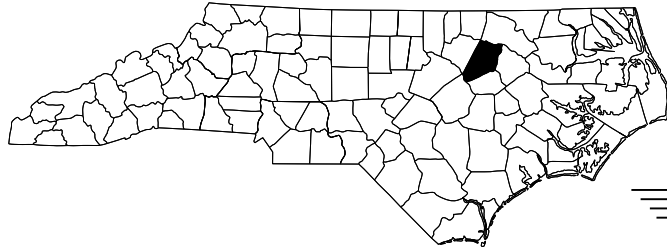


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CONTRACT: DD00156 PROJECT: BP-55001



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NASH COUNTY

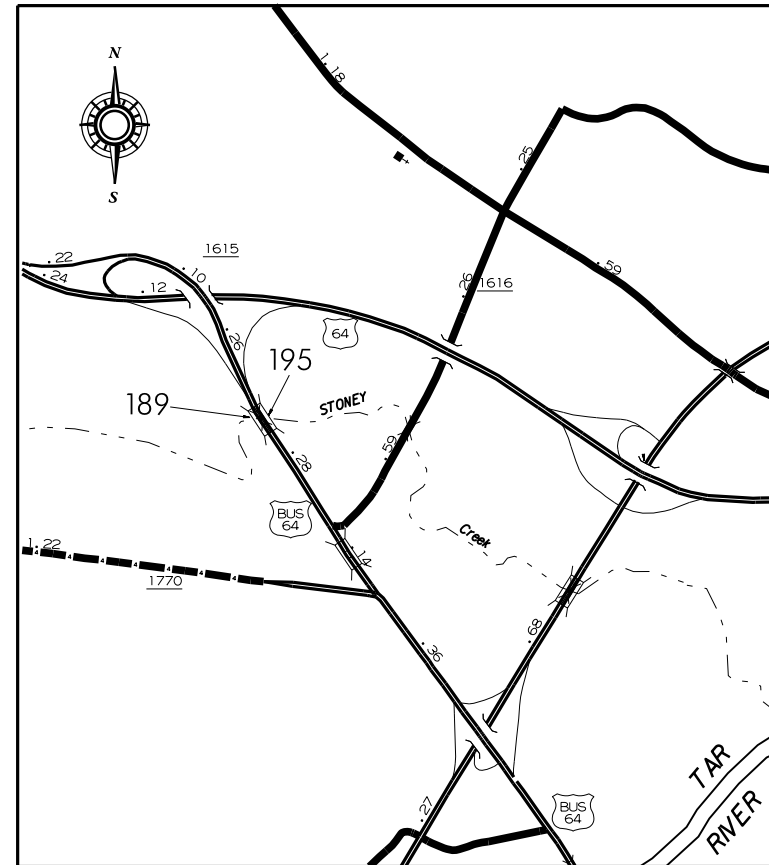
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N.C.	BP-55001	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50070.1.1	BRNHS-000S(747)	P.E. CONST.	

LOCATION: NASH COUNTY:

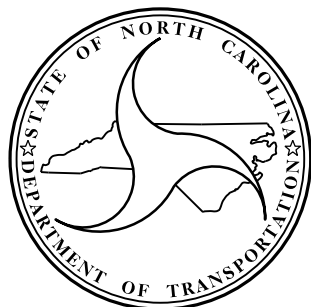
BRIDGE #189 ON US64 BUS-EB OVER STONEY CREEK.

BRIDGE #195 ON US64 BUS-WB OVER STONEY CREEK.

TYPE OF WORK: BRIDGE PRESERVATION WITH LATEX MODIFIED CONCRETE, JOINT REPLACEMENT, SUBSTRUCURE REPAIR AND CLEANING AND PAINTING OF EXISTING BEARINGS.



VICINITY MAP - NASH CO.



DESIGN DATA

NASH COUNTY			
#189	ADT 2013	=	4,000
#195	ADT 2013	=	4,000

PROJECT LENGTH

NASH COUNTY			
# 189	=	0.057	MILE
# 195	=	0.057	MILE

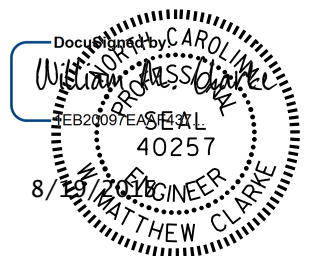
Prepared In the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

TIMOTHY M. SHERRILL, P.E.
PROJECT ENGINEER

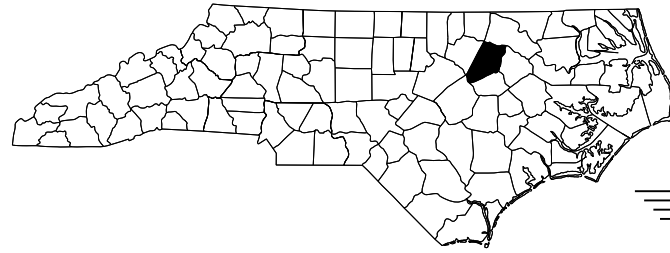
2012 STANDARD SPECIFICATIONS

LETTING DATE:
SEPTEMBER 22, 2015



W. MATTHEW CLARKE, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



NASH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP-5500I	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50070.1.1	BRNHS-000S(747)	P.E. CONST.	

LOCATION: NASH COUNTY:
BRIDGE #189 ON US64 BUS-EB OVER STONEY CREEK.
BRIDGE #195 ON US64 BUS-WB OVER STONEY CREEK.

TYPE OF WORK: BRIDGE PRESERVATION WITH LATEX MODIFIED CONCRETE, JOINT REPLACEMENT, SUBSTRUCURE REPAIR AND CLEANING AND PAINTING OF EXISTING BEARINGS.

INDEX OF SHEETS

I
1A
S-1
S-2 THRU S-17
S-18 THRU S-33
SN
TMP-1 THRU TMP-5

TITLE SHEET
INDEX OF SHEETS
TOTAL BILL OF MATERIAL
STRUCTURAL PLANS - NASH #189
STRUCTURAL PLANS - NASH #195
STANDARD NOTES
TRAFFIC MANAGEMENT PLANS

PROJECT: BP-5500I

CONTRACT: DD00156

TOTAL BILL OF MATERIAL

BRIDGE	MOBILIZATION	INCIDENTAL MILLING	ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	CLASS III SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING LATEX MODIFIED CONCRETE	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	FOAM JOINT SEALS	VOLUMETRIC MIXER	CONCRETE FOR DECK REPAIR	BRIDGE JOINT DEMOLITION	EPOXY COATING	HYDRO-DEMOLITION OF BRIDGE DECK	SCARIFYING BRIDGE DECK	CLEANING & PAINTING EXISTING BEARING ASSEMBLY
	LUMP SUM	SQ. YDS.	TONS	TONS	TONS	SQ. FT.	SO. YDS.	SO. YDS.	CU. YDS.	SO. YDS.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM *	CU. FT.	SO. FT.	SO. FT.	SO. YDS.	SO. YDS.	EA.
NASH #189	LUMP SUM	311	20	26	2.5	4,857	61	2.5*	26.5	612.4	25.4	100.3	LUMP SUM	LUMP SUM *	1 *	118.4	433	612.4	612.4	40
NASH #195	LUMP SUM	311	20	26	2.5	4,857	140	2.5*	26.5	612.4	38.1	62.3	LUMP SUM	LUMP SUM *	1 *	118.4	433	612.4	612.4	40
TOTAL	LUMP SUM	622	40	52	5	9,714	201	5 *	53	1224.8	63.5	162.6	LUMP SUM	LUMP SUM *	2 *	236.8	866	1224.8	1224.8	80

* CLASS III SURFACE PREPARATION, VOLUMETRIC MIXER, AND CONCRETE FOR DECK REPAIR ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189 & 195

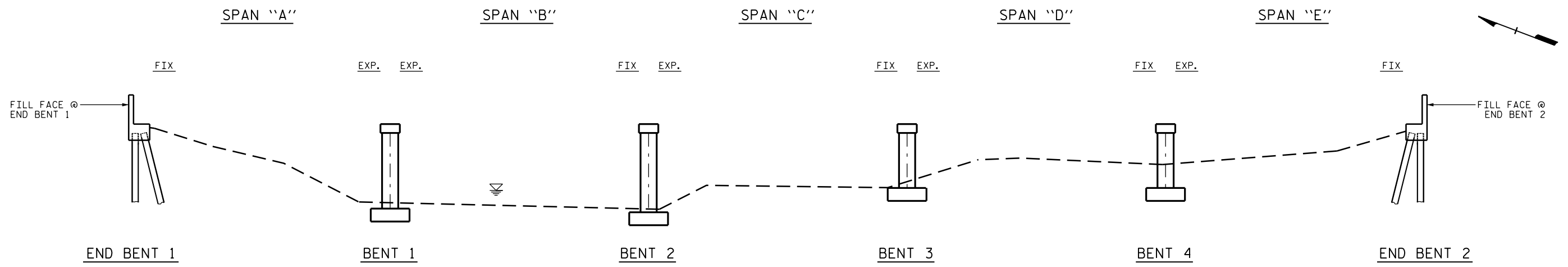
DocuSigned by:
William M. Clarke
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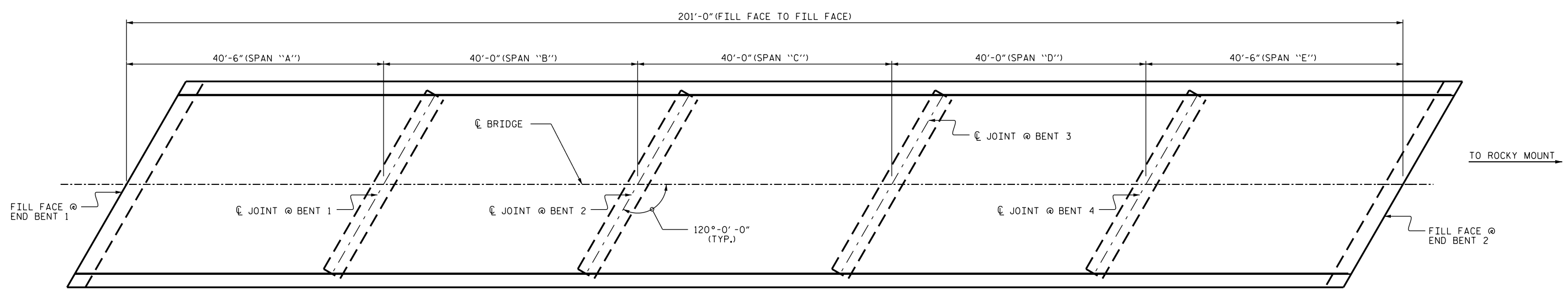


STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
TOTAL BILL OF MATERIAL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-1
TOTAL SHEETS					33

DRAWN BY : S. T. SANDOR DATE : 05/2015
 CHECKED BY : R. WEISZ DATE : 06/2015



SECTION ALONG CL ROADWAY



PLAN

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

SHEET 1 OF 2

SCOPE OF WORK:

- EPOXY INJECT CONCRETE CRACKS IN CAPS AND COLUMNS.
- PERFORM SHOTCRETE REPAIRS IN PREPARED AREAS.
- CLEAN AND PAINT EXISTING BEARINGS.
- EPOXY COAT TOP FACE OF END BENTS AND BENT CAPS.
- PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW FOAM JOINT SEALS.
- GROOVE CONCRETE BRIDGE DECK.
- MILL AND PAVE ASPHALT APPROACHES.

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

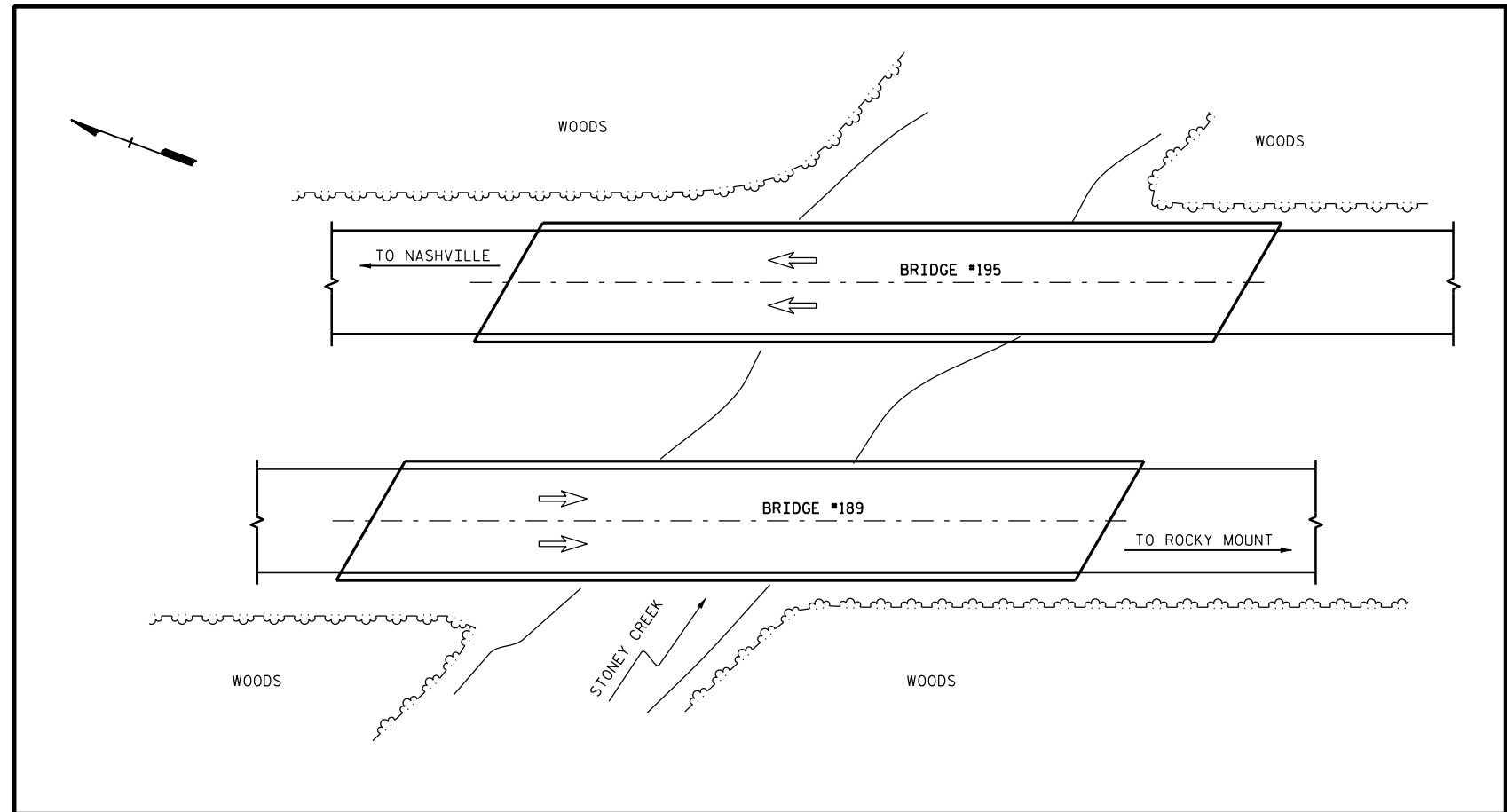
GENERAL DRAWING

BRIDGE #189 ON
 US 64 BUS. EBL
 OVER STONEY CREEK

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2	
1			3			TOTAL SHEETS	
2			4			33	

DRAWN BY : S. T. SANDOR DATE : 03/2015
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LOCATION SKETCH

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

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.
- ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.
- FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR CLEANING AND PAINTING EXISTING BEARING ASSEMBLY, SEE SPECIAL PROVISIONS.
- FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.
- FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

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PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

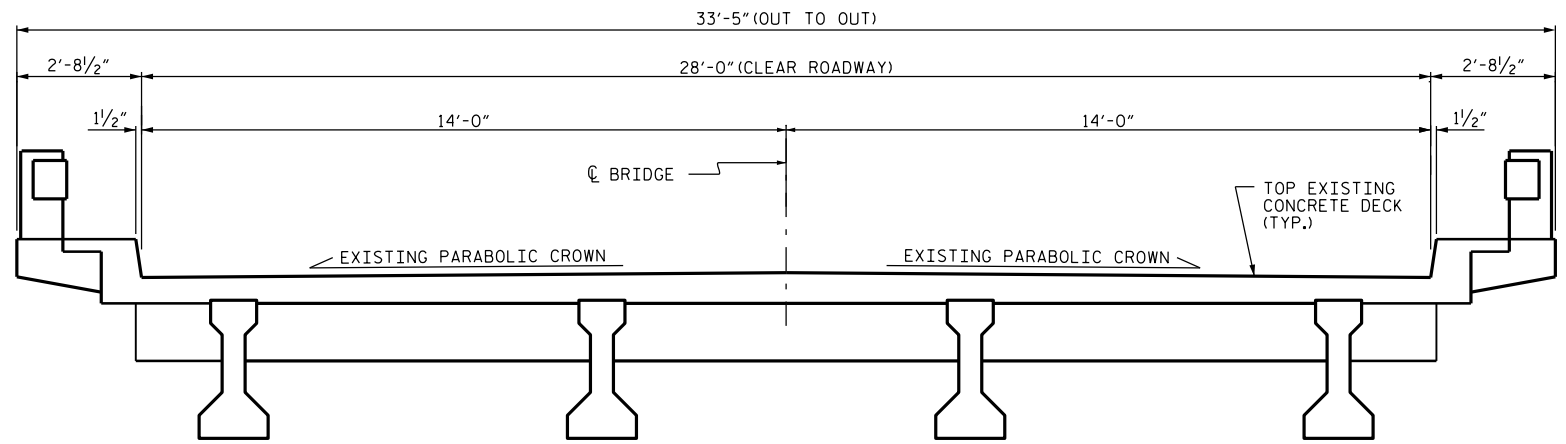
SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

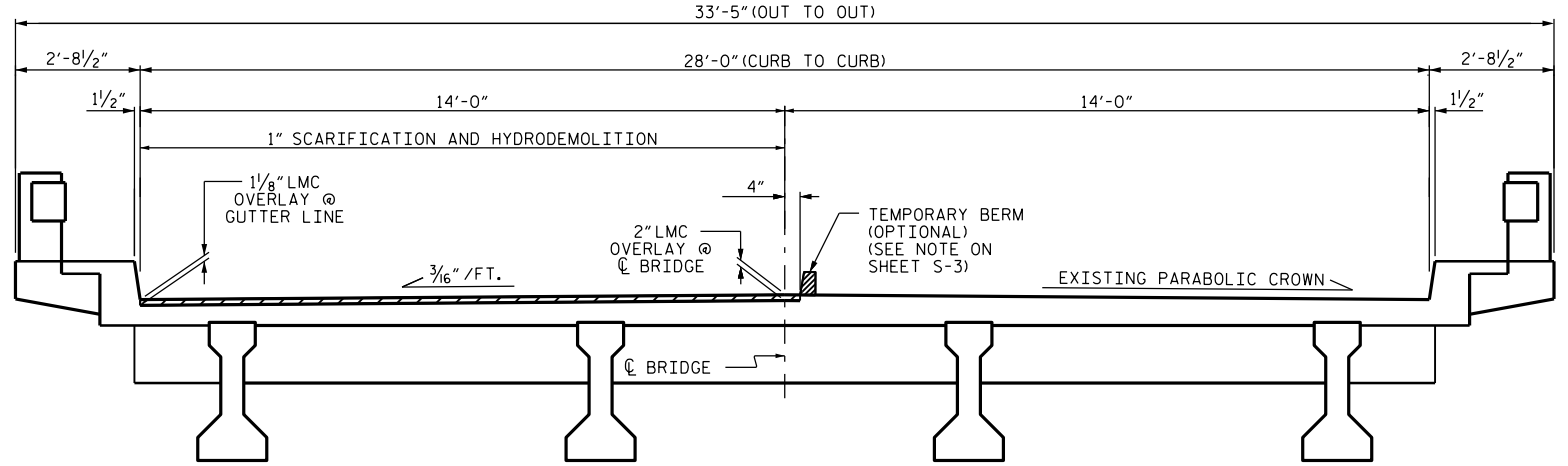
GENERAL DRAWING

BRIDGE #189 ON
 US 64 BUS. EBL
 OVER STONEY CREEK

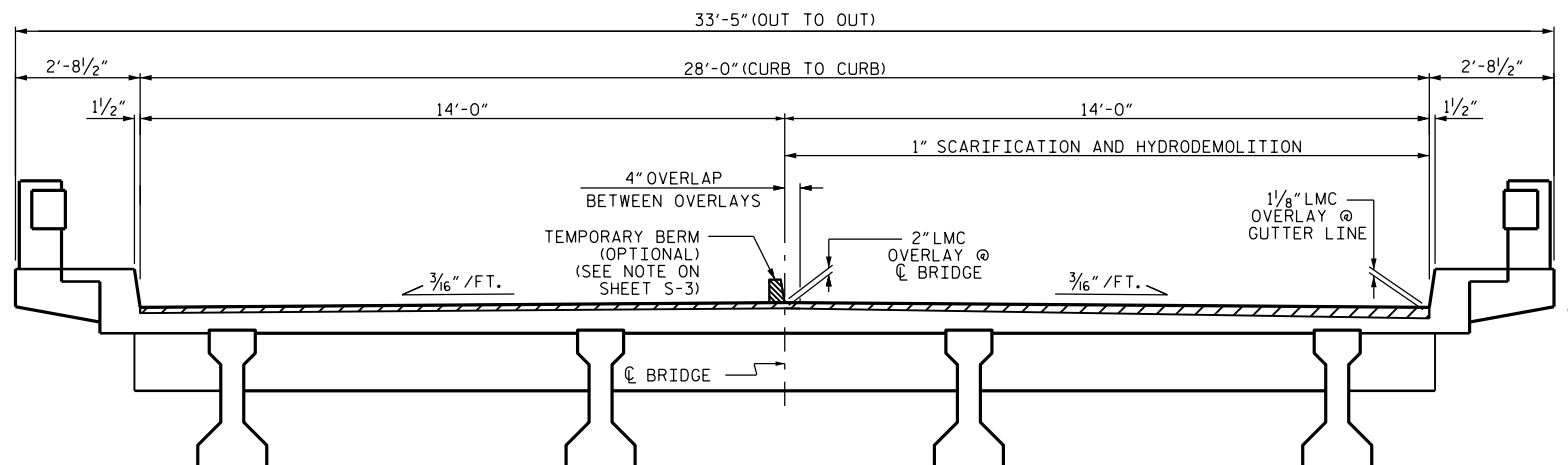
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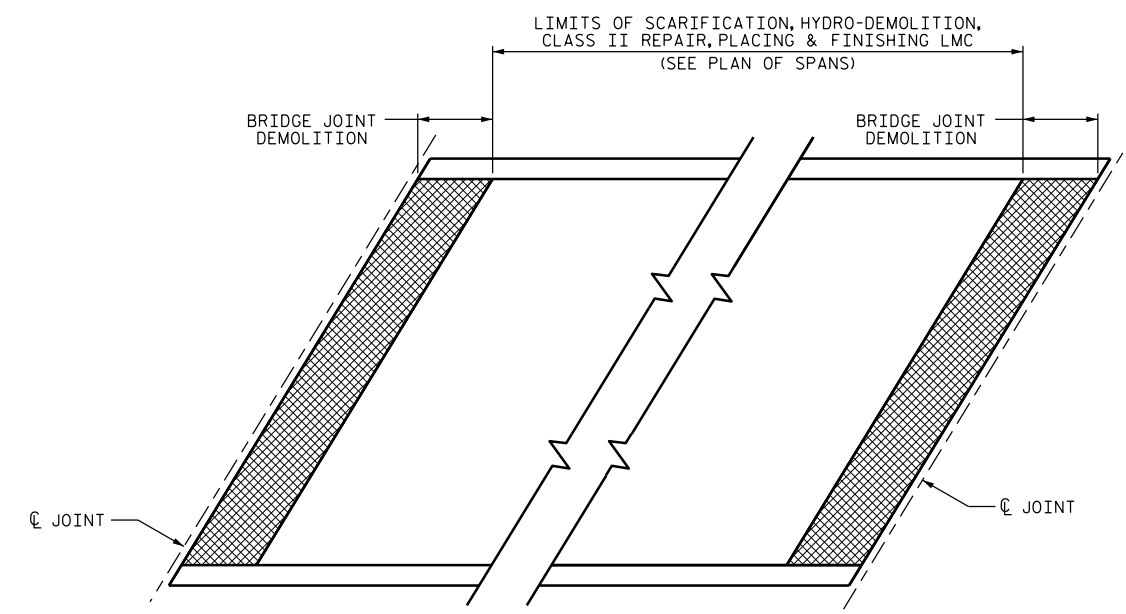
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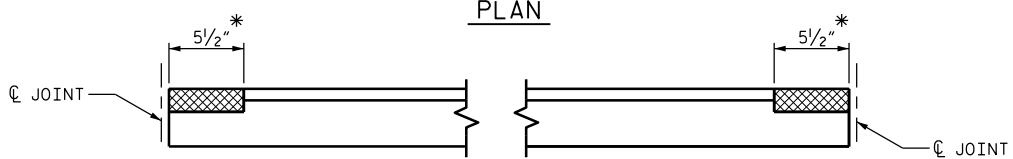
TYPICAL SECTION
(LEFT LANE LMC WORK)



TYPICAL SECTION
(RIGHT LANE LMC WORK)



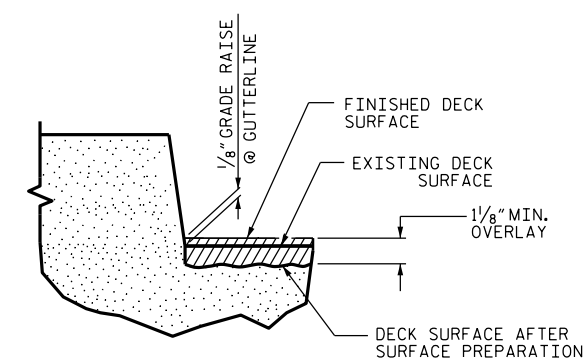
PLAN



ELEVATION

* DIMENSION MEASURED PERPENDICULAR TO JOINT

LIMITS OF BRIDGE JOINT DEMOLITION AND OVERLAY PREPARATION AND PLACEMENT



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

NOTE:

IF THE CONTRACTOR ELECTS TO STAGE THE DECK OVERLAY, THE TEMPORARY BERM AND 4" OVERLAY IS REQUIRED. STAGING INFORMATION IS NOT APPLICABLE IF A CONSTRUCTION JOINT IS NOT UTILIZED FOR THE DECK OVERLAY.

