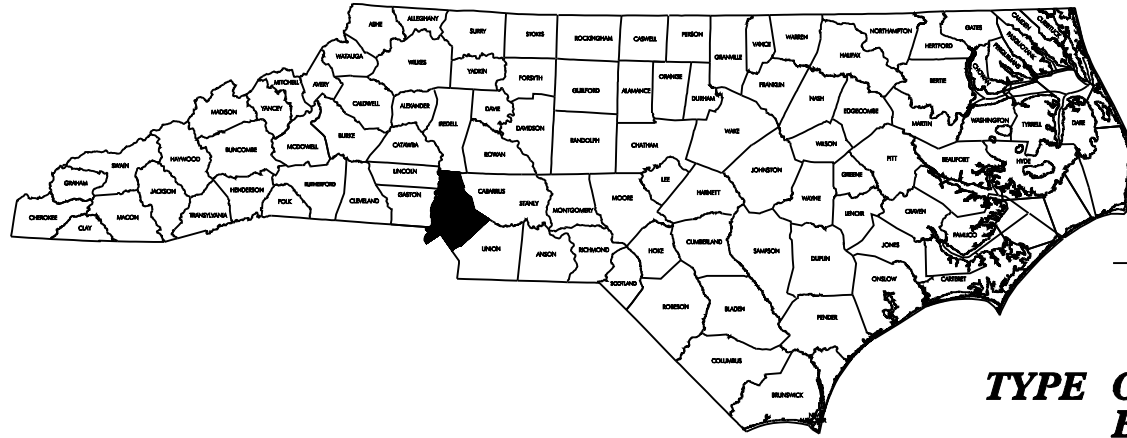


**TIP PROJECT: B-4700AT**

**CONTRACT NO. D000035**

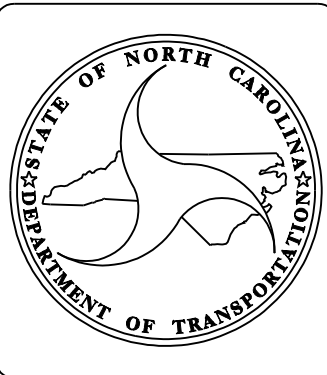
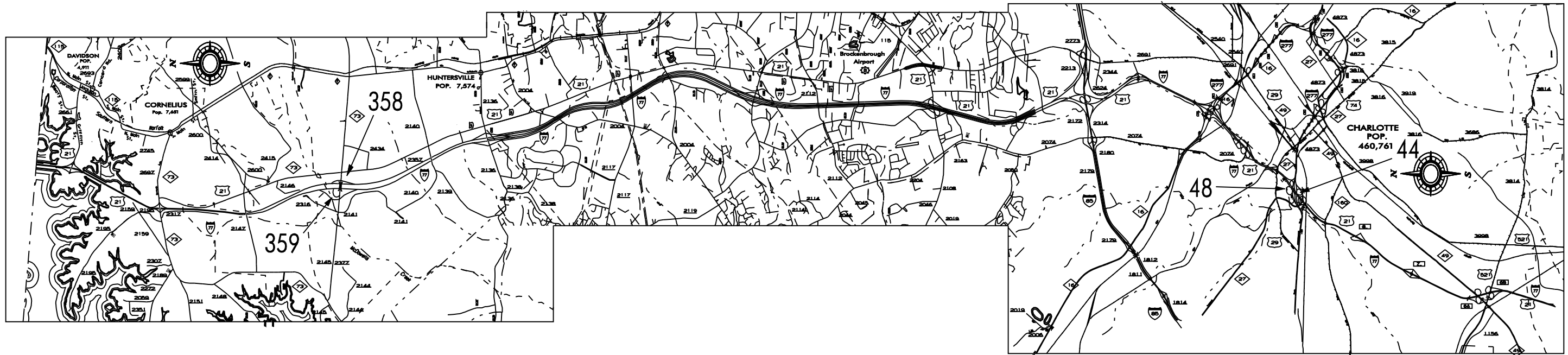


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MECKLENBURG COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4700AT	1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
36727.1.1	BRNHS-000S(504)	P.E.	
36727.3.44	BRNHS-000S(370)	CONST	

**LOCATION: US 74, I 77, ACROSS US 21, NC 73**  
**TYPE OF WORK: BRIDGE PRESERVATION: CLEANING AND PAINTING OF BRIDGES #44, #48, #358 AND #359 IN MECKLENBURG COUNTY.**



**DESIGN DATA**

**PROJECT LENGTH**

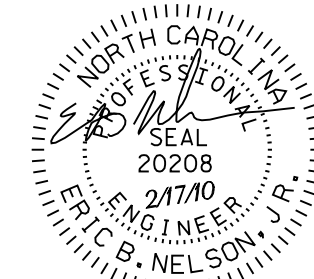
Prepared In the Office of:  
**BRIDGE MANAGEMENT UNIT**  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

**LETTING DATE:**  
MARCH 18, 2010

**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**

**MECKLENBURG COUNTY**

LOCATION: BRIDGE NO.S 44, 48, 358, AND 359.

TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE PAINTING

WBS 36727.3.27

TIP PROJECT: B-4700AT

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**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
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1145.01	BARRICADES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY DRUMS

**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
TCP-4	TRAFFIC CONTROL PHASING
<b>BRIDGES #44 / #48</b>	
TCP 5-5A	I-77 SBL LEFT LANE CLOSURE
TCP 6-6A	I-77 SBL RIGHT LANE CLOSURE AND I-77 SBL EXIT 9 LEFT LANE CLOSURE
TCP 7-7A	I-77 SBL EXIT 9 RIGHT LANE CLOSURE
TCP 8-8B	I-77 NBL THRU LANE CLOSURE (OPTION 1)
TCP 9-9A	I-77 NBL LEFT LANE CLOSURE (OPTION 2)
TCP 10-10A	I-77 NBL RIGHT LANE CLOSURE (OPTION 2)
TCP 11-11A	I-77 NBL EXIT 9 LEFT LANE CLOSURE
TCP 12-12A	I-77 NBL EXIT 9 RIGHT LANE CLOSURE
<b>BRIDGES #358 / #359</b>	
TCP 13	I-77 SBL ENTRANCE LOOP CLOSURE
<b>TYPICALS</b>	
TCP-14	TYPICAL SINGLE LANE CLOSURES
TCP-15	TYPICAL DOUBLE LANE CLOSURES

**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
- TEMPORARY CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

APPROVED: DATE: Feb 15, 2010 PLAN PREPARED BY:

BETSY L. WATSON, PE  
 TRAFFIC CONTROL ENGINEER

GEORGE KARAGEORGE  
 TRAFFIC CONTROL DESIGNER

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# 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.

**LANE CLOSURE TIME RESTRICTIONS**

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

**SOUTH OF THE I-85 & I-77 INTERCHANGE DAY AND TIME RESTRICTIONS**

ONE LANE ON I-77:  
MONDAY TO FRIDAY, 6:00AM to 9:00PM  
SATURDAY & SUNDAY, 10:00AM to 9:00PM

TWO OR MORE LANES ON I-77:  
MONDAY TO FRIDAY, 6:00AM to 11:00PM  
SATURDAY & SUNDAY, 10:00AM to 11:00PM

**NORTH OF THE I-85 & I-77 INTERCHANGE DAY AND TIME RESTRICTIONS**

ONE LANE ON I-77:  
MONDAY TO FRIDAY, 6:00AM to 9:00PM  
SATURDAY & SUNDAY, 9:00AM to 9:00PM

TWO OR MORE LANES ON I-77:  
MONDAY TO FRIDAY, 6:00AM to 11:00PM  
SATURDAY & SUNDAY, 9:00AM to 11:00PM

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 A.M. DECEMBER 31st TO 9:00 P.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY; THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- 9) FOR ANY NASCAR EVENT AT THE LOWES MOTOR SPEEDWAY, BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE THE WEEK OF THE EVENT UNTIL 9:00 P.M. THE FOLLOWING MONDAY AFTER THE RACE.
- 10) FOR ANY CAROLINA PANTHERS FOOTBALL GAME IN CHARLOTTE AND ANY GAMES AT THE BOBCATS ARENA, FOR 3 HOURS BEFORE THE GAME UNTIL 3 HOURS AFTER THE GAME.
- 11) FOR ANY EVENT AT THE BANK OF AMERICA STADIUM, CHARLOTTE CONVENTION CENTER AND/OR ANY OTHER ARENAS, BETWEEN 6:00 A.M. THE FRIDAY BEFORE THE EVENT AND 9:00 P.M. THE MONDAY AFTER THE EVENT.

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.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 73 TO I-77SB ENTRANCE LOOP	6:00 A.M.-9:00 P.M. EVERYDAY

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- D) 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.
- E) 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.
- F) 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.
- G) 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.
- H) 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.
- I) 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 CONTROL DEVICES**

- J) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- K) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- L) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

**TRAFFIC PATTERN ALTERATIONS**

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


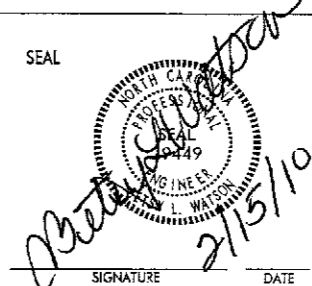

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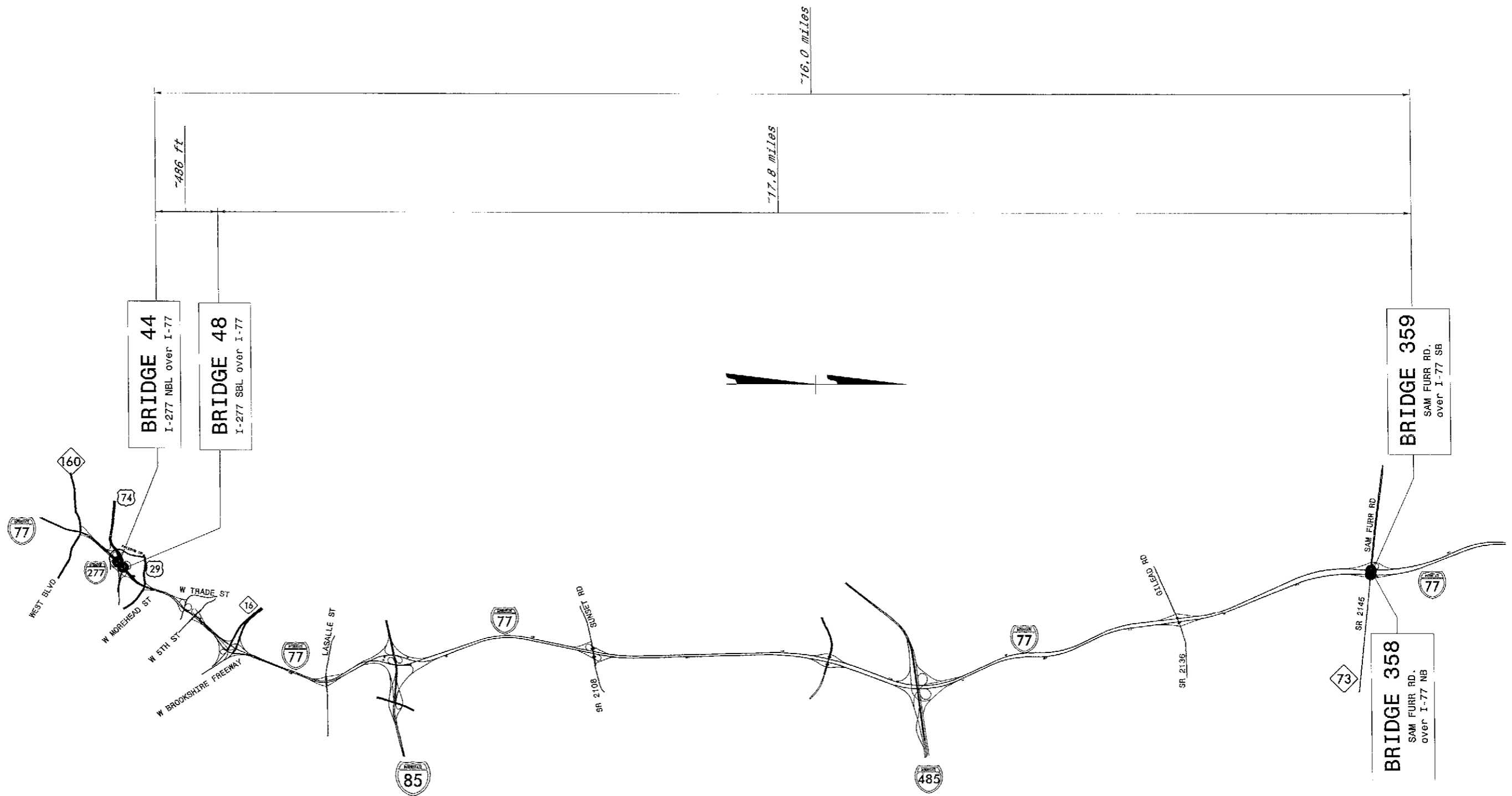
N) ENSURE ALL SIGING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

**MISCELLANEOUS**

- O) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- P) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF A STRUCTURE.
- Q) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- R) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- S) THE CONTRACTOR IS TO FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE CHANGEABLE MESSAGE SIGNS DURING VARIOUS STAGES OF CONSTRUCTION AT THE DISCRETION OF THE ENGINEER TO ADEQUATELY INFORM MOTORISTS OF CHANGING WORK ZONE CONDITIONS.
- T) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE TCP OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.

