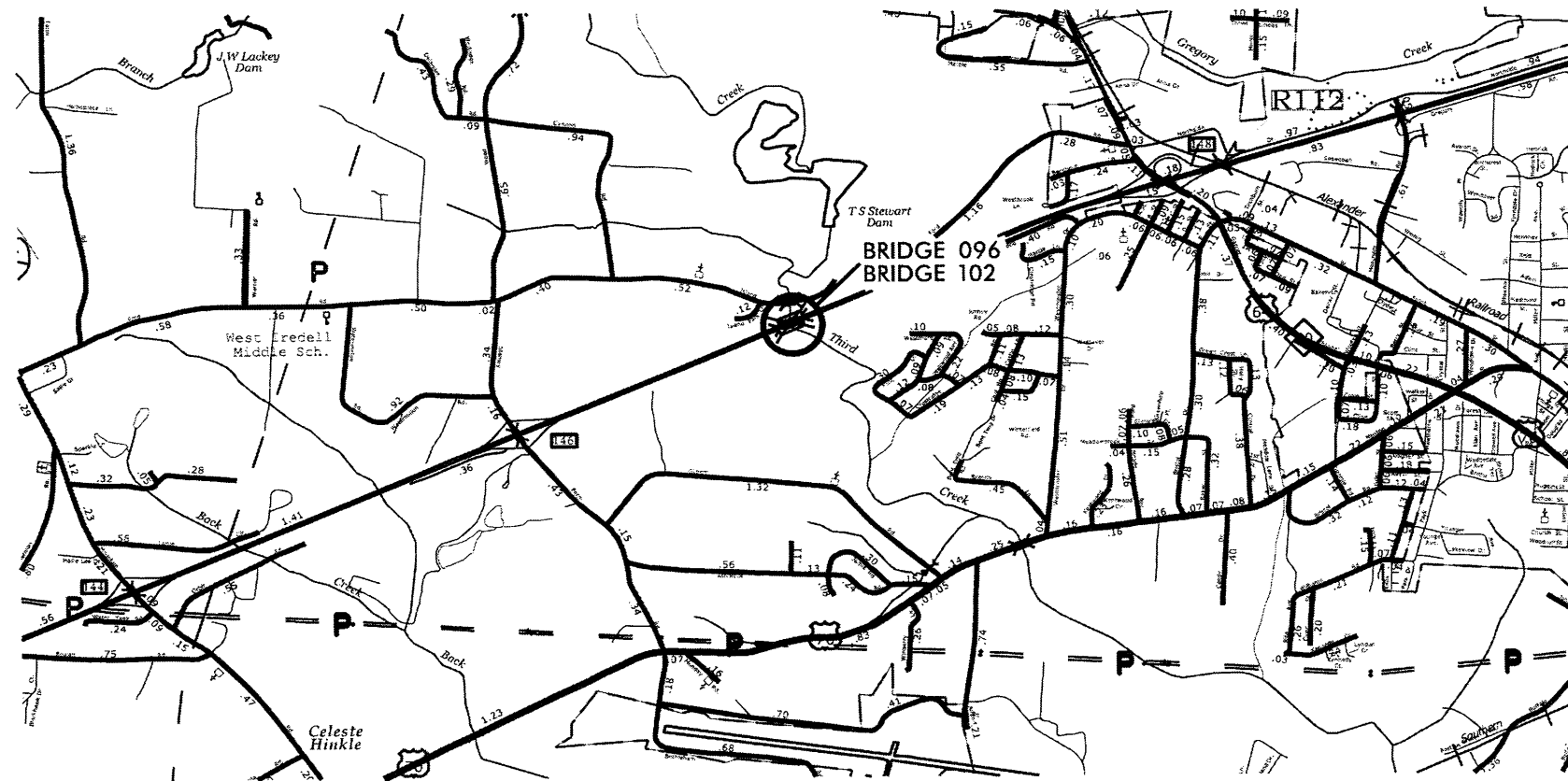


CONTRACT: D000151

IREDELL COUNTY

TYPE OF WORK: BRIDGE DECK PRESERVATION /LATEX MODIFIED CONCRETE OVERLAY

[illegible]

Star

Stanec Consulting Services Inc.
401 Jones Franklin Road
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Raleigh NC 27606
Tel: (919) 851-8866
Fax: (919) 851-7024
www.stanec.com
License No. F-0672

NCDOT CONTACT: ZAKI Wafa, PE
BRIDGE MANAGEMENT PROJECT MANAGER

RICK NELSON, PE
DESIGN ENGINEER



09/03/99

\$\$\$SYTIME\$\$\$\$\$
\$\$\$USERNAME\$\$\$\$\$
\$\$\$DGN\$\$\$\$\$

CONTRACT: DO00151

TIP PROJECT:BP-5300AA

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

IREDELL COUNTY

LOCATION: BRIDGE 096 ON I-40 EBL OVER THIRD CREEK

BRIDGE 102 ON I-40 WBL OVER THIRD CREEK

TYPE OF WORK: BRIDGE DECK PRESERVATION /LATEX MODIFIED CONCRETE OVERLAY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.		1A	
WM NO.	P.A. PROJ. NO.	DESCRIPTION	
45438.1.1	BRIMS-040-2(157)140	PE	
45438.3.24	BRIMS-040-2(157)140	CONST.	

INDEX OF SHEETS

DWG.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
RDY-1 THRU RDY-2	ROADWAY PLANS
S-1 THRU S-8	IREDELL COUNTY BRIDGE #096
S-9 THRU S-16	IREDELL COUNTY BRIDGE #102
TMP-1 THRU TMP-7	TRANSPORTATION MANAGEMENT PLANS

REVISIONS

PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
Z	VARIABLE DEPTH ASPHALT MILLING

TOTAL BILL OF MATERIALS		
SHOULDER RECONSTRUCTION	0.038	SMI
MILLING ASPHALT PAVEMENT 3.0" DEPTH	561	SY
MILLING ASPHALT PAVEMENT 1.5" TO 4.5"	449	SY
CONCRETE SURFACE COURSE, TYPE S9.5C	40	TONS
REMOVE AND RESET EXISTING GUARDRAIL	650	LF

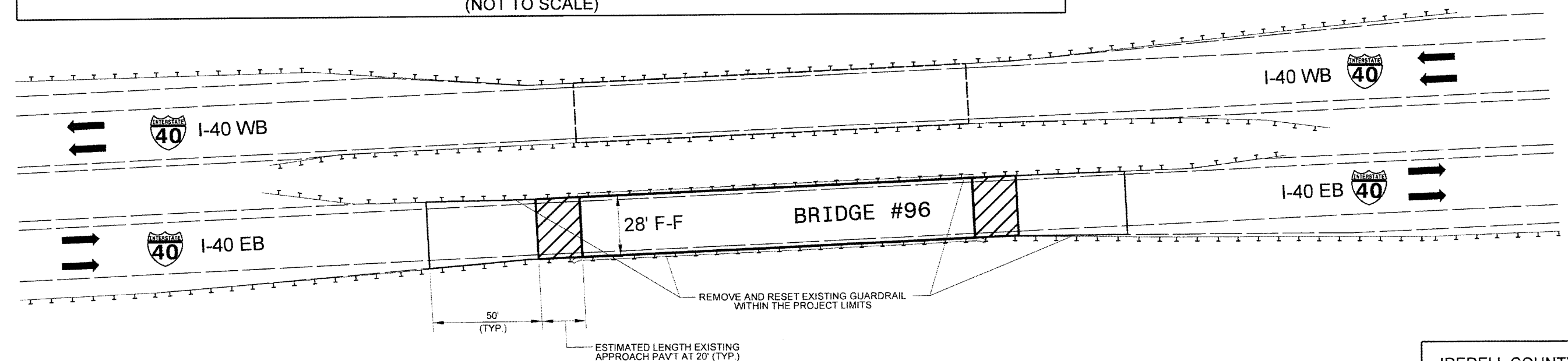
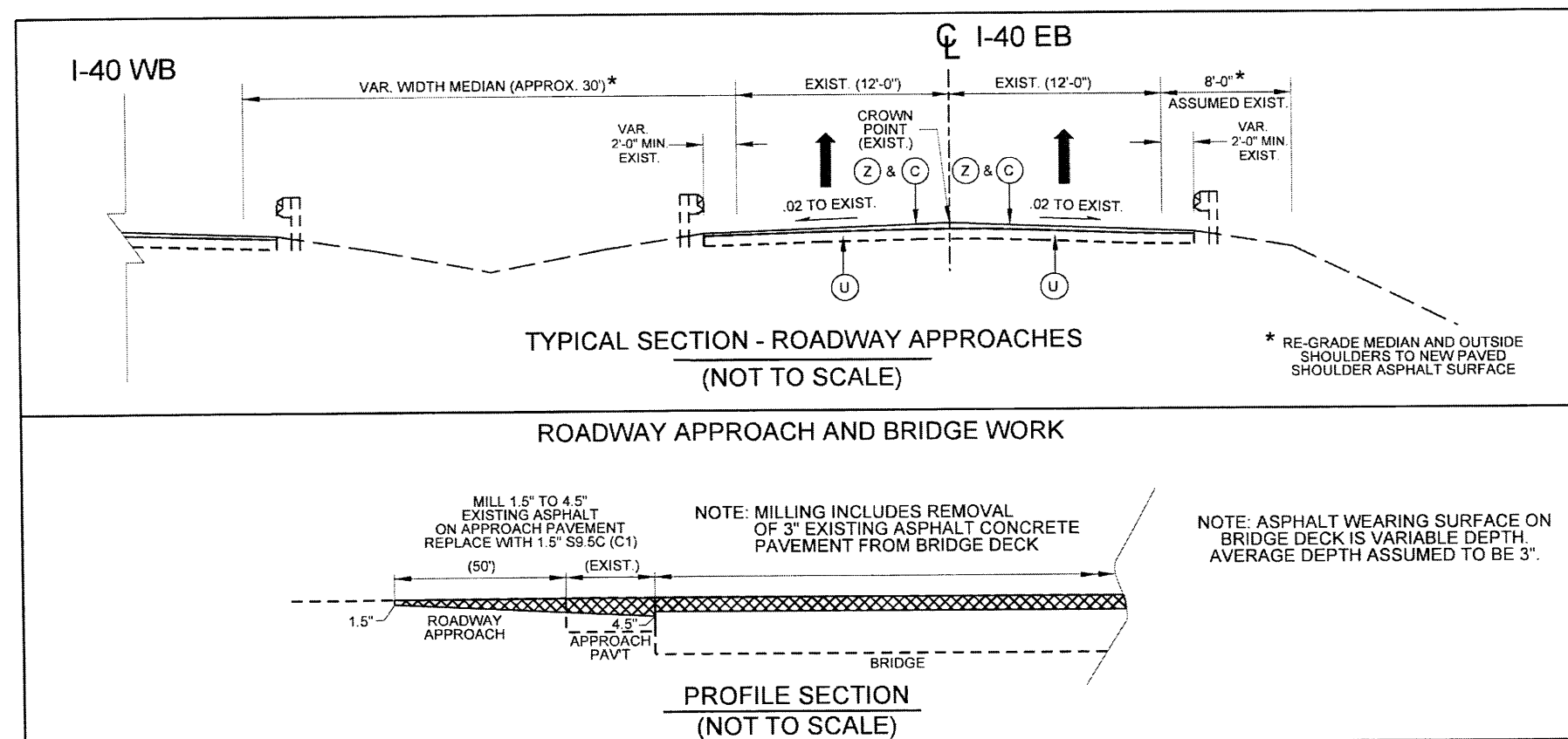
PROJECT REFERENCE NO.	SHEET NO.
NC BRIDGE 96	RDY-1

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "MICHAEL D. LINDGREN" at the bottom. Inside the ring, the words "PROFESSIONAL ENGINEER" are written in a circular path. In the center of the seal, the word "SEAL" is at the top, the number "25513" is in the middle, and the date "10/10/2012" is at the bottom. A handwritten signature, "Michael D. Lindgren", is written across the seal.

2/10/2012



DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED.
EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL
PHOTOGRAPHY NOT ACTUAL SURVEY.

NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

IREDELL COUNTY
BRIDGE #96
I-40 OVER
THIRD CREEK


REVISIONS

SYNOPSIS

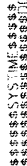
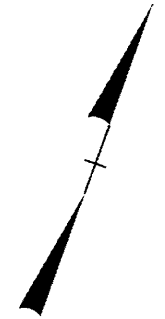
PROJECT REFERENCE NO.	SHEET NO.
NC BRIDGE 102	RDY-2

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

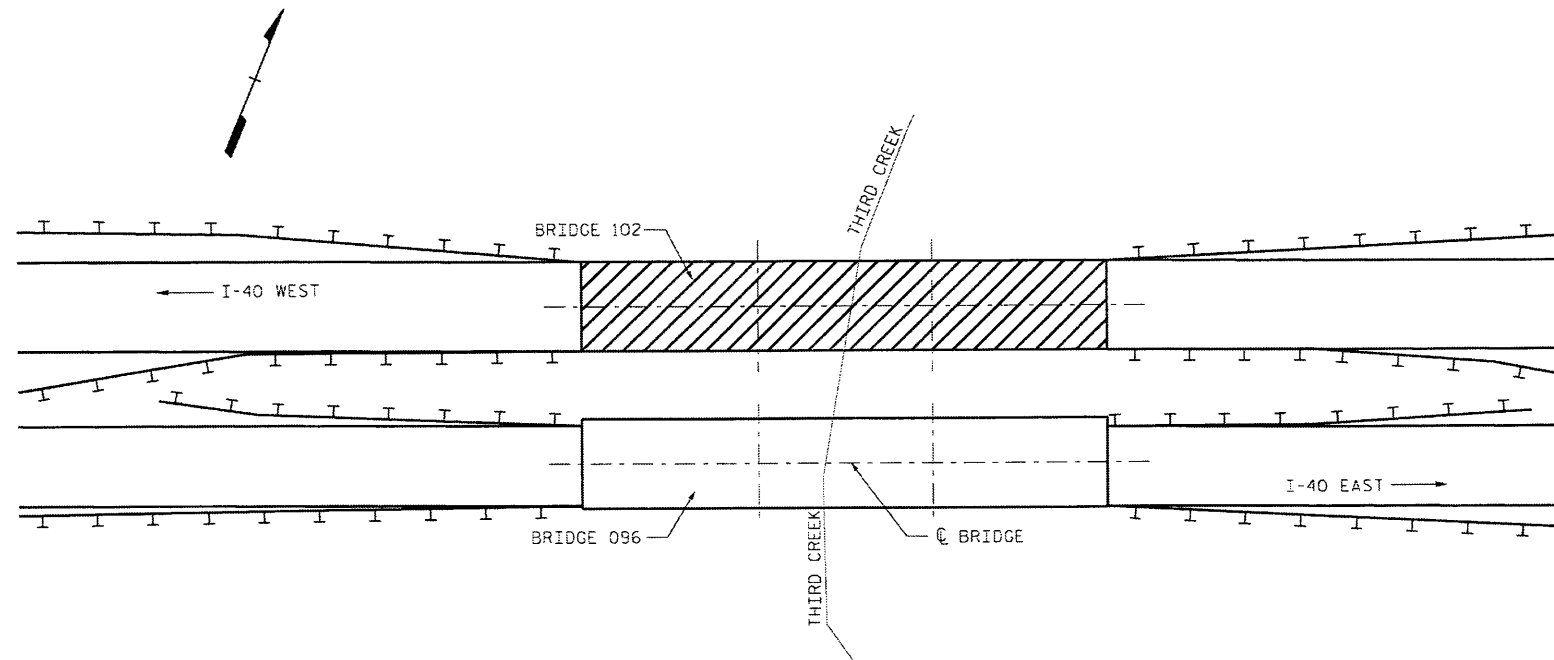


2/10/2012



NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

IREDELL COUNTY
BRIDGE #102
I-40 OVER
THIRD CREEK



BRIDGE 096 ON I-40 EASTBOUND

LOCATION: BRIDGE 480096, I-40 EBL OVER THIRD CREEK
1.0 MILES EAST OF JUNCTION SR 1512

BRIDGE 102, I-40 WBL. SEE SHEETS S-9 THRU S-16.

