

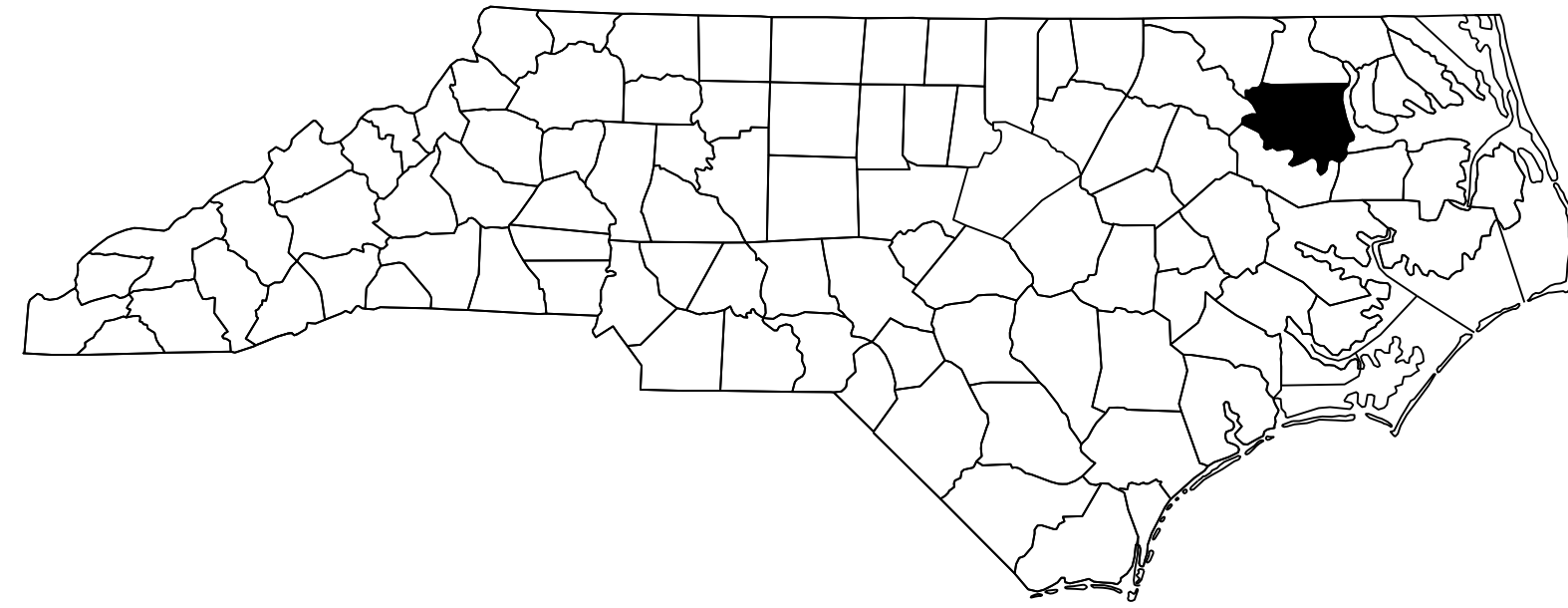
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PROJECT: 15BPR.8

CONTRACT: DA00426



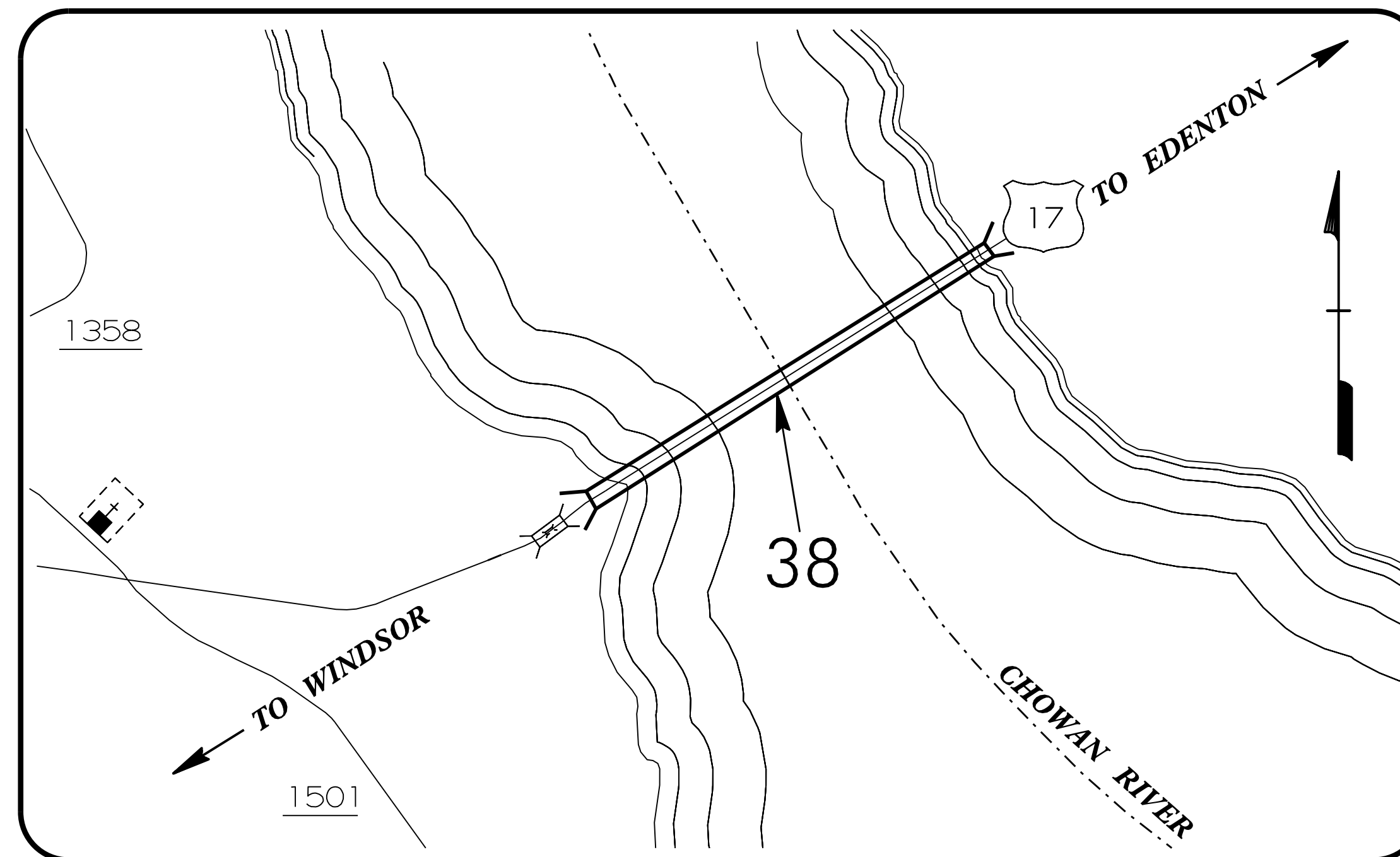
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

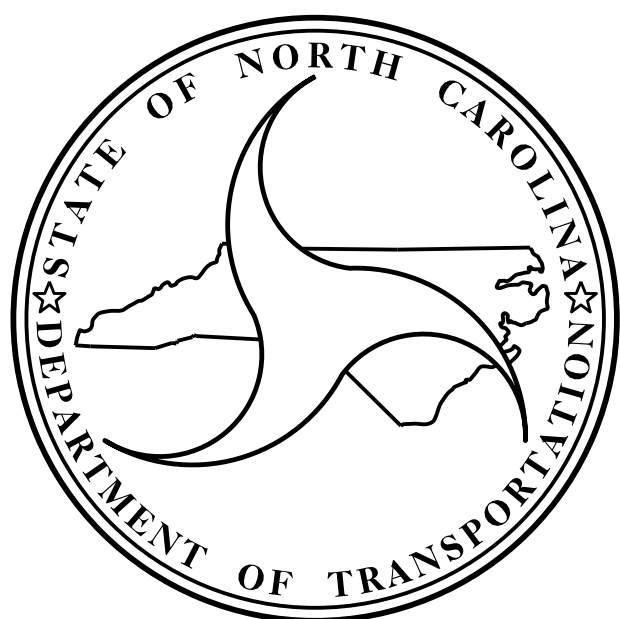
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | 15BPR.8 | 1 | |
| STATE PROJ. NO. | F. A. PROJ. NO. | DESCRIPTION | |
| 15BPR.8 | | P.E. | |
| 15BPR.8 | | CONST. | |
| | | | |
| | | | |
| | | | |
| | | | |

LOCATION: BRIDGE #38 ON US HIGHWAY 17 OVER CHOWAN RIVER

TYPE OF WORK: BRIDGE PRESERVATION - DECK AND RAIL REPAIR, SILANE DECK TREATMENT, AND JOINT SEAL REPLACEMENT



VICINITY MAP - BERTIE



DESIGN DATA

BERTIE COUNTY
BRIDGE #38 ADT 2017 = 13,500

PROJECT LENGTH

PROJECT 15BPR.8 = 1.80 MILES

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

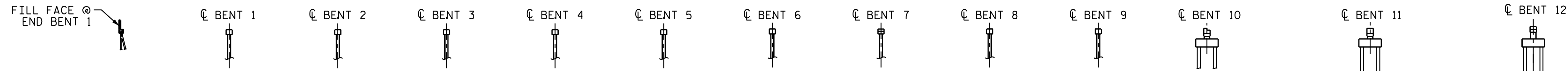
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

2018 STANDARD SPECIFICATIONS

LETTING DATE:
JULY 18, 2018

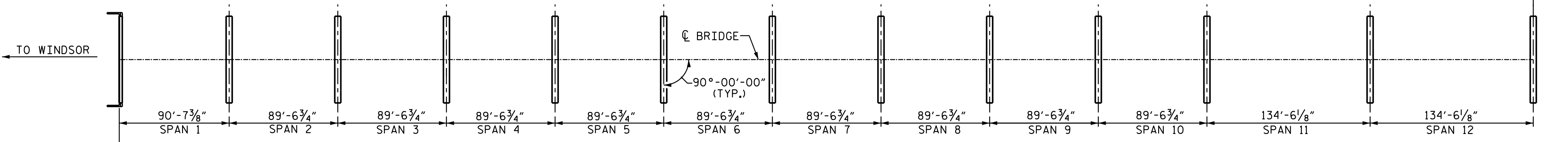
GREG W. DICKEY, PE
PROJECT ENGINEER

P. KOREY NEWTON, P.E.
PROJECT DESIGN ENGINEER



SECTION ALONG C BRIDGE

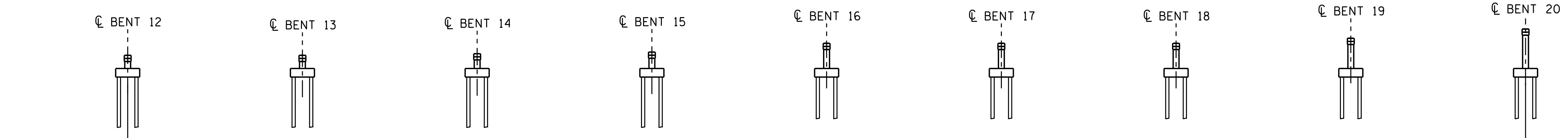
(SECTIONS TAKEN AT RIGHT ANGLES)



PLAN

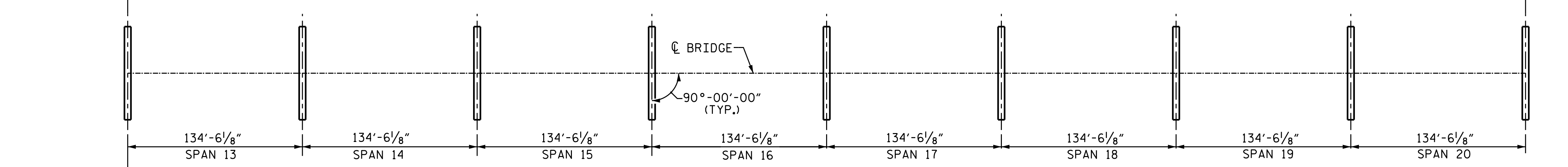
(PILES NOT SHOWN FOR CLARITY)

SCOPE OF WORK:
 PERFORM DECK AND RAIL REPAIRS IN PREPARED AREAS.
 INSTALL NEW FOAM JOINT SEALS.
 SHOTBLAST EXISTING CONCRETE DECK AND APPROACH SLABS.
 APPLY SILANE DECK TREATMENT.
 ZONE PAINTING OF EXISTING STRUCTURE.



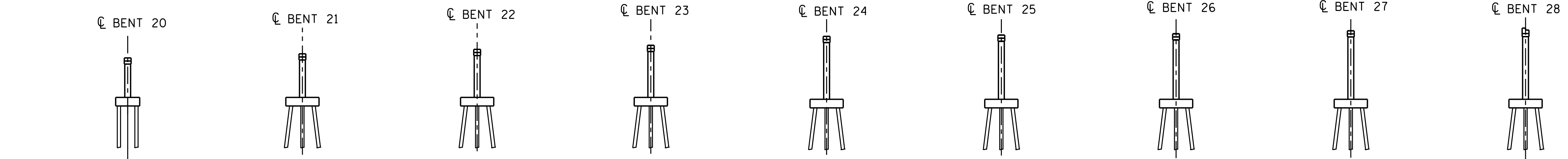
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(SECTIONS TAKEN AT RIGHT ANGLES)



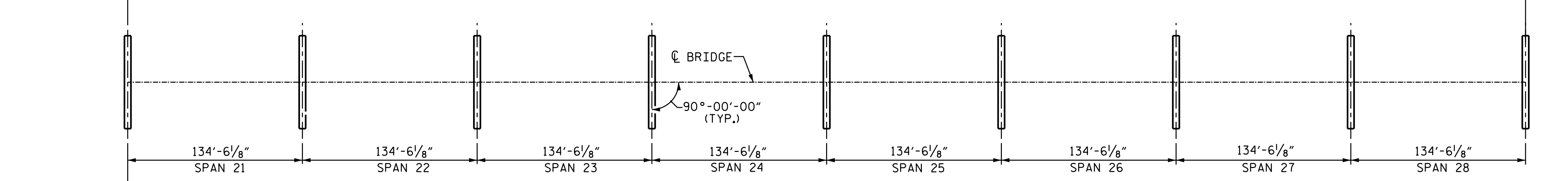
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(PILES NOT SHOWN FOR CLARITY)



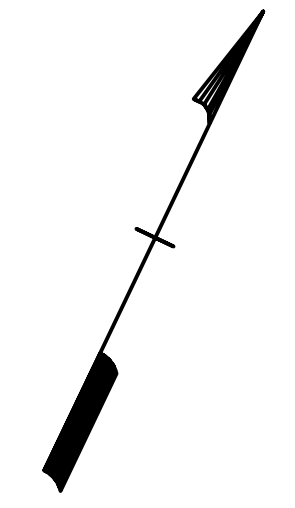
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(SECTIONS TAKEN AT RIGHT ANGLES)



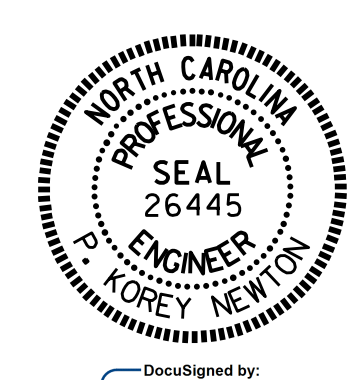
PLAN

(PILES NOT SHOWN FOR CLARITY)



PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38

SHEET 1 OF 3

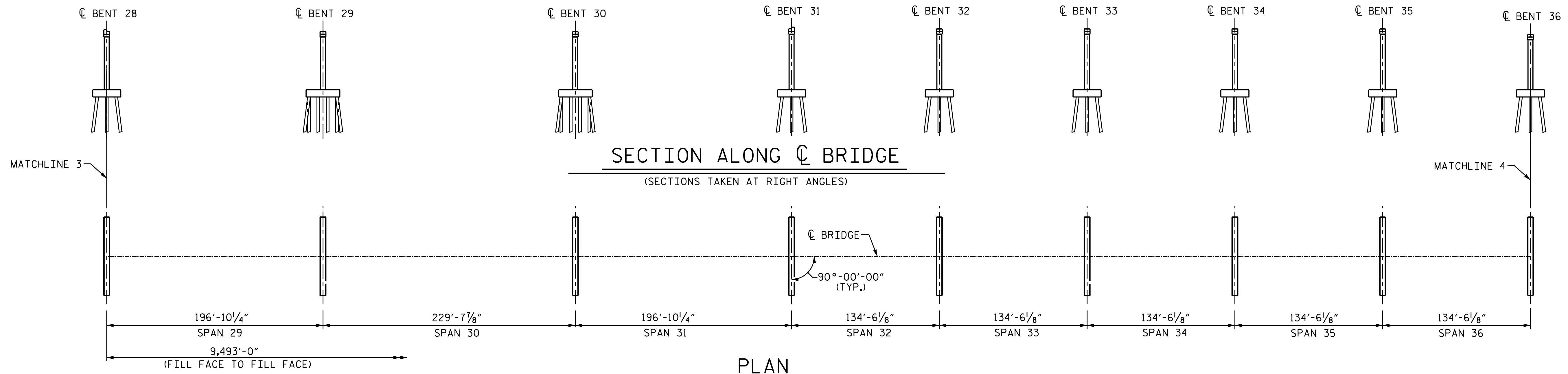


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE ON US 17
 OVER CHOWAN RIVER BETWEEN
 WINDSOR AND HERTFORD

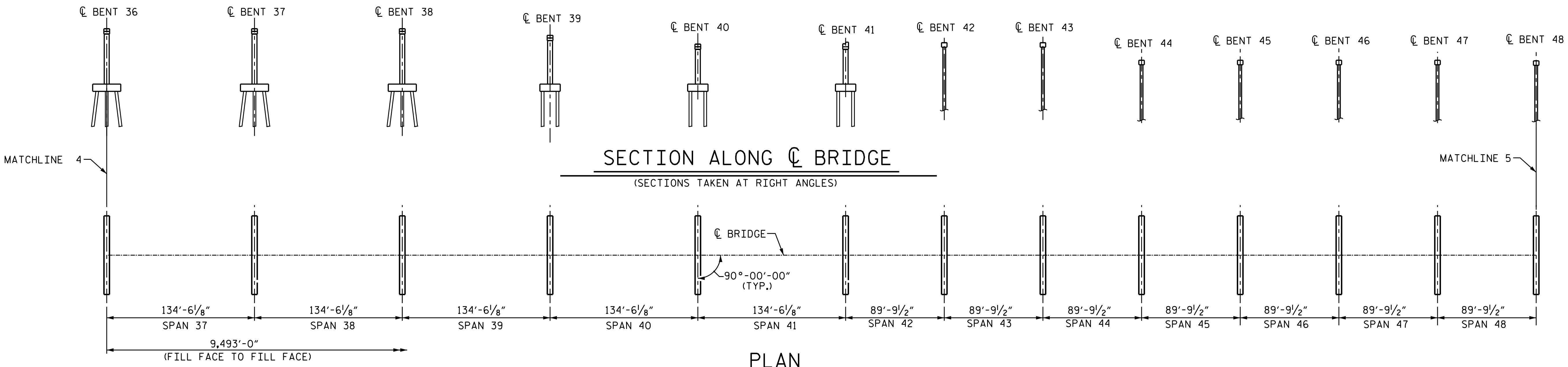
DRAWN BY : O. T. NGUYEN DATE : 2/9/18
 CHECKED BY : W. D. REAMS DATE : 3/26/18

DOCUMENT NOT CONSIDERED
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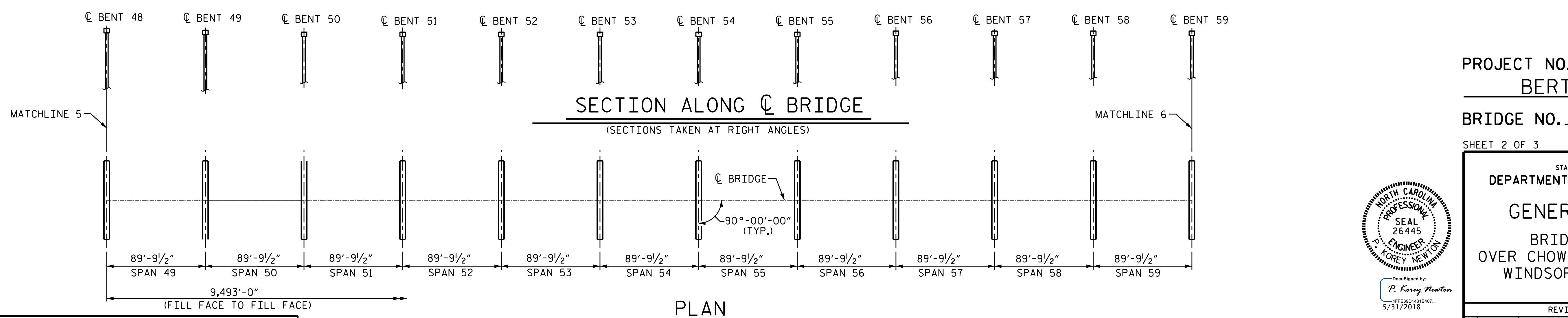
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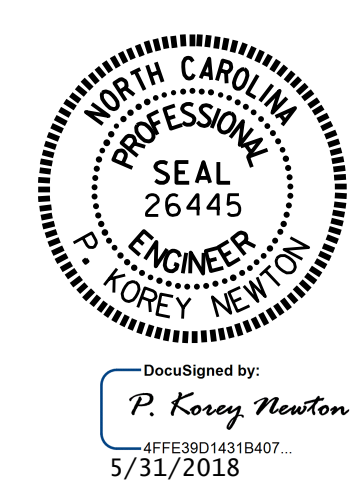
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(PILES NOT SHOWN FOR CLARITY)



PLAN
(PILES NOT SHOWN FOR CLARITY)

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38

SHEET 2 OF 3

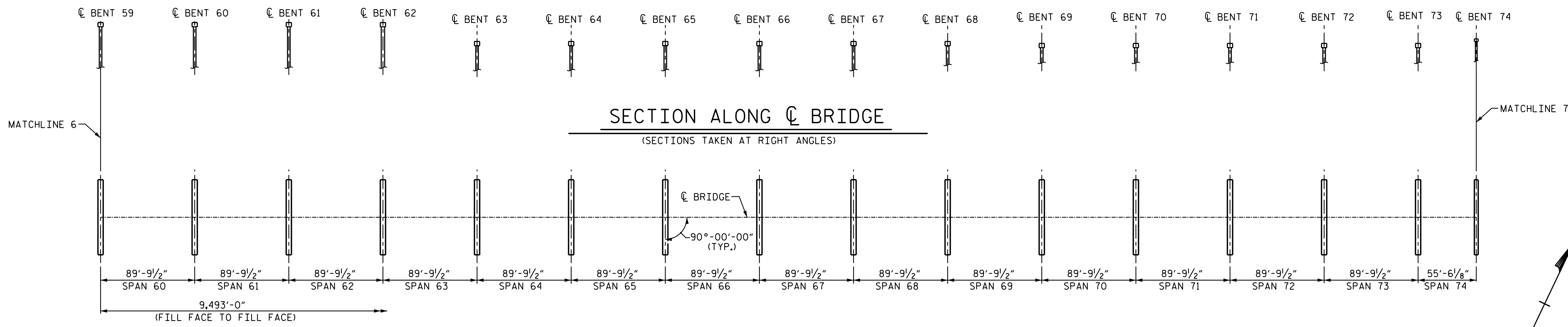


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE ON US 17
 OVER CHOWAN RIVER BETWEEN
 WINDSOR AND HERTFORD

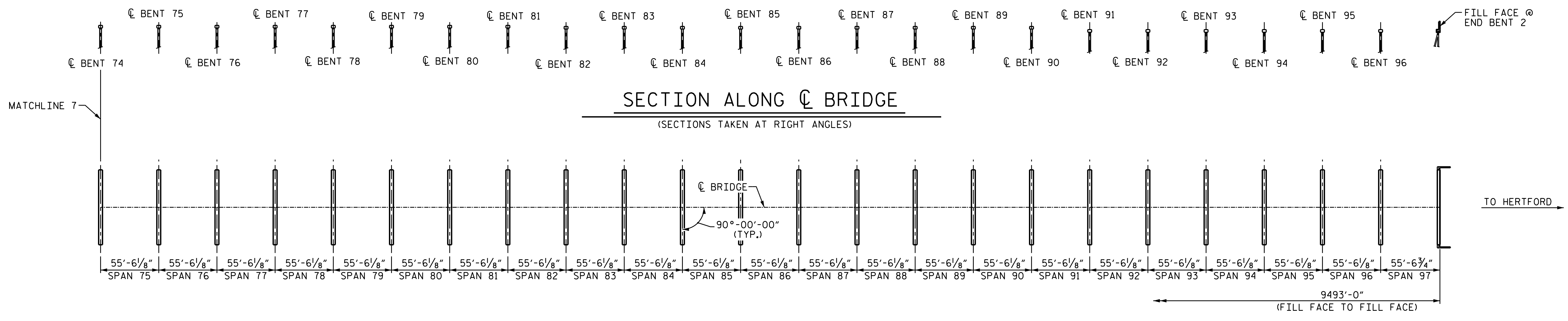
DRAWN BY : O. T. NGUYEN DATE : 2/9/18
 CHECKED BY : W. D. REAMS DATE : 3/26/18

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PLAN
(PILES NOT SHOWN FOR CLARITY)



PLAN
(PILES NOT SHOWN FOR CLARITY)

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE ON US 17
 OVER CHOWAN RIVER BETWEEN
 WINDSOR AND HERTFORD

DRAWN BY : O. T. NGUYEN DATE : 2/9/18
 CHECKED BY : W. D. REAMS DATE : 3/26/18

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
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| NO. | BY: | DATE: | NO. | BY: | DATE: | S-3 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 9 |

| TOTAL BILL OF MATERIAL | | | | | | | | | | | |
|------------------------|--------------|--------------------------|------------------------------|-----------------------|-----------------------------|---------------------------------|--------------------------|-------------------|----------------------|--------------------------|------------------|
| BERTIE BRIDGE NO. 38 | MOBILIZATION | SHOTBLASTING BRIDGE DECK | CLASS II SURFACE PREPARATION | SILANE DECK TREATMENT | EXPANSION JOINT SEAL REPAIR | REPLACEMENT OF FOAM JOINT SEALS | ZONE PAINTING WITH HRCSA | POLLUTION CONTROL | PAINTING CONTAINMENT | CONCRETE FOR DECK REPAIR | VOLUMETRIC MIXER |
| | LUMP SUM | SQ. YD. | SQ. YD. | SQ. YD. | LIN. FT. | LIN. FT. | LUMP SUM | LUMP SUM | LUMP SUM | CU. FT. | LUMP SUM |
| | LUMP SUM | 70621 | 20.1 | 70621 | 71.0 | 638.5 | LUMP SUM | LUMP SUM | LUMP SUM | 90.5 | LUMP SUM |
| TOTAL | LUMP SUM | 70621 | 20.1 | 70621 | 71.0 | 638.5 | LUMP SUM | LUMP SUM | LUMP SUM | 90.5 | LUMP SUM |

GENERAL NOTES

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

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE 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 THE BRIDGE DECK.

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

WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE TO ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2018 AND THE PROJECT SPECIAL PROVISIONS.

PRIOR TO BEGINNING WORK, CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

FOR REPLACEMENT OF FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

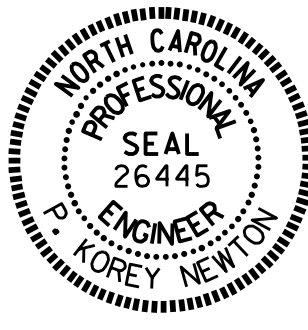
FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.8
BERTIE COUNTY
BRIDGE NO. 38



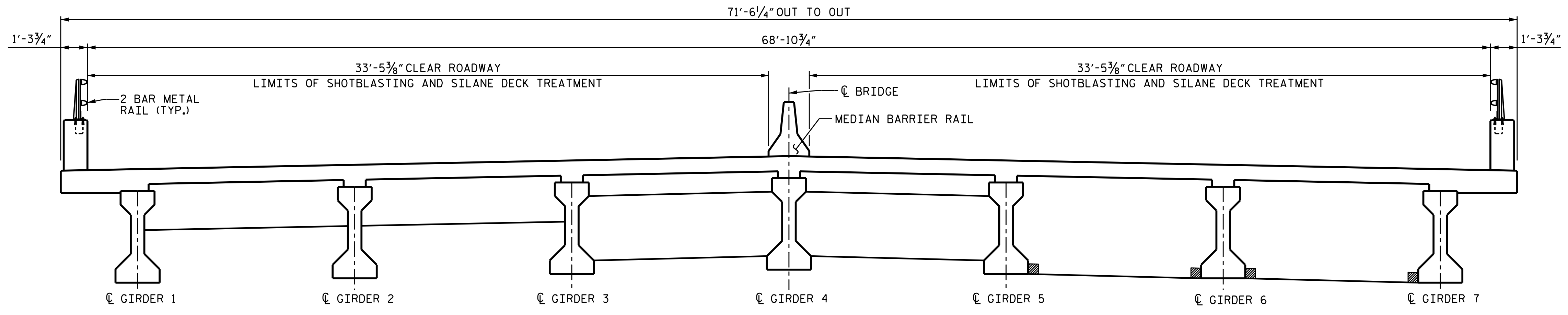
DocuSigned by:
P. Corey Newton
44FE3801A19A07...
5/31/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL NOTES
&
TOTAL BILL
OF MATERIAL

DRAWN BY : P.D. BRYANT DATE : 12/2017
CHECKED BY : W. D. REAMS DATE : 04/23/18

DOCUMENT NOT CONSIDERED
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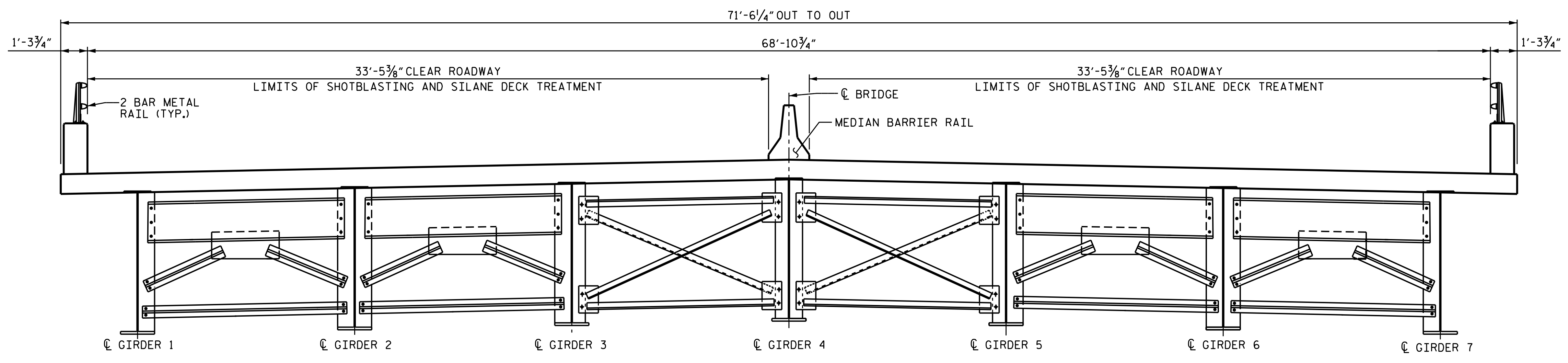


PART SECTION
SHOWING DIAPHRAGMS AT
BENTS OTHER THAN
CONTINUOUS FOR LIVE LOAD

PART SECTION
SHOWING INTERMEDIATE DIAPHRAGMS

PART SECTION
SHOWING DIAPHRAGMS AT
CONTINUOUS FOR LIVE
LOAD BENTS

TYPICAL SECTION
(SPANS 1-10 & 42-73 SHOWN, SPANS
11-28, 32-41, & 74-97 SIMILAR,
EXCEPT GIRDER TYPE)



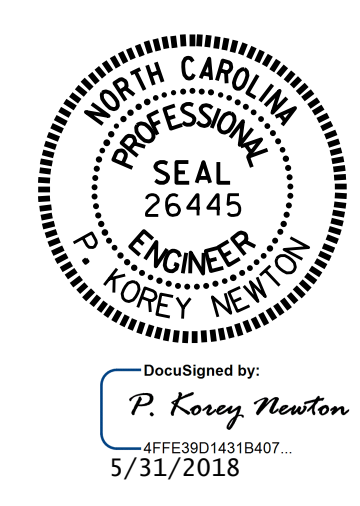
PART SECTION
SHOWING DIAPHRAGM AT BENTS 28 & 31

PART SECTION
SHOWING INTERMEDIATE DIAPHRAGM

PART SECTION
SHOWING DIAPHRAGM AT BENTS 29 & 30

TYPICAL SECTION
(SPANS 29-31)

PROJECT NO. 15BPR.8
BERTIE COUNTY
BRIDGE NO. 38



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION

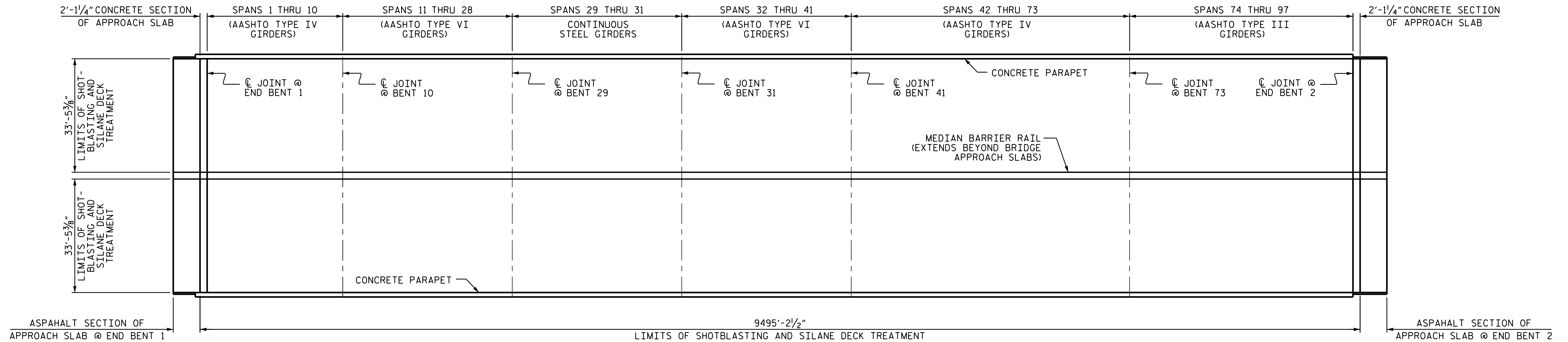
DRAWN BY : O. T. NGUYEN DATE : 2/28/18
CHECKED BY : Z. Malik DATE : 2/28/18

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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 9 |

REPAIR QUANTITY TABLE

| TOP OF DECK | ESTIMATE | ACTUAL |
|---------------------------|----------|--------|
| CLASS II CONCRETE REPAIRS | 12.0 SY | |
| CONCRETE FOR DECK REPAIRS | 54.0 CF | |
| SHOTBLASTING BRIDGE DECK | 70621 SY | |
| SILANE DECK TREATMENT | 70621 SY | |
| CONCRETE PARAPET | ESTIMATE | ACTUAL |
| CLASS II CONCRETE REPAIRS | 8.1 SY | |
| CONCRETE FOR DECK REPAIRS | 36.5 CF | |



