

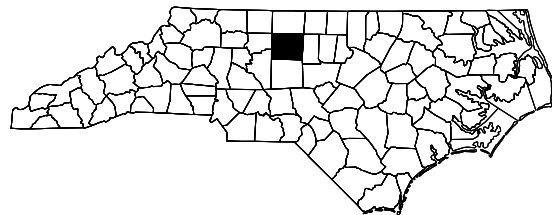
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and sealed by the individuals whose names and license  
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**This file or an individual page  
shall not be considered a certified document.**

**PROJECT: I-5790**

**CONTRACT: C203785**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GUILFORD COUNTY**

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | I-5790                      | 1           |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 53030.1.1       | NHPIM-0085(4)               | P.E.        |              |
| 53030.3.1       | NHPIM-0085(4)               | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

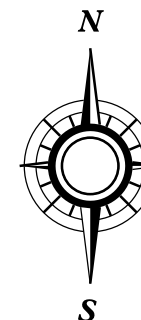
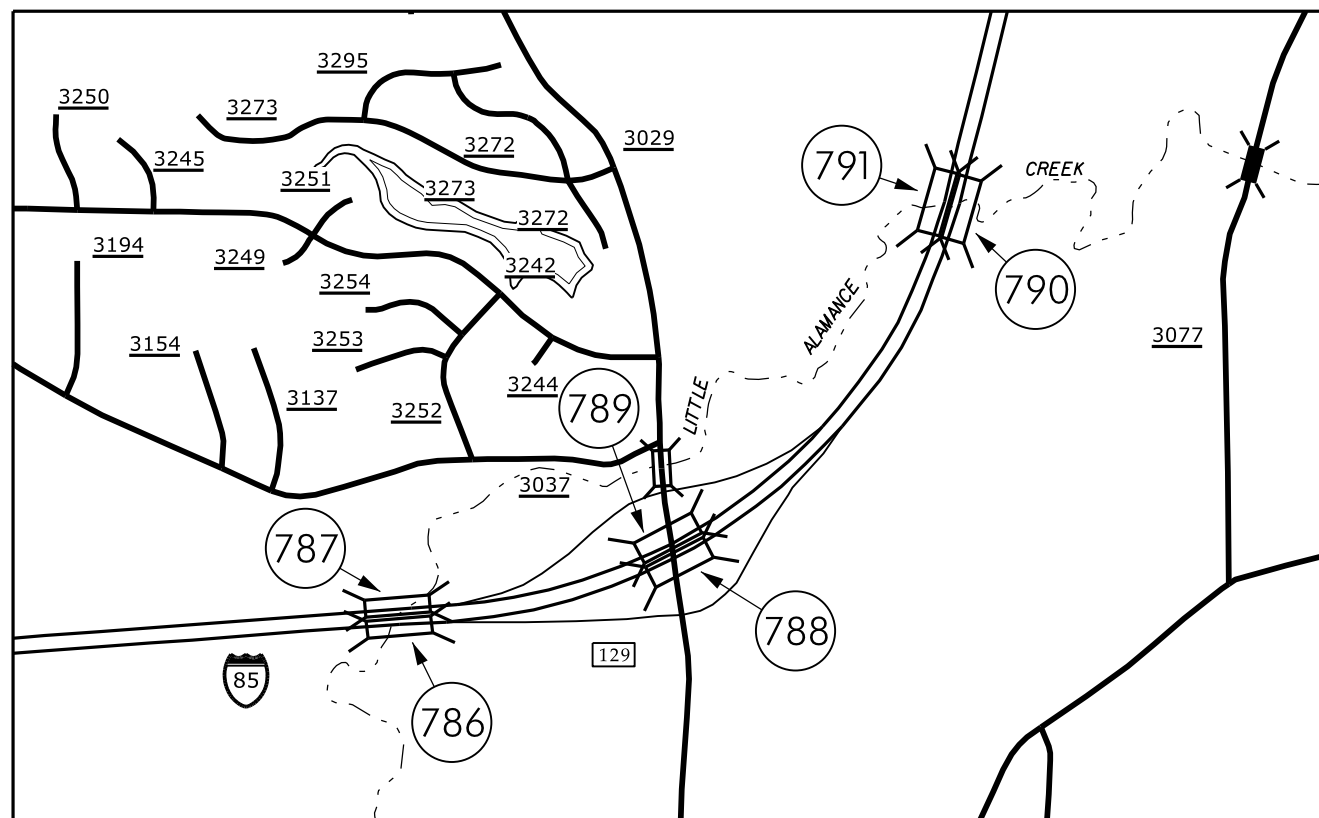
**LOCATION:**

**GUILFORD COUNTY:**

**BRIDGE #786 AND #787 ON I-85 OVER LITTLE ALAMANCE CREEK**  
**BRIDGE #788 AND #789 ON I-85 OVER SR 3029 (YOUNGS MILL ROAD)**  
**BRIDGE #790 AND #791 ON I-85 OVER LITTLE ALAMANCE CREEK**

**TYPE OF WORK:**

**BRIDGE PRESERVATION - JOINT DEMOLITION OF EXISTING BRIDGES**



**DESIGN DATA**

|                      |   |        |
|----------------------|---|--------|
| BRIDGE #786 ADT 2012 | = | 18,000 |
| BRIDGE #787 ADT 2012 | = | 18,000 |
| BRIDGE #788 ADT 2012 | = | 18,000 |
| BRIDGE #789 ADT 2012 | = | 18,000 |
| BRIDGE #790 ADT 2012 | = | 18,000 |
| BRIDGE #791 ADT 2012 | = | 18,000 |

**PROJECT LENGTH**

|             |   |            |
|-------------|---|------------|
| BRIDGE #786 | = | 0.062 MILE |
| BRIDGE #787 | = | 0.062 MILE |
| BRIDGE #788 | = | 0.026 MILE |
| BRIDGE #789 | = | 0.029 MILE |
| BRIDGE #790 | = | 0.045 MILE |
| BRIDGE #791 | = | 0.045 MILE |

Prepared in the Office of:  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

STRUCTURES MANAGEMENT UNIT  
 1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

**E. M. MURRAY, PE**  
 PROJECT ENGINEER

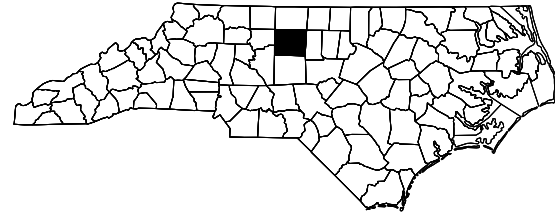
2012 STANDARD SPECIFICATIONS

**LETTING DATE:**  
 MARCH 15, 2016

Designed by:

1/27/2016  
**FARZIN ASEFNIA, PE**  
 PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



**GUILFORD COUNTY**

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | I-5790                      | 1A          |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 53030.1.1       | NHPIM-0085(4)               | P.E.        |              |
| 53030.3.1       | NHPIM-0085(4)               | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

**LOCATION:**

**GUILFORD COUNTY:**

**BRIDGE #786 AND #787 ON I-85 OVER LITTLE ALAMANCE CREEK**  
**BRIDGE #788 AND #789 ON I-85 OVER SR 3029 (YOUNGS MILL ROAD)**  
**BRIDGE #790 AND #791 ON I-85 OVER LITTLE ALAMANCE CREEK**