BRIDGE 096

TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I * SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	APPROACH PAVEMENT REPAIR
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SQ.FT.	SQ.YDS.
773.4	0	22.9	0	773.4	0	51.8	773.4	LUMP SUM	5,988	5

* QUANTITIES ARE ESTIMATES FROM BEST AVAILABLE DATA AND SHOULD BE CONSIDERED FOR INFORMATION PURPOSES ONLY. IF ANY CLASS III LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. BLOW THRU" CONTAINMENT AND FORMWORK DETAIL. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

FOR ROADWAY APPROACH PAVEMENT REPAIR, SEE SPECIAL PROVISIONS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

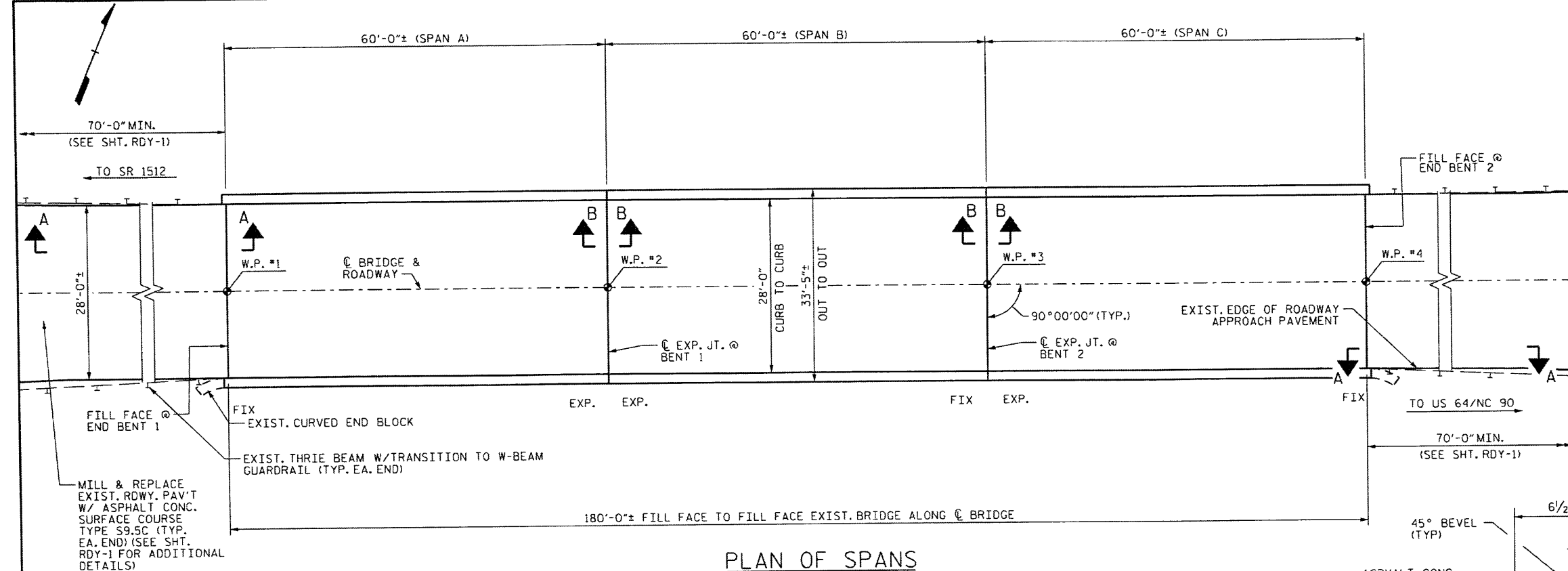
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
LOCATION SKETCH AND TOTAL BILL OF MATERIAL					
DECK REHAB. FOR BRIDGE NO. 096					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					16

Joseph T. Kelvington
2/15/2012
SEAL
13406
ENGINEER
JOSEPH T. KELVINGTON



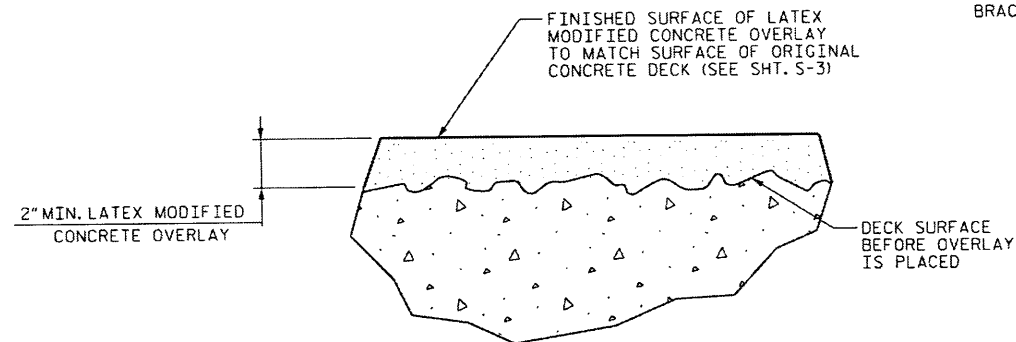
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-8858
Fax. (919) 851-7024
www.stantec.com
License No. F-0872

DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

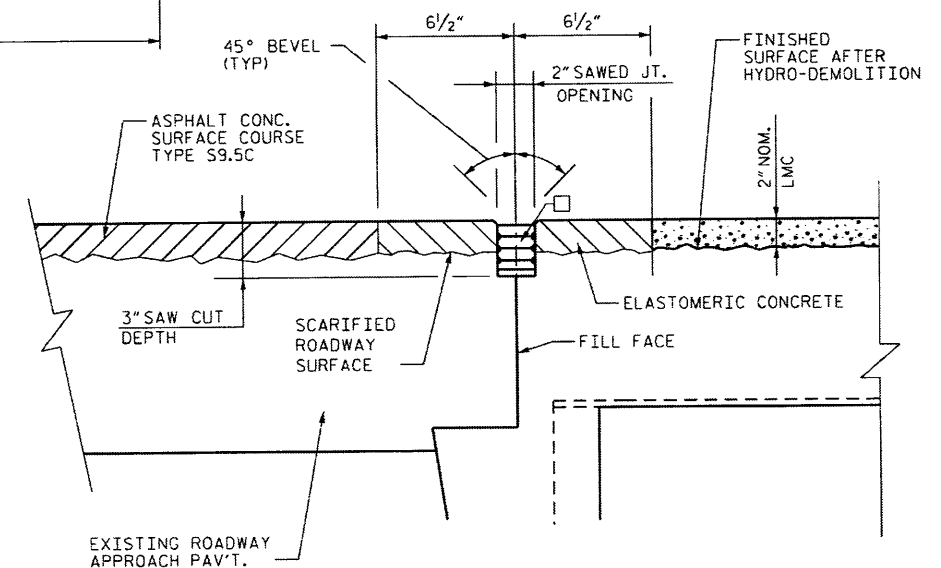


PLAN OF SPANS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

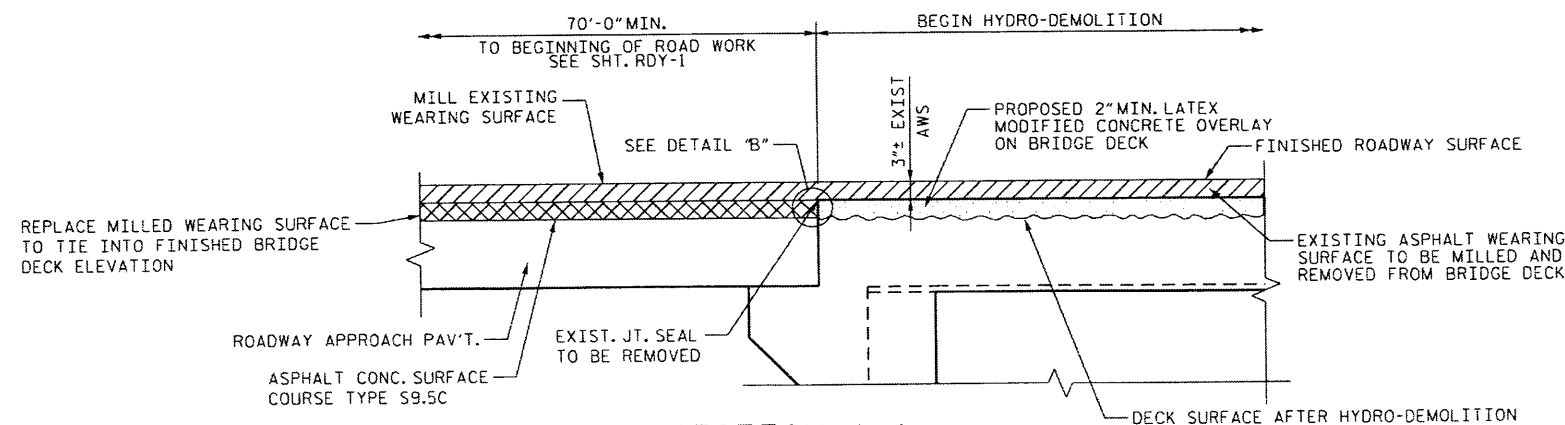


DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY



DETAIL B

□ - USE 2.5000" X 2.00" UNCOMPRESSED FOAM JOINT SEAL



SECTION A-A

NOTE: BRIDGE APPROACH PAVEMENT IS ASSUMED. REPAIR PAVEMENT AS REQUIRED AFTER SCARIFICATION IS COMPLETE. SEE SPECIAL PROVISIONS.

NOTES:
FOR HYDRO-DEMOLITION, 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. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-4.
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
FOR LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
FOR SECTION B-B, SEE SHT. NO. S-7.

PROJECT NO. BP-5300AA

IREDELL COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 096

REVISIONS						SHEET NO. S-2
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

John T. Kelvington
10/15/2012
SEAL
13406
ENGINEER



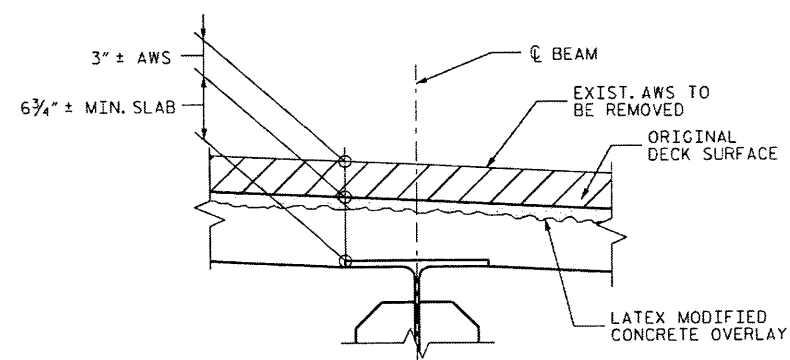
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Fax: (919) 851-7024
www.stantec.com
License No. F-0672

DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

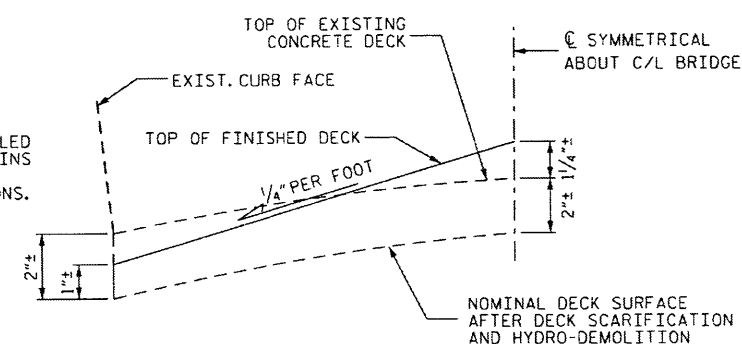
"VES" DENOTES VERY EARLY STRENGTH.

FOR TRAFFIC CONTROL PHASING AND DETAILS, SEE TRANSPORTATION
CONTROL PLANS.

ALL DIMENSIONS SHOWN ARE APPROXIMATE.

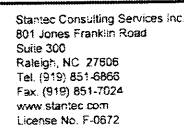


EXIST. SLAB BUILDUP



BRIDGE CROSS SLOPE SCHEMATIC FOR
DECK OVERLAY

PROJECT NO. BP-5300AA
IREDELL COUNTY
 STATION:



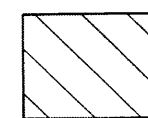
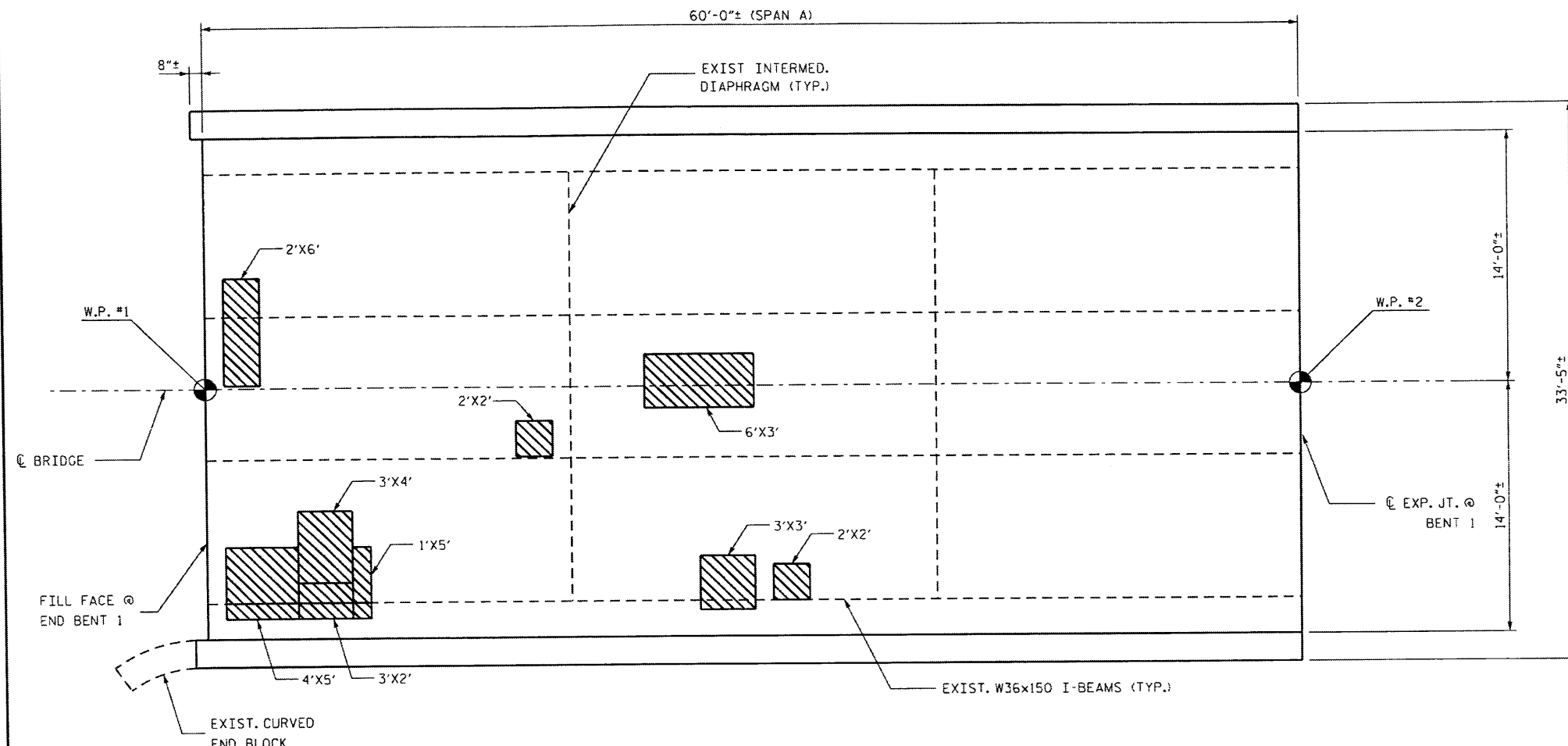
DRAWN BY : J. L. HENNEKES DATE : 7-15-11
CHECKED BY : J. T. KELVINGTON DATE : 7-15-11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

