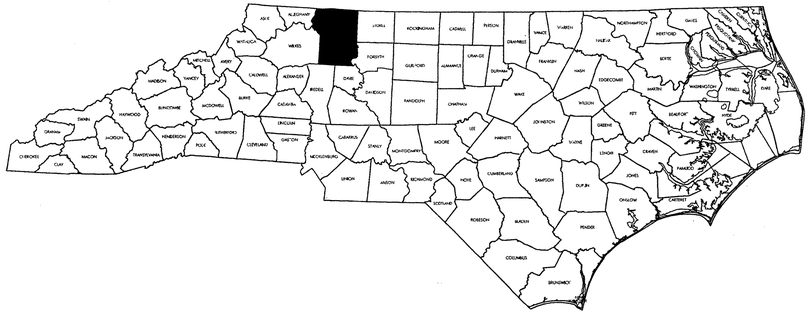
TIP PROJECT: 17BP.11.P.1

CONTRACT NO: C202968



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

SURRY AND YADKIN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.P.1	1	

STATE PROJECT NO.	F. A. PROJ. NO.	DESCRIPTION
17BP.11.P.1	N/A	PE
17BP.11.P.1	N/A	CONSTR

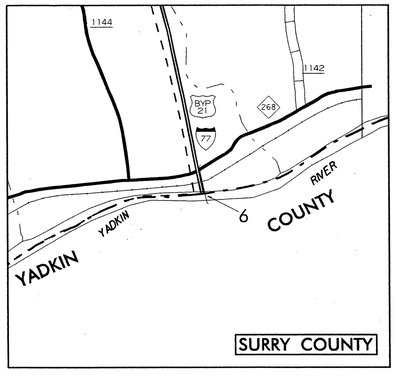
LOCATION: SURRY COUNTY:
BRIDGE #6 ON I 77 OVER NC 268, YADKIN RIVER, NSRR
BRIDGE #170 ON SR 1341 OVER I 77
BRIDGE #196 ON SR 1397 OVER I 77

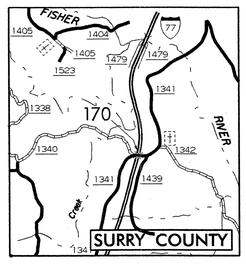
YADKIN COUNTY:
LOCATION: BRIDGE #62 ON SR 1314 OVER I 77
BRIDGE #74 ON SR 1103 OVER I 77
BRIDGE #84 ON SR 1316 OVER I 77

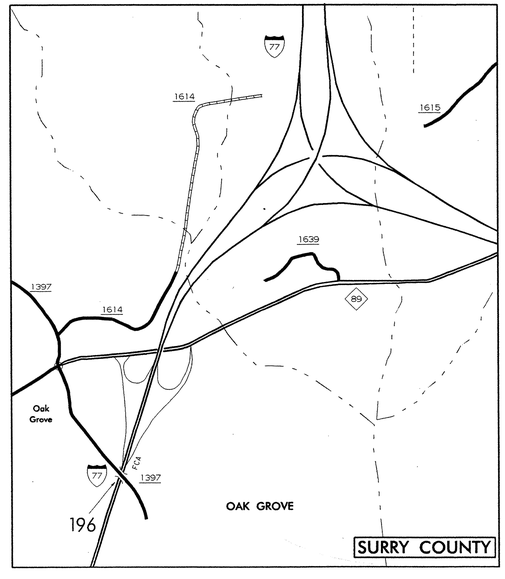
TYPE OF WORK: BRIDGE PRESERVATION–CLEANING & PAINTING OF EXISTING STRUCTURE

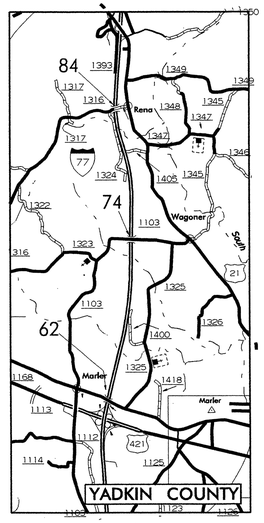
N

S









Prepared in the Office of:
STRUCTURES MANAGEMENT UNIT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH 20, 2012

GREG PERFETTI, PE
STATE BRIDGE ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 20208 ENGINEER ERIC B. NELSON JR. 12/14/11

RICK NELSON, PE
DESIGN ENGINEER

$TIME$
$DATE$
$FILE$

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.P.1	1	1A

STATE PROJECT NO.	F. A. PROJ. NO.	DESCRIPTION
17BP.11.P.1	N/A	PE
17BP.11.P.1	N/A	CONSTR

TIP PROJECT: 17BP.11.P.1

CONTRACT NO: C202968

LOCATION: SURRY COUNTY:
BRIDGE #6 ON I 77 OVER NC 268, YADKIN RIVER, NSRR
BRIDGE #170 ON SR 1341 OVER I 77
BRIDGE #196 ON SR 1397 OVER I 77

YADKIN COUNTY:
LOCATION: BRIDGE #62 ON SR 1314 OVER I 77
BRIDGE #74 ON SR 1103 OVER I 77
BRIDGE #84 ON SR 1316 OVER I 77

TYPE OF WORK: BRIDGE PRESERVATION–CLEANING & PAINTING OF EXISTING STRUCTURE

INDEX OF SHEETS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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