**TYPE OF WORK:**

**BRIDGE PRESERVATION - JOINT DEMOLITION OF EXISTING BRIDGES**

**INDEX OF SHEETS**

*I*

**TITLE SHEET**

*1A*

**INDEX OF SHEETS**

*S-1*

**TOTAL BILL OF MATERIAL**

*S-2 THRU S-4*

**STRUCTURAL PLANS - GUILFORD #786 AND #787**

*S-5 THRU S-7*

**STRUCTURAL PLANS - GUILFORD #788 AND #789**

*S-8 THRU S-10*

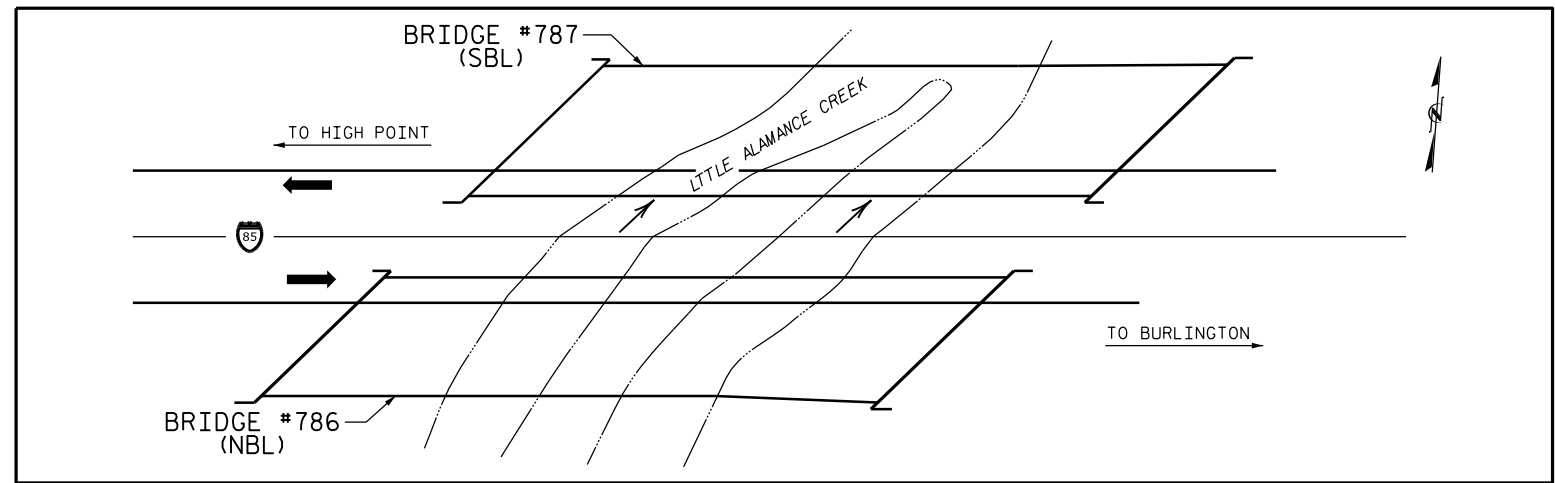
**STRUCTURAL PLANS - GUILFORD #790 AND #791**

*SN*

**STANDARD NOTES**

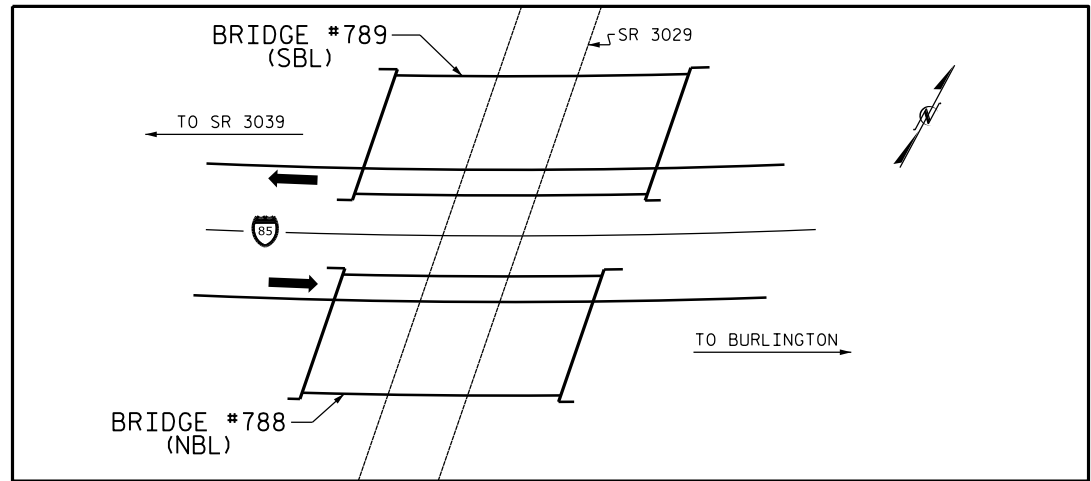
**PROJECT: I-5790**

**CONTRACT: C203785**



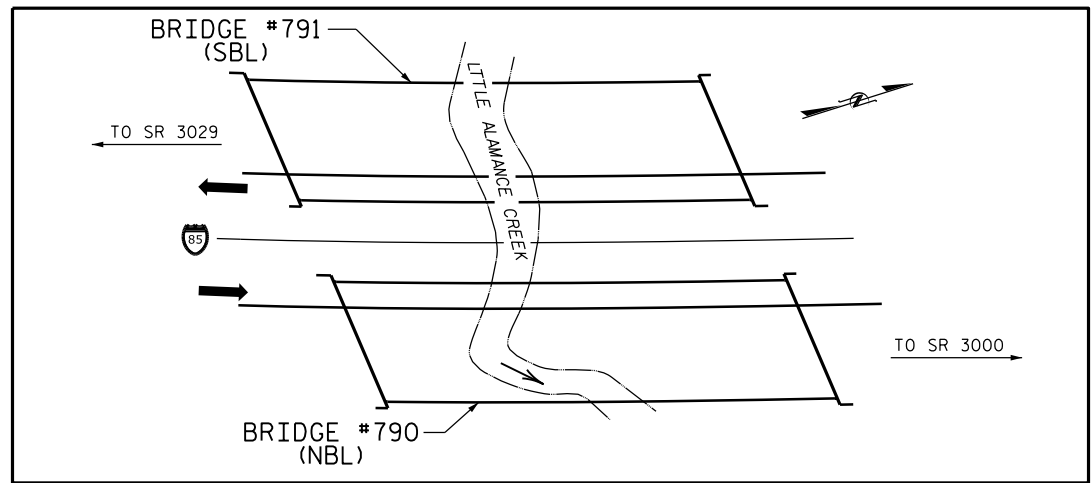
**LOCATION SKETCH**

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



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**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 FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

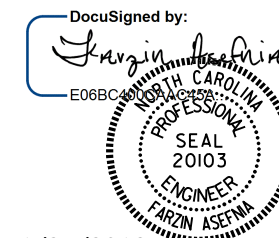
IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

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

**TOTAL BILL OF MATERIAL**

| GUILFORD COUNTY BRIDGE NO. | FOAM JOINT SEALS | ELASTOMERIC CONCRETE | BRIDGE JOINT DEMOLITION |
|----------------------------|------------------|----------------------|-------------------------|
|                            | LUMP SUM         | CU. FT.              | SQ. FT.                 |
| 786                        | LUMP SUM         | 58.0                 | 233.0                   |
| 787                        | LUMP SUM         | 63.0                 | 251.0                   |
| 788                        | LUMP SUM         | 42.0                 | 167.0                   |
| 789                        | LUMP SUM         | 42.0                 | 167.0                   |
| 790                        | LUMP SUM         | 43.0                 | 171.0                   |
| 791                        | LUMP SUM         | 43.0                 | 171.0                   |
| <b>TOTAL</b>               | <b>LUMP SUM</b>  | <b>291.0</b>         | <b>1,160.0</b>          |