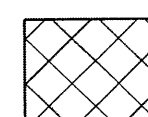
TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 096

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS 16
1			3			
2			4			



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

L' X W' = LENGTH OF AREA ALONG C BRIDGE X
WIDTH OF AREA NORMAL TO C BRIDGE ±

PLAN OF SPAN A - DECK REPAIRS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

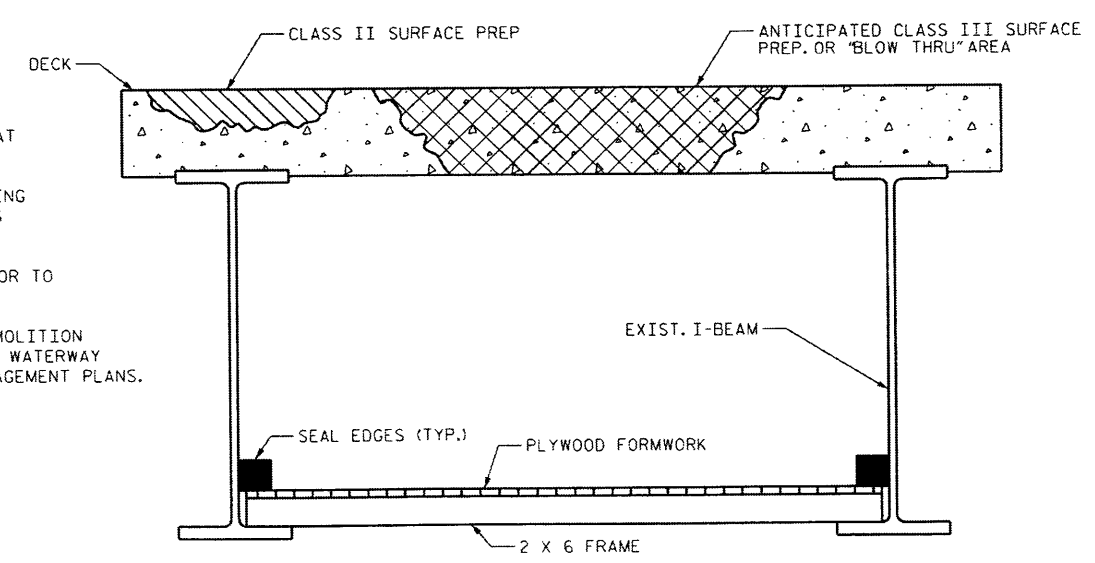
FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

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 ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND ADJUST PRODUCTION TO PREVENT DISCHARGE INTO THE WATERWAY IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.



TYP. "BLOW-THRU" CONTAINMENT AND FORMWORK

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN A					
DECK REHAB. FOR BRIDGE NO. 096					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-4 TOTAL SHEETS 16

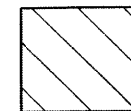
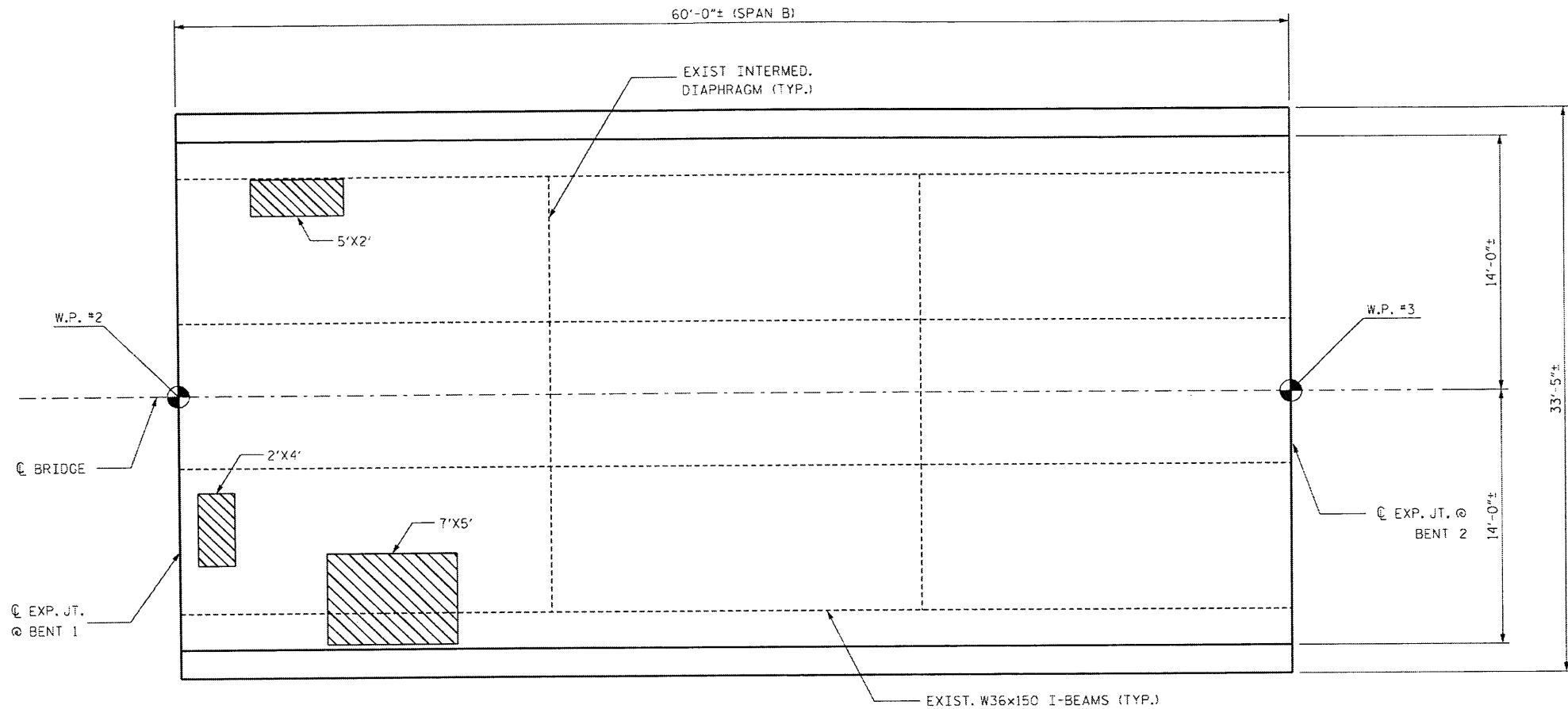
Joseph T. Kelvington
SEAL
13406
ENGINEER
JOSEPH T. KELVINGTON



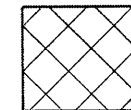
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801 Jones Franklin Road
Suite 300
Raleigh, NC 27605
Tel: (919) 851-6556
Fax: (919) 851-7024
www.stantec.com
License No. F-0672

DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

4:26:06 PM b1aton 2/9/2012 2011BP5300AA.dgn 096Ndr cawing\BP480096_RopofPLA.dgn



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L' X W' = LENGTH OF AREA ALONG CL BRIDGE X
WIDTH OF AREA NORMAL TO CL BRIDGE ±

PLAN OF SPAN B - DECK REPAIRS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

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 ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND ADJUST PRODUCTION TO PREVENT DISCHARGE INTO THE WATERWAY IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____



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801 Jones Franklin Road
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Fax. (919) 851-7024
www.stantec.com
License No. F-0972

DRAWN BY : J. L. HENNEKES DATE : 7-15-11
CHECKED BY : J. T. KELVINGTON DATE : 7-15-11



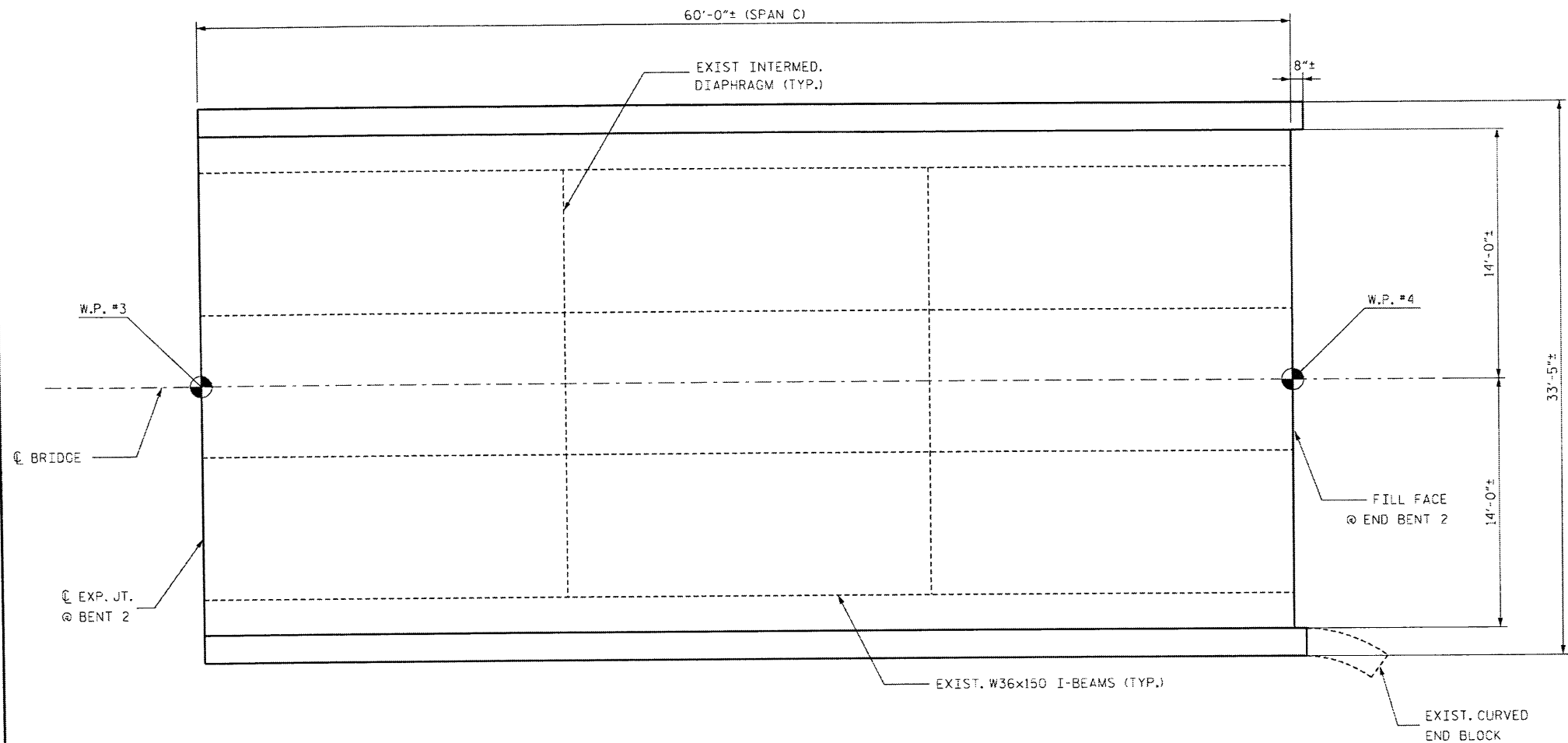
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS
SPAN B

DECK REHAB. FOR BRIDGE NO. 096

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-5
2			4			
TOTAL SHEETS						16

2: J:\Projects\BP-5300AA\Group 2\01\BP5300AA\101.dgn 09/15/2011 10:09:09 AM 2/9/2012 4:04:10 PM Brian



PLAN OF SPAN C - DECK REPAIRS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

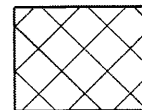
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND ADJUST PRODUCTION TO PREVENT DISCHARGE INTO THE WATERWAY IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

L' X W' = LENGTH OF AREA ALONG CL BRIDGE X
WIDTH OF AREA NORMAL TO CL BRIDGE ±

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

Joseph T. Kelvington
Professional Engineer
Seal No. 13406
State of North Carolina

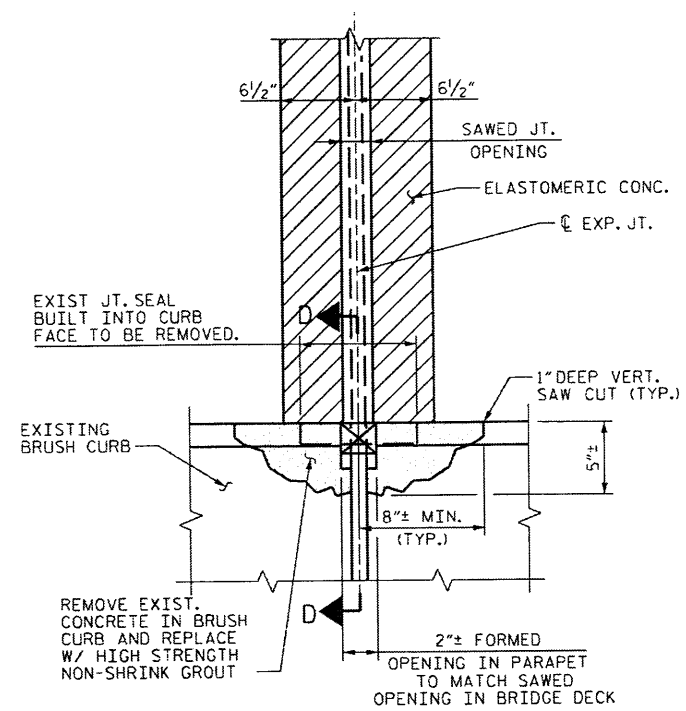
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN C					
DECK REHAB. FOR BRIDGE NO. 096					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-6					TOTAL SHEETS 16



