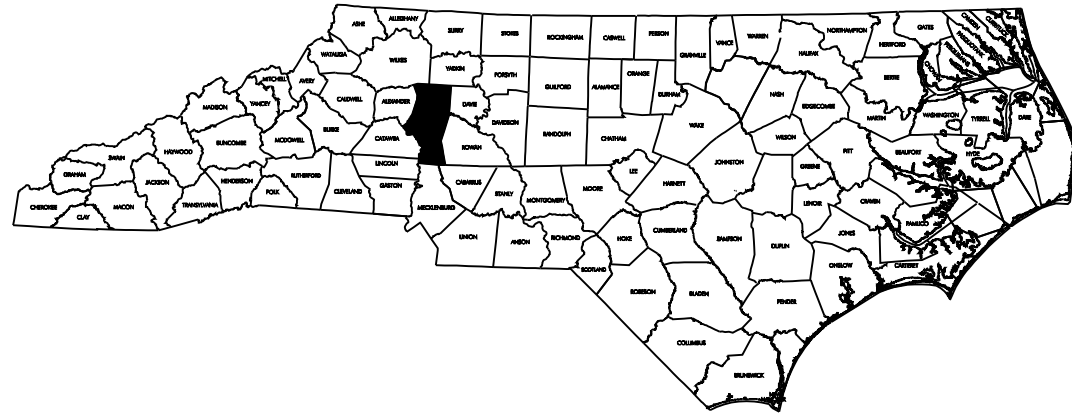


CONTRACT NO. D000016 TIP PROJECT: B-4700L

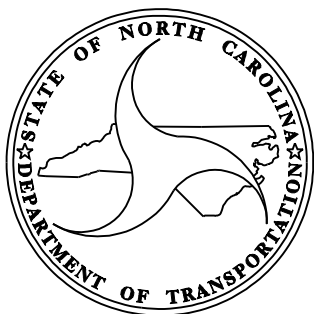
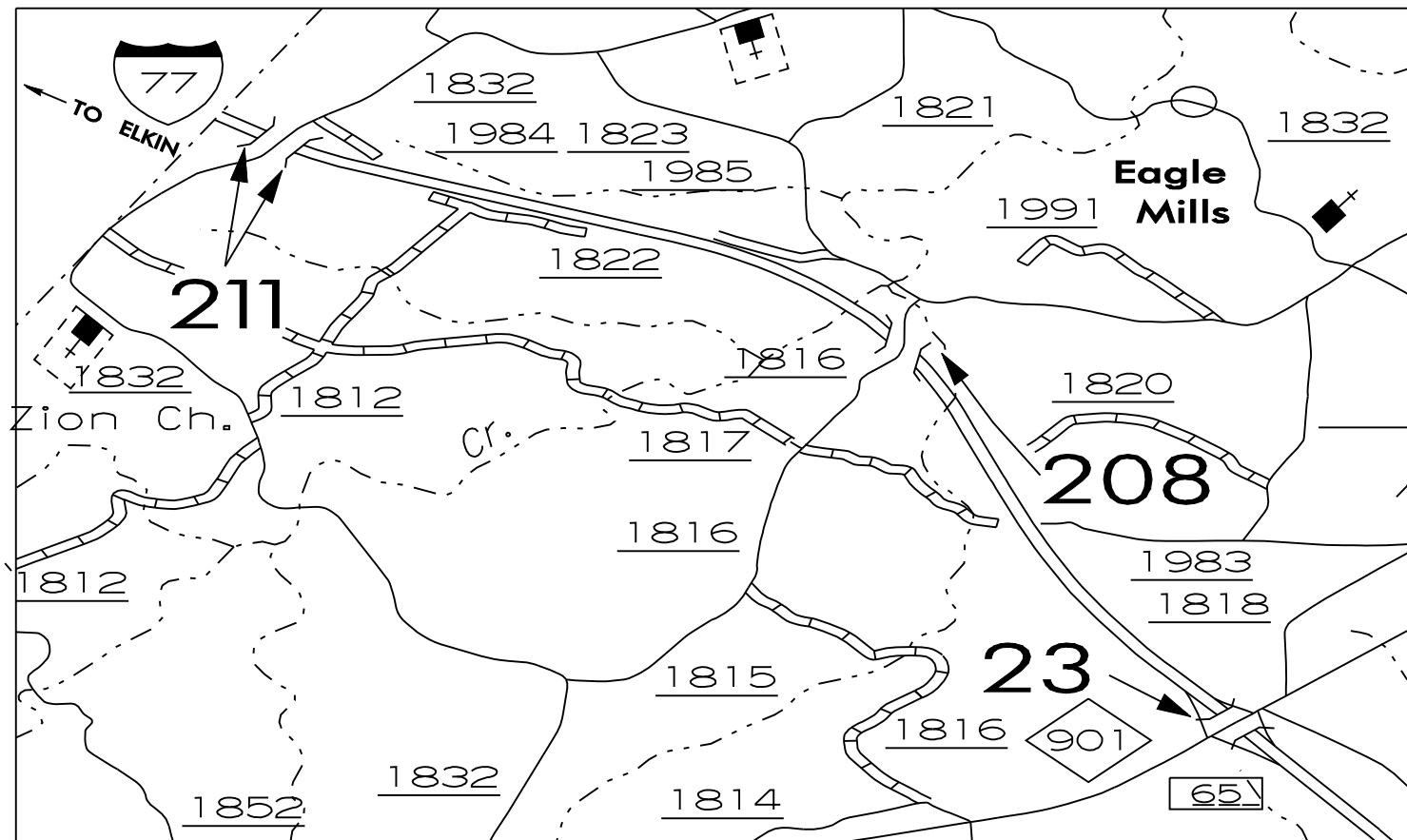


