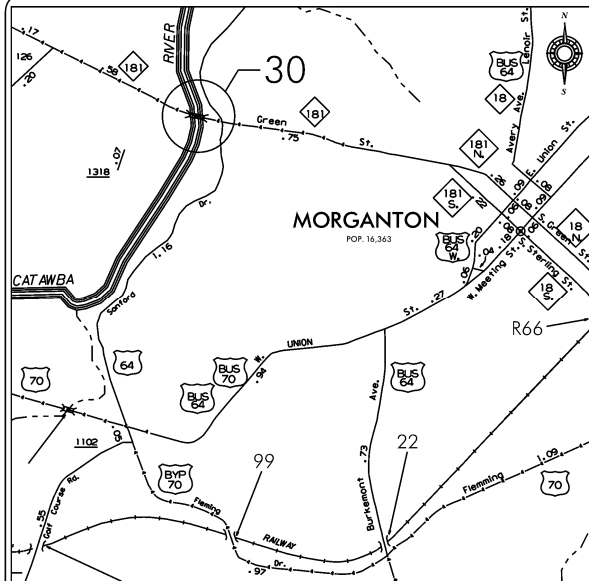
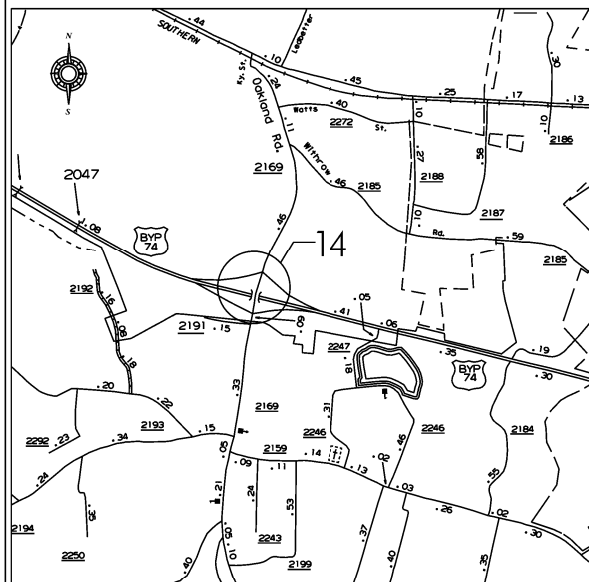


WBS 17BP.13.P.3

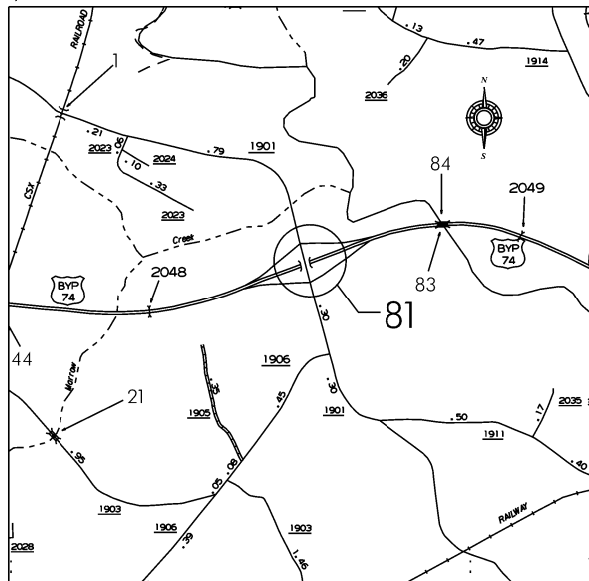
CONTRACT #D000142



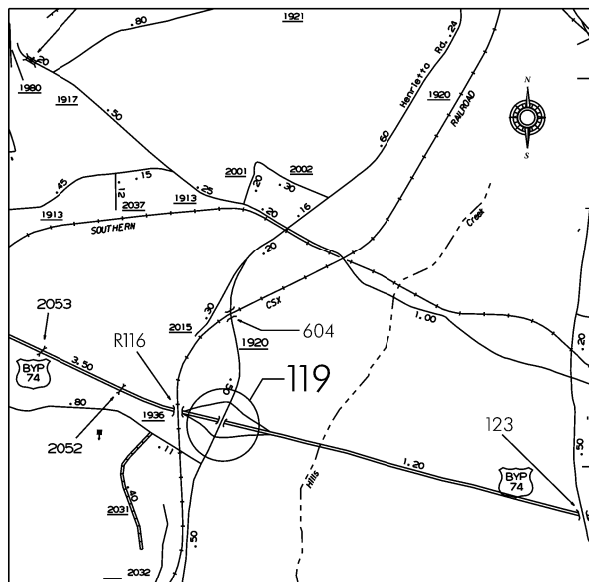
VICINITY MAP  
BURKE COUNTY



VICINITY MAP  
RUTHERFORD COUNTY



VICINITY MAP  
RUTHERFORD COUNTY



VICINITY MAP  
RUTHERFORD COUNTY

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

BURKE & RUTHERFORD COUNTIES

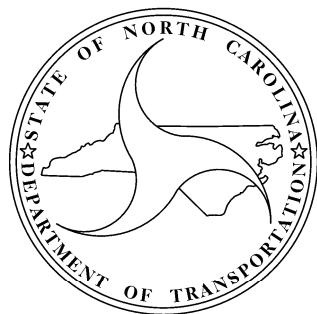
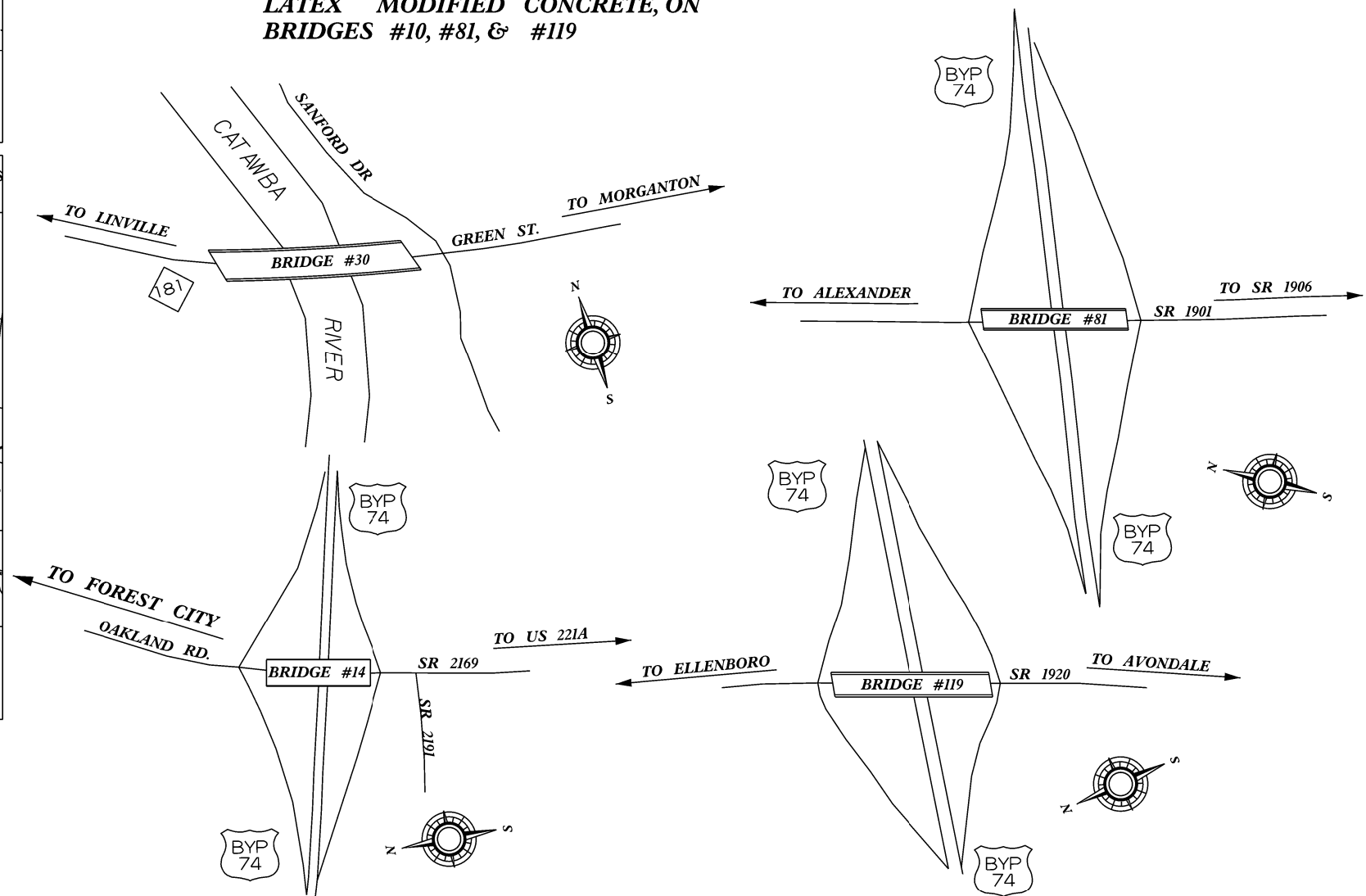
LOCATION: BURKE COUNTY  
BRIDGE #30, ON NC 181, OVER THE CATAWBA RIVER

LOCATION: RUTHERFORD COUNTY  
BRIDGE #14, ON SR 2169, OVER US 74A  
BRIDGE #81, ON SR 1901, OVER US 74 BYP  
BRIDGE #119, ON SR 1920 OVER US 74 BYP

TYPE OF WORK: BRIDGE DECK REHABILITATION WITH  
EPOXY OVERLAY, ON BRIDGE #14 AND  
LATEX MODIFIED CONCRETE, ON  
BRIDGES #10, #81, & #119

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.13.P.3	1	25
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.13.P.3		PE	
17BP.13.P.3		CONST	

INDEX OF SHEETS	
1	TITLE SHEET
S1 - S13	STRUCTURE PLANS
TMP1 - TMP6A	TRAFFIC CONTROL PLANS



DESIGN DATA

BRIDGE 30  
ADT 2008 = 20000  
  
BRIDGE 14  
ADT 2007 = 12000  
  
BRIDGE 81  
ADT 2008 = 4200  
  
BRIDGE 119  
ADT 2007 = 16000

PROJECT LENGTH

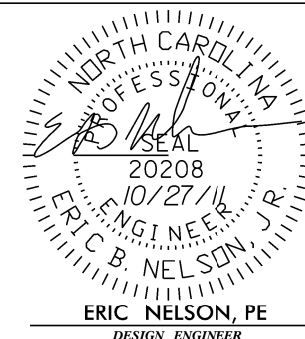
BRIDGE #30  
LENGTH STRUCTURE PROJECT = .071 MILE  
  
BRIDGE #14  
LENGTH STRUCTURE PROJECT = .041 MILE  
  
BRIDGE #81  
LENGTH STRUCTURE PROJECT = .043 MILE  
  
BRIDGE #119  
LENGTH STRUCTURE PROJECT = .042 MILE

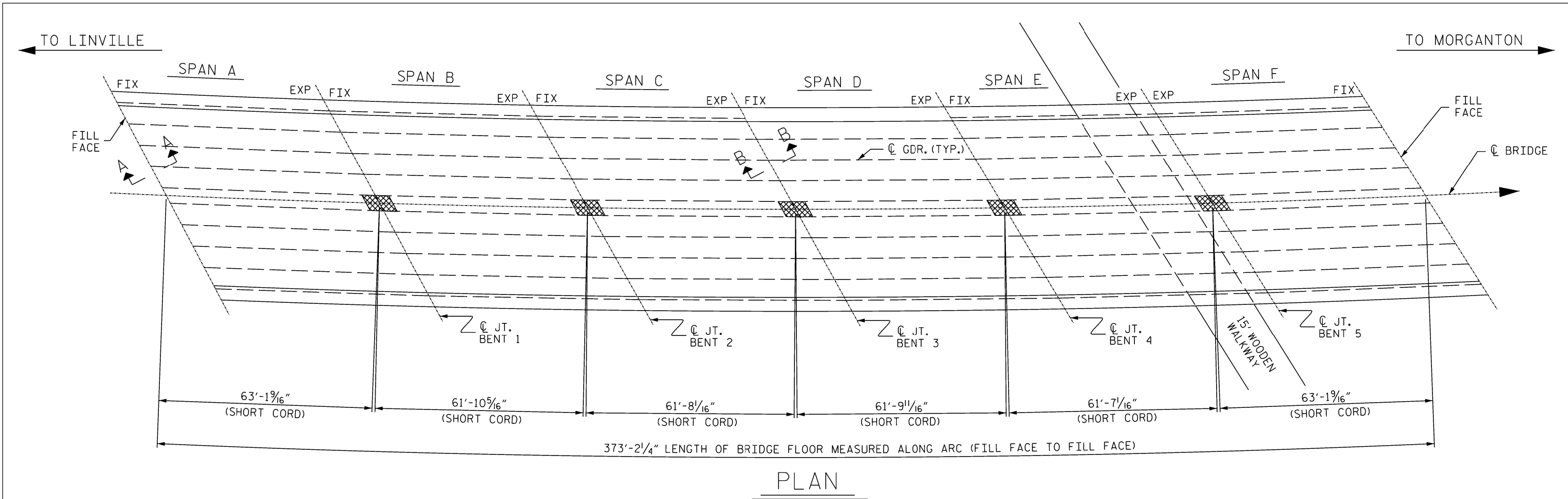
Prepared in the Office of:  
DIVISION OF BRIDGE MANAGEMENT

2006 STANDARD SPECIFICATIONS

LETTING DATE:  
NOVEMBER 30, 2011

DAN HOLDERMAN, PE  
PROJECT ENGINEER

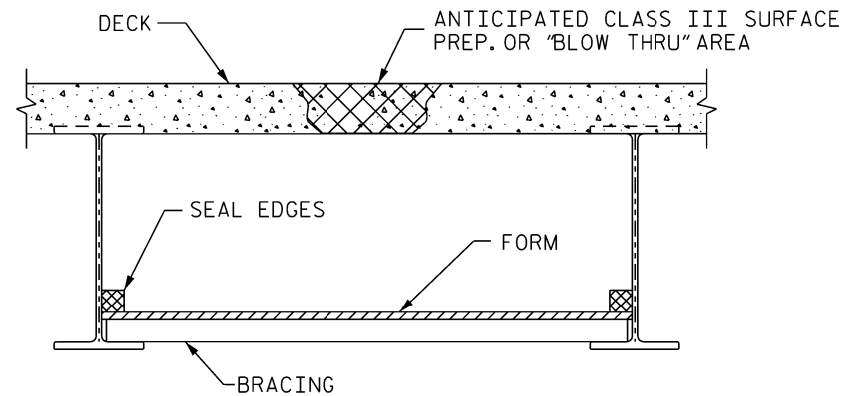




 APPROX. AREA: UNDERSIDE DECK REPAIR

### NOTES

- FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- SEE SPECIAL PROVISIONS FOR SURFACE PREPARATION.
- FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR UNDER DECK CONTAINMENT SEE SPECIAL PROVISIONS.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE SPECIAL PROVISIONS.
- THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE.
- FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR SHOTCRETE, SEE SPECIAL PROVISIONS.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.

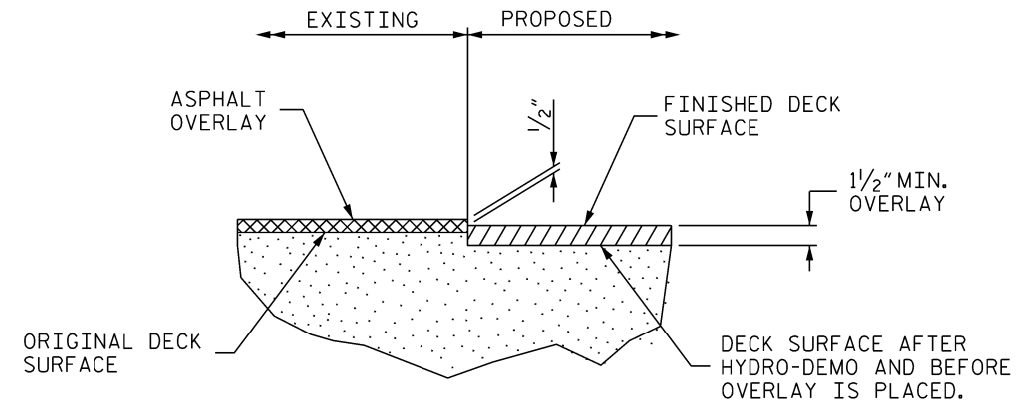


### TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORM WORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COST FOR INSTALLING AND REMOVING FORM WORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



### DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

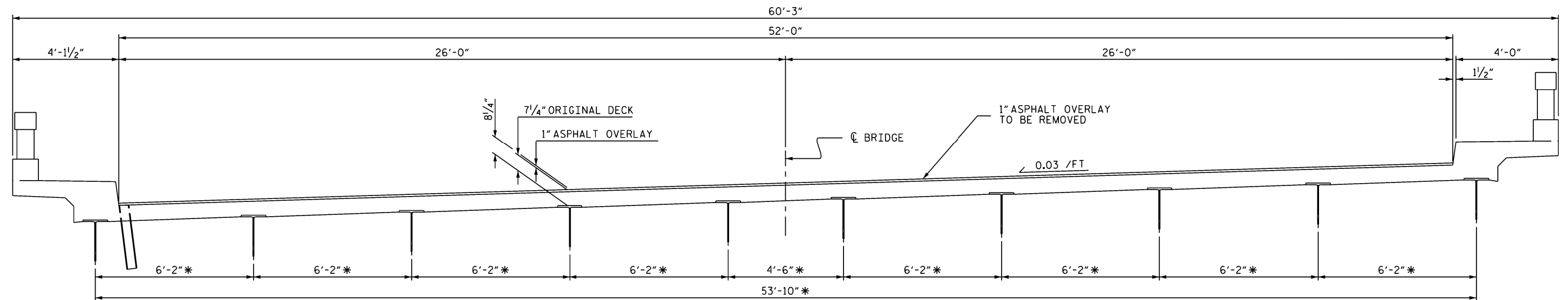
TOTAL BILL OF MATERIAL											
* SCARIFYING BRIDGE DECK	* CLASS I SURFACE PREPARATION	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE OVERLAY VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	SHOTCRETE REPAIRS	GROOVING BRIDGE FLOORS	ASPHALT CONCRETE SURFACE COURSE TYPE SF 9.5A	REINFORCING STEEL	EVAZOTE JOINT SEALS
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	CU. FT.	SQ. FT.	TONS	LBS	LUMP SUM
2763	0	0	0	2151	89	2151	82	18034	51	100	LUMP SUM

\* QUANTITY SHOWN IS FOR INFORMATION ONLY. \* INCLUDES APPROACH MILLING.

