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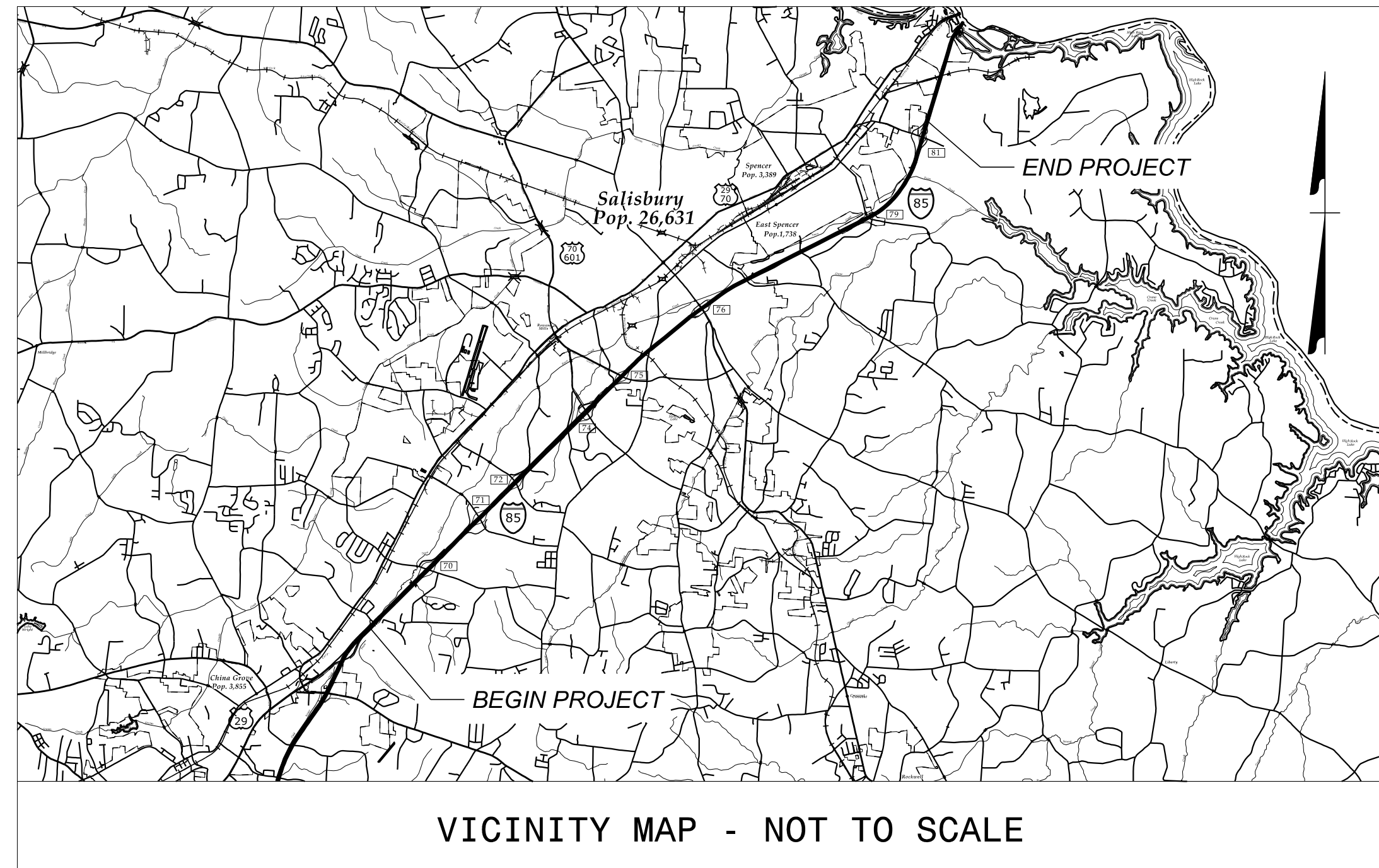
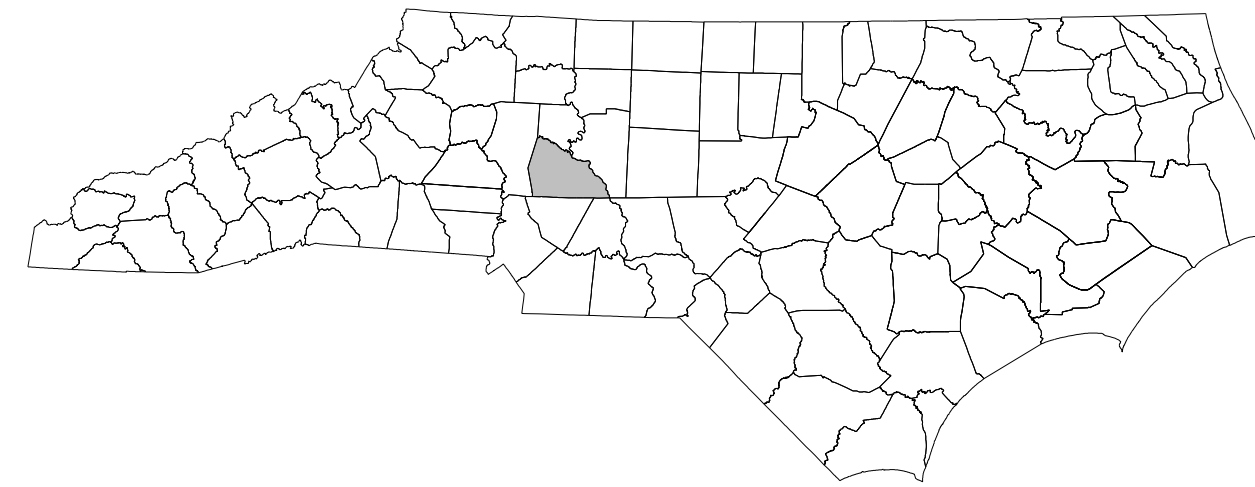
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**ROWAN COUNTY**



VICINITY MAP - NOT TO SCALE

**LOCATION: I-85 FROM US 29/US 601 IN CHINA GROVE TO US 601 (JAKE ALEXANDER BLVD.) IN SALISBURY AND FROM SOUTH OF US 52 IN SALISBURY TONORTH OF SR 2120 (LONG FERRY RD.) IN SPENCER**

**TYPE OF WORK: PAVEMENT REHABILITATION, GUARDRAIL AND DRAINAGE**

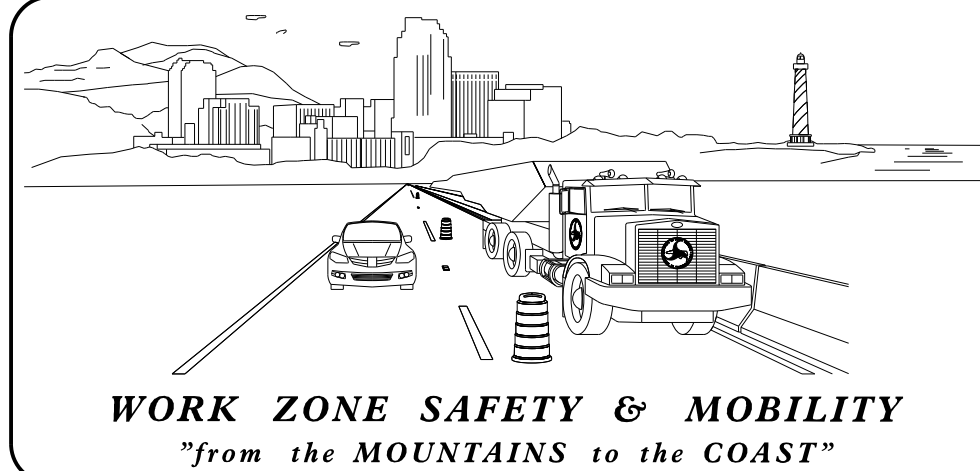
**INDEX OF SHEETS**

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SHEET NO.

TMP-1

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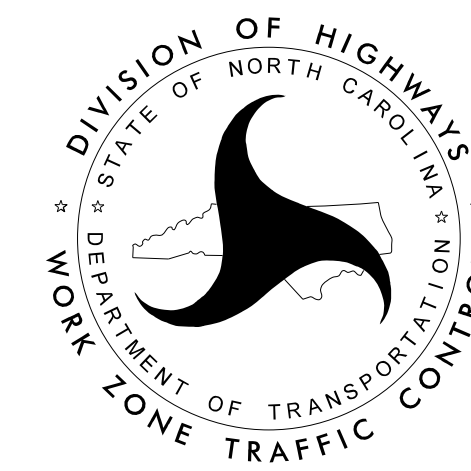


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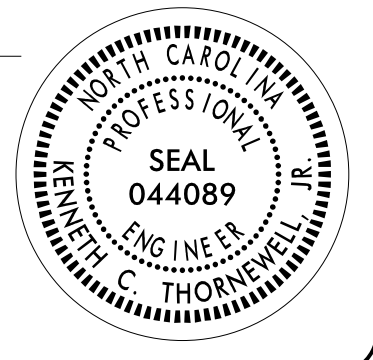


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APPROVED: *Kenneth C. Thornevell Jr., P.E.*  
1E91E727373405

DATE: 3/4/2019

SEAL



**TIP PROJECT: I-5858**



## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMP
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

## LEGEND

### GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

### PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

### TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM    SKINNY DRUM    TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### TEMPORARY PAVEMENT MARKING

COLD APPLIED PLASTIC PAVEMENT MARKING LINES  
TYPE 4 - REMOVABLE TAPE (6")