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

IREDELL COUNTY

**LOCATION: NC 901, SR 1816, SR 1832, ACROSS I77
TYPE OF WORK: CLEANING & PAINTING OF
BRIDGE #23, #208, #211 IN IREDELL COUNTY.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4700L	1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
36727.1.1	BRNHS-0005(504)	P.E.	
36727.3.13	BRNHS-0005(370)	CONST	



DESIGN DATA

PROJECT LENGTH

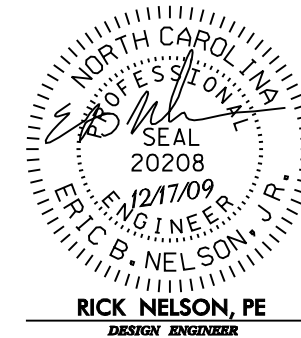
LENGTH STRUCTURE PROJECT = 3.50 MILE

Prepared In the Office of:
BRIDGE MANAGEMENT UNIT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS
LETTING DATE:
DECEMBER 17, 2009

DAN HOLDERMAN, PE
STATE BRIDGE
MANAGEMENT ENGINEER

MIKE SUMMERS
BRIDGE MANAGEMENT
PROJECT MANAGER



RICK NELSON, PE
DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**PLAN FOR PROPOSED
TRAFFIC CONTROL**

IREDELL COUNTY

LOCATION: BRIDGE NO.S 23, 208 AND 211 .

TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE PAINTING

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- WORK AREA

TRAFFIC CONTROL DEVICES

- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- PORTABLE CONCRETE BARRIER
- TEMPORARY CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
TCP-2	GENERAL NOTES
TCP-3	VICINITY MAP AND PROJECT PHASING
TCP-4	DETAIL FOR RIGHT AND LEFT LANE CLOSURES FOR I-77
TCP-5	DETAIL FOR TREATMENT OF RIGHT LANE CLOSURES IN THE VICINITY OF EXIT RAMP.

