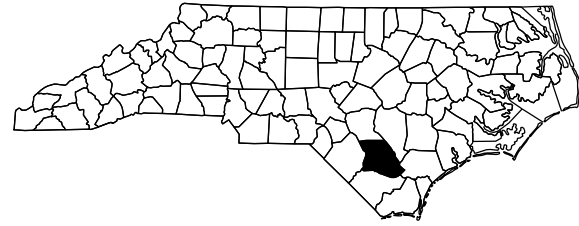


PROJECT: 15006.1009234

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

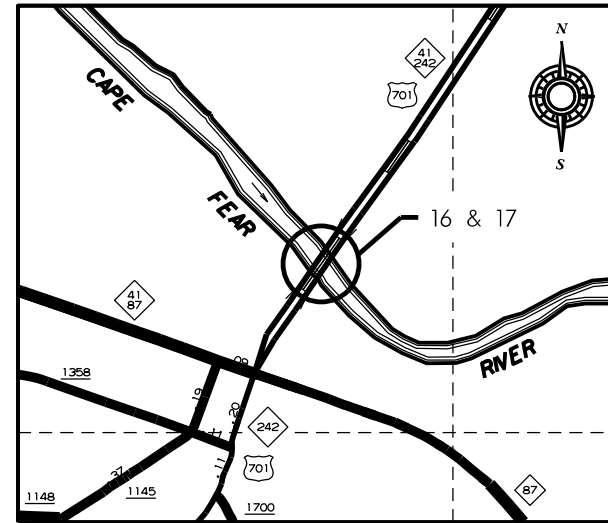
BLADEN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15006.1009234	1	
STATE PROGRAM	F.A. PROGRAM	DESCRIPTION	
15006.1009234		P.E.	
15006.1009234		P.E.	
15006.1009234		CONST.	

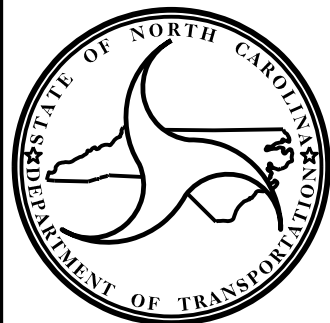
LOCATION: **BLADEN COUNTY:**

BRIDGE #16 ON US HWY 701 (NORTHBOUND) OVER THE CAPE FEAR RIVER
BRIDGE #17 ON US HWY 701 (SOUTHBOUND) OVER THE CAPE FEAR RIVER

TYPE OF WORK: **BRIDGE PRESERVATION - EXISTING DOLPHIN REMOVAL,
SUBSTRUCTURE DEBRIS DEFLECTORS**



VICINITY MAP - BLADEN CO.



DESIGN DATA

BLADEN COUNTY
#16 ADT 2015 = 11,000
#17 ADT 2015 = 11,000

PROJECT LENGTH

BLADEN COUNTY
- #16 = 0.223 MILE
- #17 = 0.223 MILE

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

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

A. KEITH PASCHAL, P.E.
PROJECT ENGINEER

2018 STANDARD SPECIFICATIONS

LETTING DATE:

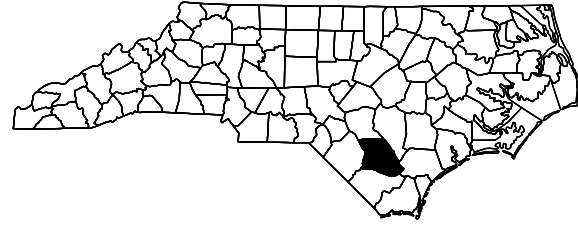
DocuSigned by:

Timothy M. Sherrill



TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER
12/20/2017

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



BLADEN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15006.1009234	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15006.1009234		P.E.	
15006.1009234		P.E.	
15006.1009234		CONST.	

LOCATION: **BLADEN COUNTY:**

BRIDGE #16 ON US HWY 701 (NORTHBOUND) OVER THE CAPE FEAR RIVER
BRIDGE #17 ON US HWY 701 (SOUTHBOUND) OVER THE CAPE FEAR RIVER

TYPE OF WORK: **BRIDGE PRESERVATION - EXISTING DOLPHIN REMOVAL,**
SUBSTRUCTURE DEBRIS DEFLECTORS

INDEX OF SHEETS

I
1A
S-1 THRU S-9
SN

TITLE SHEET
INDEX OF SHEETS
STRUCTURAL PLANS DEBRIS DEFLECTOR - BRIDGE 16 & 17
STANDARD NOTES

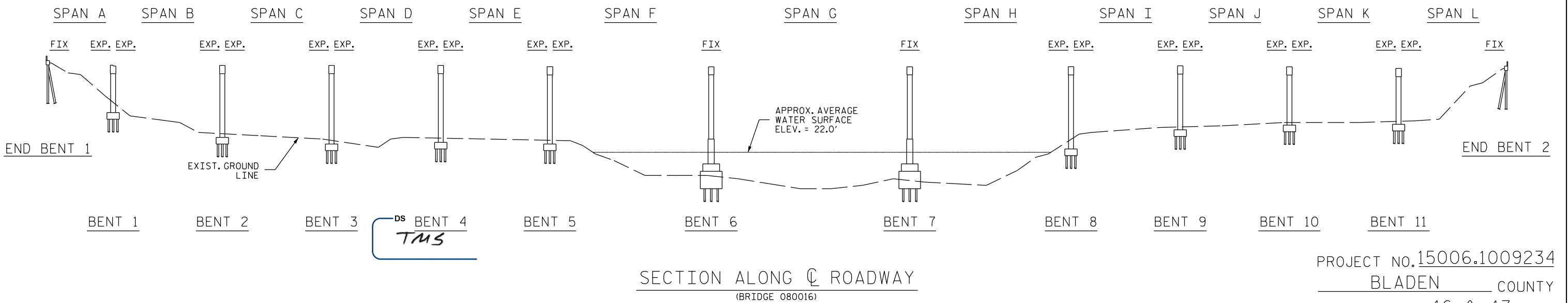
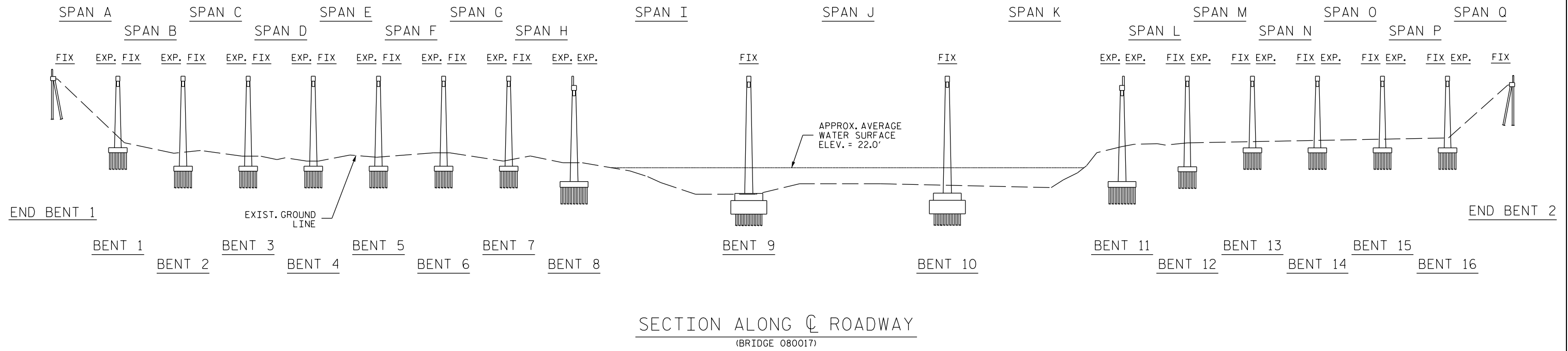
PROJECT: 15006.1009234

CONTRACT:

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 10/18/2016 (BRIDGE 080017) AND 10/19/2016 (BRIDGE 080016).

