PROJECT: 36727.3.12

<u> 2145</u>

RNER

<u>2135</u>

1934

2130

MICRO POP.425

2405

2367

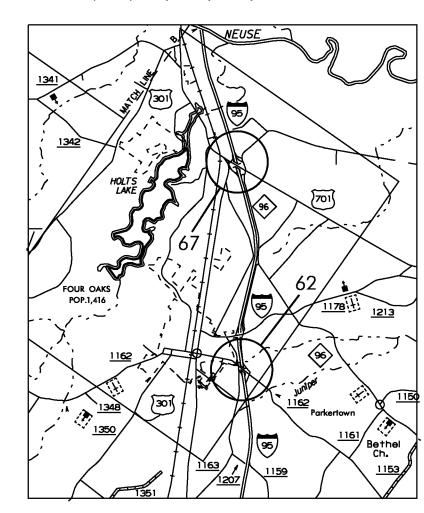
1001

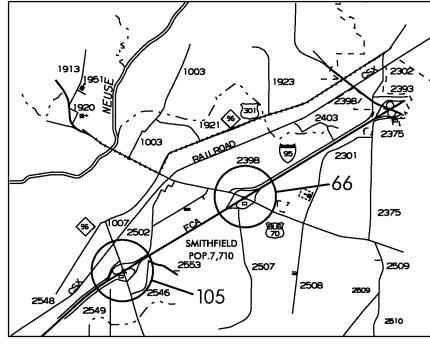
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

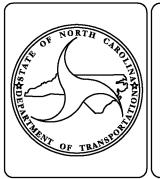
JOHNSTON COUNTY

| STATE | STATE PROMET SHIPMENDER NO. | SHIPMENDER NO. |

LOCATION: US 70 BUS, US701, SR1007, SR 1162, SR 2137 AND SR 2339 TYPE OF WORK: CLEANING & PAINTING OF BRIDGE #62, #66, #67, #105, #109, AND #112 IN JOHNSTON COUNTY.







(301)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT = 0.000 MILES

TOTAL LENGTH TIP PROJECT = 0.000 MILES

Prepared In the Office of:

BRIDGE MANAGEMENT UNIT

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

LETTING DATE:

JULY 28, 2009

DAN HOLDERMAN, PE

STATE RRIDGE

MANAGEMENT ENGINEER

MIKE SUMMERS

BRIDGE MANAGEMENT PROJECT MANAGER



STAES

SOATES SFLES

STATE PROJECT REFERENCE NO. SHEET NO. WBS 36727.3.12 TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

JOHNSTON COUNTY Painting of 6 bridges over I-95

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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1145.01	BARRICADES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR

PHASING

STEP 1.	PERFORM PAINTING OPERATIONS AS SHOWN IN THE CONTRACT AND CONSTRUCTION PLANS. PERFORM WORK IN ACCORDANCE WITH THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES- JULY 2006" AND THE FOLLOWING TCP SHEETS AS REQUIRED.

FOR BRIDGE NO. 62, USE TCP-3, TCP-4 FOR BRIDGE NO. 67, USE TCP-3, TCP-5, TCP-6 FOR BRIDGE NO. 105, USE TCP-3, TCP-6 FOR BRIDGE NO. 66, USE TCP-3, TCP-4, TCP-5 FOR BRIDGE NO. 109 AND 112, USE TCP-3, TCP-5

USE TCP-7 AS NEEDED FOR SHOULDER CLOSURES.

UPON COMPLETION OF THE PROJECT, REMOVE ALL TRAFFIC STEP 2. CONTROL DEVICES.

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, INDEX OF SHEETS, AND PHASING
TCP-2	GENERAL NOTES
TCP-3	LANE CLOSURES ALONG I-95
TCP-4	RIGHT LANE CLOSURES THROUGH ENTRANCE RAMPS
TCP-5	RIGHT LANE CLOSURES THROUGH EXIT RAMPS
TCP-6	RIGHT LANE CLOSURES THROUGH EXIT RAMPS
TCP-7	SHOULDER CLOSURES
TCP-8	SIGN DETAIL

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

- PROPOSED PVMT. ---- EXIST. PVMT.





REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TT TYPE II BARRICADE

TYPE III BARRICADE

CONE

DRUM SKINNY DRUM



STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

---- CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

FLAGGER

PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

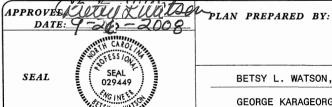
YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



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BETSY L. WATSON, PE

GEORGE KARAGEORGE

TRAFFIC CONTROL ENGINEER TRAFFIC CONTROL DESIGNER

2

9

WBS 36727.3.12

TCP-2

SHEET NO.

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

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

I-95

12:00 PM (NOON) FRIDAY THROUGH 11:59 PM SUNDAY

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

ROAD NAME

I-95

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 6:30 AM DECEMBER 31st TO 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING
- 3. FOR EASTER, BETWEEN THE HOURS OF 6:30 AM THURSDAY AND 7:00 PM TUÉSDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:30 AM FRIDAY AND
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:30 AM THE FRIDAY BEFORE THE WEEK OF INDEPENDENCE DAY AND 7:00 PM THE FOLLOWING MONDAY AFTER THE WEEK OF INDEPENDENCE DAY.
- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:30 AM FRIDAY AND
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:30 AM TUESDAY AND
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:30 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- C) DO NOT STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

I-95

ANY TIME

DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- 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.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN 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.
- 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.

- 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.
- 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
- PROVIDE A MINIMUM OF ONE MILE BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

TRAFFIC PATTERN ALTERATIONS

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

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

TRAFFIC CONTROL DEVICES

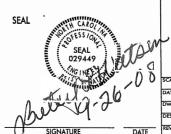
- SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT
- PLACE ADDITIONAL SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

- POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.
- COORDINATE WITH THE ENGINEER TO UTILIZE OVERHEAD DYNAMIC MESSAGE SIGNS, IF AVAILABLE, FOR ADVANCE WARNING TO MOTORIST OF: "ROAD WORK AHEAD AT MP XXX", "LEFT/ RIGHT LANE CLOSED AHEAD AT MP XXX".
- INSTALL CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE PORTABLE WORK ZONE AS SHOWN ON THE TCP SHEETS OR AS DIRECTED BY THE ENGINEER.
- RETURN TRAFFIC TO ITS EXISTING TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD.
- S) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF THE STRUCTURE.
- UPON COMPLETION OF THE WORK AT EACH BRIDGE LOCATION, REMOVE ALL T) TRAFFIC CONTROL DEVICES.



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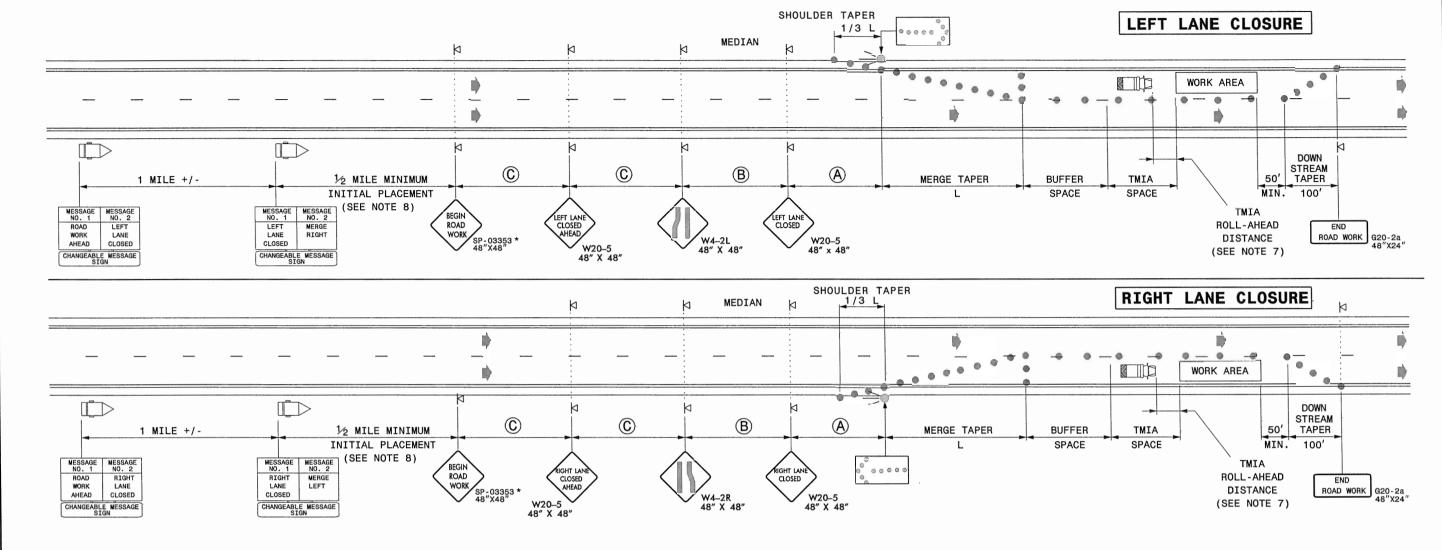
GENERAL NOTES

