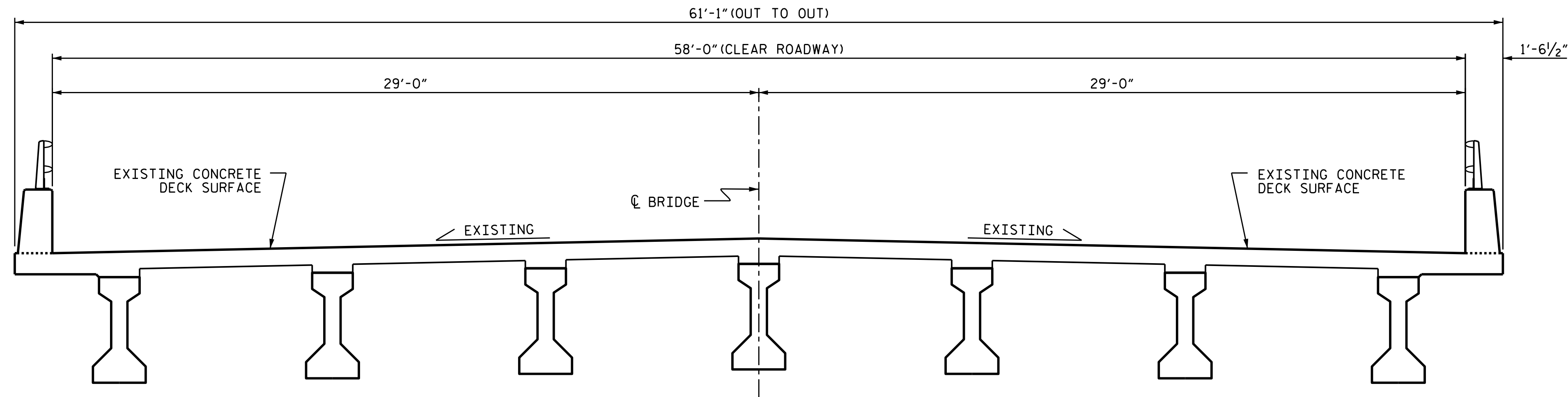
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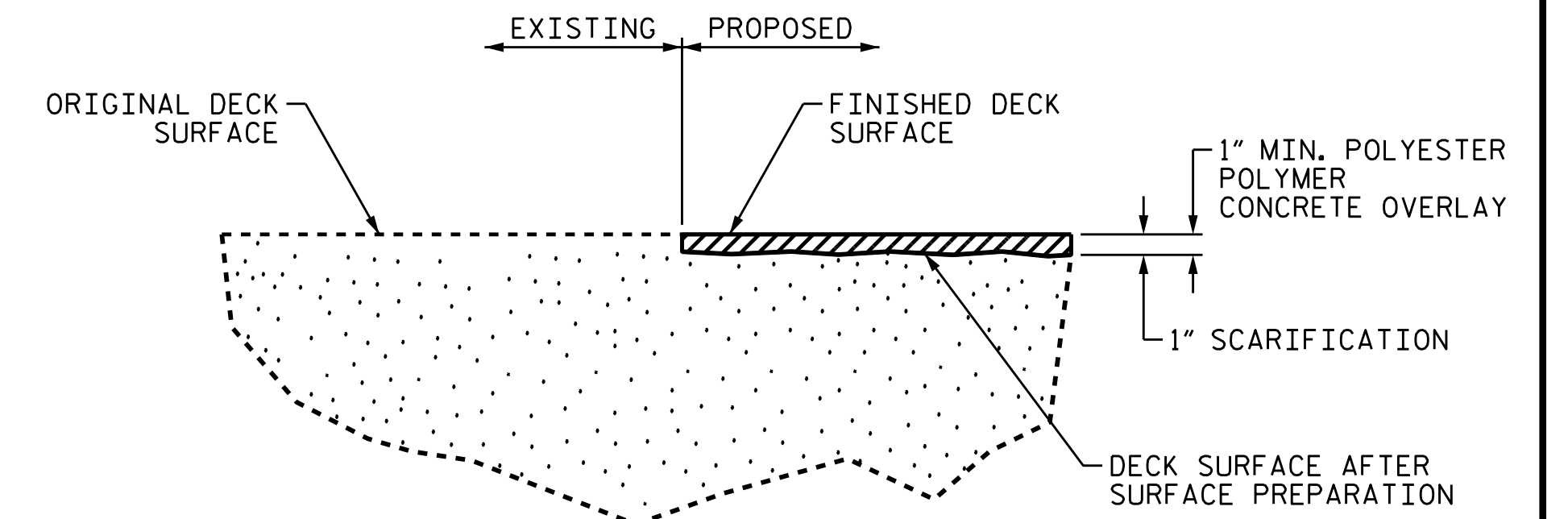
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| 1 | | | 3 | | | TOTAL SHEETS |
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NOTES:

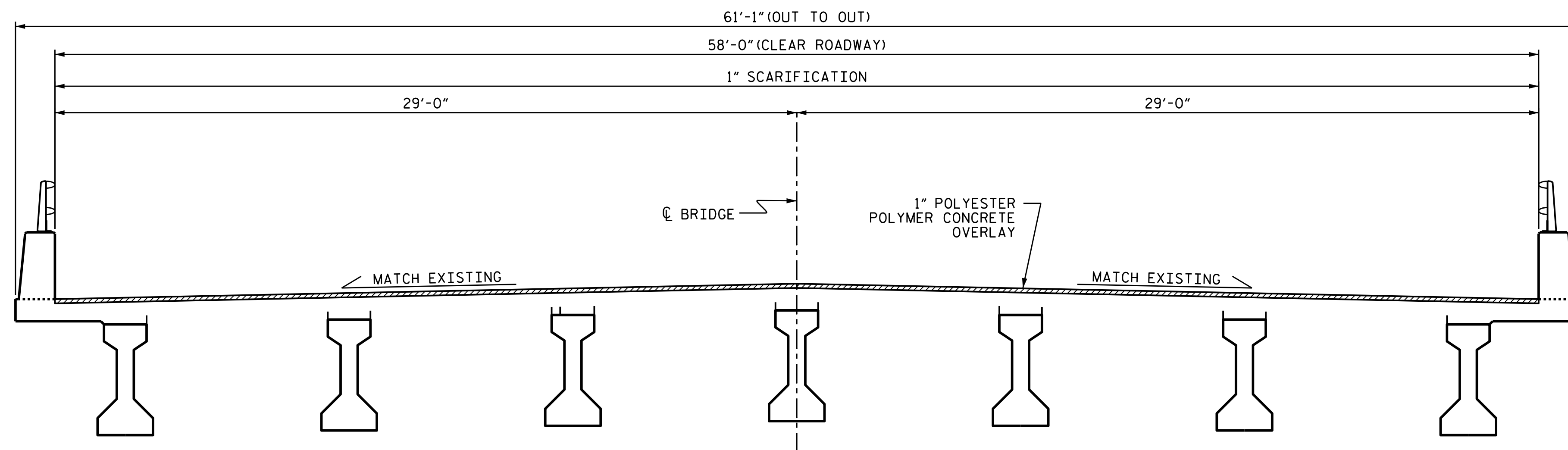
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.



TYPICAL SECTION
(EXISTING) (LOOKING NORTH)



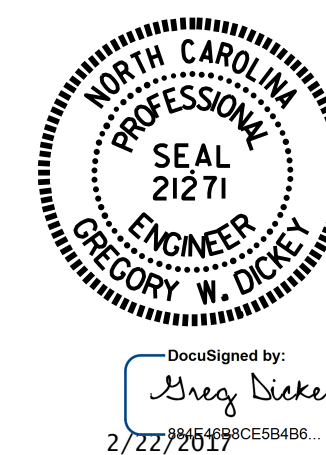
**DETAIL FOR POLYESTER
POLYMER CONCRETE OVERLAY**



TYPICAL SECTION
(PROPOSED) (LOOKING NORTH)

PROJECT NO. B-5938
CARTERET COUNTY
BRIDGE NO. 68

SHEET 1 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**TYPICAL SECTION
AND PPC OVERLAY
DETAILS**

DRAWN BY : M.A.LEE DATE : 1/2017
CHECKED BY : G.W.DICKEY DATE : 1/2017

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
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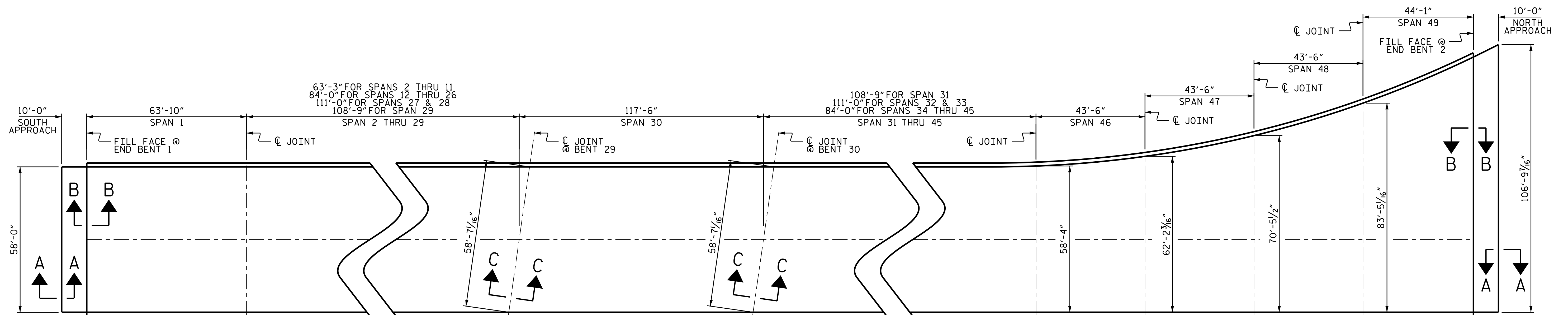
SUMMARY OF QUANTITIES

| | ESTIMATE | ACTUAL |
|---------------------------------|---------------|--------|
| SCARIFYING BRIDGE DECK | 25,722 SY | |
| CLASS II SURFACE PREPARATION | 17.59 SY | |
| SHOTBLASTING BRIDGE DECK | 25,722 SY | |
| PPC MATERIALS | 714.22 CY | |
| PLACING & FINISHING PPC OVERLAY | 25,722 SY | |
| BRIDGE DECK GROOVING | 218,738.35 SF | |

NOTES:

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

UN SOUND CONCRETE SHALL BE REMOVED PRIOR TO PPC OVERLAY PLACEMENT.

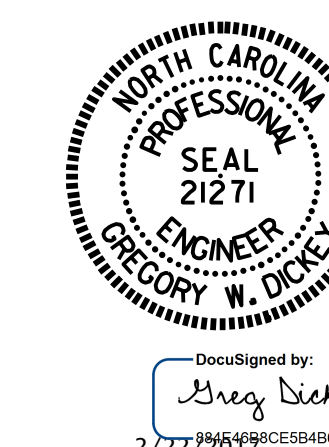


PLAN

| ANTICIPATED CLASS II DECK REPAIR LOCATIONS | | | | | |
|--|----------------------|---------------------------|----------------------|------------|-----------|
| SPAN | LOCATION (SEE NOTES) | | REPAIR SIZE L X W | QUANTITIES | |
| | LENGTH ALONG SPAN | DISTANCE FROM RT GTR LINE | | EST. SF | ACTUAL SF |
| 24 | 15' | 43' | 6'-0" X 2" | 1.0 | |
| 28 | 30' | 52' | 4'-0" X 4'-0" | 16.0 | |
| 29 | AT BENT 29 | 0' | 58'-7 1/16" X 6" | 29.3 | |
| 30 | AT BENT 29 | 0' | 58'-7 1/16" X 6" | 29.3 | |
| 30 | AT BENT 30 | 0' | 58'-7 1/16" X 6" | 29.3 | |
| 31 | AT BENT 30 | 0' | 58'-7 1/16" X 6" | 29.0 | |
| 36 | AT BENT 35 | 0' | 4'-0" X 6'-0" | 24.0 | |
| 39 | AT BENT 38 | 48' | 8" X 2" | 0.1 | |

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 4

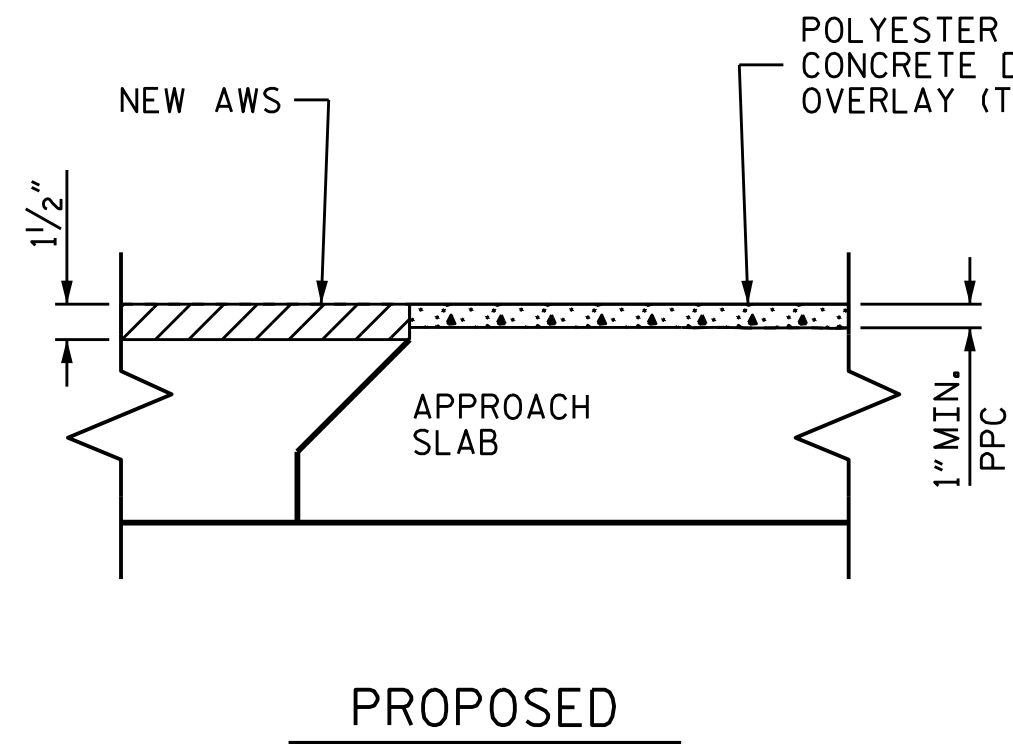
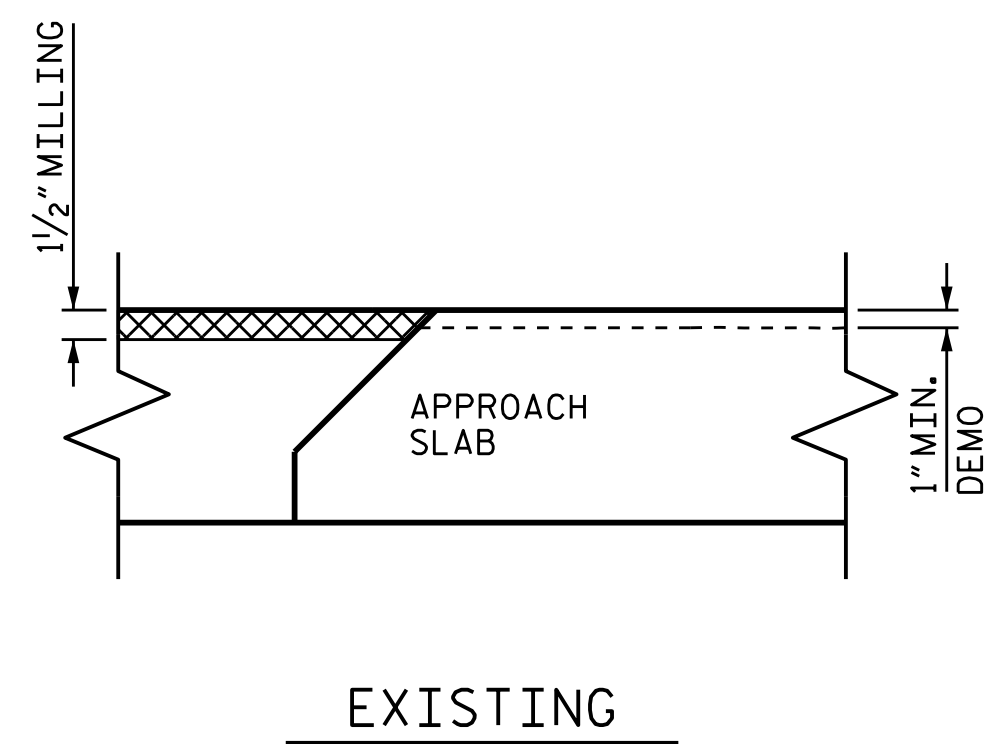


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 AND
 PPC OVERLAY

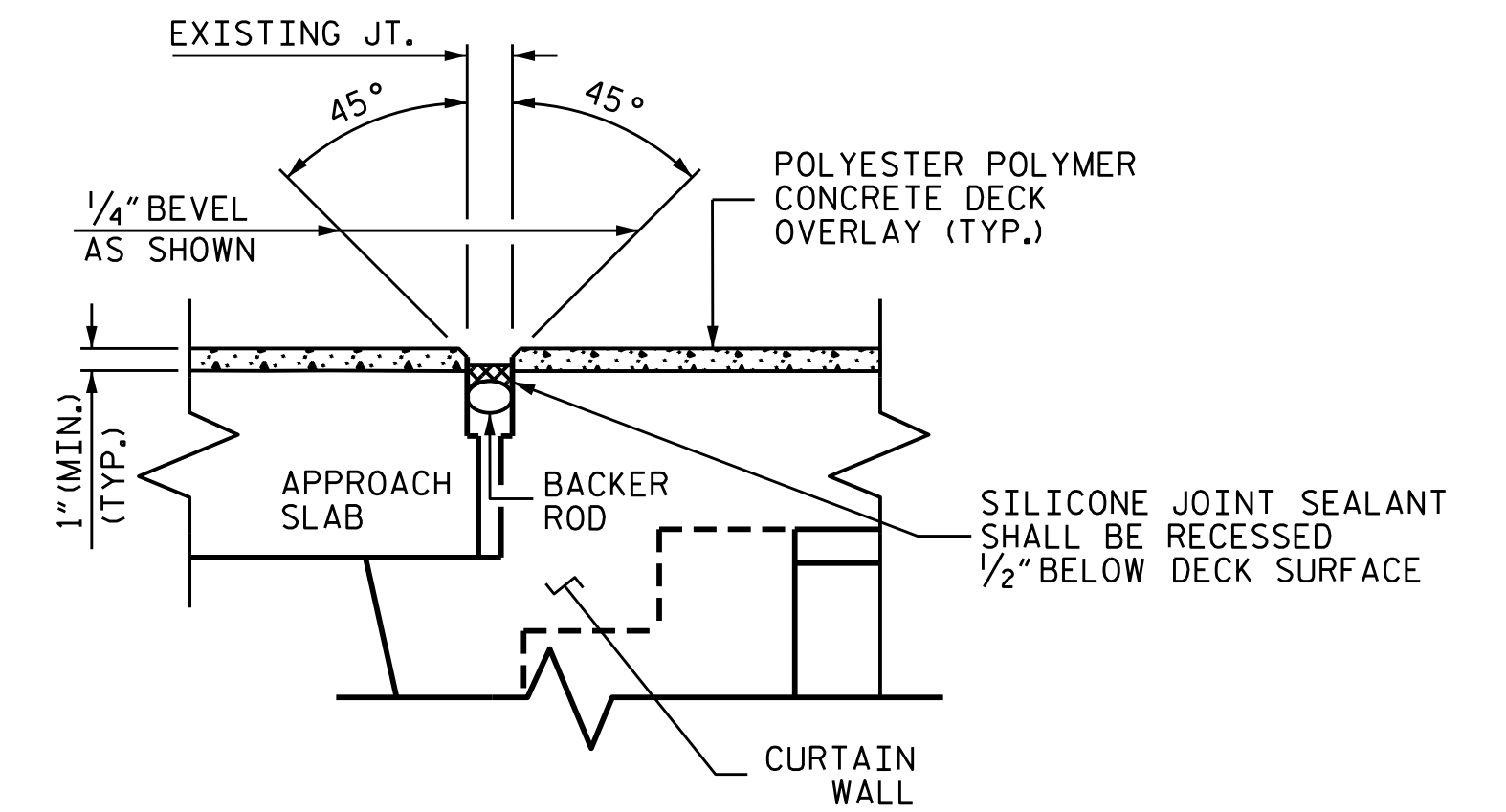
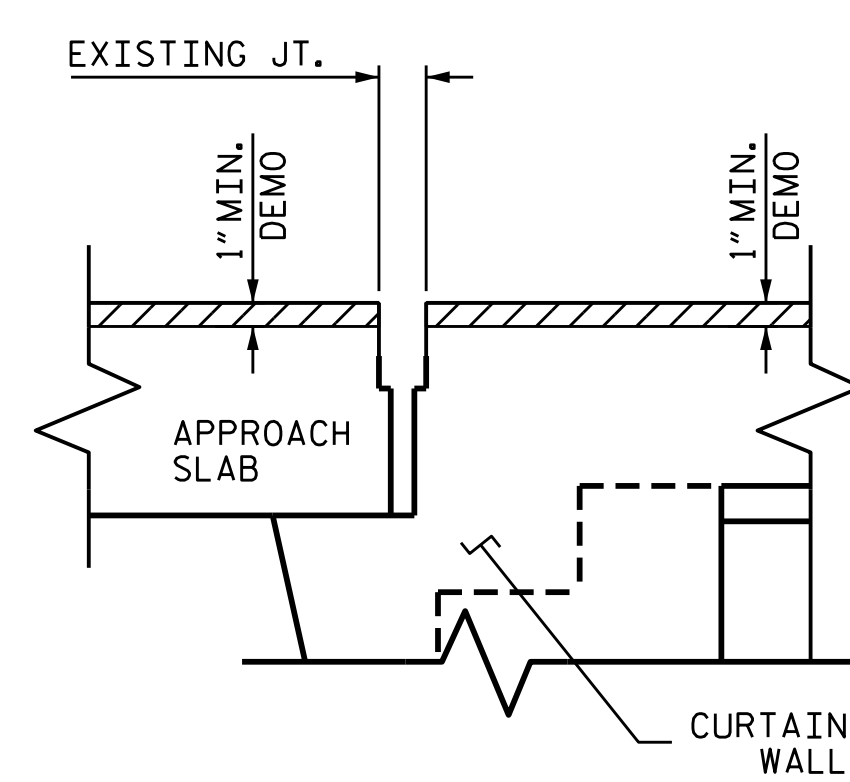
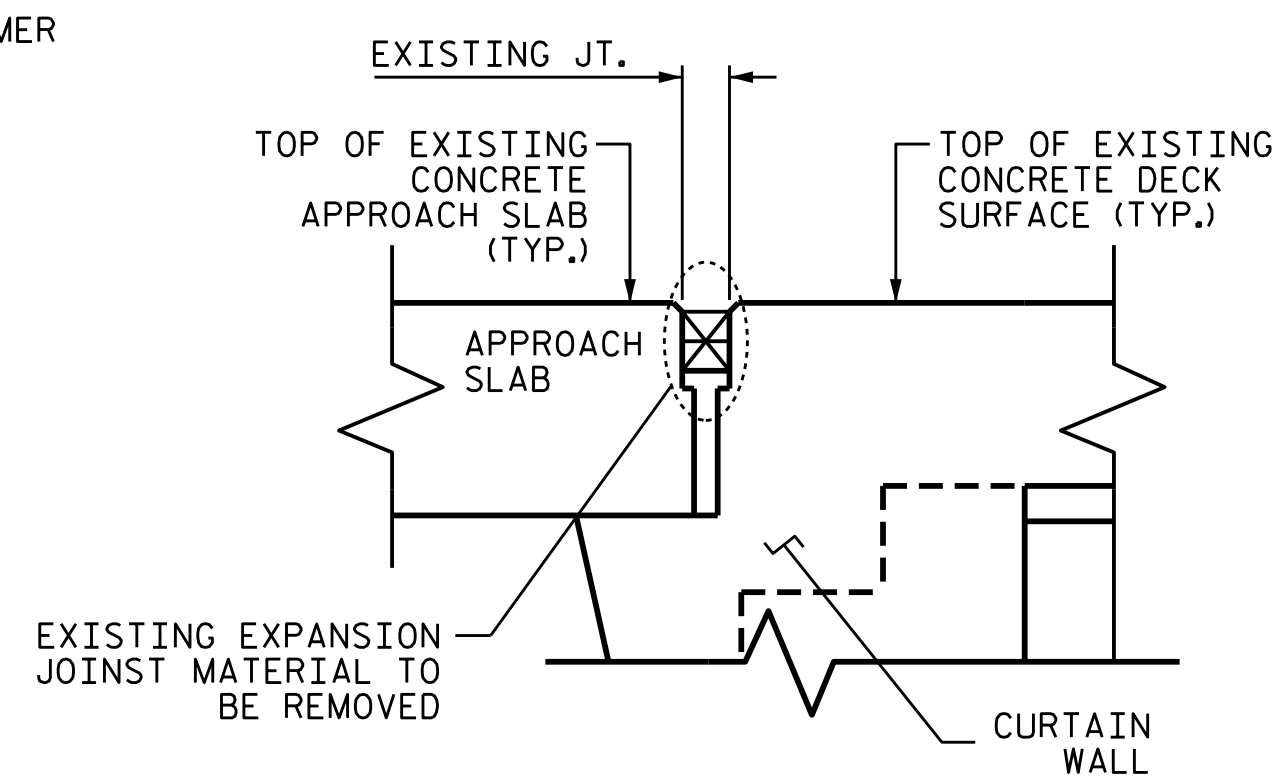
DRAWN BY : M.A. LEE DATE : 1/2017
 CHECKED BY : G.W. DICKEY DATE : 1/2017

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SECTION A-A



SECTION B-B
MINIMUM EXISTING JOINT DEMOLITION

NOTES

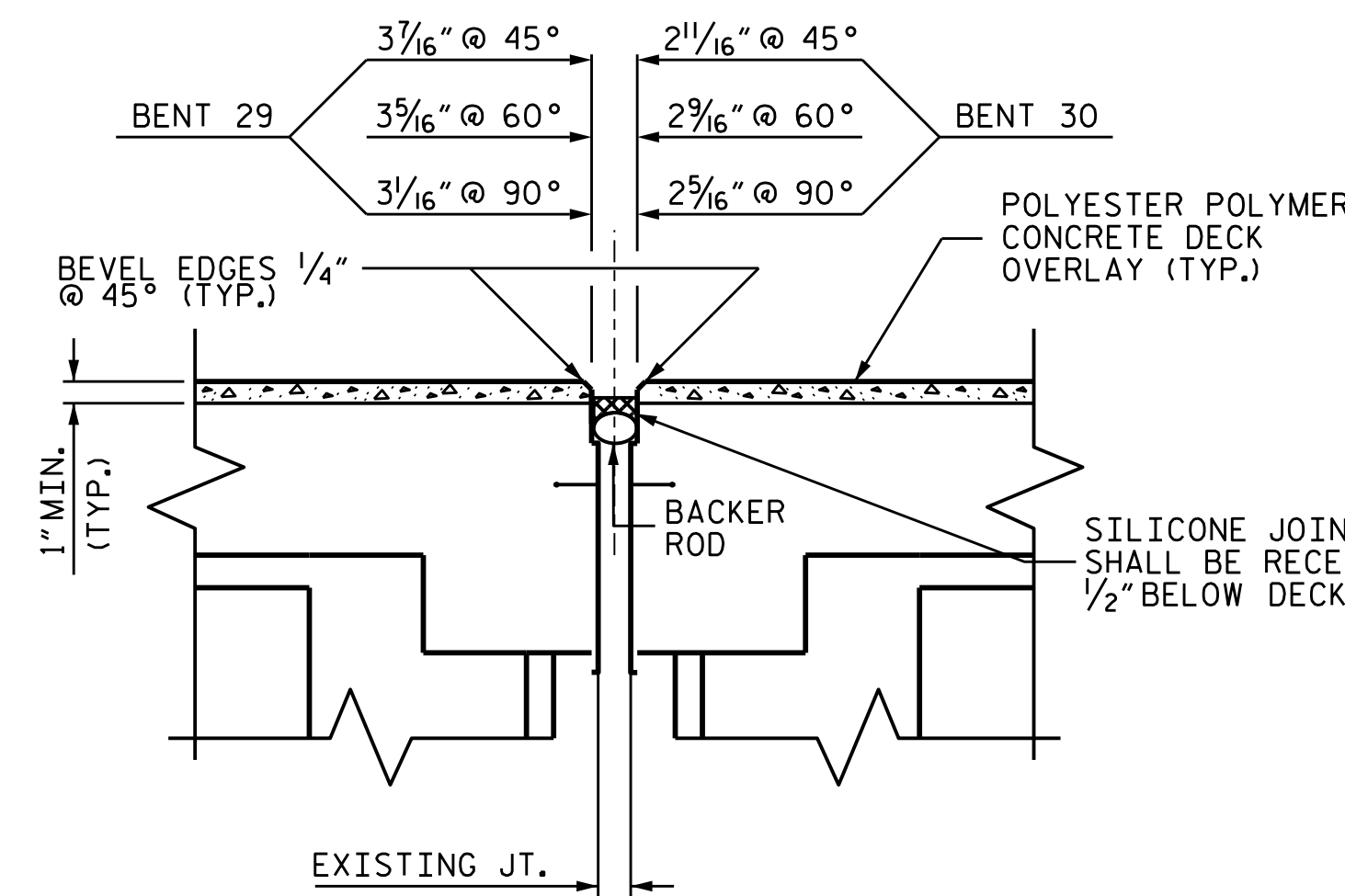
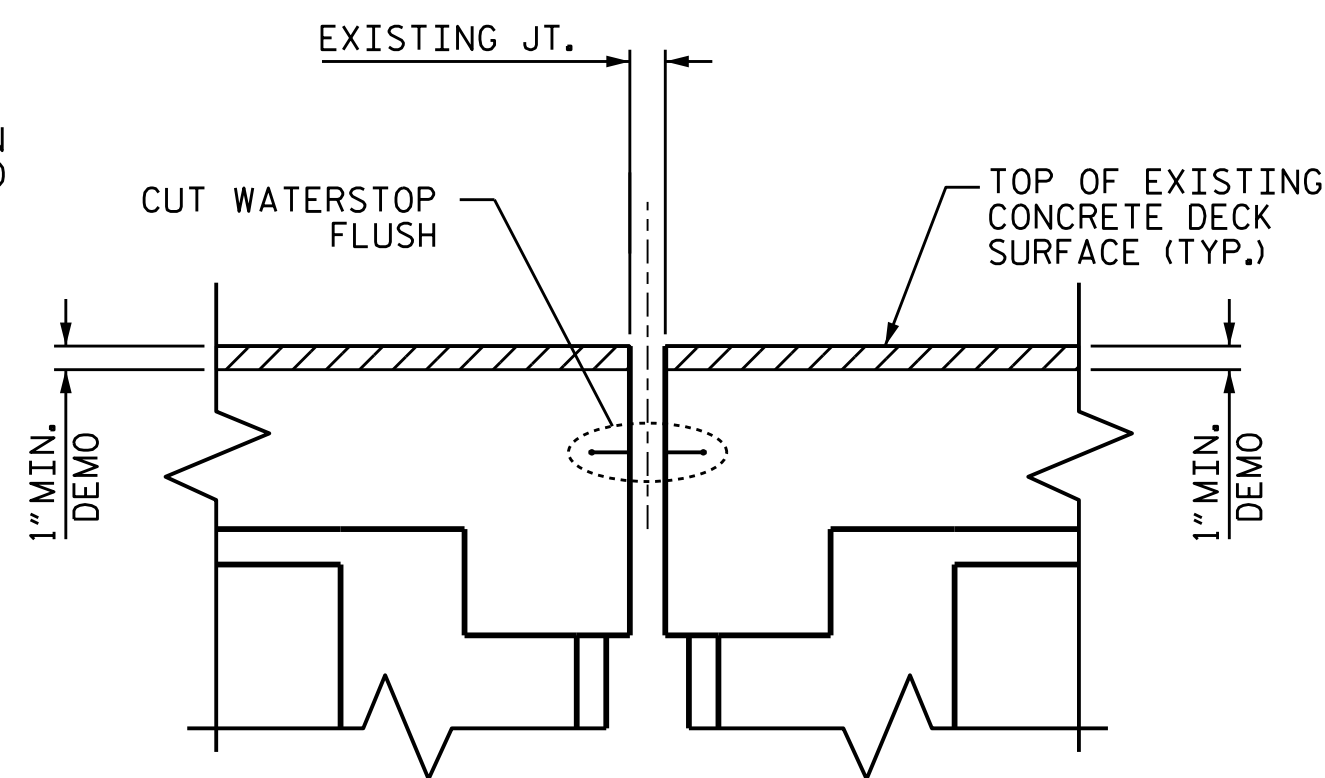
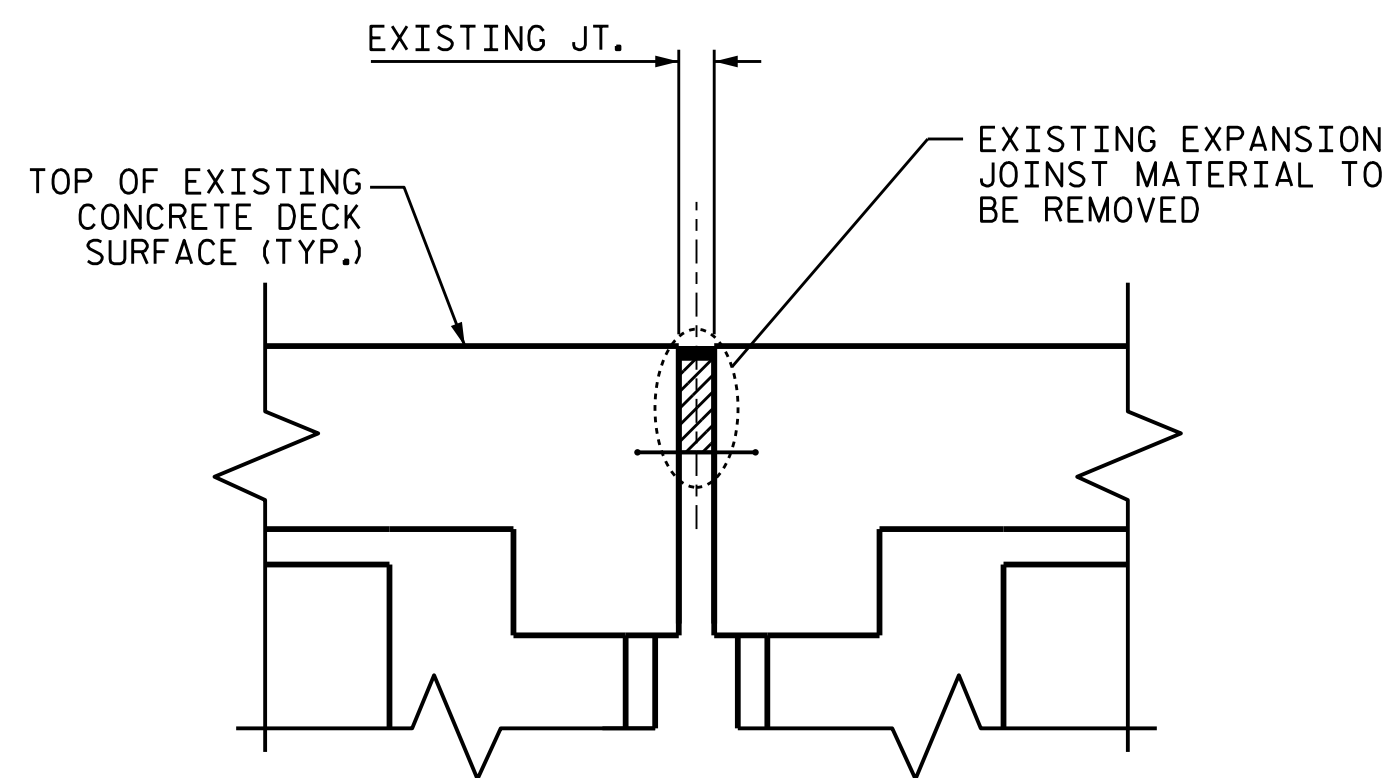
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

THE INSTALLED SILICONE JOINT SEALANT SHALL BE WATER TIGHT.

THE SILICONE JOINT SEALANT SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

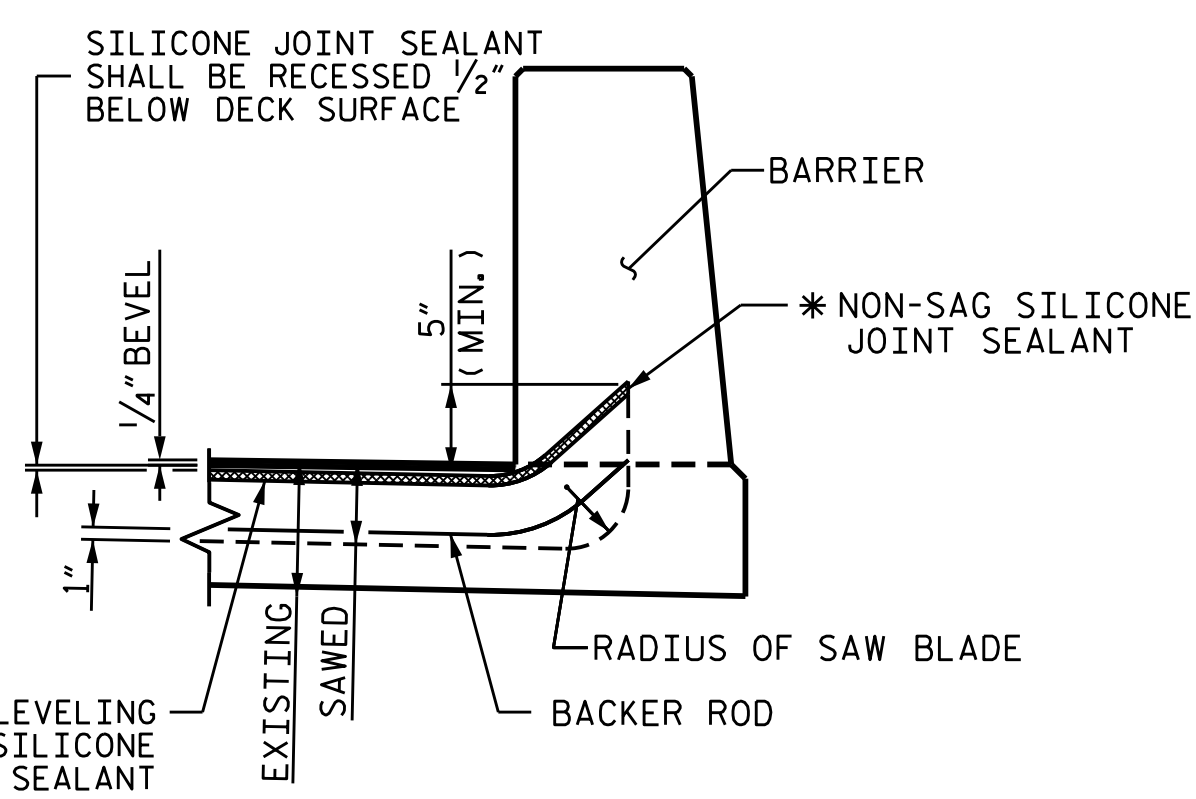
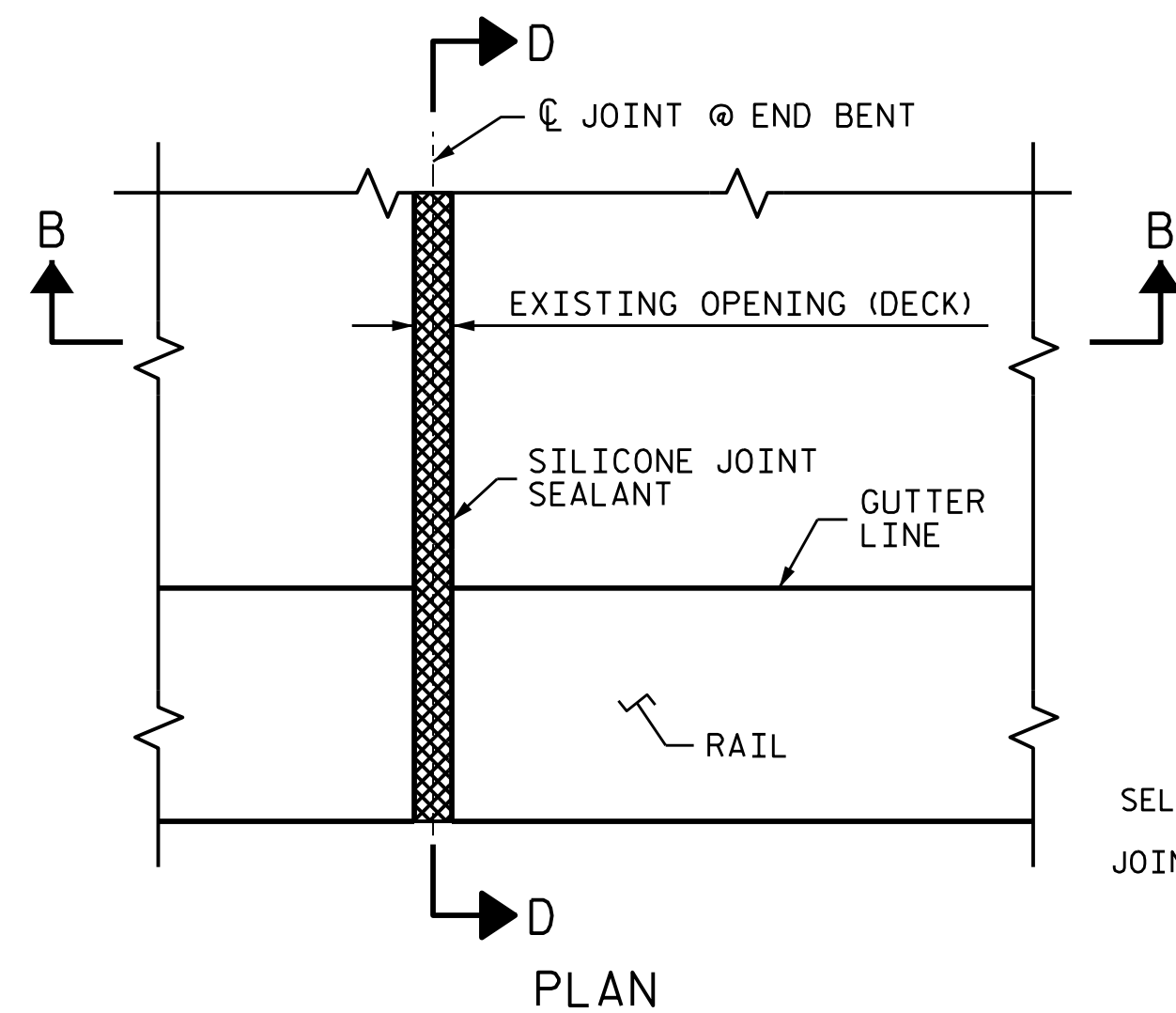


SECTION C-C
MINIMUM EXISTING JOINT DEMOLITION

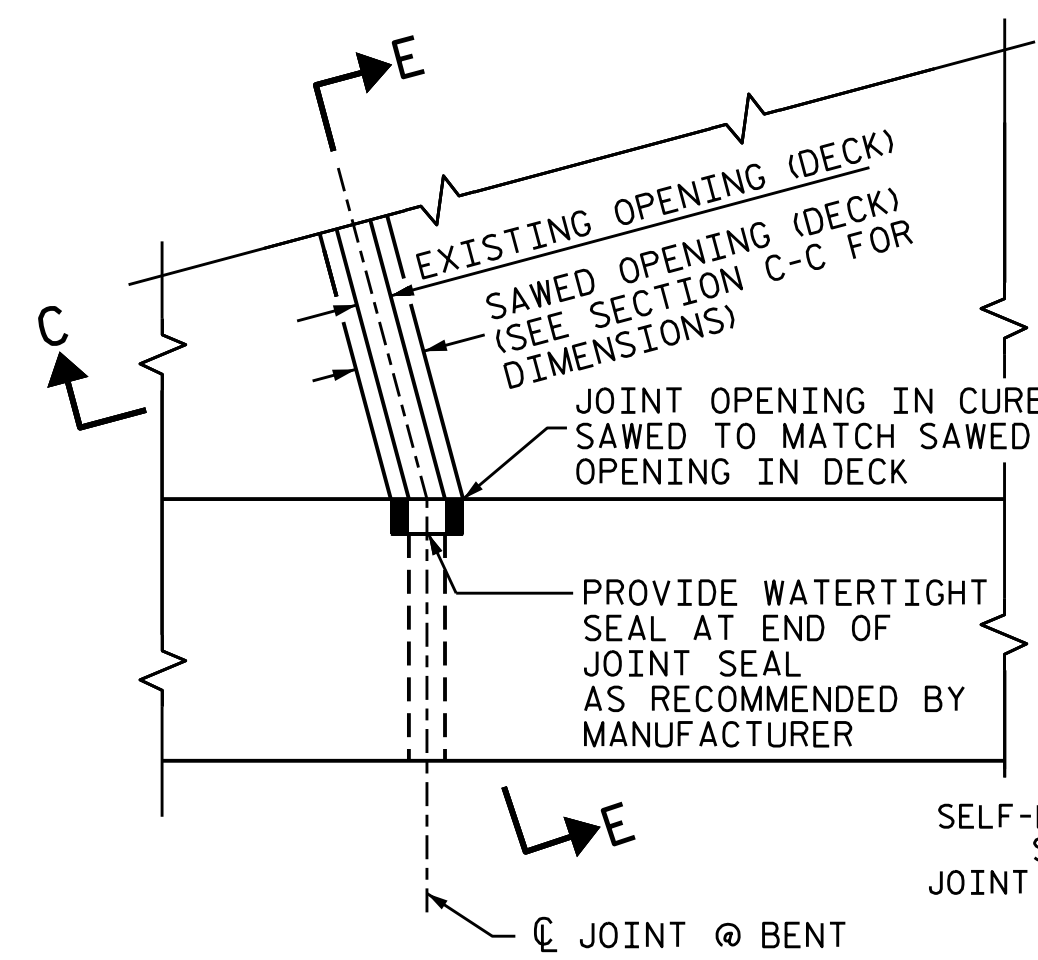
PROPOSED

| BRIDGE JOINT REMOVAL | SILICONE JOINT SEALANT |
|----------------------|------------------------|
| L.F. | L.F. |
| 280.25 | 280.3 |

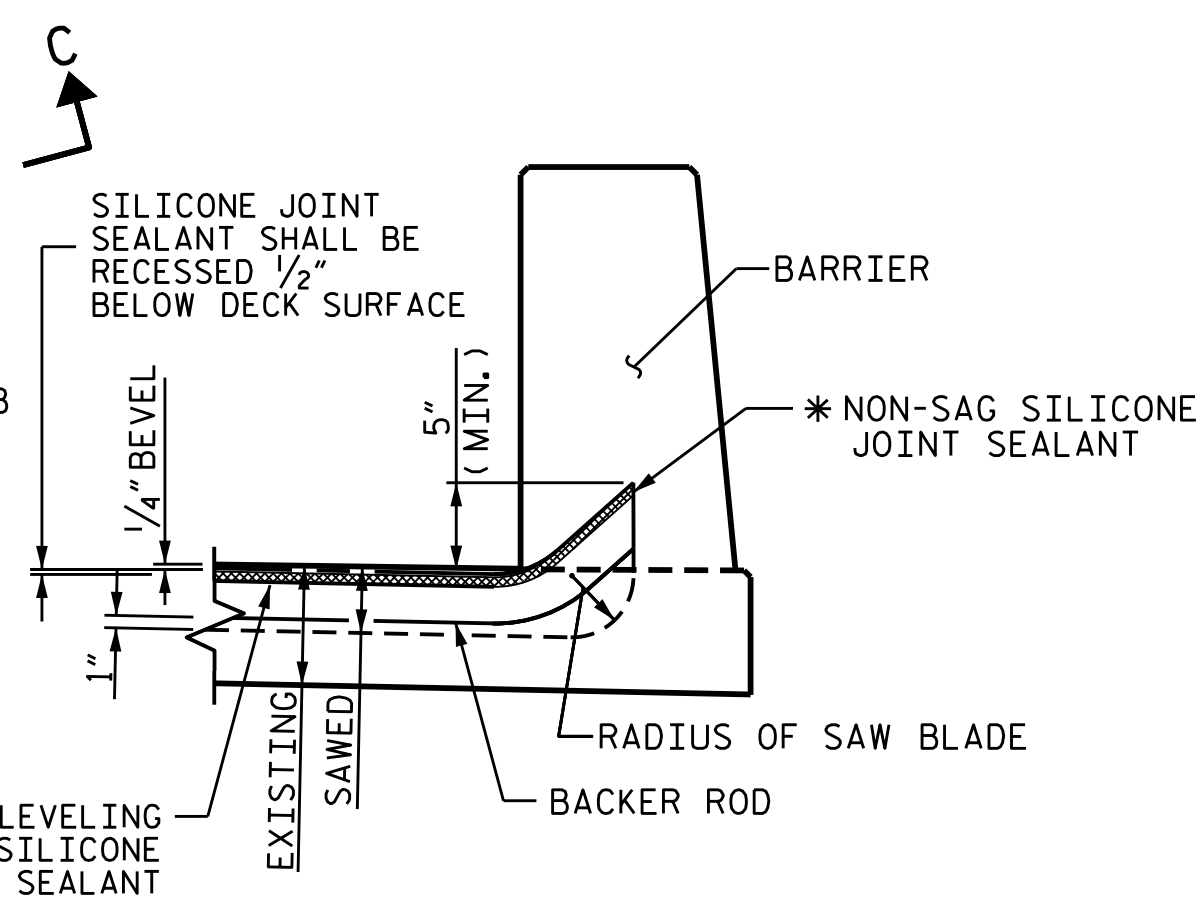
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED.



SECTION D-D



PLAN



SECTION E-E

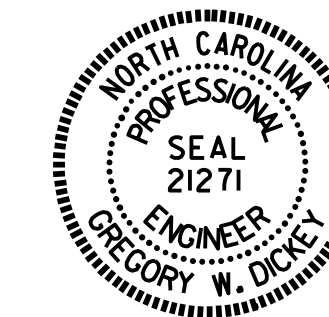
JOINT SEAL DETAILS AT BENT 29 & 30

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS



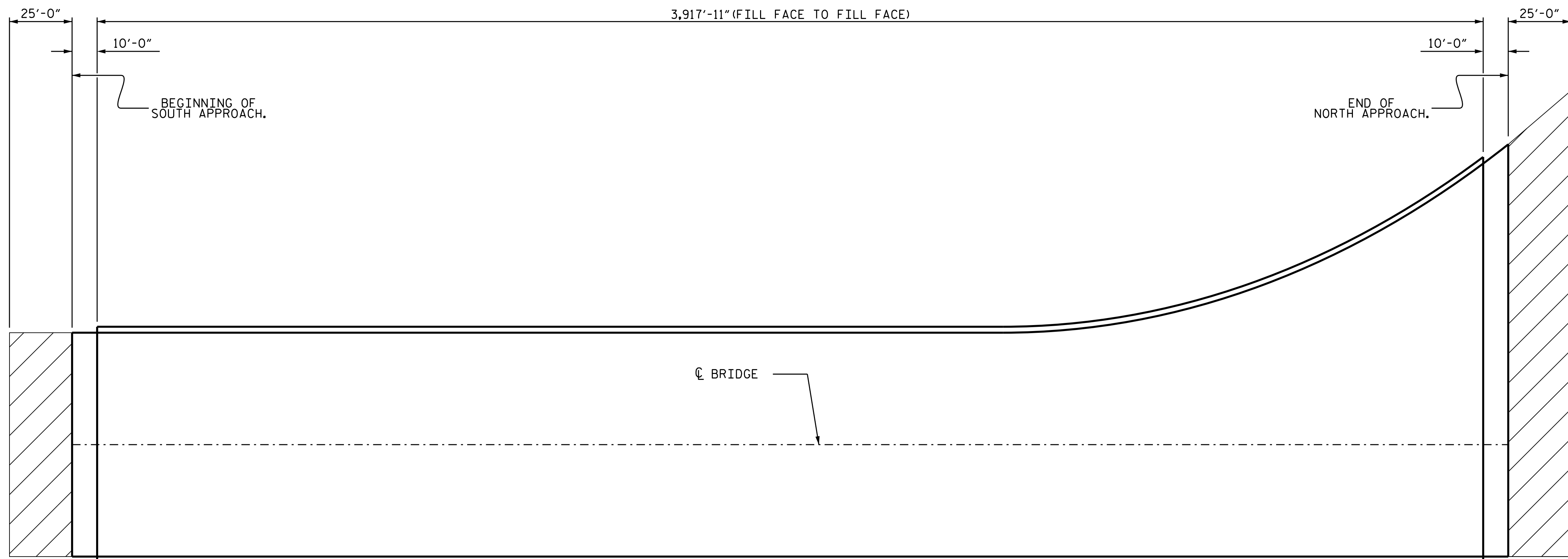
DocuSigned by:
 Greg Dickey
 180E408CE58486
 3/9/2017

DRAWN BY: M.A. LEE DATE: 1/2017
 CHECKED BY: G.W. DICKEY DATE: 1/2017

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

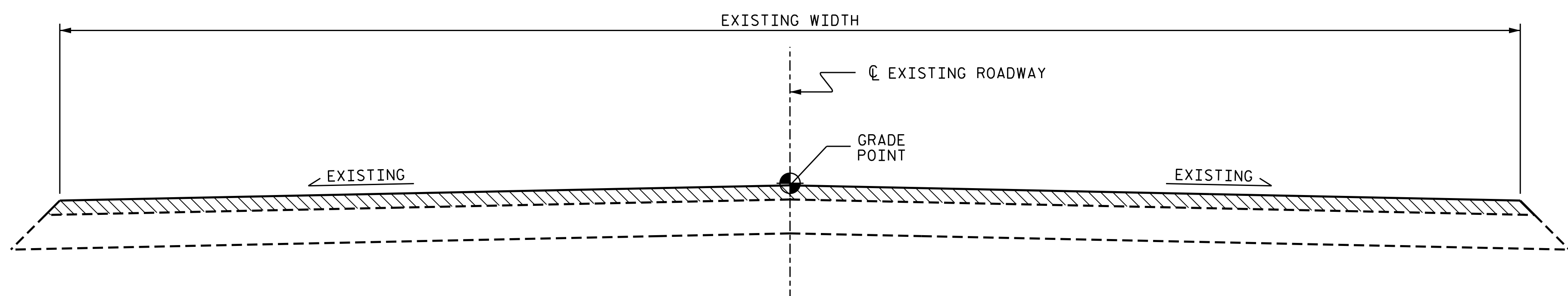
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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



NOTES:
 INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.

PLAN

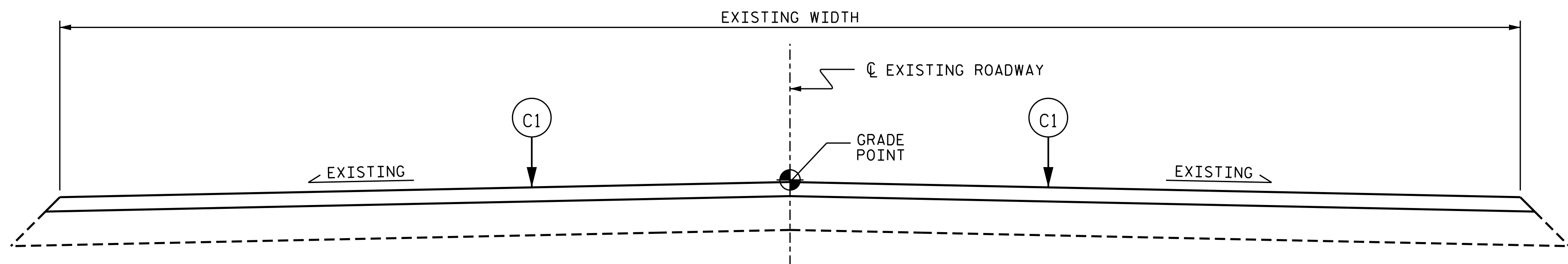


INCIDENTAL MILLING

| SUMMARY OF QUANTITIES | | |
|---|-----------------|--------|
| | ESTIMATE | ACTUAL |
| INCIDENTAL MILLING | 455.35 SQ. YDS. | |
| ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B | 38.25 TONS | |
| ASPHALT BINDER FOR PLANT MIX | 2.30 TONS | |

TYPICAL ROADWAY MILLING SECTION

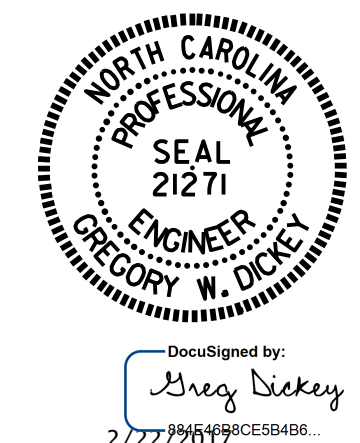
C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



TYPICAL PROPOSED ROADWAY SECTION

PROJECT NO. B-5938
 CARTERET COUNTY
 BRIDGE NO. 68

SHEET 4 OF 4

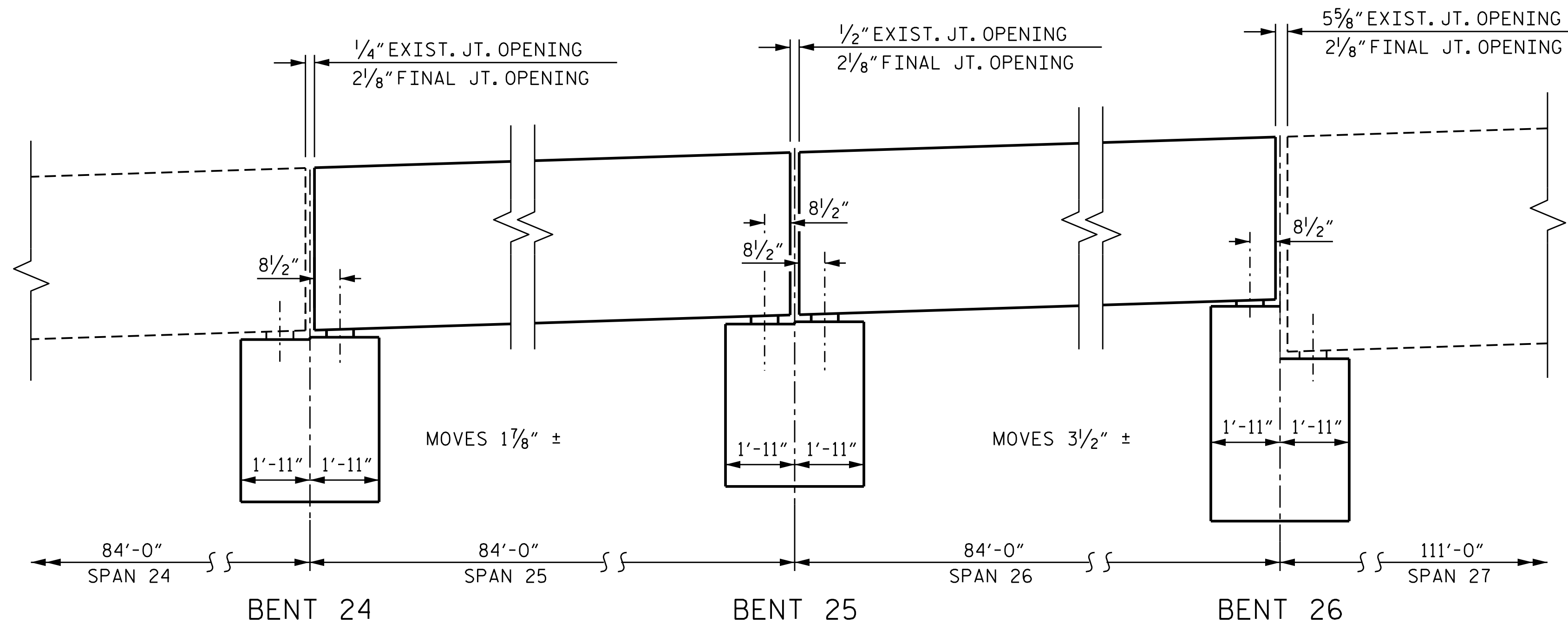


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**APPROACH MILLING
 AND TYPICAL ROADWAY
 SECTIONS**

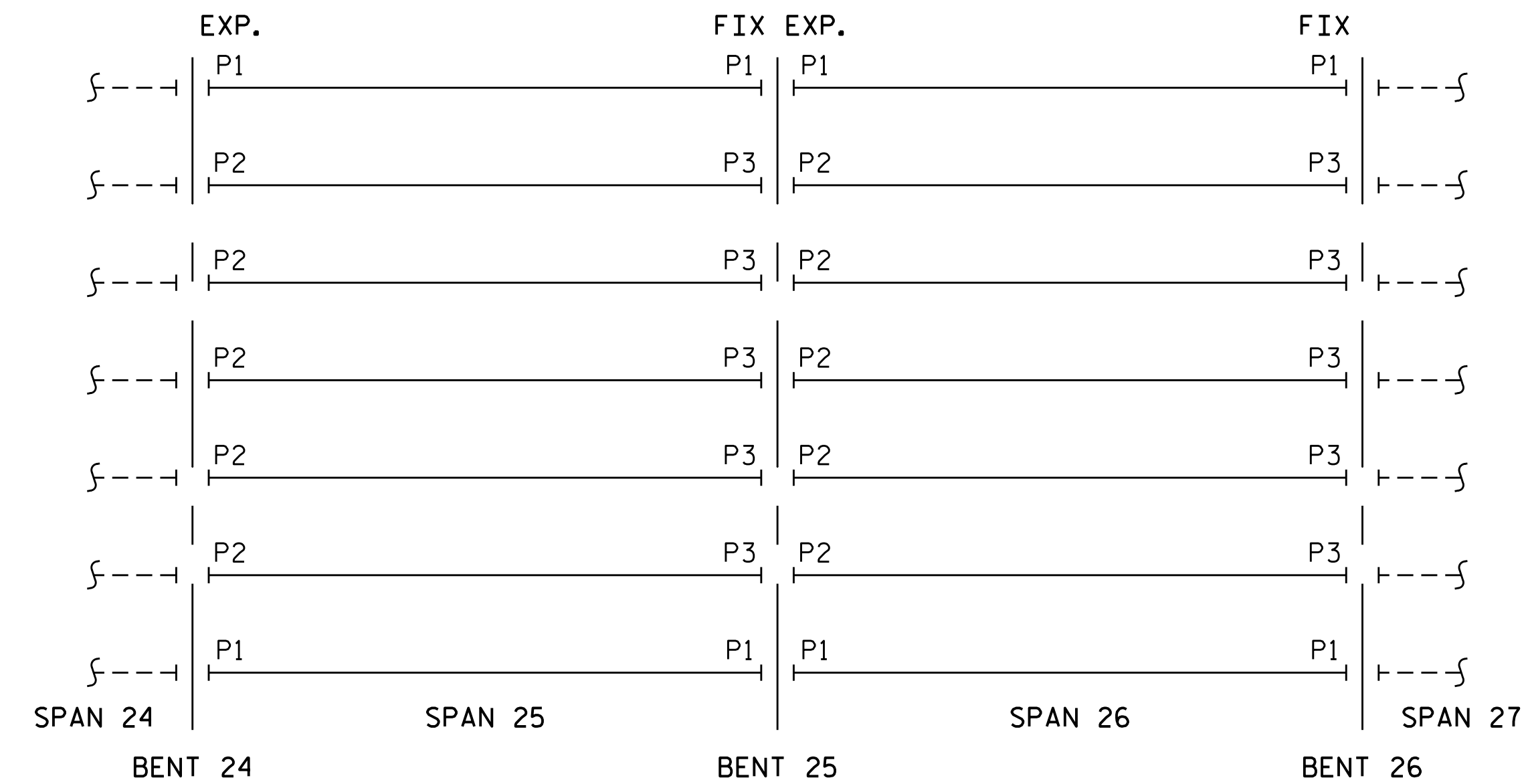
DRAWN BY : M.A. LEE DATE : 1/2017
 CHECKED BY : G.W. DICKEY DATE : 1/2017

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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



ELEVATION VIEW



LAYOUT OF ELASTOMERIC BEARINGS AND SOLE PLATE TYPES

| BILL OF MATERIAL | | | | | |
|------------------|--|---------------------|--|--|--|
| | BRIDGE JACKING FOR SPAN RE-POSITIONING | SPAN RE-POSITIONING | REPLACEMENT OF BRIDGE BEARINGS (TYPE P1) | REPLACEMENT OF BRIDGE BEARINGS (TYPE P2) | REPLACEMENT OF BRIDGE BEARINGS (TYPE P3) |
| UNIT | EACH | EACH | EACH | EACH | EACH |
| QUANTITY | 2 | 2 | 8 | 10 | 10 |

| ELASTOMERIC BEARINGS AND SOLE PLATE TYPES | | | |
|---|-----------------|-----------|----------------|
| TYPE | | TOTAL NO. | LOCATION |
| * P1 | ELASTOMERIC PAD | 8 | BT. 24, 25, 26 |
| | SOLE PLATE | 8 | |
| * P2 | ELASTOMERIC PAD | 10 | BT. 24 & 25 |
| | SOLE PLATE | 10 | |
| P3 | ELASTOMERIC PAD | 10 | BT. 25 & 26 |
| | SOLE PLATE | 10 | |
| | ANCHOR BOLTS | 20 | |

* STEEL SOLE PLATE VULCANIZE BONDED TO ELASTOMER

NOTES:

SPAN RE-POSITIONING SHALL OCCUR PRIOR TO ANY OVERLAY OR DECK REPAIR WORK.

CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION SHOWN ON THESE PLANS AND SHALL OBTAIN ALL OTHER EXISTING BRIDGE DATA NECESSARY FOR THE EXECUTION OF THE WORK.

ANCHOR BOLTS SHALL CONFORM TO EITHER ASTM A572, GRADE 50 OR EQUIVALENT AND SHALL BE GALVANIZED. ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

STEEL SOLE PLATES FOR TYPE P3 BEARING SHALL CONFORM WITH ASTM A36 AND SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. STEEL SOLE PLATE FOR TYPE P1 AND P2 BEARING SHALL CONFORM TO ASTM A36 AND BE METALLIZED AFTER VULCANIZE BONDING TO THE ELASTOMER. SEE SPECIAL PROVISIONS FOR THERMAL SPRAYED COATINGS (METALLIZATION).

PRIOR TO JACKING THE SPANS, LOCATE THE APPROXIMATE POSITION OF THE ANCHOR BOLT HOLES ON EACH CAP. USING A PACHOMETER, CHECK THE CAP FOR MAIN REINFORCING STEEL INTERFERENCE WITH THE HOLES. IF NECESSARY, ADJUST THE HOLE LOCATIONS SLIGHTLY TO AVOID REINFORCING STEEL AND MARK THE LOCATIONS, DRILL THE HOLES AND CLEAN IN ACCORDANCE WITH THE SPECIAL PROVISION ADHESIVELY ANCHORED ANCHOR BOLTS. CLEAN THE CAP OF DEBRIS. ALSO PRIOR TO JACKING, THE CONTRACTOR SHALL HAVE ALL MATERIALS NECESSARY FOR REPLACEMENT OF THE BEARING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

FOR SPANS THAT REQUIRE HORIZONTAL REPOSITIONING, REPLACE THE EXISTING BEARINGS, OR SLIDING DEVICES IF APPLICABLE, UNDER BOTH ENDS OF THE SPAN DURING THE FINAL VERTICAL JACKING OPERATION.

LOWER THE SPANS AND OPEN THE BRIDGE TO TRAFFIC ONCE THE NEW BEARINGS ARE IN THE CORRECT POSITION. WELDING AND BOLT INSTALLATION SHALL BE PERFORMED WHILE THE BRIDGE IS OPEN TO TRAFFIC AND WITHIN 24 HOURS OF THE SPAN WAS FIRST JACKED.

DO NOT PERMIT TRAFFIC ON THE SPANS WHILE JACKS SUPPORT IT AND WHEN SLIDING PLATES ARE INSTALLED UNDER THE GIRDERS WITHOUT BLOCKING OR RESTRAINT. REPLACE BEARING ON THE EXTERIOR GIRDERS OF ALL SPANS INVOLVED WITH TYPE P1 BEARINGS. REPLACE BEARINGS ON THE INTERIOR GIRDER OF THE EXPANSION END OF ALL SPANS INVOLVED WITH TYPE P2 BEARINGS. REPLACE BEARINGS ON THE INTERIOR GIRDERS OF THE FIXED END OF ALL SPANS INVOLVED WITH TYPE P3 BEARINGS, STEEL SOLE PLATES AND ANCHOR BOLTS.

DO NOT LEAVE SLIDING PLATES IN PLACE UNATTENDED. SLIGHT CHANGE IN TEMPERATURE MIGHT CAUSE BRIDGE TO MOVE DOWN.

UPON REMOVAL OF EXISTING BEARINGS, CLEAN THE CAP AND REMOVE ANY EPOXY COATING FROM THE AREA WHERE THE NEW BEARING WILL REST.

GRIND SURFACES OF THE SOLE PLATES THAT HAVE BEEN METALLIZED IN AND AROUND THE AREA OF THE PLATE THAT IS TO BE WELDED.

INSTALL BEARINGS AS SHOWN. FOR TYPE P3 BEARINGS, POSITION THE SOLE PLATE AND TYPE P3 BEARING TO ALIGN WITH THE PREVIOUSLY DRILLED HOLES IN THE CAP. JACKS AND BLOCKING MAY BE REMOVED ONCE THE NEW BEARINGS ARE IN POSITION AND THE SPAN LOWERED.

WHEN WELDING THE SOLE PLATE TO THE EMBEDDED PLATE IN THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300 F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

WELDS SHALL BE MADE IN ONE PASS USING A MAXIMUM 1/8" ELECTRODE, AND THEN ALLOWED TO COOL BEFORE MAKING ANOTHER PASS. APPLY TWO COATS OF ZINC-RICH PAINT TO THE WELDED AREAS AND ANY DAMAGED AREAS IN ACCORDANCE WITH THE SPECIFICATIONS.

INSTALL BOLTS USING APPROVED ADHESIVE BONDING AGENT. ALLOW ADHESIVE TO CURE BEFORE INSTALLING NUT AND WASHER TIGHTEN FINGER TIGHT AND THEN BACK OF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

REAPPLY EPOXY COATING TO CAP IF, AFTER THE BEARING IS INSTALLED, UNCOATED PORTIONS OF THE CAP AREA AROUND THE BEARING ARE EXPOSED OR PORTIONS OF THE EXISTING EPOXY ARE DAMAGE. SEE SPECIAL PROVISIONS FOR "EPOXY PROTECTIVE COATING."

PROCEED TO THE NEXT SPANS UNTIL ALL BEARINGS ON BENTS ARE PLACED.

SEE SPECIAL PROVISIONS FOR REPLACEMENT OF BRIDGE BEARINGS.

SEE SPECIAL PROVISIONS FOR BRIDGE JACKING FOR SPAN RE-POSITIONING.

SEE SPECIAL PROVISIONS FOR SPAN RE-POSITIONING.

DRAWN BY: WJ HARRIS DATE : JAN, 2017
 CHECKED BY: GW DICKEY DATE : JAN, 2017

22-FEB-2017 07:04

gdickey

*****DGN*****



DocuSigned by:
 Gregory W. Dickey
 27229961919CE8486

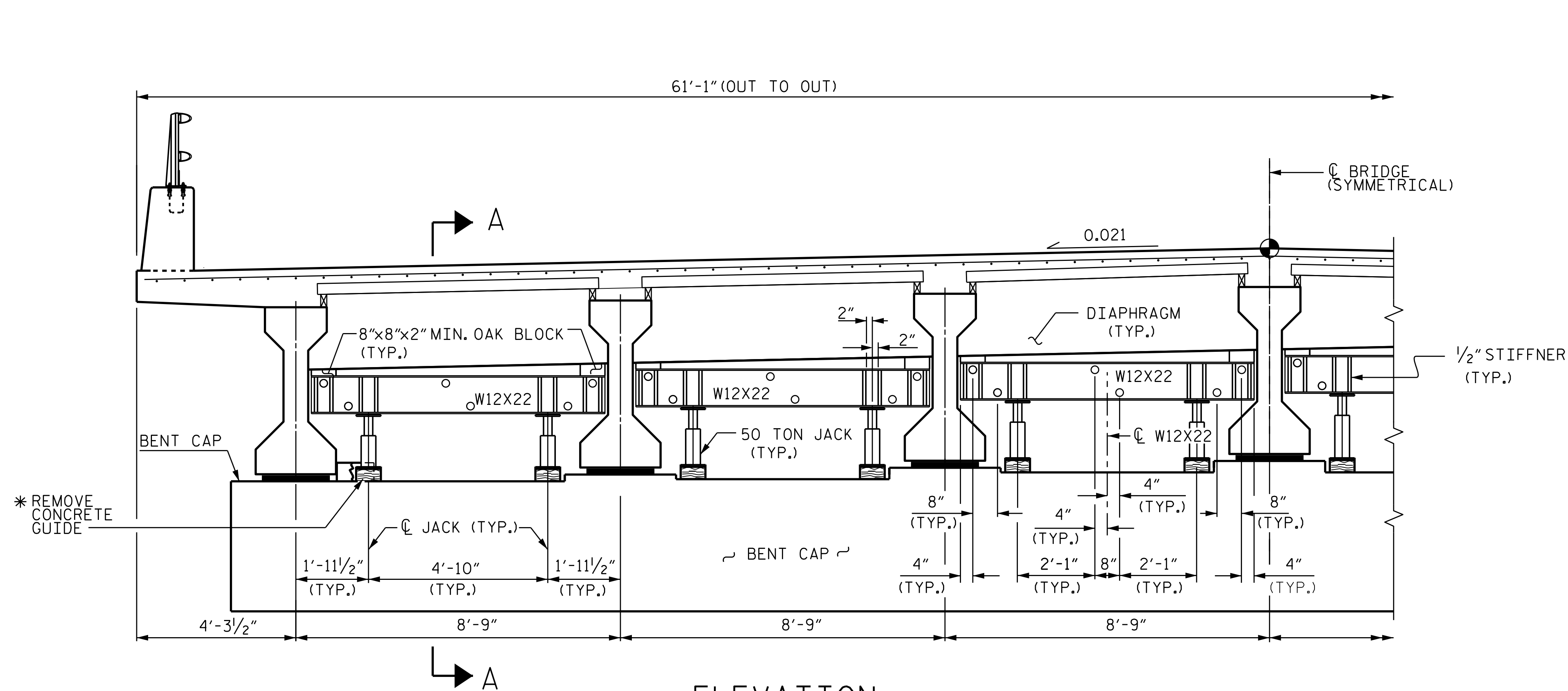
PROJECT NO. B-5938
 COUNTY: CARTERET
 BRIDGE NO. 68

SHEET 1 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SPAN RE-POSITIONING
 GENERAL

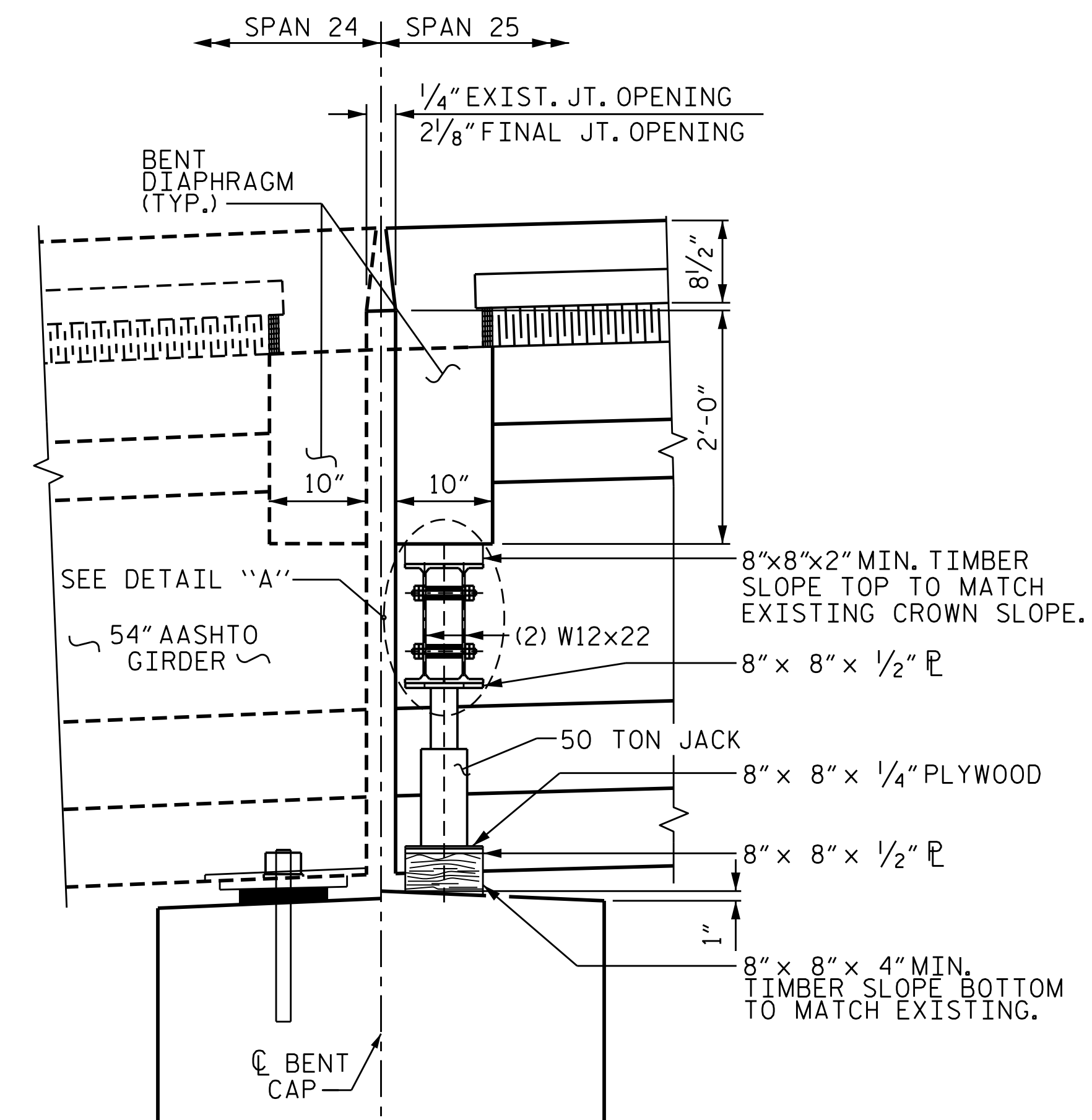
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ELEVATION

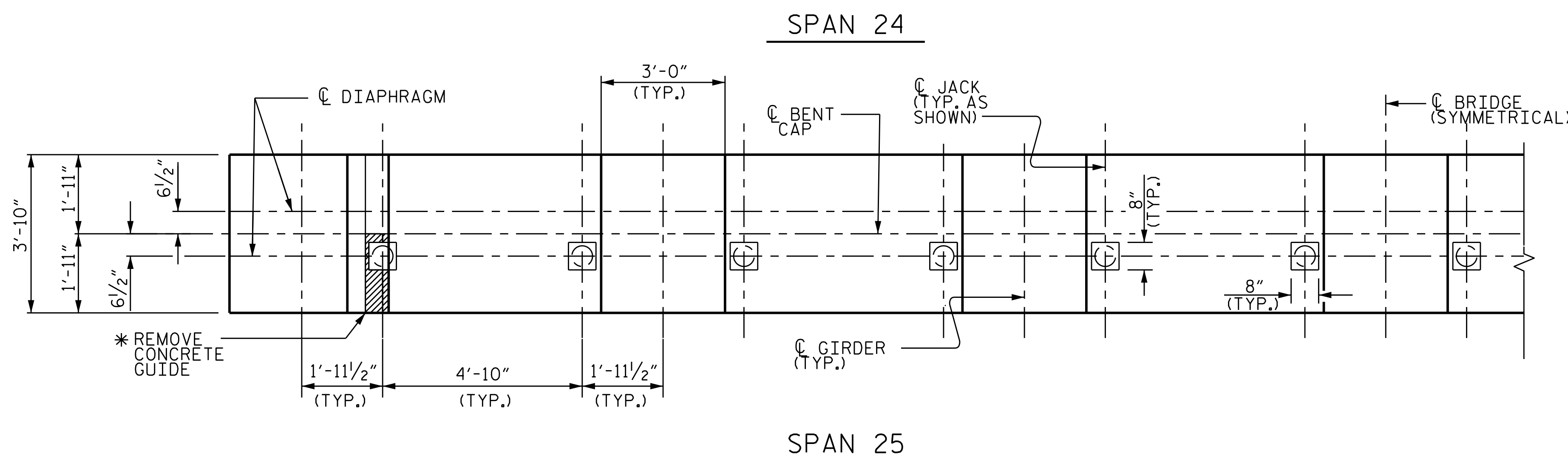
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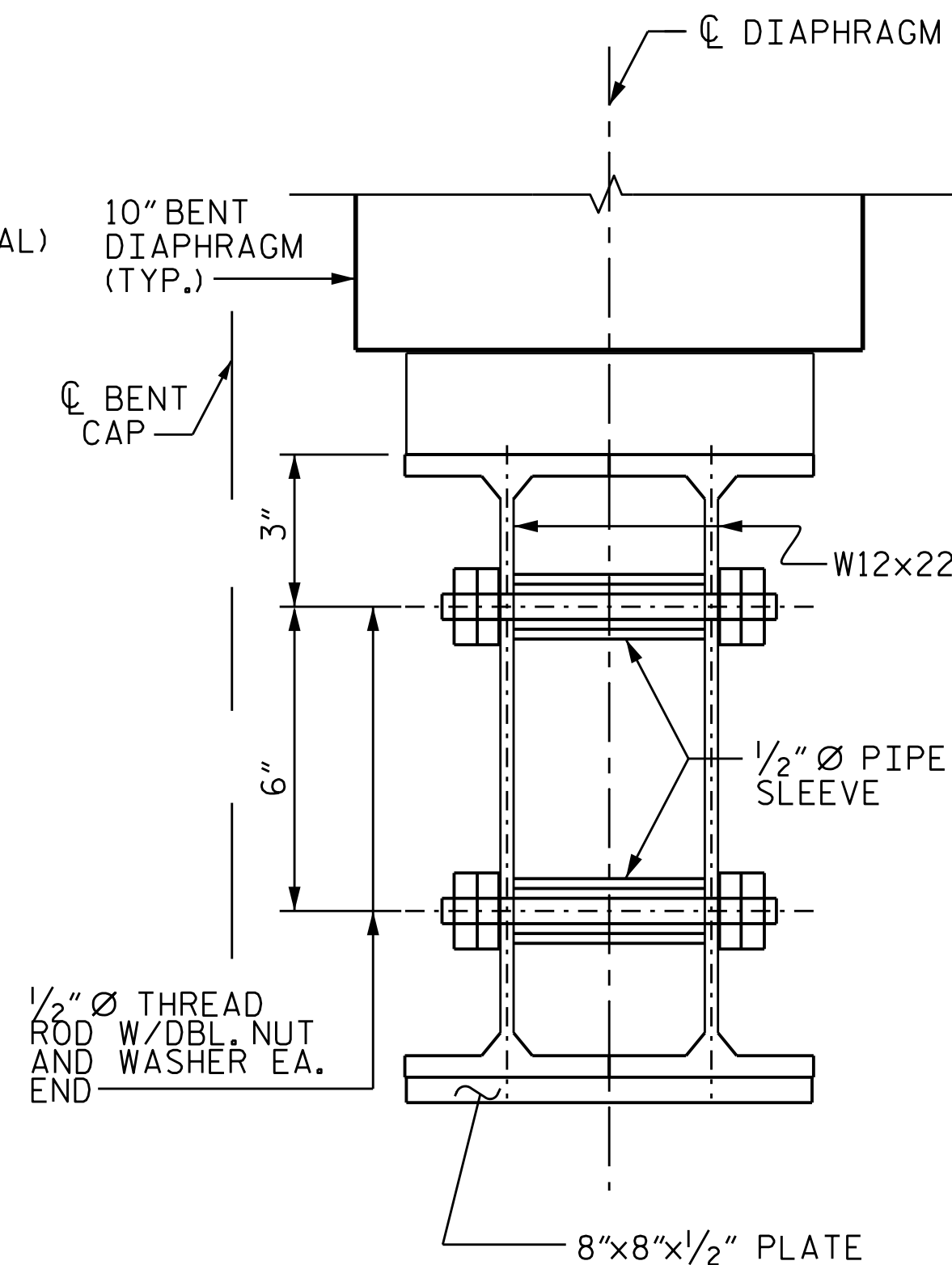
SECTION A-A

(BENT 24)

* REPLACE AFTER COMPLETION OF JACKING OPERATION



PLAN VIEW BENT 24



DETAIL "A"



DocuSigned by:
Gregory W. Dickey
2/22/2017

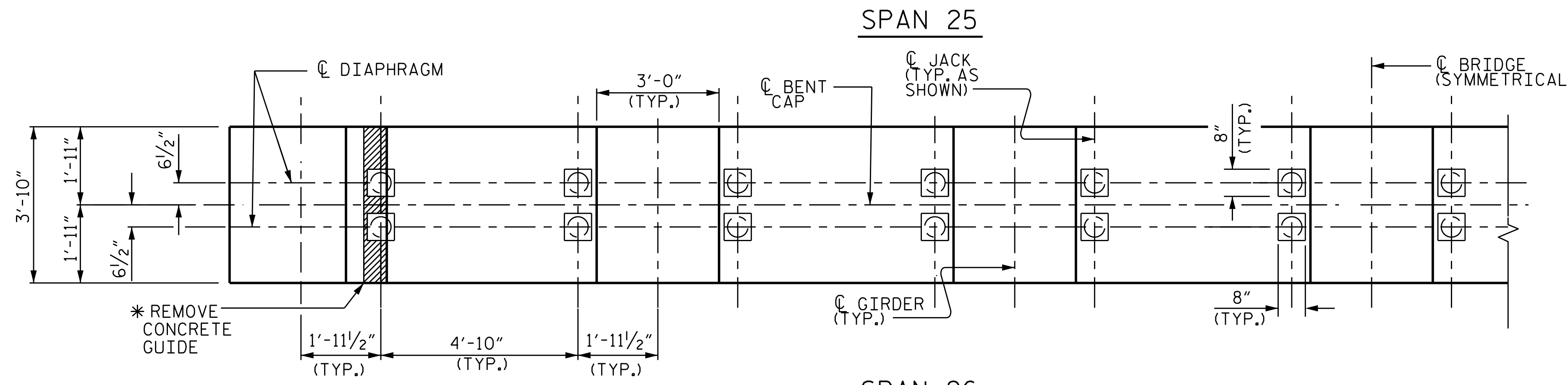
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PROJECT NO. B-5938
 COUNTY: CARTERET
 BRIDGE NO. 68
 SHEET 2 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SPAN RE-POSITIONING VERTICAL JACKING

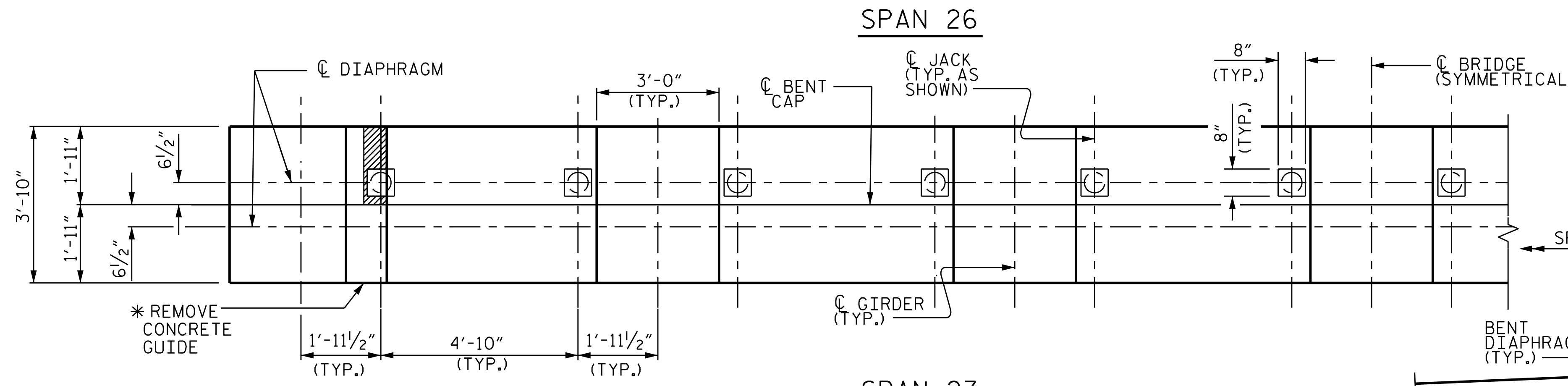
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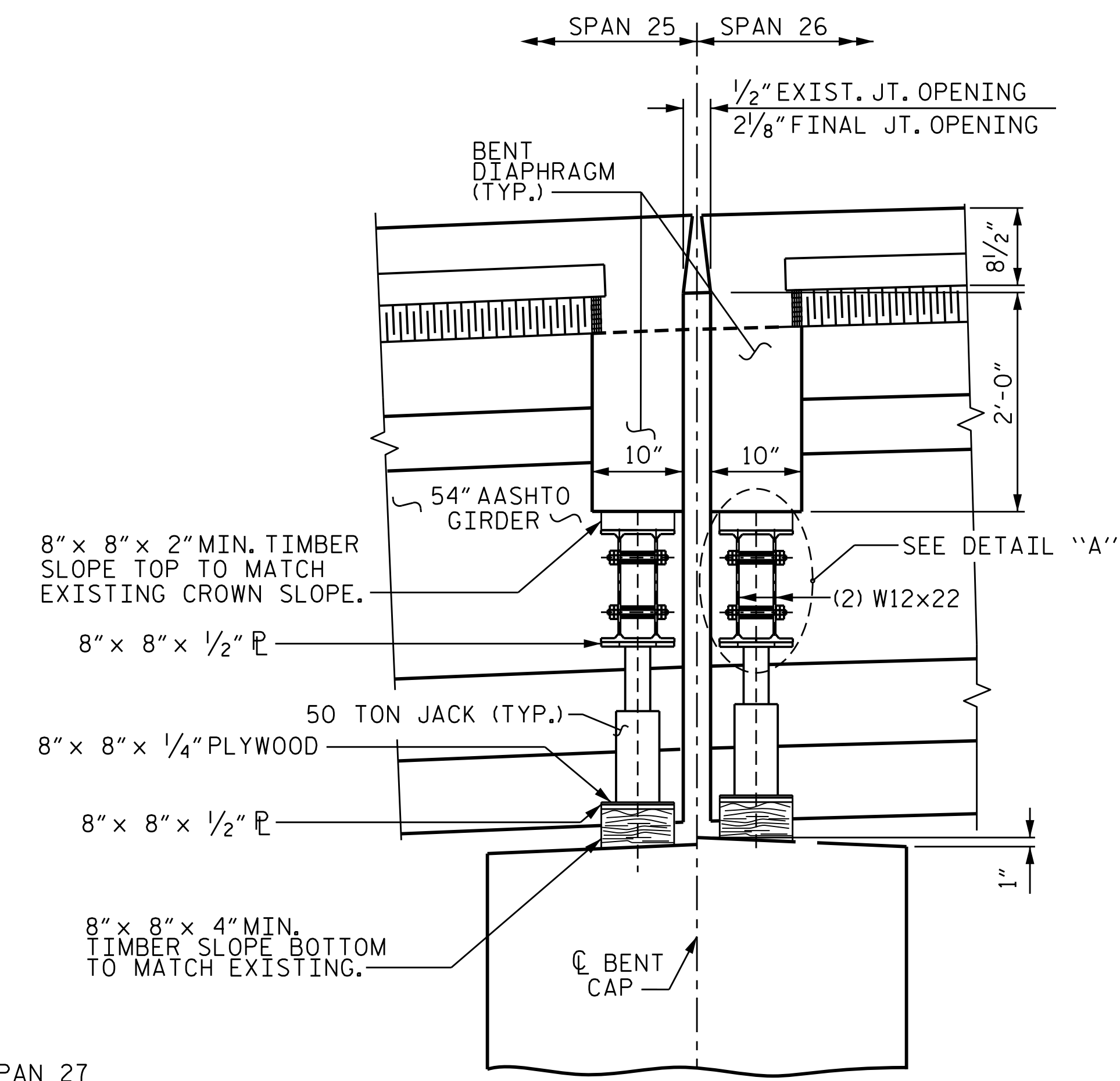
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SPAN 26
PLAN VIEW BENT 25

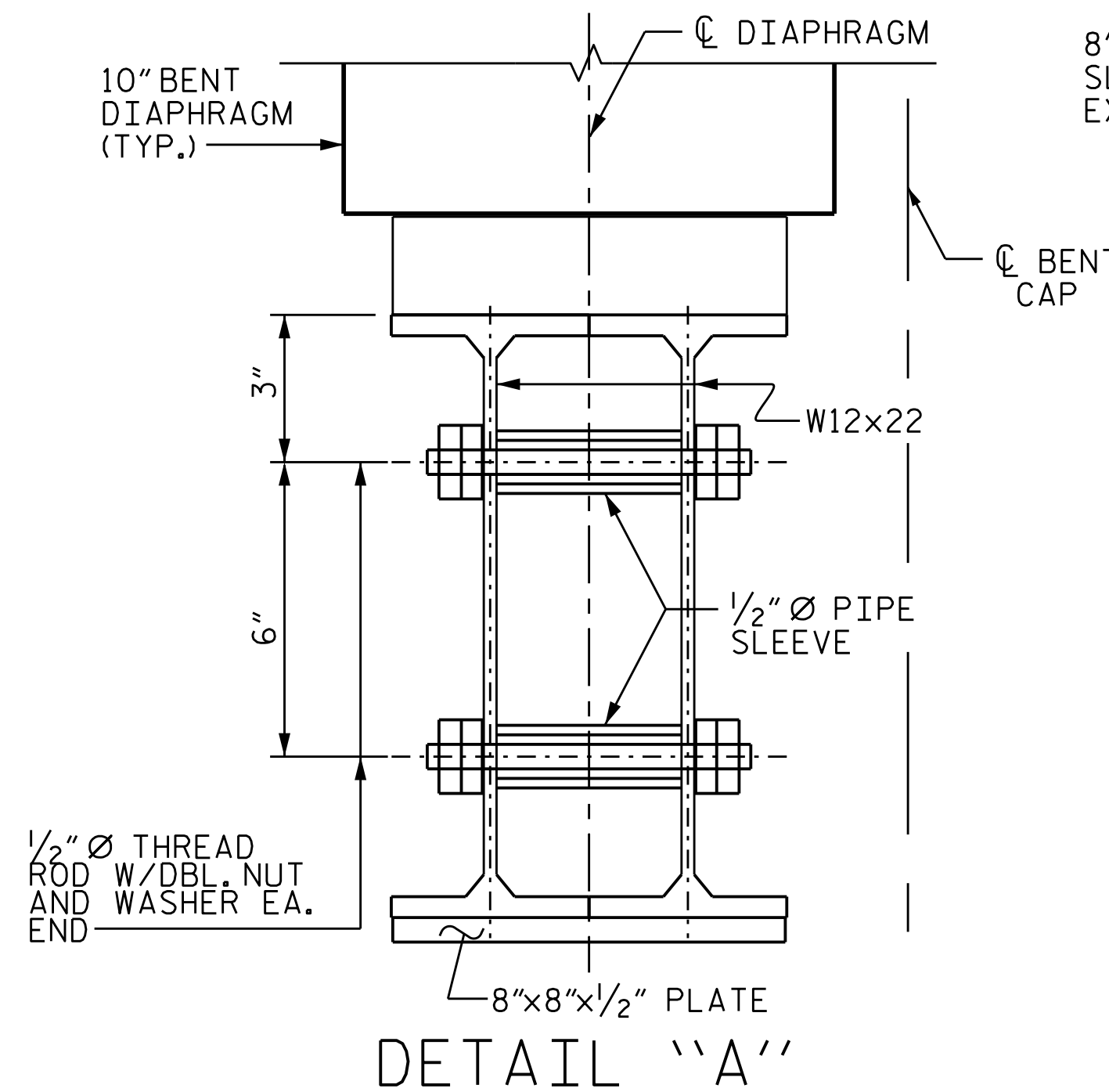


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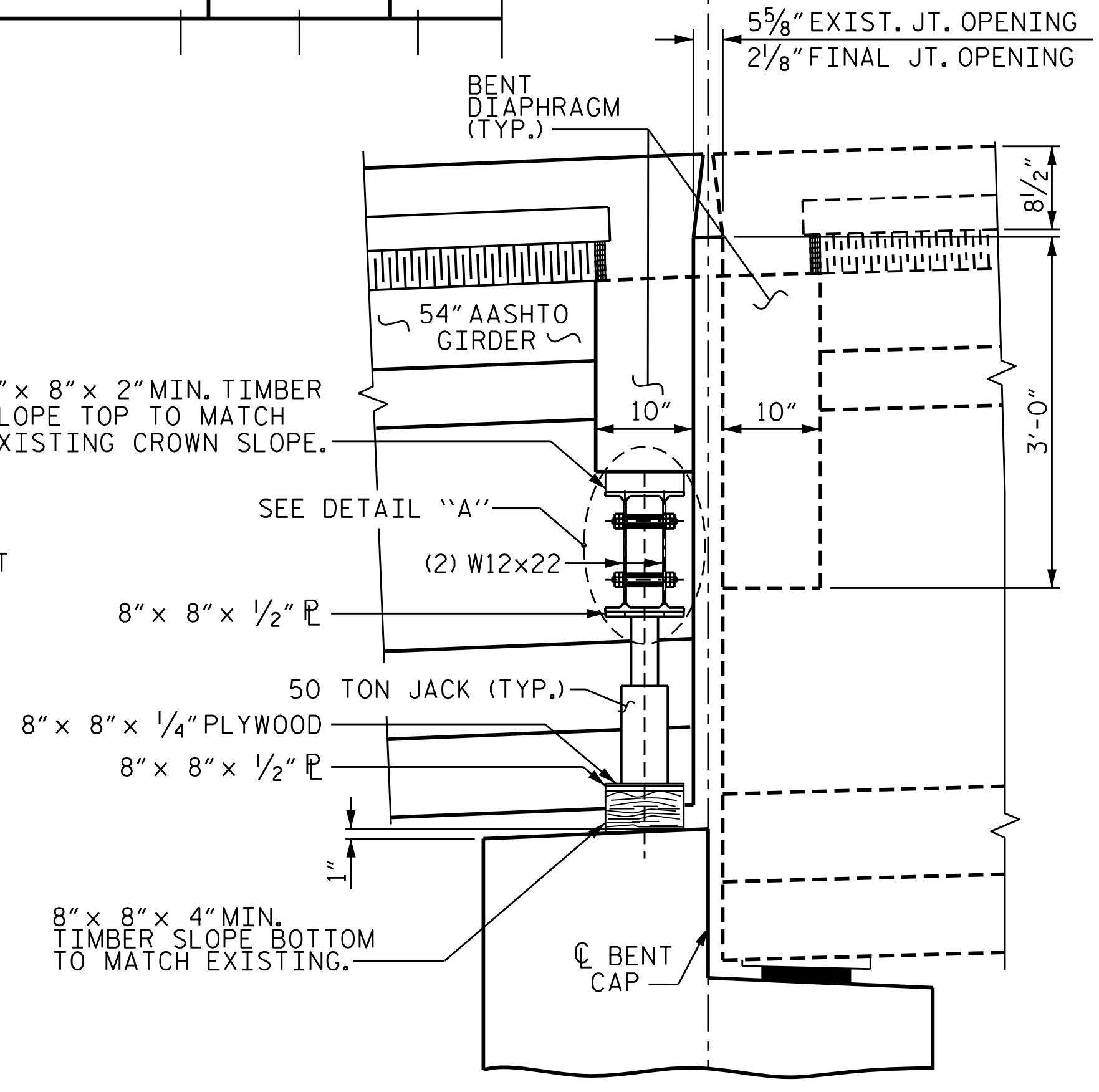
SPAN 27
PLAN VIEW BENT 26



SECTION A-A
(BENT 25)



DETAIL "A"



SECTION A-A
(BENT 26)

PROJECT NO. B-5938
COUNTY: CARTERET
BRIDGE NO. 68
SHEET 3 OF 6

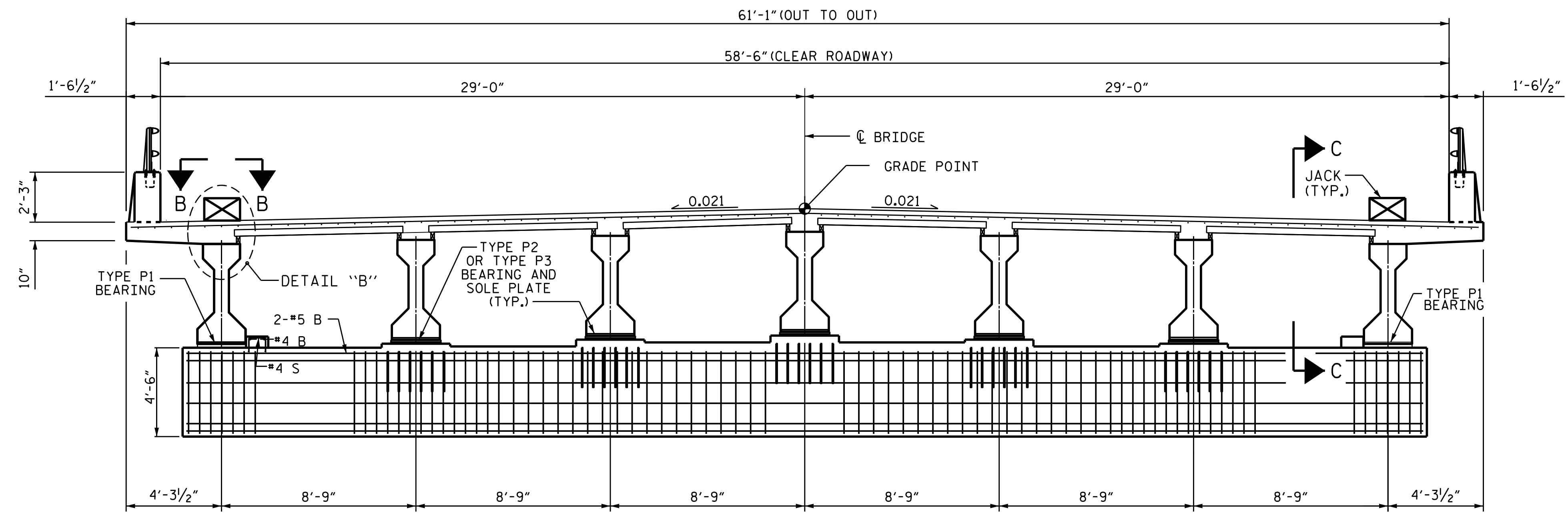


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SPAN
RE-POSITIONING
VERTICAL JACKING
DETAILS

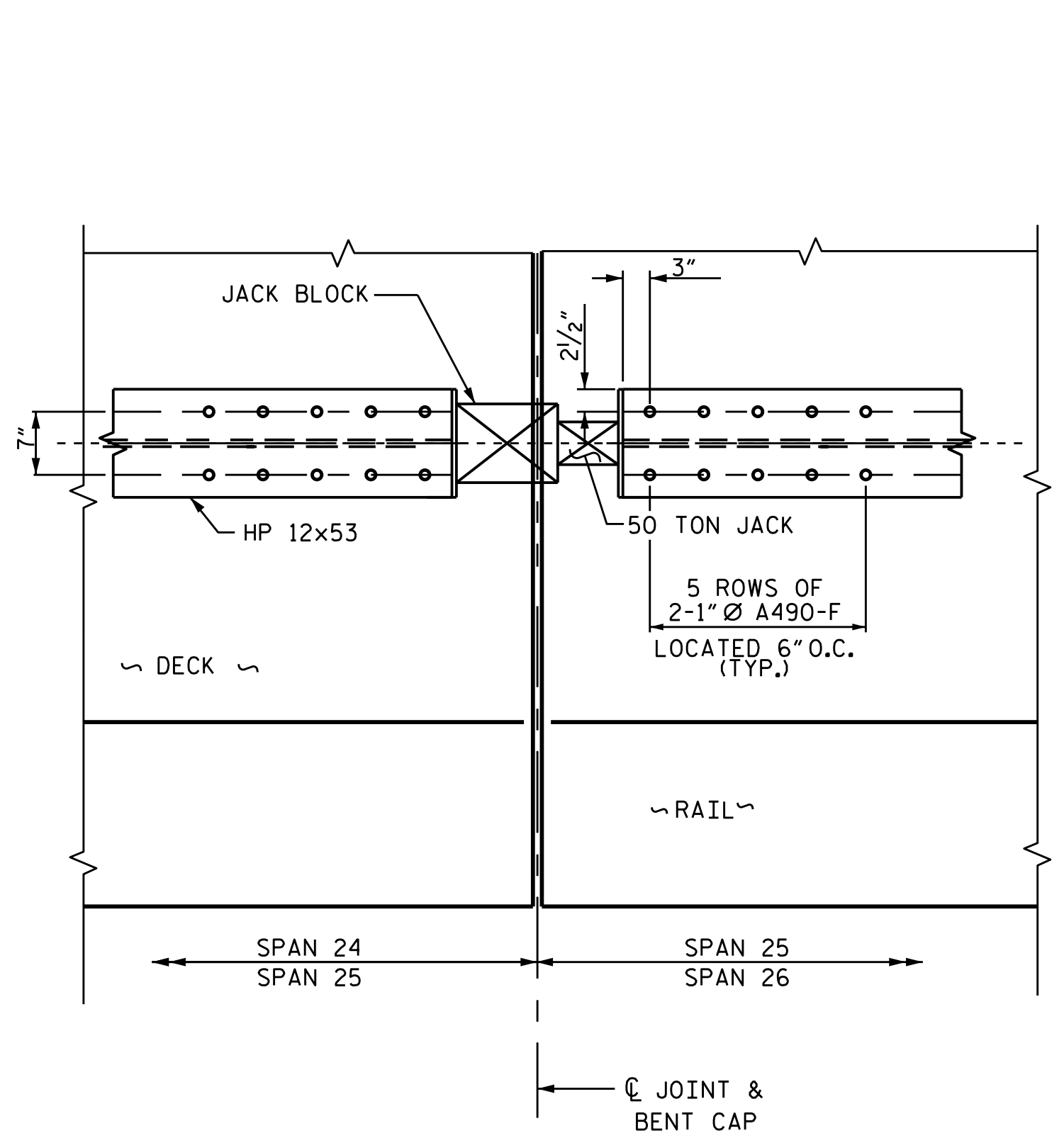
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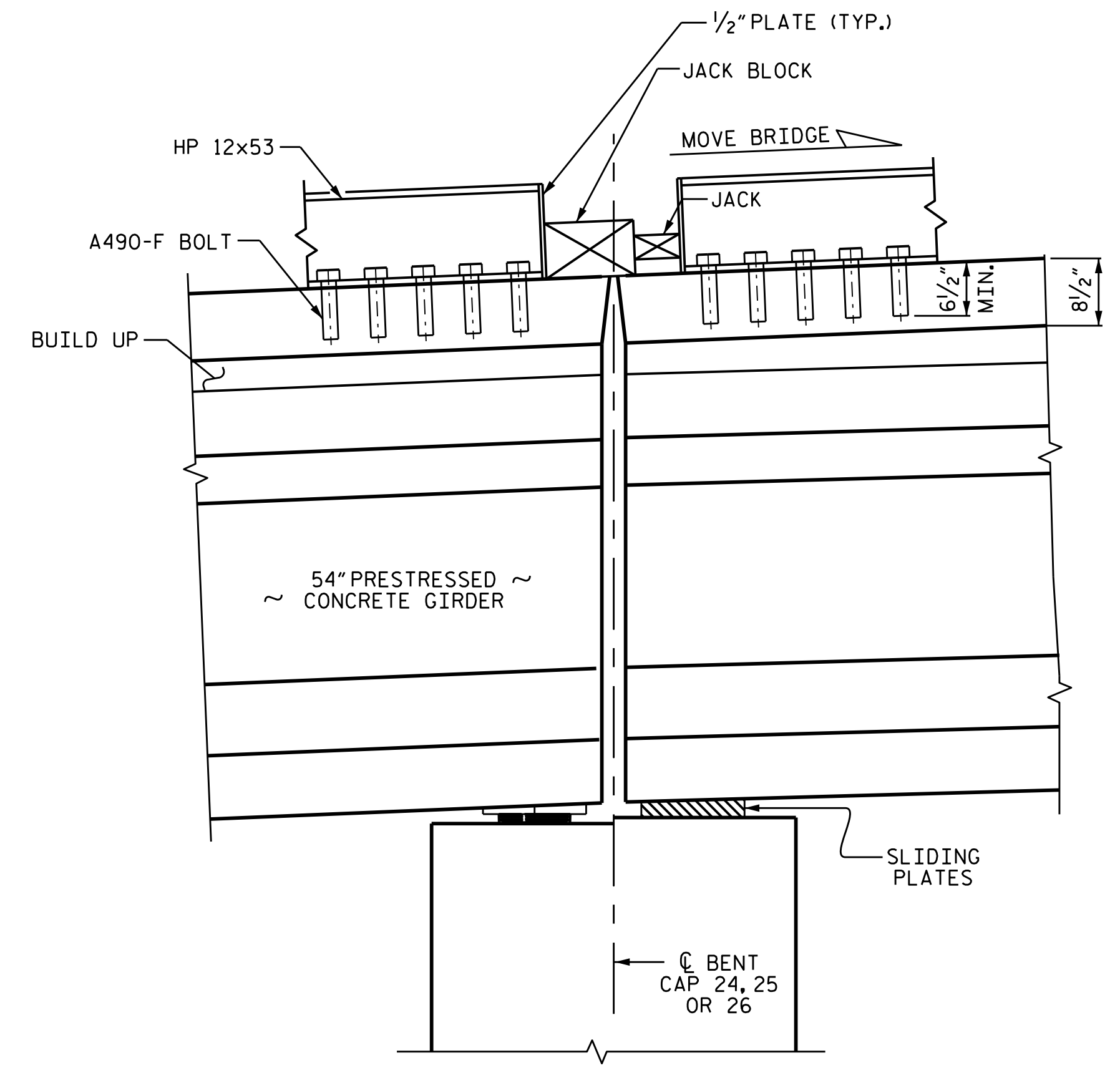
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TYPICAL SECTION
(BENT 24, 25 OR 26)

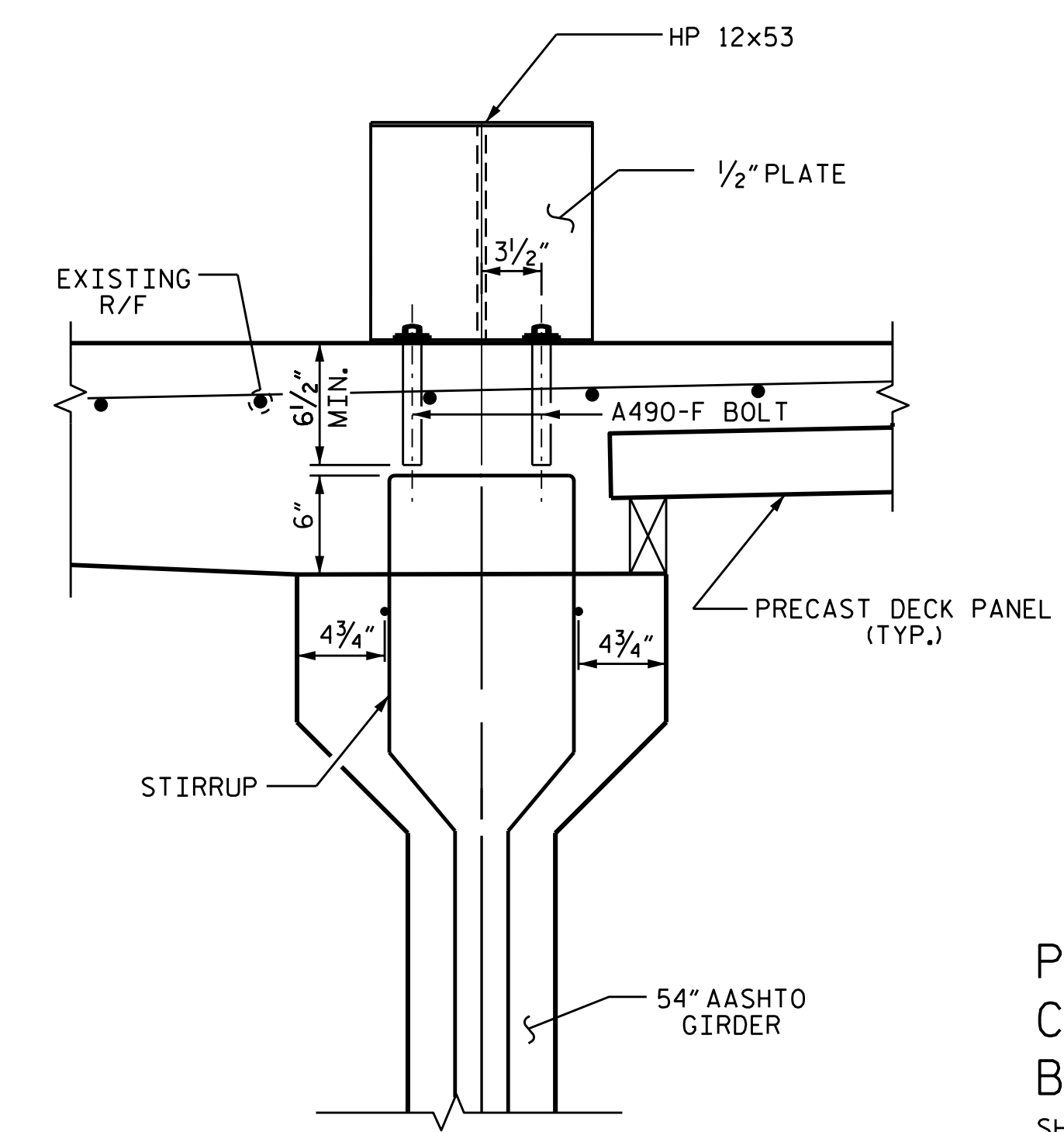


SECTION B-B



SECTION C-C

NOTE: CONTRACTOR SHALL SUBMIT DETAIL OF SLIDING PLATES TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.



DETAIL "B"

PROJECT NO. B-5938
 COUNTY: CARTERET
 BRIDGE NO. 68
 SHEET 4 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SPAN
 RE-POSITIONING
 HORIZONTAL JACKING

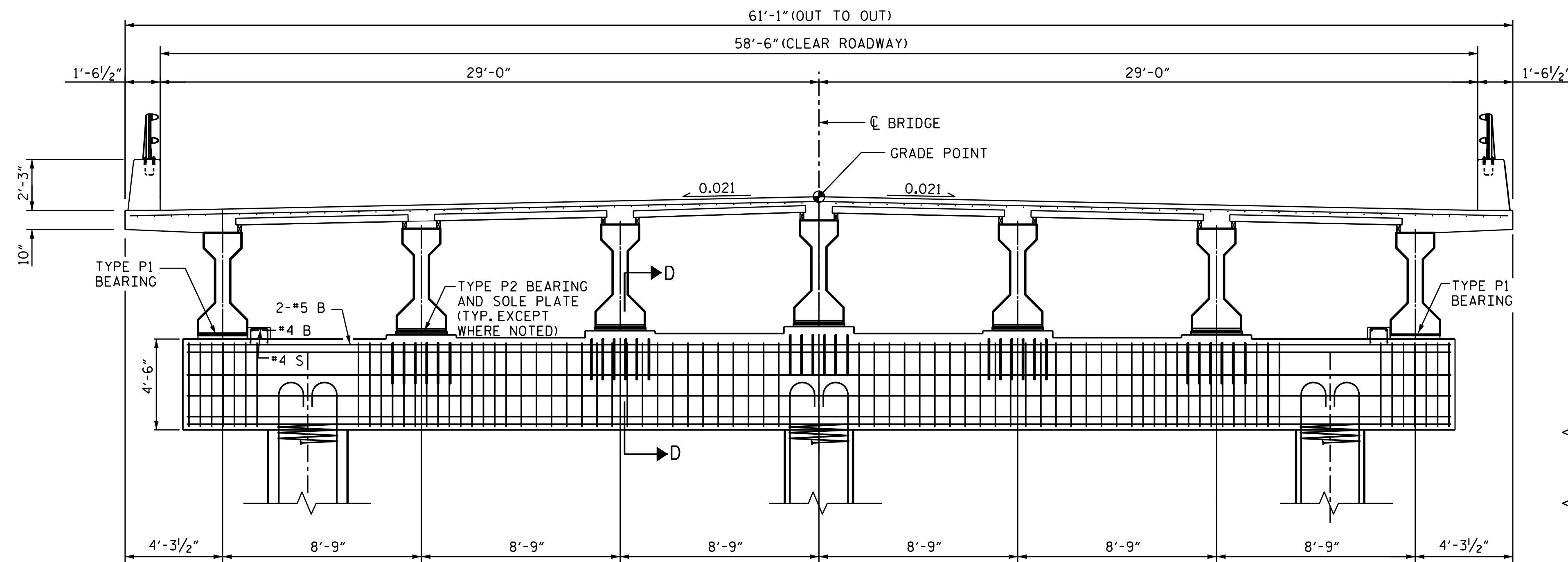


Drawn by:
 Greg Dickey
 2/22/2017

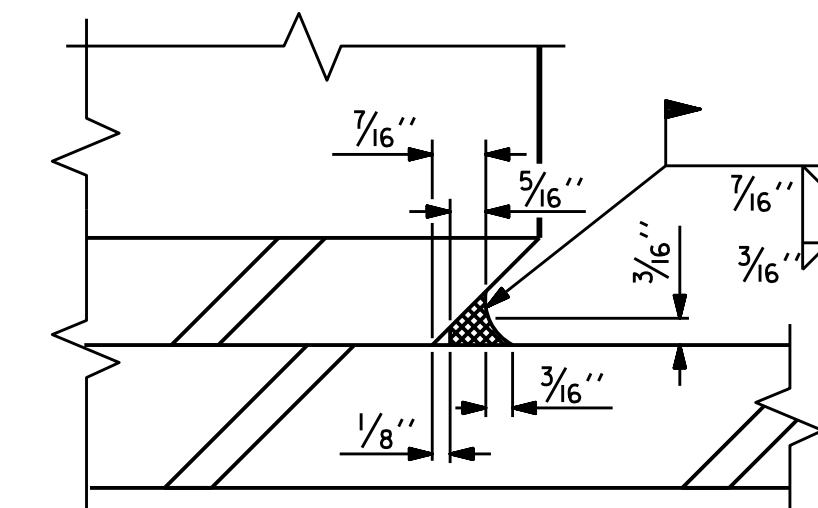
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 CHECKED BY: GW DICKEY DATE: JAN. 2017

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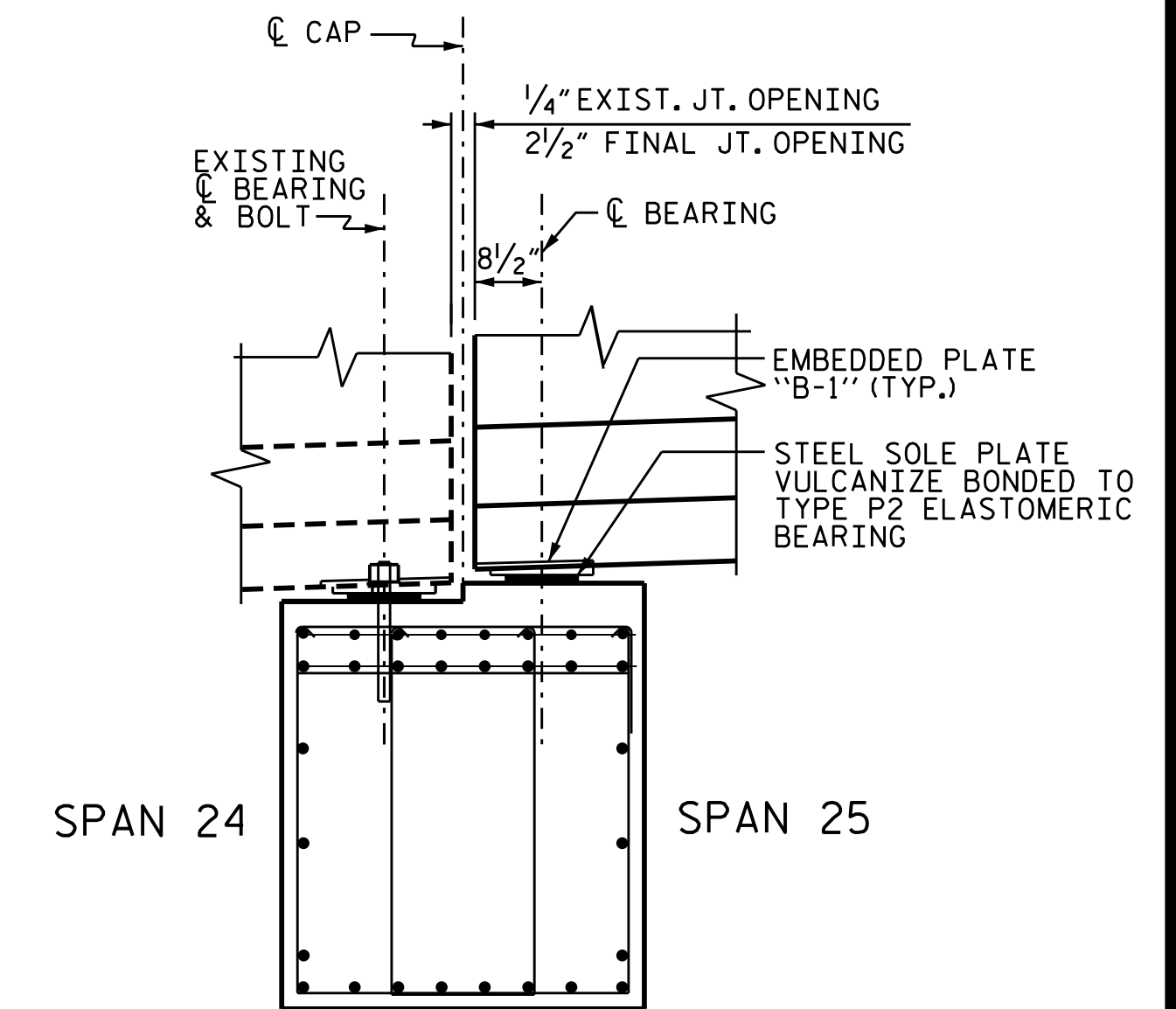
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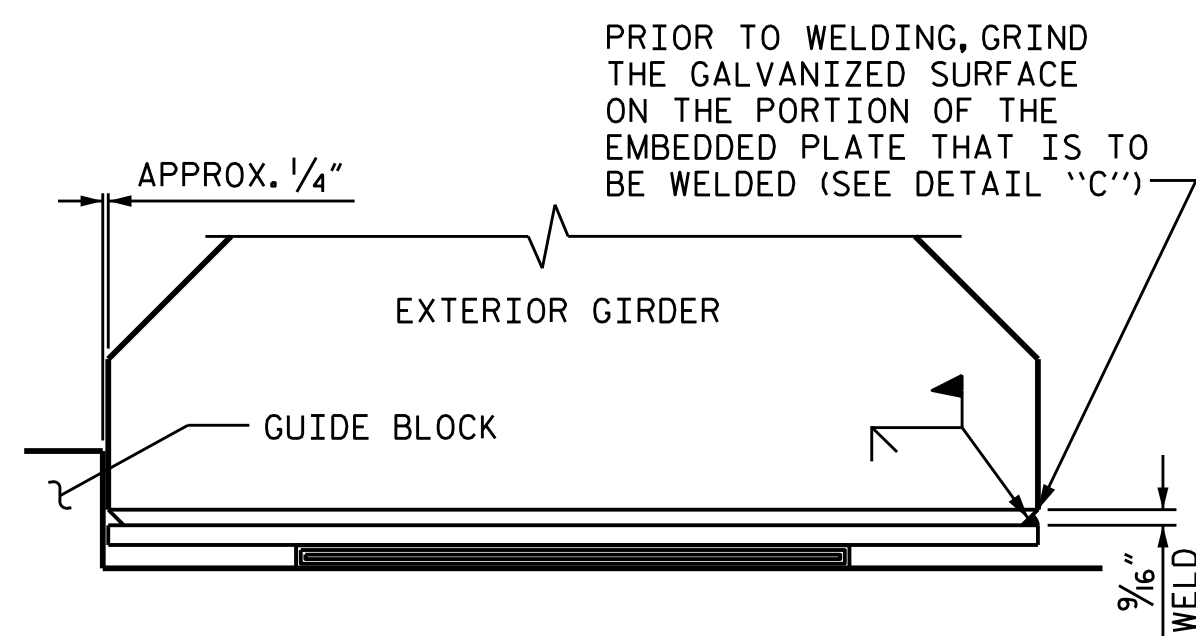
PART ELEVATION AT BENT 24 & 25
 EXPANSION END SPAN 24 OR 25
 (EXISTING REINFORCING SHOWN)



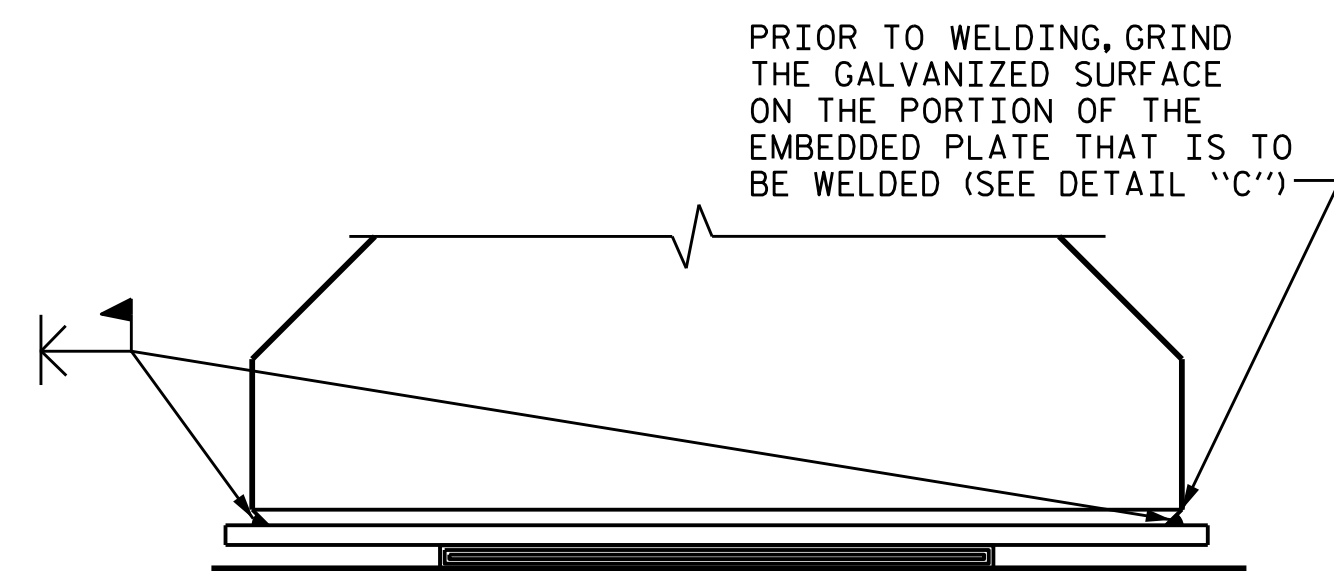
DETAIL "C"



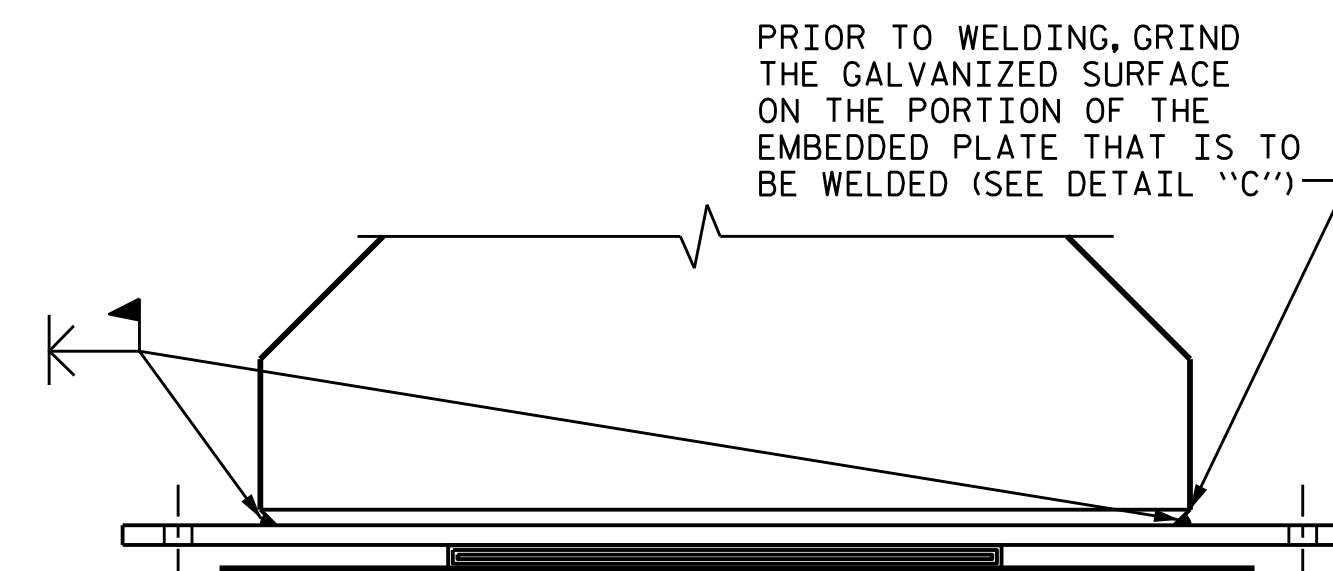
SECTION D-D @ BENT 24
 (GIRDERS 2-6)



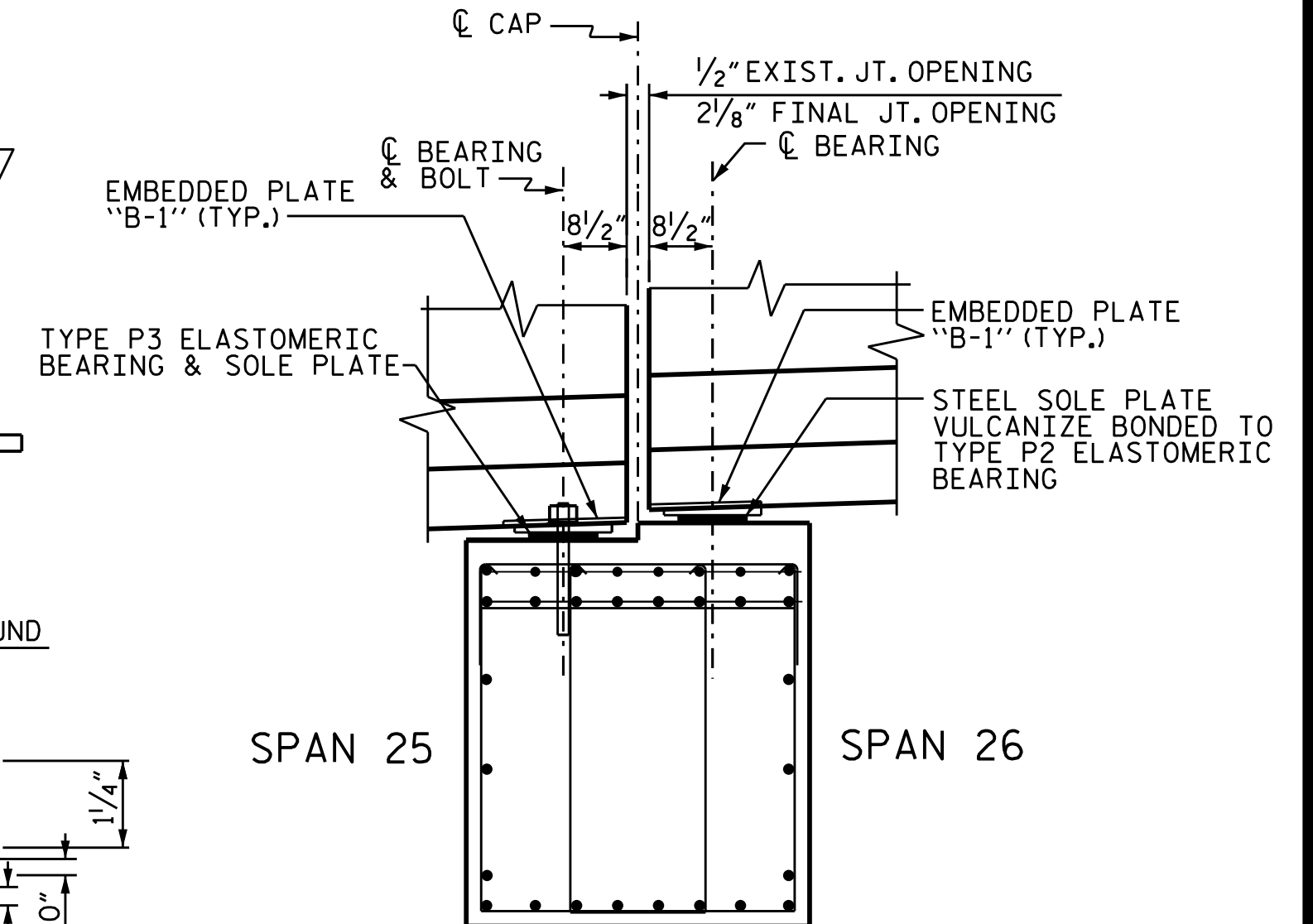
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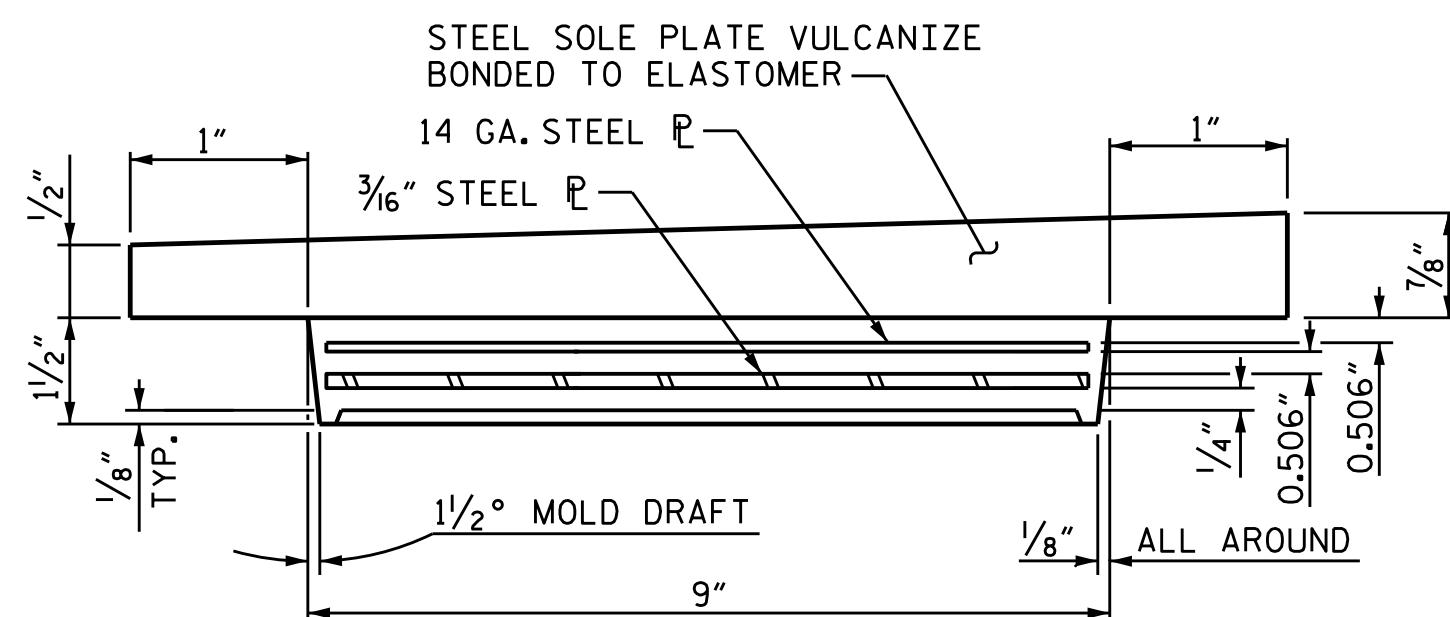
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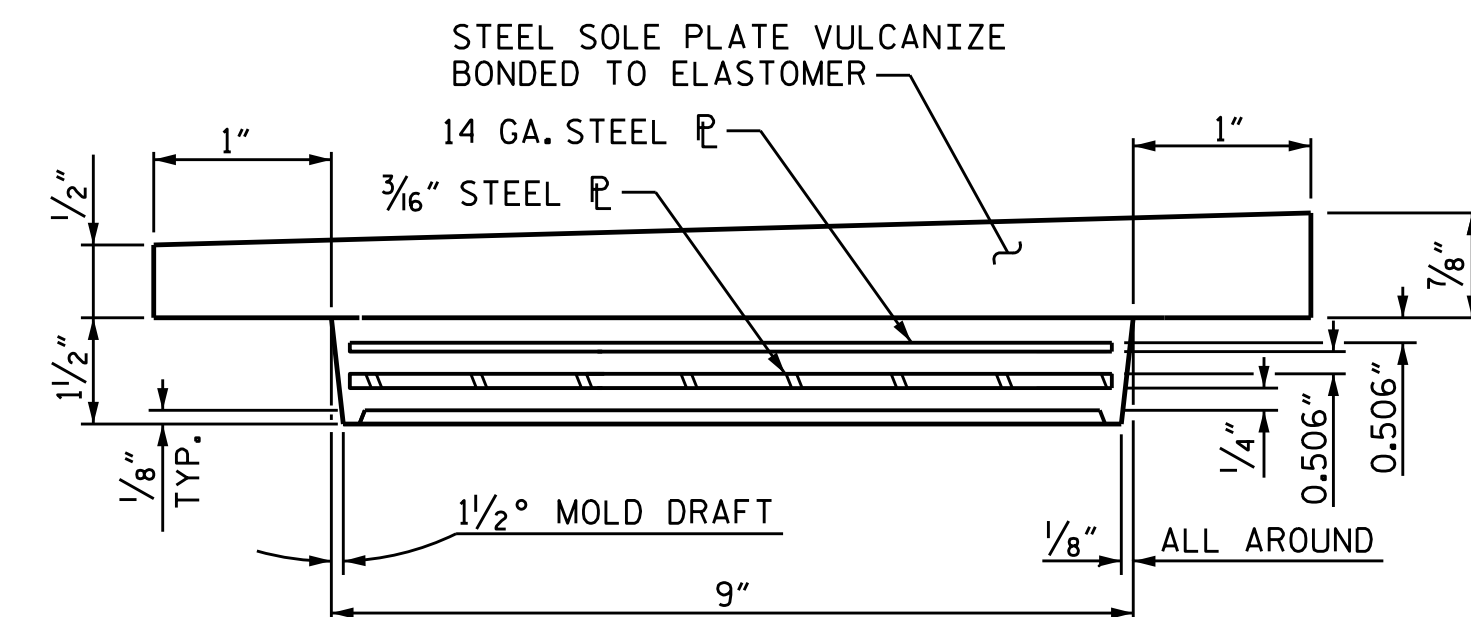
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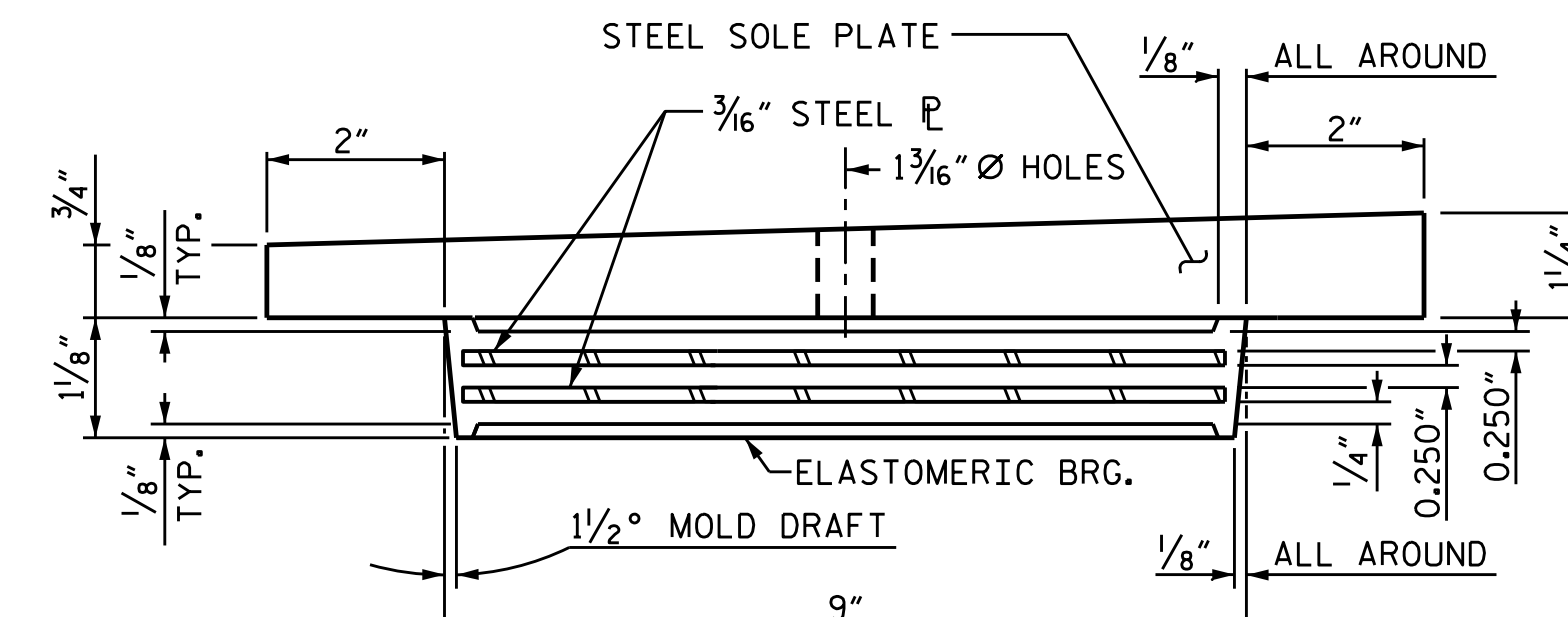
SECTION D-D @ BENT 25
 (GIRDERS 2-6)



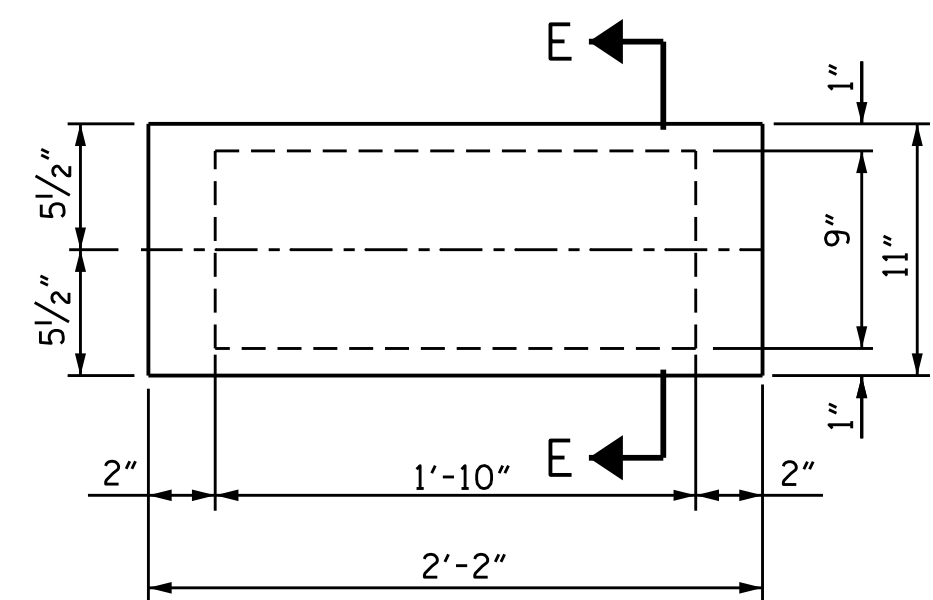
SECTION E-E



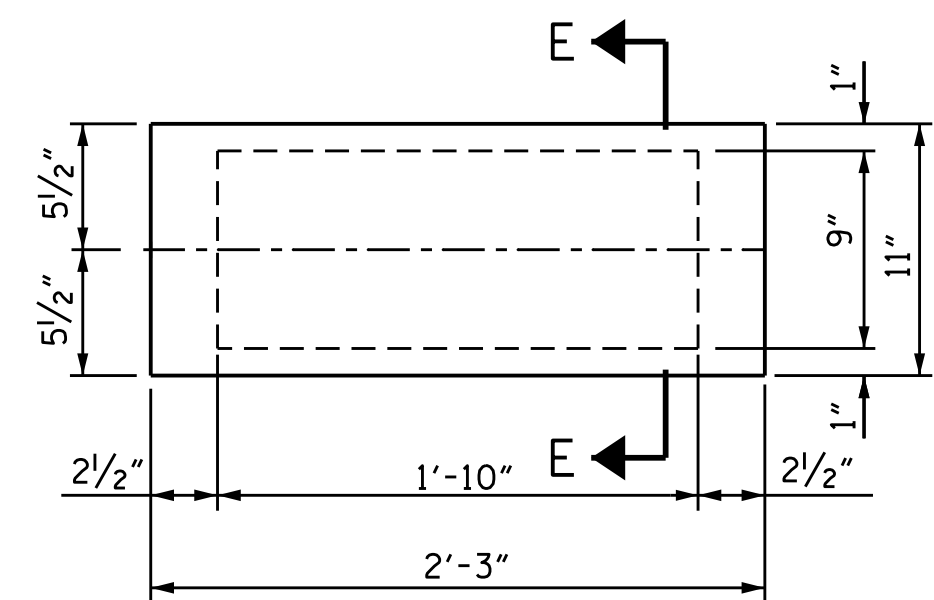
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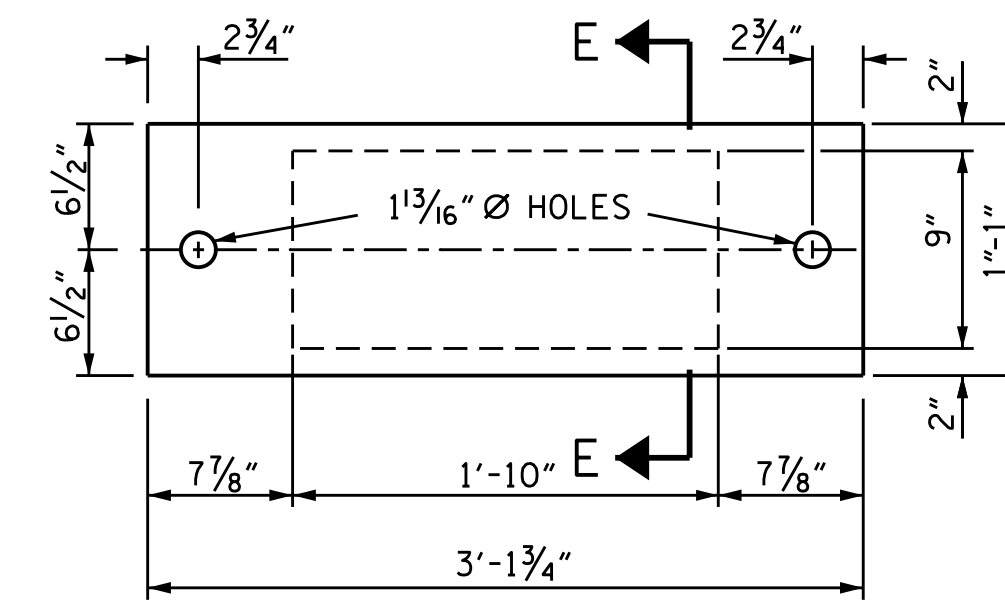
SECTION E-E



PLAN



PLAN



PLAN

DETAILS OF TYPE P1 ELASTOMERIC BEARING & SOLE PLATE

FOR GIRDERS 1 & 7 ON ALL SPANS

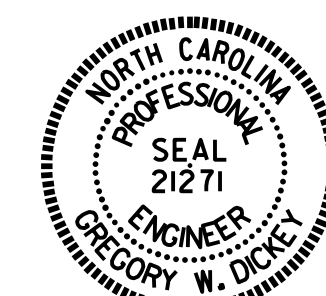
DETAILS OF TYPE P2 ELASTOMERIC BEARING & SOLE PLATE

FOR GIRDERS 2 - 6 ON SOUTH END OF SPANS

DETAILS OF TYPE P3 ELASTOMERIC BEARING & SOLE PLATE

FOR GIRDERS 2 - 6 ON NORTH END OF SPANS

PROJECT NO. B-5938
 COUNTY: CARTERET
 BRIDGE NO. 68
 SHEET 5 OF 6

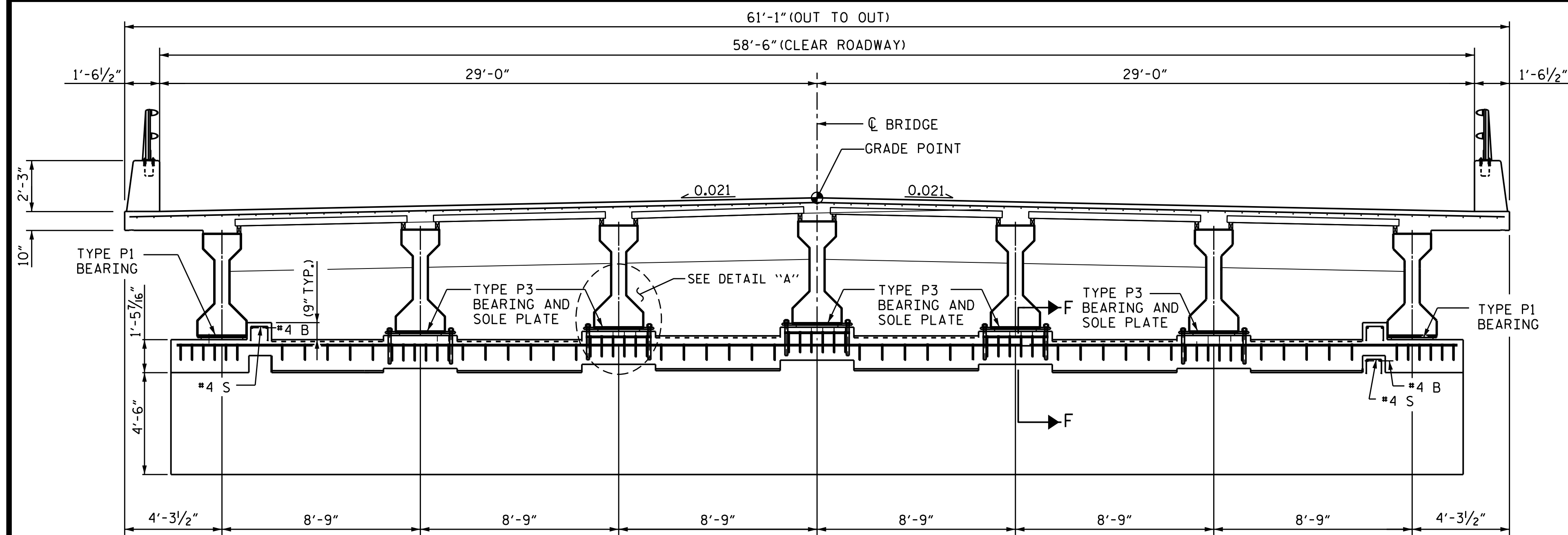


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SPAN RE-POSITIONING BEARING REPLACEMENT

DRAWN BY: WJ HARRIS DATE: JAN. 2017
 CHECKED BY: GW DICKEY DATE: JAN. 2017

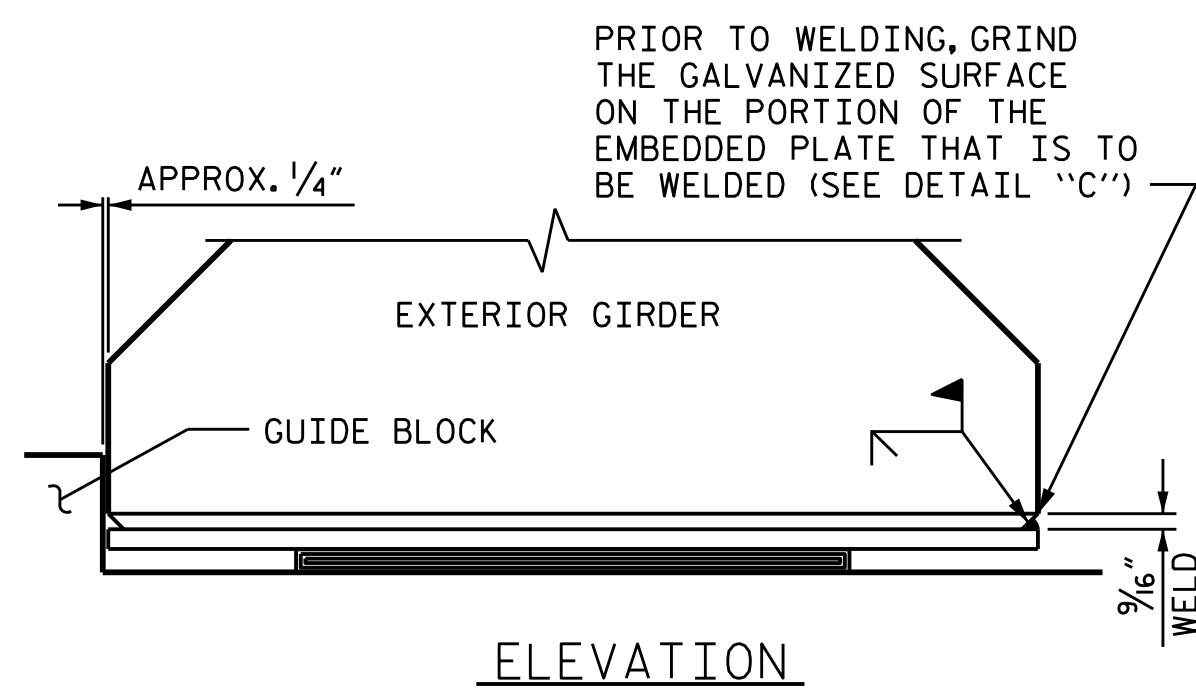
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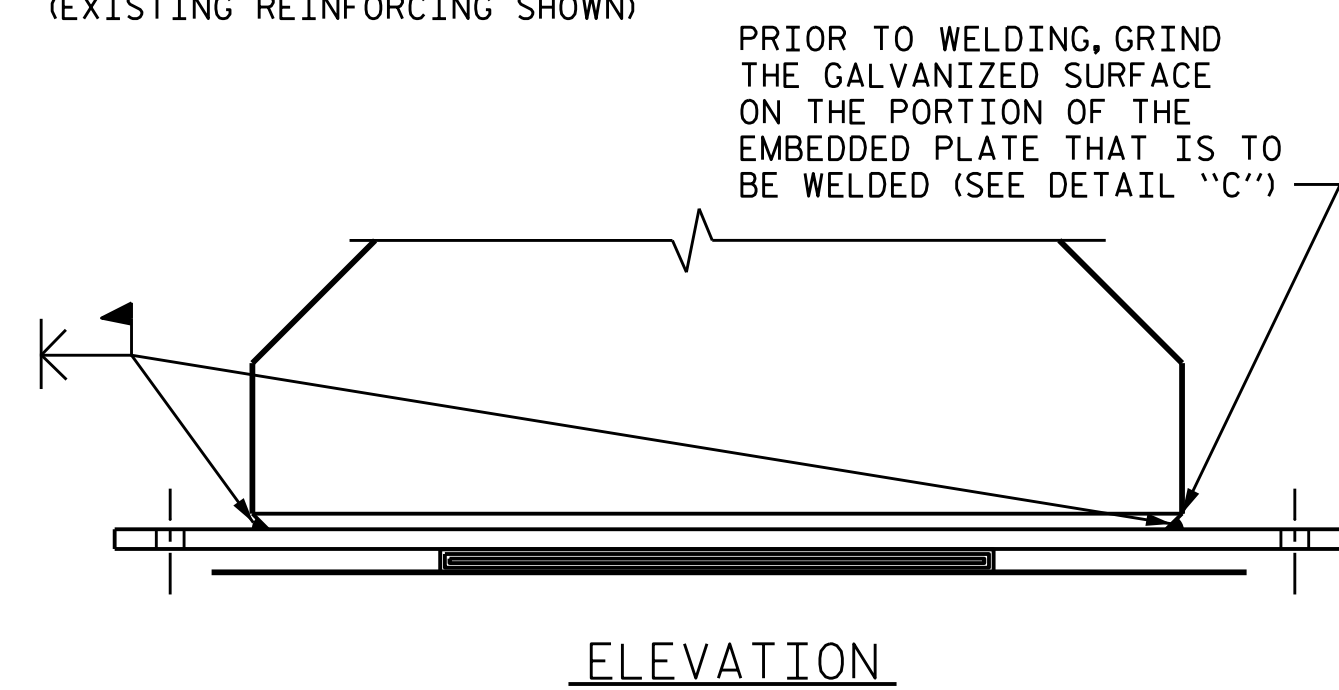


PART PLAN ELEVATION AT BENT 26

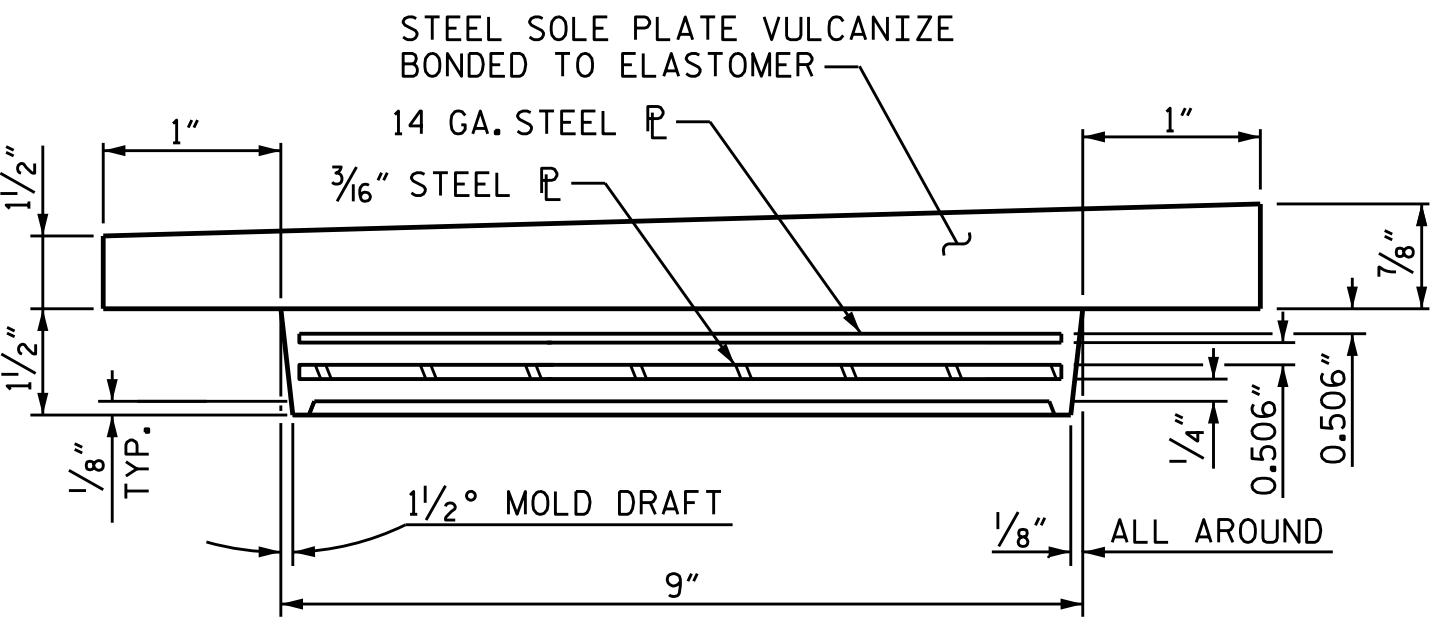
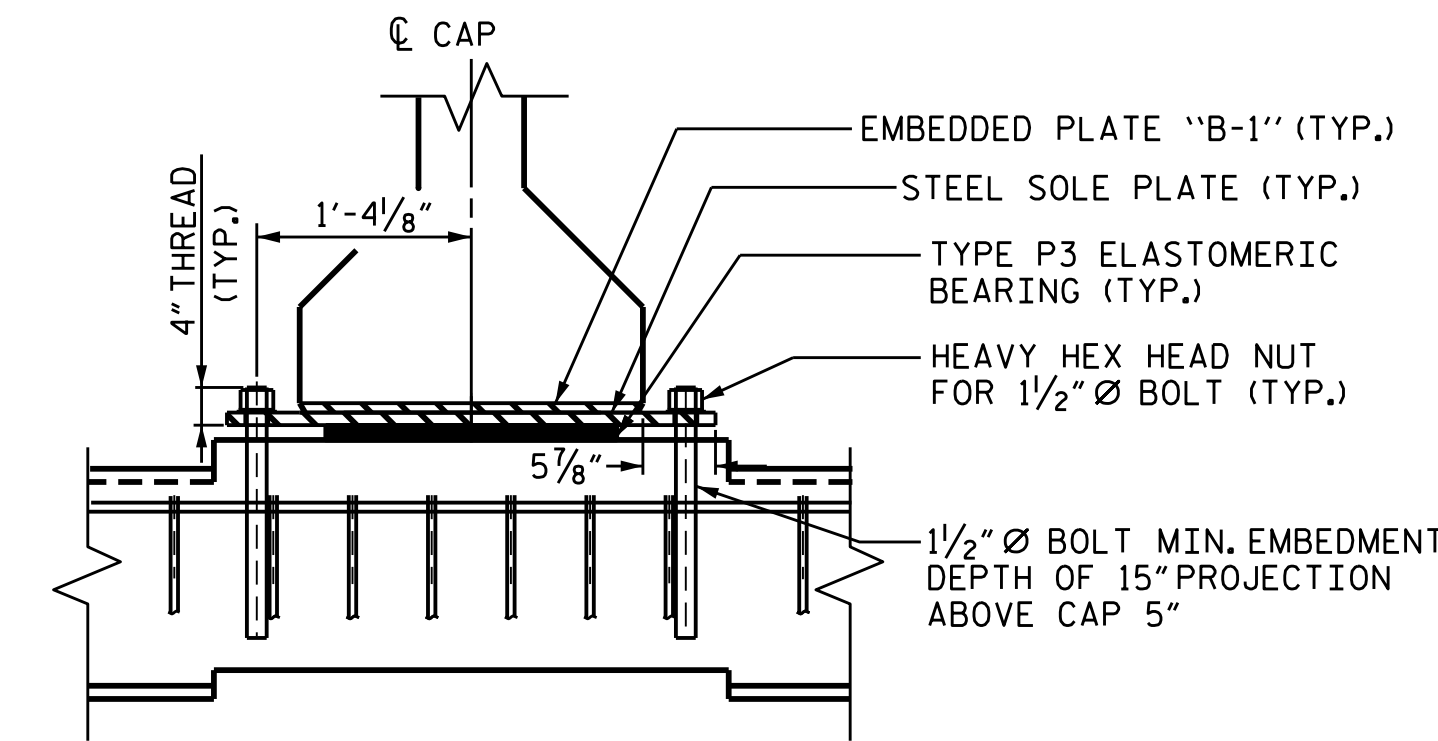
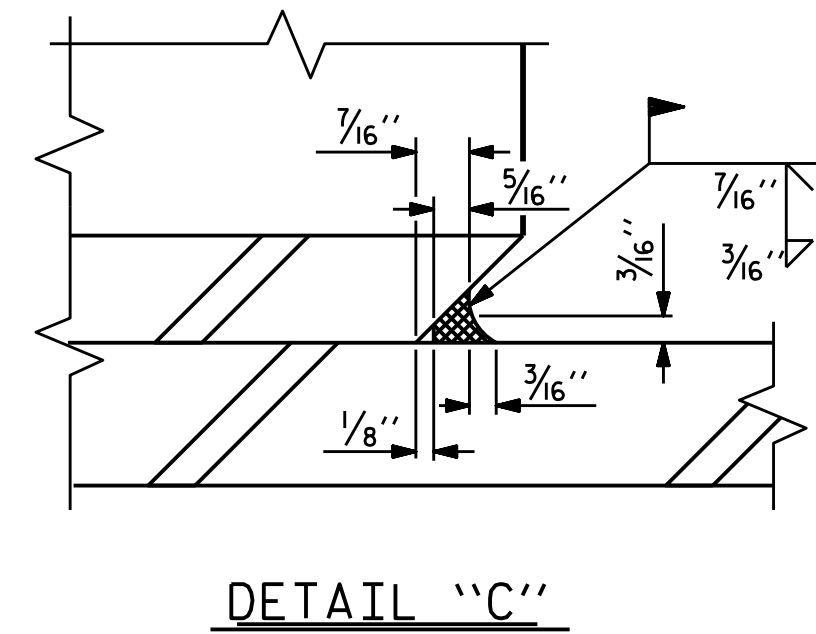
FIXED END SPAN 25 OR 26
(EXISTING REINFORCING SHOWN)



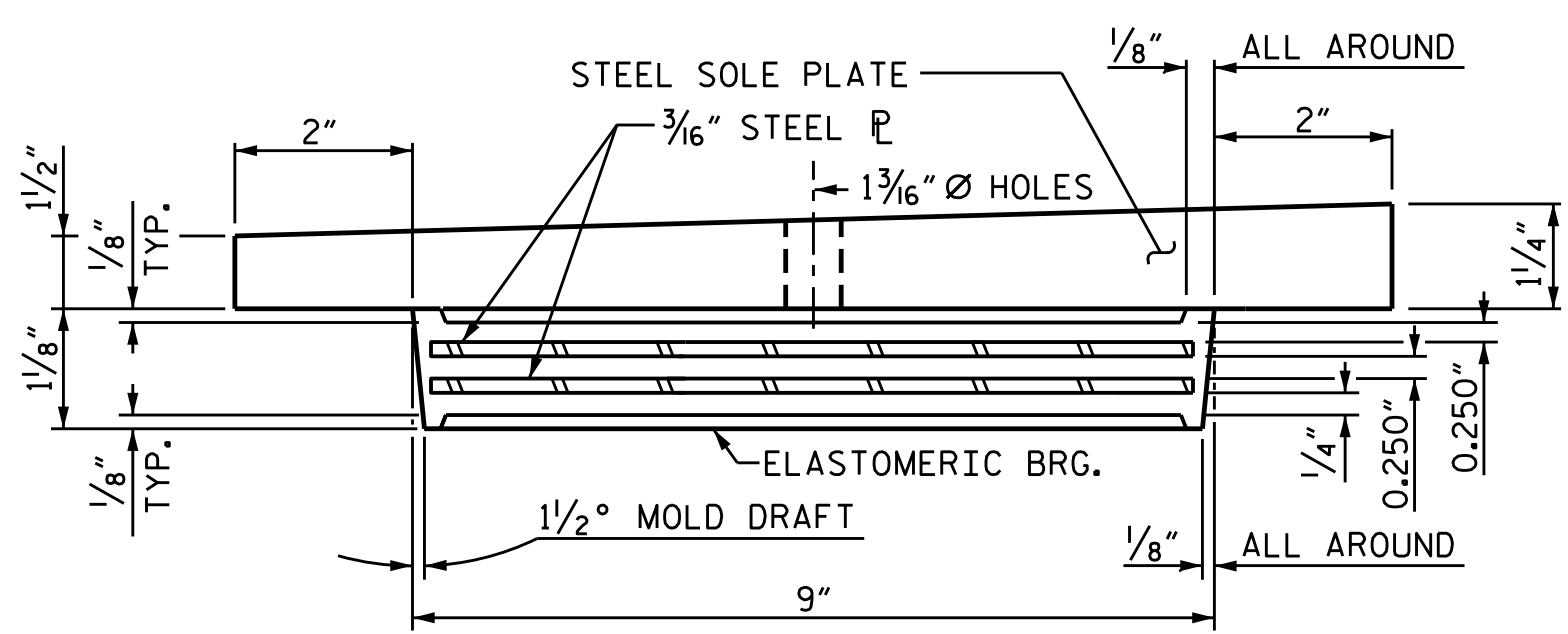
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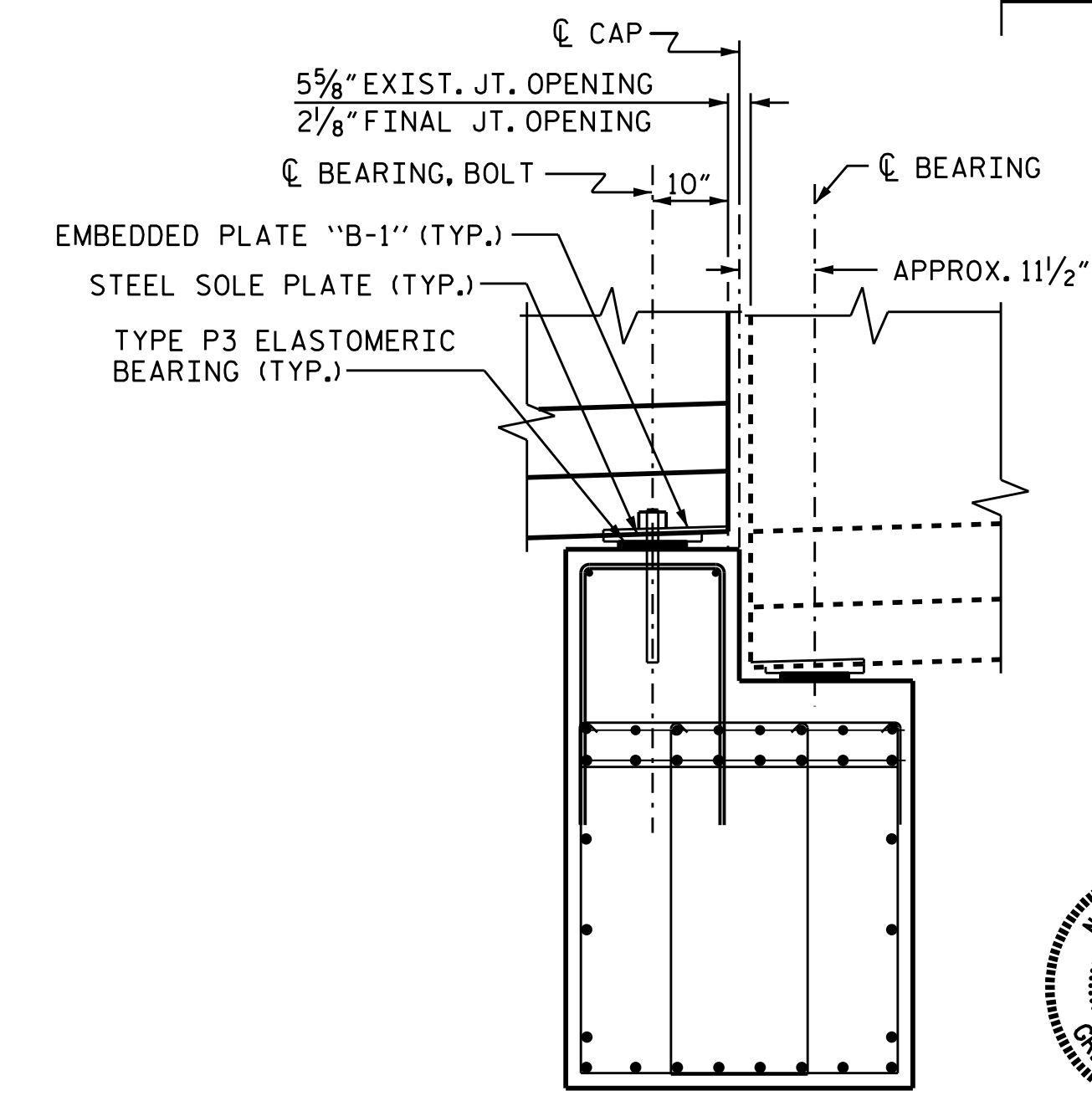
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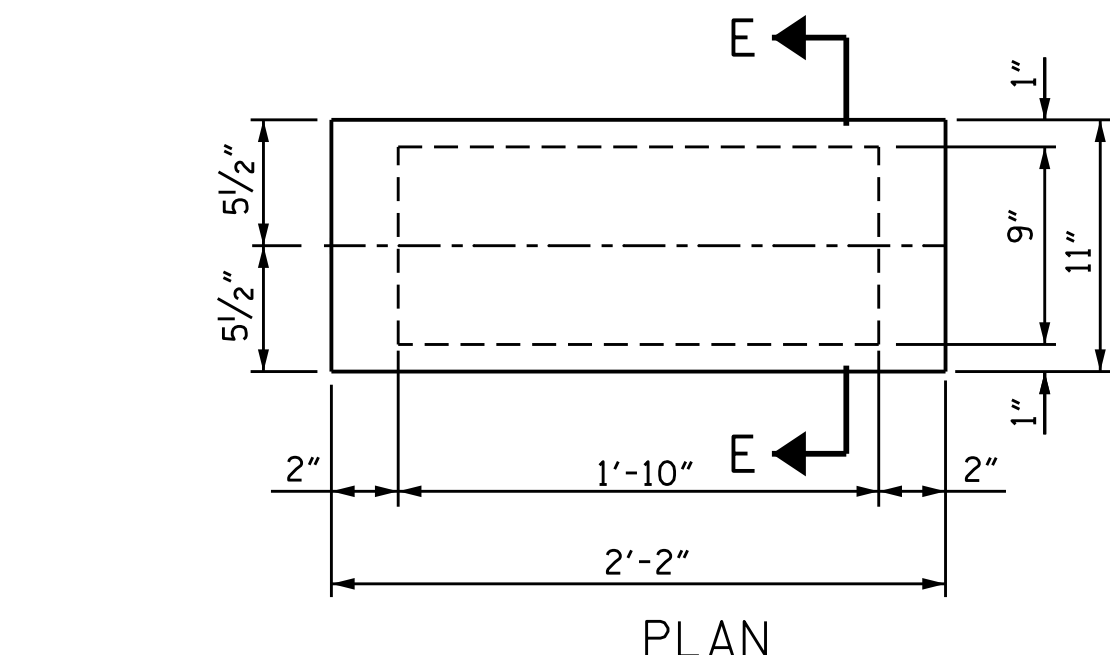
SECTION E-E



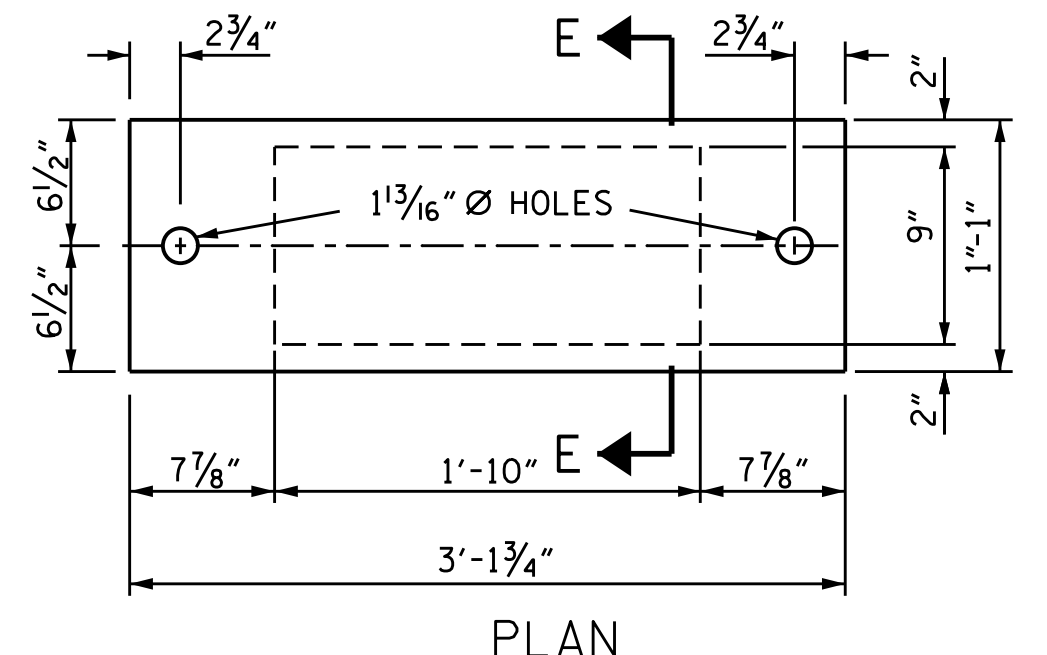
SECTION E-E



SECTION F-F @ BENT 26



PLAN



PLAN

DETAILS OF TYPE P1 ELASTOMERIC BEARING & SOLE PLATE

FOR GIRDERS 1 & 7 ON ALL SPANS

DETAILS OF TYPE P3 ELASTOMERIC BEARING & SOLE PLATE

FOR GIRDERS 2 - 6 ON NORTH END OF SPANS



Drawn by: *Gregory W. Dickey*
2/22/2015

NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

ANCHOR BOLT LENGTHS HAVE BEEN ASSUMED ON THE BASIS OF A 15" MINIMUM EMBEDMENT IN EXISTING CONCRETE CAPS. THIS EMBEDMENT REQUIREMENT MAY BE REDUCED TO BE IN COMPLIANCE WITH MINIMUM EMBEDMENT SPECIFIED BY THE MANUFACTURER OF THE EPOXY ADHESIVE BONDING SYSTEM.

PRIOR TO WELDING, GRIND THE GALVANIZED SURFACE OF THE PORTION OF THE EMBEDDED PLATE AND SOLE PLATE THAT ARE TO BE WELDED. AFTER WELDING, DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

WHEN WELDING THE SOLE PLATE TO THE EMBEDDED PLATE IN THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLT, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

** PLATE, BOLT, AND BEARING MAY BE SHIFTED SLIGHTLY AS NECESSARY TO CLEAR REINFORCING STEEL

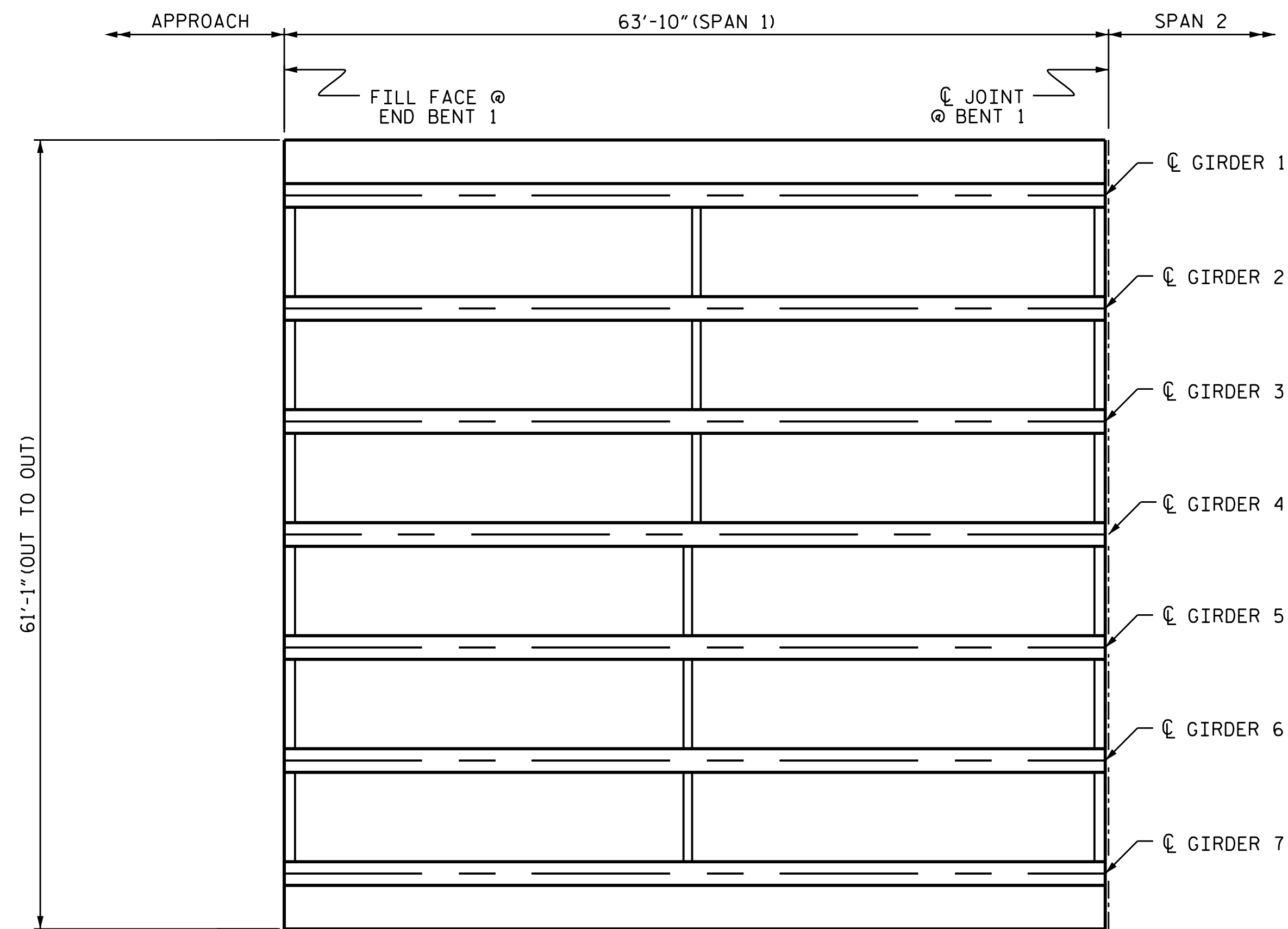
PROJECT NO. B-5938
COUNTY: CARTERET
BRIDGE NO. 68
SHEET 6 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SPAN RE-POSITIONING BEARING REPLACEMENT

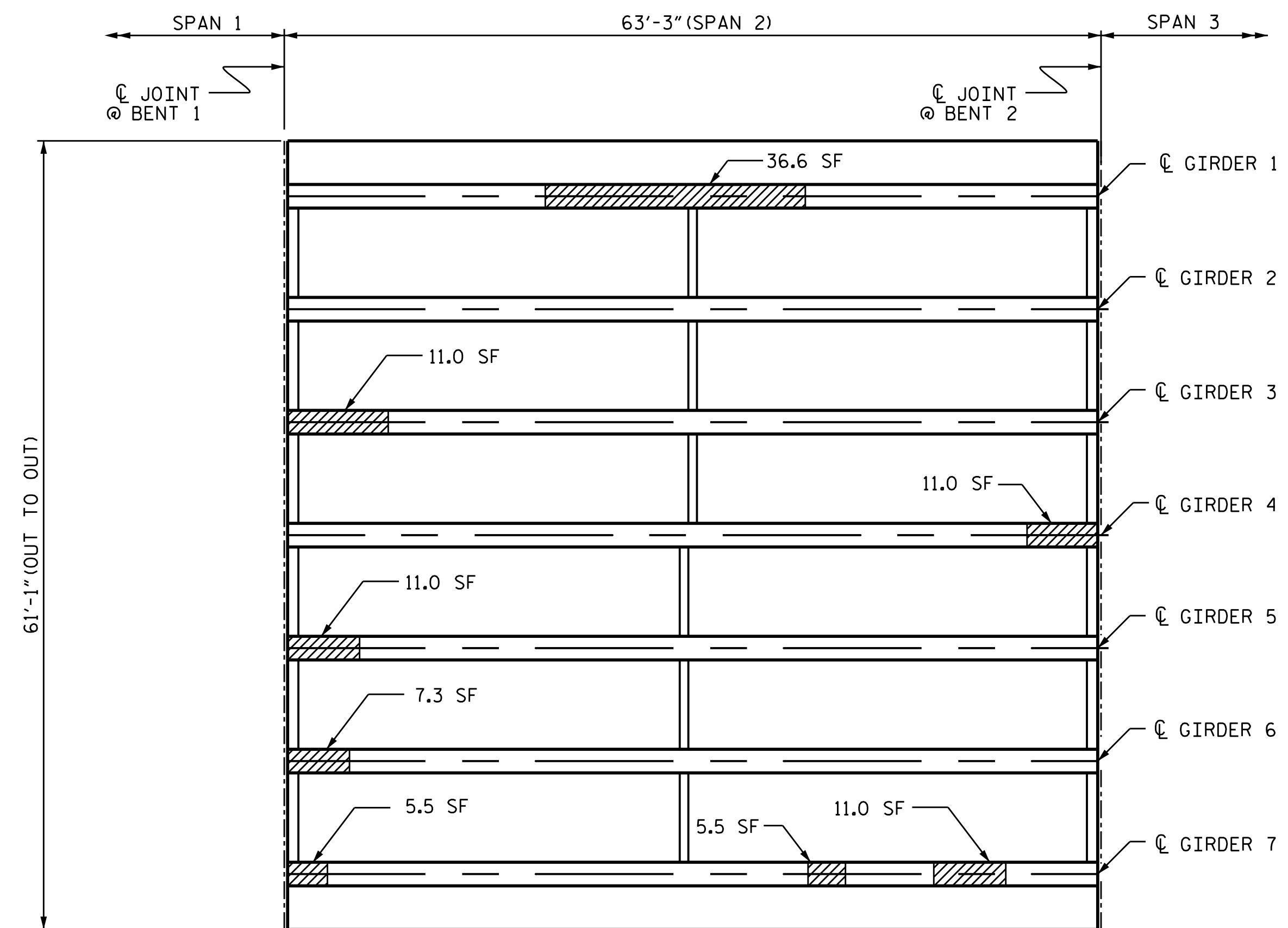
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SPAN 1 - UNDERSIDE



SPAN 2 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 1 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 2 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 98.9 | 28.9 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

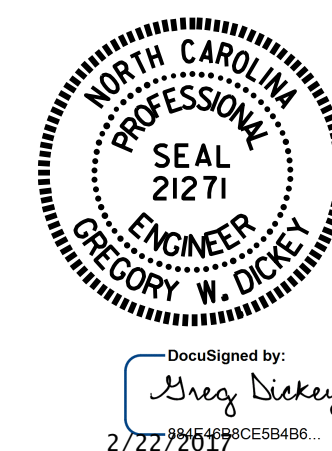
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 1 OF 24



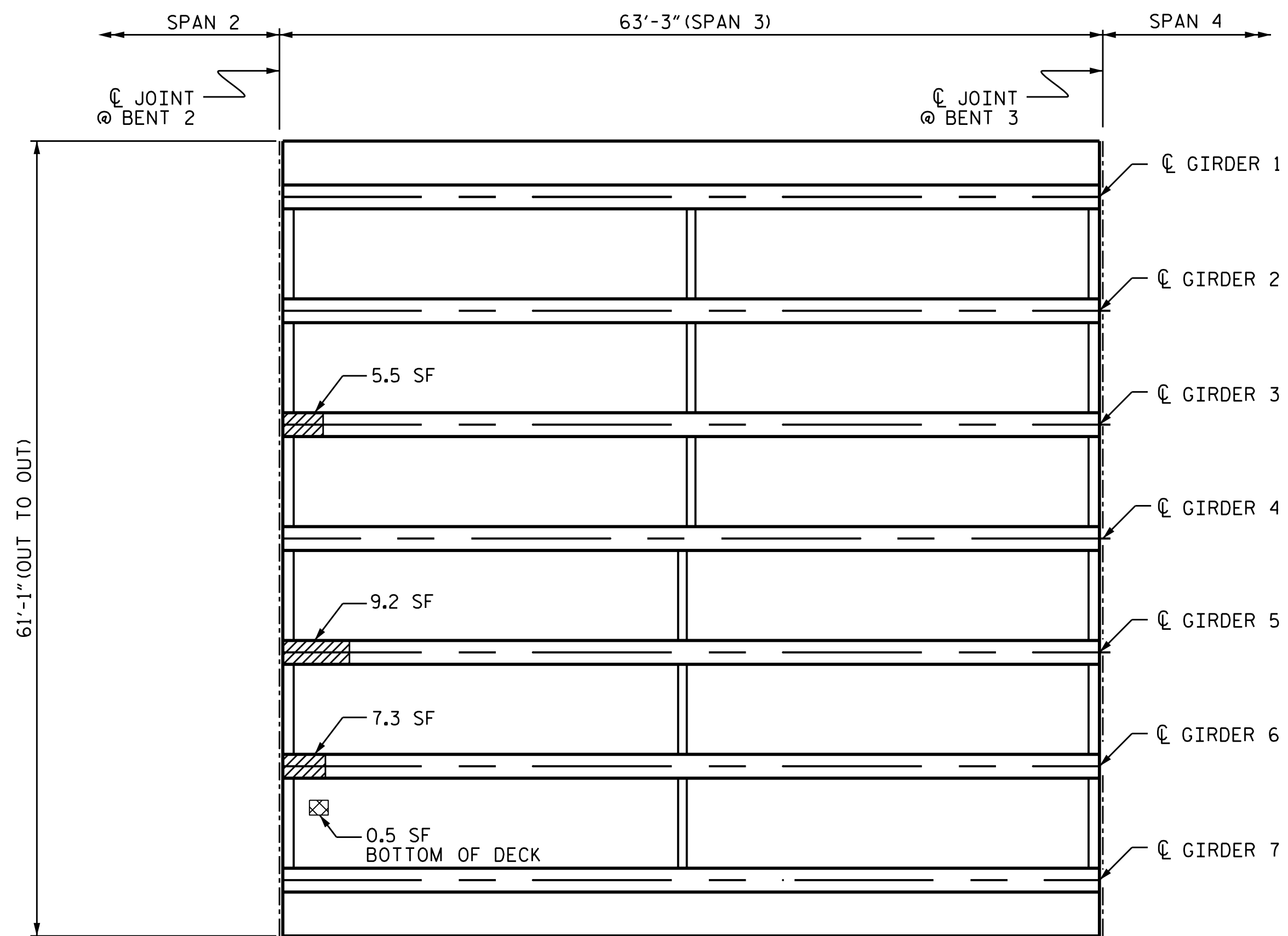
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 1 & 2

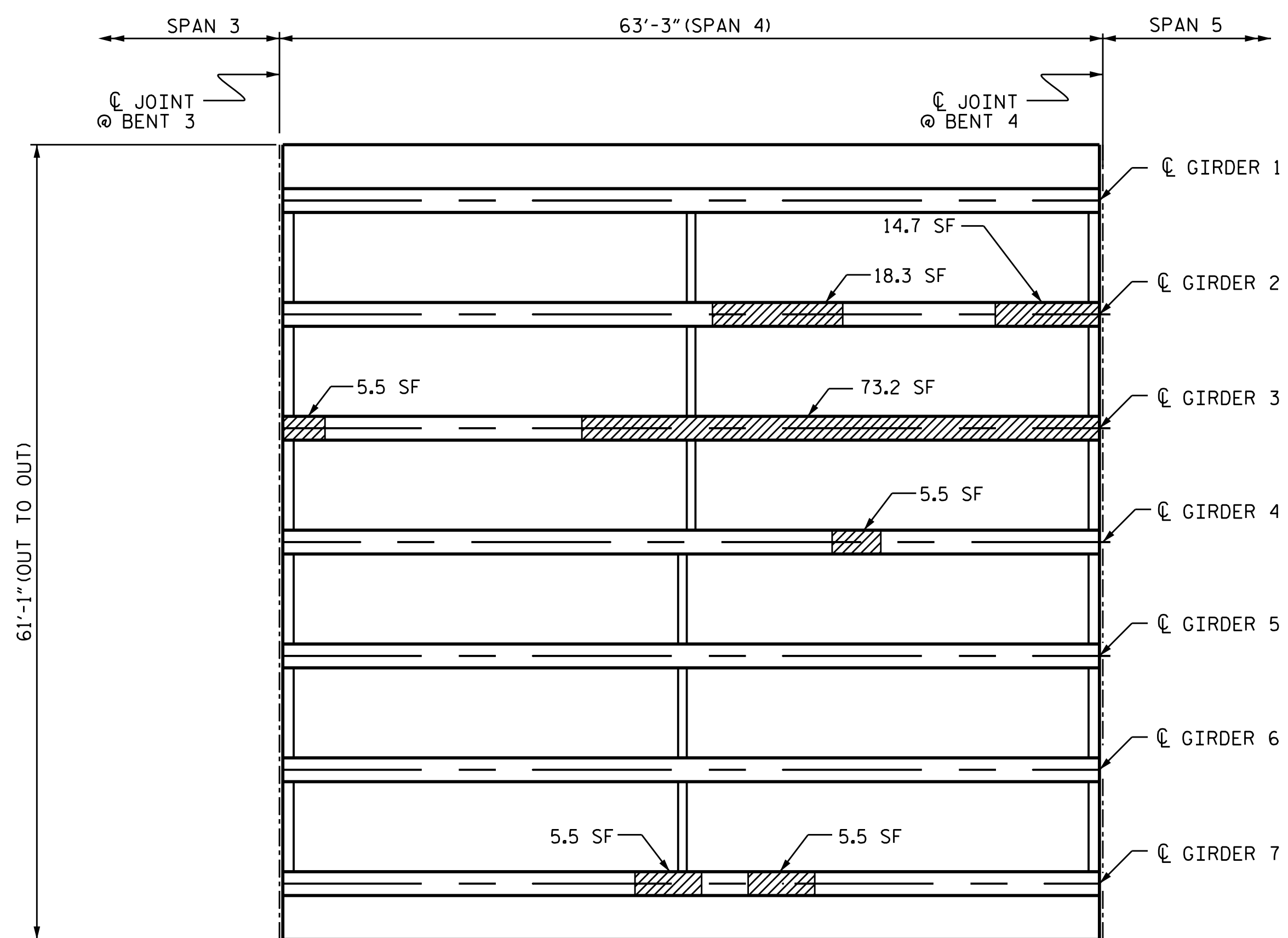
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| 1 | | | 3 | | | TOTAL SHEETS |
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SPAN 3 - UNDERSIDE



SPAN 4 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 3 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 22.0 | 6.5 | | |
| SHOTCRETE REPAIRS | 0.5 | 0.3 | | |
| REPAIRS SPAN 4 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 128.2 | 37.4 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

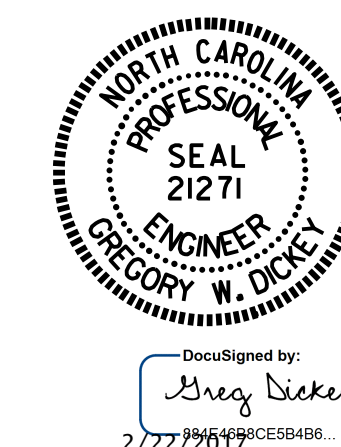
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 24



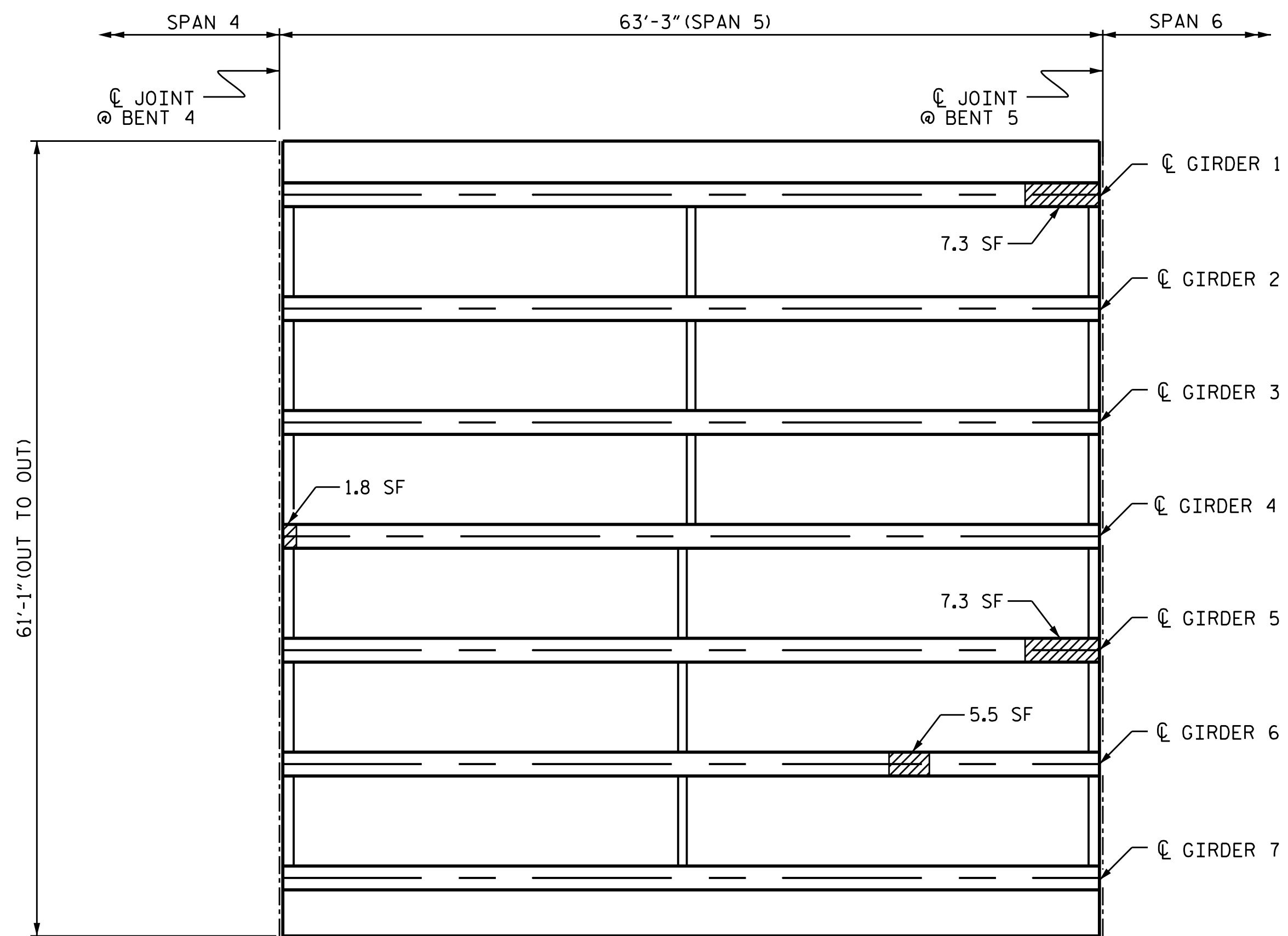
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 3 & 4

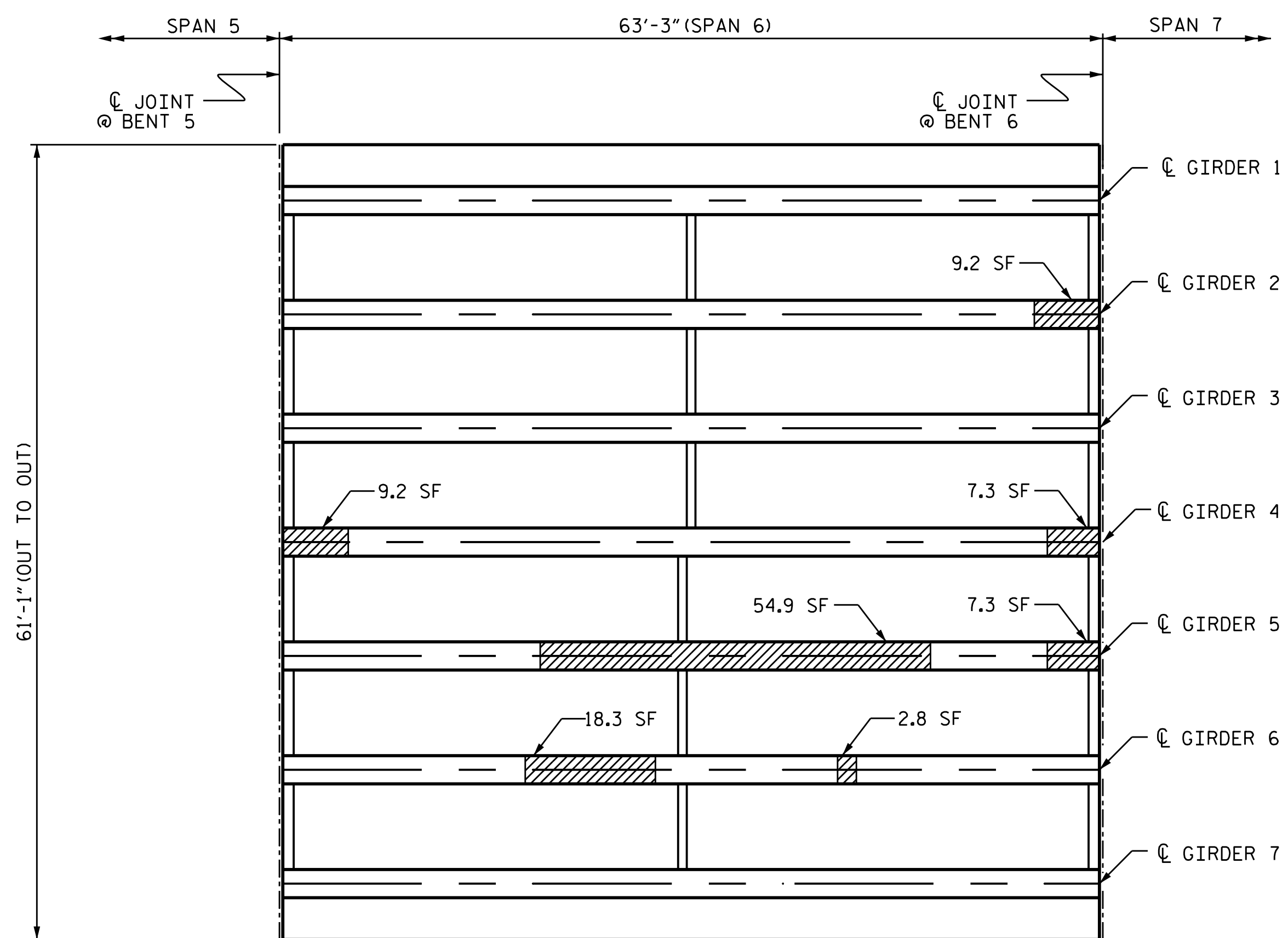
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SPAN 5 - UNDERSIDE



SPAN 6 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 5 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 21.9 | 6.4 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 6 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 109.0 | 31.8 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

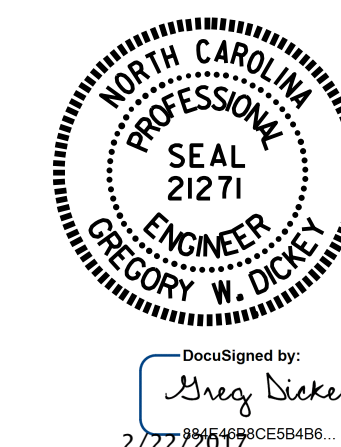
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 3 OF 24



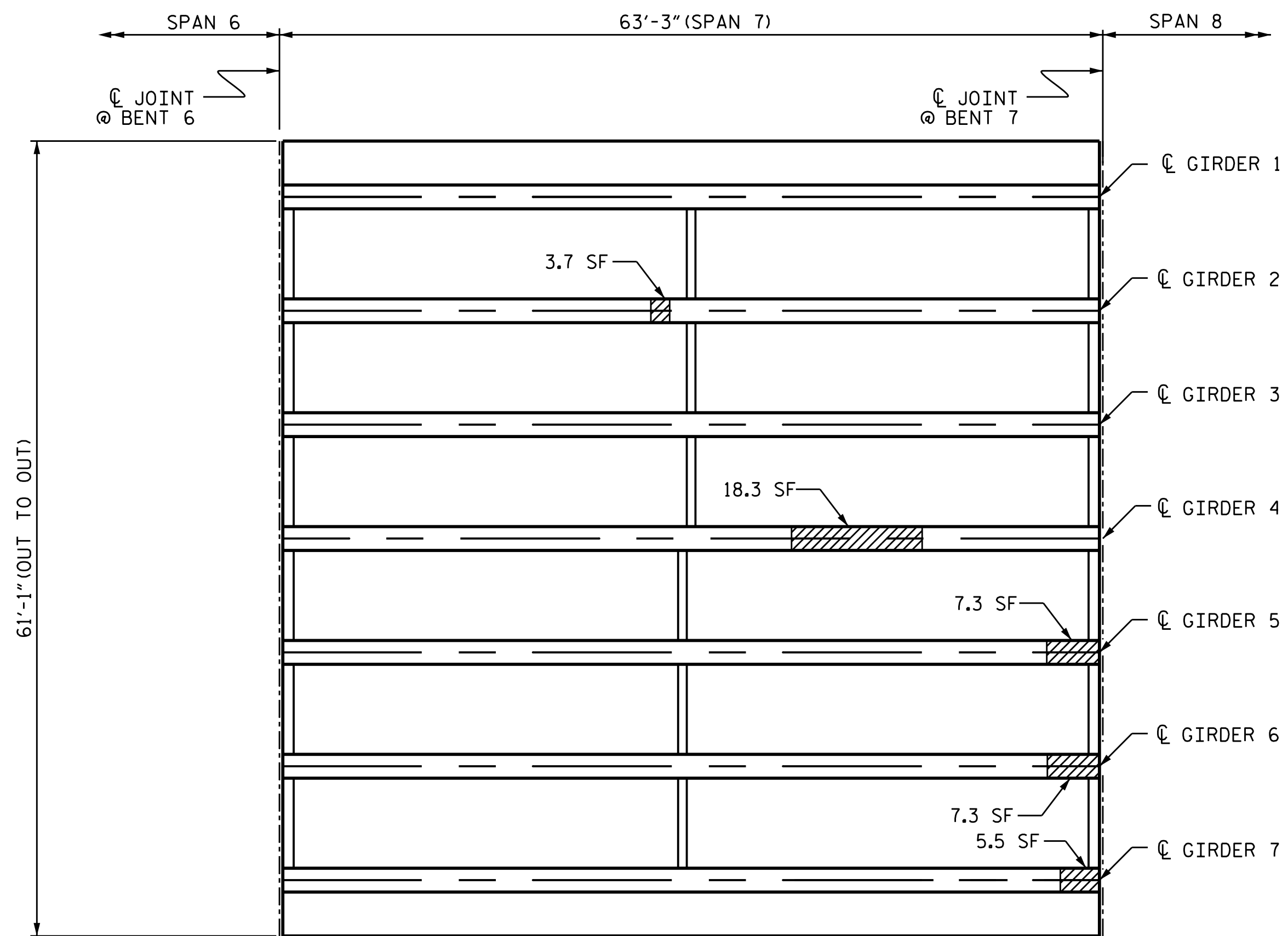
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 RALEIGH

FRAMING PLAN
 SPANS 5 & 6

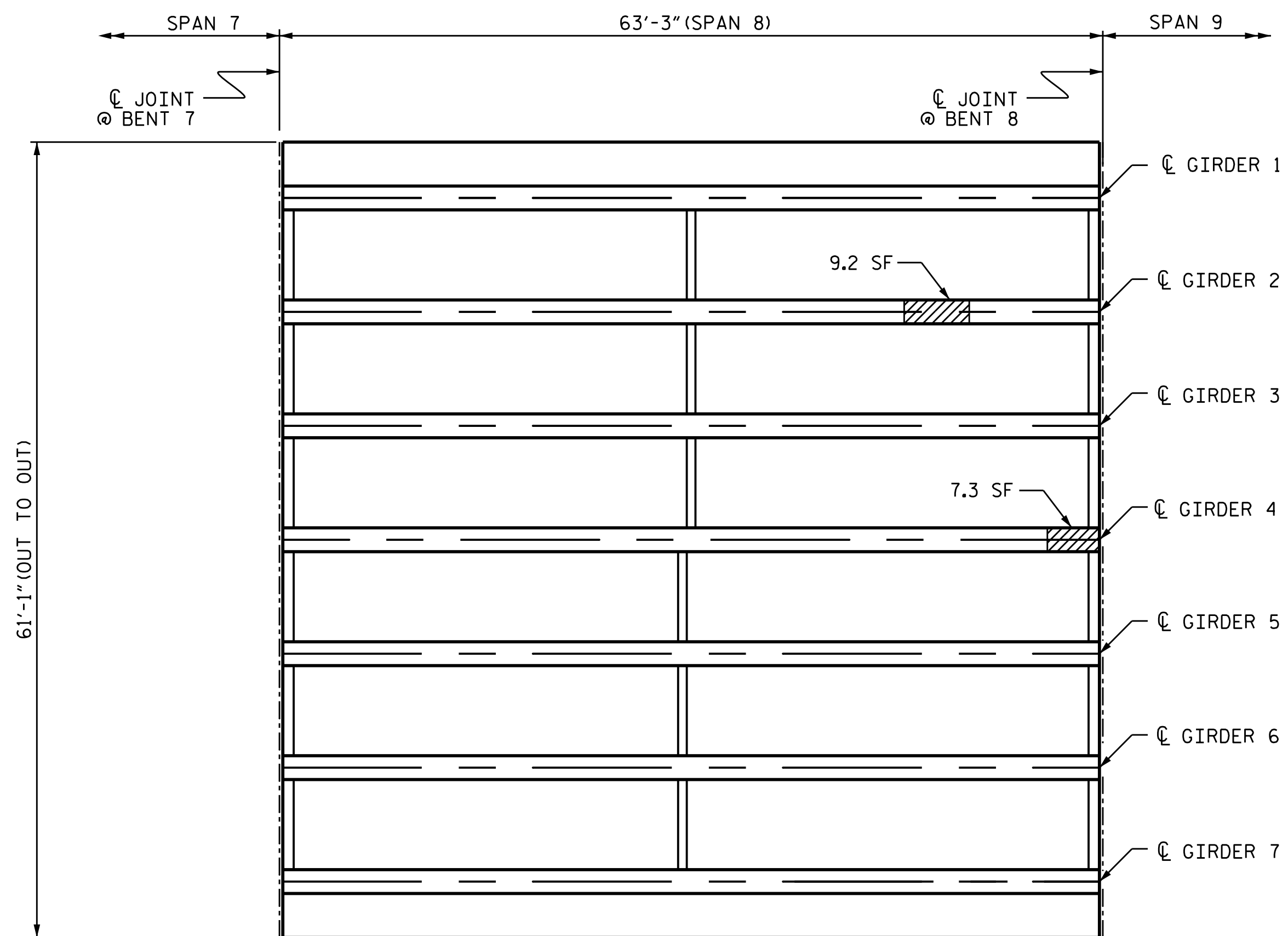
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SPAN 7 - UNDERSIDE



SPAN 8 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 7 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 42.1 | 12.3 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 8 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 16.5 | 4.8 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

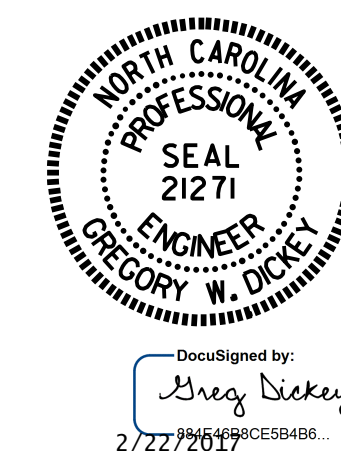
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 4 OF 24



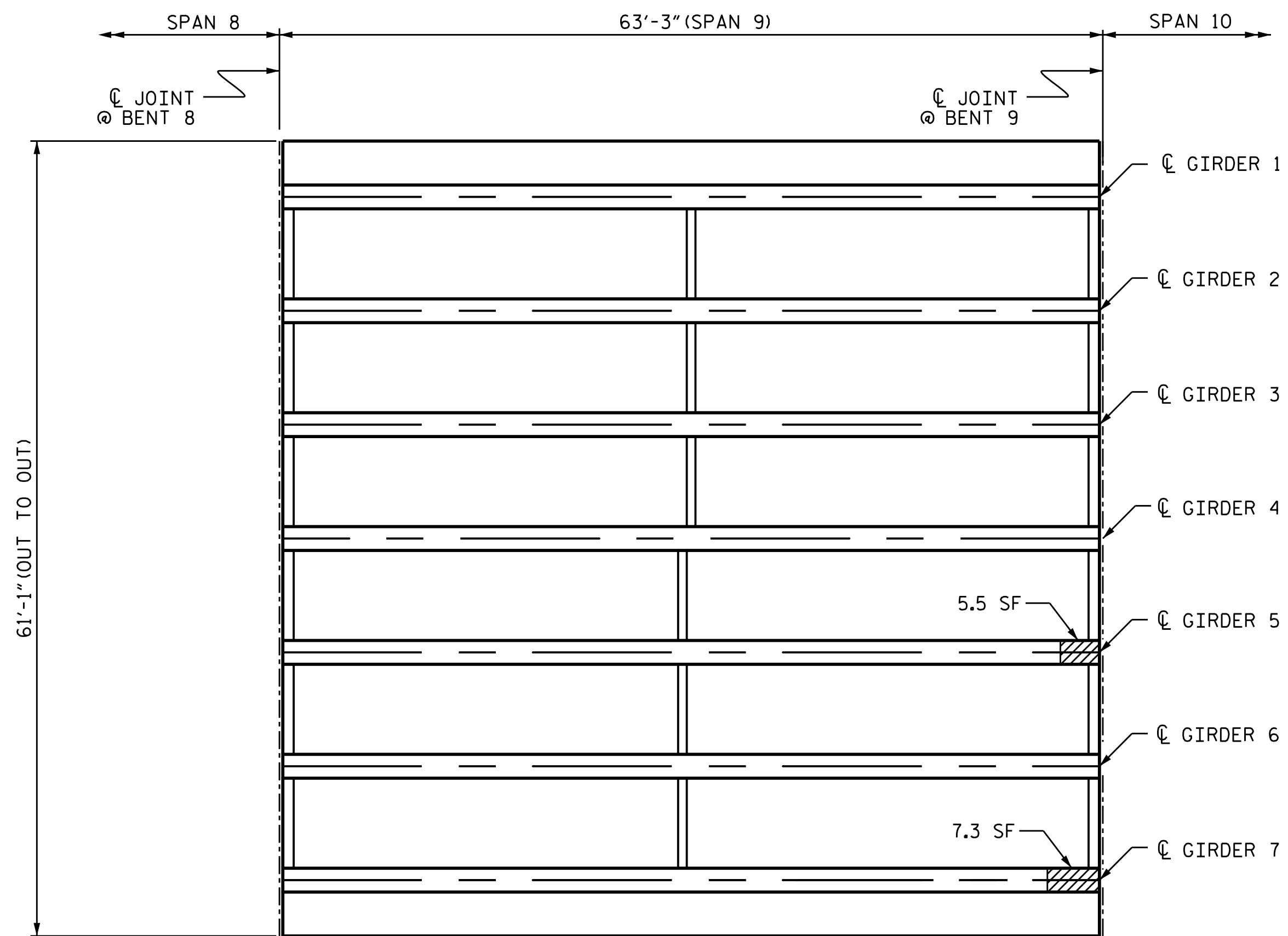
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 7 & 8

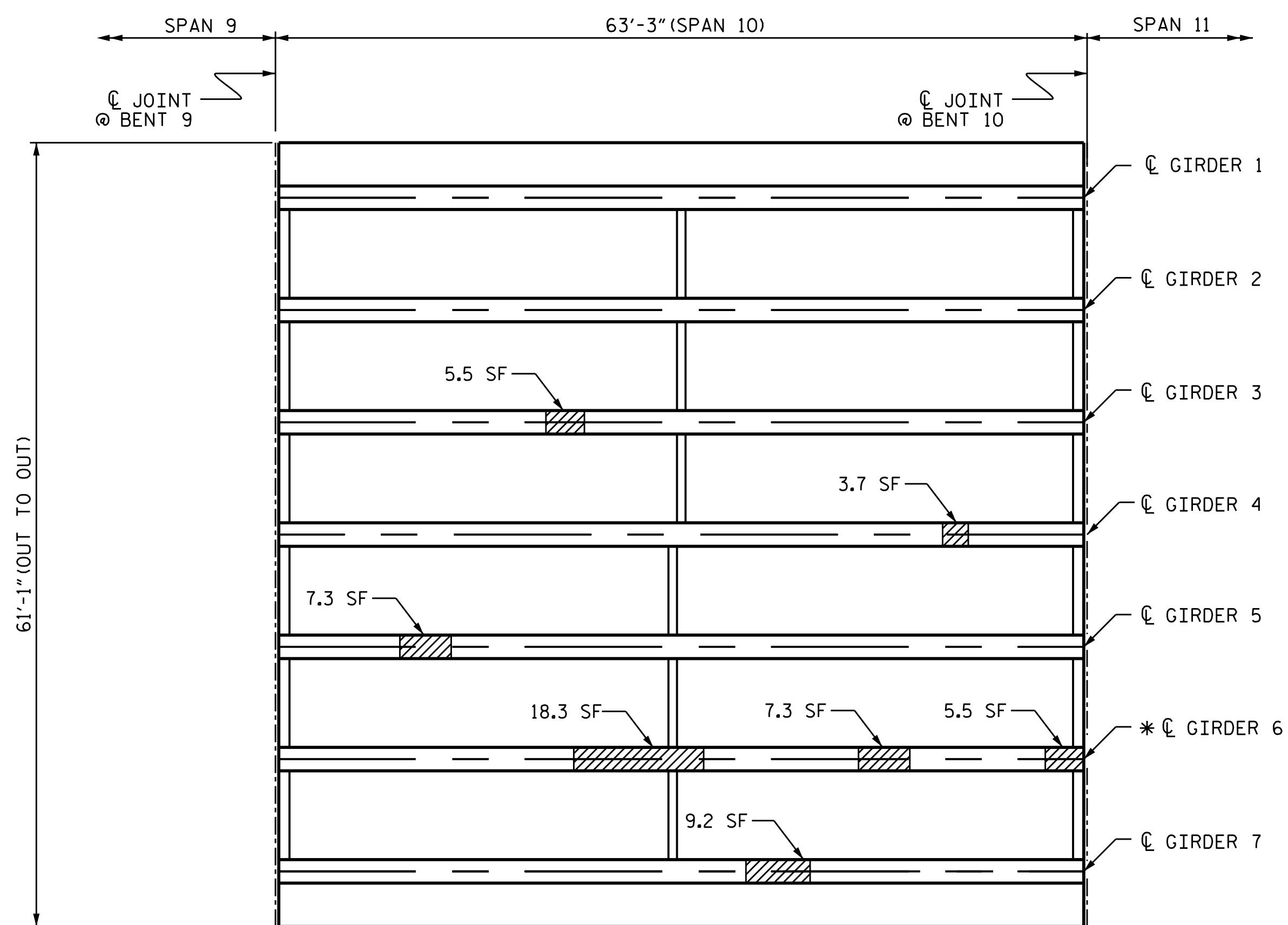
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| 1 | | | 3 | | | TOTAL SHEETS | - |
| 2 | | | 4 | | | | |



SPAN 9 - UNDERSIDE



SPAN 10 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 9 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 12.8 | 3.7 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 10 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 56.8 | 16.6 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

SPAN 10, GIRDER 6 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

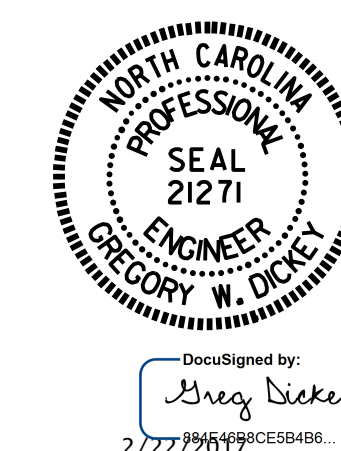
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 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 5 OF 24



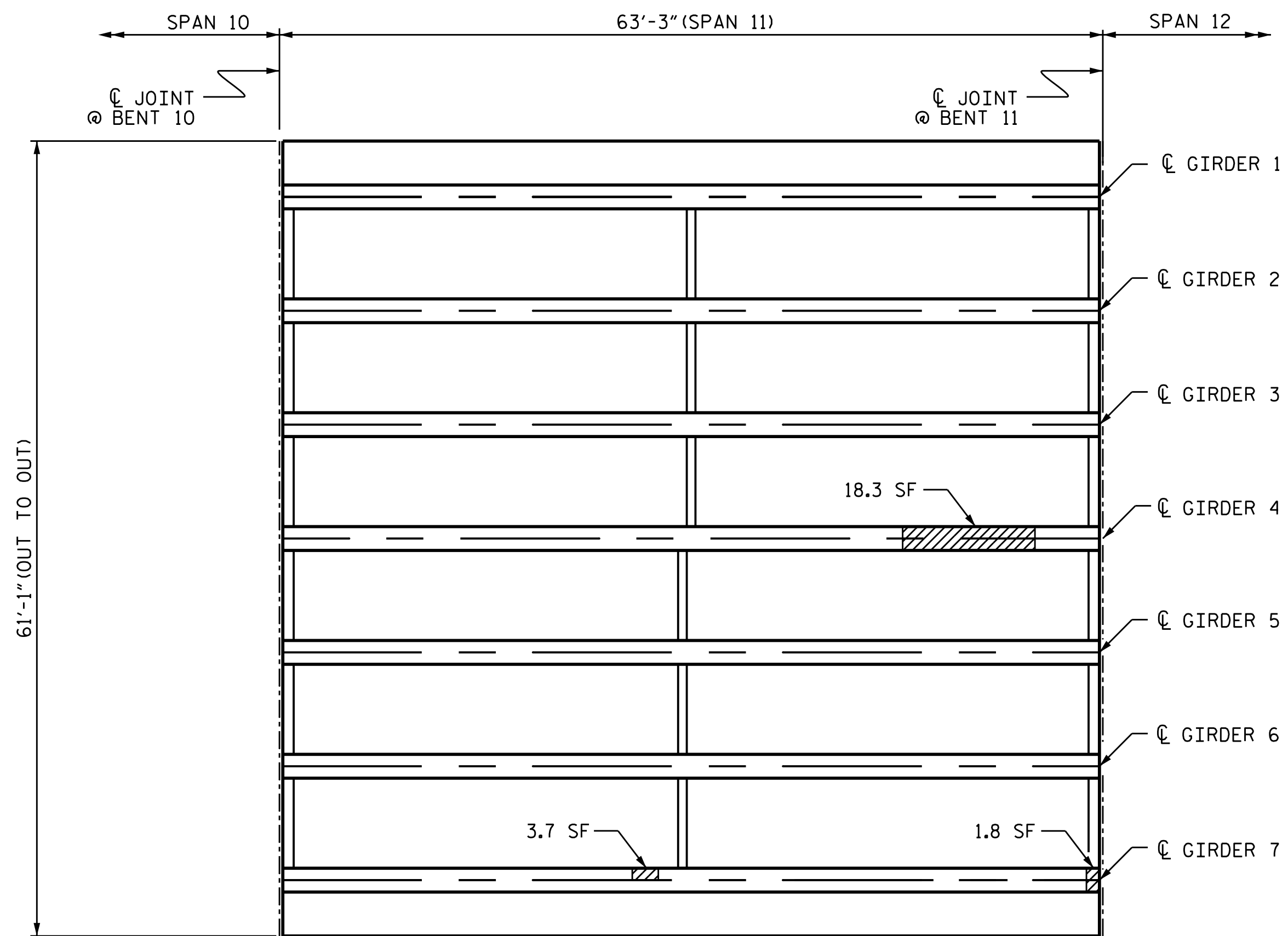
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 9 & 10

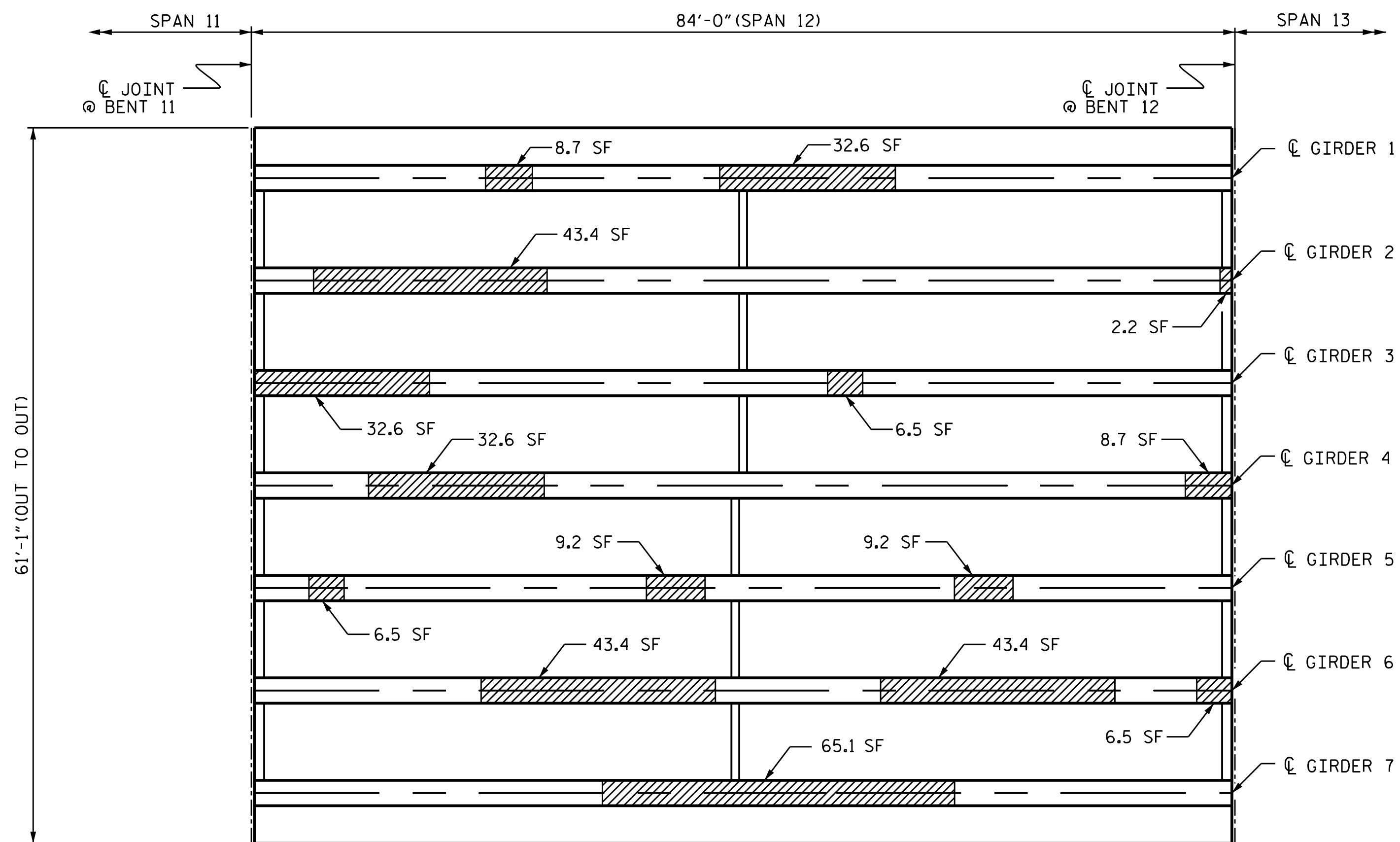
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| 2 | | | 4 | | | | |



SPAN 11 - UNDERSIDE



SPAN 12 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 11 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 23.8 | 7.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 12 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 350.6 | 120.3 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

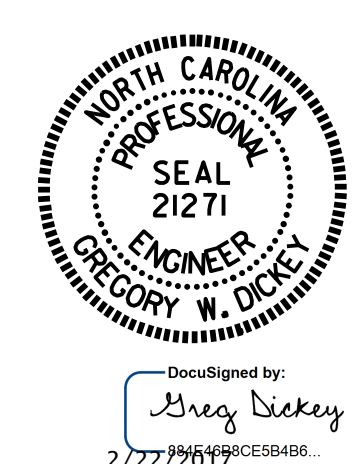
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 6 OF 24



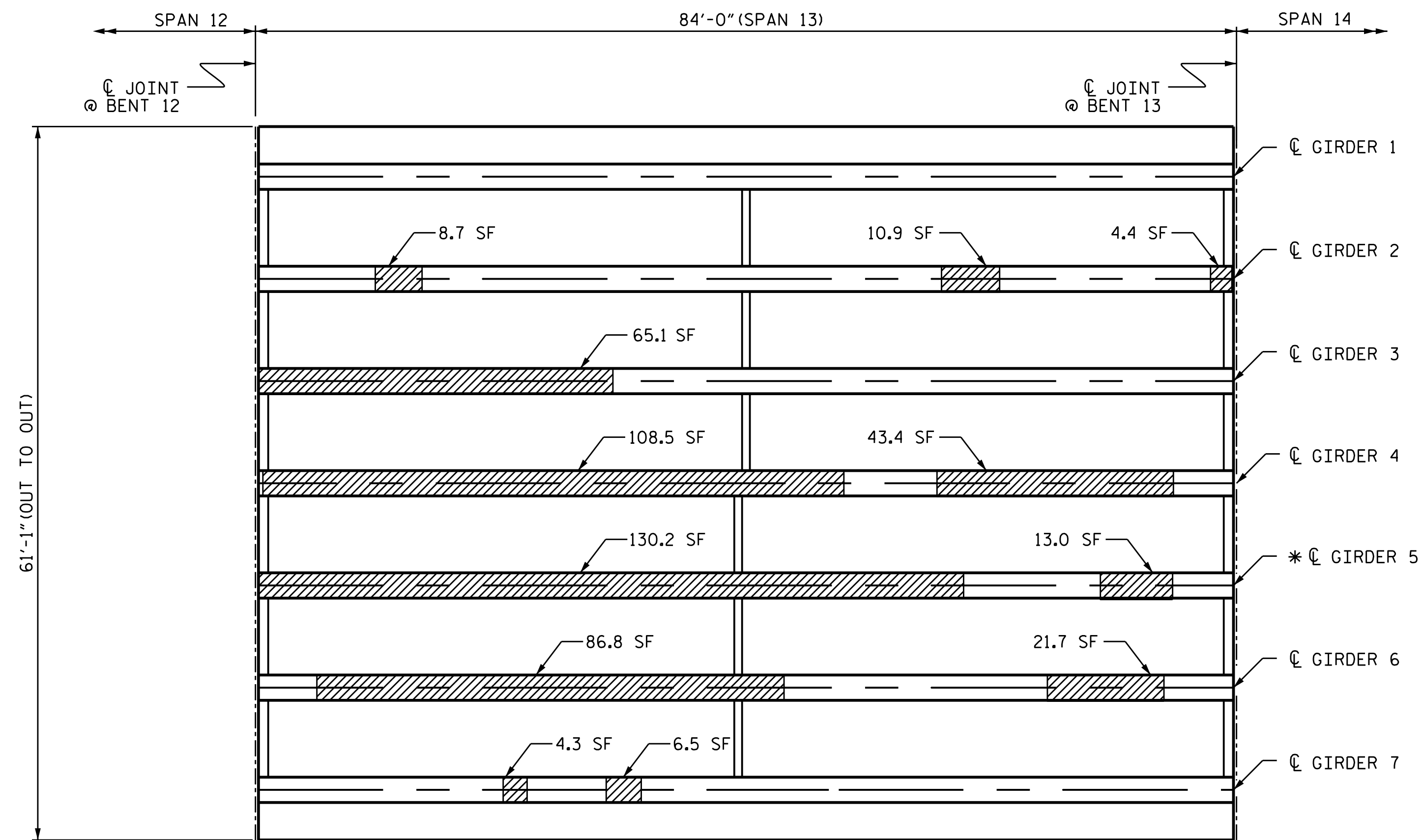
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 11 & 12

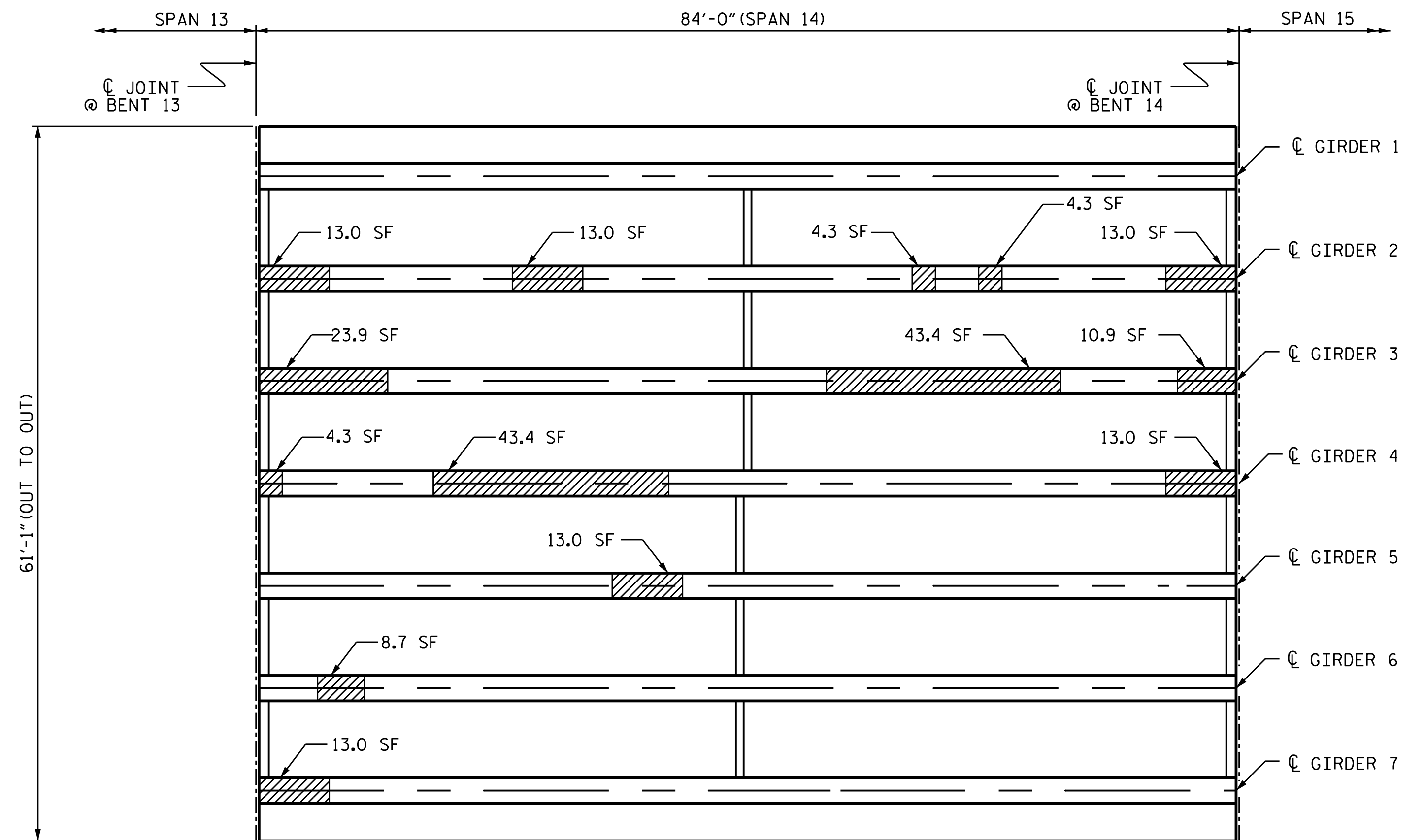
DRAWN BY : S. T. SANDOR DATE : 08/2016
 CHECKED BY : P. D. BRYANT DATE : 08/2016

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



SPAN 13 - UNDERSIDE



SPAN 14 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 13 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 503.5 | 146.9 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 14 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 221.2 | 64.5 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

SPAN 13, GIRDER 5 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

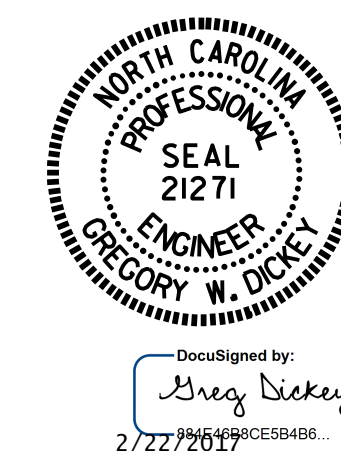
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 7 OF 24



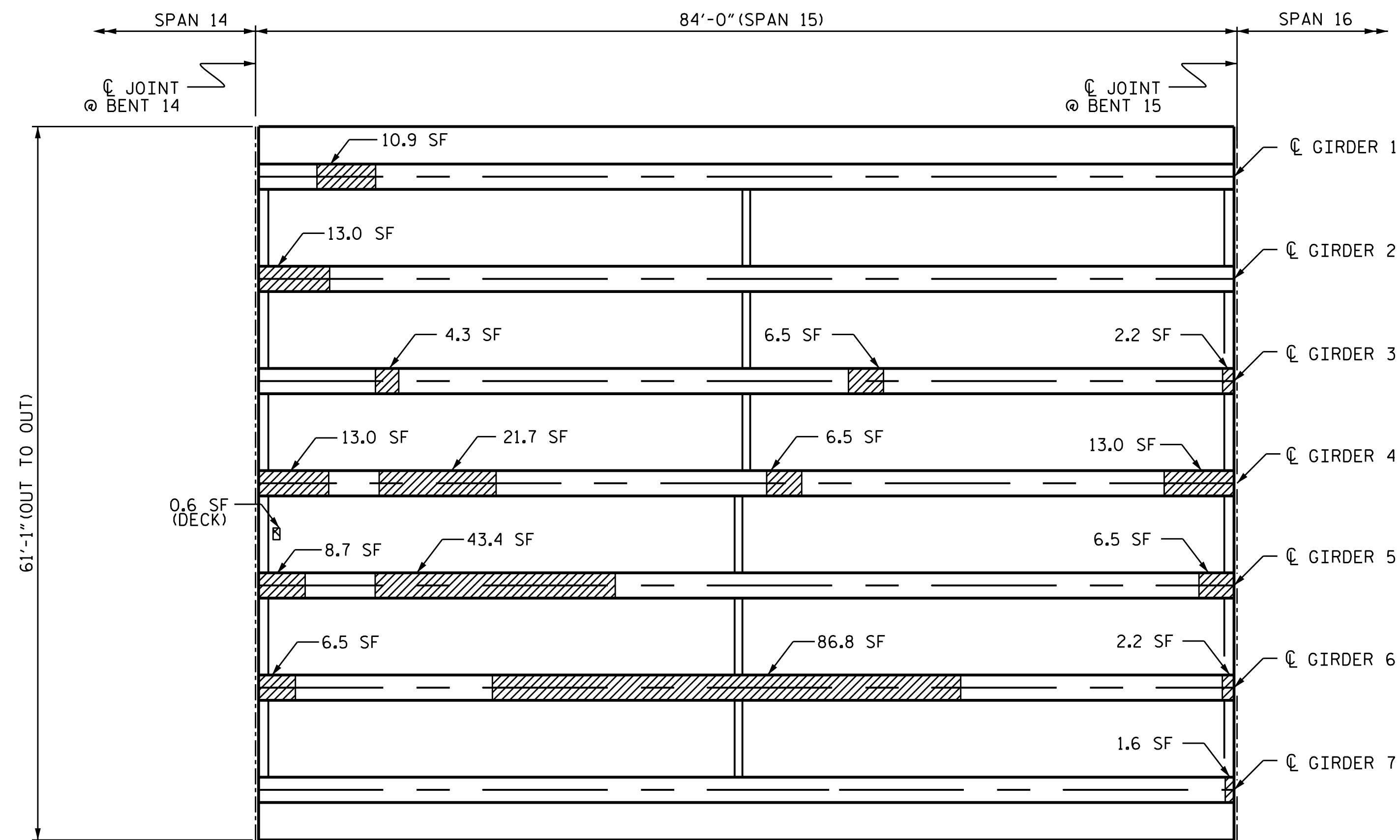
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 13 & 14

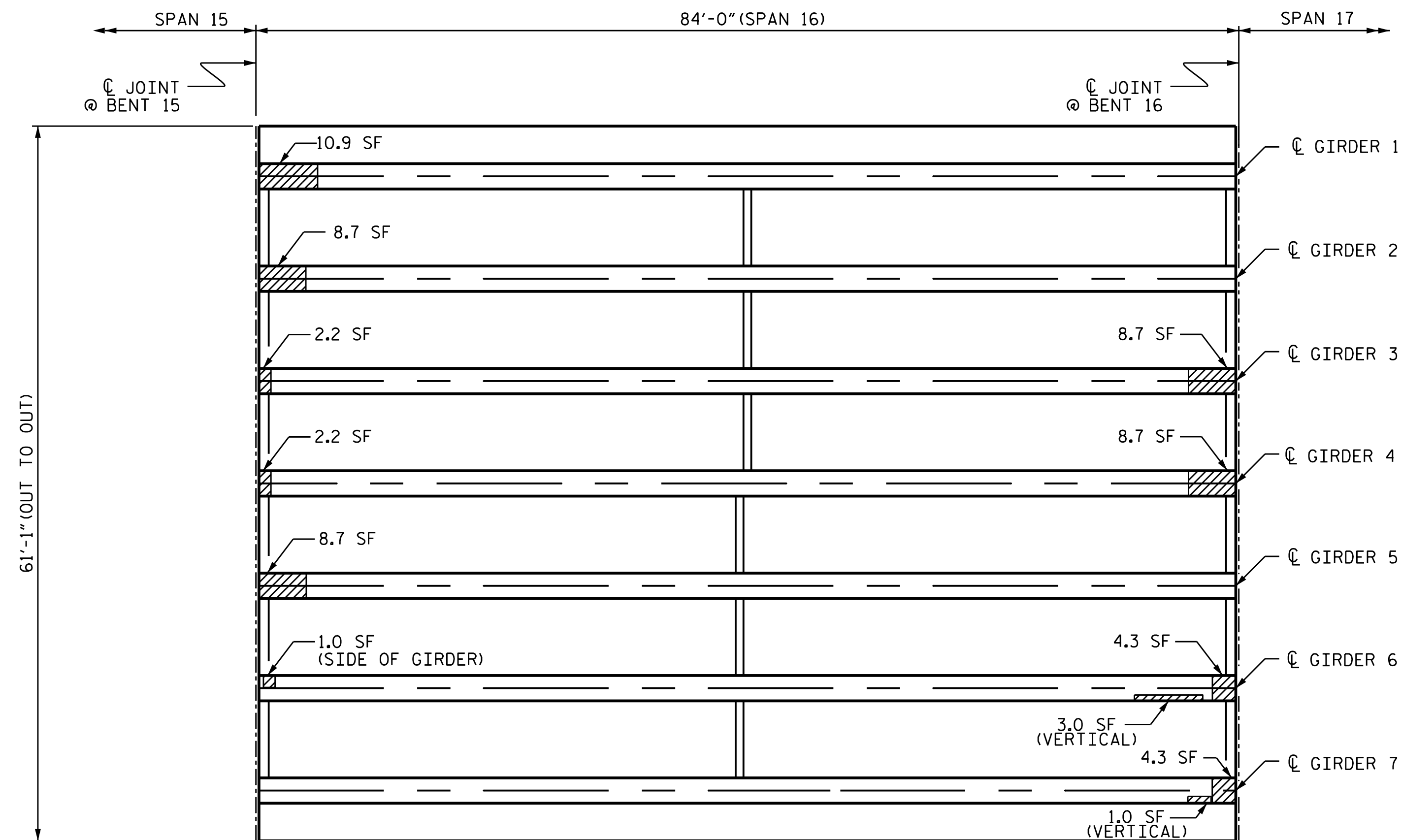
DRAWN BY : S. T. SANDOR DATE : 08/2016
 CHECKED BY : P. D. BRYANT DATE : 08/2016

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



SPAN 15 - UNDERSIDE



SPAN 16 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 15 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 246.8 | 72.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 16 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 63.8 | 18.4 | | |
| SHOTCRETE REPAIRS | 0.6 | 0.3 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

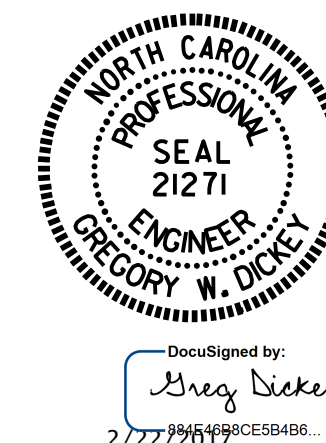
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 8 OF 24



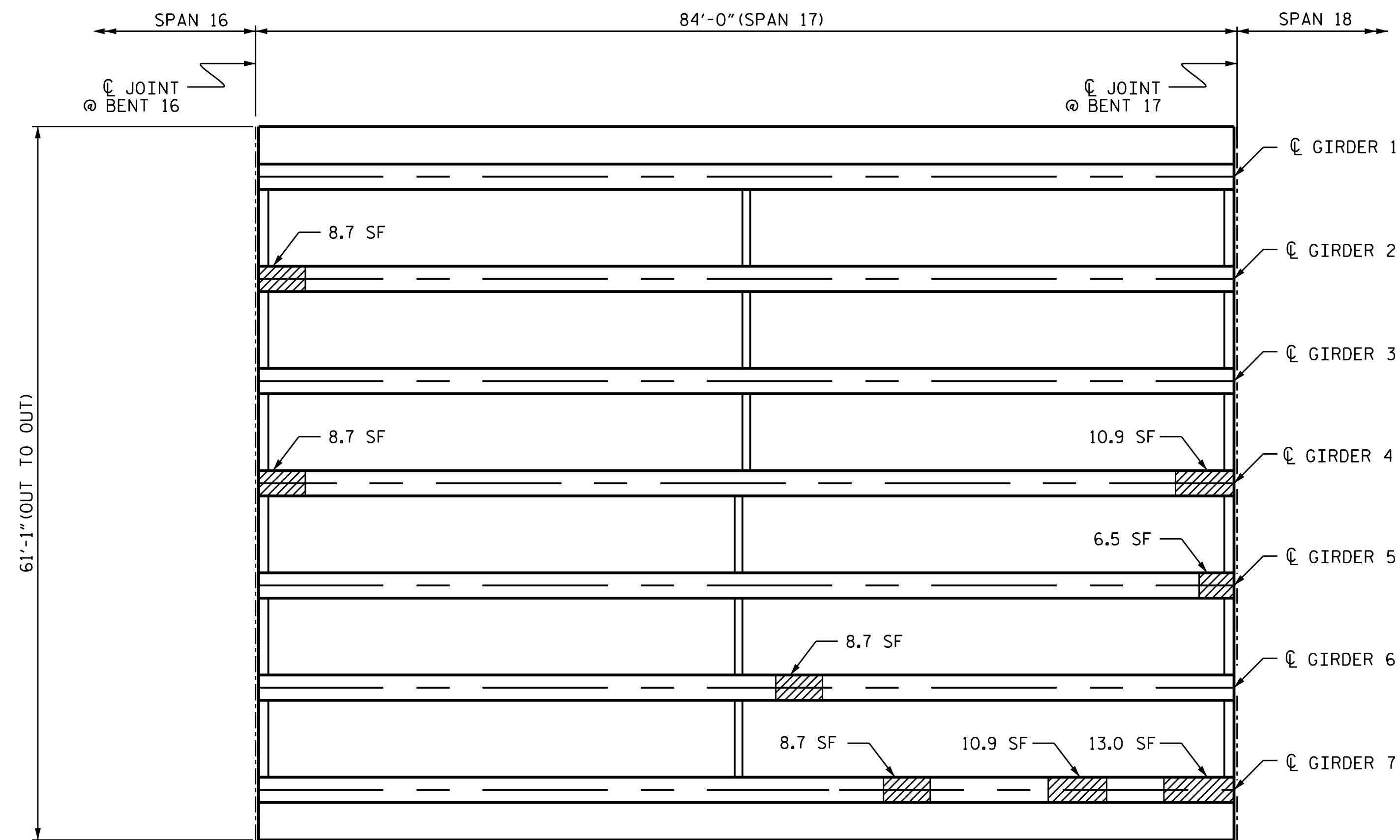
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 15 & 16

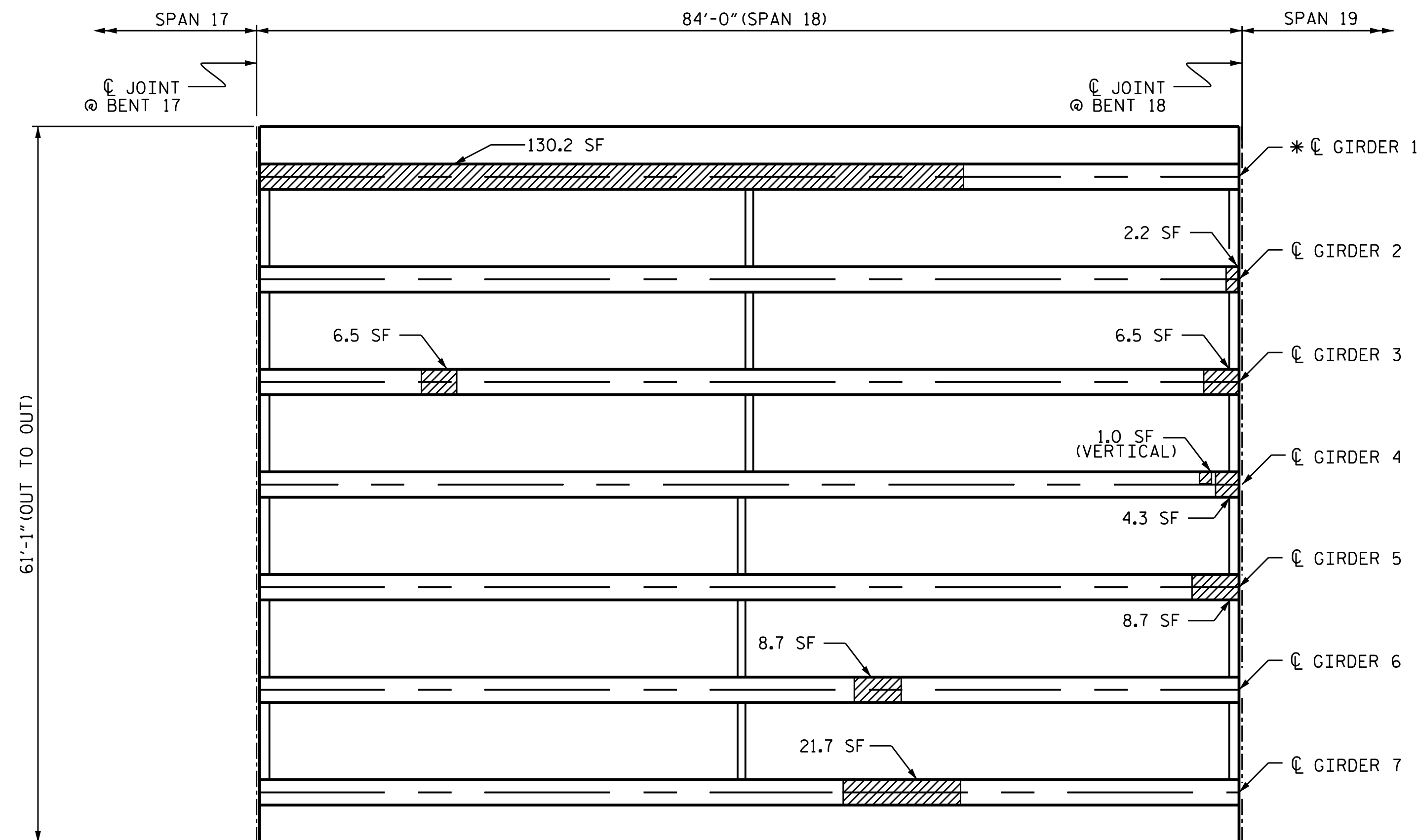
DRAWN BY : S. T. SANDOR DATE : 08/2016
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|-----------|-----|-------|-----|-----|-------|--------------|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-22 | |
| 1 | | | 3 | | | TOTAL SHEETS | - |
| 2 | | | 4 | | | | |



SPAN 17 - UNDERSIDE



SPAN 18 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 17 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 76.1 | 22.2 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 18 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 189.8 | 55.4 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

SPAN 18, GIRDER 1 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

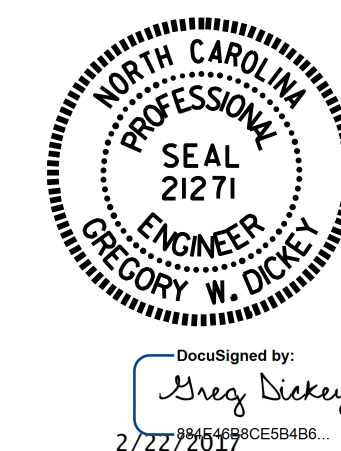
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68
 SHEET 9 OF 24



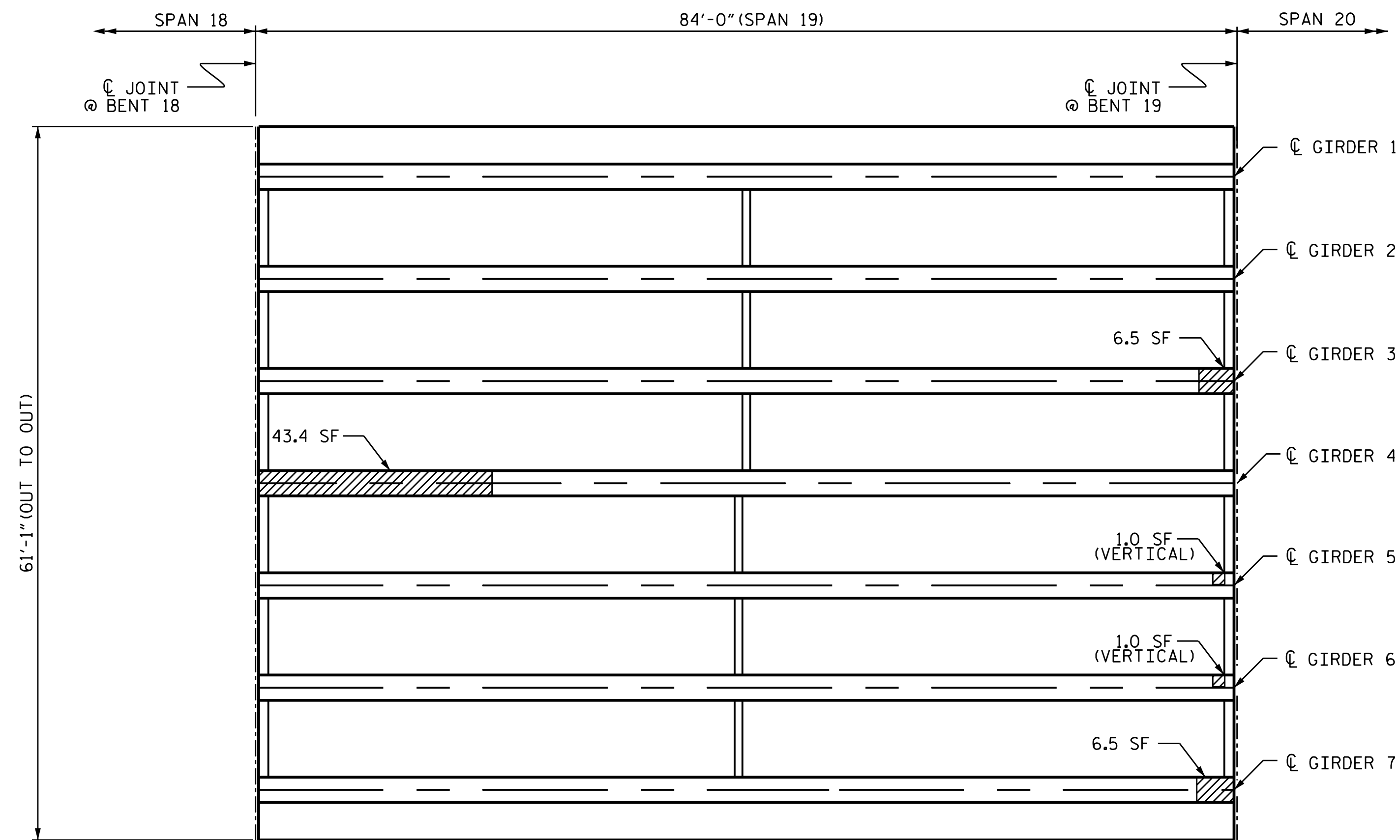
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 17 & 18

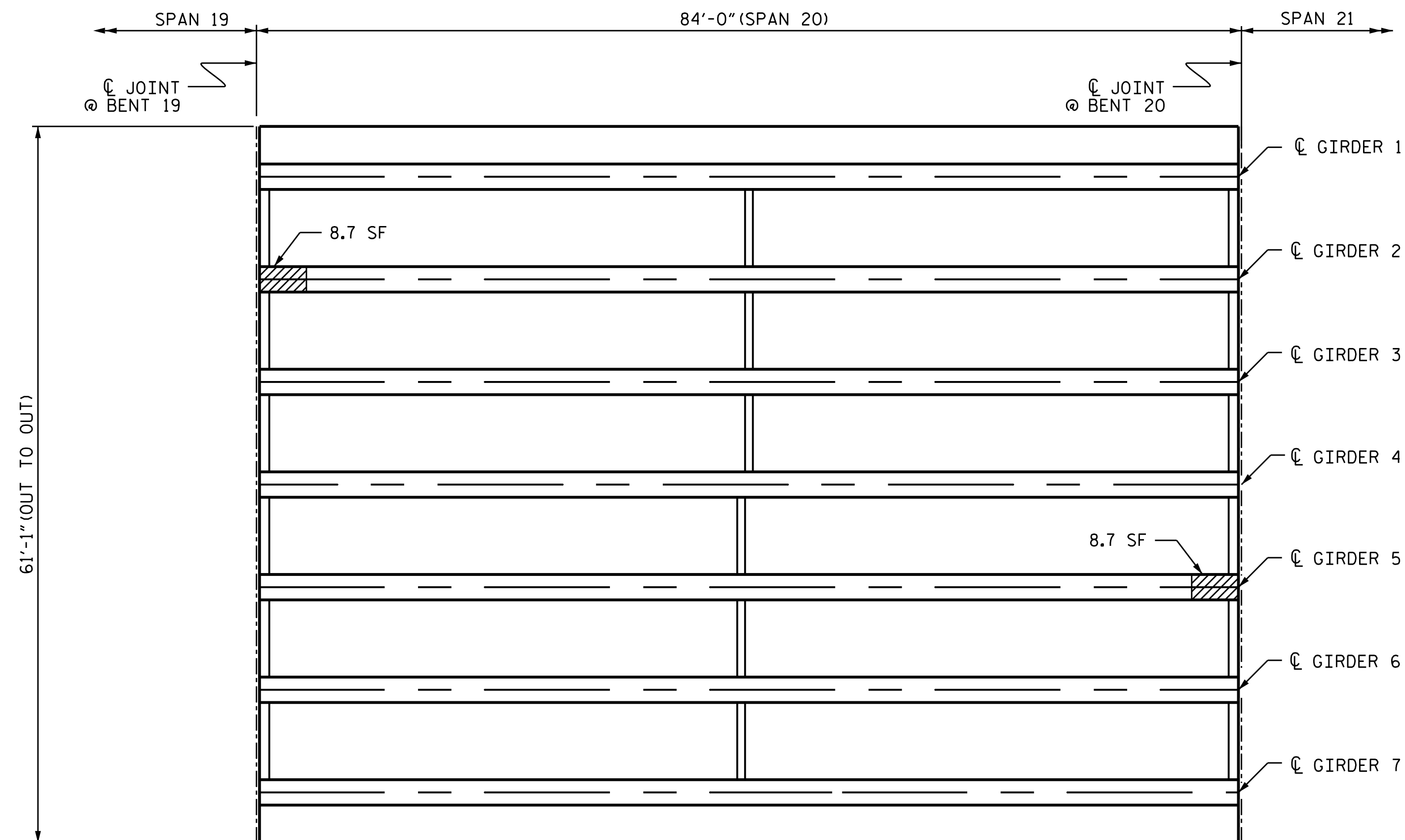
DRAWN BY : S. T. SANDOR DATE : 08/2016
 CHECKED BY : P. D. BRYANT DATE : 08/2016

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|-----------|-----|-------|-----|-----|-------|--------------------|
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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 19 - UNDERSIDE



SPAN 20 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 19 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 58.4 | 17.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 20 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 17.4 | 5.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

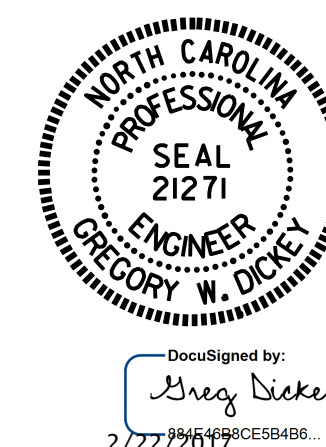
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 10 OF 24



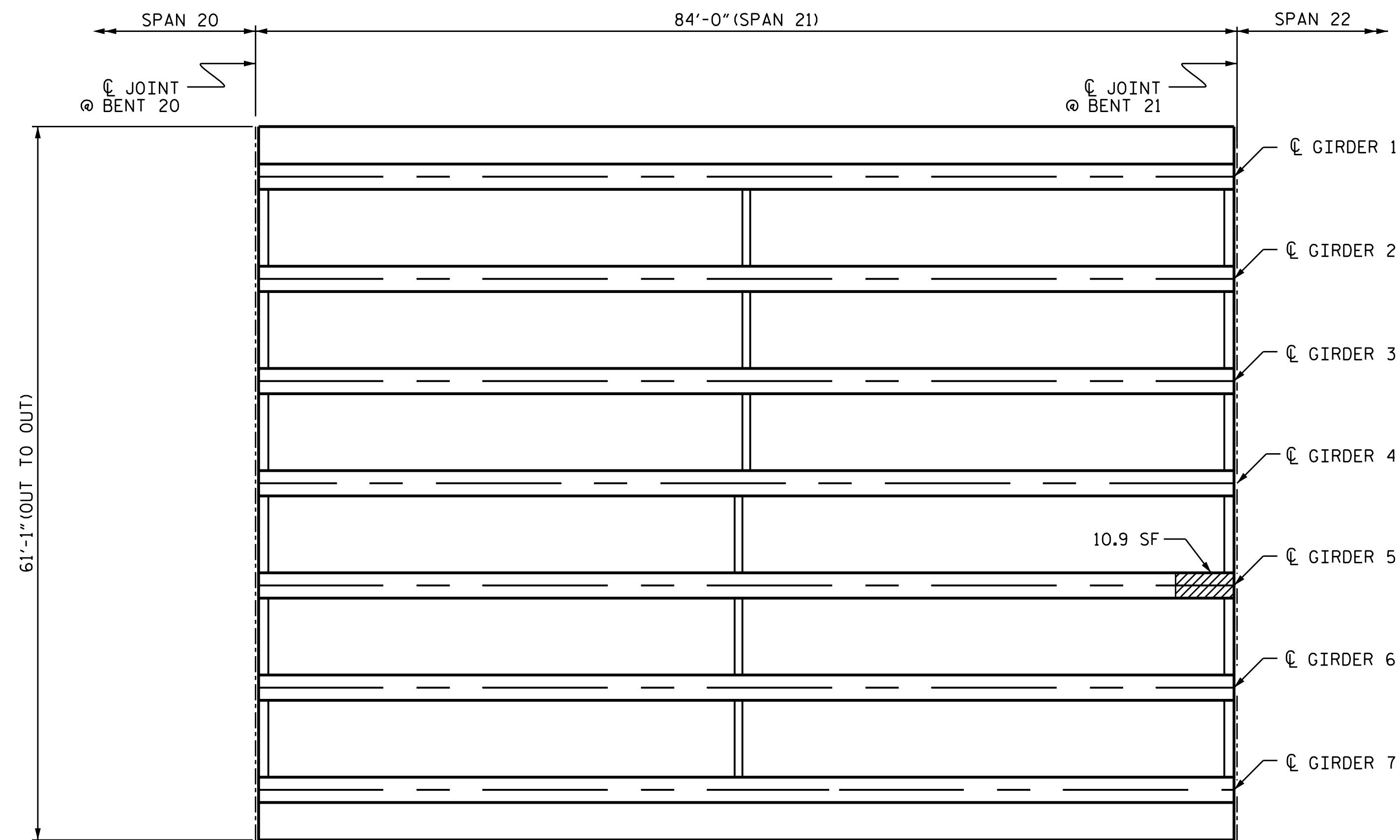
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 19 & 20

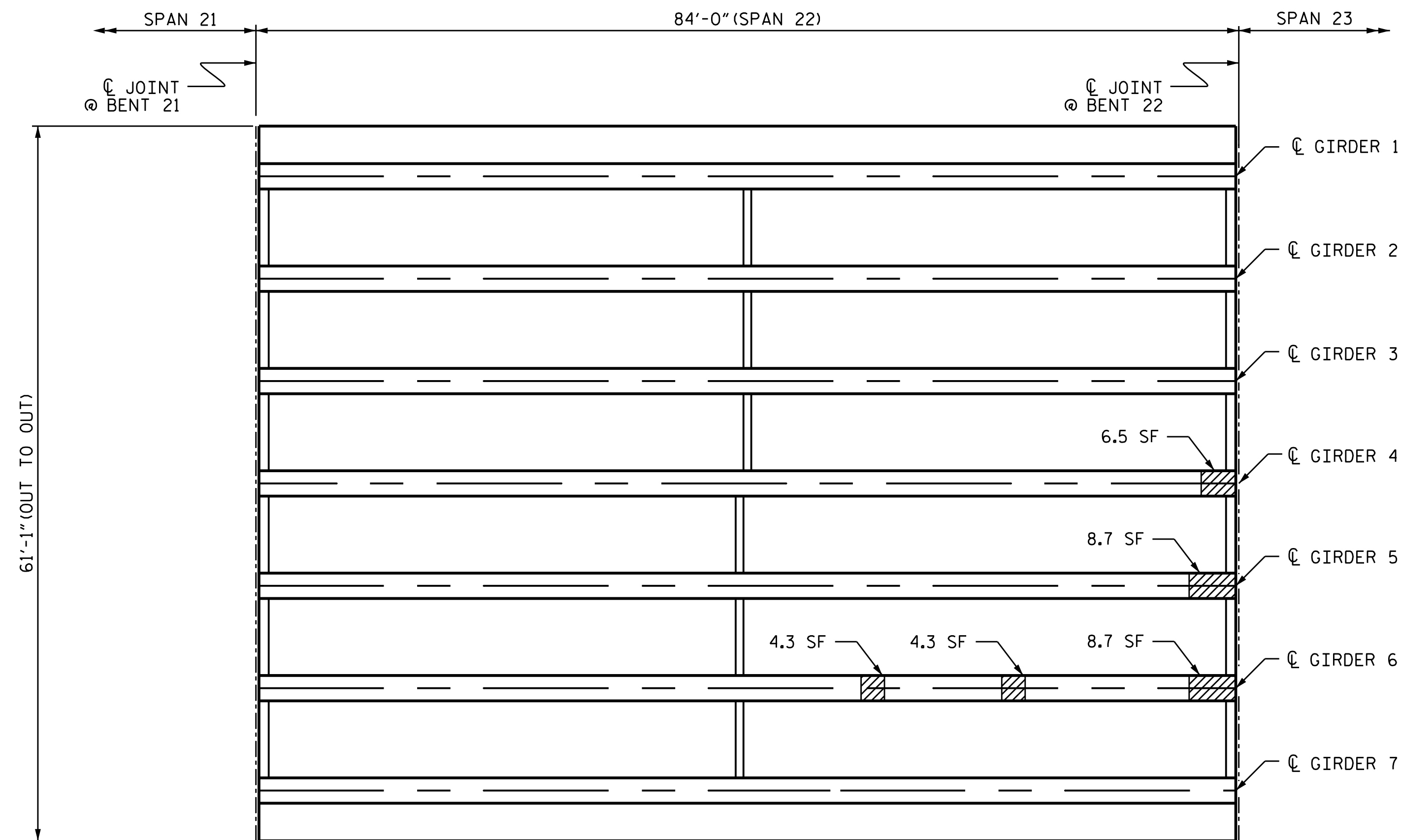
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 CHECKED BY : P. D. BRYANT DATE : 08/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-24 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 21 - UNDERSIDE



SPAN 22 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 21 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 10.9 | 3.2 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 22 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 32.5 | 9.5 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

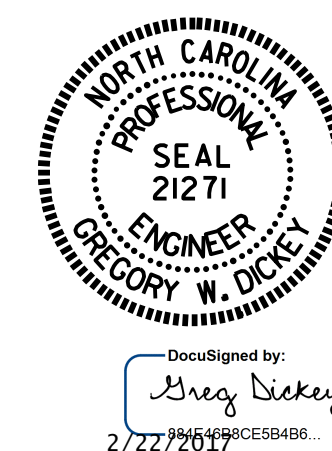
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 11 OF 24



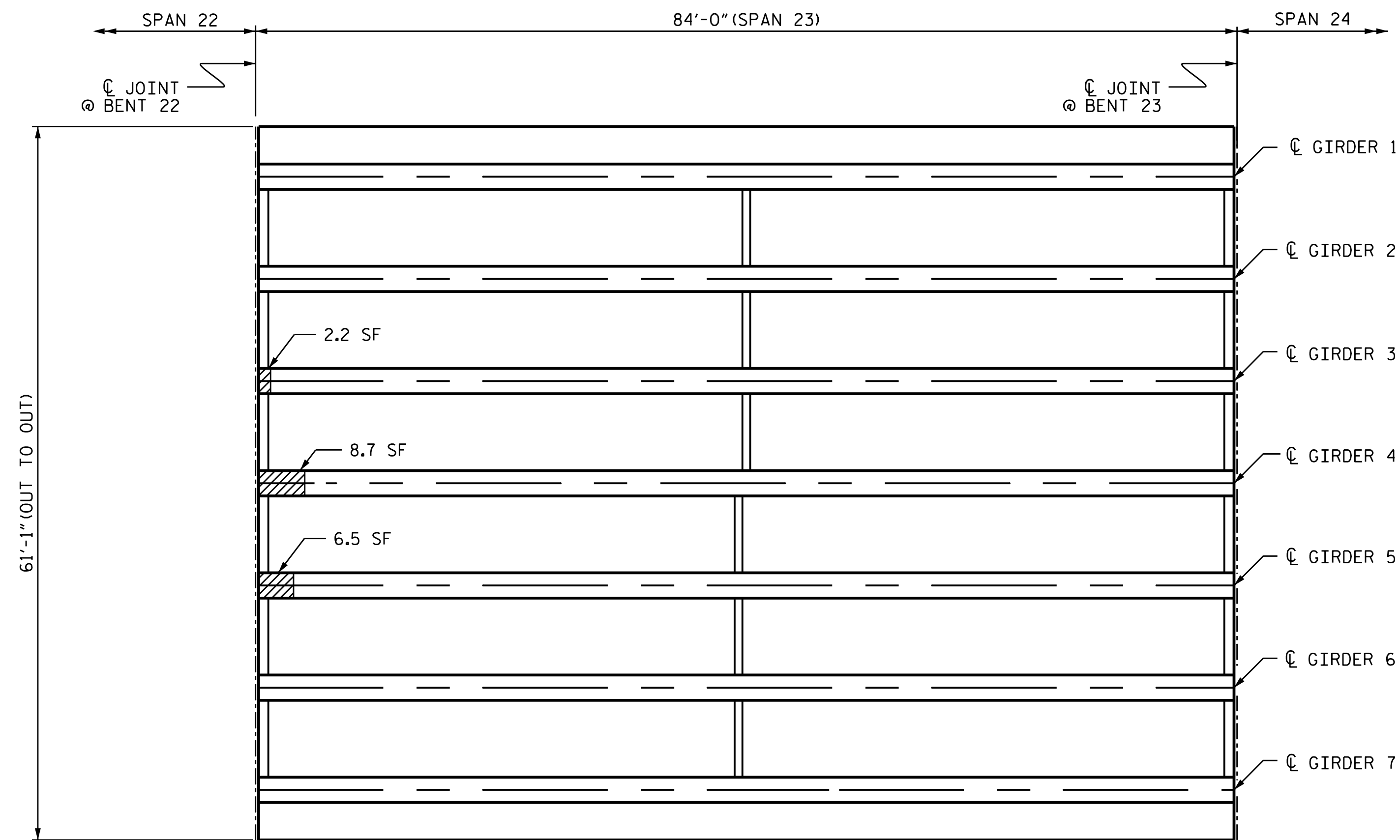
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 21 & 22

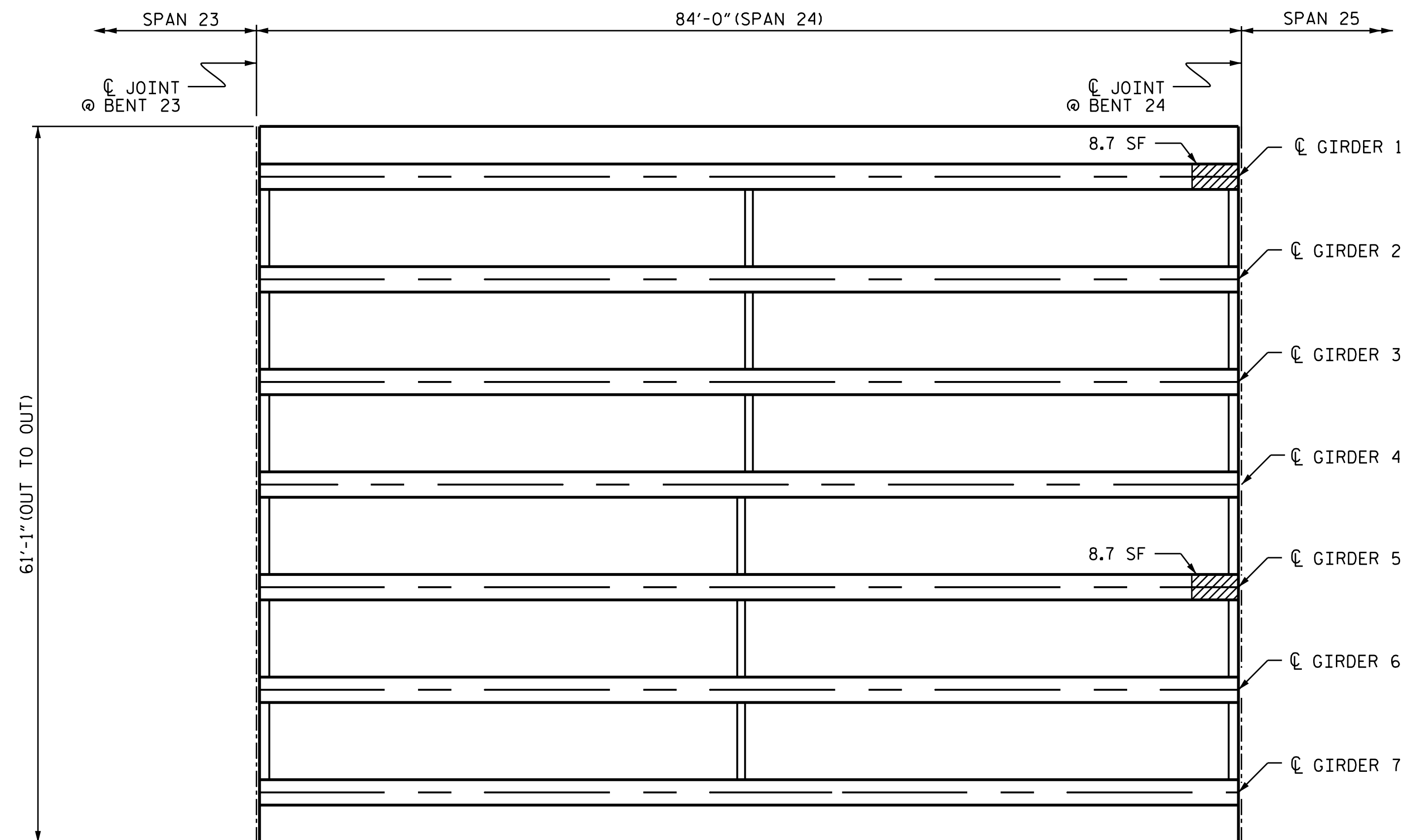
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|-----|-----------|-------|-----|-----------|-------|--------------------|
| | BY: | DATE: | | BY: | DATE: | |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 23 - UNDERSIDE



SPAN 24 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 23 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 17.4 | 5.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 24 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 17.4 | 5.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

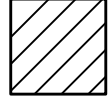
SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

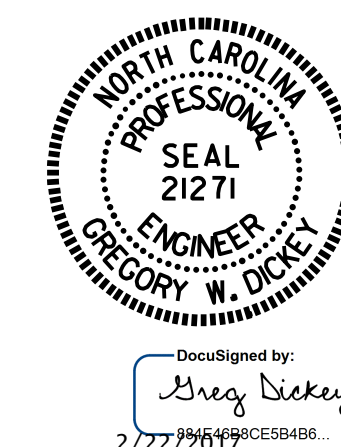
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68
 SHEET 12 OF 24



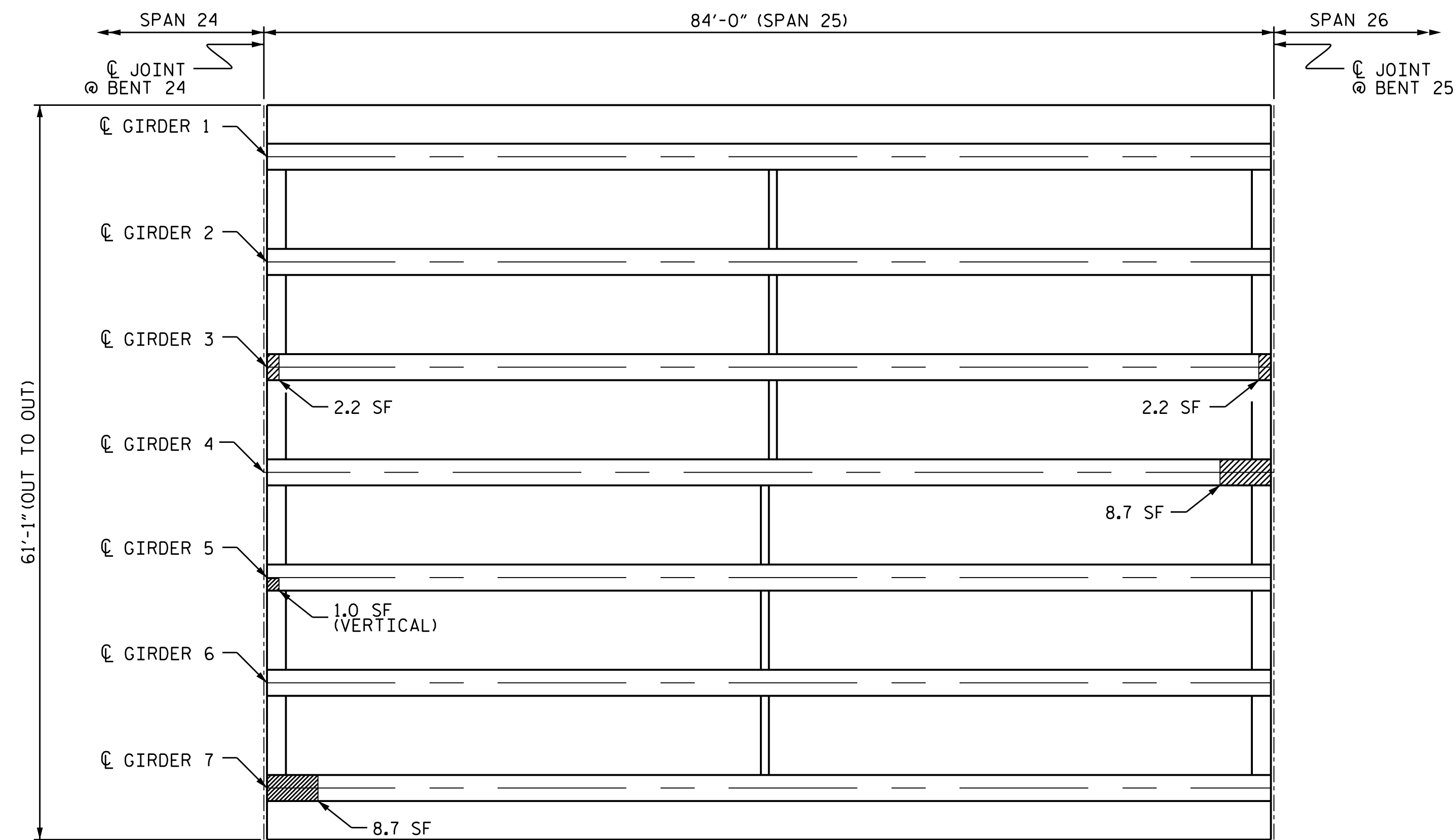
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 23 & 24

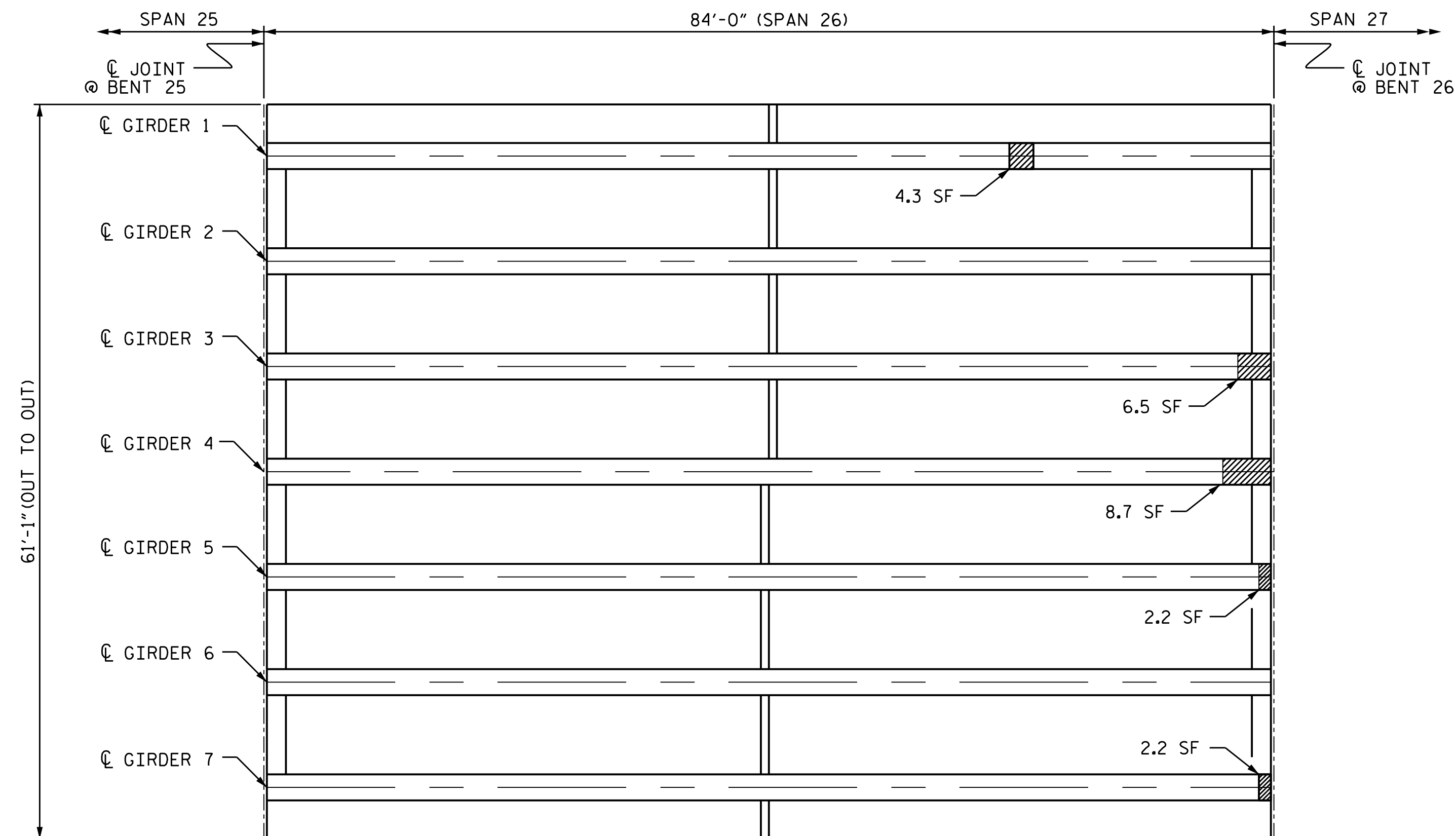
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-26 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 25 - UNDERSIDE



SPAN 26 - UNDERSIDE

| REPAIR QUANTITY TABLE | | | | |
|------------------------------------|------------|-----------|---------|-----------|
| REPAIRS SPAN 25 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 22.8 | 6.7 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 26 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 23.9 | 6.8 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

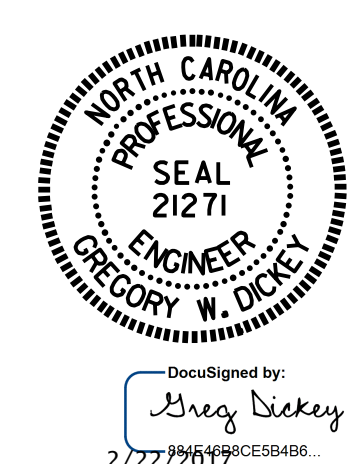
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68
 SHEET 13 OF 24



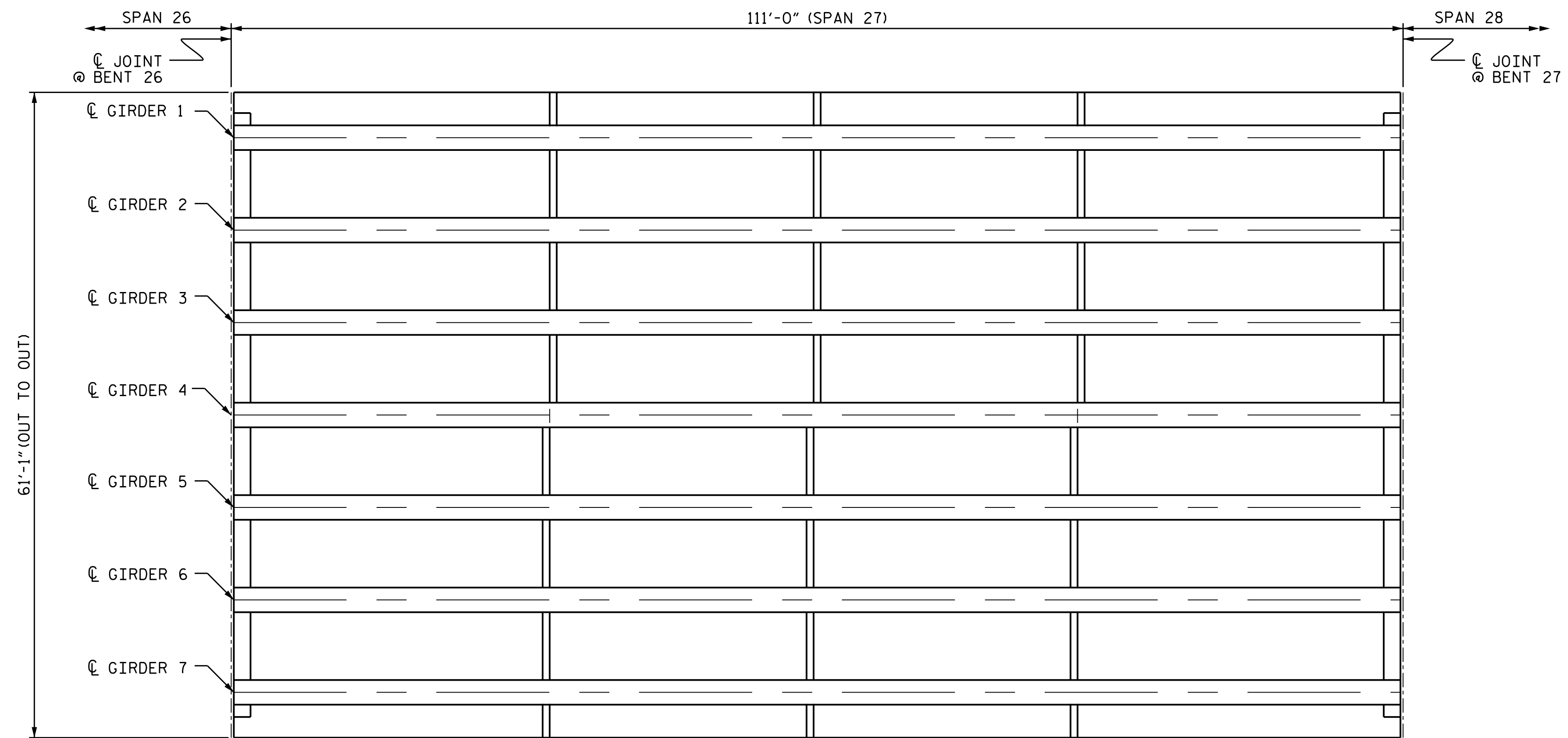
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 25 & 26

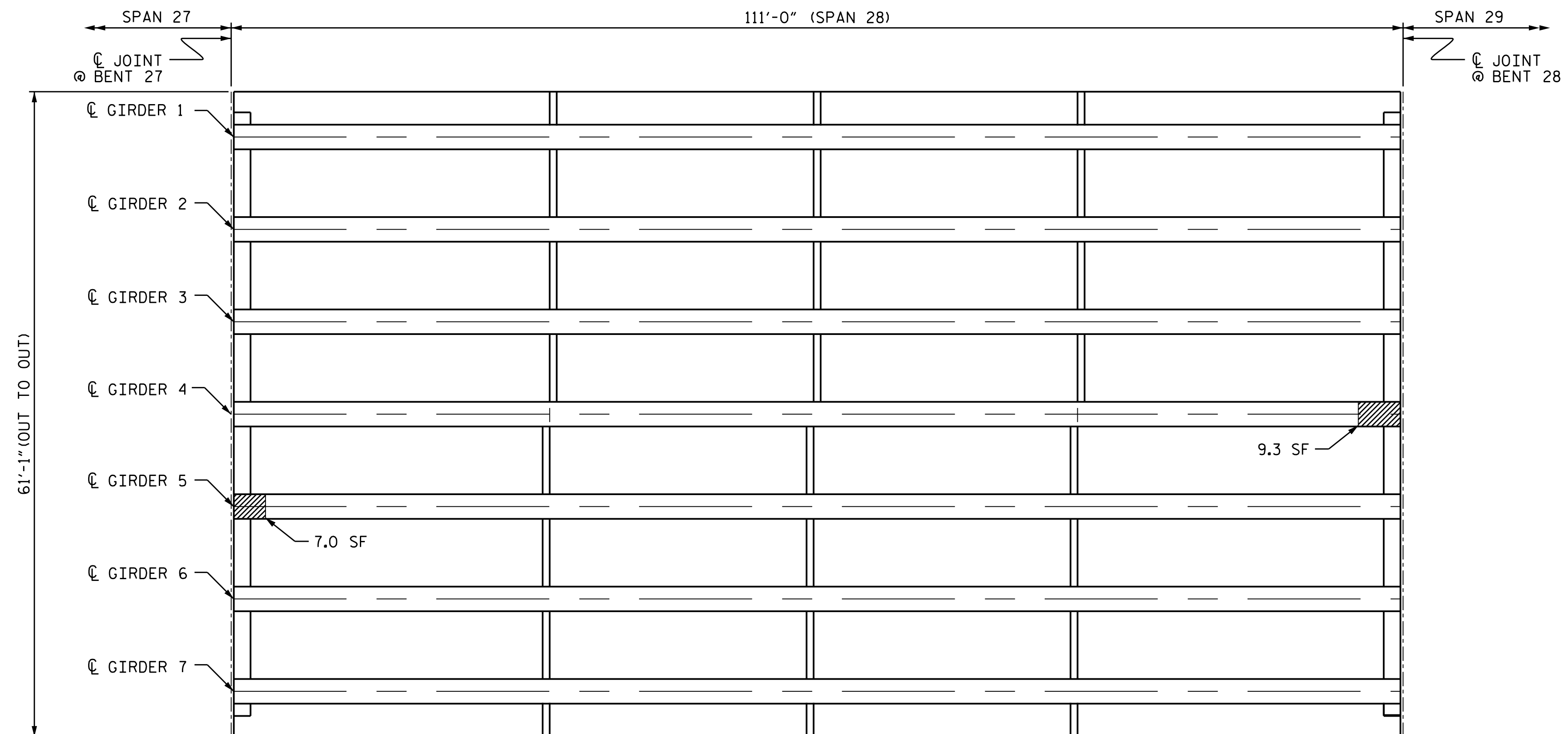
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-27 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 27 - UNDERSIDE



SPAN 28 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 27 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 28 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 16.3 | 4.8 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

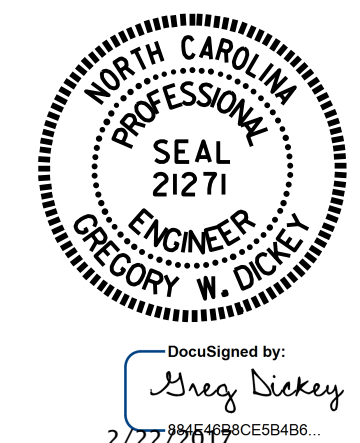
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 14 OF 24



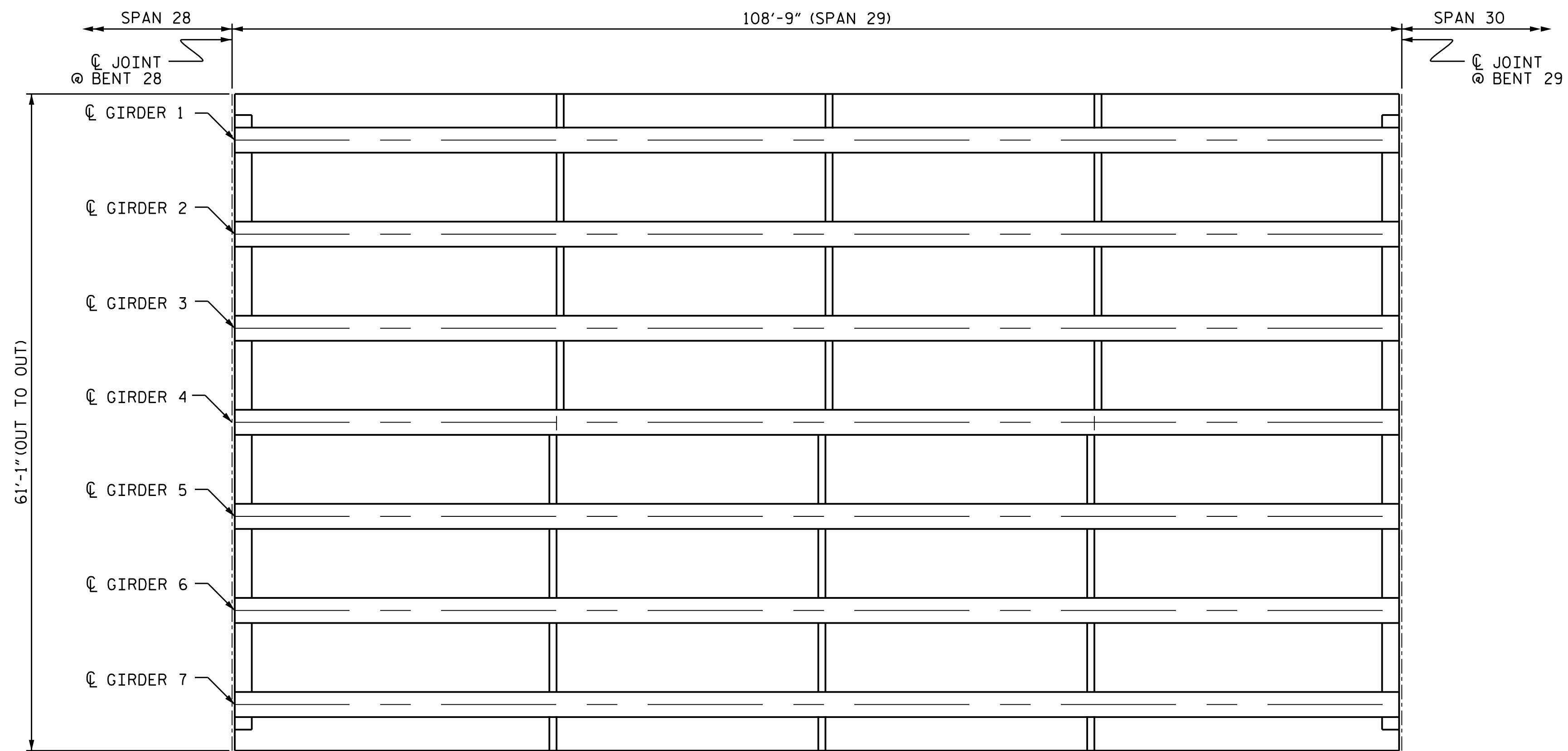
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 27 & 28

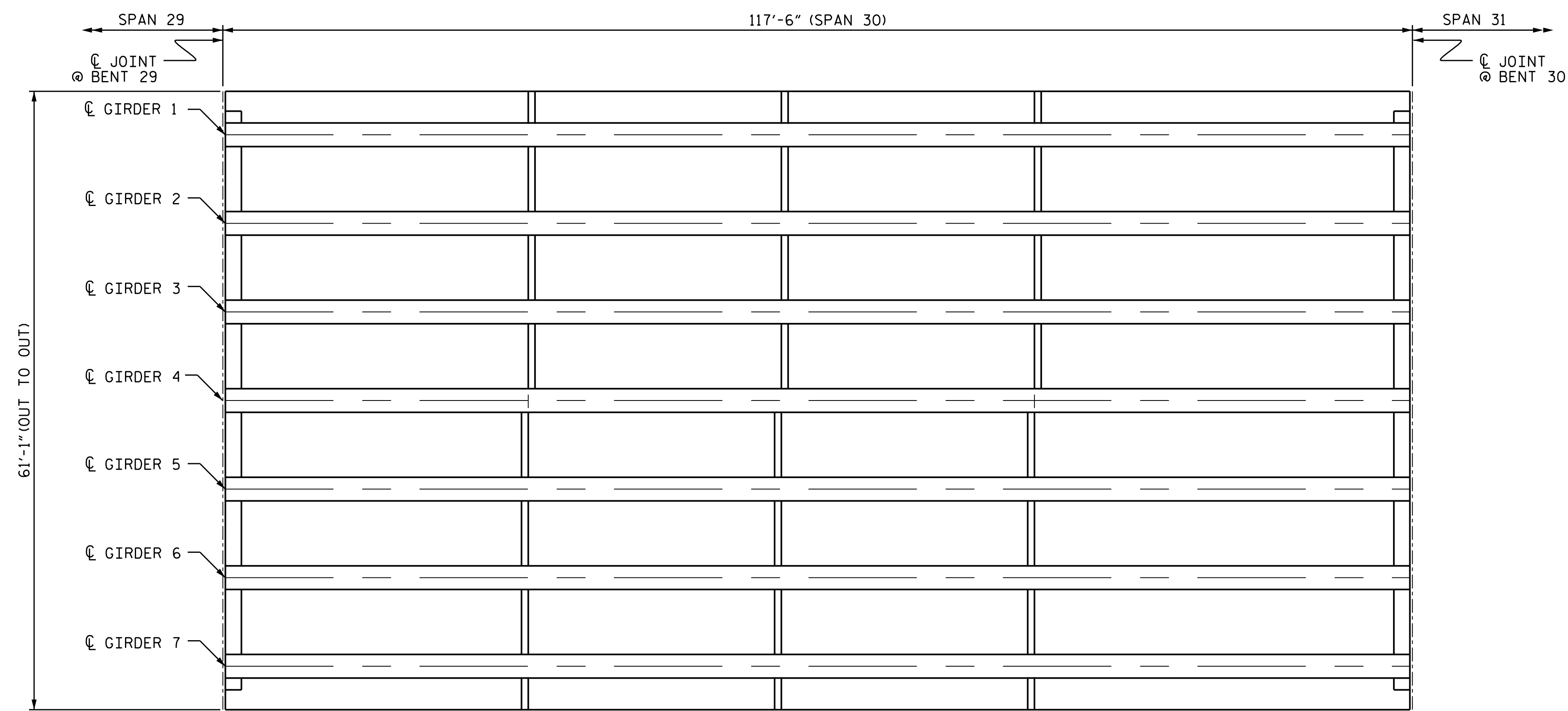
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 CHECKED BY : S. T. SANDOR DATE : 08/2016

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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-28 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 29 - UNDERSIDE



SPAN 30 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 29 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 30 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

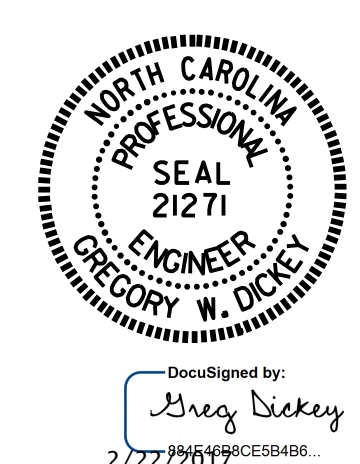
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68
 SHEET 15 OF 24



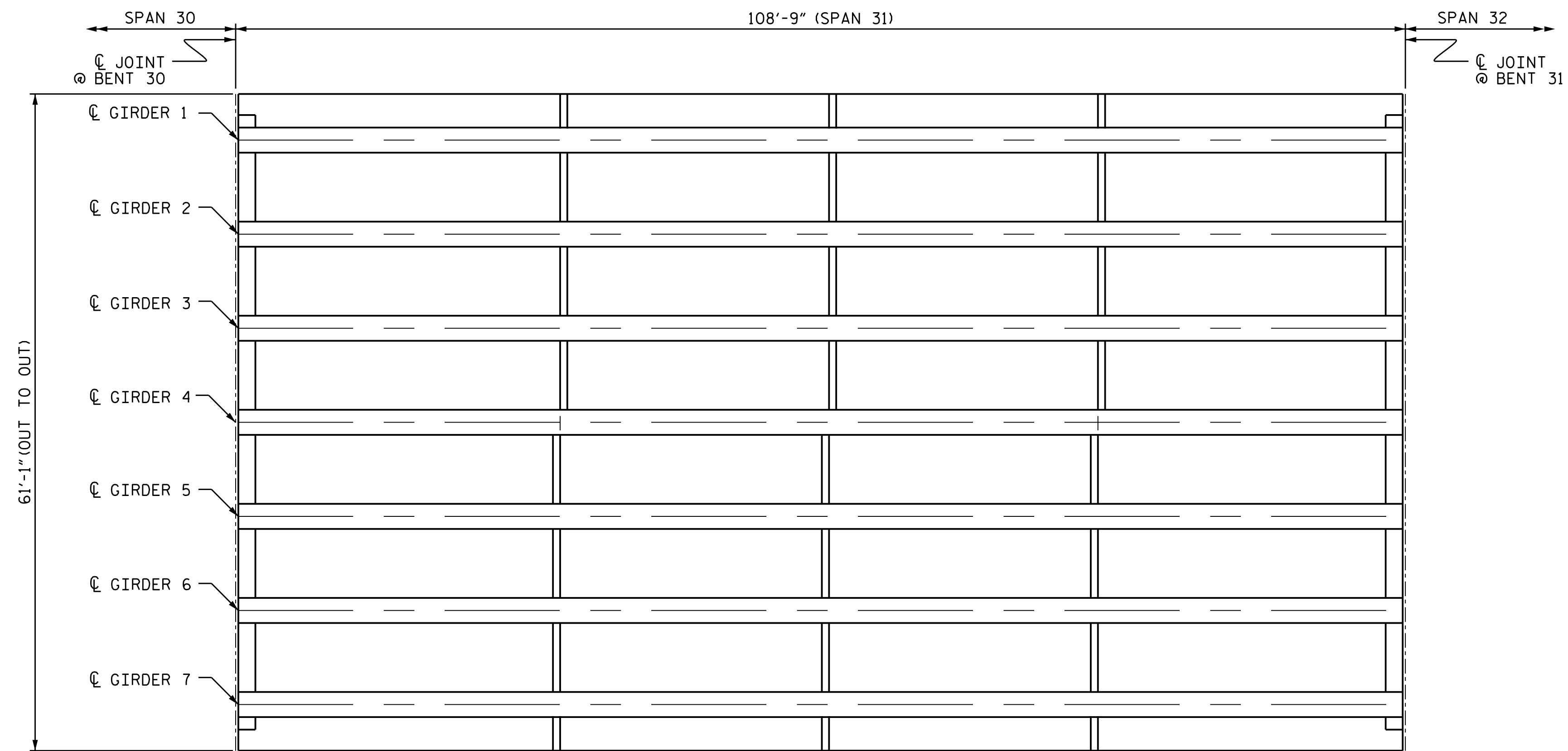
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 29 & 30