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



SCOPE OF WORK

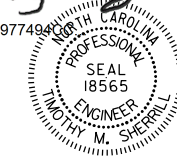
- REMOVAL OF EXISTING DOLPHIN PILES
- CONSTRUCTION OF DEBRIS DEFLECTORS

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

DocuSigned by:

Timothy M. Sherrill
AD50B1D97749



12/20/2017

PROJECT NO. 15006.1009234
BLADEN COUNTY
BRIDGE NO. 16 & 17

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGES ON
U.S. HWY 701 SOUTHBOUND AND
U.S. HWY 701 NORTHBOUND OVER
THE CAPE FEAR RIVER

DRAWN BY : R.L.PUTEK DATE : 12/17
CHECKED BY : T.M.SHERRILL DATE : 12/17

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

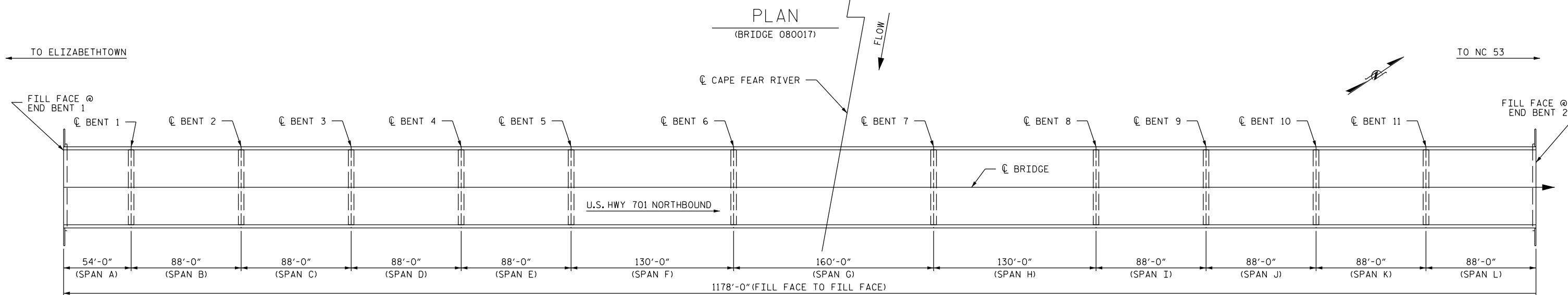
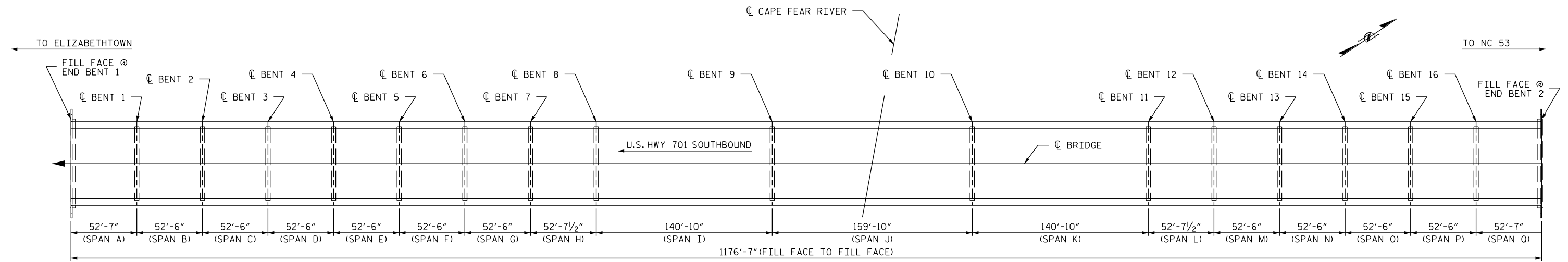
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			9

*****SYSTEMTIME*****
*****DCN*****
*****USERNAME*****

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 10/18/2016 (BRIDGE 080017) AND 10/19/2016 (BRIDGE 080016).

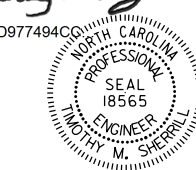
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



PROJECT NO. 15006.1009234
BLADEN COUNTY
BRIDGE NO. 16 & 17

SHEET 2 OF 2

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494C



12/20/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGES ON
U.S. HWY 701 SOUTHBOUND AND
U.S. HWY 701 NORTHBOUND OVER
THE CAPE FEAR RIVER

DRAWN BY : R.L.PUTEK DATE : 12/17
CHECKED BY : T.M.SHERRILL DATE : 12/17

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

*****SYSTEM*****
*****DCN*****
*****USERNAME*****



NOTES

THE 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 OR CONDITIONS DIFFER.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

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

PROJ. NO. 15006.1009234
 BLADEN COUNTY
 BRIDGE NO. 16 & 17

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494C



12/20/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGES ON
 U.S. HWY 701 SOUTHBOUND AND
 U.S. HWY 701 NORTHBOUND OVER
 THE CAPE FEAR RIVER