NONE SEP 2008 BLW DESIGN BY: BLW BLW



FILE ...\I-95 Bridge Package_TCP_psh02.dgr

REVISIONS



GENERAL NOTES

- 1- USE THIS DRAWING FOR LANE CLOSURES ALONG I-95 ASSOCIATED WITH ALL SIX BRIDGE LOCATIONS.
- 2- 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)
- 3- 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.
- 4- REFER TO STD. 1101.11 SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- 5- REFER TO SHEETS TCP-4, 5, AND 6 FOR TREATMENT OF LANE CLOSURES THROUGH INTERCHANGES.
- 6- 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.
- 7- 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.
- 8- 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 CONJUCTION WITH ANTICIPATED BACKUP.
- * SEE SHEET TCP-8 FOR SIGN DETAIL.



FLASHING ARROW PANEL (TYPE C)

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

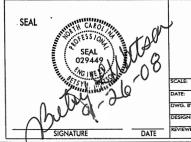
CHANGEABLE MESSAGE SIGN (CMS)

- DRUM
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW



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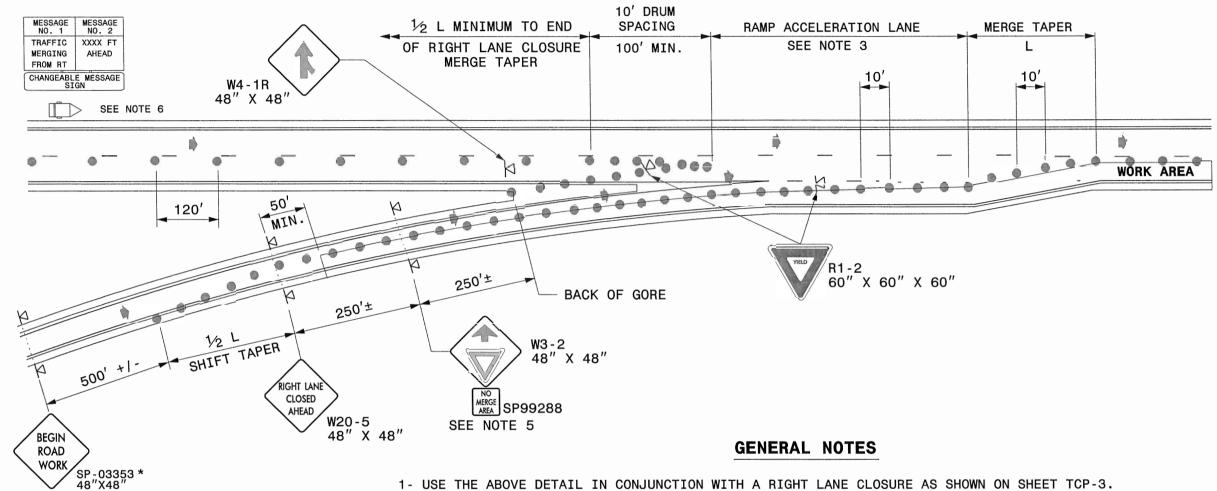
TEMPORARY LANE CLOSURES ON I-95