THE WORK STAGING ON THIS PLAN SHEET INDICATES THAT THE LEFT LANE LMC WORK IS PERFORMED FIRST, FOLLOWED BY THE RIGHT LANE LMC WORK. THE CONTRACTOR MAY ELECT TO SEQUENCE THE WORK DIFFERENTLY, BUT THE DIMENSIONS OF THE WORK ZONE AND CLEAR ROADWAY AREAS SHALL MATCH THAT INDICATED ON THIS PLAN SHEET, RESPECTIVE TO THE LANE WHERE THE LMC WORK IS BEING PERFORMED.

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189

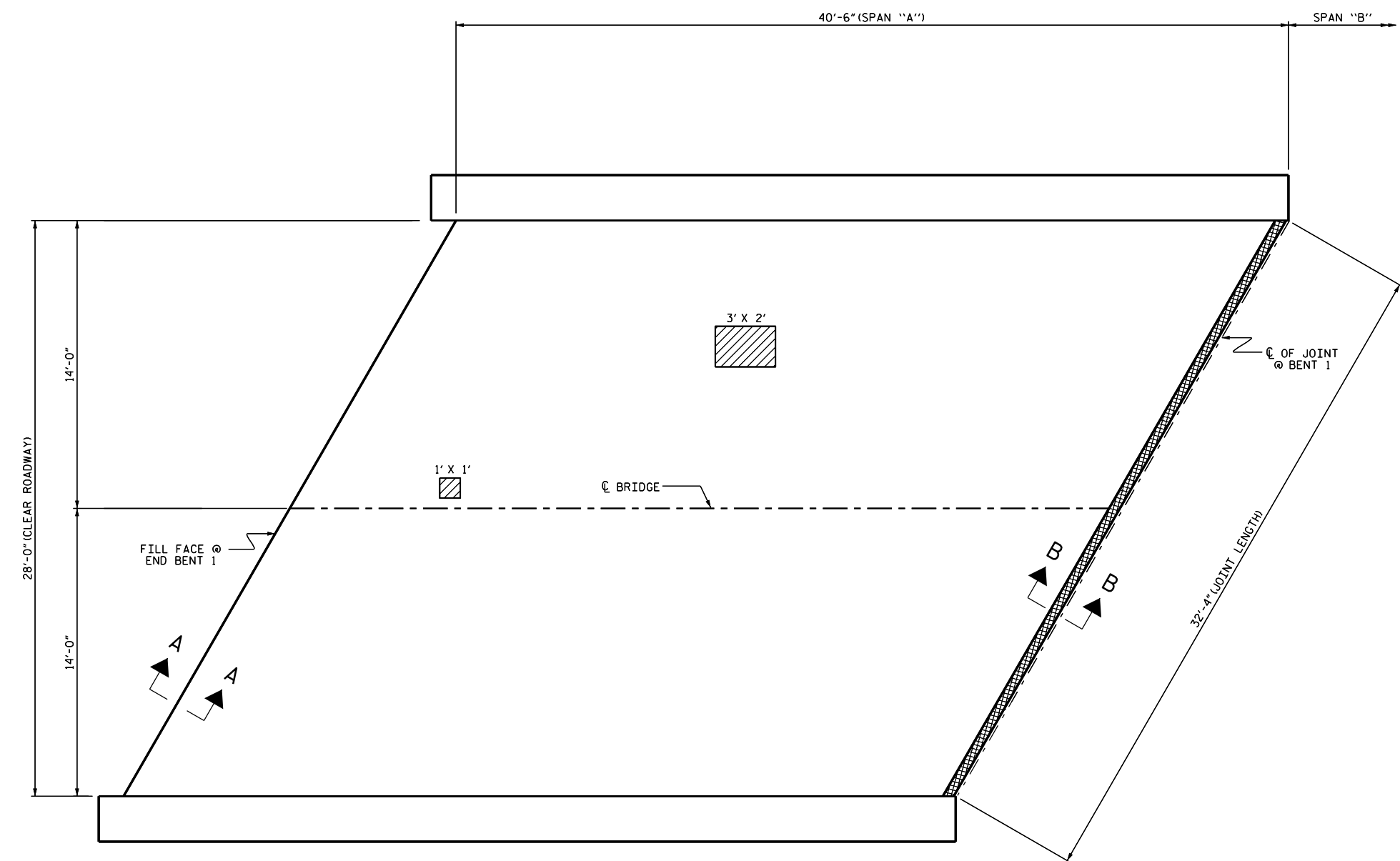
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION AND SURFACE PREPARATION DETAILS					
SHEET NO. S-4					
TOTAL SHEETS 33					
REVISIONS					
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1			3		
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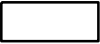


DRAWN BY : S. T. SANDOR DATE : 05/2015
CHECKED BY : R. WEISZ DATE : 06/2015

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	124.4 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	124.4 SY	
CLASS II SURFACE PREPARATION	0.8 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	14.8 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "A"
(SEE SHEET NO. S-10 FOR SECTIONS A-A AND B-B)

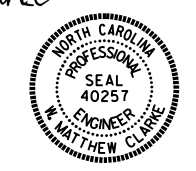
PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "A"**

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CHECKED BY :	R. WEISZ	DATE :	06/2015

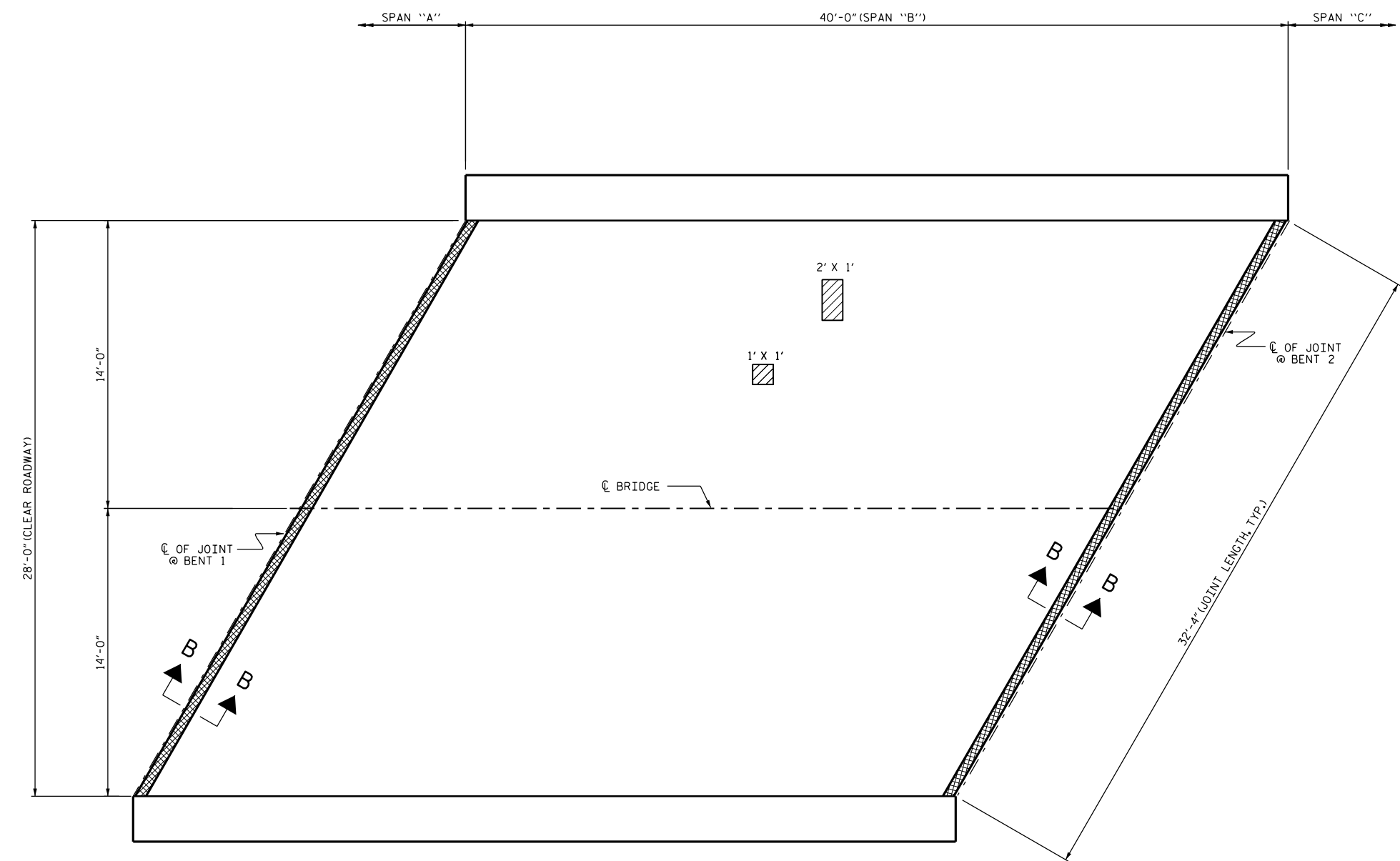
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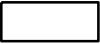


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SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	0.3 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



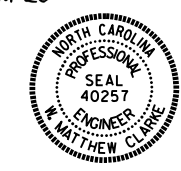
-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "B"
(SEE SHEET NO. S-10 FOR SECTION B-B)

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189
SHEET 2 OF 5

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William M. Clarke
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8/19/2015



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN "B"**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6	
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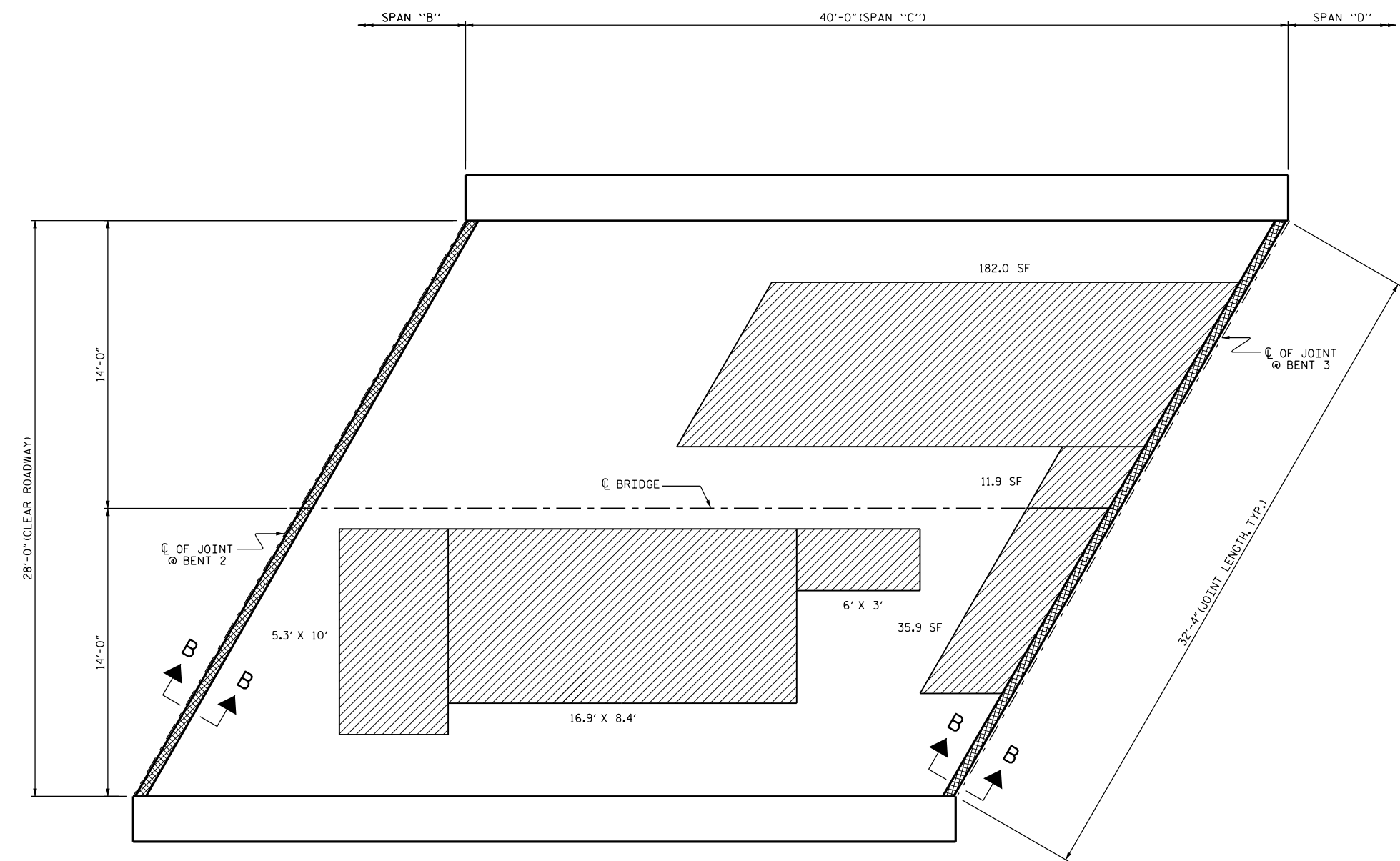
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CHECKED BY : R. WEISZ DATE : 06/2015

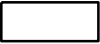
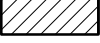

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SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	49.4 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "C"
(SEE SHEET NO. S-10 FOR SECTION B-B)

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189

SHEET 3 OF 5

DocuSigned by:
William M. Clarke
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8/19/2015



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN "C"**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7	
1			3			TOTAL SHEETS	33
2			4				

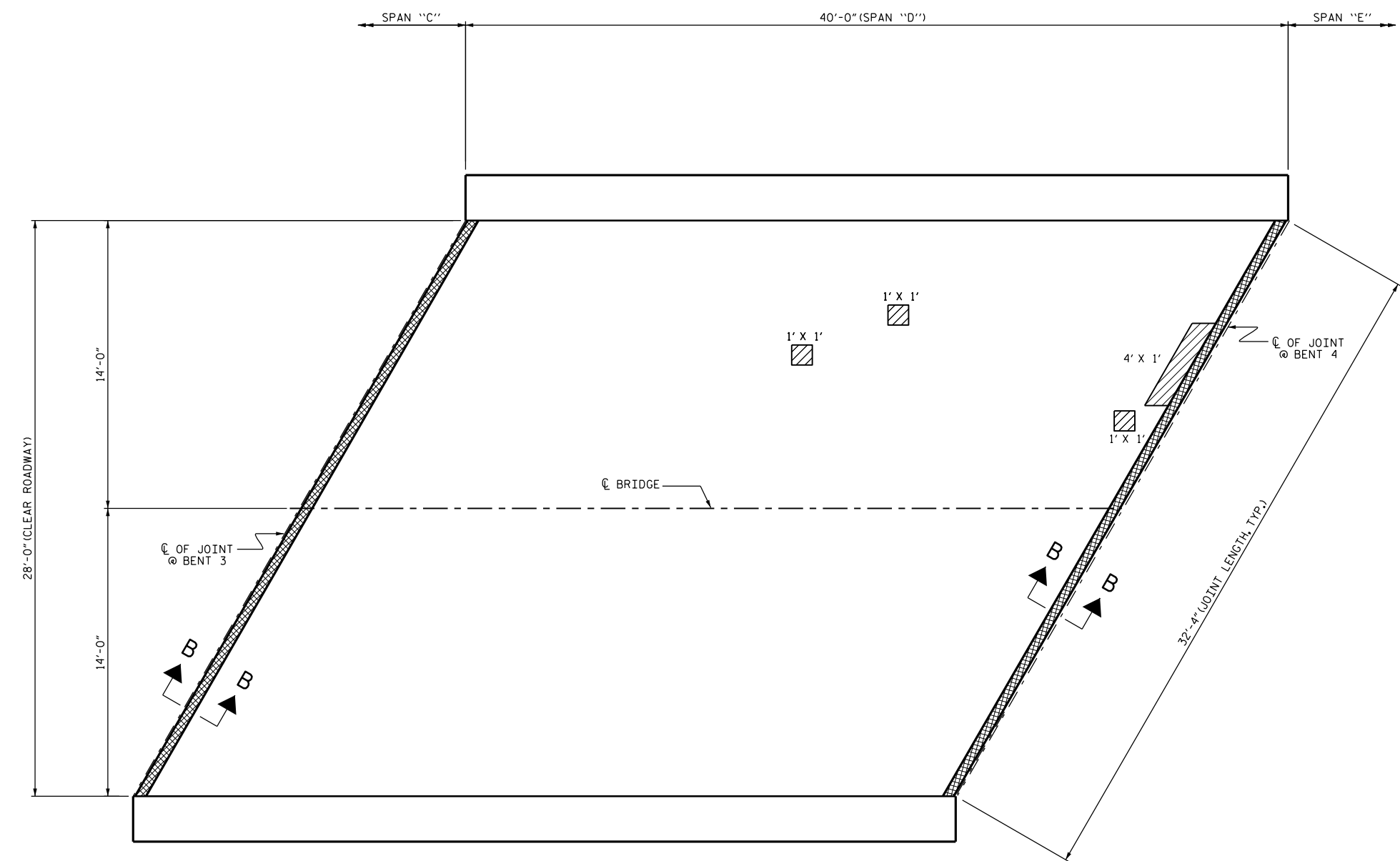
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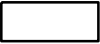


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SUMMARY OF QUANTITIES FOR SPAN "D"		
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SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	0.8 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "D"
(SEE SHEET NO. S-10 FOR SECTION B-B)


PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "D"**

DocuSigned by:
William M. Clarke
 1EB20097EAAF437...
 8/19/2015



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8	
1			3			TOTAL SHEETS	33
2			4				

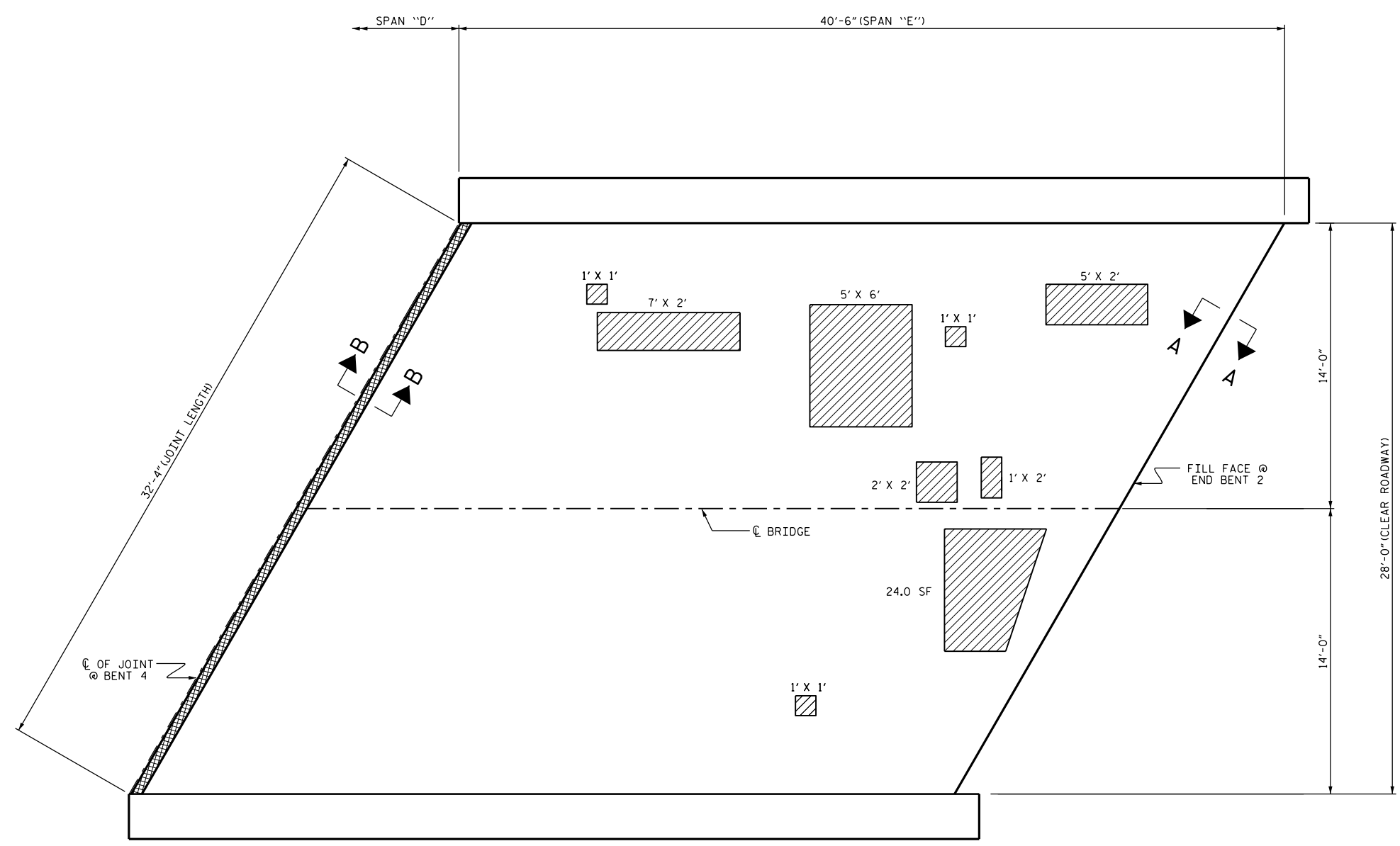
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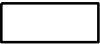


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SUMMARY OF QUANTITIES FOR SPAN "E"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	124.4 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	124.4 SY	
CLASS II SURFACE PREPARATION	9.7 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	14.8 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "E"
(SEE SHEET NO. S-10 FOR SECTIONS A-A AND B-B)

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189
SHEET 5 OF 5

DocuSigned by:
William M. Clarke
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8/19/2015



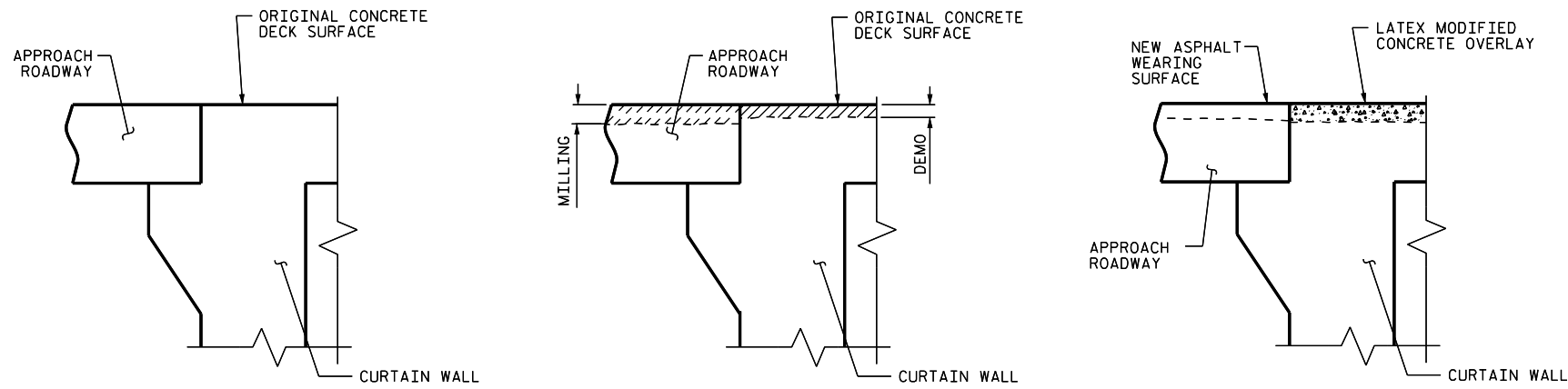
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN "E"**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9	
1			3			TOTAL SHEETS	
2			4			33	

DRAWN BY : S. T. SANDOR DATE : 03/2015
CHECKED BY : R. WEISZ DATE : 06/2015

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EXISTING

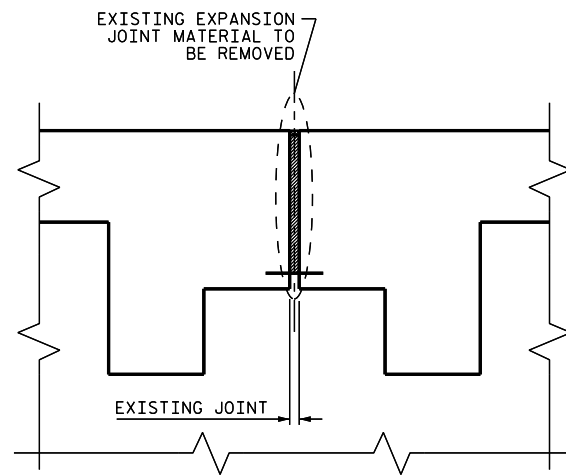
MINIMUM EXISTING JOINT DEMOLITION

PROPOSED

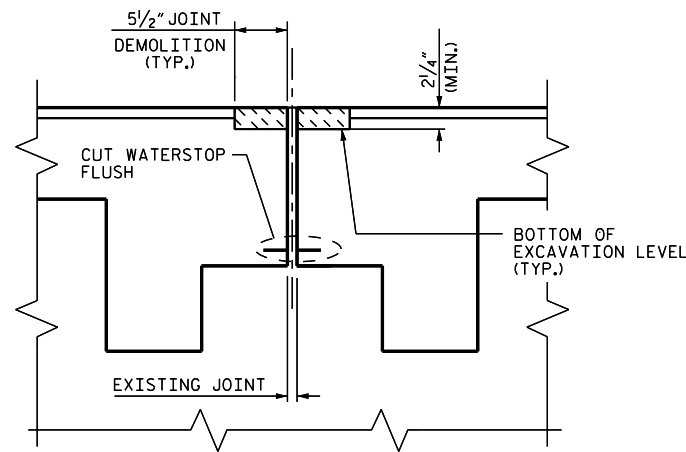
NOTES:

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

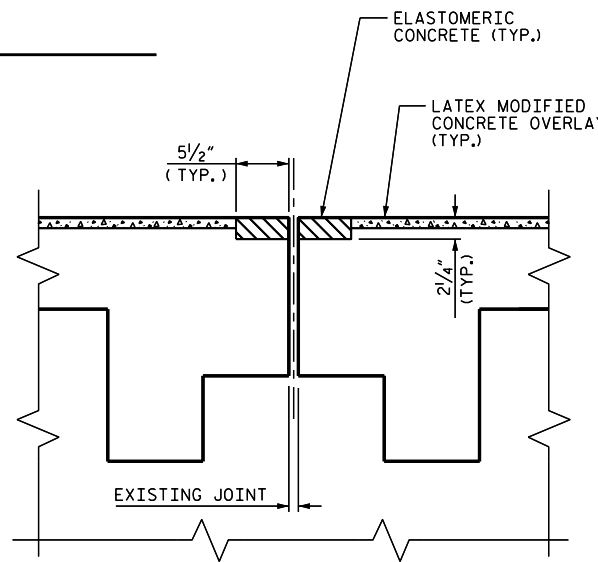
SECTION A-A



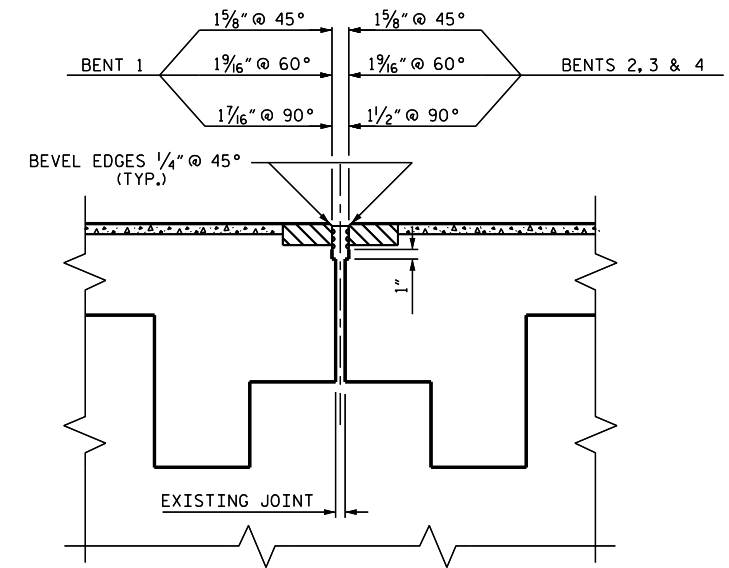
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

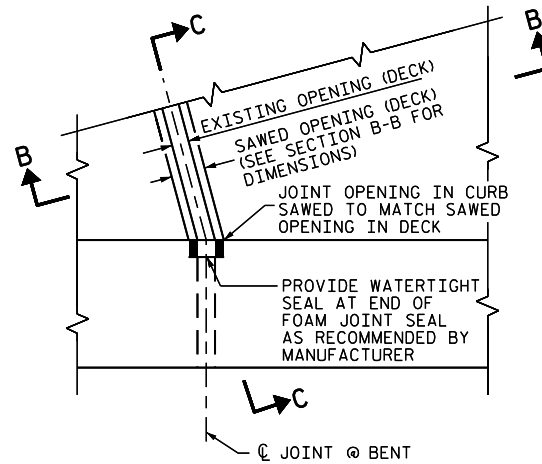


PROPOSED FOAM JOINT SEAL

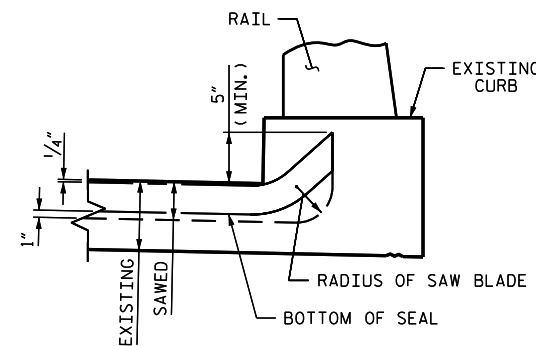
SECTION B-B

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

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE.