- C6 - WHITE EDGELINE
- C7 - YELLOW EDGELINE
- CJ - 10 FT. WHITE SKIP
- CL - WHITE SOLID LANE LINE

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APPROVED: <small>1E91EF27373405</small> DATE: 3/4/2019  <div style="text-align: center;">SEAL</div>		
<b>ROADWAY STANDARD DRAWINGS, TEMPORARY PAVEMENT MARKING SCHEDULE, AND LEGEND</b>		
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		



## 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 TWO LANES OF TRAFFIC DURING THE FOLLOWING TIME RESTRICTIONS EXCEPT AS ALLOWED ELSEWHERE IN THIS TMP:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-85	MONDAY - SUNDAY FROM 9:00 AM TO 8:00 PM

A) DO NOT CLOSE OR NARROW THREE LANES OF TRAFFIC DURING THE FOLLOWING TIME RESTRICTIONS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-85	MONDAY - THURSDAY FROM 6:00 AM TO 10:00 PM AND FRIDAY FROM 6:00 AM THRU SUNDAY AT 10:00 PM

C) DO NOT CLOSE OR NARROW A SINGLE LANE OF TRAFFIC ON I-85, INCLUDING RAMPS AND LOOPS, DURING SPECIAL EVENTS AS FOLLOWS:

#### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 10:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 10:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 10:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 10:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 10:00 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 10:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 10:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 10:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 10:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

#### SPECIAL EVENTS

- FOR ANY NASCAR RACE AT THE CHARLOTTE MOTOR SPEEDWAY BETWEEN THE HOURS OF 6:00 A.M. THE WEDNESDAY BEFORE THE FIRST TRACK EVENT AND 10:00 P.M. THE DAY AFTER THE LAST TRACK EVENT.
- FOR ANY CAROLINA PANTHERS GAME PLAYED IN CHARLOTTE, FROM FIVE (5) HOURS BEFORE THE GAME TO FIVE (5) HOURS AFTER THE GAME.
- FOR THE FOOD LION AUTO FAIR, BETWEEN THE HOURS OF 6:00 A.M. THE WEDNESDAY OF THE WEEK OF THE FAIR AND 10:00 P.M. THE FOLLOWING MONDAY AFTER THE FAIR.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO 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.

(CONTINUED)

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.

- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVEL WAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) DO NOT INSTALL MORE THAN 2 MILES OF LANE CLOSURES ON I-85 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- I) DO NOT INSTALL MORE THAN THREE SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON I-85.
- J) PROVIDE A MINIMUM OF 2 MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- L) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 1000 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

- M) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- N) INSTALL ADVANCE WORK ZONE 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.
- O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- P) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

- S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

(CONTINUED)

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY-6888ED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

- T) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 MPH OR LESS	15 FT
45 MPH - 50 MPH	20 FT
55 MPH	25 FT
60 MPH or HIGHER	30 FT

### TRAFFIC CONTROL DEVICES

- U) WHEN LANE CLOSURES ARE NOT IN EFFECT 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. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

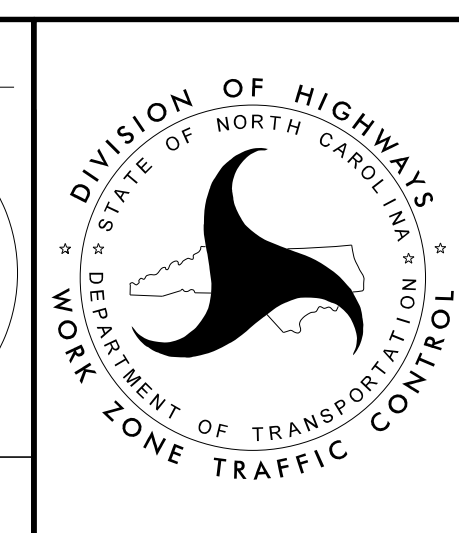
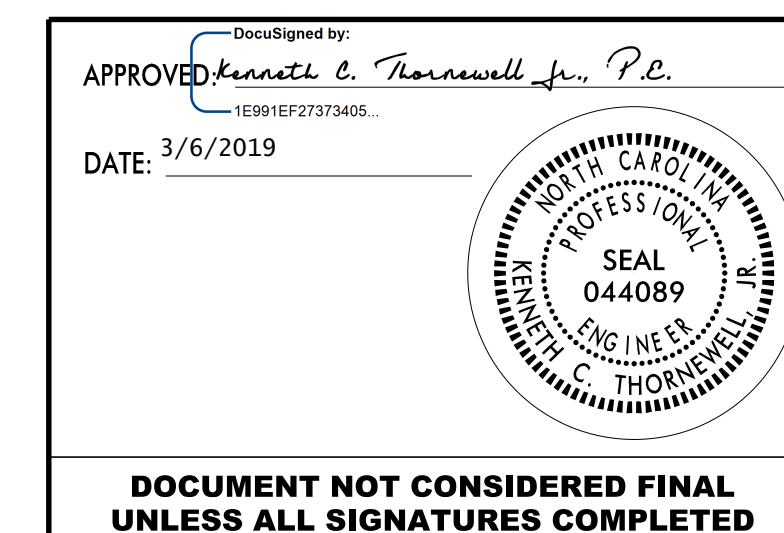
- X) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
I-85	COLD APPLIED PLASTIC, TYPE IV - REMOVABLE TAPE (6")	TEMPORARY RAISED

- Y) TIE TEMPORARY PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Z) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

### MISCELLANEOUS

- AA) LAW ENFORCEMENT MAY USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.



GENERAL NOTES

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## ***PHASING NARRATIVE:***

COORDINATE WITH NCDOT STATEWIDE TRAFFIC OPERATIONS CENTER (STOC) AND THE DIVISION 9 TRAFFIC OPERATIONS GROUP FOR ADDITIONAL TRAFFIC PATTERN INFORMATION ON I-85 ALONG PROJECT CONSTRUCTION AREA.

### FOR DRAINAGE IMPROVEMENTS

FOR EACH WORK LOCATION, THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED FOR STEP 1 THROUGH STEP 2 WITHIN 56 CONSECUTIVE HOURS, BEGINNING WHEN THE RAMP IS CLOSED TO TRAFFIC. SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

**STEP 1:**

USING RSD 1101.03 AND DETAIL SHEET TMP-5, INSTALL TRAFFIC CONTROL DEVICES AND CLOSE I-85 ON-RAMPS AS NECESSARY AND DETOUR TRAFFIC OFFSITE. COMPLETE REQUIRED DRAINAGE WORK ALONG THE ON-RAMP.

**STEP 2:**

UPON COMPLETION OF DRAINAGE WORK, RESTORE TRAFFIC TO ON-RAMP AND REMOVE DETOUR SIGNS.

THIS WORK MAY BE COMPLETED AT ANY TIME WHEN NOT IN CONFLICT WITH SLAB REPAIRS.

### FOR SLAB REPAIRS

**STEP 1:**

USING RSD 1101.01, SHEET 1 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON I-85 AND ALL RAMPS. INSTALL TMC OPERATED PCMS AS DIRECTED BY THE ENGINEER.

FOR EACH WORK LOCATION, THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 2 THROUGH STEP 5 WITHIN 14 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

**STEP 2:**

USING RSD 1101.02, SHEET 4 OF 14, CLOSE A SINGLE LANE OF TRAFFIC AND PERFORM THE FOLLOWING:

- PATCH RUMBLE STRIPS AS NECESSARY THROUGHOUT SHIFTED LANE LOCATION (SEE SPECIAL PROVISIONS)
- REMOVE EXISTING YELLOW OR WHITE EDGE LINE AND REPLACE WITH TEMPORARY YELLOW OR WHITE EDGE LINE AS SHOWN IN TMP-6 (8.5' SHIFT) OR TMP-8 (6.5' SHIFT)
- PLACE DRUMS TO DELINEATE REMOVED EDGE LINE AND OPEN TRAFFIC TO EXISTING PATTERN

FOR EACH WORK LOCATION, THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 3 THROUGH STEP 4 WITHIN 80 CONSECUTIVE HOURS, BEGINNING AT 10:00 PM ON THE SUNDAY OR MONDAY NIGHT THE CONTRACTOR ELECTS TO BEGIN WORK. SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

**STEP 3:**

USING DETAIL SHEET TMP-6 OR TMP-8, AND TMP-10, INSTALL RAMP CLOSURES & DETOURS (AS NECESSARY) AND A TRIPLE LANE CLOSURE WITH SHIFT DURING ALLOWABLE TRIPLE LANE CLOSURE HOURS. PLACE TRAFFIC IN A ONE LANE SHIFTED PATTERN AND PERFORM THE FOLLOWING WORK:

- MODIFY SKIP LINE TO SHIFT LANES 8.5 FEET (TMP-7) OR 6.5 FEET (TMP-9)
- INSTALL PCB, CRASH CUSHION, AND TEMPORARY YELLOW OR WHITE EDGE LINE ALONG PCB
- PLACE TRAFFIC IN TWO-LANE SHIFTED PATTERN AS SHOWN ON TMP-7 AND TMP-9

NOTE: TRAFFIC MUST BE OPENED TO A TWO-LANE PATTERN BY 6:00 AM THE MORNING FOLLOWING THE START OF WORK IN ACCORDANCE WITH TRIPLE LANE CLOSURE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 4:**

USING DETAIL SHEET TMP-7 OR TMP-9, COMPLETE THE FOLLOWING:

- PERFORM PAVEMENT SLAB REPAIRS
- PLACE TRAFFIC IN ONE-LANE PATTERN USING DETAIL TMP-6 OR TMP-8 DURING ALLOWABLE TRIPLE LANE CLOSURE HOURS.
- REMOVE PCB, CRASH CUSHION, AND TEMPORARY YELLOW OR WHITE EDGE LINE ALONG PCB
- RESTORE EXISTING SKIP LINE
- OPEN TRAFFIC TO EXISTING PATTERN
- PLACE DRUMS TO DELINEATE REMOVED EDGE LINE FROM STEP 2

**STEP 5:**

USING RSD 1101.02, SHEET 4 OF 14, CLOSE A SINGLE LANE OF TRAFFIC AND PERFORM THE FOLLOWING:

- REMOVE TEMPORARY YELLOW OR WHITE EDGE LINE INSTALLED IN STEP 2
- RESTORE EXISTING EDGE LINE
- RESTORE EXISTING RUMBLE STRIPS

### FOR DIAMOND GRINDING

USING RSD 1101.02, SHEET 8 OF 14, AND DETAIL SHEETS TMP-10 OR TMP-11, INSTALL A DOUBLE OR TRIPLE LANE CLOSURE DURING ALLOWABLE LANE CLOSURE HOURS TO COMPLETE DIAMOND GRINDING OPERATIONS.