2006 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH 20, 2012

GREG PERFETTI, PE
STATE BRIDGE MANAGEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 20208 ENGINEER ERIC B. NELSON, JR. 12/14/11

RICK NELSON, PE
DESIGN ENGINEER

$DATE$
$FILE$
$TIME$

PROJECT REFERENCE NO.	SHEET NO.
	2

5/28/99

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202968

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
4400000000-E	1110	251	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	392	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	36	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	7	EA	FLASHING ARROW BOARD
4422000000-N	1120	12	DAY	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)
4430000000-N	1130	550	EA	DRUMS
4445000000-E	1145	64	LF	BARRICADES (TYPE III)
4450000000-N	1150	160	HR	FLAGGER
4480000000-N	1165	3	EA	TMA
4510000000-N	SP	40	HR	LAW ENFORCEMENT
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #850006
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #850170
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #850196
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #980062
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #980074
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #980084
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM POLLUTION CONTROL

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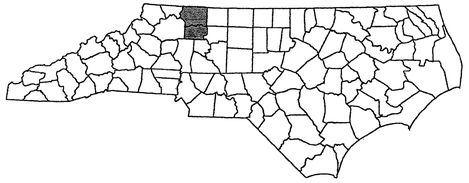
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

SURRY AND YADKIN COUNTIES

DIVISION 11



SURRY COUNTY:

BRIDGE # 6 – I–77 NB over NC 268 (E. Main St.), Southern Railway, & Yadkin River

BRIDGE #170 – SR 1341 (White Dirt Rd.) over I–77

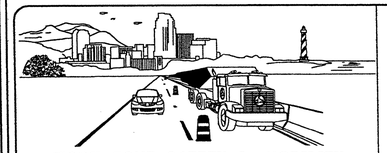
BRIDGE #196 – SR 1397 (Oak Grove Church Rd.) over I–77

YADKIN COUNTY:

BRIDGE # 62 – SR 1314 (Old US 421) over I–77

BRIDGE # 74 – SR 1103 (Marier Rd.) over I–77

BRIDGE # 84 – SR 1316 (Rena Rd.) over I–77



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

PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT
RALEIGH, NC

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

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-4,4A	SURRY COUNTY BRIDGE #196 I-77 SB LANE CLOSURES
TMP-4B	SURRY COUNTY BRIDGE #196 RAMP DETOUR ROUTE
TMP-5,5A	YADKIN COUNTY BRIDGE #62 I-77 NB LANE CLOSURES
TMP-5B	YADKIN COUNTY BRIDGE #62 RAMP DETOUR ROUTE
TMP-5C	YADKIN COUNTY BRIDGE #62 I-77 SB LANE CLOSURES

TRAFFIC MANAGEMENT STRATEGY

PAINTING OPERATIONS WILL BE PERFORMED USING TIME RESTRICTED LANE CLOSURES AND RAMP CLOSURES WITH OFFSITE DETOURS. REFER TO SHEET TMP-3 FOR PHASING.

PLAN PREPARED BY:
Stantec Consulting Services Inc.
801 Jones Franklin Road-Suite 300
Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com

BETSY L. WATSON, P.E. — TRAFFIC ENGINEER
GEORGE KARAGEORGE — SENIOR TRANSPORTATION DESIGNER
BRIAN T. LATON, E.I. — TRANSPORTATION DESIGNER

APPROVED: Betsy L Watson
DATE: 12/16/11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

SHEET NO.
TMP-1

WBS 17BP.11.P.1

12/16/2011
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dkargageorge

PROJ. REFERENCE NO.	SHEET NO.
17BP.11.P.1	TMP-1A

LEGEND

DIRECTION OF TRAFFIC FLOW

WORK AREA

NORTH ARROW

TYPE III BARRICADE

CONE

DRUM SKINNY DRUM TUBULAR MARKER

CHANGEABLE MESSAGE SIGN (CMS)

FLAGGER

FLASHING ARROW BOARD(TYPE C)

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

PORTABLE CONCRETE BARRIER (PCB)

TEMPORARY CRASH CUSHION

TEMPORARY SHORING

WORK ZONE SIGN-PORTABLE

WORK ZONE SIGN-STATIONARY

WORK ZONE SIGN-STATIONARY OR PORTABLE

SIGNALS

EXISTING PROPOSED TEMP TEMPORARY

PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

SKIP LINES

MINI-SKIP LINES

SOLID LINES

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION

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APPROVED:_____ DATE:_____

SEAL — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29449 BETSY L. WATSON — 12/16/11

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

LEGEND
&
ROADWAY STANDARD DRAWINGS

12/16/2011
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gkarageorge

PROJ. REFERENCE NO.	SHEET NO.
17BP.11.P.1	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
ALL ROADS	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME
ALL ROADS

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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) 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.

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

E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW PANEL AND MESSAGE BOARDS.

F) 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.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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 ANY ROAD CLOSURE.

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 DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION. ALL 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.

MISCELLANEOUS

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

P) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF ANY BRIDGE, UNLESS SPECIFICALLY ALLOWED IN THE PLAN OR BY THE ENGINEER.