DRAWN BY : R.L.PUTEK DATE : 12/17
 CHECKED BY : T.M.SHERRILL DATE : 12/17

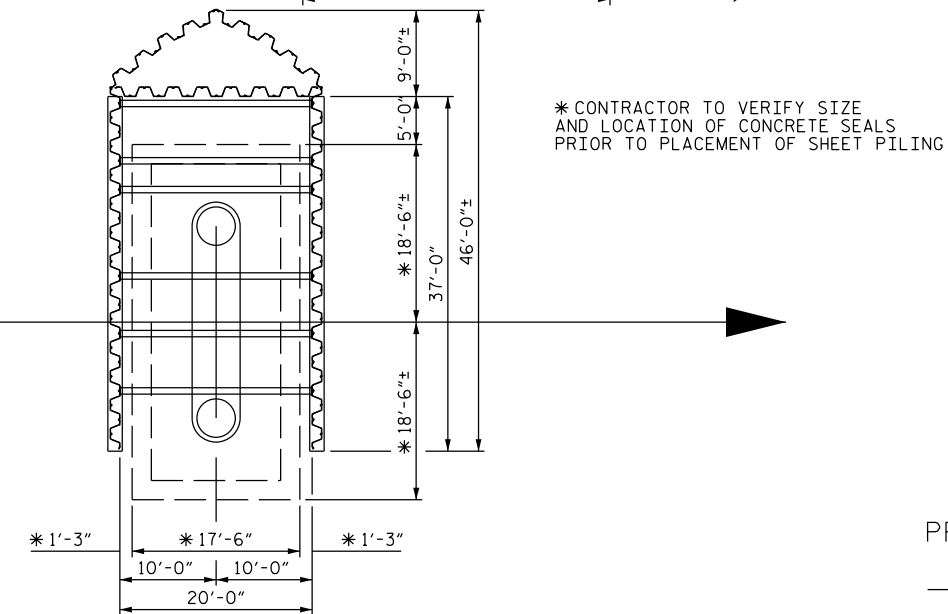
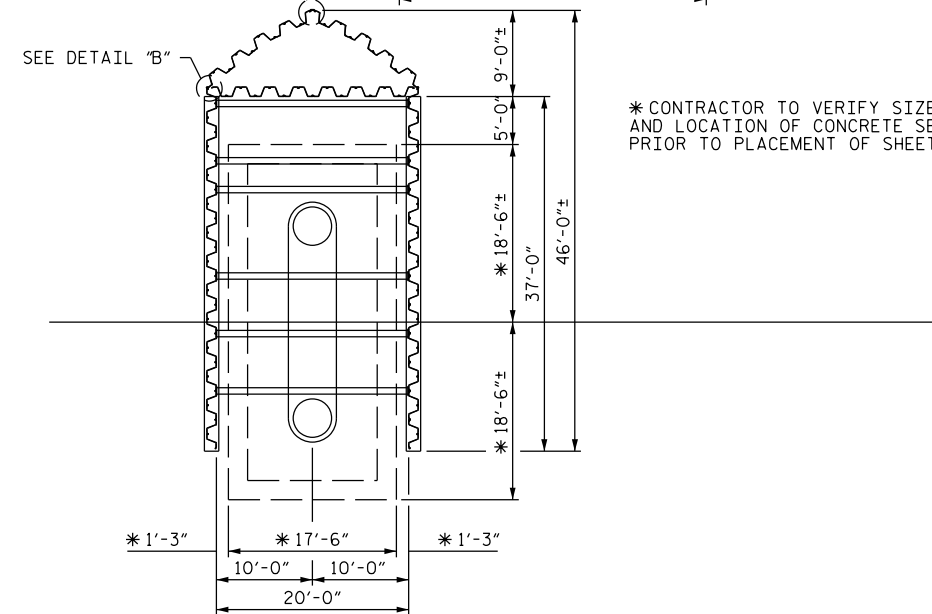
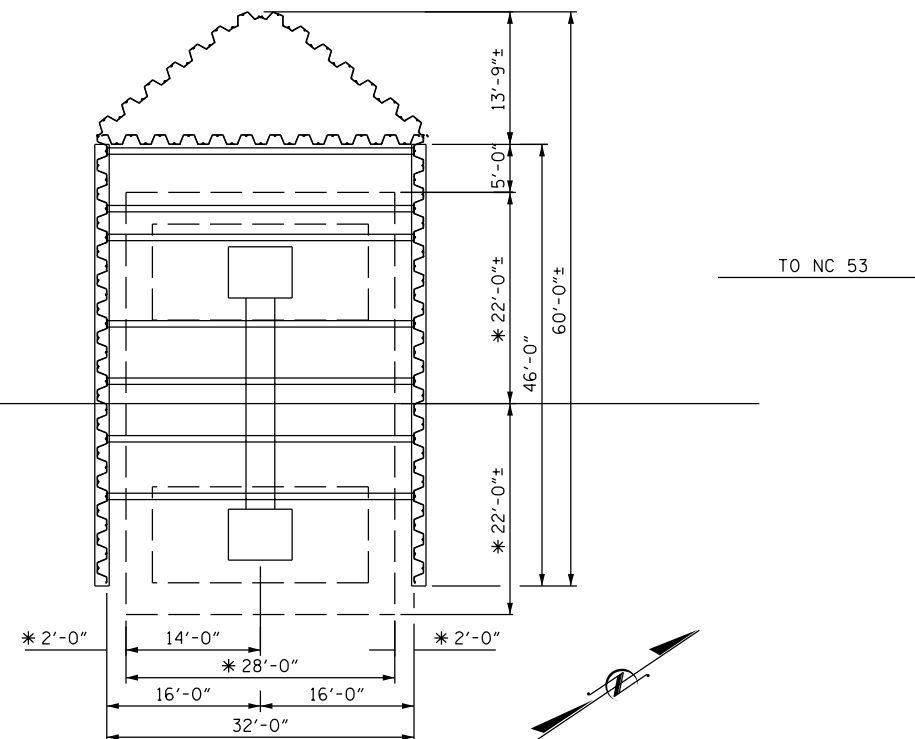
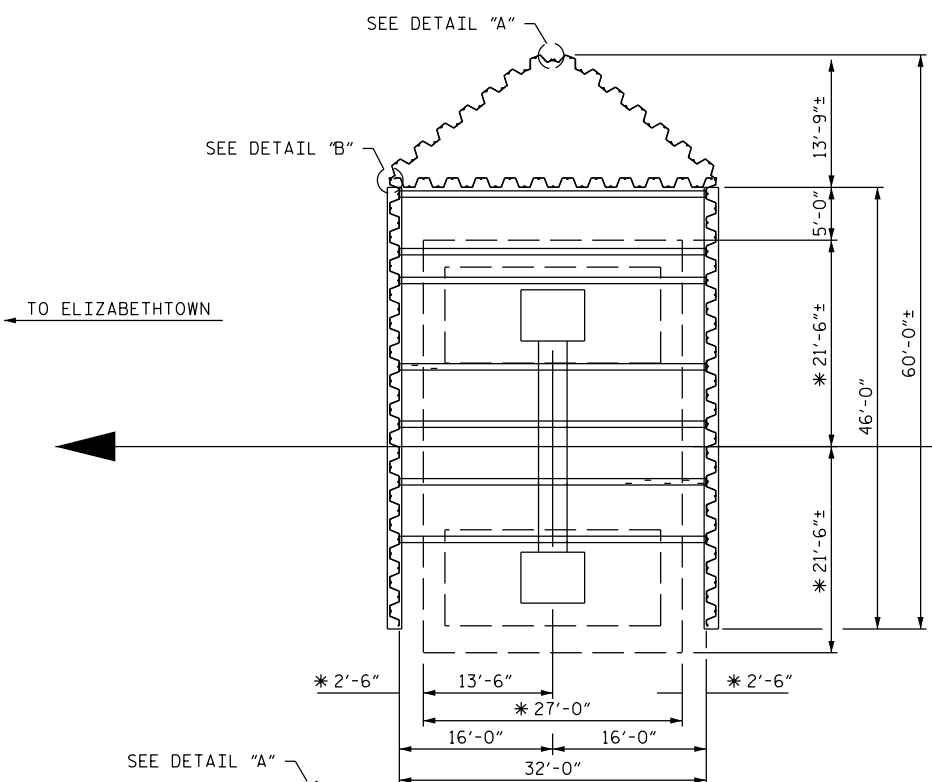
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1			3			TOTAL SHEETS
2			4			9

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

*****SYSTEM*****
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BRIDGE 17 BENT 9

BRIDGE 17 BENT 10



* CONTRACTOR TO VERIFY SIZE AND LOCATION OF CONCRETE SEALS PRIOR TO PLACEMENT OF SHEET PILING

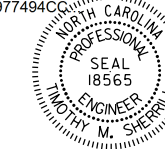
* CONTRACTOR TO VERIFY SIZE AND LOCATION OF CONCRETE SEALS PRIOR TO PLACEMENT OF SHEET PILING