PLAN

| ANTICIPATED CLASS II REPAIR LOCATIONS | | | | | | | | | | | |
|---------------------------------------|-------------------|-----------------|----------------------|------------|-----------|----------------------|-------------------|-------------------|----------------------|------------|-----------|
| FOR TOP OF DECK | | | | | | FOR CONCRETE PARAPET | | | | | |
| SPAN | LENGTH ALONG SPAN | DIST FROM RT GL | REPAIR SIZE L X W | QUANTITIES | | SPAN | LENGTH ALONG SPAN | RIGHT/LEFT/MEDIAN | REPAIR SIZE L X W | QUANTITIES | |
| | | | | EST. SF | ACTUAL SF | | | | | EST. SF | ACTUAL SF |
| 5 | 30' | 4' | 6'-0" X 4'-0" | 24.0 | | 2 | 17.5 | RIGHT | 1'-8" X 0'-11" | 1.5 | |
| 13 | 15' | 16' | 3'-7" X 3'-7" | 12.8 | | 4 | 21' | RIGHT | 2'-6" X 0'-10" | 2.1 | |
| 19 | 38' | 43' | 2'-10" X 2'-7" | 7.3 | | 5 | 22'-36' | RIGHT | 8 @ 2'-3" X 2'-3" | 40.8 | |
| 19 | 38' | 47' | 2'-6" X 2'-2" | 5.2 | | 9 | 41' | RIGHT | 2 @ 3'-0" X 1'-5" | 8.6 | |
| 39 | 38' | 23' | 5'-10" X 4'-0" | 23.3 | | 12 | 38' | RIGHT | 1'-9" X 1'-4" | 2.3 | |
| 39 | 38' | 57' | 3'-2" X 2'-8" | 8.3 | | 21 | 1' | MEDIAN | 2'-2" X 1'-7" | 3.4 | |
| 39 | 38' | 61' | 3'-2" X 2'-8" | 8.3 | | 24 | 0' | RIGHT | 2'-10" X 1'-8" | 4.7 | |
| 47 | 16' | 2' | 2'-6" X 2'-6" | 6.3 | | 24 | 38' | MEDIAN | 1'-8" X 1'-2" | 1.9 | |
| 57 | 1' | 60' | 5'-11" X 2'-2" | 12.8 | | 30 | 35' | LEFT | 1'-6" X 0'-9" | 1.1 | |
| | | | | | | 30 | 36' | LEFT | 1'-2" X 0'-9" | 0.9 | |
| | | | | | | 30 | 38' | RIGHT | 1'-4" X 0'-8" | 0.9 | |
| | | | | | | 30 | 115' | RIGHT | 1'-7" X 1'-6" | 2.4 | |
| | | | | | | 71 | 36' | LEFT | 1'-9" X 0'-10" | 1.5 | |
| | | | | | | 71 | 18' | LEFT | 1'-3" X 0'-8" | 0.8 | |

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION,
 SHOTBLASTING, AND
 SILANE DECK TREATMENT

DRAWN BY : P.D. BRYANT DATE : 05/2018
 CHECKED BY : W.D. REAMS DATE : 05/2018

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| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 9 |

REPAIR INSTALLATION PROCEDURE

LOOSEN THE EXISTING BOLTS AND HOLD DOWN PLATES TO REMOVE AND REPLACE THE EXISTING GLAND. REMOVE THE EXISTING NEOPRENE SEALANT AND CLEAN THE EXISTING BASE ANGLE OF OIL, GREASE AND OTHER LATENTS.

LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED $\frac{1}{8}$ " IN DIAMETER WITH A HAND PUNCH.

IN ORDER TO CHECK FOR PROPER ALIGNMENT, PLACE THE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. DO NOT APPLY NEW NEOPRENE SEALANT. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE, BUT DO NOT TIGHTEN. THE ENGINEER WILL INSPECT THE JOINT SEAL DEVICE FOR PROPER ALIGNMENT.

AFTER INSPECTION, REMOVE THE HOLD-DOWN PLATES AND NEW GLAND. APPLY NEW NEOPRENE SEALANT TO THE BASE ANGLE IN ACCORDANCE WITH THE "INSTALLATION SKETCH". PLACE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE ASSEMBLY AND TORQUE THE BOLTS TO 88 FT-LBS WITH A TORQUE WRENCH. CHECK THE TORQUE AFTER THREE (3) HOURS AND, IF NECESSARY, RETIGHTEN TO 88 FT-LBS. A FINAL CHECK SHALL BE MADE AT SEVEN (7) DAYS. TORQUE SHALL NOT BE LESS THAN 80 FT-LBS AFTER SEVEN (7) DAYS.

AFTER PROPER TORQUING, CLEAN THE BOLT HOLE RECESSES AND THE RECESS BETWEEN THE JOINT SEAL DEVICE AND CONCRETE. COMPLETELY FILL THESE RECESSES WITH NEW NEOPRENE SEALANT.

GENERAL NOTES

ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

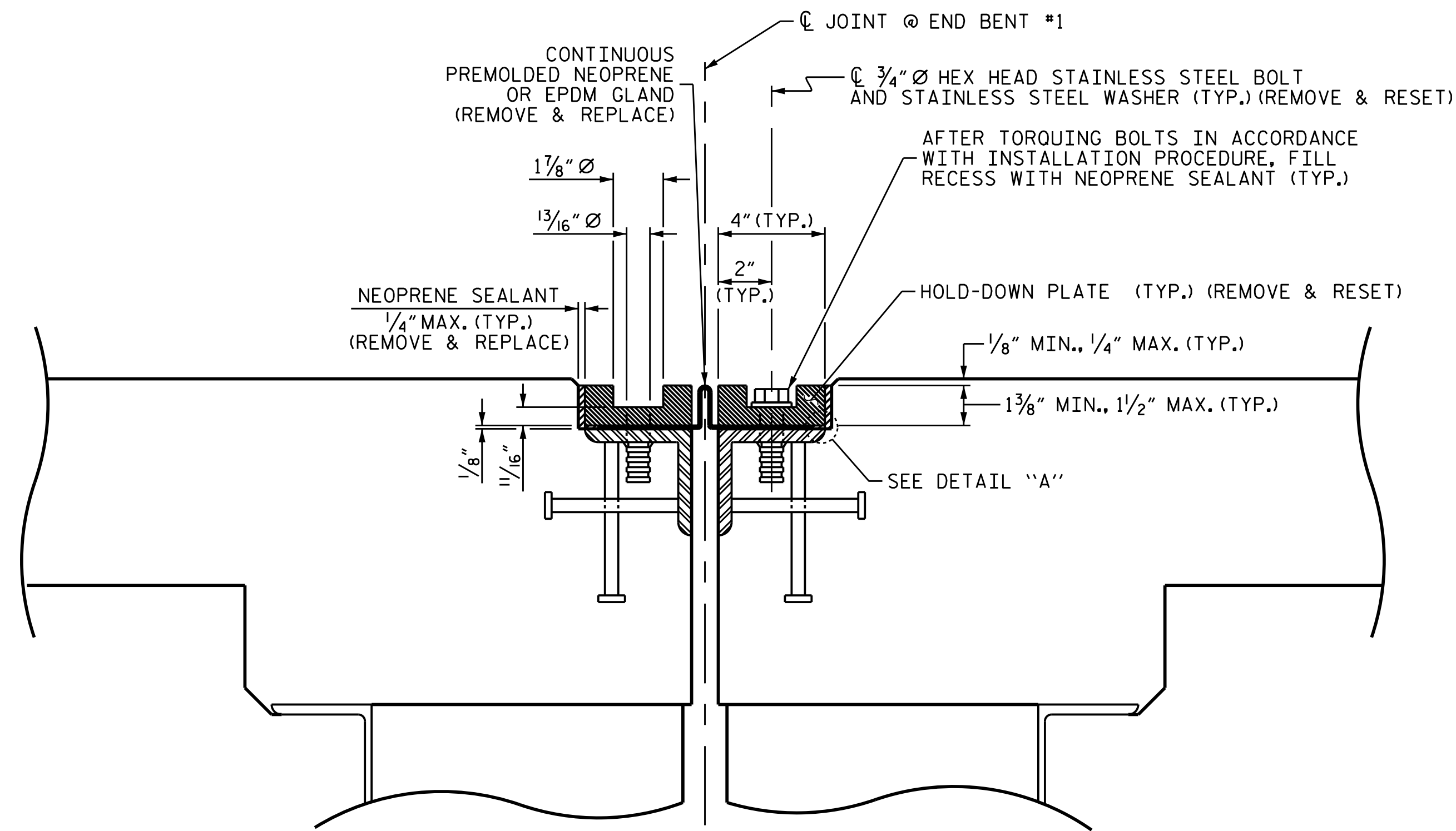
A PREMOLDED CORRUGATED OR NON-CORRUGATED GLAND SHALL BE USED FOR JOINTS SKEWED BETWEEN 50° THRU 130° .

THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM $\frac{1}{8}$ " AND A MAXIMUM OF $\frac{1}{4}$ " BELOW THE TOP OF SLAB.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "EXPANSION JOINT SEALS".

PAY LENGTH = 71.0 LIN. FT.

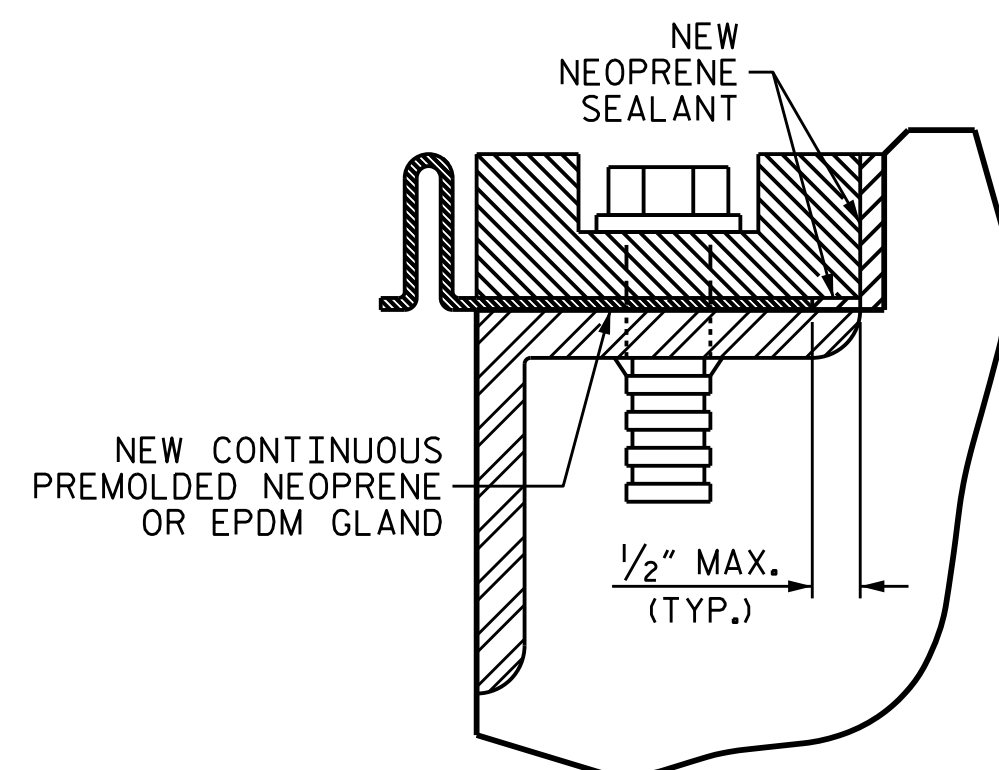


SECTION E-E

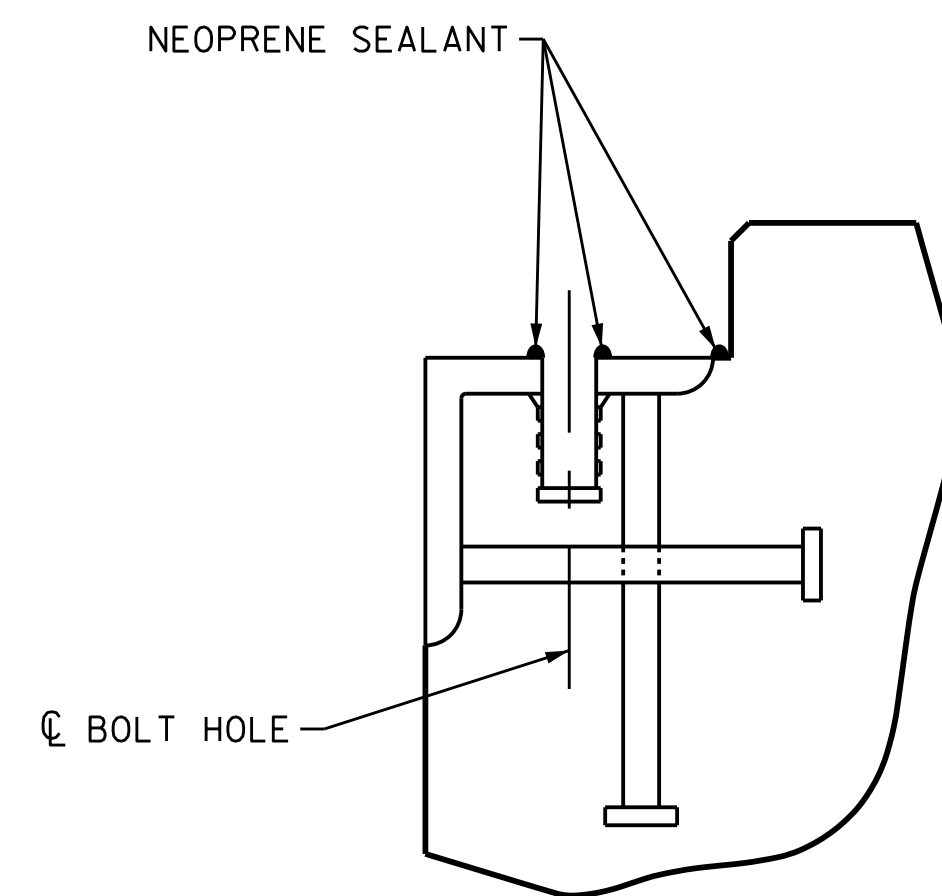
(SECTION NORMAL TO JOINT -- STEEL SUPERSTRUCTURE)

MOVEMENT AND SETTING AT JOINT

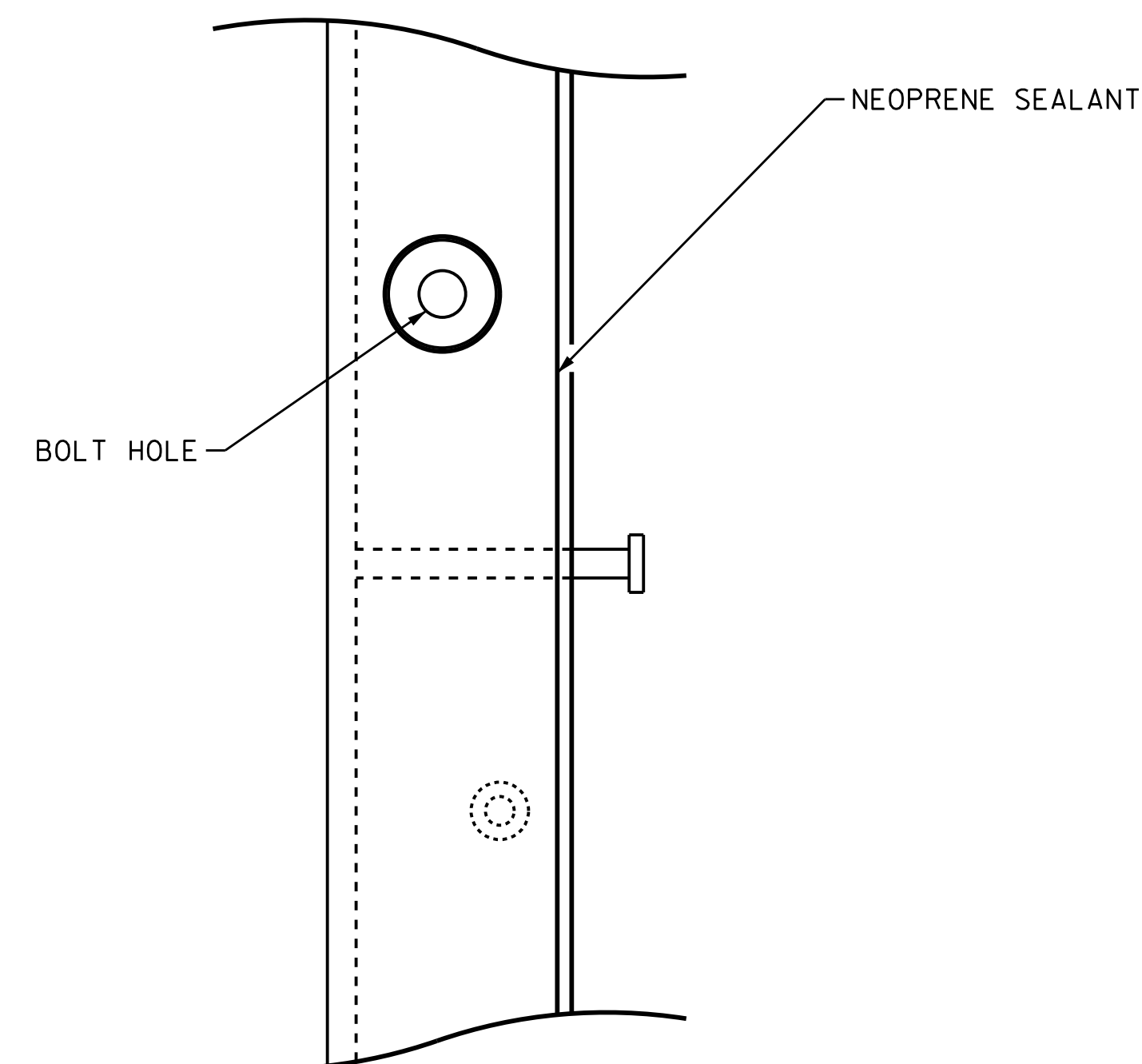
| BRIDGE | LOCATION | SKEW ANGLE | TOTAL MOVEMENT (ALONG \bar{C} RDWY) | PERPENDICULAR JOINT OPENING AT 45° F | PERPENDICULAR JOINT OPENING AT 60° F | PERPENDICULAR JOINT OPENING AT 90° F |
|--------|----------|------------|---------------------------------------|---|---|---|
| 38 | BENT 73 | 90 | 1 $\frac{5}{16}$ " | 2 $\frac{5}{8}$ " | 2" | 1 $\frac{5}{16}$ " |