DRAWN BY: CLB      DATE: 09/11  
CHECKED BY: DCM      DATE: 09/11

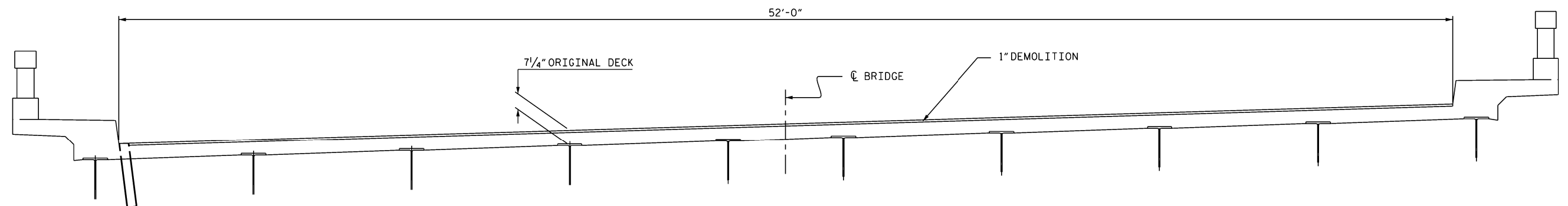
PROJECT NO. 17BP.13.P.3  
COUNTY: BURKE  
DECK REPAIR BRIDGE NO. 30  
SHEET 1 OF 6

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN VIEW OF BRIDGE #30, ON NC 181 OVER THE CATAWBA RIVER 52' CL. ROADWAY					
REVISIONS					SHEET NO.
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS					S-1 13

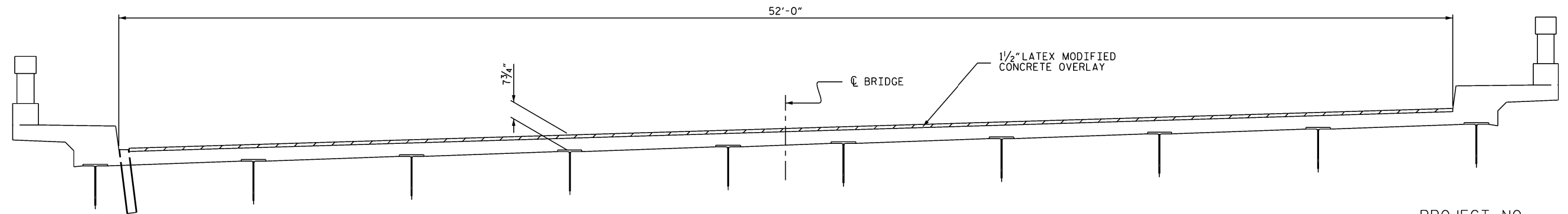


TYPICAL SECTION  
(SHOWN @ BENT)

\* RADIAL



TYPICAL SECTION  
(SHOWN @ BENT)



TYPICAL SECTION  
(SHOWN @ BENT)

PROJECT NO. 17BP.13.P.3  
COUNTY: BURKE  
DECK REPAIR BRIDGE NO. 30  
SHEET 2 OF 6

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL SECTION

DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			S-2
2			4			TOTAL SHEETS 13

# NOTES

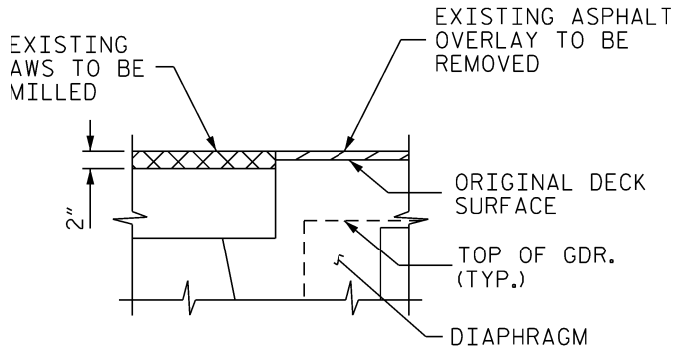
FOR EVAZOTE JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE JOINT SEALS SHALL BE WATERTIGHT.

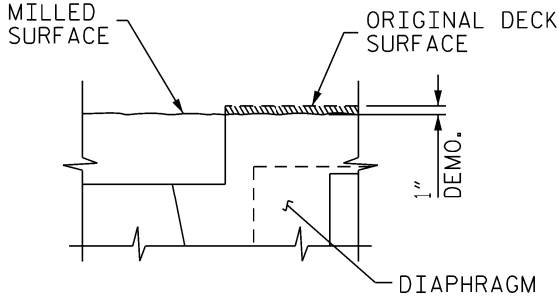
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT BENTS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE EVAZOTE JOINT SEAL IN LIEU OF SAWING THE JOINT.

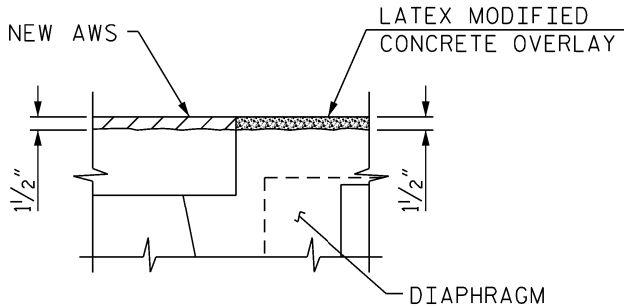
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL FOR THE EXISTING JOINT IN THE CURB SHALL BE DETERMINED BY THE ENGINEER.



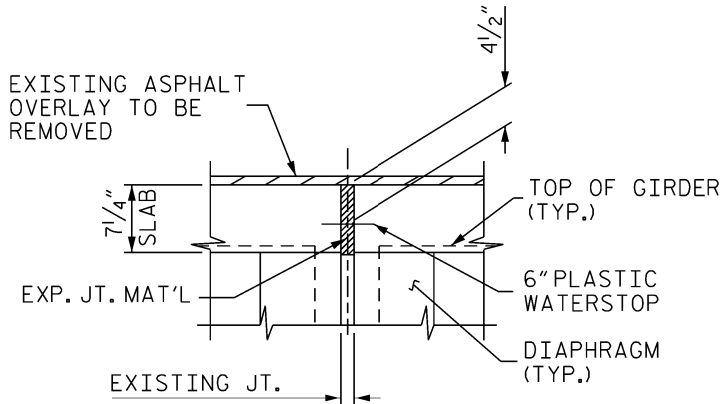
SECTION A-A  
(EXISTING JOINT)



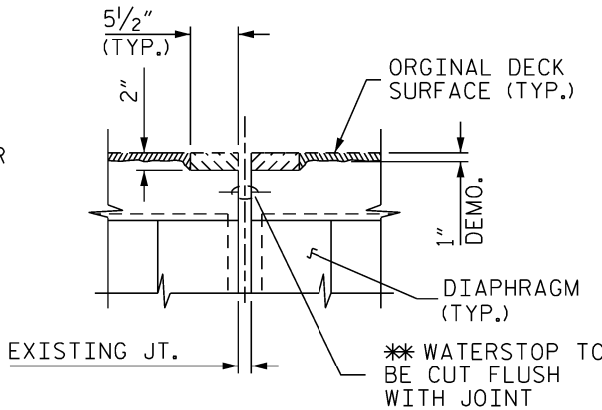
SECTION A-A  
(MINIMUM EXISTING JOINT DEMOLITION)



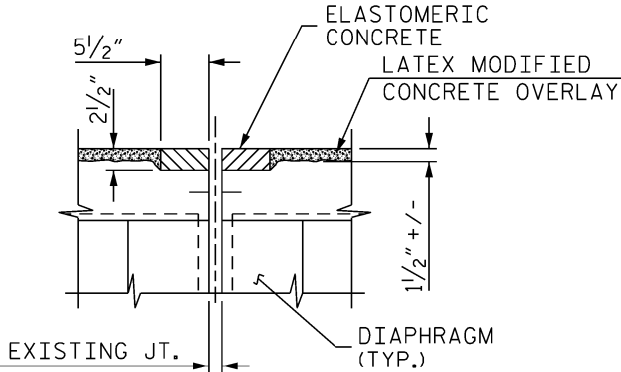
SECTION A-A  
(PROPOSED JOINT)



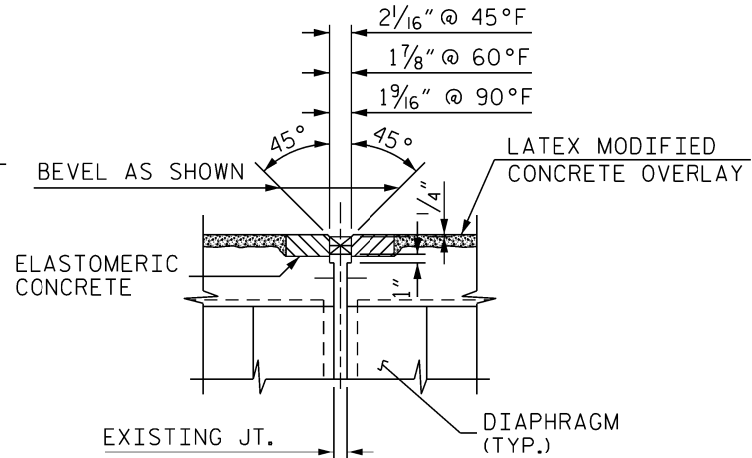
SECTION B-B  
(EXISTING JOINT)



SECTION B-B  
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION B-B  
(PROPOSED JOINT PRE-SAWED)



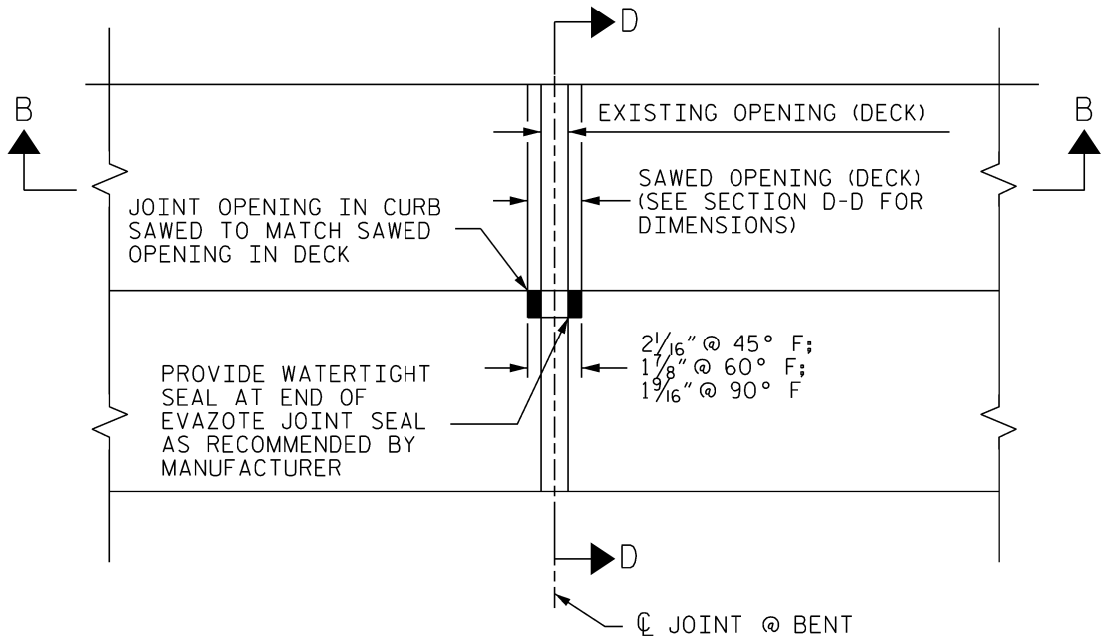
SECTION B-B  
(PROPOSED EVAZOTE JOINT SEAL EXPANSION)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQ'D.

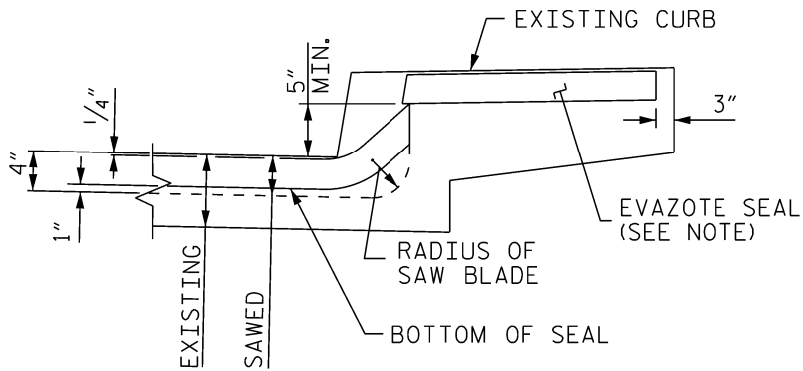
ELASTOMERIC CONCRETE		
BENTS	59.6	(CU. FT.)
* TOTAL	59.6	(CU. FT.)

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.

\* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP SHALL BE REMOVED.



PLAN



SECTION D-D

PROJECT NO. 17BP.13.P.3  
COUNTY: BURKE  
DECK REPAIR BRIDGE NO. 30  
SHEET 3 OF 6

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

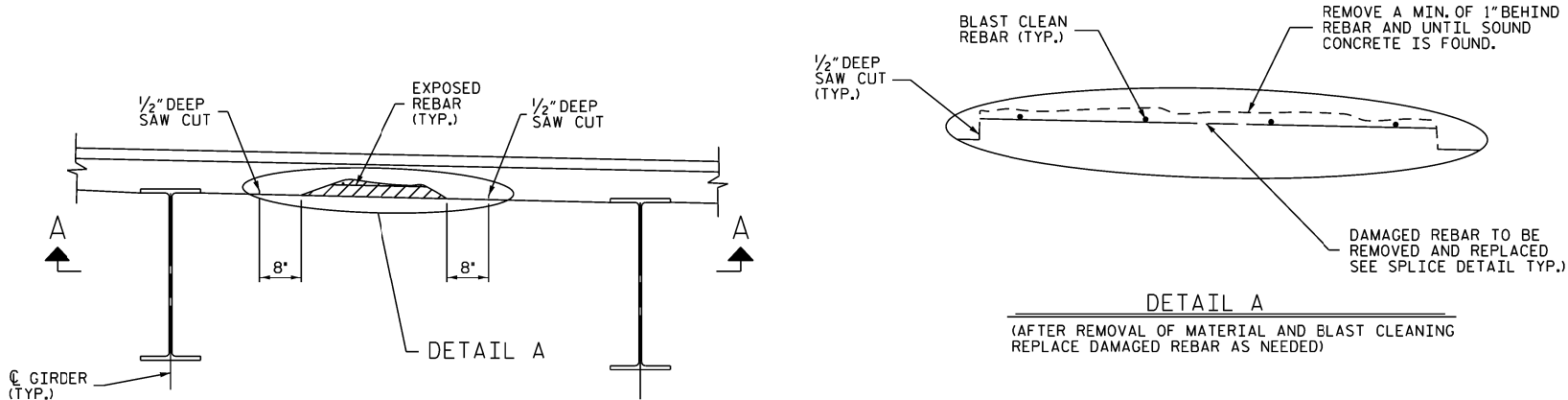
JOINT DETAILS

REVISIONS						SHEET NO. S-3
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 13
2			4			

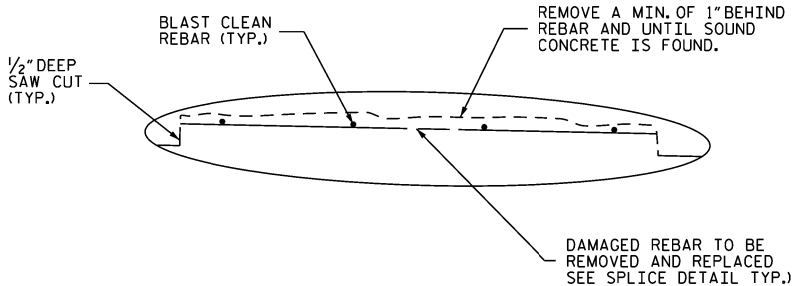
DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11

NOTES

1. SPALL AND DAMAGED AREAS ARE APPROXIMATE.
2. PREPARE AREAS TO BE REPAIRED BY CHIPPING AWAY ALL LOOSE MATERIAL (INCLUDING CONCRETE BACK TO SAW CUT LINES), WIRE BRUSH (BLAST IF NEEDED), AND REMOVE DUST IMMEDIATELY PRIOR TO PATCHING.
3. REPAIR MATERIAL SHALL BE APPROVED FOR USE BY NCDOT.
4. PROPOSED MATERIALS AND METHODS FOR REPAIRS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO BEGINNING WORK.