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SEAL

*Betty L. Watson*  
 2/15/10

**MECKLENBURG COUNTY BRIDGE PAINTING VICINITY MAP**

SCALE:	NONE
DATE:	FEB. 2010
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DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS

COORDINATE ALL OPERATIONS WITH OTHER CONTRACTORS WORKING IN THIS AREA. (SEE PROJECT SPECIAL PROVISIONS)

BRIDGES #44 AND #48

PERFORM BRIDGE PAINTING OPERATIONS OVER I-77 AND EXIT 9 AS FOLLOWS:

I-77 SB

CLOSE LEFT LANE AS SHOWN ON SHEET TCP 5-5A. CLOSE RIGHT LANE AS SHOWN ON SHEET TCP 6-6A.

I-77 SB EXIT 9

CLOSE LEFT LANE AS SHOWN ON SHEET TCP 6-6A. CLOSE RIGHT LANE AS SHOWN ON SHEET TCP 7-7A.

I-77 NB

OPTION 1 CLOSE TWO LEFT LANES AS SHOWN ON SHEETS TCP 8-8B. I-77 NB TRAFFIC IS DIVERTED TO EXIT 9 AROUND THE WORK AREA AND BACK ONTO I-77 NB.

OPTION 2 MAY BE USED AS DIRECTED BY THE ENGINEER. OPTION 2 INVOLVES USING DOUBLE LEFT LANE CLOSURES AND SINGLE RIGHT LANE CLOSURES ON I-77 NB AS SHOWN ON SHEETS TCP 9-9A AND TCP 10-10A.

I-77 NB EXIT 9


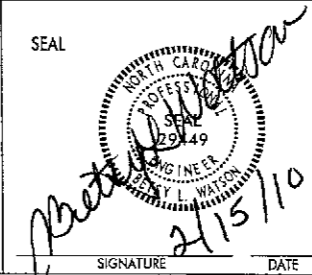

CLOSE LEFT LANE AS SHOWN ON SHEETS TCP 11-11A. CLOSE RIGHT LANE AS SHOWN ON SHEETS TCP 12-12A.

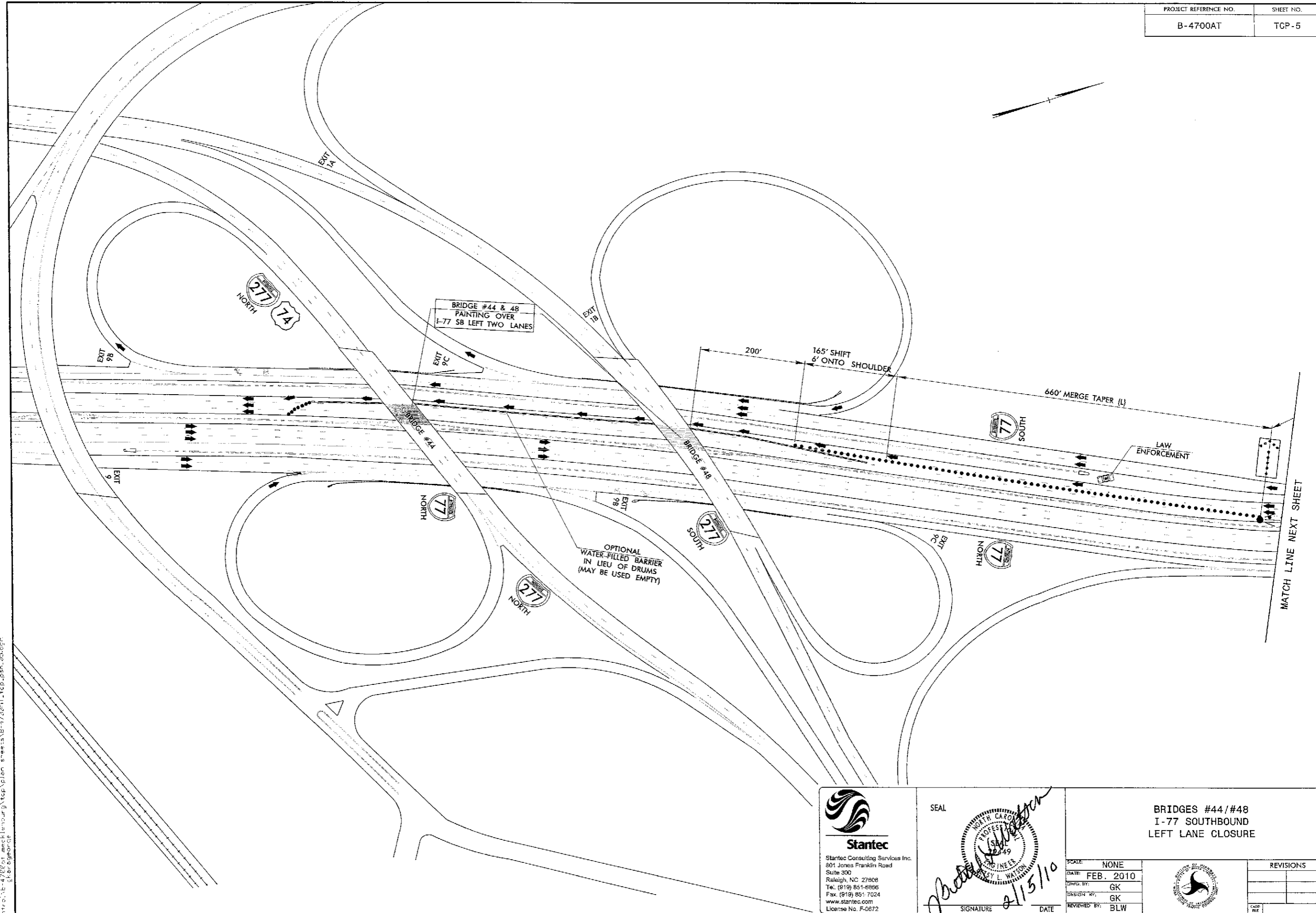
BRIDGES #358 AND #359

PERFORM ALL BRIDGE PAINTING OPERATIONS OVER I-77 USING RIGHT AND LEFT LANE CLOSURES IN ACCORDANCE WITH SHEET TCP-14.

WHEN WORKING OVER THE I-77 SB RIGHT LANES CLOSE THE ENTRANCE LOOP FROM SAM FURR RD. AS SHOWN ON SHEET TCP-13.

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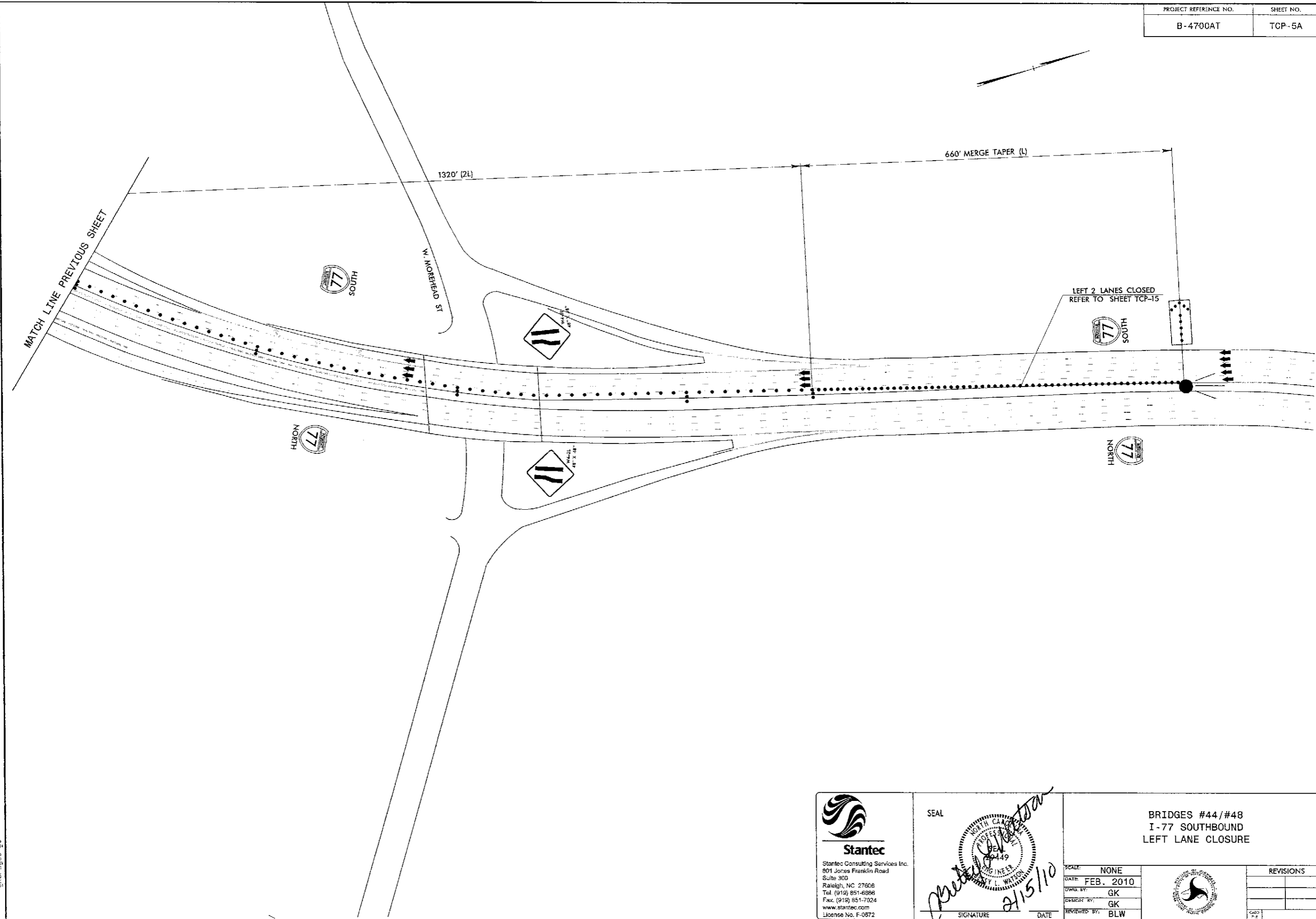
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*Wesley L. Watson*  
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 DATE 2/15/10