DETAIL "A"



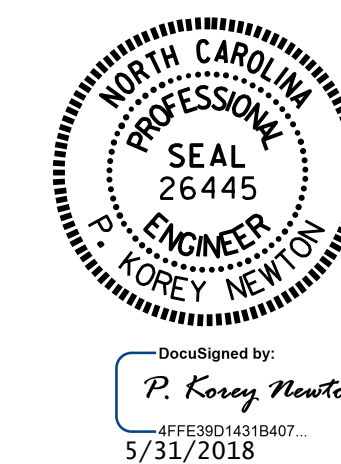
CROSS SECTION



PLAN VIEW

INSTALLATION SKETCH

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 73
 EXPANSION JOINT
 SEAL REPAIR
 DETAILS

DRAWN BY : W.D. REAMS DATE : 3/23/18
 CHECKED BY : D.R. SHACKELFORD DATE : 5/2/18

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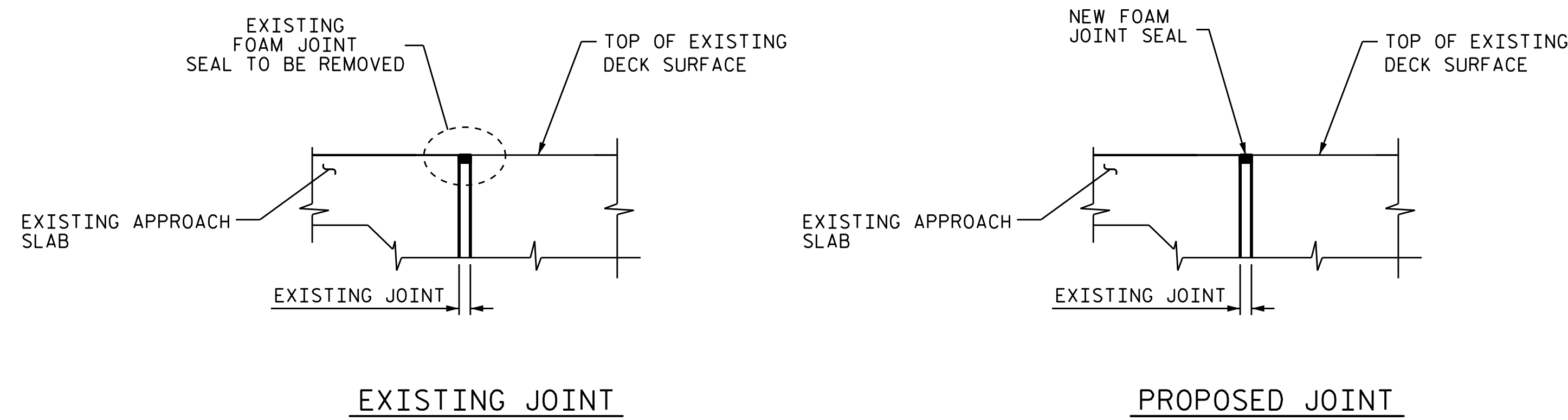
| NO. | REVISIONS | | NO. | REVISIONS | | SHEET NO. |
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| 2 | | | 4 | | | TOTAL SHEETS 9 |

NOTES

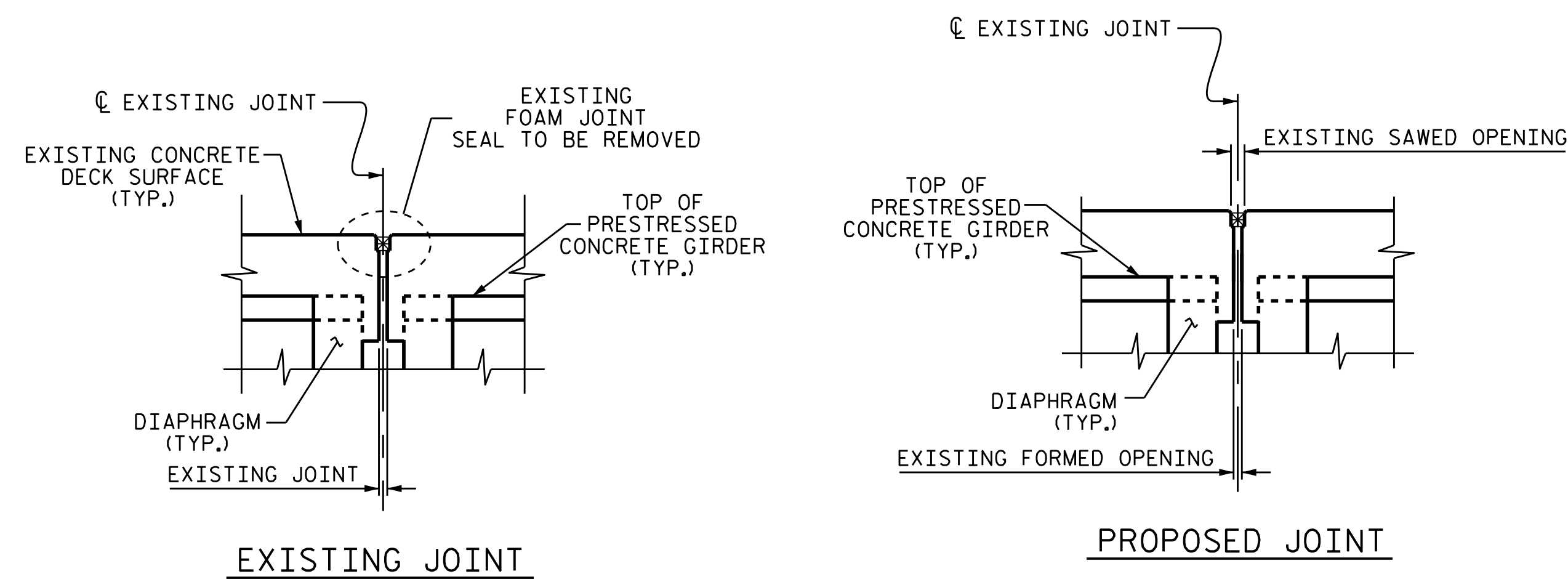
FOR FOAM JOINTS, SEE SPECIAL PROVISIONS.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE THE EXISTING FOAM SEALS, MEASURE THE OPENINGS, AND REPLACE WITH FOAM SEALS AT BENTS 76, 79, 82, 85, 88, 91, 94, AND END BENTS 1 & 2.

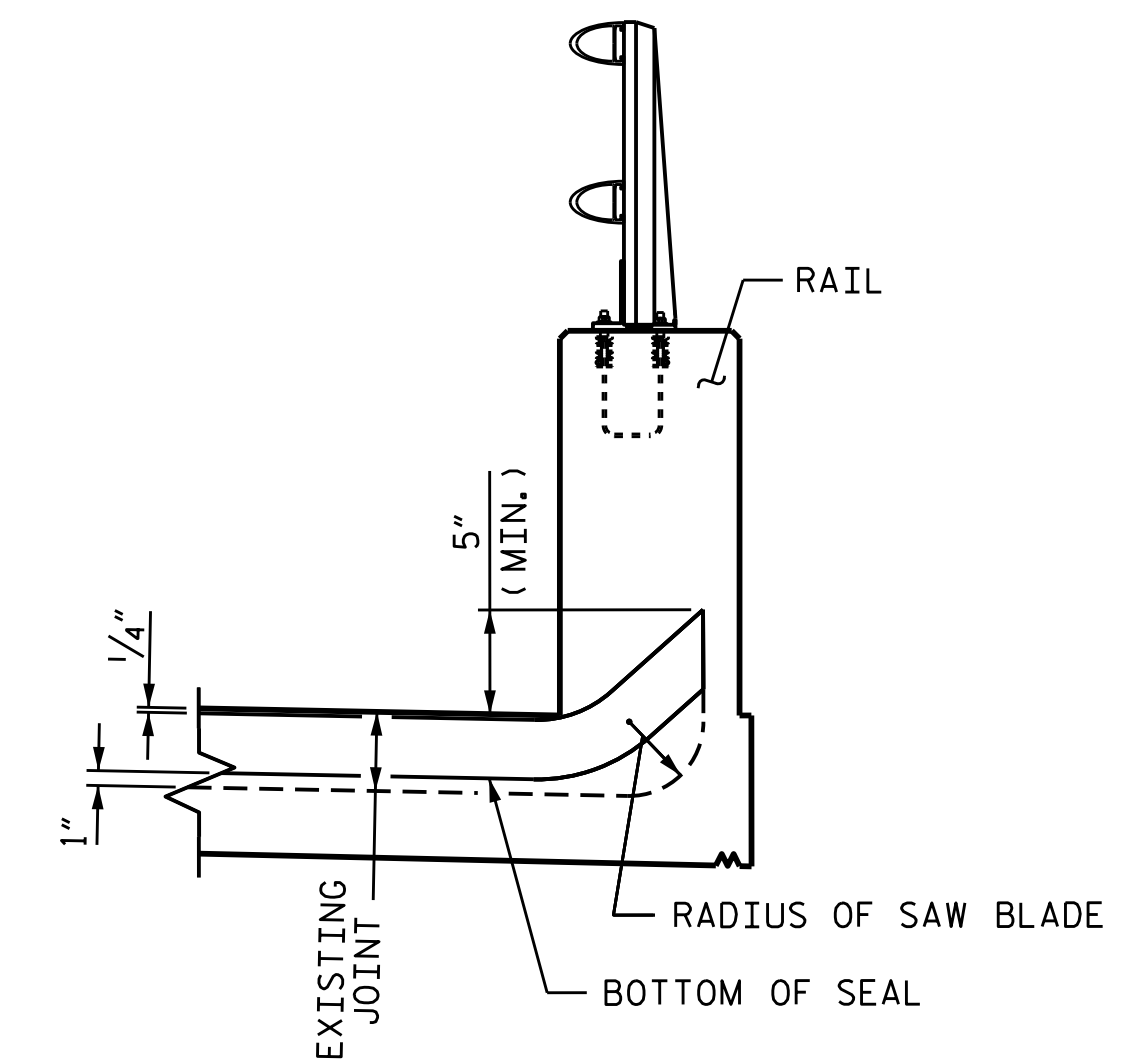
PAY LENGTH = 71.0 LIN. FT.



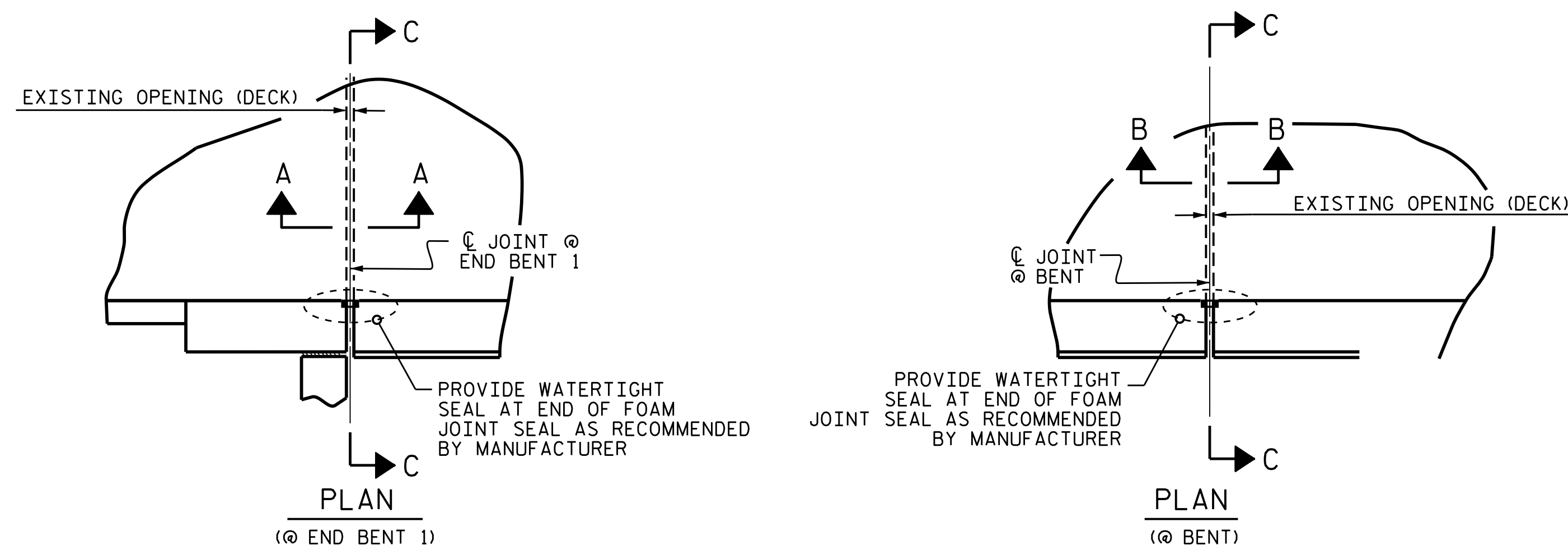
SECTION A-A



SECTION B-B



SECTION C-C



JOINT SEAL DETAILS

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO: 38



DocuSigned by:
 P. Korey Newton
 4452801419407...
 5/31/2018

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT SEAL
 REPLACEMENT DETAILS

DRAWN BY : W.D. REAMS DATE : 3/2/18
 CHECKED BY : D. R. SHACKELFORD DATE : 5/2/18

31-MAY-2018 09:43
 J:\Structures\Plans\15BPR.8.SMU.FoamJoints.070038.dgn
 pknewton

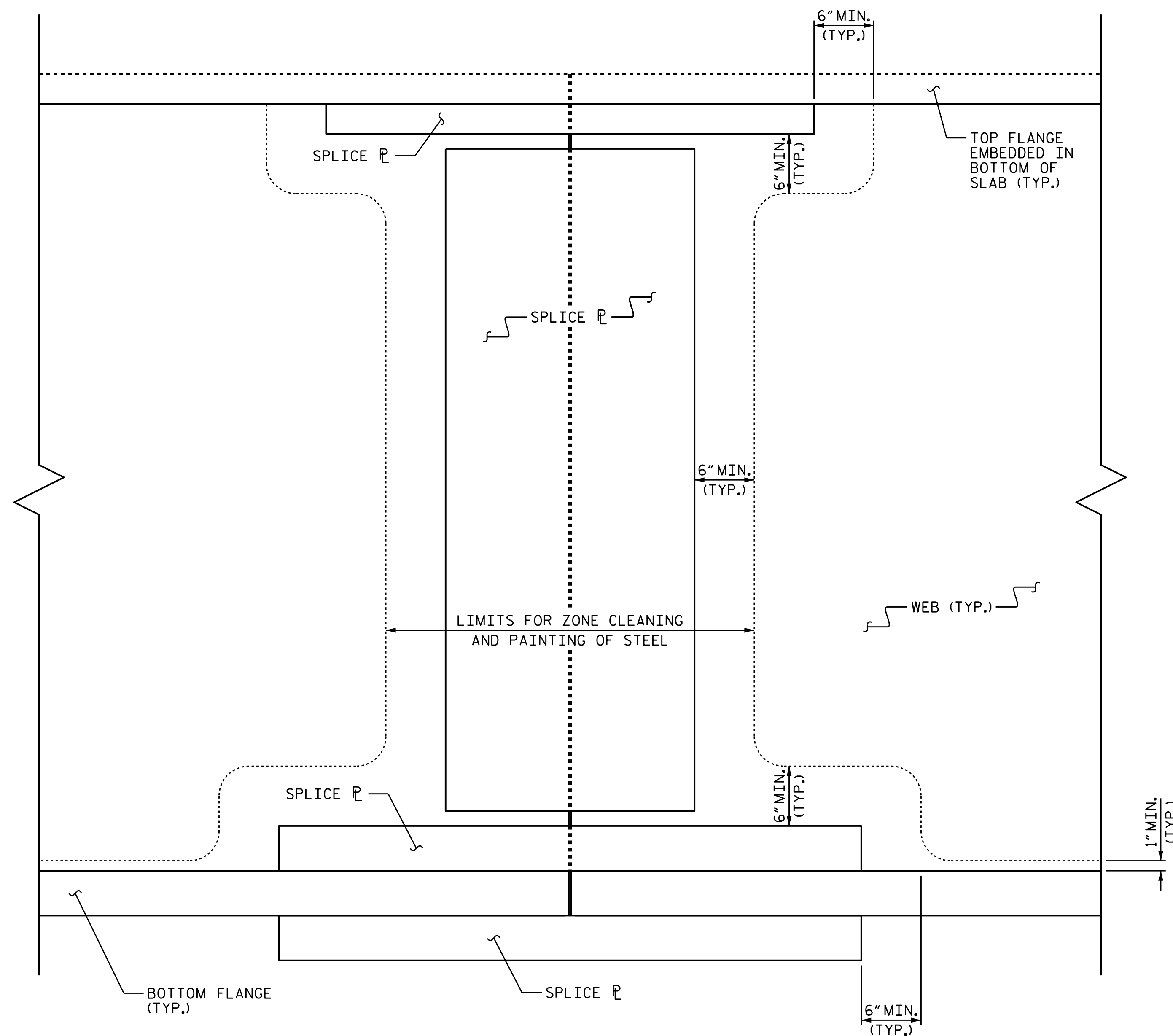
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 SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-8 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 9 |