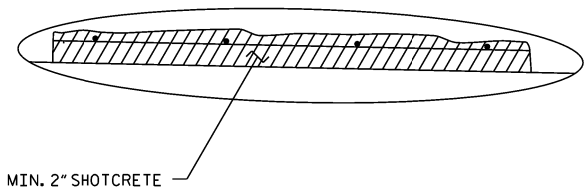


TYPICAL BAY SECTION



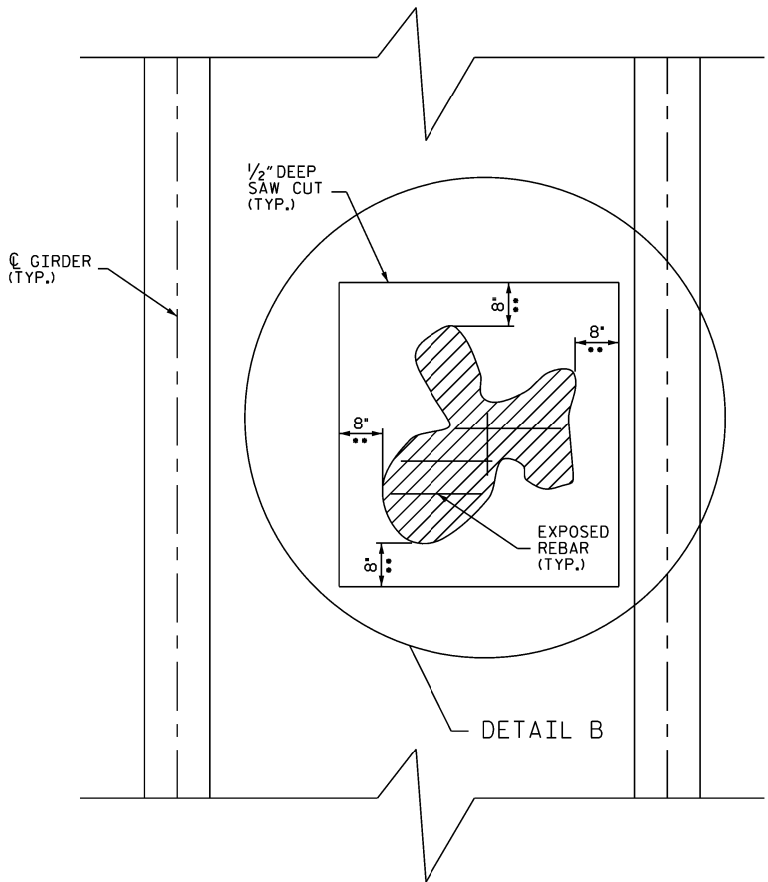
DETAIL A

(AFTER REMOVAL OF MATERIAL AND BLAST CLEANING  
REPLACE DAMAGED REBAR AS NEEDED)



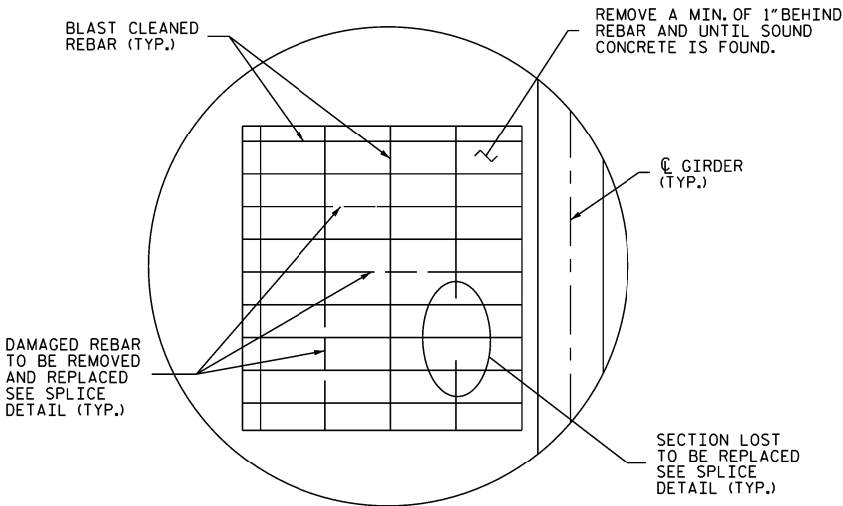
DETAIL A

(AFTER REPAIR)



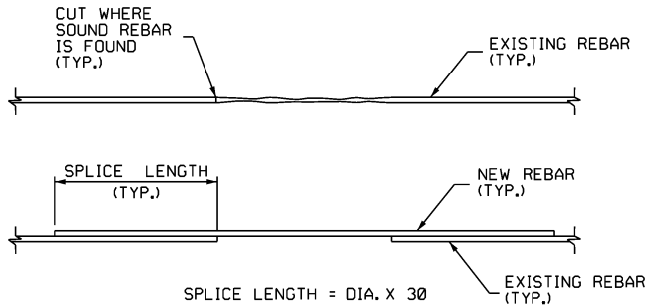
TYPICAL BAY SECTION A-A

\*\* 8" MIN. OR EDGE OF GIRDER OR JOINT.



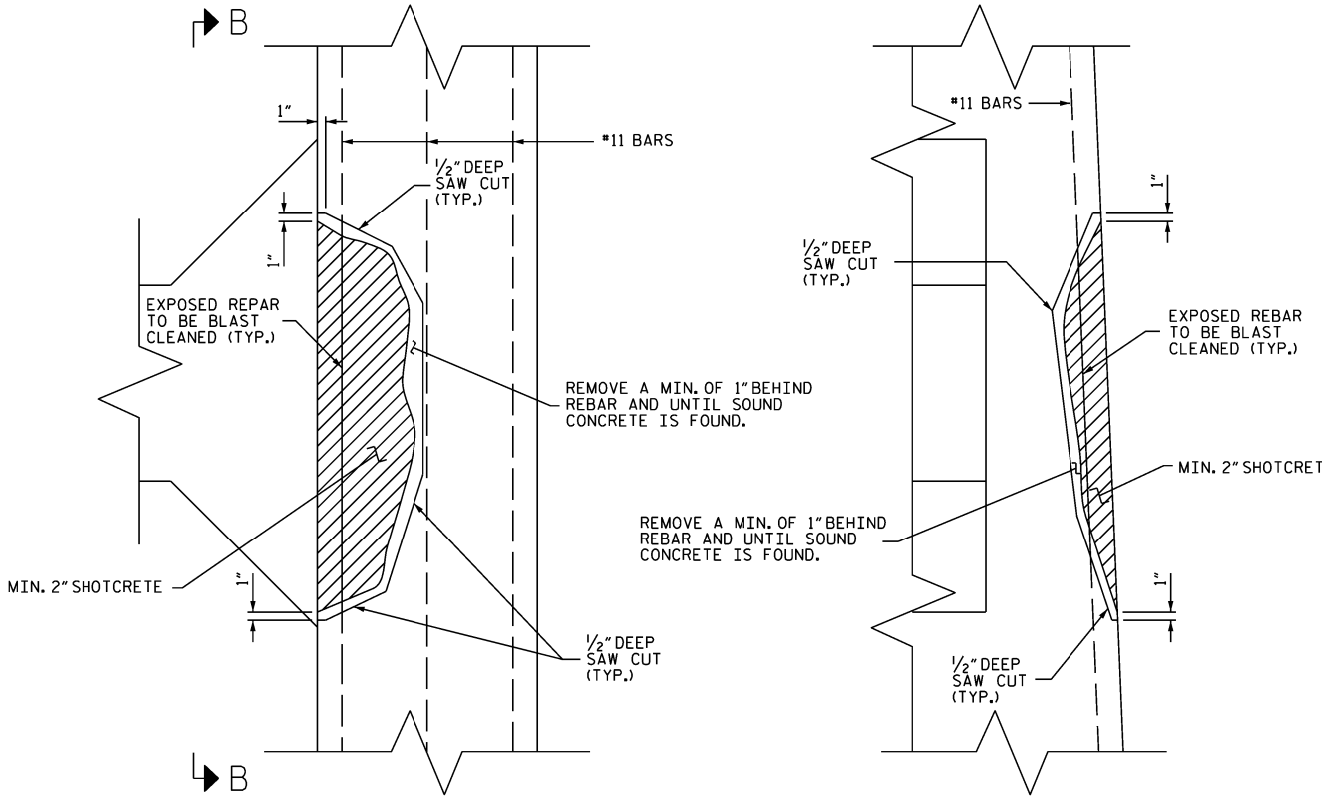
DETAIL B

(AFTER REMOVAL OF MATERIAL AND BLAST CLEANING  
REPLACE DAMAGED REBAR AS NEEDED)



SPlice DETAIL

(FOR DECK REBAR IF NEEDED)



COLUMN STEEL REPAIR

REPAIR FOR BENT #1 SHOWN, OTHER BENTS SIMILAR

SECTION B-B

UNDER DECK REPAIR

LOCATION	* SIZE	SQ.FT.
SPAN A, BENT 1, BAY 5	4.5' X 4.5'	20.3
SPAN B, BENT 1, BAY 5	4.5' X 4.5'	20.3
SPAN B, BENT 2, BAY 5	4.5' X 4.5'	20.3
SPAN C, BENT 2, BAY 5	4.5' X 4.5'	20.3
SPAN C, BENT 3, BAY 5	4.5' X 4.5'	20.3
SPAN D, BENT 3, BAY 5	4.5' X 4.5'	20.3
SPAN D, BENT 4, BAY 5	4.5' X 4.5'	20.3
SPAN E, BENT 4, BAY 5	4.5' X 4.5'	20.3
SPAN E, BENT 5, BAY 5	4.5' X 4.5'	20.3
SPAN F, BENT 5, BAY 5	4.5' X 4.5'	20.3
TOTAL		203 SQ.FT.

\* APPROXIMATE

COLUMN REPAIRS

LOCATION	* SIZE	SQ.FT.
BENT 1	5.5' X 1.5'	8.3
BENT 5	4.5' X 1.5'	6.8
TOTAL		15.1 SQ.FT.

\* APPROXIMATE

PROJECT NO. 17BP.13.P.3  
COUNTY: BURKE  
DECK REPAIR BRIDGE NO. 30  
SHEET 4 OF 6

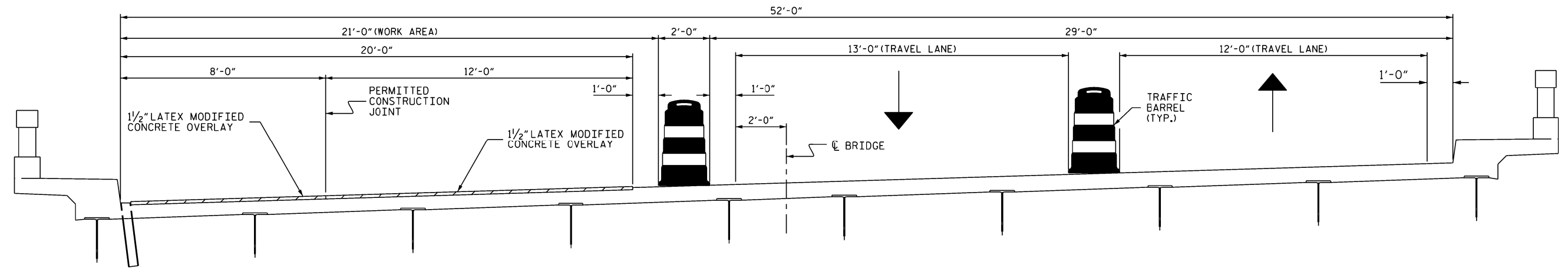
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

UNDER SIDE OF DECK  
& BENT COLUMN  
REPAIRS

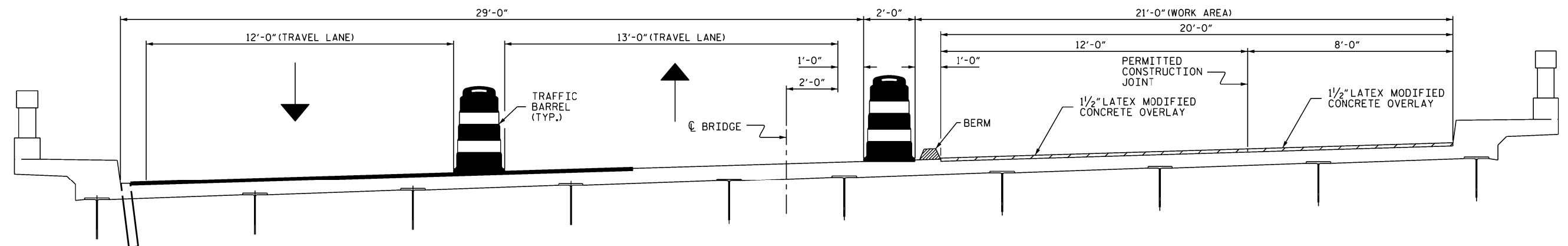
REPAIR FOR BENT #1 SHOWN, OTHER BENTS SIMILAR

REVISIONS					SHEET NO. S-4
NO.	BY	DATE	NO.	BY	
1			3		TOTAL SHEETS 13
2			4		

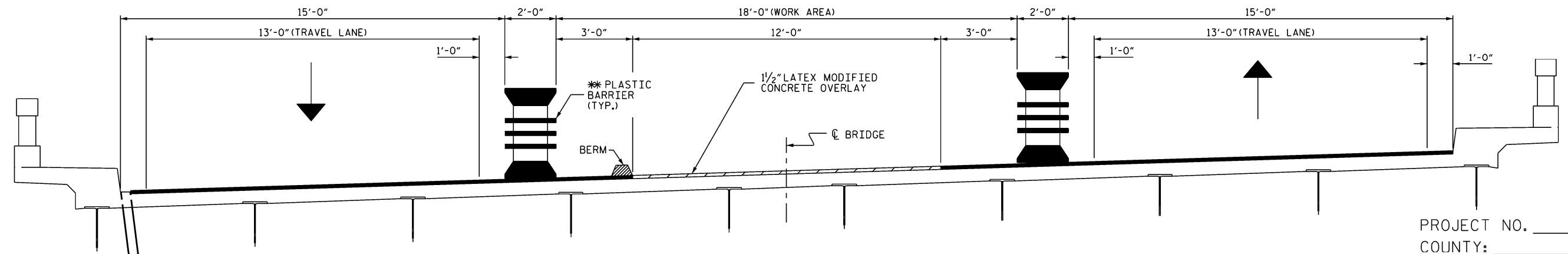
DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11



STAGE I SECTION



STAGE II SECTION



STAGE III SECTION

PROJECT NO. 17BP.13.P.3  
 COUNTY: BURKE  
 DECK REPAIR BRIDGE NO. 30  
 SHEET 5 OF 6

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

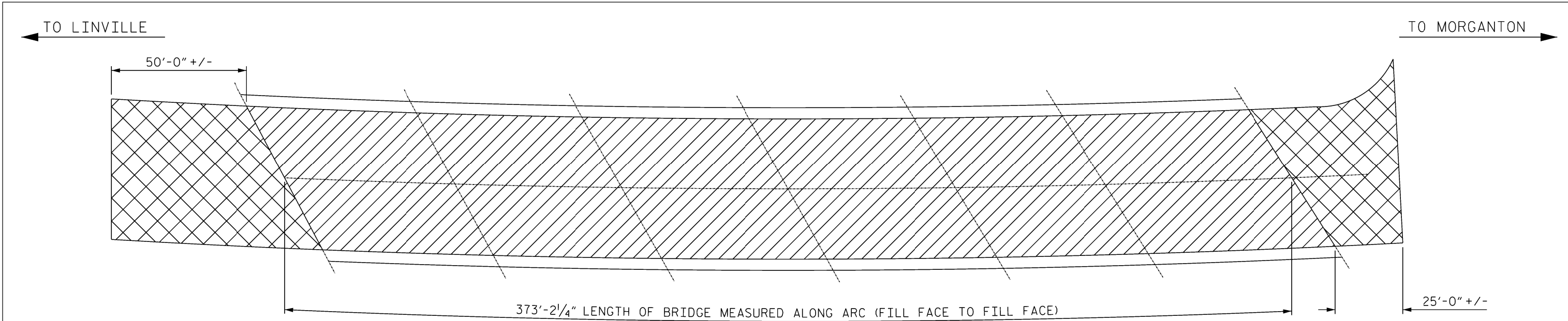
STAGING SECTIONS



REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			S-5
2			4			
TOTAL SHEETS						13

DRAWN BY: CLB DATE: 09/11  
 CHECKED BY: DCM DATE: 09/11

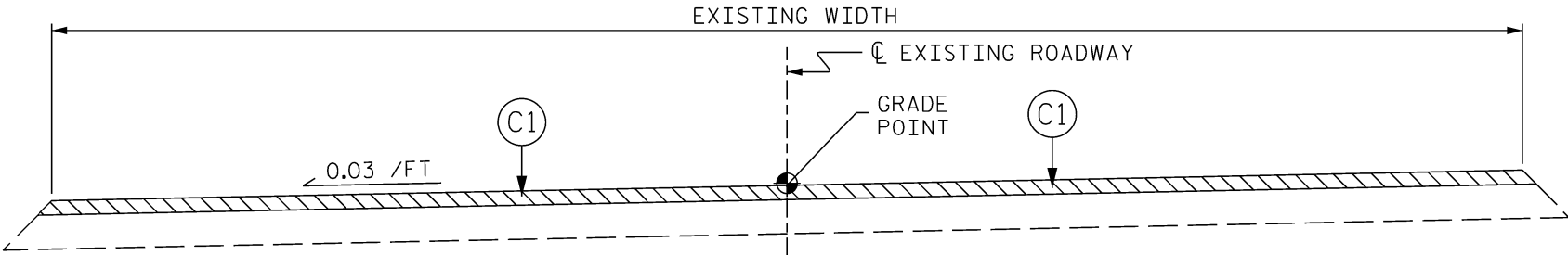
\*\*\*\*\*USERNAME\*\*\*\*\* \*\*\*\*\*SYTIME\*\*\*\*\*

\*USE PLASTIC BARRIER AS A SEPARATION CHANNELIZING DEVICE INSTEAD OF DRUMS.  
 PLASTIC BARRIER MAY BE WATER-FILLED OR USED EMPTY IF TIME BECOMES A FACTOR.