PLAN

PLAN

PROJECT NO. 15006.1009234
 BLADEN COUNTY
 BRIDGE NO. 16 & 17

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC



12/20/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

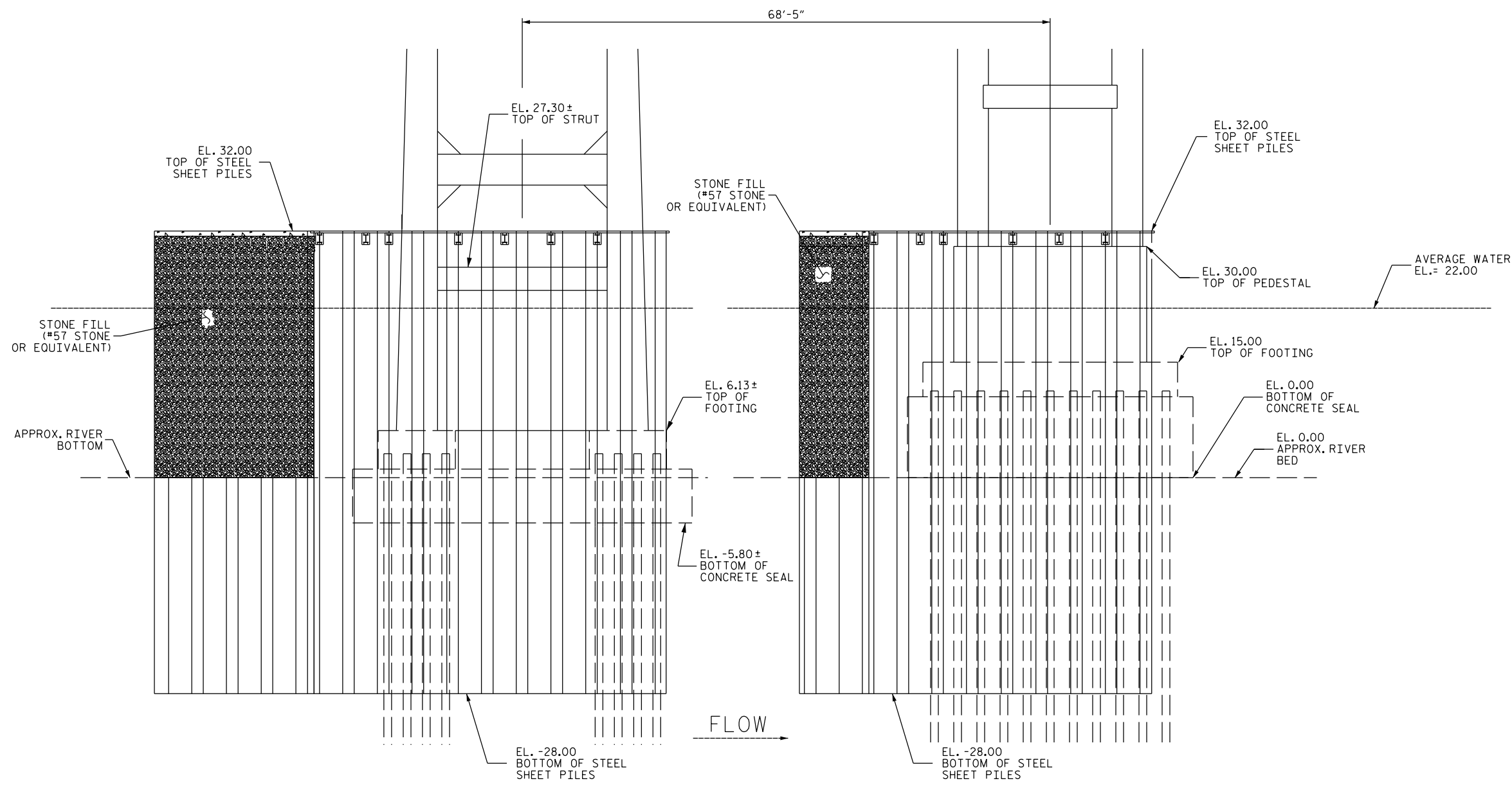
DEBRIS DEFLECTOR

DRAWN BY : R.L.PUTEK DATE : 11/17
 CHECKED BY : T.M.SHERRILL DATE : 11/17

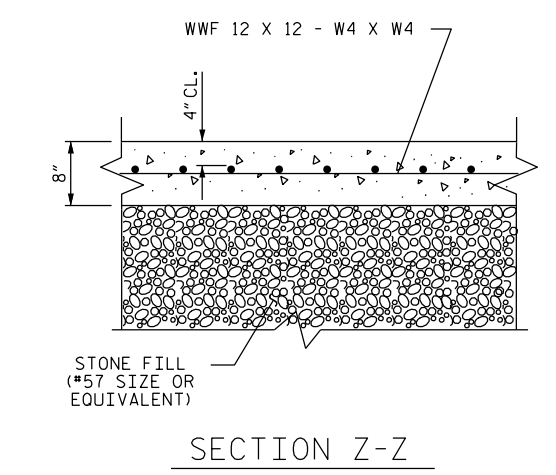
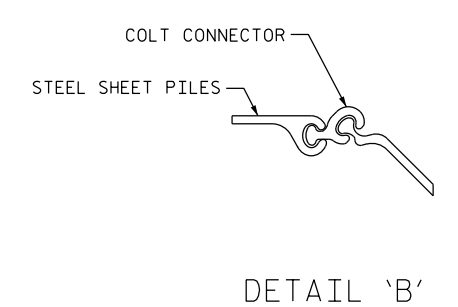
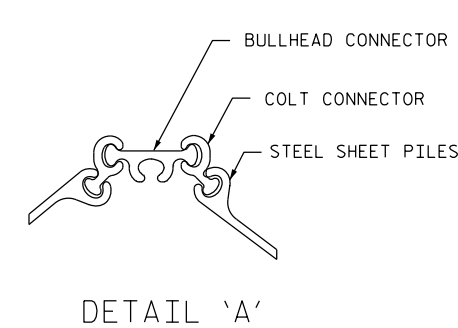
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 SIGNATURES COMPLETED

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1			3			TOTAL SHEETS
2			4			9

*****SYSTEM*****
 *****DCN*****
 *****USERNAME*****



ELEVATION



PROJECT NO. 15006.1009234
BLADEN COUNTY
BRIDGE NO. 16 & 17

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494C
NORTH CAROLINA
PROFESSIONAL
SEAL
18565
ENGINEER
TIMOTHY M. SHERRILL

12/20/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DEBRIS DEFLECTOR

DRAWN BY : R.L.PUTEK DATE : 11/17
CHECKED BY : T.M.SHERRILL DATE : 11/17

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
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*****USERNAME*****

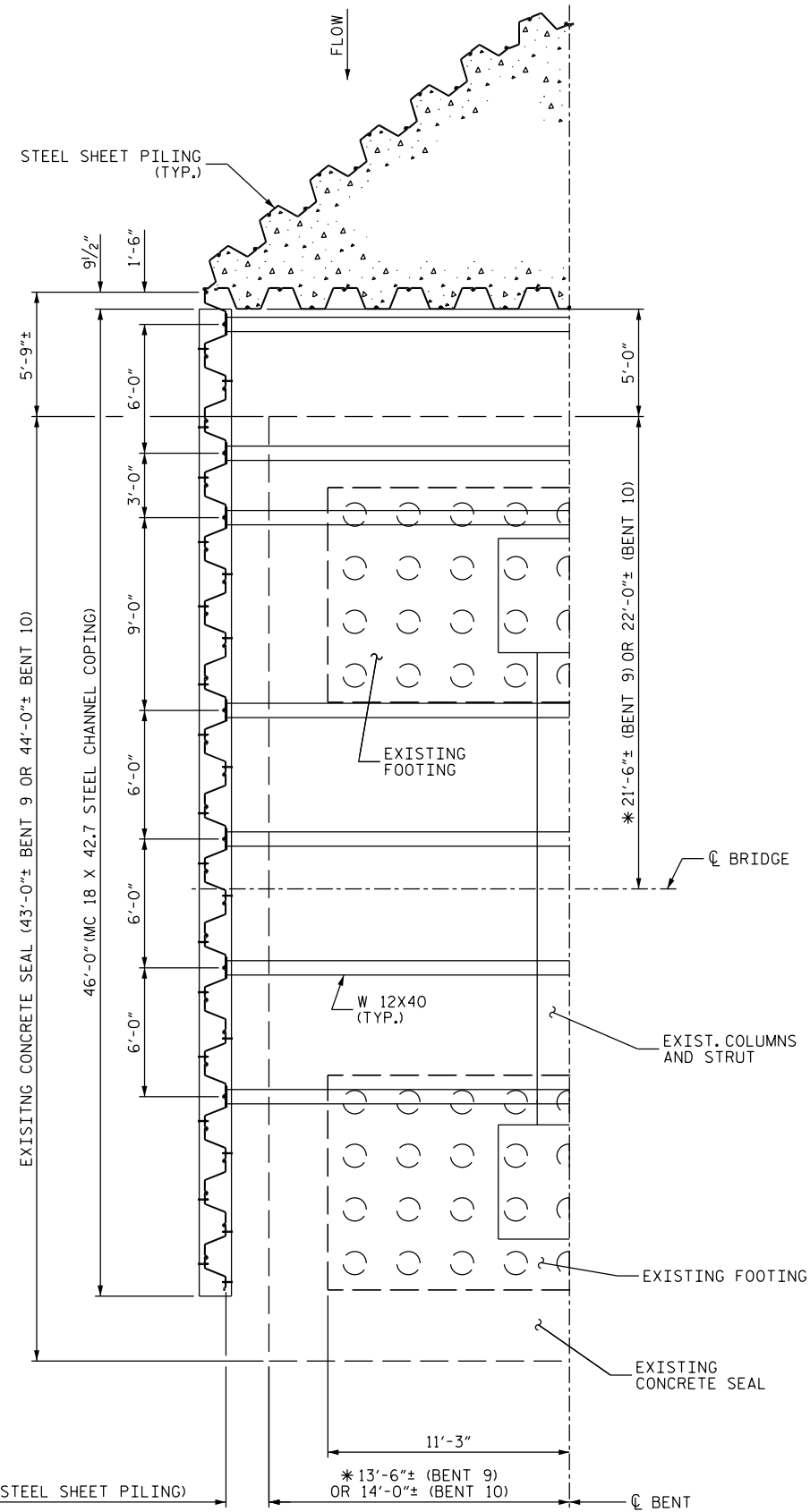
NOTES:

BENT INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED: 10/18/2016 (BRIDGE 080017) AND 10/19/2016 (BRIDGE 080016).

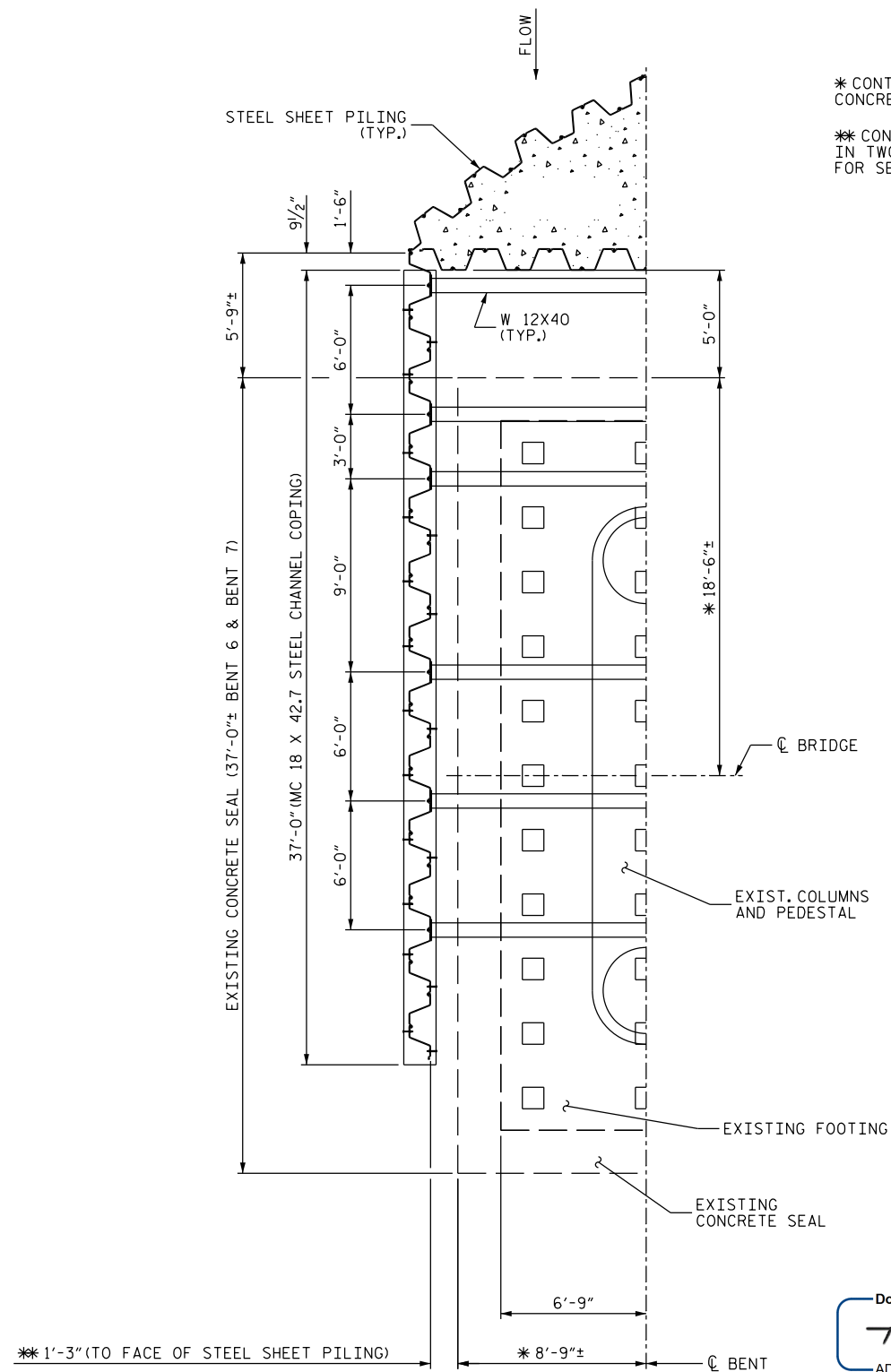
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

* CONTRACTOR TO VERIFY LOCATION AND SIZE OF EXISTING CONCRETE SEAL PRIOR TO PLACEMENT OF STEEL SHEET PILING.

** CONTRACTOR IS TO MONITOR, AND VERIFY THE ELEVATION OF EACH BENT IN TWO DIFFERENT LOCATIONS TWICE DAILY (MID-DAY, AND END OF DAY) FOR SETTLEMENT DURING PLACEMENT OF STEEL SHEET PILING.



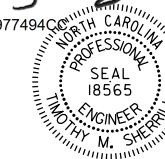
HALF PLAN
(BRIDGE 080017 BENT 9 OR 10)



HALF PLAN
(BRIDGE 080016 BENT 6 OR 7)