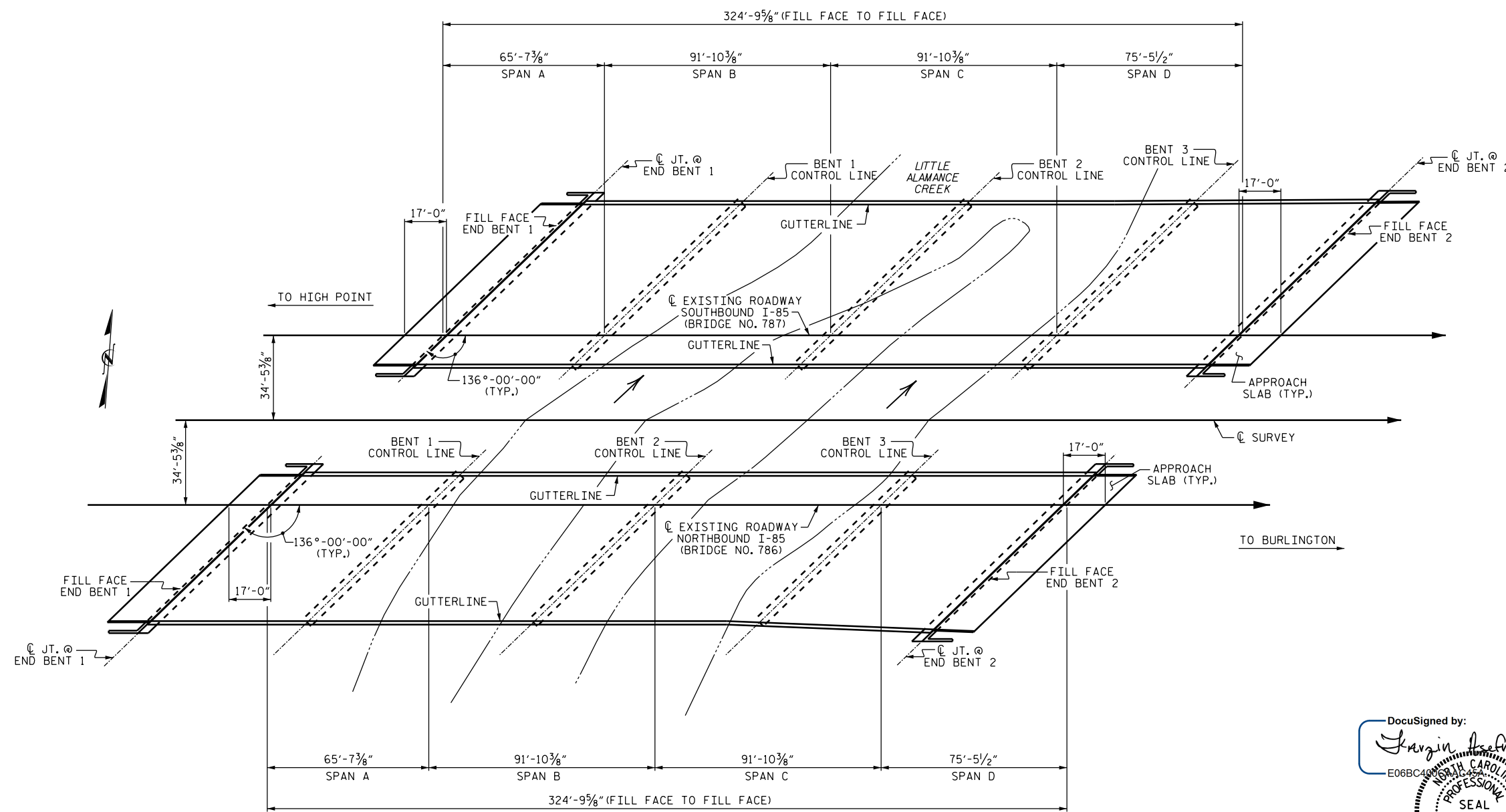
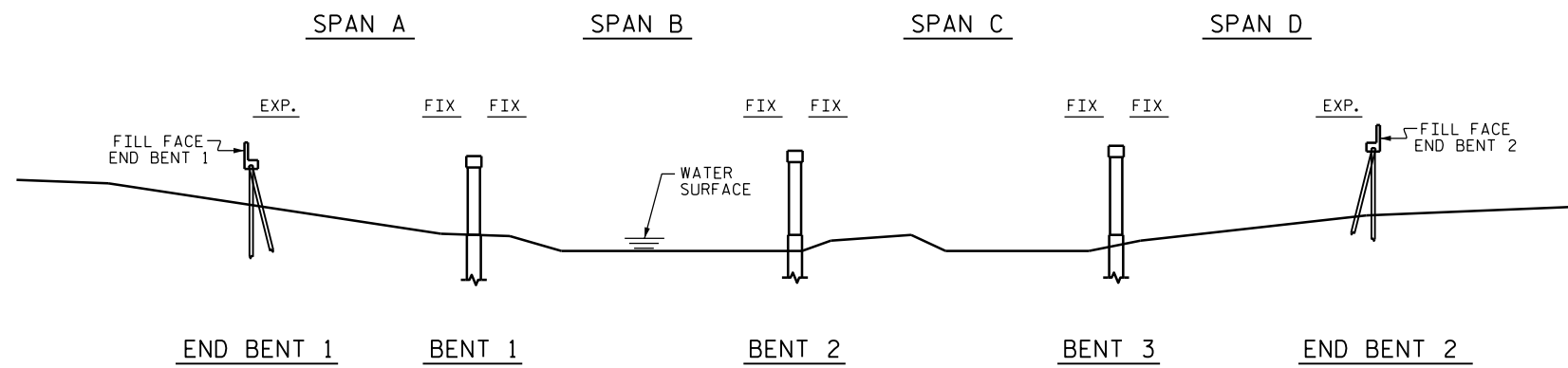
PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 786 - 791



1/27/2016

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |       | SHEET NO.<br>S-1   |
|--|-----|-------|-----|-----|-------|--------------------|
| TOTAL BILL OF MATERIAL   |     |       |     |     |       |                    |
| REVISIONS  |     |       |     |     |       | TOTAL SHEETS<br>10 |
| NO.  | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1  |     |       | 3   |     |       |                    |
| 2  |     |       | 4   |     |       |                    |

DRAWN BY : T.L. AVERETTE DATE : 10/2015  
 CHECKED BY : J.P. ADAMS DATE : 10/2015



**PLAN**

FOUNDATIONS NOT SHOWN FOR CLARITY

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 786 & 787

DocuSigned by:  
*Farzin Asefnia*  
 E06BC400  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 20103  
 ENGINEER  
 FARZIN ASEFNIA

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

DRAWN BY : M. WELDON    DATE : 10/2015  
 CHECKED BY : F. ASEFNIA    DATE : 10/2015

1/27/2016

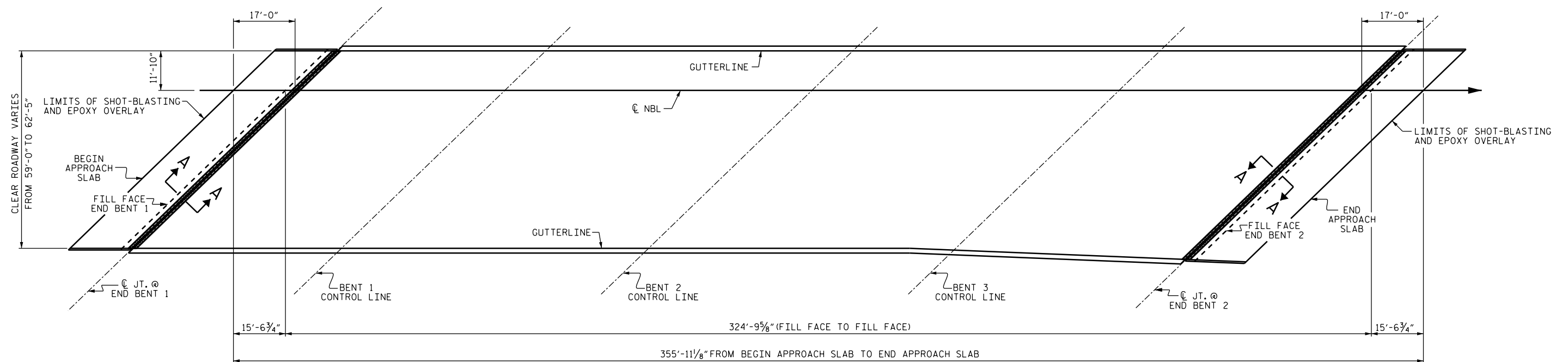
27-JAN-2016 09:02  
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 mweldon

SUMMARY OF QUANTITIES

|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 58.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 233.0 SQ. FT. |        |

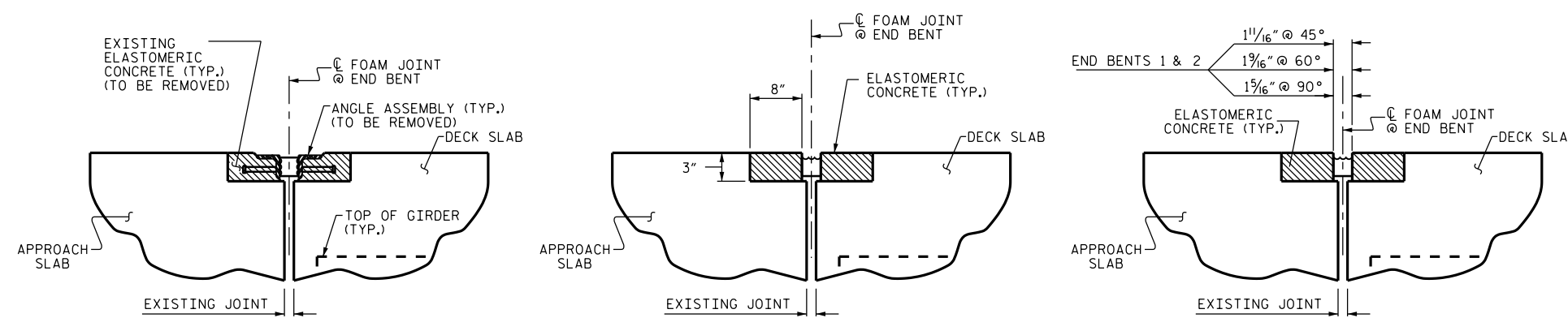
NOTES:

FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.  
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.  
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".