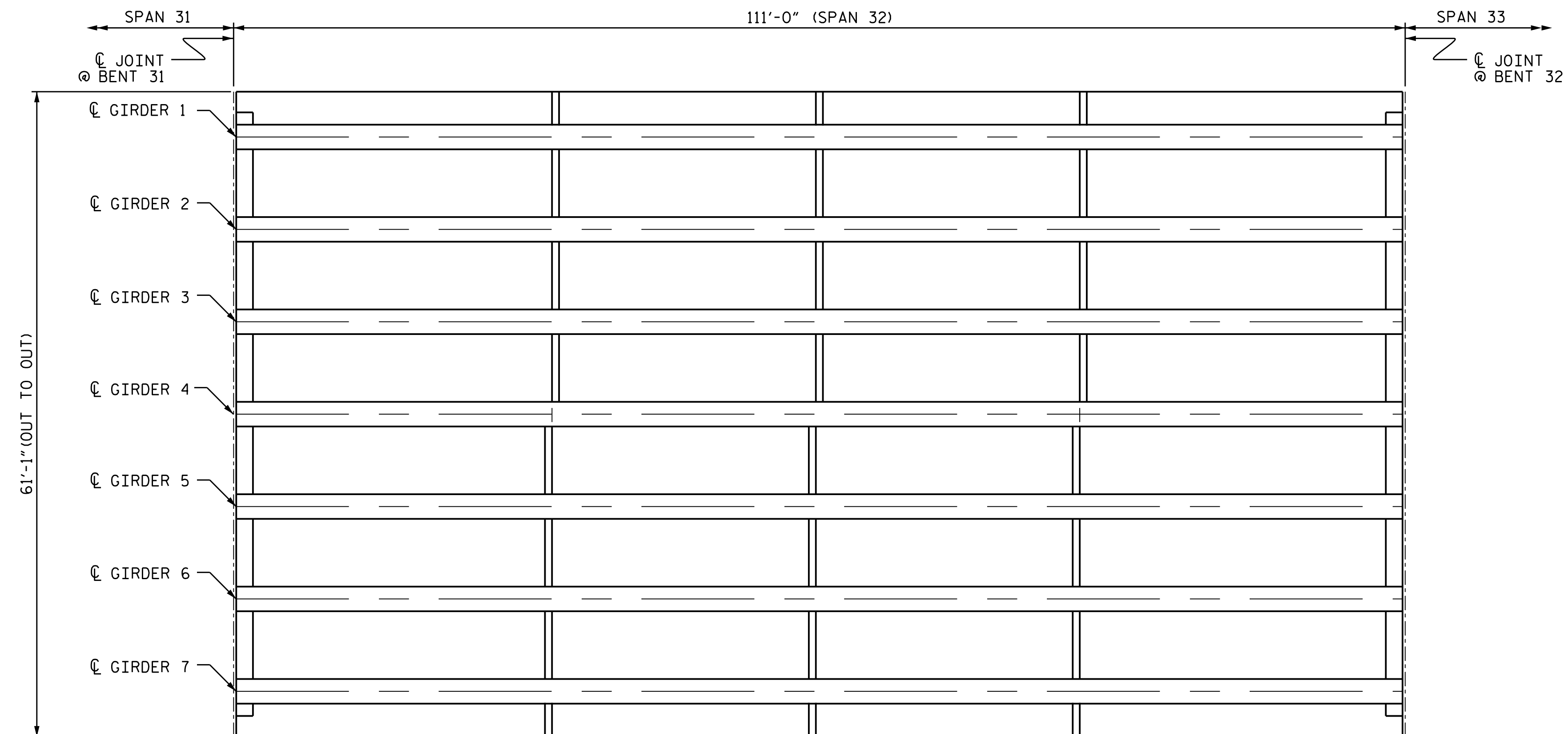
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 CHECKED BY : S. T. SANDOR DATE : 08/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-29 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 31 - UNDERSIDE



SPAN 32 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 31 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 32 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

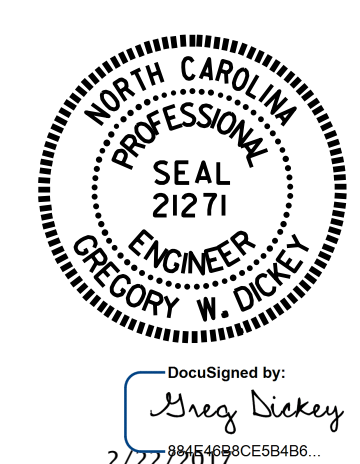
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 16 OF 24



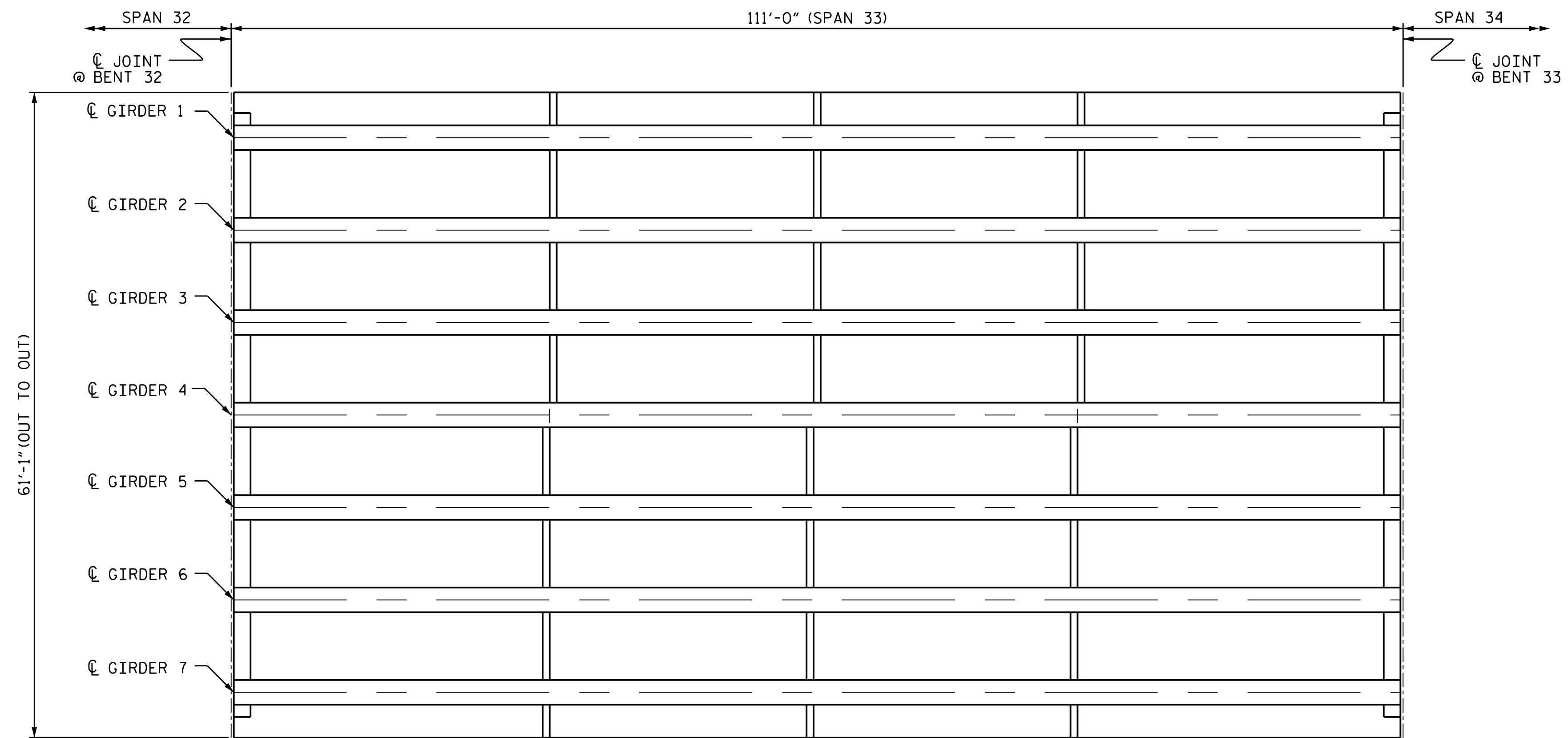
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 31 & 32

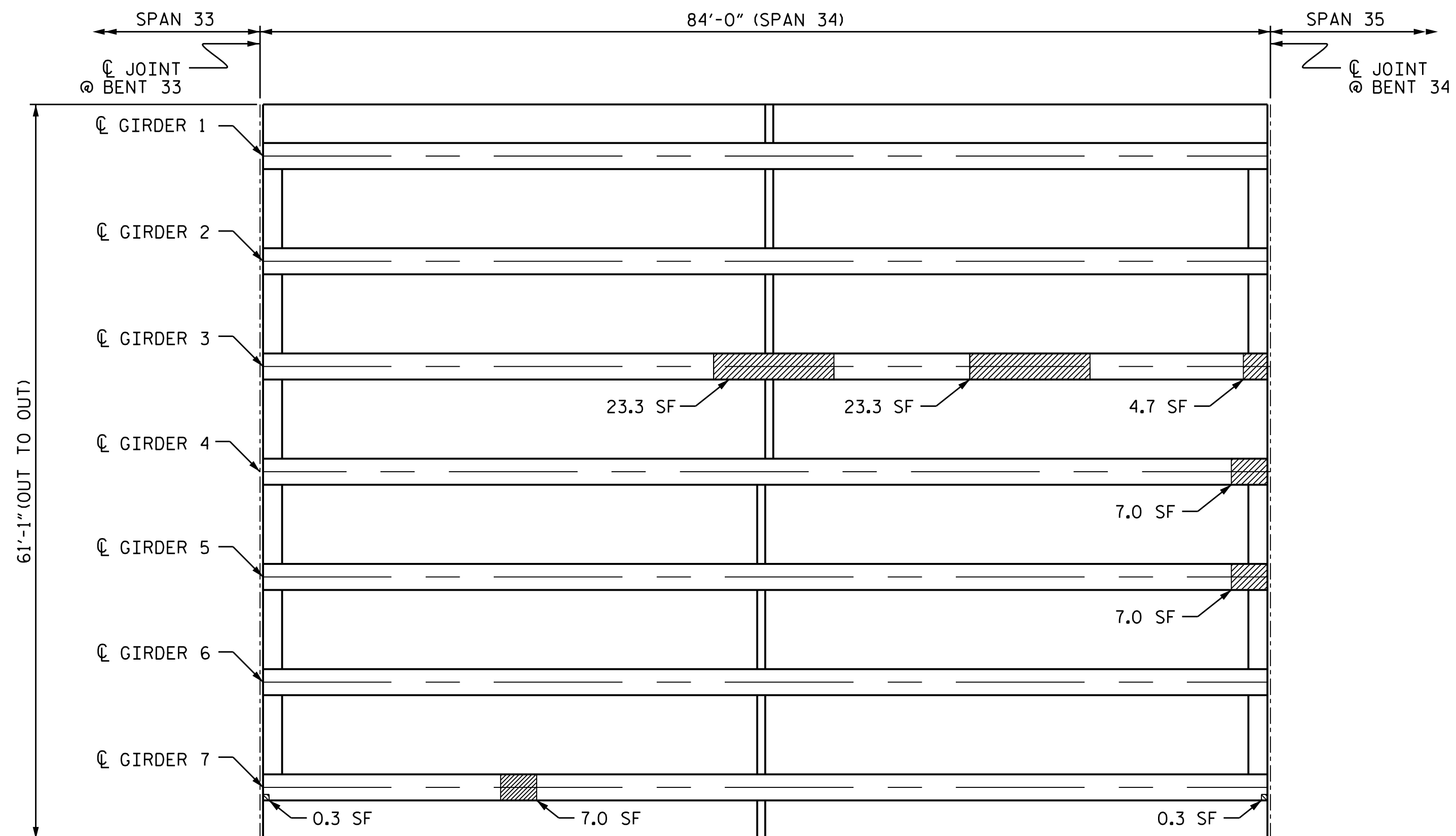
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 CHECKED BY : S. T. SANDOR DATE : 08/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-30 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 33 - UNDERSIDE



SPAN 34 UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 33 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 34 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 72.9 | 21.3 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

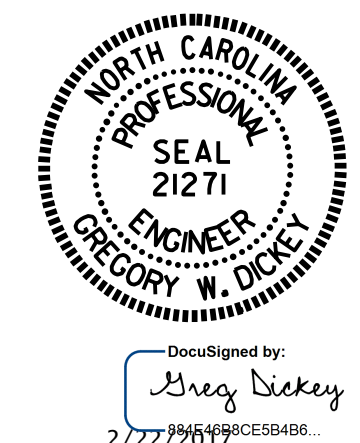
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 17 OF 24



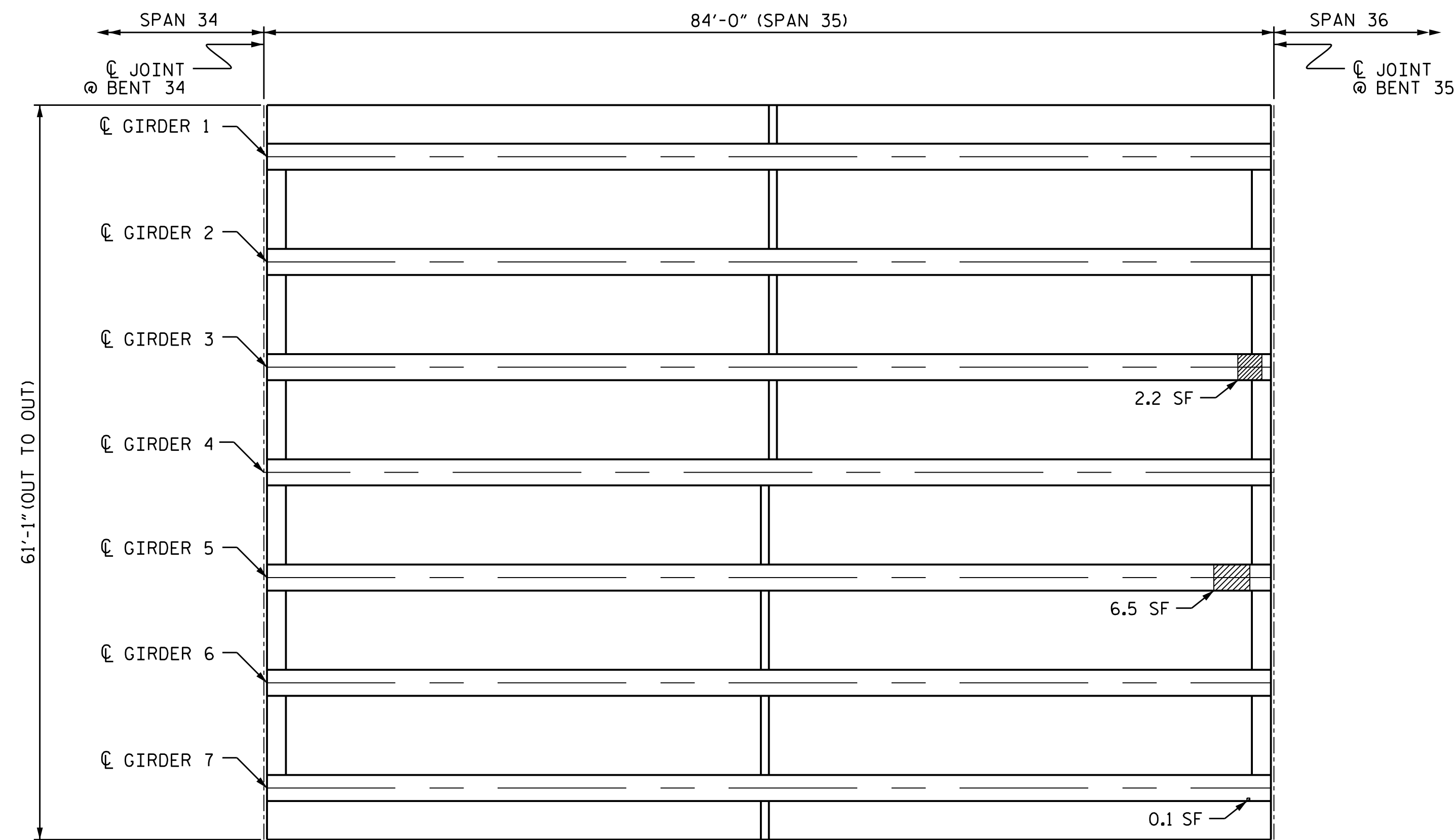
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 33 & 34

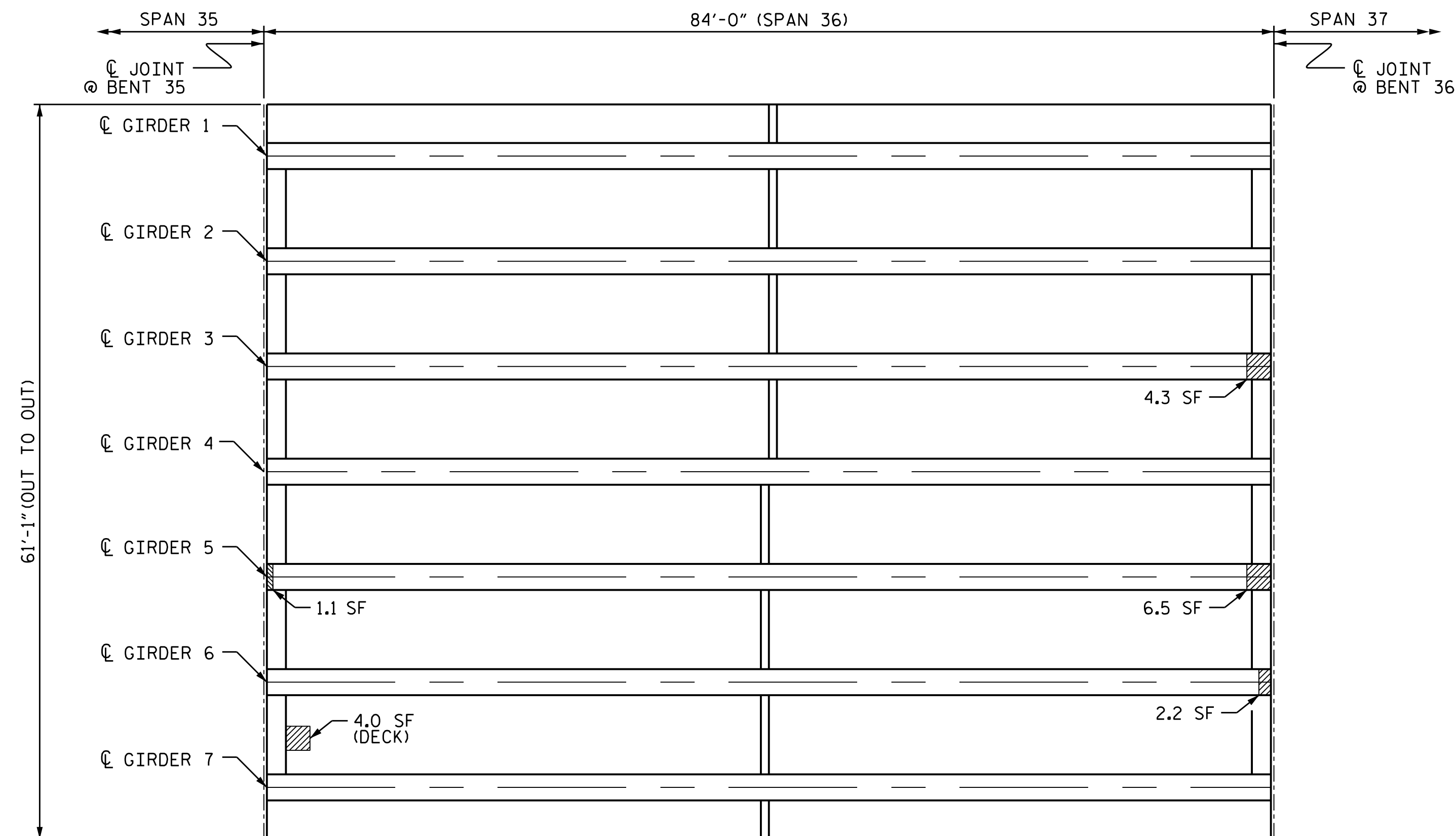
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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-31 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 35 - UNDERSIDE



SPAN 36 - UNDERSIDE

| REPAIR QUANTITY TABLE | | | | |
|------------------------------------|------------|-----------|---------|-----------|
| REPAIRS SPAN 35 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 8.8 | 2.6 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 36 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 14.1 | 4.1 | | |
| SHOTCRETE REPAIRS | 4.0 | 2.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

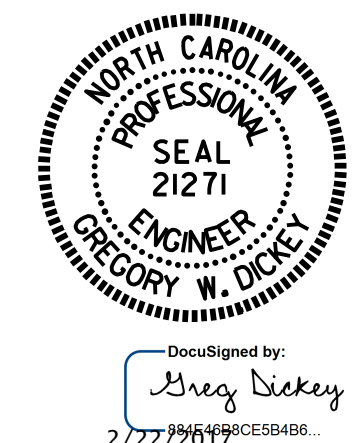
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 18 OF 24



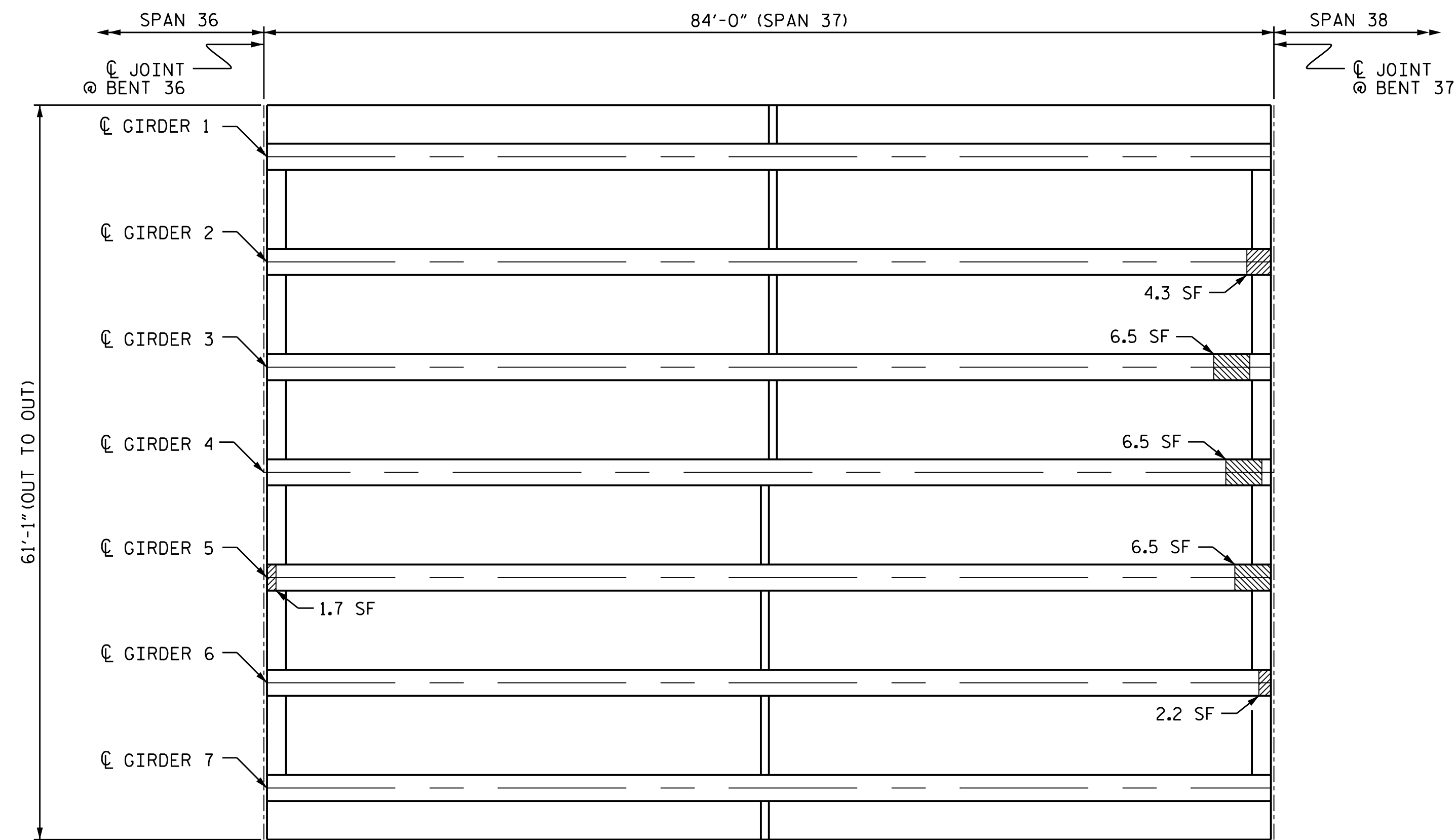
STATE OF NORTH CAROLINA
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 RALEIGH

FRAMING PLAN
 SPANS 35 & 36

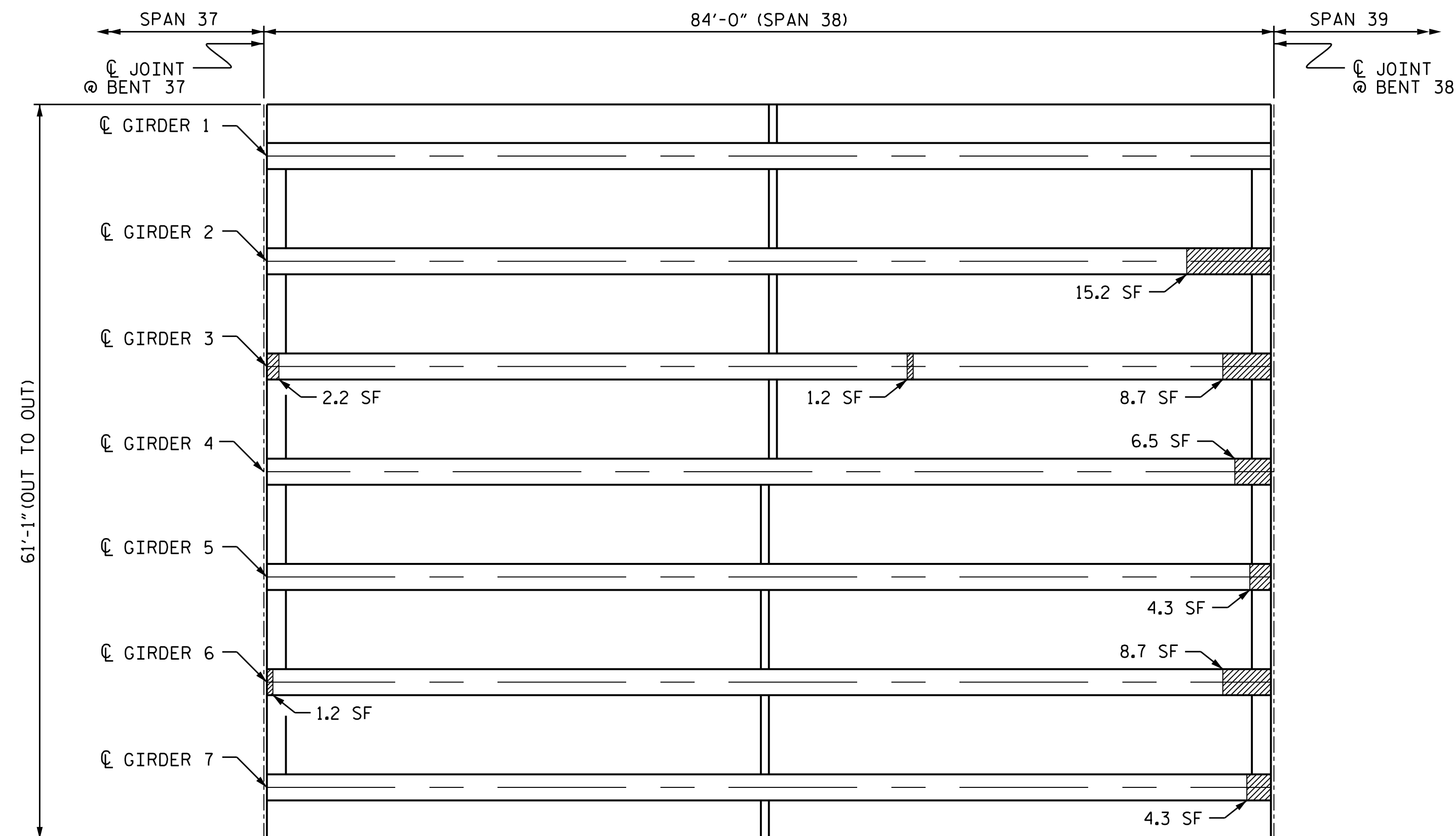
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-32 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 37 - UNDERSIDE



SPAN 38 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 37 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 27.7 | 8.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 38 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 52.5 | 15.3 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

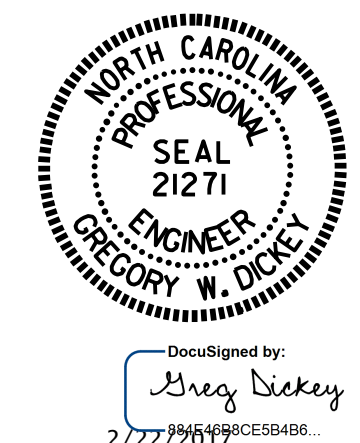
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 19 OF 24



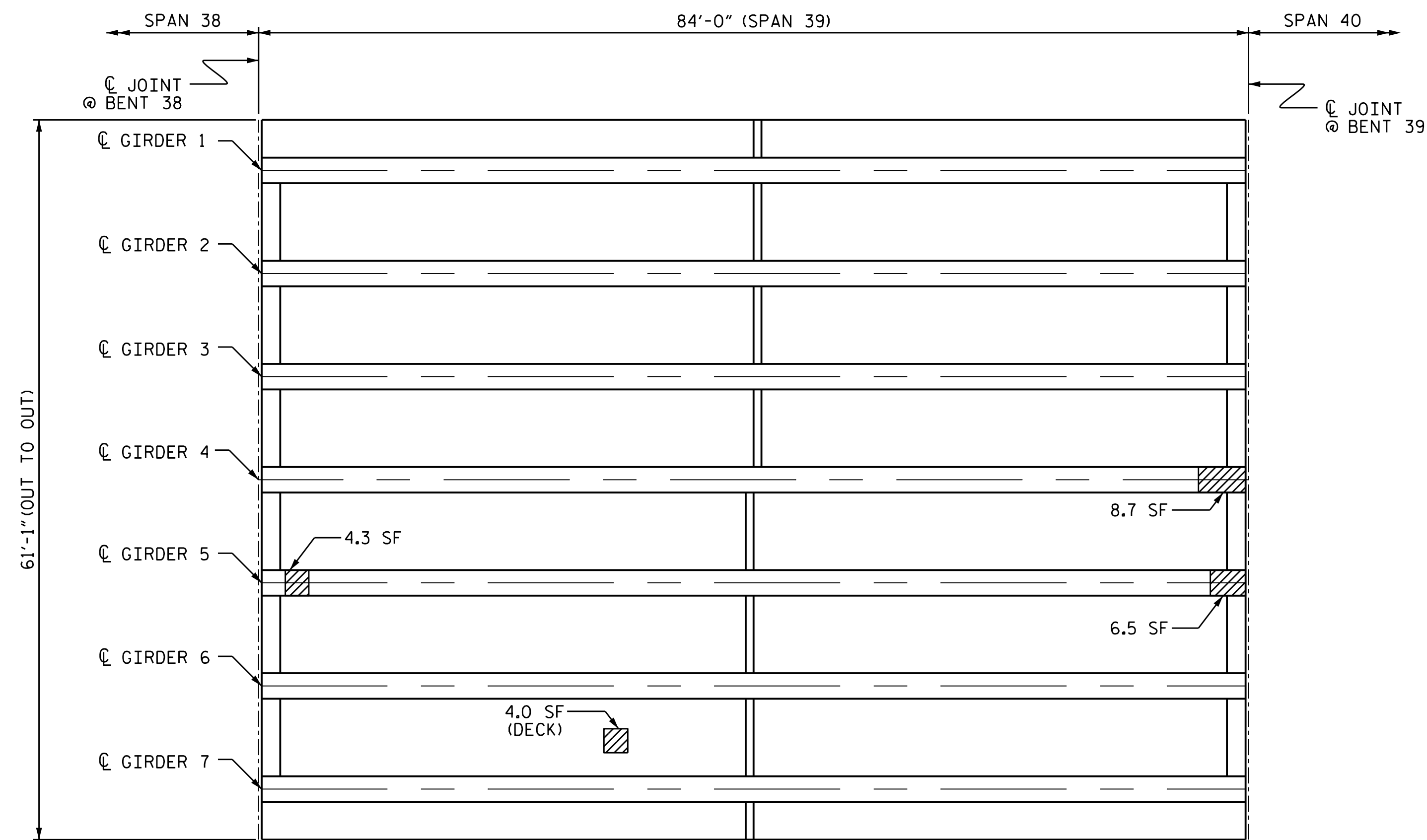
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 37 & 38

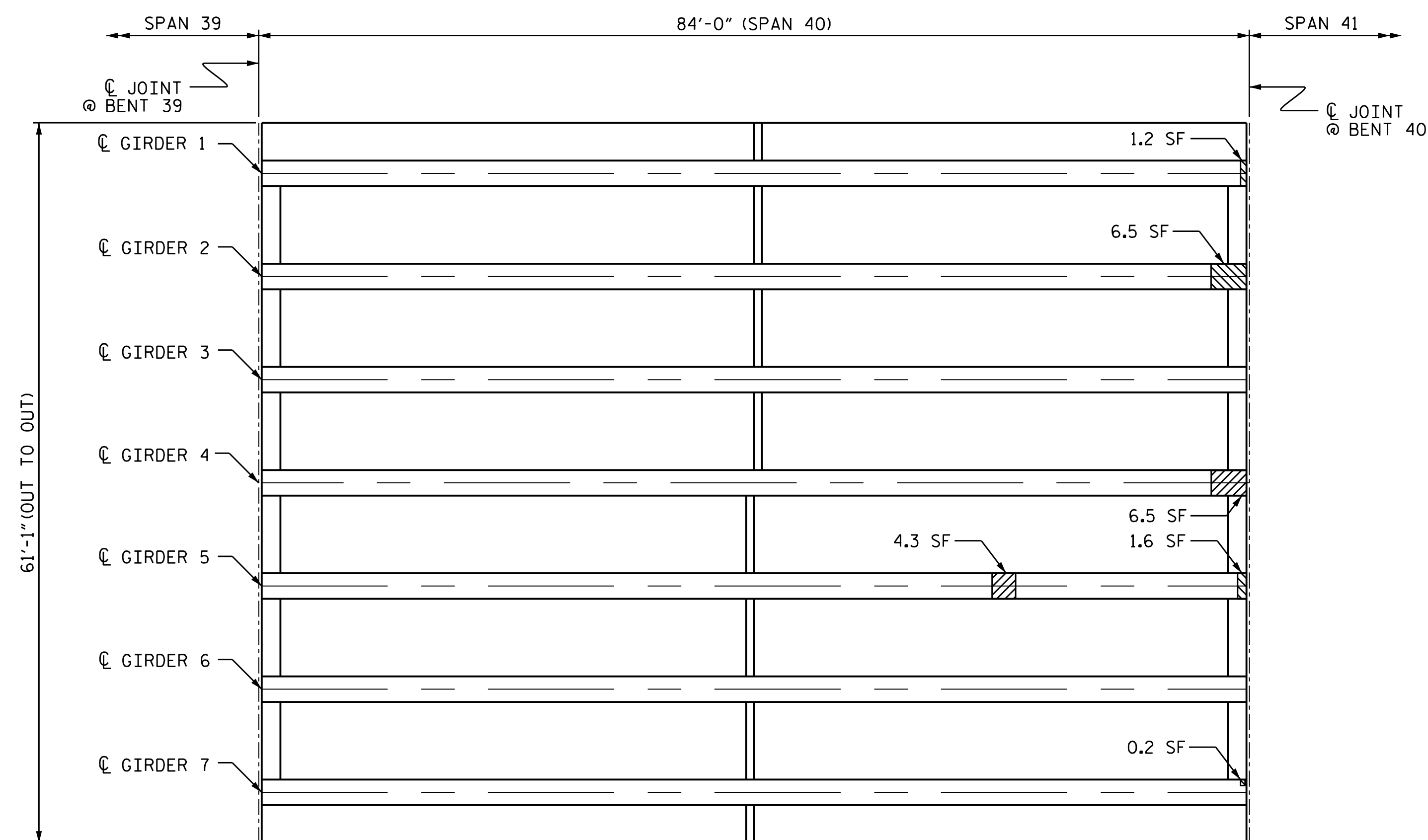
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-33 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 39 - UNDERSIDE



SPAN 40 - UNDERSIDE

| REPAIR QUANTITY TABLE | | | | |
|------------------------------------|------------|-----------|---------|-----------|
| REPAIRS SPAN 39 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 19.5 | 5.7 | | |
| SHOTCRETE REPAIRS | 4.0 | 2.0 | | |
| REPAIRS SPAN 40 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 20.2 | 5.9 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

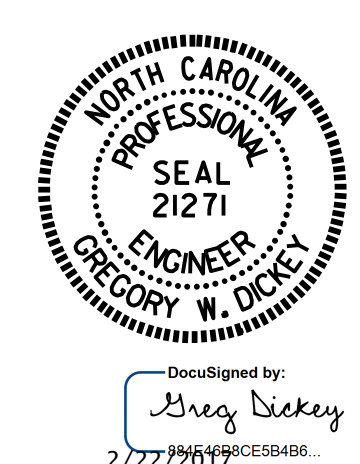
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68
 SHEET 20 OF 24



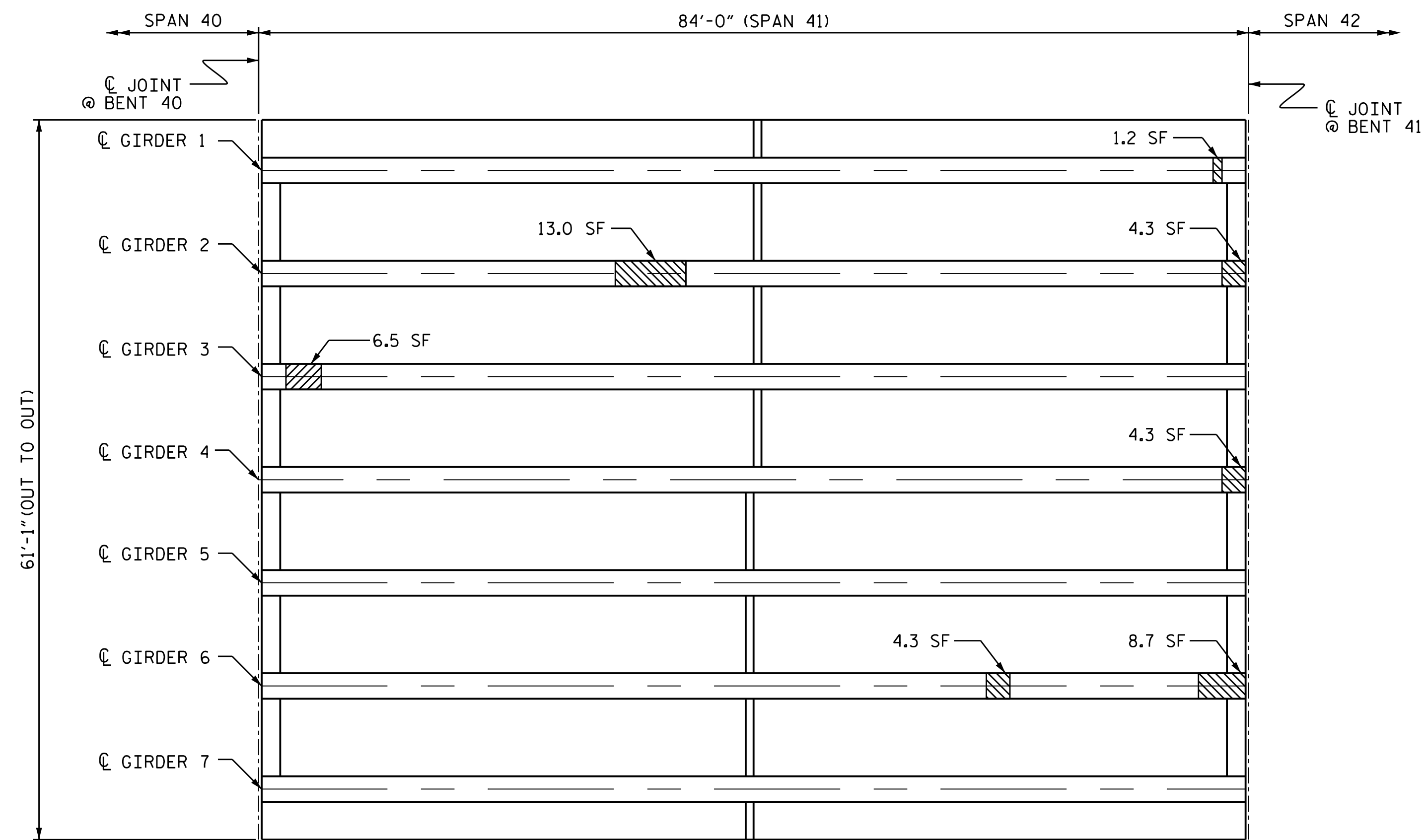
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 39 & 40

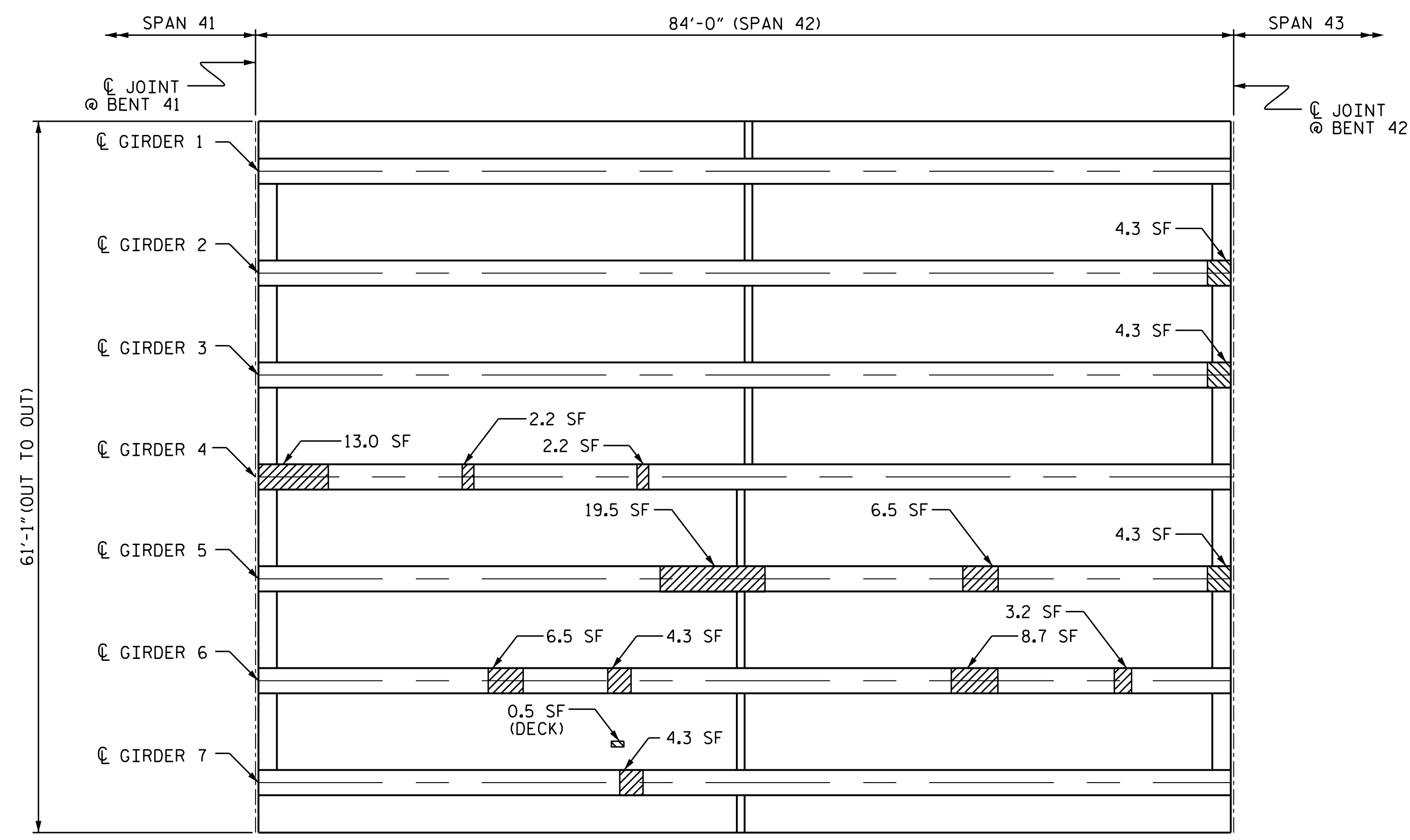
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 8/2016
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| | BY: | DATE: | NO. | |
| 1 | | | 3 | S1-34 TOTAL SHEETS |
| 2 | | | 4 | |



SPAN 41 - UNDERSIDE



SPAN 42 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 41 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 42.3 | 12.4 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 42 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 83.1 | 24.3 | | |
| SHOTCRETE REPAIRS | 0.5 | 0.3 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

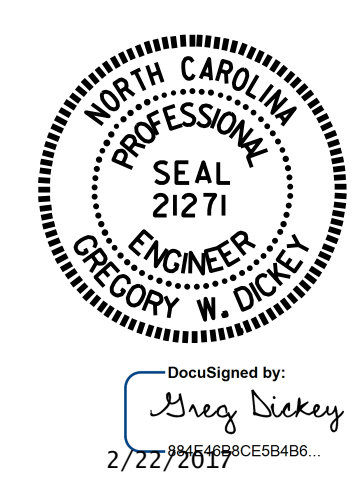
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 21 OF 24



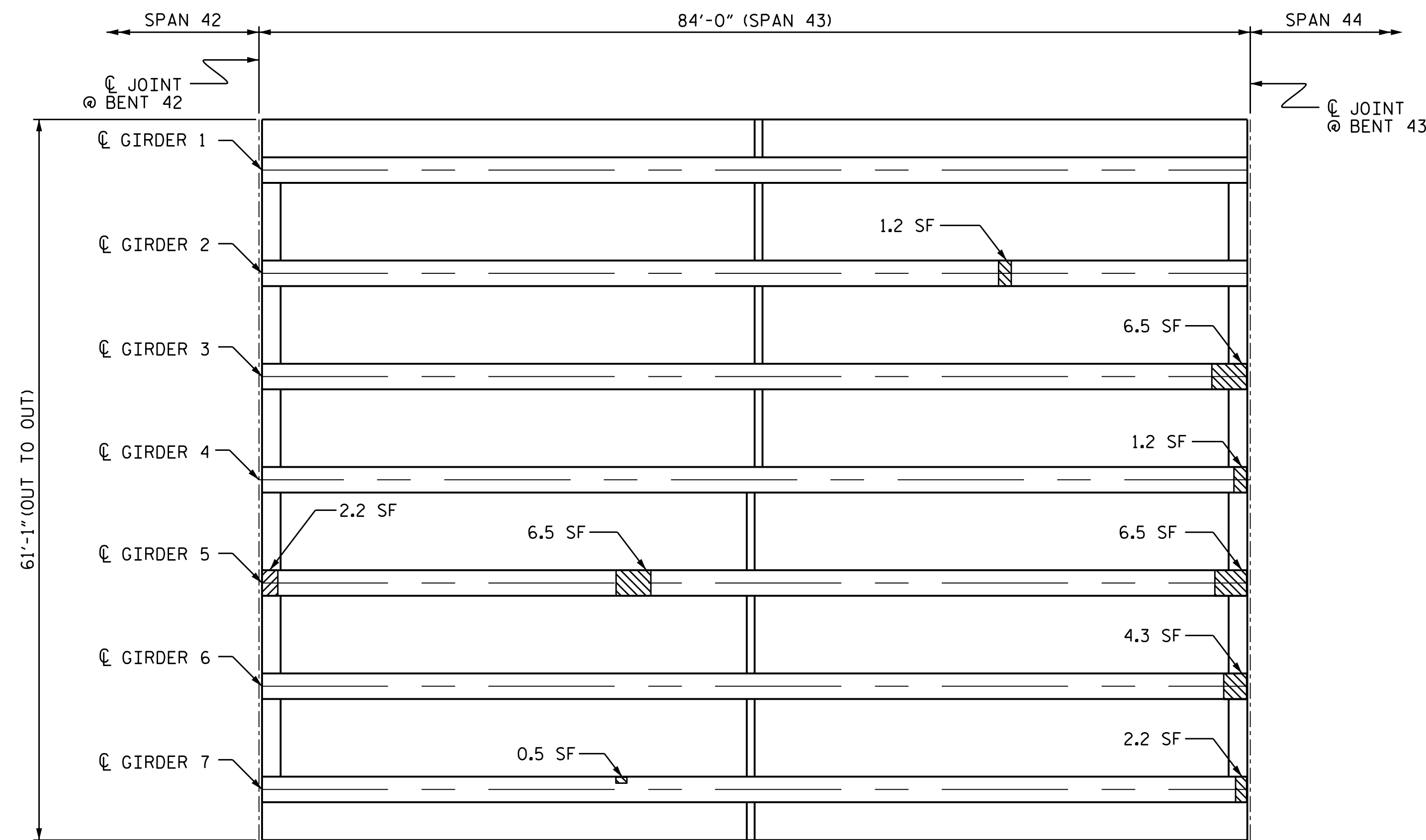
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 41 & 42

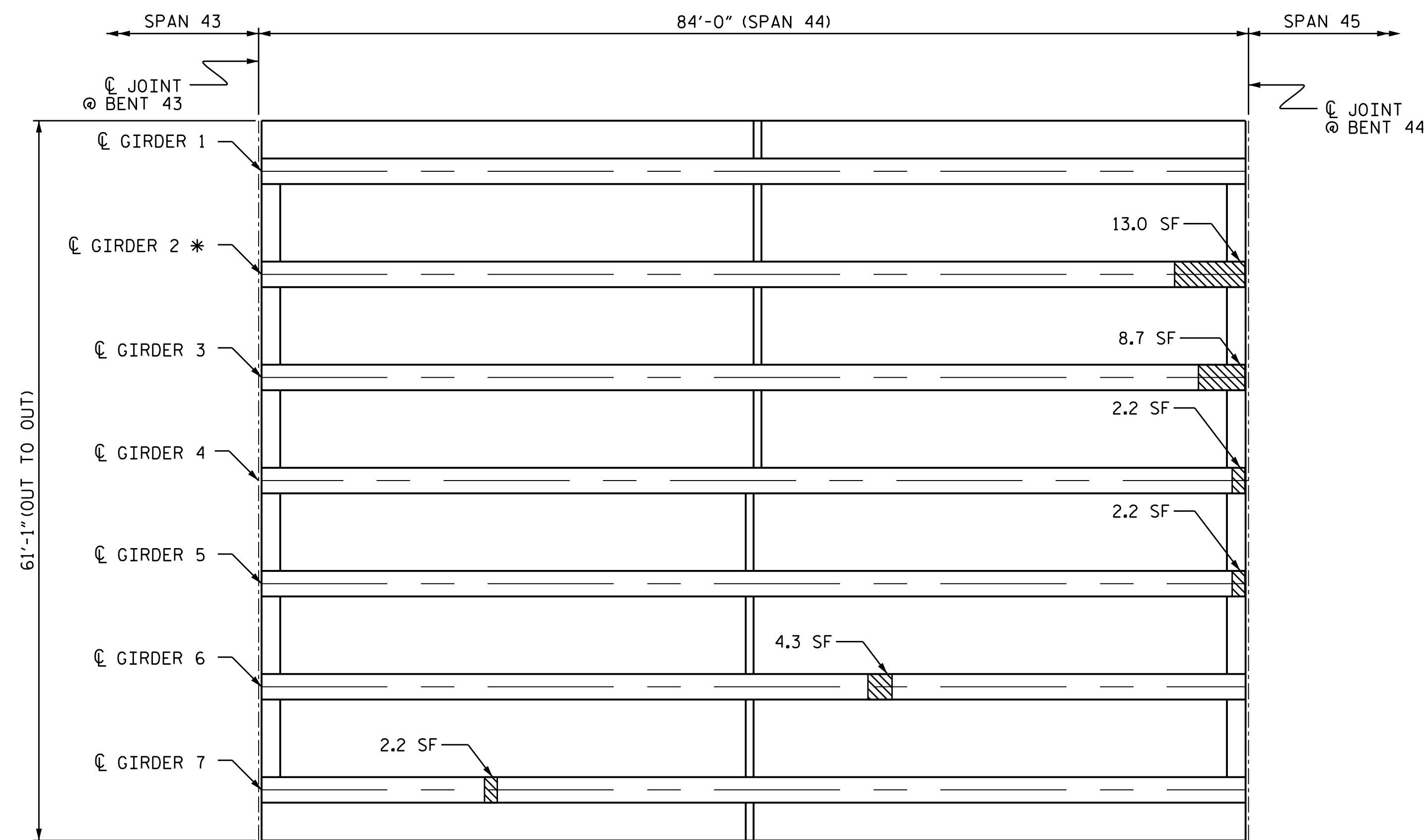
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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-35 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



SPAN 43 - UNDERSIDE



SPAN 44 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 43 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 31.1 | 9.1 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 44 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 32.6 | 9.5 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

SPAN 44, GIRDER 2 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

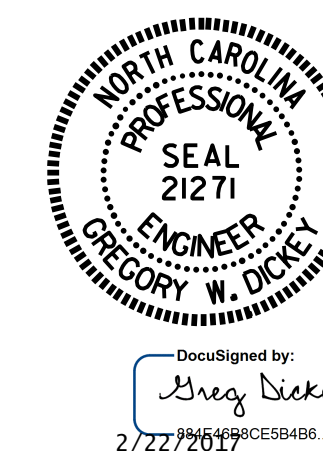
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - PRESTRESSED CONCRETE GIRDER REPAIR

 - SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 22 OF 24



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 43 & 44

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 8/2016
 CHECKED BY : P. D. BYRANT DATE : 8/2016

22-FEB-2017 07:05
 R:\Structures\Final.DGN_FILES\ONLY\400.XXX.B5938.S202.FRAMEG.SPANS.1-49.dgn
 gdickey

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-36 |
| 2 | | | 4 | | | - |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

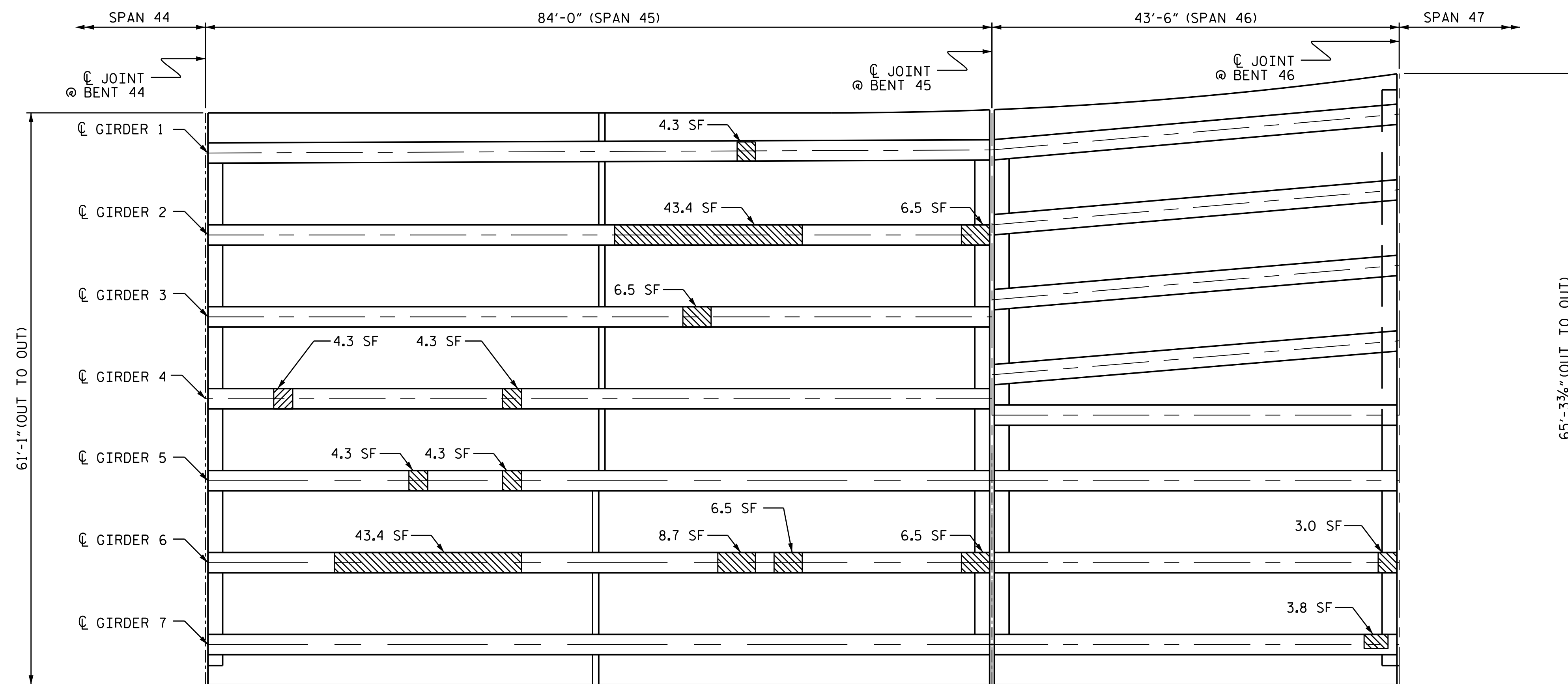
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

REPAIR QUANTITY TABLE

| REPAIRS SPAN 45 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 143.0 | 41.7 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 46 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 6.8 | 2.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |



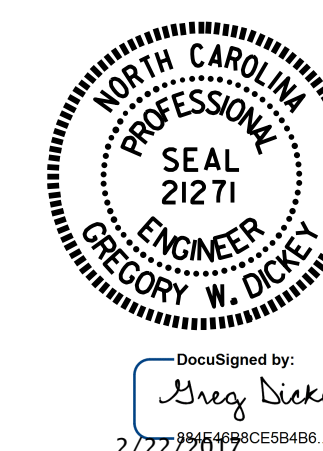
- PRESTRESSED CONCRETE GIRDER REPAIR
 - SHOTCRETE REPAIRS

SPAN 45 - UNDERSIDE

SPAN 46 - UNDERSIDE

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 23 OF 24



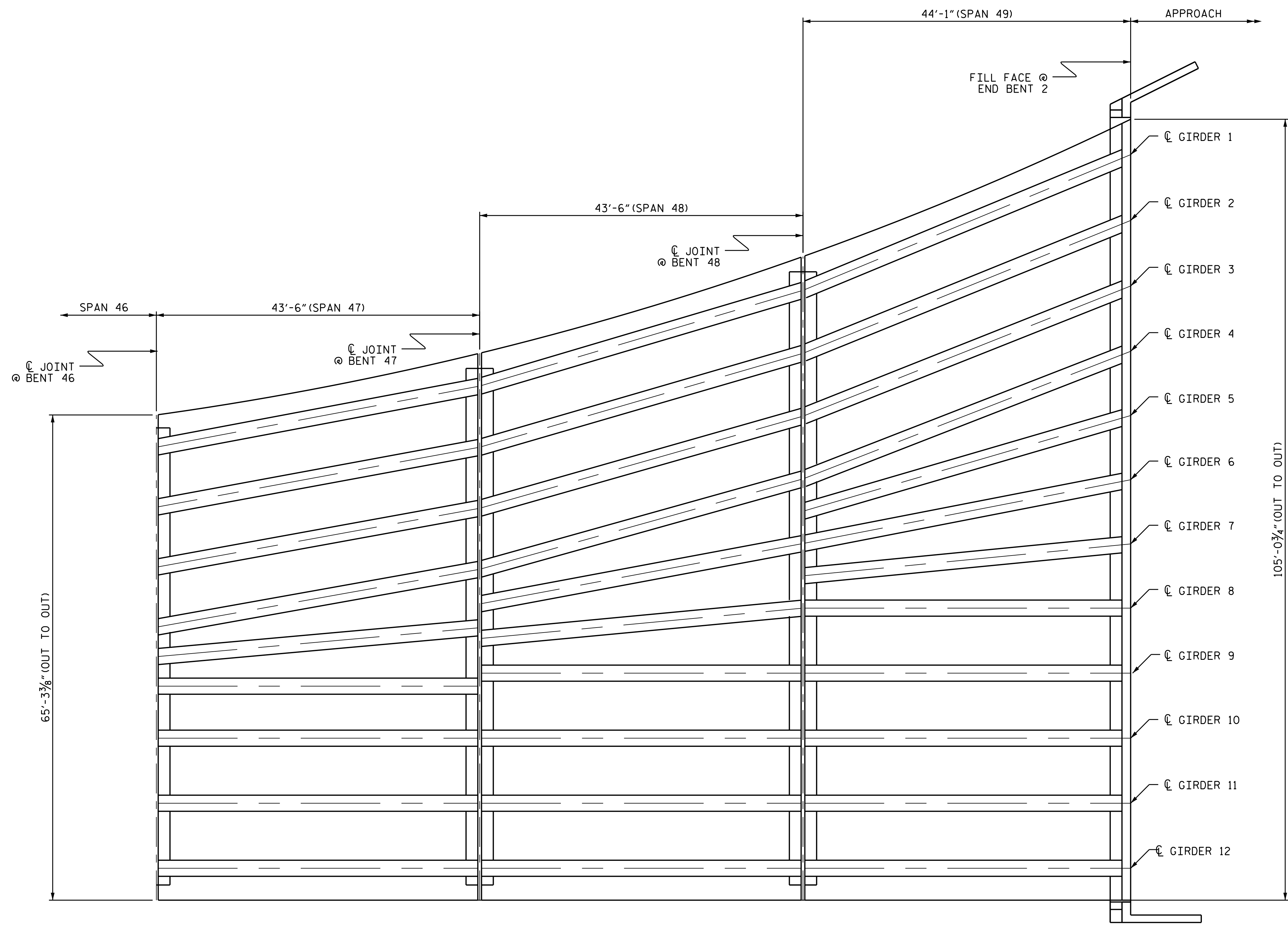
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**FRAMING PLAN
 SPANS 45 & 46**

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 8/2016
 CHECKED BY : P. D. BYRANT DATE : 8/2016

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|-----|-----------|-------|--|-----|-----------|-------|--------------|-----------|
| | BY: | DATE: | | | BY: | DATE: | | |
| 1 | | | | 3 | | | S1-37 | |
| 2 | | | | 4 | | | TOTAL SHEETS | |



SPAN 47 - UNDERSIDE SPAN 48 - UNDERSIDE SPAN 49 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 47 | QUANTITIES | | | |
|------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 48 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| REPAIRS SPAN 49 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| PRESTRESSED CONCRETE GIRDER REPAIR | 0.0 | 0.0 | | |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE FULL LENGTH TSA COATING, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S1-40THRU S1-43.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

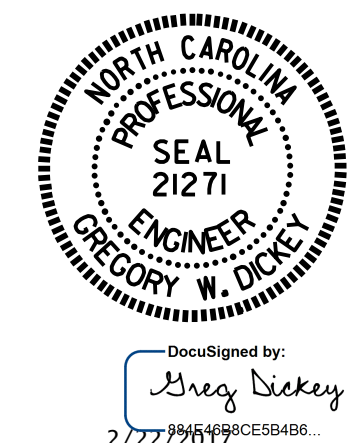
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 24 OF 24



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPANS 47, 48 & 49

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 8/2016
 CHECKED BY : P. D. BYRANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | SI-38 | |
| 1 | | | 3 | | | TOTAL SHEETS | 8 |
| 2 | | | 4 | | | | |

NOTES

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

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

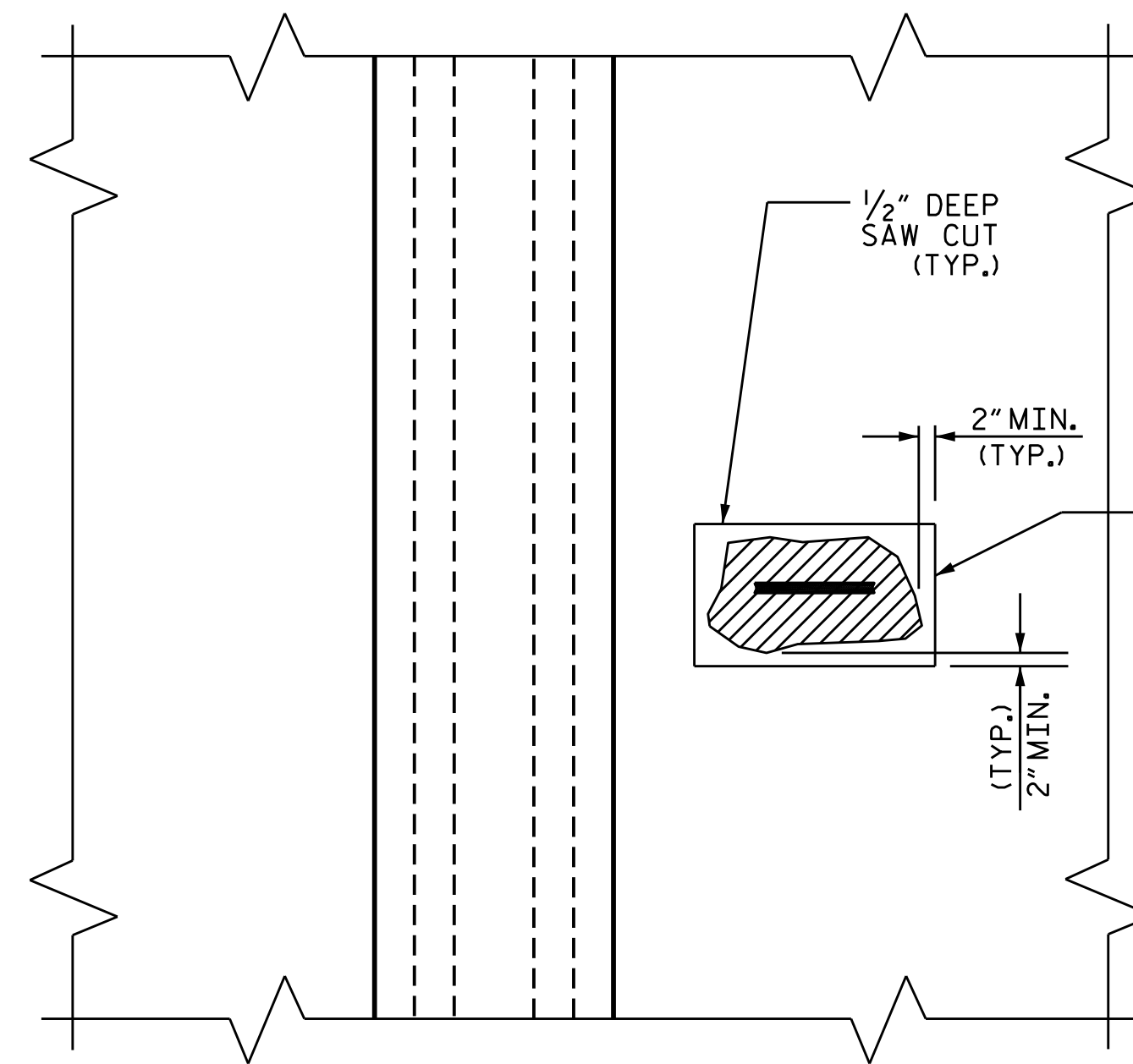
CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

ALL REPAIRS ON GIRDER SHALL USE PRESTRESSED CONCRETE GIRDER REPAIR MATERIAL.

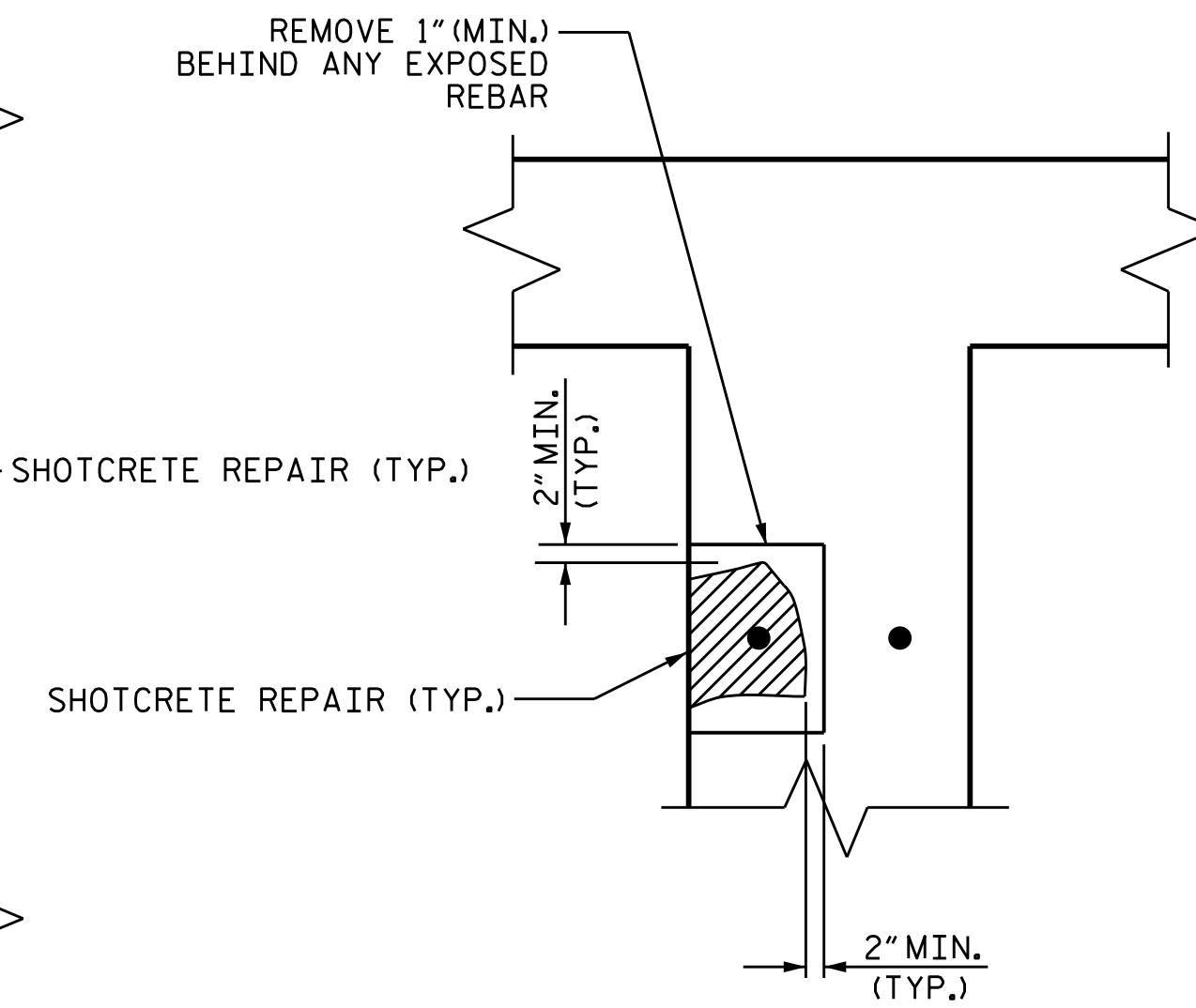
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

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

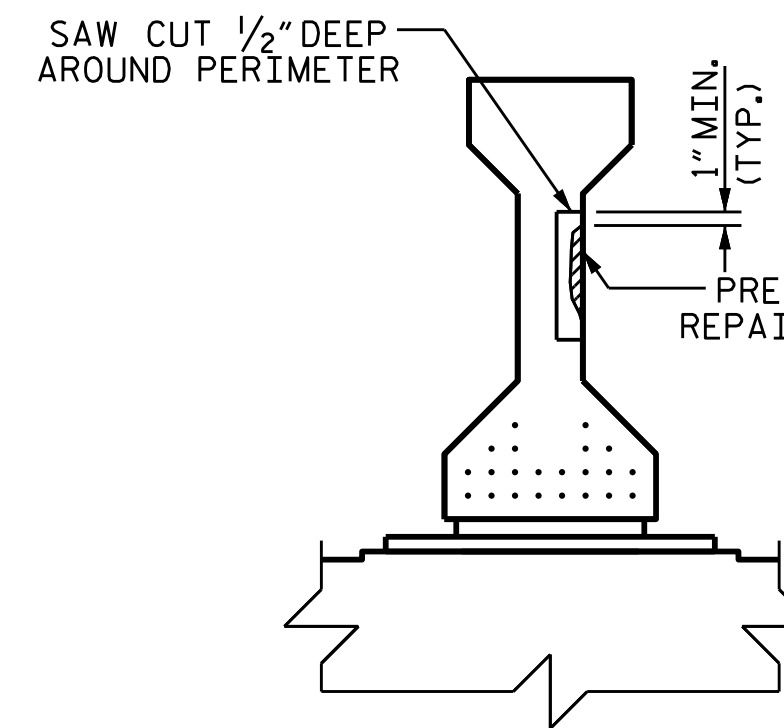
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.



SECTION D-D

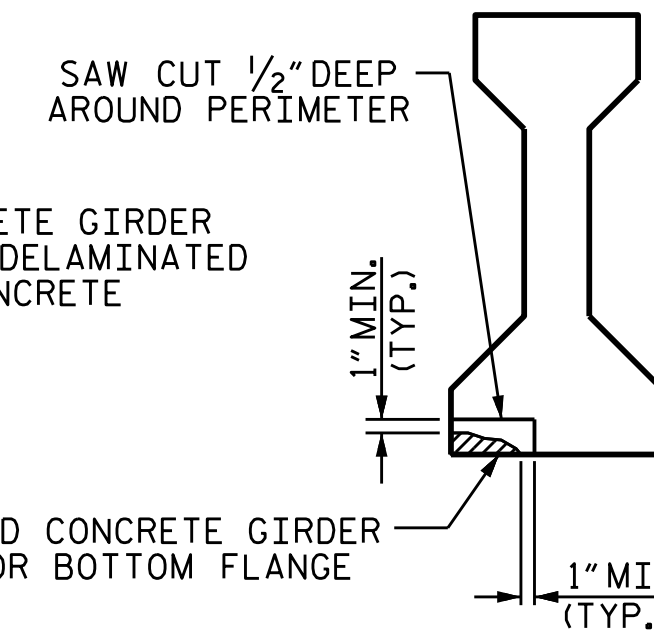


SECTION E-E



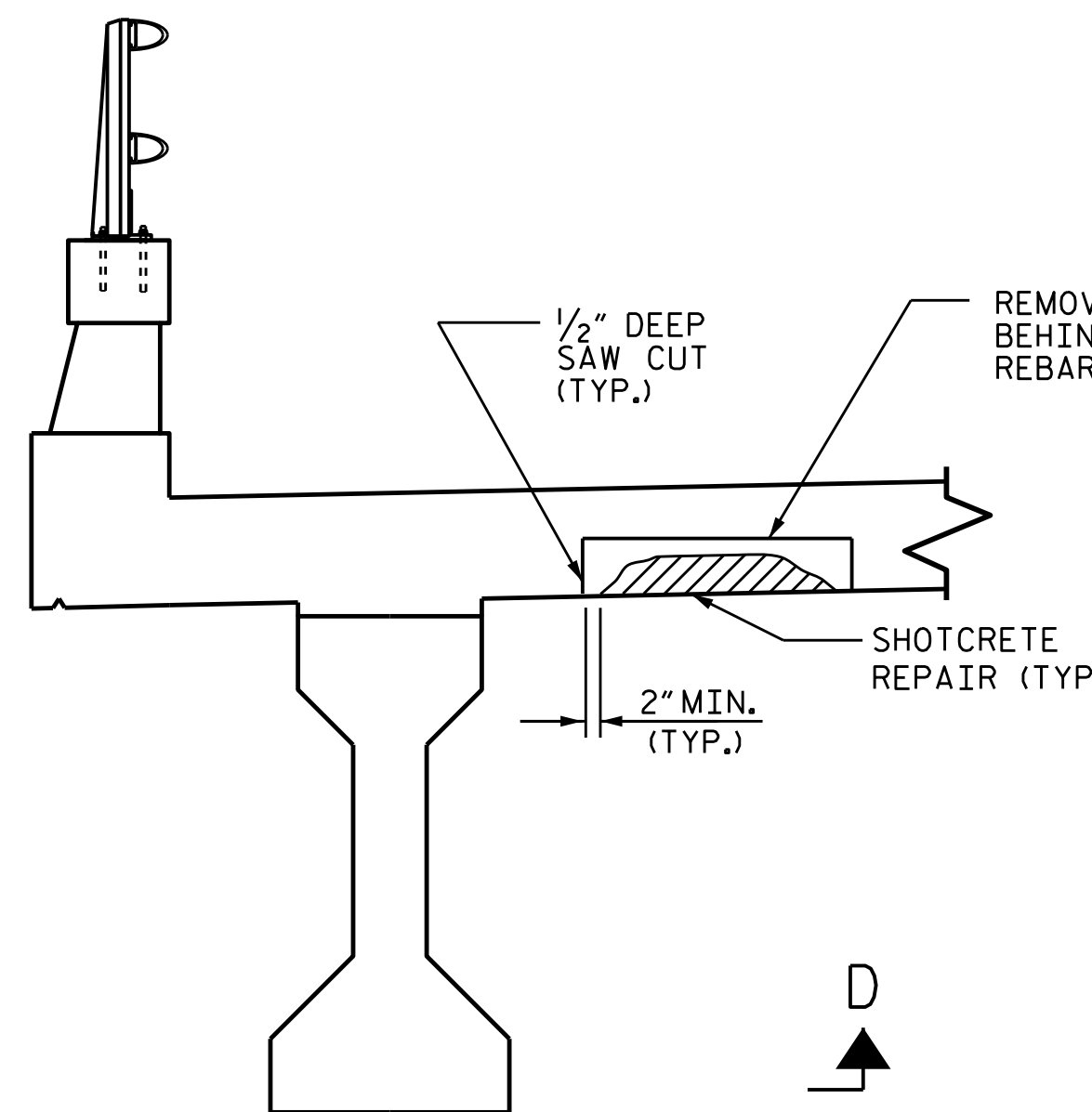
SECTION B-B

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



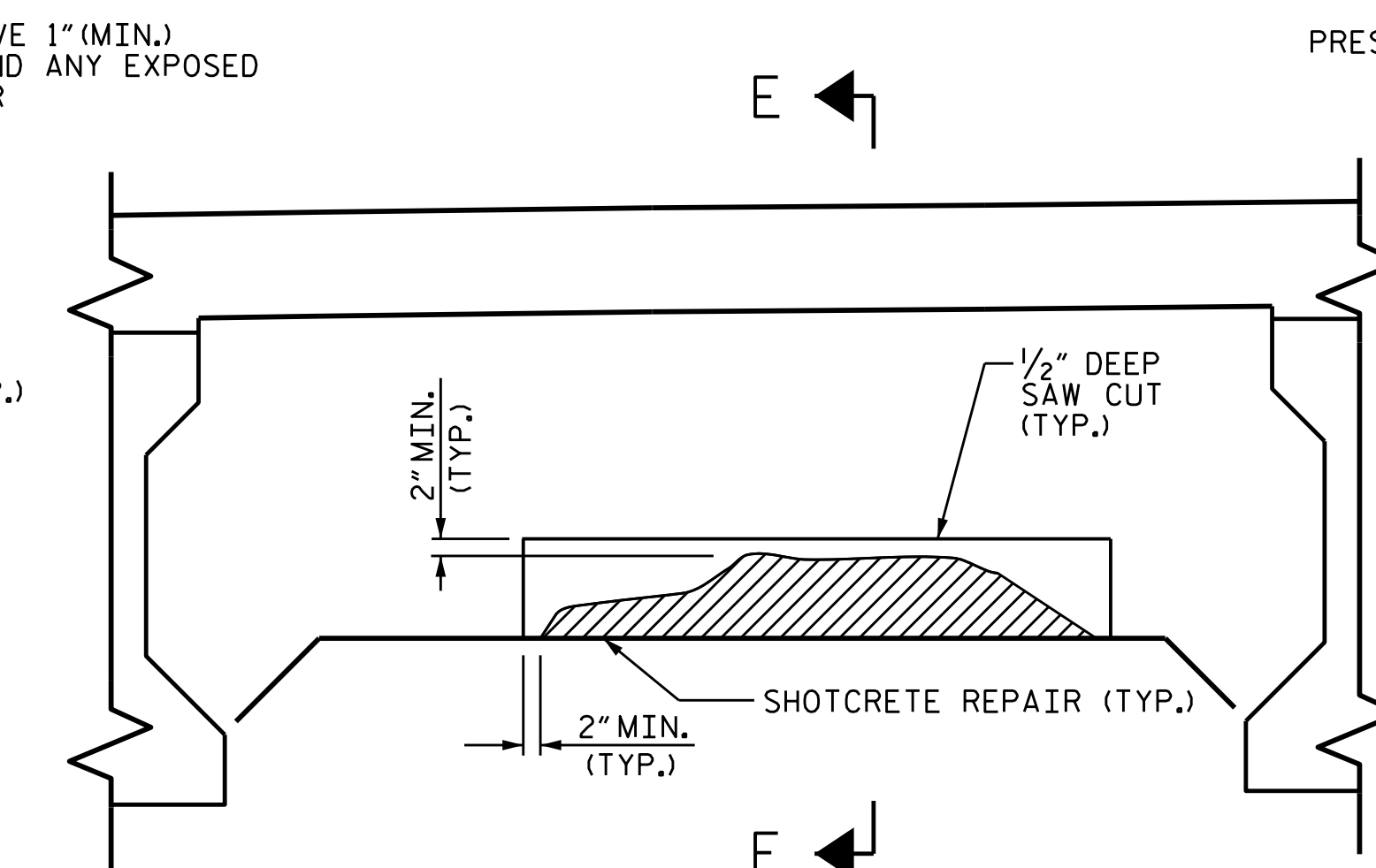
SECTION C-C

(ALL UNSOUND CONCRETE MUST BE REMOVED. USE EXTREME CARE TO NOT DAMAGE STRANDS. PRESTRESSED STRANDS NOT SHOWN FOR CLARITY.)



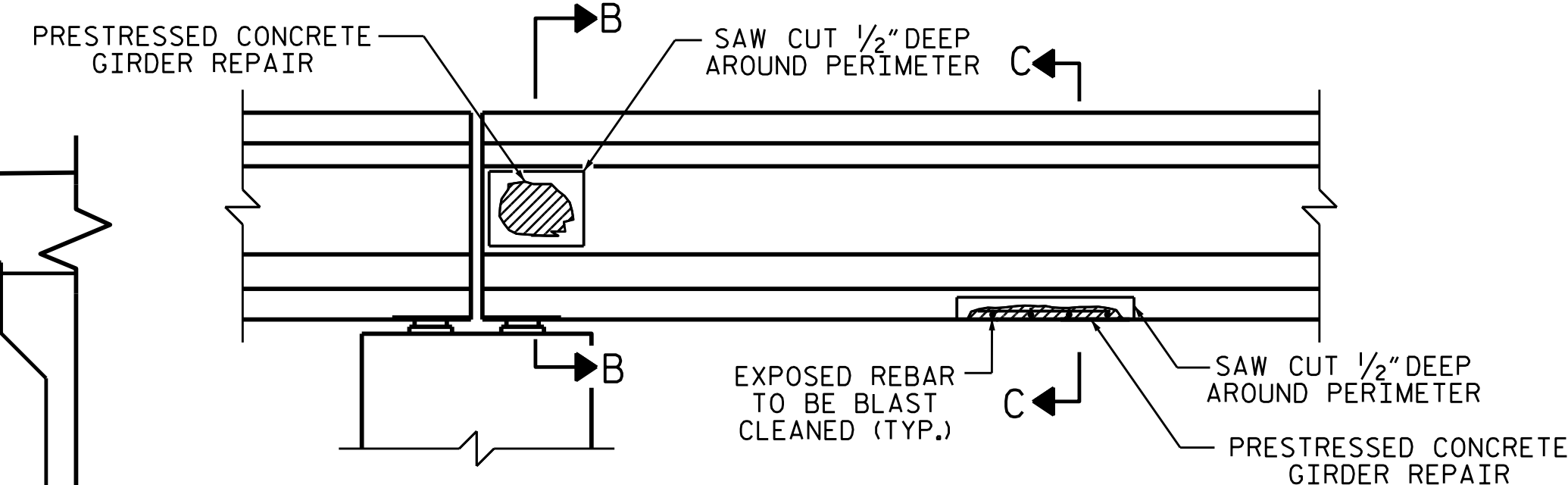
TYPICAL SECTION

UNDERDECK DETAILS



TYPICAL SECTION

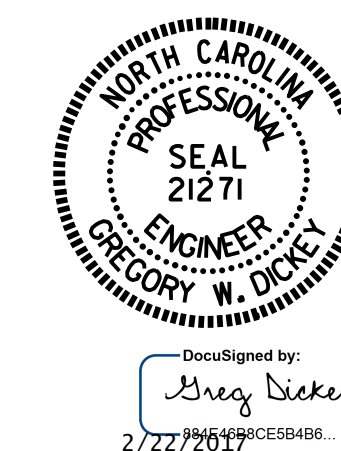
INTERIOR DIAPHRAGM REPAIR DETAILS



ELEVATION

PRESTRESSED CONCRETE GIRDER REPAIR DETAIL

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68



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

DRAWN BY : R. WEISZ DATE : 2/2017
 CHECKED BY : P. BRYANT DATE : 2/2017

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-39 |
| 2 | | | 4 | | | - |

| SPAN | TSA, FULL LENGTH (NON-MONITORING) | | TSA, FULL LENGTH (MONITORING) | | TSA, PARTIAL LENGTH (NON-MONITORING) | | TSA, PARTIAL LENGTH (MONITORING) | |
|-------|-----------------------------------|-------------|-------------------------------|-------------|--------------------------------------|-------------|----------------------------------|-------------|
| | ESTIMATE (SF) | ACTUAL (SF) | ESTIMATE (SF) | ACTUAL (SF) | ESTIMATE (SF) | ACTUAL (SF) | ESTIMATE (SF) | ACTUAL (SF) |
| 1 | 2130.4 | | - | | - | | - | |
| 2 | 2110.9 | | - | | - | | - | |
| 3 | 2110.9 | | - | | - | | - | |
| 4 | 2110.9 | | - | | - | | - | |
| 5 | 2110.9 | | - | | - | | - | |
| 6 | 2110.9 | | - | | - | | - | |
| 7 | 2110.9 | | - | | - | | - | |
| 8 | 2110.9 | | - | | - | | - | |
| 9 | 2110.9 | | - | | - | | - | |
| 10 | 1809.3 | | 301.6 | | - | | - | |
| 11 | 2110.9 | | - | | - | | - | |
| 12 | 3305.3 | | - | | - | | - | |
| 13 | 2833.1 | | 472.2 | | - | | - | |
| 14 | 3305.3 | | - | | - | | - | |
| 15 | 3305.3 | | - | | - | | - | |
| 16 | - | | - | | 427.1 | | - | |
| 17 | - | | - | | 550.8 | | - | |
| 18 | - | | - | | 511.5 | | 348.4 | |
| 19 | - | | - | | 477.7 | | - | |
| 20 | - | | - | | 393.4 | | - | |
| 21 | - | | - | | 404.6 | | - | |
| 22 | - | | - | | 460.8 | | - | |
| 23 | - | | - | | 399.0 | | - | |
| 24 | - | | - | | 404.6 | | - | |
| 25 | - | | - | | 404.6 | | - | |
| 26 | - | | - | | 432.7 | | - | |
| 27 | - | | - | | 420.0 | | - | |
| 28 | - | | - | | 426.0 | | - | |
| 29 | - | | - | | 420.0 | | - | |
| 30 | - | | - | | 420.0 | | - | |
| 31 | - | | - | | 420.0 | | - | |
| 32 | - | | - | | 420.0 | | - | |
| 33 | - | | - | | 420.0 | | - | |
| 34 | - | | - | | 584.4 | | - | |
| 35 | - | | - | | 404.6 | | - | |
| 36 | - | | - | | 393.4 | | - | |
| 37 | - | | - | | 410.3 | | - | |
| 38 | - | | - | | 452.4 | | - | |
| 39 | - | | - | | 404.6 | | - | |
| 40 | - | | - | | 427.1 | | - | |
| 41 | - | | - | | 500.4 | | - | |
| 42 | - | | - | | 764.4 | | - | |
| 43 | - | | - | | 460.8 | | - | |
| 44 | - | | - | | 435.5 | | 45 | |
| 45 | 3305.3 | | - | | - | | - | |
| 46 | 1366.8 | | - | | - | | - | |
| 47 | 1536.6 | | - | | - | | - | |
| 48 | 1724.1 | | - | | - | | - | |
| 49 | 2098.2 | | - | | - | | - | |
| TOTAL | 45717.8 | | 773.8 | | 13050.7 | | 394.4 | |

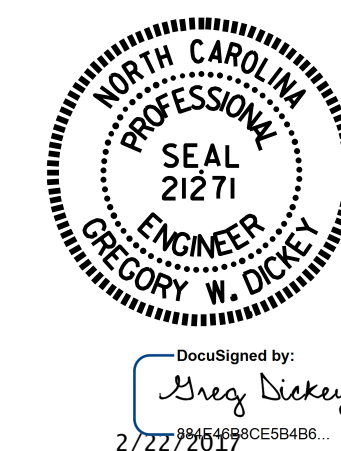
NOTES:

SPANS 1 THRU 15 & 45 THRU 49 WILL RECEIVE FULL LENGTH TSA COATING. SPAN 10, GIRDER 6 AND SPAN 13, GIRDER 5 WILL BE REQUIRED TO BE MONITORING LOCATIONS.

SPANS 16 THRU 44 WILL RECEIVE THE TSA COATING FOR THE FIRST 5' OF THE GIRDER AT THE BENTS AND THEN THE TSA COATING IN CONCRETE REPAIR AREAS. SPAN 18, GIRDER 1 AND SPAN 44, GIRDER 2 WILL BE REQUIRED TO BE MONITORING LOCATIONS.

PROJECT NO. B-5938
CARTERET COUNTY
BRIDGE NO. 68

SHEET 1 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRESTRESSED CONCRETE GIRDER WITH THERMAL SPRAY ANODE DETAILS

DRAWN: KE 12/29/16
CHECKED: SV 12/29/16

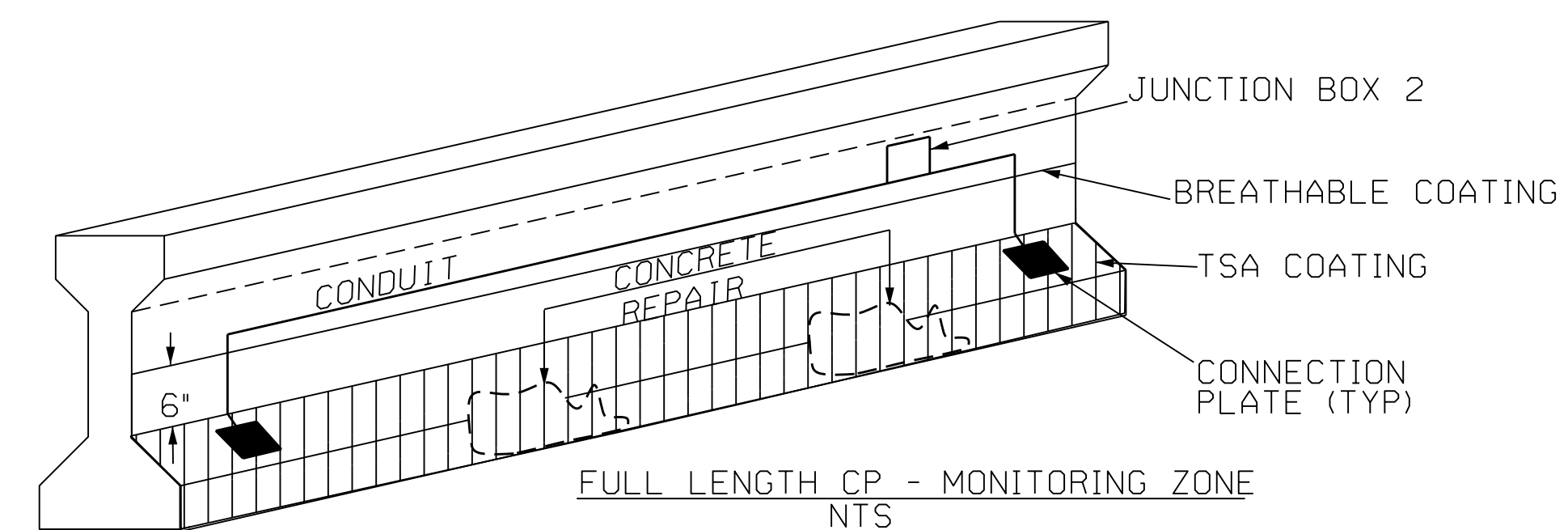
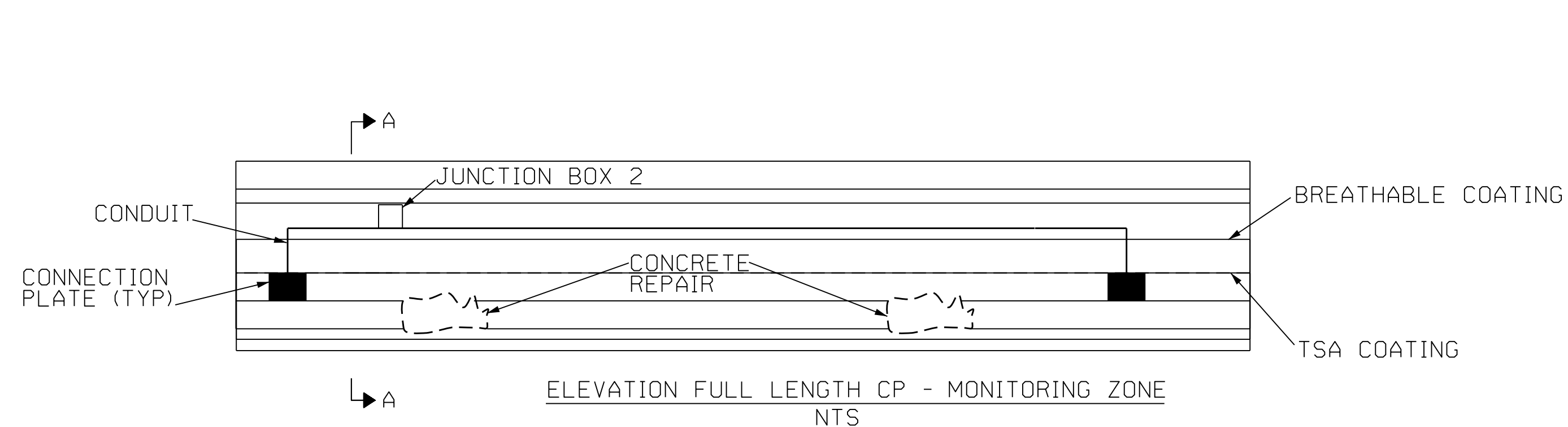


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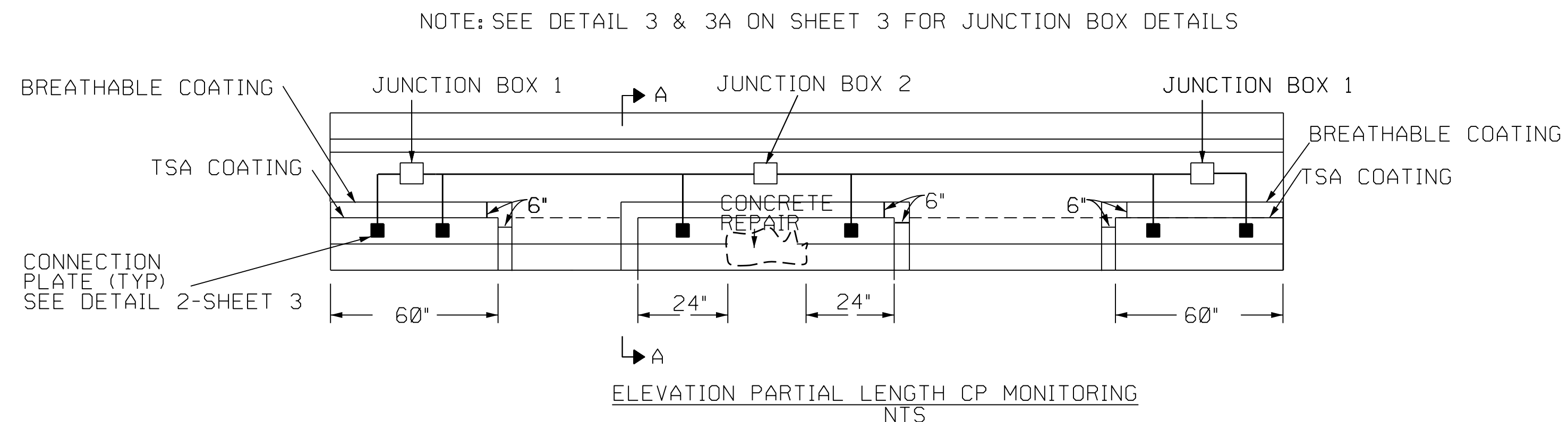
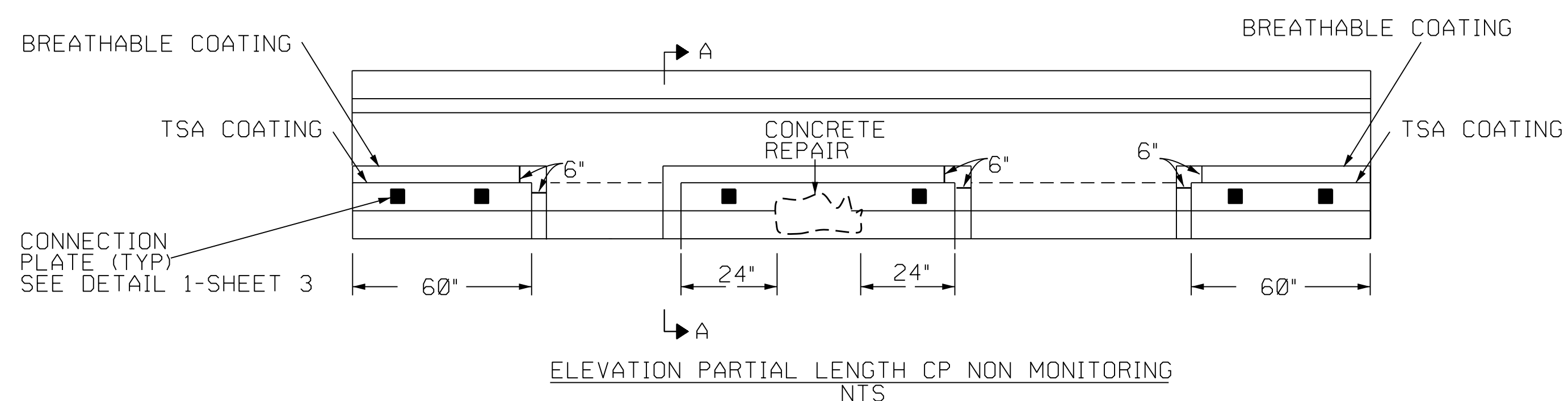
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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-40 |
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| 2 | | | 4 | | | - |

CHECKED BY : G.W.DICKEY DATE : 2/2017



NOTES:

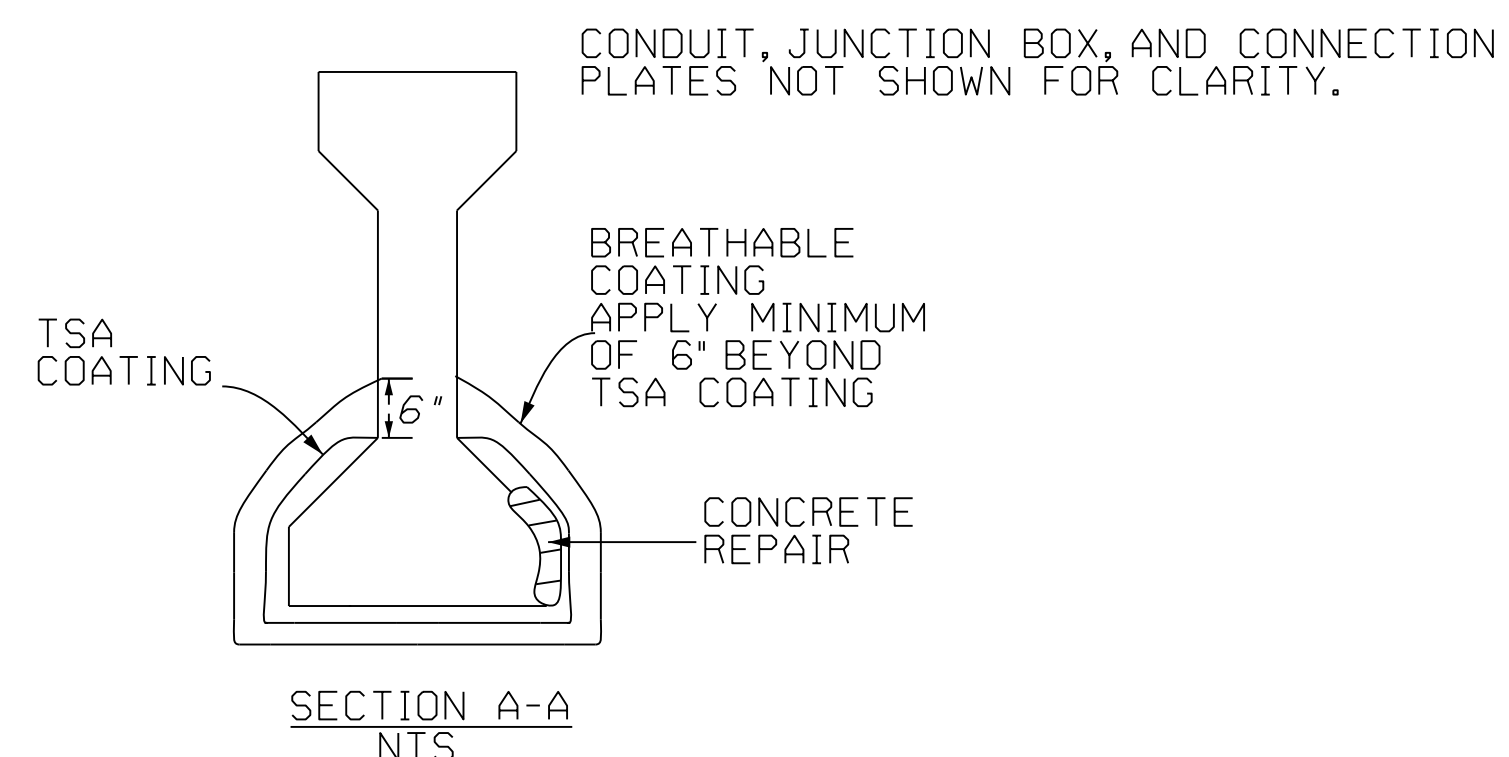
1. FOR NON-MONITORING FULL LENGTH, NO CONDUITS OR JUNCTION BOX IS REQUIRED - SEE DETAIL 1 SHEET 3
2. FOR MONITORING FULL LENGTH, TWO REFERENCE ELECTRODES SHALL BE INSTALLED PER GIRDER, ONE WITHIN THE FIRST 5' OF THE GIRDER END, THE OTHER NEAR THE CONCRETE REPAIR AREA. THE EXACT LOCATIONS SHALL BE DECIDED BY THE CATHODIC PROTECTION SPECIALIST IN THE FIELD.



NOTE: SEE DETAIL 3 & 3A ON SHEET 3 FOR JUNCTION BOX DETAILS

NOTES:

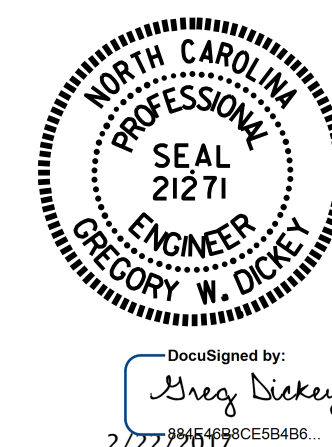
1. FOR MONITORING PARTIAL LENGTH, TWO REFERENCE ELECTRODES SHALL BE INSTALLED PER GIRDER, ONE WITHIN THE FIRST 5' OF THE GIRDER END, THE OTHER NEAR THE CONCRETE REPAIR AREA. THE EXACT LOCATIONS SHALL BE DECIDED BY THE CATHODIC PROTECTION SPECIALIST IN FIELD.
2. ALWAYS EXTEND TSA COATING AREA 24" BEYOND CONCRETE DAMAGE AREA. EXTEND BREATHABLE COATING 6" BEYOND THE EDGE OF TSA COATING.



CONDUIT, JUNCTION BOX, AND CONNECTION PLATES NOT SHOWN FOR CLARITY.

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 4



| | | | | | |
|--|-----|-------|-----|-----|-------|
| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH | | | | | |
| PRESTRESSED CONCRETE GIRDER WITH THERMAL SPRAY ANODE DETAILS | | | | | |
| REVISIONS | | | | | |
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| SHEET NO. | | | | | S1-41 |
| TOTAL SHEETS | | | | | - |

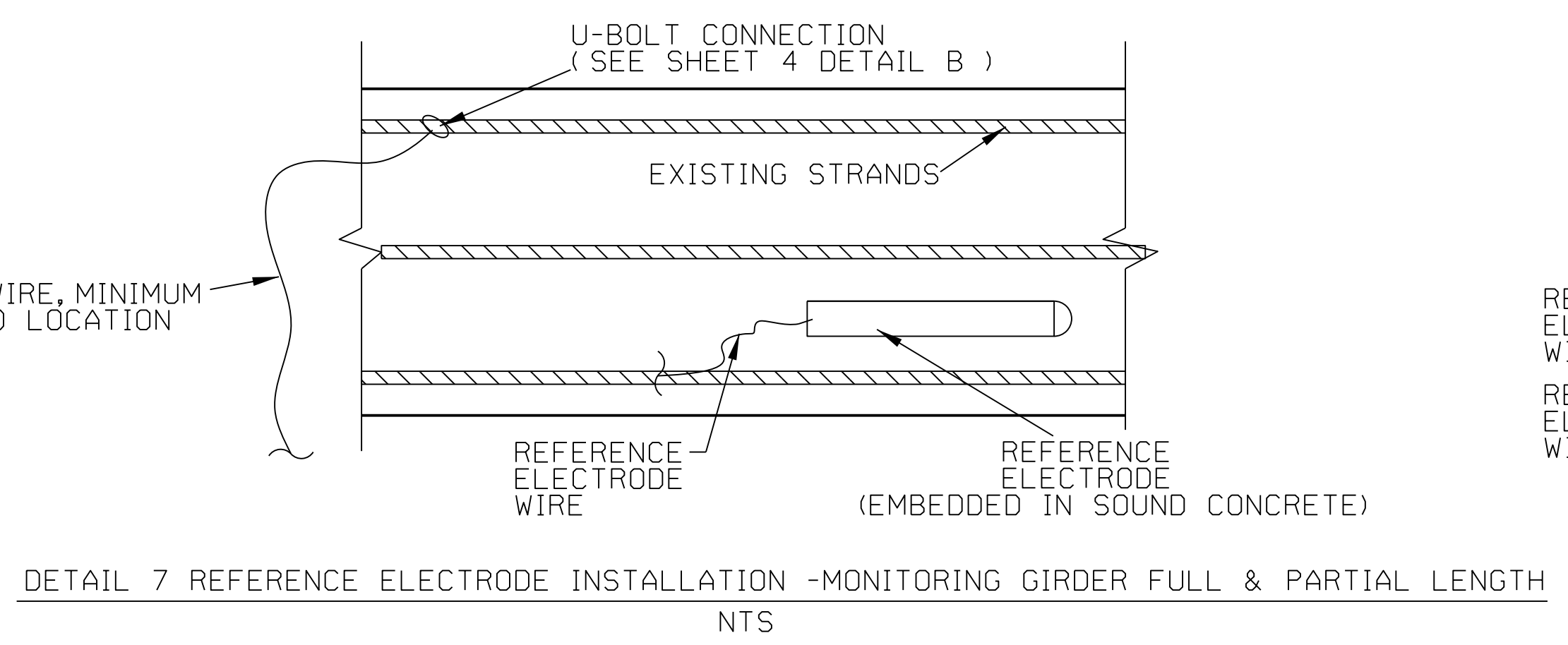
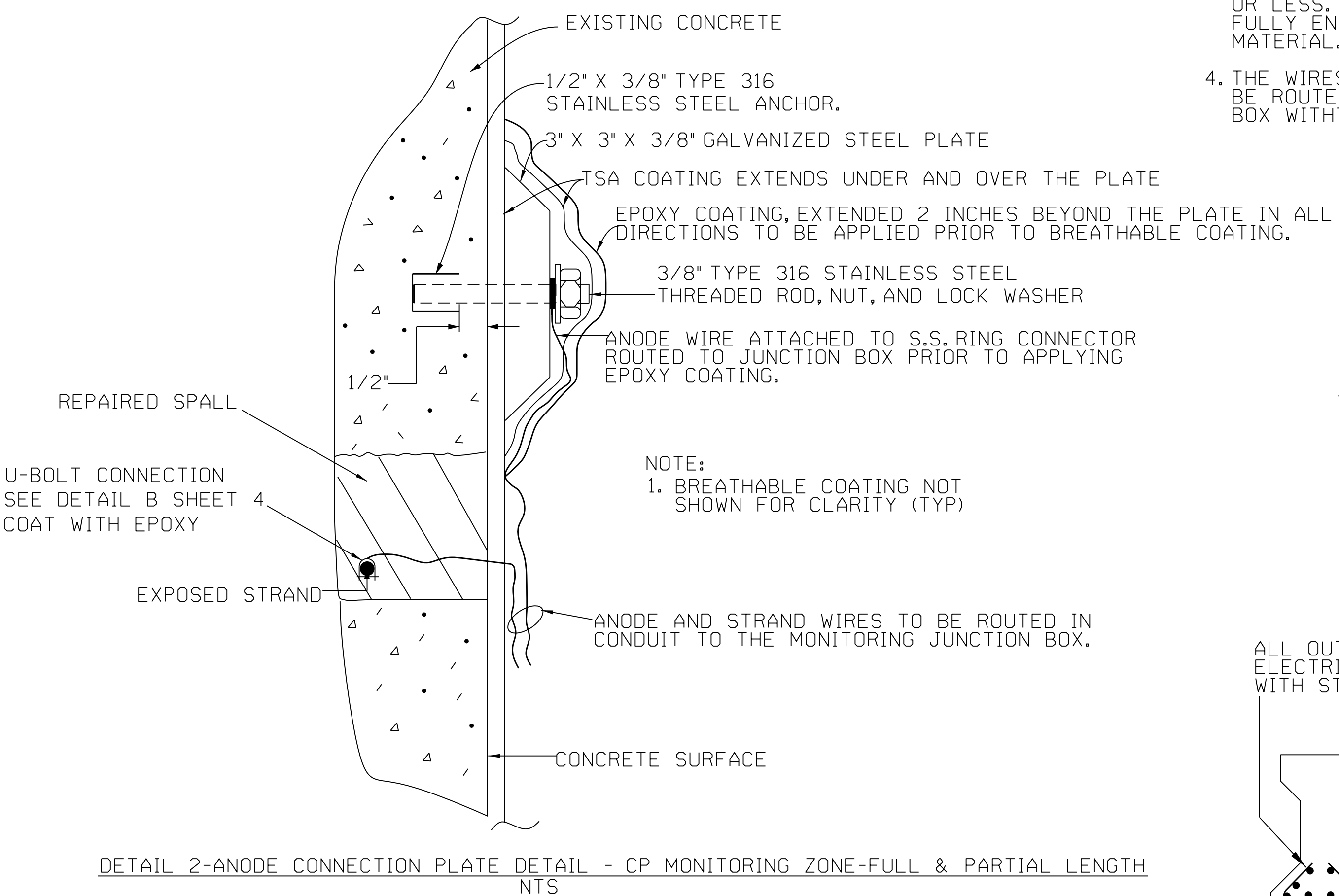
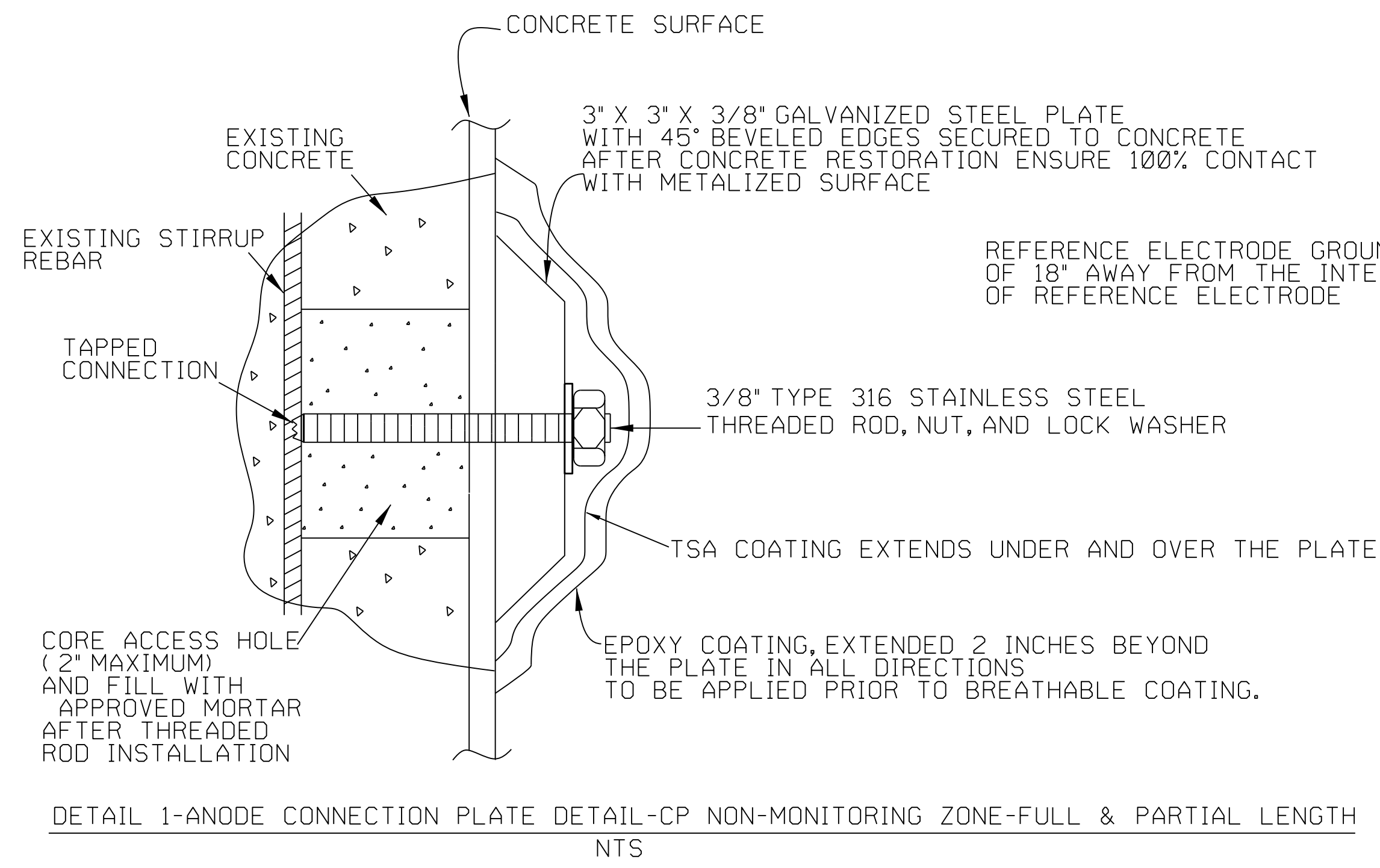
CHECKED BY : G.W.DICKEY DATE : 2/2017

| | |
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| DRAWN: | KE 12/29/16 |
| CHECKED: | SV 12/29/16 |

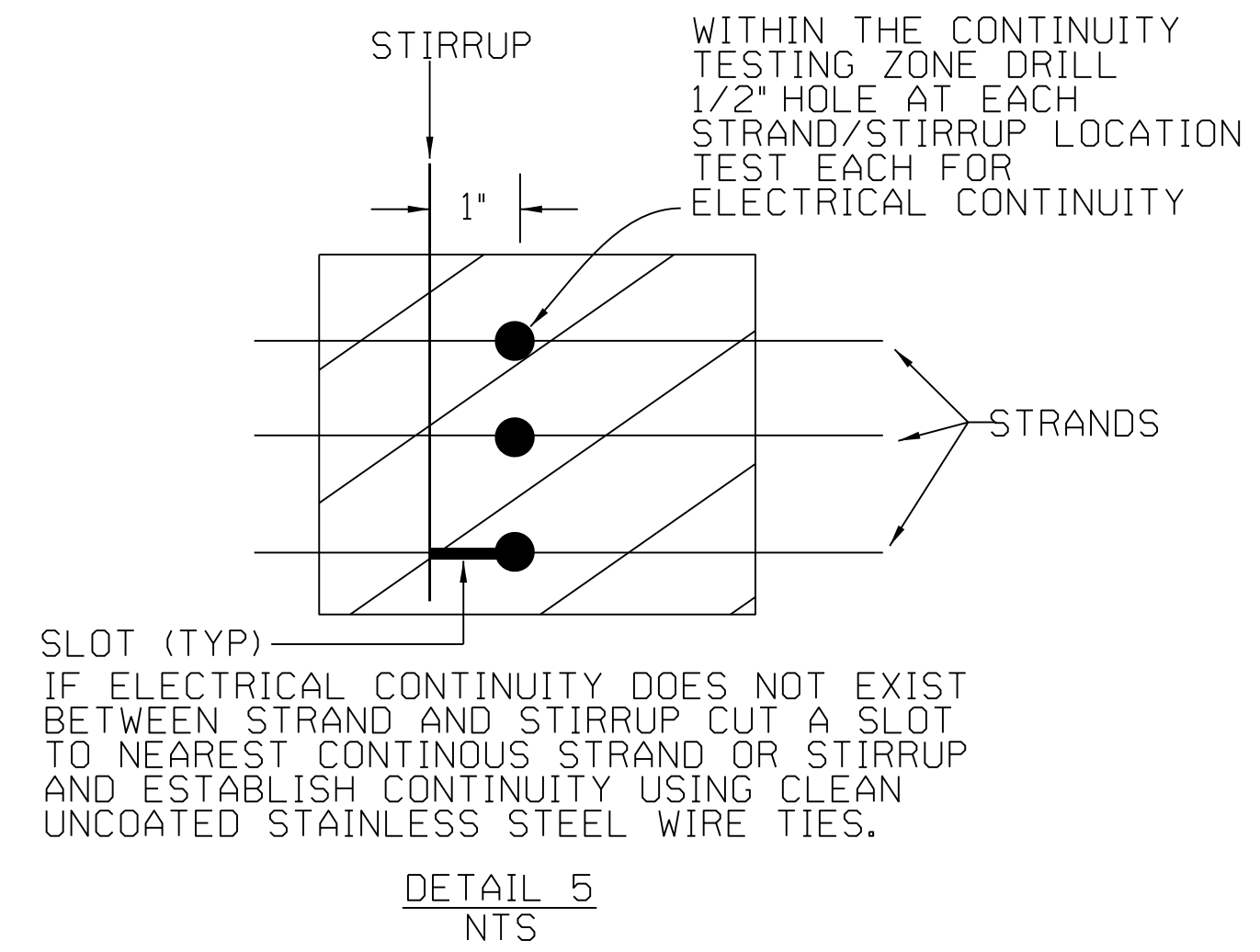
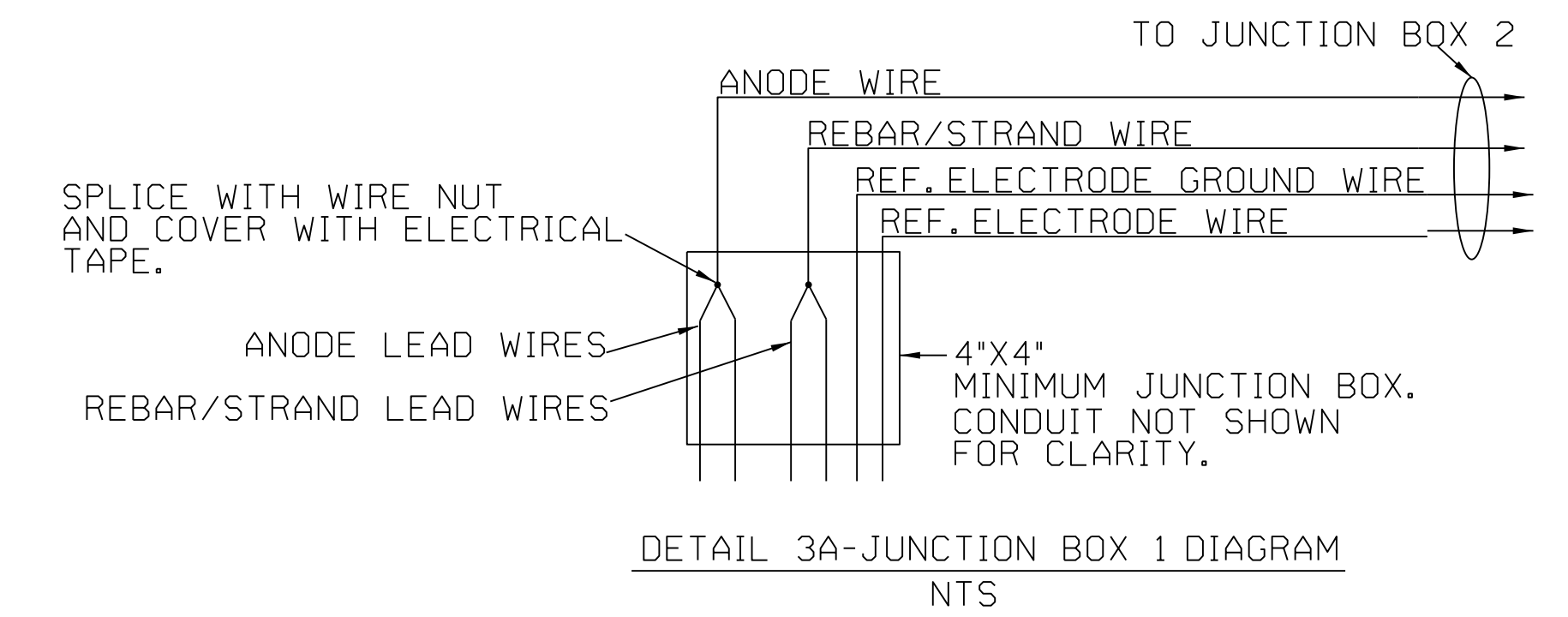
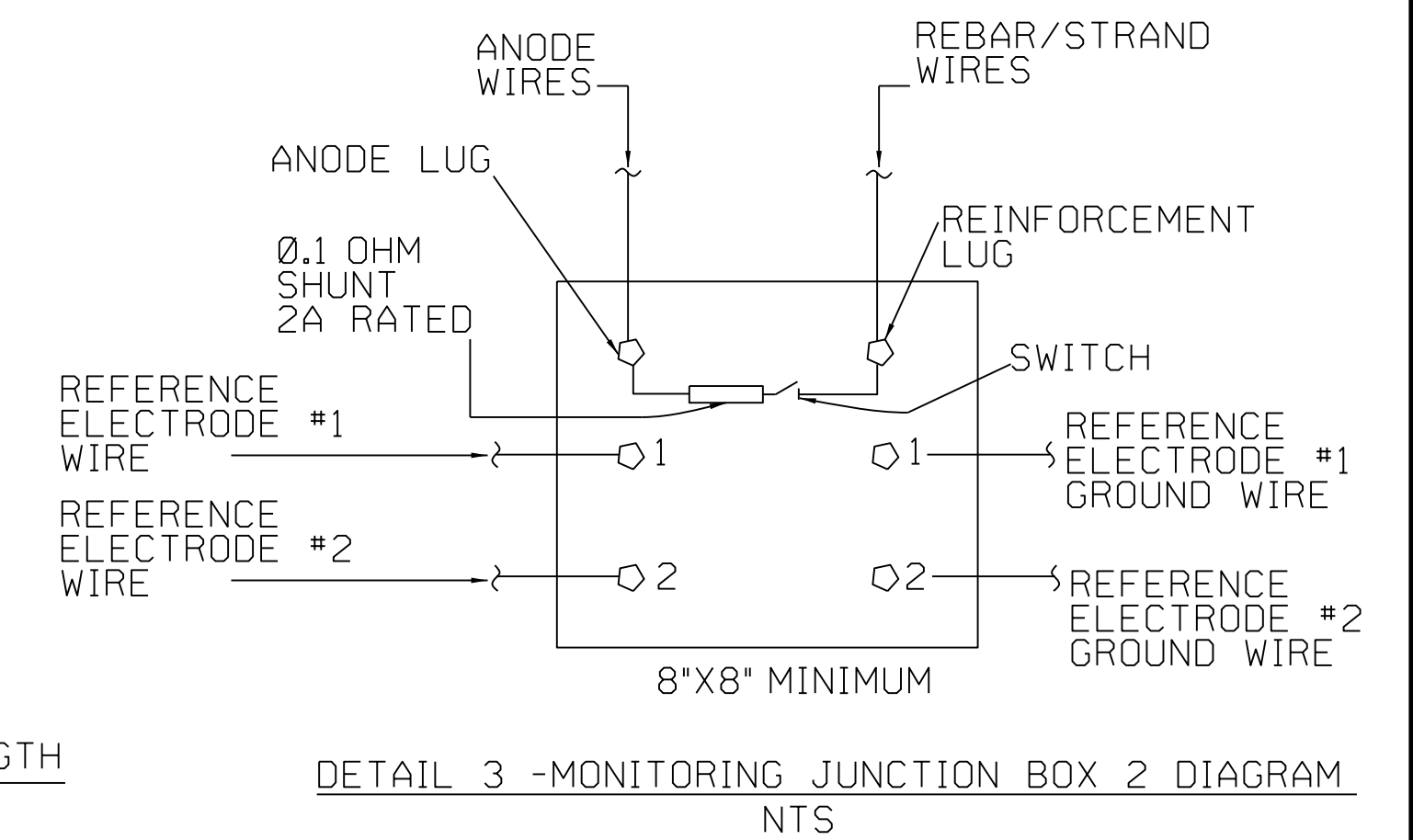
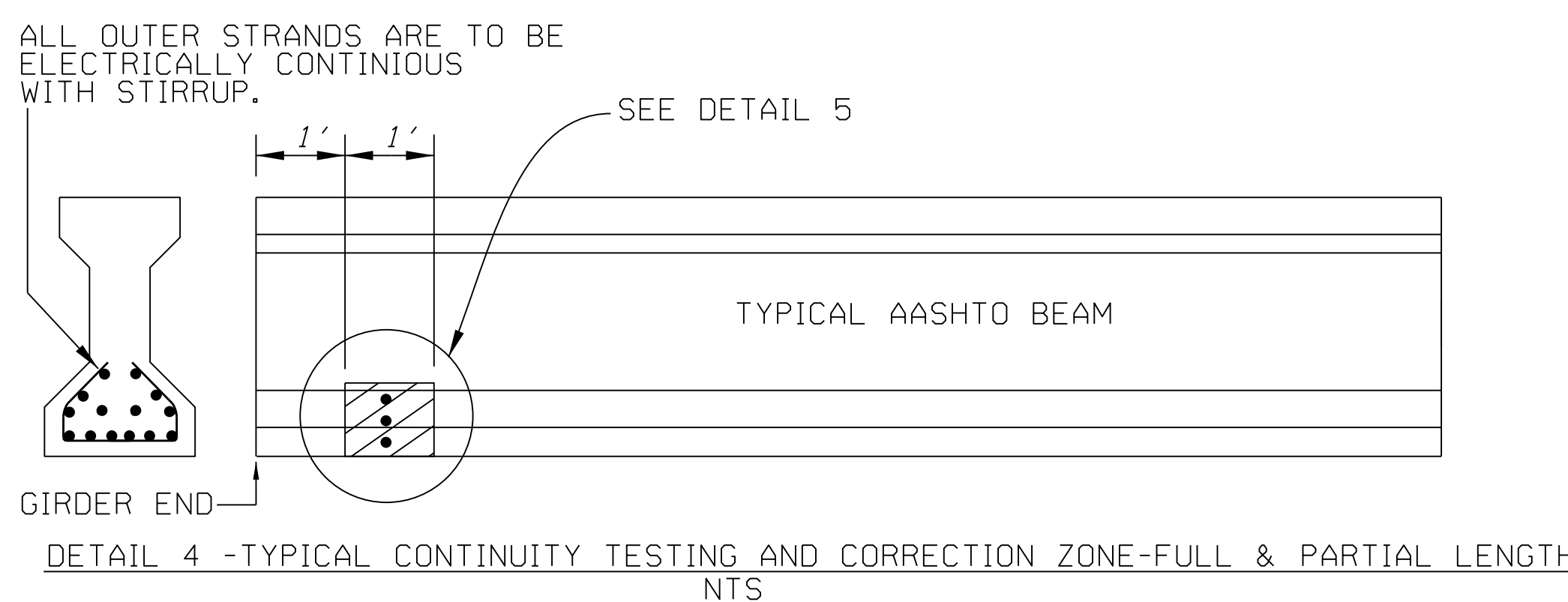
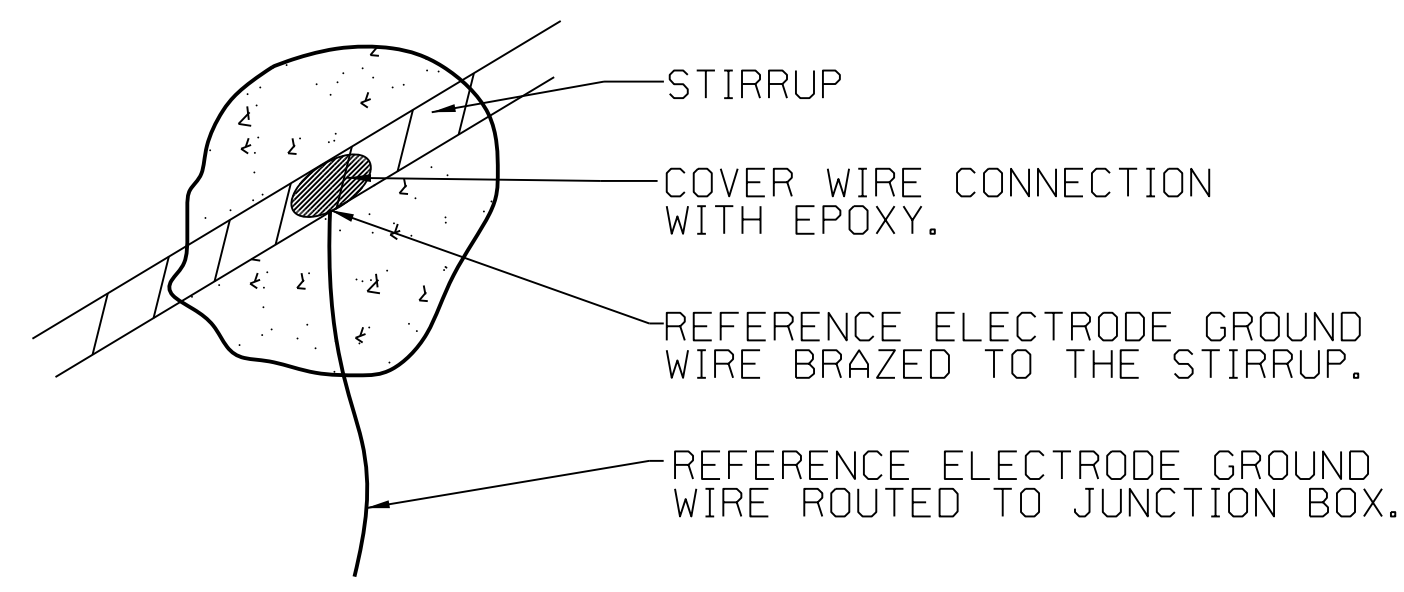


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- NOTES:
1. THE REFERENCE ELECTRODE GROUND WIRE IS ALLOWED TO BE BRAZED TO A STIRRUP, PROVIDED THAT THE BRAZING CONNECTION IS A MINIMUM OF 18" AWAY FROM THE INTENDED REFERENCE ELECTRODE INSTALLATION LOCATION (SEE DETAIL 6).
 2. DO NOT EXPOSE STRAND/REBAR/STIRRUP WHILE INSTALLING REFERENCE ELECTRODE.
 3. THE REFERENCE ELECTRODE SHALL BE INSTALLED PARALLEL TO STRANDS. FILL THE EXCAVATION HOLE WITH APPROVED PORTLAND CEMENT PATCHING GROUT WITH 15,000 OHM-CM RESISTIVITY OR LESS. THE REFERENCE ELECTRODE SHALL BE FULLY ENCAPSULATED WITH CEMENTITIOUS BACKFILL MATERIAL. NO VOIDS SHALL BE PERMITTED.
 4. THE WIRES FOR THE REFERENCE ELECTRODE SHALL BE ROUTED INSIDE THE CONDUIT TO THE JUNCTION BOX WITHOUT SPLICING.

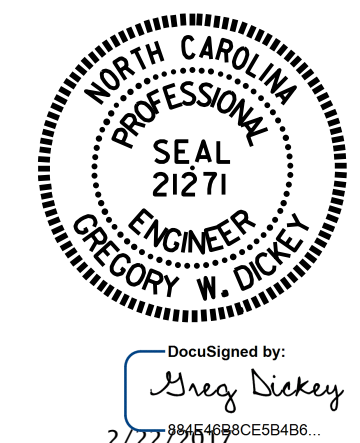


PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRESTRESSED CONCRETE GIRDER WITH THERMAL SPRAY ANODE DETAILS



| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-42 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | - | |

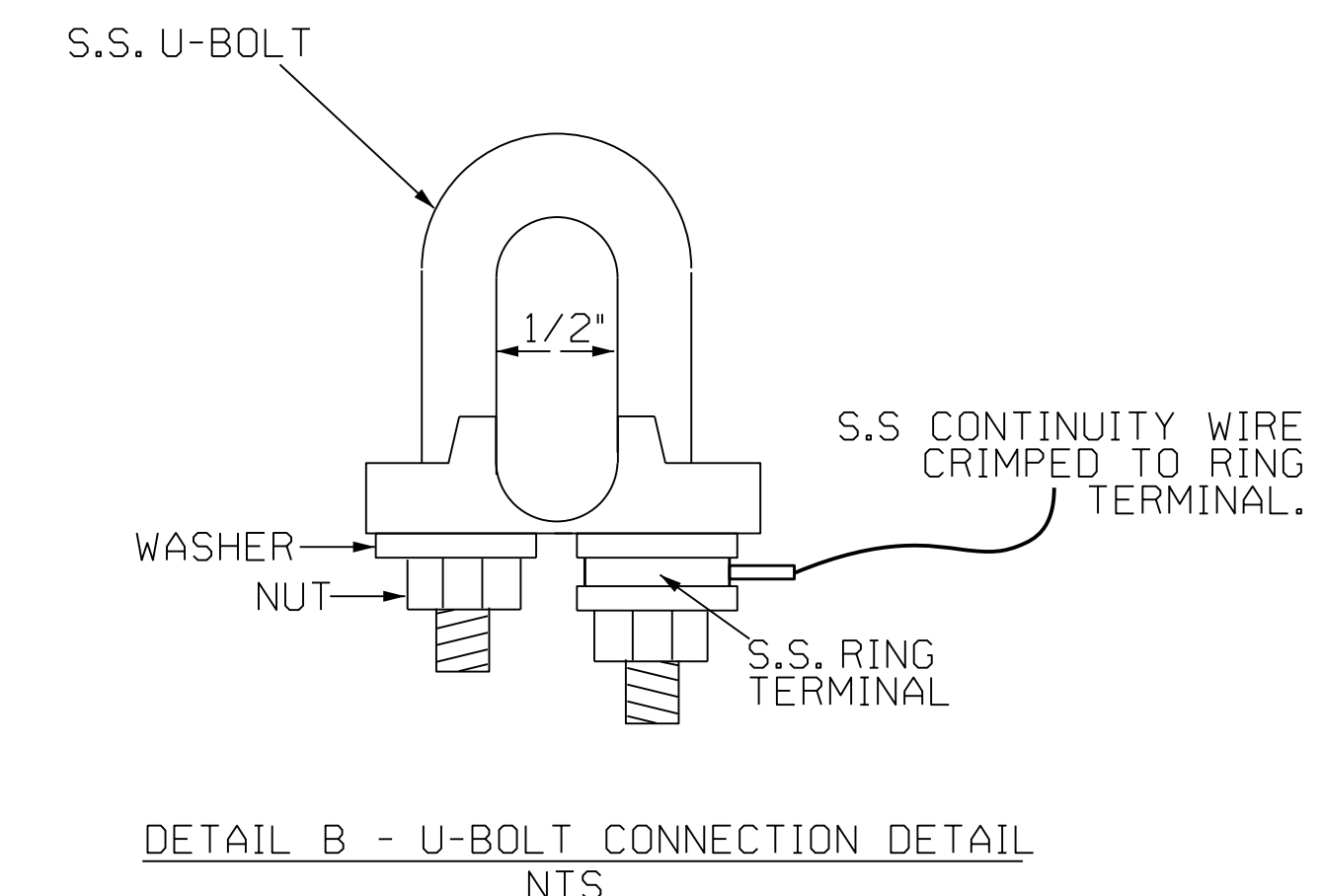
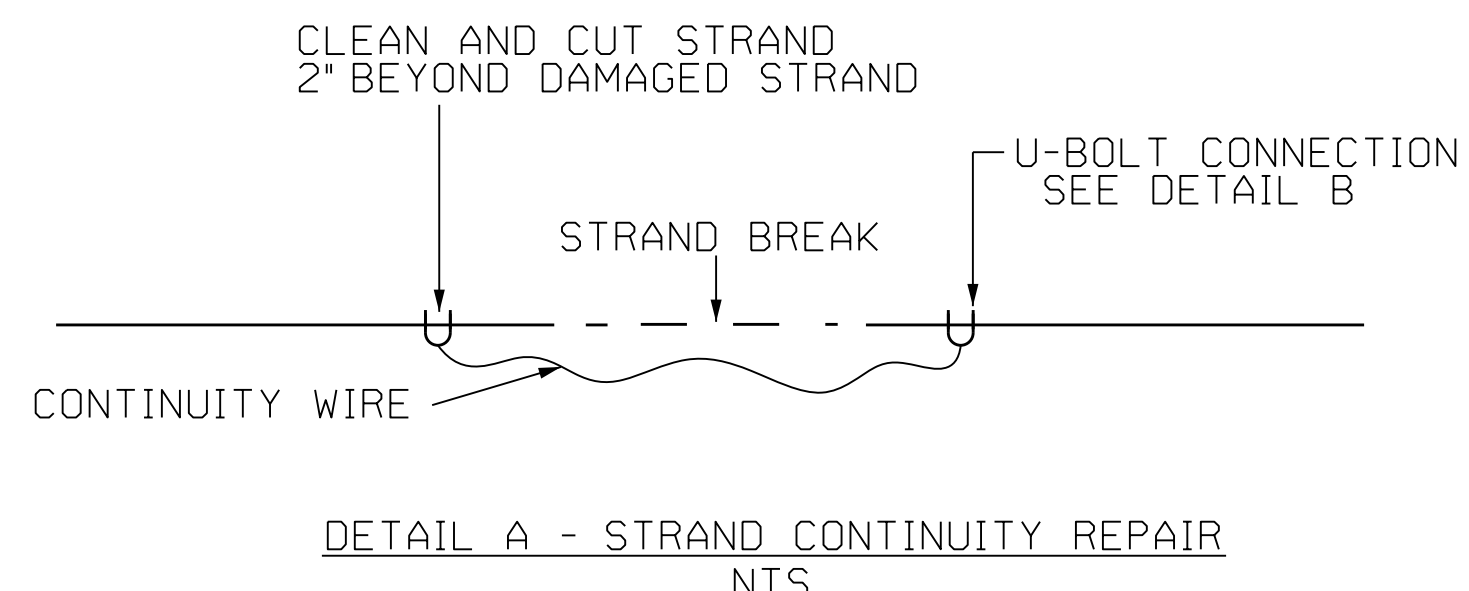
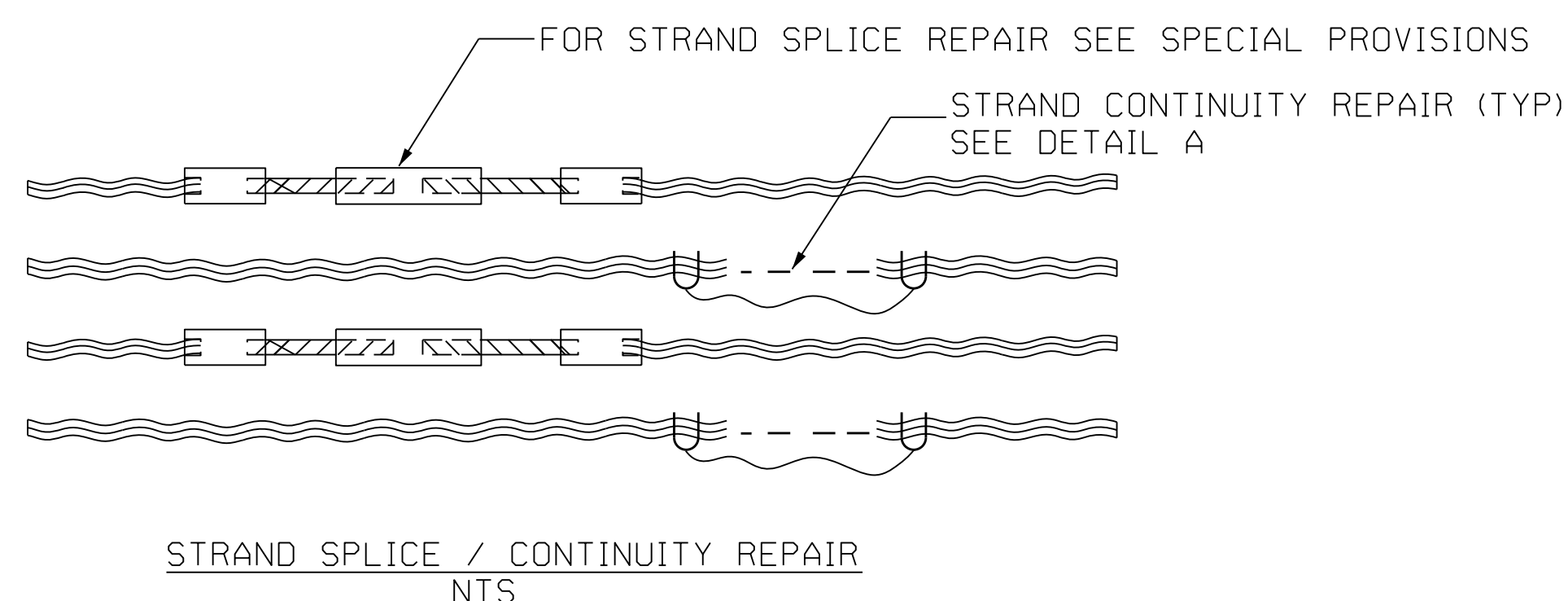
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CHECKED BY : G.W.DICKEY DATE : 2/2017

DRAWN: KE 12/29/16
 CHECKED: SV 12/29/16

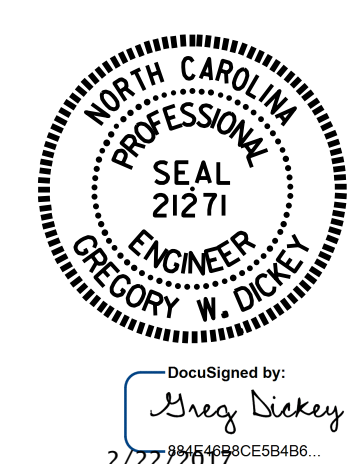
Siva Corrosion Services, Inc.
 NDT • Corrosion • Materials
 www.SivaCorrosion.com
 1313 Wilmington Pike Suite 2B
 West Chester, PA 19380-19383
 P(610) 692-6551

- NOTES:
1. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. IF EXISTING STRAND IS DAMAGED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR ADDITIONAL INSTRUCTIONS ON THE APPLICABLE REPAIR METHOD
 2. STRAND LOSS GREATER THAN 50% SHALL BE TREATED AS BROKEN



PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 4 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRESTRESSED CONCRETE
 GIRDER WITH THERMAL
 SPRAY ANODE
 DETAILS

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-43 |
| 2 | | | 4 | | | - |

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CHECKED BY : G.W.DICKEY DATE : 2/2017

| | |
|-----------------------------|---|
| DRAWN: <u>KE 12/29/16</u> |  Siva Corrosion Services, Inc. NDT • Corrosion • Materials www.SivaCorrosion.com 1313 Wilmington Pike Suite 2B West Chester, PA 19380-19383 (P) (610) 692-6551 |
| CHECKED: <u>SV 12/29/16</u> | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

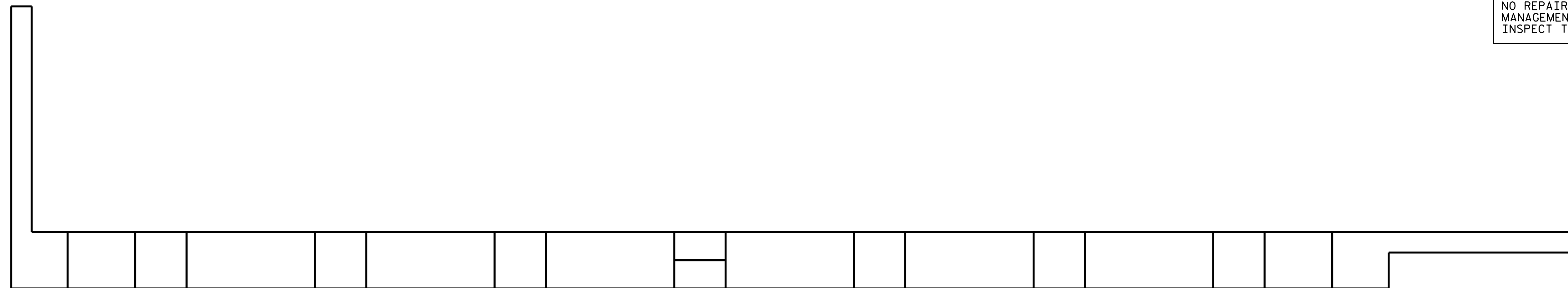
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

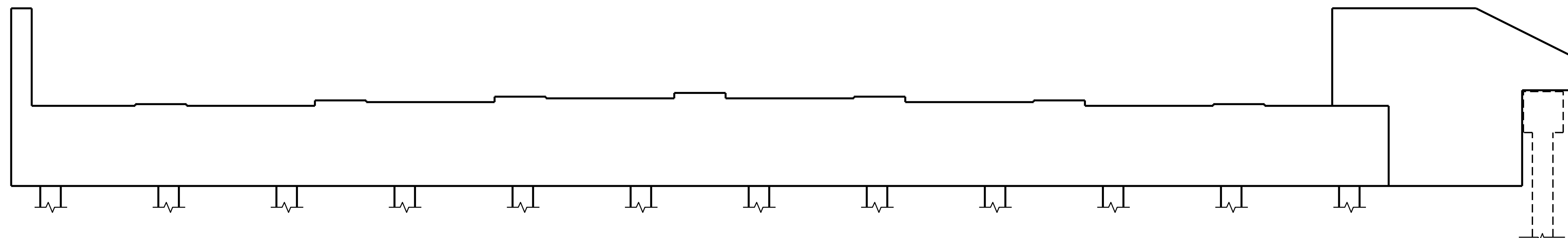
| REPAIRS END BENT 1 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

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



PLAN
TOP OF CAP



ELEVATION
NORTH SIDE

PROJECT NO. B-5938
CARTERET COUNTY
BRIDGE NO. 68

SHEET 1 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1



DocuSigned by:
Greg Dickey
2/22/2017 9:58:48 AM

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
CHECKED BY : R. N. WEISZ DATE : 9/2016

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| NO. | REVISIONS | | NO. | REVISIONS | | SHEET NO. |
|-----|-----------|-------|-----|-----------|-------|-----------------------|
| | BY: | DATE: | | BY: | DATE: | |
| 1 | | | 3 | | | S1-44 TOTAL SHEETS |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

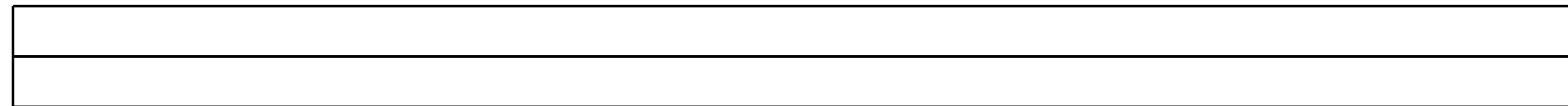
REPAIR QUANTITY TABLE

| REPAIRS BENT 1 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

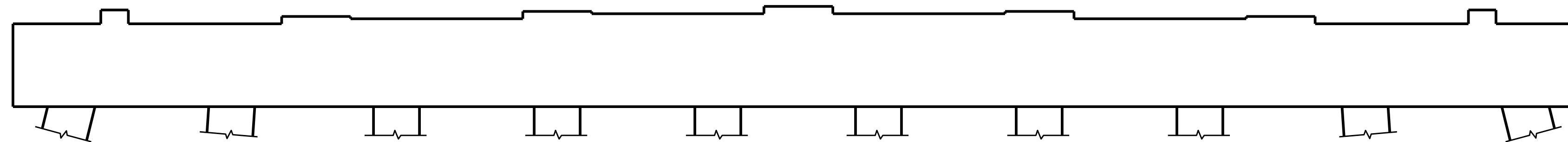
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



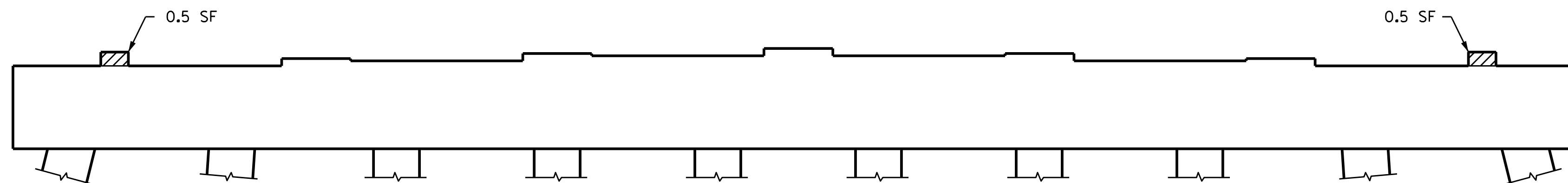
PLAN

TOP OF CAP



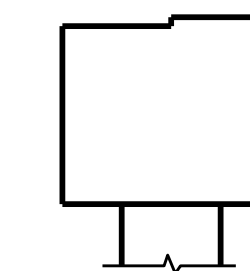
ELEVATION

SOUTH SIDE



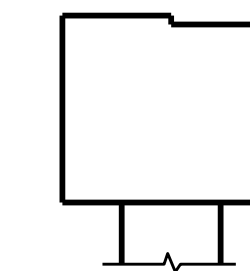
ELEVATION

NORTH SIDE



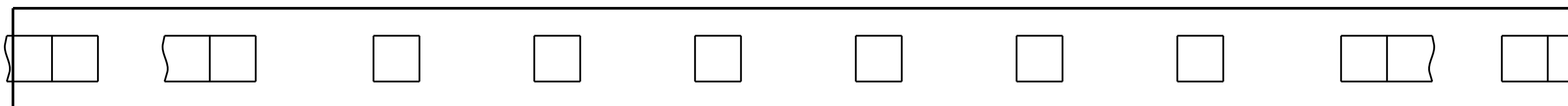
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 2 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1



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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-45 |
| 2 | | | 4 | | | |

NOTES:

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

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

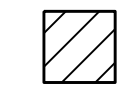
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

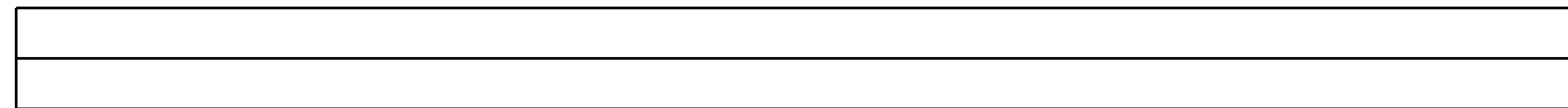
REPAIR QUANTITY TABLE

| REPAIRS BENT 2 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

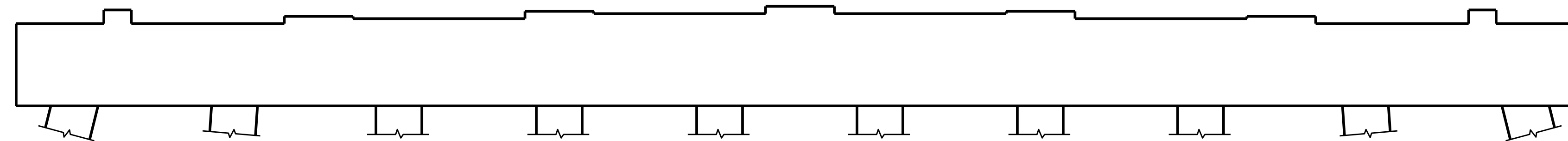
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



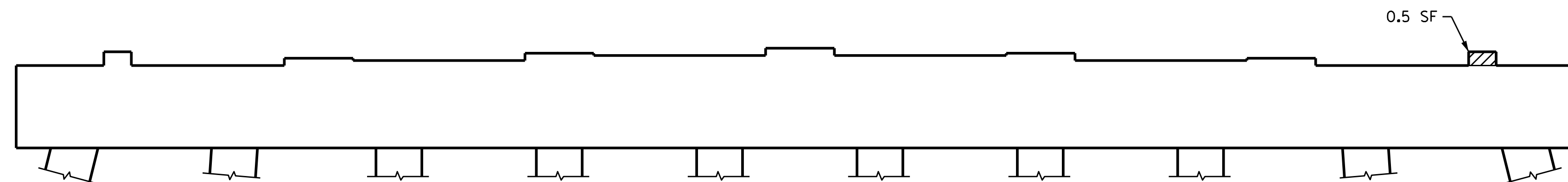
PLAN

TOP OF CAP



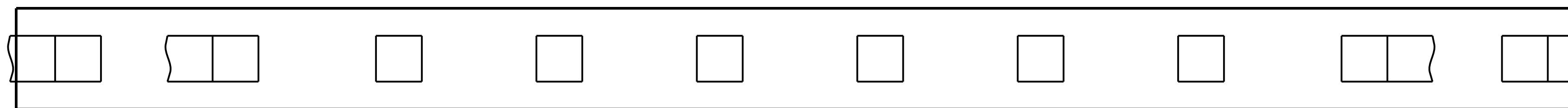
ELEVATION

SOUTH SIDE



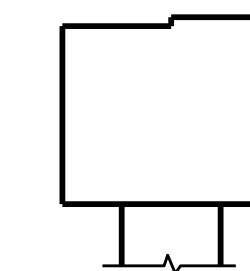
ELEVATION

NORTH SIDE



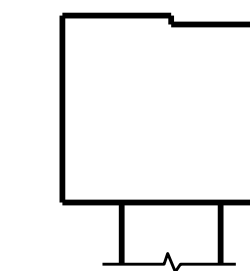
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 3 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2



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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-46 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

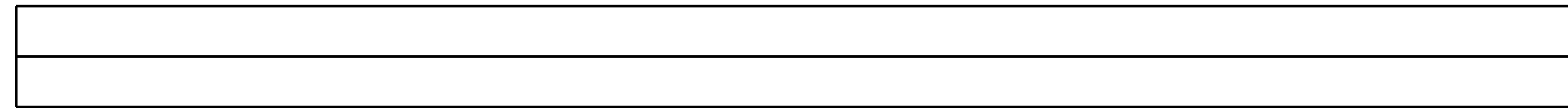
REPAIR QUANTITY TABLE

| REPAIRS BENT 3 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

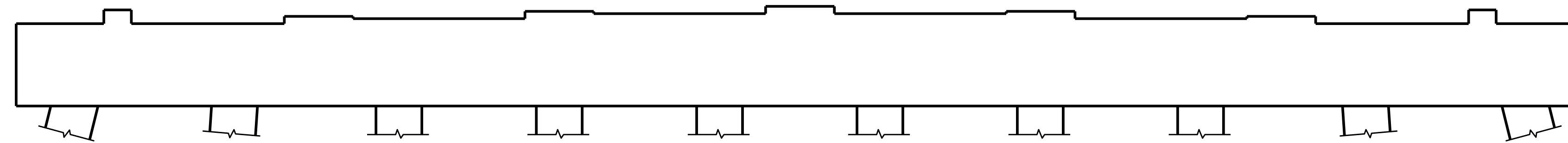
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



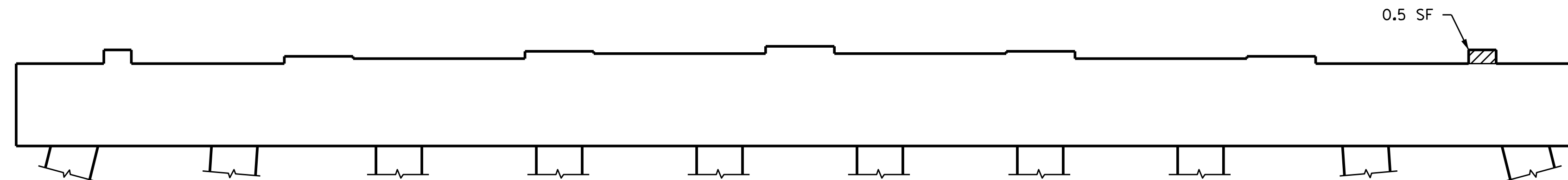
PLAN

TOP OF CAP



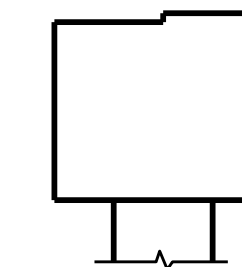
ELEVATION

SOUTH SIDE



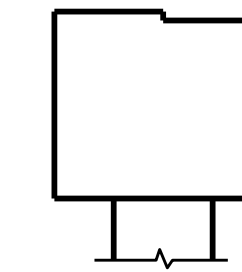
ELEVATION

NORTH SIDE



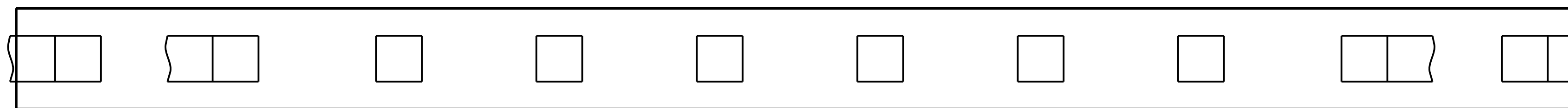
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 4 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3



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| 1 | | | 3 | | | S1-47 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 4 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

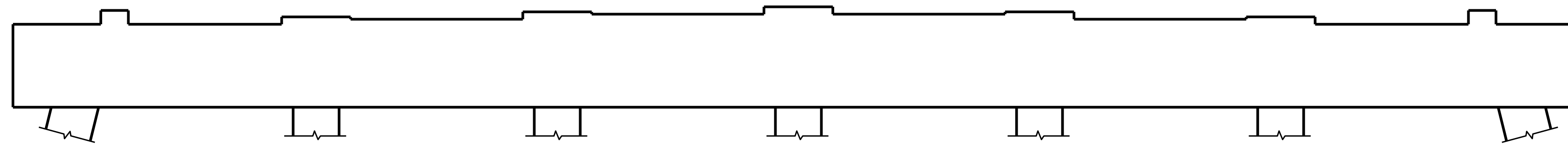
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

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



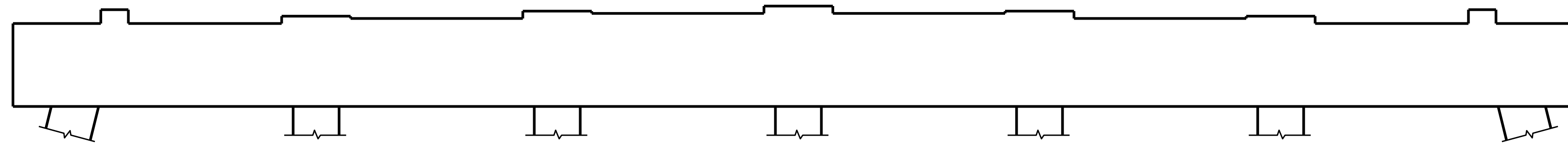
PLAN

TOP OF CAP



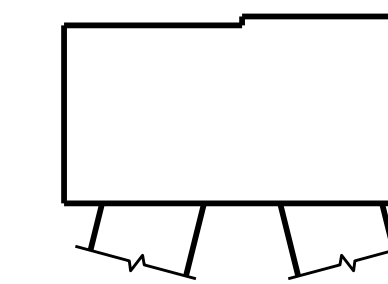
ELEVATION

SOUTH SIDE



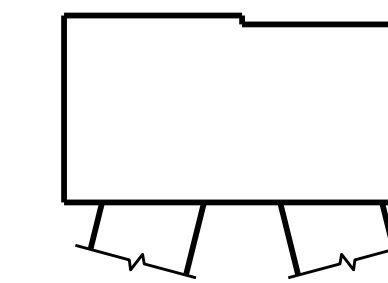
ELEVATION

NORTH SIDE



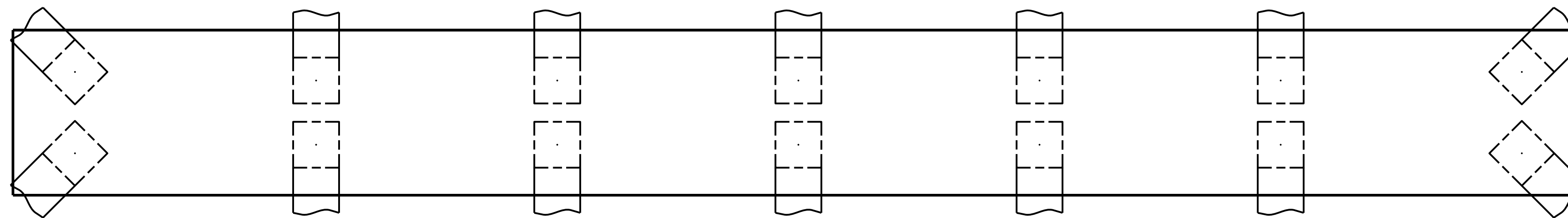
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

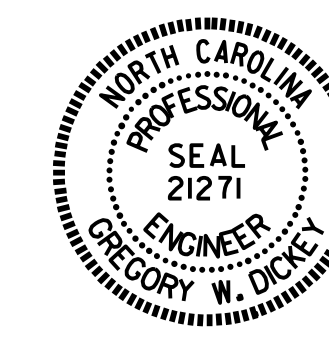
CARTERET COUNTY

BRIDGE NO. 68

SHEET 5 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4



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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-48 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

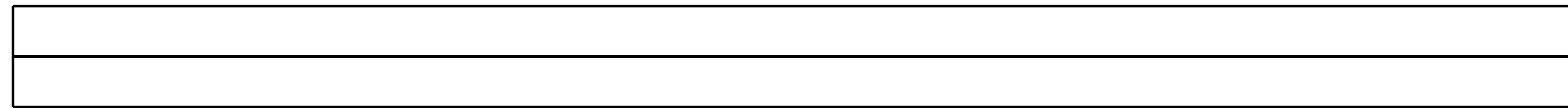
REPAIR QUANTITY TABLE

| REPAIRS BENT 5 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 2.0 | 1.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

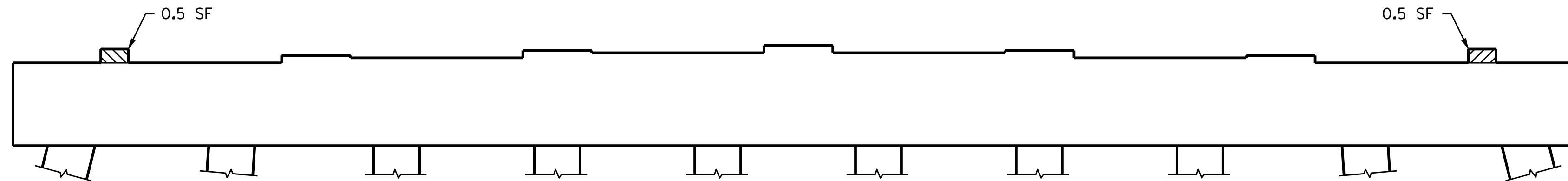
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



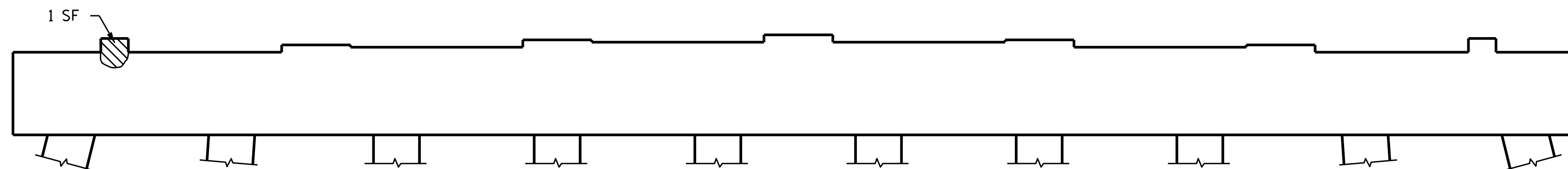
PLAN

TOP OF CAP



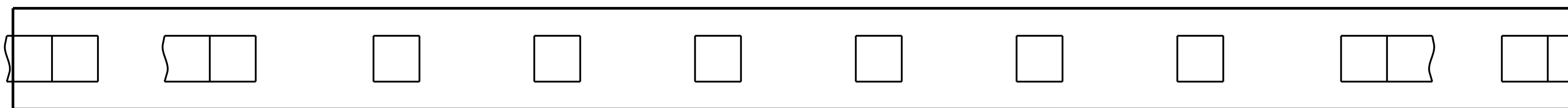
PLAN

SOUTH SIDE



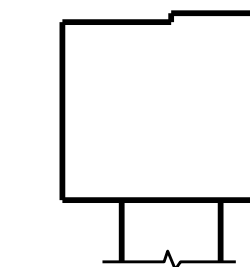
ELEVATION

NORTH SIDE



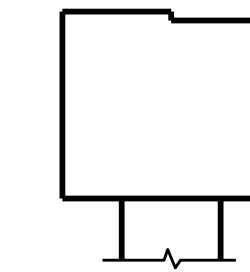
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 6 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 5



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Greg Dickey
2/22/2016 9:03:48 AM

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CHECKED BY : R. N. WEISZ DATE : 9/2016

22-FEB-2017 07:33
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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-49 |
| 2 | | | 4 | | | |

NOTES:

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

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

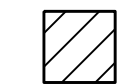
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

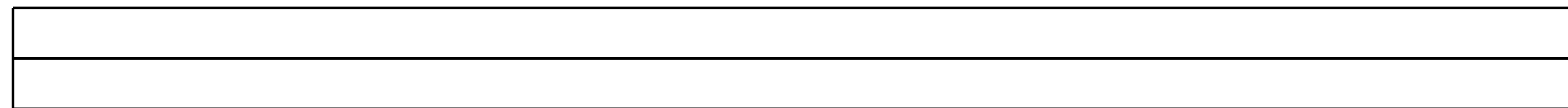
REPAIR QUANTITY TABLE

| REPAIRS BENT 6 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 6.0 | 3.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

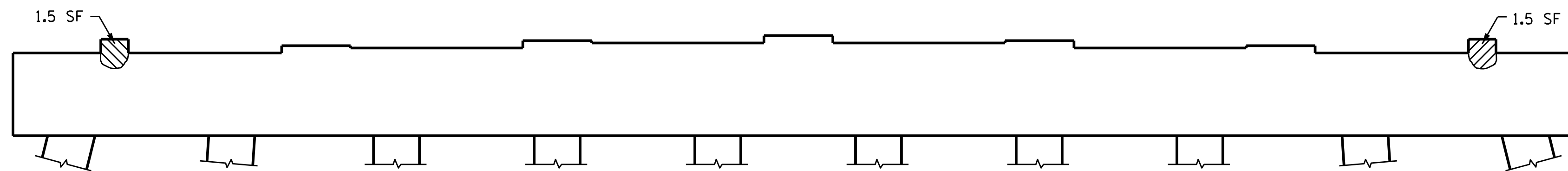
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



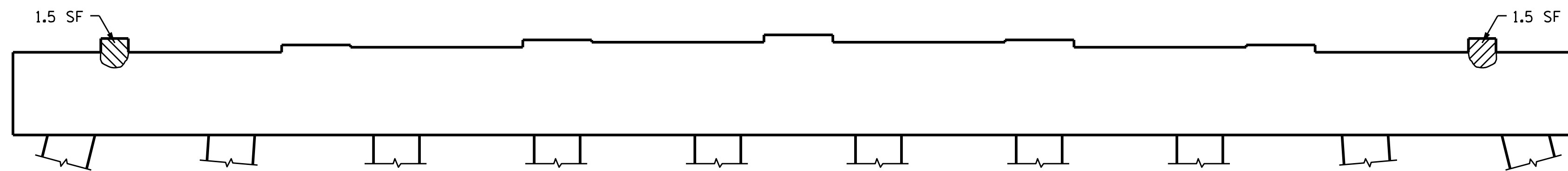
PLAN

TOP OF CAP



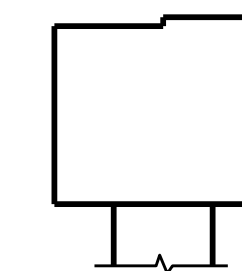
ELEVATION

SOUTH SIDE



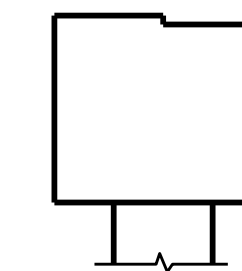
ELEVATION

NORTH SIDE



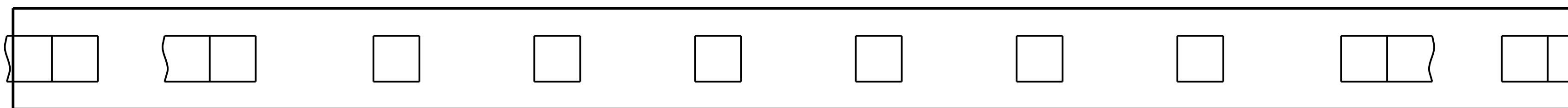
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 7 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 6



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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-50 |
| 2 | | | 4 | | | |

NOTES:

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

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

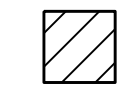
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

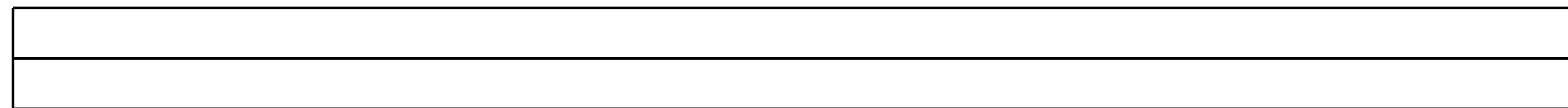
REPAIR QUANTITY TABLE

| REPAIRS BENT 7 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 4.0 | 2.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 10.0 | | |

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

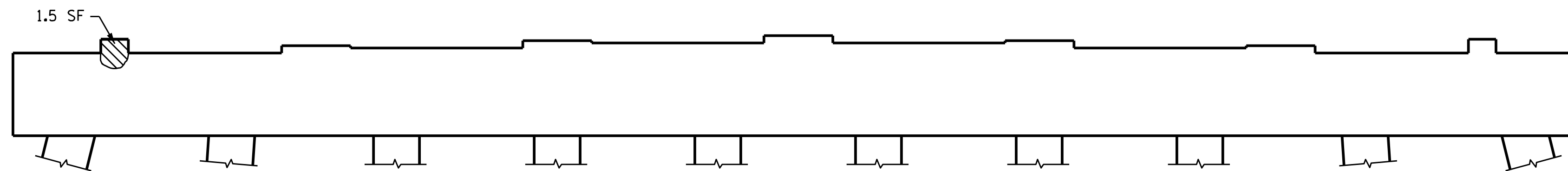
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



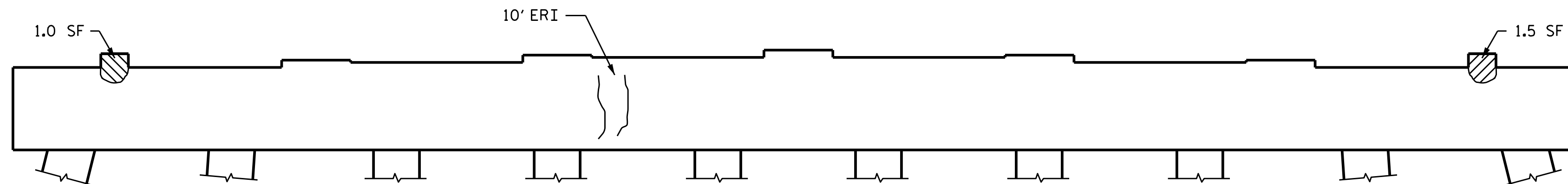
PLAN

TOP OF CAP



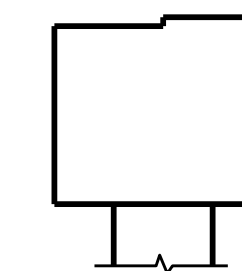
ELEVATION

SOUTH SIDE



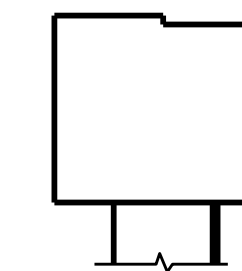
ELEVATION

NORTH SIDE



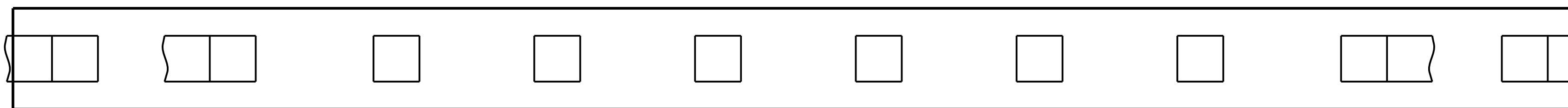
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 8 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 7



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| 1 | | | 3 | | | S1-51 |
| 2 | | | 4 | | | |

NOTES:

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

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

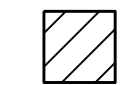
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 8 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 39.0 | | |

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

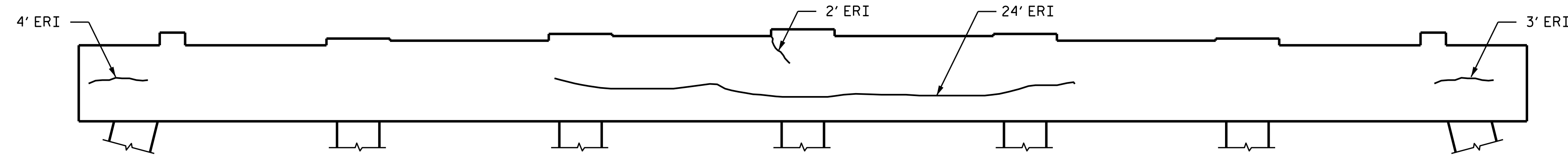
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



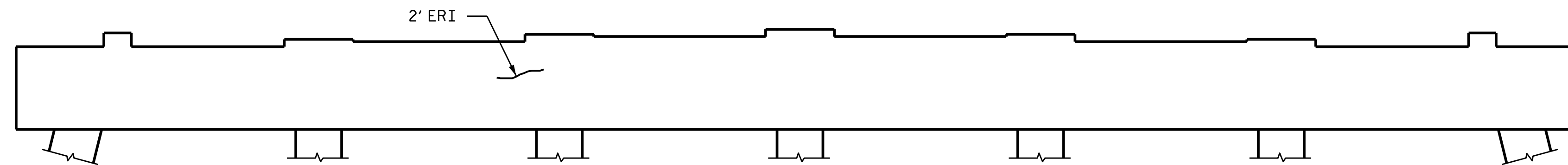
PLAN

TOP OF CAP



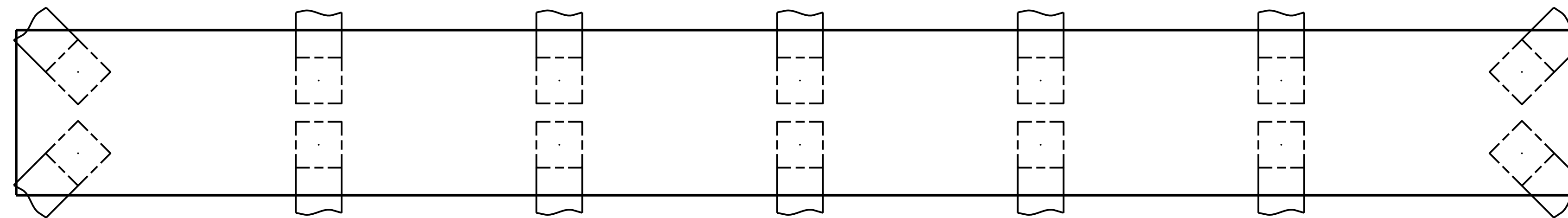
ELEVATION

SOUTH SIDE



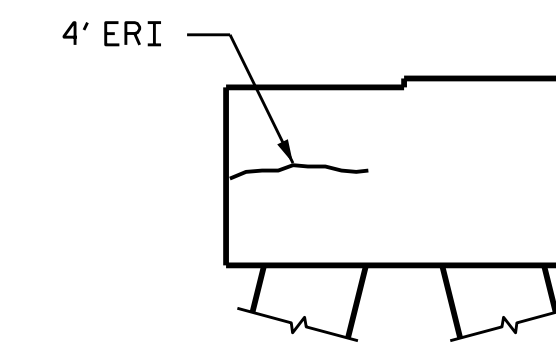
ELEVATION

NORTH SIDE



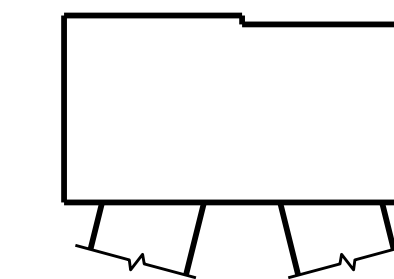
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

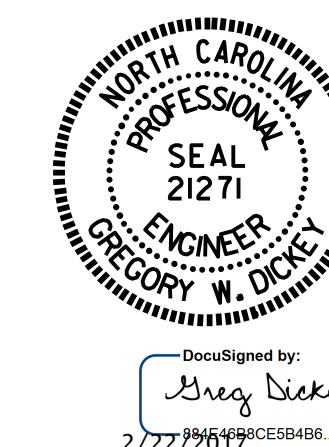
CARTERET COUNTY

BRIDGE NO. 68

SHEET 9 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 8



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| 1 | | | 3 | | | S1-52 |
| 2 | | | 4 | | | |

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
CHECKED BY : R. N. WEISZ DATE : 9/2016

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

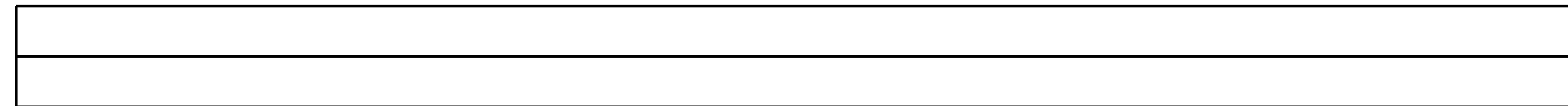
REPAIR QUANTITY TABLE

| REPAIRS BENT 9 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.5 | 0.8 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 70.0 | | |

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

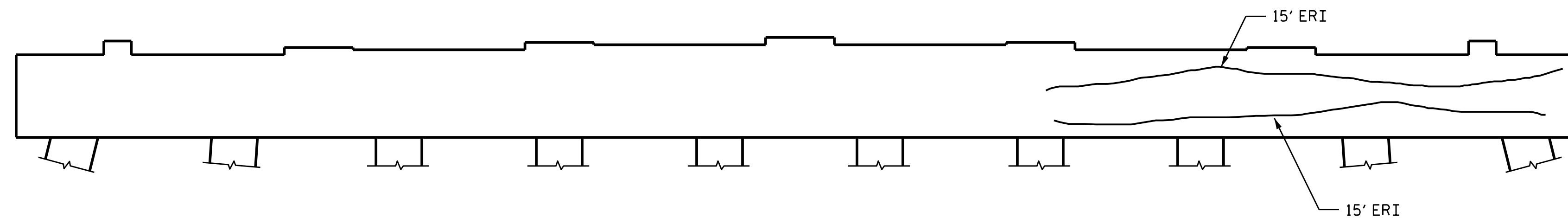
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



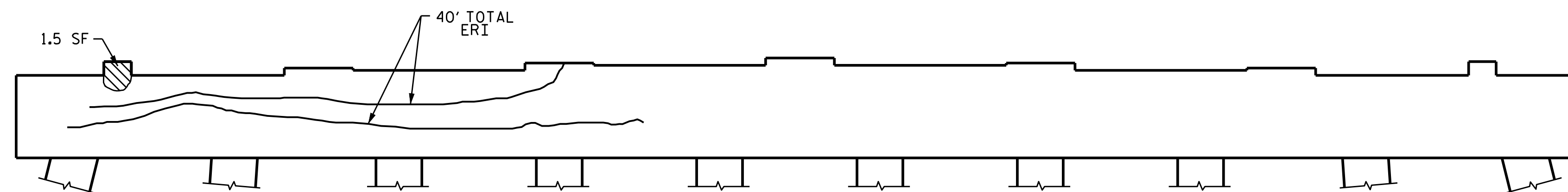
PLAN

TOP OF CAP



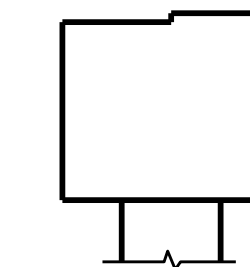
ELEVATION

SOUTH SIDE



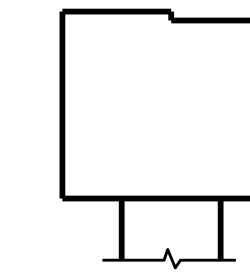
ELEVATION

NORTH SIDE



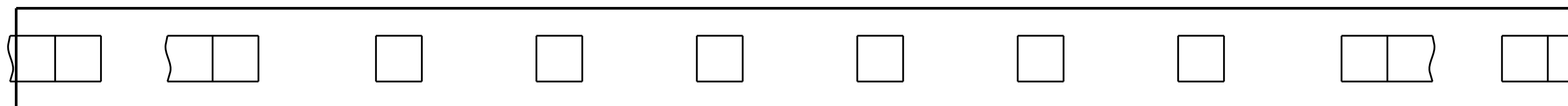
END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

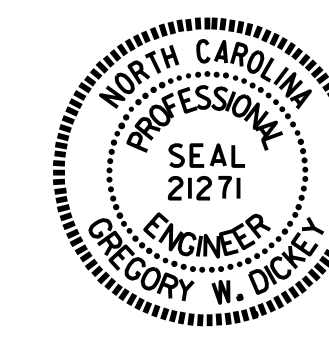
CARTERET COUNTY

BRIDGE NO. 68

SHEET 10 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 9



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| 1 | | | 3 | | | S1-53 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

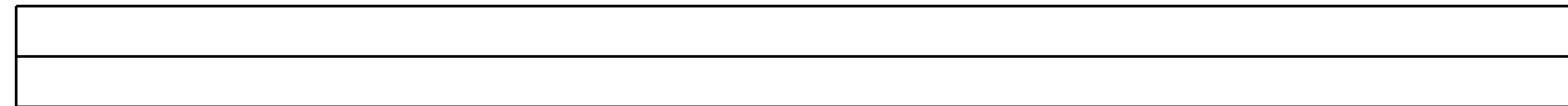
REPAIR QUANTITY TABLE

| REPAIRS BENT 10 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 4.5 | 2.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 37.0 | | |

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

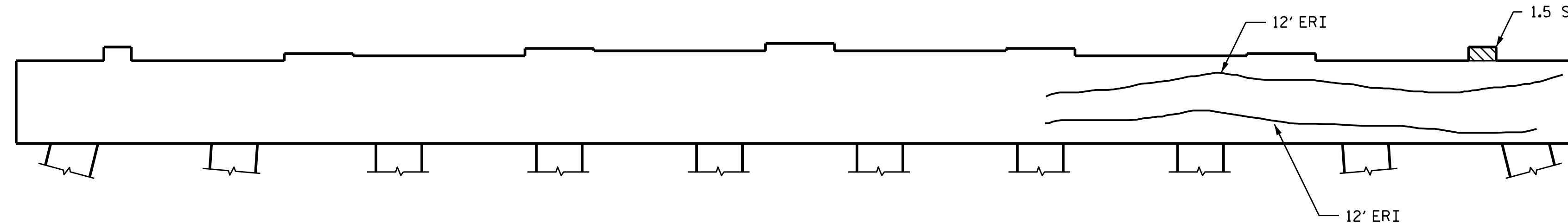
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



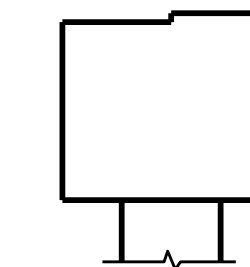
PLAN

TOP OF CAP



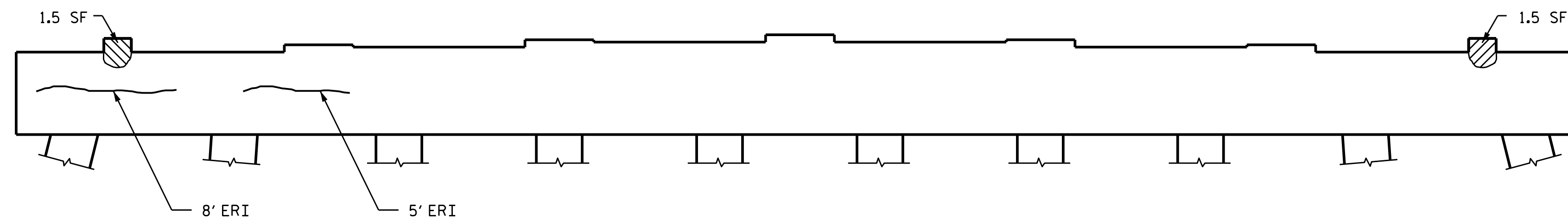
ELEVATION

SOUTH SIDE



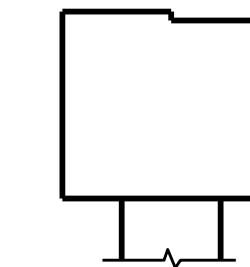
END VIEW

EAST SIDE



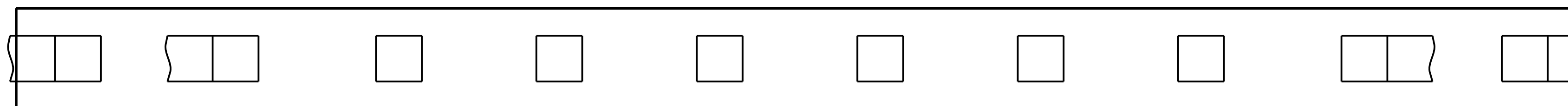
ELEVATION

NORTH SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 11 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 10



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| 1 | | | 3 | | | S1-54 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.


FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

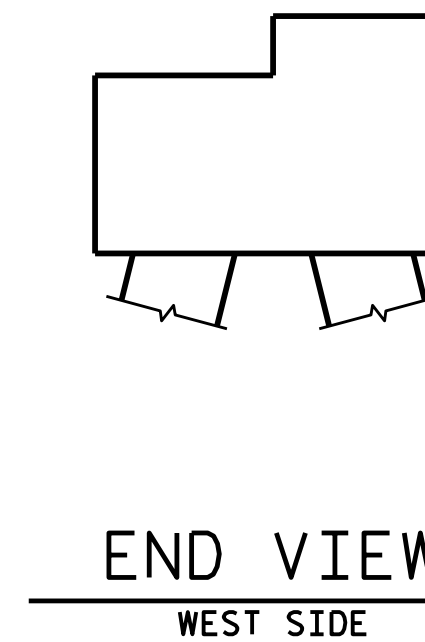
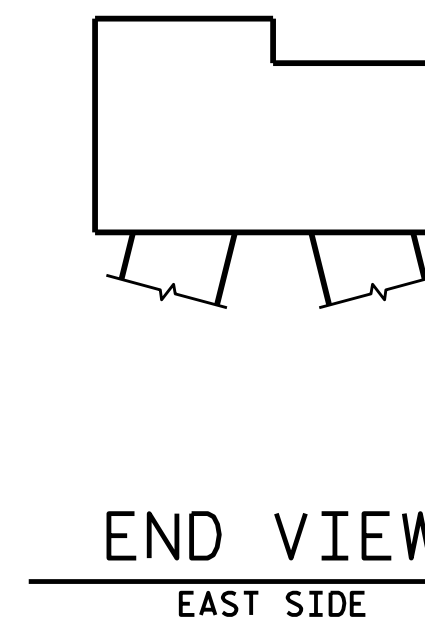
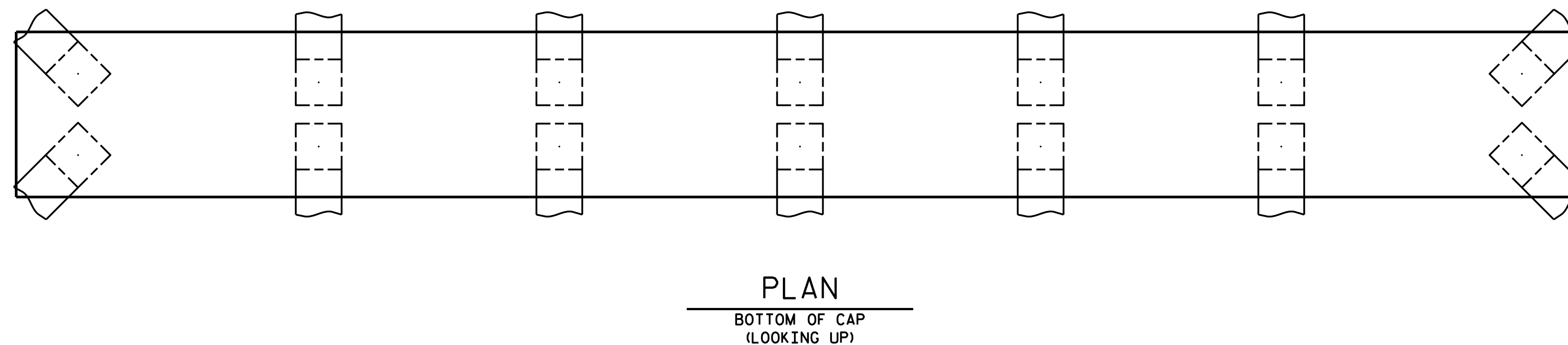
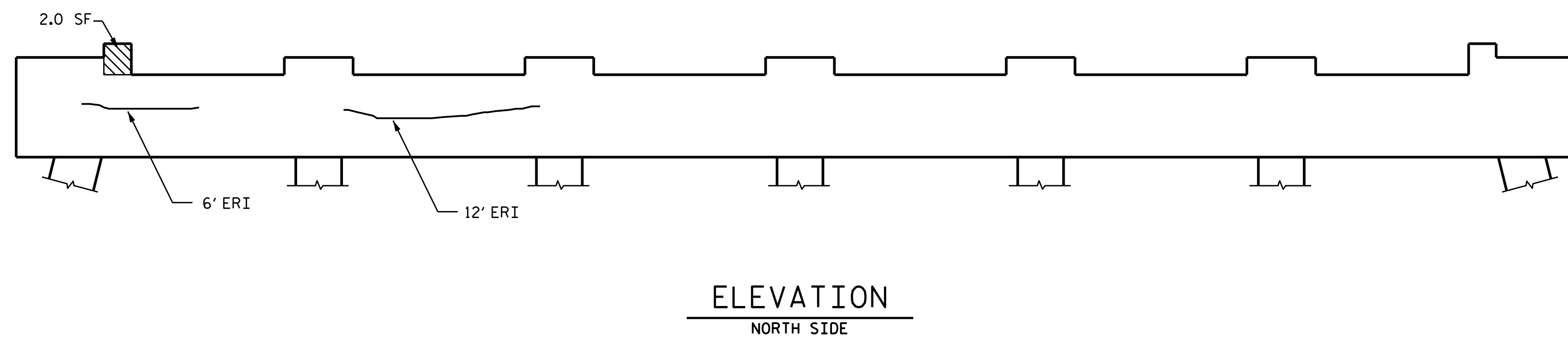
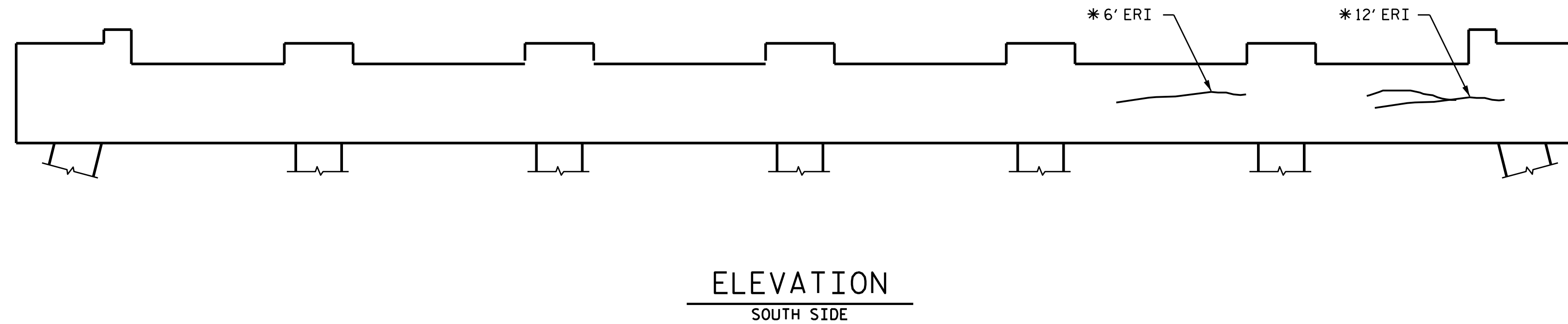
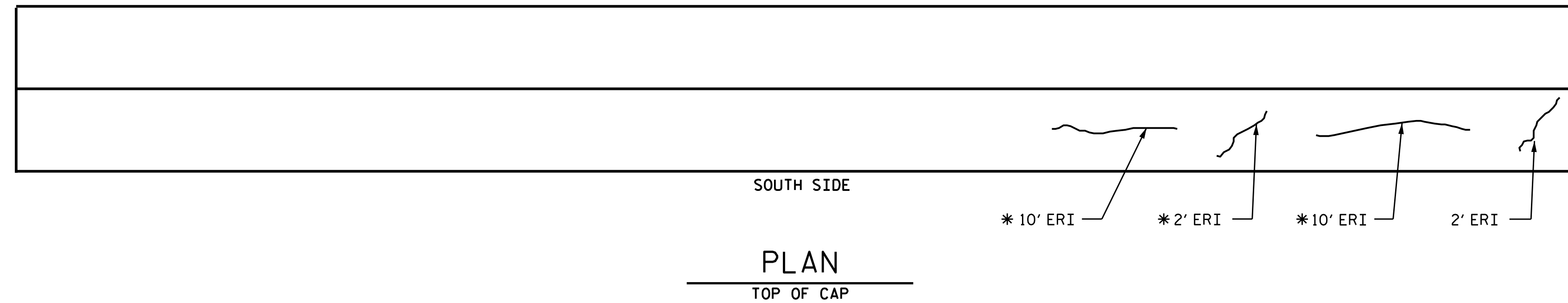
| REPAIRS BENT 11 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 2.0 | 1.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 60.0 | | |

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

* SHOTCRETE REPAIR MAY BE USED IN LIEU OF ERI TO REPAIR MAP CRACKING AT DISCRETION OF ENGINEER.

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

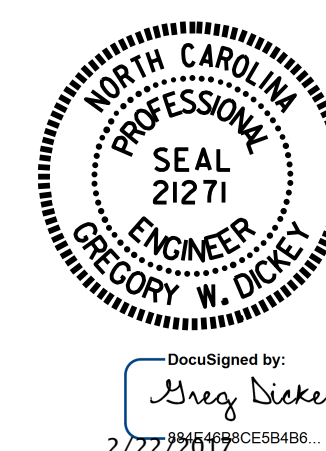


PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 12 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 11



DocuSigned by:
 Greg Dickey
 2/22/2016 9:53:48 AM

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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| 1 | | | 3 | | | S1-55 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 12 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 11.0 | | |

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

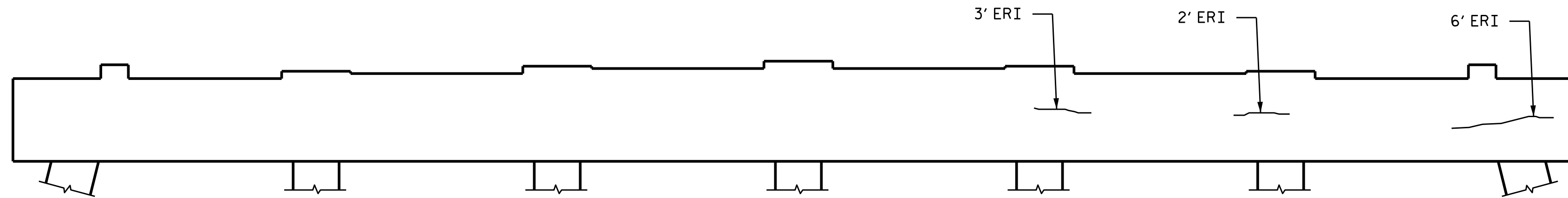
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



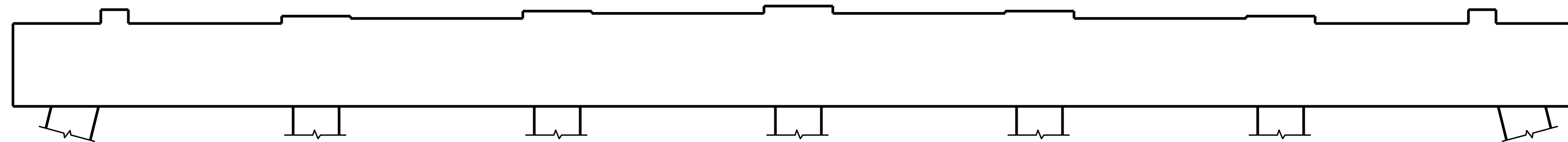
PLAN

TOP OF CAP



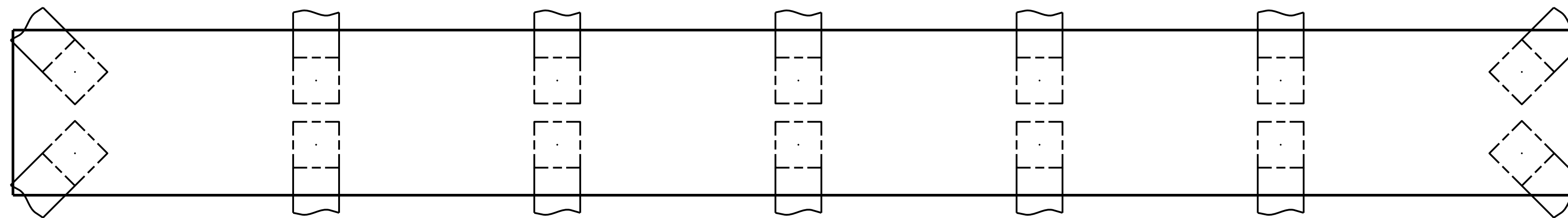
ELEVATION

SOUTH SIDE



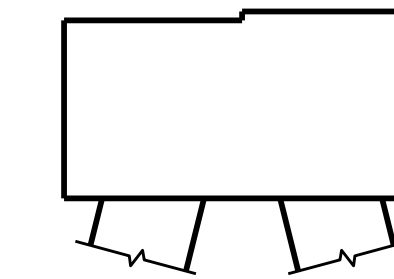
ELEVATION

NORTH SIDE



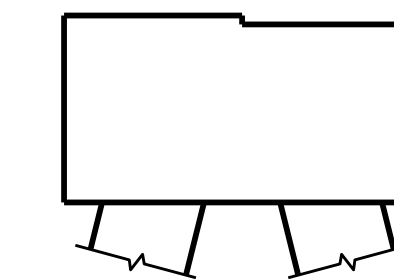
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

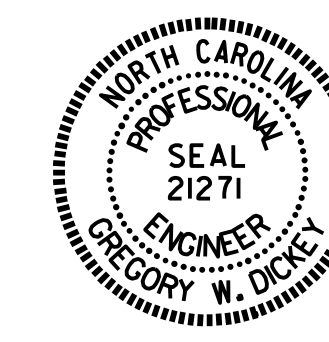
CARTERET COUNTY

BRIDGE NO. 68

SHEET 13 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 12



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2/22/2017 9:03:48 AM

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
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gdickey

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-56 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

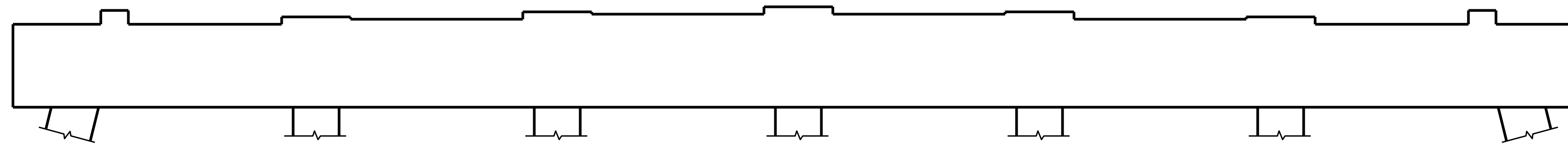
| REPAIRS BENT 13 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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



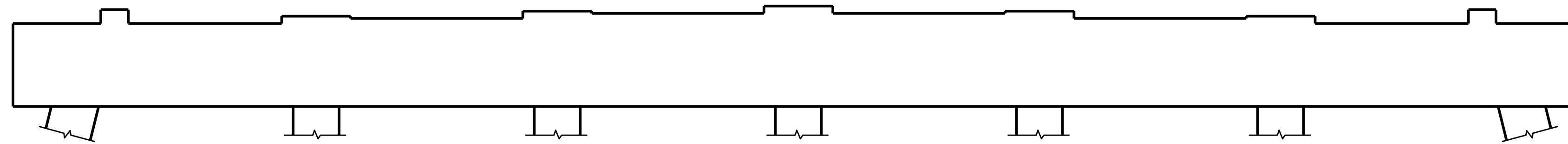
PLAN

TOP OF CAP



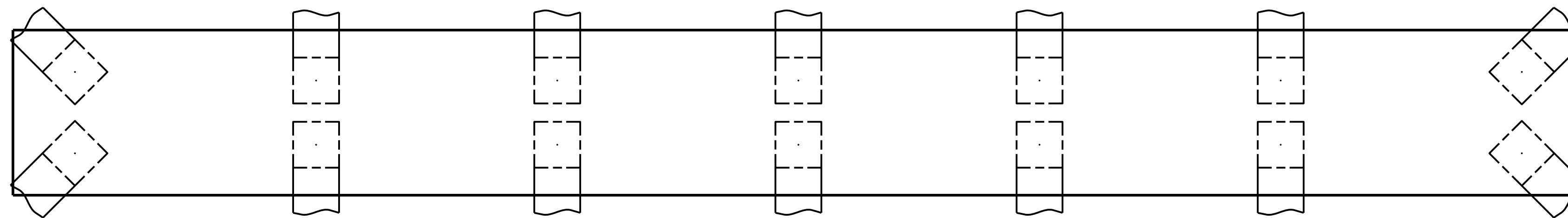
ELEVATION

SOUTH SIDE



ELEVATION

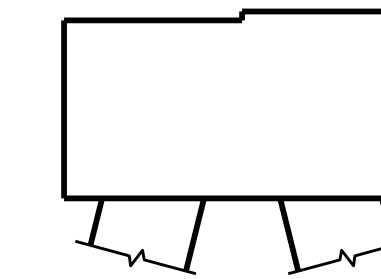
NORTH SIDE



PLAN

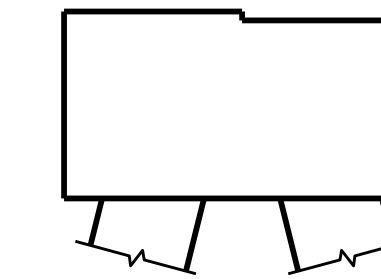
BOTTOM OF CAP
(LOOKING UP)

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



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 14 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 13



DocuSigned by:
Greg Dickey
2/22/2016 9:58:48 AM

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

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
CHECKED BY : R. N. WEISZ DATE : 9/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-57 |
| 2 | | | 4 | | | |

NOTES:

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

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

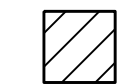
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

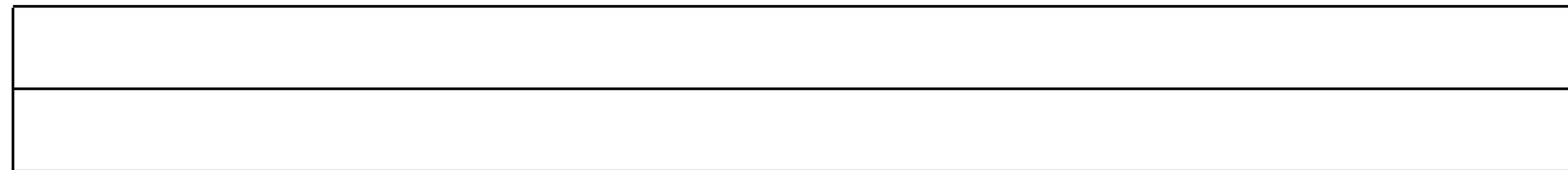
REPAIR QUANTITY TABLE

| REPAIRS BENT 14 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.8 | 0.9 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

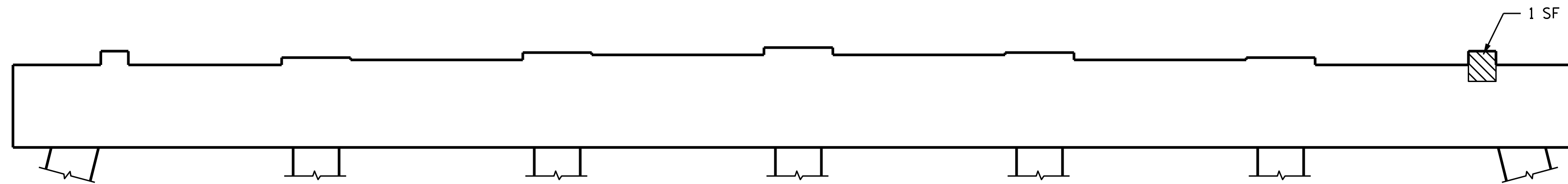
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



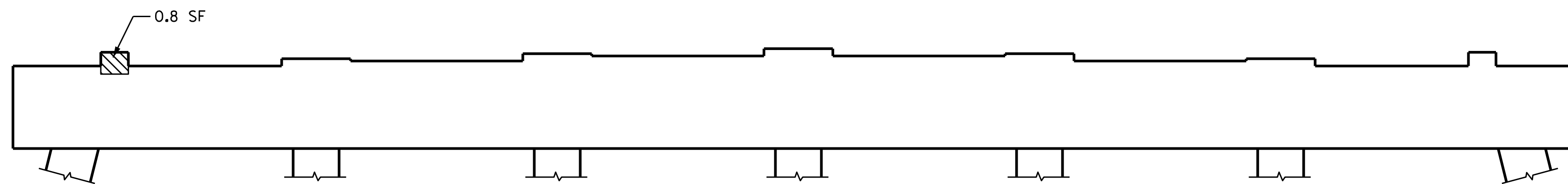
PLAN

TOP OF CAP



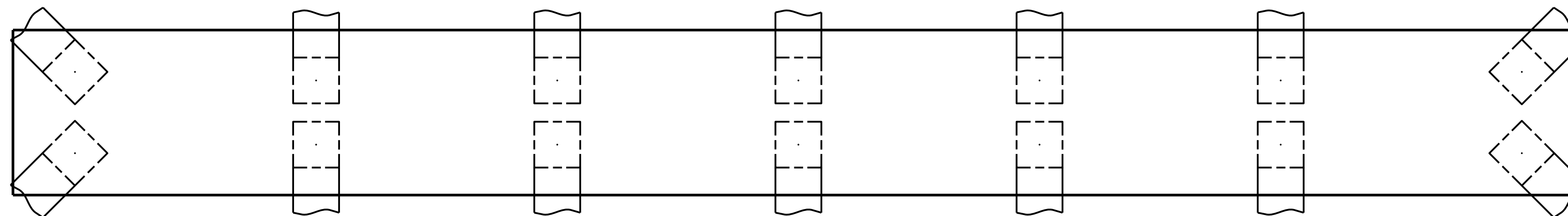
ELEVATION

SOUTH SIDE



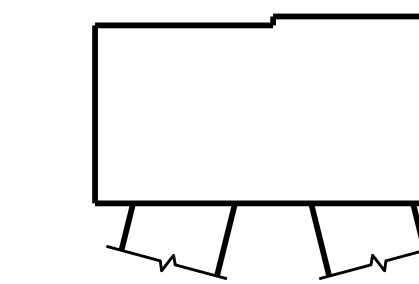
ELEVATION

NORTH SIDE



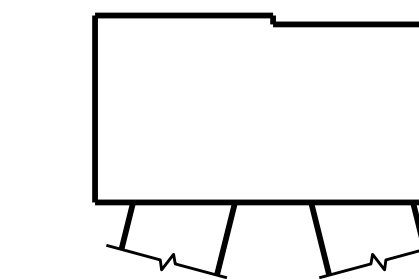
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 15 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 14



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Greg Dickey
2/22/2017 9:03:48 AM

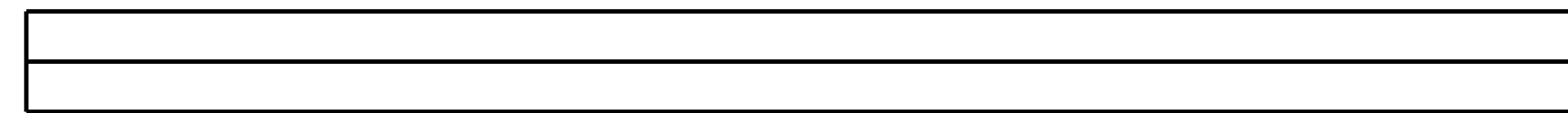
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
CHECKED BY : R. N. WEISZ DATE : 9/2016

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gdickey

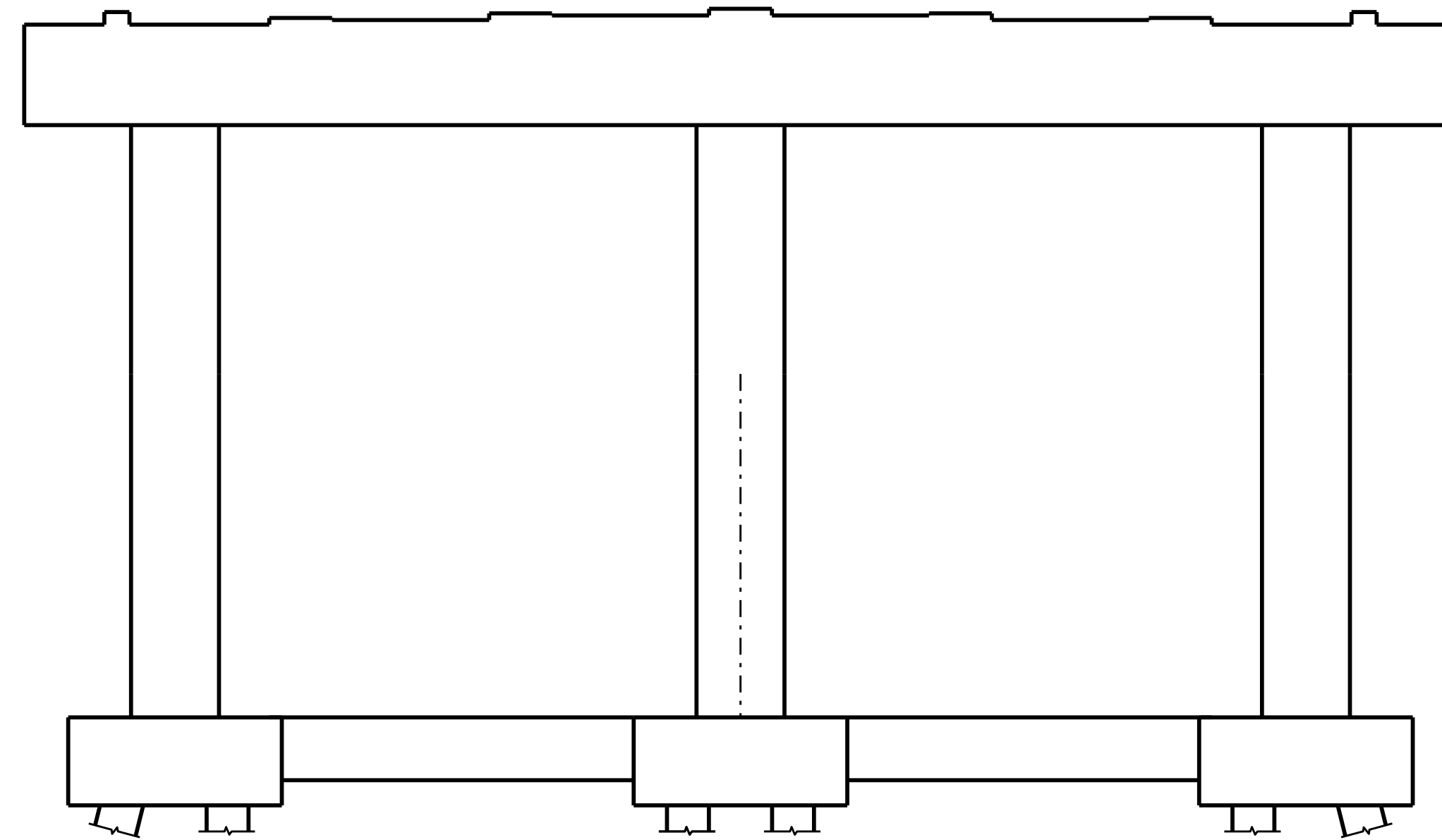
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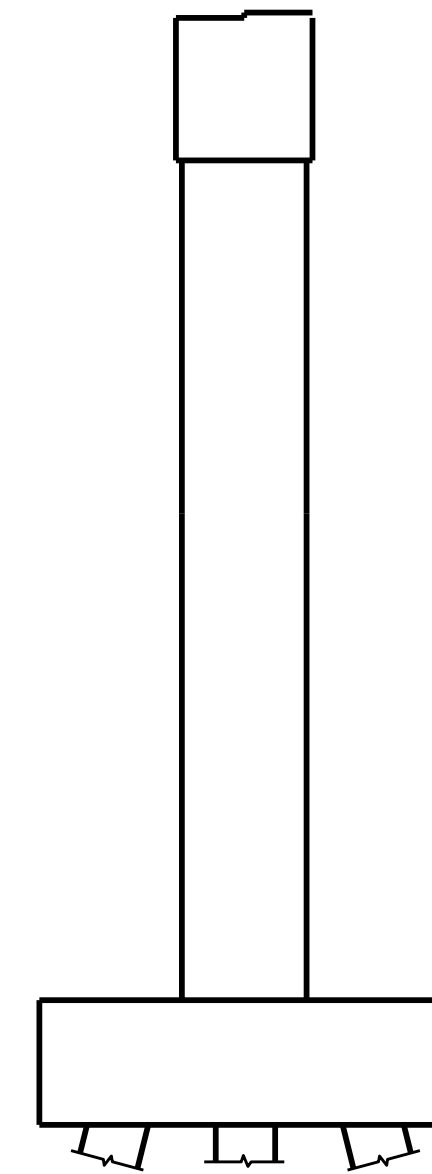
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



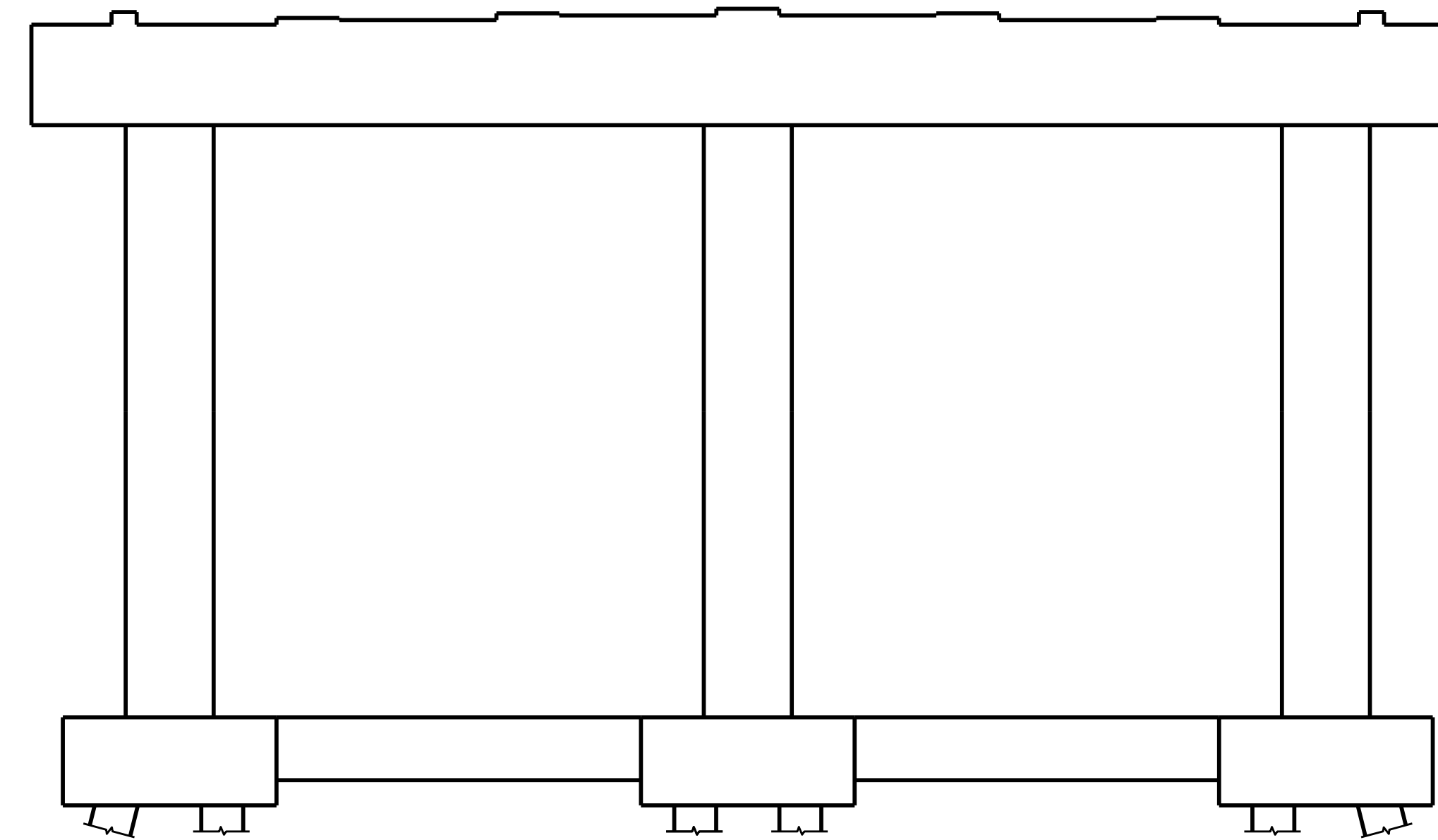
PLAN
TOP OF CAP



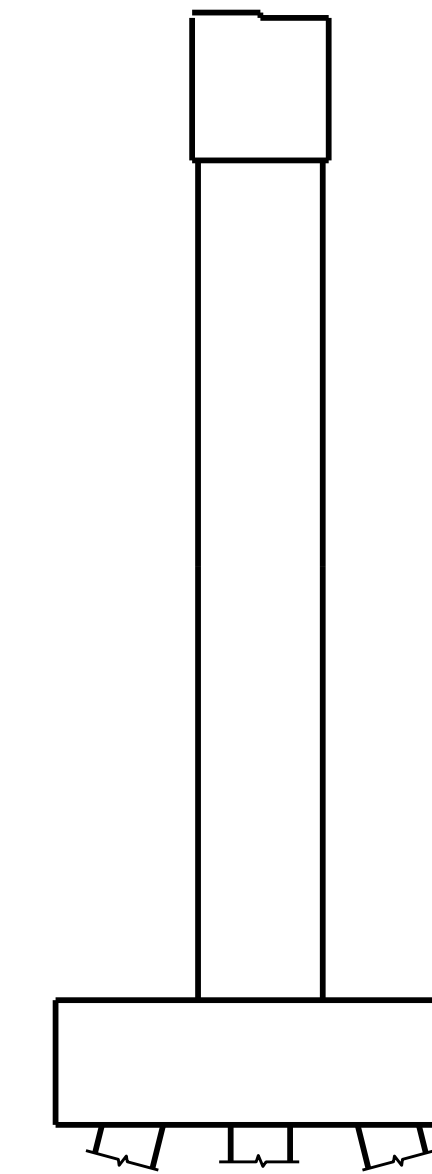
ELEVATION
SOUTH SIDE



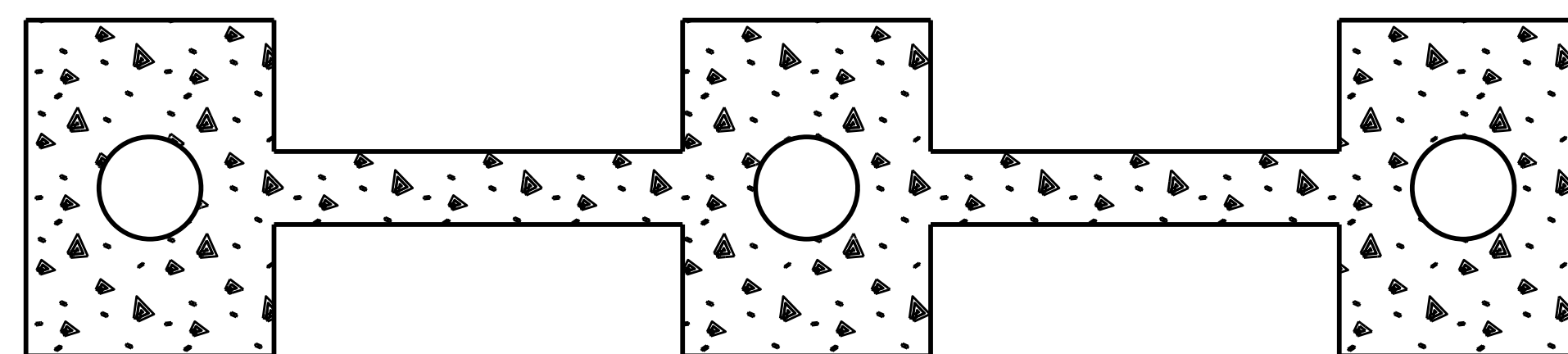
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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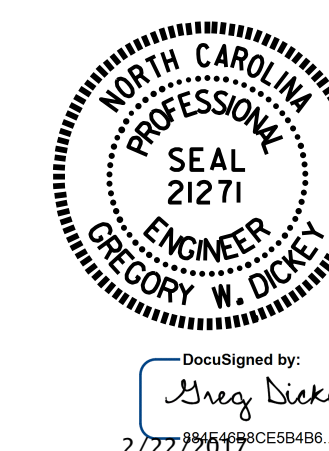
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 15 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 16 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

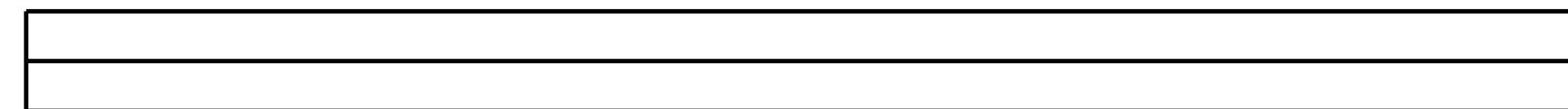
BENT 15

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 CHECKED BY : R. N. WEISZ DATE : 9/2016

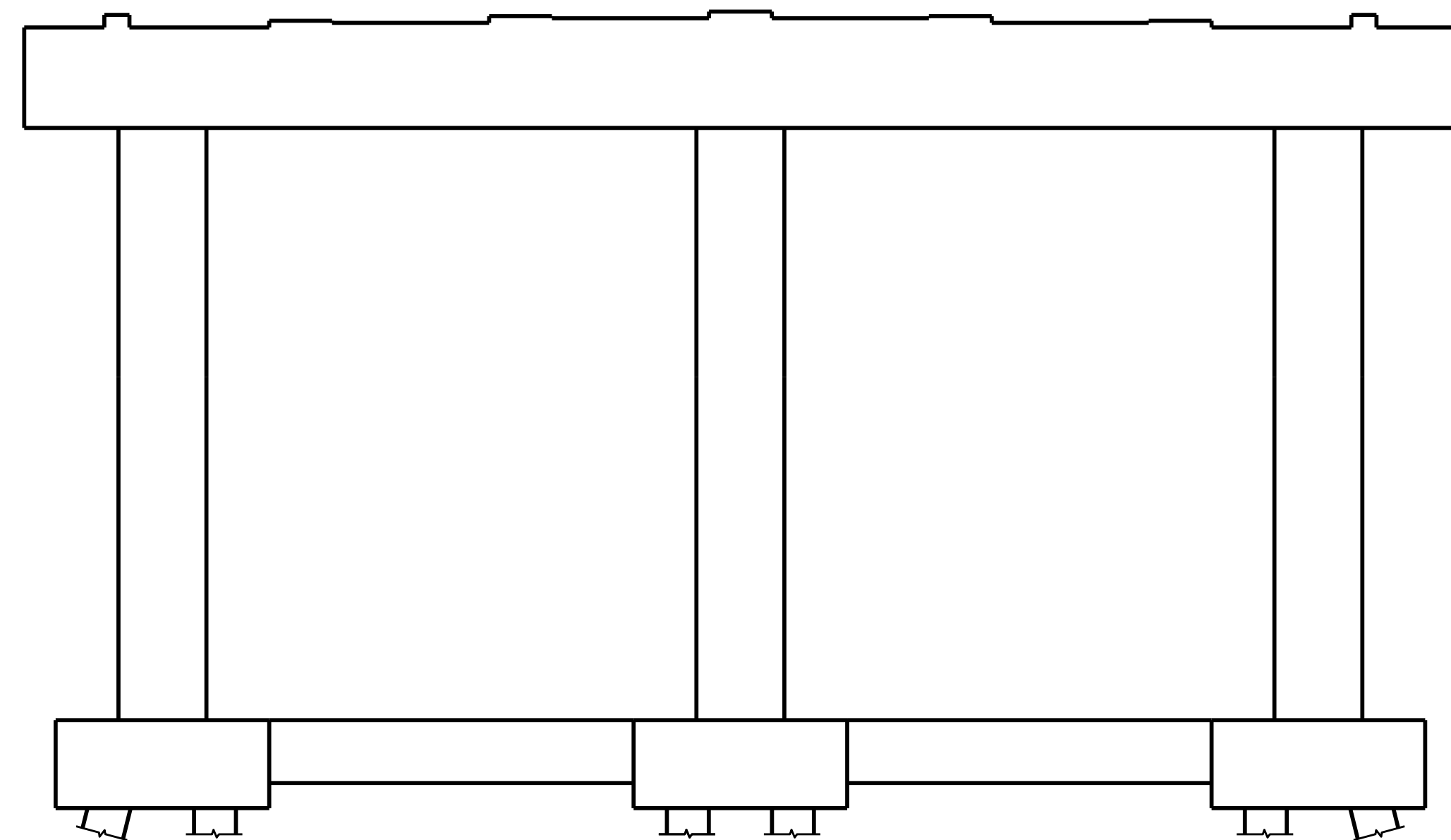
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| 2 | | | 4 | | | |

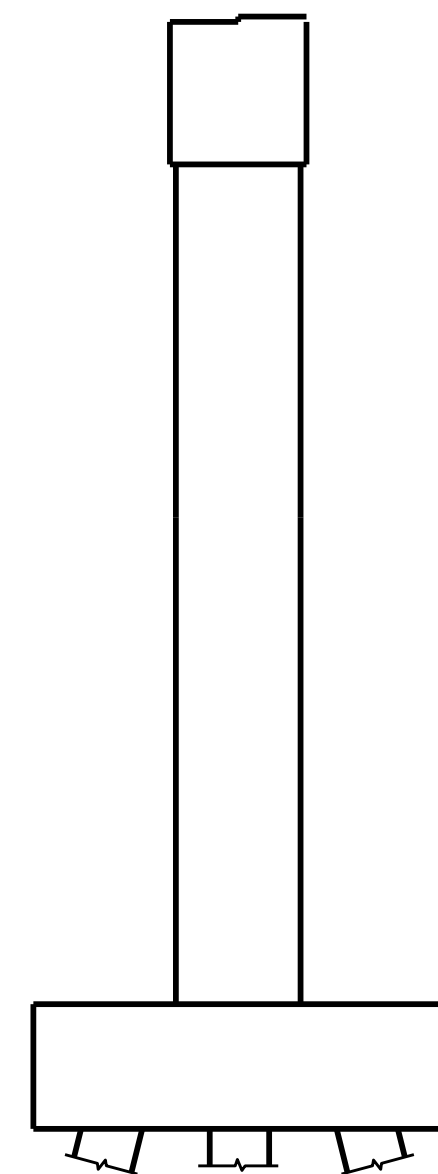
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



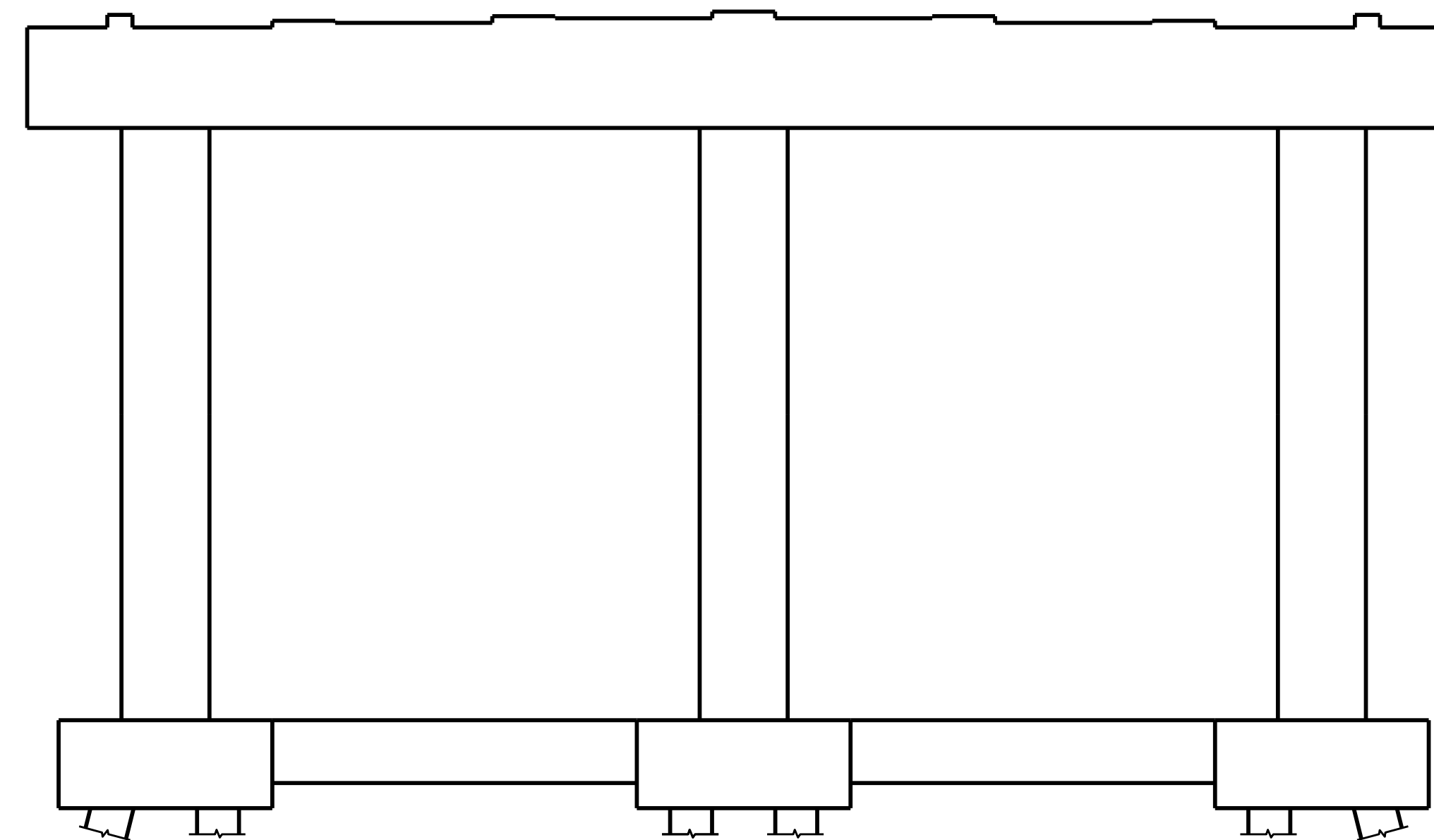
PLAN
TOP OF CAP



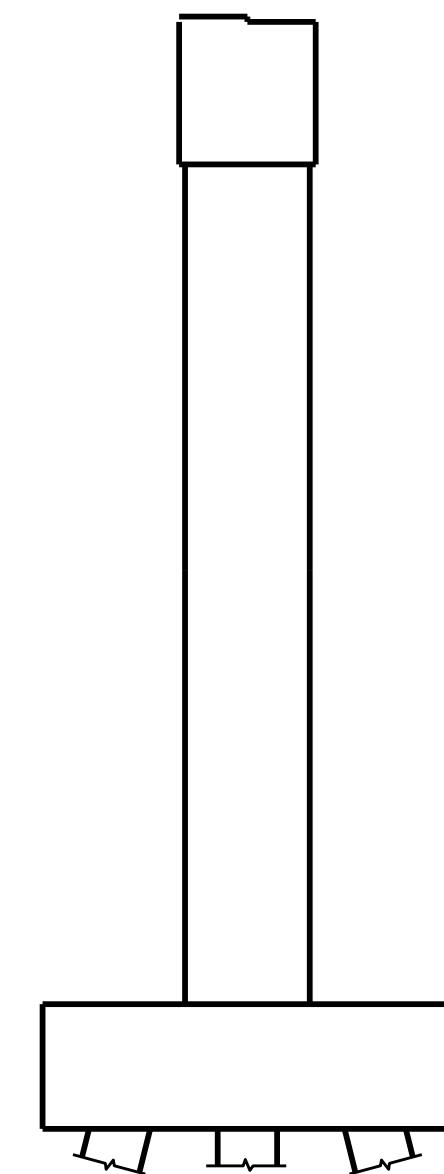
ELEVATION
SOUTH SIDE



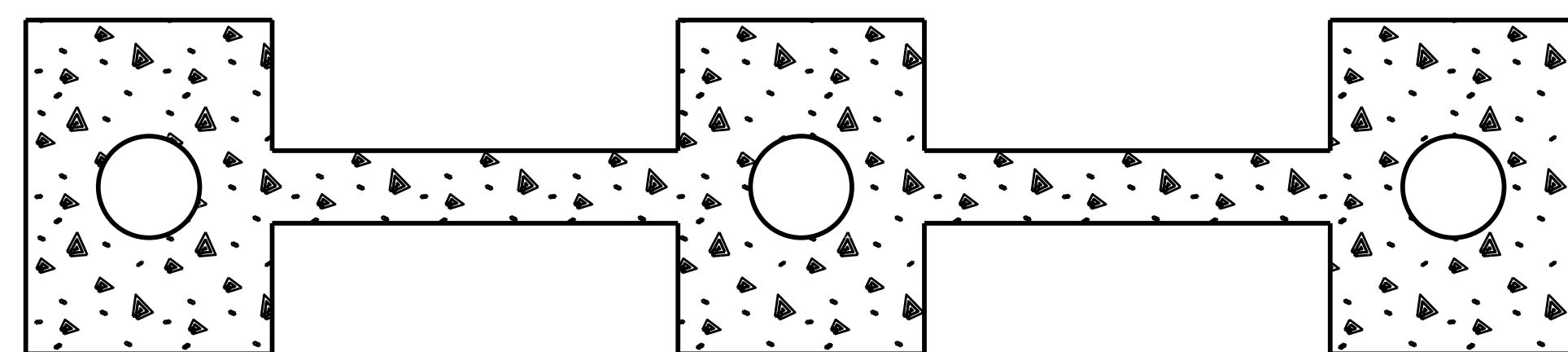
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

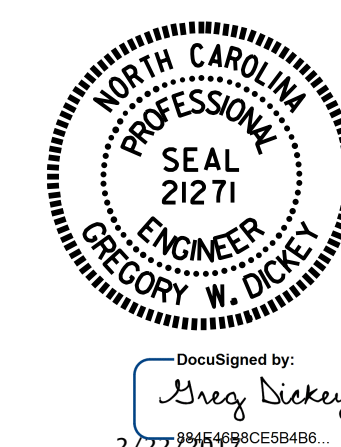
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 16 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 17 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

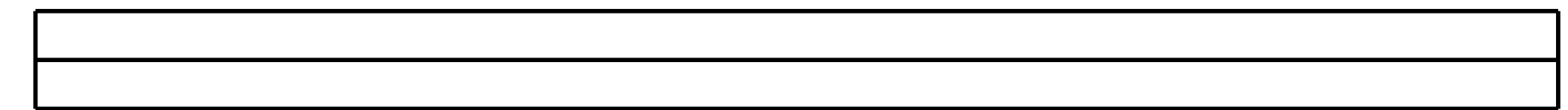
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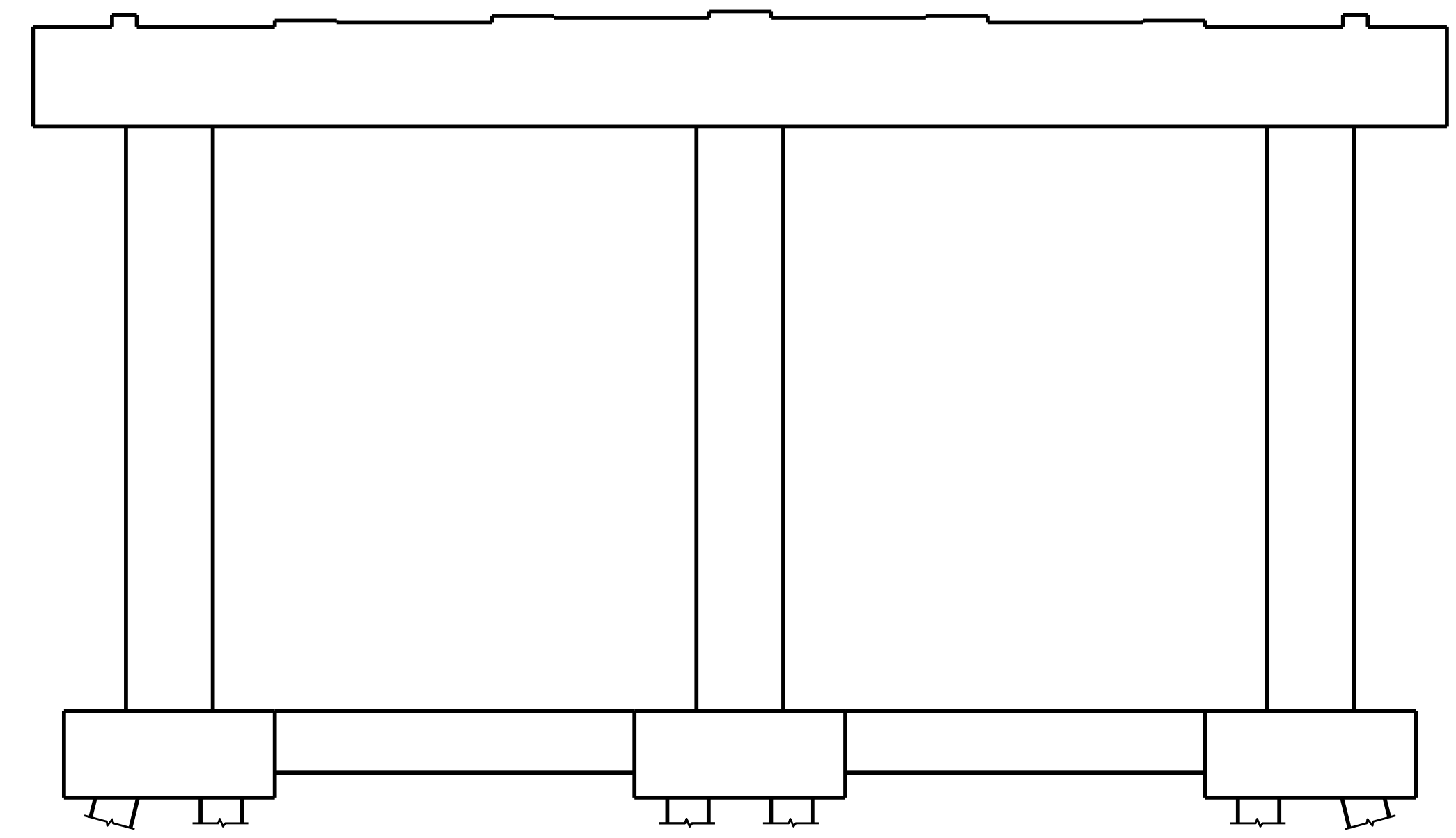
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| 2 | | | 4 | | | |

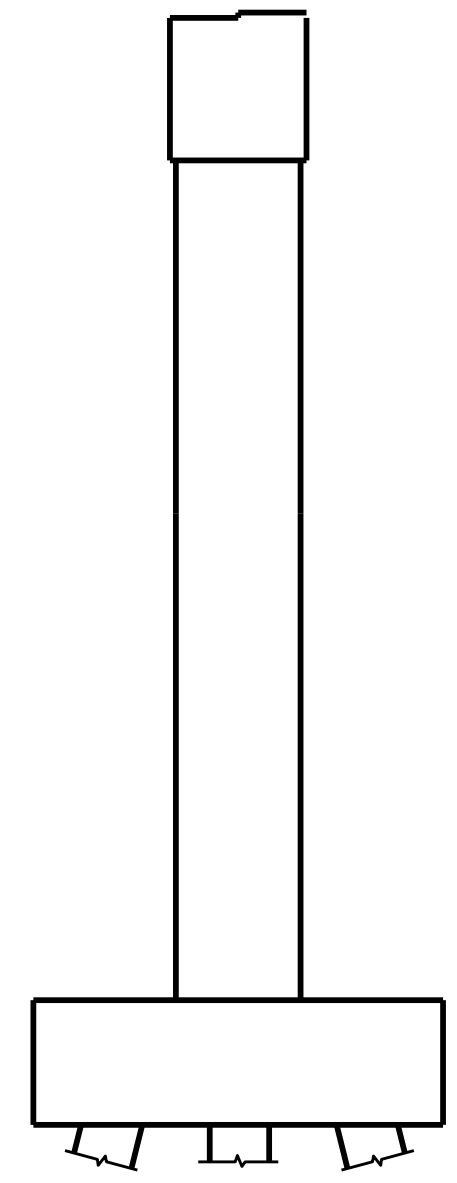
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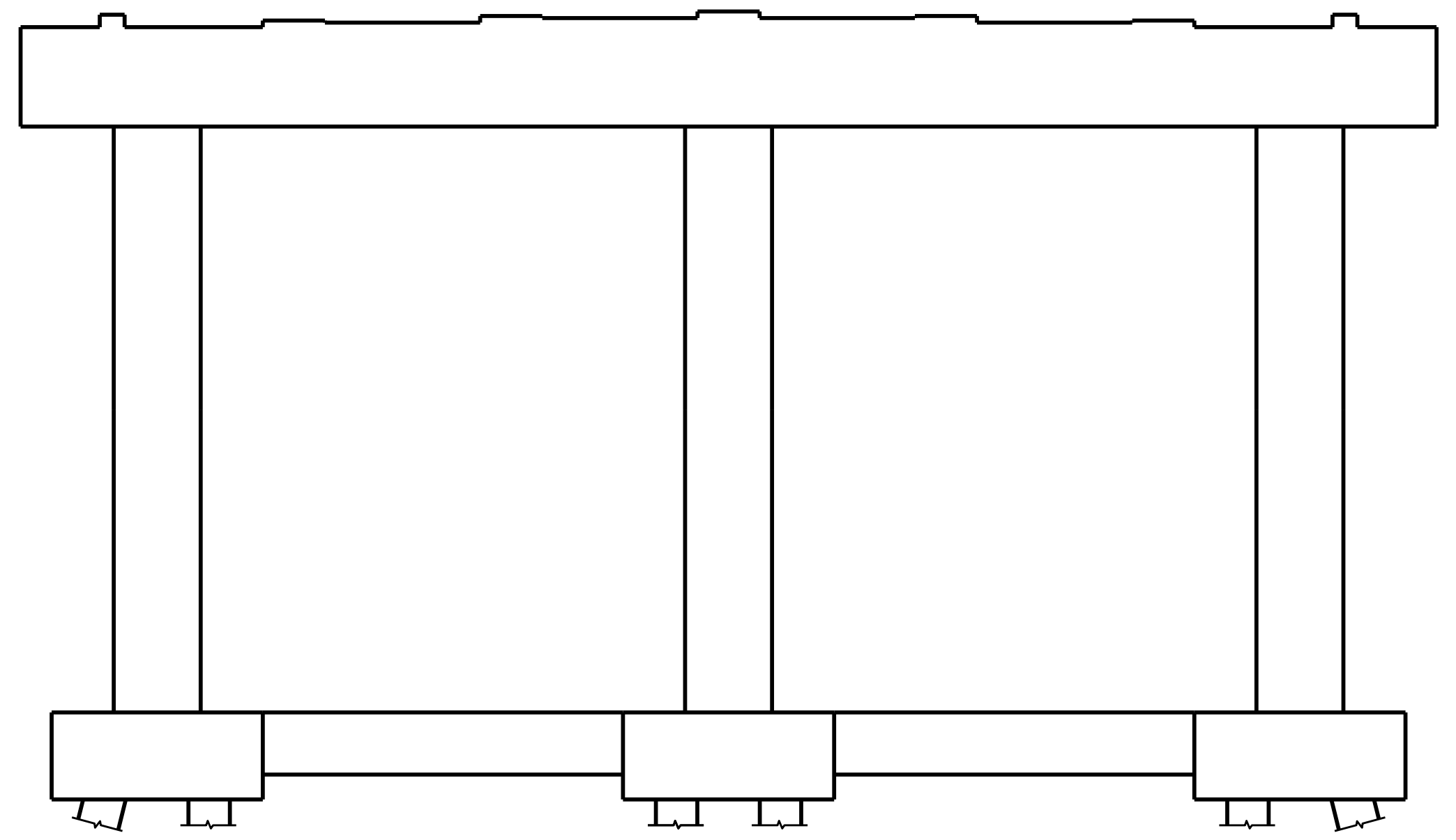
PLAN
TOP OF CAP



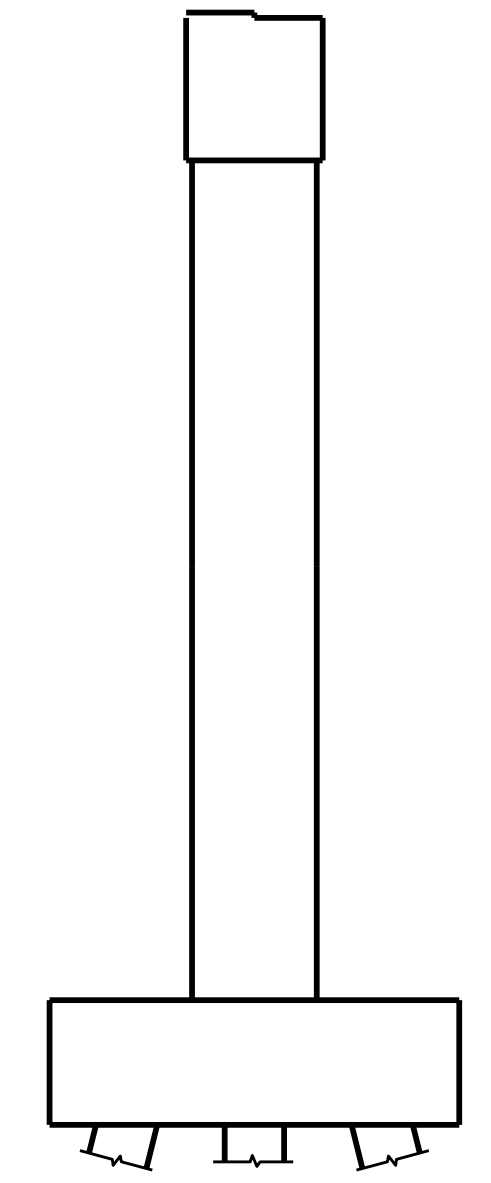
ELEVATION
SOUTH SIDE



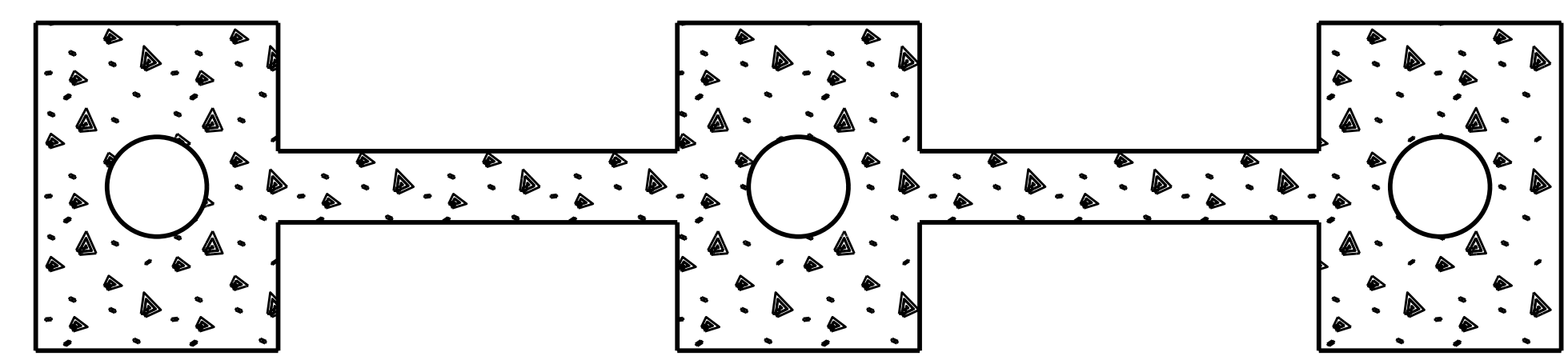
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

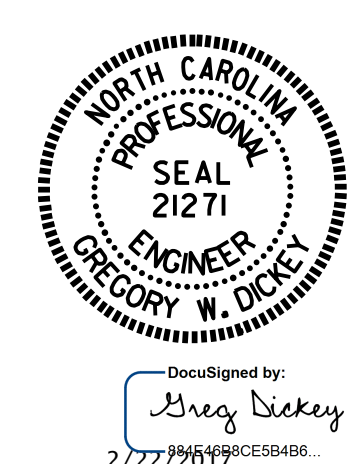
- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 17 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 18 OF 50



STATE OF NORTH CAROLINA
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 RALEIGH

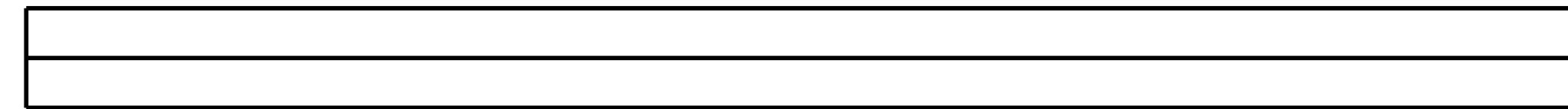
BENT 17

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.
 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.
 FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

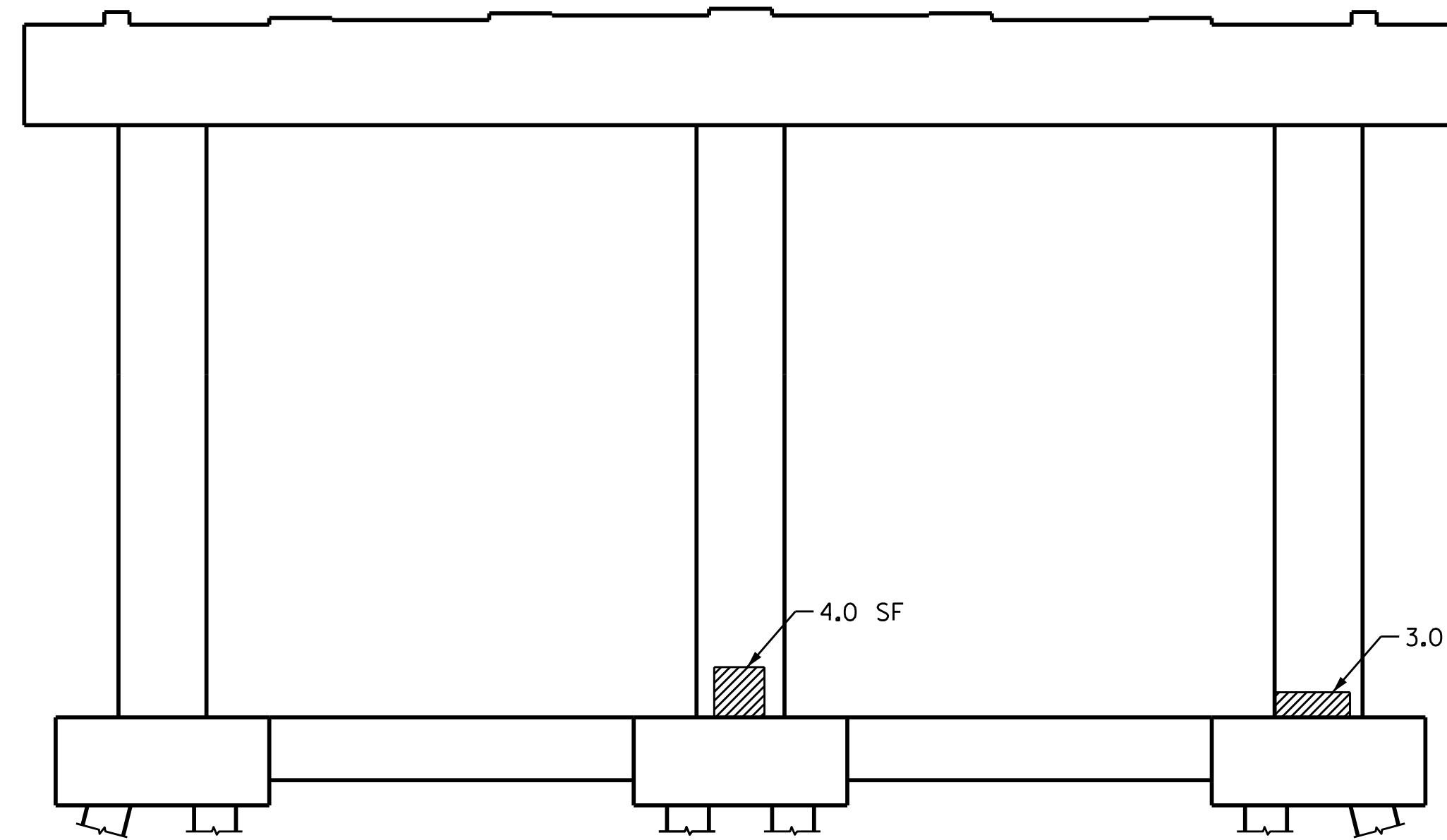
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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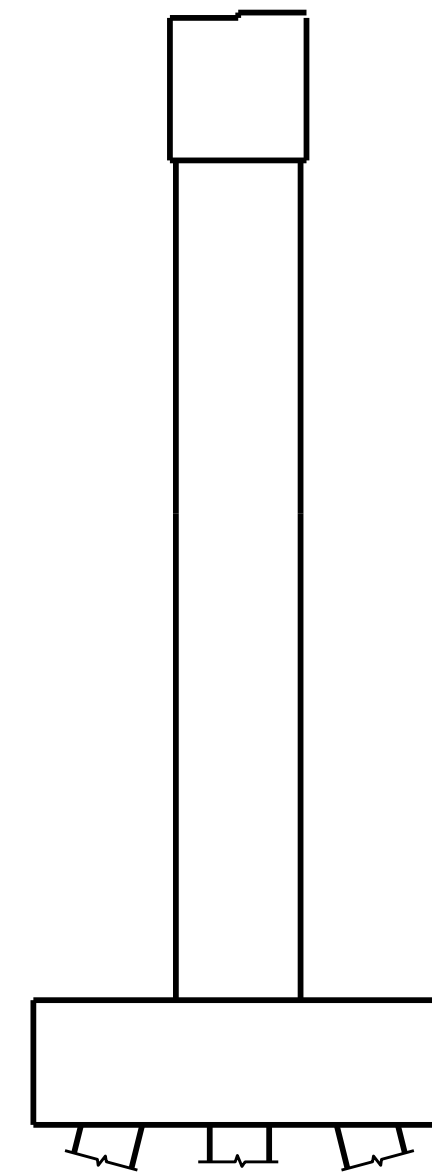
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| 1 | | | 3 | | | TOTAL SHEETS |
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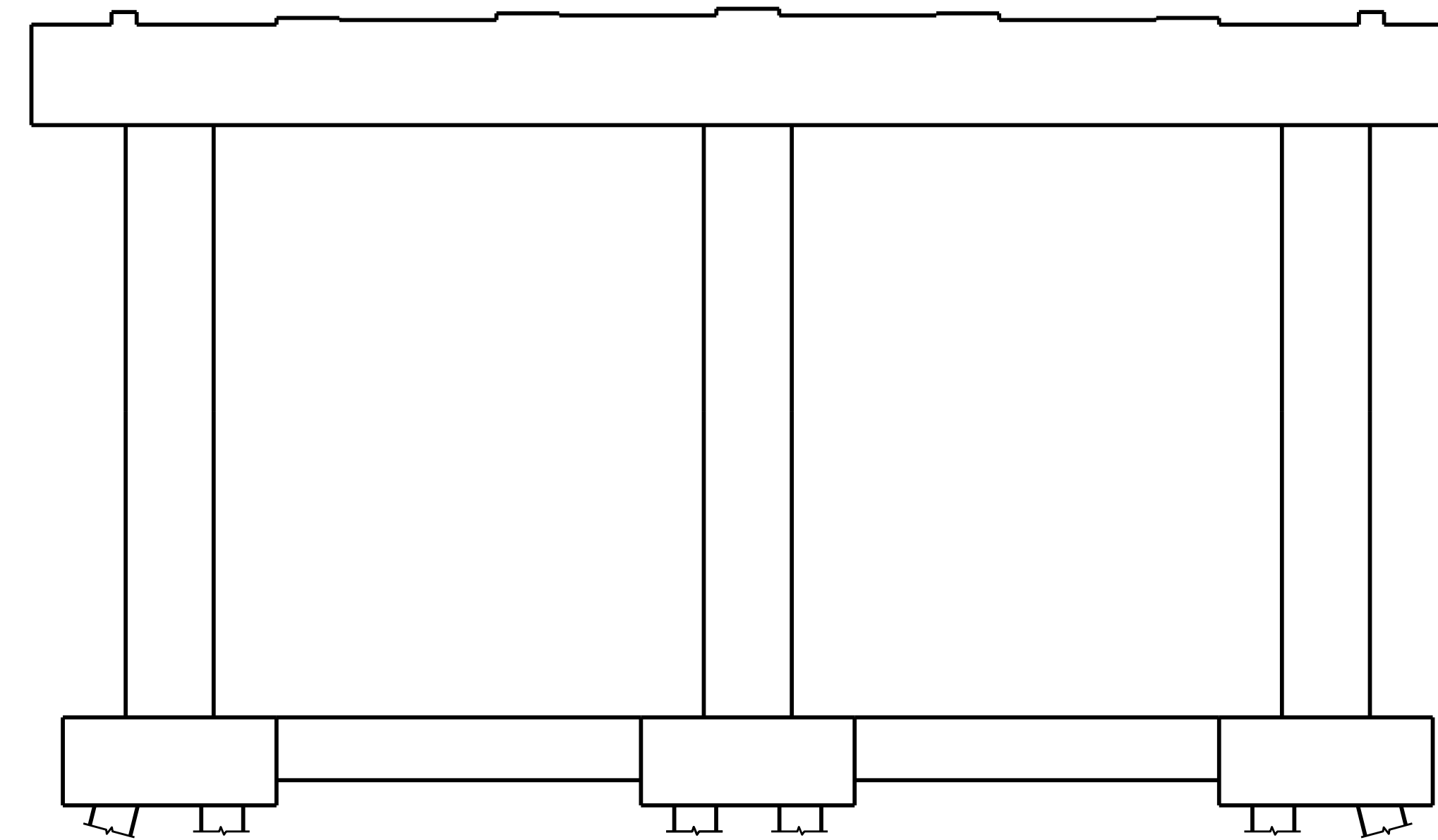
PLAN
TOP OF CAP



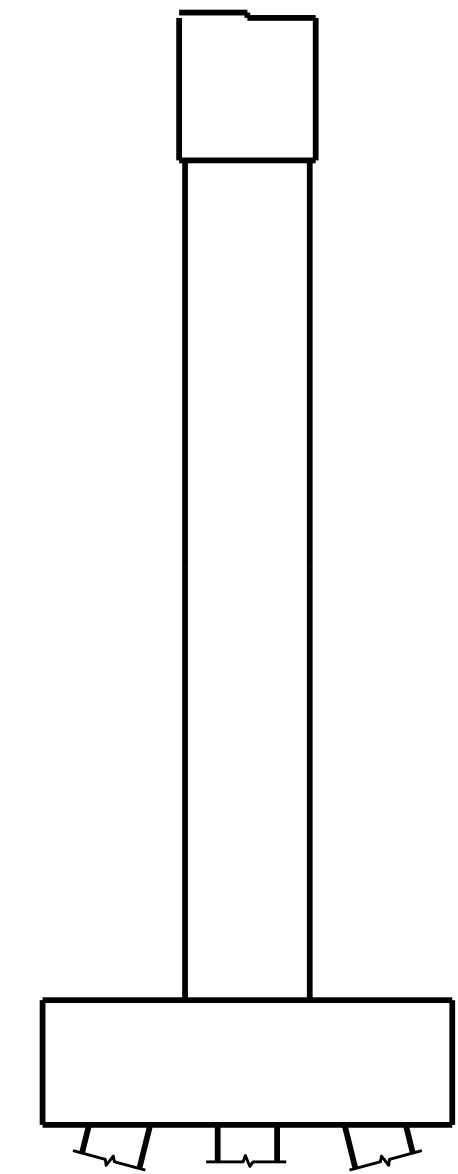
ELEVATION
SOUTH SIDE



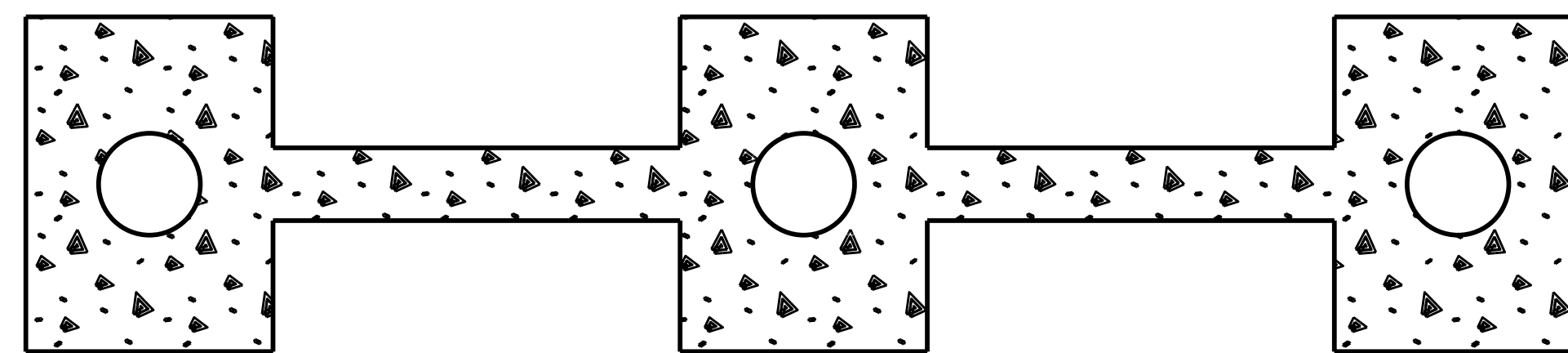
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

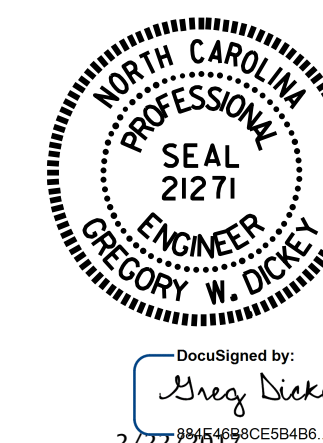
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 18 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 7.0 | 3.5 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

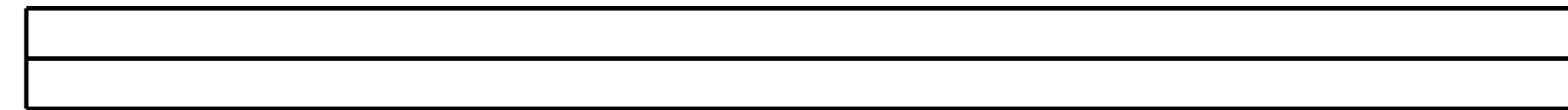
BENT 18

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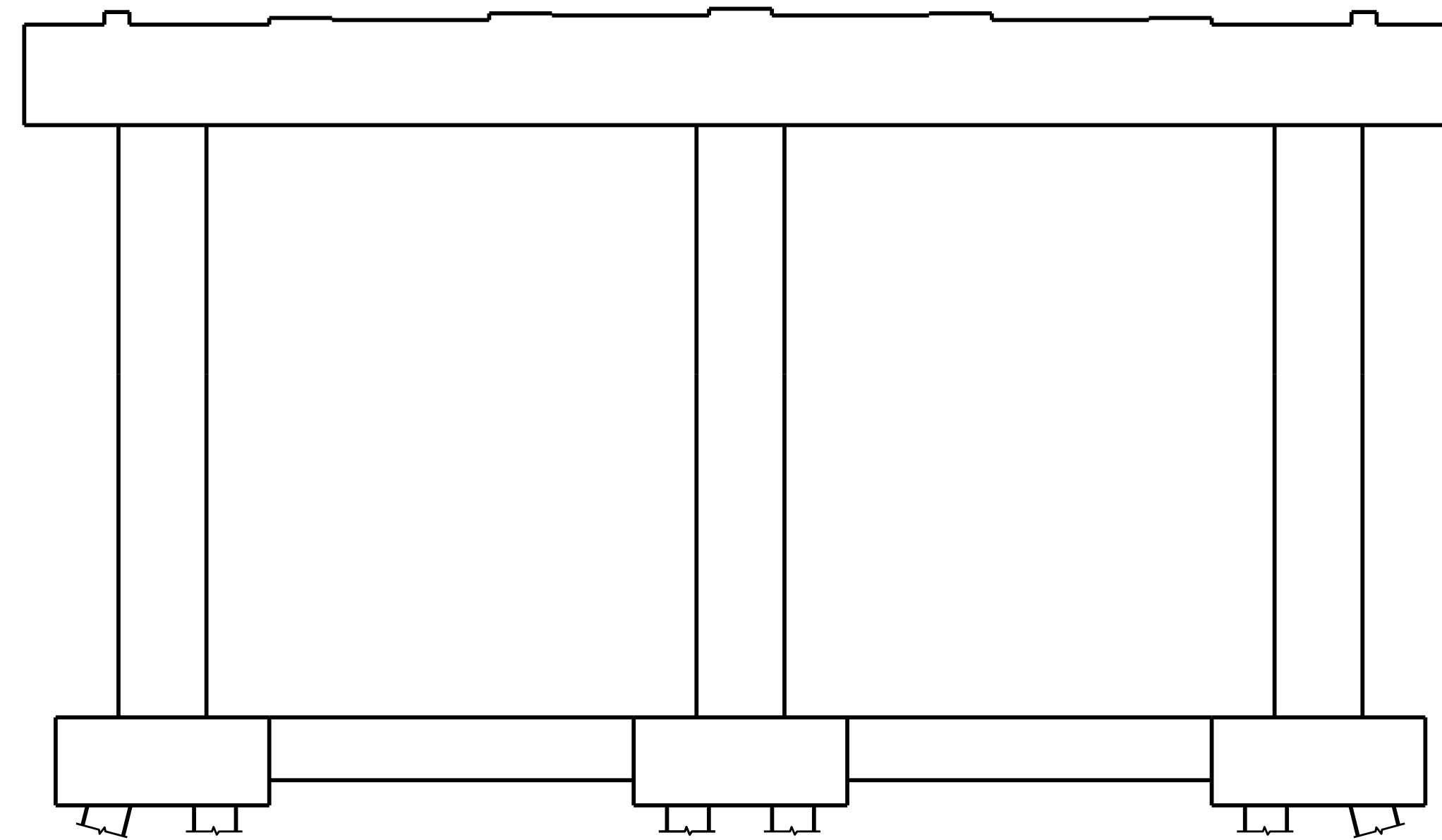
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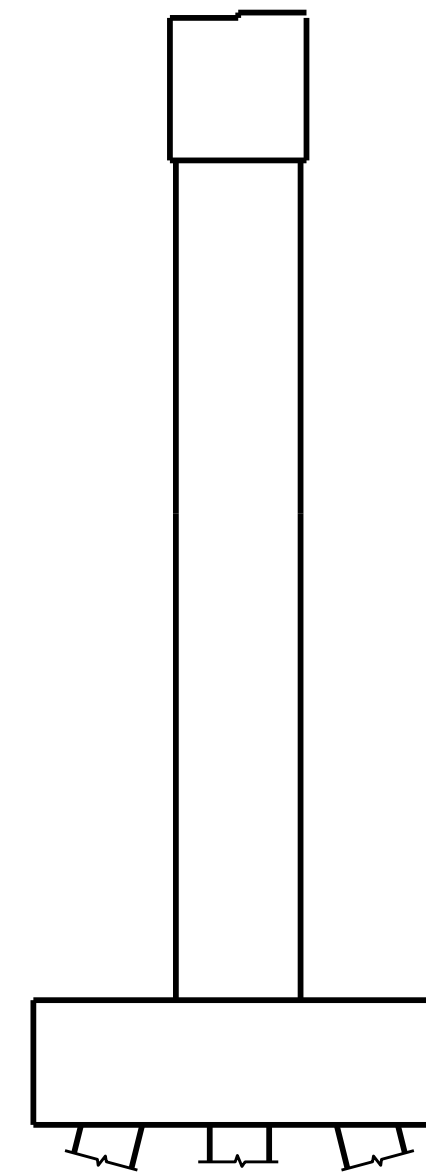
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



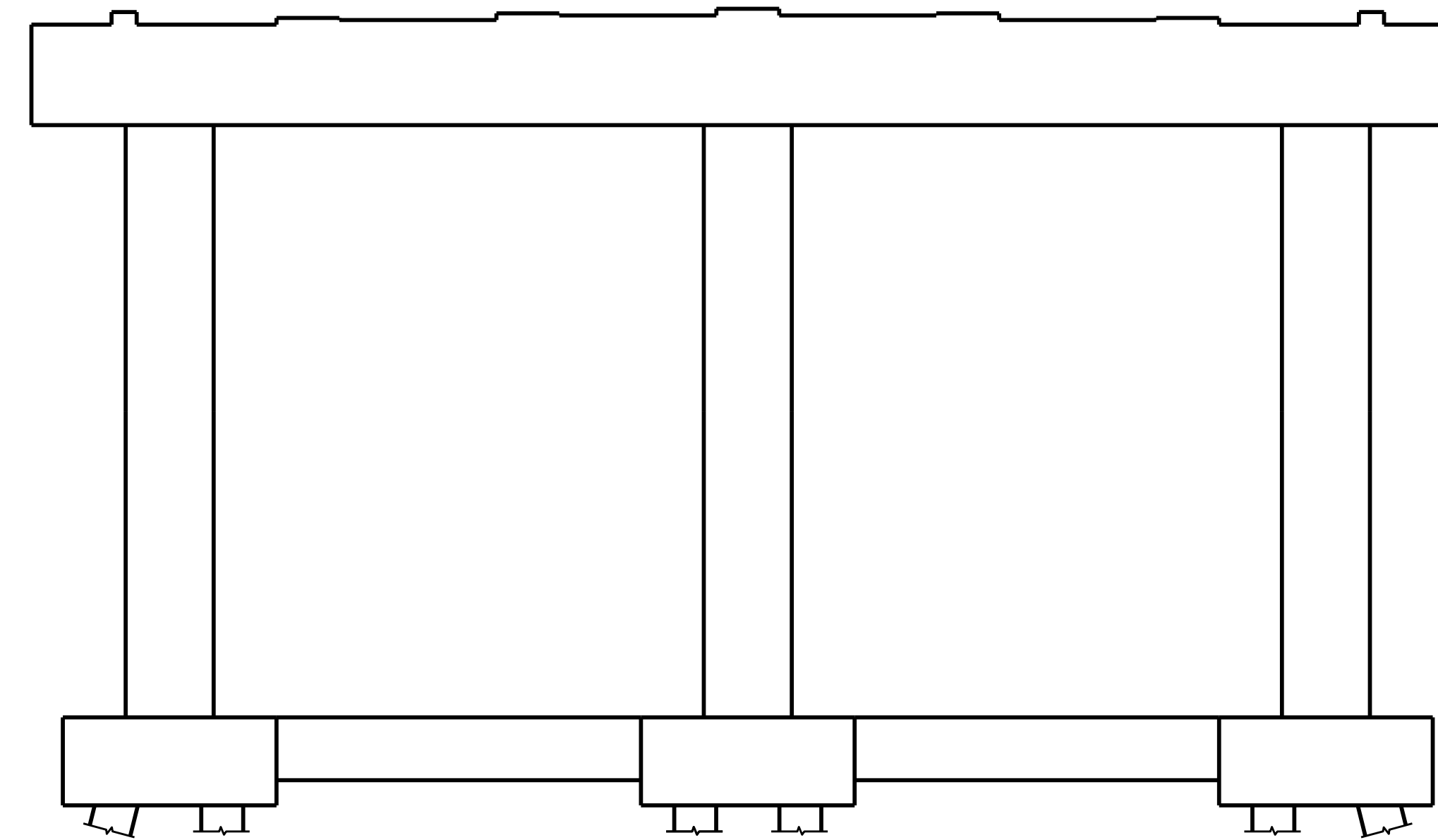
PLAN
TOP OF CAP



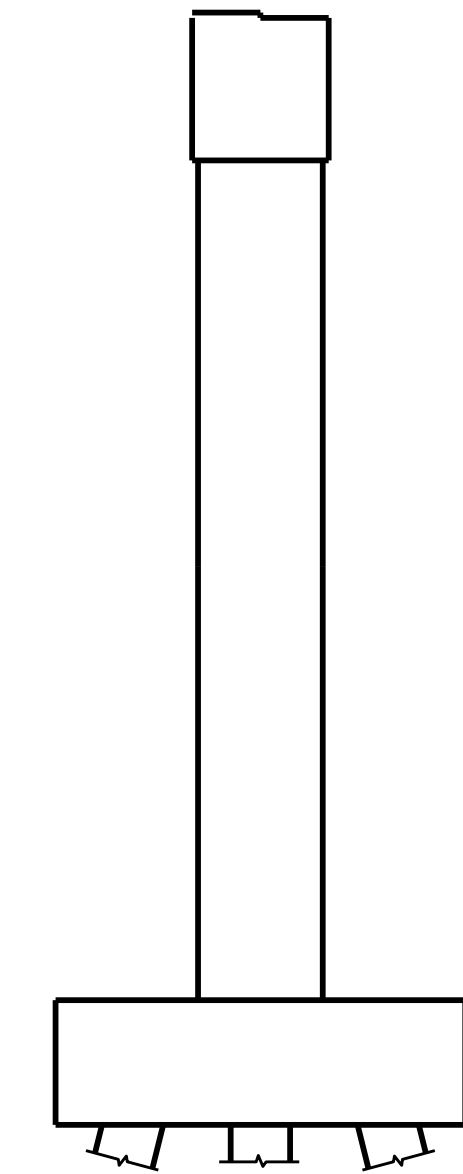
ELEVATION
SOUTH SIDE



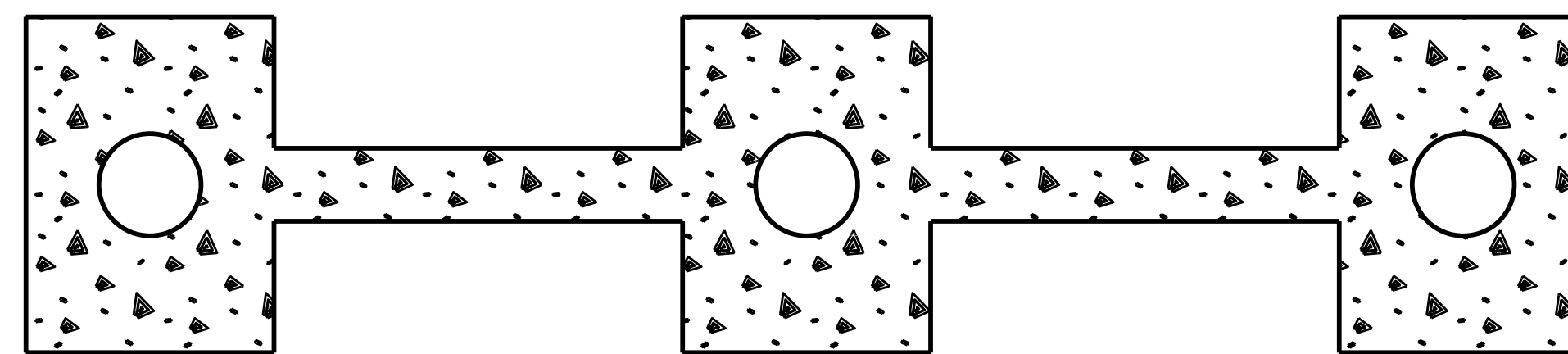
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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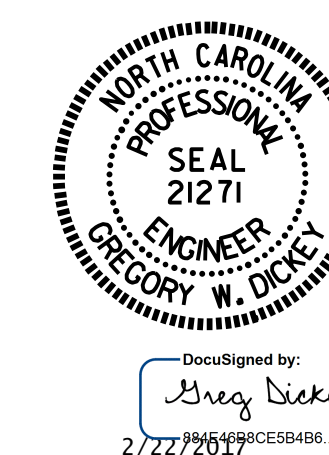
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 19 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 20 OF 50



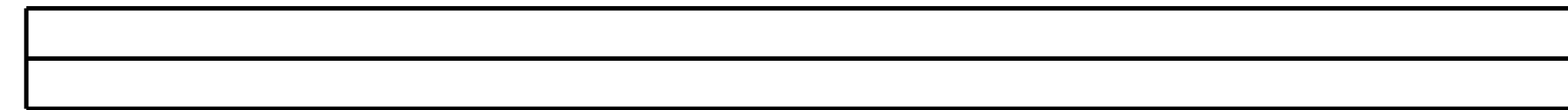
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 19

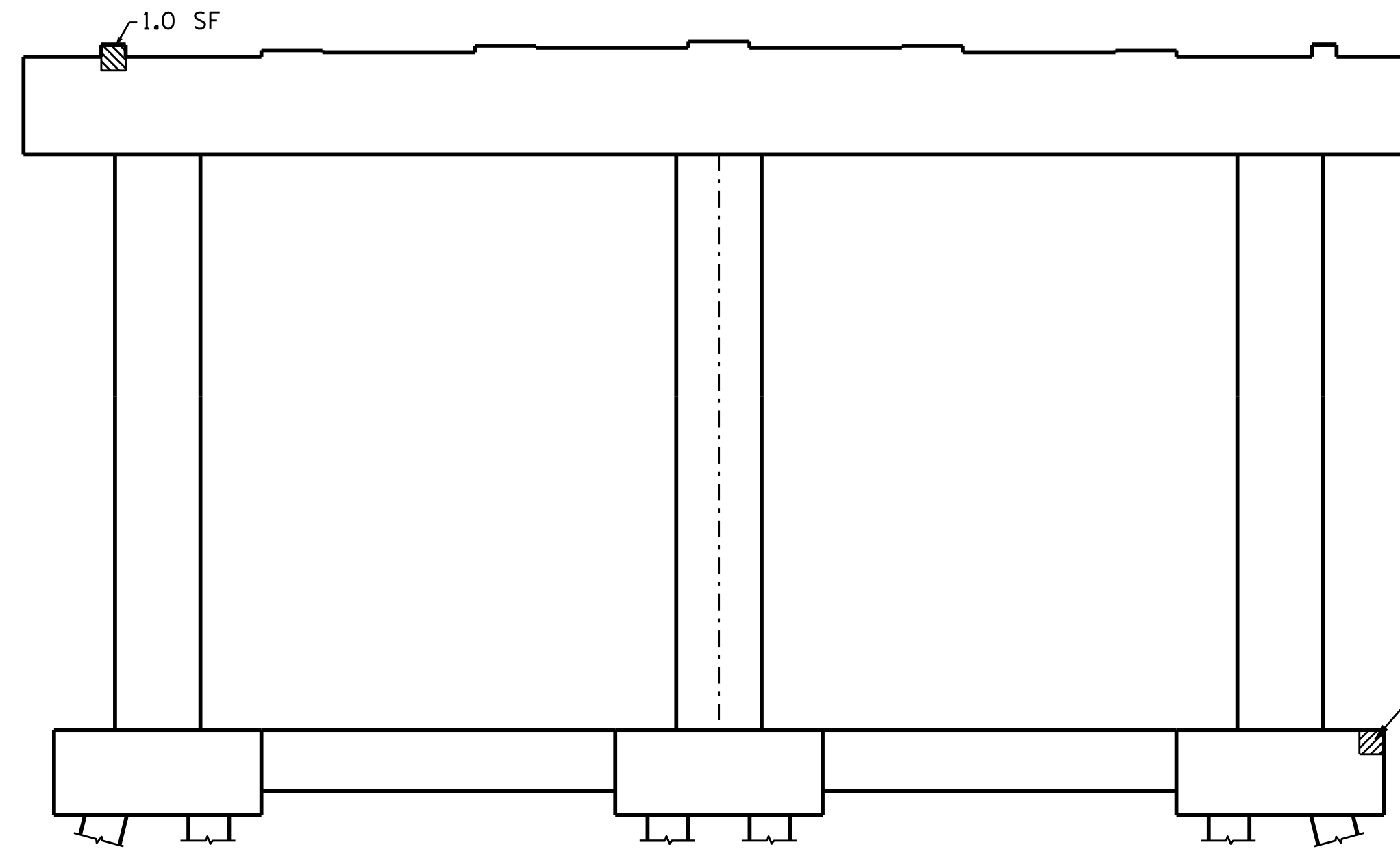
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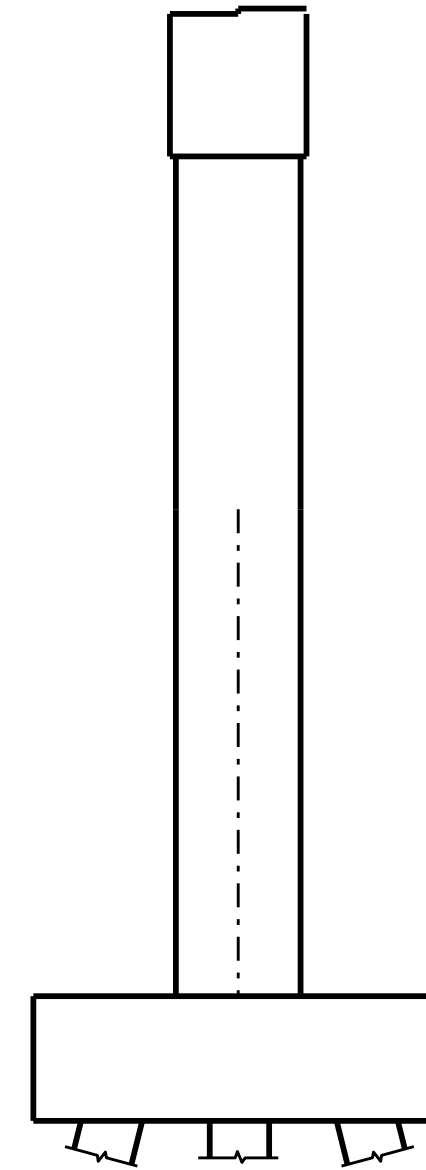
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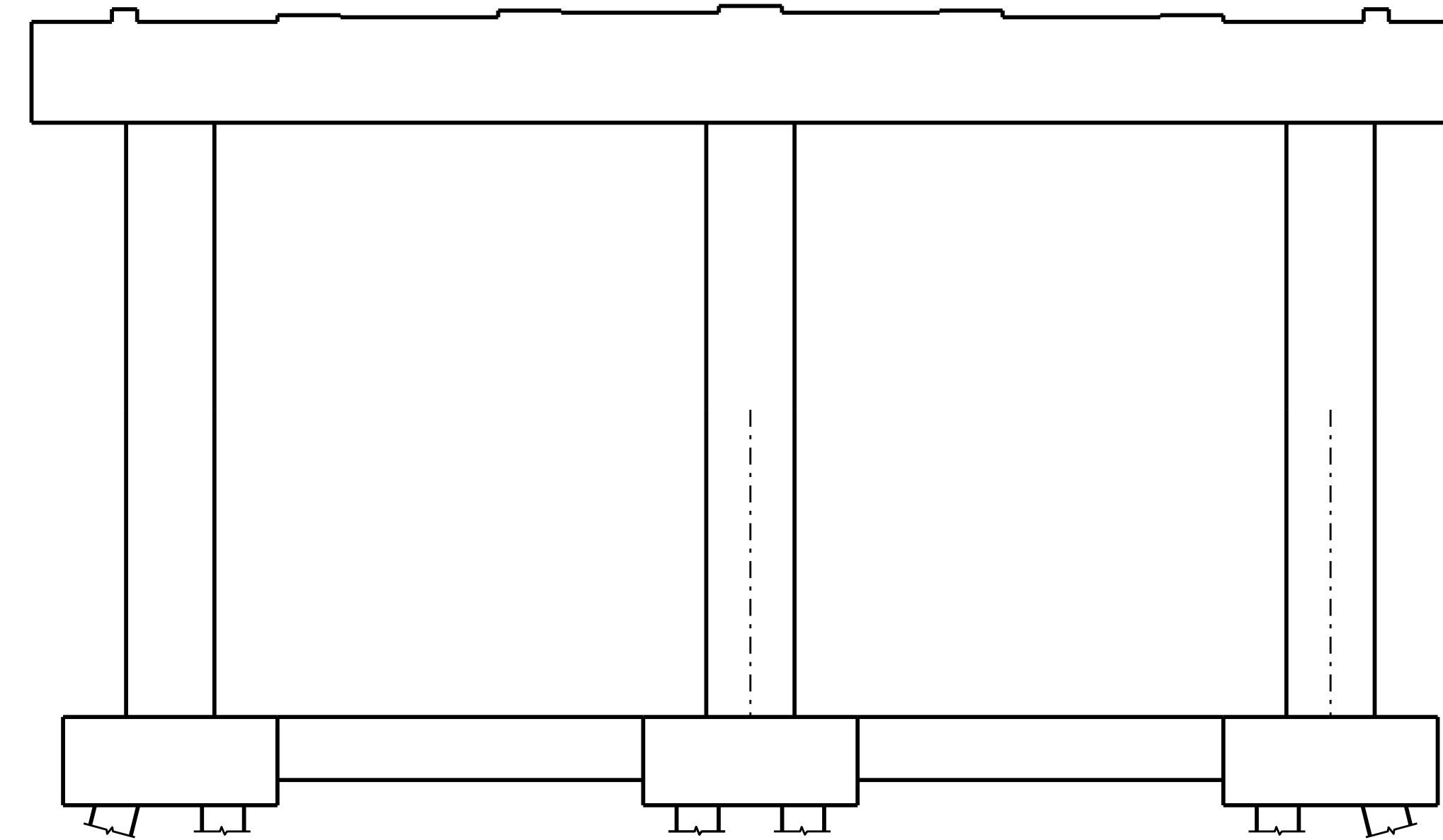
PLAN
TOP OF CAP



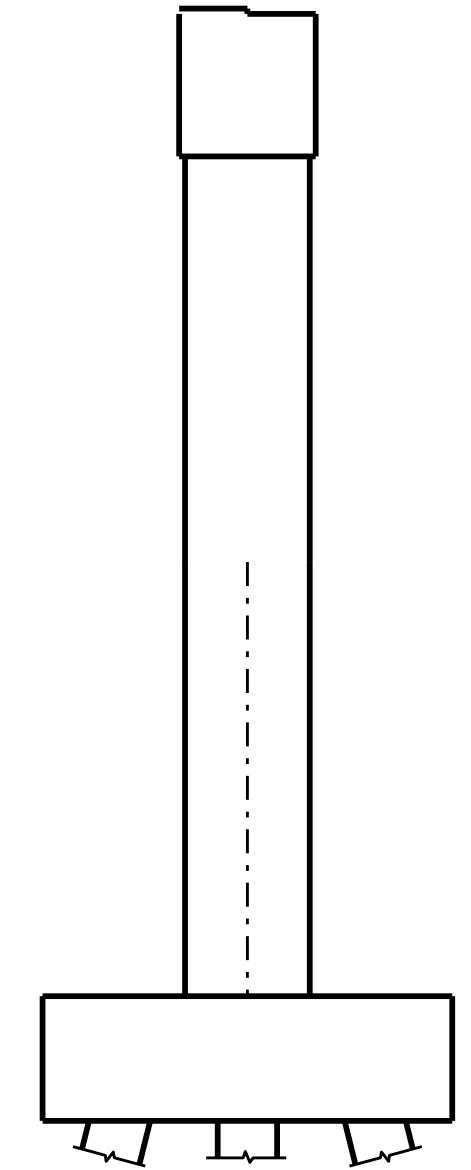
ELEVATION
SOUTH SIDE



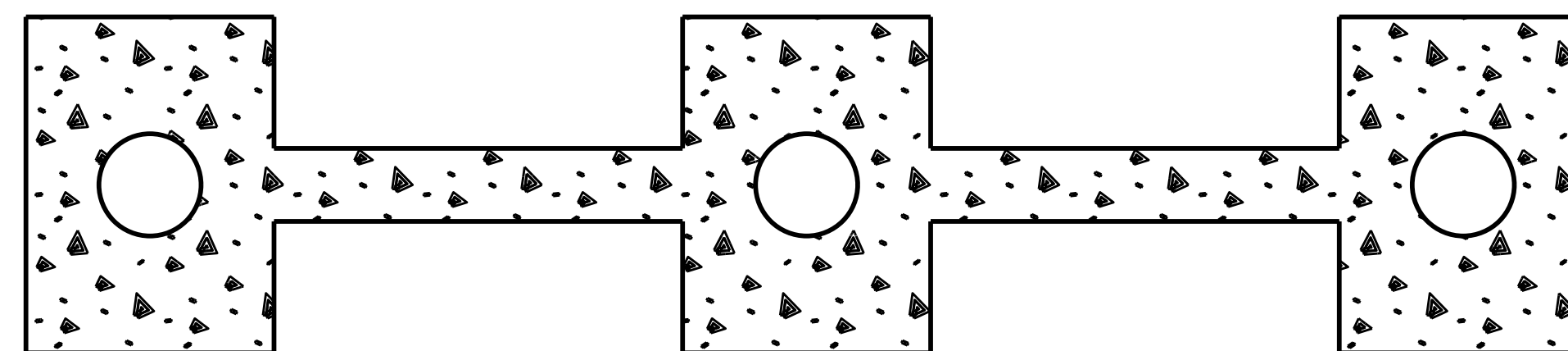
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 20 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 1.0 | 0.5 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

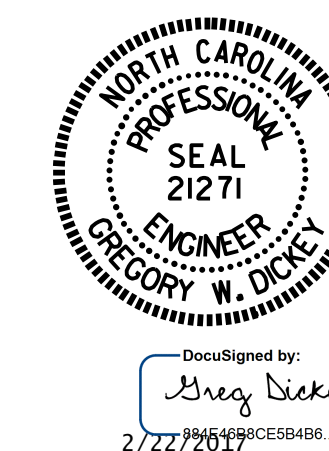
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. B-5938
CARTERET COUNTY
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SHEET 21 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

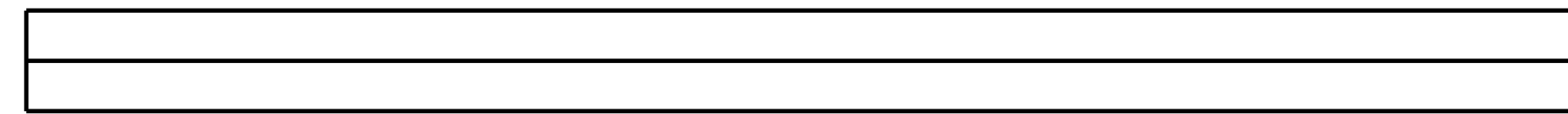
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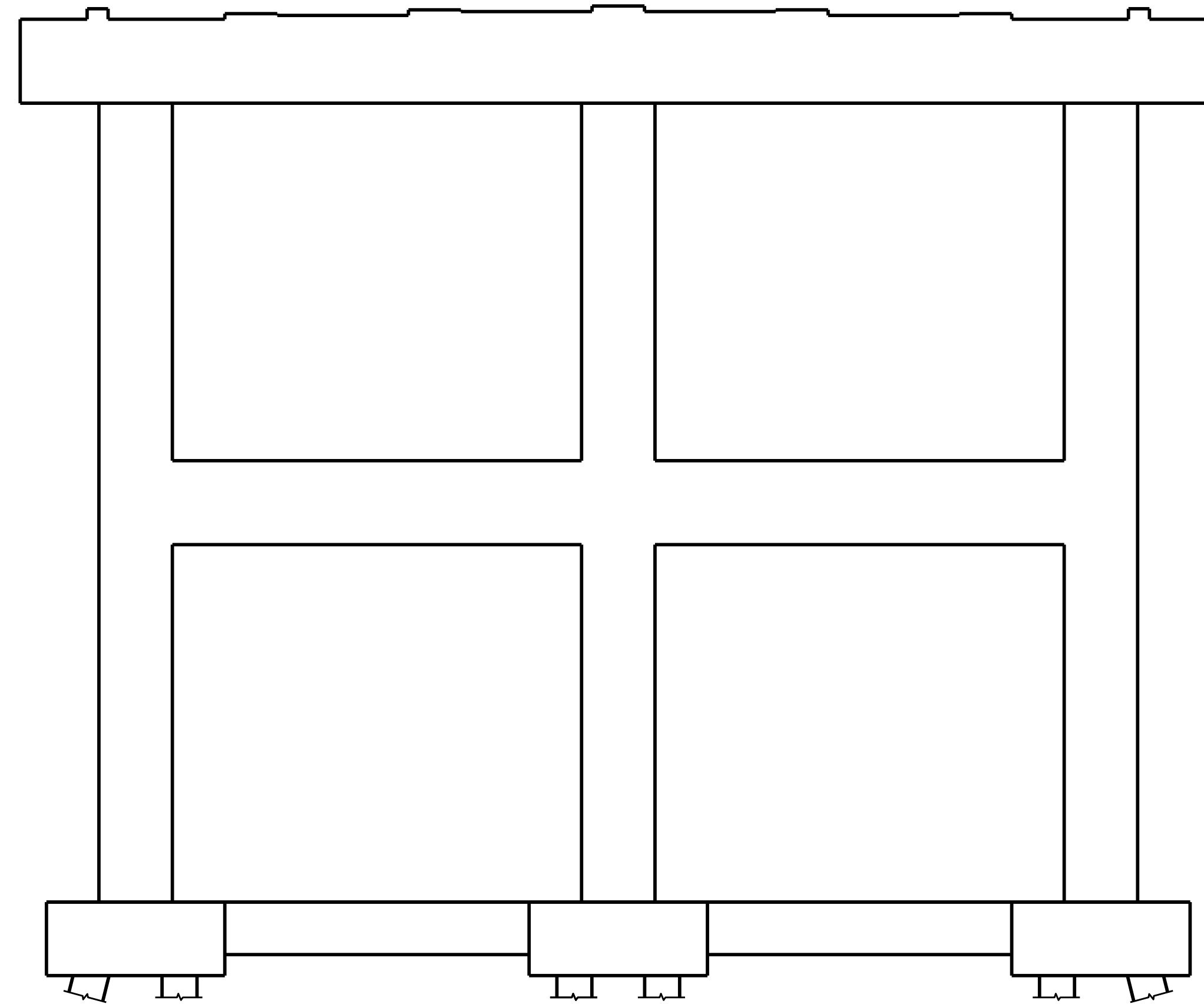
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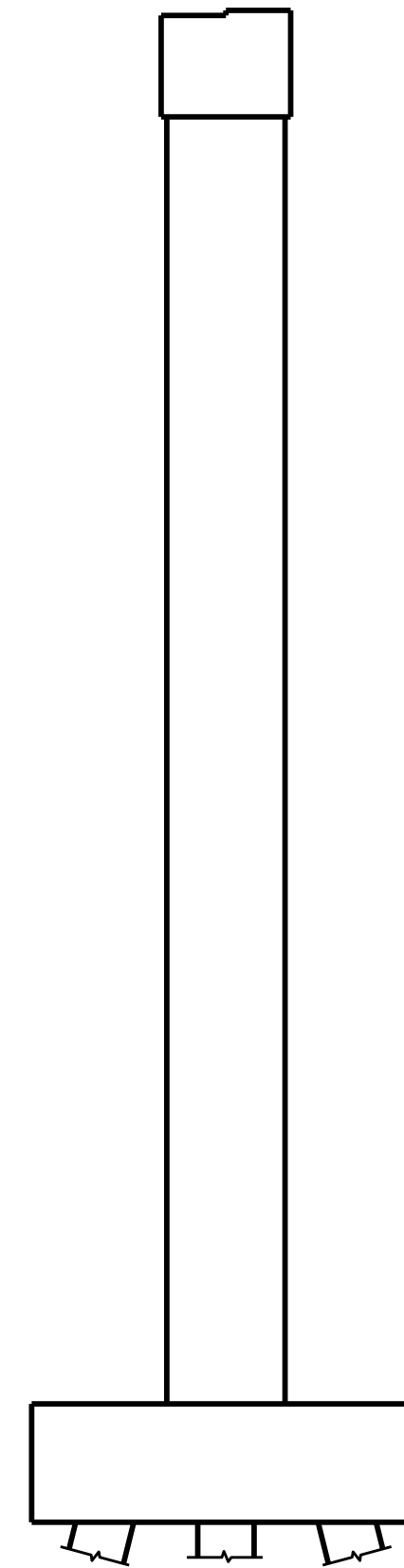
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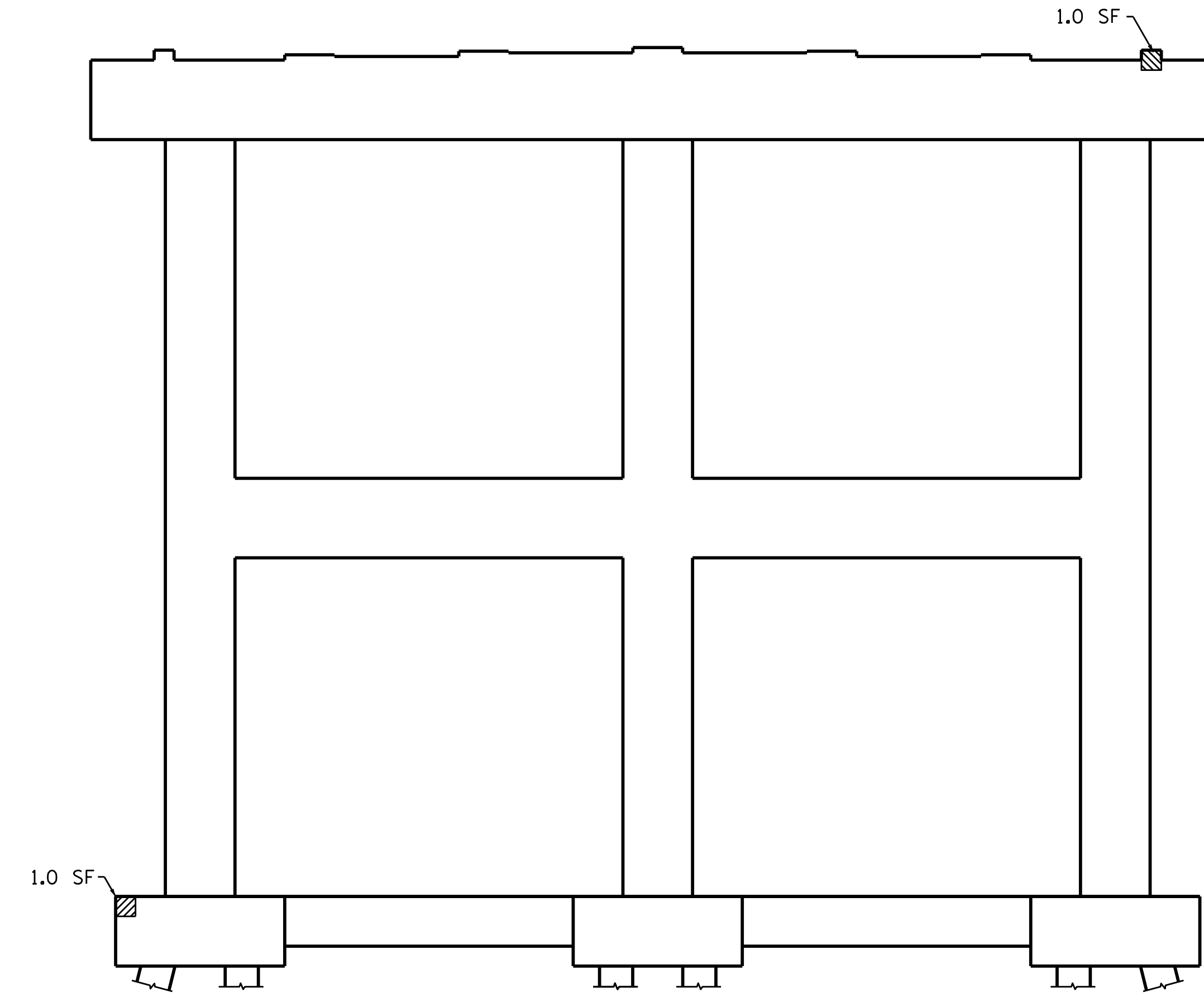
PLAN
TOP OF CAP