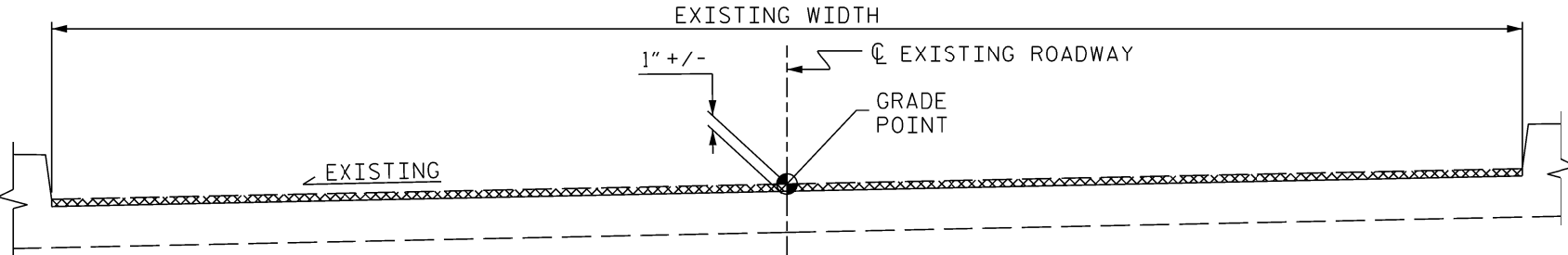
-  ASPHALT MILLING, DECK SCARICATION AND HYDRODEMOLITION
-  ASPHALT MILLING

PLAN

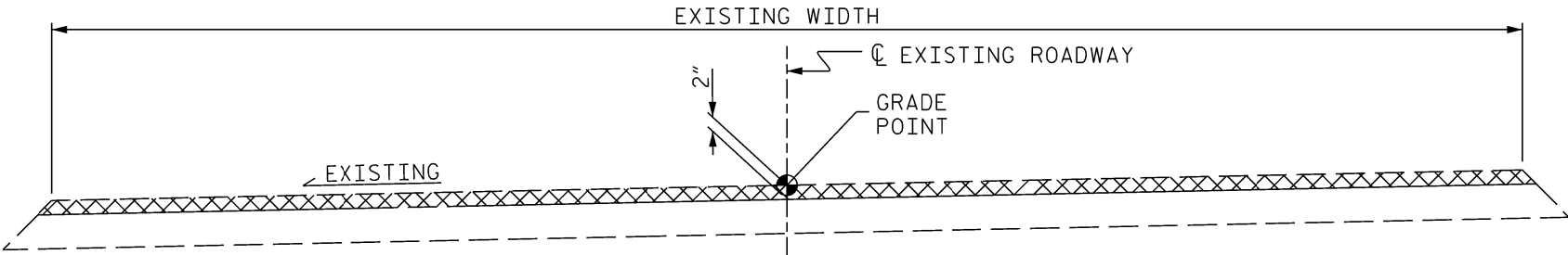


TYPICAL ROADWAY SECTION

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF 9.5A AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1 1/2" IN DEPTH.



TYPICAL BRIDGE MILLING SECTION  
(MILL TO 1" DEPTH OR BRIDGE DECK SURFACE)



TYPICAL ROADWAY MILLING SECTION  
(MILL TO 2" DEPTH)

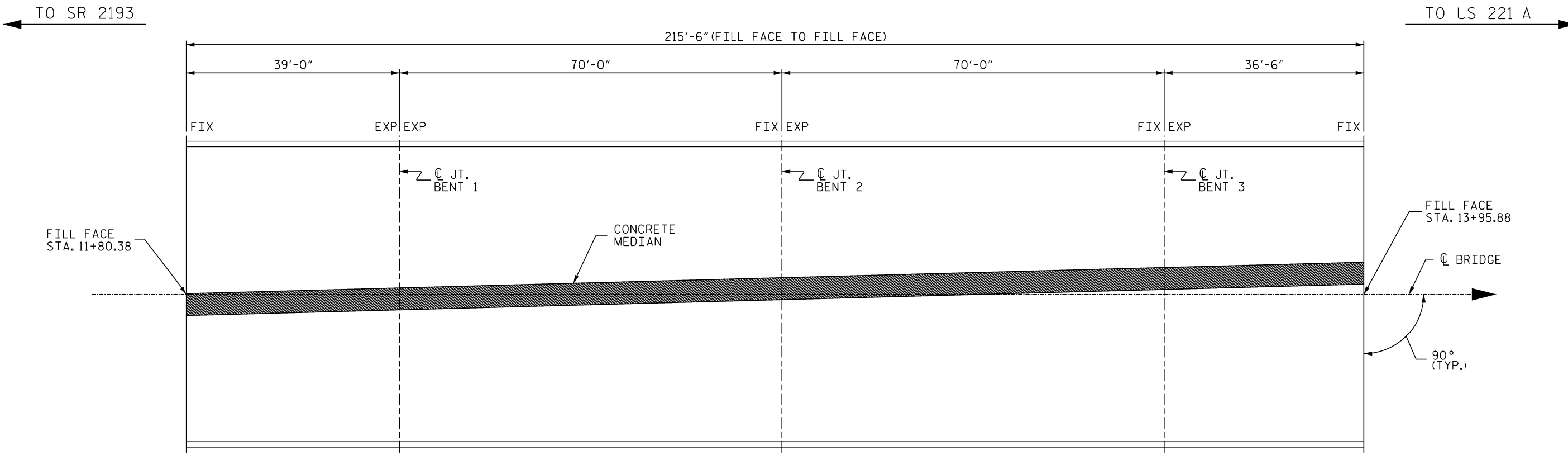
NOT TO SCALE

DRAWN BY: CLB      DATE: 09/11  
 CHECKED BY: DCM      DATE: 09/11

PROJECT NO. 17BP.13.P.3  
 COUNTY: BURKE  
 DECK REPAIR BRIDGE NO. 30  
 SHEET 6 OF 6

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 ROADWAY TYPICAL  
 SECTION AND  
 MILLING DETAILS

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-6
1			3			TOTAL SHEETS 13
2			4			



PLAN

TOTAL BILL OF MATERIAL		
PLACEMENT OF EPOXY OVERLAY	EVAZOTE JOINT SEALS	CLASS II CONCRETE DECK REPAIR FOR EPOXY/ASPHALT OVERLAY
SQ.FT.	LUMP SUM	SQ.FT.
10775	LUMP SUM	100

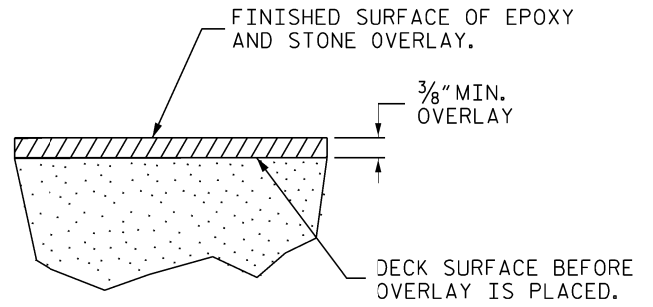
NOTES

FOR REPAIR OF BRIDGE WITH EPOXY AND STONE OVERLAY, SEE SPECIAL PROVISIONS.

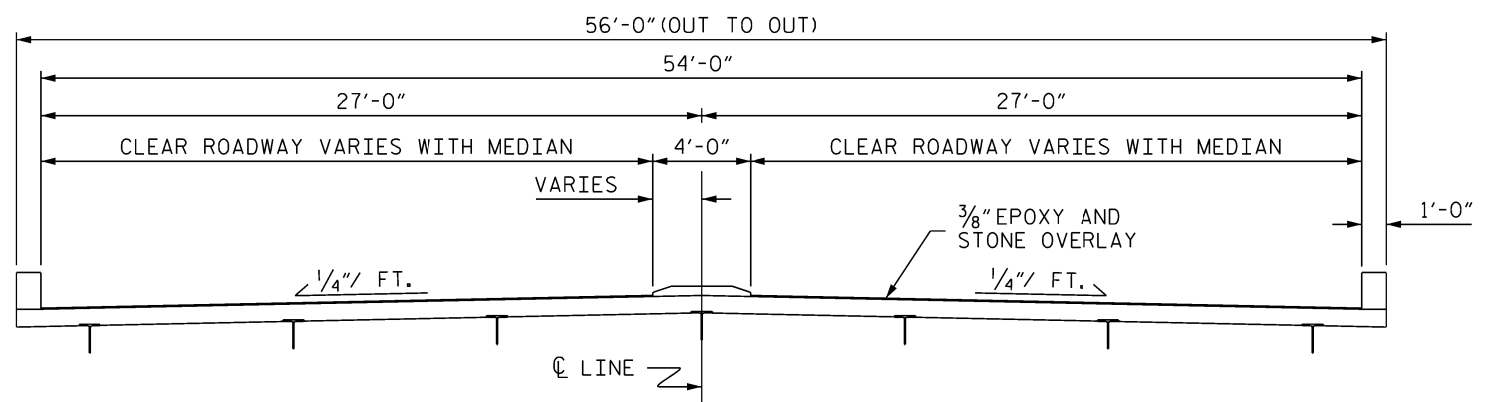
SEE SPECIAL PROVISIONS FOR CLASS II DECK REPAIRS.

FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

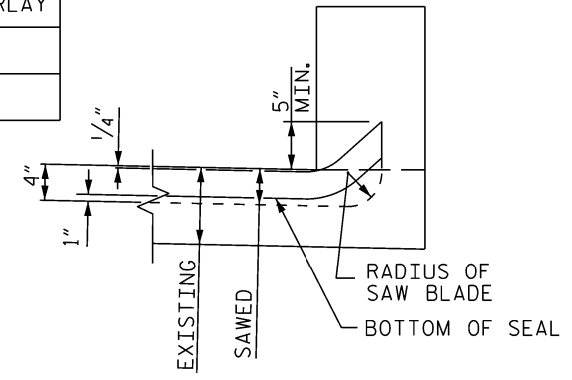
THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" @ THE BENTS.



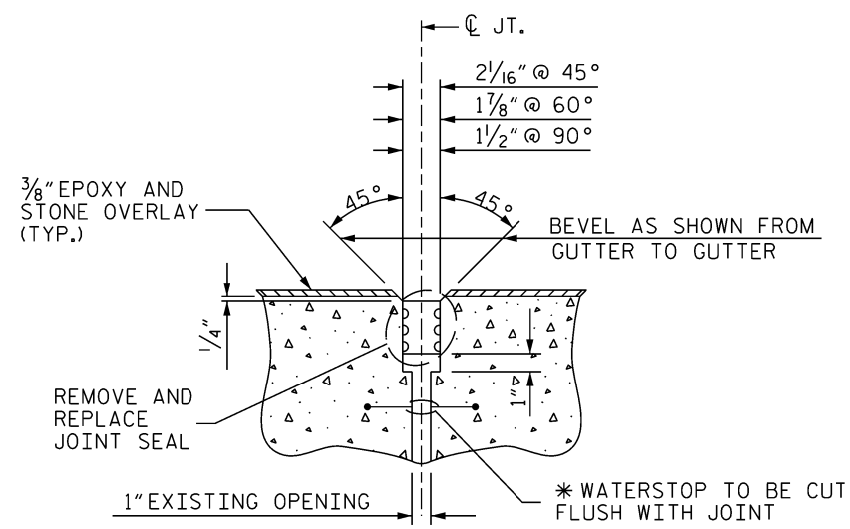
DETAIL FOR EPOXY AND STONE OVERLAY



TYPICAL SECTION



SEAL DETAILS @ RAIL



JOINT DETAILS @ BENTS  
(EVAZOTE JOINT SEAL EXPANSION)

\* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP SHALL BE REMOVED.

PROJECT NO. 17BP.13.P.3

COUNTY: RUTHERFORD

DECK REPAIR BRIDGE NO. 14

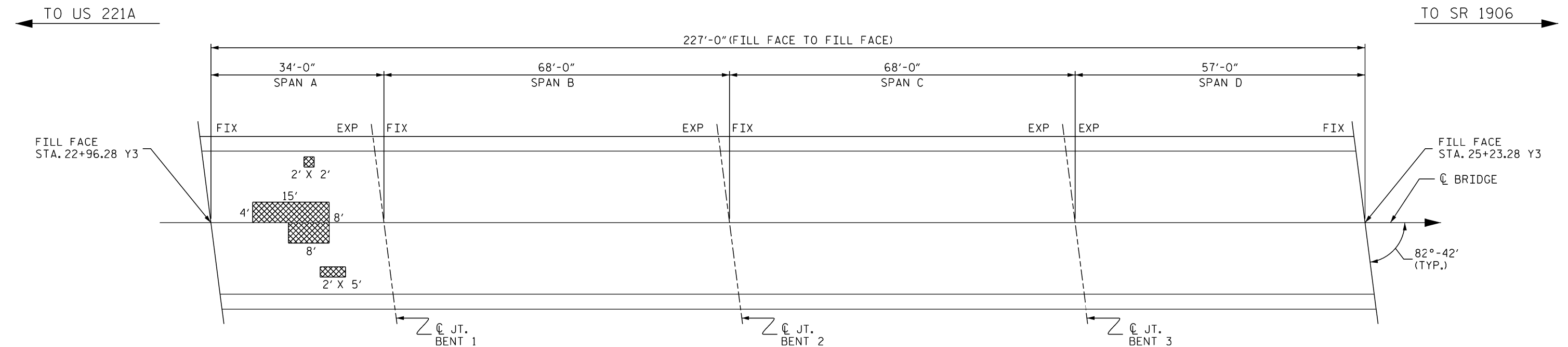
SHEET 1 OF 1

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE #14 ON SR 2169 OVER US 74 A					
54' CL. ROADWAY 90° SKEW					
REVISIONS					SHEET NO.
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS					13

DRAWN BY: CLB DATE: 09/11

CHECKED BY: DCM DATE: 09/11





PLAN

- APPROX. AREA: CLASS I REPAIR
- APPROX. AREA: CLASS II REPAIR

NOTES

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

SEE SPECIAL PROVISIONS FOR SURFACE PREPARATION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS .

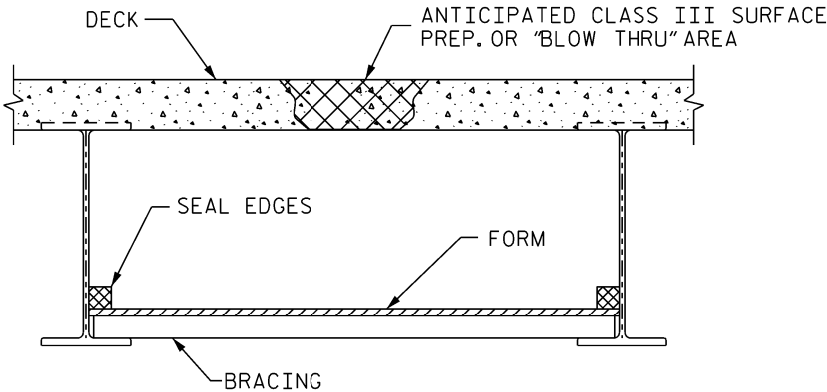
FOR UNDER DECK CONTAINMENT SEE SPECIAL PROVISIONS.

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

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE.

FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.