PLAN

JOINT DEMOLITION



EXISTING

PROPOSED

PROPOSED FOAM JOINT SEAL

JOINT SEAL DETAILS AT END BENT

SECTION A-A

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 786

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                    |
|--|-----|-------|-----|-----|--------------------|
| JOINT DEMOLITION<br>DETAILS<br>(NBL)                               |     |       |     |     |                    |
| REVISIONS  |     |       |     |     | SHEET NO.          |
| NO.  | BY: | DATE: | NO. | BY: | DATE:              |
| 1  |     |       | 3   |     |                    |
| 2  |     |       | 4   |     |                    |
|  |     |       |     |     | TOTAL SHEETS<br>10 |

DocuSigned by:  
  
 E06BC40...  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 20103  
 ENGINEER  
 FARZIN ASEFMA

1/27/2016

DRAWN BY : T.L. AVERETTE DATE : 10/2015  
 CHECKED BY : J.P. ADAMS DATE : 10/2015

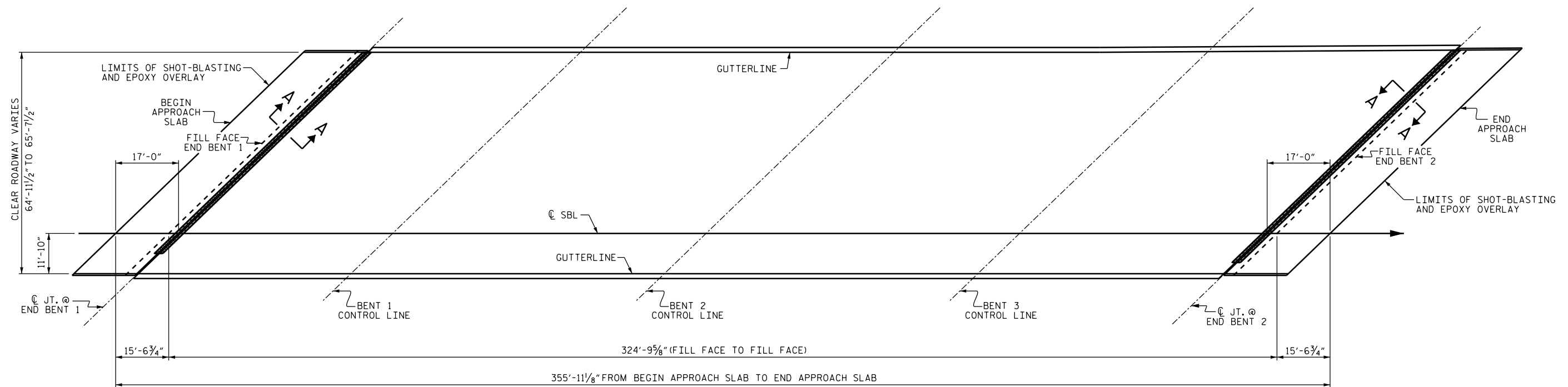
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 mweldon

SUMMARY OF QUANTITIES

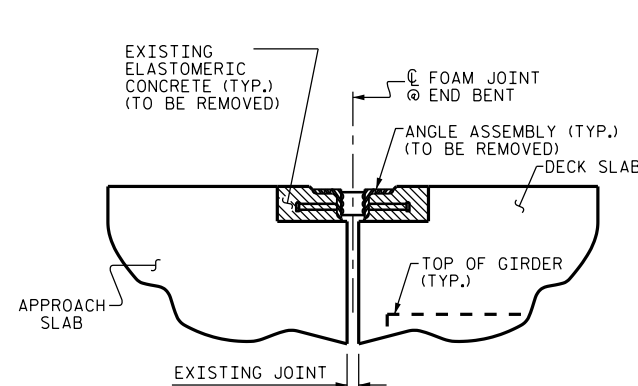
|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 63.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 251.0 SQ. FT. |        |

NOTES:

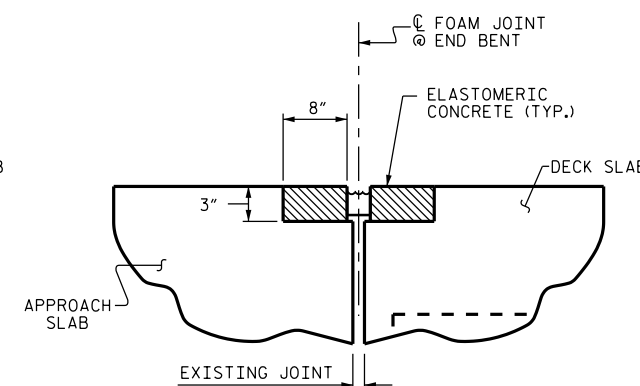
FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.  
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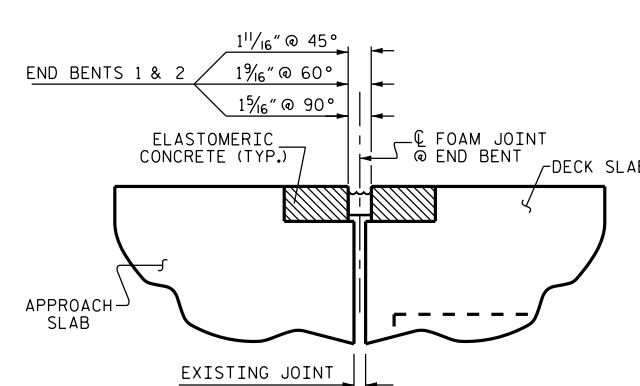
JOINT DEMOLITION



EXISTING



PROPOSED



PROPOSED FOAM JOINT SEAL

JOINT SEAL DETAILS AT END BENT

SECTION A-A

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 787

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

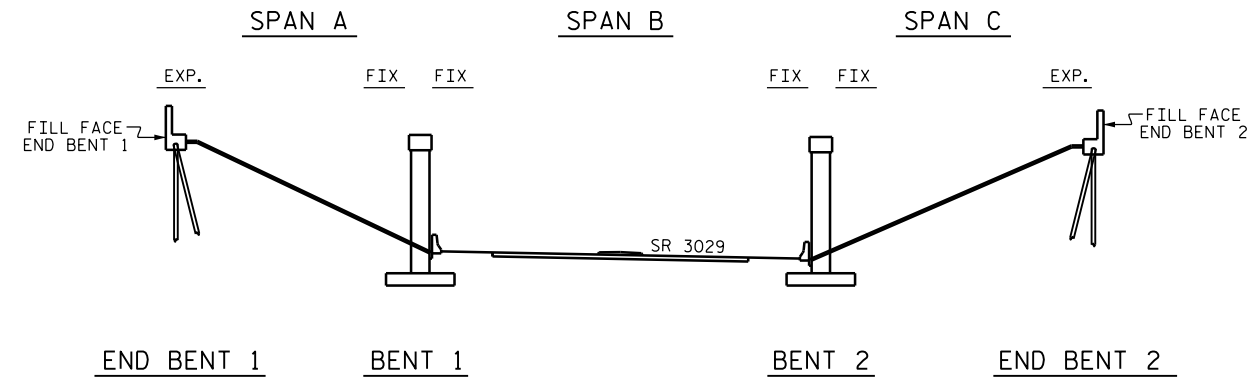
**JOINT DEMOLITION  
 DETAILS  
 (SBL)**