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
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29449 BETSY L. WATSON
12/16/11

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

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
17BP.11.P.1	TMP-3

PHASING

PERFORM ALL BRIDGE PAINTING OPERATIONS USING LANE CLOSURES AS OUTLINED BELOW:

SURRY COUNTY

BRIDGE NO. 6

FOR LANE CLOSURES ON NC 268 (EAST MAIN ST) USE ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

FOR LANE CLOSURES ON I-77 USE ROADWAY STANDARD DRAWING 1101.02, SHEET 4 OF 15 OR ROADWAY STANDARD DRAWING 1101.02, SHEET 6 OF 15.

BRIDGE NO. 170

FOR LANE CLOSURES ON WHITE DIRT ROAD USE ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

FOR LANE CLOSURES ON I-77 USE ROADWAY STANDARD DRAWING 1101.02, SHEET 4 OF 15, OR ROADWAY STANDARD DRAWING 1101.02, SHEET 6 OF 15.

BRIDGE NO. 196

I-77 SB
USE LEFT LANE CLOSURES FOR LEFT LANE WORK AREAS. USE LEFT LANE CLOSURES WITH WEAVE SHIFT FOR RIGHT LANE AND RAMP LANE WORK AREAS. CLOSE ENTRANCE RAMP FROM NC 89 TO I-77 SB WHEN WORKING IN THE RIGHT LANE AND RAMP LANE. REFER TO SHEETS TMP-4,4A.
FOR RAMP CLOSURE DETOUR ROUTE SEE SHEET TMP-4B.

I-77 NB
FOR LANE CLOSURES ON I-77 NB USE ROADWAY STANDARD DRAWING 1101.02, SHEET 4 OF 15, OR ROADWAY STANDARD DRAWING 1101.02, SHEET 6 OF 15.

YADKIN COUNTY

BRIDGE NO. 62

I-77 NB
USE LEFT LANE CLOSURES FOR LEFT LANE WORK AREAS. USE LEFT LANE CLOSURES WITH WEAVE SHIFT FOR RIGHT LANE AND RAMP LANE WORK AREAS. CLOSE ENTRANCE RAMP FROM US 421 TO I-77 NB WHEN WORKING IN THE RIGHT LANE AND RAMP LANE. REFER TO SHEETS TMP-5,5A.
FOR RAMP CLOSURE DETOUR ROUTE SEE SHEET TMP-5B.

I-77 SB
FOR LANE CLOSURES ON I-77 SB SEE SHEET TMP-5C.

BRIDGE NO. 74

FOR LANE CLOSURES ON MARIER ROAD USE ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

FOR LANE CLOSURES ON INTERSTATE 77 USE ROADWAY STANDARD DRAWING 1101.02, SHEET 4 OF 15, OR ROADWAY STANDARD DRAWING 1101.02, SHEET 6 OF 15.

BRIDGE NO. 84

FOR LANE CLOSURES ON RENA ROAD USE ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

FOR LANE CLOSURES ON INTERSTATE 77 USE ROADWAY STANDARD DRAWING 1101.02, SHEET 4 OF 15, OR ROADWAY STANDARD DRAWING 1101.02, SHEET 6 OF 15.

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APPROVED:_____ DATE:_____

SEAL 23049 ENGINEER PATSY L. WALTON NORTH CAROLINA PROFESSIONAL
12/16/11

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

PHASING

12/16/2011
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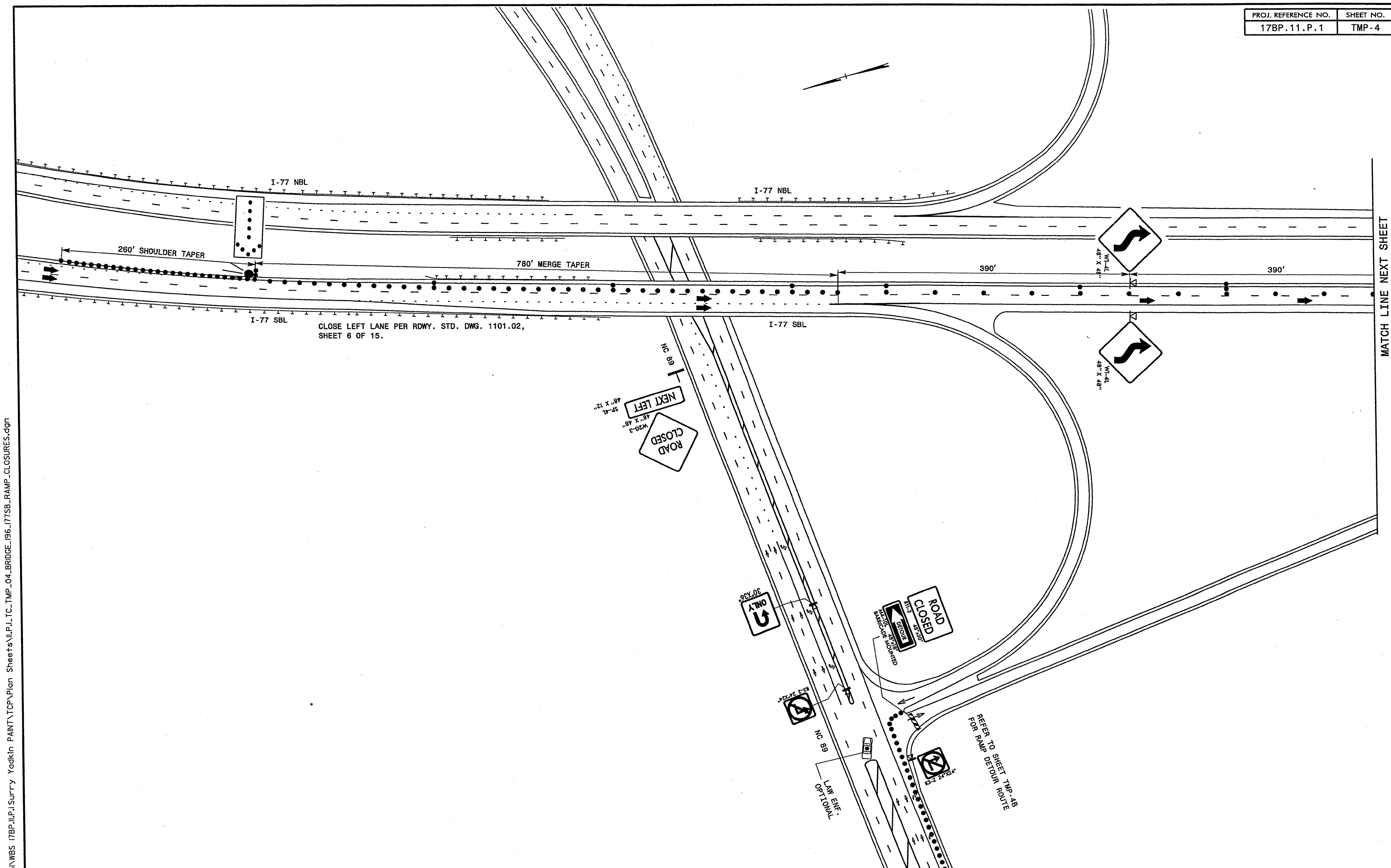
PROJ. REFERENCE NO.	SHEET NO.
17BP.11.P.1	TMP-4