PROJECT NO. 15006.1009234
BLADEN COUNTY
BRIDGE NO. 16 & 17

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494C



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

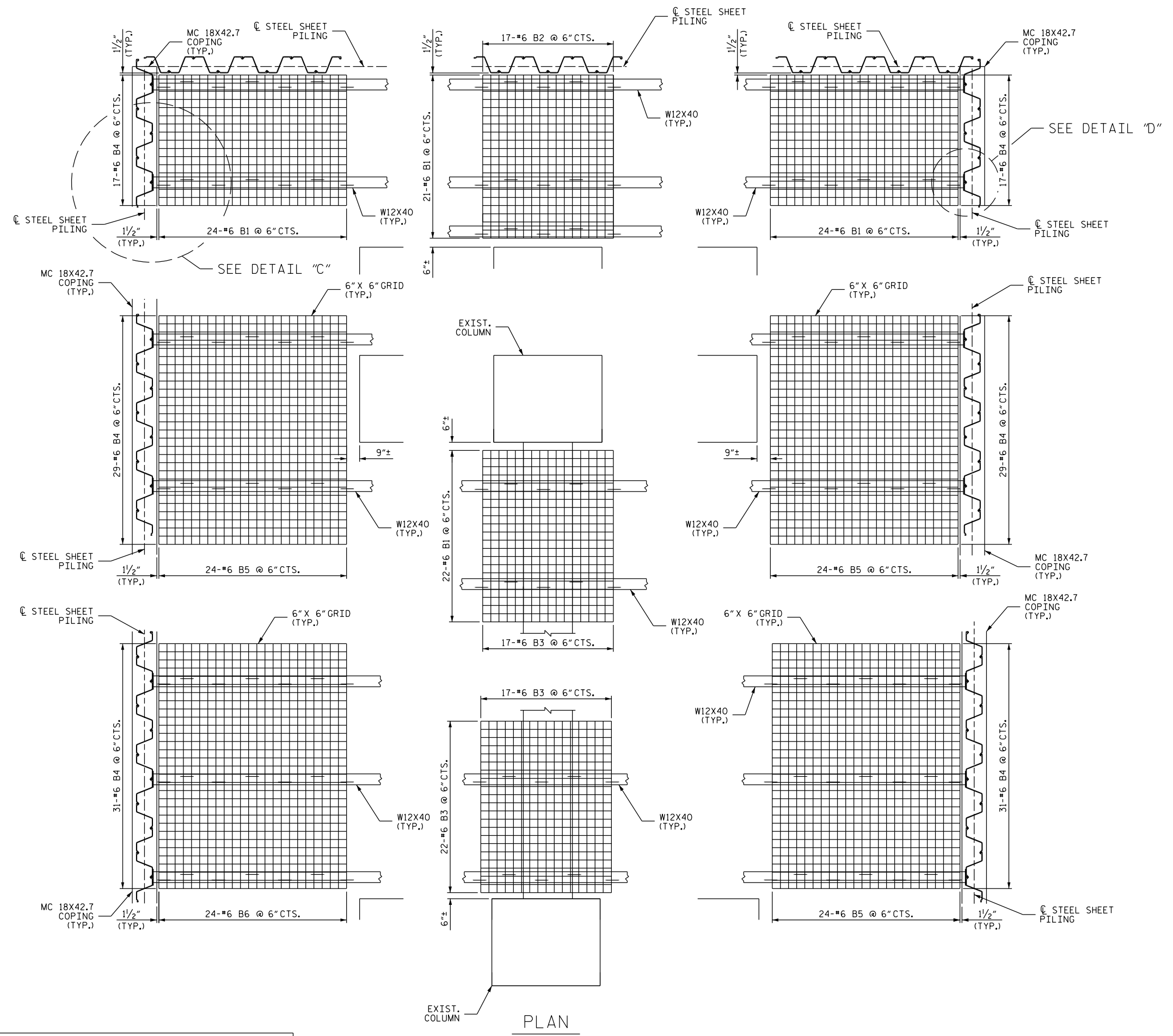
FRAMING PLAN

12/20/2017

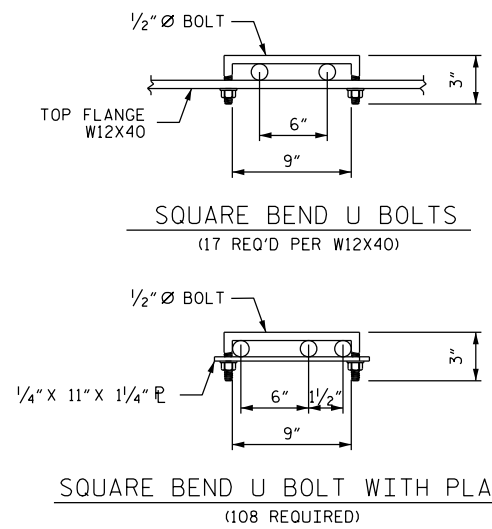
DRAWN BY : R.L.PUTEK DATE : 12/17
CHECKED BY : T.M.SHERRILL DATE : 12/17

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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



BILL OF MATERIAL					
FOR ONE DEBRIS DEFLECTOR (2 REQ'D)					
STEEL SHEET PILES		10040 SQ. FT.			
STRUCTURAL STEEL		14017 LBS.			
STONE FILL (*57 OR EQUIVALENT)		386 TONS			
8" THICK CONCRETE SLAB WITH WWF 12 X 12 - W4 X W4		6.0 CY			
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	113	#6	STR	8'-0"	1358
B2	17	#6	STR	10'-0"	255
B3	34	#6	STR	10'-6"	536
B4	154	#6	STR	11'-6"	2660
B5	48	#6	STR	14'-0"	1009
B6	48	#6	STR	15'-0"	1081
REINFORCING STEEL		6899 LBS.			



PROJECT NO. 15006.1009234
 BLADEN COUNTY
 BRIDGE NO. 17

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 18565
 ENGINEER
 TIMOTHY M. SHERRILL

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STEEL REINFORCEMENT
 BENTS 9 & 10