NOTES

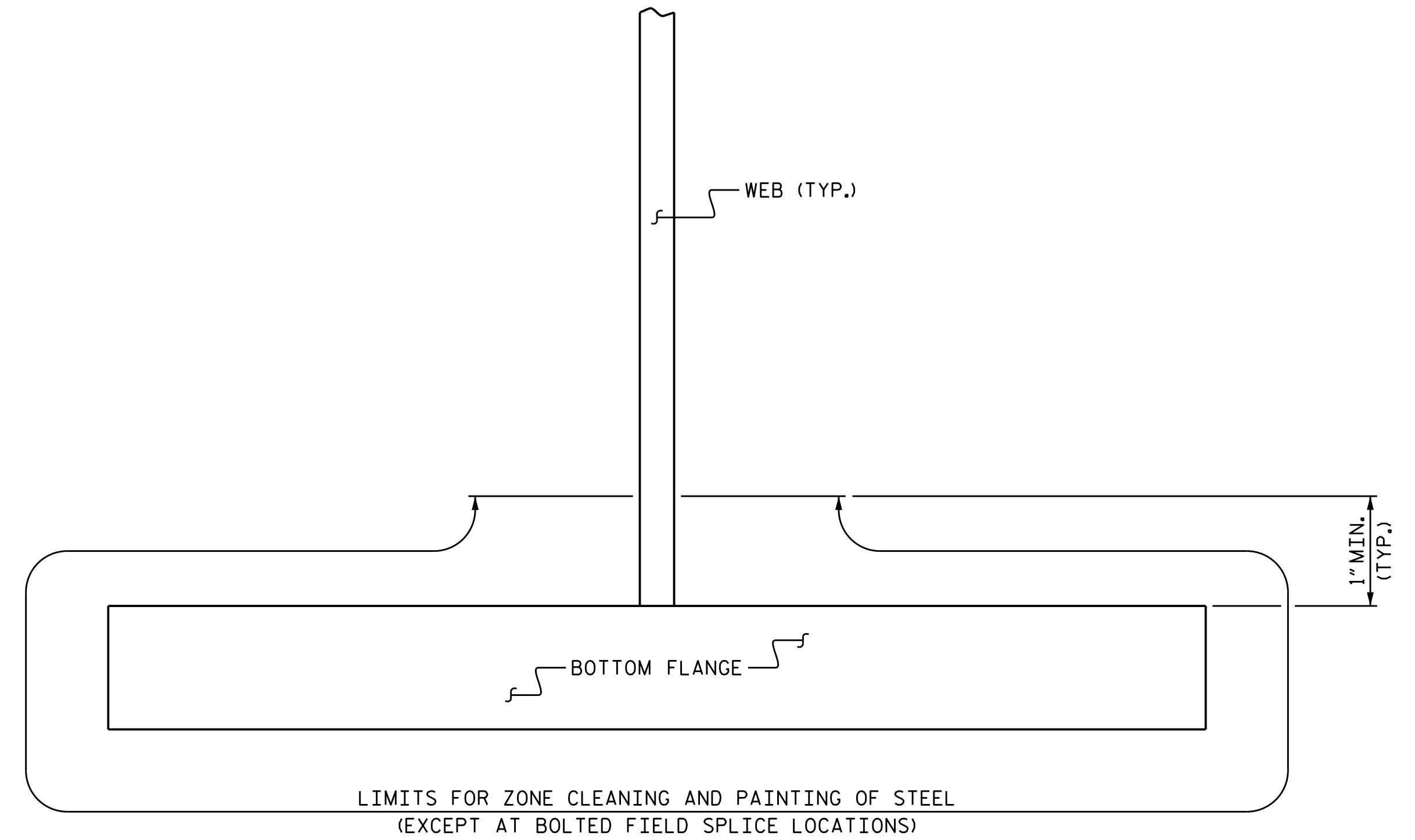
FOR EACH STEEL GIRDER, THE ENTIRE BOTTOM FLANGE AND THE ENTIRE GIRDER AT EACH BOLTED FIELD SPLICE SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE LIMITS INDICATED ON THIS SHEET.

SEE SPECIAL PROVISIONS FOR ZONE PAINTING WITH HRCSA.



PART ELEVATION

THE LIMITS FOR ZONE CLEANING AND PAINTING SHOWN SHALL APPLY FOR EACH SIDE OF EACH STEEL GIRDER AT EACH BOLTED FIELD SPLICE LOCATION.



PART SECTION

SECTION SHOWN DOES NOT REFLECT THE LIMITS FOR PAINTING AT BOLTED FIELD SPLICE LOCATIONS. SEE PART ELEVATION VIEW.

PROJECT NO. 15BPR.8
BERTIE COUNTY
 BRIDGE NO. 38



DocuSigned by:
 P. Corey Newton
 44FE3801419B407...
 5/31/2018

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

ZONE PAINTING WITH HRCSA

DRAWN BY : P. K. NEWTON DATE : 5/24/18
 CHECKED BY : P. D. BRYANT DATE : 5/24/18

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|----------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | |
| 1 | | | 3 | | | S-9 |
| 2 | | | 4 | | | TOTAL SHEETS 9 |

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 2018 "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 $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $1\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " 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 $\frac{1}{4}$ " 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 $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset 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 $\frac{5}{16}$ " 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 $\frac{1}{16}$ 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

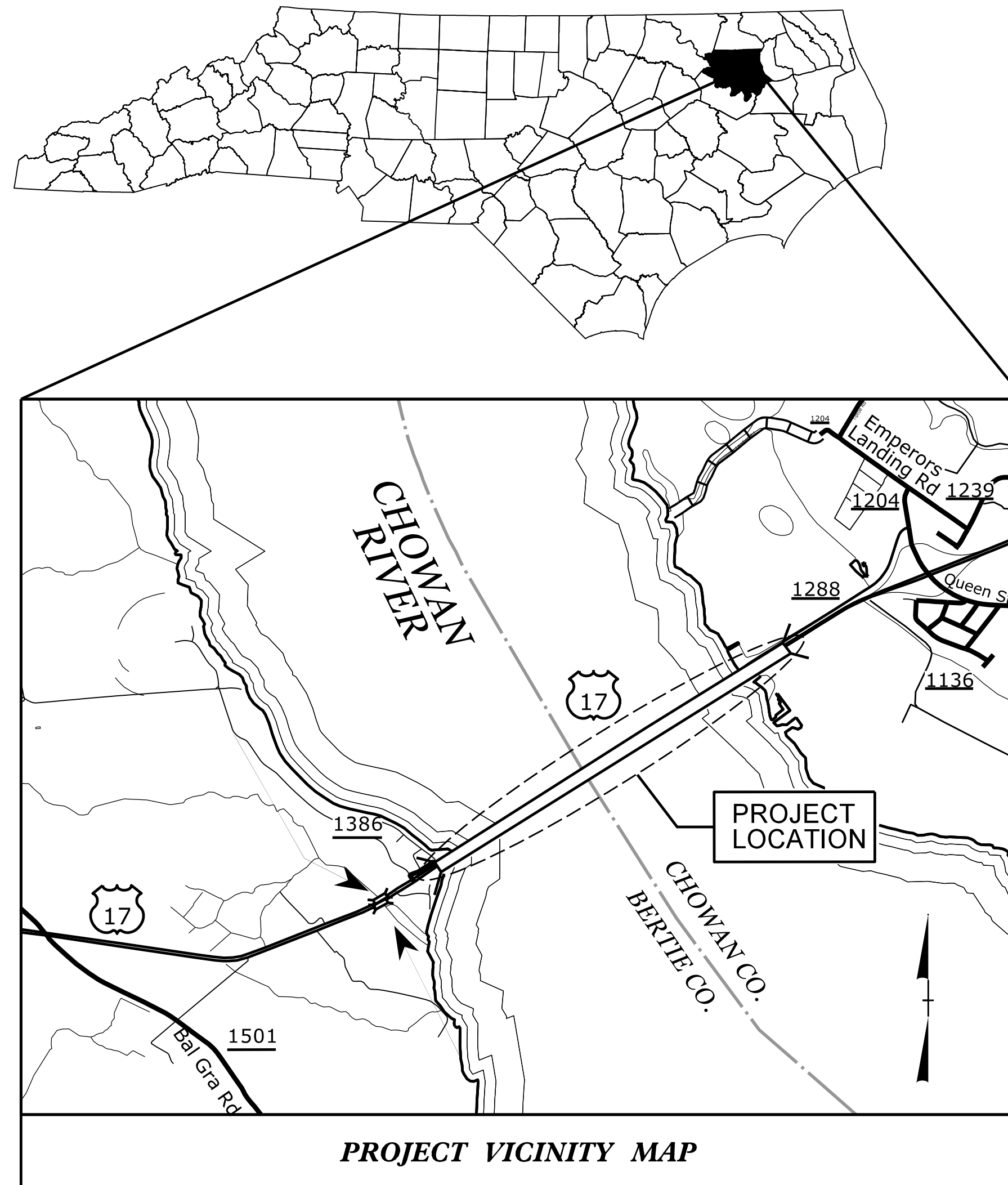
JANUARY, 1990

STD. NO. SN

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BERTIE COUNTY



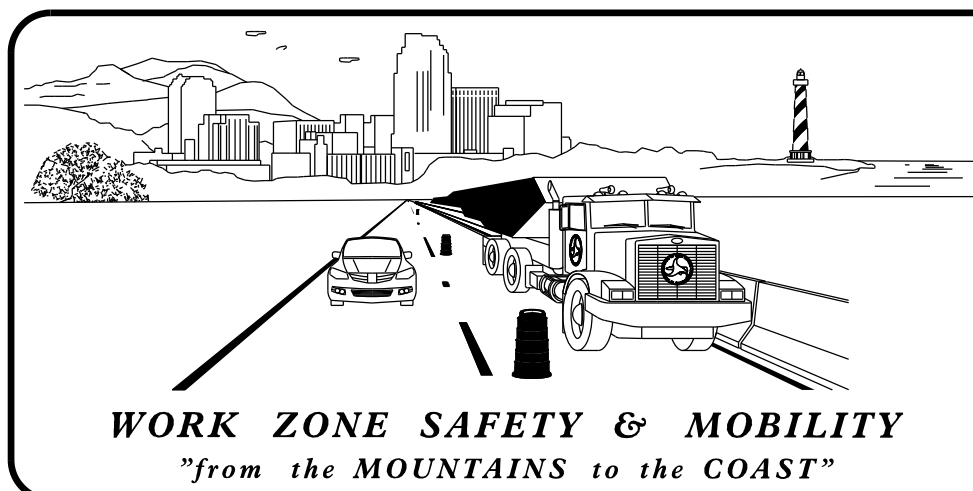
LOCATION: BRIDGE #38 – US 17 OVER CHOWAN RIVER, JUST WEST OF EDENTON

TYPE OF WORK: SILANE DECK TREATMENT, FOAM JOINT SEAL REPLACEMENTS, PSG GIRDER REPAIRS, SUBSTRUCTURE CONCRETE/SHOTCRETE REPAIRS, SPOT PAINTING OF STEEL SUPERSTRUCTURE

INDEX OF SHEETS

| <u>SHEET NO.</u> | <u>TITLE</u> |
|------------------|---|
| TMP-1 | INDEX OF SHEETS |
| TMP-1A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND |
| TMP-2 | TRAFFIC MANAGEMENT STRATEGY, GENERAL NOTES, PHASING AND LOCAL NOTES |
| TMP-2A | WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION |
| TMP-3 & 4 | MEDIAN LANE AND SHOULDER WORK AREA DETAILS |
| TMP-5 & 6 | OUTSIDE LANE AND SHOULDER WORK AREA DETAILS |

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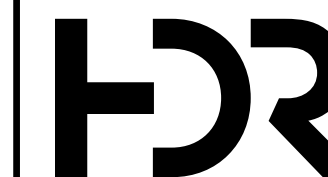
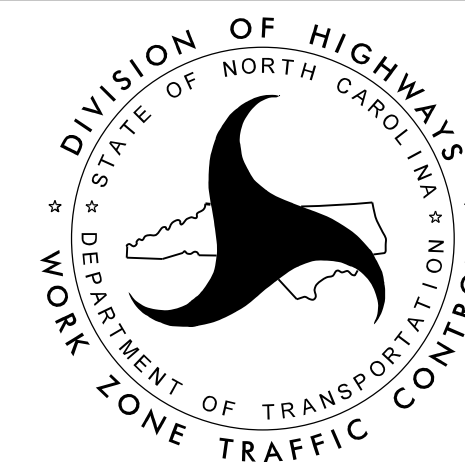
PLANS PREPARED BY:

MIKE RZEPKA, P.E.
PROJECT ENGINEER

YVETTE MARIOTTE
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

T. M. SHERRILL, P.E.
PRESERVATION AND REPAIR STAFF ENGINEER



555 Fayetteville St,
Suite 900
Raleigh, NC 27601
NC License No: F-0258

APPROVED: Michael T. Rzepka
DATE: 4/20/2018

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| <u>STD. NO.</u> | <u>TITLE</u> |
|-----------------|--|
| 1101.01 | WORK ZONE ADVANCE WARNING SIGNS |
| 1101.02 | TEMPORARY LANE CLOSURES |
| 1101.04 | TEMPORARY SHOULDER CLOSURES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1110.02 | PORTABLE WORK ZONE SIGNS |
| 1115.01 | FLASHING ARROW BOARDS |
| 1130.01 | DRUMS |
| 1135.01 | CONES |
| 1145.01 | BARRICADES |
| 1165.01 | TRUCK MOUNTED ATTENUATOR |
| 1180.01 | SKINNY-DRUMS |
| 1205.01 | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS |
| 1251.01 | RAISED PAVEMENT MARKERS - (PERMANENT) |

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL / CRYSTAL
- CRYSTAL / RED
- YELLOW / YELLOW

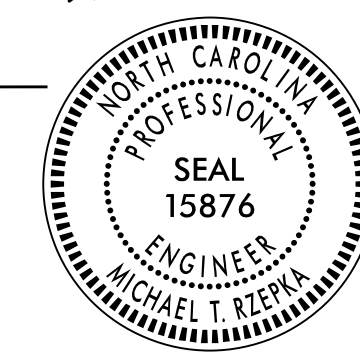
PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

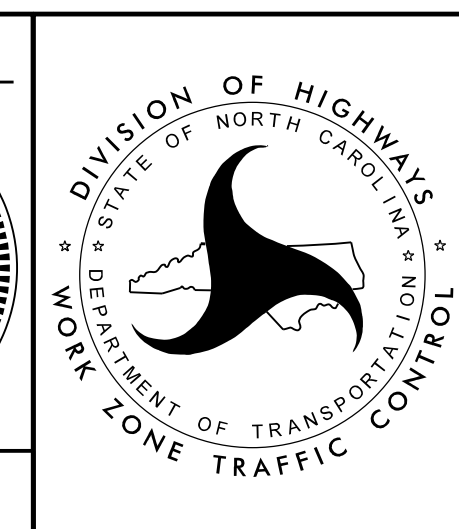
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APPROVED: Michael T. Rzepka

DATE: 4/20/2018



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ROADWAY STANDARD DRAWINGS
AND LEGEND

TRAFFIC MANAGEMENT STRATEGY

PROPOSED REPAIRS TO BRIDGE #38 WILL BE PERFORMED USING LANE CLOSURES. REFER TO THIS SHEET FOR PHASING.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

US 17

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 12:00 A.M. DECEMBER 31st TO 11:59 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 11:59 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 12:00 A.M. THURSDAY AND 11:59 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 12:00 A.M. FRIDAY TO 11:59 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 12:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 11:59 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 12:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 11:59 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 12:00 A.M. FRIDAY AND 11:59 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 12:00 A.M. TUESDAY TO 11:59 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 12:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 11:59 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US 17.

I) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

TRAFFIC PATTERN ALTERATIONS

J) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

N) UPON COMPLETION OF ALL CONSTRUCTION OPERATIONS, INSTALL FINAL PAVEMENT MARKINGS AND PAVEMENT MARKERS IN ORIGINAL LOCATIONS AS FOLLOWS:

| <u>ROAD NAME</u> | <u>MARKING</u> | <u>MARKER</u> |
|------------------|----------------|------------------|
| US 17 | POLYUREA | PERMANENT RAISED |

O) INSTALL TEMPORARY PAVEMENT MARKINGS IN ORIGINAL LOCATIONS AS FOLLOWS UNTIL FINAL MARKINGS ARE PLACED:

| <u>ROAD NAME</u> | <u>MARKING</u> | <u>MARKER</u> |
|------------------|----------------|---------------|
| US 17 | PAINT | NONE |

P) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

Q) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

R) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.



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NC License No: F-0258

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 15BPR.8 | TMP-2 |

PHASING

PERFORM BRIDGE RESTORATION WORK (SEE STRUCTURE PLANS). WHEN WORK REQUIRES LANE CLOSURES, SEE SHEETS TMP-2A, 3 & 4 AND USE WITH ROADWAY STANDARD DRAWINGS 1101.02, SHEETS 3 & 4 OF 14. (SEE LOCAL NOTES 1 THROUGH 4)

FOR BRIDGE WORK AFFECTING NAVIGABLE WATERS SEE LOCAL NOTE 5.

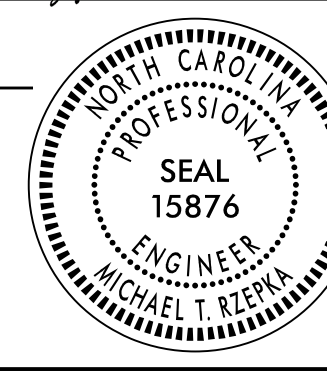

REPLACE PAVEMENT MARKINGS OBLITERATED DURING DECK WORK WITH TEMPORARY PAVEMENT MARKINGS IN THEIR ORIGINAL LOCATIONS UNTIL FINAL MARKINGS ARE INSTALLED.