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License No. F-0672

APPROVED:________ DATE:______

SEAL

NORTH CAROLINA PROFESSIONAL SEAL [illegible] ENGINEER BETSY L. WATSON

[illegible] 12/16/11

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

SURRY CO. BRIDGE #196

SB LANE CLOSURES

12/16/2011
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PROJ. REFERENCE NO.	SHEET NO.
17BP.11.P.1	TMP-4A

MATCH LINE PREVIOUS SHEET

I-77 NBL

I-77 SBL

390' SHIFT TAPER

405'

440'

FOR LEFT LANE WORK AREA STOP TRAFFIC TEMPORARILY TO REMOVE SHIFT TAPER, REMOVE W1-4 SIGNS, RELOCATE TMA AND REPOSITION DRUMS TO KEEP TRAFFIC IN THE RIGHT LANE.

BACK OF GORE

RAMP CLOSED. REFER TO SHEET TMP-4B FOR DETOUR ROUTE

OAK GROVE CHURCH ROAD

BRIDGE #196

I-77 NBL

I-77 SBL

I-77 NBL

I-77 SBL

ROAD CLOSED
R11-2 48"x30"

DETOUR
M4-10L 48"x18"
BARRICADE MOUNTED

REFER TO SHEET TMP-4B FOR RAMP DETOUR ROUTE

R2-2 24"X24"

ROAD CLOSED
W20-3 48" X 48"

NEXT RIGHT
SP-4R 48" X 12"

NC 89

ONLY
R3-7 30"X36"

R2-2 24"X24"

NC 89

LAW ENF. OPTIONAL

NC 89

NEXT LEFT
SP-4L 48" X 12"

ROAD CLOSED
W20-3 48" X 48"

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Suite 300
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APPROVED:_____ DATE:_____

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER 29449 BETSY L. WATSON
12/16/11