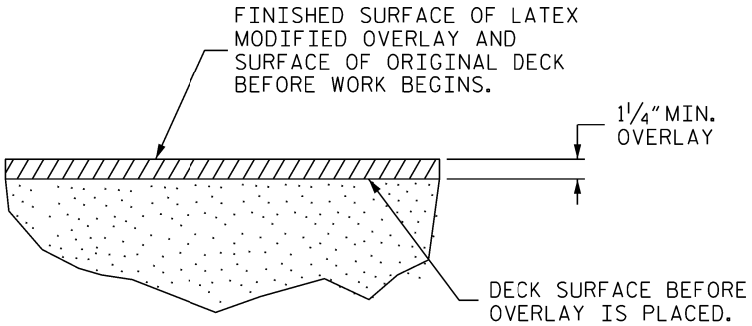


TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORM WORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COST FOR INSTALLING AND REMOVING FORM WORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

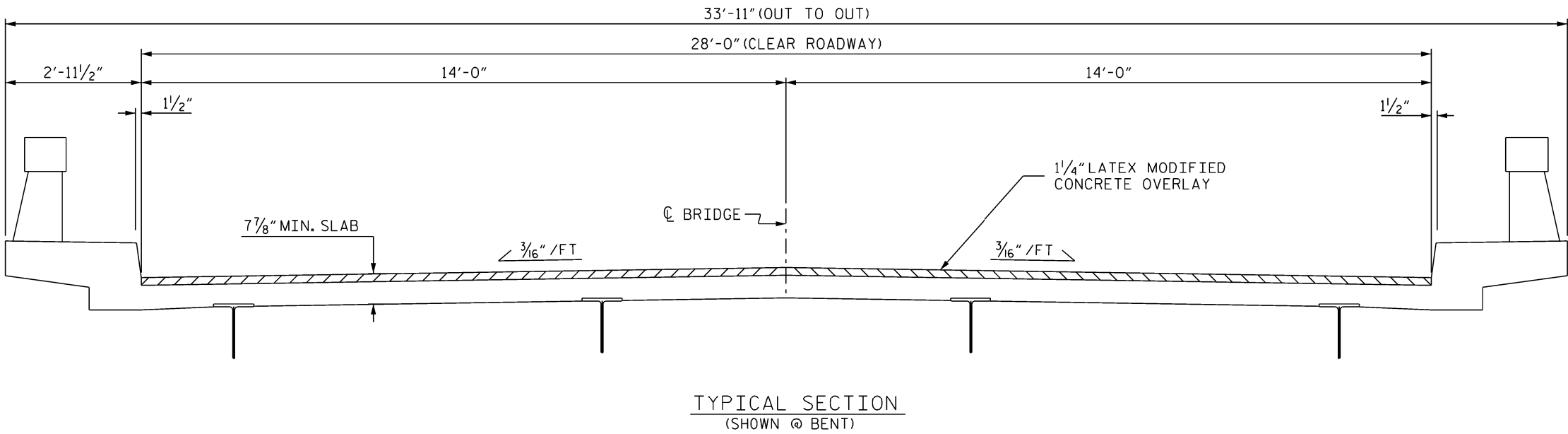
TOTAL BILL OF MATERIAL									
** SCARIFYING BRIDGE DECK	* CLASS I SURFACE PREPARATION	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS	ASPHALT CONCRETE SURFACE COURSE TYPE SF 9.5A
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	LUMP SUM	SQ. FT.	TONS
830	0	18	0	706	29	706	LUMP SUM	5606	13

\* QUANTITY SHOWN IS FOR INFORMATION ONLY. \*\* INCLUDES APPROACH MILLING.

DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11

PROJECT NO. 17BP.13.P.3  
COUNTY: RUTHERFORD  
DECK REPAIR BRIDGE NO. 81  
SHEET 1 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN VIEW OF BRIDGE #81, ON SR 1901 OVER US 74 BYP 28' CL. ROADWAY 82°-42' SKEW					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. S-8					TOTAL SHEETS 13



**NOTES**

FOR EVAZOTE JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE JOINT SEALS SHALL BE WATERTIGHT.

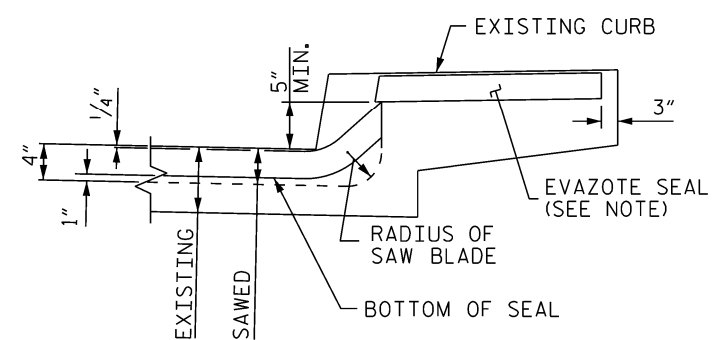
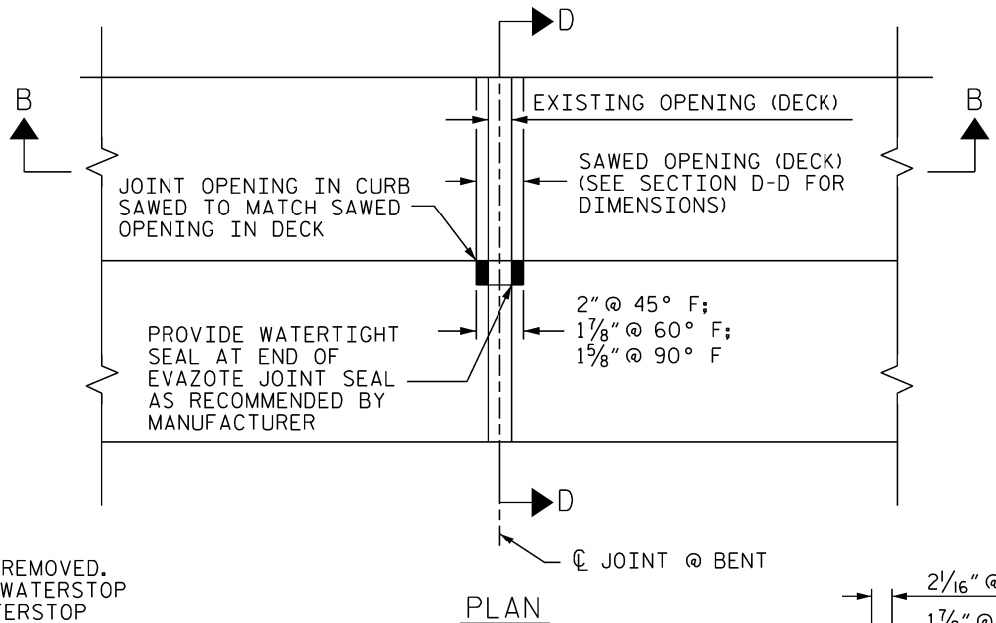
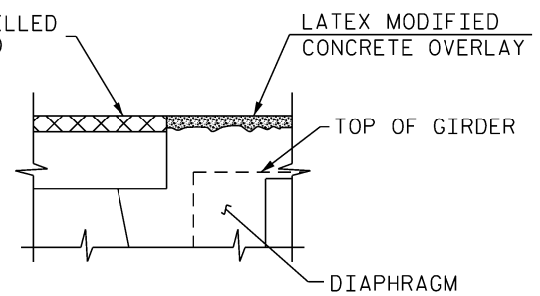
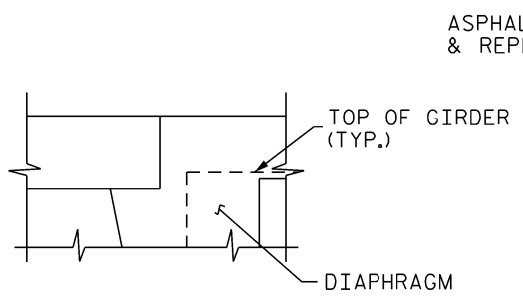
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT BENTS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE EVAZOTE JOINT SEAL IN LIEU OF SAWING THE JOINT.

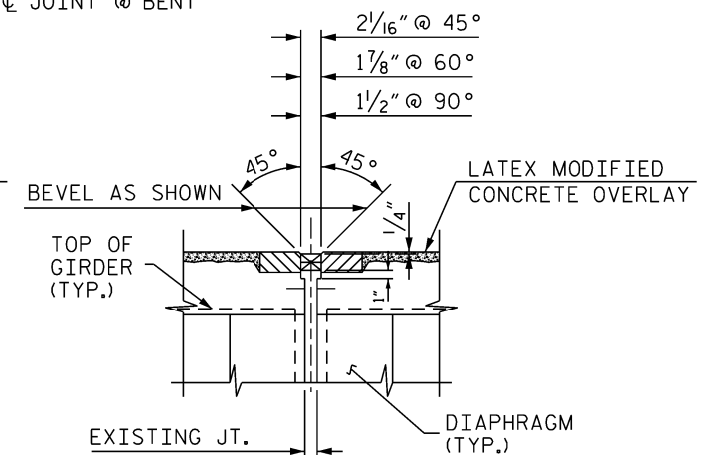
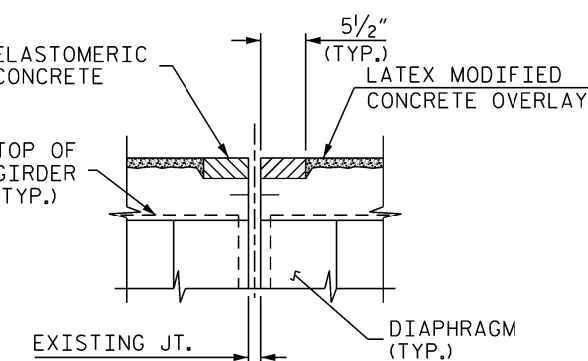
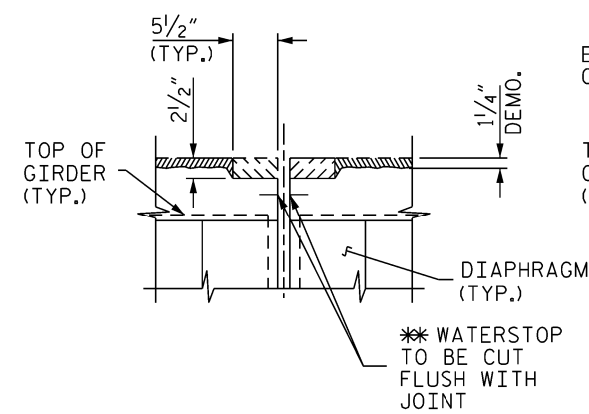
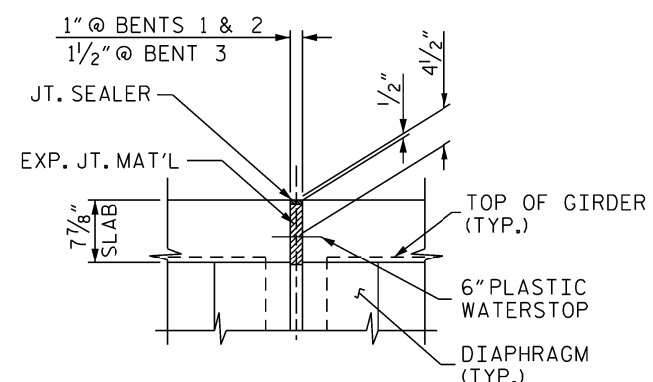
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL FOR THE EXISTING JOINT IN THE CURB SHALL BE DETERMINED BY THE ENGINEER.

ELASTOMERIC CONCRETE		
BENTS	16.2	(CU. FT.)
* TOTAL	16.2	(CU. FT.)

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.



\* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP SHALL BE REMOVED.



NOTE: RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQ'D.

PROJECT NO. 17BP.13.P.3  
COUNTY: RUTHERFORD  
DECK REPAIR BRIDGE NO. 81  
SHEET 2 OF 3

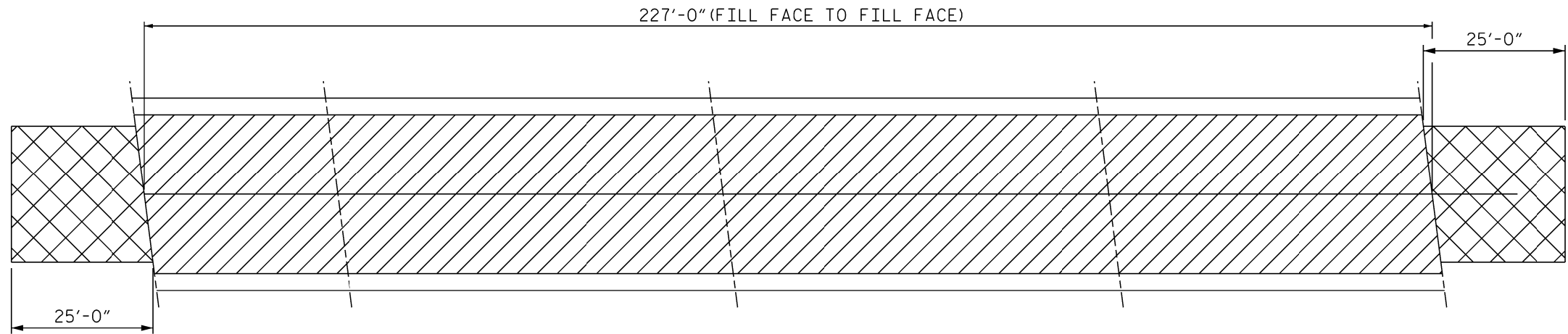
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION & JOINT DETAILS					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. S-9  
TOTAL SHEETS 13

DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11

← TO US 221A

TO SR 1906 →



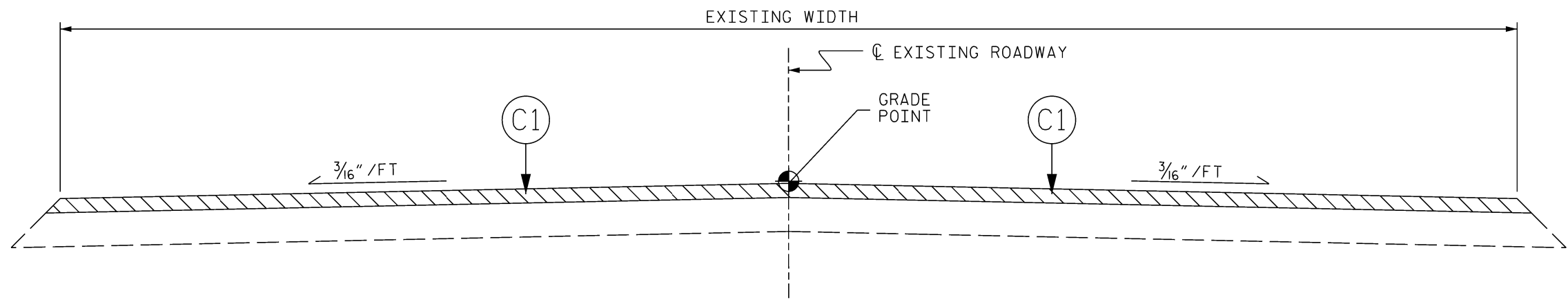
DECK SCARIFICATION AND HYDRODEMOLITION



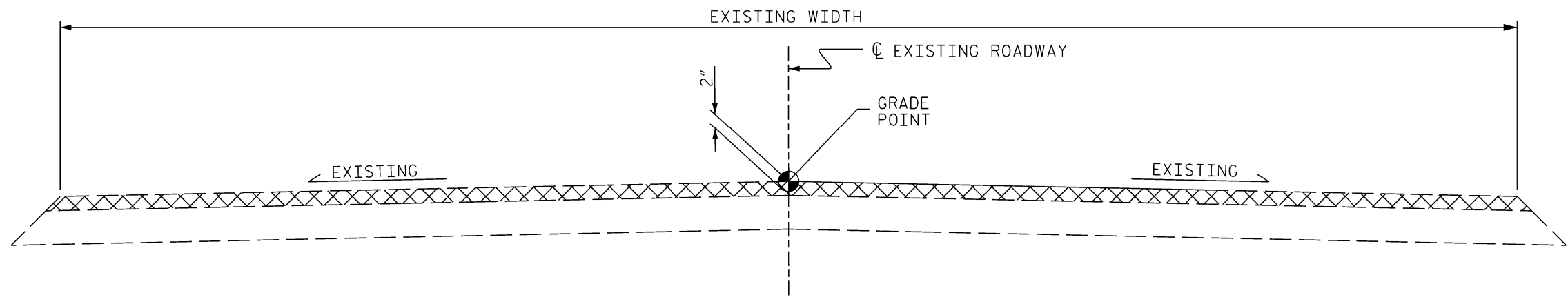
ASPHALT MILLING

PLAN

C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF 9.5A AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1 1/2" IN DEPTH.
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TYPICAL ROADWAY SECTION



TYPICAL ROADWAY MILLING SECTION  
(MILL TO 2" DEPTH)