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

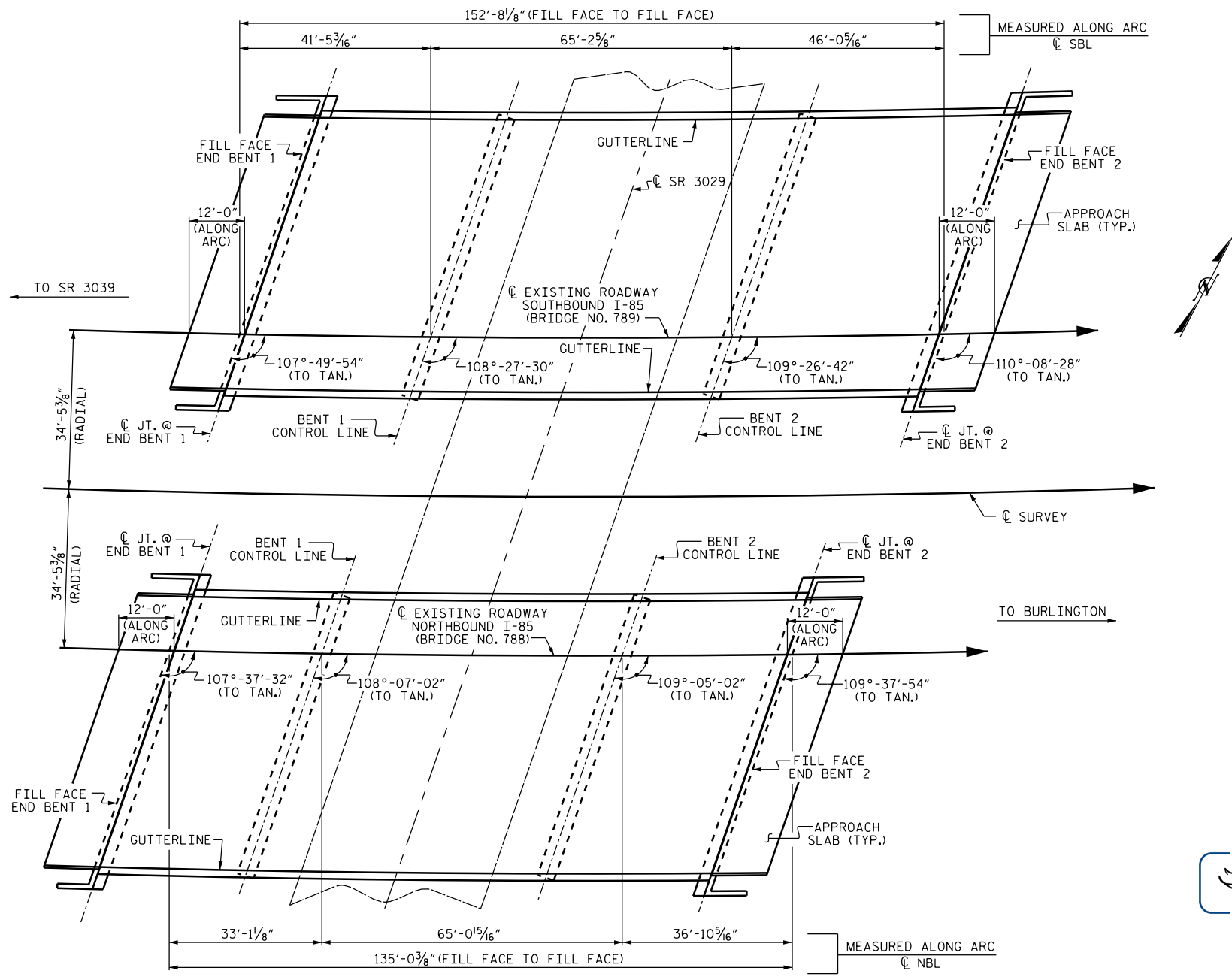
DocuSigned by:  
*Farzin Asefnia*  
 E06BC...

1/27/2016

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015



**SECTION ALONG  $\bar{C}$  ROADWAY**  
 SECTIONS AT BENTS AND END BENTS ARE TAKEN AT RIGHT ANGLES  
 (SOUTHBOUND LANE SHOWN, NORTHBOUND LANE SIMILAR)



**PLAN**  
 FOUNDATIONS NOT SHOWN FOR CLARITY

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 788 & 789

DocuSigned by:  
*Farzin Asefina*  
 E06BCH...  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 20103  
 ENGINEER  
 FARZIN ASEFINIA

1/27/2016

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFINIA DATE : 10/2015

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 mweldon

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH                |     |       |     |     |       | SHEET NO.    |  |
|---|-----|-------|-----|-----|-------|--------------|--|
| GENERAL DRAWING<br>FOR DUAL BRIDGES<br>ON I-85 OVER SR 3029<br>(YOUNGS MILL ROAD) |     |       |     |     |       | S-5          |  |
| REVISIONS   |     |       |     |     |       | TOTAL SHEETS |  |
| NO.   | BY: | DATE: | NO. | BY: | DATE: | 10           |  |
| 1   |     |       | 3   |     |       |              |  |
| 2   |     |       | 4   |     |       |              |  |

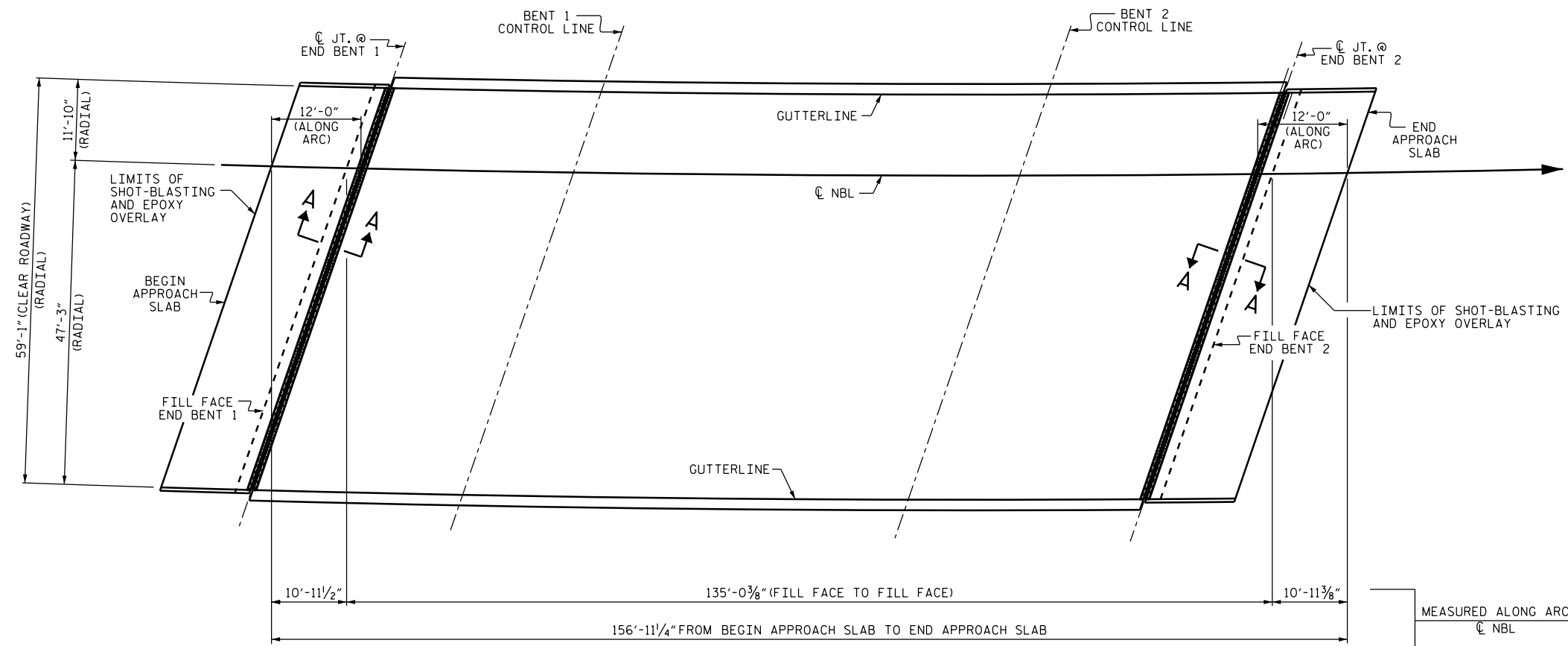


SUMMARY OF QUANTITIES

|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 42.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 167.0 SQ. FT. |        |

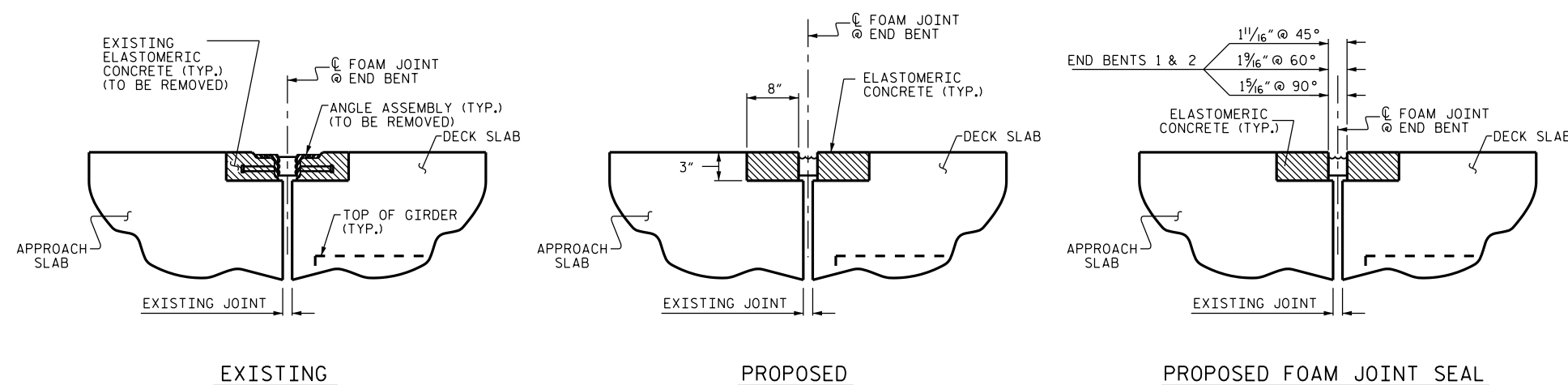
NOTES:

FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.  
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 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".