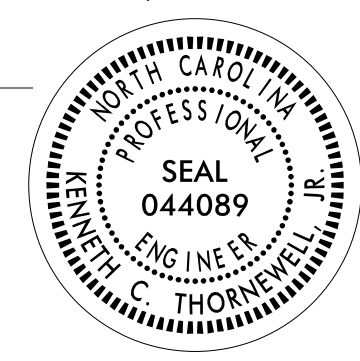

THIS WORK MUST BE COMPLETED AFTER SLAB REPAIRS ARE COMPLETE.

## ***MANAGEMENT STRATEGIES***

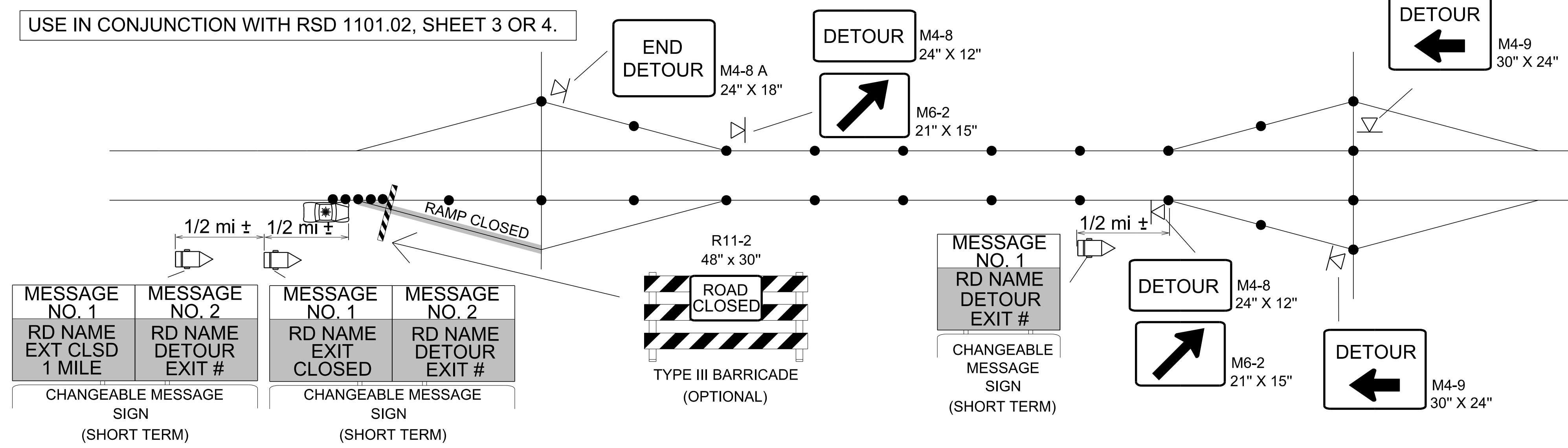
RECOMMENDED MANAGEMENT STRATEGIES RELATIVE TO THIS TMP ARE AS FOLLOWS:

- SINGLE LANE CLOSURES
- DOUBLE LANE CLOSURES
- TRIPLE LANE CLOSURES
- RAMP CLOSURES AND DETOURS
- TRAFFIC SHIFTS
- LAW ENFORCEMENT

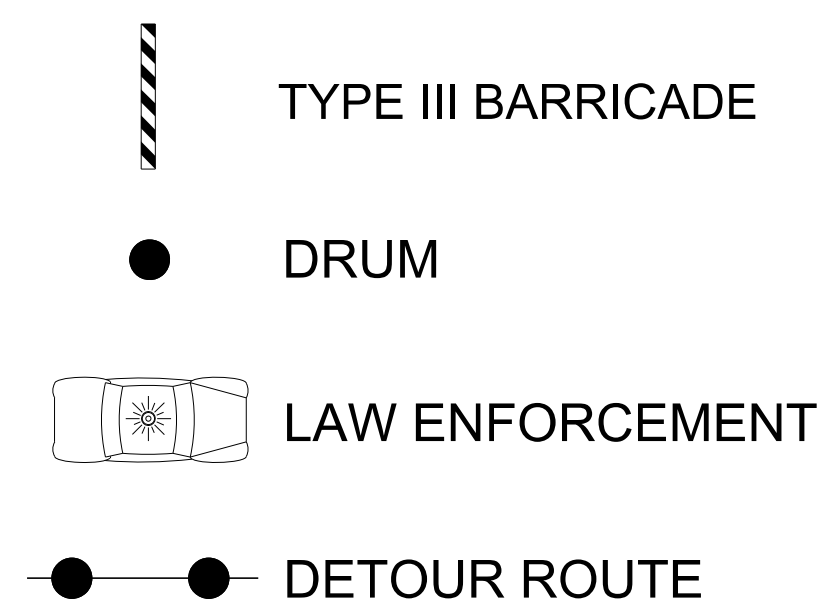
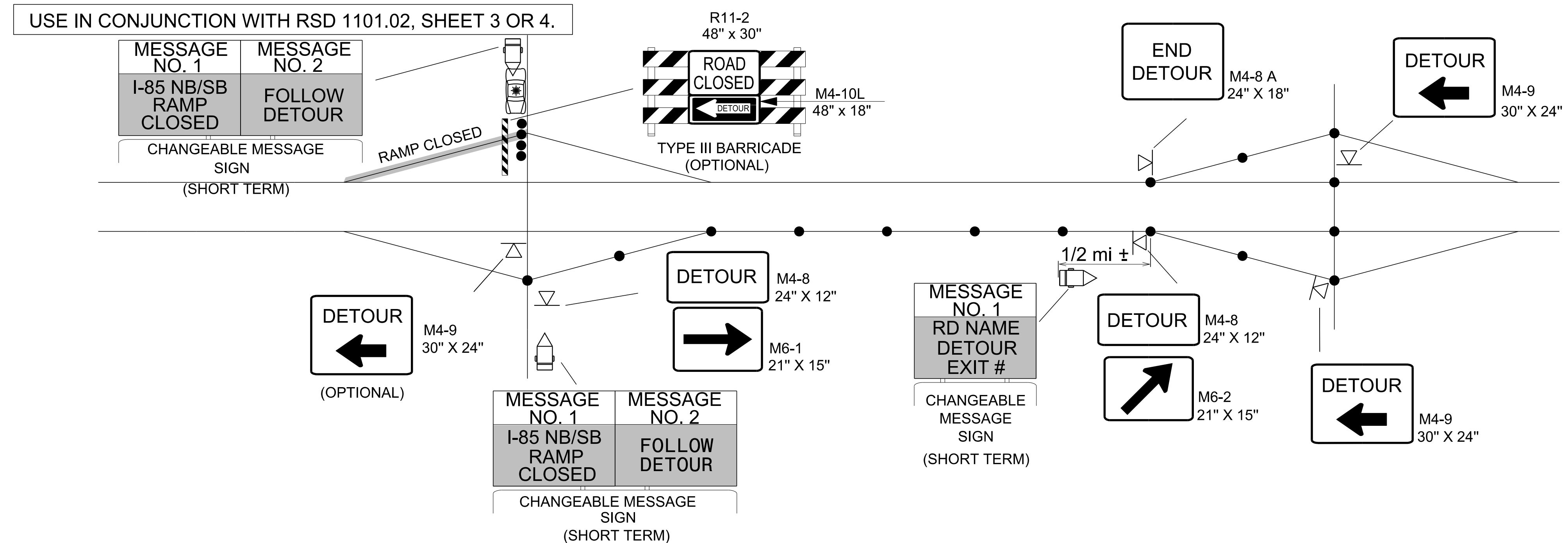
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APPROVED: <i>Kenneth C. Thornewell, Jr., P.E.</i> <small>1E991F27373405</small> DATE: 3/14/2019  <div style="text-align: center;">             SEAL         </div>		<h3>PHASING AND MANAGEMENT STRATEGIES</h3>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		

### SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE



### SHORT TERM CLOSURE AND DETOUR OF ON-RAMP TO ADJACENT INTERCHANGE



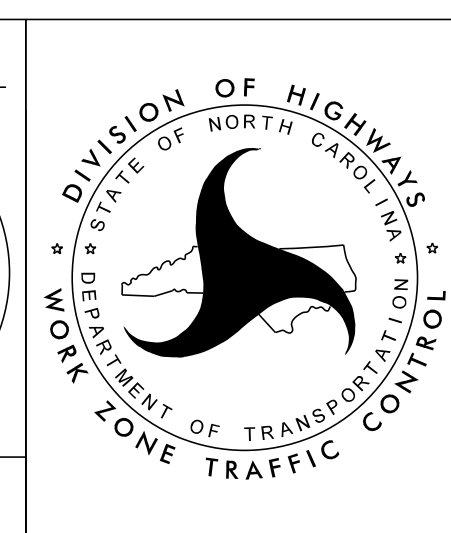
#### NOTES

1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".