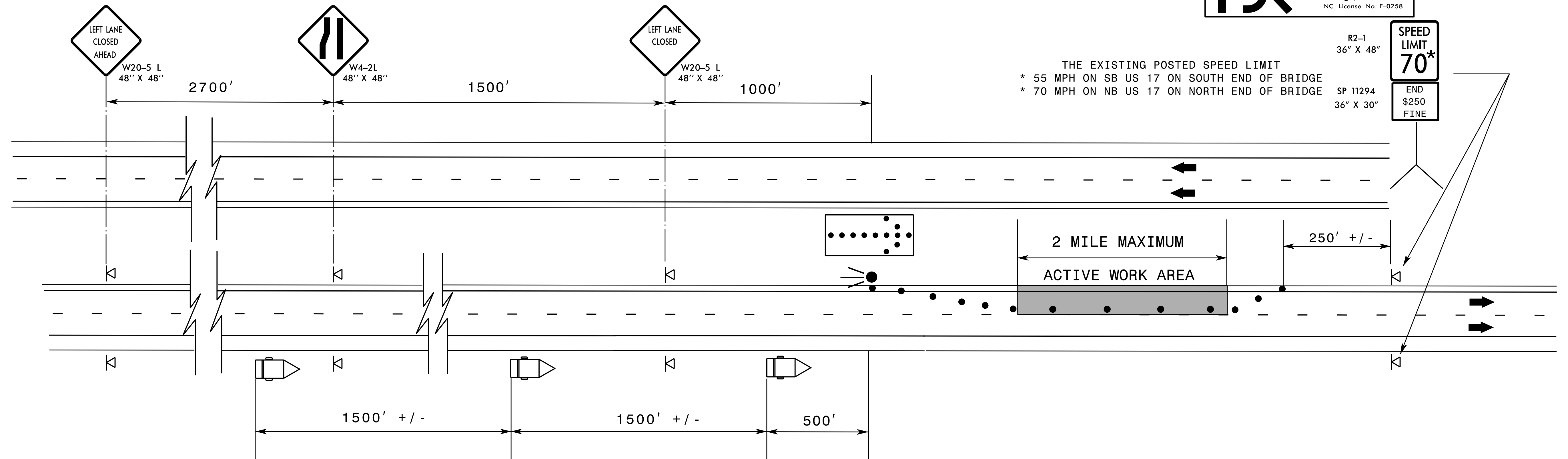
AT THE COMPLETION OF ALL BRIDGE WORK, USE ROADWAY STANDARD DRAWINGS 1101.02, SHEETS 3 & 4 OF 14 AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS IN THEIR ORIGINAL LOCATIONS.

LOCAL NOTES

- 1) CONTACT RESIDENT ENGINEER AT LEAST THIRTY (30) DAYS IN ADVANCE OF INSTALLATION OF WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION (SHEET TMP-2A).
- 2) OVERWEIGHT/OVERSIZE LOAD RESTRICTIONS WILL BE NEEDED DURING LANE CLOSURE USE.
- 3) IF LANE CLOSURE REMAINS IN PLACE DURING INACTIVE WORK PERIODS, RETURN TRAFFIC TO EXISTING OPEN LANE BY REMOVING THE LANE-NARROWING DRUM TAPER ADJACENT TO WORK AREA AND SHIFT SKINNY DRUMS INTO WORK AREA. COVER/REMOVE SIGNS W26-1, W5-1 & W1-4. SEE SECTION VIEWS ON SHEETS TMP-3 & TMP-5.
- 4) FOR LONG-TERM LANE CLOSURES OR DURING TIMES OF CONSTRUCTION INACTIVITY, DRUMS, SKINNY DRUMS AND CONES NEED TO BE DOUBLED-WEIGHTED TO MINIMIZE MOVEMENT, AS DIRECTED BY THE ENGINEER.
- 5) COORDINATE WITH THE U.S. COAST GUARD FOR WORK AFFECTING NAVIGABLE WATERS (SEE SPECIAL PROVISION).

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| <p>APPROVED: <i>Michael T. Rzepka</i></p> <p>DATE: 4/20/2018</p> <p>SEAL</p>  |  | <p>TRAFFIC MANAGEMENT STRATEGY, GENERAL NOTES, PHASING AND LOCAL NOTES</p> |
| <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> | | |



THE EXISTING POSTED SPEED LIMIT
 * 55 MPH ON SB US 17 ON SOUTH END OF BRIDGE
 * 70 MPH ON NB US 17 ON NORTH END OF BRIDGE

R2-1
36" X 48"
 SPEED LIMIT
70*
 END
\$250
FINE
 SP 11294
36" X 30"

| MESSAGE NO. 1 | MESSAGE NO. 2 |
|-------------------|------------------|
| 55 MPH ZONE AHEAD | \$250 FINE AHEAD |

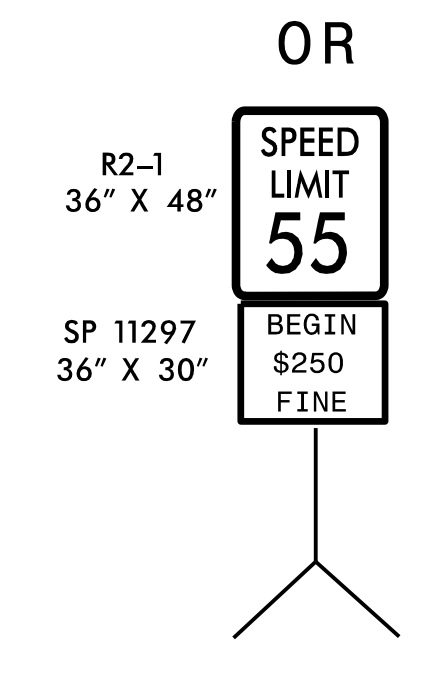
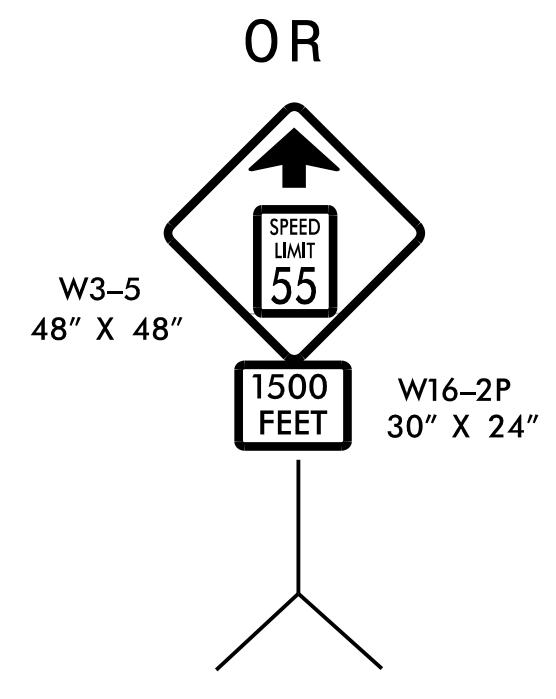
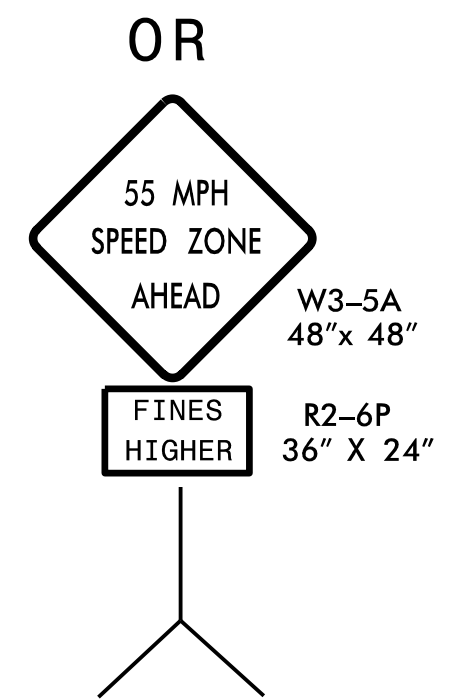
CHANGEABLE MESSAGE SIGN

| MESSAGE NO. 1 | MESSAGE NO. 2 |
|----------------------|--------------------|
| BEGIN 55 MPH 1500 FT | WORKERS IN ROADWAY |

CHANGEABLE MESSAGE SIGN

| MESSAGE NO. 1 | MESSAGE NO. 2 |
|----------------|------------------|
| SPEED LIMIT 55 | BEGIN \$250 FINE |

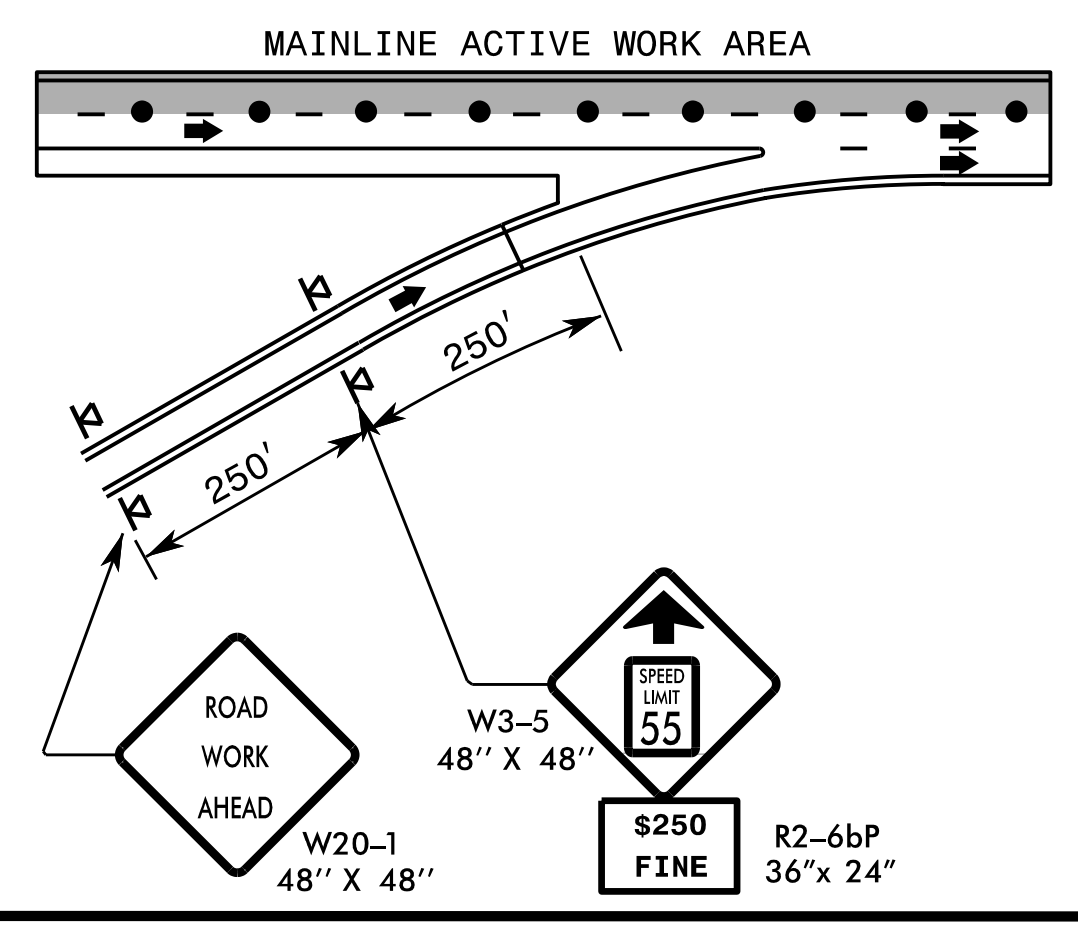
CHANGEABLE MESSAGE SIGN



GUIDELINES

1. THIS DRAWING IS FOR USE ONLY AFTER AN ENGINEERING INVESTIGATION HAS BEEN PERFORMED BY THE REGIONAL TRAFFIC ENGINEER AND WORK ZONE TRAFFIC CONTROL SECTION. THE WORK ZONE "VARIABLE" SPEED LIMIT IS INTENDED FOR USE ON FREEWAYS WITH SPEED LIMITS 65 MPH OR GREATER. SEE WORK ZONE "VARIABLE" SPEED LIMIT GUIDELINES FOR CRITERIA.
2. THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE SPEED LIMIT REDUCTION IN ORDER FOR THE REDUCTION AND/OR \$250 SPEEDING FINE TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT MESSAGE/SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE \$250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.
3. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
4. THE MAXIMUM LANE CLOSURE LENGTH IS 2 MILES UNLESS OTHERWISE SHOWN IN THE PLANS. IN ADDITION, FOR ACTIVE WORK AREAS THAT EXCEED 1 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL CMS'S/SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEEDING PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMPS LOCATED WITHIN THE ACTIVE WORK AREA.
5. THE \$250 SPEEDING FINE PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION.
6. THIS APPLICATION IS FOR SHORT-TERM ACTIVITIES SUCH AS LANE CLOSURES AND ROAD CLOSURES. THE WORK ZONE "VARIABLE" SPEED LIMIT SHALL NOT BE IN OPERATION CONTINUOUSLY (24/7) FOR A PERIOD EXCEEDING 30 CALENDAR DAYS. THE WORK ZONE "VARIABLE" SPEED LIMIT MESSAGING/SIGNAGE SHALL BE REMOVED AT THE COMPLETION OF THE ACTIVITY. THE REGIONAL TRAFFIC ENGINEER WILL BE NOTIFIED BY THE RESIDENT ENGINEER TO RESCIND THE ORDINANCE.
7. WHEN WORK ZONE "VARIABLE" SPEED LIMIT REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION.

ENTRANCE RAMPS



NOTES

1. THE WORK ZONE "VARIABLE" SPEED LIMIT WILL BE ESTABLISHED IN COLLABORATION BETWEEN THE REGIONAL TRAFFIC ENGINEER, THE DIVISION, AND THE WORK ZONE TRAFFIC CONTROL SECTION. THIS DRAWING SHOWS THE TYPICAL APPLICATION OF REDUCING THE SPEED LIMIT TO 60 MPH.
2. TYPICALLY THE WORK ZONE "VARIABLE" SPEED LIMIT APPLIES TO A SPECIFIC PORTION AND NOT THE ENTIRE PROJECT. THE WORK AREA AFFECTED BY THE SPEED REDUCTION SHOULD NOT EXCEED 2 MILES UNLESS THE MAXIMUM LENGTH OF LANE CLOSURE ALLOWED BY THE PLANS EXCEEDS THE 2 MILE MAXIMUM.
3. THE WORK ZONE "VARIABLE" SPEED LIMIT AND THE \$250 SPEEDING FINE IS TO BEGIN 500' IN ADVANCE OF THE FLASHING ARROW PANEL AT THE MERGE TAPER. THE EXISTING SPEED LIMIT SIGNS AND THE "END \$250 FINE" SIGNS ARE TO BE INSTALLED AT THE LOCATION WHERE THE EXISTING SPEED LIMIT IS TO RESUME.
4. THE NEED AND LOCATION OF ADDITIONAL POSTED WORK ZONE "VARIABLE" SPEED LIMIT SIGNS WITHIN THE LANE CLOSURE IS TO BE DETERMINED BY THE REGIONAL TRAFFIC ENGINEER.