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WBS 36727.3.13

TIP PROJECT: B-4700L

APPROVED: DATE: 10/20/09	PLAN PREPARED BY: BETSY L. WATSON, PE GEORGE KARAGEORGE	Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel: 919.851.6866 Fax: 919.851.7024 www.stantec.com
	TRAFFIC CONTROL ENGINEER TRAFFIC CONTROL DESIGNER	

GENERAL NOTES

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

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

LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
ALL ROADS	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY AND 4:00 P.M.-6:00 P.M. MONDAY THRU FRIDAY

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

ROAD NAME
ALL ROADS

HOLIDAY

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING SHEET TCP-4 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) DO NOT INSTALL MORE THAN 4 MILES OF LANE CLOSURE ON I-77 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- I) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON I-77.
- J) PROVIDE A MINIMUM OF 1 MILE BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING


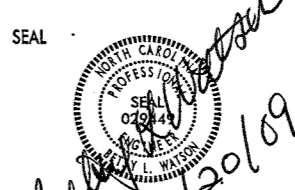
L) ENSURE ALL SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

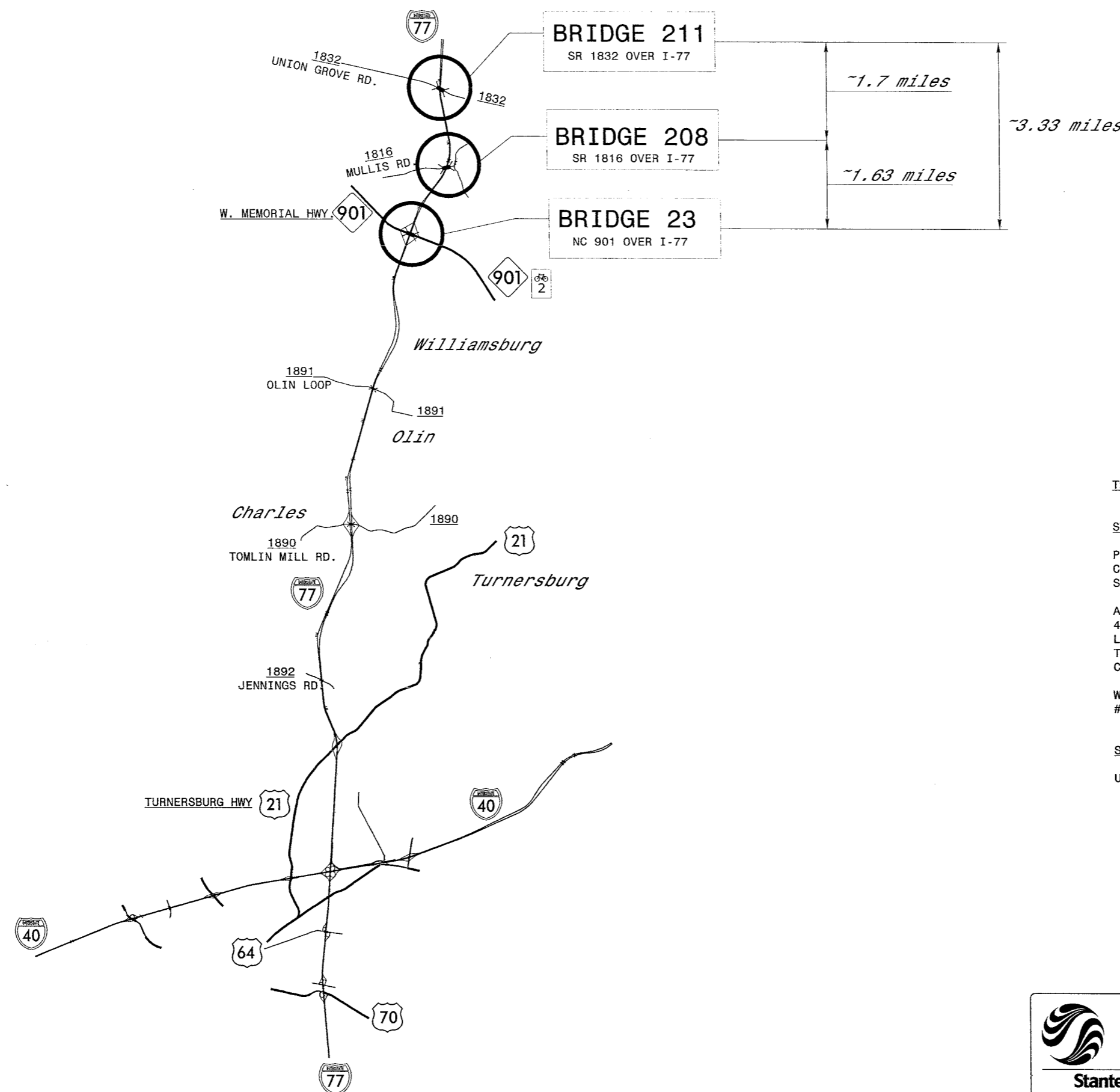
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M) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF THE STRUCTURE.