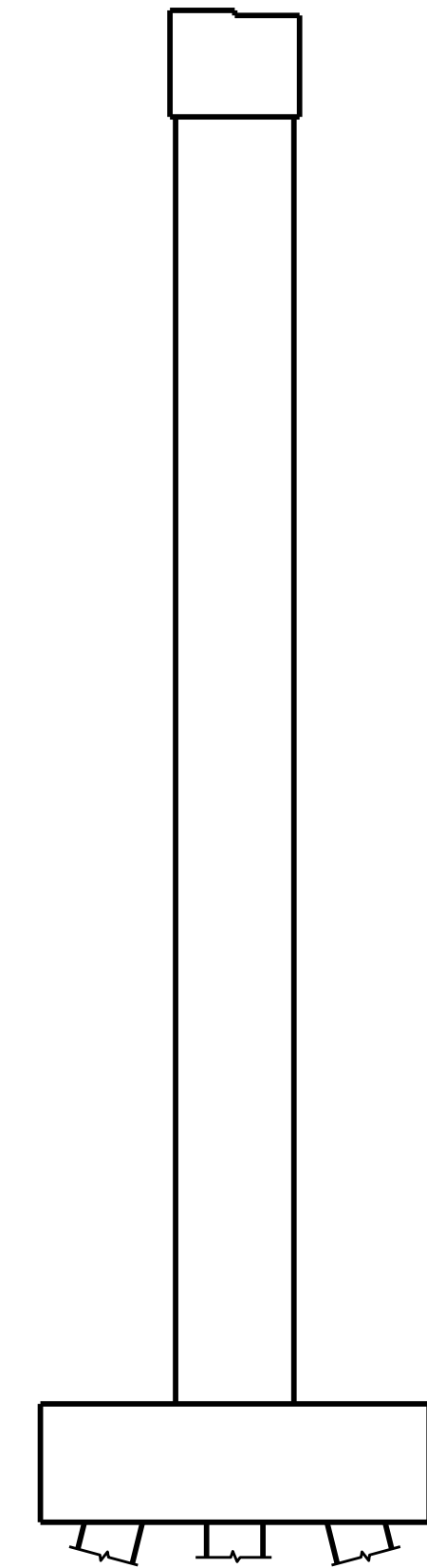
ELEVATION
SOUTH SIDE



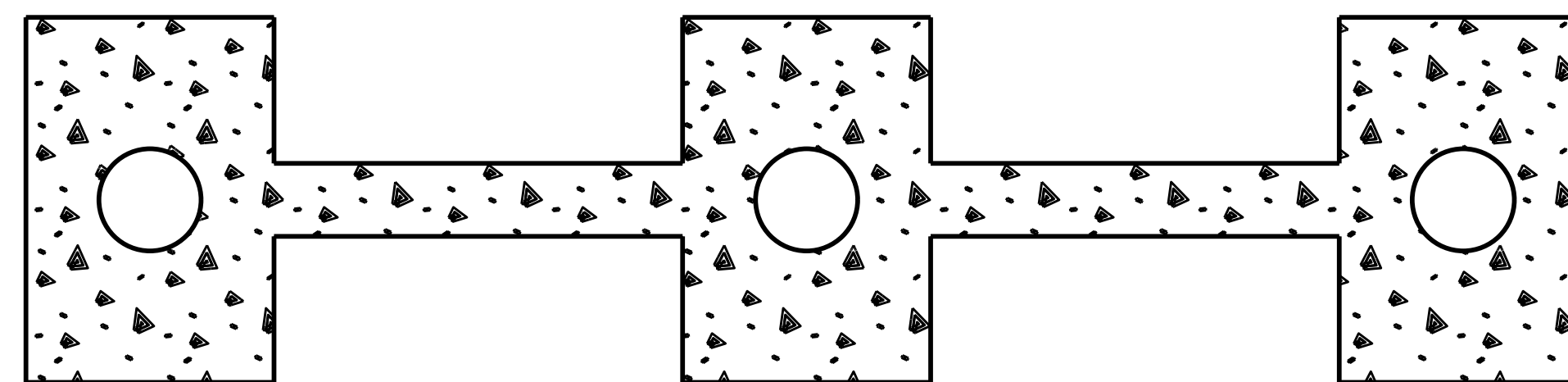
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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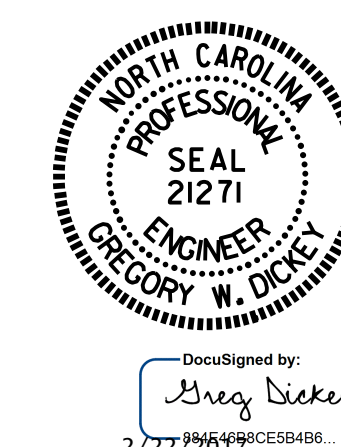
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 21 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 1.0 | 0.5 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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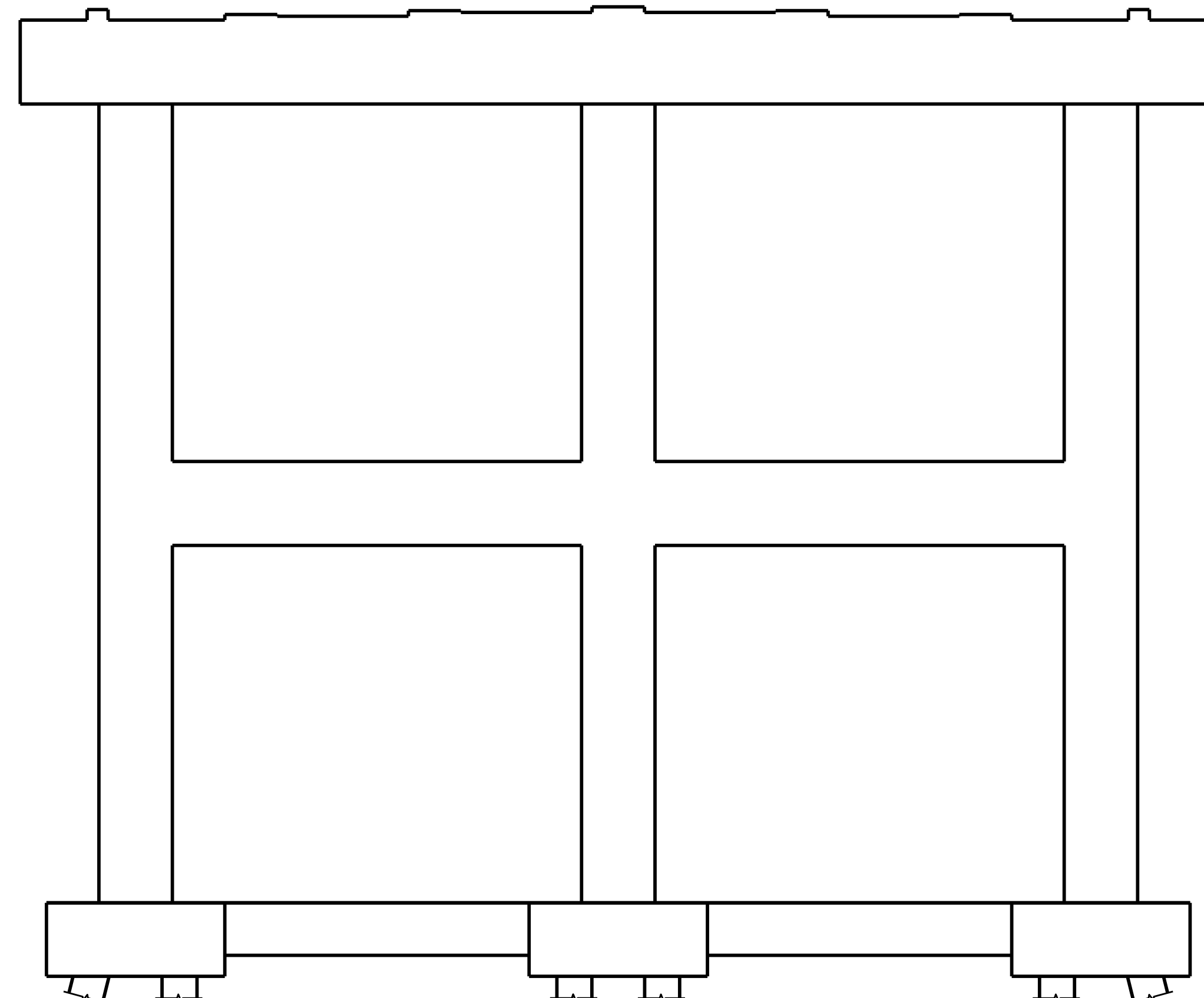
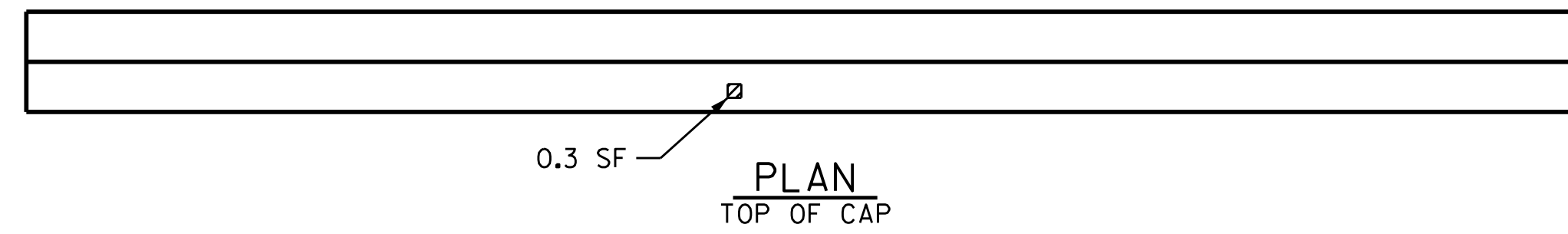
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BENT 21

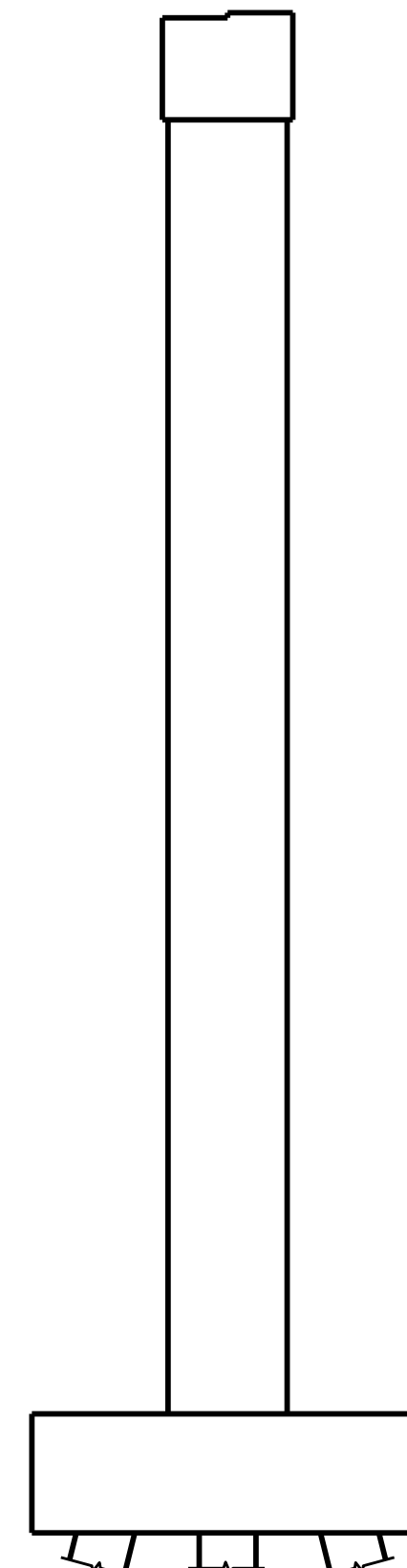
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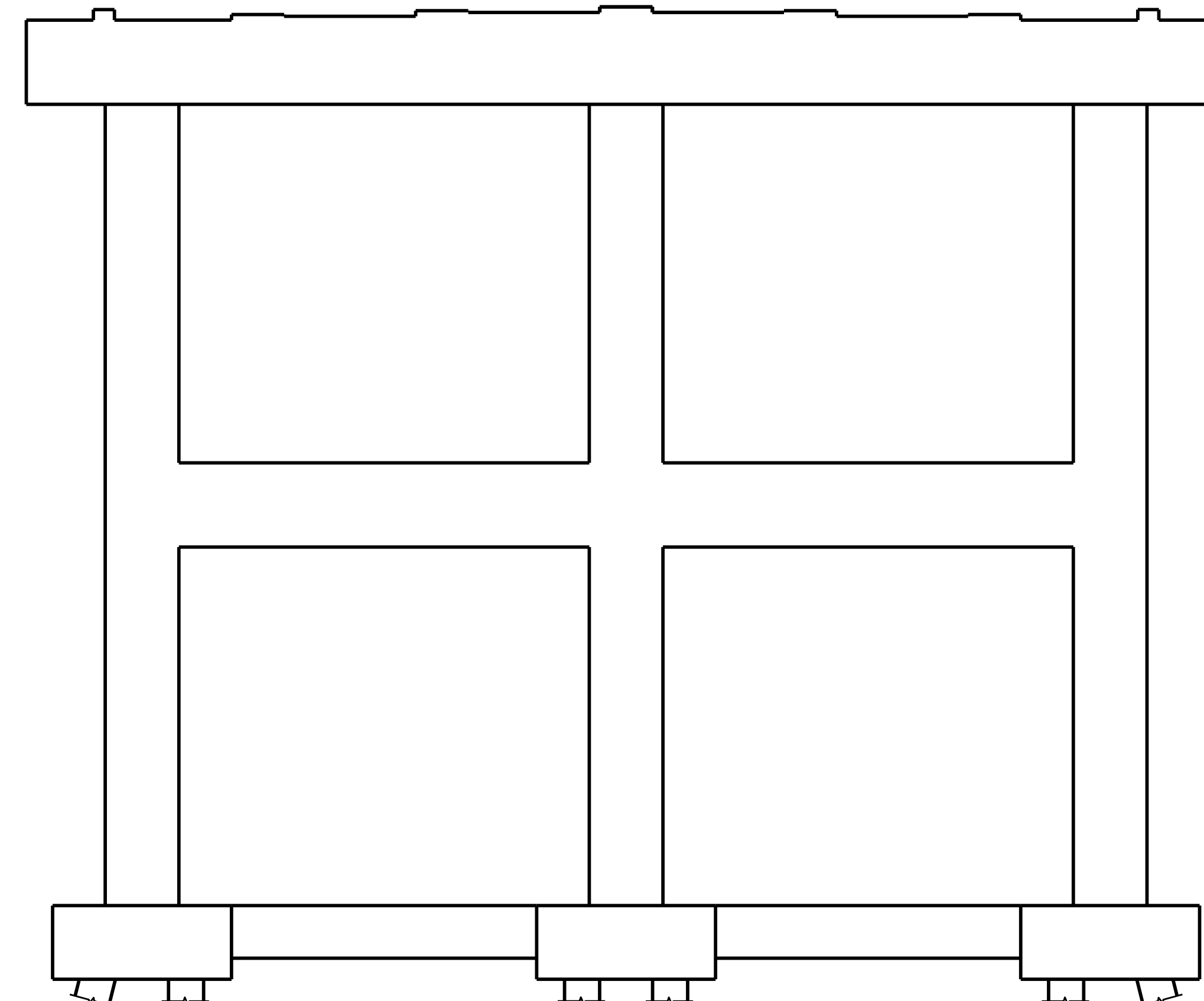
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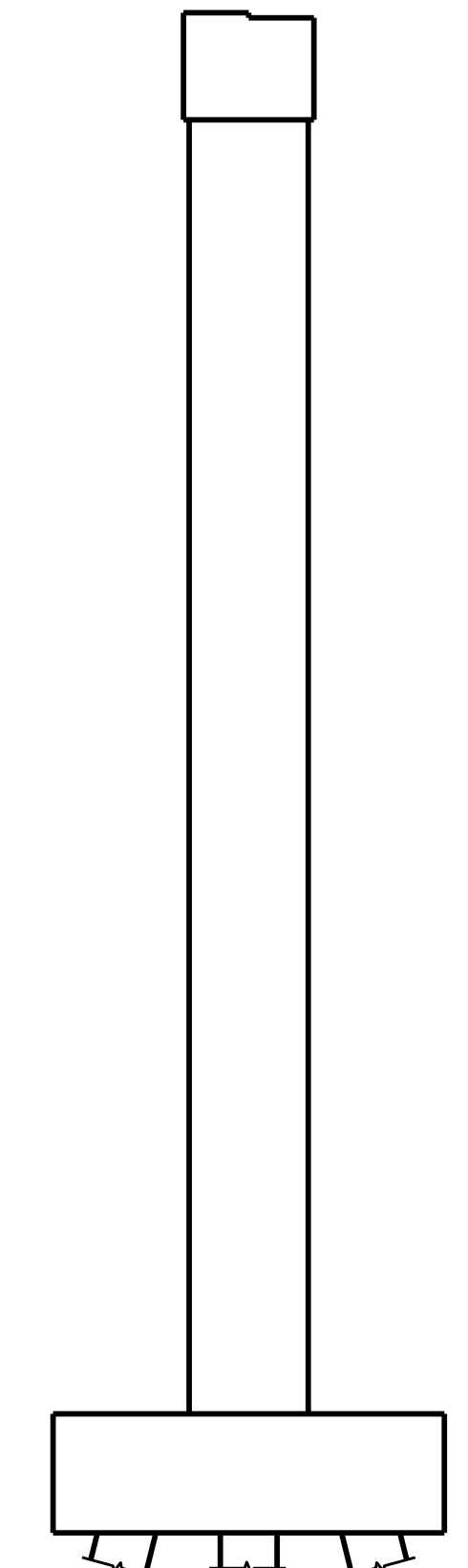
ELEVATION
SOUTH SIDE



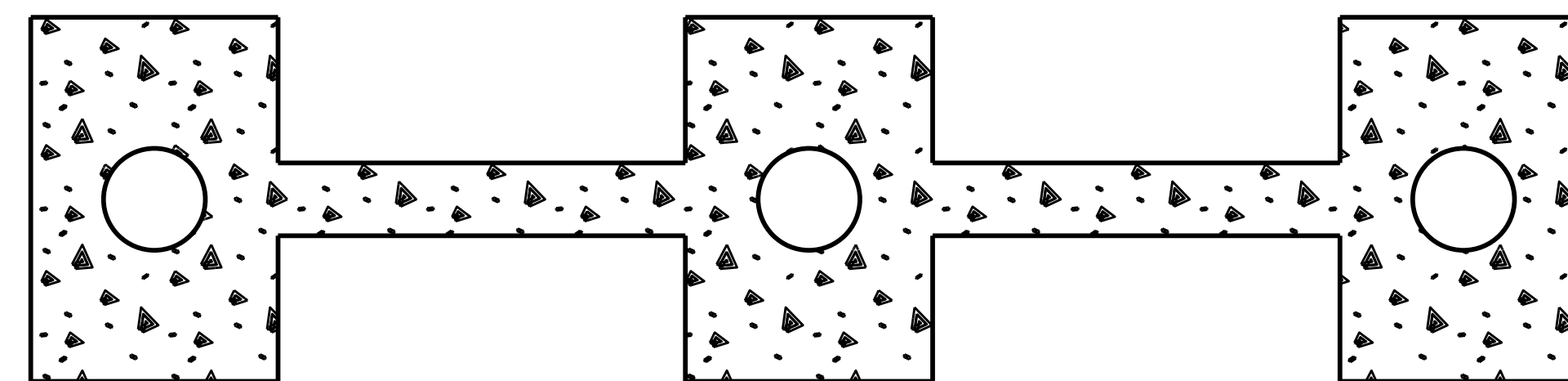
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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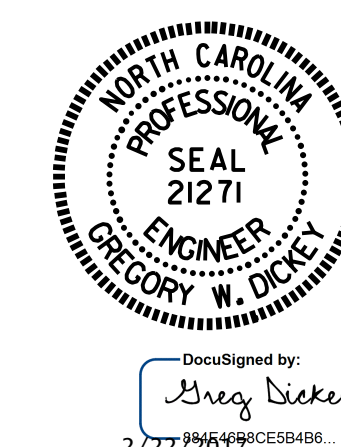
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 22 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.3 | 0.2 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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CARTERET COUNTY
 BRIDGE NO. 68

SHEET 23 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

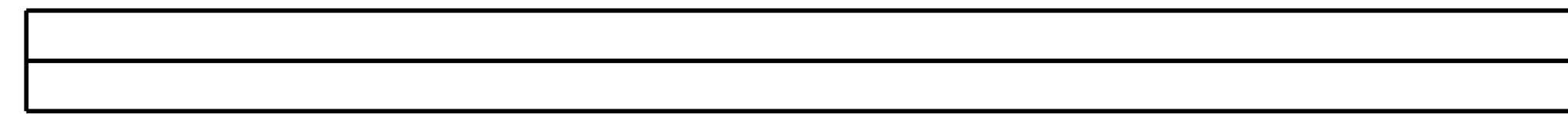
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DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

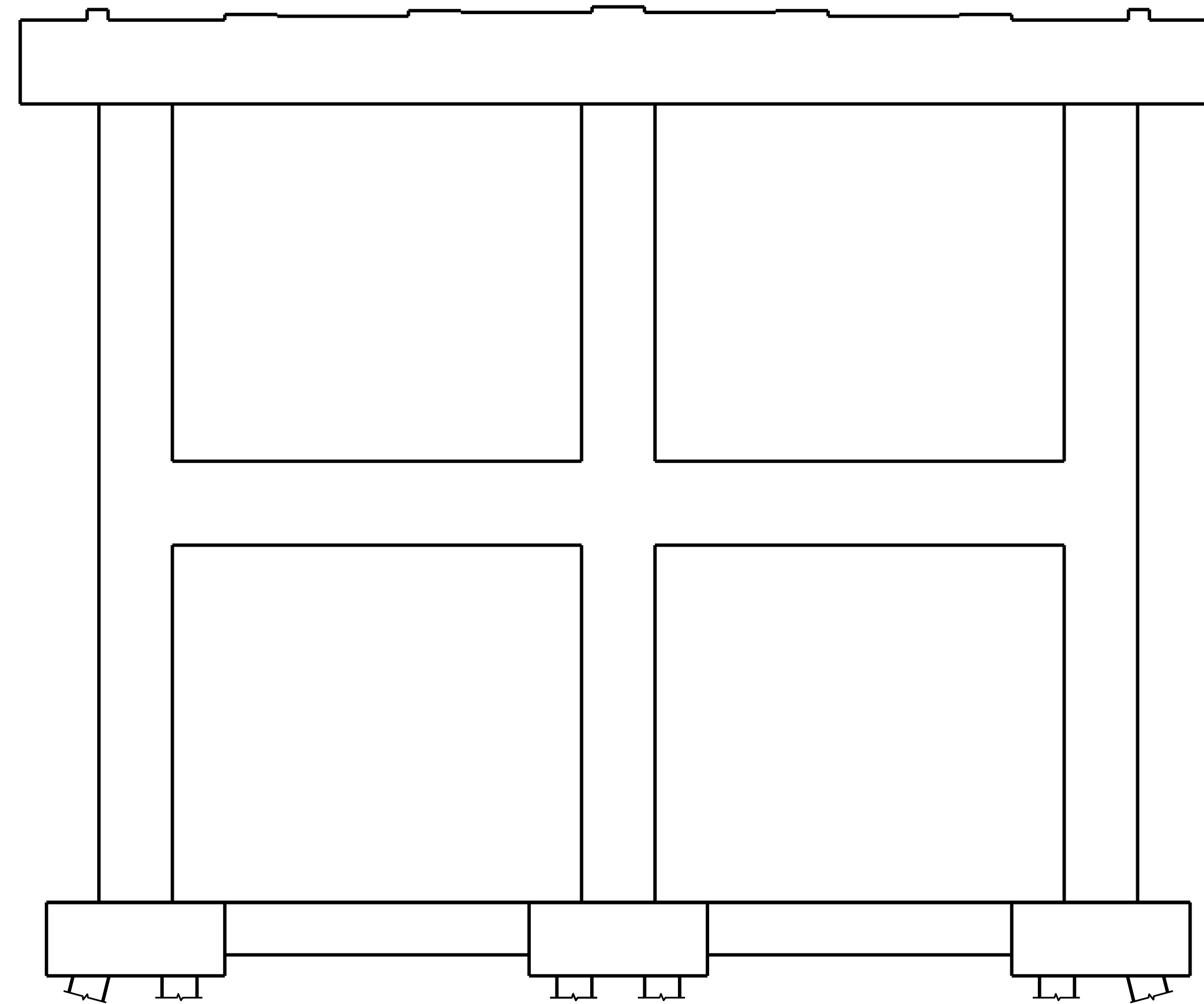
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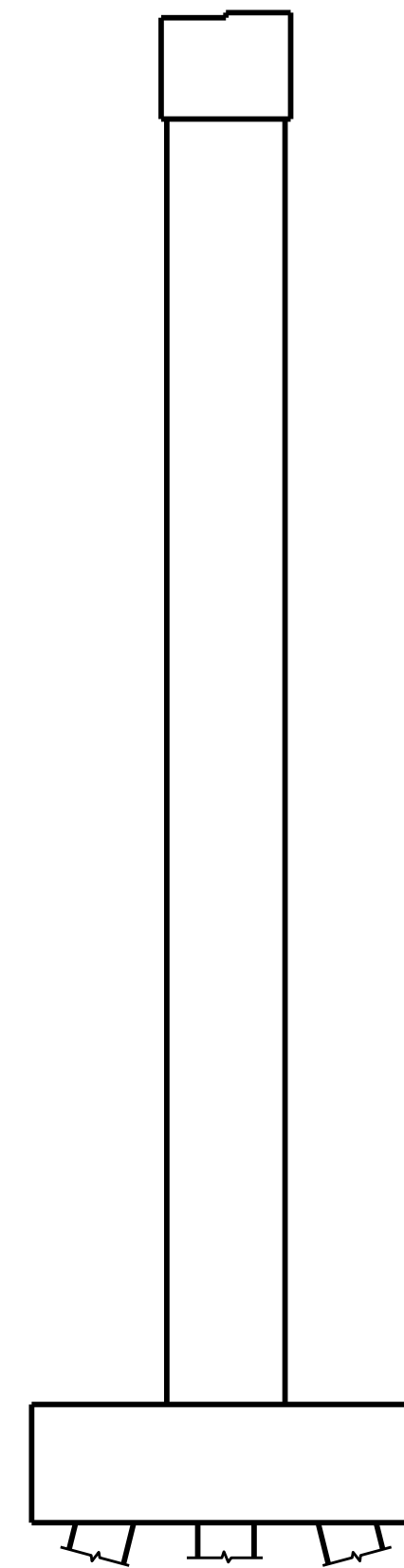
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



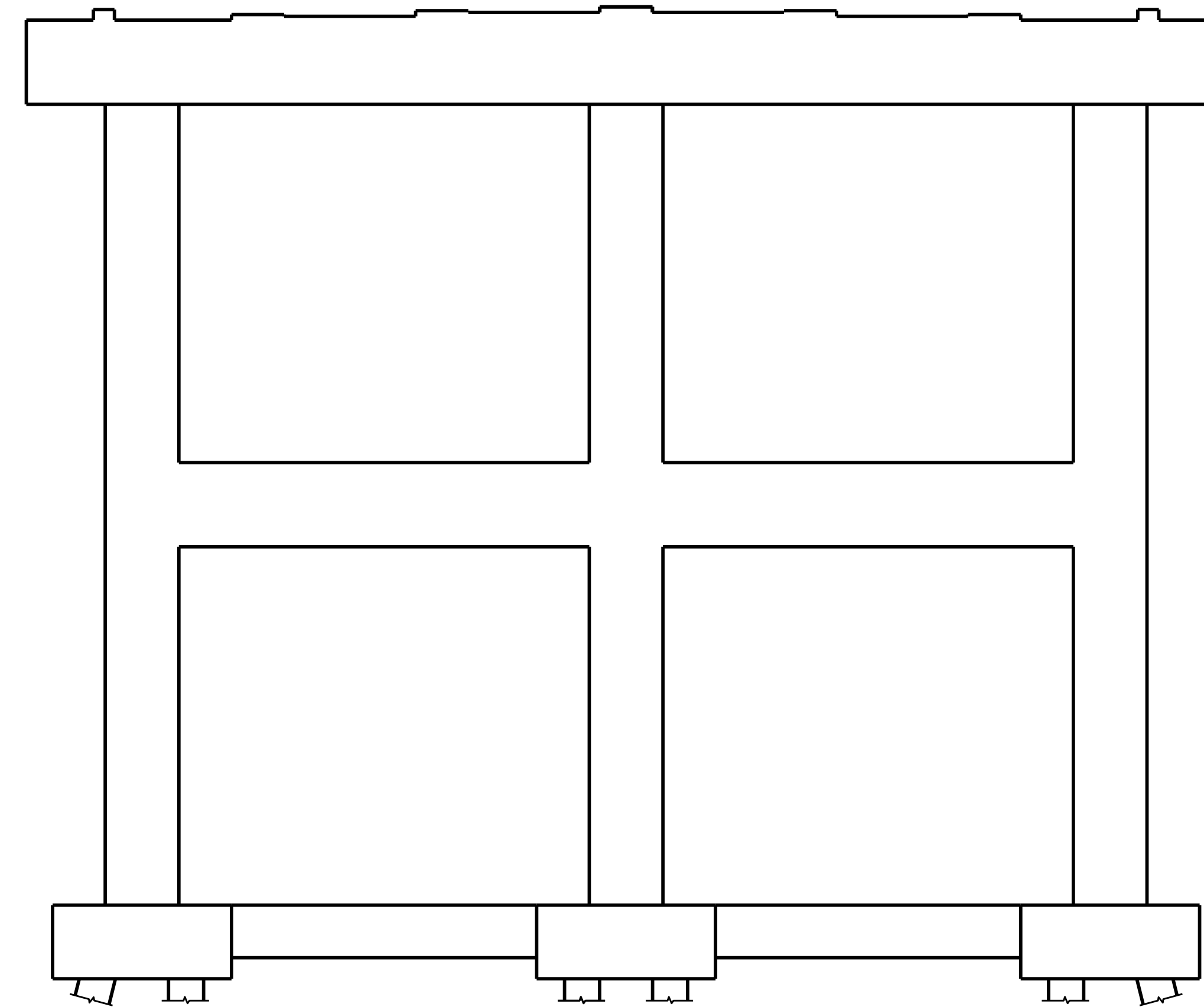
PLAN
TOP OF CAP



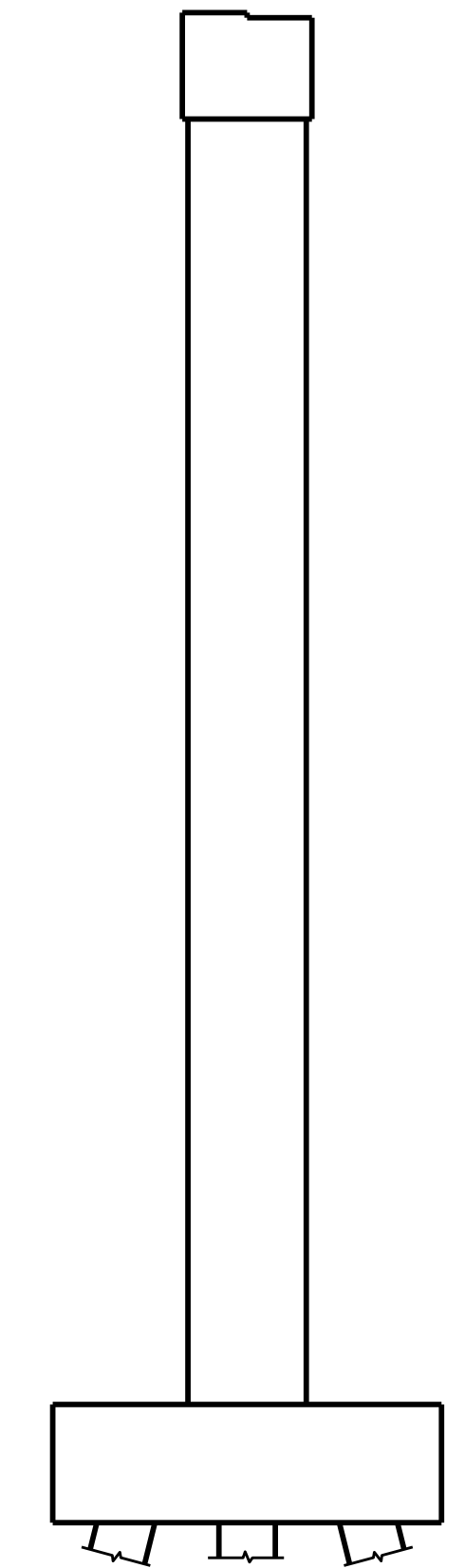
ELEVATION
SOUTH SIDE



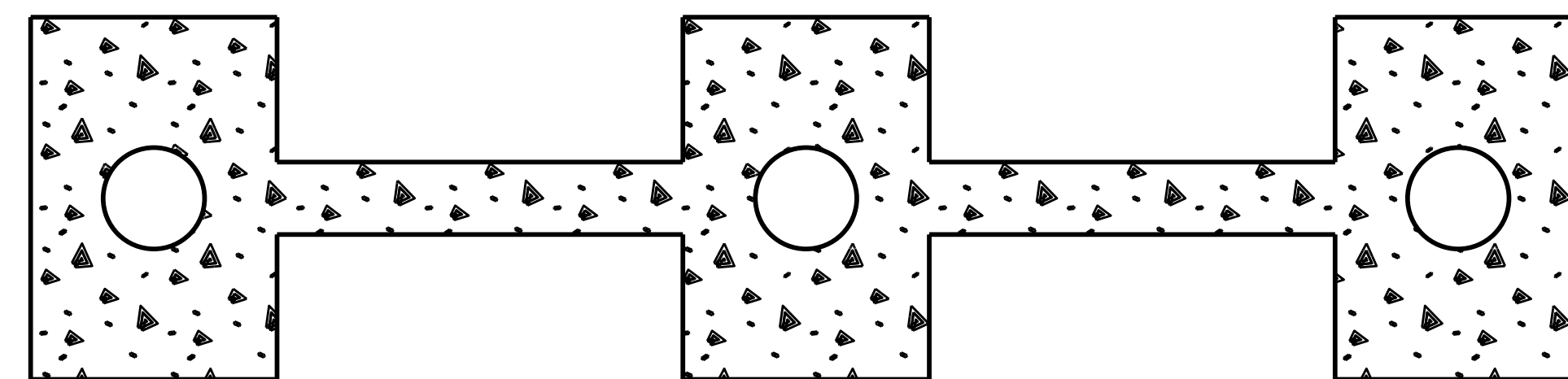
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

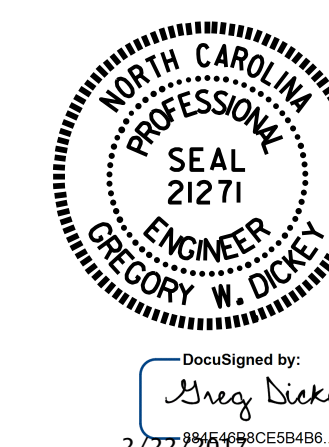
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 23 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 30.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 24 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

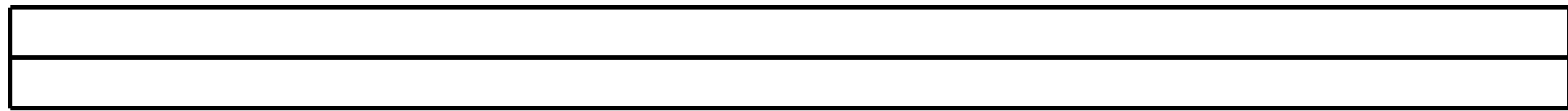
BENT 23

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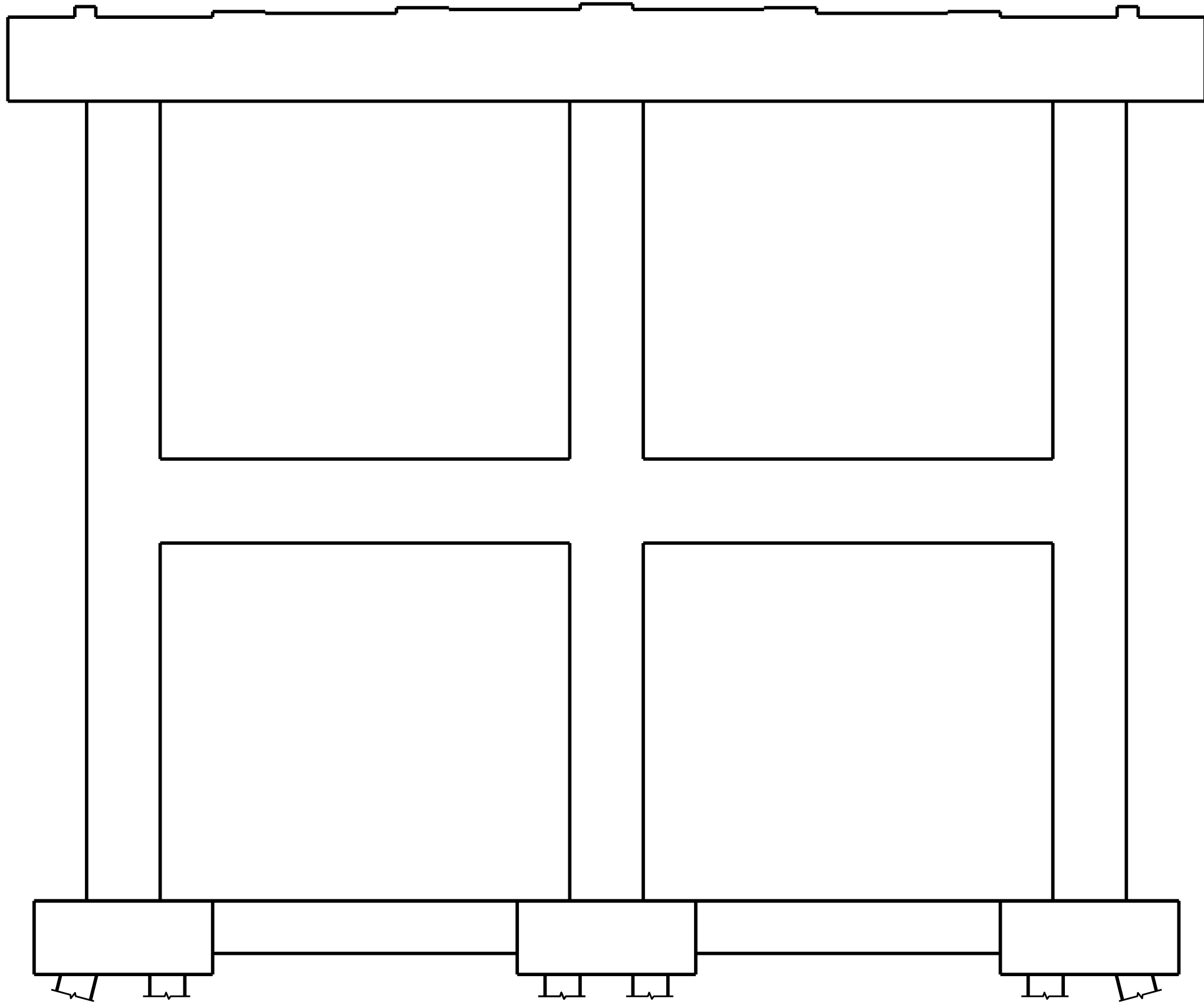
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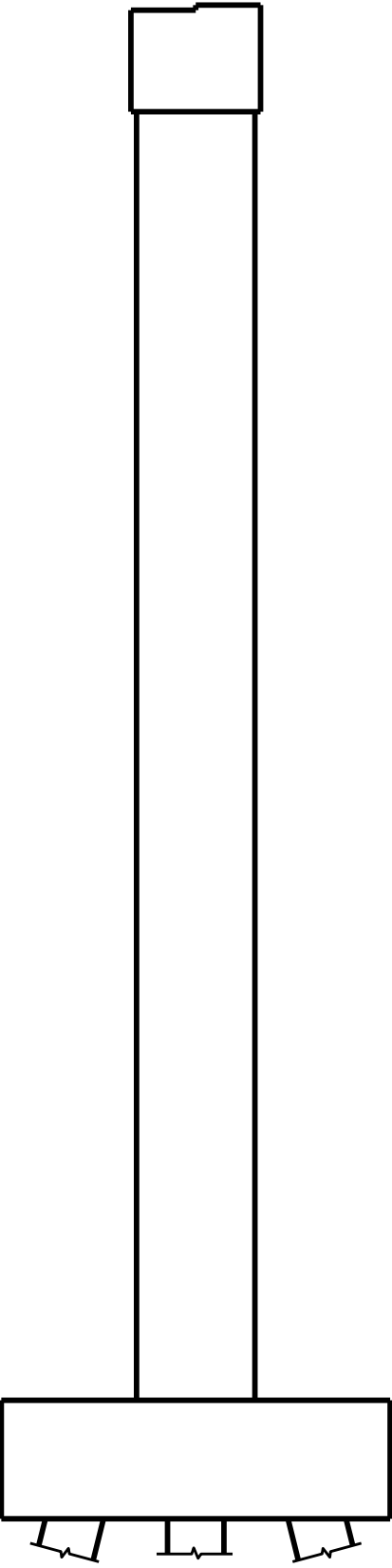
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



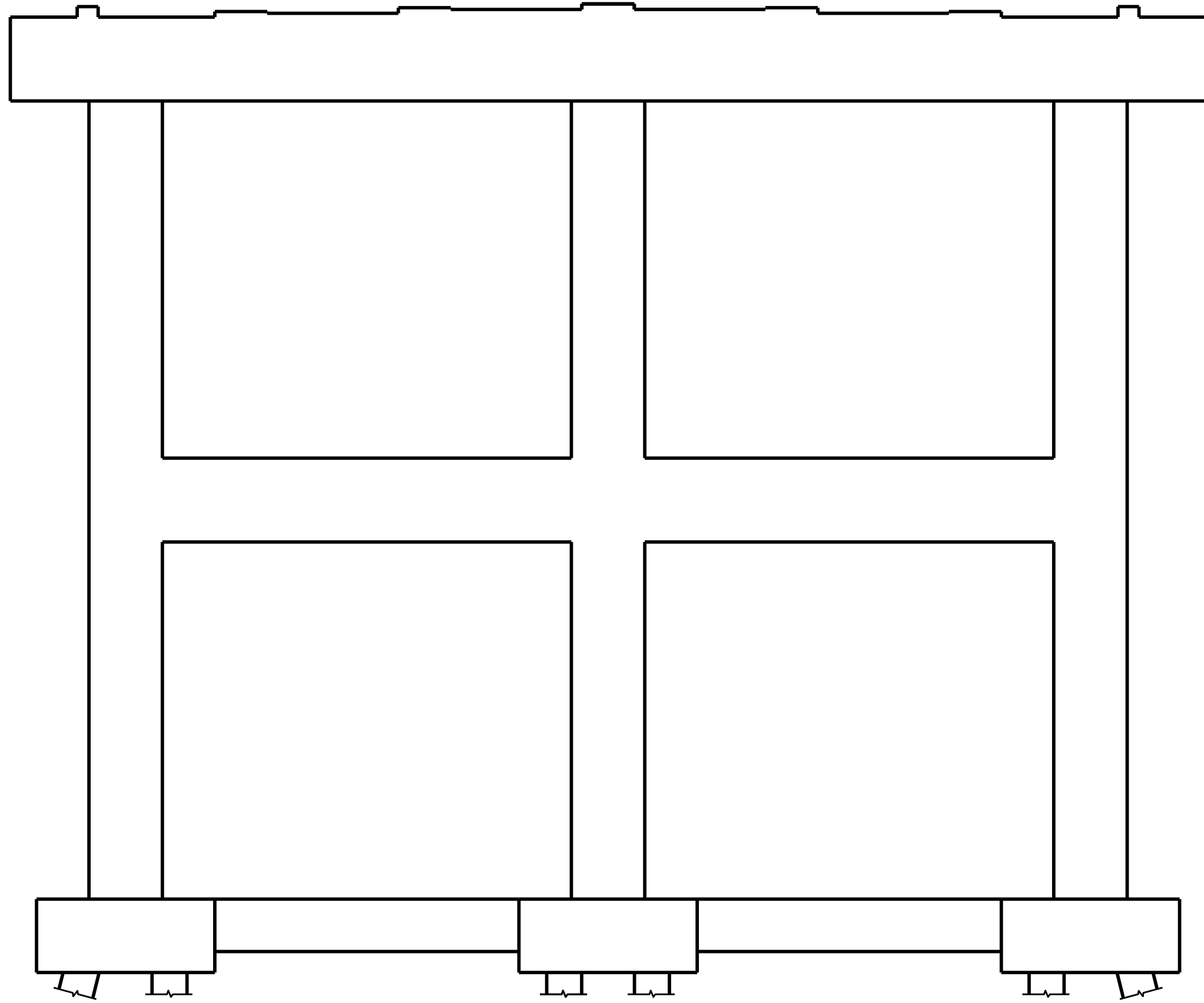
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TOP OF CAP



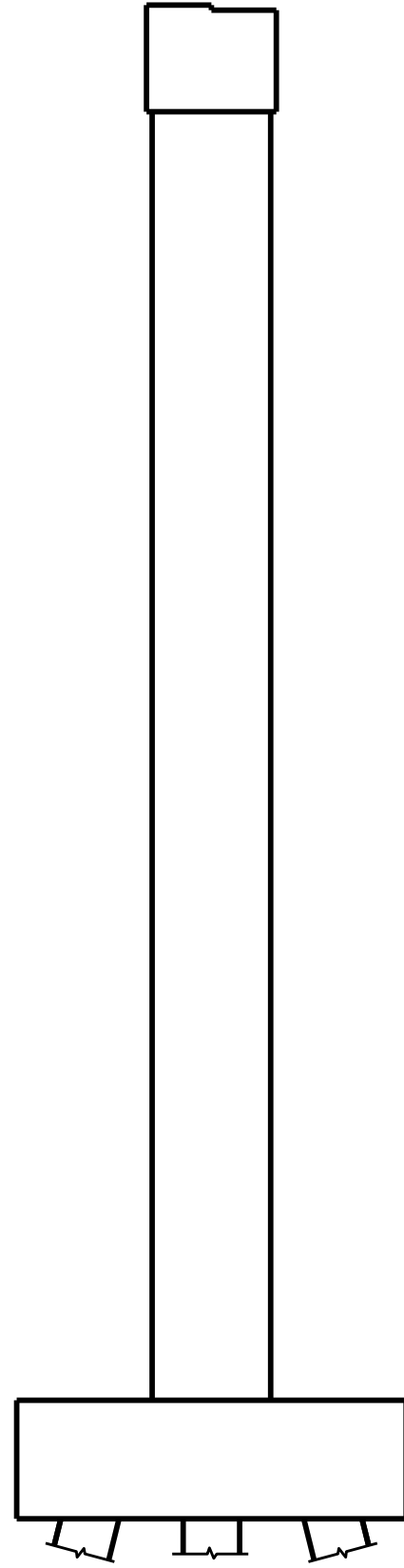
ELEVATION
SOUTH SIDE



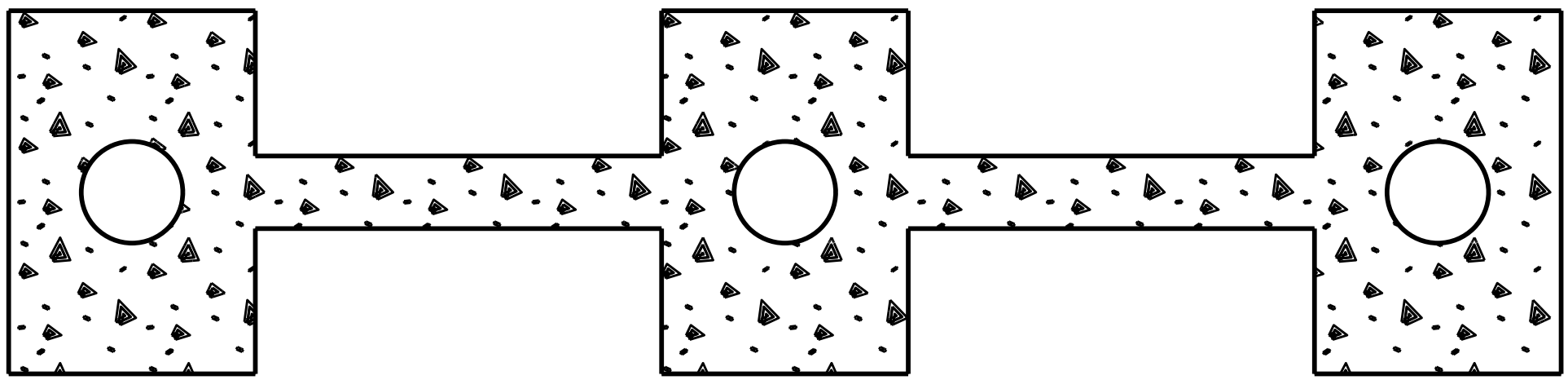
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
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 FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.
 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

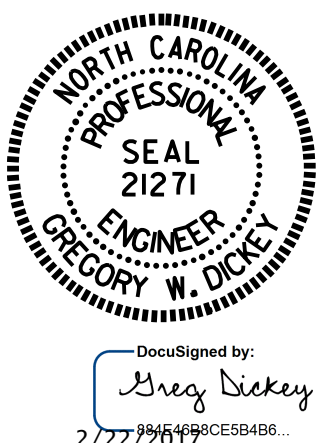
| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 24 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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CARTERET COUNTY
 BRIDGE NO. 68

SHEET 25 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

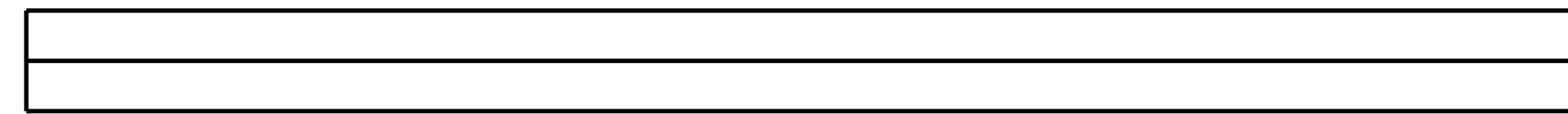
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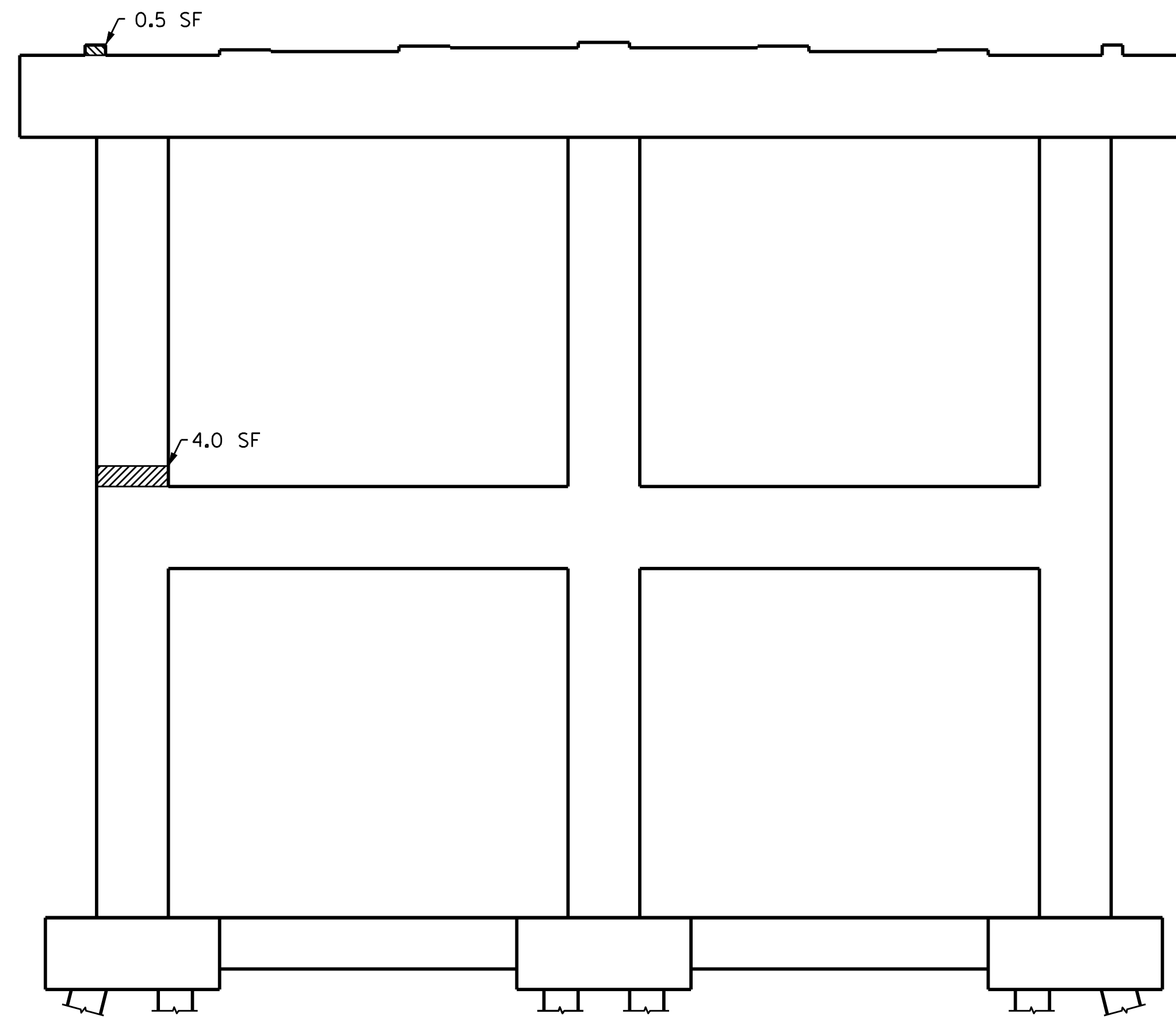
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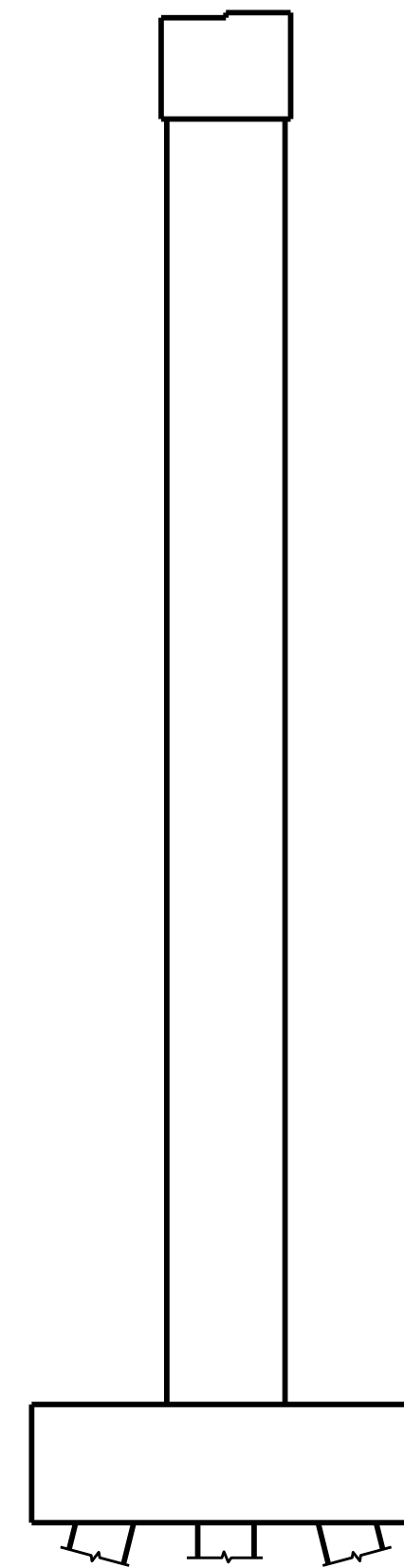
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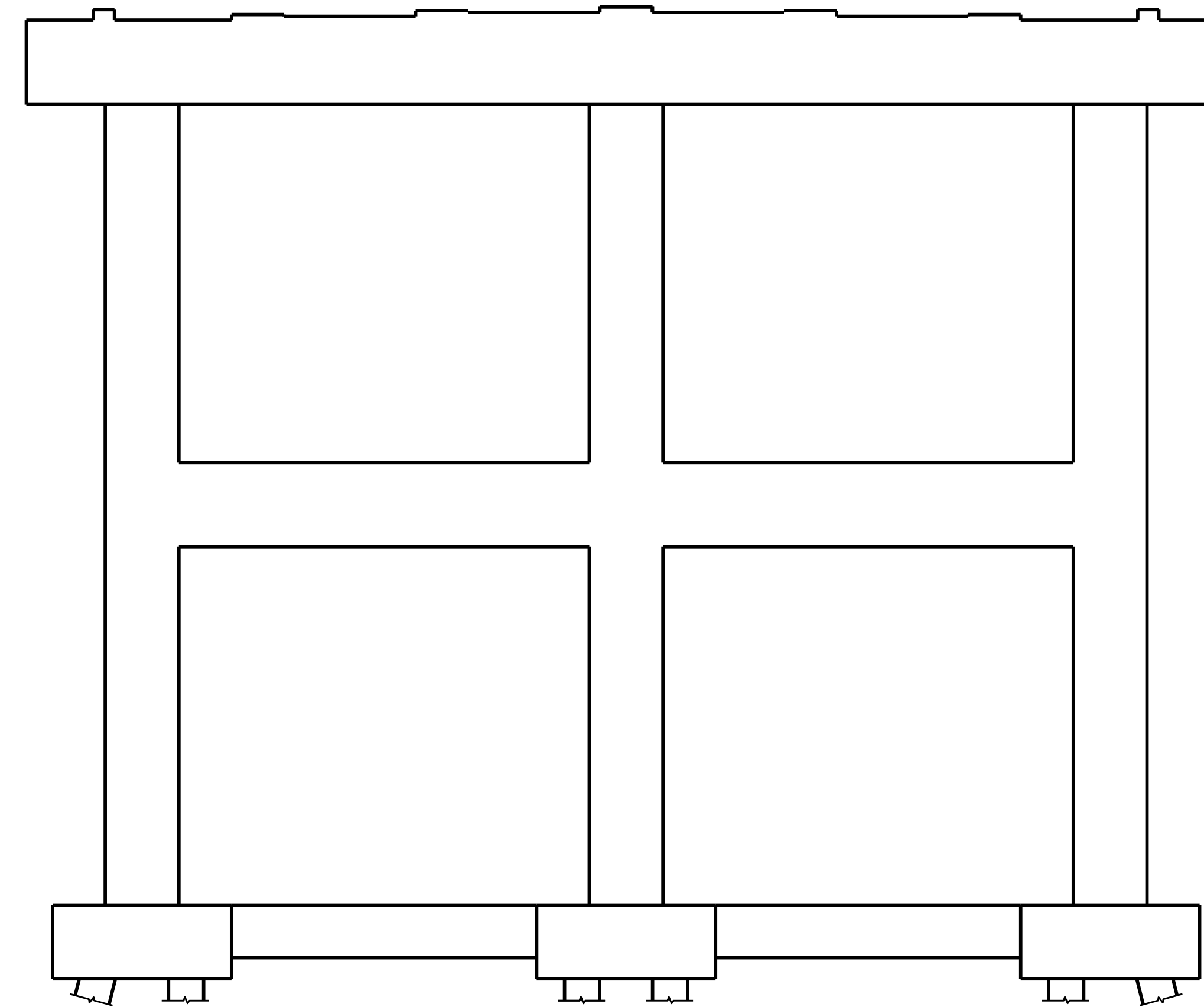
PLAN
TOP OF CAP



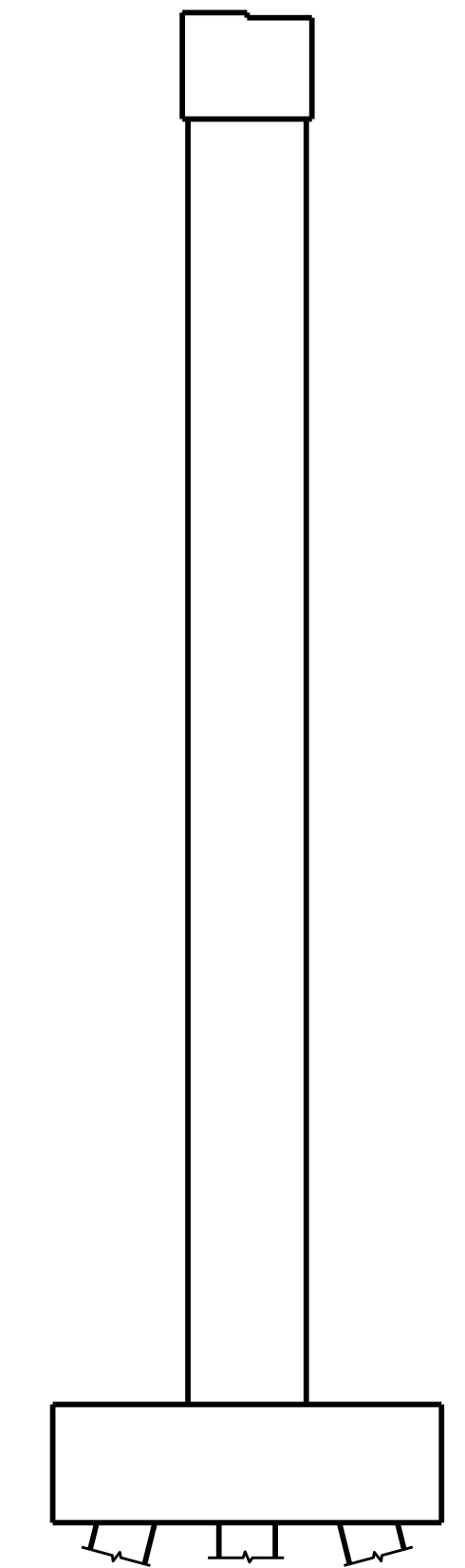
ELEVATION
SOUTH SIDE



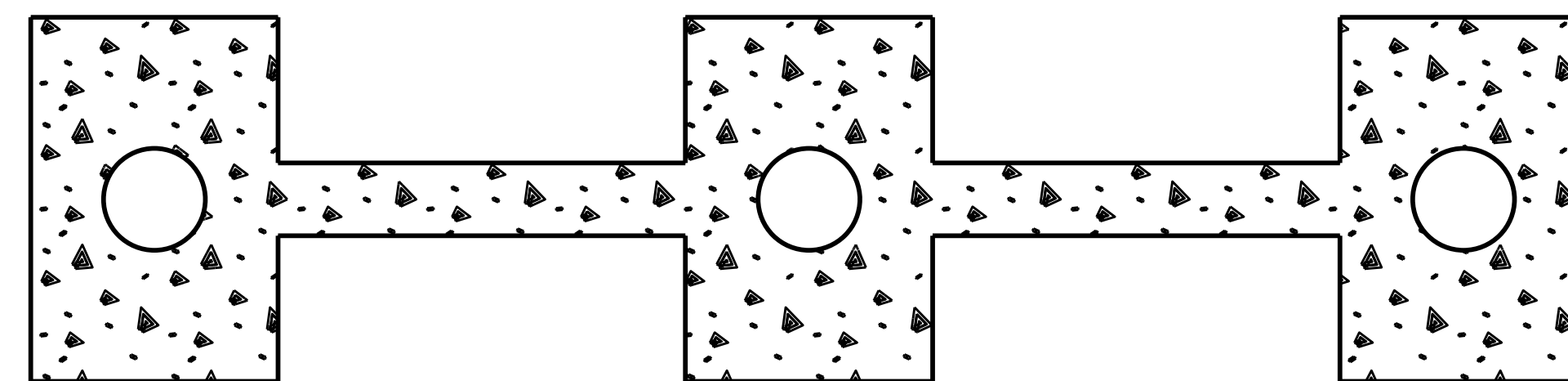
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



360 SF

PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 25 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 4.0 | 2.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

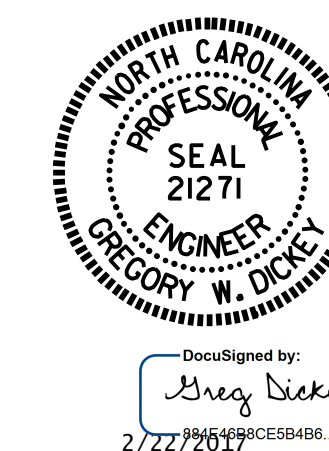
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 26 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

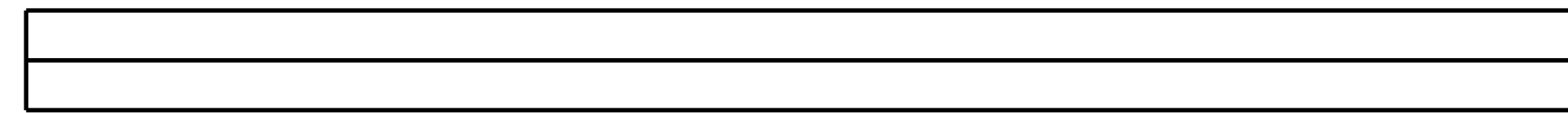
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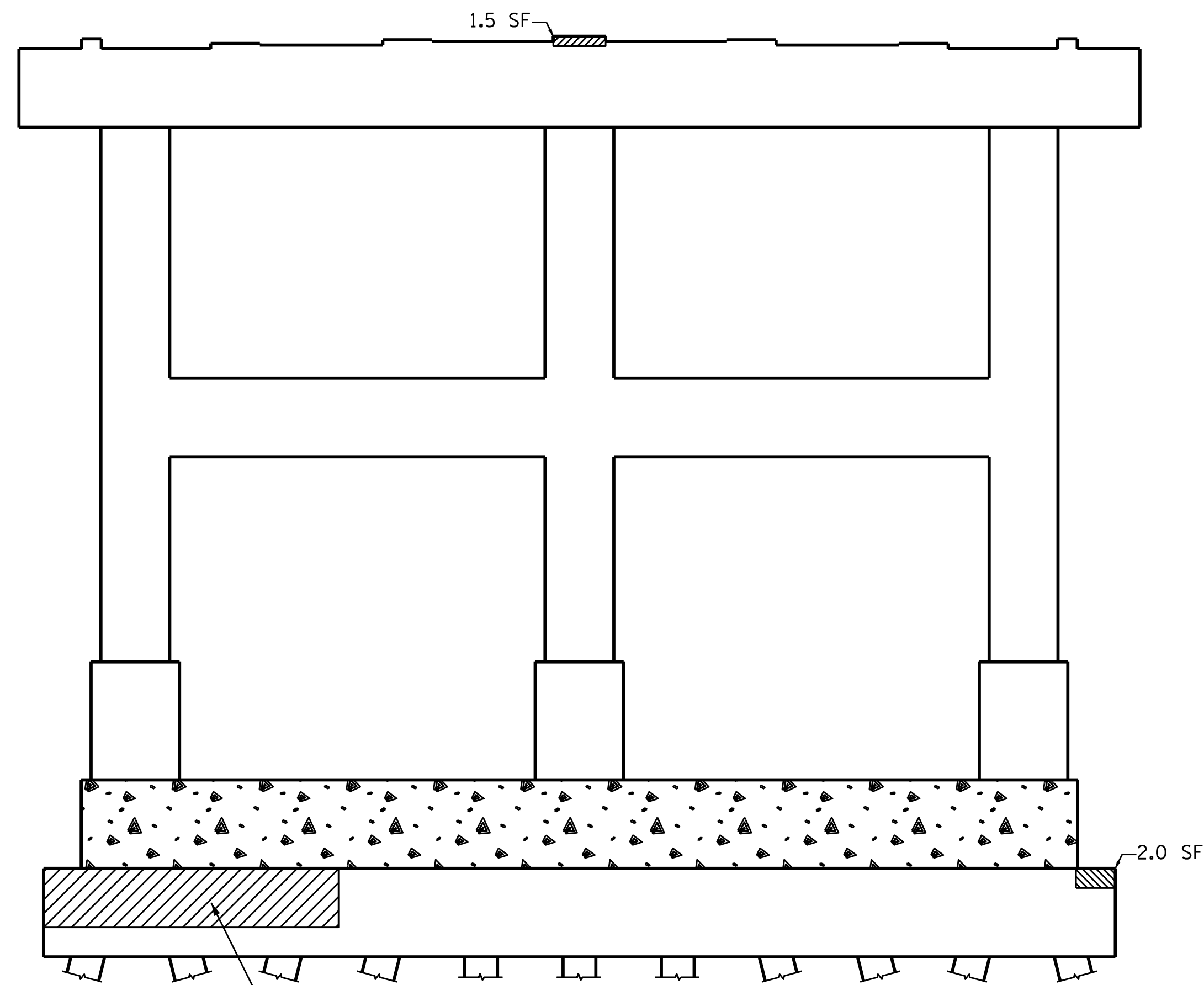
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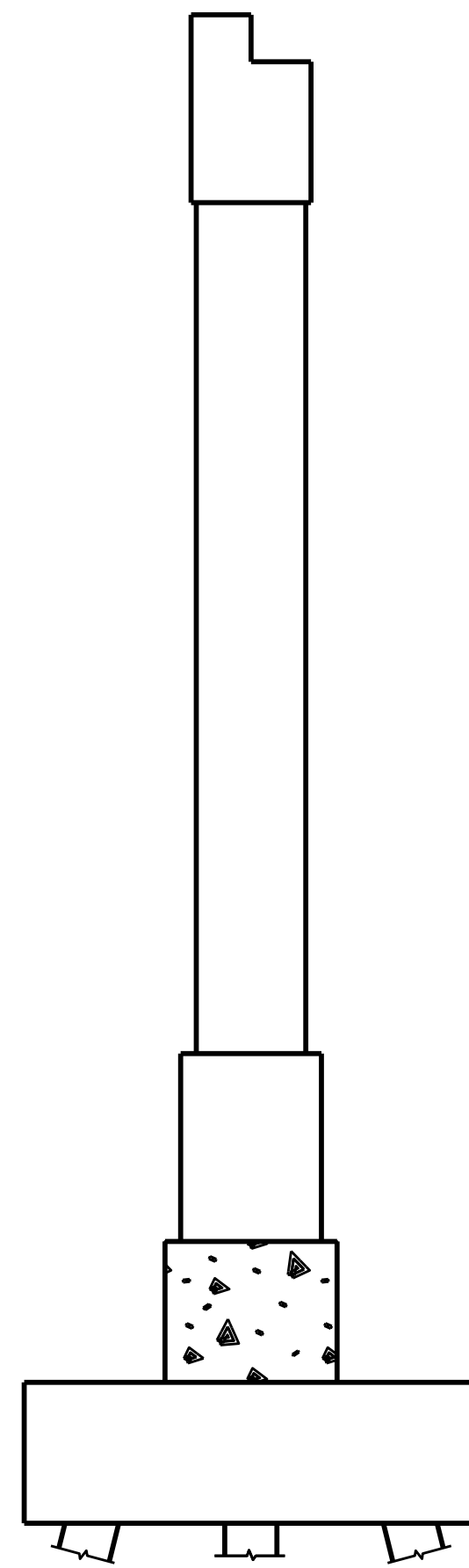
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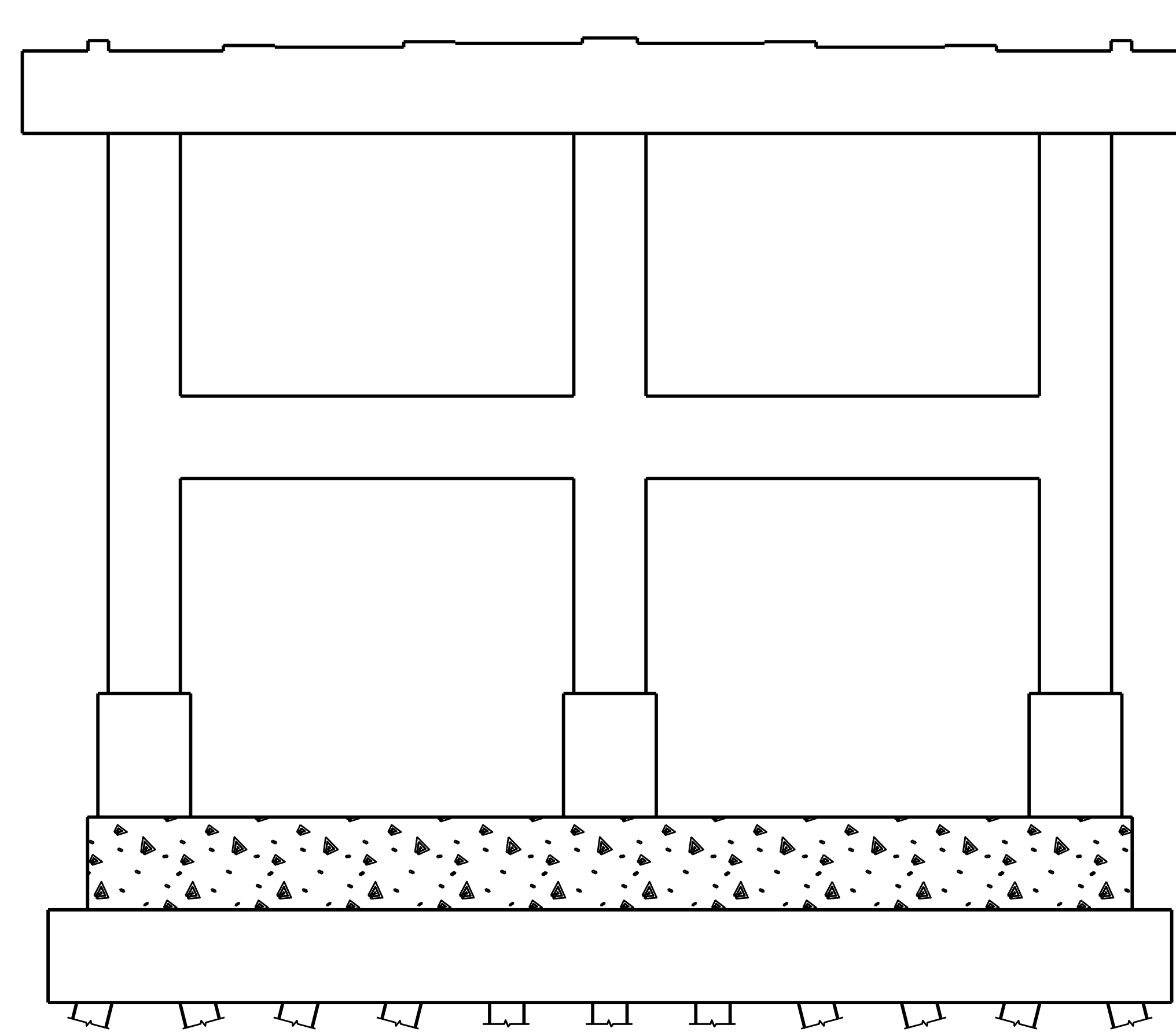
PLAN
TOP OF CAP



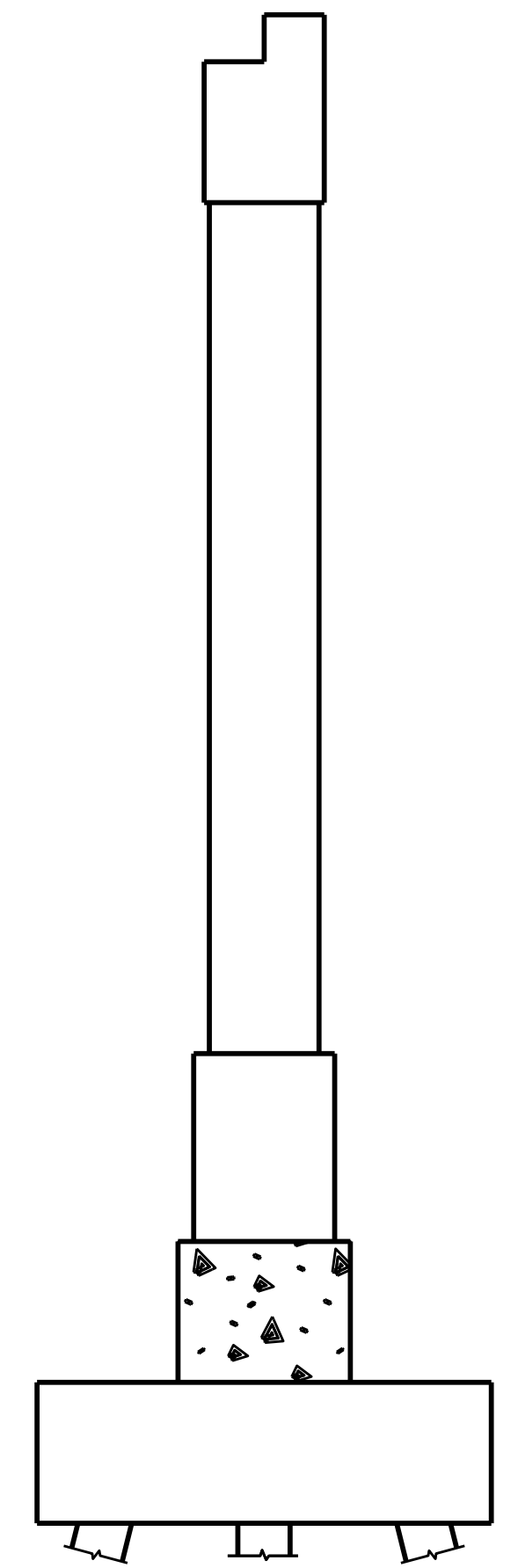
ELEVATION
SOUTH SIDE



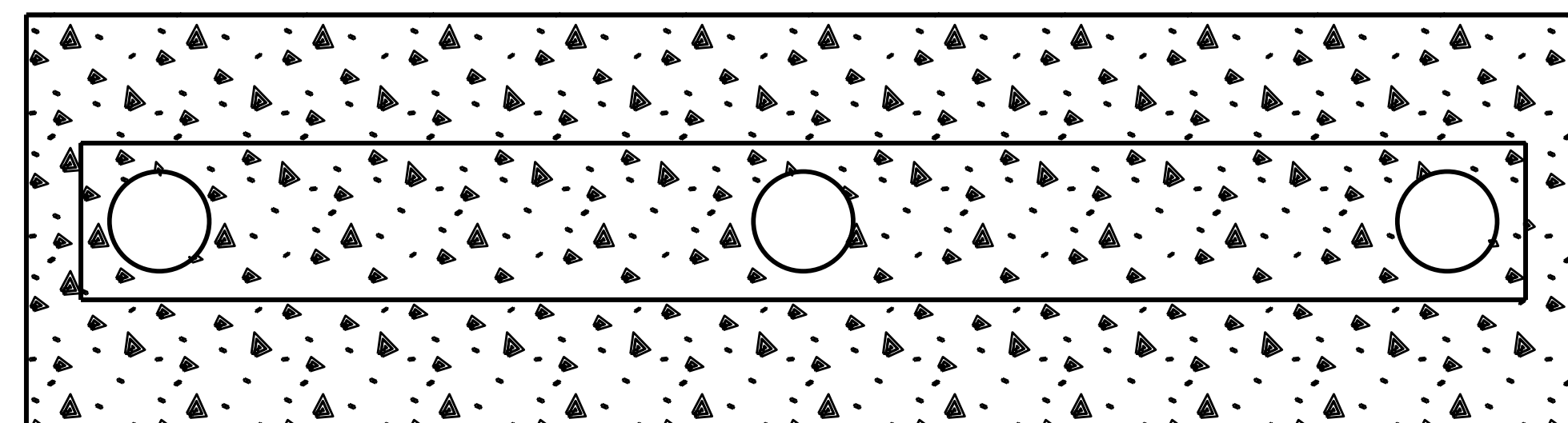
END VIEW
EAST SIDE




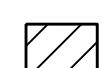
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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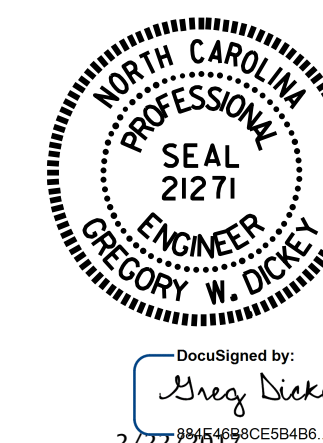
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|----------------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 26 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.5 | 0.8 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 47.0 | 23.5 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 500.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 762.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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 BRIDGE NO. 68

SHEET 27 OF 50



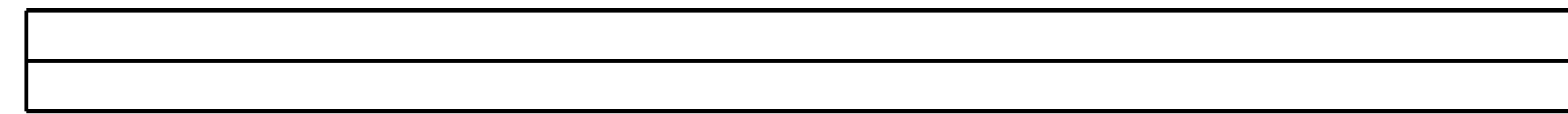
STATE OF NORTH CAROLINA
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 RALEIGH

BENT 26

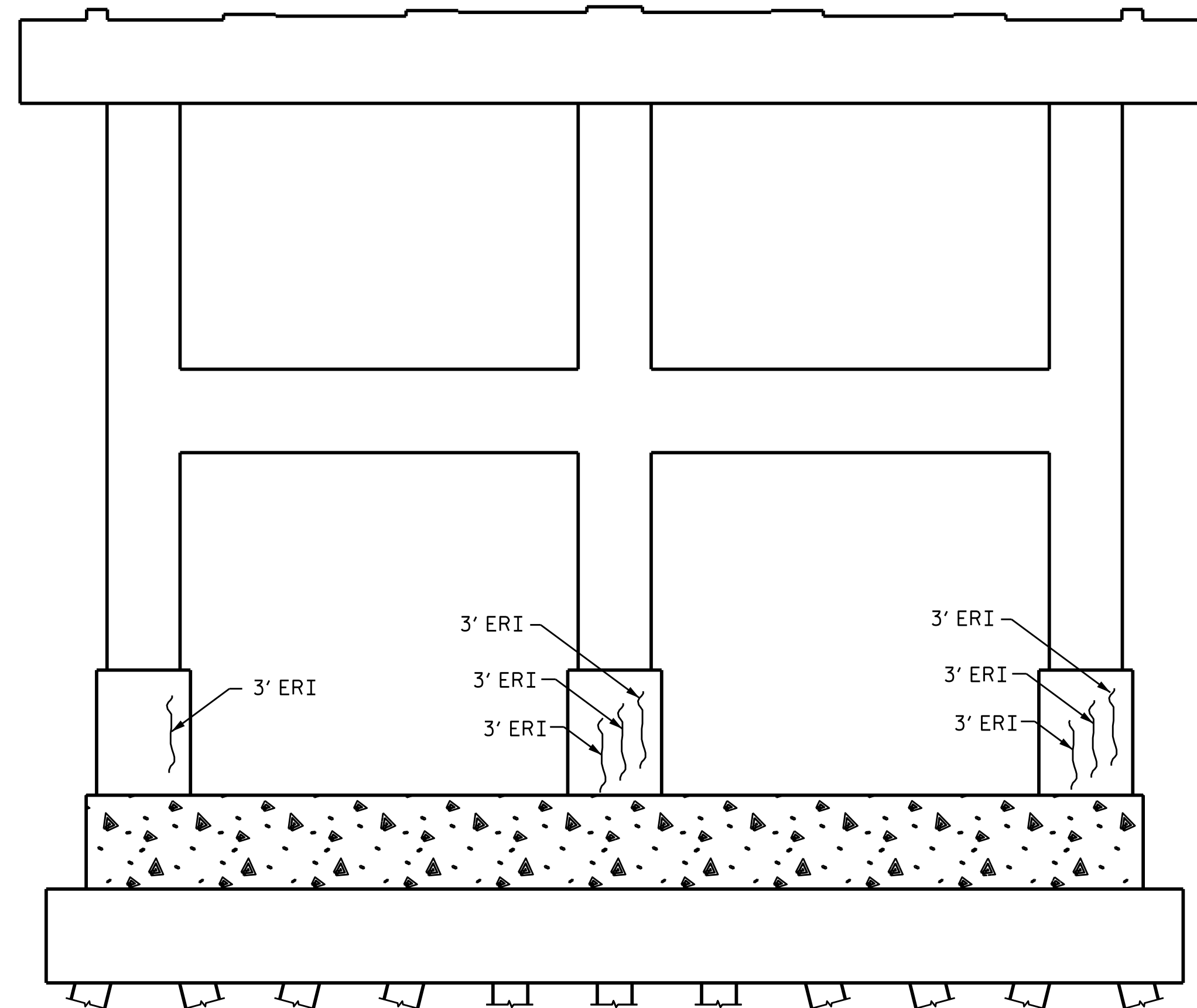
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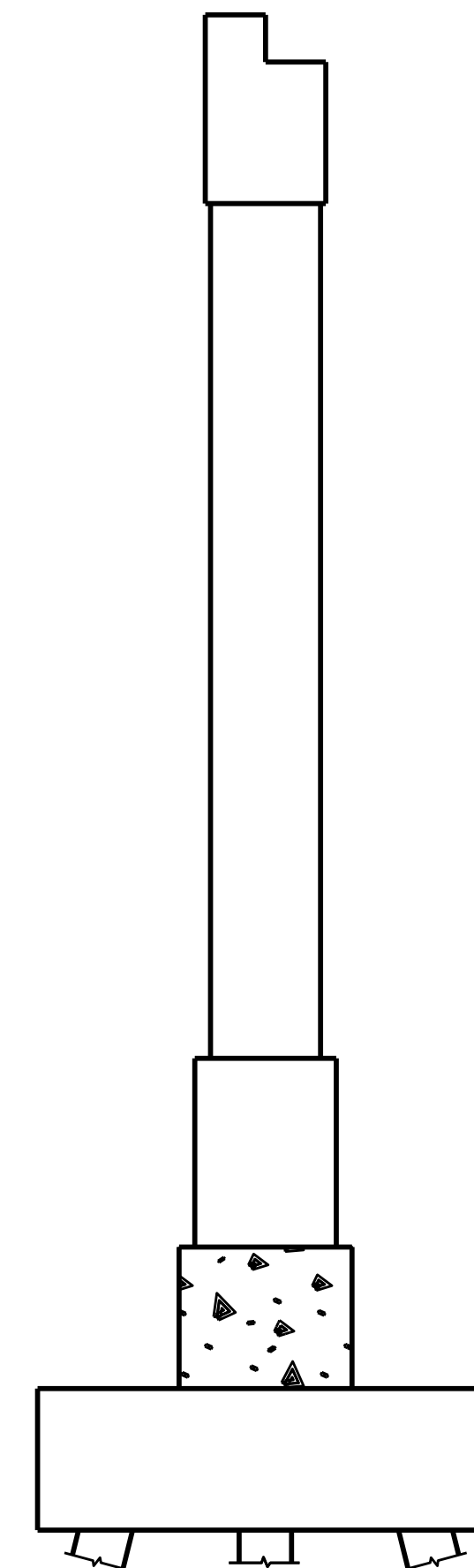
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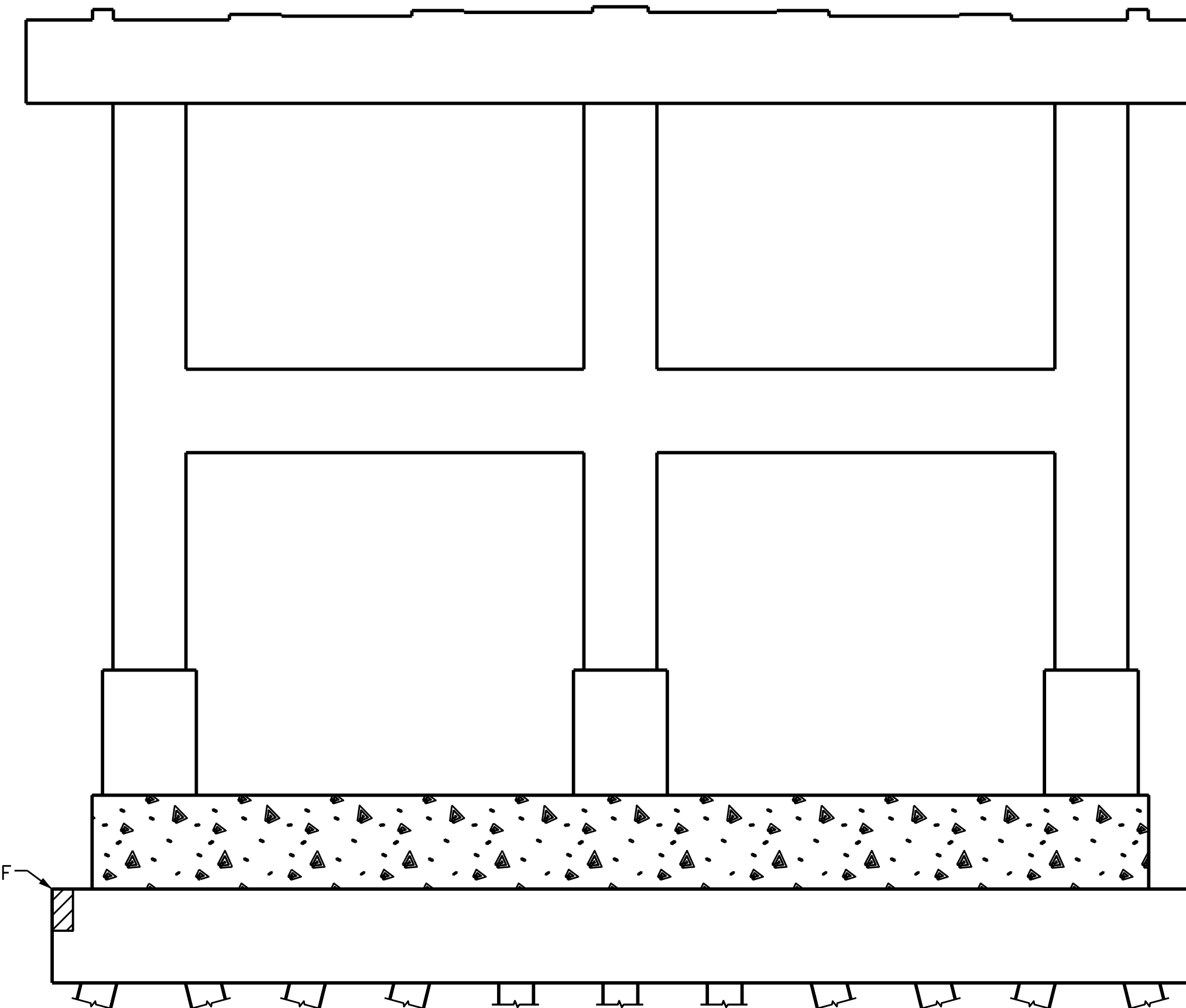
PLAN
TOP OF CAP



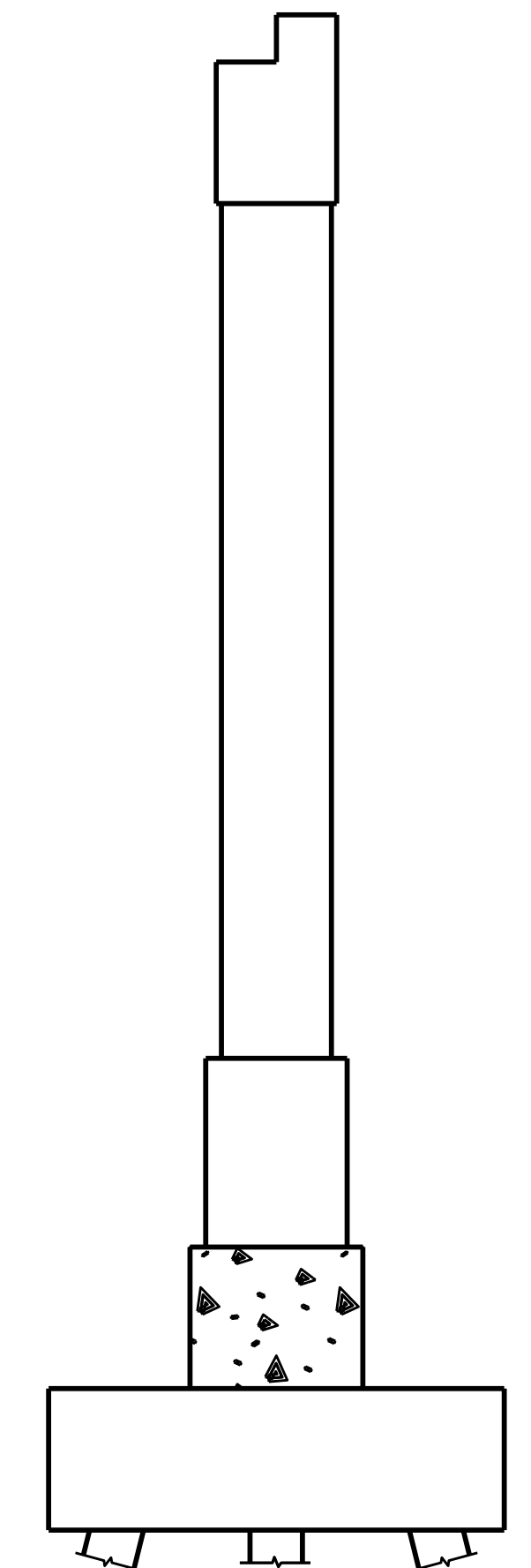
ELEVATION
SOUTH SIDE



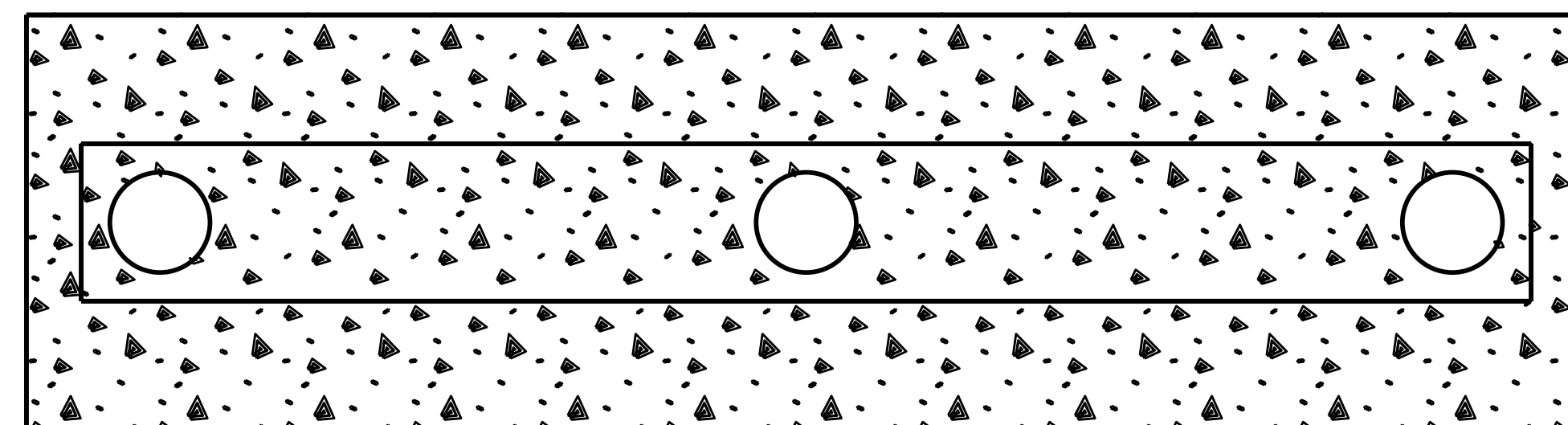
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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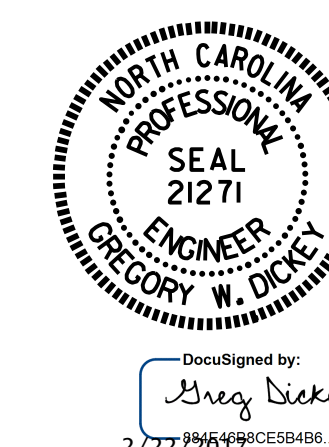
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|----------------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 27 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 2.0 | 1.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 500.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 762.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 21.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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SHEET 28 OF 50



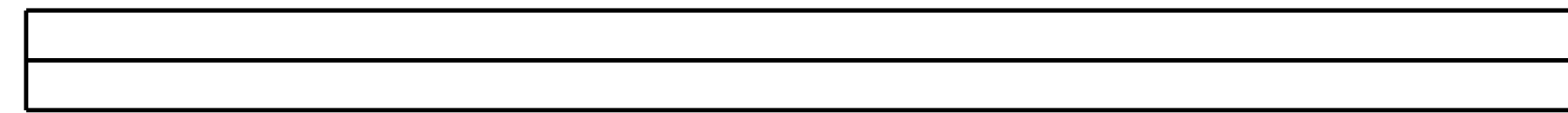
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 27

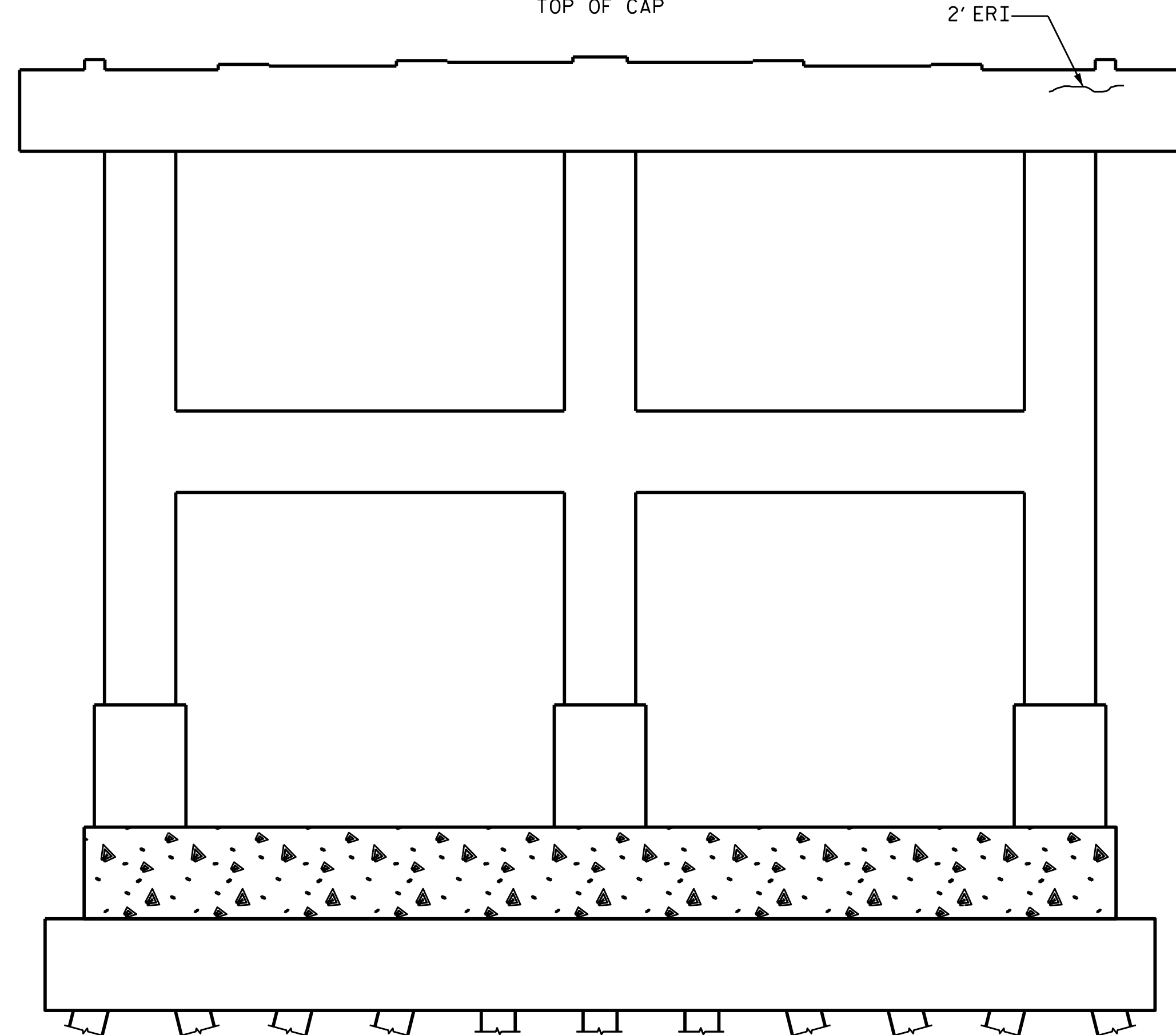
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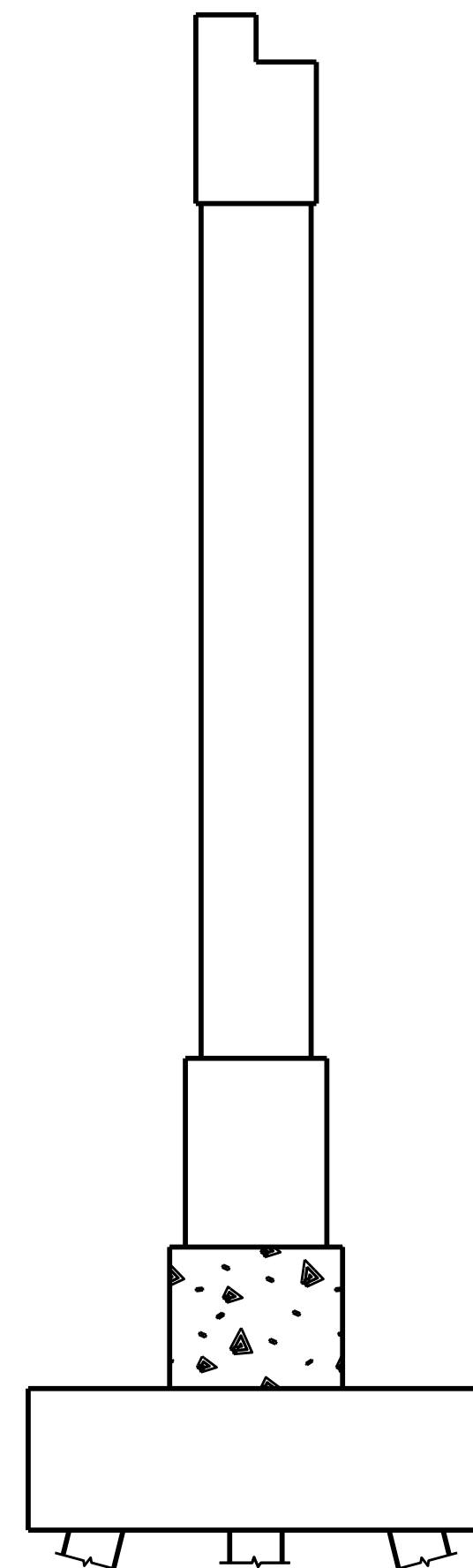
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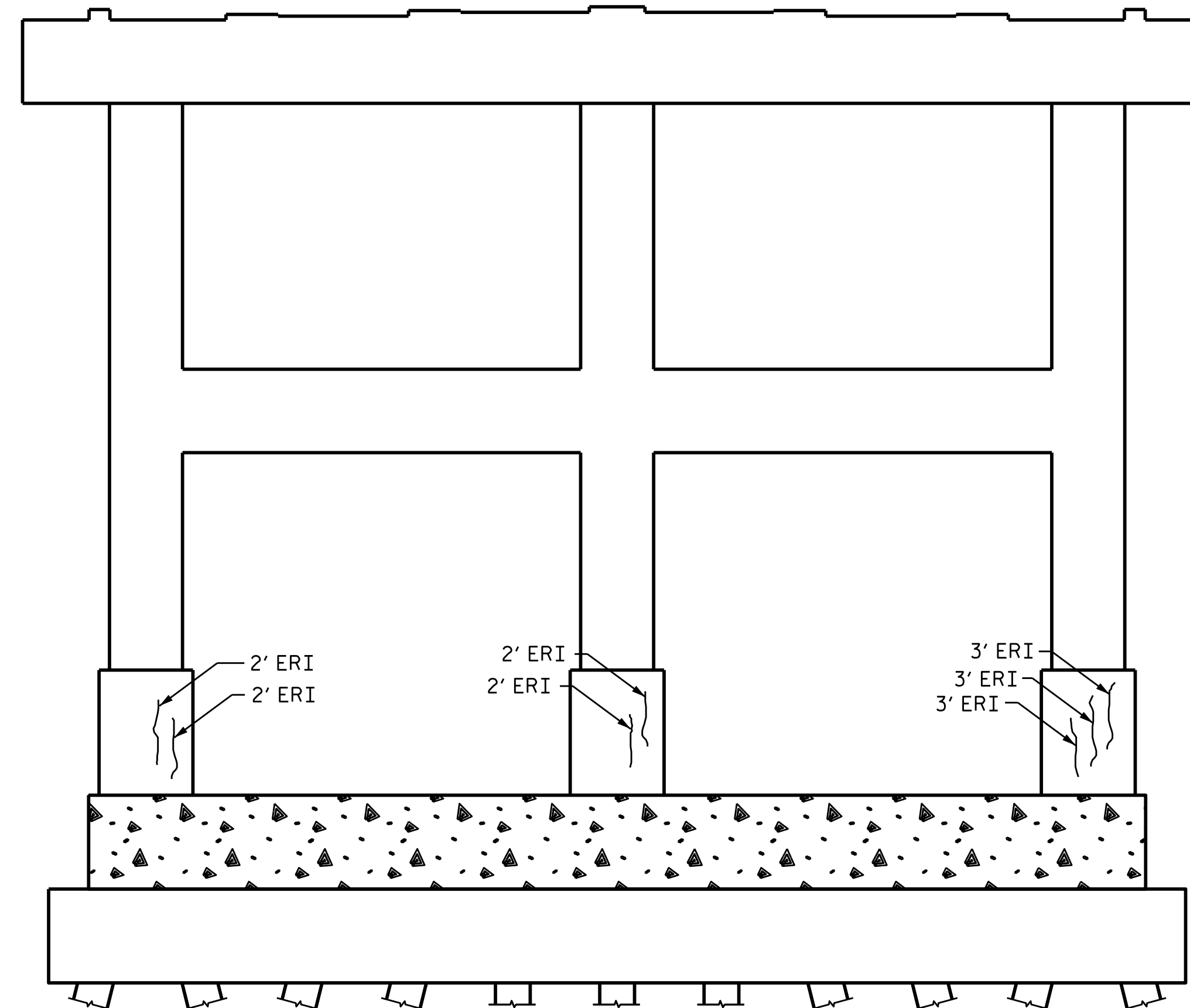
PLAN
TOP OF CAP



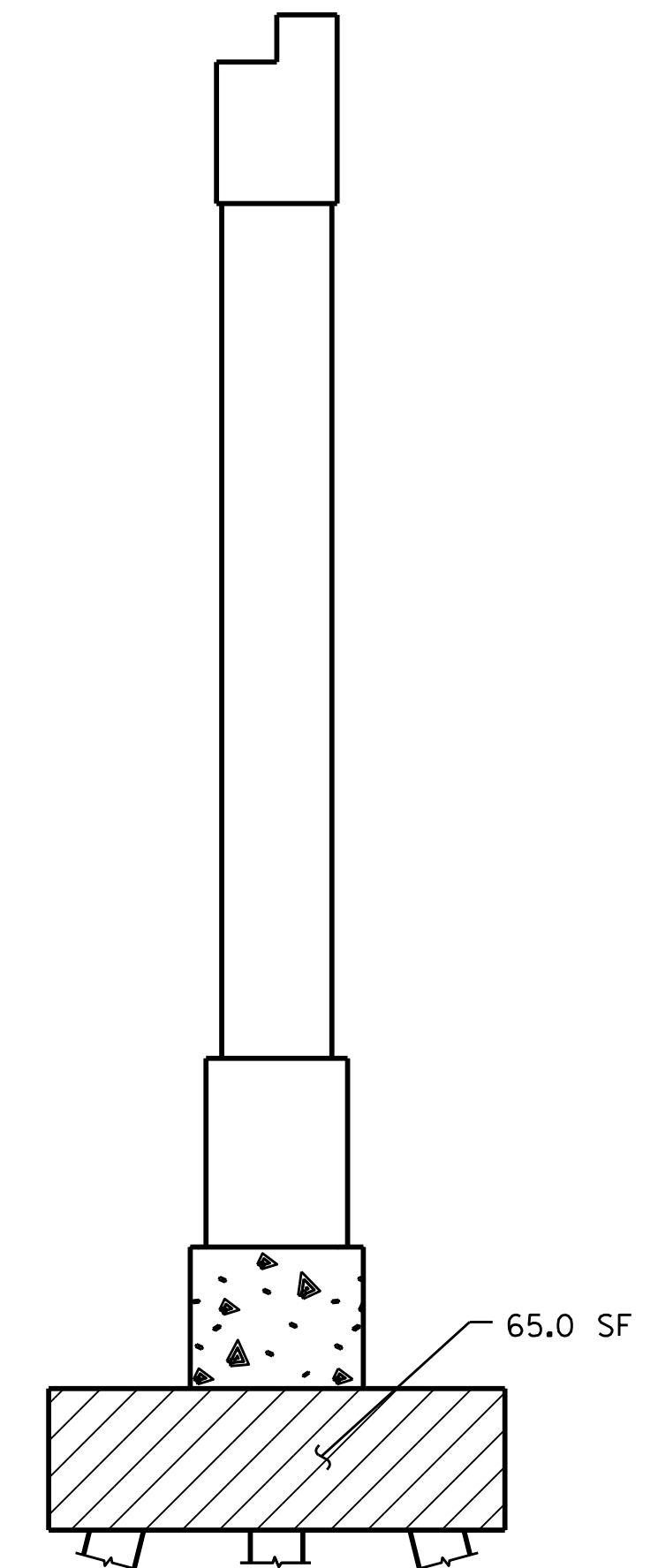
ELEVATION
SOUTH SIDE



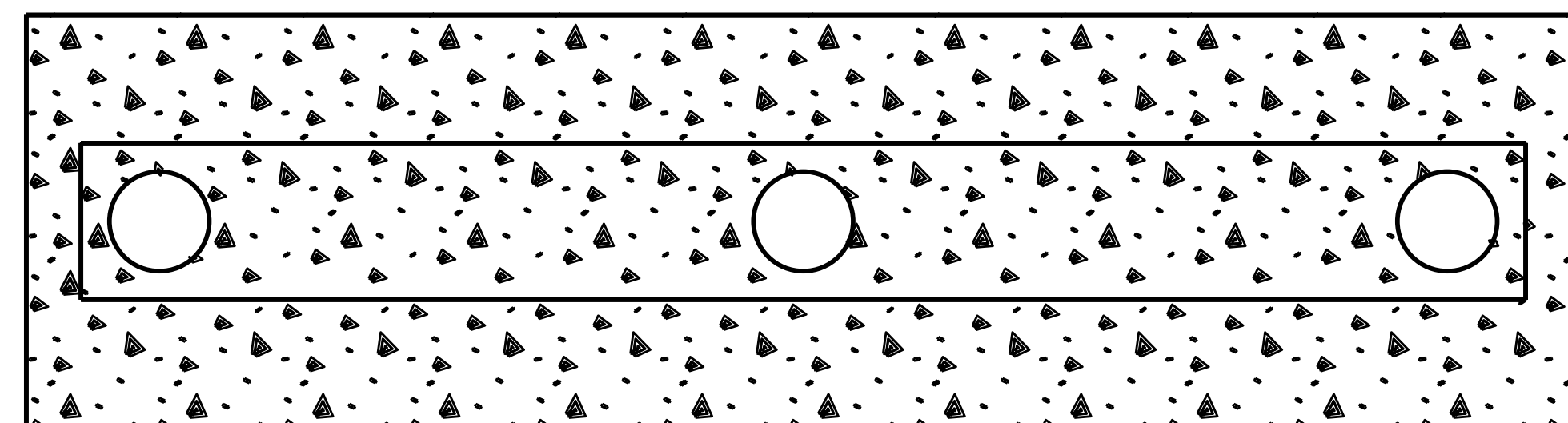
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

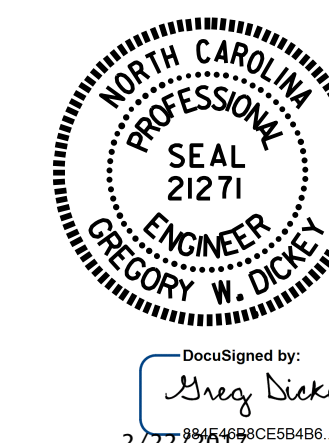
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 28 | QUANTITIES | | | |
|----------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 65.0 | 32.5 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 500.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 762.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 2.0 | | | |
| COLUMN | 17.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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



PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 29 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

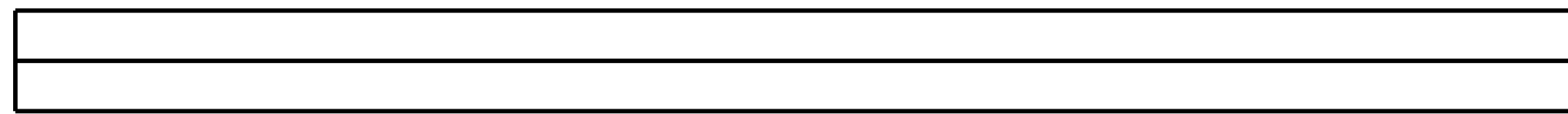
BENT 28

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

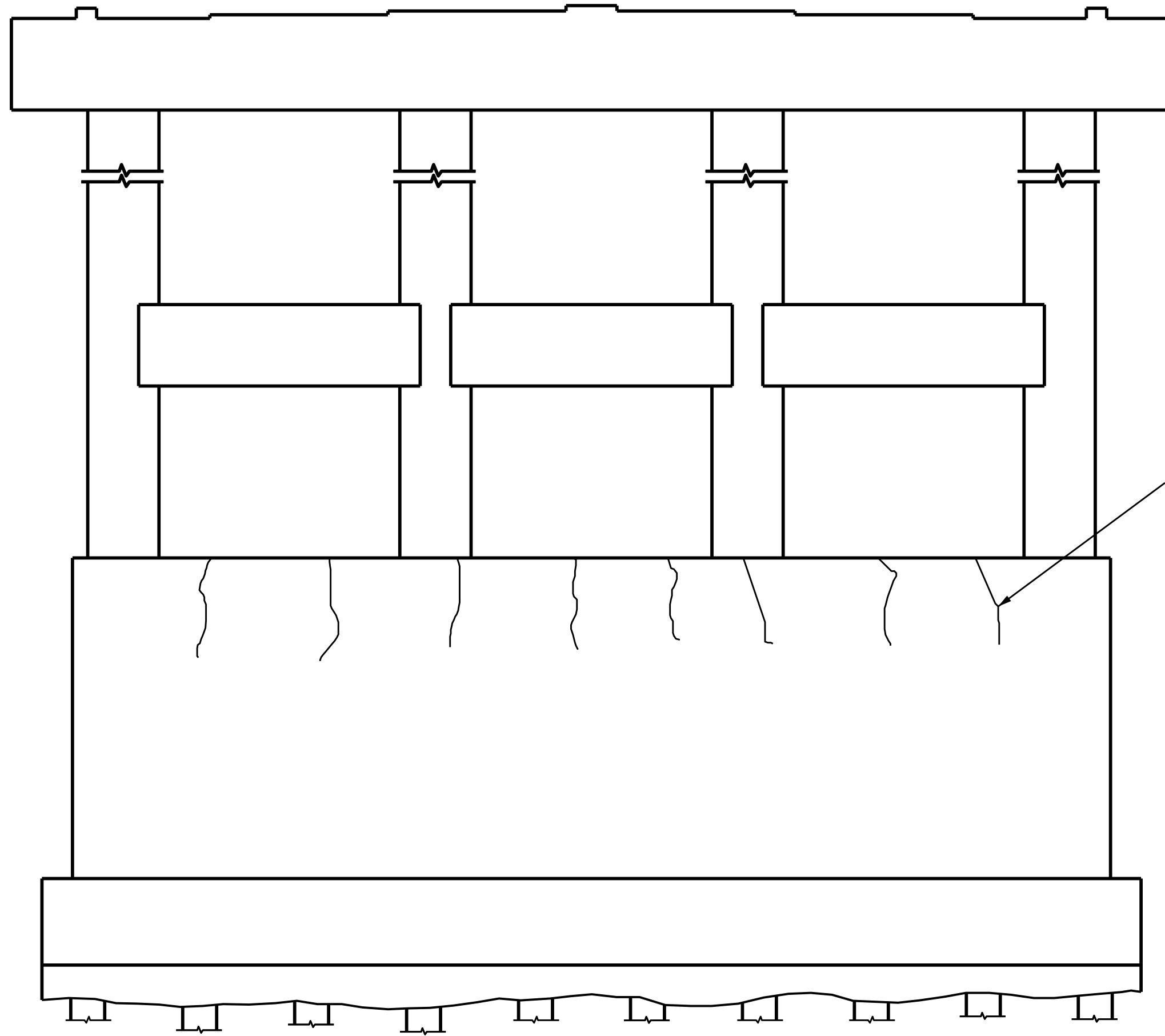
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| REVISIONS | | | | | | SHEET NO. |
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| 2 | | | 4 | | | |

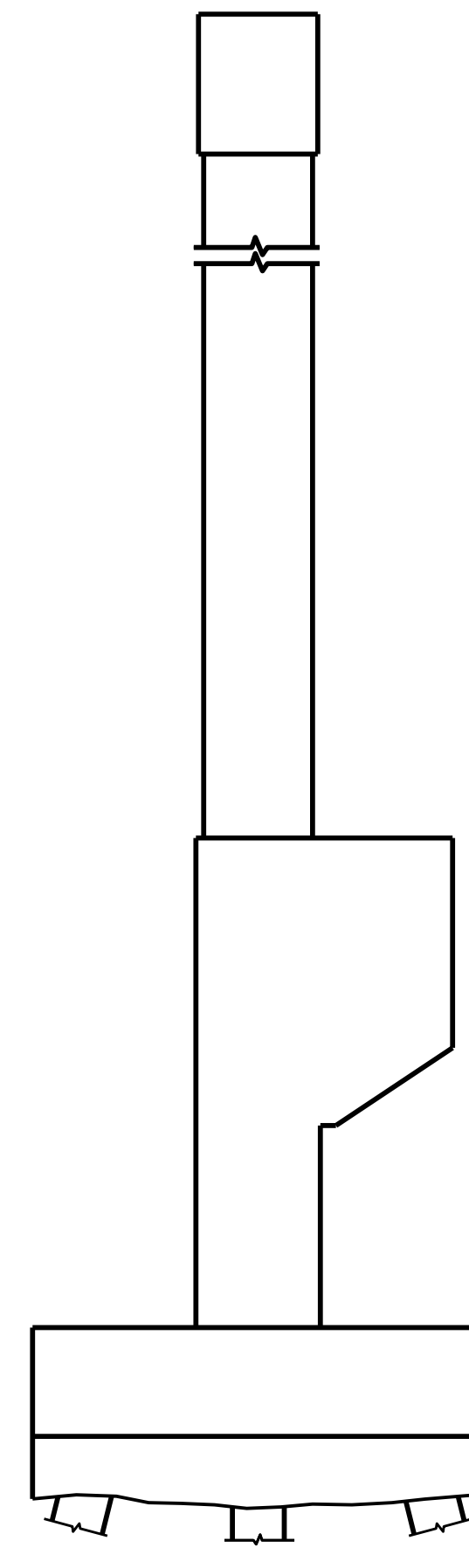


PLAN
TOP OF CAP

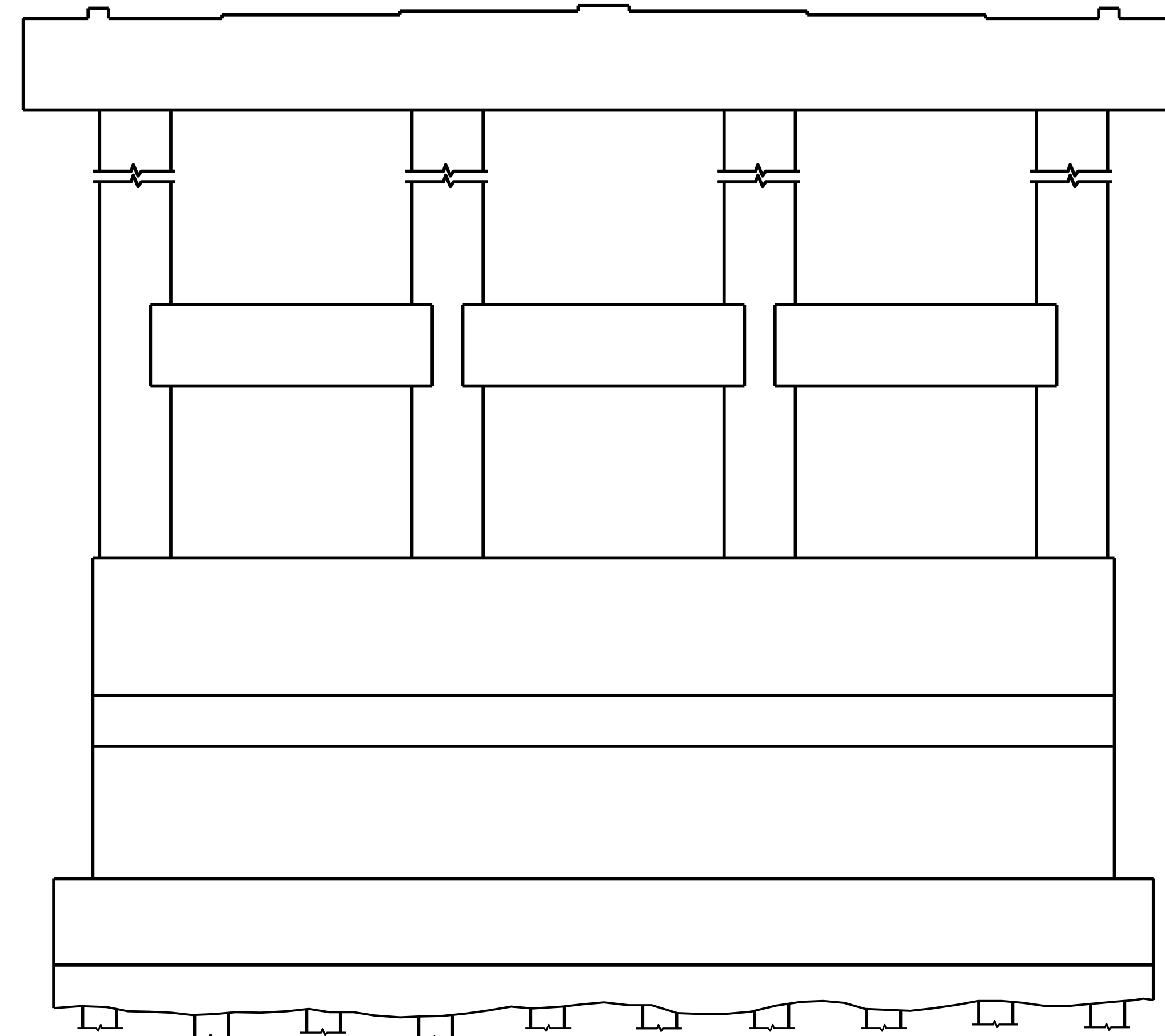


ELEVATION
SOUTH SIDE

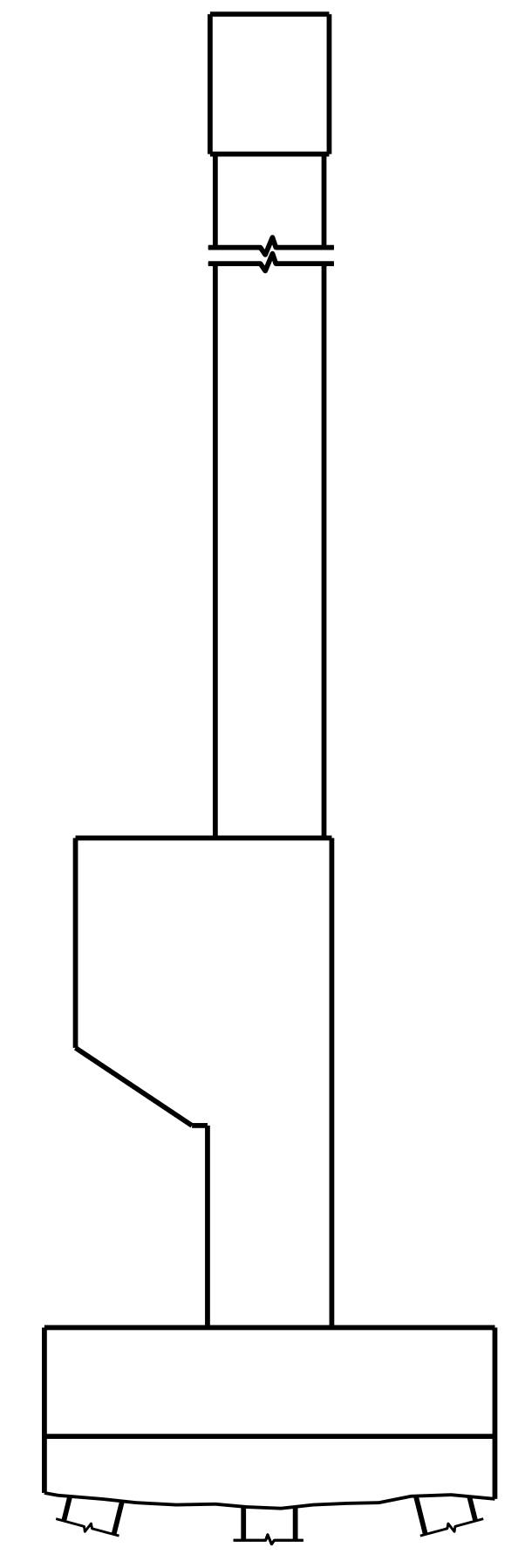
54' ERI
(TOTAL)



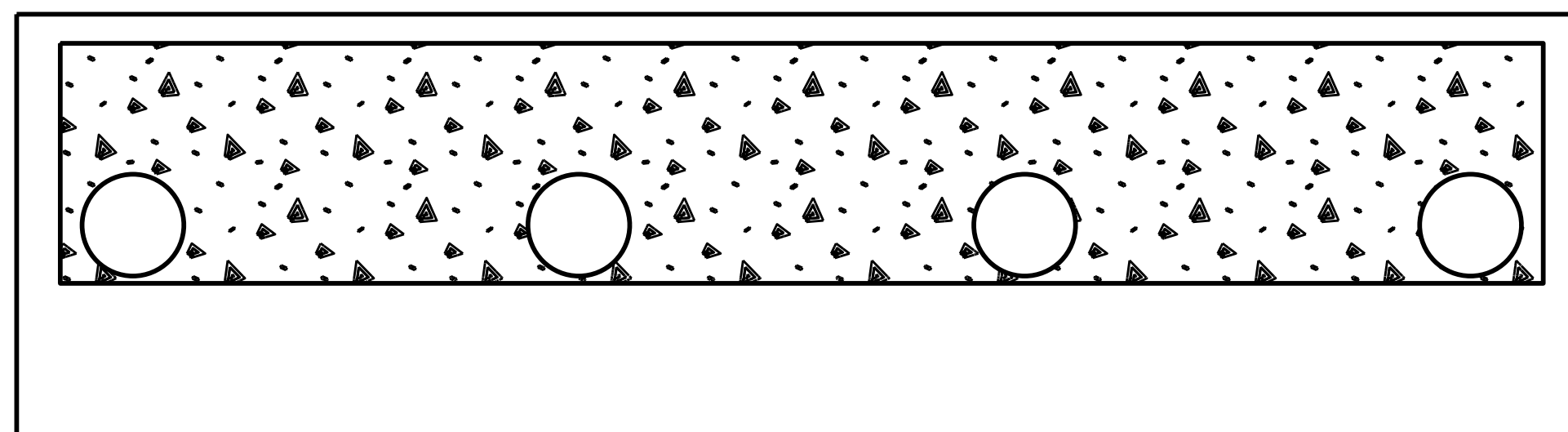
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF SHELF & FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

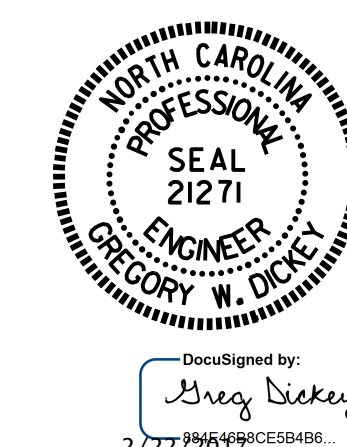
REPAIR QUANTITY TABLE

| REPAIRS BENT 29 | QUANTITIES | | | |
|----------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 0.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 382.3 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 54.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 30 OF 50



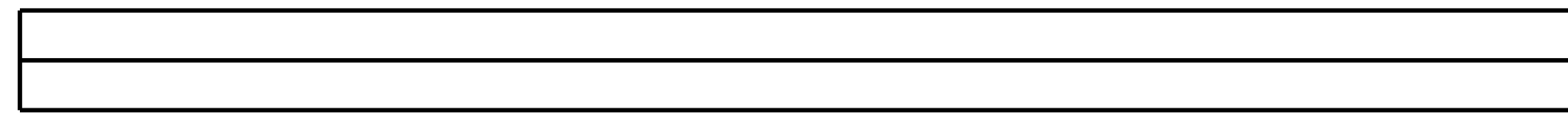
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 29

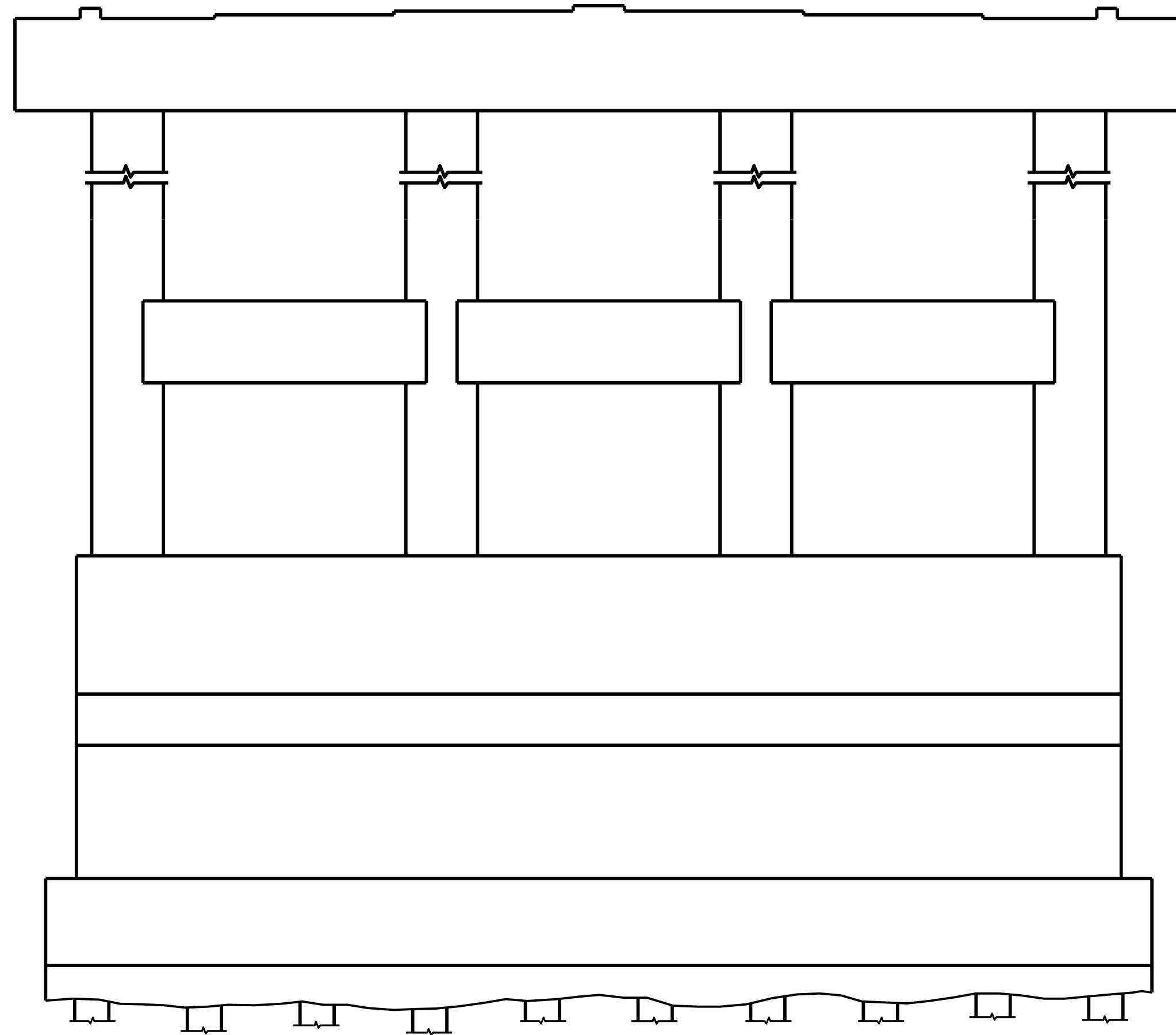
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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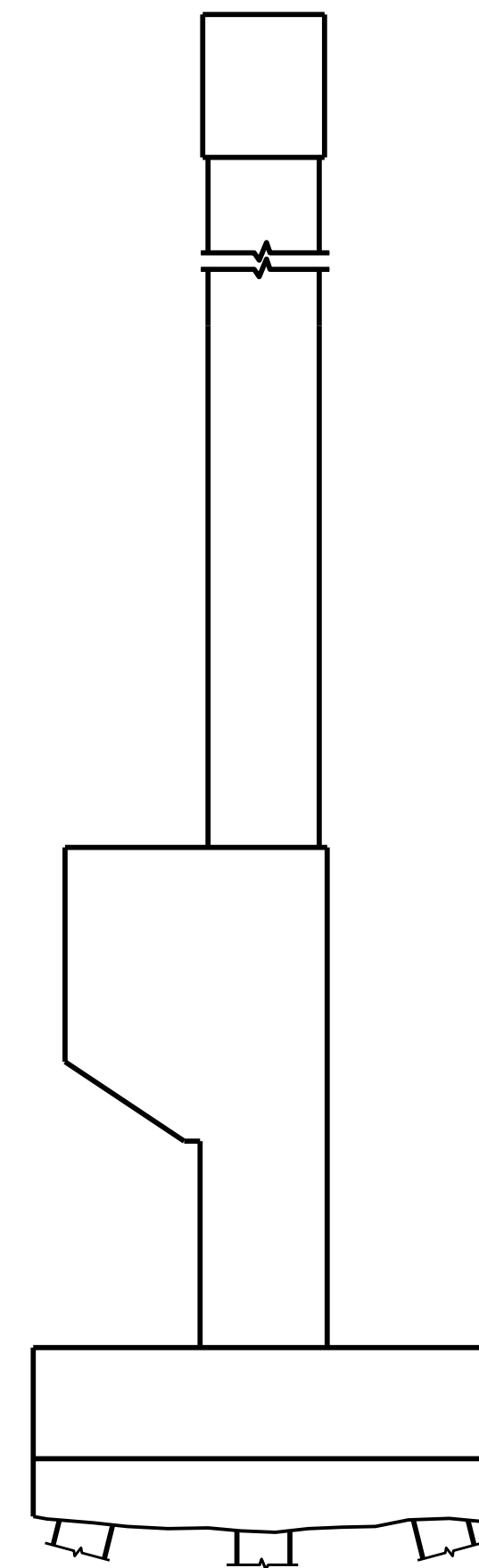
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| 2 | | | 4 | | | |



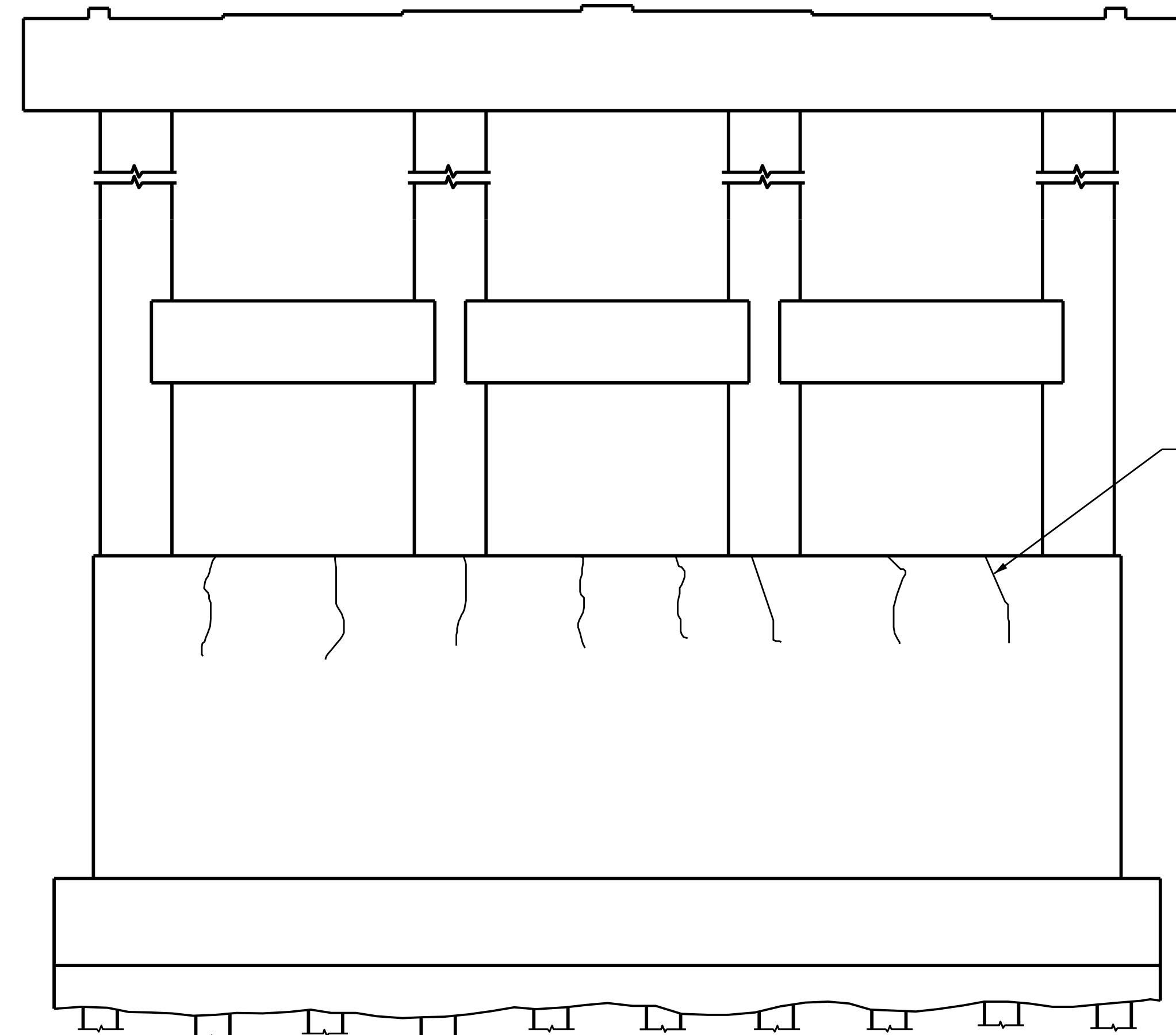
PLAN
TOP OF CAP



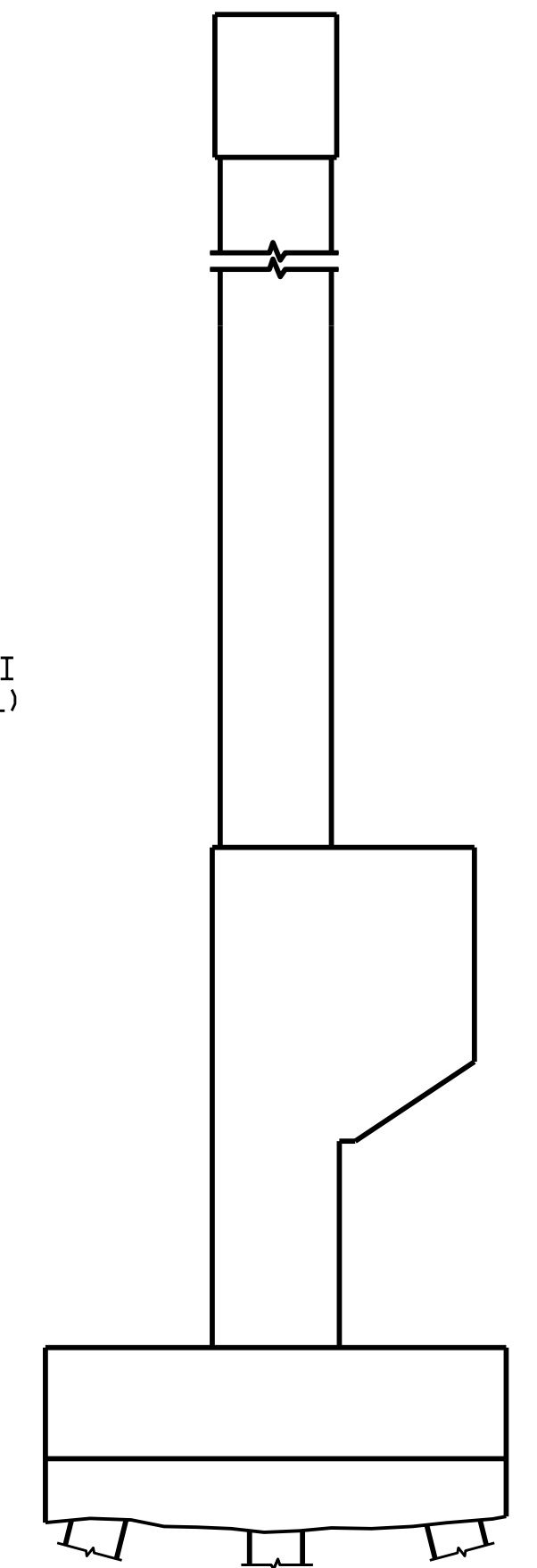
ELEVATION
SOUTH SIDE



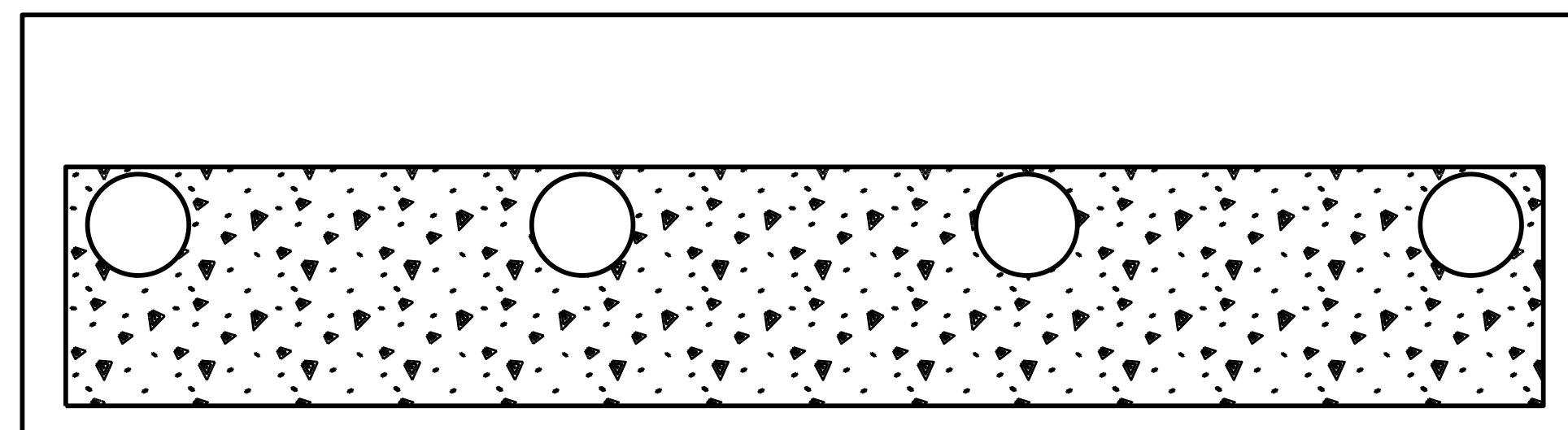
END VIEW
EAST SIDE





ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF SHELF & FOOTING

-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

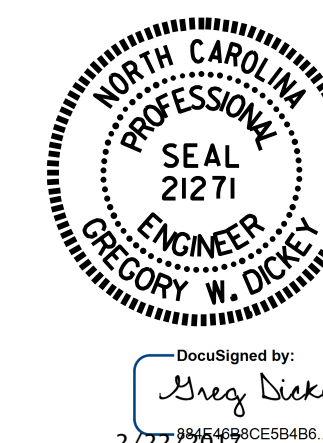
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|----------------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 30 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 0.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 382.3 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 50.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 31 OF 50



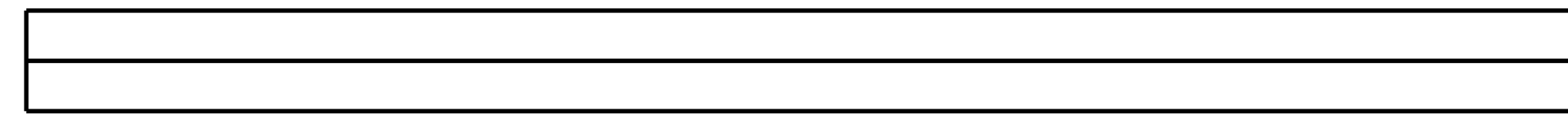
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 30

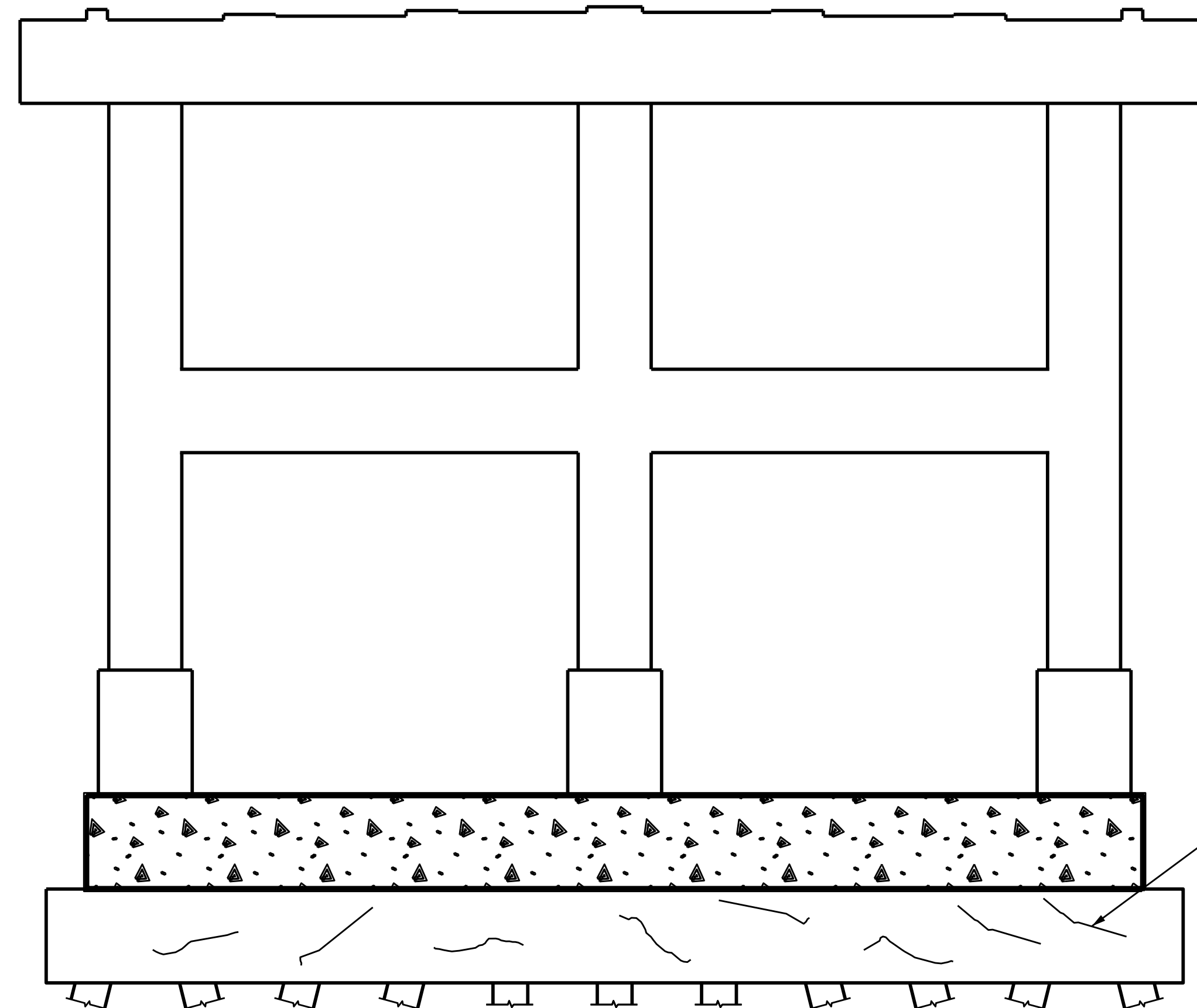
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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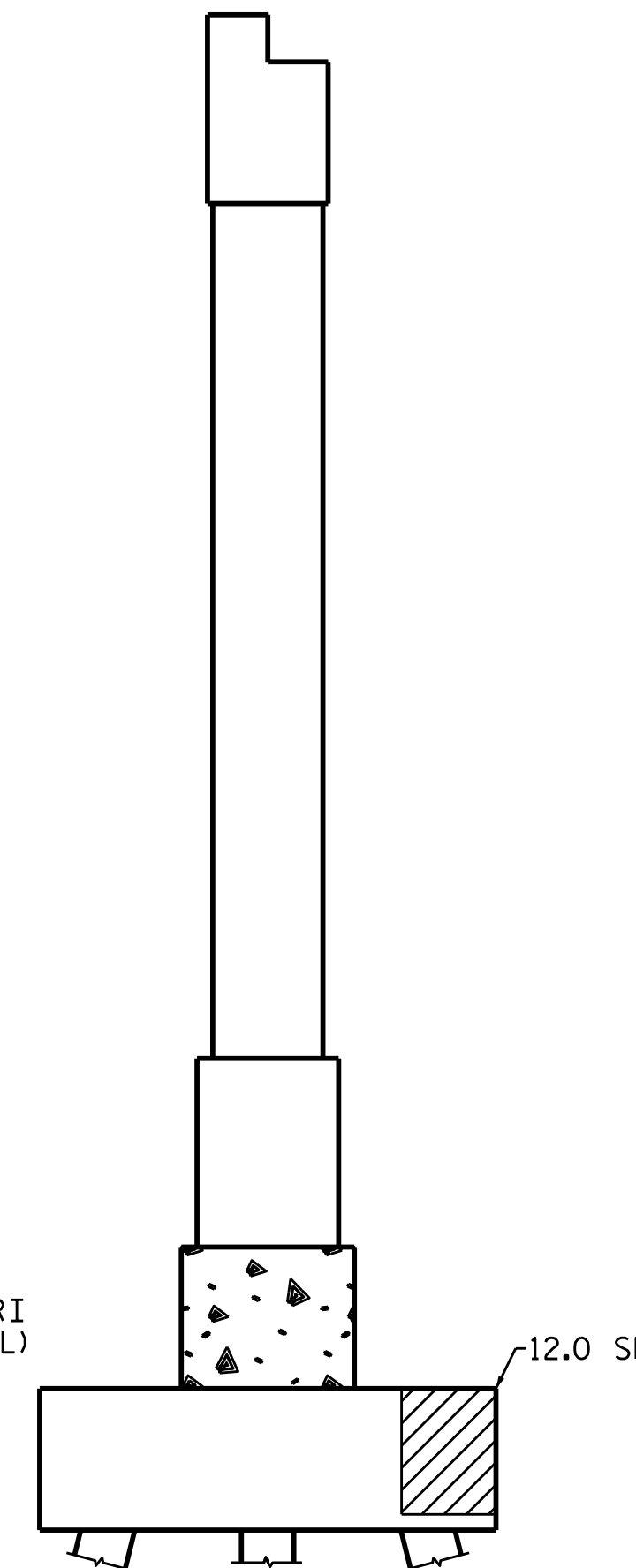
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| 2 | | | 4 | | | |



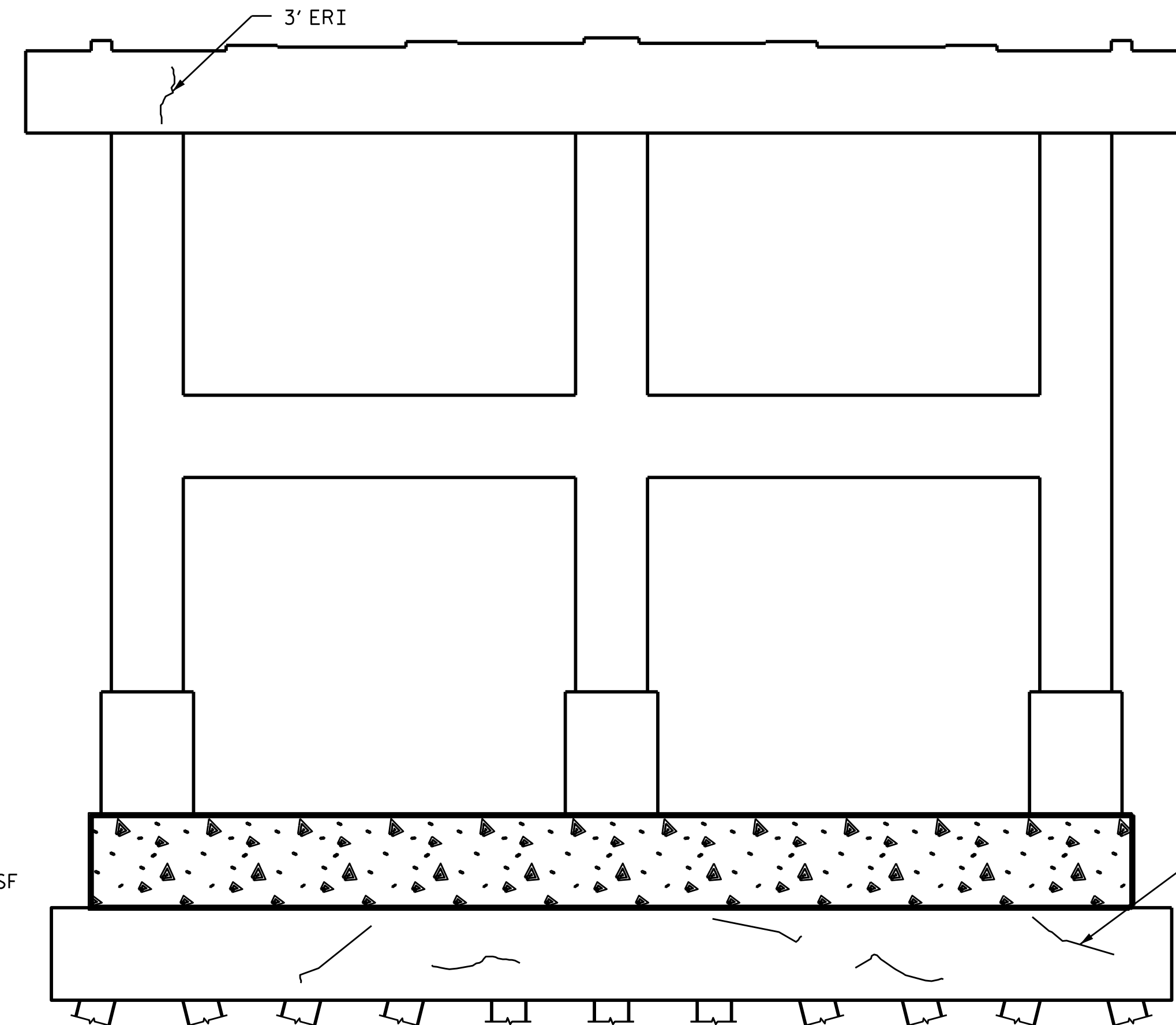
PLAN
TOP OF CAP



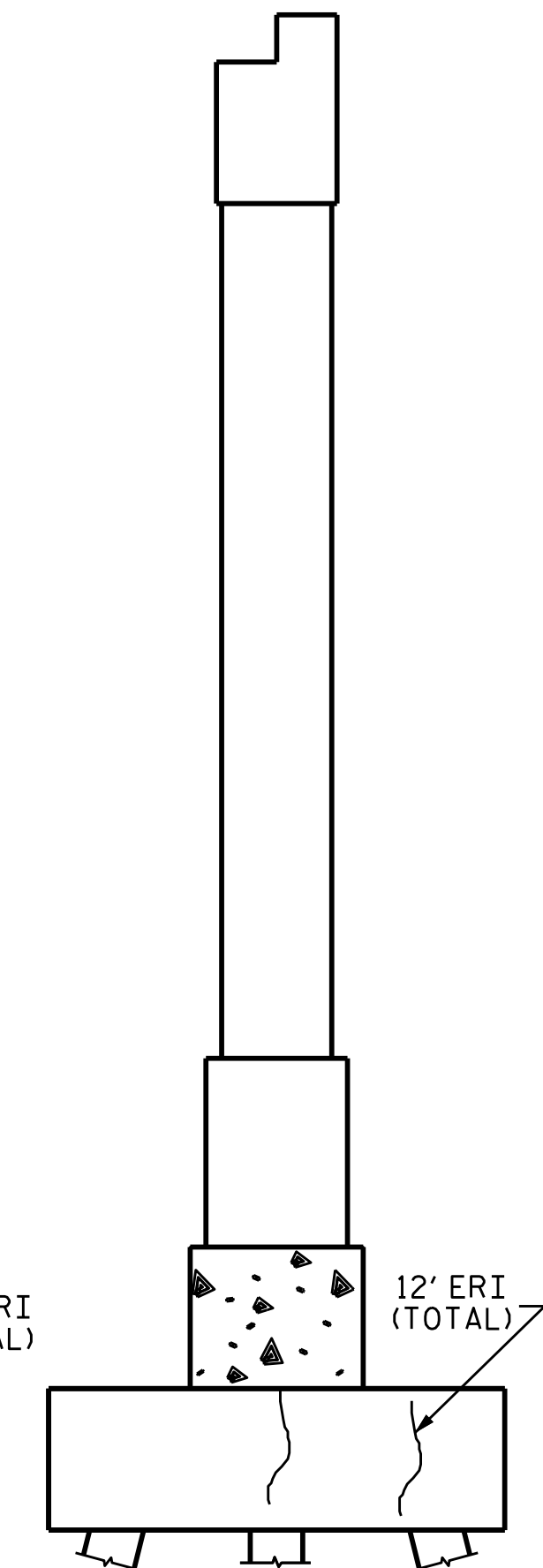
ELEVATION
SOUTH SIDE



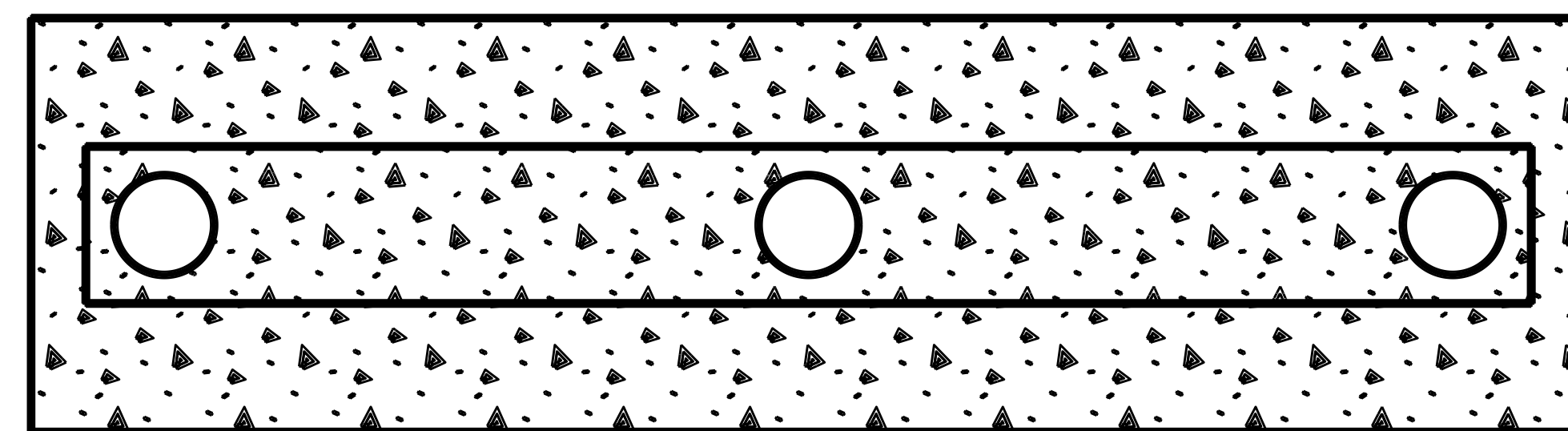
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|----------------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 31 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 12.0 | 6.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 500.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 762.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 3.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 62.0 | | | |

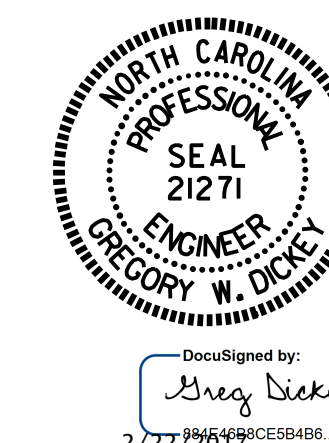
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 32 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

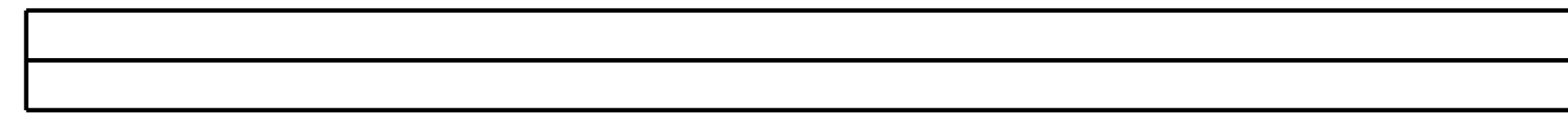
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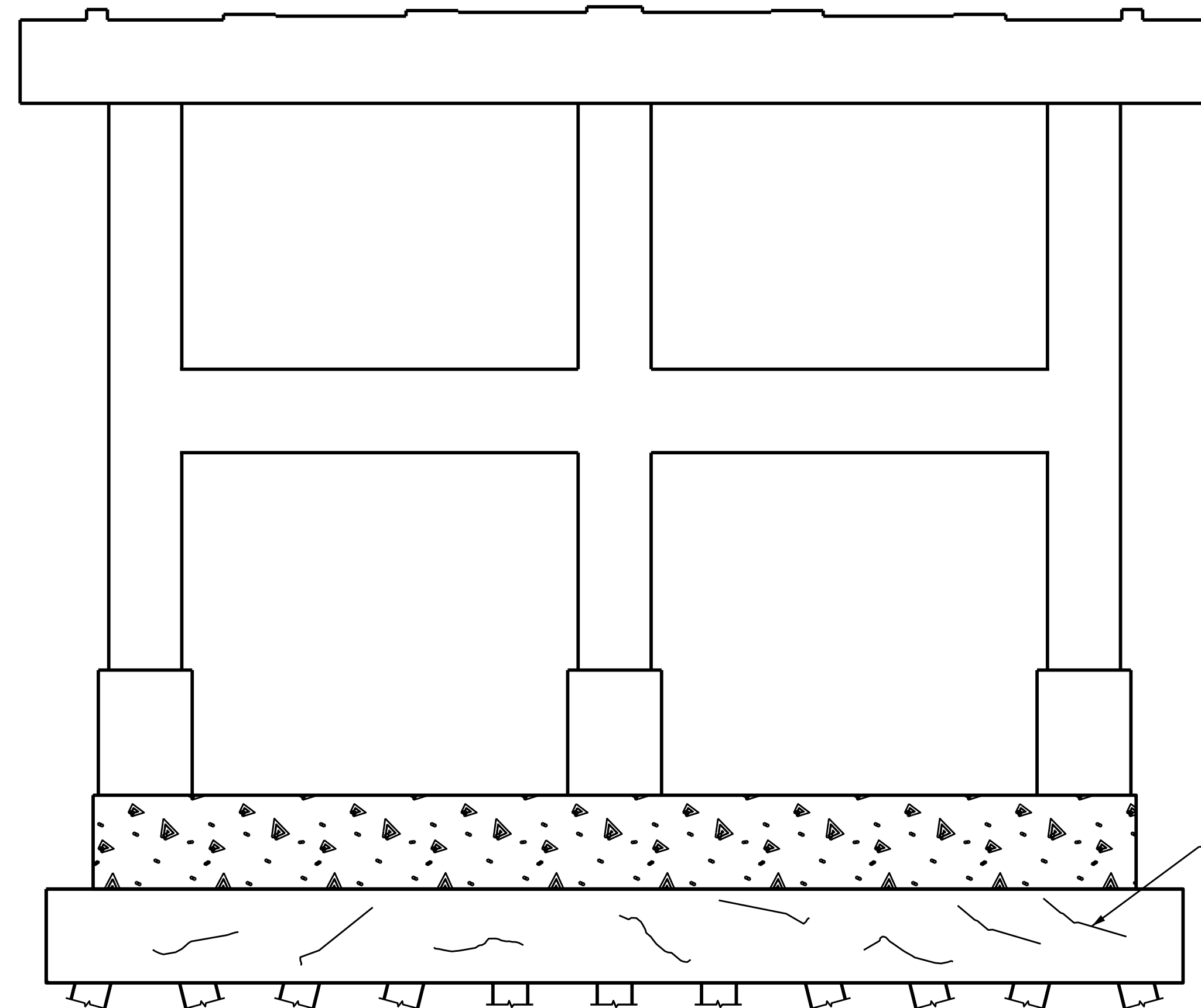
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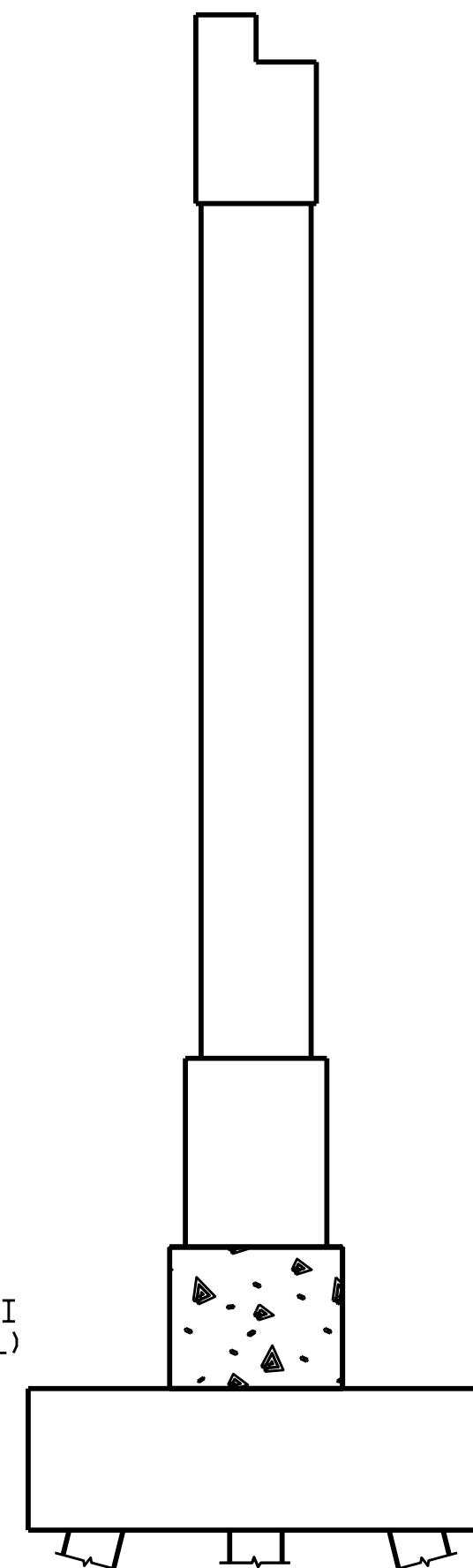
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016



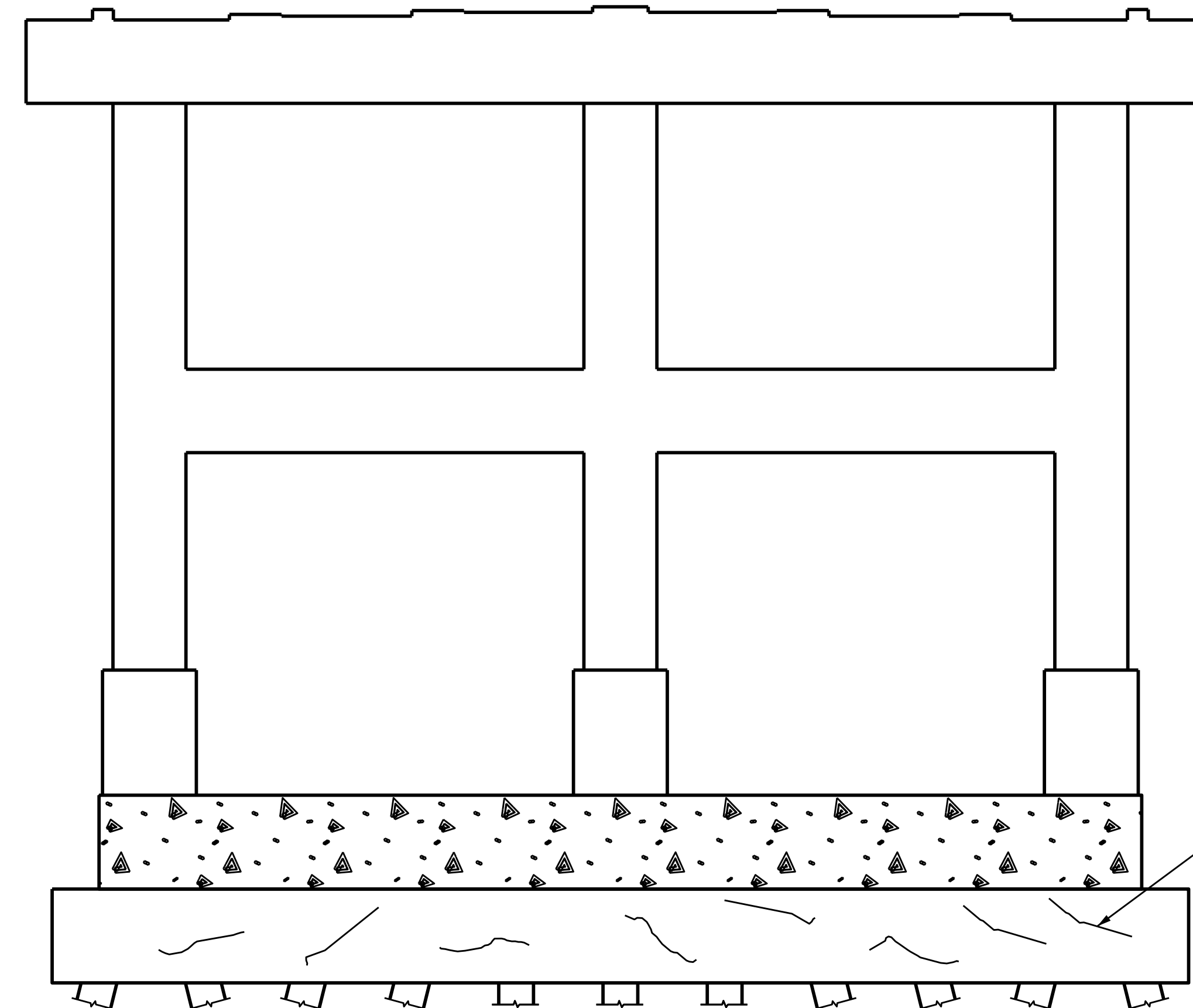
PLAN
TOP OF CAP



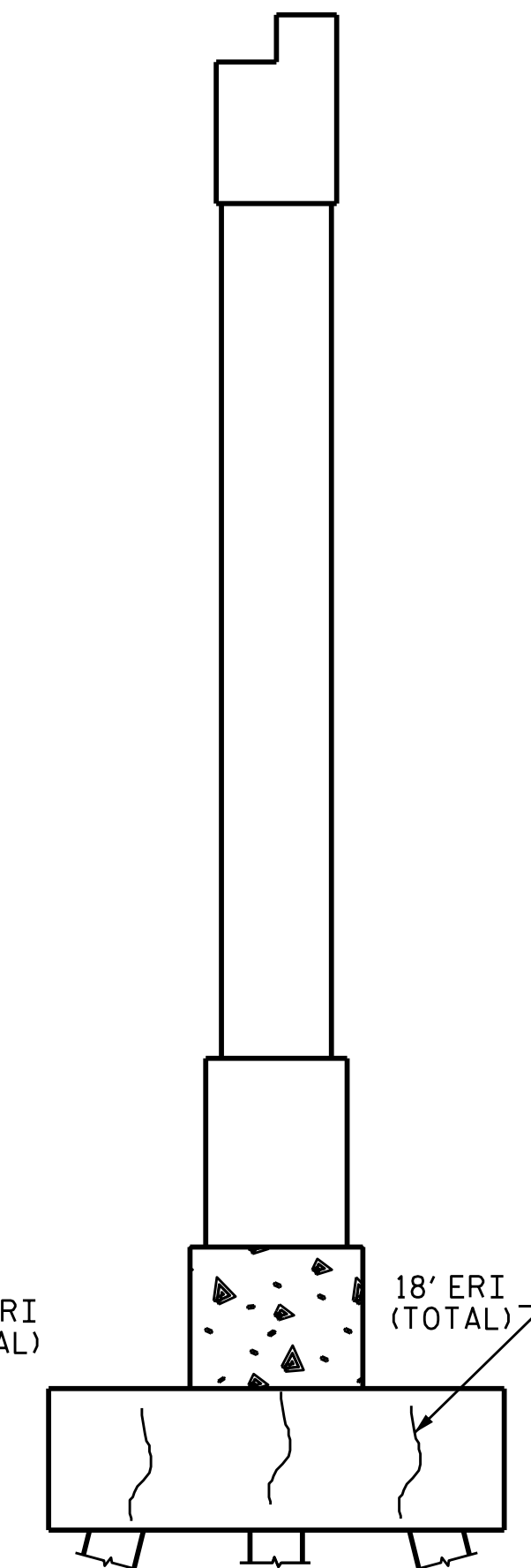
ELEVATION



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE

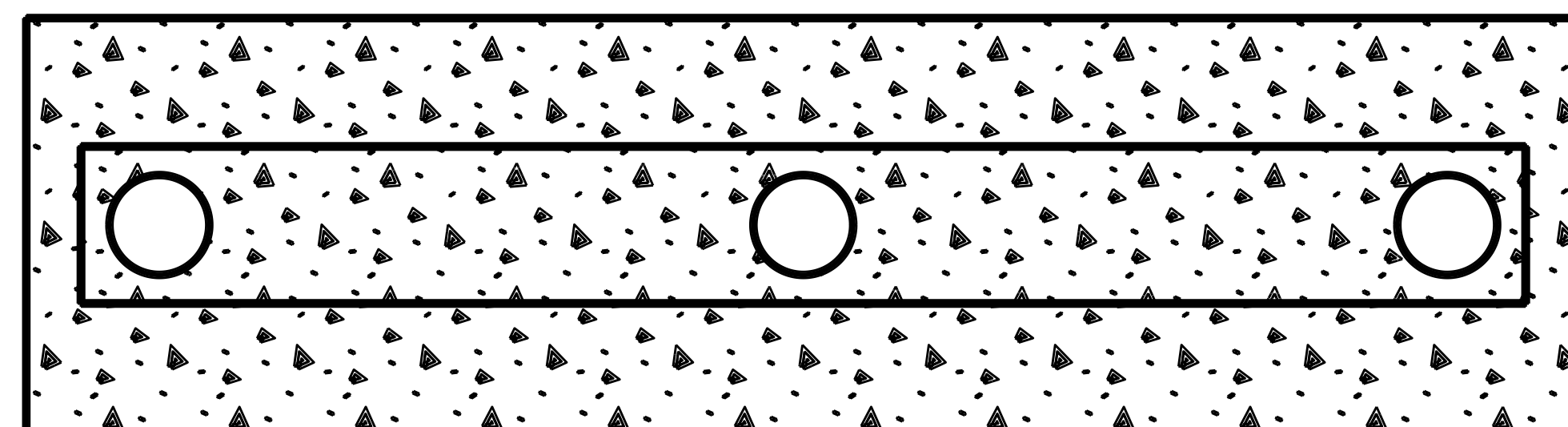


END VIEW
WEST SIDE

30' ERI (TOTAL)

30' ERI (TOTAL)

18' ERI (TOTAL)



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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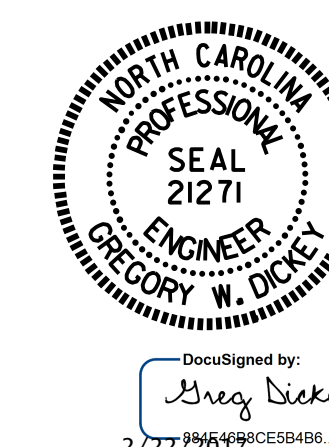
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|----------------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 32 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| STRUT (VERTICAL FACE) | 500.0 | | | |
| STRUT & FTG (HORIZONTAL, CORNER) | 762.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 78.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 33 OF 50



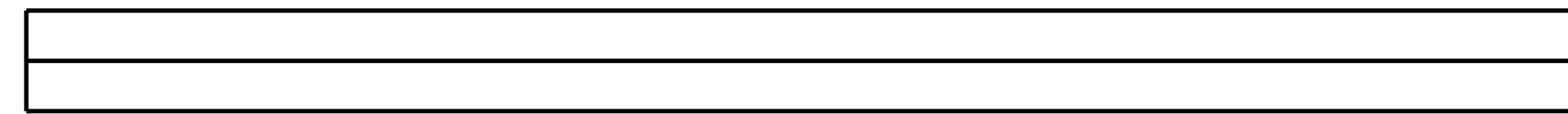
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 32

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

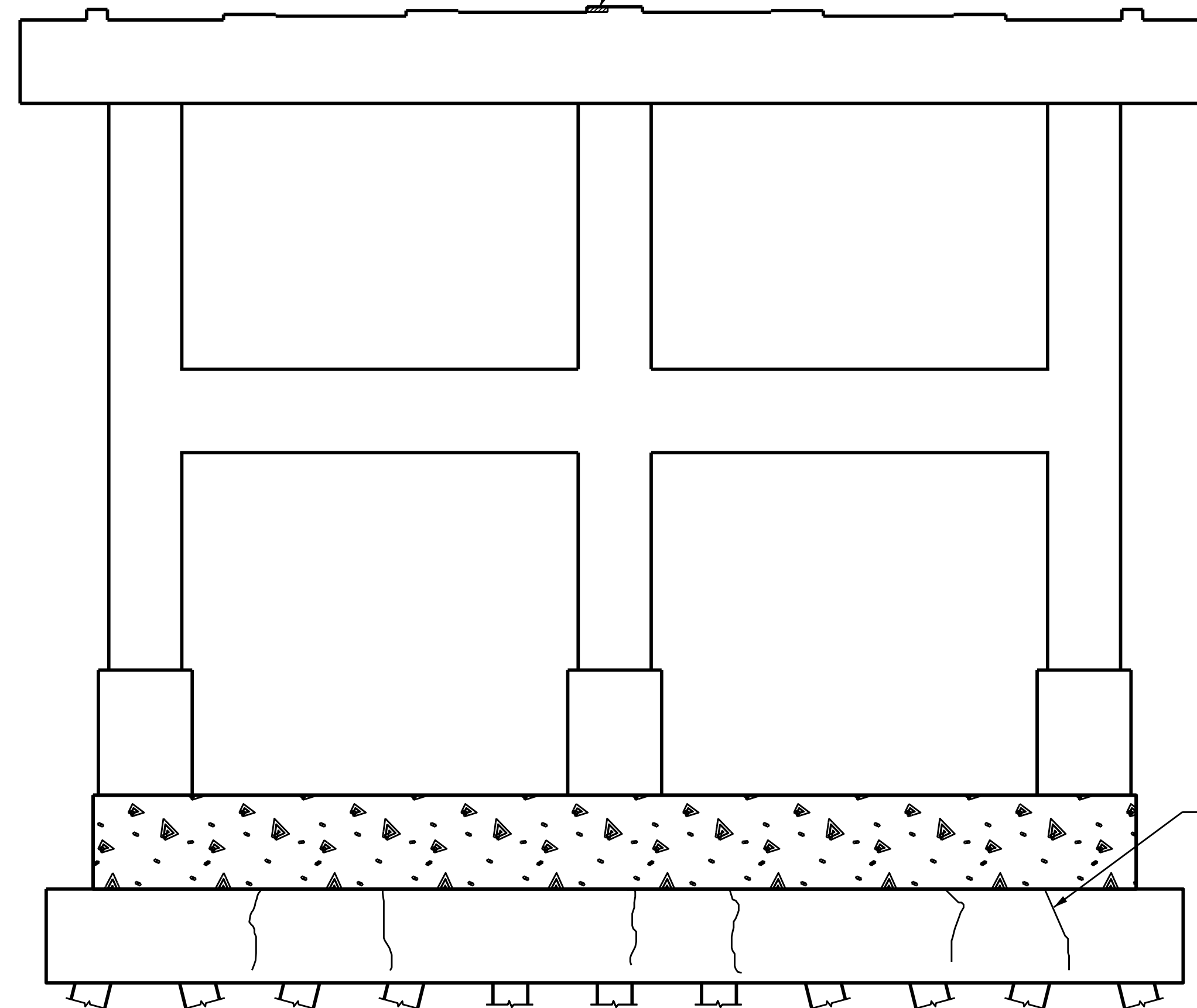
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| 2 | | | 4 | | | |

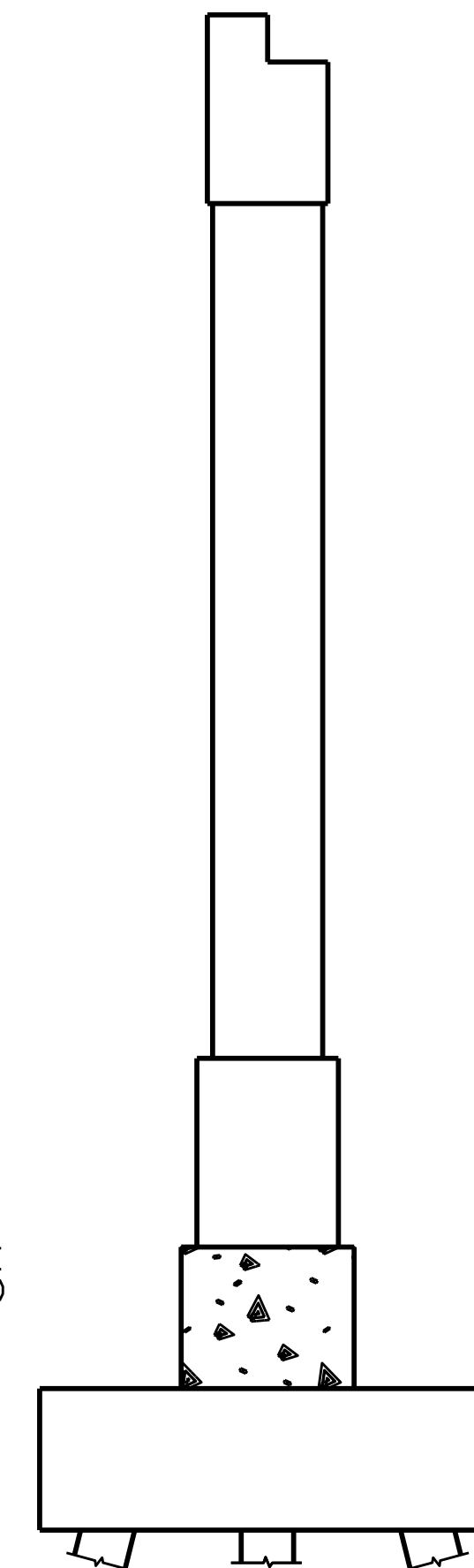


PLAN
TOP OF CAP

0.3 SF

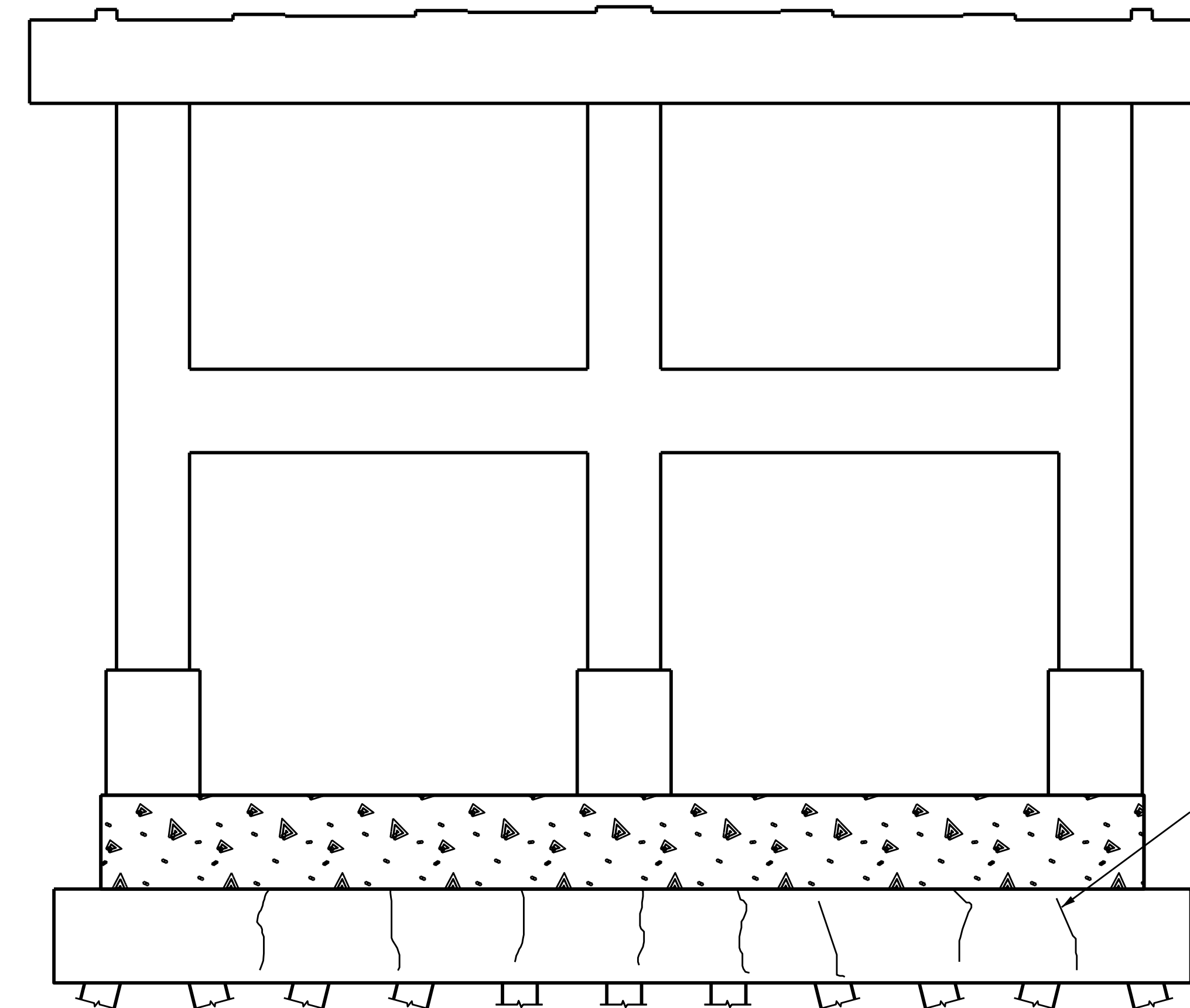


ELEVATION
SOUTH SIDE

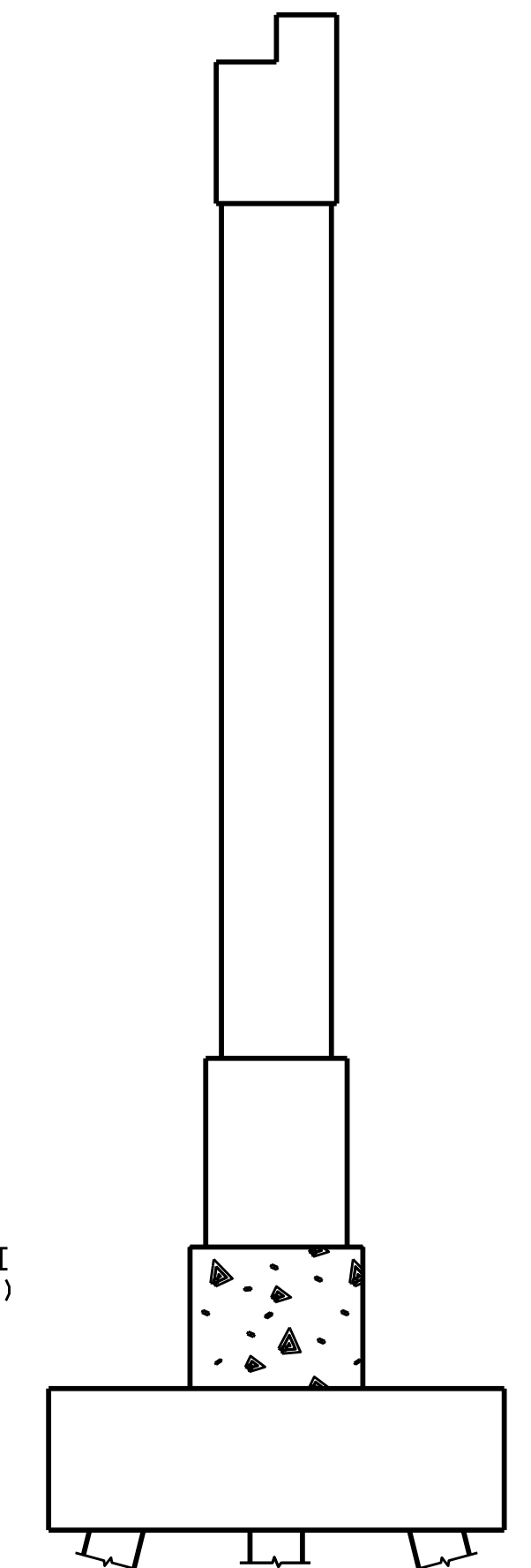


END VIEW
EAST SIDE

30' ERI
(TOTAL)

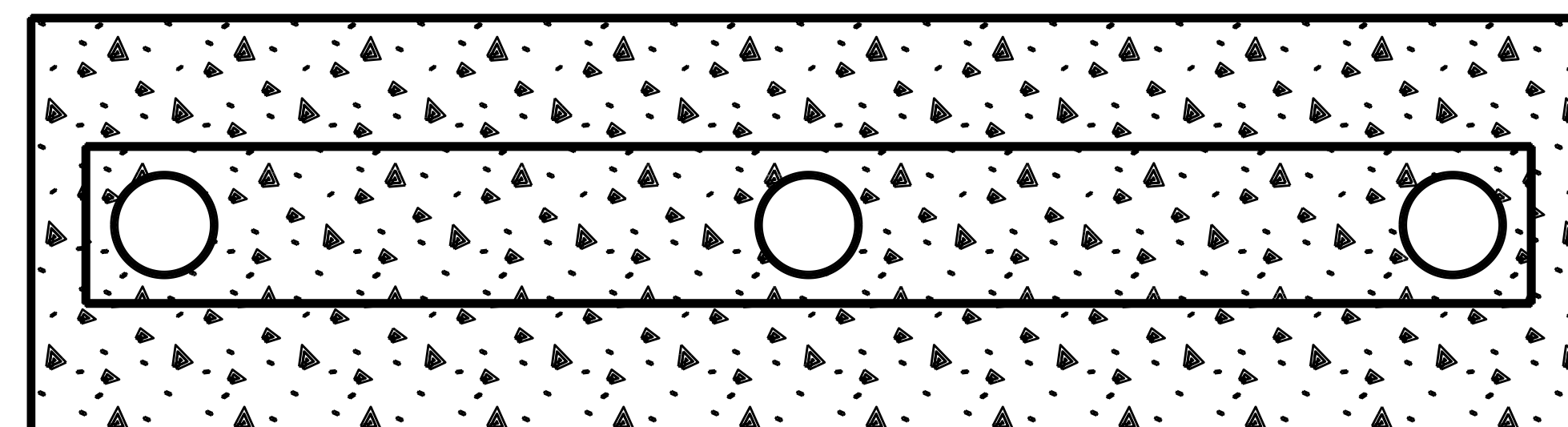


ELEVATION
NORTH SIDE



END VIEW
WEST SIDE

50' ERI
(TOTAL)



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

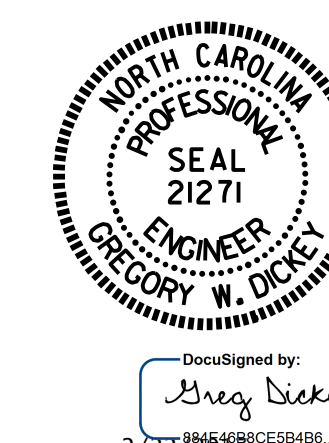
REPAIR QUANTITY TABLE

| REPAIRS BENT 33 | QUANTITIES | | | |
|----------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | | | | |
| CAP (VERTICAL FACE) | 0.3 | 0.2 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | | AREA SF | | AREA SF |
| STRUT (VERTICAL FACE) | | 500.0 | | |
| STRUT & FTG (HORIZONTAL, CORNER) | | 762.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |
| COLUMN | | 0.0 | | |
| STRUT | | 0.0 | | |
| FOOTING | | 80.0 | | |

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

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CARTERET COUNTY
 BRIDGE NO. 68

SHEET 34 OF 50



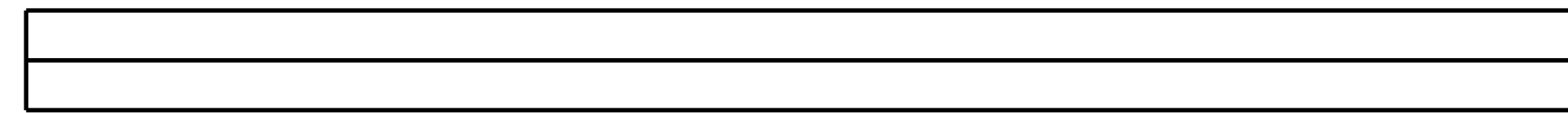
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 33

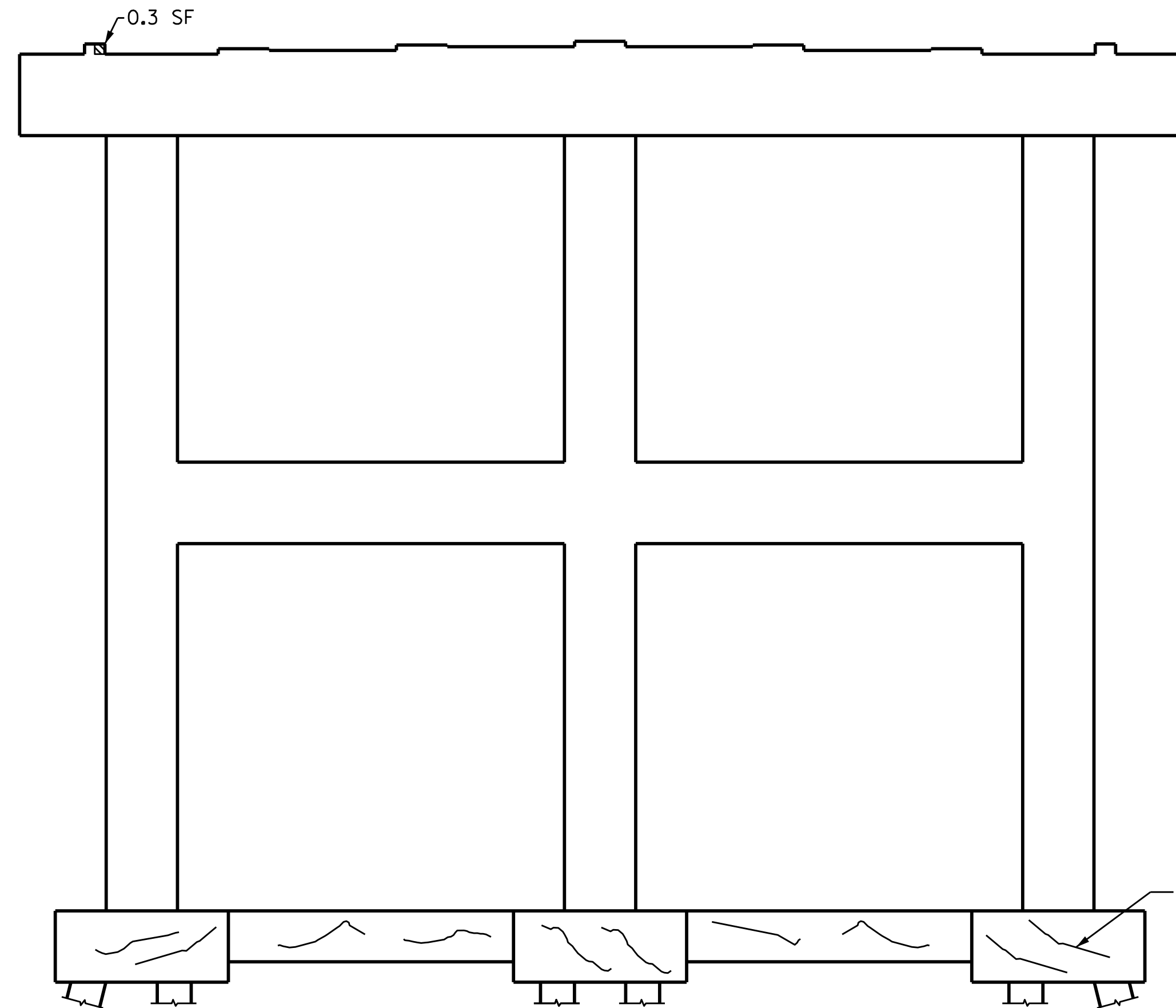
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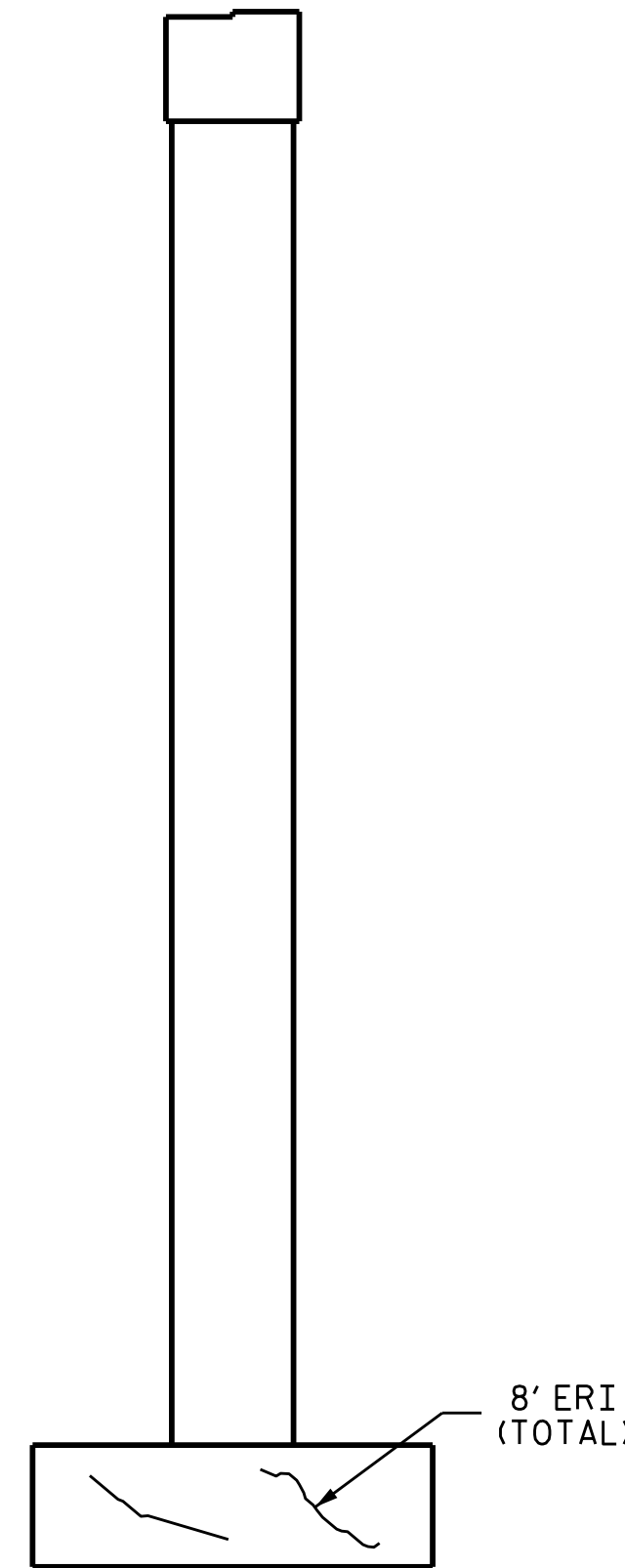
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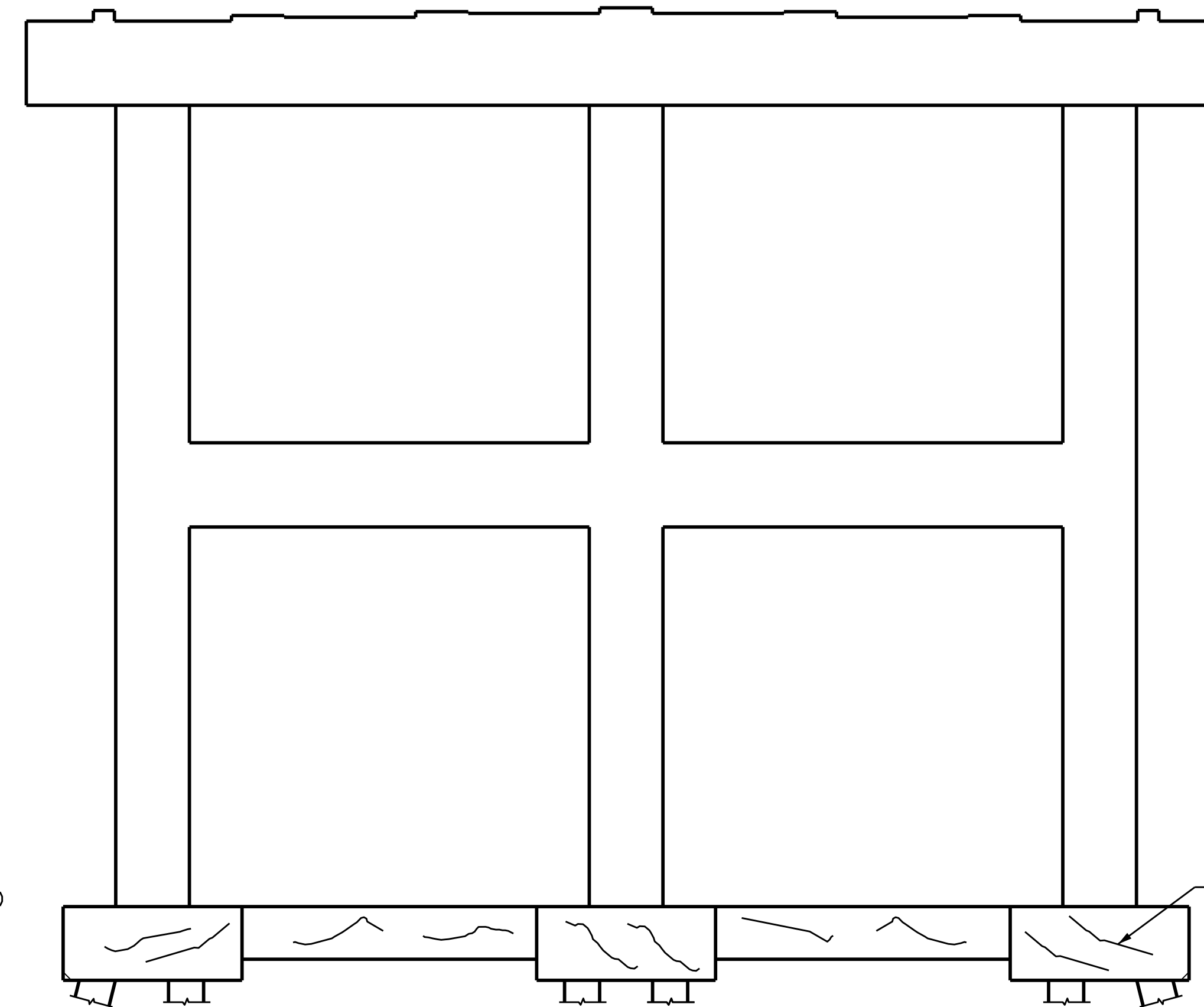
PLAN
TOP OF CAP



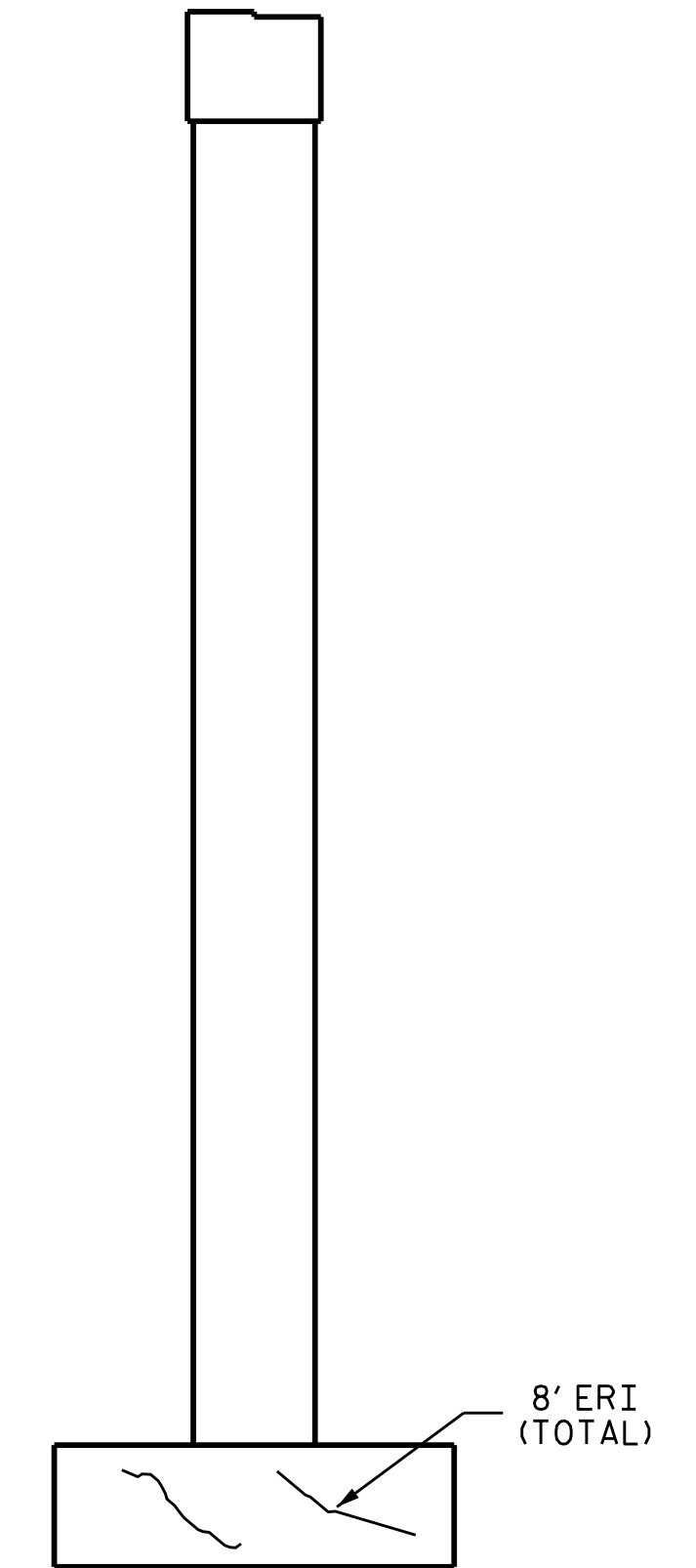
ELEVATION
SOUTH SIDE



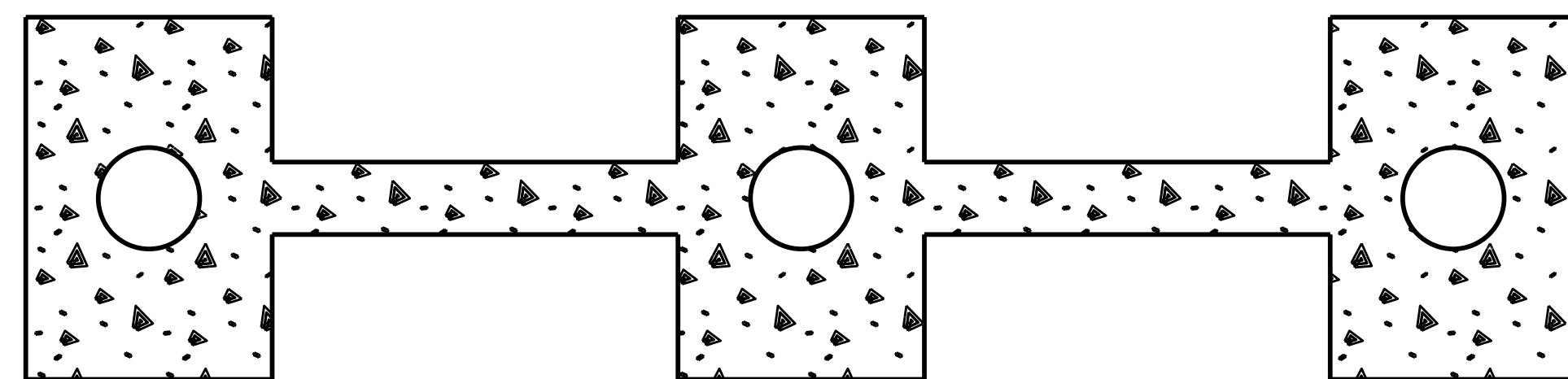
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

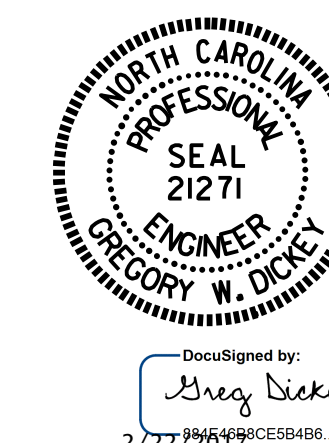
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 34 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.3 | 0.2 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 80.0 | | | |

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

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CARTERET COUNTY
 BRIDGE NO. 68

SHEET 35 OF 50



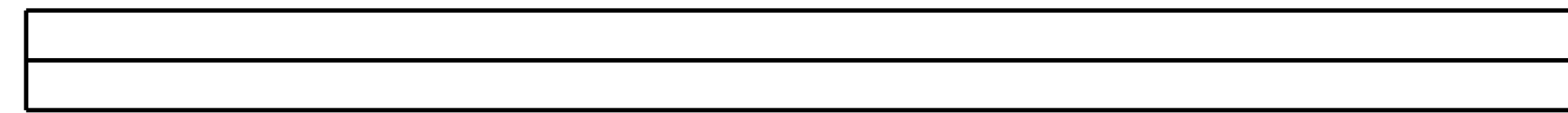
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 34

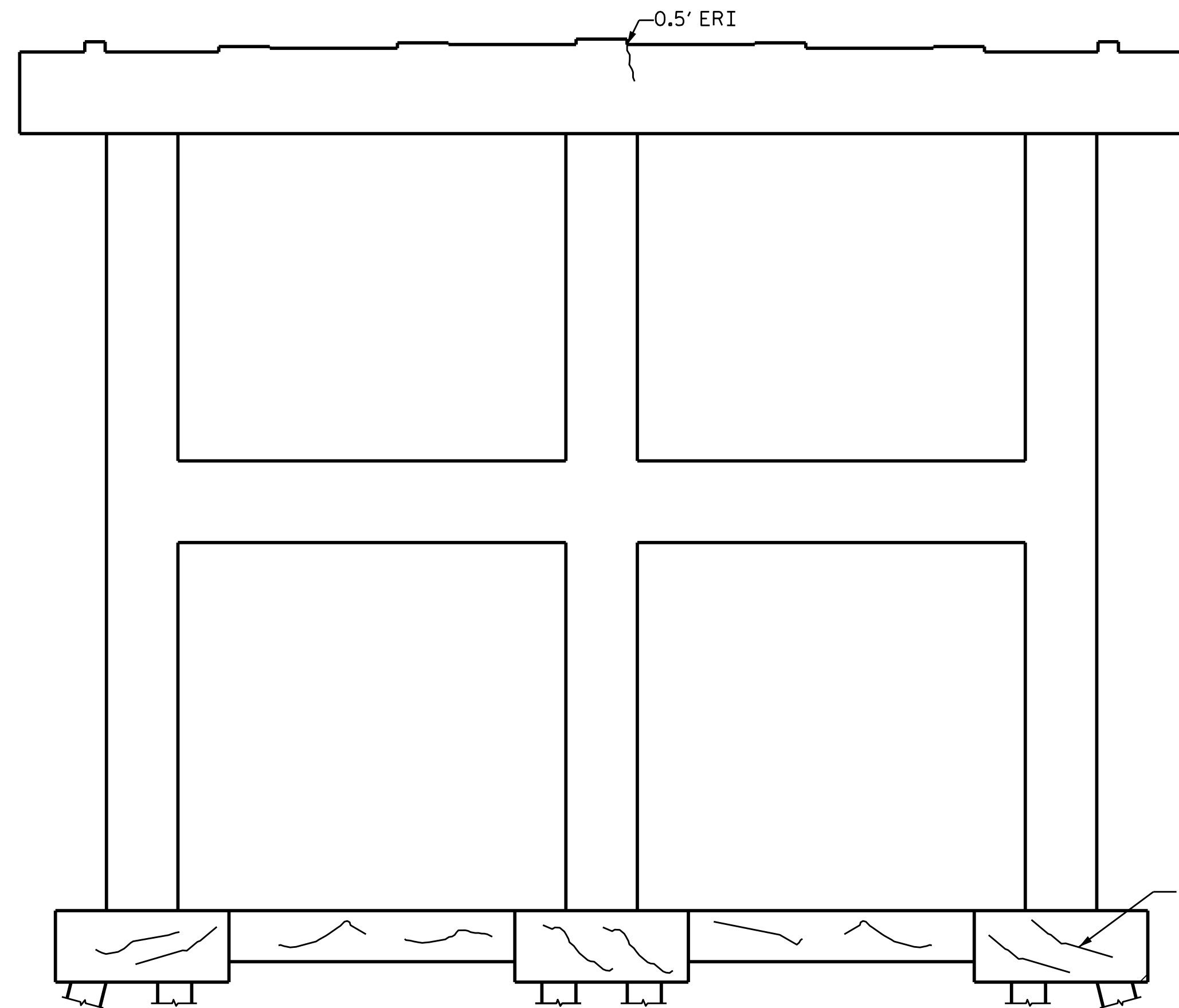
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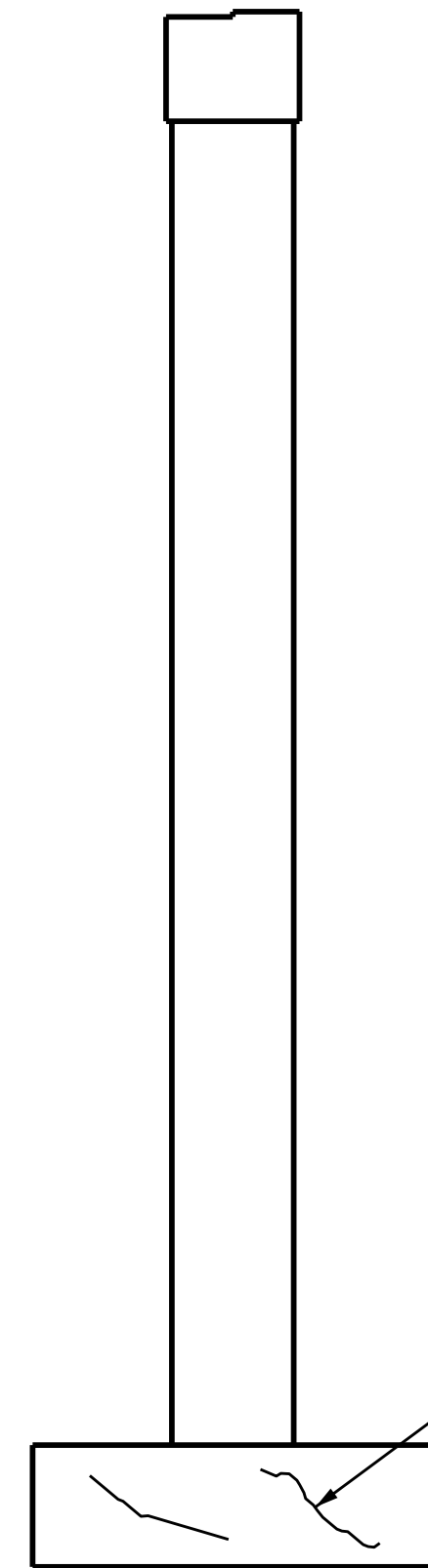
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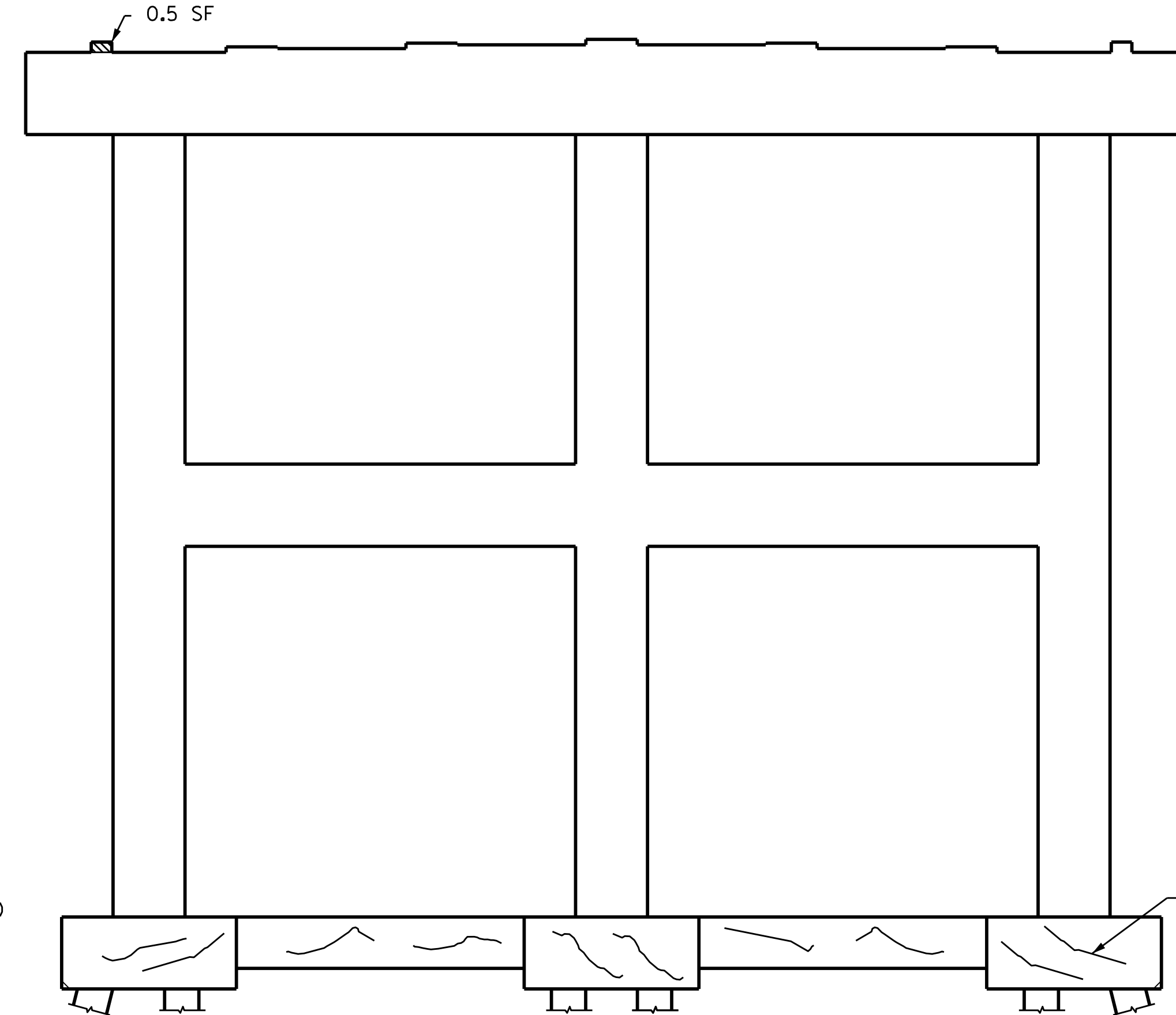
PLAN
TOP OF CAP



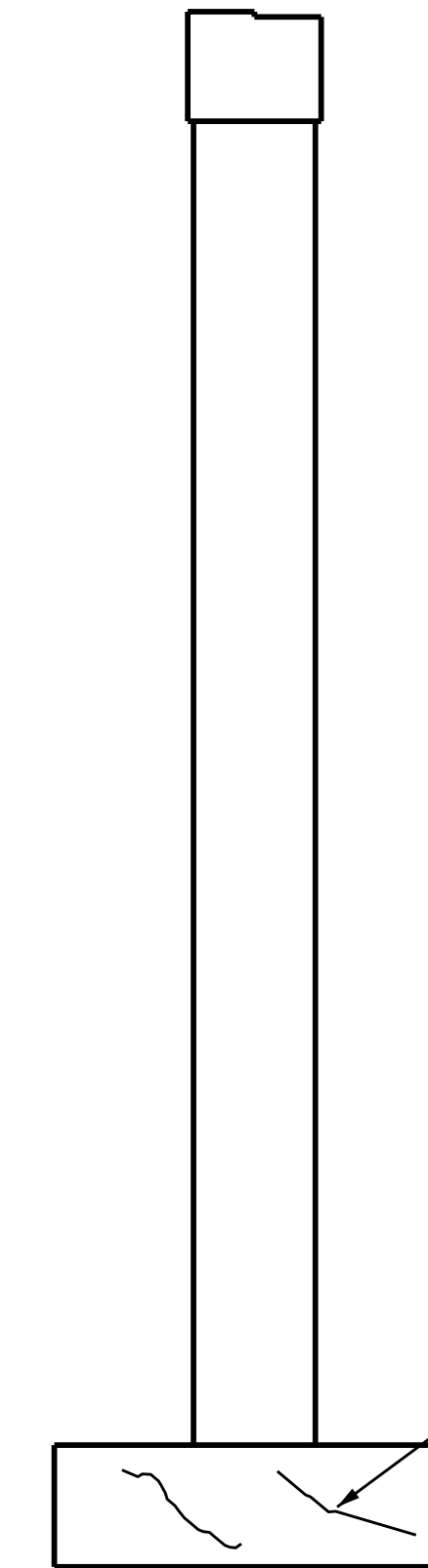
ELEVATION
SOUTH SIDE



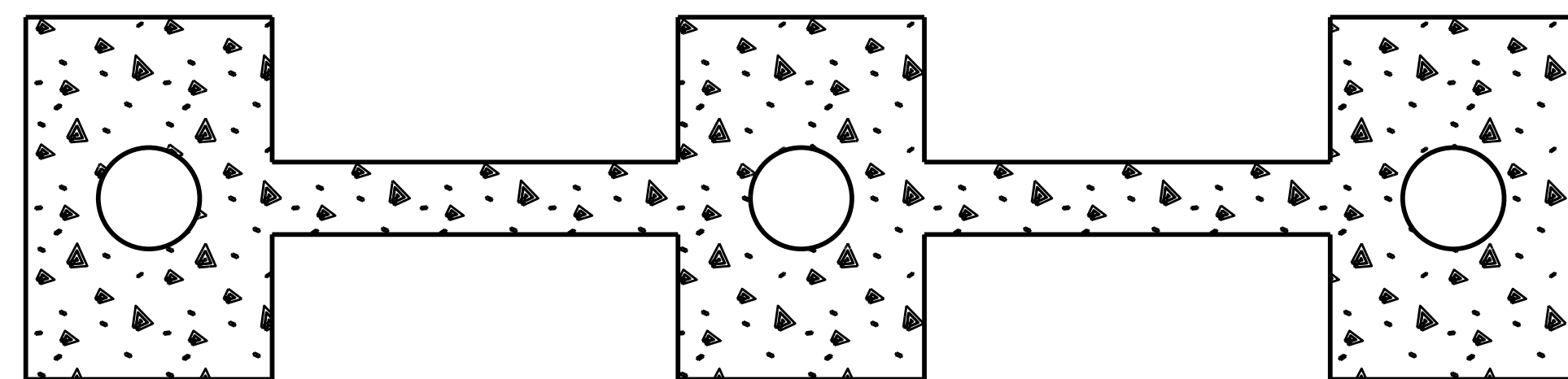
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 35 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.5 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 80.0 | | | |

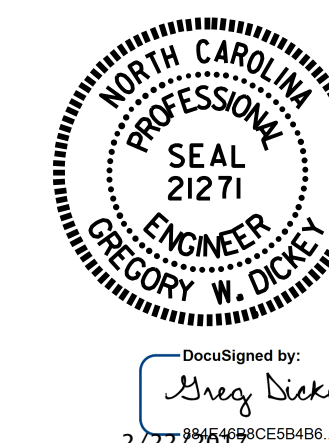
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

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 BRIDGE NO. 68

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

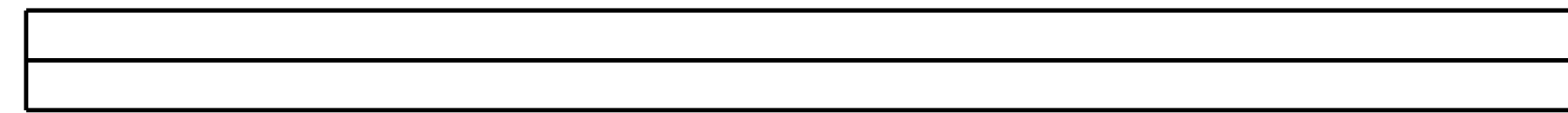
BENT 35



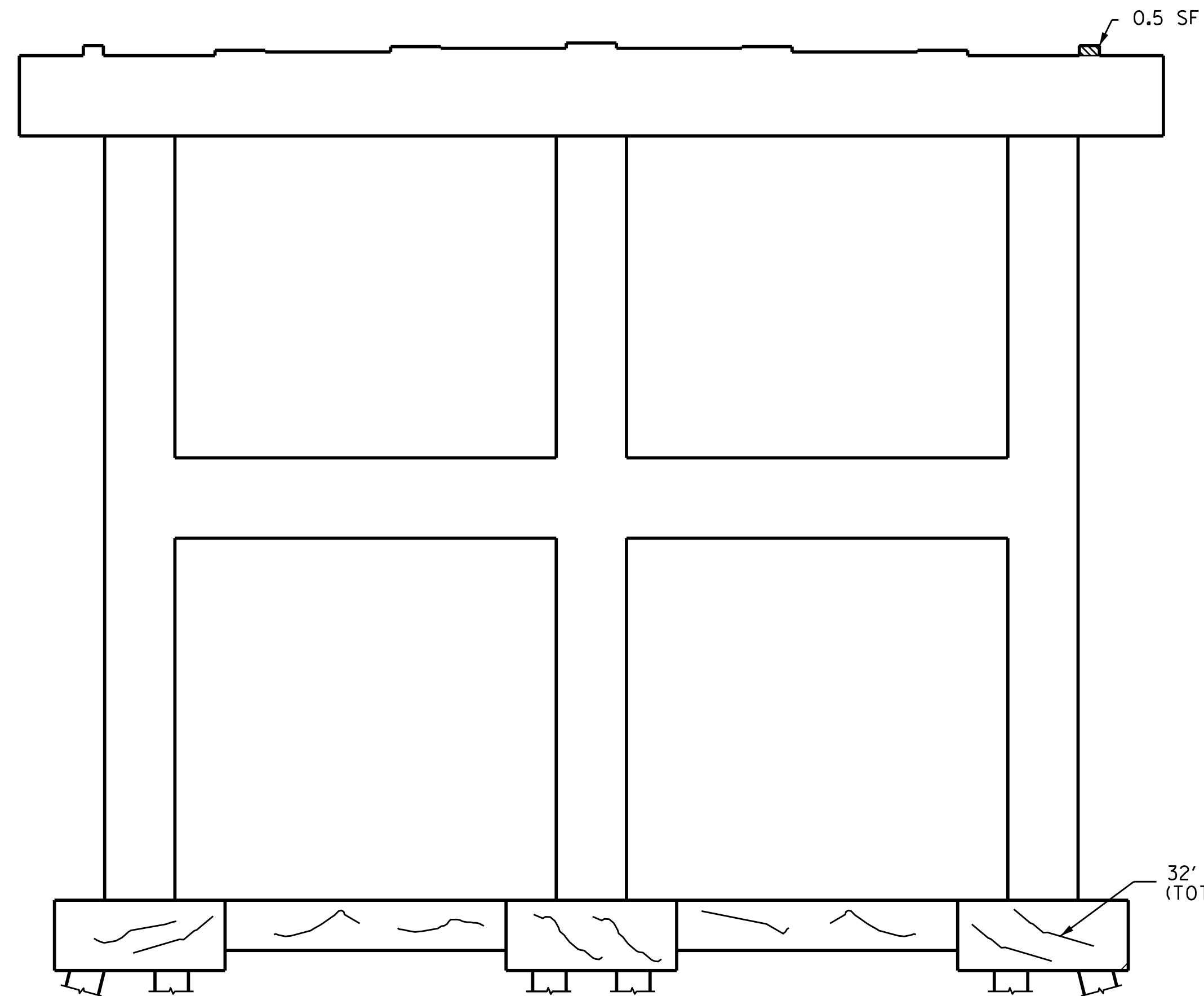
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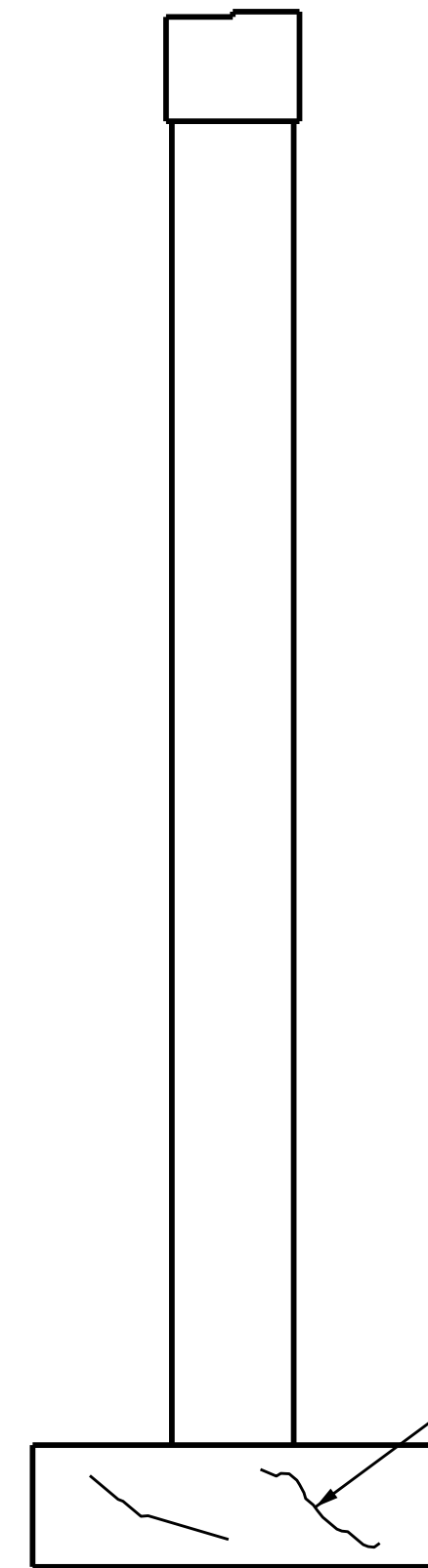
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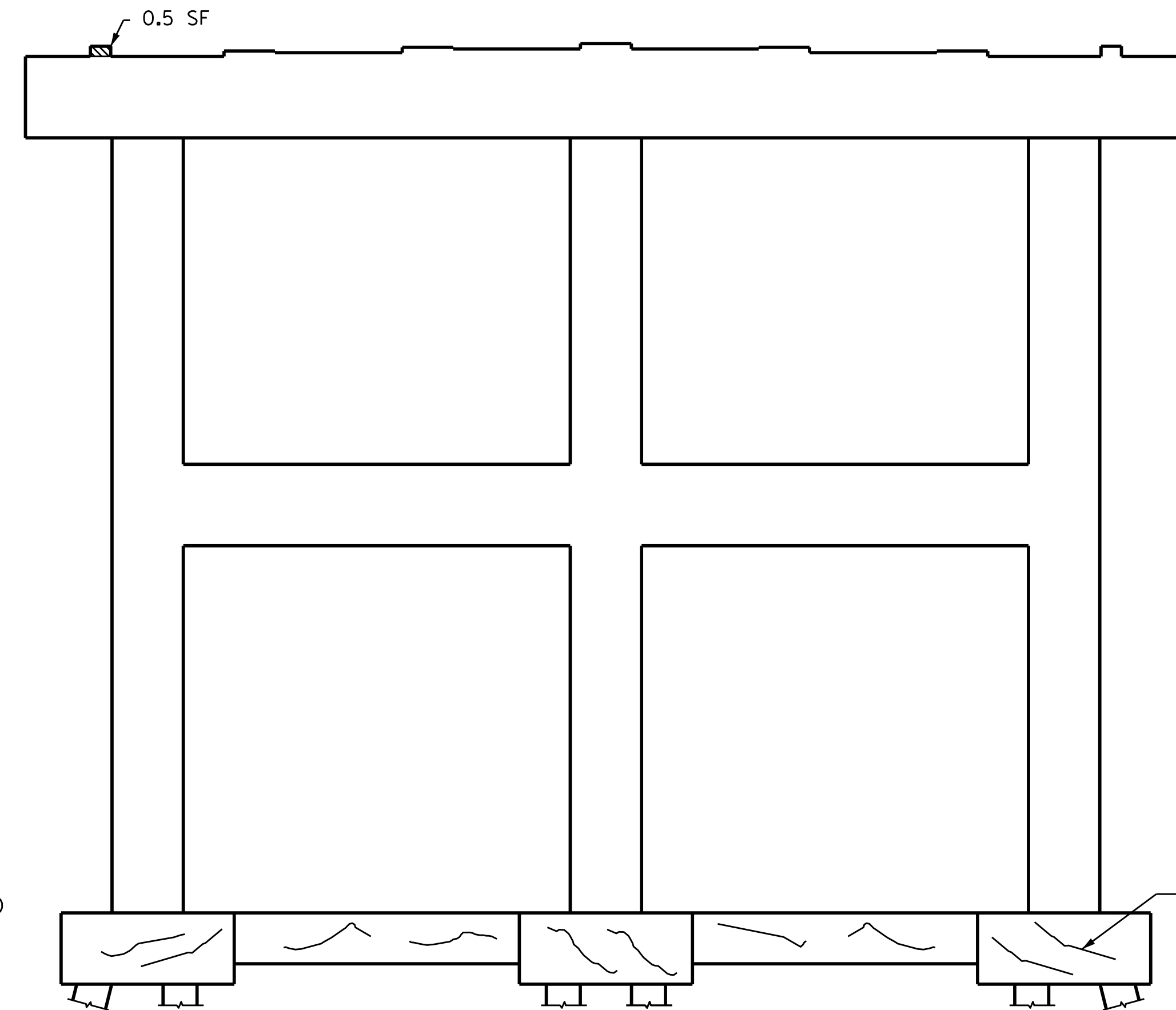
PLAN
TOP OF CAP



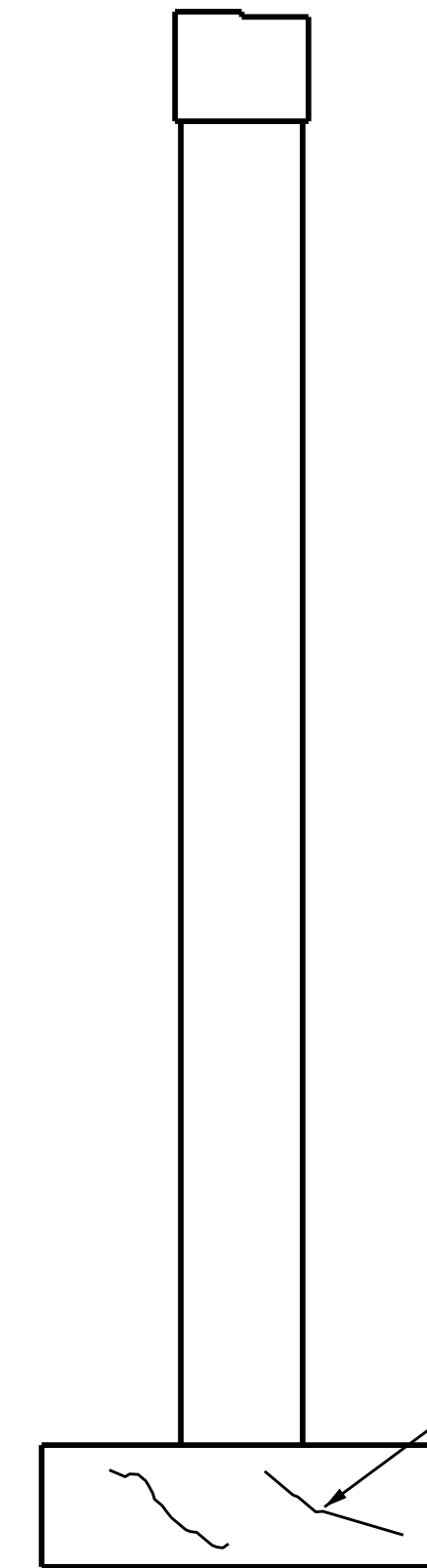
ELEVATION
SOUTH SIDE



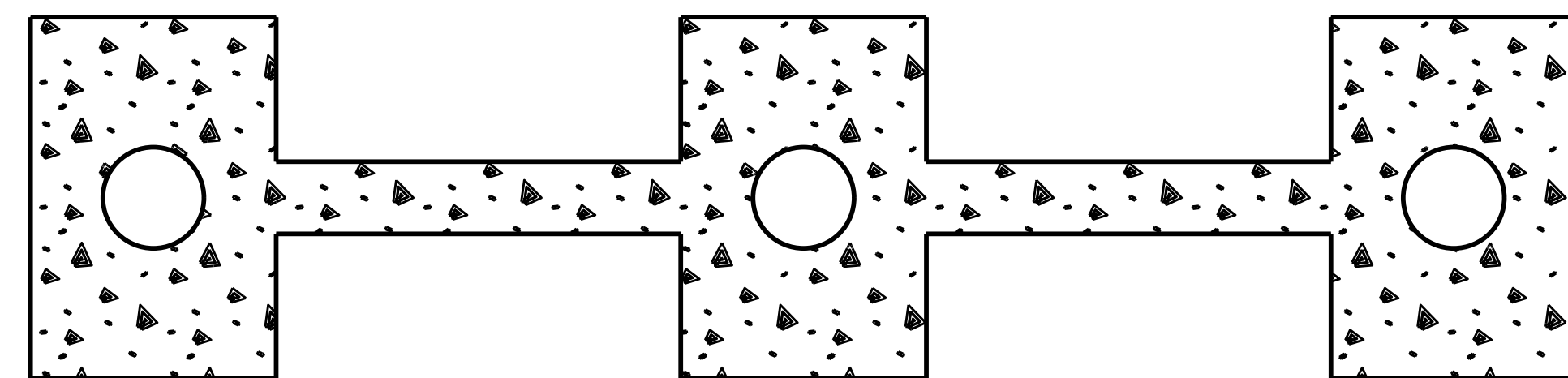
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

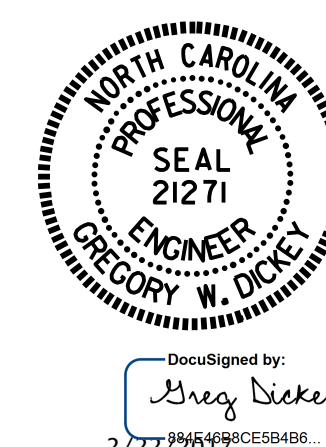
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 36 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 80.0 | | | |

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

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 BRIDGE NO. 68

SHEET 37 OF 50



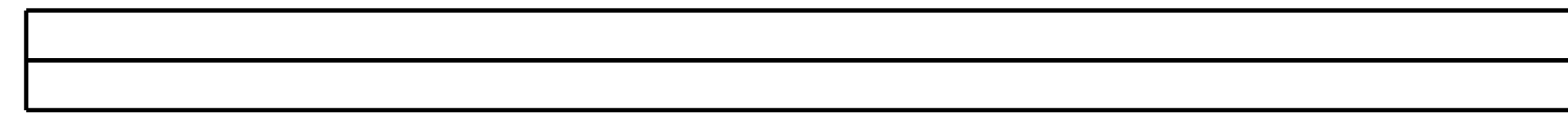
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 36

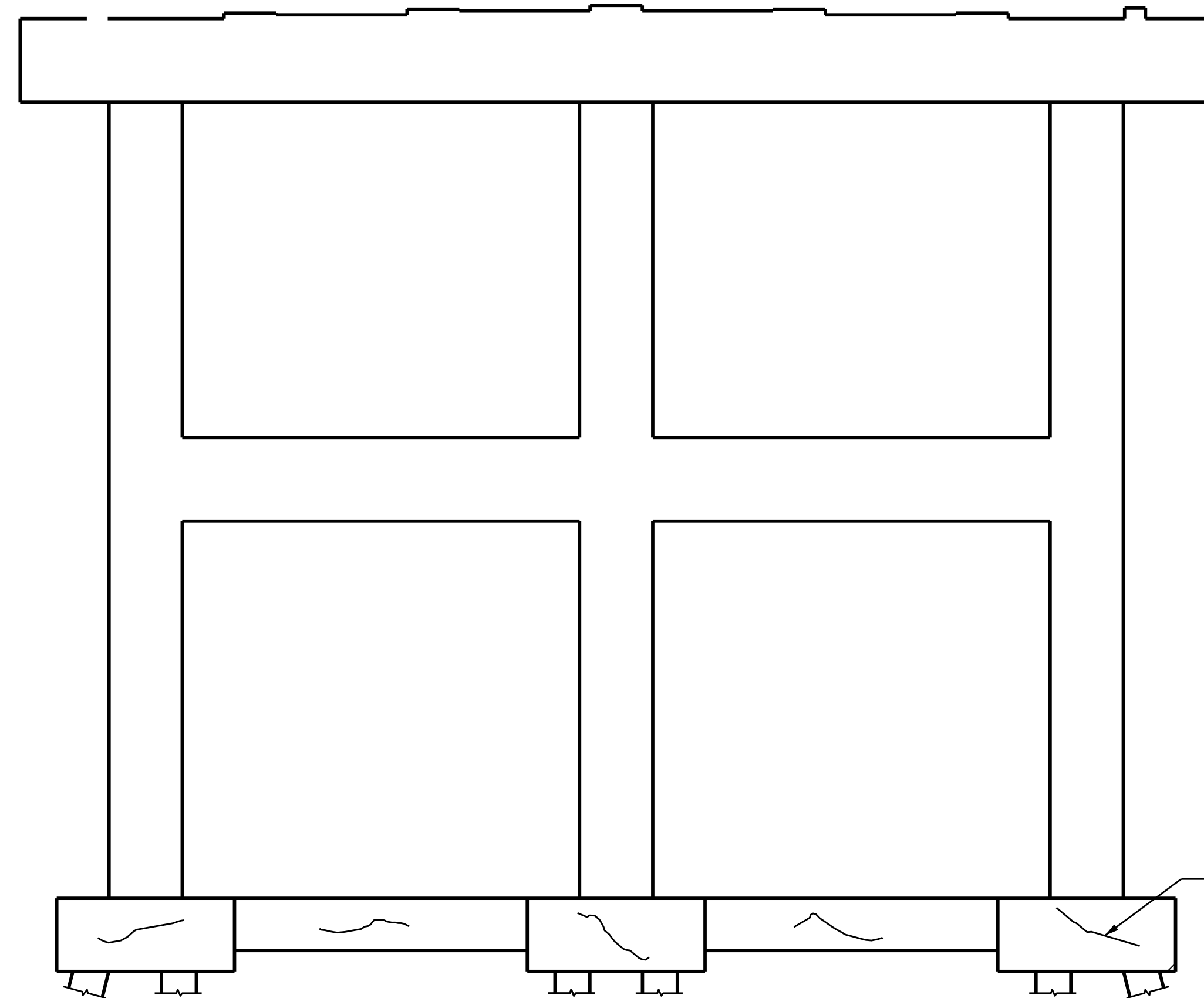
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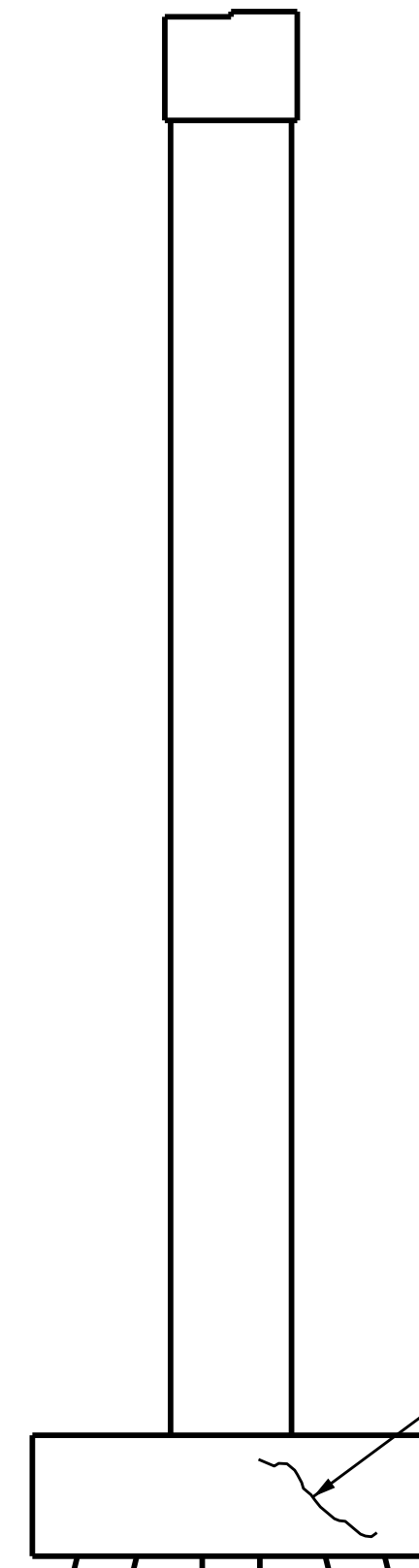
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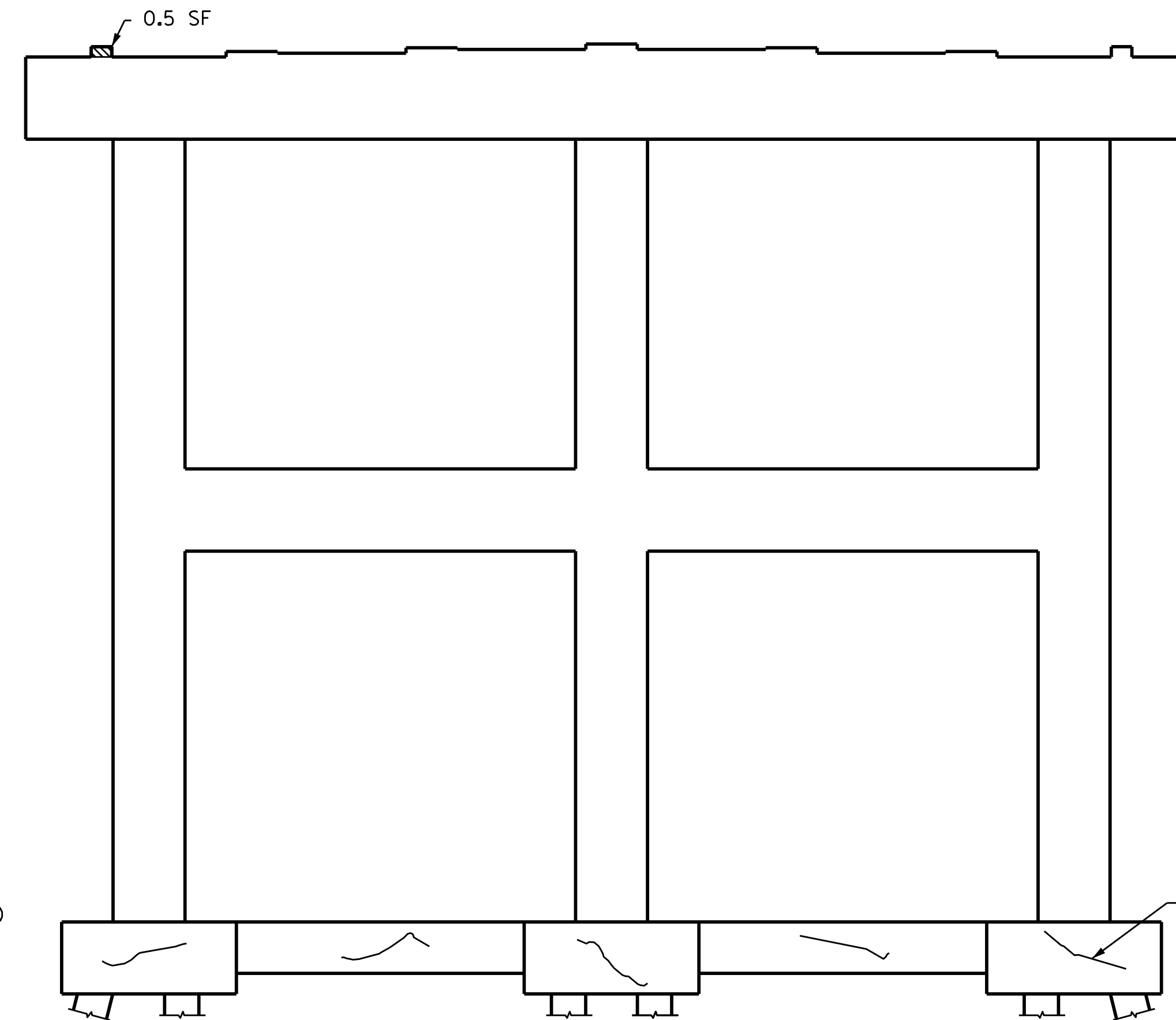
PLAN
TOP OF CAP



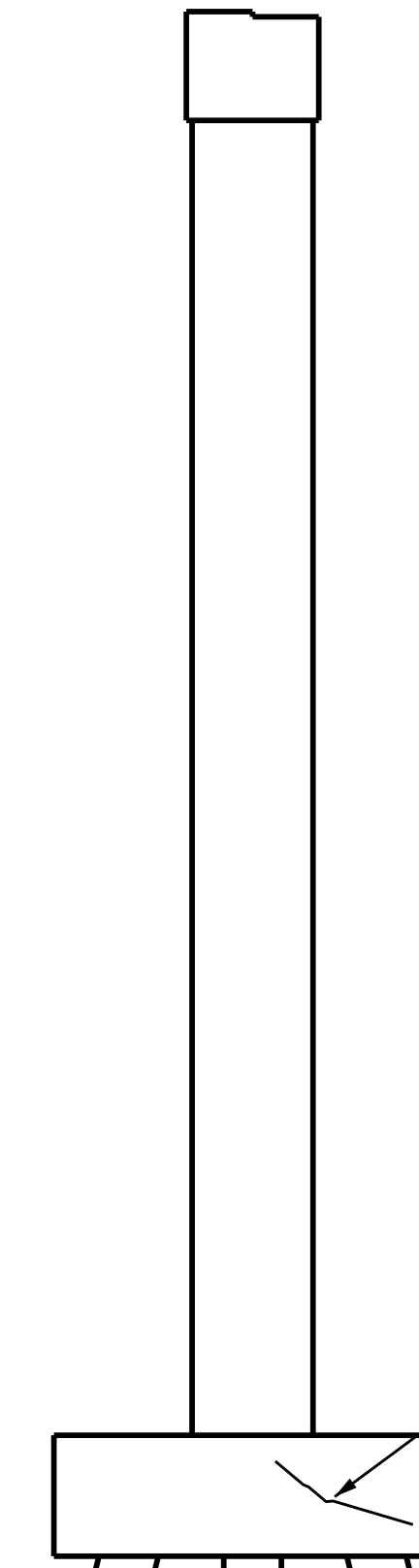
ELEVATION
SOUTH SIDE



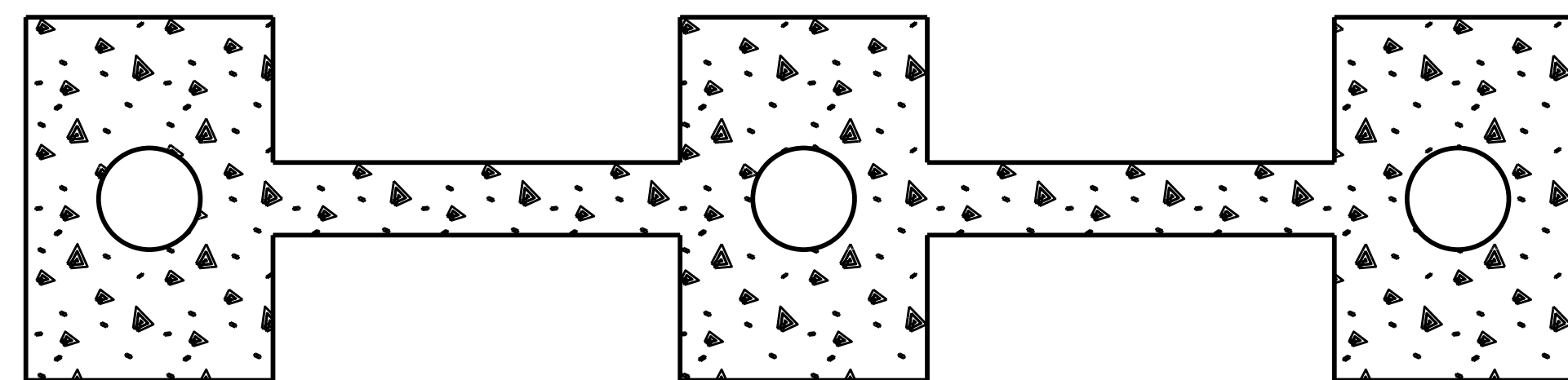
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 37 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 30.0 | | | |

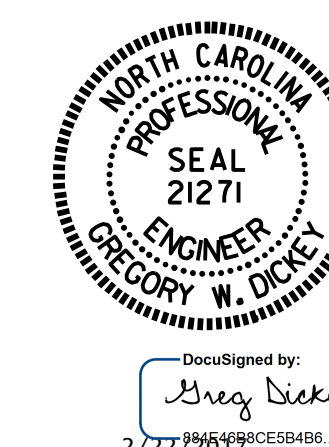
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

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CARTERET COUNTY
 BRIDGE NO. 68

SHEET 38 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

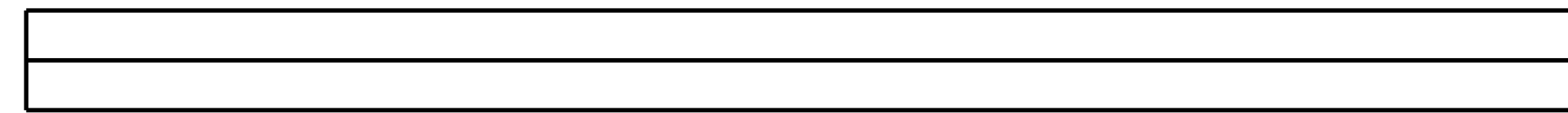
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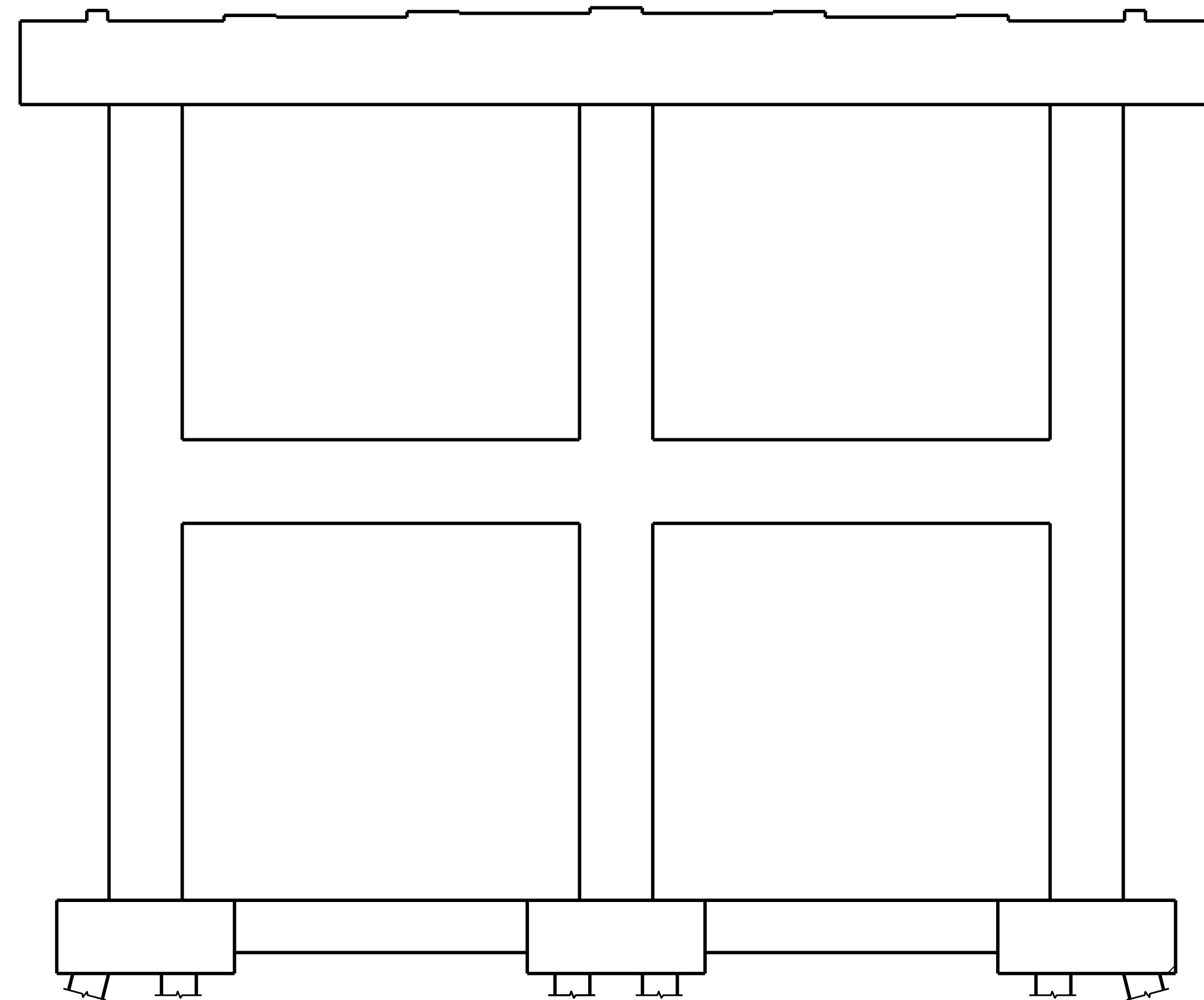
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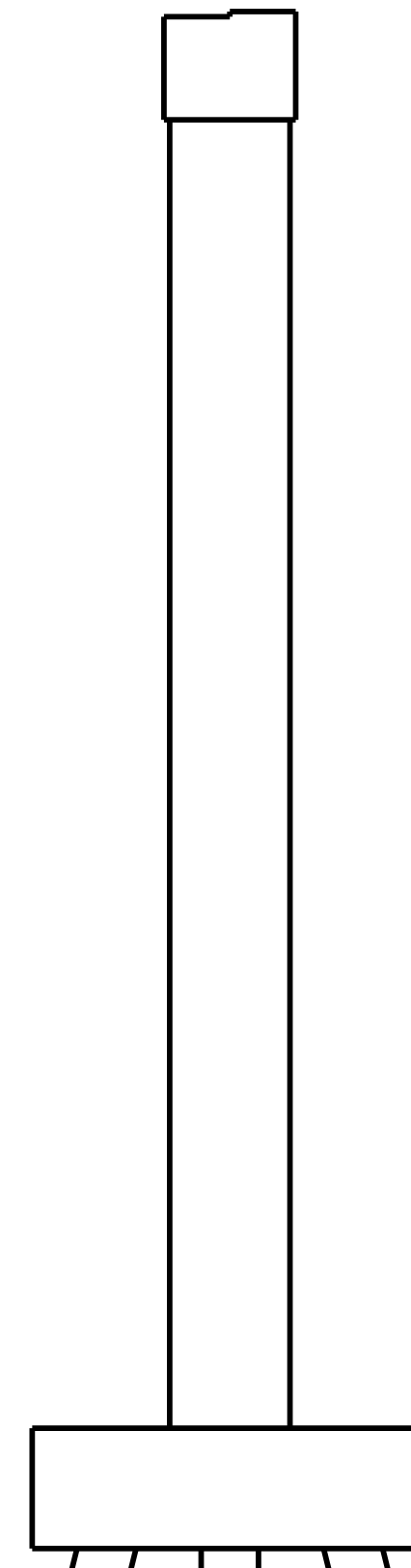
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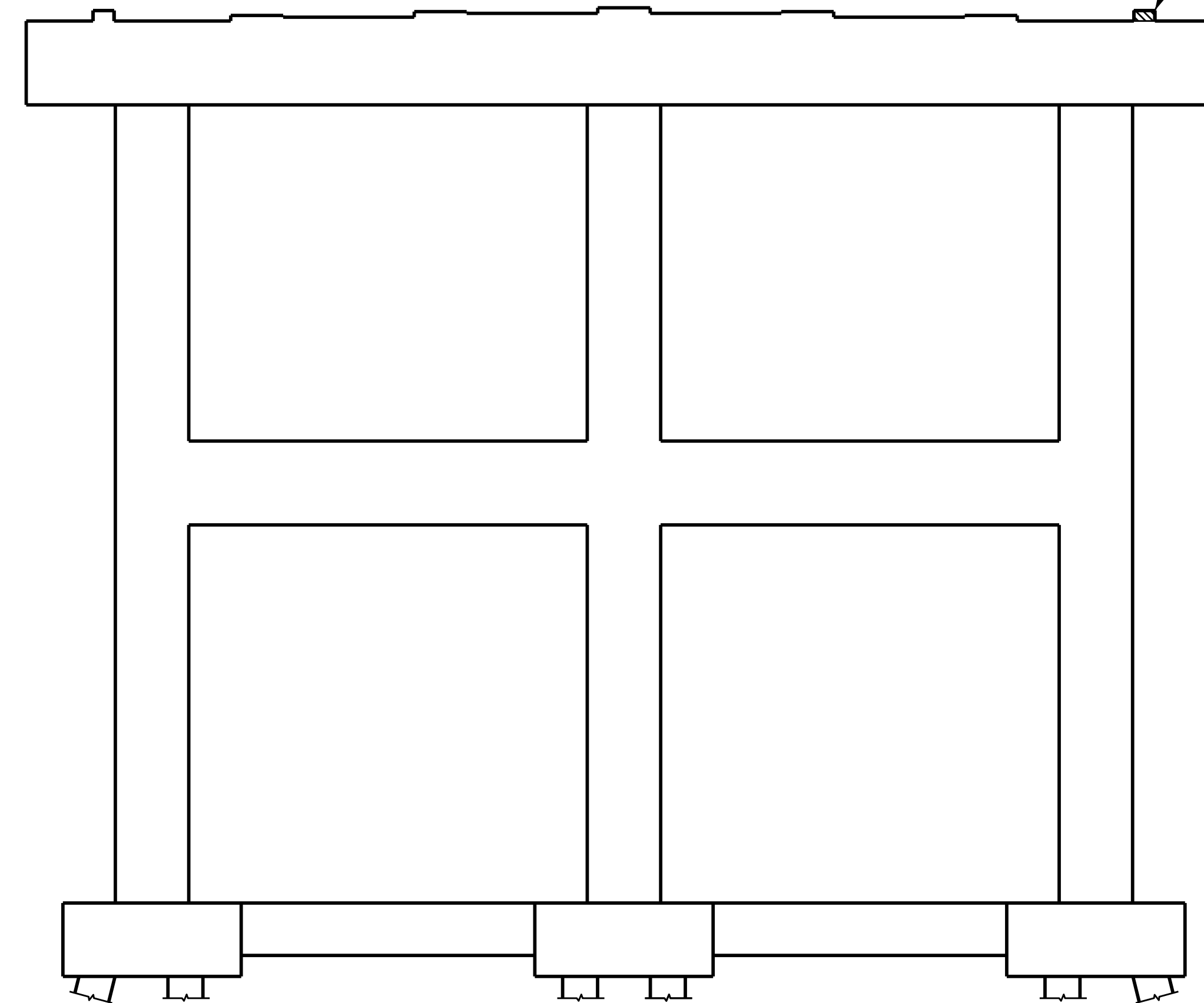
PLAN
TOP OF CAP



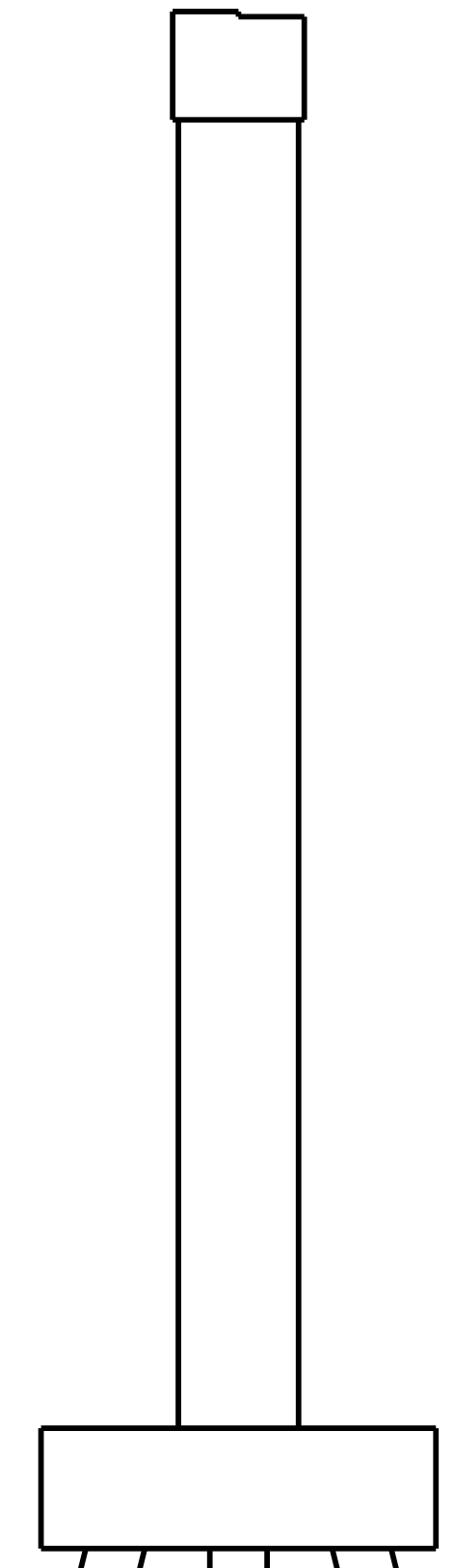
ELEVATION
SOUTH SIDE



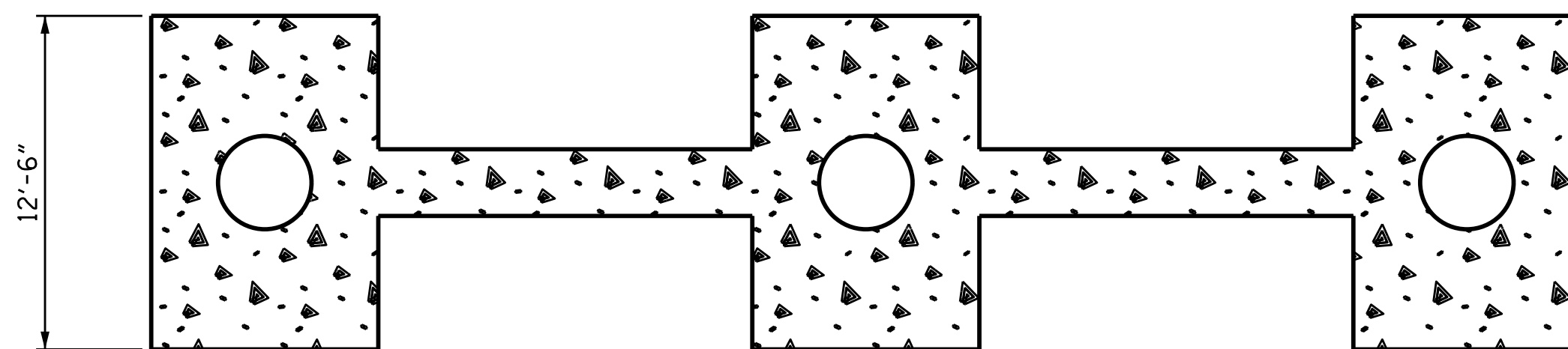
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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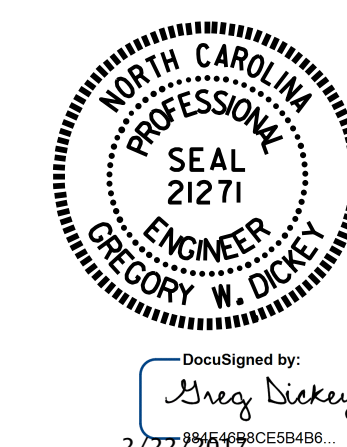
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 38 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 360.0 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

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SHEET 39 OF 50



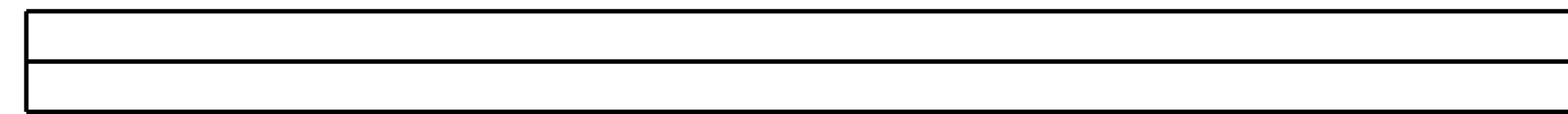
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 38

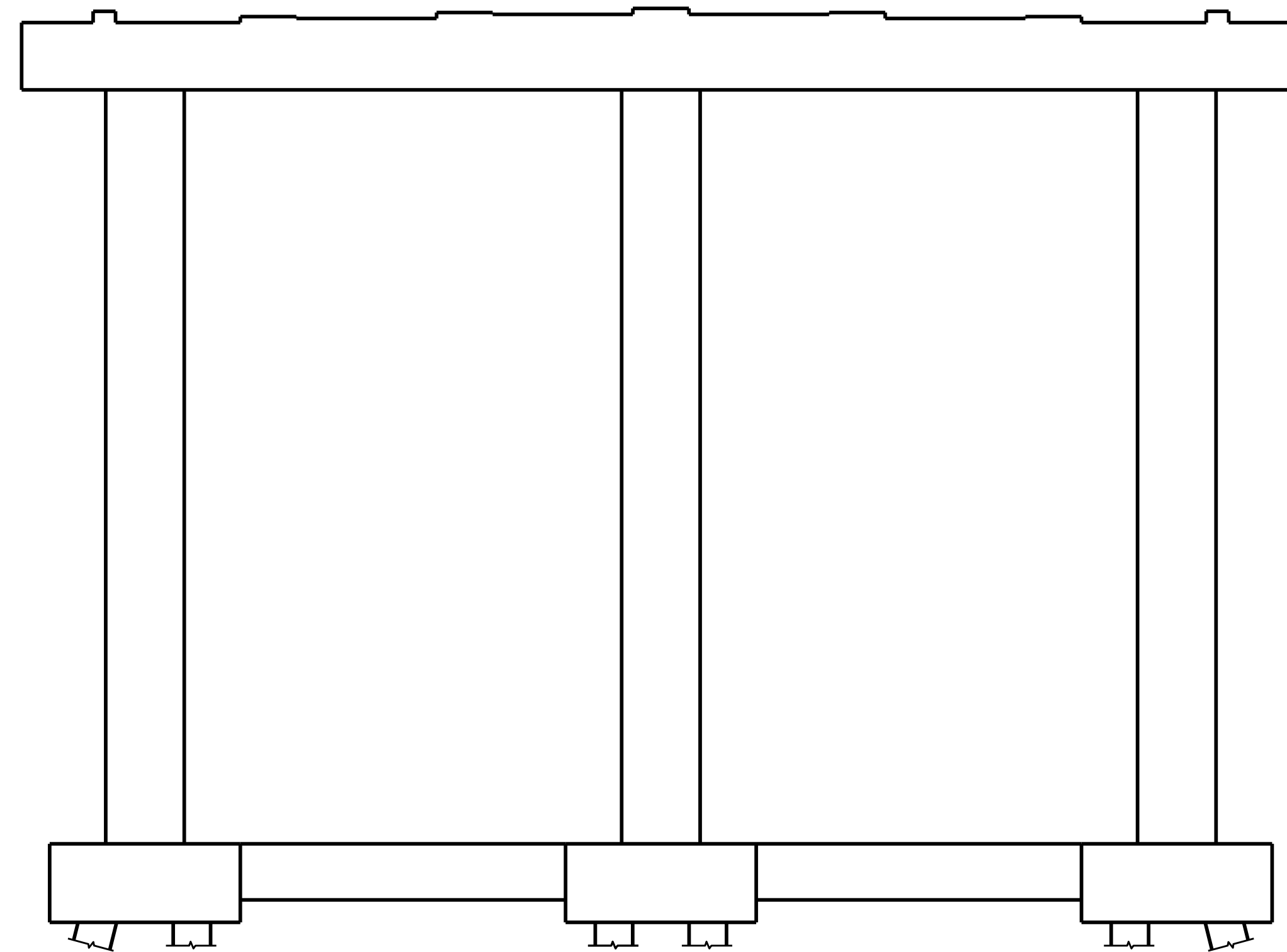
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 CHECKED BY : R. N. WEISZ DATE : 9/2016

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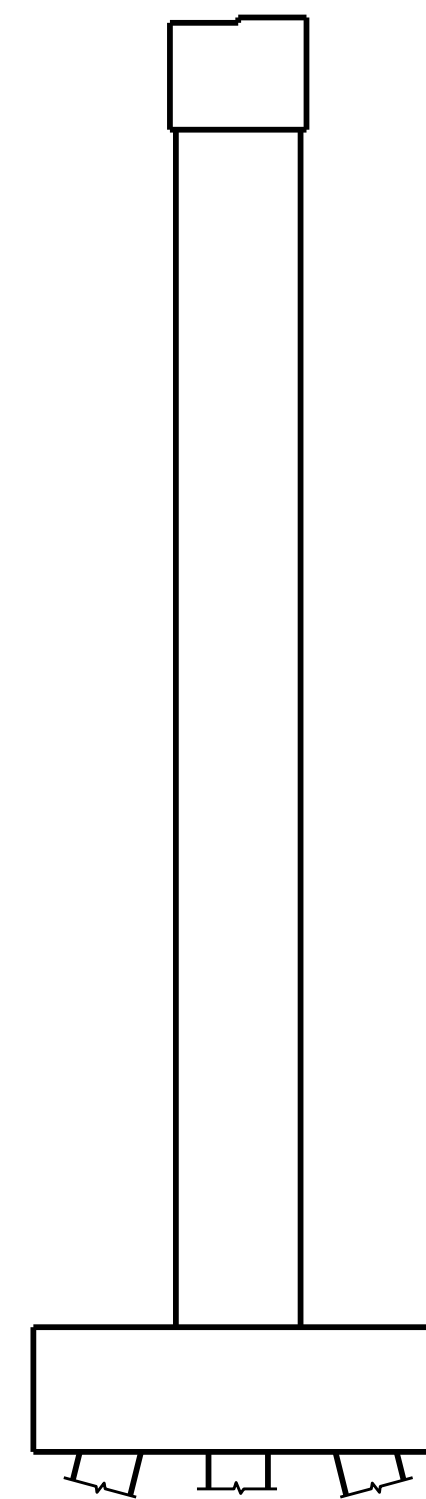
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| 1 | | | 3 | | | S1-82 |
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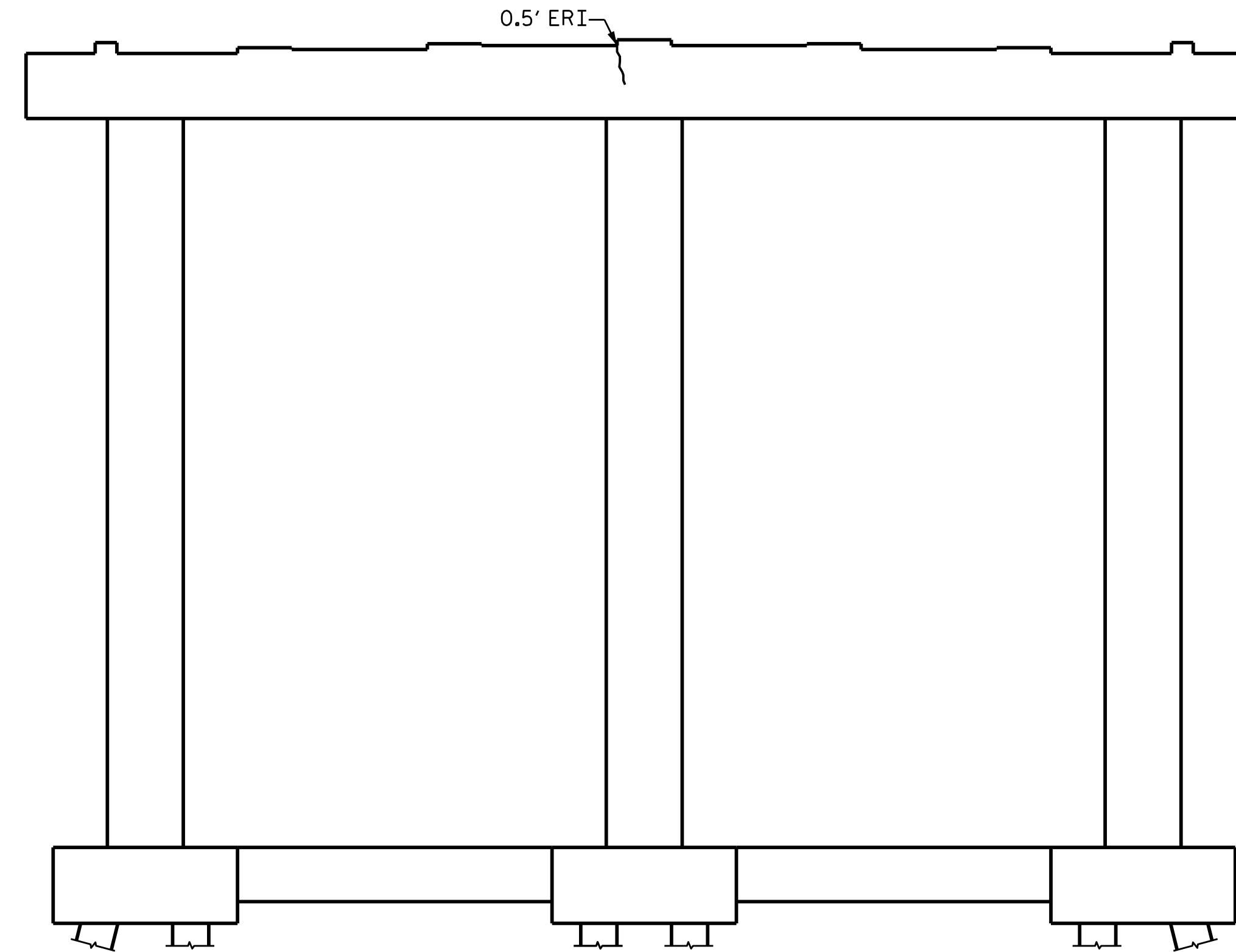
PLAN
TOP OF CAP



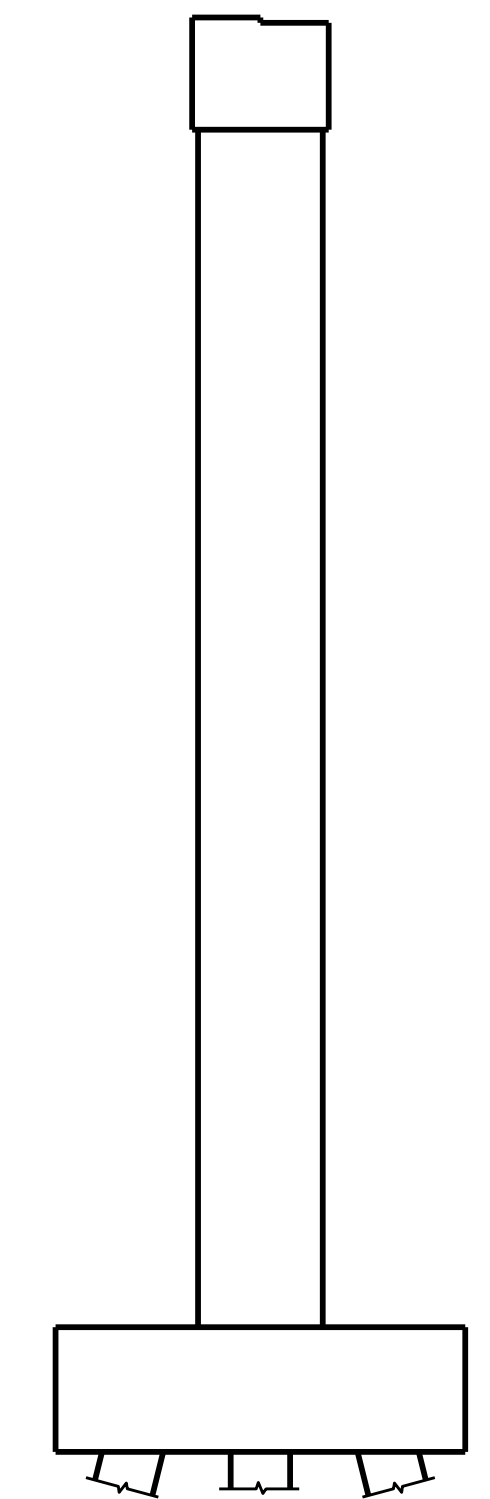
ELEVATION
SOUTH SIDE



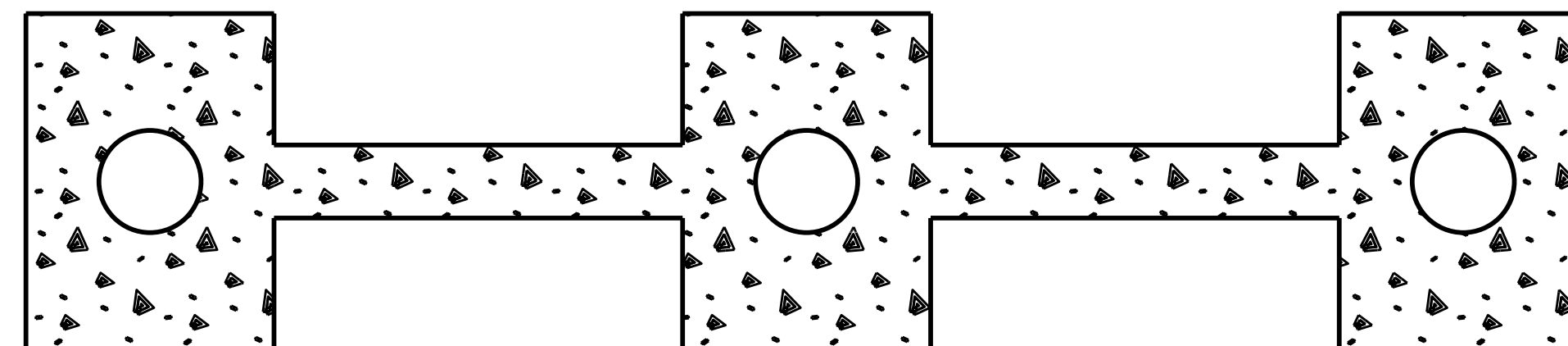
END VIEW
EAST SIDE




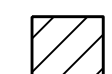
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

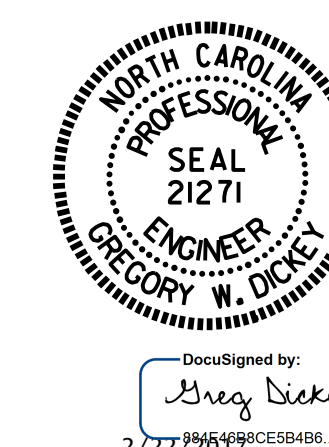
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 39 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.5 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 40 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

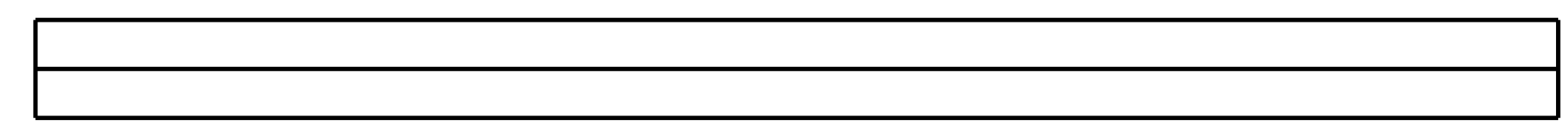
BENT 39

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

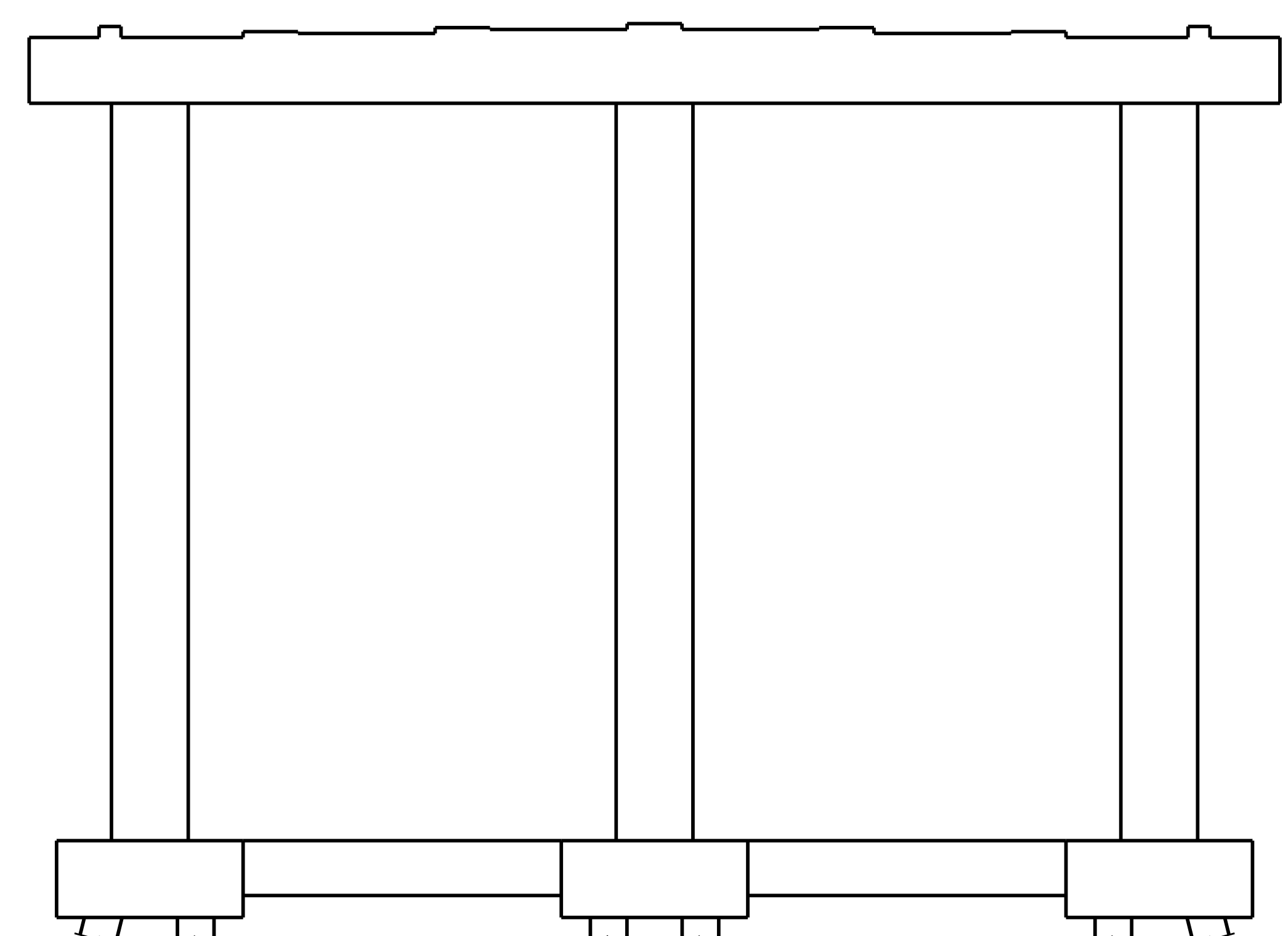
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| REVISIONS | | | | | | TOTAL SHEETS |
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| 2 | | | 4 | | | 1 |

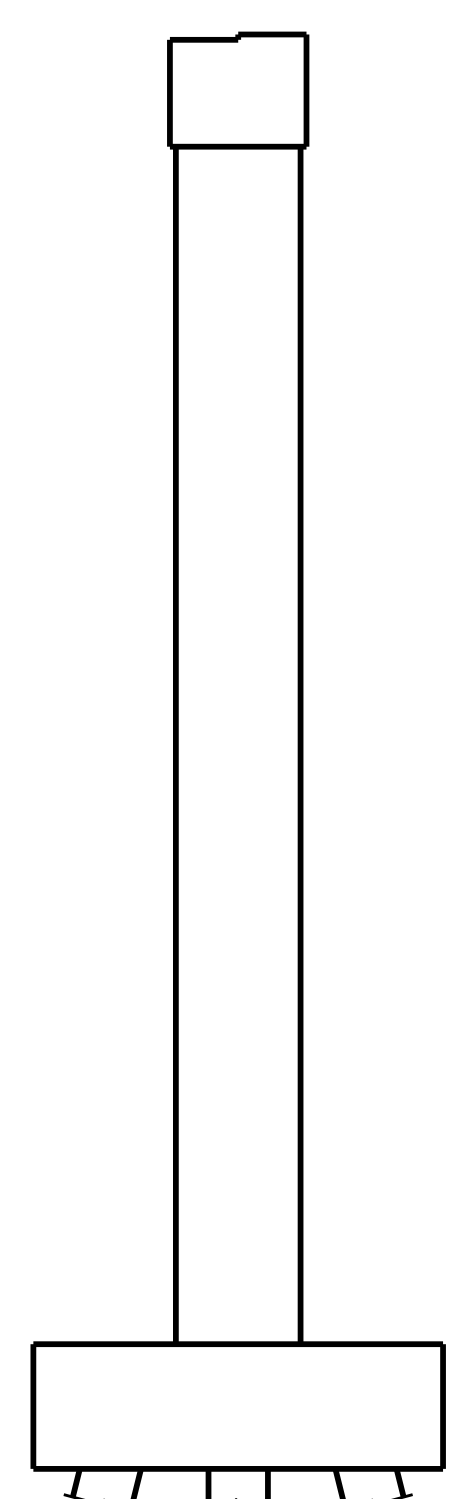
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



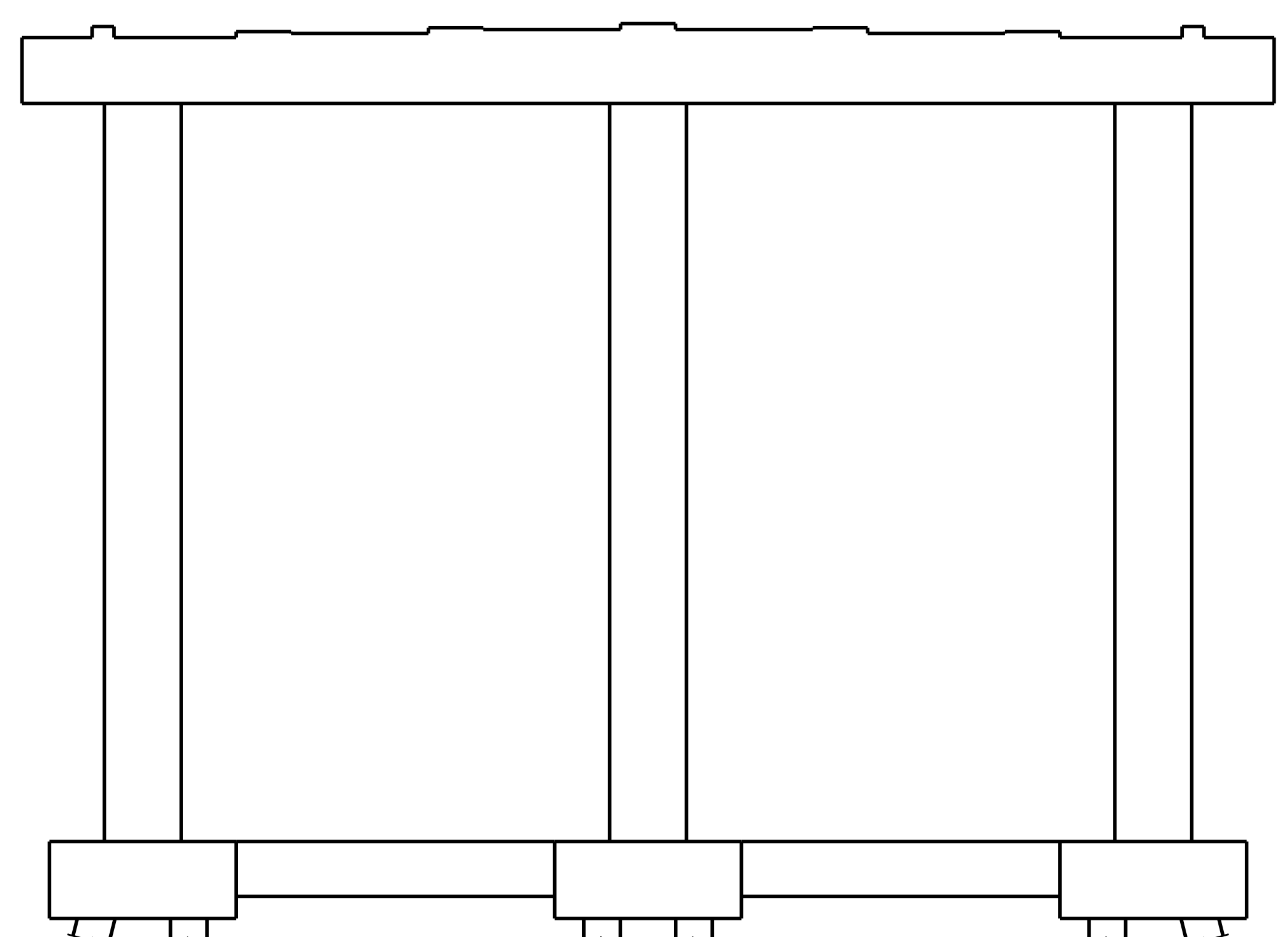
PLAN
TOP OF CAP



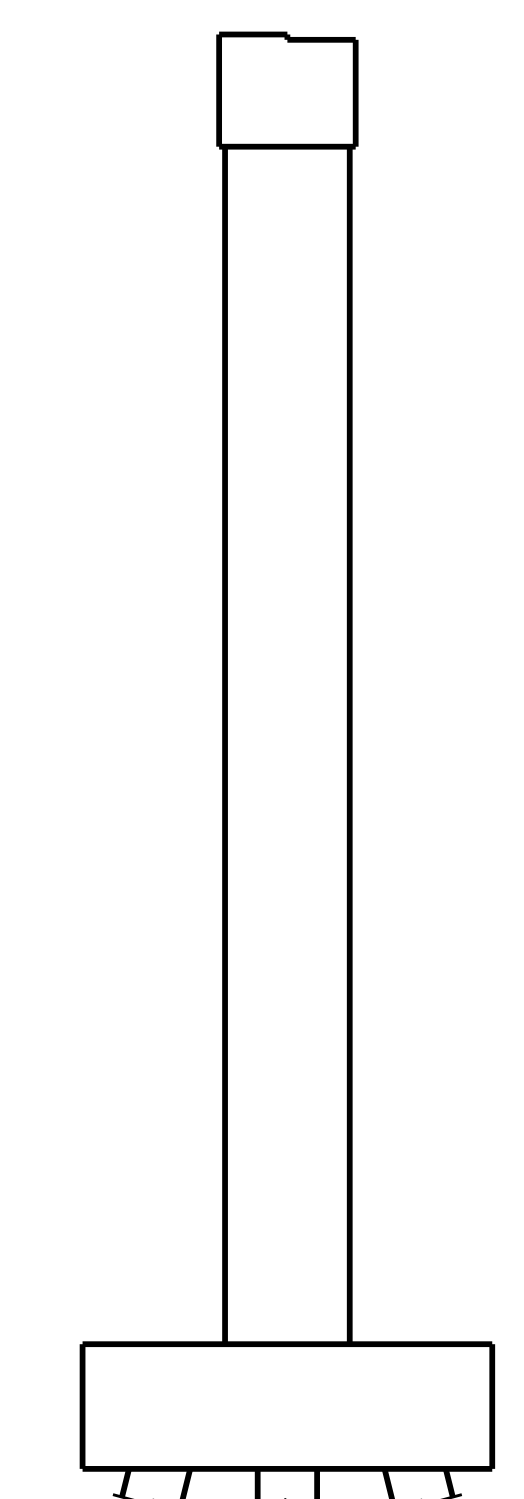
ELEVATION
SOUTH SIDE



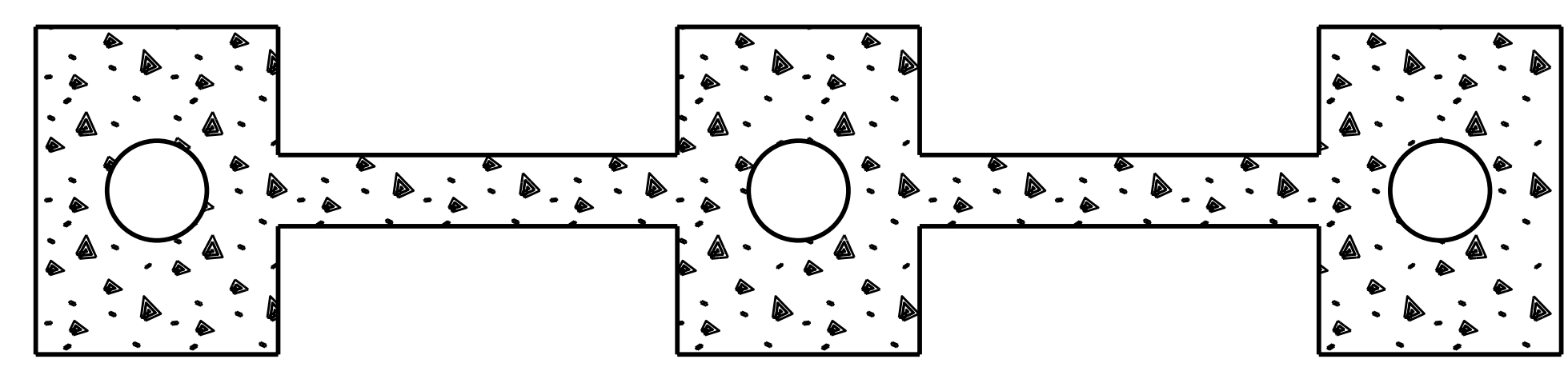
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

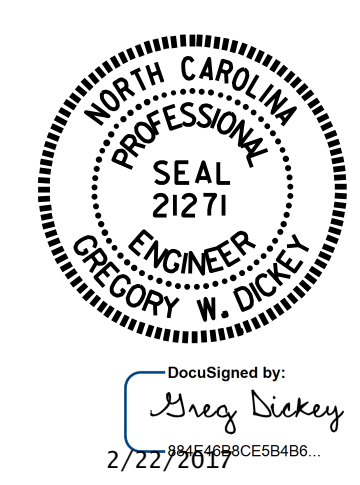
NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.
 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.
 FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 40 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 41 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