PLAN

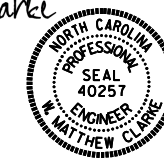


SECTION C-C

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 33

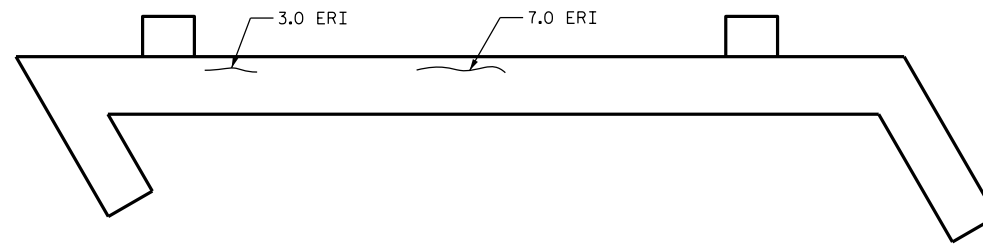
DocuSigned by:
 William M. Clarke
 1EB20097EAAF437...



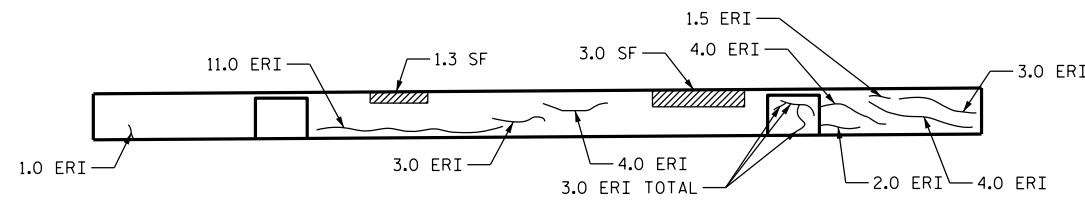
8/19/2015

JOINT SEAL DETAILS AT BENT

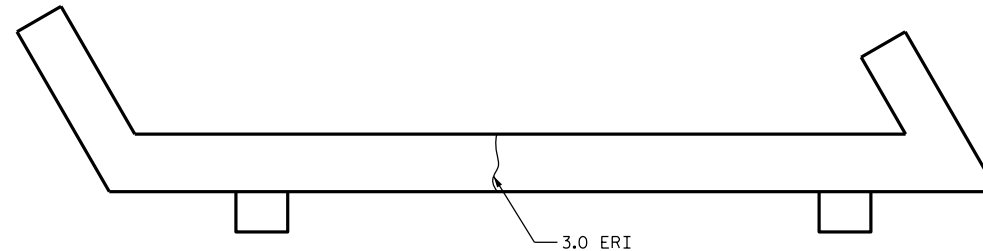
DRAWN BY: S. T. SANDOR DATE: 04/2015
 CHECKED BY: R. WEISZ DATE: 05/2015



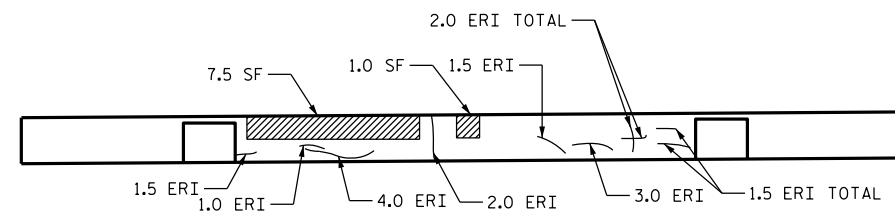
END BENT 1
PLAN



END BENT 1
ELEVATION



END BENT 2
PLAN



END BENT 2
ELEVATION

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	4.3	2.0			
CAP (HORIZONTAL, CORNER)	0.0	0.0			
EPOXY RESIN INJECTION		LN. FT	LN. FT		
CAP		46.5			

REPAIRS END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	8.5	3.9			
CAP (HORIZONTAL, CORNER)	0.0	0.0			
EPOXY RESIN INJECTION		LN. FT	LN. FT		
CAP		19.5			

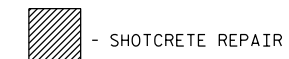
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

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

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.



- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			33

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 1EB20097EAAF437...

8/19/2015



DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	17.5	8.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	2.7	1.2		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		3.2		
COLUMN		0.0		
STRUT		1.0		

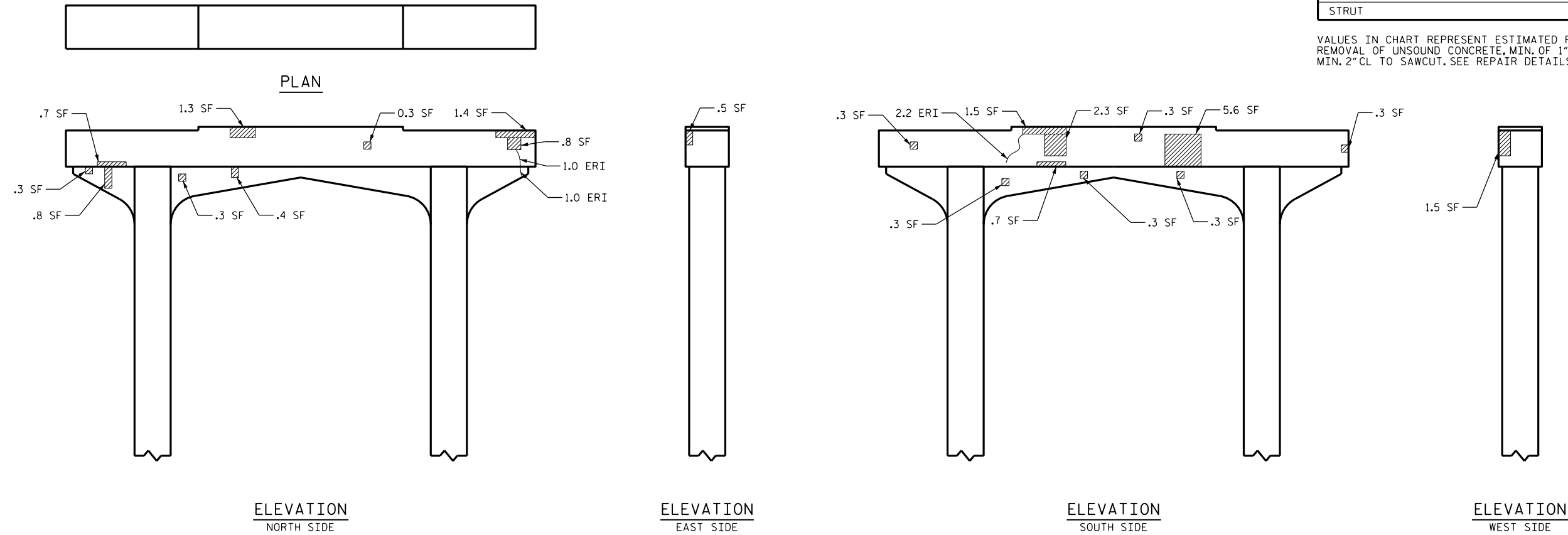
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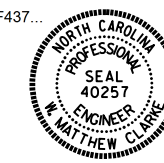
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

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



- SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

SHEET 2 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 1					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					S-12
33					

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	3.2	1.5		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	1.5	0.7		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		17.6		
COLUMN		0.0		
STRUT		2.0		

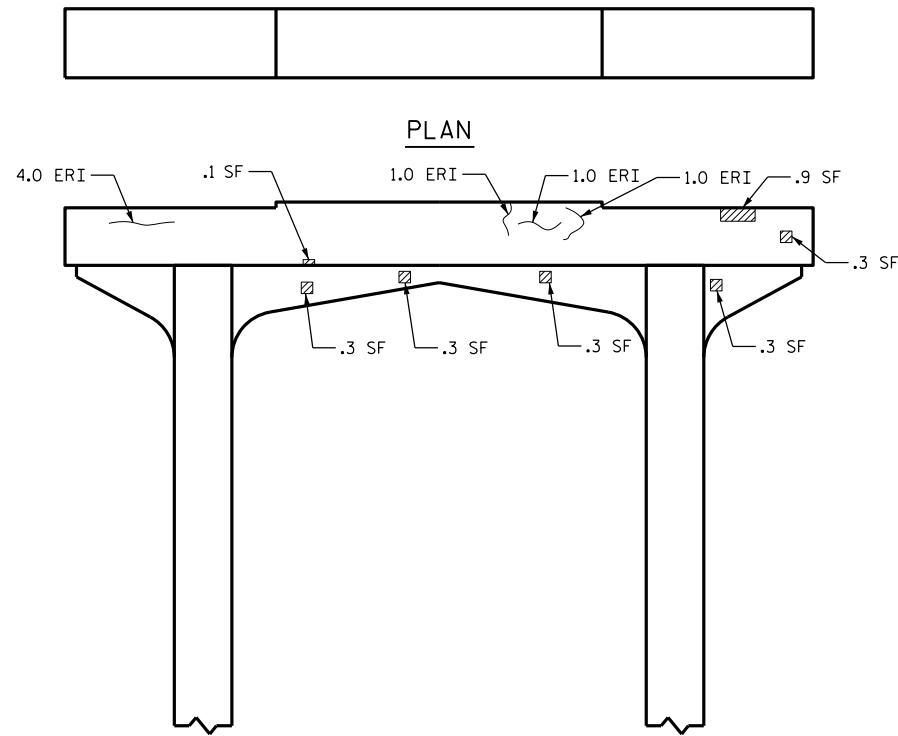
NOTES:

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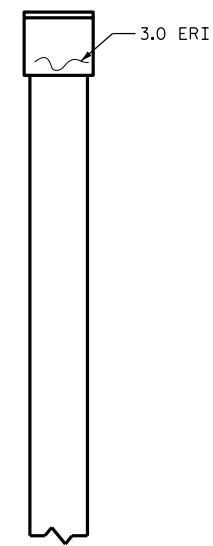
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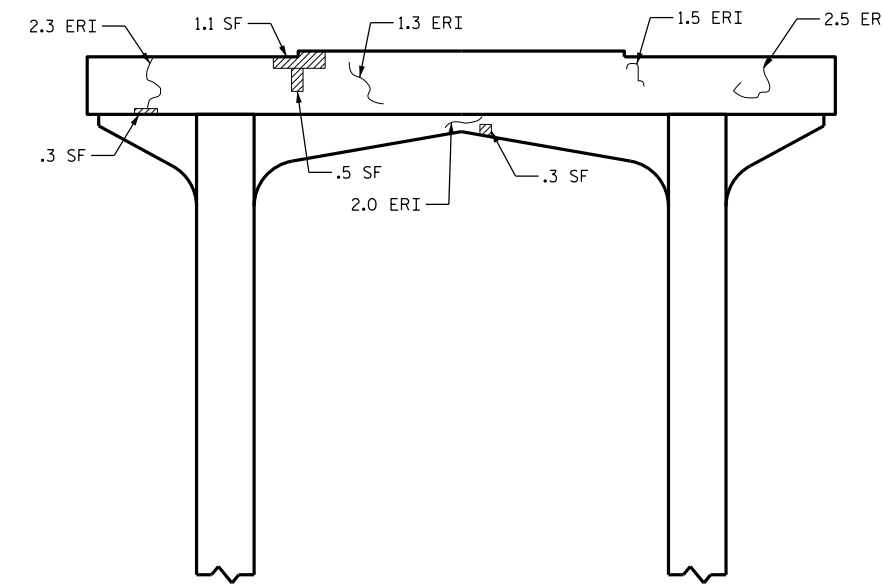
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ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



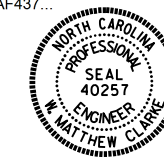
ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189

SHEET 3 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 2					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					33
					S-13

DRAWN BY : H.F. YEUNG DATE : 5/15
CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	14.7	6.7		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	0.3	0.1		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		6.0		
COLUMN		0.0		
STRUT		0.0		

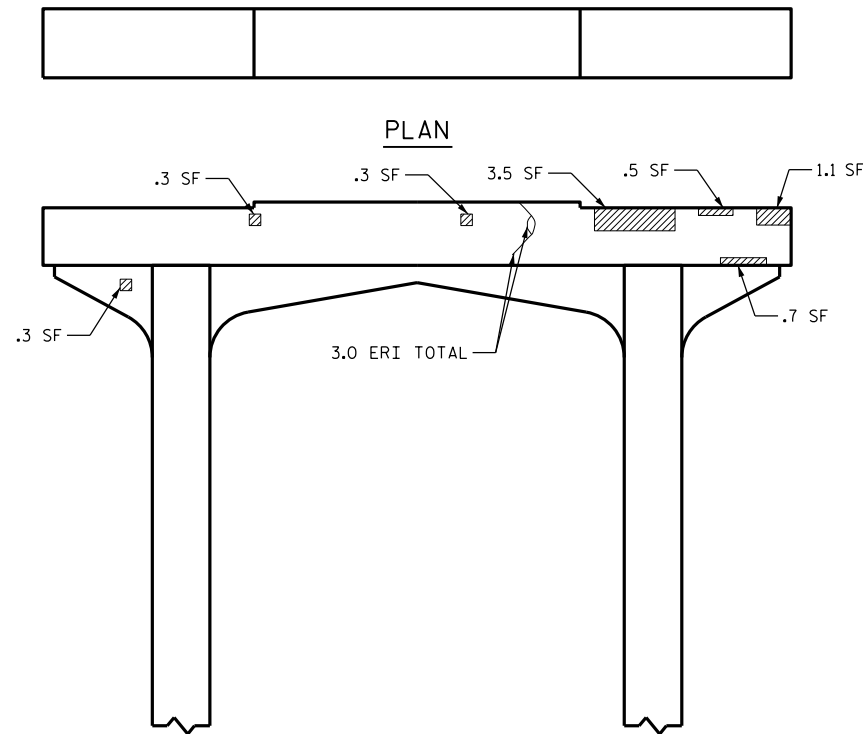
NOTES:

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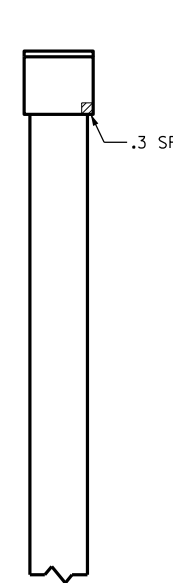
FOR CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

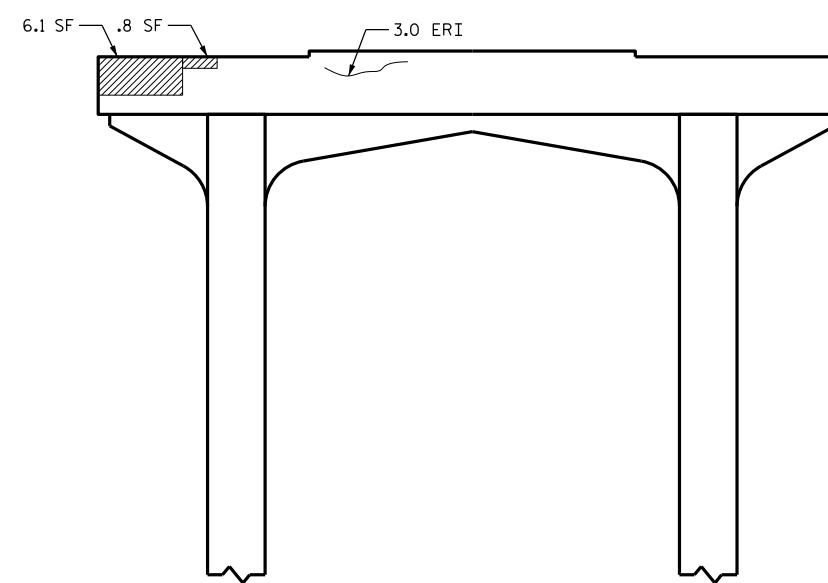
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



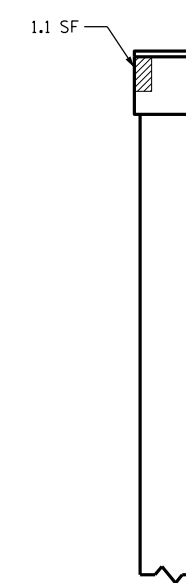
ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

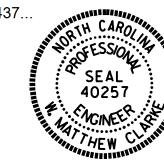


ELEVATION
WEST SIDE

- SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION

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PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189

SHEET 4 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 3					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					33
					S-14

DRAWN BY : H.F. YEUNG DATE : 5/15
CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.6	0.7		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	1.4	0.6		
EPOXY RESIN INJECTION			LN. FT	LN. FT
CAP		0.5		
COLUMN		0.0		
STRUT		4.0		

NOTES:

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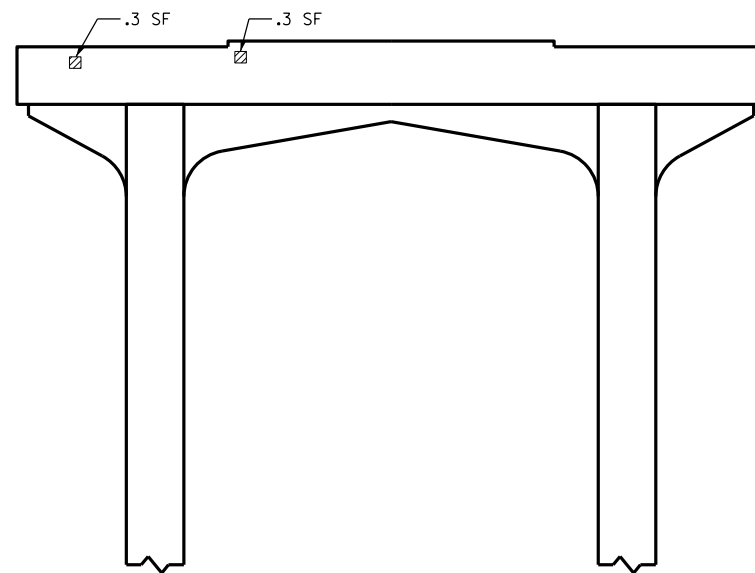
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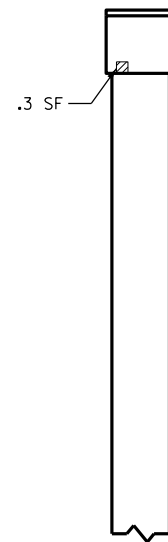
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



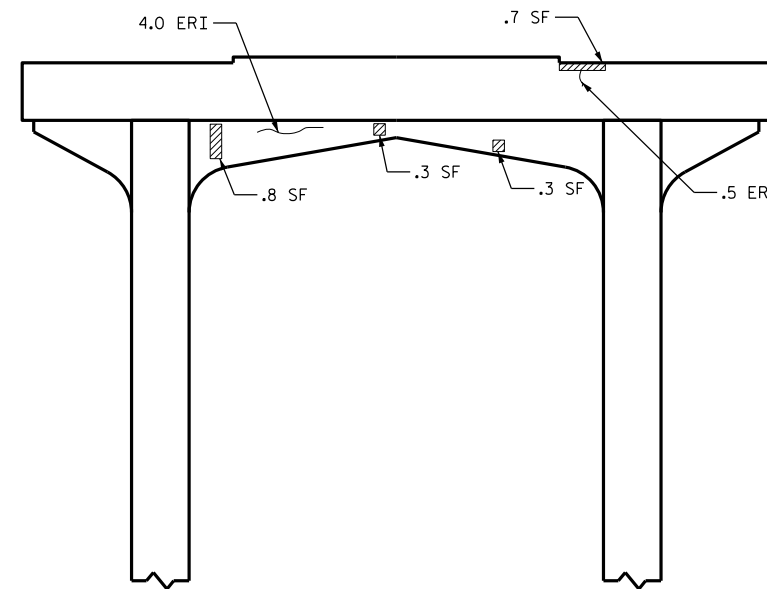
PLAN



ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

- SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

DocuSigned by:
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 1EB20097EAAF437...