PLAN

▨ JOINT DEMOLITION



JOINT SEAL DETAILS AT END BENT  
SECTION A-A

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 788

|  |     |       |     |     |       |
|--|-----|-------|-----|-----|-------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |       |
| JOINT DEMOLITION<br>DETAILS<br>(NBL)                               |     |       |     |     |       |
| SHEET NO.<br>S-6   |     |       |     |     |       |
| TOTAL SHEETS<br>10   |     |       |     |     |       |
| REVISIONS  |     |       |     |     |       |
| NO.  | BY: | DATE: | NO. | BY: | DATE: |
| 1  |     |       | 3   |     |       |
| 2  |     |       | 4   |     |       |

DocuSigned by:  
*Karzin Asefina*  
 E06B...  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 2013  
 ENGINEER  
 KARZIN ASEFINIA

1/27/2016

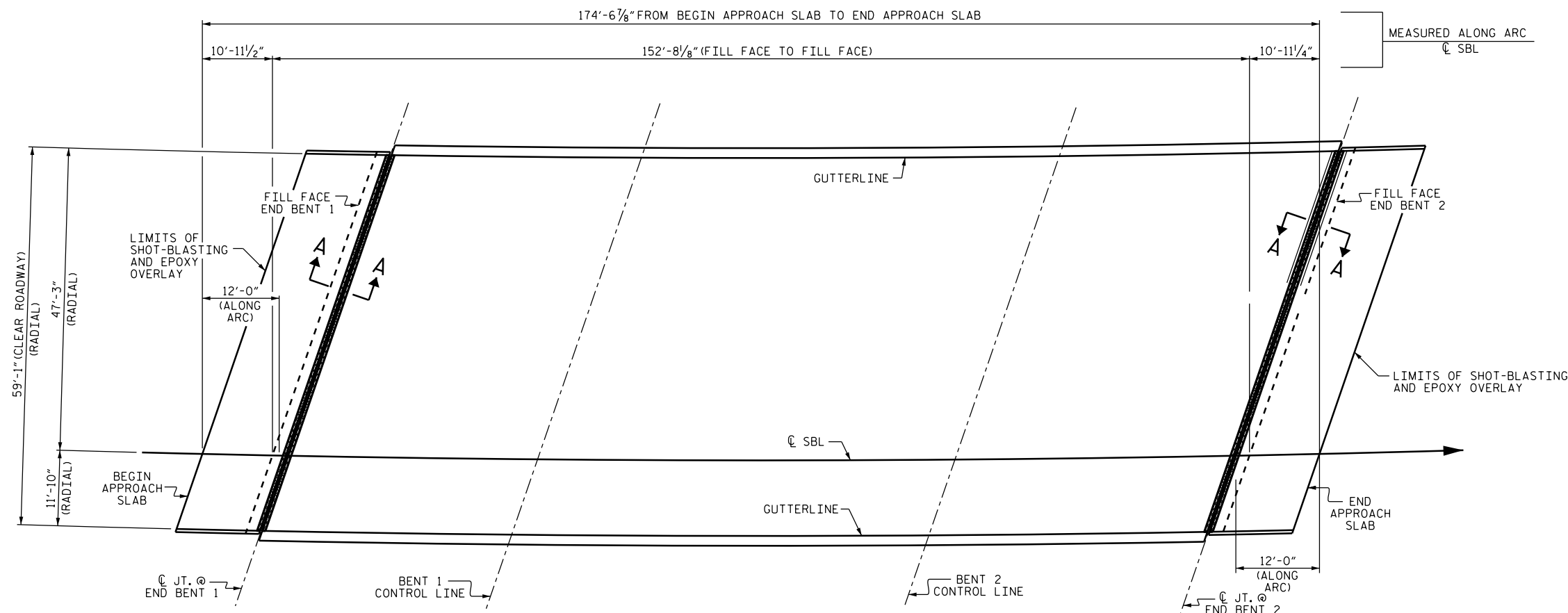
DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015

SUMMARY OF QUANTITIES

|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 42.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 167.0 SQ. FT. |        |

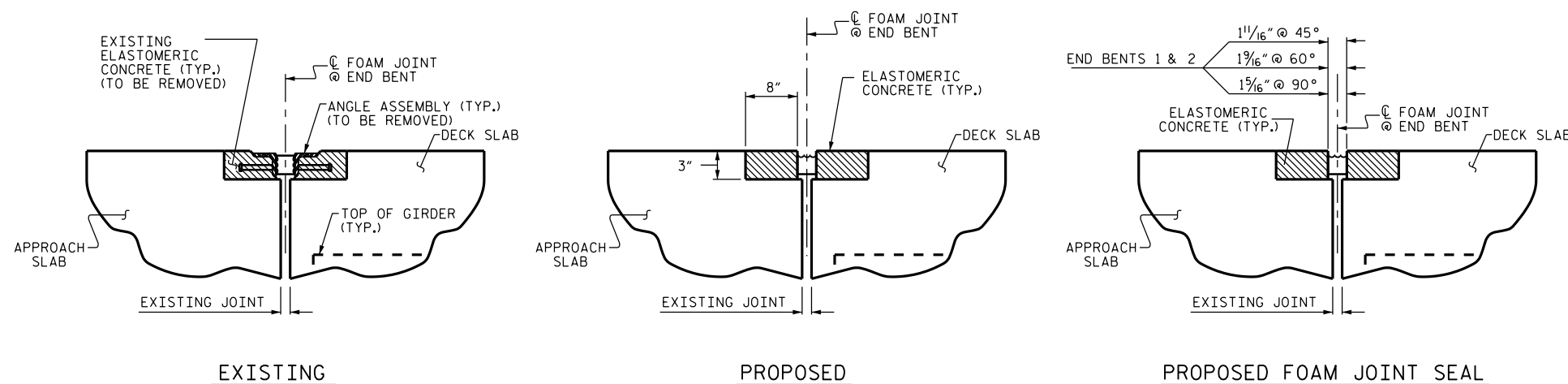
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PLAN

JOINT DEMOLITION



JOINT SEAL DETAILS AT END BENT  
SECTION A-A

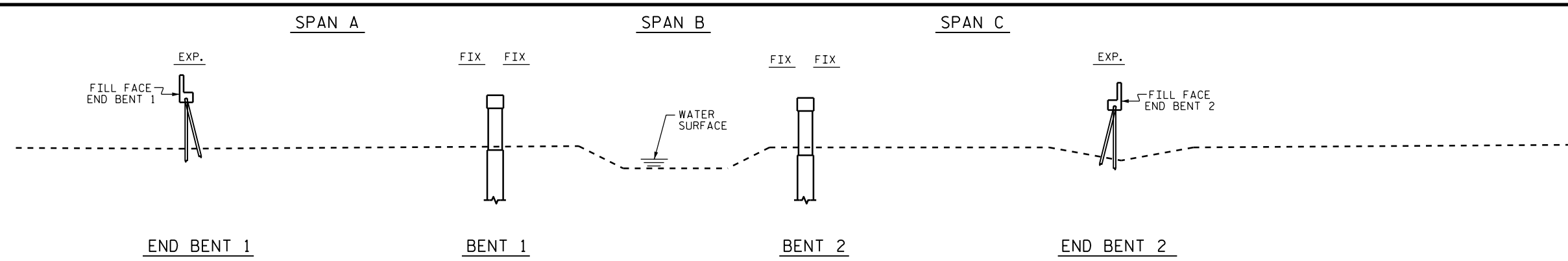
PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 789

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                    |
|--|-----|-------|-----|-----|--------------------|
| JOINT DEMOLITION<br>DETAILS<br>(SBL)                               |     |       |     |     |                    |
| REVISIONS  |     |       |     |     | SHEET NO.          |
| NO.  | BY: | DATE: | NO. | BY: | DATE:              |
| 1  |     |       | 3   |     |                    |
| 2  |     |       | 4   |     |                    |
|  |     |       |     |     | TOTAL SHEETS<br>10 |