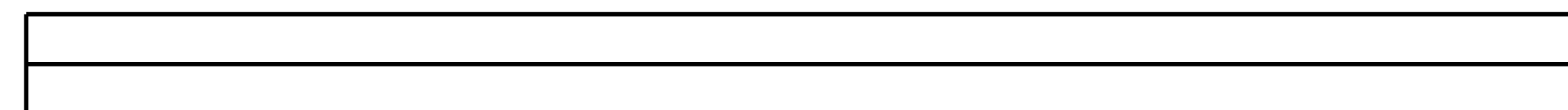
BENT 40

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

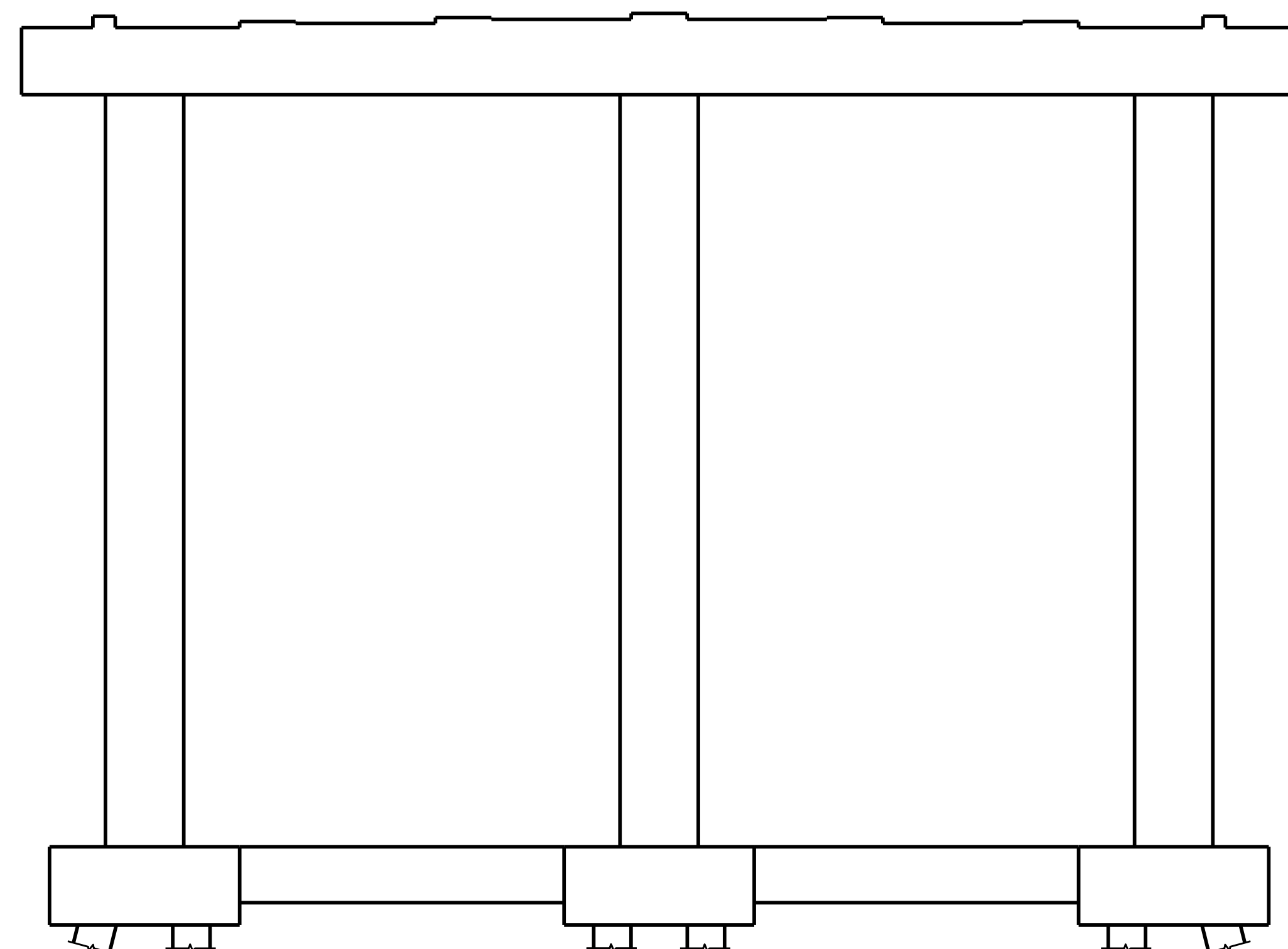
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| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S1-84 |
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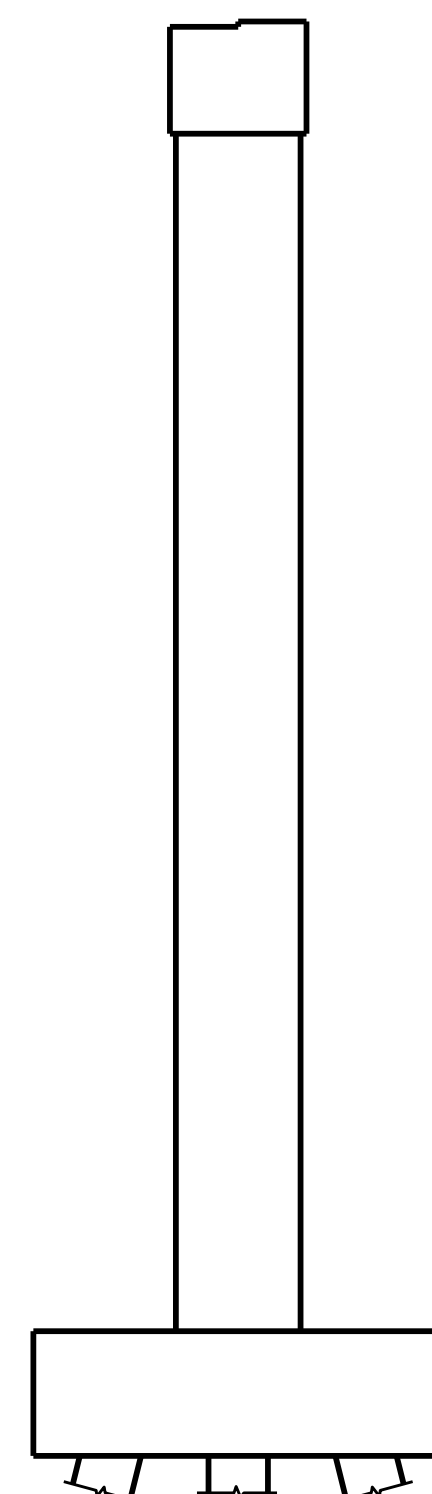
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



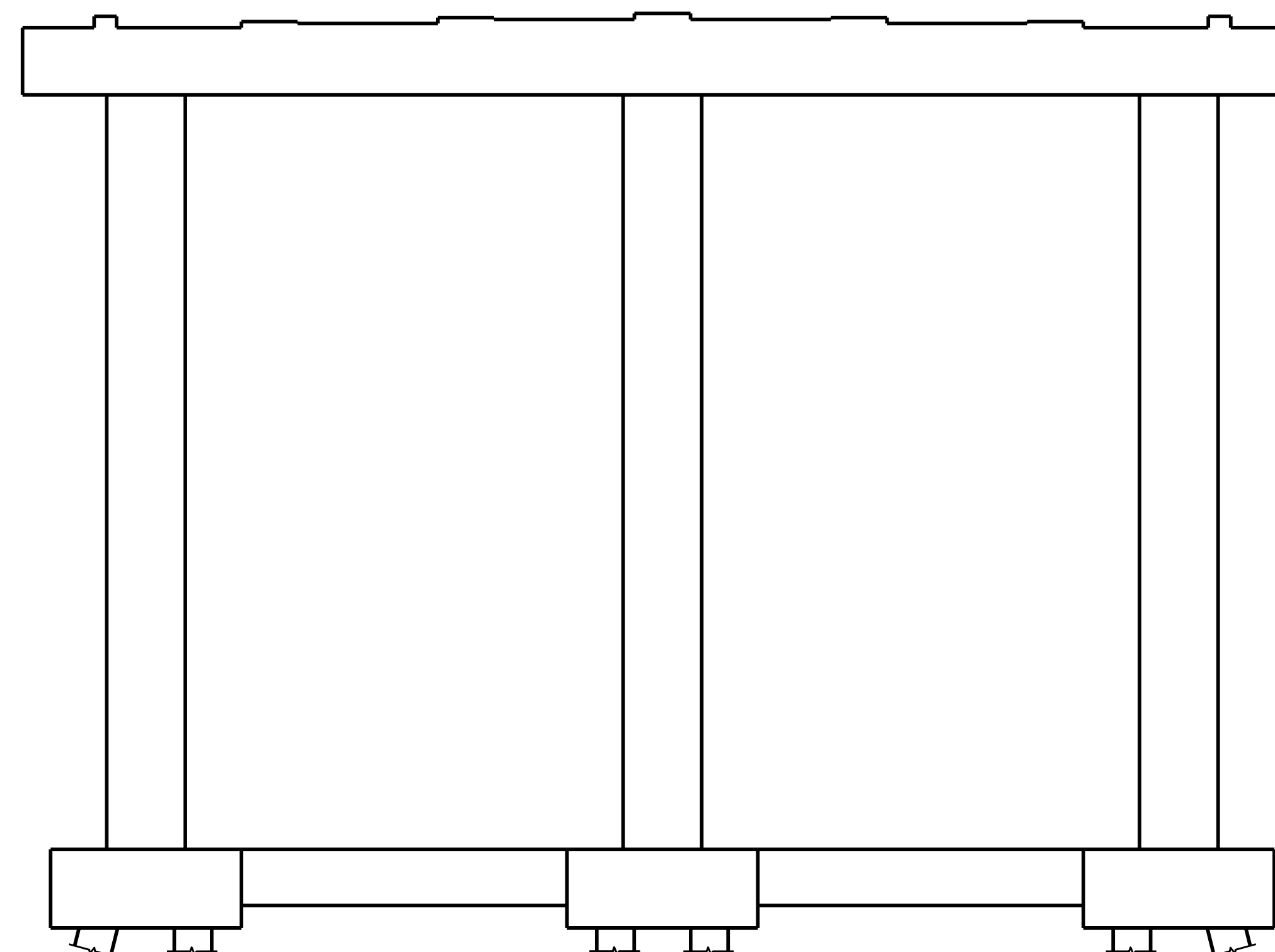
PLAN
TOP OF CAP



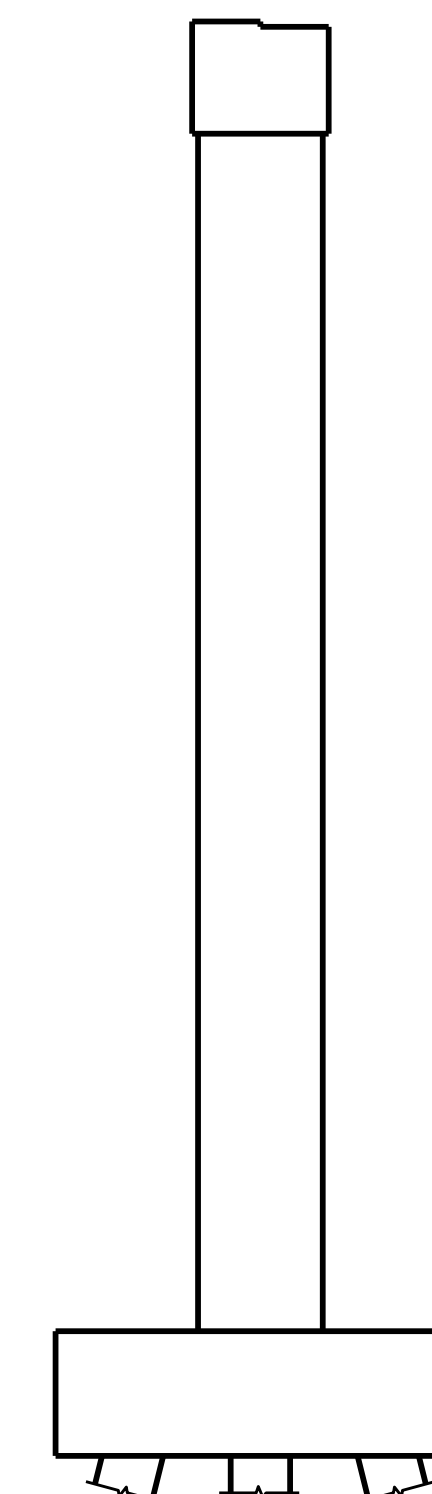
ELEVATION
SOUTH SIDE



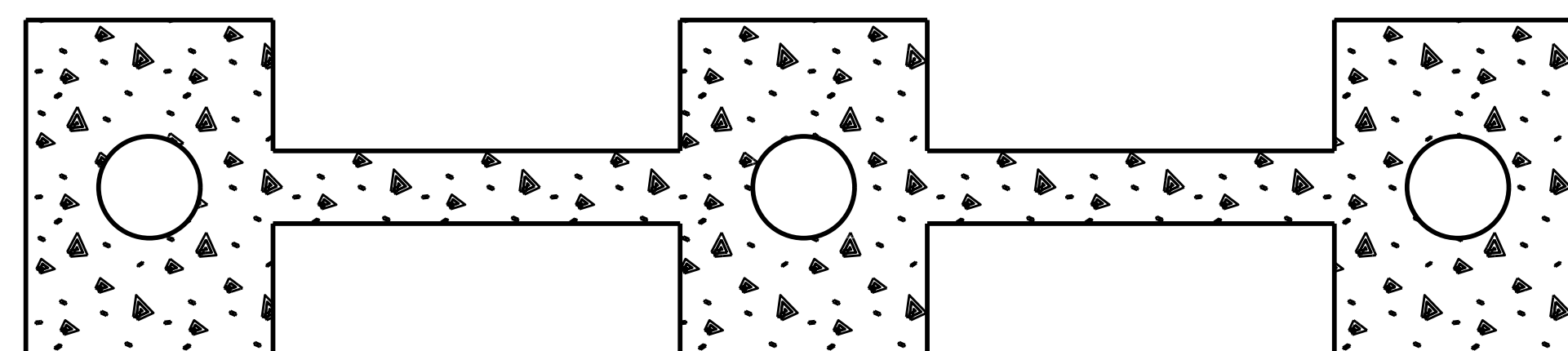
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

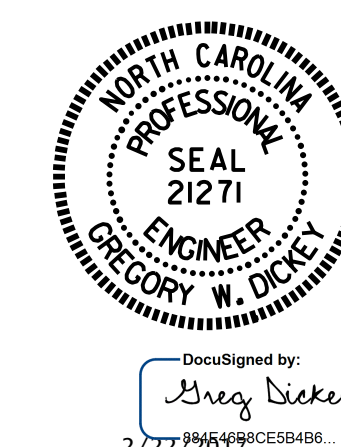
- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 41 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 42 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

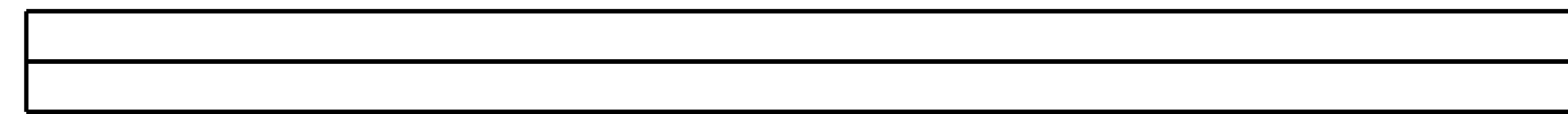
BENT 41

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
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 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.
 FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

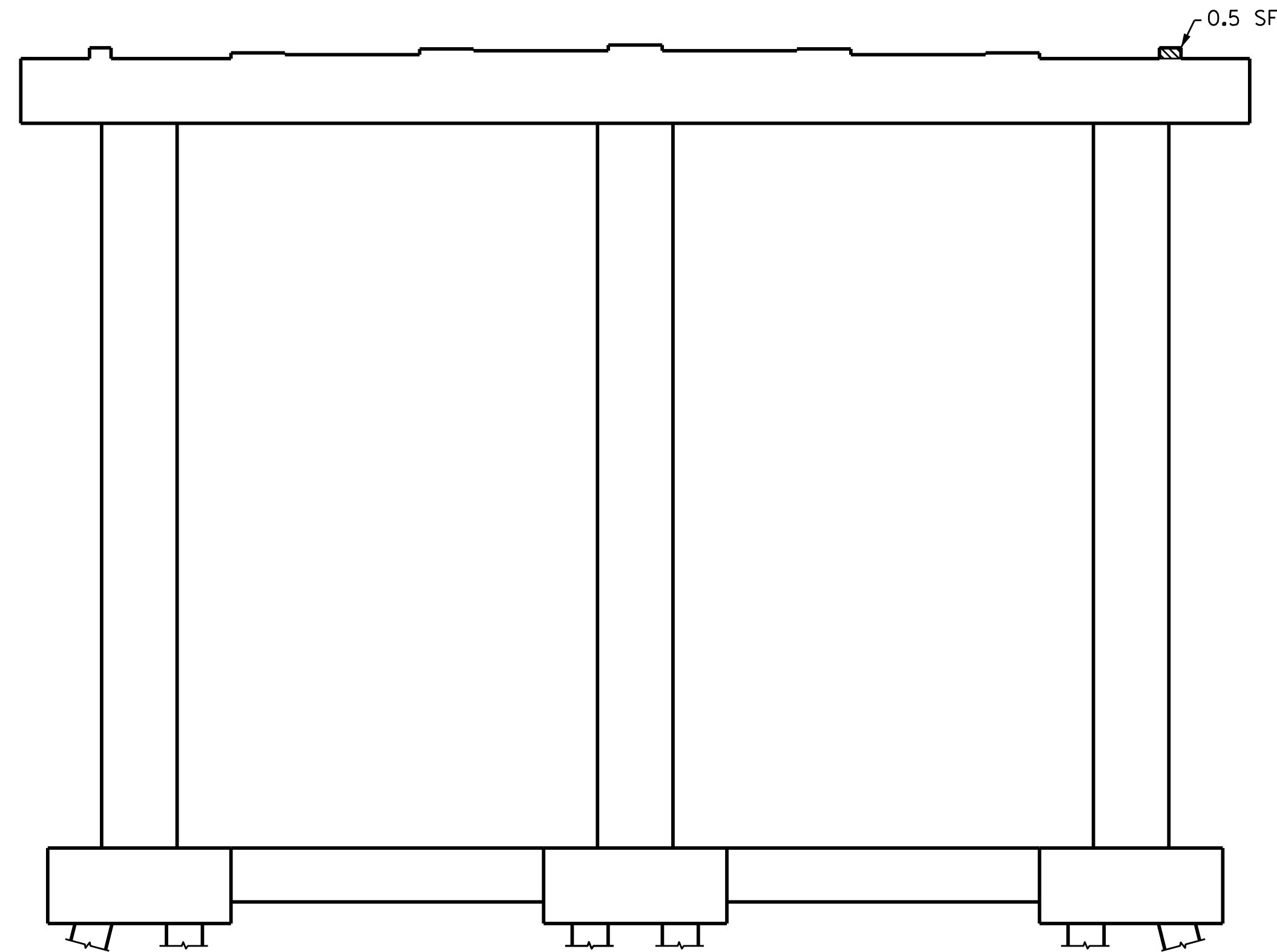
DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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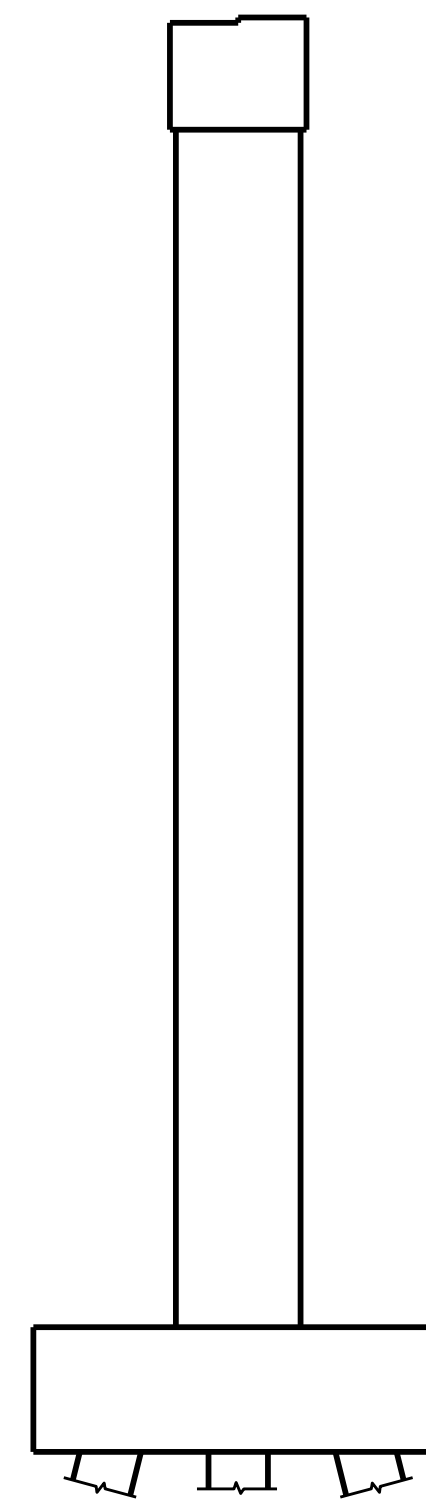
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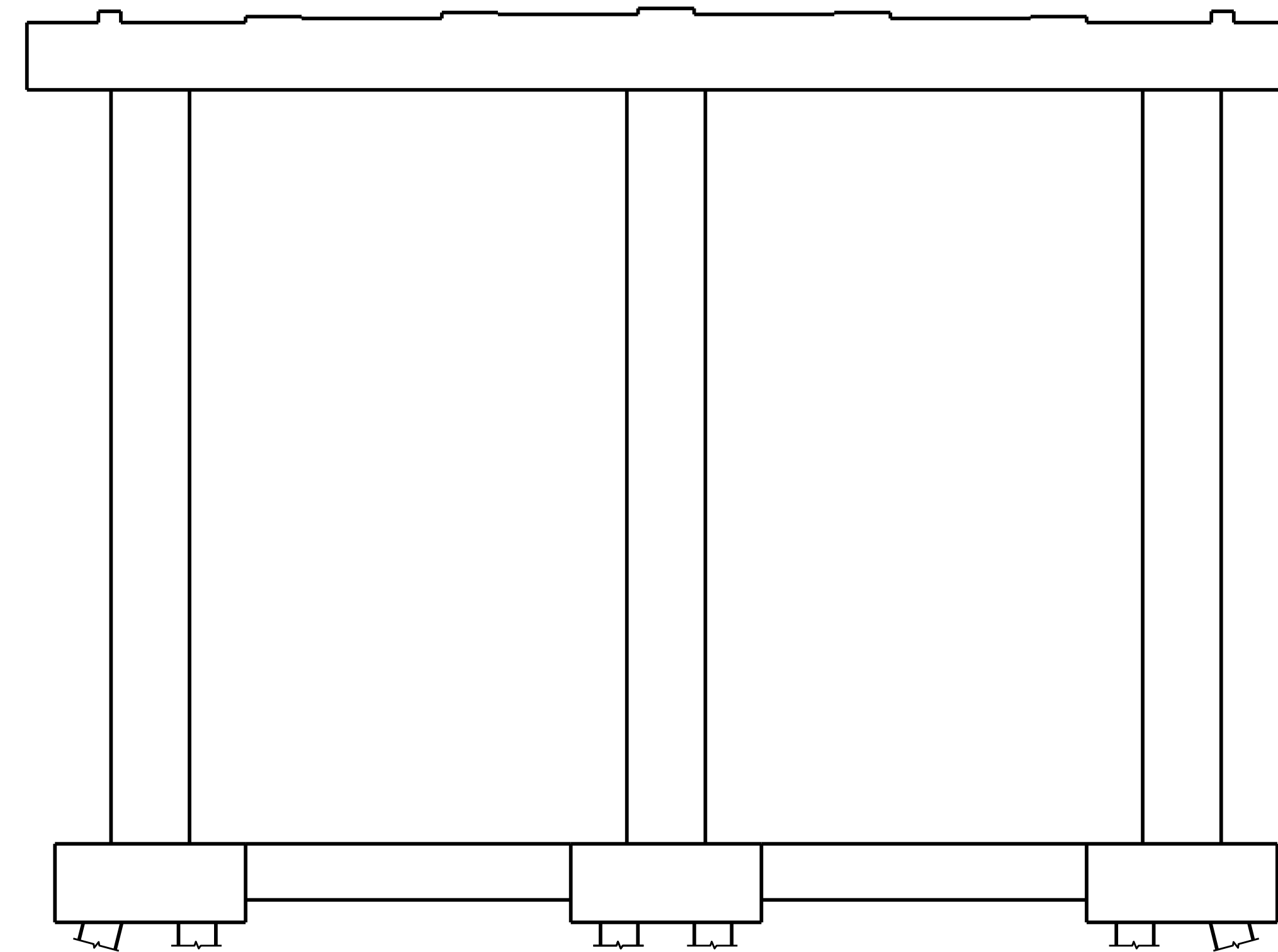
PLAN
TOP OF CAP



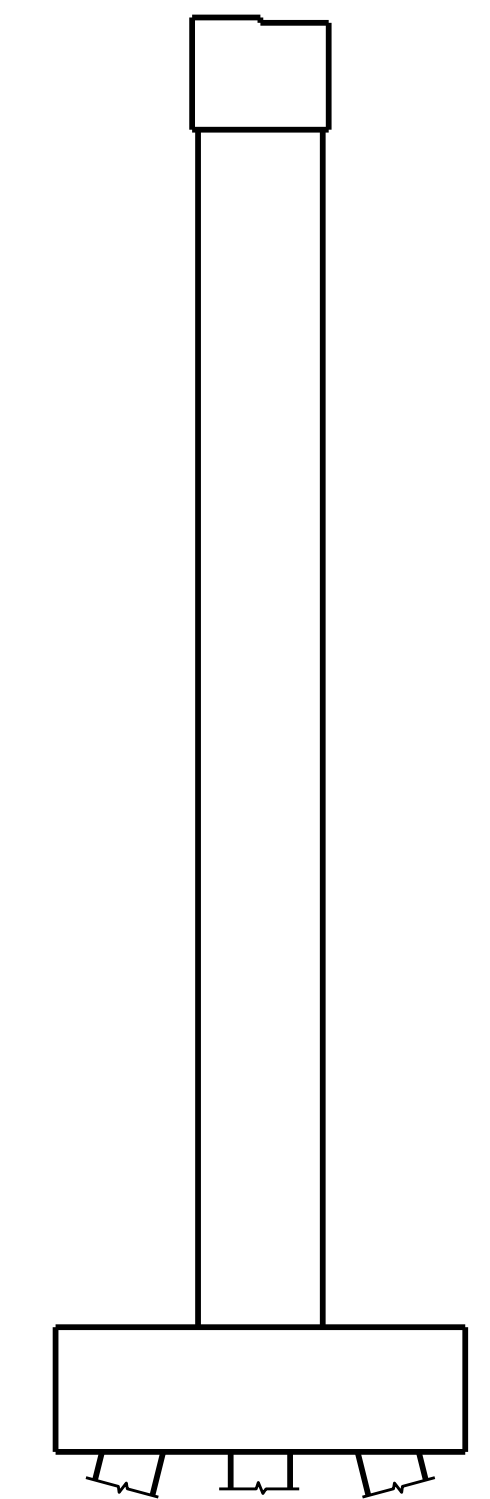
ELEVATION
SOUTH SIDE



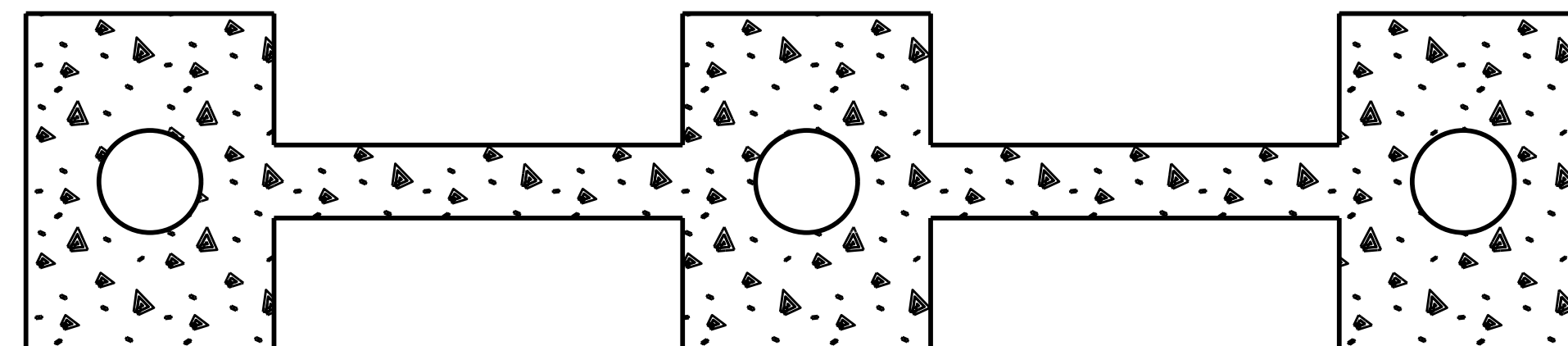
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

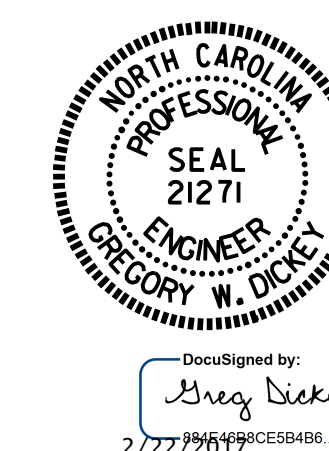
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 42 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.5 | 0.3 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 43 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

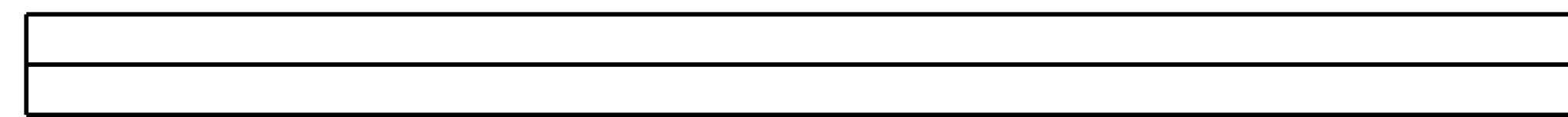
BENT 42

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

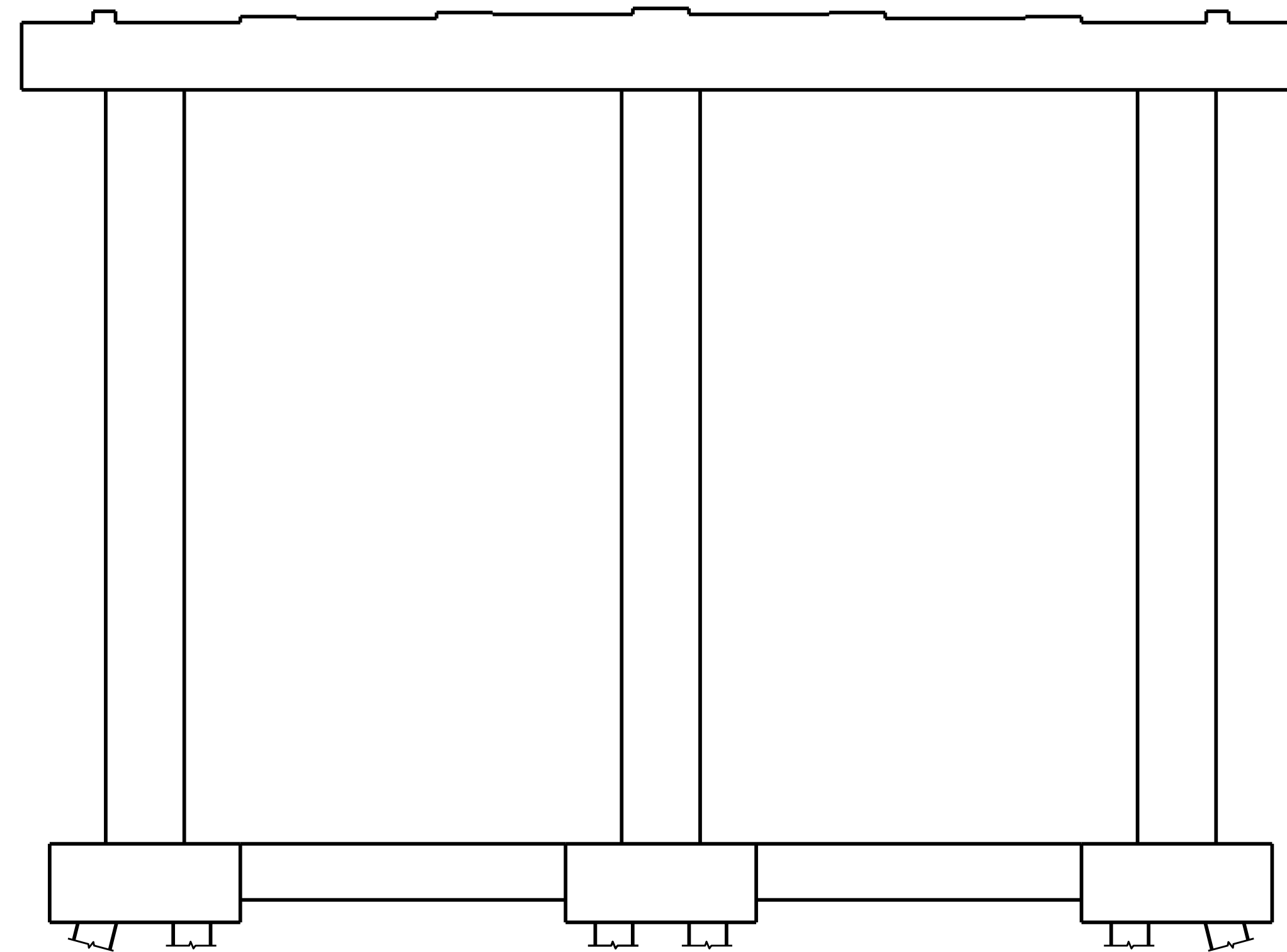
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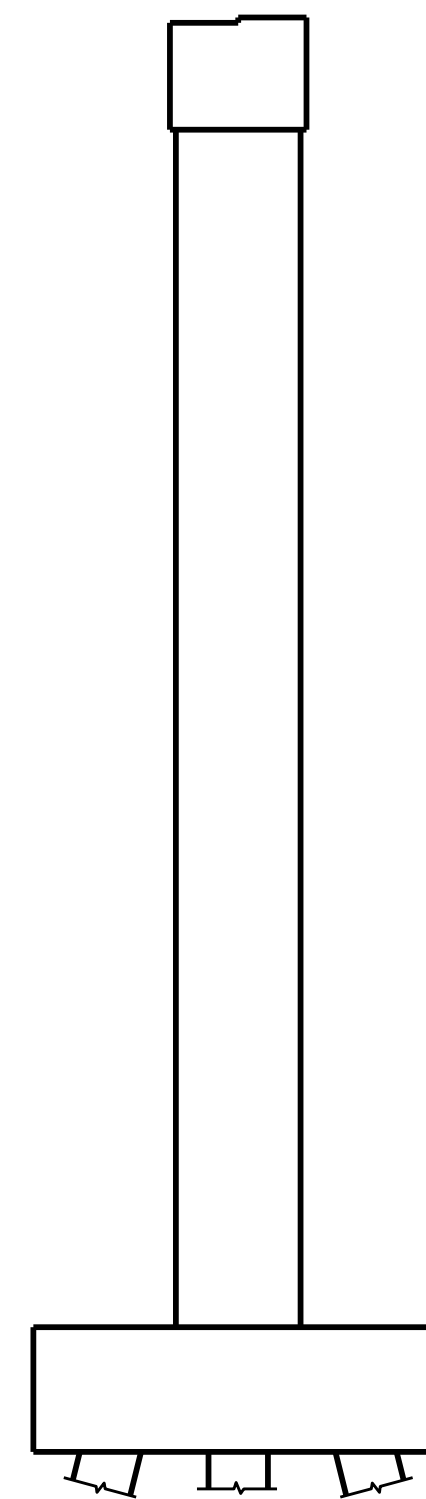
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



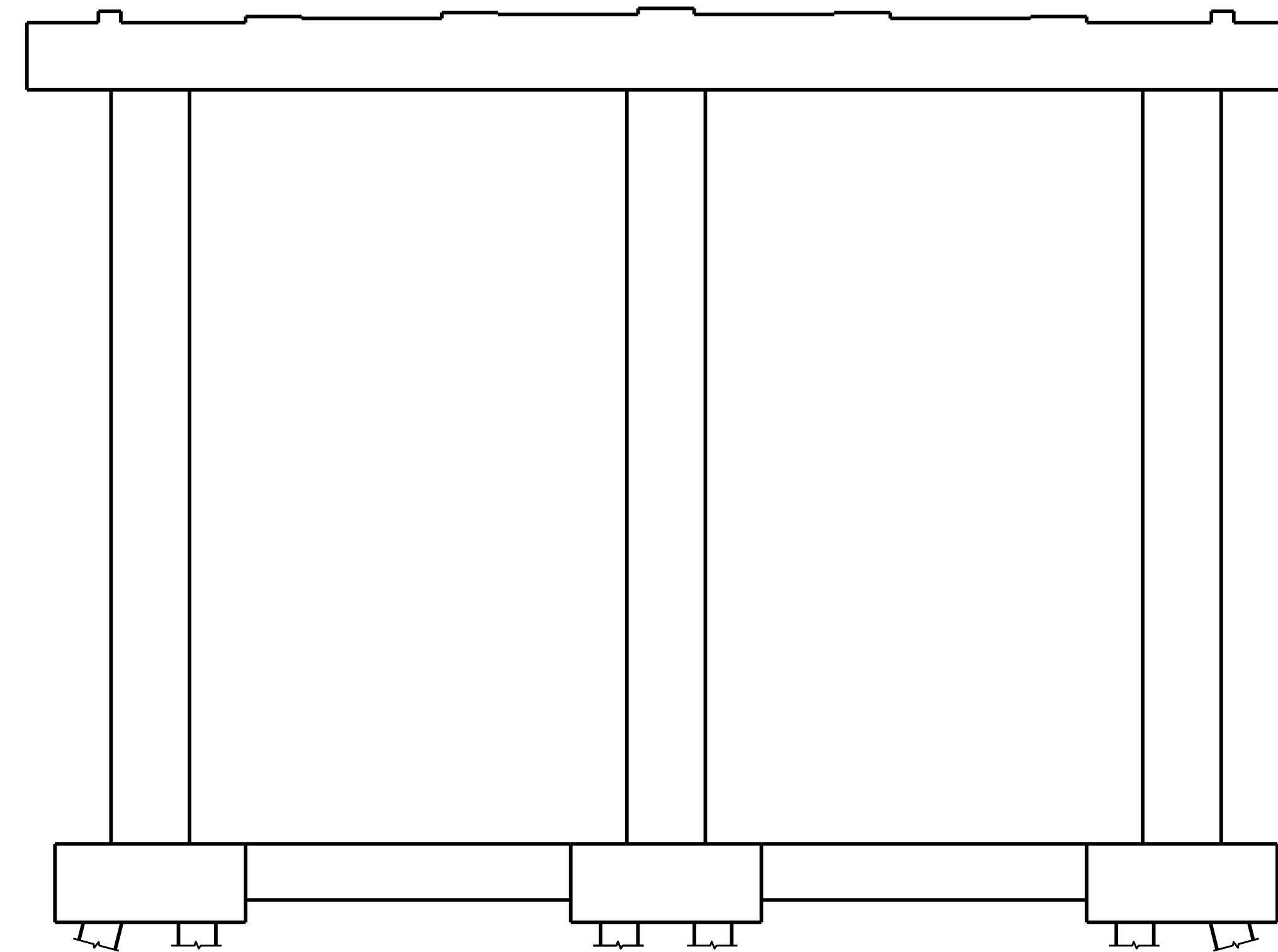
PLAN
TOP OF CAP



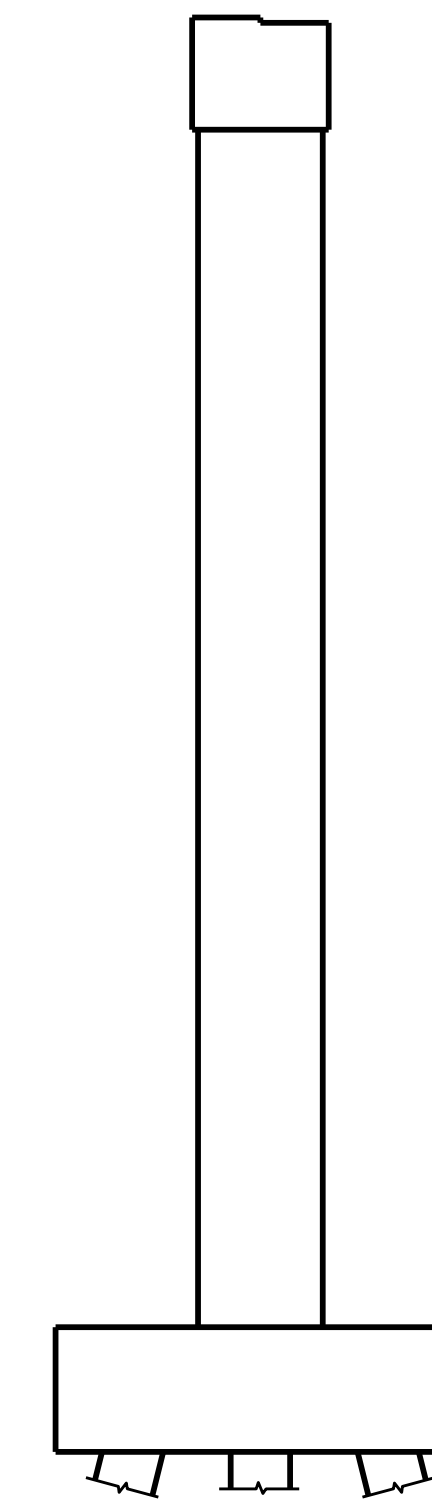
ELEVATION
SOUTH SIDE



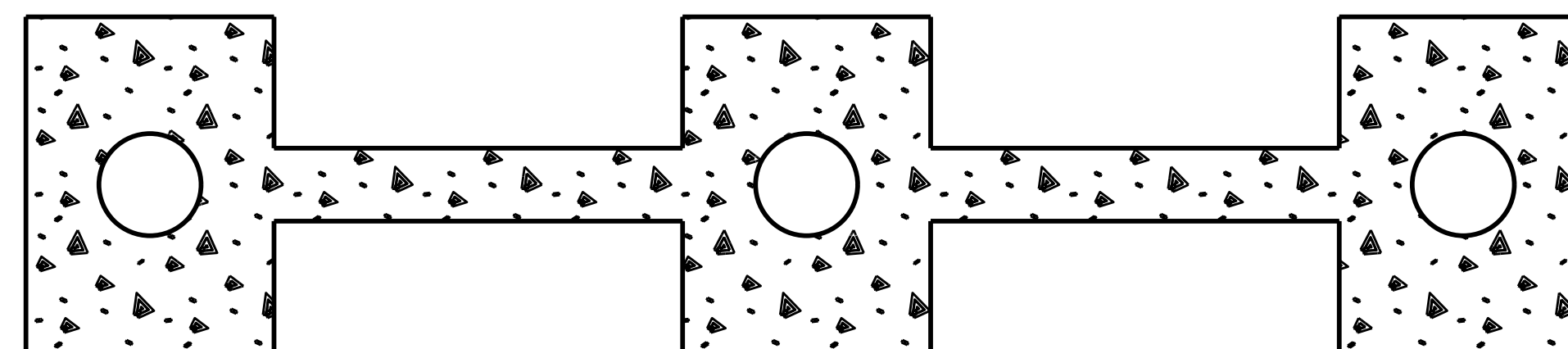
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
TOP OF FOOTING

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

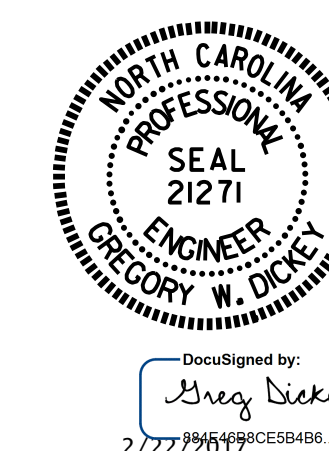
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

| REPAIR QUANTITY TABLE | | | | |
|--------------------------|------------|-----------|---------|-----------|
| REPAIRS BENT 43 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 0.0 | 0.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 0.0 | 0.0 | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| FTG (VERTICAL FACE) | 0.0 | | | |
| FTG (HORIZONTAL, CORNER) | 334.4 | | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0.0 | | | |
| COLUMN | 0.0 | | | |
| STRUT | 0.0 | | | |
| FOOTING | 0.0 | | | |

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 44 OF 50



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 43

DRAWN BY : P. D. BRYANT / S. T. SANDOR DATE : 9/2016
 CHECKED BY : R. N. WEISZ DATE : 9/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-87 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

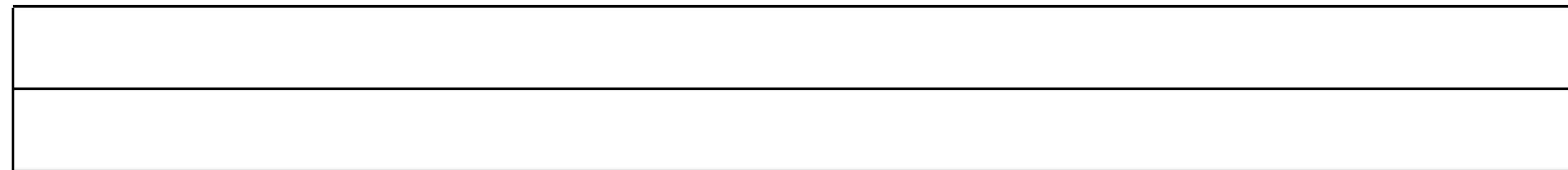
REPAIR QUANTITY TABLE

| REPAIRS BENT 44 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

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

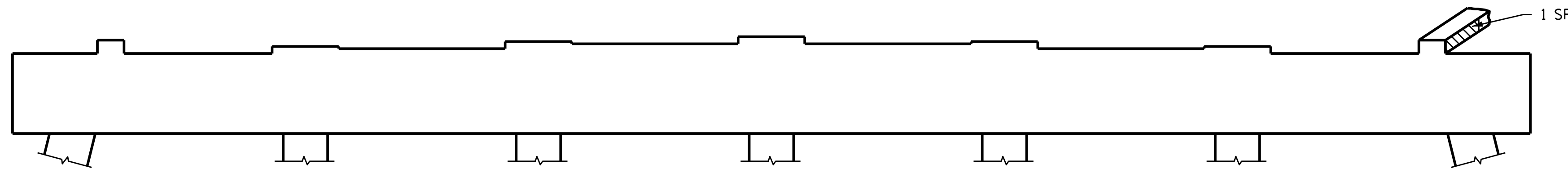
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION



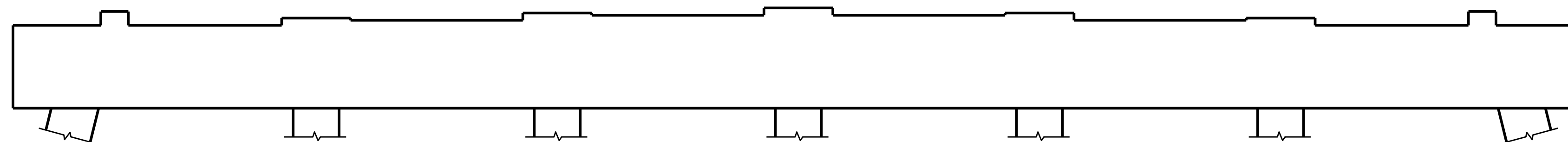
PLAN

TOP OF CAP



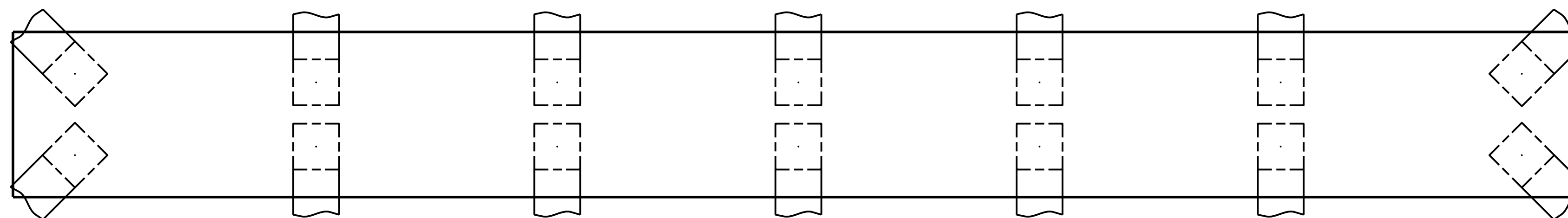
ELEVATION

SOUTH SIDE



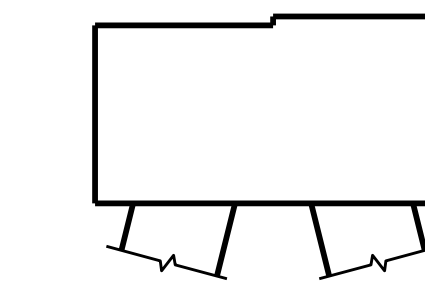
ELEVATION

NORTH SIDE



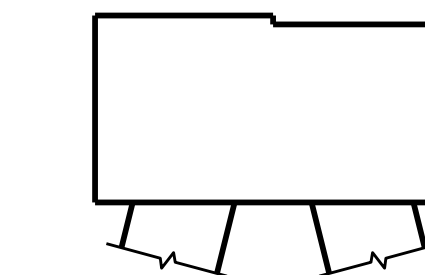
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

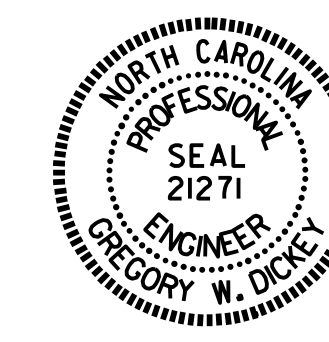
CARTERET COUNTY

BRIDGE NO. 68

SHEET 45 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 44



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| 1 | | | 3 | | | S1-88 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 45 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

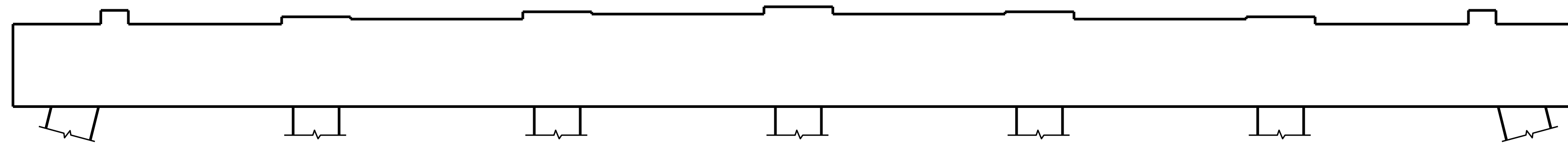
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

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



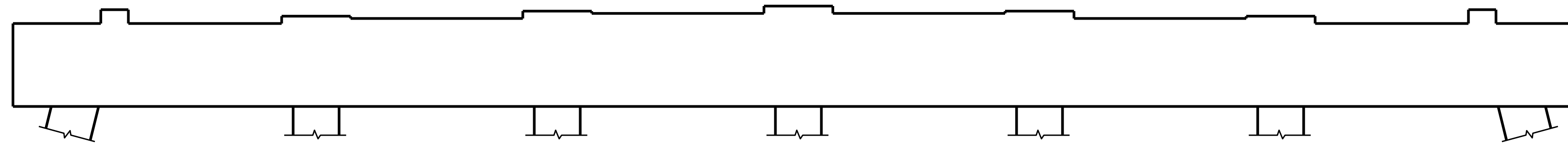
PLAN

TOP OF CAP



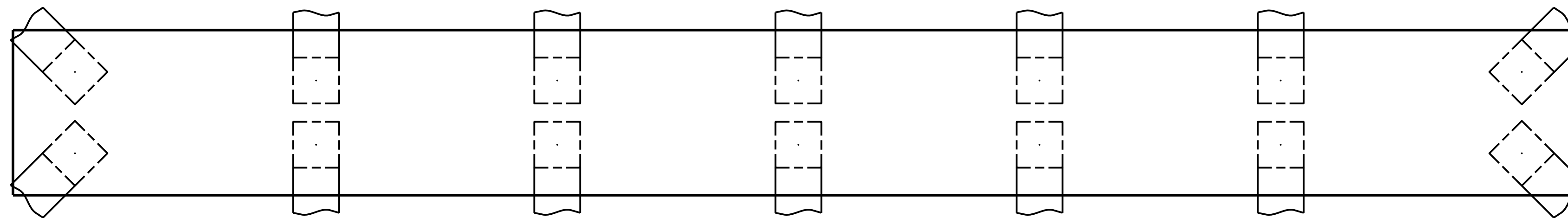
ELEVATION

SOUTH SIDE



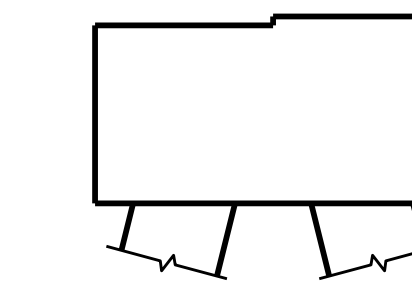
ELEVATION

NORTH SIDE



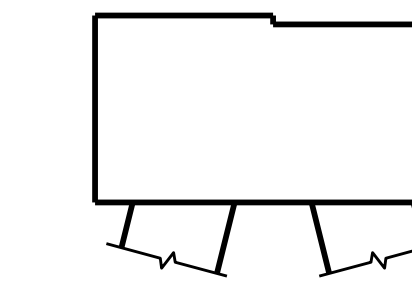
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

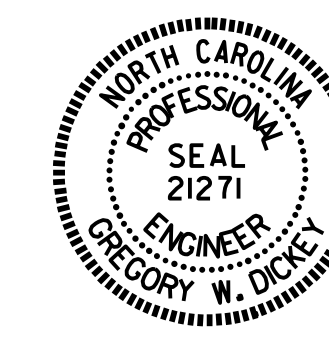
CARTERET COUNTY

BRIDGE NO. 68

SHEET 46 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 45



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| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

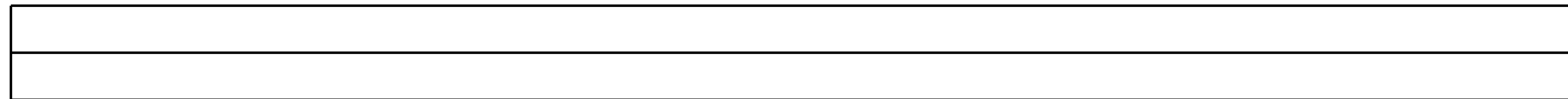
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 46 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

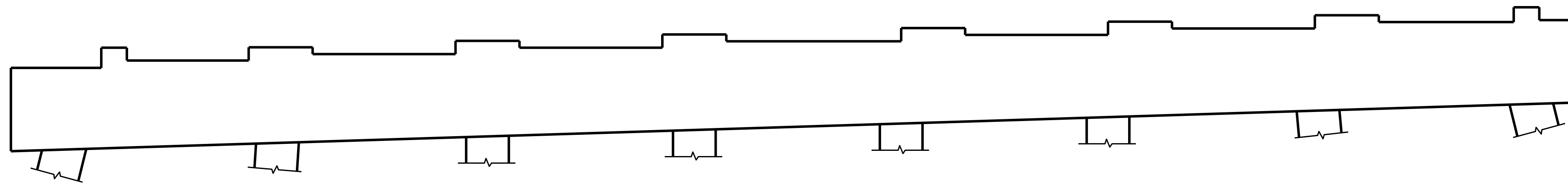
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NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.



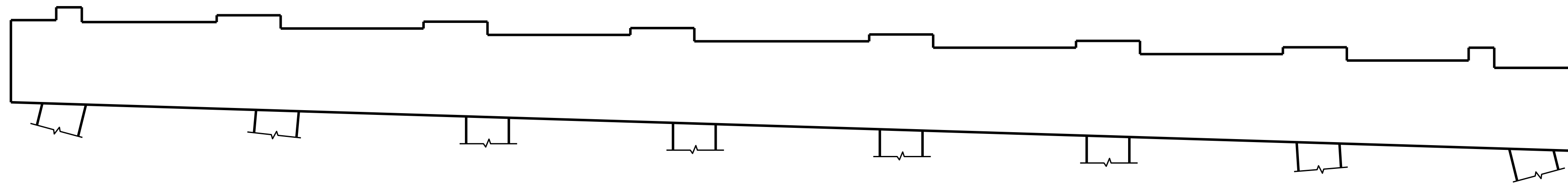
PLAN

TOP OF CAP



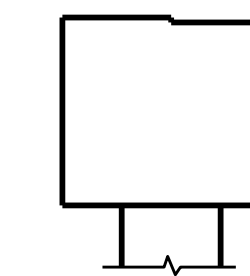
ELEVATION

SOUTH SIDE



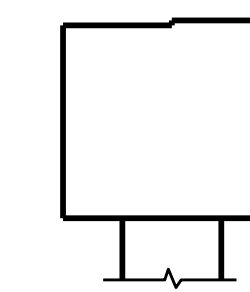
ELEVATION

NORTH SIDE



END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

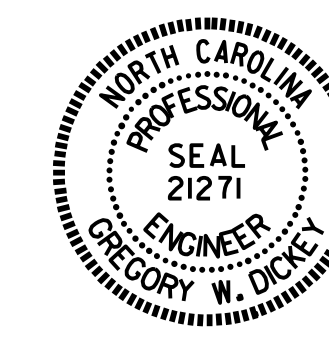
CARTERET COUNTY

BRIDGE NO. 68

SHEET 47 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 46



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| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 47 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

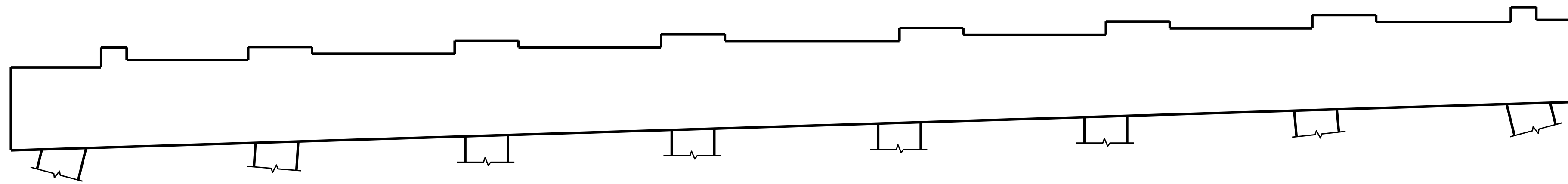
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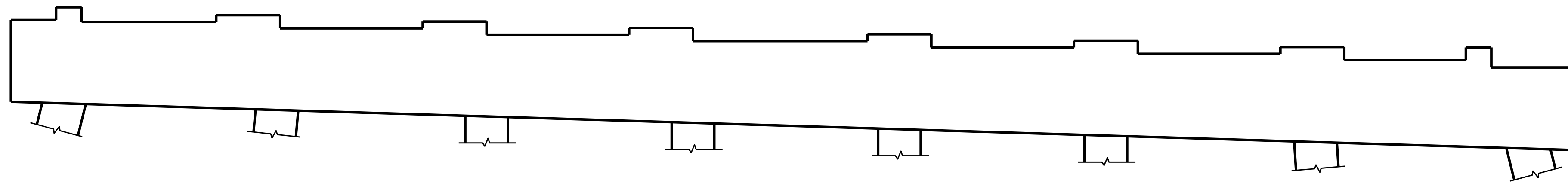
PLAN

TOP OF CAP



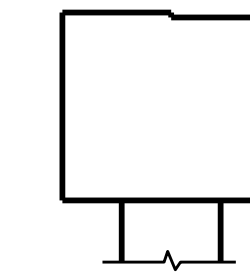
ELEVATION

SOUTH SIDE



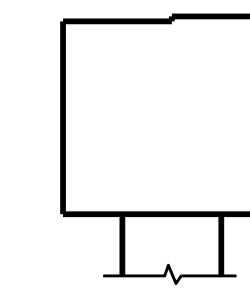
ELEVATION

NORTH SIDE



END VIEW

EAST SIDE



END VIEW

WEST SIDE



PLAN

BOTTOM OF CAP
(LOOKING UP)

PROJECT NO. B-5938

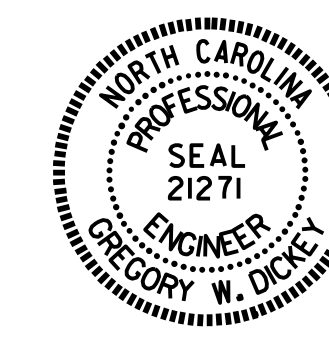
CARTERET COUNTY

BRIDGE NO. 68

SHEET 48 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 47



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NOTES:

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

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


FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

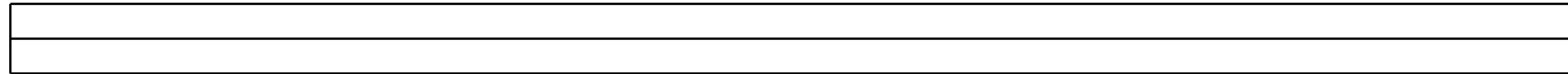
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 48 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0.0 | | |

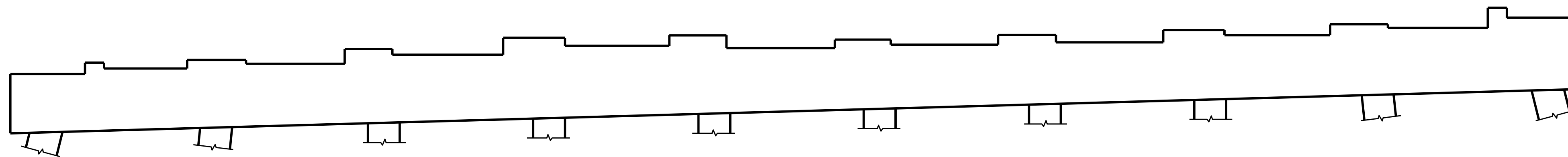
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



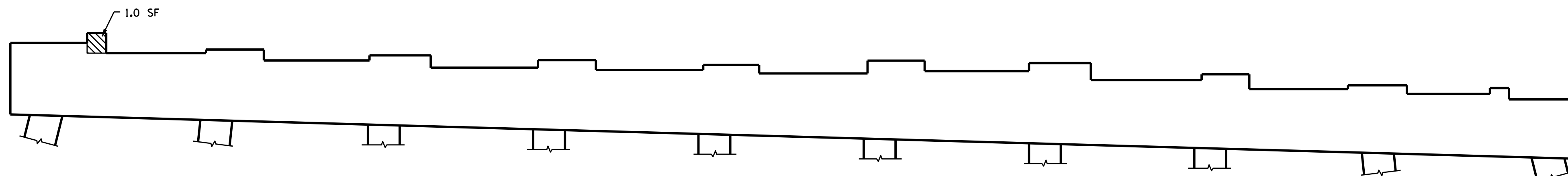
PLAN

TOP OF CAP



ELEVATION

SOUTH SIDE



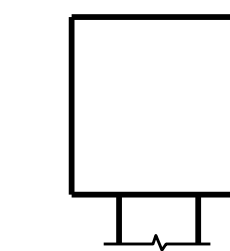
ELEVATION

NORTH SIDE



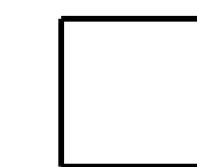
PLAN

BOTTOM OF CAP
(LOOKING UP)



END VIEW

EAST SIDE



END VIEW

WEST SIDE

PROJECT NO. B-5938

CARTERET COUNTY

BRIDGE NO. 68

SHEET 49 OF 50

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 48



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| 1 | | | 3 | | | S1-92 |
| 2 | | | 4 | | | |

NOTES:

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

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

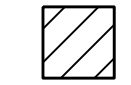
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

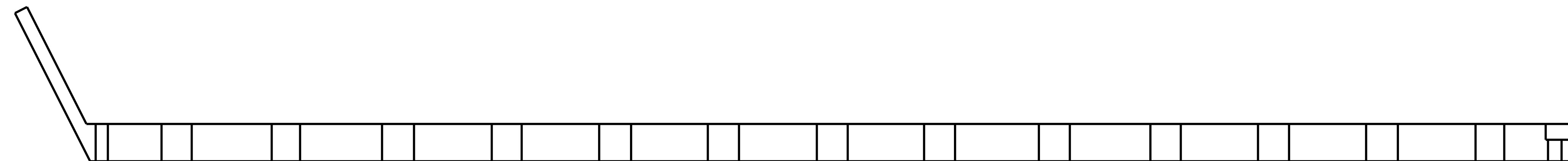
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

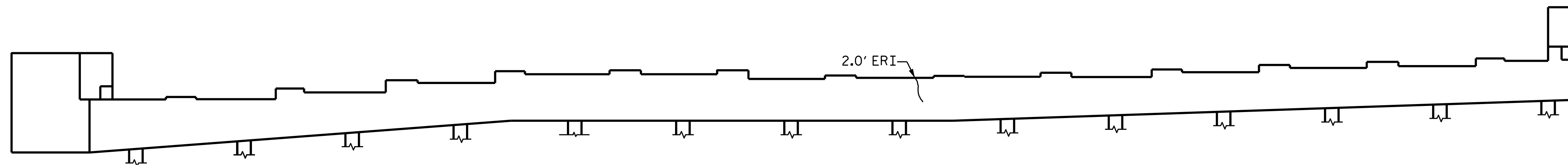
| REPAIRS END BENT 2 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.0 | 0.0 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 2.0 | | |

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

 - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP



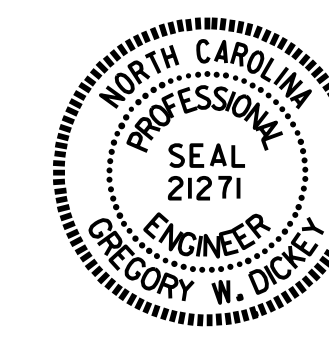
ELEVATION
SOUTH SIDE

PROJECT NO. B-5938
CARTERET COUNTY
BRIDGE NO. 68

SHEET 50 OF 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 2



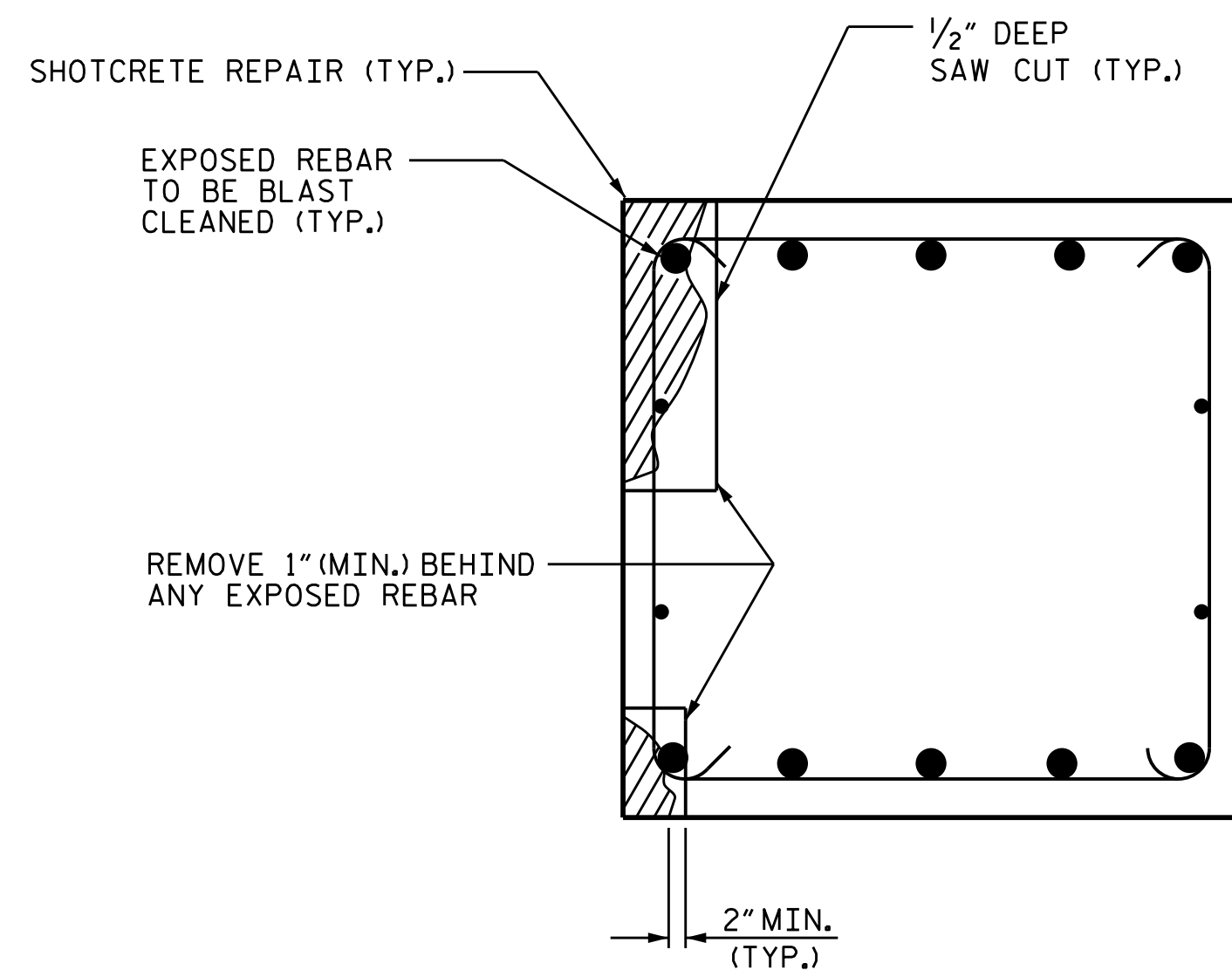
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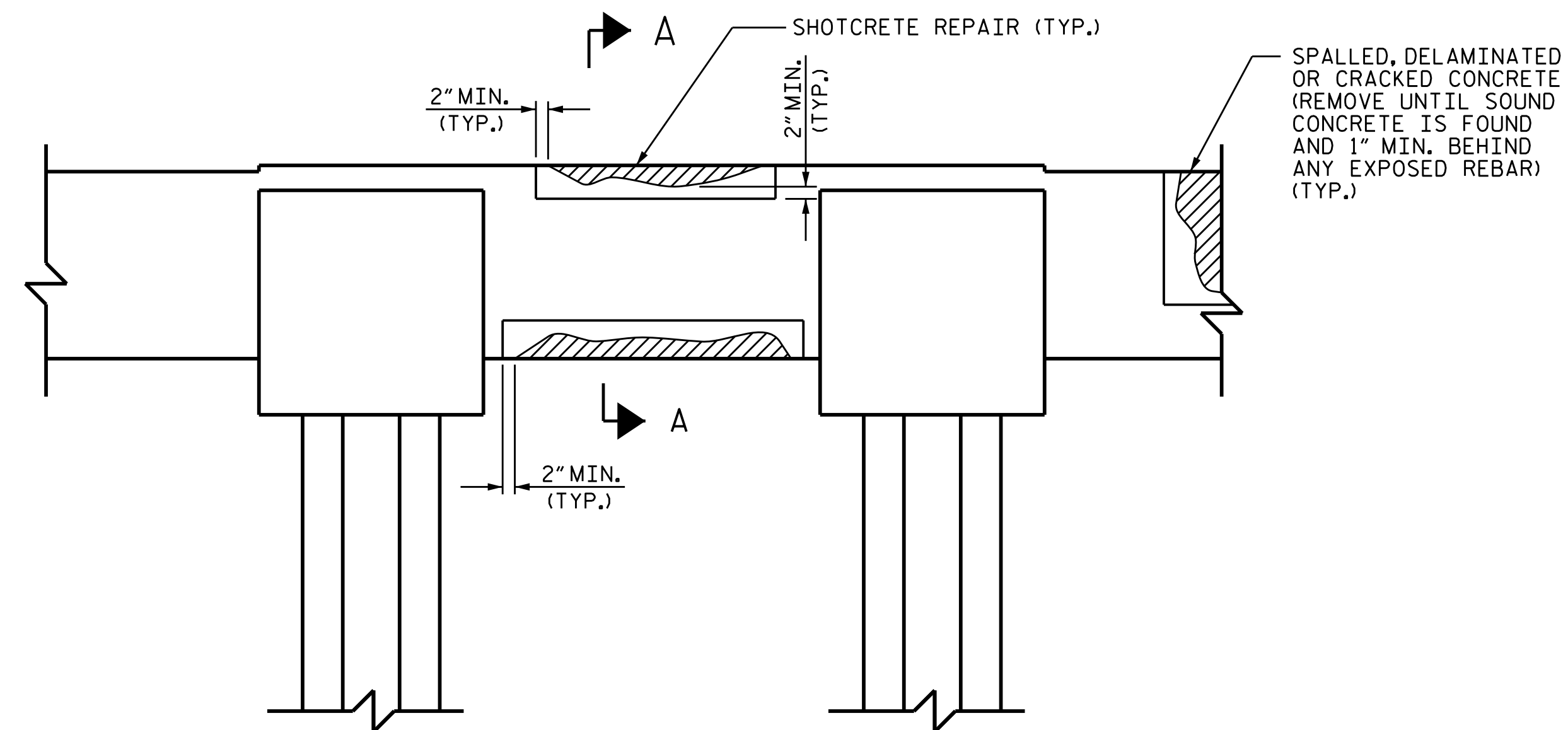
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| 2 | | | 4 | | | |



SECTION A-A



BENT CAP REPAIRS

CAP REPAIR
(COLUMN & FOOTING
REPAIRS SIMILAR)

NOTES

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

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

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

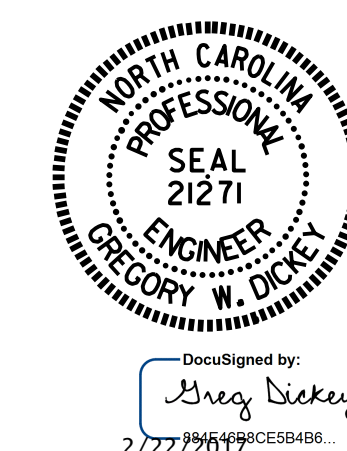
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.



PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68



STATE OF NORTH CAROLINA
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 RALEIGH

TYPICAL
 SUBSTRUCTURE
 REPAIR DETAILS

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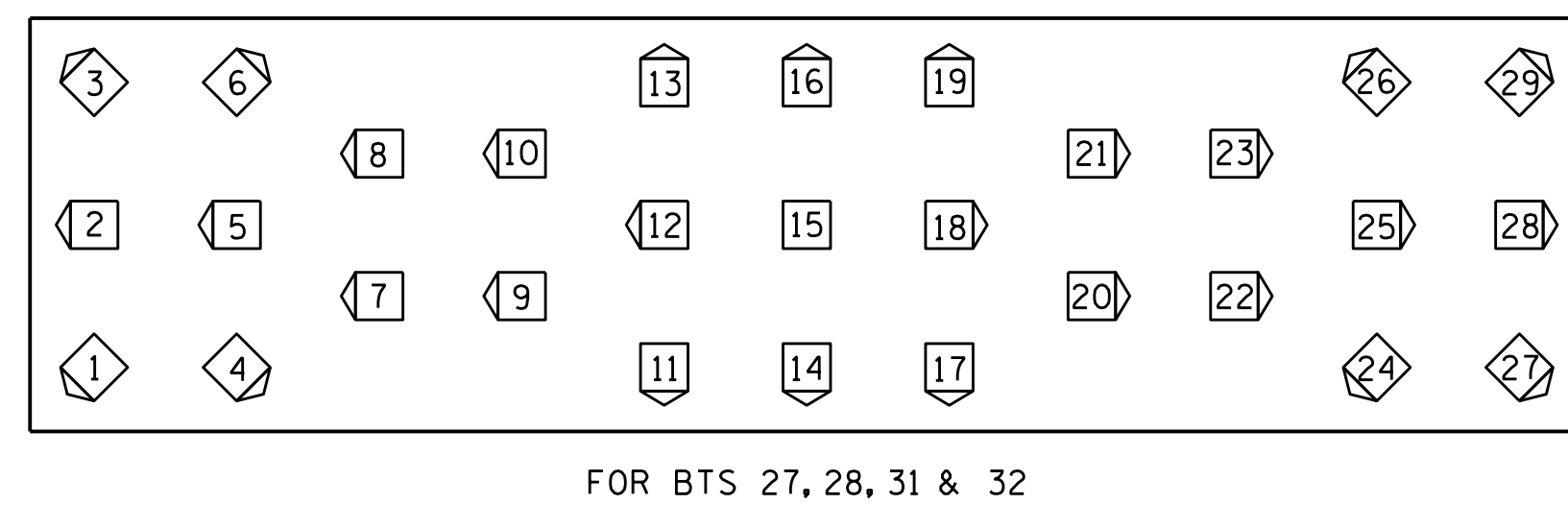
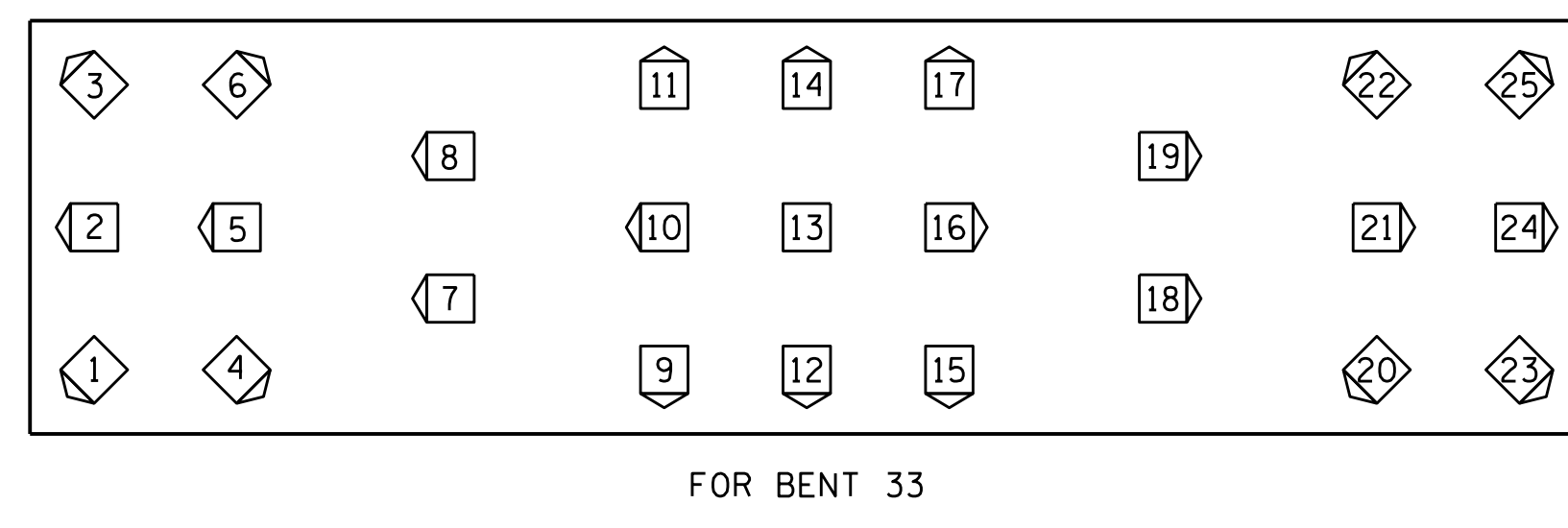
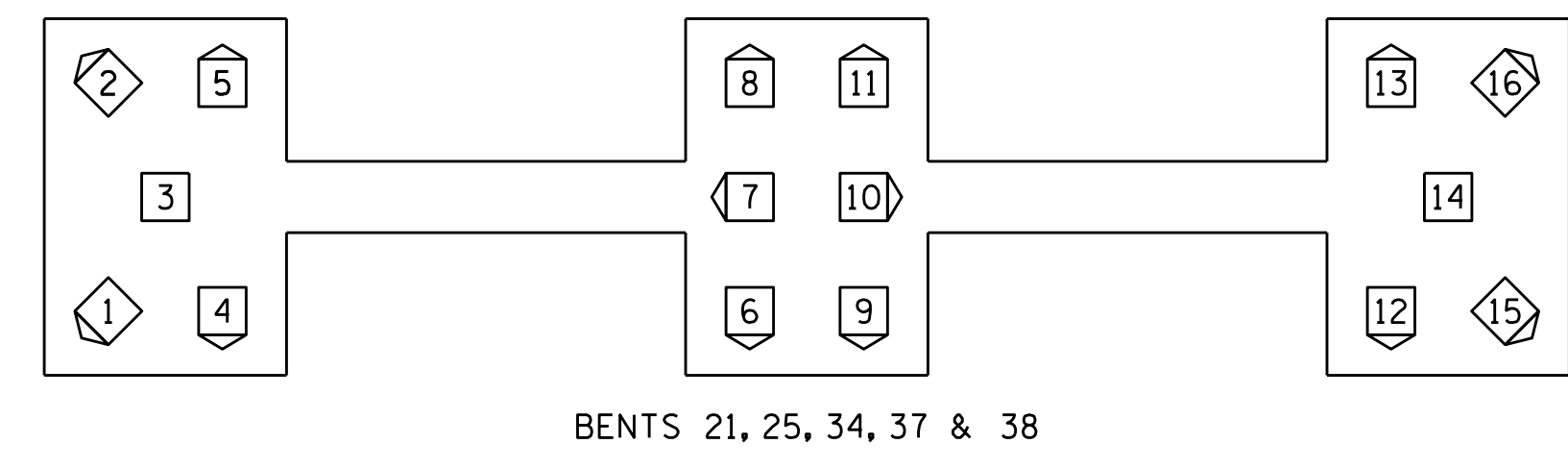
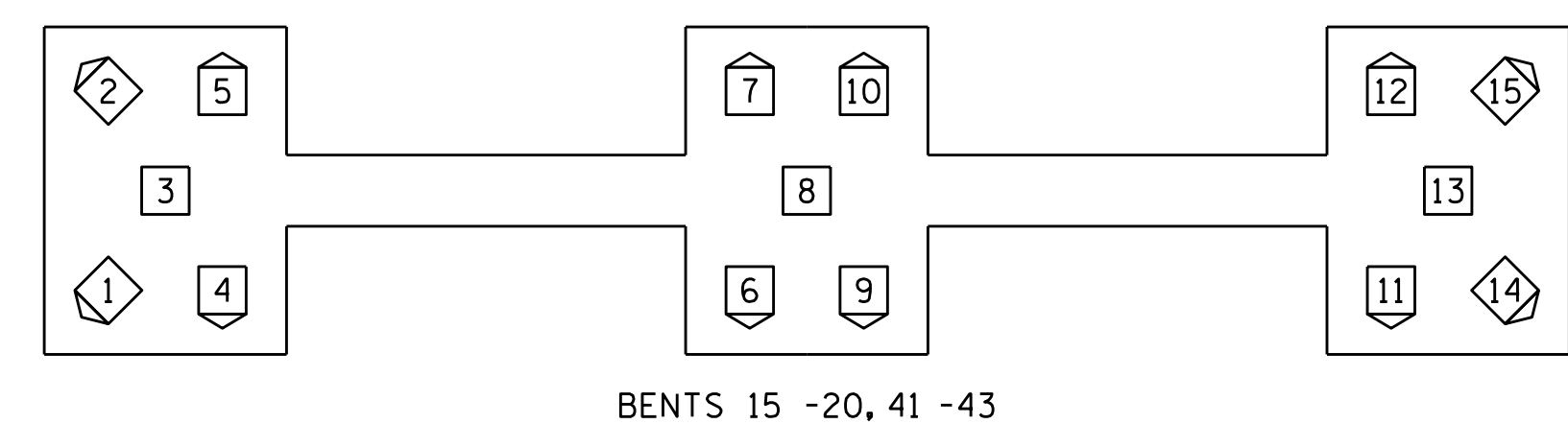
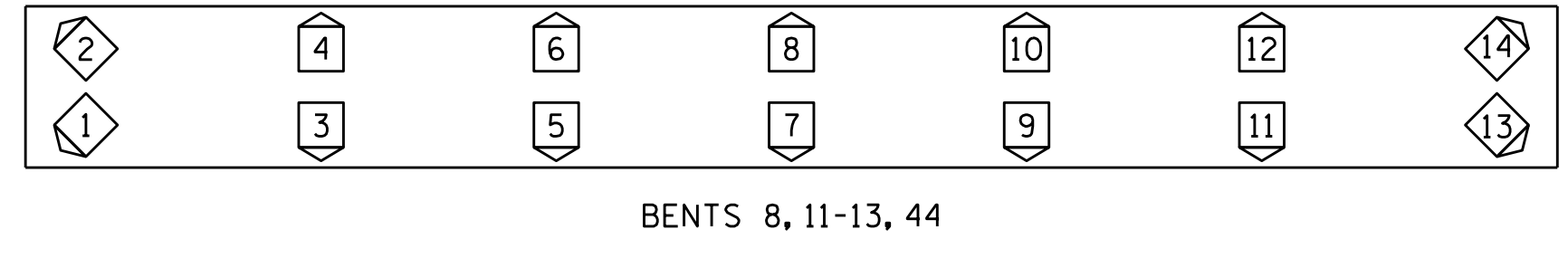
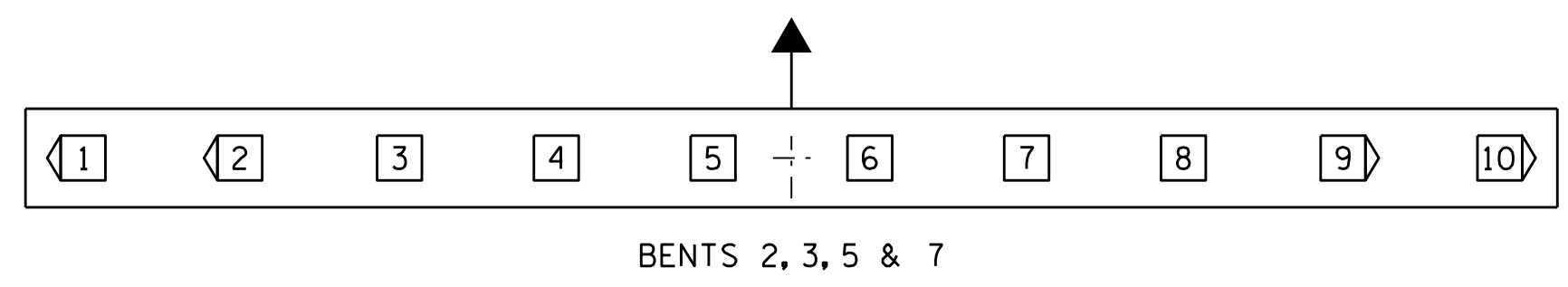
SUMMARY OF QUANTITIES

| | QUANTITIES | |
|--------------------|------------|--------|
| | ESTIMATE | ACTUAL |
| BENTS 1 - 44 | LF | LF |
| PILE ENCAPSULATION | 480 | |

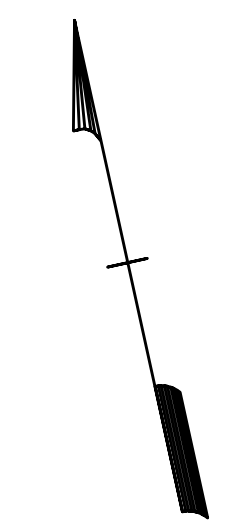
NOTES:
SEE "PILE ENCAPSULATION DETAILS" SHEETS FOR PILE ENCAPSULATION REPAIR DETAILS.
FOR PILE ENCAPSULATION, SEE SPECIAL PROVISIONS.

| BENT | PILE | REPAIR LENGTH | |
|------|------|---------------|-----------|
| | | EST. LF | ACTUAL LF |
| 2 | 8 | 14 | |
| 3 | 5 | 13 | |
| 5 | 6 | 7 | |
| 7 | 1 | 13 | |
| 7 | 10 | 7 | |
| 8 | 6 | 7 | |
| 11 | 13 | 7 | |
| 12 | 4 | 7 | |
| 12 | 5 | 7 | |
| 12 | 12 | 7 | |
| 12 | 14 | 7 | |
| 13 | 4 | 10 | |
| 15 | 9 | 5 | |
| 15 | 14 | 8 | |
| 16 | 1 | 5 | |
| 16 | 5 | 5 | |
| 17 | 14 | 5 | |
| 18 | 2 | 5 | |
| 18 | 10 | 5 | |
| 18 | 13 | 5 | |
| 19 | 12 | 5 | |
| 20 | 6 | 5 | |
| 21 | 13 | 5 | |
| 25 | 5 | 5 | |
| 25 | 15 | 5 | |
| 27 | 13 | 5 | |
| 27 | 27 | 5 | |
| 28 | 8 | 5 | |
| 28 | 12 | 5 | |
| 28 | 14 | 8 | |
| 28 | 16 | 5 | |
| 28 | 27 | 5 | |
| 31 | 4 | 5 | |
| 31 | 5 | 5 | |
| 31 | 12 | 5 | |
| 31 | 13 | 5 | |
| 31 | 15 | 5 | |
| 31 | 18 | 5 | |
| 31 | 24 | 5 | |
| 32 | 11 | 5 | |
| 32 | 18 | 5 | |

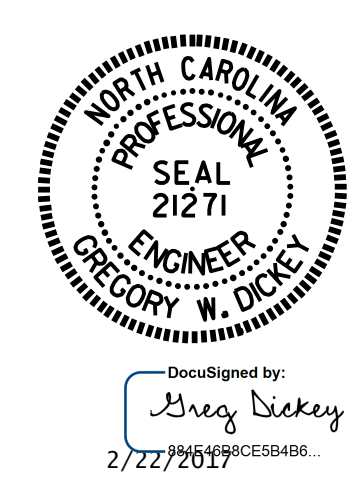
| BENT | PILE | REPAIR LENGTH | |
|------|------|---------------|-----------|
| | | EST. LF | ACTUAL LF |
| 32 | 21 | 5 | |
| 32 | 24 | 5 | |
| 33 | 4 | 5 | |
| 33 | 5 | 5 | |
| 33 | 8 | 5 | |
| 33 | 10 | 5 | |
| 33 | 11 | 5 | |
| 33 | 12 | 5 | |
| 33 | 13 | 5 | |
| 33 | 14 | 5 | |
| 33 | 16 | 5 | |
| 33 | 17 | 5 | |
| 33 | 20 | 5 | |
| 33 | 22 | 5 | |
| 33 | 23 | 5 | |
| 34 | 5 | 5 | |
| 34 | 6 | 5 | |
| 34 | 7 | 5 | |
| 34 | 10 | 5 | |
| 34 | 11 | 5 | |
| 34 | 15 | 5 | |
| 34 | 16 | 5 | |
| 37 | 2 | 7 | |
| 37 | 5 | 5 | |
| 37 | 7 | 5 | |
| 37 | 10 | 5 | |
| 37 | 12 | 7 | |
| 37 | 13 | 5 | |
| 37 | 14 | 7 | |
| 37 | 15 | 5 | |
| 38 | 3 | 5 | |
| 38 | 4 | 5 | |
| 38 | 5 | 5 | |
| 41 | 14 | 5 | |
| 42 | 8 | 5 | |
| 43 | 5 | 10 | |
| 44 | 1 | 7 | |
| 44 | 7 | 7 | |
| 44 | 14 | 13 | |



TYPICAL PILE NUMBERS
ALL PILES ARE 20" SQUARE PRESTRESSED CONCRETE.



PROJECT NO. B-5938
CARTERET COUNTY
BRIDGE NO. 68
SHEET 1 OF 3



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PILE ENCAPSULATION REPAIR TABLES

DRAWN BY : P.D. BRYANT DATE : 01/2017
CHECKED BY : R.WEISZ DATE : 02/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

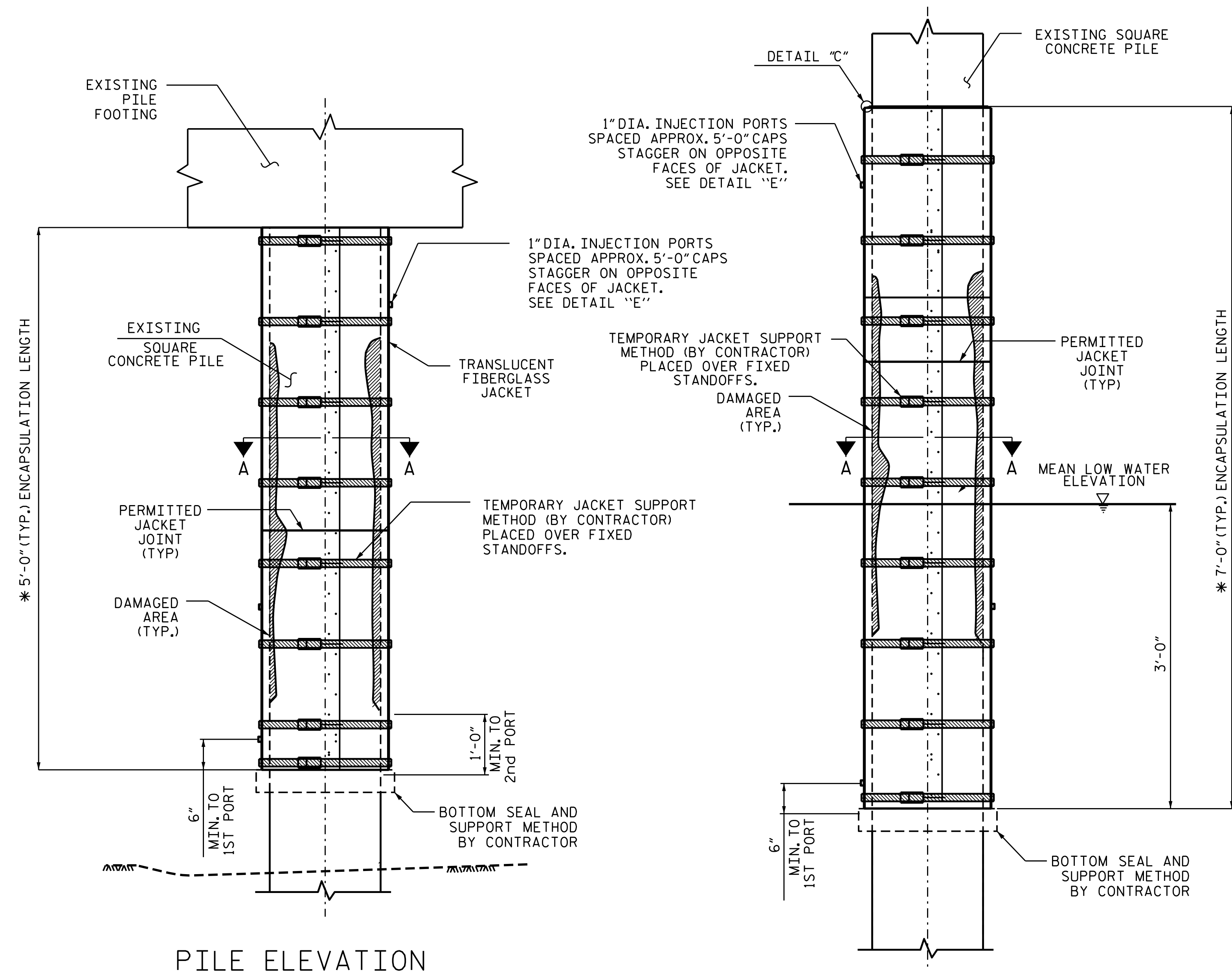
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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-95 |
| 2 | | | 4 | | | |

NOTES:

ALL EXISTING PILES ARE 20" SQUARE PRESTRESSED CONCRETE PILES.

SEE PILE ENCAPSULATION REPAIR TABLE SHT S1-95 FOR ESTIMATED ENCAPSULATION LENGTH.

FOR PILE ENCAPSULATION, SEE SPECIAL PROVISIONS.

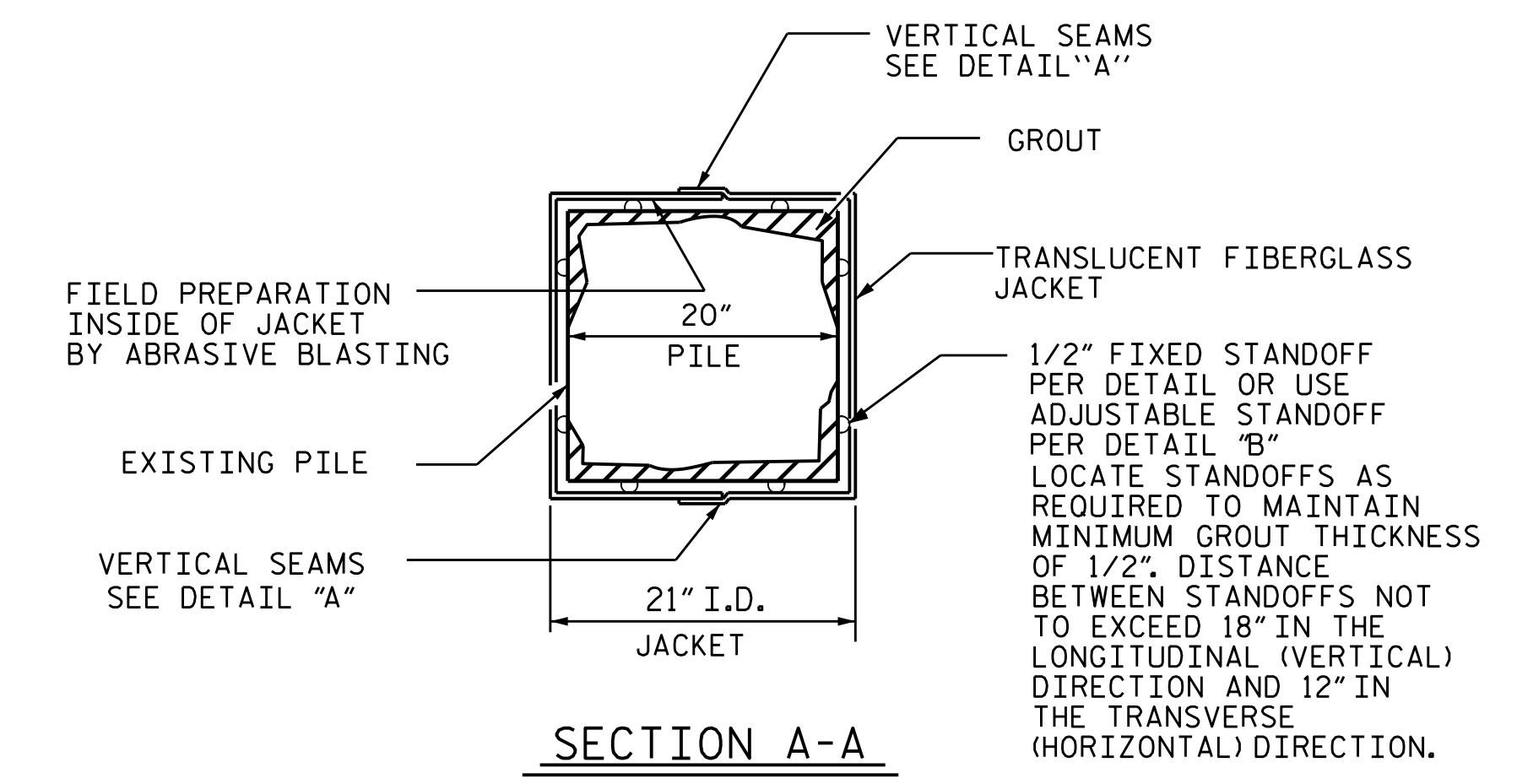


PILE ELEVATION

* REFER TO SHT S1-95 FOR ENCAPSULATION LENGTH (TYPICAL FOR BENTS 15-21,25,27,28,31-34,37,38,41-43)

PILE ELEVATION

* REFER TO SHT S1-95 FOR ENCAPSULATION LENGTH (TYPICAL FOR BENTS 2,3,5,7,8,11,12,13,44)



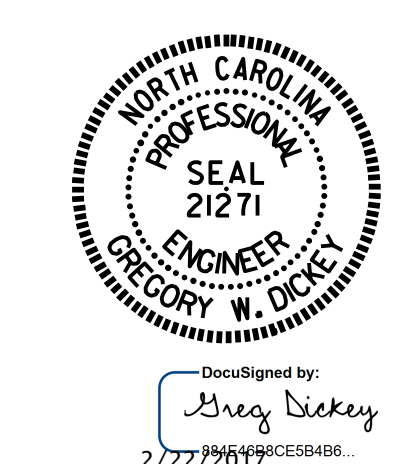
SECTION A-A

REPAIR SEQUENCES

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

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 3



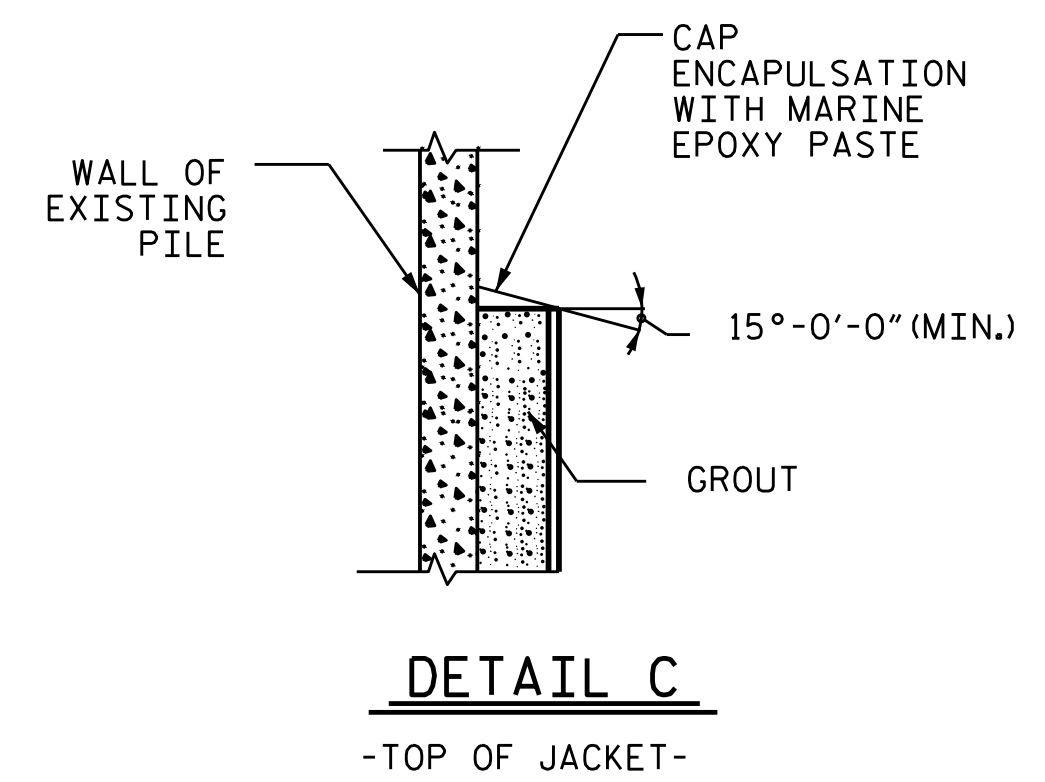
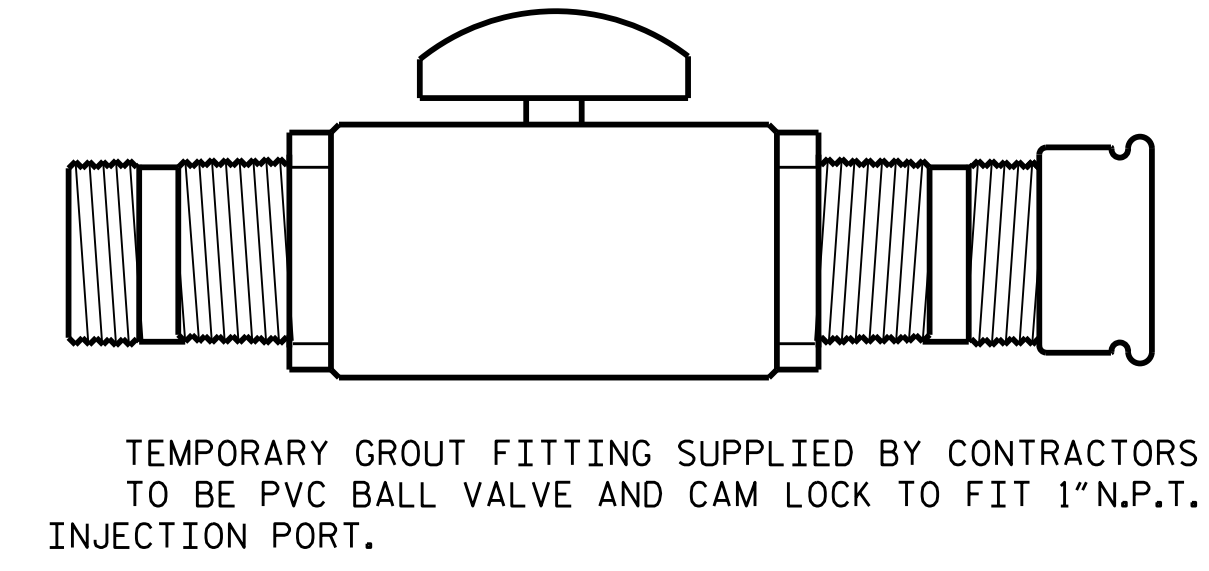
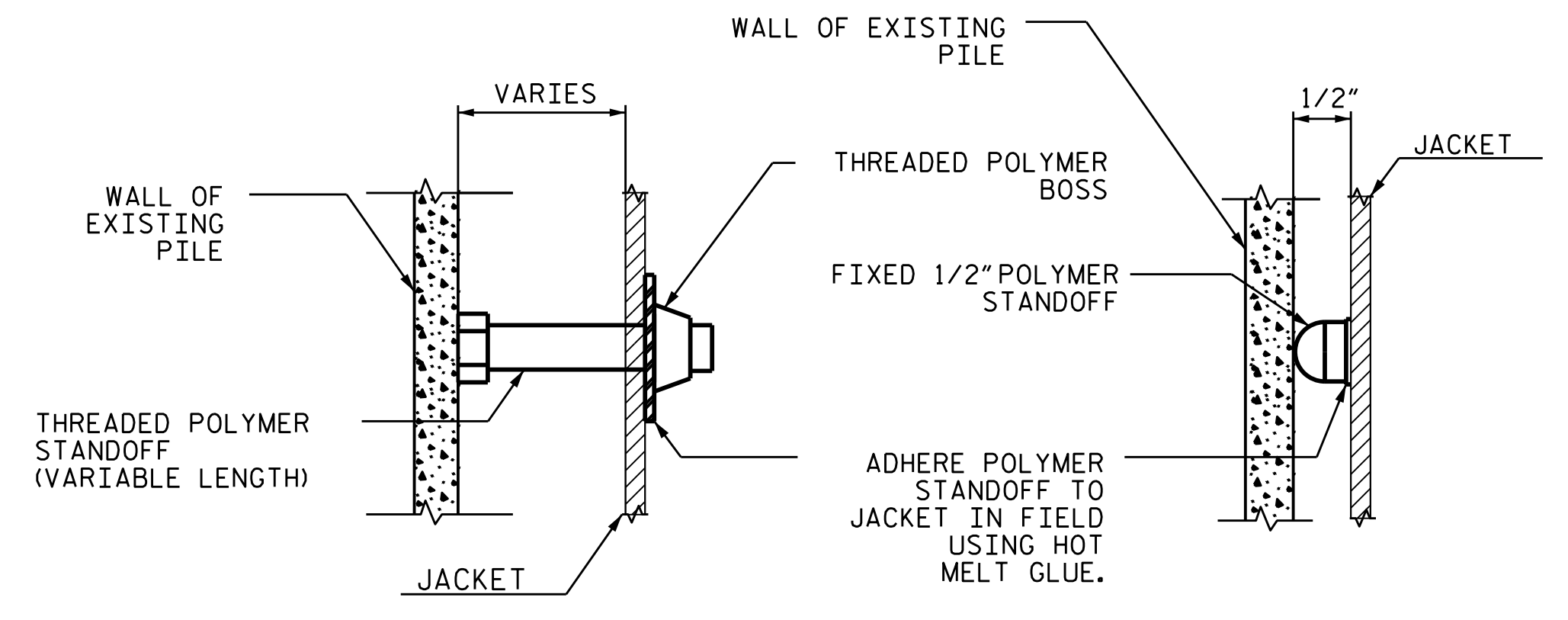
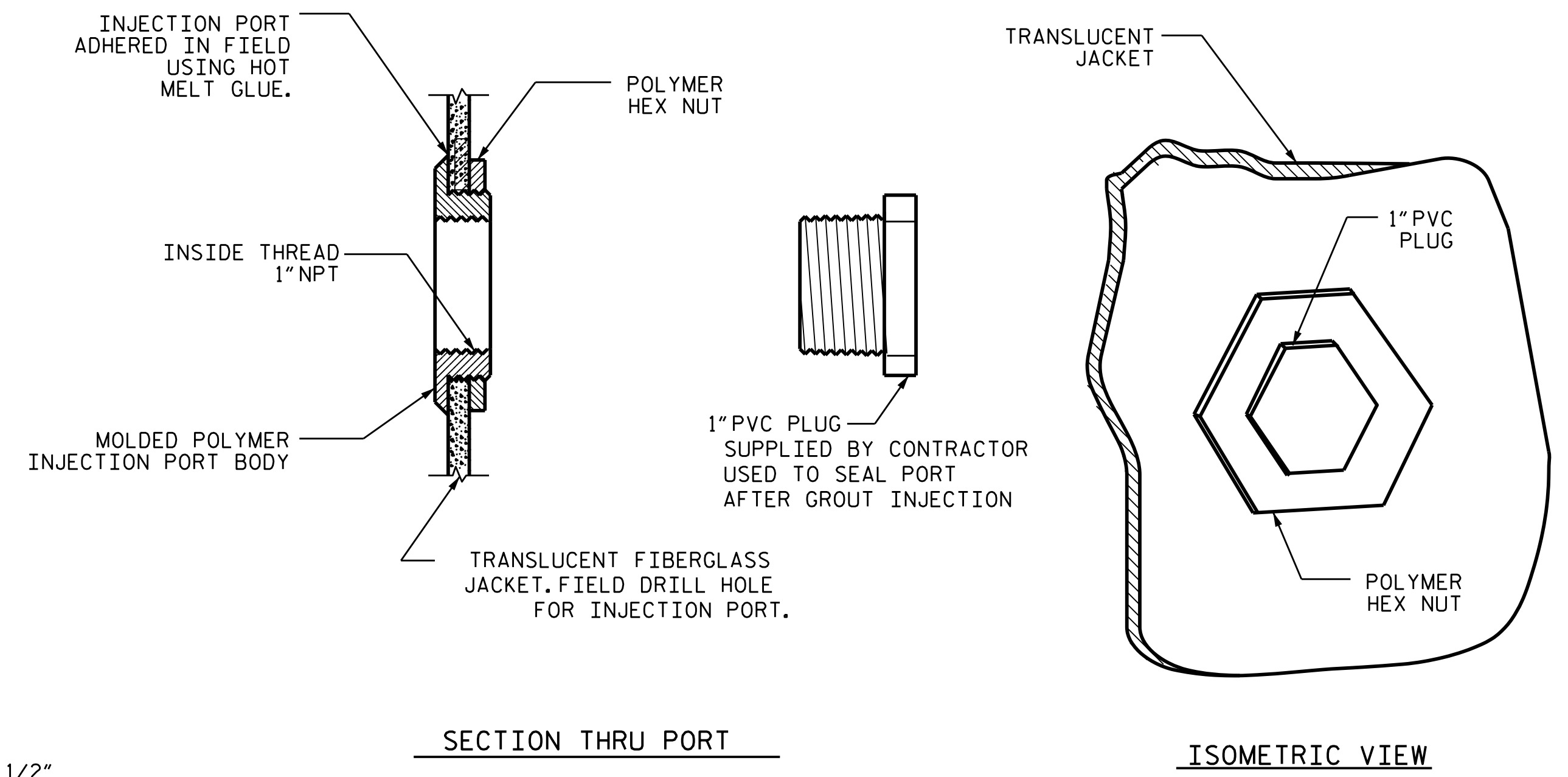
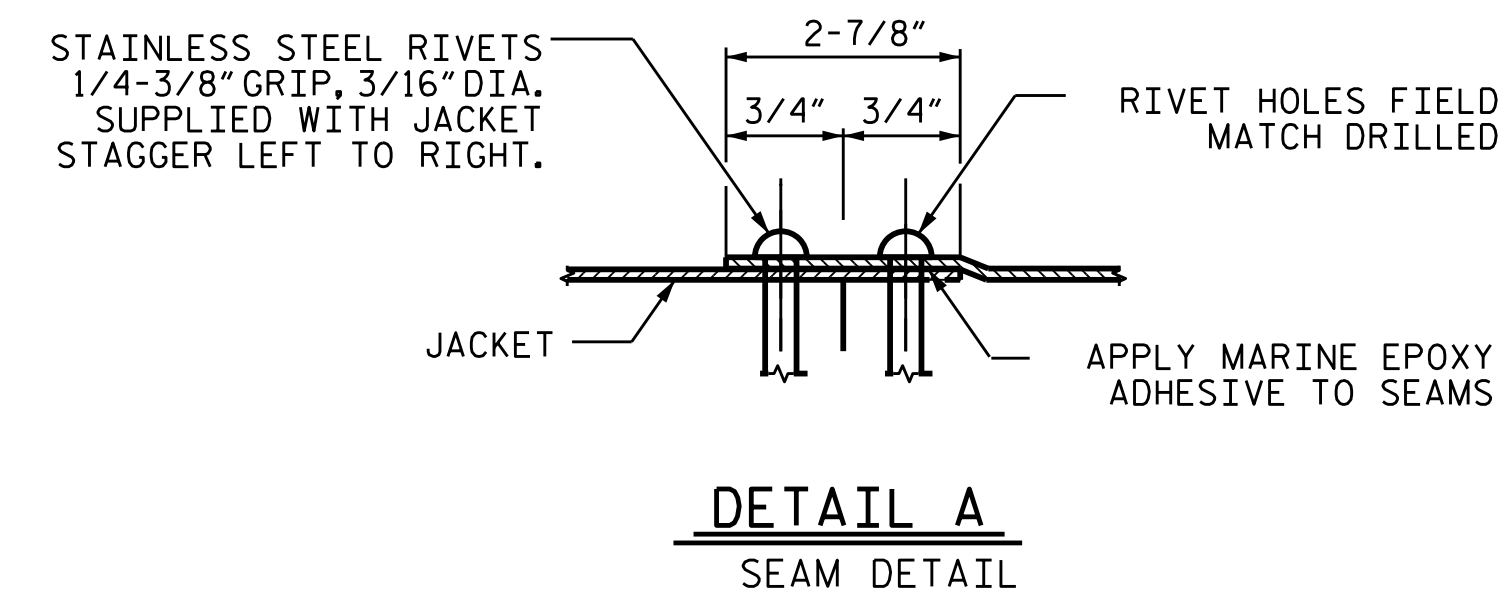
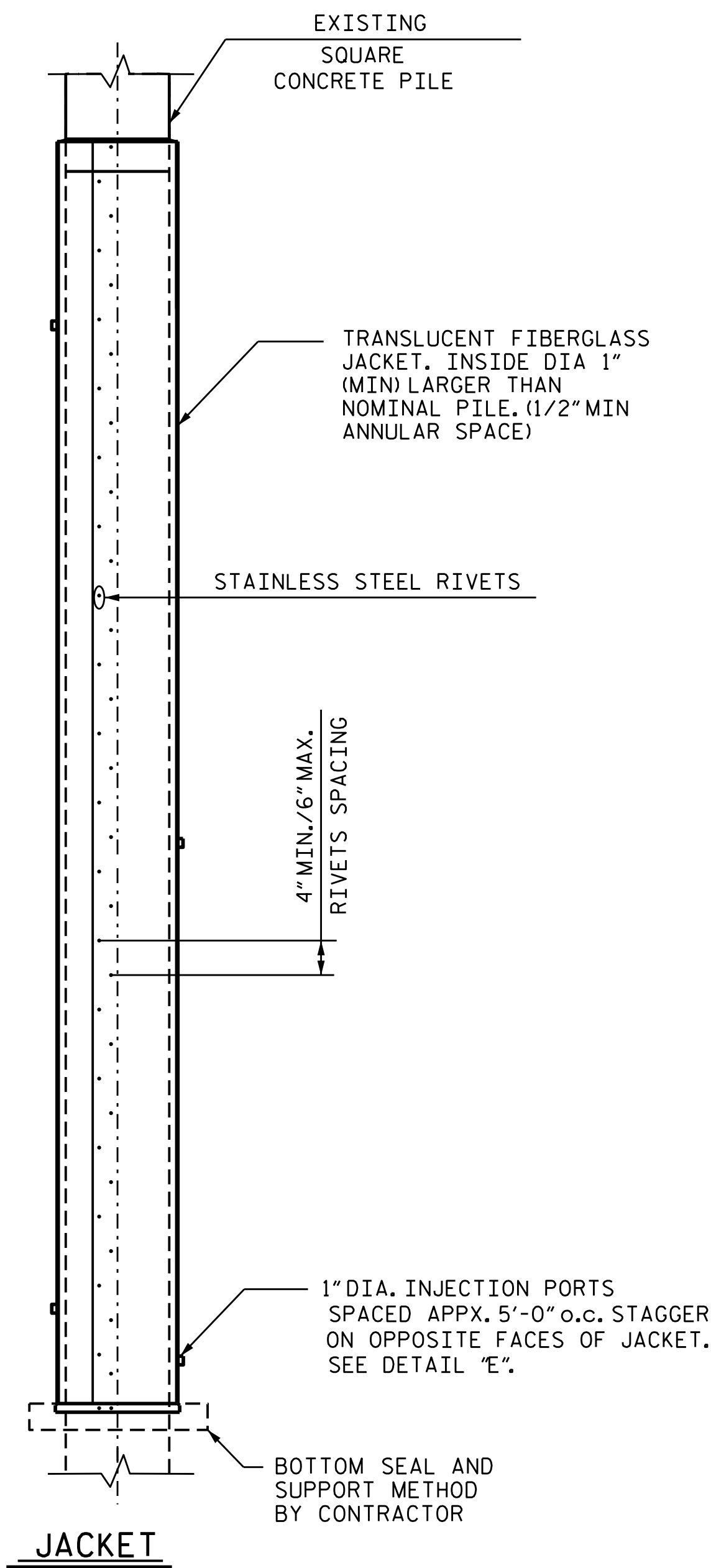
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE ENCAPSULATION DETAILS

DRAWN BY : P.D. BRYANT DATE : 01/2017
 CHECKED BY : R. WEISZ DATE : 02/2017

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S1-96 |
| 2 | | | 4 | | | |

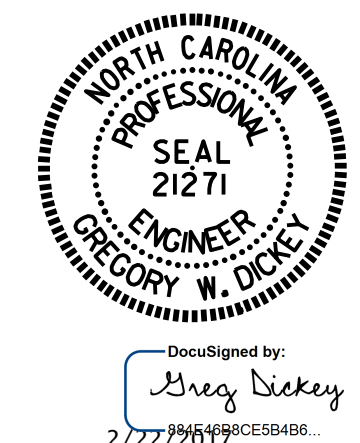


PROJECT NO. B-5938
CARTERET COUNTY
 STATION: 68

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE ENCAPSULATION DETAILS



DRAWN BY : P.D. BRYANT DATE : 01/2017
 CHECKED BY : R. WEISZ DATE : 02/2017

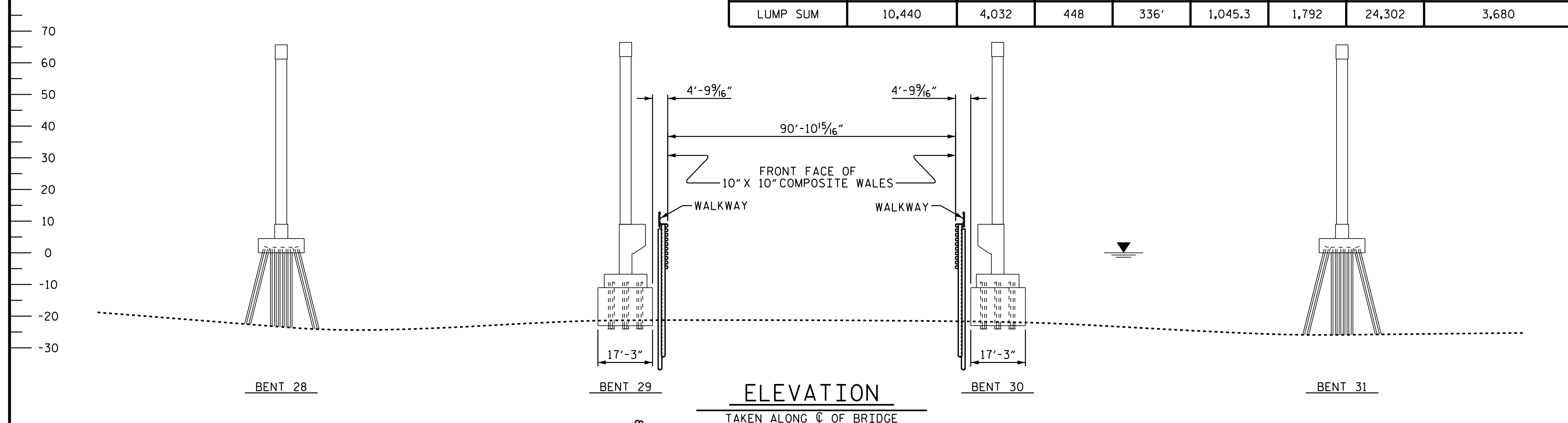
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-97 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | | |

| TOTAL BILL OF MATERIAL | | | | | | | | |
|-----------------------------------|---------------------|----------------------------|-------------------------|------------------------|-------------------------|------------------------|----------|-----------------------------|
| REMOVAL OF EXISTING FENDER SYSTEM | 14" COMPOSITE PILES | 10" X 10" COMPOSITE LUMBER | 6" X 10" PLASTIC LUMBER | 4" X 6" PLASTIC LUMBER | 2" X 12" PLASTIC LUMBER | 2" X 6" PLASTIC LUMBER | HARDWARE | WIRE ROPE FOR FENDER SYSTEM |
| LUMP SUM | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LBS. | LIN. FT. |
| LUMP SUM | 10,440 | 4,032 | 448 | 336' | 1,045.3 | 1,792 | 24,302 | 3,680 |

GENERAL NOTES:

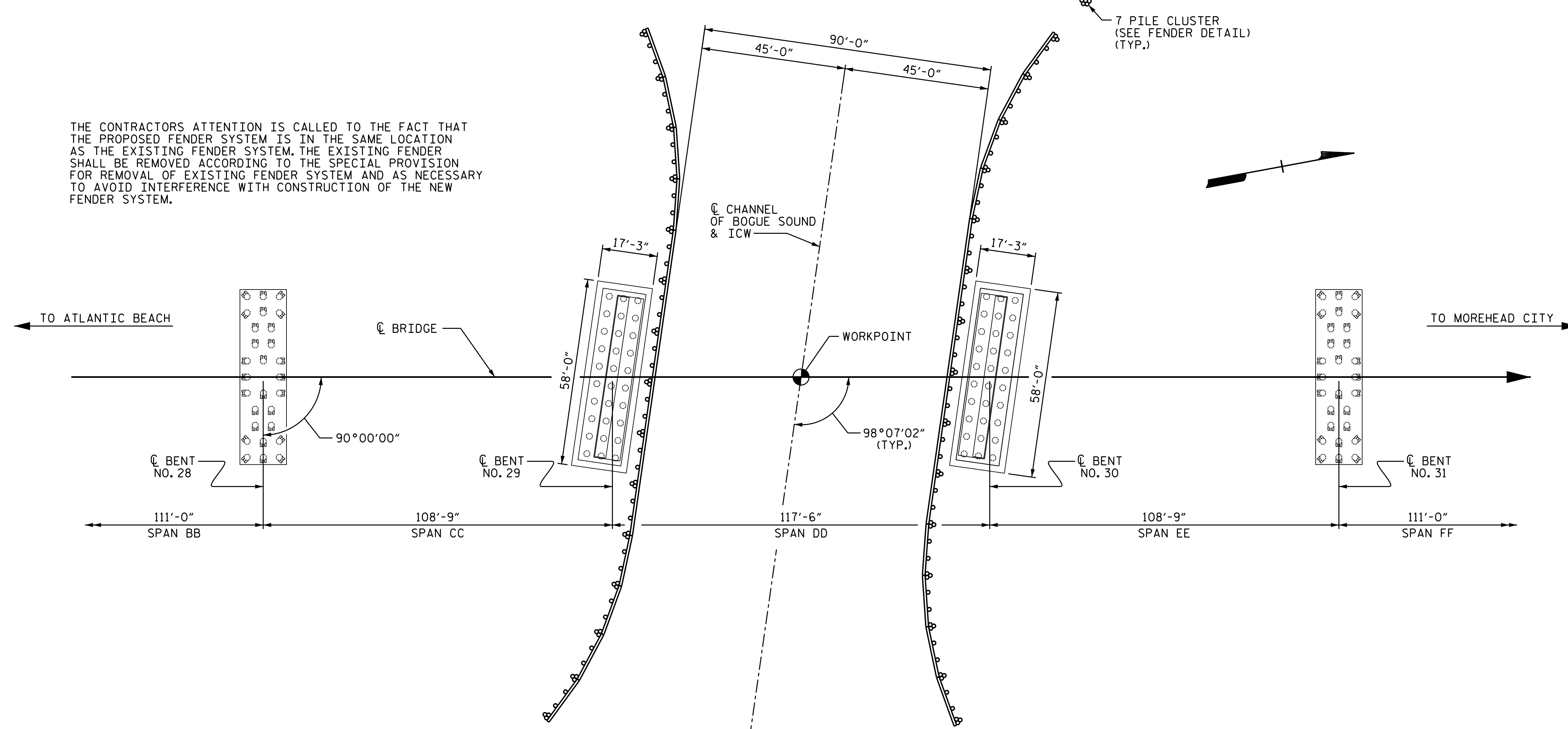
- FOR COORDINATION WITH THE U.S. COAST GUARD, SEE SPECIAL PROVISIONS.
- FOR NAVIGATIONAL LIGHTS, SEE SPECIAL PROVISIONS FOR COORDINATION WITH THE U.S. COAST GUARD.
- FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.
- FOR REMOVAL OF EXISTING FENDER SYSTEM, SEE SPECIAL PROVISIONS.
- FOR PILE DRIVING EQUIPMENT DATA SUBMITTAL, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR WORK IN, OVER OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.
- FOR WIRE ROPE FOR FENDER SYSTEM, SEE SPECIAL PROVISIONS.
- FOR FENDER REPLACEMENT, SEE SPECIAL PROVISIONS.
- FOR AS-BUILT PLANS, SEE SPECIAL PROVISIONS.
- FOR LOCATION OF NEW FENDER SYSTEM, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL RELOCATE THE CLEARANCE MARKER AT BOTH ENDS OF THE FENDER SYSTEM TO THE LOCATION DESIGNATED BY THE ENGINEER.
- THE CONTRACTOR SHALL VISIT THE JOB SITE AND CHECK THE MATERIALS AND THE QUANTITY NEEDED TO COMPLETE ALL THE WORK IN ACCORDANCE WITH THE PLANS, PROJECT SPECIAL PROVISIONS, AND THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012, EXCEPT AS OTHERWISE NOTED ON THE PLANS AND SPECIAL PROVISIONS.



ELEVATION

TAKEN ALONG C OF BRIDGE

THE CONTRACTORS ATTENTION IS CALLED TO THE FACT THAT THE PROPOSED FENDER SYSTEM IS IN THE SAME LOCATION AS THE EXISTING FENDER SYSTEM. THE EXISTING FENDER SHALL BE REMOVED ACCORDING TO THE SPECIAL PROVISION FOR REMOVAL OF EXISTING FENDER SYSTEM AND AS NECESSARY TO AVOID INTERFERENCE WITH CONSTRUCTION OF THE NEW FENDER SYSTEM.

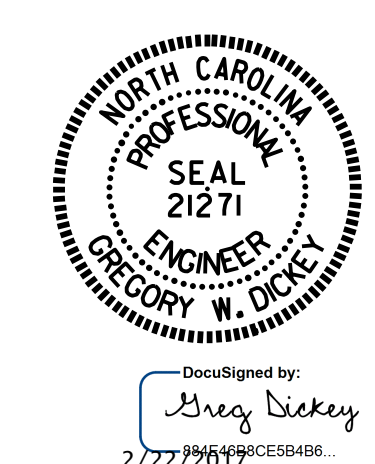


PLAN OF FENDER SYSTEM

WALKWAY ON FENDER SYSTEM NOT SHOWN FOR CLARITY

DRAWN BY : M.A. LEE DATE : 1/2015
 CHECKED BY : W.M. CLARKE DATE : 1/2015

22-FEB-2017 08:02
 R:\Structures\Final.DGN_FILES\ONLY\400.XXX.B5939.SMU.FENDER.dgn
 glickey



PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 1 OF 4

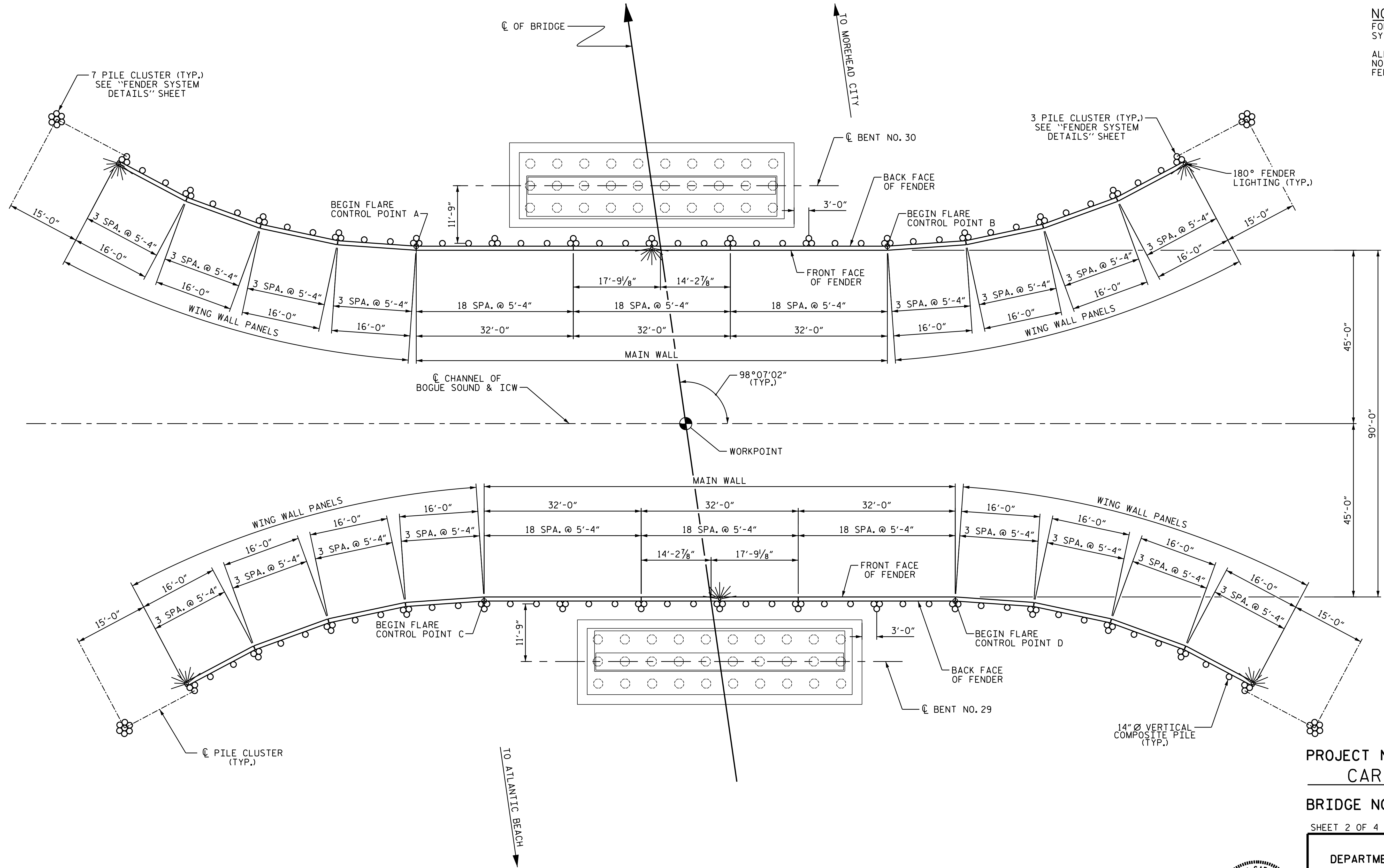
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**FENDER SYSTEM
 FOR BRIDGE 68 OVER
 C CHANNEL OF
 BOGUE SOUND & ICW**

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



PLAN OF PILE LAYOUT
 WALKWAY ON FENDER SYSTEM NOT SHOWN FOR CLARITY

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 2 OF 4



DocuSigned by:
 Greg Dickey
 2/22/2015 9:58:48 AM

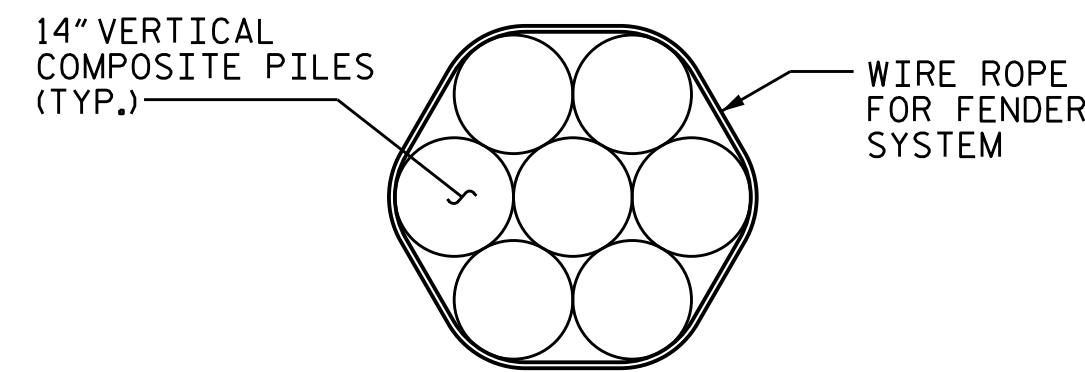
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**FENDER SYSTEM
 PILE LAYOUT**

DRAWN BY : M.A. LEE DATE : 1/2015
 CHECKED BY : W.M. CLARKE DATE : 1/2015

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

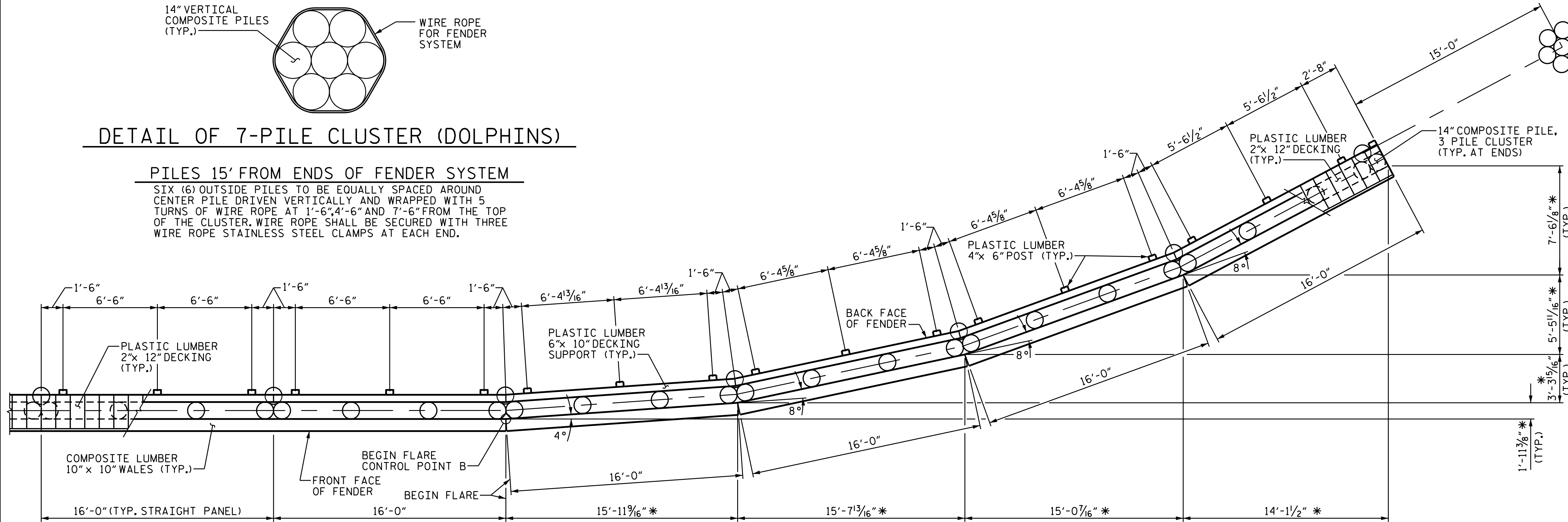
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| NO. | BY: | DATE: | NO. | BY: | DATE: | F-2 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |



DETAIL OF 7-PILE CLUSTER (DOLPHINS)

PILES 15' FROM ENDS OF FENDER SYSTEM

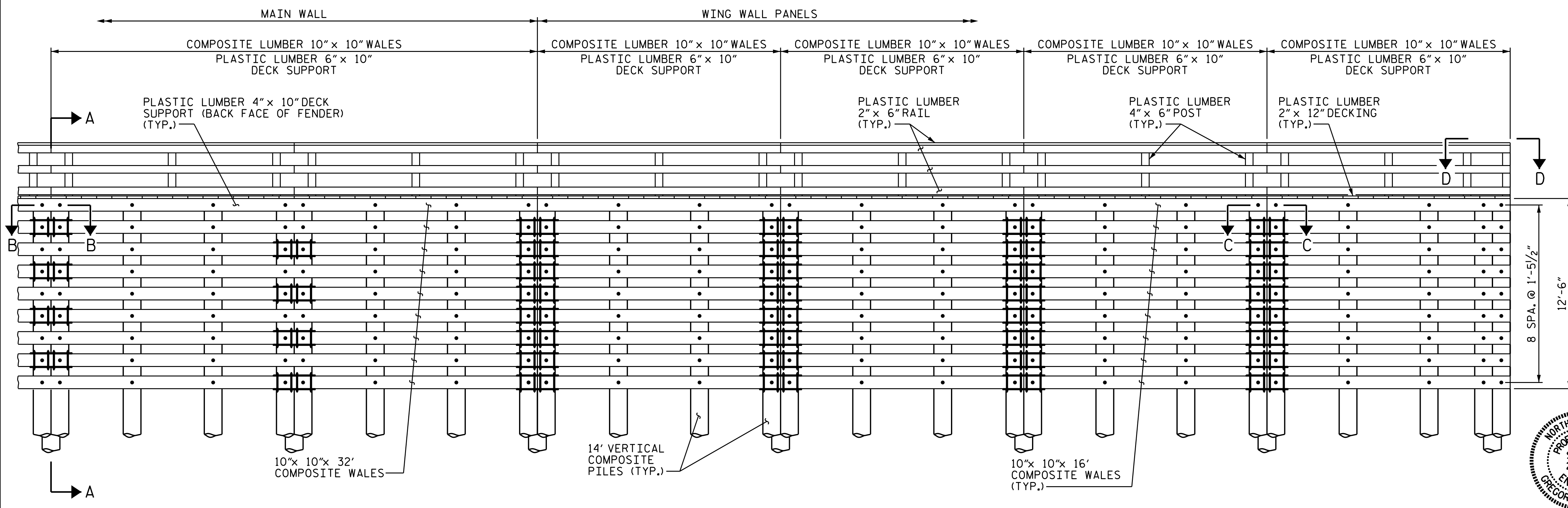
SIX (6) OUTSIDE PILES TO BE EQUALLY SPACED AROUND CENTER PILE DRIVEN VERTICALLY AND WRAPPED WITH 5 TURNS OF WIRE ROPE AT 1'-6", 4'-6" AND 7'-6" FROM THE TOP OF THE CLUSTER. WIRE ROPE SHALL BE SECURED WITH THREE WIRE ROPE STAINLESS STEEL CLAMPS AT EACH END.



PARTIAL PLAN VIEW (TYPICAL FLARE)

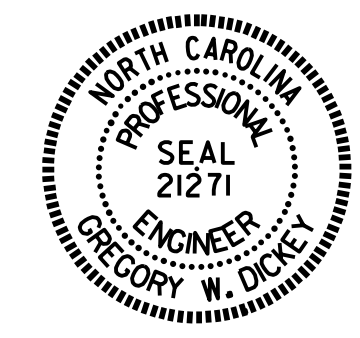
(FLARE AT CONTROL B SHOWN, CONTROL POINTS A, C & D SIMILAR (HANDRAIL NOT SHOWN FOR CLARITY))

NOTES:
 PLASTIC LUMBER AND COMPOSITE LUMBER DIMENSIONS SHOWN ARE BASED ON NOMINAL LUMBER DIMENSIONS.
 * DIMENSIONS TYPICAL FOR 16'-0" TYPICAL STRAIGHT PANELS.



PARTIAL ELEV. VIEW OF MAIN WALL

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE: 68
 SHEET 3 OF 4



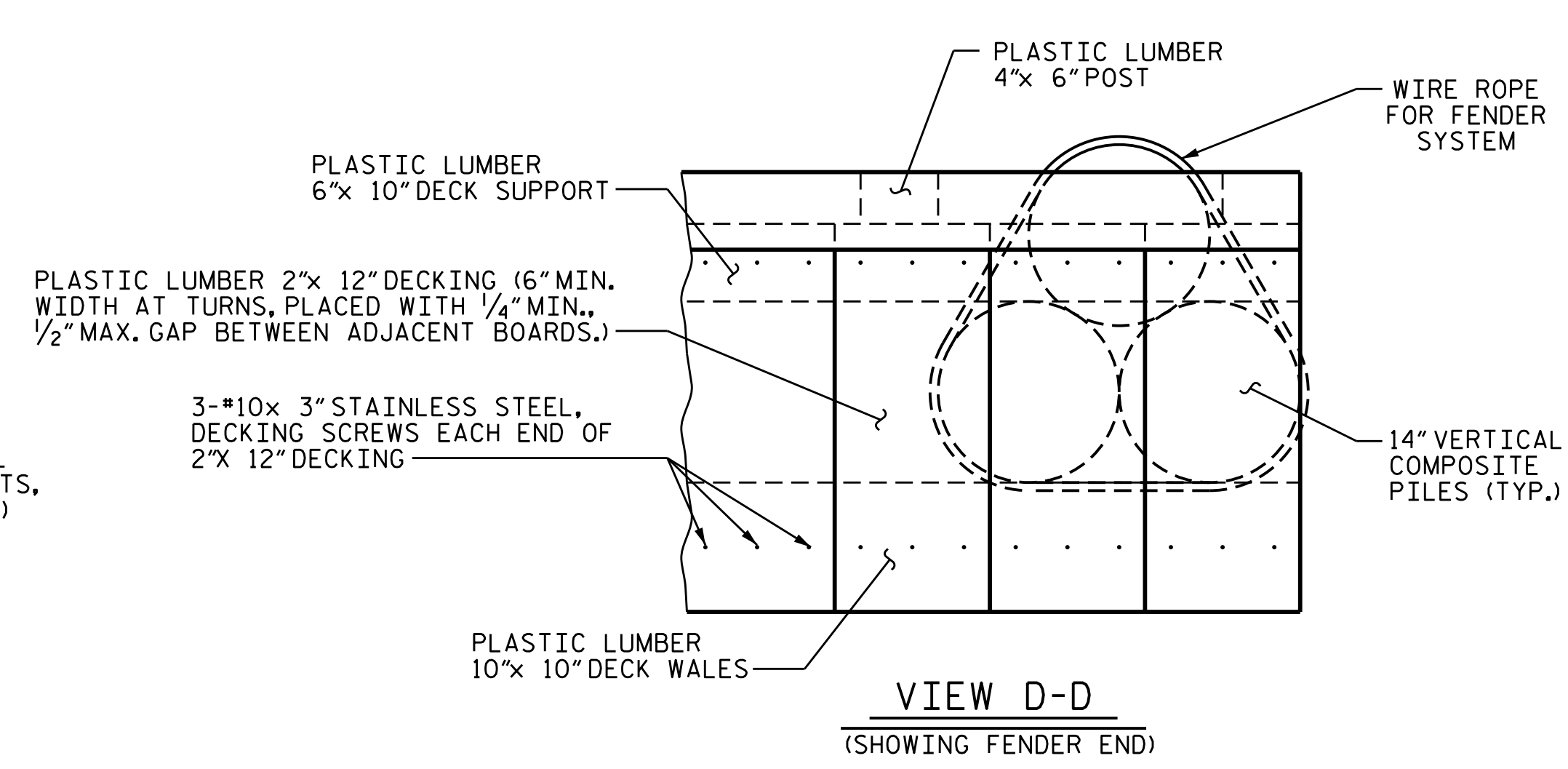
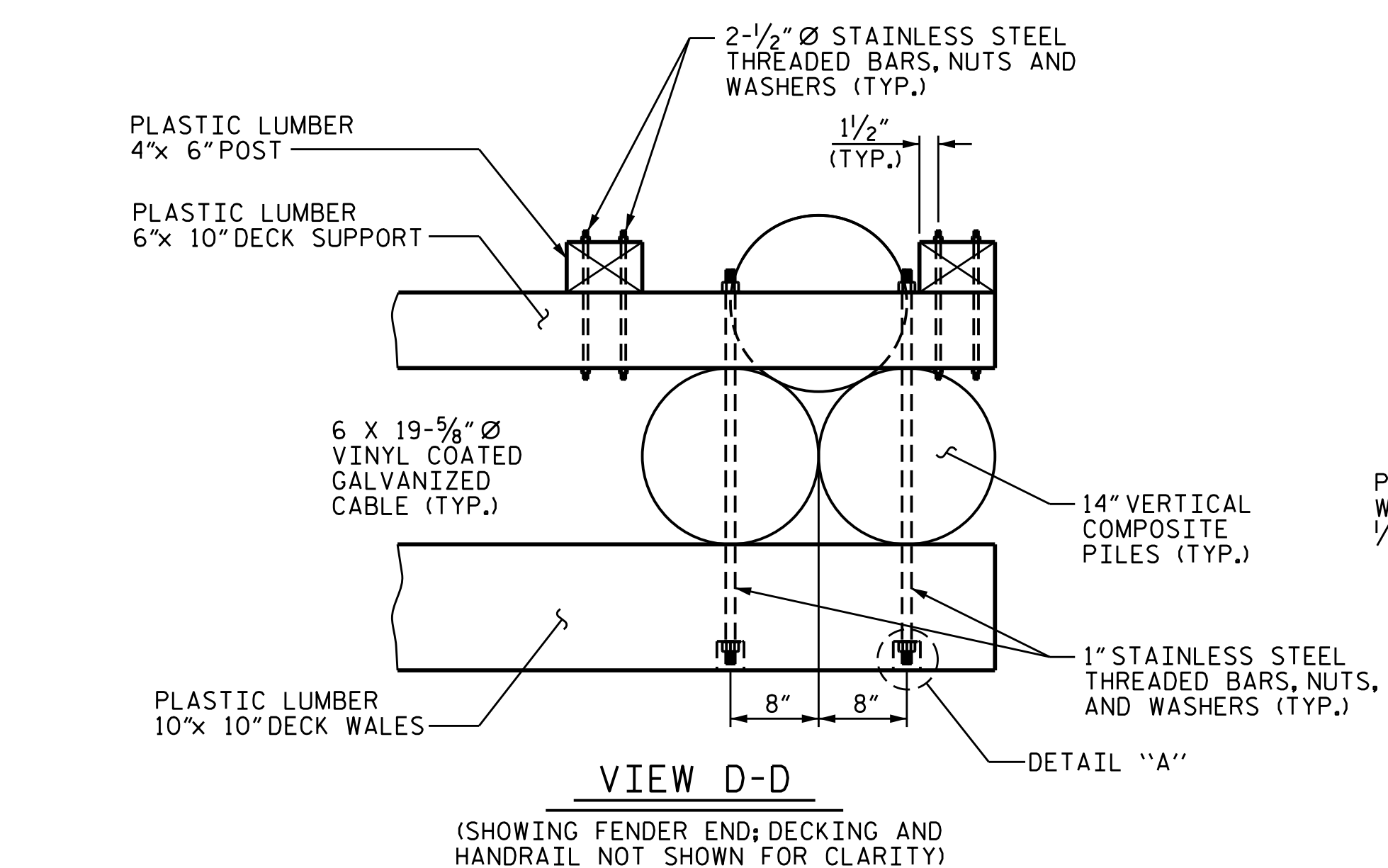
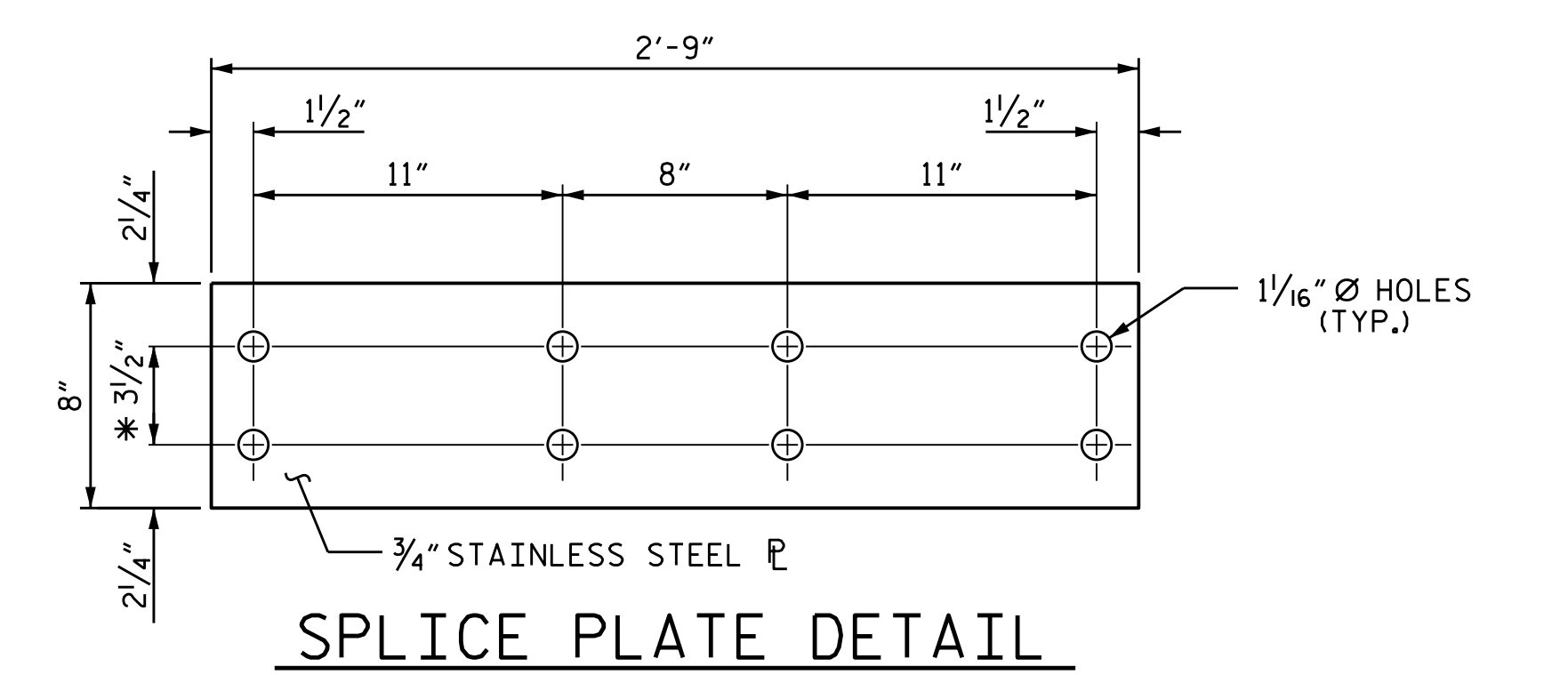
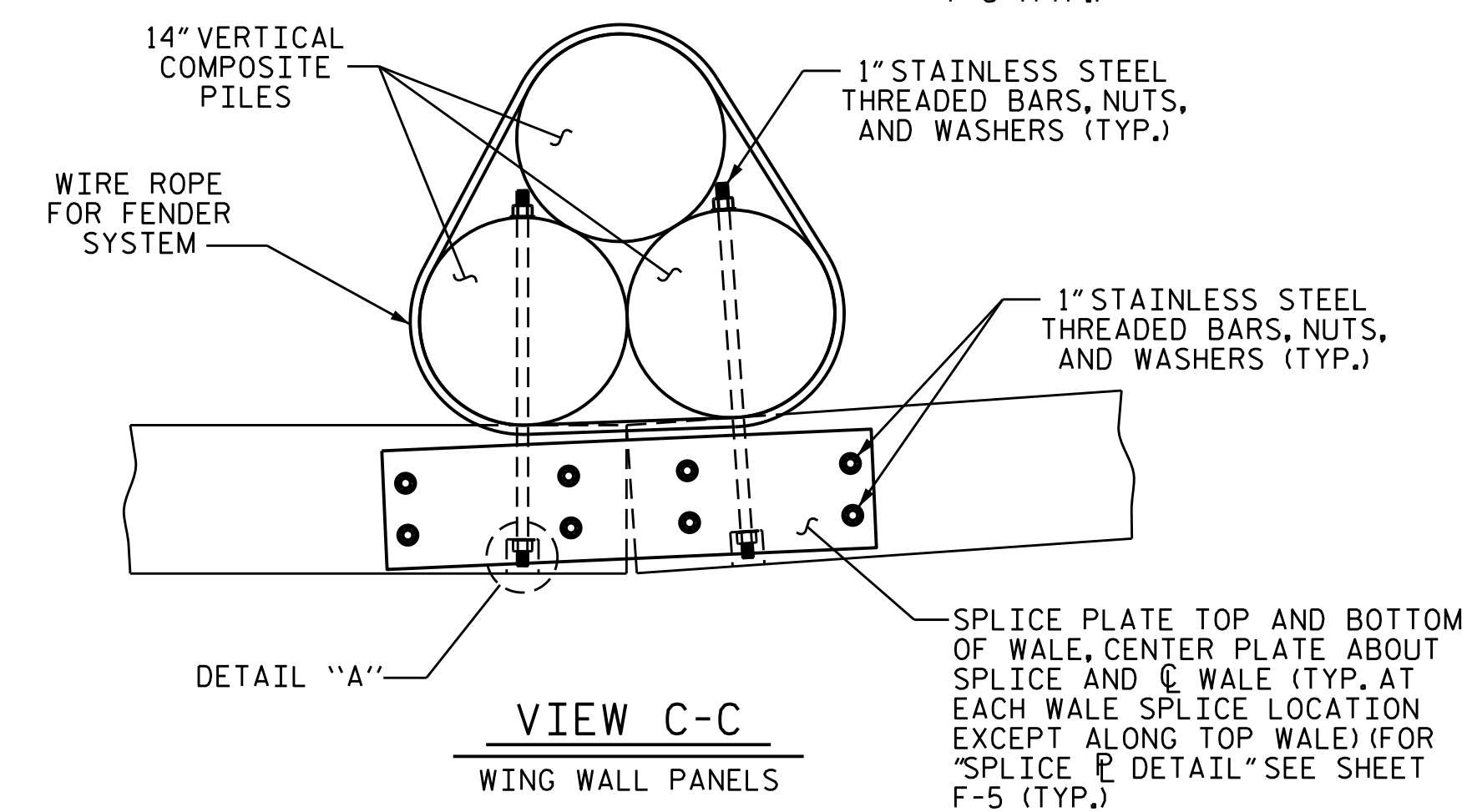
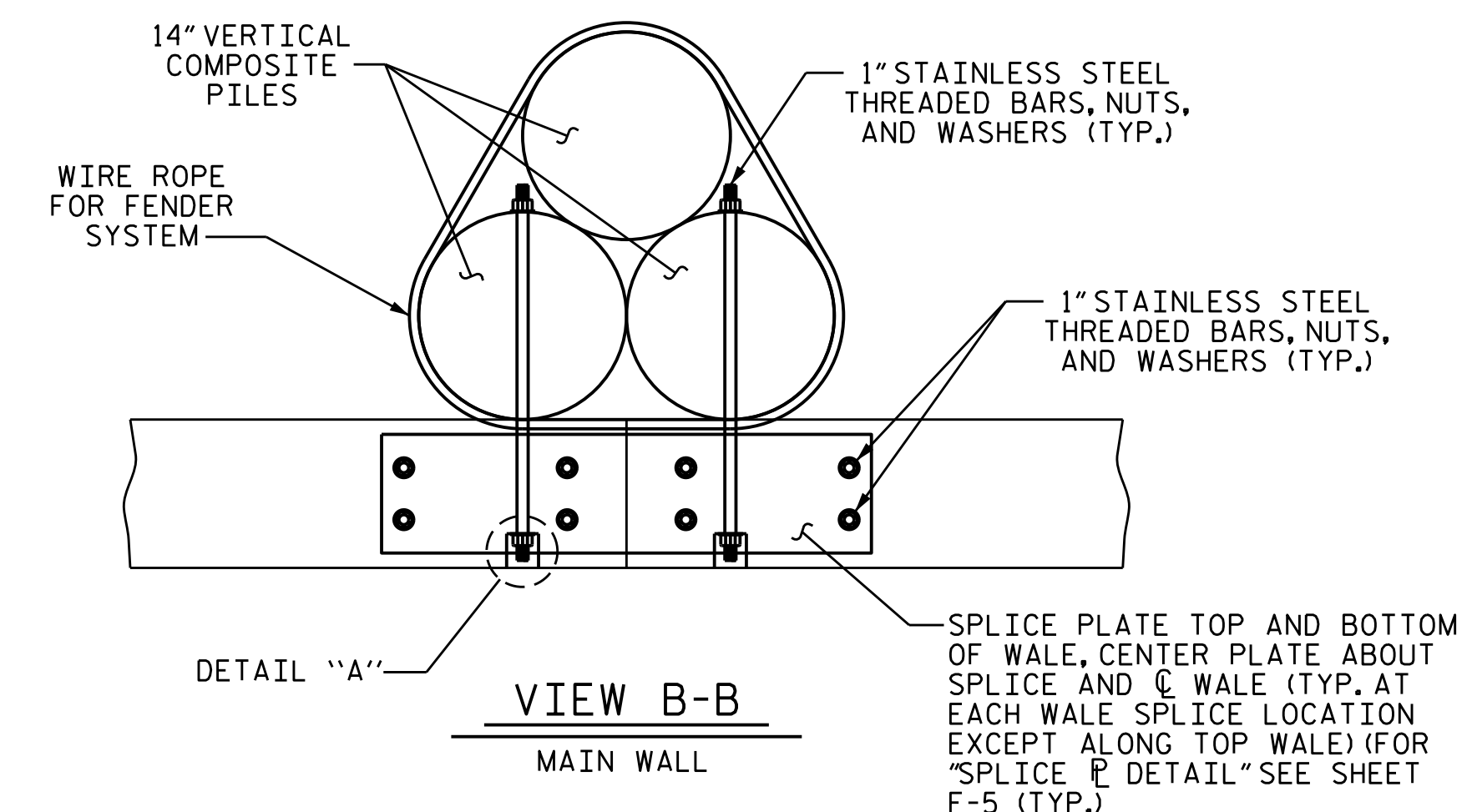
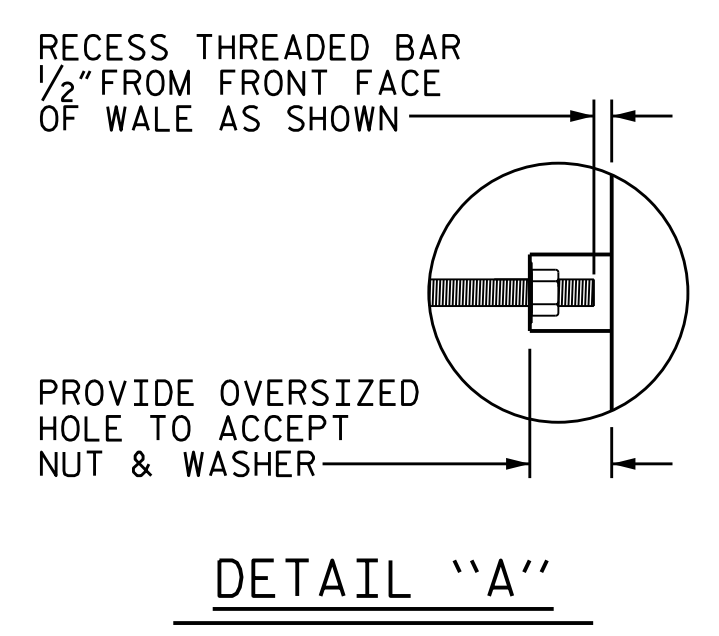
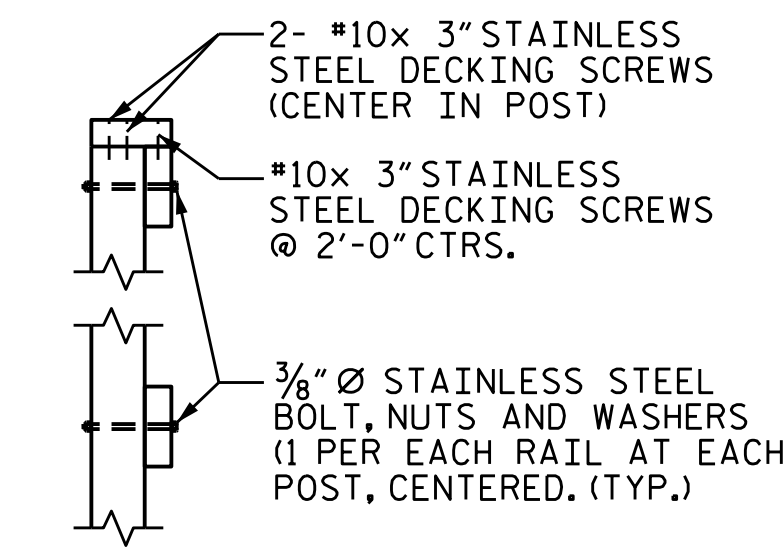
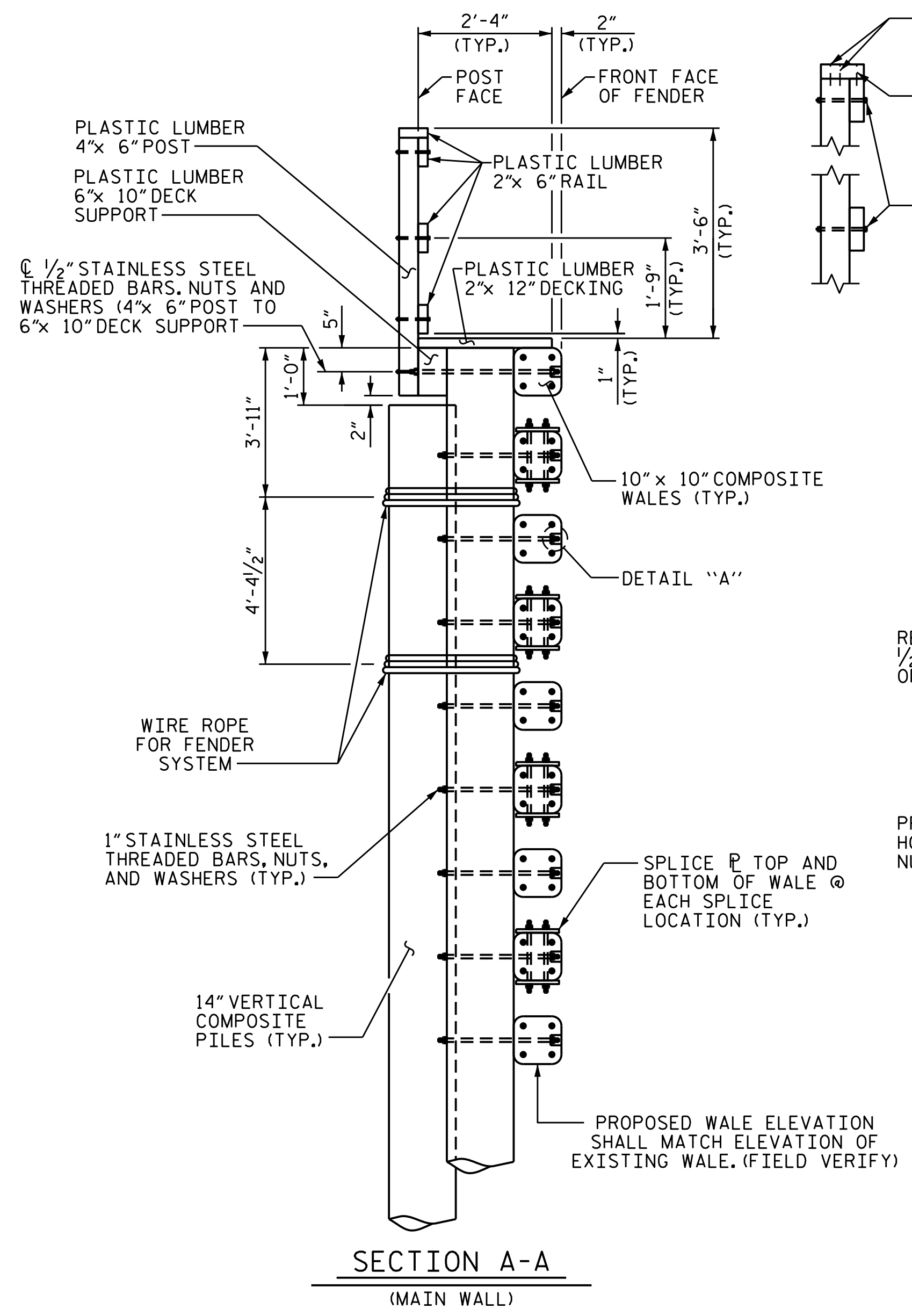
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FENDER SYSTEM DETAILS

DRAWN BY: W.J. HARRIS DATE: 12/16
 CHECKED BY: M.A. LEE DATE: 12/16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



NOTES:
 STAGGER 32'-0" WALES IN MAIN WALL SO THAT ALTERNATE JOINTS BREAK ON EACH PILE CLUSTER.
 PILE CLUSTERS CONTAINING THREE PILES SHALL BE WRAPPED WITH 5 TURNS OF WIRE ROPE FOR FENDER SYSTEM AT LOCATIONS SPECIFIED AND SECURED WITH THREE STAINLESS STEEL CLAMPS AT EACH END.
 STAINLESS STEEL THREADED BARS SHALL CONFORM TO ASTM A193 GRADE B8M.
 STAINLESS STEEL NUTS SHALL CONFORM TO ASTM F594 TYPE 316.
 STAINLESS STEEL WASHERS SHALL BE COMPATIBLE WITH THREADED RODS AND NUTS.
 TORQUE NUTS ON 1" THREADED RODS TO 150 FT-LB.
 THREADS OF RODS SHALL BE KEPT FREE OF DIRT, DEBRIS, AND SAND TO PREVENT GALLING AND SEIZING DURING INSTALLATION AND TIGHTENING.
 STAINLESS STEEL SPLICE PLATES SHALL CONFORM TO ASTM A240 TYPE 316.

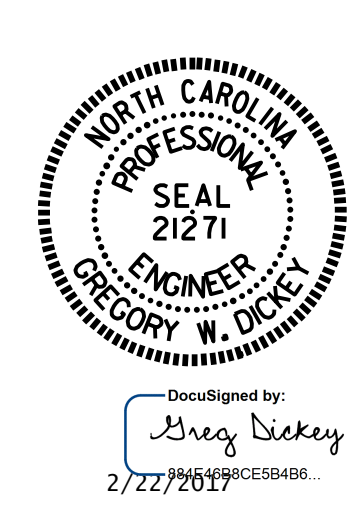
| STRUCTURAL COMPOSITE MEMBERS | | | | | |
|------------------------------|----------|--------|-----------|-----|------------|
| ITEM | UNIT | LENGTH | SIZE | NO. | TOTAL |
| COMPOSITE PILE | LIN. FT. | 60'-0" | 14" | 174 | 10,440'-0" |
| 10" x 10" COMPOSITE LUMBER | LIN. FT. | 32'-0" | 10" x 10" | 54 | 1,728'-0" |
| 10" x 10" COMPOSITE LUMBER | LIN. FT. | 16'-0" | 10" x 10" | 144 | 2,304'-0" |
| 6" x 10" PLASTIC LUMBER | LIN. FT. | 16'-0" | 6" x 10" | 24 | 448'-0" |
| 4" x 6" PLASTIC LUMBER | LIN. FT. | 4'-0" | 4" x 6" | 84 | 336'-0" |
| 2" x 12" PLASTIC LUMBER | LIN. FT. | 2'-4" | 2" x 12" | 448 | 1,045'-4" |
| 2" x 6" PLASTIC LUMBER | LIN. FT. | 16'-0" | 2" x 6" | 112 | 1,792'-0" |

| STRUCTURAL HARDWARE | | | |
|-------------------------------------|---------------|-------|-------------|
| ITEM | UNIT | NO. | TOTAL |
| WIRE ROPE FOR FENDER SYSTEM | LIN. FT. | — | 3,680'-0" |
| 3/4" STAINLESS STEEL CABLE CLAMPS | LBS. | 528 | 528 LBS |
| 1" STAINLESS STEEL THREADED BAR | LIN. FT. | — | 4,037'-0" |
| | LBS. | | 21,160 LBS. |
| 1" STAINLESS STEEL WASHER | 19 LBS/100 | 7,876 | 1497 LBS. |
| 1" STAINLESS STEEL HEX NUT | 27.3 LBS/100 | 7,876 | 2150 LBS. |
| 1/2" STAINLESS STEEL THREADED BAR | LIN. FT. | — | 77'-0" |
| | LBS. | | 46 LBS |
| 1/2" STAINLESS STEEL WASHER | 3.8 LBS/100 | 168 | 7 LBS. |
| 1/2" STAINLESS STEEL HEX NUT | 3.4 LBS/100 | 168 | 6 LBS. |
| 3/8" STAINLESS STEEL BOLT | 20 LBS/100 | 252 | 50.4 LBS. |
| 3/8" STAINLESS STEEL WASHER | 1.4 LBS/100 | 504 | 1,242 LBS. |
| 3/8" STAINLESS STEEL HEX NUT | 1.5 LBS/100 | 252 | 2,810 LBS. |
| #10x3" STAINLESS STEEL DECK SCREWS | 1.5 LBS/100 | 3080 | 46.2 LBS. |
| 2'-9" x 8" x 3/4" STAINLESS STEEL P | 57.5 LBS EACH | 368 | 21,160 LBS. |

NOTE: WITH APPROVAL OF THE ENGINEER THE CONTRACTOR MAY ELECT TO USE STAINLESS STEEL BOLTS IN PLACE OF THREADED BAR AT FEASIBLE LOCATIONS AS LONG AS THE MATERIAL PROPERTIES ARE THE SAME.

PROJECT NO. B-5938
CARTERET COUNTY
 BRIDGE NO. 68

SHEET 4 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FENDER SYSTEM DETAILS

DRAWN BY: M.A. LEE DATE: 5/2015
 CHECKED BY: W.M. CLARKE DATE: 5/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
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PLANS AND DETAILS FOR PROPOSED LIGHTING /ELECTRICAL CONSTRUCTION

DCM

NOTES

- 1 REMOVE EXISTING FOUNDATIONS AND REPLACE WITH NEW FOUNDATION FOR ALL SINGLE ARM LIGHT STANDARDS ON THE MAINLAND AT MOREHEAD CITY. (LIGHT STANDARDS #7-#12)
- 2 INSTALL NEW CONDUCTORS USING EXISTING UNDERGROUND CONDUIT SYSTEM TO SERVE LIGHT STANDARD #7 THROUGH #12 FROM MOREHEAD CITY CONTROL SYSTEM "N". CONDUITS INSTALLED INSIDE THE NEW LIGHT FOUNDATIONS SHALL CONNECT TO EXISTING CONDUIT SYSTEM.
- 3 LIGHT STANDARDS #7 THROUGH #12 ARE ON THE MAINLAND AND REQUIRE IMPACT ATTENUATION DEVICES. (SEE DELTA NOTE #7 BELOW)
- 4 ALL LIGHT STANDARDS ON THE BRIDGE DO NOT REQUIRE IMPACT ATTENUATION DEVICES.
- 5 THE CONTRACTOR SHALL CONSULT WITH THE TOWN OF ATLANTIC BEACH ABOUT THE MOUNTING HEIGHT OF THE FIXED BANNER ARMS ON THE BRIDGE LIGHT STANDARD POLES.
- 6 ALL FIXED BANNER ARMS SHALL HAVE SPRING-LOADED MECHANISMS TO RESPOND TO WIND LOADS. CONTACT MARC SCHULZE, PUBLIC SERVICES DIRECTOR (252-726-1366), OF THE TOWN OF ATLANTIC BEACH FOR MOUNTING HEIGHT AND BRACKET ARM LENGTH.
- 7 MAINLAND LIGHT STANDARD #7 ON CONTROL SYSTEM "N" IS MISSING. LOCATE OLD FOUNDATION, REMOVE OLD FOUNDATION, REPLACE WITH NEW FOUNDATION AND MOUNT NEW LIGHT STANDARD WITH IMPACT ATTENUATION DEVICES.

SCOPE OF WORK

UPGRADE ROADWAY LIGHTING SYSTEM BY REMOVING EXISTING LIGHT STANDARDS WITH HPS LUMINAIRES, INSTALLING NEW LIGHT STANDARDS WITH LIGHT EMITTING DIODE LUMINAIRES AND NEW UNDERGROUND CIRCUITRY.

DESIGN CRITERIA

- 2005 AASHTO ROADWAY LIGHTING DESIGN GUIDE
- 2009 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION AND LATEST INTERIM SPECIFICATIONS VALID AT THE TIME OF LETTING
- FATIGUE CATEGORY II SHALL BE USED IN DESIGN
- DESIGN LIGHT STANDARD MOUNT SUPPORT FOR BASIC WIND SPEED OF 110 MPH
- 2014 NATIONAL ELECTRICAL CODE
- 2011 AASHTO ROADSIDE DESIGN GUIDE

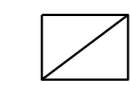
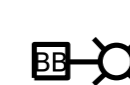
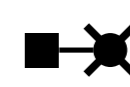


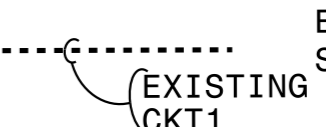
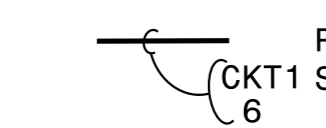
ROADWAY STANDARDS

THE FOLLOWING ROADWAY ENGLISH STANDARDS AS APPEAR IN "NCDOT ROADWAY STANDARD DRAWINGS", ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| STD NO. | TITLE |
|---------|---------------------|
| 1404.01 | LIGHT STANDARDS |
| 1405.01 | STANDARD FOUNDATION |
| 1409.01 | ELECTRICAL DUCT |
| 1410.01 | FEEDER CIRCUITS |

ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2012.

LEGEND

-  EXISTING CONTROL SYSTEM.
-  PROPOSED MAINLAND SINGLE ARM LIGHT STANDARD TYPE MTLT 35' WITH 6' SINGLE ARM WITH IMPACT ATTENUATION DEVICE TO REPLACE EXISTING LIGHT STANDARD. REMOVE EXISTING LIGHT STANDARD AND FOUNDATION. (SEE NOTE 7 FOR EXCEPTION.) INCLUDES 220W MAX LED ROADWAY LUMINAIRE. 4000K COLOR TEMPERATURE IES DISTRIBUTION: TYPE II OR III AS REQUIRED. MAXIMUM BUG RATING 3-0-3.
-  PROPOSED BRIDGE LIGHT STANDARD TYPE MTLT 35' WITH 6' SINGLE ARM WITH BANNER BRACKET ARMS. (REPLACES EXISTING LIGHT STANDARD) INCLUDES 220W MAX LED ROADWAY LUMINAIRE. 4000K COLOR TEMPERATURE IES DISTRIBUTION: TYPE II OR III AS REQUIRED. MAXIMUM BUG RATING 3-0-3.
-  MISSING LIGHT STANDARD
-  REFERENCE TO CORRESPONDING NOTE AS NUMBERED
-  EXISTING FEEDER CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A THIS SHEET
-  PROPOSED FEEDER CIRCUIT(1) PLAN SYMBOL (6) SEE TABLE A THIS SHEET

| TOTAL BILL OF MATERIAL FOR BRIDGE LIGHTING | | | | | | | | | |
|--|--------------------------------------|---------------------------------------|----------------------------------|-----------------------------|-----------------------------|-------------------------------|--------------------------|------------------------|-----------------------------|
| MOREHEAD CITY LIGHTING SYSTEM | REMOVE LIGHT STANDARD FROM OUTRIGGER | REMOVE LIGHT STANDARD FROM FOUNDATION | REMOVE LIGHT STANDARD FOUNDATION | STANDARD FOUNDATION TYPE R1 | STANDARD FOUNDATION TYPE R2 | ALTERNATE OUTRIGGER MOUNTIONG | MAINLAND LIGHT STANDARDS | BRIDGE LIGHT STANDARDS | ROADWAY LIGHTING LUMINAIRES |
| LS | EA | EA | EA | EA | EA | EA | EA | EA | EA |
| LS | 15 | 5 | 6 | 4 | 2 | 15 | 6 | 15 | 21 |

ABBREVIATIONS

| | | | |
|---------|-----------------|-----|--------------------------------|
| BD | BURIED | PVC | PVC SCHEDULE 40 CONDUIT |
| LT | LIGHT | RGC | RIGID GALVANIZED STEEL CONDUIT |
| JA | JACKED | C | CONDUIT |
| MH | MOUNTING HEIGHT | CKT | CIRCUIT |
| Ø | PHASE | N | NEUTRAL |
| SER LAT | SERVICE LATERAL | G | GROUND |
| | | HM | HIGH MAST |

PROJECT NO. **B-5938**
CARTERET COUNTY

SHEET 1 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LIGHTING LAYOUT

ATLANTIC BEACH BRIDGE
 BRIDGE # 68 ON SR 1182
 OVER BOGUE SOUND



Declassified by: *Paul Chan* 1/20/2017

SEE PROJECT SPECIAL PROVISIONS TITLED "LIGHTING" FOR MATERIALS CONSTRUCTION METHODS AND PAYMENT.

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | L-1 |
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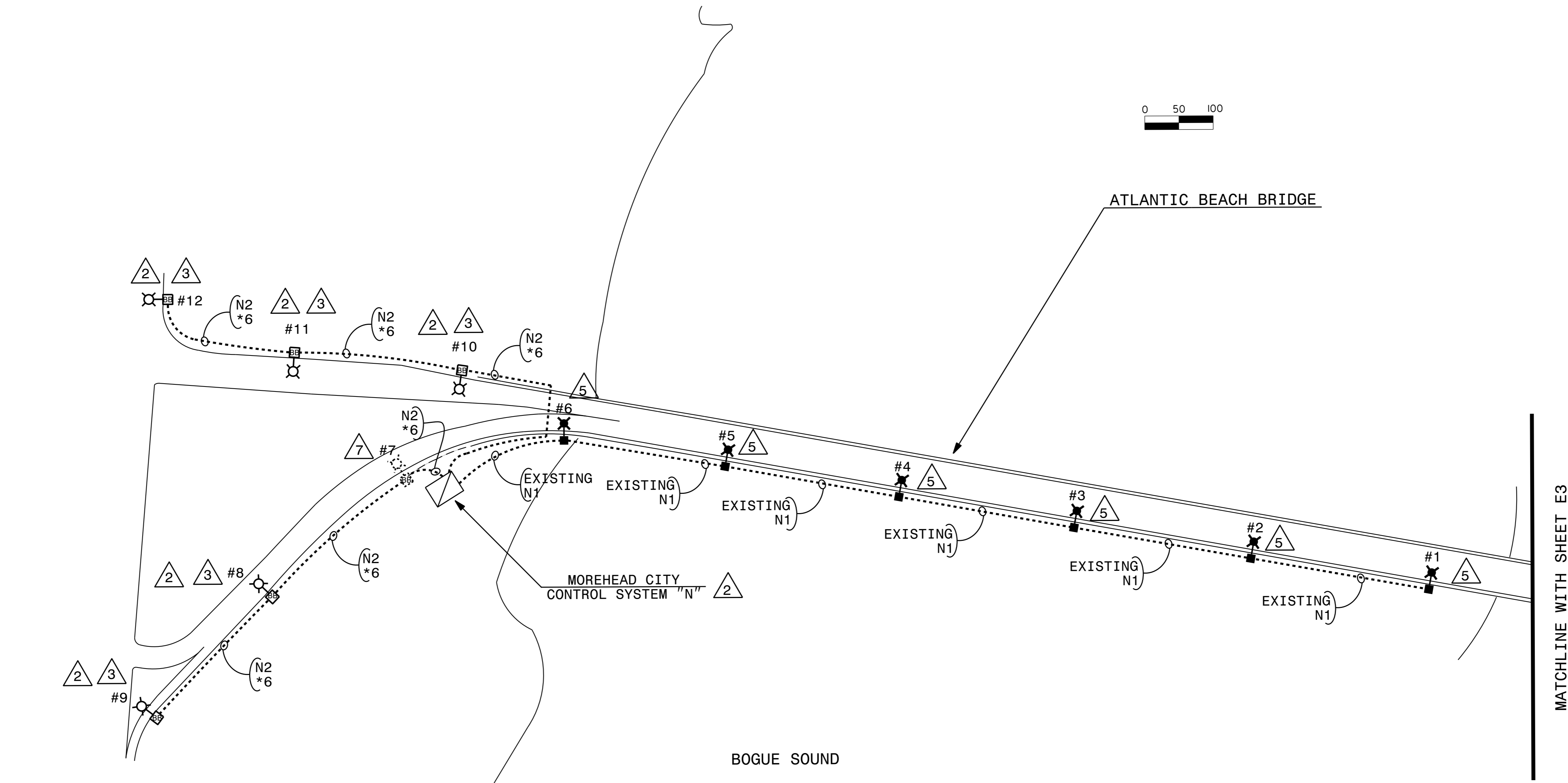
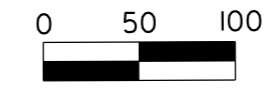
TABLE "A"
 CIRCUITRY CONDUCTOR CONDUIT TYPE & SIZE

| PLAN SYMBOL | DESCRIPTION | CONTRACT ITEM | |
|-------------|---------------------------|--|--|
| 6 | 2 #6 Ø 1 #8G 1.5" P | 2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR 1.5" PVC CONDUIT | 2 - 6 W/G FEEDER CIRCUIT IN 1.5" CONDUIT |
| *6 | 2 #6 Ø 1 #10G | 2 AWG SIZE 6 CONDUCTOR (BK & RD) 1 AWG SIZE 8 GROUNDING CONDUCTOR | 2 - 6 W/G FEEDER CIRCUIT |

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USE FOR LIGHTING CONSTRUCTION ONLY

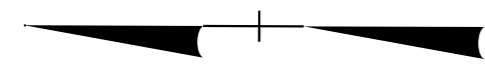
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MATCHLINE WITH SHEET E3

| LOAD SCHEDULE NORTHWEST SIDE OF BRIDGE ON MAINLAND MOREHEAD CITY | | | | | | | | |
|--|----------------------------|----------------|------------|--|---------------------------------|----------------|------------|------------------------|
| EXISTING 1Ø, 3W, 120/240 VAC MOREHEAD CITY CONTROL SYSTEM "N" | | | | PROPOSED 1Ø, 3W, 120/240 VAC MOREHEAD CITY CONTROL SYSTEM "N" | | | | |
| CIRCUIT ID | SINGLE ARM 1 @ 250W HPS | AMPS @ 240V | KW LOAD | CIRCUIT ID | SINGLE ARM 1 @ 220W MAX. LED | AMPS @ 240V | KW LOAD | BREAKER SIZE (AMPS) |
| N1 | #1 - #6 | 7.9 | 1.9 | N1 | #1 - #6 | 5.5 | 1.32 | 30 |
| N2 | #7 - #9 | 4.2 | 1.0 | N2 | #7 - #12 | 5.5 | 1.32 | 30 |
| N3 | #10 - #12 | 4.2 | 1.0 | UNKOWN | | | | 30 |
| TOTAL | 12 | 16.3 | 3.9 | TOTAL | | 11.0 | 2.64 | |

* NOTE: ORIGINAL WORK WAS DONE ON SUPPLEMENTAL AGREEMENT DATED 12-3-1986 UNDER STATE PROJECT # 8.2160203



PROJECT NO. **B-5938**
CARTERET COUNTY

SHEET 2 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
LIGHTING LAYOUT
ATLANTIC BEACH BRIDGE
BRIDGE # 68 ON SR 1182
OVER BOGUE SOUND



SEE PROJECT SPECIAL PROVISIONS TITLED
"LIGHTING" FOR MATERIALS
CONSTRUCTION METHODS AND PAYMENT.

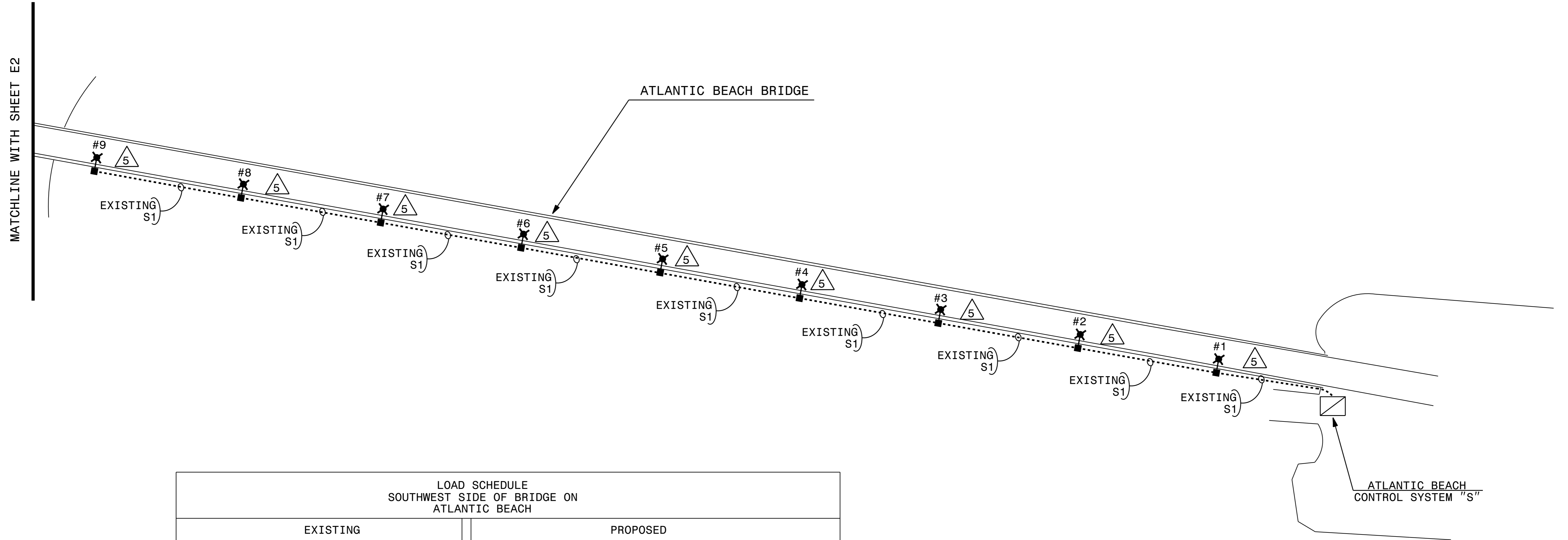
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Paul Chan
1/20/2017

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USE FOR LIGHTING CONSTRUCTION ONLY

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| LOAD SCHEDULE SOUTHWEST SIDE OF BRIDGE ON ATLANTIC BEACH | | | | | | | | |
|---|----------------------------|----------------|------------|---|---------------------------------|----------------|------------|------------------------|
| EXISTING 1Ø, 3W, 120/240 VAC ATLANTIC BEACH CONTROL SYSTEM "S" | | | | PROPOSED 1Ø, 3W, 120/240 VAC ATLANTIC BEACH CONTROL SYSTEM "S" | | | | |
| CIRCUIT ID | SINGLE ARM 1 @ 250W HPS | AMPS @ 240V | KW LOAD | CIRCUIT ID | SINGLE ARM 1 @ 220W MAX. LED | AMPS @ 240V | KW LOAD | BREAKER SIZE (AMPS) |
| S1 | #1-#9 | 12.0 | 2.9 | S1 | #1-#9 | 8.25 | 1.98 | UNKNOWN |
| SPARE | | | | SPARE | | | | UNKNOWN |
| TOTAL | 9 | 12.0 | 2.9 | TOTAL | 9 | 8.25 | 1.98 | |

* NOTE: ORIGINAL WORK WAS DONE ON SUPPLEMENTAL AGREEMENT DATED 12-3-1986 UNDER STATE PROJECT # 8.2160203

PROJECT NO. **B-5938**
CARTERET COUNTY

SHEET 3 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LIGHTING LAYOUT
 ATLANTIC BEACH BRIDGE
 BRIDGE # 68 ON SR 1182
 OVER BOGUE SOUND



DocuSigned by:
 Paul Chan
 1/20/2017

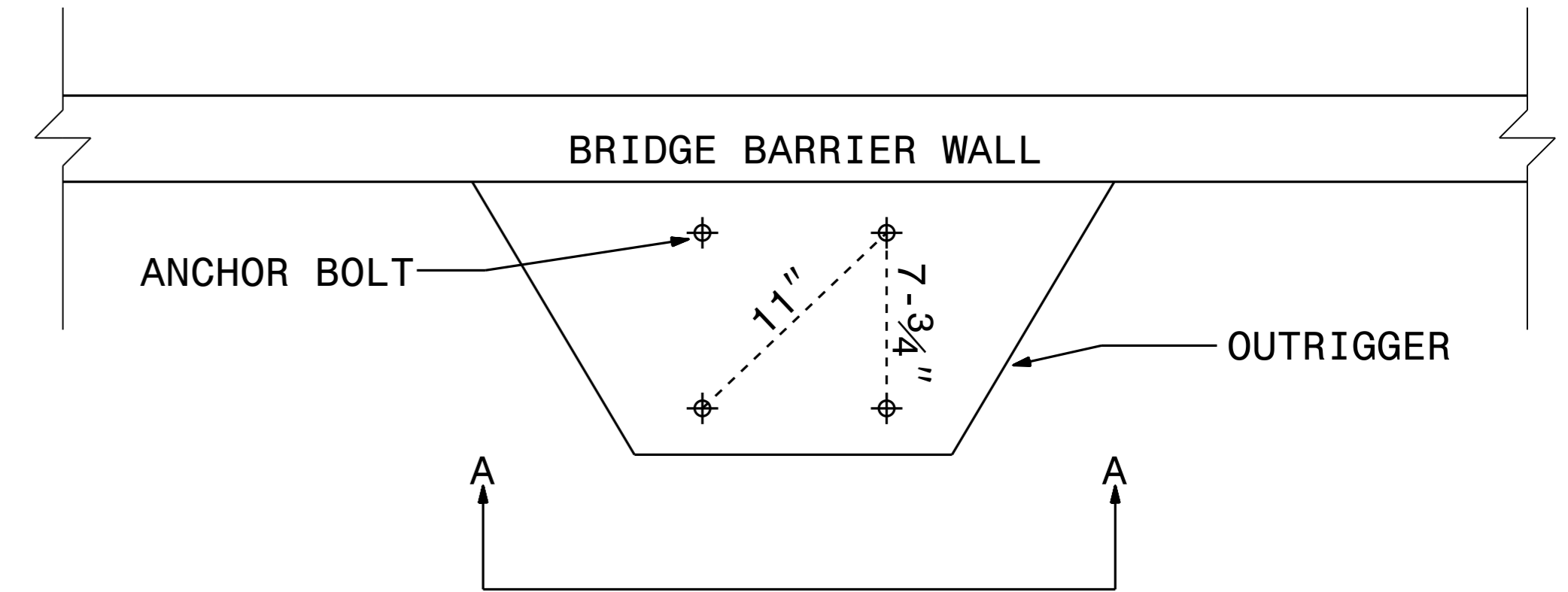
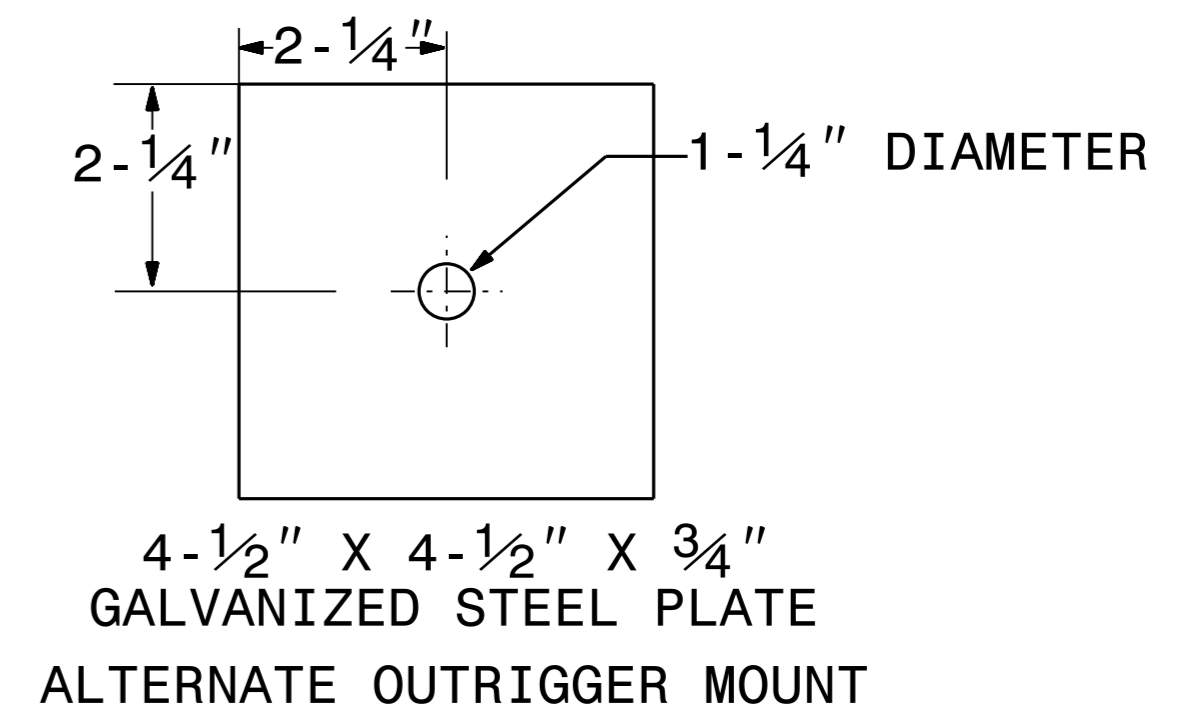
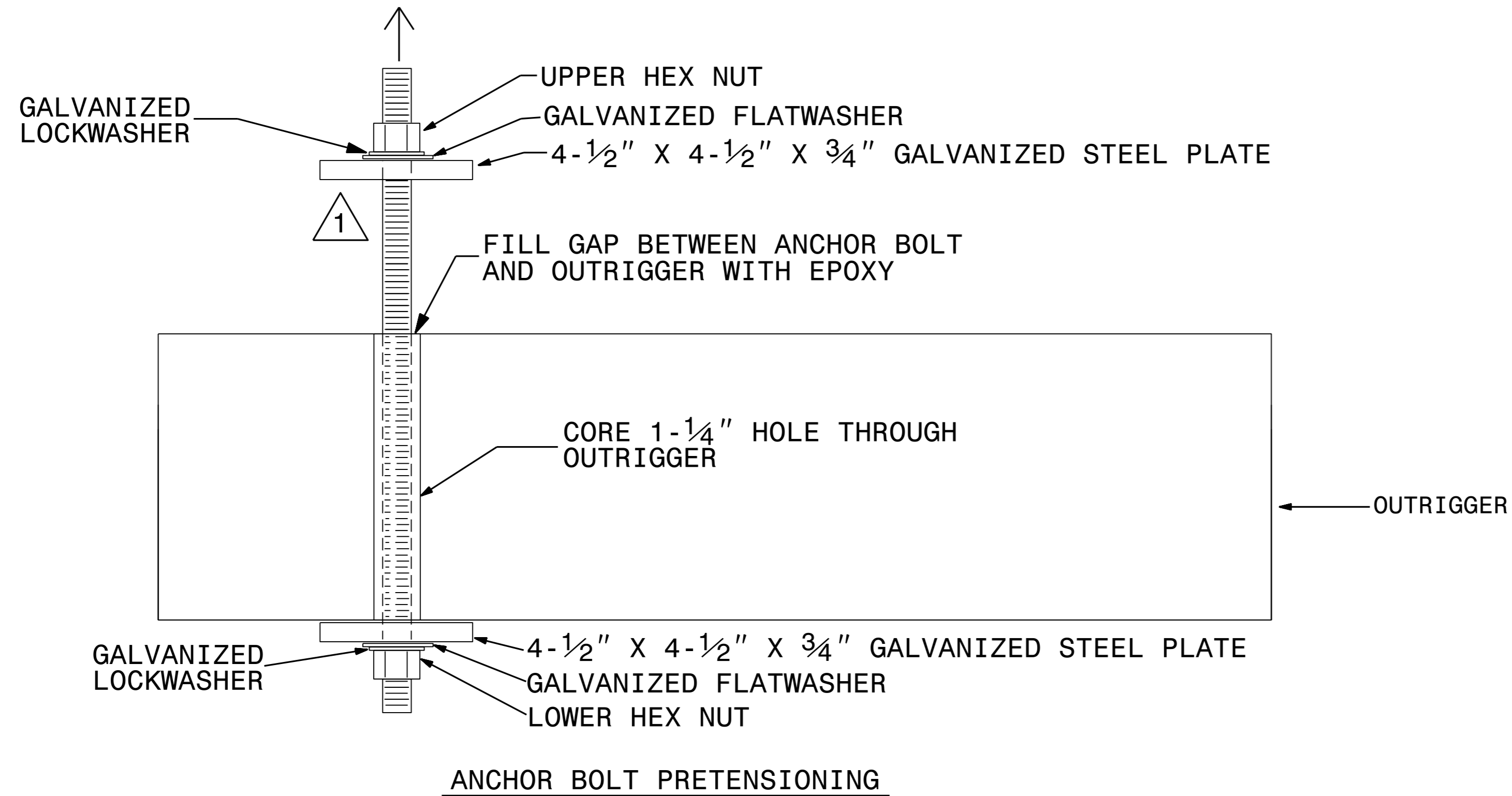
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 CONSTRUCTION METHODS AND PAYMENT.

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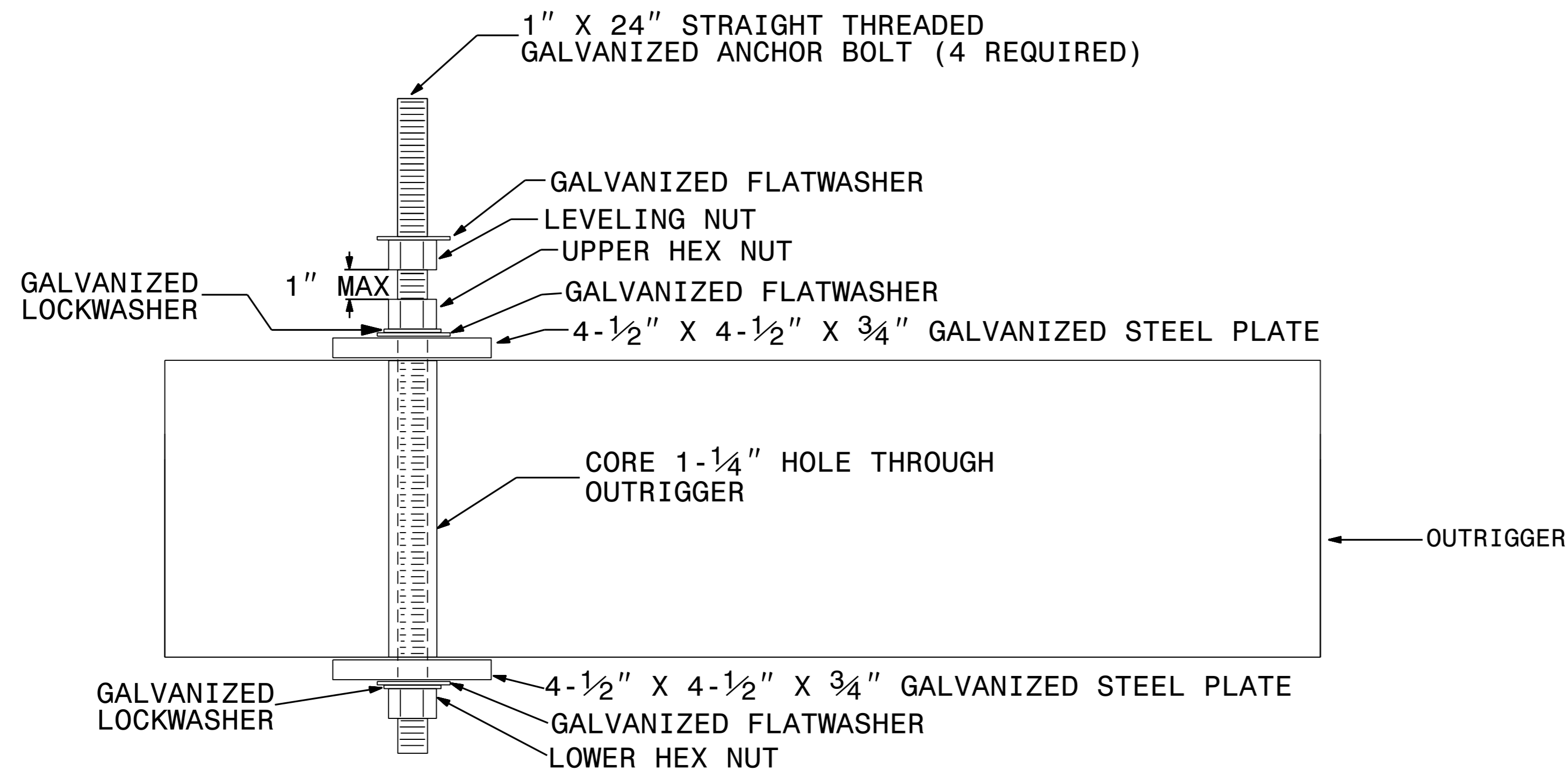
USE FOR LIGHTING CONSTRUCTION ONLY

PRETENSION TO 13,000 POUND-FORCE
TENSILE FORCE



NOTES

- 1 FILL GAP BETWEEN ANCHOR BOLT AND OUTRIGGER WITH EPOXY. PRETENSION ANCHOR BOLT TO 13,000 POUND-FORCE. MAINTAIN FORCE UNTIL BOTH THE UPPER HEX NUT AND THE LOWER HEX NUT ARE TIGHTENED TO A TORQUE OF 270 FT-LBS.



VIEW A-A
ALTERNATE OUTRIGGER MOUNT
(ONLY ONE ANCHOR BOLT SHOWN FOR CLARITY)

NTS

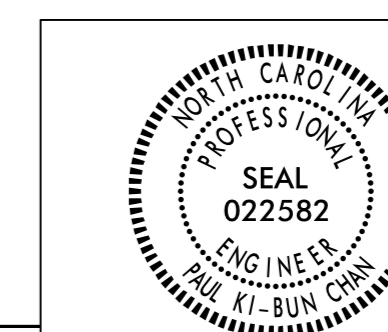
PROJECT NO. B-5938
CARTERET COUNTY

SHEET 4 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIGHTING DETAILS
ALTERNATE OUTRIGGER
MOUNTING

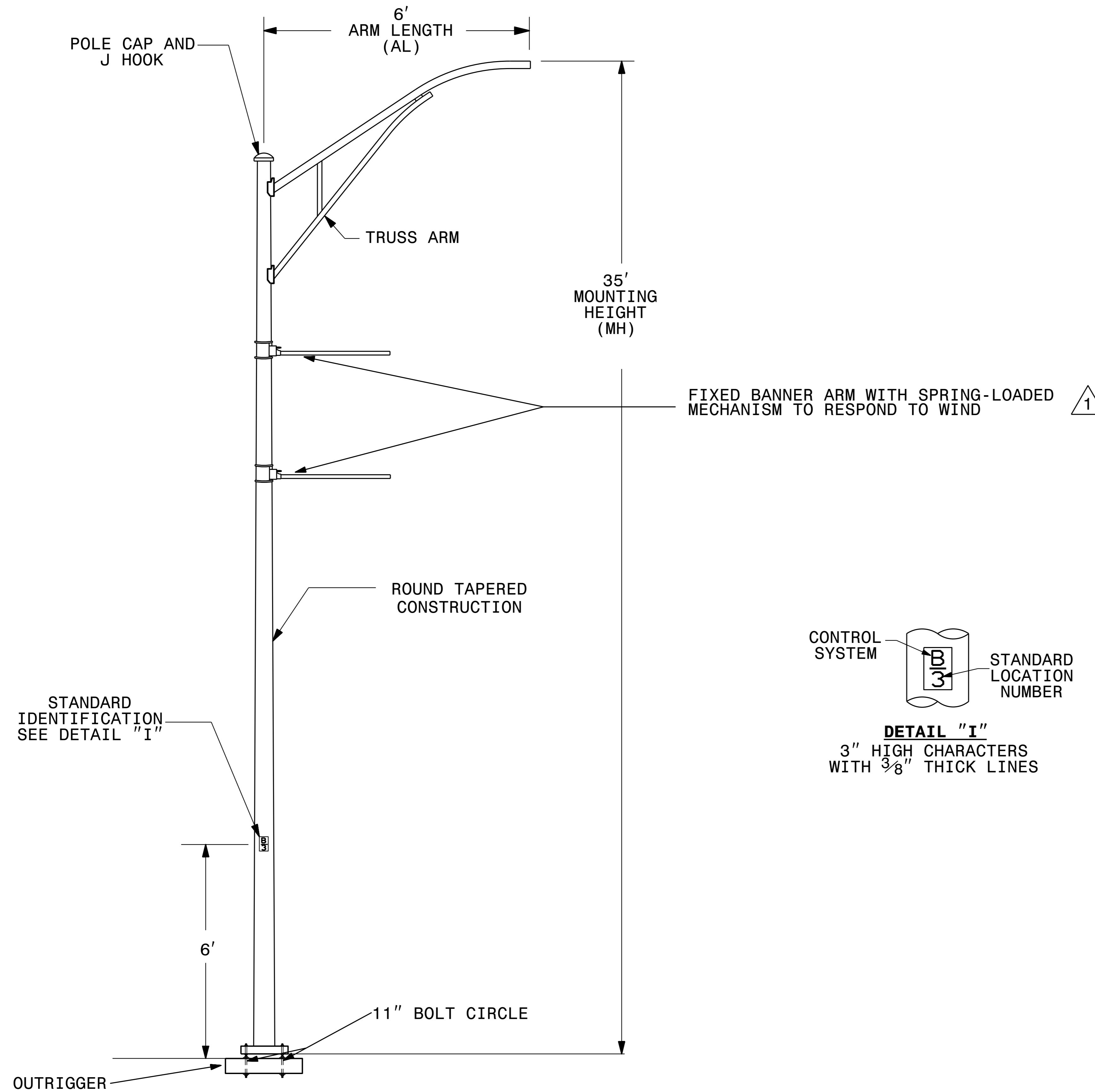
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Paul Chan
1/20/2017

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CONSTRUCTION METHODS AND PAYMENT.

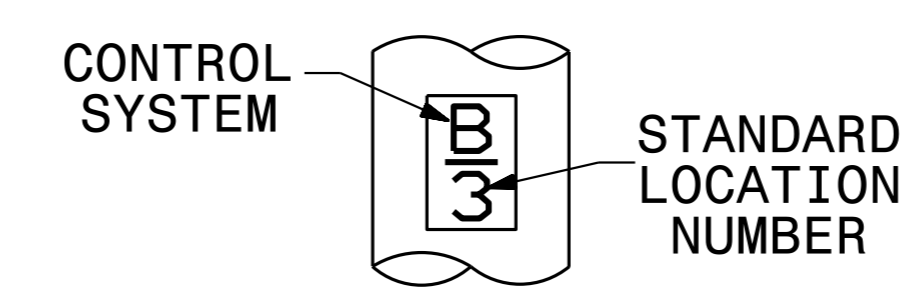
USE FOR LIGHTING CONSTRUCTION ONLY



NOTES

1 CONTACT MARC SCHULZE, PUBLIC SERVICES DIRECTOR (252-726-1366), OF THE TOWN OF ATLANTIC BEACH FOR MOUNTING HEIGHT AND BRACKET ARM LENGTH.

FIXED BANNER ARM WITH SPRING-LOADED MECHANISM TO RESPOND TO WIND 1



DETAIL "I"
3" HIGH CHARACTERS WITH 3/8" THICK LINES

STANDARD IDENTIFICATION SEE DETAIL "I"

SINGLE-ARM LIGHT STANDARD ON BRIDGE

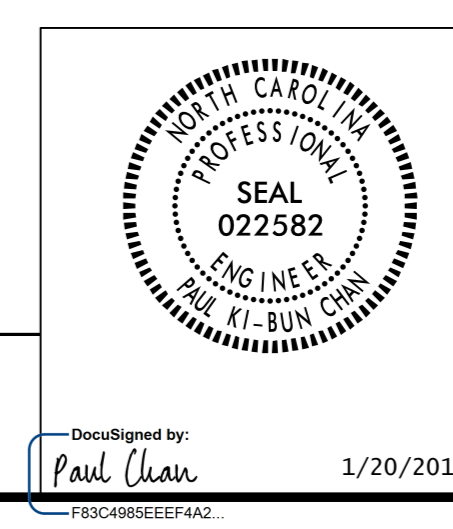
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PROJECT NO. **B-5938**
CARTERET COUNTY

SHEET 5 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIGHTING DETAILS
LIGHT STANDARD MOUNTING
OF BRACKET ARMS FOR
BANNER DISPLAY



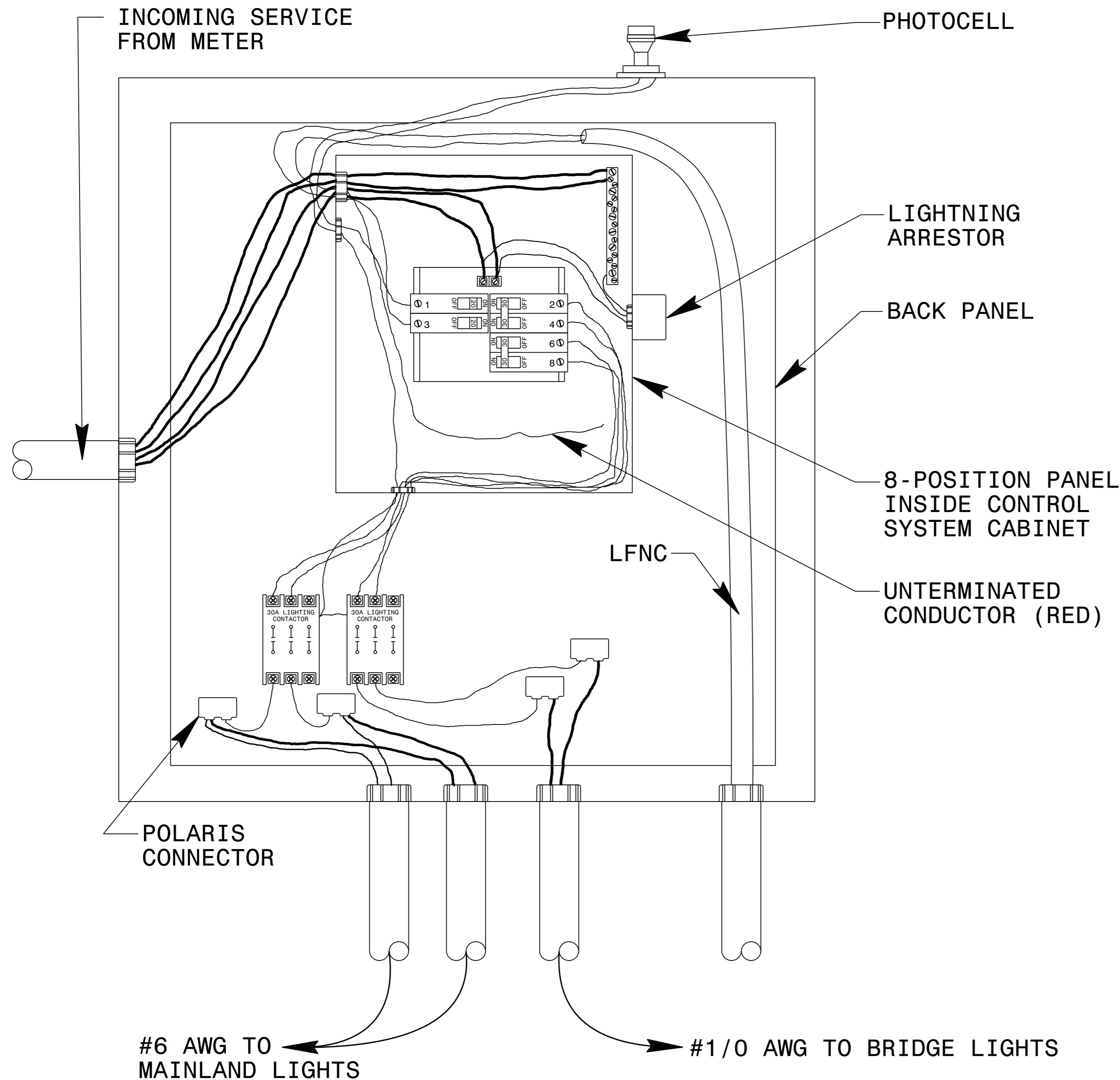
SEE PROJECT SPECIAL PROVISIONS TITLED "LIGHTING" FOR MATERIALS CONSTRUCTION METHODS AND PAYMENT.

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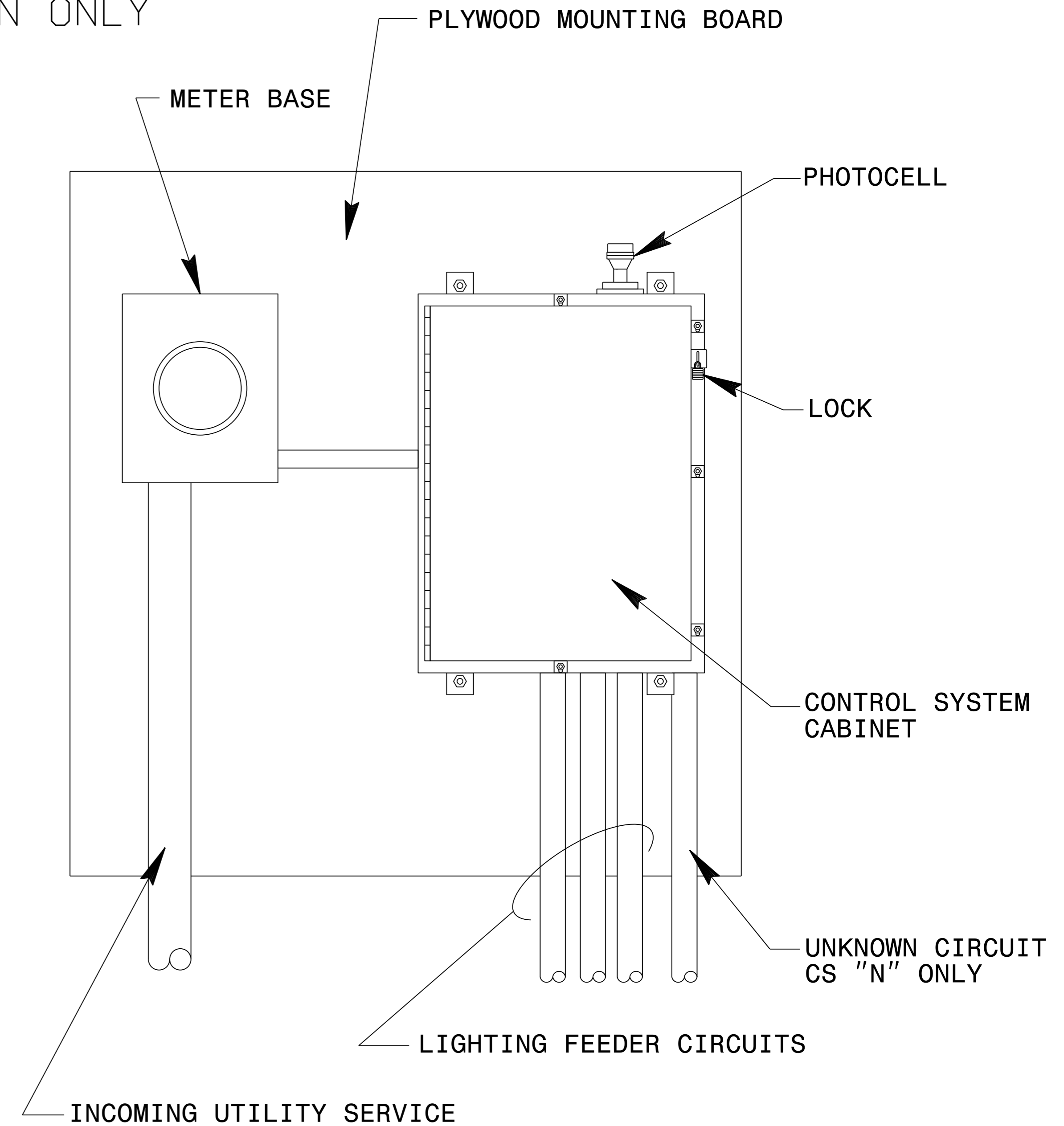
USE FOR LIGHTING CONSTRUCTION ONLY



CONTROL PANEL LAYOUT AND CONNECTIONS

*GROUND AND NEUTRAL CONNECTIONS NOT SHOWN

| POSITION | CONNECTION |
|----------|--------------|
| 1 | PHOTOCELL |
| 2 | LIGHTING CKT |
| 3 | UNKNOWN |
| 4 | LIGHTING CKT |
| 5 | BLANK |
| 6 | LIGHTING CKT |
| 7 | BLANK |
| 8 | LIGHTING CKT |



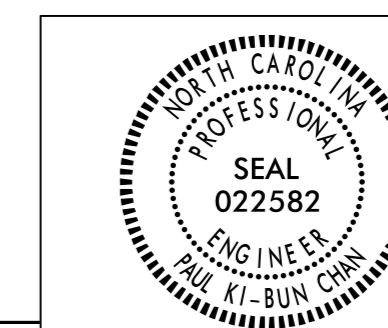
CONTROL PANEL MOUNTING DETAILS

TYPICAL FOR CONTROL SYSTEM "N" AND "S"

PROJECT NO. B-5938
CARTERET COUNTY

SHEET 6 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
LIGHTING DETAILS
 CONTROL SYSTEM "N"
 LAYOUT
 MOREHEAD CITY



Designed by
Paul Chan
 1/20/2017

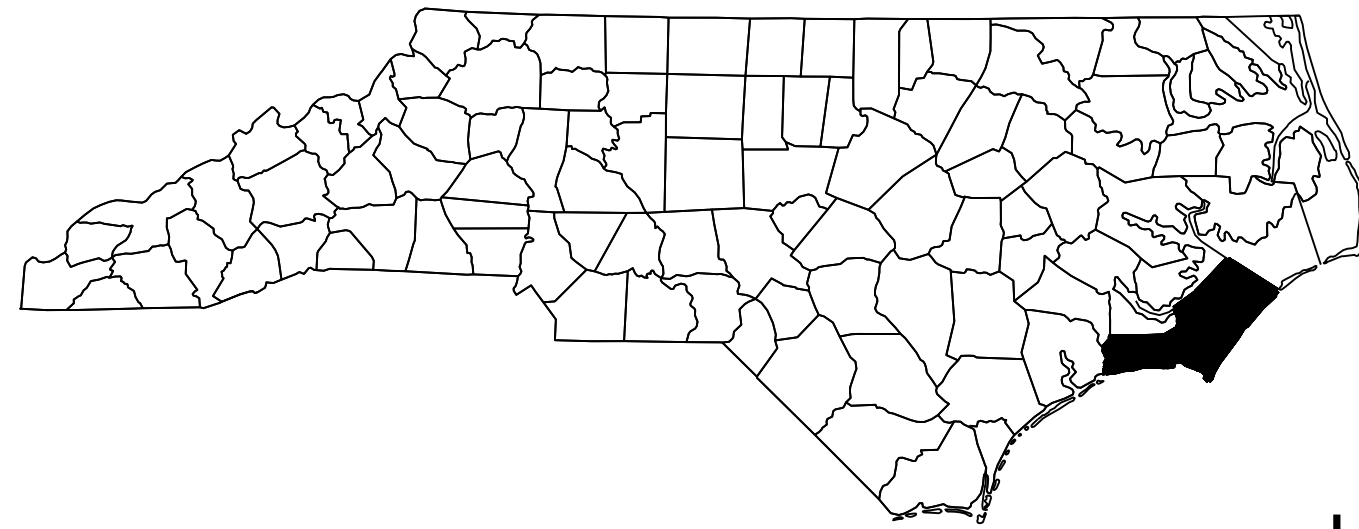
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PROJECT: B-5939

CONTRACT: 203925



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

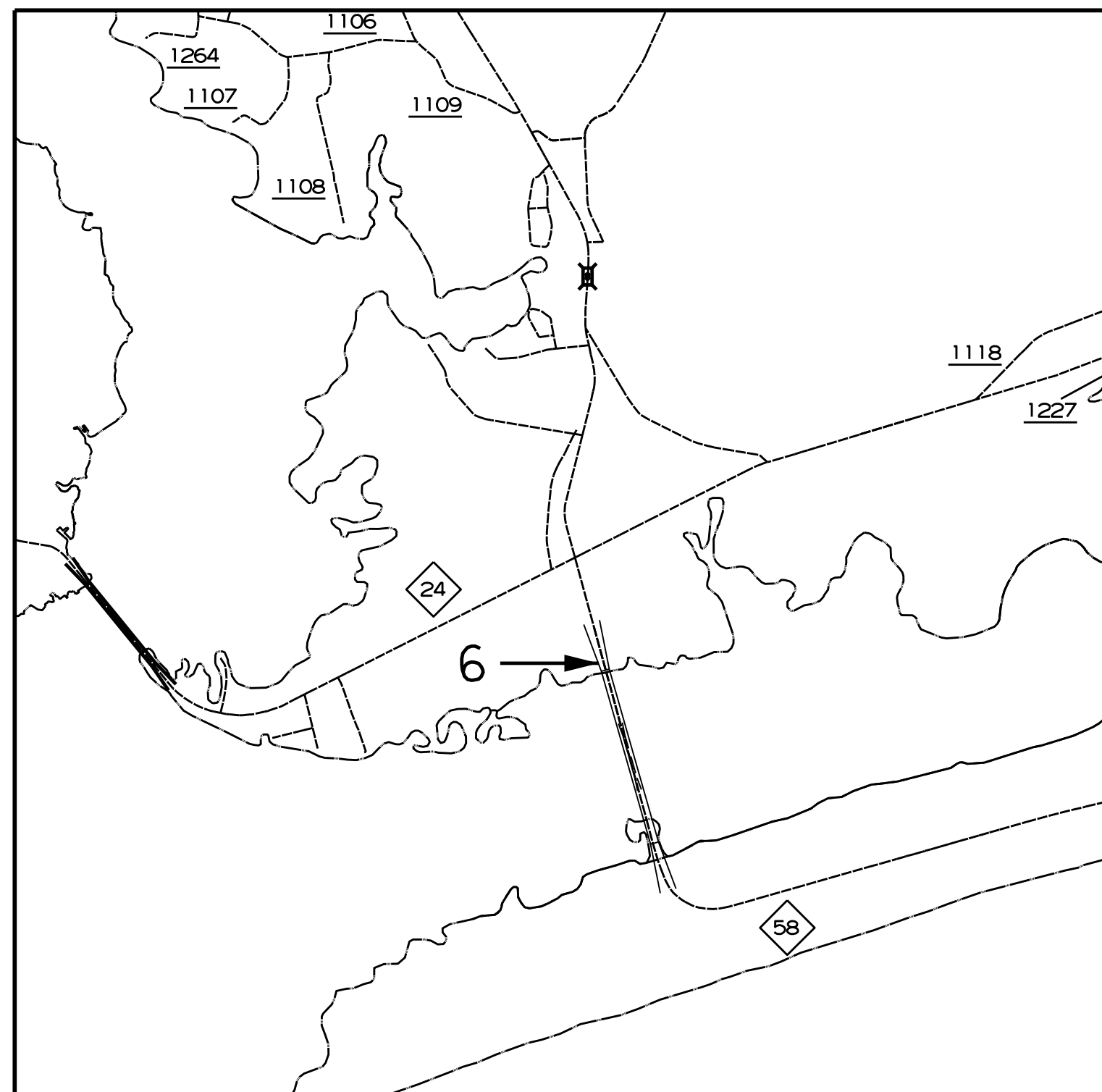
CARTERET COUNTY

LOCATION: CARTERET COUNTY:
-BRIDGE #6 ON NC58 OVER THE INTRACOASTAL WATERWAY.

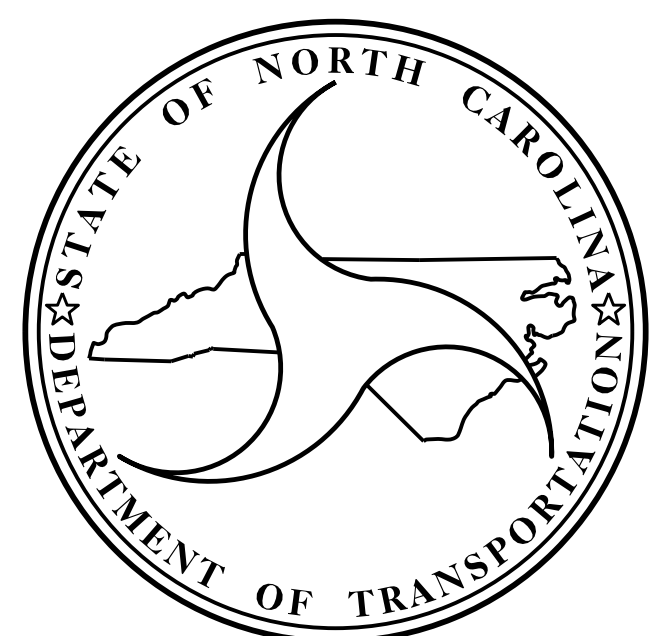
TYPE OF WORK: BRIDGE PRESERVATION - CATHODIC PROTECTION FOR PRESTRESSED CONCRETE GIRDERS, FRP STRENGTHENING, CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR, 2-BAR METAL RAIL RETROFIT, CATHODIC PROTECTION FOR PRESTRESSED CONCRETE PILES.

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | B-5939 | 1C | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 46484.1.1 | | P.E. | |
| 46484.3.1 | | CONST. | |
| | | | |
| | | | |
| | | | |
| | | | |

PART 2



VICINITY MAP - CARTERET CO. #6



DESIGN DATA

CARTERET COUNTY
BRIDGE #6 ADT 2013 = 13,000

PROJECT LENGTH

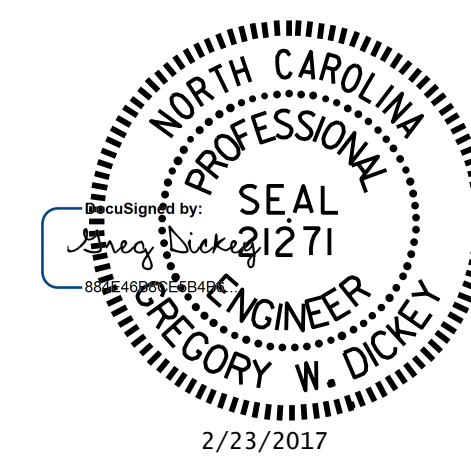
CARTERET COUNTY
BRIDGE #6 = 0.87 MILE

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

ERIC B. NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
APRIL 18, 2017

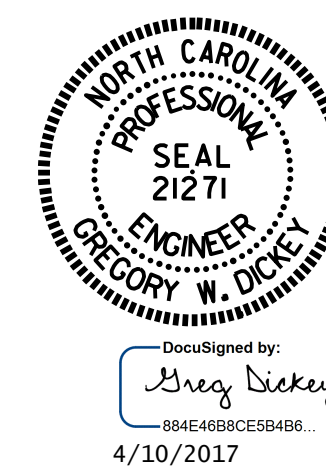


GREG W. DICKEY, P.E.
PROJECT DESIGN ENGINEER

TOTAL BILL OF MATERIAL

| BRIDGE | MOBILIZATION | POLLUTION CONTROL | TWO BAR METAL RAIL | REMOVE & RESET EXISTING GUARDRAIL | GUARDRAIL ANCHOR UNITS, TYPE III | SHOTCRETE REPAIRS | EPOXY RESIN INJECTION | PAINTING CONTAINMENT | CP JACKET (NON-MONITORING) | CP JACKET (MONITORING) | PRESTRESSED CONCRETE GIRDER REPAIR | EPOXY COATING | TSA, PARTIAL LENGTH (MONITORING) | TSA, PARTIAL LENGTH (NON-MONITORING) | FRP STRENGTHENING SYSTEM | CLEANING AND PAINTING OF BEARINGS WITH HRCSA | SPLICING OF PRESTRESSING STRAND | RESET BEARINGS | BRIDGE JACKING | BULK ANODE |
|-------------|--------------|-------------------|--------------------|-----------------------------------|----------------------------------|-------------------|-----------------------|----------------------|----------------------------|------------------------|------------------------------------|---------------|----------------------------------|--------------------------------------|--------------------------|--|---------------------------------|----------------|----------------|------------|
| CARTERET #6 | LUMP SUM | LS | LF | LF | EACH | CF | LF | LUMP SUM | LF | LF | CF | SF | SF | SF | SF | EACH | EACH | EACH | EACH | EACH |
| TOTAL | LUMP SUM | LS | 9,190.6 | 912.5 | 4 | 859.4 | 118 | LUMP SUM | 965 | 26 | 219.9 | 2813.6 | 209.3 | 19348 | 560 | 590 | 20 | 3 | 3 | 156 |

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6



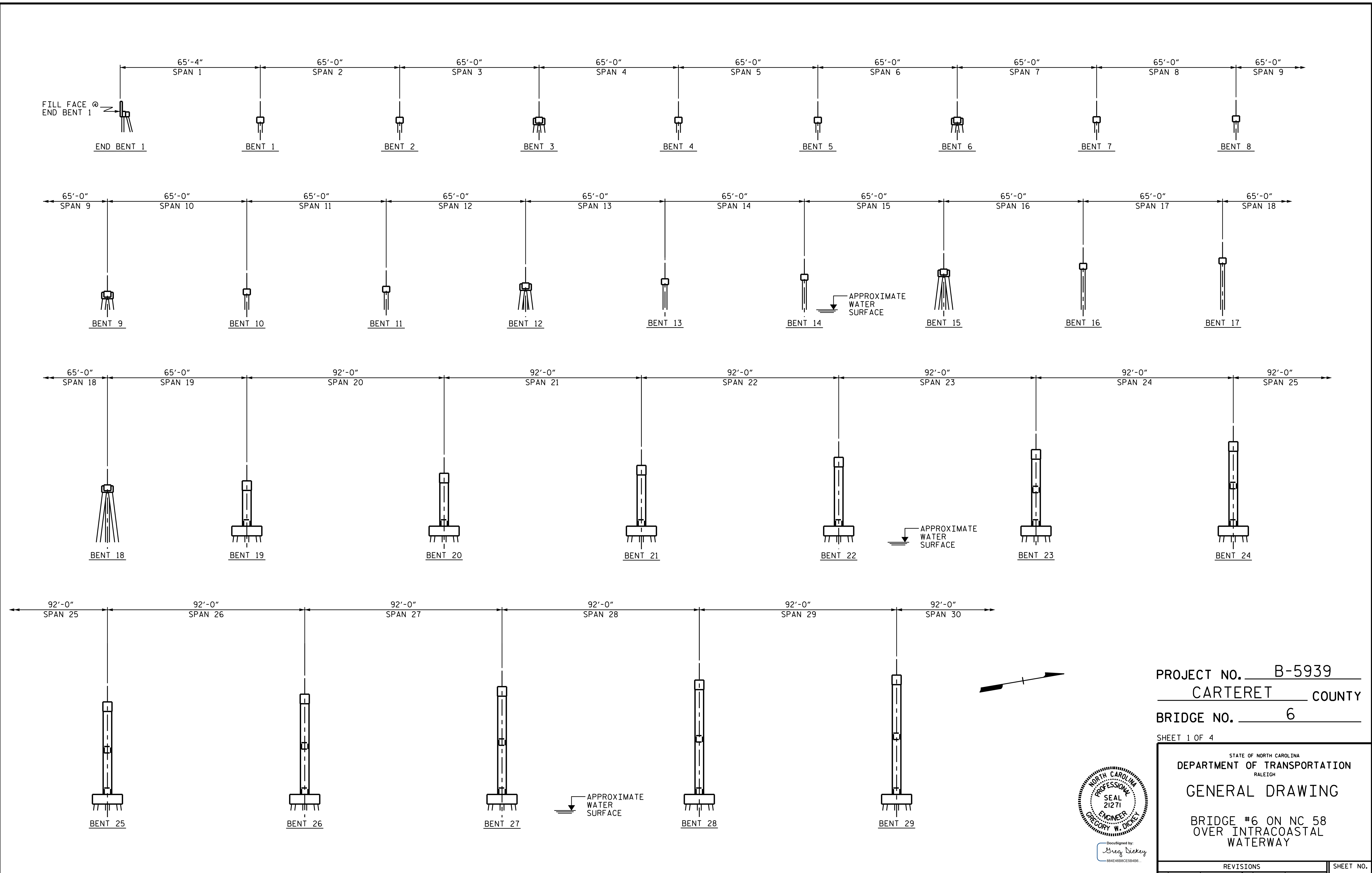
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TOTAL BILL OF MATERIAL

DRAWN BY : M.A.LEE DATE : 2/2017
 CHECKED BY : G.W.DICKEY DATE : 2/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
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SECTION ALONG \odot ROADWAY

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 SIGNATURES COMPLETED

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 1 OF 4

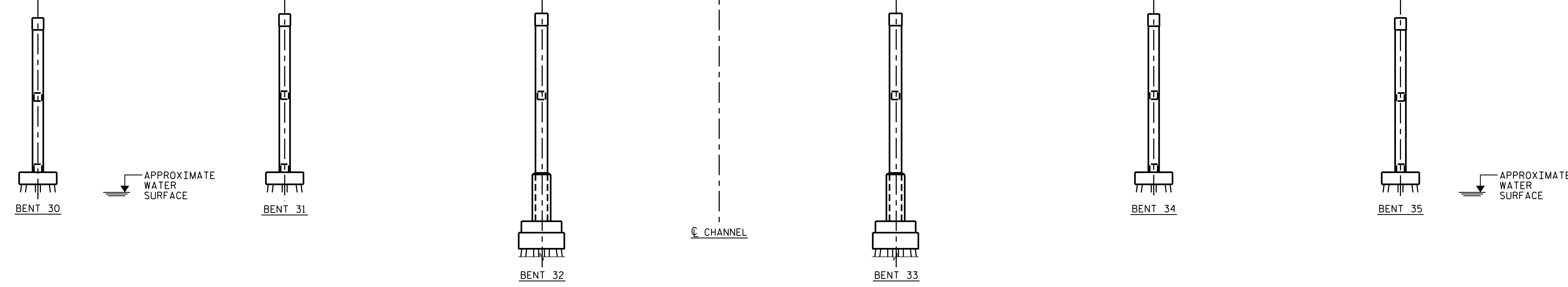


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 Greg Dickey
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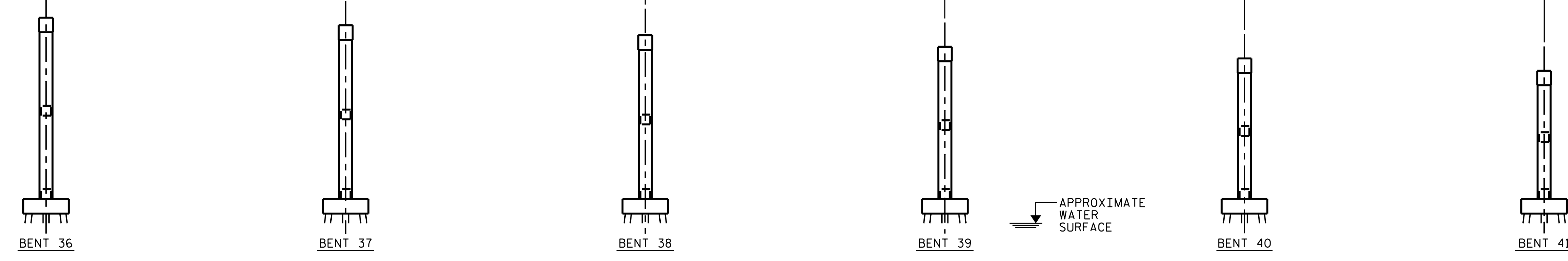
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE #6 ON NC 58
 OVER INTRACOASTAL
 WATERWAY

| REVISIONS | | | | | | SHEET NO. | |
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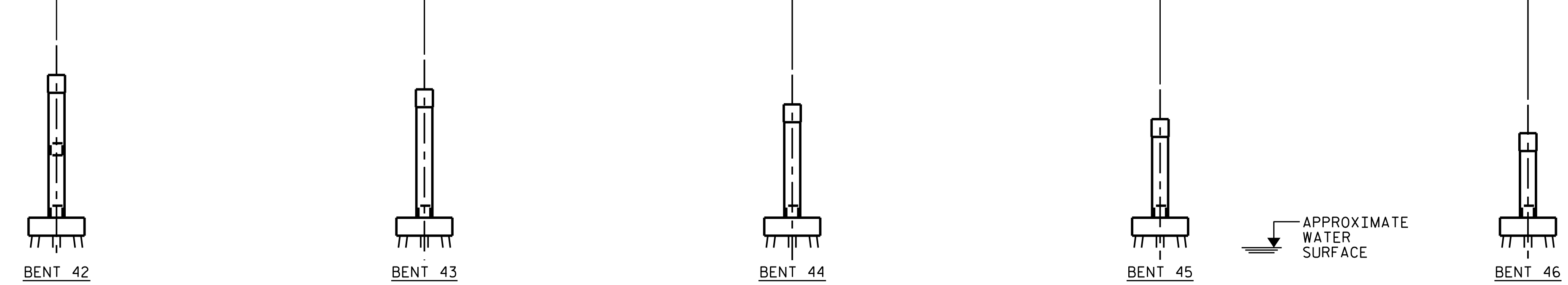
92'-0" SPAN 30 92'-0" SPAN 31 96'-0" SPAN 32 132'-0" SPAN 33 96'-0" SPAN 34 92'-0" SPAN 35 92'-0" SPAN 36



92'-0" SPAN 36 92'-0" SPAN 37 92'-0" SPAN 38 92'-0" SPAN 39 92'-0" SPAN 40 92'-0" SPAN 41 92'-0" SPAN 42

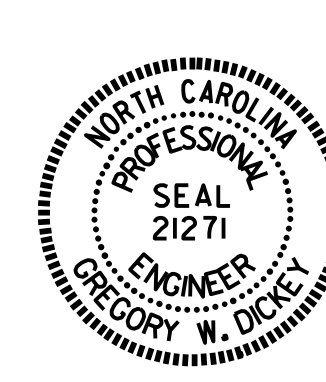


92'-0" SPAN 42 92'-0" SPAN 43 92'-0" SPAN 44 92'-0" SPAN 45 92'-0" SPAN 46 65'-0" SPAN 47



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 2 OF 4



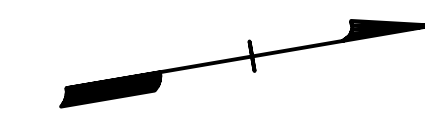
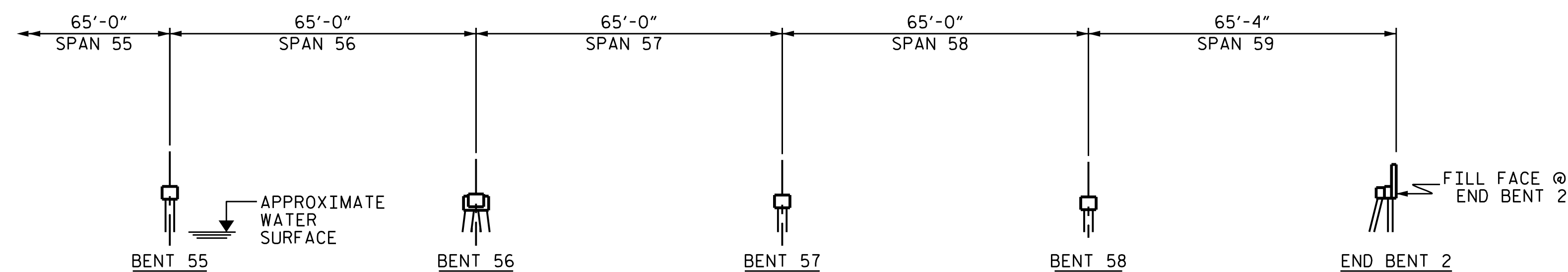
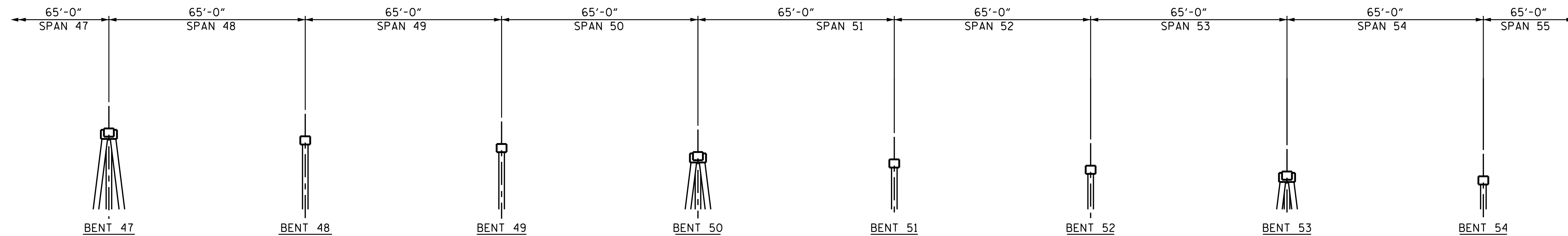
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE #6 ON NC 58
 OVER INTRACOASTAL
 WATERWAY

DRAWN BY : M.A. LEE DATE : 2/2017
 CHECKED BY : G.W. DICKEY DATE : 2/2017

SECTION ALONG C ROADWAY

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. | |
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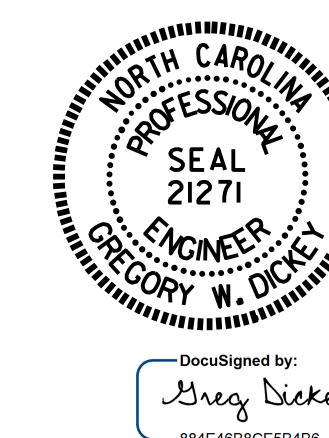
SECTION ALONG C ROADWAY

SCOPE OF WORK:

- TWO BAR METAL RAIL RETROFIT
- RESET BEARINGS AND ANCHOR BOLTS
- CLEAN AND PAINT BEARINGS WITH HRSCA
- CONCRETE SUPERSTRUCTURE REPAIRS
- PRESTRESSED CONCRETE GIRDER REPAIRS
- CATHODIC PROTECTION FOR GIRDERS
- CONCRETE SUBSTRUCTURE REPAIRS
- PILE JACKETS WITH CATHODIC PROTECTION
- FRP STRENGTHENING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

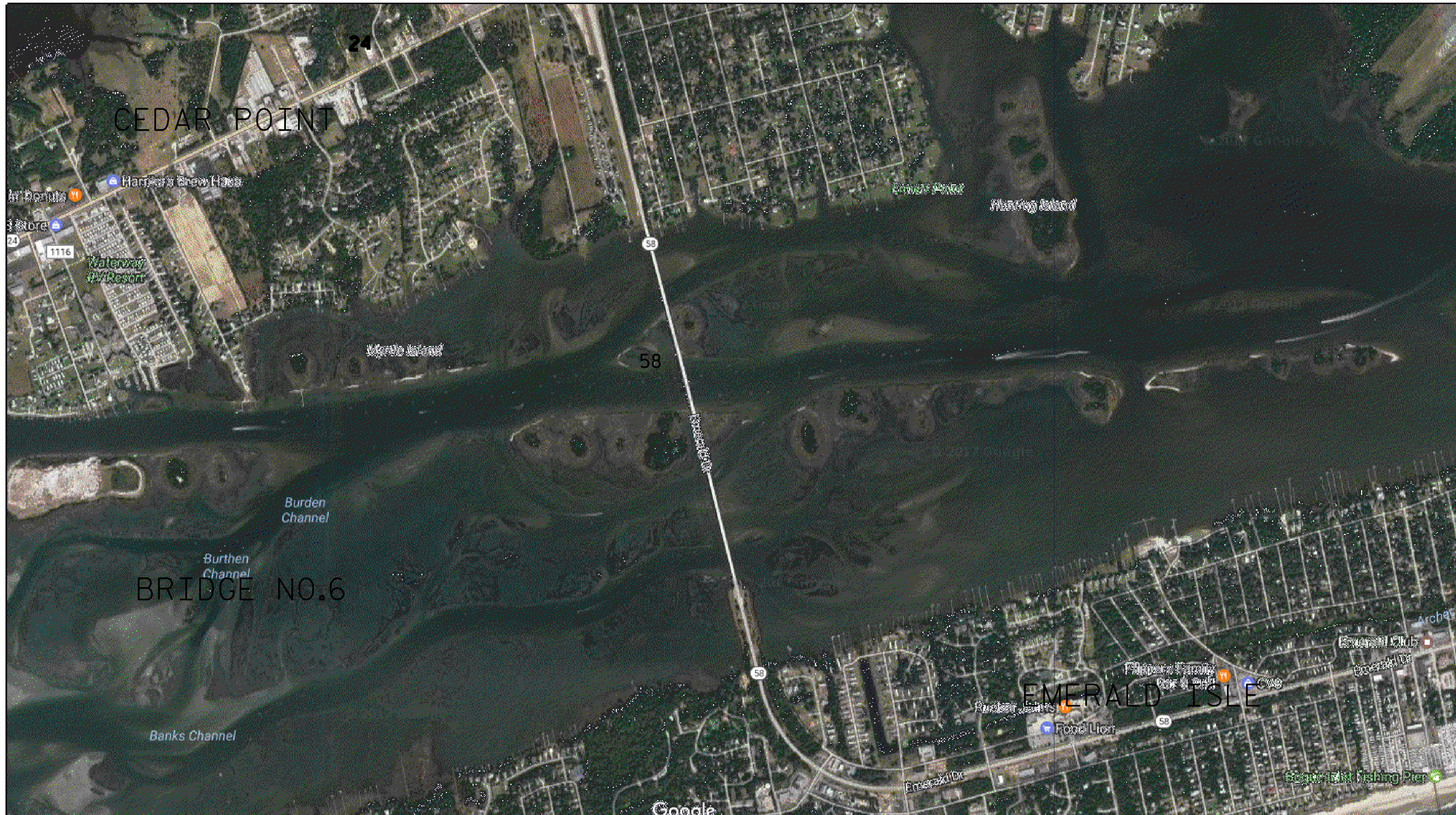
GENERAL DRAWING

BRIDGE #6 ON NC 58
 OVER INTRACOASTAL
 WATERWAY

DRAWN BY : M.A.LEE DATE : 2/2017
 CHECKED BY : G.W.DICKEY DATE : 2/2017

DOCUMENT NOT CONSIDERED
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| 2 | | | 4 | | | | |



LOCATION SKETCH

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

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

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

FOR TWO BAR METAL RAIL, SEE SPECIAL PROVISIONS.

FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE CATHODIC PROTECTION, SEE SPECIAL PROVISIONS.

FOR FIBER REINFORCED POLYMER (FRP) STRENGTHENING, SEE SPECIAL PROVISIONS.

FOR GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKETS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR MOBILIZATION, SEE SPECIAL PROVISIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SPLICING OF PRESTRESSING STRANDS, SEE PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE SPECIAL PROVISIONS.

FOR TSA PARTIAL LENGTH (NON-MONITORING), SEE SPECIAL PROVISIONS.

FOR TSA PARTIAL LENGTH (MONITORING), SEE SPECIAL PROVISIONS.

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

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SECURING VESSELS, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.

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

FOR RESET BEARINGS, SEE SPECIAL PROVISIONS.

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

FOR BULK ANODE, SEE GALVANIC PROTECTION INTEGRAL PILE JACKET SPECIAL PROVISION.

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 4 OF 4



DocuSigned by:
 Greg Dickey
 884E488CE5848E...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 BRIDGE #6 ON NC58
 OVER THE INRACOASTAL
 WATERWAY**

DRAWN BY : M.A. LEE DATE : 2/2017
 CHECKED BY : G. W. DICKEY DATE : 2/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

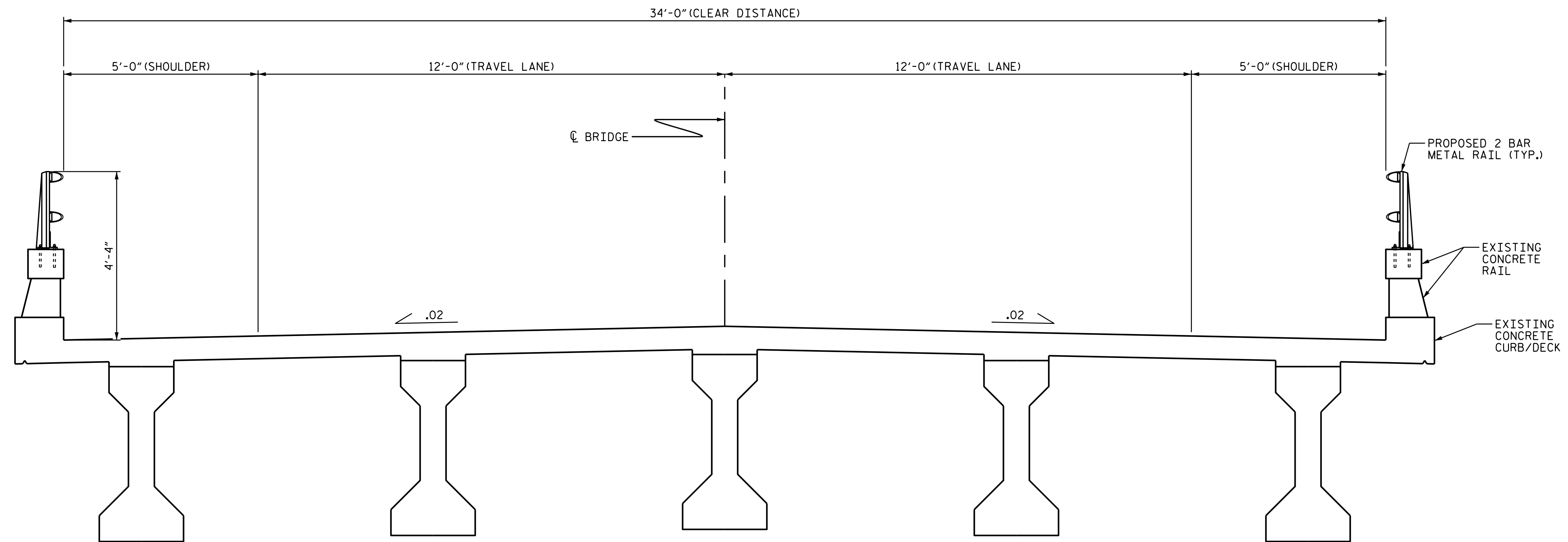
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| 2 | | | 4 | | | - |

NOTES:

THE EXISTING CONCRETE RAILS SHALL BE REMOVED TO THE TOP OF THE EXISTING CONCRETE CURB FROM THE END OF THE CURB TO THE LOCATION OF THE FIRST INTERIOR POST ON EACH SIDE. SEE SHEET 4 OF 8 FOR LOCATION OF FIRST INTERIOR POST.

REMOVAL OF THE EXISTING CONCRETE RAILS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PROPOSED CONCRETE PARAPETS AND END POSTS FOR THE TWO BAR METAL RAILS.

THE OUTER ENDS OF THE EXISTING CONCRETE RAILS SHALL BE PAINTED WITH AN APPROVED EPOXY PAINT PRIOR TO CONSTRUCTION OF THE PROPOSED PARAPETS AND END POSTS.



TYPICAL SECTION

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 1 OF 8



DocuSigned by:
 Greg Dickey
 884E488CE58486...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL SECTION FOR
 PROPOSED TWO BAR
 METAL RAIL

DRAWN BY : H. F. YEUNG DATE : 12/15
 CHECKED BY : W. M. CLARKE DATE : 12/15

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. | |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-6 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | | |

NOTES

THE CONTRACTOR SHALL USE METAL RAILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL NOTES AND THE FOLLOWING SPECIFICATIONS.

UNLESS OTHERWISE REQUIRED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR HAS THE OPTION TO USE AN ALTERNATE TO THE 2 BAR METAL RAIL. THE ALTERNATE RAIL SHALL MEET THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST (APL) UNDER "2 BAR METAL RAIL ALTERNATE". ADJUSTMENTS TO THE CONCRETE PARAPET WILL NOT BE ALLOWED.

ALUMINUM RAILS

MATERIAL FOR POSTS, BASES AND RAILS, EXPANSION BARS AND CLAMP BARS SHALL BE ASTM B-221 ALLOY 6061-T6.

MATERIAL FOR RIVETS SHALL BE ASTM B316 ALLOY 6061-T6. RIVETS SHALL BE STANDARD BUTTON HEAD AND CONE POINT COLD DRIVEN AS PER DRAWING.

THE BASE OF RAIL POSTS, OR ANY OTHER ALUMINUM SURFACE IN CONTACT WITH CONCRETE SHALL BE THOROUGHLY COATED WITH AN ALUMINUM IMPREGNATED CAULKING COMPOUND OF APPROVED QUALITY.

MATERIAL FOR SHIMS TO BE ASTM B209 ALLOY 6061-T6.

GENERAL NOTES

RAILING SHALL BE CONTINUOUS FROM END POST TO END POST OF BRIDGE. EACH JOINT IN RAIL LENGTH SHALL BE SPLICED AS DETAILED. PANEL LENGTHS OF RAIL SHALL BE ATTACHED TO A MINIMUM OF THREE POSTS.

FOR END OF RAIL TO CLEAR FACE OF CONCRETE END POST DIMENSION, SEE STANDARD NO. BMR2.

CAP SCREWS SHALL BE ASTM F593 ALLOY 305 STAINLESS STEEL. WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

CERTIFIED MILL REPORTS ARE REQUIRED FOR RAILS AND POSTS. SHOP INSPECTION IS NOT REQUIRED.

METAL RAIL POSTS SHALL BE SET NORMAL TO CURB GRADE.

METHOD OF MEASUREMENT FOR METAL RAILS: FOR LENGTH OF METAL RAILS TO BE PAID FOR, SEE THE STANDARD SPECIFICATIONS.

CURVED RAIL USAGE: WHERE RAILS ARE TO BE USED ON BRIDGES ON HORIZONTAL AND/OR VERTICAL CURVATURE THE CONTRACTOR MAY, AT HIS OPTION, HAVE THE REQUIRED CURVATURE IN THE RAIL FORMED IN THE SHOP OR IN THE FIELD. IN EITHER EVENT, THE RAIL SHALL CONFORM WITHOUT BUCKLING OR KINKING TO THE REQUIRED CURVATURE IN A UNIFORM MANNER ACCEPTABLE TO THE ENGINEER.

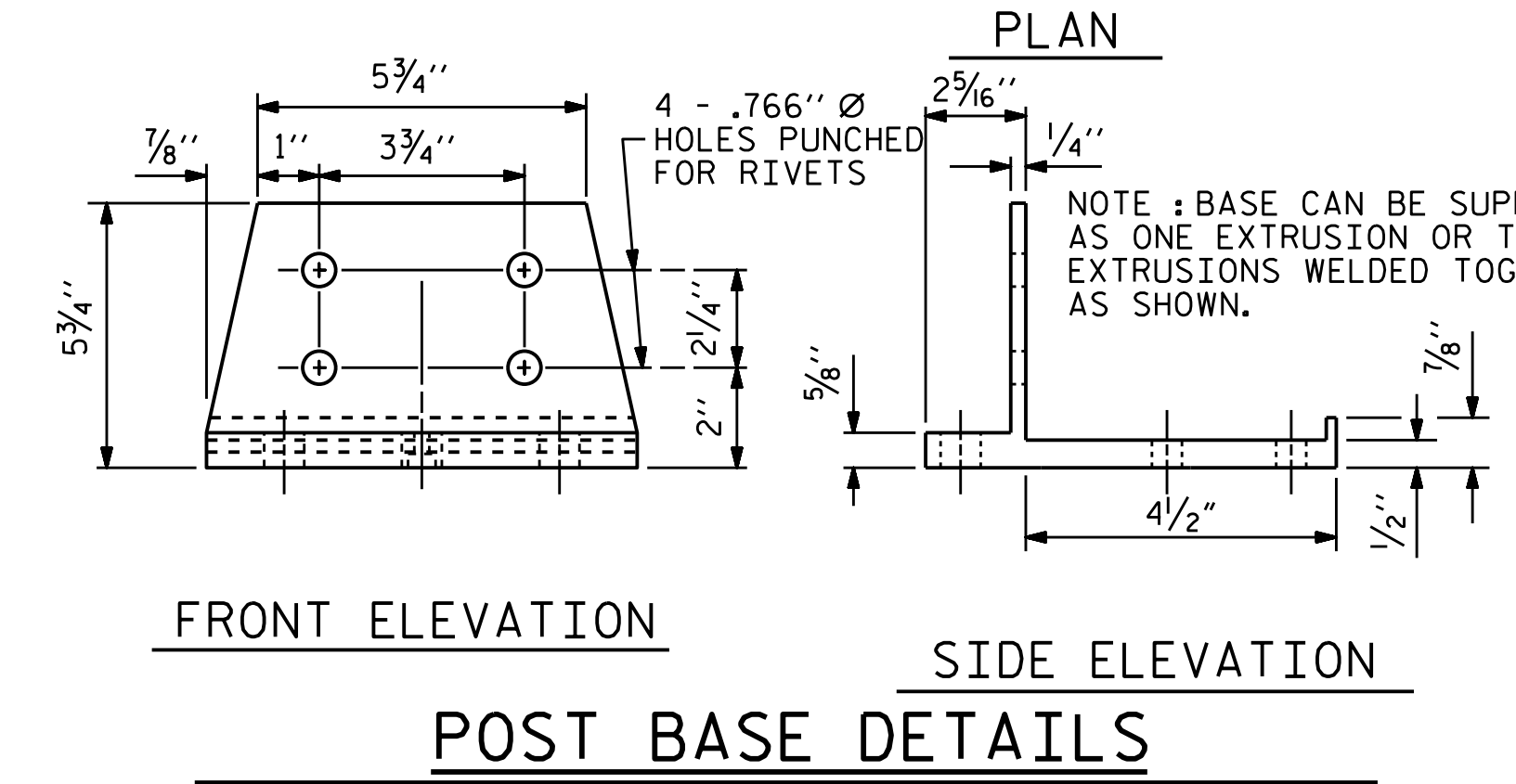
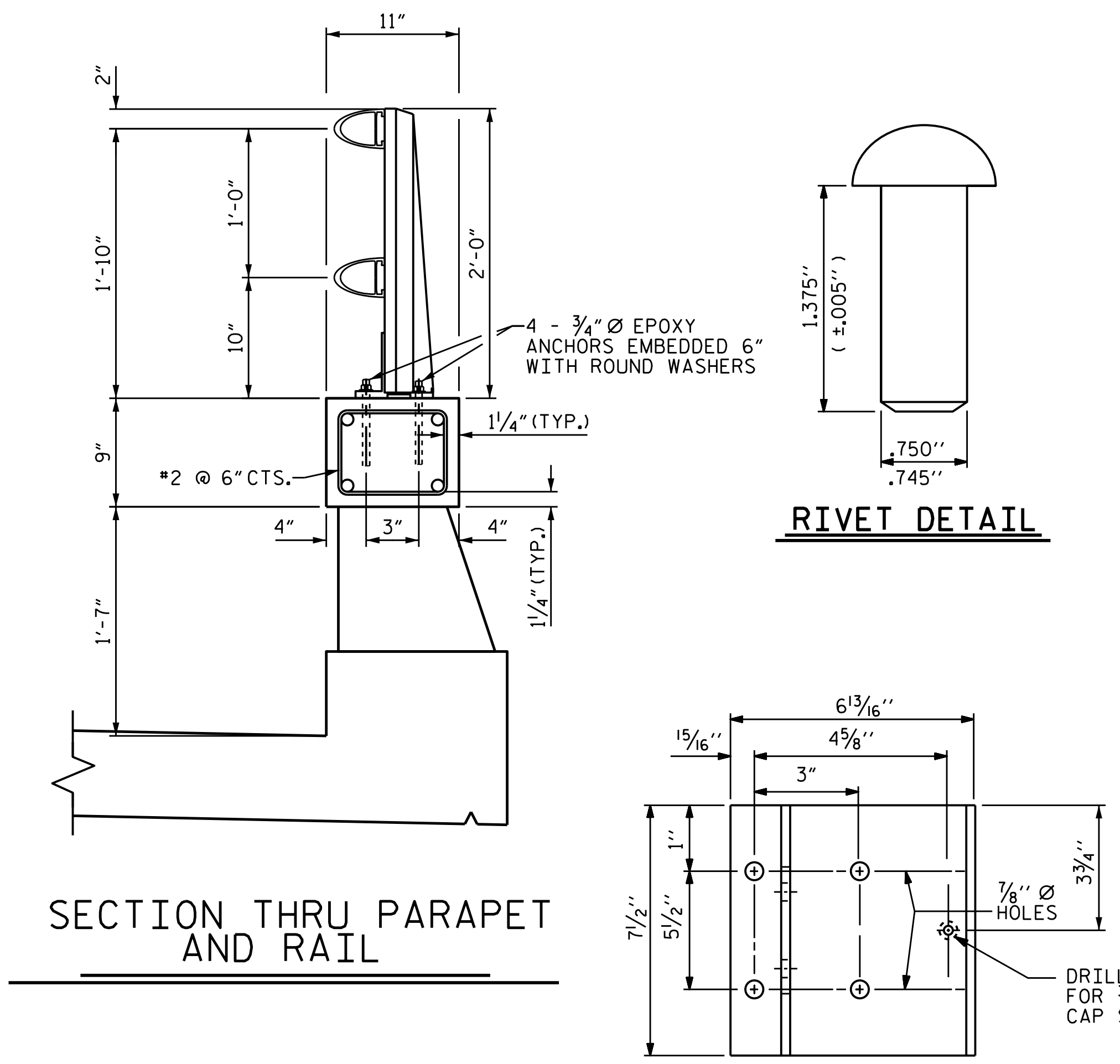
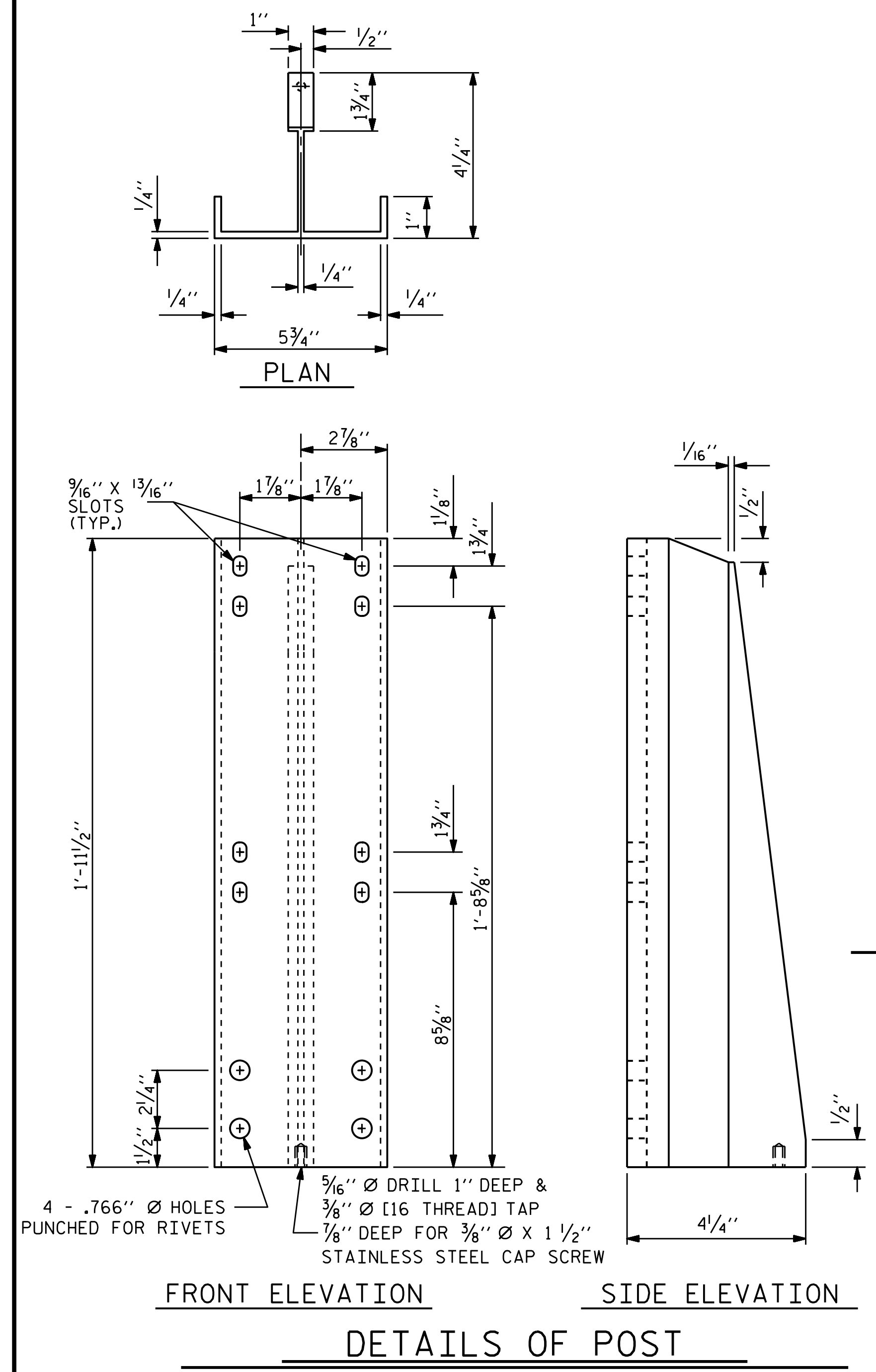
TO ENSURE FUTURE IDENTIFICATION OF THE FABRICATOR, A PERMANENT IDENTIFYING MARK SHALL BE PLACED ON EACH POST. THE METHOD OF MARKING AND LOCATION SHALL BE SUCH THAT IT DOES NOT DETRACT FROM THE APPEARANCE OF THE POST, BUT REMAINS VISIBLE AFTER RAIL PLACEMENT.

SHIMS SHALL BE USED AS NECESSARY FOR POST ALIGNMENT.

ALLOY 6351-T5 MAY BE SUBSTITUTED FOR ALLOY 6061-T6 WHERE APPLICABLE.

MINOR VARIATIONS IN DETAILS OF METAL RAIL WILL BE CONSIDERED. DETAILS OF SUCH VARIATIONS, IF DESIRED, SHALL BE SUBMITTED FOR APPROVAL.

PAY LENGTH = 9190.6 LIN. FT.



| | |
|---------------------------|---------------------|
| ASSEMBLED BY : H.F. YEUNG | DATE : 12/15 |
| CHECKED BY : W.M. CLARKE | DATE : 12/15 |
| DRAWN BY : EEM 6/94 | REV. 5/1/06 TLA/GM |
| CHECKED BY : RGW 6/94 | REV. 10/1/11 MAA/GM |
| | REV. 6/13 MAA/GM |



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 2 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 2 BAR METAL RAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. | |
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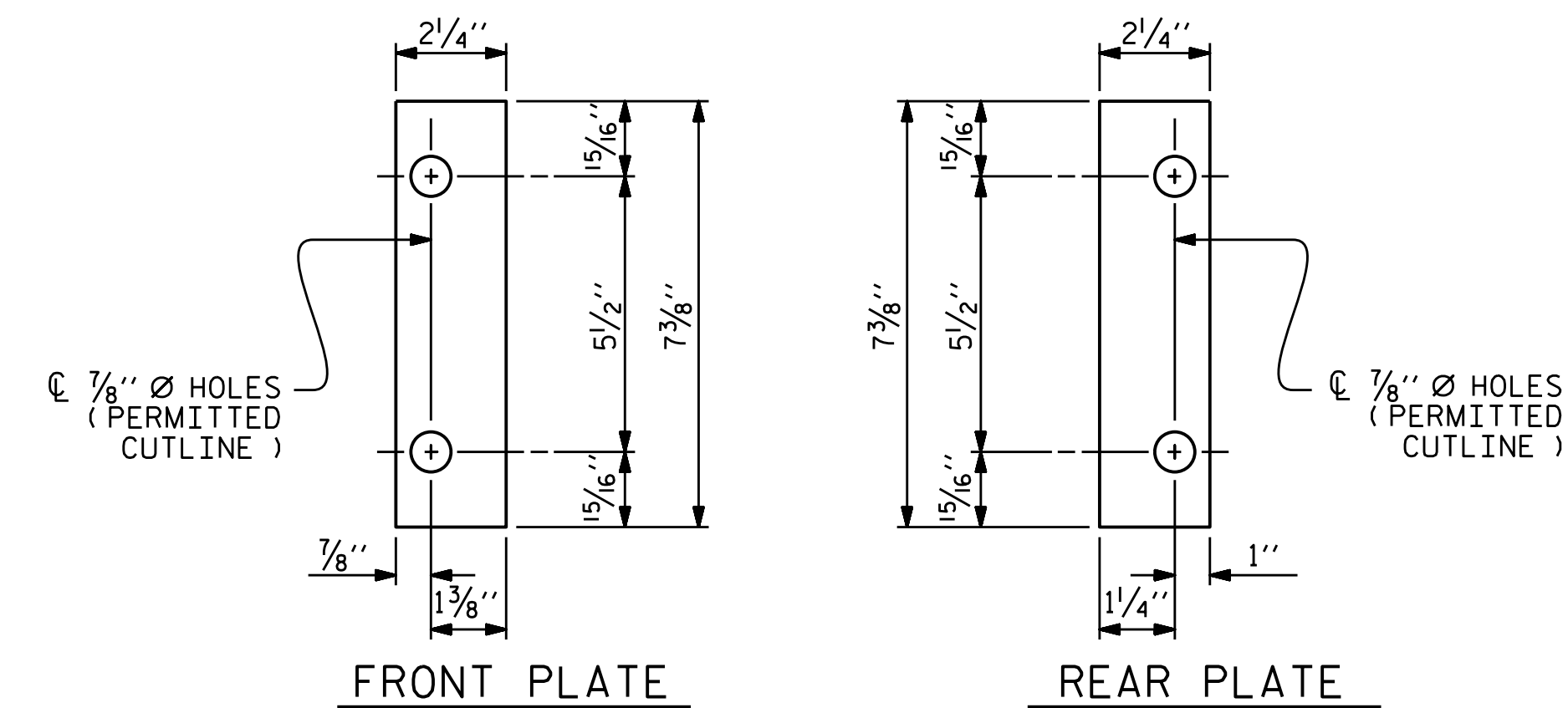
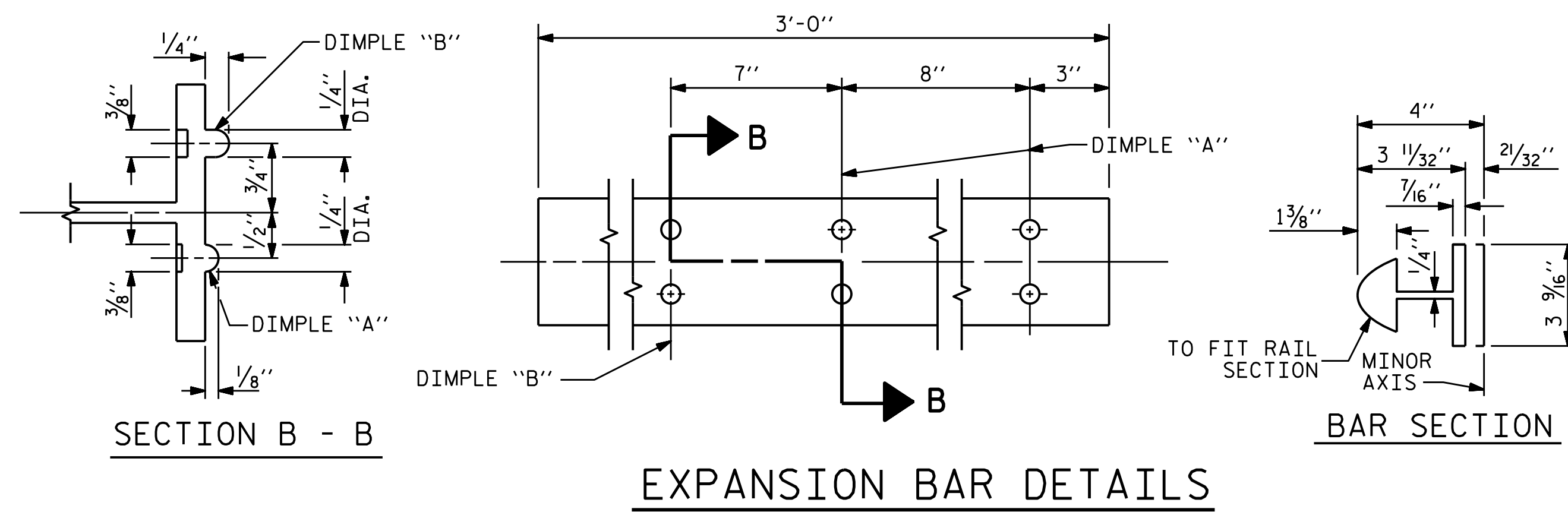
THE METAL RAIL ANCHOR ASSEMBLIES TO BE HOT DIPPED GALVANIZED TO CONFORM TO REQUIREMENTS OF AASHTO M111.

THE COST OF THE METAL RAIL ANCHOR ASSEMBLY WITH BOLTS AND WASHERS COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID FOR LINEAR FEET OF METAL RAIL.

BOLTS TO BE TIGHTENED ONE-HALF TURN WITH A WRENCH FROM A FINGER-TIGHT POSITION.

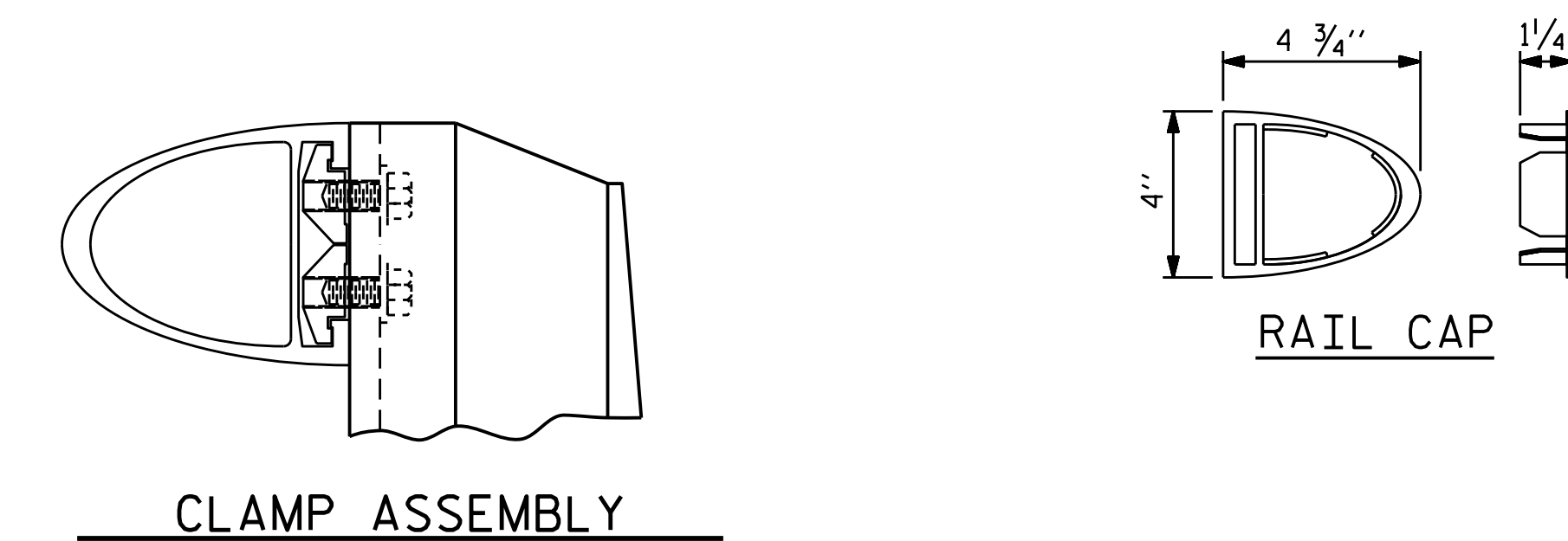
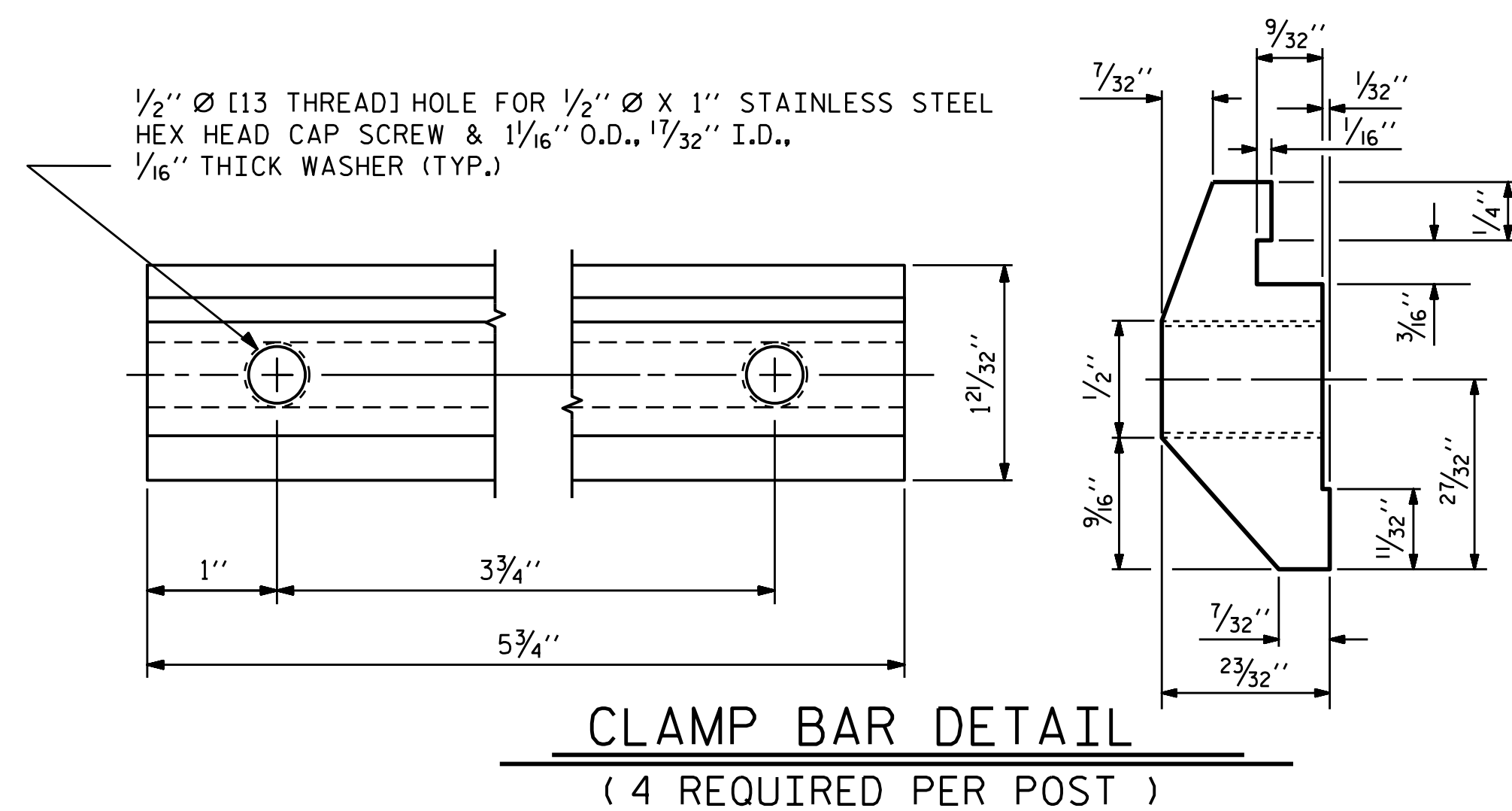
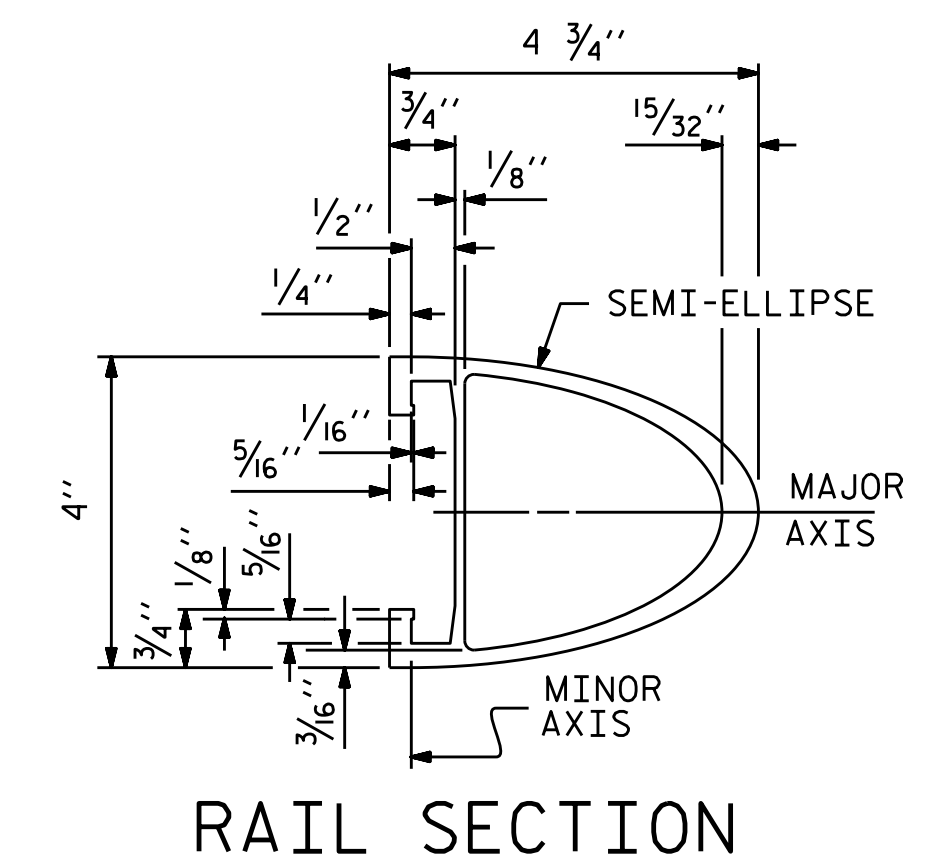
FOR ADHESIVELY ANCHORED ANCHOR BOLTS, LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4" Ø BOLT IS 5 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE THE STANDARD SPECIFICATIONS.

ADHESIVELY ANCHORED ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F593 ALLOY 304 STAINLESS STEEL WITH MINIMUM 75,000 PSI ULTIMATE STRENGTH. NUTS SHALL MEET THE REQUIREMENTS OF ASTM F594 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.



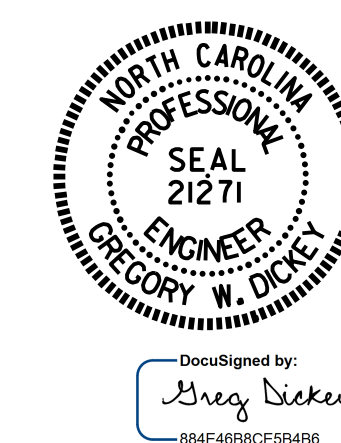
SHIM DETAILS

NOTE : SHIMS MAY BE CUT ALONG PERMITTED CUTLINE OR SLOTTED TO EDGE OF PLATE TO FACILITATE PLACEMENT.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 3 OF 8



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 2 BAR METAL RAIL

| | |
|---------------------------|----------------------|
| ASSEMBLED BY : H.F. YEUNG | DATE : 12/15 |
| CHECKED BY : W.M. CLARKE | DATE : 12/15 |
| DRAWN BY : EEM 6/94 | REV. 8/16/99 MAB/LES |
| CHECKED BY : RGW 6/94 | REV. 5/1/06R KMM/GM |
| | REV. 10/1/11 MAA/GM |

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| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | | |

NOTES

STRUCTURAL CONCRETE INSERT

THE STRUCTURAL CONCRETE INSERT ASSEMBLY SHALL CONSIST OF THE FOLLOWING COMPONENTS:

- A. FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 1/2".
- B. 1 - 3/4" Ø X 1 5/8" BOLT WITH WASHER. BOLT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLT AND WASHER SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLT AND WASHER MAY BE USED AS AN ALTERNATE FOR THE 3/4" Ø X 1 5/8" GALVANIZED BOLT AND WASHER. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
- C. WIRE STRUT SHOWN IN THE CONCRETE INSERT ASSEMBLY DETAIL IS THE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 PSI. AS AN OPTION, A 1/16" Ø WIRE STRUT WITH A MINIMUM TENSILE STRENGTH OF 90,000 PSI IS ACCEPTABLE.

NOTES

METAL RAIL TO END POST CONNECTION

THE METAL RAIL TO END POST CONNECTION SHALL CONSIST OF THE FOLLOWING COMPONENTS:

- A. 1/2" PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 AND SHALL BE GALVANIZED AFTER FABRICATION.
- B. 3/4" STRUCTURAL CONCRETE INSERT SHALL HAVE A WORKING LOAD SHEAR CAPACITY OF 4800 LBS. THE FERRULES SHALL ENGAGE A 3/4" Ø X 1 5/8" BOLT WITH 2" O.D. WASHER IN PLACE. THE 3/4" Ø X 1 5/8" BOLT SHALL HAVE N.C. THREADS.
- C. CAP SCREWS FOR RAIL ATTACHMENT TO ANGLE SHALL CONFORM TO THE REQUIREMENTS OF ASTM F593 ALLOY 305 STAINLESS STEEL. CAP SCREWS TO BE CENTERED IN SLOTS AT 60°F.
- D. STANDARD CLAMP BARS (SEE METAL RAIL SHEET).
- E. 1/2" Ø PIPE SLEEVES (IF REQUIRED) TO BE GALVANIZED.

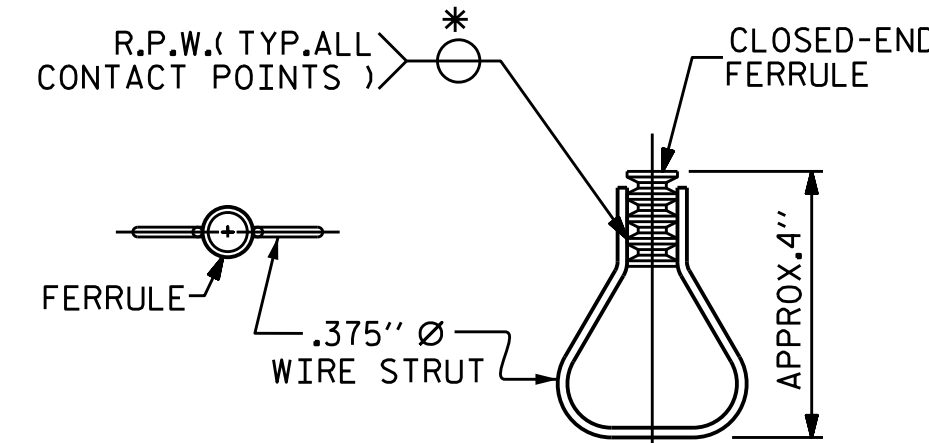
THE COST OF THE STANDARD CLAMP BARS AND CAP SCREWS USED IN THE METAL RAIL TO END POST CONNECTION SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR LINEAR FEET OF 1 OR 2 BAR METAL RAILS.

THE 3/4" STRUCTURAL CONCRETE INSERT WITH BOLT SHALL BE ASSEMBLED IN THE SHOP.

THE COST OF THE 3/4" STRUCTURAL CONCRETE INSERT ASSEMBLY, AND THE 1/2" PLATES COMPLETE IN PLACE SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.

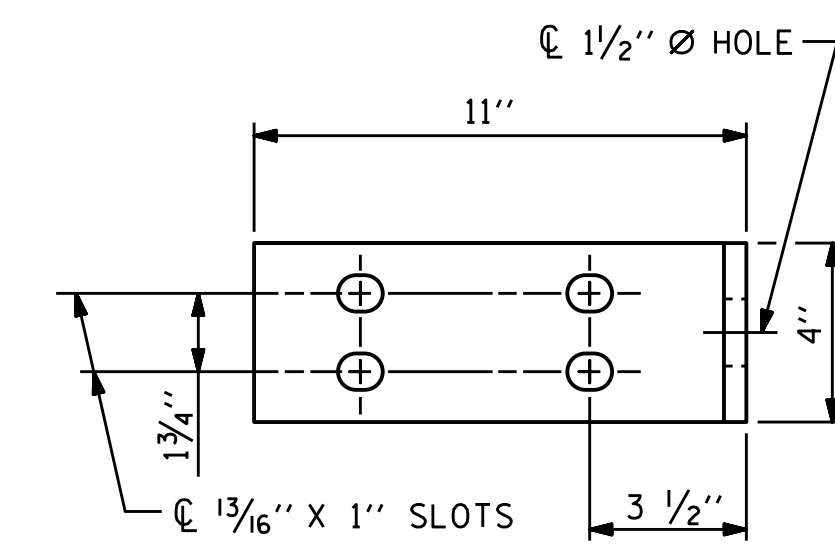
THE CONTRACTOR, AT HIS OPTION, MAY USE AN ADHESIVE BONDING SYSTEM IN LIEU OF THE STRUCTURAL CONCRETE INSERT EMBEDDED IN THE END POST. IF THE ADHESIVE BONDING SYSTEM IS USED, THE 3/4" Ø X 1 5/8" BOLT WITH WASHER SHALL BE REPLACED WITH A 3/4" Ø X 6 1/2" BOLT AND 2" O.D. WASHER. ALL SPECIFICATIONS THAT APPLY TO THE 3/4" Ø X 1 5/8" BOLT SHALL APPLY TO THE 3/4" Ø X 6 1/2" BOLT. FIELD TESTING OF THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

FOR RAIL POST SPACINGS, SEE SHEET RAIL POST SPACINGS.

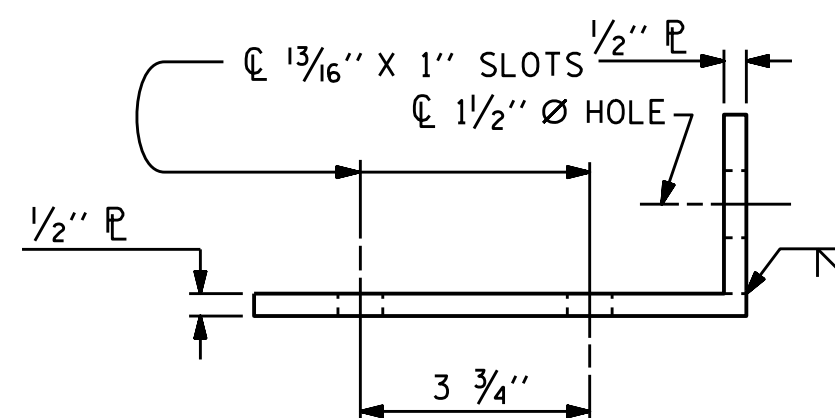


PLAN ELEVATION
STRUCTURAL CONCRETE INSERT

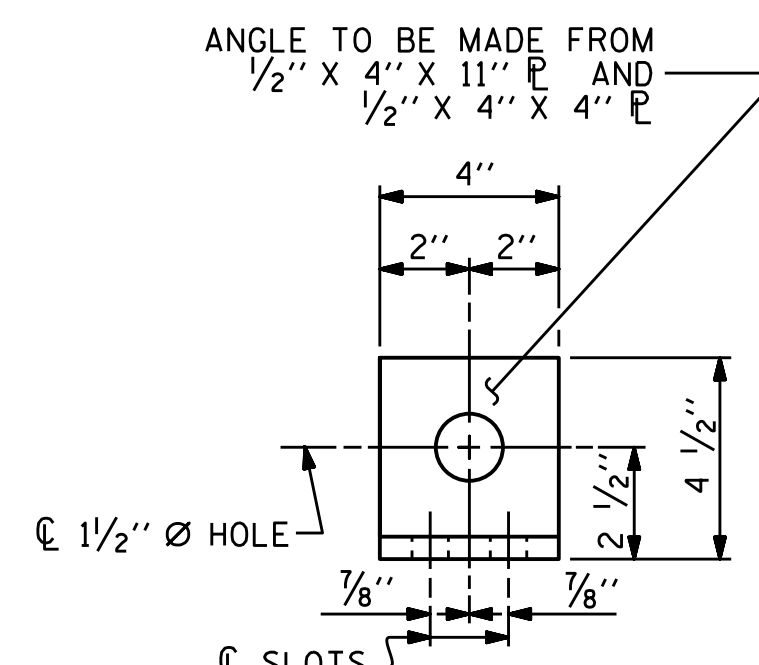
* EACH WELDED ATTACHMENT OF WIRE TO FERRULE SHALL DEVELOP THE TENSILE STRENGTH OF THE WIRE.



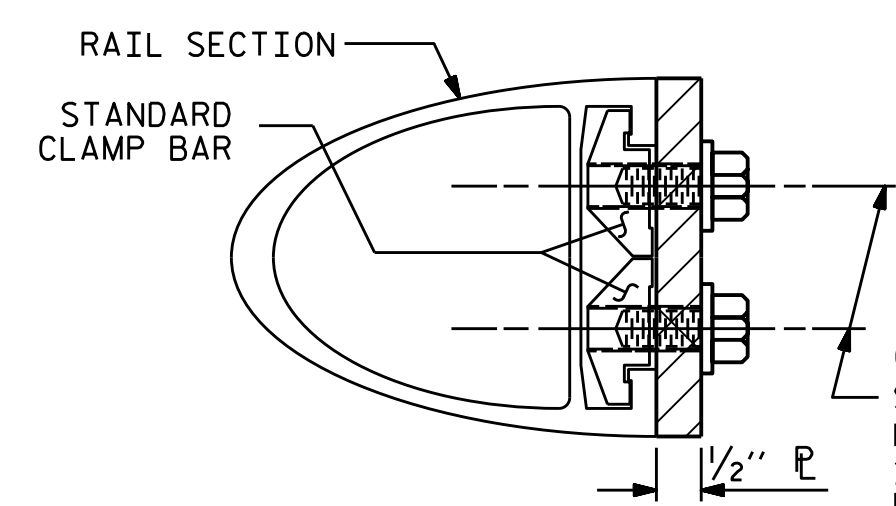
ELEVATION



TOP VIEW

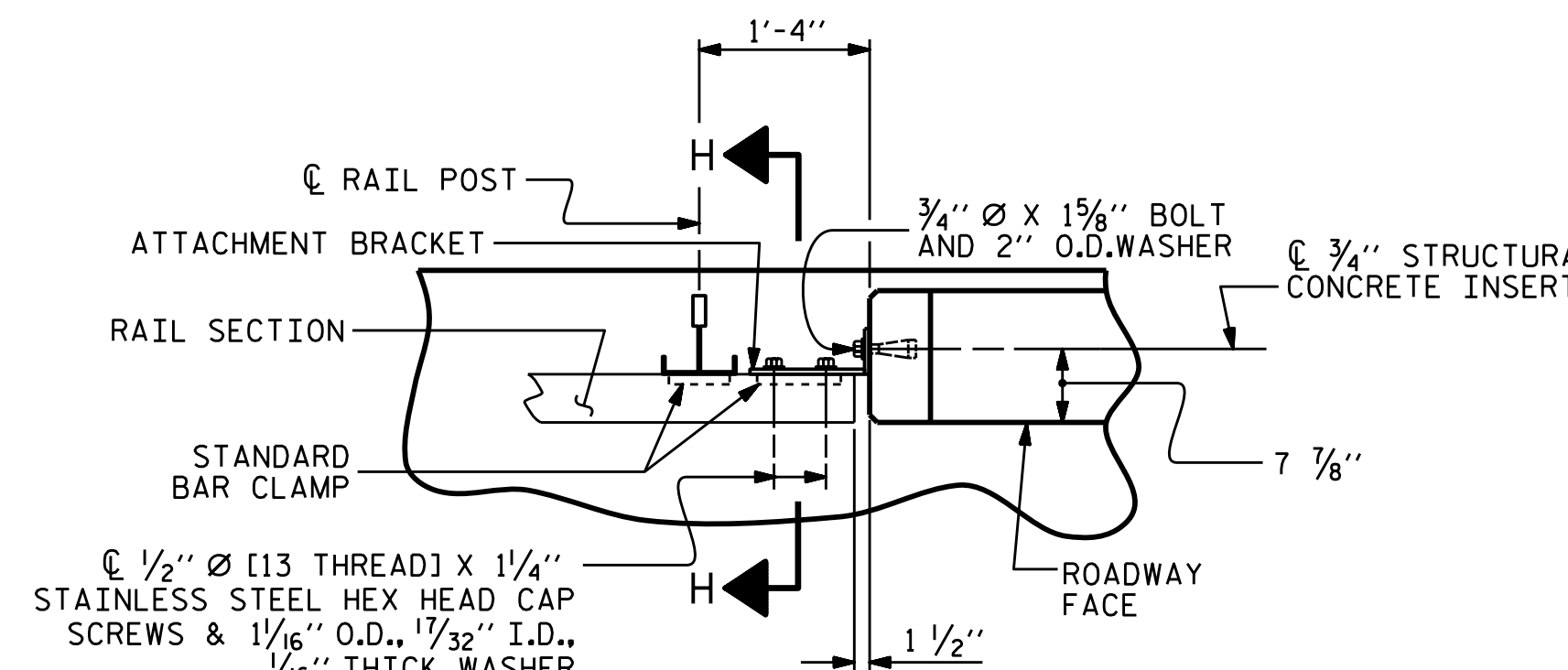


END VIEW



SECTION H-H (FIX)

FIXED



PLAN - RAIL AND END POST

DETAILS FOR ATTACHING METAL RAIL TO END POST

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 4 OF 8

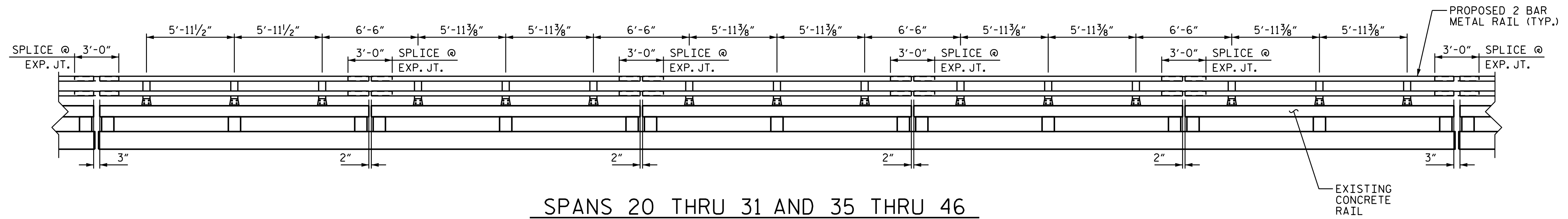
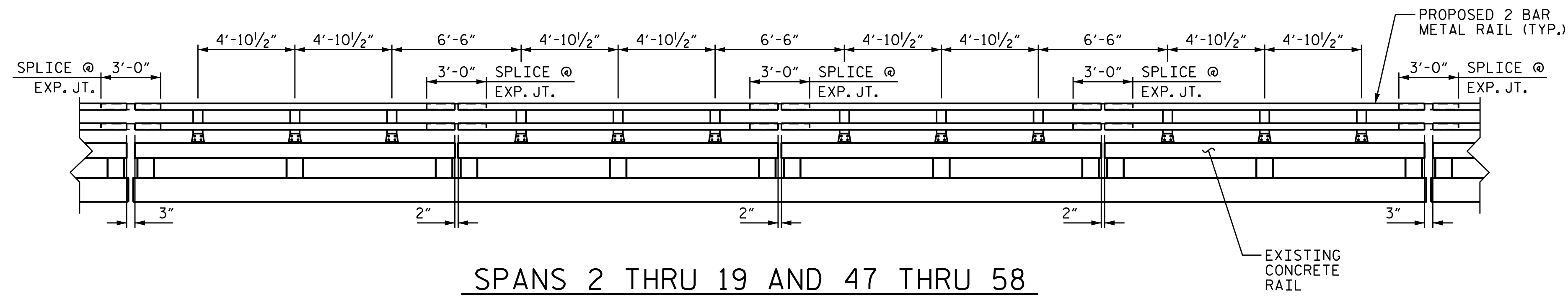
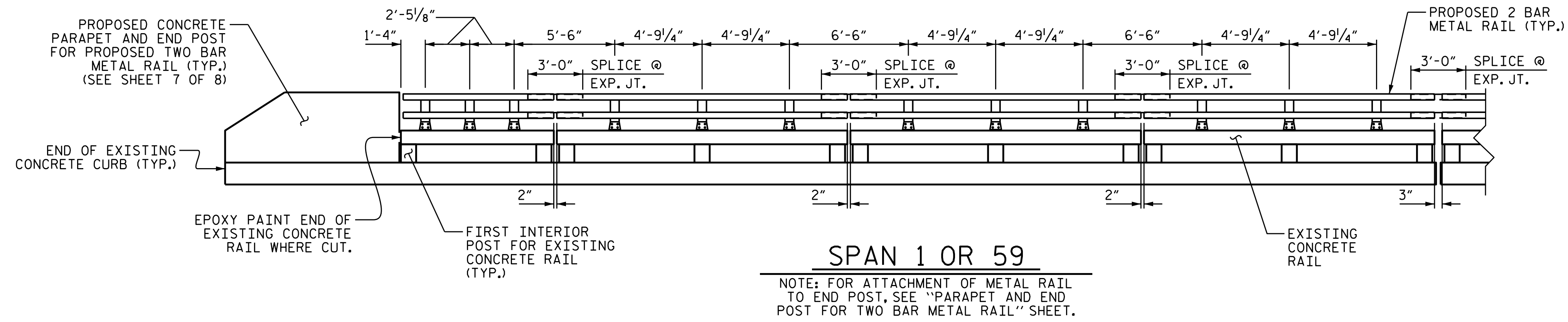


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
RAIL POST SPACINGS
AND
END OF RAIL DETAILS
FOR TWO BAR METAL RAILS

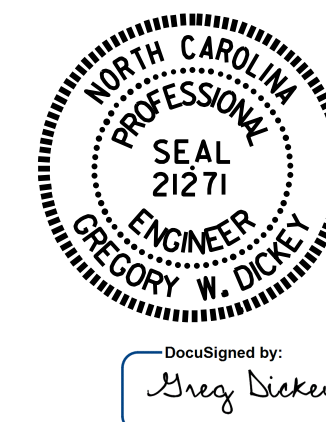
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| ASSEMBLED BY : H.F. YEUNG | DATE : 12/15 |
| CHECKED BY : W.M. CLARKE | DATE : 12/15 |
| DRAWN BY : FCJ 1/88 | REV. 5/7/03 RWW/JTE |
| CHECKED BY : CRK 3/89 | REV. 5/1/06 TLA/GM |
| | REV. 10/1/11 MAA/GM |

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PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 5 OF 8



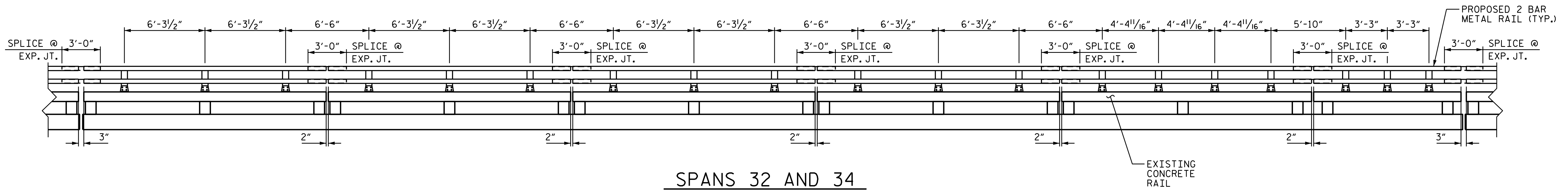
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

RAIL POST SPACINGS

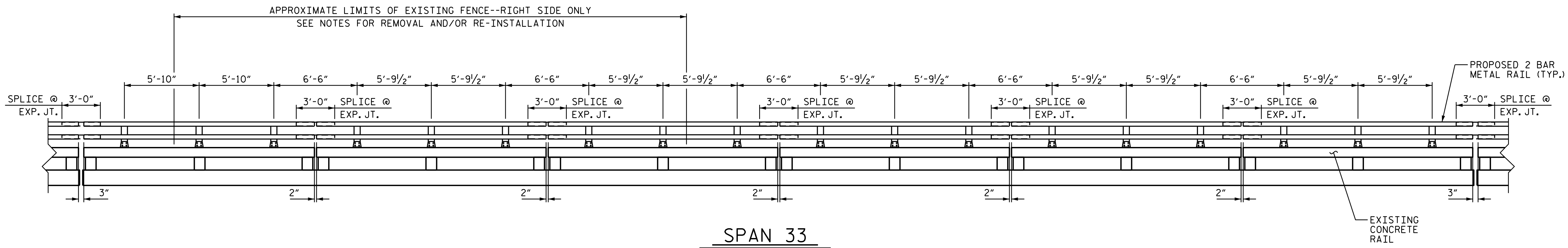
DRAWN BY : H.F. YEUNG DATE : 12/15
 CHECKED BY : W.M. CLARKE DATE : 12/15

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SPANS 32 AND 34



SPAN 33

NOTES:
 THE EXISTING FENCE ALONG THE RIGHT SIDE OF SPAN 33 SHALL BE REMOVED AS NECESSARY TO INSTALL THE TWO BAR METAL RAIL AND THEN RE-INSTALLED TO THE SATISFACTION OF THE ENGINEER. SLIGHT RE-LOCATION OF FENCE MAY BE NECESSARY TO FACILITATE CONSTRUCTION OF THE TWO BAR METAL RAIL.
 THE ACCESS RESTRICTION FOR THE SOLAR ARRAY SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER.