8/19/2015

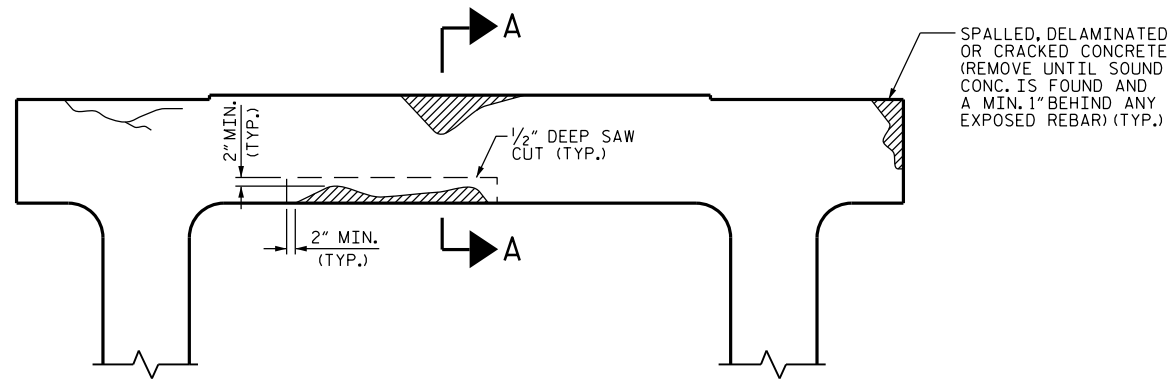


PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

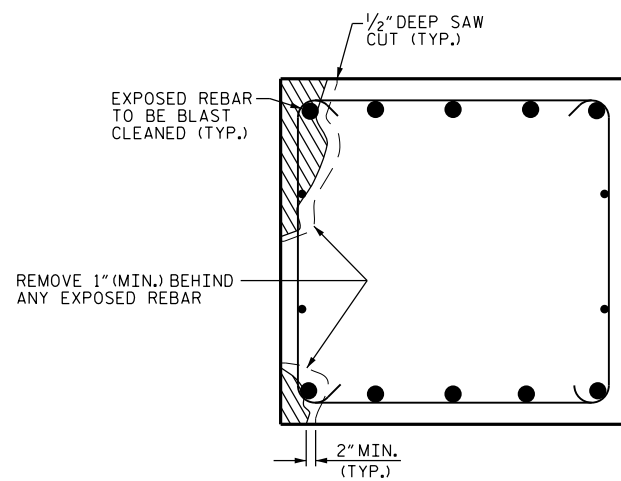
SHEET 5 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 4					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					33

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15

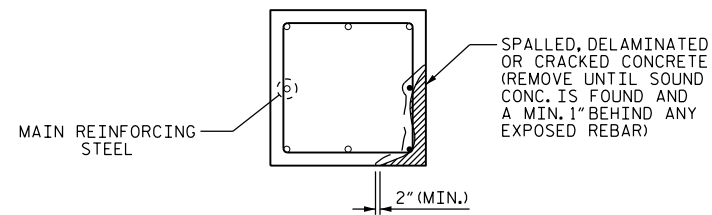


BENT CAP REPAIRS

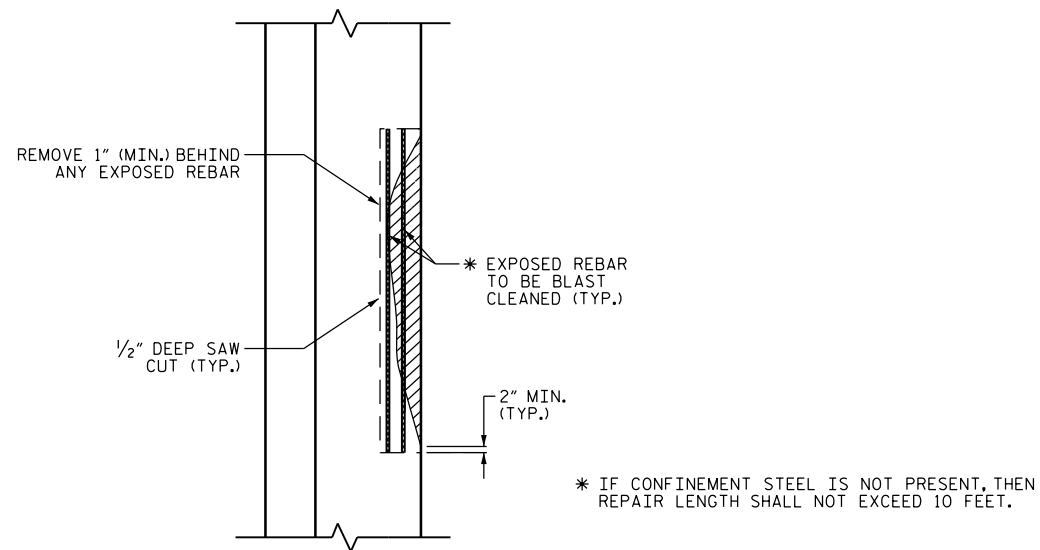


SECTION THRU CAP

CAP REPAIR



PLAN OF COLUMN



ELEVATION OF COLUMN

COLUMN REPAIR

NOTES:

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

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

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 189

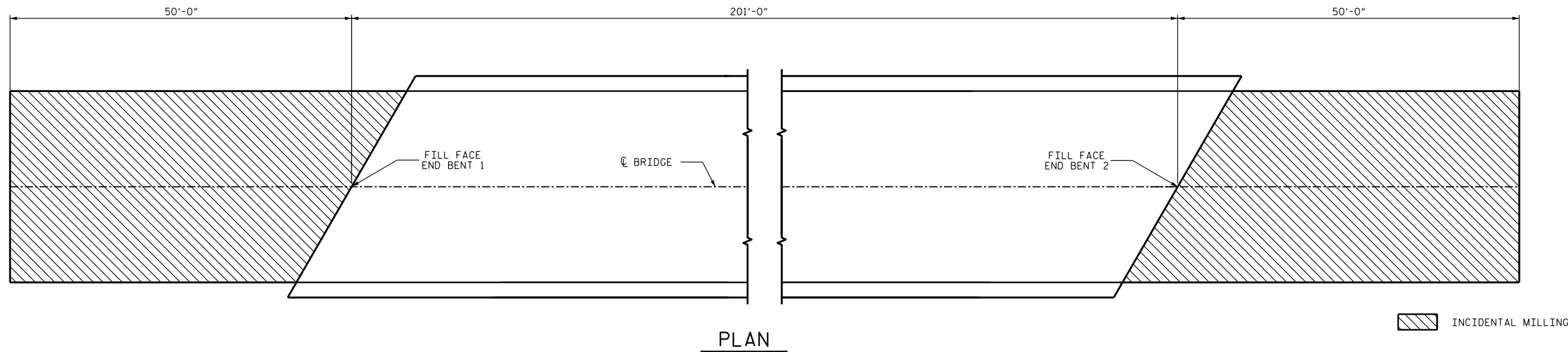
DocuSigned by:
William M. Clarke
 1EB20097EAAF437...



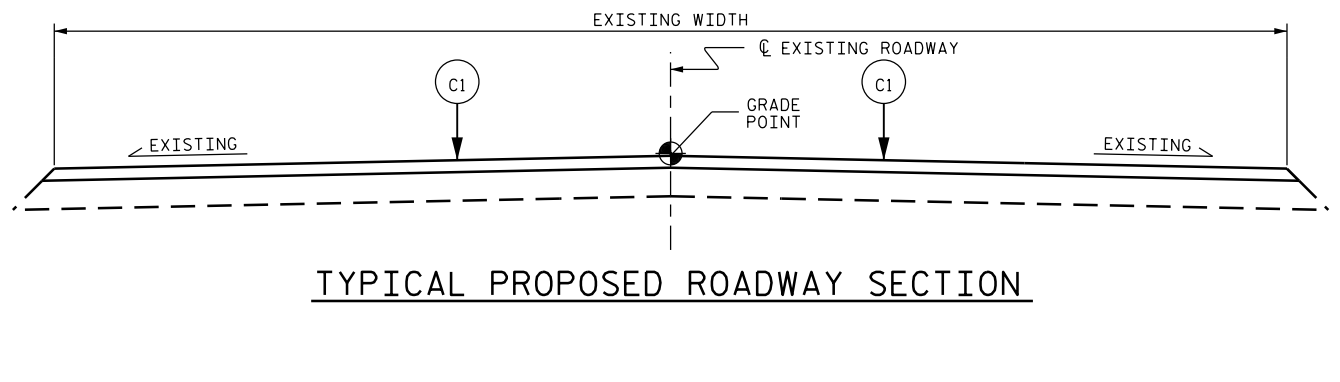
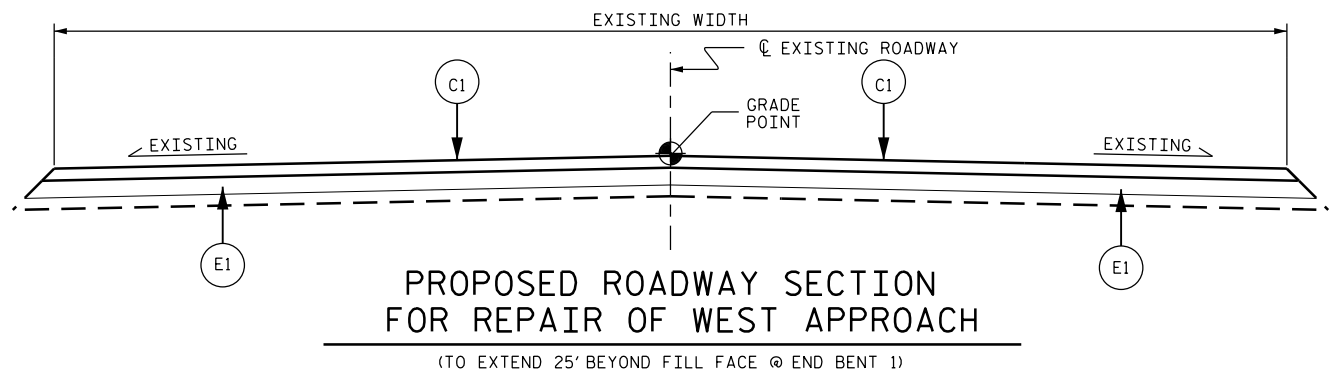
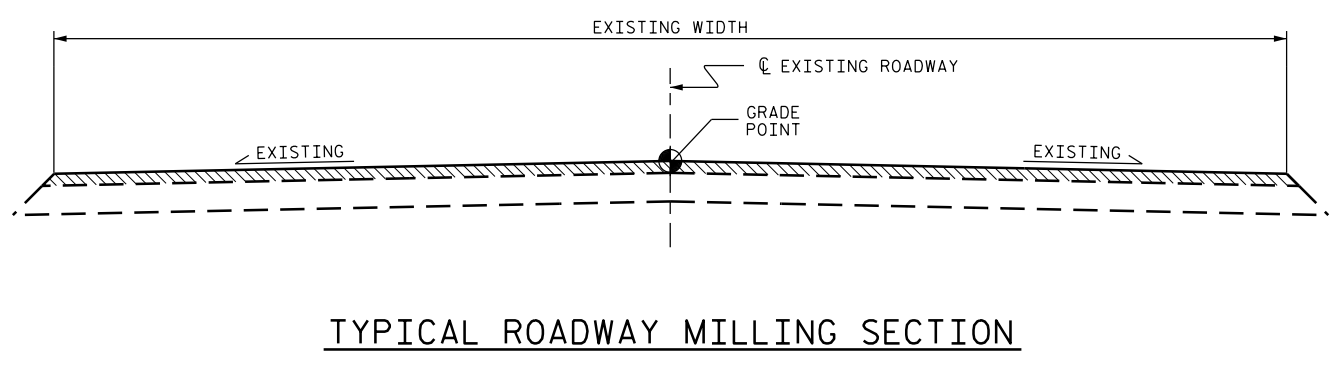
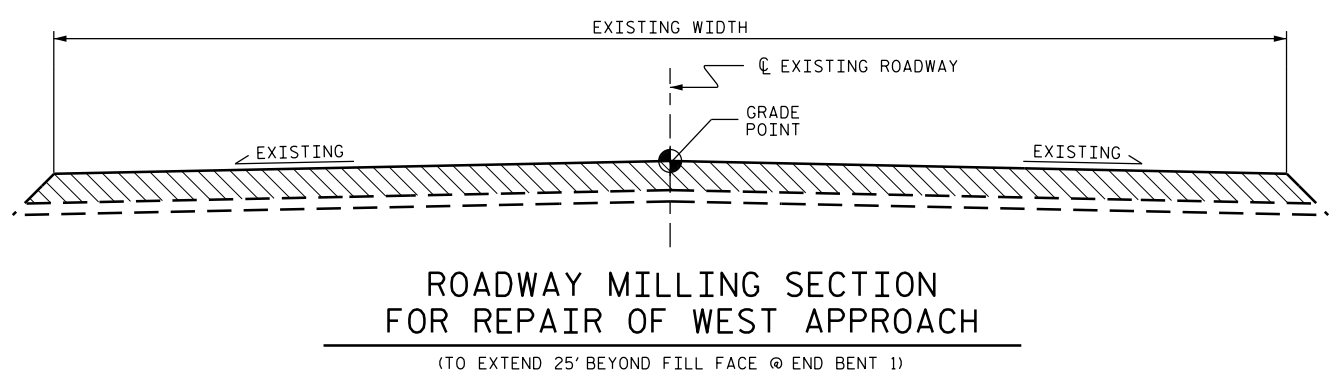
8/19/2015

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-16	
TYPICAL CAP AND COLUMN REPAIR DETAILS						TOTAL SHEETS 33	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15



PLAN



NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 6" DEPTH OF NEW ASPHALT PAVEMENT AT FILL FACE OF END BENT 1 FOR A DISTANCE OF 25'. ALL OTHER LOCATIONS ARE TO BE MILLED TO ATTAIN MINIMUM 1 1/2" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

E1	PROPOSED 4 1/2" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH.
C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	311 SQ. YDS.	
ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	20 TONS	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	26 TONS	

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 189

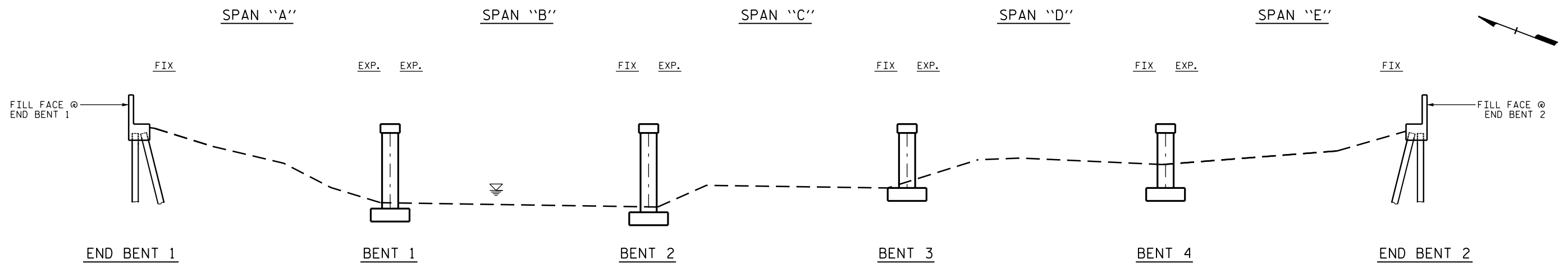
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH MILLING AND TYPICAL ROADWAY SECTIONS

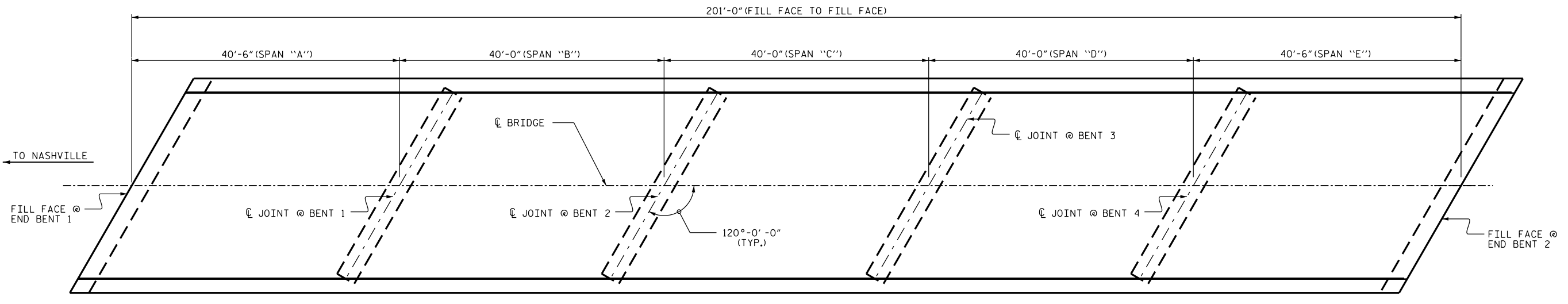
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DRAWN BY: R. WEISZ DATE: 5/2015
CHECKED BY: W.M. CLARKE DATE: 6/2015

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SECTION ALONG CL ROADWAY



PLAN

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 1 OF 2

SCOPE OF WORK:

- EPOXY INJECT CONCRETE CRACKS IN CAPS AND COLUMNS.
- PERFORM SHOTCRETE REPAIRS IN PREPARED AREAS.
- CLEAN AND PAINT EXISTING BEARINGS.
- EPOXY COAT TOP FACE OF END BENTS AND BENT CAPS.
- PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW FOAM JOINT SEALS.
- GROOVE CONCRETE BRIDGE DECK.
- MILL AND PAVE ASPHALT APPROACHES.

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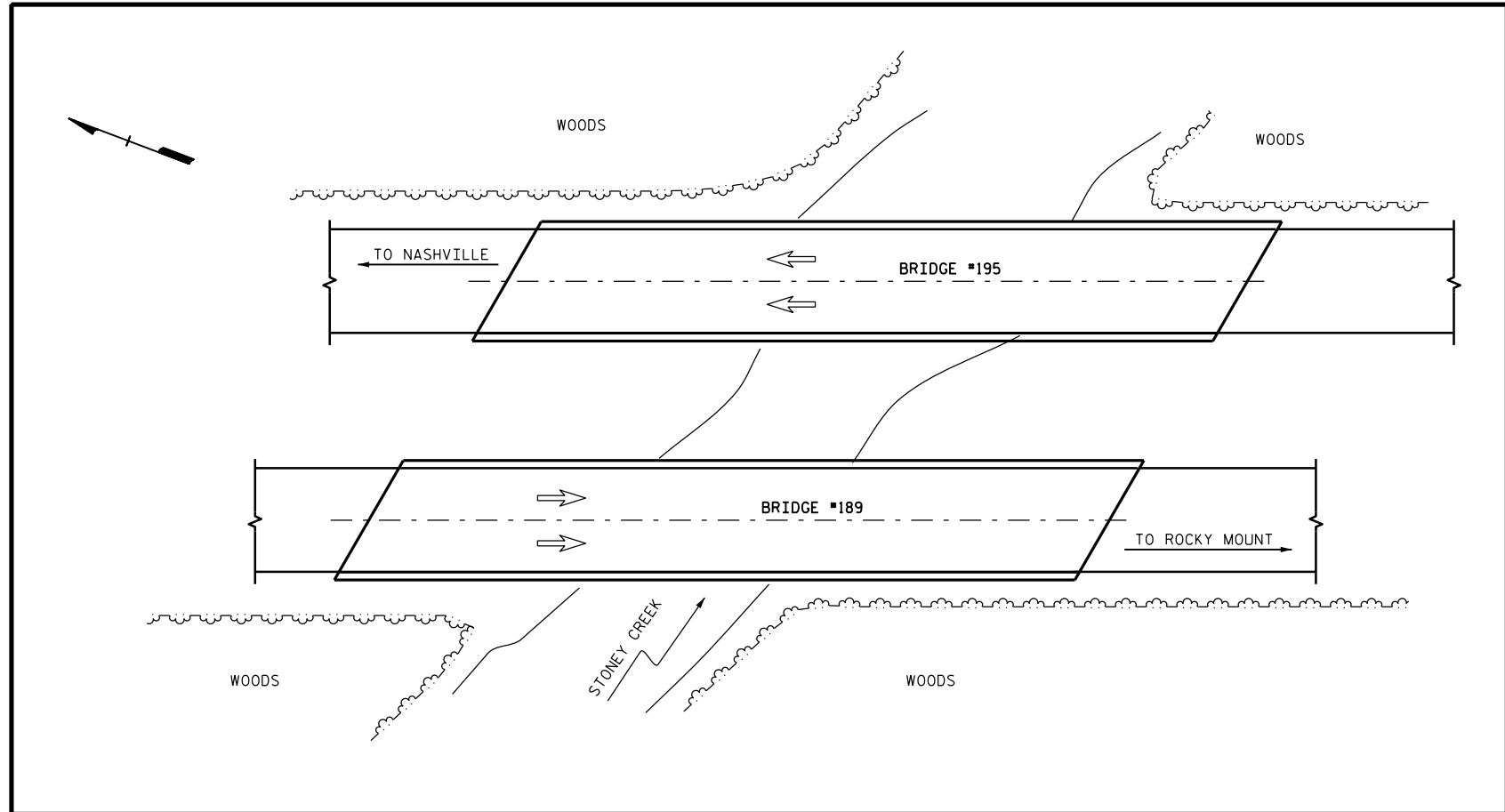
GENERAL DRAWING

BRIDGE #195 ON
 US 64 BUS. WBL
 OVER STONEY CREEK

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DRAWN BY : S. T. SANDOR DATE : 03/2015
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LOCATION SKETCH

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

GENERAL NOTES

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

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

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

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING EXISTING BEARING ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

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

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

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

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 CHECKED BY : R. WEISZ DATE : 05/2015

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8/19/2015



PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

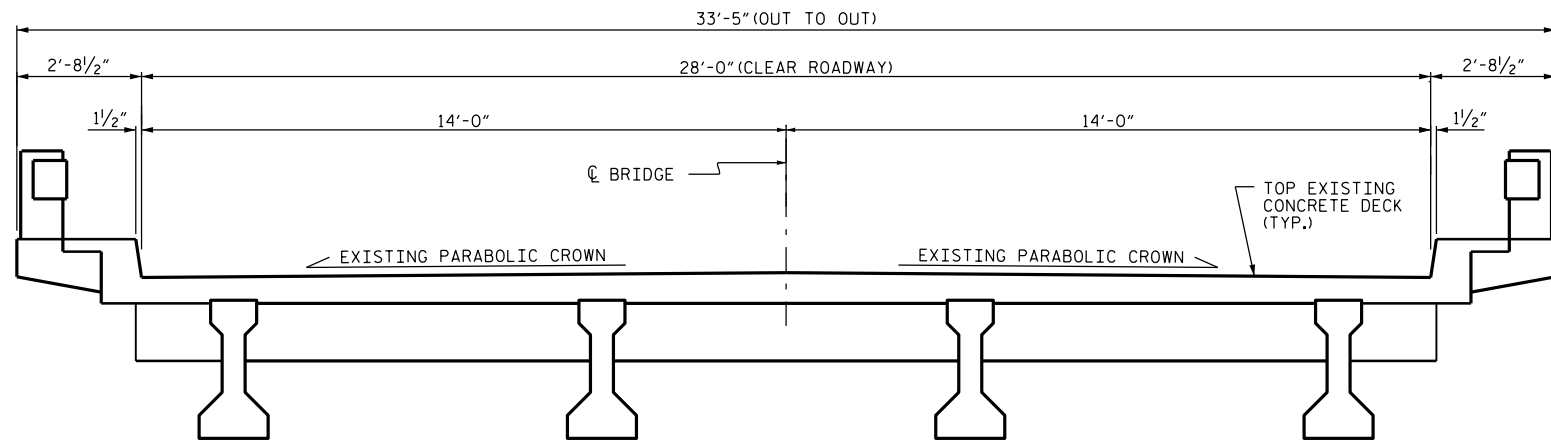
SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

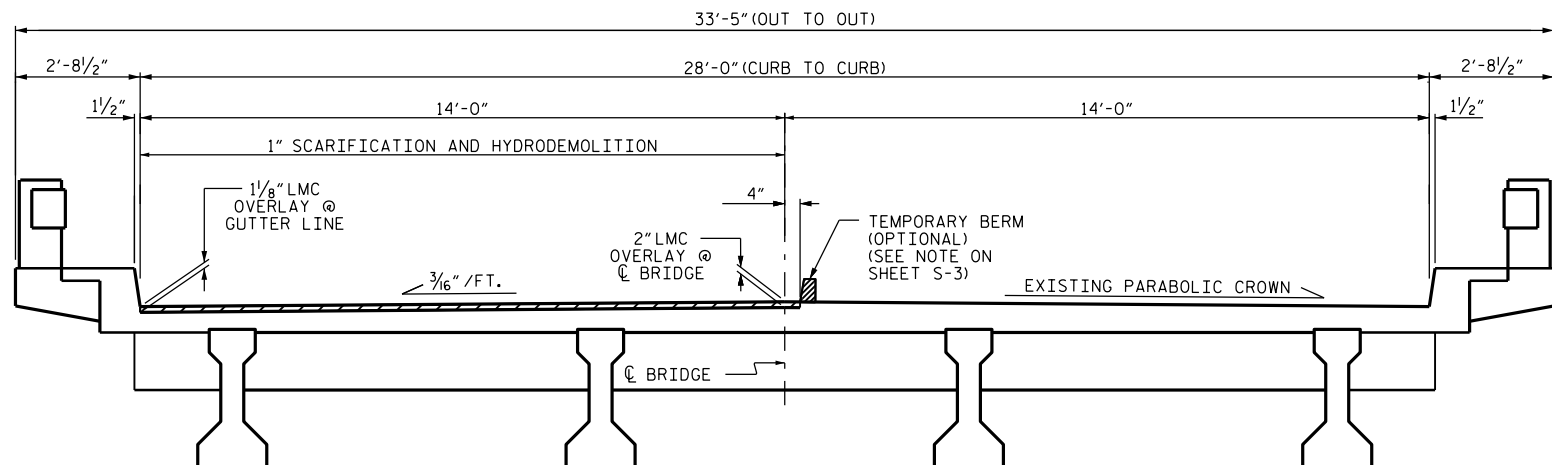
GENERAL DRAWING

BRIDGE #195 ON
 US 64 BUS. WBL
 OVER STONEY CREEK

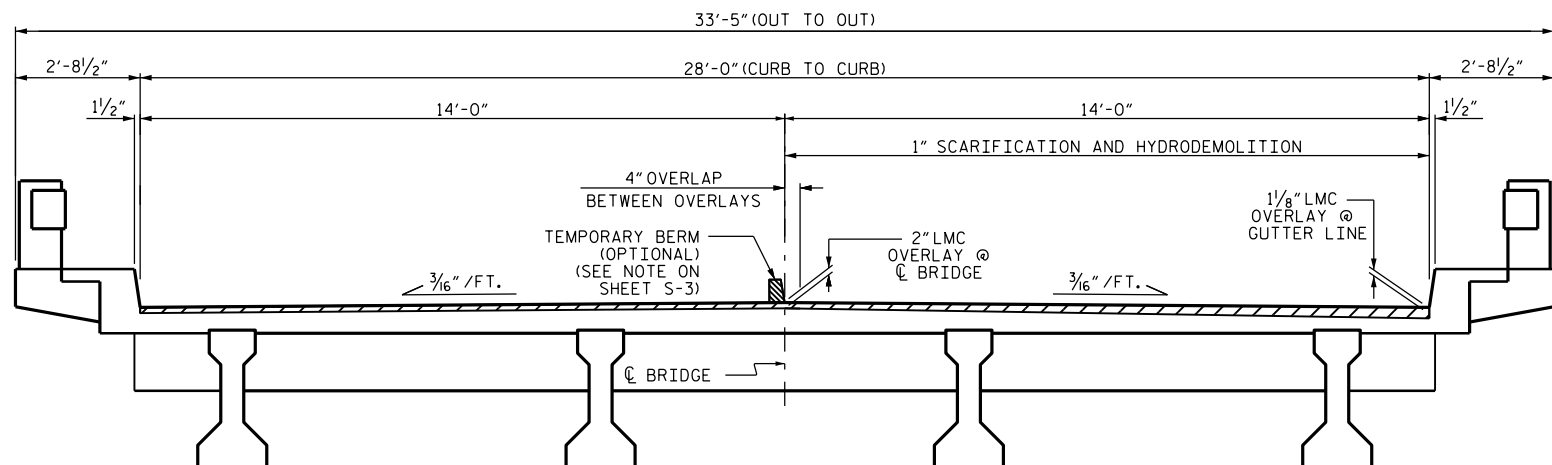
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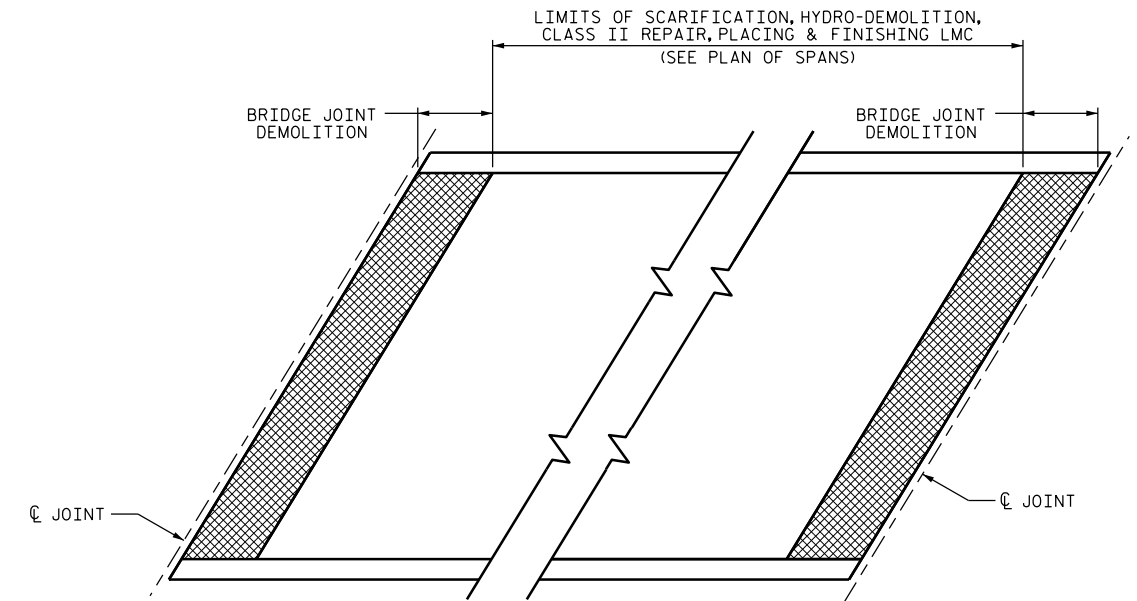
TYPICAL SECTION
(EXISTING)



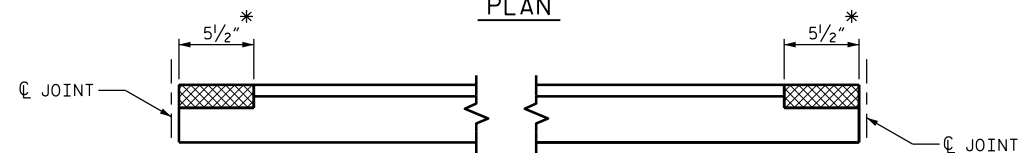
TYPICAL SECTION
(LEFT LANE LMC WORK)



TYPICAL SECTION
(RIGHT LANE LMC WORK)



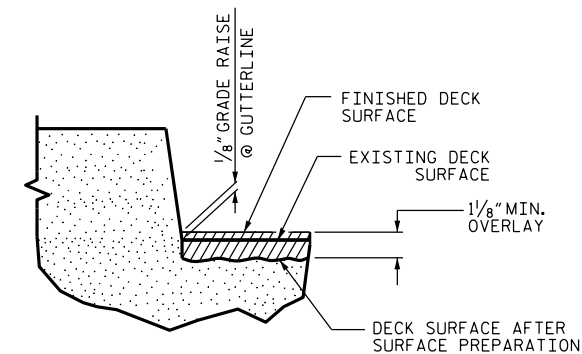
PLAN



ELEVATION

* DIMENSION MEASURED PERPENDICULAR TO JOINT

LIMITS OF BRIDGE JOINT DEMOLITION AND OVERLAY PREPARATION AND PLACEMENT



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

NOTE:

IF THE CONTRACTOR ELECTS TO STAGE THE DECK OVERLAY, THE TEMPORARY BERM AND 4" OVERLAY IS REQUIRED. STAGING INFORMATION IS NOT APPLICABLE IF A CONSTRUCTION JOINT IS NOT UTILIZED FOR THE DECK OVERLAY.