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

SURRY CO. BRIDGE #196

SB LANE CLOSURES

12/16/2011
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gmcgeorge

PROJ. REFERENCE NO.	SHEET NO.
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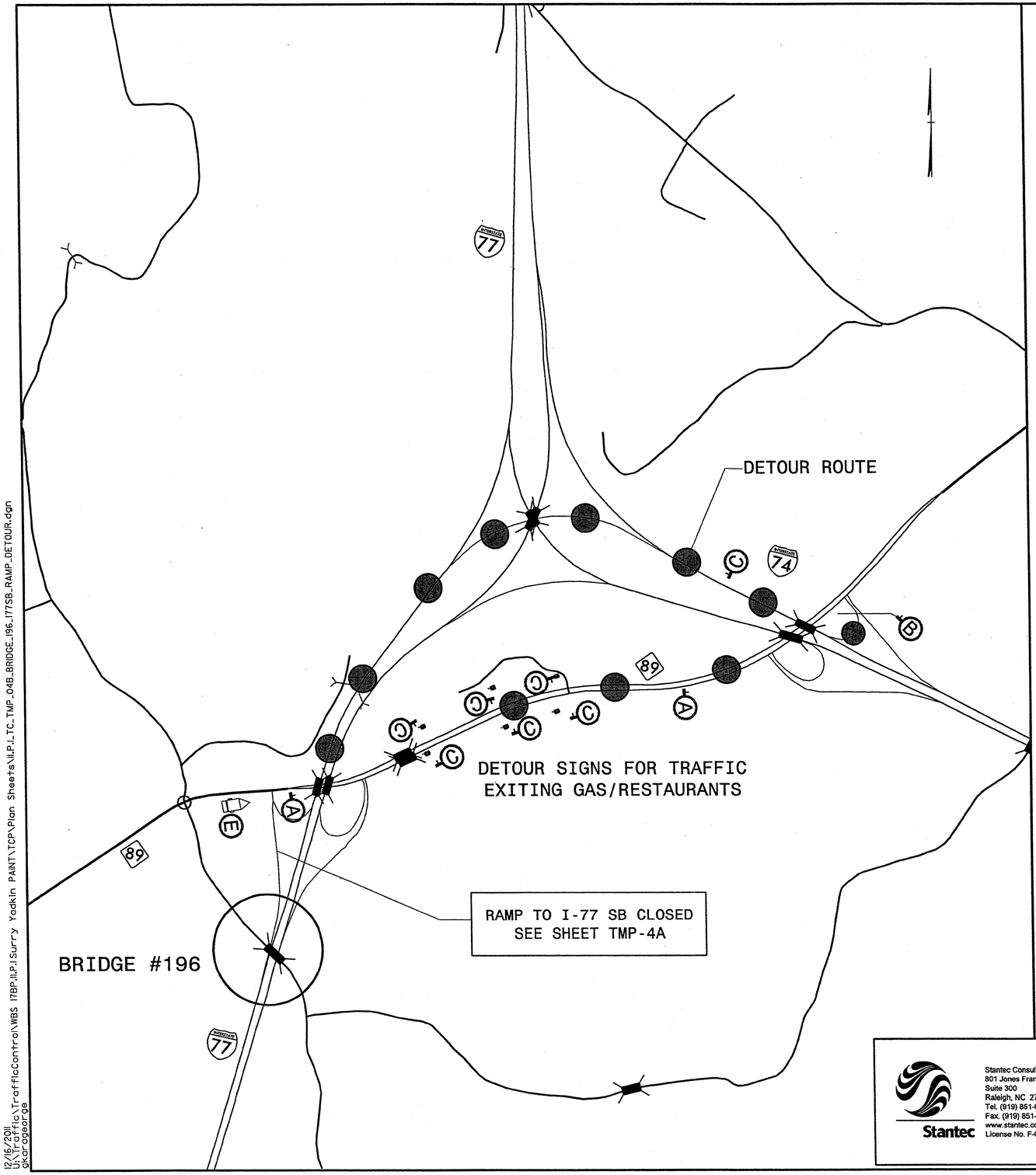

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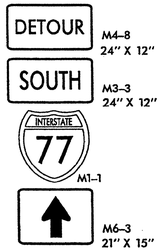

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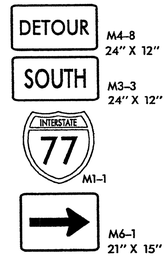

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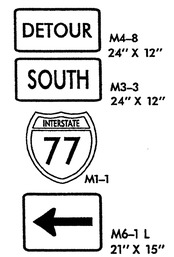

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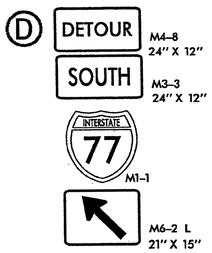