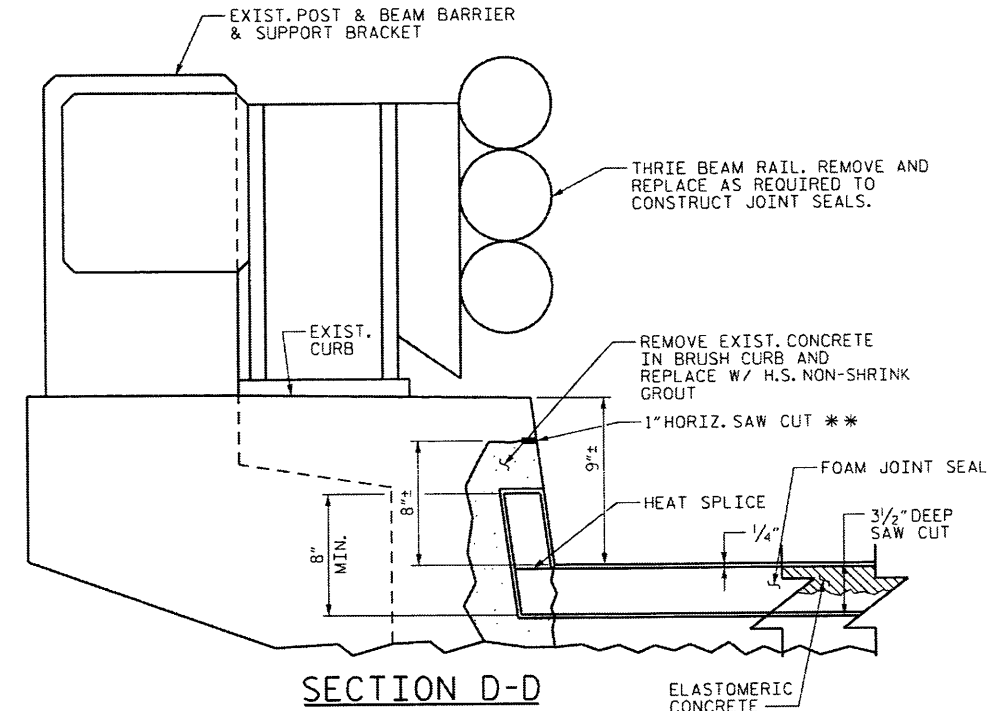
Stantec Consulting Services Inc.
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Raleigh, NC 27606
Tel. (919) 851-8866
Fax. (919) 851-7024
www.stantec.com
License No. F-0572

DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

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PARTIAL PLAN @ JOINT



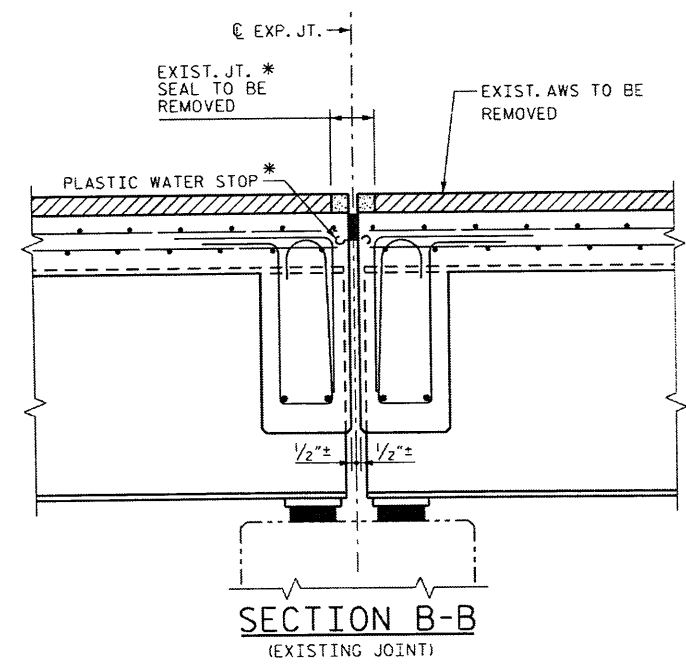
SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISIONS.
HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

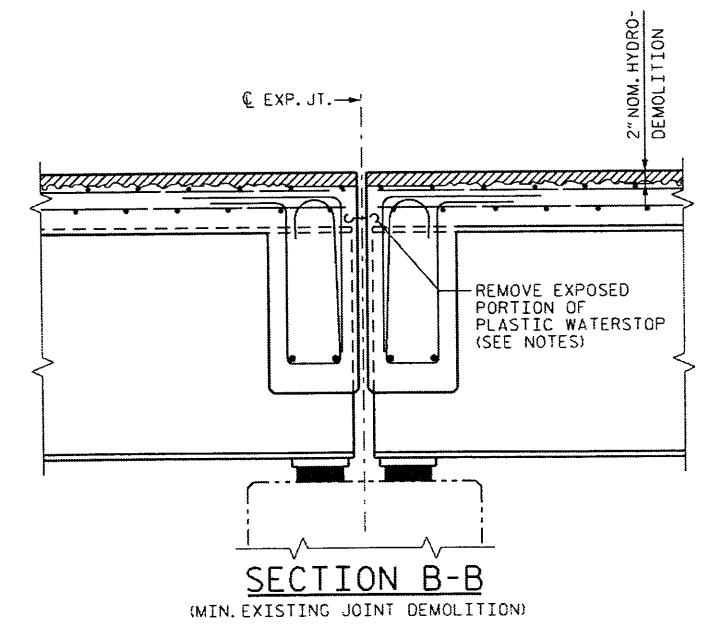
ELASTOMERIC CONCRETE

LOCATION	QTY
END BENT 1	8.2 C.F.
BENT 1	3.5 C.F.
BENT 2	3.5 C.F.
END BENT 2	8.2 C.F.

TOTAL ELASTOMERIC CONC. = 23.4 C.F.
TOTAL ELASTOMERIC CONC. = 0.9 C.Y.

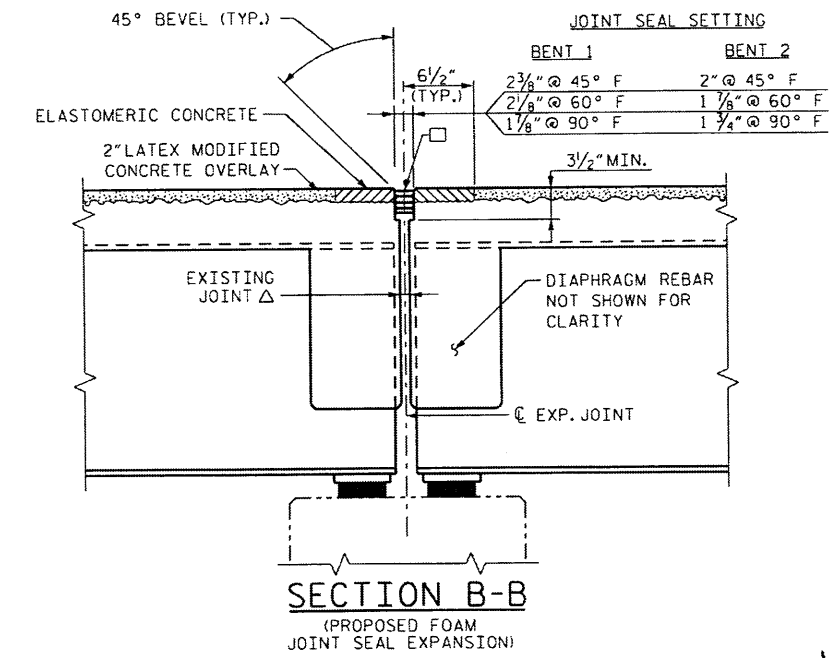


SECTION B-B
(EXISTING JOINT)



SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)

- NOTES:
1. ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED.
 2. RETAIN ALL EXIST. REINF. STEEL CLEAN AND REPAIR AS REQUIRED.




SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

- NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.
- THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.
- THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.
- ☐ USE 2.8125" x 2.50" UNCOMPRESSED SEAL @ BENTS 1 & 2.
- ☐ 1" EXIST. JOINT OPENING @ BENTS 1 & 2.

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

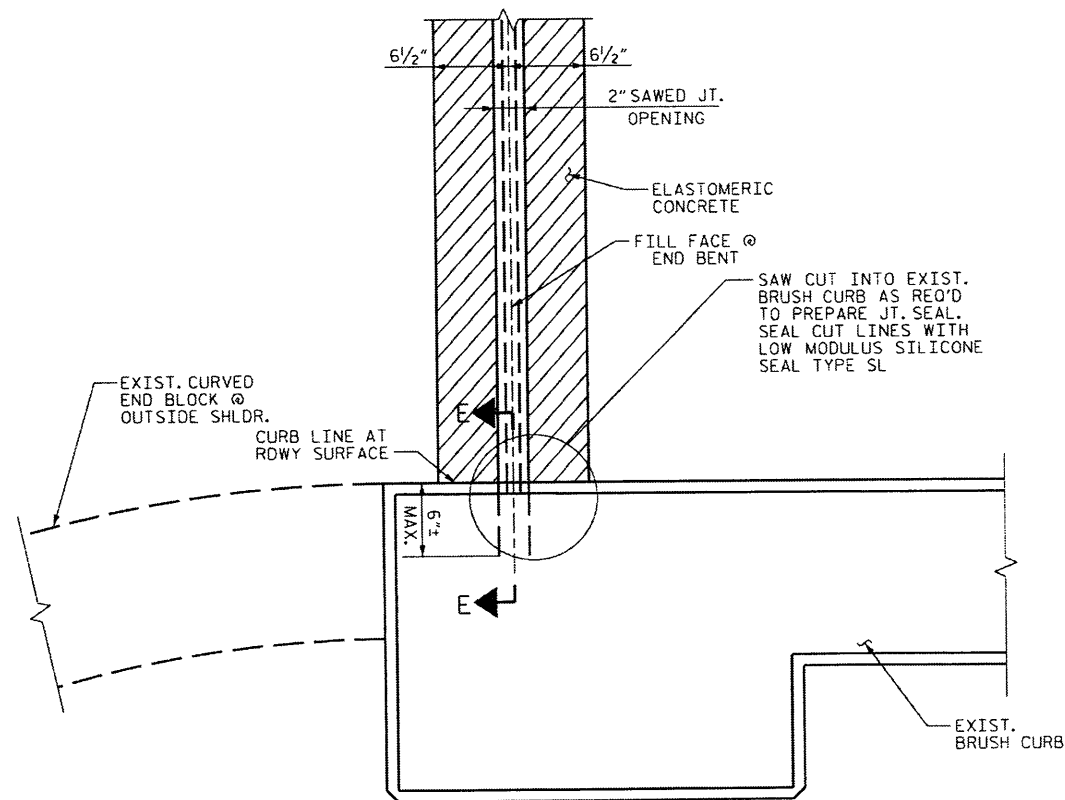
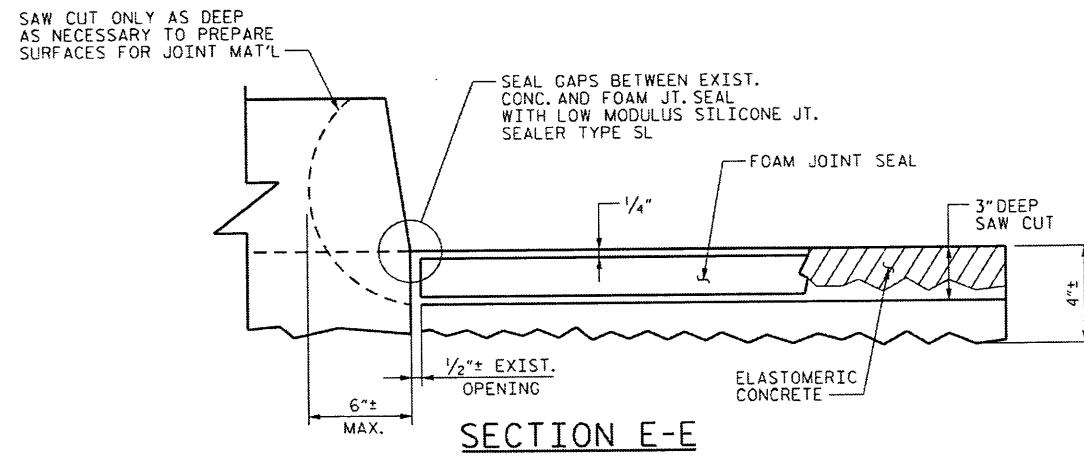
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
EXPANSION JOINT DETAILS					
DECK REHAB. FOR BRIDGE NO. 096					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-7					TOTAL SHEETS 16



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License No. F-0672

DRAWN BY: B. J. ELLIOT DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

Joseph T. Kelvington
Professional Engineer
No. 1406
State of North Carolina



PARTIAL PLAN @ END BENT #1
 (END BENT #2 SIMILAR)
 NOTE: BARRIER, END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.
 REMOVE AND REPLACE EXISTING THRIE BEAM RAILS AS NECESSARY TO CONSTRUCT JT. SEALS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
END BENT JOINT SEAL DETAILS					
DECK REHAB. FOR BRIDGE NO. 096					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					16

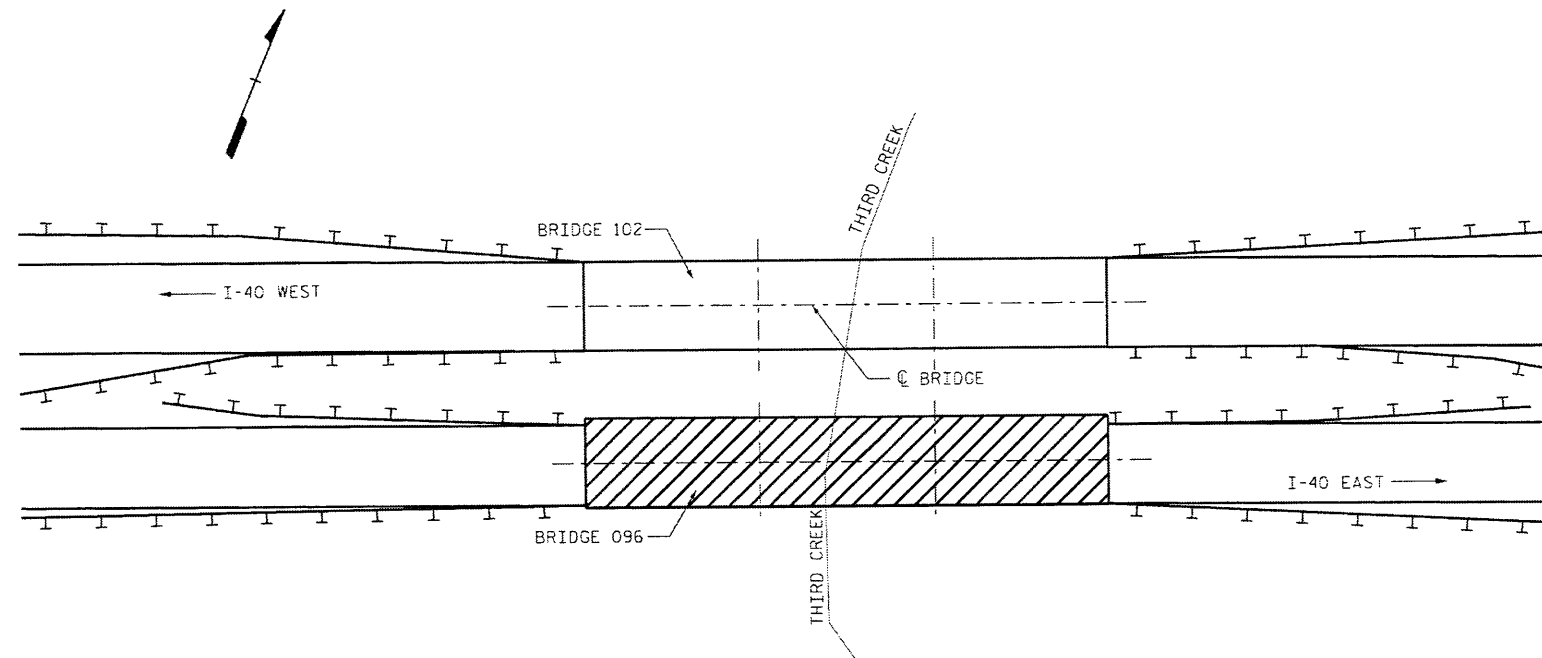
Joseph T. Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON



Stantec Consulting Services Inc.
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 Fax: (919) 851-7024
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DRAWN BY: J. L. HENNEKES DATE: 7-15-11
 CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

n:\Structural\res\Bridges\Group\2011\BP5300AA\BP-1.dgn 096\Drawing\BP480096.Det12.dgn 2/9/2012 4:26:14 PM borton



BRIDGE 102 ON I-40 WESTBOUND

LOCATION: BRIDGE 480102, I-40 WBL OVER THIRD CREEK
1.0 MILE EAST OF JUNCTION SR 1512

 BRIDGE 096, I-40 EBL. SEE SHEETS S-1 THRU S-8.