APPROVED: *Kenneth C. Hornwell Jr., P.E.*  
DATE: 3/4/2019

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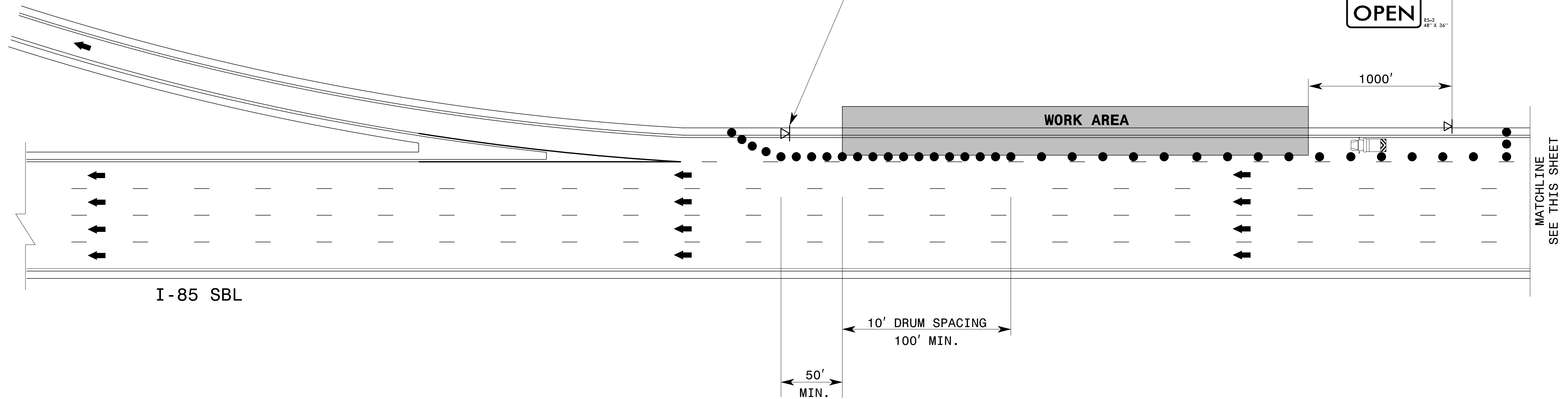
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL

TYPICAL RAMP DETOUR

TO  
PEELER RD.  
EXIT 71

**EXIT**  
WHITE ON GREEN  
REFLECTORIZED  
E5-1  
48" X 42"

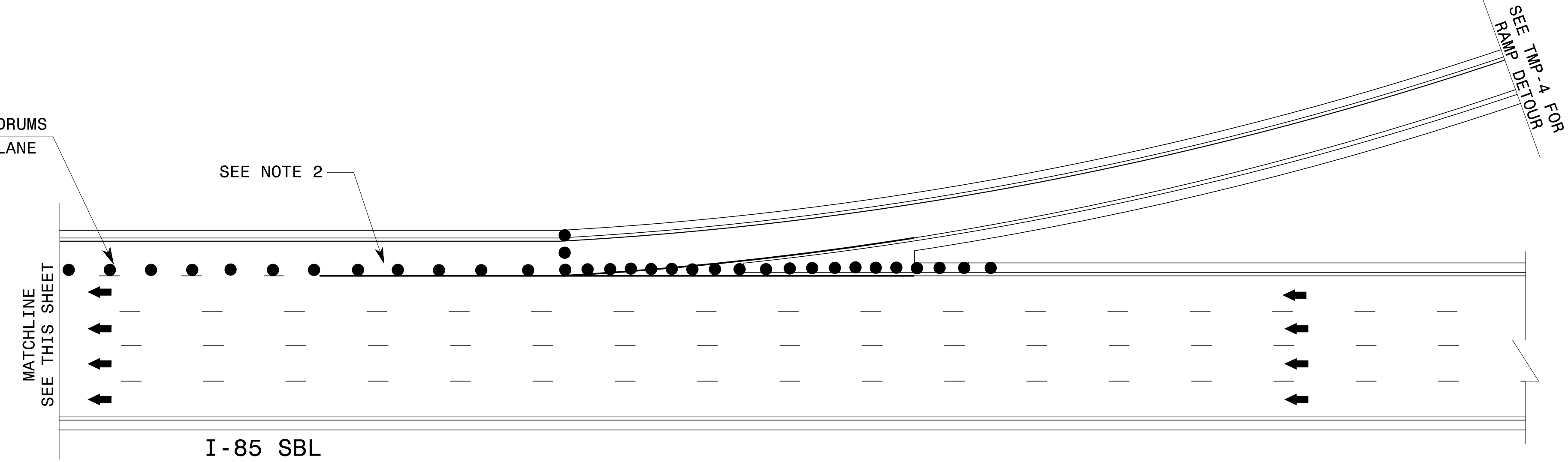
**EXIT  
OPEN**  
E5-2  
48" X 36"



FROM  
PEACH ORCHARD RD.  
EXIT 72

CONTINUE DRUMS  
TO FULL LANE

SEE NOTE 2



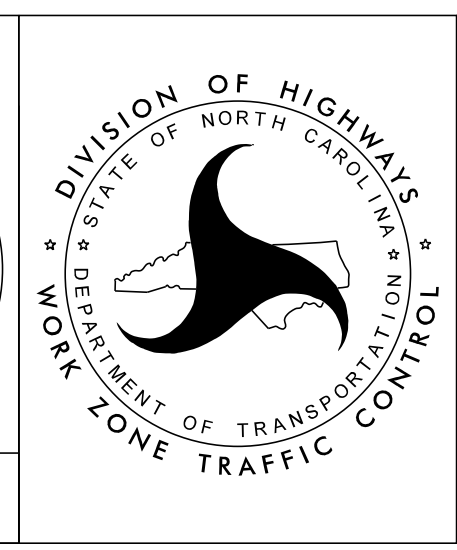
**NOTES:**

1. CLOSE I-85 SB ON-RAMP. SEE TMP-4 FOR RAMP DETOUR DETAILS.
2. MOUNT EXIT SIGNS A MINIMUM OF 5 FEET ABOVE THE PAVEMENT ELEVATION.

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DATE: 3/4/2019

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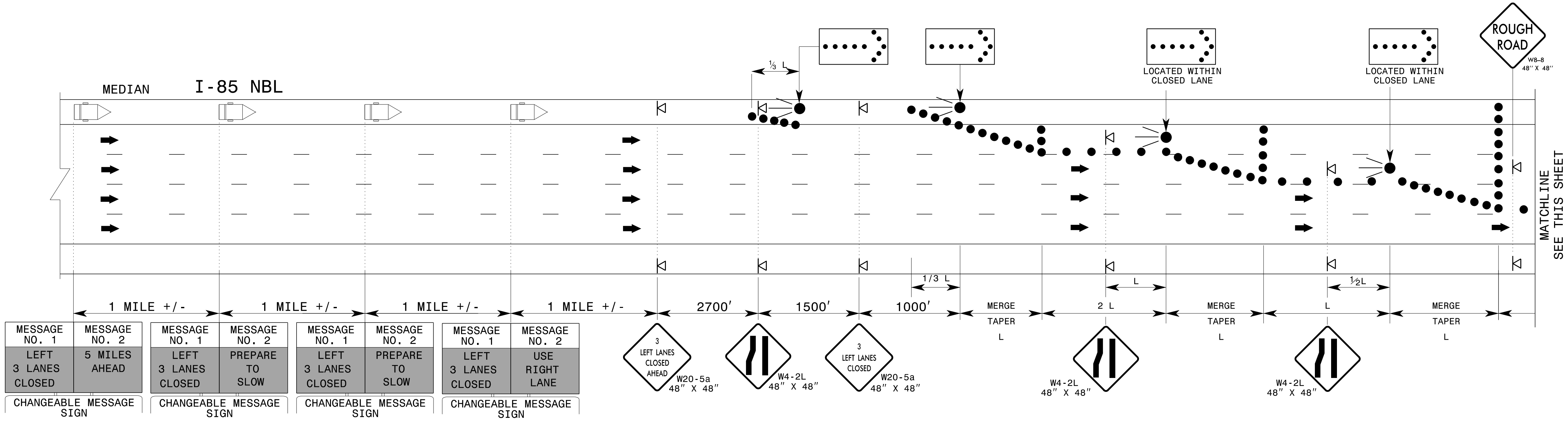


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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION & WORK ZONE TRAFFIC CONTROL

**DRAINAGE IMPROVEMENTS**

2/5/2019 \\dot\dfsroot01\ProjStore\DivProj\Division09\5858\TrafficControl\TCP\DGNNI-5858\_TMP-5\_Drainage\_Improvements.dgn User: jdbeaver1