IE: NONE
SEP 2008
G. BY: BLW
SIGN BY: BLW

REVISIONS

Stantec REVISIONS

ortation/design/i-95 bridge package/I-95 Brid blwatson



- 1- USE THE ABOVE DETAIL IN CONJUNCTION WITH A RIGHT LANE CLOSURE AS SHOWN ON SHEET TCP-3.
- 2- MOUNT SIGNS SHOWN A MINIMUM OF 5 FEET ABOVE THE PAVEMENT ELEVATION.
- 3- IF EXISTING ACCELERATION DISTANCE OR A MINIMUM OF 400' ACCELERATION DISTANCE CANNOT BE PROVIDED, CONTACT THE WORK ZONE TRAFFIC CONTROL UNIT FOR FURTHER GUIDANCE.
- 4- CLOSE THE RIGHT LANE SUFFICIENTLY IN ADVANCE TO STABILIZE MOTOR VEHICLE TRAFFIC FLOW BEFORE THE MERGE AS SHOWN ON SHEET TCP-3.
- 5- INSTALL SP99288 BELOW THE YIELD AHEAD SIGN (AS SHOWN) TO ALERT MOTORISTS THAT THE ACCELERATION DISTANCE HAS BEEN REDUCED.
- 6- COORDINATE WITH THE ENGINEER FOR LOCATION OF CMS.
- 7- USE THE ABOVE DETAIL ALONG I-95 FOR THE FOLLOWING SITUATIONS:

BRIDGE NO. 62, SB ON-RAMP FROM KEEN ROAD BRIDGE NO. 66, NB ENTRANCE LOOP

* SEE SHEET TCP-8 FOR SIGN DETAIL.

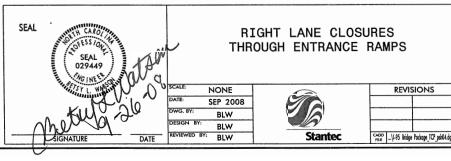
LEGEND

CHANGEABLE MESSAGE SIGN (CMS)