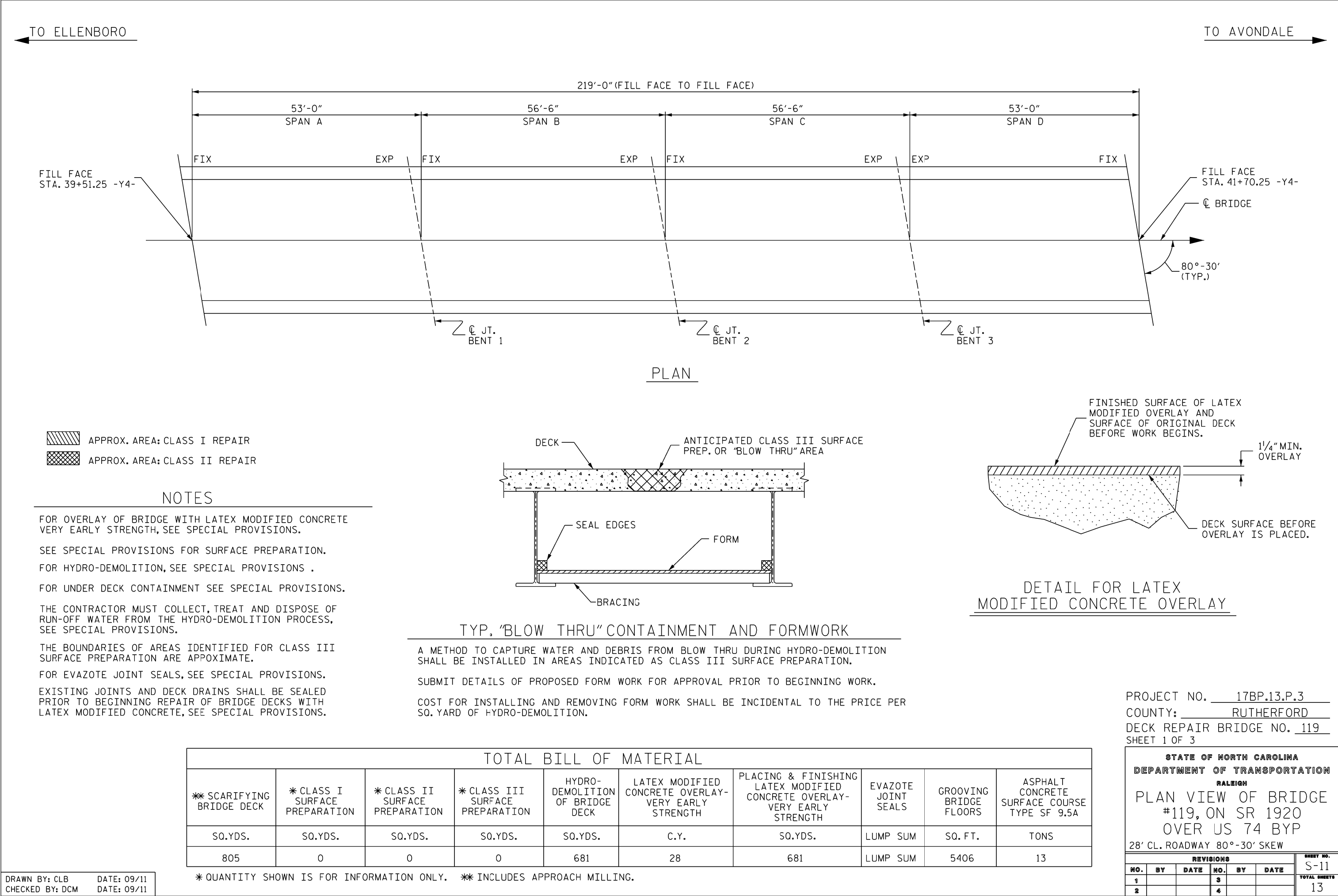
NOT TO SCALE

PROJECT NO. 17BP.13.P.3  
COUNTY: RUTHERFORD  
DECK REPAIR BRIDGE NO. 81  
SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
ROADWAY TYPICAL  
SECTION AND  
MILLING DETAILS

DRAWN BY: CLB DATE: 09/11  
CHECKED BY: DCM DATE: 09/11

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-10
1			3			TOTAL SHEETS
2			4			13



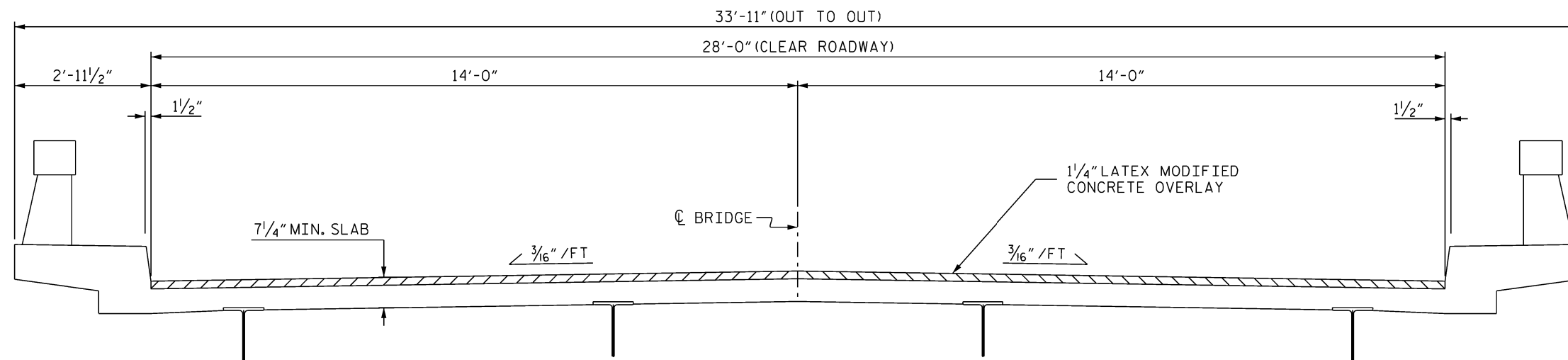
FOR EVAZOTE JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE JOINT SEALS SHALL BE  
WATERTIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT  
SEAL SHALL BE 2 1/2" AT BENTS.

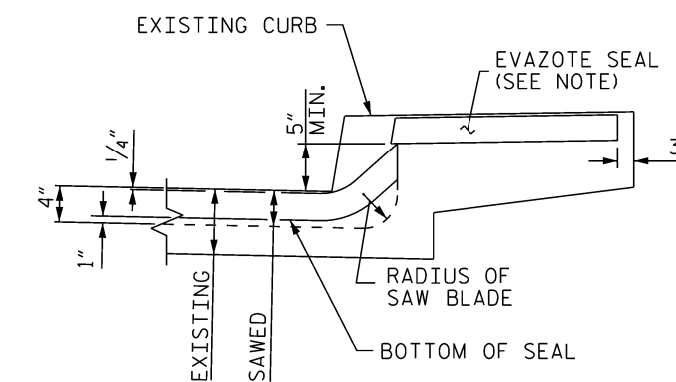
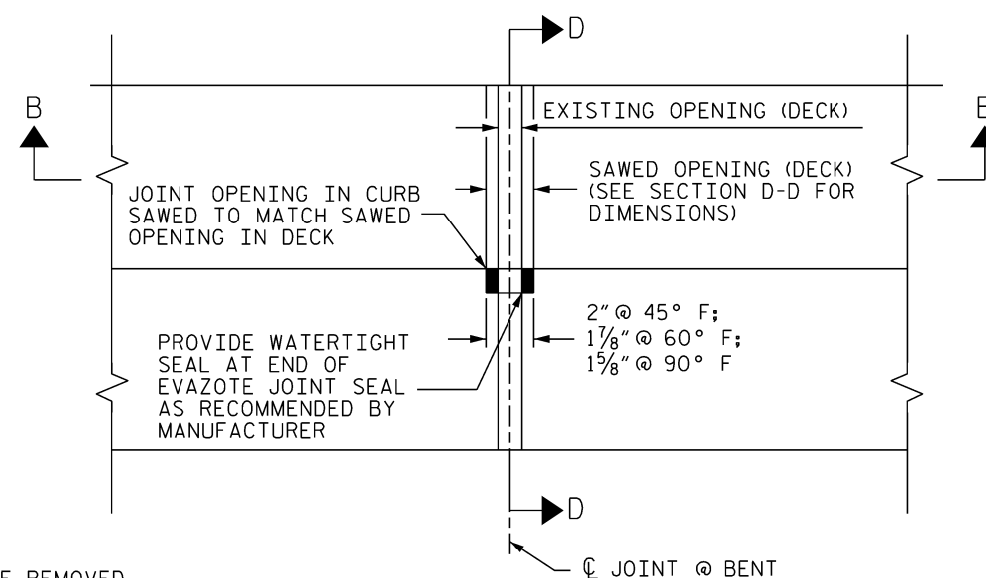
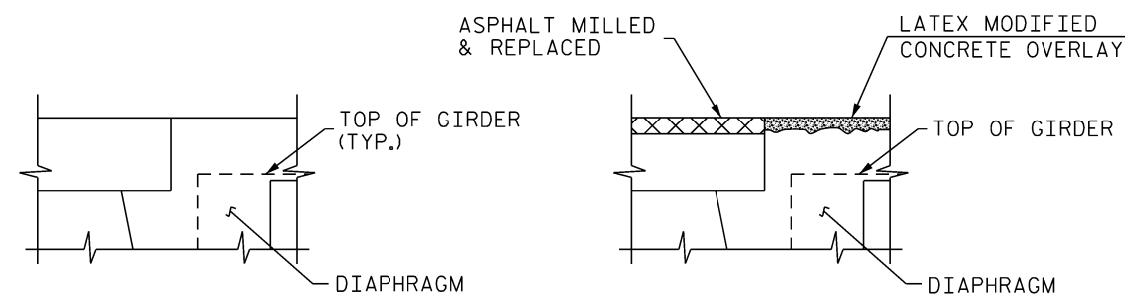
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE  
JOINT FOR THE EVAZOTE JOINT SEAL IN LIEU OF SAWING  
THE JOINT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT  
SEAL FOR THE EXISTING JOINT IN THE CURB SHALL BE  
DETERMINED BY THE ENGINEER.

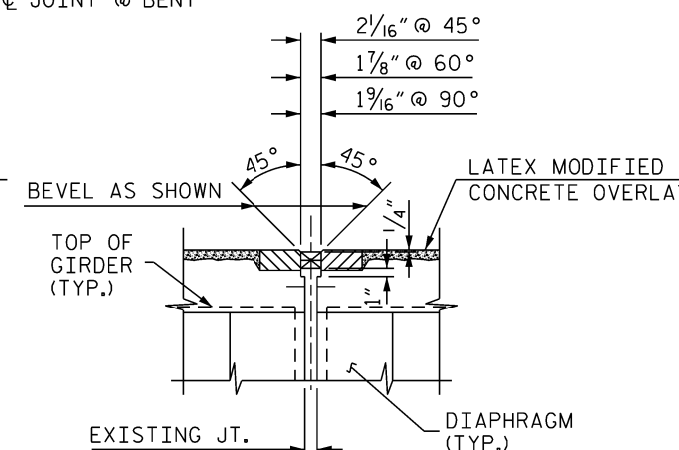
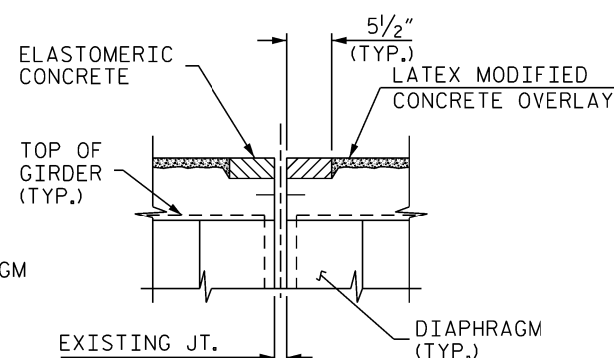
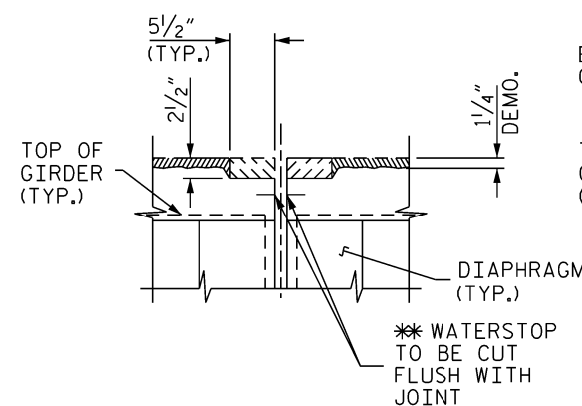
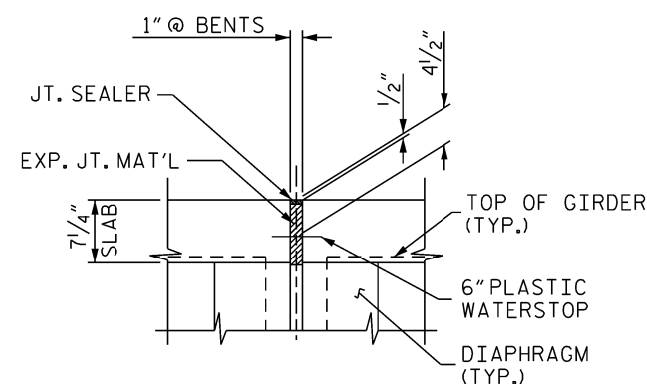


ELASTOMERIC CONCRETE		
BENTS	16.3	(CU. FT.)
* TOTAL	16.3	(CU. FT.)

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.



**\*\* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED.  
 IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP  
 IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP  
 SHALL BE REMOVED.**



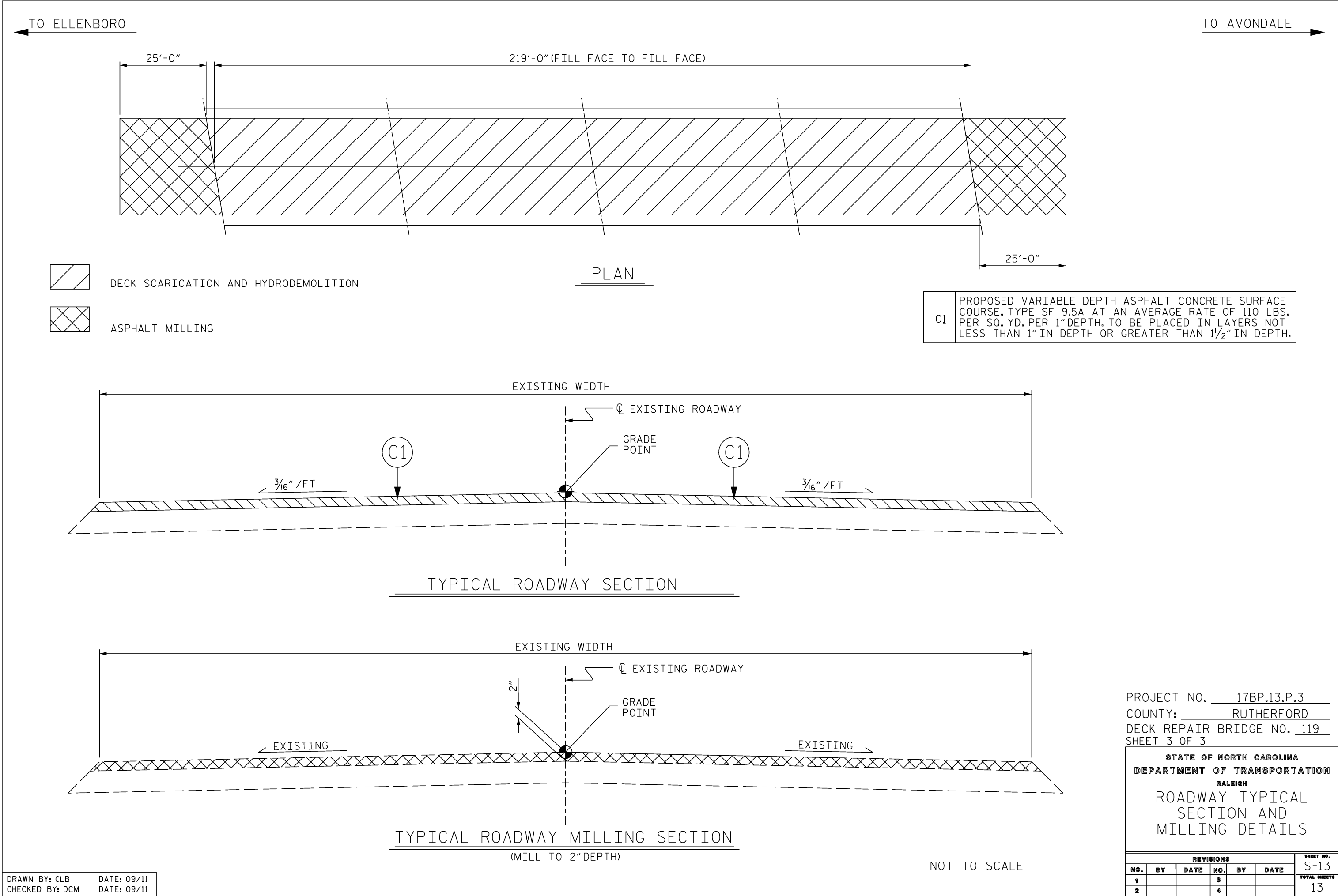
NOTE: RETAIN ALL EXISTING REINFORCING  
STEEL. CLEAN AND REPAIR AS REQ'D.

PROJECT NO. 17BP.13.P.3  
COUNTY: RUTHERFORD  
DECK REPAIR BRIDGE NO. 119  
SHEET 2 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL SECTION  
&  
JOINT DETAILS

REVISIONS						SHEET NO. S-12
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEET 13
2			4			



PROJECT NO. 17BP.13.P.3

COUNTY: RUTHERFORD

DECK REPAIR BRIDGE NO. 119

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

ROADWAY TYPICAL  
SECTION AND  
MILLING DETAILS

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO.