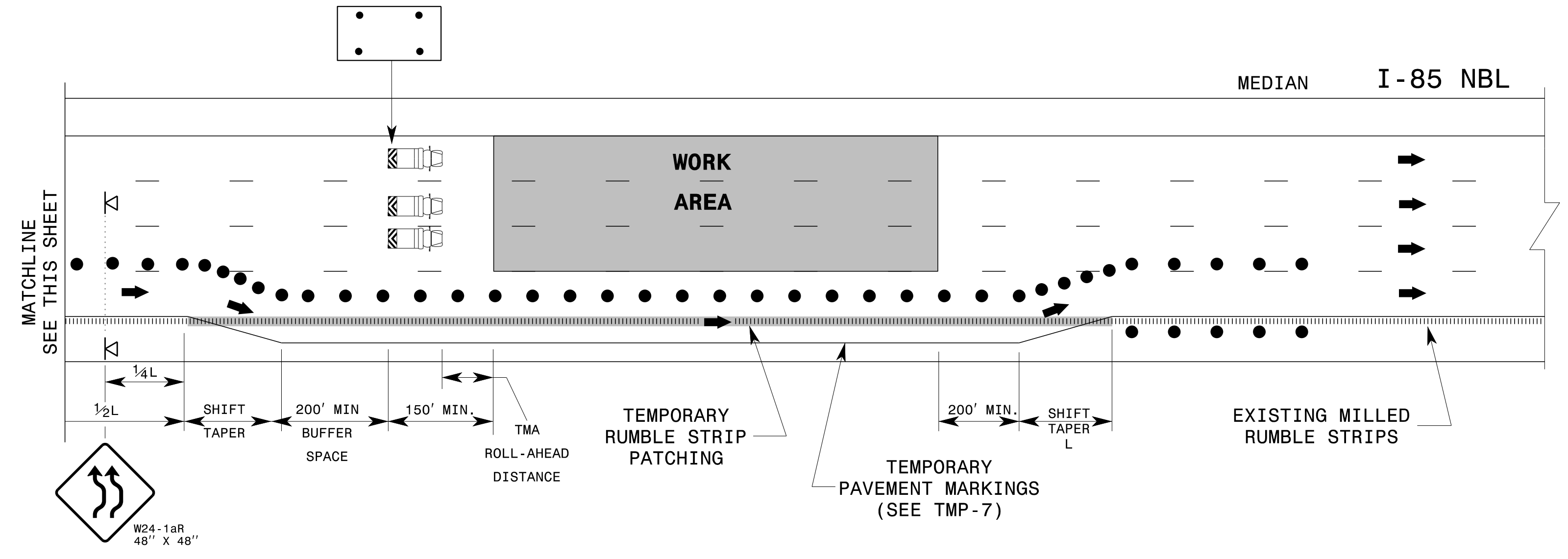




MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
LEFT 3 LANES CLOSED	5 MILES AHEAD	LEFT 3 LANES CLOSED	PREPARE TO SLOW	LEFT 3 LANES CLOSED	PREPARE TO SLOW	LEFT 3 LANES CLOSED	USE RIGHT LANE
CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN	CHANGEABLE MESSAGE SIGN

**GENERAL NOTES**

1. PLACE FLASHING ARROW BOARDS (FAB) ON THE SHOULDER. PLACE FAB WITHIN THE TAPER. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE FAB LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE FAB IS MET (SEE RSD. 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 WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
3. REFER TO RSD. 1101.02, SHEETS 9 & 10, FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
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.
5. POSITION THE TMAs TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER.
6. PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. PLACE CMS APPROXIMATELY 1 MILE IN ADVANCE OF THE FIRST W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP. MONITOR TRAFFIC, AND WHEN NECESSARY, MOVE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP.
7. THE WORK AREA SHALL NOT EXCEED A LENGTH OF 1000' UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.



L (MERGE) = 720' MIN (60 MPH)  
L (SHIFT) = 510' MIN (60 MPH)

APPROVED: *Kenneth C. Thornwell, Jr., P.E.*  
DATE: 3/14/2019  
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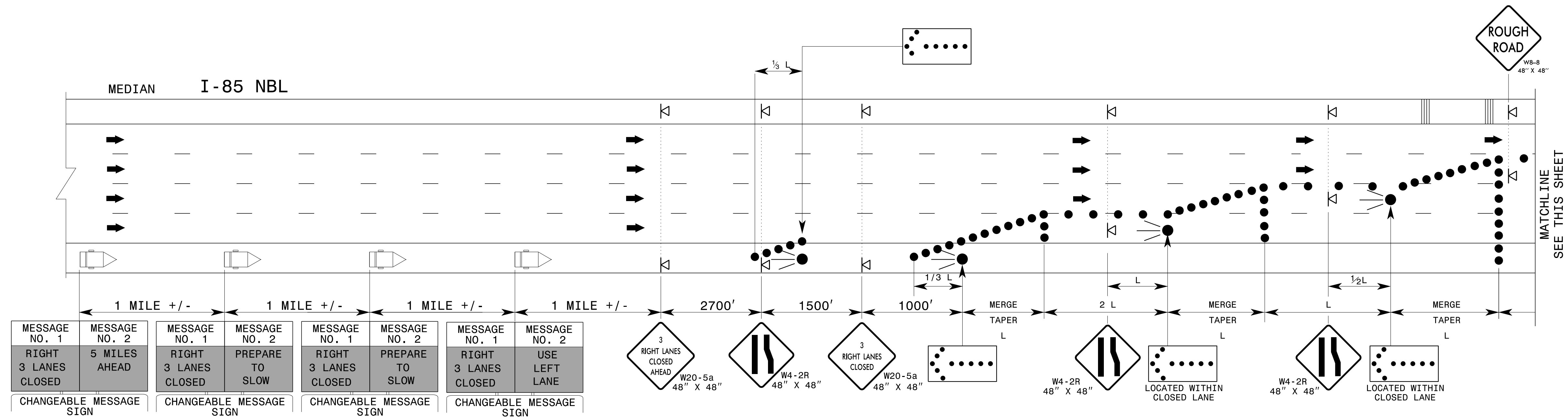
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STATE OF NORTH CAROLINA  
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**SLAB REPAIRS**  
**LANE 2**  
**STEP 2 AND STEP 4**

