

|                                 | STATE         | STATE       | PROJECT REPERENCE NO. | SHEET<br>NO. | TOTAL<br>SHBETS |
|---------------------------------|---------------|-------------|-----------------------|--------------|-----------------|
|                                 | N.C.          | 4           | 2579.1.1              | 1            |                 |
|                                 | STAT          | B PROJ. NO. | P. A. PROJ. NO.       | DESCRIPT     | TION            |
|                                 | 42:           | 579.1.1     | BRSTP-0024 (43)       | PE           |                 |
|                                 | 425           | 579.3.9     | BRSTP-0024 (43)       |              | ST              |
|                                 |               |             |                       |              |                 |
| IY                              |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
| BLVD.) , OVER<br>ON WITH<br>4ND | ₹ <i>I</i> —8 | 35          | 1                     |              |                 |
|                                 |               |             | R                     | )            |                 |
|                                 |               |             |                       | /            |                 |
|                                 |               |             |                       | 5            |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
| A. 219+26.52 -1                 |               |             |                       |              |                 |
|                                 | -             |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
| SK 2665                         |               |             |                       |              |                 |
| HAKKIS BO                       | ULEV          | 'ARN        | TO US                 | 29           |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
|                                 |               |             |                       |              |                 |
| WITH CARO                       |               |             |                       |              |                 |
| STATES STON 1                   |               |             |                       |              |                 |
| SEAL                            | 1111          |             |                       |              |                 |
| = 20208 =<br>= 2/2/10           |               |             |                       |              |                 |
| P C NEERS                       |               |             |                       |              |                 |
| NELSONN                         |               |             |                       |              |                 |
| ERIC NELSON, PE                 |               |             |                       |              |                 |
| ADDIGIT DITURIDAR               |               | 1           |                       |              |                 |





CHECKED BY: AGA

SSSSUSERNAMESSSS \$\$\$\$\$\$\$\$YSTTMF\$\$\$\$\$



SSSSUSERNAMESSSS \$\$\$\$\$\$\$\$YSTTMF\$\$\$\$\$

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## PLAN FOR PROPOSED TRAFFIC CONTROL

## **MECKLENBURG COUNTY**

LOCATION: BRIDGE #294 WEST WT HARRIS BLVD. OVER I-85 TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE PRESERVATION

## ROADWAY STANDARD DRAWINGS

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

| STD. NO. | TITLE   |
|----------|---|
| 1101.02  | TEMPORARY LANE CLOSURES                         |
| 1101.04  | TEMPORARY SHOULDER CLOSURES                     |
| 1101.11  | TRAFFIC CONTROL DESIGN TABLES                   |
| 1110.01  | STATIONARY WORK ZONE SIGNS                      |
| 1110.02  | PORTABLE WORK ZONE SIGNS                        |
| 1115.01  | FLASHING ARROW PANELS                           |
| 1130.01  | DRUMS   |
| 1135.01  | CONES   |
| 1145.01  | BARRICADES                                      |
| 1150.01  | FLAGGING DEVICES                                |
| 1165.01  | TRUCK MOUNTED IMPACT ATTENUATOR                 |
| 1180.01  | SKINNY DRUMS                                    |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES & OFFSETS        |
| 1205.02  | PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS |
|          |   |

### **INDEX OF SHEETS**

| SHEET NO. | TITLE   |
|-----------|---|
| TCP-1     | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS<br>LEGEND, AND INDEX OF SHEETS |
| TCP-2     | GENERAL NOTES   |
| TCP-3     | TRAFFIC CONTROL PHASING   |
| TCP-4     | PHASE I-TRAFFIC CONTROL FOR STAGE I BRIDGE W                                |
| TCP-5     | PHASE I-TRAFFIC CONTROL FOR STAGE I BRIDGE W                                |
| TCP-6     | PHASE II-TRAFFIC CONTROL FOR STAGE II BRIDGE                                |
| TCP-7     | I-85 SB EXIT 45A CLOSURE & DETOUR ROUTE                                     |



0

42579.3

WBS

-5101

BK

....