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

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 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel. 919.851.8866 Fax. 919.851.7024 www.stantec.com	SEAL  <i>L. Watson</i> 10/20/09	PROJECT NOTES GENERAL NOTES									
	SCALE: NONE DATE: SEPT. 2009 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	REVISIONS								
REVISIONS											



TRAFFIC CONTROL PHASING

STEP 1:

PERFORM BRIDGE PAINTING OPERATIONS AS SHOWN IN THE CONTRACT AND CONSTRUCTION PLANS. PERFORM WORK IN ACCORDANCE WITH "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES-JULY 2006".

AT THE END OF EACH DAY'S OPERATIONS MOVE EQUIPMENT TO STAGING AREA AT LEAST 40 FEET AWAY FROM ANY TRAVEL LANES AS APPROVED BY THE ENGINEER AND REMOVE LANE CLOSURES. WHEN NOT BEING USED TO CLOSE A LANE, DRUMS MAY EITHER BE TOTALLY REMOVED OR BE MOVED TO OUTSIDE OF SHOULDER SUCH THAT THEY DO NOT CLOSE THE SHOULDER.

WHEN LANE CLOSURES ENCR OACH THROUGH THE VICINITY OF AN EXIT RAMP AT BRIDGE #23, USE SHEET TCP-5 IN CONJUNCTION WITH A RIGHT LANE CLOSURE (TCP-4).

STEP 2:

UPON COMPLETION OF THE PROJECT, REMOVE ALL TRAFFIC CONTROL DEVICES.

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SEAL

L. Watson
10/20/09

SIGNATURE DATE

IREDELL COUNTY BRIDGE PAINTING VICINITY MAP TRAFFIC CONTROL PHASING

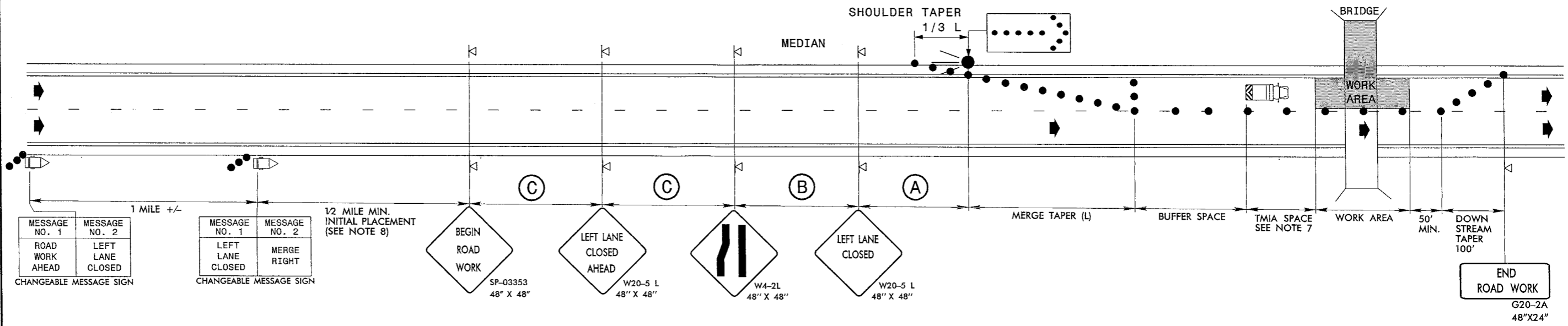
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DESIGN BY:	GK
REVIEWED BY:	BLW