3/14/2019  
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User: jbeaver1

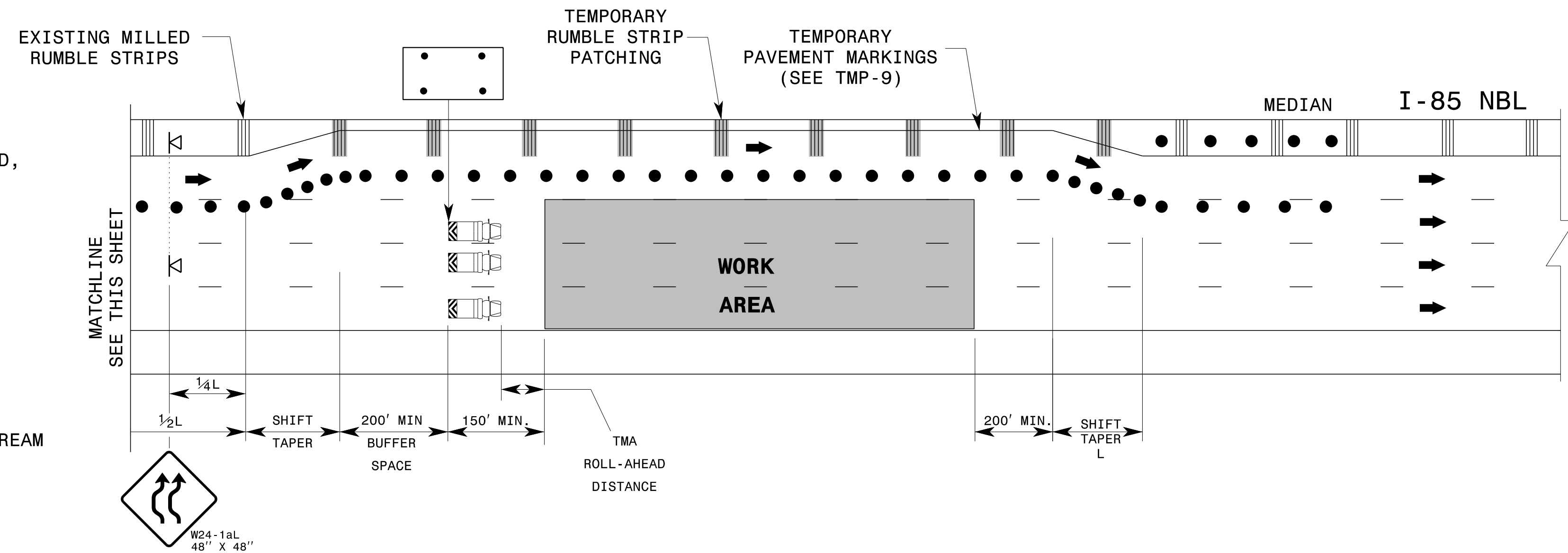






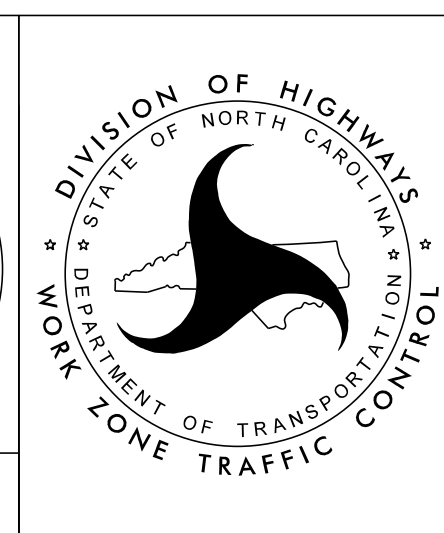
**GENERAL NOTES**

1. PLACE FLASHING ARROW BOARDS (FAB) ON THE SHOULDER. PLACE FAB WITHIN THE TAPER. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE FAB LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE FAB IS MET (SEE RSD. 1101.11, SHEET 2).
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L (MERGE) = 720' MIN (60 MPH)  
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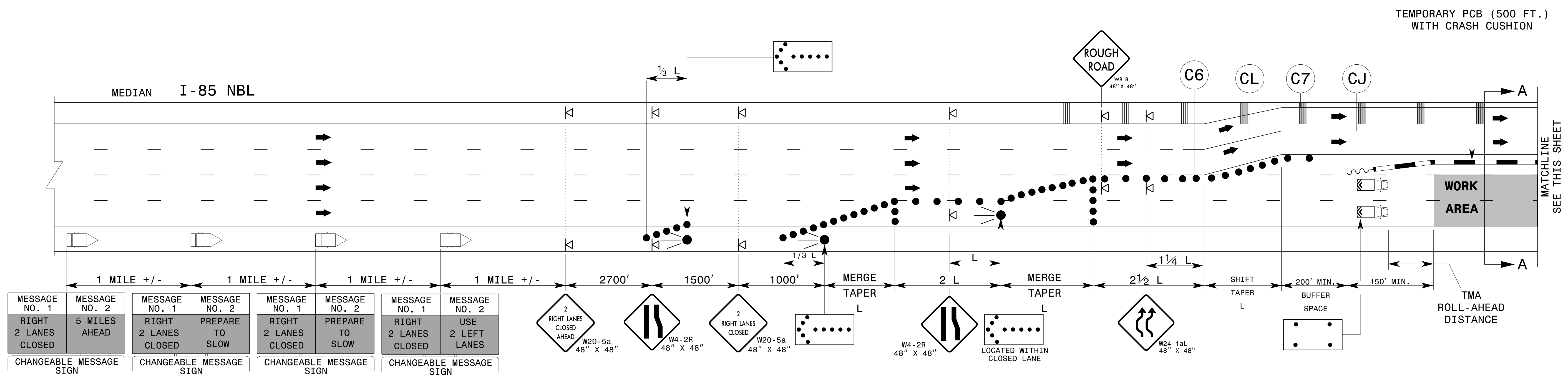
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DATE: 3/14/2019  
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**SLAB REPAIRS**  
**LANE 3**  
**STEP 2 AND STEP 4**

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UNLESS ALL SIGNATURES COMPLETED**

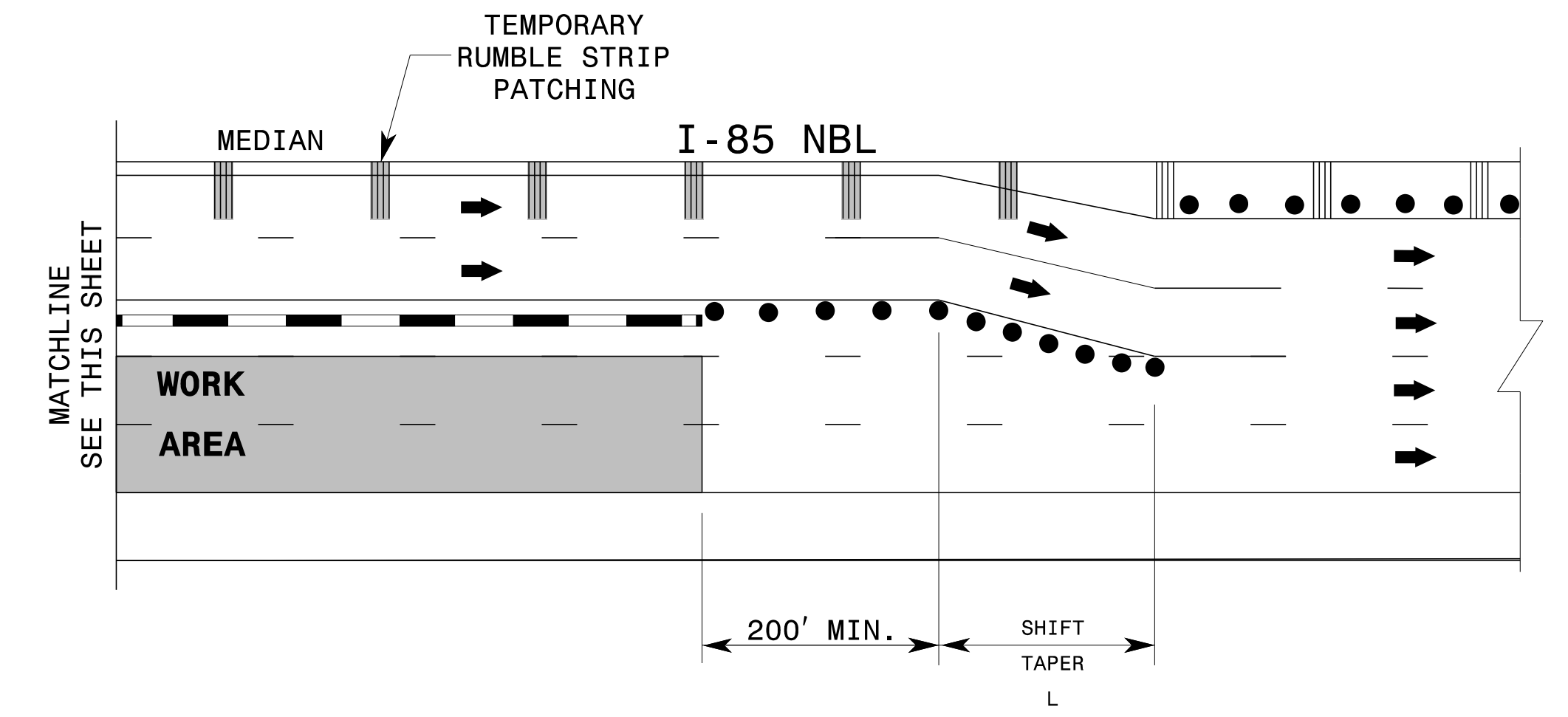
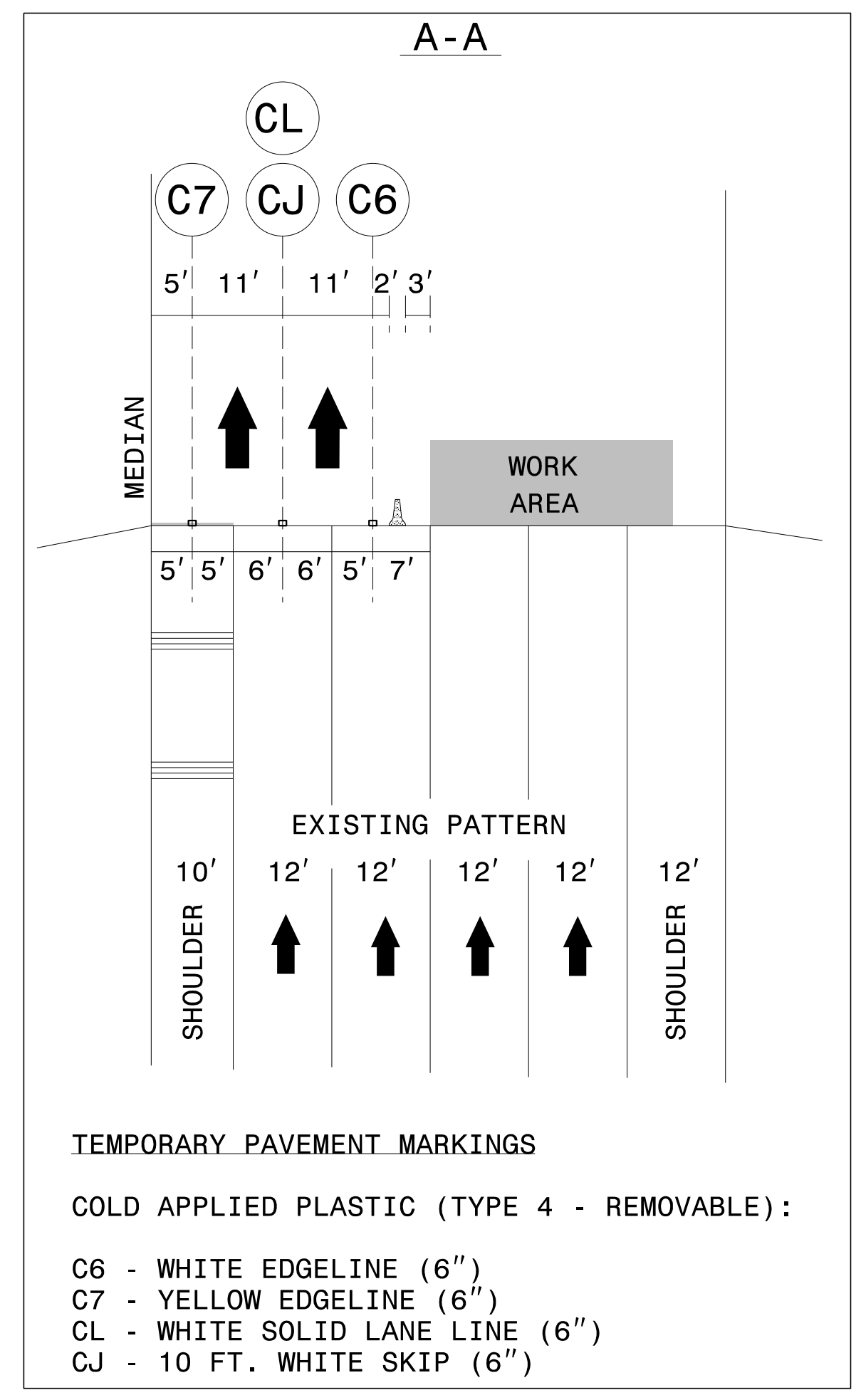




MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
RIGHT 2 LANES CLOSED	5 MILES AHEAD	RIGHT 2 LANES CLOSED	PREPARE TO SLOW	RIGHT 2 LANES CLOSED	PREPARE TO SLOW	RIGHT 2 LANES CLOSED	USE 2 LEFT LANES
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN	