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 6 OF 8



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

RAIL POST SPACINGS

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 CHECKED BY : W. M. CLARKE DATE : 12/15

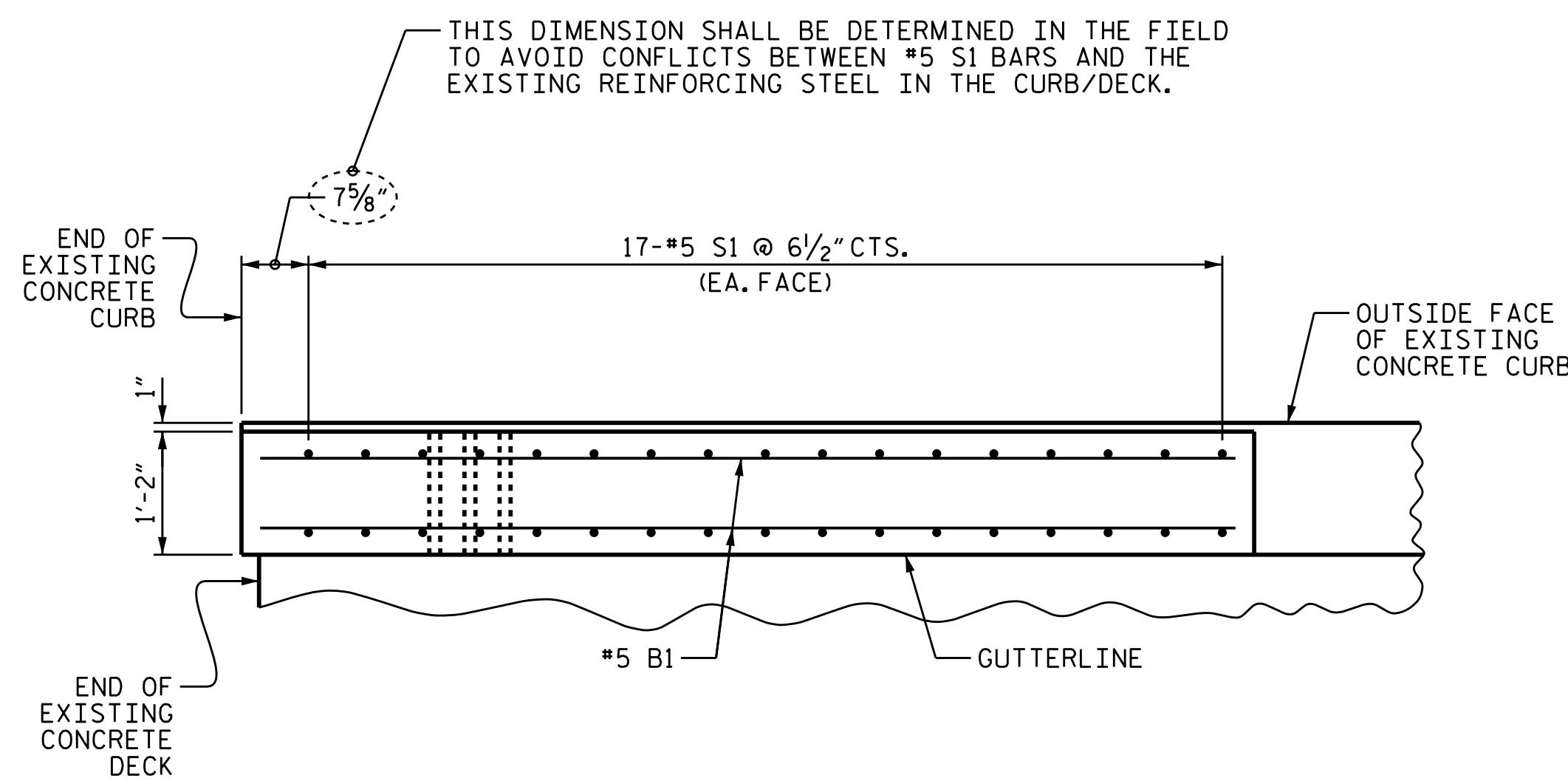
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BILL OF MATERIAL FOR PARAPETS AND END POSTS

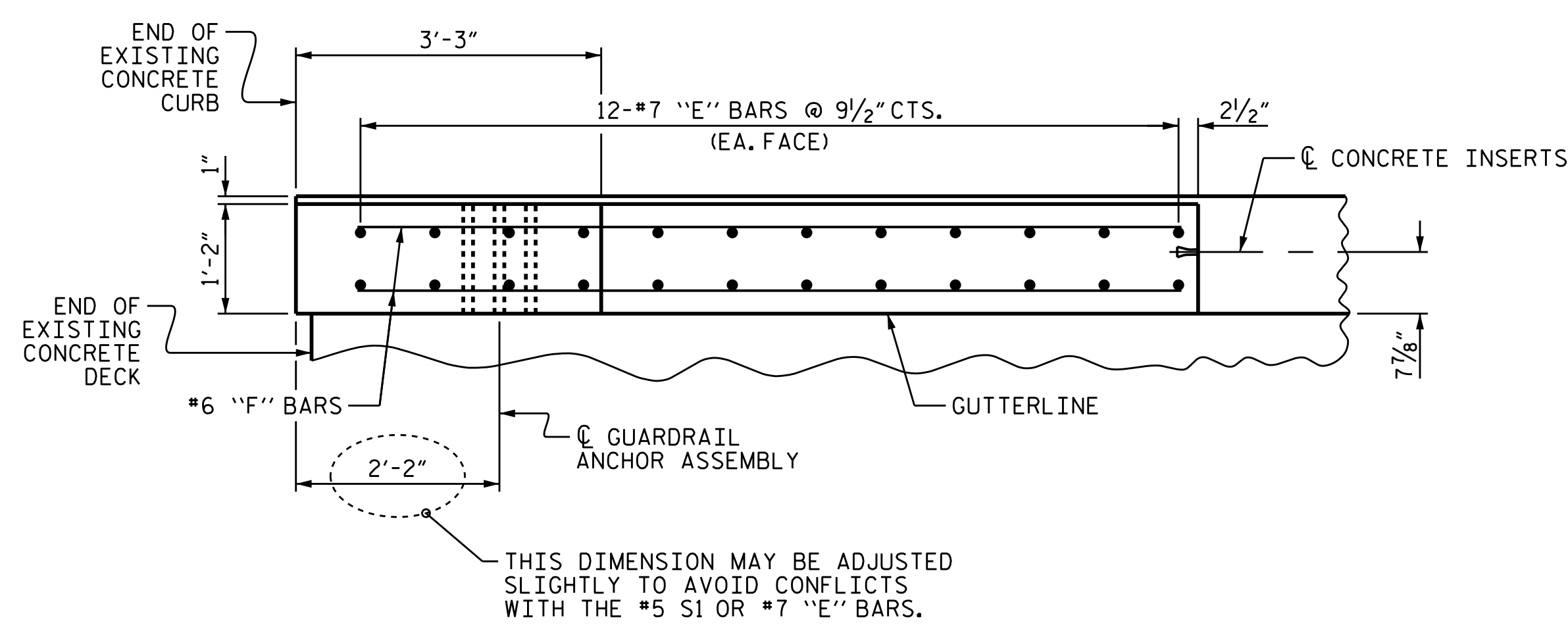
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| *B1 | 24 | #5 | STR | 9'-3" | 232 |
| *E1 | 8 | #7 | STR | 1'-10" | 30 |
| *E2 | 8 | #7 | STR | 2'-4" | 38 |
| *E3 | 8 | #7 | STR | 2'-10" | 46 |
| *E4 | 8 | #7 | STR | 3'-4" | 55 |
| *E5 | 64 | #7 | STR | 3'-7" | 469 |
| *F1 | 8 | #6 | STR | 6'-2" | 74 |
| *F2 | 8 | #6 | STR | 7'-6" | 90 |
| *F3 | 8 | #6 | STR | 8'-8" | 104 |
| *F4 | 8 | #6 | STR | 3'-3" | 39 |
| *S1 | 136 | #5 | STR | 2'-6" | 355 |

*EPOXY COATED REINFORCING STEEL LBS. 1532
 CLASS AA CONCRETE CU. YDS. 5.9

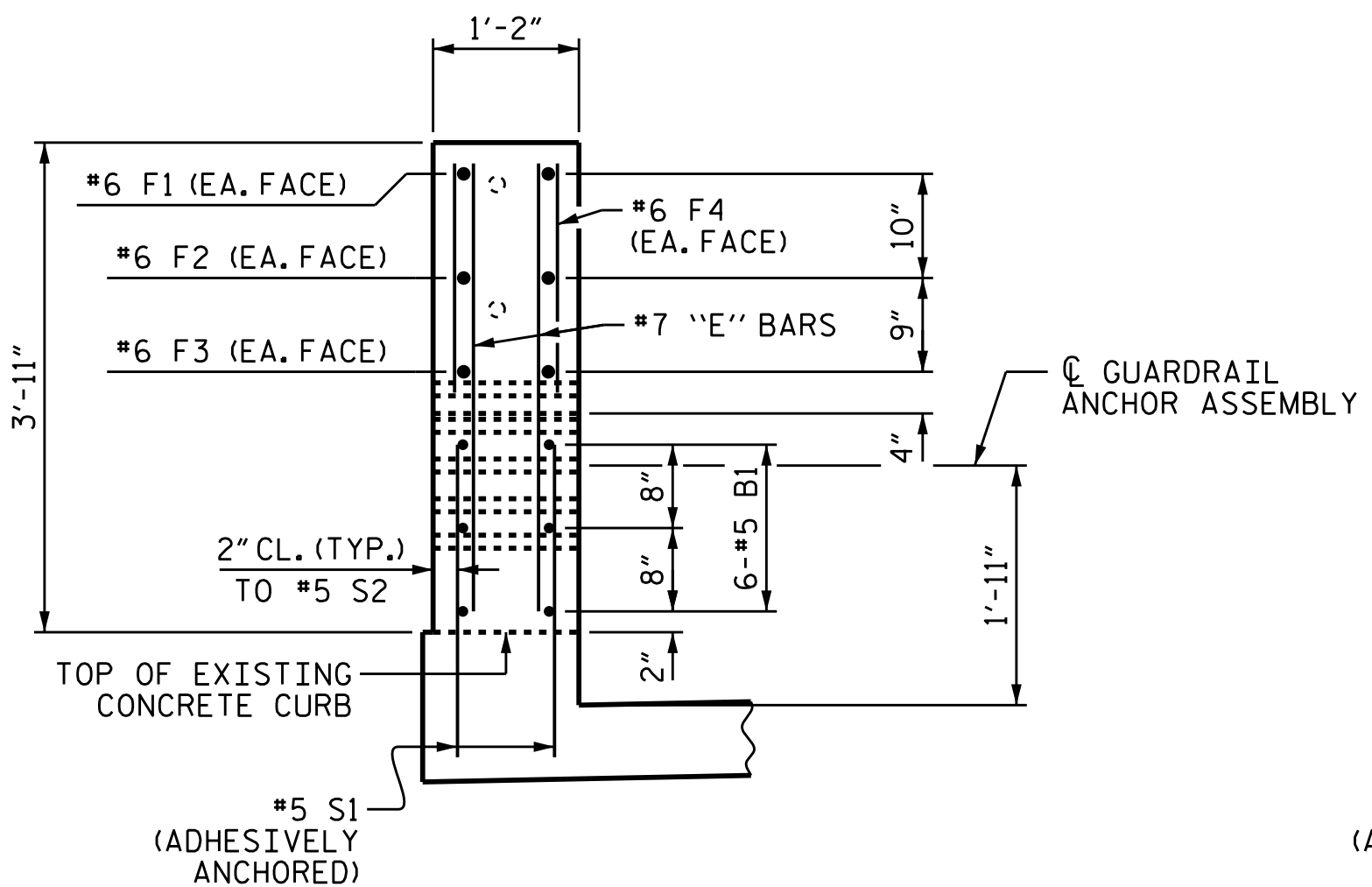


PLAN OF PARAPET

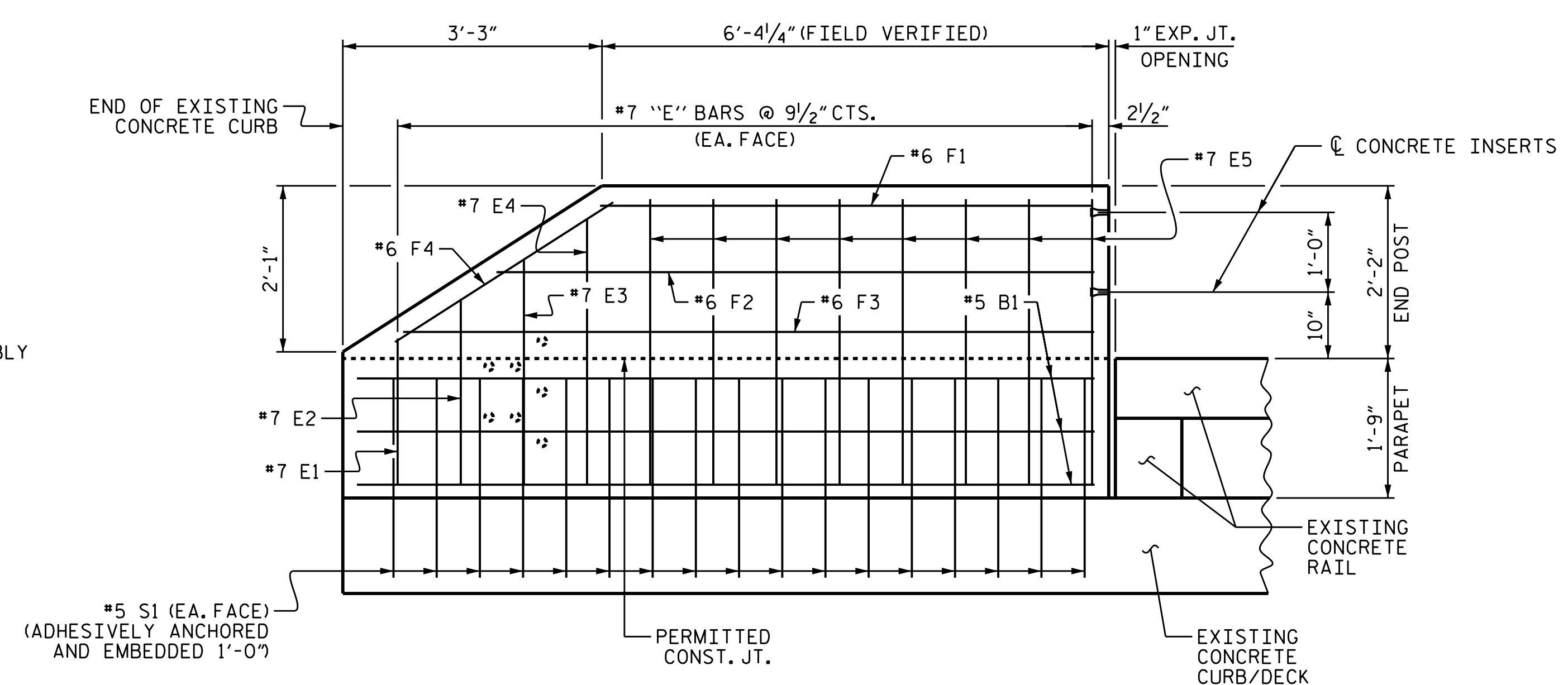
#5 S1 BARS MAY BE SHIFTED TO AVOID DRILLING THROUGH REINFORCING STEEL IN EXISTING BRIDGE DECK.



PLAN OF END POST



END VIEW



ELEVATION

PARAPET AND END POST FOR TWO BAR METAL RAIL

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 7 OF 8



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PARAPET AND END POST FOR TWO BAR METAL RAIL

DRAWN BY : P. K. NEWTON DATE : 1/20/17
 CHECKED BY : G. W. DICKEY DATE : 1/23/17

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-12 |
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NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 1/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 1/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.

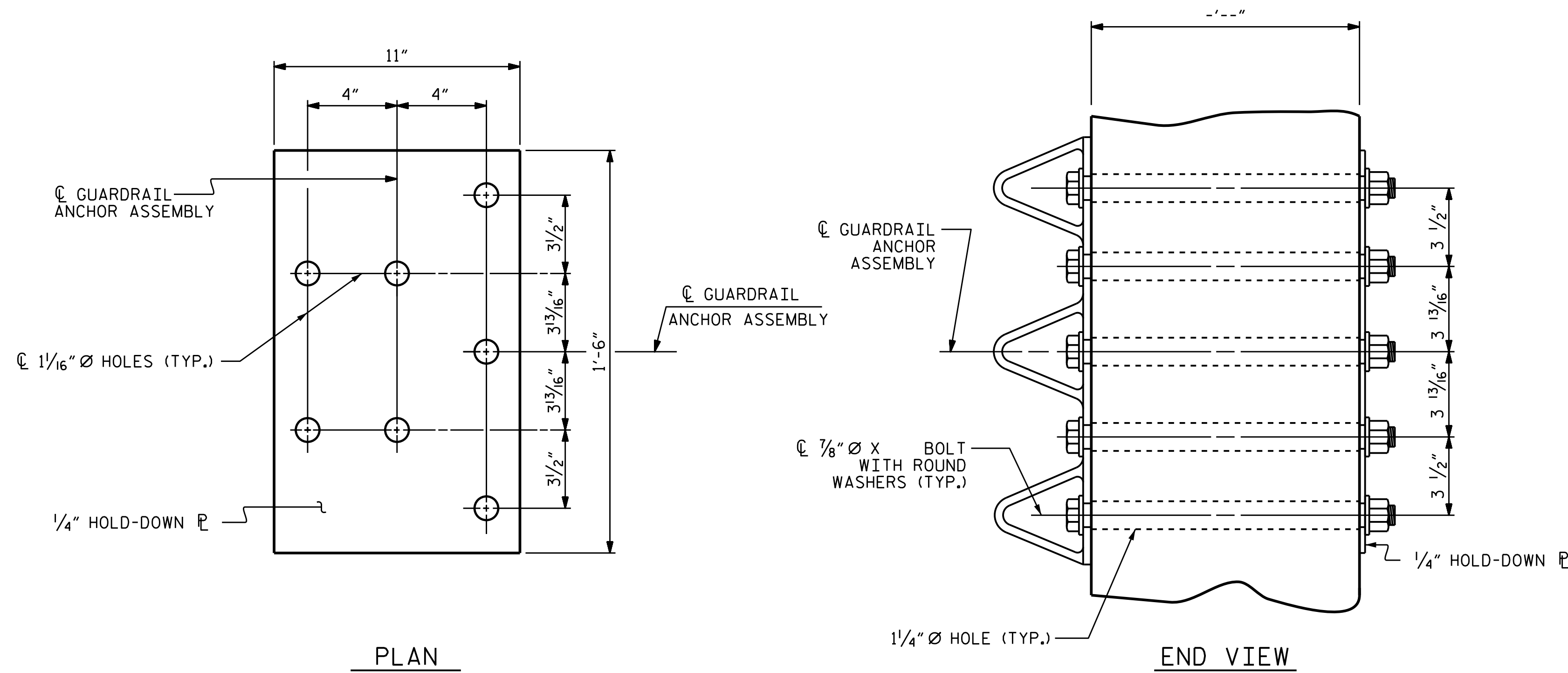
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF THE PARAPET. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

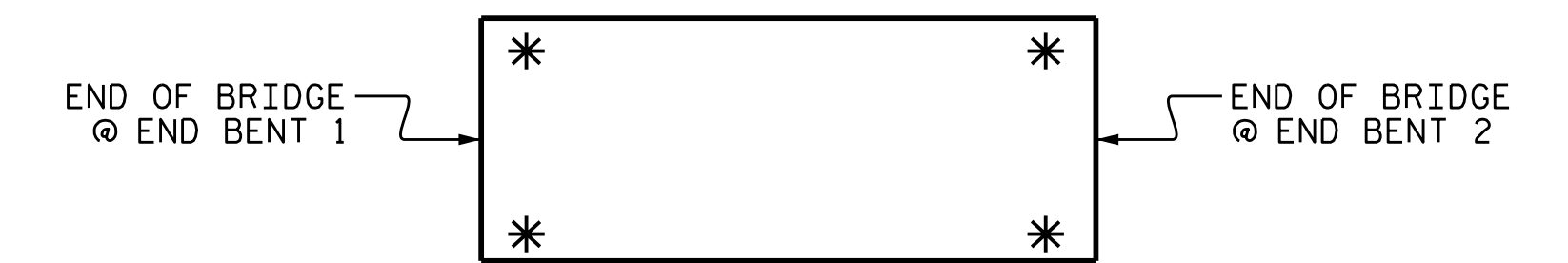
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE END POST TO CLEAR ASSEMBLY BOLTS.

THE 1 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

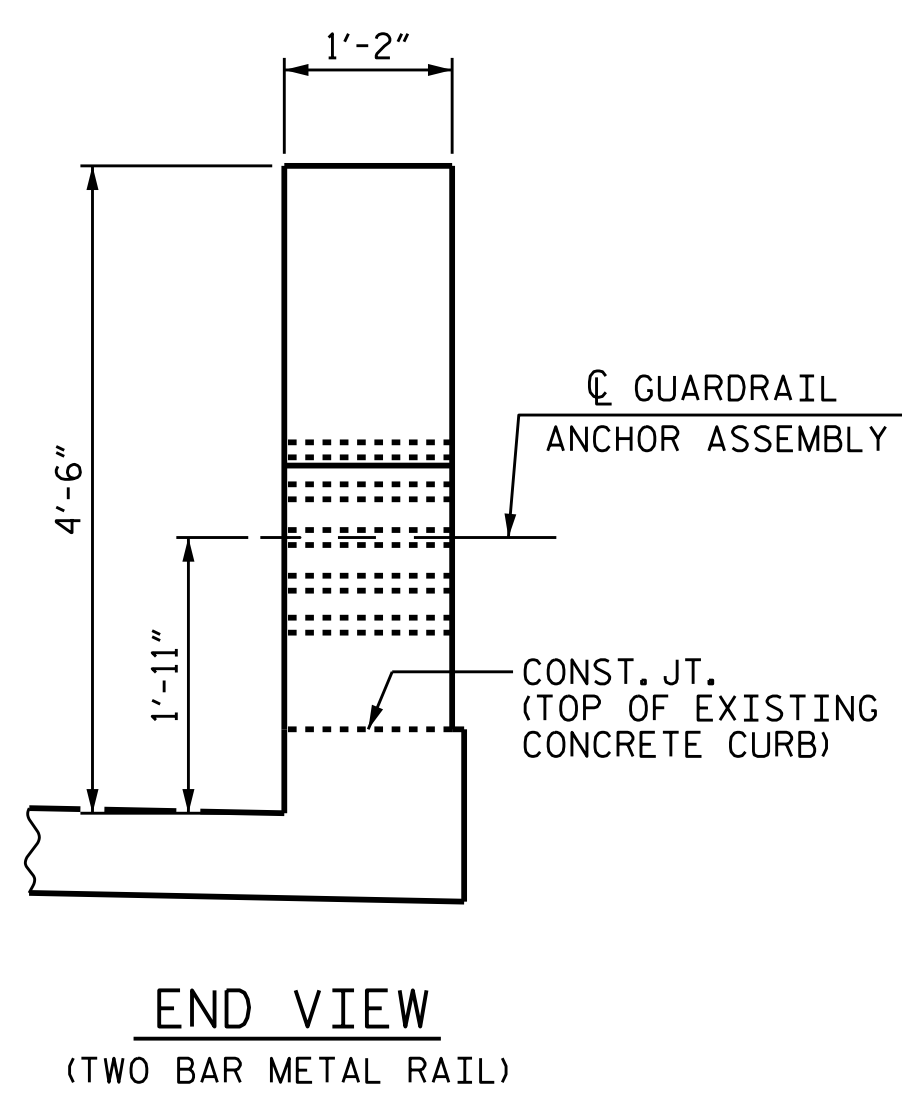


GUARDRAIL ANCHOR ASSEMBLY DETAILS

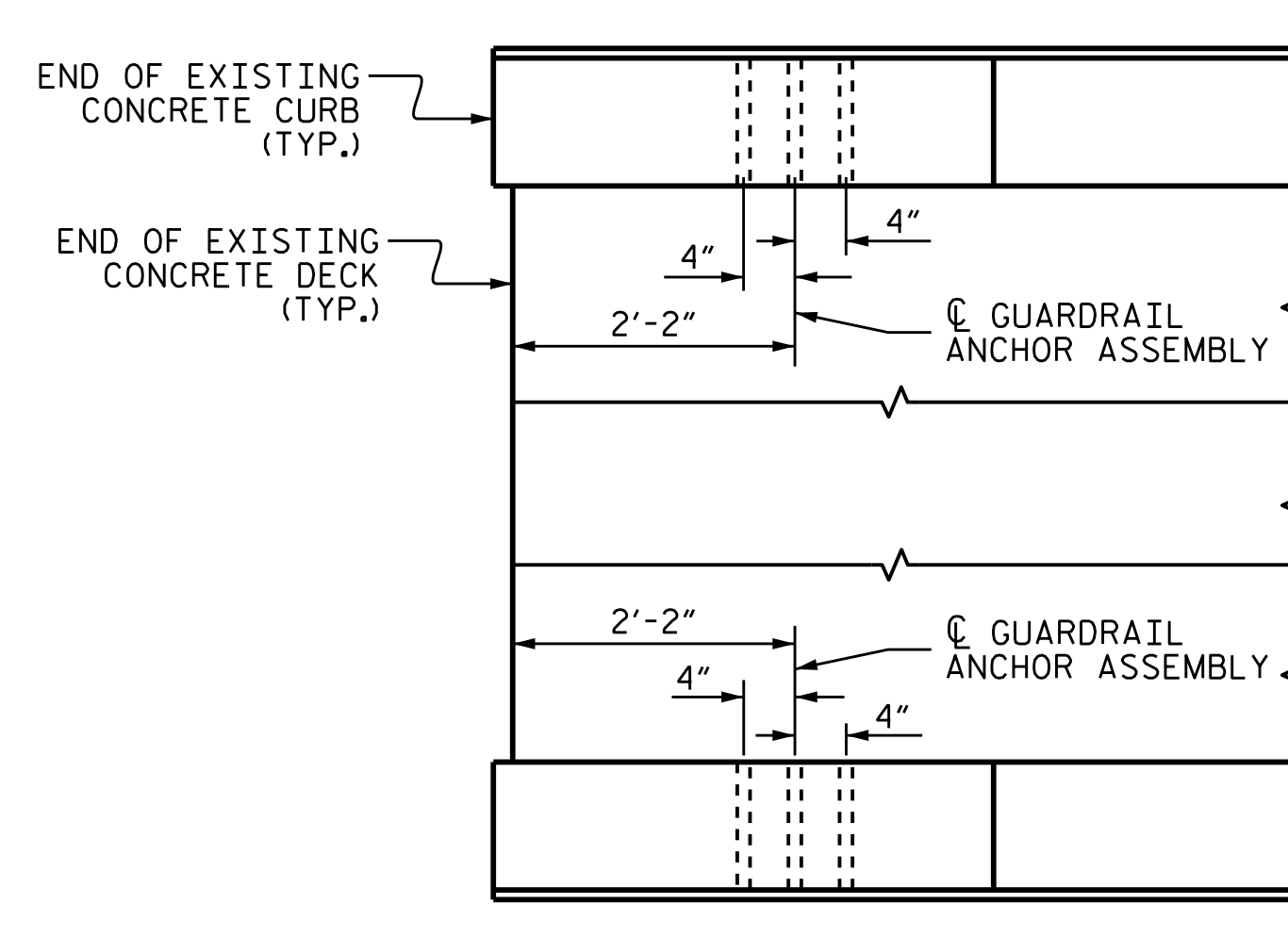


SKETCH SHOWING POINTS OF ATTACHMENT

* LOCATION OF GUARDRAIL ATTACHMENT



END VIEW
(TWO BAR METAL RAIL)



PLAN

LOCATION OF GUARDRAIL ANCHOR AT END POST

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 8 OF 8



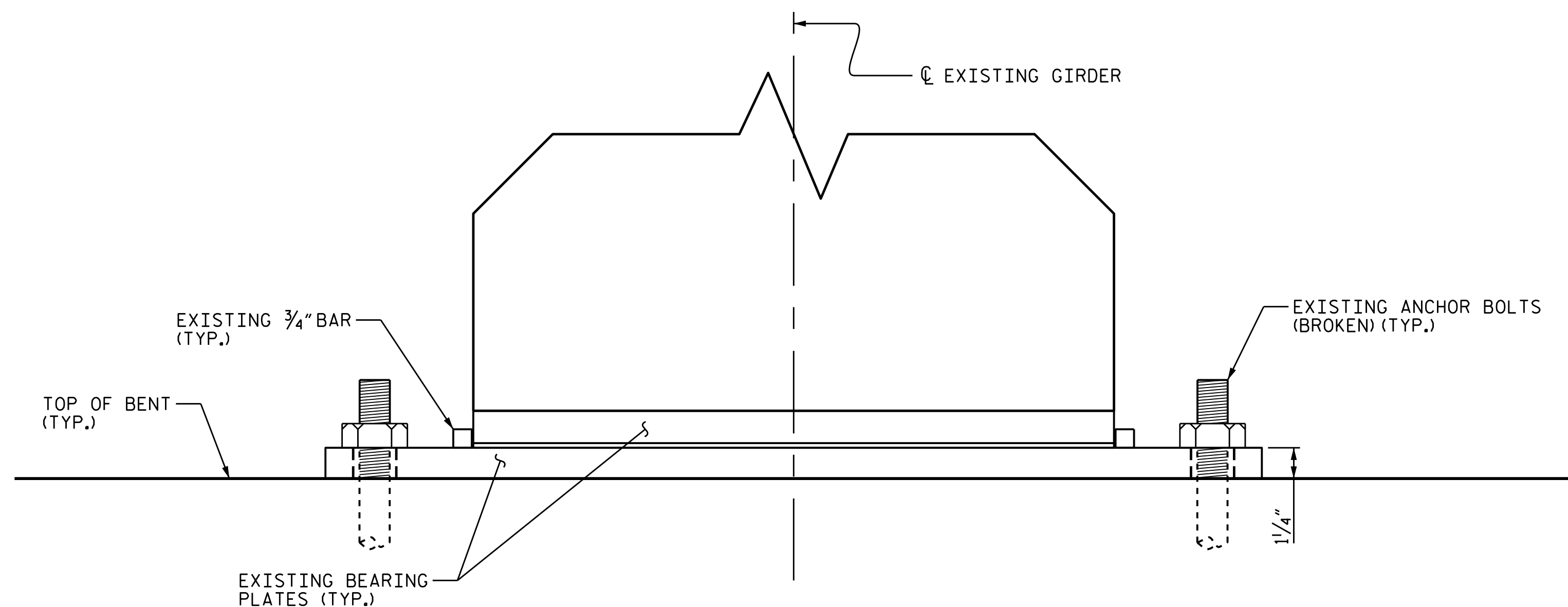
DocuSigned by:
 Greg Dickey
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 GUARDRAIL ANCHORAGE
 DETAILS
 FOR METAL RAILS

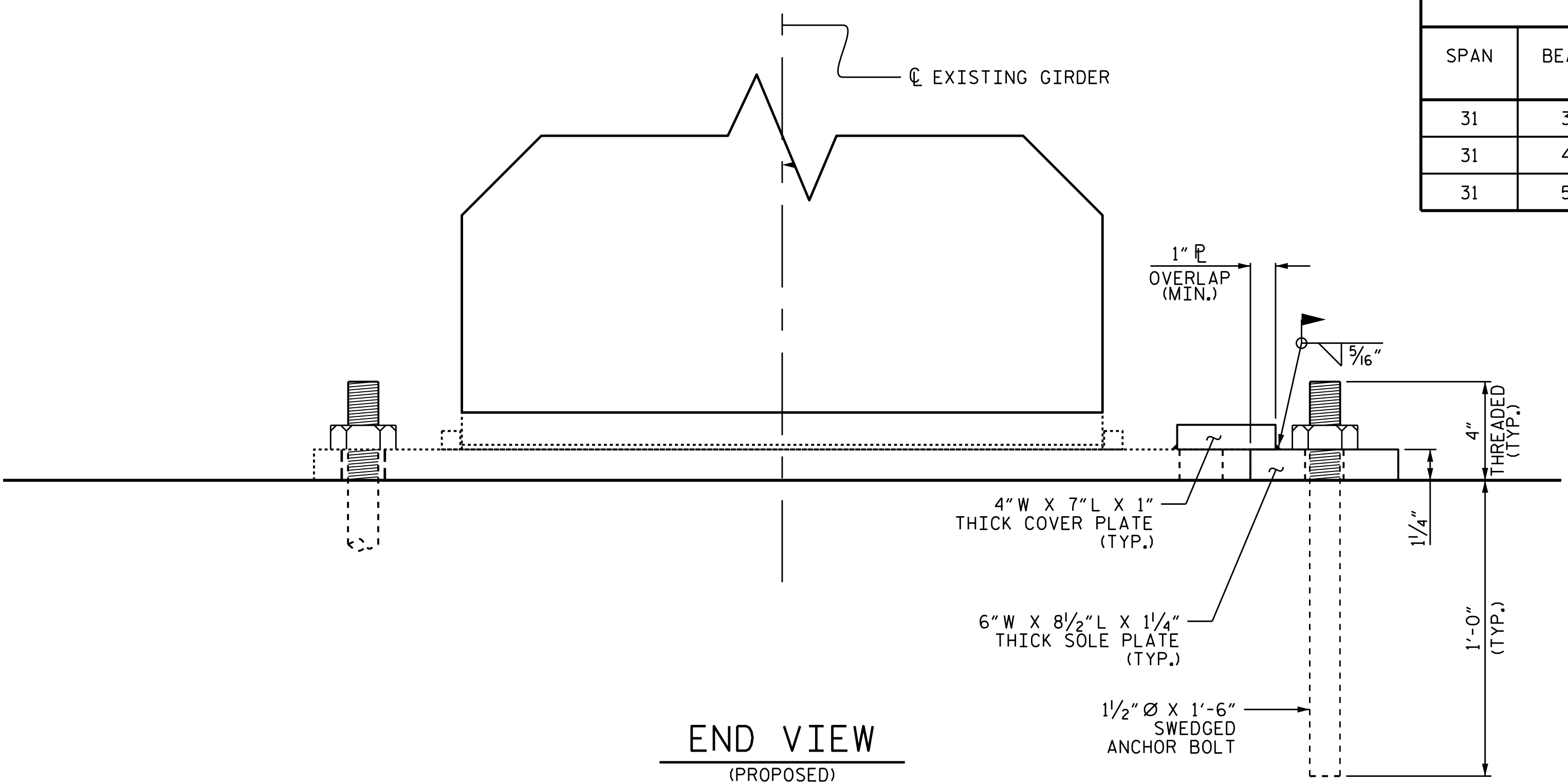
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|-----------------------------|---------------------|
| ASSEMBLED BY : P. K. NEWTON | DATE : 1/20/17 |
| CHECKED BY : G. W. DICKEY | DATE : 1/23/17 |
| DRAWN BY : MAA 5/10 | REV. 12/5/11 MAA/GM |
| CHECKED BY : GM 5/10 | REV. 6/13 MAA/GM |
| | REV. 1/15 MAA/TMG |

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END VIEW
(EXISTING)



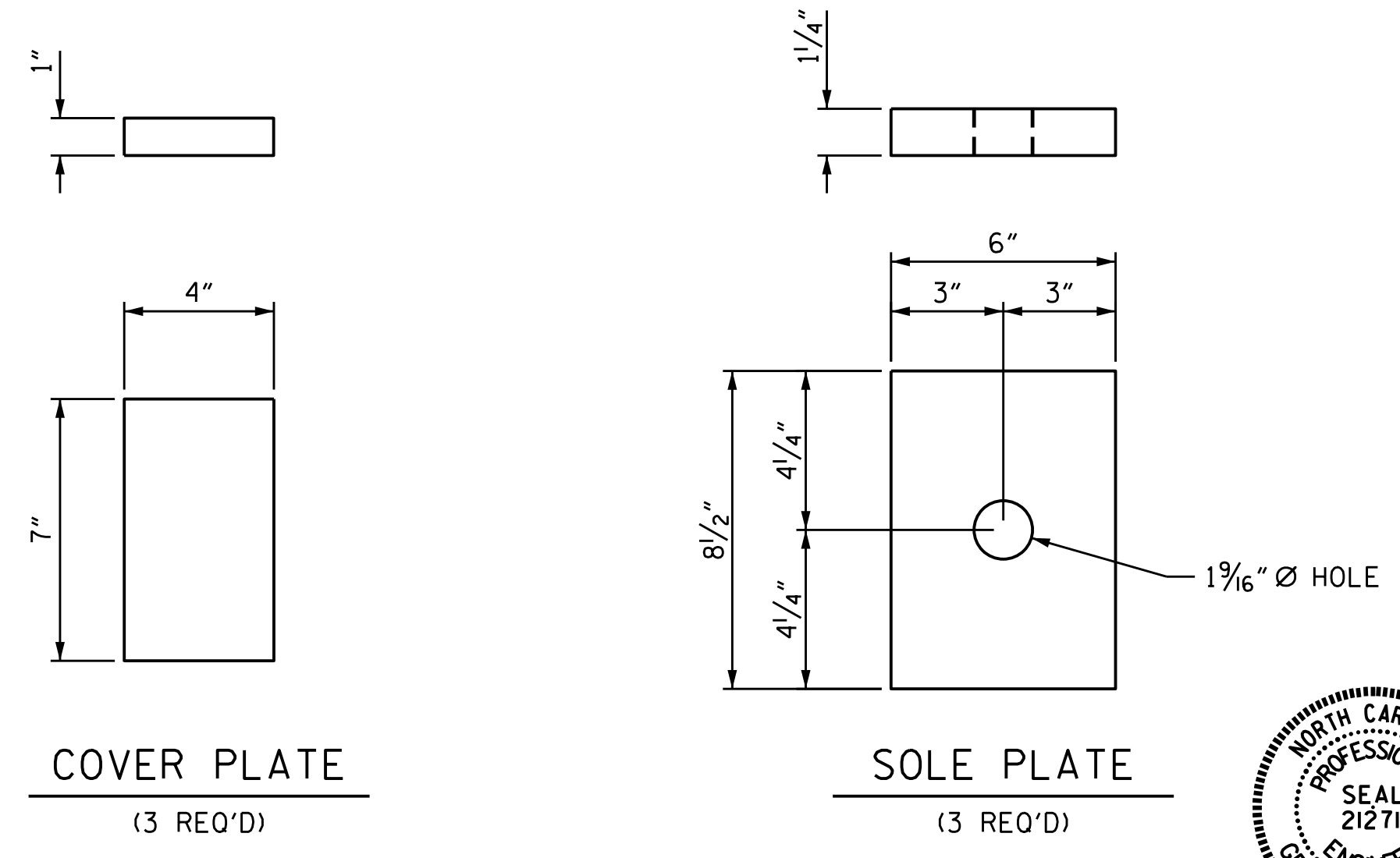
END VIEW
(PROPOSED)

**ANTICIPATED
"RESET BEARINGS"
LOCATIONS**

| SPAN | BEAM | BENT | COVER PLATE | SOLE PLATE | ANCHOR BOLT | HEX NUT | STRUCTURAL STEEL LBS. |
|------|------|------|-------------|------------|-------------|---------|-----------------------|
| | | | EACH | EACH | EACH | EACH | |
| 31 | 3 | 31 | 1 | 1 | 1 | 1 | 34.62 |
| 31 | 4 | 31 | 1 | 1 | 1 | 1 | 34.62 |
| 31 | 5 | 31 | 1 | 1 | 1 | 1 | 34.62 |



PLAN VIEW
(PROPOSED)



COVER PLATE
(3 REQ'D)

SOLE PLATE
(3 REQ'D)

PLATE DETAILS

NOTES:

REPAIR ANCHOR BOLTS PRIOR TO CLEANING AND PAINTING OF BEARINGS.
 JACK SPAN AS NEEDED AND RESET SOLE PLATES TO ORIGINAL LOCATION
 LOCATE PROPOSED ANCHOR BOLT HOLE AS DIRECTED. ENSURE NEW ANCHOR BOLT WILL MISS EXISTING STEEL. NEW ANCHOR BOLT MAY BE SHIFTED WITHIN 1" TOLERANCE TO MISS EXISTING REINFORCING STEEL.
 AT ALL POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN, THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL. SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS AND NUTS. SHOP INSPECTION IS REQUIRED.
 ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.
 ALL WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.
 ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.
 THE CONTRACTOR SHALL CORE INTO EXISTING BENT CAP TO INSTALL 1/2" Ø ANCHOR BOLTS. BOLTS SHALL BE ADHESIVELY ANCHORED; SEE STANDARD SPECIFICATIONS. ADHESIVE FOR NEW ANCHOR BOLTS SHALL BE AN NCDOT-APPROVED PRODUCT. FIELD TESTING WILL NOT BE REQUIRED FOR INSTALLATION OF ADHESIVELY ANCHORED BOLTS.

CLEANING AND PAINTING OF BEARINGS SEQUENCE:

CLEAN AND PAINT ALL EXPOSED AREAS OF PLATES, NUTS, BOLTS, AND WASHERS AT EACH BEARING IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS FOR CLEANING AND PAINTING OF EXISTING BEARING PLATES WITH HRCSA.
 DURING ALL CLEANING AND PAINTING OPERATIONS, THE CONTRACTOR SHALL ISOLATE THE WORK AREA WITH APPROPRIATE CONTAINMENT DEVICES IN ORDER TO PREVENT ANY GENERATED DEBRIS FROM CAUSING VIOLATIONS OF CURRENT FEDERAL, STATE AND LOCAL AIR AND WATER POLLUTION REGULATIONS.
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEGAL DISPOSAL OF ALL DEBRIS COLLECTED BY THE CONTAINMENT DEVICES.

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**CLEANING, PAINTING
 AND RESET
 BEARING DETAILS**

DRAWN BY : M.A. LEE DATE : 1/2017
 CHECKED BY : G.W. DICKEY DATE : 1/2017

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| 2 | | | 4 | | | |

JACKING NOTES:

THE CONTRACTOR SHALL SUBMIT JACKING PLANS AND CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO MATERIAL PURCHASE OR FABRICATION OF THE JACKING SYSTEM.

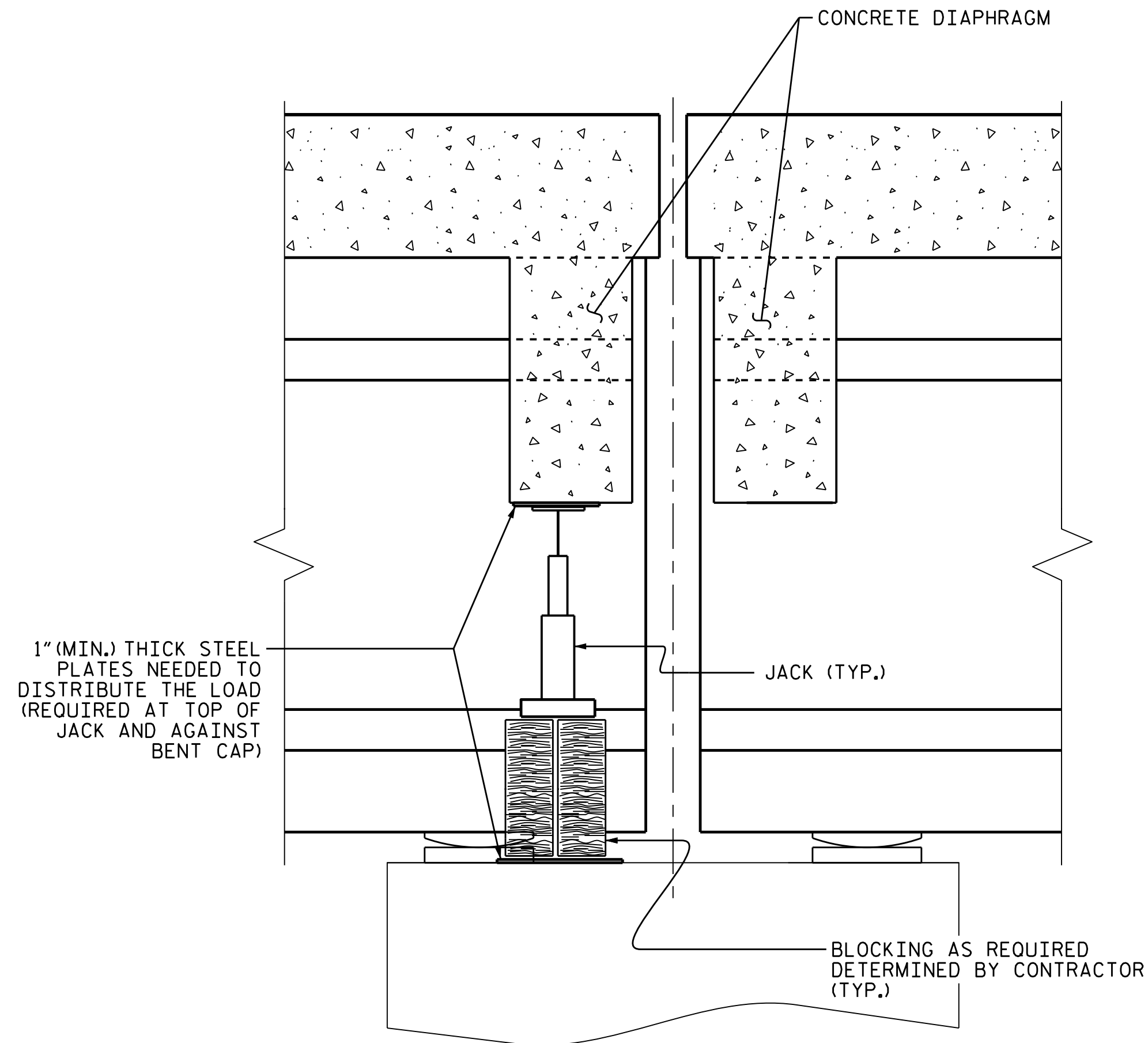
THE BEAM SHALL BE LIFTED ENOUGH THAT THE BEAM CLEARS THE BEARING AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE THE CONTRACTOR SHALL PROVIDE A METHOD TO SUPPORT THE BEAM FOR DEAD AND LIVE LOADS AND REMOVE THE JACKS DURING THE REPAIR OPERATIONS. IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION, THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF DURING THE JACKING PROCESS OR WHILE THE BEAM IS BEING SUPPORTED THE BEAM SHIFTS FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

PRIOR TO JACKING, THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE BEAM FROM BEING LIFTED.

ALL ADJACENT BEARINGS OF BEAMS NOT BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS 1/8".



SECTION THRU DIAPHRAGM

(DETAIL IS FOR ILLUSTRATION, ONLY. CONTRACTOR SHALL DEVELOP AND SUBMIT A JACKING PLAN BASED ON SPECIFIC CONDITIONS, DIMENSIONS, LOADS, ETC. FOR CARTERET BRIDGE 6 FOR APPROVAL.)

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6



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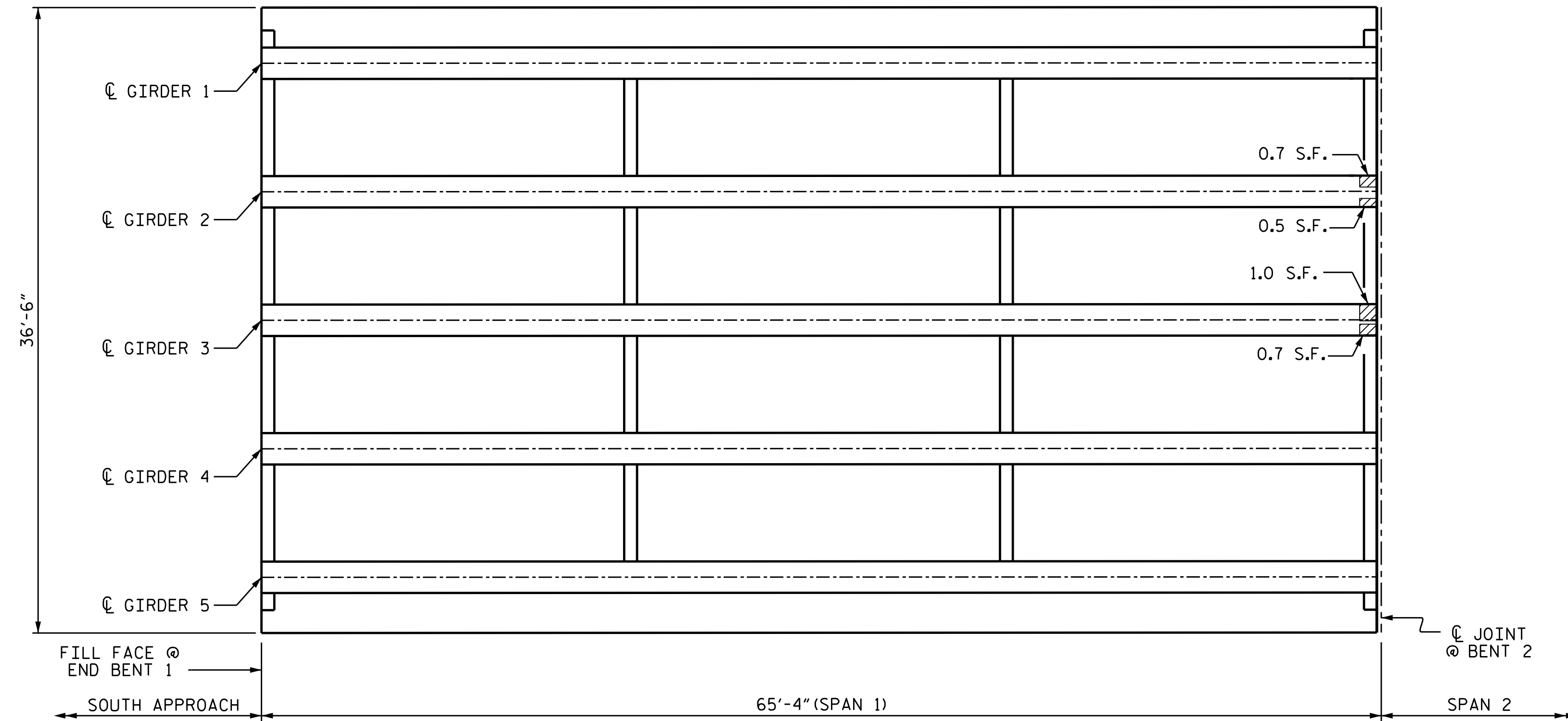
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JACKING DETAILS

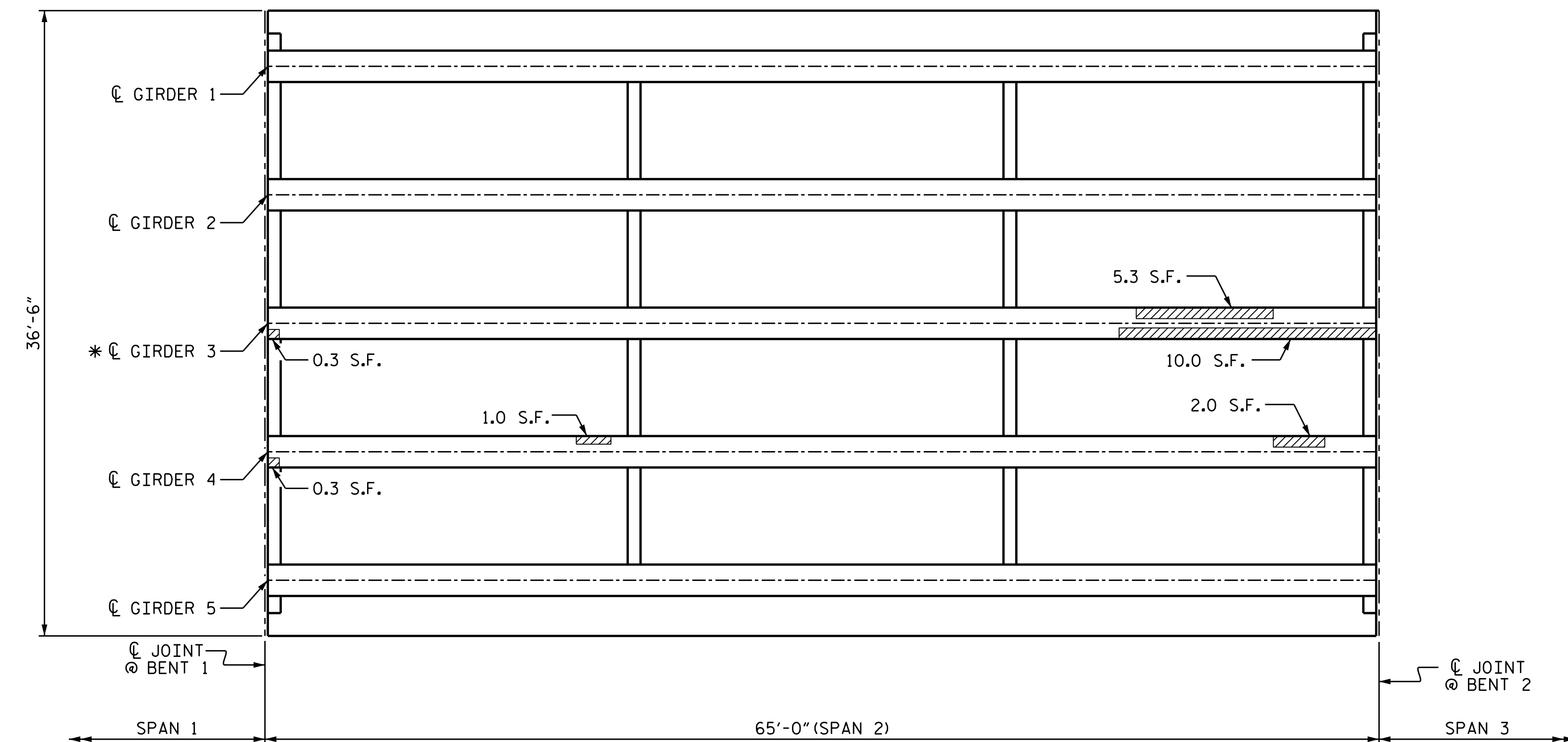
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 CHECKED BY : M.A.LEE DATE : 2/2017

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SPAN 1 - UNDERSIDE



SPAN 2 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 1 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 2.9 | 0.8 | | |

| REPAIRS SPAN 2 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 18.9 | 5.5 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

* SPAN 2, GIRDER 3 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 1 OF 30



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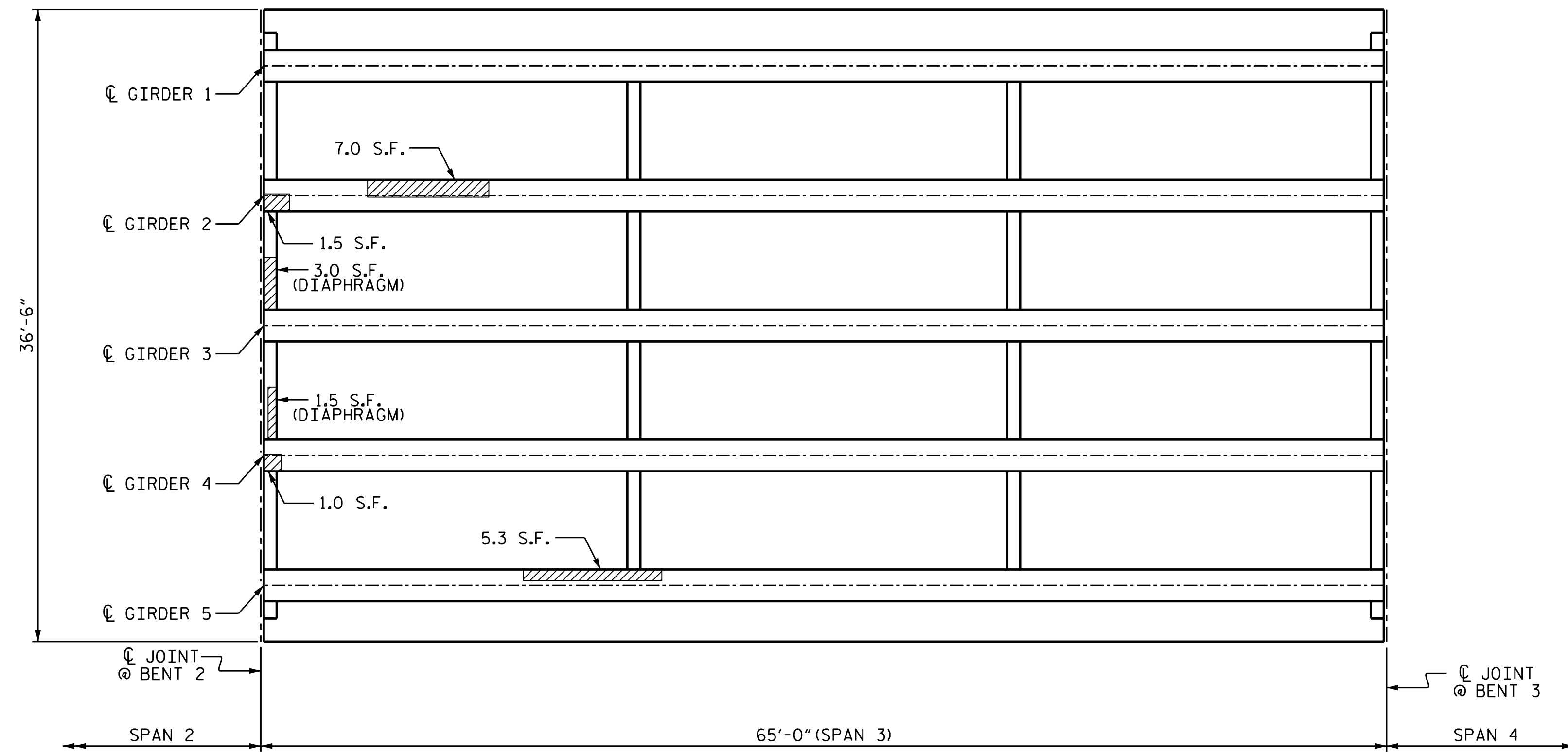
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FRAMING PLAN
 SPAN 1 & 2

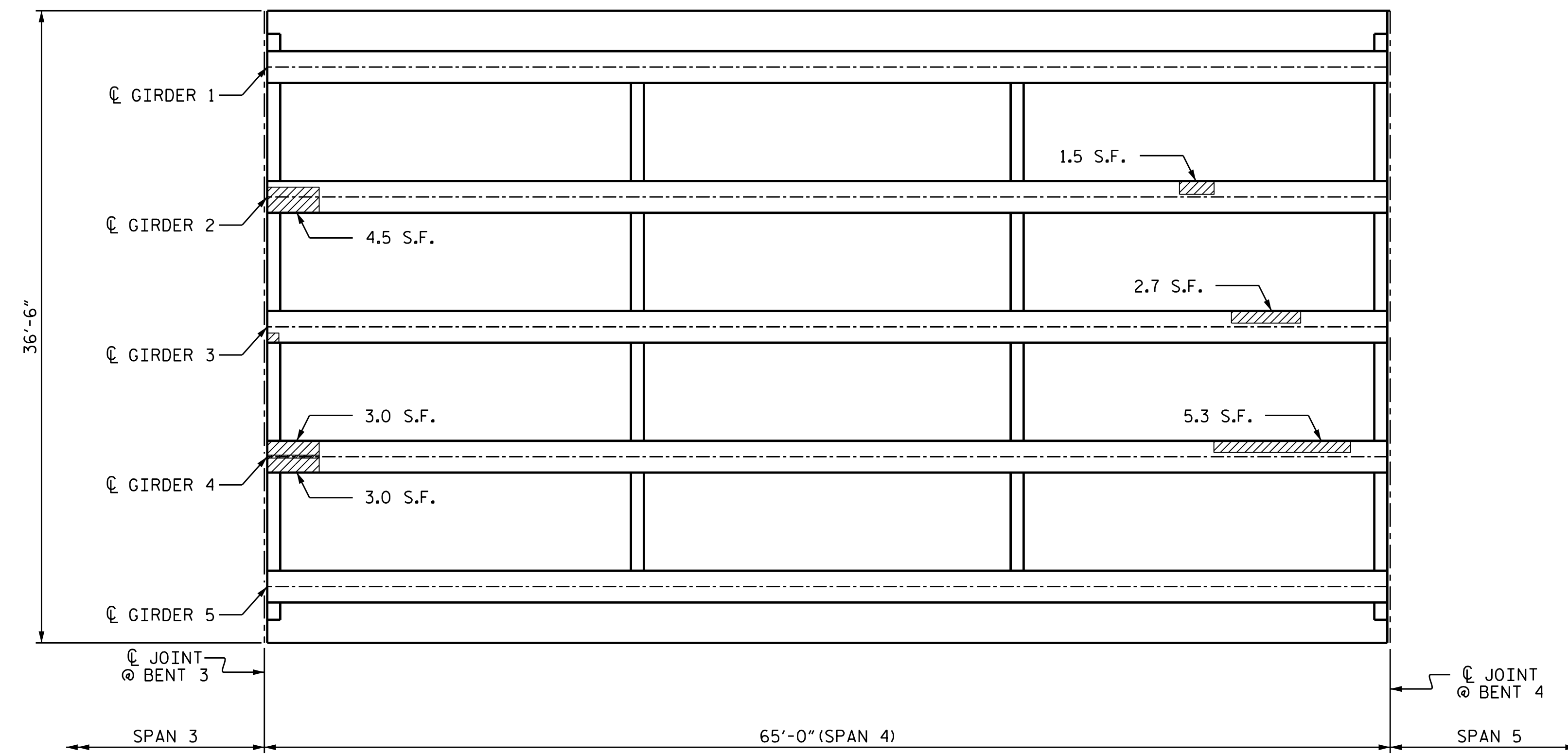
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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



SPAN 3 - UNDERSIDE



SPAN 4 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 3 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 4.5 | 2.3 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 14.8 | 4.3 | | |

| REPAIRS SPAN 4 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 20.0 | 5.8 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

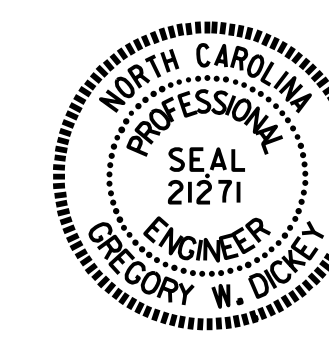
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 2 OF 30



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 Greg Dickey
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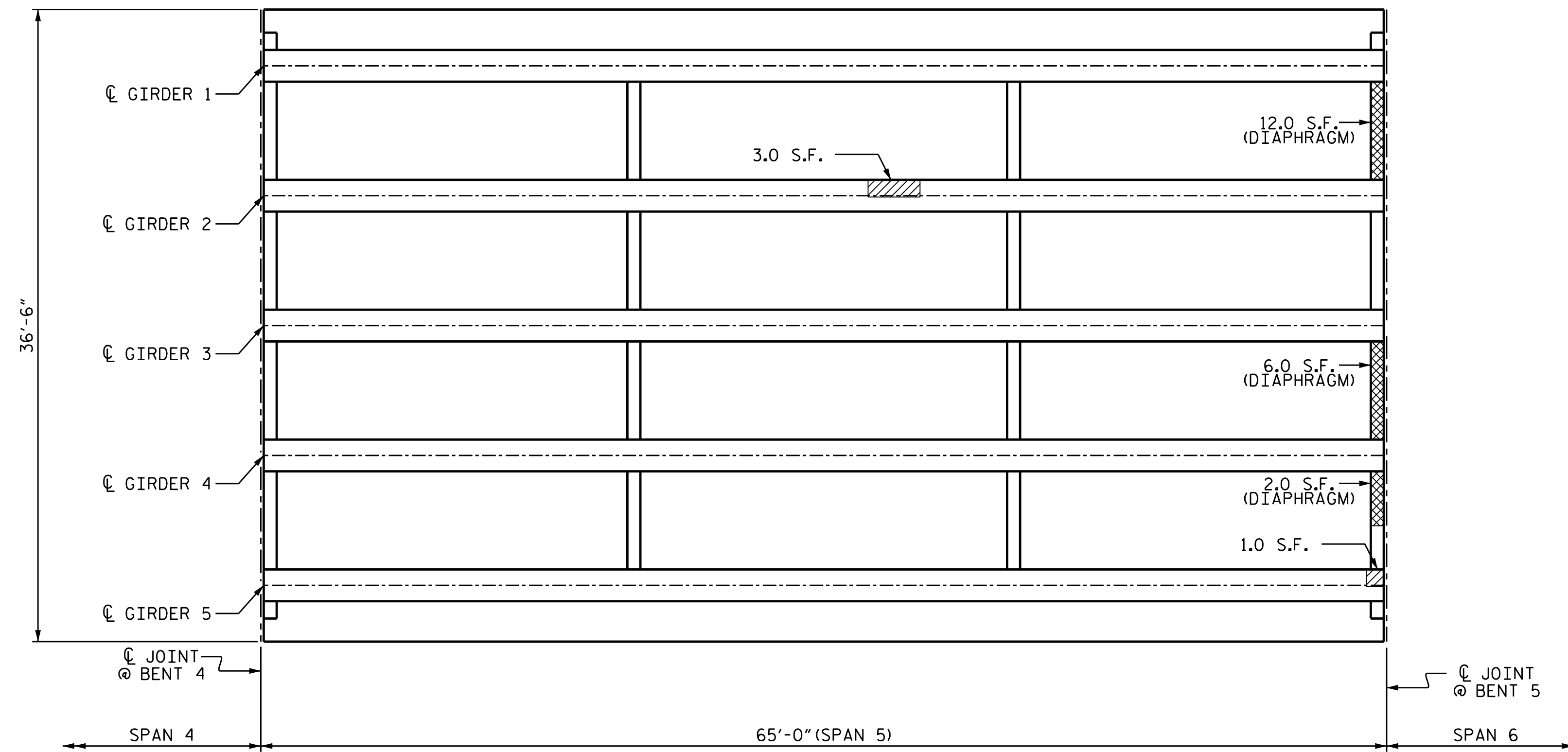
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 RALEIGH

FRAMING PLAN
 SPAN 3 & 4

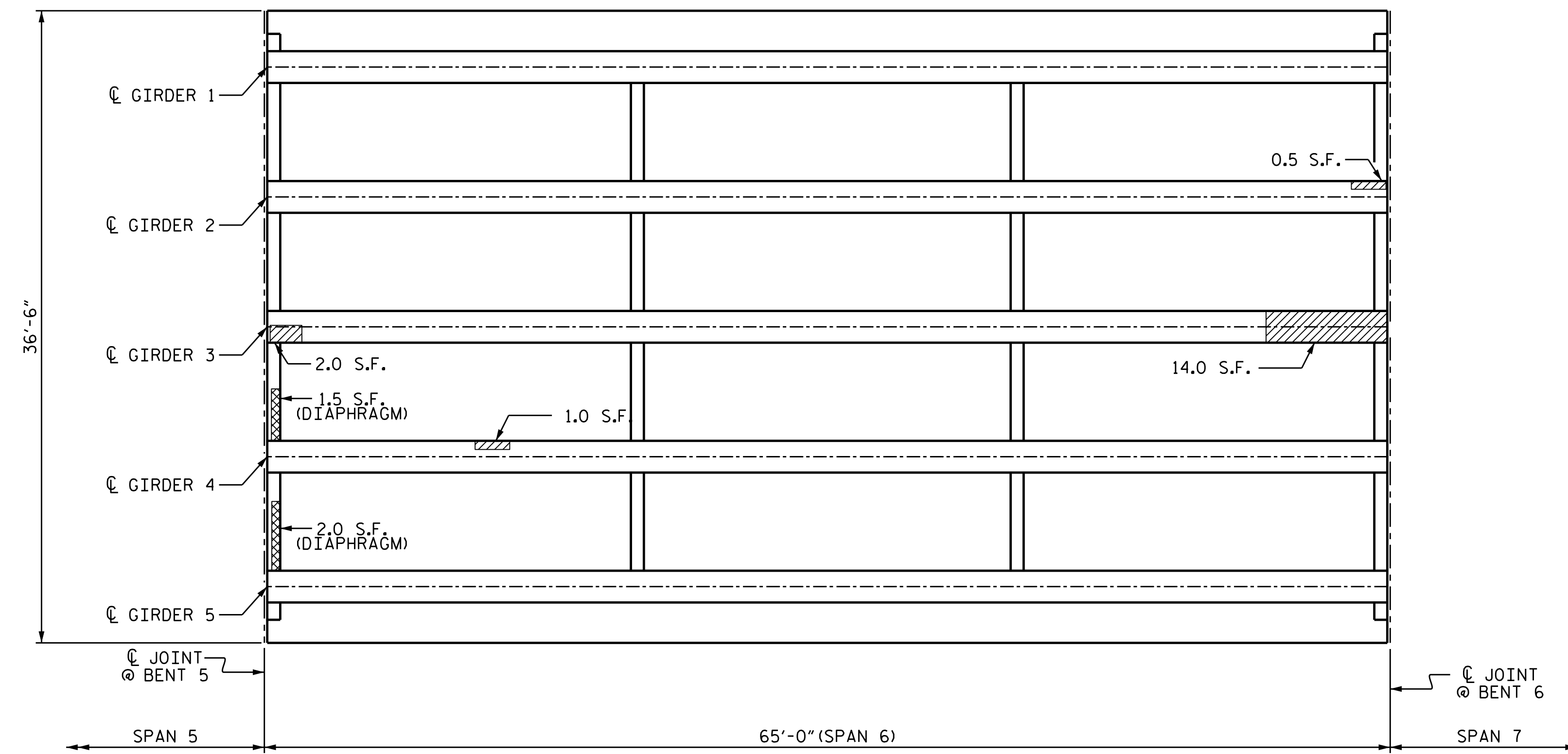
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 CHECKED BY : M. A. LEE DATE : 9/2016

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SPAN 5 - UNDERSIDE



SPAN 6 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 5 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 20.0 | 10.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 4.0 | 1.2 | | |

| REPAIRS SPAN 6 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 3.5 | 1.8 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 17.5 | 5.1 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 3 OF 30



DocuSigned by:
 Greg Dickey
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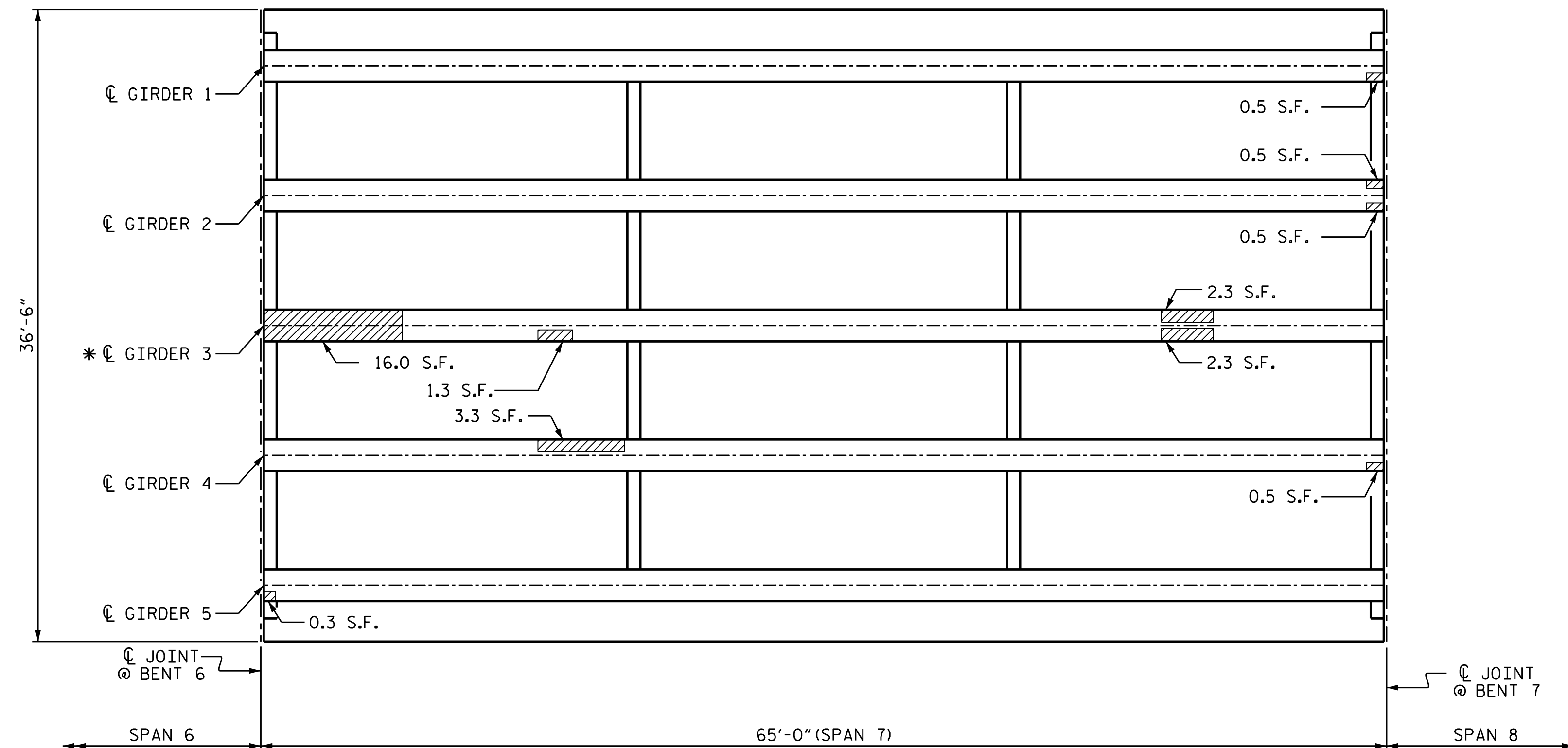
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 5 & 6

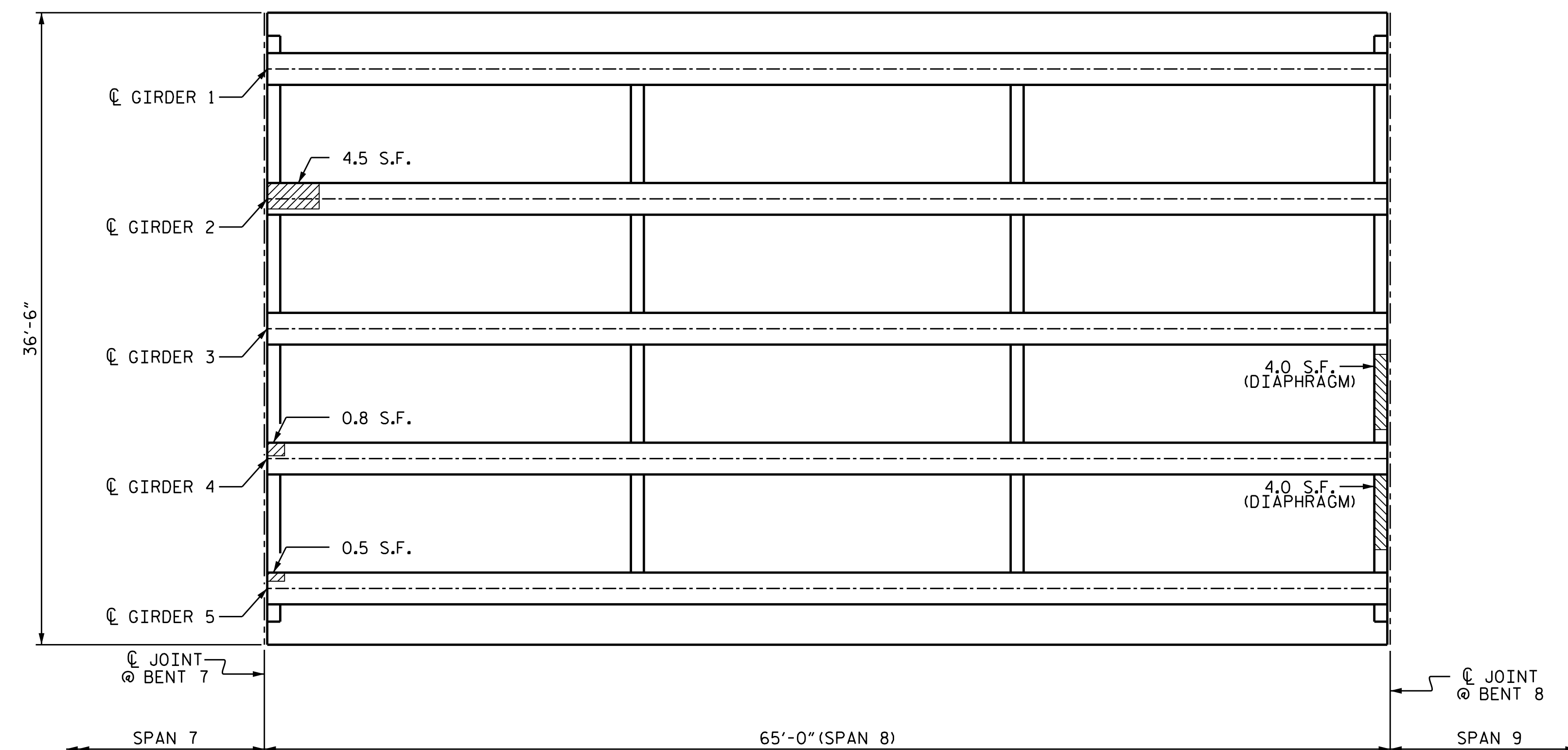
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-18 |
| 2 | | | 4 | | | |



SPAN 7 - UNDERSIDE



SPAN 8 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 7 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 27.5 | 8.0 | | |
| REPAIRS SPAN 8 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 8.0 | 4.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 5.8 | 1.7 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

* SPAN 7, GIRDER 3 WILL BE REQUIRED TO BE A MONITORING LOCATION.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 4 OF 30

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 7 & 8

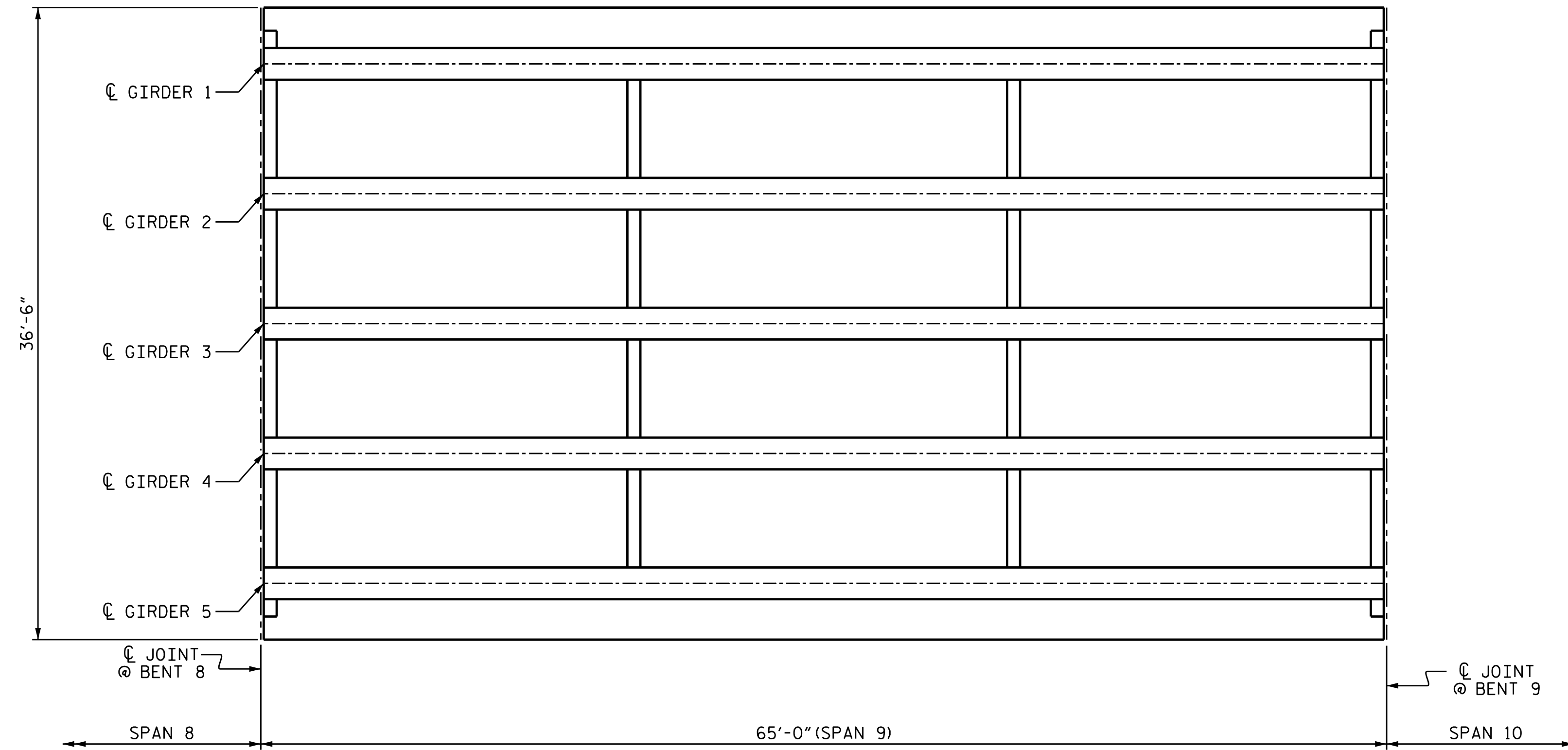


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 Greg Dickey
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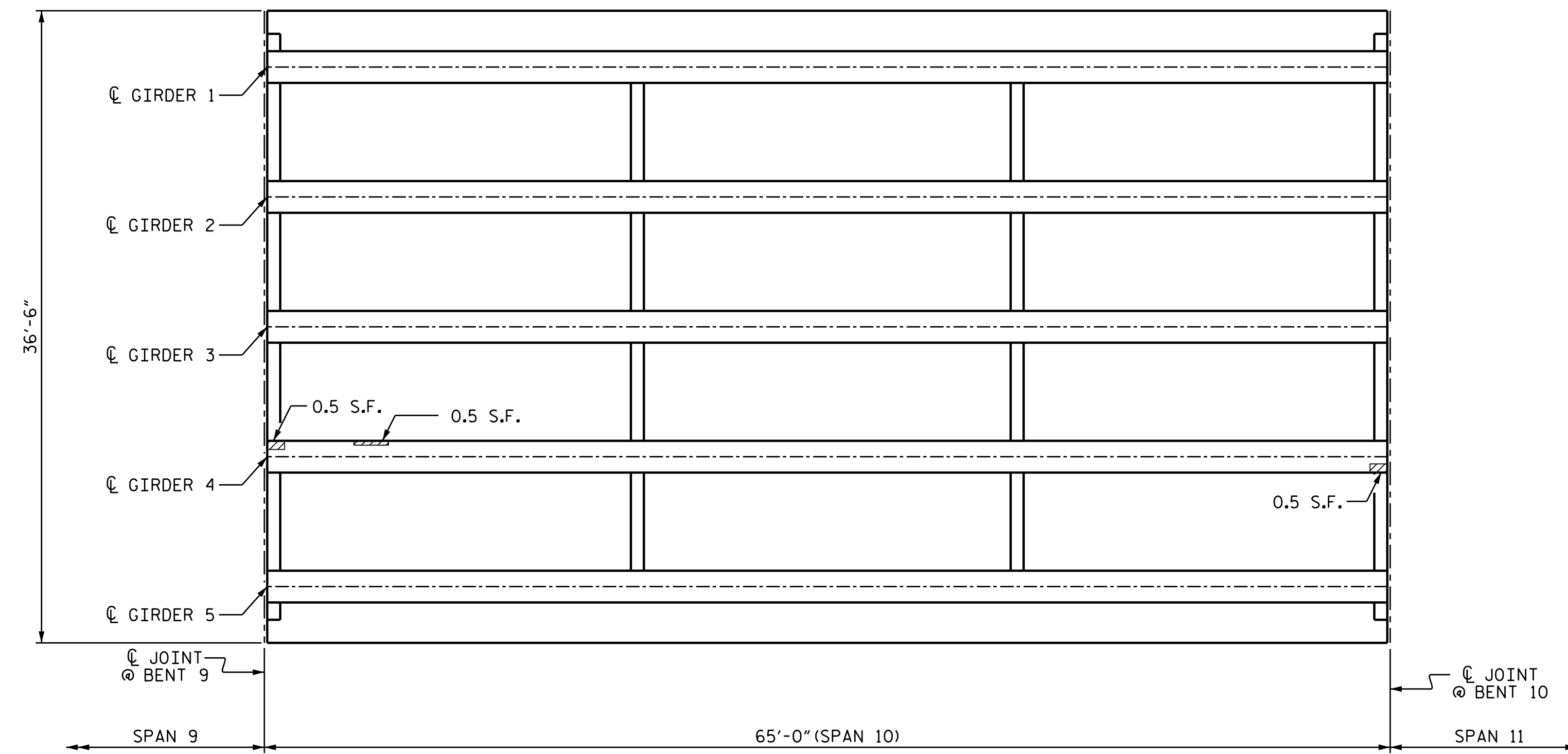
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 CHECKED BY : M. A. LEE DATE : 9/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-19 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |



SPAN 9 - UNDERSIDE



SPAN 10 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 9 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 10 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.5 | 0.4 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 5 OF 30



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 Greg Dickey
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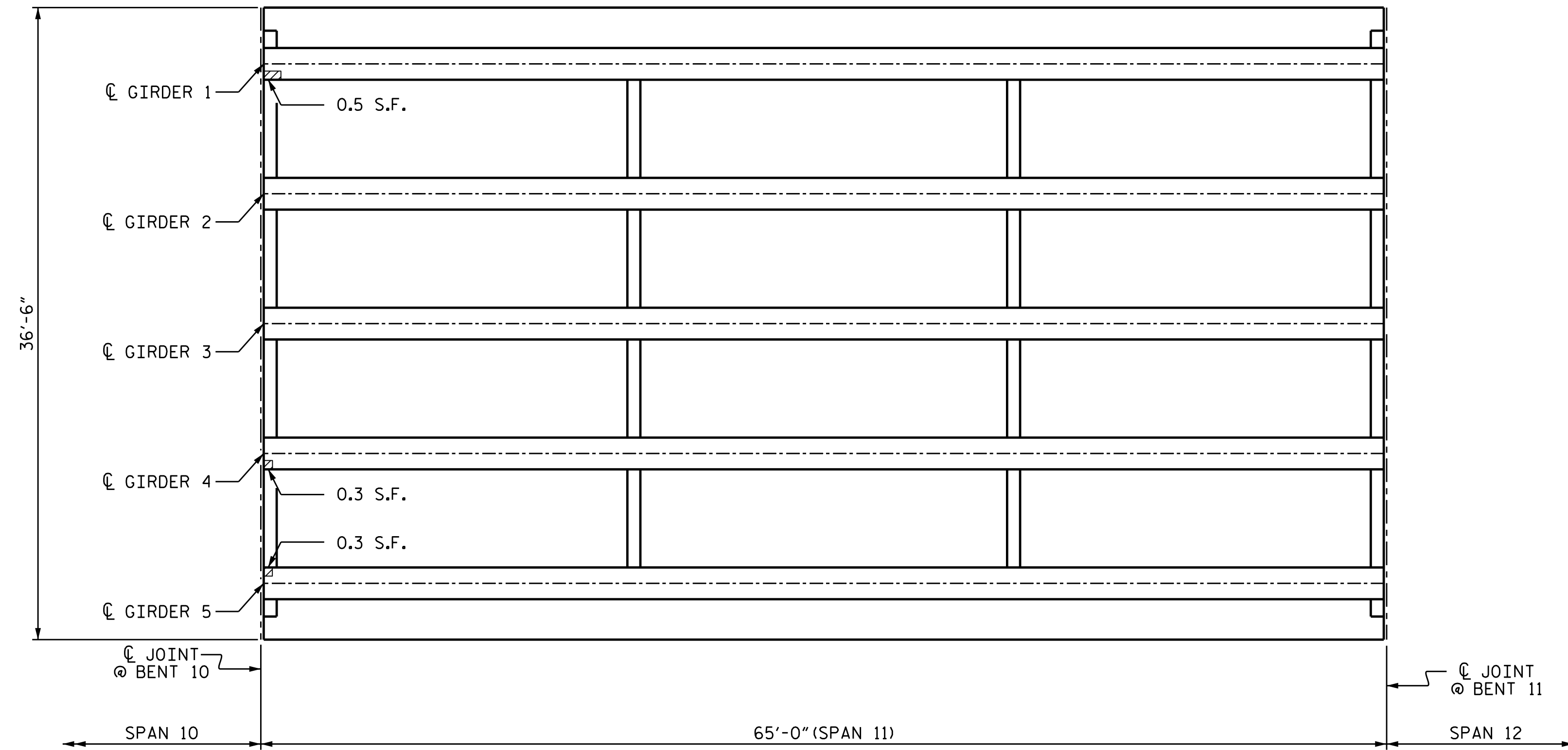
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 9 & 10

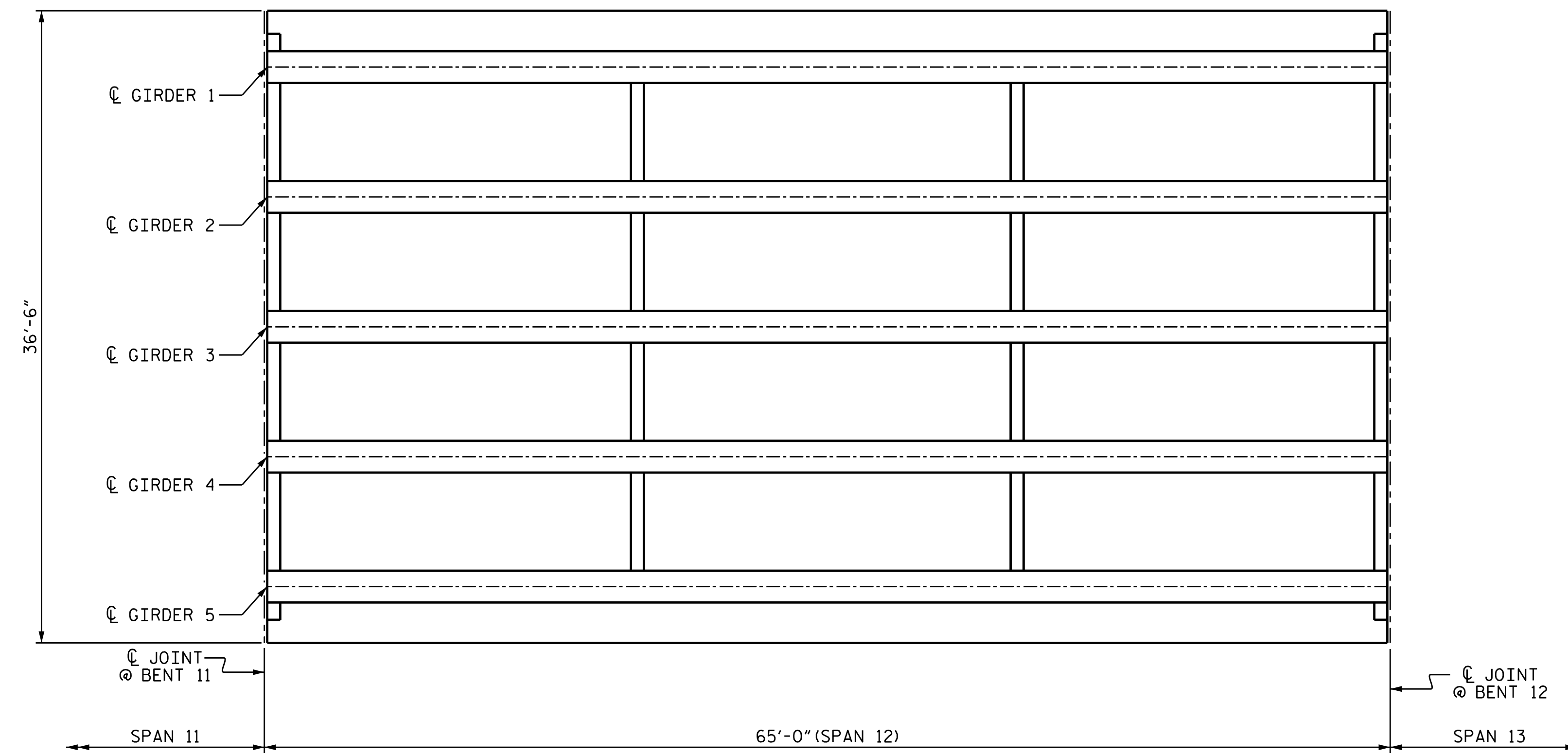
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| 1 | | | 3 | | | S2-20 |
| 2 | | | 4 | | | |



SPAN 11 - UNDERSIDE



SPAN 12 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 11 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.1 | 0.3 | | |

| REPAIRS SPAN 12 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

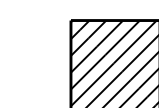
FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 6 OF 30



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 Greg Dickey
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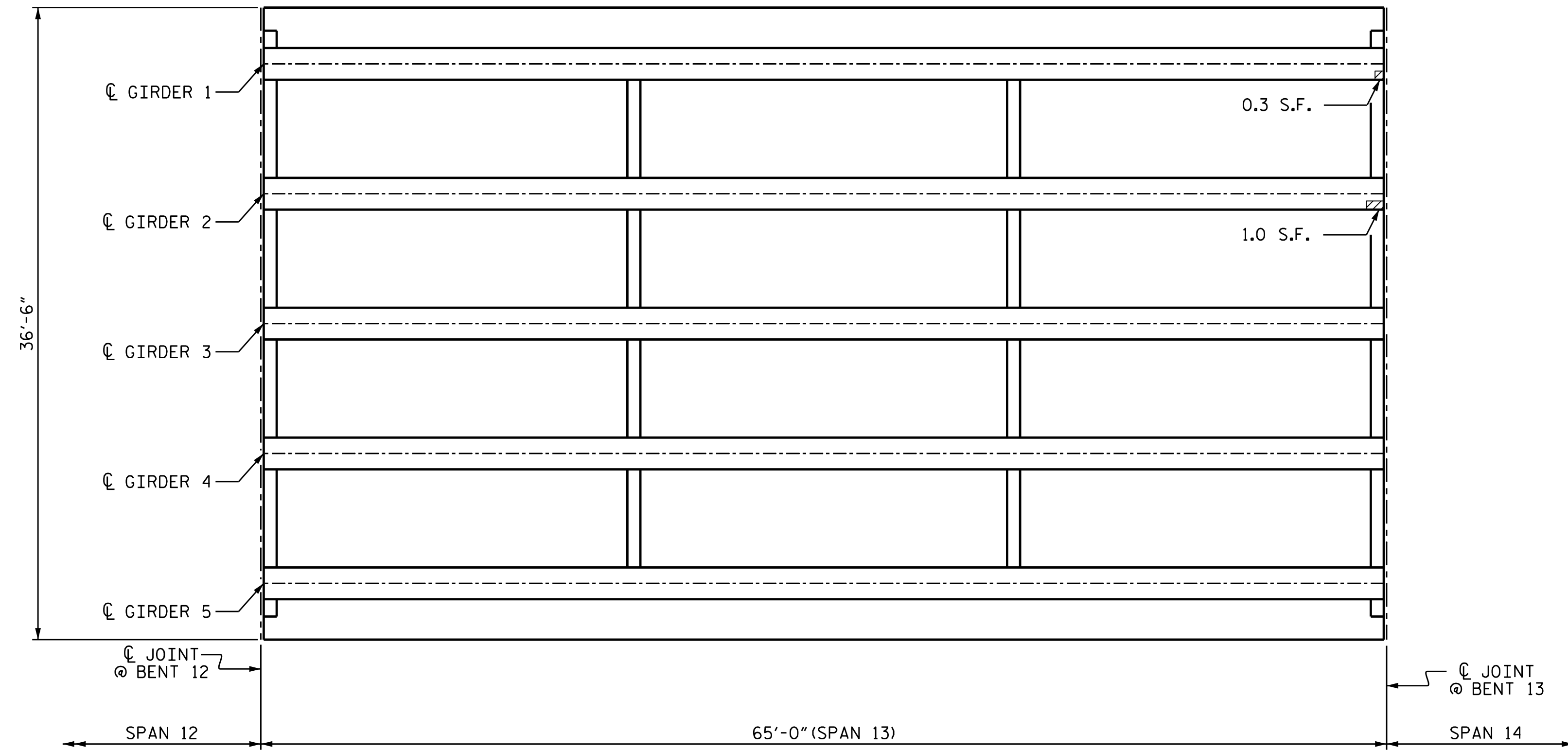
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 11 & 12

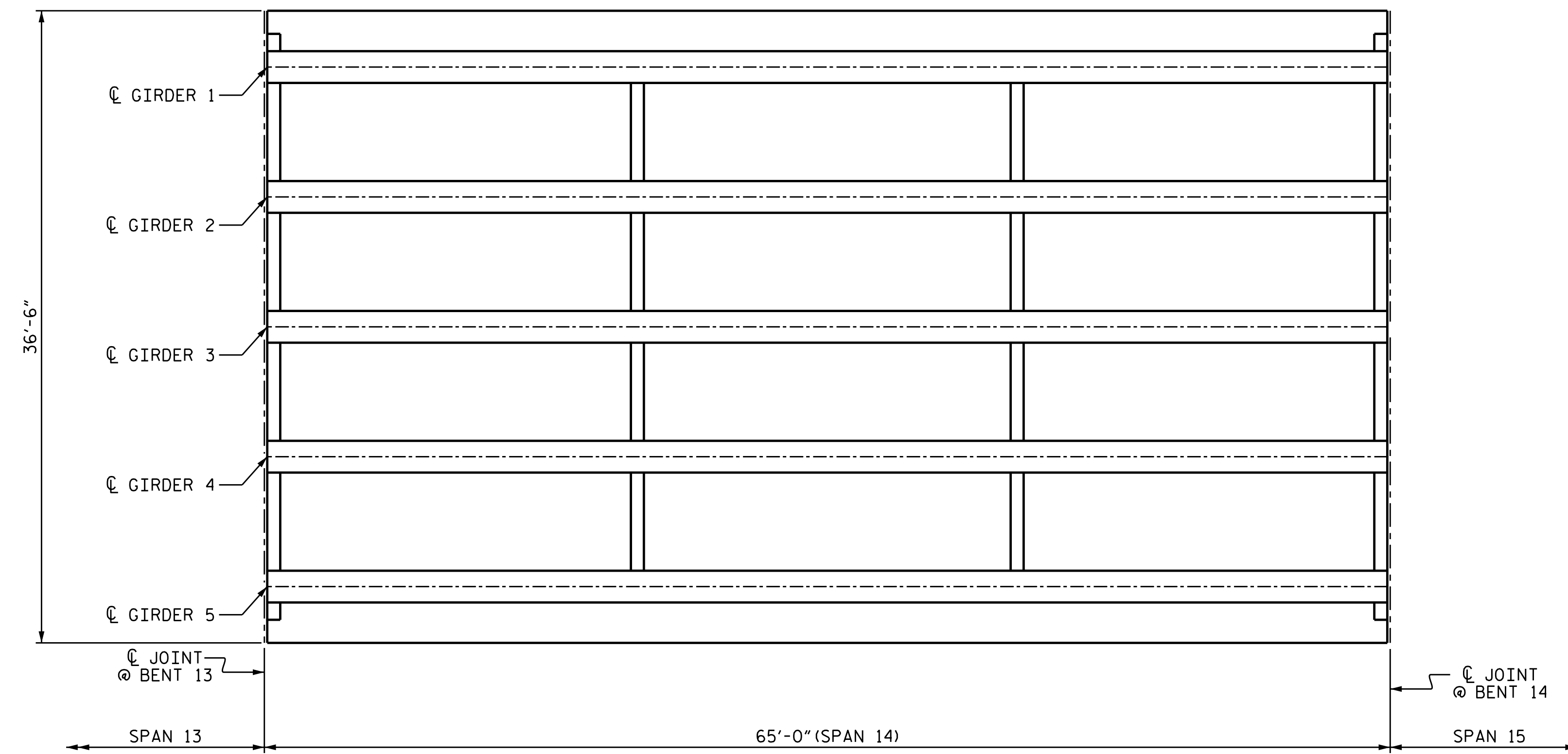
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |



SPAN 13 - UNDERSIDE



SPAN 14 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 13 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.3 | 0.4 | | |

| REPAIRS SPAN 14 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

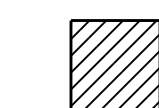
FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 7 OF 30



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 Greg Dickey
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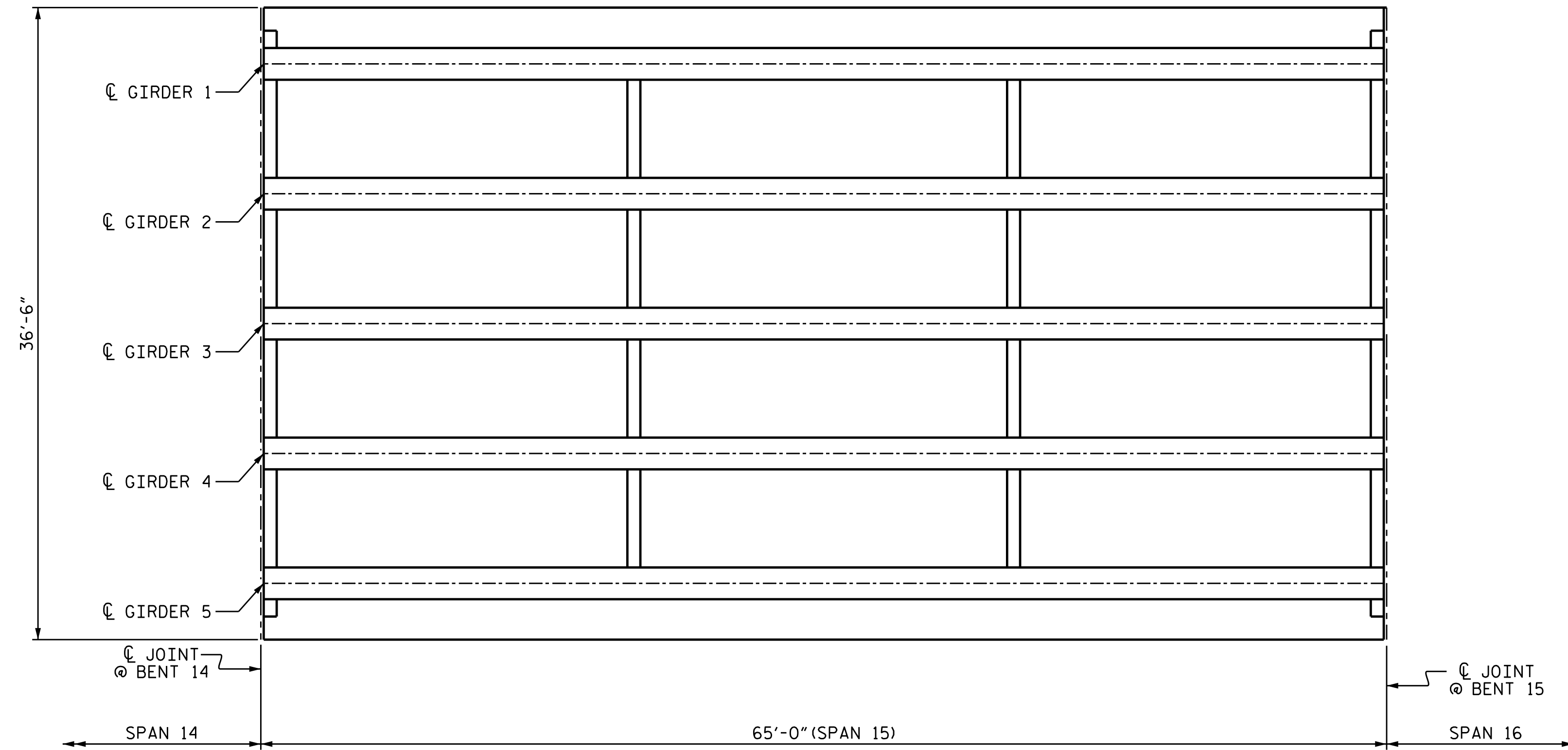
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 13 & 14

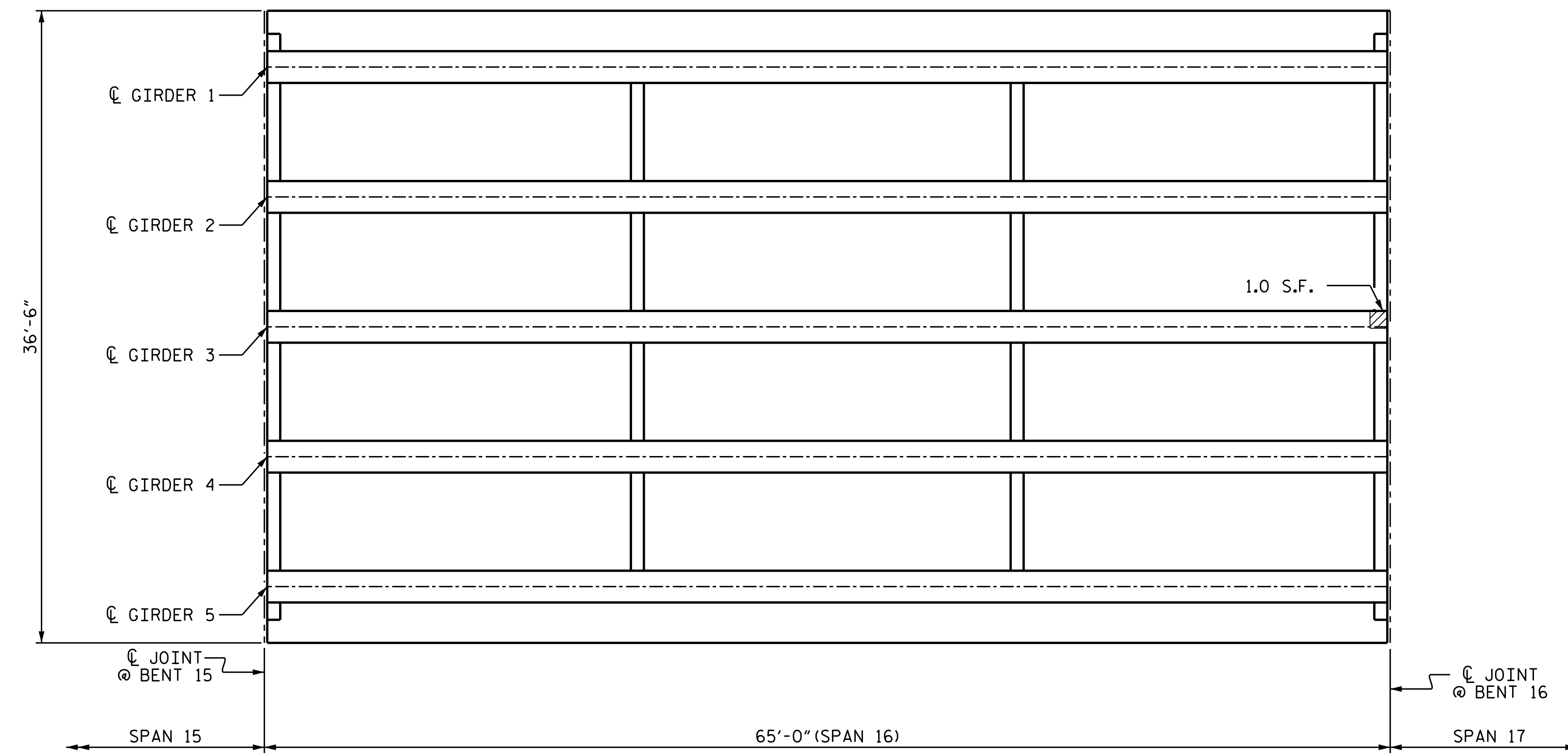
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 CHECKED BY : M. A. LEE DATE : 9/2016

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| 2 | | | 4 | | | |



SPAN 15 - UNDERSIDE



SPAN 16 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 15 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 16 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

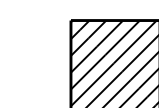
FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 8 OF 30



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 Greg Dickey
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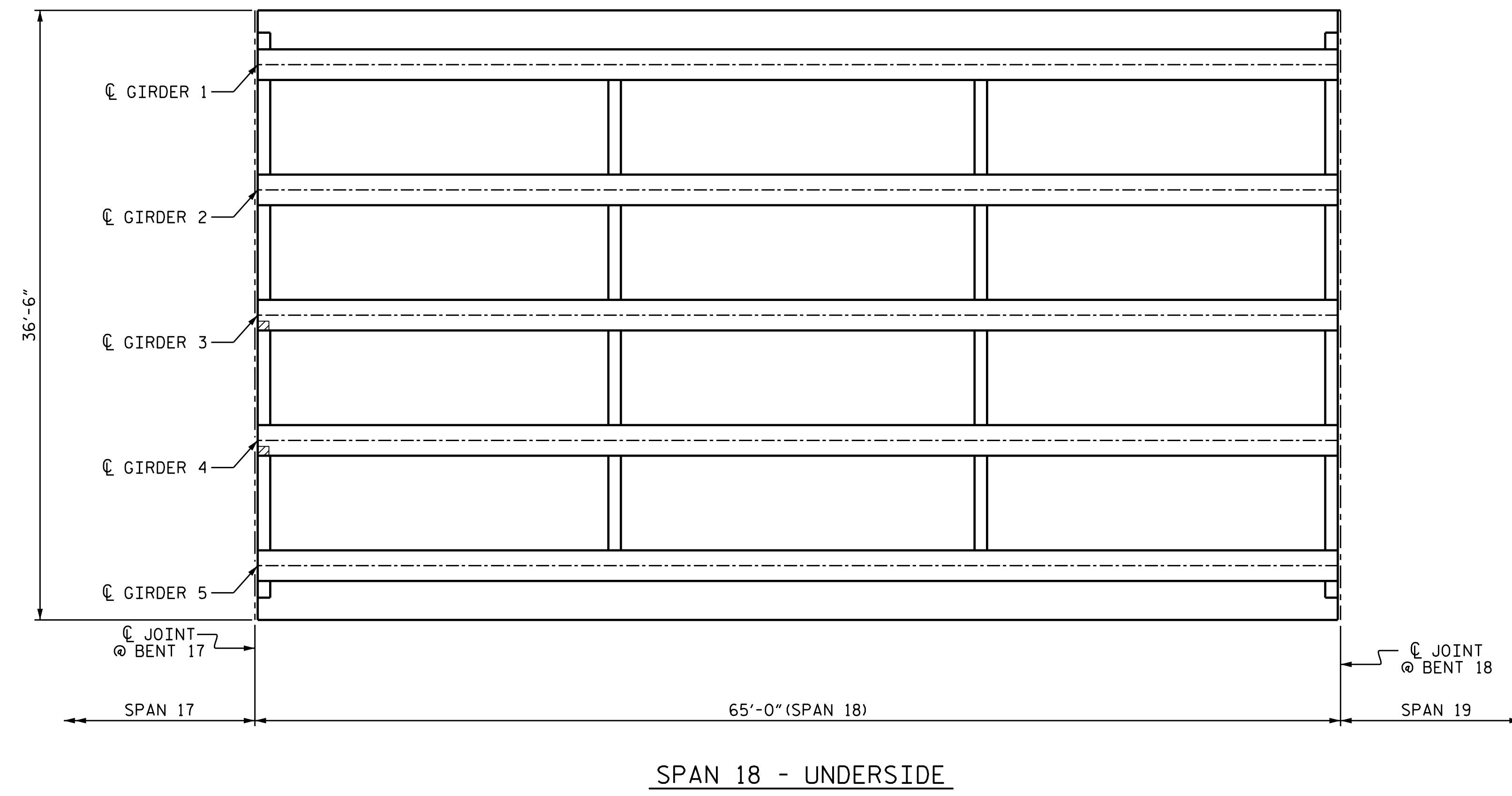
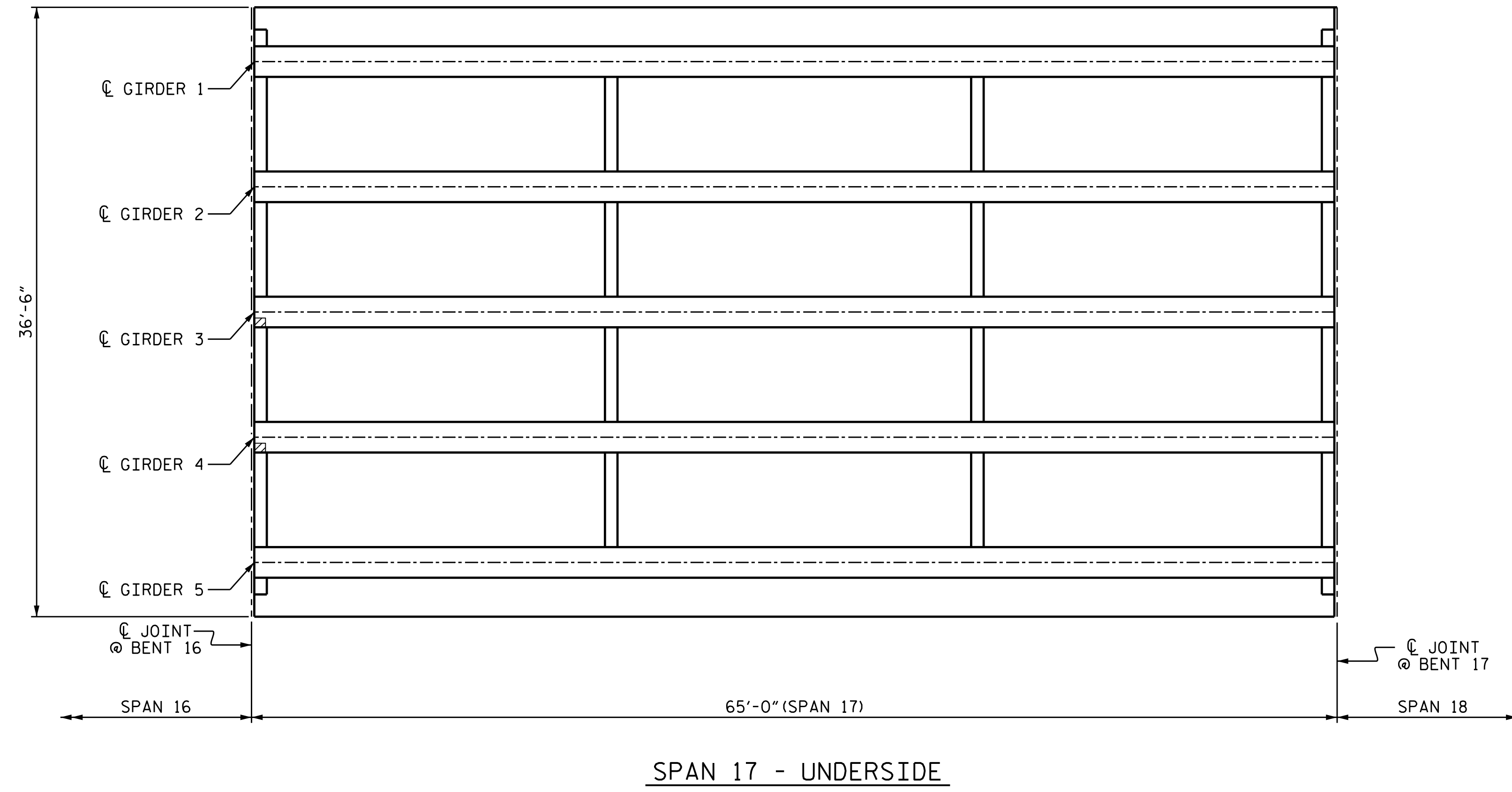
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 15 & 16

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-23 |
| 2 | | | 4 | | | |



REPAIR QUANTITY TABLE

| REPAIRS SPAN 17 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 18 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

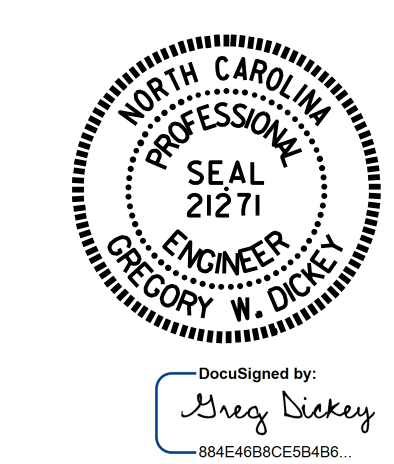
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS
- PRESTRESSED CONCRETE GIRDER REPAIR

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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 9 OF 30

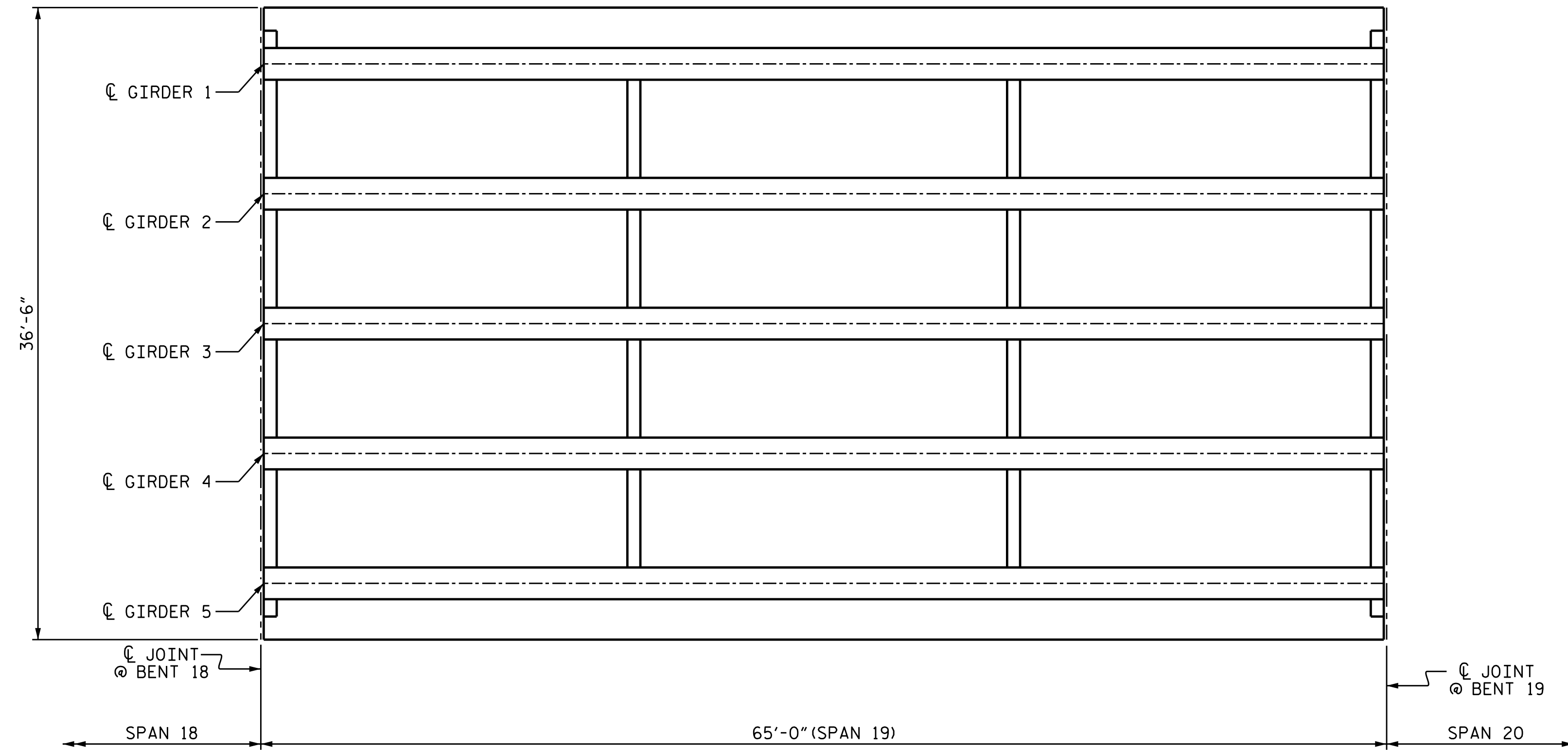


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 DEPARTMENT OF TRANSPORTATION
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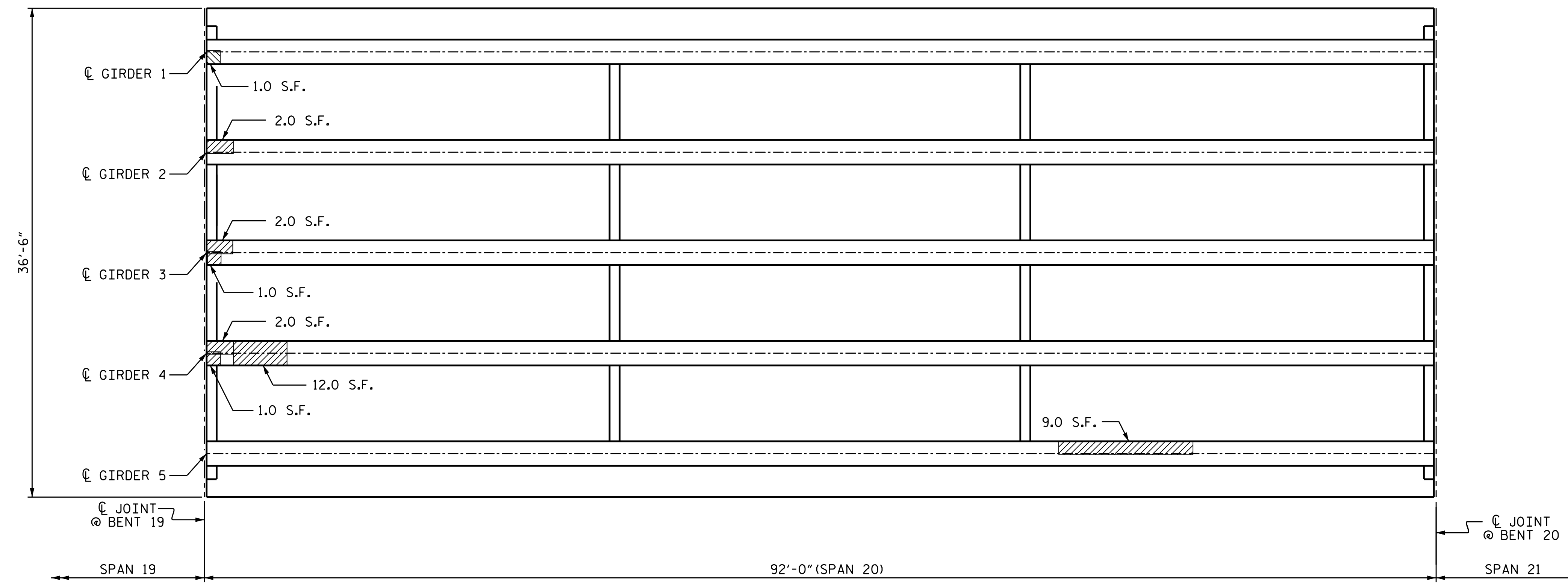
**FRAMING PLAN
 SPAN 17 & 18**

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-24 |
| 2 | | | 4 | | | |



SPAN 19 - UNDERSIDE



SPAN 20 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 19 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 20 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 30.0 | 8.8 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 10 OF 30



DocuSigned by:
Greg Dickey
884E488CE58486...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FRAMING PLAN
SPAN 19 & 20

DRAWN BY : S. T. SANDOR DATE : 8/2016
CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | | S2-25 | |
| 2 | | | 4 | | | | TOTAL SHEETS | |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 21 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 45.0 | 13.1 | | |

| REPAIRS SPAN 22 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 61.0 | 17.8 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

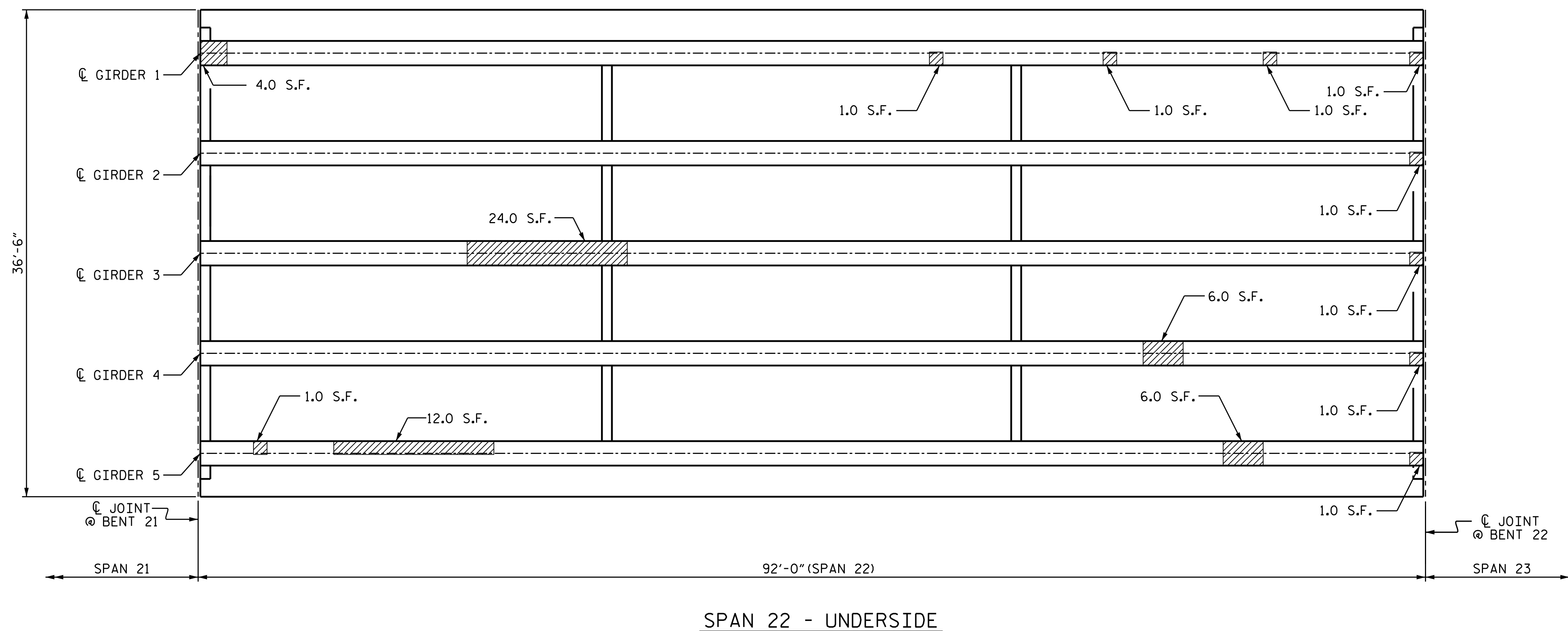
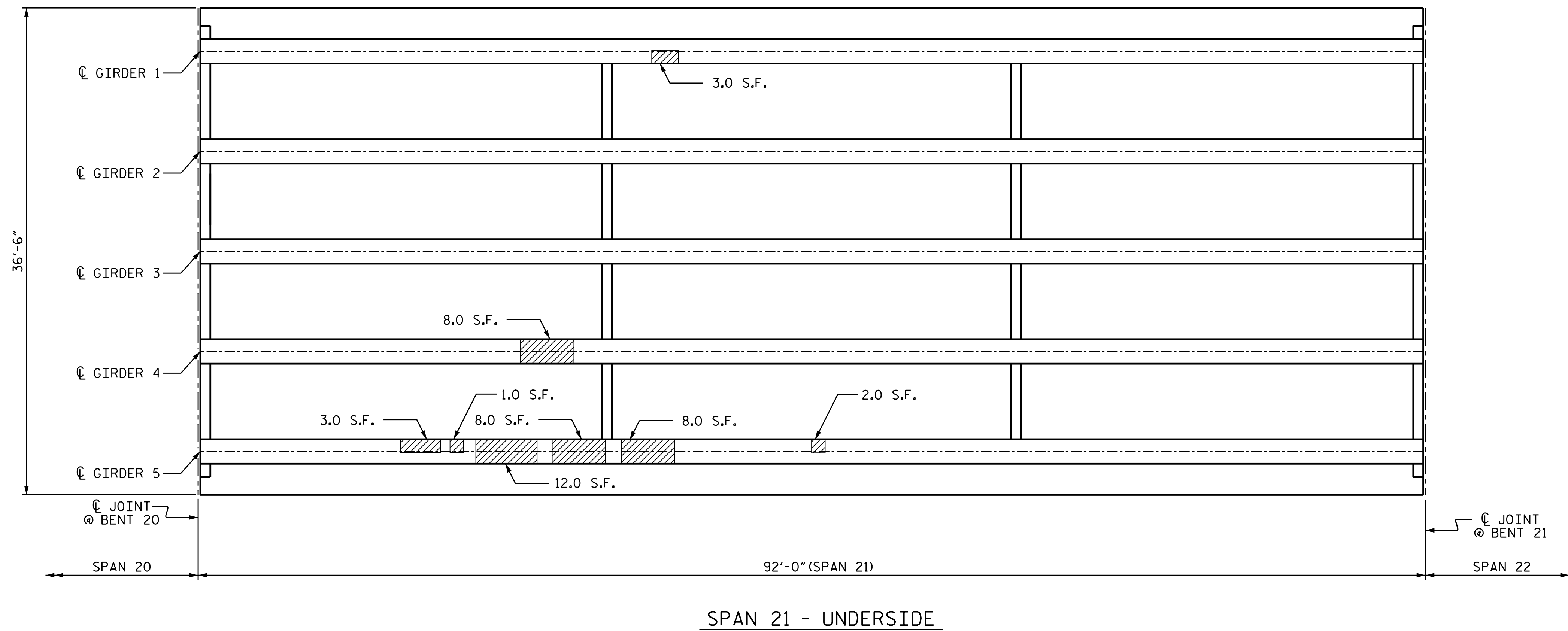
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 11 OF 30

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN SPAN 21 & 22



DocuSigned by:
 Greg Dickey
 884E488CE5B486

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S2-26 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 23 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 13.0 | 3.8 | | |

| REPAIRS SPAN 24 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 47.0 | 13.7 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

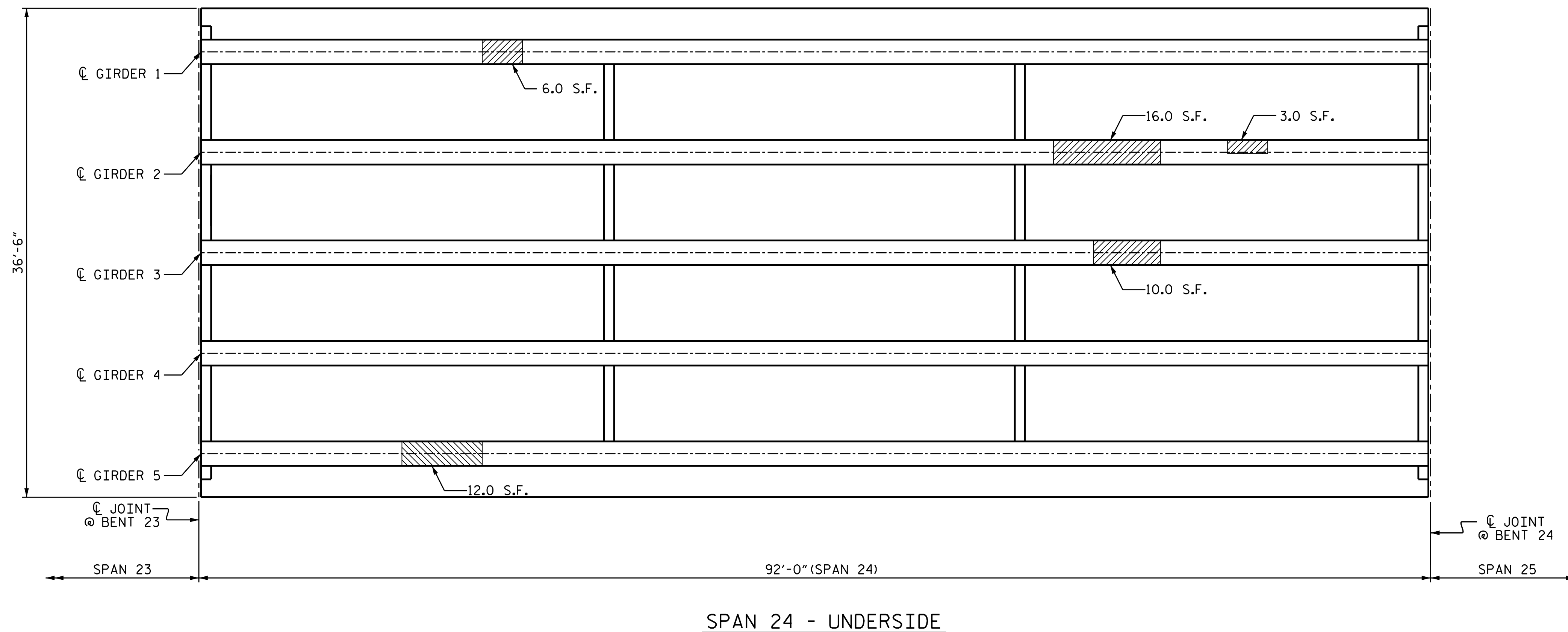
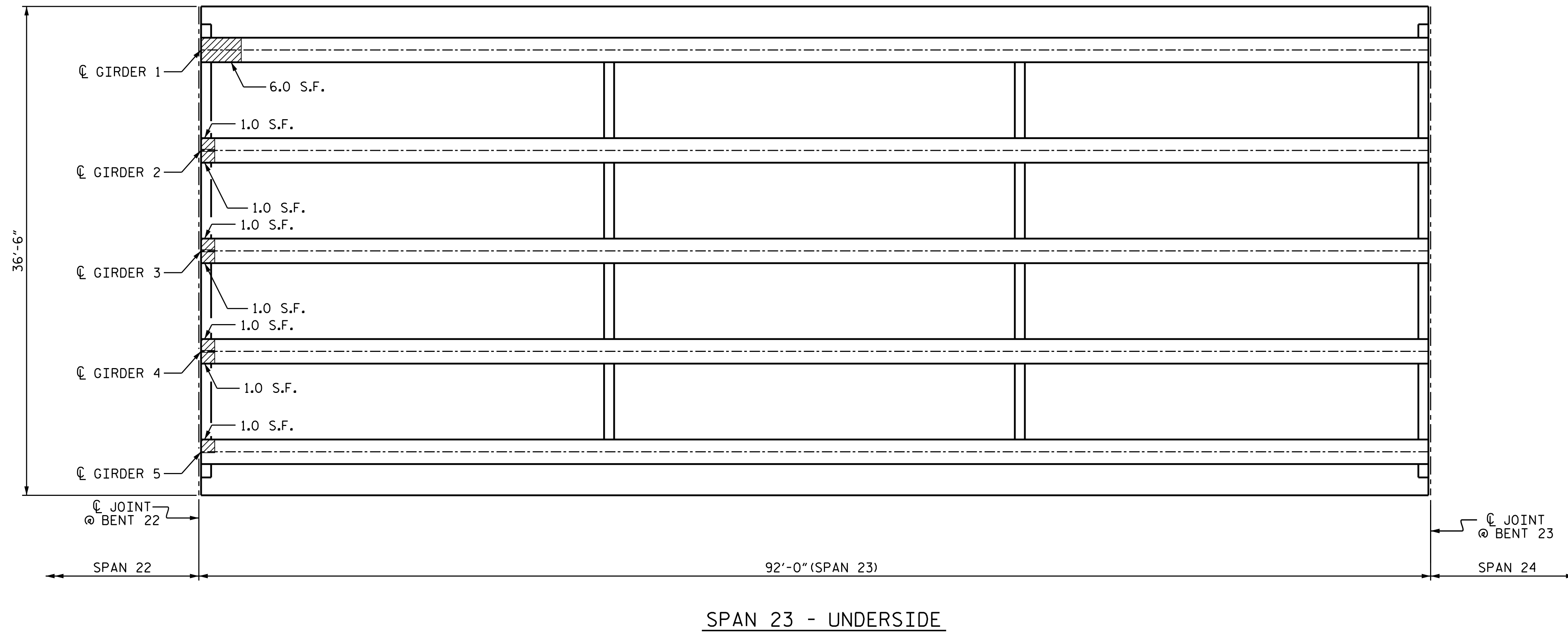
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
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SHEET 12 OF 30



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**FRAMING PLAN
 SPAN 23 & 24**

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-27 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 25 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 20.0 | 5.8 | | |

| REPAIRS SPAN 26 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 30.0 | 8.8 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

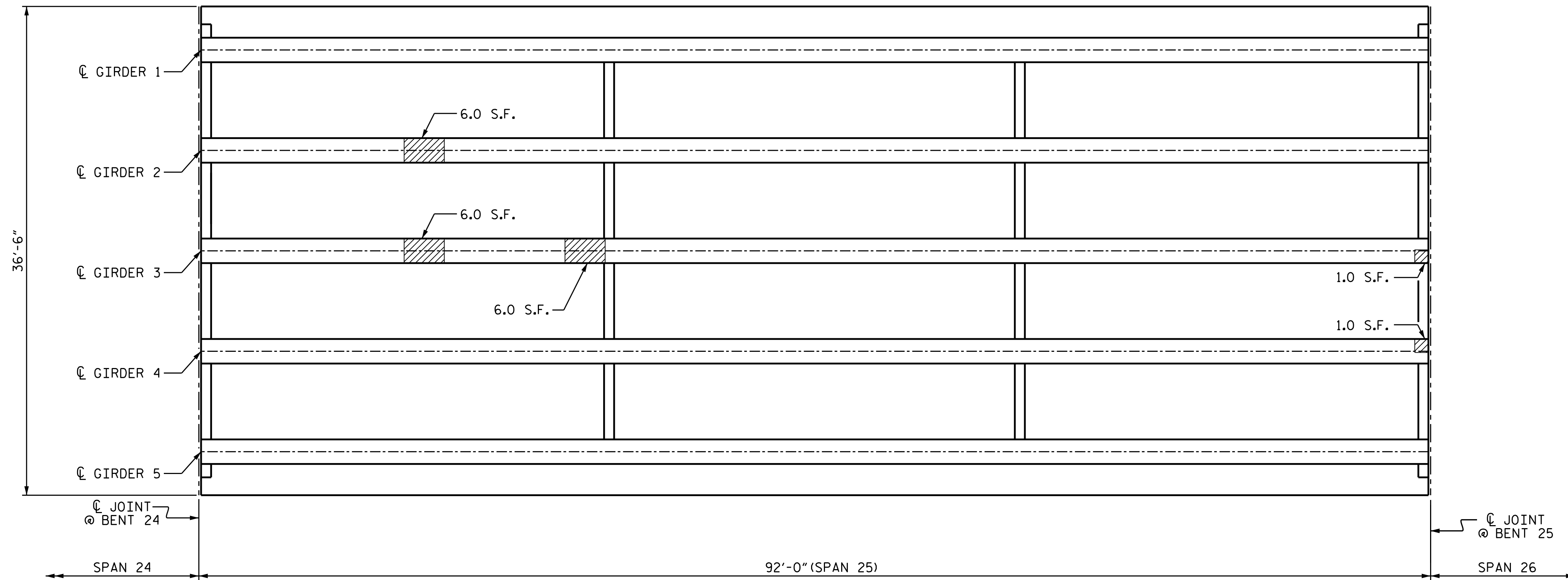
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

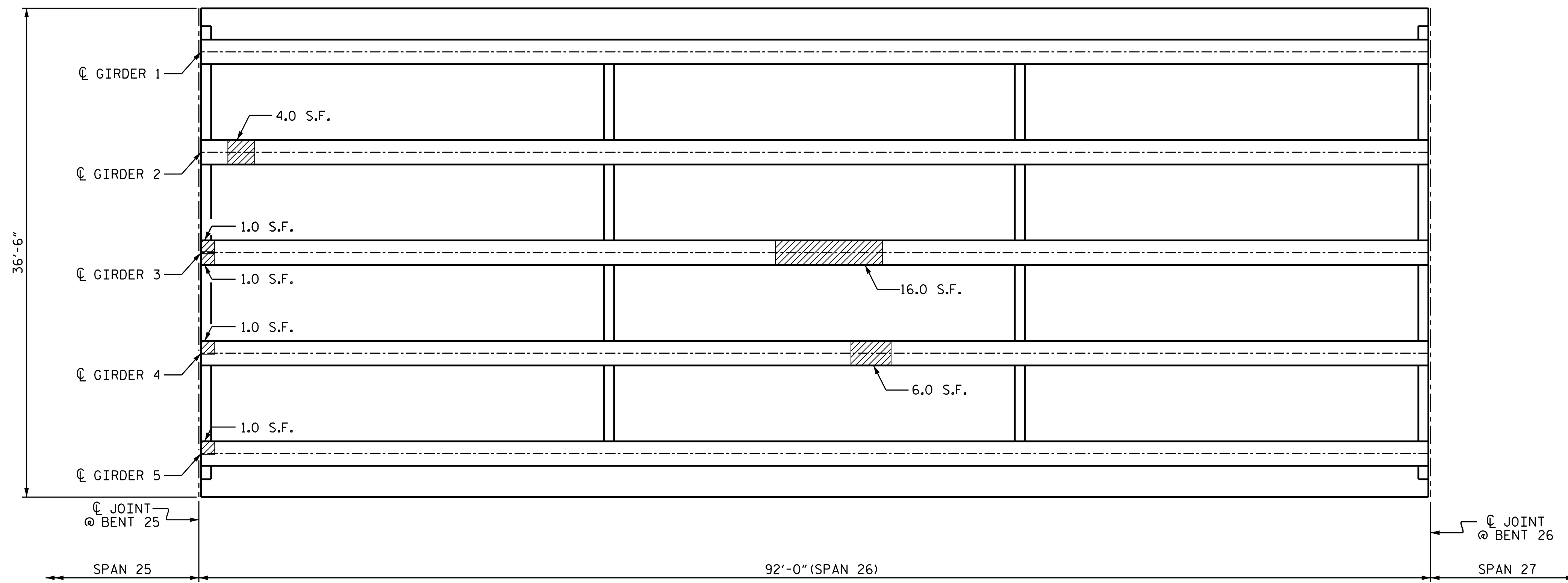
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



SPAN 25 - UNDERSIDE



SPAN 26 - UNDERSIDE

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 13 OF 30



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Greg Dickey
 884E488CE58486

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FRAMING PLAN SPAN 25 & 26

DRAWN BY : S. T. SANDOR DATE : 8/2016
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| 1 | | | 3 | | | S2-28 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 27 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 6.0 | 1.8 | | |

| REPAIRS SPAN 28 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 17.0 | 5.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

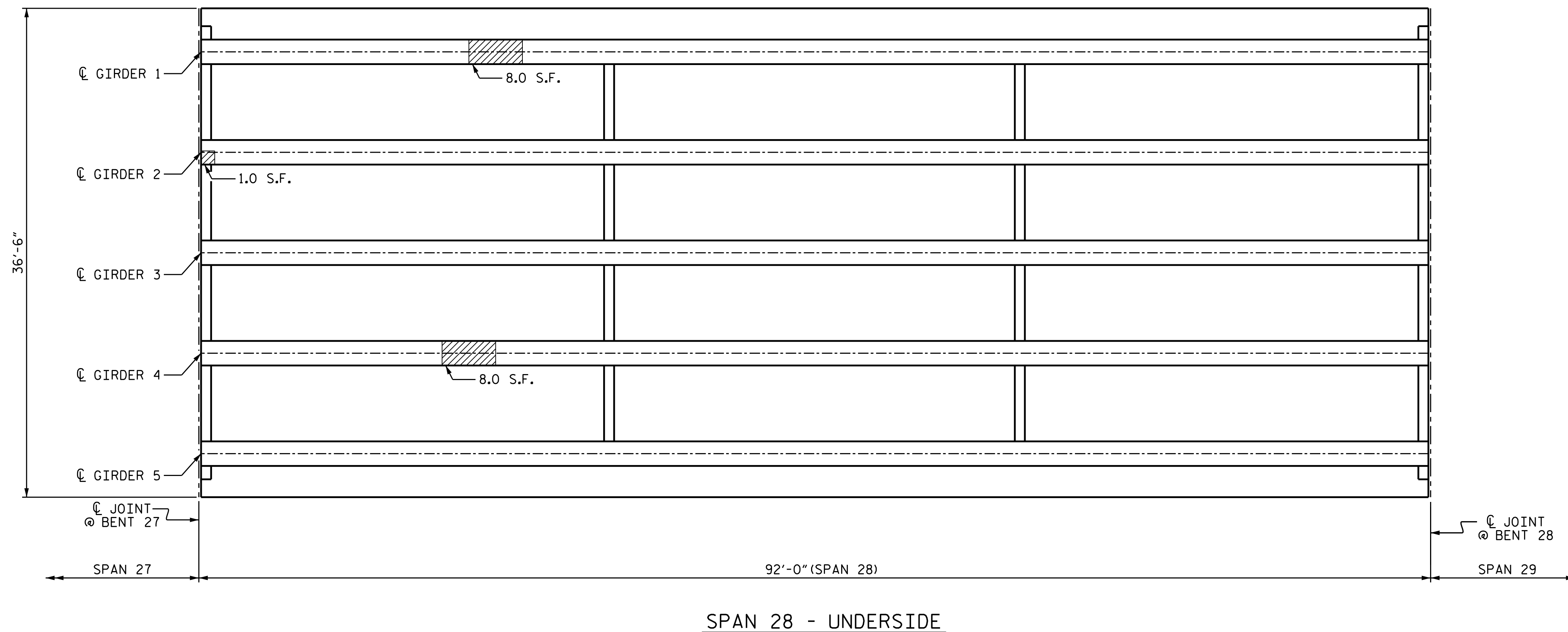
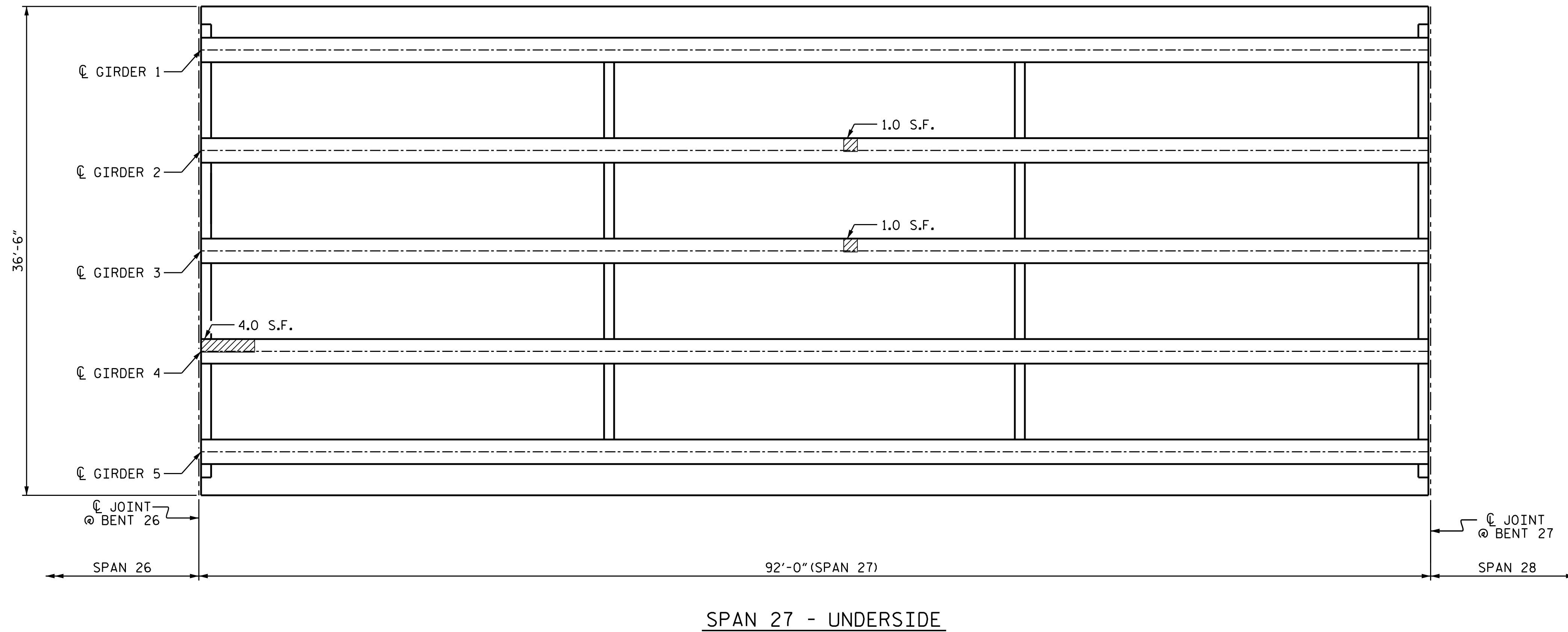
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 14 OF 30



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**FRAMING PLAN
 SPAN 27 & 28**

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| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 29 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 4.0 | 1.2 | | |

| REPAIRS SPAN 30 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 17.0 | 5.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

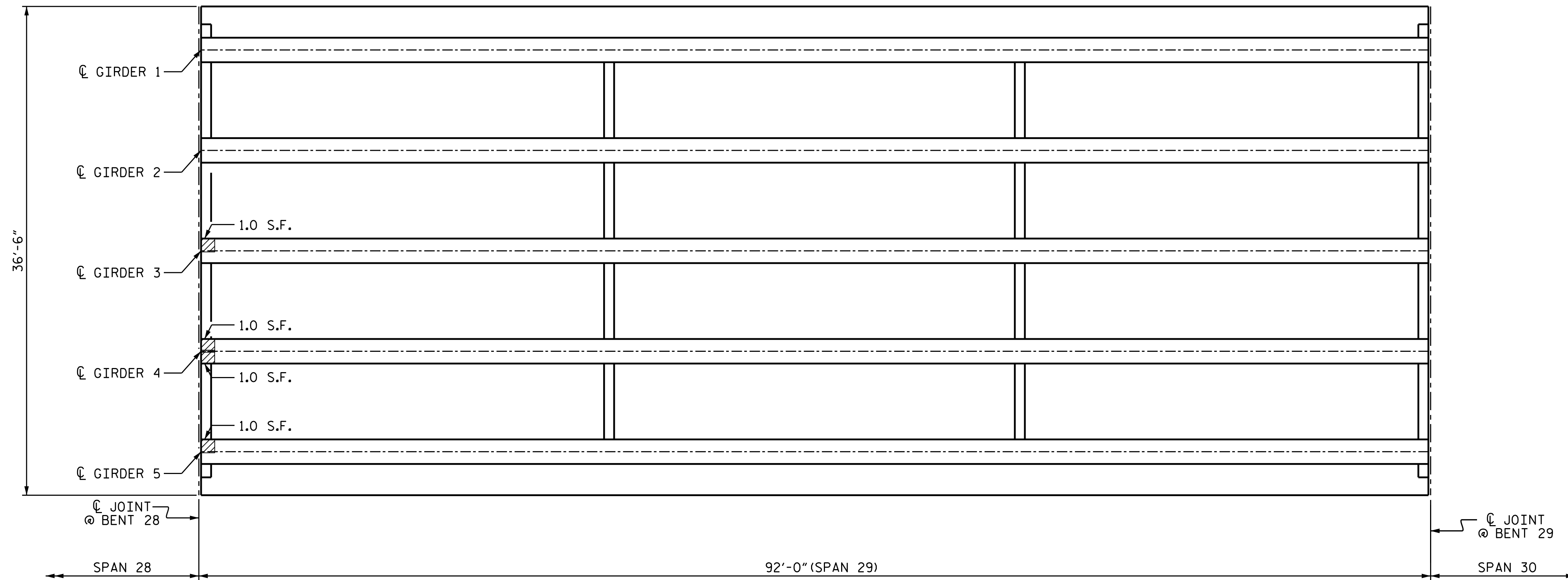
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

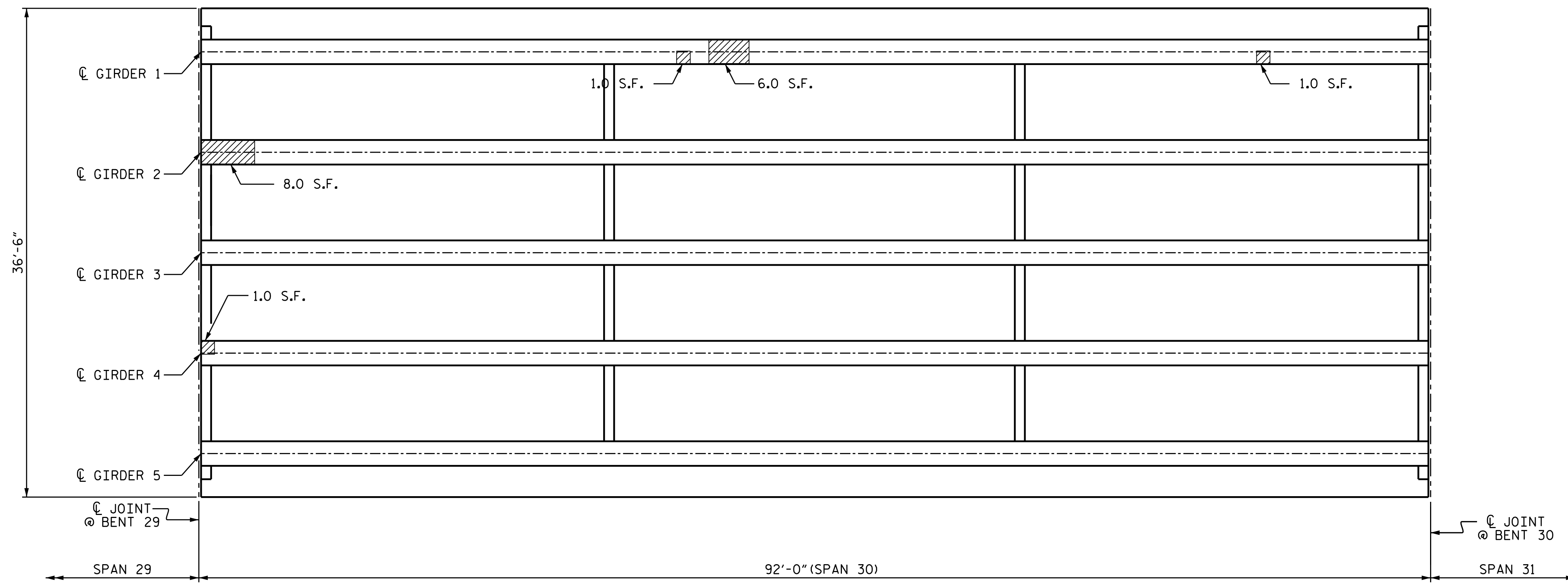
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



SPAN 29 - UNDERSIDE



SPAN 30 - UNDERSIDE

PROJECT NO. B-5939
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 BRIDGE NO. 6

SHEET 15 OF 30



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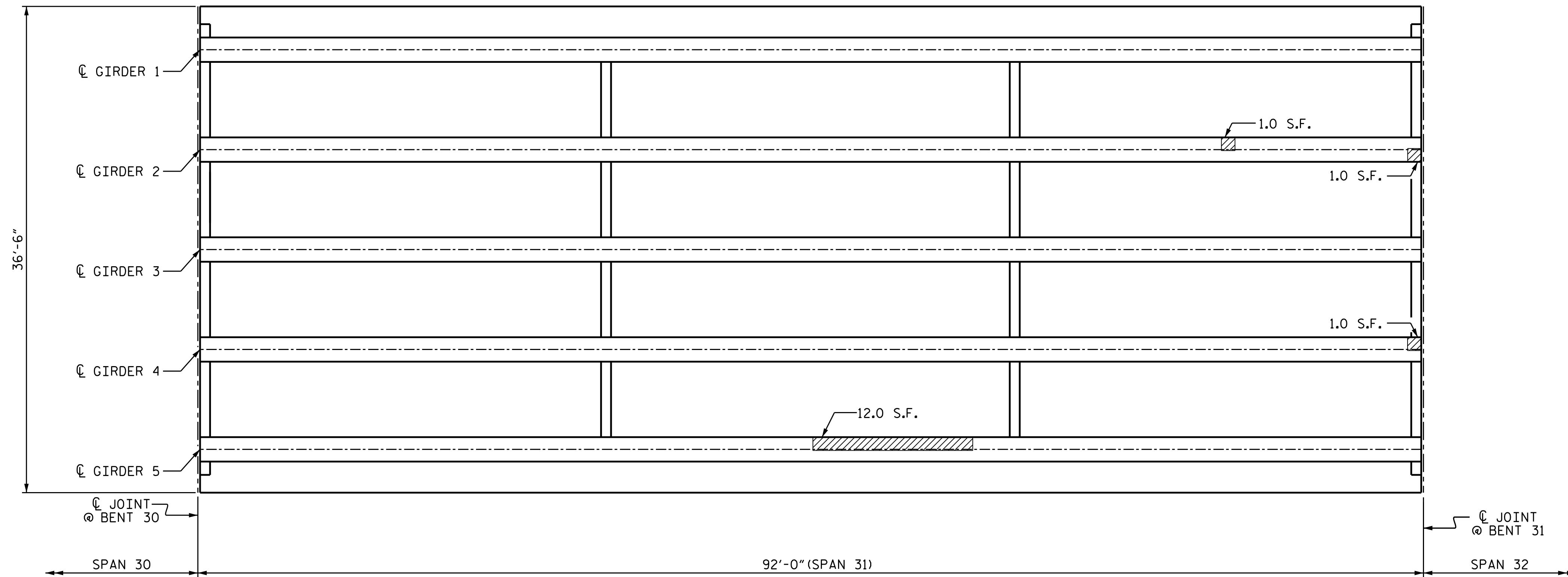
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FRAMING PLAN SPAN 29 & 30

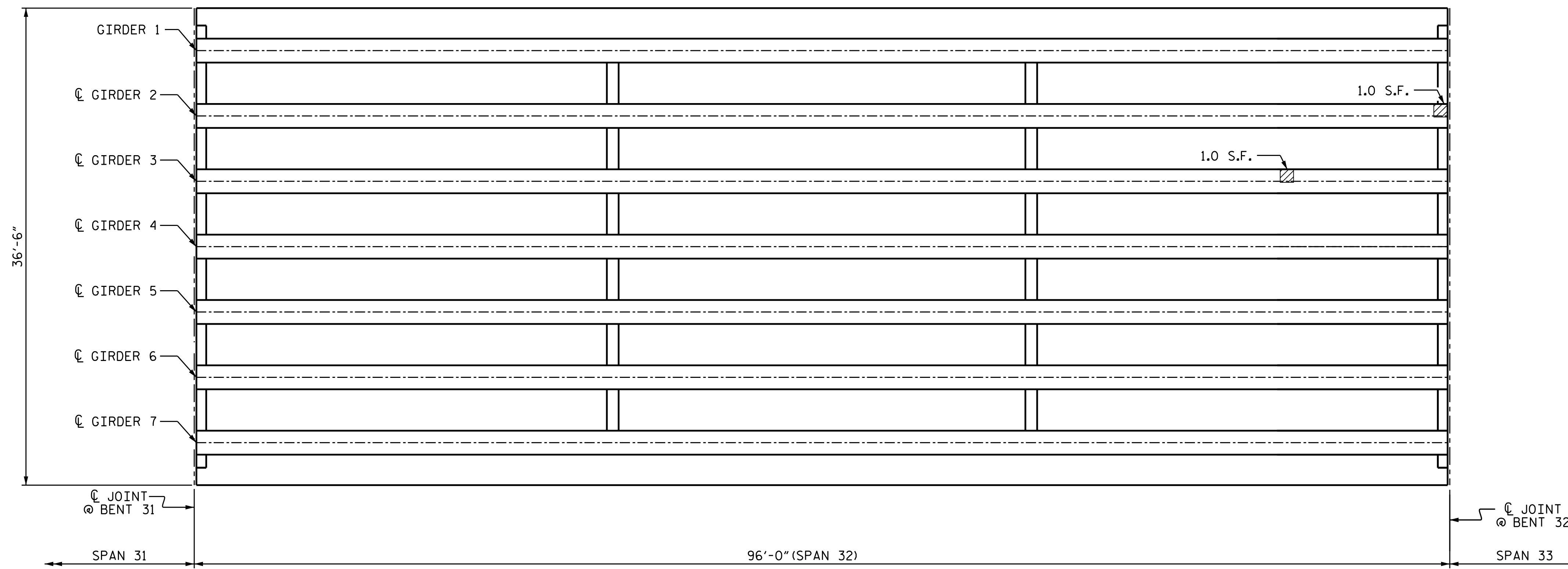
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| 2 | | | 4 | | | TOTAL SHEETS |



SPAN 31 - UNDERSIDE



SPAN 32 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 31 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 15.0 | 4.4 | | |

| REPAIRS SPAN 32 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 2.0 | 0.6 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 16 OF 30

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FRAMING PLAN
SPAN 31 & 32



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Greg Dickey
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| 2 | | | 4 | | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

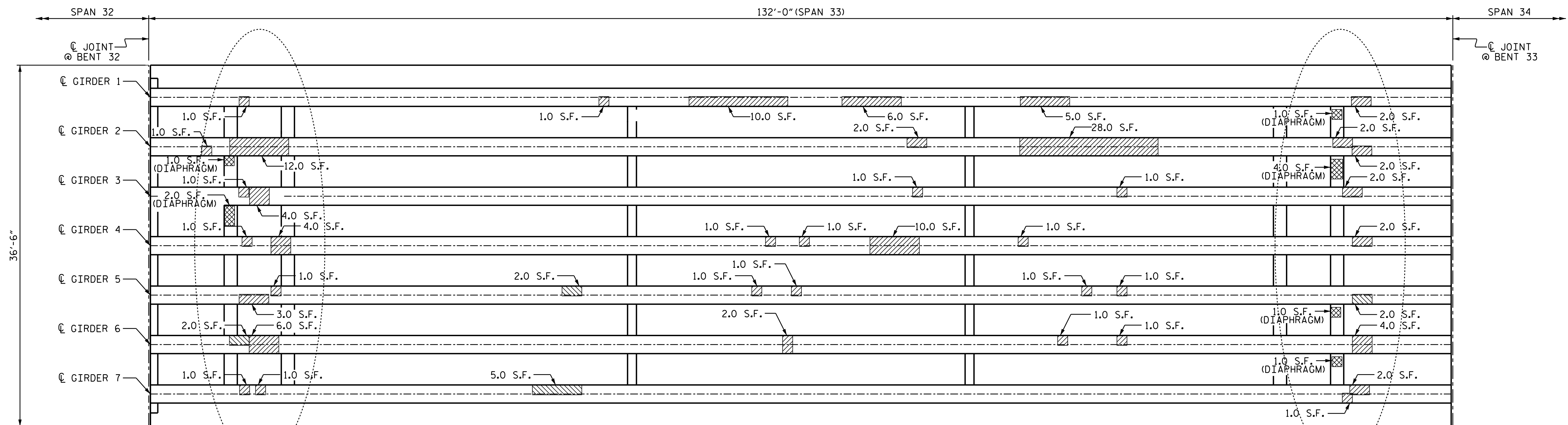
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

REPAIR QUANTITY TABLE

| REPAIRS SPAN 33 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 10.0 | 5.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 139.0 | 40.5 | | |

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR



SPAN 33 - UNDERSIDE

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

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FRAMING PLAN
 SPAN 33



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 Greg Dickey
 884E488CE5848B...

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| 1 | | | 3 | | | S2-32 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 34 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 17.0 | 5.0 | | |

| REPAIRS SPAN 35 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 12.0 | 6.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 34.0 | 9.9 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

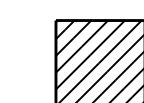
FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

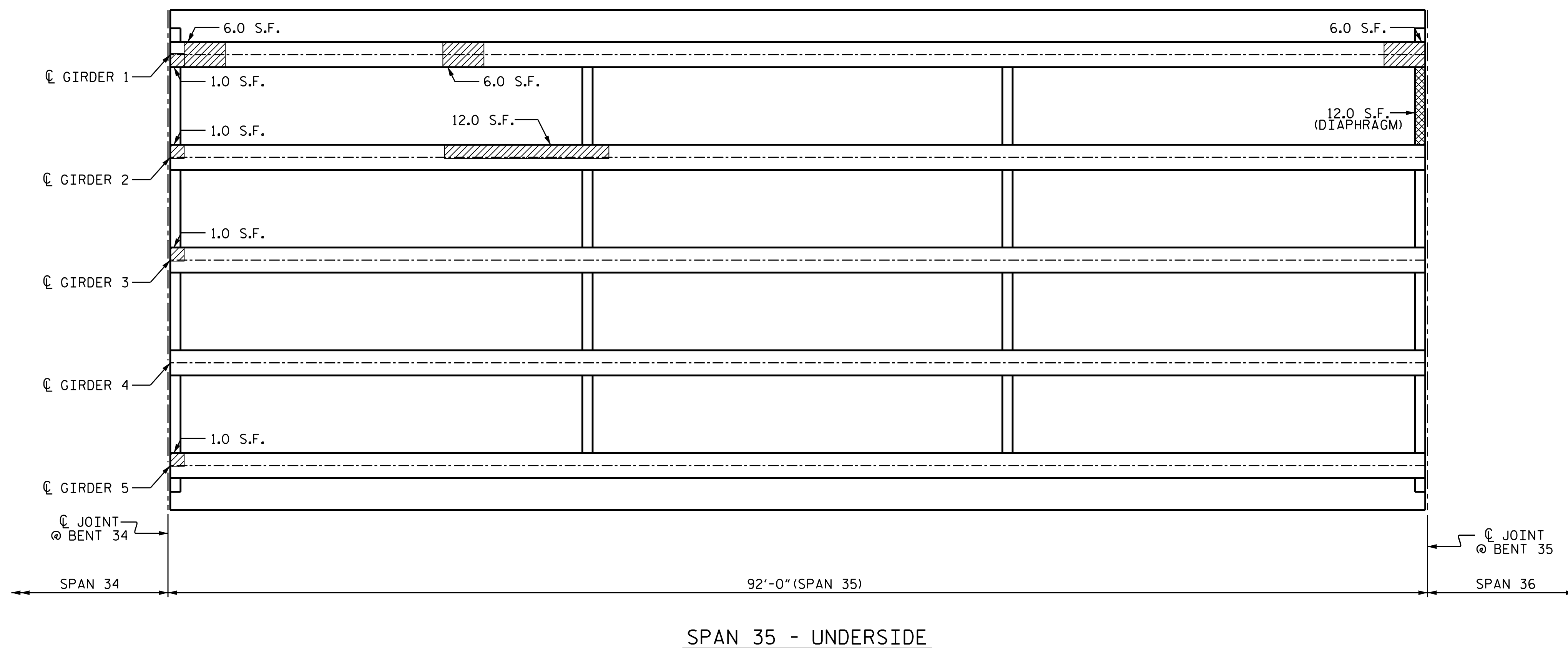
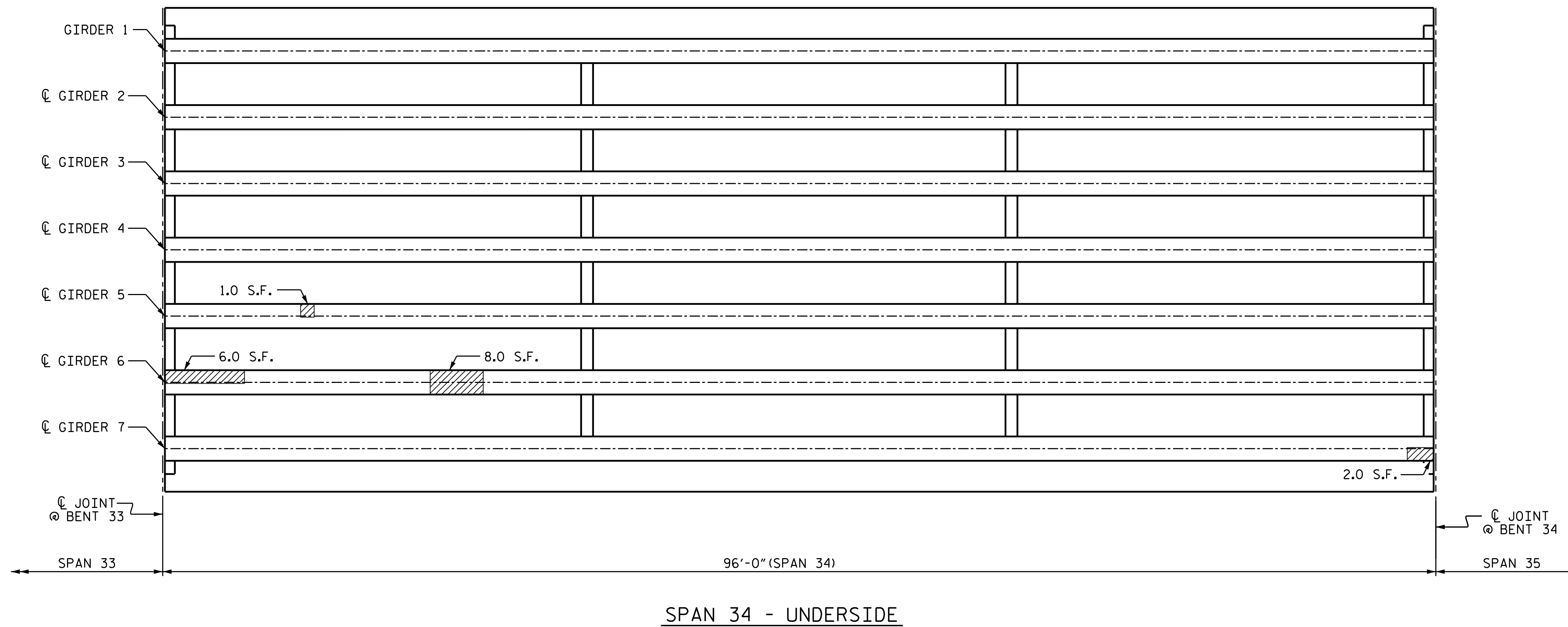
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 18 OF 30



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FRAMING PLAN SPAN 34 & 35

DRAWN BY : S. T. SANDOR DATE : 8/2016
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| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 36 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 8.0 | 2.3 | | |

| REPAIRS SPAN 37 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 2.0 | 0.6 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

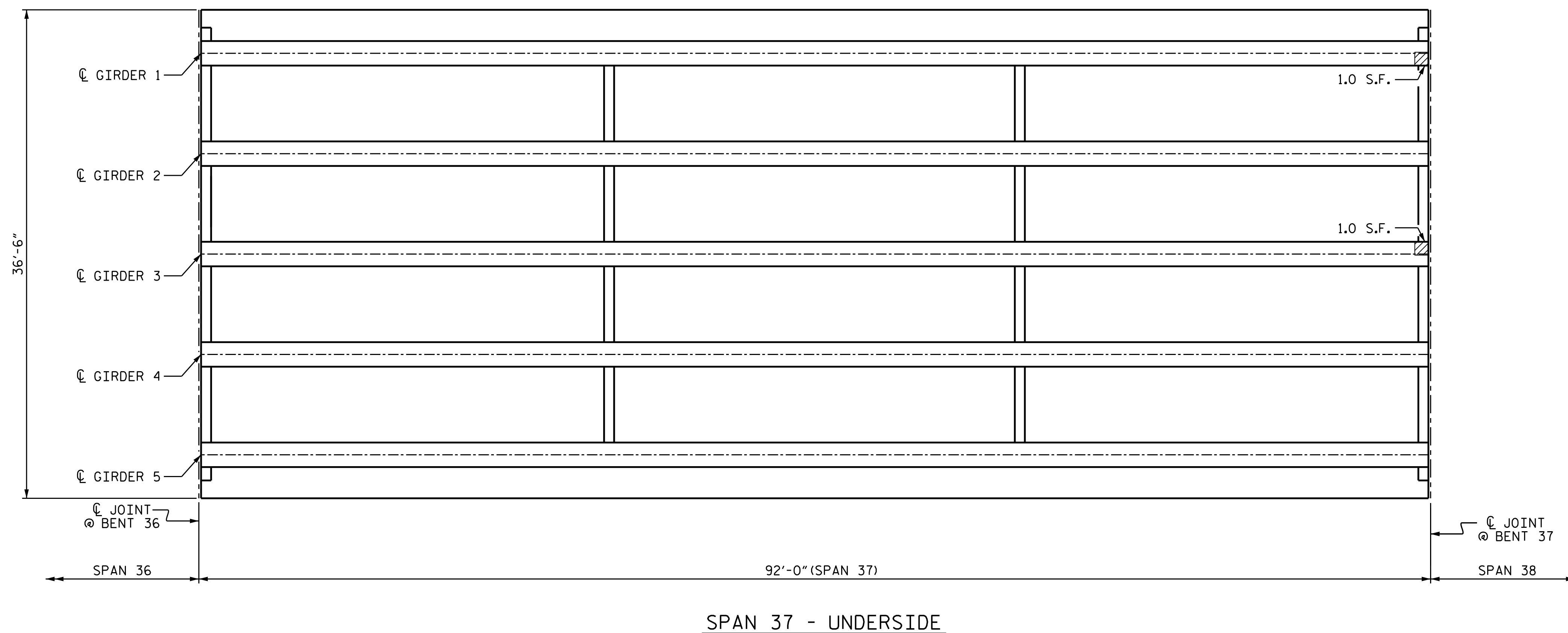
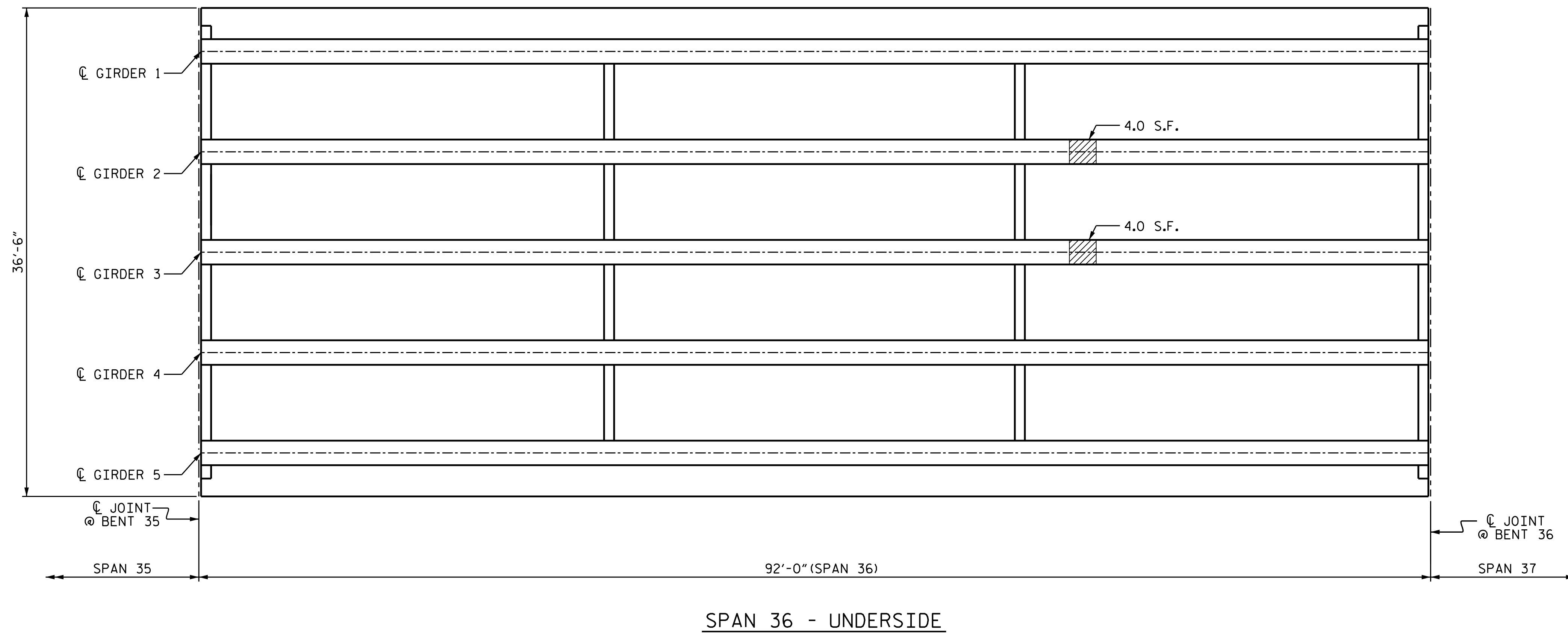
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 19 OF 30



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**FRAMING PLAN
 SPAN 36 & 37**

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
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| 1 | | | 3 | | | S2-34 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 38 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 2.0 | 1.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 42.0 | 12.3 | | |

| REPAIRS SPAN 39 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

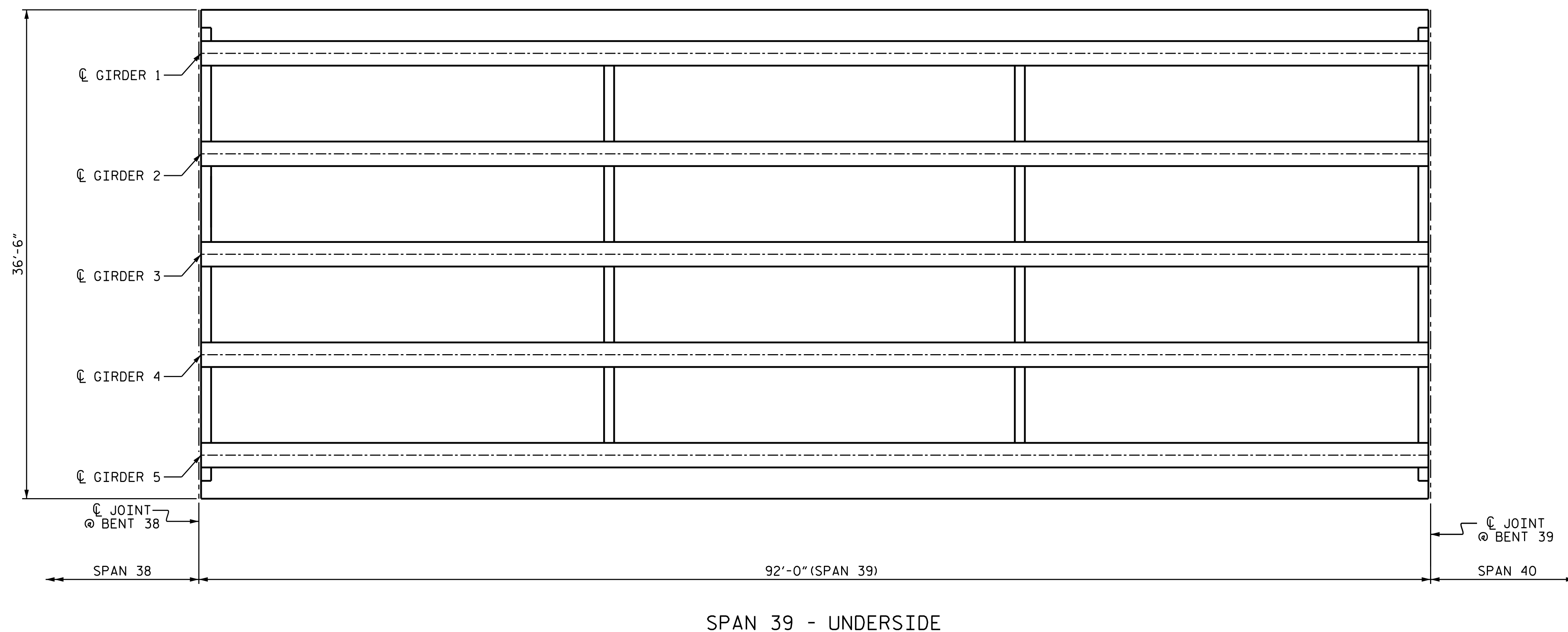
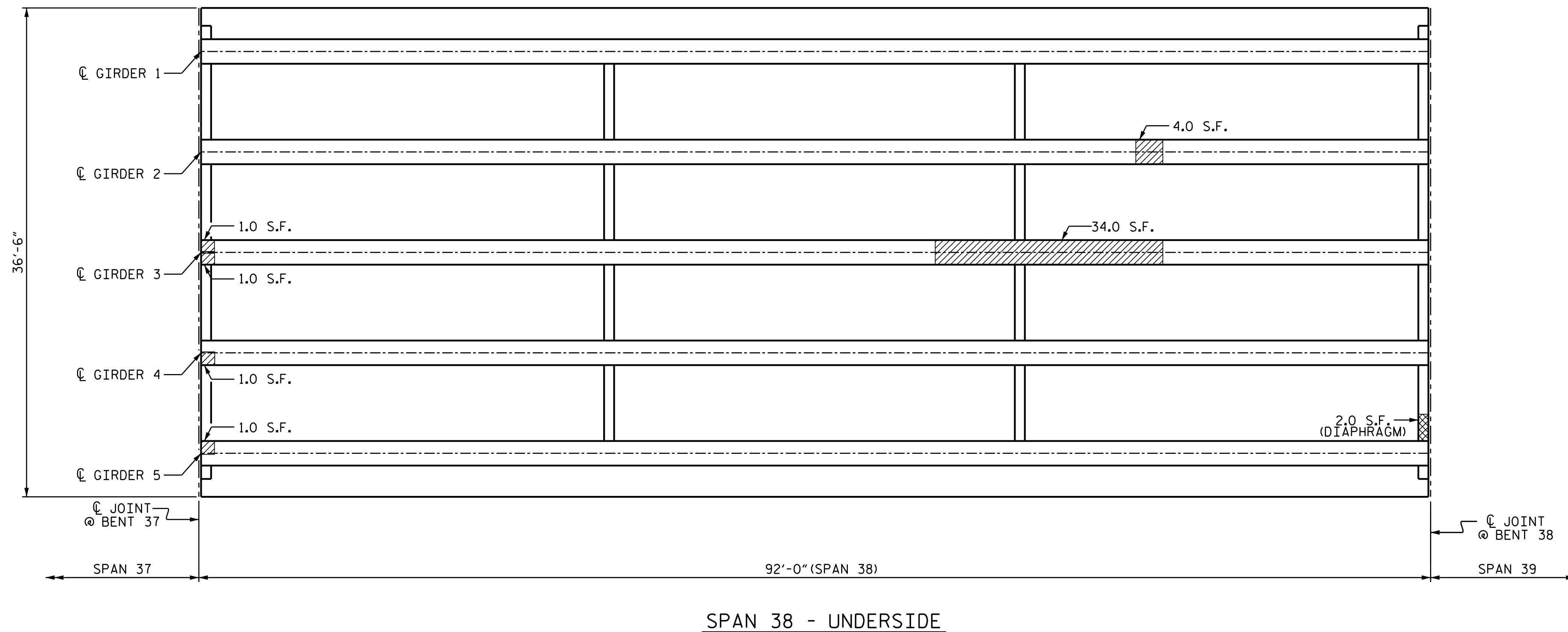
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 20 OF 30



DocuSigned by:
Greg Dickey
 884E488CE58486

| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH | | | | | |
|--|-----|-------|-----|-----|-----------------------|
| FRAMING PLAN SPAN 38 & 39 | | | | | |
| REVISIONS | | | | | SHEET NO. |
| NO. | BY: | DATE: | NO. | BY: | DATE: |
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REPAIR QUANTITY TABLE

| REPAIRS SPAN 40 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 8.0 | 2.3 | | |

| REPAIRS SPAN 41 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 12.0 | 6.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 19.0 | 5.5 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

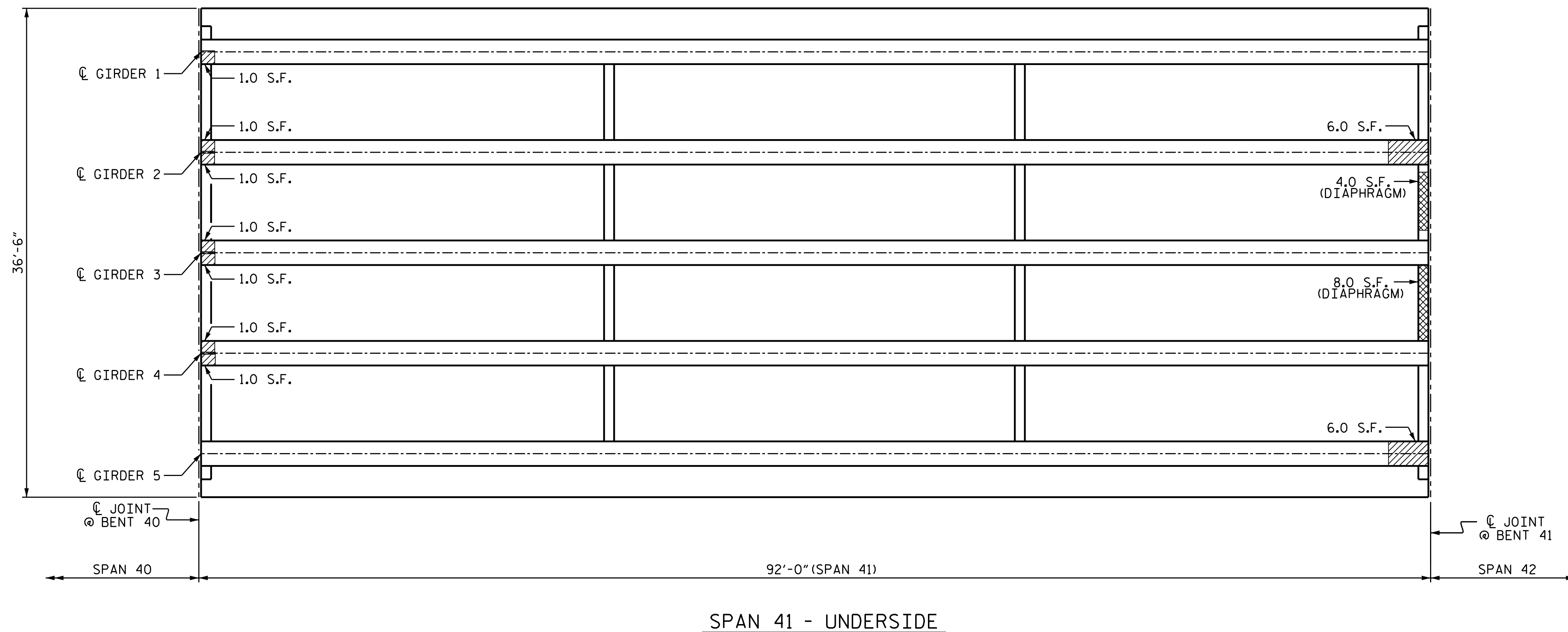
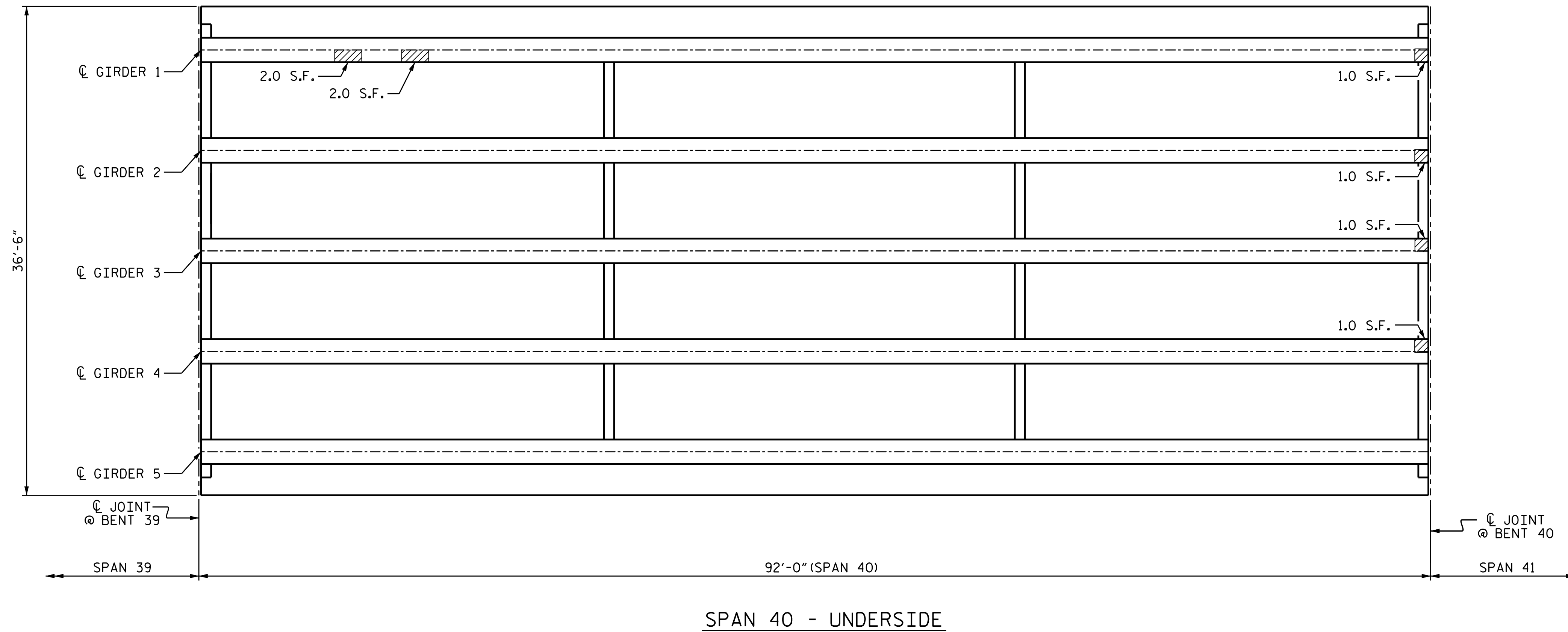
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

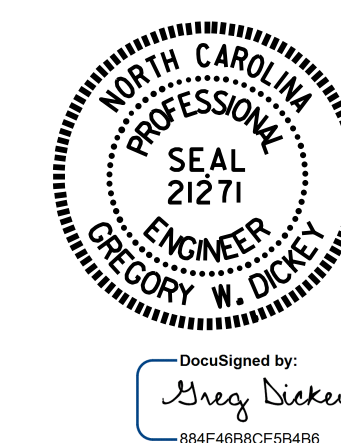
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 21 OF 30



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN SPAN 40 & 41

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-36 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 42 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 12.0 | 6.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 43 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

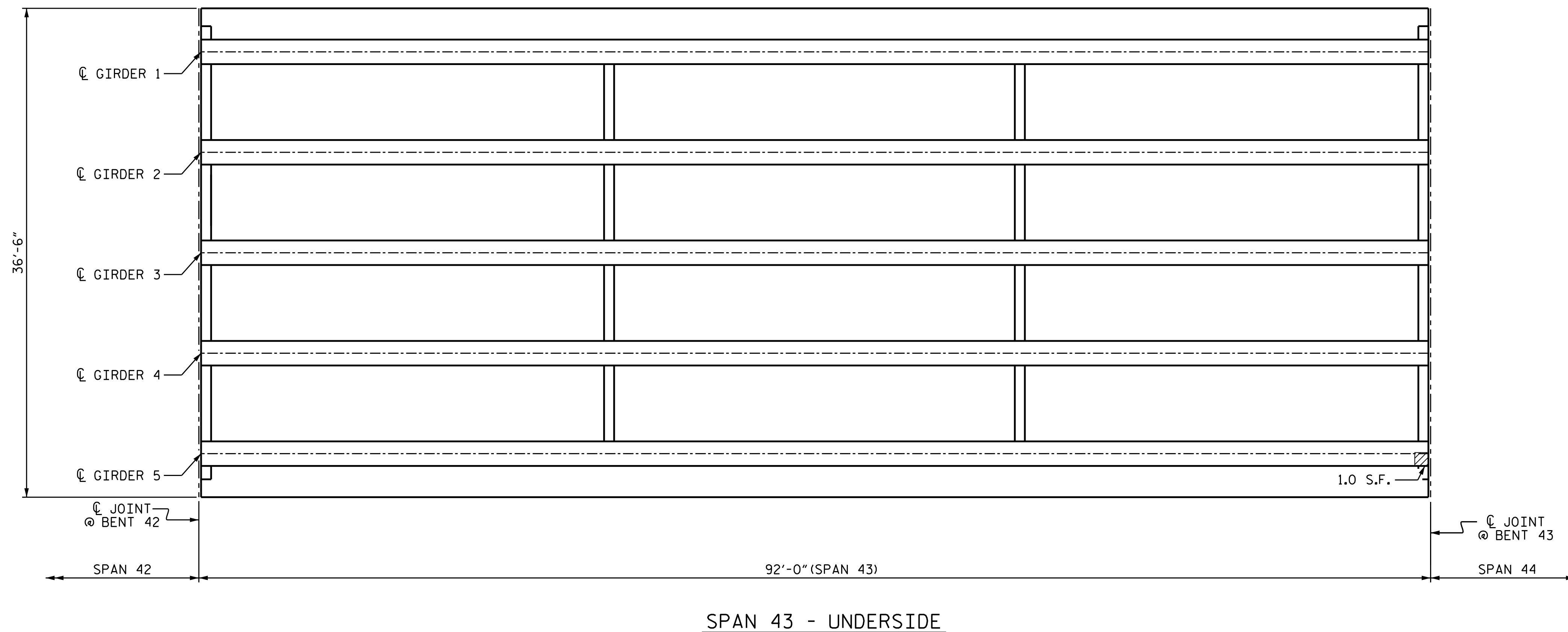
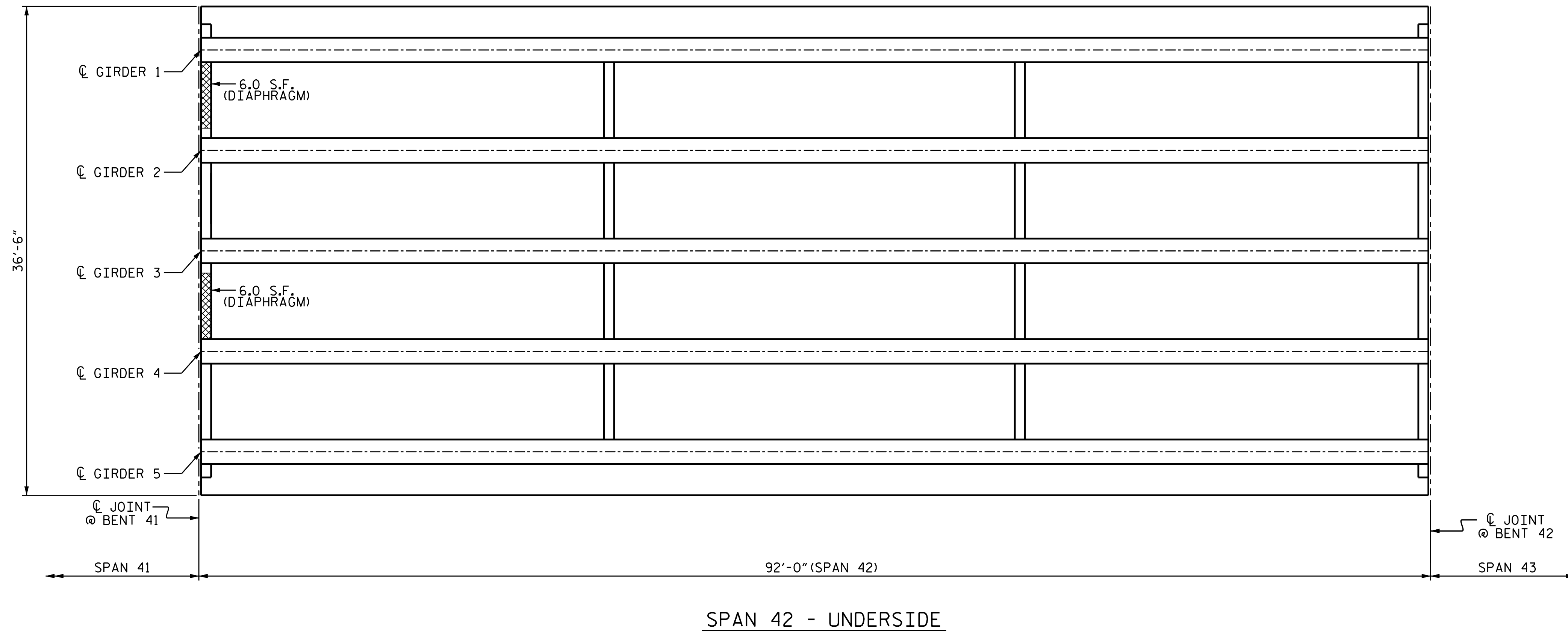
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 22 OF 30

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 42 & 43



DocuSigned by:
Greg Dickey
 884E488CE5B4B6

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-37 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 44 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 49.0 | 14.3 | | |

| REPAIRS SPAN 45 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 4.0 | 1.2 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

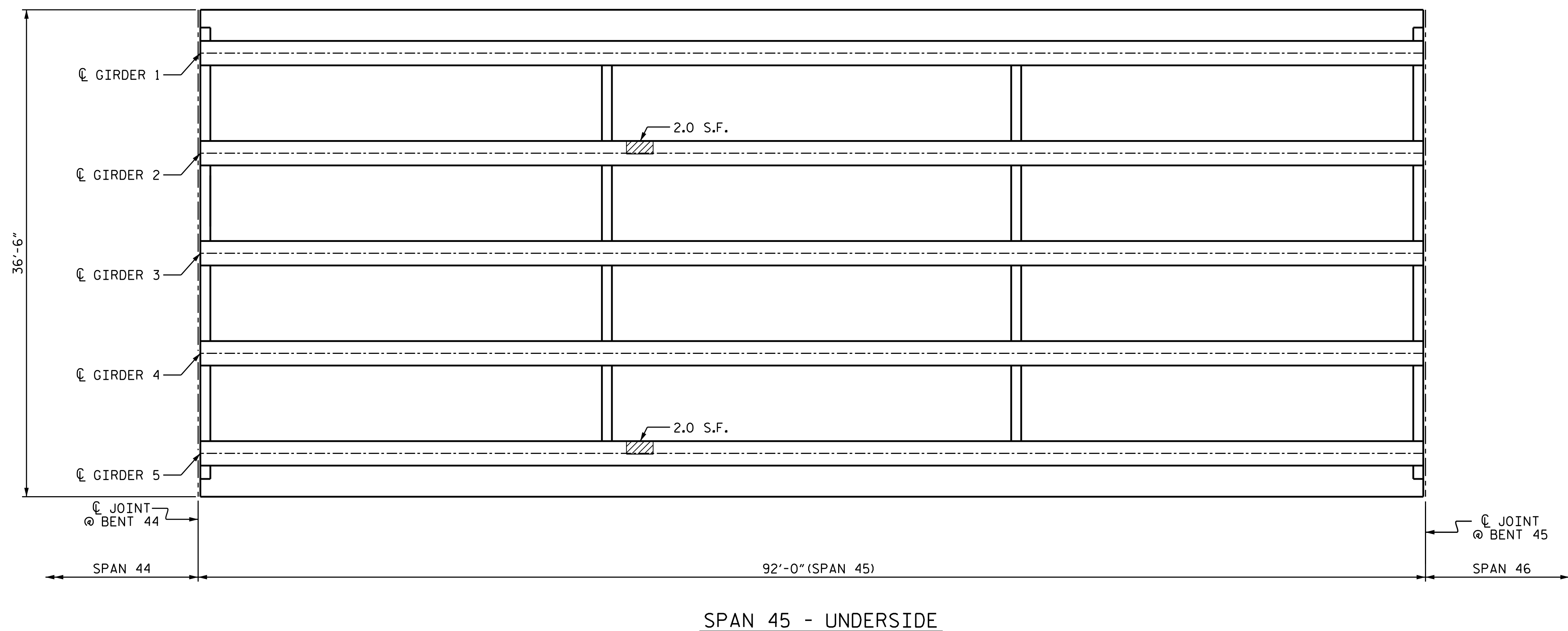
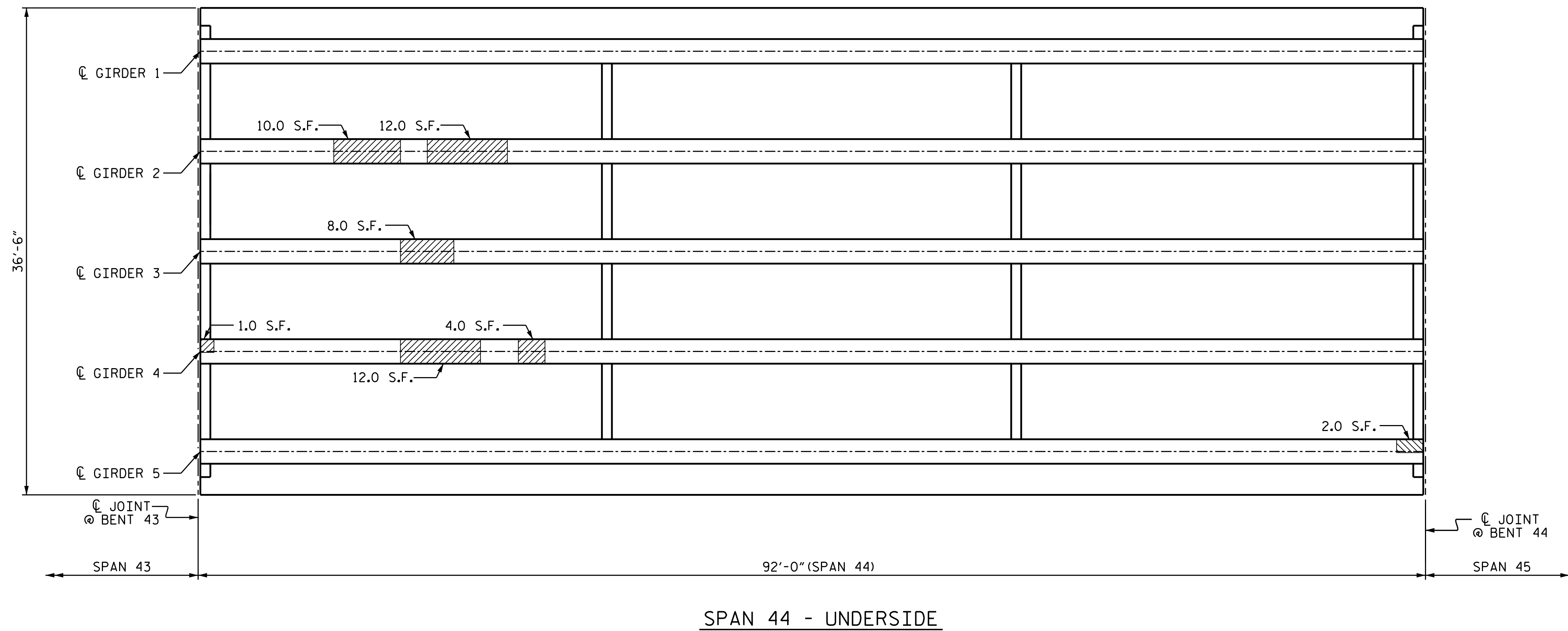
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

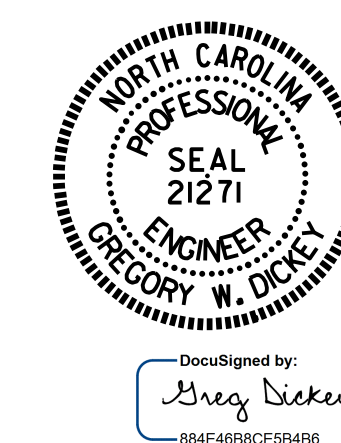
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 23 OF 30



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN SPAN 44 & 45

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-38 |
| 2 | | | 4 | | | TOTAL SHEETS |

REPAIR QUANTITY TABLE

| REPAIRS SPAN 46 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 47 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

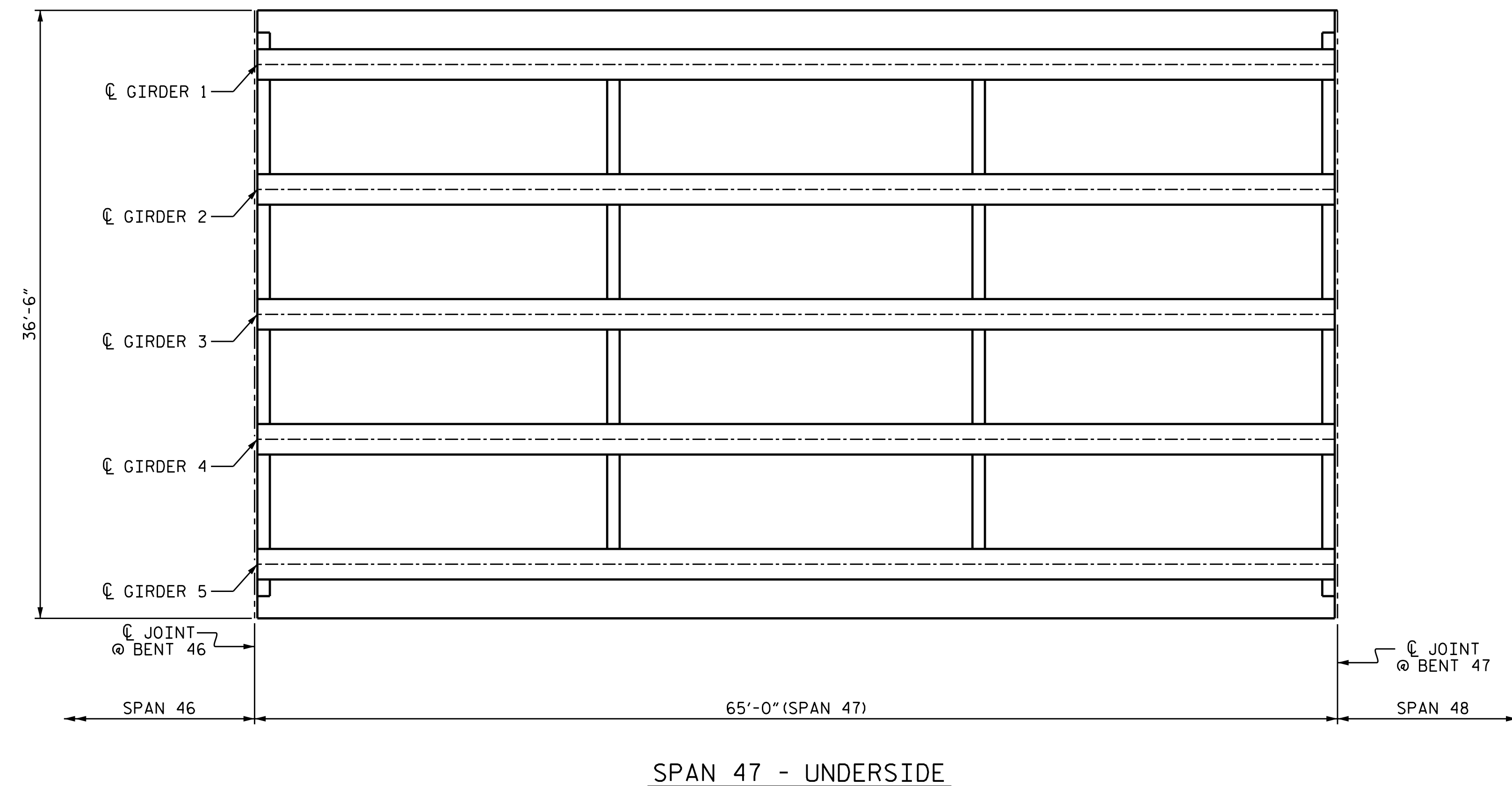
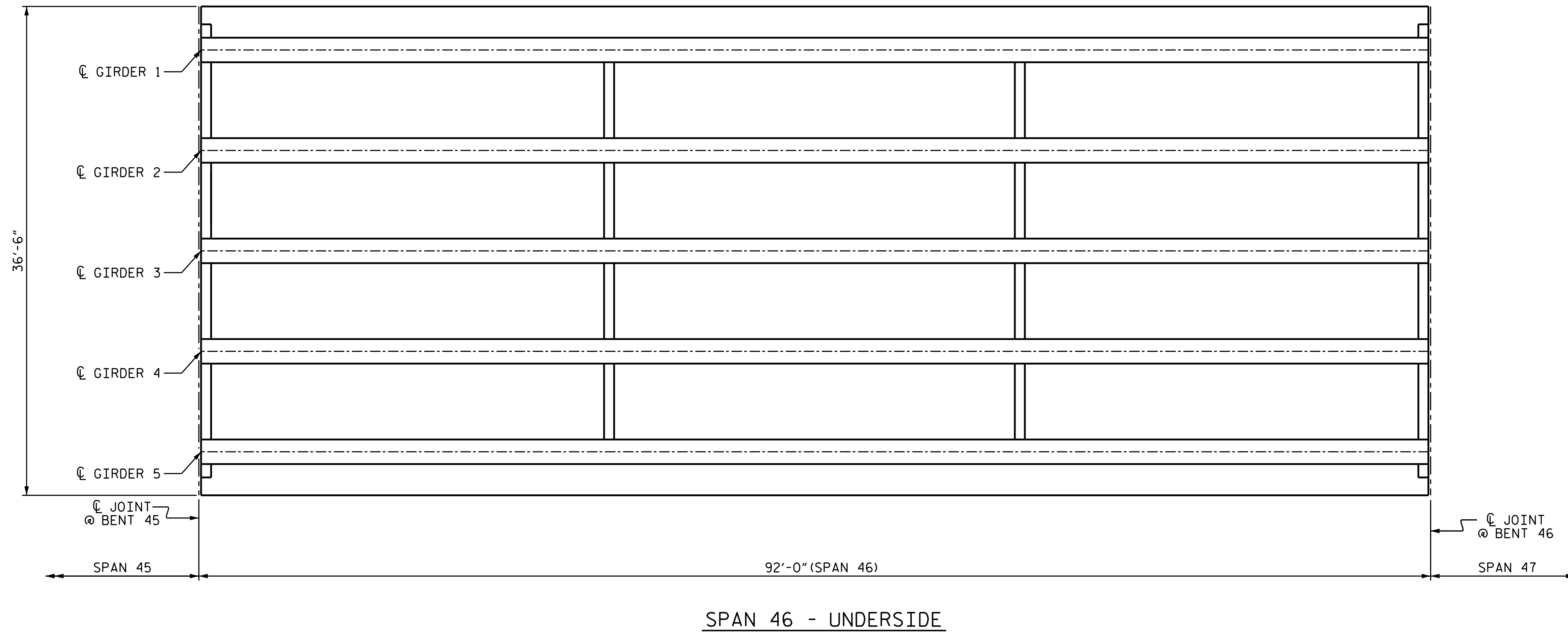
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

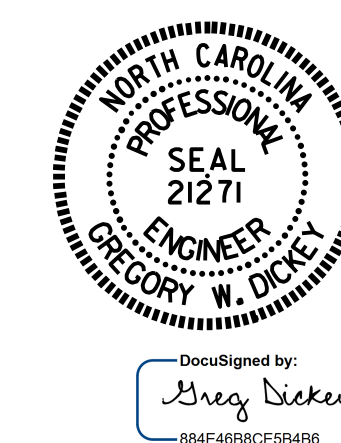
- PRESTRESSED CONCRETE GIRDER REPAIR



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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 24 OF 30



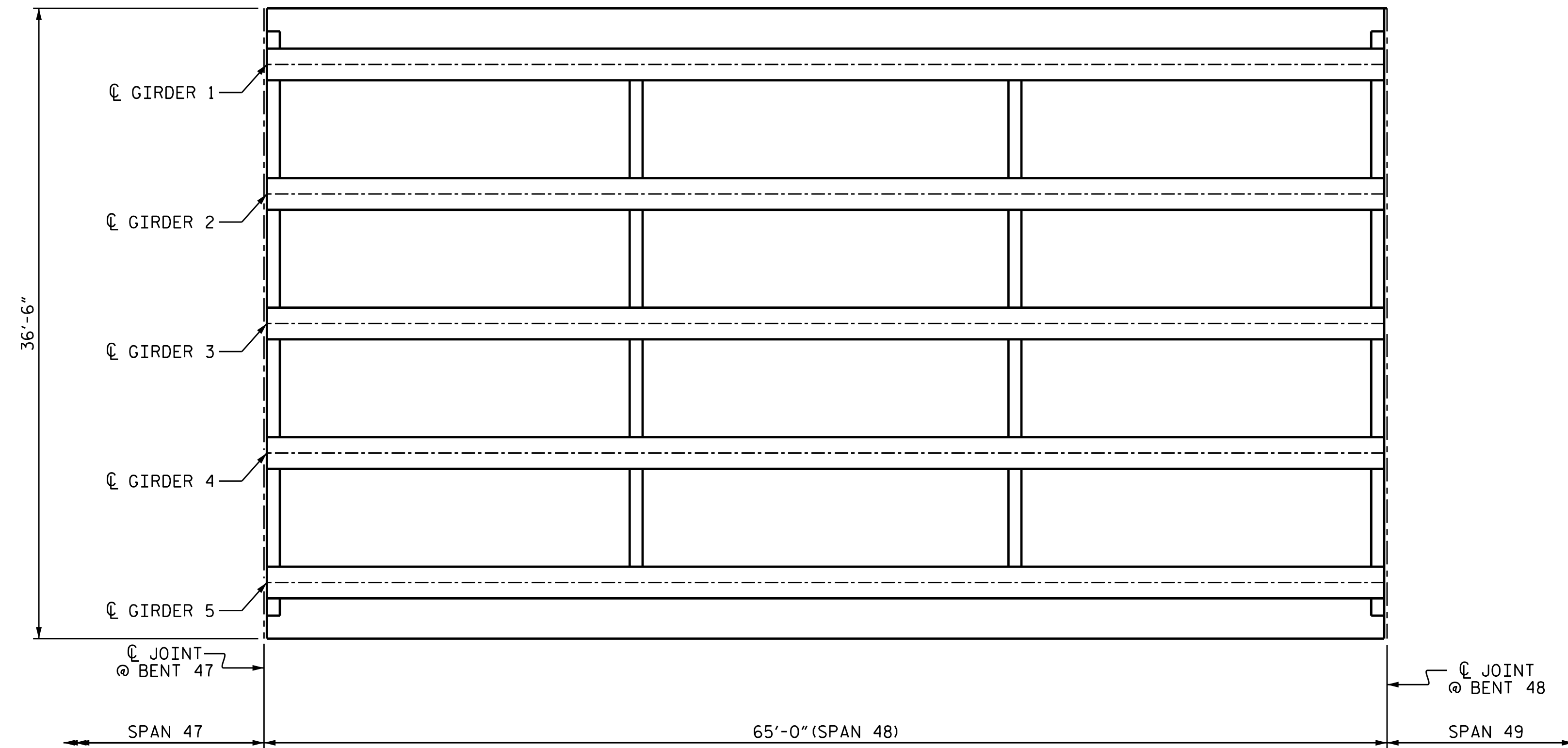
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DEPARTMENT OF TRANSPORTATION
RALEIGH

FRAMING PLAN SPAN 46 & 47

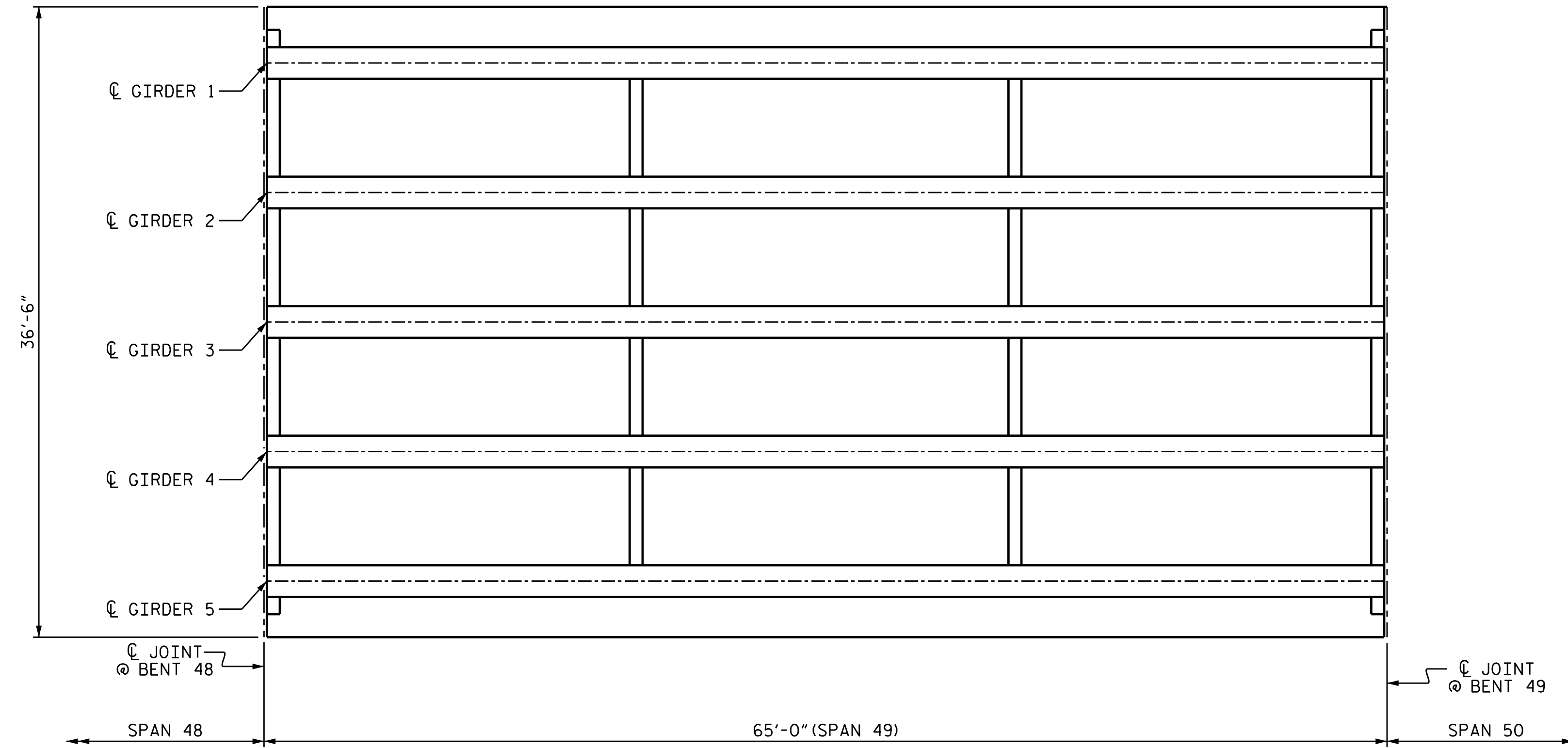
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-39 |
| 2 | | | 4 | | | TOTAL SHEETS |



SPAN 48 - UNDERSIDE



SPAN 49 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 48 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 49 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS
- PRESTRESSED CONCRETE GIRDER REPAIR

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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 25 OF 30



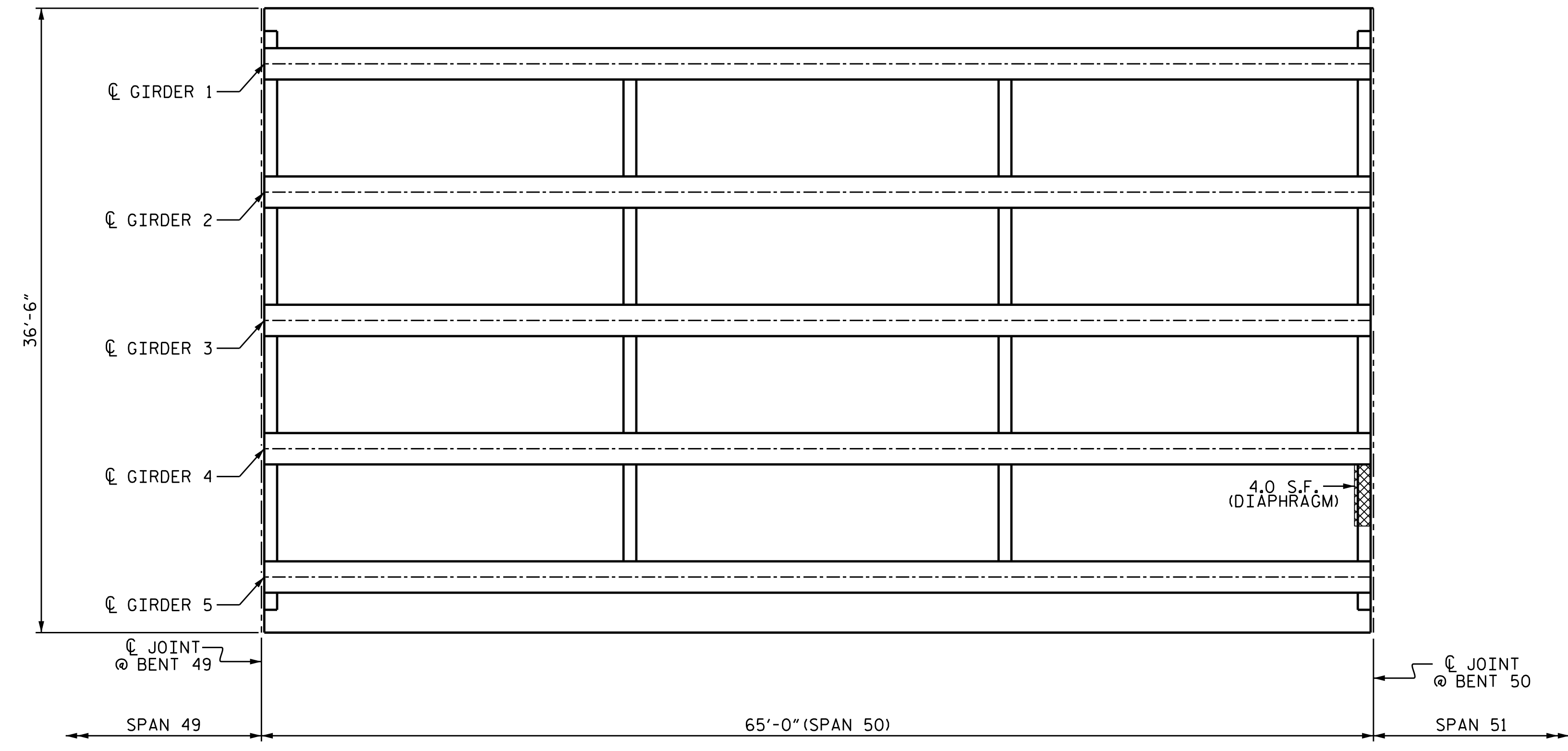
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 48 & 49

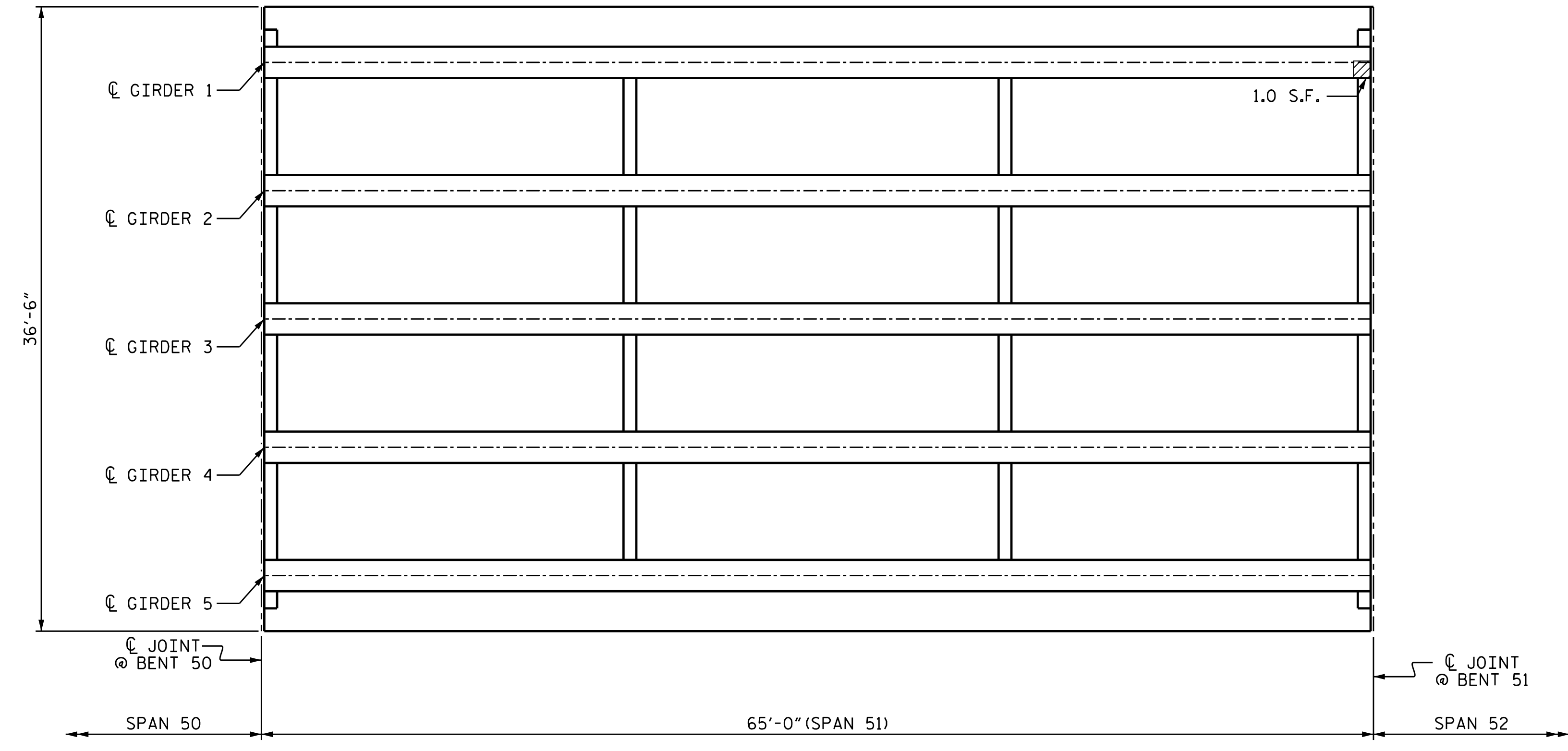
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| 1 | | | 3 | | | S2-40 |
| 2 | | | 4 | | | |



SPAN 50 - UNDERSIDE



SPAN 51 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 50 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 4.0 | 2.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 51 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

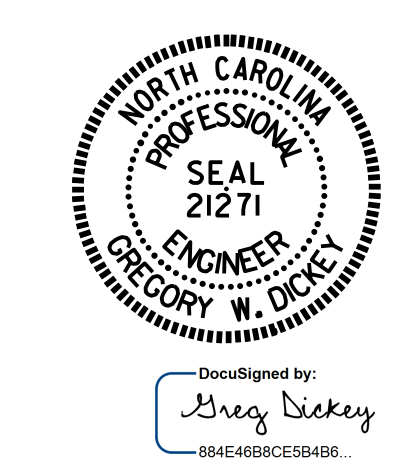
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 26 OF 30

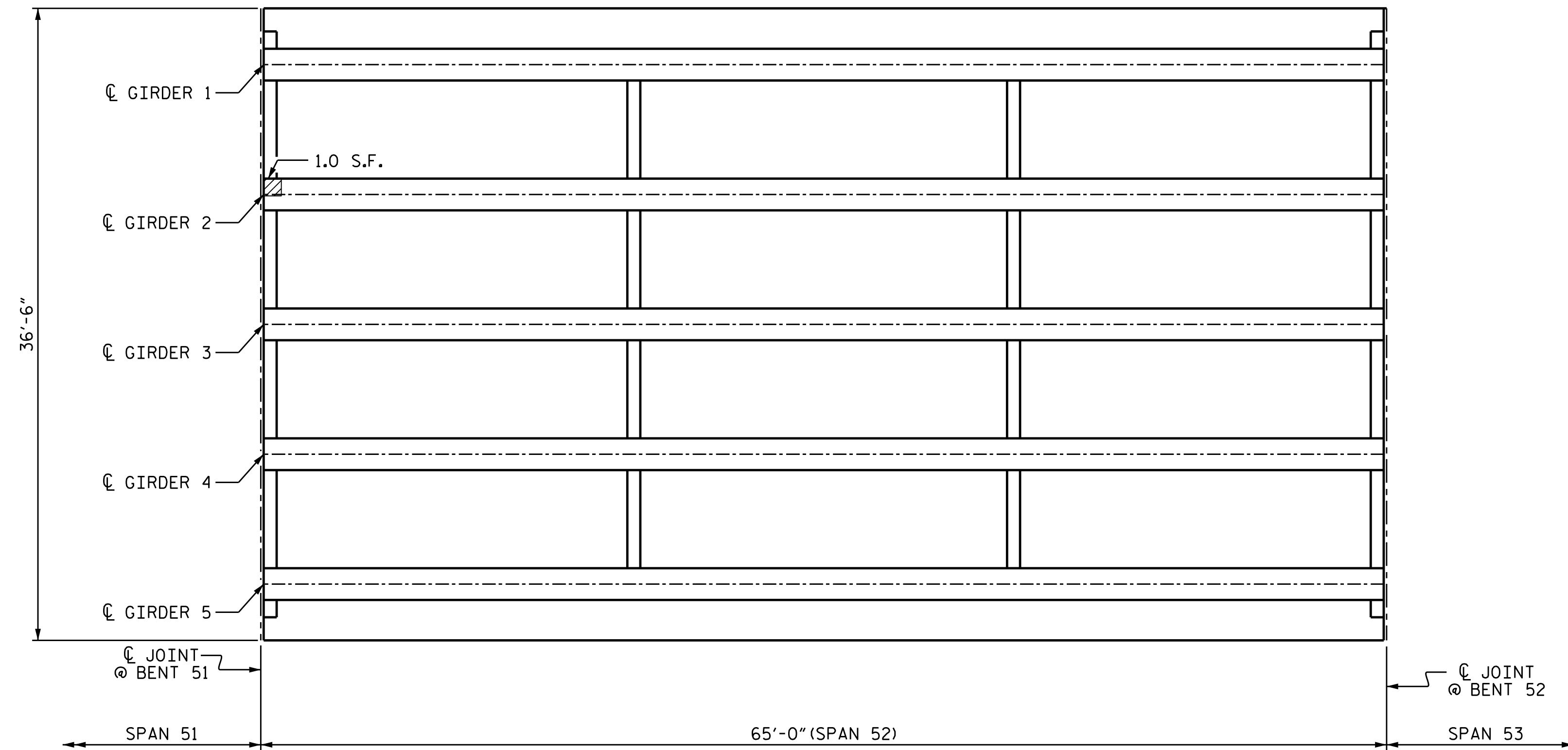


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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

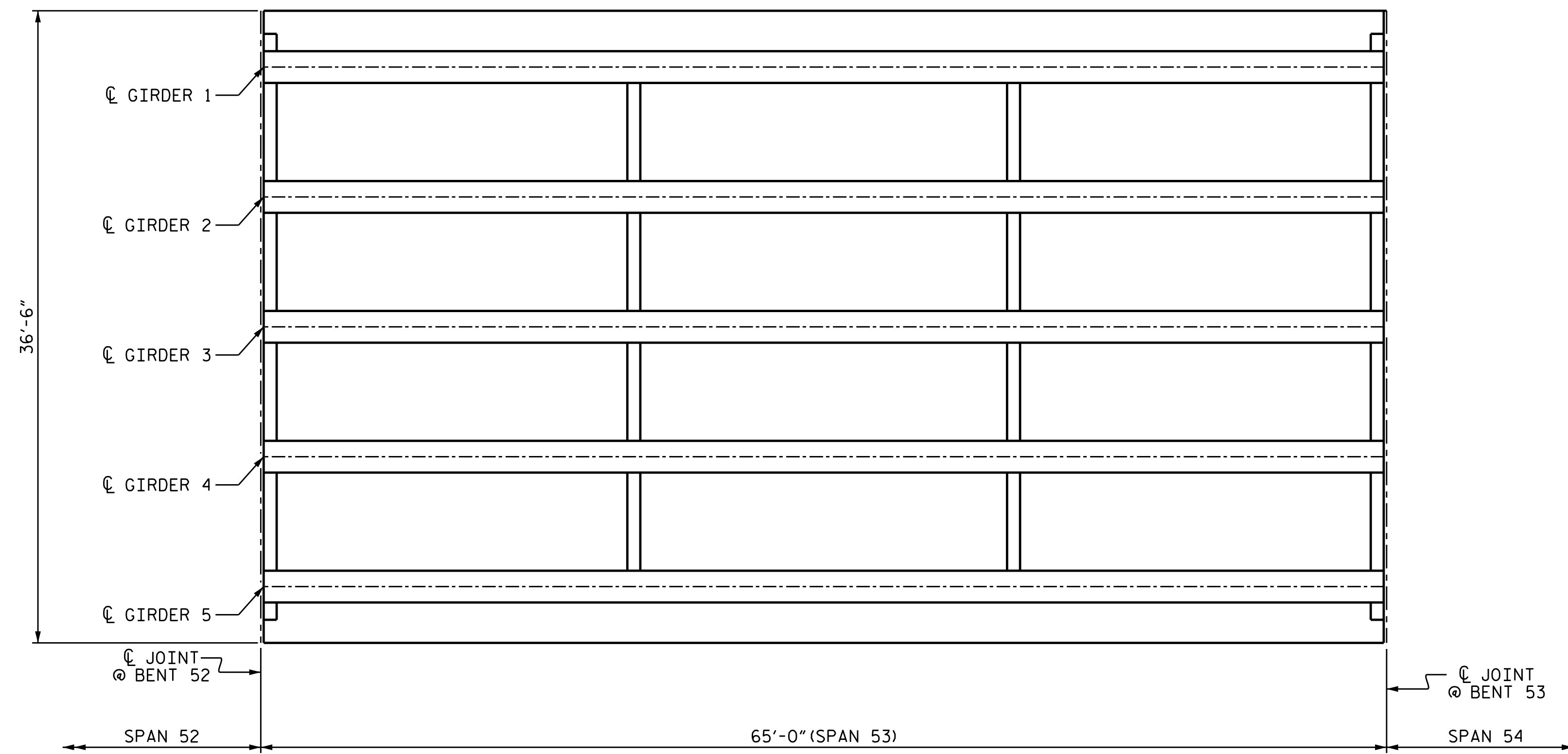
FRAMING PLAN
 SPAN 50 & 51

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

| NO. | REVISIONS | | | | | | SHEET NO. |
|-----|-----------|-------|-----|-----|-------|--------------|-----------|
| | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS | |
| 1 | | | 3 | | | S2-41 | |
| 2 | | | 4 | | | | |



SPAN 52 - UNDERSIDE



SPAN 53 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 52 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |

| REPAIRS SPAN 53 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 27 OF 30



DocuSigned by:
 Greg Dickey
 884E488CE58486...

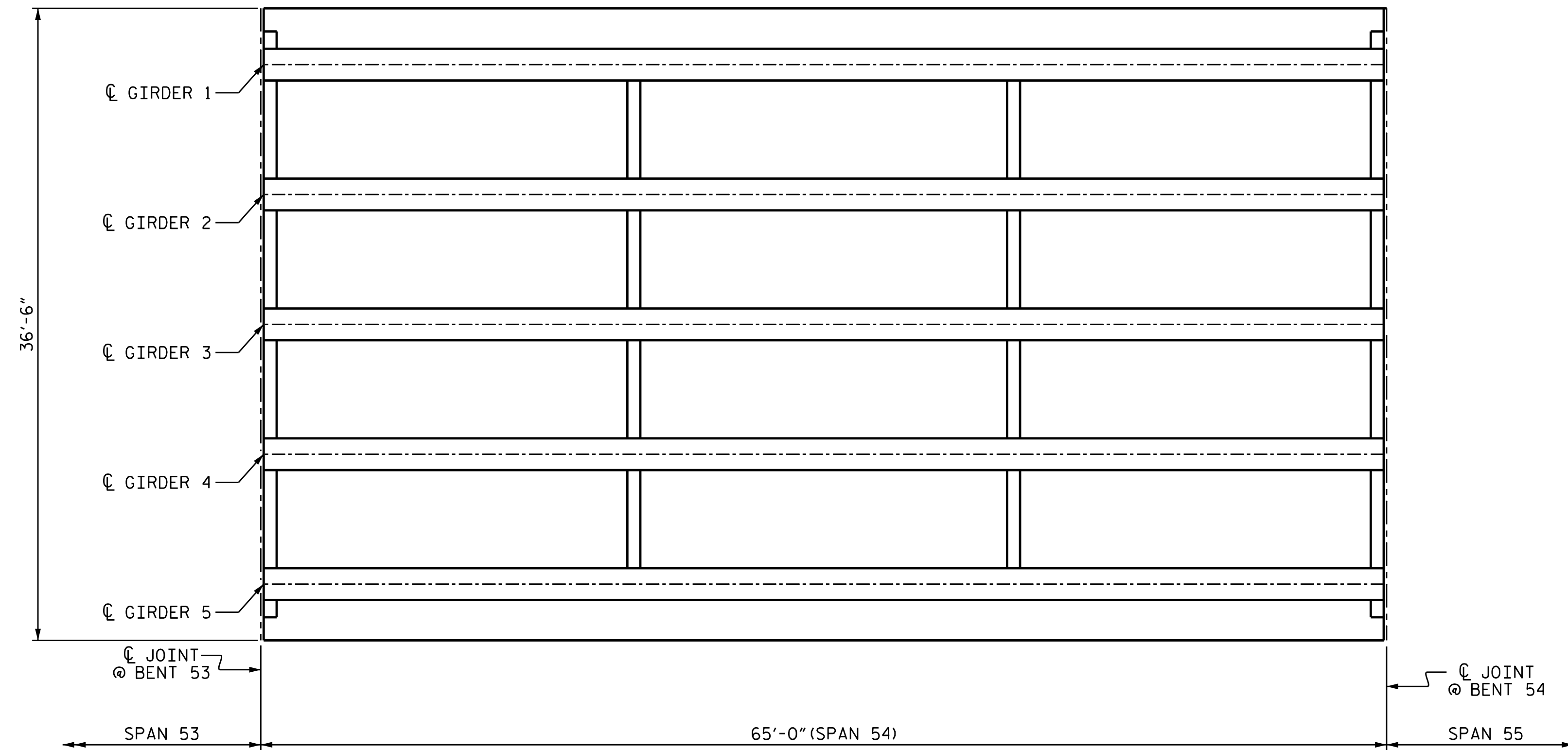
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 52 & 53

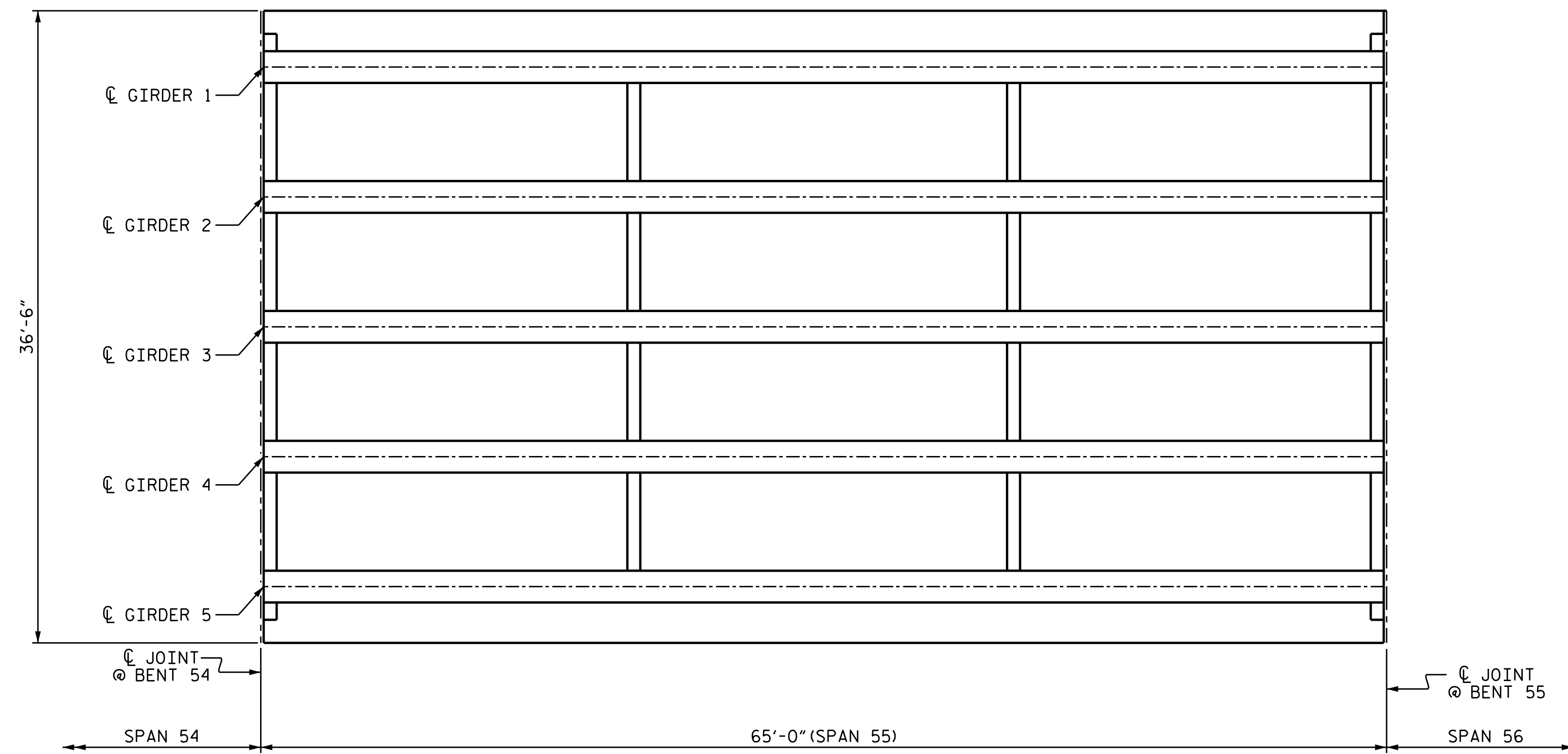
DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-42 |
| 2 | | | 4 | | | |



SPAN 54 - UNDERSIDE



SPAN 55 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 54 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

| REPAIRS SPAN 55 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

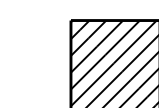
FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIRS

 - PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 28 OF 30



DocuSigned by:
 Greg Dickey
 884E488CE58486...

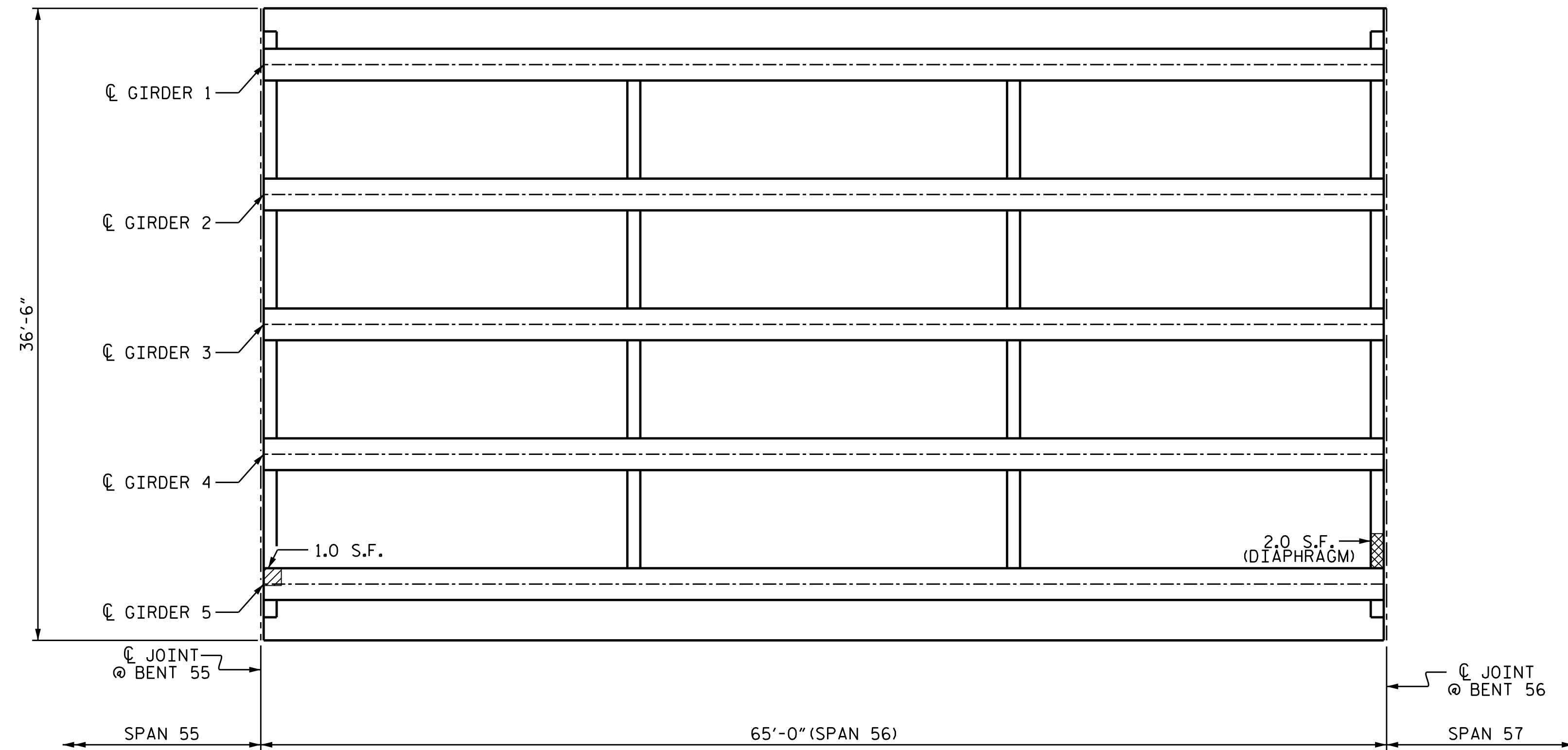
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 54 & 55

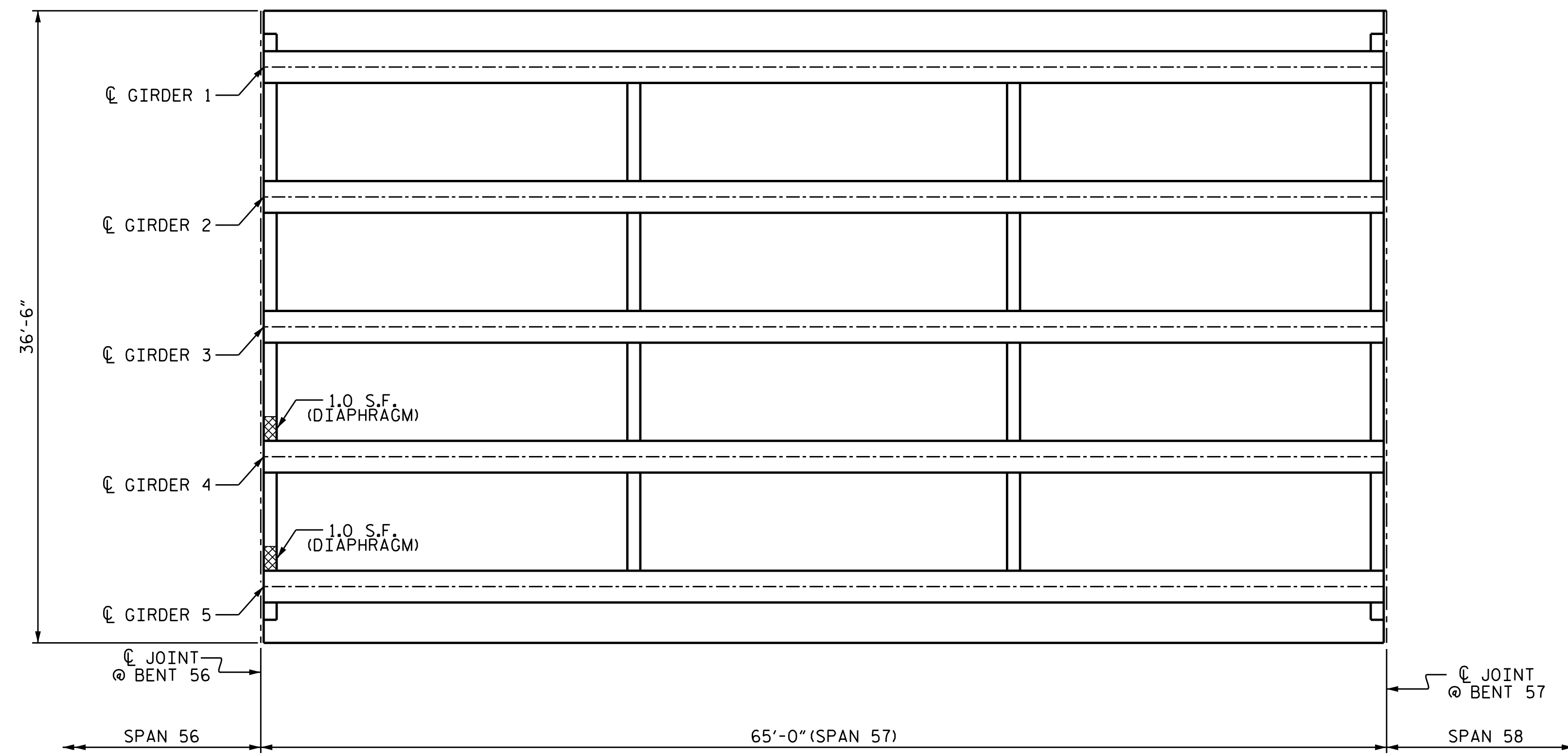
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-43 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |



SPAN 56 - UNDERSIDE



SPAN 57 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 56 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 2.0 | 1.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |

| REPAIRS SPAN 57 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| SHOTCRETE REPAIRS | 2.0 | 1.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 0.0 | 0.0 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS

- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 29 OF 30



DocuSigned by:
 Greg Dickey
 884E488CE58486...

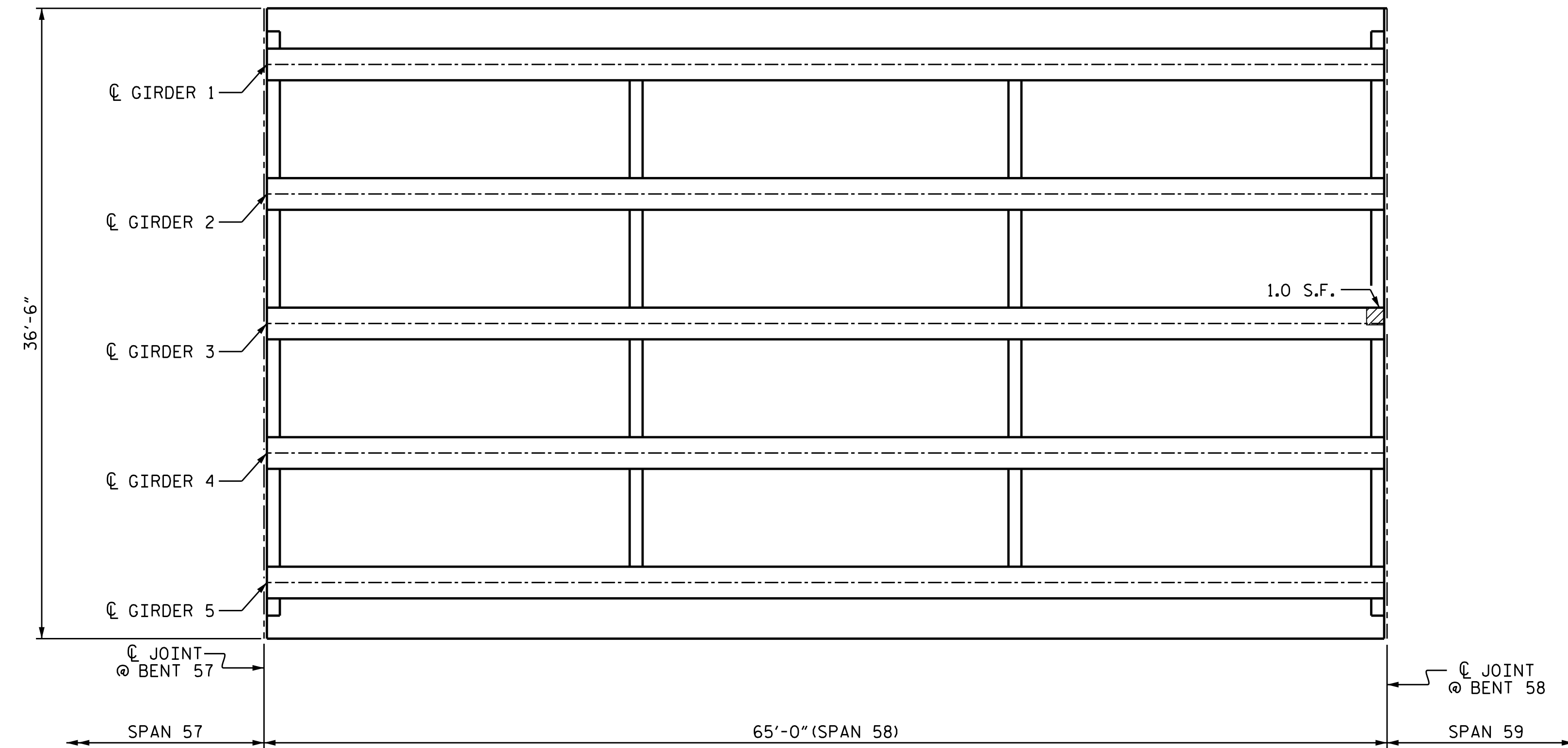
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 56 & 57

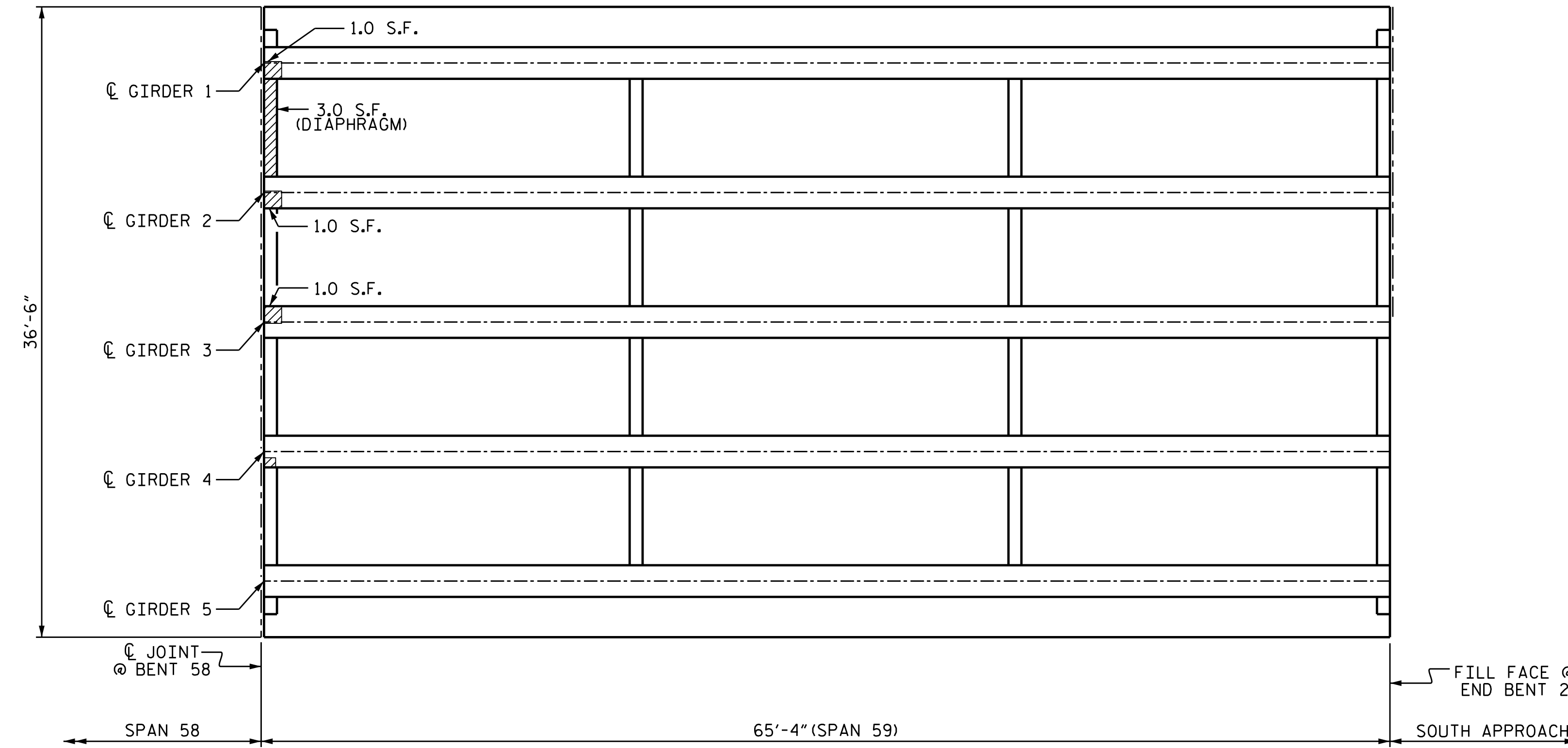
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-44 |
| 2 | | | 4 | | | |



SPAN 58 - UNDERSIDE



SPAN 59 - UNDERSIDE

REPAIR QUANTITY TABLE

| REPAIRS SPAN 58 | QUANTITIES | | | |
|-------------------------------------|------------|-----------|--------|-----------|
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | | VOLUME CF |
| SHOTCRETE REPAIRS | 0.0 | 0.0 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 1.0 | 0.3 | | |
| REPAIRS SPAN 59 | QUANTITIES | | | |
| | ESTIMATE | | ACTUAL | |
| | AREA SF | VOLUME CF | | VOLUME CF |
| SHOTCRETE REPAIRS | 3.0 | 1.5 | | |
| PRESTRESSED CONCRETE GIRDER REPAIRS | 3.0 | 0.9 | | |

NOTES:

SPANS WILL RECEIVE TSA COATING FOR THE FIRST 5' OF THE GIRDERS AT THE BENTS AND THEN THE TSA COATING IN PRESTRESSED CONCRETE GIRDER REPAIR LOCATIONS. SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION AND SHEETS S2-62 THRU S2-65.

FOR GIRDER & DIAPHRAGM AND UNDERDECK REPAIRS SEE "TYPICAL GIRDER, UNDERDECK AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE TO REPAIR DEPTH AND MIN. 1" CL. TO SAW CUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIRS
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 30 OF 30



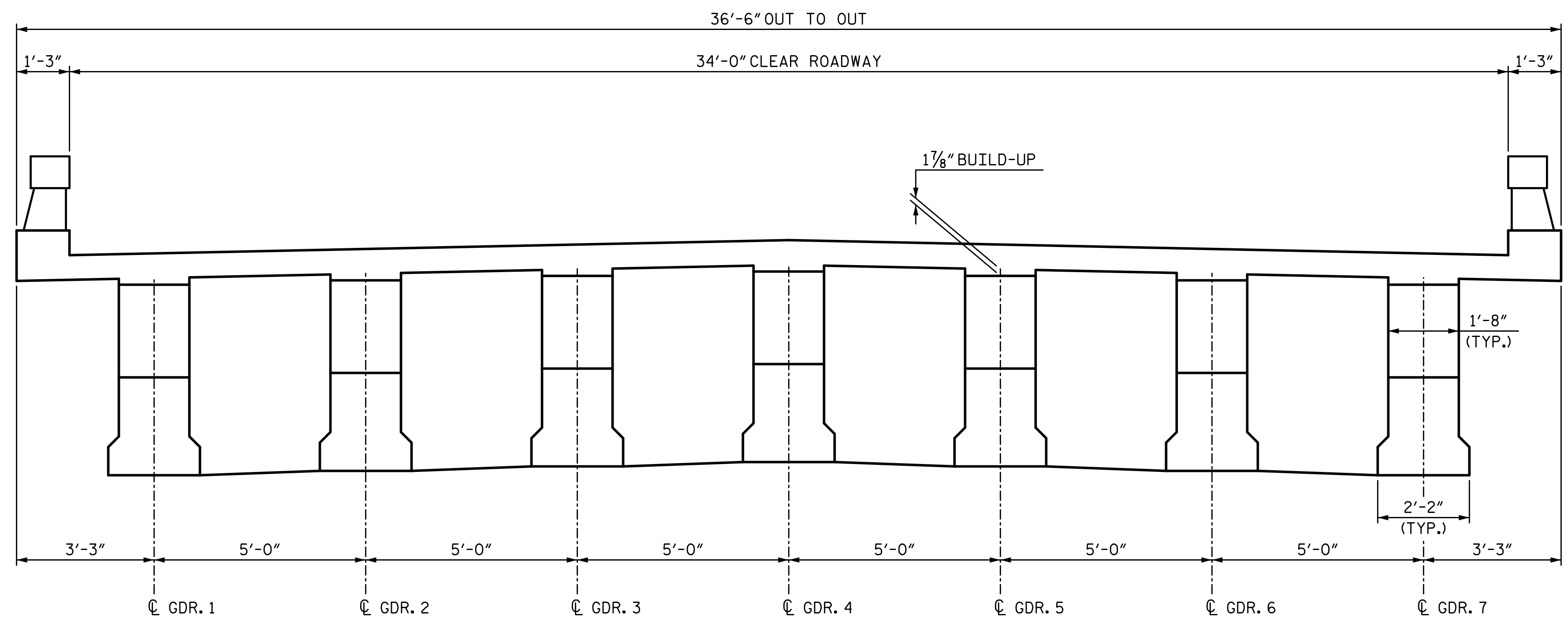
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 SPAN 58 & 59

DRAWN BY : S. T. SANDOR DATE : 8/2016
 CHECKED BY : M. A. LEE DATE : 9/2016

| NO. | REVISIONS | | | | | | SHEET NO. |
|-----|-----------|-------|-----|-----|-------|--------------|-----------|
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| 2 | | | 4 | | | | |

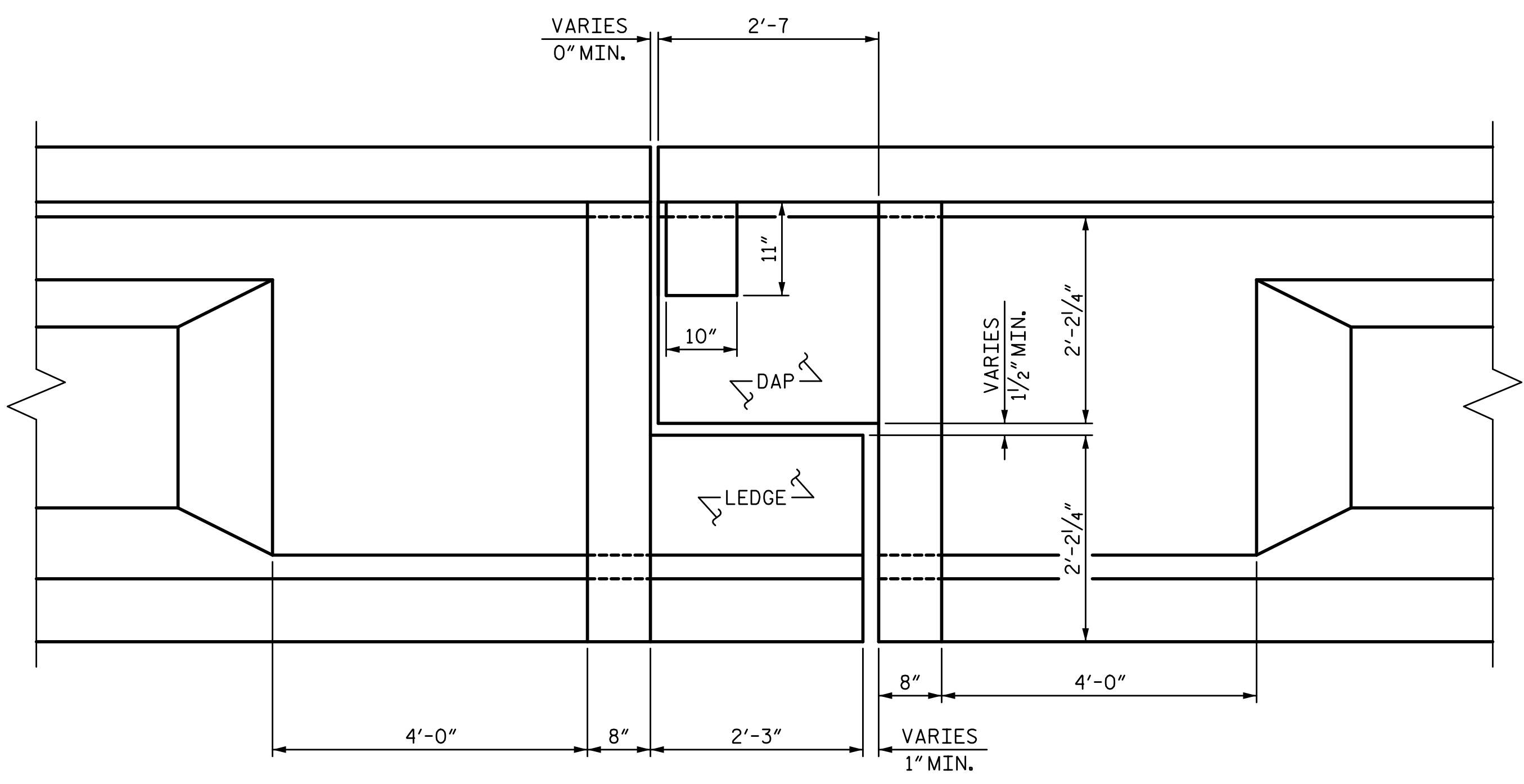
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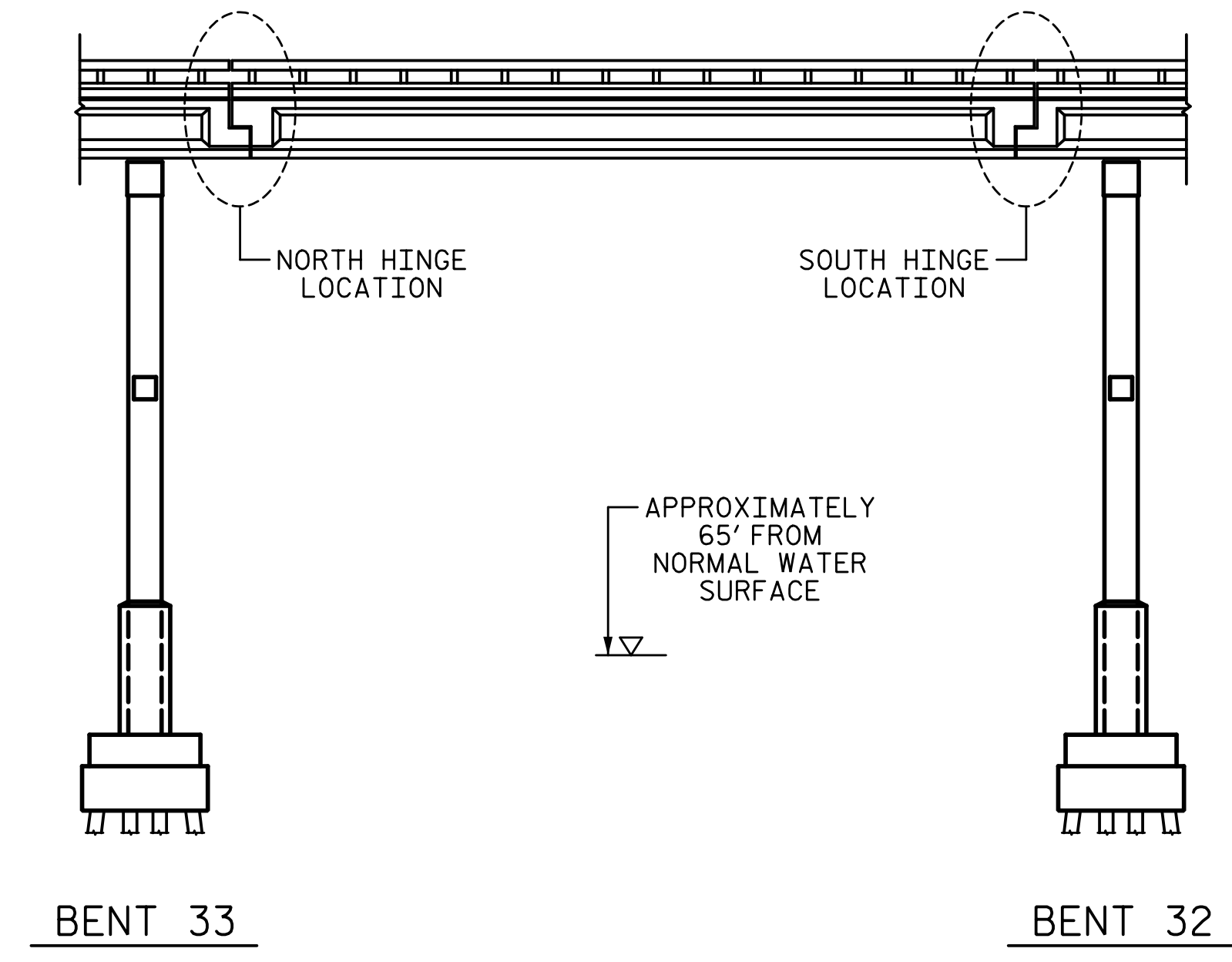
TYPICAL SECTION
(SECTION TAKEN AT HINGE LOCATIONS)

NOTES:

- GIRDER STRENGTHENING INCLUDES ALL GIRDERS IN THE NORTH AND SOUTH HINGE LOCATIONS.
- FRP = FIBER REINFORCED POLYMER
- DAP REFERS TO UPPER PORTION OF DROP-IN SECTION AT HINGE.
- LEDGE REFERS TO LOWER PORTION OF CANTILEVER SECTION AT HINGE.
- FOR SURFACE PREPARATION, SEE "FIBER REINFORCED POLYMER (FRP) STRENGTHENING" SPECIAL PROVISION.
- FOR FRP MATERIAL REQUIREMENTS, SEE "FIBER REINFORCED (FRP) STRENGTHENING" SPECIAL PROVISION.
- FOR PROTECTIVE COATING APPLICATION AFTER FRP SYSTEM INSTALLATION, SEE "FIBER REINFORCED (FRP) STRENGTHENING" SPECIAL PROVISION.
- ALL CORNERS SHALL BE ROUNDED BEFORE APPLYING FRP MATERIAL, SEE "FIBER REINFORCED POLYMER (FRP) STRENGTHENING" SPECIAL PROVISION.
- DRILLING OF FRP ANCHORAGE HOLES MAY VARY SLIGHTLY IN ORDER TO AVOID EXISTING REINFORCEMENT IN THE CONCRETE DIAPHRAGM.
- THE DIMENSIONS OF THE EXISTING HINGE INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCE BETWEEN THE EXISTING HINGE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
- MINIMUM END CAPACITY (AFTER FRP REPAIR) = 216.67 KPS/GIRDER.



SECTION THRU HINGE
(NORTH HINGE SHOWN, SOUTH HINGE SIMILAR)



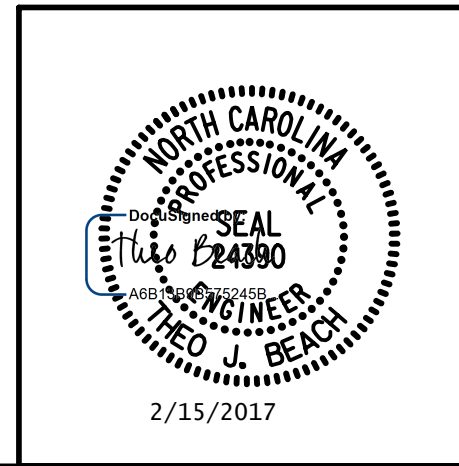
PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6
 SHEET 1 OF 15

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

TYPICAL SECTION AT HINGES
 FRP HINGE REPAIR

| | |
|---------------------------------------|------------|
| DRAWN BY: T. BANKOVICH | DATE: 4-16 |
| CHECKED BY: N.J. MABRY | DATE: 4-16 |
| DESIGN ENGINEER OF RECORD: T.J. BEACH | DATE: 4-16 |

PLANS PREPARED BY:
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 IMPSON ENGINEERS ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
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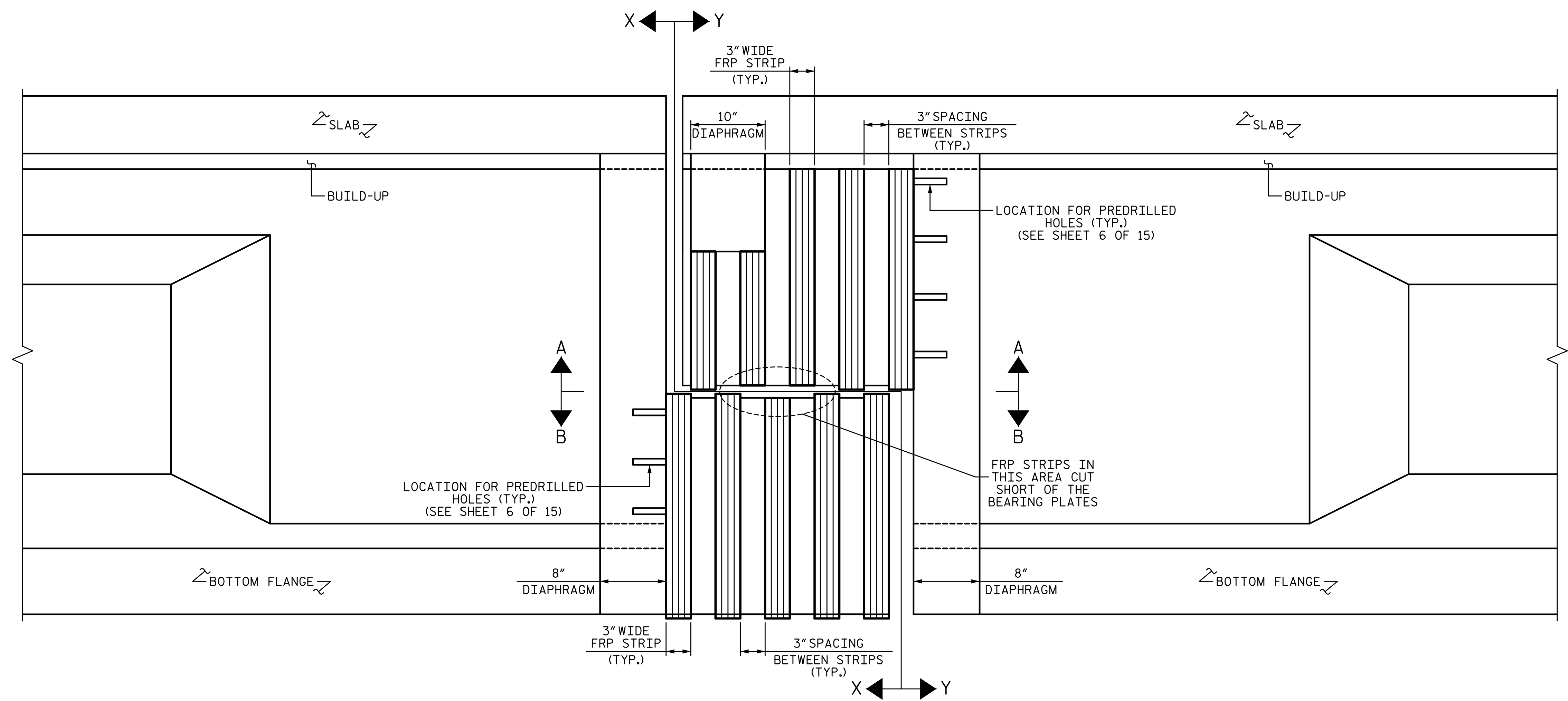


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|-----------|-----|-------|-----|-----------|-------|
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

TOTAL SHEETS
S2-46

NOTES:
FOR VIEWS, SEE SHEET 3 OF 15.



ELEVATION

(INTERIOR GIRDER NORTH HINGE SHOWN, INTERIOR GIRDER SOUTH HINGE SIMILAR)

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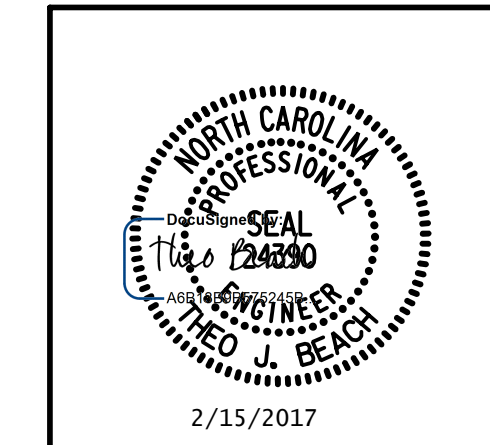
PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO.: 6

SHEET 2 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
FRP STRIPS LAYER 1
FOR
INTERIOR GIRDERS
FRP HINGE REPAIR

PLANS PREPARED BY:

SEA & A
SIMPSON ENGINEERS ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
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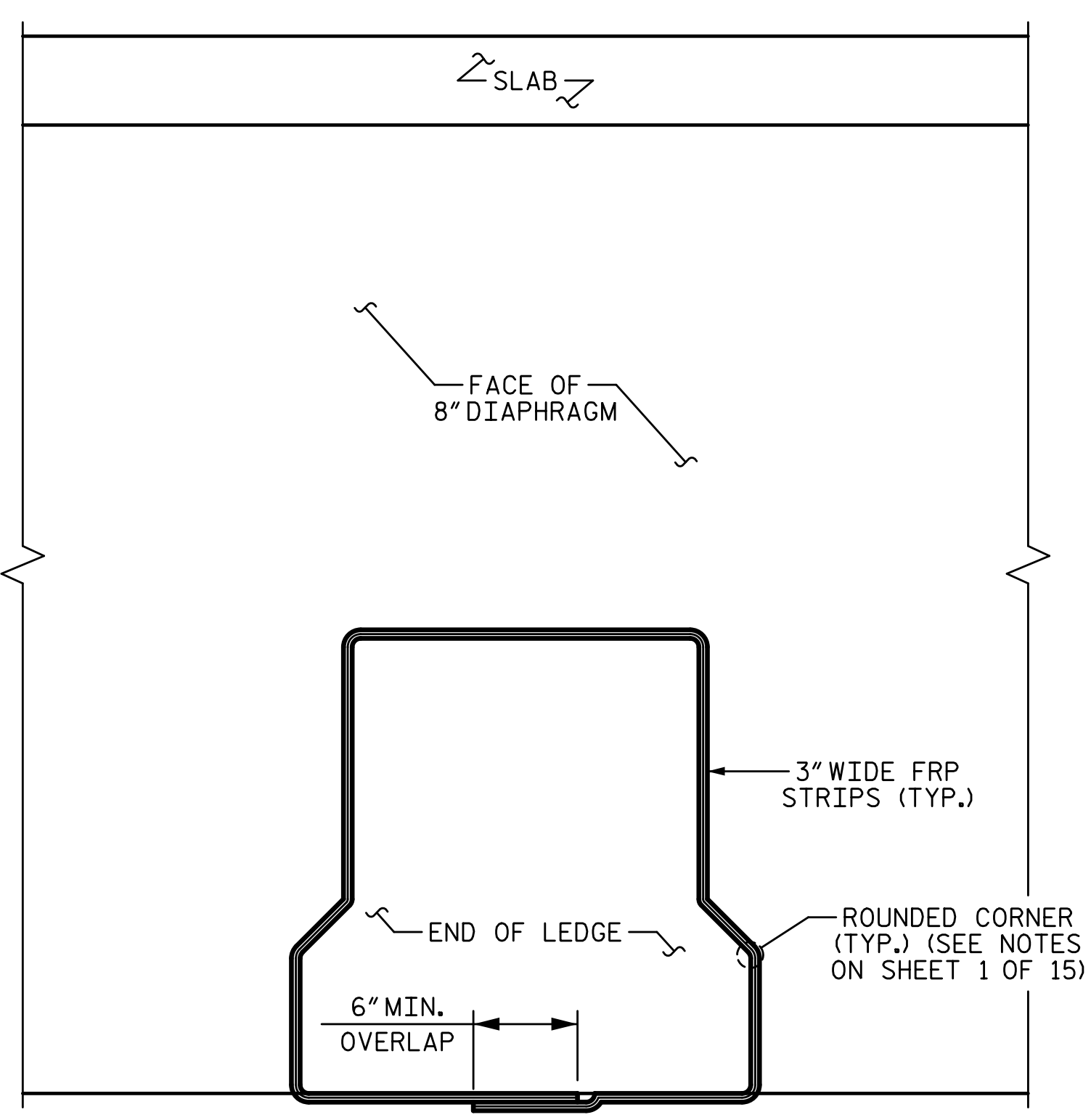


DRAWN BY: T. BANKOVICH DATE: 4-16
CHECKED BY: N.J. MABRY DATE: 4-16
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

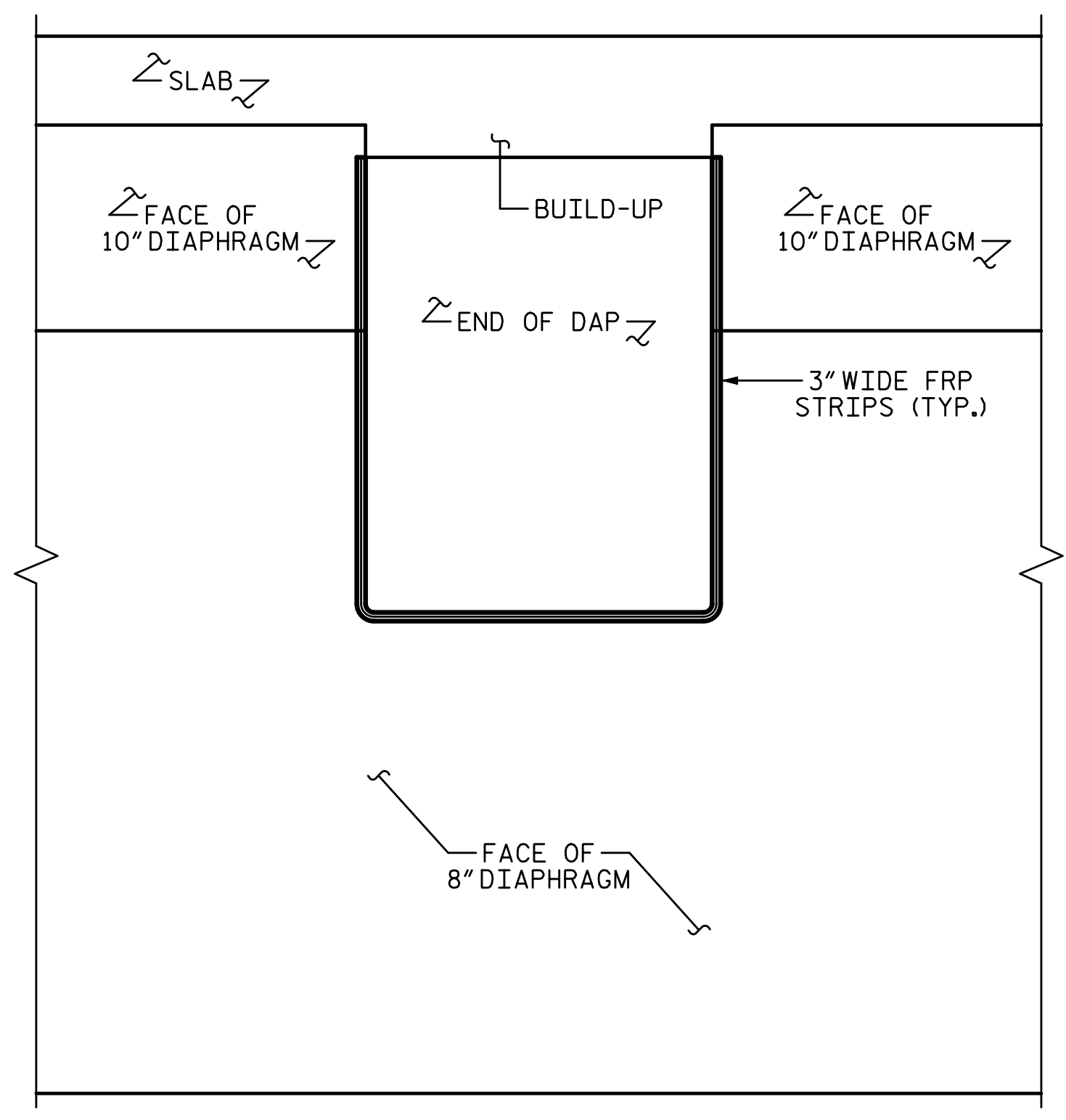
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-47 |
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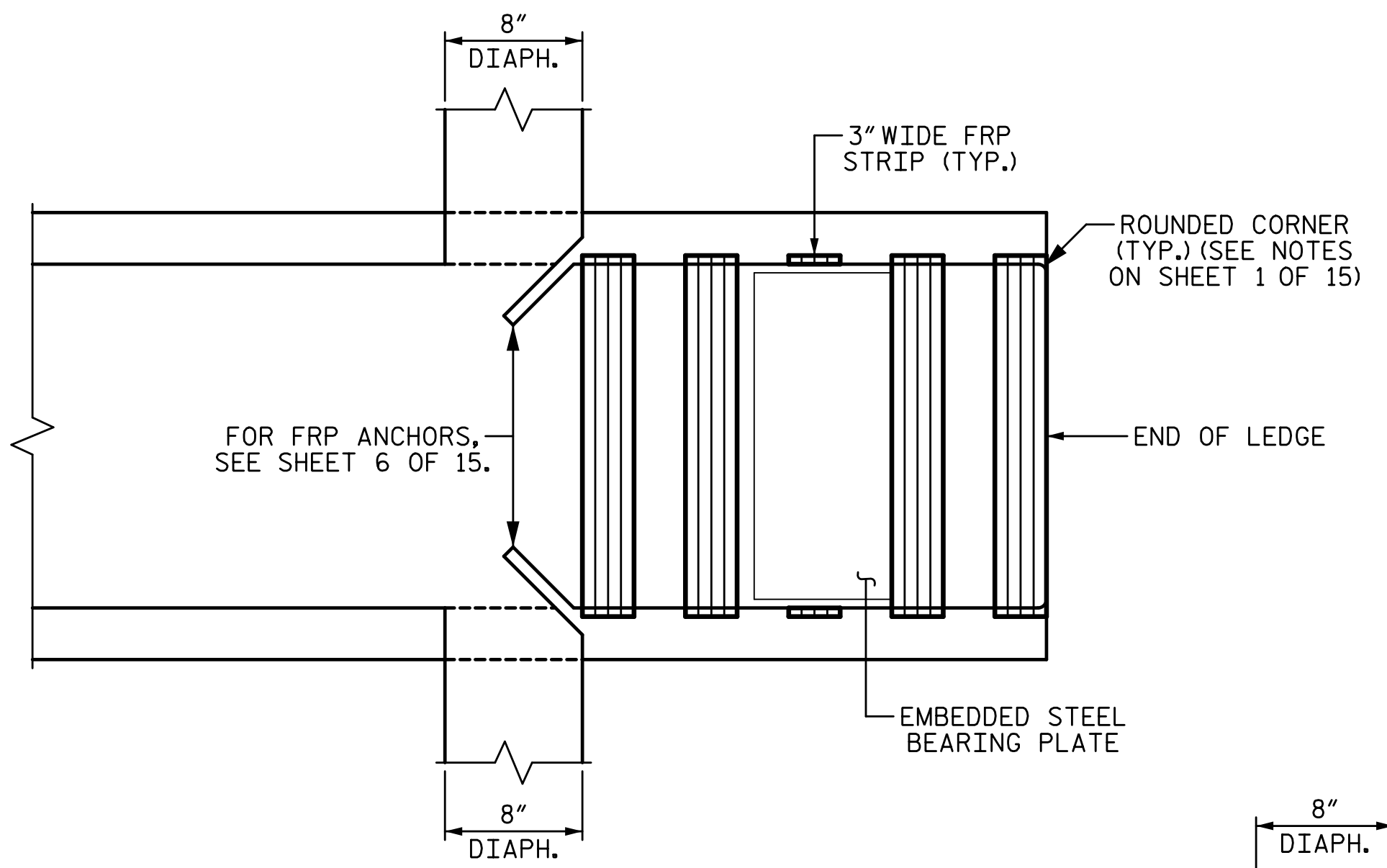
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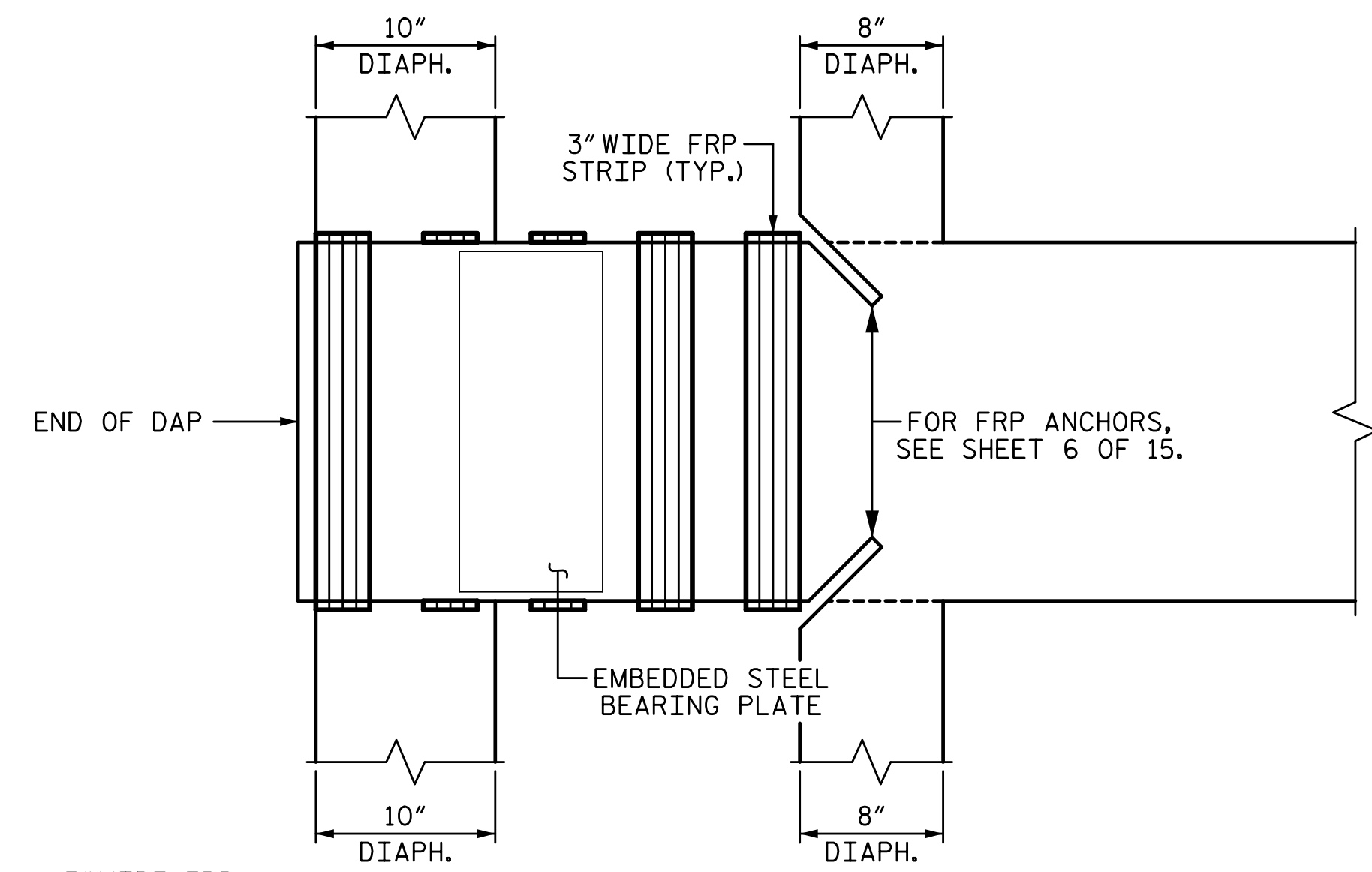
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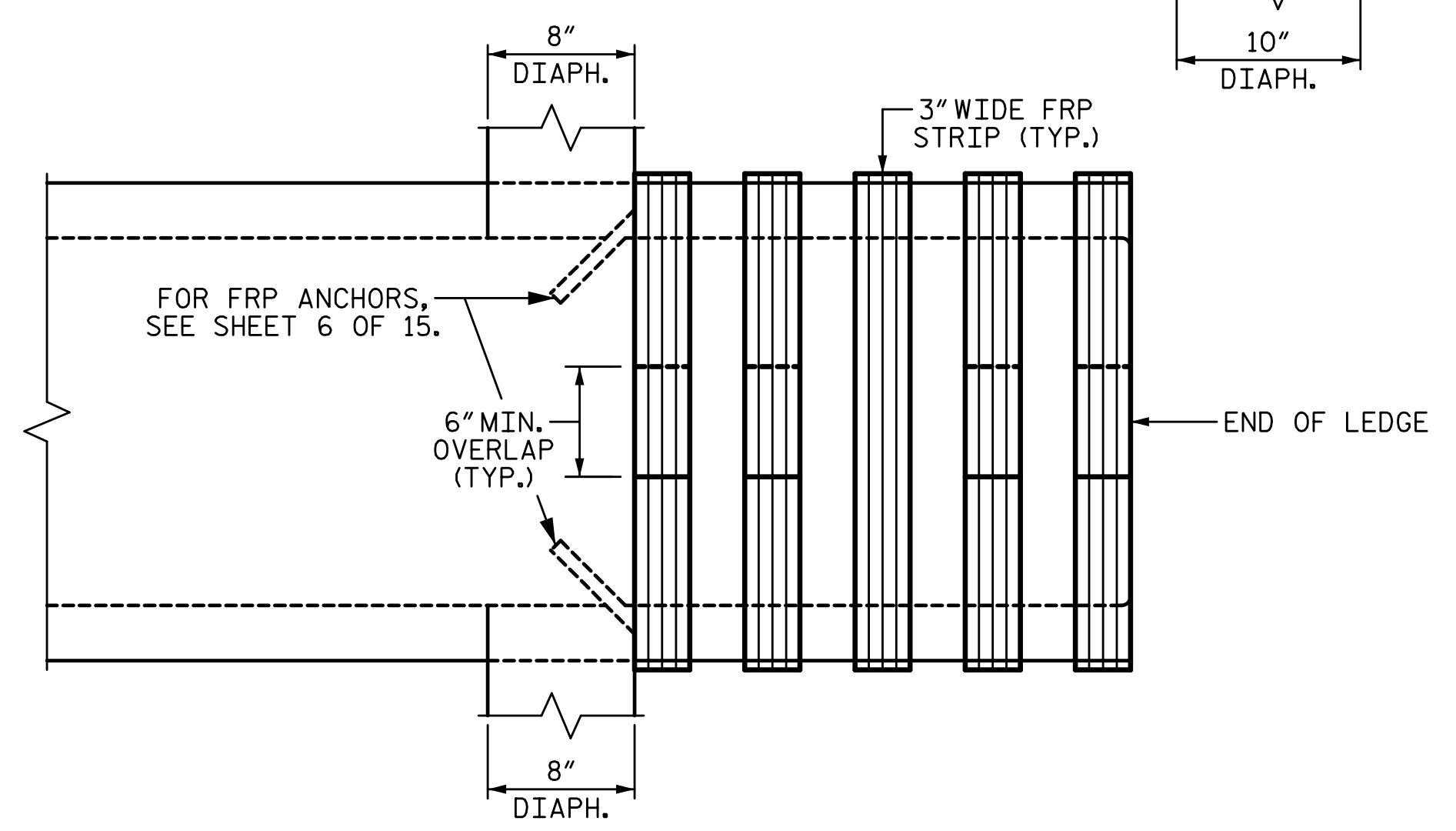
VIEW Y-Y



VIEW B-B
(SHOWING TOP OF LEDGE)



VIEW A-A
(SHOWING BOTTOM OF DAP)



BOTTOM OF LEDGE

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

SHEET 3 OF 15

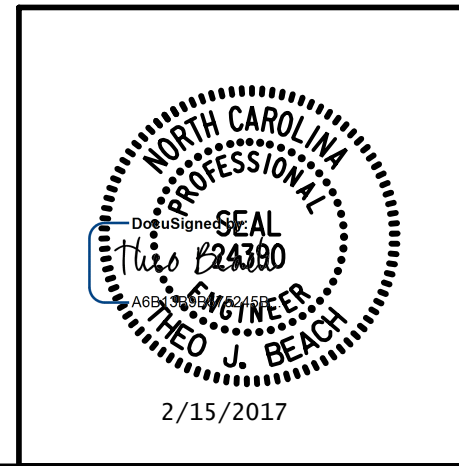
STATE OF NORTH CAROLINA
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 RALEIGH
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 FRP STRIPS LAYER 1
 FOR
 INTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----------|-------|
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

TOTAL SHEETS: 48

PLANS PREPARED BY:

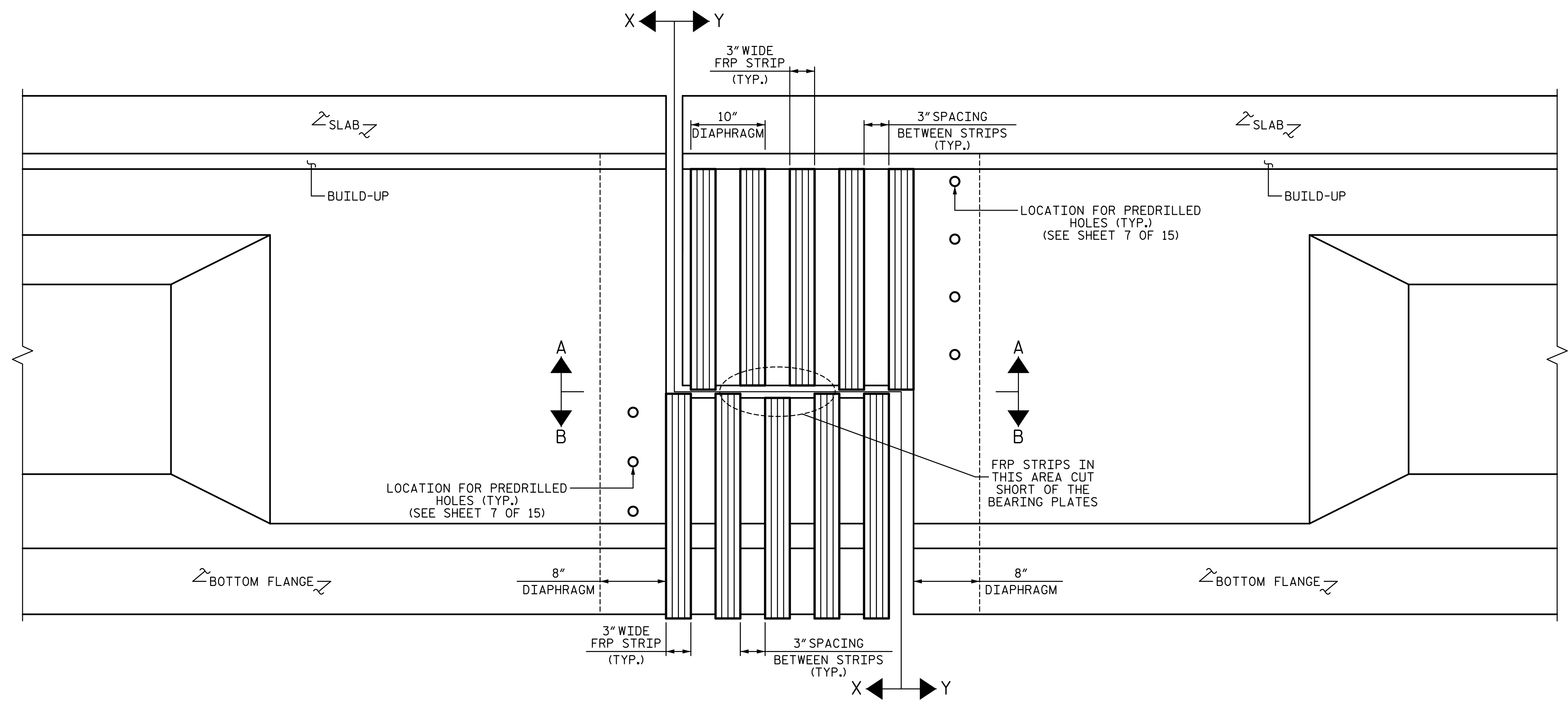
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| CHECKED BY: N.J. MABRY | DATE: 4-16 |
| DESIGN ENGINEER OF RECORD: T.J. BEACH | DATE: 4-16 |

NOTES:
FOR VIEWS, SEE SHEET 5 OF 15.