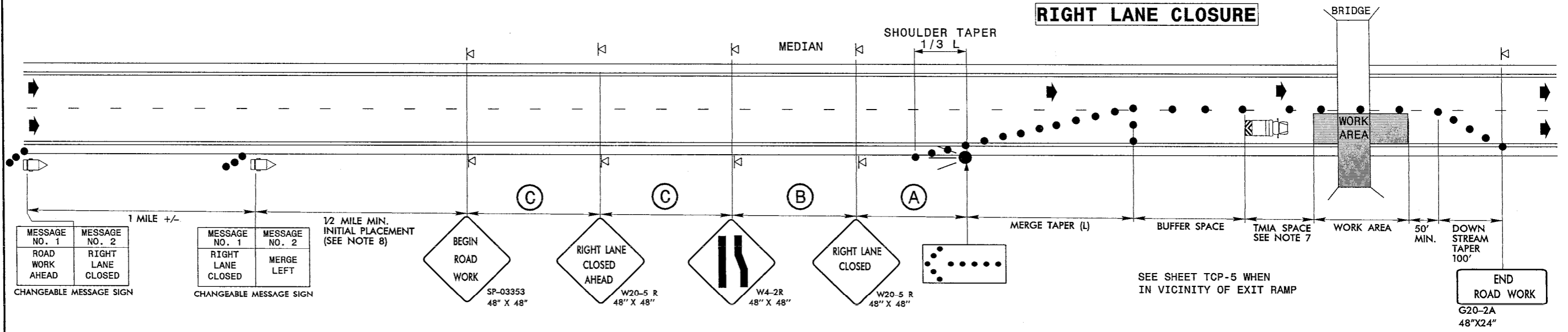
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LEFT LANE CLOSURE

PROJECT REFERENCE NO.	SHEET NO.
B-4700L	TCP-4



RIGHT LANE CLOSURE



NOTES

- USE THIS DRAWING FOR LANE CLOSURES ALONG I-77 ASSOCIATED WITH ALL THREE BRIDGE LOCATIONS.
- PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW PANELS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW PANEL LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW PANEL IS MET. (SEE STD. 1101.11 SHEET 2).
- PLACE DRUMS IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE DRUMS ALONG THE BUFFER SPACE AND WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- REFER TO STD. 1101.11 SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- REFER TO SHEET TCP-5 FOR TREATMENT OF LANE CLOSURES THROUGH INTERCHANGES.
- 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.
- TMIA'S ARE REQUIRED ONLY WHEN A BUFFER SPACE CANNOT BE ATTAINED, OR WHEN DIRECTED BY THE ENGINEER OR THE PLANS. WHEN USED, POSITION THE TMIA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER.
- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY 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.