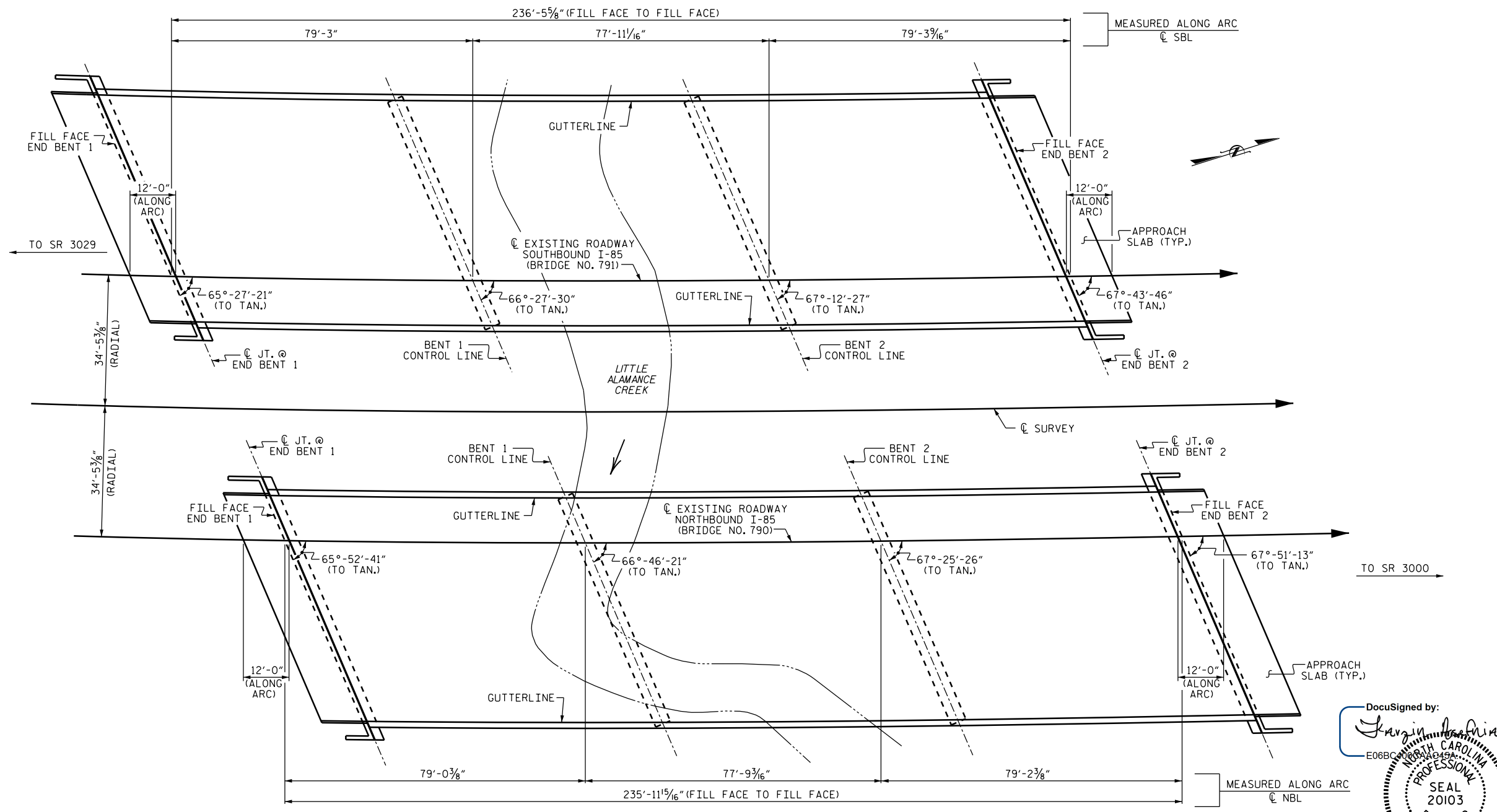
DocuSigned by:  
  
 E06BC... NORTH CAROLINA PROFESSIONAL SEAL 20103 ENGINEER FARZIN ASEFNIA

1/27/2016

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015



**SECTION ALONG C ROADWAY**  
 SECTIONS AT BENTS AND END BENTS ARE TAKEN AT RIGHT ANGLES  
 (SOUTHBOUND LANE SHOWN, NORTHBOUND LANE SIMILAR)



**PLAN**  
 FOUNDATIONS NOT SHOWN FOR CLARITY

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 790 & 791

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING  
 FOR DUAL BRIDGES  
 ON I-85 OVER  
 LITTLE ALAMANCE CREEK**

DocuSigned by:  
*Farzina Asefnia*  
 E06BC...  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 20103  
 ENGINEER  
 FARZINA ASEFNIA

1/27/2016

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015

| REVISIONS |     |       |     |     |       | SHEET NO.    |  |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO.       | BY: | DATE: | NO. | BY: | DATE: | S-8          |  |
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| 2         |     |       | 4   |     |       | 10           |  |

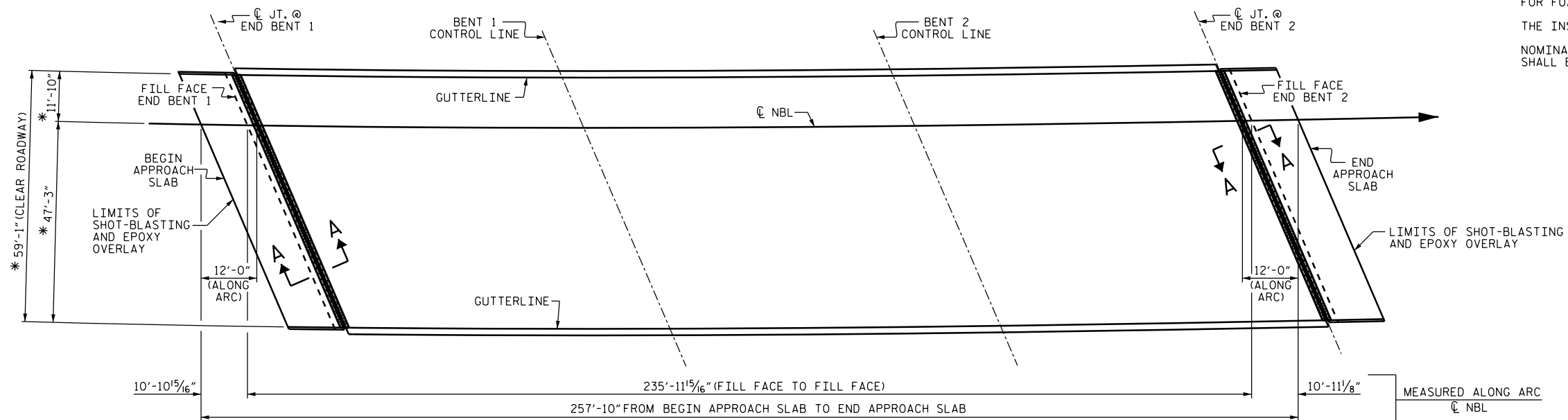
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 mweldon

SUMMARY OF QUANTITIES

|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 43.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 171.0 SQ. FT. |        |

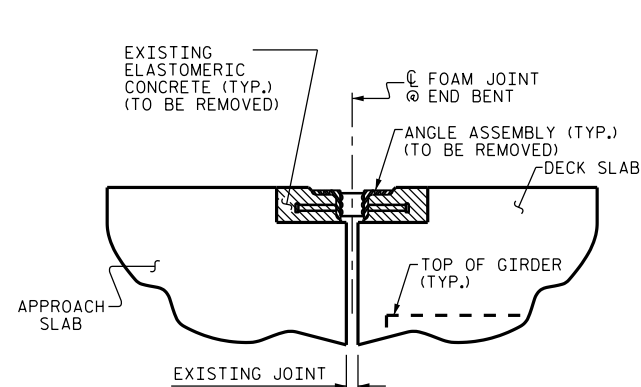
NOTES:

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 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