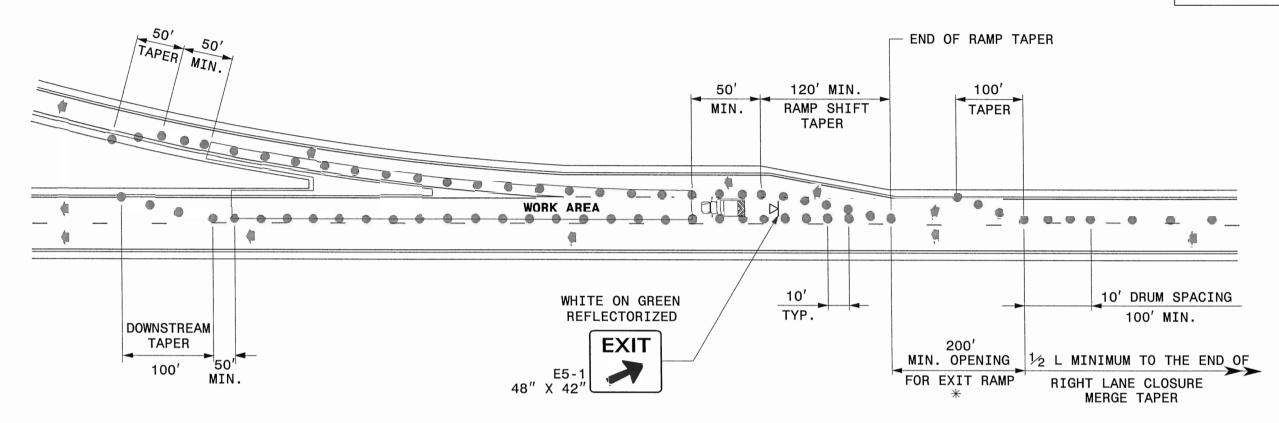
- DRUM
- DIRECTION OF TRAFFIC FLOW



Stantec Consulting Services Inc.
Suite 300, 801 Jones Franklin Road
Rohigh, NC
27036
let, 919,851,13866
Fax 919,851,7024
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PROJECT REFERENCE NO. SHEET NO. WBS 36727.3.12 TCP-5



GENERAL NOTES

- 1-USE THE ABOVE DETAILS IN CONJUNCTION WITH A RIGHT LANE CLOSURE AS SHOWN ON SHEET TCP-3.
- 2-MOUNT EXIT SIGNS A MINIMUM OF 7 FEET ABOVE THE PAVEMENT ELEVATION.
- 3-USE THE ABOVE DETAIL FOR LANE CLOSURES ALONG I-95 FOR THE FOLLOWING SITUATIONS:

BRIDGE NO. 67: NB OFF-RAMP BRIDGE NO. 66, 109, AND 112: NB AND SB OFF-RAMPS

LEGEND

TRUCK MOUNTED IMPACT ATTENUATOR DRUM

□ PORTABLE SIGN

DIRECTION OF TRAFFIC FLOW

* NOTE:

USE EXISTING RAMP OPENING LENGTH WHERE POSSIBLE. USE NO LESS THAN $1\!\!\!/_2$ ORIGINAL LENGTH.

IF 1/2 ORIGINAL LENGTH CANNOT BE OBTAINED, CONTACT THE WORK ZONE TRAFFIC CONTROL UNIT FOR FURTHER GUIDANCE.



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Suite 300, 801 Jones Franklin Road
Raielan, NC
27606
let. 919.851.6866
fox. 919.851.7024
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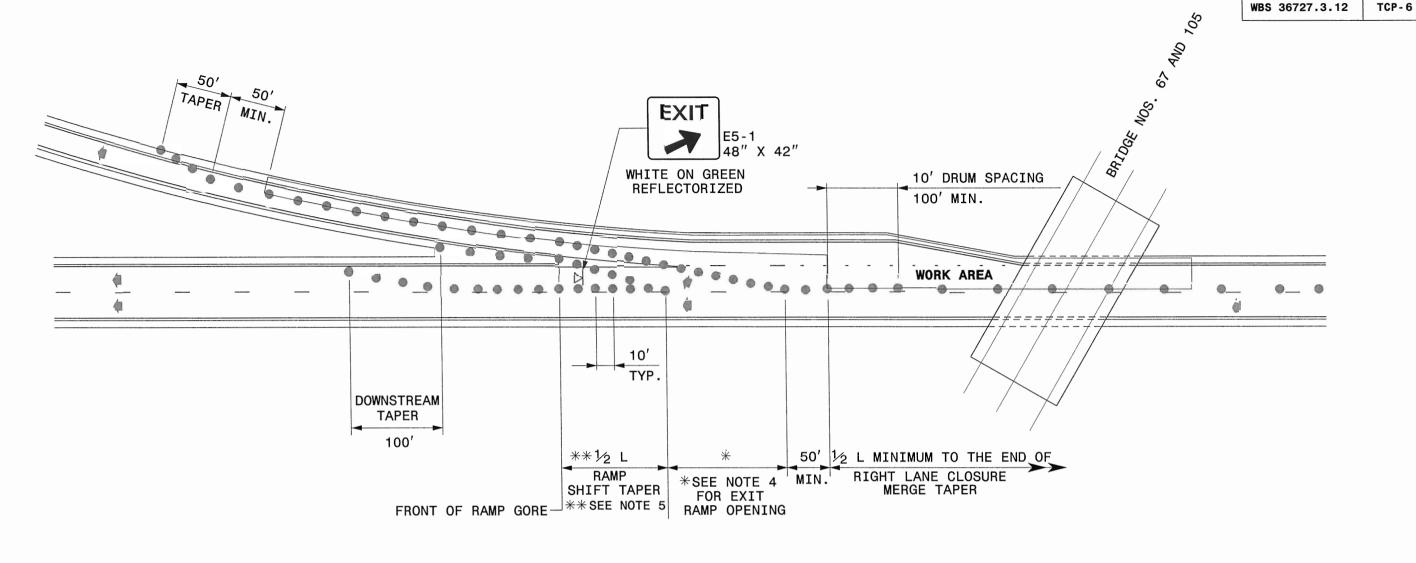
SEAL