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10/20/09

SIGNATURE DATE

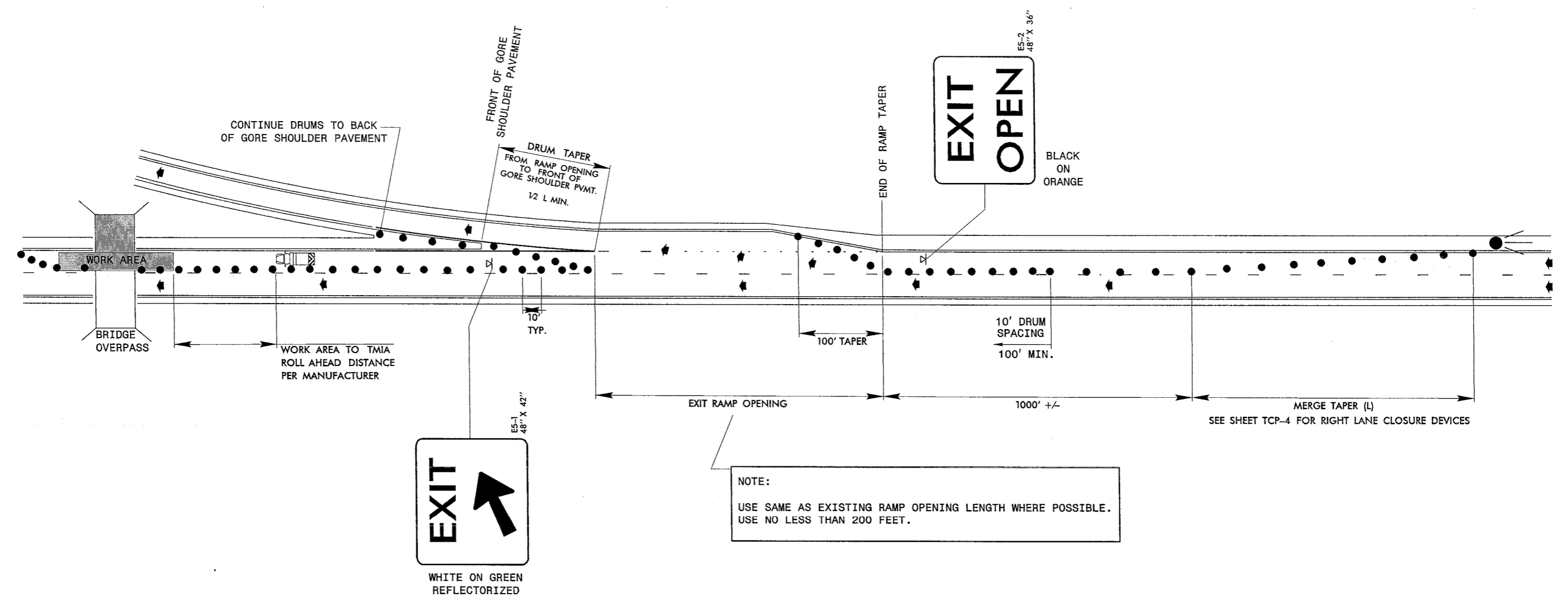
TEMPORARY LANE CLOSURES ON I-77

SCALE: NONE
DATE: SEPT. 2009
DWG. BY: GK
DESIGN BY: GK
REVIEWED BY: BLW

REVISIONS

CLAD FILE

**TYPICAL
RIGHT LANE CLOSURE
THROUGH VICINITY OF EXIT RAMP**



NOTE:
USE SAME AS EXISTING RAMP OPENING LENGTH WHERE POSSIBLE.
USE NO LESS THAN 200 FEET.

- NOTES**
1. USE THE ABOVE DETAIL IN CONJUNCTION WITH A RIGHT LANE CLOSURE AS SHOWN ON SHEET TCP-4.
 2. MOUNT EXIT SIGN(E5-1) AND EXIT OPEN SIGN(E5-2) A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.
 3. REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEETS 1, 2 & 4 FOR TRAFFIC CONTROL DESIGN TABLES.
 4. USE THE ABOVE DETAIL FOR EXIT RAMP IN ADVANCE OF BRIDGE #23.

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SEAL

David L. Watson
10/20/09

SIGNATURE DATE

**TYPICAL
RIGHT LANE CLOSURE
THROUGH VICINITY OF EXIT RAMP**

SCALE: NONE		REVISIONS
DATE: SEPT. 2009		
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DESIGN BY: GK		
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