THE WORK STAGING ON THIS PLAN SHEET INDICATES THAT THE LEFT LANE LMC WORK IS PERFORMED FIRST, FOLLOWED BY THE RIGHT LANE LMC WORK. THE CONTRACTOR MAY ELECT TO SEQUENCE THE WORK DIFFERENTLY, BUT THE DIMENSIONS OF THE WORK ZONE AND CLEAR ROADWAY AREAS SHALL MATCH THAT INDICATED ON THIS PLAN SHEET, RESPECTIVE TO THE LANE WHERE THE LMC WORK IS BEING PERFORMED.

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 195

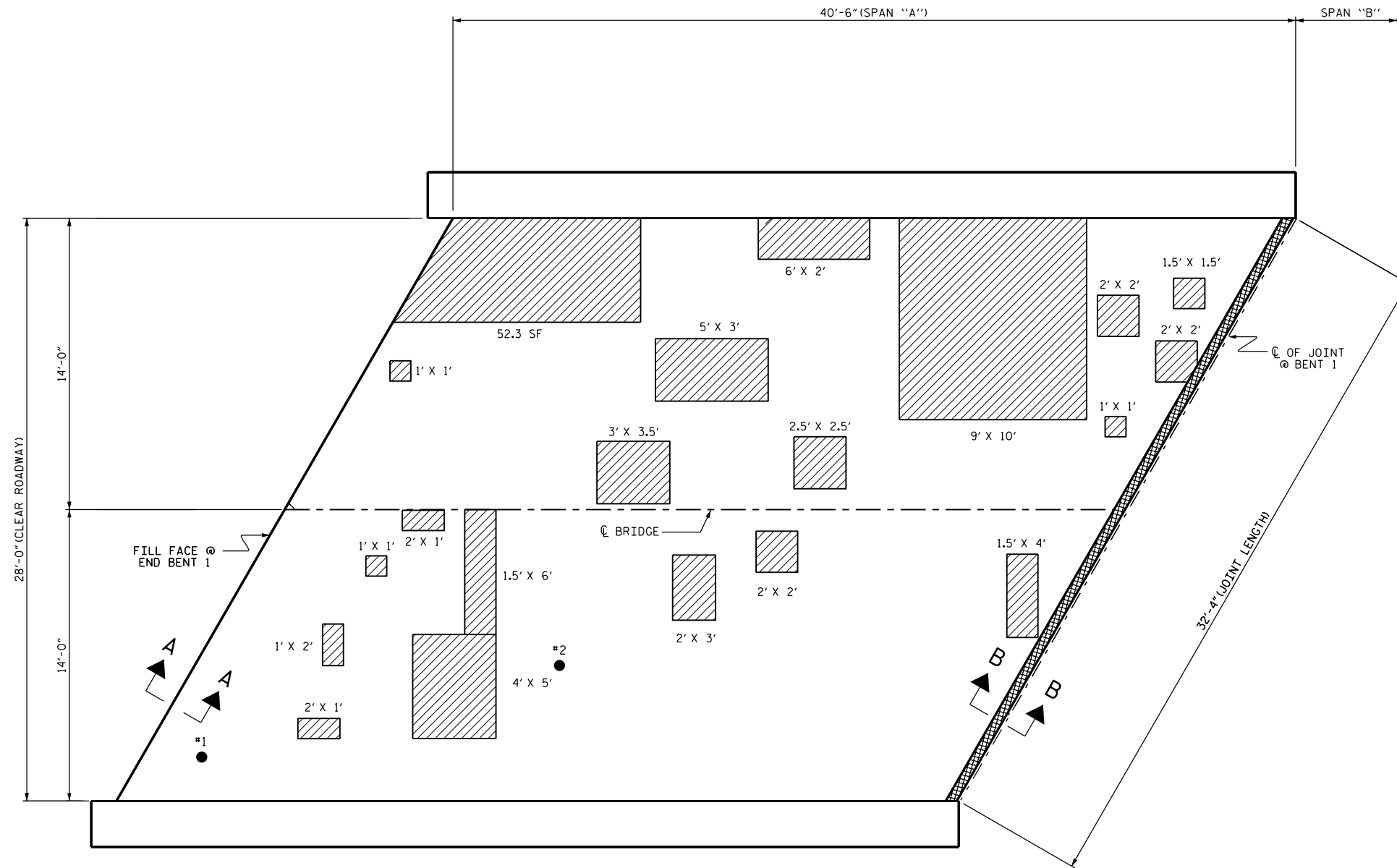
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TYPICAL SECTION AND SURFACE PREPARATION DETAILS						TOTAL SHEETS 33																							
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DRAWN BY : S. T. SANDOR DATE : 05/2015
CHECKED BY : R. WEISZ DATE : 06/2015

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	124.4 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	124.4 SY	
CLASS II SURFACE PREPARATION	27.8 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	14.8 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  APPROXIMATE DECK EVALUATION SAMPLE LOCATION

BRIDGE DECK EVALUATION SAMPLES	
TEST LOCATION	AVG. TEST RESULT (PSI)
#1	3660
#2	3640

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY NCDOT REPORT, DATED 03/31/15.

SPAN "A"
(SEE SHEET NO. S-26 FOR SECTIONS A-A AND B-B)

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 1 OF 5

DocuSigned by:
William M. Clarke
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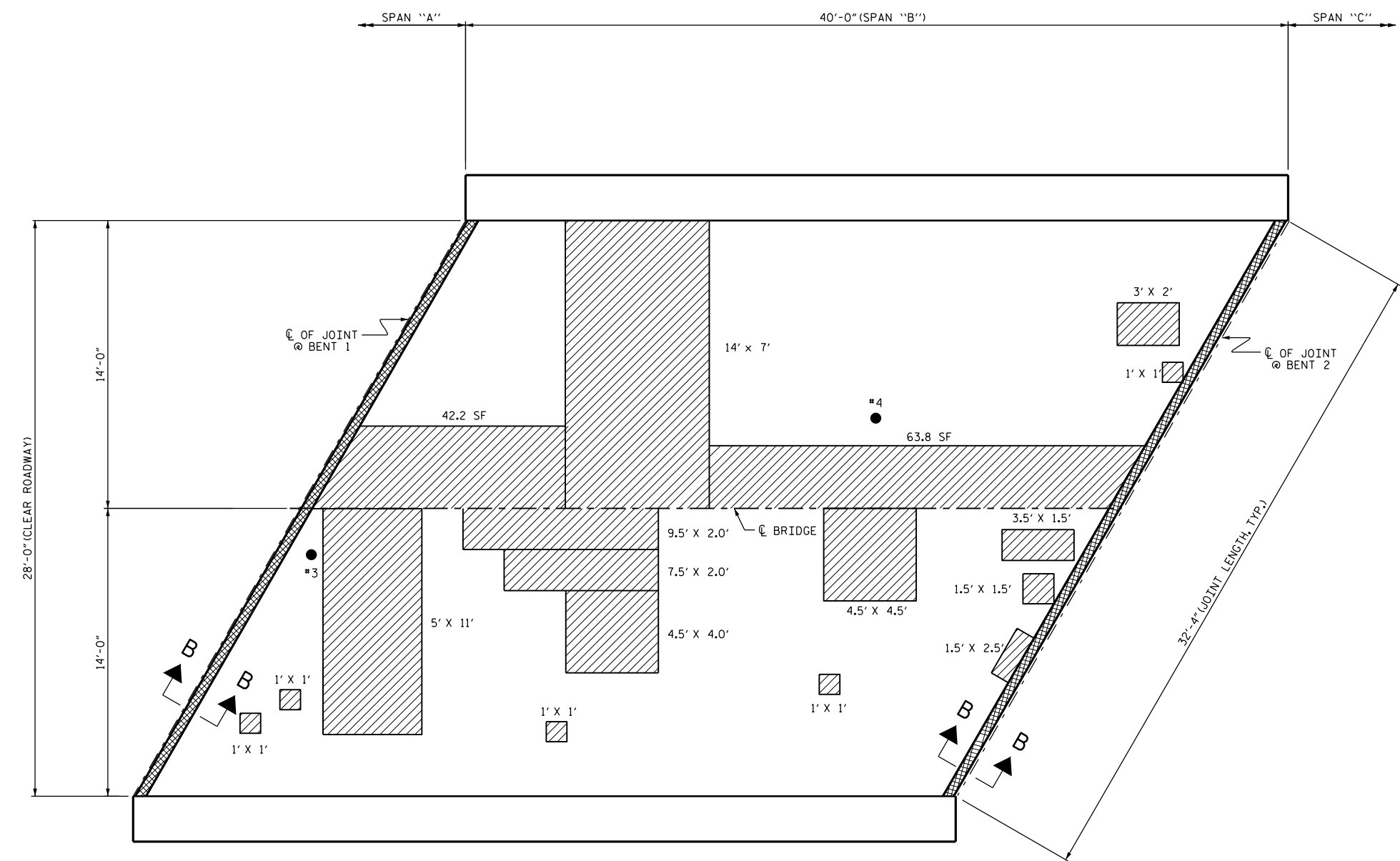
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SURFACE PREPARATION SPAN "A"					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
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					S-21
					TOTAL SHEETS
					33

DRAWN BY : S. T. SANDOR DATE : 03/2015
 CHECKED BY : R. WEISZ DATE : 06/2015

SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	39.2 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION
- APPROXIMATE DECK EVALUATION SAMPLE LOCATION

BRIDGE DECK EVALUATION SAMPLES	
TEST LOCATION	AVG. TEST RESULT (PSI)
#3	3560
#4	5000

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY NCDOT REPORT, DATED 03/31/15.

SPAN "B"
(SEE SHEET NO. S-26 FOR SECTION B-B)

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195
 SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "B"**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
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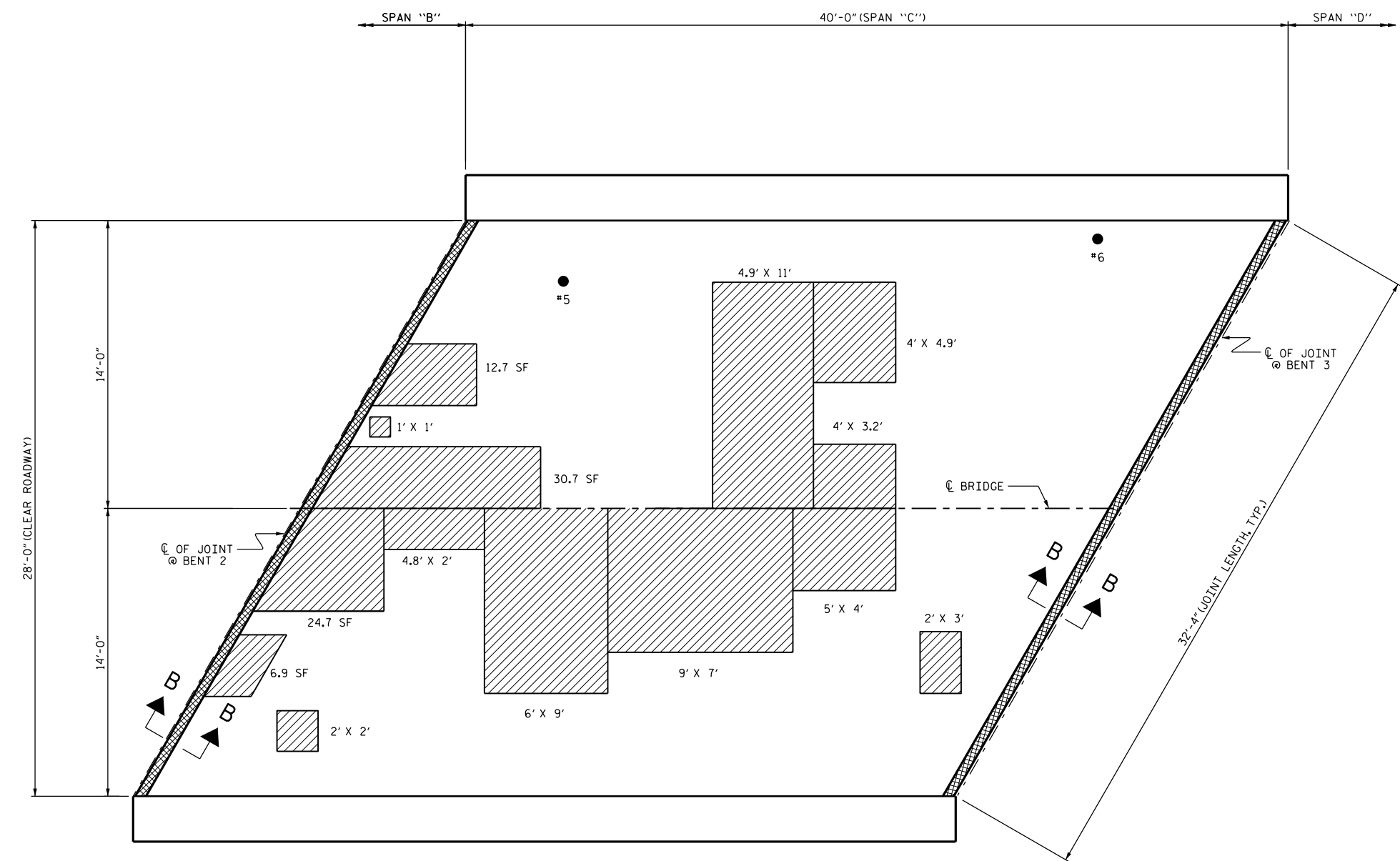
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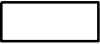



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SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	35.4 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  APPROXIMATE DECK EVALUATION SAMPLE LOCATION

BRIDGE DECK EVALUATION SAMPLES	
TEST LOCATION	AVG. TEST RESULT (PSI)
#5	3520
#6	3320

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY NCDOT REPORT, DATED 03/31/15.

SPAN "C"
(SEE SHEET NO. S-26 FOR SECTION B-B)

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 3 OF 5

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8/19/2015

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "C"

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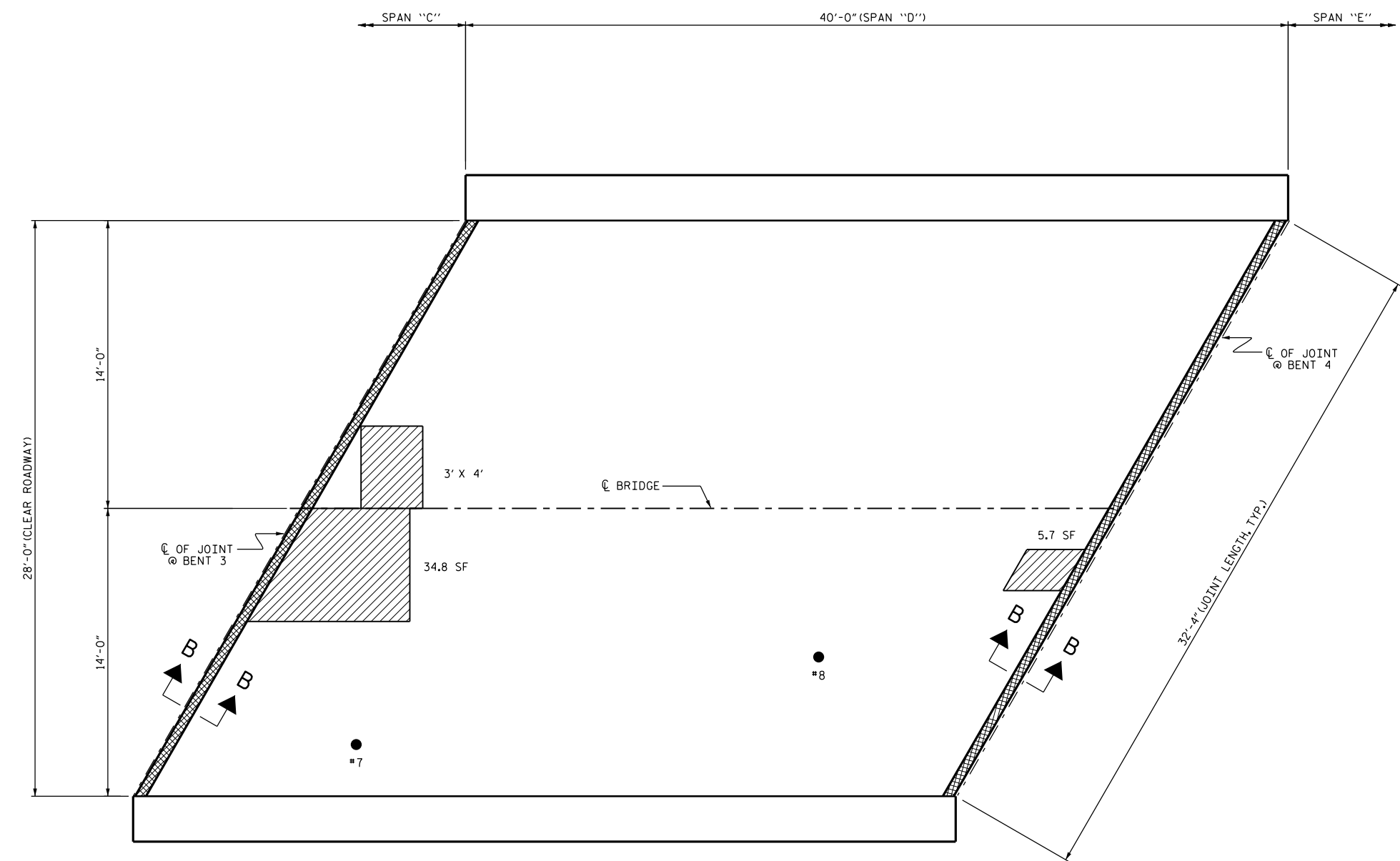
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SUMMARY OF QUANTITIES FOR SPAN "D"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	121.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	121.2 SY	
CLASS II SURFACE PREPARATION	5.8 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION
- APPROXIMATE DECK EVALUATION SAMPLE LOCATION

BRIDGE DECK EVALUATION SAMPLES	
TEST LOCATION	AVG. TEST RESULT (PSI)
#7	4200
#8	3540

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY NCDOT REPORT, DATED 03/31/15.

SPAN "D"
(SEE SHEET NO. S-26 FOR SECTION B-B)

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195
 SHEET 4 OF 5

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 1EB20097EAAF437...

8/19/2015



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "D"**

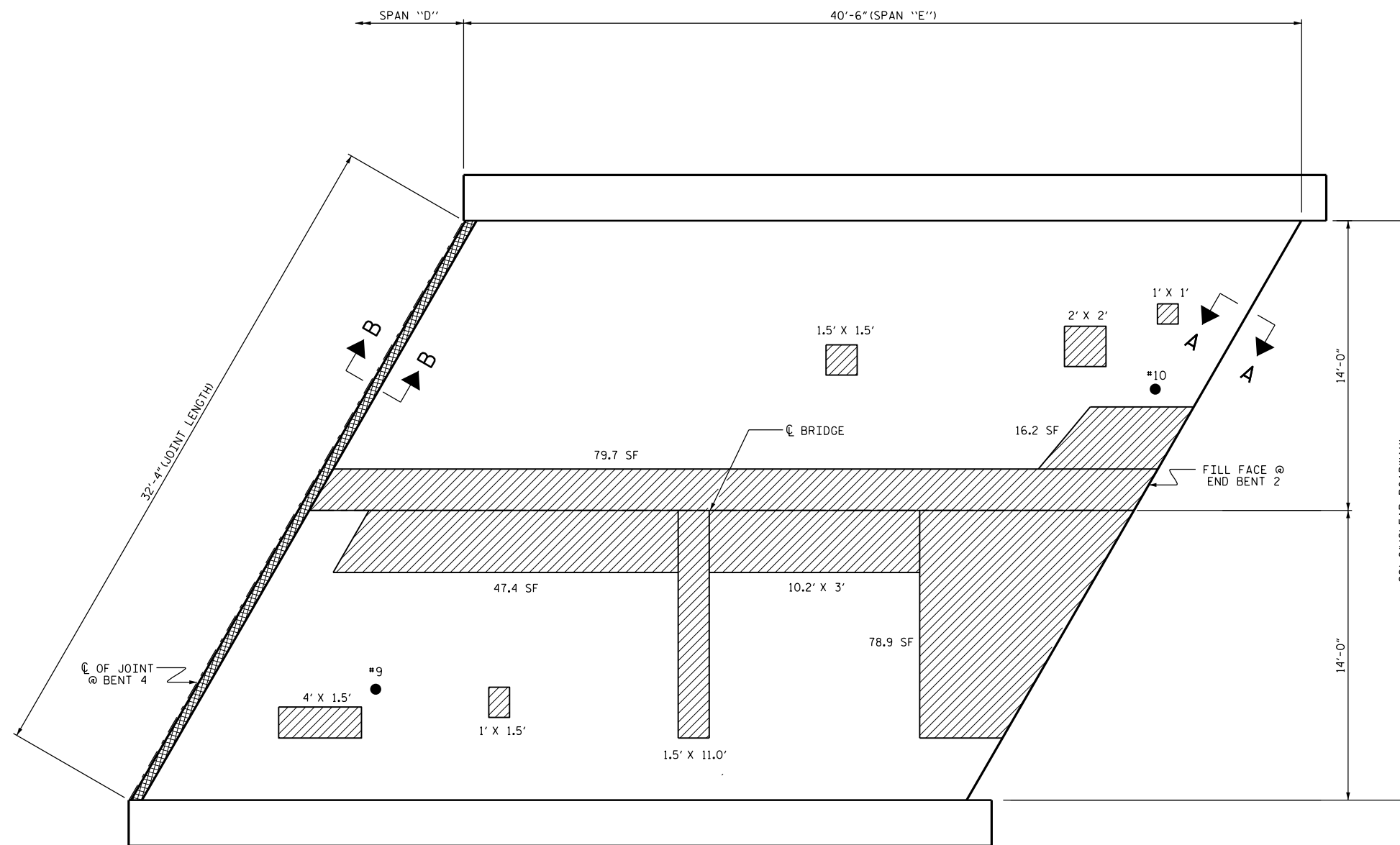
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CHECKED BY :	R. WEISZ	DATE :	06/2015

SUMMARY OF QUANTITIES FOR SPAN "E"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	124.4 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	124.4 SY	
CLASS II SURFACE PREPARATION	31.5 SY	
CLASS III SURFACE PREPARATION	0.5 SY	
JOINT DEMOLITION	14.8 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



SPAN "E"
(SEE SHEET NO. S-26 FOR SECTIONS A-A AND B-B)

- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION
- APPROXIMATE DECK EVALUATION SAMPLE LOCATION

BRIDGE DECK EVALUATION SAMPLES	
TEST LOCATION	AVG. TEST RESULT (PSI)
#9	3960
#10	4280

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY NCDOT REPORT, DATED 03/31/15.