S-13

TOTAL SHEETS

13

DRAWN BY: CLB

DATE: 09/11

CHECKED BY: DCM

DATE: 09/11

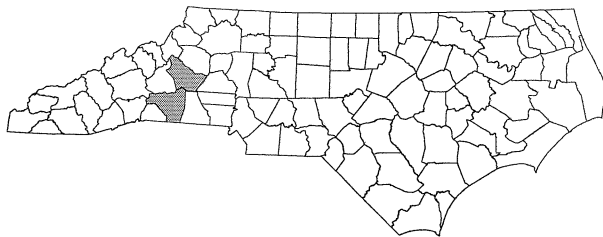
\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*SYTIME\*\*\*\*\*

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN  
RUTHERFORD & BURKE COUNTIES

DIVISION 13



BURKE BRIDGE #30 – NC 181 OVER CATAWBA RIVER

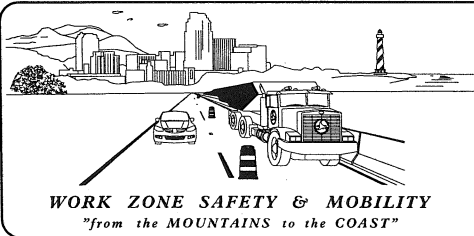
RUTHERFORD BRIDGE #14 – SR 2169 OVER US 74-A  
RUTHERFORD BRIDGE #81 – SR 1901 OVER US 74 BYPASS  
RUTHERFORD BRIDGE #119 – SR 1920 OVER US 74 BYPASS

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-2	GENERAL NOTES
TMP-3	VICINITY MAPS & TRAFFIC CONTROL PHASING
TMP-4,4A	BURKE CO. BRIDGE #30-NC 181 NB STAGE I-WORK AREA
TMP-5,5A	BURKE CO. BRIDGE #30-NC 181 SB STAGE II-WORK AREA
TMP-6,6A	BURKE CO. BRIDGE #30-NC 181 NB/SB STAGE III-WORK AREA

TRAFFIC MANAGEMENT STRATEGY

PROPOSED BRIDGE WORK WILL BE PERFORMED USING TIME RESTRICTED LANE CLOSURES. FOR THE BRIDGES IN RUTHERFORD COUNTY FLAGGER CONTROLLED LANE CLOSURES ARE SPECIFIED. FOR THE BRIDGE IN BURKE COUNTY THE WORK IS CONSTRUCTED IN THREE STAGES, USING LANE CLOSURES AND PLACING TRAFFIC IN A TWO-LANE, TWO-WAY PATTERN ON EACH SIDE OF THE BRIDGE. REFER TO SHEET TMP-3 FOR TRAFFIC CONTROL PHASING.



PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT  
RALEIGH, NC



PLAN PREPARED BY:  
Stantec Consulting Services Inc.  
801 Jones Franklin Road-Suite 300  
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Tel. 919.851.6866  
Fax. 919.851.7024  
www.stantec.com

BETSY L. WATSON, P.E.  
GEORGE KARAGEORGE  
TRAFFIC ENGINEER  
TRANSPORTATION DESIGNER

APPROVED: *Betsy L. Watson*  
DATE: 10/28/11



WBS 17BP.13.P.3

**LEGEND**

**GENERAL**

← DIRECTION OF TRAFFIC FLOW

WORK AREA

NORTH ARROW

**TRAFFIC CONTROL DEVICES**

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

**TEMPORARY SIGNING**

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

**SIGNALS**

- EXISTING
- PROPOSED
- TEMPORARY

**PAVEMENT MARKINGS**

- EXISTING PAVEMENT MARKING (GRAY)
- SKIP LINES
- MINI-SKIP LINES
- SOLID LINES

**PAVEMENT MARKING SYMBOLS**

- PAVEMENT MARKING SYMBOLS
- EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)
- ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

**PAVEMENT MARKERS**

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

**ROADWAY STANDARD DRAWINGS**

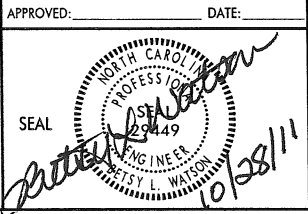
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES

10/28/2011  
U:\Traffic\TrafficControl\WBS 17BP.13.P.3 Rutherford Burke\TCP\Plan Sheets\17BP.13.P.3.TC.TMP-01A.RDWYSTDSLEGEND.dgn  
gkarageorge



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www.stantec.com  
License No. F-0672



LEGEND  
&  
ROADWAY STANDARD DRAWINGS



GENERAL NOTES

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

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.

LANE CLOSURE TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 181	6:00 A.M.-7:00 P.M. MONDAY THRU FRIDAY
SR 2169	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY
SR 1901	4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY
SR 1920	

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND HOLIDAY WEEKENDS AS FOLLOWS:

ROAD NAME  
ALL ROADS

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY; THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- 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. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW PANEL AND MESSAGE BOARDS.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- 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 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- UNLESS OTHERWISE SHOWN IN THE PLANS, PLACE ARROW PANELS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW PANELS WITHIN THE MERGE TAPER BEHIND THE CHANNELIZING DEVICES OF THE LANE CLOSURE. IF NEEDED, EXTEND LANE CLOSURES TO PROVIDE STOPPING SIGHT DISTANCE TO THE ARROW PANEL (REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
- PLACE LANE CLOSURE DRUMS IN TAPERS AT A MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT (MPH). ALONG BUFFER SPACES AND WORK AREAS SPACE DRUMS AT A MAXIMUM SPACING EQUAL IN FEET TO TWICE THE POSTED SPEED LIMIT (MPH). IN ALL CASES, CHANNELIZING DEVICES ARE TO BE SPACED IN SUCH A MANNER AS TO POSITIVELY ACHIEVE THE INTENDED VISUAL CHANNELIZATION. CHANNELIZING DEVICES SHOULD BE Laterally OFFSET 3 FT INSIDE THE CLOSED LANE AS ROOM PERMITS.

PAVEMENT MARKINGS AND MARKERS

L) UPON COMPLETION OF ALL OTHER CONSTRUCTION OPERATIONS INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

BRIDGE#/ROAD NAME	MARKING	PAVEMENT MARKER
BURKE 30/NC 181	POLYUREA	SNOWPLOWABLE
RUTHERFORD 14/SR 2169	PAINT	NONE
RUTHERFORD 81/SR 1901	PAINT	NONE
RUTHERFORD 119/SR 1920	PAINT	NONE

MISCELLANEOUS

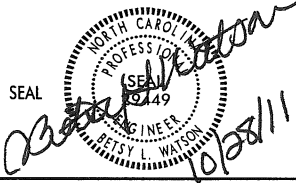
- ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- WHERE DESIGNATED IN THE PLANS, PLASTIC BARRIER MAY BE USED AS A LONGITUDINAL CHANNELIZING DEVICE INSTEAD OF DRUMS AT THE OPTION OF THE ENGINEER (SEE SPECIAL PROVISION).

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gkar-george

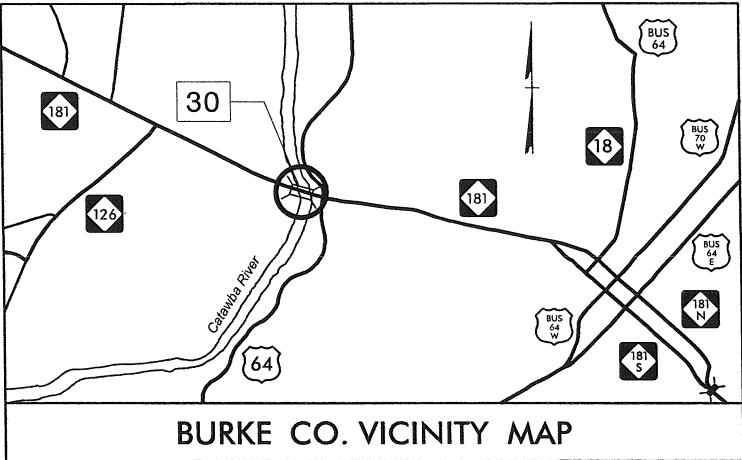


Stantec Consulting Services Inc.  
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Tel. (919) 851-6866  
Fax. (919) 851-7024  
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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_



GENERAL NOTES



BURKE CO. VICINITY MAP

### TRAFFIC CONTROL PHASING

BURKE CO. BRIDGE #30

PERFORM BRIDGE WORK IN STAGES USING LANE CLOSURES AS FOLLOWS:

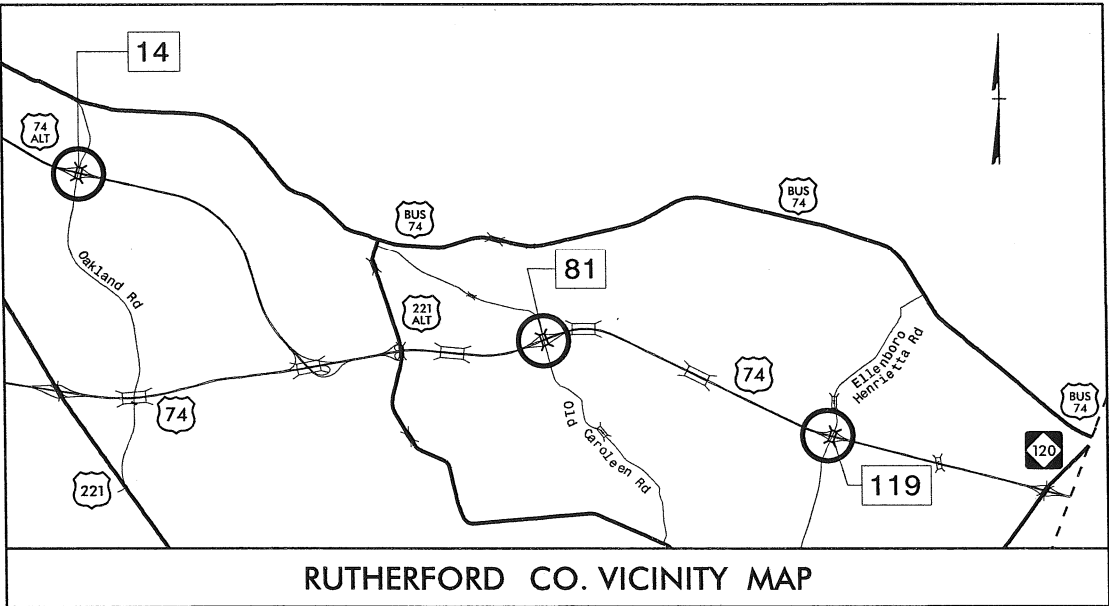
STAGE I - NC 181 NB LANE WORK AREA REFER TO SHEETS TMP-4, 4A.

STAGE II - NC 181 SB LANE WORK AREA REFER TO SHEETS TMP-5, 5A.

STAGE III - NC 181 NB/SB INSIDE LANES REFER TO SHEETS TMP-6, 6A.

RUTHERFORD CO. BRIDGES #14, 81, 119

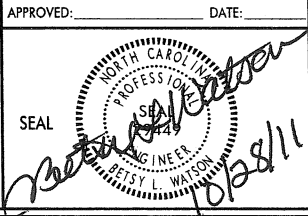
PERFORM BRIDGE WORK USING FLAGGER CONTROLLED LANE CLOSURE PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9.



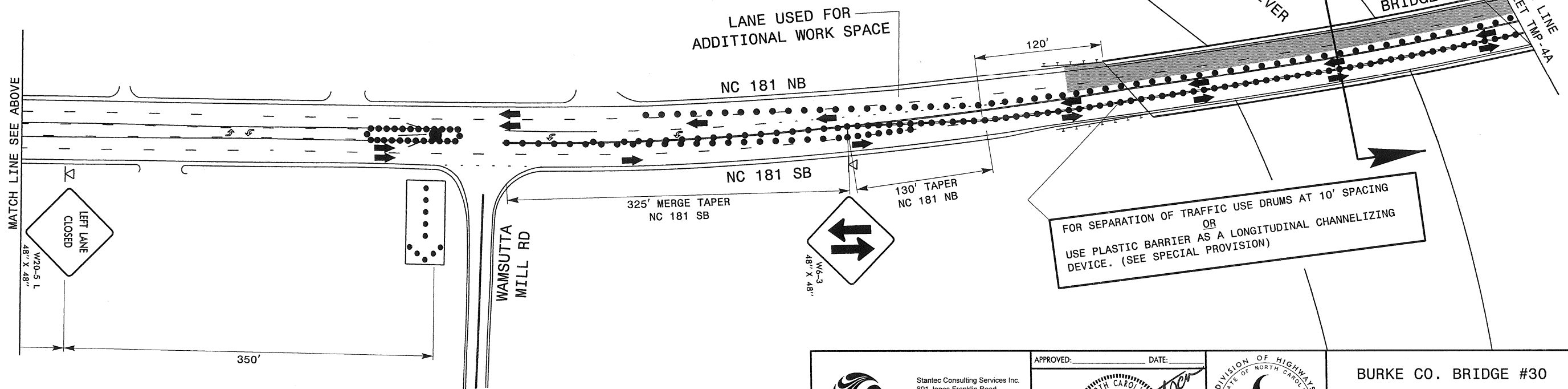
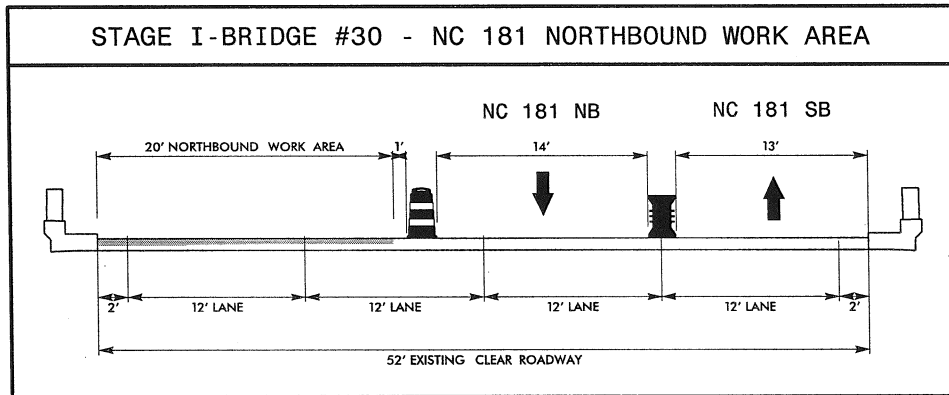
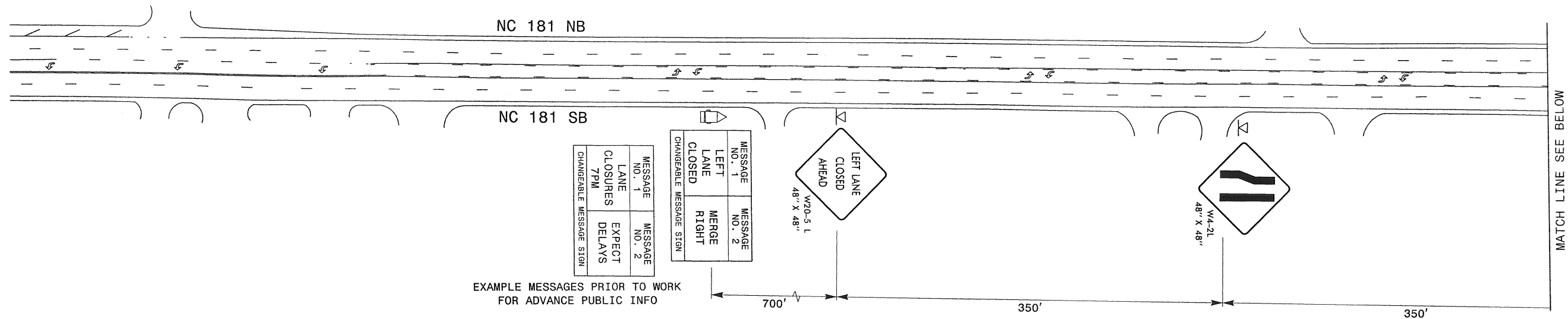
RUTHERFORD CO. VICINITY MAP