PROJECT

|                 |                    | STATE PRO     | JECT REFERENCE NO.  | SHEET NO.   |
|-----------------|--------------------|---------------|---|-------------|
|                 |                    | BK            |   | TCP-1       |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 | (.                 | LEGEN         | <b>VD</b>   |             |
|                 | GENER              | AL            |   |             |
|                 | -                  | DIRECTION (   | OF TRAFFIC FLOW   |             |
|                 |                    | - NORTH ARROW | V   |             |
|                 | <b>2</b> 3.)       | WORK AREA     |   |             |
|                 |                    |               |   |             |
|                 | TRAFF              | IC CONTRO     | DL DEVICES  |             |
|                 |                    | TYPE III B    | ABBICADE  |             |
|                 |                    | CONE          |   |             |
|                 | •                  | DRUM 👌 🔘      | SKINNY DRUM   |             |
|                 |                    | FLASHING AR   | ROW PANEL (TYPE (   | C)          |
|                 | ⊢                  | STATIONARY    | SIGN  |             |
|                 | ۲<br>ا             | PORTABLE SI   | GN  |             |
| ĸ               |                    | PORTAB        | OR PORTABLE SIGN  | RIER        |
| к               | ~~~                | TEMPORARY C   | RASH CUSHION  |             |
| ORK             |                    | CHANGEABLE    | MESSAGE SIGN  |             |
|                 |                    | TRUCK MOUNT   | ED IMPACT ATTENU  | ATOR (TMIA) |
|                 |                    | POLICE        |   |             |
|                 |                    | FLAGGER       |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               |   |             |
|                 |                    |               | ,   |             |
| PREPARED BY     | · e                |               | Stantec Consulting Services Inc.<br>Suite 300, 801 Jones Franklin Road<br>Raleigh, NC |             |
|                 |                    | Stantos       | 27606<br>Tel. 919.851.6866<br>Fax. 919.851.7024<br>www.stantec.com                    |             |
| BETSY L. WATSON | . PE               | JULINEC       |   |             |
| GEORGE KARAGEOR | , . <u>-</u><br>GE | _ TRAFFI      | C CONTROL ENGI  | NEER        |
|                 |                    | TRAFFI        | C CONTROL DESI  | GNER        |

### 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.

#### TIME RESTRICTIONS

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

ROAD NAME DAY AND TIME RESTRICTIONS ALL ROADS 6:00 A.M.-8:00 P.M. MONDAY THRU FRIDAY (DAILY) AND 8:00 P.M. FRIDAY THRU 8:00 P.M. SUNDAY

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 8:00 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 8:00 P.M. THURSDAY AND 6:00 A.M. MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00 P.M. FRIDAY TO 6:00 A.M. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 8:00 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 8:00 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 8:00 P.M. FRIDAY AND 6:00 A.M. TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00 P.M. TUESDAY TO 6:00 A.M. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CLOSE ROADS AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS                    |
|-----------|--|
| ALL ROADS | 6:00 A.M8:00 P.M. MONDAY THRU FRIDAY (DAILY) |
|           | AND 8:00 P.M. FRIDAY THRU 8:00 P.M. SUNDAY   |

LANE AND SHOULDER CLOSURE REQUIREMENTS

#### TRAFFIC CONTROL

- 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 AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL Q) POLICE MAY B 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.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- J) INSTALL WORK ZONE ADVANCE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- K) PROVIDE CHANGEABLE MESSAGE SIGNS, PORTABLE SIGNS AND DEVICES REQUIRED FOR OFFSITE DETOURS AND CLOSURE OF EXIT RAMPS AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- L) REMOVE ALL PORTABLE SIGNS AND DEVICES AND TURN OFF CHANGEABLE MESSAGE SIGNS WHEN OFFSITE DETOURS AND EXIT CLOSURES ARE NOT IN OPERATION.
- M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.



| BK-5101J TCP   | -2 |
|--|----|
|  |    |
|  | 1  |
|  |    |
| ES,  | ļ  |
|  | Ì  |
|  |    |
|  |    |
|  |    |
| TRAFFIC CONTROL DEVICES  |    |
| N) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN<br>TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII,<br>AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT<br>IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF<br>STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE<br>PLANS.   |    |
| O) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED,<br>OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.   |    |
| PAVEMENT MARKINGS AND MARKERS  |    |
| P) REPLACE, ALL PAVEMENT MARKINGS BEFORE RE-OPENING LANES TO TRAFFIC<br>USING PAINT INITIALLY. UPON COMPLETION OF ALL BRIDGE WORK OPERATIONS<br>INSTALL THERMOPLASTIC PAVEMENT MARKINGS.   |    |
| MISCELLANEOUS  | 4  |
| Q) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR<br>INTERSECTIONS AS DIRECTED BY THE ENGINEER.   |    |
| B) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING   |    |
| ARE APPROXIMATE; FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.   |    |
| S) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN<br>ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE<br>INCLUDING THE FOLLOWING AREAS OF CONCERN:  |    |
| A. LANE CLOSURE RESTRICTIONS.  |    |
| B. DETOURS OFFSITE AND ONSITE.   |    |
| C. AREAS OF CONSTRICTED HORIZONTAL CLEARANCES (NARROW LANES OR LANES<br>BORDERED ALONG THE OUTSIDE WITH EITHER PCB OR GUARDRAIL).  |    |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |
| . ~ M  |    |
| SEAL GENERAL NOTES   |    |
|  |    |
| tec has been a final fin |    |
| nvices Inc.  | NS |
| DAN. 2010<br>DWG. 57: GK   |    |
|  |    |

## TRAFFIC CONTROL PHASING

PHASE I - STAGE I BRIDGE WORK

#### PERFORM STEPS 1 THROUGH 6 IN A CONTINUOUS OPERATION

STEP 1: IMPLEMENT I-85 SB-EXIT 45A DETOUR AS SHOWN ON SHEET TCP-7.