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

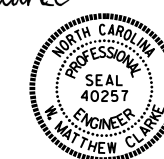
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "E"**

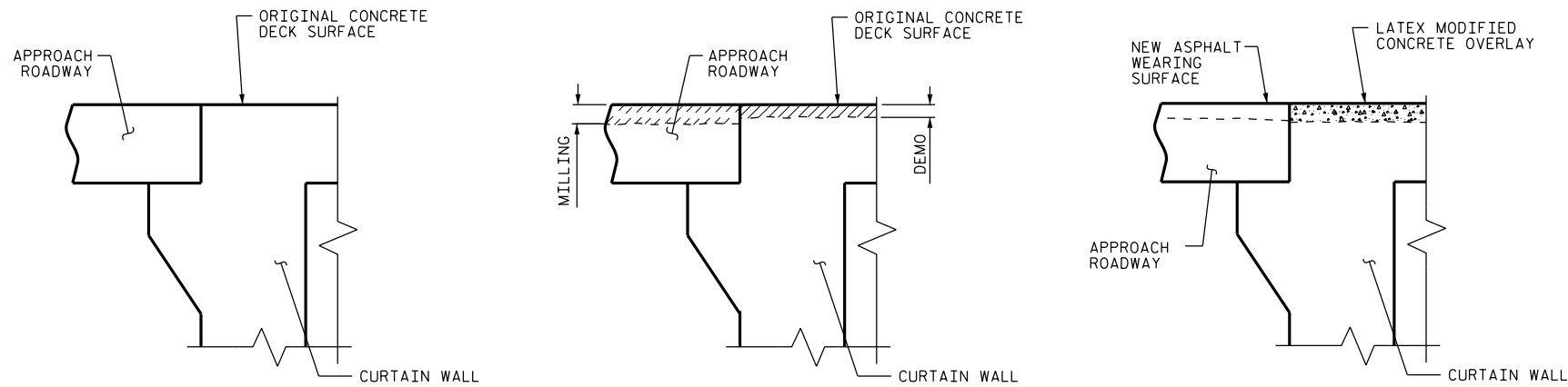
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8/19/2015

DRAWN BY : S. T. SANDOR DATE : 03/2015
 CHECKED BY : R. WEISZ DATE : 06/2015



EXISTING

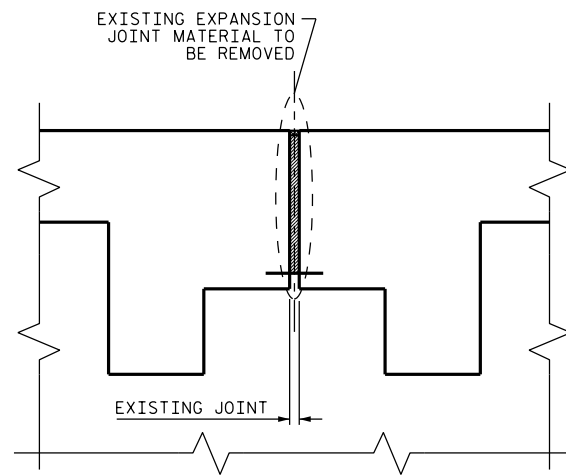
MINIMUM EXISTING JOINT DEMOLITION

PROPOSED

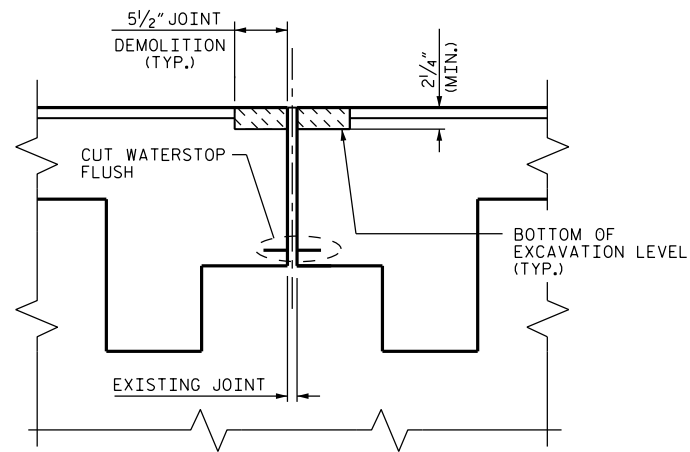
SECTION A-A

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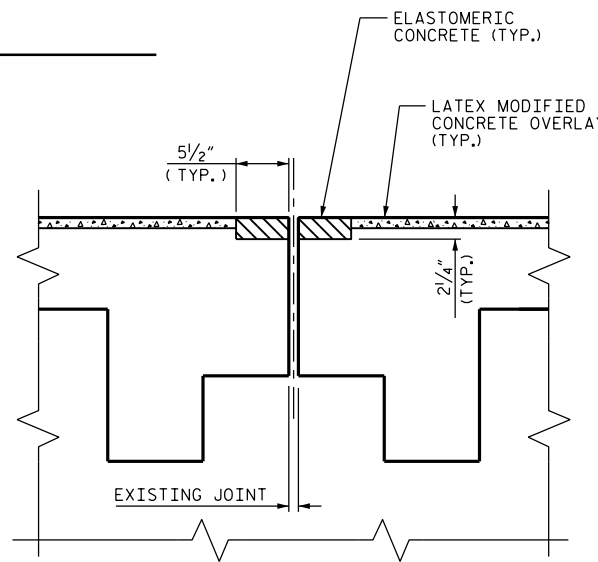
FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.



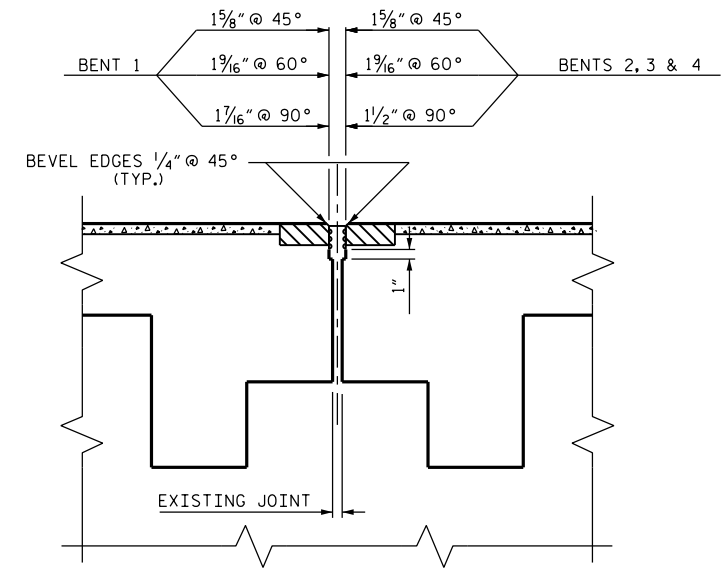
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

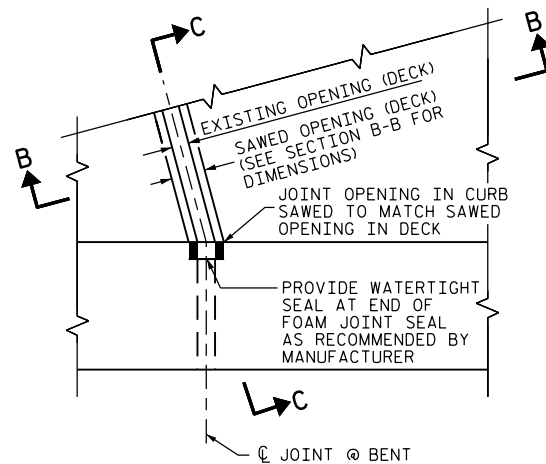


PROPOSED FOAM JOINT SEAL

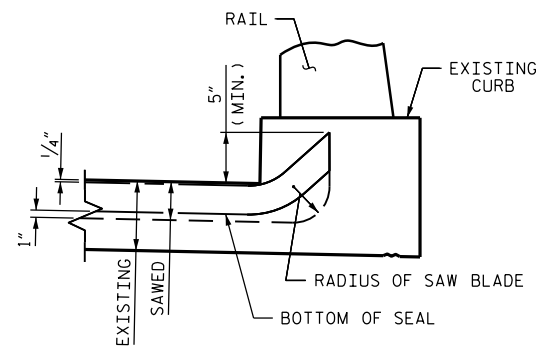
SECTION B-B

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

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE.



PLAN



SECTION C-C

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

DocuSigned by:
William M. Clarke
 1EB20097EAAF437...

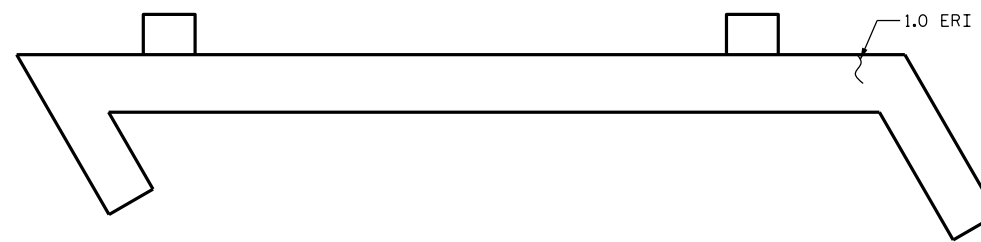
8/19/2015



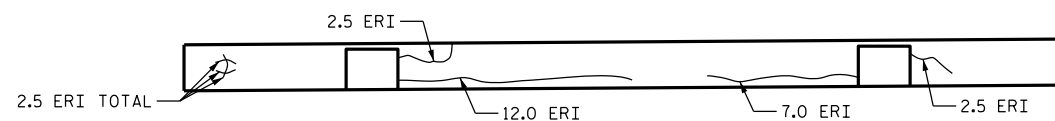
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-26
TOTAL SHEETS					33

DRAWN BY: S. T. SANDOR DATE: 04/2015
 CHECKED BY: R. WEISZ DATE: 05/2015

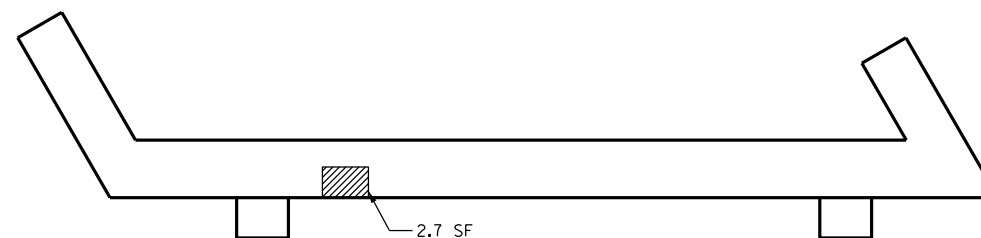
JOINT SEAL DETAILS AT BENT



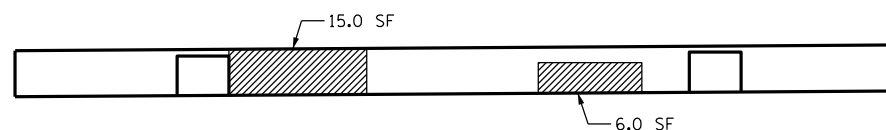
END BENT 1
PLAN



END BENT 1
ELEVATION



END BENT 2
PLAN



END BENT 2
ELEVATION

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0			
CAP (HORIZONTAL, CORNER)	0.0	0.0			
EPOXY RESIN INJECTION		LN. FT	LN. FT		
CAP		27.5			

REPAIRS END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	21.0	9.6			
CAP (HORIZONTAL, CORNER)	2.7	1.2			
EPOXY RESIN INJECTION		LN. FT	LN. FT		
CAP		0.0			

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

NOTES:

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

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

PROJECT NO. BP-5500I

NASH COUNTY

BRIDGE NO. 195

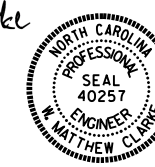
SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-27
2			4			33

DocuSigned by:
William M. Clarke
1EB20097EAAF437...



8/19/2015

DRAWN BY : H.F. YEUNG DATE : 5/15
CHECKED BY : R.N. WEISZ DATE : 6/15

NOTES:

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

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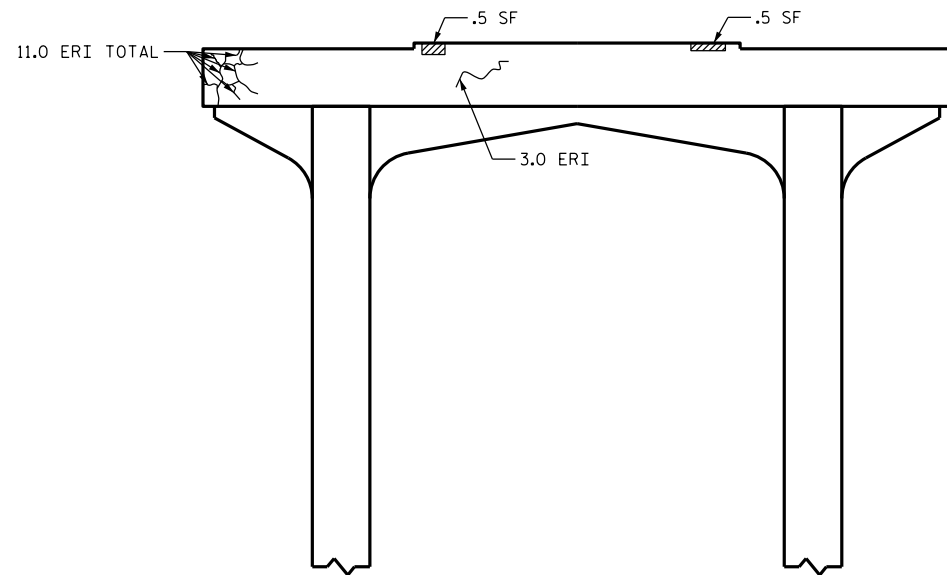
REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	8.2	3.4		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	3.8	1.6		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		17.0		
COLUMN		0.0		
STRUT		0.0		

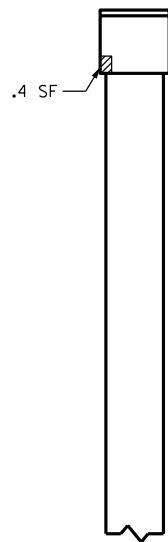
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



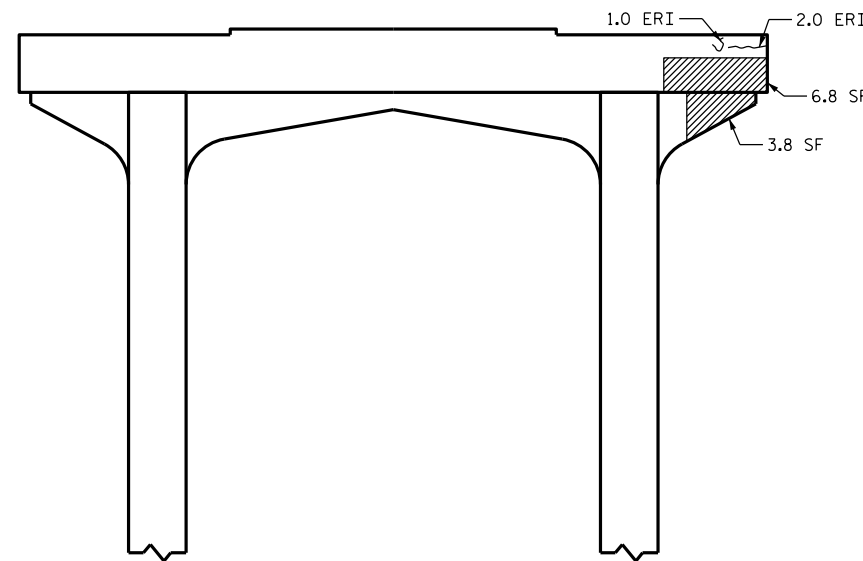
PLAN



ELEVATION
NORTH SIDE




ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

 - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

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1EB20097EAAF437...

8/19/2015



PROJECT NO. BP-5500I
NASH COUNTY
BRIDGE NO. 195

SHEET 2 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 1					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					33
					S-28

DRAWN BY : H.F. YEUNG DATE : 5/15
CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	18.4	8.4		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	2.0	0.9		
STRUT	0.3	0.1		
EPOXY RESIN INJECTION			LN. FT	LN. FT
CAP		9.5		
COLUMN		0.0		
STRUT		0.0		

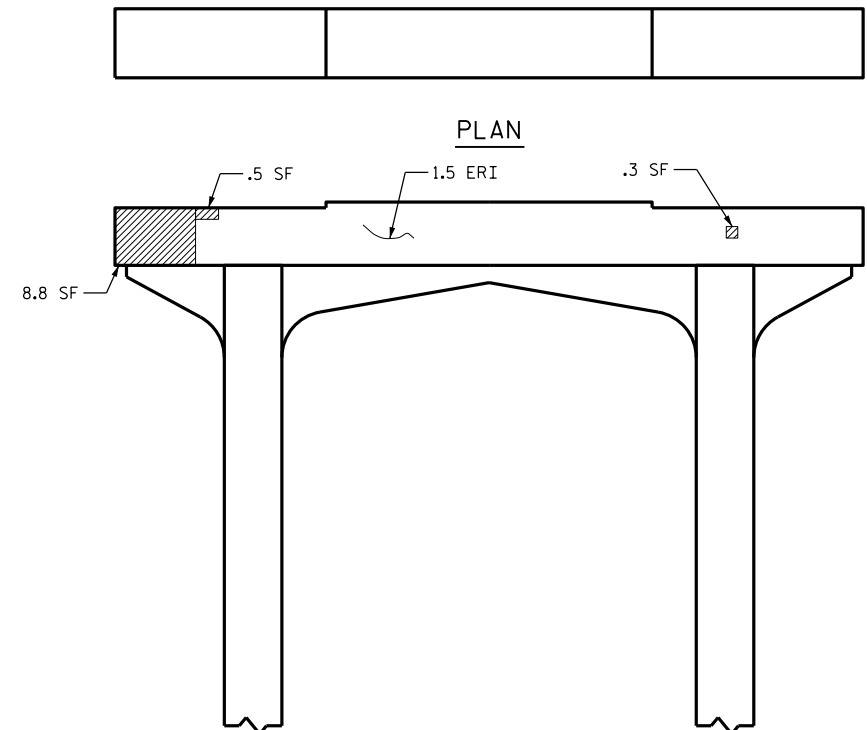
NOTES:

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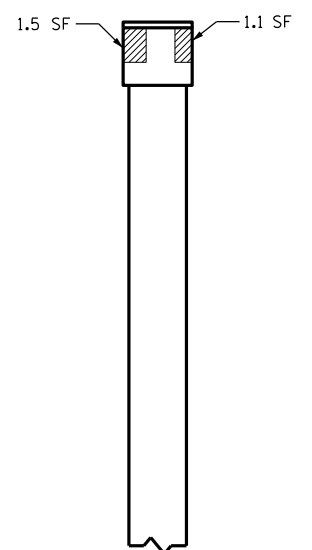
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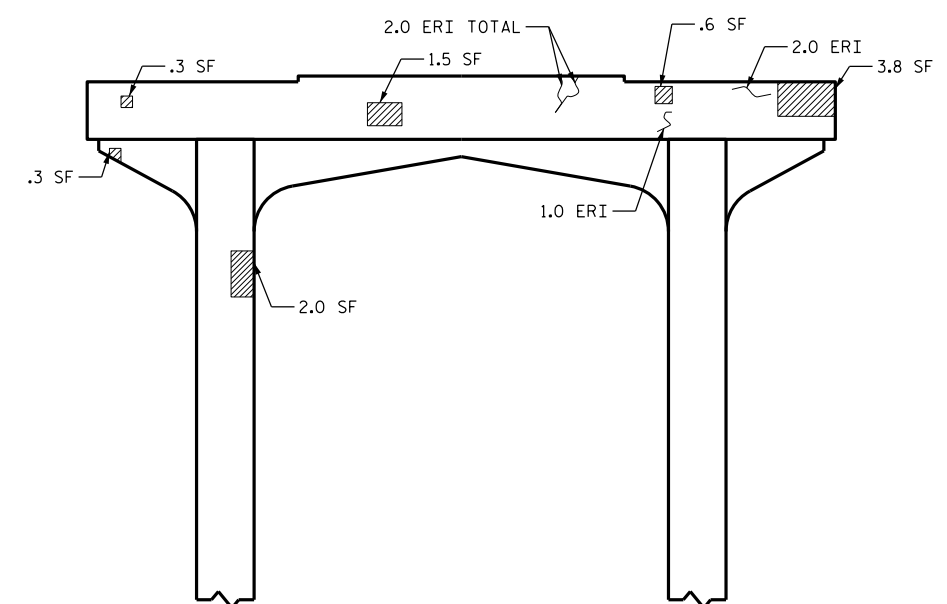


PLAN

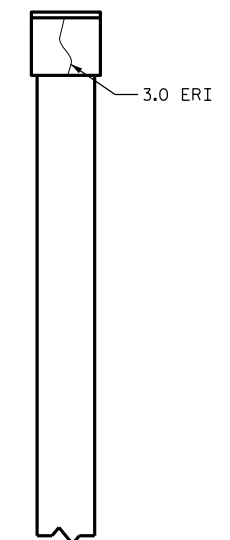
ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

- SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

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8/19/2015

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 3 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 2					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					5
					S-29
					33

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	13.1	6.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	2.6	1.2		
STRUT	1.2	0.6		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
COLUMN		0.0		
STRUT		0.0		

NOTES:

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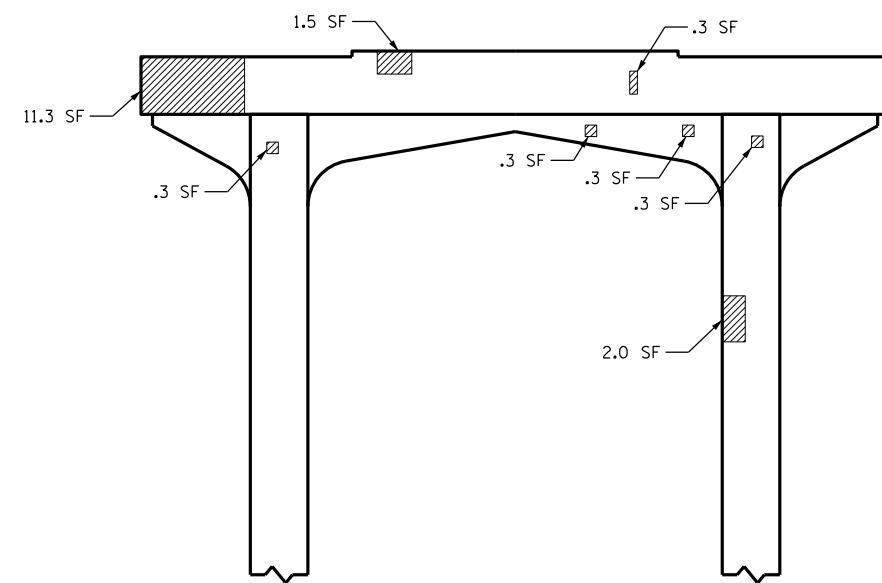
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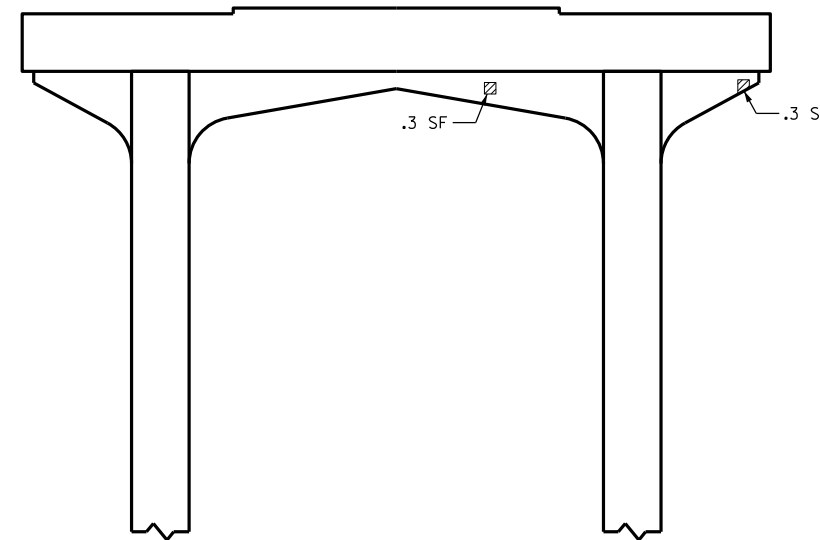
PLAN



ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

- SHOTCRETE REPAIR
 - EPOXY RESIN INJECTION

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8/19/2015



PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 4 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 3					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					33

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15

REPAIR QUANTITY TABLE

REPAIRS BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	9.9	4.5		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	1.1	0.5		
STRUT	0.3	0.1		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		6.3		
COLUMN		0.0		
STRUT		0.0		

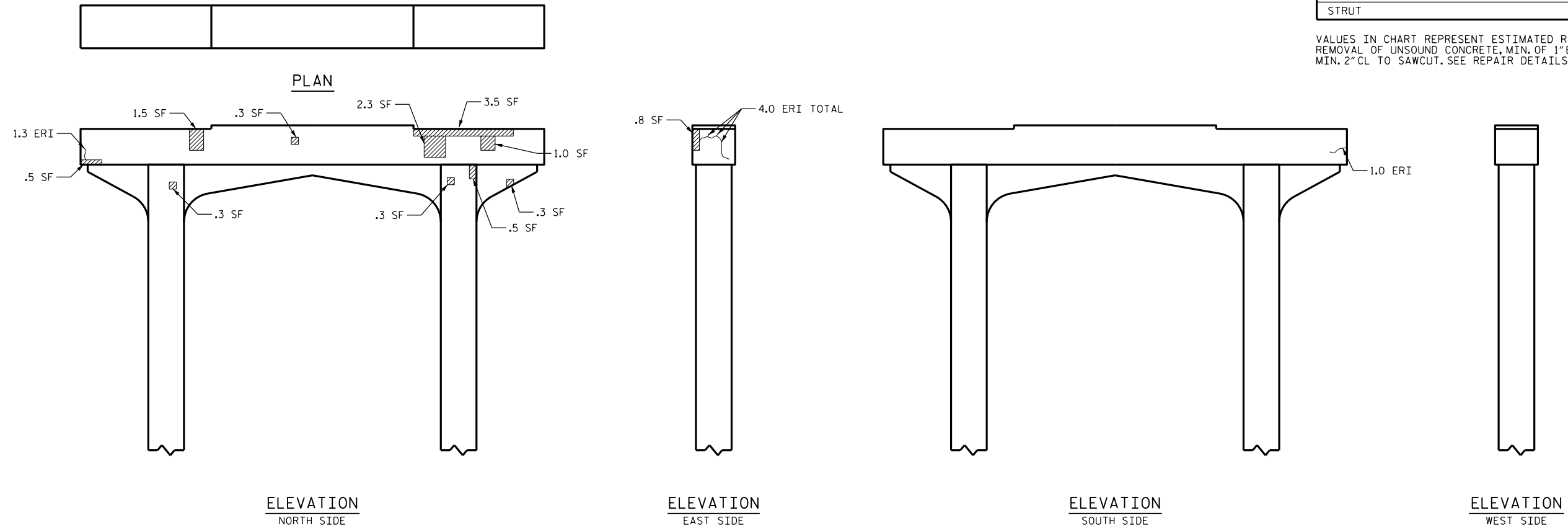
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PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