APPROVED: *Michael T. Rzepka*

DATE: 4/20/2018

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**WORK ZONE
"VARIABLE"
SPEED LIMIT
REDUCTION**

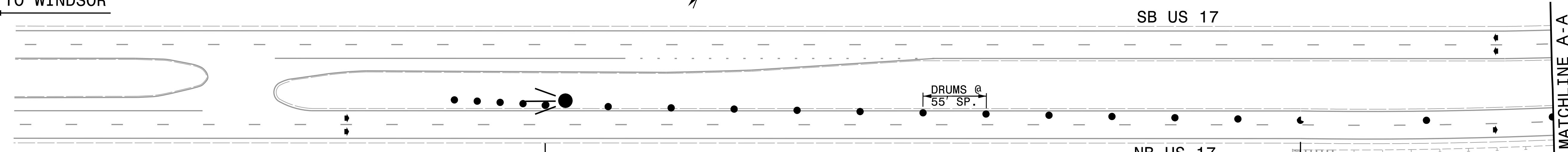
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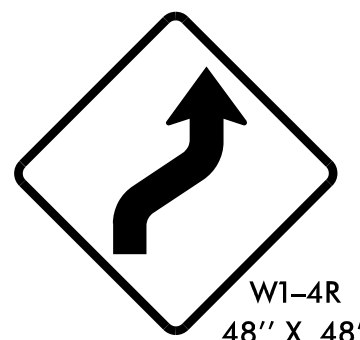
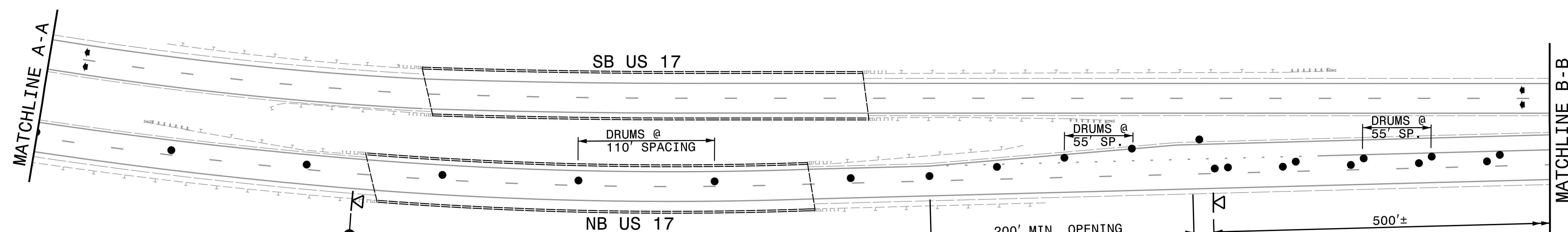
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TO WINDSOR

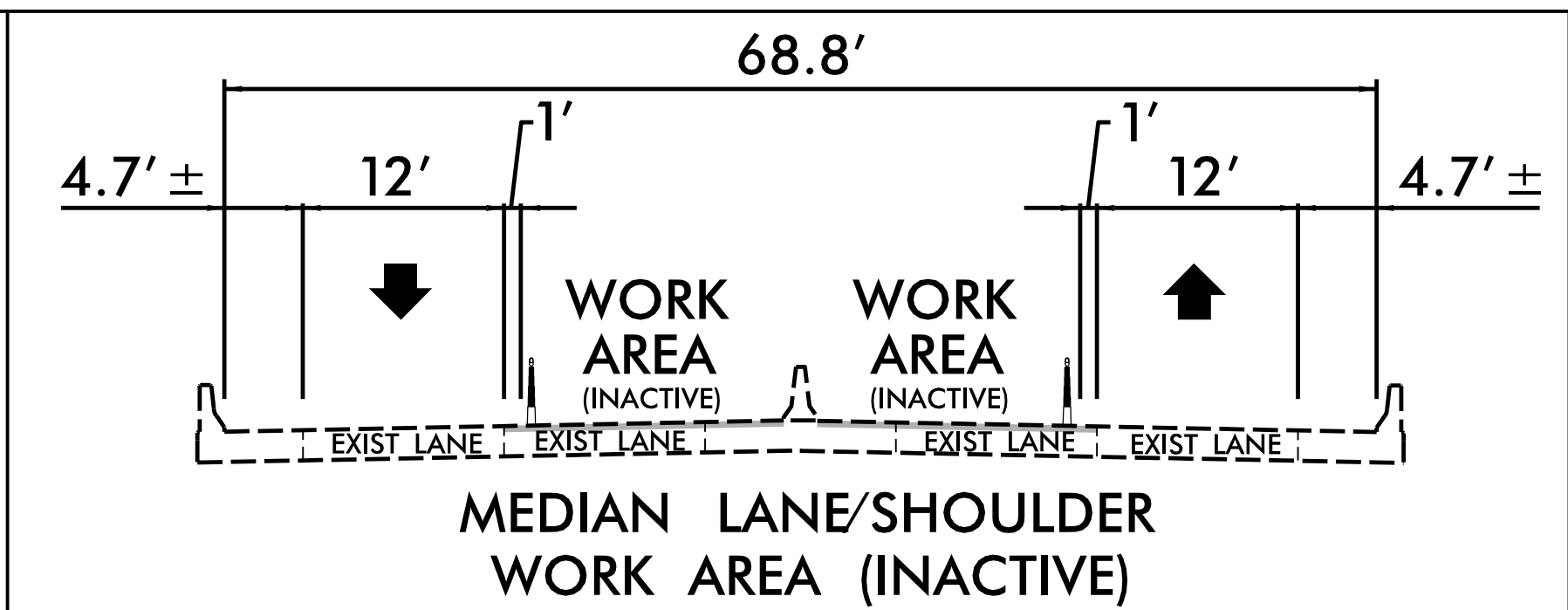
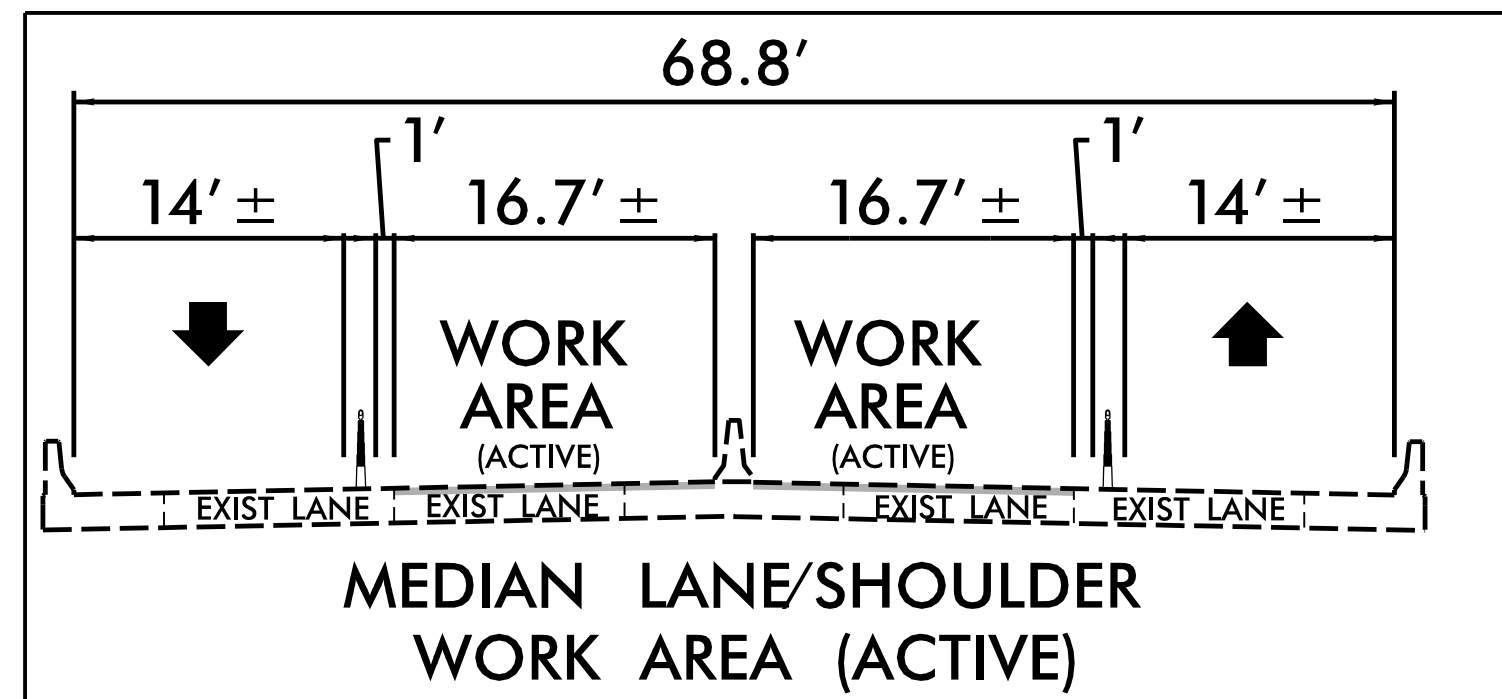
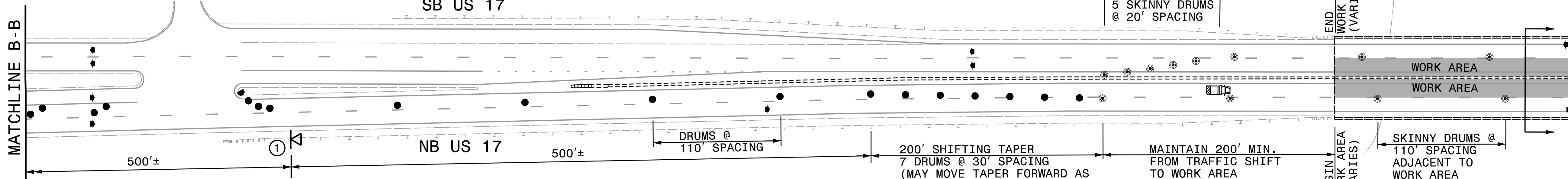
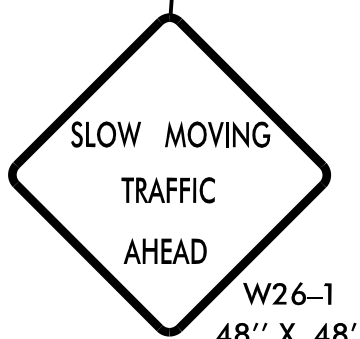


USE RSD 1101.02, SHEET 3 OF 14 AND TMP-2A
FOR PLACEMENT OF MEDIAN LANE CLOSURE
AND SPEED REDUCTION/\$250 PENALTY
SIGNS AND DEVICES

IF USING MULTIPLE SETUPS, SET NORTHBOUND MEDIAN LANE
CLOSURE IN SAME LOCATION EACH TIME.



GOV. EDEN
HOUSE RD.

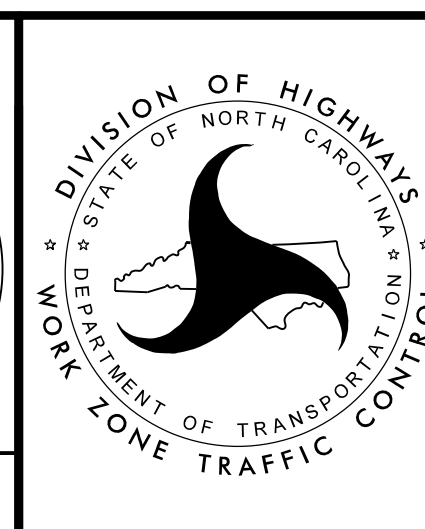


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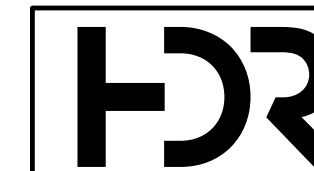
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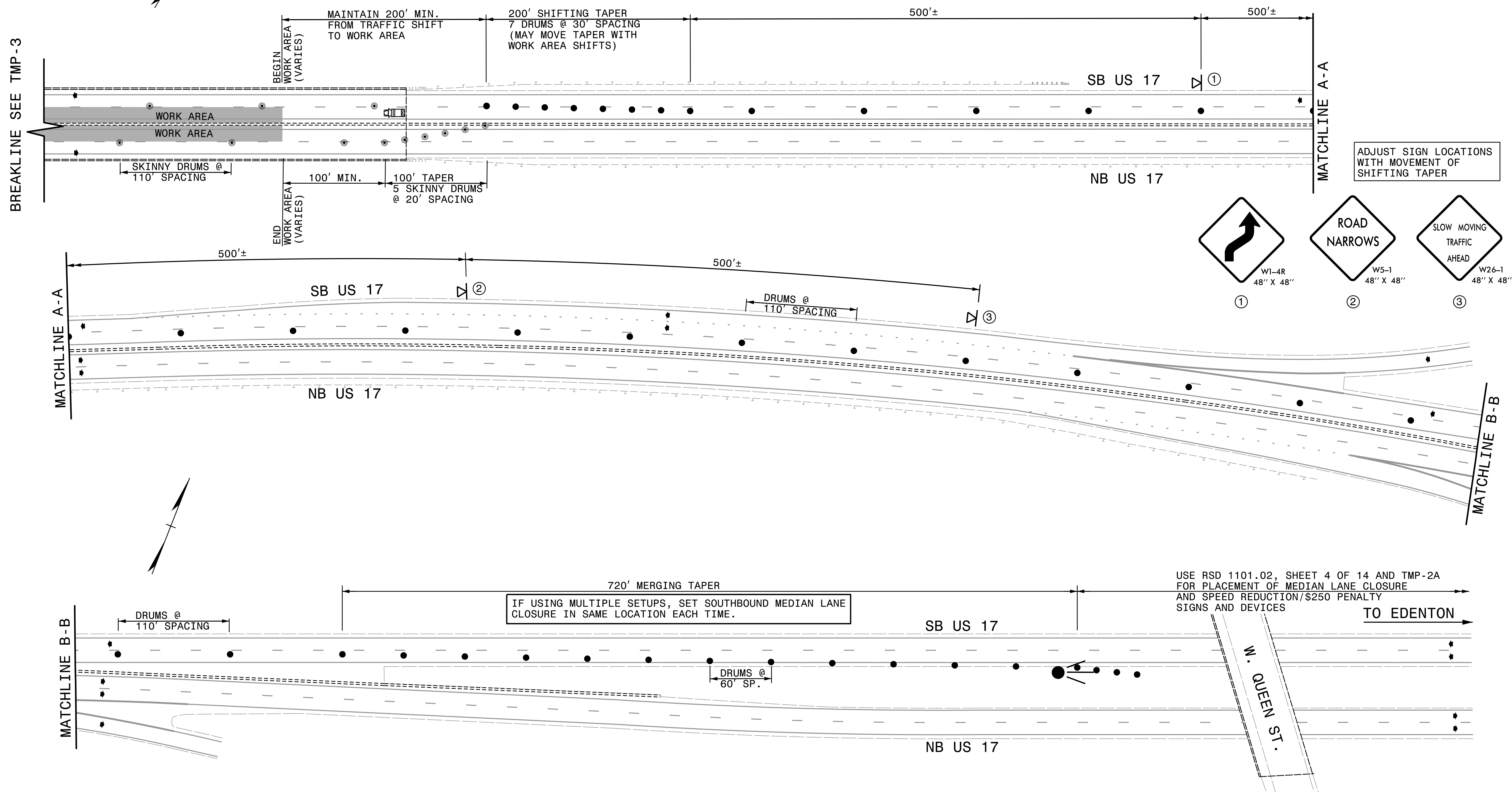
MEDIAN LANE/SHOULDER
WORK AREA DETAILS

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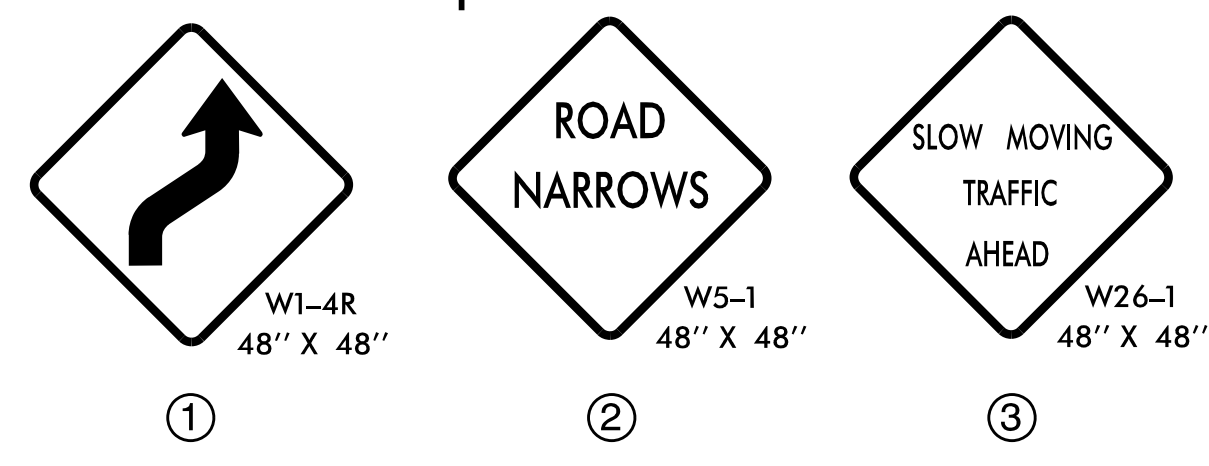


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ADJUST SIGN LOCATIONS WITH MOVEMENT OF SHIFTING TAPER



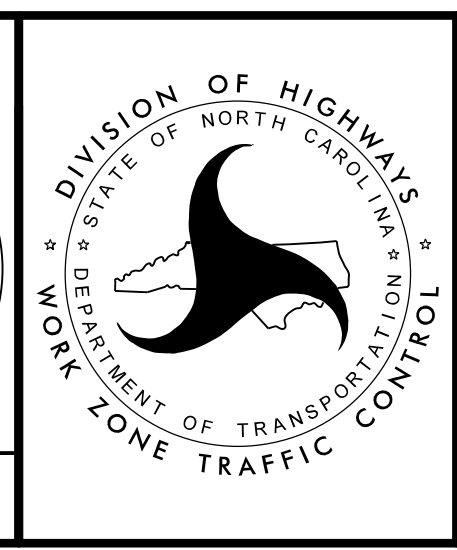
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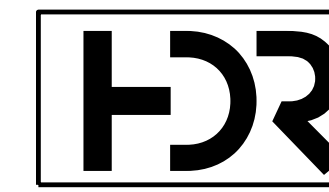
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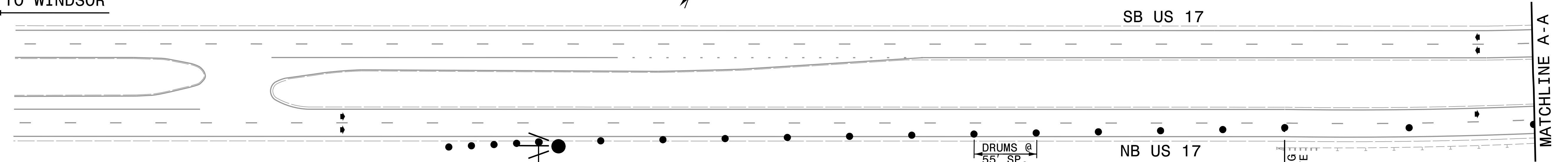
MEDIAN LANE / SHOULDER WORK AREA DETAILS



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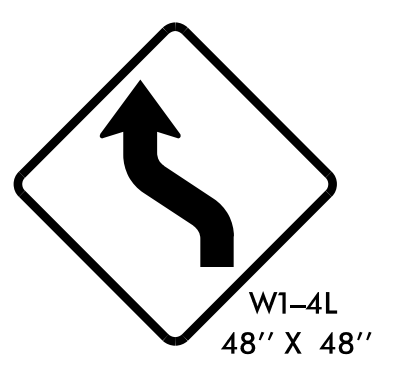
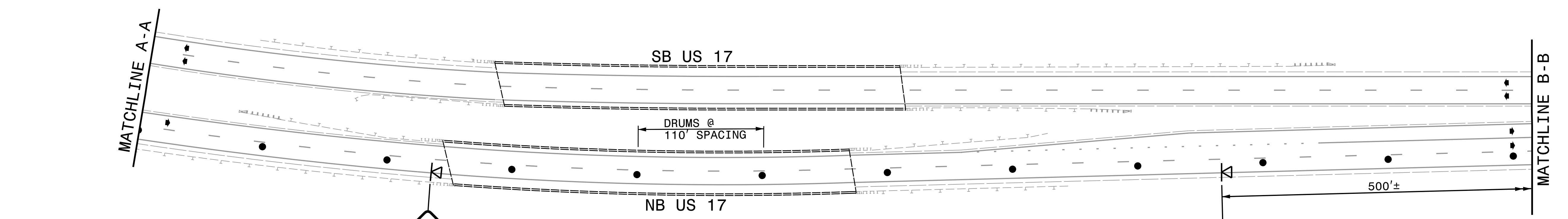
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TO WINDSOR