RIGHT LANE CLOSURES THROUGH EXIT RAMPS

NONE SEP 2008 BLW

FILE ...\L-95 Bridge Pockage TCP psh05.dgn

REVISIONS

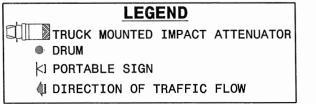


GENERAL NOTES

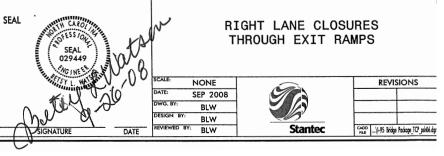
- 1-USE THE ABOVE DETAILS IN CONJUNCTION WITH A RIGHT LANE CLOSURE AS SHOWN ON SHEET TCP-3.
- 2-MOUNT EXIT SIGNS A MINIMUM OF 7 FEET ABOVE THE PAVEMENT ELEVATION.
- 3-USE THE ABOVE DETAIL FOR LANE CLOSURES ALONG I-95 FOR THE FOLLOWING SITUATIONS:

BRIDGE NO. 67: SB EXIT LOOP BRIDGE NO. 105: NB AND SB EXIT LOOPS

- * 4- USE EXISTING RAMP OPENING LENGTH WHERE POSSIBLE. USE NO LESS THAN
 ½ ORIGINAL LENGTH. IF ½ ORIGINAL LENGTH CANNOT BE OBTAINED,
 CONTACT THE WORK ZONE TRAFFIC CONTROL UNIT FOR FURTHER GUIDANCE.
- ** 5- IF ½L CANNOT BE OBTAINED FOR THE RAMP SHIFT TAPER, CONTACT THE WORK ZONE TRAFFIC CONTROL UNIT FOR FURTHER GUIDANCE.

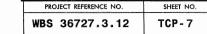


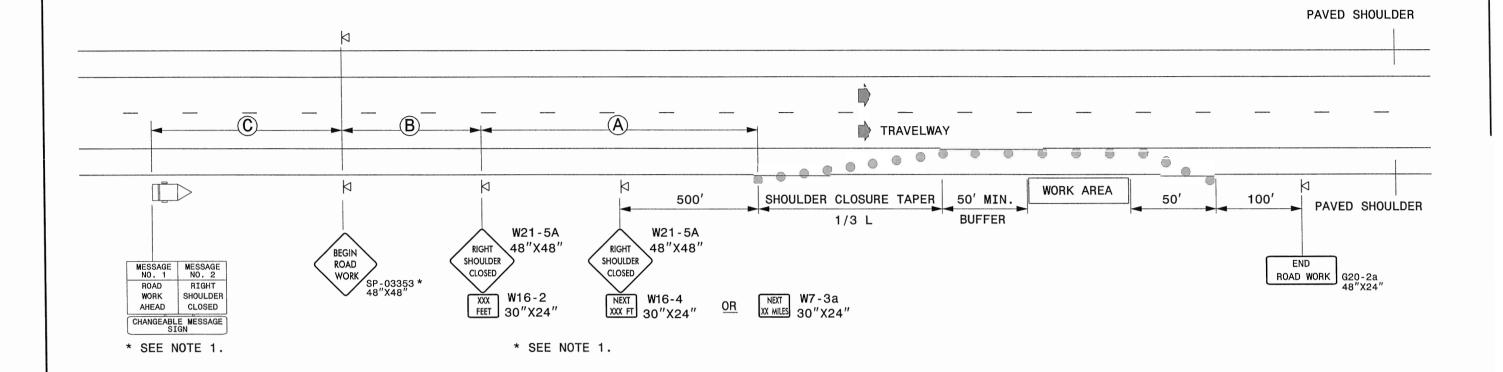




PROJECT REFERENCE NO.