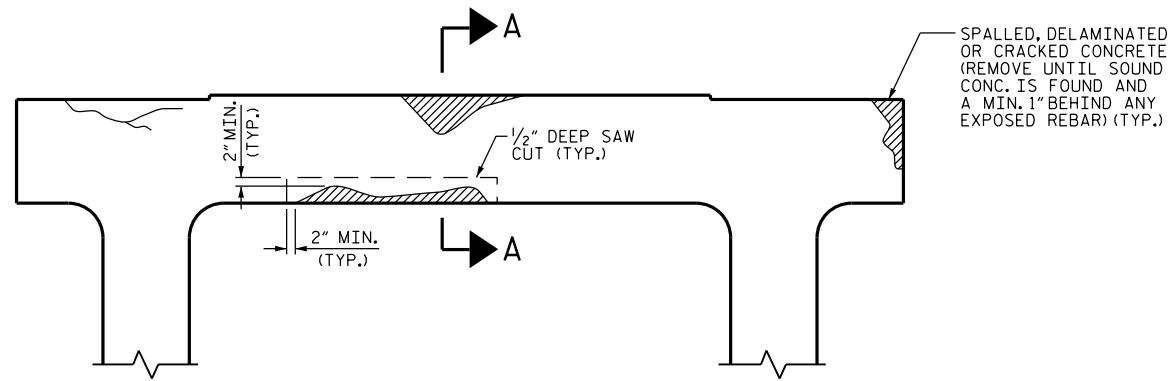
BENT 4

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-31
1			3			TOTAL SHEETS
2			4			33

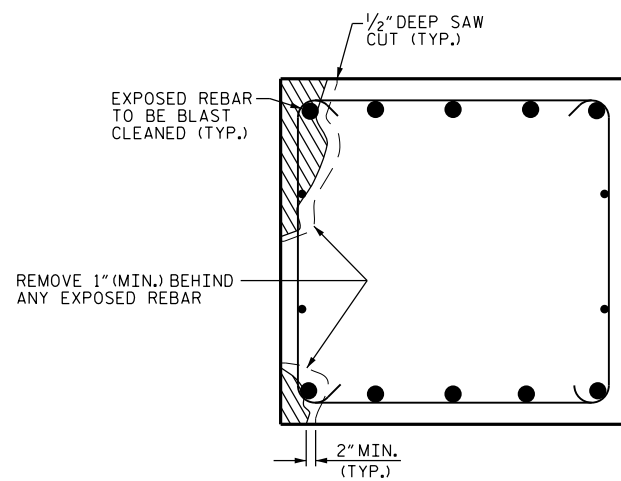
DocuSigned by:
William M. Clarke
 1EB20097EAAF437...
 8/19/2015

- SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION

DRAWN BY : H.F. YEUNG DATE : 5/15
 CHECKED BY : R.N. WEISZ DATE : 6/15



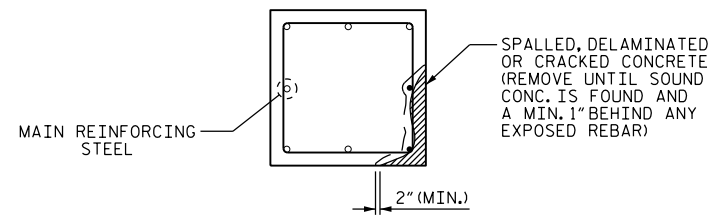
BENT CAP REPAIRS



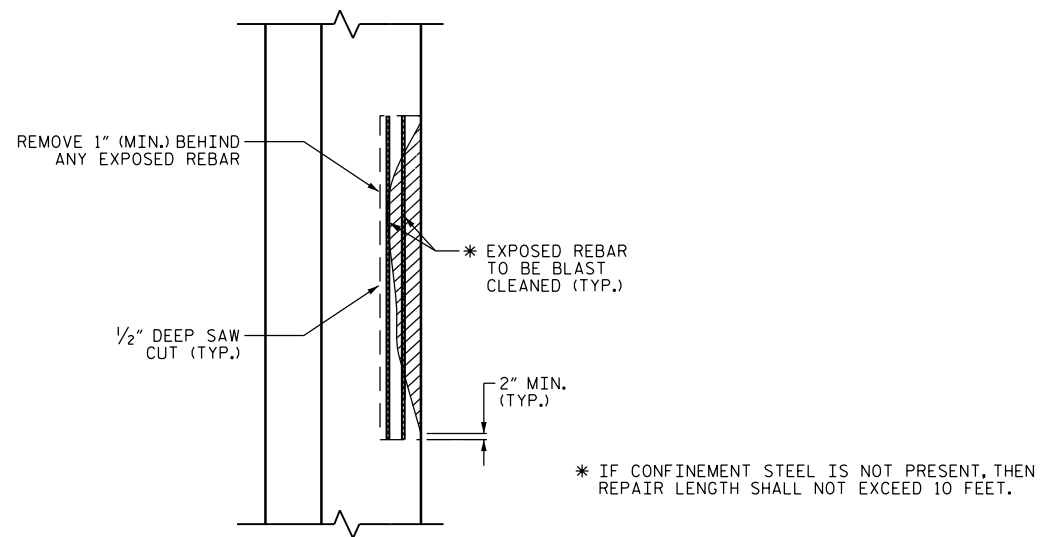
SECTION THRU CAP

CAP REPAIR

SPALLED, DELAMINATED OR CRACKED CONCRETE (REMOVE UNTIL SOUND CONC. IS FOUND AND A MIN. 1" BEHIND ANY EXPOSED REBAR) (TYP.)



PLAN OF COLUMN



ELEVATION OF COLUMN

COLUMN REPAIR

NOTES:

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

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

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

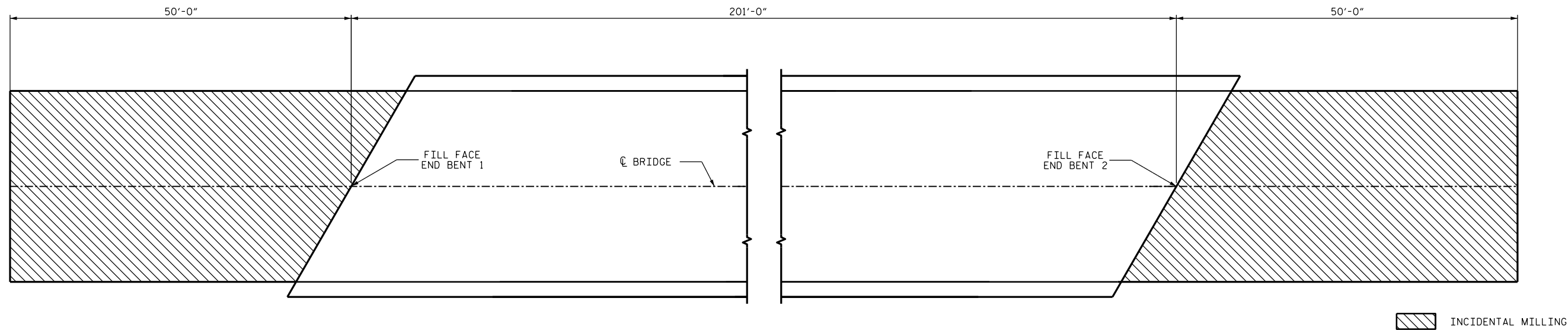
DocuSigned by:
William M. Clarke
 1EB20097EAAF437...



8/19/2015

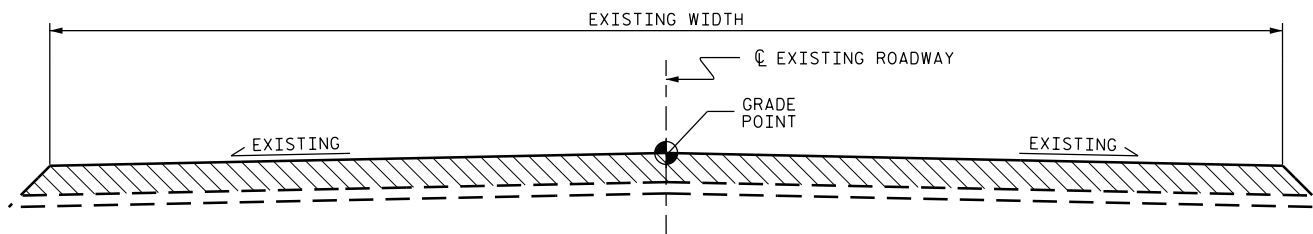
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						TYPICAL CAP AND COLUMN REPAIR DETAILS	
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-32	
1			3			TOTAL SHEETS	
2			4			33	

DRAWN BY: H.F. YEUNG DATE: 5/15
 CHECKED BY: R.N. WEISZ DATE: 6/15



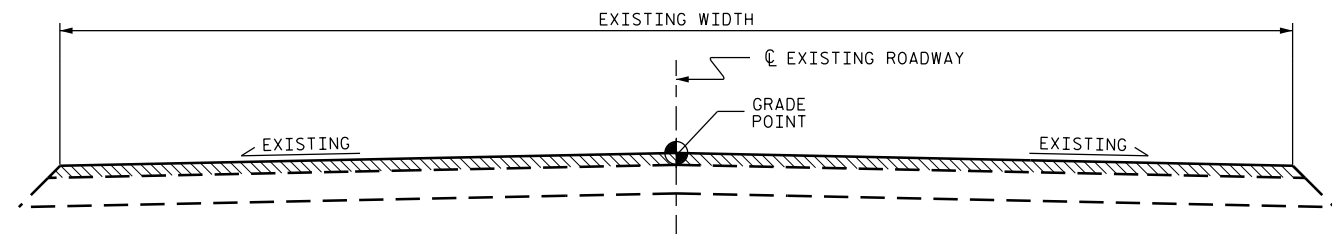
PLAN

INCIDENTAL MILLING

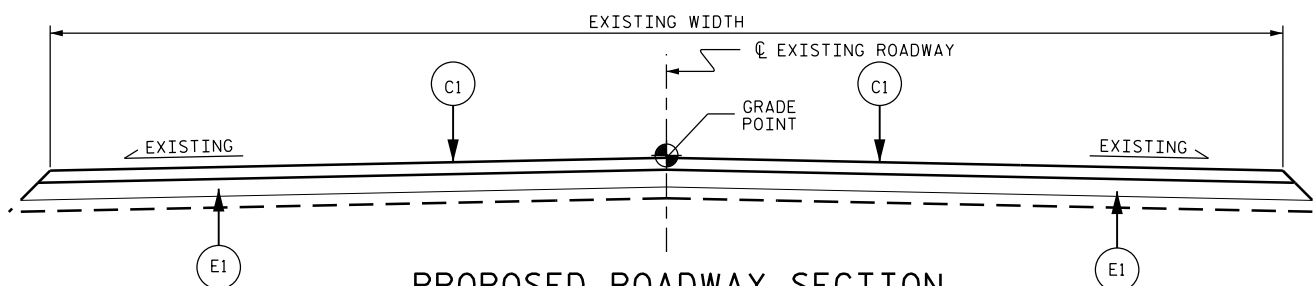


ROADWAY MILLING SECTION FOR REPAIR OF WEST APPROACH

(TO EXTEND 25' BEYOND FILL FACE @ END BENT 1)

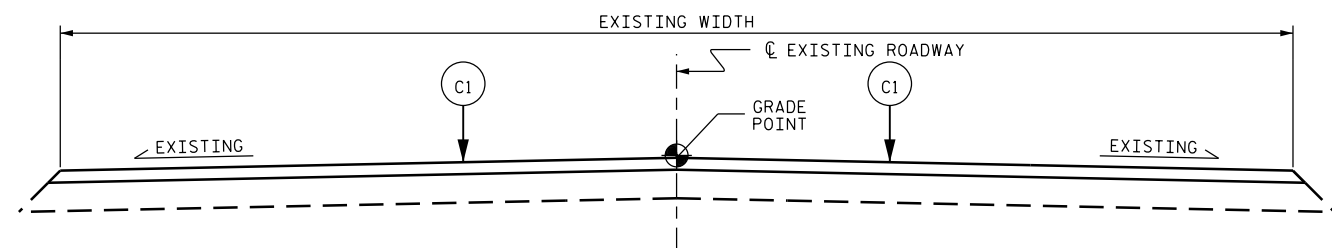


TYPICAL ROADWAY MILLING SECTION



PROPOSED ROADWAY SECTION FOR REPAIR OF WEST APPROACH

(TO EXTEND 25' BEYOND FILL FACE @ END BENT 1)



TYPICAL PROPOSED ROADWAY SECTION

NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 6" DEPTH OF NEW ASPHALT PAVEMENT AT FILL FACE OF END BENT 1 FOR A DISTANCE OF 25'. ALL OTHER LOCATIONS ARE TO BE MILLED TO ATTAIN MINIMUM 1 1/2" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

E1	PROPOSED 4 1/2" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH.
C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
INCIDENTAL MILLING	311 SQ. YDS.	
ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	20 TONS	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	26 TONS	

PROJECT NO. BP-5500I
NASH COUNTY
 BRIDGE NO. 195

DocuSigned by:
 William M. Clarke
 1EB20097EAAF437...



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

APPROACH MILLING AND TYPICAL ROADWAY SECTIONS

REVISIONS					SHEET NO.
NO.	BY:	DATE:	BY:	DATE:	
1					S-33
2					TOTAL SHEETS 33

DRAWN BY: R. WEISZ DATE: 5/2015
 CHECKED BY: W.M. CLARKE DATE: 6/2015

8/19/2015

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 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. FINISHES 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

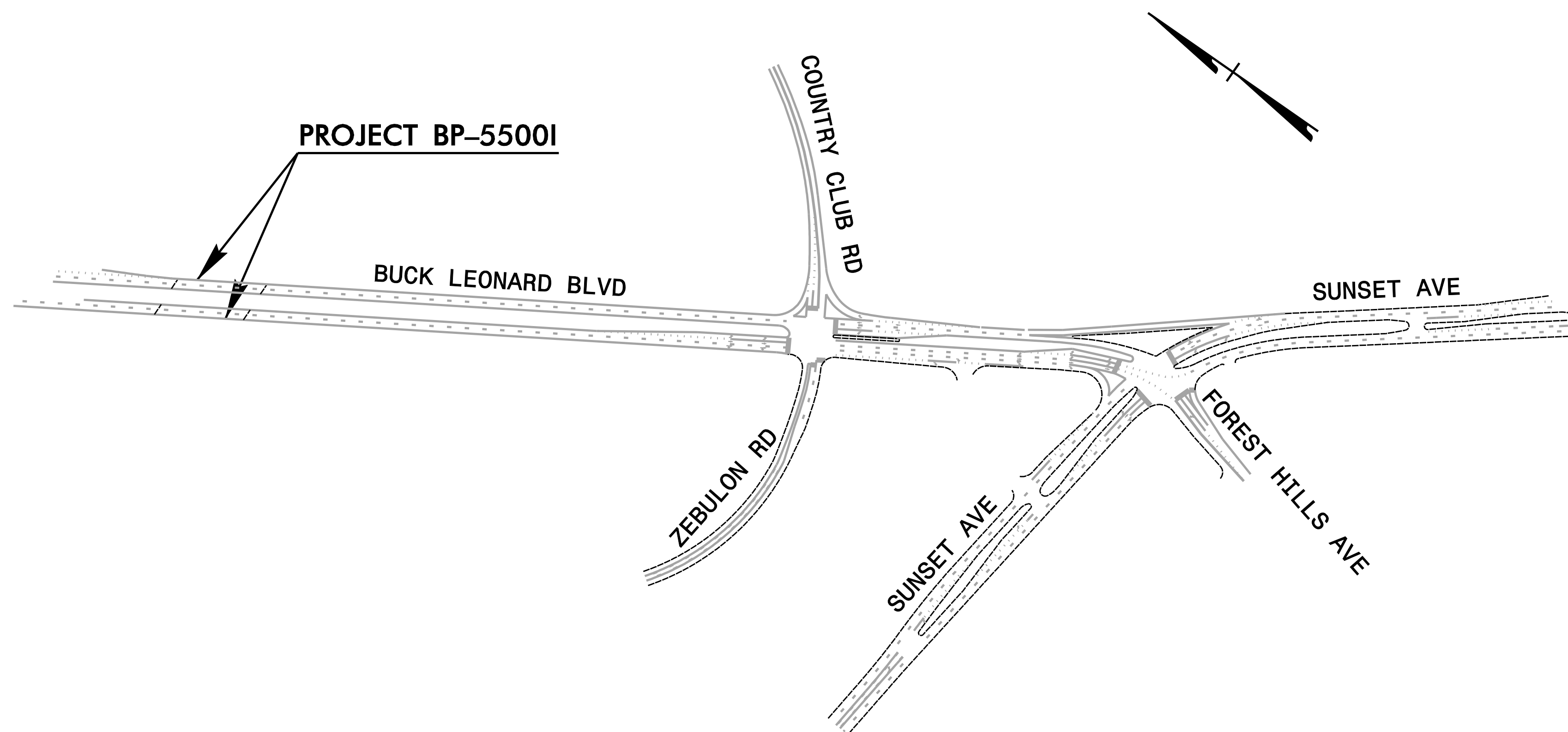
JANUARY, 1990

STD. NO. SN

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

NASH COUNTY

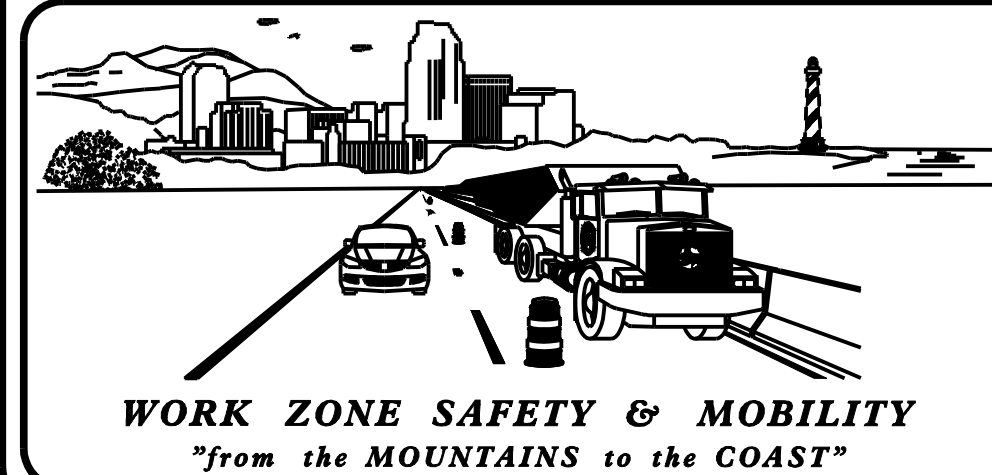


SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND AND SIGN DESIGN
TMP-2	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES)
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU TMP-6	TEMPORARY TRAFFIC CONTROL FOR NB BUCK LEONARD BLVD BRIDGE CLOSURE
TMP-7	TEMPORARY TRAFFIC CONTROL FOR SB BUCK LEONARD BLVD BRIDGE CLOSURE

SHEET NO.
TMP-1

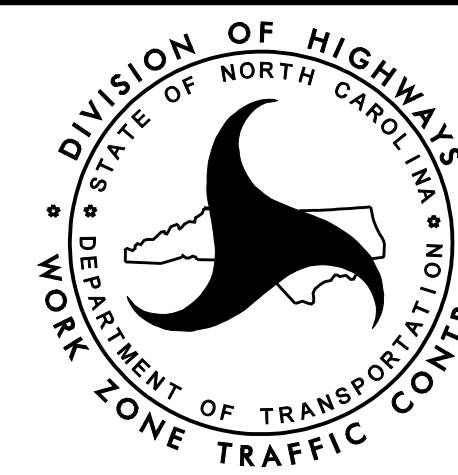
BP-55001

TIP PROJECT:



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
STEVE KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
DON PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER
TRAFFIC CONTROL DESIGN ENGINEER



PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: *Tom Arvey*
DATE: 8/11/2015

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
TIM ARVEY
SEAL 025465

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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
1150.01	FLAGGING DEVICES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT
- ON-GOING CONSTRUCTION

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

<p>SIGN NUMBER: TYPE: D</p> <p>QUANTITY:</p> <p>SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.Ft.</p> <p>BORDER TYPE: FLUSH RECESS: 0.38" WIDTH: 0.63" RADIUS: 1.5"</p> <p>NO. Z BARS: LENGTH:</p>	<p>BACKG COLOR: ORANGE COPY COLOR: BLACK</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>MAT'L: 0.125" (3.2 mm) ALUMINUM</p>	SYMBOL	X	Y	WID	HT																										<p>DESIGN BY: _____</p> <p>CHECKED BY: _____</p> <p>DATE: Jul 17, 2015</p> <p>PROJECT ID: _____</p> <p>DIV: _____</p>	<p>BORDER R=1.5" TH=0.63" IN=0.38"</p>
SYMBOL	X	Y	WID	HT																													

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter														Series/Size Text Length	
B	U	C	K	L	E	O	N	A	R	D					C 2000 32
1.9	2.7	2.8	2.2	3.3	2.4	2.4	2.9	2.6	2.9	2.7	2.2	2.1			
B	L	V	D												C 2000 10.2
12.8	2.8	2.2	2.9	2.2	13.1										

FILENAME: detour sign designs

NORTH CAROLINA D.O.T. SIGN DETAIL

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: </p> <p>DATE: 8/11/2015</p> <p>SEAL</p>		<p>ROADWAY STANDARD DRAWINGS, LEGEND AND SIGN DESIGN</p>
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MANAGEMENT STRATEGIES

THIS PROJECT INVOLVES BRIDGE DECK WORK FOR THE BUCK LEONARD BLVD BRIDGES OVER THE TAR RIVER. A SEPARATE DIRECTIONAL OFF SITE DETOUR WILL BE UTILIZED FOR EACH DIRECTION OF BUCK LEONARD BLVD. THIS ALLOWS THE BRIDGE DECK OPERATIONS TO BE COMPLETED AWAY FROM TRAFFIC. LANE CLOSURES MAY BE PERMITTED FOR MISCELLANEOUS ITEMS AS DIRECTED BY THE ENGINEER.

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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) 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.
- C) 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.

TRAFFIC PATTERN ALTERATIONS

- D) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING


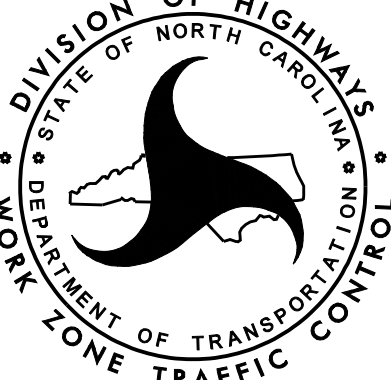
- E) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- F) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- G) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- H) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

- I) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i> DATE: 8/28/2015</p> <p>SEAL</p> 		<p align="center">TRANSPORTATION MANAGEMENT PLAN GENERAL NOTES</p>
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PHASING

PHASE I (NORTHBOUND BUCK LEONARD BRIDGE DECK WORK)

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ALONG BUCK LEONARD BLVD ACCORDING TO ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 3.

PLACE AND ACTIVATE THE CHANGABLE MESSAGE SIGN SHOWN ON SHEET TMP-5.

INSTALL AND COVER THE STATIONARY SIGNS SHOWN ON SHEETS TMP-4 THRU TMP-6 AND PLACE ONE ADDITIONAL CHANGEABLE MESSAGE SIGN AT ONE OF THE LOCATIONS SHOWN ON SHEET TMP-6.

STEP 2: UNCOVER THE STATIONARY SIGNS INSTALLED IN PHASE I, STEP 1 AND CLOSE THE RIGHT TURN SLIP LANE FROM SUNSET AVENUE TO BUCK LEONARD BLVD AS SHOWN ON SHEET TMP-6.

RELOCATE THE CHANGABLE MESSAGE SIGN SHOWN ON SHEET TMP-5 TO ONE OF THE LOCATIONS SHOWN ON SHEET TMP-6.

SIMULTANEOUSLY COMPLETE THE FOLLOWING:

- CLOSE THE RIGHT TURN LANE FROM COUNTRY CLUB ROAD TO BUCK LEONARD BLVD AS SHOWN ON SHEET TMP-4.
- CLOSE THE LEFT TURN LANE FROM ZEBULON ROAD TO BUCK LEONARD BLVD AS SHOWN ON SHEET TMP-4.
- CLOSE THE TWO NORTHBOUND THRU LANES ON BUCK LEONARD BLVD. ON THE SOUTHERN LEG OF THE BUCK LEONARD BLVD/ZEBULON ROAD INTERSECTION USING DRUMS AS SHOWN ON SHEET TMP-5 AND TMP-6. INSTALL THE TYPE III BARRICADE SHOWN ON SHEET TMP-5 AND THE REMAINING DRUMS REQUIRED TO CLOSE BUCK LEONARD BLVD. AS SHOWN ON SHEET TMP-5.

STEP 3: COMPLETE THE BRIDGE DECK REHAB REQUIREMENTS FOR THE EXISTING NORTHBOUND BUCK LEONARD BRIDGE. AND INSTALL FINAL PAVEMENT MARKINGS ON THE BRIDGE DECK.