ELEVATION

(EXTERIOR GIRDER 7 NORTH HINGE SHOWN, EXTERIOR GIRDER 1 SOUTH HINGE SIMILAR AND EXTERIOR GIRDER 1 NORTH HINGE AND GIRDER 7 SOUTH HINGE SIMILAR BY ROTATION)

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CARTERET COUNTY
BRIDGE NO.: 6

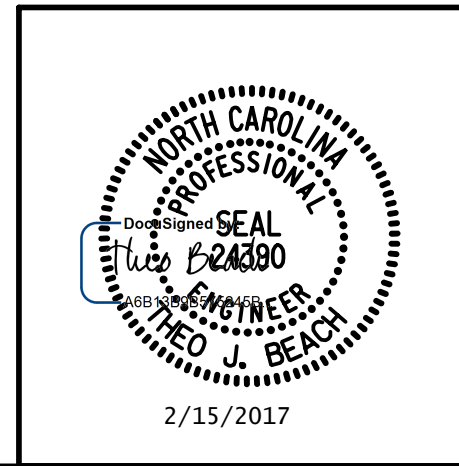
SHEET 4 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
FRP STRIPS LAYER 1
FOR
EXTERIOR GIRDERS
FRP HINGE REPAIR

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
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| 2 | | | 4 | | | |

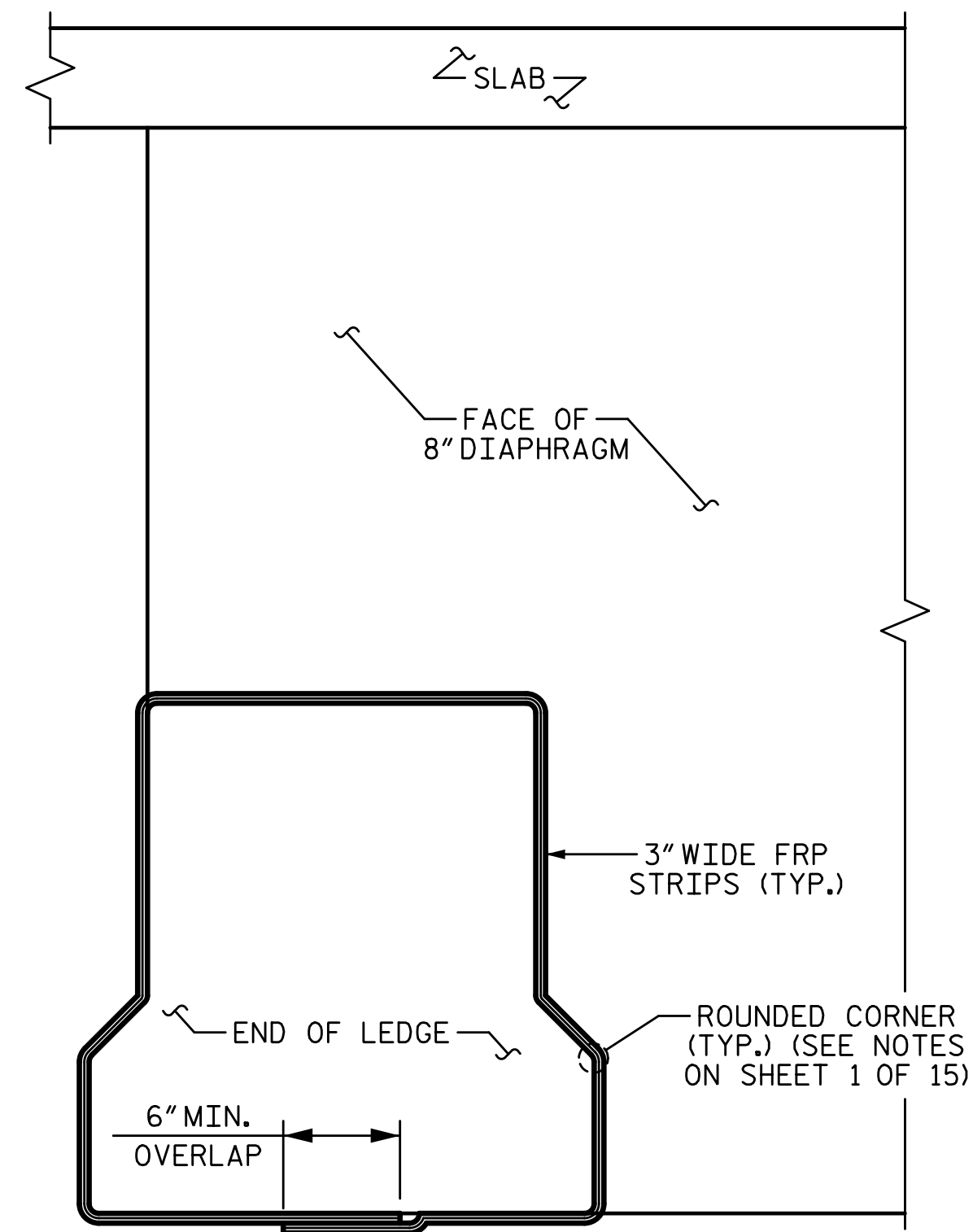
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| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

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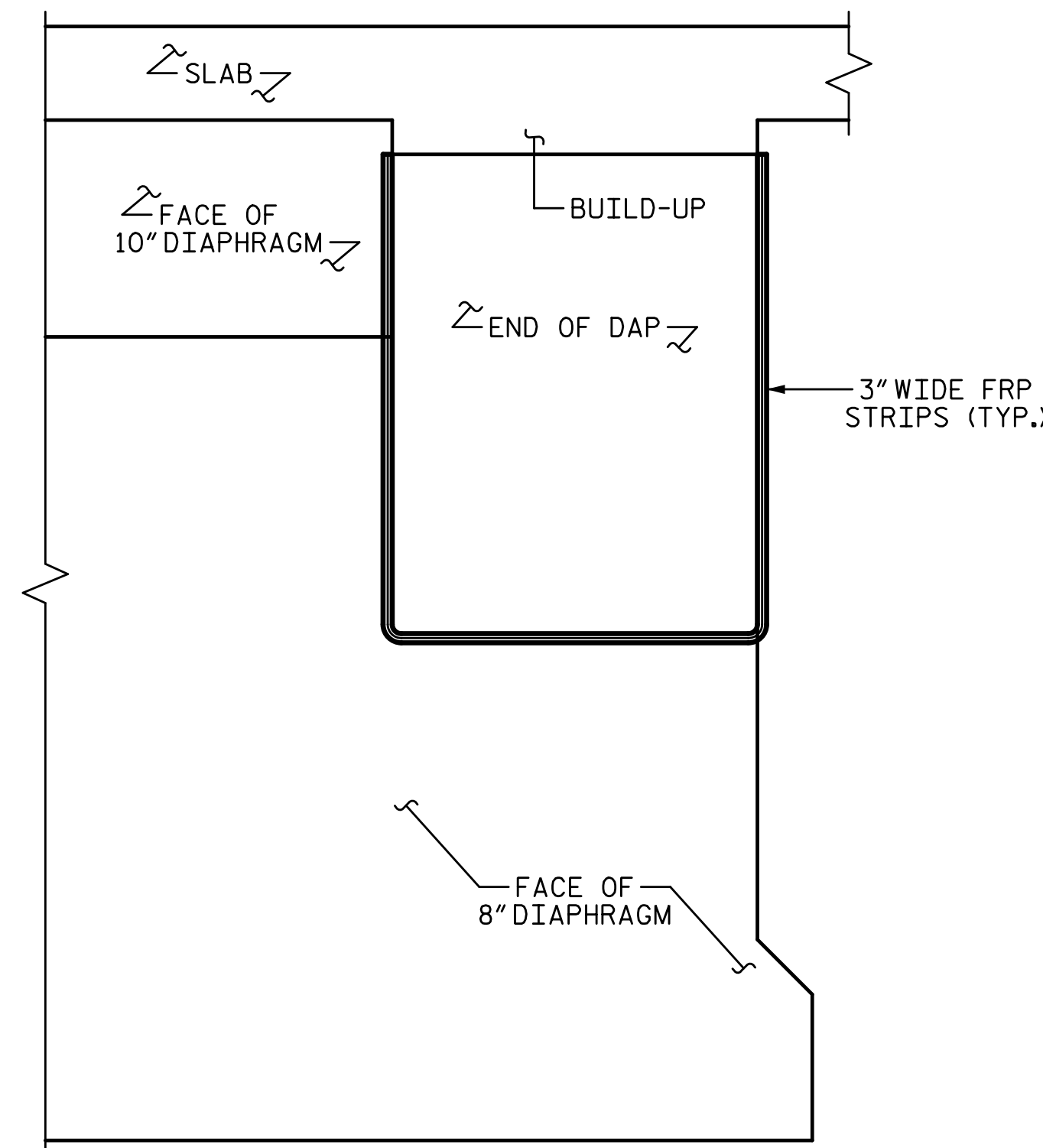


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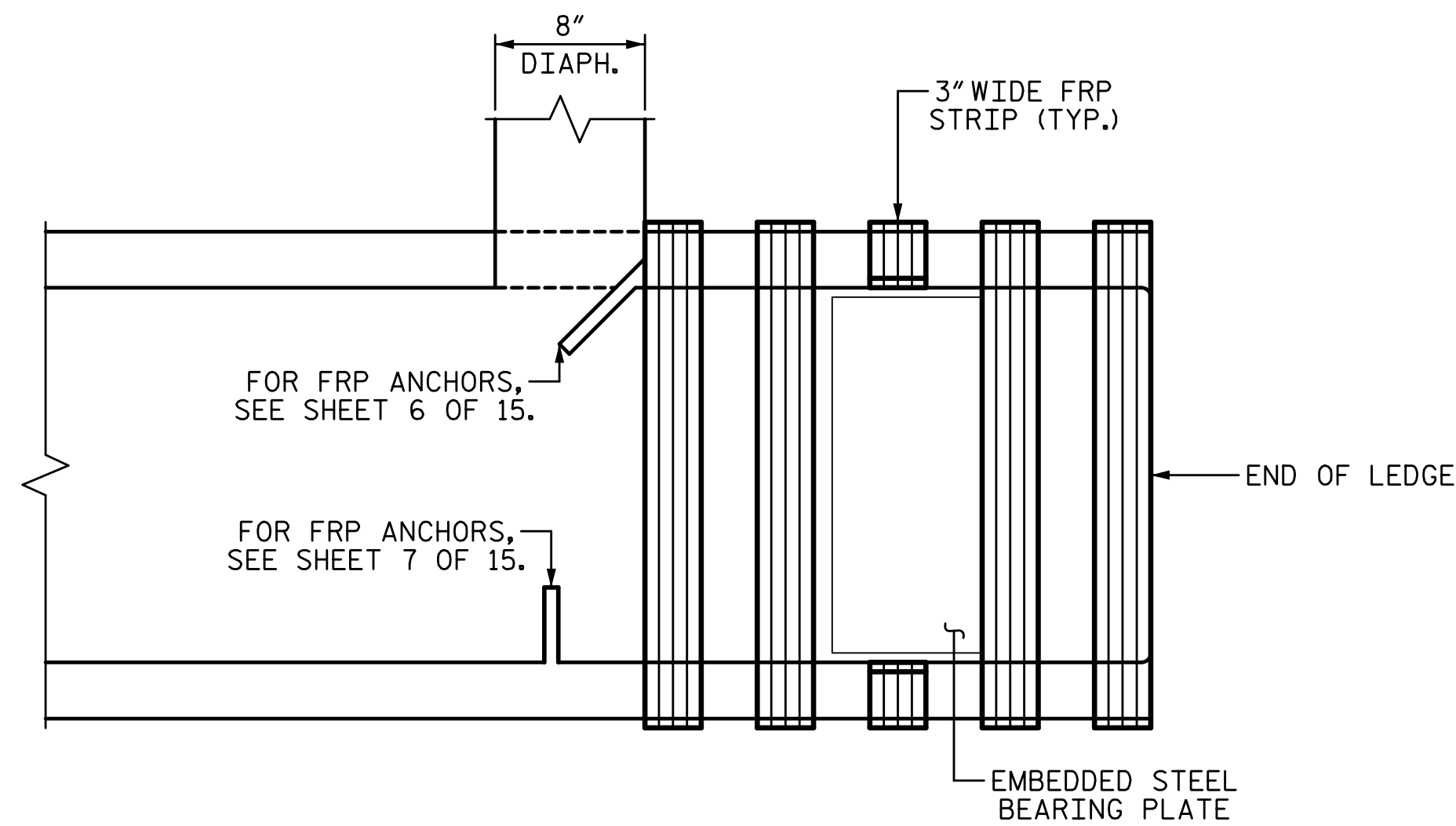
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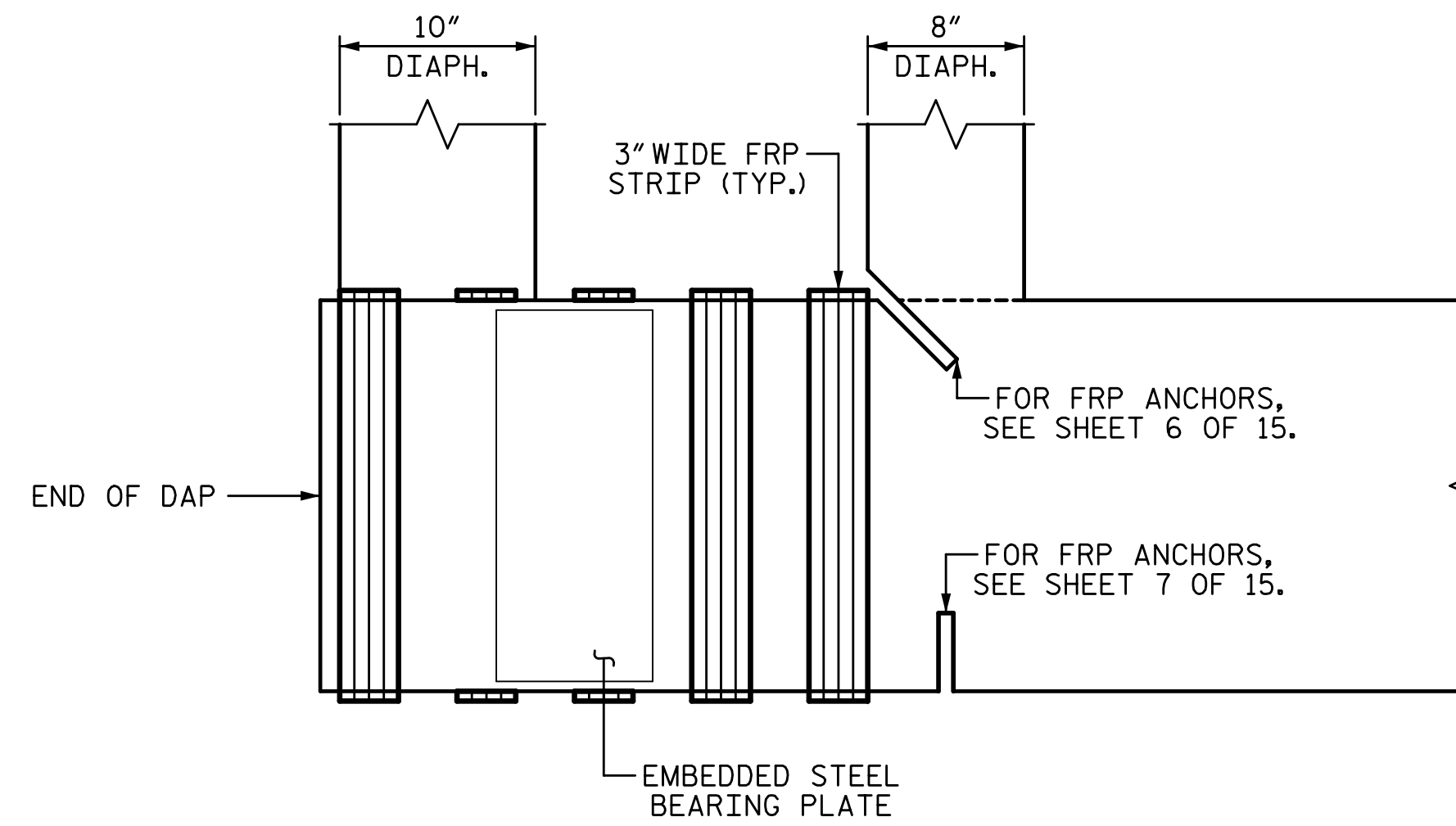
VIEW X-X



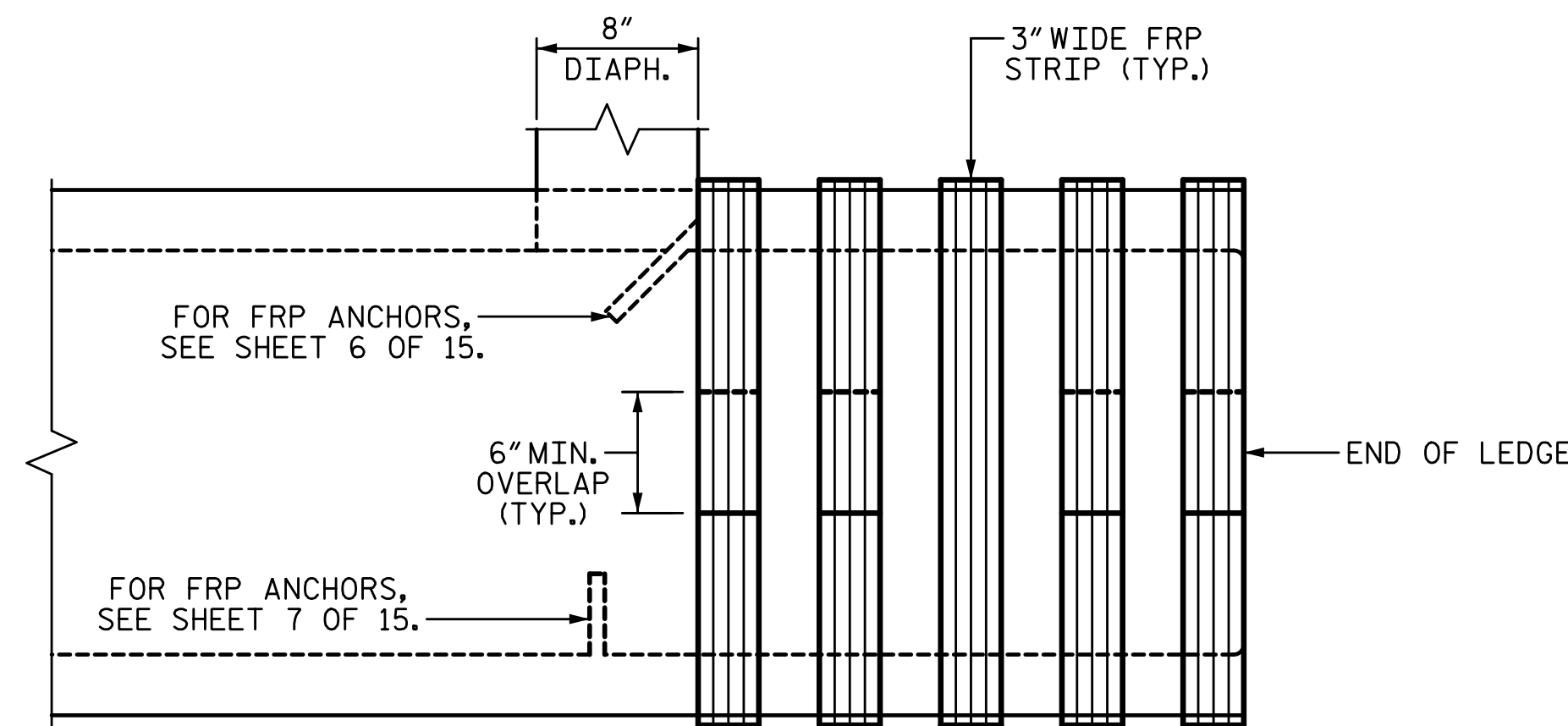
VIEW Y-Y



VIEW B-B
(SHOWING TOP OF LEDGE)



VIEW A-A
(SHOWING BOTTOM OF DAP)



BOTTOM OF LEDGE

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

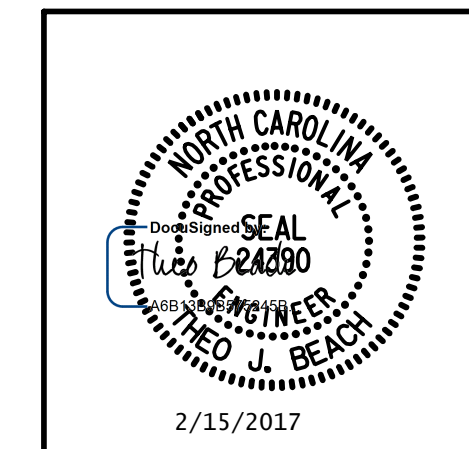
SHEET 5 OF 15

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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 FRP STRIPS LAYER 1
 FOR
 EXTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-50 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |

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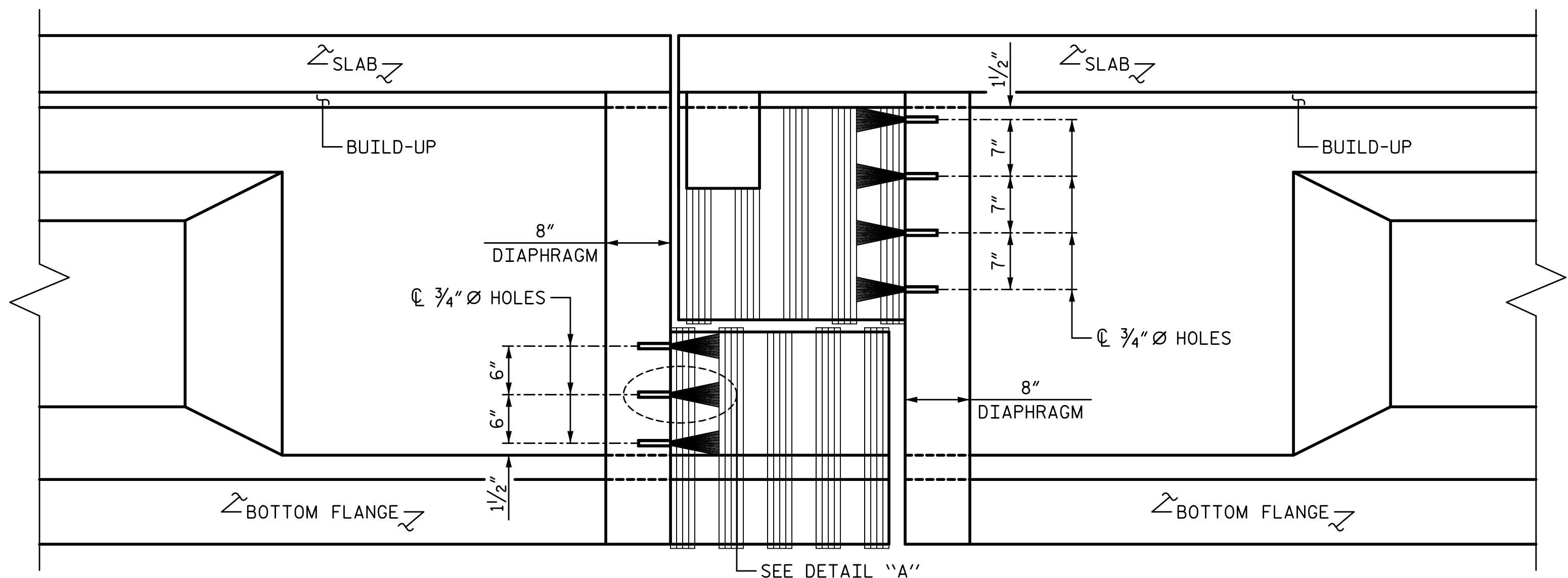
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 CHECKED BY: N.J. MABRY DATE: 4-16
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

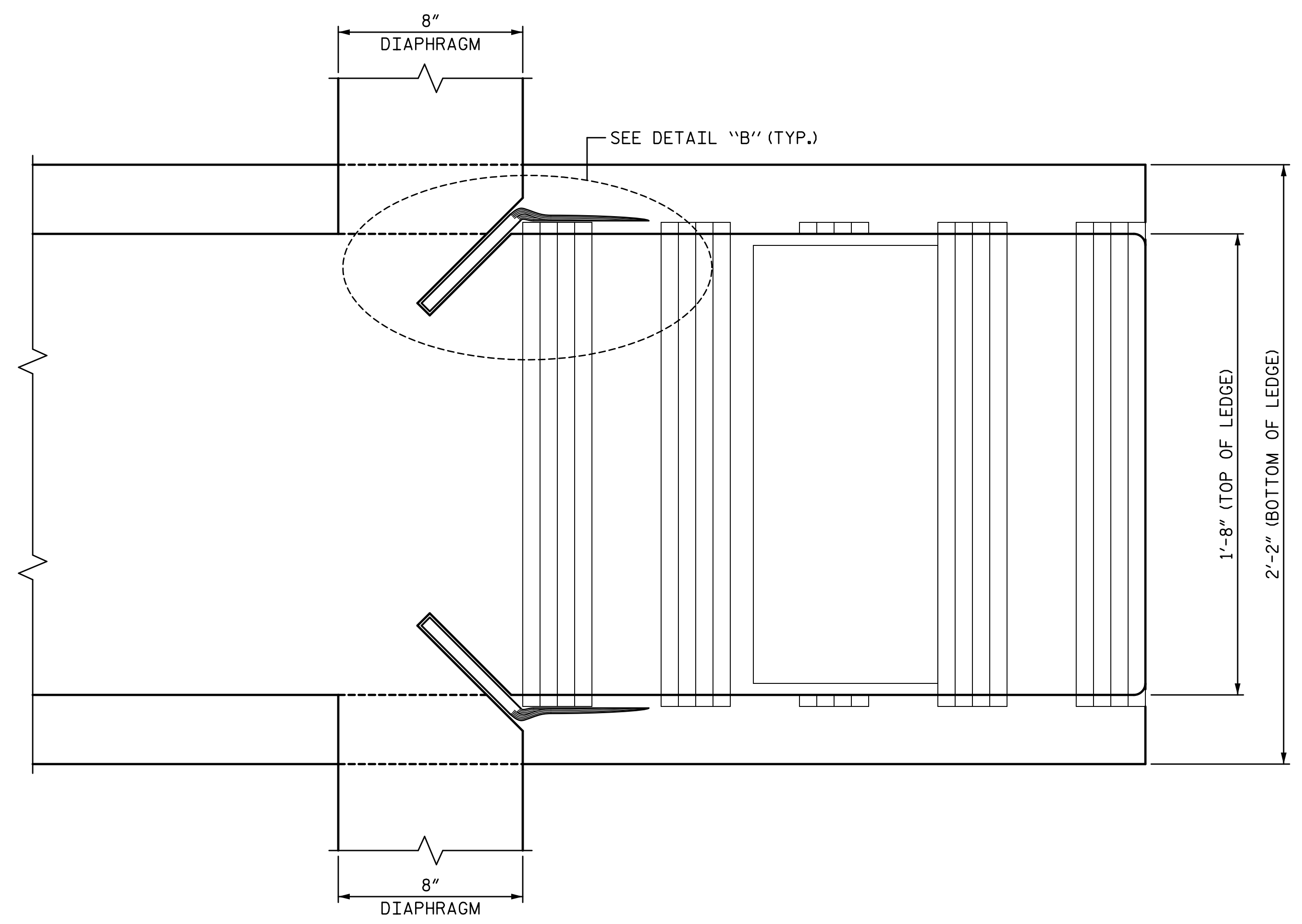
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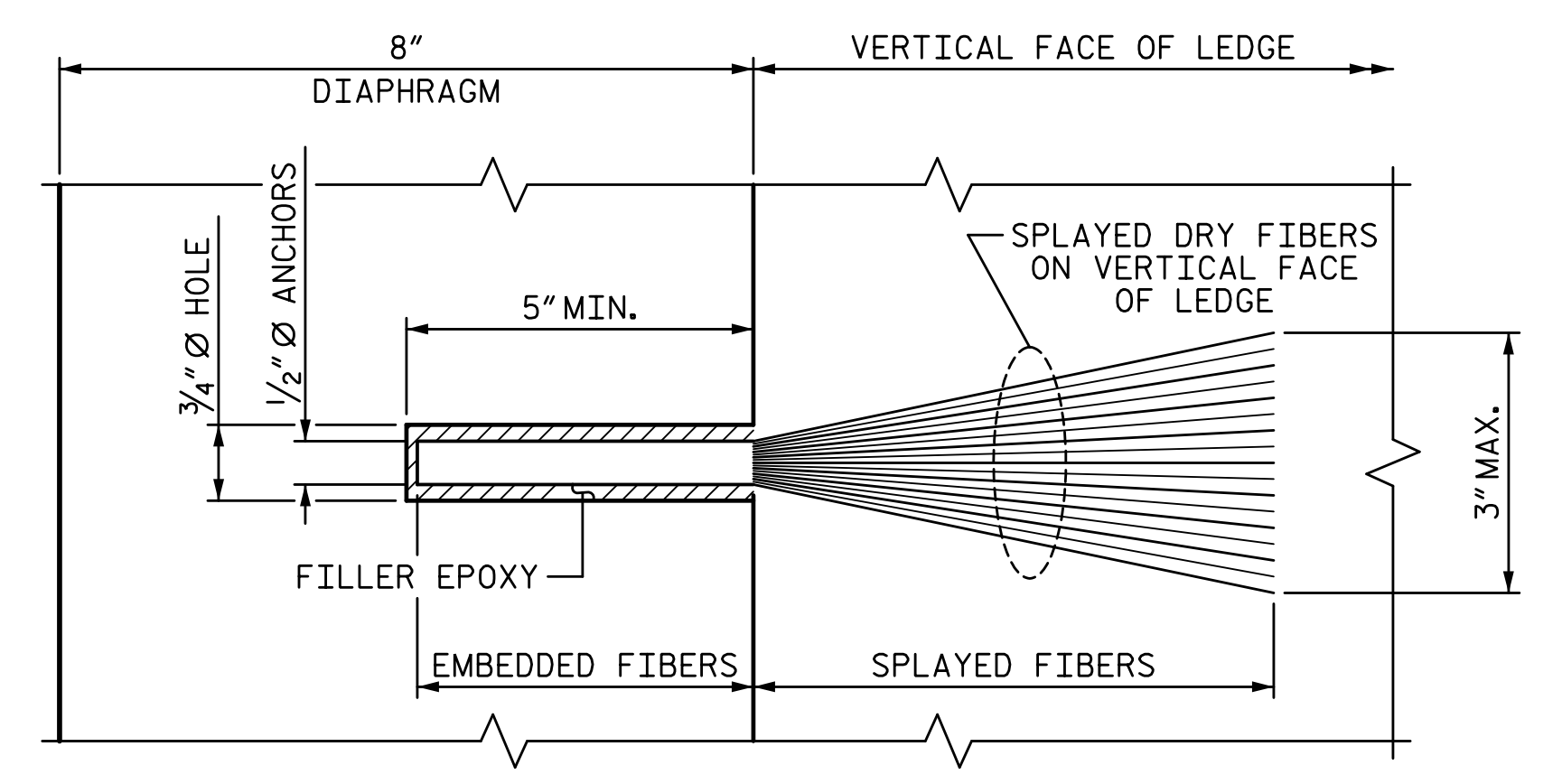


ELEVATION
(TYP. EA. FACE OF DAP AND LEDGE)

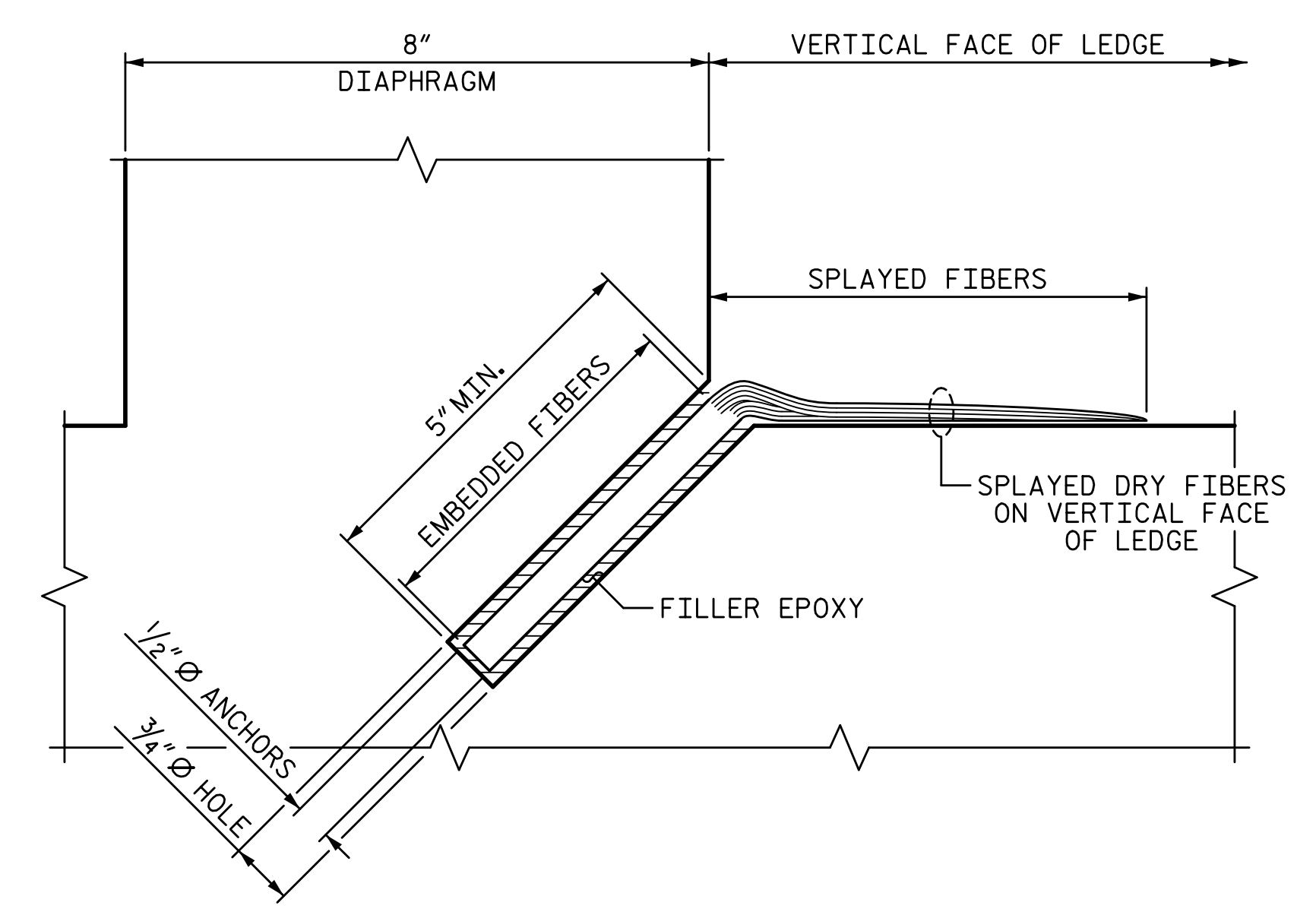
PREVIOUS LAYER



PLAN
(LEDGE SHOWN, DAP SIMILAR)



DETAIL "A"
(LEDGE SHOWN, DAP SIMILAR)



DETAIL "B"
(LEDGE SHOWN, DAP SIMILAR)

14 ANCHORS REQUIRED PER INTERIOR HINGE LOCATION

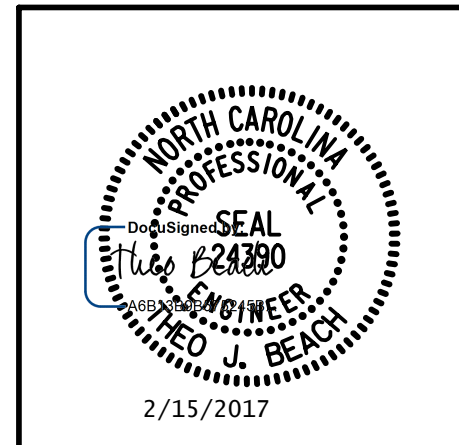
PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO.: 6

SHEET 6 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
**FRP ANCHORAGE
FOR INTERIOR GIRDERS**
FRP HINGE REPAIR

PLANS PREPARED BY:

SE & A
SIMPSON
ENGINEERS
& ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0538 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521



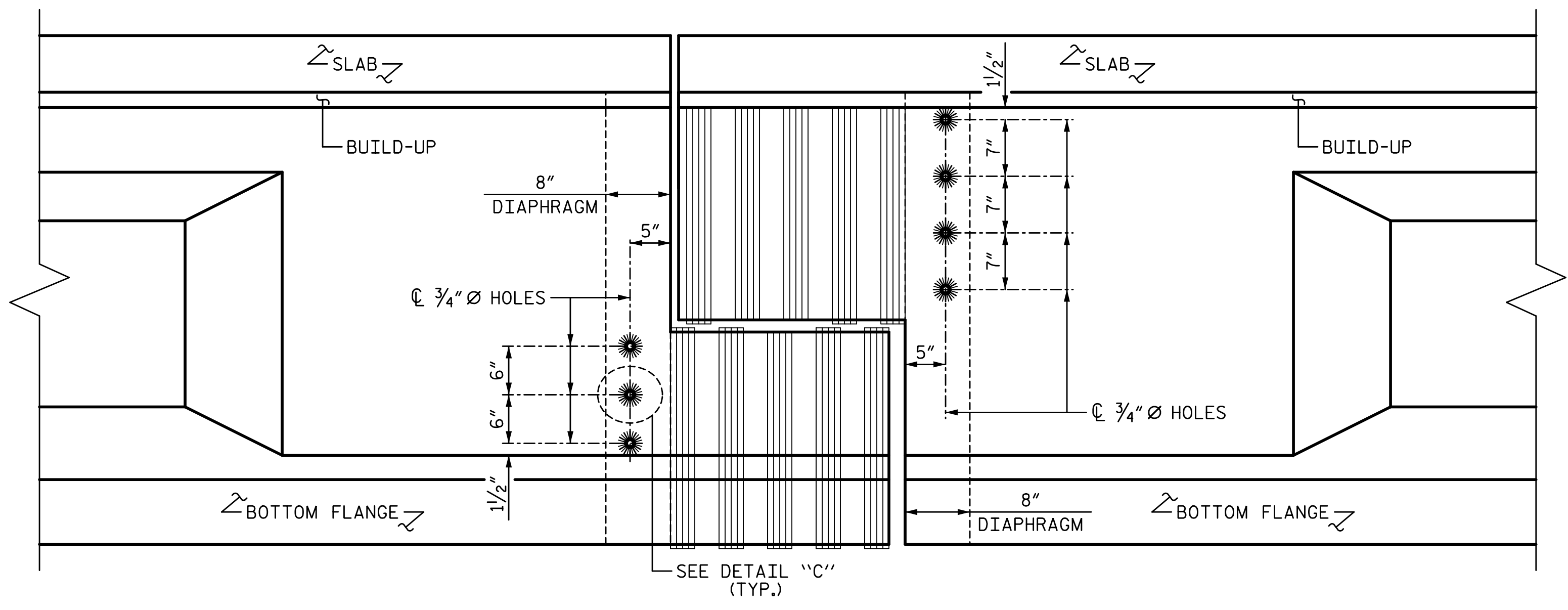
2/15/2017

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-51 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |

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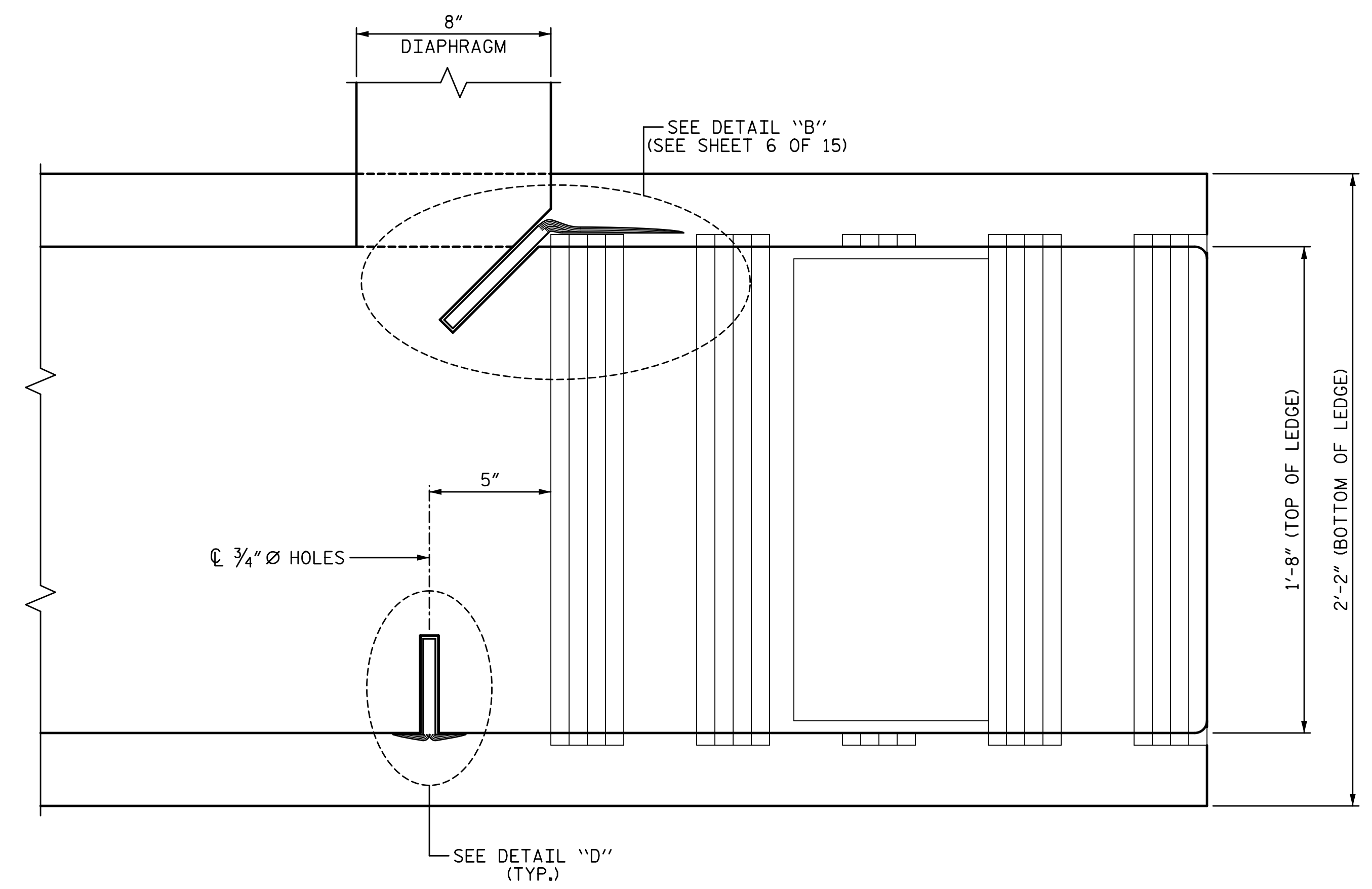
DRAWN BY: T. BANKOVICH DATE: 4-16
CHECKED BY: N.J. MABRY DATE: 4-16
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

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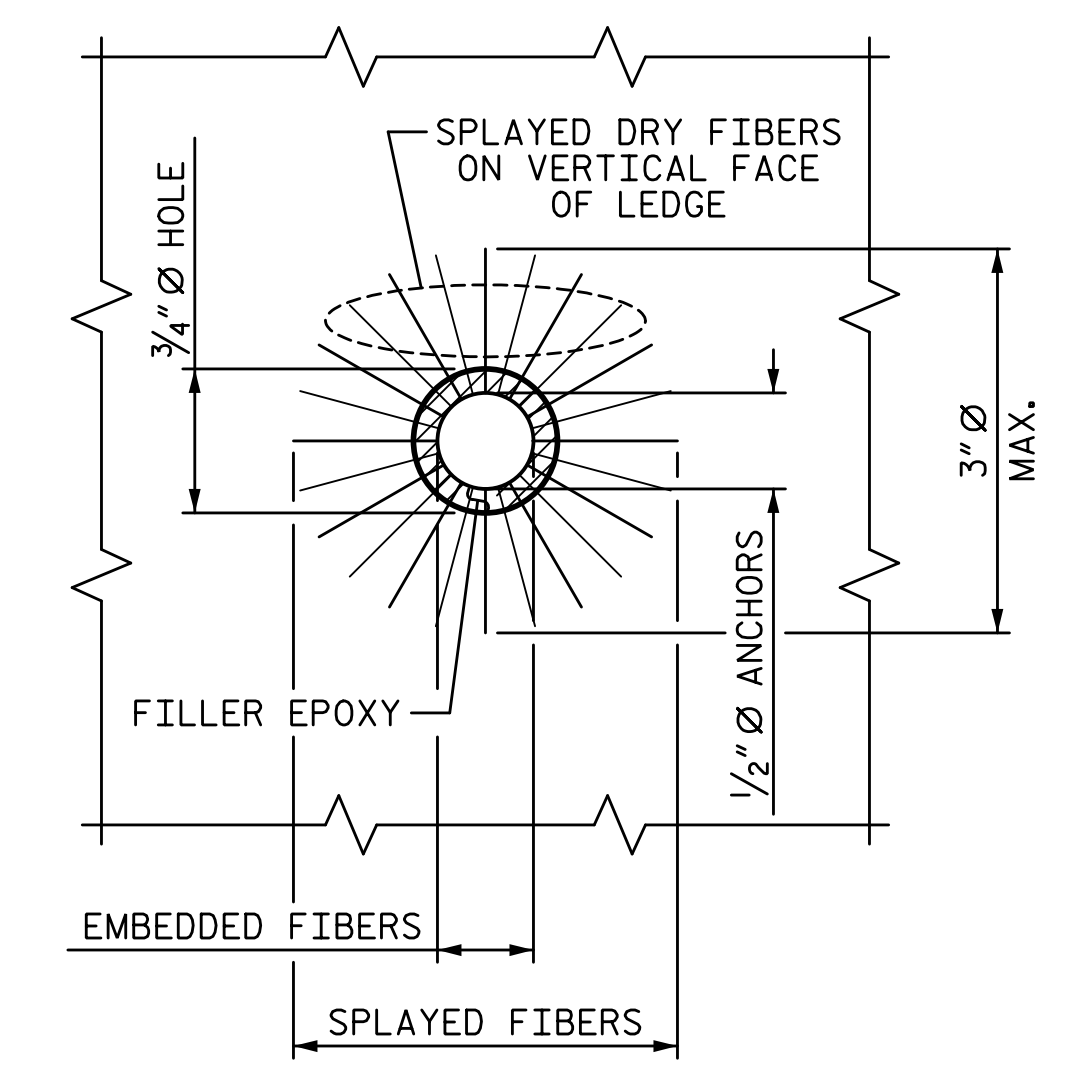


ELEVATION

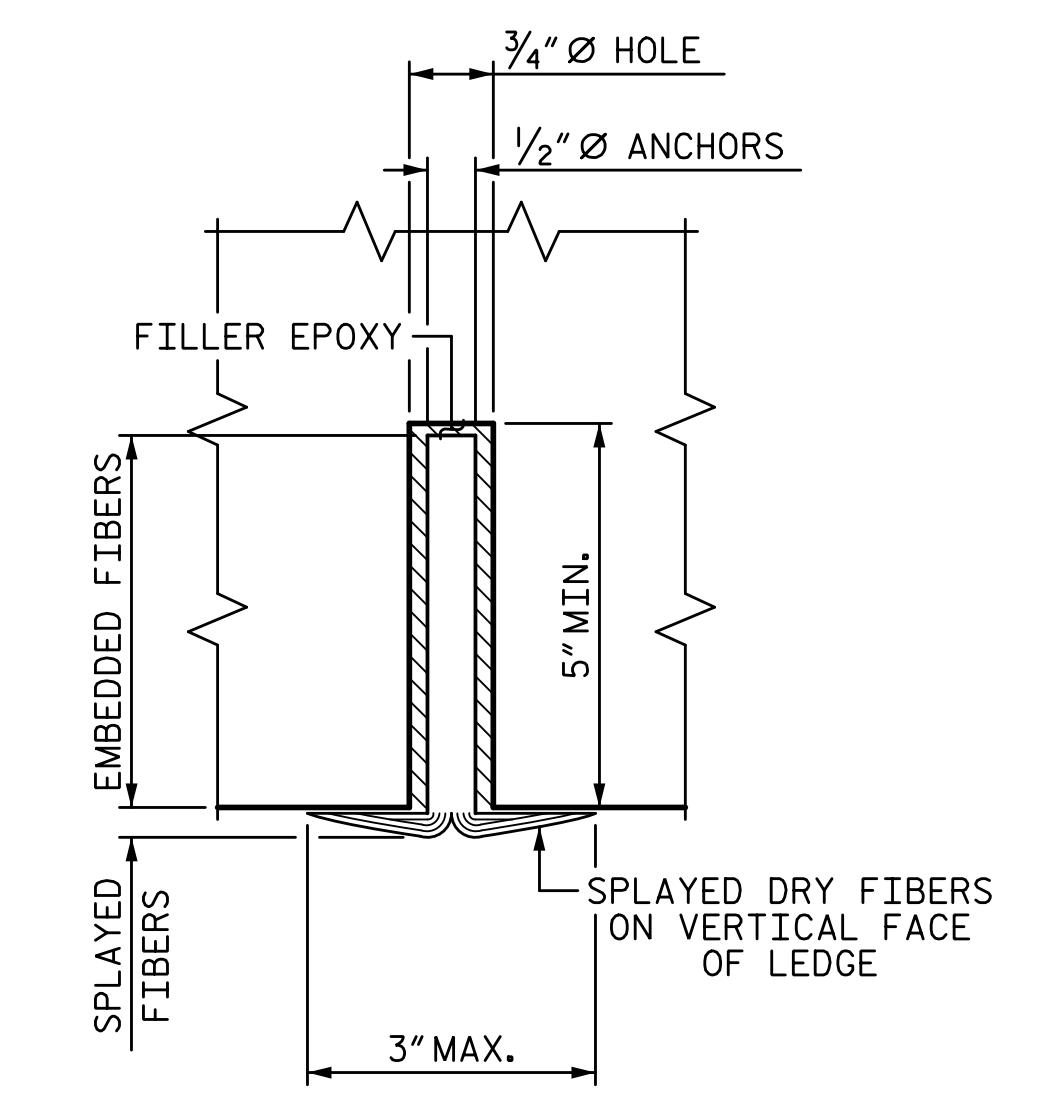
(EXTERIOR FACE OF ANCHORAGE SHOWN, FOR INTERIOR FACE OF ANCHORAGE SEE SHEET 6 OF 15)



PLAN



DETAIL "C"



DETAIL "D"

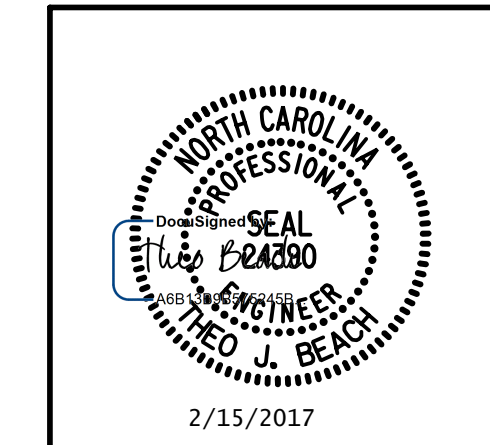
14 ANCHORS REQUIRED PER EXTERIOR HINGE LOCATION

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

SHEET 7 OF 15

PLANS PREPARED BY:

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FRP ANCHORAGE
FOR EXTERIOR GIRDERS
 FRP HINGE REPAIR

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

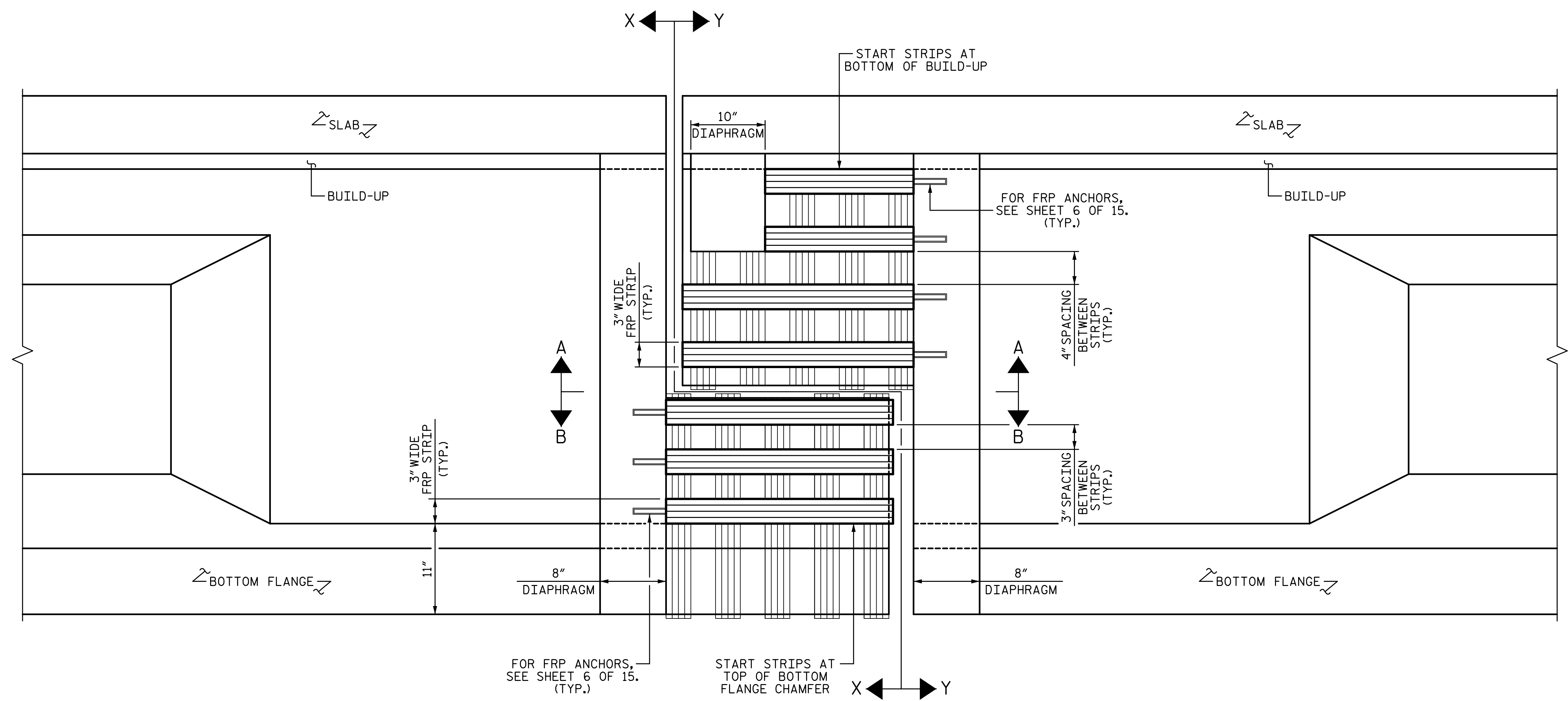
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DRAWN BY: T. BANKOVICH DATE: 4-16
 CHECKED BY: N.J. MABRY DATE: 4-16
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

NOTES:

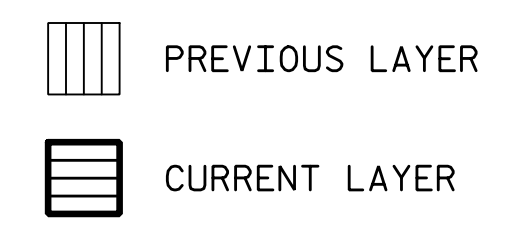
FOR VIEWS, SEE SHEET 9 OF 15.

FRP ANCHORAGE SHALL BE INSTALLED PRIOR TO INSTALLATION OF FRP LAYER 2.



ELEVATION

(INTERIOR GIRDER NORTH HINGE SHOWN, INTERIOR GIRDER SOUTH HINGE SIMILAR)



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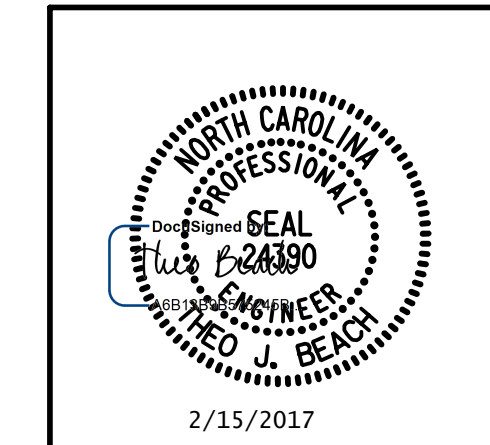
PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

SHEET 8 OF 15

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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 PRESERVATION
 FRP STRIPS LAYER 2
 FOR
 INTERIOR GIRDERS
 FRP HINGE REPAIR

PLANS PREPARED BY:

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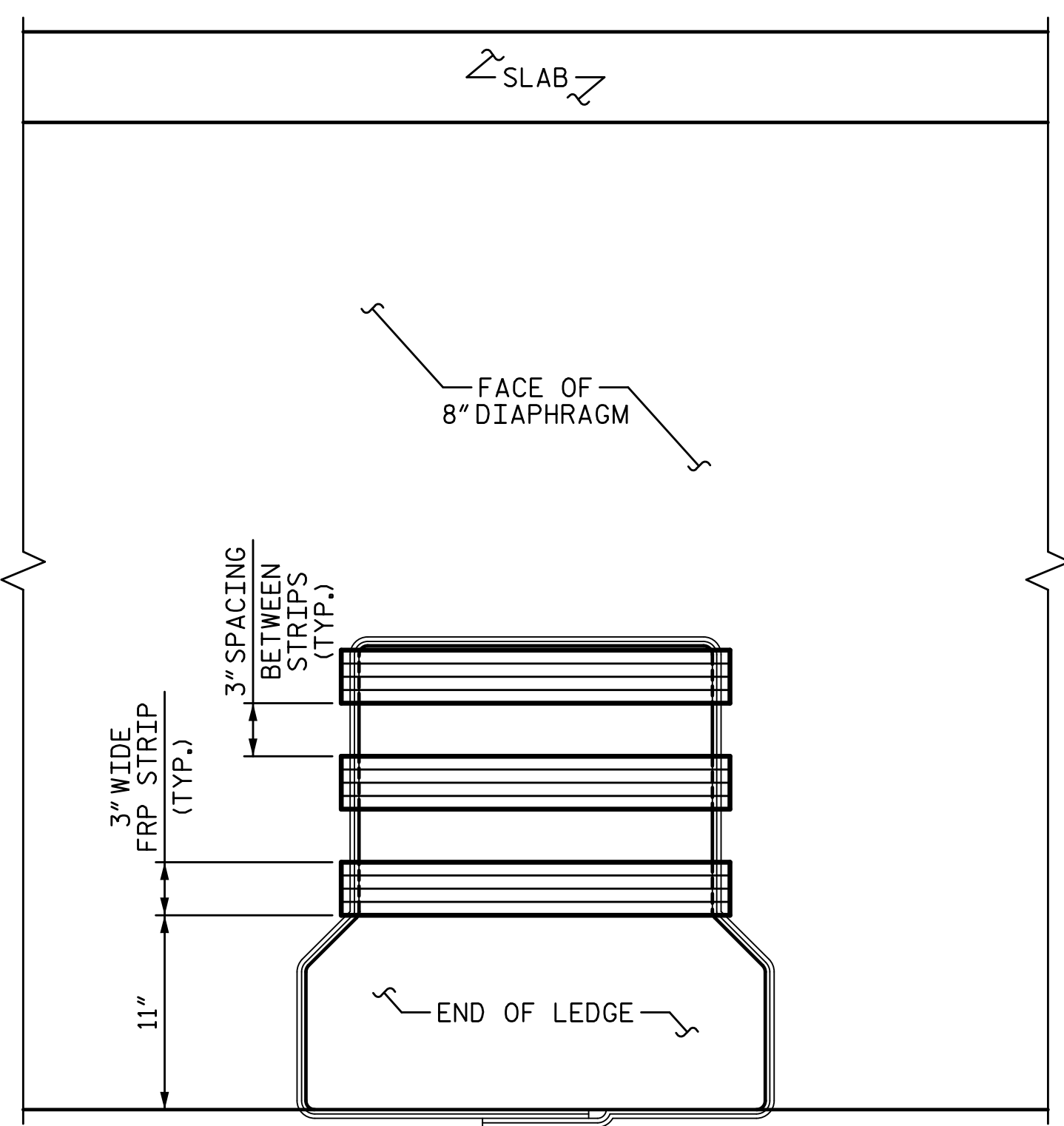


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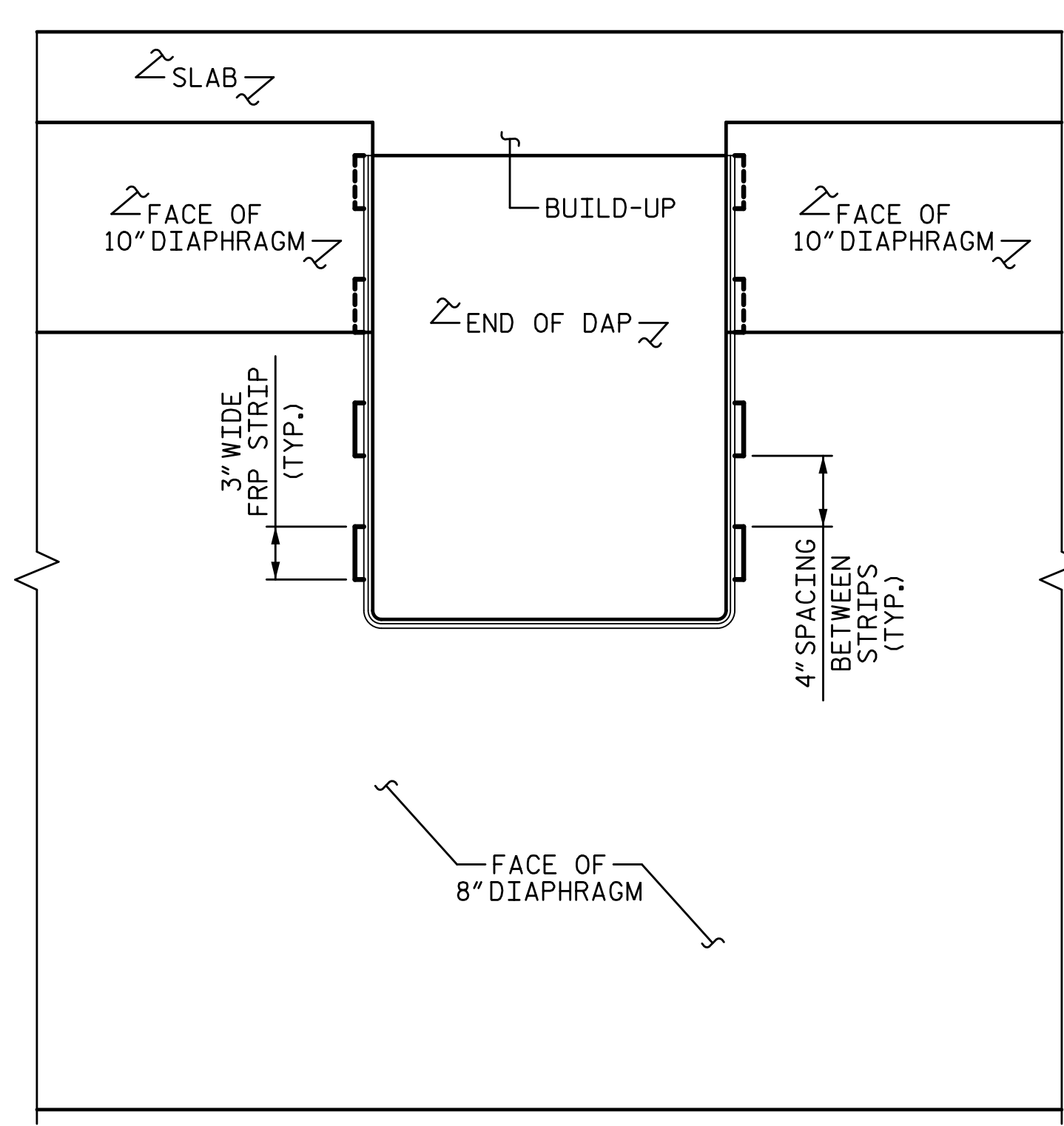
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| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

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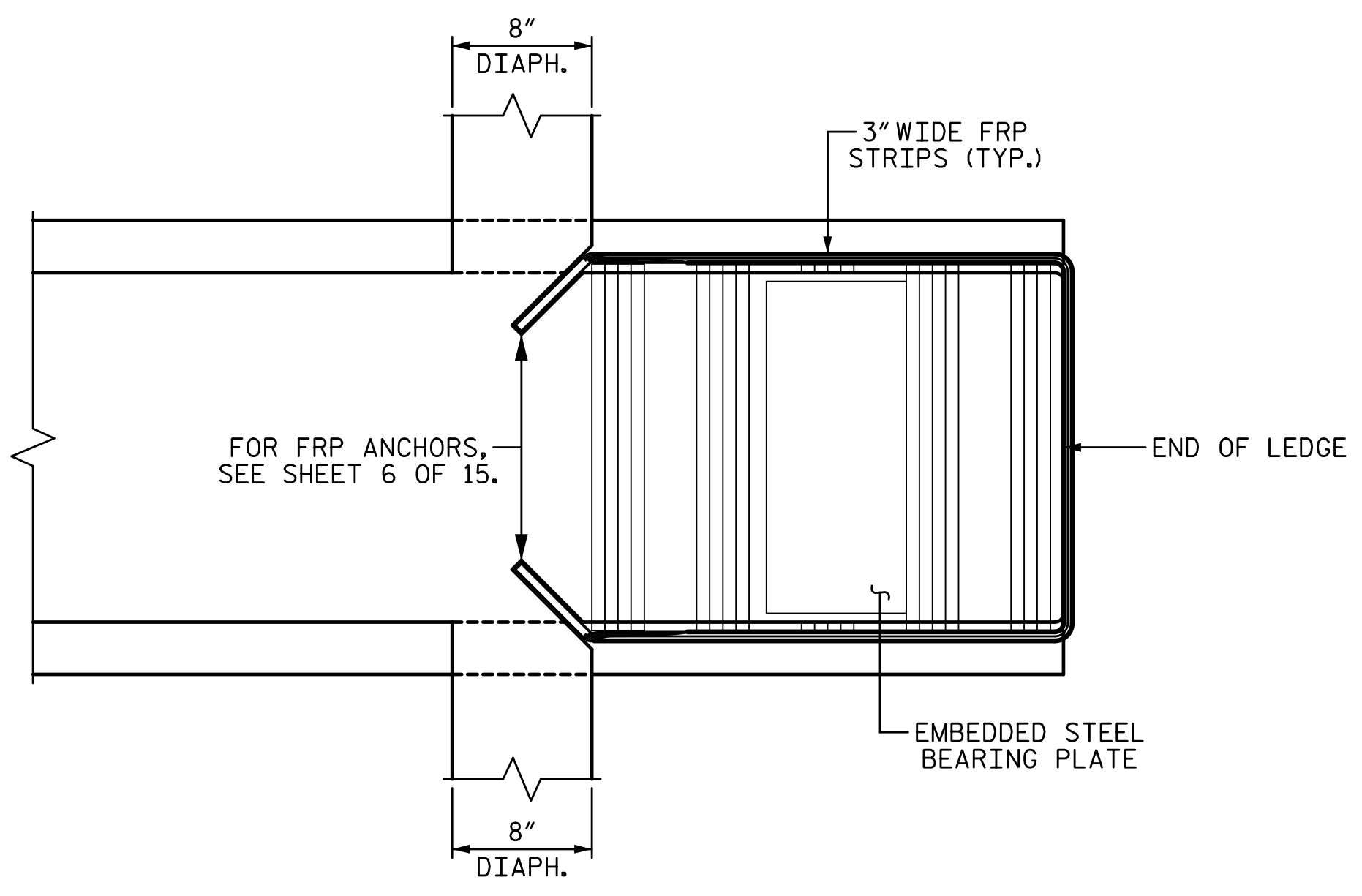
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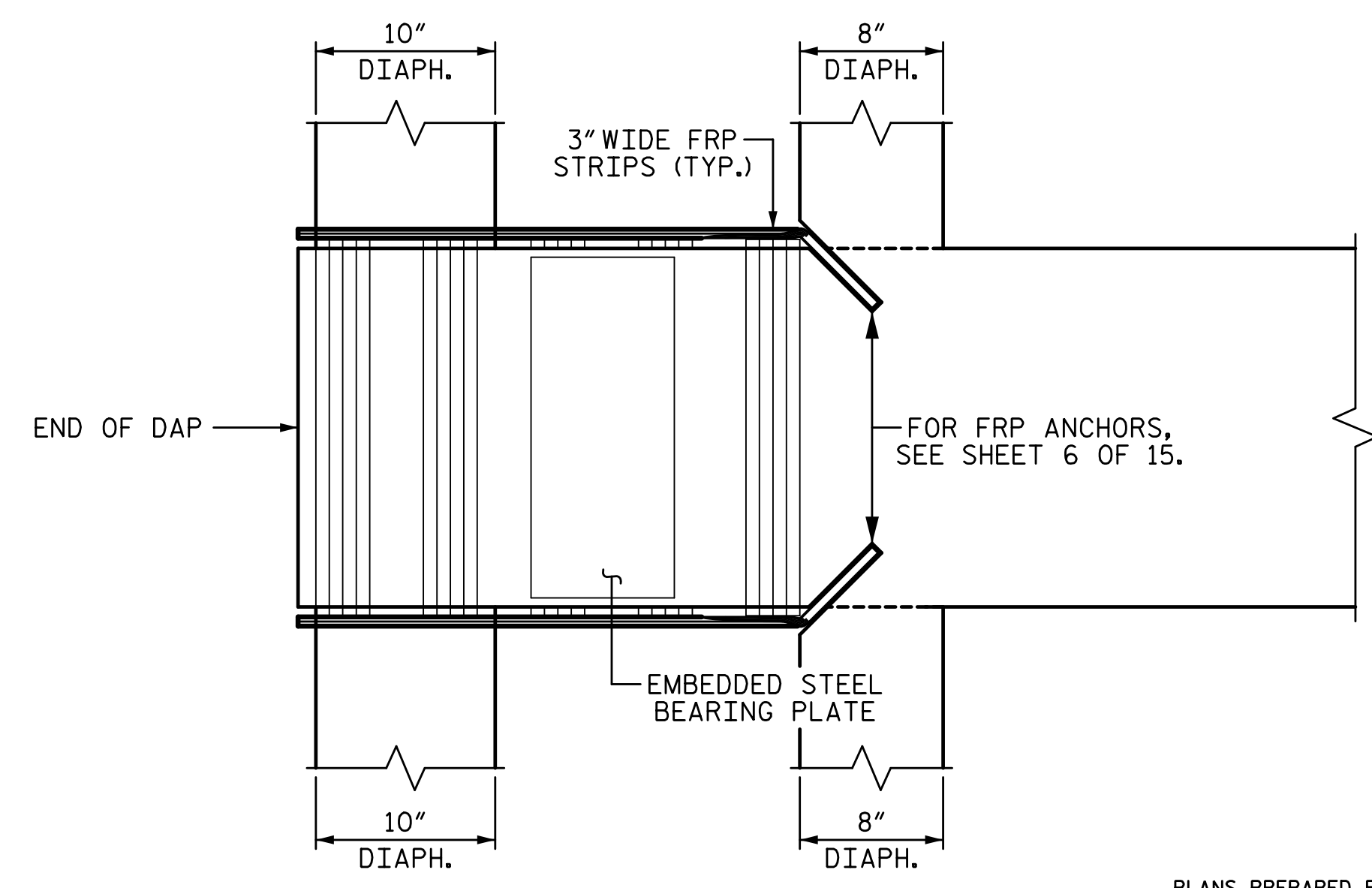
VIEW X-X



VIEW Y-Y



VIEW B-B
(SHOWING TOP OF LEDGE)



VIEW A-A
(SHOWING BOTTOM OF DAP)

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

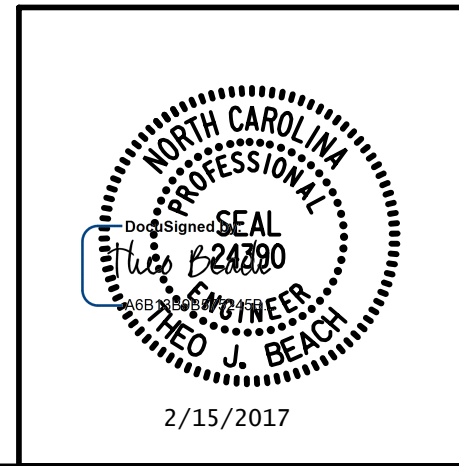
SHEET 9 OF 15

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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 FRP STRIPS LAYER 2
 FOR
 INTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----------|-------|
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| 1 | | | 3 | | |
| 2 | | | 4 | | |

TOTAL SHEETS: 54

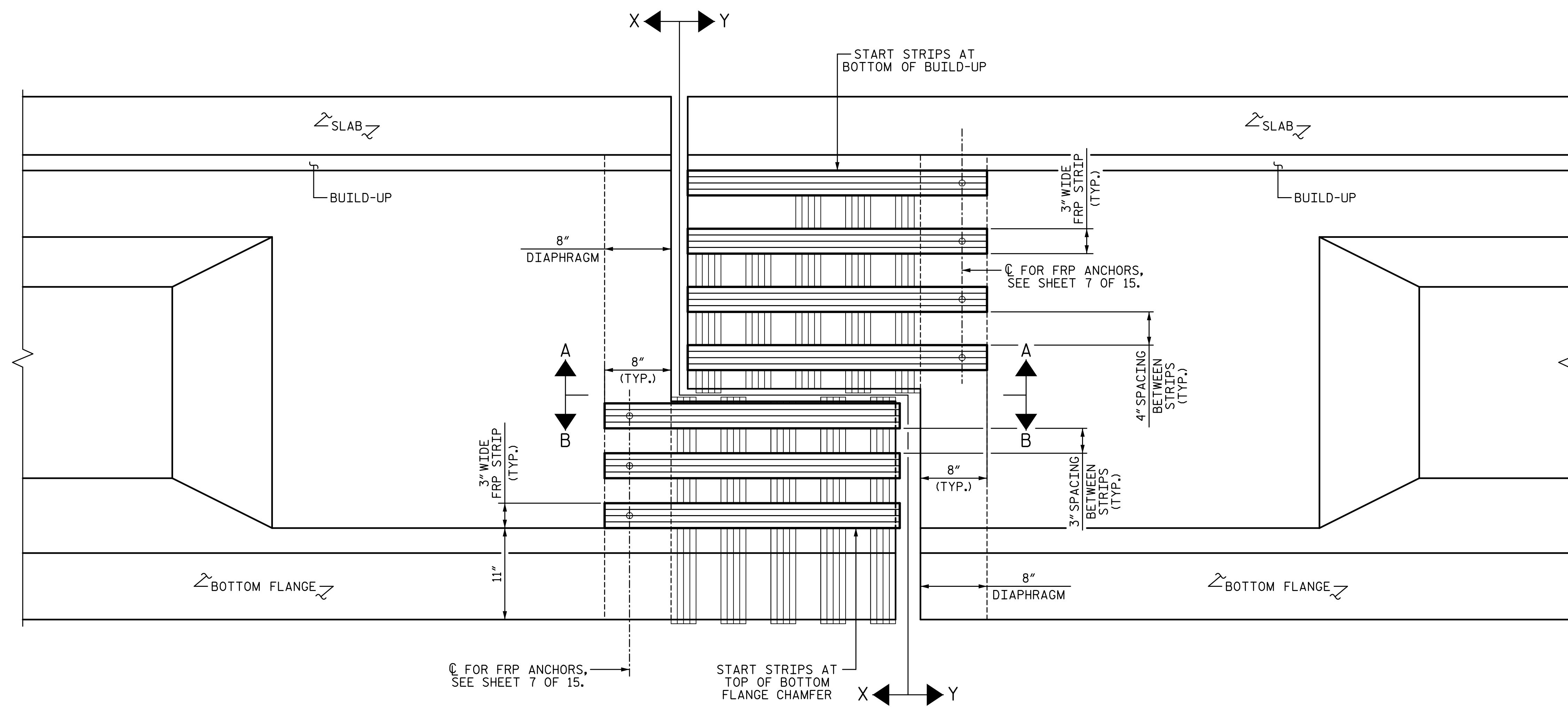
PLANS PREPARED BY:
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 CHECKED BY: N.J. MABRY DATE: 4-16
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

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NOTES:
FOR VIEWS, SEE SHEET 11 OF 15.



ELEVATION

(EXTERIOR GIRDER 7 NORTH HINGE SHOWN, EXTERIOR GIRDER 1 SOUTH HINGE SIMILAR AND EXTERIOR GIRDER 1 NORTH HINGE AND GIRDER 7 SOUTH HINGE SIMILAR BY ROTATION)

- PREVIOUS LAYER
- CURRENT LAYER

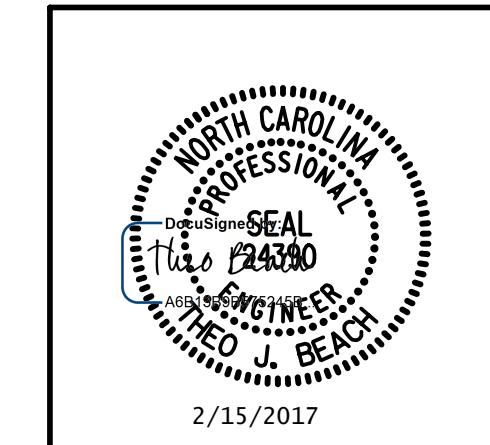
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PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO.: 6

SHEET 10 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
FRP STRIPS LAYER 2
FOR
EXTERIOR GIRDERS
FRP HINGE REPAIR

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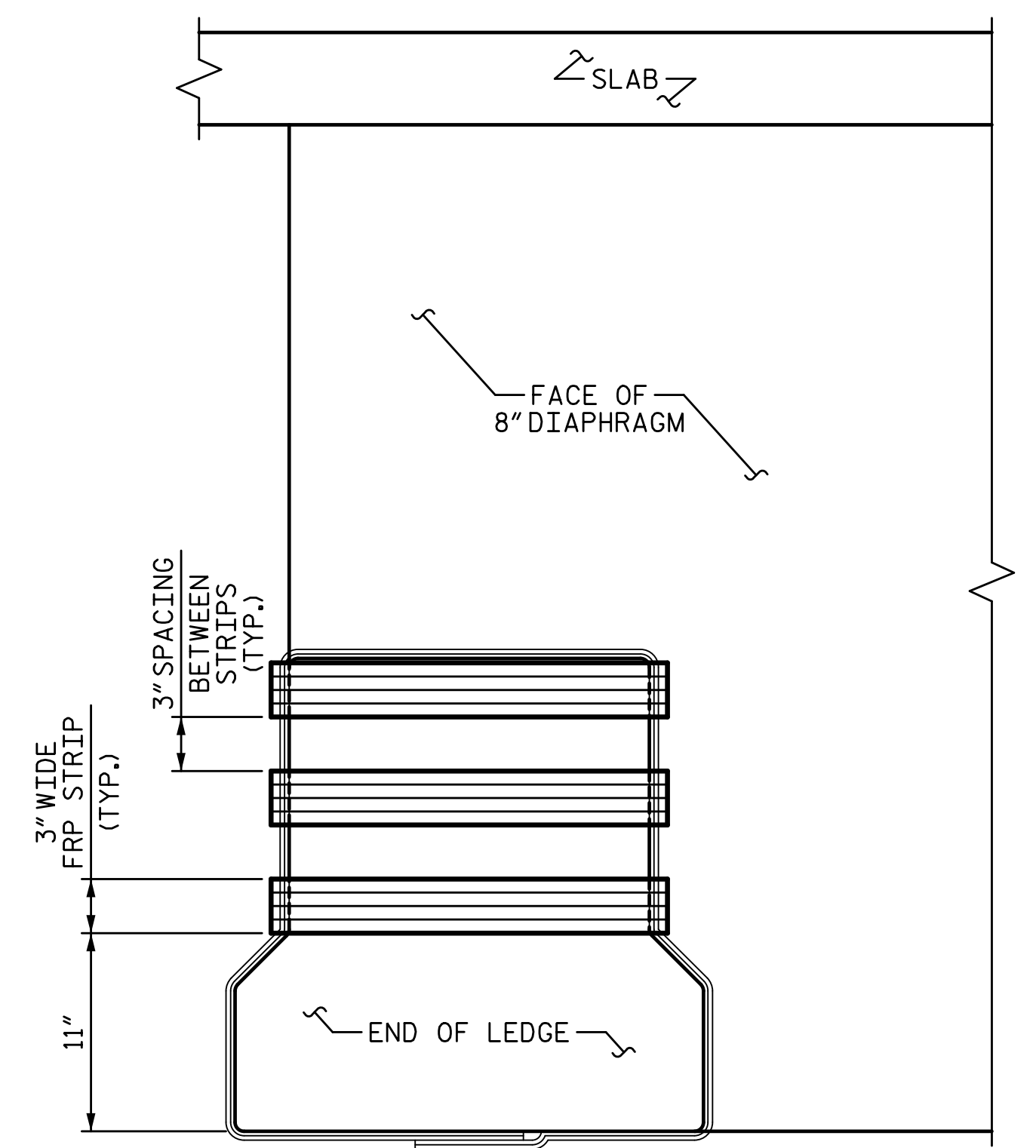


| REVISIONS | | | | | | SHEET NO. S2-55 TOTAL SHEETS |
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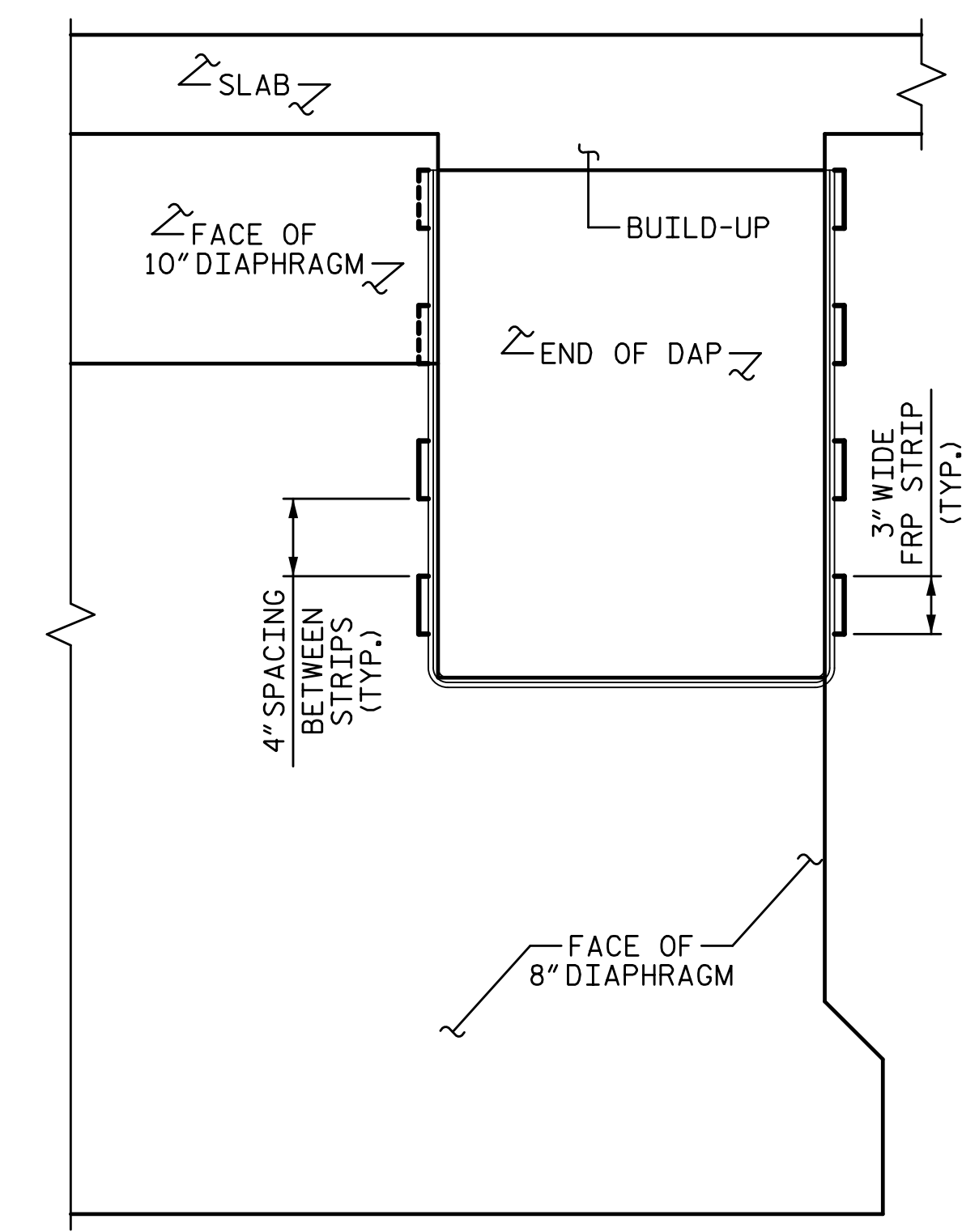
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| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

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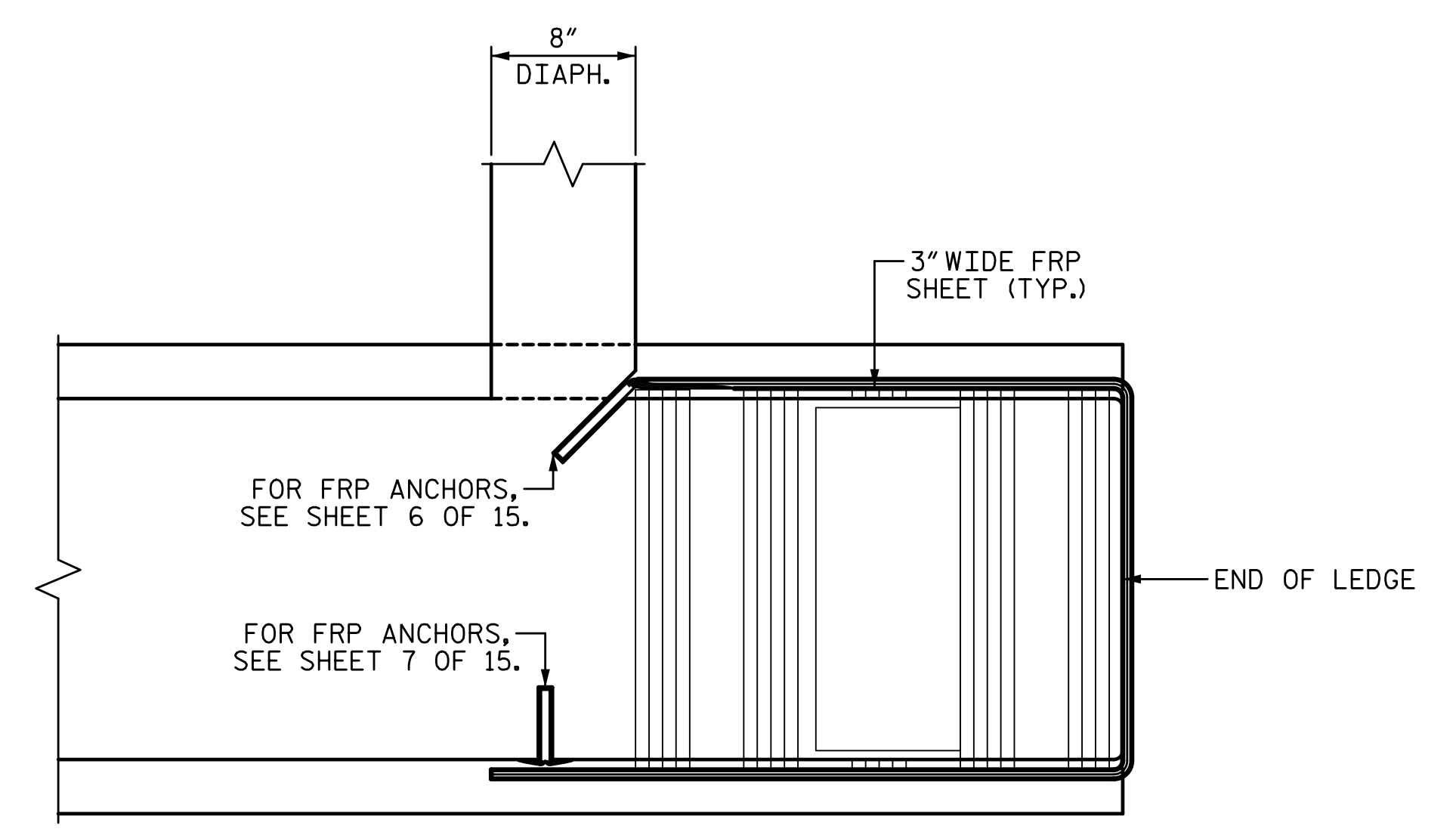
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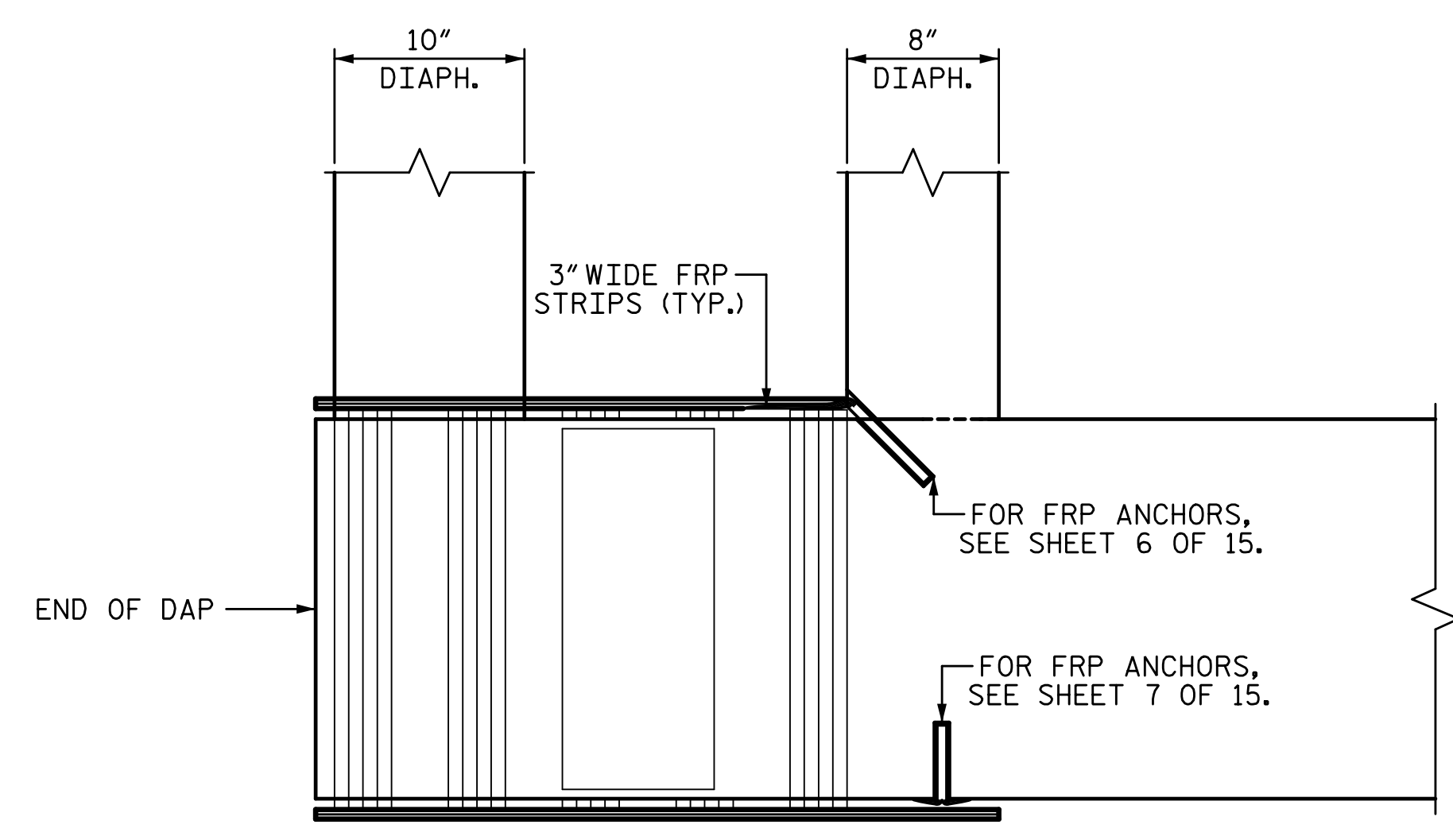
VIEW X-X



VIEW Y-Y



VIEW B-B
(SHOWING TOP OF LEDGE)



VIEW A-A
(SHOWING BOTTOM OF DAP)

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

SHEET 11 OF 15

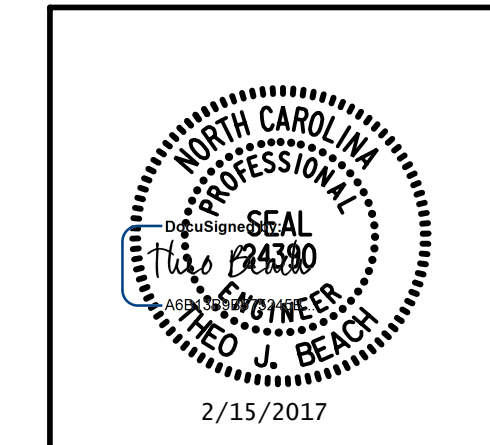
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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 FRP STRIPS LAYER 2
 FOR
 EXTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----------|-------|
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

TOTAL SHEETS: 56

PLANS PREPARED BY:

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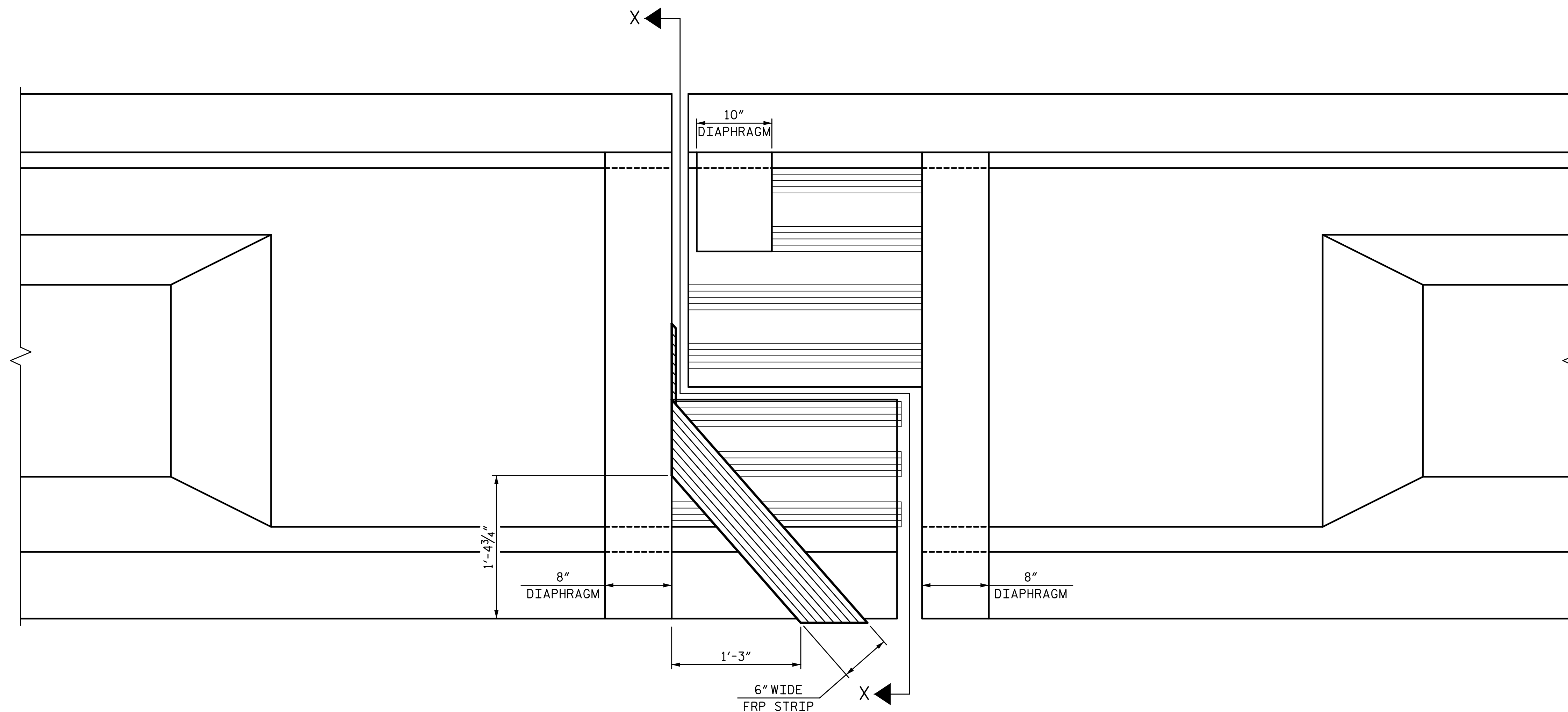
DRAWN BY: T. BANKOVICH DATE: 4-16
 CHECKED BY: N.J. MABRY DATE: 4-16
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

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NOTES:

FOR VIEWS, SEE SHEET 13 OF 15.
LAYER 1 NOT SHOWN FOR CLARITY.



ELEVATION

(INTERIOR GIRDER NORTH HINGE SHOWN, INTERIOR GIRDER SOUTH HINGE SIMILAR)

PREVIOUS LAYER

CURRENT LAYER

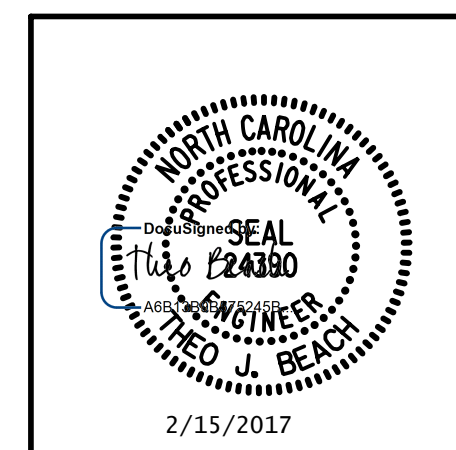
PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO.: 6

SHEET 12 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
FRP STRIPS LAYER 3
FOR
INTERIOR GIRDERS
FRP HINGE REPAIR

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(919) 852-0468
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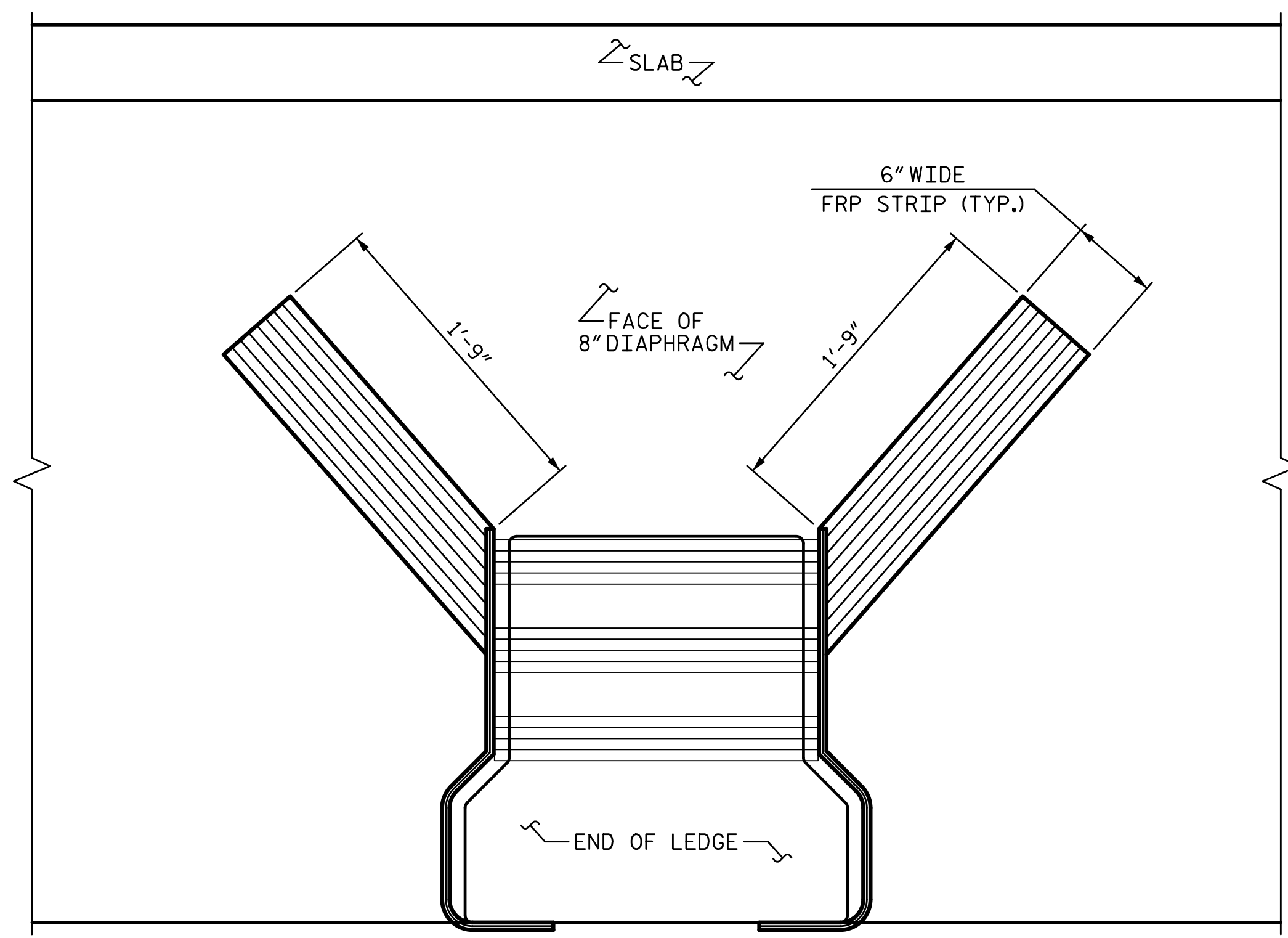
REVISIONS

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

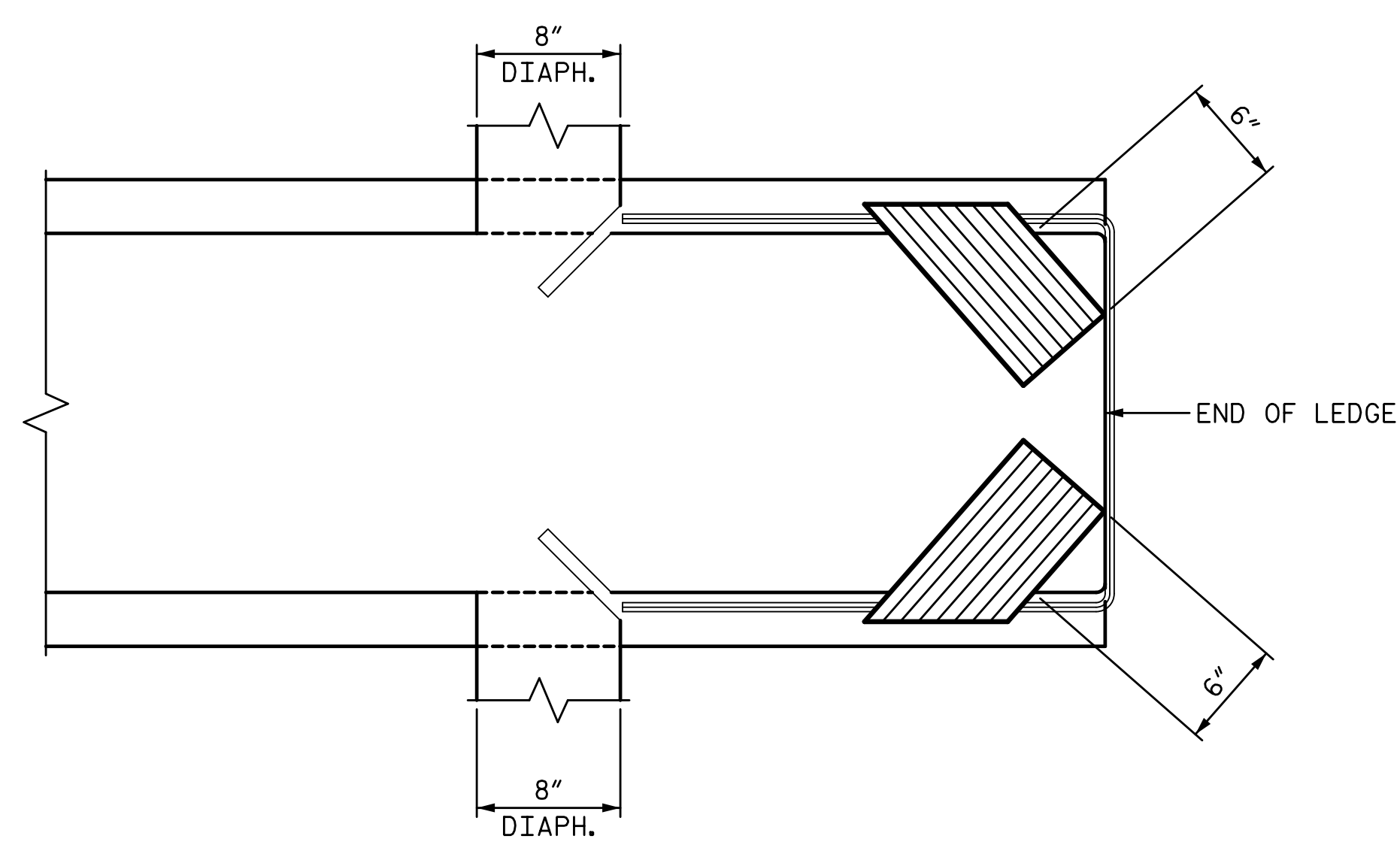
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| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

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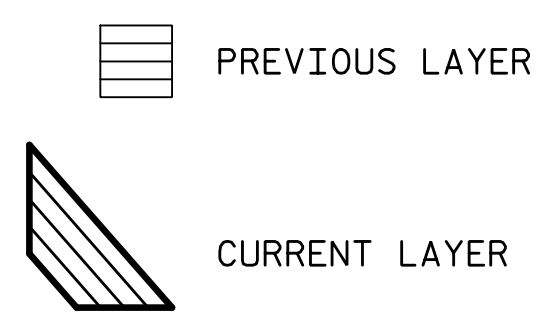


VIEW X-X



BOTTOM OF LEDGE

NOTES:
LAYER 1 NOT SHOWN FOR CLARITY.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

SHEET 13 OF 15

PLANS PREPARED BY:

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 FRP STRIPS LAYER 3
 FOR
 INTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
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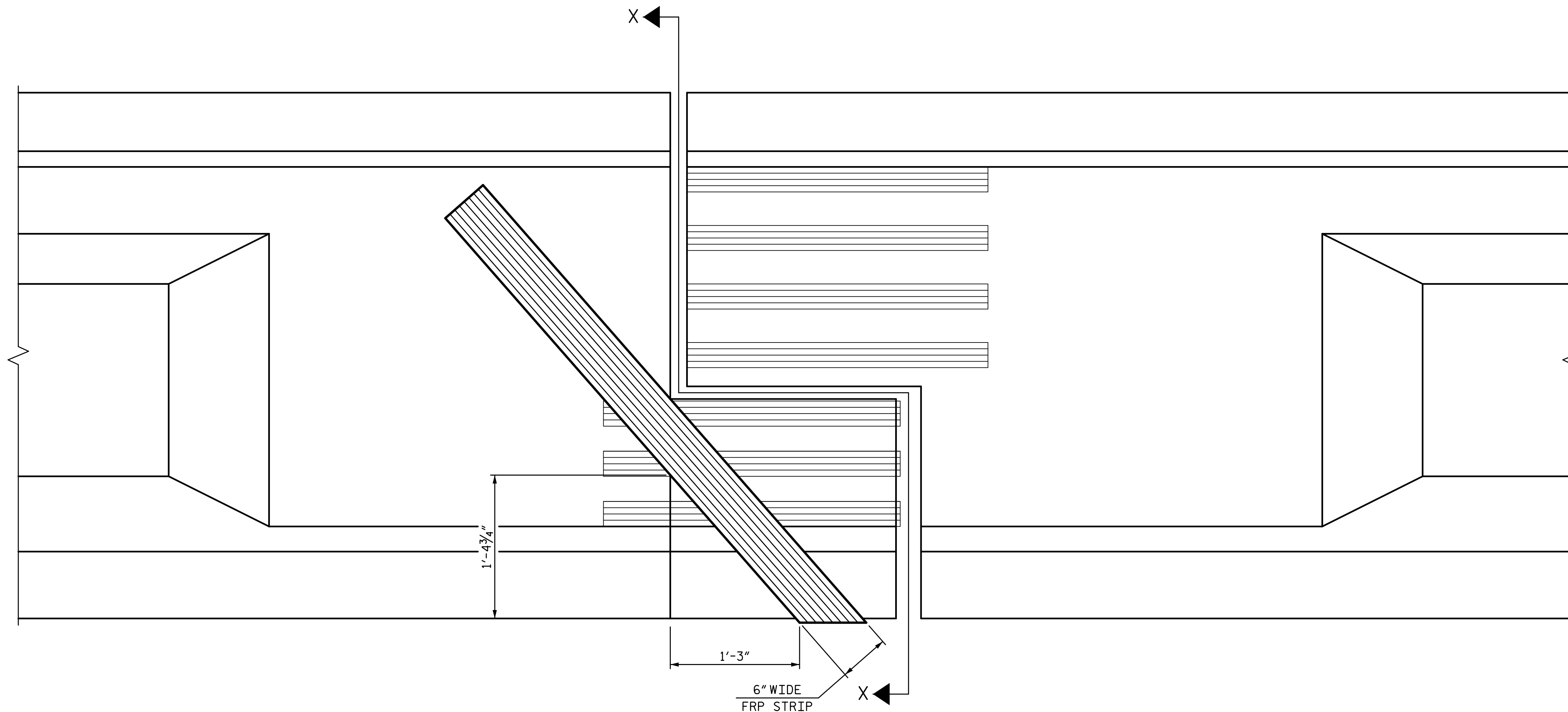
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| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

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NOTES:

FOR VIEWS, SEE SHEET 15 OF 15.
LAYER 1 NOT SHOWN FOR CLARITY.



ELEVATION

(EXTERIOR GIRDER 7 NORTH HINGE SHOWN, EXTERIOR GIRDER 1 SOUTH HINGE SIMILAR AND EXTERIOR GIRDER 1 NORTH HINGE AND GIRDER 7 SOUTH HINGE SIMILAR BY ROTATION)

 PREVIOUS LAYER

 CURRENT LAYER

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO.: 6

SHEET 14 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
FRP STRIP LAYER 3
FOR
EXTERIOR GIRDERS
FRP HINGE REPAIR

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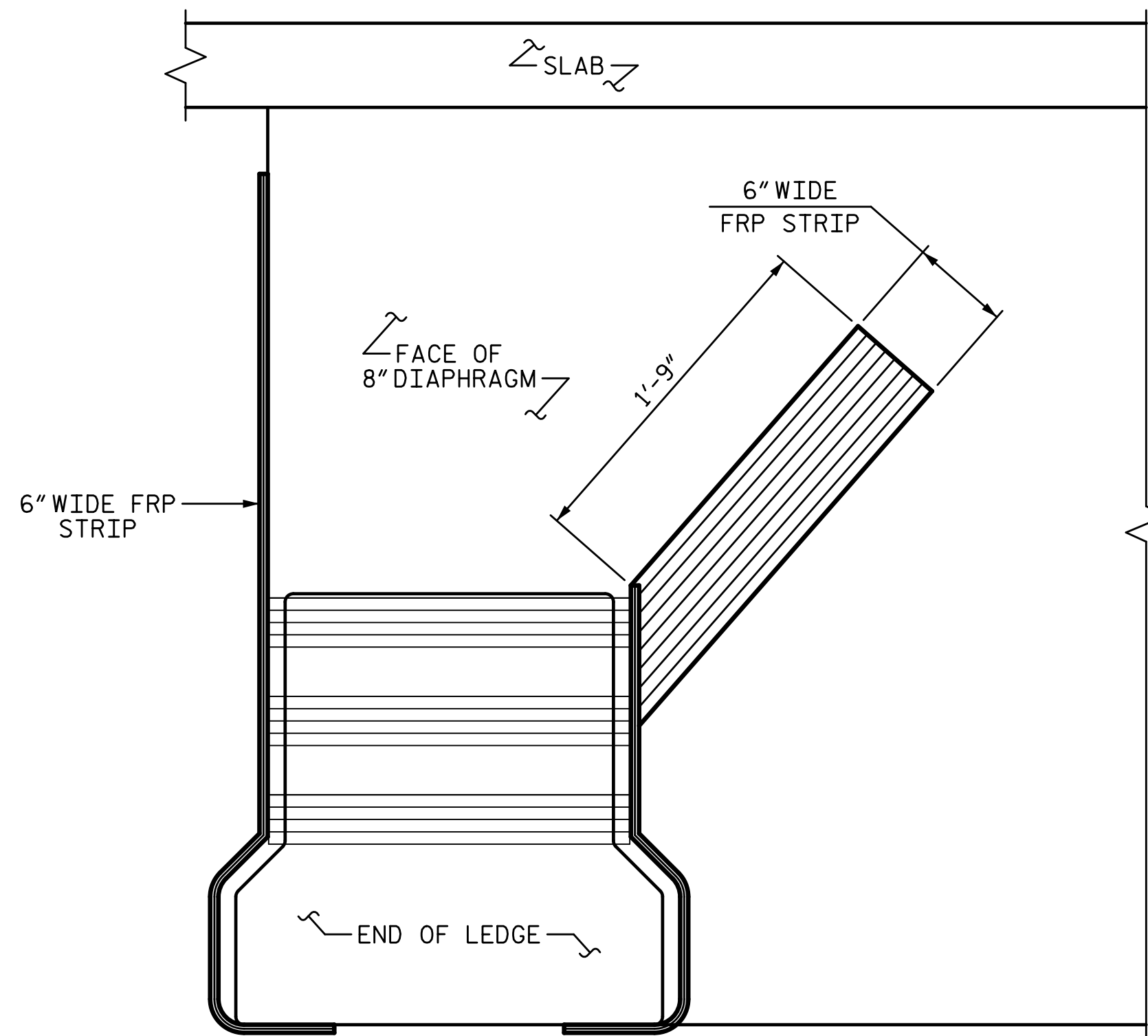


REVISIONS

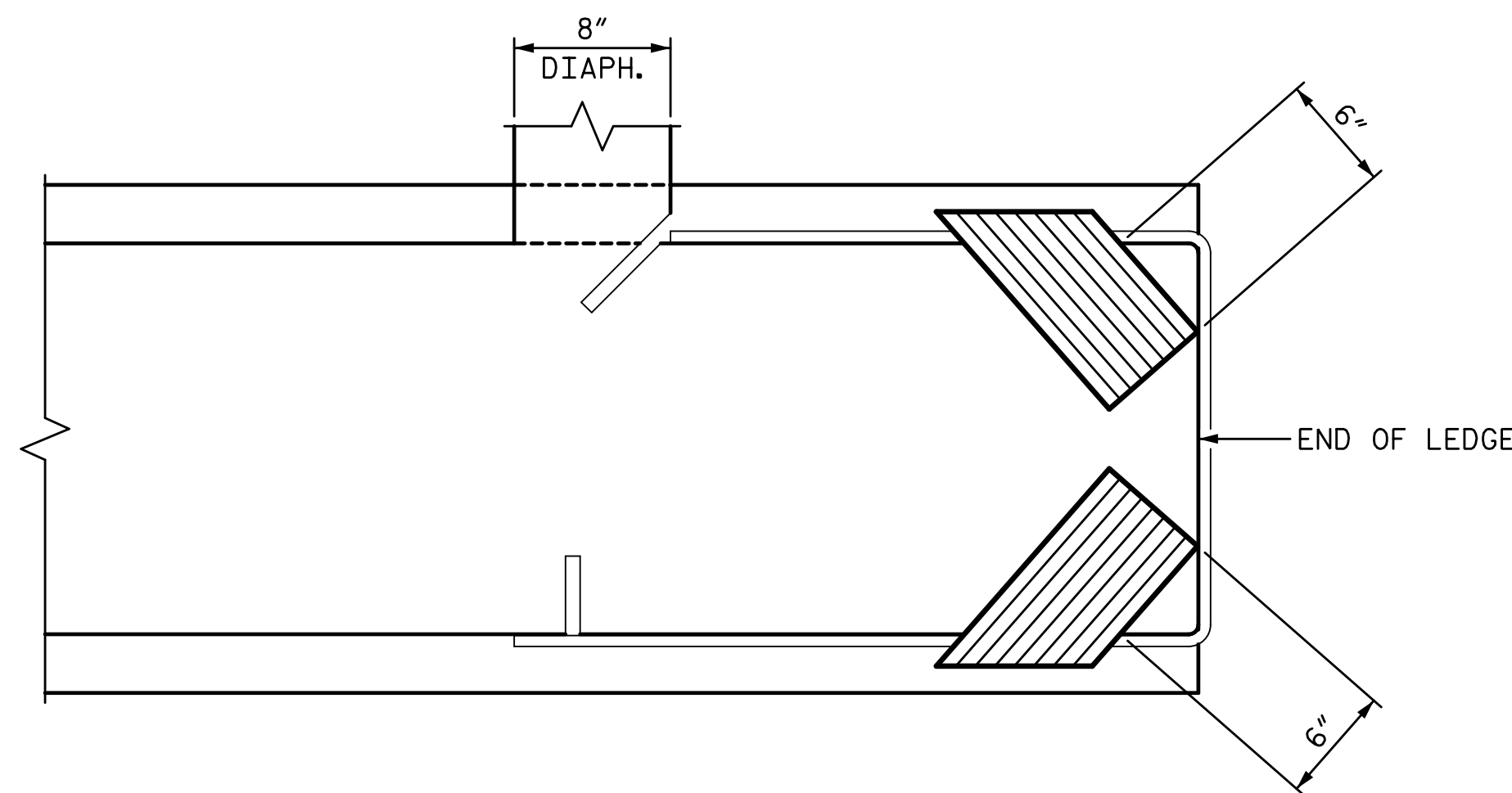
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| 1 | | | 3 | | | S2-59 |
| 2 | | | 4 | | | TOTAL SHEETS |

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DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 4-16

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VIEW X-X



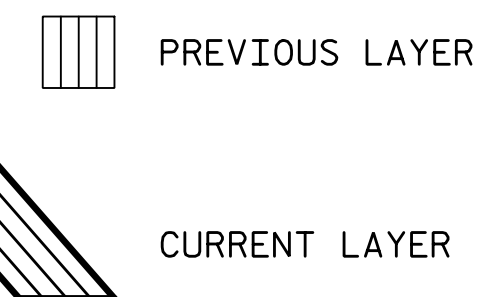
BOTTOM OF LEDGE

NOTES:

LAYER 1 NOT SHOWN FOR CLARITY.

| BILL OF MATERIAL | | |
|-----------------------------|-----------------|-----------------|
| | INTERIOR GIRDER | EXTERIOR GIRDER |
| | SF | SF |
| LAYER 1 | 206 | 85 |
| LAYER 2 | 124 | 58 |
| LAYER 3 | 59 | 28 |
| TOTAL | 389 | 171 |
| ** FRP STRENGTHENING SYSTEM | | 560 SF |

** QUANTITIES INCLUDED BOTH HINGE LOCATIONS FOR ALL INTERIOR AND EXTERIOR GIRDERS



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO.: 6

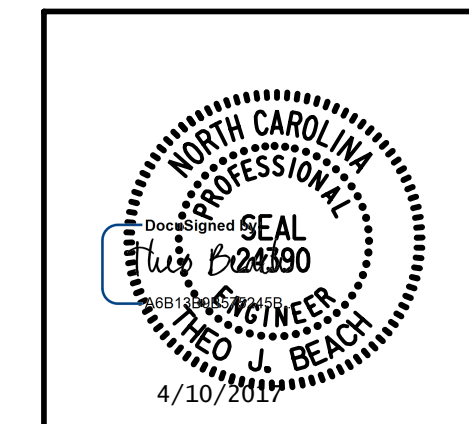
SHEET 15 OF 15

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 FRP STRIPS LAYER 3
 FOR
 EXTERIOR GIRDERS
 FRP HINGE REPAIR

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-60 |
| 1 | | | 3 | | | TOTAL SHEETS |
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|--|-------------------|
| DRAWN BY: <u>T. BANKOVICH</u> | DATE: <u>4-16</u> |
| CHECKED BY: <u>N.J. MABRY</u> | DATE: <u>4-16</u> |
| DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u> | DATE: <u>4-16</u> |

NOTES

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

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

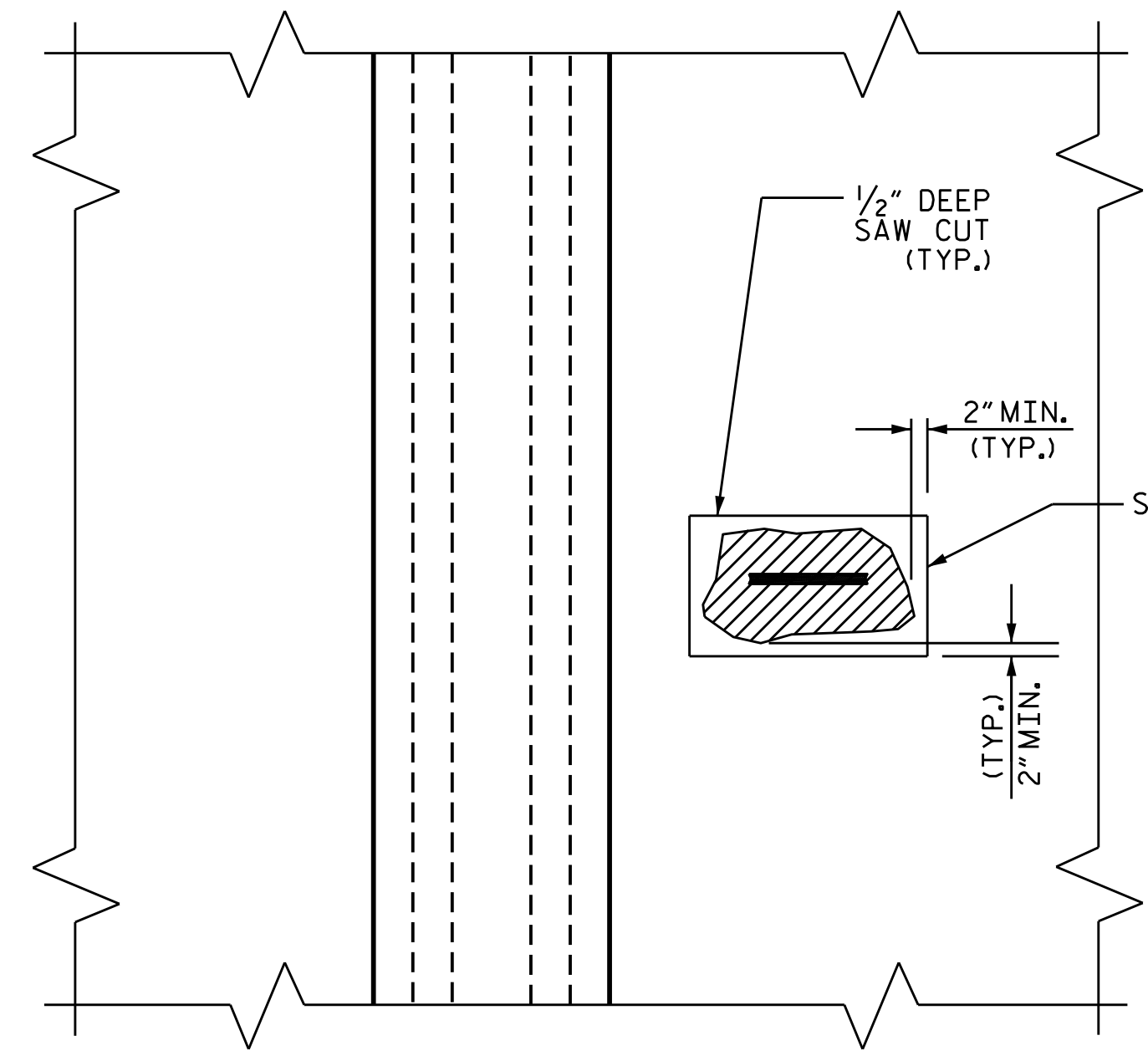
CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

ALL REPAIRS ON GIRDER SHALL USE PRESTRESSED CONCRETE GIRDER REPAIR MATERIAL.

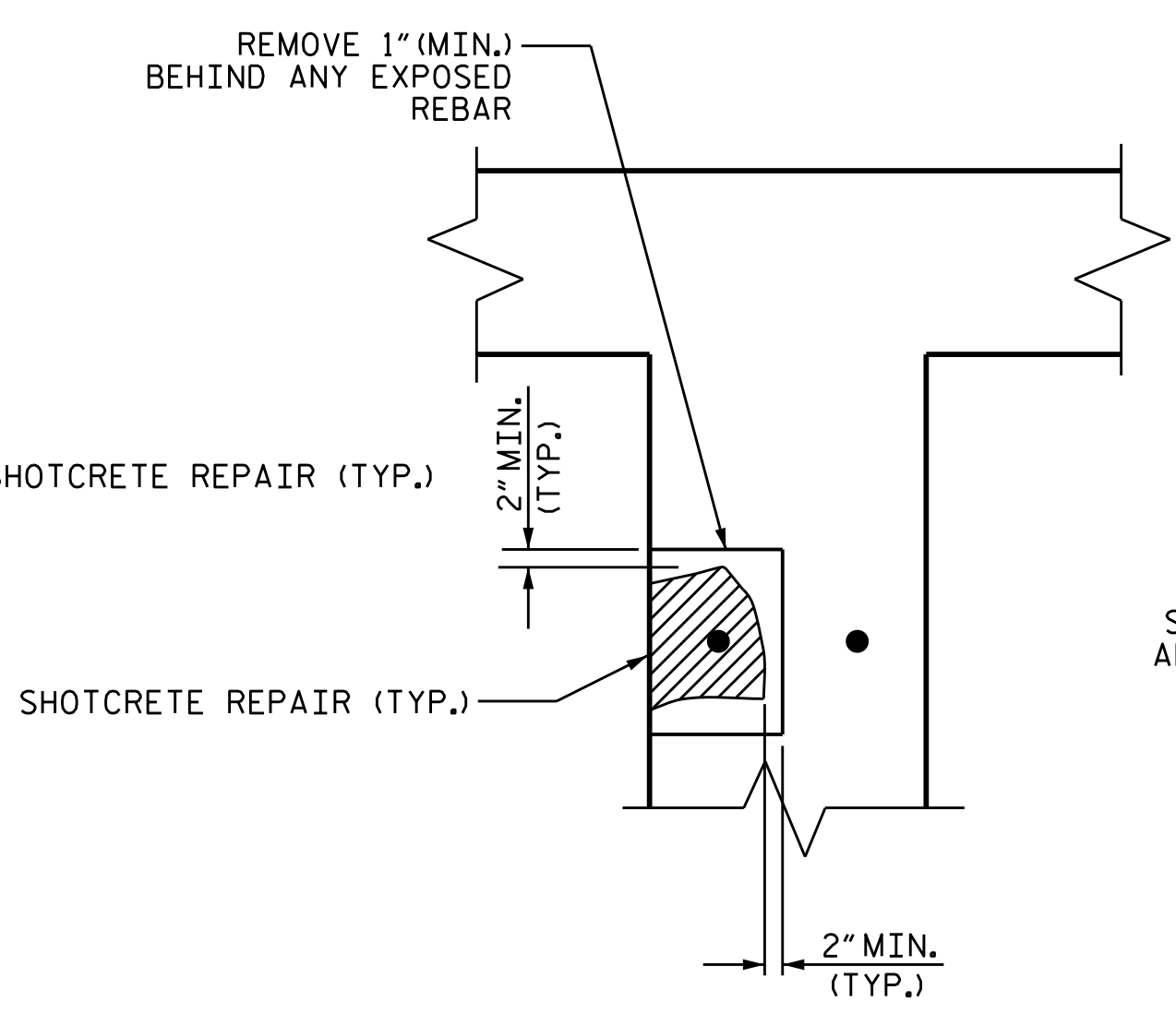
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

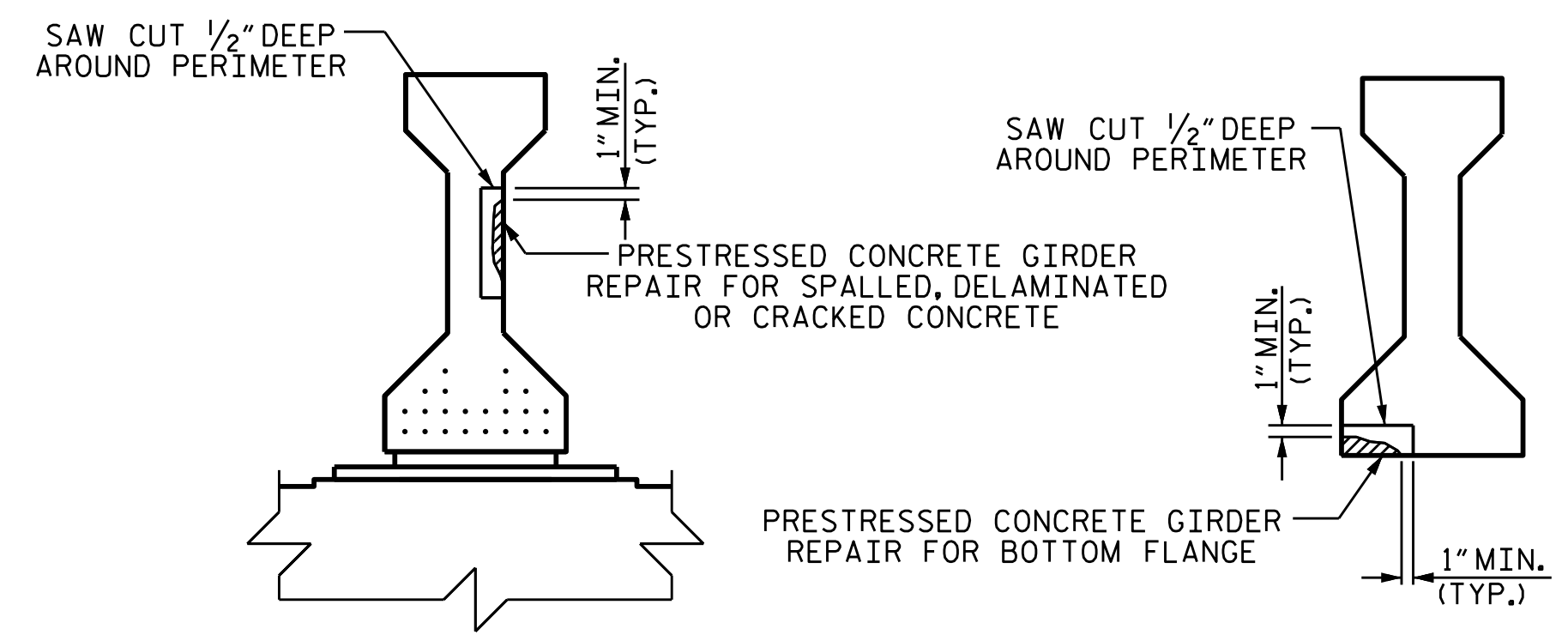
PRESTRESSED CONCRETE GIRDER REPAIR MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.



SECTION D-D



SECTION E-E

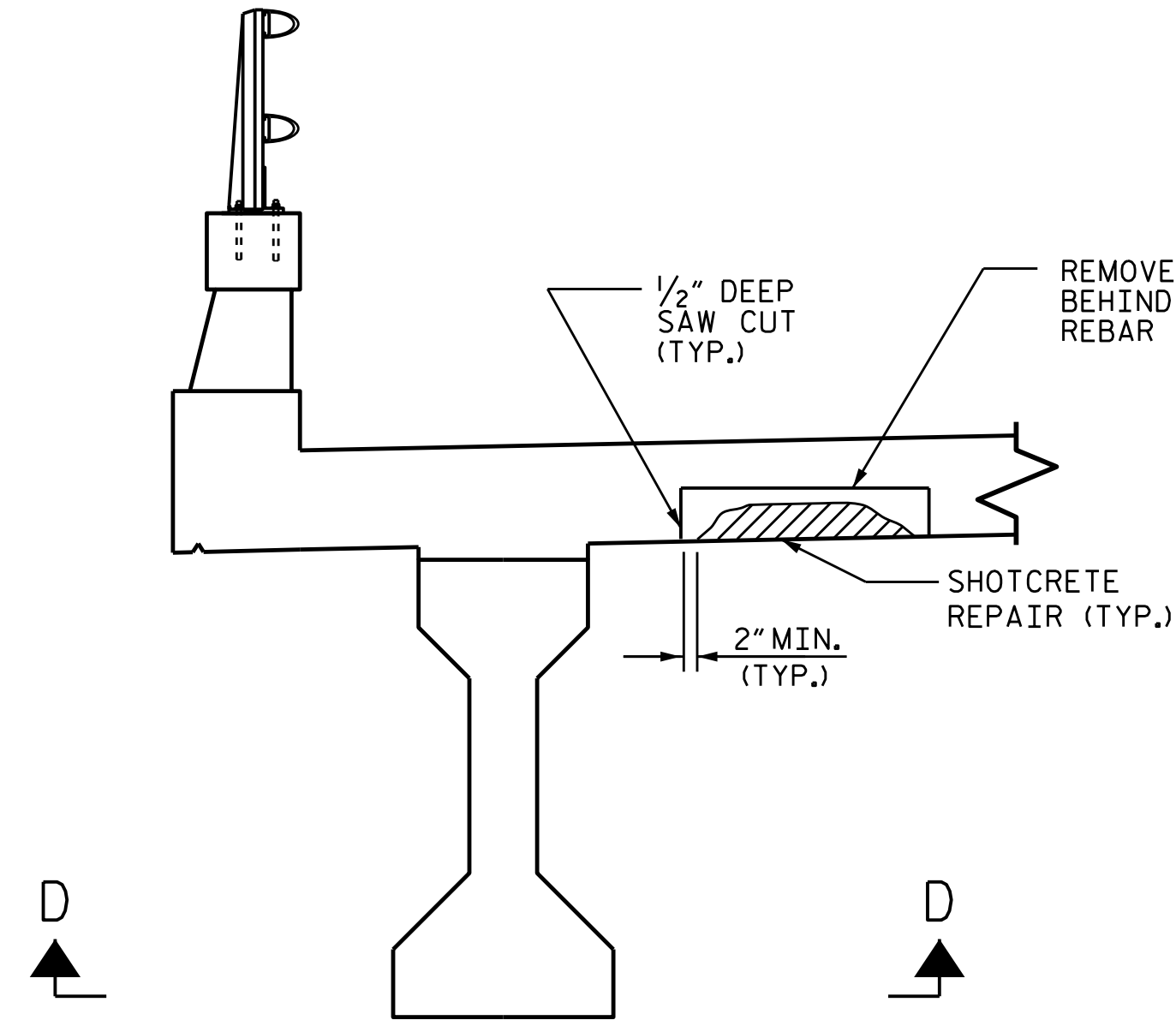


SECTION B-B

SECTION C-C

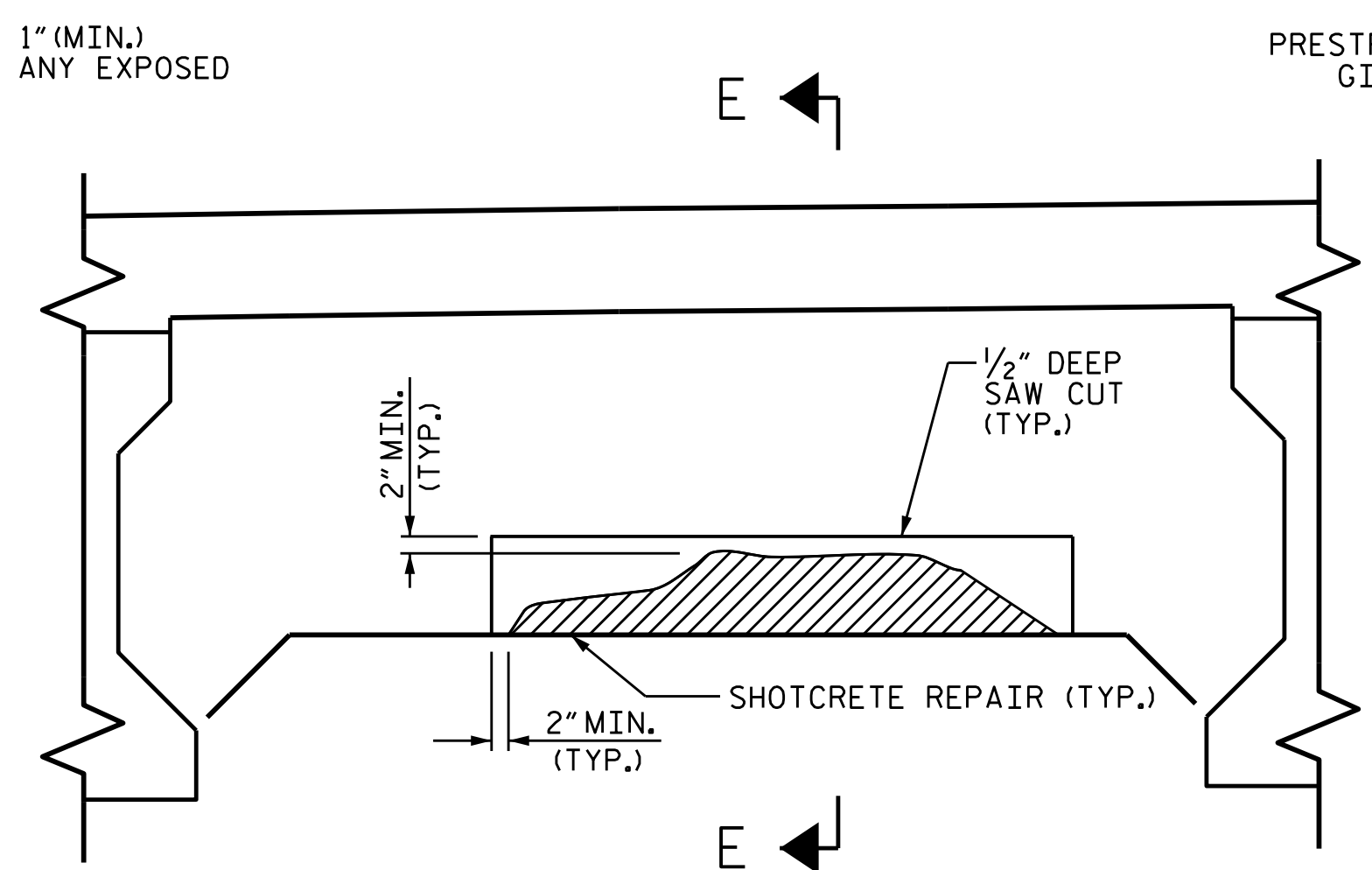
(IF MORE THAN HALF THE CIRCUMFERENCE OF REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESSED STRANDS.)

(ALL UNSOUND CONCRETE MUST BE REMOVED. USE EXTREME CARE TO NOT DAMAGE STRANDS. PRESTRESSED STRANDS NOT SHOWN FOR CLARITY.)



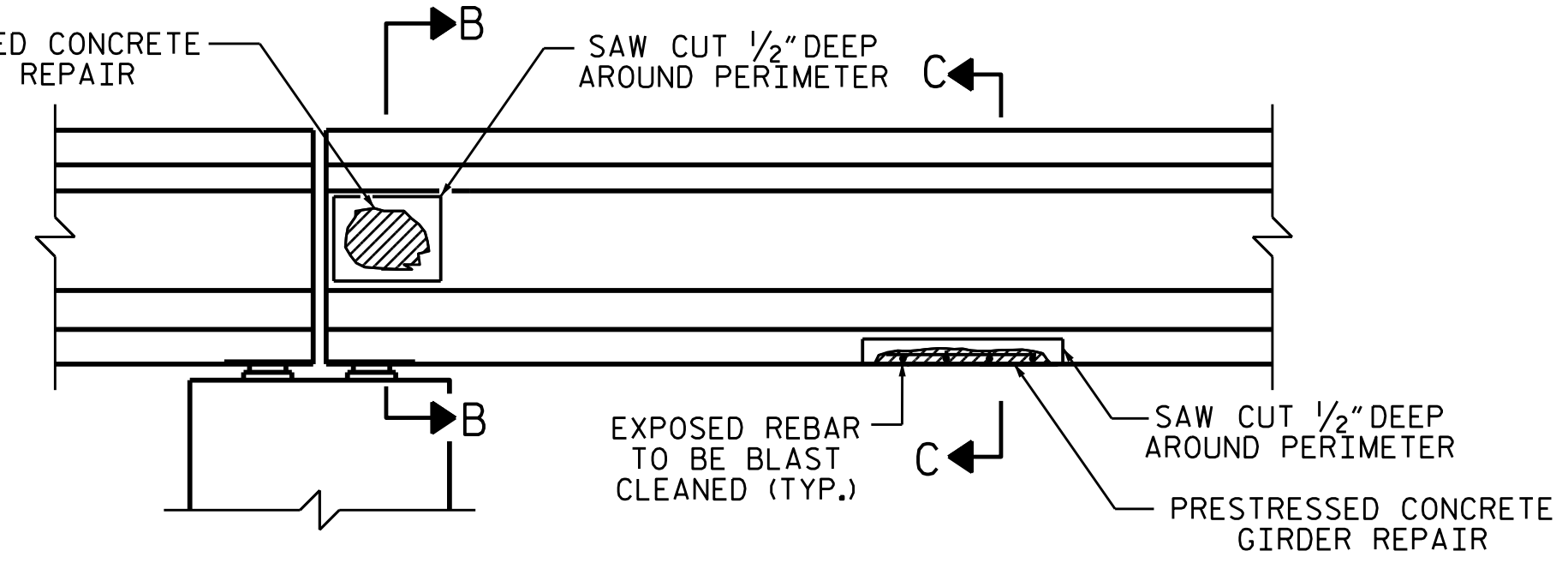
TYPICAL SECTION

UNDERDECK DETAILS



TYPICAL SECTION

INTERIOR DIAPHRAGM REPAIR DETAILS



ELEVATION

PRESTRESSED CONCRETE GIRDER REPAIR DETAIL

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL GIRDER,
 UNDERDECK &
 DIAPHRAGM
 REPAIR DETAILS**

DRAWN BY : R.WEISZ DATE : 2/2017
 CHECKED BY : P.BRYANT DATE : 2/2017

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-61 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | - |

| SPAN | TSA, PARTIAL LENGTH (NON-MONITORING) | | TSA, PARTIAL LENGTH (MONITORING) | |
|--------------|--------------------------------------|--------------|----------------------------------|--------------|
| | ESTIMATE (SF) | ACTUAL (SF) | ESTIMATE (SF) | ACTUAL (SF) |
| 1 | 238.6 | | - | |
| 2 | 257.2 | | 81.6 | |
| 3 | 344.5 | | - | |
| 4 | 329.2 | | - | |
| 5 | 272 | | - | |
| 6 | 286.3 | | - | |
| 7 | 239.7 | | 127.7 | |
| 8 | 238.6 | | - | |
| 9 | 238.6 | | - | |
| 10 | 238.6 | | - | |
| 11 | 238.6 | | - | |
| 12 | 238.6 | | - | |
| 13 | 238.6 | | - | |
| 14 | 238.6 | | - | |
| 15 | 238.6 | | - | |
| 16 | 238.6 | | - | |
| 17 | 238.6 | | - | |
| 18 | 238.6 | | - | |
| 19 | 238.6 | | - | |
| 20 | 376.5 | | - | |
| 21 | 528.3 | | - | |
| 22 | 663.2 | | - | |
| 23 | 281 | | - | |
| 24 | 533.9 | | - | |
| 25 | 399 | | - | |
| 26 | 387.8 | | - | |
| 27 | 337.2 | | - | |
| 28 | 370.9 | | - | |
| 29 | 281 | | - | |
| 30 | 376.5 | | - | |
| 31 | 399 | | - | |
| 32 | 420.1 | | - | |
| 33 | 1645.3 | | - | |
| 34 | 481.9 | | - | |
| 35 | 410.3 | | - | |
| 36 | 348.4 | | - | |
| 37 | 281 | | - | |
| 38 | 432.7 | | - | |
| 39 | 281 | | - | |
| 40 | 337.2 | | - | |
| 41 | 281 | | - | |
| 42 | 281 | | - | |
| 43 | 281 | | - | |
| 44 | 370.9 | | - | |
| 45 | 348.4 | | - | |
| 46 | 281 | | - | |
| 47 | 238.6 | | - | |
| 48 | 238.6 | | - | |
| 49 | 238.6 | | - | |
| 50 | 238.6 | | - | |
| 51 | 238.6 | | - | |
| 52 | 238.6 | | - | |
| 53 | 238.6 | | - | |
| 54 | 238.6 | | - | |
| 55 | 238.6 | | - | |
| 56 | 238.6 | | - | |
| 57 | 238.6 | | - | |
| 58 | 238.6 | | - | |
| 59 | 238.6 | | - | |
| TOTAL | | 19348 | | 209.3 |

NOTES:

ALL GIRDERS IN EVERY SPAN WILL RECEIVE THE TSA COATING ON THE FIRST 5' FROM EACH END OF THE SPAN. ADDITIONALLY, EACH REPAIR AREA WILL RECEIVE THE TSA COATING.

SPAN 2, GIRDER 3 AND SPAN 7, GIRDER 3 WILL BE REQUIRED TO BE MONITORING LOCATIONS.

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 1 OF 7



DocuSigned by:
Greg Dickey
884E488CE58486...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**REPAIRS TO
PRESTRESSED CONCRETE
GIRDERS WITH THERMAL
SPRAY ANODE CATHODIC
PROTECTION
(TSA COATING)**

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-62 |
| 2 | | | 4 | | | |

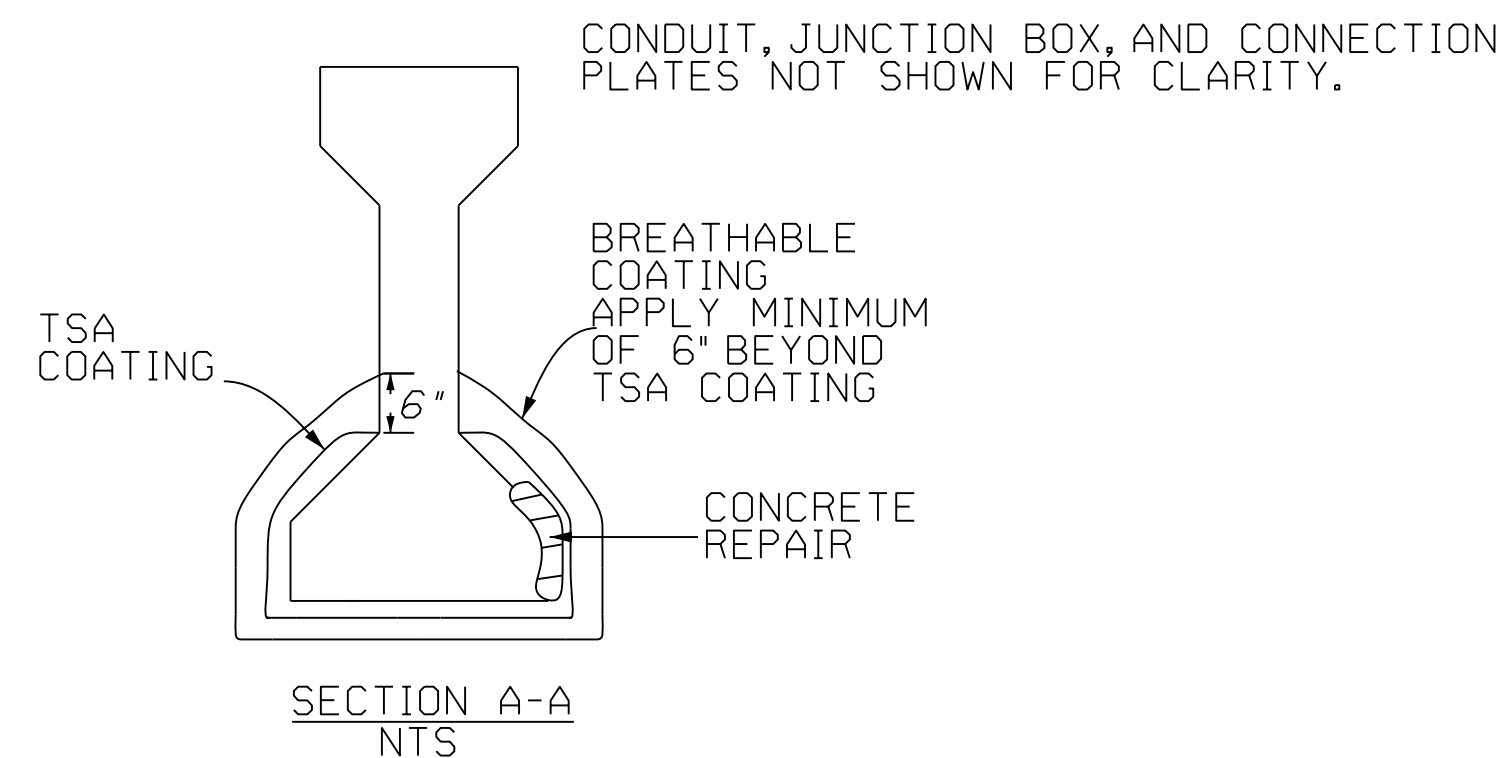
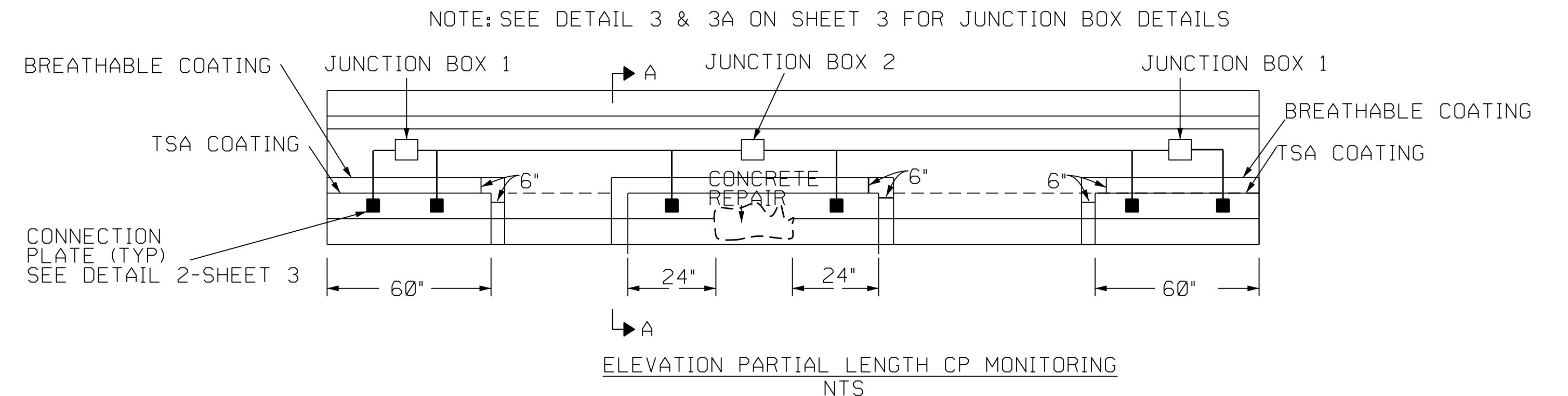
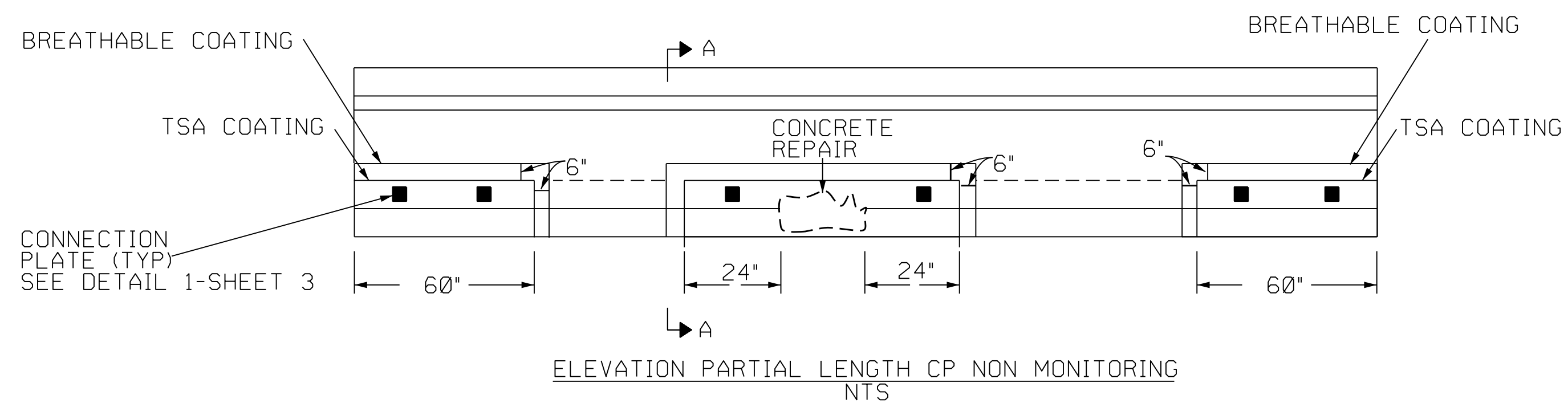
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CHECKED BY : G.W.DICKEY DATE : 2/2017

DRAWN: KE 12/29/16
CHECKED: SV 12/29/16



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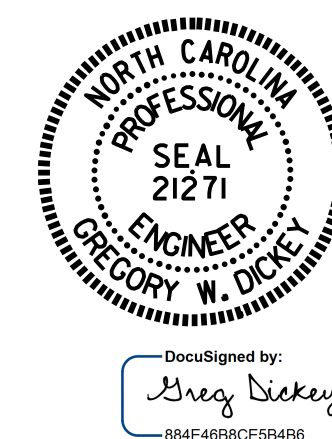


NOTES:

1. FOR MONITORING PARTIAL LENGTH, TWO REFERENCE ELECTRODES SHALL BE INSTALLED PER GIRDER, ONE WITHIN THE FIRST 5' OF THE GIRDER END, THE OTHER NEAR THE CONCRETE REPAIR AREA. THE EXACT LOCATIONS SHALL BE DECIDED BY THE CATHODIC PROTECTION SPECIALIST IN FIELD.
2. ALWAYS EXTEND TSA COATING AREA 24" BEYOND CONCRETE DAMAGE AREA. EXTEND BREATHABLE COATING 6" BEYOND THE EDGE OF TSA COATING.

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 2 OF 7



DocuSigned by:
 Greg Dickey
 884E488CE58486...

| | | | | | | |
|---|-----|-------|-----|-----|-------|--------------|
| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH | | | | | | SHEET NO. |
| REPAIRS TO PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE CATHODIC PROTECTION (TSA COATING) | | | | | | S2-63 |
| REVISIONS | | | | | | TOTAL SHEETS |
| NO. | BY: | DATE: | NO. | BY: | DATE: | |
| 1 | | | 3 | | | 4 |
| 2 | | | 4 | | | |

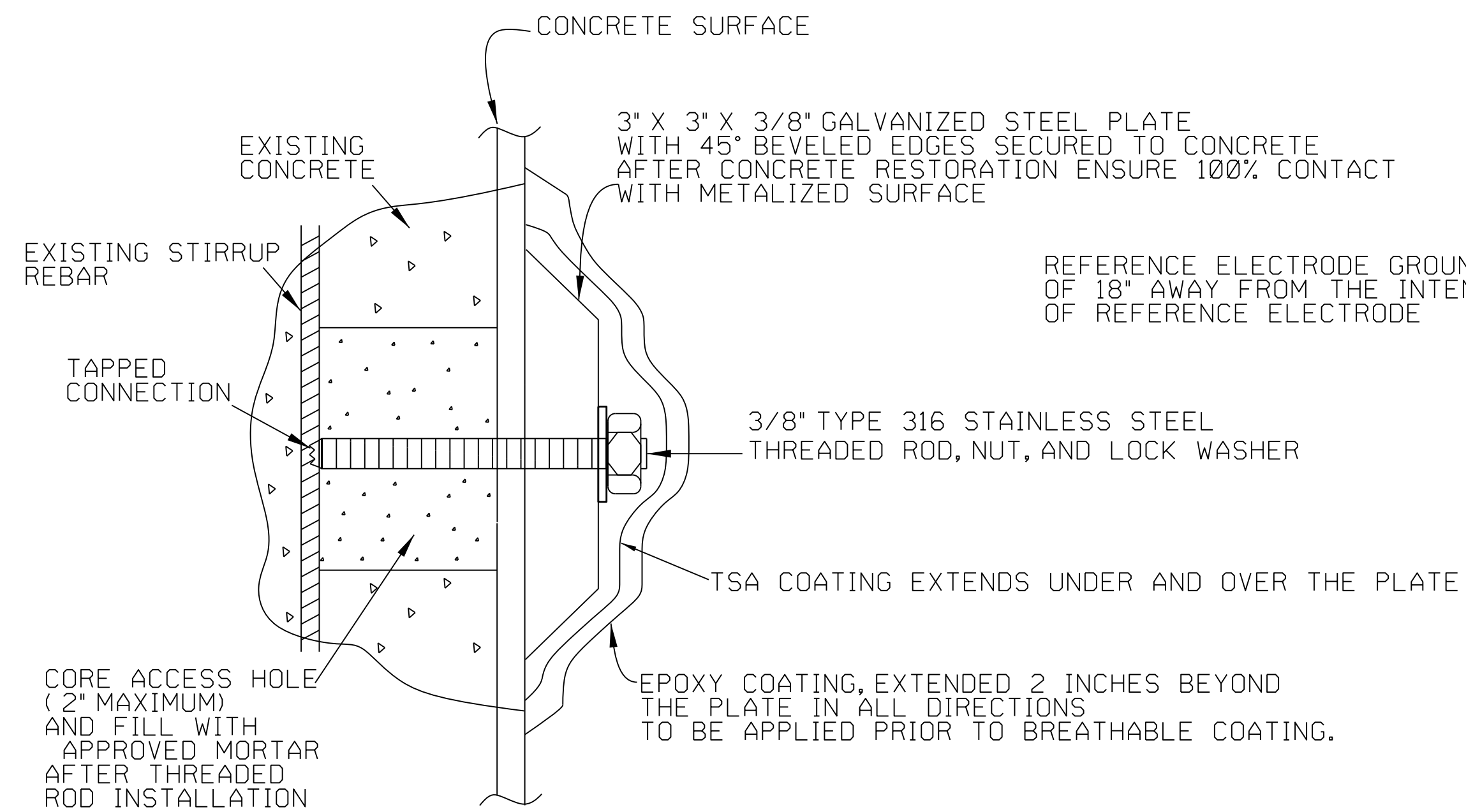
CHECKED BY : G.W.DICKEY DATE : 2/2017

DRAWN: KE 12/29/16
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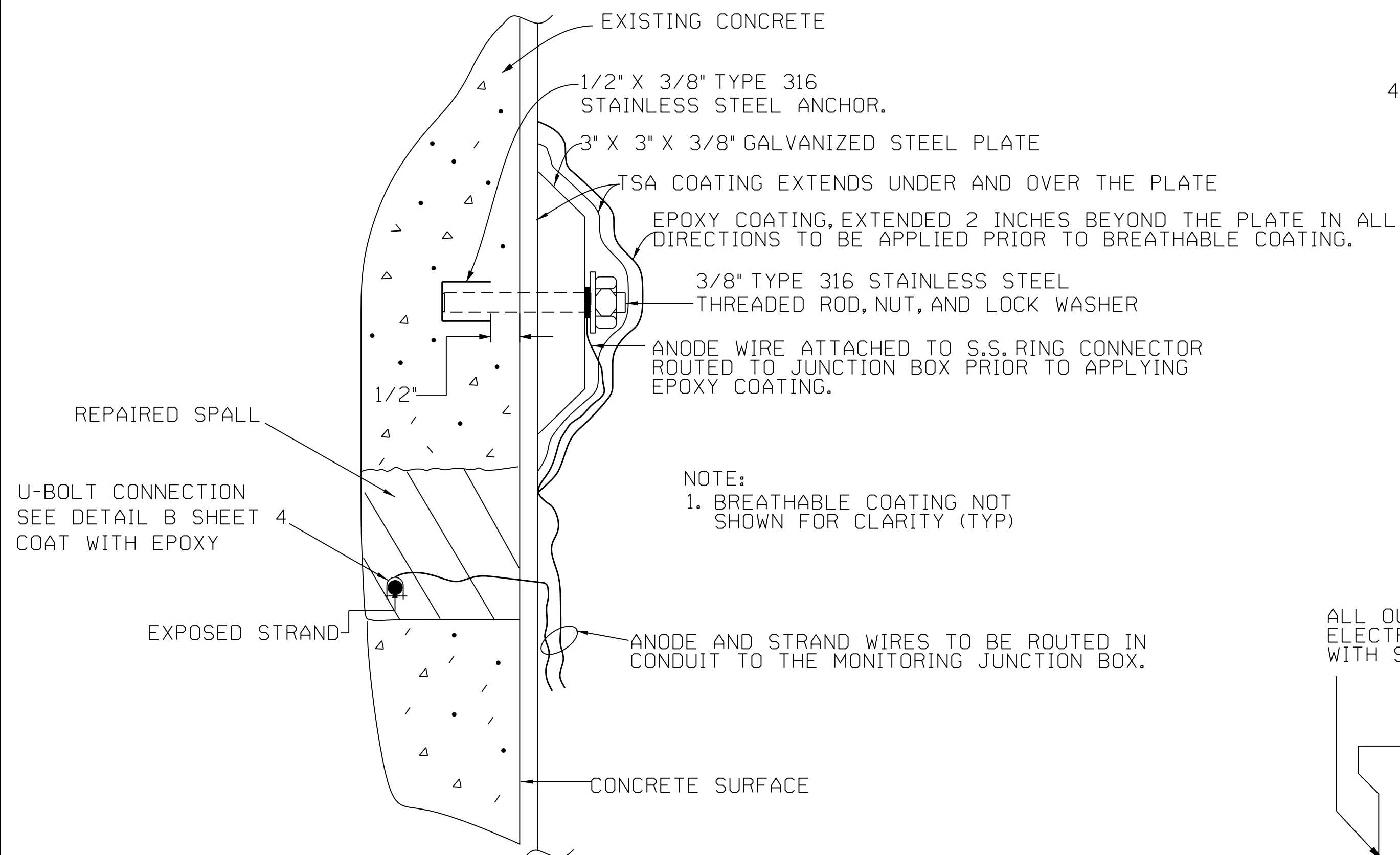


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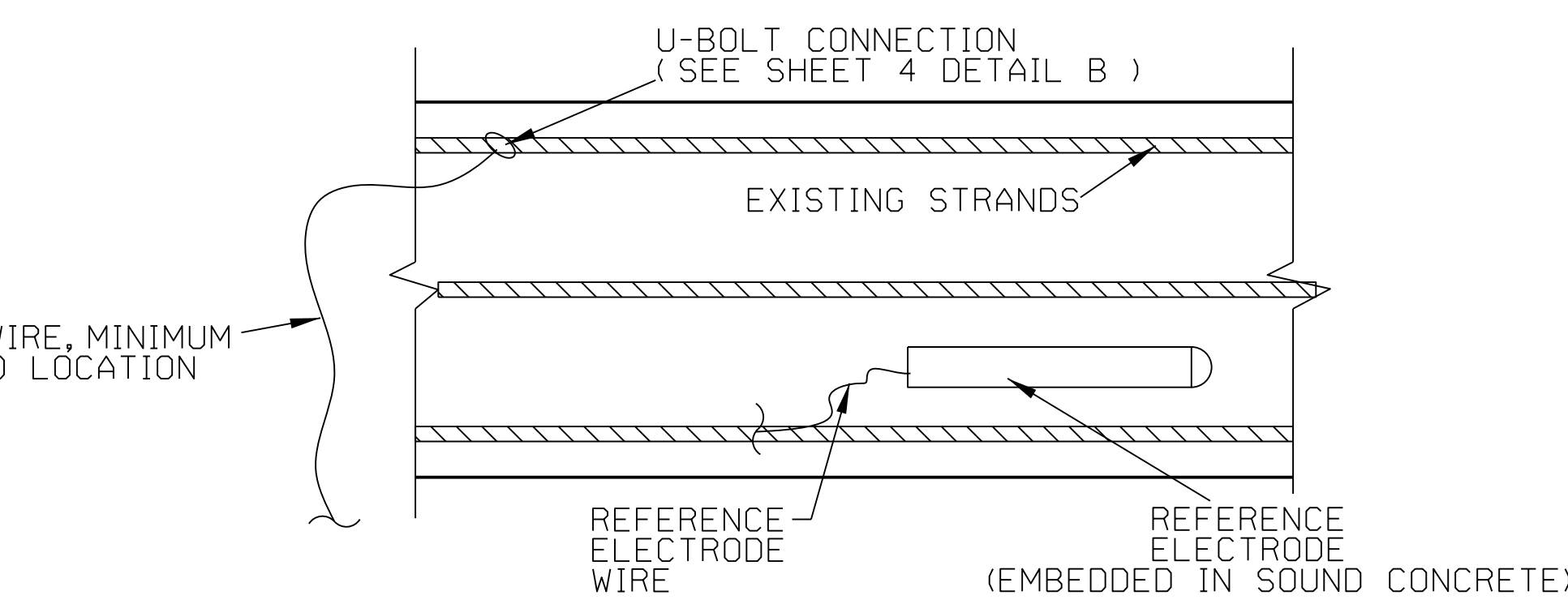
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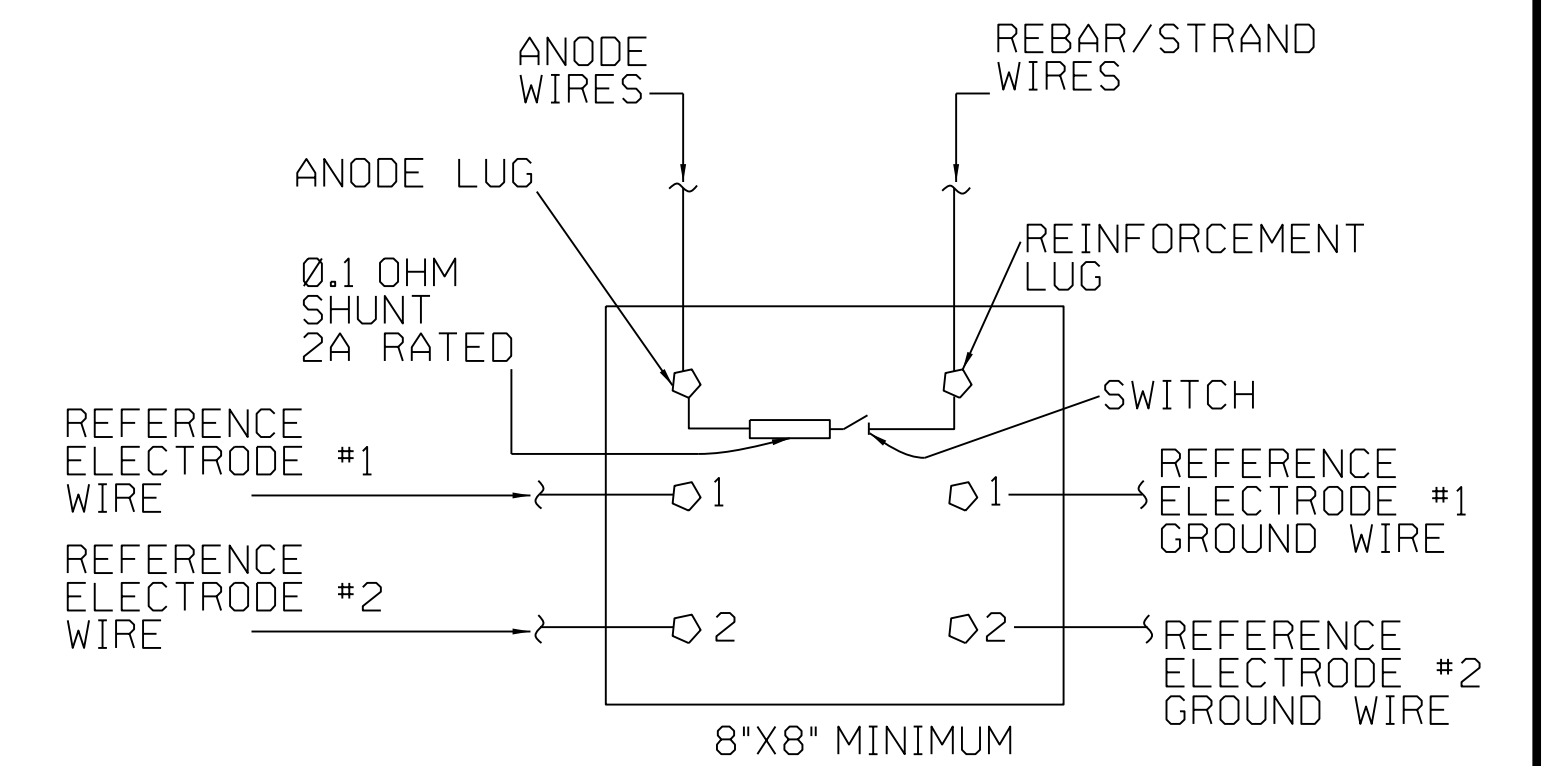
DETAIL 1-ANODE CONNECTION PLATE DETAIL-CP NON-MONITORING ZONE-FULL & PARTIAL LENGTH
NTS



DETAIL 2-ANODE CONNECTION PLATE DETAIL - CP MONITORING ZONE-FULL & PARTIAL LENGTH
NTS



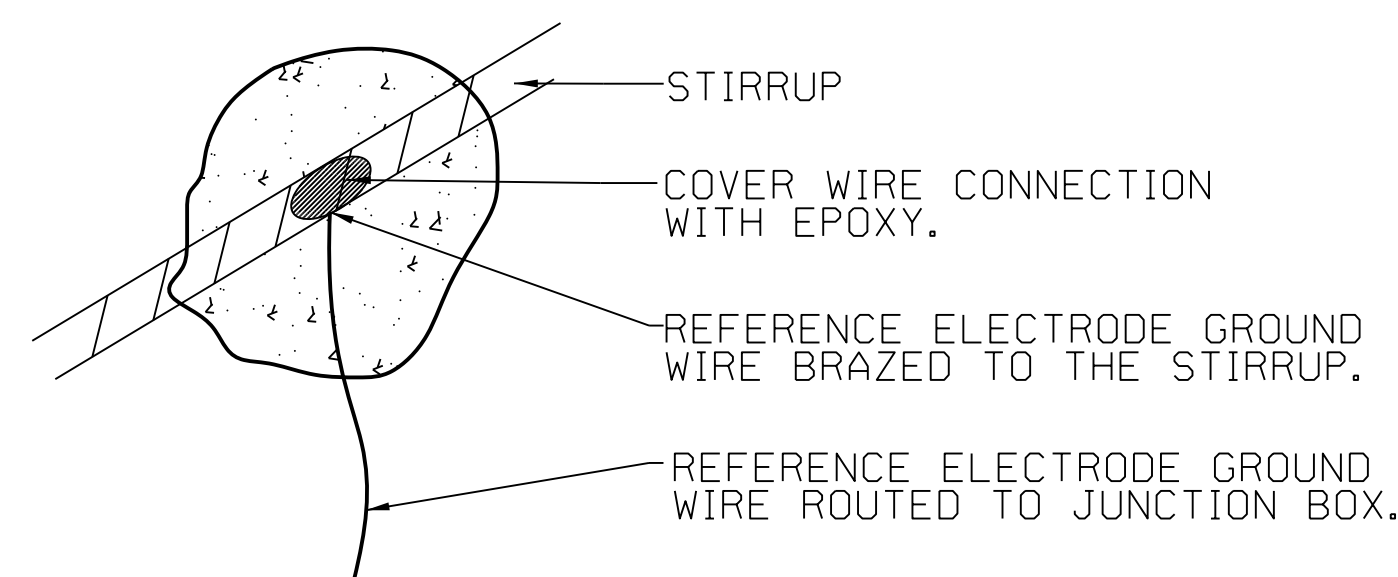
DETAIL 7 REFERENCE ELECTRODE INSTALLATION -MONITORING GIRDER FULL & PARTIAL LENGTH
NTS



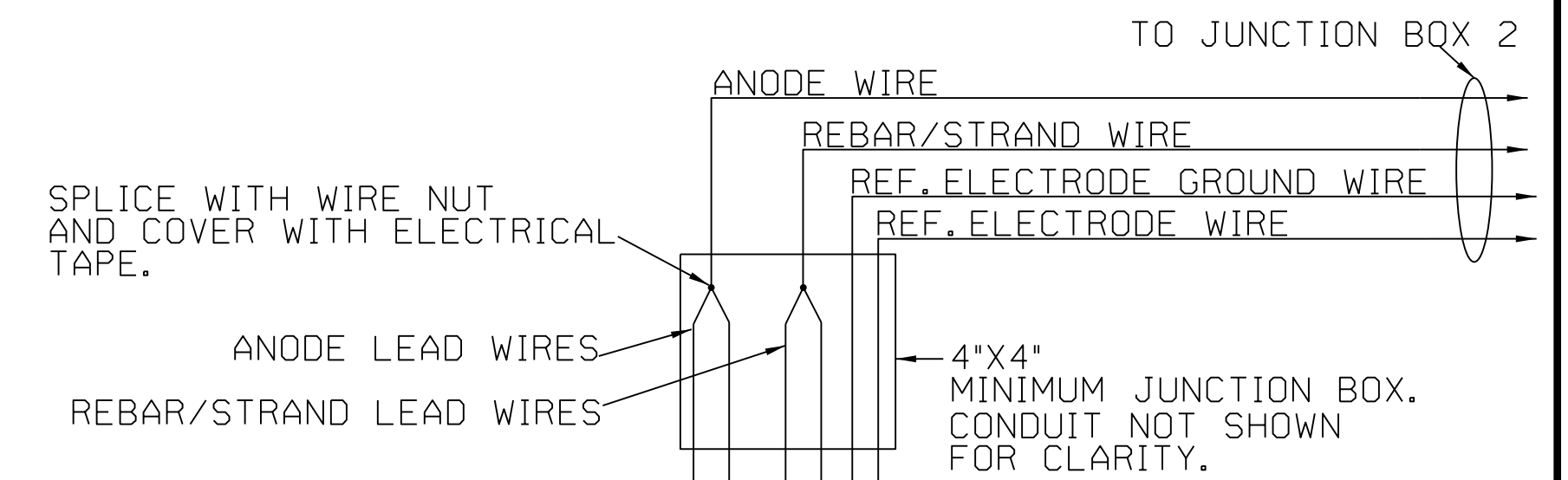
DETAIL 3 -MONITORING JUNCTION BOX 2 DIAGRAM
NTS

NOTES:

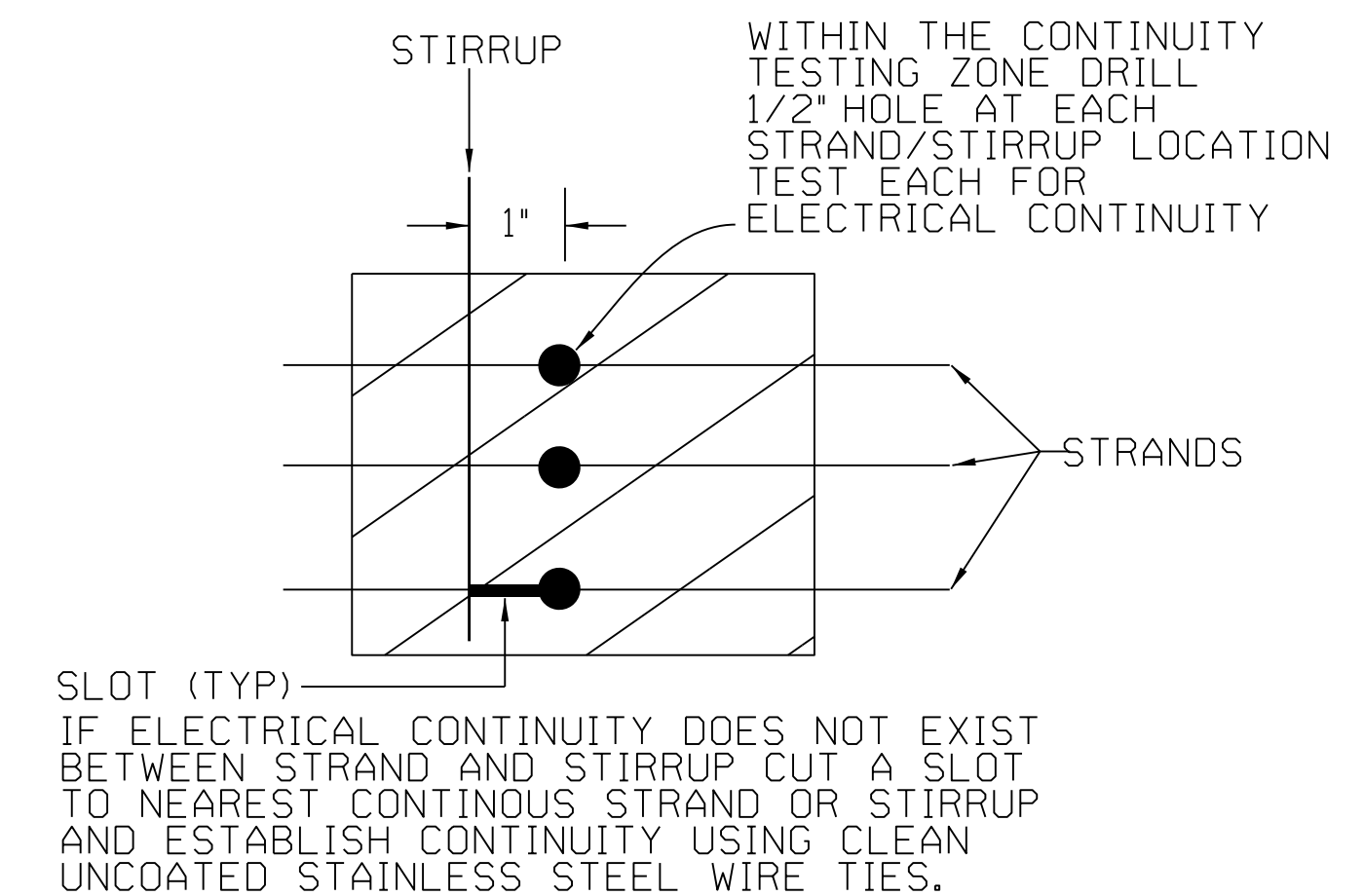
1. THE REFERENCE ELECTRODE GROUND WIRE IS ALLOWED TO BE BRAZED TO A STIRRUP, PROVIDED THAT THE BRAZING CONNECTION IS A MINIMUM OF 18" AWAY FROM THE INTENDED REFERENCE ELECTRODE INSTALLATION LOCATION (SEE DETAIL 6).
2. DO NOT EXPOSE STRAND/REBAR/STIRRUP WHILE INSTALLING REFERENCE ELECTRODE.
3. THE REFERENCE ELECTRODE SHALL BE INSTALLED PARALLEL TO STRANDS. FILL THE EXCAVATION HOLE WITH APPROVED PORTLAND CEMENT PATCHING GROUT WITH 15,000 OHM-CM RESISTIVITY OR LESS. THE REFERENCE ELECTRODE SHALL BE FULLY ENCAPSULATED WITH CEMENTITIOUS BACKFILL MATERIAL. NO VOIDS SHALL BE PERMITTED.
4. THE WIRES FOR THE REFERENCE ELECTRODE SHALL BE ROUTED INSIDE THE CONDUIT TO THE JUNCTION BOX WITHOUT SPLICING.



DETAIL 6 - REFERENCE ELECTRODE GROUNDING DETAIL
NTS

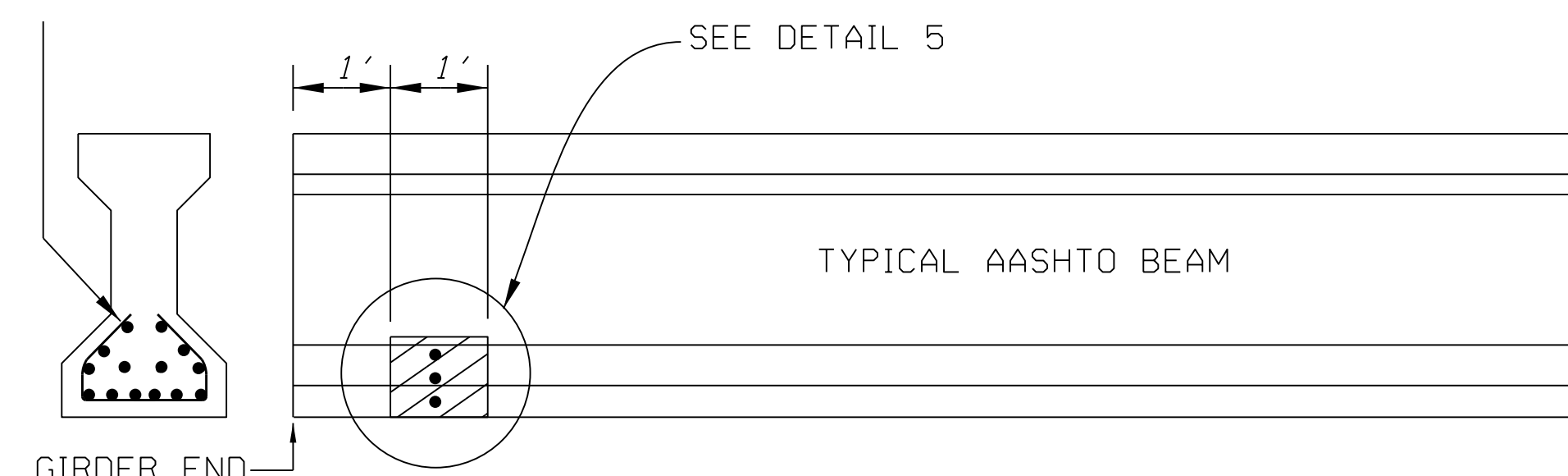


DETAIL 3A-JUNCTION BOX 1 DIAGRAM
NTS



DETAIL 5
NTS

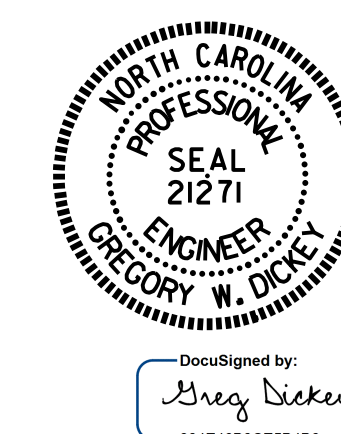
ALL OUTER STRANDS ARE TO BE ELECTRICALLY CONTINUOUS WITH STIRRUP.



DETAIL 4 -TYPICAL CONTINUITY TESTING AND CORRECTION ZONE-FULL & PARTIAL LENGTH
NTS

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 3 OF 7



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
REPAIRS TO
PRESTRESSED CONCRETE
GIRDERS WITH THERMAL
SPRAY ANODE CATHODIC
PROTECTION
(TSA COATING)

| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S2-64 |
| 2 | | | 4 | | | |

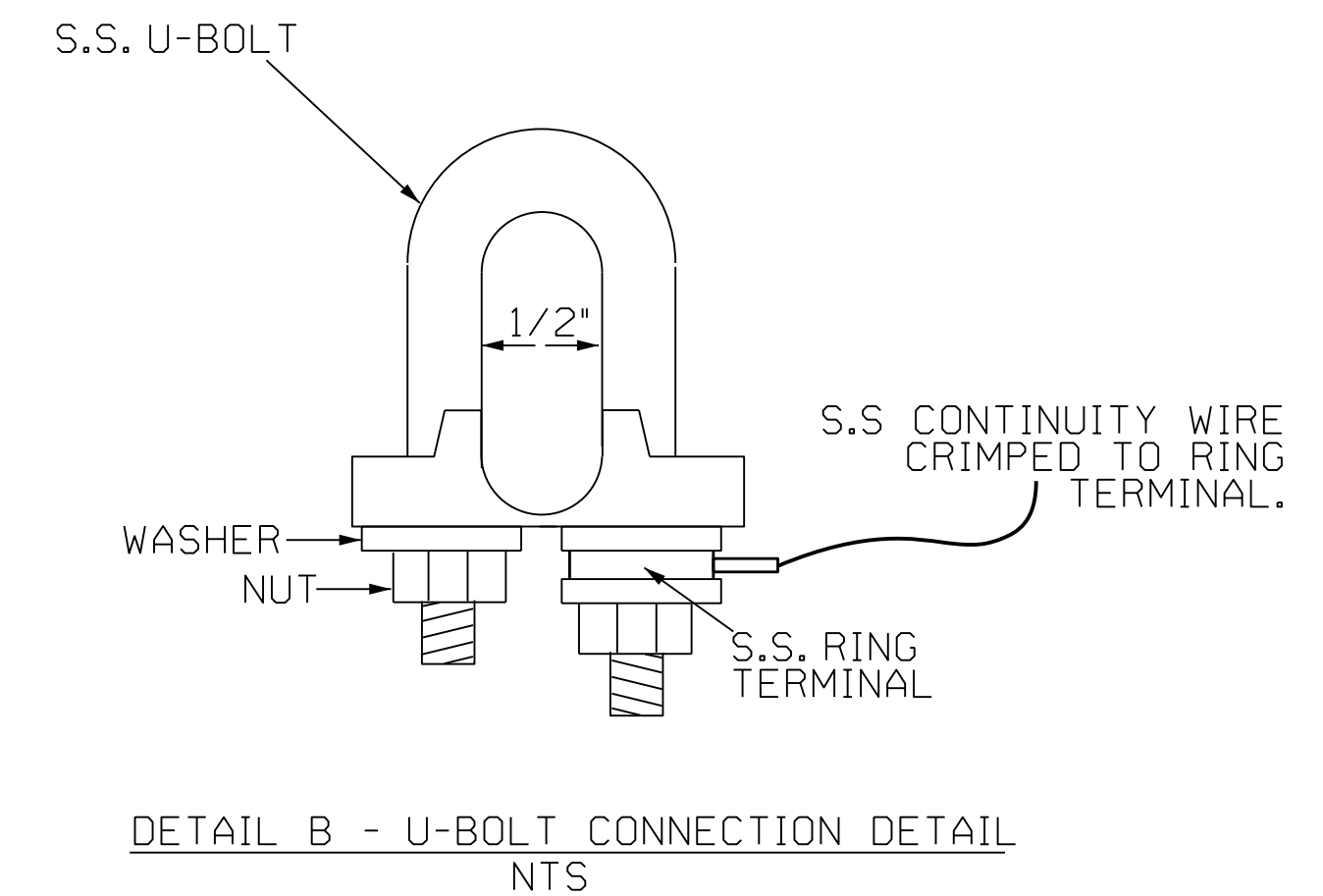
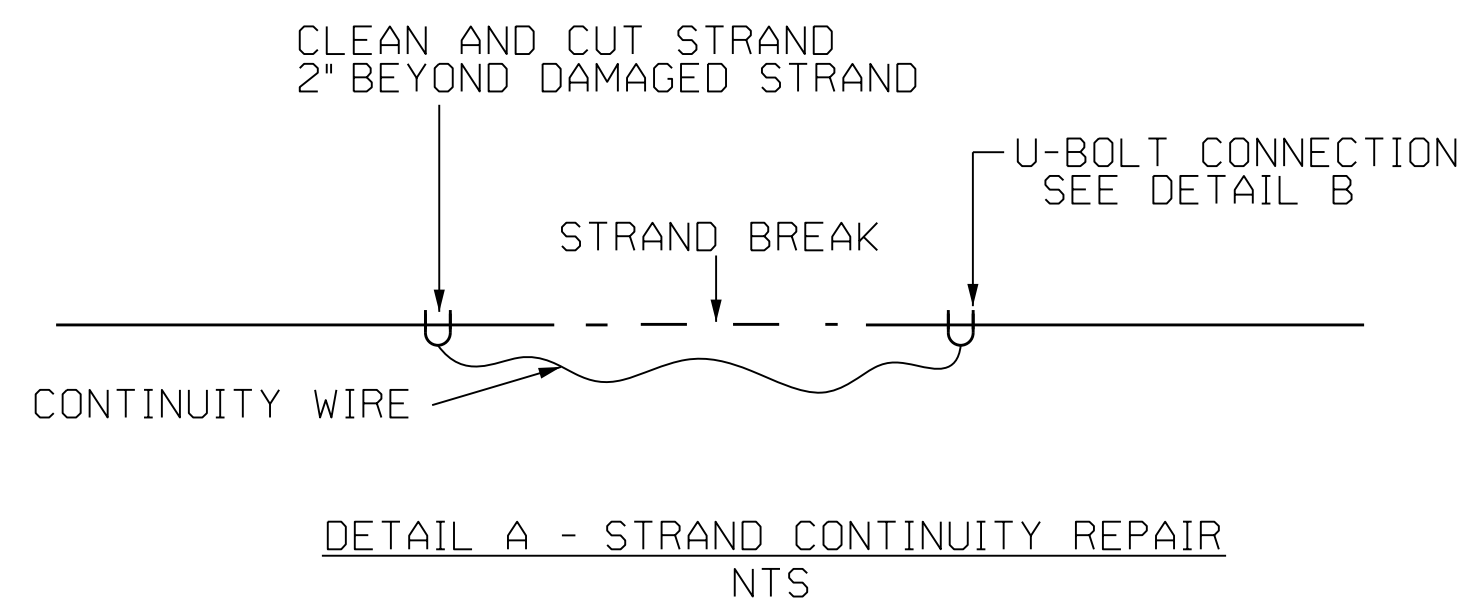
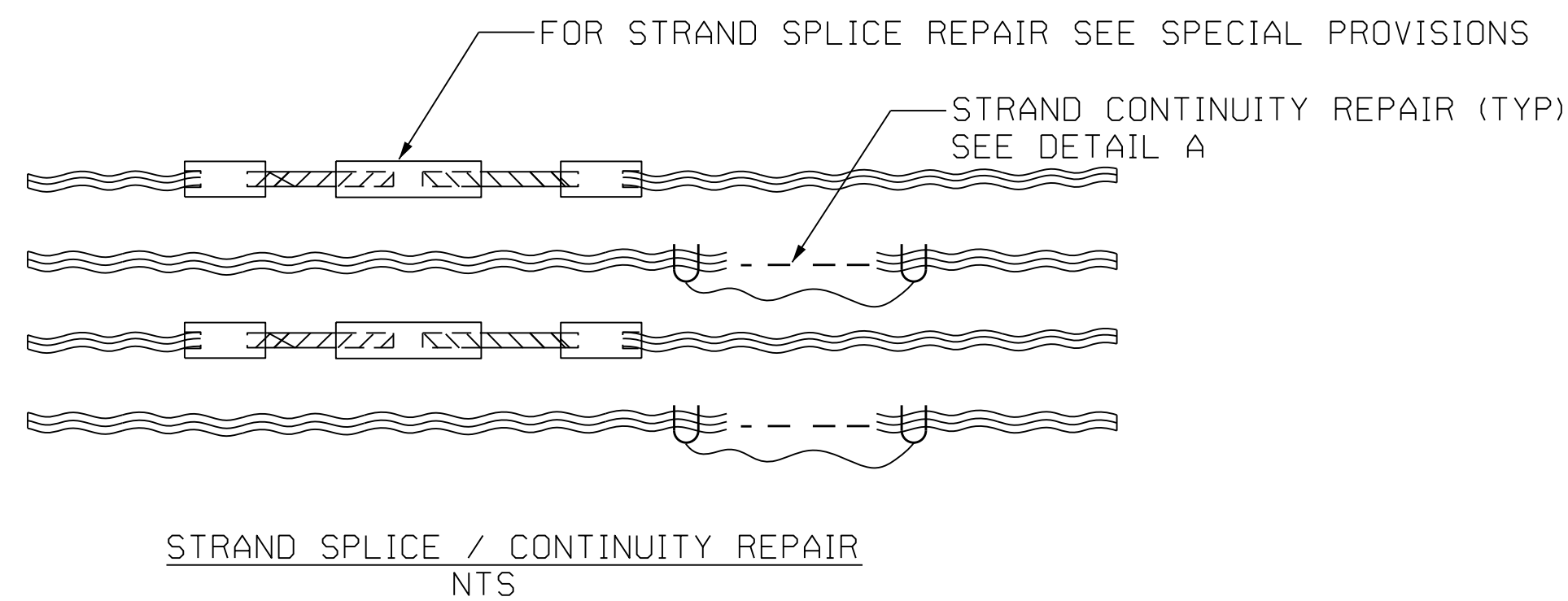
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NOTES:

1. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. IF EXISTING STRAND IS DAMAGED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR ADDITIONAL INSTRUCTIONS ON THE APPLICABLE REPAIR METHOD.
2. STRAND LOSS GREATER THAN 50% SHALL BE TREATED AS BROKEN.

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 4 OF 7



DocuSigned by:
Greg Dickey
884E488CE58486...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STRAND CONTINUITY
DETAILS

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-65 |
| 2 | | | 4 | | | |

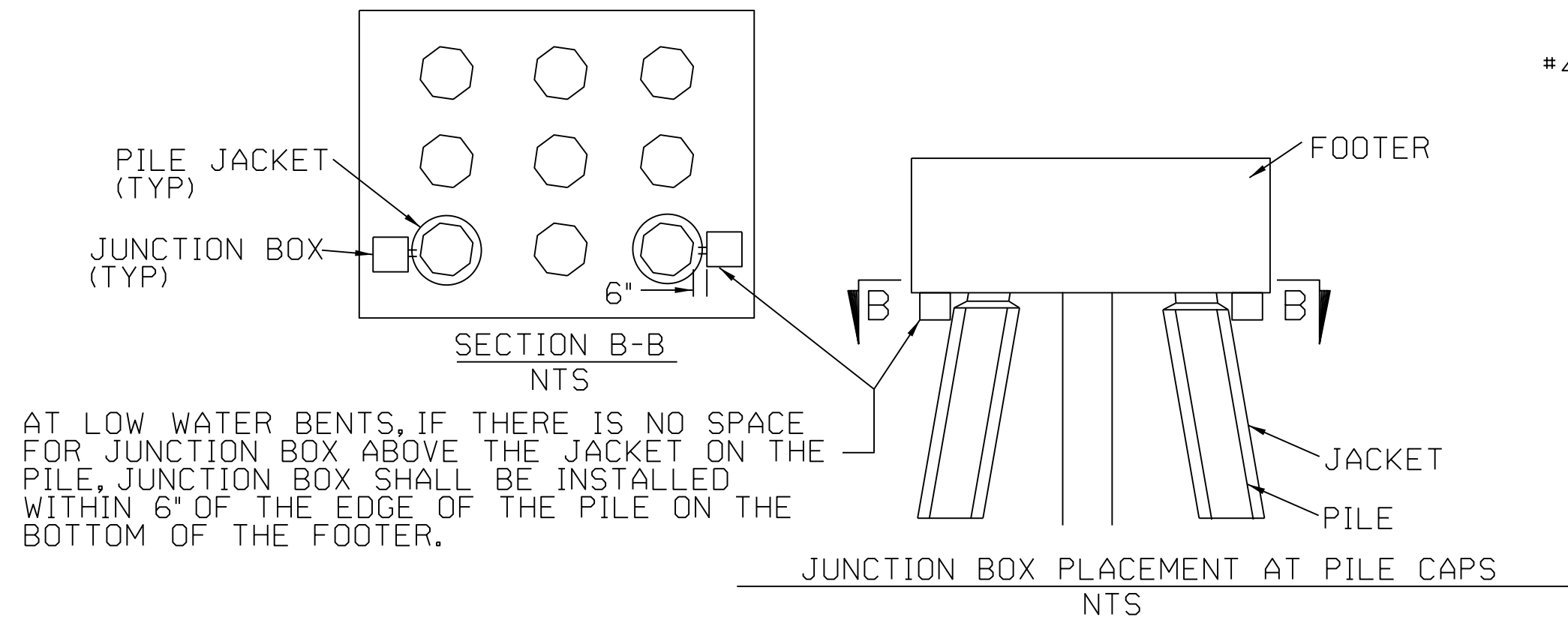
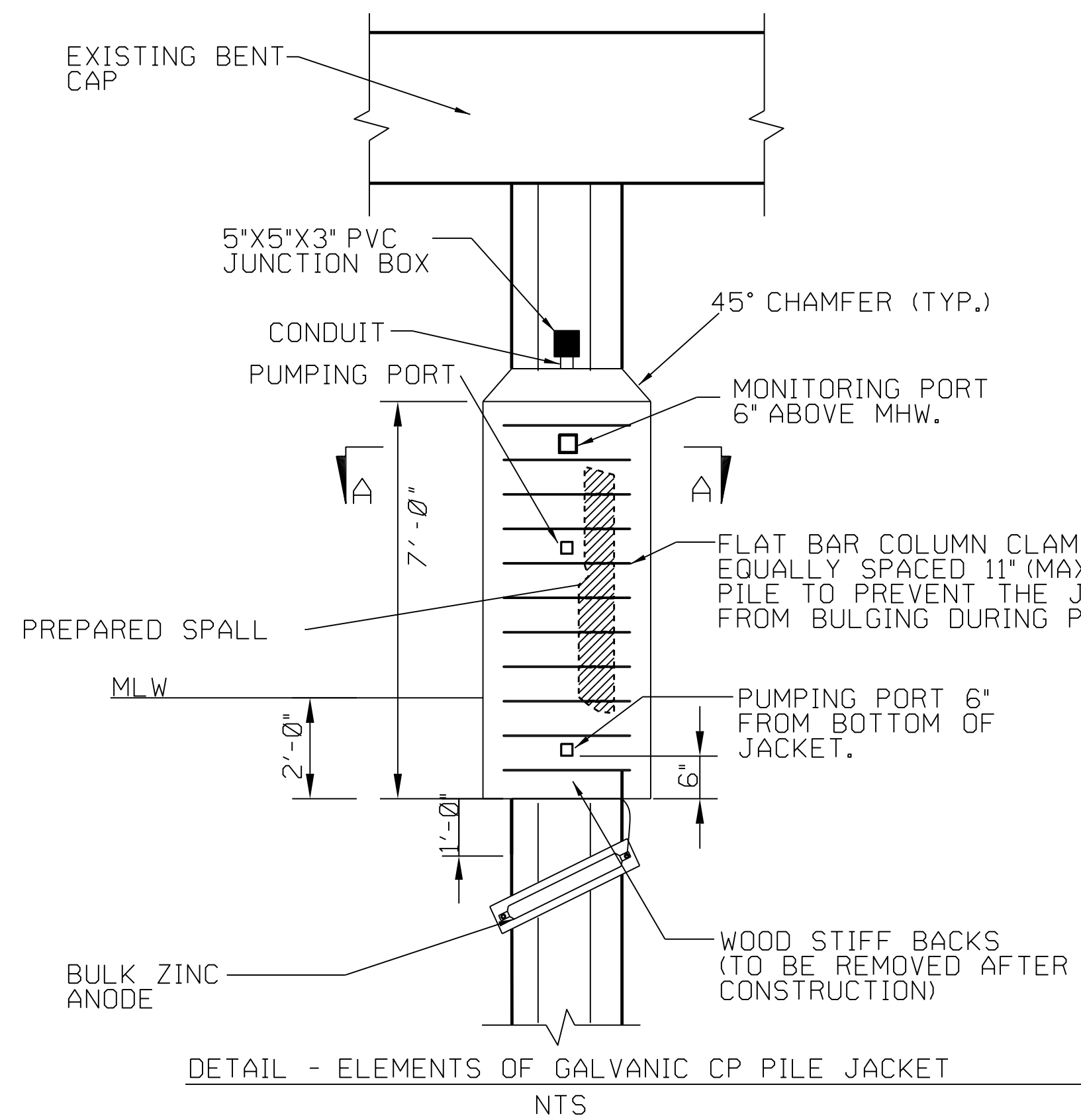
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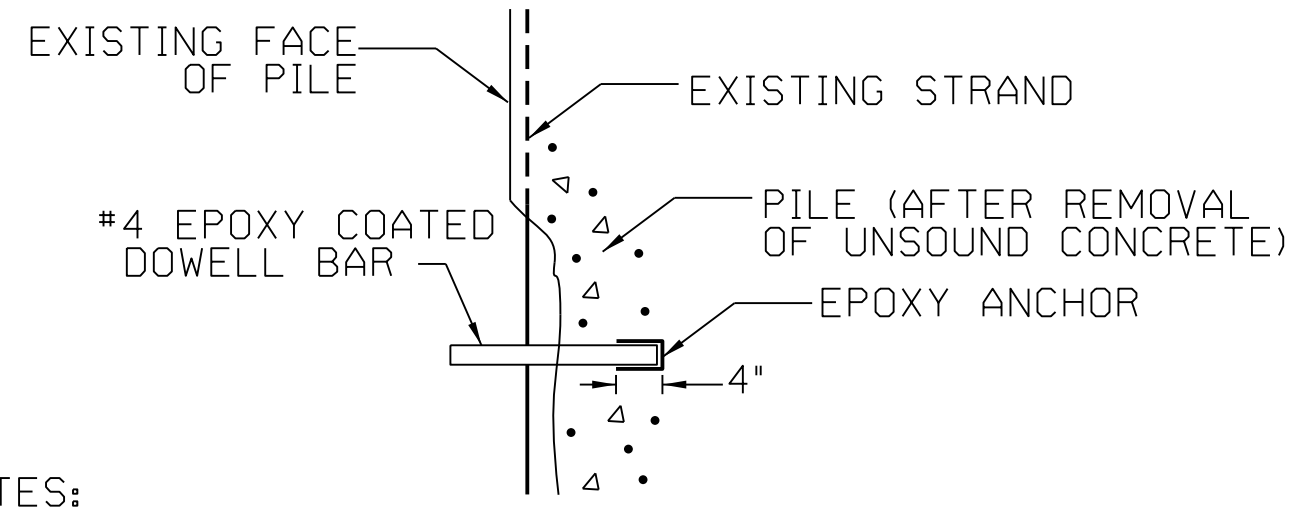


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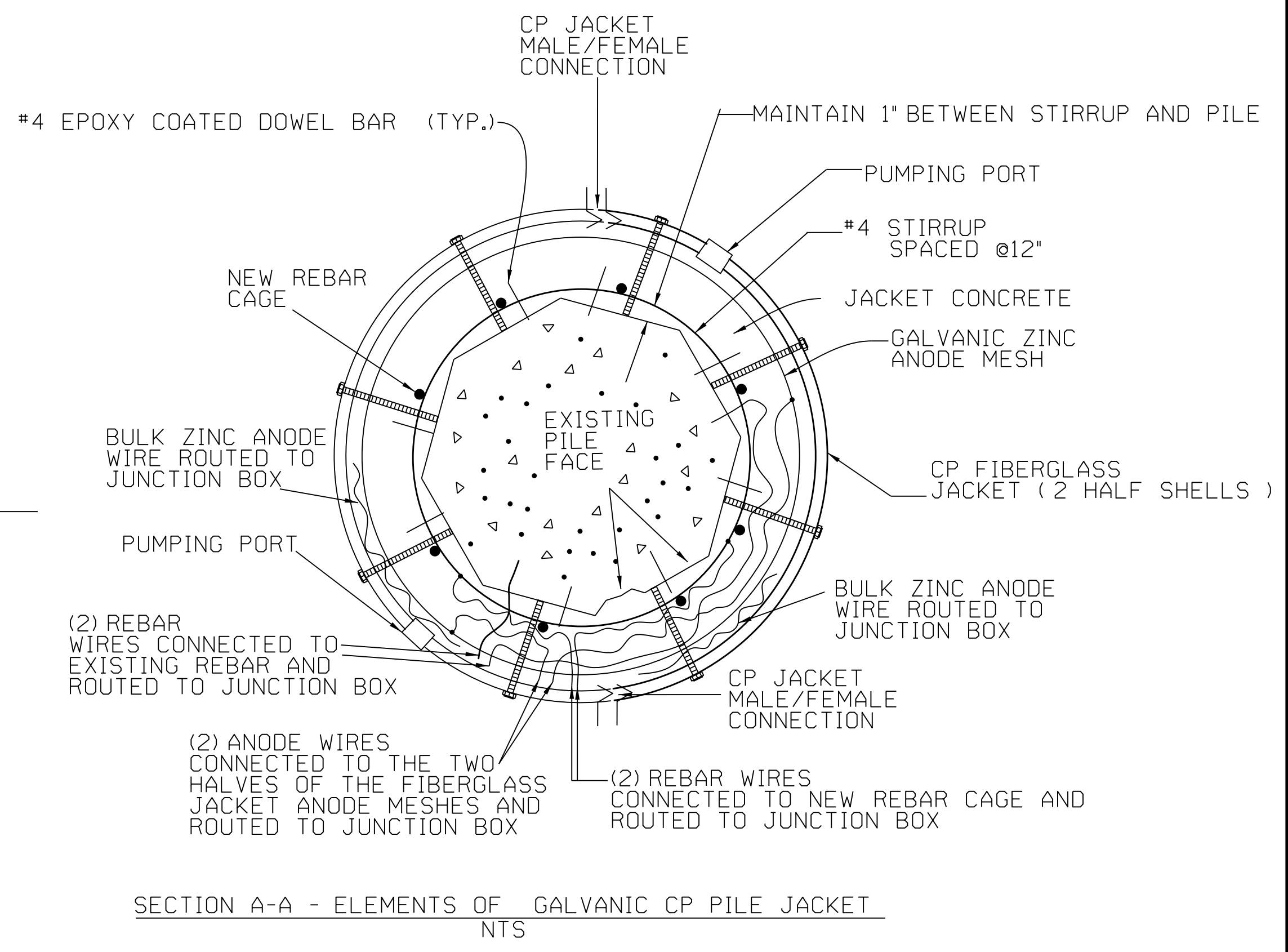
CHECKED BY : G.W.DICKEY DATE : 2/2017



AT LOW WATER BENTS, IF THERE IS NO SPACE FOR JUNCTION BOX ABOVE THE JACKET ON THE PILE, JUNCTION BOX SHALL BE INSTALLED WITHIN 6" OF THE EDGE OF THE PILE ON THE BOTTOM OF THE FOOTER.



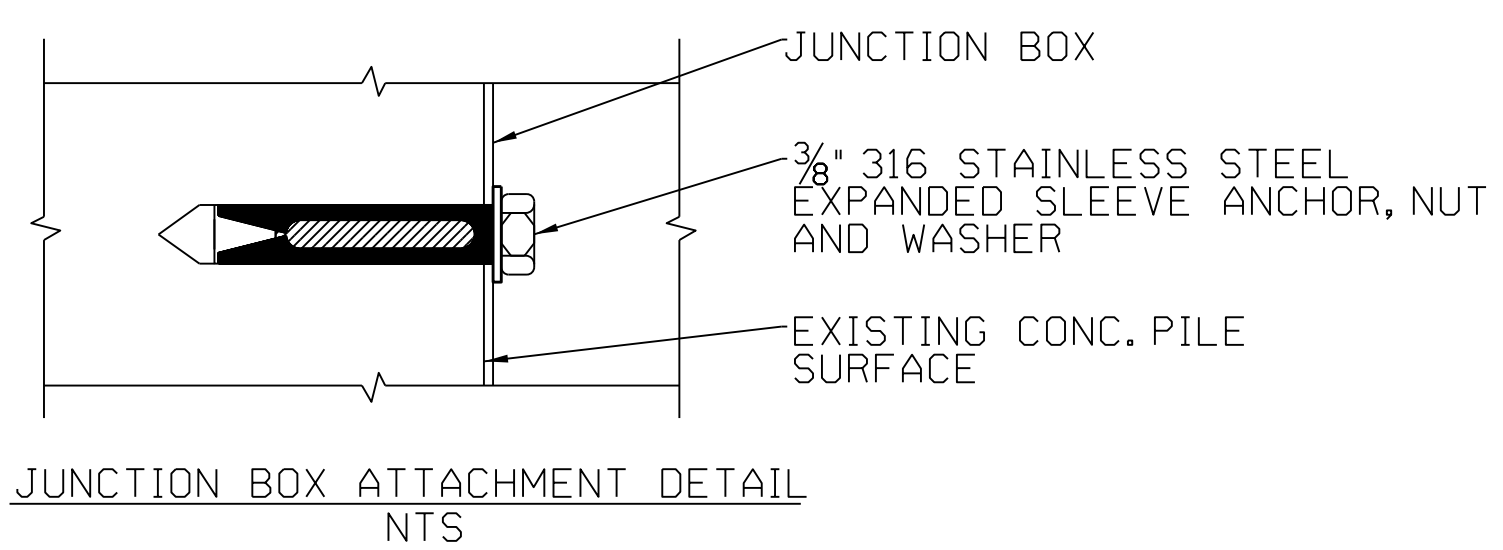
- NOTES:
1. EMBED DOWEL WITH EPOXY AT A POINT WHERE STRAND IS INTACT AND CONTINUOUS WITH THE PILE LENGTH EXTENDING FROM THAT PARTICULAR END OF THE JACKET. MAINTAIN ELECTRICAL ISOLATION BETWEEN DOWEL AND EXISTING PILE REINFORCEMENT.
 2. WIRE TIE ALL INTERSECTIONS OF REINFORCING CAGE AND DOWEL BARS.



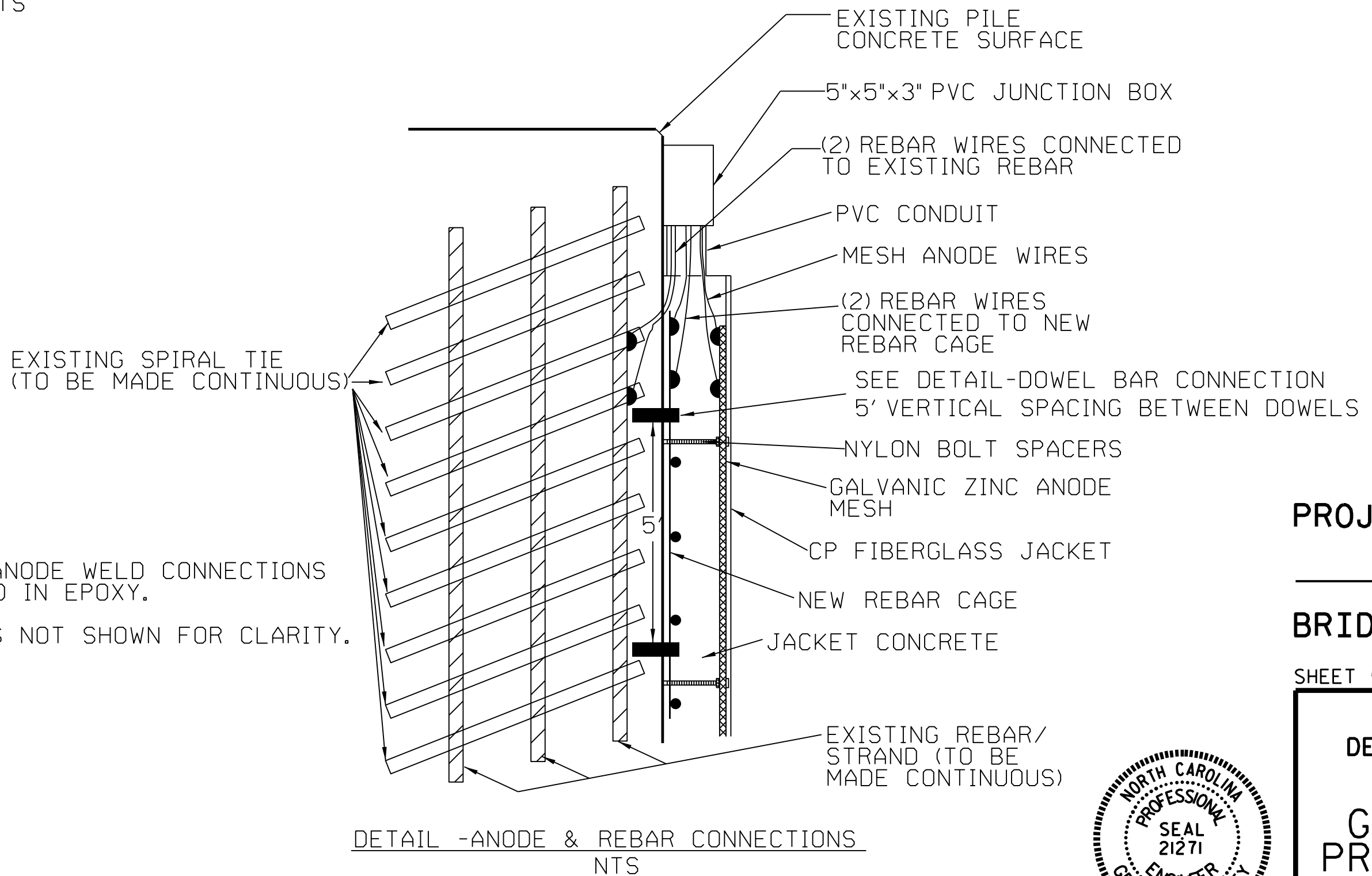
NOTE: CLAMPS AROUND FIBERGLASS FORM NOT SHOWN FOR CLARITY

- NOTES:
1. FOR "GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET", SEE SPECIAL PROVISION.
 2. TYPICAL GALVANIC JACKET DETAIL APPLIES TO ALL PILES DENOTED IN PLANS.
 2. THE CONTRACTOR MAY NEED TO TRIM THE JACKET TO FIT AROUND THE PILES.
 3. THE CONTRACTOR SHALL INSTALL JUNCTION BOXES FOR CP WIRES ON THE SAME FACE ON ALL PILES.
 4. THE CONTRACTOR SHALL POSITION THE JACKET SUCH THAT THE ANODE WIRE FROM TWO HALVES OF THE JACKET ARE ON THE SAME FACE AS THE REBAR WIRES.
 5. INTERLOCKING JOINTS SHALL BE SEALED WITH EPOXY WHICH IS SUITABLE FOR UNDERWATER APPLICATION AND SHALL ALSO ACHIEVE MINIMUM BOND STRENGTH OF 150 PSI WITH THE JACKET CONCRETE AND CONCRETE.
 6. THE WATERTIGHT SEAL AT THE BOTTOM OF THE JACKET IS TEMPORARY. AFTER THE MORTAR/CONCRETE FILL HAS CURED, THE WATERTIGHT SEAL SHALL BE REMOVED AND THE BOTTOM OF THE JACKET SHALL BE EXPOSED TO WATER.
 7. ALL CONDUITS AND JUNCTION BOXES FOR GCP JACKETS SHALL BE SCHEDULE 80 SUNLIGHT RESISTANT PVC.

DETAIL DOWEL BAR CONNECTION NTS



NOTE: PROVIDE FASTENER WITH MINIMUM 500 LBS. PULLOUT AND 500 LBS. CAPACITY.



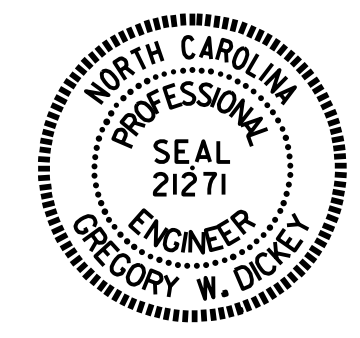
- NOTES:
1. REBAR AND MESH ANODE WELD CONNECTIONS SHALL BE COVERED IN EPOXY.
 2. BULK ANODE WIRES NOT SHOWN FOR CLARITY.

DETAIL - ANODE & REBAR CONNECTIONS NTS

PROJECT NO. B-5939
 CARTERET COUNTY
 BRIDGE NO. 6

SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET DETAILS



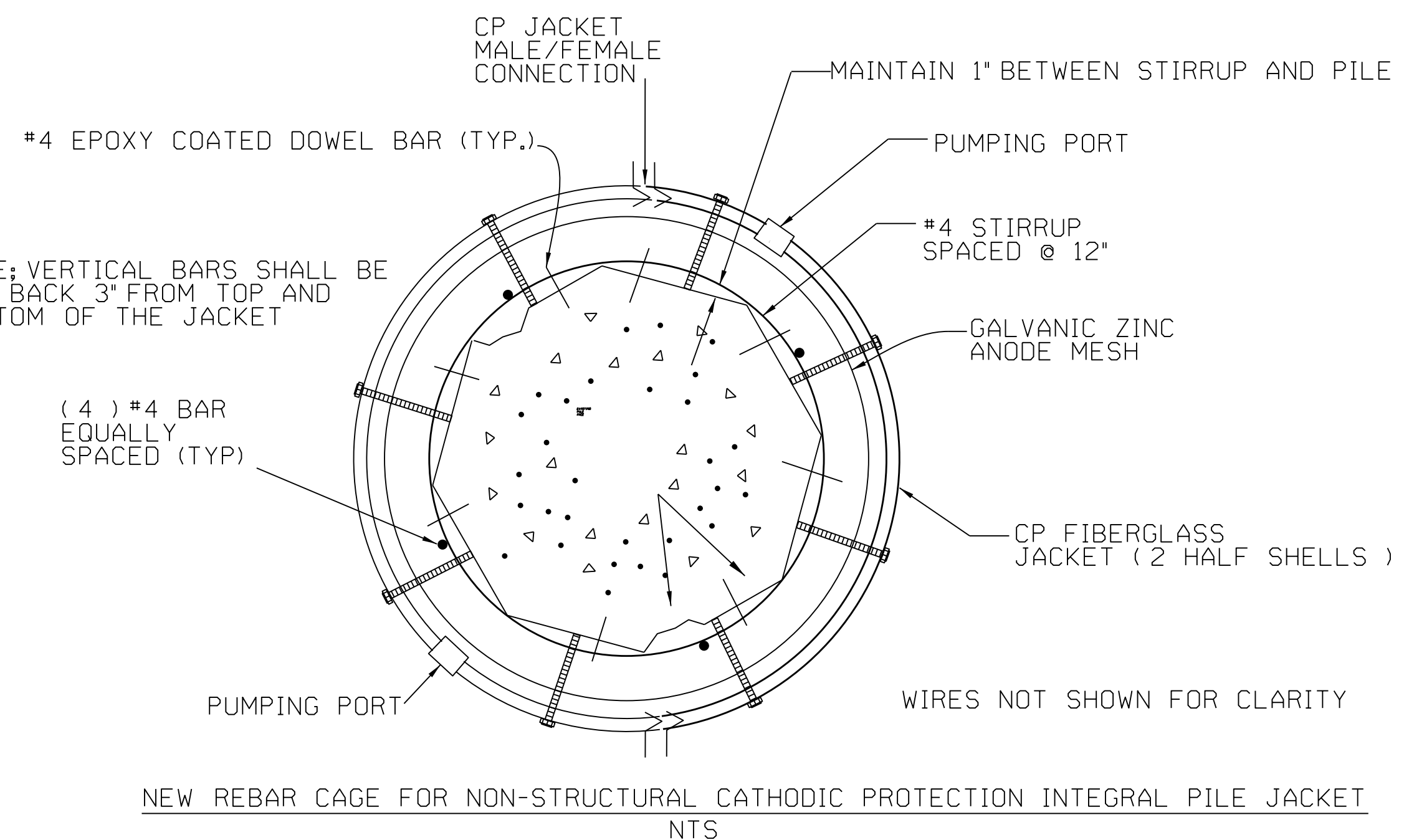
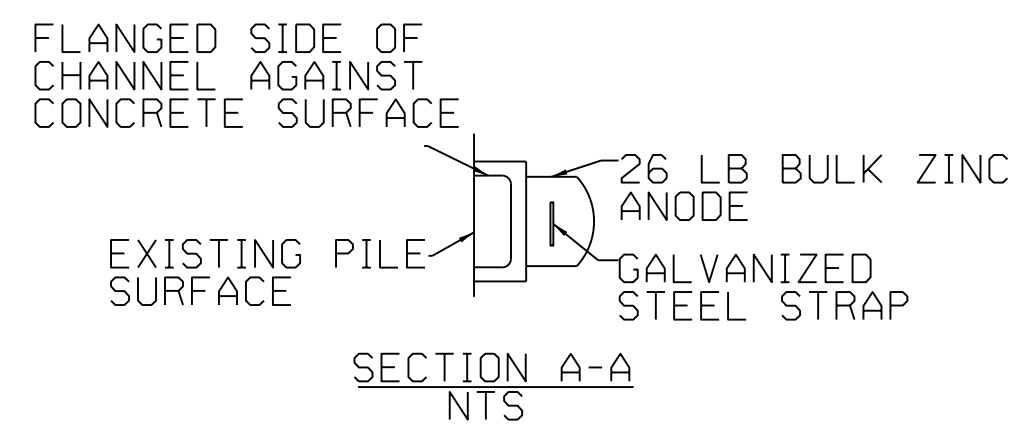
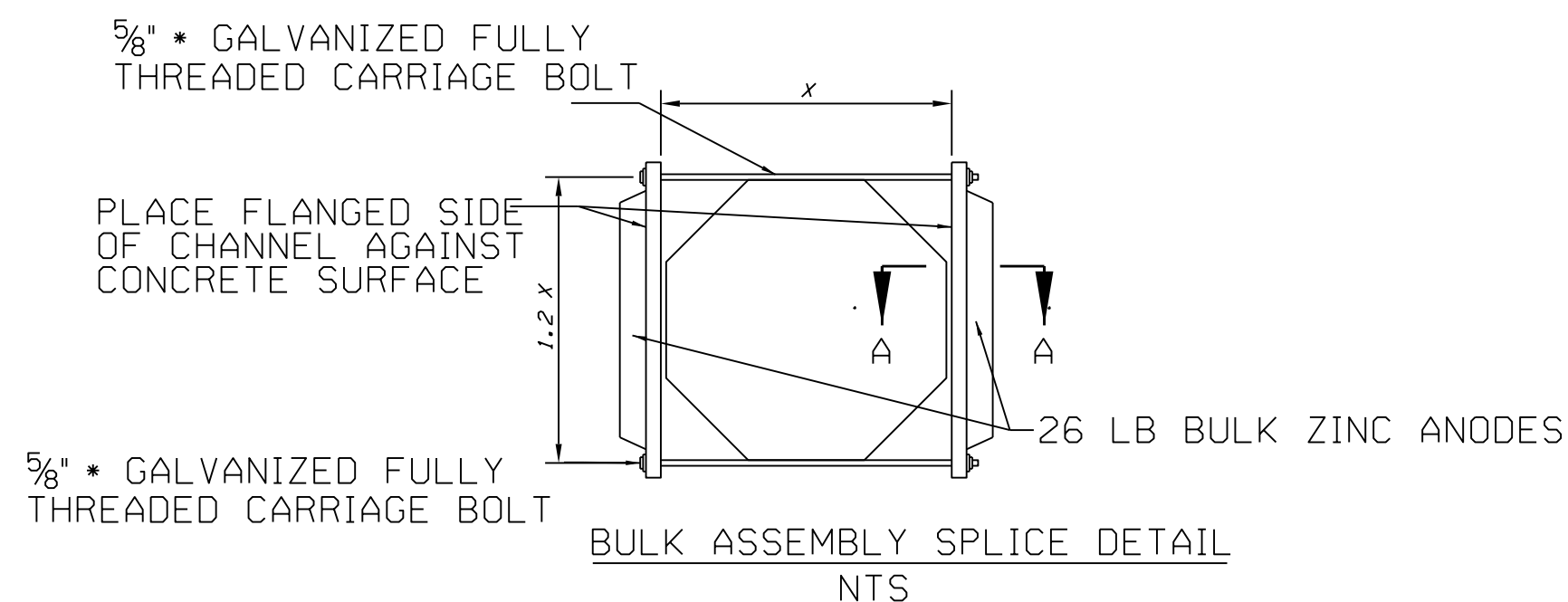
| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-66 |
| 2 | | | 4 | | | |

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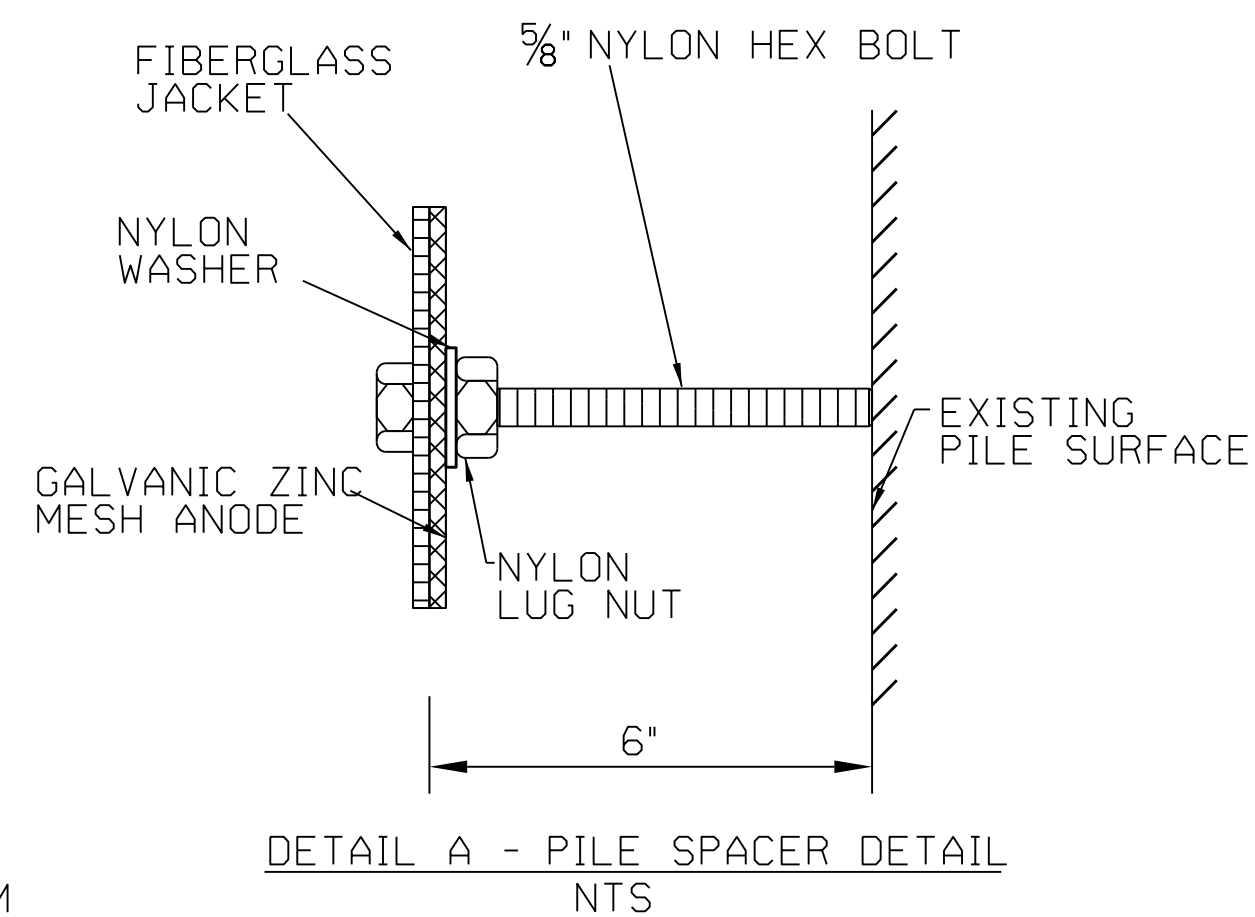
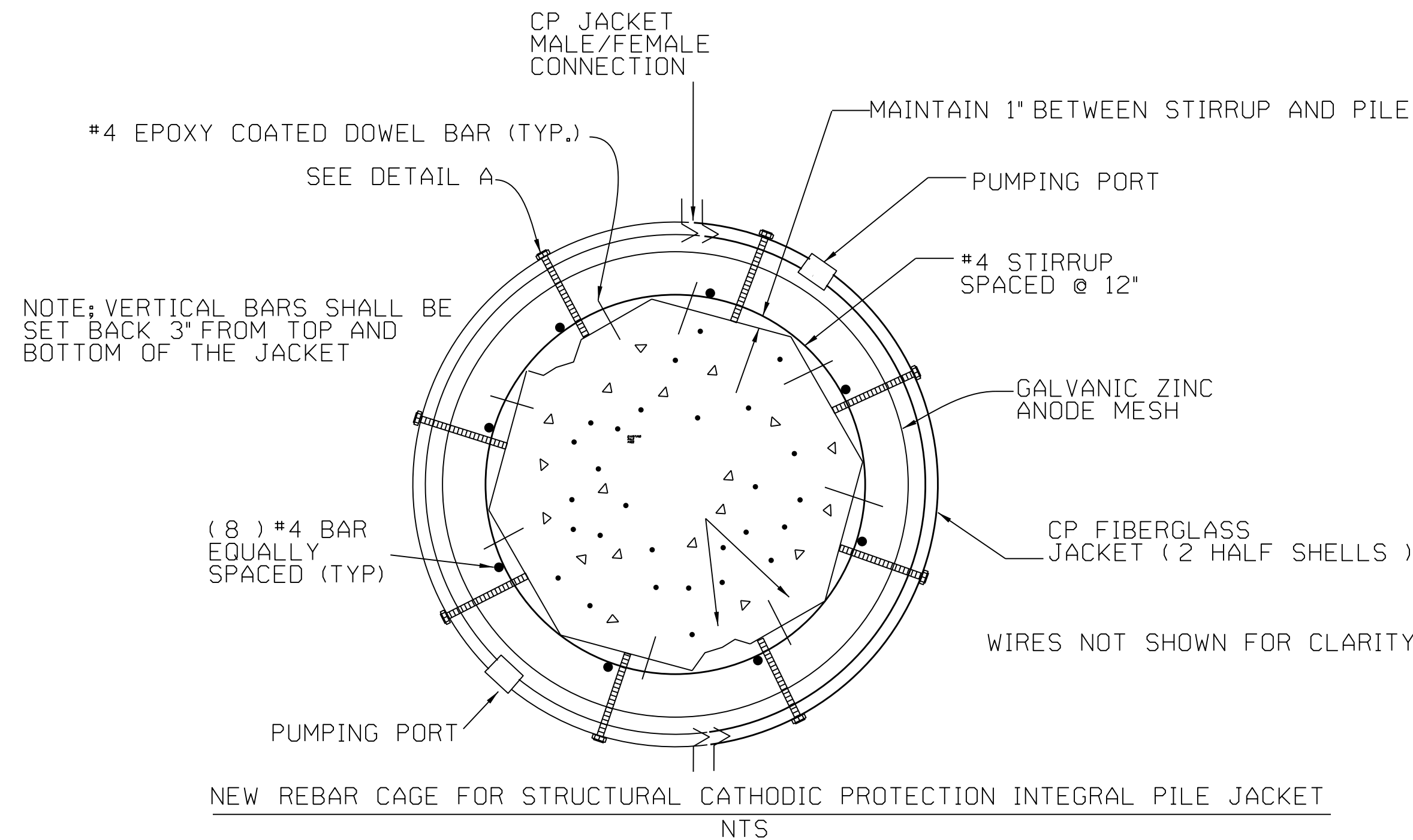
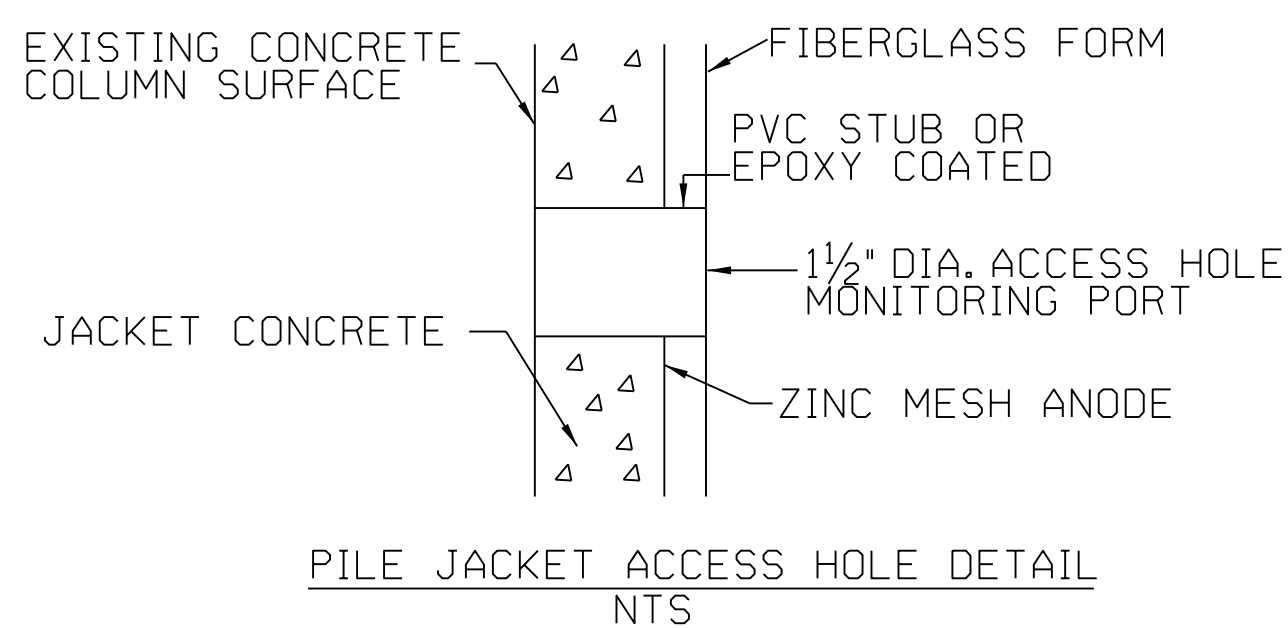
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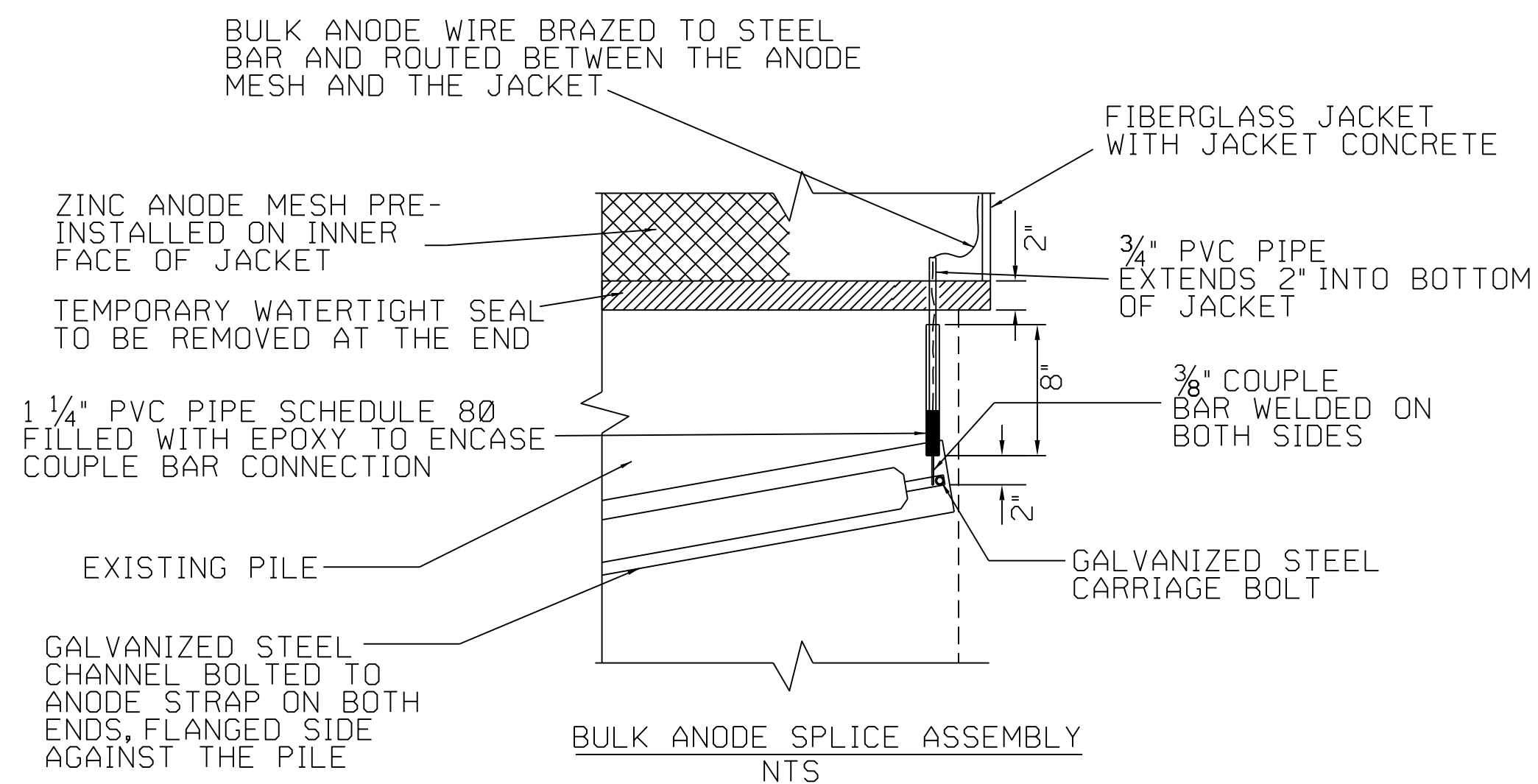


NOTES:

1. STRUCTURAL CP JACKET SHALL BE REQUIRED ON PILES AS SPECIFIED ON PILE JACKET REPAIR TABLES AND AS PER "GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET" SPECIAL PROVISION.
2. ALL COMPONENTS OF THE BULK ANODE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.
3. PUNCH SQUARE HOLES FOR BOLTS IN 2" CHANNEL PRIOR TO HOT DIP GALVANIZING.
4. THE MINIMUM DIMENSIONS OF THE 2" STEEL CHANNEL SHALL BE 2"x 1"x 3/16" (CHANNEL TYPE C121316).
5. THE BULK ANODE WIRES SHALL BE ROUTED TO THE JUNCTION BOX BY ATTACHING THE WIRES TO THE ANODE MESH IN THE JACKET.

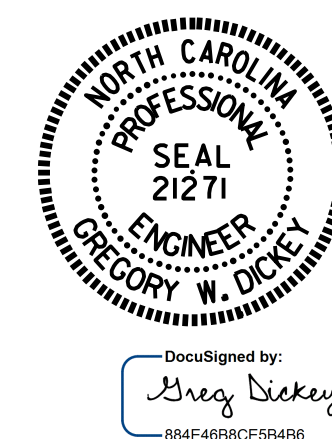


- NOTES:
1. JACKET REINFORCEMENT NOT SHOWN FOR CLARITY.
 2. NYLON SPACER TO TOUCH CONCRETE SURFACE TO PREVENT THE CP JACKET FROM DEFORMING. (FASTEN EVERY 2.25 SQUARE FEET, OR 1'-6" SPACING IN BOTH DIRECTIONS).
 3. NYLON SPACERS TO BE CUT SUCH THAT A 6" GAP EXISTS BETWEEN THE EXISTING CONCRETE PILE SURFACE AND THE INTERIOR JACKET SURFACE.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 6 OF 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET DETAILS

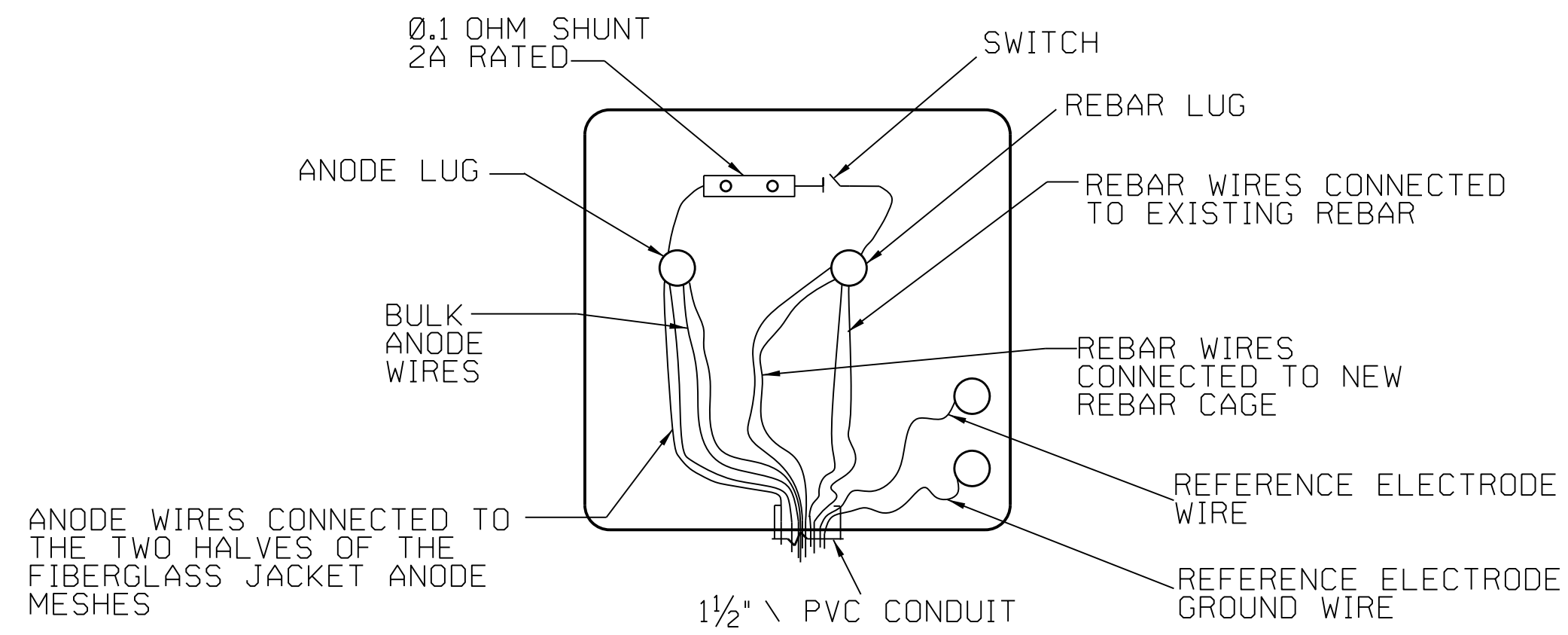
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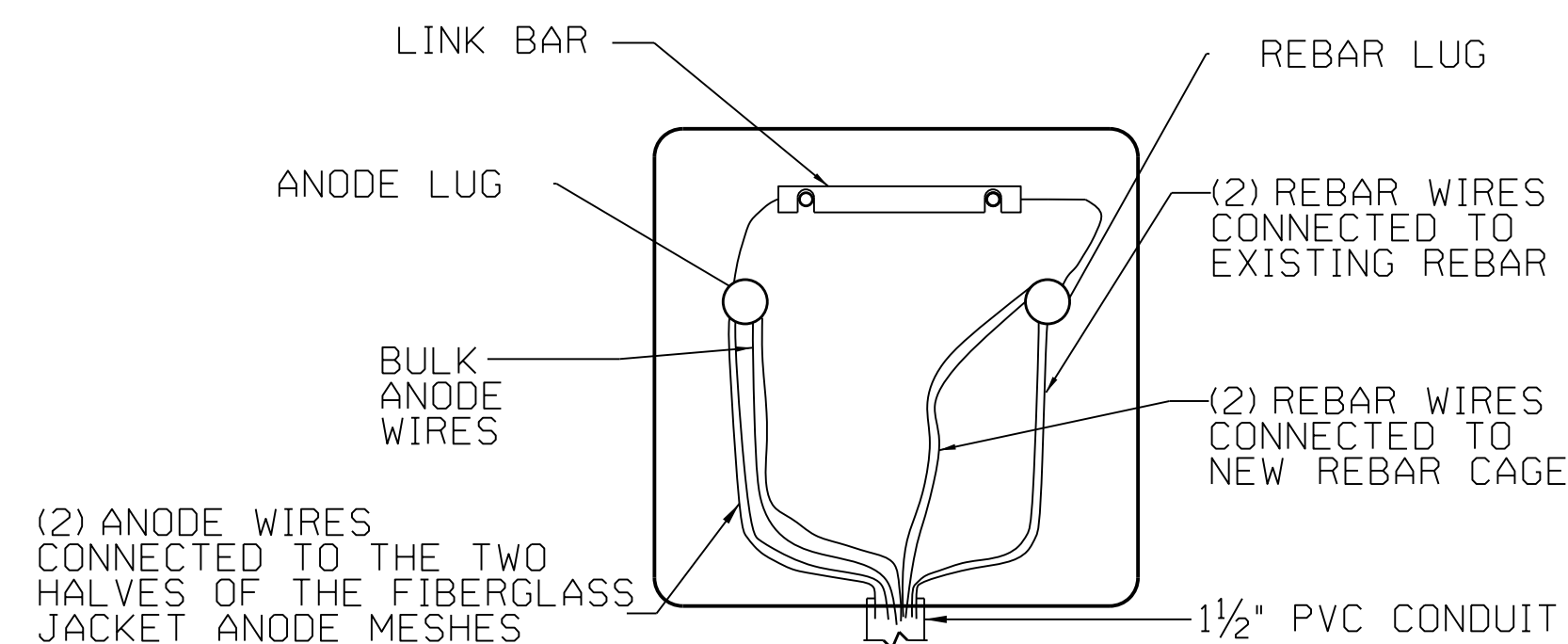
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 West Chester, PA 19380-19383
 P(610) 692-6551

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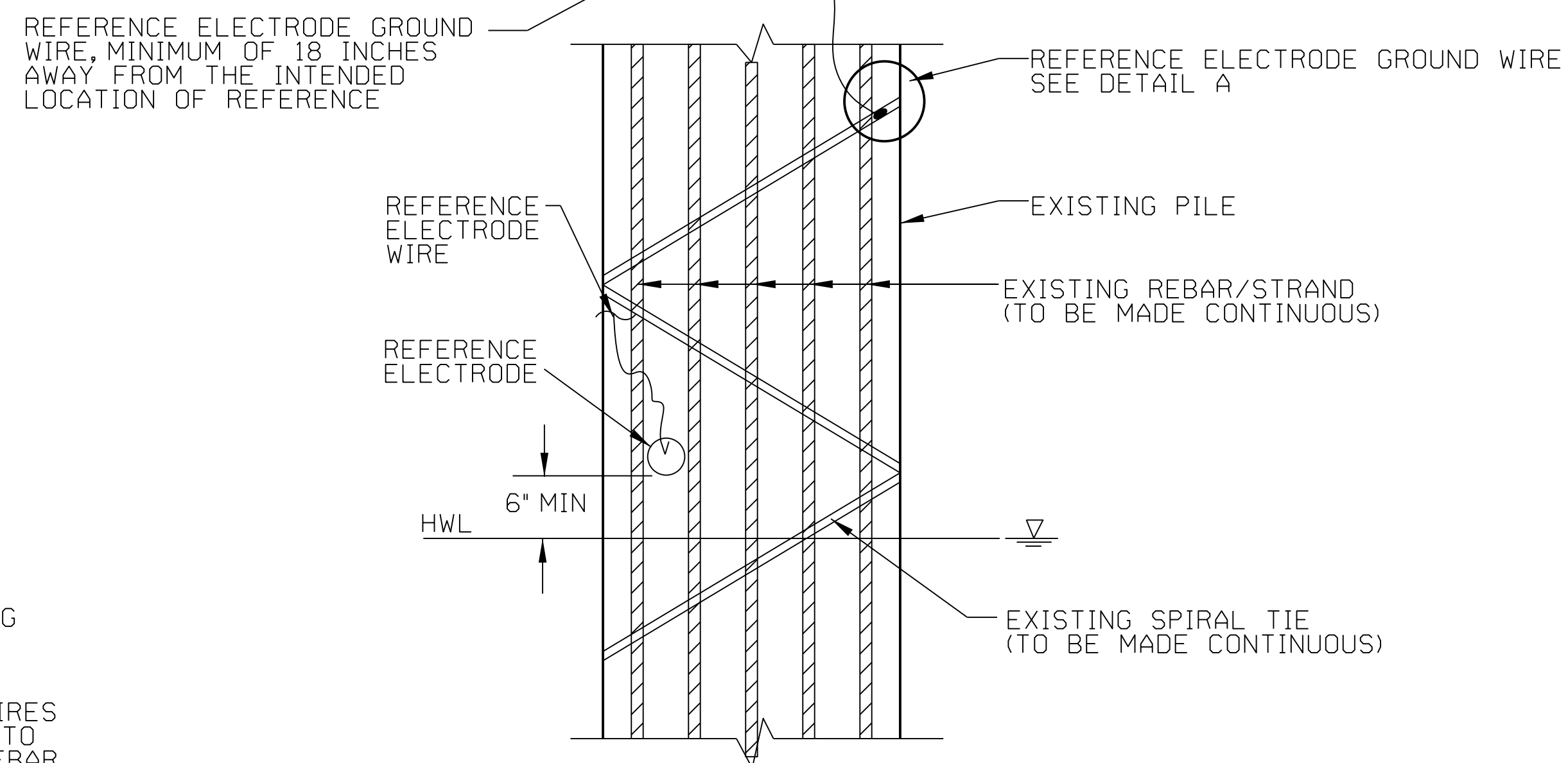
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| 1 | | | 3 | | | S2-67 |
| 2 | | | 4 | | | |



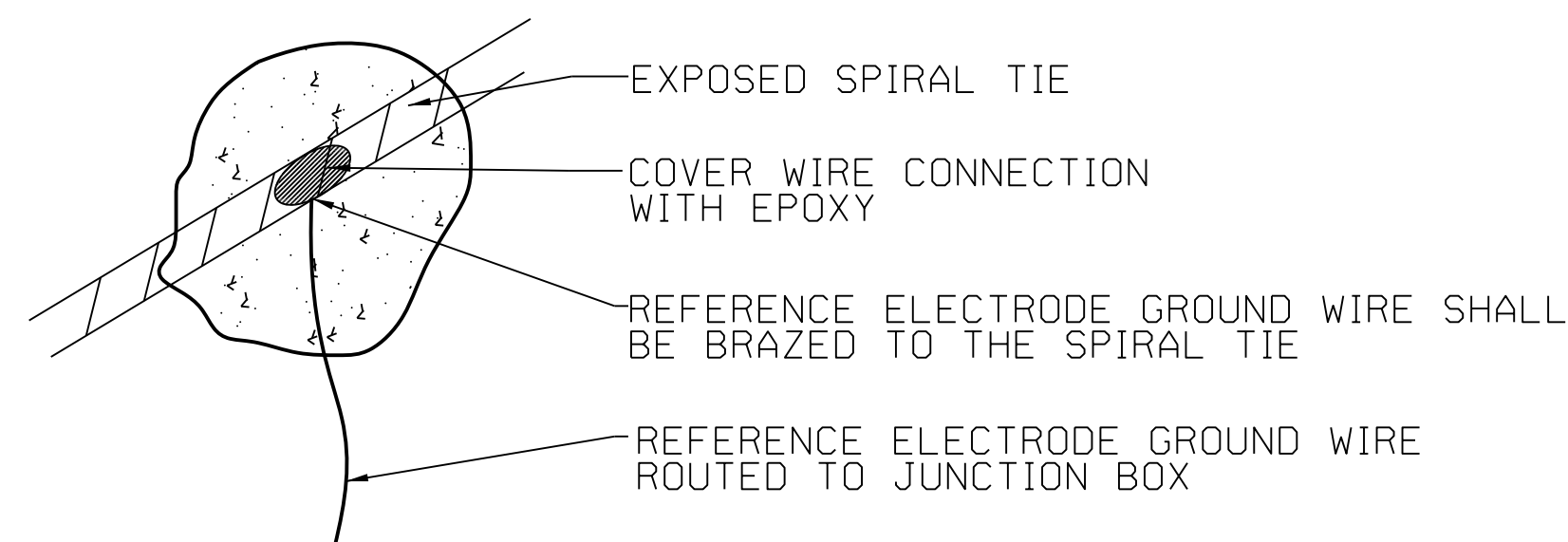
JUNCTION BOX DETAIL - MONITORING (PILES ONLY)
NTS



JUNCTION BOX DETAIL - NON MONITORING PILE
NTS



REFERENCE ELECTRODE INSTALLATION DETAIL - MONITORING PILE ONLY
NTS



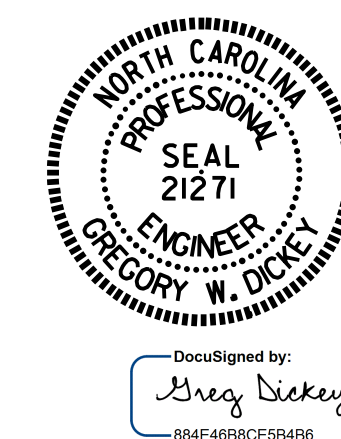
DETAIL A - REFERENCE ELECTRODE GROUND DETAIL
NTS

NOTES:

1. THE REFERENCE ELECTRODE GROUND WIRE MAY BE BRAZED TO A SPIRAL TIE INSIDE A SPALLED AREA, PROVIDED THAT A SPALL IS IN THE IMMEDIATE VICINITY OF THE CONNECTION LOCATION SHOWN IN THE CONTRACT DOCUMENTS. IF NECESSARY, ACCESS TO THE SPIRAL TIE FOR THE GROUND CONNECTION SHALL BE MADE BY CORE DRILLING A 2" DIAMETER ACCESS HOLE THROUGH THE CONCRETE USING A LIGHT WEIGHT CORING DRILL. STRANDS SHALL BE AVOIDED.
2. TO INSTALL REFERENCE ELECTRODE, CORE DRILL 2" DIAMETER HOLE THROUGH THE CONCRETE. STRANDS AND SPIRAL TIES SHALL NOT BE EXPOSED.
3. THE REFERENCE ELECTRODE SHALL BE INSTALLED PERPENDICULARLY TO CONCRETE SURFACE. FILL THE EXCAVATION HOLE WITH APPROVED PORTLAND CEMENT PATCHING GROUT WITH 15,000 OHM-CM RESISTIVITY OR LESS. THE REFERENCE ELECTRODE SHALL BE FULLY ENCAPSULATED WITH CEMENTITIOUS BACK FILL MATERIAL. NO VOIDS SHALL BE PERMITTED.
4. THE WIRES FOR THE REFERENCE ELECTRODE SHALL BE ROUTED INSIDE THE JACKET TO THE JUNCTION BOX ABOVE THE PILE JACKET WITHOUT SPLICING.

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 7 OF 7



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GALVANIC CATHODIC
PROTECTION INTEGRAL
PILE JACKET
DETAILS

| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-68 |
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CHECKED BY : G.W.DICKEY DATE : 2/2017

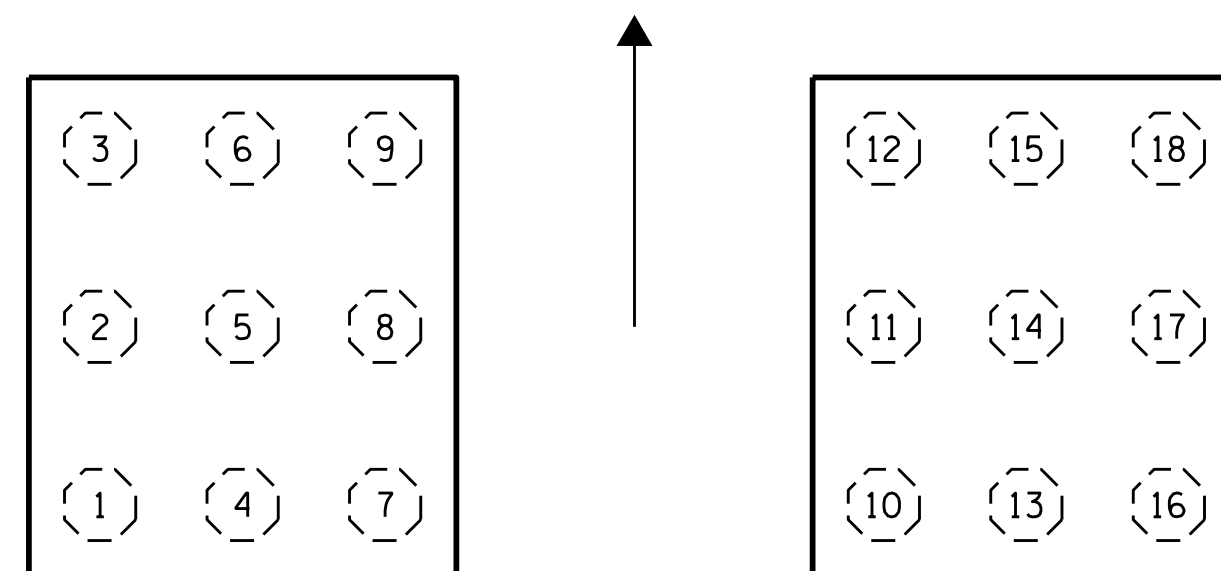
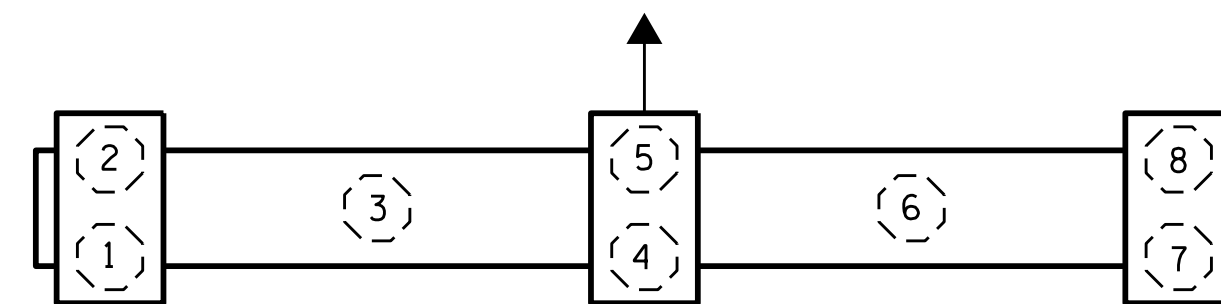
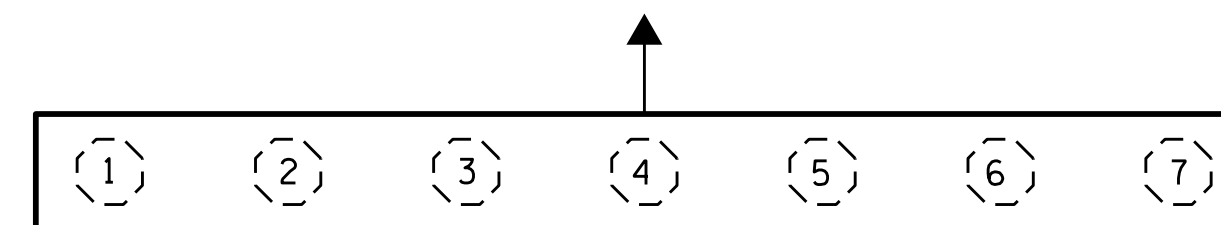
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| PILE REPAIRS | | | | |
|--------------|------|------|---------------|-----------|
| BENT | PILE | TYPE | JACKET LENGTH | |
| | | | EST. LF | ACTUAL LF |
| 4 | 1 | 1 | 7 | |
| 4 | 2 | 1 | 7 | |
| 4 | 3 | 1 | 7 | |
| 4 | 4 | 1 | 7 | |
| 4 | 5 | 1 | 7 | |
| 4 | 6 | 1 | 7 | |
| 4 | 7 | 1 | 7 | |
| 8 | 2 | 1 | 7 | |
| 8 | 4 | 1 | 7 | |
| 10 | 1 | 1 | 7 | |
| 11 | 1 | *2 | 7 | |
| 11 | 7 | 1 | 7 | |
| 12 | 2 | *1 | 7 | |
| 12 | 4 | 1 | 7 | |
| 12 | 7 | 1 | 7 | |
| 12 | 8 | 1 | 7 | |
| 13 | 1 | *1 | 7 | |
| 13 | 4 | *1 | 7 | |
| 13 | 5 | 1 | 7 | |
| 13 | 7 | 1 | 7 | |
| 14 | 1 | *1 | 7 | |
| 14 | 2 | 1 | 7 | |
| 14 | 3 | 1 | 7 | |
| 14 | 4 | *2 | 7 | |
| 14 | 5 | 1 | 7 | |
| 14 | 6 | 1 | 7 | |
| 14 | 7 | 1 | 7 | |
| 15 | 1 | 1 | 7 | |
| 15 | 2 | 1 | 7 | |
| 15 | 4 | 1 | 7 | |
| 15 | 6 | 1 | 7 | |
| 16 | 1 | 1 | 7 | |
| 16 | 2 | 1 | 7 | |
| 16 | 3 | 1 | 7 | |
| 16 | 4 | 1 | 7 | |
| 16 | 5 | 1 | 7 | |
| 16 | 6 | 1 | 7 | |
| 16 | 7 | 1 | 7 | |
| 17 | 3 | 1 | 7 | |
| 17 | 4 | 1 | 7 | |
| 17 | 6 | 1 | 7 | |
| 18 | 4 | 1 | 7 | |
| 19 | 1 | *1 | 6 | |
| 19 | 3 | *2 | 6 | |
| 19 | 5 | *1 | 6 | |
| 19 | 8 | 1 | 6 | |

| PILE REPAIRS | | | | |
|--------------|------|------|---------------|-----------|
| BENT | PILE | TYPE | JACKET LENGTH | |
| | | | EST. LF | ACTUAL LF |
| 19 | 9 | 1 | 6 | |
| 19 | 10 | 1 | 6 | |
| 19 | 11 | 1 | 6 | |
| 19 | 12 | 1 | 6 | |
| 19 | 13 | 1 | 6 | |
| 19 | 14 | 1 | 6 | |
| 19 | 15 | 1 | 6 | |
| 19 | 18 | *1 | 6 | |
| 20 | 1 | 1 | 6 | |
| 20 | 2 | 1 | 6 | |
| 20 | 5 | 1 | 6 | |
| 20 | 11 | 1 | 6 | |
| 20 | 12 | 1 | 6 | |
| 20 | 13 | 1 | 6 | |
| 20 | 14 | 1 | 6 | |
| 20 | 15 | 1 | 6 | |
| 21 | 2 | 1 | 6 | |
| 21 | 3 | 1 | 6 | |
| 21 | 5 | 1 | 6 | |
| 21 | 6 | 1 | 6 | |
| 21 | 7 | *1 | 6 | |
| 21 | 10 | 1 | 6 | |
| 21 | 11 | 1 | 6 | |
| 21 | 12 | 1 | 6 | |
| 21 | 13 | 1 | 6 | |
| 21 | 14 | 1 | 6 | |
| 21 | 15 | 1 | 6 | |
| 21 | 16 | 1 | 6 | |
| 21 | 17 | 1 | 6 | |
| 21 | 18 | 1 | 6 | |
| 22 | 7 | 1 | 6 | |
| 31 | 1 | 1 | 6 | |
| 31 | 3 | 1 | 6 | |
| 31 | 5 | *1 | 6 | |
| 31 | 6 | 1 | 6 | |
| 31 | 7 | 1 | 6 | |
| 31 | 8 | 1 | 6 | |
| 31 | 9 | 1 | 6 | |
| 31 | 11 | 1 | 6 | |
| 31 | 12 | 1 | 6 | |
| 31 | 13 | 1 | 6 | |
| 31 | 14 | 1 | 6 | |
| 31 | 15 | 1 | 6 | |
| 31 | 17 | 1 | 6 | |
| 31 | 18 | 1 | 6 | |



TYPICAL PILE NUMBERS
BENTS WITH MORE PILES FOLLOW SIMILAR PATTERN

SUMMARY OF QUANTITIES

| | QUANTITIES | |
|--------------|------------|--------|
| | ESTIMATE | ACTUAL |
| BENTS 1 - 33 | LF | LF |
| TYPE 1 | 568 | |
| TYPE 2 | 20 | |
| BENTS 1 - 33 | ESTIMATE | ACTUAL |
| BULK ANODE | EACH | EACH |
| | 91 | |

TYPE 1 REPAIR IS A CP JACKET (NON-MONITORING).
 TYPE 2 REPAIR IS A CP JACKET (MONITORING).
 EACH CP JACKET LOCATION SHALL RECEIVE A BULK ANODE.
 *CP JACKET SHALL BE STRUCTURAL, SEE SHT S2-66 THRU S-68.
 SEE SHT S2-66 THRU S-68 FOR CP JACKET DETAILS.
 FOR CP JACKETS, SEE "GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET" SPECIAL PROVISION.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE JACKET
 REPAIR TABLES

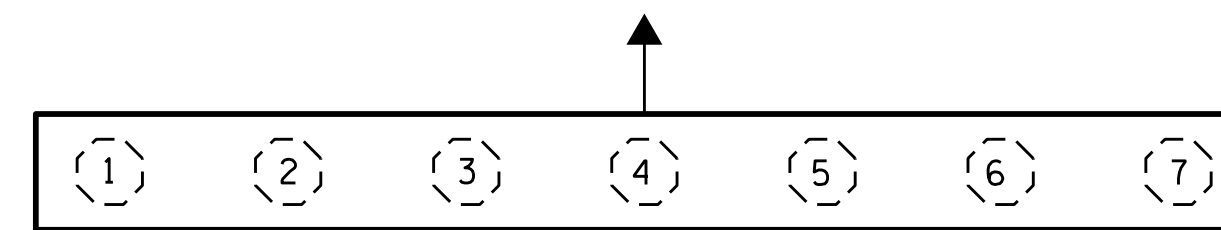
DRAWN BY : M. LEE / R. WEISZ DATE : 12/2016
 CHECKED BY : R. WEISZ DATE : 2/2017

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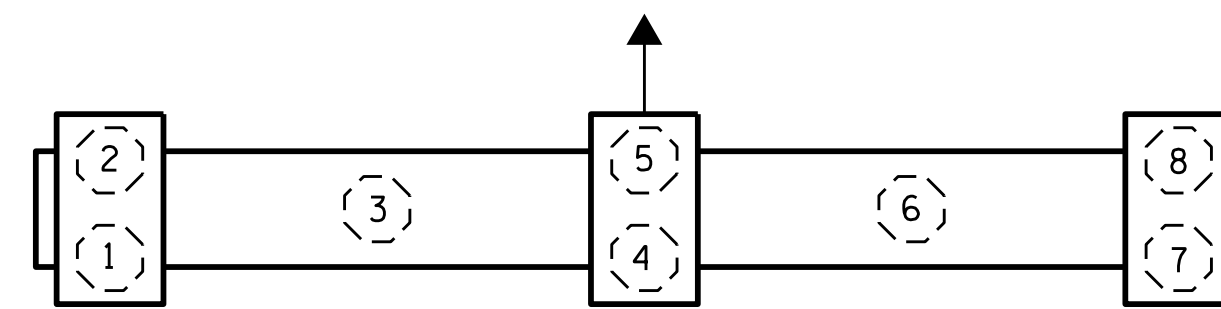
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-69 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |

| PILE REPAIRS | | | | |
|--------------|------|------|---------------|-----------|
| BENT | PILE | TYPE | JACKET LENGTH | |
| | | | EST. LF | ACTUAL LF |
| 34 | 2 | *1 | 6 | |
| 34 | 4 | 1 | 6 | |
| 34 | 5 | 1 | 6 | |
| 34 | 6 | *1 | 6 | |
| 34 | 8 | 1 | 6 | |
| 34 | 10 | 1 | 6 | |
| 34 | 11 | 1 | 6 | |
| 34 | 12 | 1 | 6 | |
| 34 | 13 | 1 | 6 | |
| 34 | 14 | 1 | 6 | |
| 34 | 15 | *1 | 6 | |
| 34 | 16 | 1 | 6 | |
| 34 | 17 | 1 | 6 | |
| 34 | 18 | 1 | 6 | |
| 35 | 1 | 1 | 6 | |
| 35 | 2 | 1 | 6 | |
| 35 | 3 | 1 | 6 | |
| 35 | 4 | 1 | 6 | |
| 35 | 6 | 1 | 6 | |
| 35 | 7 | 1 | 6 | |
| 35 | 8 | 1 | 6 | |
| 35 | 9 | 1 | 6 | |
| 35 | 10 | 1 | 6 | |
| 35 | 11 | 1 | 6 | |
| 35 | 12 | 1 | 6 | |
| 35 | 13 | 1 | 6 | |
| 35 | 14 | 1 | 6 | |
| 35 | 15 | 1 | 6 | |
| 35 | 17 | 1 | 6 | |
| 35 | 18 | 1 | 6 | |
| 36 | 1 | 1 | 6 | |
| 36 | 2 | 1 | 6 | |
| 36 | 3 | 1 | 6 | |
| 36 | 5 | 1 | 6 | |
| 36 | 6 | 1 | 6 | |
| 36 | 8 | 1 | 6 | |
| 36 | 11 | 1 | 6 | |
| 36 | 14 | 1 | 6 | |
| 40 | 2 | 1 | 6 | |
| 41 | 5 | 1 | 6 | |
| 44 | 12 | 1 | 6 | |
| 44 | 13 | 1 | 6 | |
| 45 | 2 | 1 | 6 | |
| 45 | 5 | 1 | 6 | |
| 45 | 8 | *1 | 6 | |

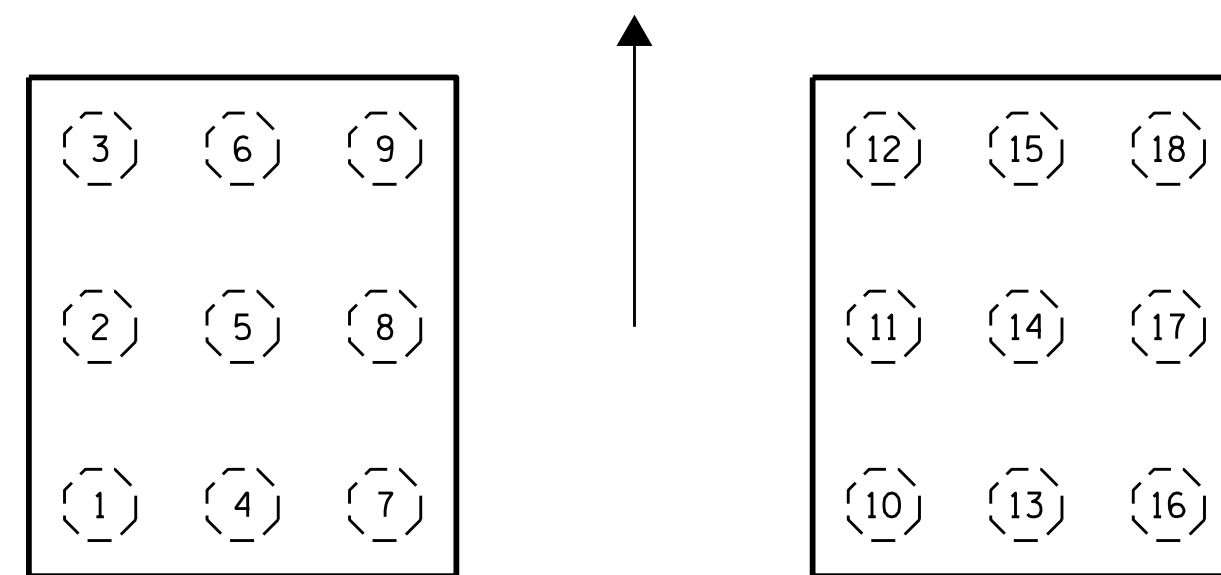
| PILE REPAIRS | | | | |
|--------------|------|------|---------------|-----------|
| BENT | PILE | TYPE | JACKET LENGTH | |
| | | | EST. LF | ACTUAL LF |
| 45 | 12 | *1 | 6 | |
| 46 | 3 | 1 | 6 | |
| 46 | 11 | *1 | 6 | |
| 46 | 12 | 1 | 6 | |
| 46 | 14 | *2 | 6 | |
| 46 | 15 | 1 | 6 | |
| 46 | 18 | 1 | 6 | |
| 47 | 2 | 1 | 7 | |
| 47 | 3 | 1 | 7 | |
| 47 | 5 | 1 | 7 | |
| 47 | 6 | 1 | 7 | |
| 47 | 7 | 1 | 7 | |
| 48 | 2 | 1 | 7 | |
| 49 | 1 | 1 | 7 | |
| 50 | 3 | 1 | 7 | |
| 51 | 1 | 1 | 7 | |
| 56 | 1 | 1 | 7 | |
| 56 | 3 | 1 | 7 | |
| 56 | 4 | 1 | 7 | |
| 56 | 6 | 1 | 7 | |



BTS 48,49,51,52,54,55,57,58



BTS 47,50,53,56



BTS 34,35,36,40,41,44,45,46

TYPICAL PILE NUMBERS
BENTS WITH MORE PILES FOLLOW SIMILAR PATTERN

SUMMARY OF QUANTITIES

| | QUANTITIES | |
|---------------|------------|--------|
| | ESTIMATE | ACTUAL |
| BENTS 34 - 58 | LF | LF |
| TYPE 1 | 397 | |
| TYPE 2 | 6 | |
| | ESTIMATE | ACTUAL |
| BENTS 34 - 58 | EACH | EACH |
| BULK ANODE | 65 | |

TYPE 1 REPAIR IS A CP JACKET (NON-MONITORING).
 TYPE 2 REPAIR IS A CP JACKET (MONITORING).
 EACH CP JACKET LOCATION SHALL RECEIVE A BULK ANODE.
 *CP JACKET SHALL BE STRUCTURAL, SEE SHT S2-66 THRU S-68.
 SEE SHT S2-66 THRU S-68 FOR CP JACKET DETAILS.
 FOR CP JACKETS, SEE "GALVANIC CATHODIC PROTECTION INTEGRAL PILE JACKET" SPECIAL PROVISION.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PILE JACKET
 REPAIR TABLES

DRAWN BY : M.LEE / R.WEISZ DATE : 12/2016
 CHECKED BY : R.WEISZ DATE : 2/2017

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NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.




FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

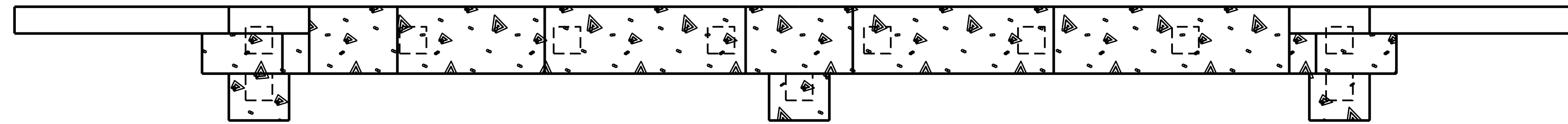
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

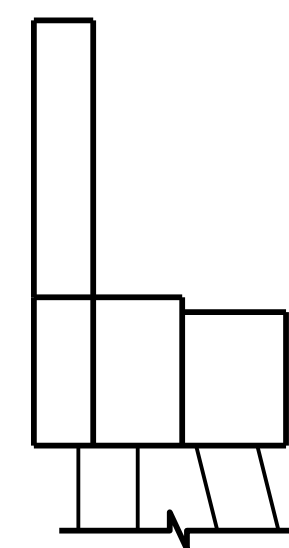
| REPAIRS END BENT 1 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 115.3 | | |

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

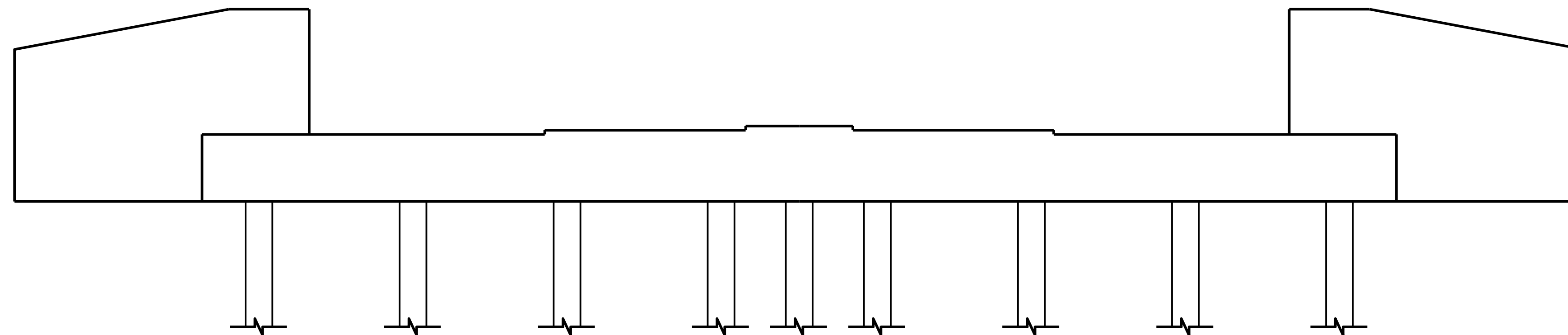
-  - SHOTCRETE REPAIR
-  - EPOXY RESIN INJECTION
-  - EPOXY COATING



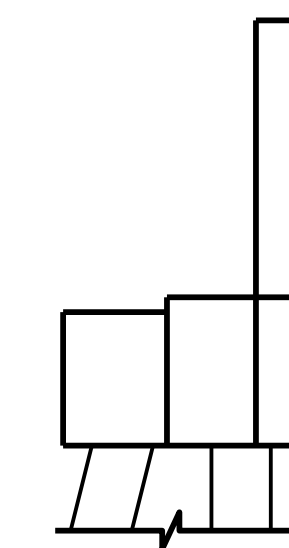
PLAN
TOP OF CAP



END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE

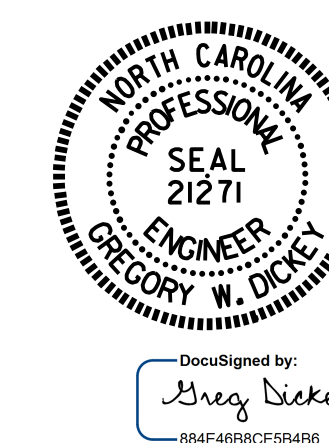


END VIEW
EAST SIDE

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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 1 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 1

DRAWN BY : M.A.LEE DATE : 8/2016
 CHECKED BY : P.BRYANT DATE : 8/2016

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NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

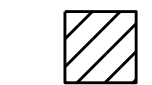

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

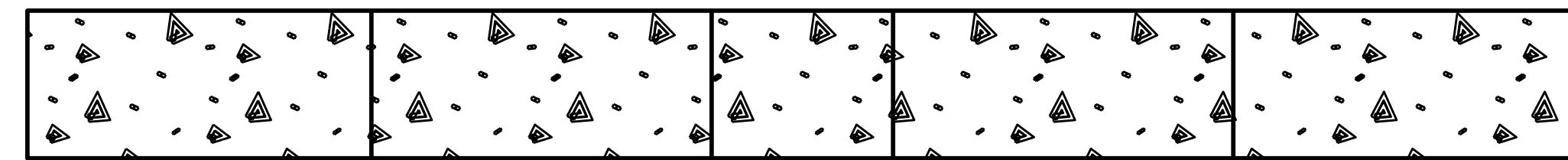
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

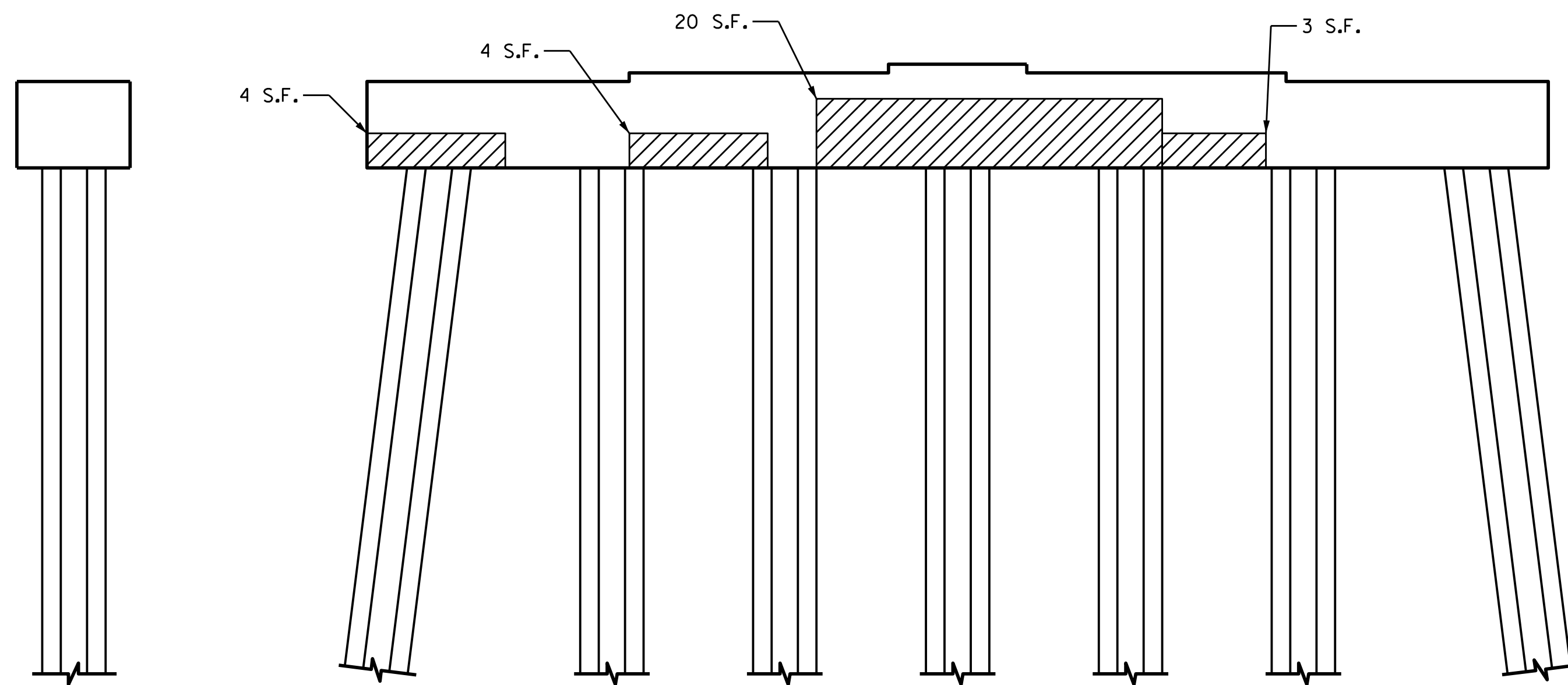
| REPAIRS BENT 1 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 65.2 | 32.6 | | |
| CAP (HORIZONTAL, CORNER) | 0.5 | 0.3 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

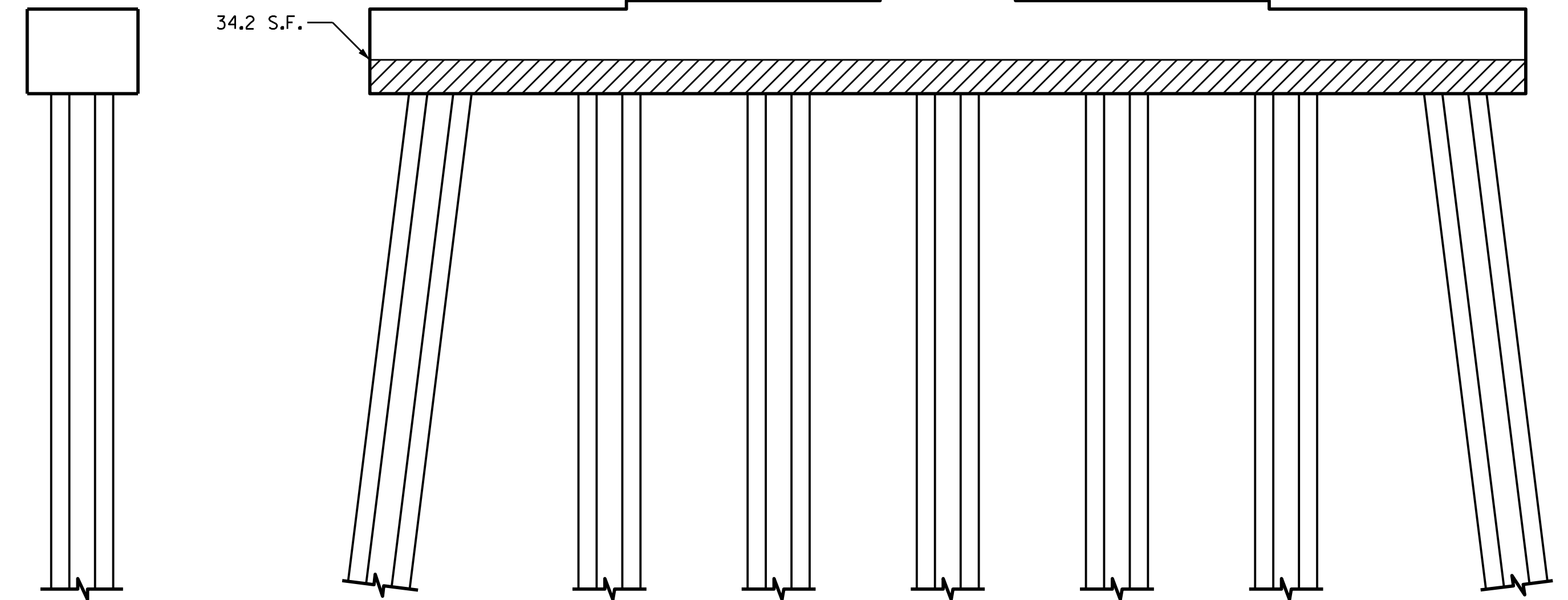


PLAN
TOP OF CAP



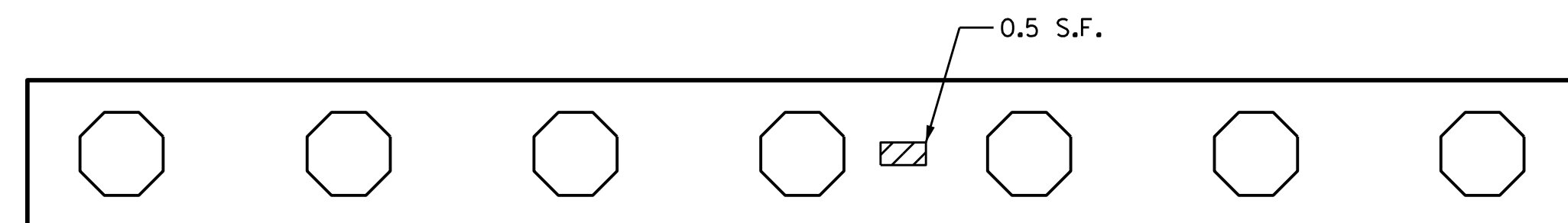
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 2 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 1



DocuSigned by:
Greg Dickey
884E488CE58486

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-72 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

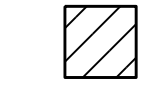
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

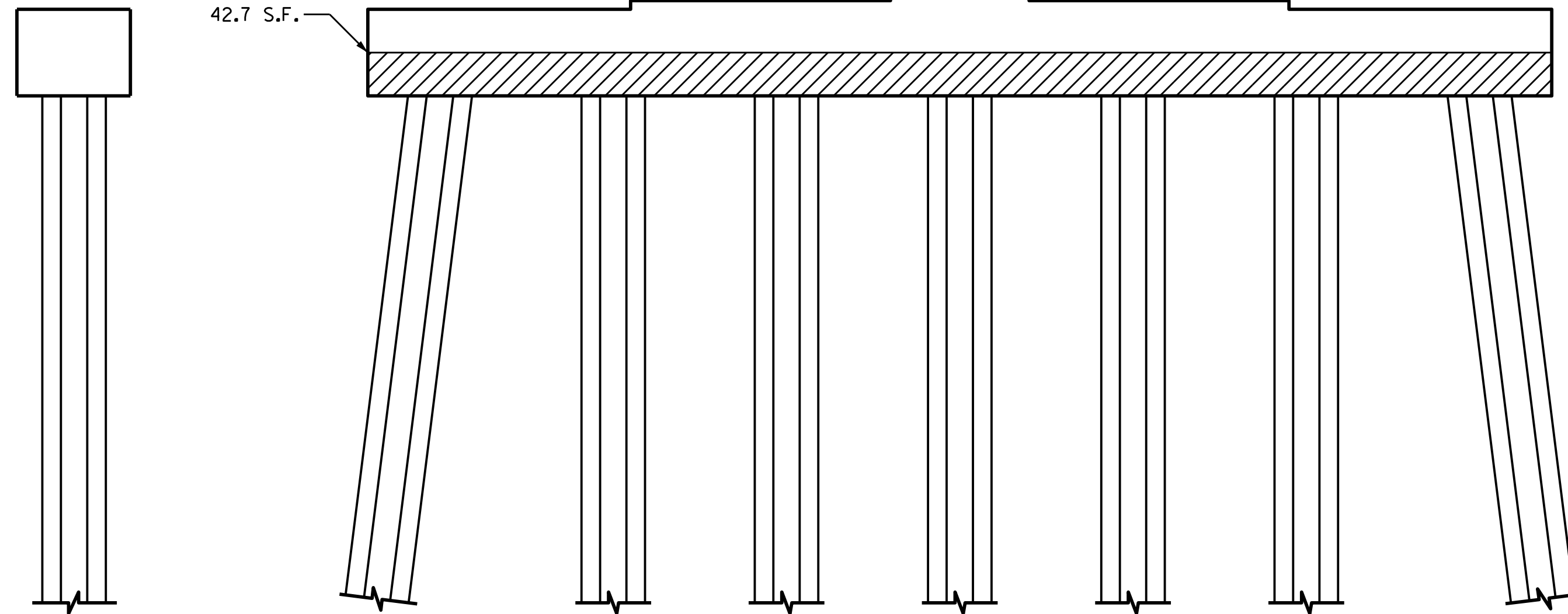
| REPAIRS BENT 2 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 80.2 | 40.1 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

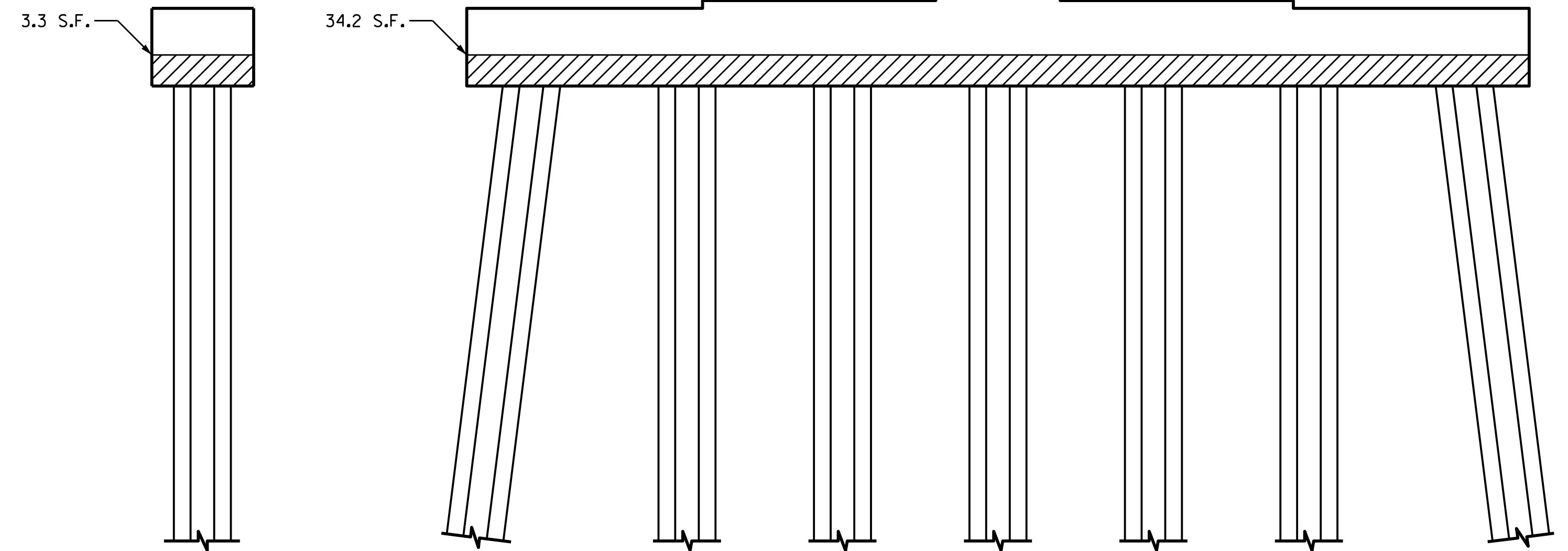
 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



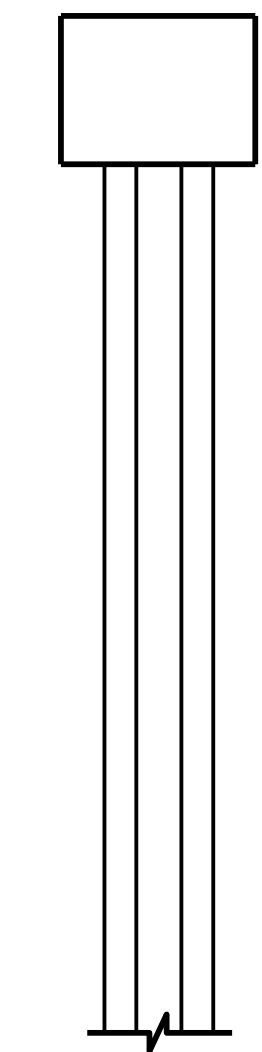
PLAN
TOP OF CAP



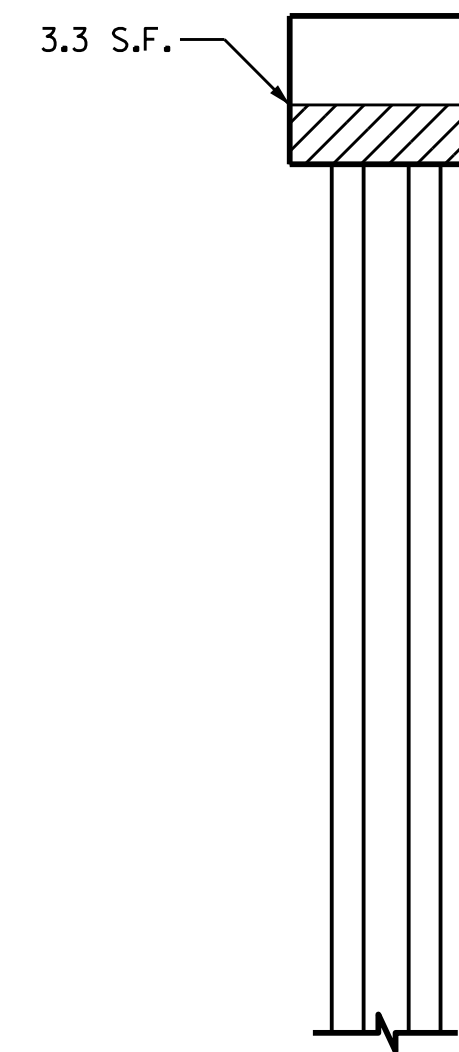
ELEVATION
SOUTH SIDE



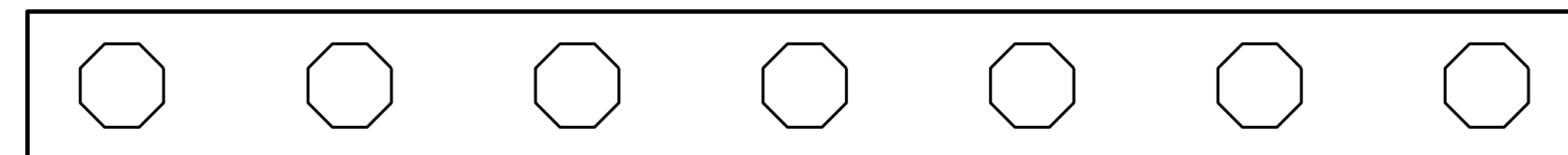
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 3 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 2



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Greg Dickey
884E488CE5848E...