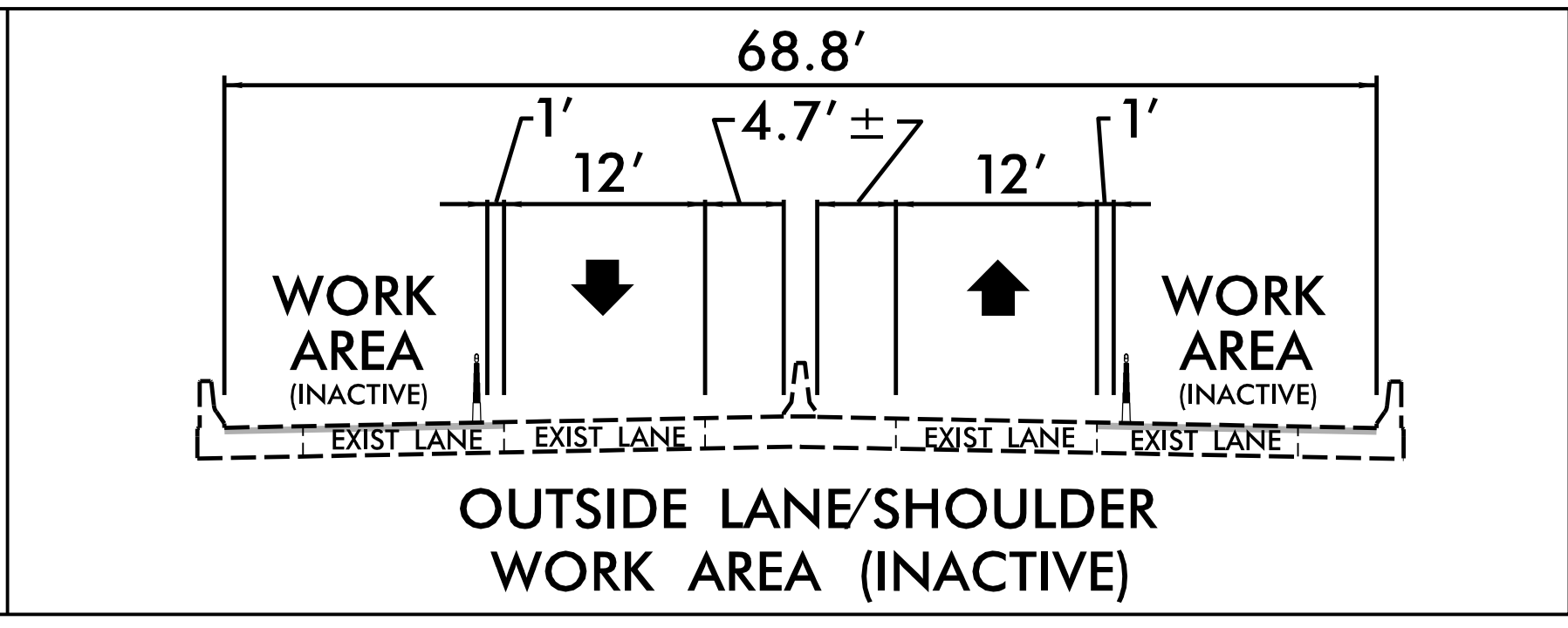
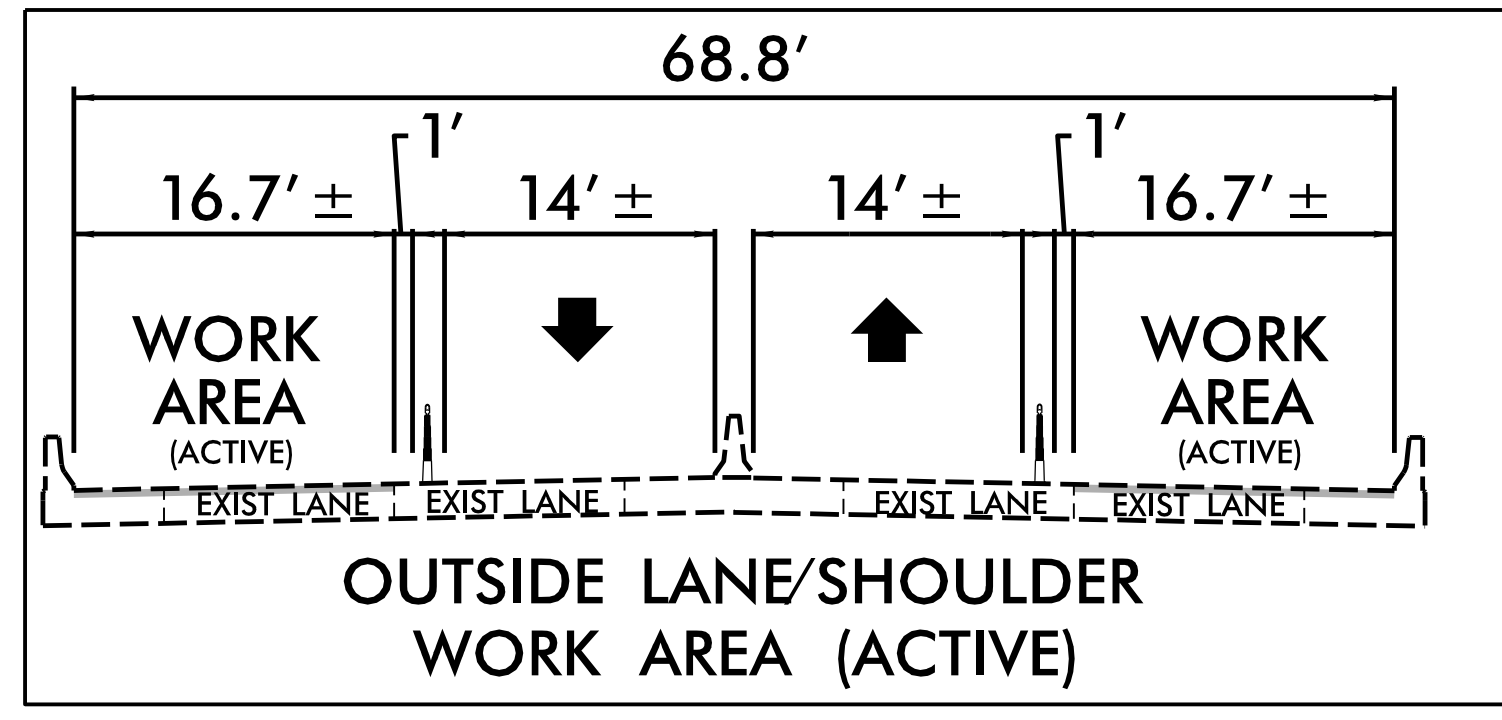
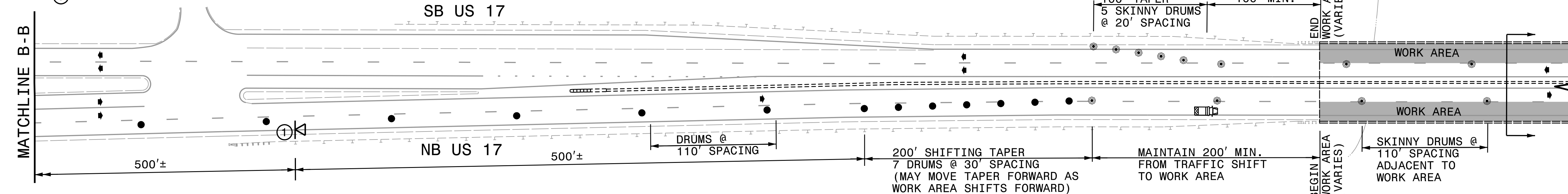
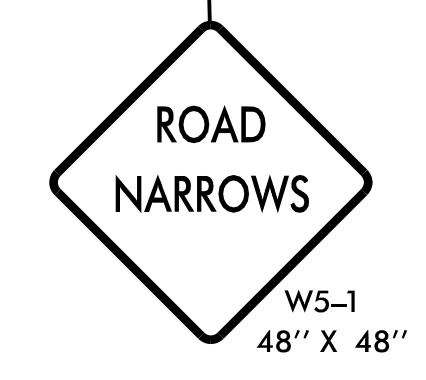
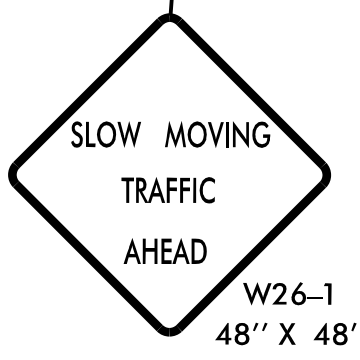


USE RSD 1101.02, SHEET 3 OF 14 AND TMP-2A
FOR PLACEMENT OF MEDIAN LANE CLOSURE
AND SPEED REDUCTION/\$250 PENALTY
SIGNS AND DEVICES

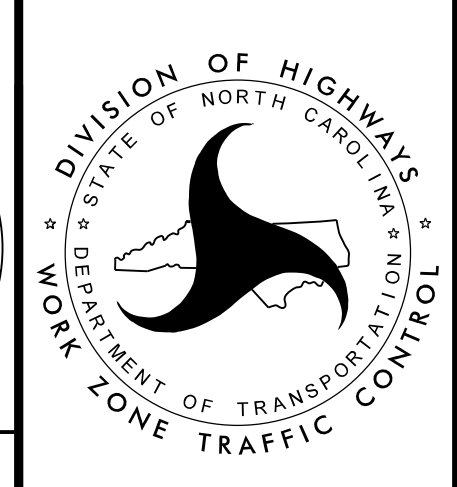
IF USING MULTIPLE SETUPS, SET NORTHBOUND OUTSIDE LANE
CLOSURE IN SAME LOCATION EACH TIME.



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HOUSE RD.



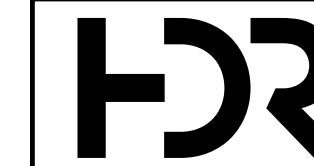
APPROVED: *Michael T. Rzepka*
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OUTSIDE LANE/SHOULDER
WORK AREA DETAILS

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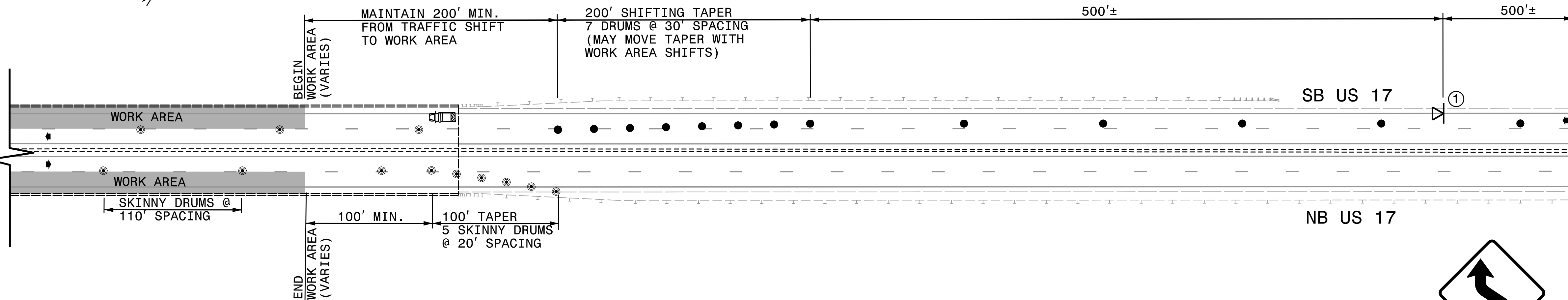
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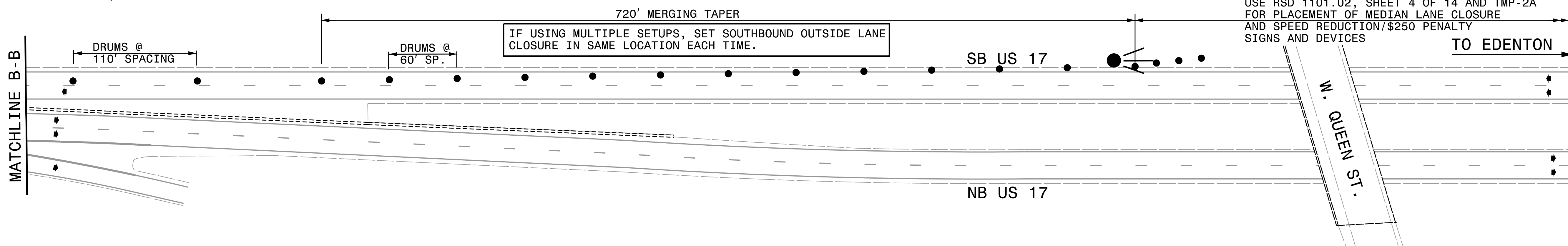
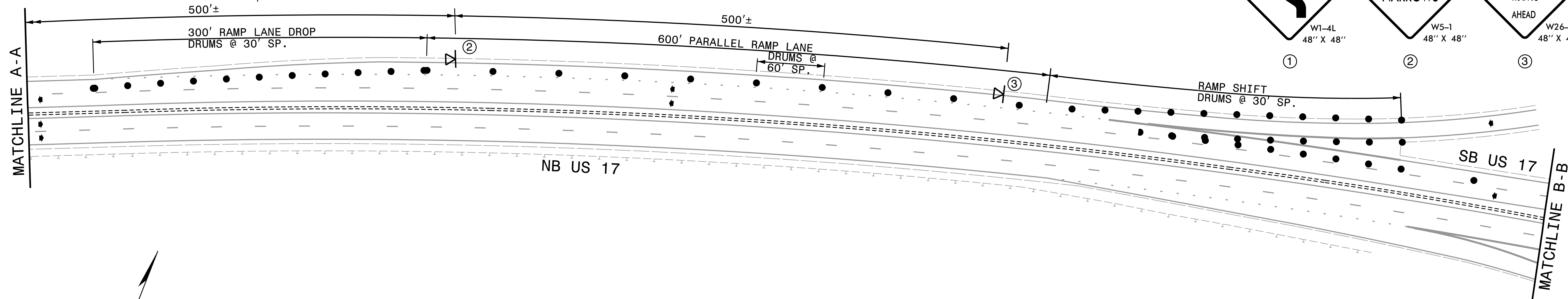
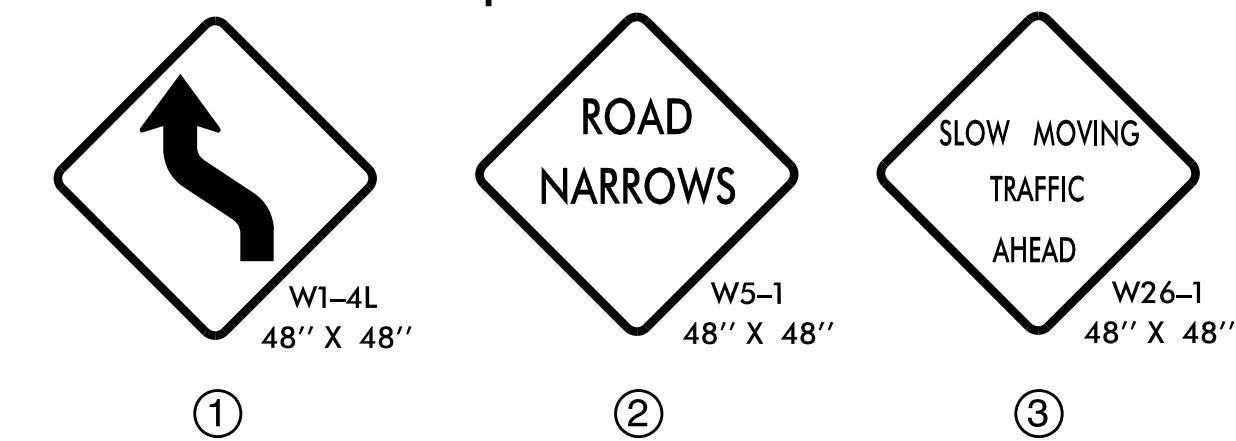
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| 15BPR.8 | TMP-6 |

BREAKLINE SEE TMP-5



ADJUST SIGN LOCATIONS WITH MOVEMENT OF SHIFTING TAPER



USE RSD 1101.02, SHEET 4 OF 14 AND TMP-2A FOR PLACEMENT OF MEDIAN LANE CLOSURE AND SPEED REDUCTION/\$250 PENALTY SIGNS AND DEVICES

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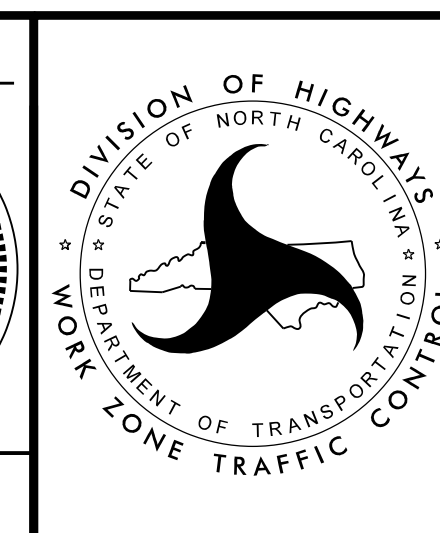
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OUTSIDE LANE/SHOULDER
WORK AREA DETAILS