**GENERAL NOTES**

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TEMPORARY PAVEMENT MARKINGS  
 COLD APPLIED PLASTIC (TYPE 4 - REMOVABLE):  
 C6 - WHITE EDGELINE (6")  
 C7 - YELLOW EDGELINE (6")  
 CL - WHITE SOLID LANE LINE (6")  
 CJ - 10 FT. WHITE SKIP (6")

L (MERGE) = 720' MIN (60 MPH)  
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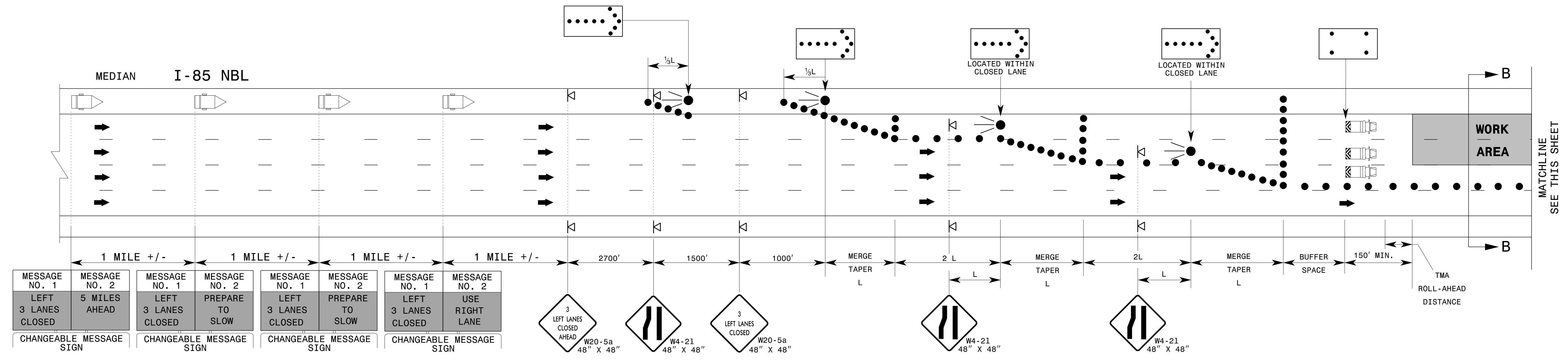
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 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION & WORK ZONE TRAFFIC CONTROL

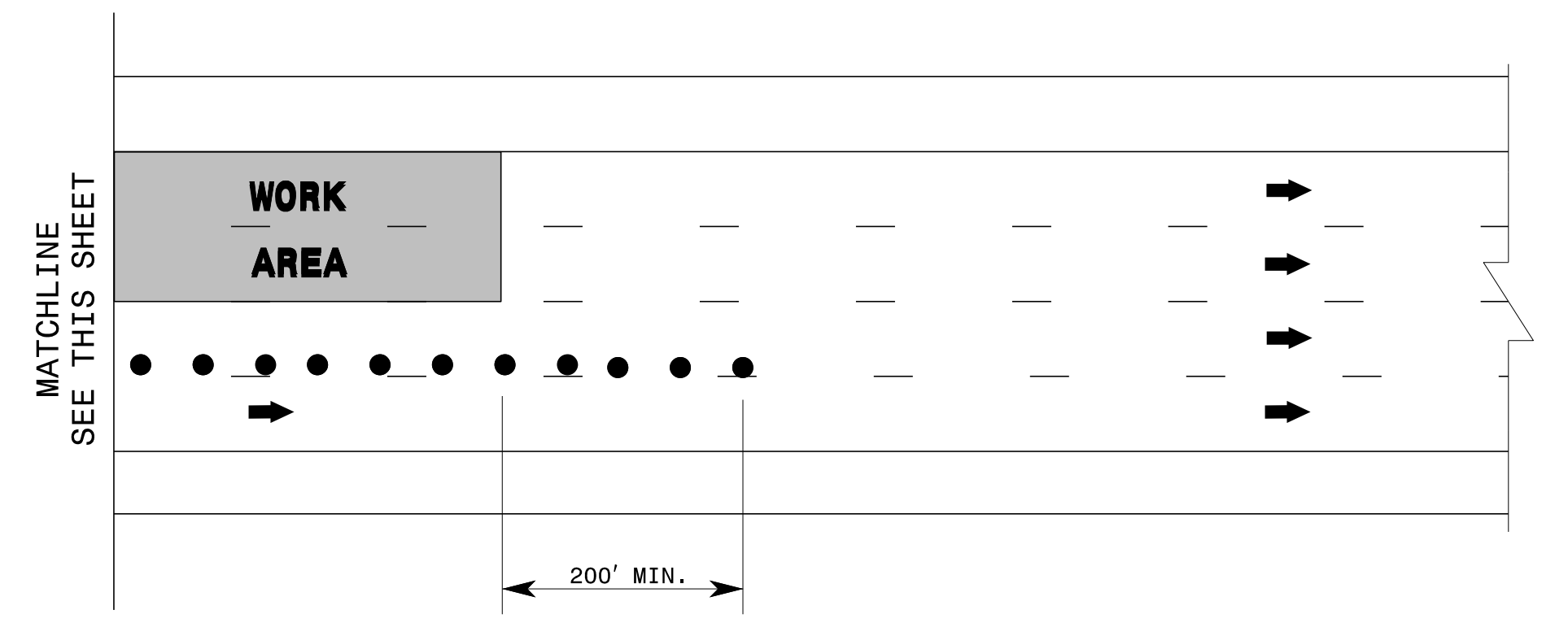
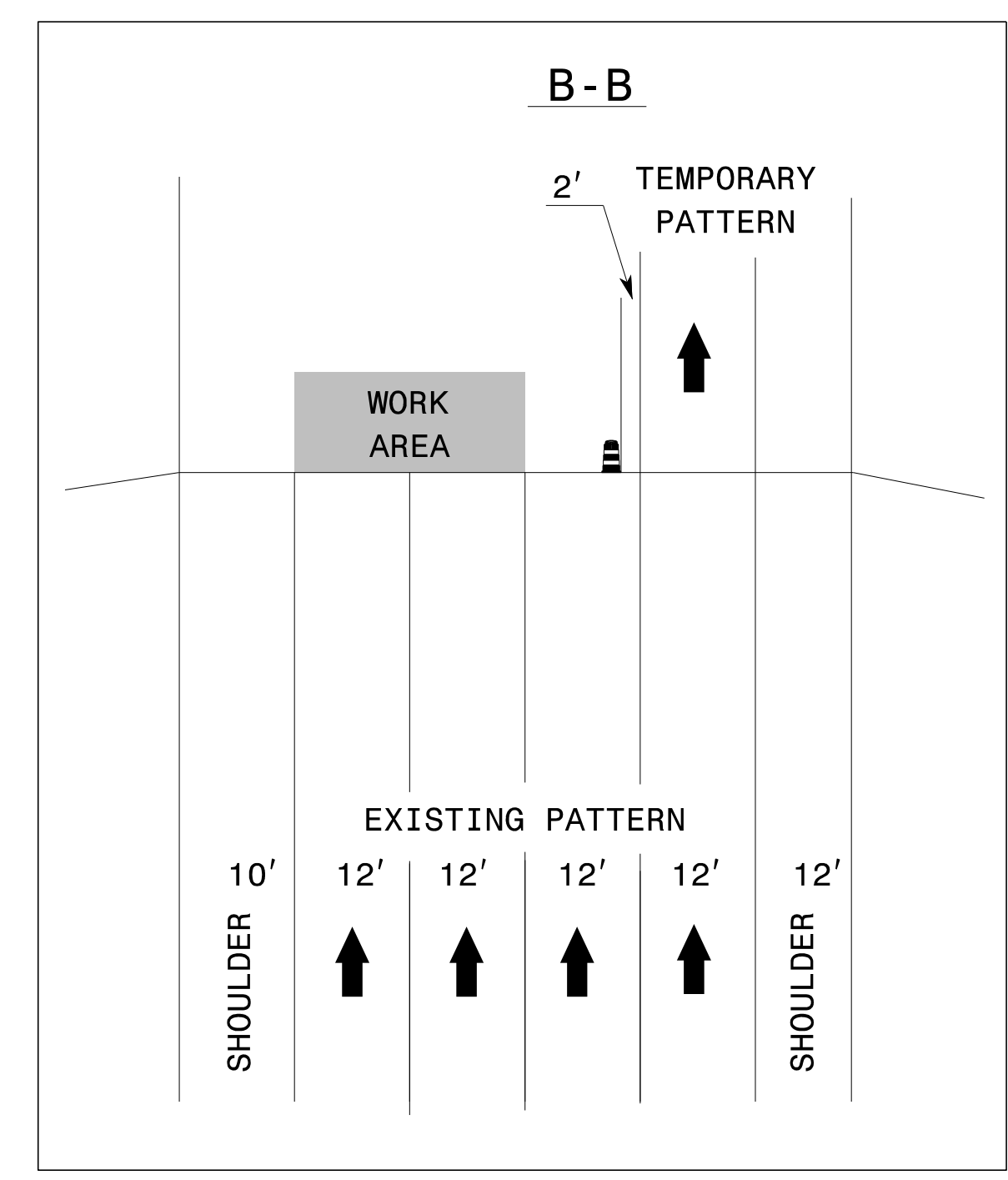
**SLAB REPAIRS**  
**LANE 3**  
**STEP 3**

3/14/2019  
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 User: jdbeaver1



**GENERAL NOTES**

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L (MERGE) = 720' MIN (60 MPH)  
 BUFFER SPACE = 345' MIN (60 MPH)