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SEAL 29449 NORTH CAROLINA PROFESSIONAL ENGINEER BETSY L. WATSON

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

SURRY CO. BRIDGE #196

DETOUR ROUTE

12/16/2011
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dkarageorge

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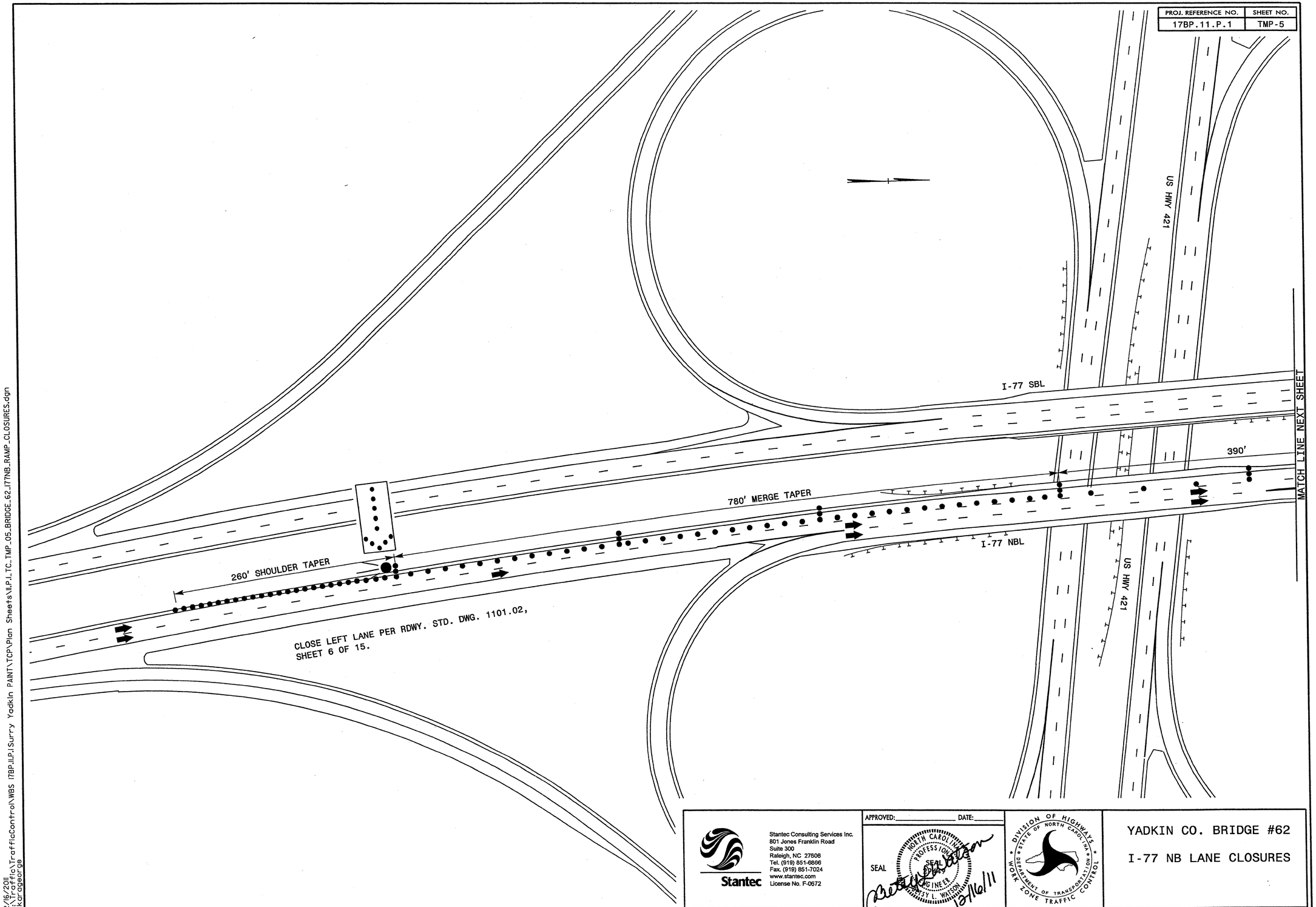

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NORTH CAROLINA PROFESSIONAL SEAL 029449 ENGINEER BETTY L. WATSON

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YADKIN CO. BRIDGE #62

I-77 NB LANE CLOSURES

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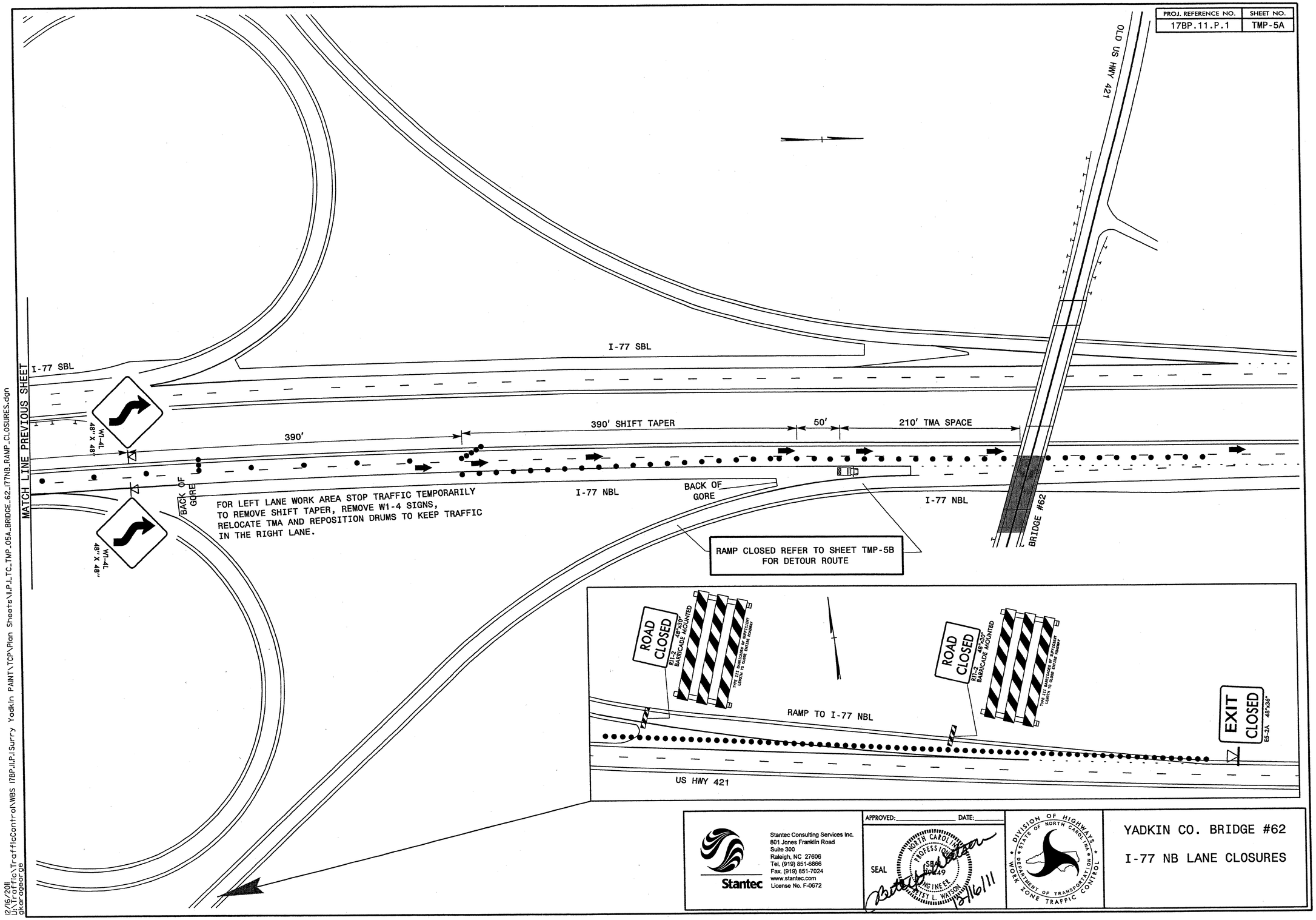