DRAWN BY : M.A.LEE DATE : 8/2016
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-73 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

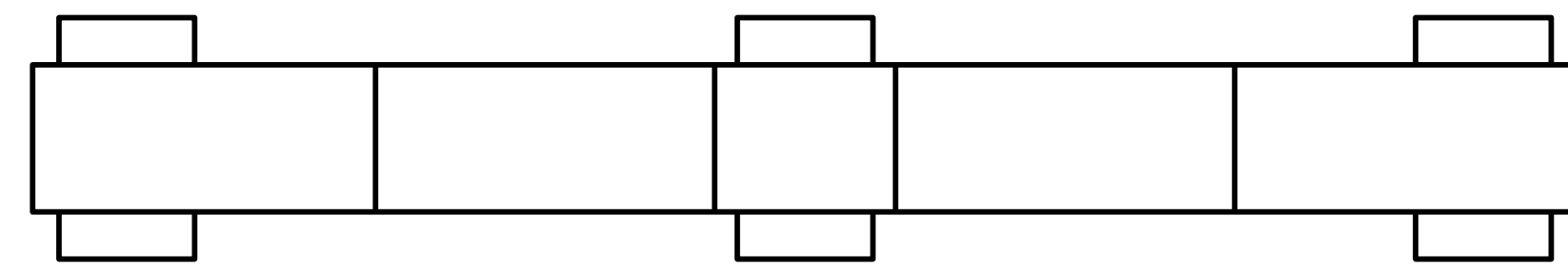
REPAIR QUANTITY TABLE

| REPAIRS BENT 3 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 98.2 | 49.1 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

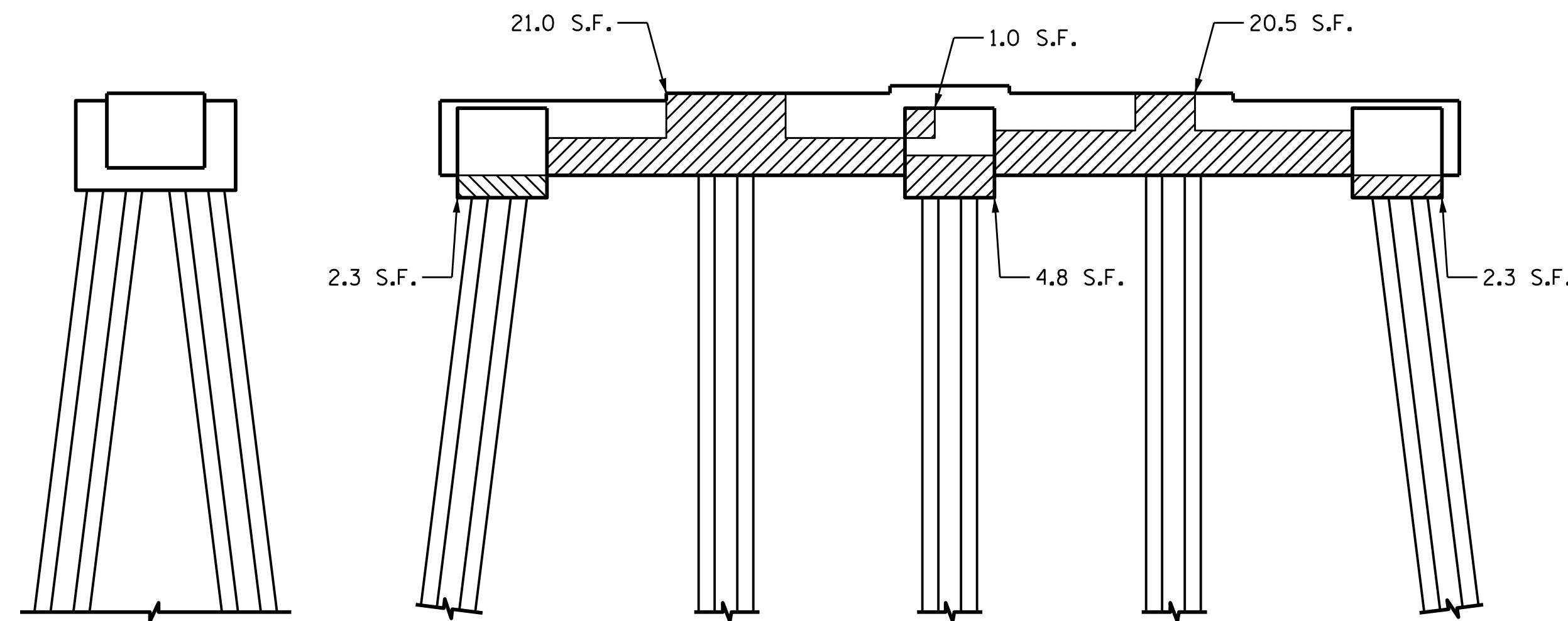
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

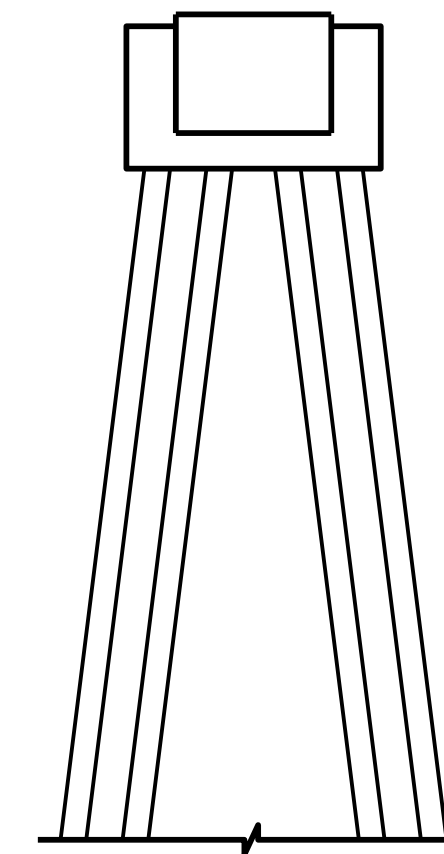
ERI - EPOXY RESIN INJECTION



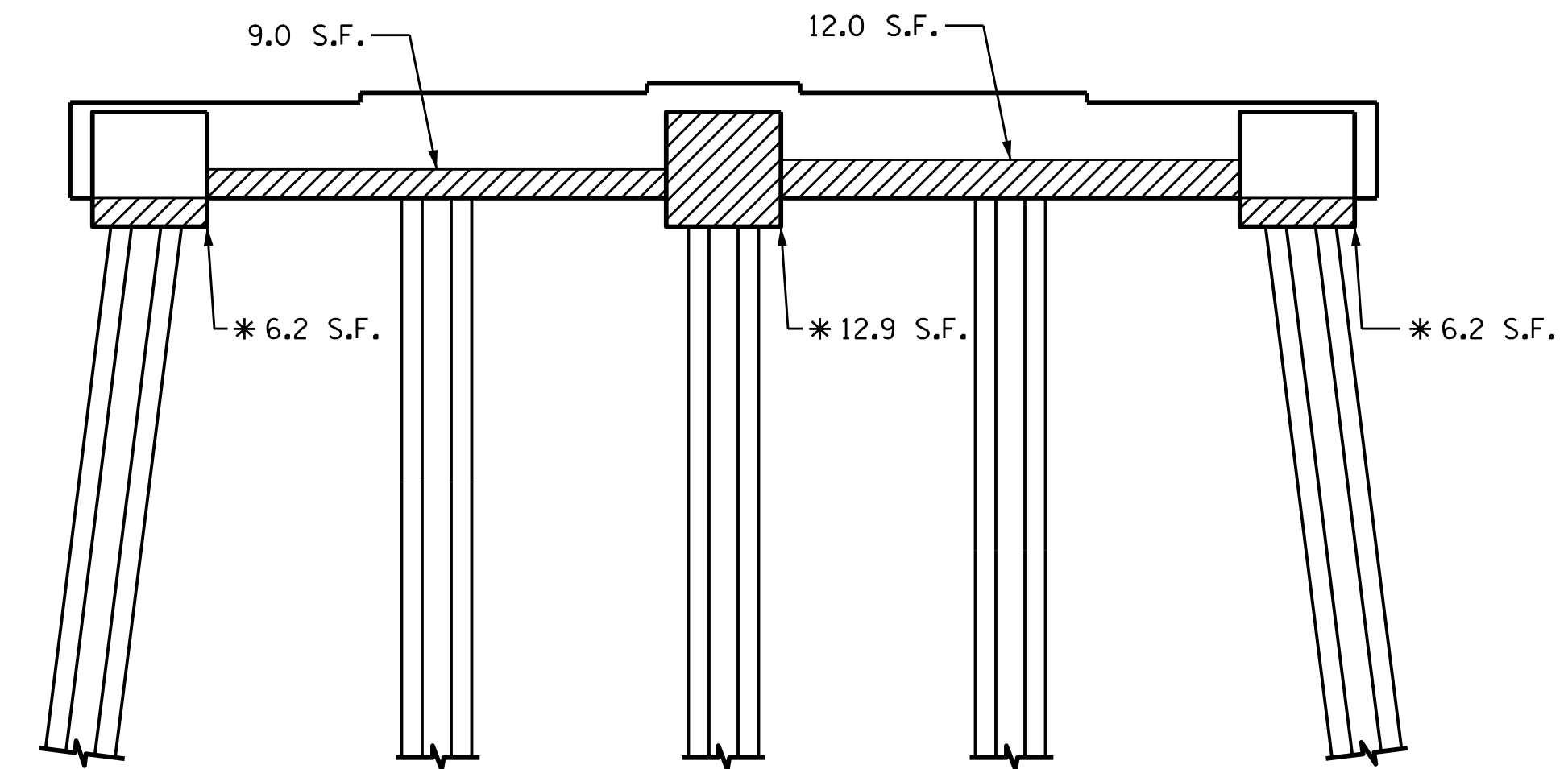
PLAN
TOP OF CAP



ELEVATION
SOUTH SIDE



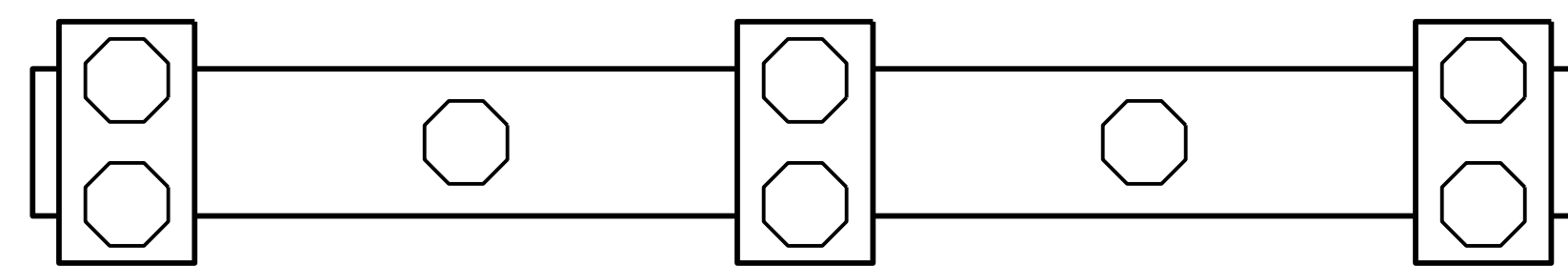
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE

* REPAIR EXTENDS AROUND PILE CAP

END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 4 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 3



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| 1 | | | 3 | | | S2-74 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

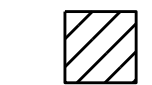

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

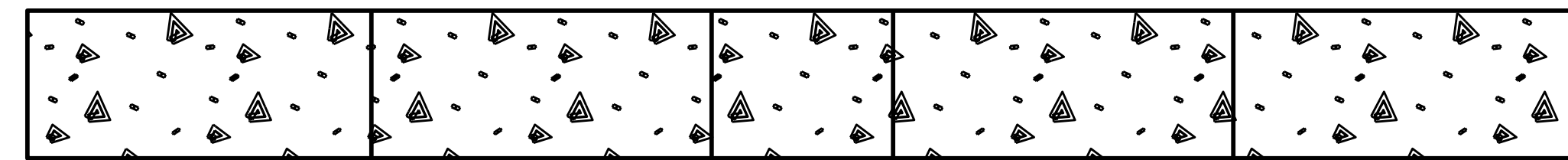
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

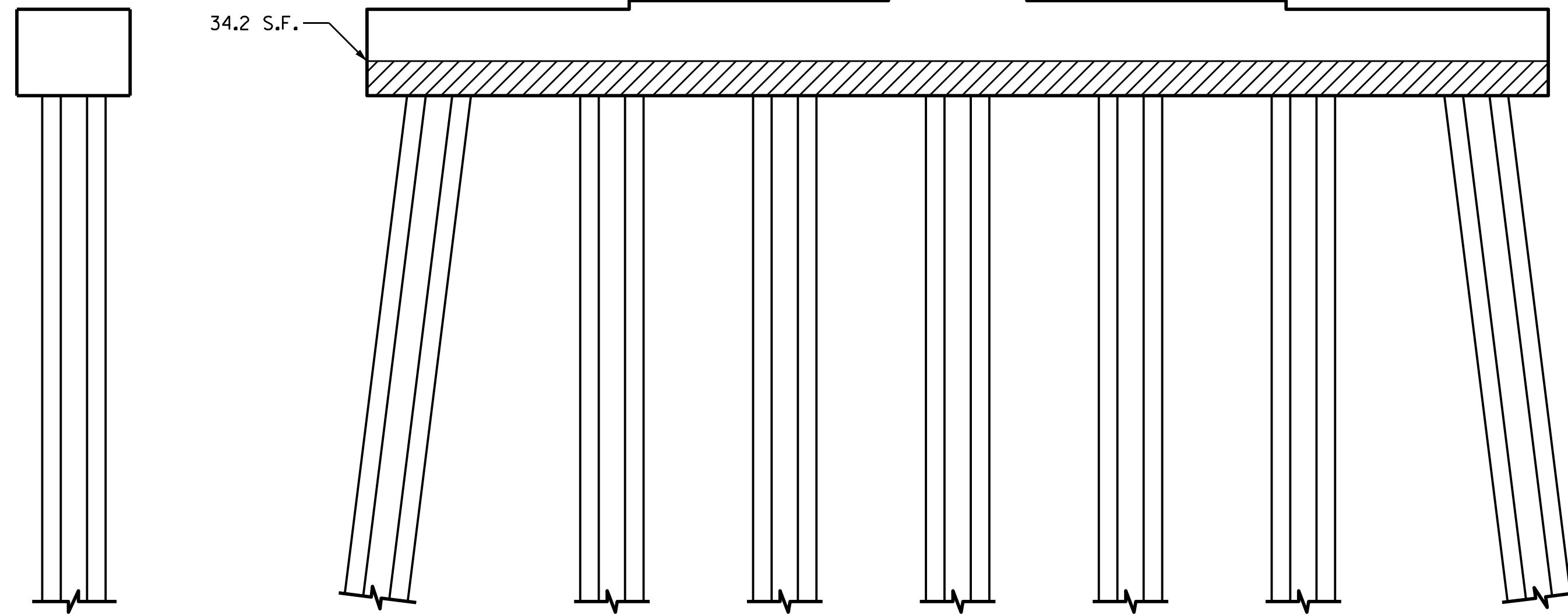
| REPAIRS BENT 4 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 68.9 | 34.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.5 | 0.3 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

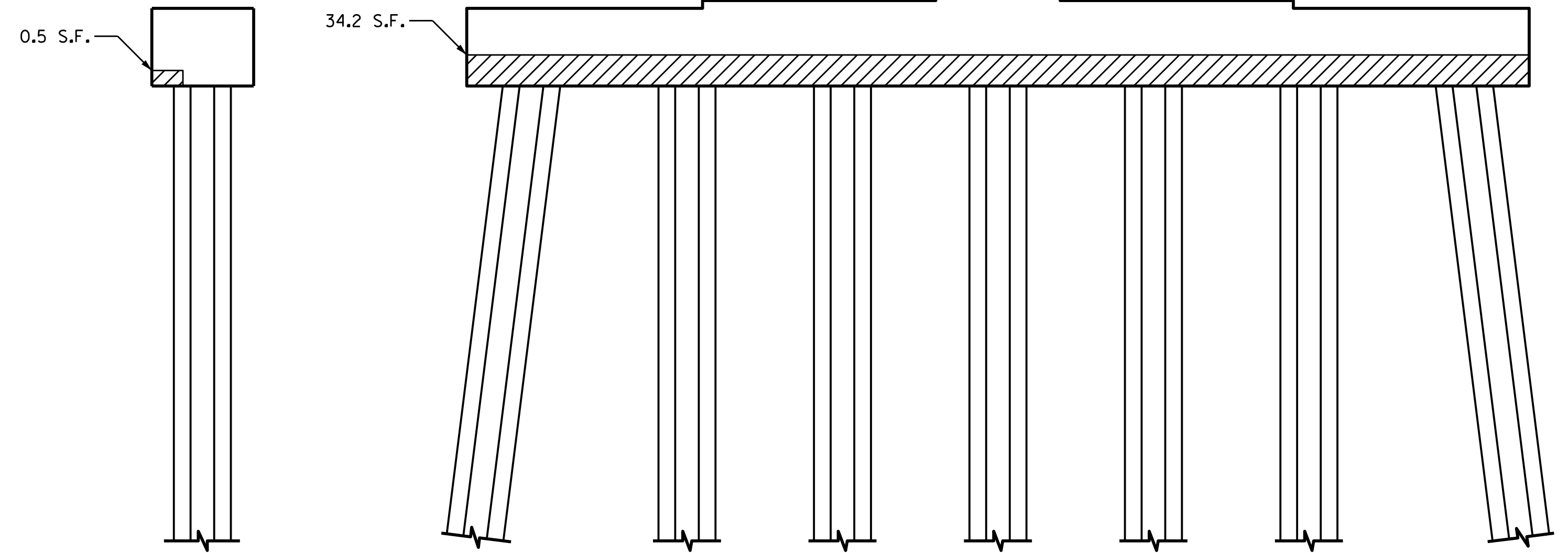


PLAN
TOP OF CAP



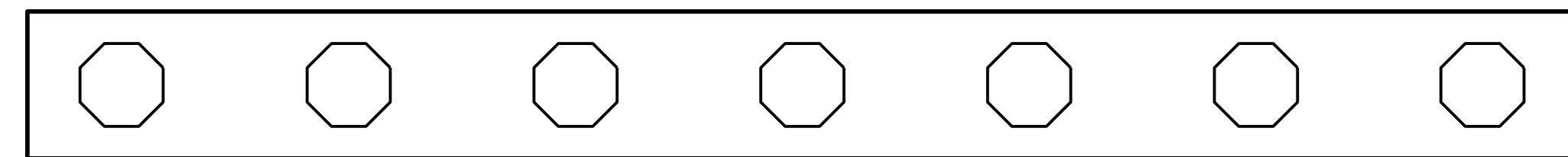
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 5 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 4



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Greg Dickey
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| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S2-75 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

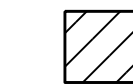
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

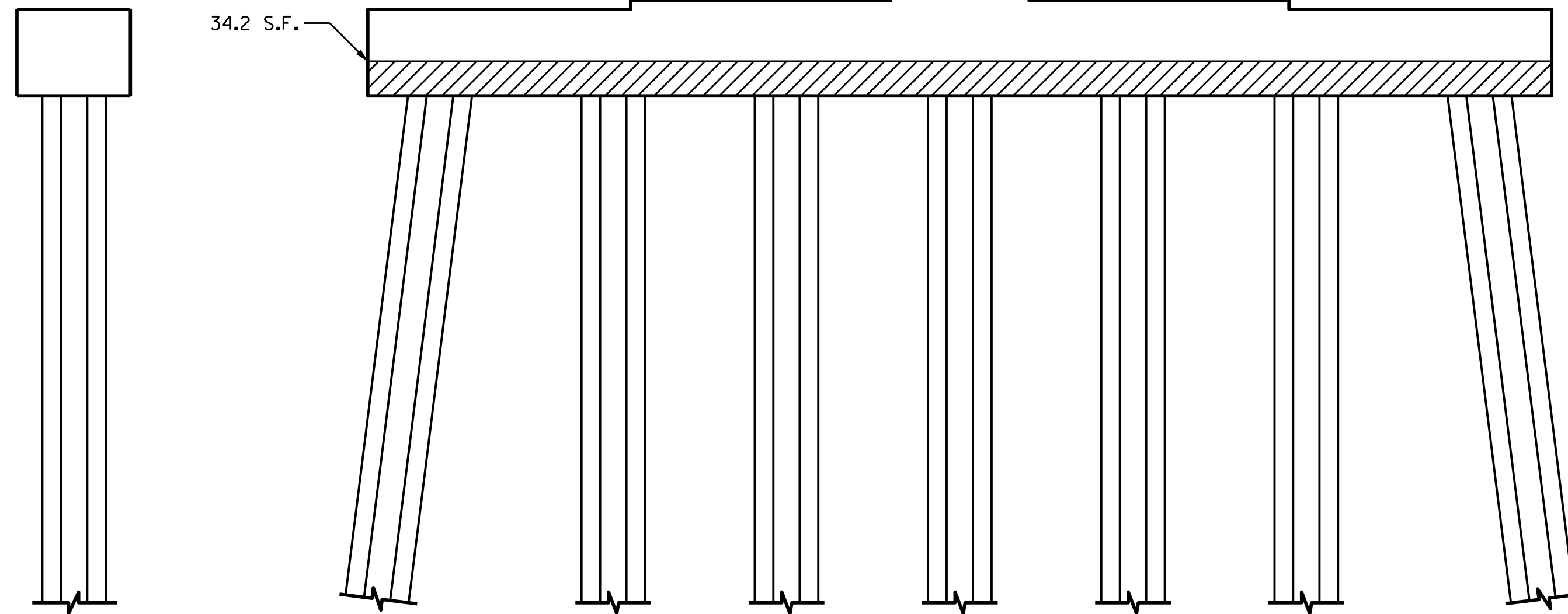
| REPAIRS BENT 5 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 77.9 | 39.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

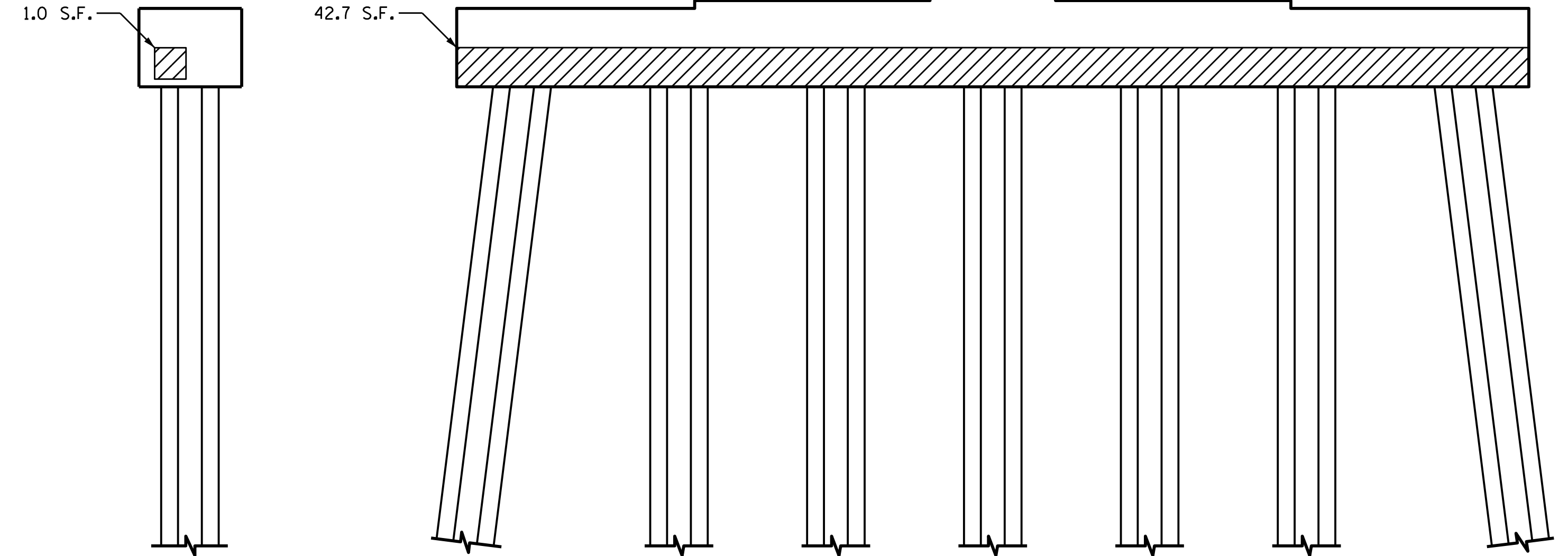
 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP



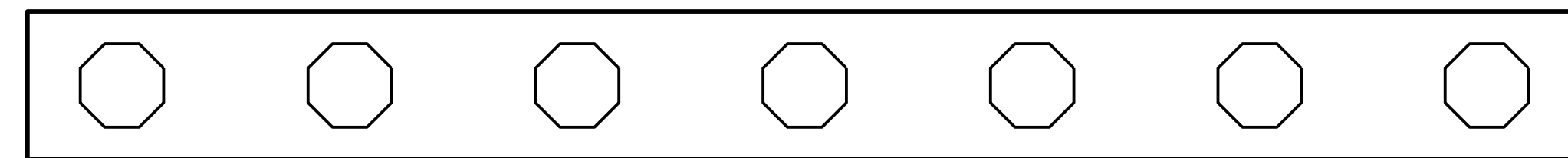
ELEVATION
SOUTH SIDE



ELEVATION
NORTH SIDE

END VIEW
WEST SIDE

END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939
CARTERET COUNTY

BRIDGE NO. 6

SHEET 6 OF 60

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 5



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| 1 | | | 3 | | | S2-76 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

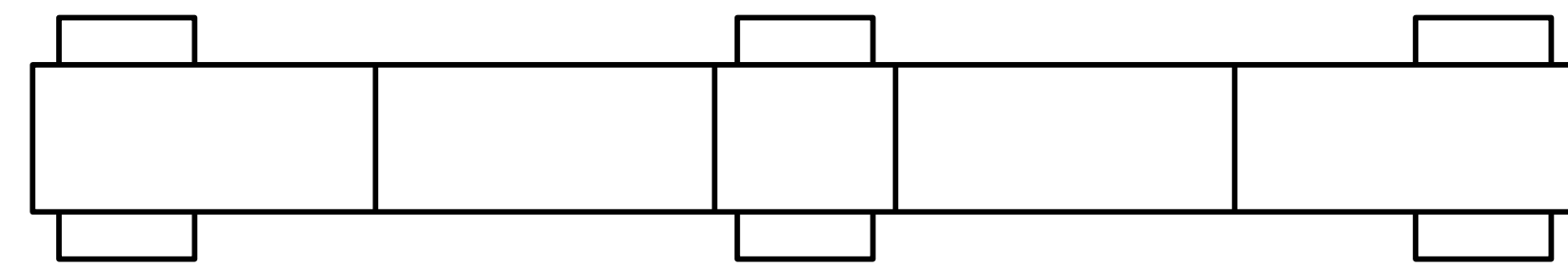
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

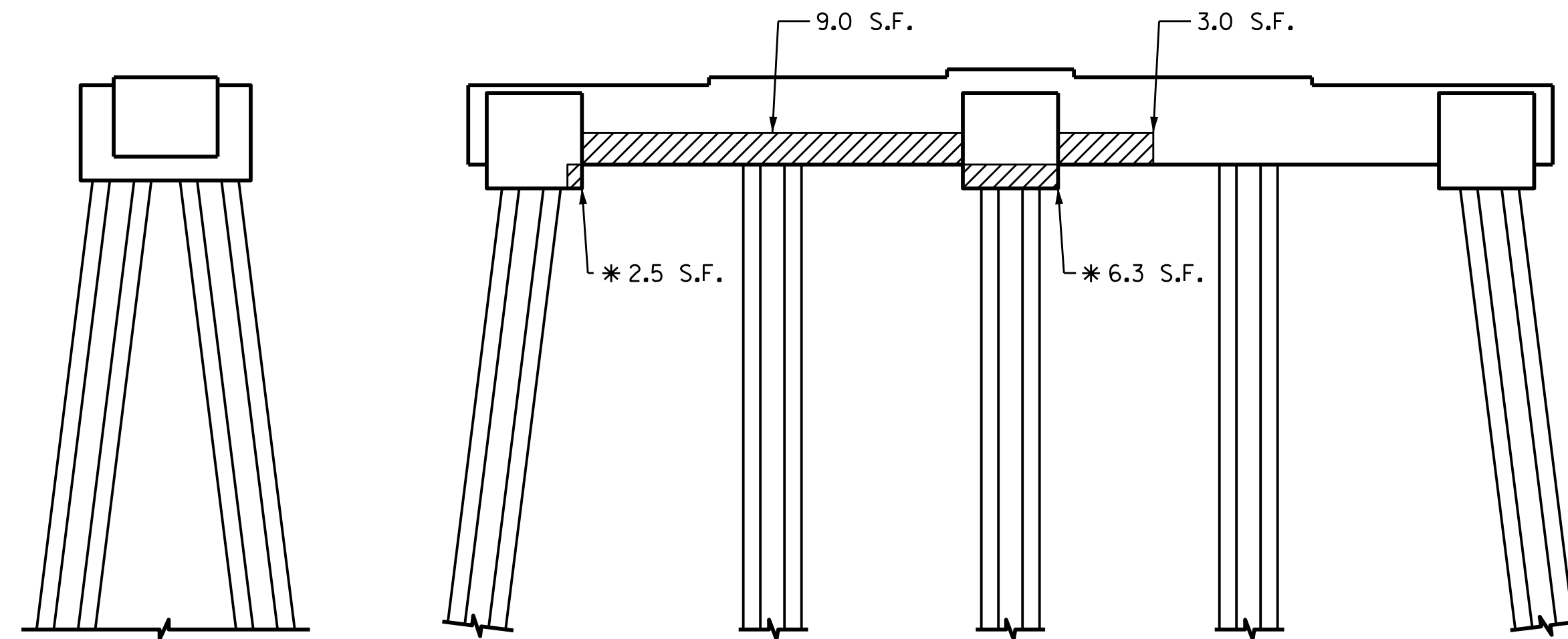
REPAIR QUANTITY TABLE

| REPAIRS BENT 6 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 32.4 | 16.2 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

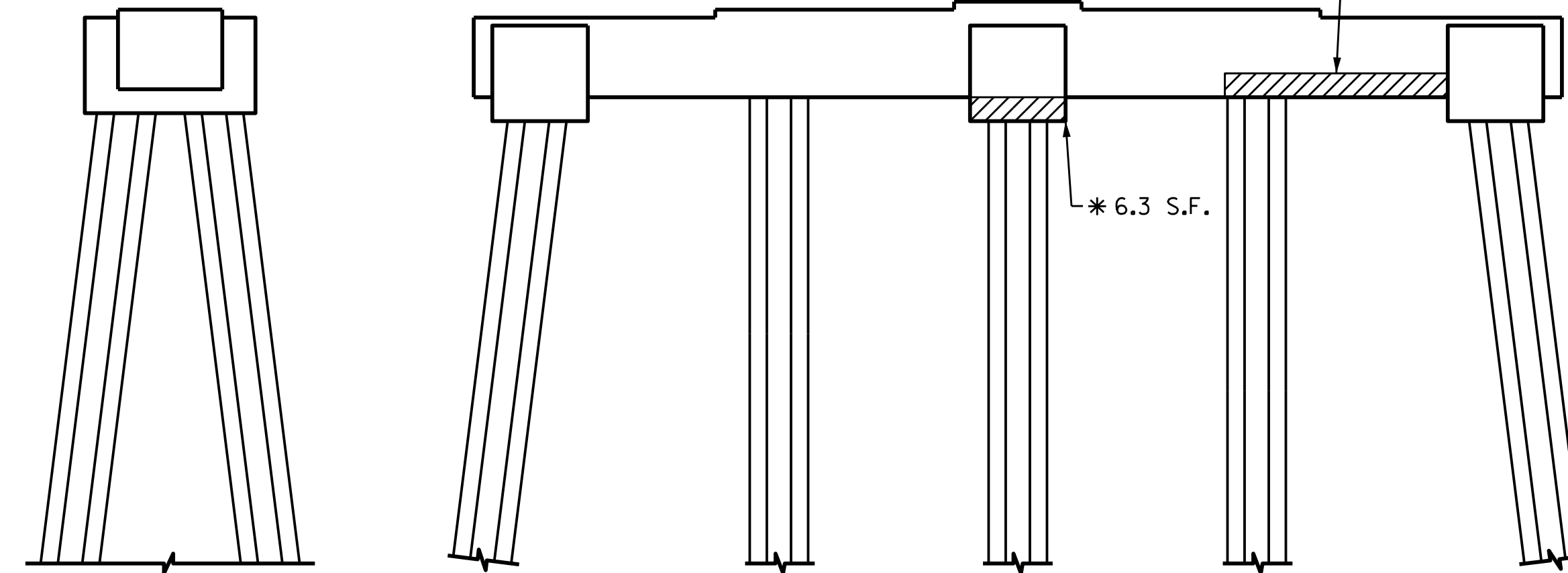


PLAN
TOP OF CAP



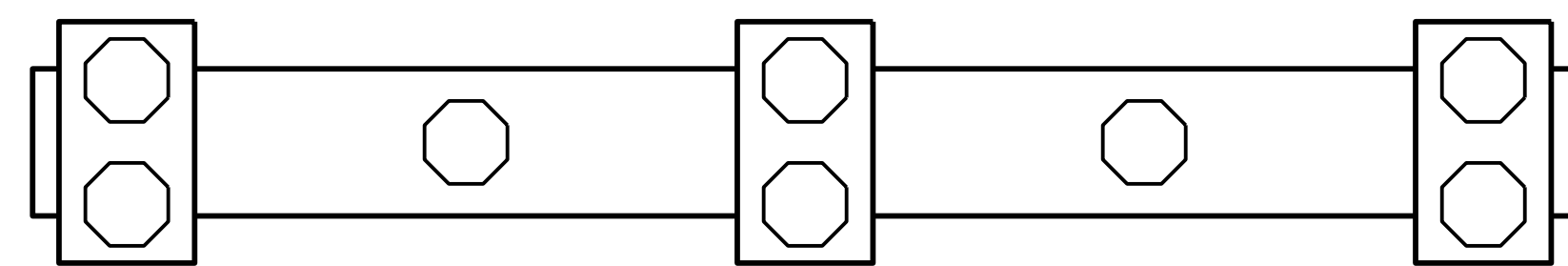
ELEVATION
SOUTH SIDE

* REPAIR EXTENDS AROUND PILE CAP



ELEVATION
NORTH SIDE

* REPAIR EXTENDS AROUND PILE CAP



PLAN
BOTTOM OF CAP

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 7 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 6



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| 1 | | | 3 | | | S2-77 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

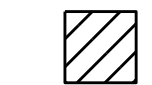

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

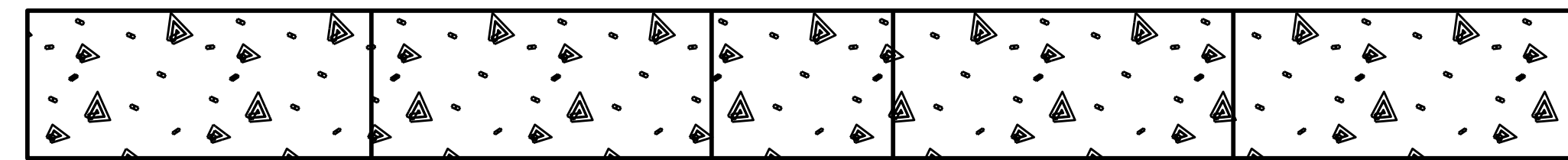
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

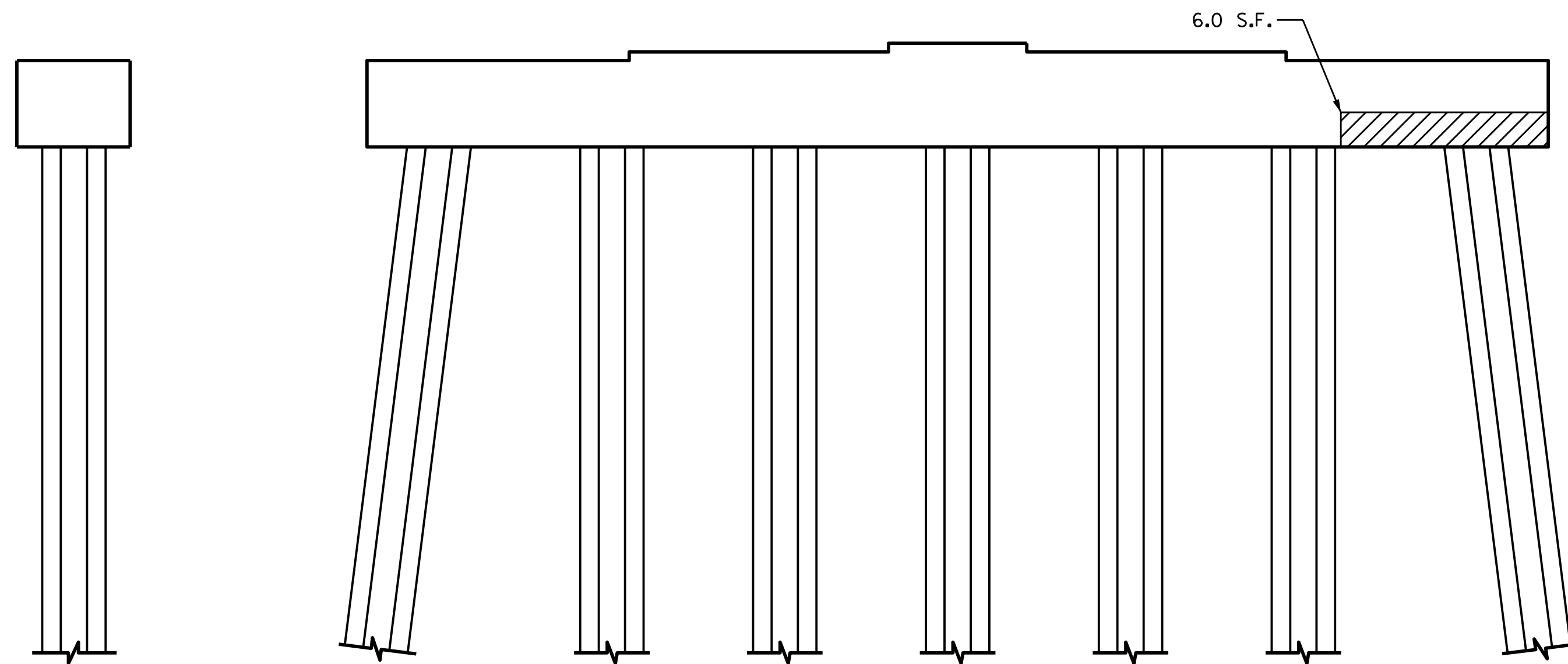
| REPAIRS BENT 7 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 10.0 | 5.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

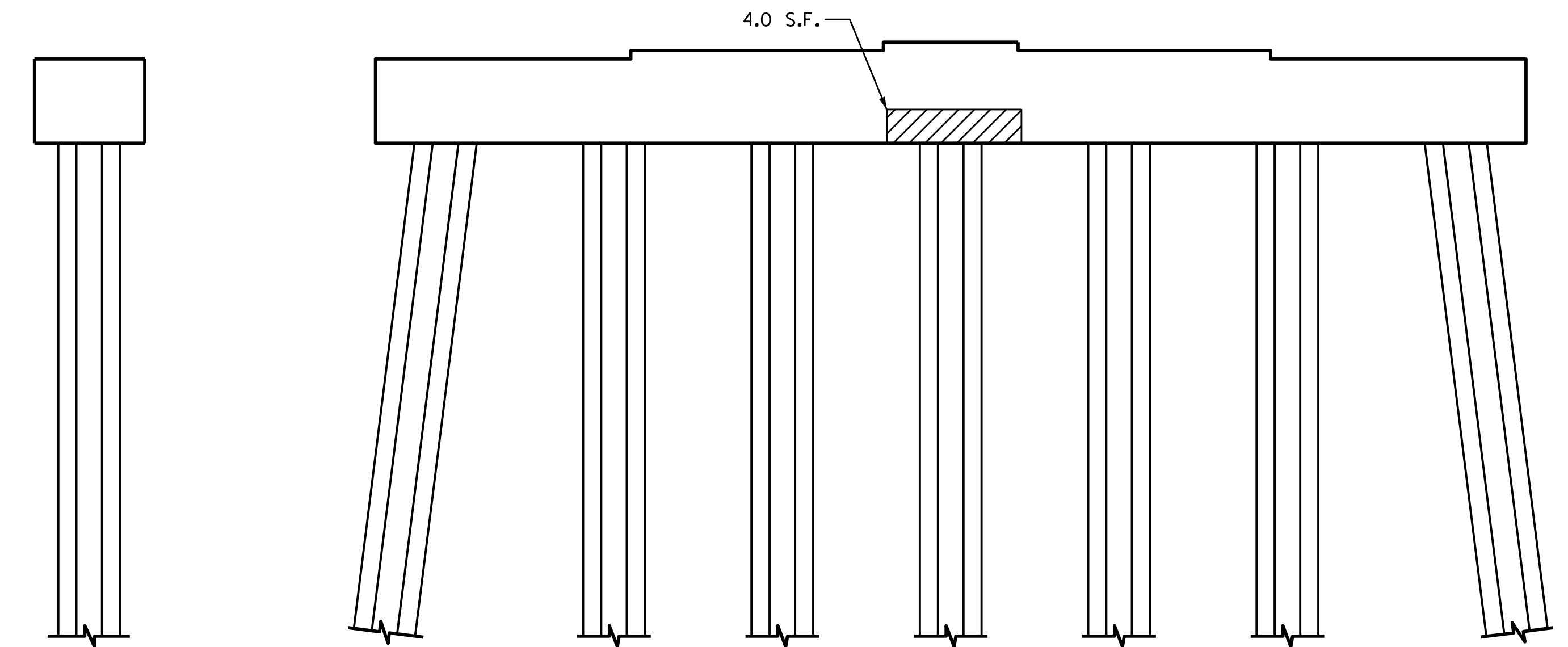


PLAN
TOP OF CAP



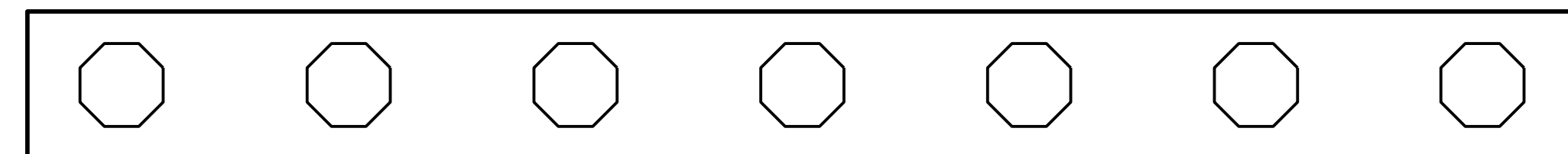
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 8 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
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| 1 | | | 3 | | | S2-78 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

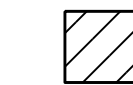
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

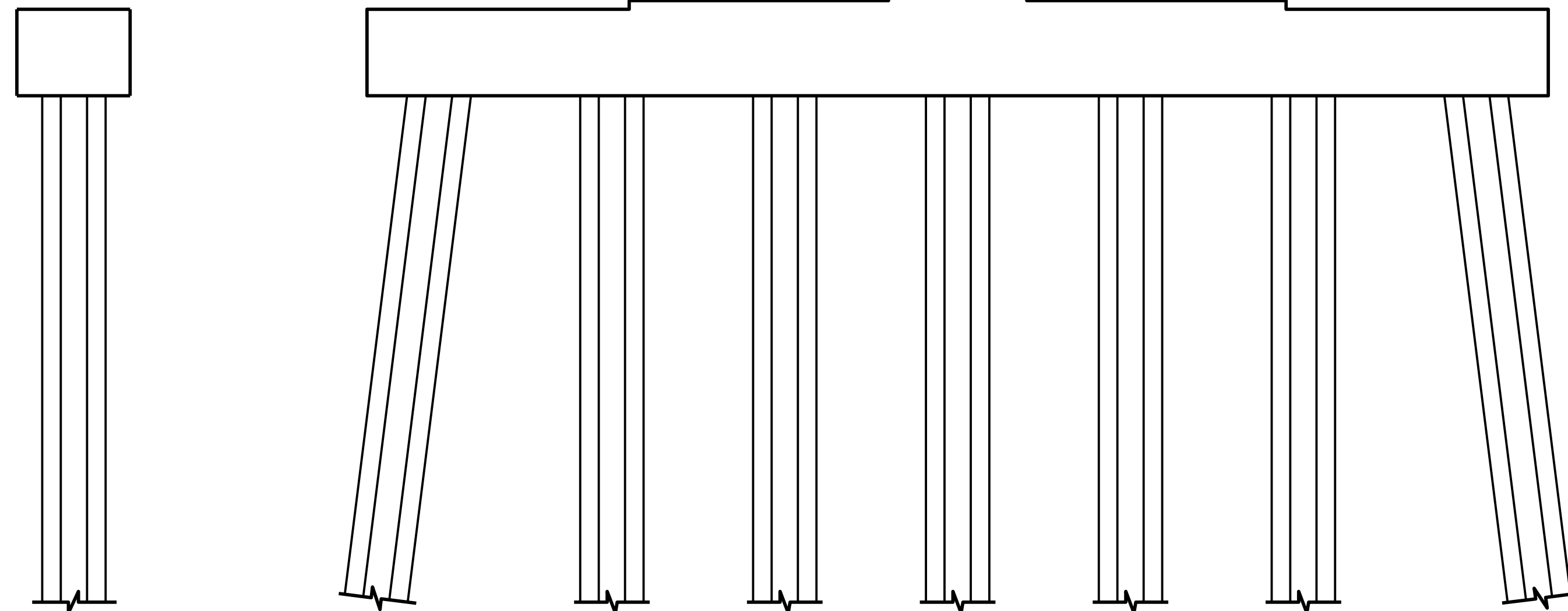
| REPAIRS BENT 8 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 10.0 | 5.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

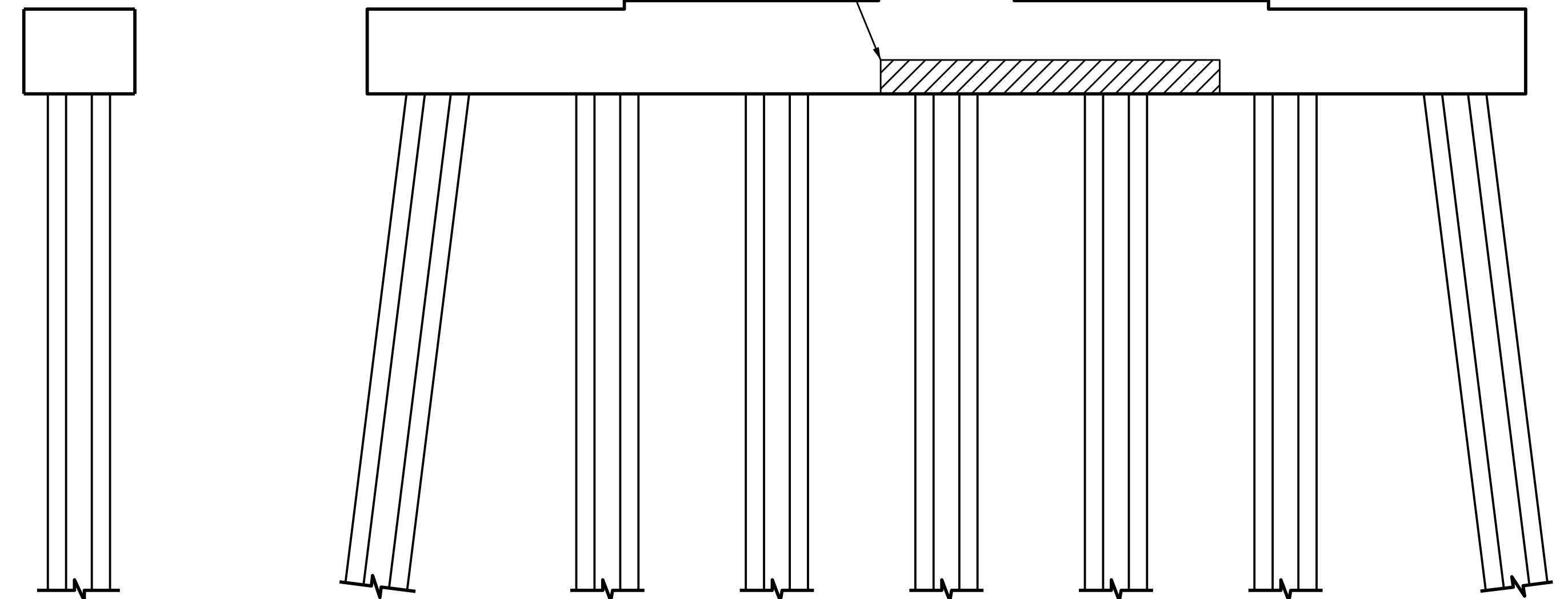


PLAN
TOP OF CAP



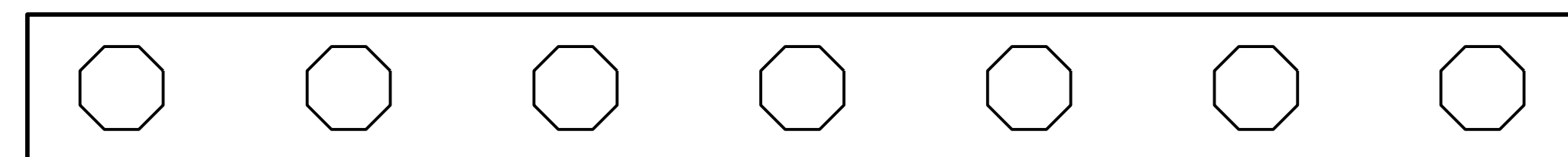
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 9 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 8



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Greg Dickey
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| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 9 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 7.0 | 3.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

NOTES:

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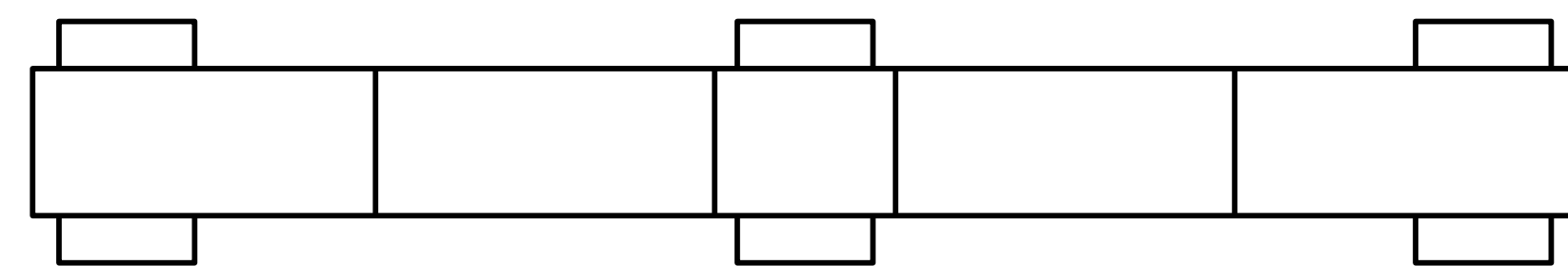
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

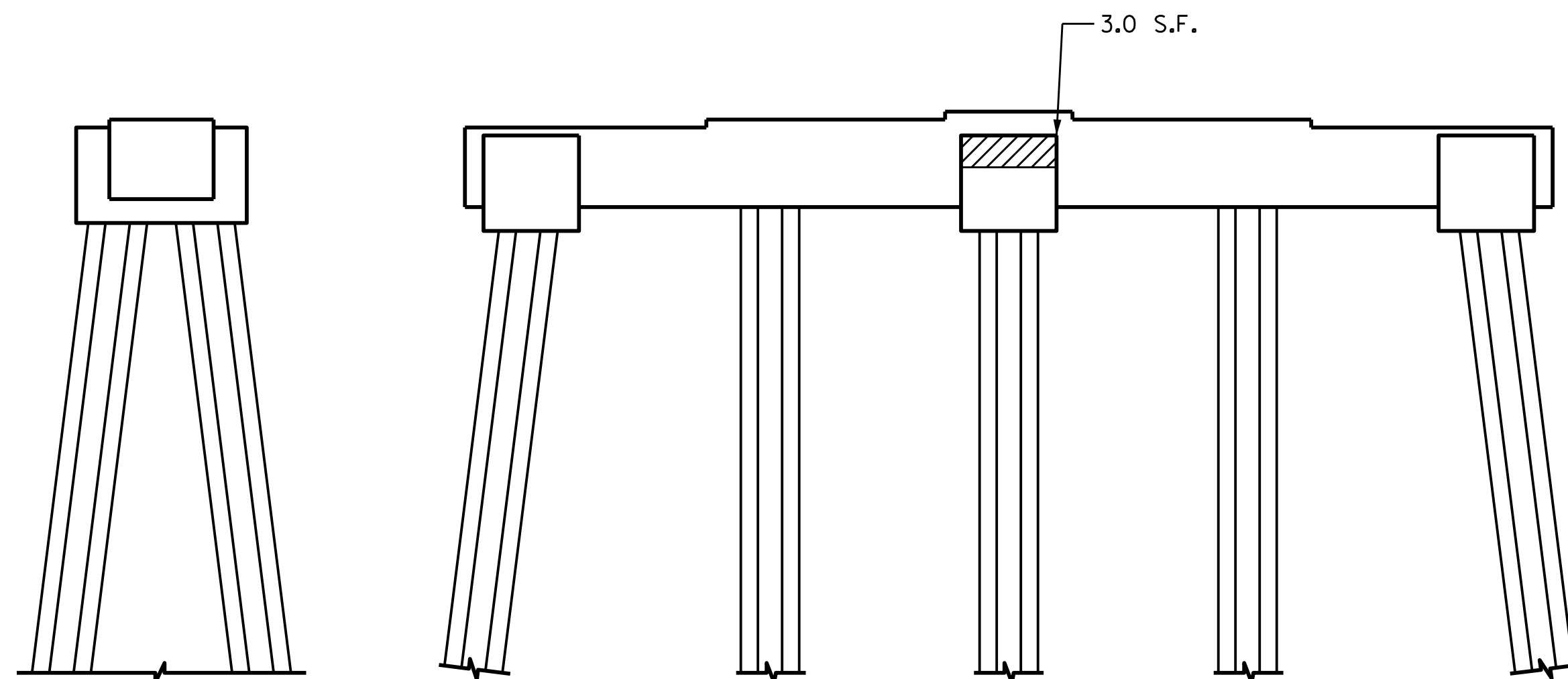
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

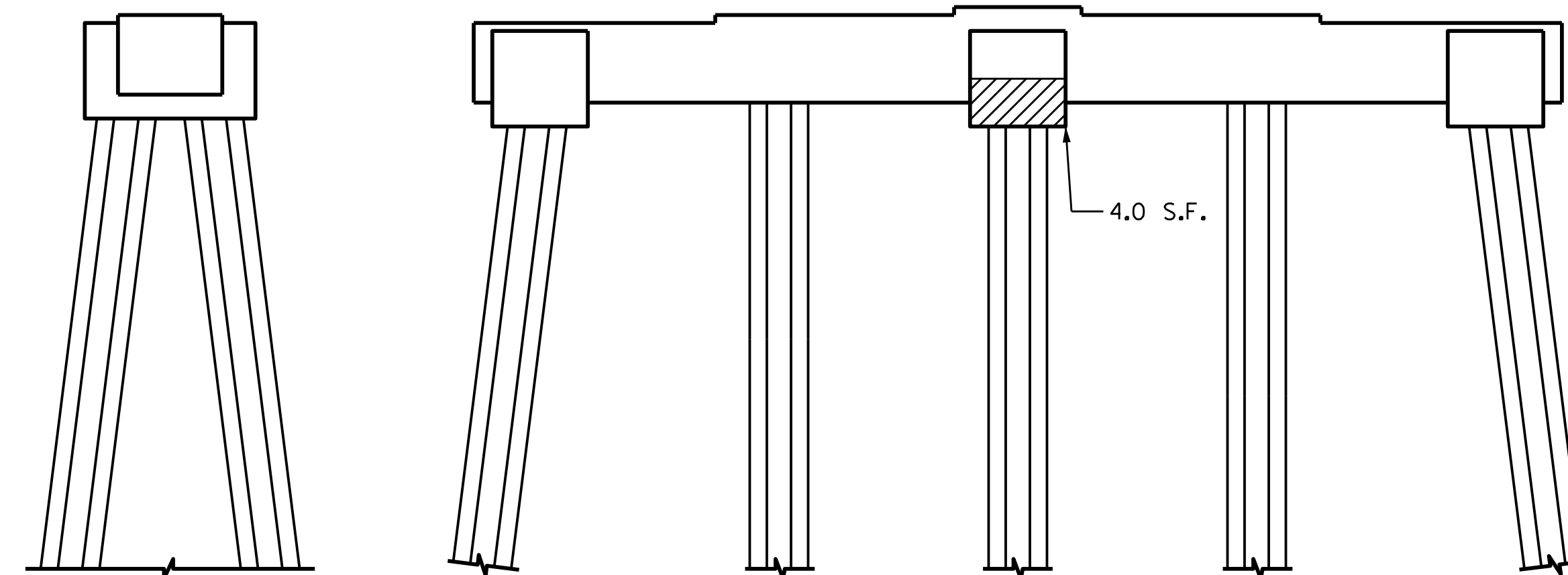


PLAN
TOP OF CAP



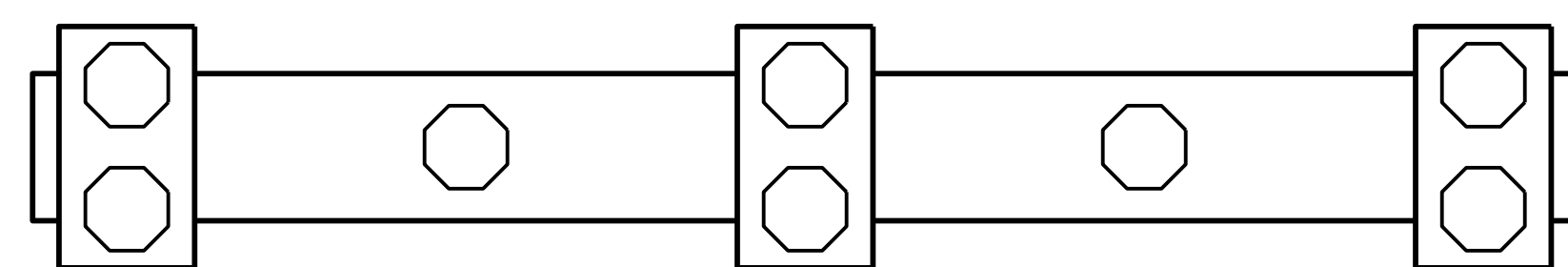
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 10 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 9



DocuSigned by:
Greg Dickey
884E488CE58486

DRAWN BY : M.A.LEE DATE : 8/2016
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| 1 | | | 3 | | | S2-80 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

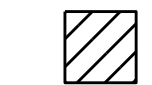

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

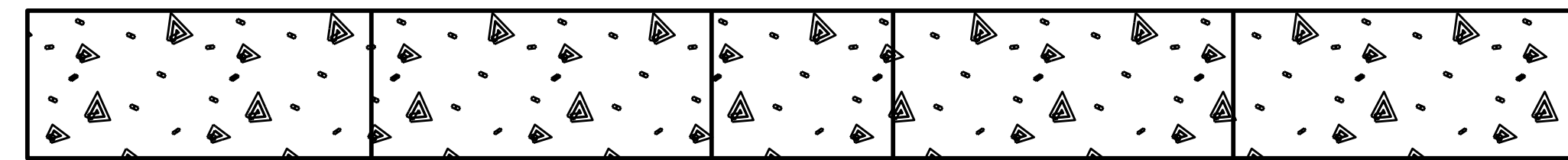
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

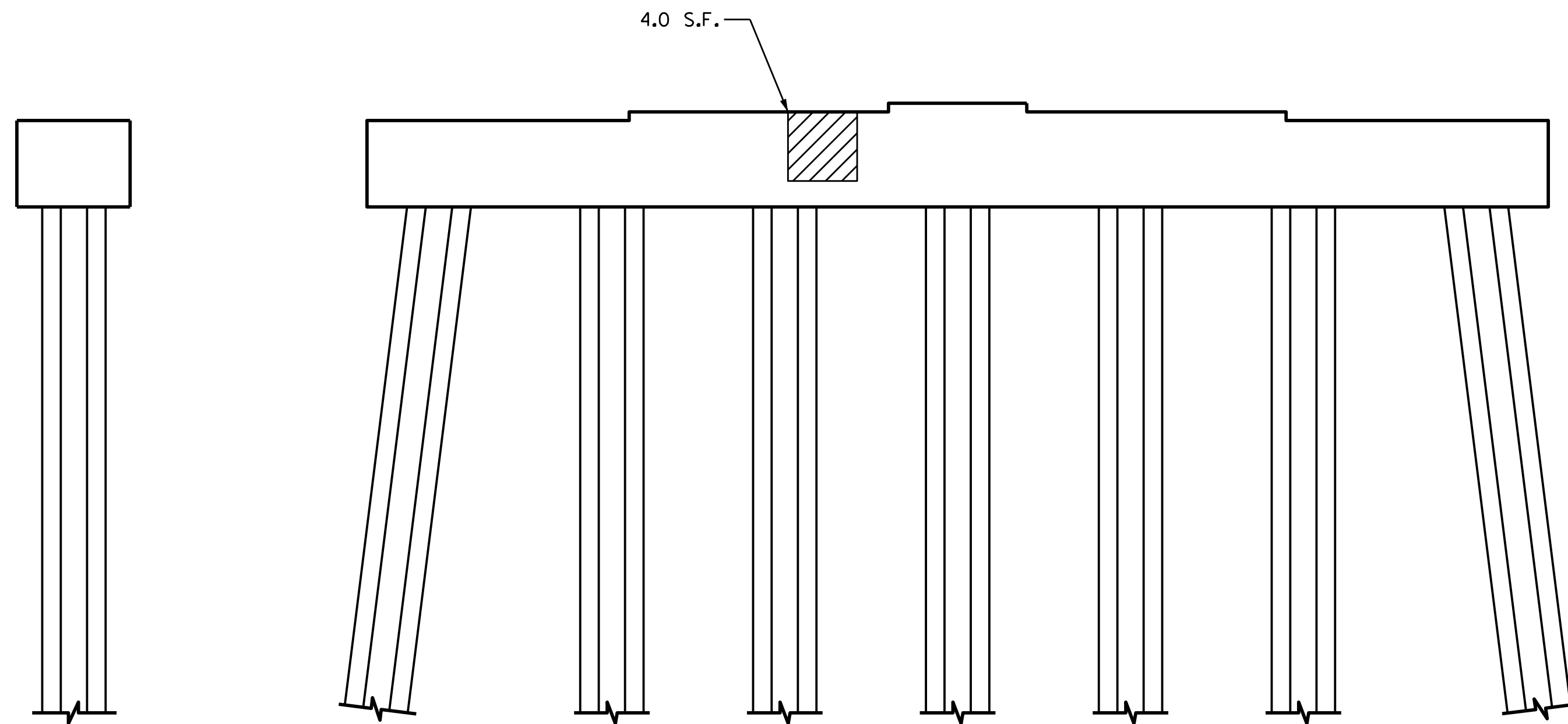
| REPAIRS BENT 10 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 4.0 | 2.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

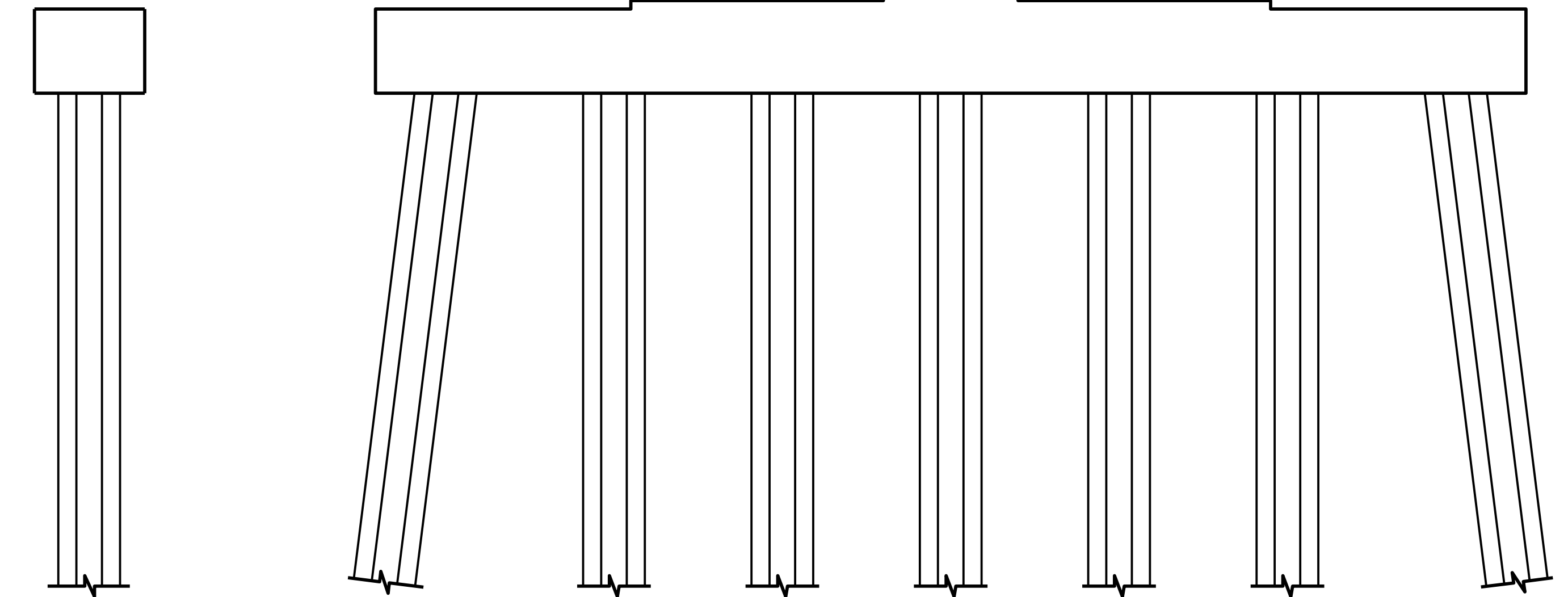


PLAN
TOP OF CAP



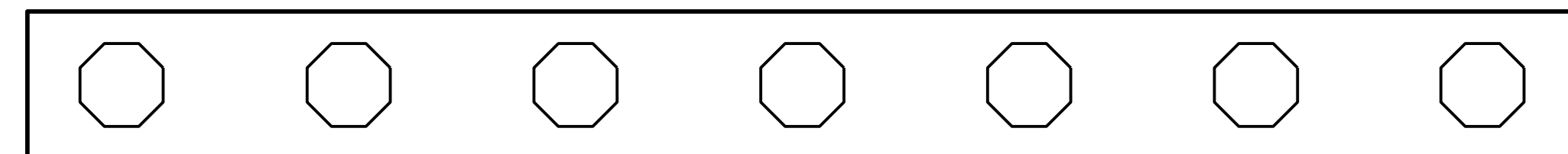
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 11 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 10



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Greg Dickey
884E488CE58486...

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

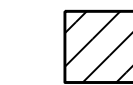
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| 1 | | | 3 | | | S2-81 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 11 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

NOTES:

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

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

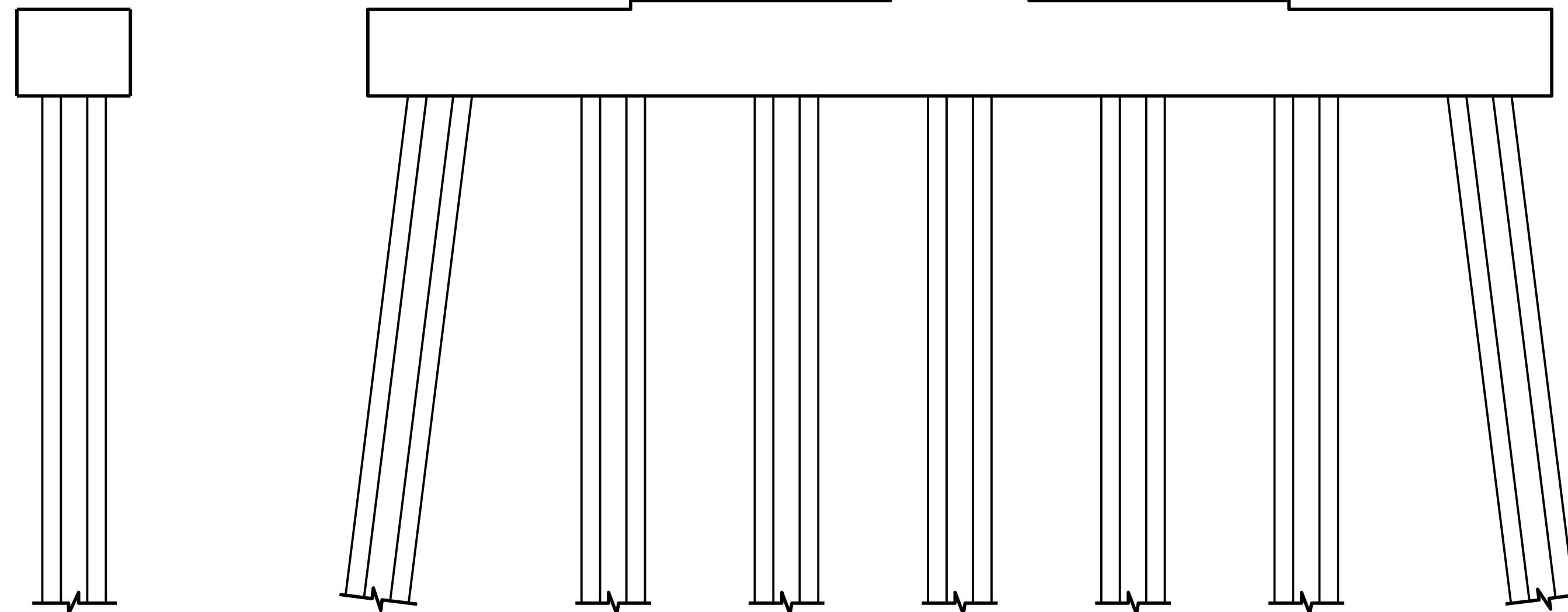
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

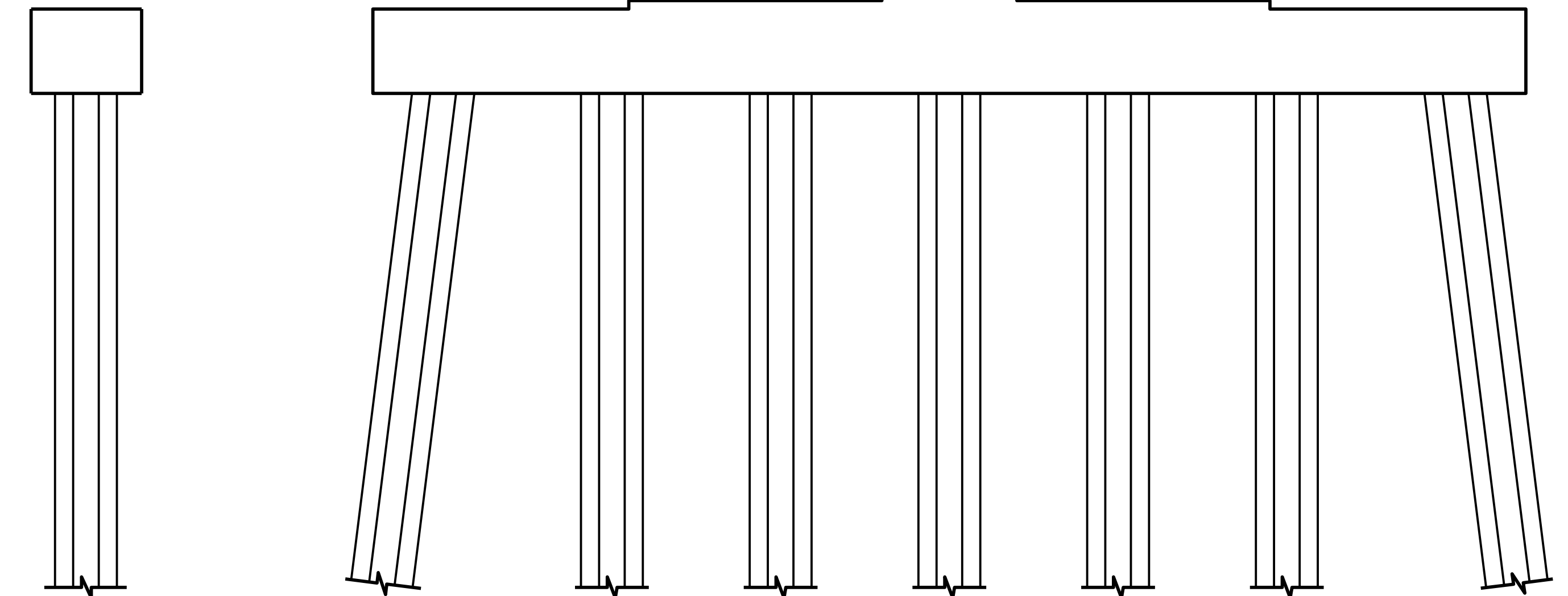
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP



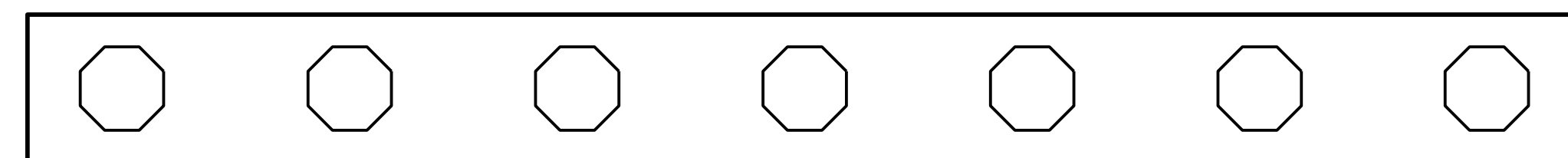
ELEVATION
SOUTH SIDE



ELEVATION
NORTH SIDE

END VIEW
WEST SIDE

END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 12 OF 60

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 11



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DRAWN BY : M.A.LEE DATE : 8/2016
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| 1 | | | 3 | | | S2-82 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

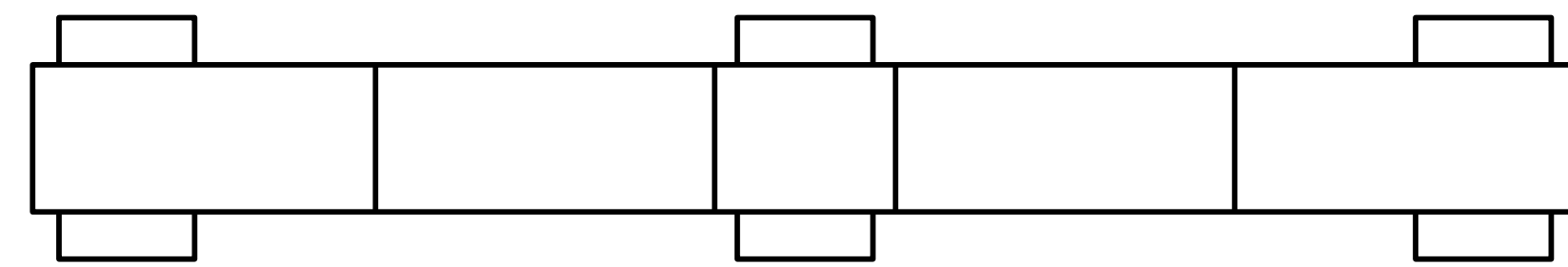
REPAIR QUANTITY TABLE

| REPAIRS BENT 12 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 3.1 | 1.6 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

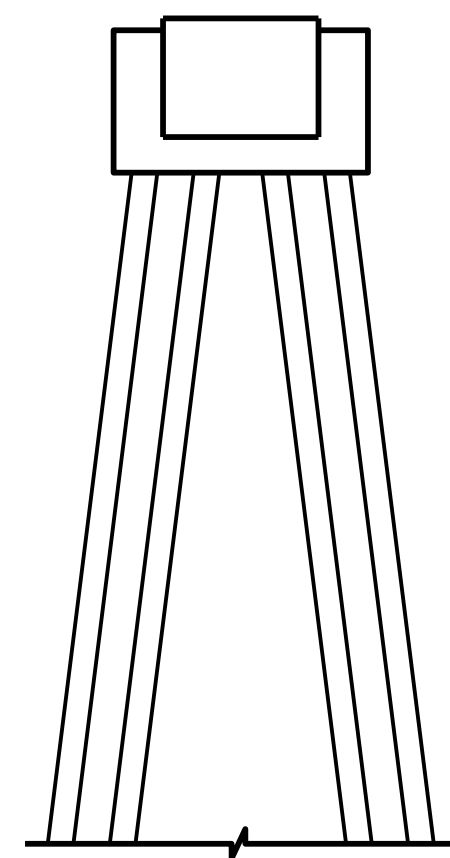
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

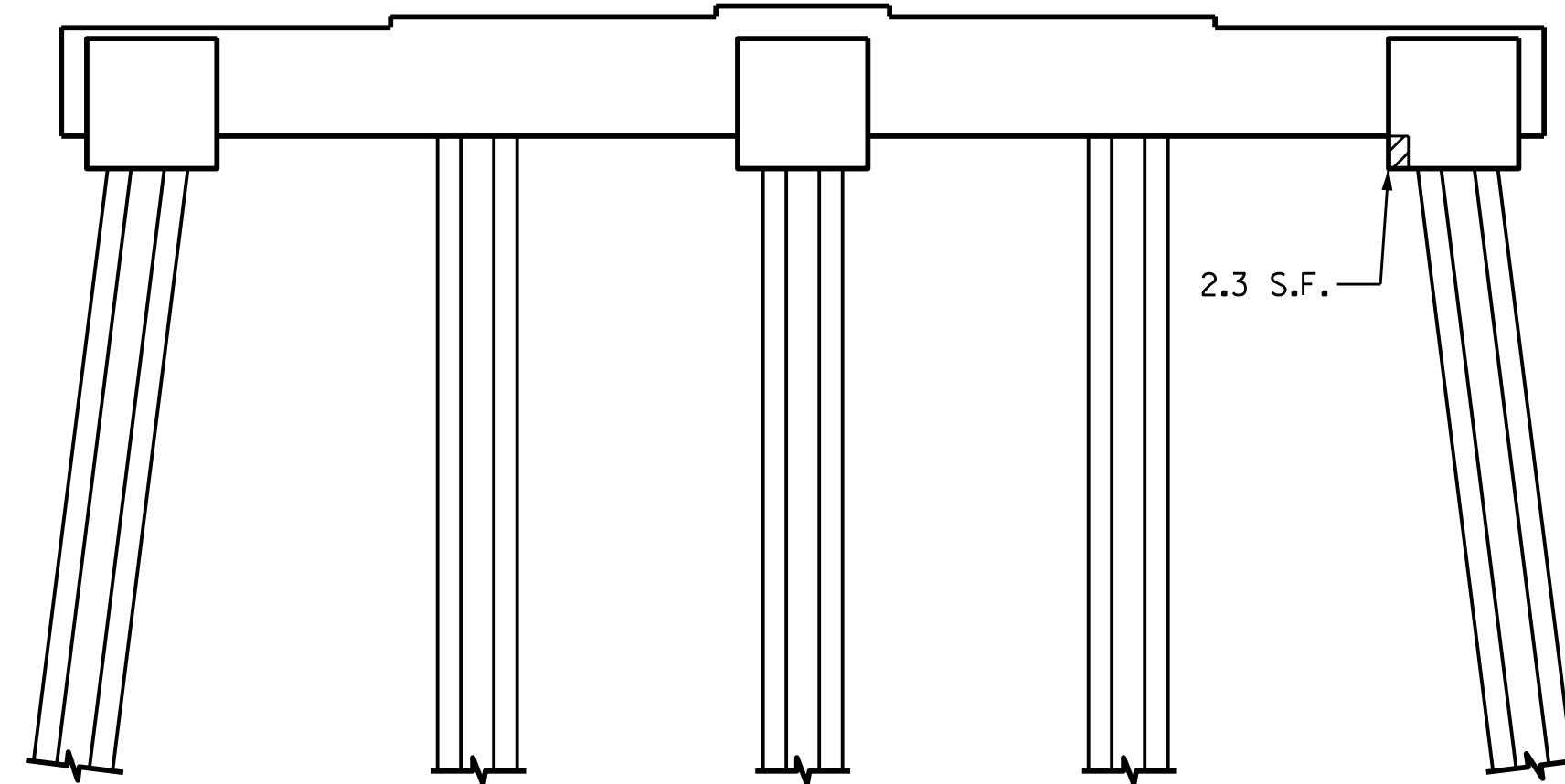
ERI - EPOXY RESIN INJECTION



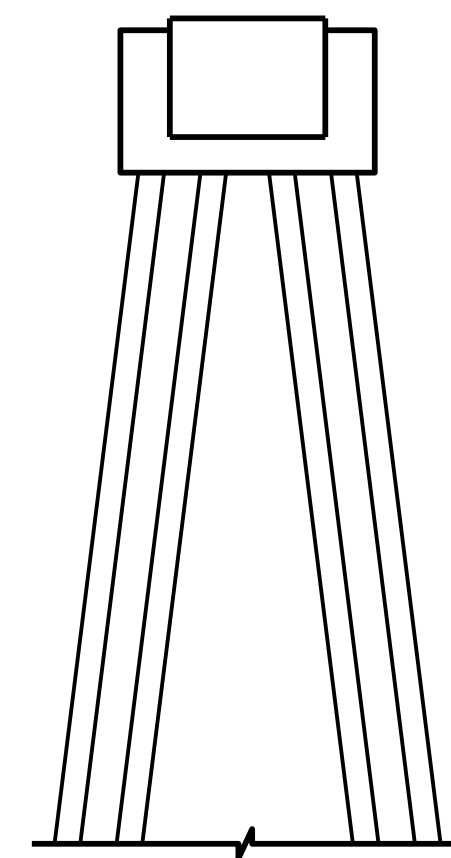
PLAN
TOP OF CAP



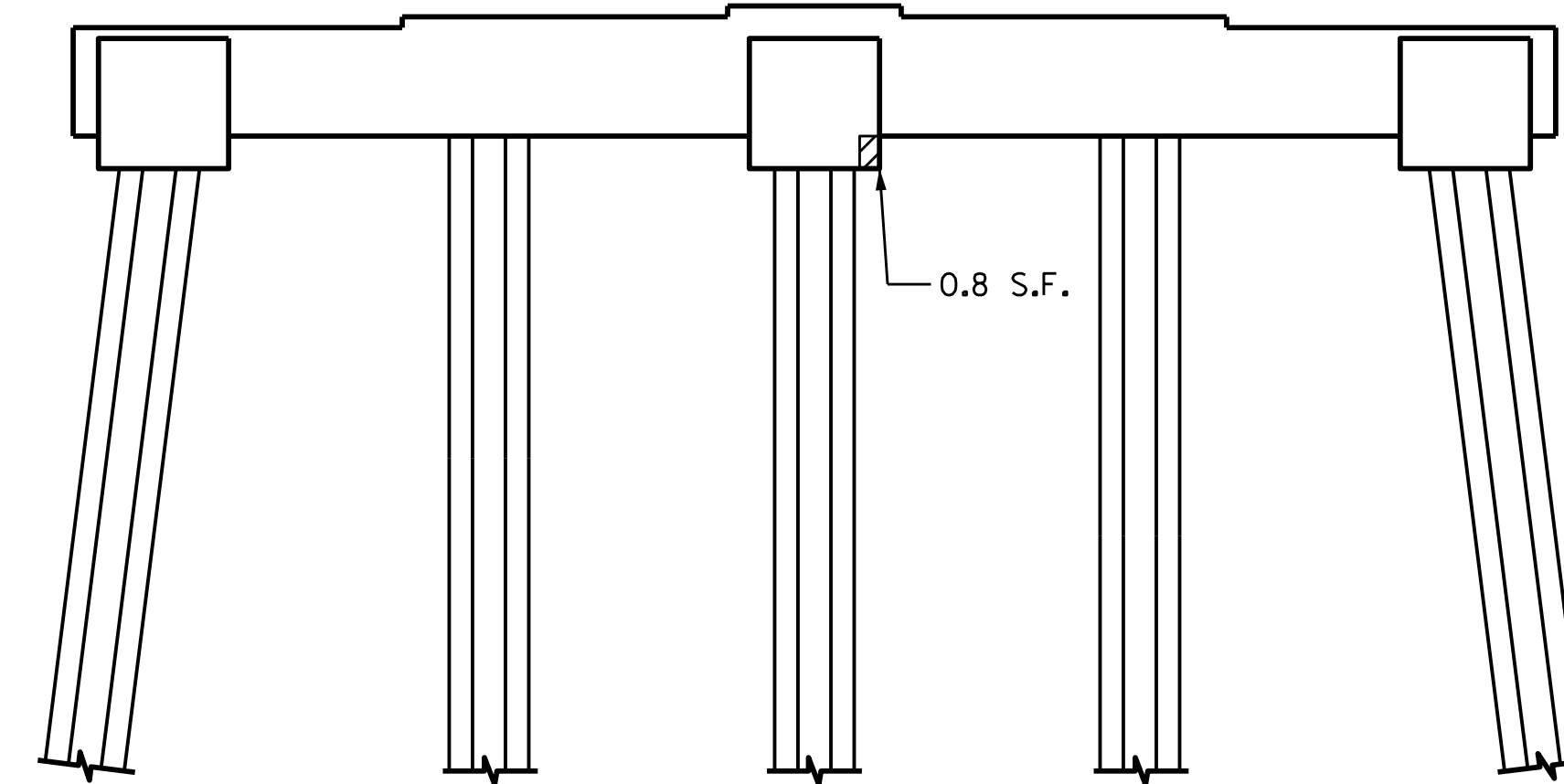
END VIEW
WEST SIDE



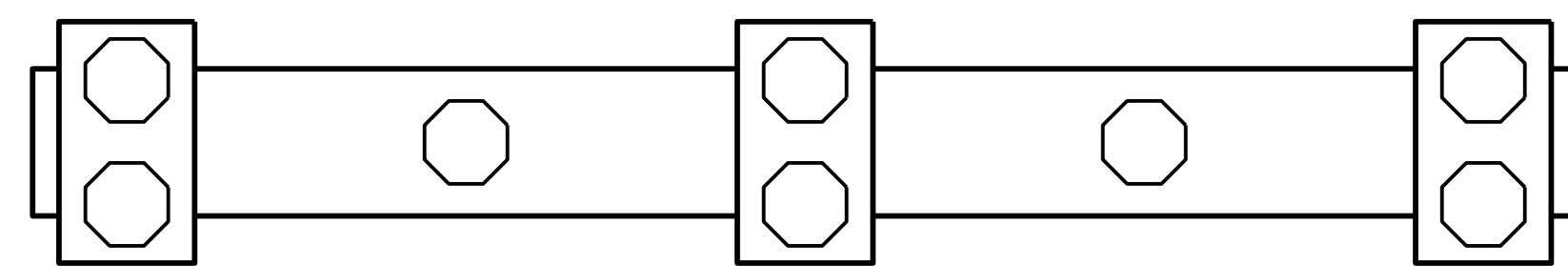
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 13 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 12



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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-83 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

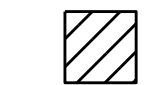


FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

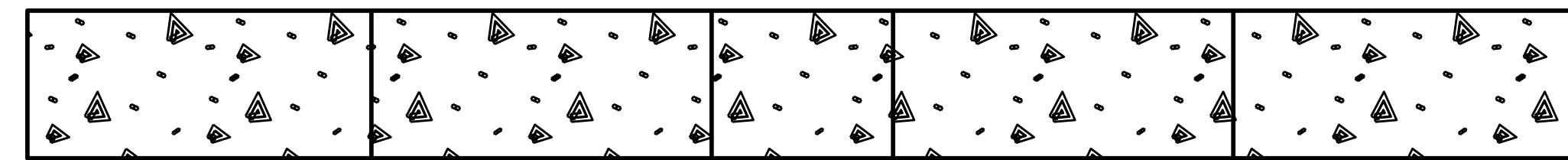
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

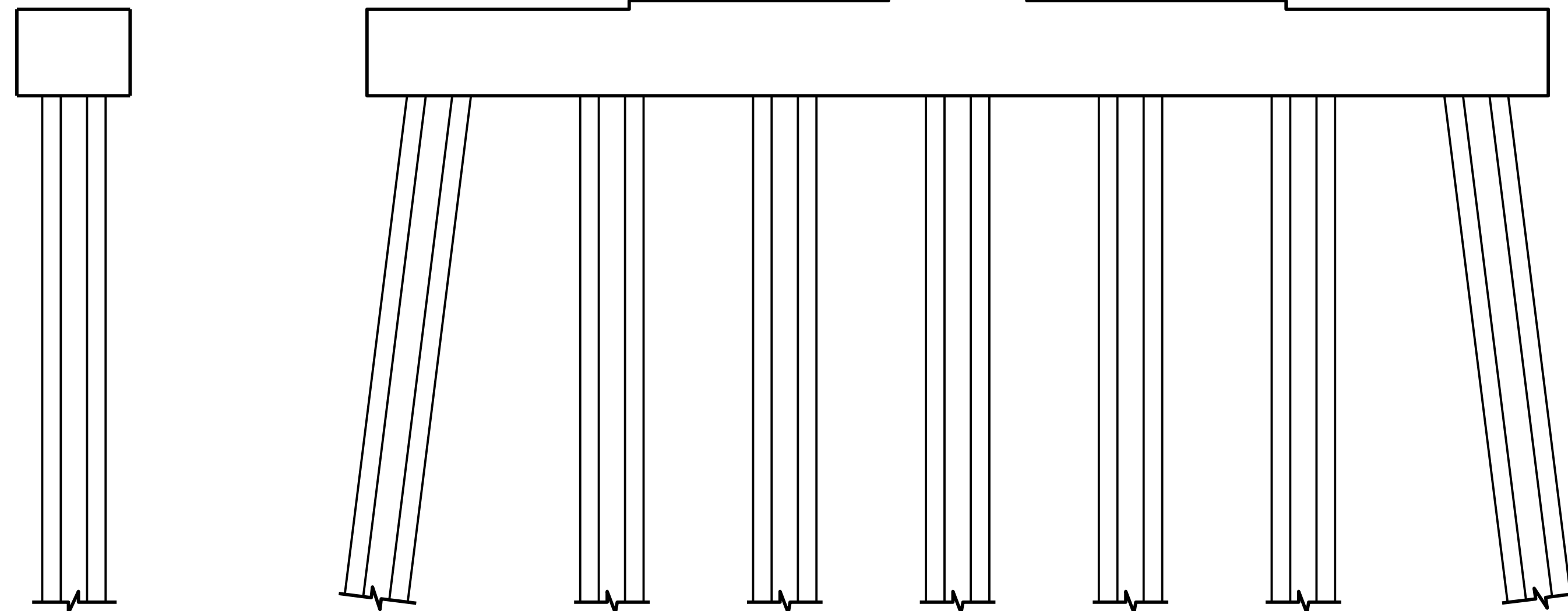
| REPAIRS BENT 13 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
-  - EPOXY RESIN INJECTION
-  - EPOXY COATING

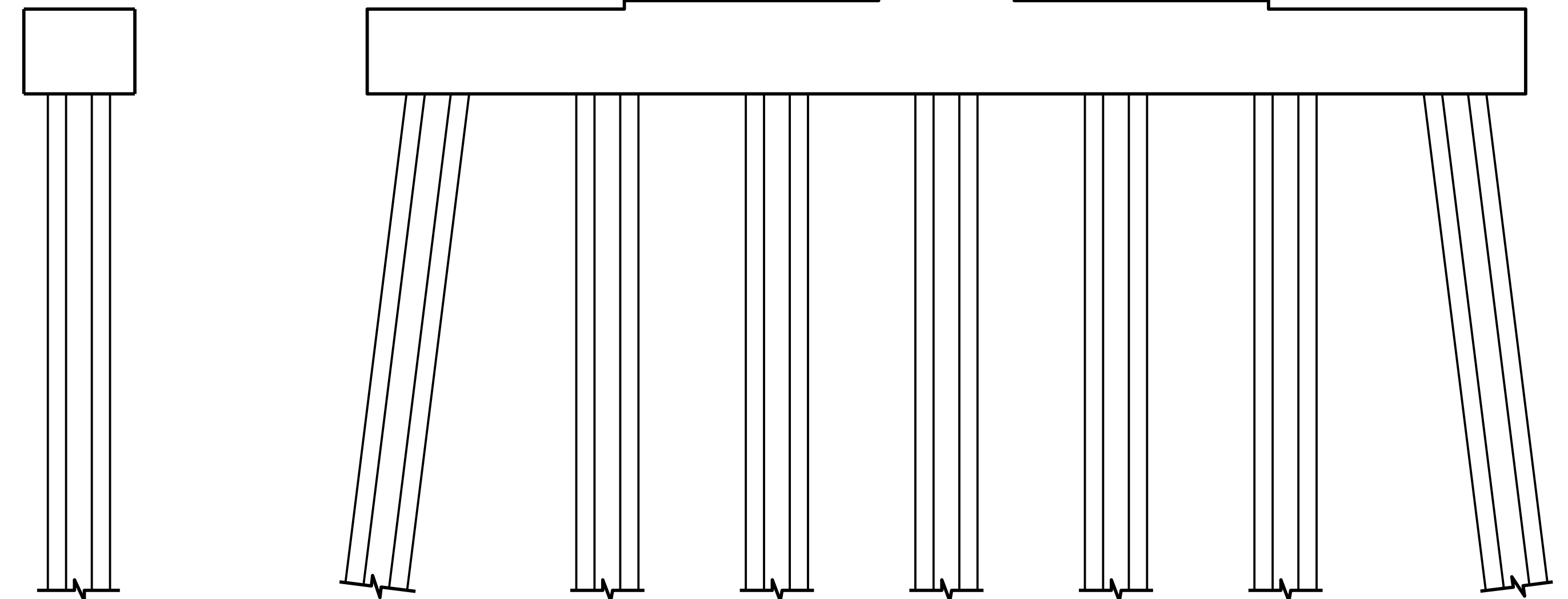


PLAN
TOP OF CAP



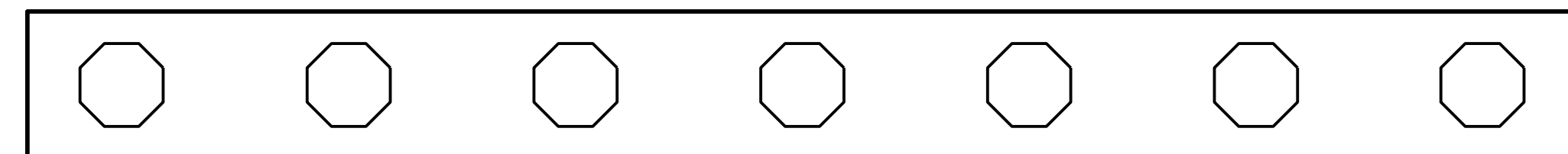
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939
CARTERET COUNTY
BRIDGE NO. 6

SHEET 14 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 13



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| 1 | | | 3 | | | S2-84 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

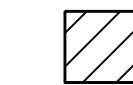
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

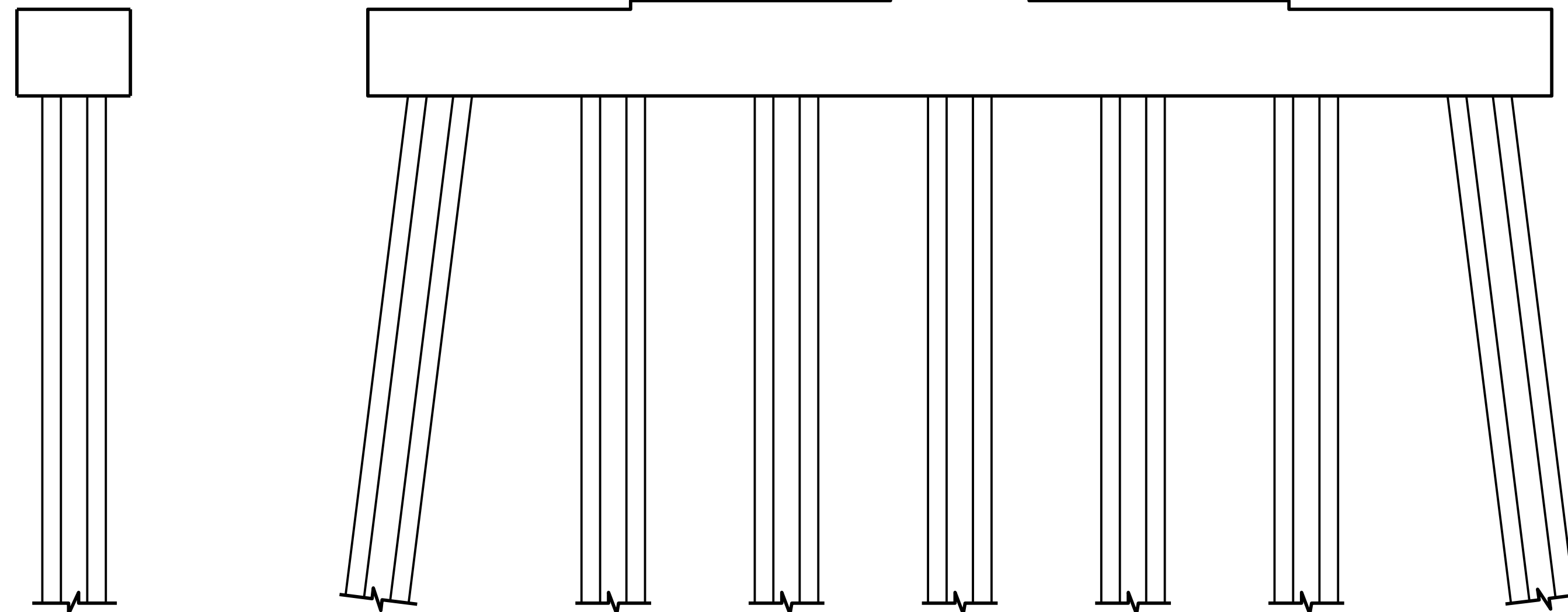
| REPAIRS BENT 14 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

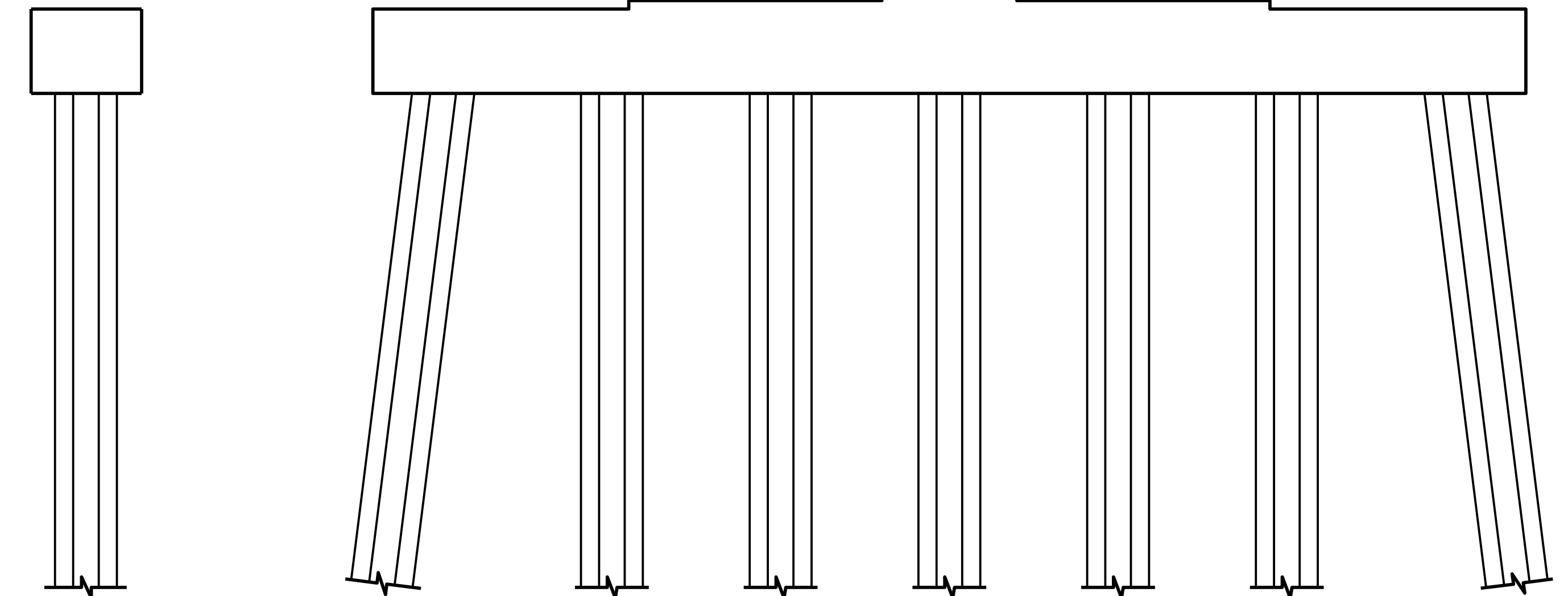
 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP



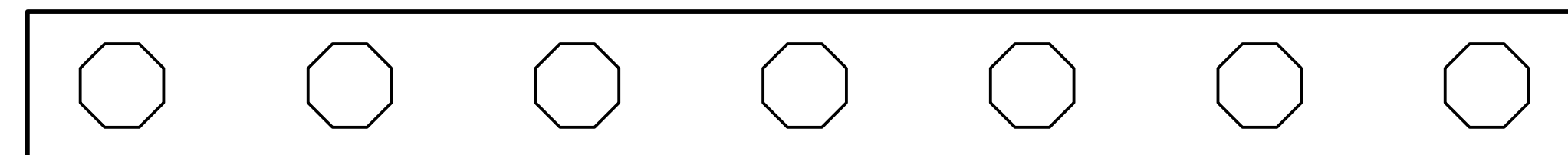
ELEVATION
SOUTH SIDE



ELEVATION
NORTH SIDE

END VIEW
WEST SIDE

END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 15 OF 60



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 Greg Dickey
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SUBSTRUCTURES
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-85 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

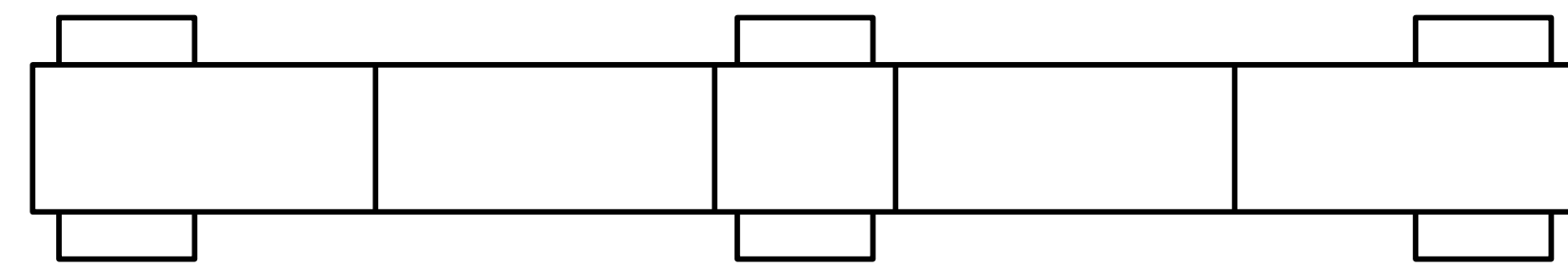
REPAIR QUANTITY TABLE

| REPAIRS BENT 15 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 2.3 | 1.2 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

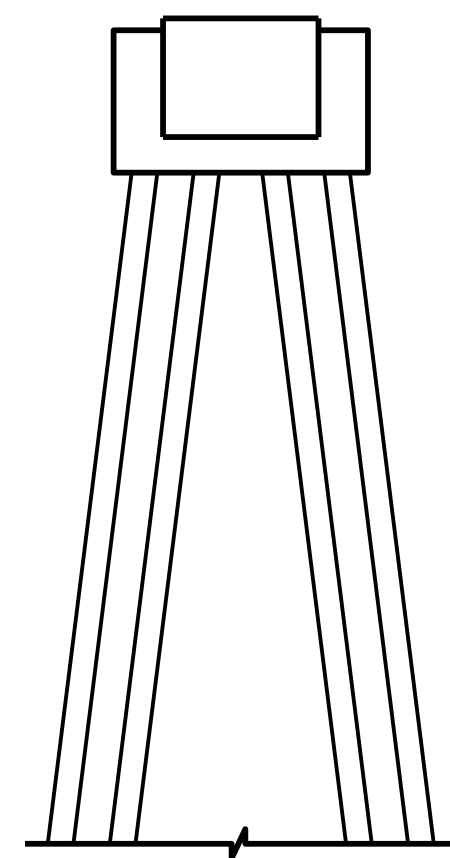
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

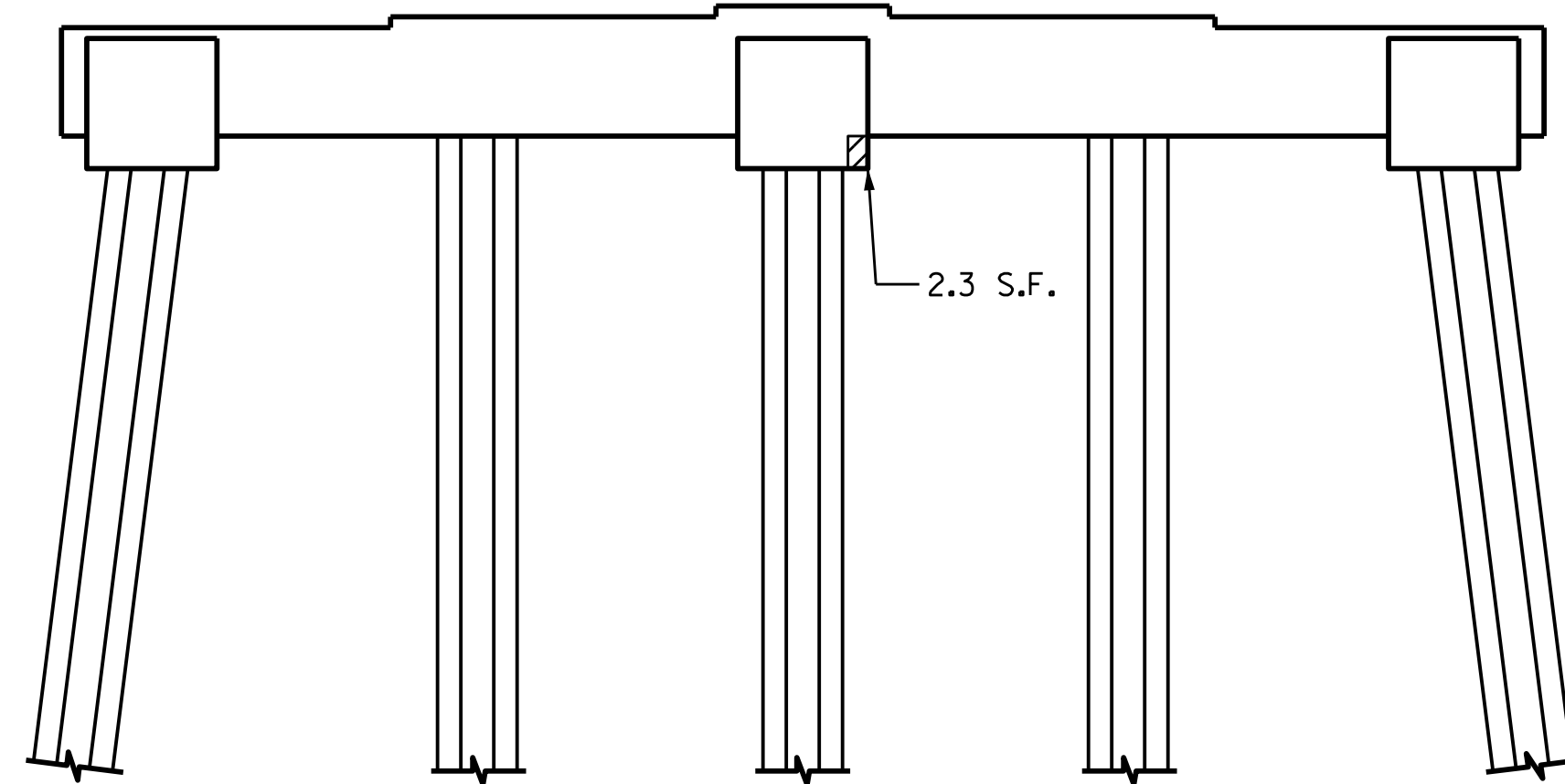
ERI - EPOXY RESIN INJECTION



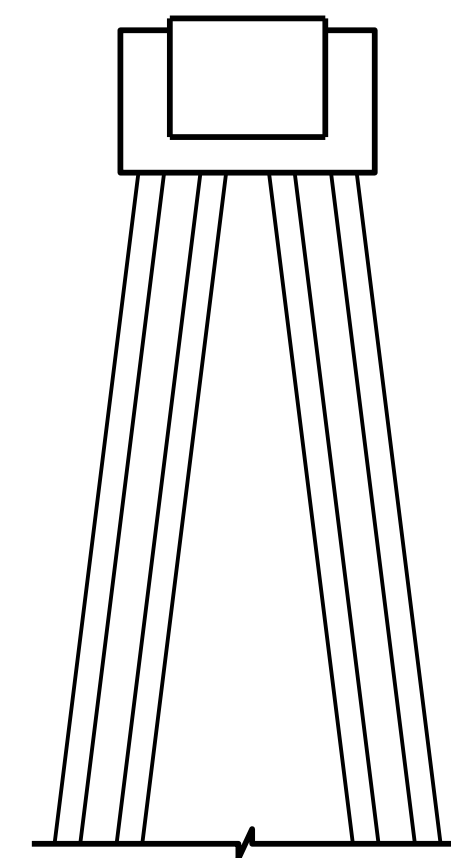
PLAN
TOP OF CAP



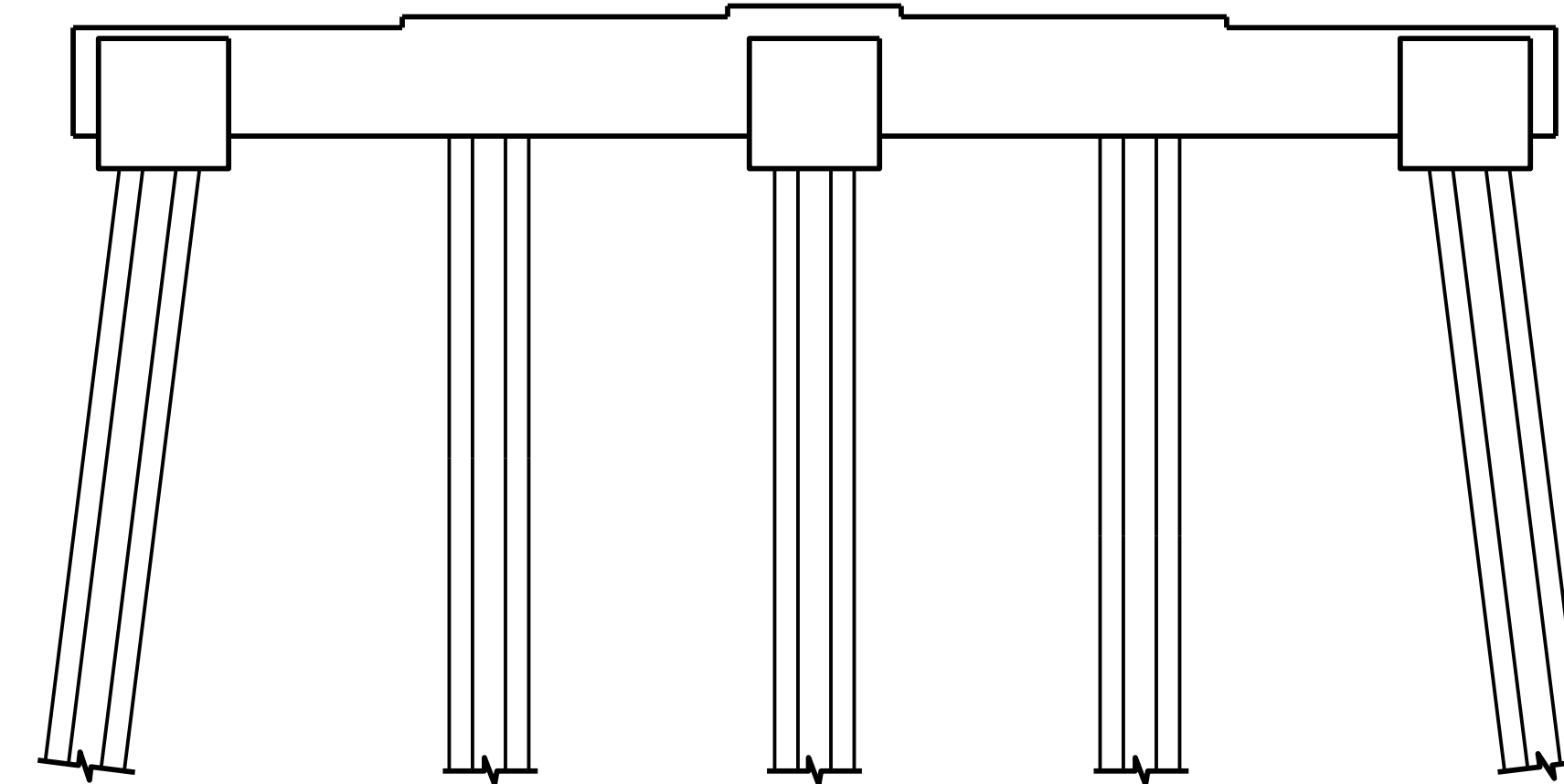
END VIEW
WEST SIDE



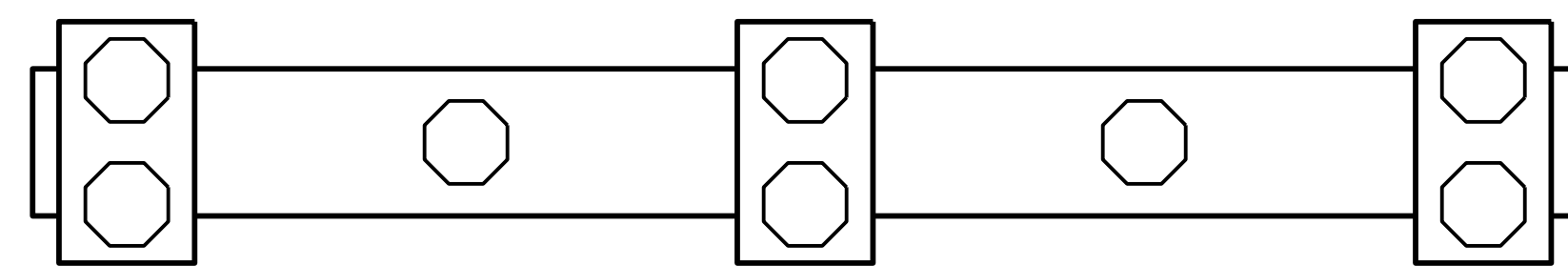
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 16 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 15



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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-86 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

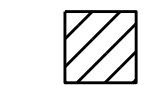

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

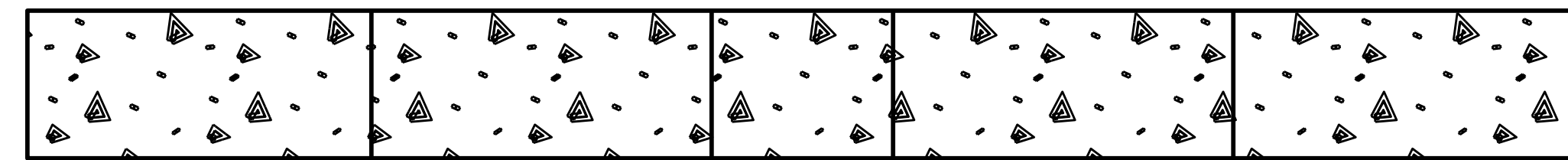
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

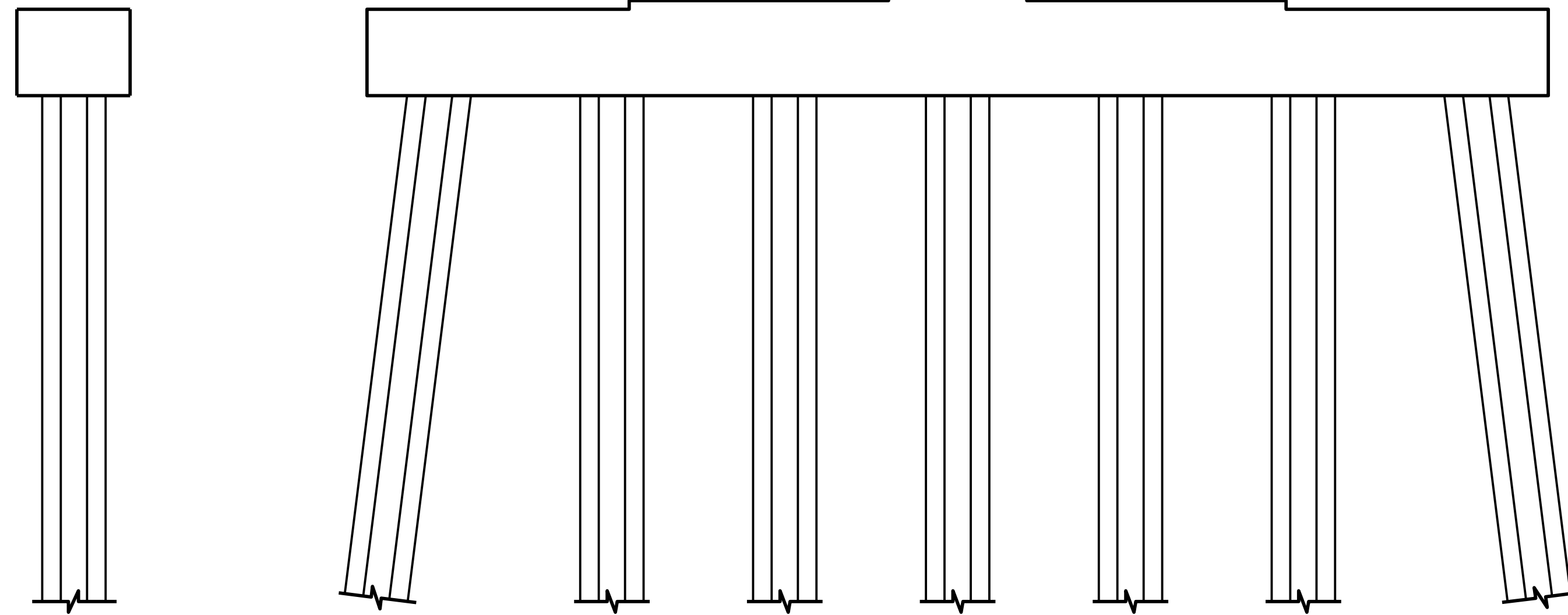
| REPAIRS BENT 16 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

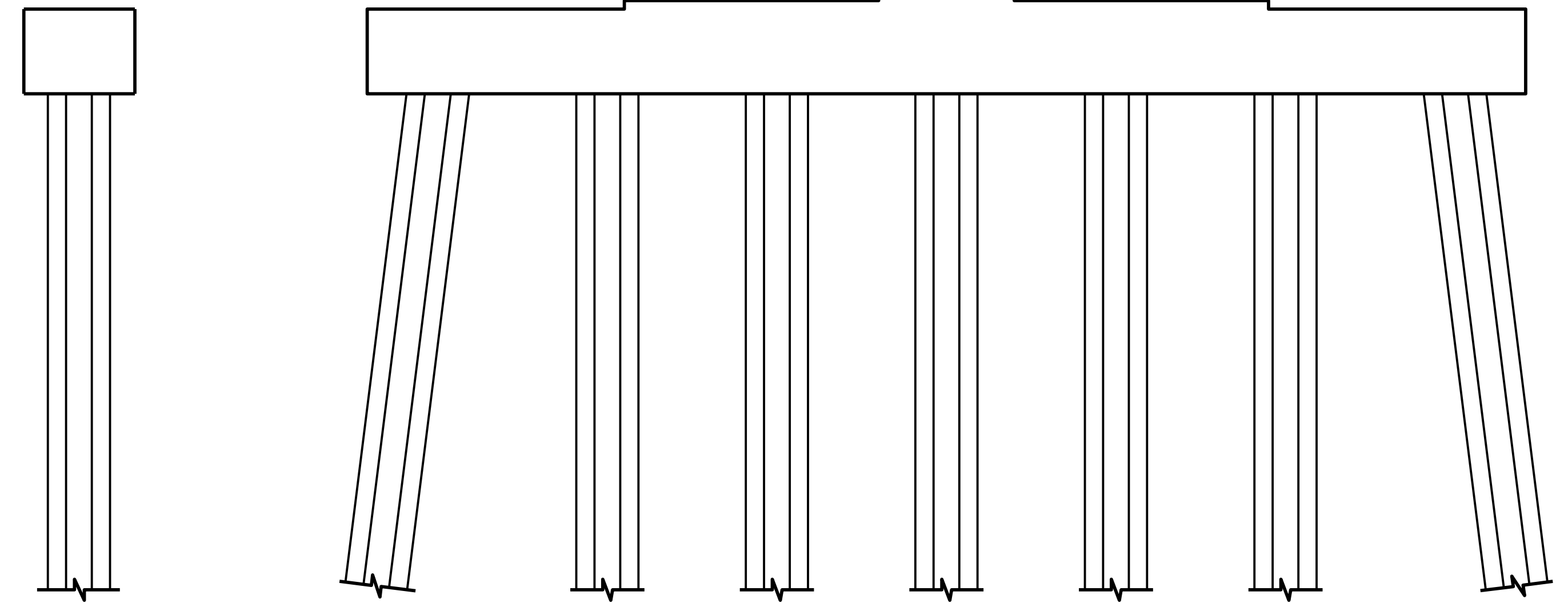


PLAN
TOP OF CAP



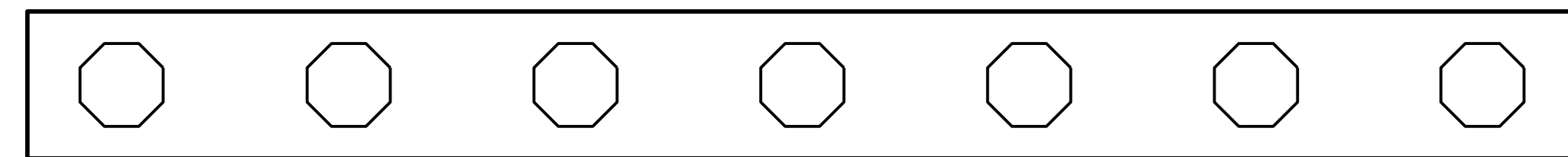
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 17 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 16



DocuSigned by:
Greg Dickey
884E488CE58486...

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

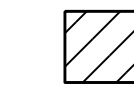
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

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|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-87 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 17 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0.3 | 0.2 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

NOTES:

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

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

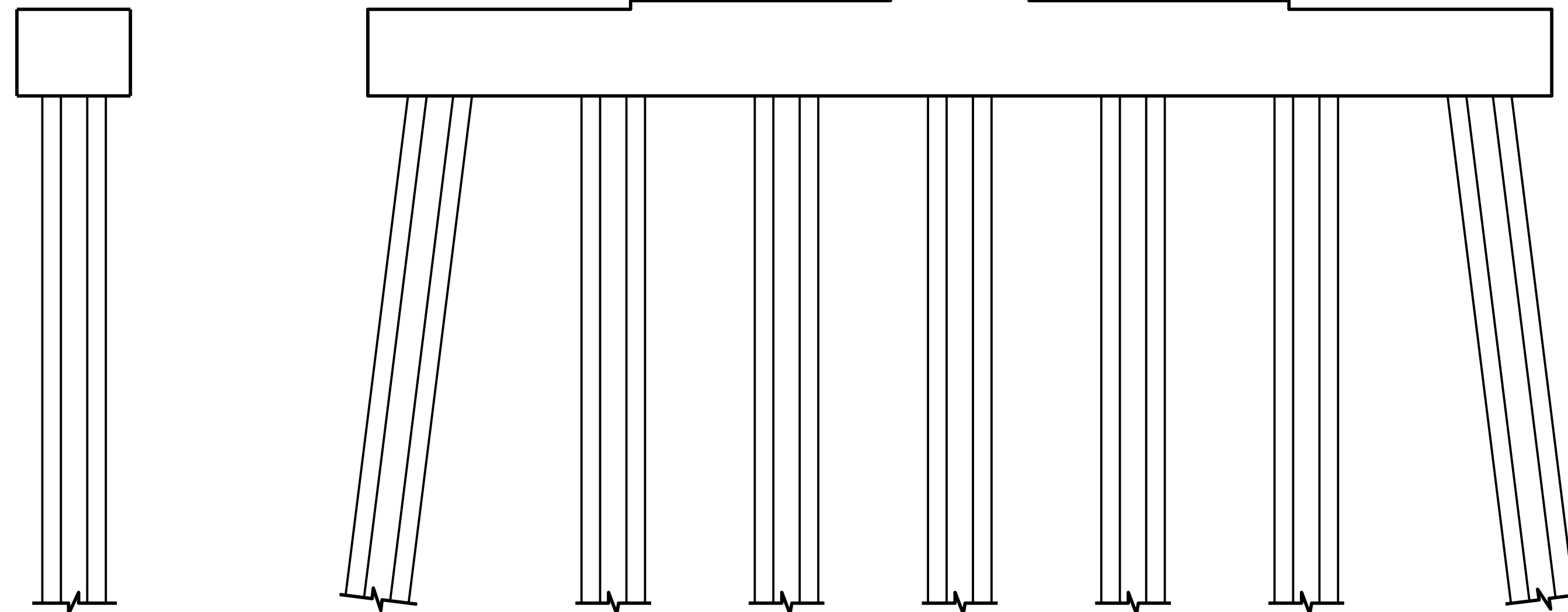
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

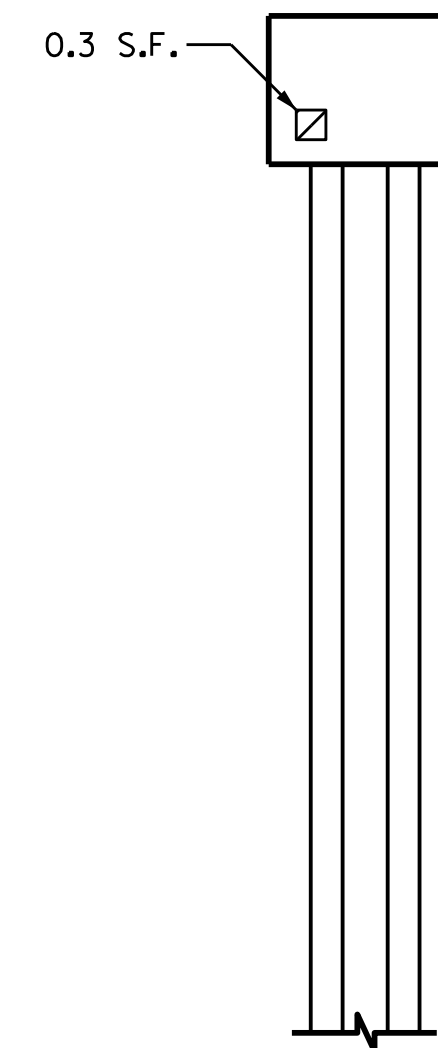


PLAN
TOP OF CAP

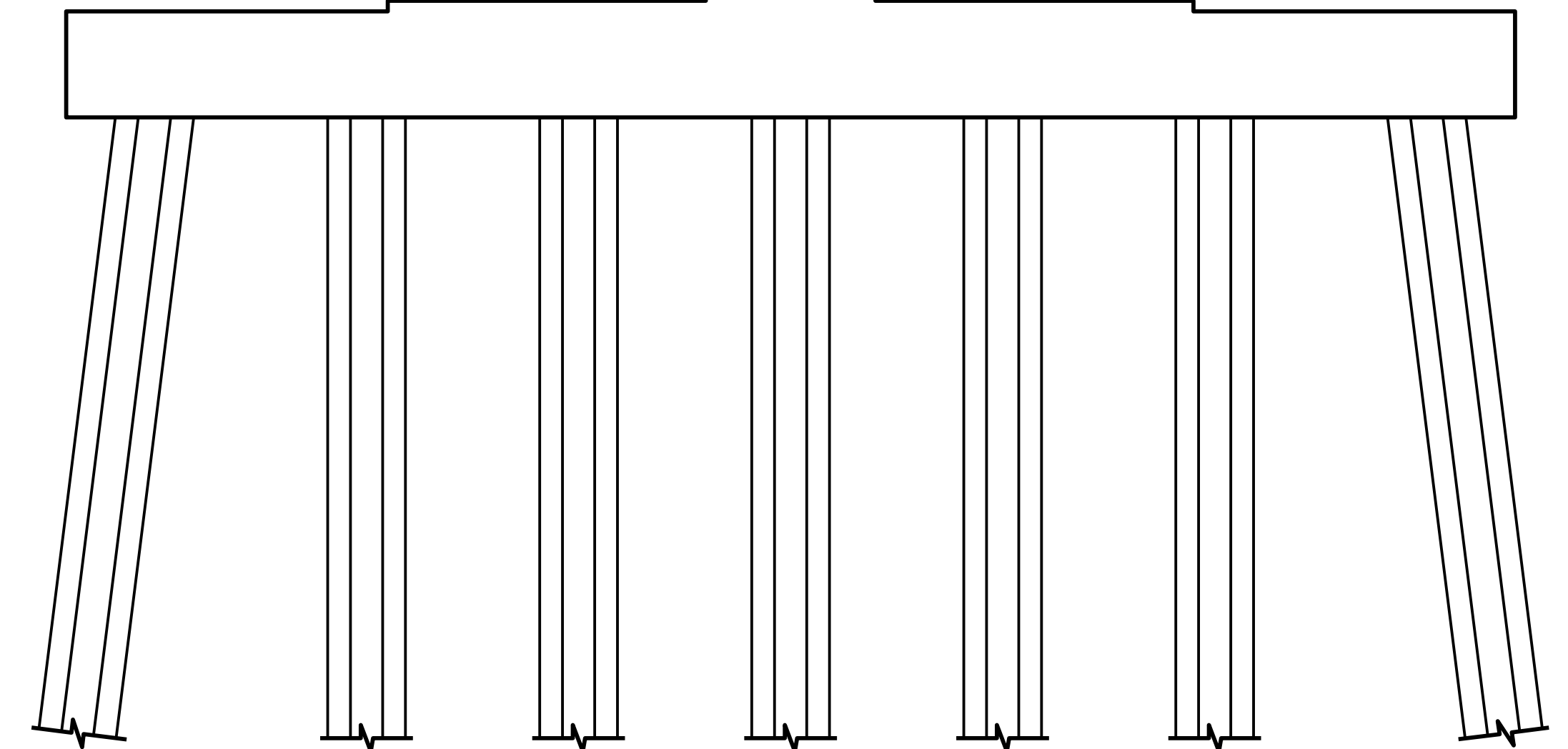


END VIEW
WEST SIDE

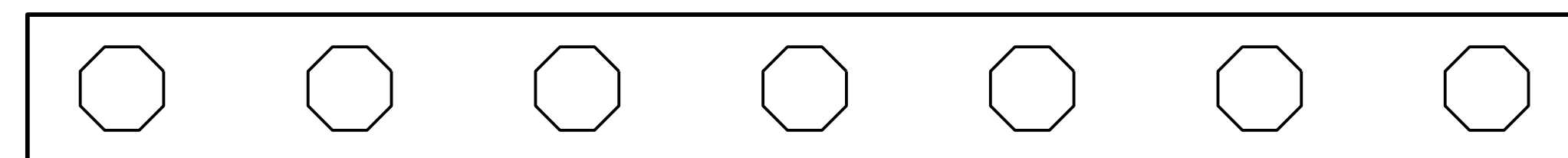
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939
CARTERET COUNTY

BRIDGE NO. 6

SHEET 18 OF 60

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 17



DocuSigned by:
 Greg Dickey
 884E488CE58486...

DRAWN BY : M.A.LEE DATE : 8/2016
 CHECKED BY : P.BRYANT DATE : 8/2016

23-FEB-2017 07:42
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 gdickey

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 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-88 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 18 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

NOTES:

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

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

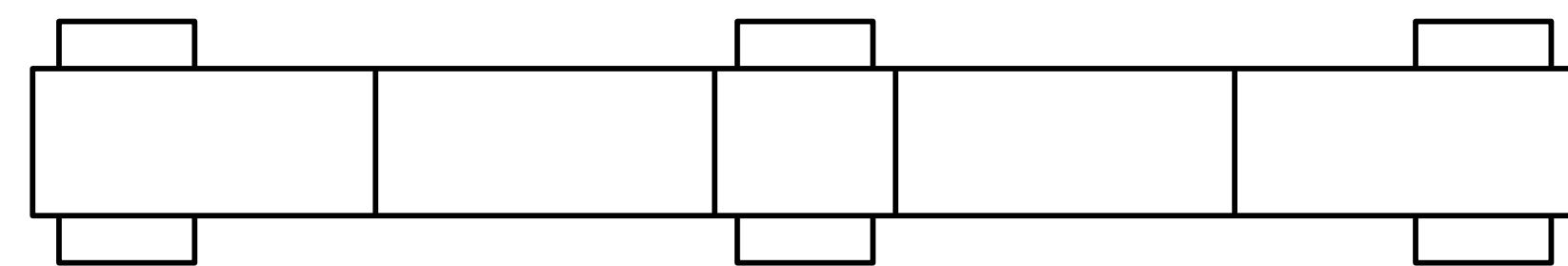
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

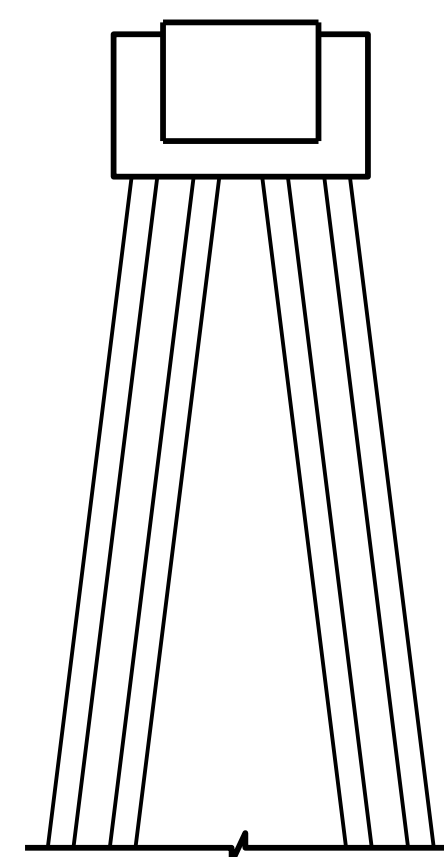
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

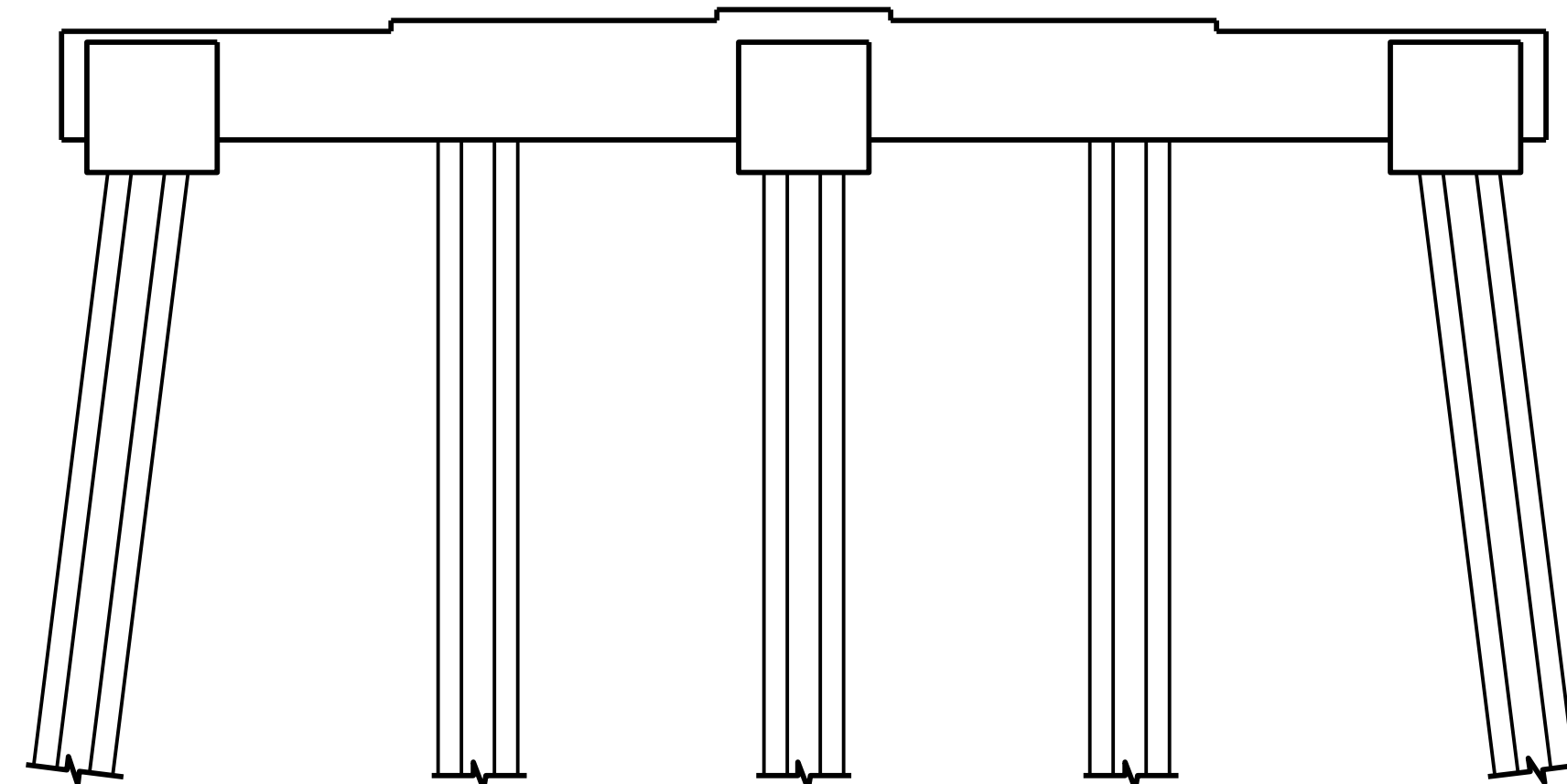
ERI - EPOXY RESIN INJECTION



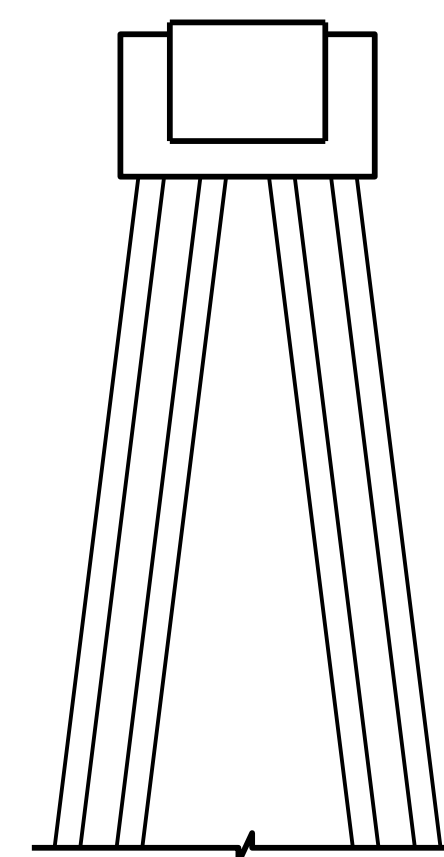
PLAN
TOP OF CAP



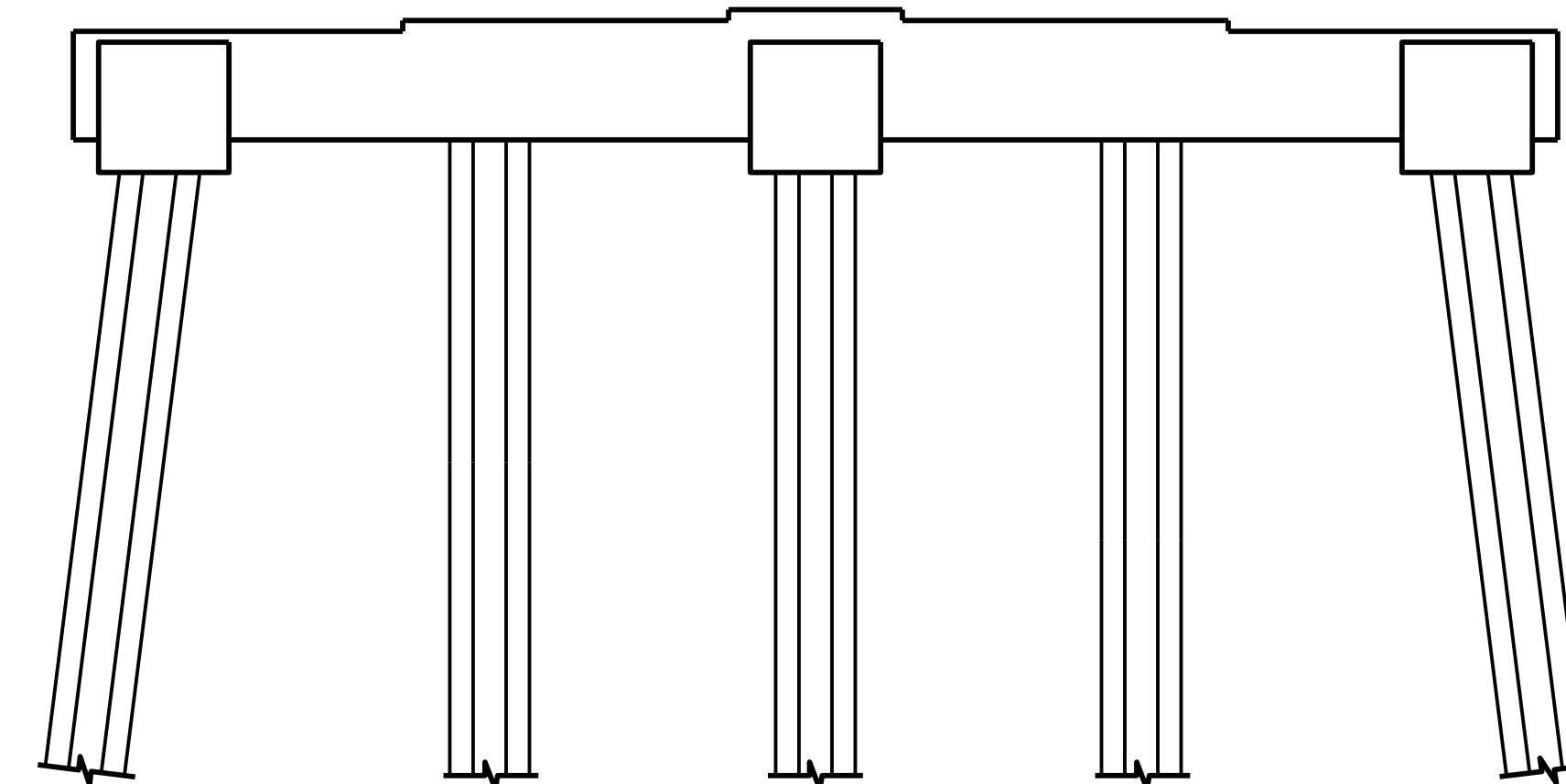
END VIEW
WEST SIDE



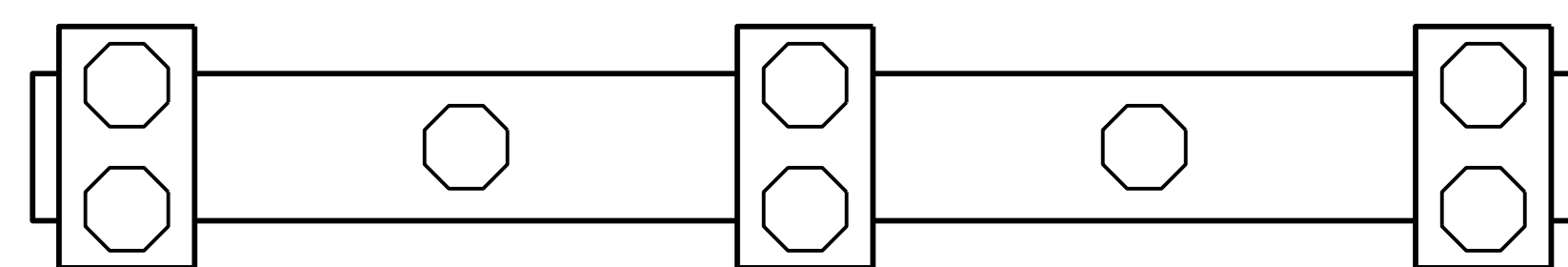
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 19 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 18



DocuSigned by:
Greg Dickey
884E488CE58486...

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CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-89 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 19 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 7.0 | 3.5 | | |
| CAP (HORIZONTAL, CORNER) | 0.0 | 0.0 | | |
| COLUMN | 2.0 | 1.0 | | |
| STRUT | 0.0 | 0.0 | | |
| FOOTING | 62.0 | 31.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | LN. FT | |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |
| EPOXY COATING | | AREA SF | AREA SF | |
| CAP | | 147.3 | | |

NOTES:

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

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

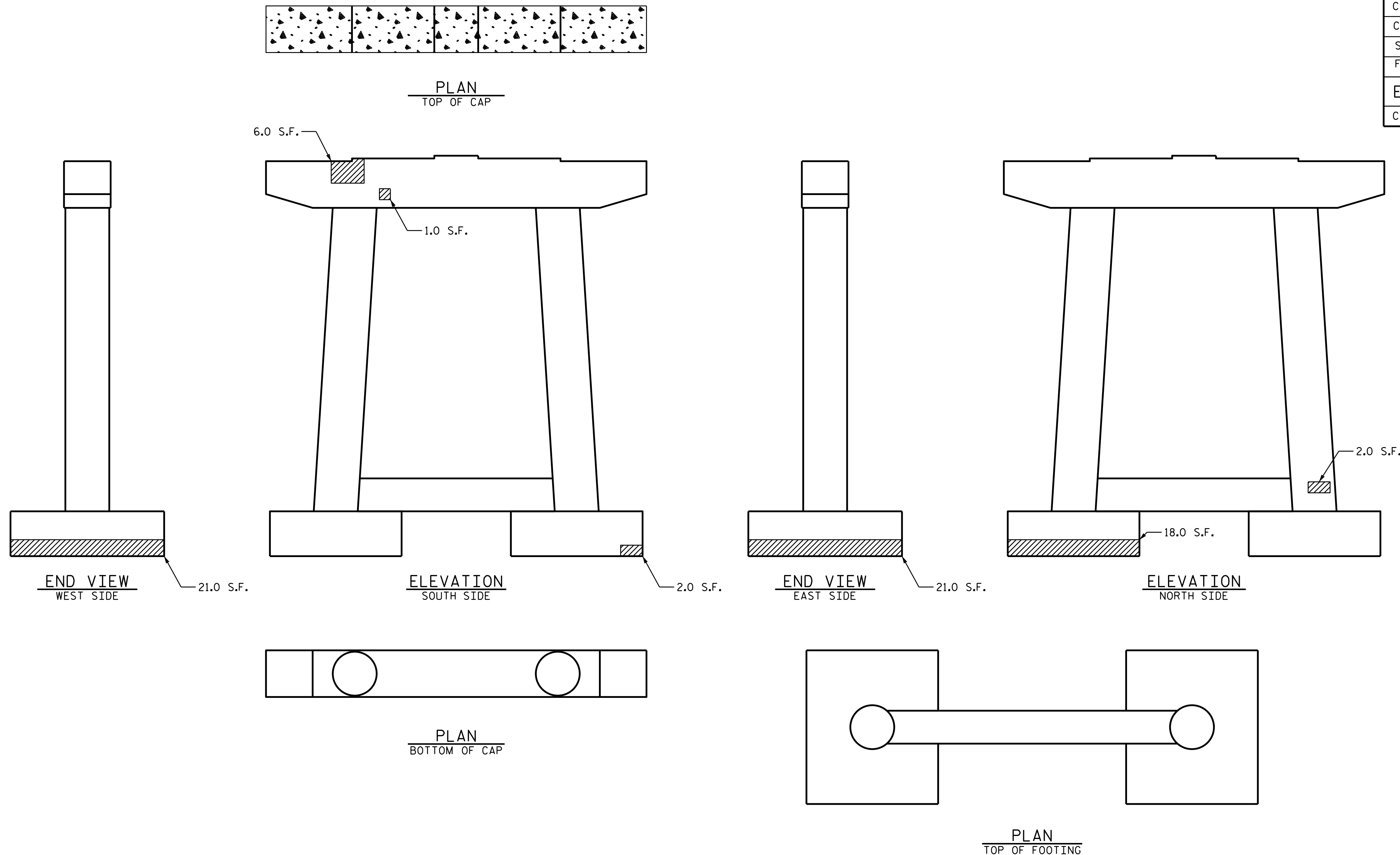
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

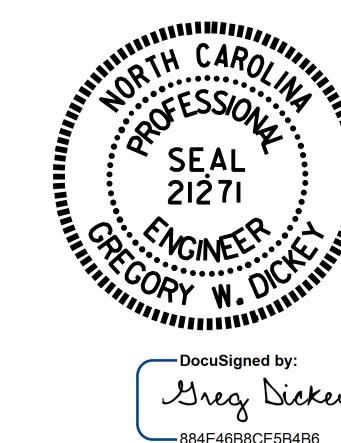
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

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

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 20 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 19

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-90 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 20 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 8.0 | 4.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 2.0 | 1.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 49.5 | 24.8 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 4.00 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

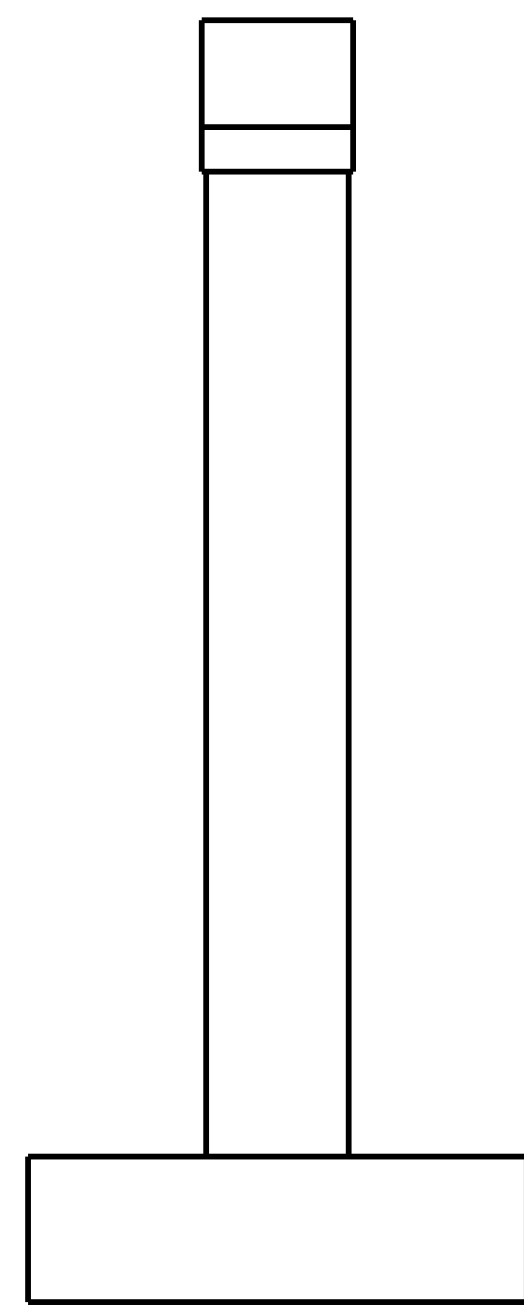
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

- SHOTCRETE REPAIR

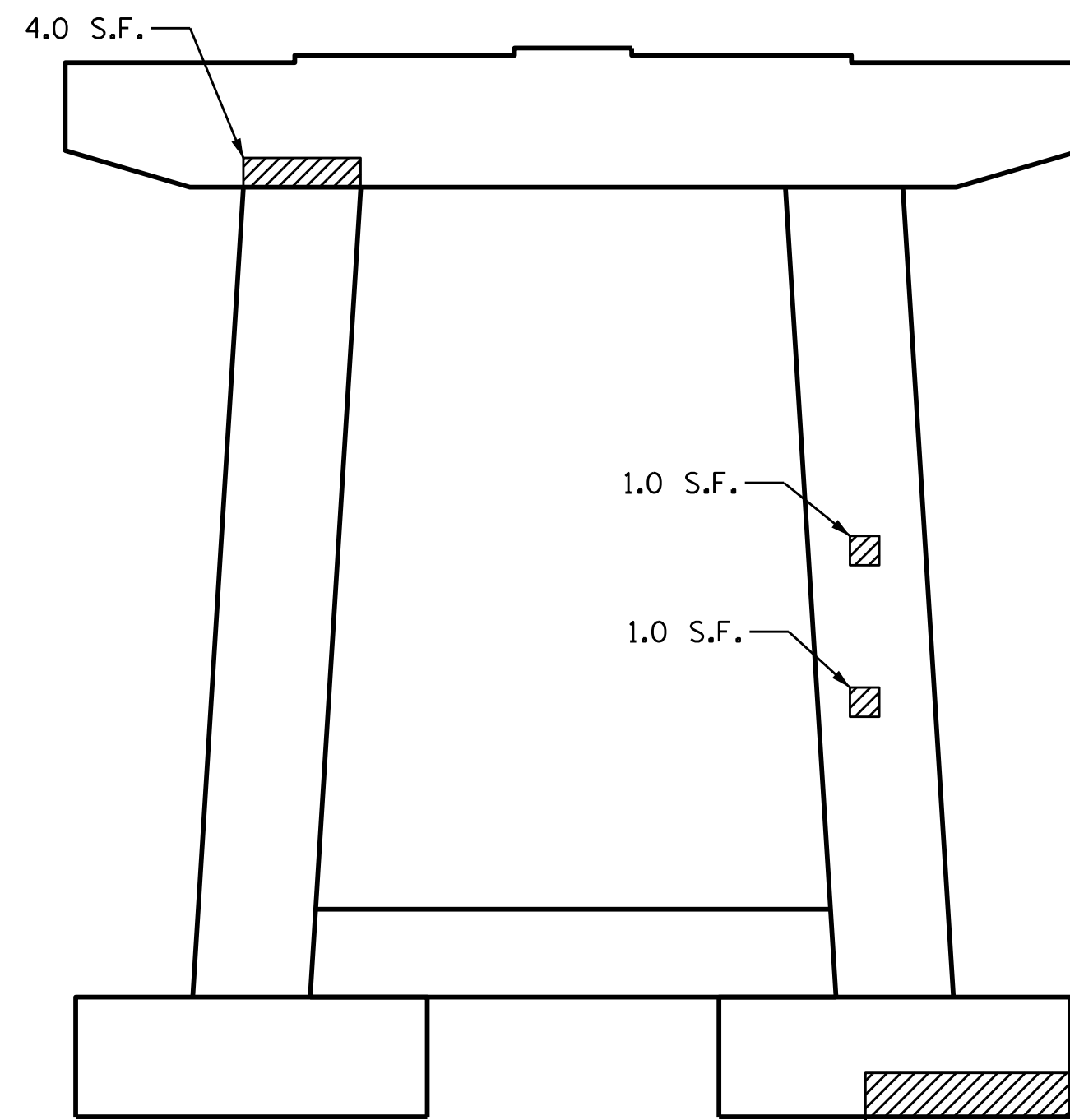
ERI - EPOXY RESIN INJECTION



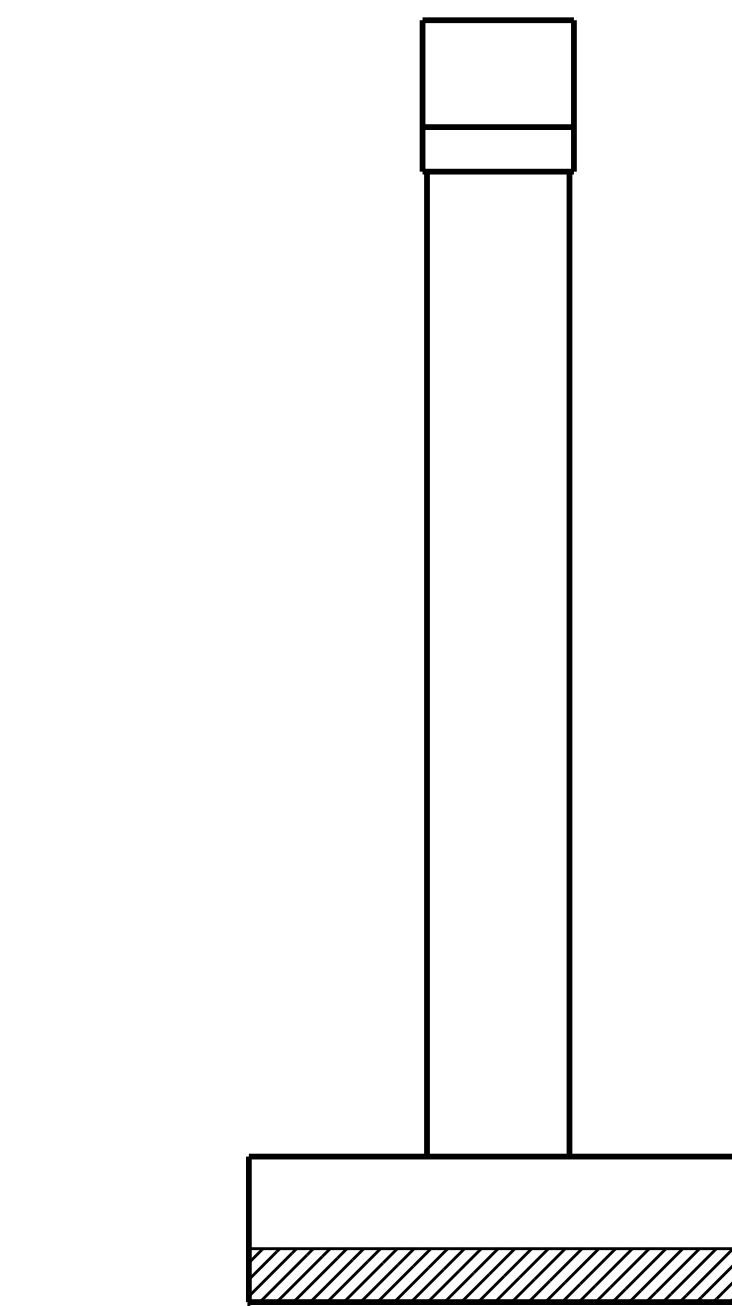
PLAN
TOP OF CAP



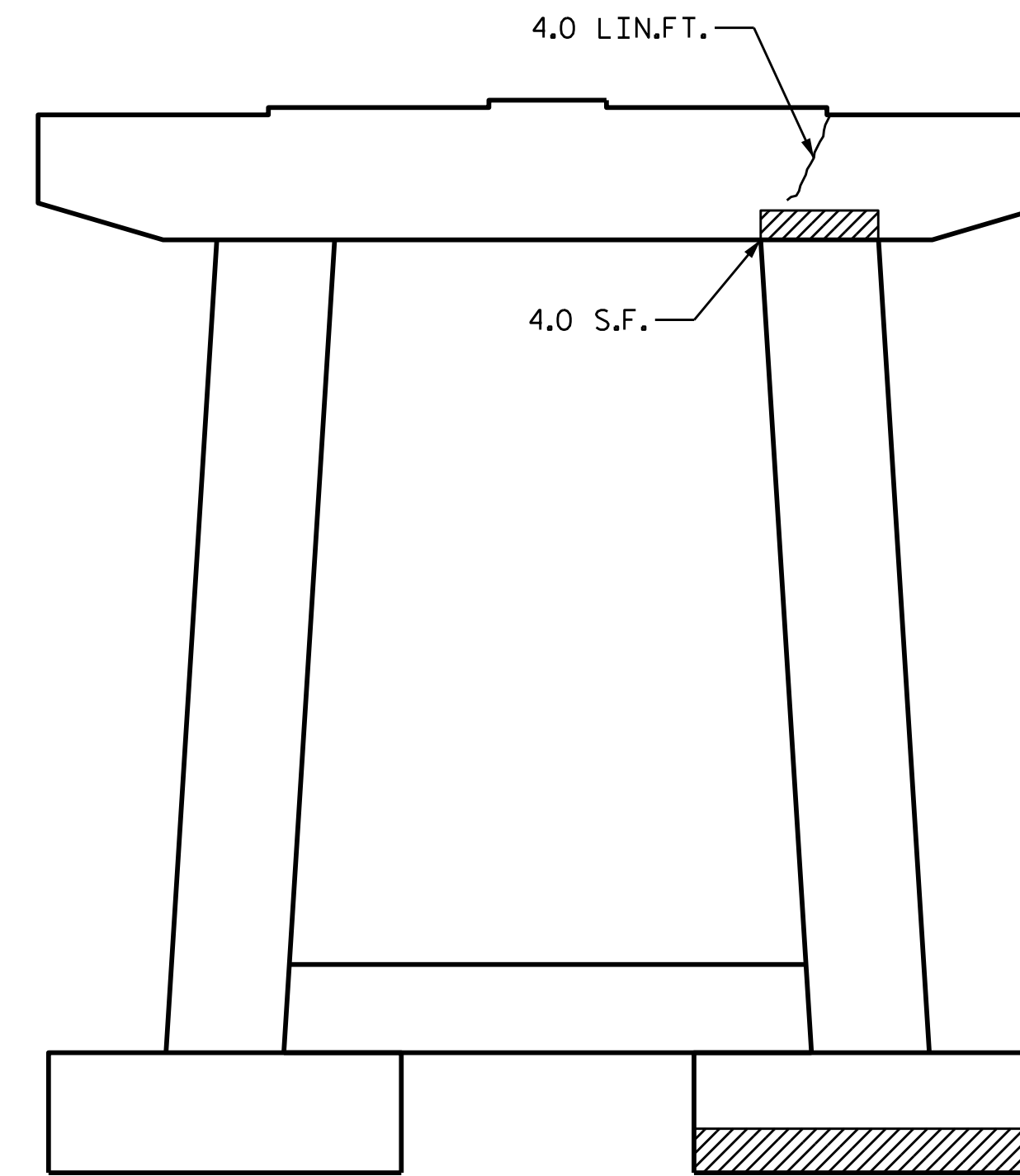
END VIEW
WEST SIDE



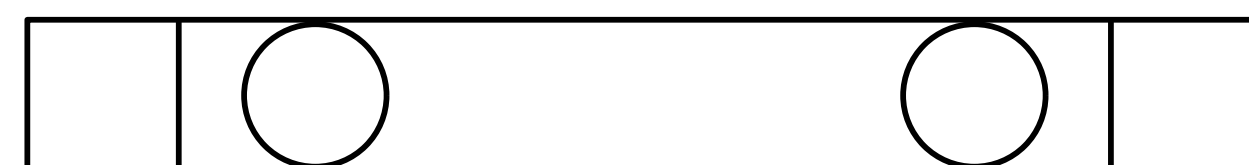
ELEVATION
SOUTH SIDE



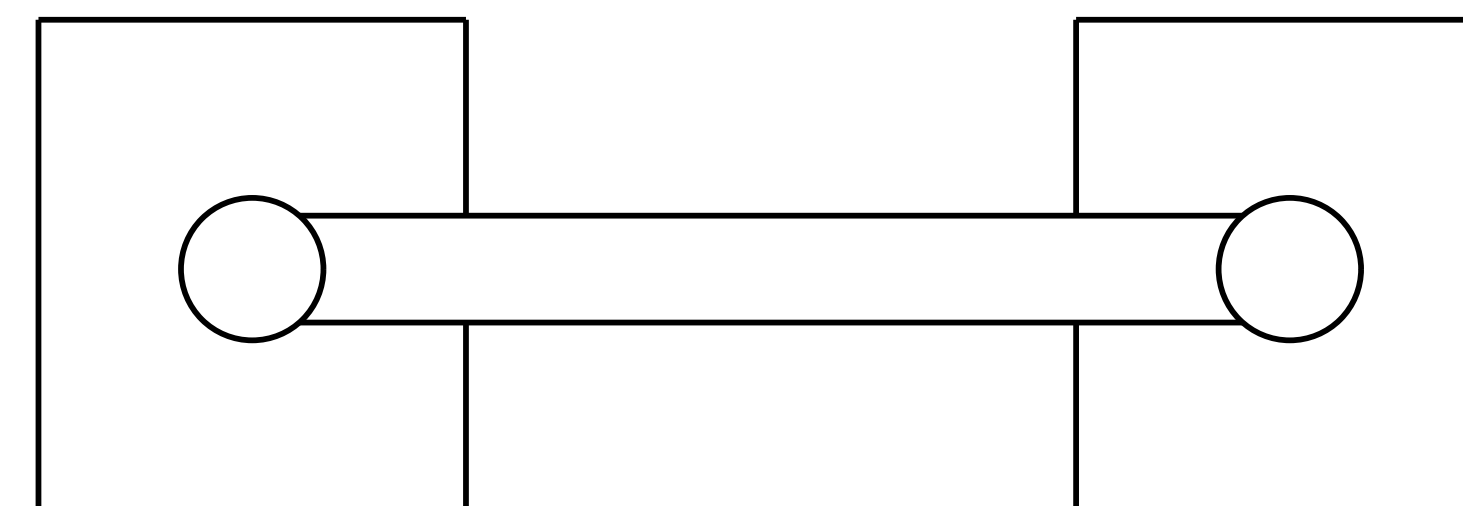
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

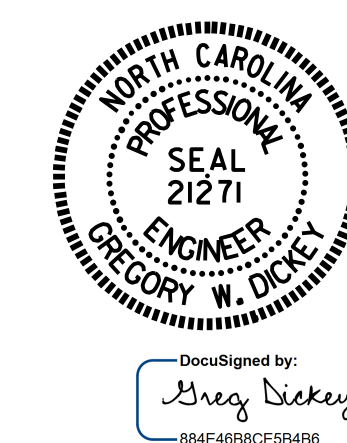
CARTERET COUNTY

BRIDGE NO. 6

SHEET 21 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 20



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Greg Dickey
884E488CE5848E...

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| 1 | | | 3 | | | S2-91 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 21 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 9.0 | 4.5 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 9.0 | 4.5 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 8.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

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

- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

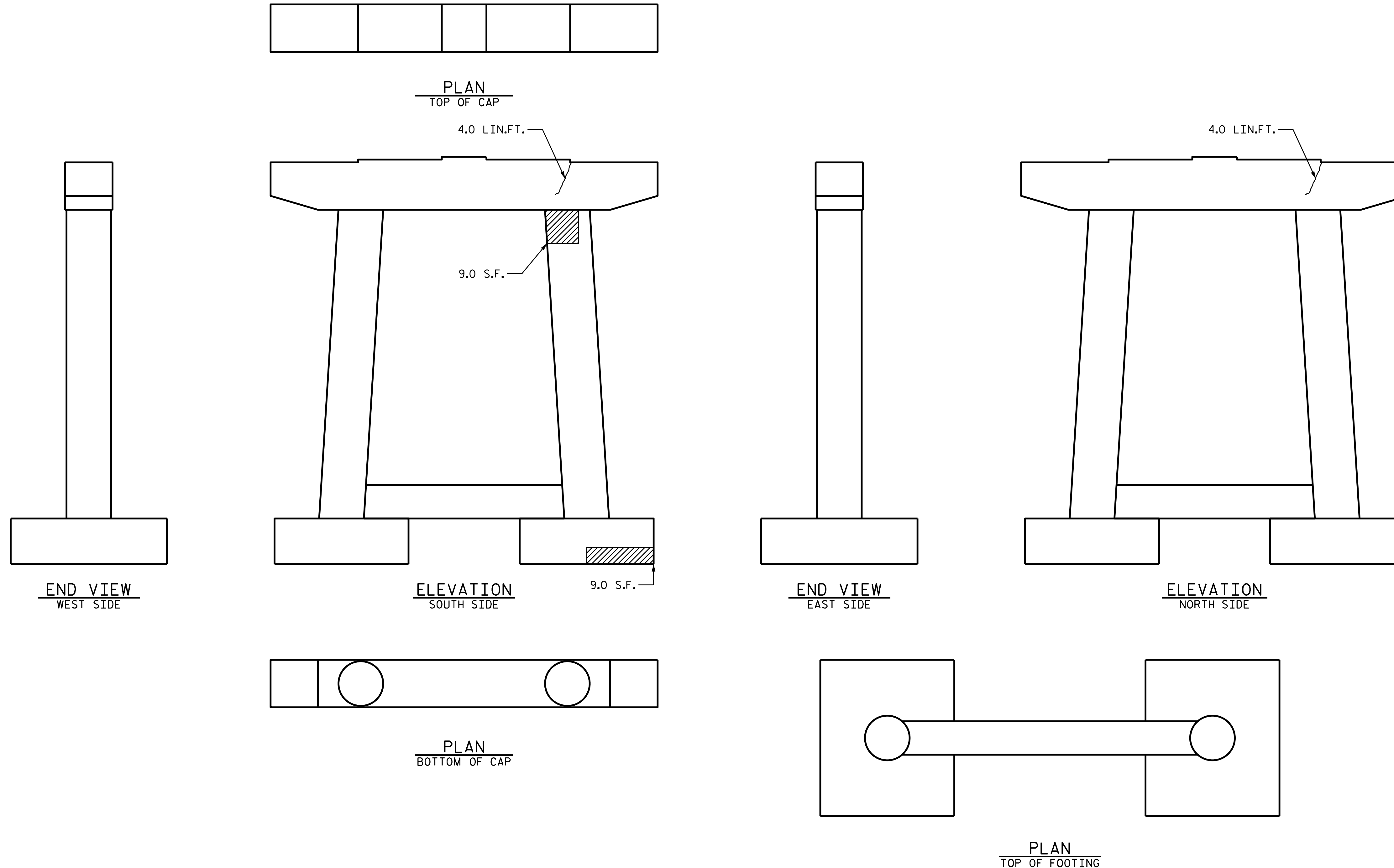
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

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

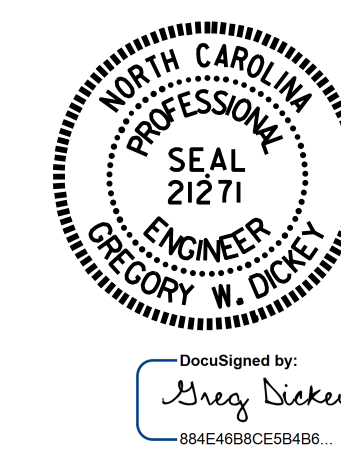
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 22 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES BENT 21

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-92 |
| 2 | | | 4 | | | TOTAL SHEETS |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

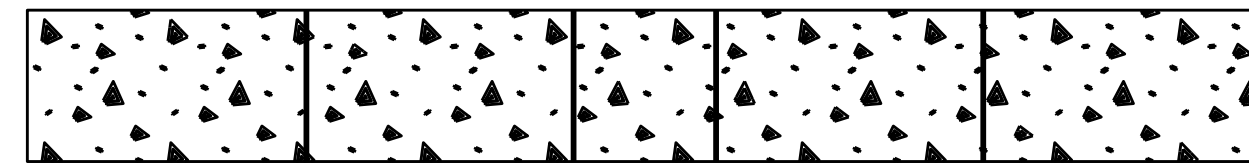
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 22 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 6.0 | 3.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | LN. FT | |
| CAP | | 8.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |
| EPOXY COATING | | AREA SF | AREA SF | |
| CAP | | 147.3 | | |

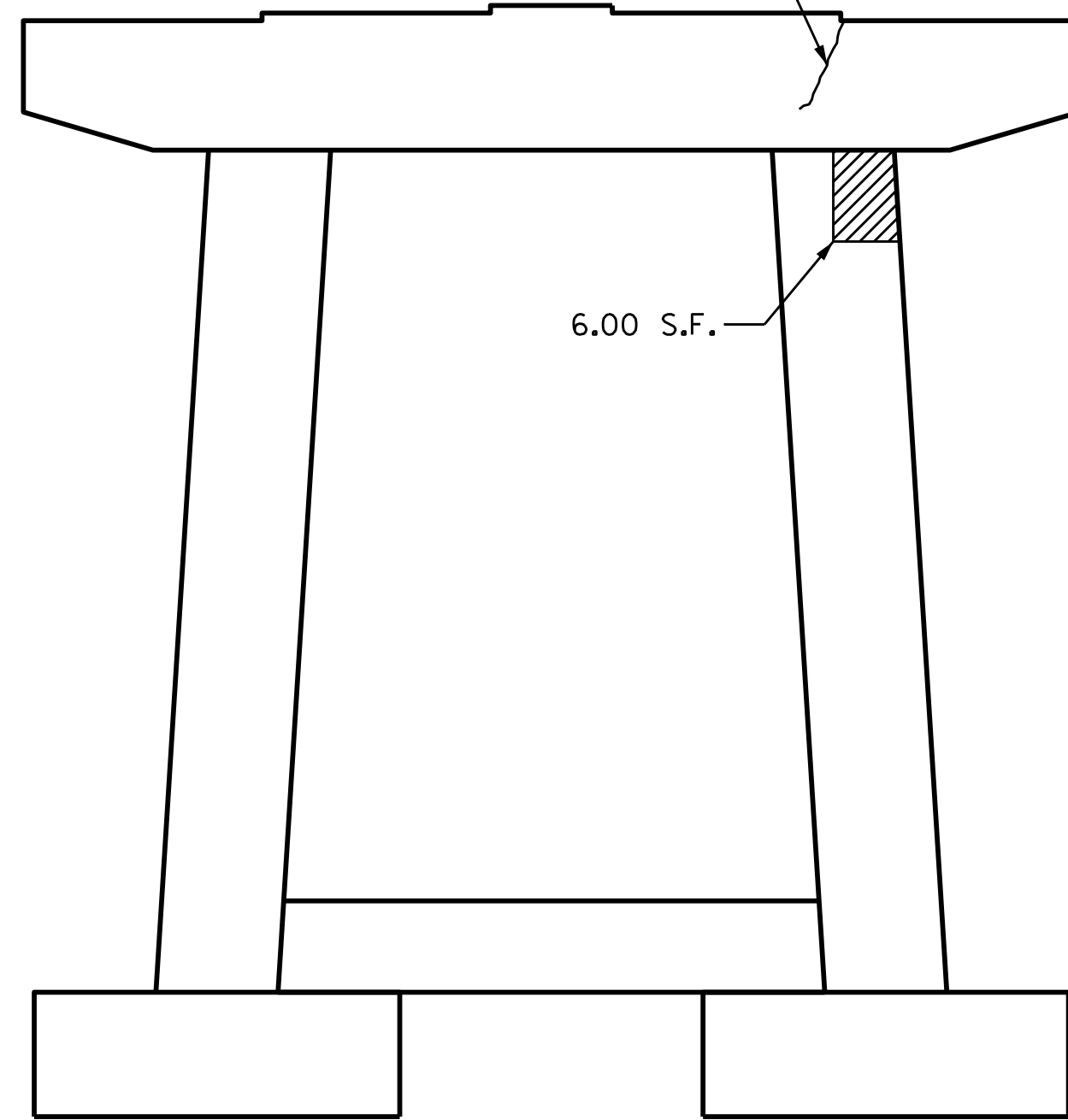
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



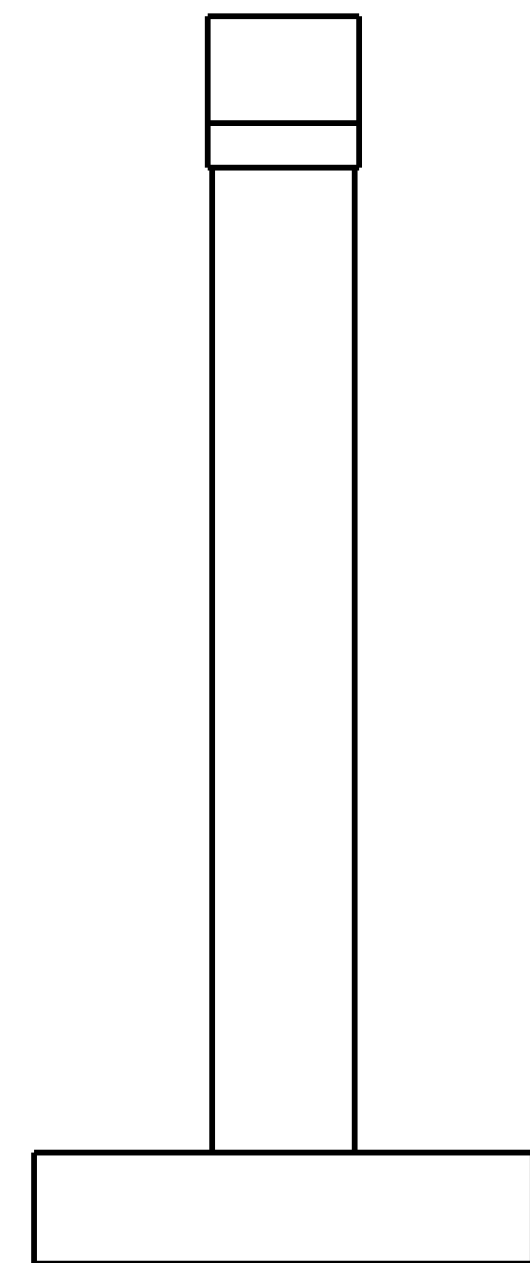
PLAN
TOP OF CAP

4.0 LIN.FT.

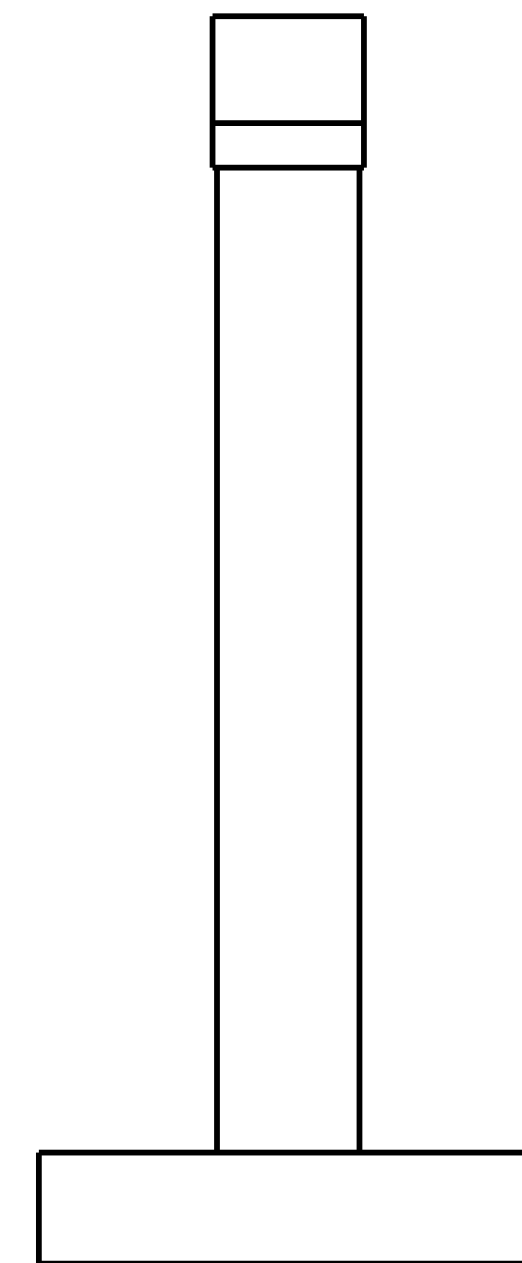


ELEVATION
SOUTH SIDE

6.00 S.F.

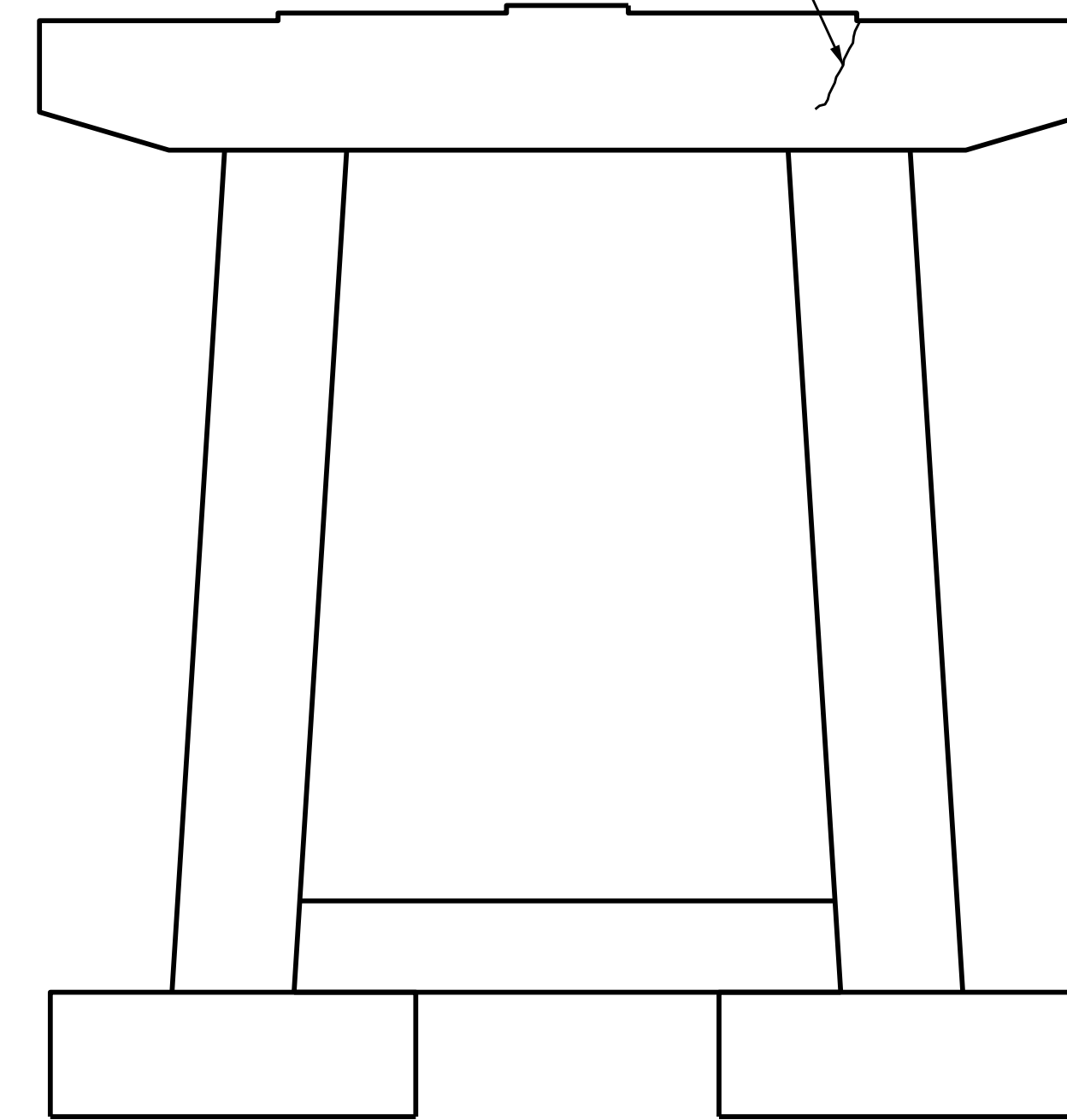


END VIEW
WEST SIDE



END VIEW
EAST SIDE

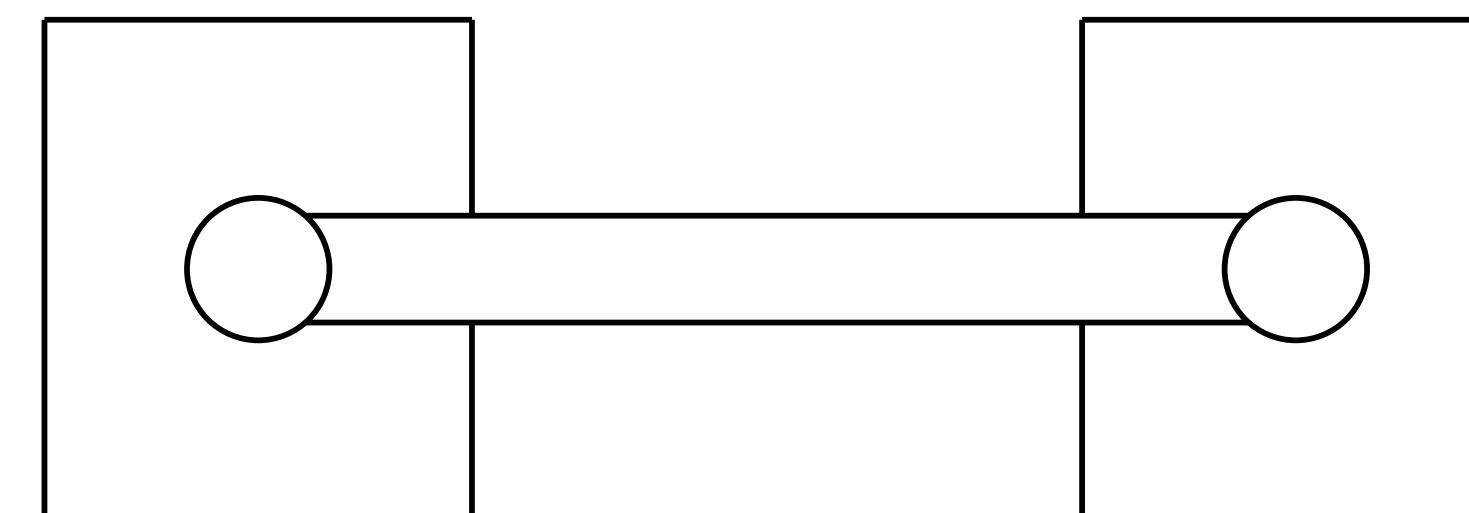
4.0 LIN.FT.



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 23 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 22



DocuSigned by:
Greg Dickey
884E488CE58486...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-93 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 23 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 4.0 | 2.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 22.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

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

- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

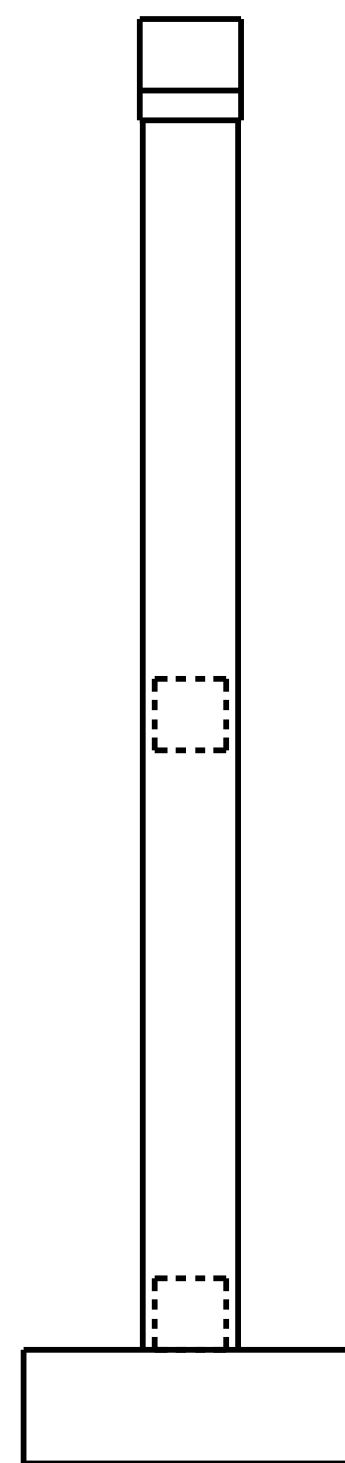
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

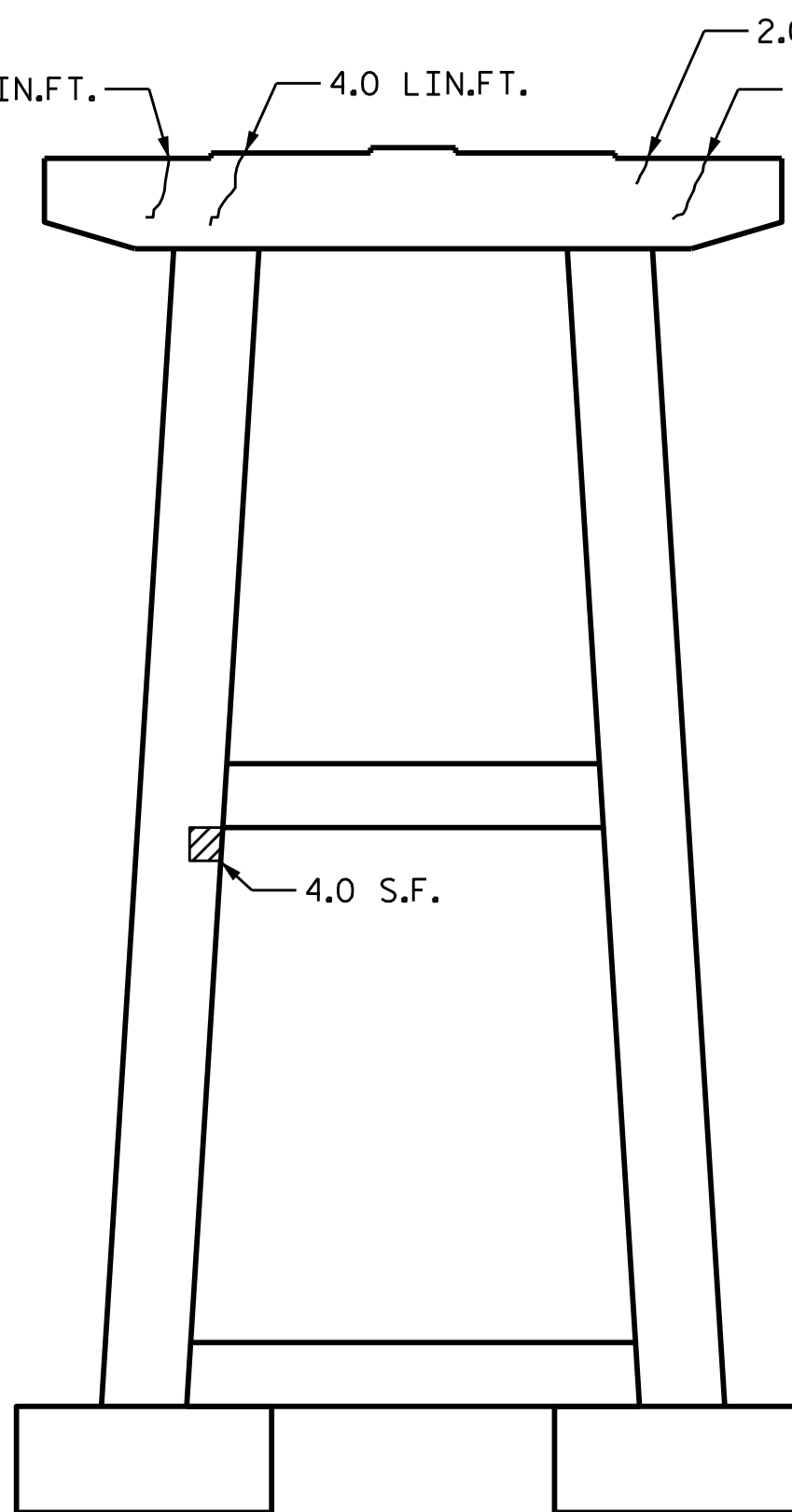


PLAN
TOP OF CAP

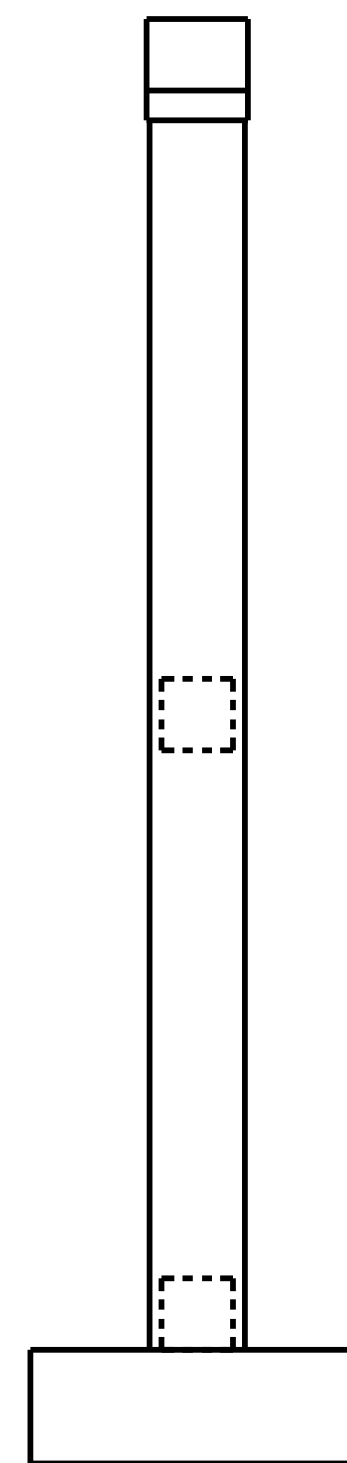
4.0 LIN.FT. 4.0 LIN.FT. 2.0 LIN.FT. 4.0 LIN.FT.



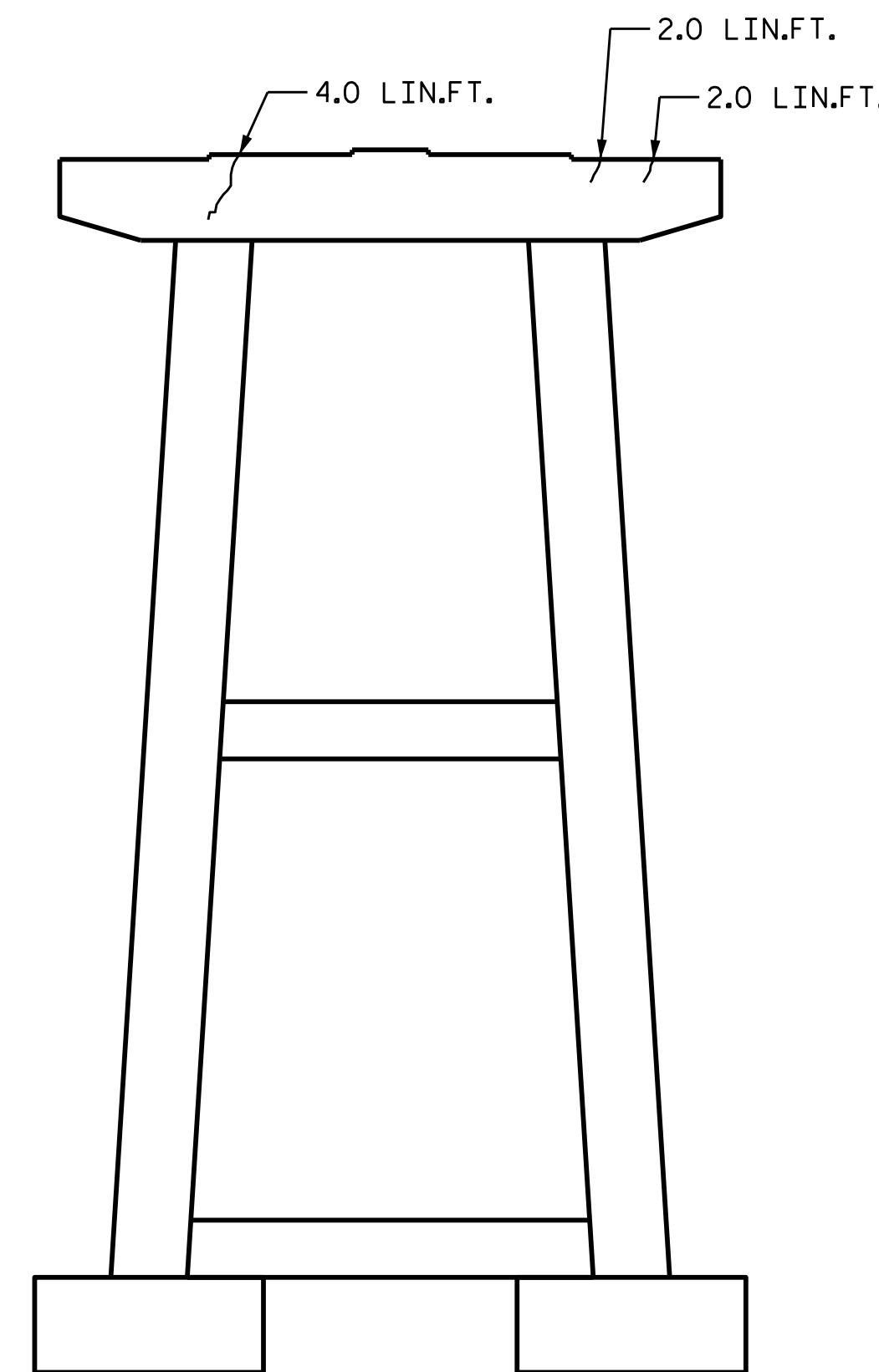
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



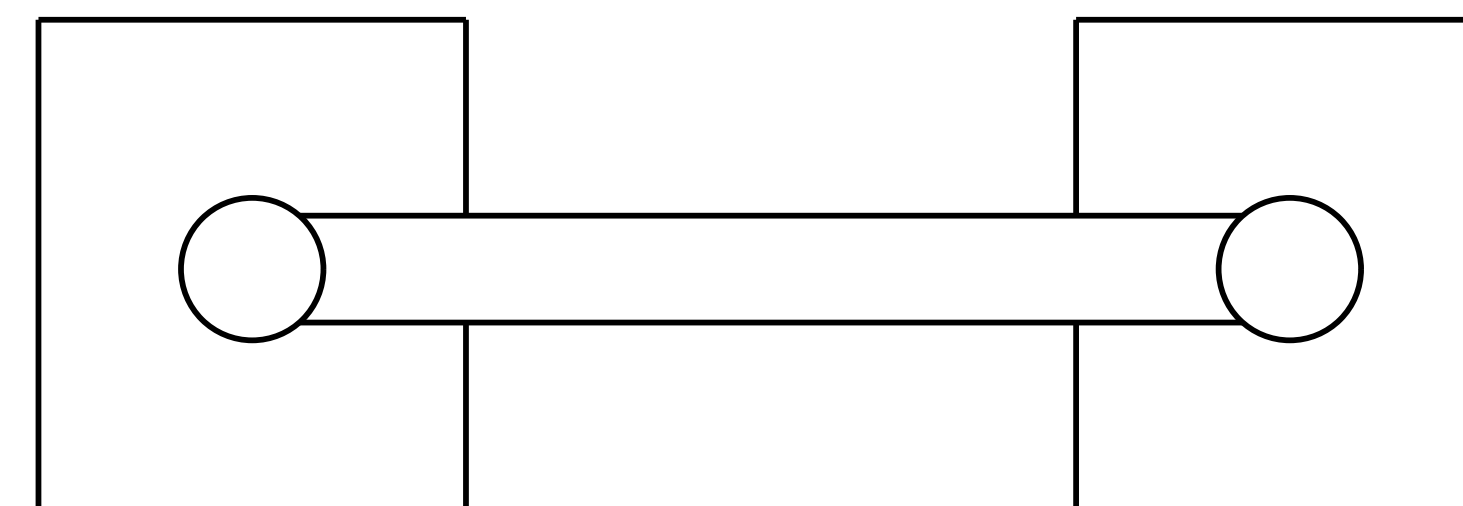
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 24 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 23



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-94 |
| 2 | | | 4 | | | |

NOTES:

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

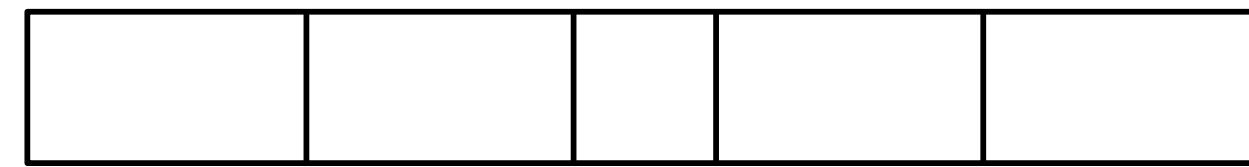
REPAIR QUANTITY TABLE

| REPAIRS BENT 24 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 3.0 | 1.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 3.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

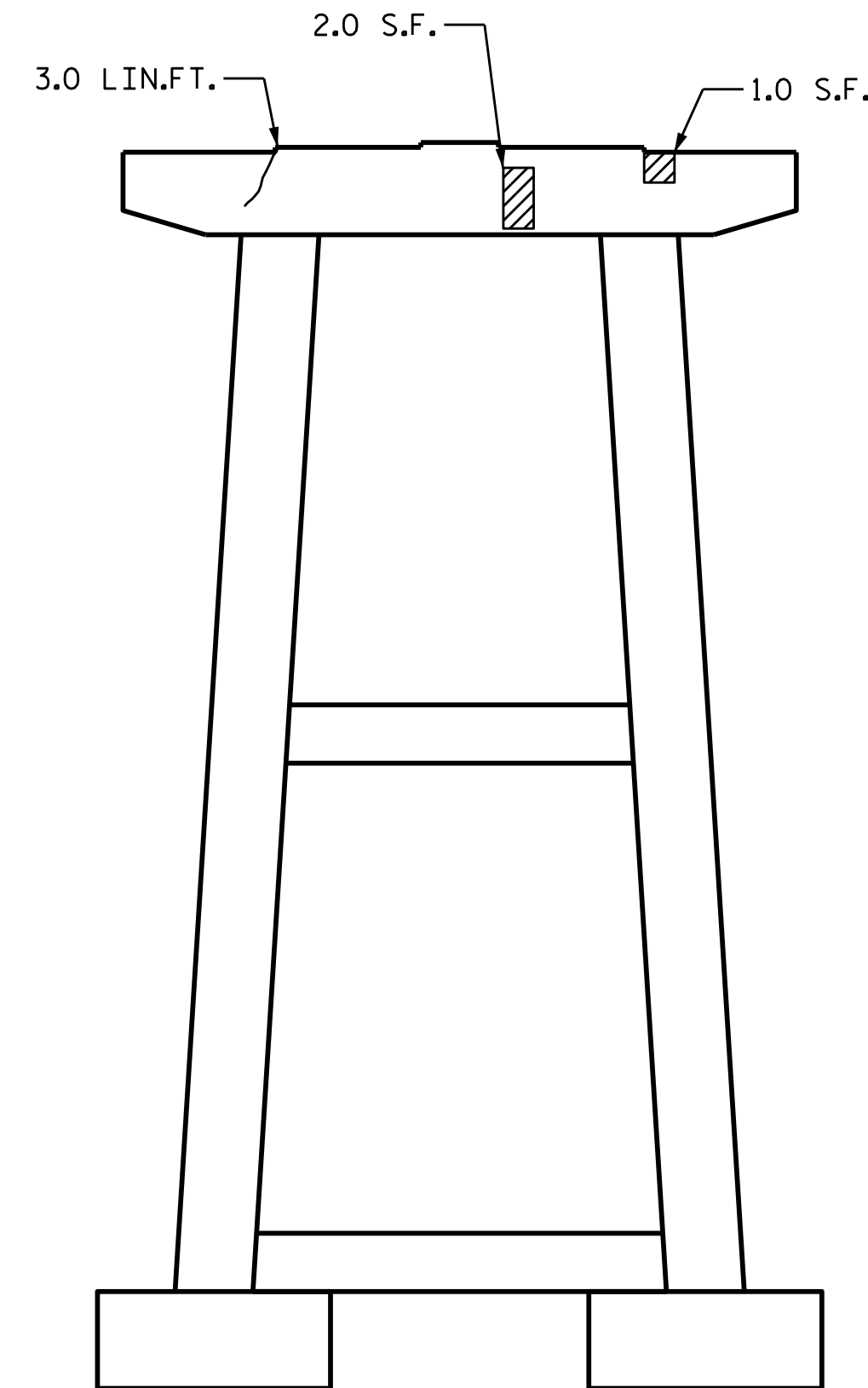
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

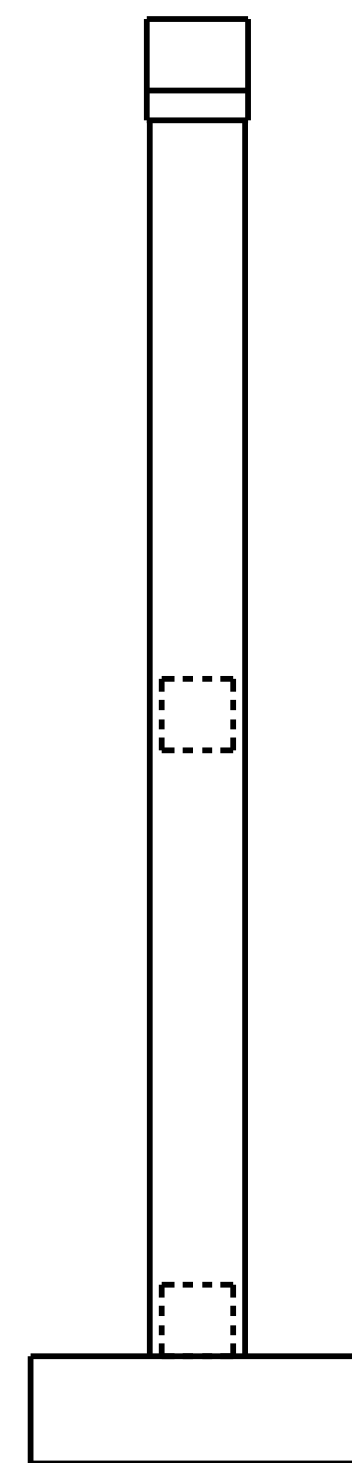
ERI - EPOXY RESIN INJECTION



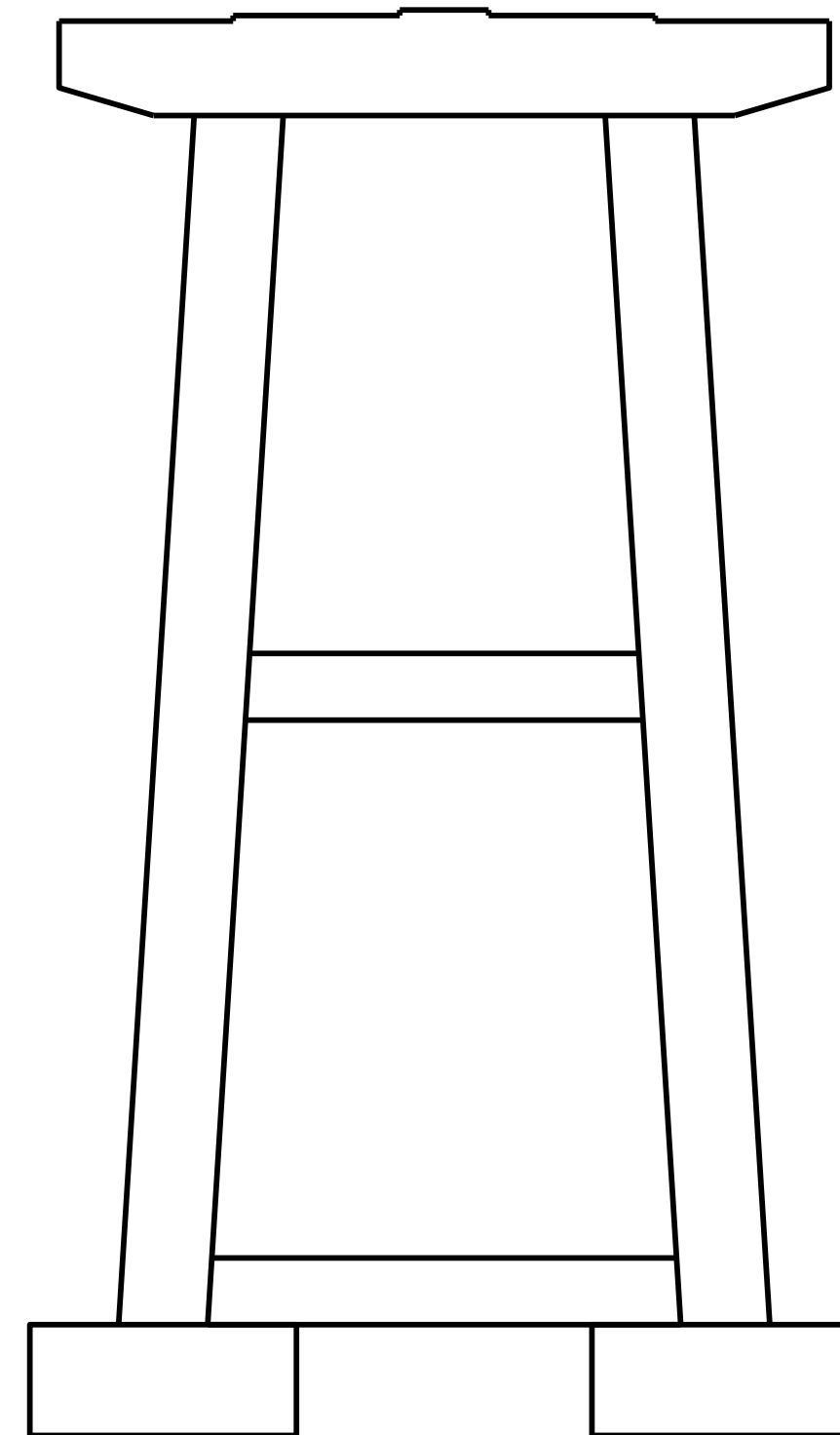
PLAN
TOP OF CAP



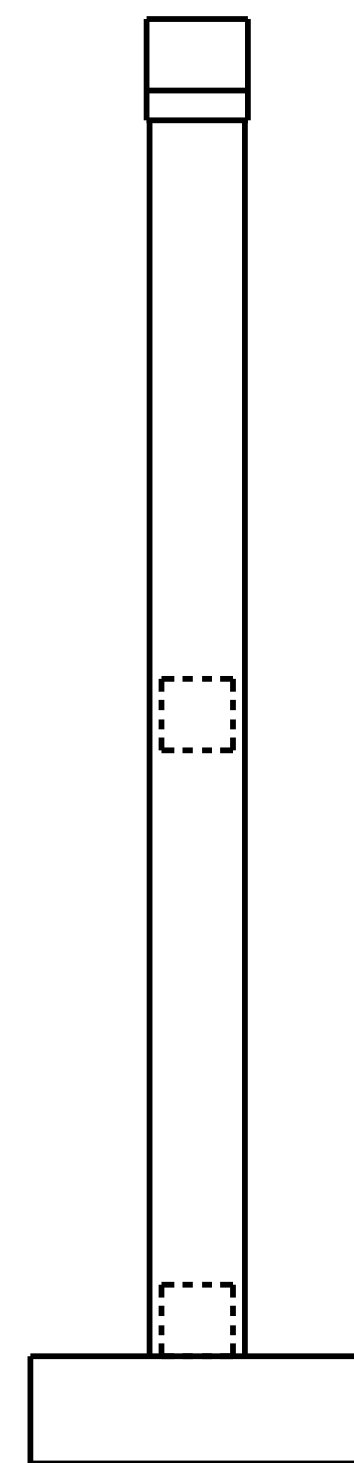
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



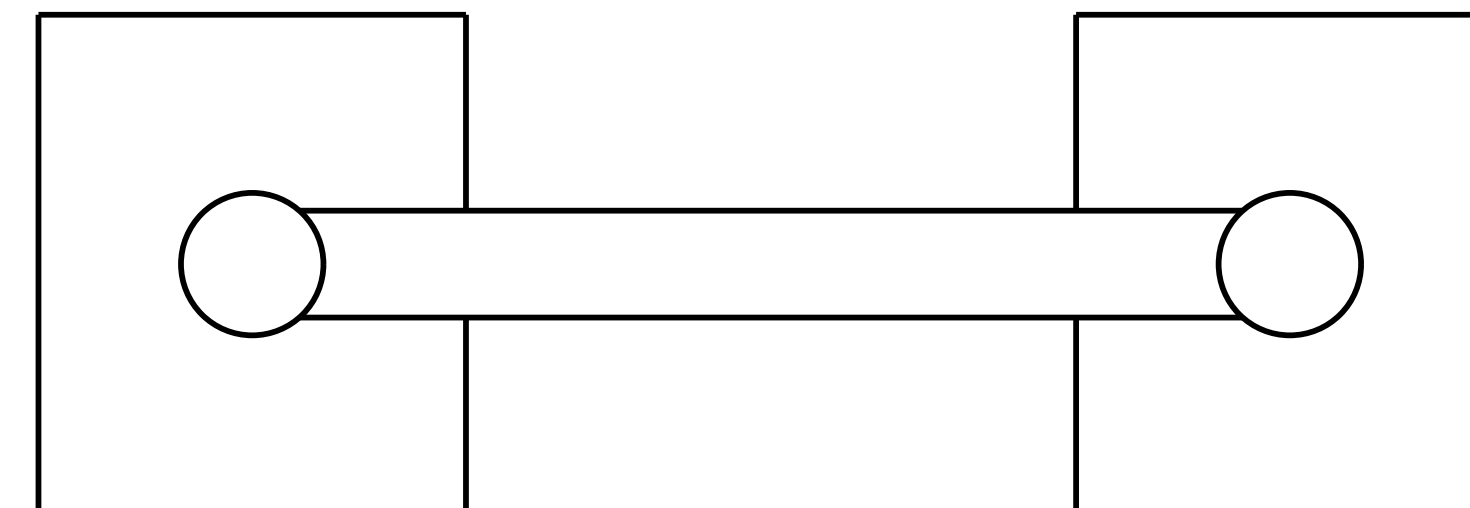
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

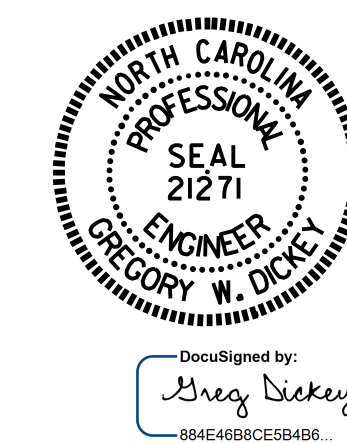
CARTERET COUNTY

BRIDGE NO. 6

SHEET 25 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 24



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | S2-95 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
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NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

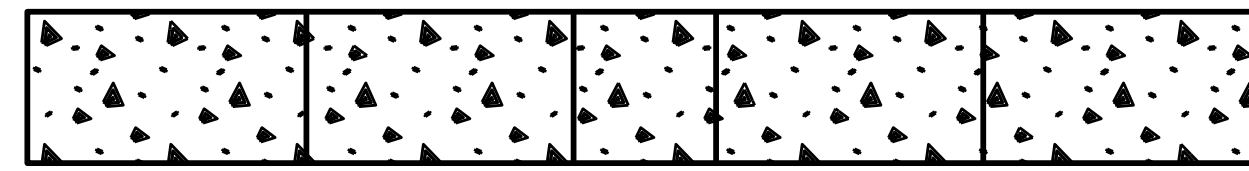
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

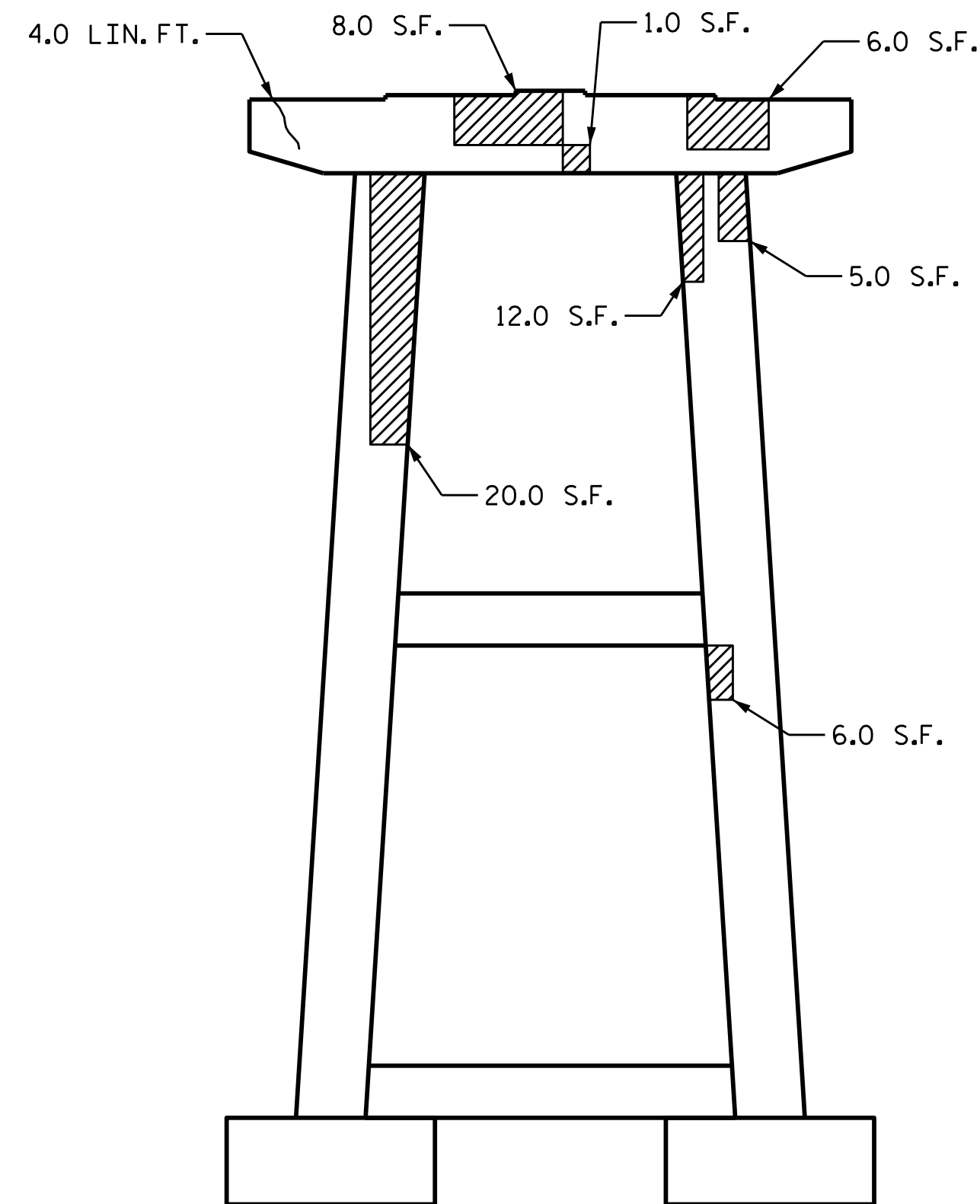
| REPAIRS BENT 25 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 15.0 | 7.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 43.0 | 21.5 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 18.0 | 9.0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 4.0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

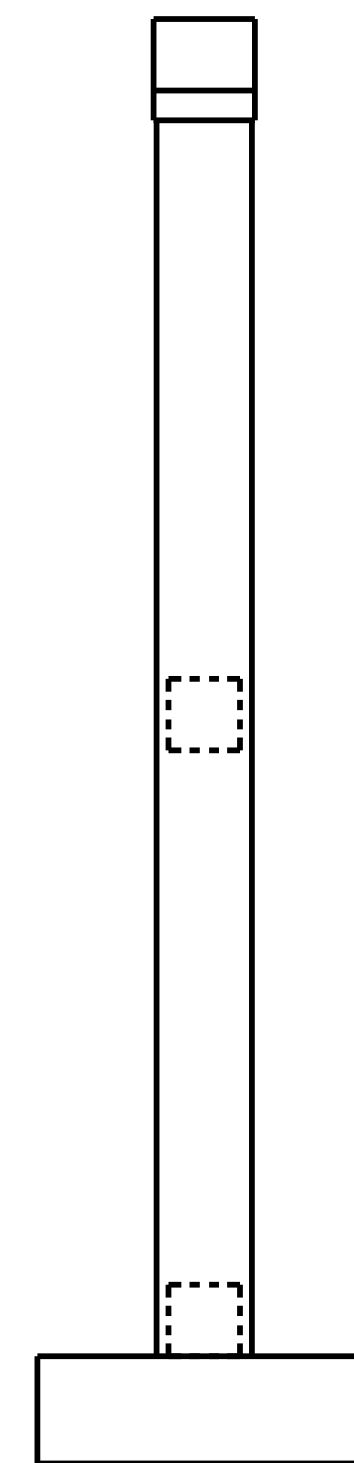
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



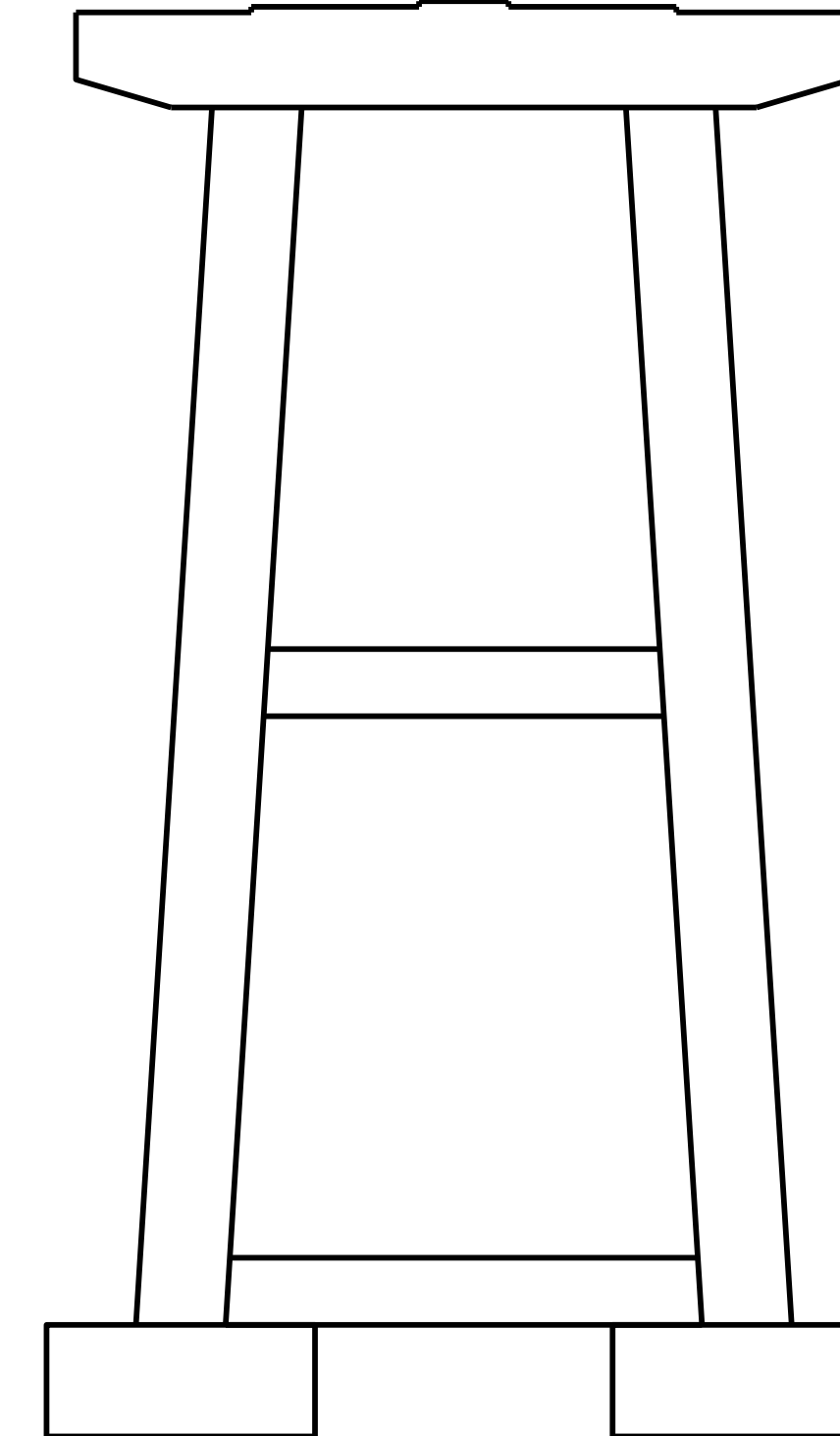
PLAN
TOP OF CAP



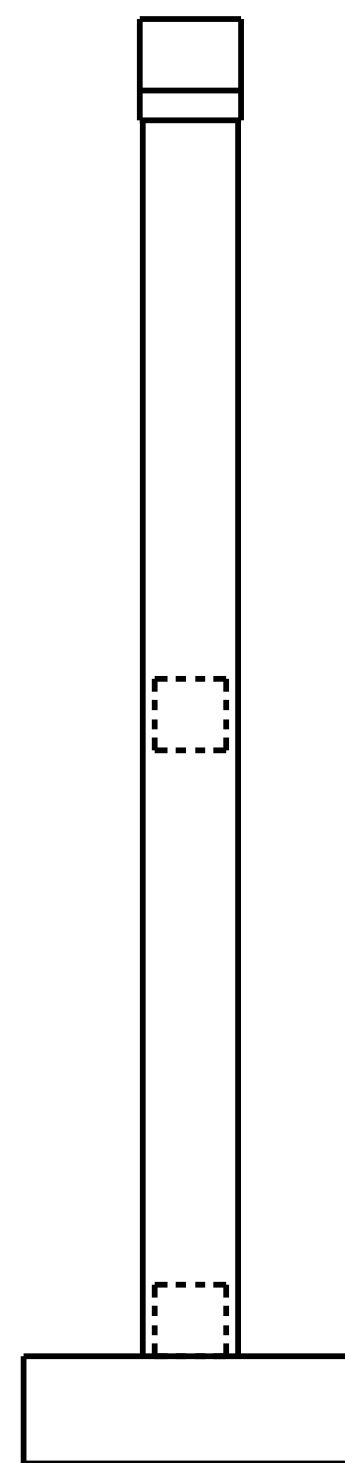
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



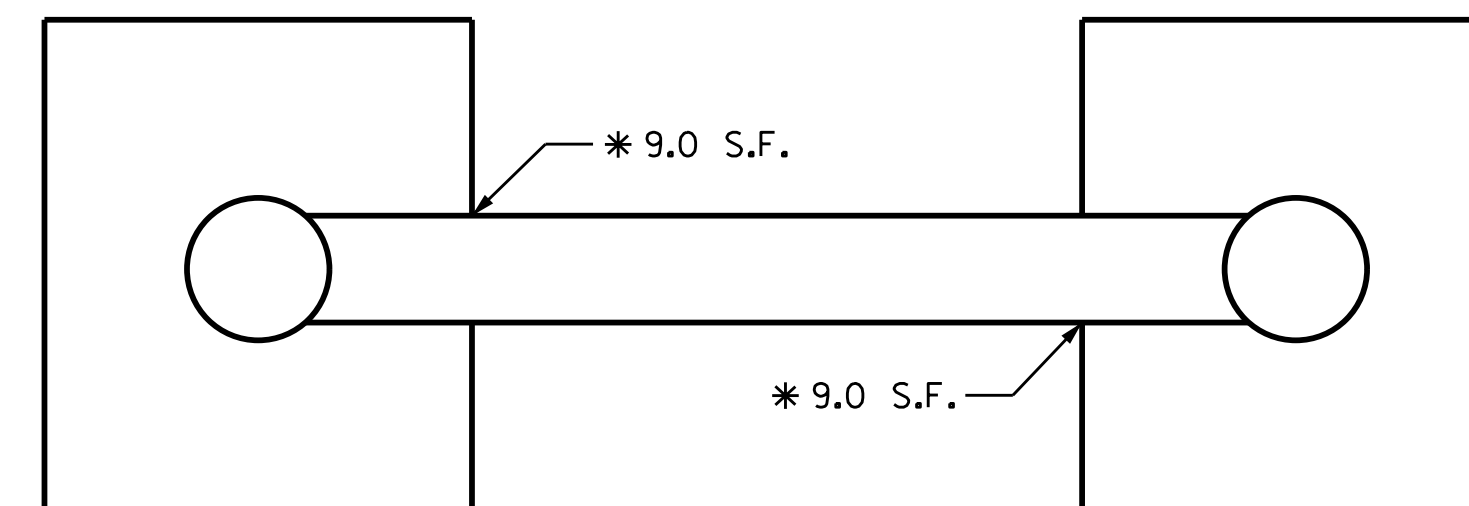
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE

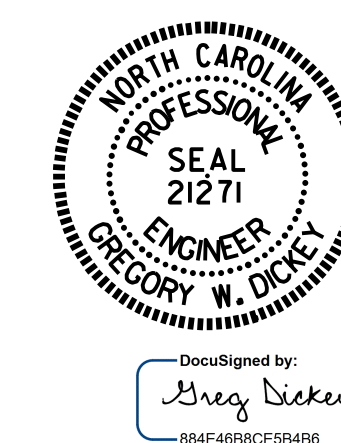


PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING
* REPAIR ON FOOTING BELOW STRUT

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 26 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUBSTRUCTURES
 BENT 25**

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-96 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 26 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 6.0 | 3.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 4.0 | 2.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

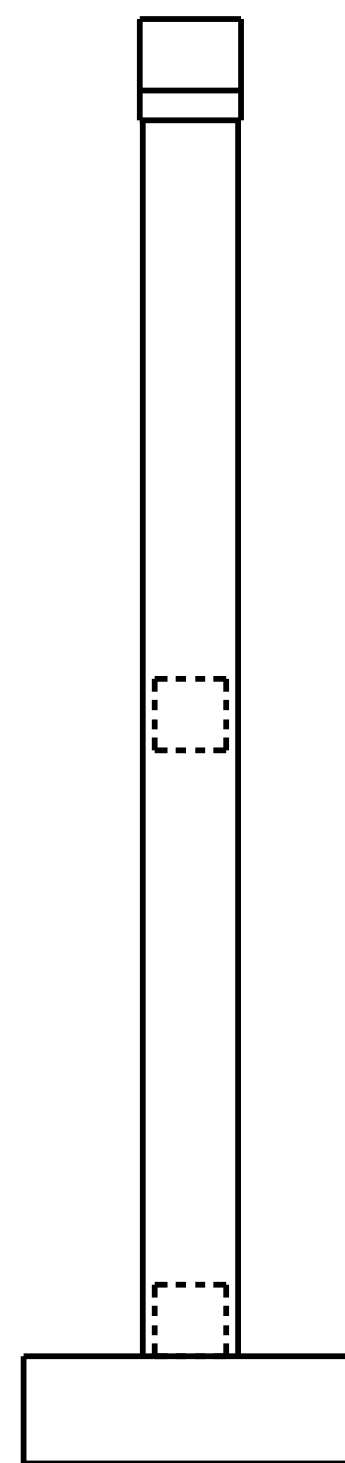
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

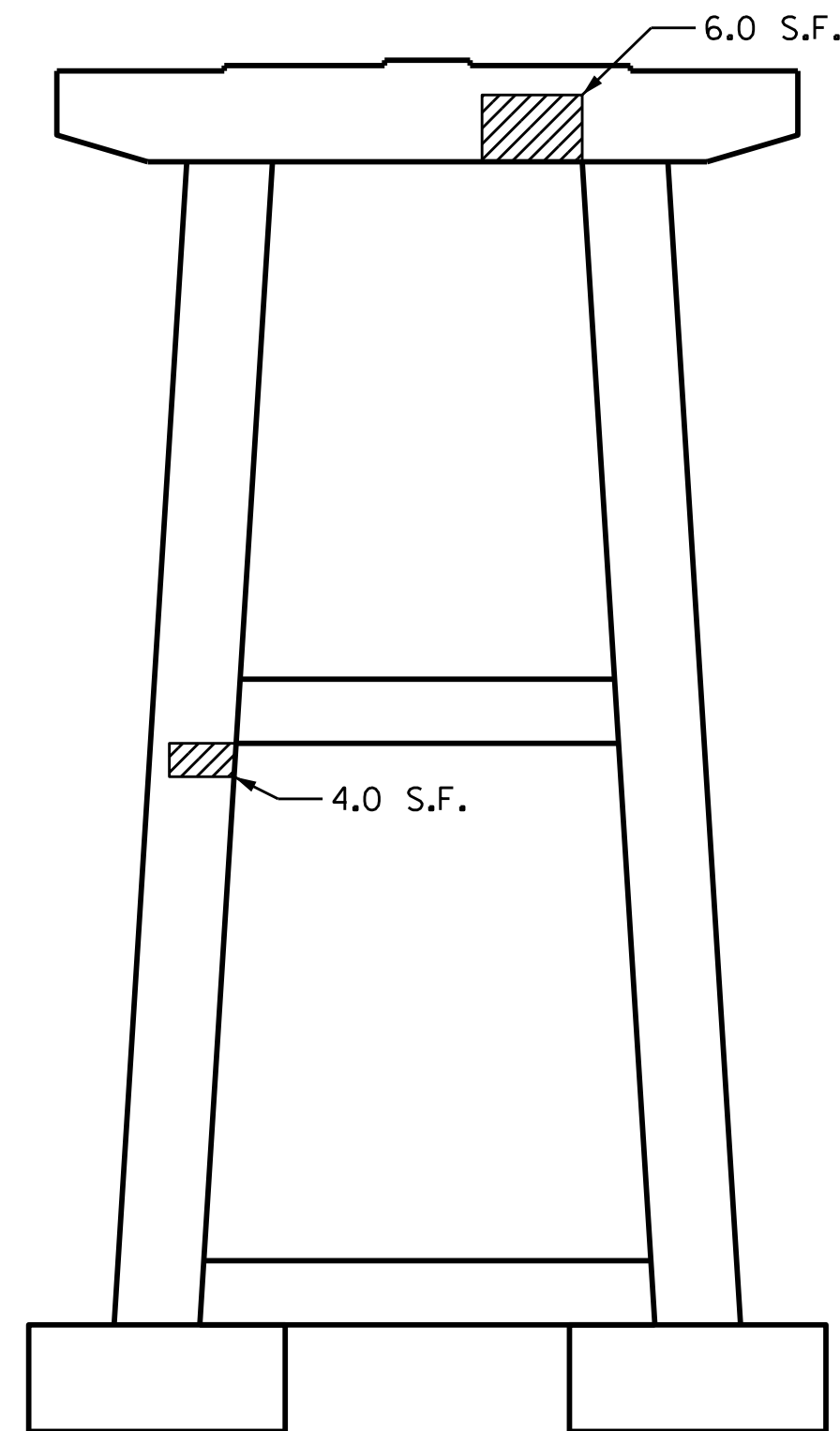
ERI - EPOXY RESIN INJECTION



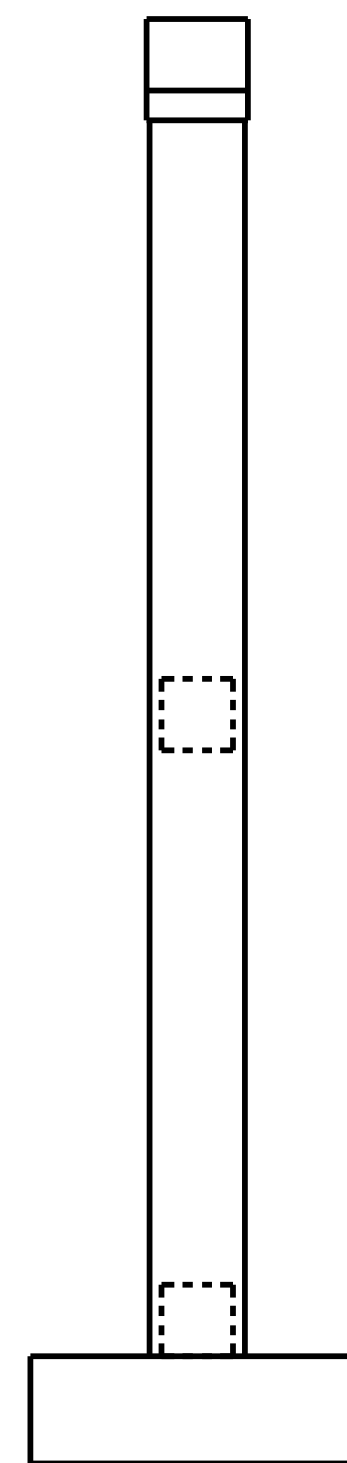
PLAN
TOP OF CAP



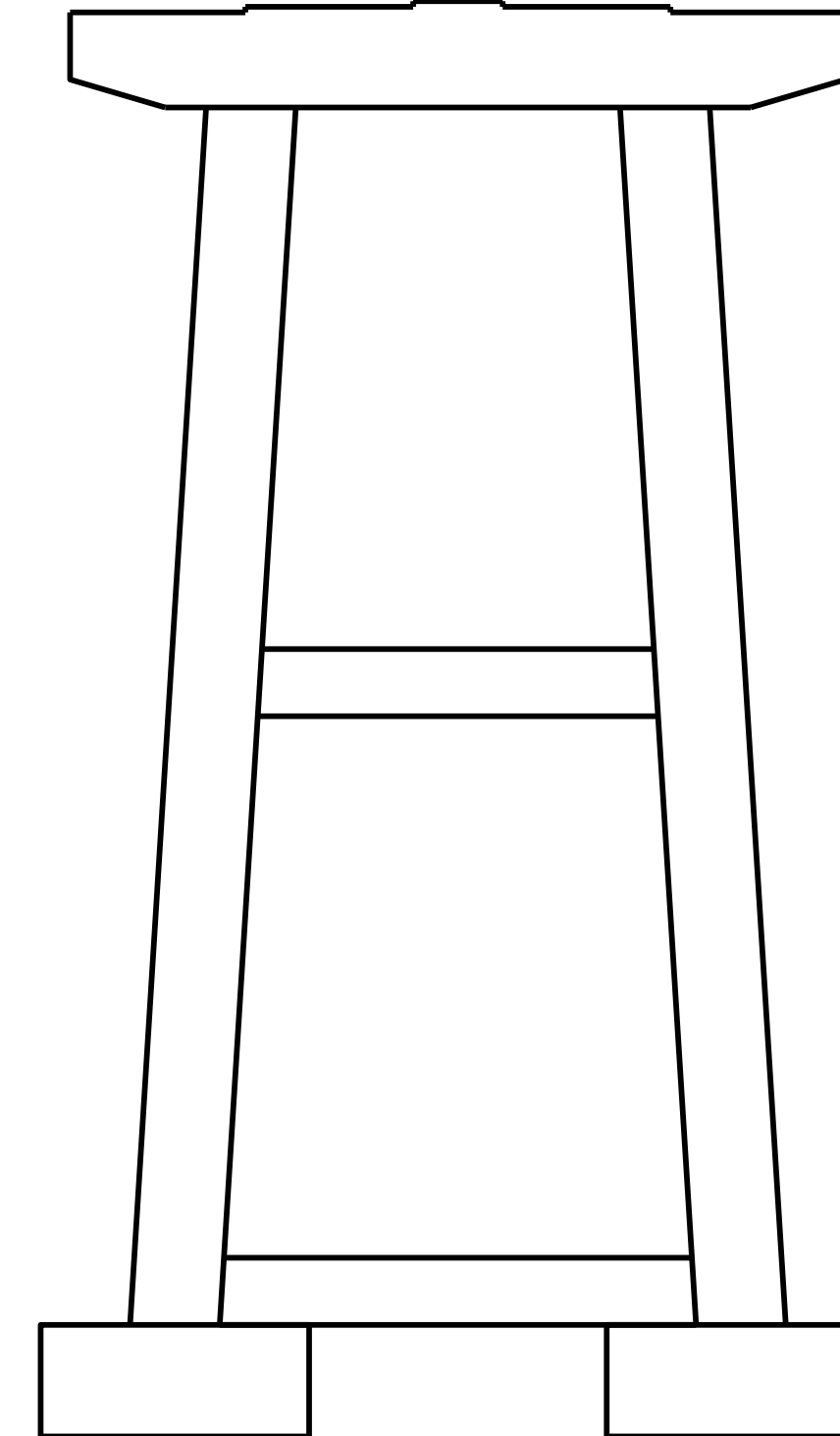
END VIEW
WEST SIDE



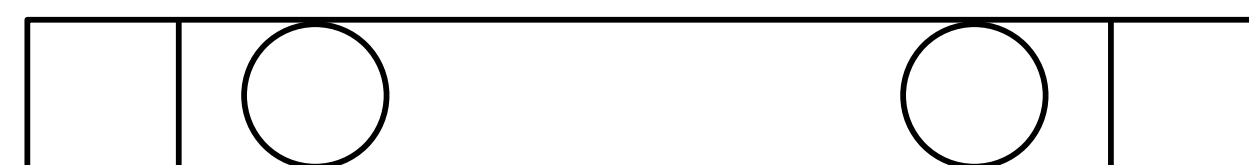
ELEVATION
SOUTH SIDE



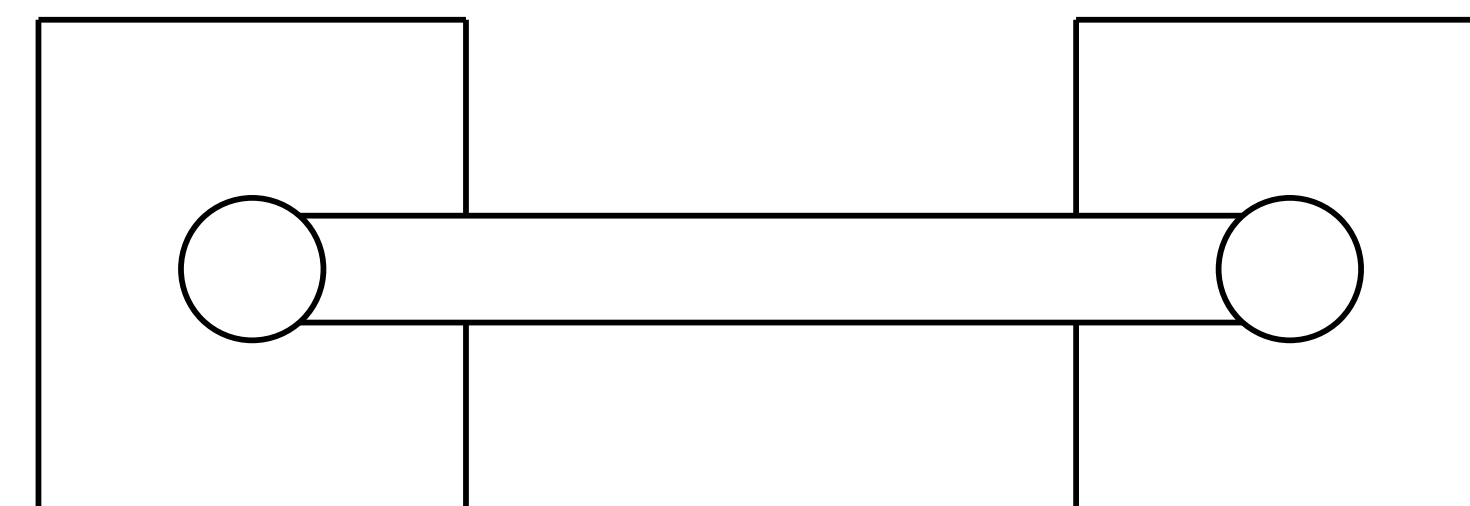
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

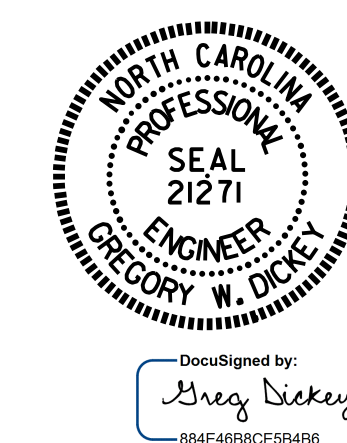
CARTERET COUNTY

BRIDGE NO. 6

SHEET 27 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 26



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-97 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

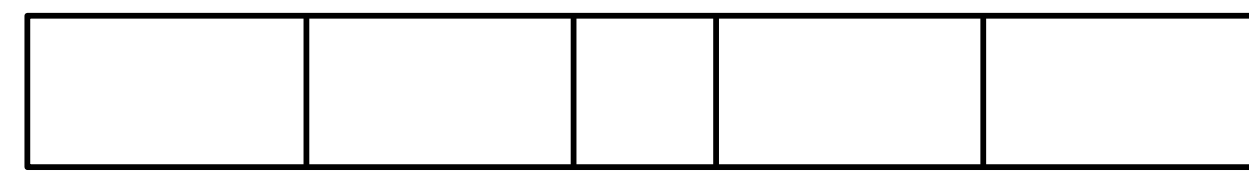
REPAIR QUANTITY TABLE

| REPAIRS BENT 27 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 2.0 | 1.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 4.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

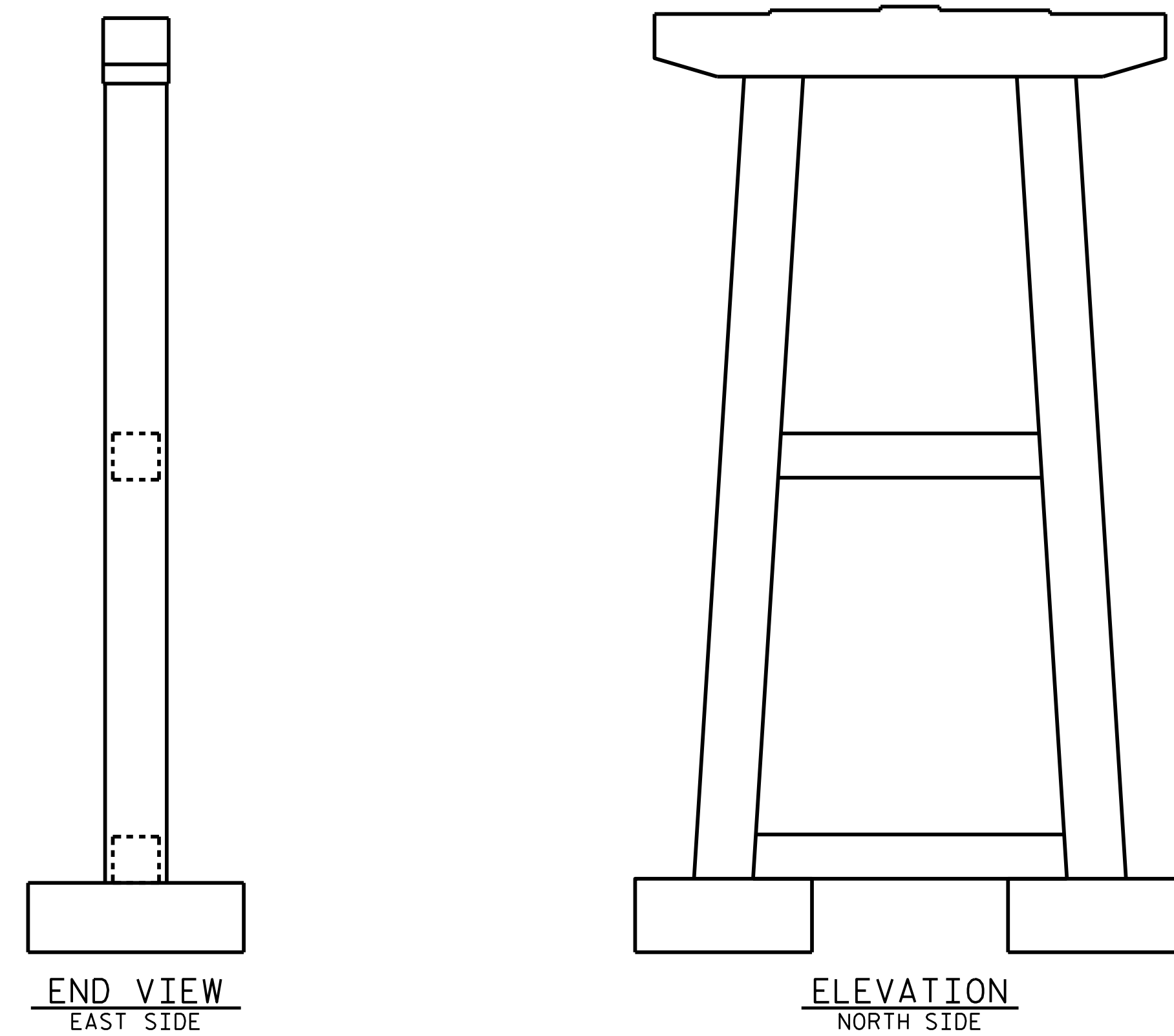
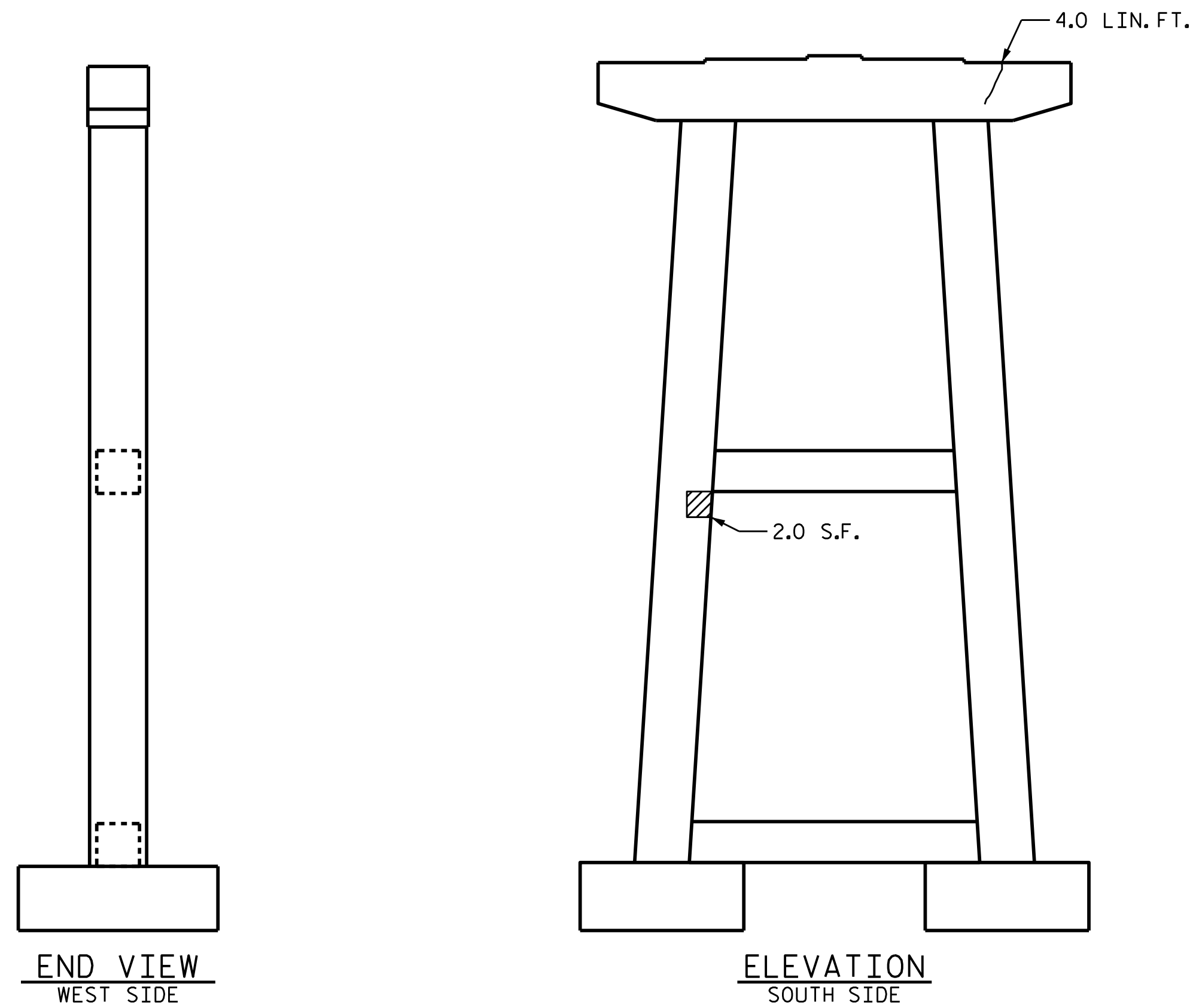
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

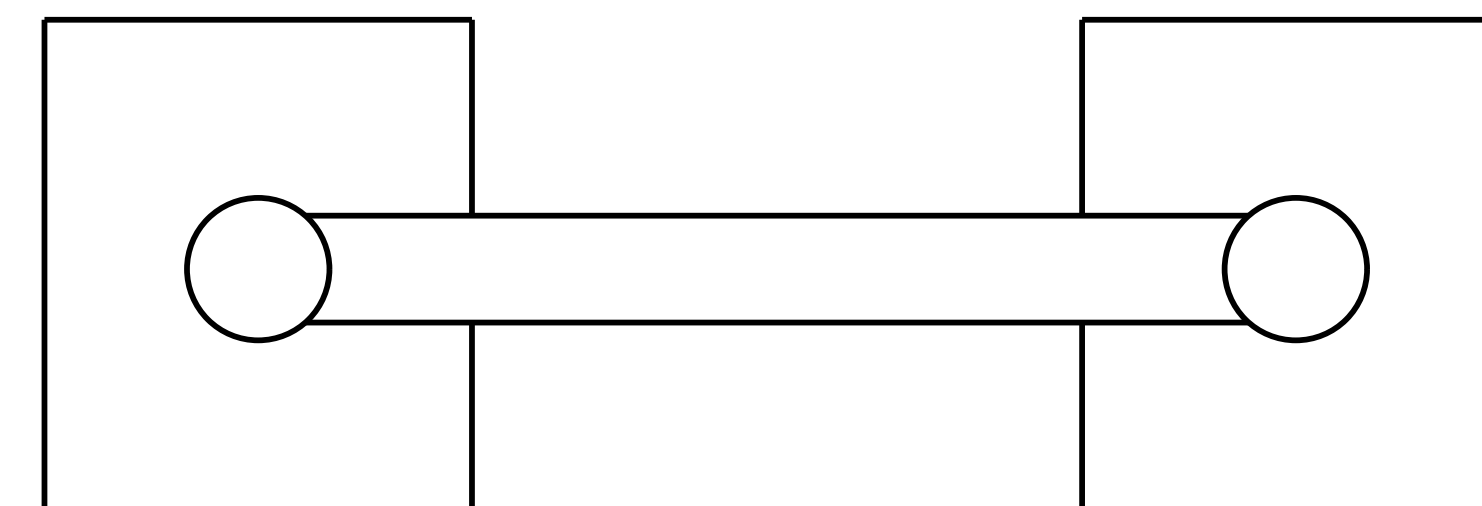
ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP

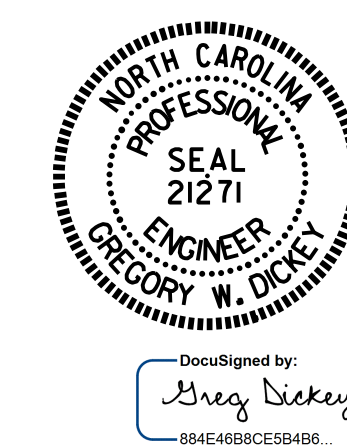


PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 28 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURES
 BENT 27**

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-98 |
| 2 | | | 4 | | | |

NOTES:

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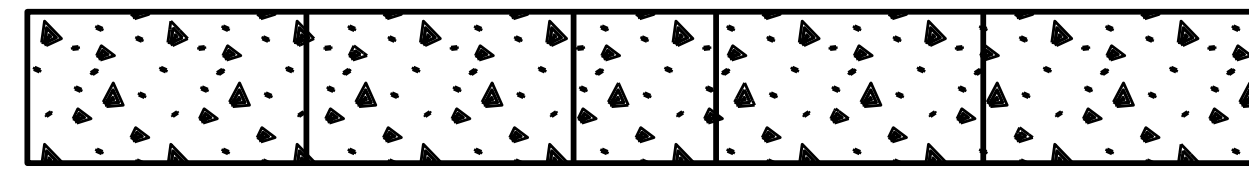
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

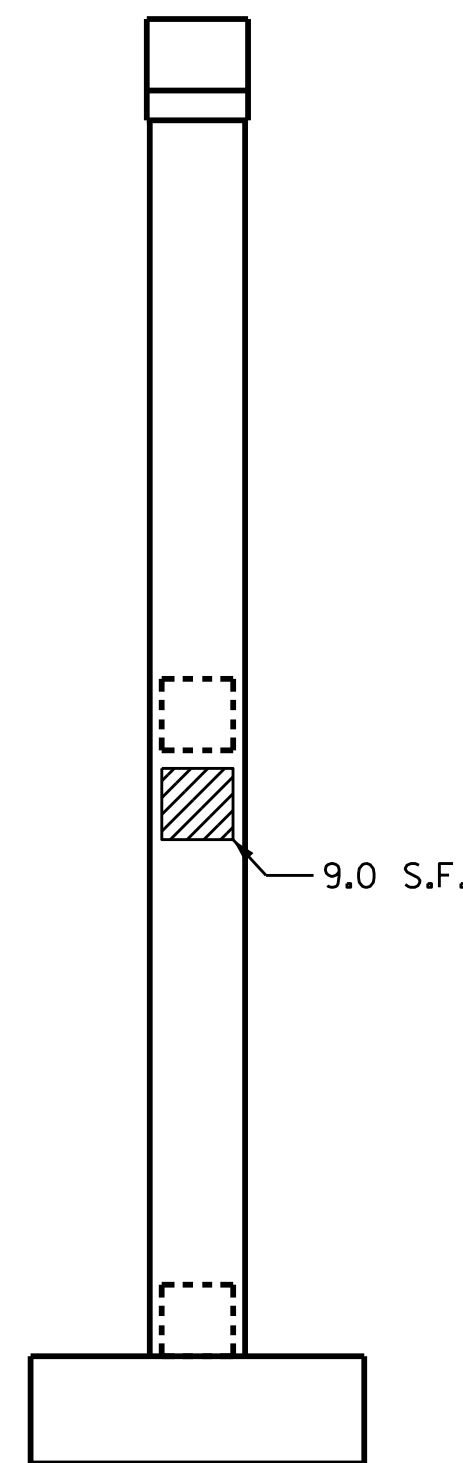
| REPAIRS BENT 28 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 18.0 | 9.0 | | |
| STRUT | 6.0 | 3.0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

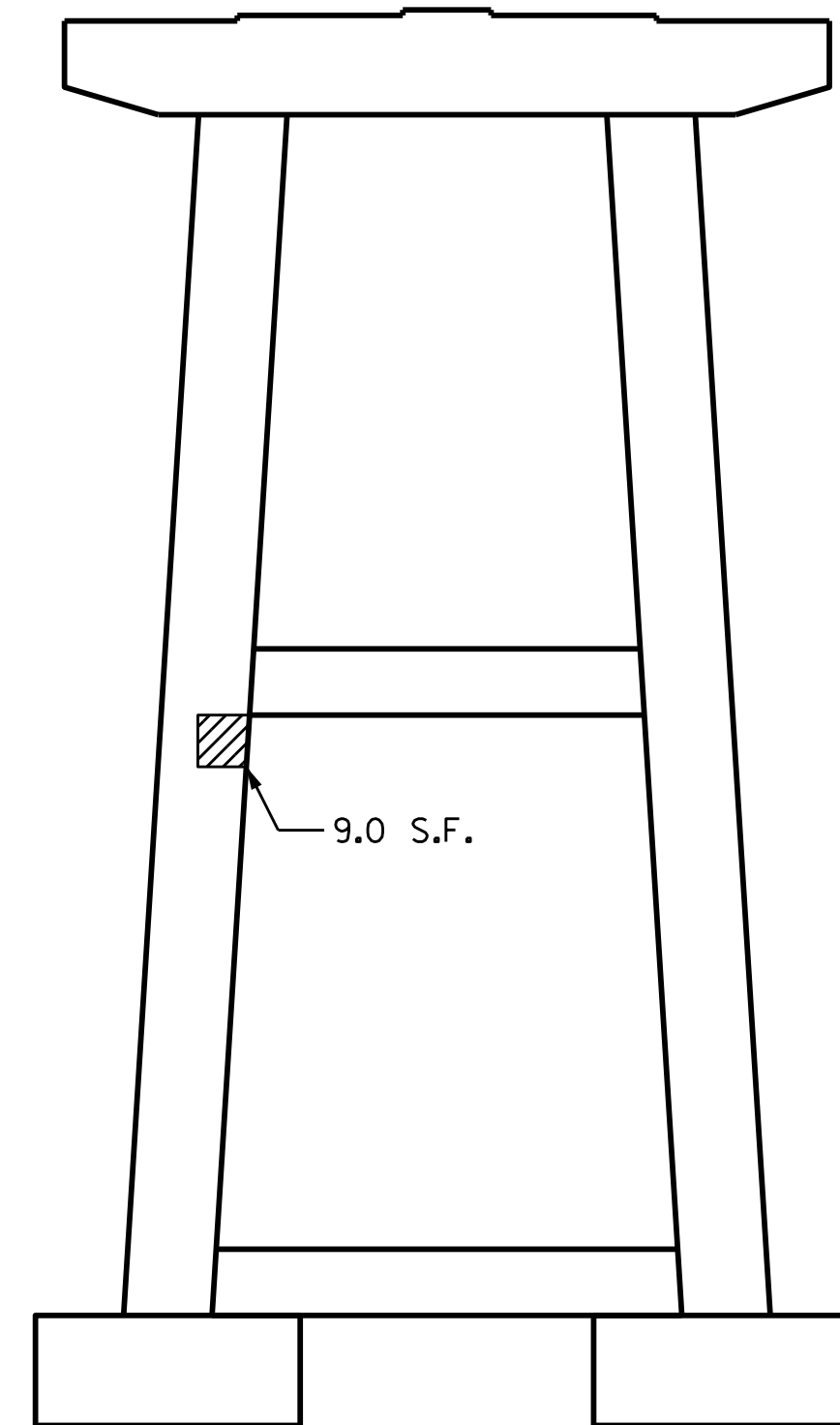
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



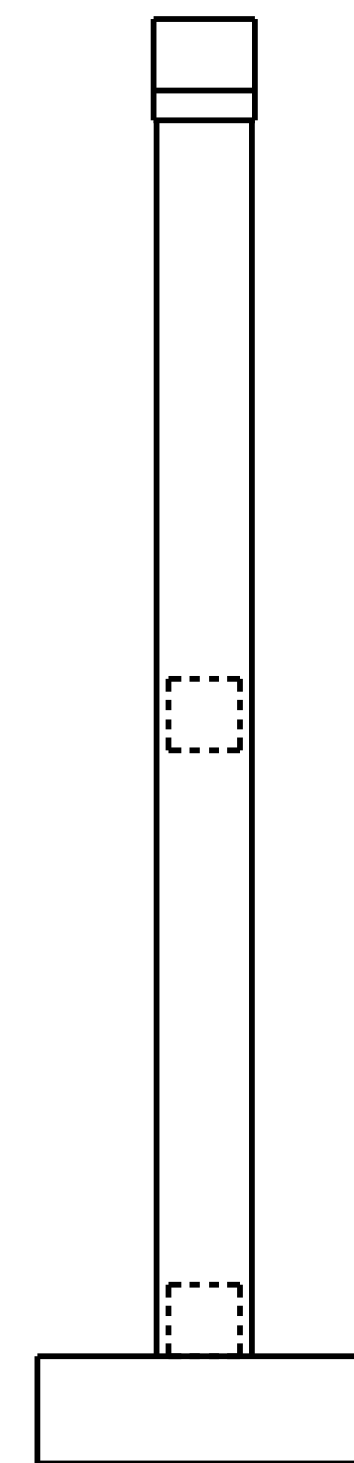
PLAN
TOP OF CAP



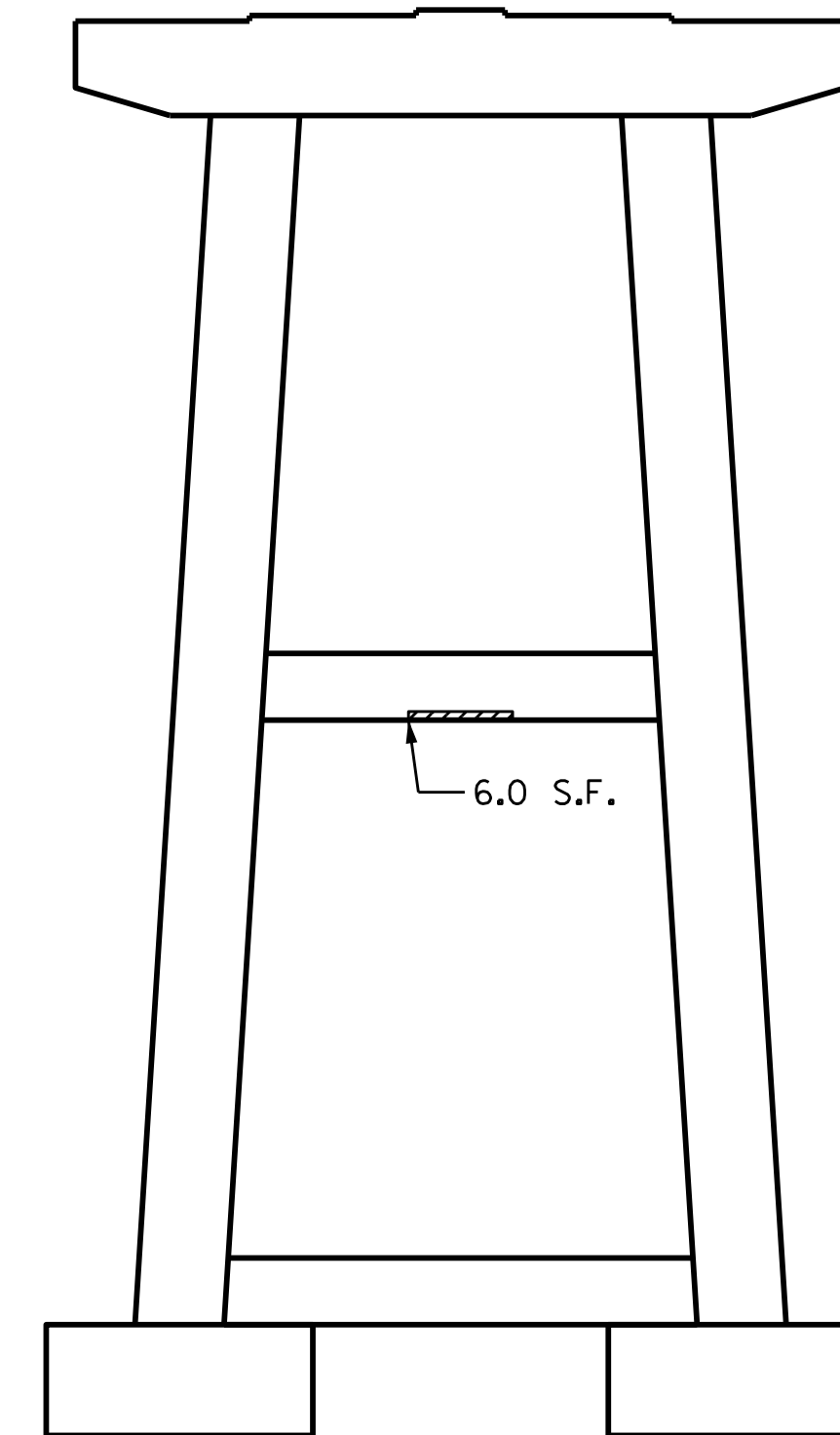
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



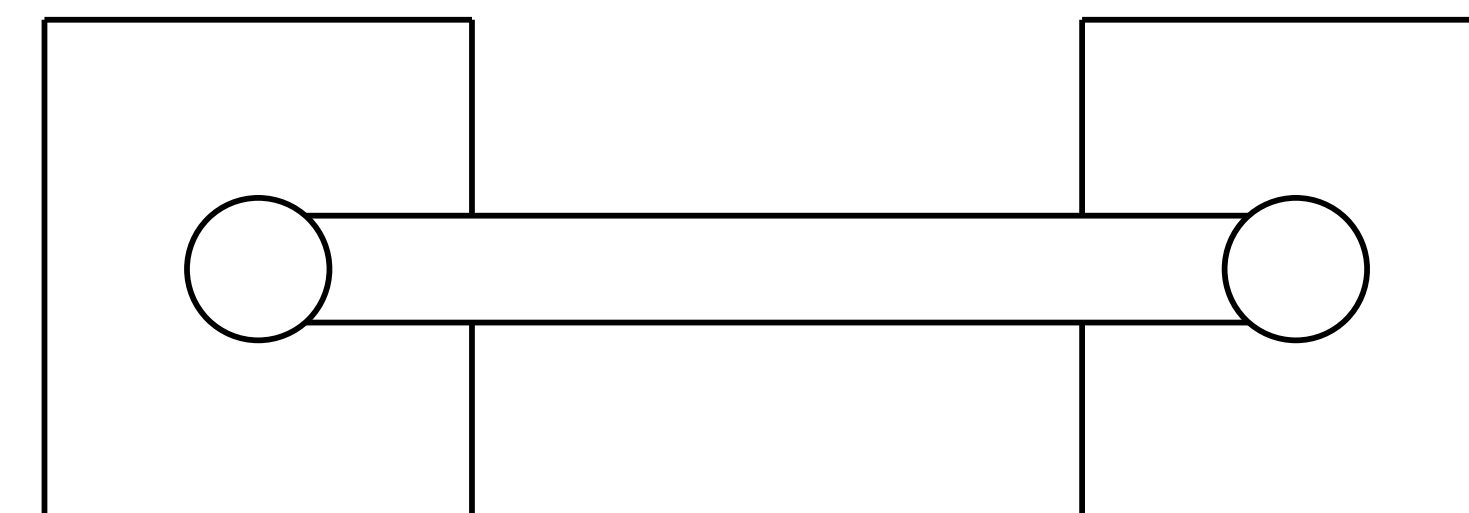
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 29 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 28



DocuSigned by:
Greg Dickey
884E488CE58486...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS | |
| 1 | | | 3 | | | S2-99 | |
| 2 | | | 4 | | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 29 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 3.0 | 1.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 3.0 | 1.5 | | |
| STRUT | 4.5 | 2.3 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

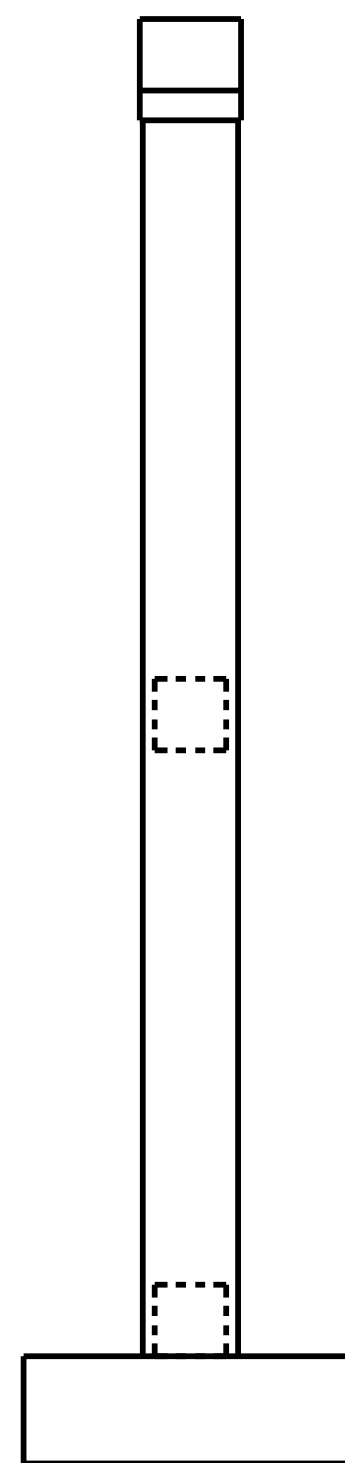
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

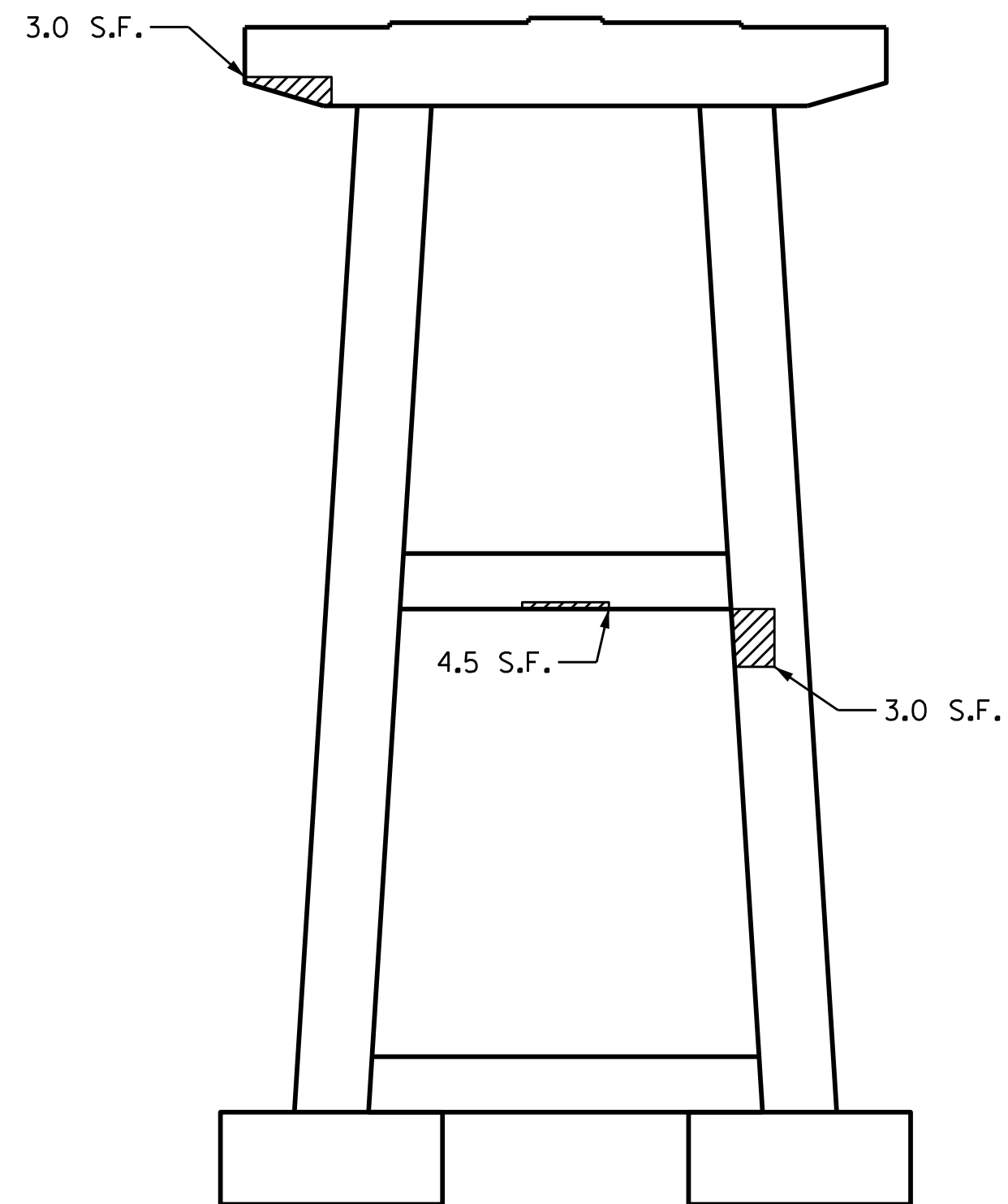
ERI - EPOXY RESIN INJECTION



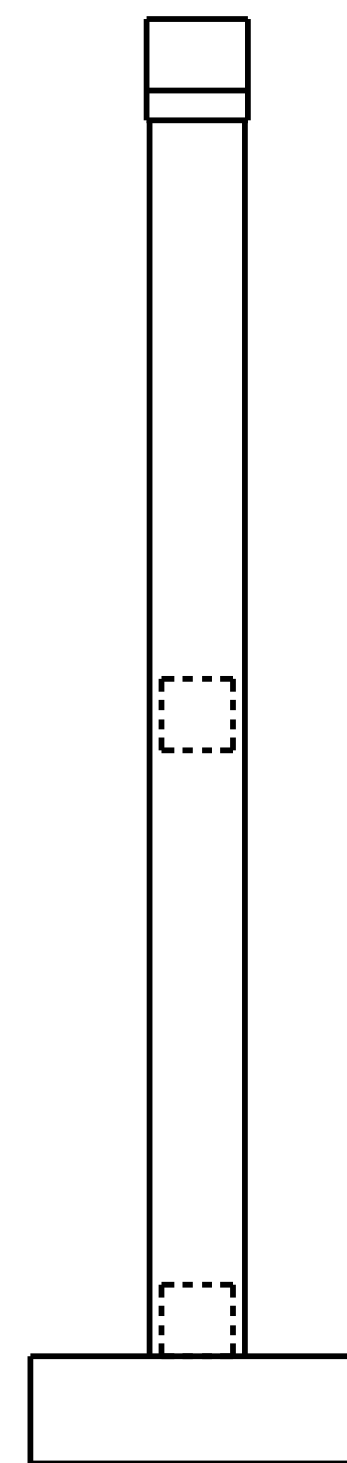
PLAN
TOP OF CAP



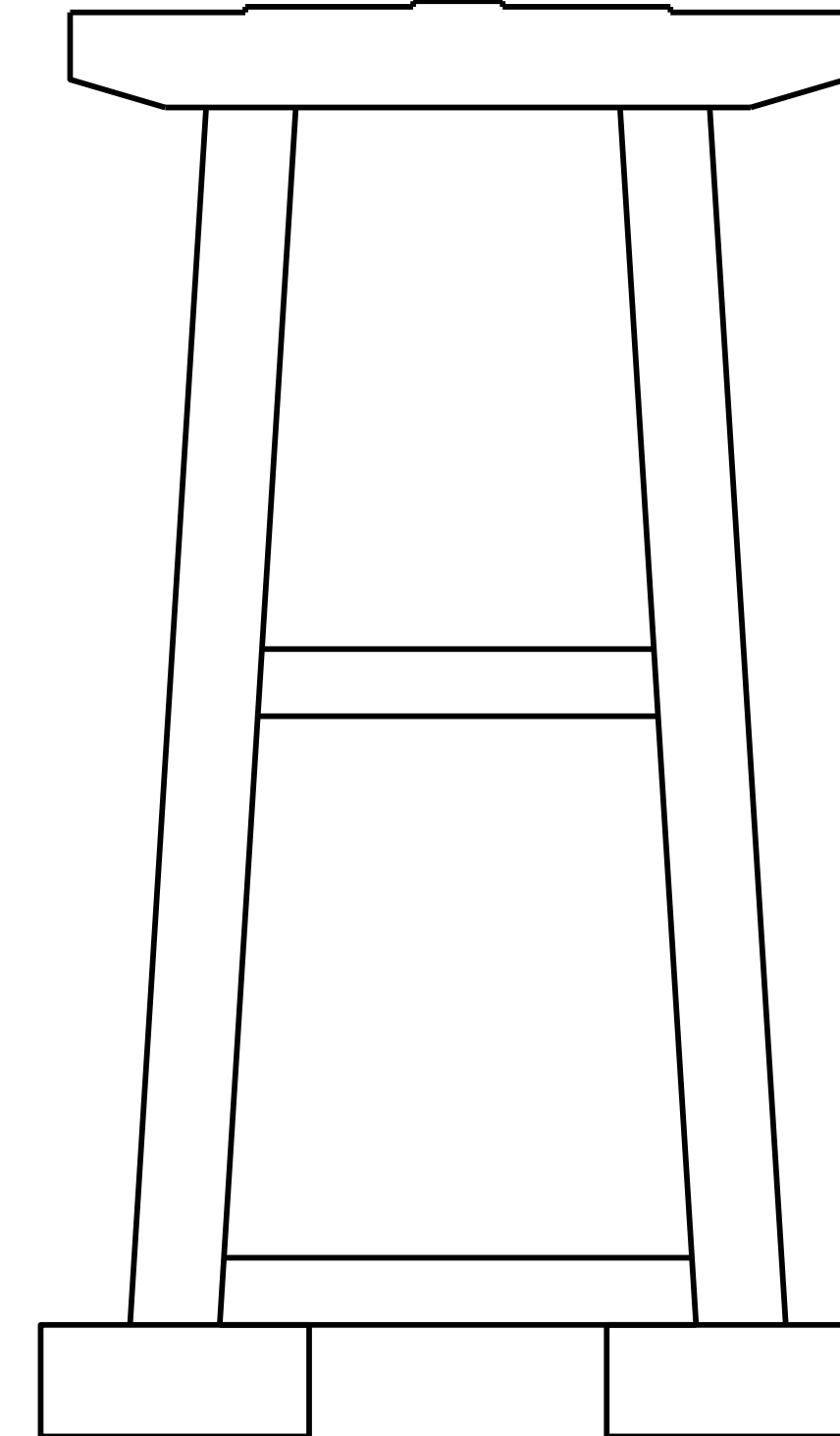
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



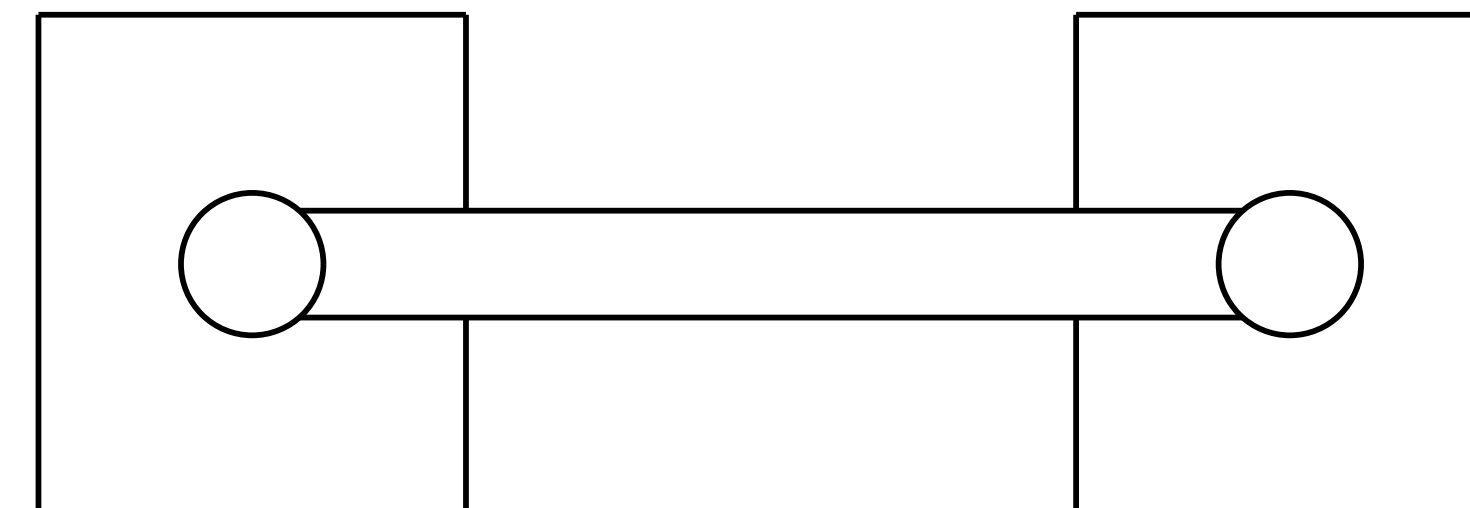
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

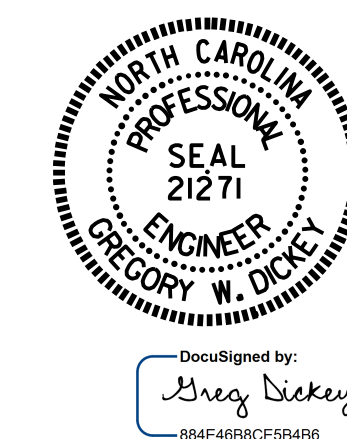
CARTERET COUNTY

BRIDGE NO. 6

SHEET 30 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 29



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-100 | |
| 2 | | | 4 | | | | |

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 30 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 9.0 | 4.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 6.0 | 3.0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 4.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

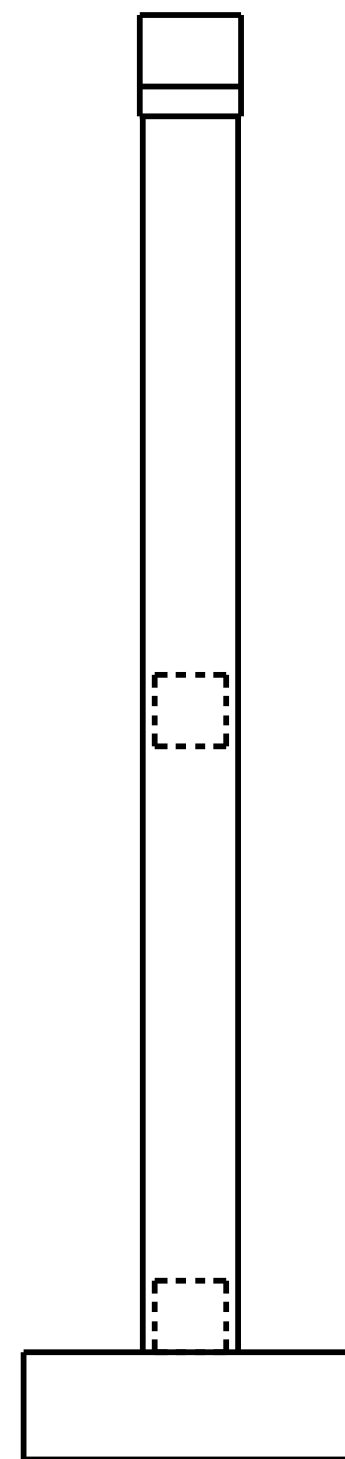
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

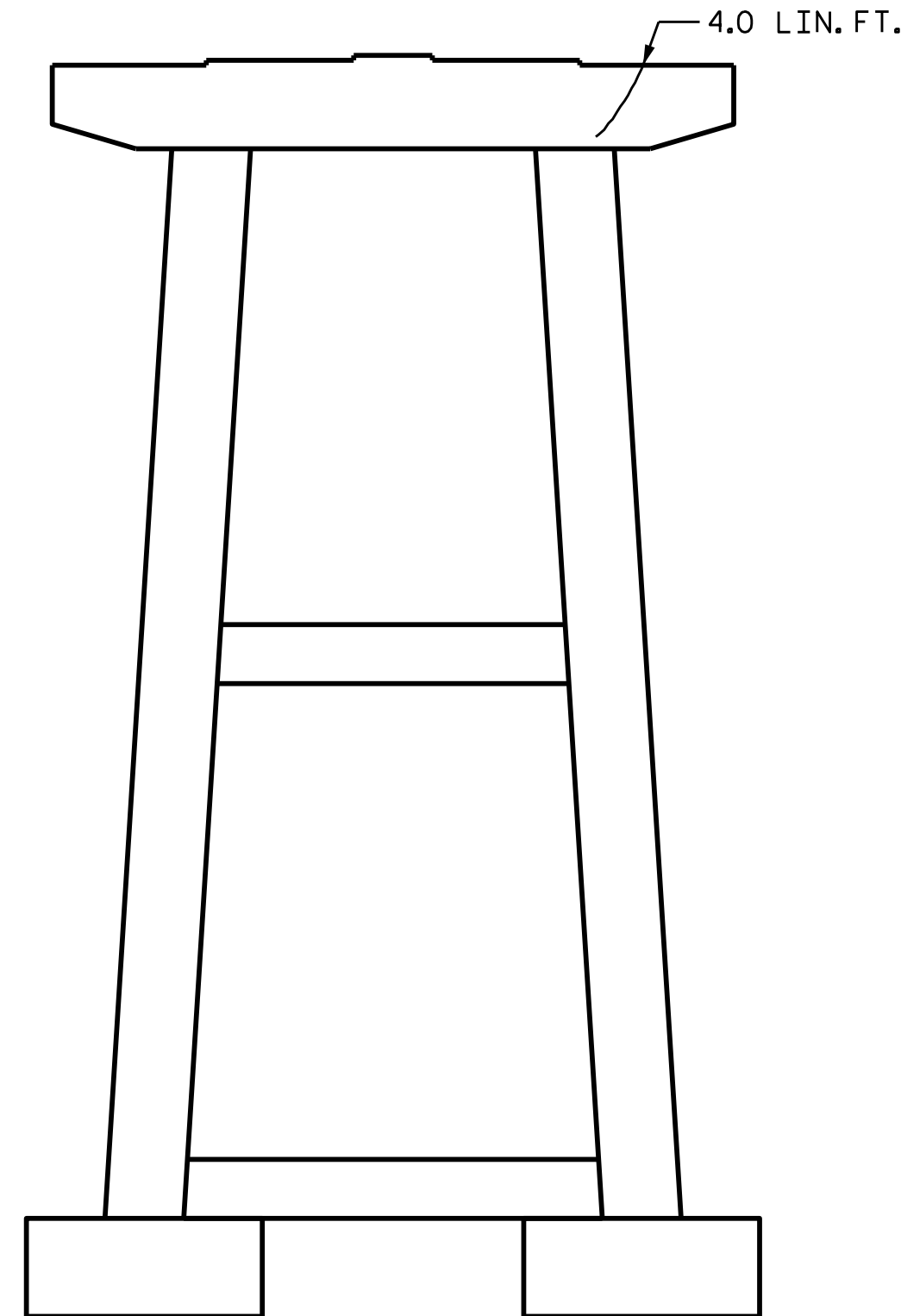
ERI - EPOXY RESIN INJECTION



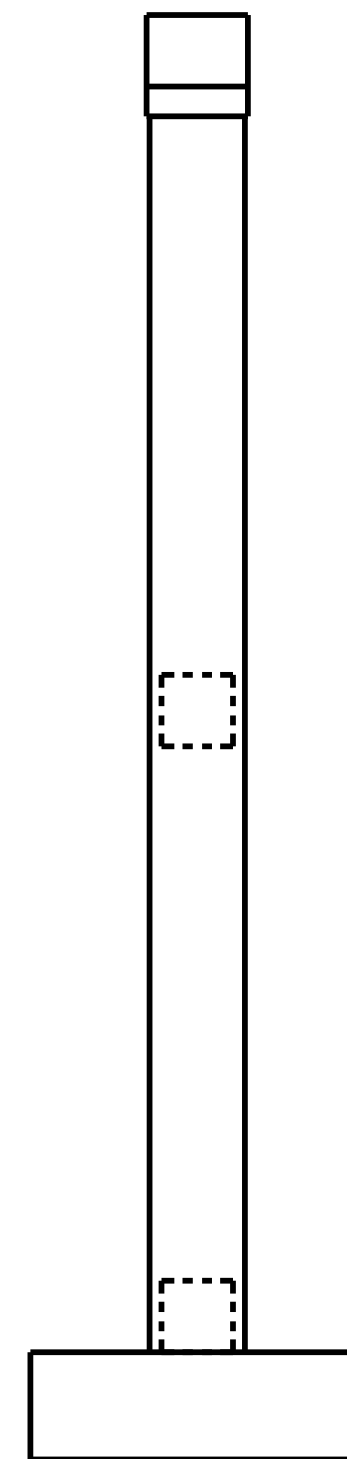
PLAN
TOP OF CAP



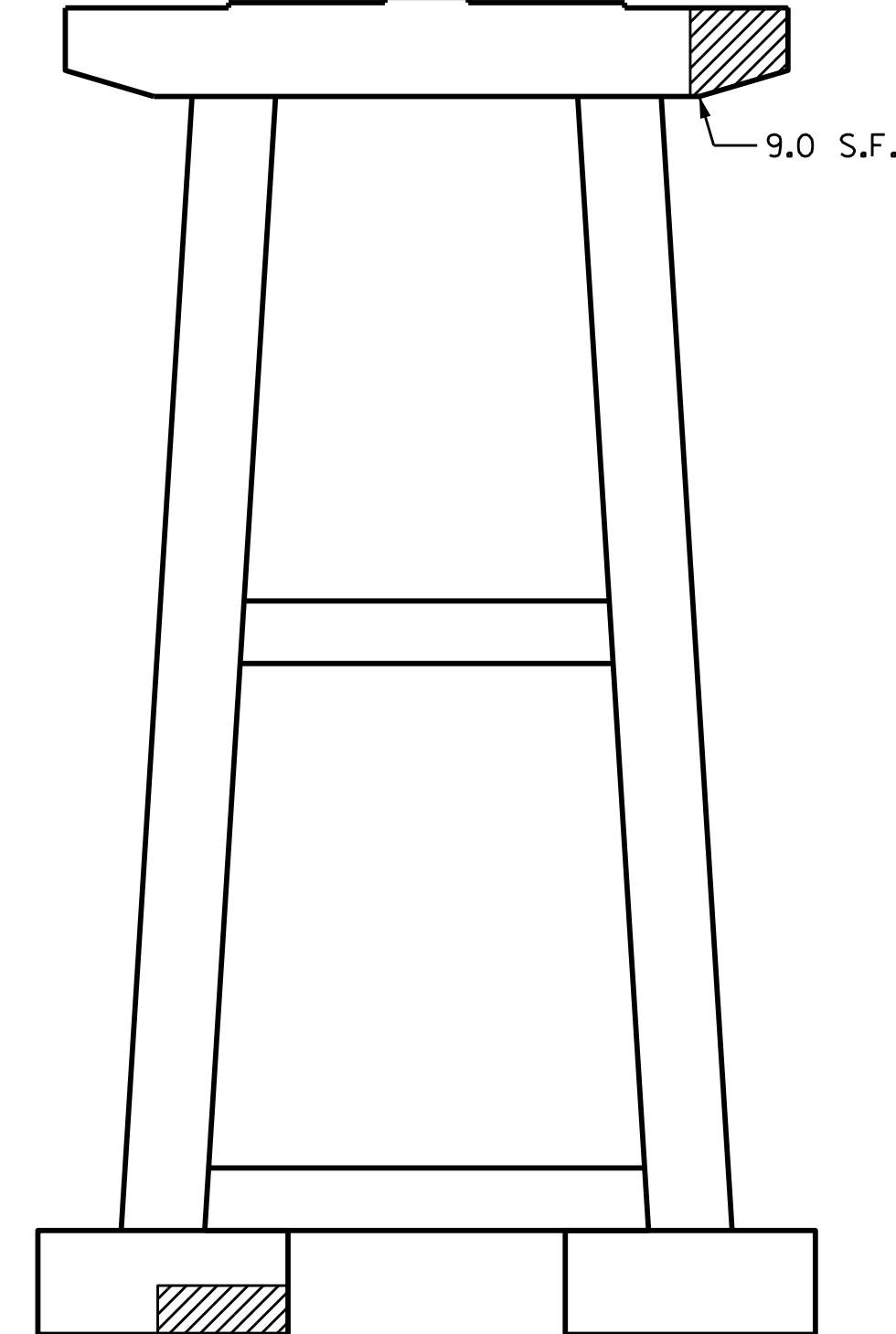
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



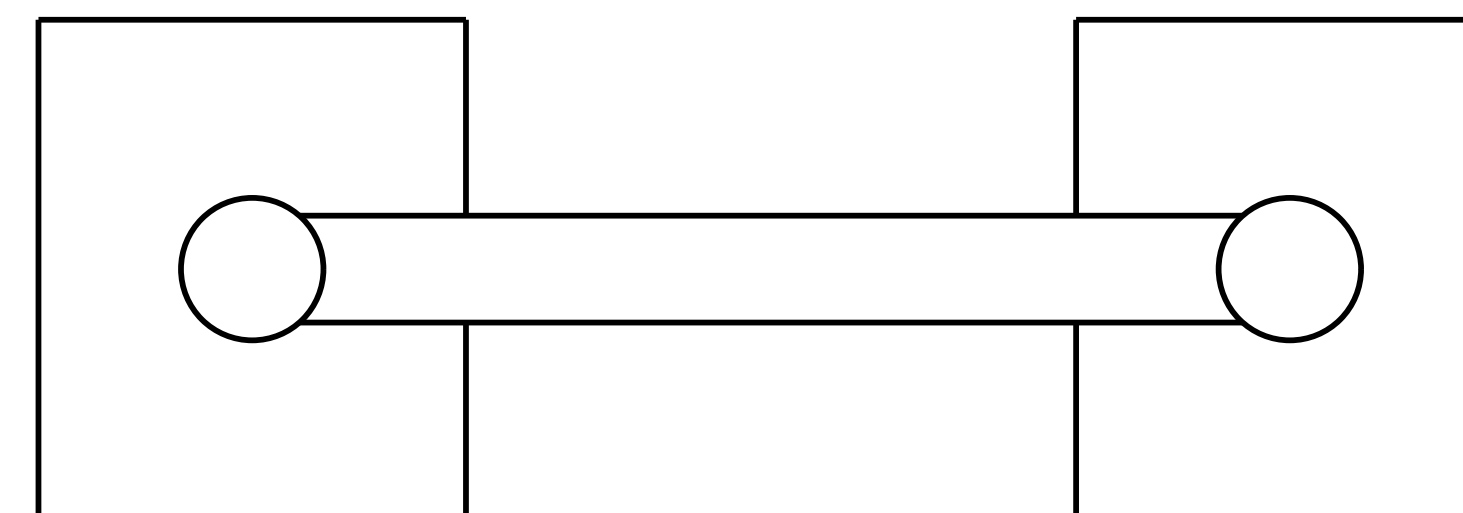
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

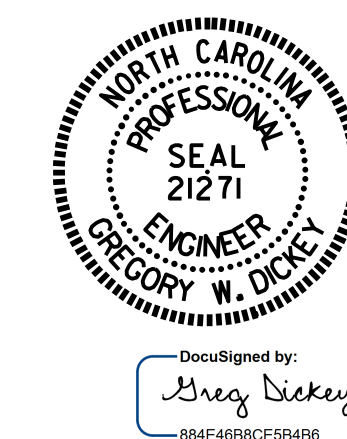
CARTERET COUNTY

BRIDGE NO. 6

SHEET 31 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 30



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-101 | |
| 2 | | | 4 | | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

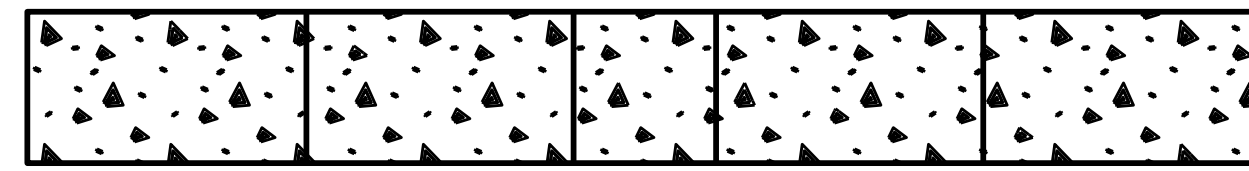
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

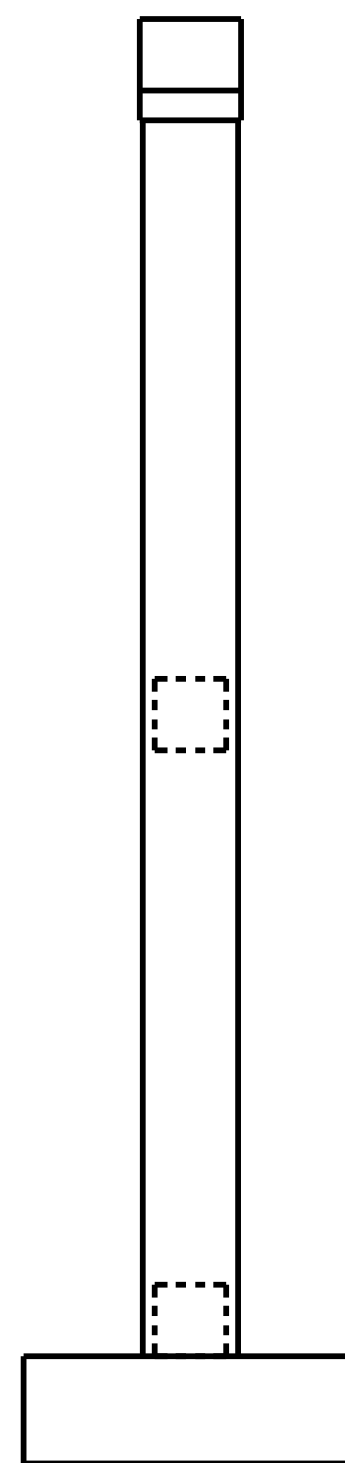
| REPAIRS BENT 31 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 37.7 | 18.9 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 6.0 | 3.0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 3.0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

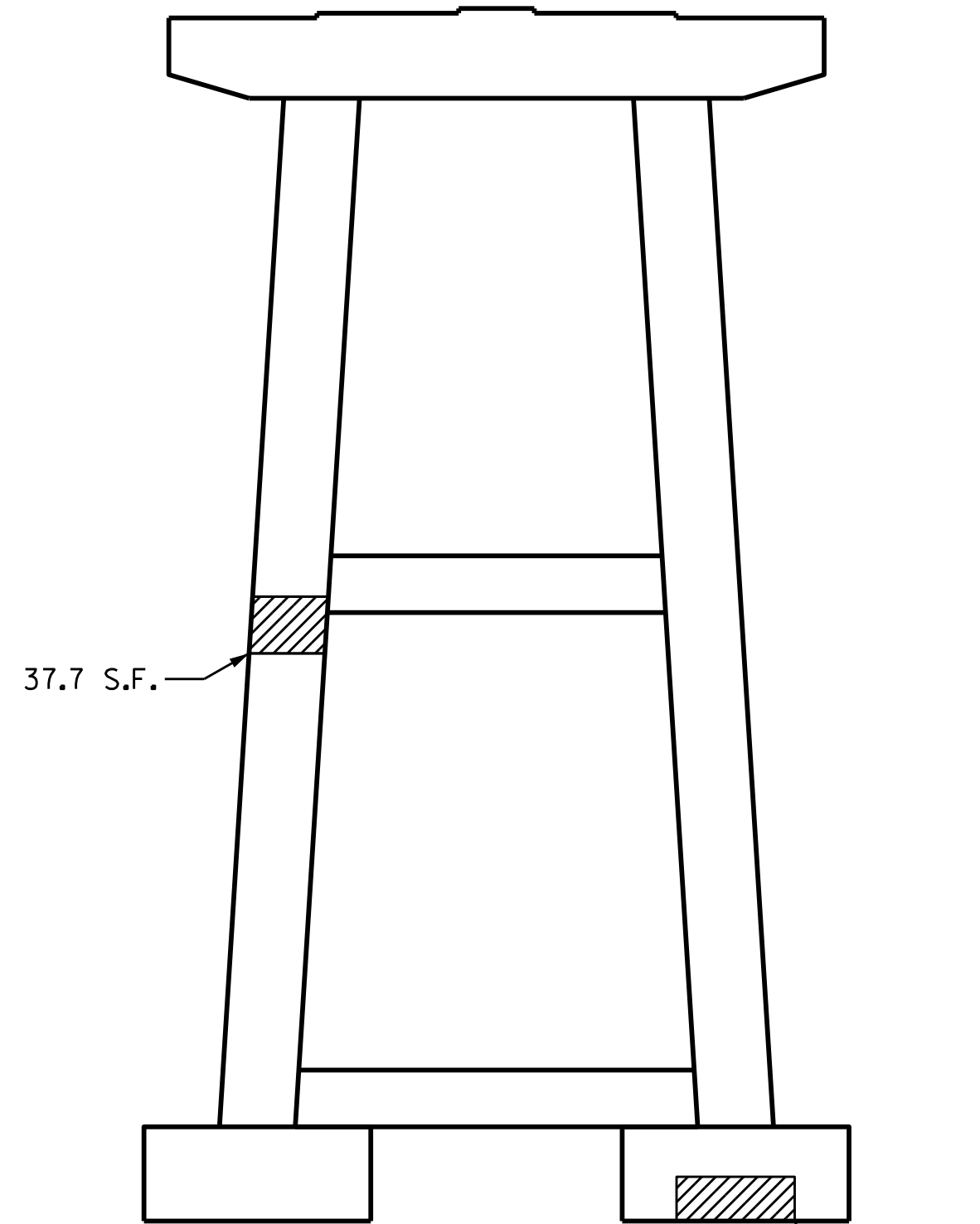
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



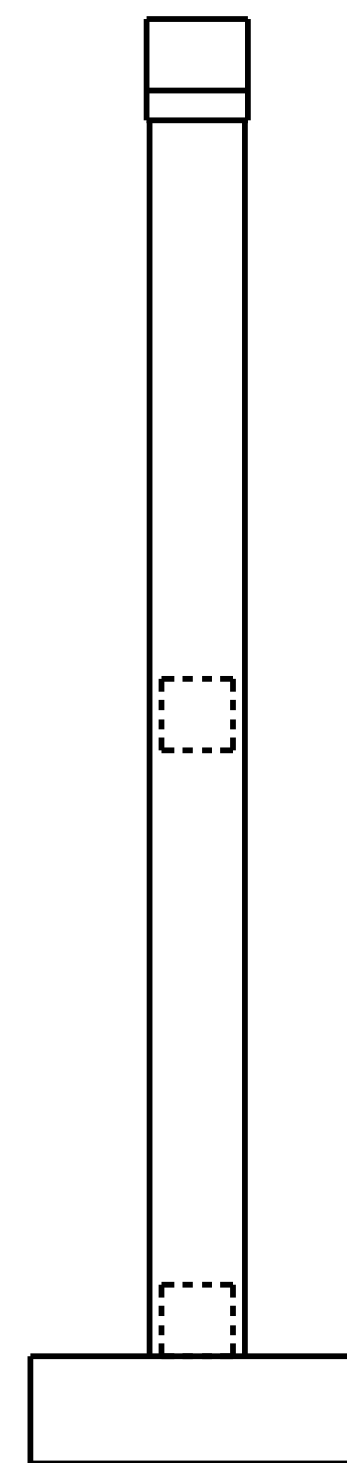
PLAN
TOP OF CAP



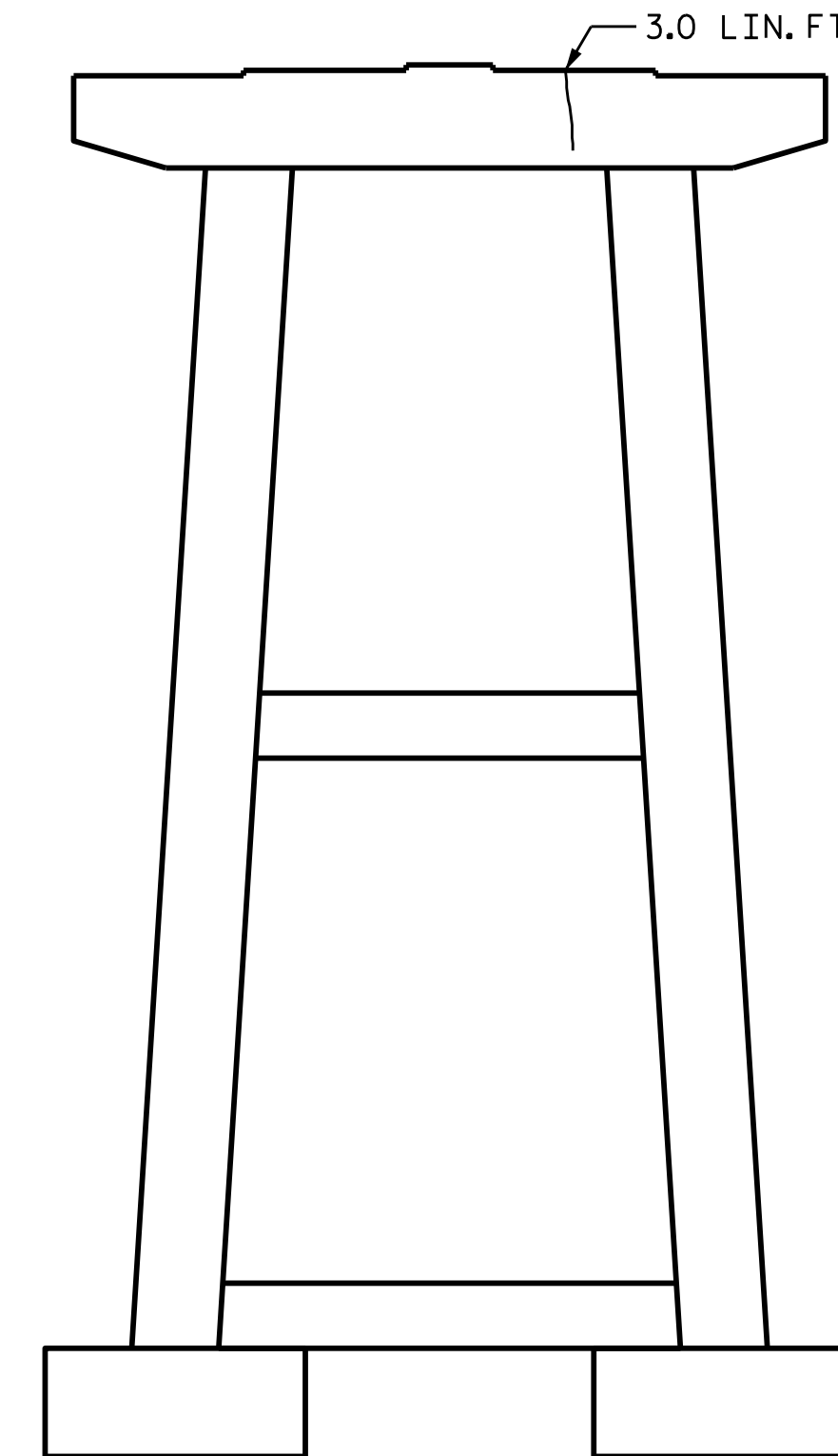
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



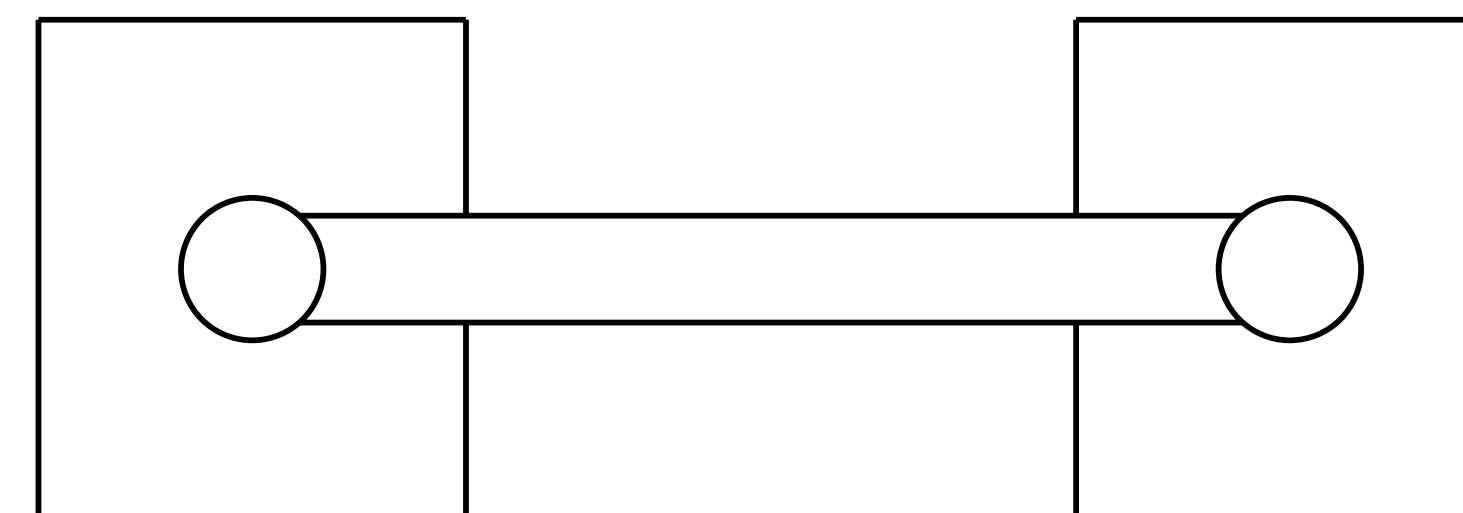
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 32 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 31



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-102 |
| 2 | | | 4 | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

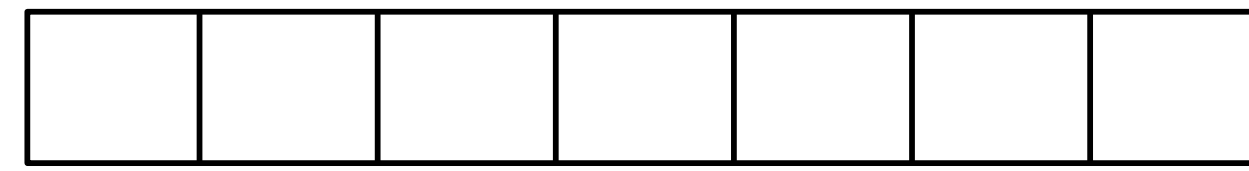
REPAIR QUANTITY TABLE

| REPAIRS BENT 32 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 6.0 | 3.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 32.0 | 16.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

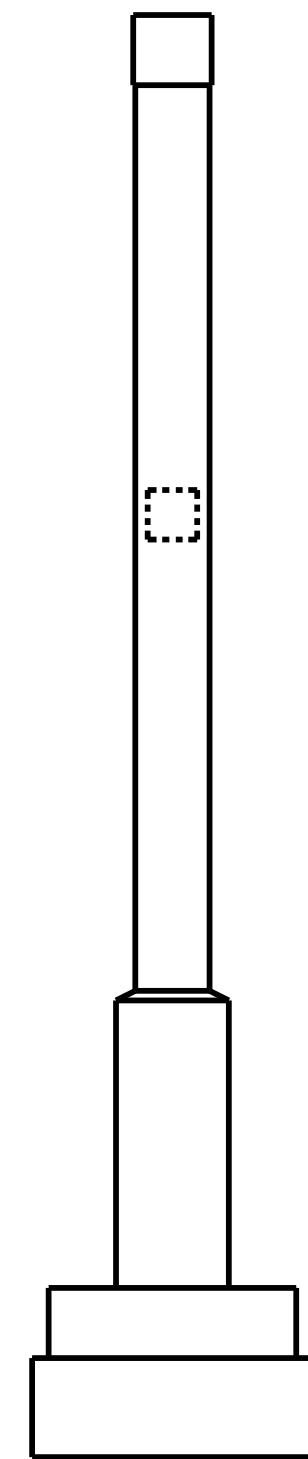
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

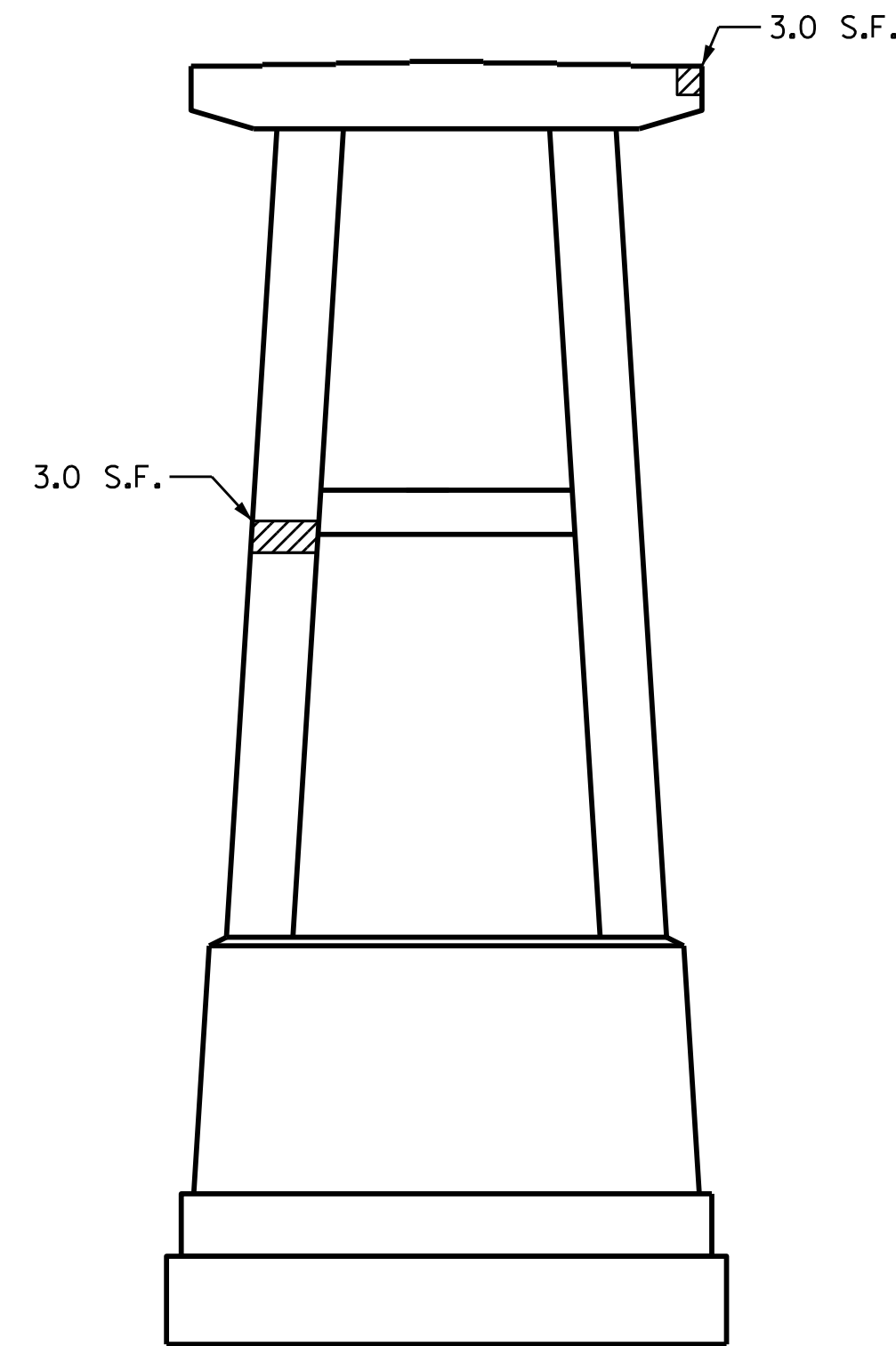
ERI - EPOXY RESIN INJECTION



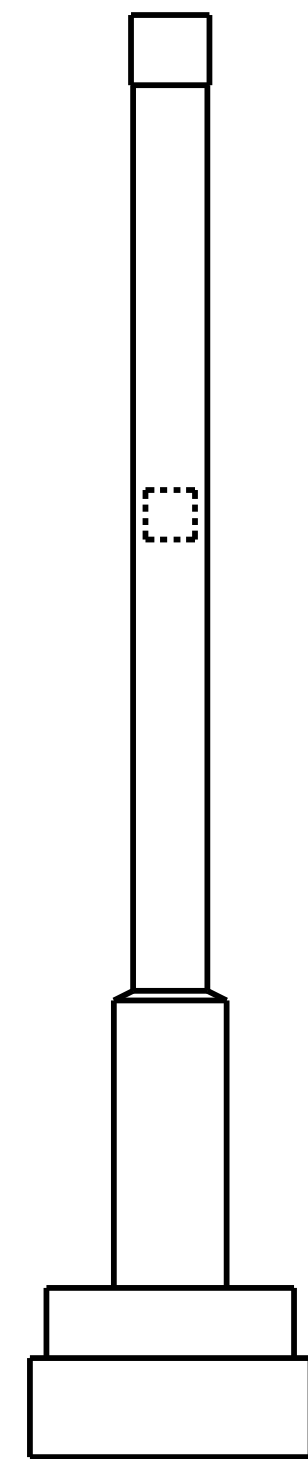
PLAN
TOP OF CAP



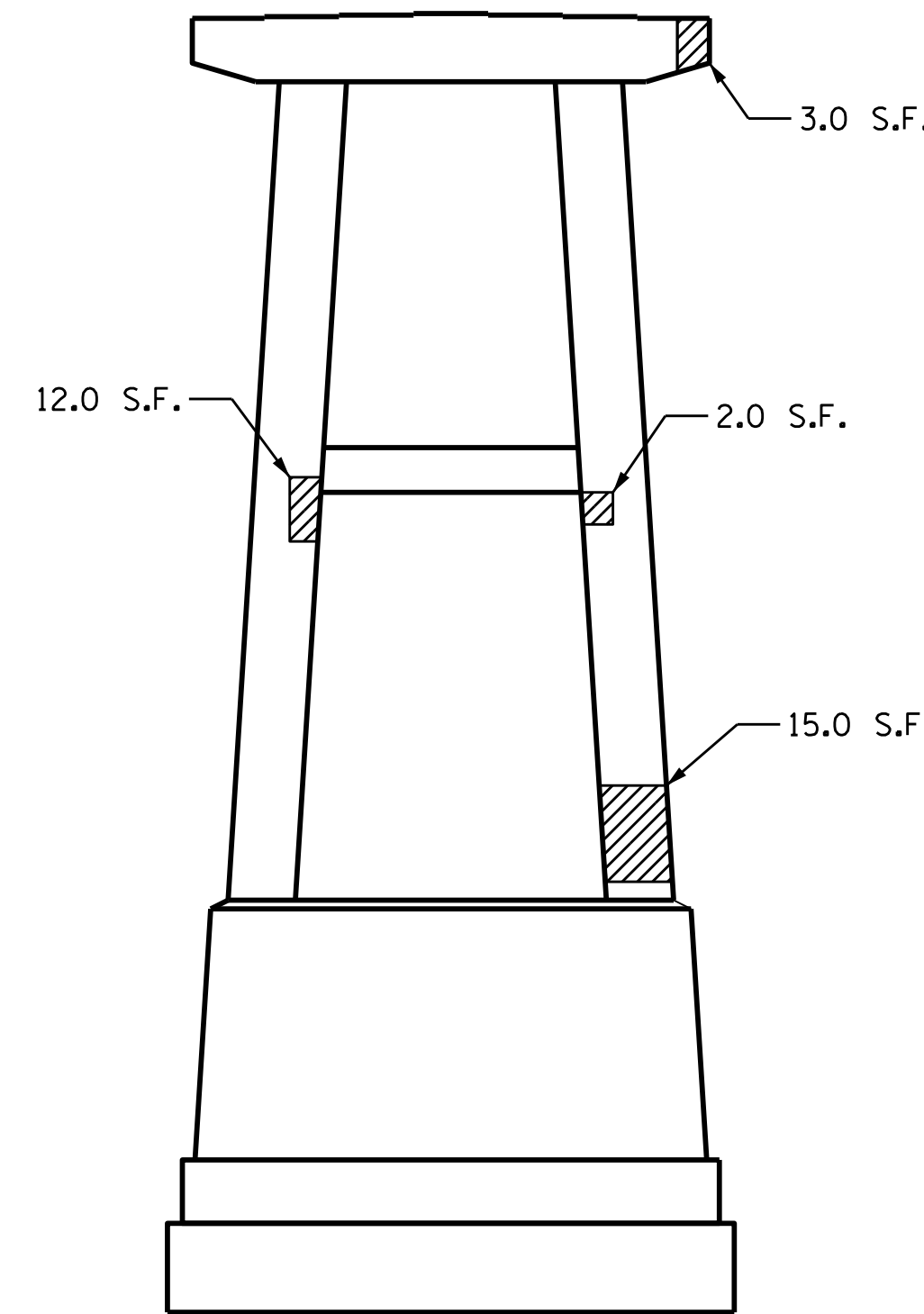
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



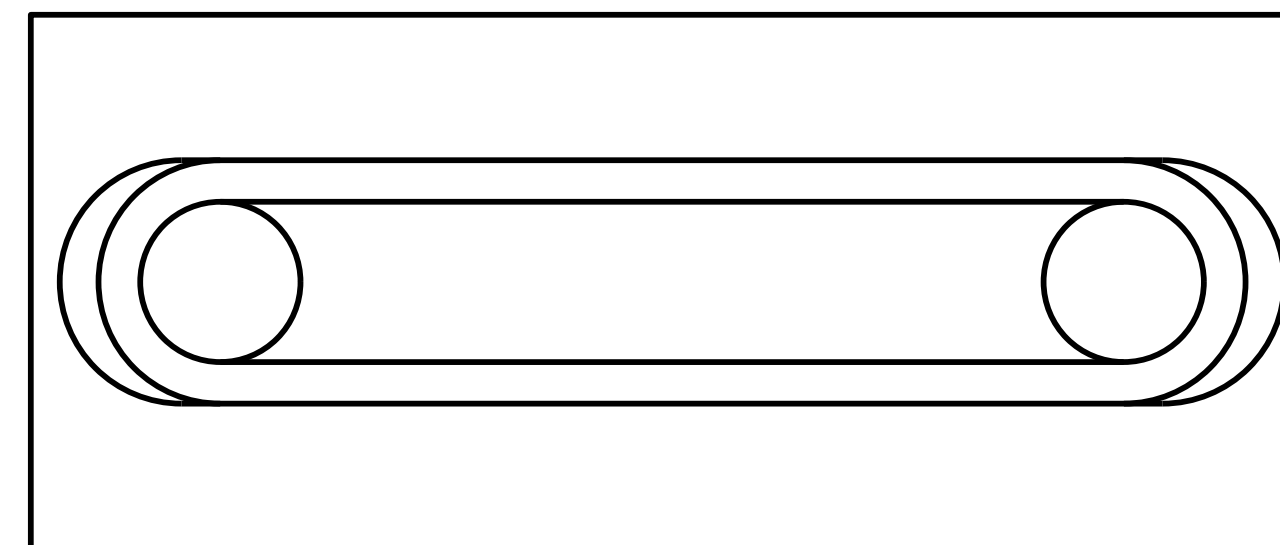
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 33 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 32



DocuSigned by:
Greg Dickey
884E488CE5848E...