**BRIDGES #44/#48  
I-77 SOUTHBOUND  
LEFT LANE CLOSURE**

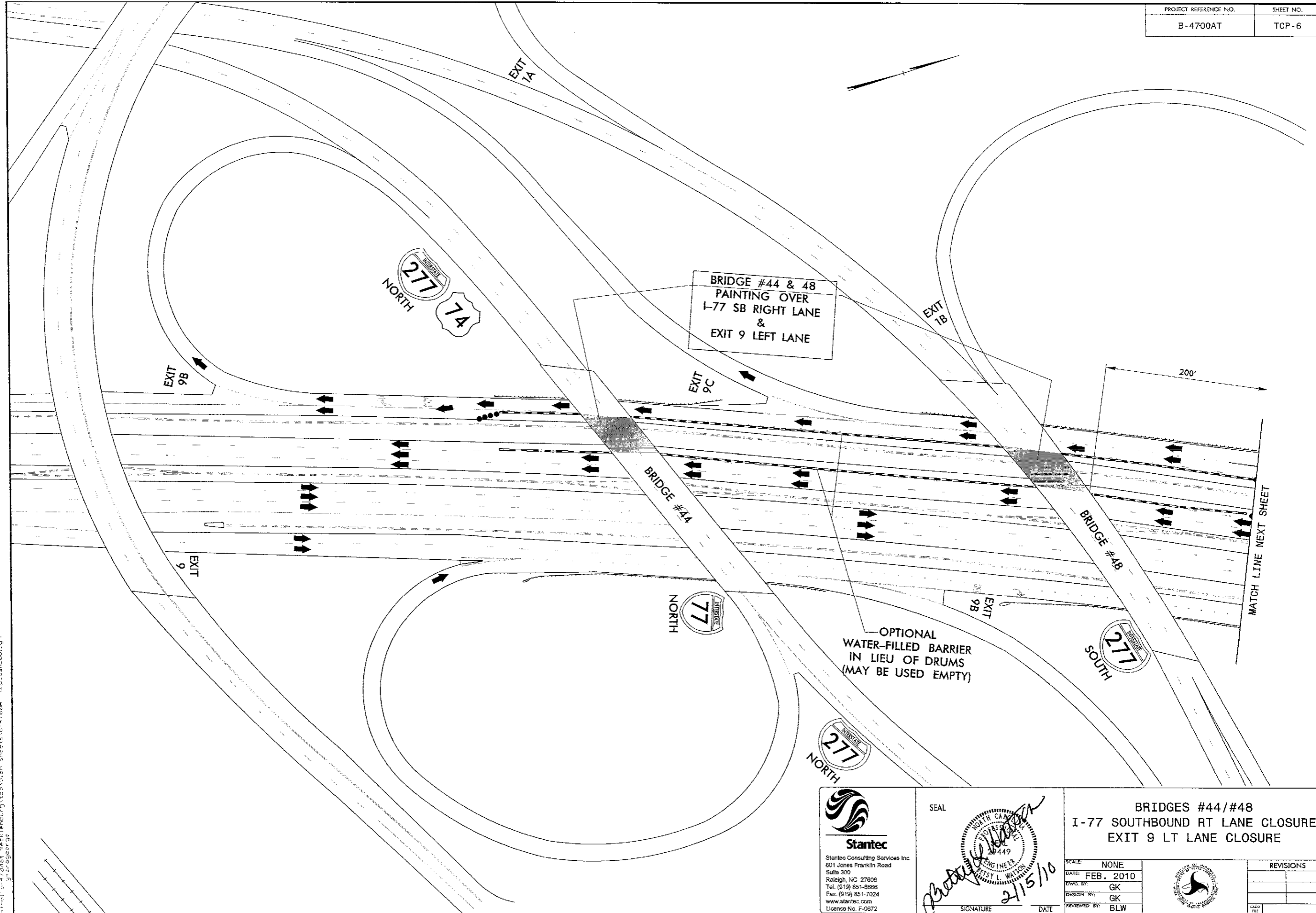
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 gharis@george

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	SIGNATURE: <i>Gregory L. Watson</i> DATE: 2/15/10	SCALE: NONE DATE: FEB. 2010 DWSN BY: GK DESIGN BY: GK REVIEWED BY: BLW		REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>					



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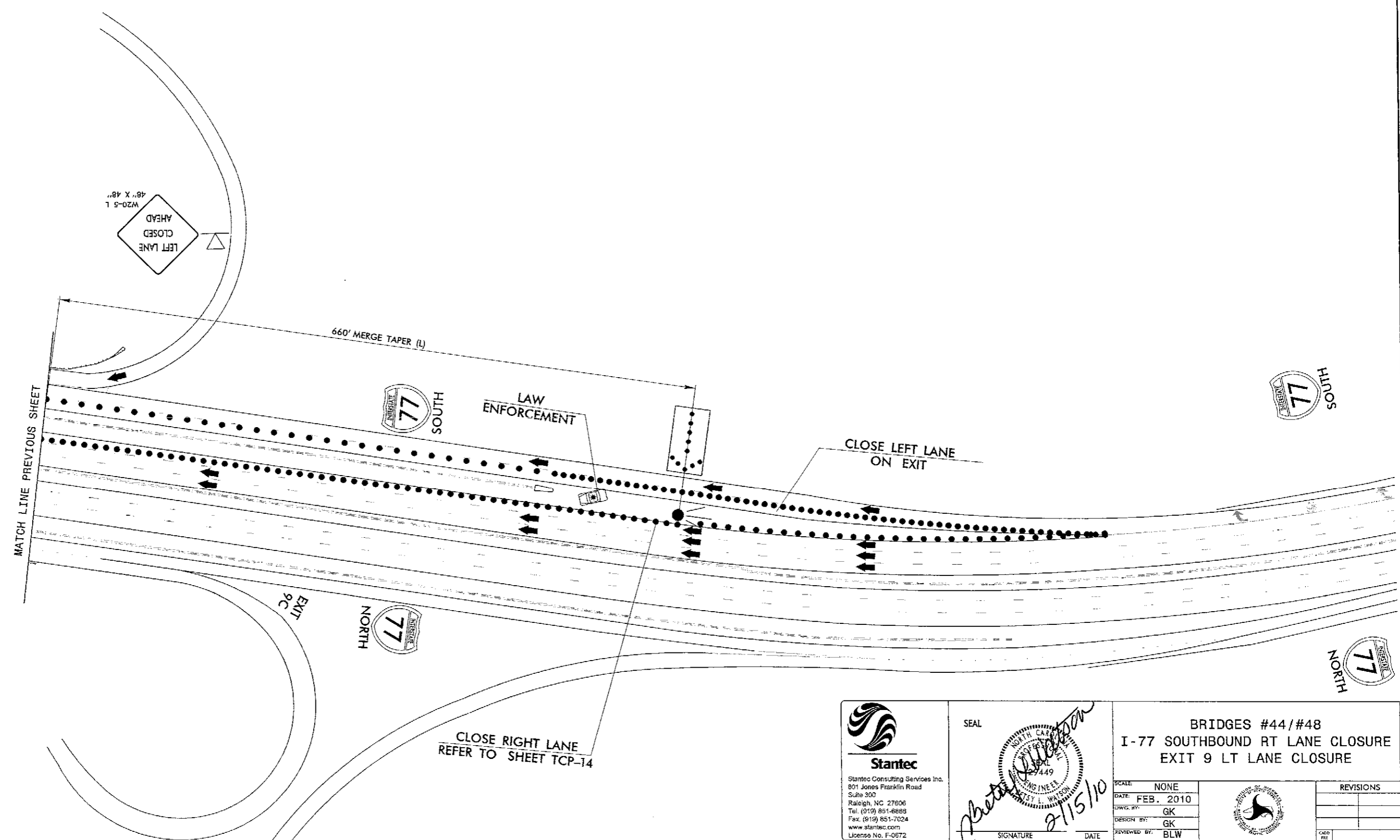
*Patsy L. Watson*  
 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 SOUTHBOUND RT LANE CLOSURE**  
**EXIT 9 LT LANE CLOSURE**

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REVIEWED BY:	BLW

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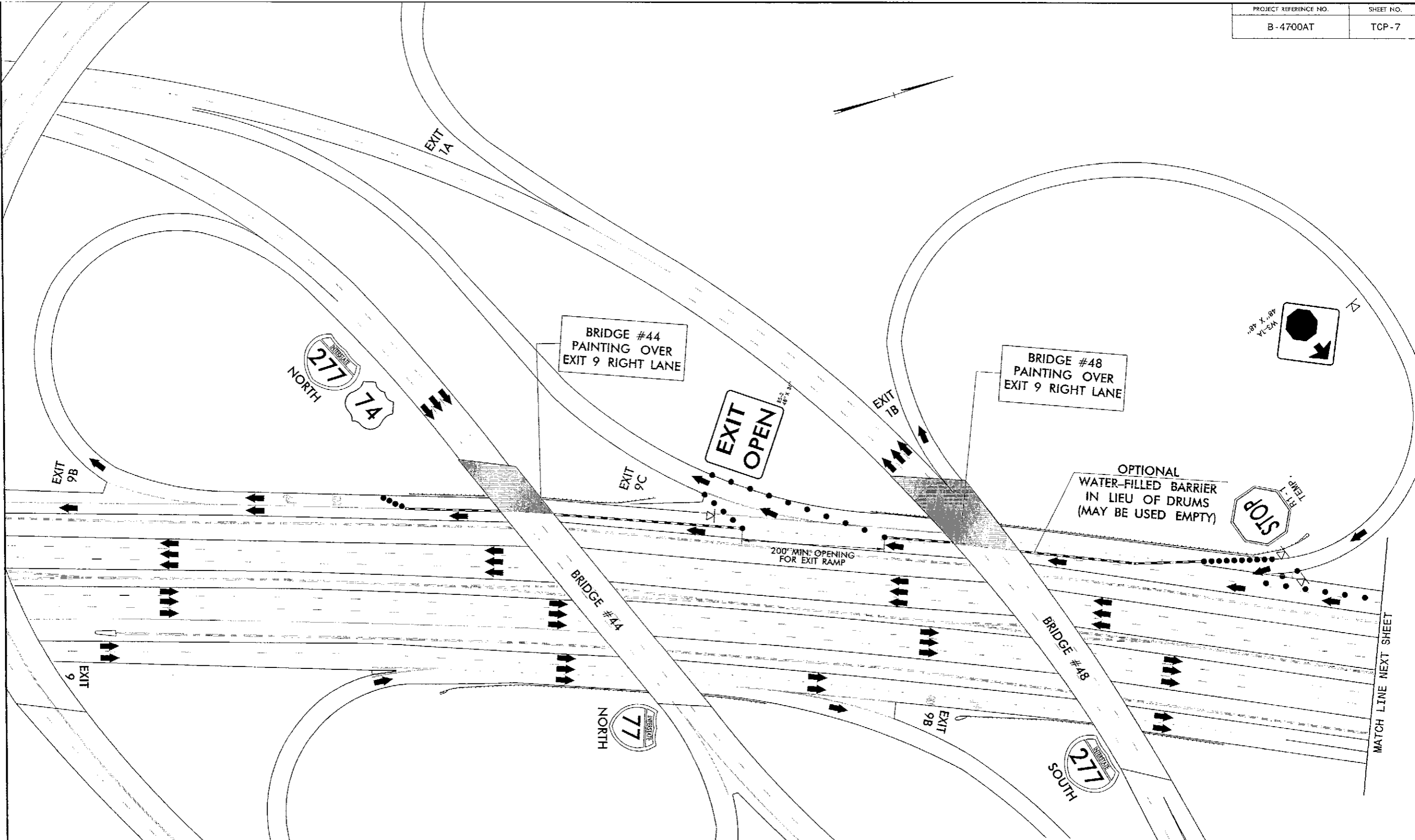
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BRIDGES #44/#48  
 I-77 SOUTHBOUND RT LANE CLOSURE  
 EXIT 9 LT LANE CLOSURE