SHEET NO.

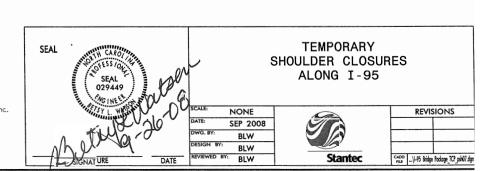




GENERAL NOTES

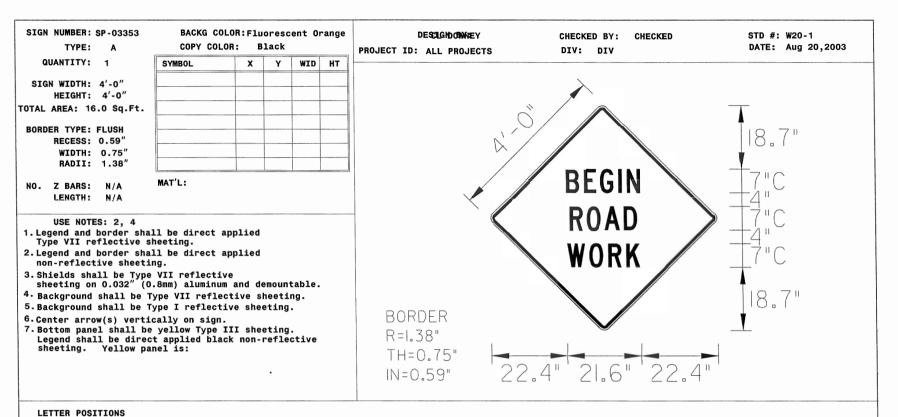
- 1- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED. FOR CLOSURES ON THE MEDIAN SIDE OF THE ROADWAY, SUBSTITUTE THE WORD "LEFT" FOR THE WORD "RIGHT" IN THE CHANGEABLE MESSAGE SIGN AND ON SIGNS W21-5A.
- 2- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- 3- REFER TO STD. 1101.11 SHEETS 1, 3, & 4, FOR "L" DISTANCE, AND SIGN SPACING.
- 4- DO NOT CLOSE THE SHOULDERS ON THE RIGHT SIDE AND MEDIAN SIDE OF THE ROADWAY AT THE SAME TIME.
- 5- USE THIS DETAIL AS NEEDED FOR SHOULDER CLOSURES ALONG I-95, FOR ALL SIX BRIDGE LOCATIONS.
- * SEE SHEET TCP-8 FOR SIGN DETAIL.





|on\design\i-45 bridge package\i-45 bridge rackage

SP 03353

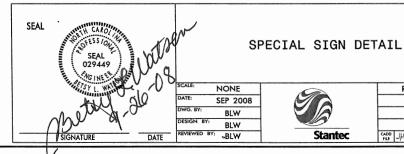


Series/Size Letter spacings are to start of next letter Text Length B E G I N **C7** 22.4 5.3 4.6 5.4 2.5 3.8 22.4 21.6 R O A D **C7** 23.4 5 5.2 5.6 3.8 23.4 19.6 W O R K **C7** 22.6 6.4 5.6 5.2 4 22.6 21.2

Spacing Factor is 1 unless specified otherwise



Stantec Consulting Services Inc.
Suite 300, 801 Jones Franklin Road
Raleigh, NC
27606
Tel. 919.851.6866
Fox. 919.851.7024
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REVISIONS

CADO ...\L95 Bridge Pockage TCP psh08.dg