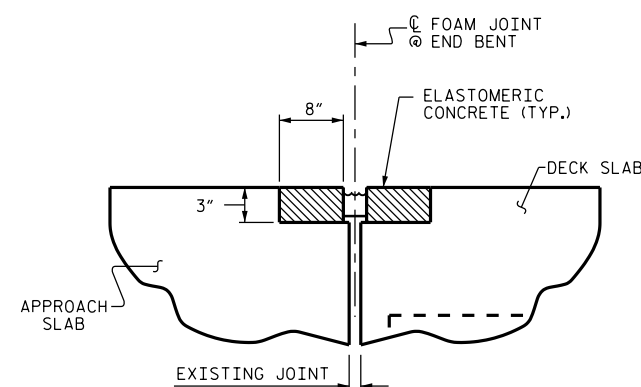


\* RADIAL DIMENSION

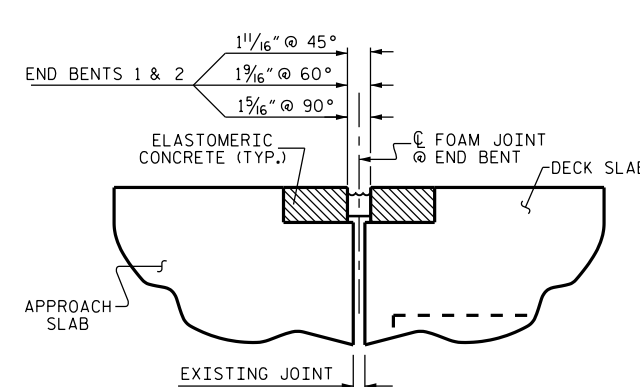
JOINT DEMOLITION



EXISTING



PROPOSED



PROPOSED FOAM JOINT SEAL

JOINT SEAL DETAILS AT END BENT  
SECTION A-A

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 790

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |       | SHEET NO.<br>S-9      |  |
|--|-----|-------|-----|-----|-------|-----------------------|--|
| JOINT DEMOLITION<br>DETAILS<br>(NBL)                               |     |       |     |     |       | TOTAL<br>SHEETS<br>10 |  |
| REVISIONS  |     |       |     |     |       |                       |  |
| NO.  | BY: | DATE: | NO. | BY: | DATE: |                       |  |
| 1  |     |       | 3   |     |       |                       |  |
| 2  |     |       | 4   |     |       |                       |  |

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015

27-JAN-2016 09:03  
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 mweldon

DocuSigned by:  
  
 FARZIN ASEFNIA  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 20103  
 ENGINEER

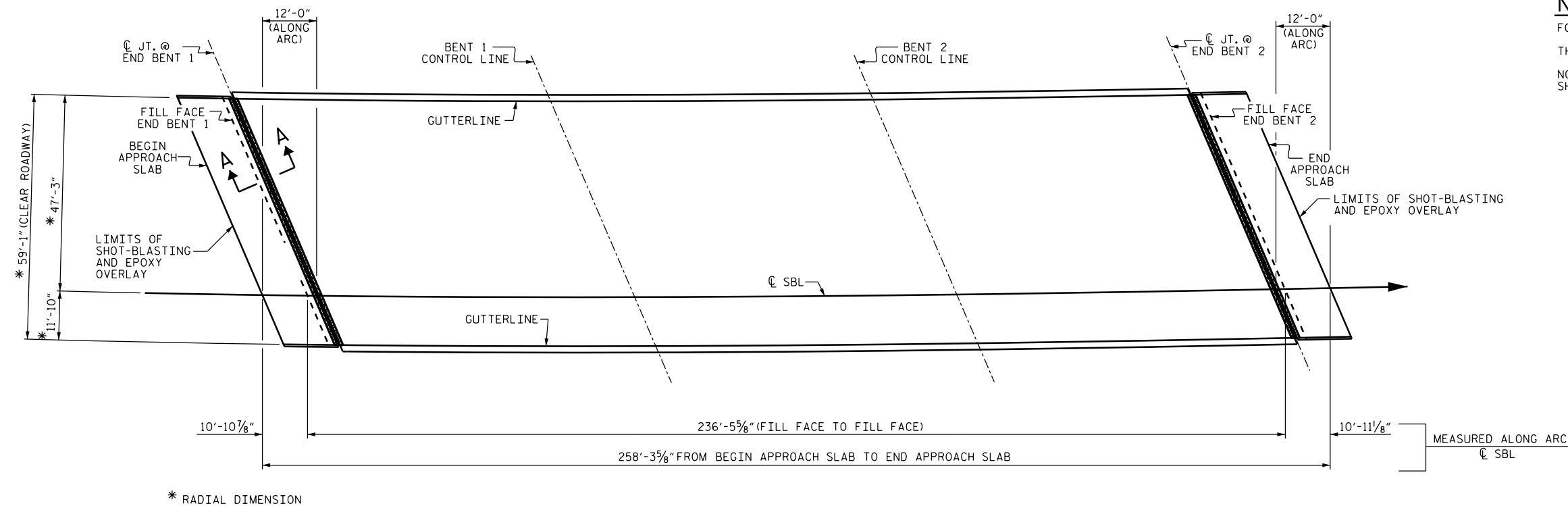
1/27/2016

SUMMARY OF QUANTITIES

|                         | ESTIMATE      | ACTUAL |
|-------------------------|---------------|--------|
| ELASTOMERIC CONCRETE    | 43.0 CU. FT.  |        |
| BRIDGE JOINT DEMOLITION | 171.0 SQ. FT. |        |

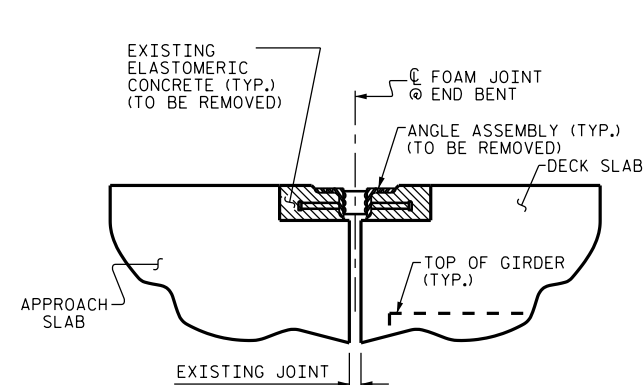
NOTES:

FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.  
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.  
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

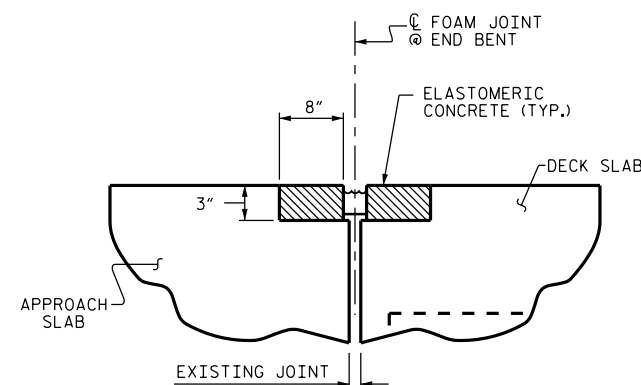


PLAN

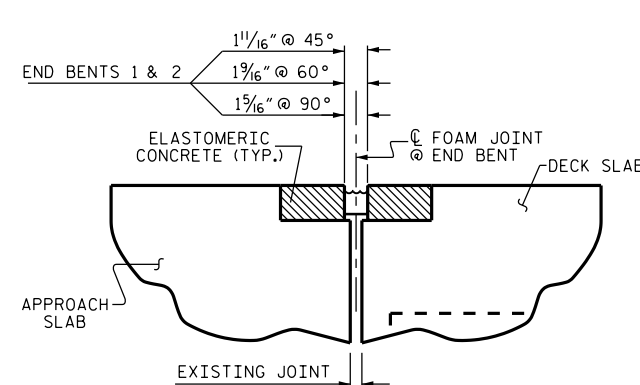
JOINT DEMOLITION



EXISTING



PROPOSED

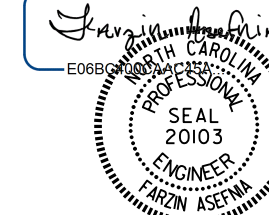


PROPOSED FOAM JOINT SEAL

JOINT SEAL DETAILS AT END BENT  
SECTION A-A

PROJECT NO. I-5790  
GUILFORD COUNTY  
 BRIDGE NO. 791

DocuSigned by:



1/27/2016

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

DRAWN BY : M. WELDON DATE : 10/2015  
 CHECKED BY : F. ASEFNIA DATE : 10/2015

## 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<br>OF TIMBER | ----- | 375 LBS. PER SQ. IN.    |
| EQUIVALENT FLUID PRESSURE OF EARTH              | ----- | 30 LBS. PER CU. FT.     |
|   |       | (MINIMUM)               |

### MATERIAL AND WORKMANSHIP:

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

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

### CONCRETE:

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

### CONCRETE CHAMFERS:

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

### DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

### REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

### STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

### HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

### SPECIAL NOTES:

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

# ENGLISH

JANUARY, 1990

STD. NO. SN