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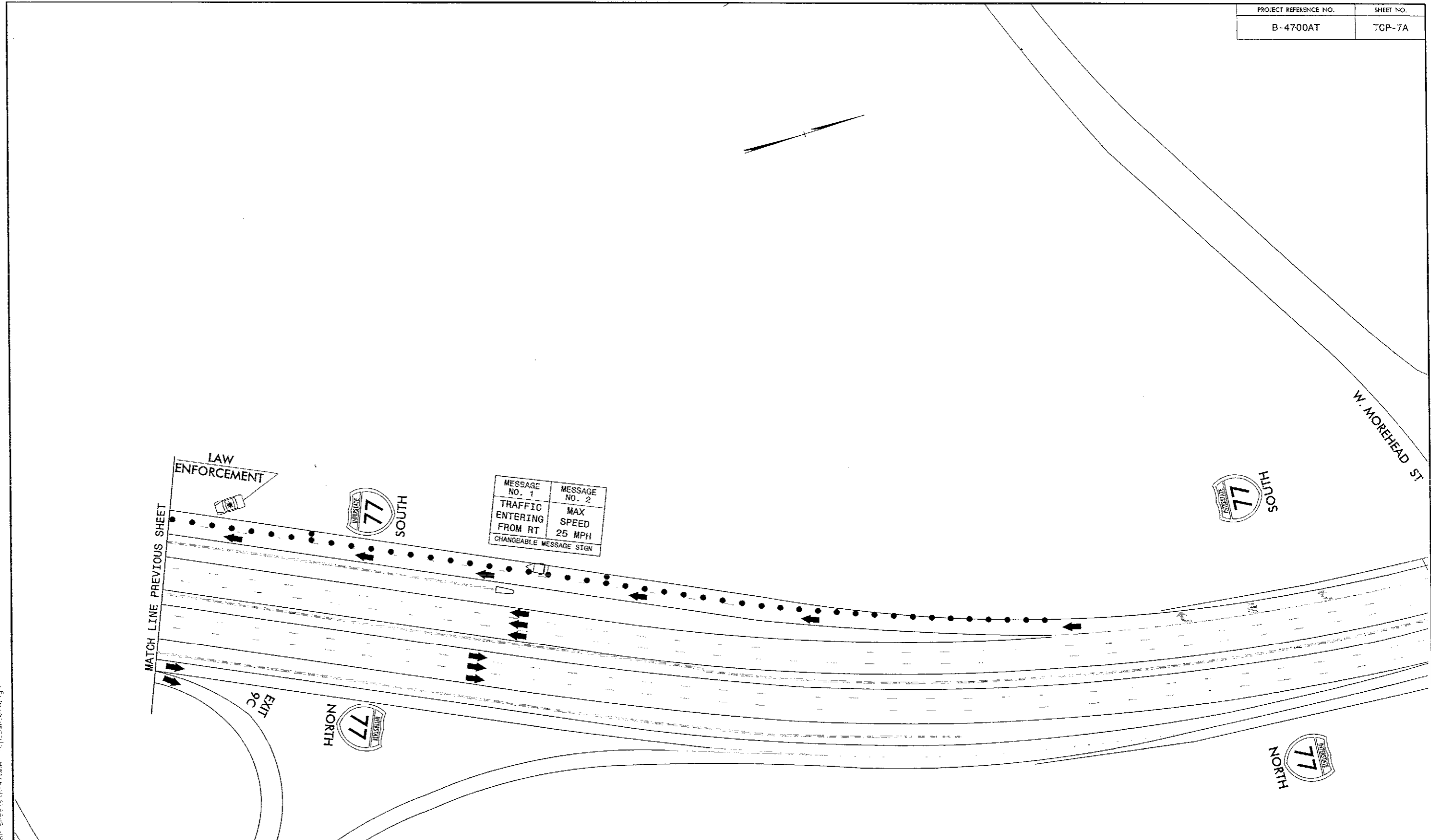
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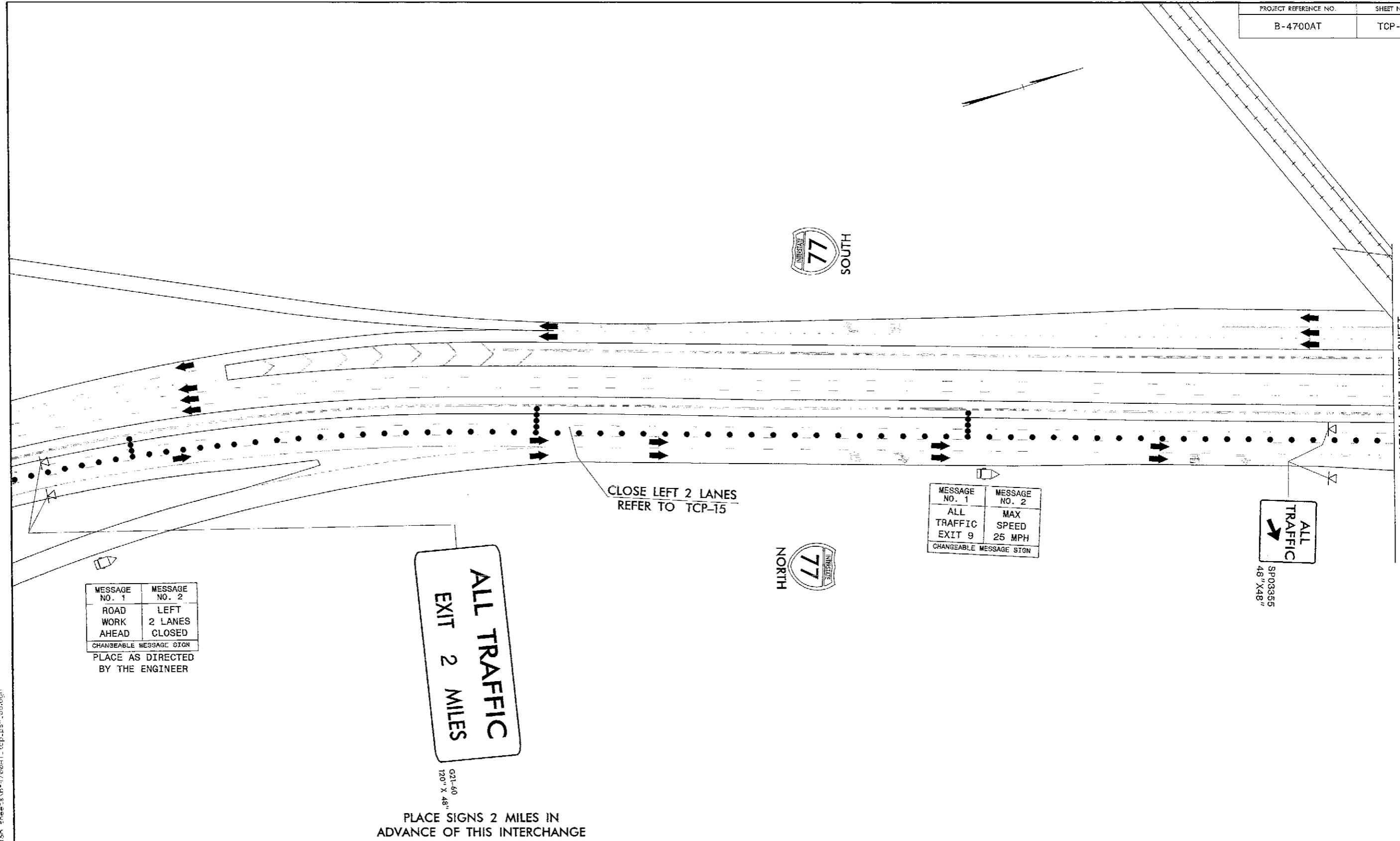
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	SIGNATURE <i>Betty L. Watson</i> DATE 2/15/10	SCALE: NONE DATE: FEB. 2010 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS						
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	SCALE: NONE DATE: FEB. 2010 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW		<table border="1"> <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> </tbody> </table>	REVISIONS						
REVISIONS										



MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	LEFT 2 LANES CLOSED
CHANGEABLE MESSAGE SIGN	
PLACE AS DIRECTED BY THE ENGINEER	

**ALL TRAFFIC**  
**EXIT 2 MILES**

PLACE SIGNS 2 MILES IN  
ADVANCE OF THIS INTERCHANGE

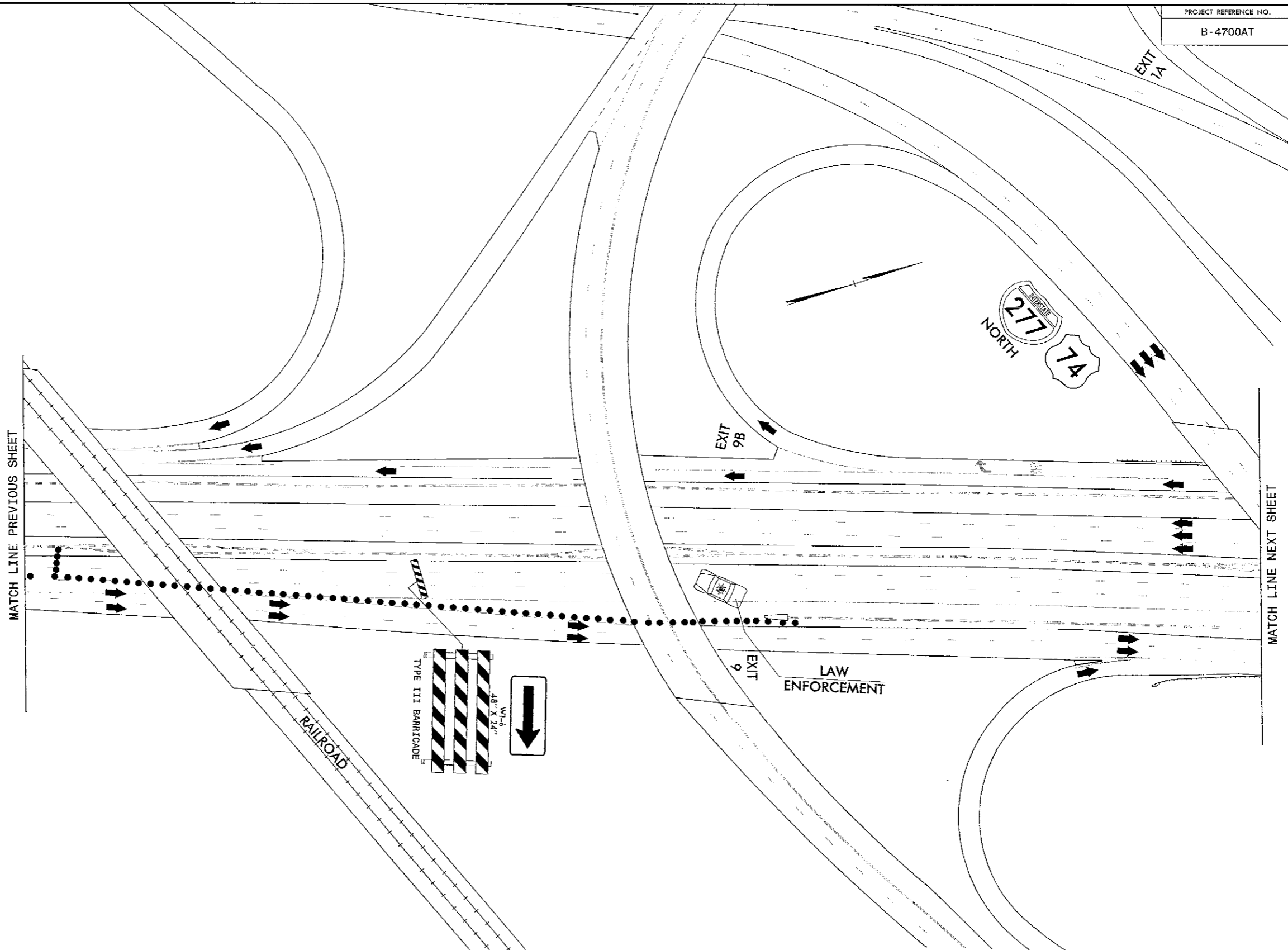
MESSAGE NO. 1	MESSAGE NO. 2
ALL TRAFFIC EXIT 9	MAX SPEED 25 MPH
CHANGEABLE MESSAGE SIGN	

**ALL TRAFFIC**  
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2/15/2010 2:47:06 PM c:\mcklerburg\tcp\plan\_sheets\B-4700AT\_tcp.esx\_08.dgn  
 gkreg@stantec.com

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	<p>SCALE: NONE DATE: FEB. 2010 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW</p>	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS						
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*Gregory Watson*  
 2/15/10

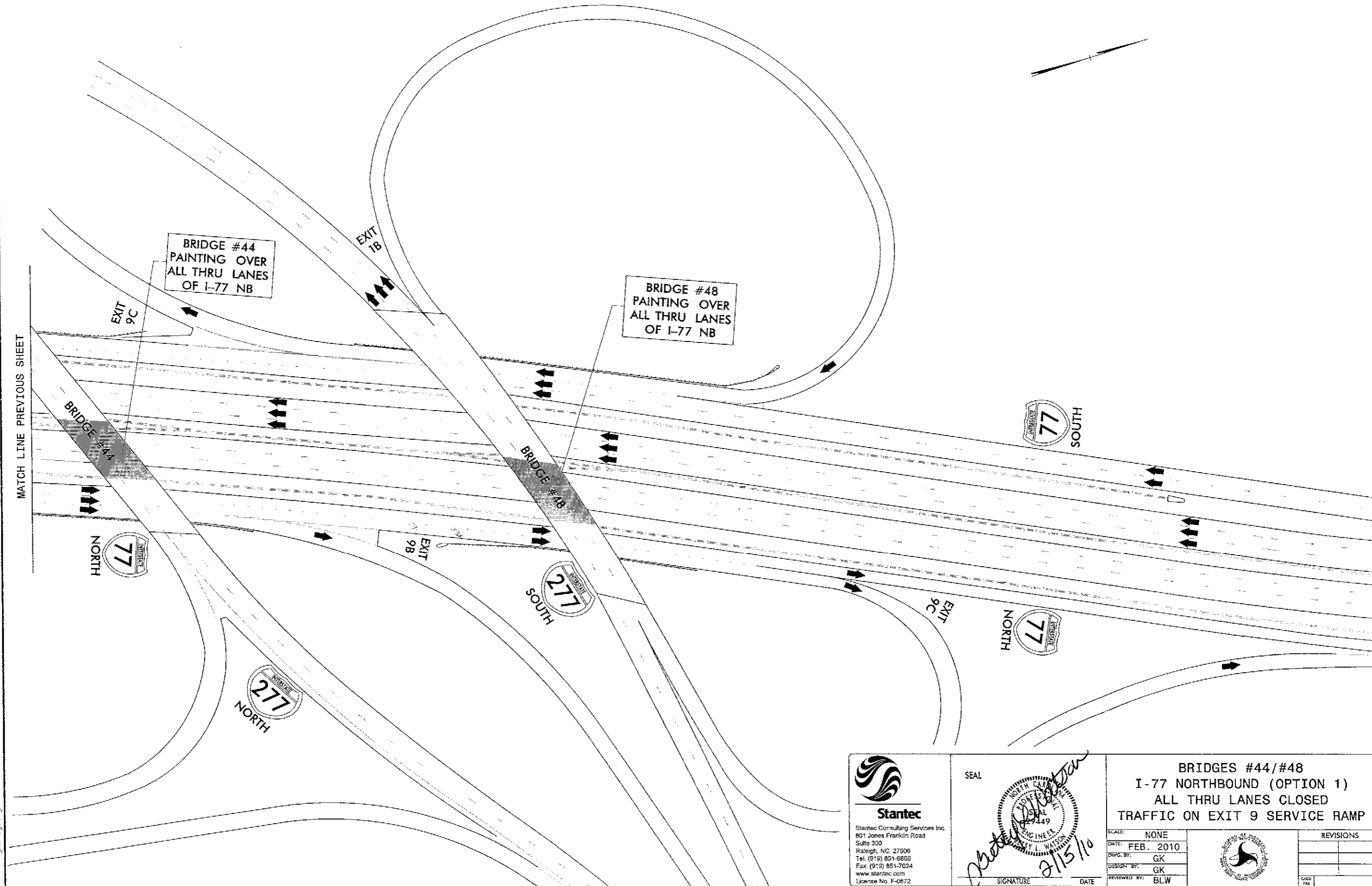
SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND (OPTION 1)**  
**ALL THRU LANES CLOSED**  
**TRAFFIC ON EXIT 9 SERVICE RAMP**

SCALE:	NONE
DATE:	FEB. 2010
DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

NO.	REVISIONS

CADD FILE



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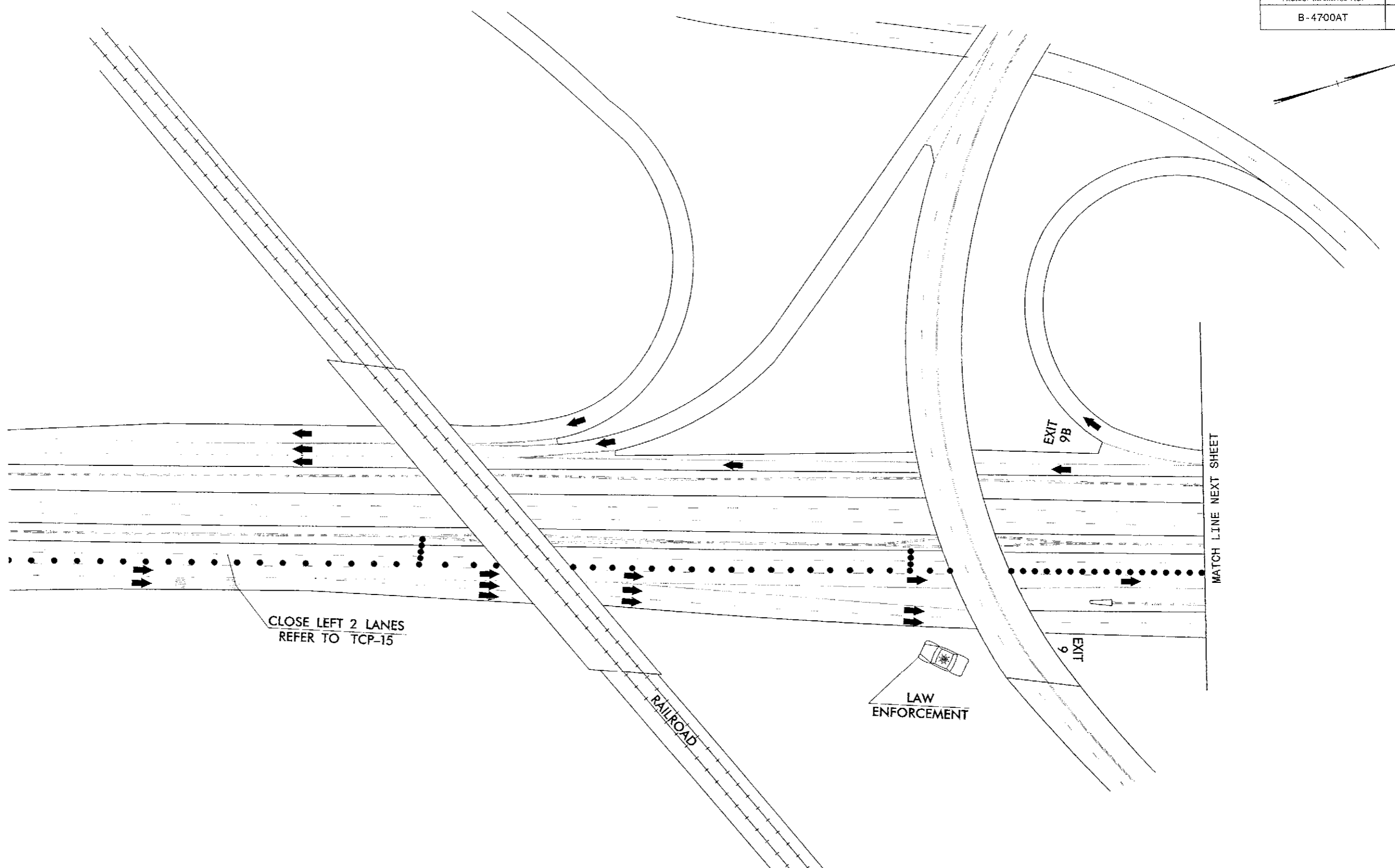
SIGNATURE: *Robert L. Watson*  
 DATE: 2/15/10

**BRIDGES #44/#48**  
**I-77 NORTHBOUND (OPTION 1)**  
**ALL THRU LANES CLOSED**  
**TRAFFIC ON EXIT 9 SERVICE RAMP**

SCALE:	NONE
DATE:	FEB. 2010
DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS

CADD FILE



CLOSE LEFT 2 LANES  
REFER TO TCP-15

RAILROAD

LAW  
ENFORCEMENT

EXIT  
9B

EXIT  
9

MATCH LINE NEXT SHEET

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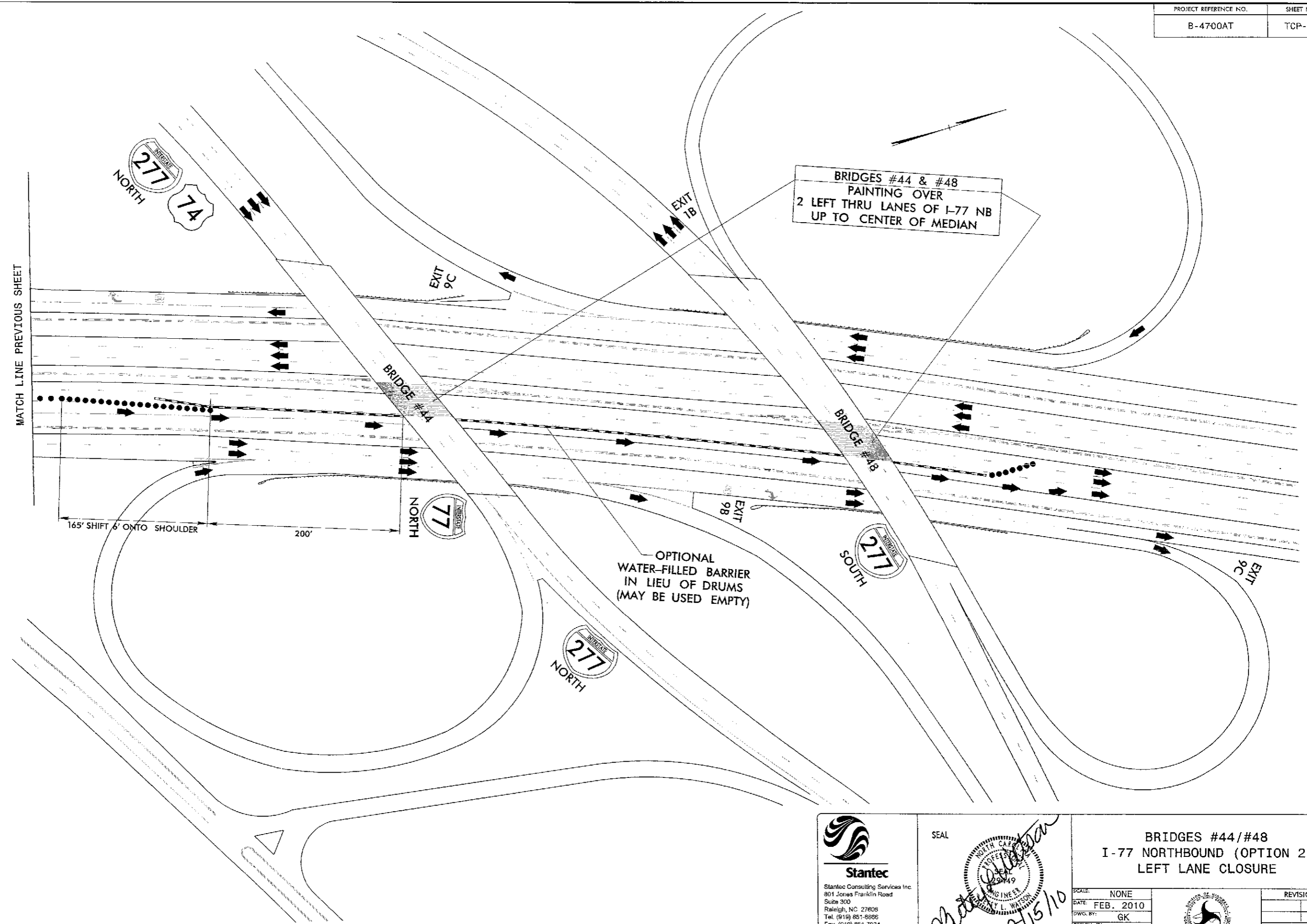
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*Gregory L. Watson*  
 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48  
 I-77 NORTHBOUND (OPTION 2)  
 LEFT LANE CLOSURE**

SCALE:	NONE
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DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS	



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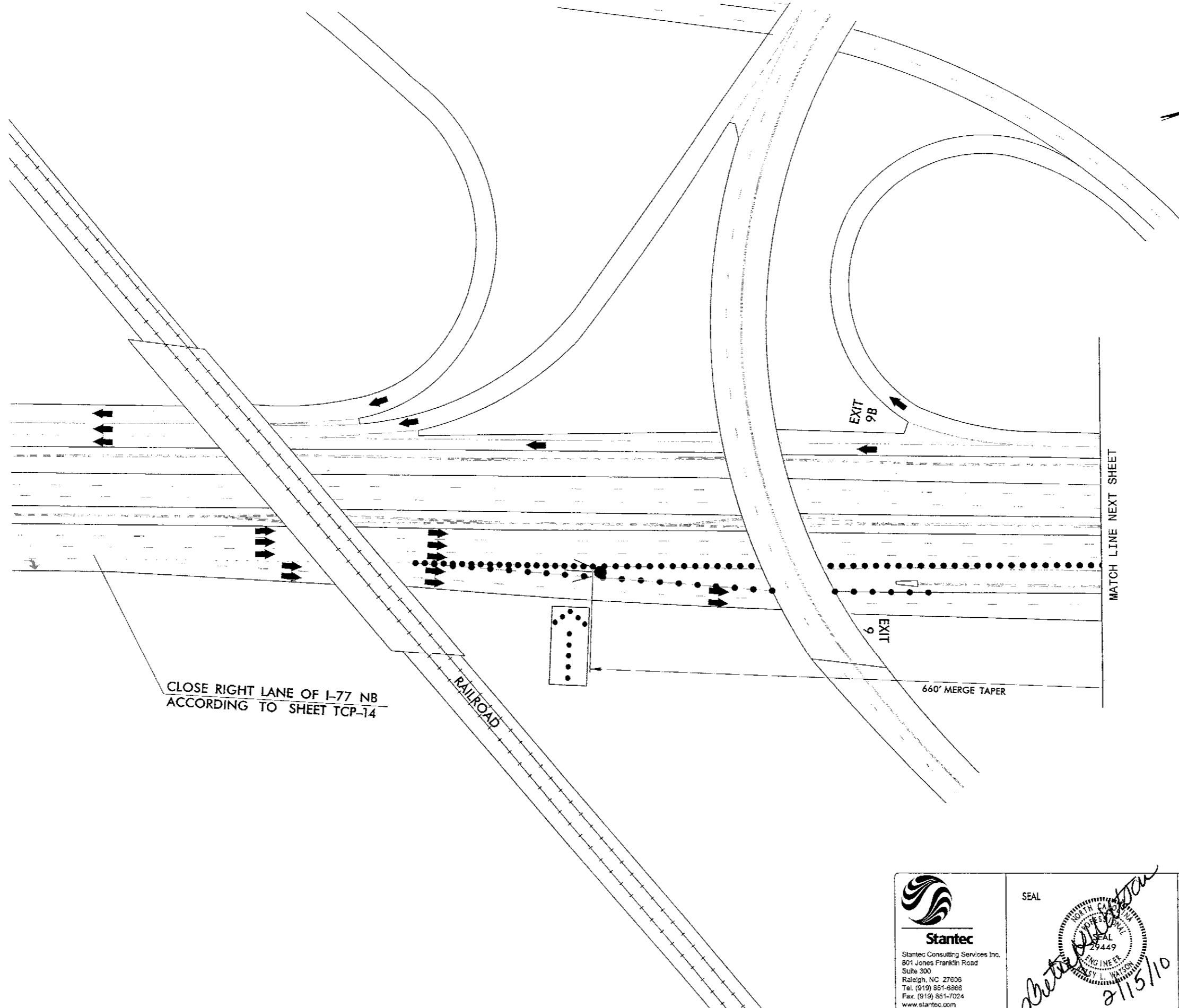
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 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND (OPTION 2)**  
**LEFT LANE CLOSURE**

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DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS	





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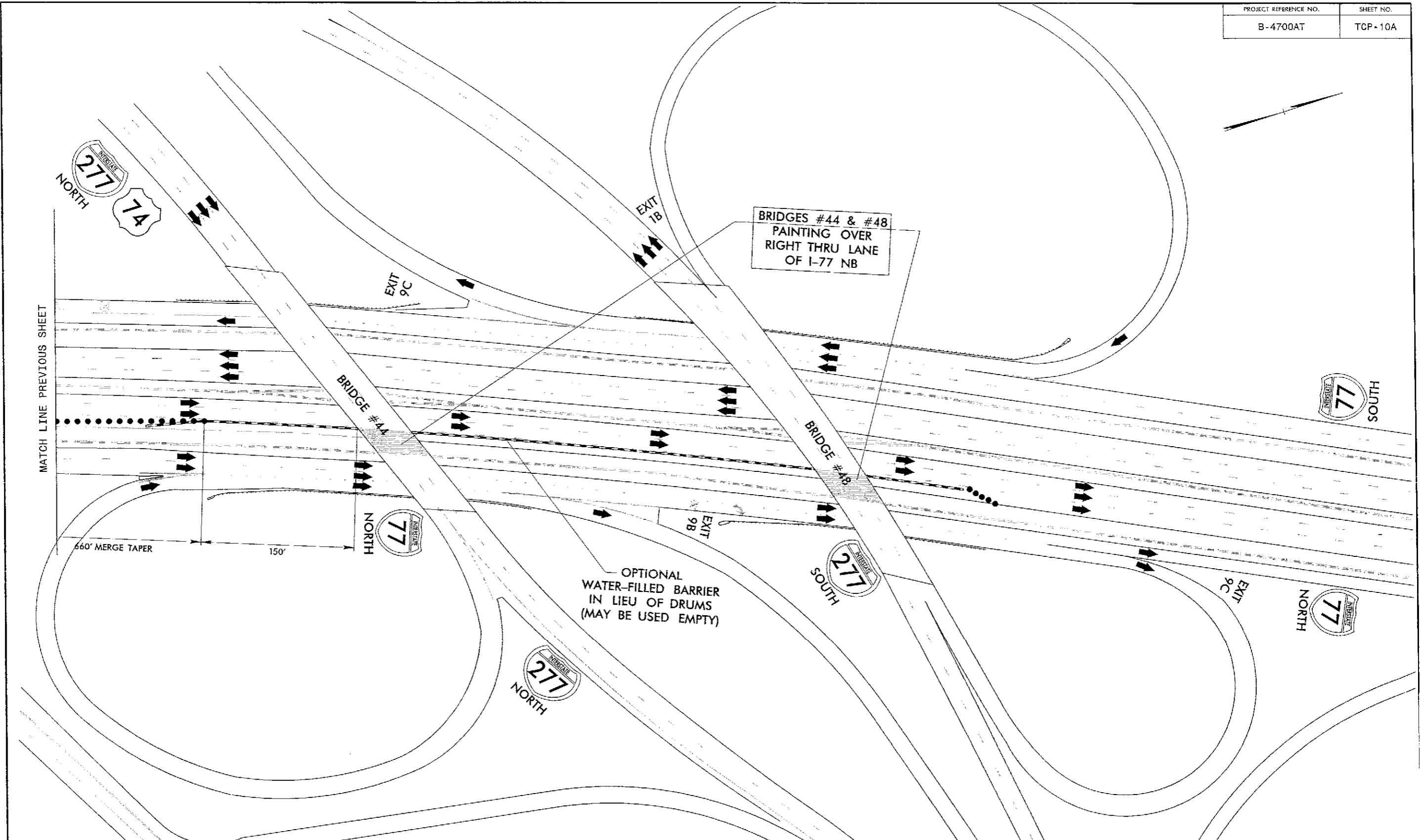
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 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND (OPTION 2)**  
**RIGHT LANE CLOSURE**




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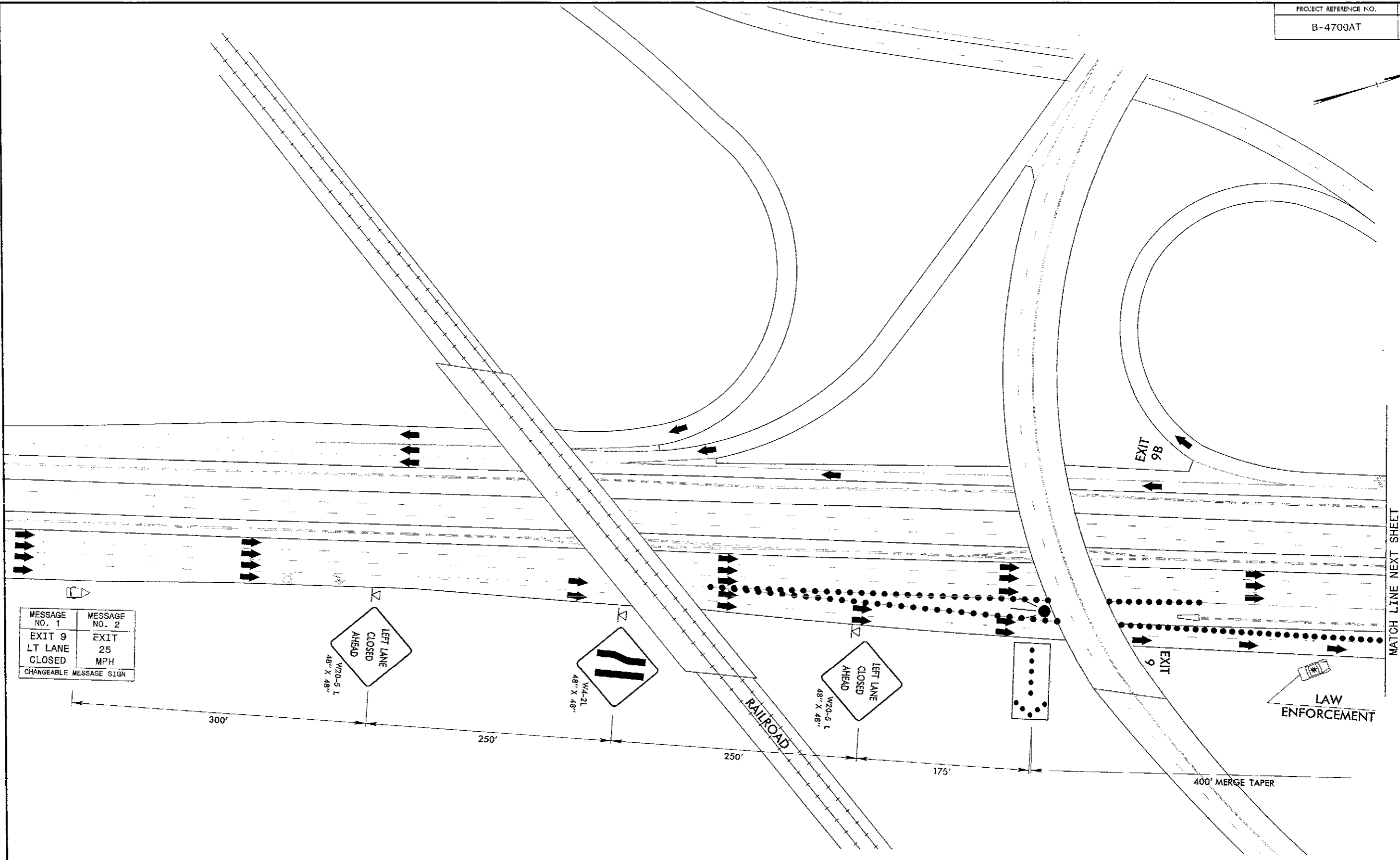
REVISIONS	

CAD FILE



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	REVISIONS											
NO.	DESCRIPTION											
CAD: RLF		REVISIONS										



MESSAGE NO. 1	MESSAGE NO. 2
EXIT 9 LT LANE CLOSED	EXIT 25 MPH
CHANGEABLE MESSAGE SIGN	

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 4:26:05  
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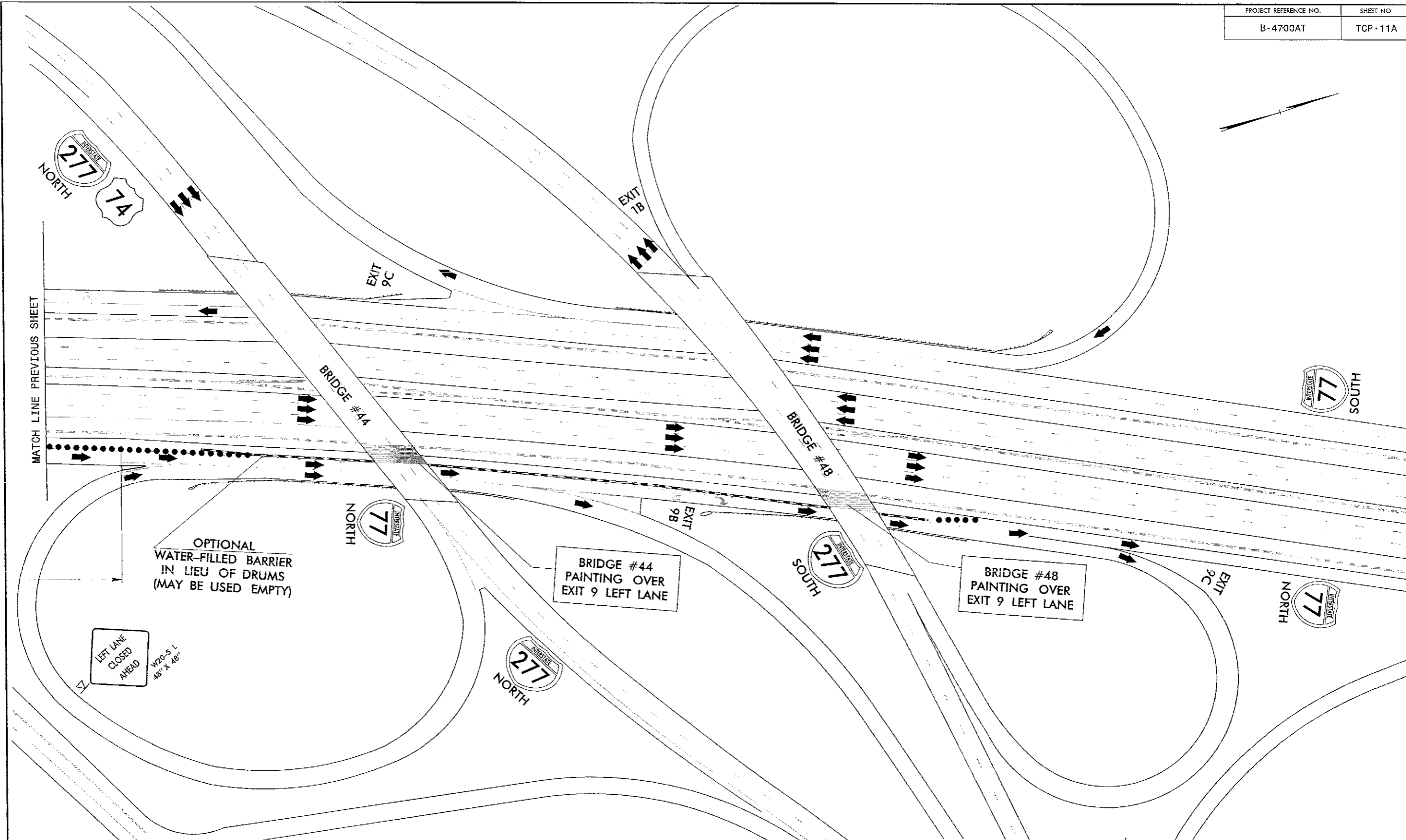
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 2/15/10  
 SIGNATURE DATE

BRIDGES #44/#48  
 I-77 NORTHBOUND  
 EXIT 9 LEFT LANE CLOSURE

SCALE:	NONE
DATE:	FEB. 2010
DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

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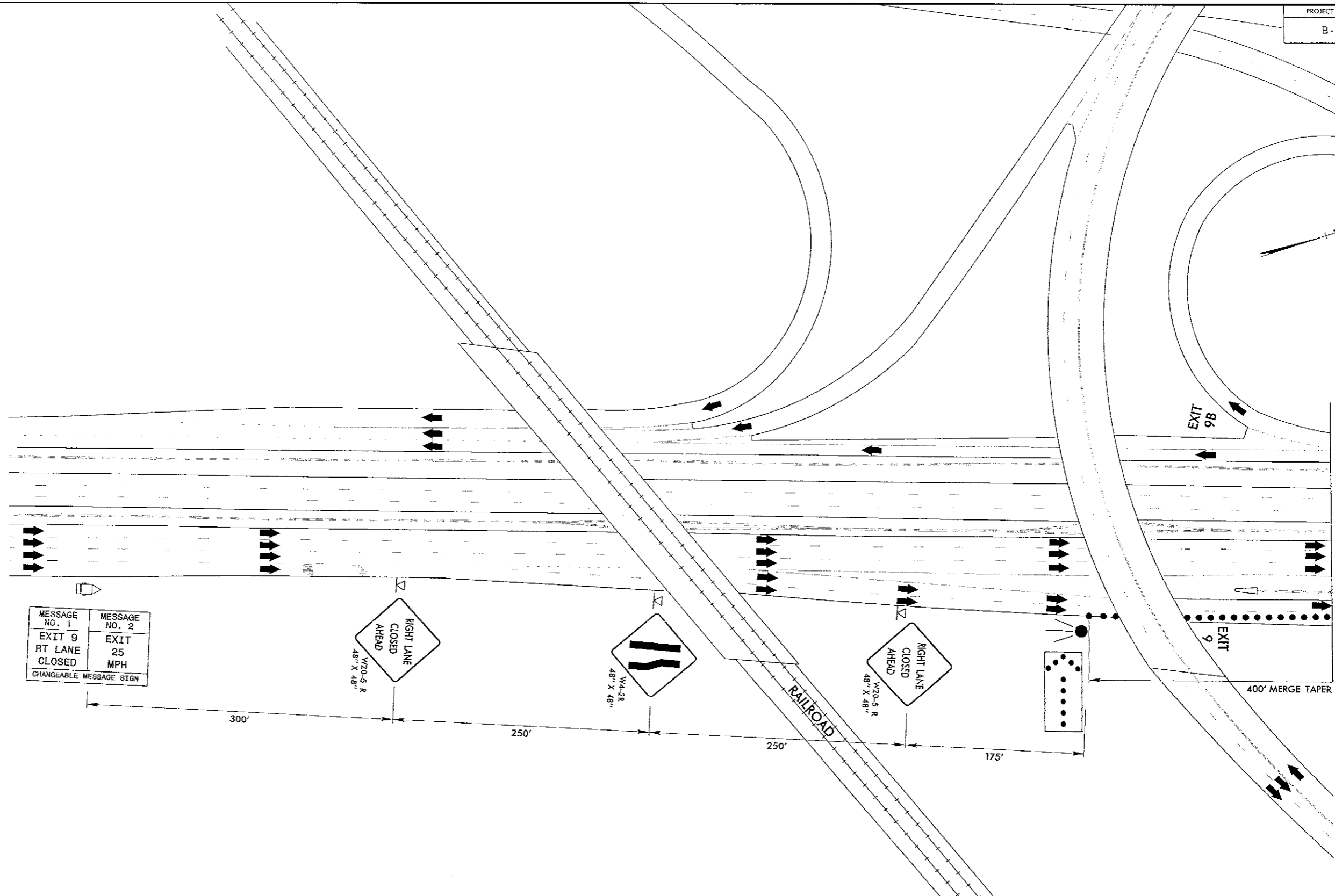
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*Gregory L. Watson*  
 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND**  
**EXIT 9 LEFT LANE CLOSURE**

SCALE:	NONE
DATE:	FEB. 2010
DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS	



MESSAGE NO. 1	MESSAGE NO. 2
EXIT 9 RT LANE CLOSED	EXIT 25 MPH
CHANGEABLE MESSAGE SIGN	

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 Shared by:

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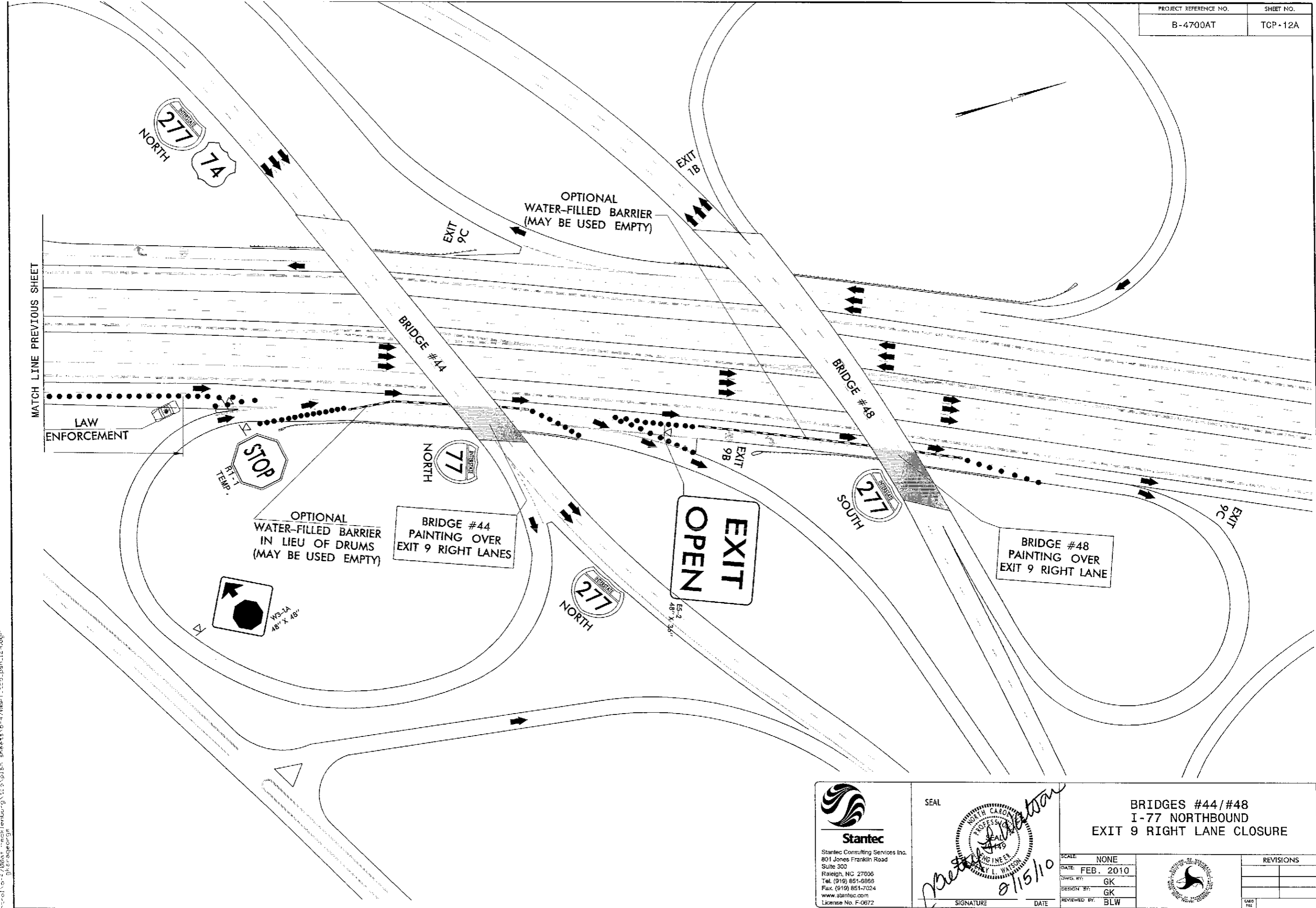
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*Betsy S. Watson*  
 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND**  
**EXIT 9 RIGHT LANE CLOSURE**

SCALE:	NONE
DATE:	FEB. 2010
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DESIGN BY:	GK
REVIEWED BY:	BLW

REVISIONS



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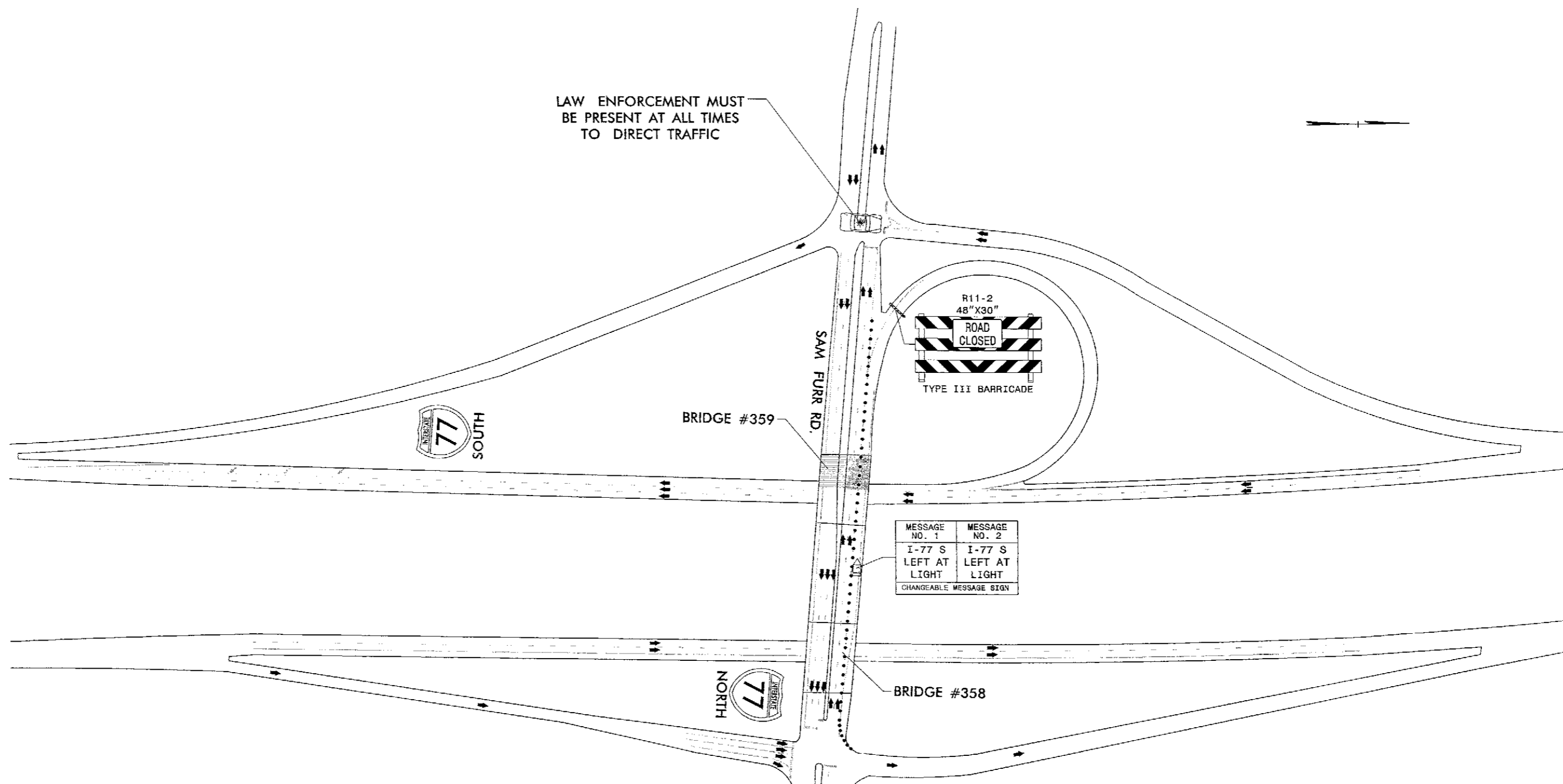
Gregory L. Watson  
 2/15/10  
 SIGNATURE DATE

**BRIDGES #44/#48**  
**I-77 NORTHBOUND**  
**EXIT 9 RIGHT LANE CLOSURE**

SCALE:	NONE
DATE:	FEB. 2010
DWG. BY:	GK
DESIGN BY:	GK
REVIEWED BY:	BLW



REVISIONS	



LAW ENFORCEMENT MUST  
BE PRESENT AT ALL TIMES  
TO DIRECT TRAFFIC

MESSAGE NO. 1	MESSAGE NO. 2
I-77 S LEFT AT LIGHT	I-77 S LEFT AT LIGHT
CHANGEABLE MESSAGE SIGN	

**NOTES:**

- USE RIGHT AND LEFT LANE CLOSURES ON I-77 TO PERFORM BRIDGE PAINTING OPERATIONS. SEE TCP-14 FOR LANE CLOSURES.
- WHEN WORKING ON I-77 SB OVER RIGHT LANE, CLOSE ENTRANCE LOOP AS SHOWN ABOVE.
- IN THE EVENT THAT LAW ENFORCEMENT CANNOT BE PROVIDED DURING CLOSURE OF THE I-77 SB ENTRANCE LOOP, TRAFFIC MUST BE DETOURED AS DIRECTED BY THE ENGINEER.

2/15/2010  
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 User: jkennedy  
 Plot: B-4700AT-TCP-13.dwg

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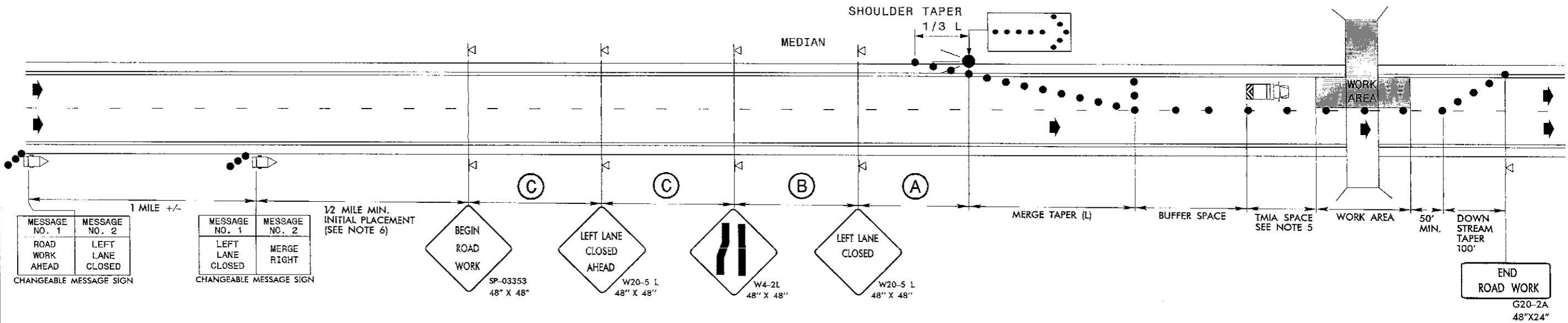
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I-77 SB ENTRANCE LOOP  
CLOSURE**

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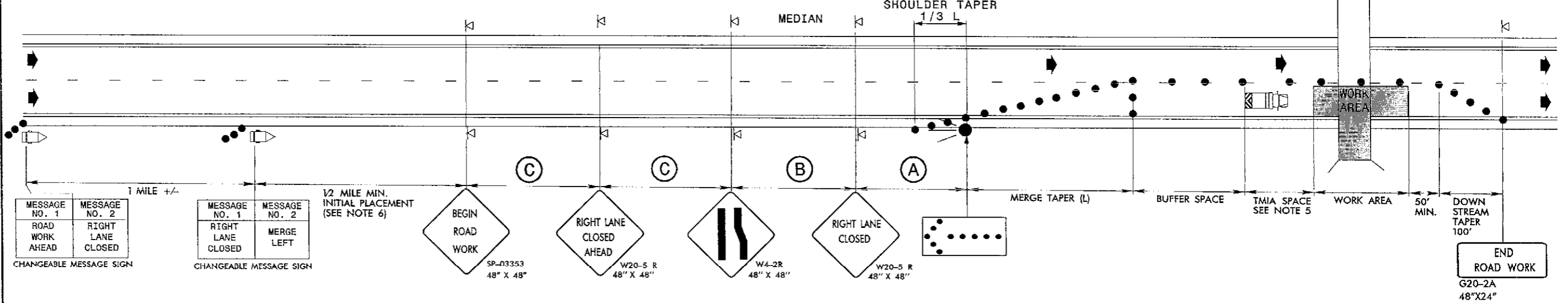
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# LEFT LANE CLOSURE



# RIGHT LANE CLOSURE



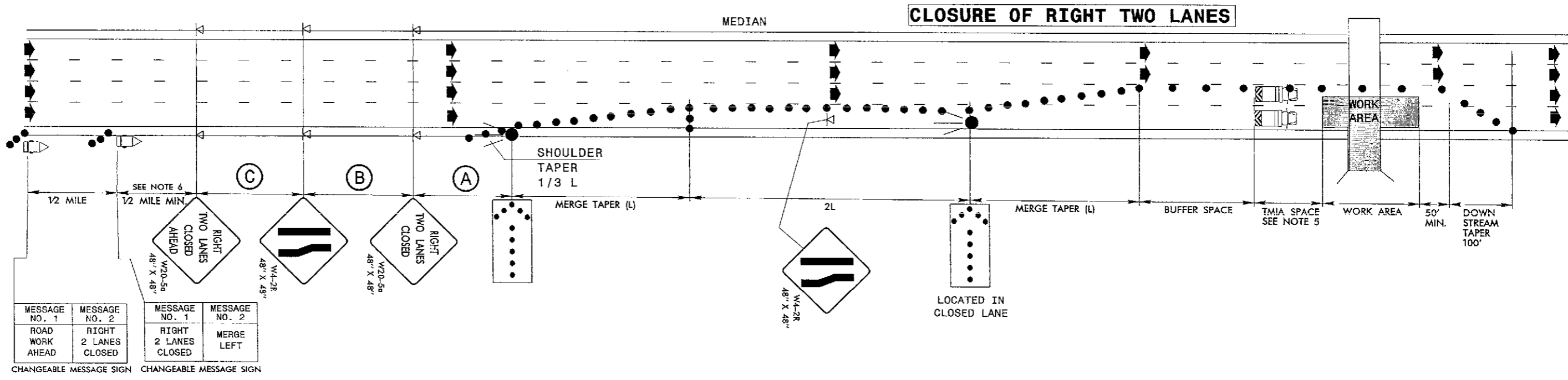
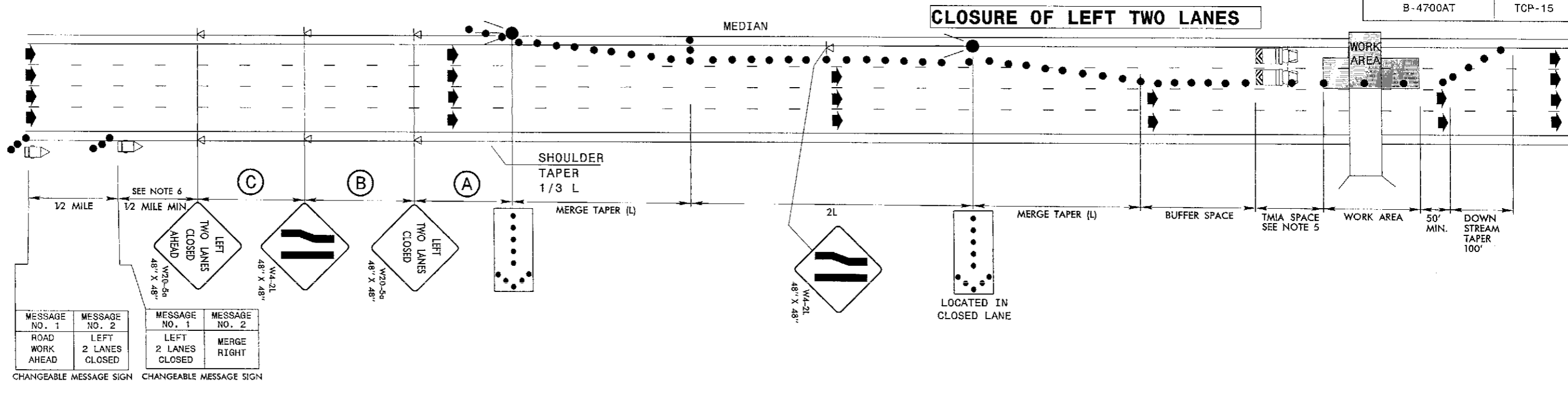
### NOTES

- 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.
- 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.

10/11/10 10:42 AM 4700AT.mxd (R:\Projects\B-4700AT\TCP\plan\14.dwg)

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	<p>SIGNATURE: <i>M. L. Watson</i> DATE: 2/15/10</p>	<table border="1"> <tr> <td>SCALE:</td> <td>NONE</td> </tr> <tr> <td>DATE:</td> <td>FEB. 2010</td> </tr> <tr> <td>DWG. BY:</td> <td>GK</td> </tr> <tr> <td>DESIGN BY:</td> <td>GK</td> </tr> <tr> <td>REVIEWED BY:</td> <td>BLW</td> </tr> </table>	SCALE:	NONE	DATE:	FEB. 2010	DWG. BY:	GK	DESIGN BY:	GK	REVIEWED BY:	BLW	<table border="1"> <tr> <th>REVISIONS</th> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> </table>	REVISIONS			
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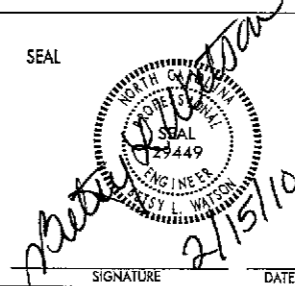




**NOTES**

1. PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). 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).
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.
3. REFER TO STD. 1101.11 SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
4. 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.
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	<p>SCALE: NONE DATE: FEB. 2010 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW</p>	<p>REVISIONS</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>					