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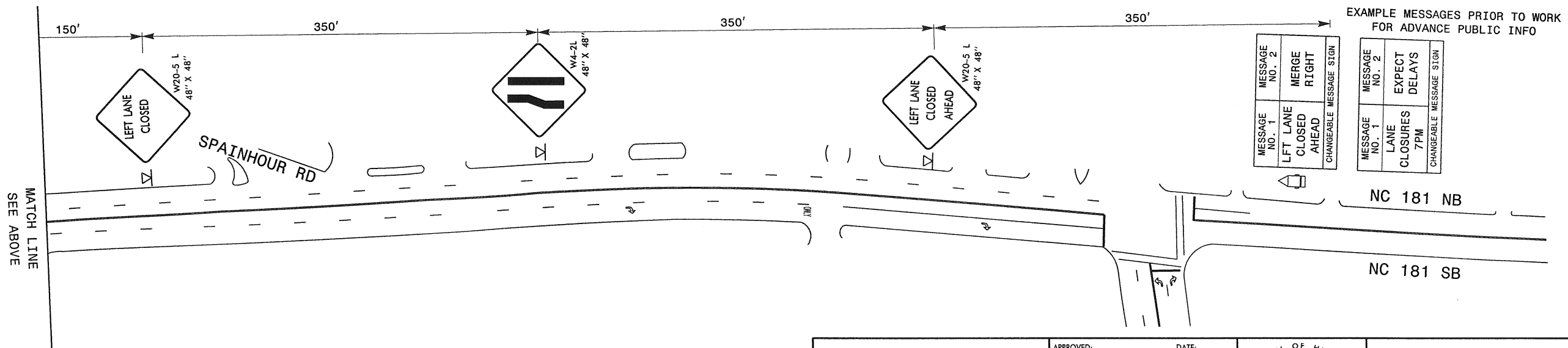
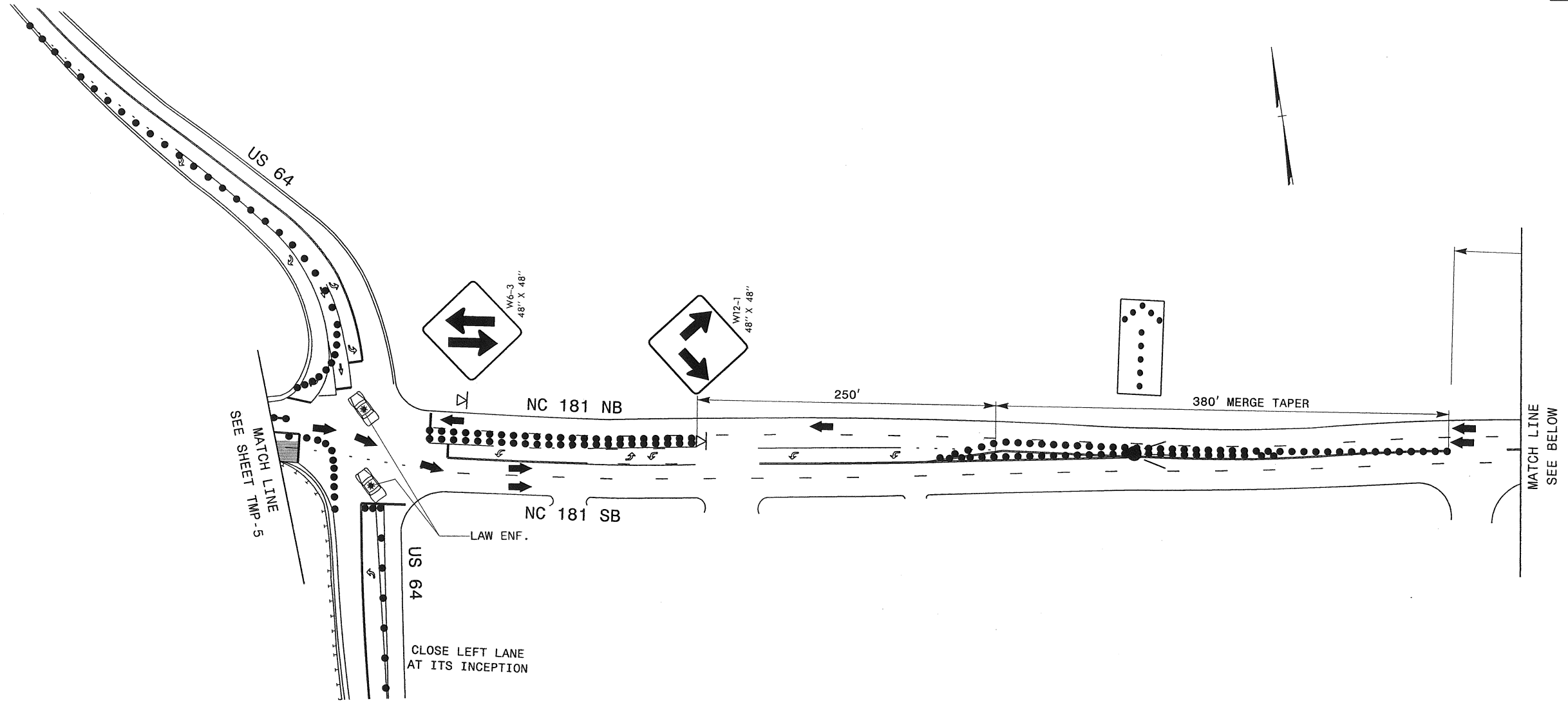
VICINITY MAPS  
&  
TRAFFIC CONTROL PHASING



 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com License No. F-0572	APPROVED: _____ DATE: _____  Betsy L. Watson 10/28/11	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	BURKE CO. BRIDGE #30 NC 181 NORTHBOUND STAGE I-WORK AREA
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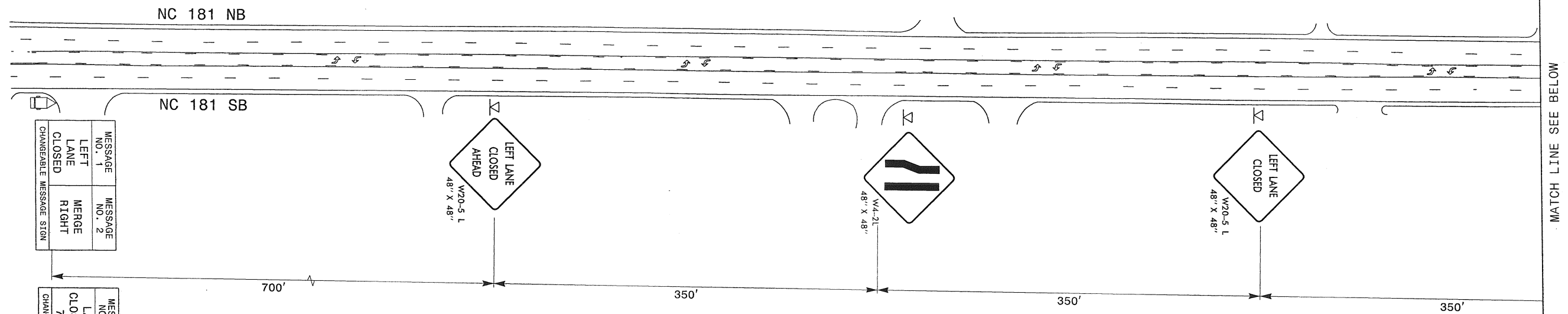
EXAMPLE MESSAGES PRIOR TO WORK FOR ADVANCE PUBLIC INFO

MESSAGE NO. 1	MESSAGE NO. 2
LFT LANE CLOSED AHEAD	MERGE RIGHT
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
LANE CLOSURES 7PM	EXPECT DELAYS
CHANGEABLE MESSAGE SIGN	

<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	<p>APPROVED: _____ DATE: _____</p> <p>SEAL</p> <p><i>Professional Engineer</i></p> <p>10/28/11</p>	<p>SEAL</p> <p><i>Professional Engineer</i></p> <p>10/28/11</p>	<p>STATE OF NORTH CAROLINA</p> <p>DEPARTMENT OF TRANSPORTATION</p> <p>WORK ZONE TRAFFIC CONTROL</p>	<p>BURKE CO. BRIDGE #30</p> <p>NC 181 SOUTHBOUND</p> <p>STAGE II-WORK AREA</p>
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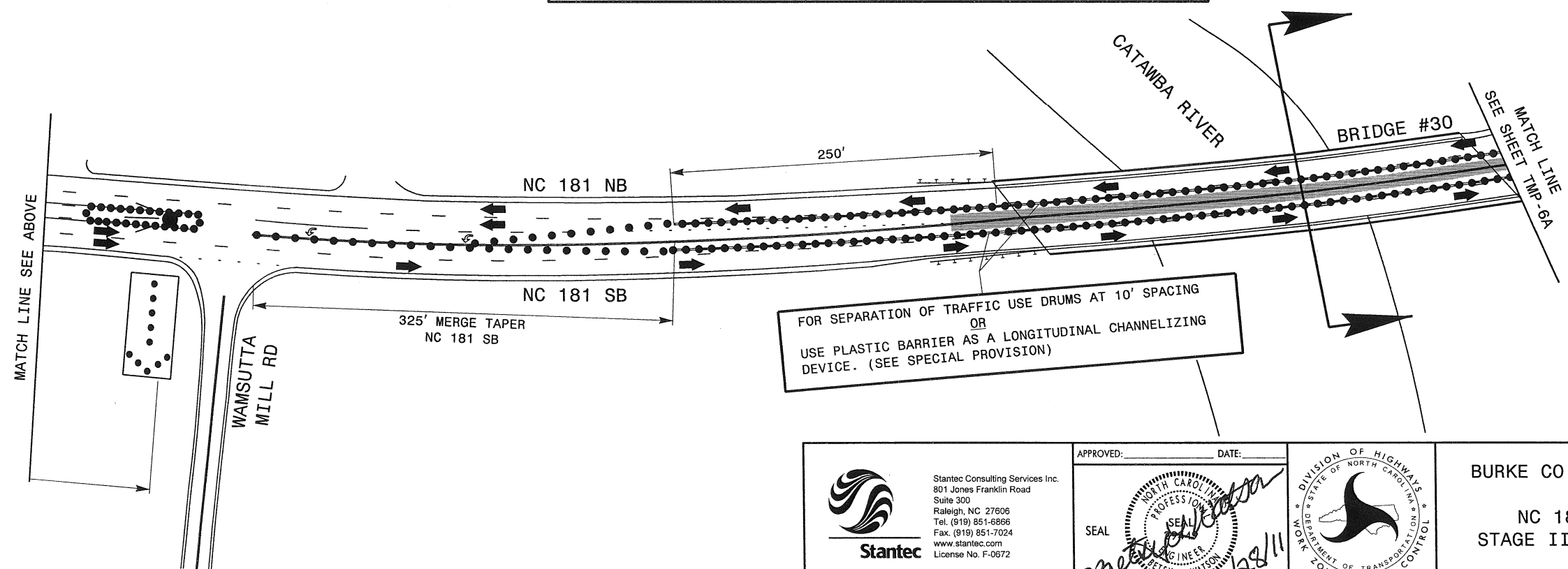
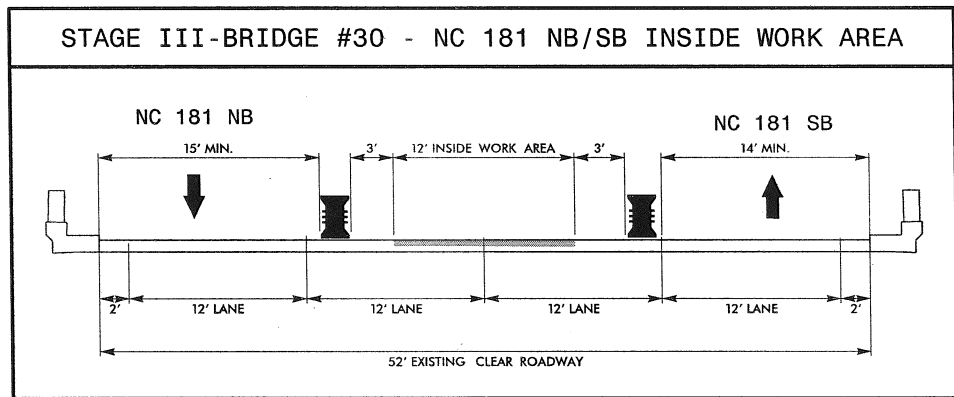
10/28/2011  
U:\TrafficControl\WBS 17BP.13.P.3 Rutherford Burke\TC\Plan Sheets\17BP.13.P.3.TC\_TMP\_05A\_BURKE\_30.dgn  
ok-ar-george



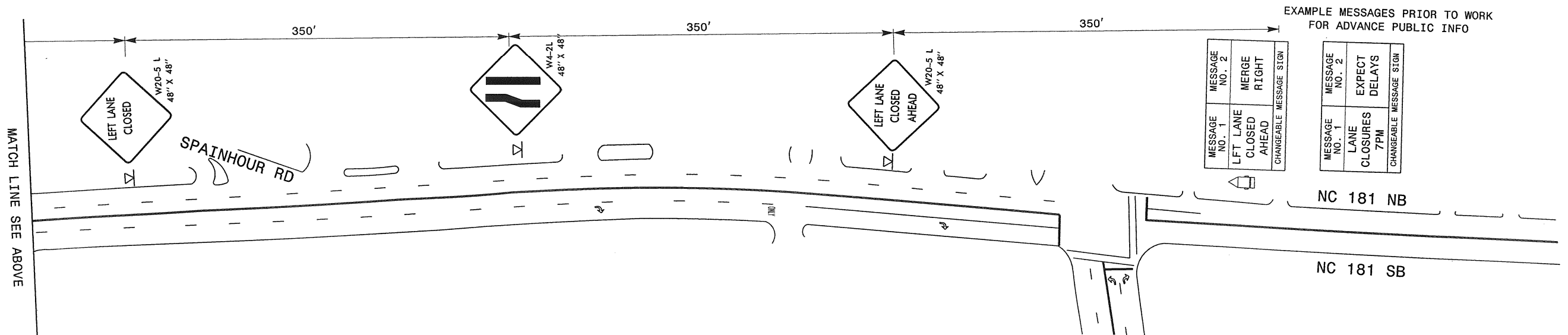
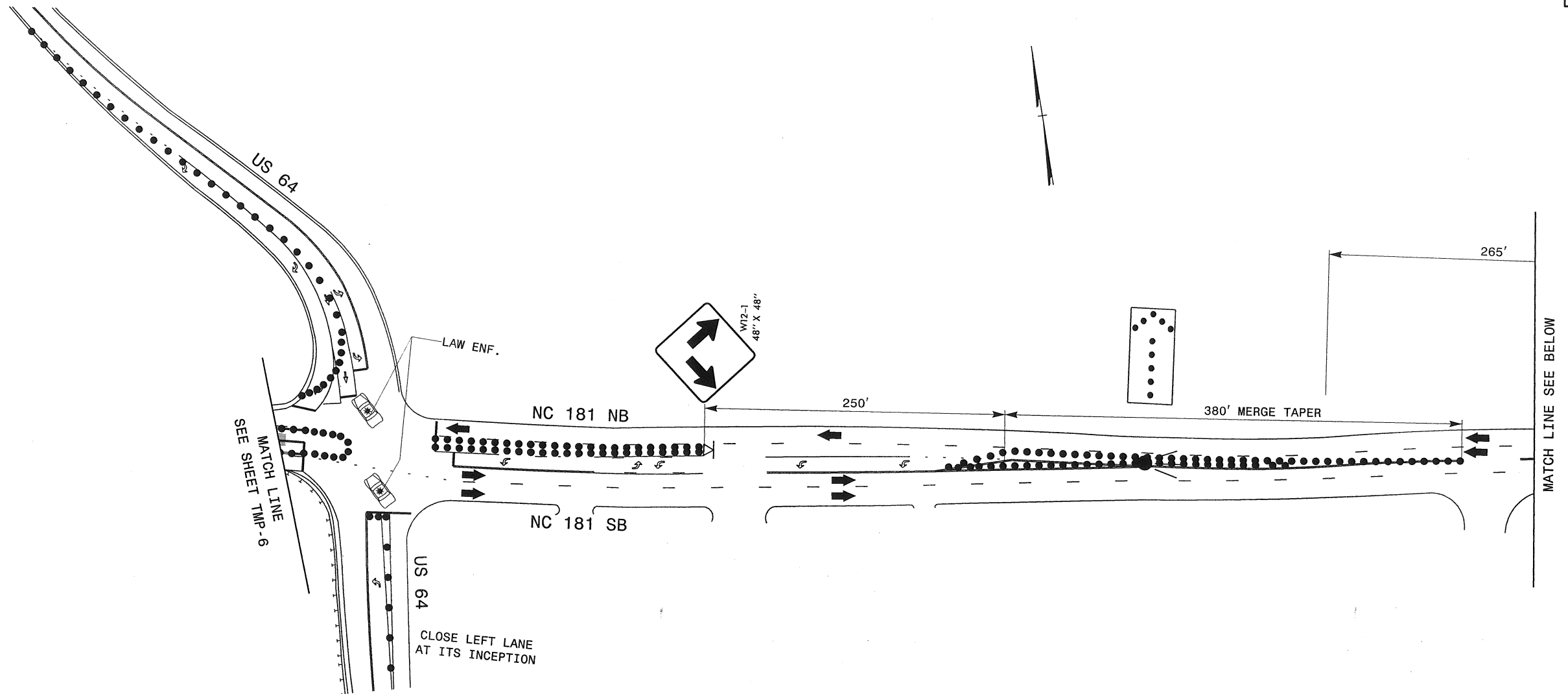
MESSAGE NO. 1	MESSAGE NO. 2
LEFT LANE CLOSED	MERGE RIGHT
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
LANE CLOSURES 7PM	EXPECT DELAYS
CHANGEABLE MESSAGE SIGN	

EXAMPLE MESSAGES PRIOR TO WORK  
FOR ADVANCE PUBLIC INFO



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	SEAL 		



10/28/2011  
 U:\Traffic\TrafficControl\WBS 17BP.13.P.3 Rutherford Burke\TCPlan Sheets\17BP.13.P.3.TC.TMP\_06A\_BURKE\_30.dgn  
 gkr 09/01/11

<p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax (919) 851-7024        www.stantec.com        License No. F-0672</p>	APPROVED: _____ DATE: _____ 		BURKE CO. BRIDGE #30  NC 181 NB/SB STAGE III-WORK AREA
	SEAL 		