<u>STEP 2:</u> CLOSE EXIT 45A FROM I-85 SB AS SHOWN ON SHEET TCP-5.

STEP 3: INSTALL LANE CLOSURES FOR BOTH DIRECTIONS OF WEST WT HARRIS BLVD. AS SHOWN ON SHEETS TCP-4 & 5.

<u>STEP 4:</u> PERFORM STAGE I WORK FOR BRIDGE #294.

<u>STEP 5:</u> REMOVE TRAFFIC CONTROL DEVICES FROM WEST WT HARRIS BLVD. AND OPEN TO EXISTING TRAFFIC PATTERN.

STEP 6: REMOVE TRAFFIC CONTROL DEVICES AND OPEN EXIT 45A TO TRAFFIC. UPON OPENING OF EXIT 45A TURN OFF MESSAGE SIGNS FOR DETOUR. PHASE II - STAGE II BRIDGE WO

PERFORM STEPS 1 THROUGH 6 IN

STEP 1: IMPLEMENT I-85 SB-EXIT 45A DE

STEP 2: CLOSE EXIT 45A FROM I-85 SB

<u>STEP 3:</u> INSTALL LANE CLOSURES ON WEST

STEP 4: PERFORM STAGE II WORK FOR BRI

STEP 5: REMOVE TRAFFIC CONTROL DEVICE EXISTING TRAFFIC PATTERN.

STEP 6:

REMOVE TRAFFIC CONTROL DEVIC OF EXIT 45A TURN OFF MESSAGE

514.5



|                                   | PROJECT REFERENCE NO. | SHEEDENCOB |
|-----------------------------------|-----------------------|------------|
|                                   | BK-5101J              | TCP-3      |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
| DRK                               |                       |            |
| A CONTINUOUS OPERATION            |                       |            |
|                                   |                       |            |
| ETOUR AS SHOWN ON SHEET TCP-7.    |                       |            |
| AS SHOWN ON SHEET TCP-6.          |                       |            |
| T WT HARRIS BLVD. AS SHOWN ON SHE | ET TCP-4 & 6.         |            |
|                                   |                       |            |
| IDGE #294.                        |                       |            |
| ES FROM WEST WT HARRIS BLVD. AND  | OPEN TO               |            |
|                                   |                       |            |
| ES AND OPEN EXIT 45A TO TRAFFIC.  | UPON OPENING          |            |
| SIGNS FOR DETOUR.                 |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
|                                   |                       |            |
| KON                               |                       |            |
| TR.                               | AFFIC CONTROL PH      | ASING      |
|                                   | MECKLENBURG COUN      | ITY        |
| THE MAN I CO SCALE NONE           | 30th Of High          | REVISIONS  |
| DATE: JAN. 20<br>DWG.BY: GK       |                       |            |
| SIGNATURE DATE REMEWED BY: BLV    | N N                   | CADD       |
|                                   | 1                     |            |



\_\_\_\_

|                                 |   | ·····               |
|---------------------------------|---|---------------------|
|                                 | BK-5101.  | SHEET NO.           |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
| +                               | <b>~</b>  |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
| N ACCORDANCE                    |   |                     |
| SHEET 3 OF 9                    |   |                     |
|                                 |   |                     |
|                                 |   | 1                   |
|                                 |   |                     |
| Set &                           |   |                     |
|                                 |   | нĽ                  |
|                                 | المراجع المراجع<br>مراجع المراجع ال<br>مراجع المراجع ال | E<br>ASE 1<br>ASE 1 |
| •••••                           |   | 5 PH                |
|                                 |   | TCP -               |
| 3                               | ······································  | EET W               |
| 540' MERGE TAPER                |   | HS HS               |
|                                 |   |                     |
|                                 |   |                     |
|                                 | :   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
|                                 |   |                     |
| Y BON                           | PHASE I   |                     |
| ANTH CARE A                     |   |                     |
| STA                             | GE I BRIDGE WO  | DRK                 |
| BRIDGE                          | #294 MECKLENB   | JRG CO.             |
| SCALE NONE                      | 01 Her  | REVISIONS           |
| DATE: JAN. 2010                 |   |                     |
|                                 |   |                     |
| SIGNATURE DATE REVIEWED BY: BLW | TRAFFIC CONT  | DD                  |



si\rBK-1/19/2010 si\rBK-51011\_top-psh\_20 skreateriae 294\TCP\Plan\_Sheets\BK-51011\_top-psh\_20

-----



J/19/2010 ab. 5101, pridge 294\tcp\plan sheets\BK-5101.tcp\_psh\_86.dg

\_\_\_\_



----