BRIDGE 102

TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	APPROACH PAVEMENT REPAIR
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SQ.FT.	SQ.YDS.
773.4	0	22.9	0	773.4	0	51.8	773.4	LUMP SUM	5,988	5

* QUANTITIES ARE ESTIMATES FROM BEST AVAILABLE DATA AND SHOULD BE CONSIDERED FOR INFORMATION PURPOSES ONLY. IF ANY CLASS III LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

FOR ROADWAY APPROACH PAVEMENT REPAIR, SEE SPECIAL PROVISIONS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL

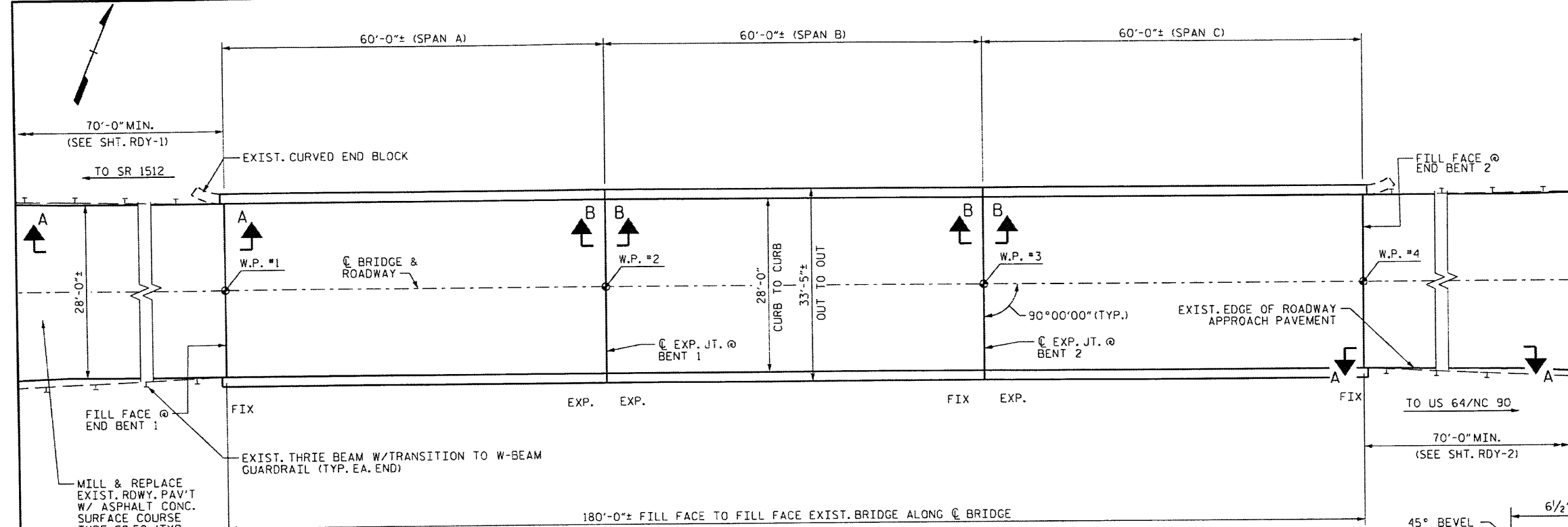
DECK REHAB. FOR BRIDGE NO. 102

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-9
2			4			TOTAL SHEETS 16



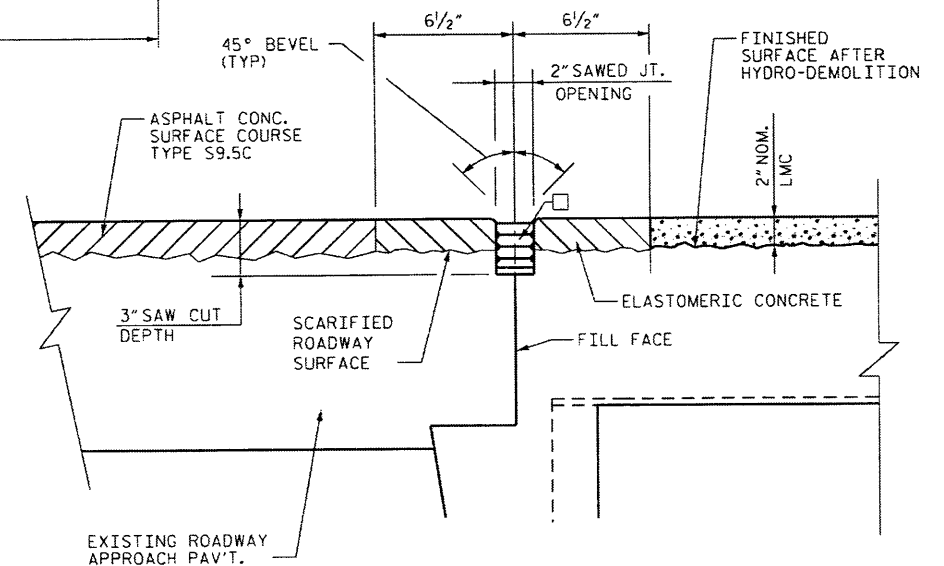
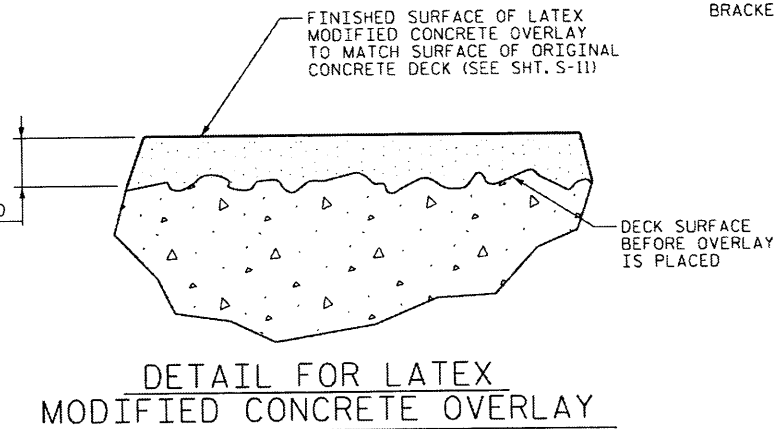
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License No. P-0672

DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11



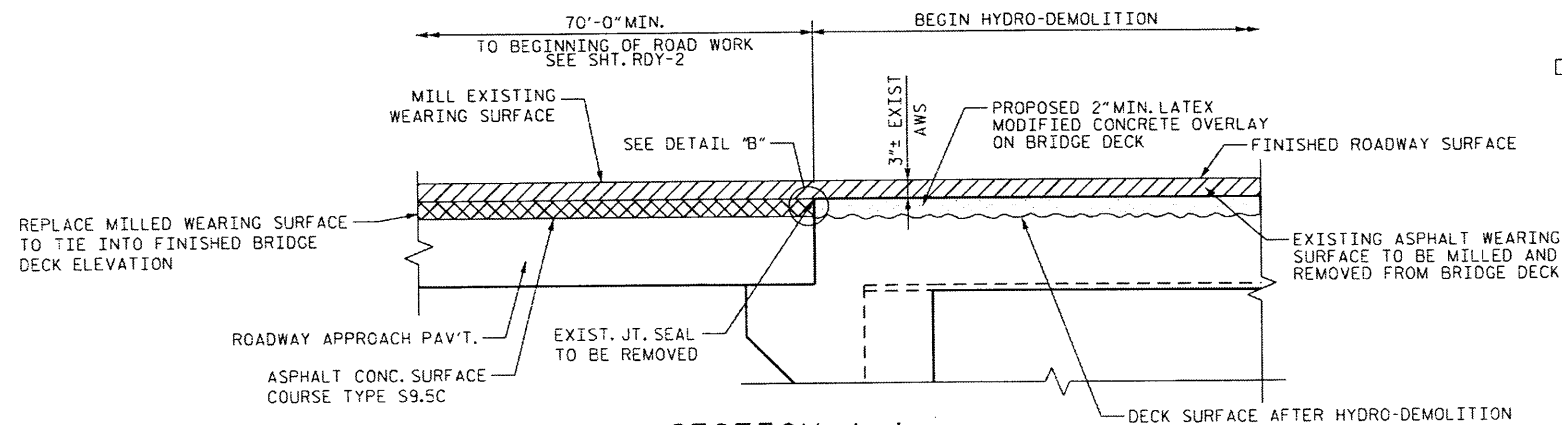
PLAN OF SPANS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.



DETAIL B

□ - USE 2.5000" X 2.00" UNCOMPRESSED FOAM JOINT SEAL



SECTION A-A

NOTE: BRIDGE APPROACH PAVEMENT IS ASSUMED. REPAIR PAVEMENT AS REQUIRED AFTER SCARIFICATION IS COMPLETE. SEE SPECIAL PROVISIONS.

NOTES:
FOR HYDRO-DEMOLITION, 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. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-12.
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
FOR LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
FOR SECTION B-B, SEE SHT. NO. S-15.

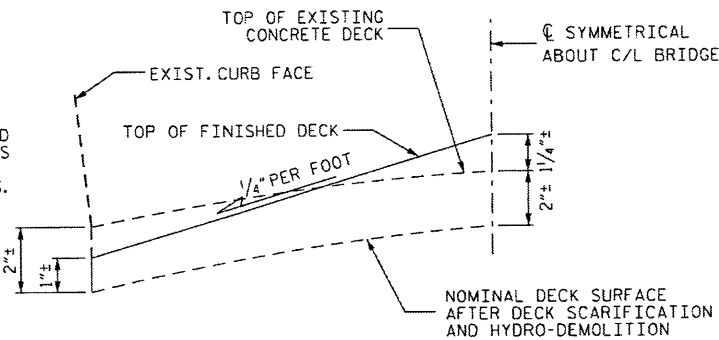
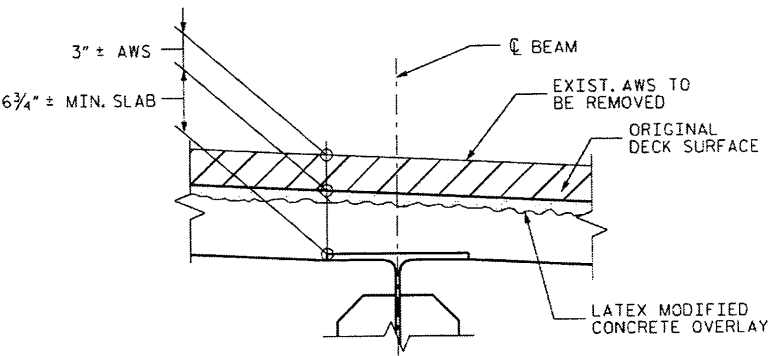
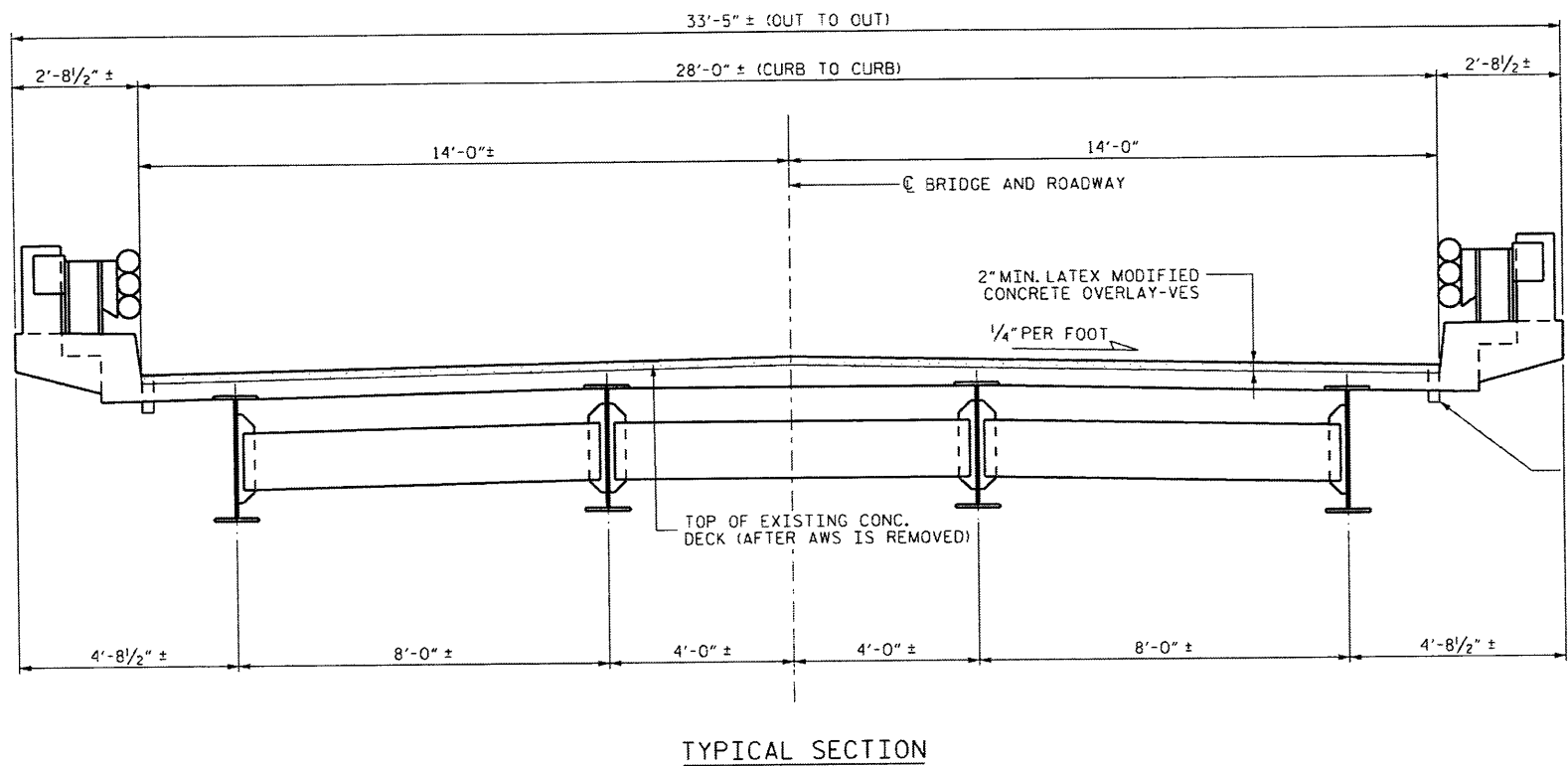
PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF BRIDGE					
DECK REHAB. FOR BRIDGE NO. 102					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					16
SHEET NO.					S-10



DRAWN BY: J. L. HENNEKES DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

NOTES:
"VES" DENOTES VERY EARLY STRENGTH.
FOR TRAFFIC CONTROL PHASING AND DETAILS, SEE TRANSPORTATION CONTROL PLANS.
ALL DIMENSIONS SHOWN ARE APPROXIMATE.



PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

Joseph J. Kelvington
2/15/2012
SEAL 13406
REGISTERED PROFESSIONAL ENGINEER
JOSEPH J. KELVINGTON

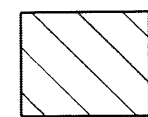
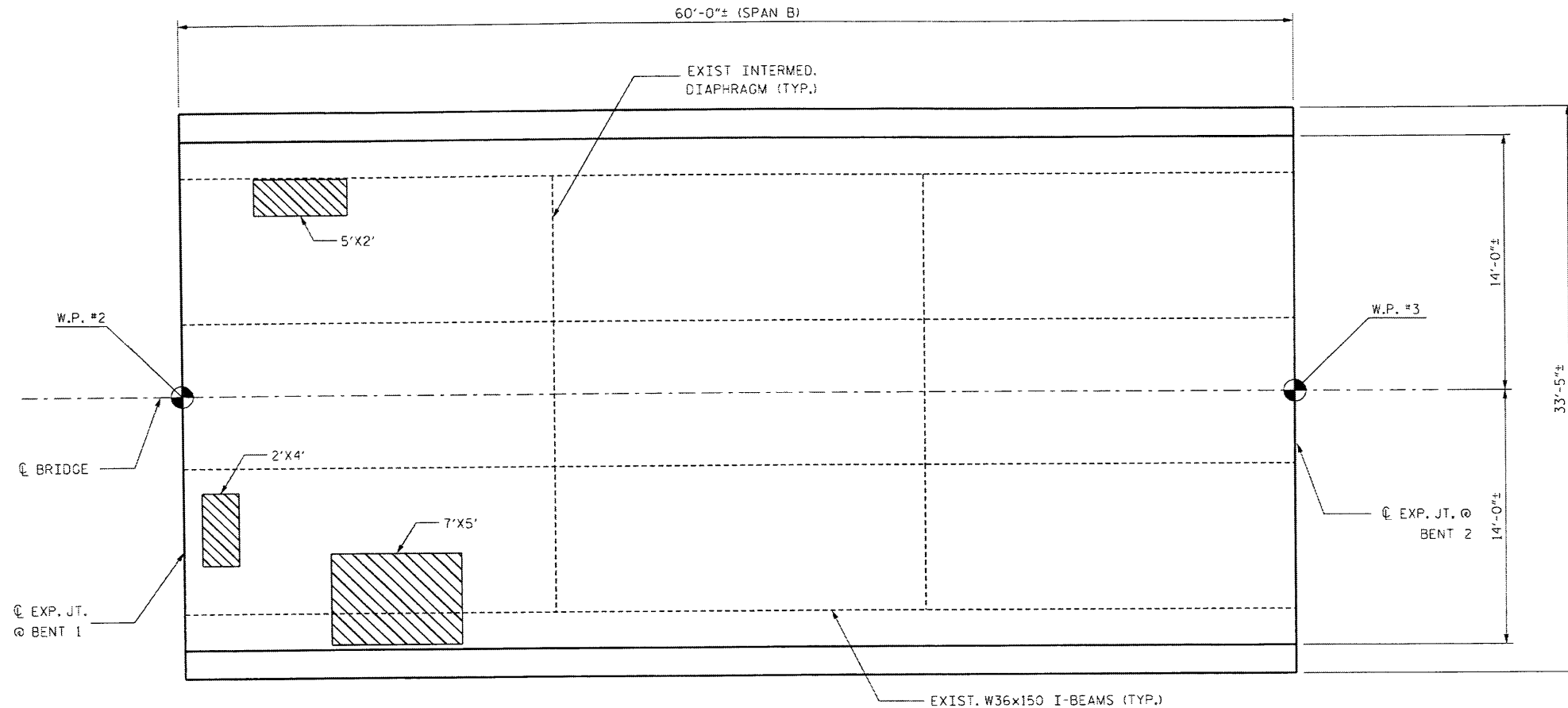
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION

REVISIONS						SHEET NO. S-11
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

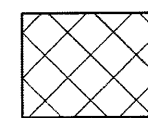


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DRAWN BY : J. L. HENNEKES DATE : 7-15-11
CHECKED BY : J. T. KELVINGTON DATE : 7-15-11



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L' X W' = LENGTH OF AREA ALONG CL BRIDGE X WIDTH OF AREA NORMAL TO CL BRIDGE ±

PLAN OF SPAN B - DECK REPAIRS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

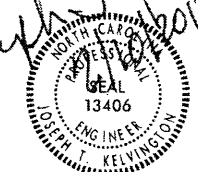
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND ADJUST PRODUCTION TO PREVENT DISCHARGE INTO THE WATERWAY IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
 STATION: _____

Joseph J. King
 7/15/2012



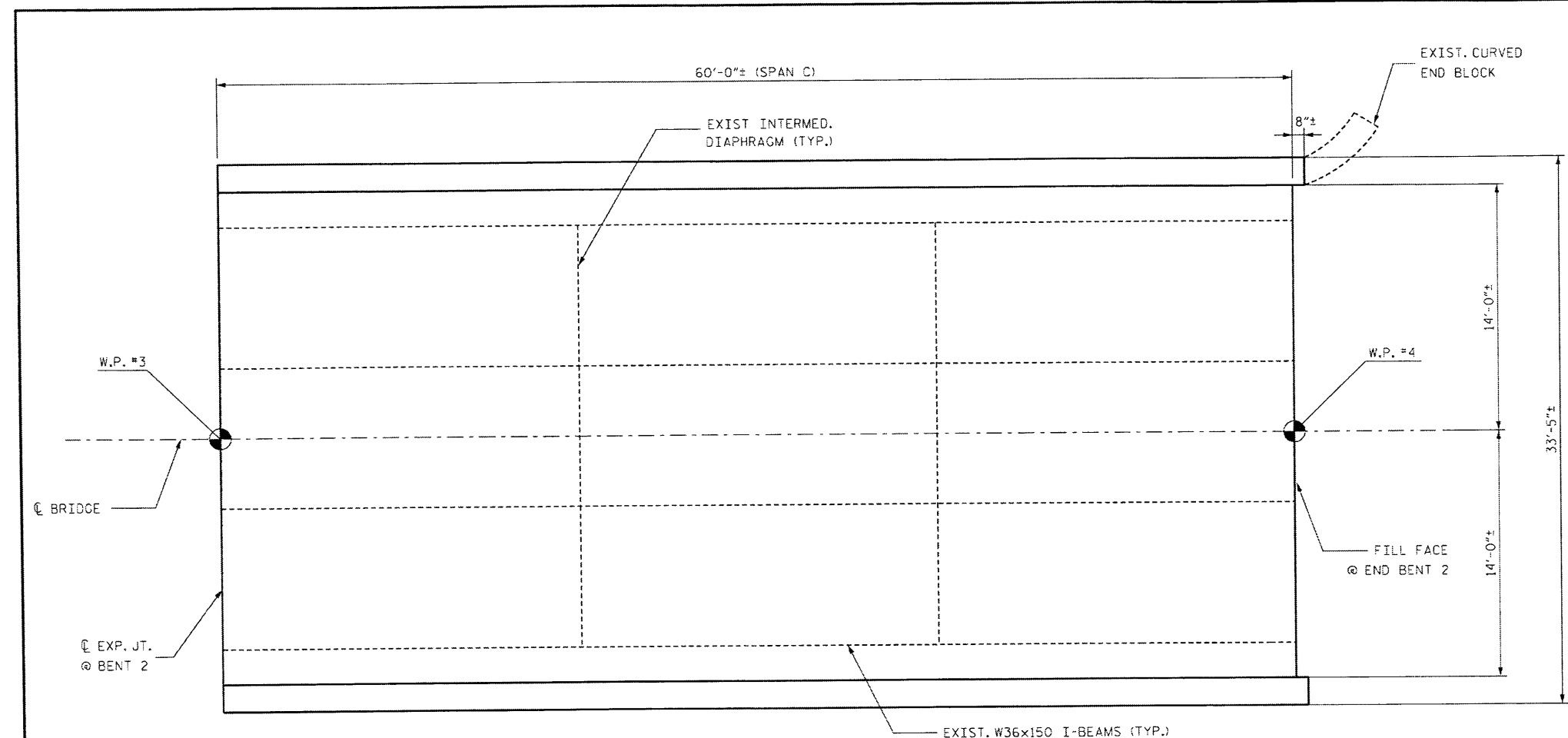
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN B					
DECK REHAB. FOR BRIDGE NO. 102					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-13
TOTAL SHEETS					16



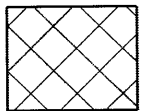
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 CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

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 2/13/2012 4:08:16 PM dlaton
 2/13/2012 4:08:16 PM dlaton



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

L' X W' = LENGTH OF AREA ALONG CL BRIDGE X
WIDTH OF AREA NORMAL TO CL BRIDGE ±

PLAN OF SPAN C - DECK REPAIRS

NOTE: END POSTS AND BARRIER POST BRACKETS NOT SHOWN FOR CLARITY.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT
SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III
SURFACE PREPARATION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL
BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF
HYDRO-DEMOLITION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS
REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT
WILL BE ENCOUNTERED @ THE PROJECT SITE.

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 ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO
BEGINNING WORK.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION
WORK AND ADJUST PRODUCTION TO PREVENT DISCHARGE INTO THE WATERWAY
IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS
SPAN C

DECK REHAB. FOR BRIDGE NO. 102

REVISIONS						SHEET NO. S-14
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			



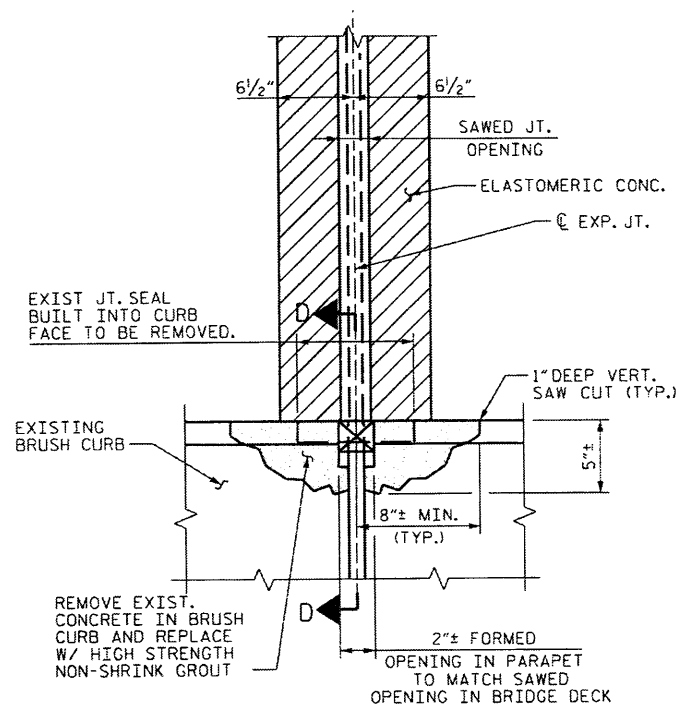
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DRAWN BY : J. L. HENNEKES DATE : 7-15-11
CHECKED BY : J. T. KELVINGTON DATE : 7-15-11

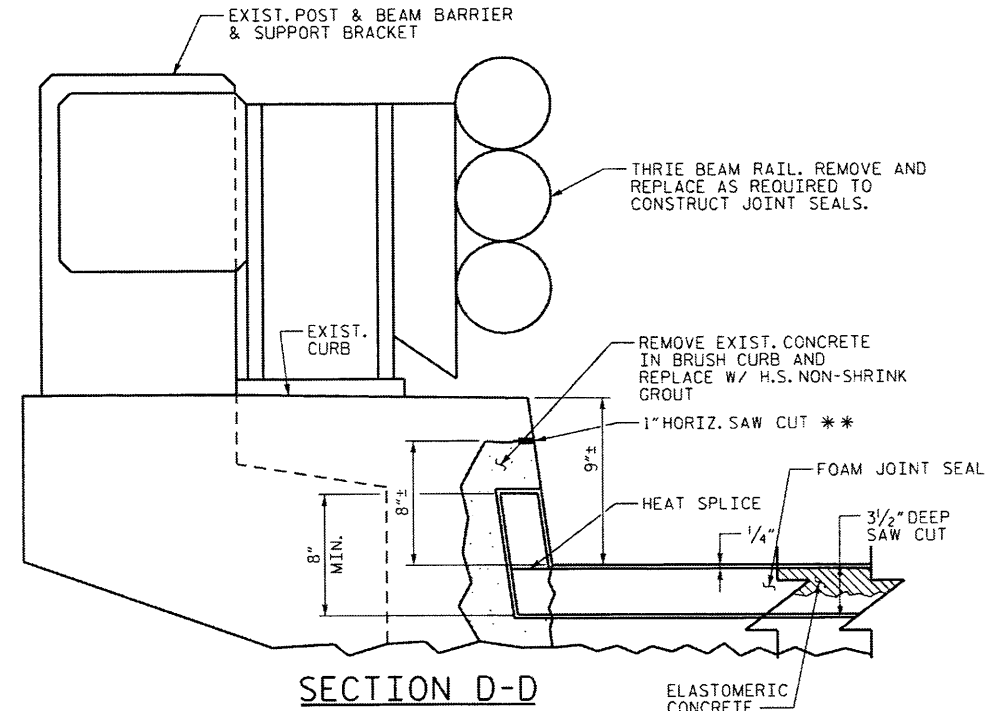
Joseph T. Kelvington
Professional Engineer
Seal 13406
North Carolina
7/15/2011

uctur65\Bridg Group 20\NBP5300AA\Bridg ID\N\Drawing\BP530002.Dwg 2/9/2012 4:08:16 PM blaton

sign:\structures\bridge_group\2011\BP5300AA\bridge_102\Drawing\BP48002.Det.dgn 2/9/2012 4:28:32 PM bclon



PARTIAL PLAN @ JOINT



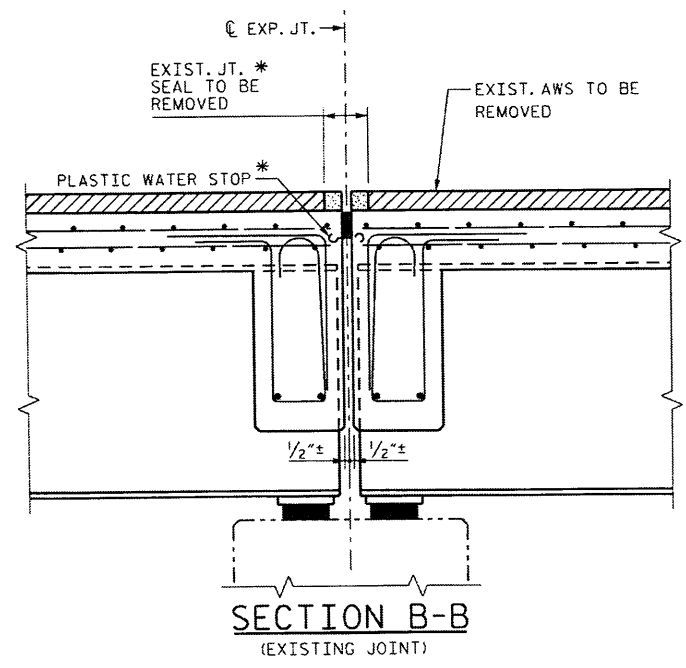
SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISIONS.
HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

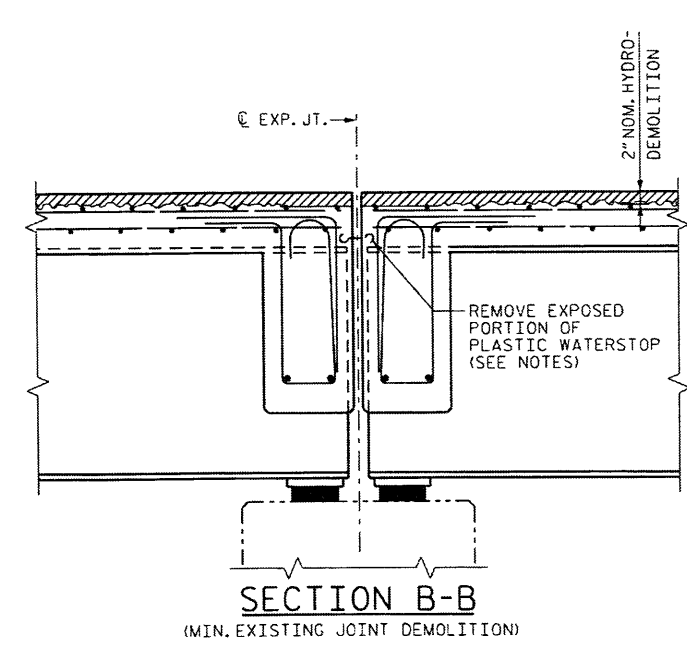
ELASTOMERIC CONCRETE

LOCATION	QTY
END BENT 1	8.2 C.F.
BENT 1	3.5 C.F.
BENT 2	3.5 C.F.
END BENT 2	8.2 C.F.

TOTAL ELASTOMERIC CONC. = 23.4 C.F.
TOTAL ELASTOMERIC CONC. = 0.9 C.Y.

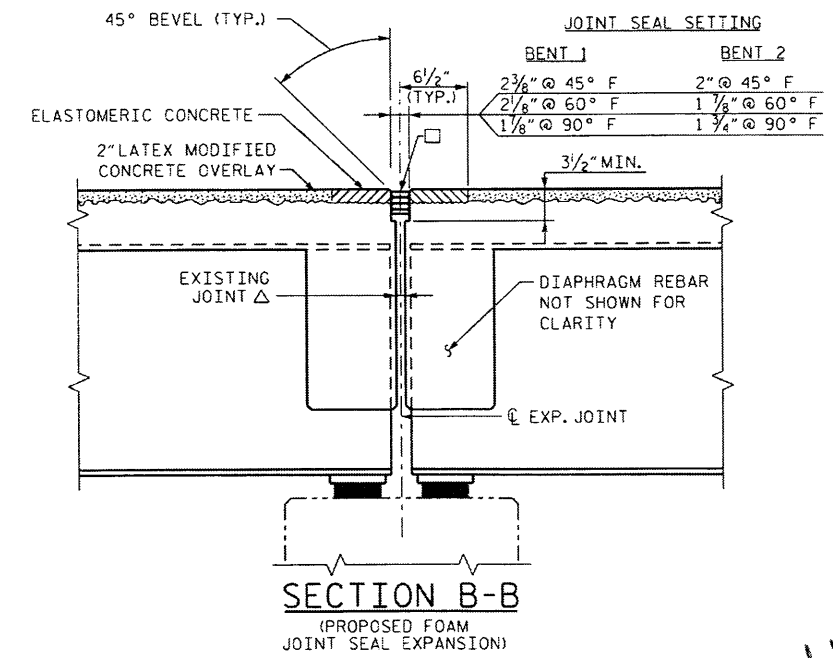


SECTION B-B
(EXISTING JOINT)




SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)

NOTES:
1. ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED.
2. RETAIN ALL EXIST. REINF. STEEL CLEAN AND REPAIR AS REQUIRED.



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.
THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.
□ USE 2.8125" x 2.50" UNCOMPRESSED SEAL @ BENTS 1 & 2.
△ 1" EXIST. JOINT OPENING @ BENTS 1 & 2.



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DRAWN BY: B. J. ELLIOT DATE: 7-15-11
CHECKED BY: J. T. KELVINGTON DATE: 7-15-11

Joseph T. Kelvington
JOSEPH T. KELVINGTON
13406
ENGINEER

PROJECT NO. BP-5300AA
IREDELL COUNTY
STATION: _____

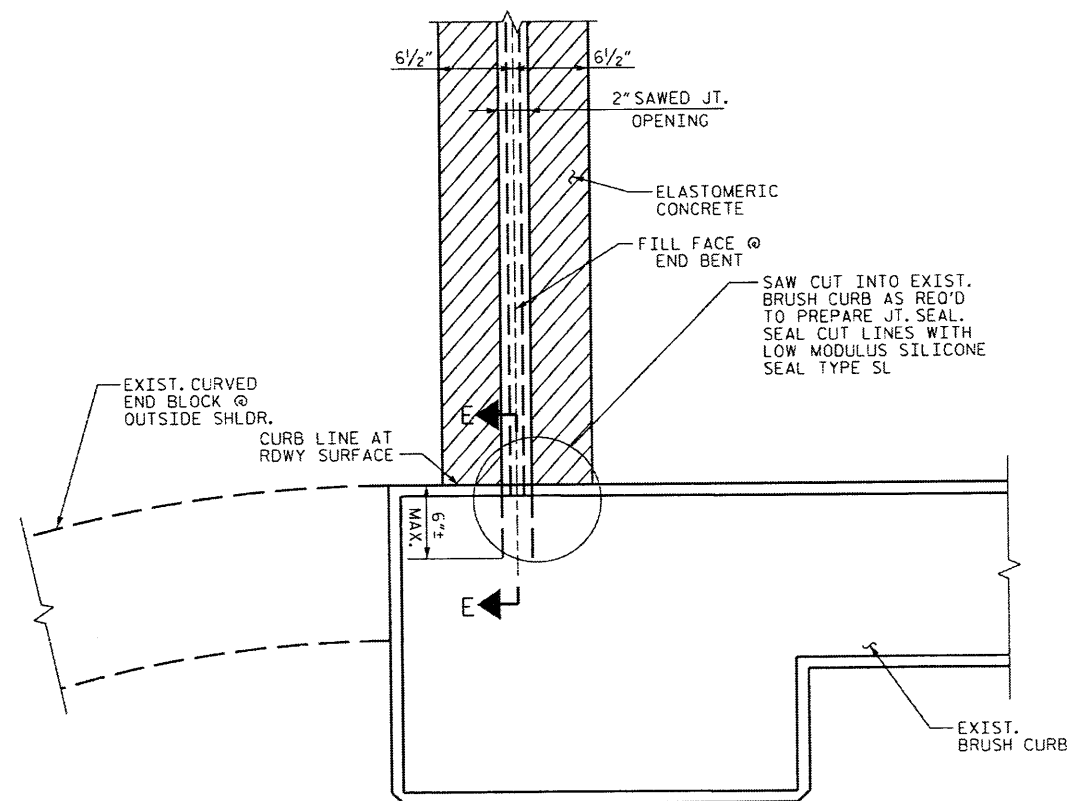
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 102

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15	
1			3			TOTAL SHEETS	
2			4			16	

SECTION E-E



PARTIAL PLAN @ END BENT #1

(END BENT #2 SIMILAR)

NOTE: BARRIER, END POSTS AND BARRIER POST BRACKETS
NOT SHOWN FOR CLARITY.

REMOVE AND REPLACE EXISTING THRIE BEAM
RAILS AS NECESSARY TO CONSTRUCT JT. SEALS.

PROJECT NO. BP-5300AA
IREDELL COUNTY
 STATION:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL
DETAILS

DECK REHAB. FOR BRIDGE NO. 102

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			16



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DRAWN BY : J. L. HENNEKES DATE : 7-15-11
CHECKED BY : J. T. KELVINGTON DATE : 7-15-11

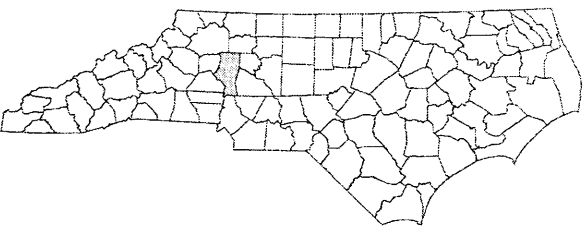
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102\BrowingBP48002.Det2.dgn			

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

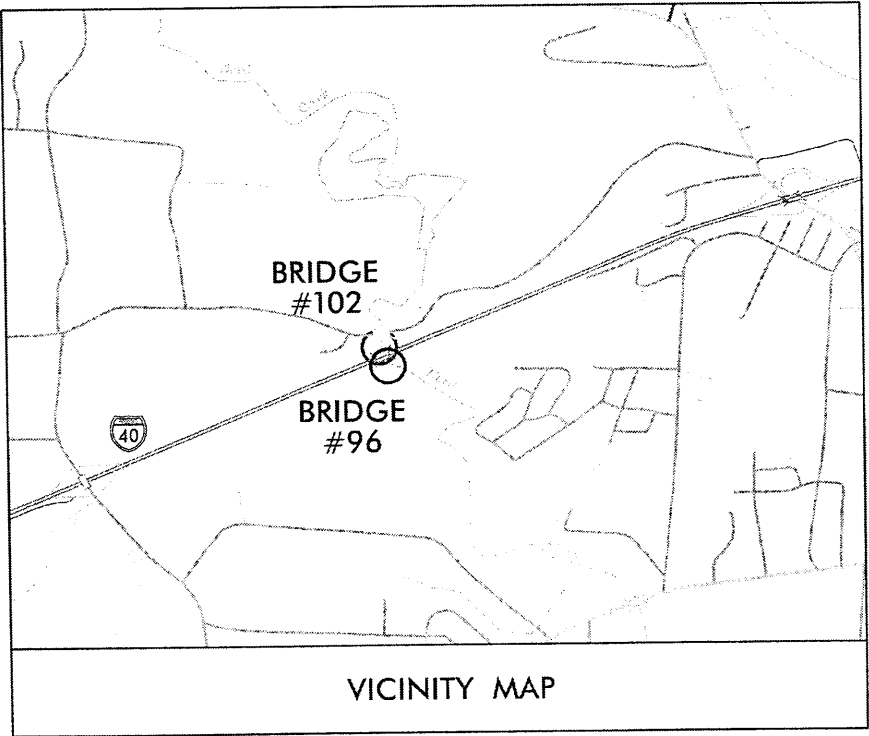
IREDELL COUNTY

DIVISION 12

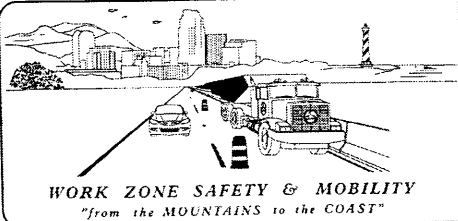


BRIDGE PRESERVATION

BRIDGE #96 AND #102 - I-40 OVER THIRD CREEK



VICINITY MAP



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT
RALEIGH, NC



PLAN PREPARED BY:
Stantec Consulting Services Inc.
801 Jones Franklin Road-Suite 300
Raleigh, NC 27605
Tel: 919.851.5888
Fax: 919.851.7024
www.stantec.com

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

APPROVED *Betsy L. Watson*
DATE: *February 10, 2012*

SEAL



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	PHASING
TMP-4	BRIDGE #102 - I-40 WB DETOUR ROUTE
TMP-5	BRIDGE #96 - I-40 EB DETOUR ROUTE
TMP-6	TYPICAL I-40 ROAD CLOSURE-ALL TRAFFIC EXITS
TMP-7	SINGLE LANE CLOSURES ON MULTI-LANE ROADWAYS

TRAFFIC MANAGEMENT STRATEGY

PROPOSED REPAIRS TO BRIDGE #96 & #102 WILL BE PERFORMED USING A COMBINATION OF DAY AND TIME RESTRICTED LANE CLOSURES AND TIME RESTRICTED I-40 ROAD CLOSURES WITH AN OFFSITE DETOUR. REFER TO SHEET TMP-3 FOR PHASING.

SHEET NO.

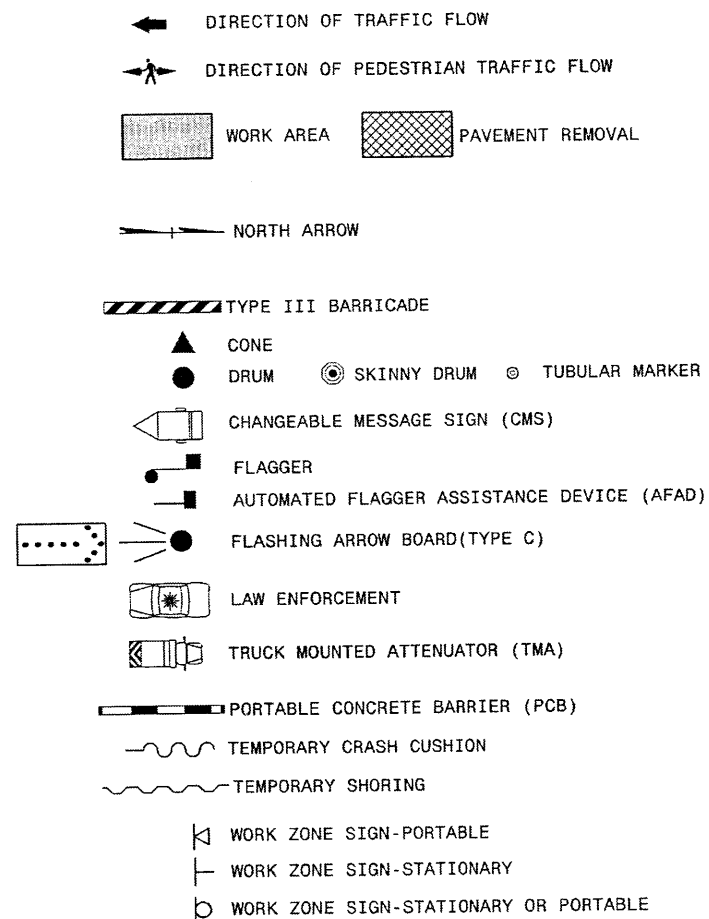
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WBS 45438.1.1

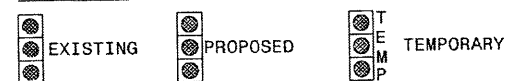
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2/9/2012
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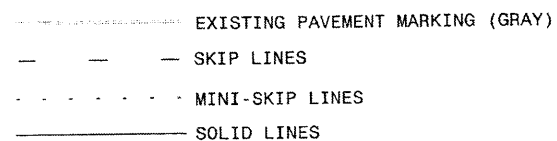
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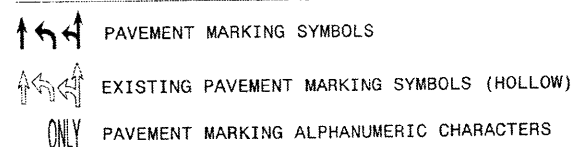
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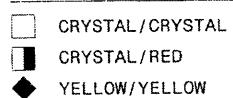
PAVEMENT MARKINGS



PAVEMENT MARKING SYMBOLS



PAVEMENT MARKERS



PROJ. REFERENCE NO.	SHEET NO.
BP-5300AA	TMP-1A

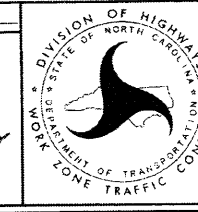
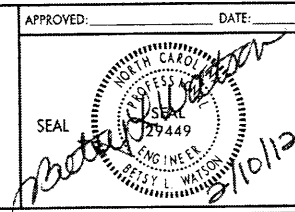
ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE



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LEGEND
&
ROADWAY STANDARD DRAWINGS

2/9/2012
U:\Traffic\TrafficControl\TCPlan Sheets\BP-5300AA I-40\TCPlan Sheets\BP-5300AA.TC.TMP.02. GENERAL NOTES.dgn
gkr 3/30/12

PROJ. REFERENCE NO.	SHEET NO.
BP-5300AA	TMP-2

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
I-40	6:00 A.M.-9:00 A.M. MONDAY THRU THURSDAY 4:00 P.M.-7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M.-8:00 P.M. FRIDAY 12:00 P.M.(NOON)-7:00 P.M. SUNDAY

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

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

- | ROAD NAME | DAY AND TIME RESTRICTIONS |
|-----------|---------------------------|
| I-40 | |
- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 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.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5) 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.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8) 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.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40	MONDAY-SUNDAY FROM 6:00 A.M. TO 8:00 P.M.