STEP 4: REMOVE TRAFFIC CONTROL DEVICES FOR THE CLOSURE OF THE EXISTING NORTHBOUND BUCK LEONARD BRIDGE AND REOPEN NORTHBOUND BUCK LEONARD BLVD TO THE ORIGINAL PATTERN.

PHASE II (SOUTHBOUND BUCK LEONARD BRIDGE DECK WORK)

STEP 1: PLACE THE CHANGABLE MESSAGE SIGNS SHOWN ON SHEET TMP-7 TWO WEEKS IN ADVANCE OF THE SOUTHBOUND BUCK LEONARD BLVD CLOSURE. AS DIRECTED BY THE ENGINEER, PLACE A MESSAGE ON THESE TWO CHANGABLE MESSAGE SIGNS SIMILAR TO THE MESSAGE THAT WAS PLACED ON THE CHANGABLE MESSAGE SIGN SHOWN ON SHEET TMP-4.



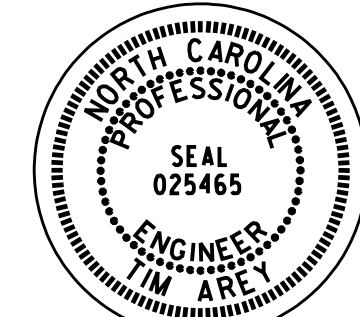
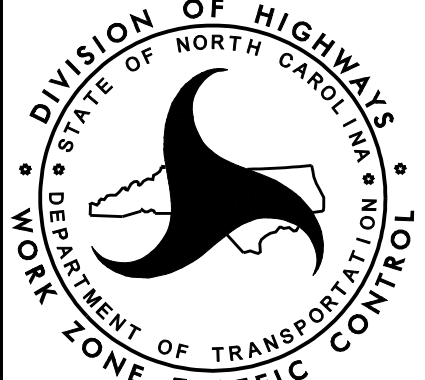
INSTALL AND COVER THE STATIONARY SIGNS SHOWN ON SHEET TMP-7.

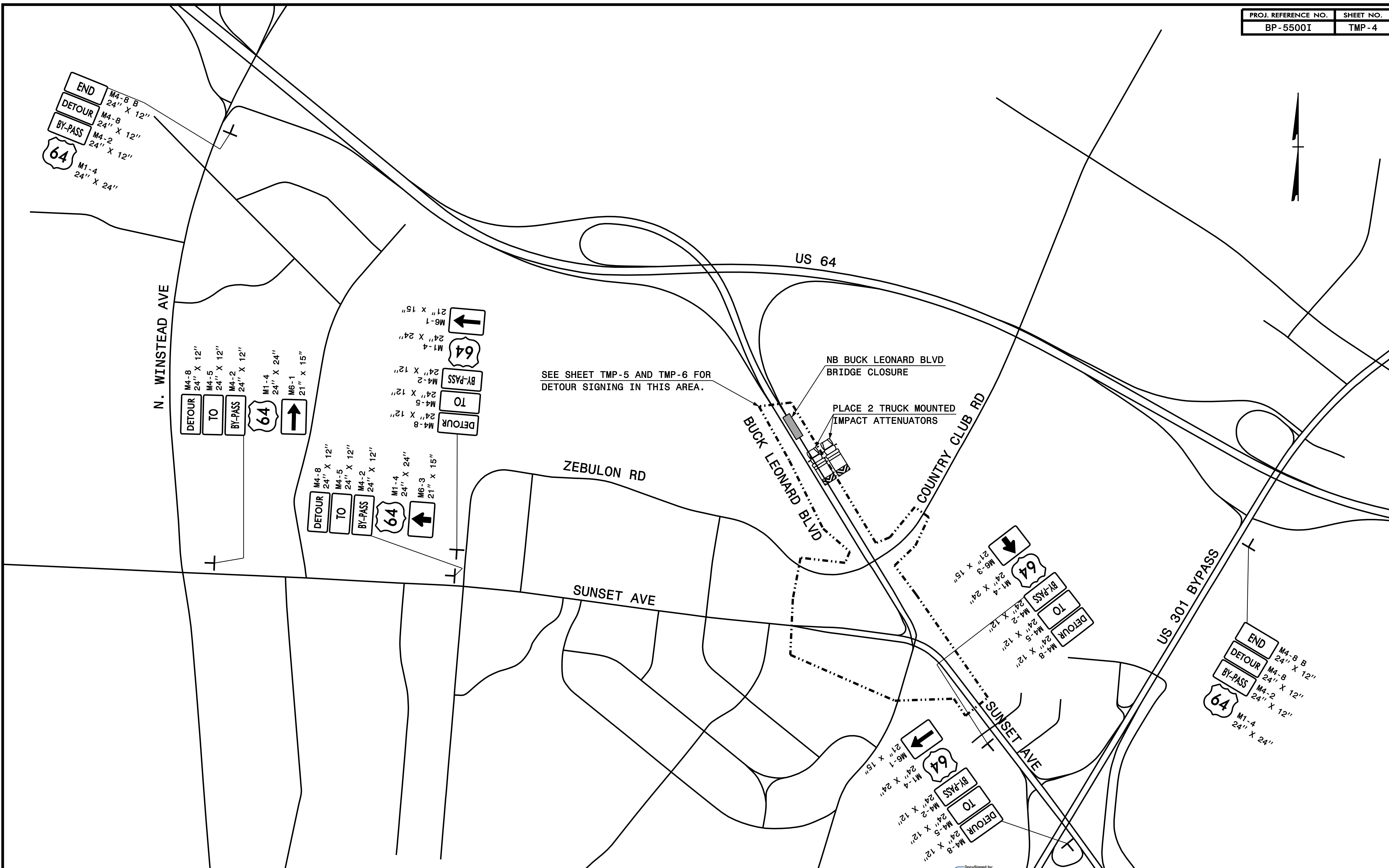
STEP 2: UNCOVER THE STATIONARY SIGNS INSTALLED IN PHASE II, STEP 1 AND CLOSE THE US 64 BYPASS OFF RAMP TO SOUTHBOUND BUCK LEONARD BLVD USING DRUMS AS DESCRIBED IN NOTE 3, SHEET TMP-7. COVER THE TWO EXISTING GUIDE SIGNS FOR THE BUCK LEONARD BLVD EXIT ALONG EASTBOUND US 64 BYPASS AS SHOWN ON SHEET TMP-7. CHANGE THE TWO WEEK ADVANCE NOTICE MESSAGE ON THE CHANGEABLE MESSAGE SIGN TO THE MESSAGE SHOWN ON SHEET TMP-7.

CLOSE THE US 64 BYPASS OFF LOOP TO SOUTHBOUND BUCK LEONARD BLVD USING DRUMS AS DESCRIBED IN NOTE 2, SHEET TMP-7. COVER THE TWO EXISTING GUIDE SIGNS FOR THE BUCK LEONARD BLVD EXIT ALONG WESTBOUND US 64 BYPASS AS SHOWN ON SHEET TMP-7. CHANGE THE TWO WEEK ADVANCE NOTICE MESSAGE ON THE CHANGEABLE MESSAGE SIGN TO THE MESSAGE SHOWN ON SHEET TMP-7.

STEP 3: COMPLETE THE BRIDGE DECK REHAB REQUIREMENTS FOR THE EXISTING SOUTHBOUND BUCK LEONARD BRIDGE AND INSTALL FINAL PAVEMENT MARKINGS ON THE BRIDGE DECK.

STEP 4: REMOVE TRAFFIC CONTROL DEVICES FOR THE CLOSURE OF THE EXISTING SOUTHBOUND BUCK LEONARD BRIDGE AND REOPEN SOUTHBOUND BUCK LEONARD ROAD TO THE ORIGINAL PATTERN.

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC.  ENGINEERS • CONSULTANTS	APPROVED:  DATE: 8/11/2015 		TRANSPORTATION MANAGEMENT PLAN TRAFFIC CONTROL PHASING
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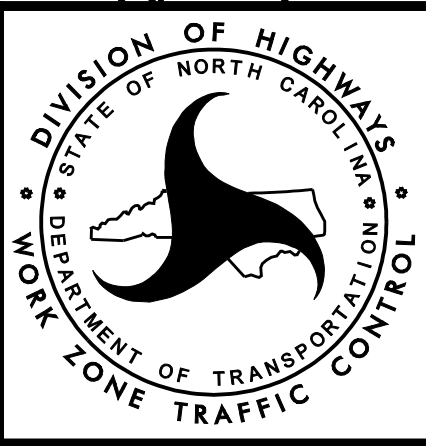
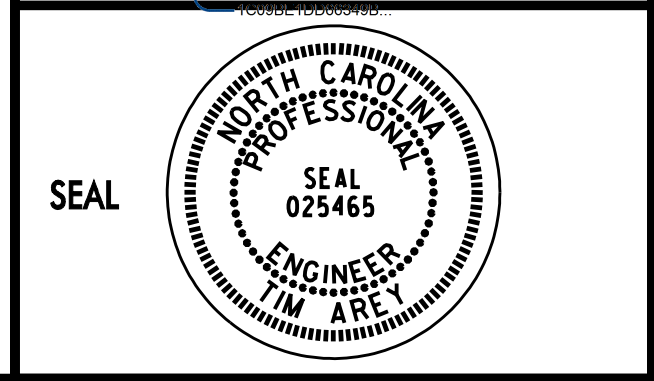
SEE SHEET TMP-5 AND TMP-6 FOR
DETOUR SIGNING IN THIS AREA.

NB BUCK LEONARD BLVD
BRIDGE CLOSURE

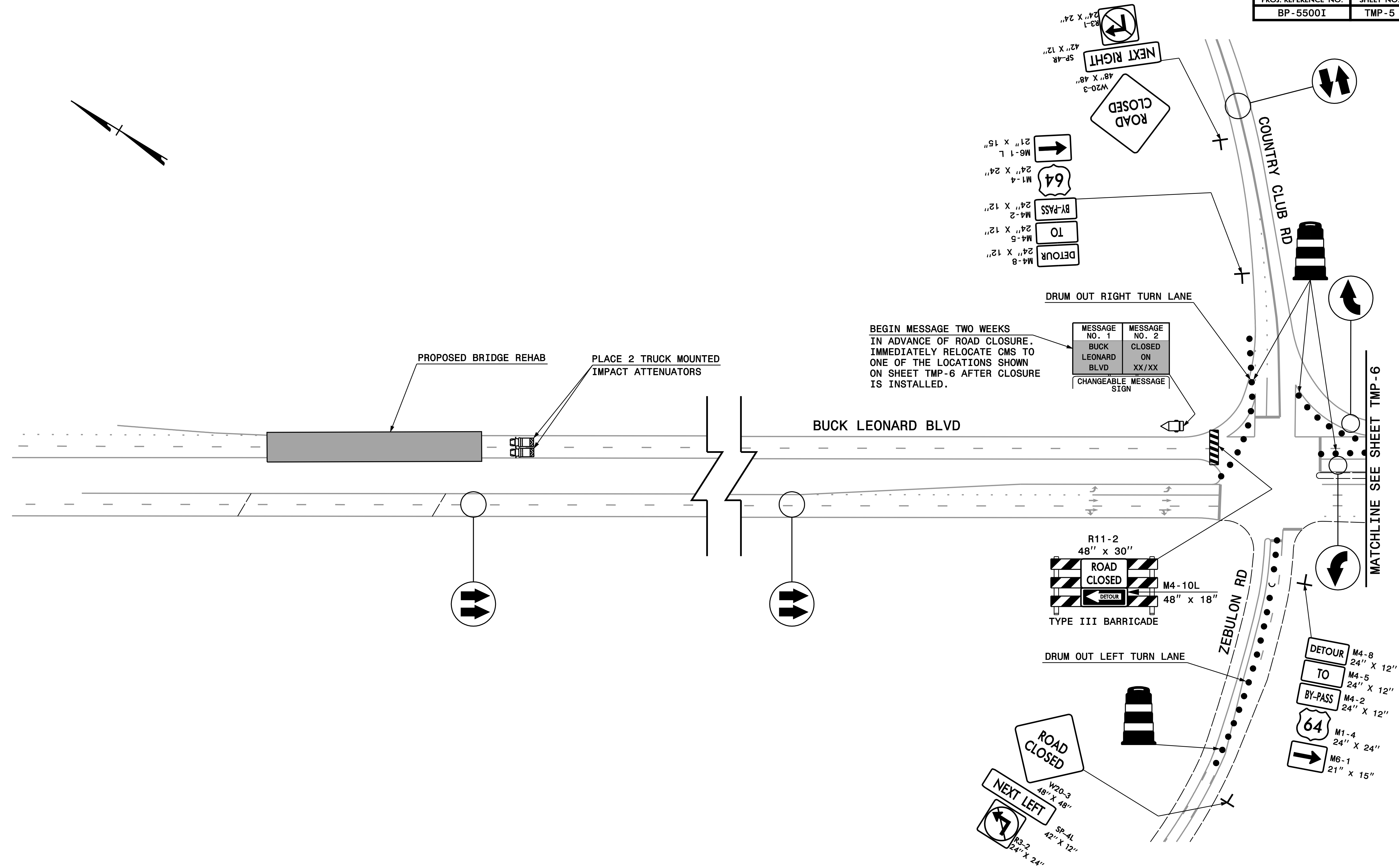
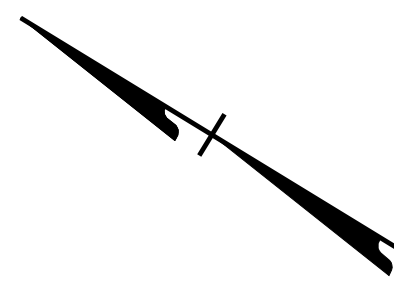
PLACE 2 TRUCK MOUNTED
IMPACT ATTENUATORS

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: *Ann Gray* DATE: 8/11/2015



**TRANSPORTATION
MANAGEMENT PLAN
OFFSITE DETOUR FOR
NB BUCK LEONARD BLVD**



BEGIN MESSAGE TWO WEEKS IN ADVANCE OF ROAD CLOSURE. IMMEDIATELY RELOCATE CMS TO ONE OF THE LOCATIONS SHOWN ON SHEET TMP-6 AFTER CLOSURE IS INSTALLED.

MESSAGE NO. 1 BUCK LEONARD BLVD CLOSED ON XX/XX	MESSAGE NO. 2 ROAD CLOSED ON XX/XX
-------------------------------------------------------	---------------------------------------

CHANGEABLE MESSAGE SIGN

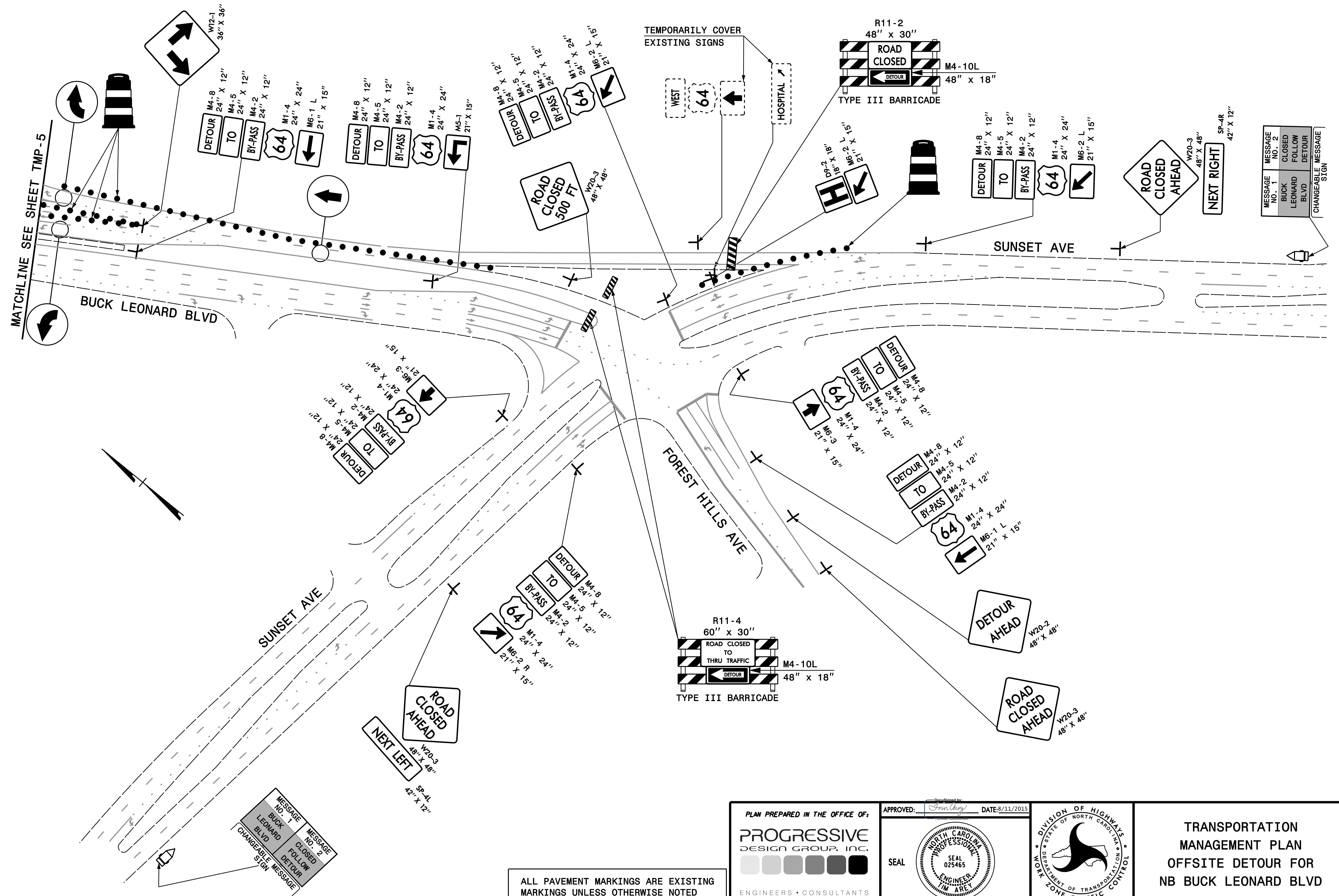
ALL PAVEMENT MARKINGS ARE EXISTING MARKINGS UNLESS OTHERWISE NOTED

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: *[Signature]* DATE: 8/11/2015
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
JIM AREY
SEAL 025465

DIVISION OF HIGHWAYS
& STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
OFFSITE DETOUR FOR NB BUCK LEONARD BLVD



MESSAGE NO. 1	BUCK LEONARD BLVD	CLOSED	FOLLOW
MESSAGE NO. 2	LEONARD BLVD	DETOUR	DETOUR
CHANGEABLE MESSAGE SIGN			

MESSAGE NO. 1	BUCK LEONARD BLVD	CLOSED	FOLLOW
MESSAGE NO. 2	LEONARD BLVD	DETOUR	DETOUR
CHANGEABLE MESSAGE SIGN			

ALL PAVEMENT MARKINGS ARE EXISTING MARKINGS UNLESS OTHERWISE NOTED

PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: *[Signature]* DATE: 8/11/2015

SEAL

PROFESSIONAL ENGINEER

SEAL 025465

JIM AREY

DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION

STATE OF NORTH CAROLINA

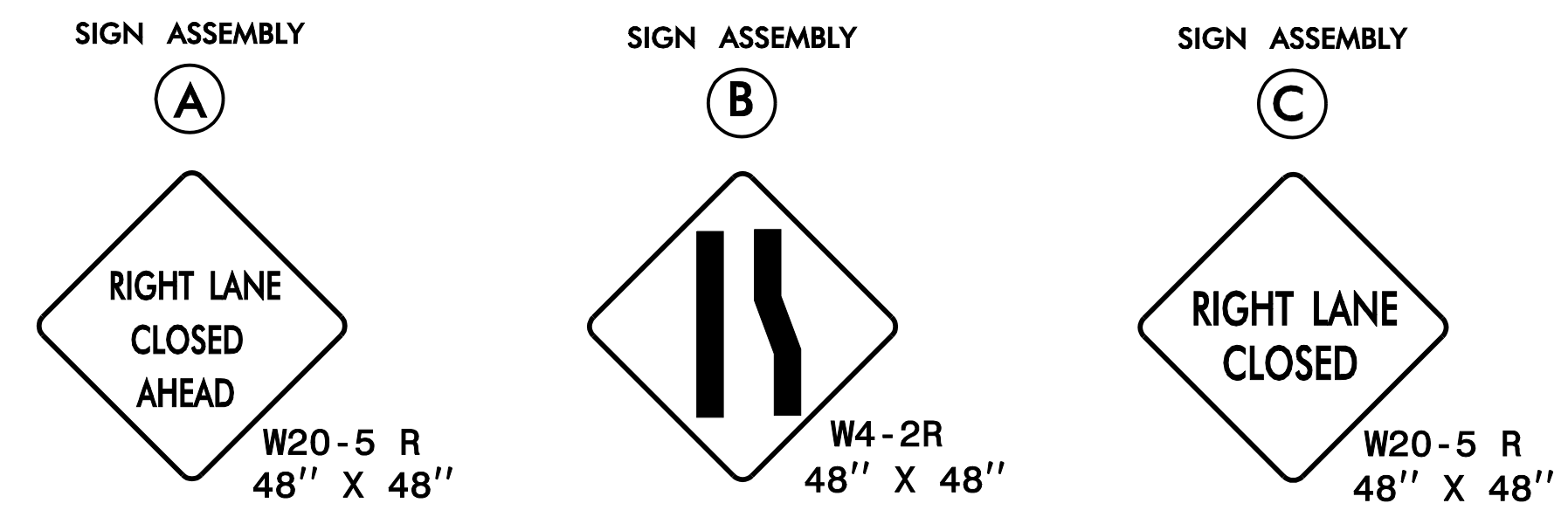
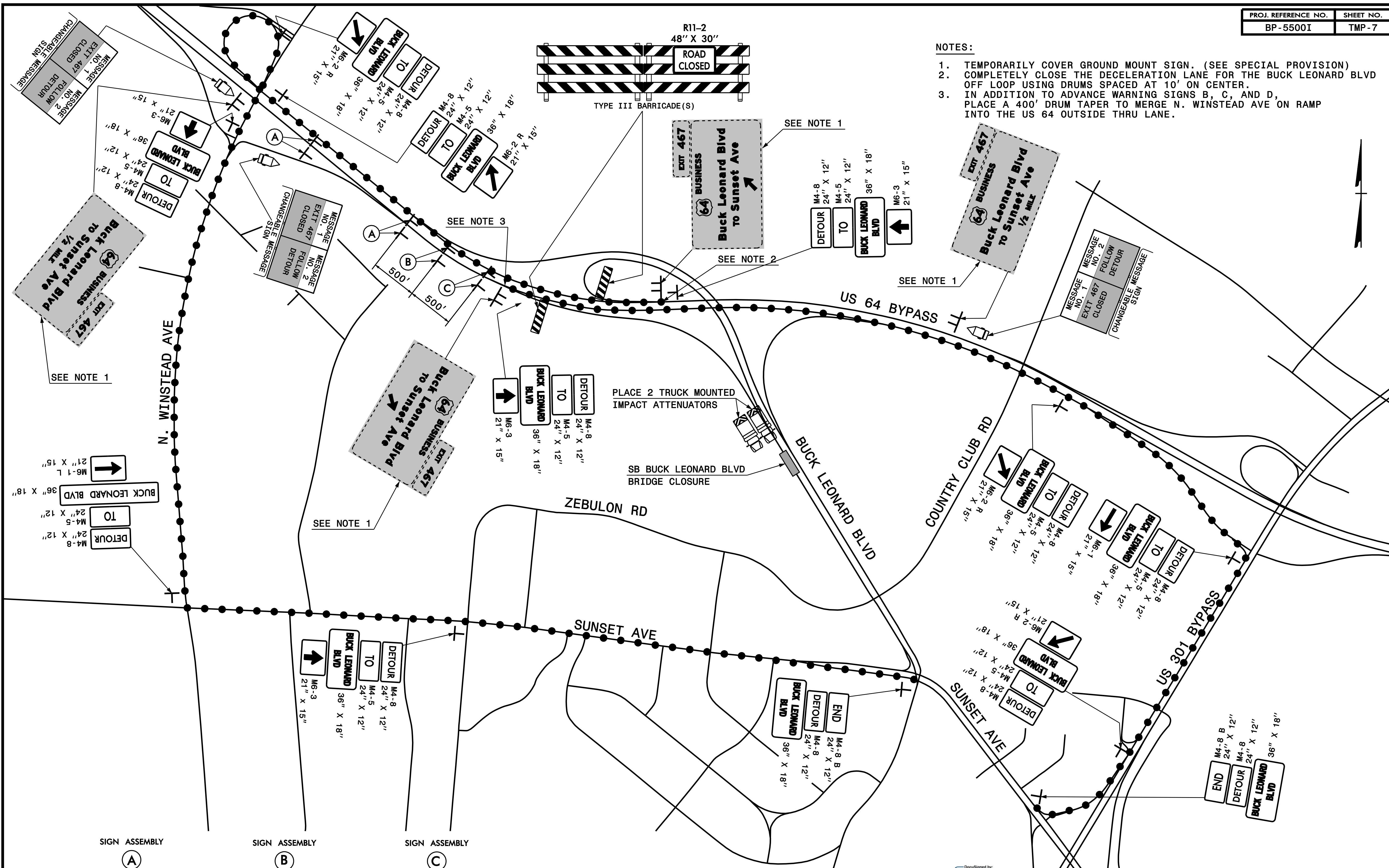
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

OFFSITE DETOUR FOR NB BUCK LEONARD BLVD

NOTES:

1. TEMPORARILY COVER GROUND MOUNT SIGN. (SEE SPECIAL PROVISION)
2. COMPLETELY CLOSE THE DECELERATION LANE FOR THE BUCK LEONARD BLVD OFF LOOP USING DRUMS SPACED AT 10' ON CENTER.
3. IN ADDITION TO ADVANCE WARNING SIGNS B, C, AND D, PLACE A 400' DRUM TAPER TO MERGE N. WINSTEAD AVE ON RAMP INTO THE US 64 OUTSIDE THRU LANE.



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE
DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: *[Signature]* DATE: 8/11/2015

SEAL

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
MANAGEMENT PLAN
OFFSITE DETOUR FOR
SB BUCK LEONARD BLVD