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 DATE: 3/4/2019

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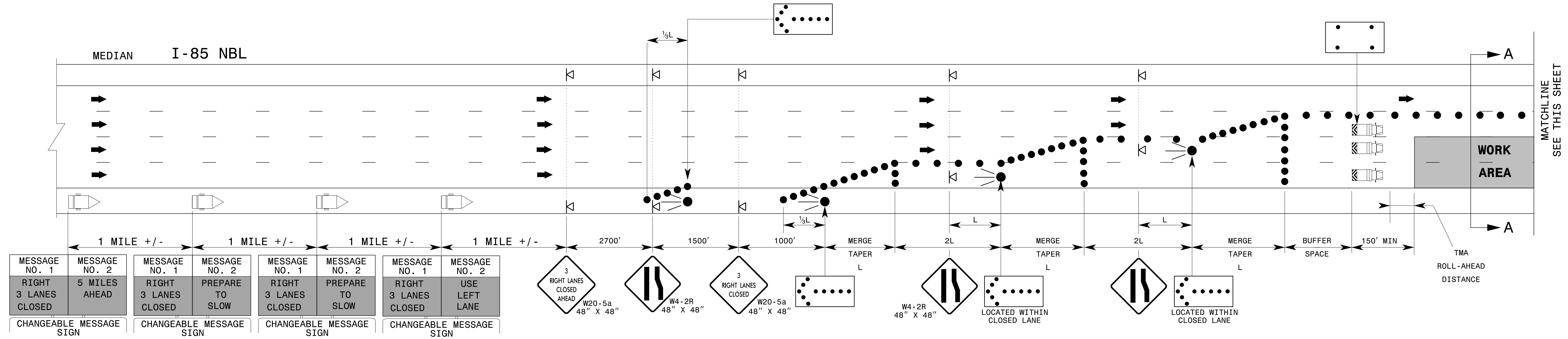


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**DIAMOND GRINDING**

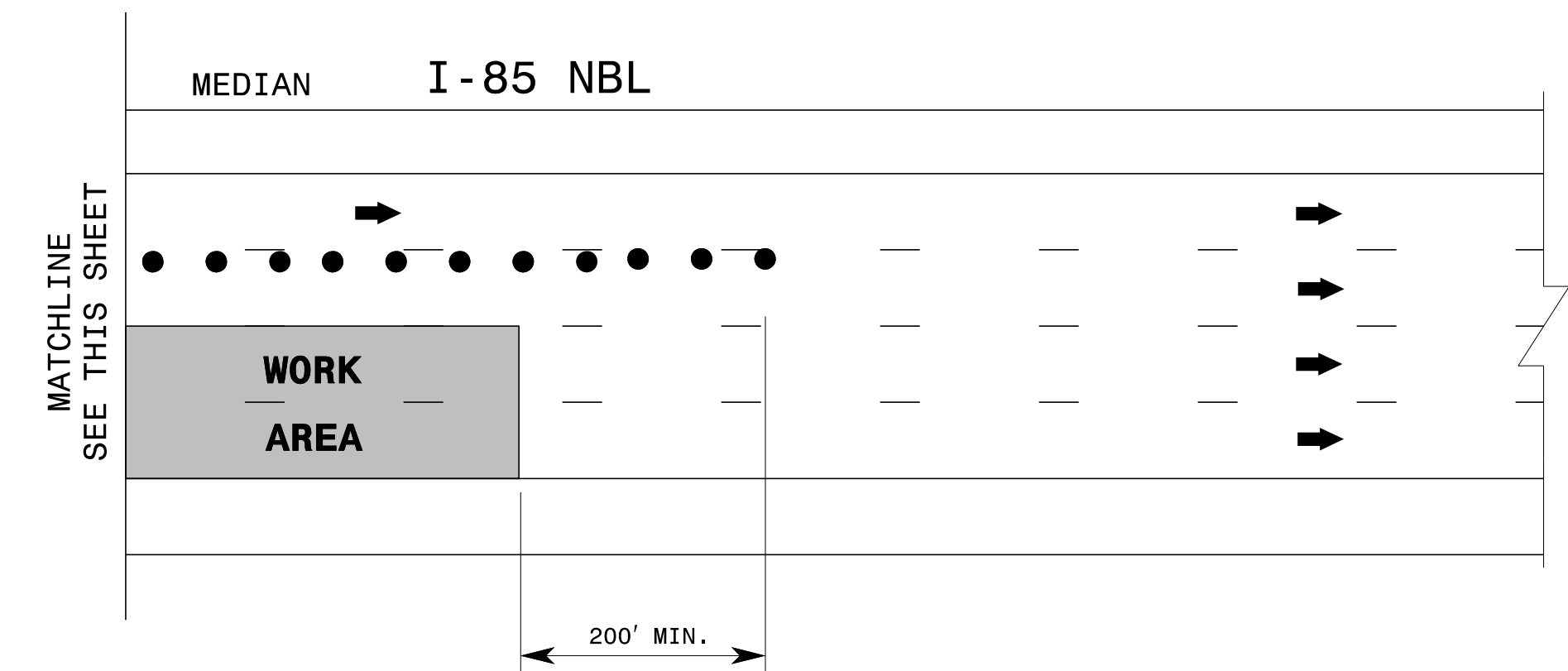
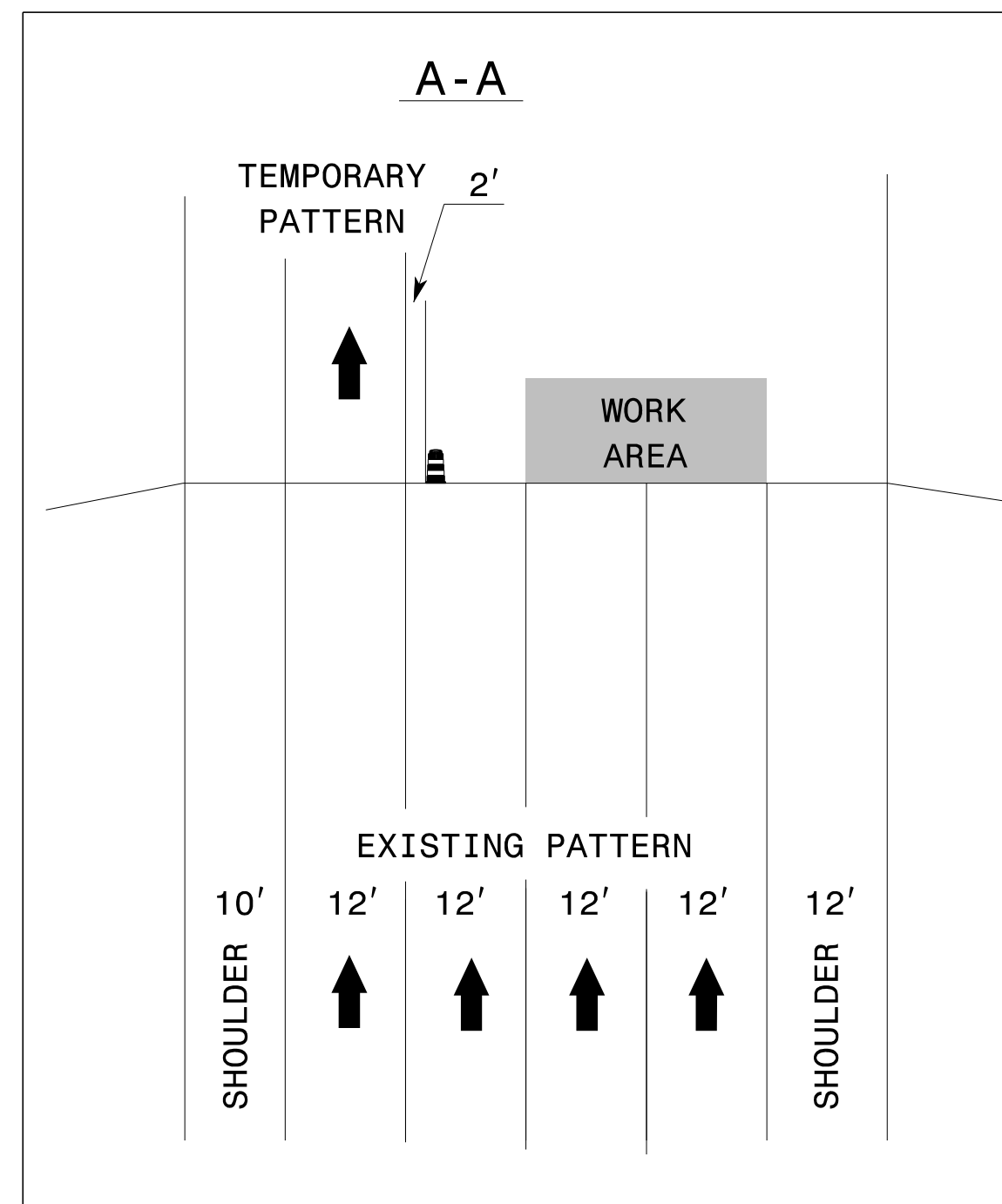
**LANE 2**





**GENERAL NOTES**

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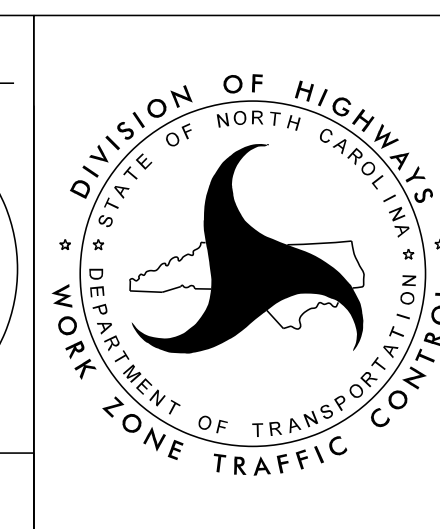


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**DIAMOND GRINDING**  
**LANE 3**

2/5/2019  
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