A TOTAL OF EIGHT (8) I-40 ROAD CLOSURE PERIODS WILL BE ALLOWED FOR BOTH DIRECTIONS OF I-40. ONLY ONE DIRECTION OF I-40 WILL BE ALLOWED TO BE CLOSED DURING EACH PERIOD.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- F) 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.
- G) 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.
- H) 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.

ROAD CLOSURES

- I) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO CLOSING A ROADWAY TO TRAFFIC. PROVIDE A SCHEDULE OF PLANNED ROAD CLOSURES TO THE ENGINEER.
- J) PROVIDE SIGNING AND DEVICES FOR ROAD CLOSURES ACCORDING TO THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE ALL SIGNS AND DEVICES FOR ROAD CLOSURES WHEN NOT IN EFFECT.
- K) PROVIDE OFFSITE DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE OFFSITE DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION. ALL OFFSITE DETOUR ROUTES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- M) WHEN CLOSING A ROADWAY OR DRIVEWAY PLACE TYPE III BARRICADES COMPLETELY ACROSS THE ROADWAY OR FROM CURB TO CURB. ATTACH BARRICADE MOUNTED "ROAD CLOSED" SIGN R11-2 AT ALL CLOSURE LOCATIONS. IF LOCAL TRAFFIC IS TO BE MAINTAINED STAGGER THE BARRICADES TO ALLOW ACCESS.
- N) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.

PAVEMENT EDGE DROP OFF REQUIREMENTS

O) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAVE AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

P) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF 500 FT. EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

Q) WHEN TRAFFIC IS ALLOWED ON MILLED PAVEMENT INSTALL BLACK ON ORANGE "ROUGH PAVEMENT" SIGNS (W8-2), AS DIRECTED BY THE ENGINEER.

PAVEMENT MARKINGS AND MARKERS

R) REPLACE ANY OBLITERATED PAVEMENT MARKINGS BEFORE OPENING LANES OR A ROADWAY TO TRAFFIC. PAINT MAY BE USED UNTIL THE FINAL MARKINGS ARE INSTALLED.

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

ROAD NAME	MARKING	PAVEMENT MARKER
I-40	POLYUREA	SNOWPLOWABLE


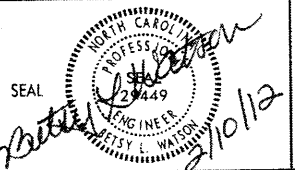

MISCELLANEOUS

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

U) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.

V) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

W) CHANGEABLE MESSAGE SIGN MESSAGES SHOWN ARE EXAMPLES. OTHER MESSAGES MAY BE USED AS CONDITIONS WARRANT. ALL MESSAGES AND LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INCORPORATING.

 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel: (919) 651-6886 Fax: (919) 651-7024 www.stantec.com License No. F-0572	APPROVED: _____ DATE: _____ 		GENERAL NOTES
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PHASING

DECK PRESERVATION OF BRIDGE #96 AND BRIDGE #102 I-40 ACROSS THIRD CREEK

PERFORM ALL WORK USING LANE CLOSURES OR ROAD CLOSURES FOLLOWING THE RESTRICTIONS SET FORTH IN THE GENERAL NOTES.

CLOSE THE AFFECTED DIRECTION OF I-40 WHEN PERFORMING BRIDGE DECK HYDRO-DEMOLITION AND CONCRETE POURING. PROVIDE AN OFFSITE DETOUR DURING THE ROAD CLOSURES. REFER TO SHEETS TMP-4,5,6.

DO NOT CLOSE BOTH DIRECTIONS OF I-40 AT THE SAME TIME.

DO NOT CLOSE LANES IN BOTH DIRECTIONS OF I-40 AT THE SAME TIME.

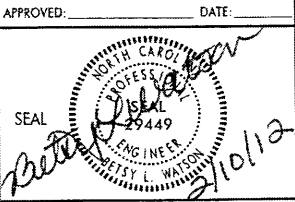
A TOTAL OF EIGHT (8) I-40 ROAD CLOSURE PERIODS WILL BE ALLOWED FOR BOTH DIRECTIONS OF I-40. ONLY ONE DIRECTION OF I-40 WILL BE ALLOWED TO BE CLOSED DURING EACH PERIOD.

MILLING, SHOULDER, PAVING AND GUARDRAIL WORK MAY BE PERFORMED DURING THE ROAD CLOSURE PERIODS OR BY USING LANE CLOSURES AT OTHER TIMES. REFER TO ROADWAY STANDARD DRAWING 1101.02 SHEET4.

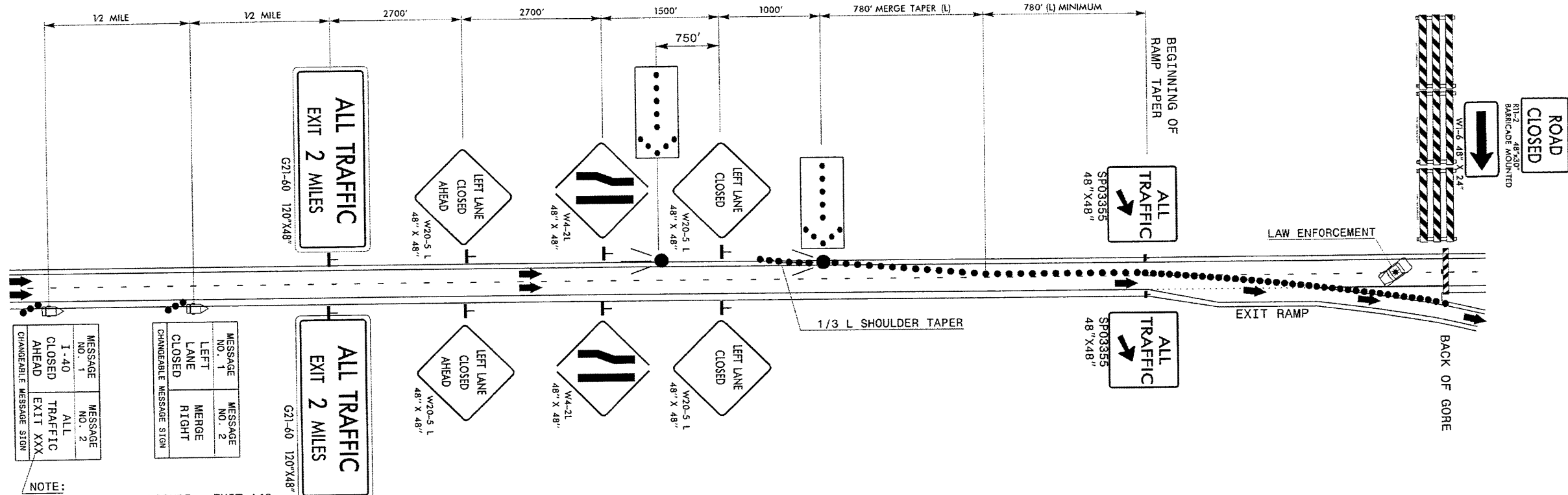
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PHASING




NOTE:
DURING I-40 WB CLOSURE - EXIT 148
DURING I-40 EB CLOSURE - EXIT 146

EXAMPLE MESSAGES PRIOR TO ROAD CLOSURE FOR ADVANCE PUBLIC INFO			
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
I-40 WEST CLOSURE FRI 8 PM	I-40 WEST CLOSURE FRI 8 PM	I-40 WEST CLOSURE FRI 8 PM	I-40 WEST CLOSURE FRI 8 PM
CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN

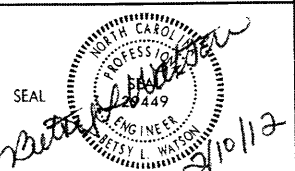
NOTES


1. 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. USE PACE VEHICLES IN A ROLLING ROAD BLOCK TO INSTALL/REMOVE BARRICADES AND DRUMS DIRECTING TRAFFIC ONTO THE EXIT RAMP.
2. REMOVE THE ROAD CLOSURE AND LANE CLOSURE DEVICES WHEN WORK IS NOT BEING PERFORMED, WHEN NO LONGER NEEDED, OR WHEN DIRECTED BY THE ENGINEER.
3. PLACE ARROW BOARDS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW BOARDS 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 BOARD(REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
4. 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.
5. CHANGEABLE MESSAGE SIGN MESSAGES SHOWN ARE EXAMPLES. OTHER MESSAGES MAY BE USED AS CONDITIONS WARRANT. ALL MESSAGES AND LOCATIONS MUST BE PRE-APPROVED BY THE ENGINEER.
6. USE STATIONARY SIGNS AND REMOVE OR COVER WHEN ROAD CLOSURE IS NOT IN EFFECT. PORTABLE SIGNS MAY BE USED FOR OPERATIONS LASTING LESS THAN 3 DAYS.



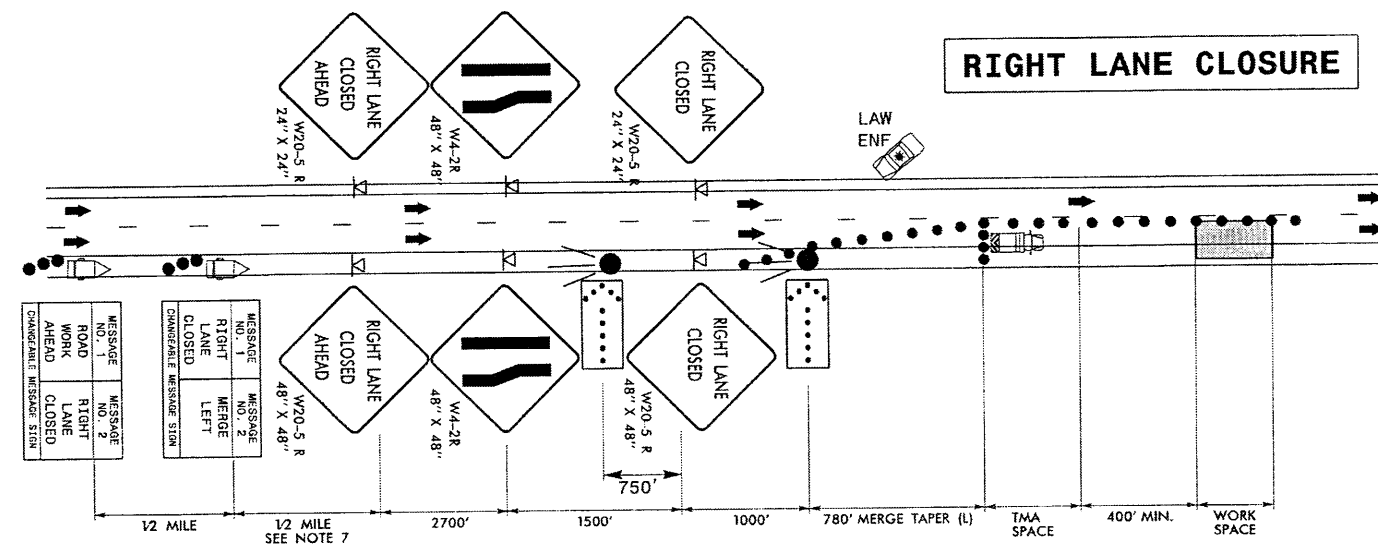
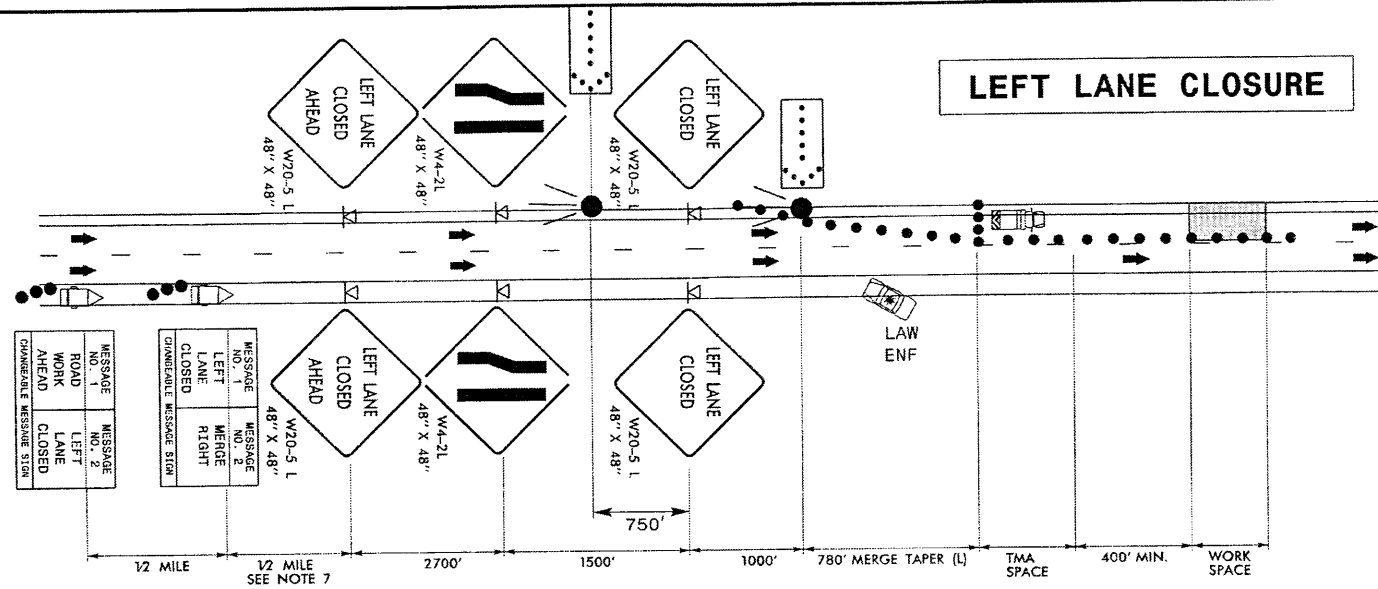
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APPROVED: _____ DATE: _____





TYPICAL I-40 ROAD CLOSURE
ALL TRAFFIC EXITS



NOTES

1. 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.
2. STATIONARY SIGNS SHOULD BE USED IF THE LANE CLOSURE WILL BE IN PLACE FOR LONGER THAN 3 CONSECUTIVE DAYS.
3. SIGNS ARE NOT REQUIRED ON THE LEFT SIDE OF THE ROADWAY WHEN THERE IS NOT ENOUGH ROOM FOR PLACEMENT. AT CONCRETE BARRIER LOCATIONS CLAMP ATTACHMENTS AND SMALLER SIGNS MAY BE USED.
4. PLACE ARROW BOARDS ON THE SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW BOARDS 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 BOARD (TABLE 2).
5. 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.
6. POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY OR AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC AND MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.
8. 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, REMOVE LANE CLOSURE DEVICES, COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW AND MESSAGE BOARDS.

 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	APPROVED: _____ DATE: _____ SEAL Brett L. Watson 2/10/12	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	SINGLE LANE CLOSURES ON MULTI-LANE ROADWAYS
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