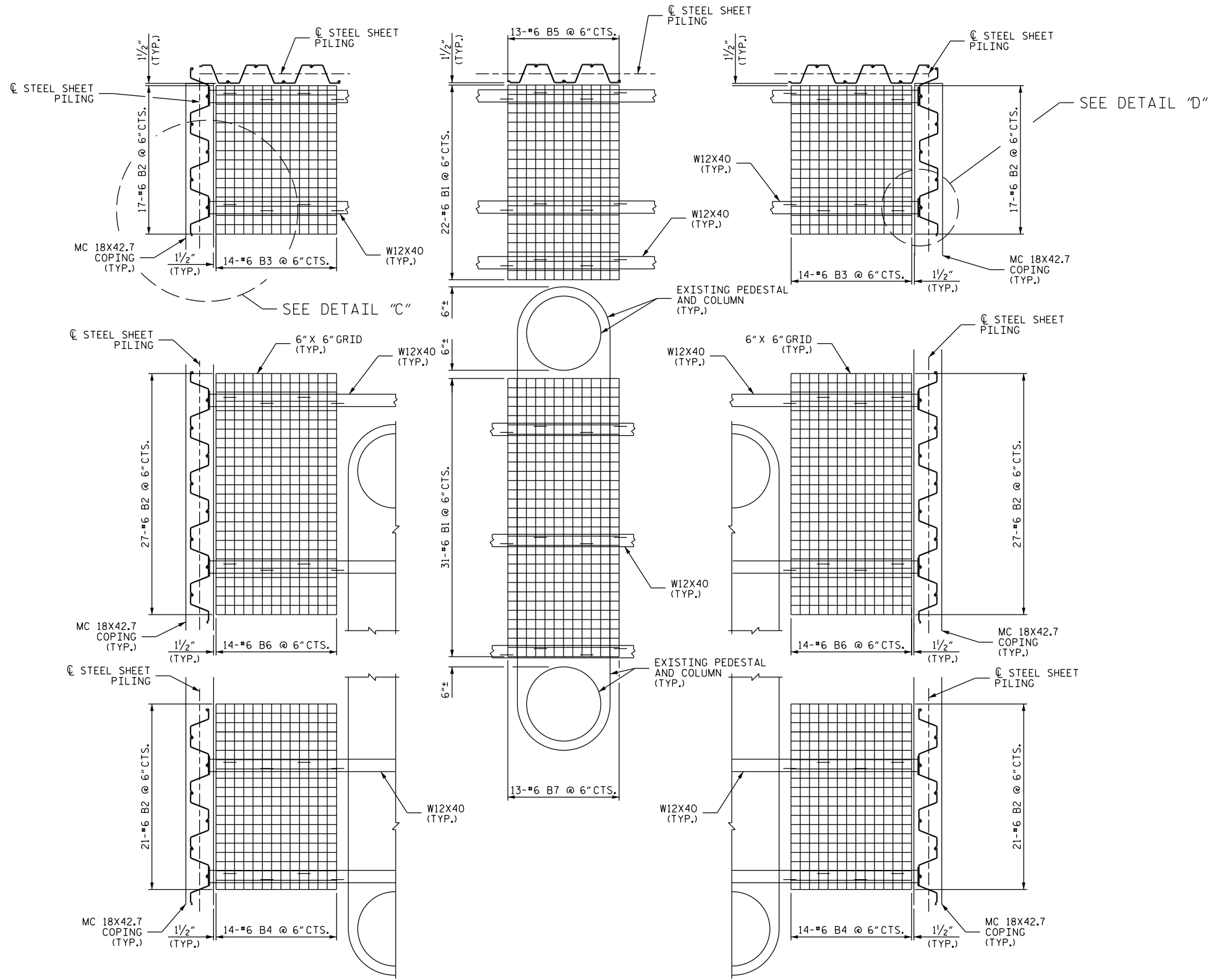
12/20/2017

DRAWN BY : R.L.PUTEK DATE : 12/17
 CHECKED BY : T.M.SHERRILL DATE : 12/17

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			9

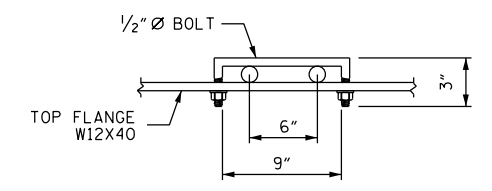
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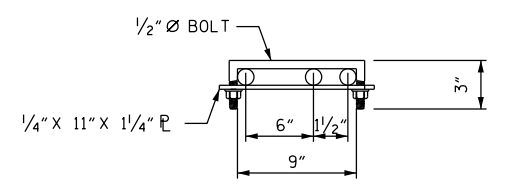


PLAN

BILL OF MATERIAL					
FOR ONE DEBRIS DEFLECTOR (2 REQ'D)					
STEEL SHEET PILES		7770 SQ. FT.			
STRUCTURAL STEEL		9930 LBS.			
STONE FILL (#57 OR EQUIVALENT)		170 TONS			
8" THICK CONCRETE SLAB WITH WWF 12 X 12 - W4 X W4		2.6 CY			
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	31	#6	STR	6'-0"	279
B2	130	#6	STR	6'-6"	1269
B3	28	#6	STR	8'-0"	336
B4	28	#6	STR	10'-0"	420
B5	22	#6	STR	10'-6"	347
B6	28	#6	STR	13'-0"	547
B7	13	#6	STR	15'-0"	293
REINFORCING STEEL		3491 LBS.			



SQUARE BEND U BOLTS
(10 REQ'D PER W12X40)

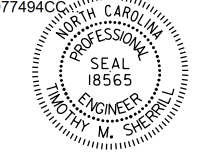


SQUARE BEND U BOLT WITH PLATE
(64 REQUIRED)

PROJECT NO. 15006.1009234
 BLADEN COUNTY
 BRIDGE NO. 16

SHEET 2 OF 2

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STEEL REINFORCEMENT
 BENTS 6 & 7

12/20/2017

DRAWN BY : R.L.PUTEK DATE : 12/17
 CHECKED BY : T.M.SHERRILL DATE : 12/17

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

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

*****SYSTEM*****
 *****DCN*****
 *****USERNAME*****

NOTE:

SHEET PILES INDICATED IN PLANS ARE PZ57. OTHER SHEET PILE SIZES MAY BE PROPOSED BY THE CONTRACTOR, BUT SHALL HAVE A MINIMUM SECTION MODULUS OF 30.2 in³/ft AND ARE SUBJECT TO APPROVAL BY THE ENGINEER. SHOULD THE CONTRACTOR PROPOSE ANOTHER SHEET PILE SIZE, ANY ADJUSTMENTS TO THE DEFLECTORS AND ASSOCIATED ELEMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT.

STEEL SHEET PILES SHALL MEET ASTM A572 OR A690 SPECIFICATIONS.

STEEL SHEET PILES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

AFTER FIELD WELDING, OR IF GALVANIZING ON MEMBERS IS DAMAGED, REPAIR DAMAGED GALVANIZED SURFACES IN ACCORDANCE WITH ARTICLE 1076-7 OF THE STANDARD SPECIFICATIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

ALL REINFORCING STEEL SHALL BE UNCOATED GRADE 60.

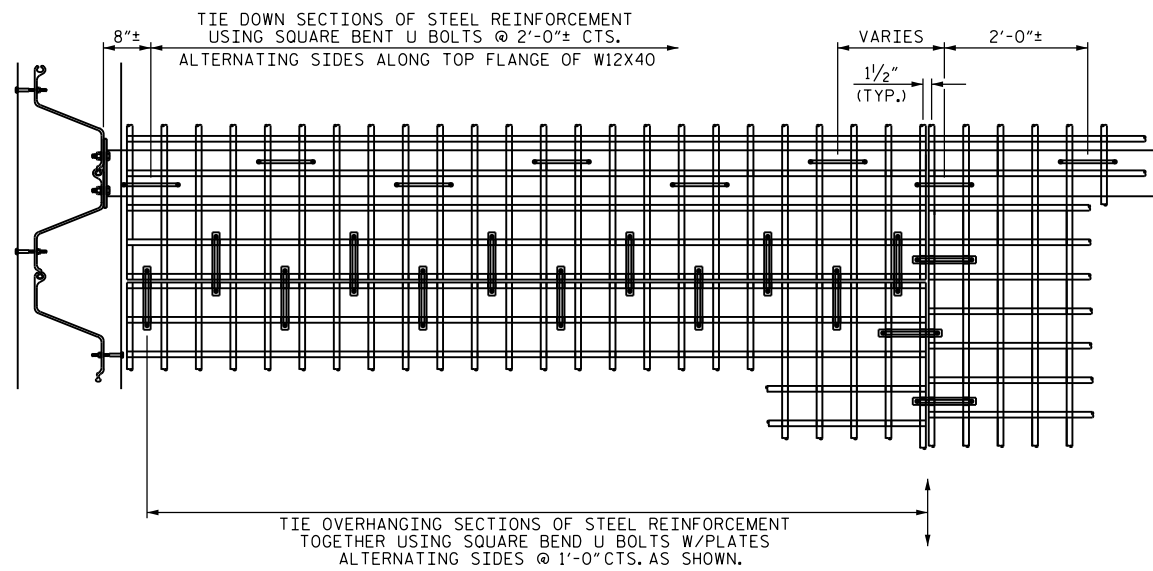
REINFORCING STEEL TO BE WELDED AT ALL INTERSECTIONS BETWEEN TOP MAT AND BOTTOM MAT.

ALL STRUCTURAL STEEL AND PLATES SHALL BE AASHTO M270 GRADE 50.

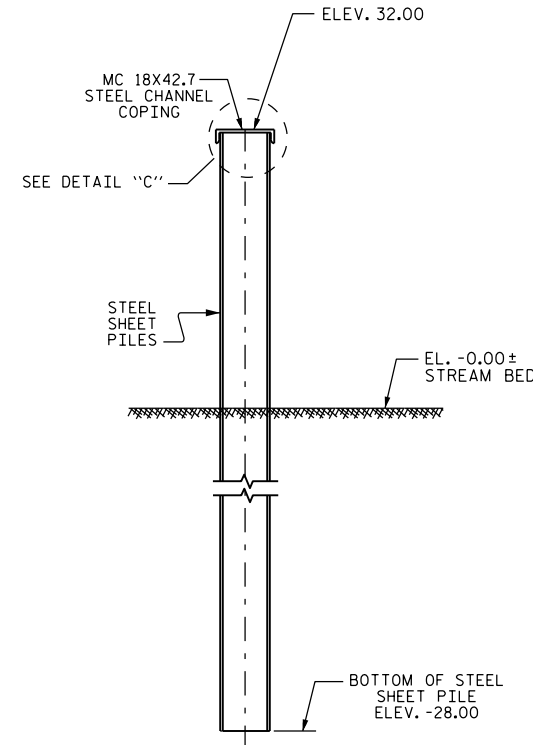
ALL BOLTS, NUTS AND WASHERS SHALL COMPLY TO ASTM A325.