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SEAL 30449 NORTH CAROLINA PROFESSIONAL ENGINEER BETSY L. WATSON

12/6/11

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

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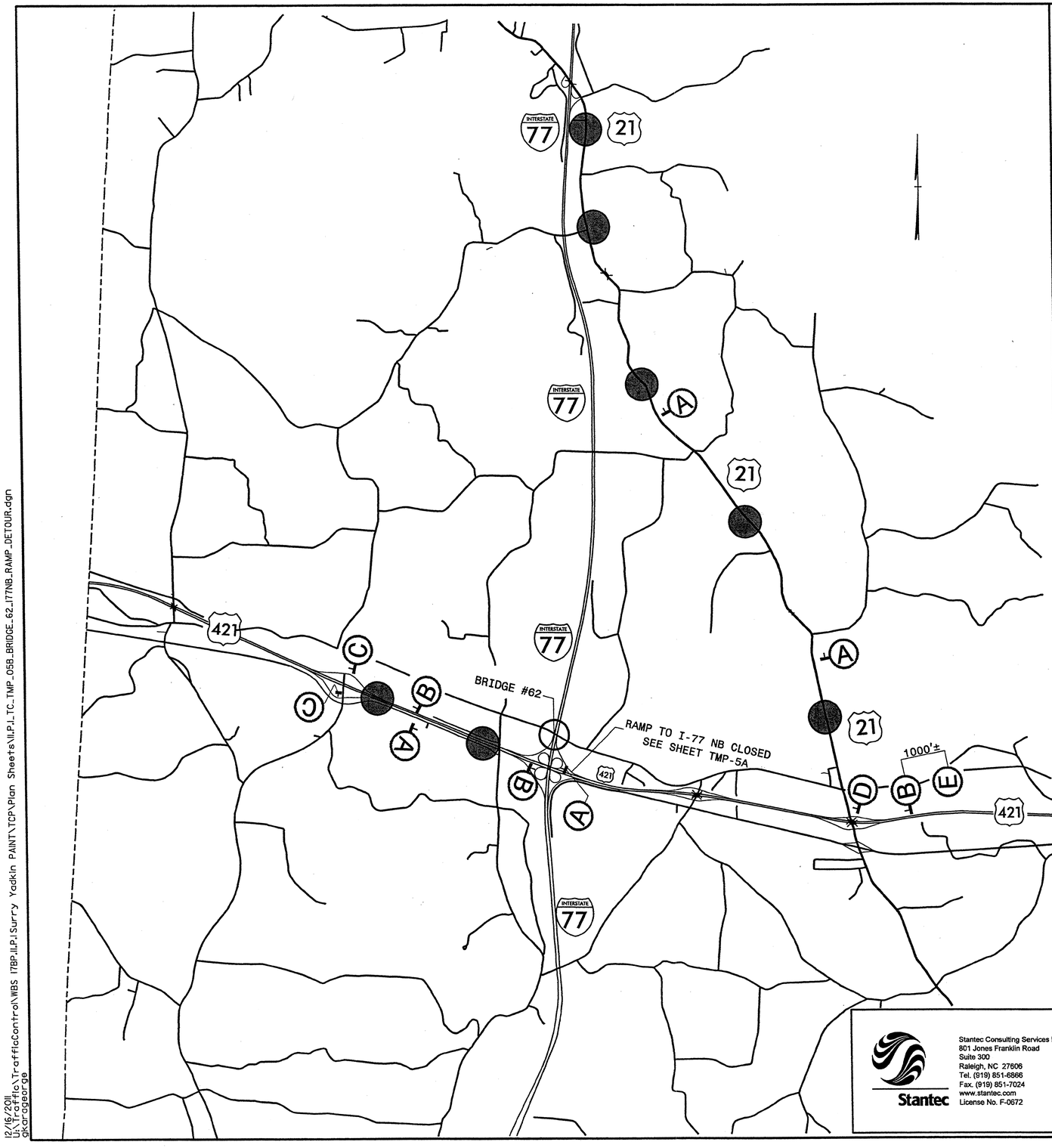

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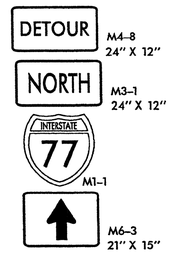