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CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-103 | |
| 2 | | | 4 | | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 33 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 4.0 | 2.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 3.0 | 1.5 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

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

- EPOXY COATING
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTES:

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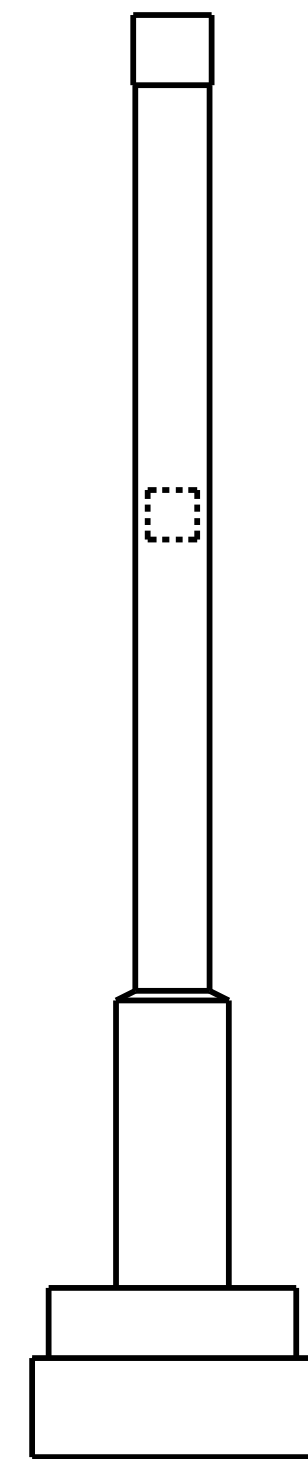
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

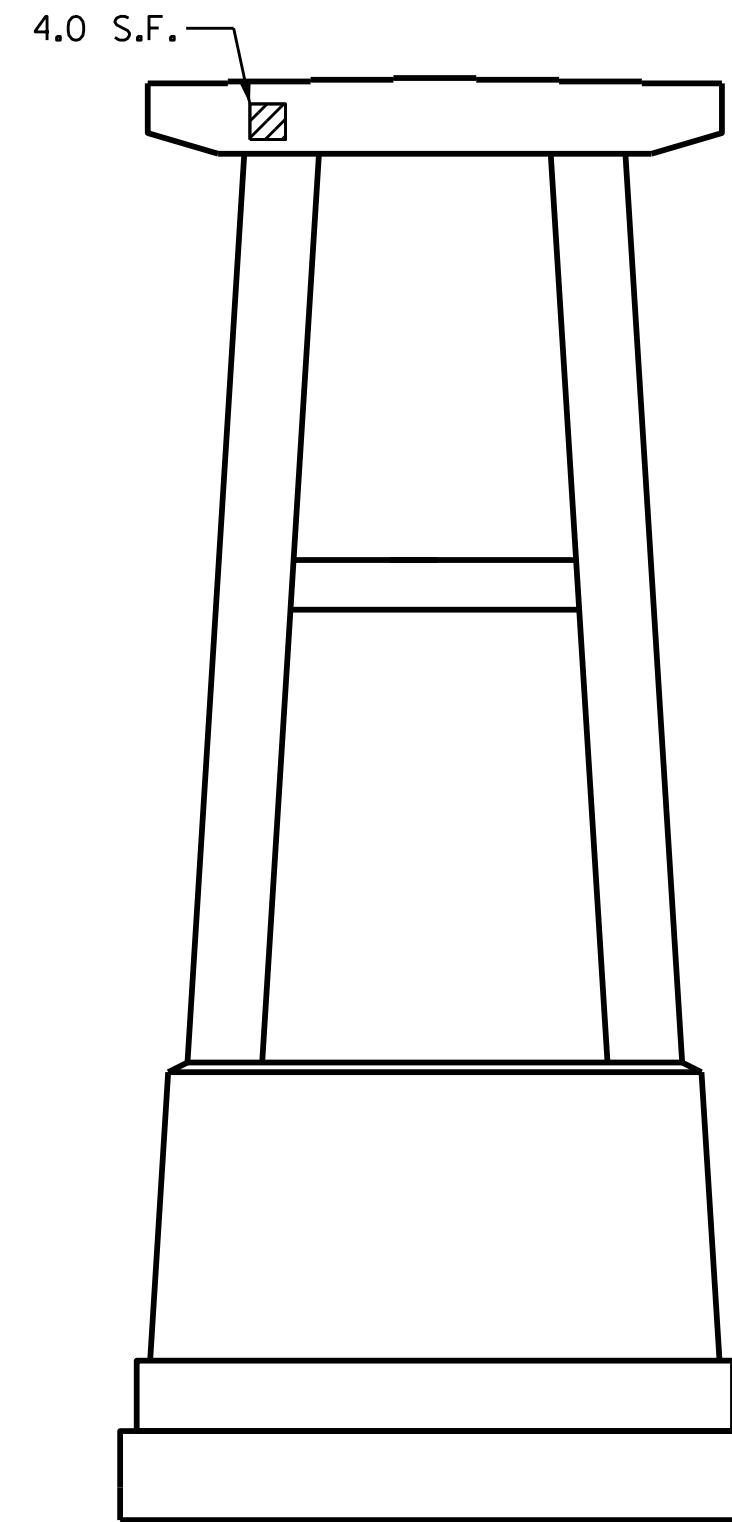
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



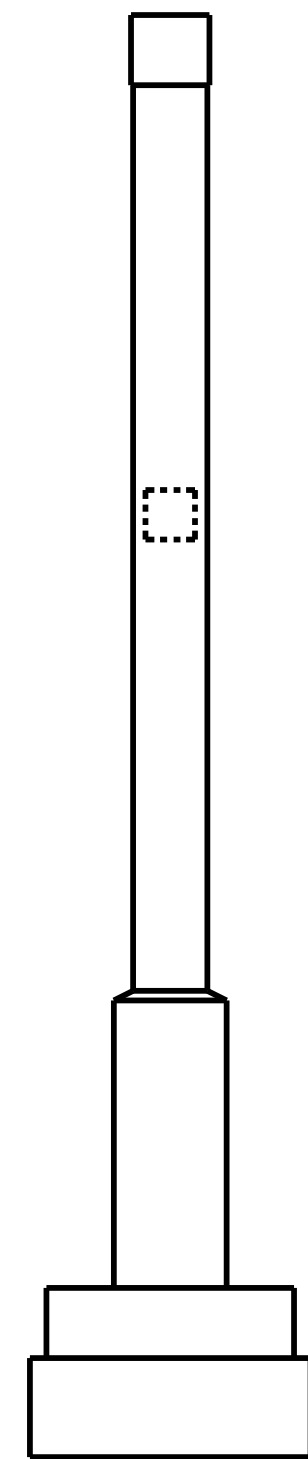
PLAN
TOP OF CAP



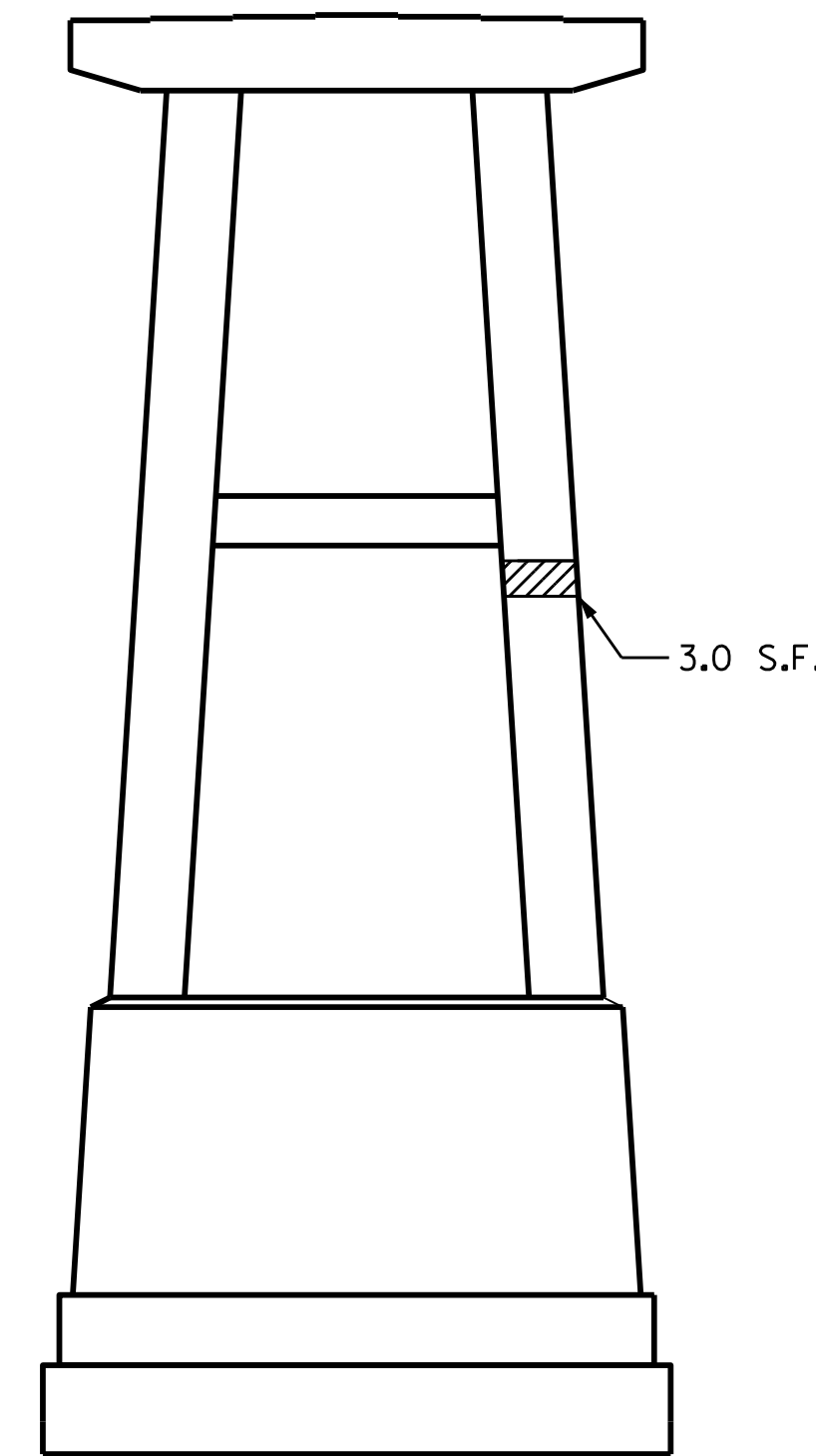
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



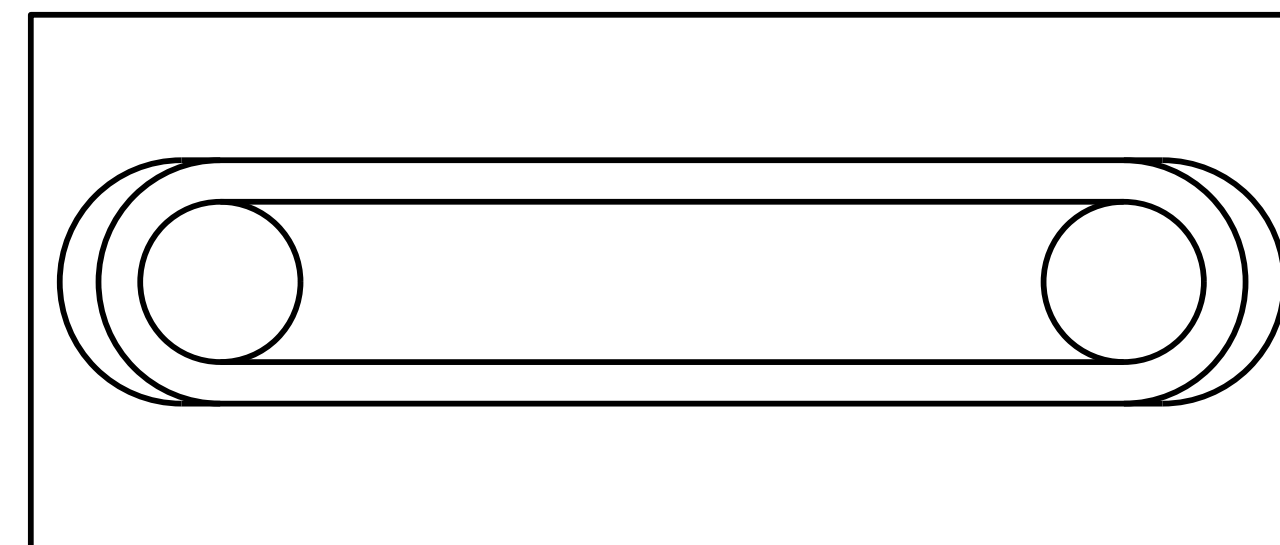
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 34 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 33



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-104 | |
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NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

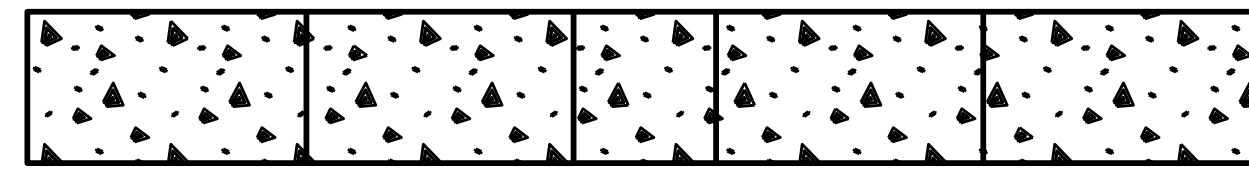
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

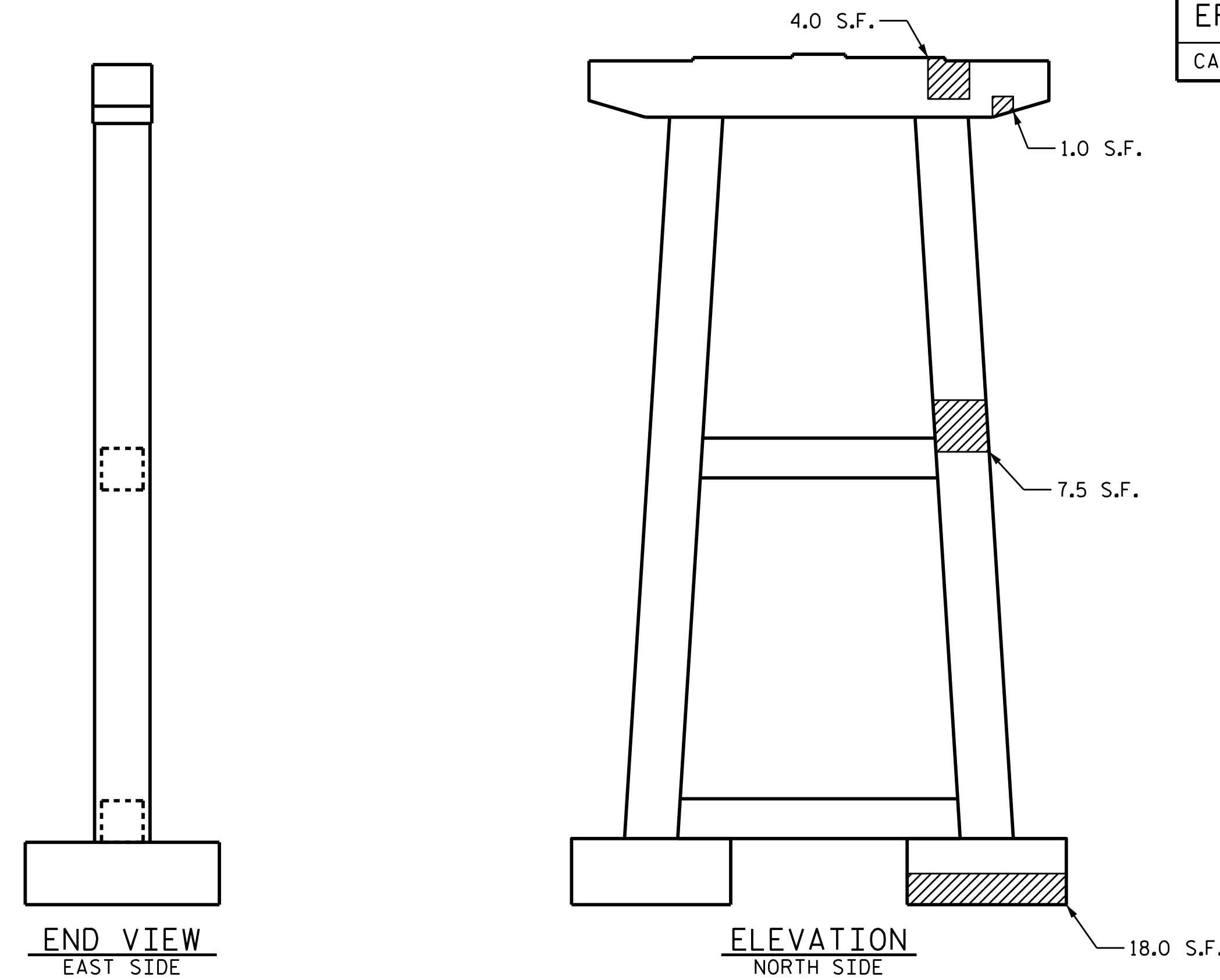
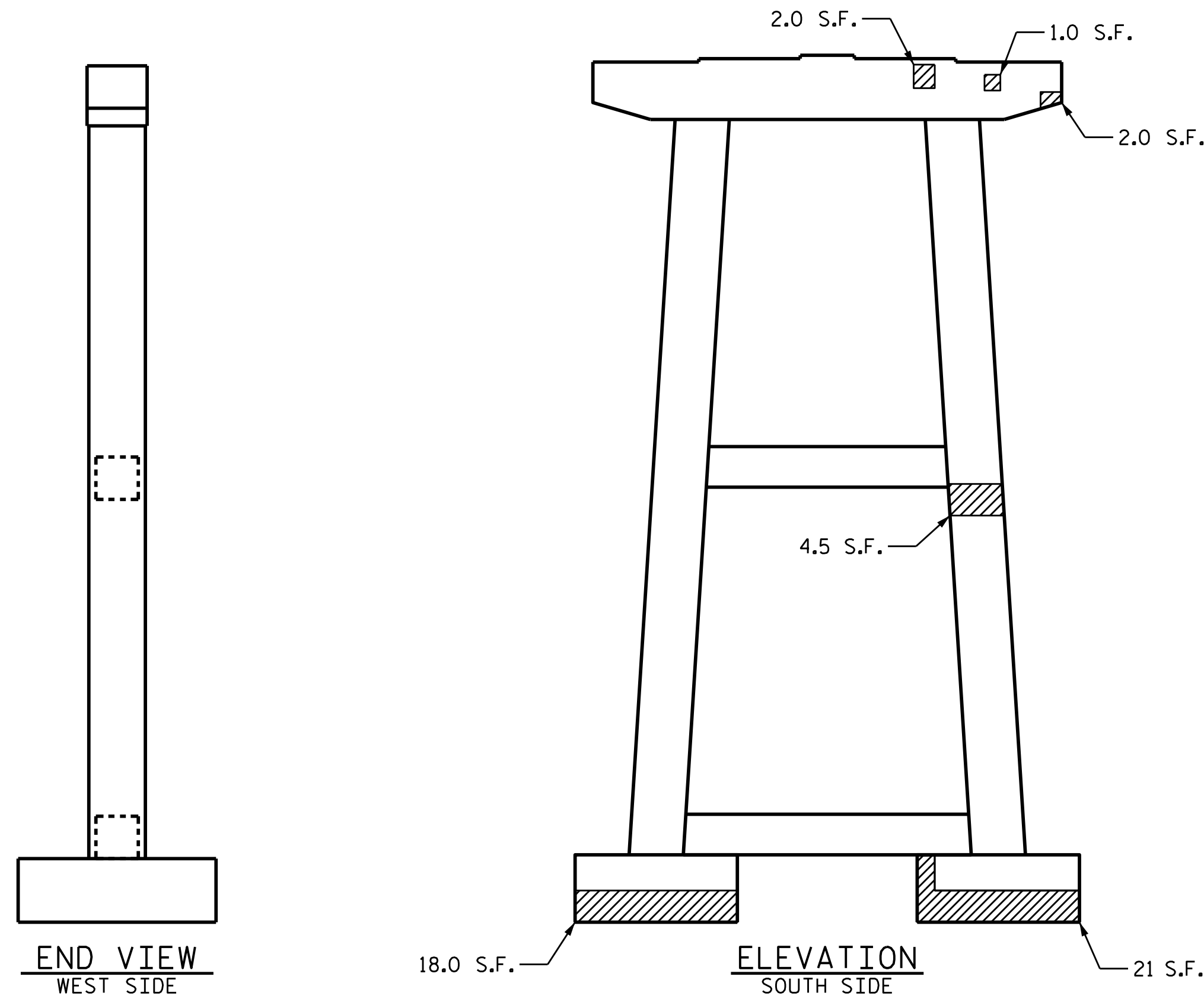
| REPAIRS BENT 34 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 10.0 | 5.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 12.0 | 6.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 57.0 | 28.5 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

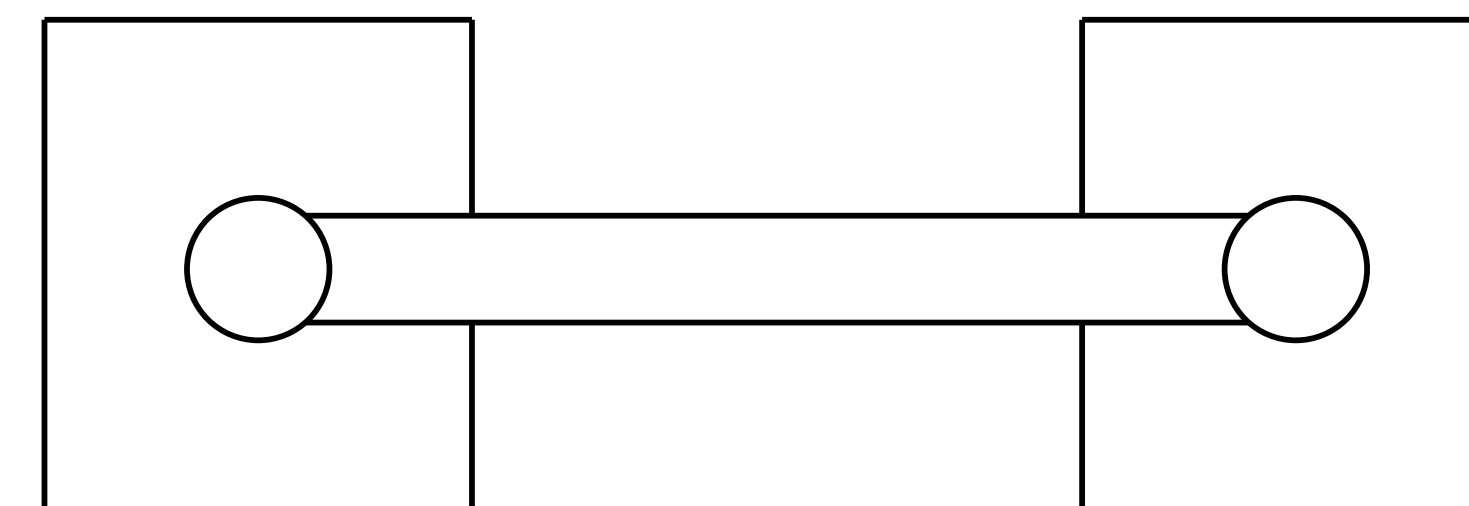
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP

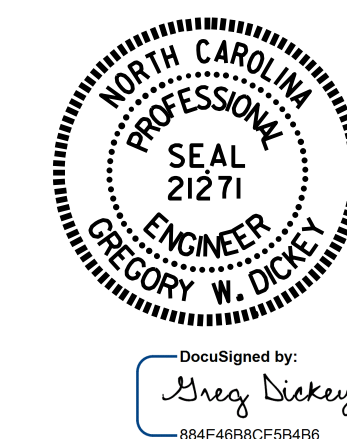


PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 35 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURES
 BENT 34**

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-105 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 35 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 17.0 | 8.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 12.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

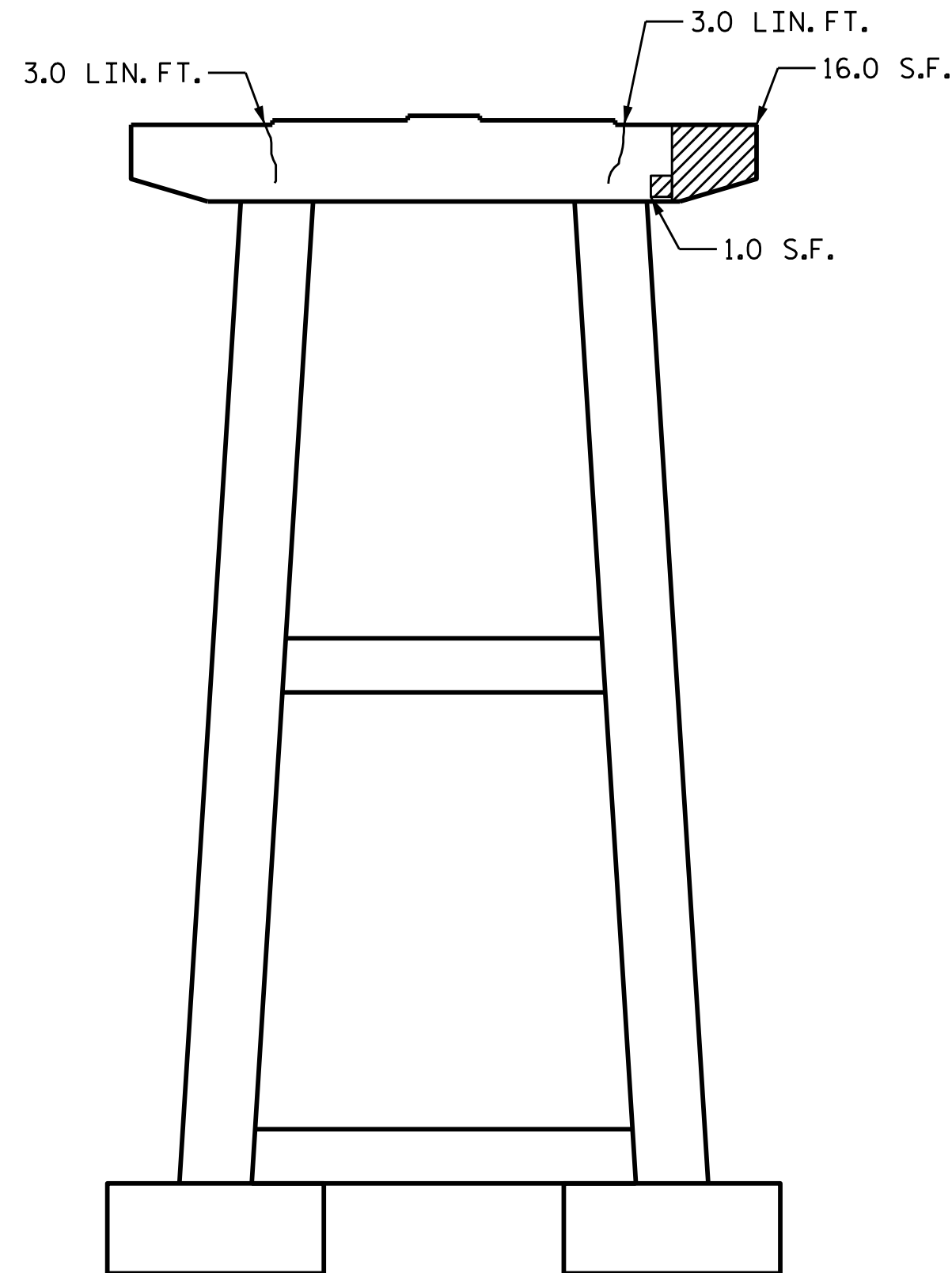
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

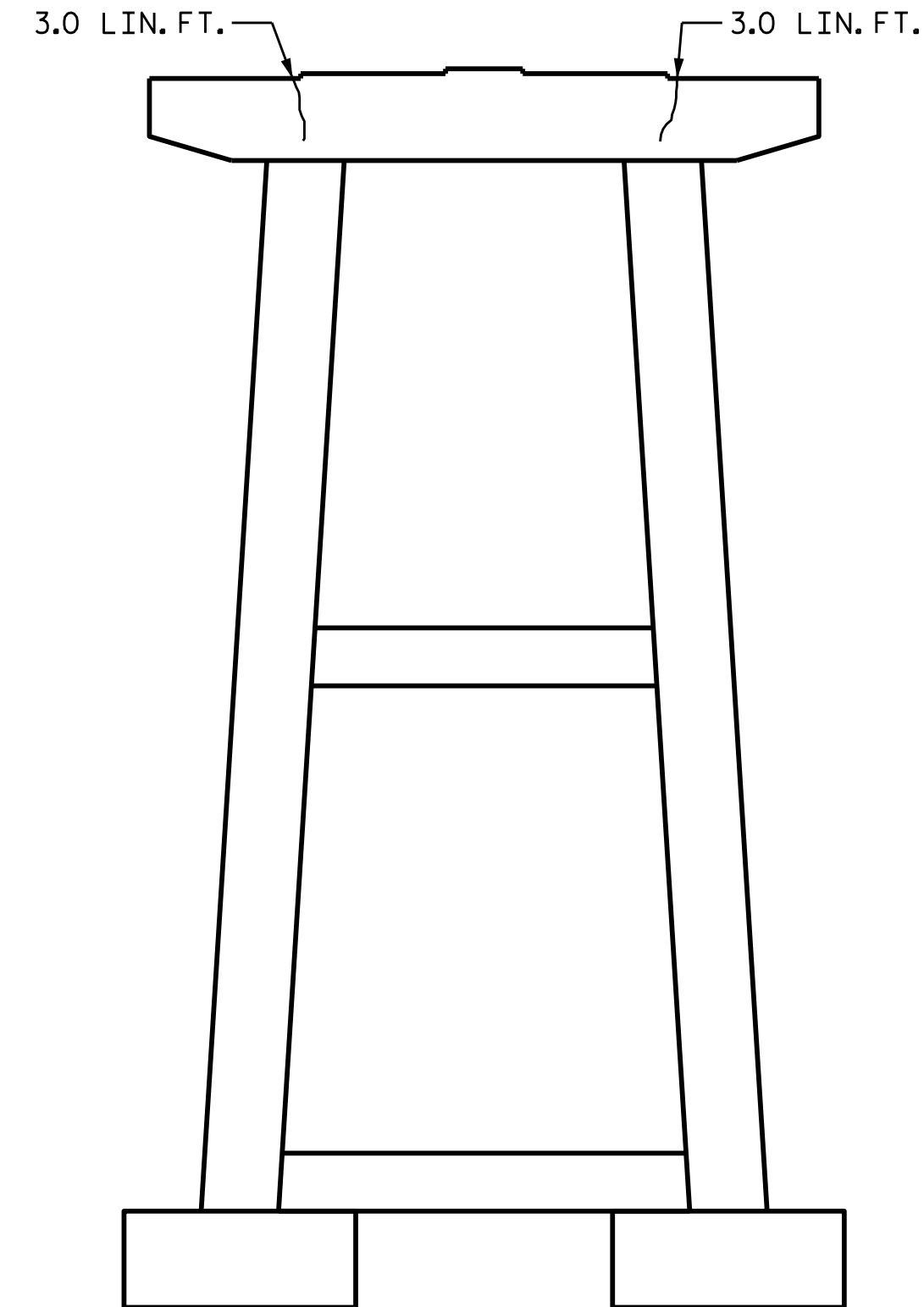
ERI - EPOXY RESIN INJECTION



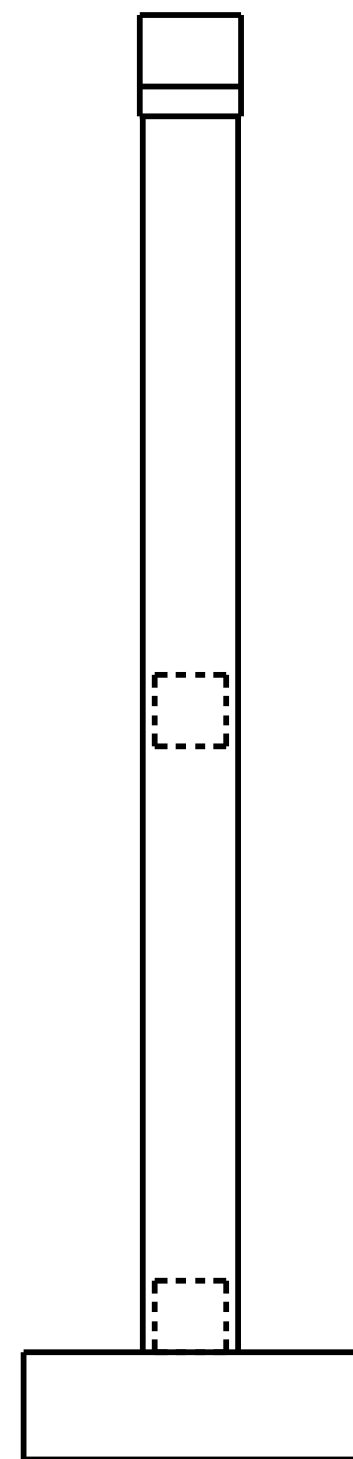
PLAN
TOP OF CAP



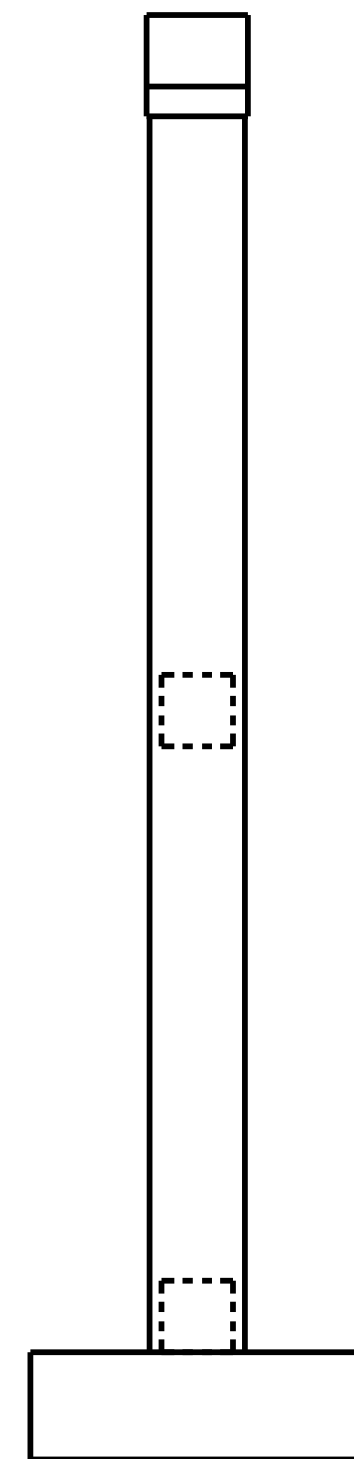
ELEVATION
SOUTH SIDE



ELEVATION
NORTH SIDE



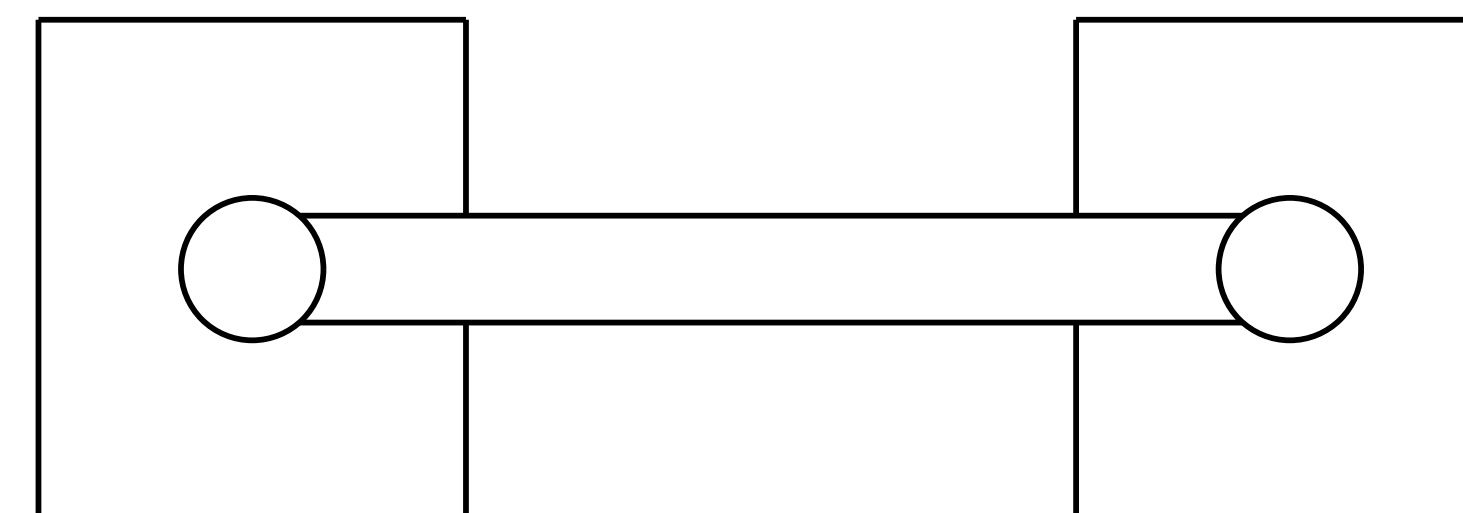
END VIEW
WEST SIDE



END VIEW
EAST SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

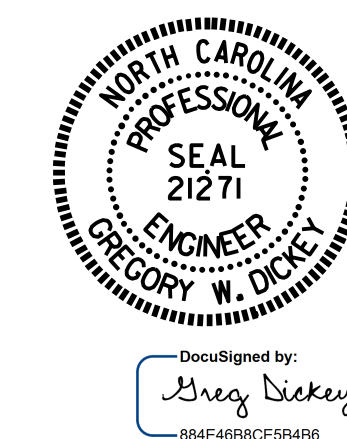
CARTERET COUNTY

BRIDGE NO. 6

SHEET 36 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 35



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
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| 1 | | | 3 | | | S2-106 | |
| 2 | | | 4 | | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 36 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 3.0 | 1.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 4.5 | 2.3 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 7.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

NOTES:

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

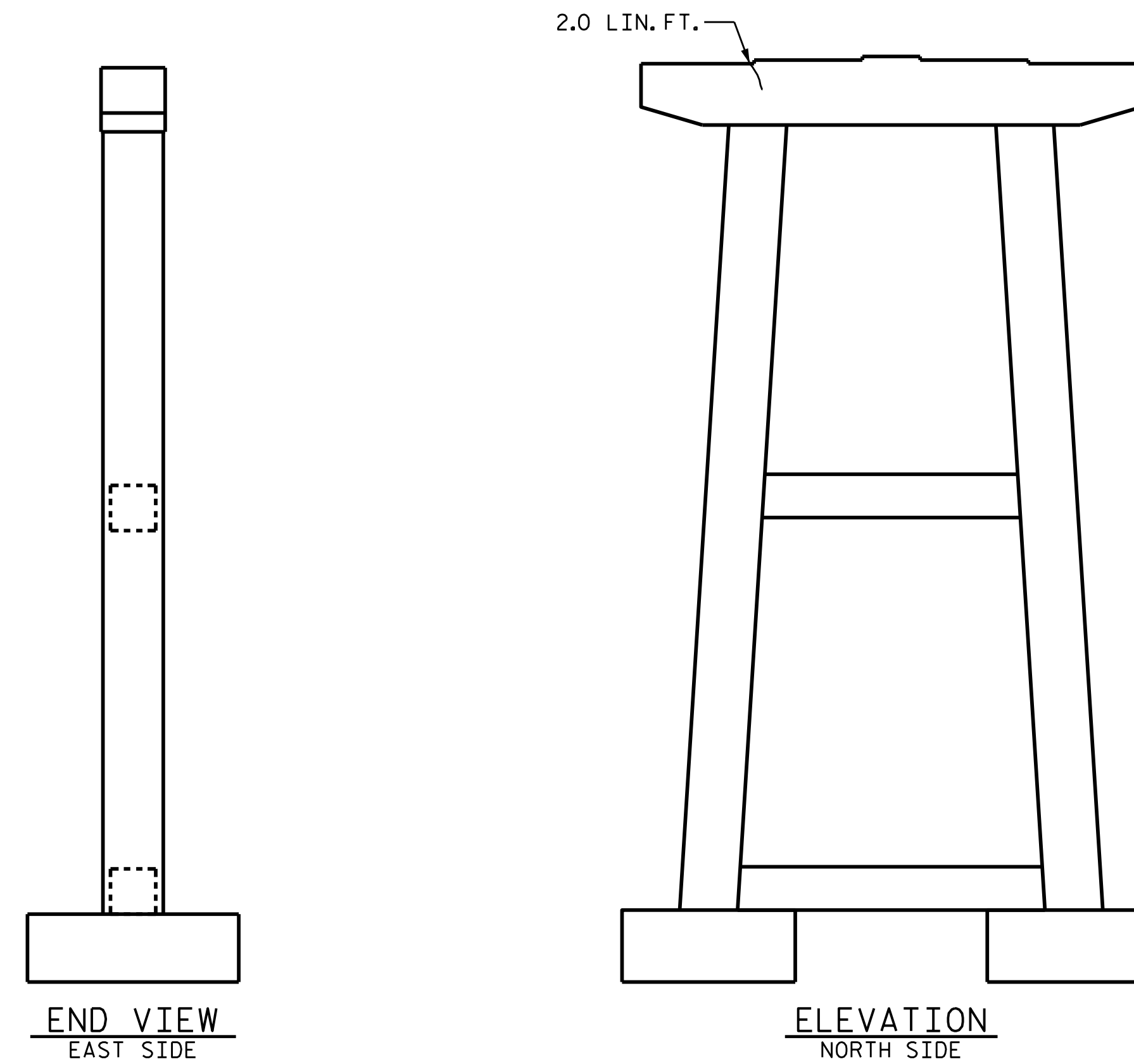
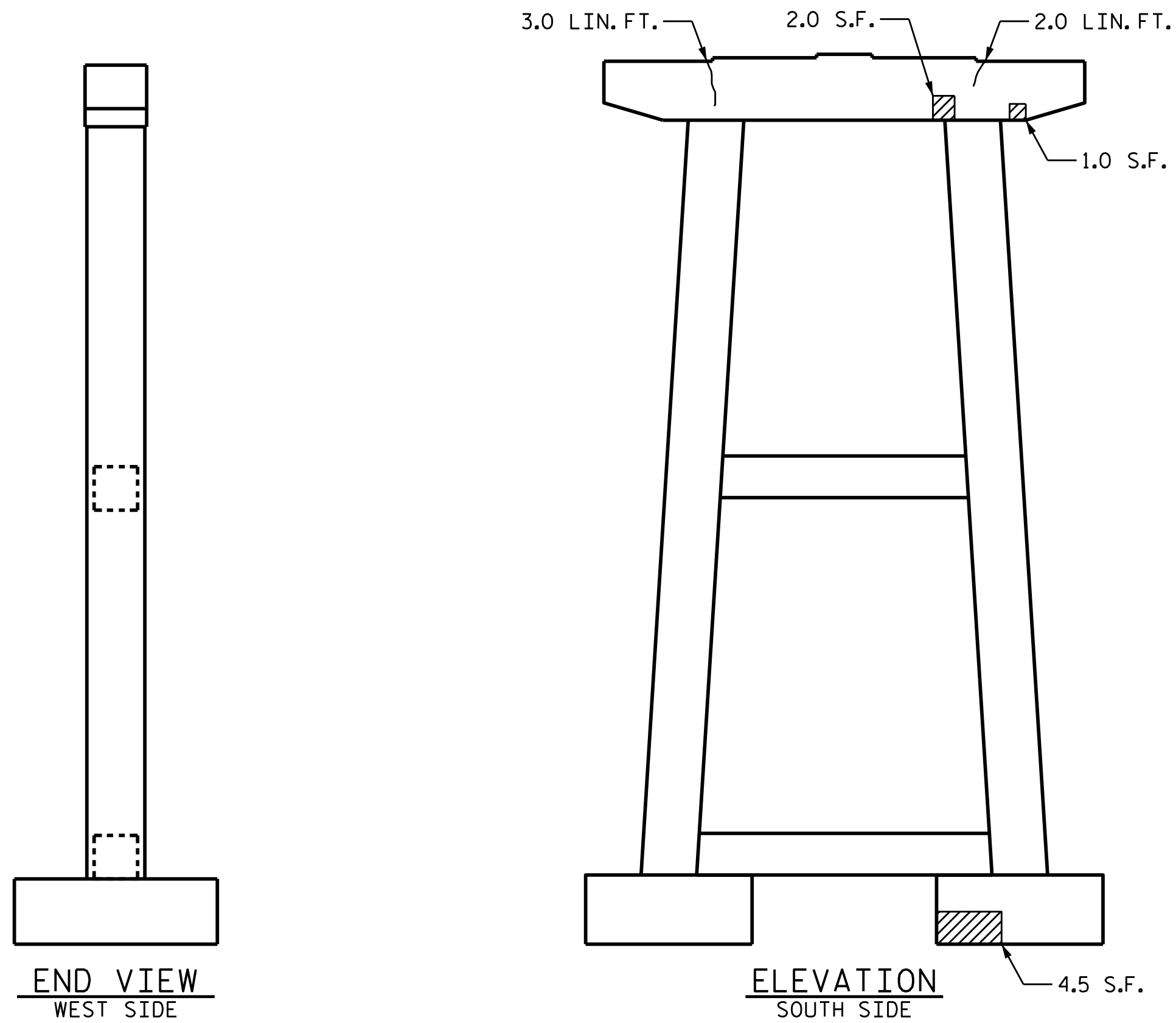
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

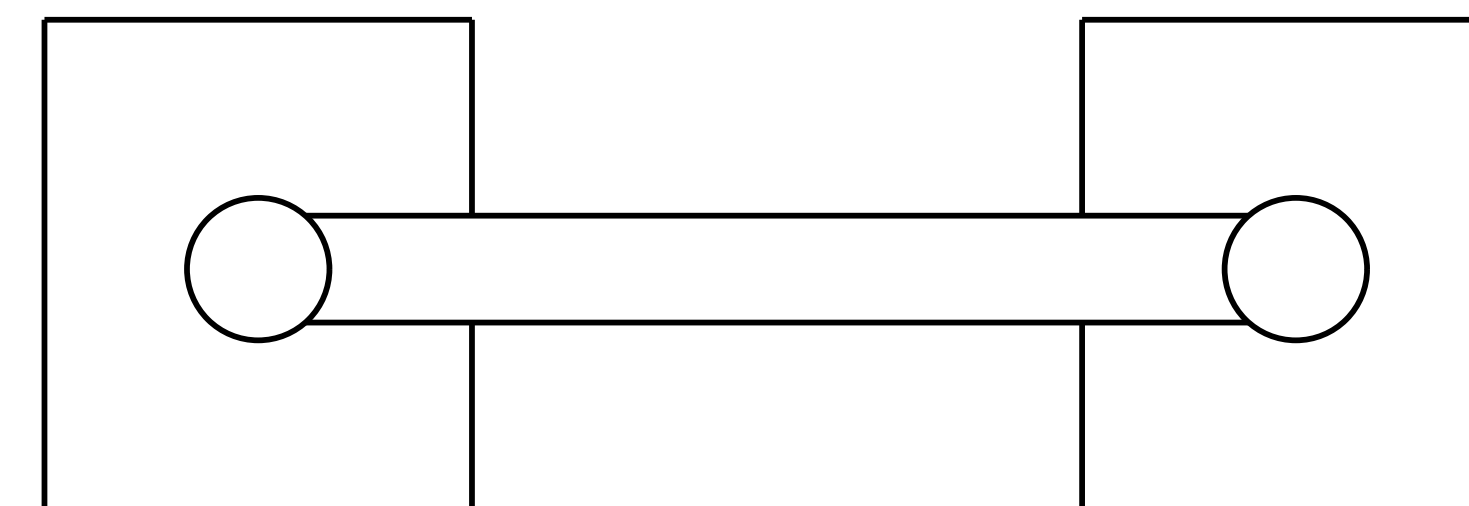
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 37 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 36



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS | |
| 1 | | | 3 | | | S2-107 | |
| 2 | | | 4 | | | | |

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

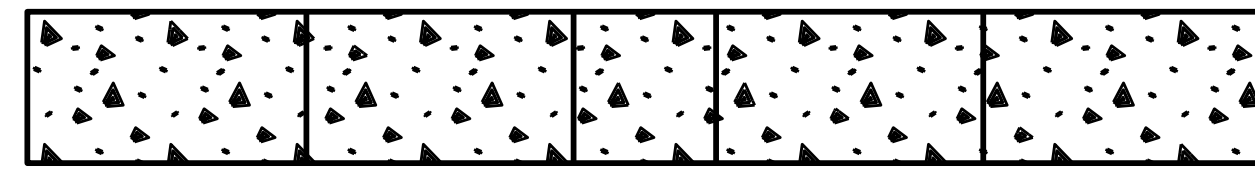
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

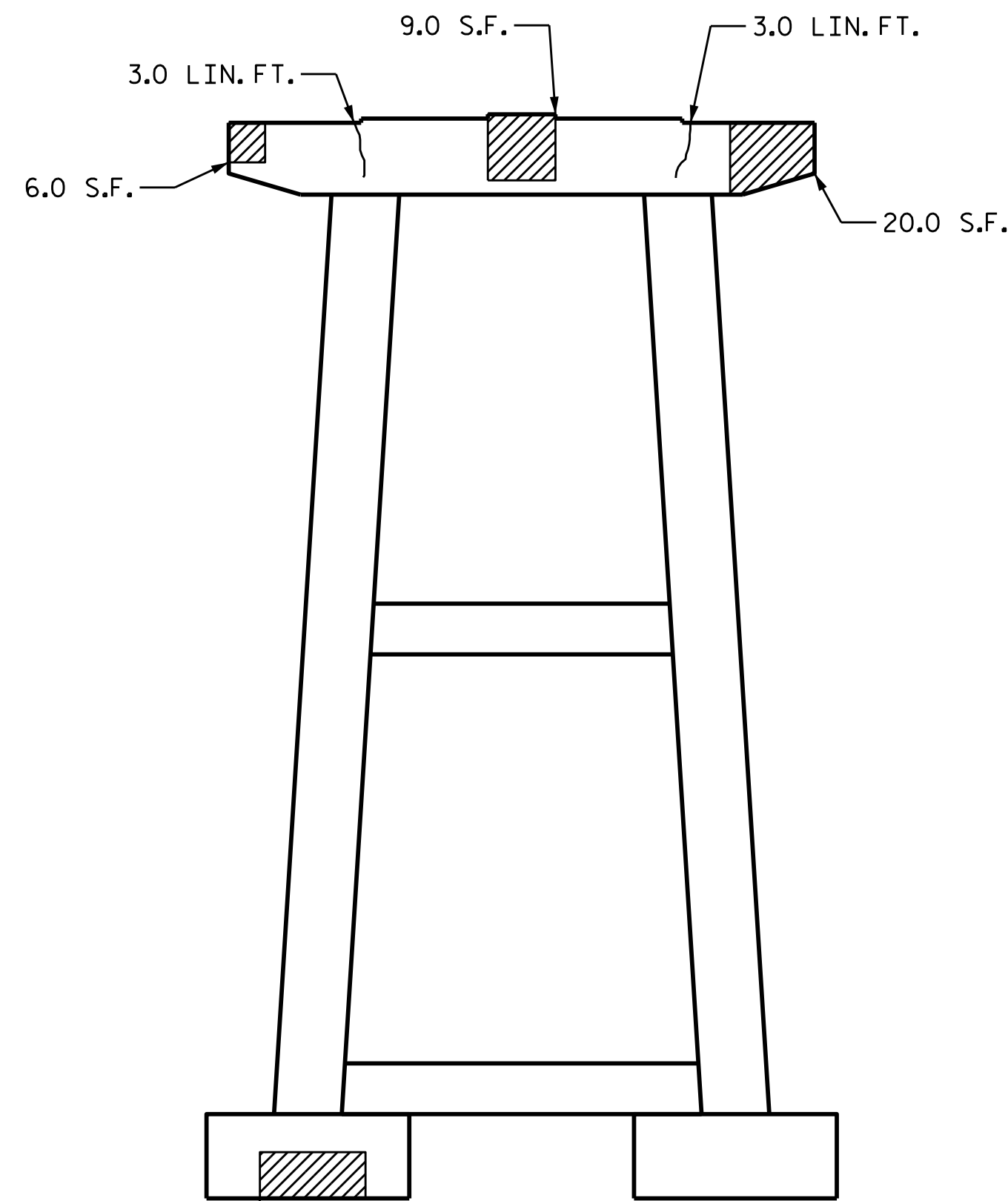
| REPAIRS BENT 37 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 41.0 | 20.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 19.0 | 9.5 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 10.0 | 5.0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 10.0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

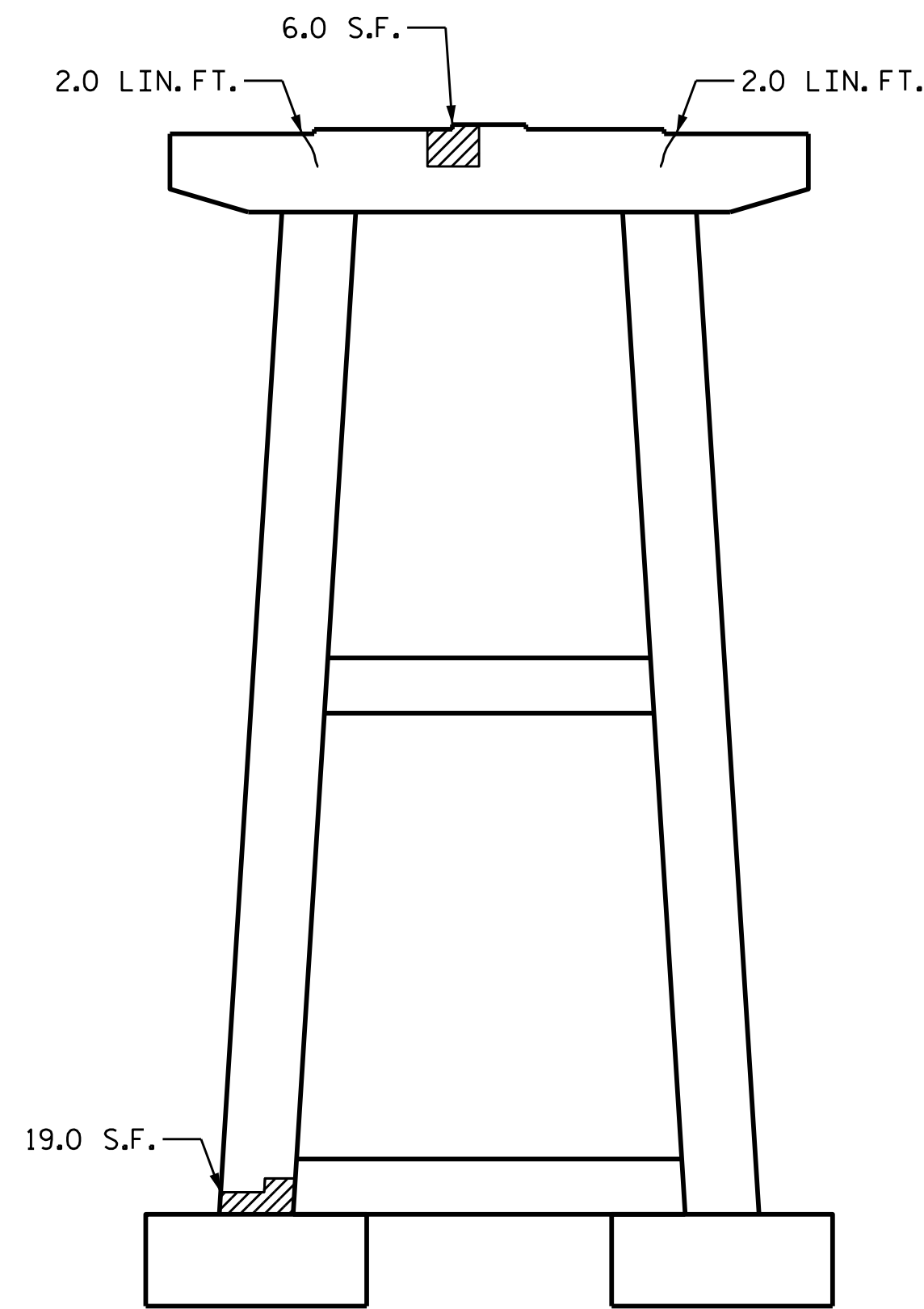
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



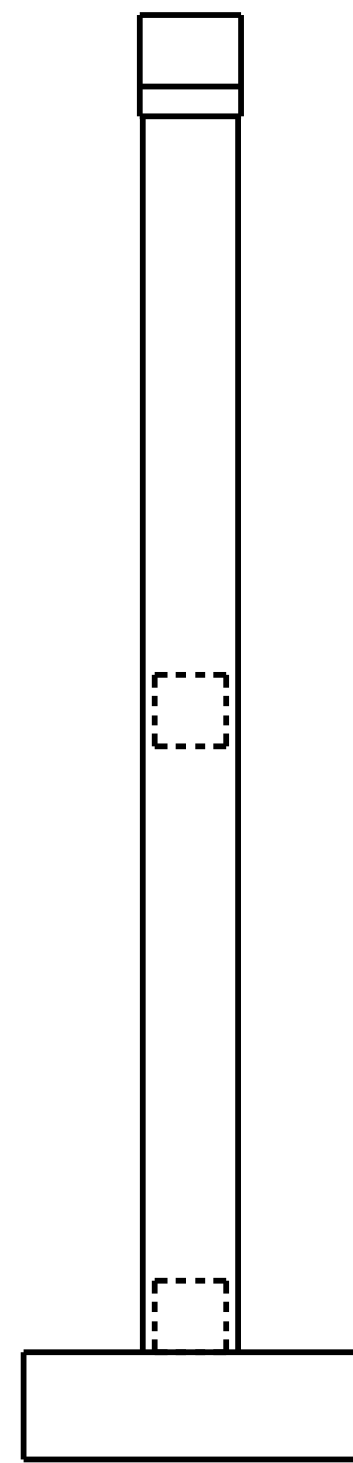
PLAN
TOP OF CAP



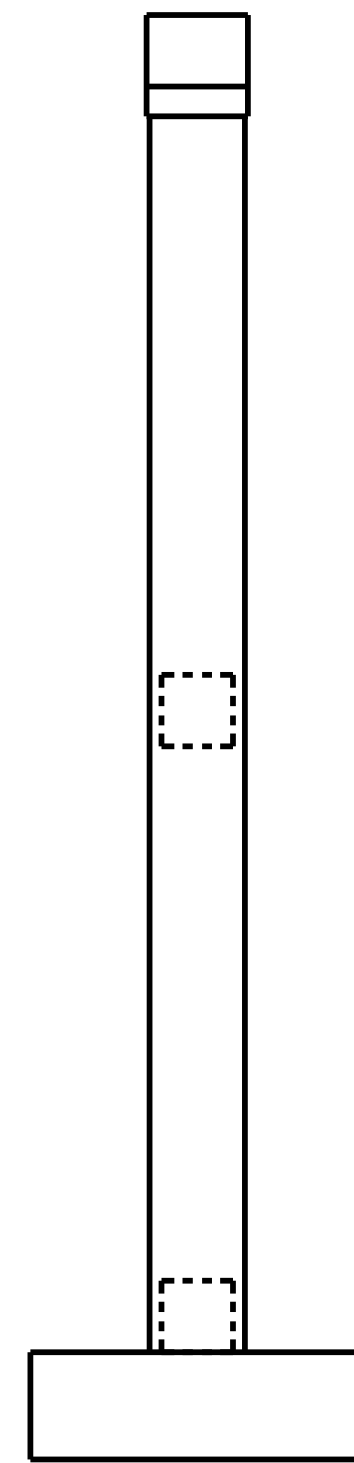
ELEVATION
SOUTH SIDE



ELEVATION
NORTH SIDE



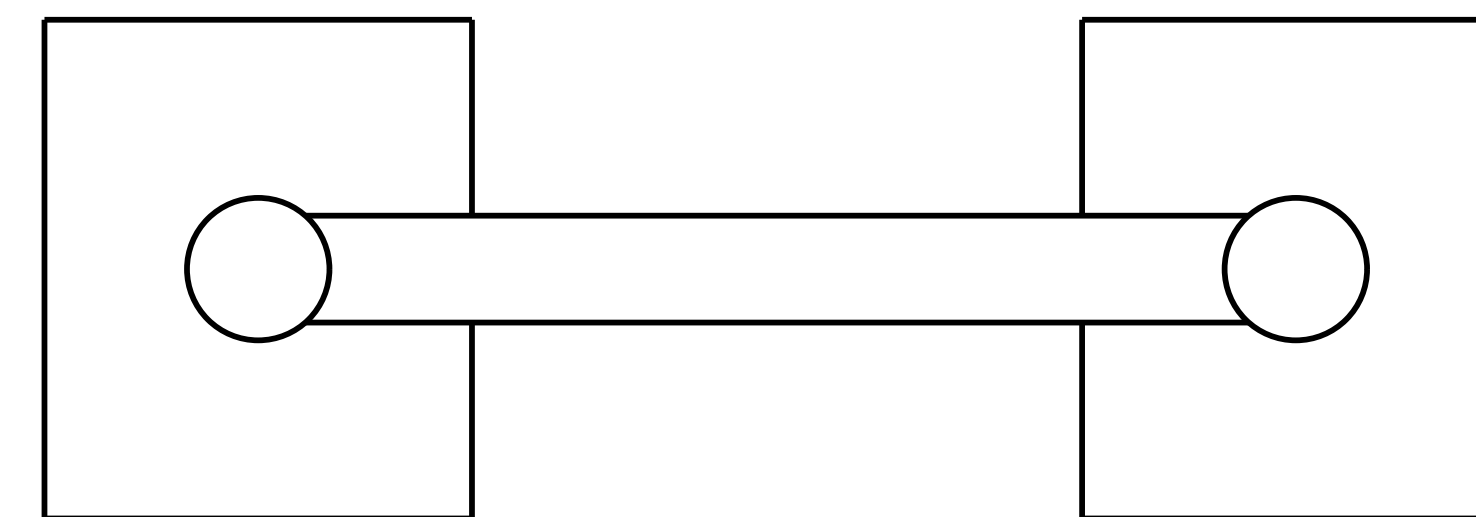
END VIEW
WEST SIDE



END VIEW
EAST SIDE



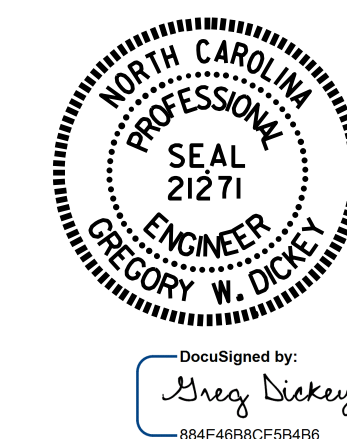
PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 38 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 37

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S2-108 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 38 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 2.0 | 1.0 | | |
| STRUT | 6.0 | 3.0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 9.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

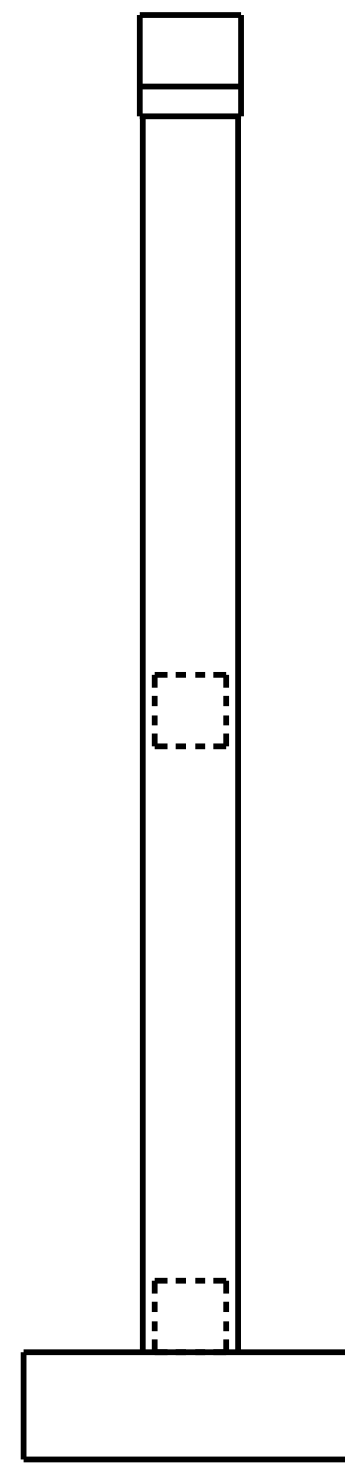
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

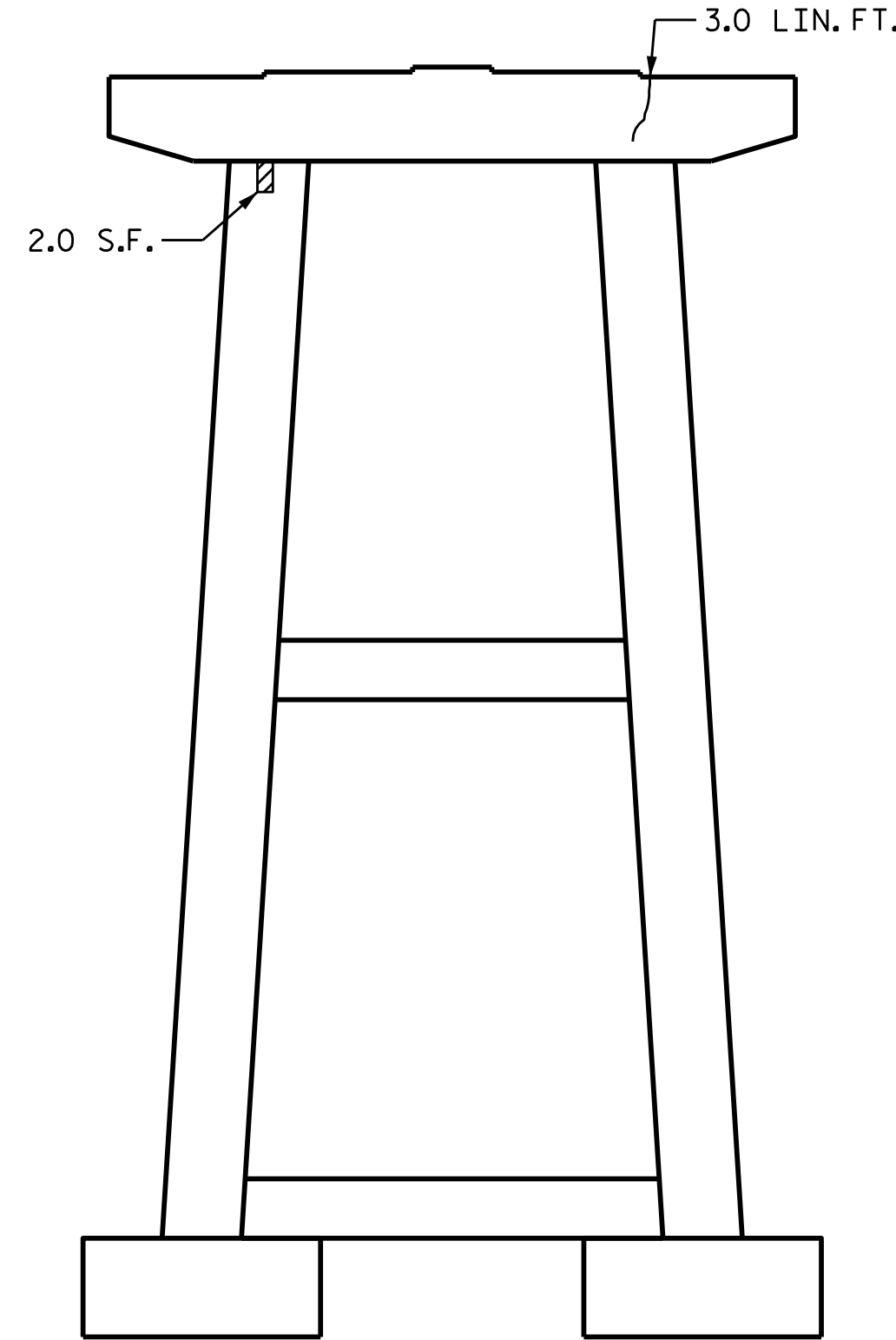
ERI - EPOXY RESIN INJECTION



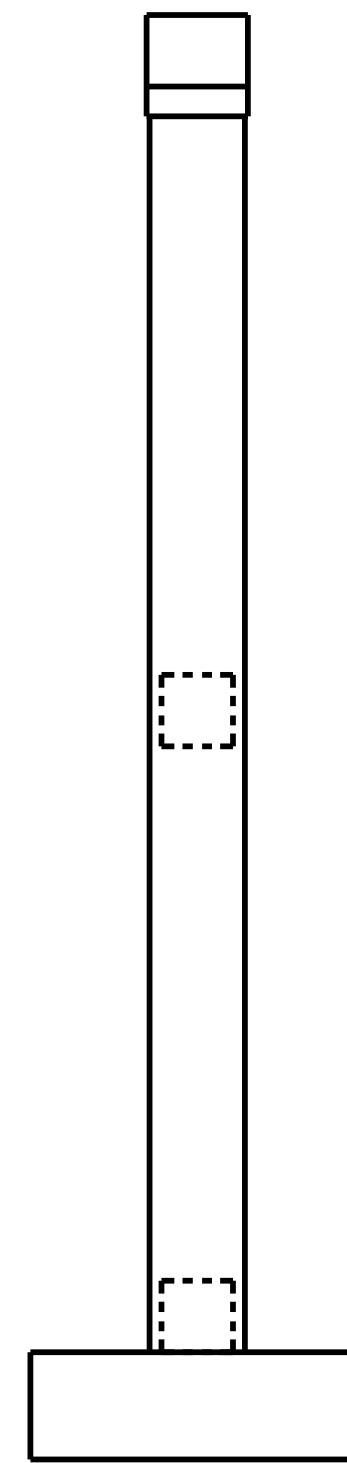
PLAN
TOP OF CAP



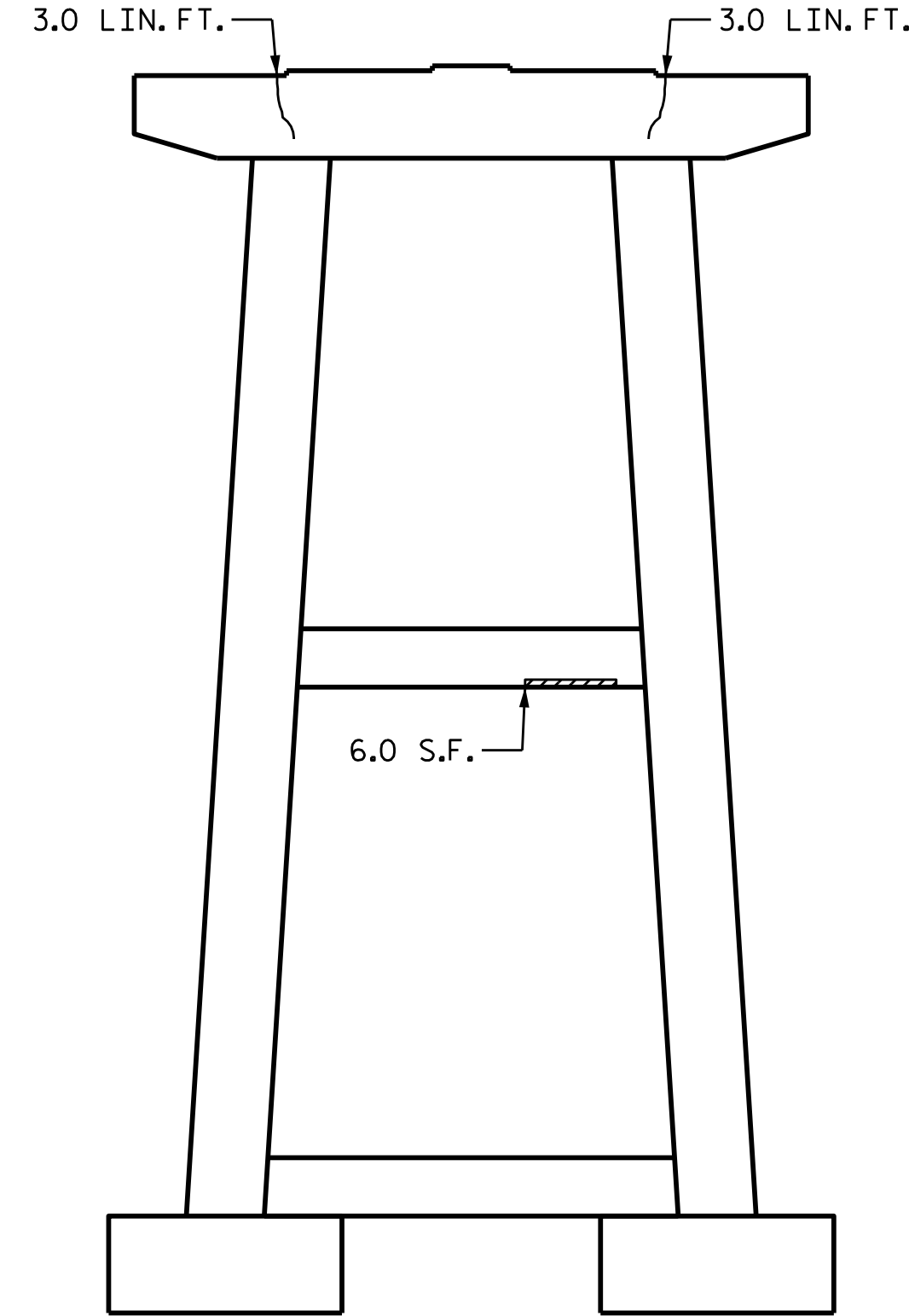
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



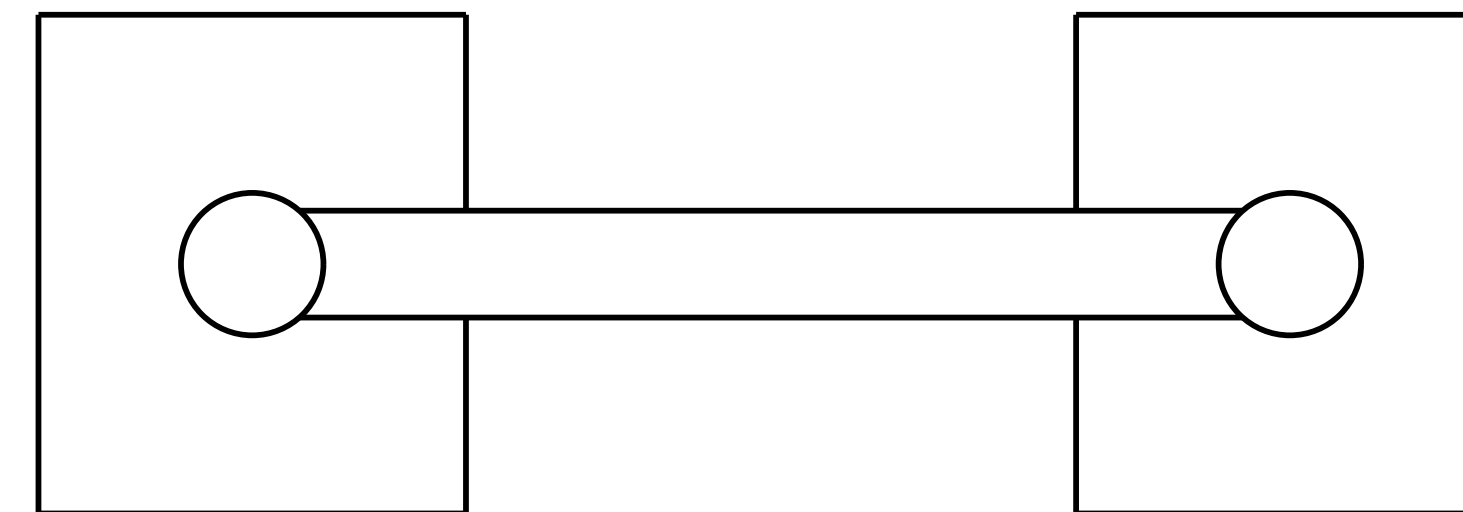
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

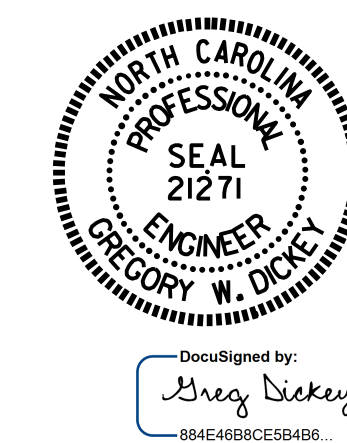
CARTERET COUNTY

BRIDGE NO. 6

SHEET 39 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 38



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
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| 1 | | | 3 | | | S2-109 | |
| 2 | | | 4 | | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 39 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 2.0 | 1.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 20.0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

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

- SHOTCRETE REPAIR
- EPOXY RESIN INJECTION

NOTES:

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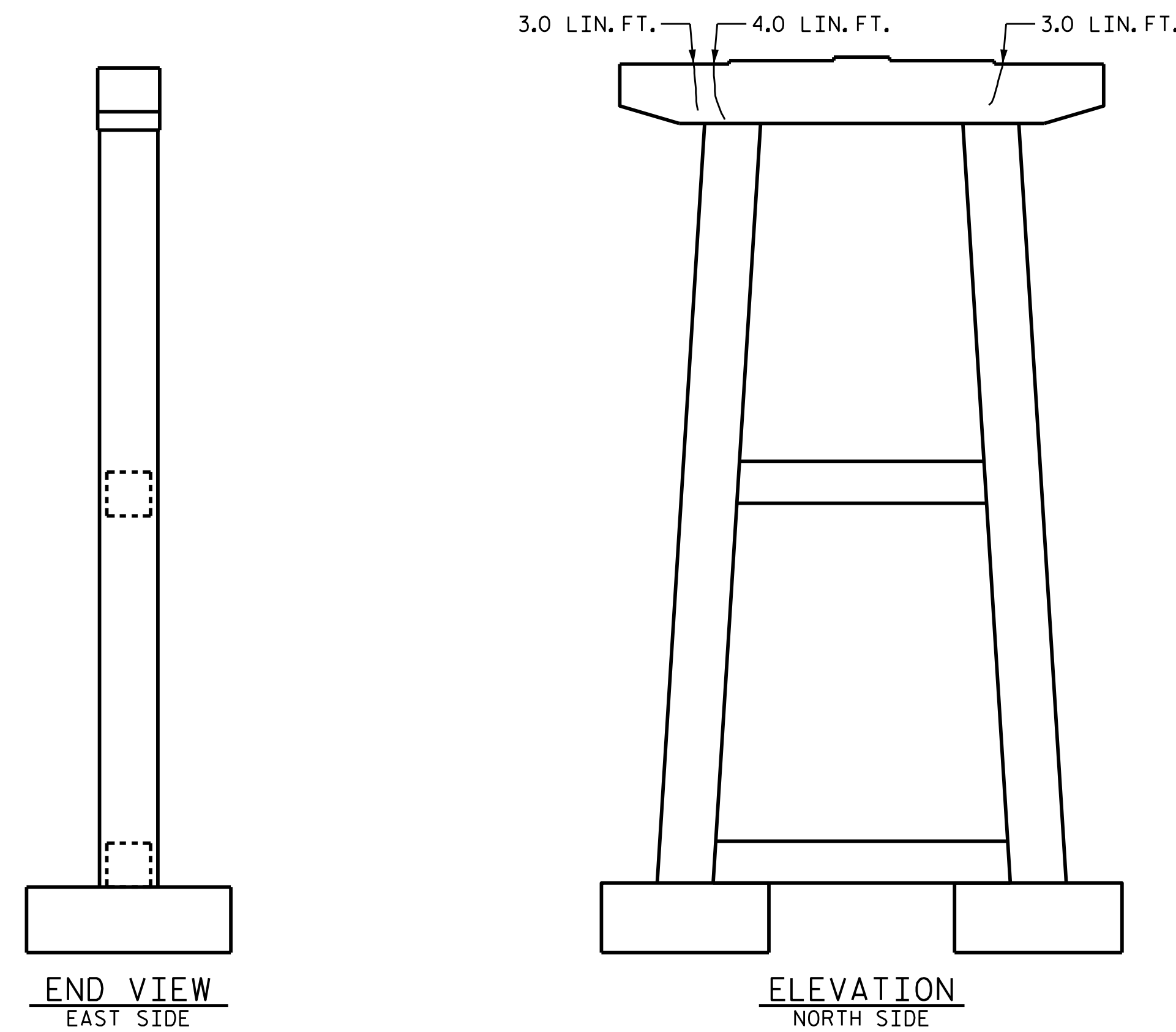
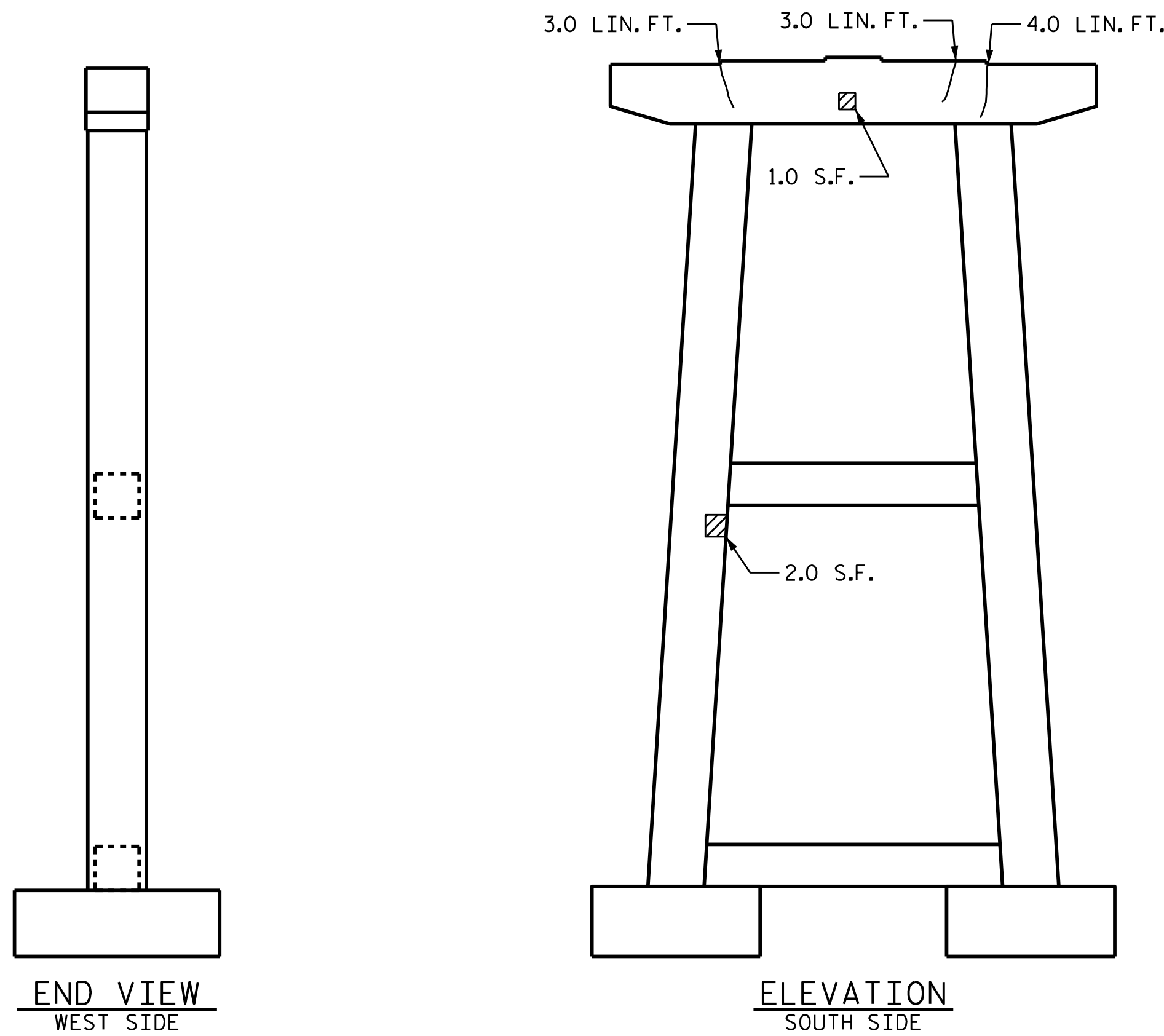
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

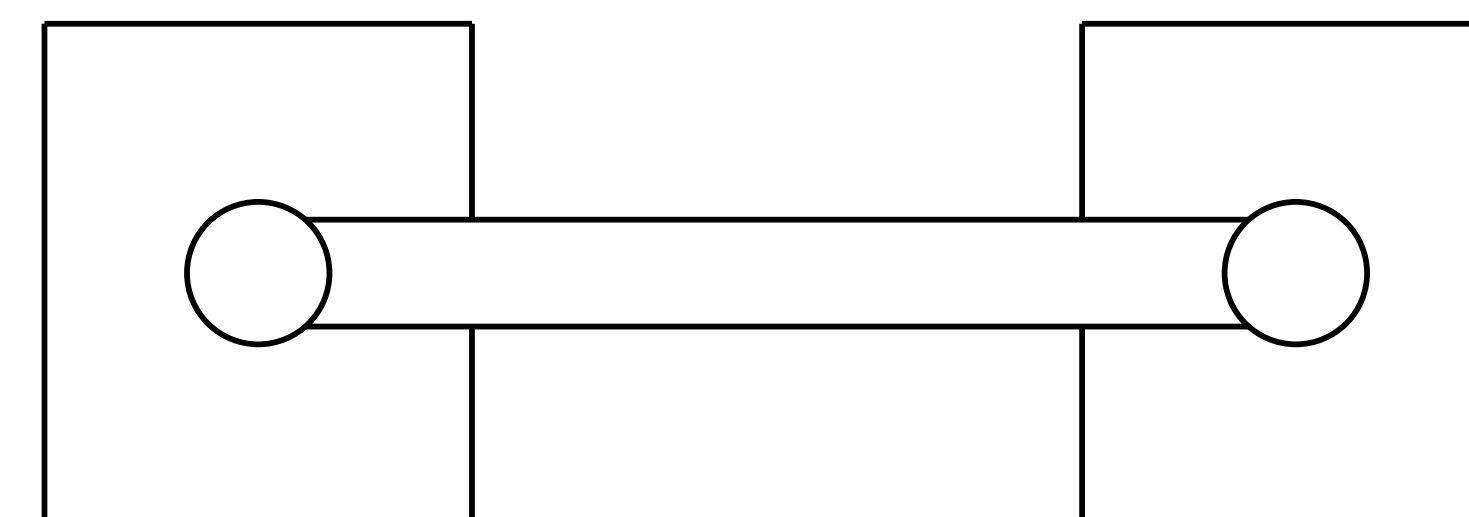
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP

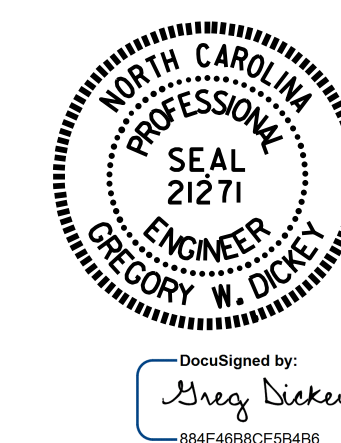


PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 40 OF 60



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURES
 BENT 39

DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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| 2 | | | 4 | | | |

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

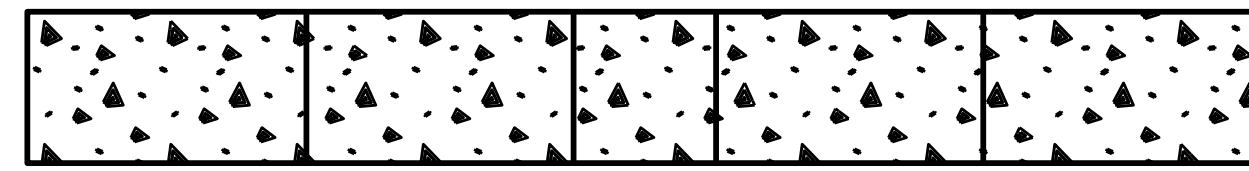
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

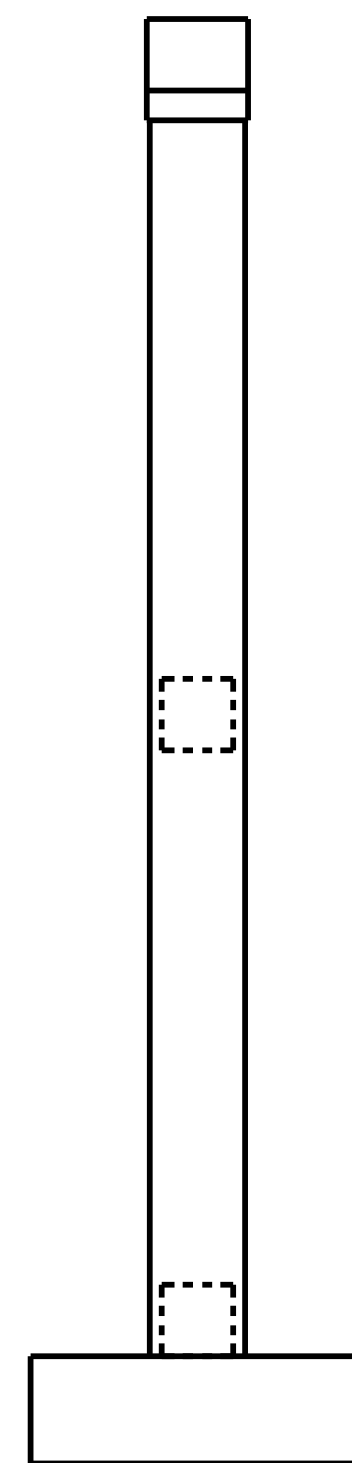
| REPAIRS BENT 40 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 24.0 | 12.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 4.5 | 2.3 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | LN. FT | |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |
| EPOXY COATING | | AREA SF | AREA SF | |
| CAP | | 147.3 | | |

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

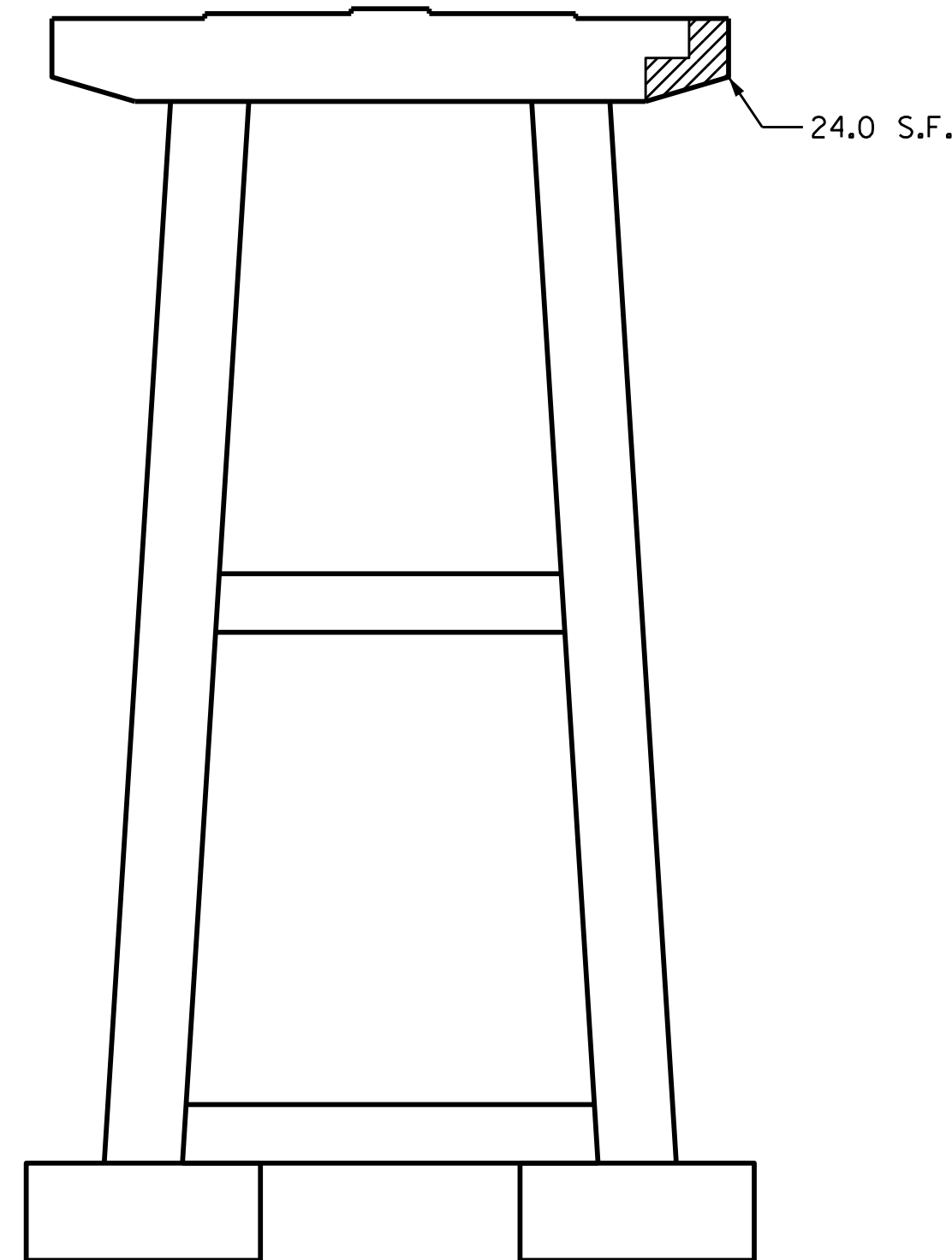
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



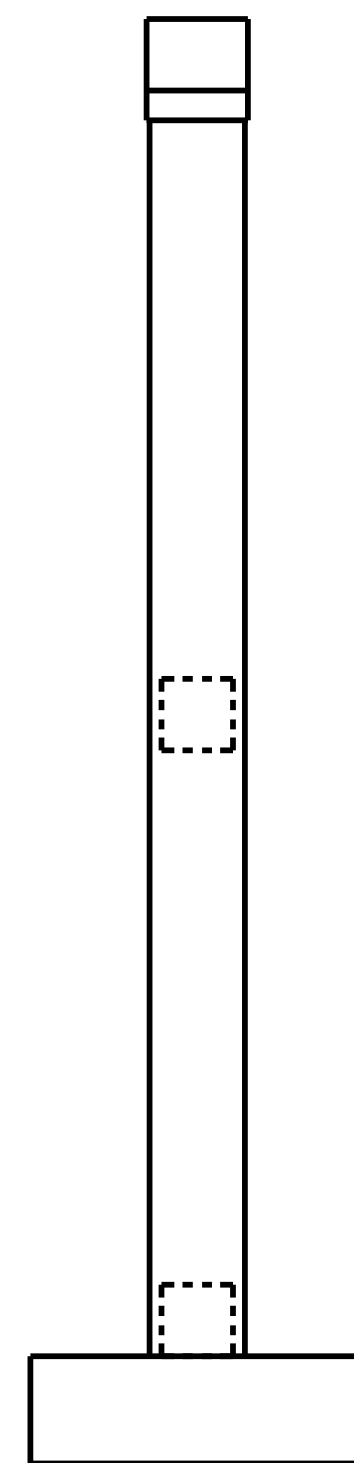
PLAN
TOP OF CAP



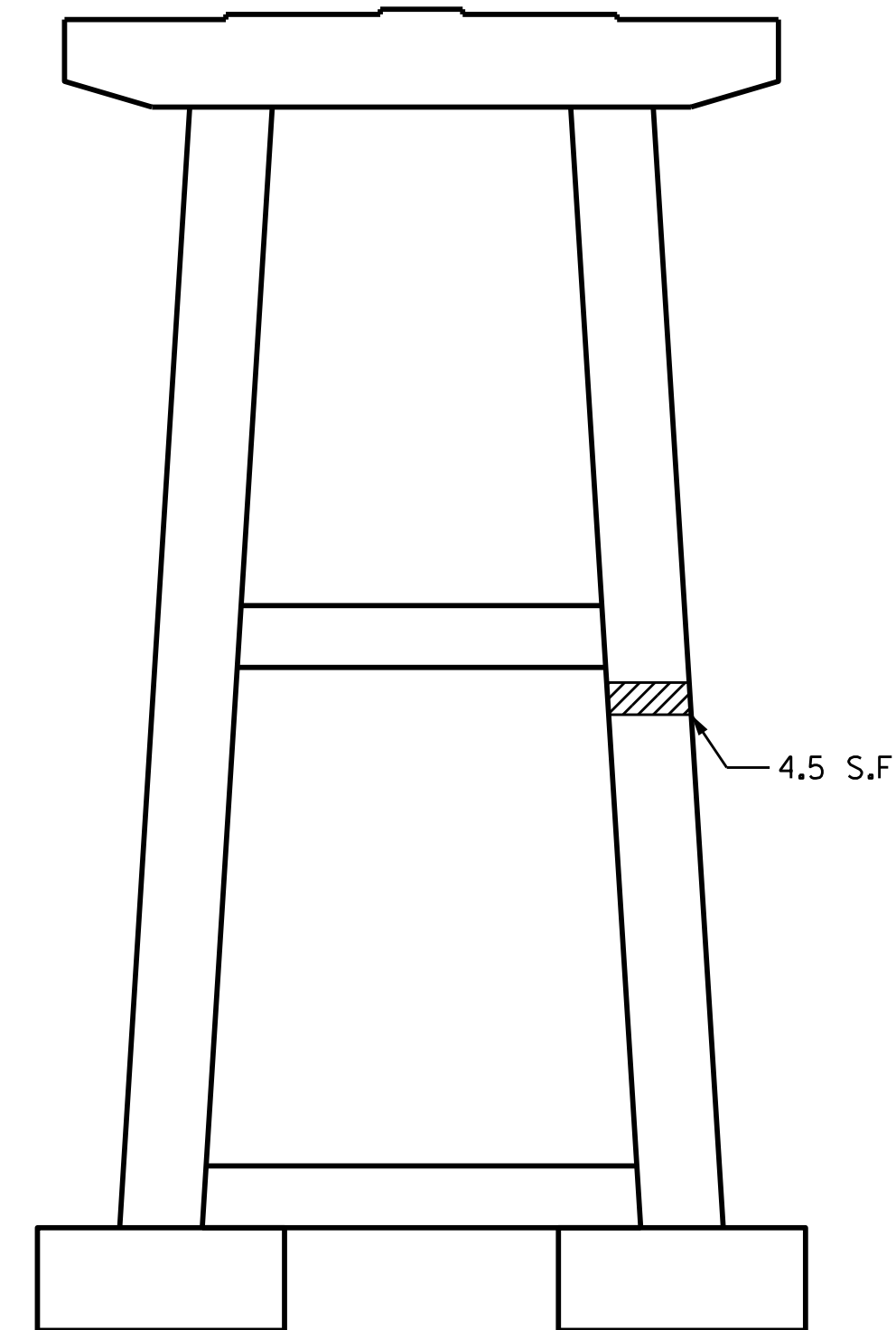
END VIEW
WEST SIDE



ELEVATION
SOUTH SIDE



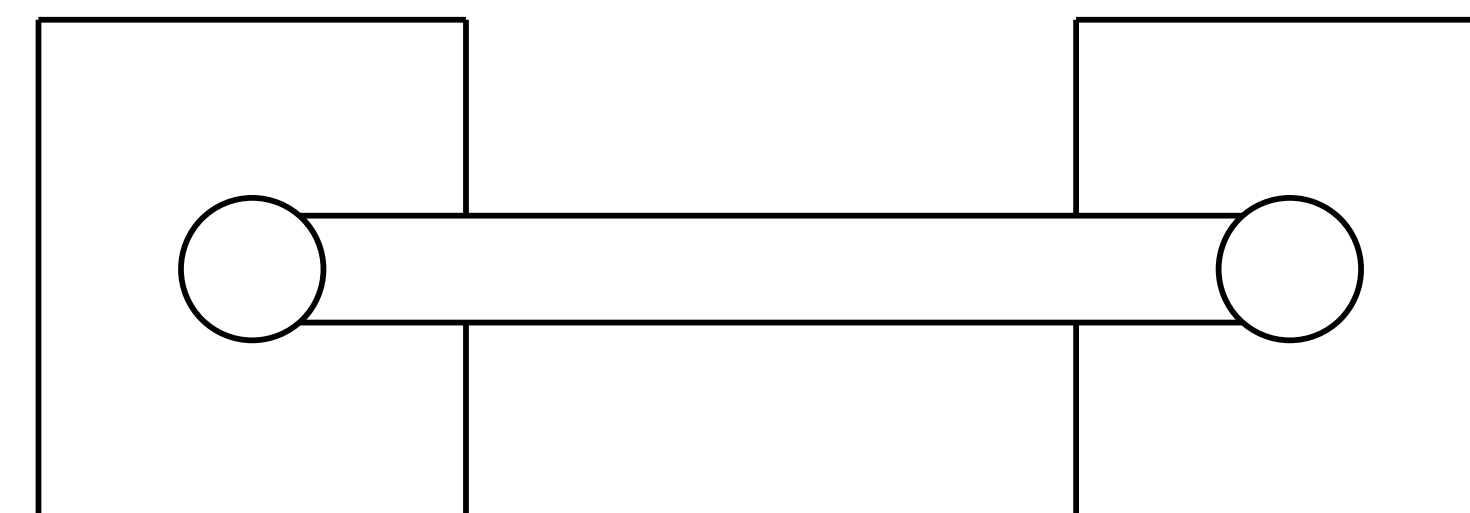
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 41 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 40



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
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| 1 | | | 3 | | | S2-111 |
| 2 | | | 4 | | | |

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

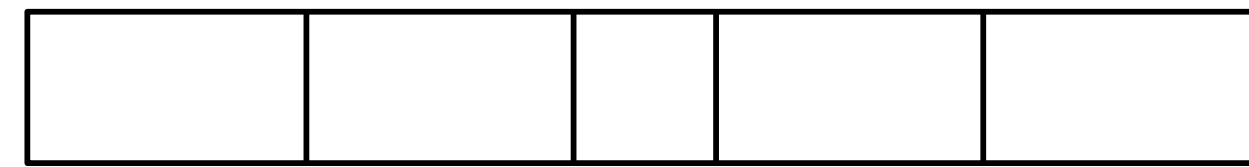
REPAIR QUANTITY TABLE

| REPAIRS BENT 41 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 1.0 | 0.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

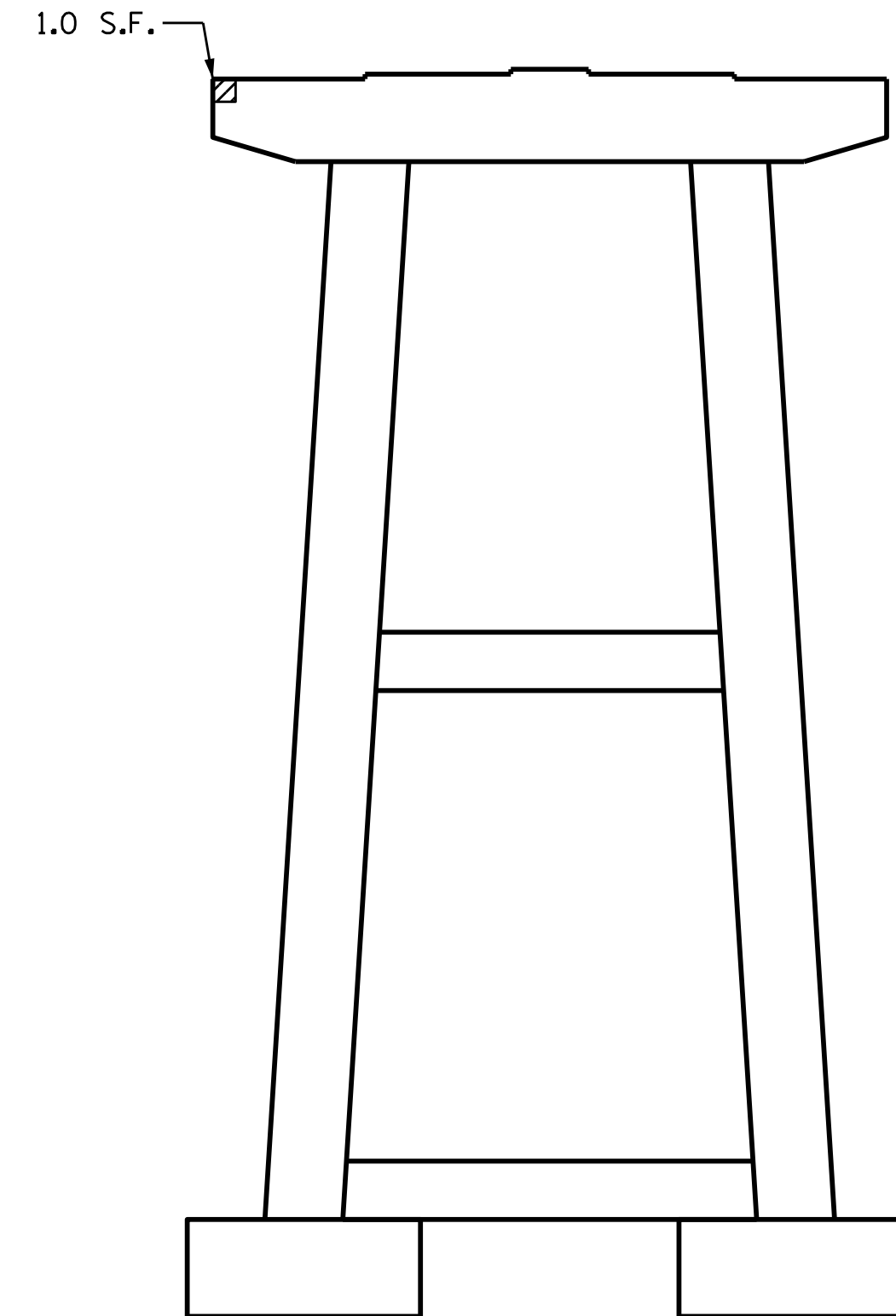
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

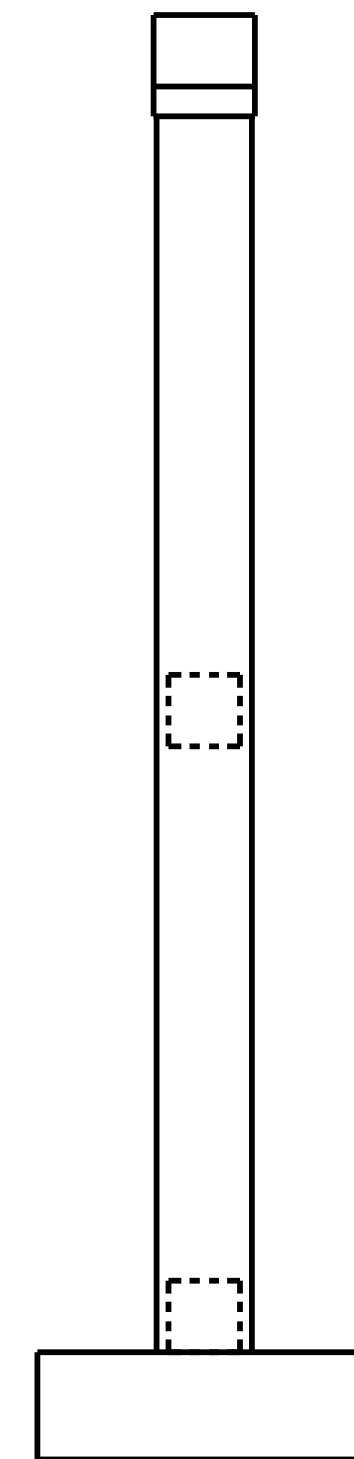
ERI - EPOXY RESIN INJECTION



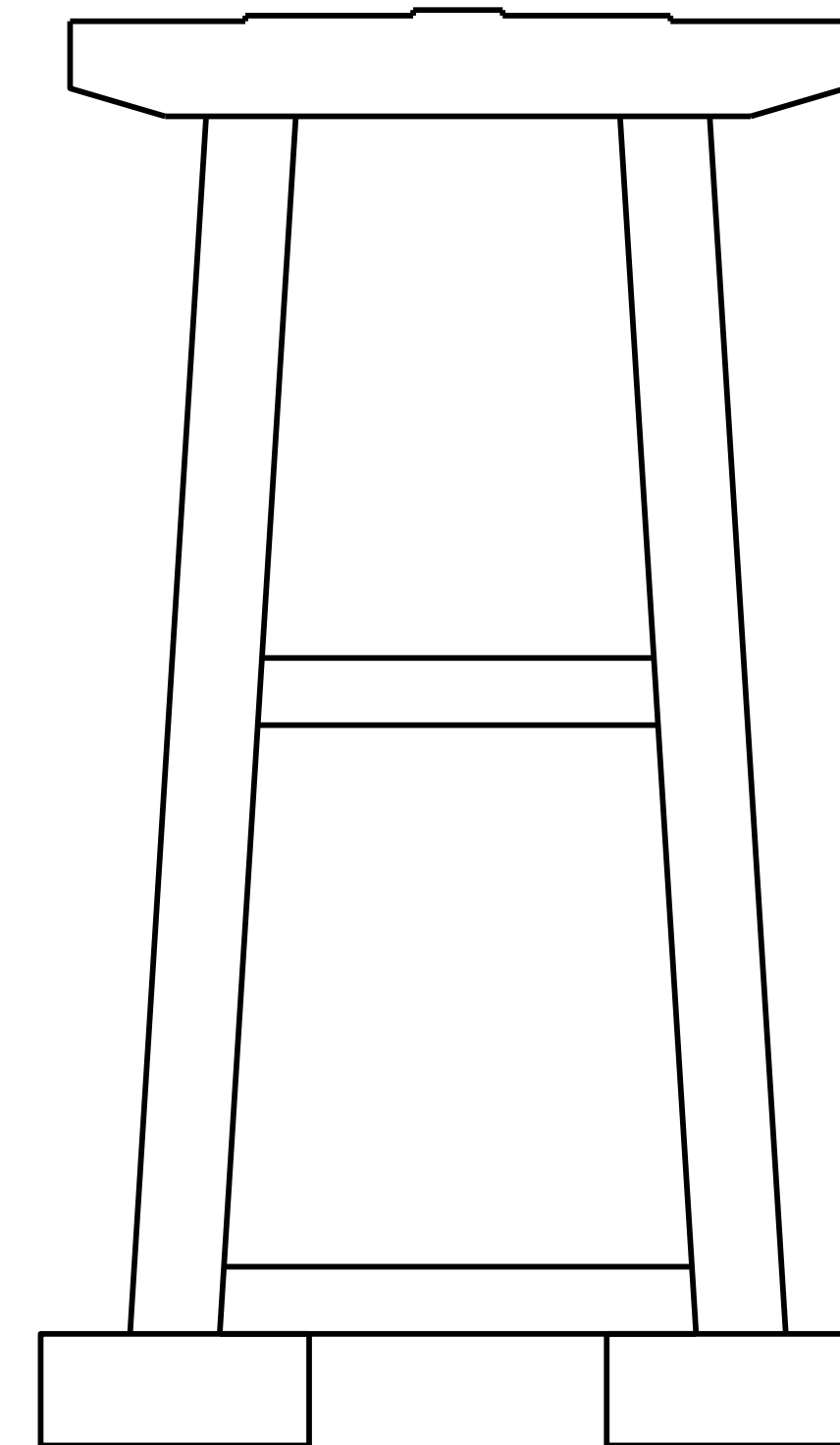
PLAN
TOP OF CAP



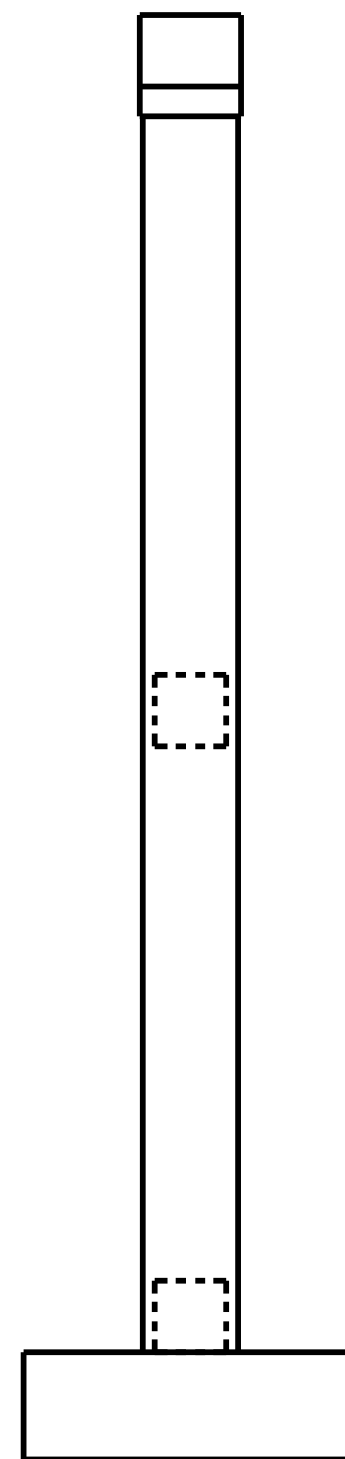
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



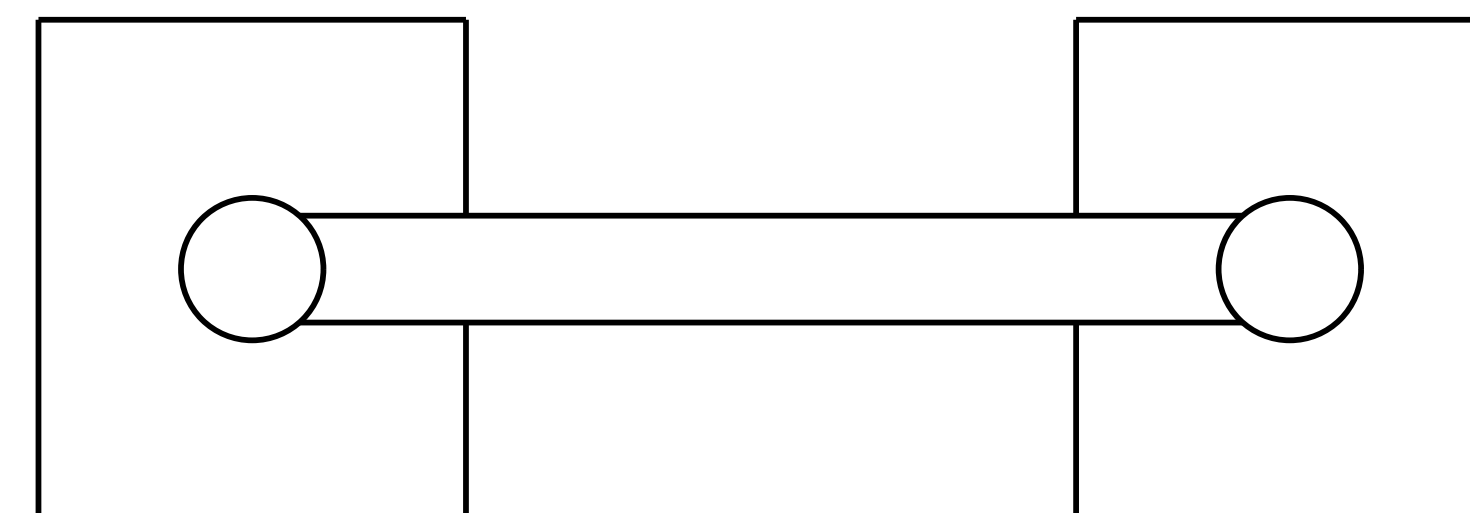
ELEVATION
NORTH SIDE



END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

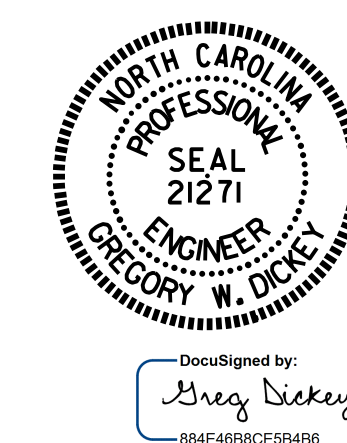
CARTERET COUNTY

BRIDGE NO. 6

SHEET 42 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 41



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS | |
| 1 | | | 3 | | | S2-112 | |
| 2 | | | 4 | | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 42 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 12.0 | 6.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

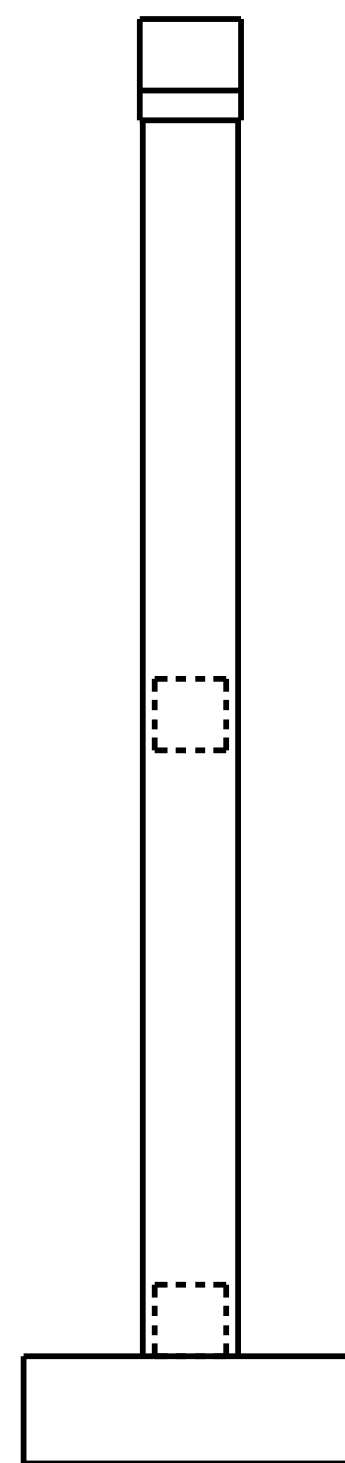
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

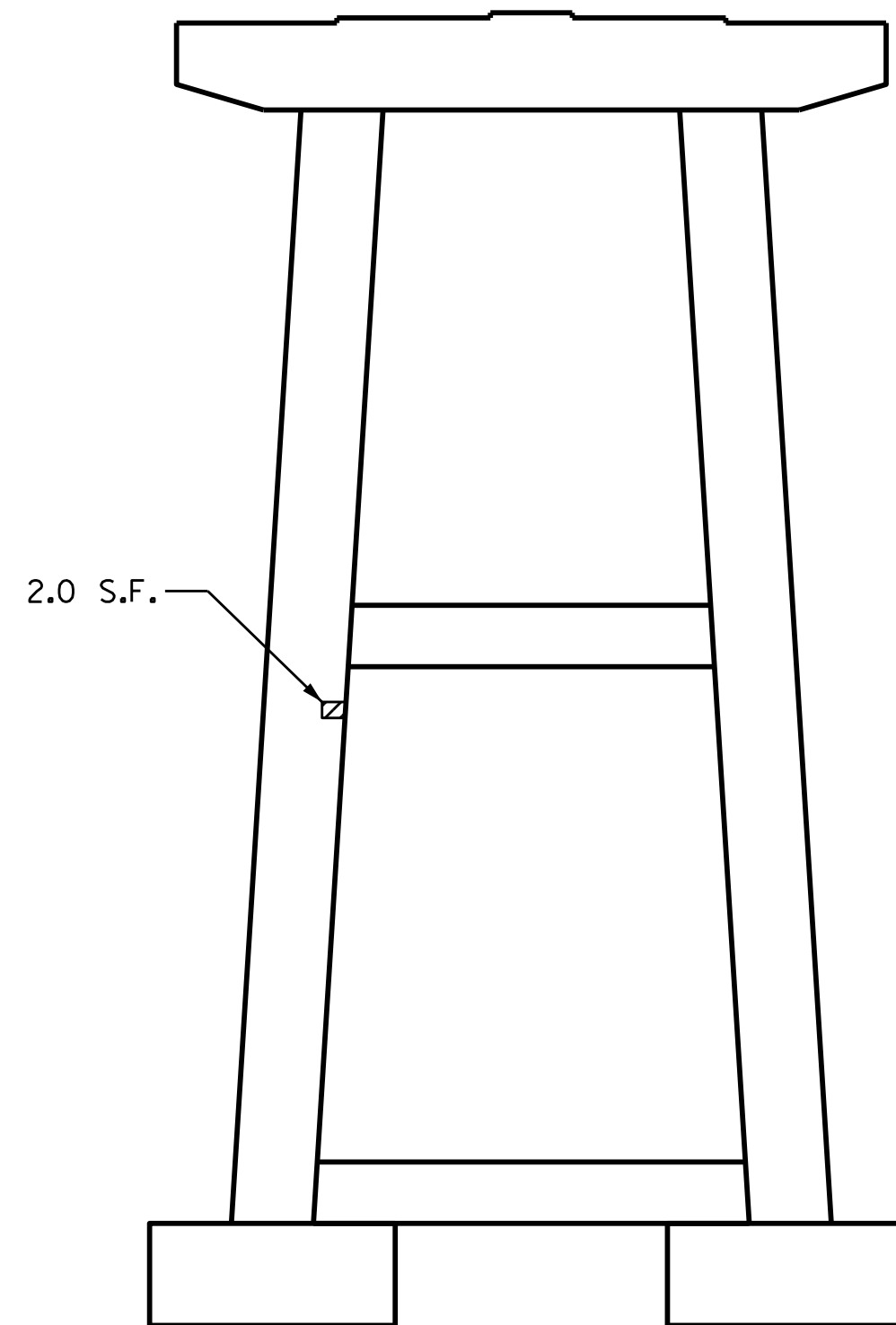
ERI - EPOXY RESIN INJECTION



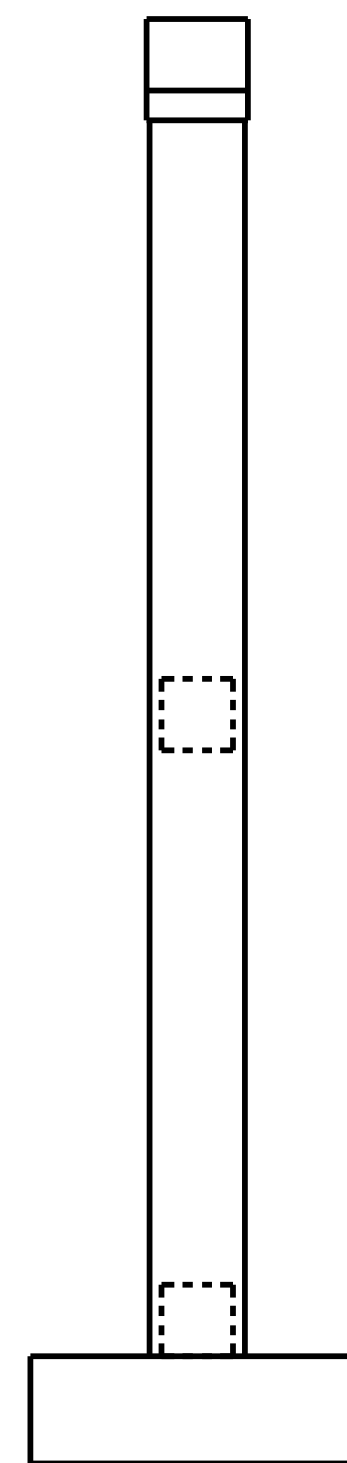
PLAN
TOP OF CAP



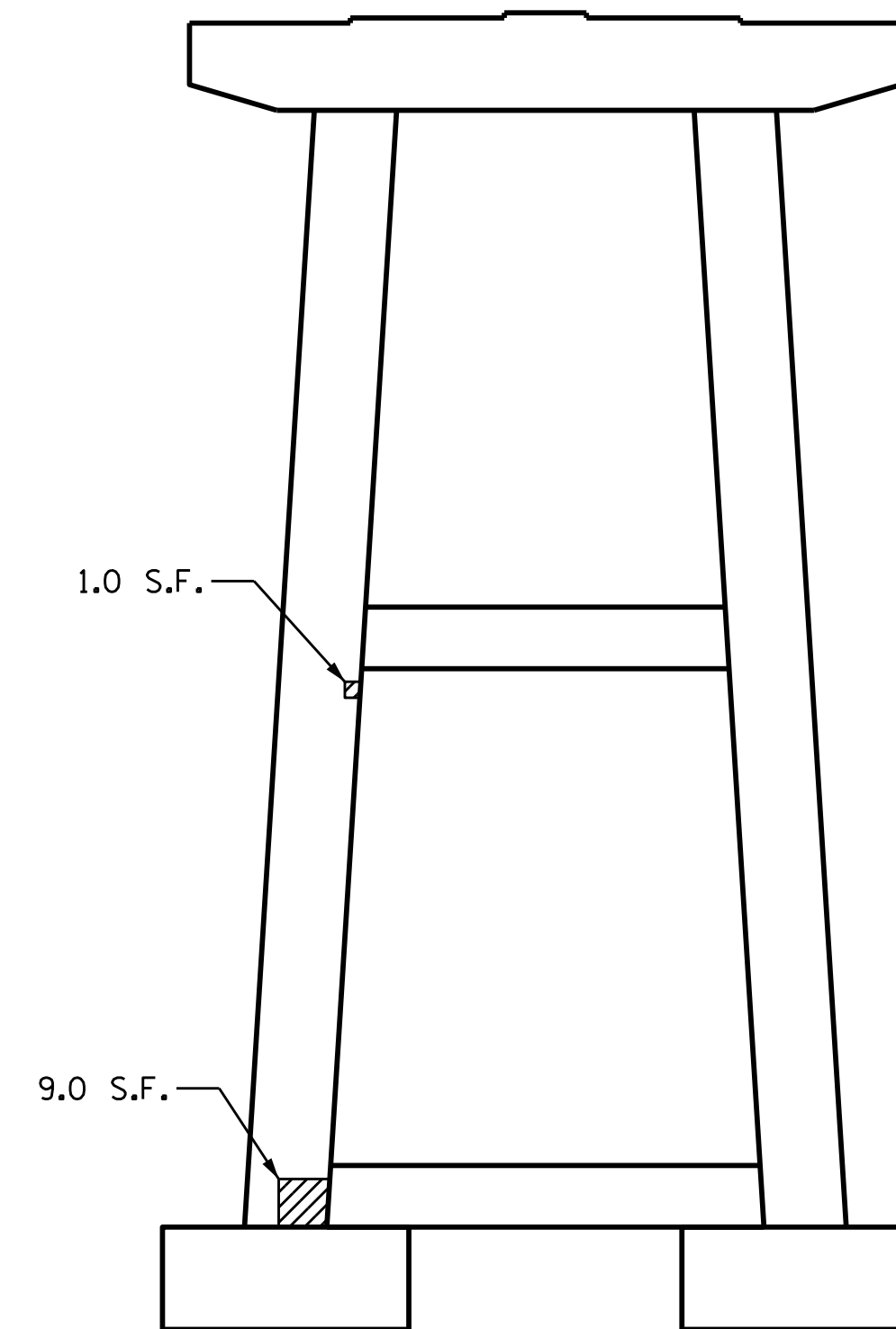
END VIEW
WEST SIDE



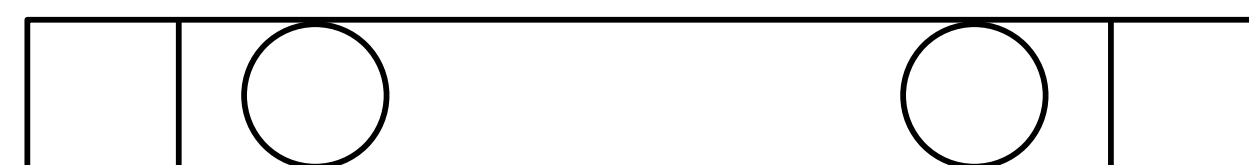
ELEVATION
SOUTH SIDE



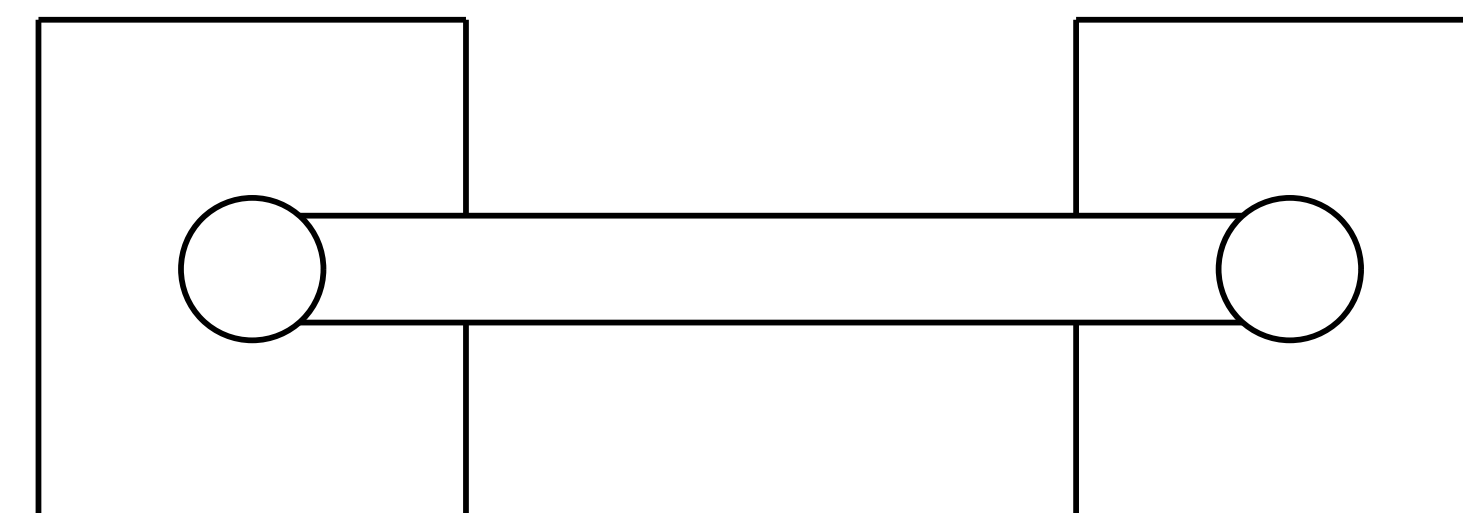
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 43 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 42



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
CHECKED BY : P. BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS | |
| 1 | | | 3 | | | S2-113 | |
| 2 | | | 4 | | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

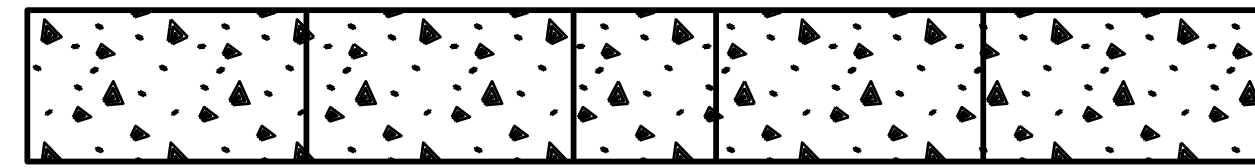
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

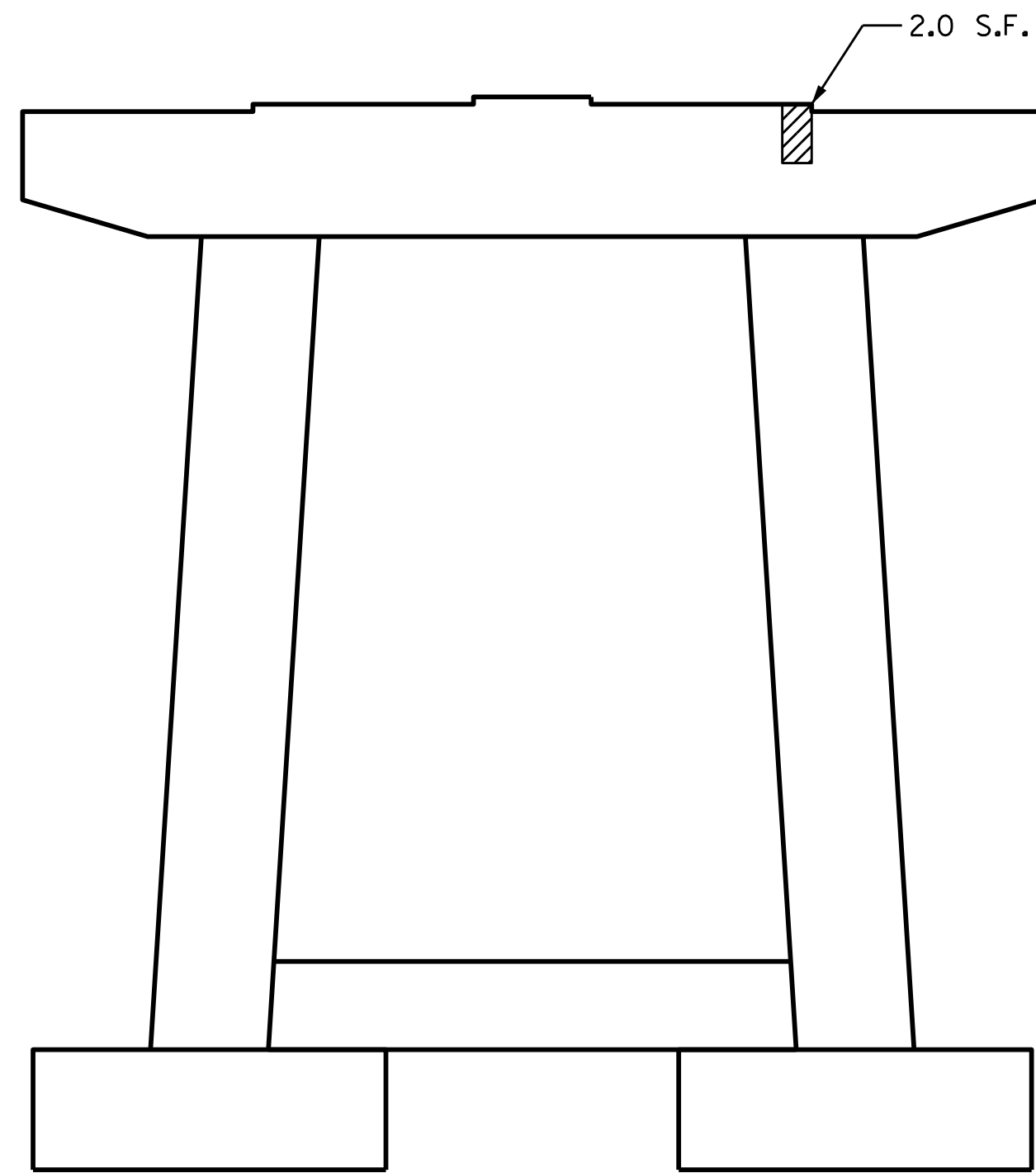
| REPAIRS BENT 43 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 2.0 | 1.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | | AREA SF | |
| CAP | 147.3 | | | |

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

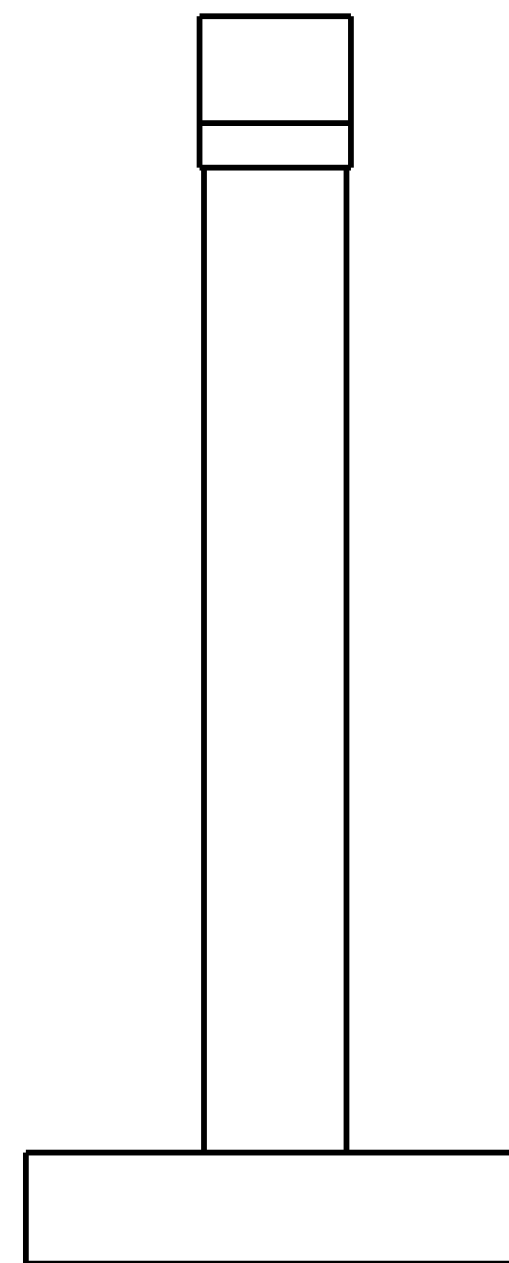
-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



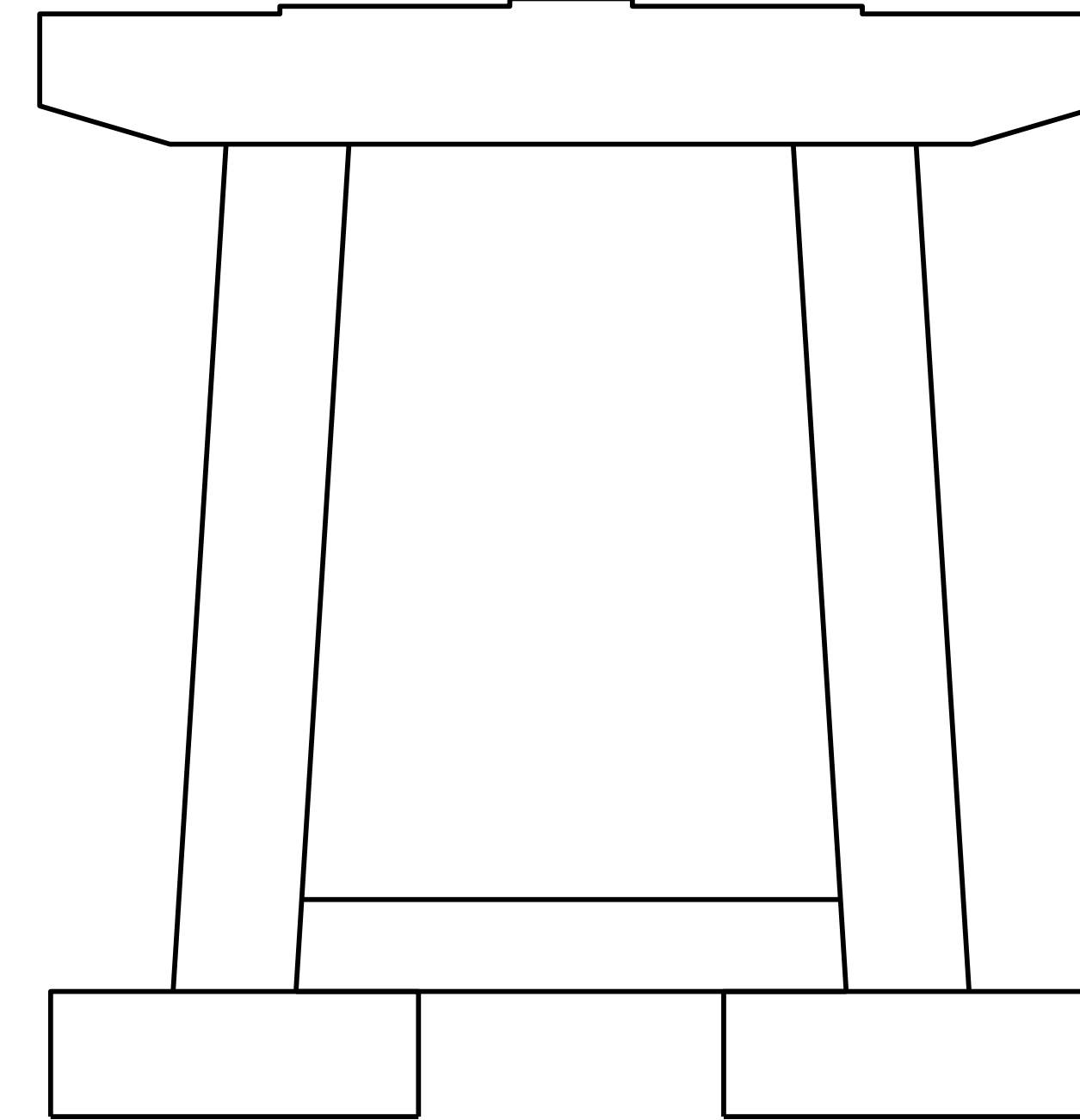
PLAN
TOP OF CAP



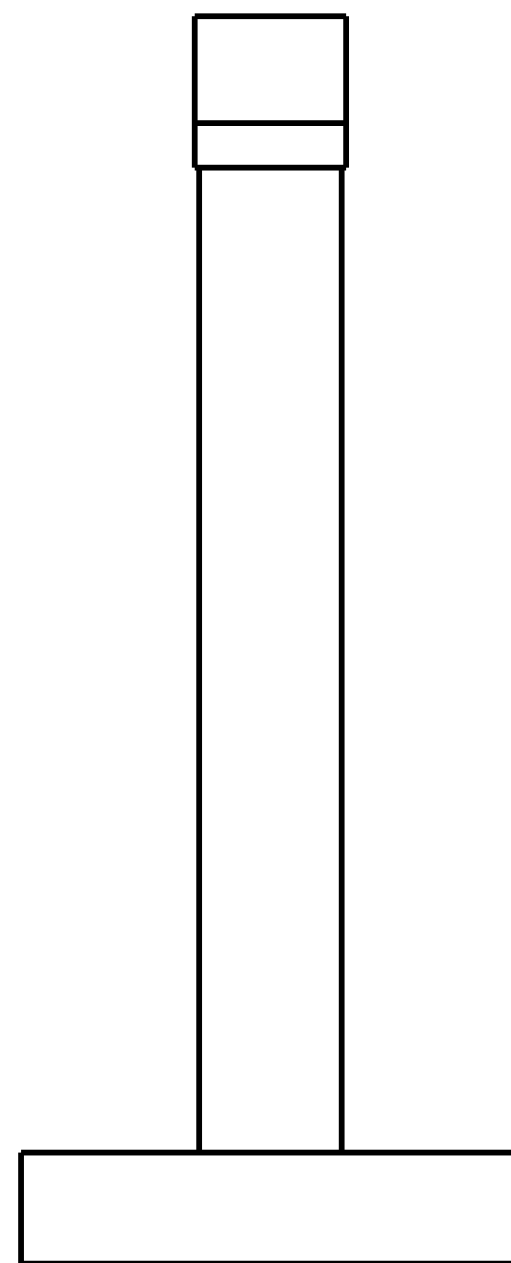
ELEVATION
SOUTH SIDE



ELEVATION
EAST SIDE



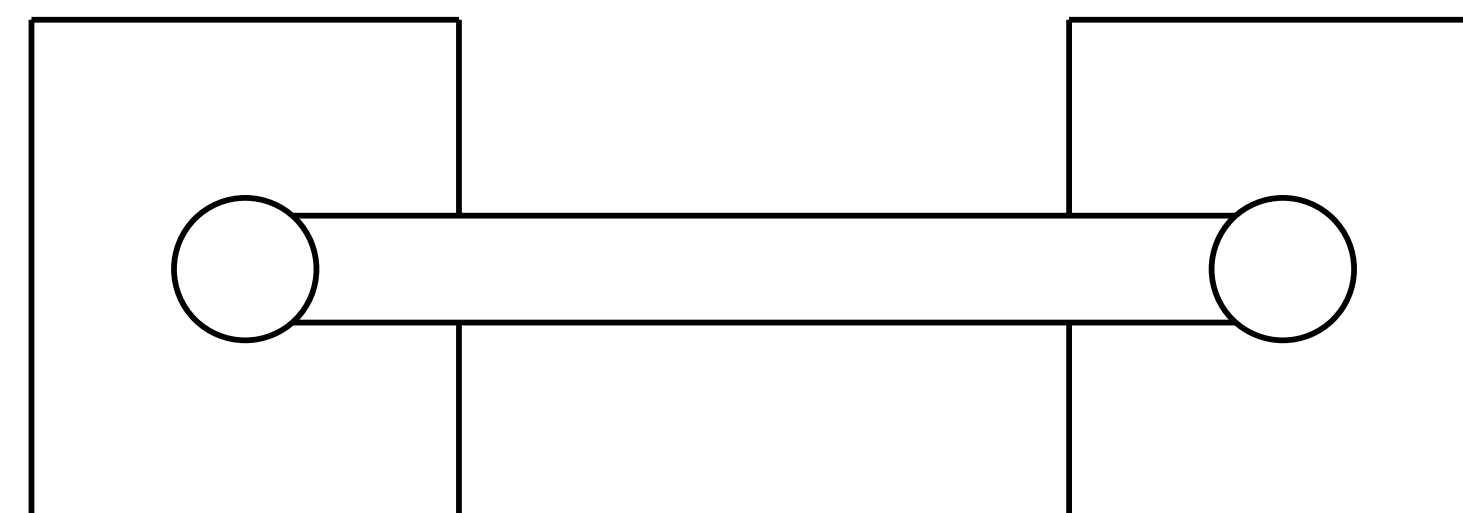
ELEVATION
NORTH SIDE



ELEVATION
WEST SIDE



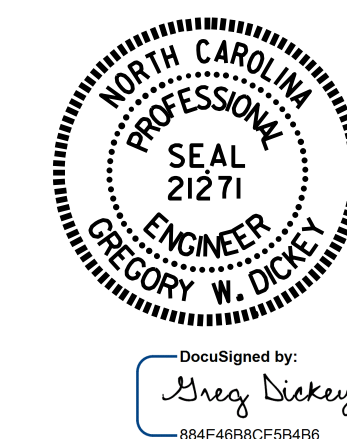
PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6

SHEET 44 OF 60



DocuSigned by:
 Greg Dickey
 884E488CE5848B...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURES
 BENT 43**

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-114 |
| 2 | | | 4 | | | |

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DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 44 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 0 | 0 | | |
| STRUT | 29.8 | 14.9 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

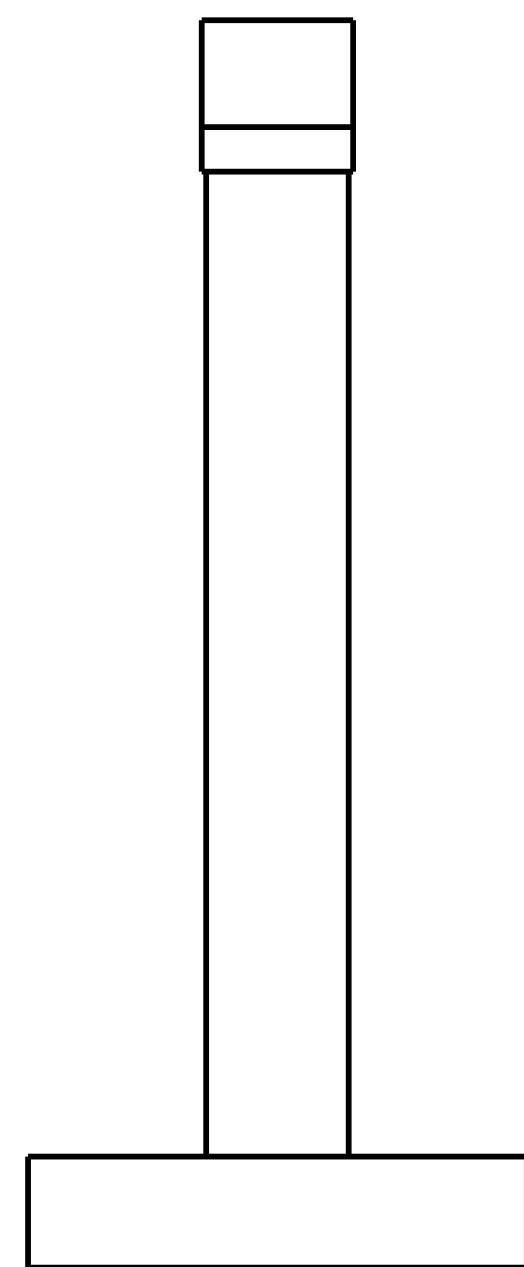
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

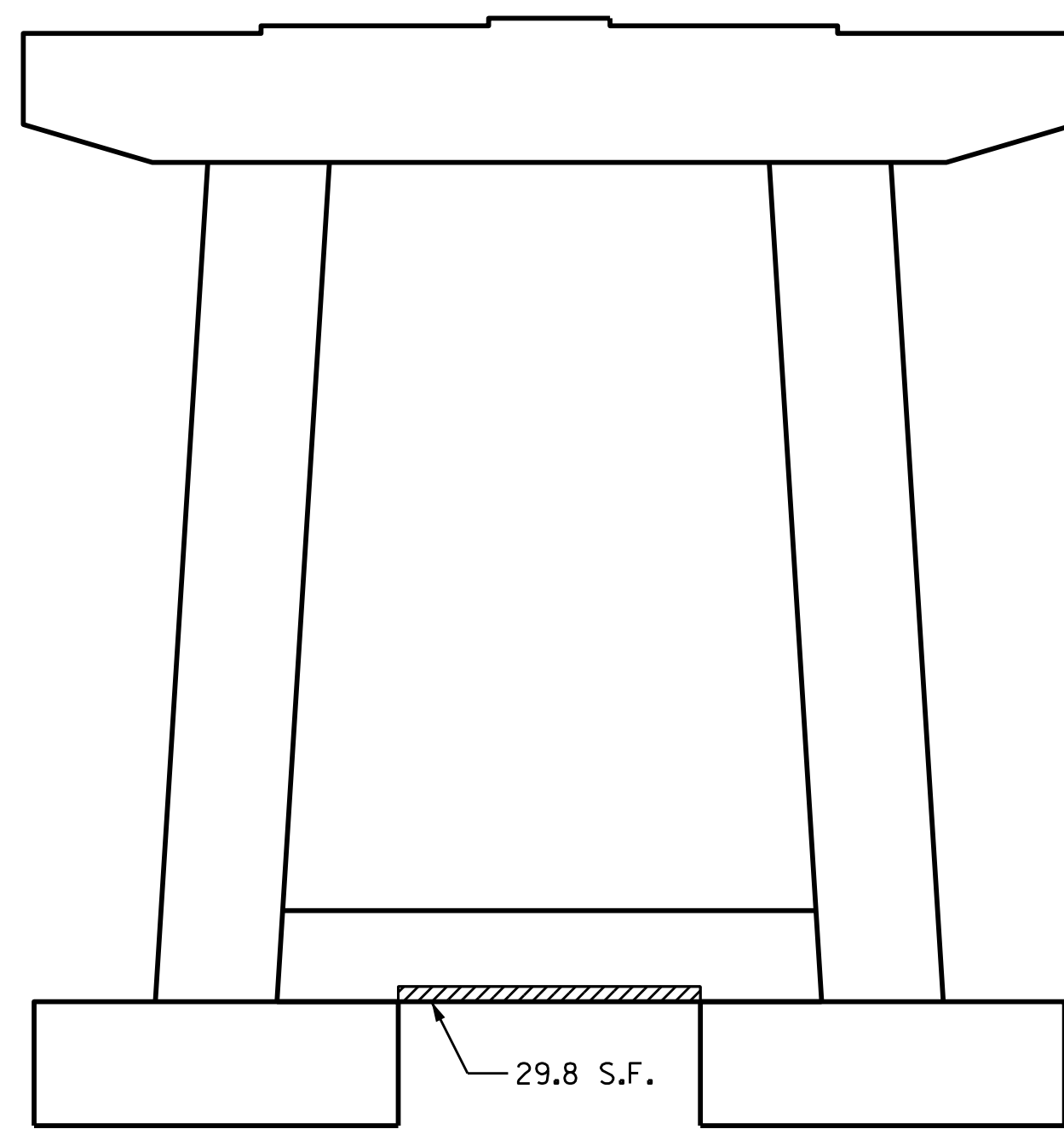
ERI - EPOXY RESIN INJECTION



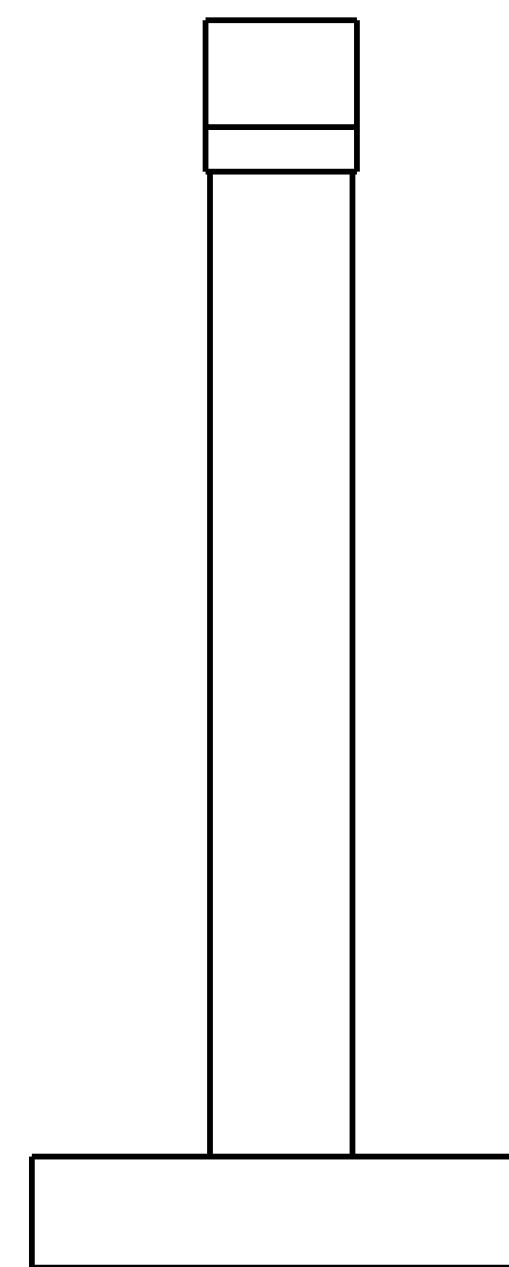
PLAN
TOP OF CAP



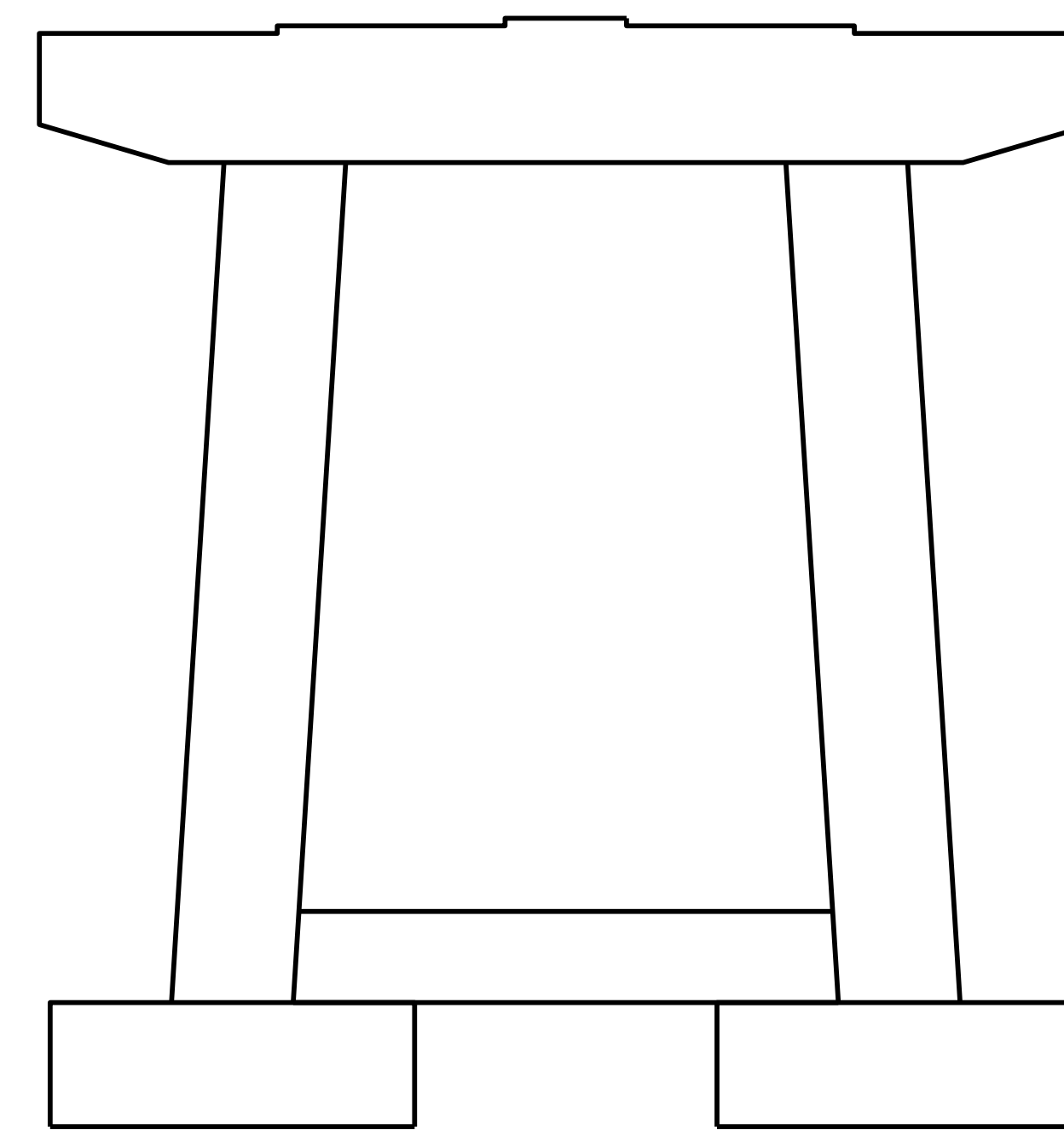
END VIEW
WEST SIDE



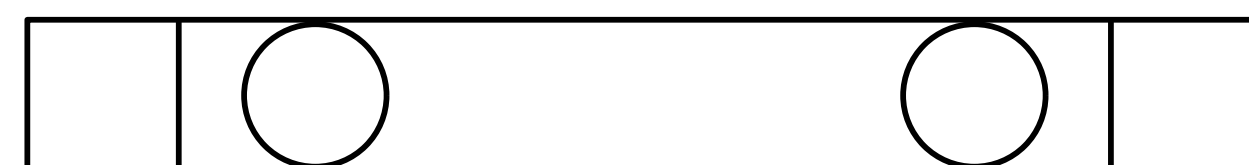
ELEVATION
SOUTH SIDE



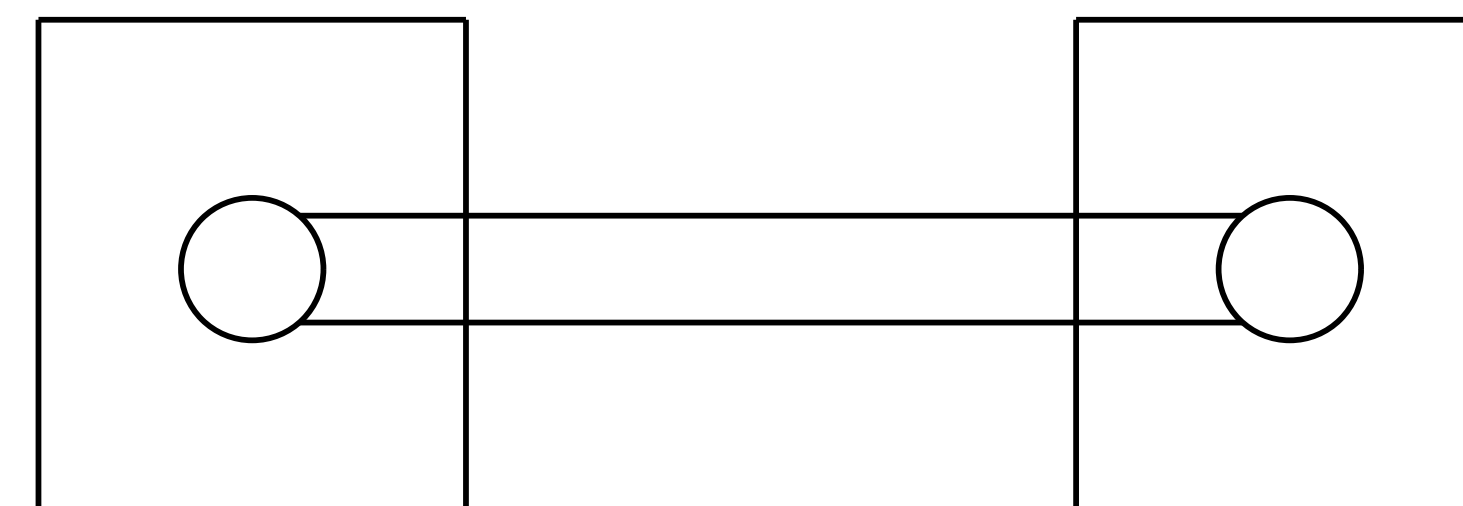
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 45 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 44



DocuSigned by:
Greg Dickey
884E488CE5848B...

DRAWN BY : M.A. LEE DATE : 8/2016
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-115 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS BENT 45 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 14.0 | 7.0 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 21.0 | 10.5 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| COLUMN | | 0 | | |
| STRUT | | 0 | | |
| FOOTING | | 0 | | |

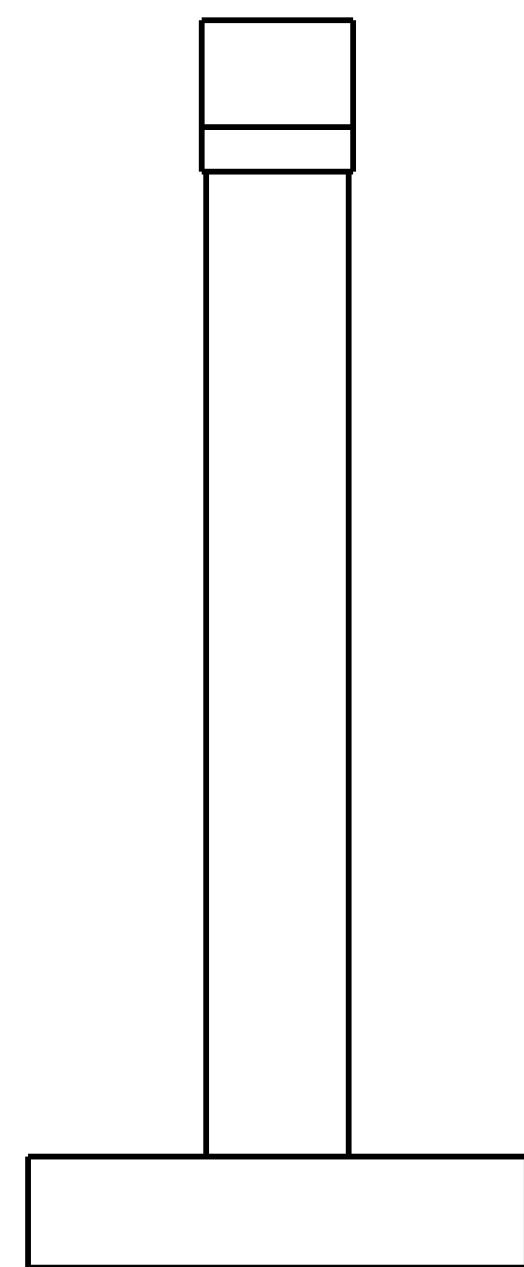
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

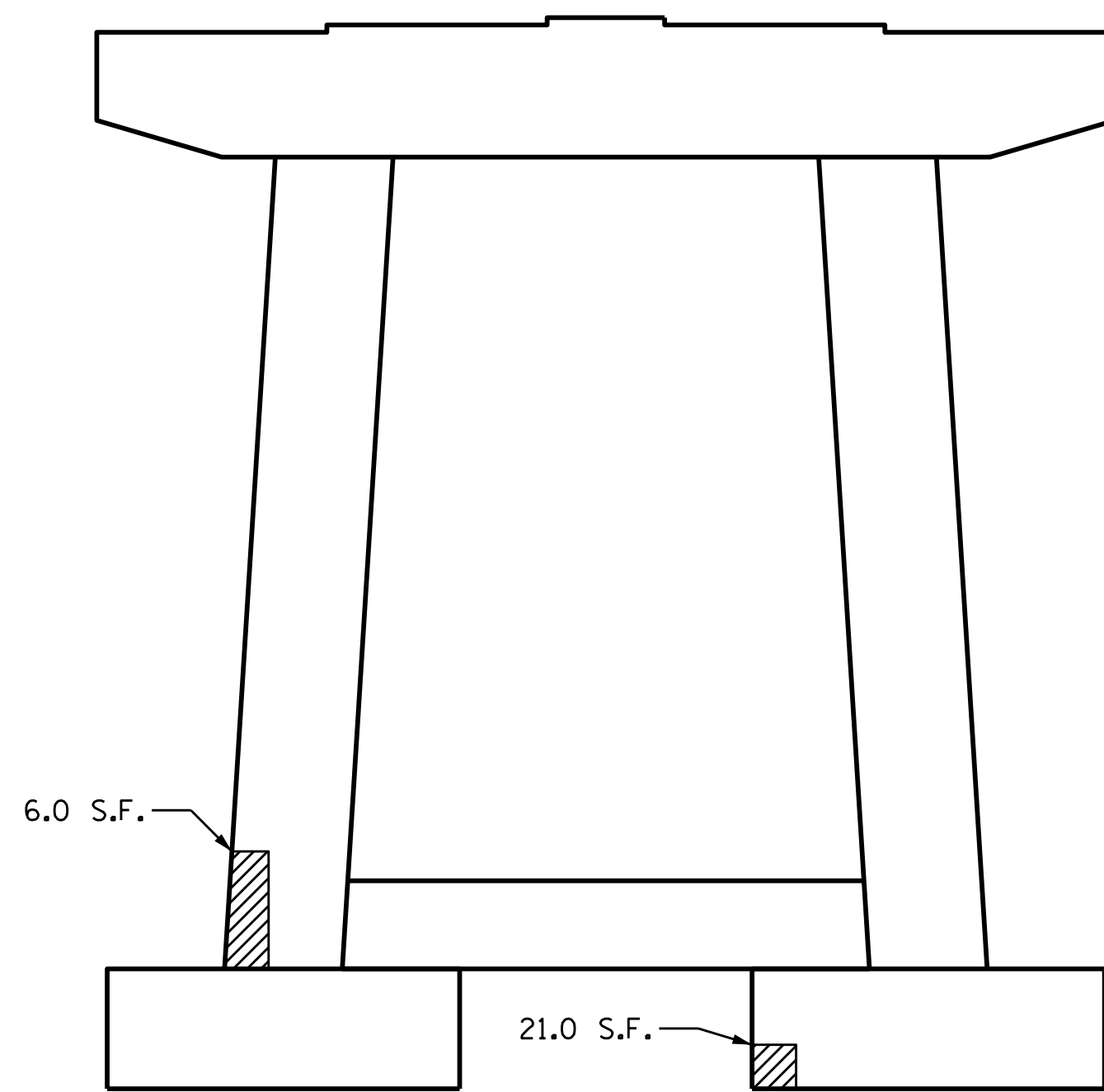
ERI - EPOXY RESIN INJECTION



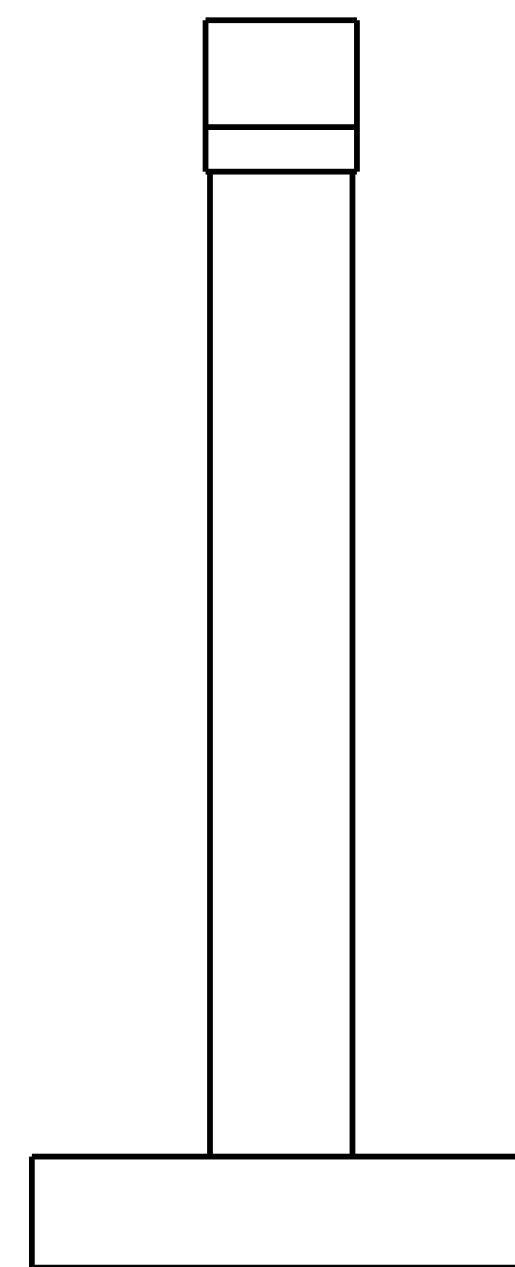
PLAN
TOP OF CAP



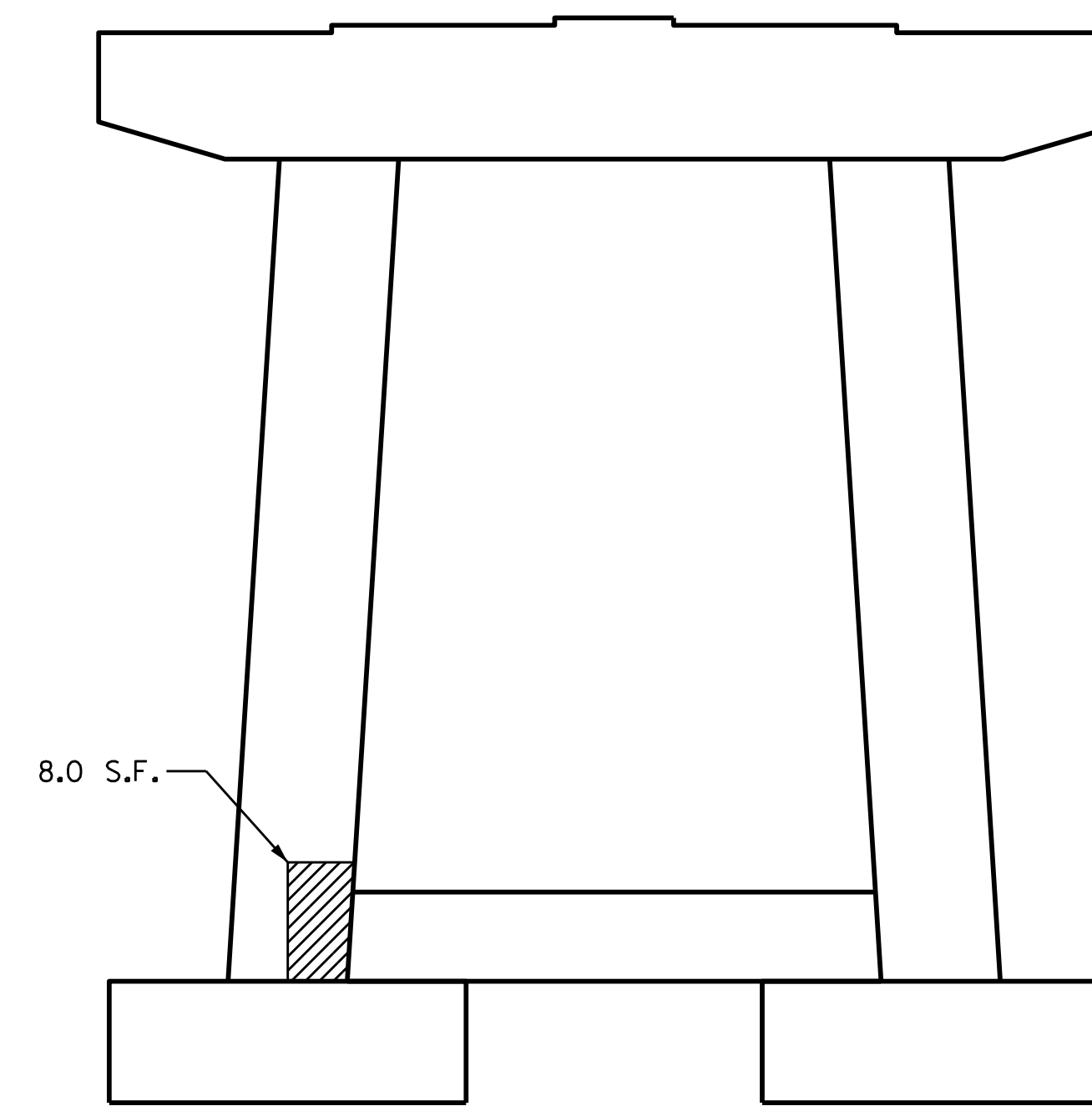
END VIEW
WEST SIDE



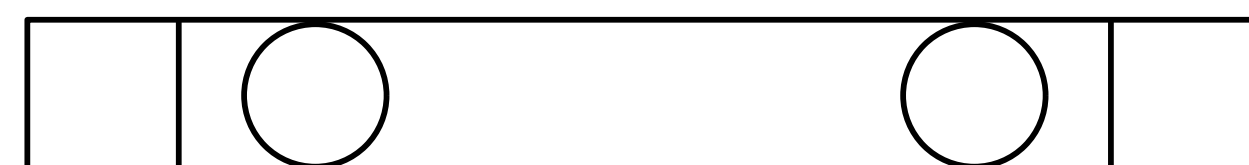
ELEVATION
SOUTH SIDE



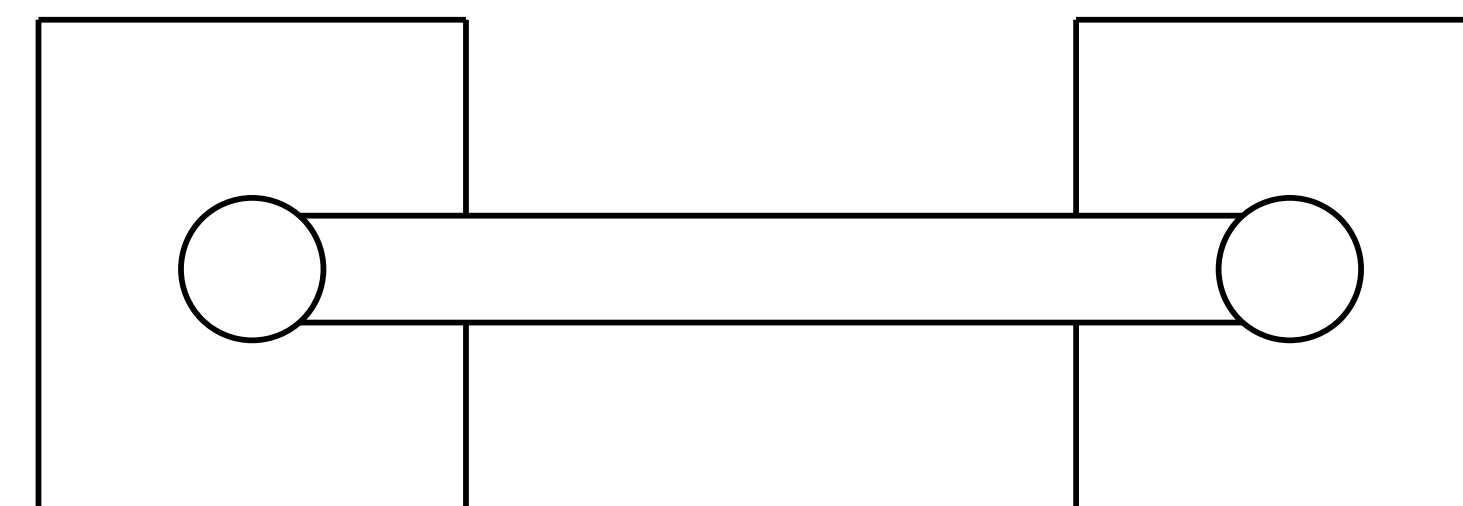
END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP



PLAN
TOP OF FOOTING

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 46 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 45



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884E488CE5848E...

DRAWN BY : M.A. LEE DATE : 8/2016
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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-116 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.



FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

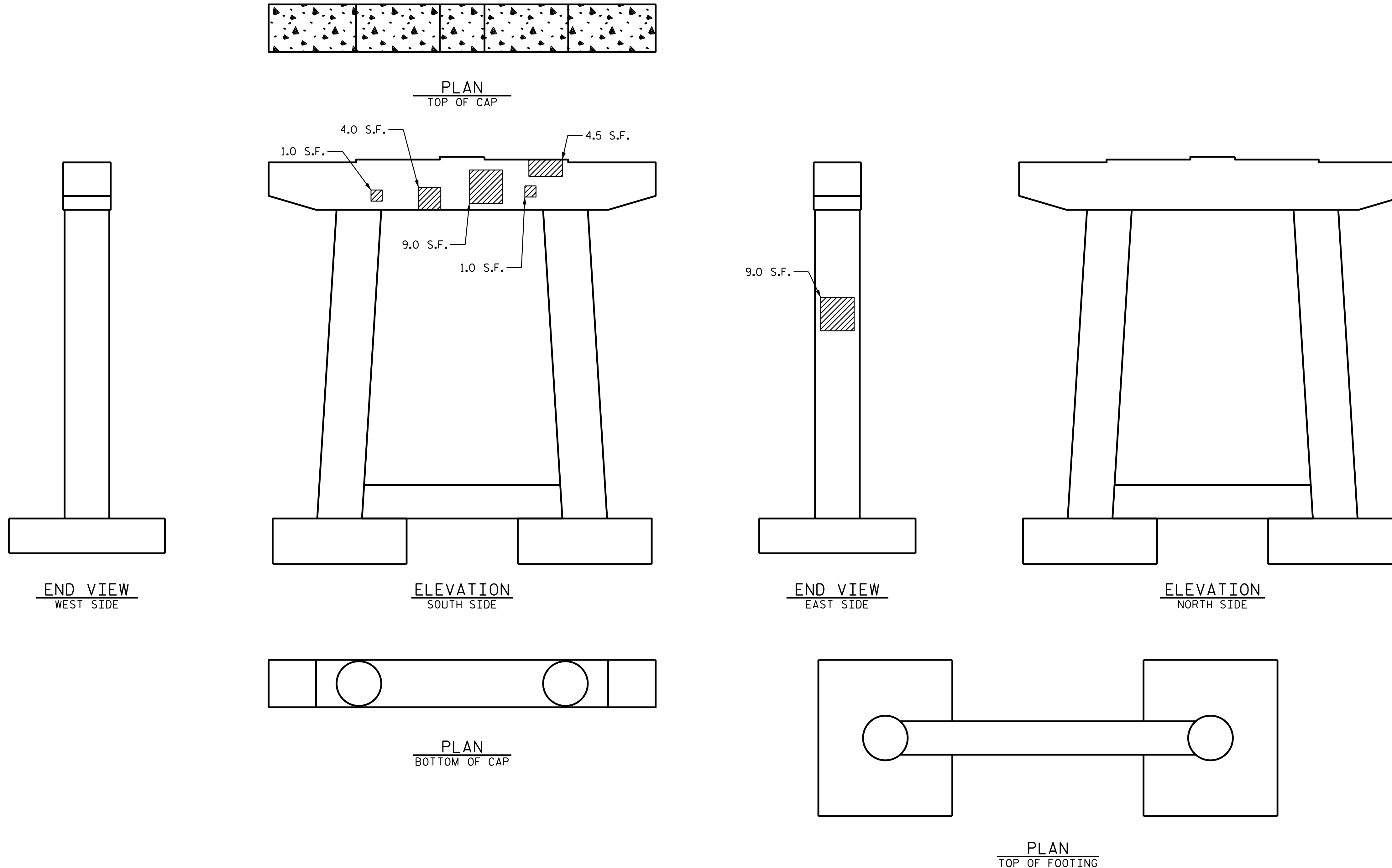
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

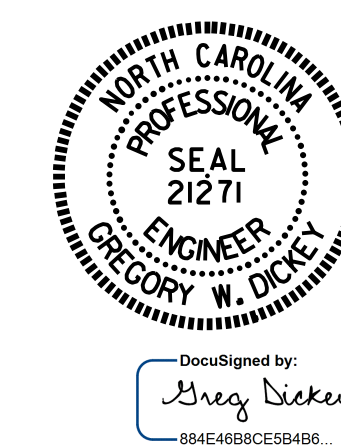
| REPAIRS BENT 46 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 19.5 | 9.8 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| COLUMN | 9.0 | 4.5 | | |
| STRUT | 0 | 0 | | |
| FOOTING | 0 | 0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0 | | | |
| COLUMN | 0 | | | |
| STRUT | 0 | | | |
| FOOTING | 0 | | | |
| EPOXY COATING | AREA SF | AREA SF | | |
| CAP | 147.3 | | | |

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

-  - EPOXY COATING
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6
 SHEET 47 OF 60



| | | | | | | |
|--|-----|-------|-----|-----|-------|--------------|
| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH | | | | | | SHEET NO. |
| SUBSTRUCTURES BENT 46 | | | | | | S2-117 |
| REVISIONS | | | | | | TOTAL SHEETS |
| NO. | BY: | DATE: | NO. | BY: | DATE: | |
| 1 | | | 3 | | | |
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DRAWN BY : M.A. LEE DATE : 8/2016
 CHECKED BY : P. BRYANT DATE : 8/2016

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REPAIR QUANTITY TABLE

| REPAIRS BENT 47 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 5.5 | 2.8 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

NOTES:

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

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

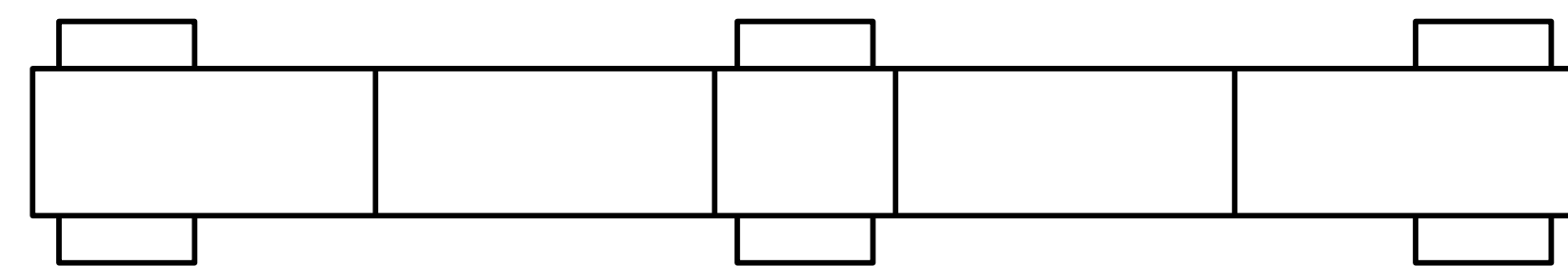
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

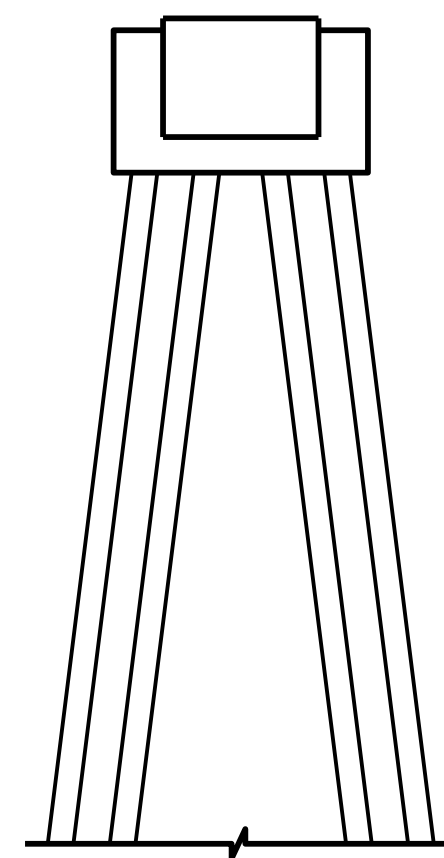
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

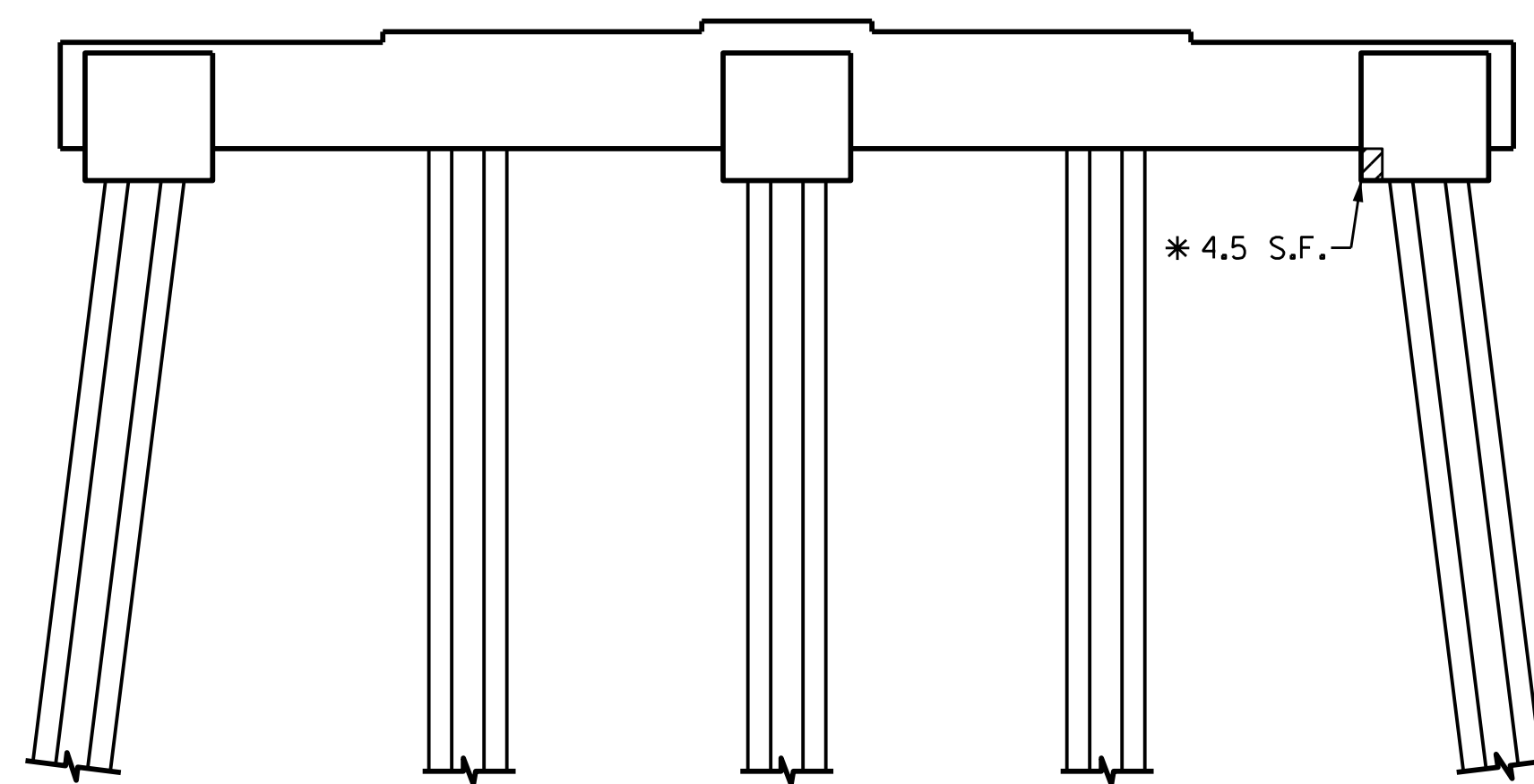
ERI - EPOXY RESIN INJECTION



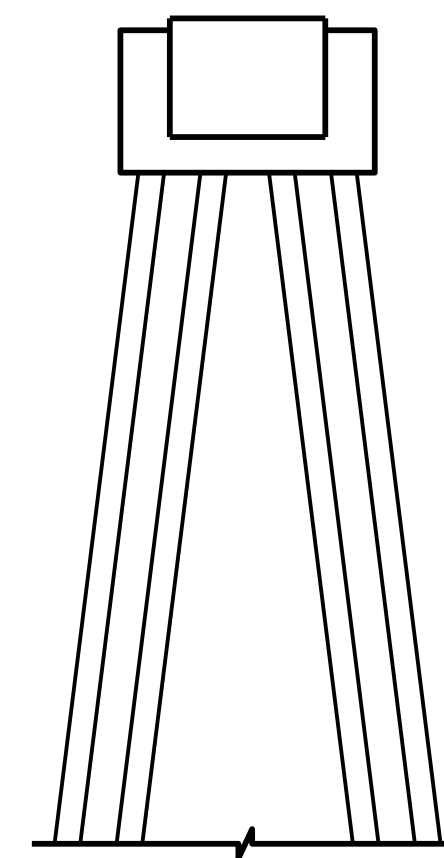
PLAN
TOP OF CAP



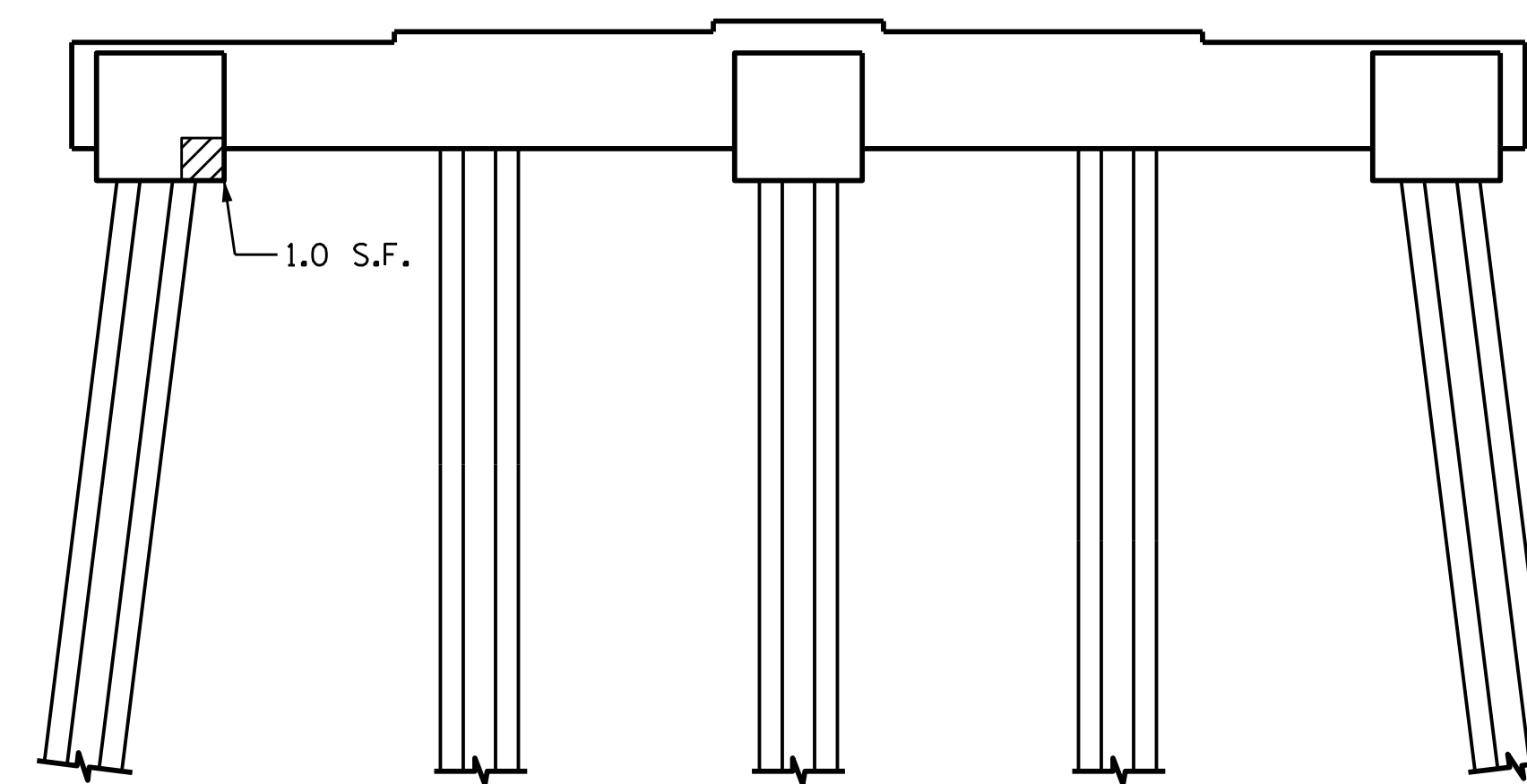
END VIEW
WEST SIDE



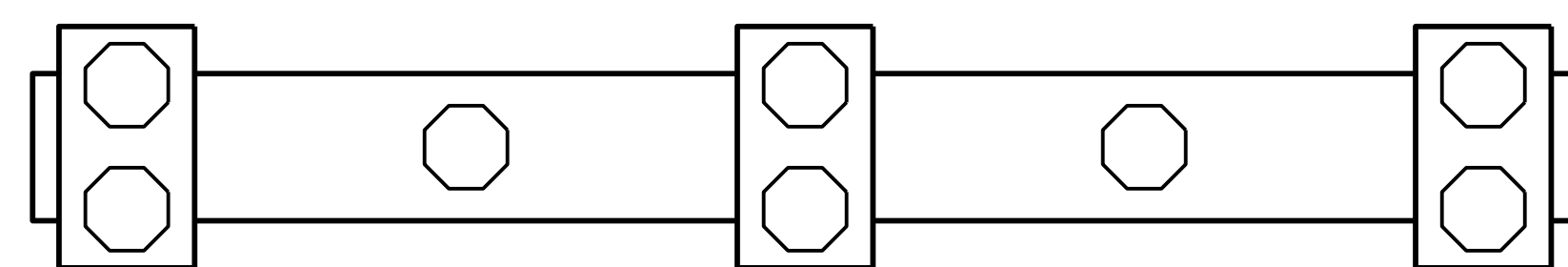
ELEVATION
SOUTH SIDE
* REPAIR EXTENDS AROUND PILE CAP



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 48 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 47



DocuSigned by:
Greg Dickey
884E48BCE58486..

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

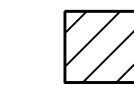
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-118 |
| 2 | | | 4 | | | |

REPAIR QUANTITY TABLE

| REPAIRS BENT 48 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

NOTES:

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

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

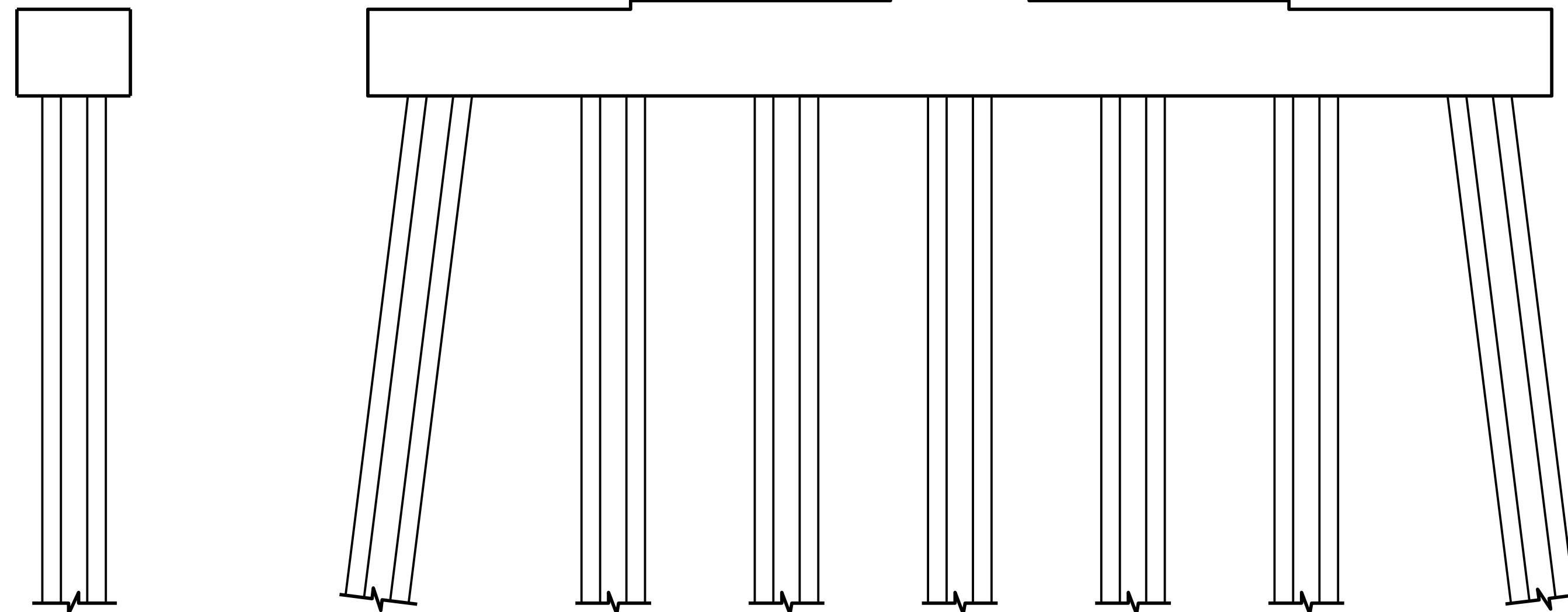
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.



PLAN
TOP OF CAP

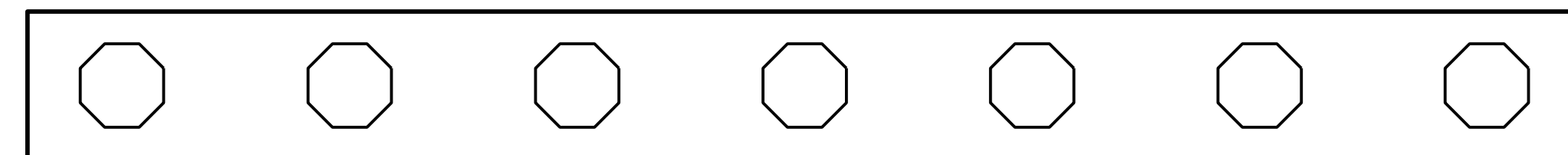


END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 49 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 48



DocuSigned by:
Greg Dickey
884E488CE58486

DRAWN BY : M.A.LEE DATE : 8/2016
 CHECKED BY : P.BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-119 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

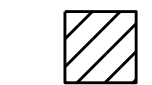

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

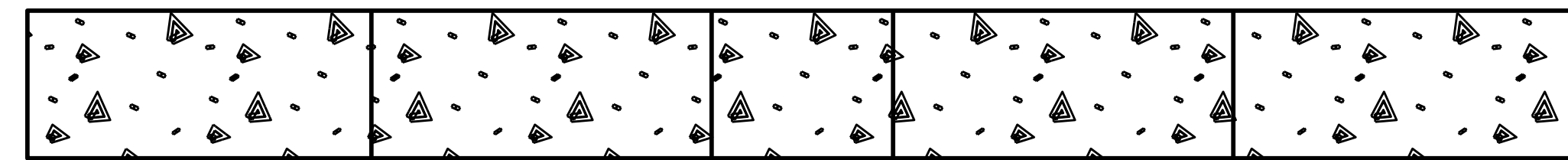
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

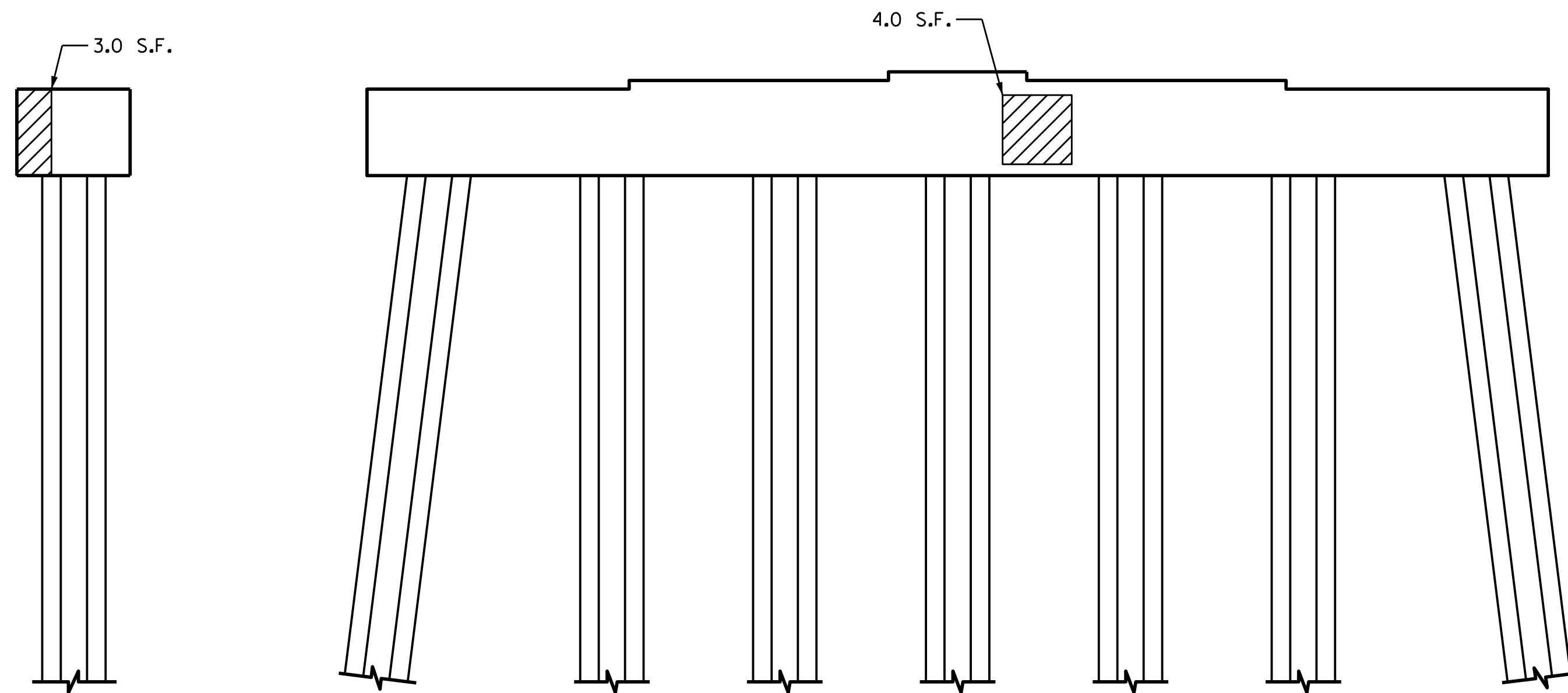
| REPAIRS BENT 49 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 10.0 | 5.0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

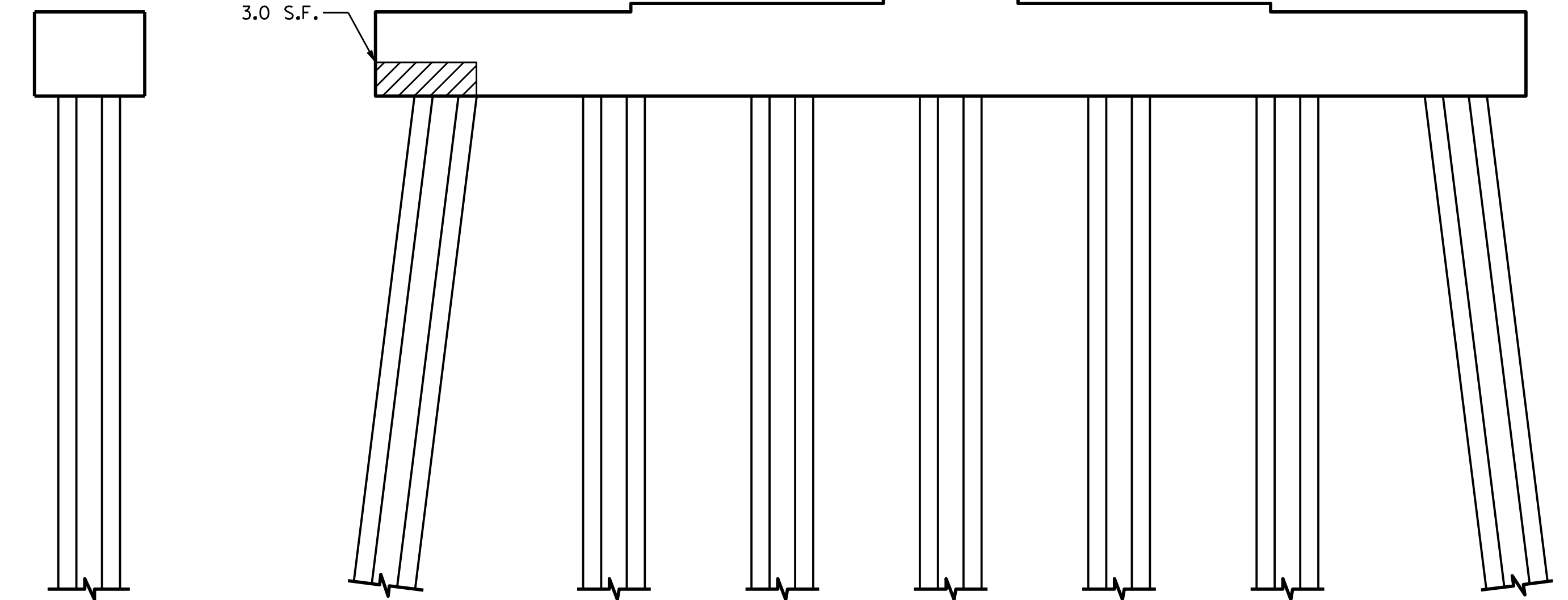


PLAN
TOP OF CAP



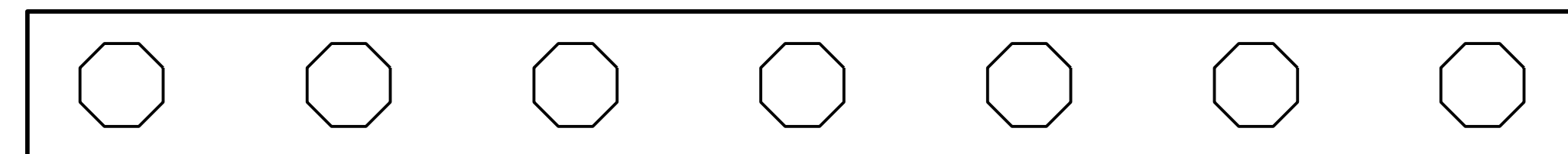
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 50 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 49



DocuSigned by:
Greg Dickey
884E488CE58486...

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-120 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

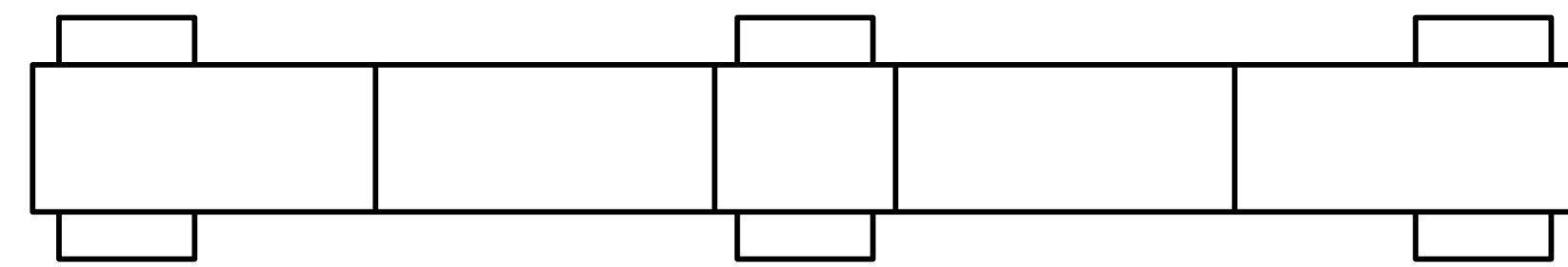
REPAIR QUANTITY TABLE

| REPAIRS BENT 50 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 5.1 | 2.6 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

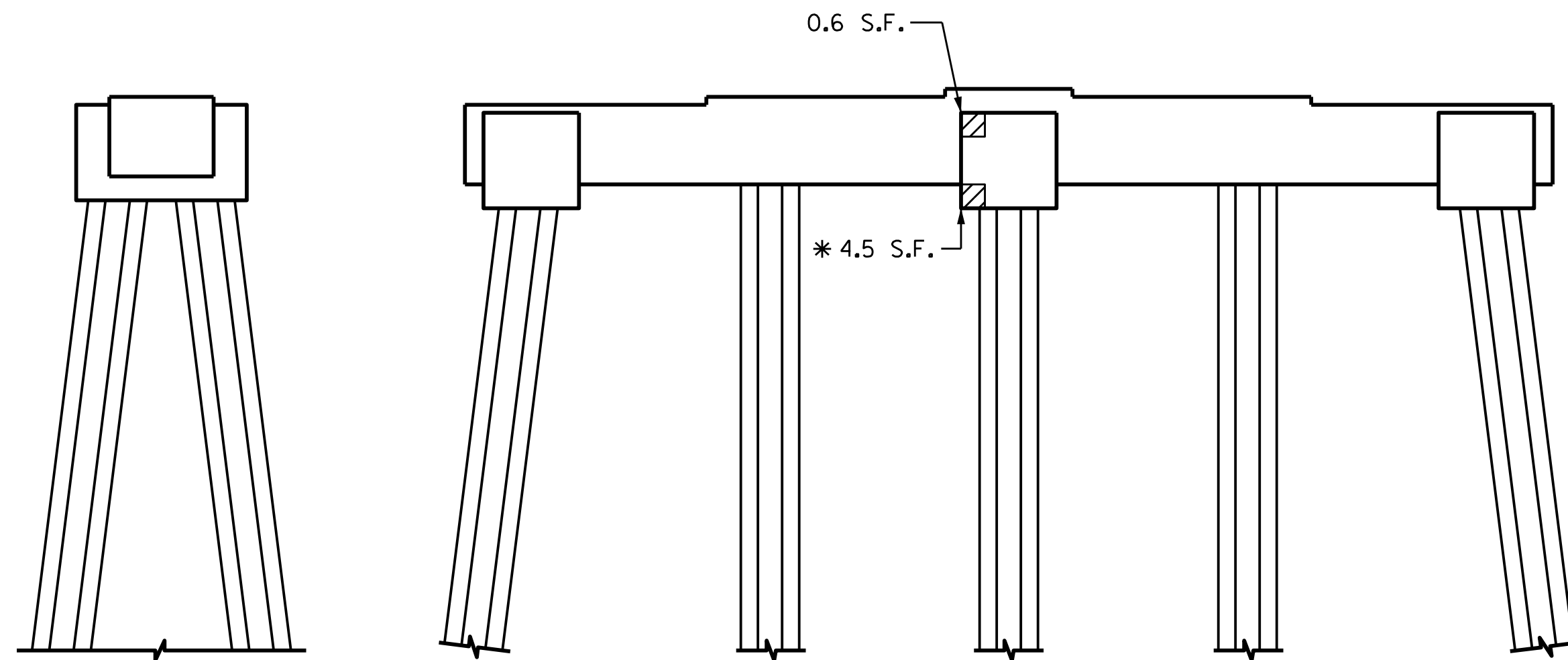
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

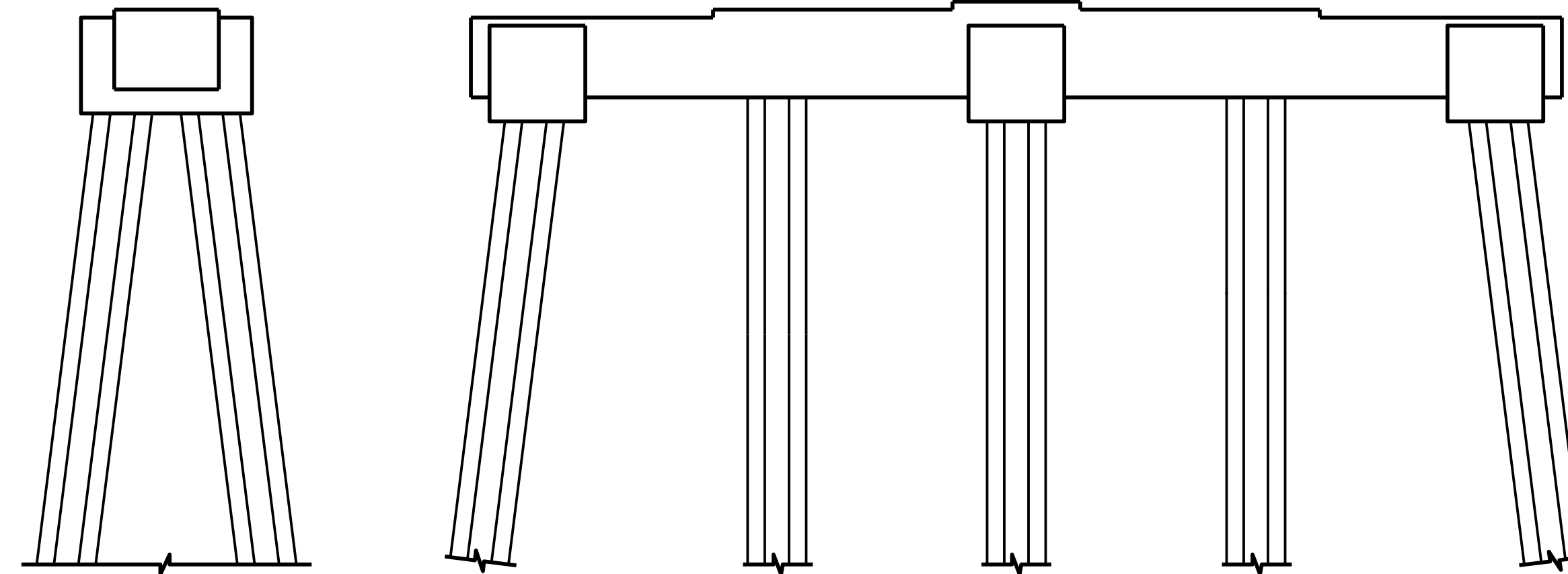


PLAN
TOP OF CAP



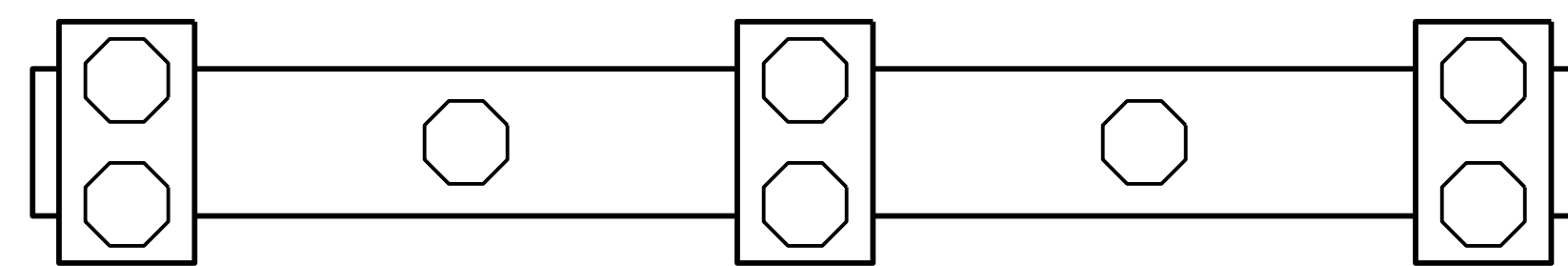
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE
* REPAIR EXTENDS AROUND PILE CAP



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 51 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 50



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Greg Dickey
884E48BCE5B4B6

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

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| 1 | | | 3 | | | S2-121 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

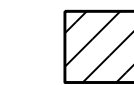
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

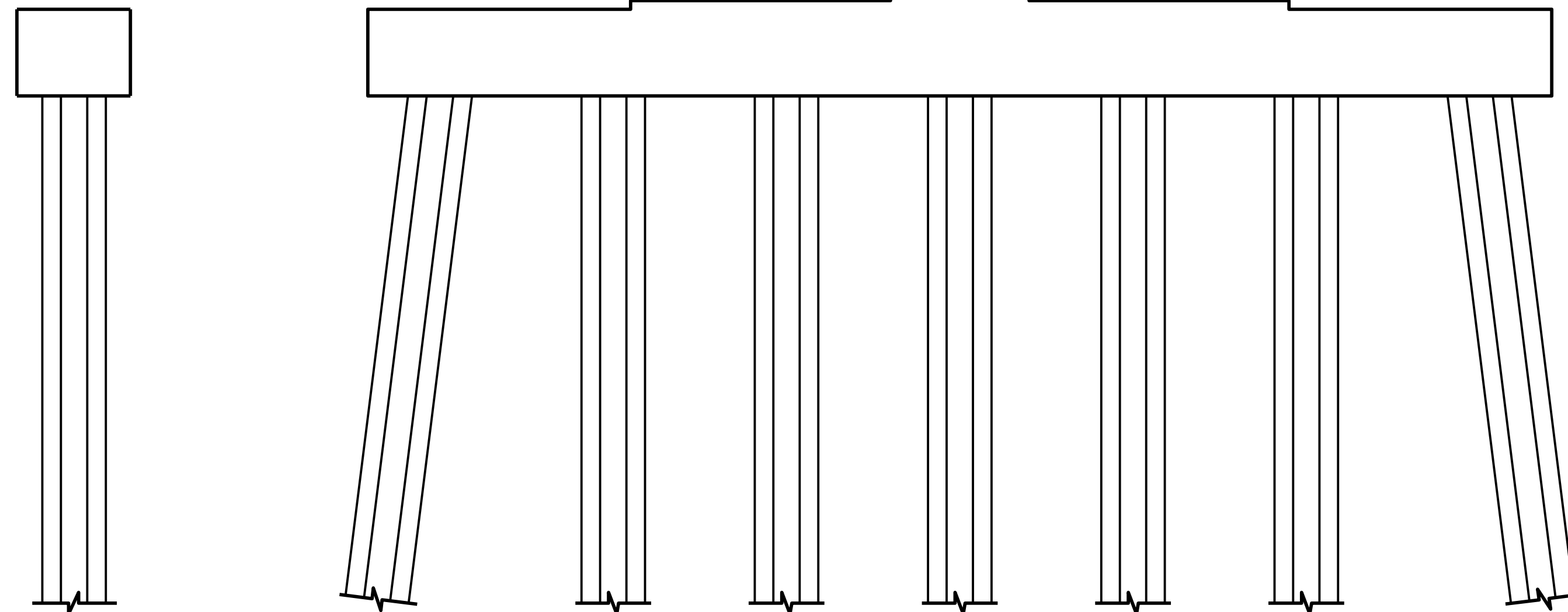
| REPAIRS BENT 51 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

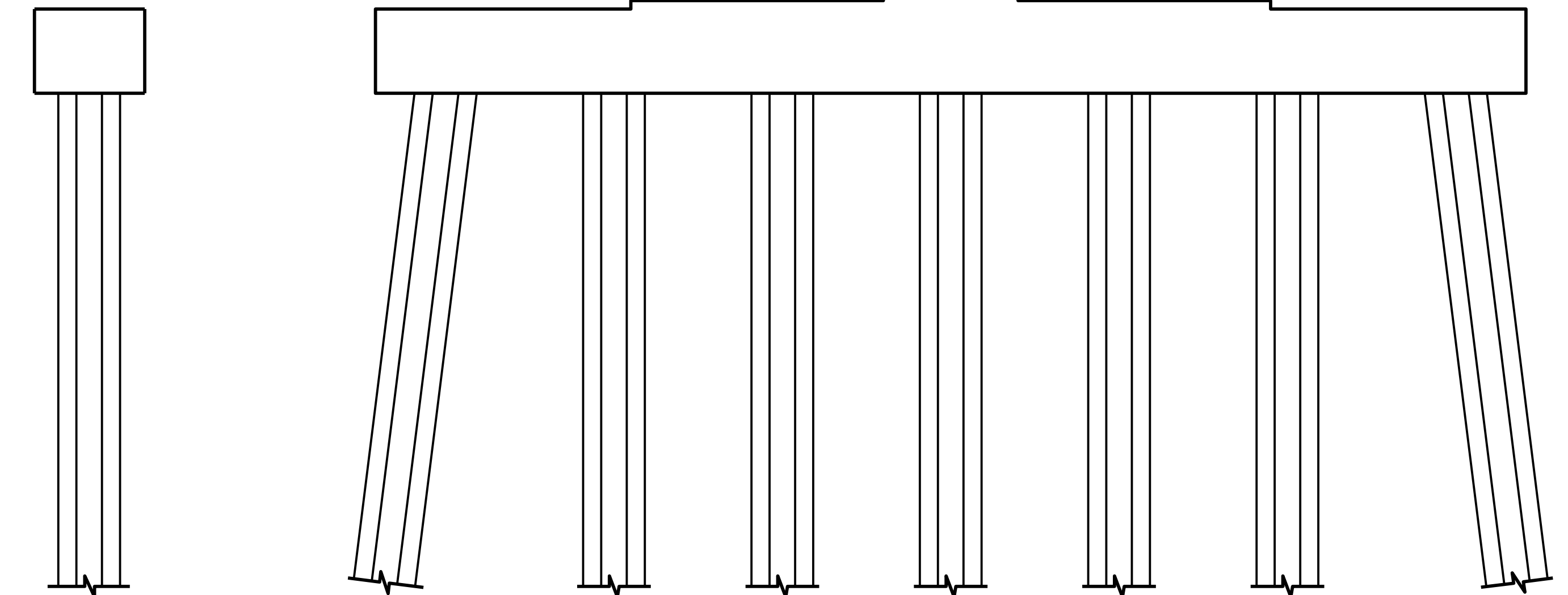


PLAN
TOP OF CAP



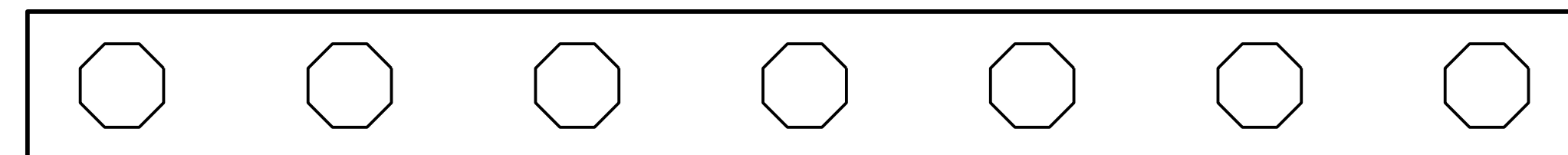
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 52 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 51



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Greg Dickey
884E488CE58486...

DRAWN BY : M.A.LEE DATE : 8/2016
 CHECKED BY : P.BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-122 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

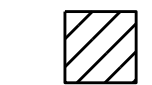

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

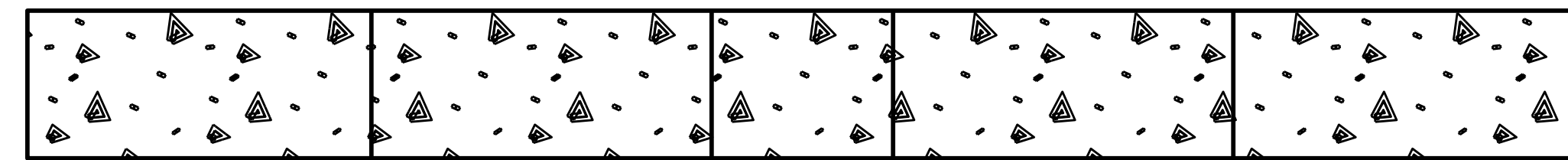
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

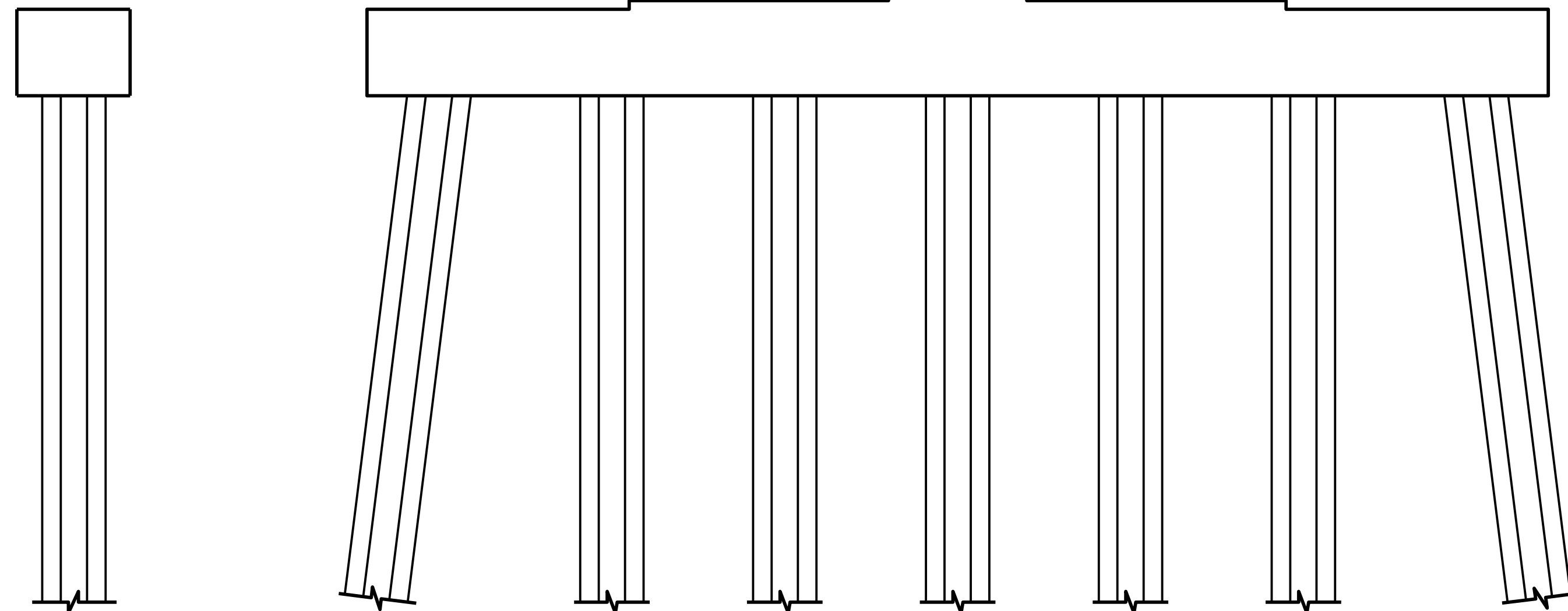
| REPAIRS BENT 52 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 0 | 0 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

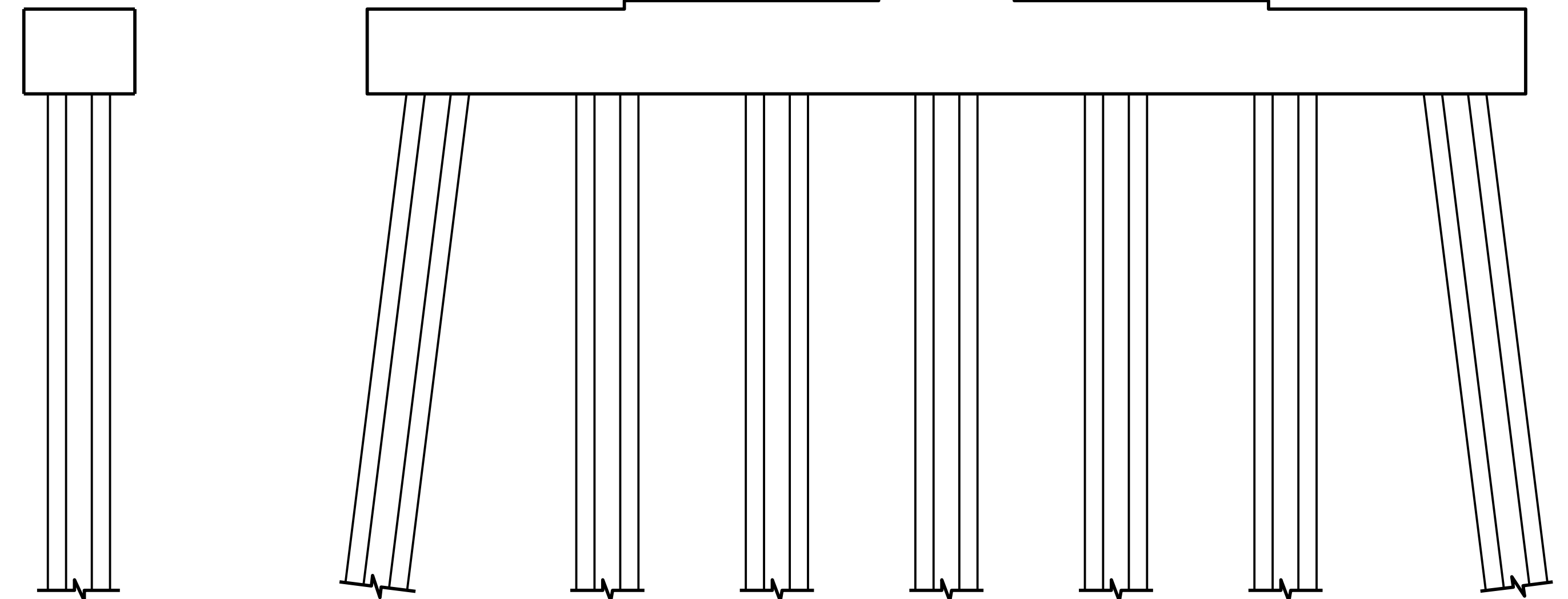


PLAN
TOP OF CAP



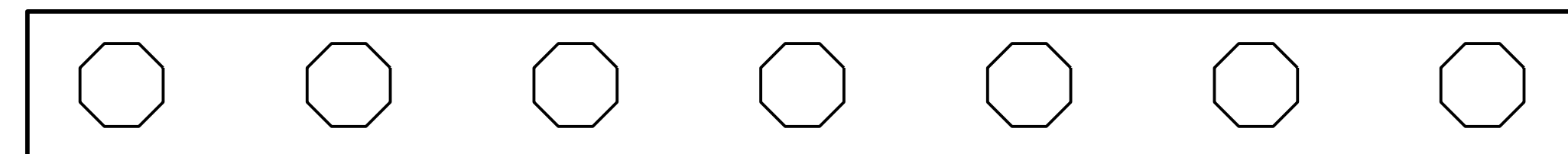
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

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

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 53 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 52



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Greg Dickey
884E488CE58486

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

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gdickey

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| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-123 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

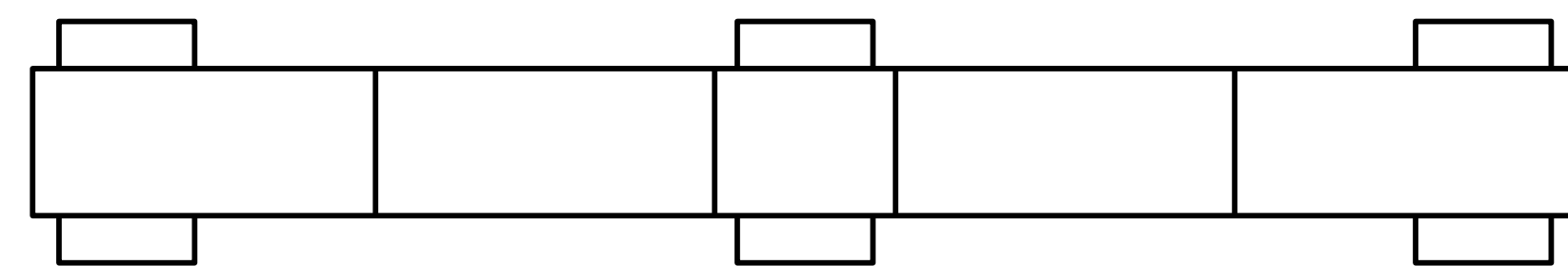
REPAIR QUANTITY TABLE

| REPAIRS BENT 53 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 26.3 | 13.2 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

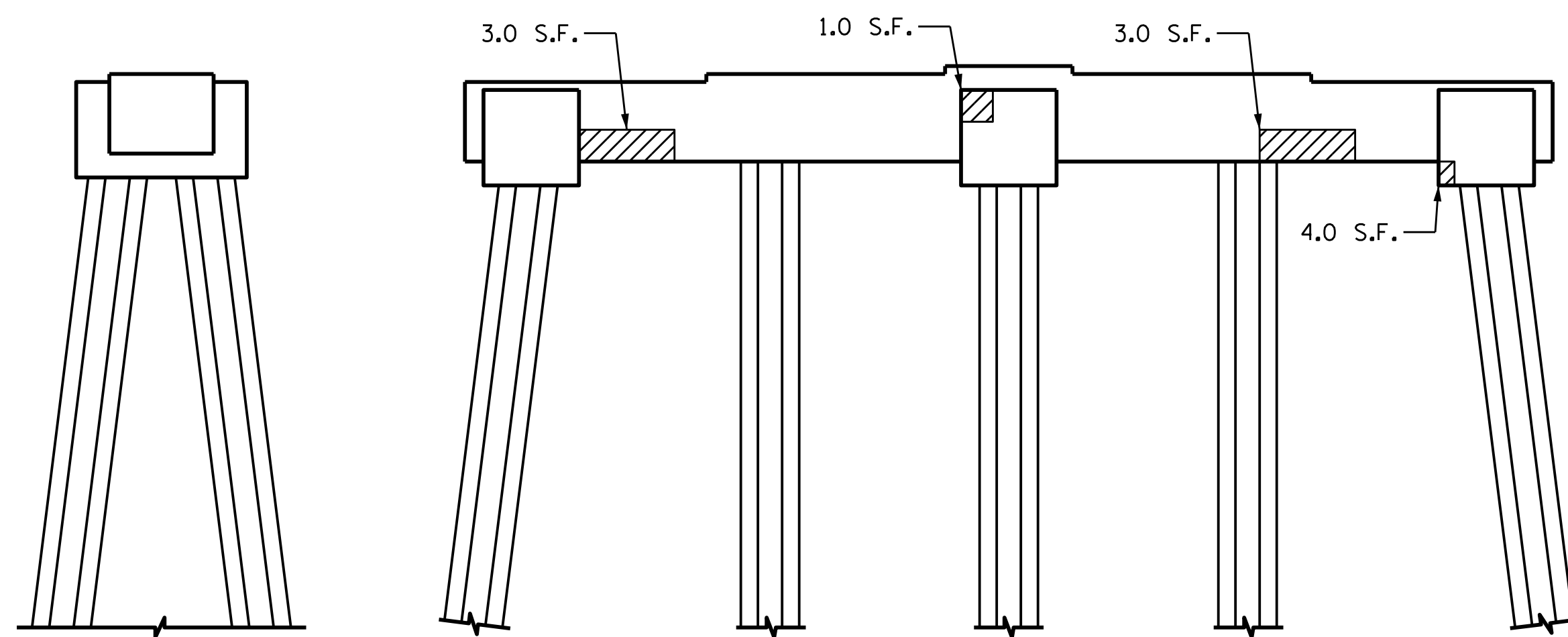
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

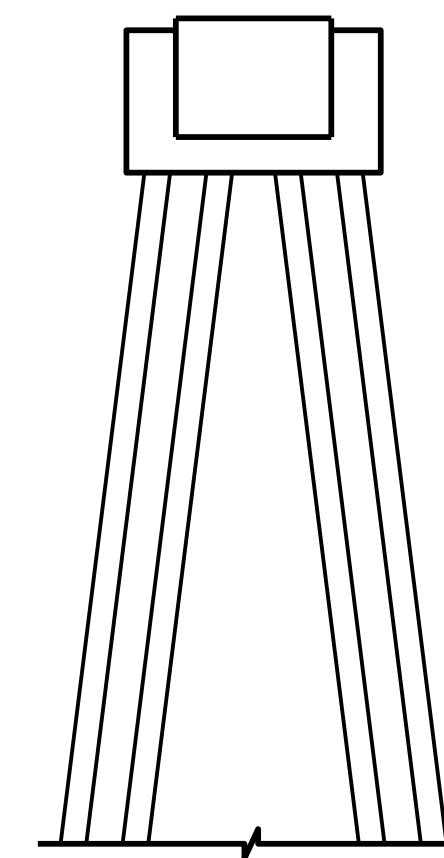


PLAN
TOP OF CAP

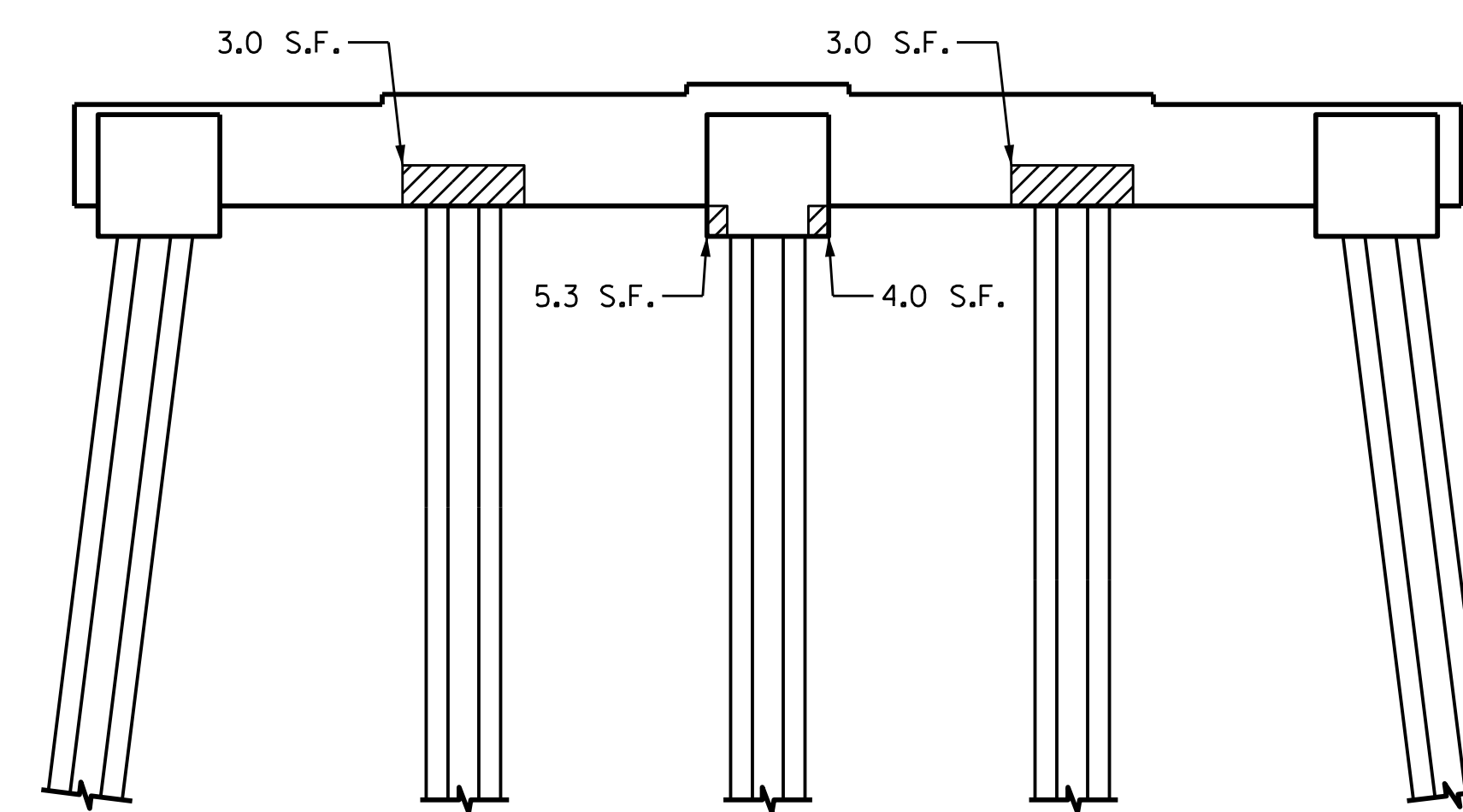


END VIEW
WEST SIDE

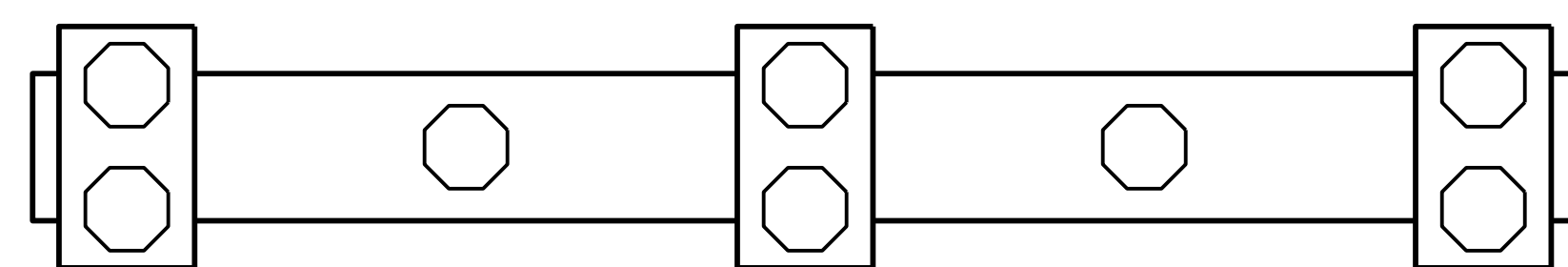
ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE



ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 54 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 53



DocuSigned by:
Greg Dickey
884E488CE58486

DRAWN BY : M.A.LEE DATE : 8/2016
CHECKED BY : P.BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-124 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

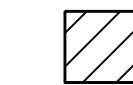
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

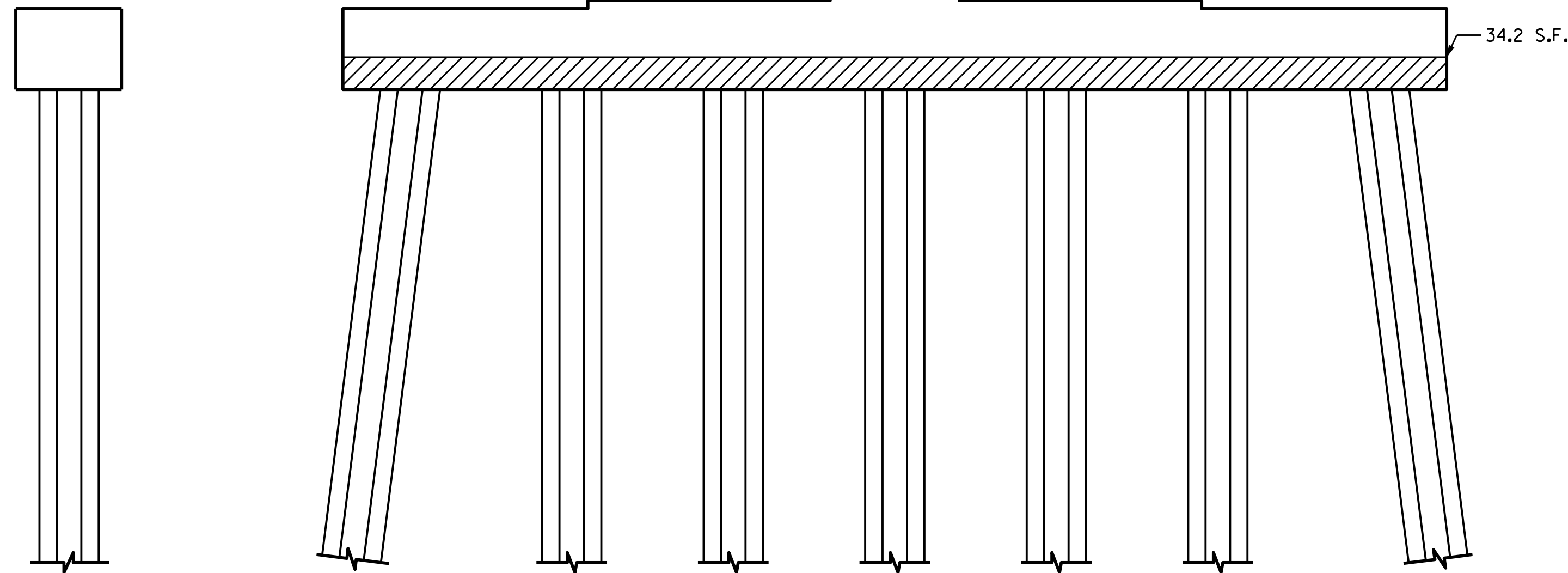
| REPAIRS BENT 54 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 46.2 | 23.1 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

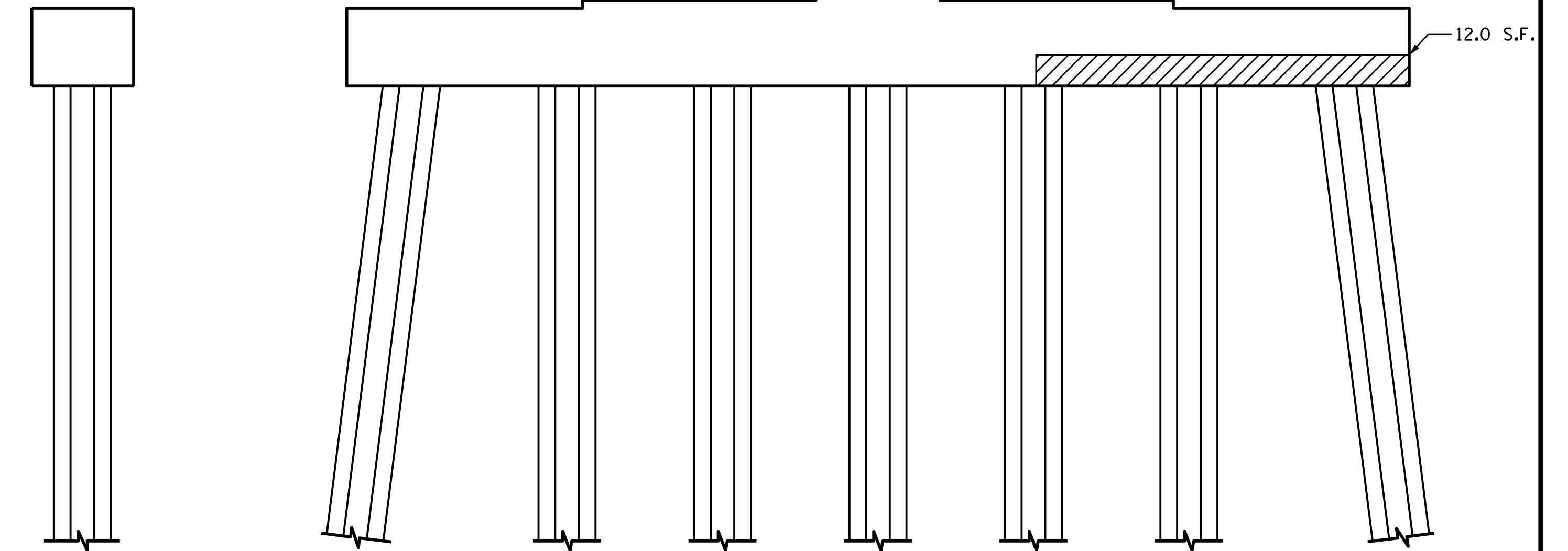


PLAN
TOP OF CAP



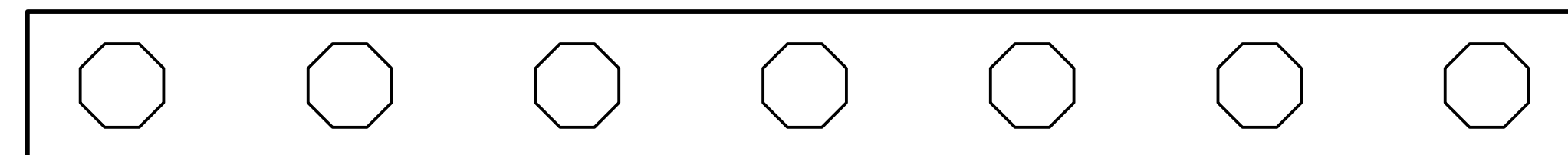
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 55 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 54



DocuSigned by:
Greg Dickey
884E488CE5848E...

DRAWN BY : M.A.LEE DATE : 8/2016
 CHECKED BY : P.BRYANT DATE : 8/2016

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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-125 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

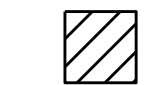

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

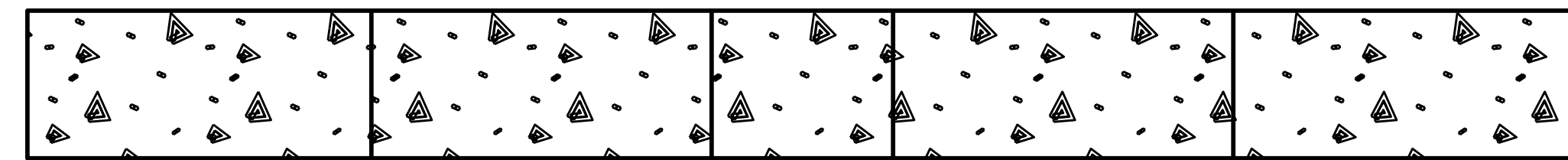
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

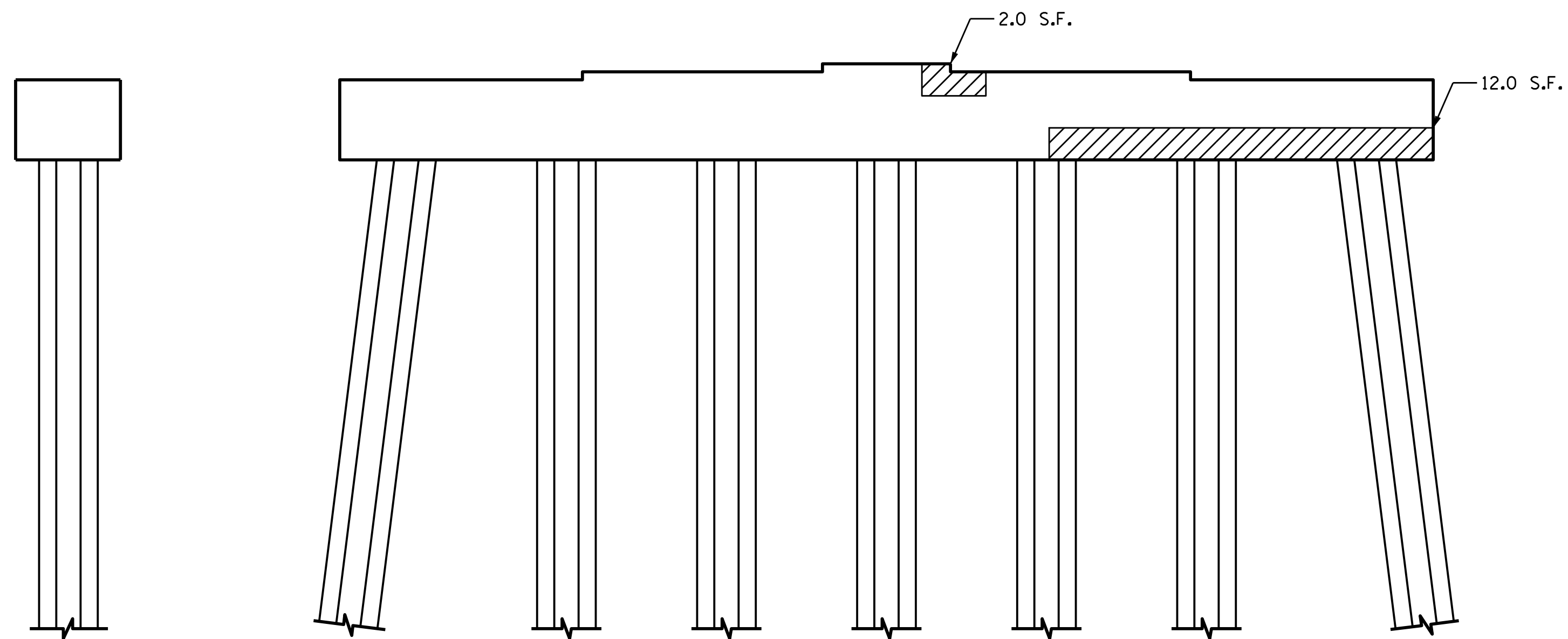
| REPAIRS BENT 55 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 23.0 | 11.5 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING



PLAN
TOP OF CAP

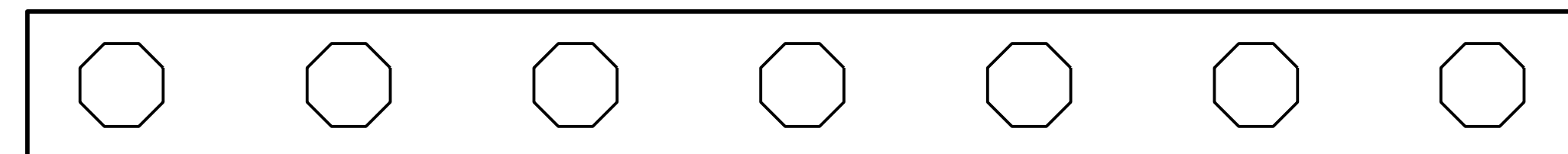


END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 56 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 55



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Greg Dickey
884E488CE58486...

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-126 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

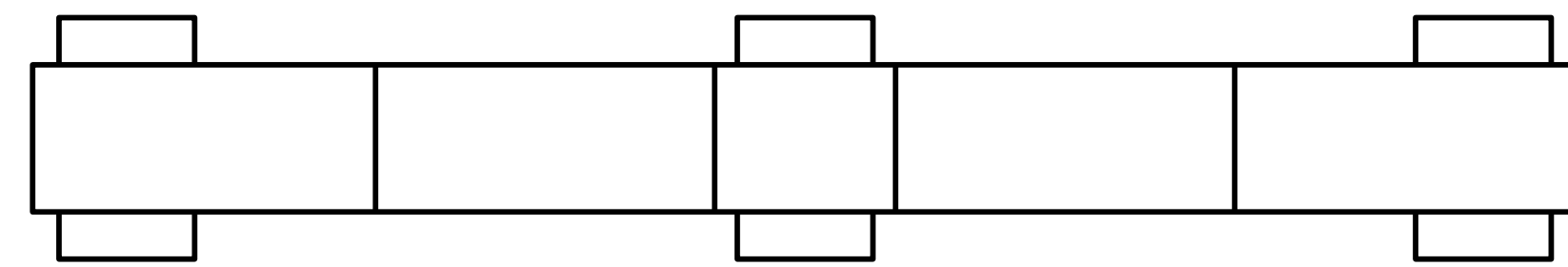
REPAIR QUANTITY TABLE

| REPAIRS BENT 56 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 130.1 | 65.1 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | LN. FT | | LN. FT | |
| CAP | 0 | | | |

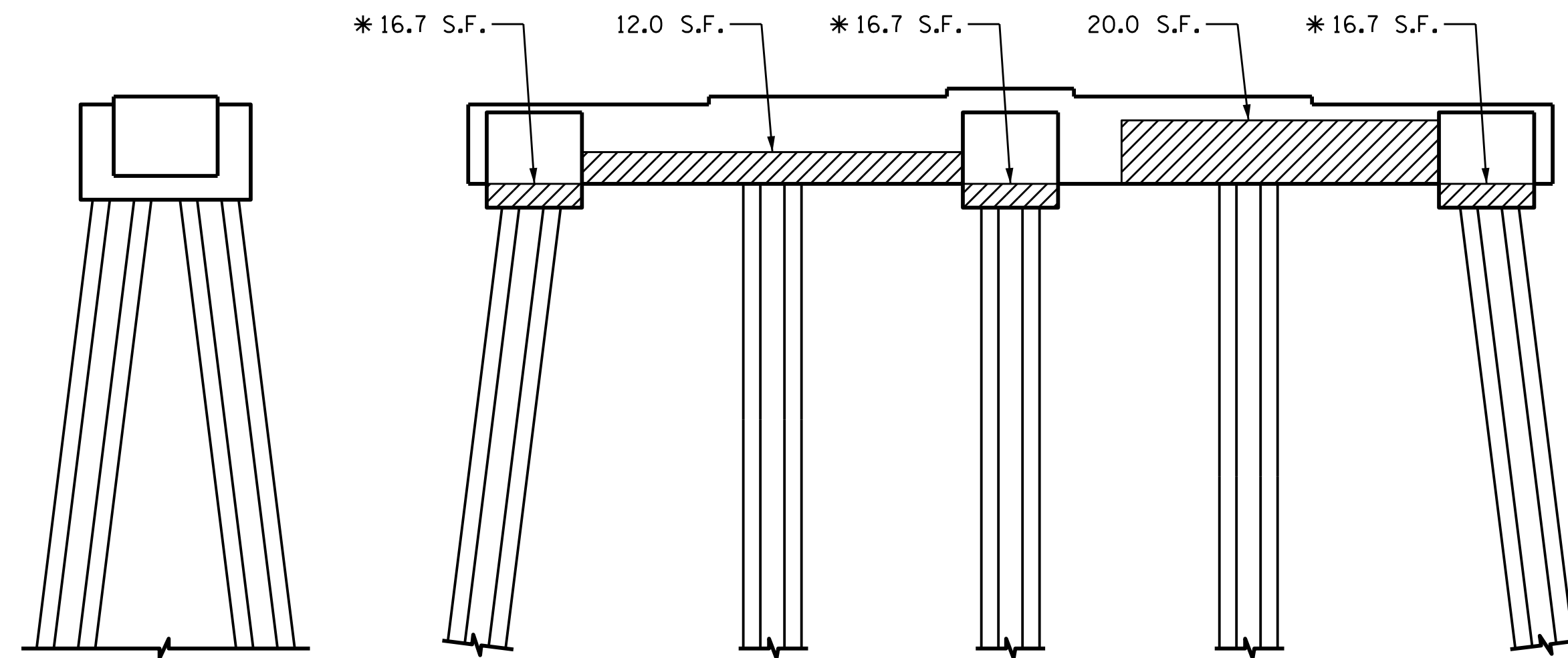
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

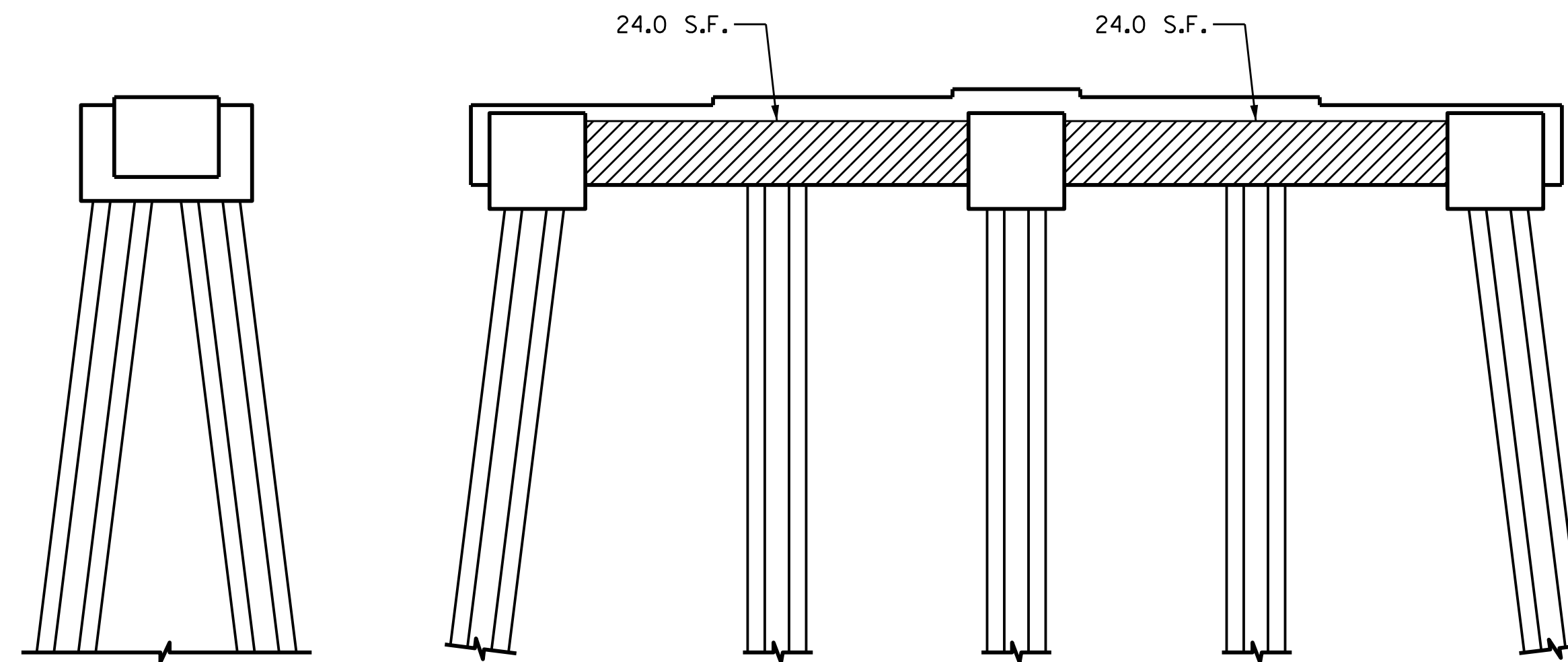


PLAN
TOP OF CAP



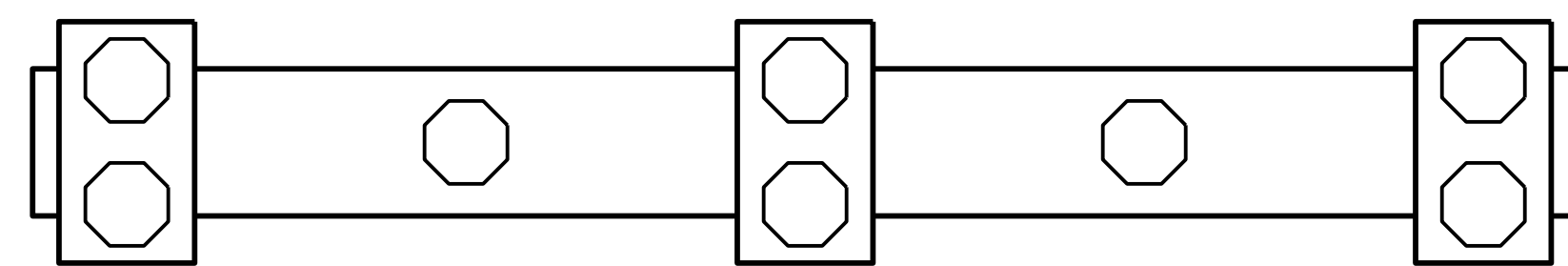
END VIEW
EAST SIDE

ELEVATION
SOUTH SIDE
* REPAIR EXTENDS AROUND PILE CAP



END VIEW
WEST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 57 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 56



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| REVISIONS | | | | | | SHEET NO. |
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| 1 | | | 3 | | | S2-127 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

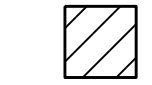
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

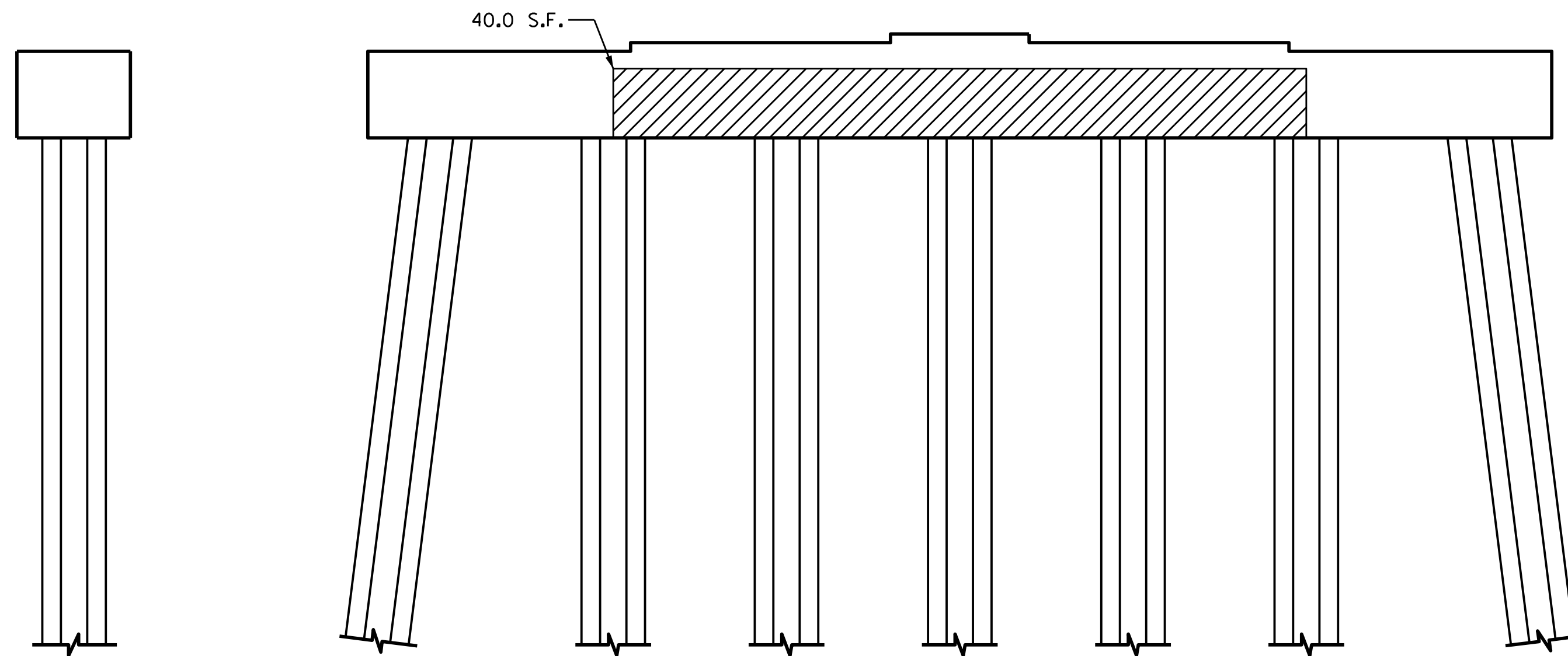
| REPAIRS BENT 57 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 40.5 | 20.3 | | |
| CAP (HORIZONTAL, CORNER) | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |

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

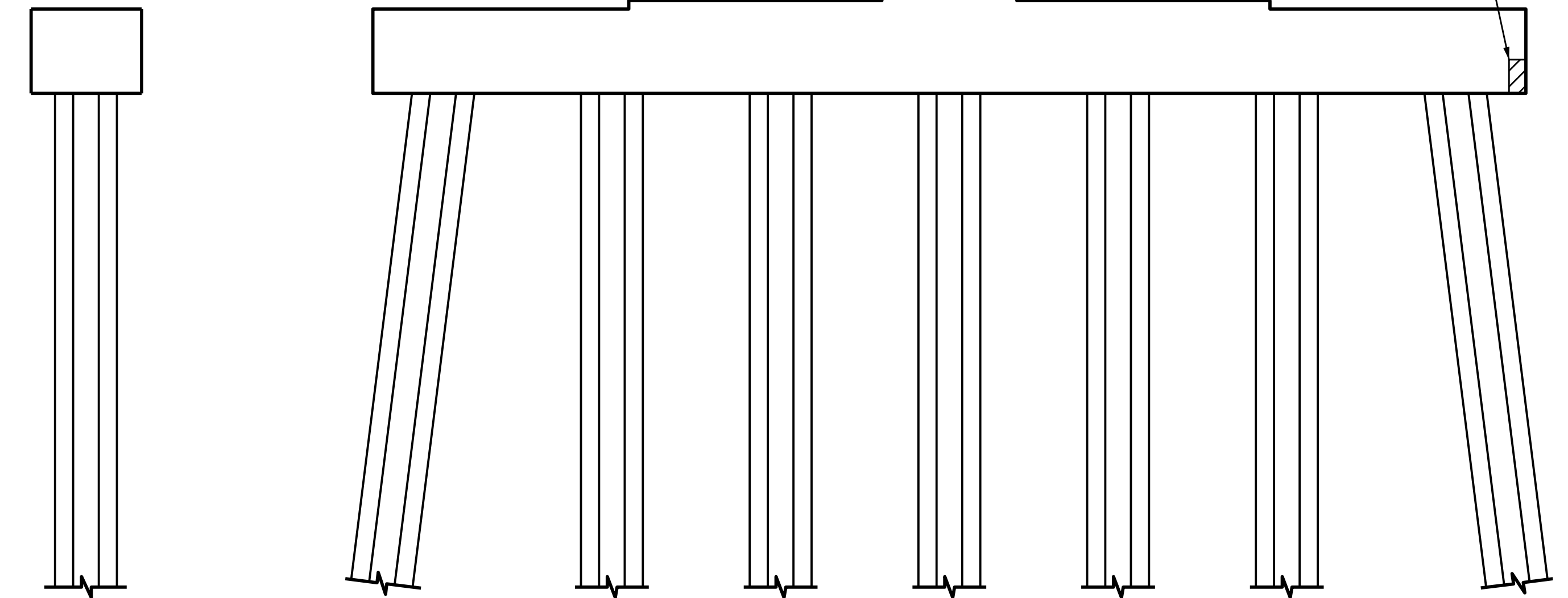
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



PLAN
TOP OF CAP



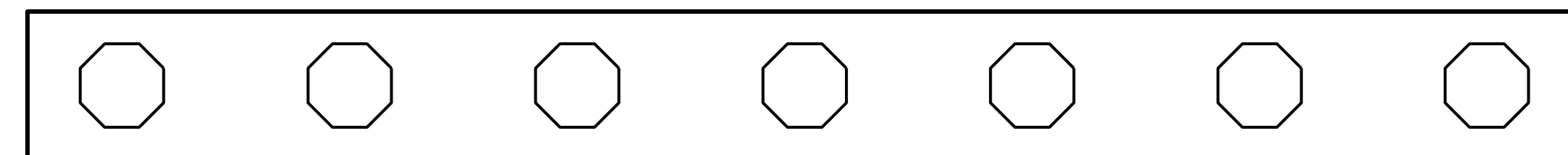
ELEVATION
NORTH SIDE



ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

END VIEW
WEST SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 58 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 57



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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-128 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

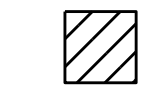

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

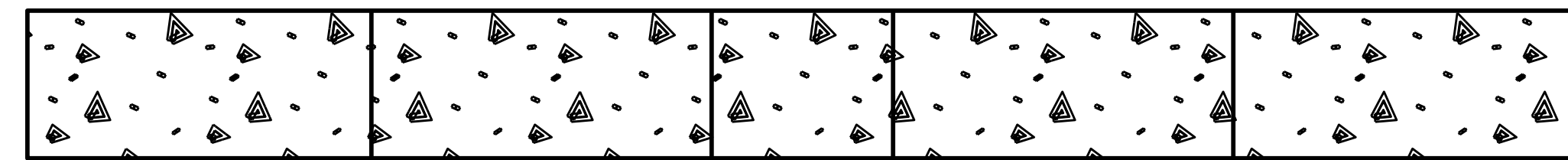
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

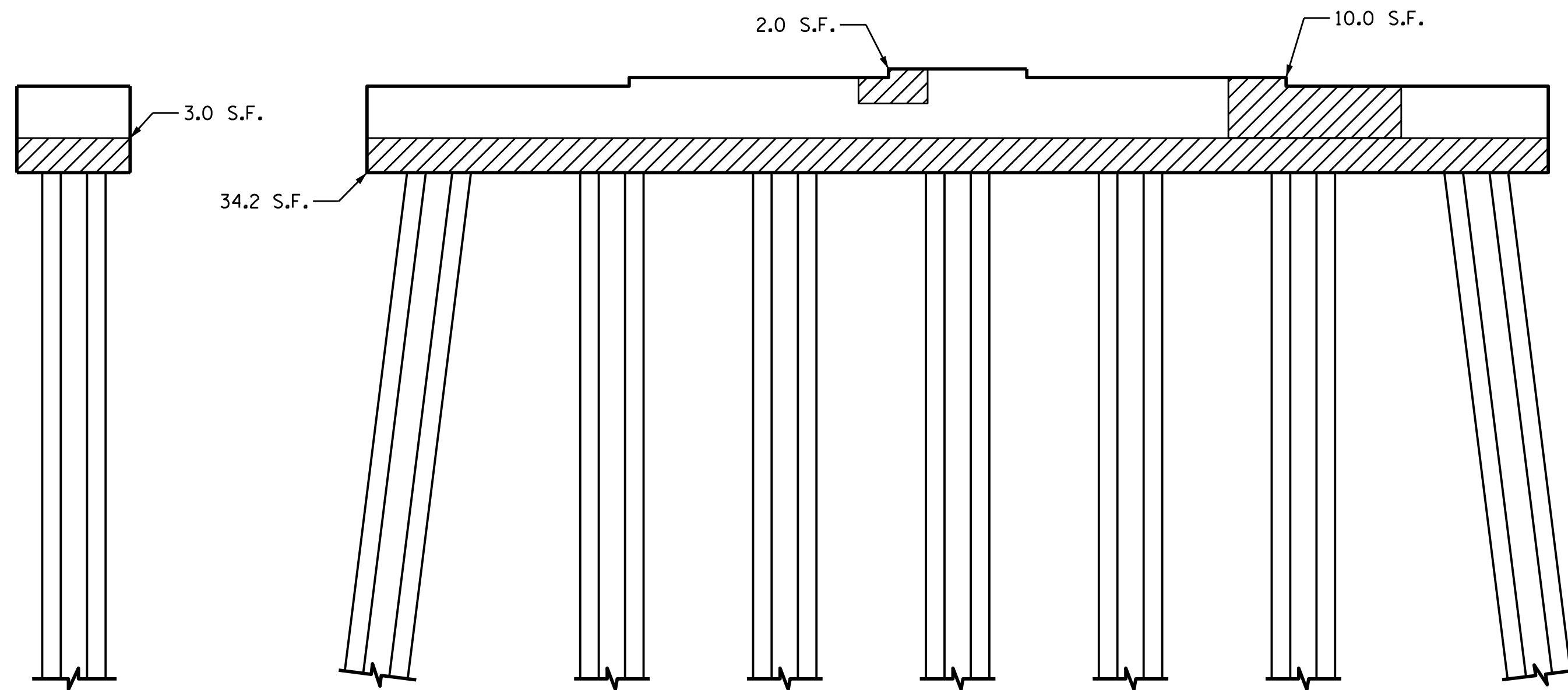
| REPAIRS BENT 58 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 88.2 | 44.1 | | |
| CAP (HORIZONTAL, CORNER) | 53.8 | 26.9 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 111.0 | | |

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

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
-  - EPOXY COATING

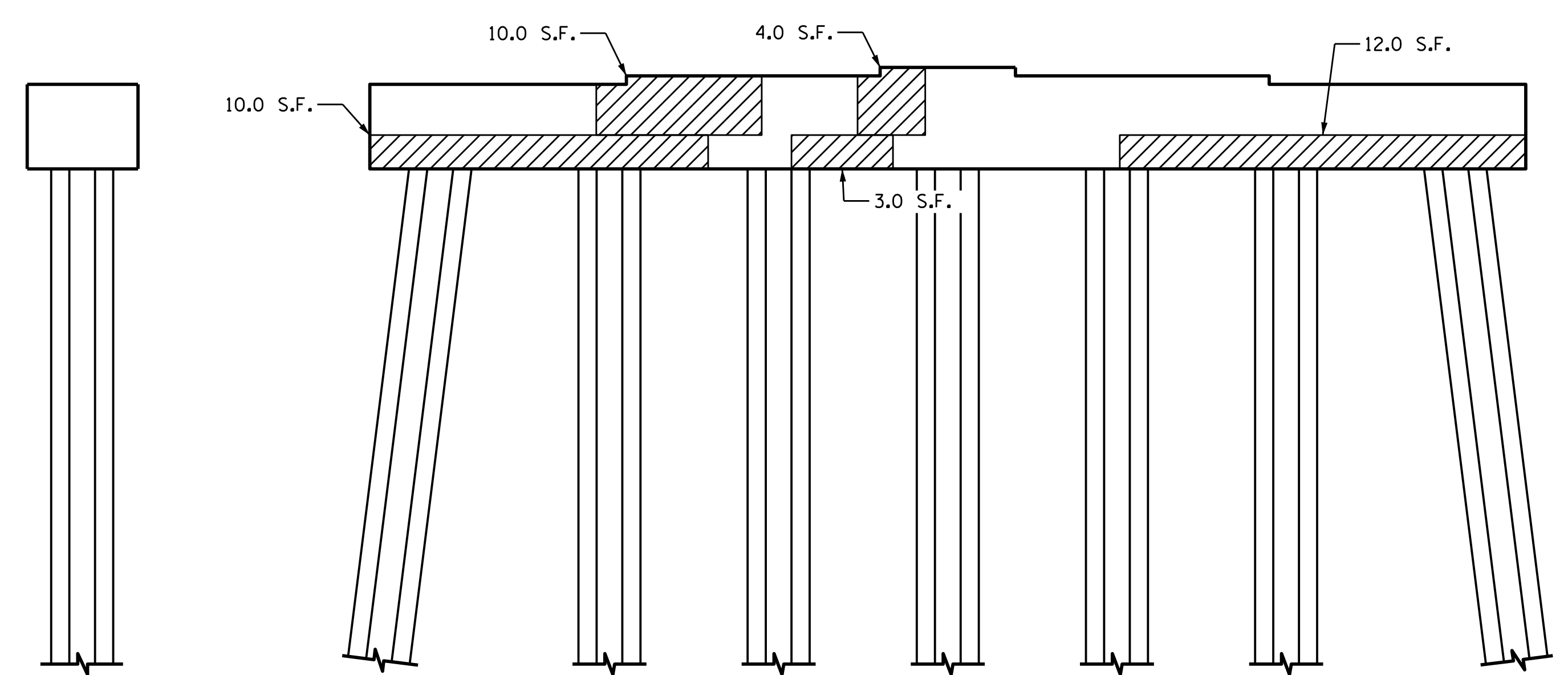


PLAN
TOP OF CAP



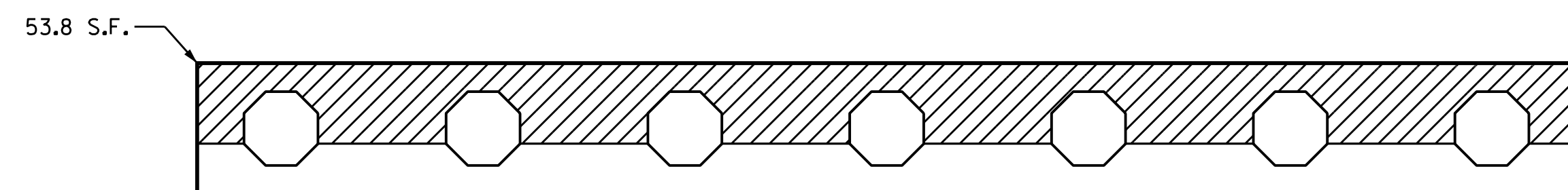
END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



PLAN
BOTTOM OF CAP

PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 59 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURES
BENT 58



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Greg Dickey
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| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-129 |
| 2 | | | 4 | | | |

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.




FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

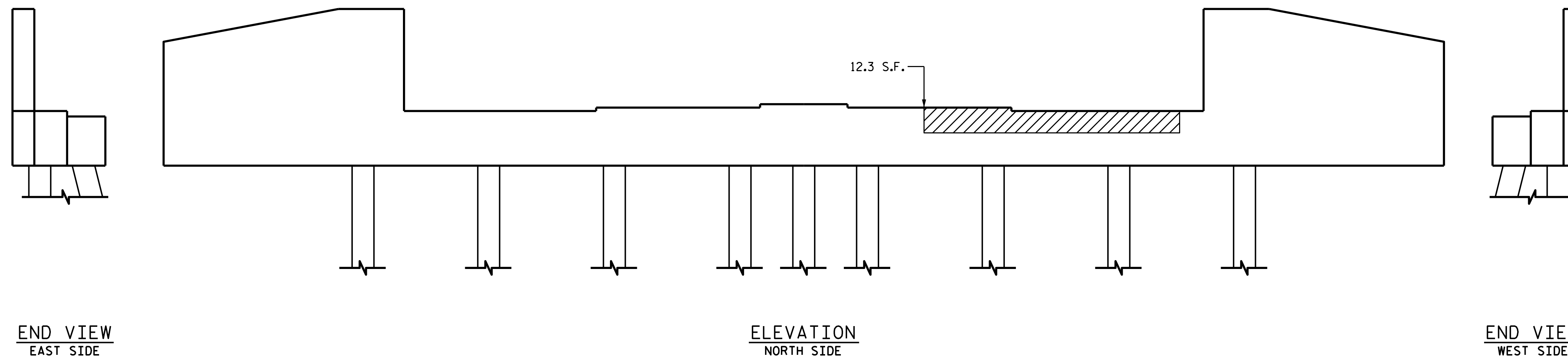
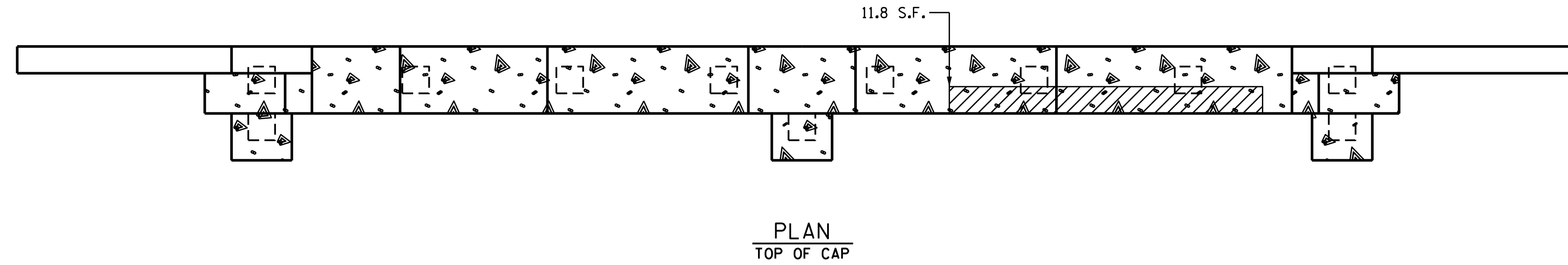
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

| REPAIRS END BENT 2 | QUANTITIES | | | |
|--------------------------|------------|-----------|---------|-----------|
| | ESTIMATE | | ACTUAL | |
| SHOTCRETE REPAIRS | AREA SF | VOLUME CF | AREA SF | VOLUME CF |
| CAP (VERTICAL FACE) | 12.3 | 6.2 | | |
| CAP (HORIZONTAL, CORNER) | 11.8 | 5.9 | | |
| EPOXY RESIN INJECTION | | LN. FT | | LN. FT |
| CAP | | 0 | | |
| EPOXY COATING | | AREA SF | | LN. FT |
| CAP | | 115.3 | | |

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

-  - SHOTCRETE REPAIR
-  - EPOXY RESIN INJECTION
-  - EPOXY COATING



PROJECT NO. B-5939

CARTERET COUNTY

BRIDGE NO. 6

SHEET 60 OF 60

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 2



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884E488CE58486...

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-130 |
| 2 | | | 4 | | | |

NOTES

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

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

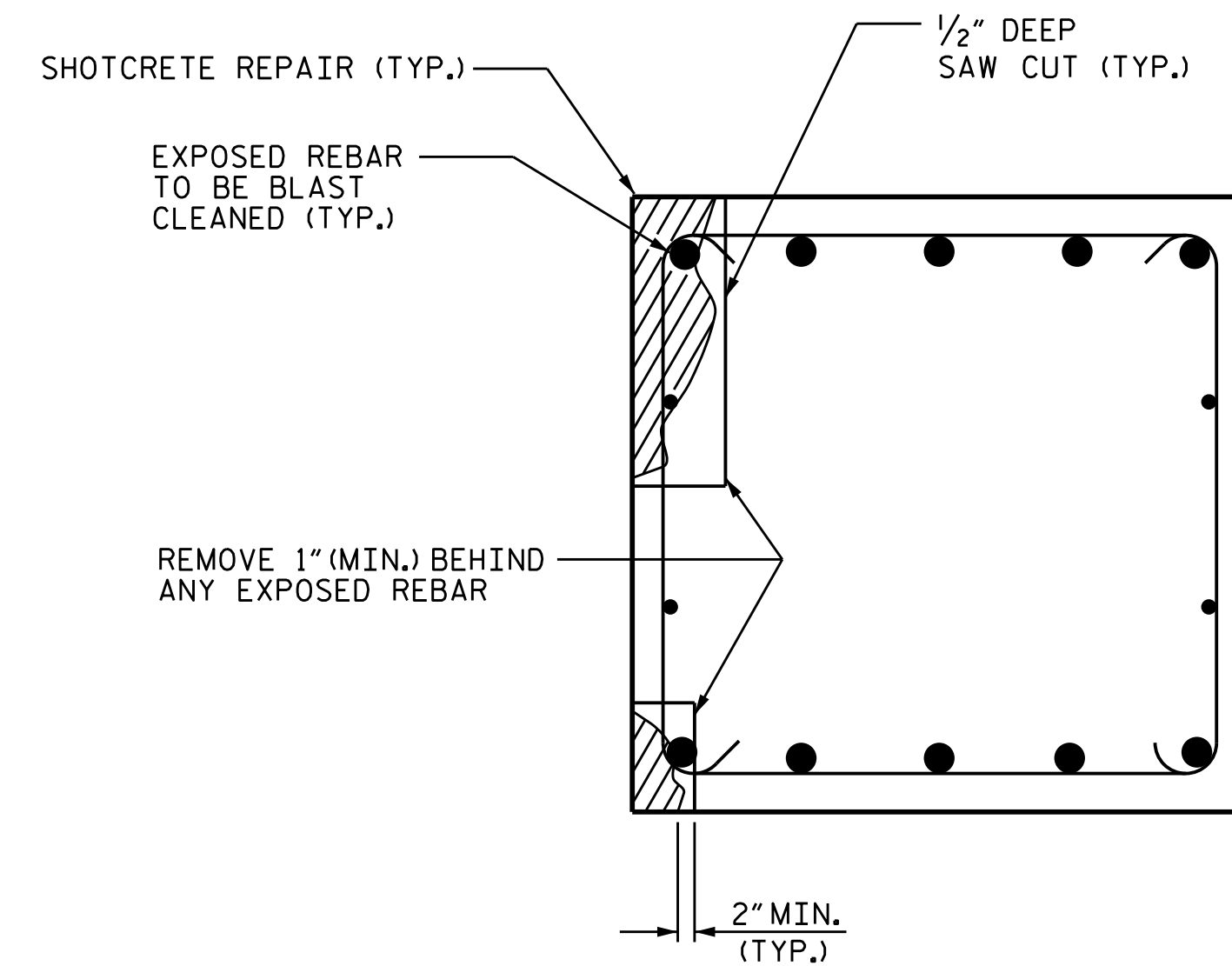
CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

ALL REPAIRS ON GIRDER SHALL USE PRESTRESSED CONCRETE GIRDER REPAIR MATERIAL.

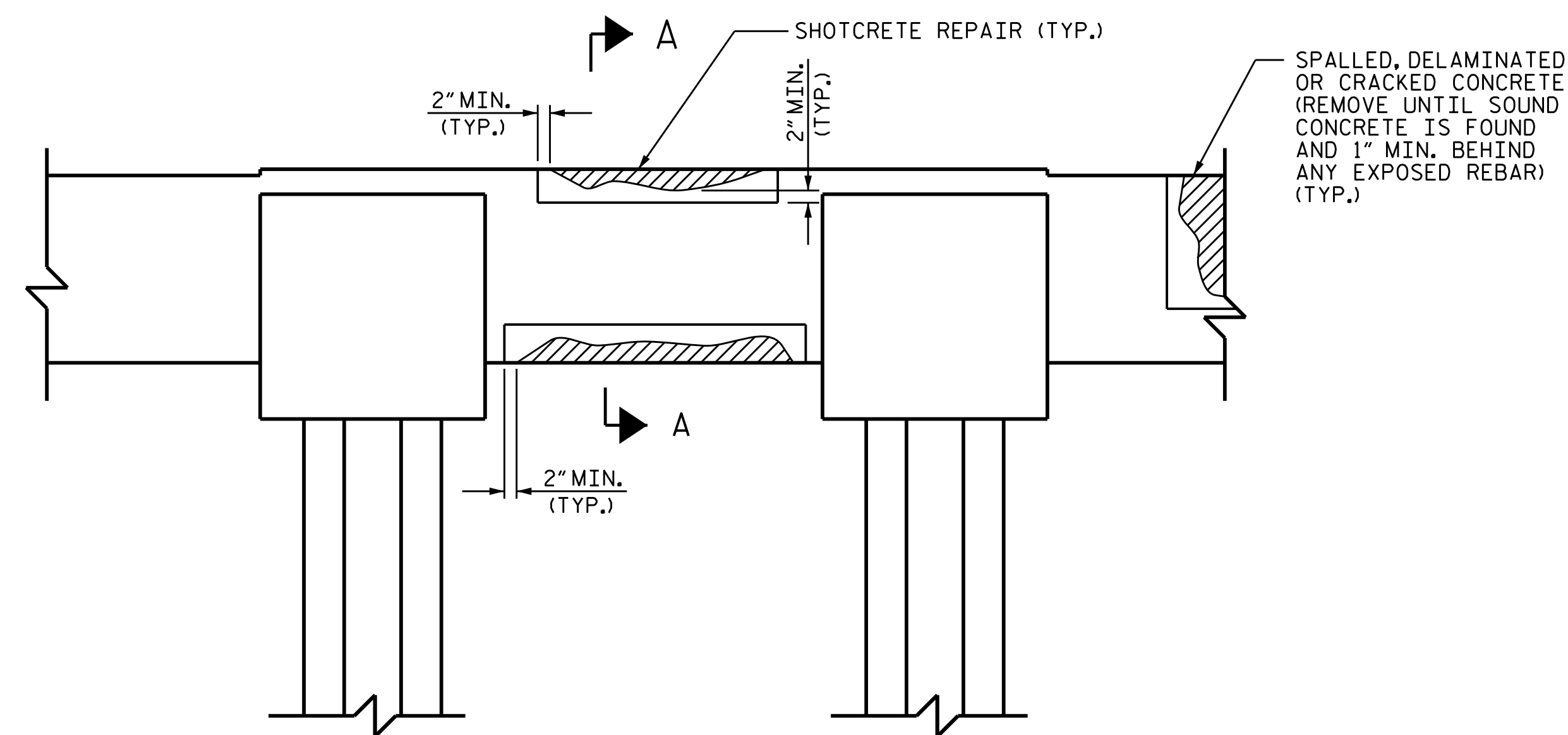
FOR PRESTRESSED CONCRETE GIRDER REPAIR, SEE "PRESTRESSED CONCRETE GIRDERS WITH THERMAL SPRAY ANODE" SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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



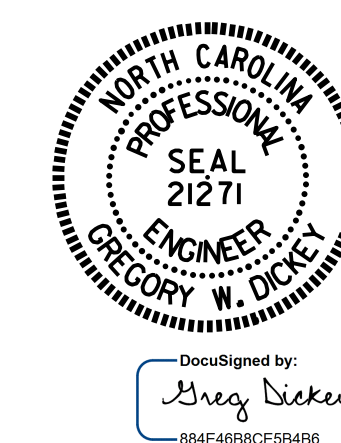
SECTION A-A



BENT CAP REPAIRS

CAP REPAIR
(COLUMN & FOOTING REPAIRS SIMILAR)

PROJECT NO. B-5939
CARTERET COUNTY
 BRIDGE NO. 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL
 SUBSTRUCTURE
 REPAIR DETAILS**

DRAWN BY : R.WEISZ DATE : 2/2017
 CHECKED BY : P.BRYANT DATE : 2/2017

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| NO. | BY: | DATE: | NO. | BY: | DATE: | TOTAL SHEETS |
| 1 | | | 3 | | | S2-131 |
| 2 | | | 4 | | | - |

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

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

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

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

REINFORCING STEEL:

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

STRUCTURAL STEEL:

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

HANDRAILS AND POSTS:

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

SPECIAL NOTES:

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

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