ALL STRUCTURAL STEEL, BOLTS, NUTS AND WASHERS TO BE GALVANIZED.

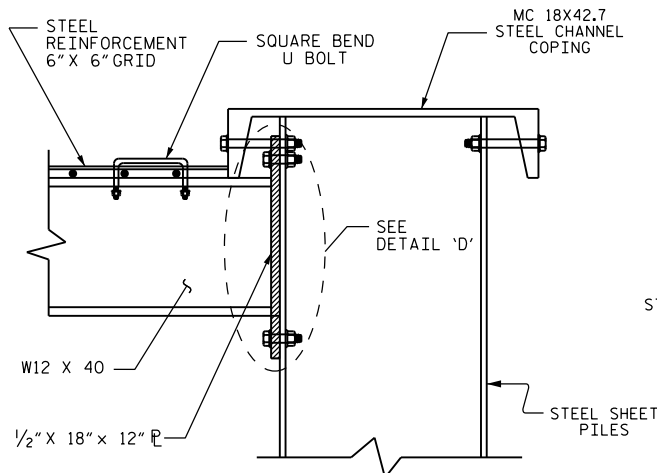
BECAUSE OF CLEARANCE ISSUES BENEATH BRIDGE 080016 AND 080017, IT IS ANTICIPATED THAT SHEET PILES MIGHT REQUIRE SPLICING. WELDING FOR SHEET PILE SPLICES SHALL BE IN ACCORDANCE WITH DETAIL A OR DETAIL B OF PILE SPLICE DETAILS. LOCATION OF SPLICE SHALL BE A MINIMUM OF THREE FEET ABOVE OR BELOW A SPLICE IN AN ADJACENT SHEET PILE.



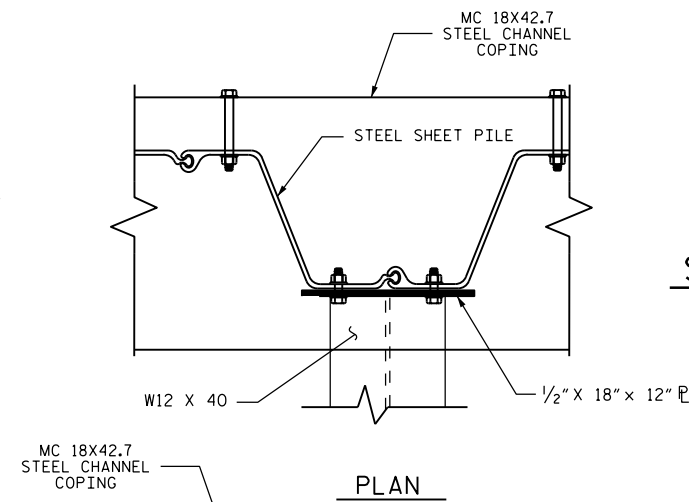
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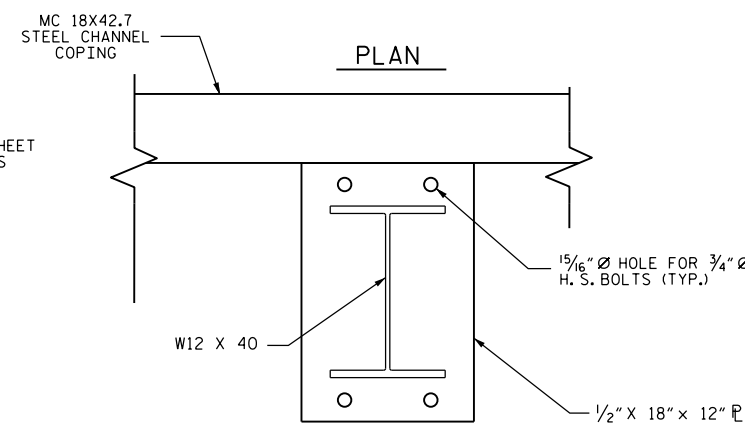
SECTION THRU STEEL SHEET PILE



PARTIAL VIEW

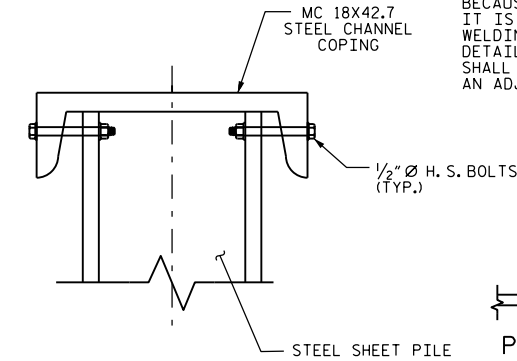


PLAN

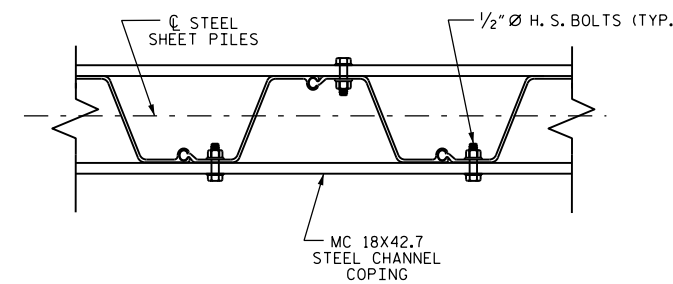


ELEVATION

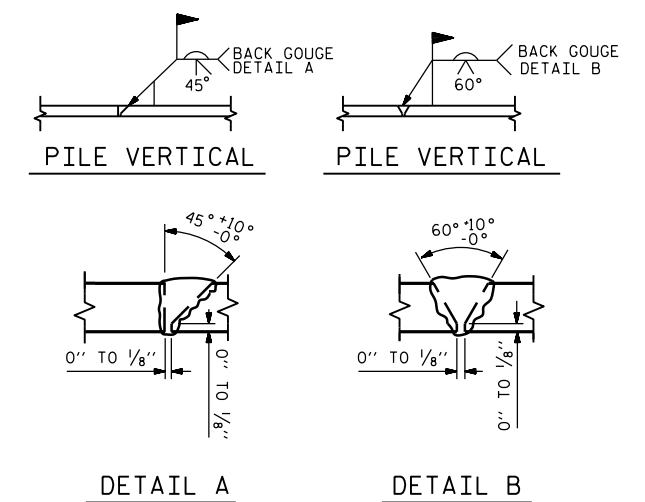
DETAIL "D"



DETAIL "E"



PLAN VIEW



PILE SPLICE DETAIL

PROJECT NO. 15006.1009234
 BLADEN COUNTY
 BRIDGE NO. 16 & 17

DocuSigned by:

Trinity M. Spill

AD50B1D977494C



6/28/2018

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STRUCTURAL STEEL DETAILS

DRAWN BY: R.L. PUTEK DATE: 11/17
 CHECKED BY: T.M. SHERRILL DATE: 11/17

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1	RLP	06-22-18	3			5-9
2	TMS	06-28-18	4			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 SO. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SO. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SO. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SO. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SO. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SO. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SO. 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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