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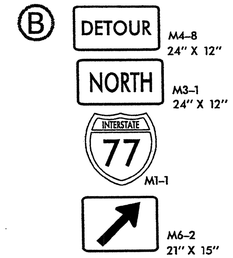

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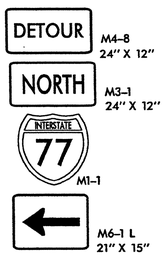

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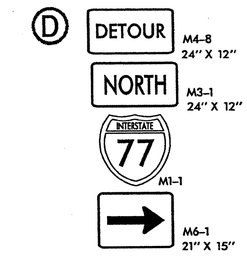

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SEAL

NORTH CAROLINA PROFESSIONAL SEAL 036439 ENGINEER BETSY L. WATSON

2/16/11

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US 421W TO I-77 NB RAMP DETOUR ROUTE

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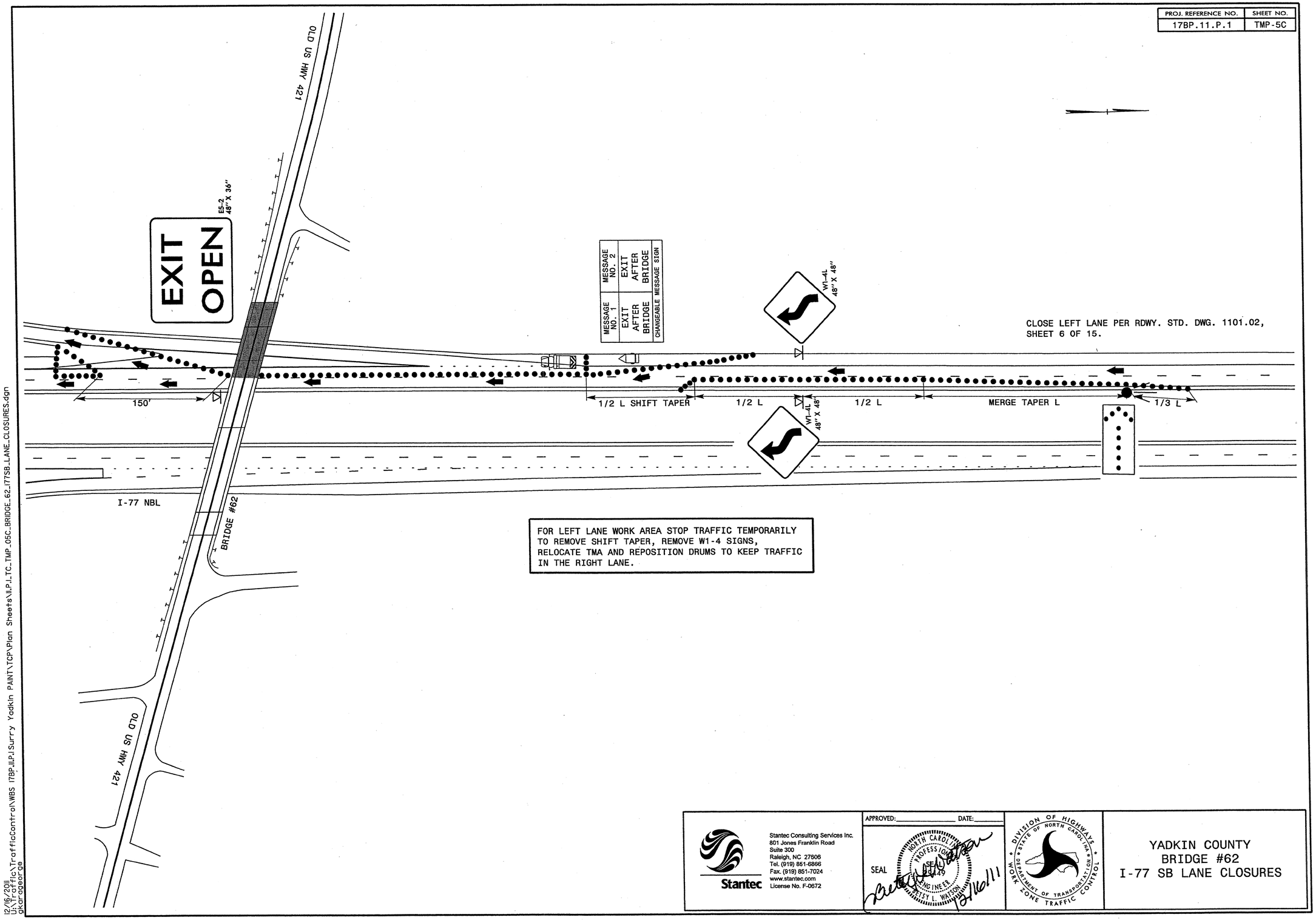

FOR LEFT LANE WORK AREA STOP TRAFFIC TEMPORARILY TO REMOVE SHIFT TAPER, REMOVE W1-4 SIGNS, RELOCATE TMA AND REPOSITION DRUMS TO KEEP TRAFFIC IN THE RIGHT LANE.

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034419 ENGINEER JESSY L. WATSON
12/16/11

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

YADKIN COUNTY
BRIDGE #62
I-77 SB LANE CLOSURES

12/16/2011
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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF	
STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR	
UNTREATED - EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN