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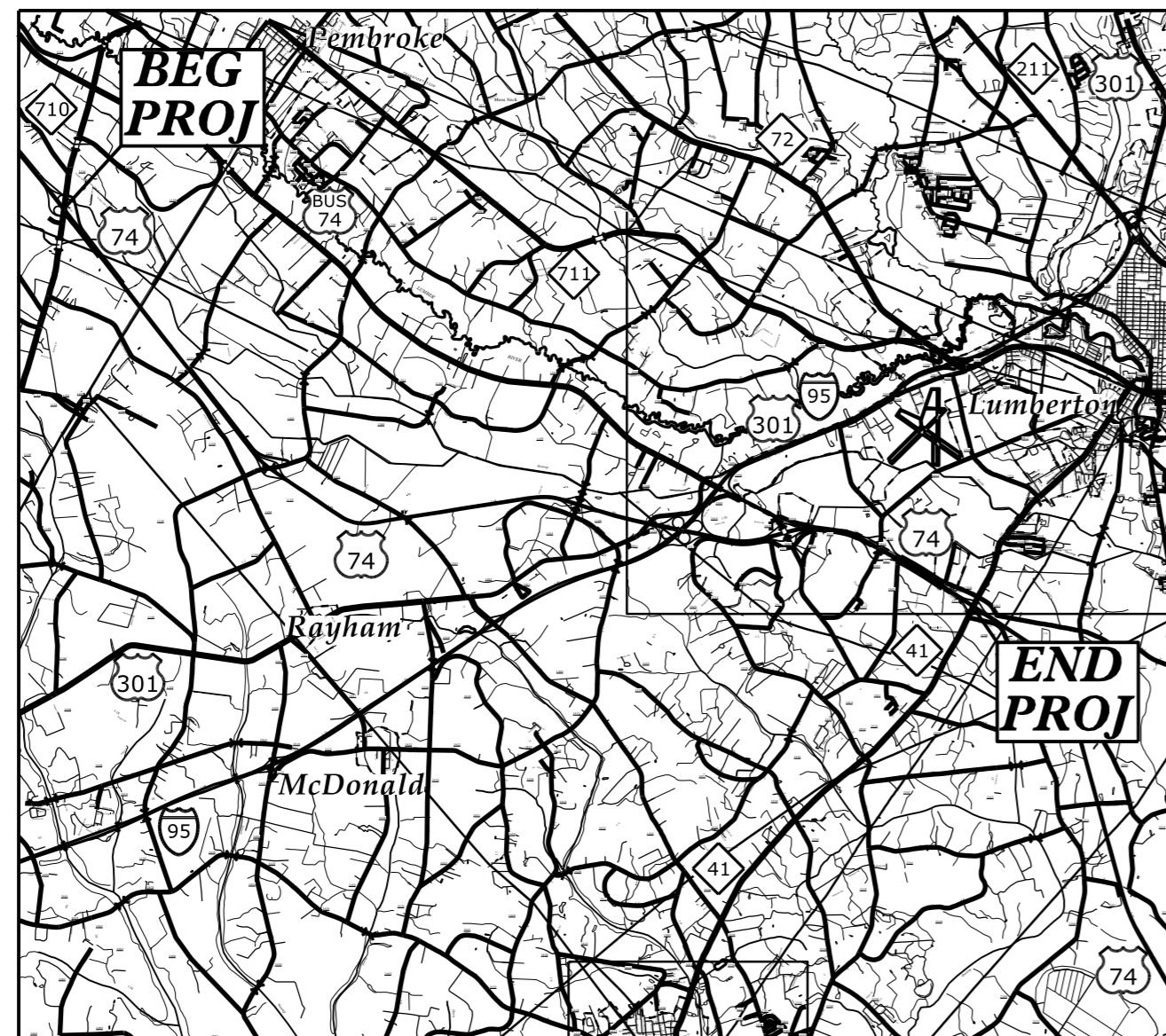
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09/08/99

21-MAR-2016 16:33
H:\DDC\Projects\I-5732-I-74 from NC 710 to NC 41-Pavement Markings-Robeson Co\Proj\I-5732-Rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

CONTRACT: DF00125 **TIP PROJECT: I-5732**



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

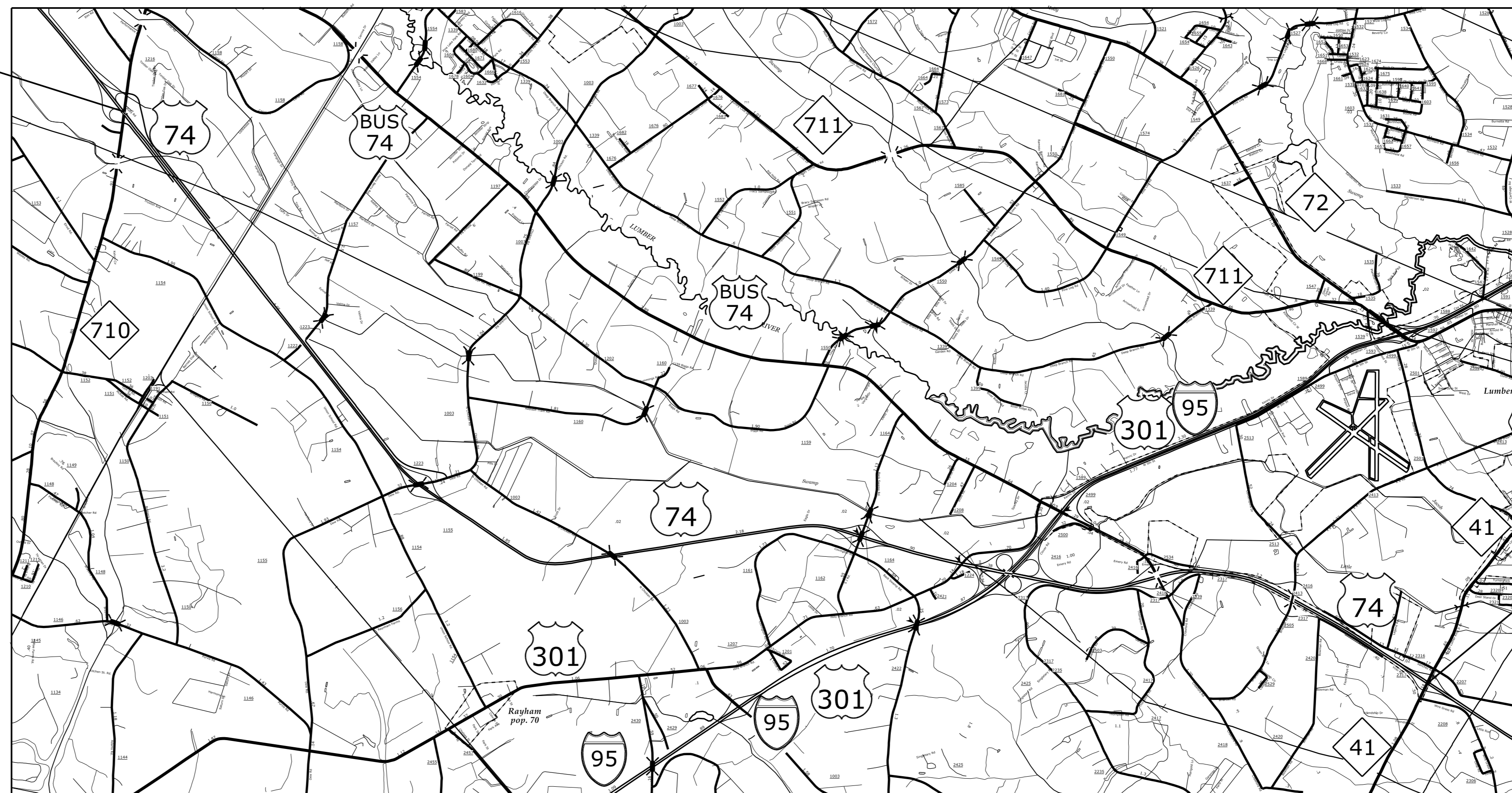
ROBESON COUNTY

LOCATION: I-74 FROM NC 710 TO NC 41

TYPE OF WORK: PAVEMENT MARKINGS

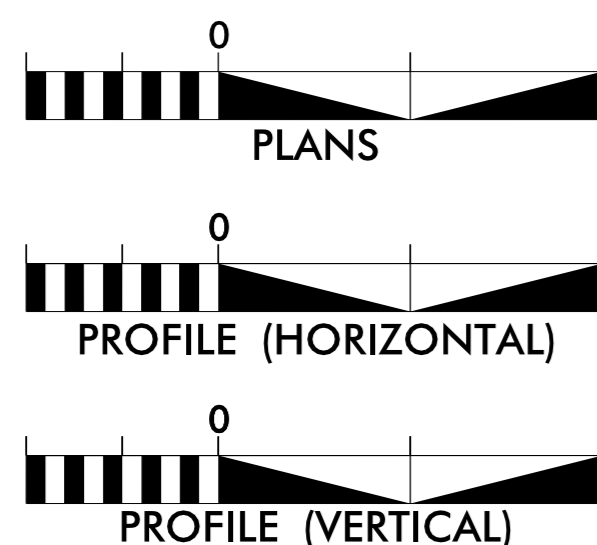
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5732	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
52009.1.FS1	NHPP-0074(182)	P.E.	
52009.3.FS1	NHPP-0074(182)	CONSTR	

BEGIN TIP PROJECT I-5732
-L- STA 10+00.00



END TIP PROJECT I-5732
-L- STA 765+04.00

GRAPHIC SCALES



DESIGN DATA

ADT 2016 = 10,600
ADT 2036 = 19,200

PROJECT LENGTH

TOTAL PROJECT LENGTH = 14.3 mi

Prepared in the Office of:
DIVISION OF HIGHWAYS
431 Transportation Dr., Fayetteville NC, 28301

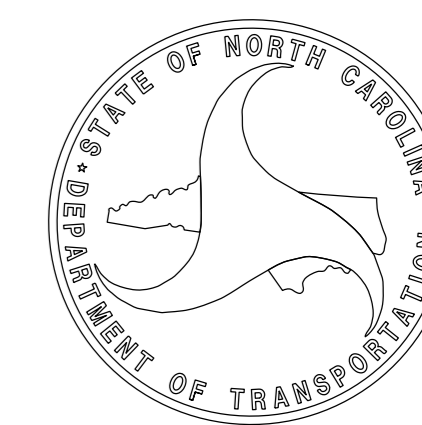
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NA

LETTING DATE:
MAY 18, 2016

SEAN MATUSZEWSKI
PROJECT ENGINEER

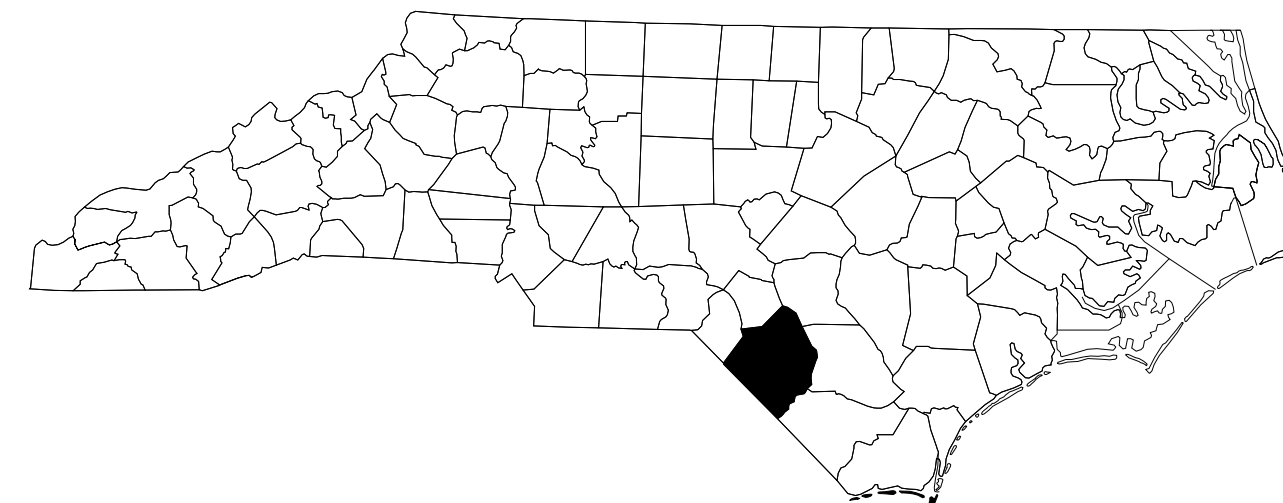
NEIL BUTLER
PROJECT DESIGN ENGINEER



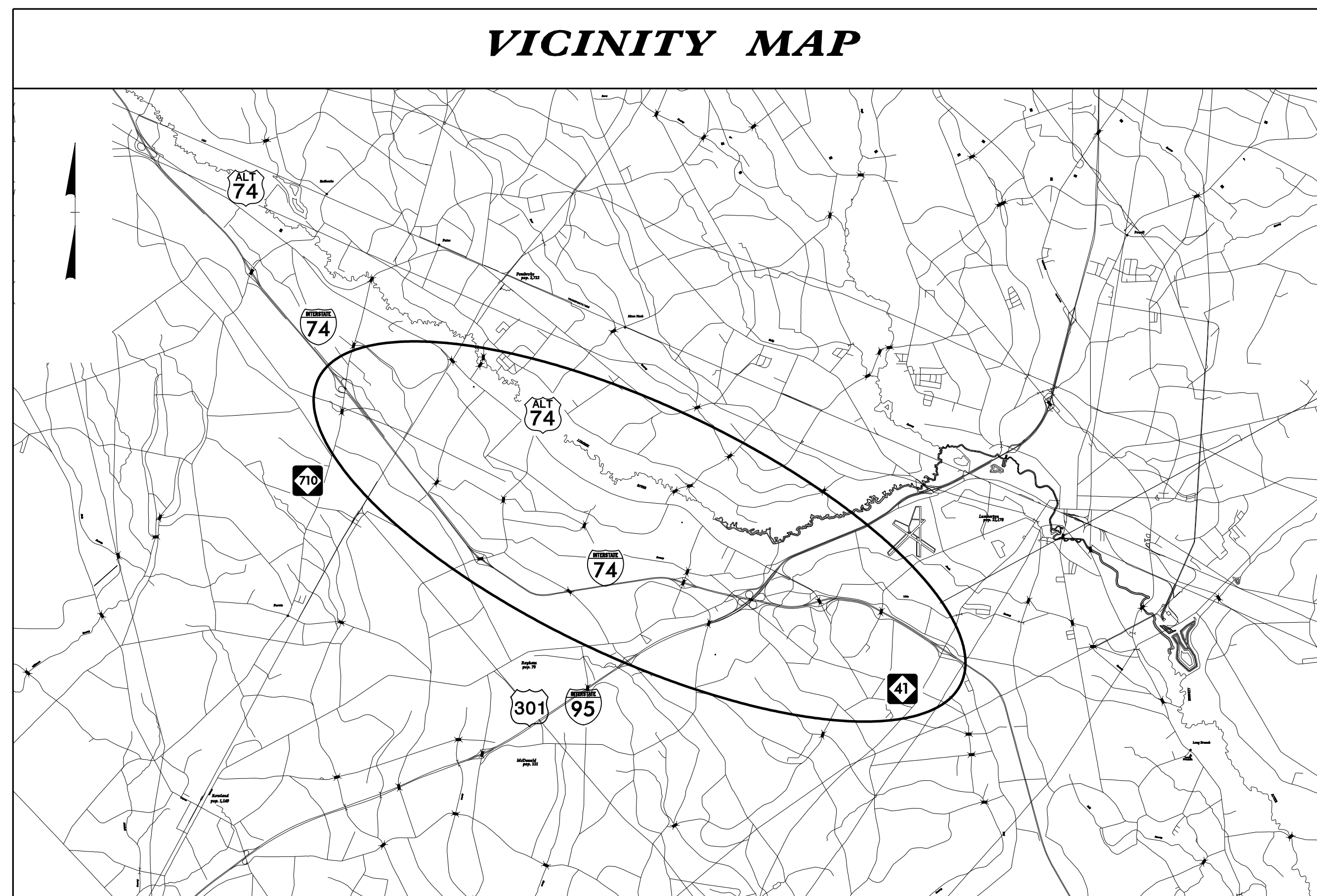
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY



VICINITY MAP

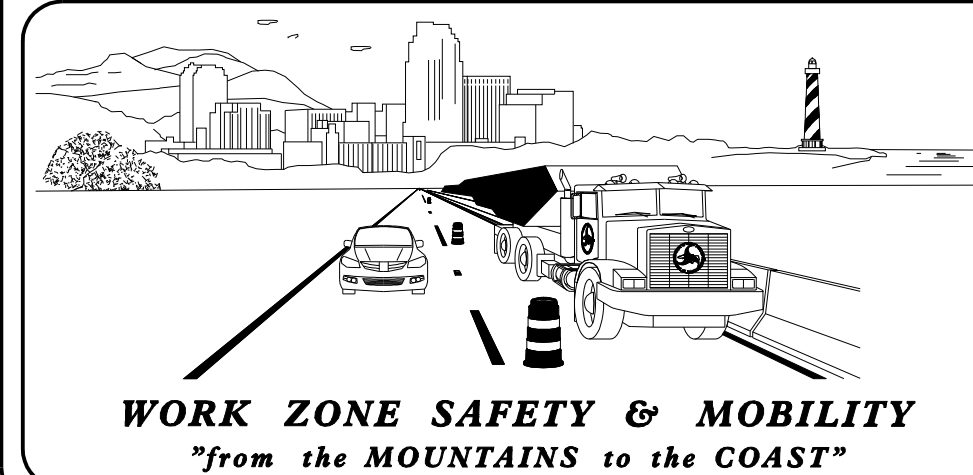


APPROXIMATE
PROJECT LOCATION

INDEX OF SHEETS

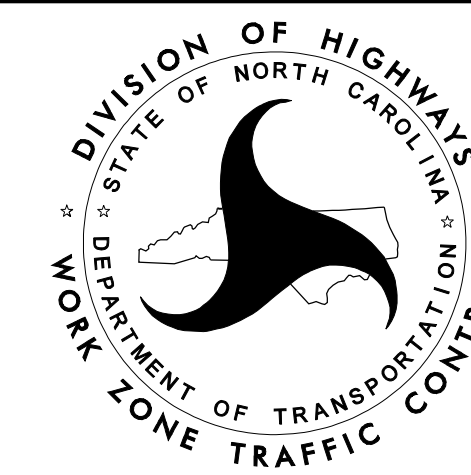
SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2	TRANSPORTATION OPERATIONS PLAN: WORK ZONE TRAFFIC CONTROL REQUIREMENTS
TMP-2A AND TMP-2B	OFF SITE DETOUR DETAILS
TMP-2C	PAVEMENT MARKING REPLACEMENT ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES >= 60 MPH
TMP-2D	WORK ZONE VARIABLE SPEED LIMIT DETAIL
TMP-3	WORK ZONE TRAFFIC CONTROL NARRATIVE

SHEET NO.
TMP-1



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
STEVE KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
DON PARKER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
TRAFFIC CONTROL DESIGN ENGINEER



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE
DESIGN GROUP, INC.

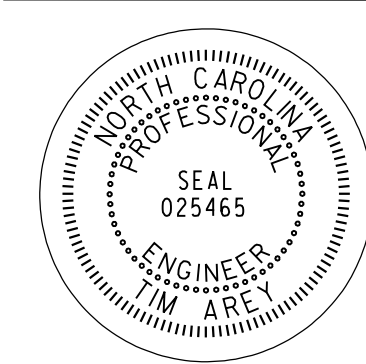


ENGINEERS • CONSULTANTS

PH: 704 573 3003

APPROVED: *Tom Arsy*
DATE: 3/21/2016

SEAL



TIP PROJECT: I-5732

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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
1101.01	WORK ZONE WARNING SIGNS
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
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - (SNOWPLOWABLE)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT
- ON-GOING CONSTRUCTION

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

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

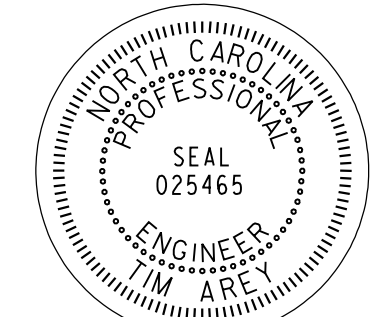

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS PH 704 573 3003</p>	<p>APPROVED: <i>Jim Arey</i> DATE: 3/21/2016</p> <p>SEAL</p> 		<p>ROADWAY STANDARD DRAWINGS & LEGEND</p>
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WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS

PROJ. REFERENCE NO. I-5732	SHEET NO. TMP-2
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LANE CLOSURE RESTRICTIONS

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 (SEE SPECIAL PROVISION, INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

A) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
I-74 AND I-74 RAMPS/LOOPS	FRIDAY AT 12:00 P.M. NOON TO MONDAY AT 12:01 A.M.

B) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

<u>ROAD NAME</u>
I-74 ALL I-74 RAMPS/LOOPS

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 7:00AM DECEMBER 31st AND 6:00PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 7:00AM THURSDAY AND 6:00PM TUESDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00AM FRIDAY AND 6:00PM WEDNESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00AM THE FRIDAY BEFORE THE WEEK OF INDEPENDENCE DAY AND 6:00PM THE FOLLOWING MONDAY AFTER THE WEEK OF INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00AM FRIDAY AND 6:00PM WEDNESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00AM TUESDAY AND 6:00PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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.

WORK ZONE SIGNING:

(A) INSTALLATION

IF THERE IS A PERIOD OF CONSTRUCTION INACTIVITY LONGER THAN 14 CALENDAR DAYS, REMOVE OR COVER ADVANCE/GENERAL WARNING WORK ZONE SIGNS. UNCOVER ADVANCE/GENERAL WARNING WORK ZONE SIGNS NO MORE THAN 7 CALENDAR DAYS BEFORE WORK RESUMES. ALL OTHER OPERATIONS MAY BE SUSPENDED UPON FAILURE TO COMPLY WITH THE ABOVE REQUIREMENTS. SUCH SUSPENDED OPERATIONS WOULD NOT BE RESUMED UNTIL THE ABOVE REQUIREMENTS ARE FULFILLED.

(B) LANE CLOSURE WORK ZONE SIGNS

INSTALL ANY REQUIRED LANE CLOSURE SIGNING NEEDED DURING THE LIFE OF THE PROJECT IN ACCORDANCE WITH THE STANDARD DRAWING NO. 1101.02, 1101.11 AND 1110.02 OF THE 2012 ROADWAY STANDARD DRAWINGS.

(C) ROAD CLOSURE SIGNS

NOTIFY THE ENGINEER FOURTEEN (14) CALENDAR DAYS PRIOR TO RAMP/LOOP CLOSURE. PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS AND PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS. COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD AND ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

PAVEMENT MARKING AND MARKERS:

1. LONG-LIFE PAVEMENT MARKINGS WILL BE PLACED UPON REMOVAL OF THE EXISTING PAVEMENT MARKINGS.
2. EXISTING SNOWPLOWABLE PAVEMENT MARKERS SHALL BE RETAINED. LENSES SHALL BE REPLACED.
3. NO TEMPORARY MARKERS ARE REQUIRED.

CONSTRUCTION OPERATIONS:

1. REMOVE /REPLACE ANY CONFLICTING OR DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
2. OPERATE EQUIPMENT AND CONDUCT OPERATIONS IN THE SAME DIRECTION AS THE FLOW OF TRAFFIC. MAINTAIN VEHICULAR ACCESS IN ACCORDANCE WITH ARTICLE 1101-05 OF THE 2012 STANDARD SPECIFICATIONS.
3. DO NOT INSTALL MORE THAT 2 MILES OF LANE CLOSURE ON I-74, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE, AND DO NOT INSTALL ANY MORE THAN ONE PER DIRECTION.

LAW ENFORCEMENT:

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

TEMPORARY TRAFFIC CONTROL (TTC):

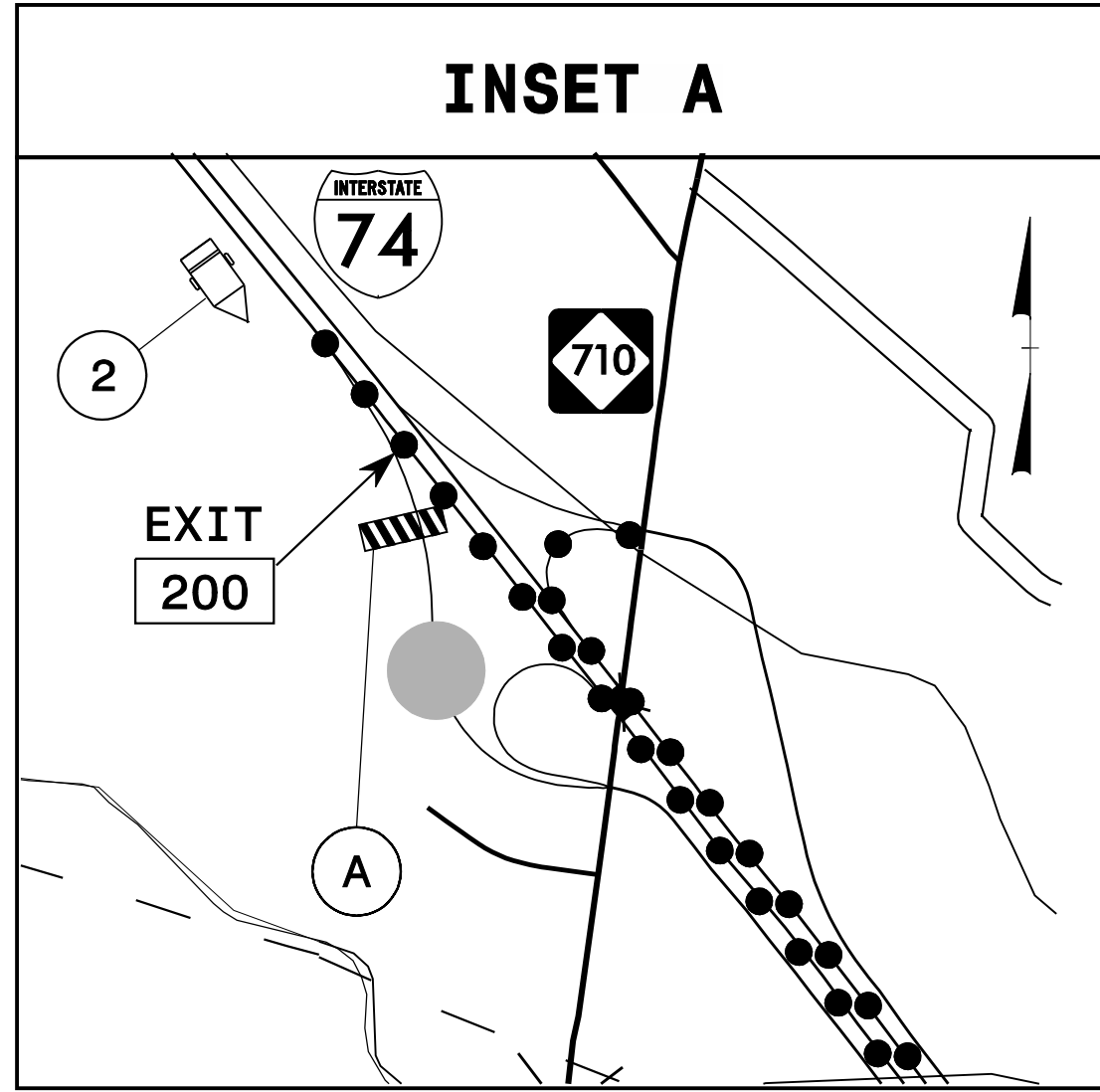
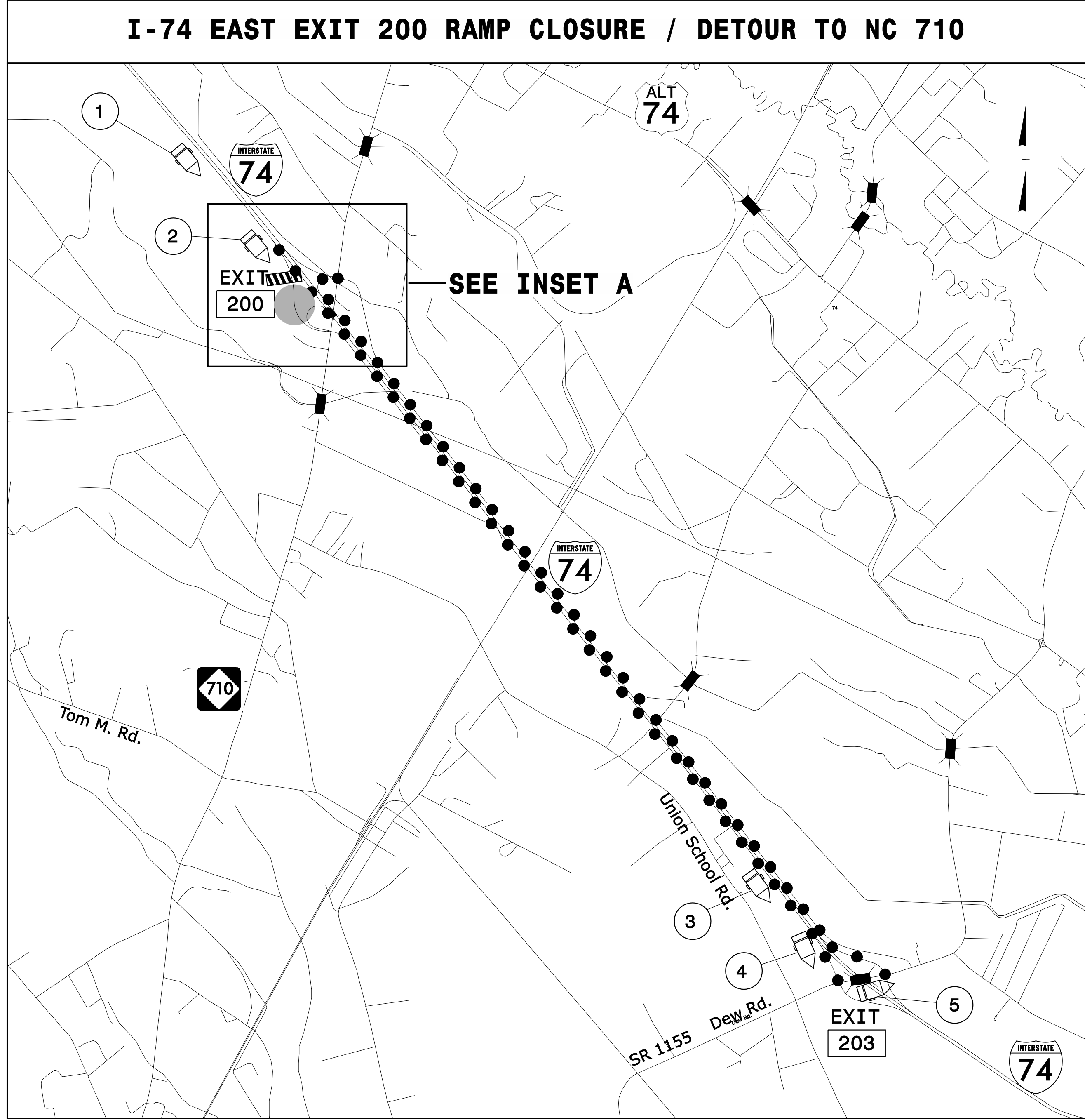
MAINTAIN TRAFFIC IN ACCORDANCE WITH DIVISIONS 10, 11 AND 12 OF THE 2012 STANDARD SPECIFICATIONS AND THE FOLLOWING PROVISIONS:

INSTALL WORK ZONE ADVANCE WARNING SIGNS IN ACCORDANCE WITH THE DETAIL DRAWING PROVIDED IN THESE PLANS PRIOR TO BEGINNING ANY OTHER WORK.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AND WITHIN 10 FEET OF OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING STANDARD DRAWING NO. 1101.02 OF THE 2012 ROADWAY STANDARD DRAWINGS. 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, 2012 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.

WHEN UTILIZING A SLOW-MOVING OPERATION FOR SUCH ITEMS AS PAVEMENT MARKING AND MARKER PLACEMENT, AS A MINIMUM THE SLOW MOVING OPERATION CARAVAN SHALL CONSIST OF THE VEHICLES AND DEVICES SHOWN ON THE MOVING OPERATION CARAVAN DETAILS ACCORDING TO ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 13 OF THE 2012 ROADWAY STANDARD DRAWINGS. TRAFFIC CONES MAY BE USED WHEN NECESSARY TO PROVIDE ADDITIONAL PROTECTION OF WET PAVEMENT MARKINGS. BALLAST ALL TRAFFIC CONES SO THEY WILL NOT BE BLOWN OVER BY TRAFFIC.

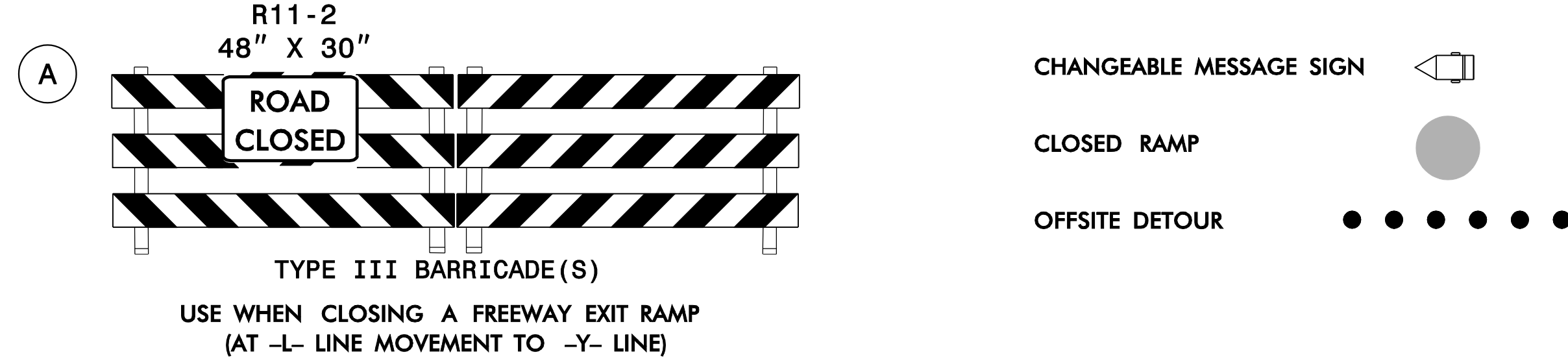
<p style="font-size: small;">PLAN PREPARED IN THE OFFICE OF:</p> <p style="font-weight: bold; font-size: large;">PROGRESSIVE</p> <p style="font-weight: bold; font-size: large;">DESIGN GROUP, INC.</p> <div style="display: flex; justify-content: center; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> </div> <p style="font-size: x-small;">ENGINEERS • CONSULTANTS PH 704 573 3003</p>	<p style="font-size: x-small;">APPROVED: <i>Tom Arvey</i> DATE: 3/21/2016</p> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="font-size: x-small; text-align: center;"> <p>SEAL</p> <p>PROFESSIONAL ENGINEER TIM ARVEY 025465</p> </div> </div>		<p style="font-weight: bold; font-size: large;">TRANSPORTATION MANAGEMENT PLAN</p> <p style="font-weight: bold; font-size: large;">TRANSPORTATION OPERATIONS PLAN</p>
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- | <p>1</p> <table border="1" style="font-size: small;"> <tr><th>MESSAGE NO. 1</th><th>MESSAGE NO. 2</th></tr> <tr><td>EXIT 200 CLOSED</td><td>USE EXIT 203</td></tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>PLACE CMS APPROX. 1/2 MILE IN ADVANCE OF CLOSED RAMP</p> | MESSAGE NO. 1 | MESSAGE NO. 2 | EXIT 200 CLOSED | USE EXIT 203 | <p>3</p> <table border="1" style="font-size: small;"> <tr><th>MESSAGE NO. 1</th><th>MESSAGE NO. 2</th></tr> <tr><td>DETOUR TO NC 710</td><td>USE EXIT 203</td></tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>PLACE CMS 800-1000 FEET IN ADVANCE OF EXIT 203</p> | MESSAGE NO. 1 | MESSAGE NO. 2 | DETOUR TO NC 710 | USE EXIT 203 |
|---|---------------|---------------|-----------------|------------------|---|---------------|---------------|------------------|--------------|
| MESSAGE NO. 1 | MESSAGE NO. 2 | | | | | | | | |
| EXIT 200 CLOSED | USE EXIT 203 | | | | | | | | |
| MESSAGE NO. 1 | MESSAGE NO. 2 | | | | | | | | |
| DETOUR TO NC 710 | USE EXIT 203 | | | | | | | | |
| <p>2</p> <table border="1" style="font-size: small;"> <tr><th>MESSAGE NO. 1</th><th>MESSAGE NO. 2</th></tr> <tr><td>EXIT 200 CLOSED</td><td>USE EXIT 203</td></tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>PLACE CMS 1000+/- FEET IN ADVANCE OF CLOSED RAMP</p> | MESSAGE NO. 1 | MESSAGE NO. 2 | EXIT 200 CLOSED | USE EXIT 203 | <p>4</p> <table border="1" style="font-size: small;"> <tr><th>MESSAGE NO. 1</th><th>MESSAGE NO. 2</th></tr> <tr><td>DETOUR TO NC 710</td><td>TURN LEFT</td></tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>PLACE CMS 300-600 FEET FROM TOP OF RAMP</p> | MESSAGE NO. 1 | MESSAGE NO. 2 | DETOUR TO NC 710 | TURN LEFT |
| MESSAGE NO. 1 | MESSAGE NO. 2 | | | | | | | | |
| EXIT 200 CLOSED | USE EXIT 203 | | | | | | | | |
| MESSAGE NO. 1 | MESSAGE NO. 2 | | | | | | | | |
| DETOUR TO NC 710 | TURN LEFT | | | | | | | | |
| <p>5</p> <table border="1" style="font-size: small;"> <tr><th>MESSAGE NO. 1</th><th>MESSAGE NO. 2</th></tr> <tr><td>DETOUR TO NC 710</td><td>TURN LEFT</td></tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>PLACE CMS 200-300 FEET IN ADVANCE OF TURN (RAMP TO I-74 WEST)</p> | | MESSAGE NO. 1 | MESSAGE NO. 2 | DETOUR TO NC 710 | TURN LEFT | | | | |
| MESSAGE NO. 1 | MESSAGE NO. 2 | | | | | | | | |
| DETOUR TO NC 710 | TURN LEFT | | | | | | | | |

NOTES:

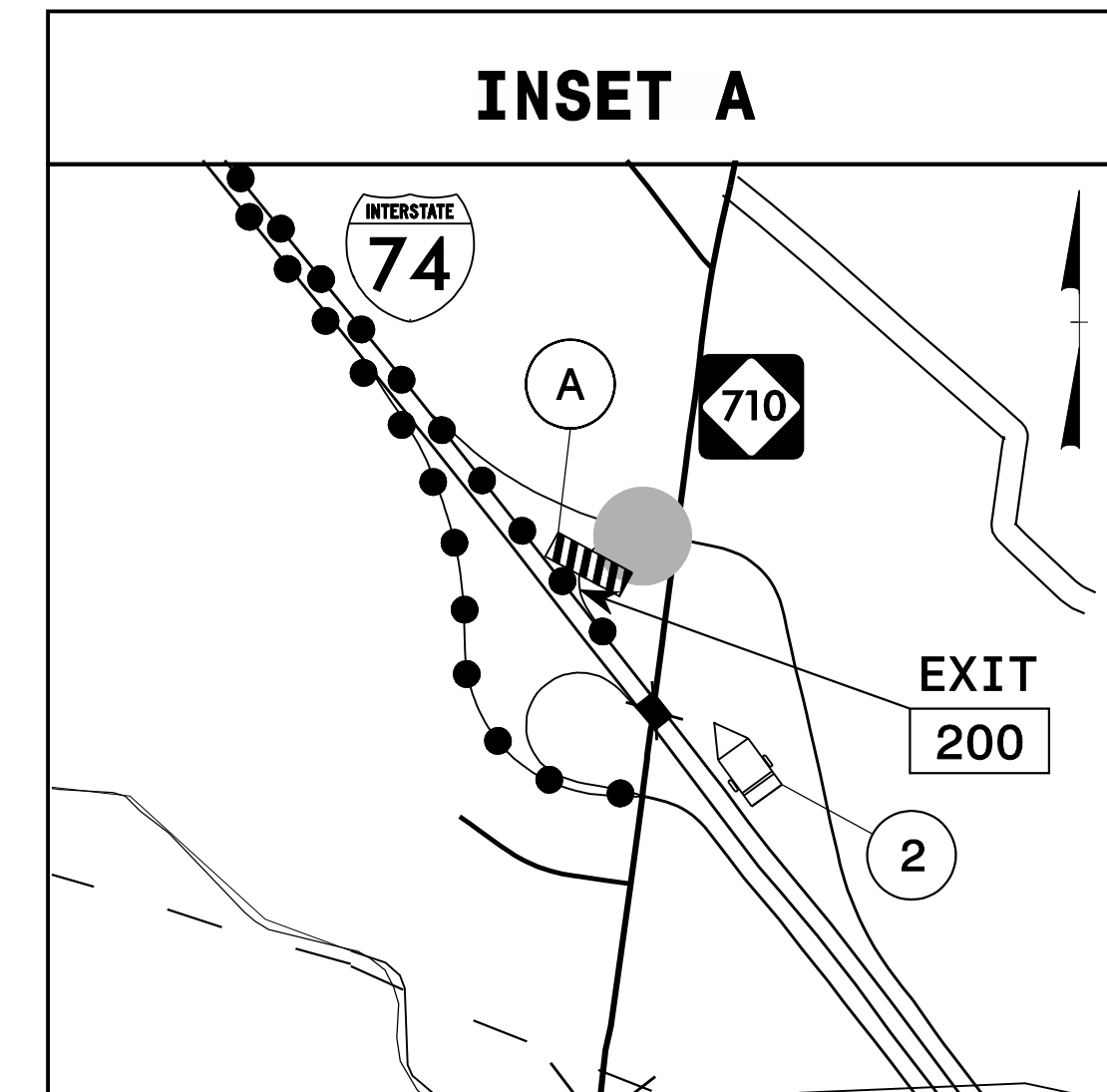
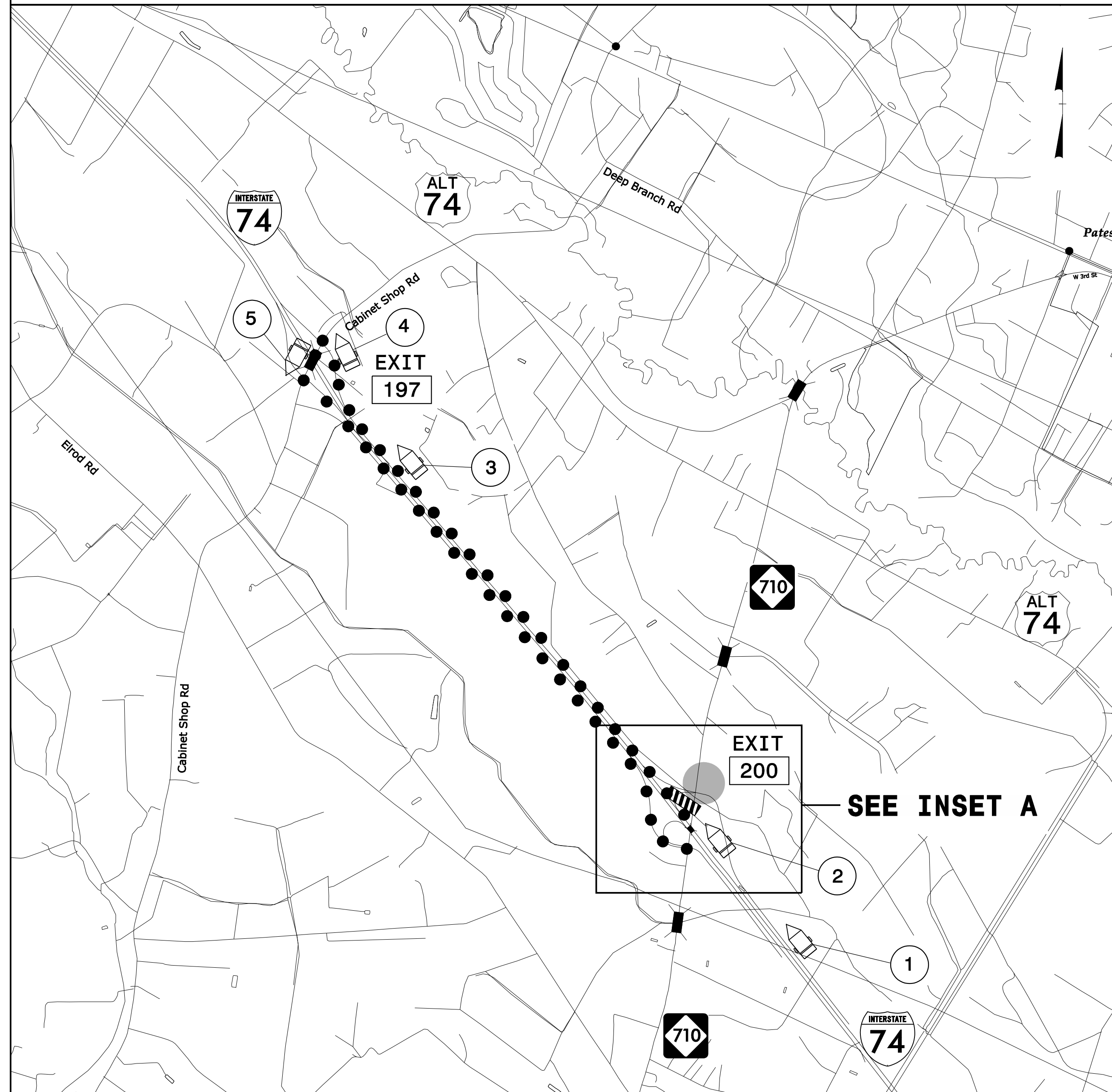
- NO MORE THAN ONE RAMP OR LOOP SHOULD BE CLOSED AT THE SAME TIME.
- CHANGEABLE MESSAGE SIGNS LOCATED AT INTERSECTIONS SHALL NOT BE PLACED WHERE THEY BLOCK STOP SIGNS, STOP AHEAD SIGNS, OR OTHER REGULATORY OR WARNING SIGNS. DO NOT PLACE CMS IN LOCATION THAT MAY INTERFERE WITH PROPER SIGHT DISTANCE OF ANY SIGNS.



I-74 EAST EXIT 200 RAMP CLOSURE

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS PH 704 573 3003	APPROVED: <i>Ann Gray</i> DATE: 3/21/2016 SEAL 		TRANSPORTATION MANAGEMENT PLAN OFF SITE DETOURS
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I-74 WEST EXIT 200 RAMP CLOSURE / DETOUR TO NC 710



1	MESSAGE NO. 1	MESSAGE NO. 2
	EXIT 200 CLOSED	USE EXIT 197
	CHANGEABLE MESSAGE SIGN	

PLACE CMS APPROX. 1/2 MILE IN ADVANCE OF CLOSED RAMP

3	MESSAGE NO. 1	MESSAGE NO. 2
	DETOUR TO NC 710	USE EXIT 197
	CHANGEABLE MESSAGE SIGN	

PLACE CMS 800-1000 FEET IN ADVANCE OF EXIT 203

2	MESSAGE NO. 1	MESSAGE NO. 2
	EXIT 200 CLOSED	USE EXIT 197
	CHANGEABLE MESSAGE SIGN	

PLACE CMS 1000+/- FEET IN ADVANCE OF CLOSED RAMP

4	MESSAGE NO. 1	MESSAGE NO. 2
	DETOUR TO NC 710	TURN LEFT
	CHANGEABLE MESSAGE SIGN	

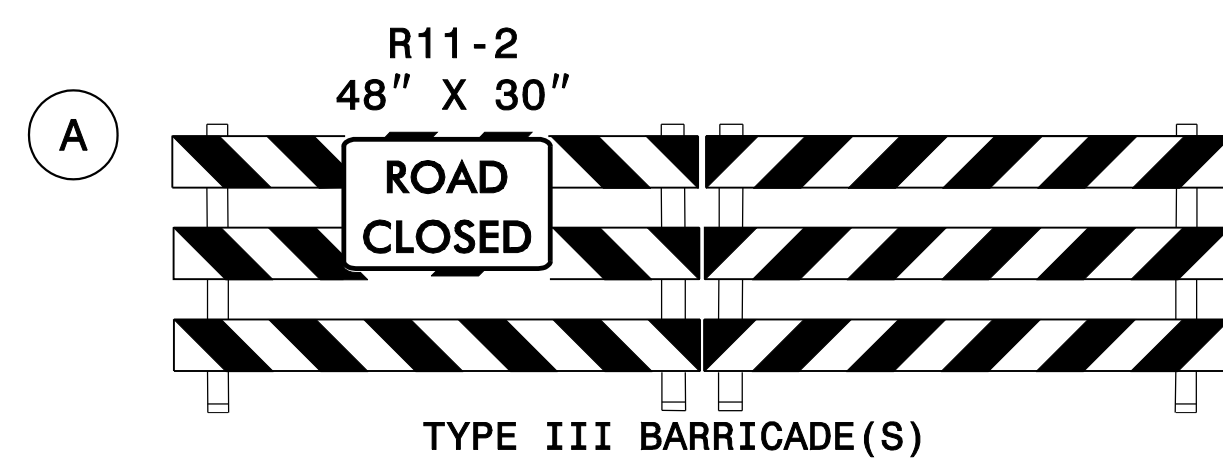
PLACE CMS 300-600 FEET FROM TOP OF RAMP

5	MESSAGE NO. 1	MESSAGE NO. 2
	DETOUR TO NC 710	TURN LEFT
	CHANGEABLE MESSAGE SIGN	

PLACE CMS 200-300 FEET IN ADVANCE OF TURN (RAMP TO I-74 EAST)

NOTES:

- NO MORE THAN ONE RAMP OR LOOP SHOULD BE CLOSED AT THE SAME TIME.
- CHANGEABLE MESSAGE SIGNS LOCATED AT INTERSECTIONS SHALL NOT BE PLACED WHERE THEY BLOCK STOP SIGNS, STOP AHEAD SIGNS, OR OTHER REGULATORY OR WARNING SIGNS. DO NOT PLACE CMS IN LOCATION THAT MAY INTERFERE WITH PROPER SIGHT DISTANCE OF ANY SIGNS.



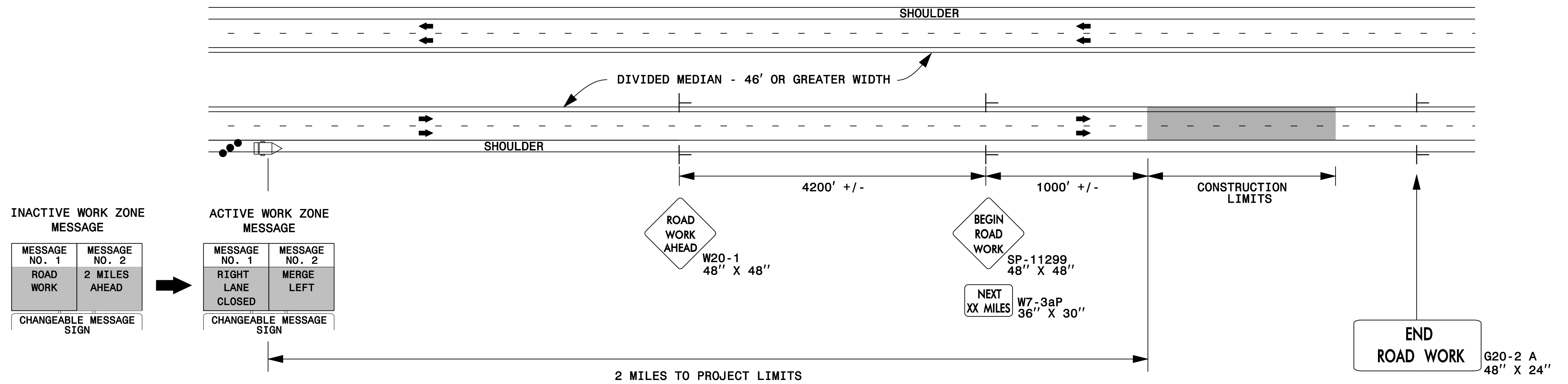
USE WHEN CLOSING A FREEWAY EXIT RAMP (AT -L- LINE MOVEMENT TO -Y- LINE)

- CHANGEABLE MESSAGE SIGN
- CLOSED RAMP
- OFFSITE DETOUR

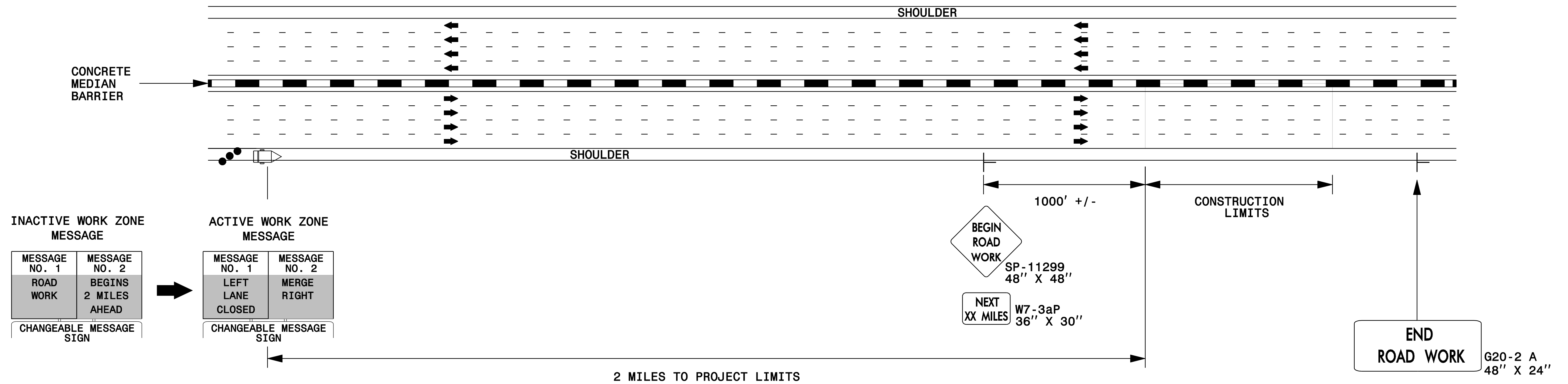
I-74 WEST EXIT 200 RAMP CLOSURE

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS PH 704 573 3003	APPROVED: <i>Jim Gray</i> DATE: 3/23/2016 		TRANSPORTATION MANAGEMENT PLAN OFF SITE DETOURS
	SEAL		

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER



NOTES:

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) FOR MEDIAN WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.

LEGEND

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
 ENGINEERS • CONSULTANTS
 PH 704 573 3003

APPROVED: *Jim Gray* DATE: 3/23/2016
 SEAL

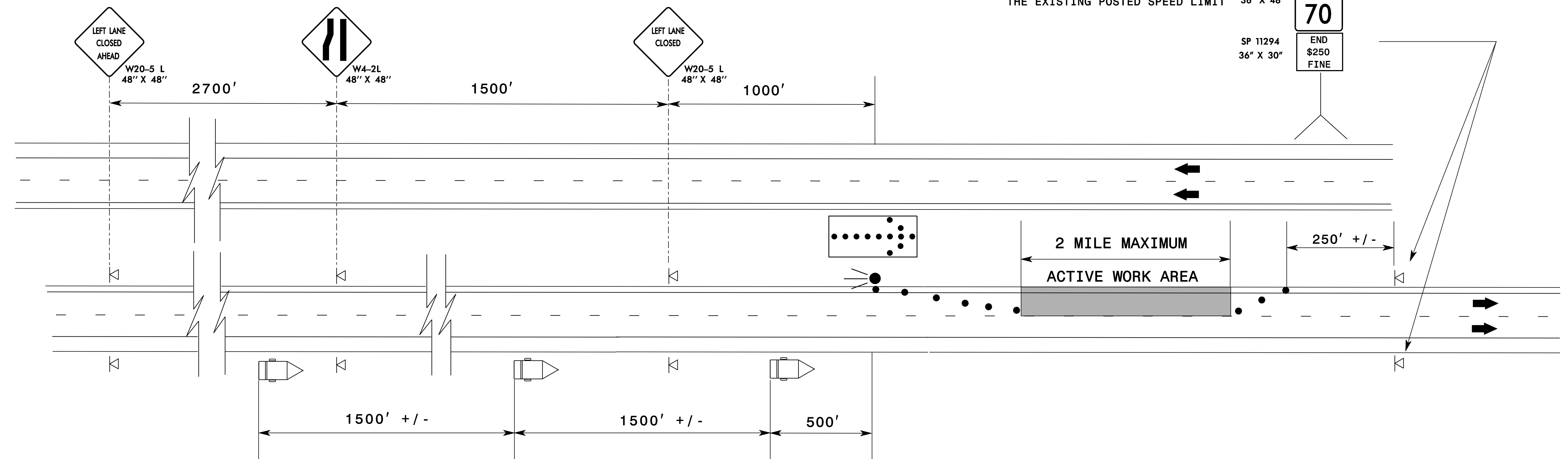
DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

**PAVEMENT MARKING REPLACEMENT:
 ADVANCE WARNING SIGNS FOR
 HIGH SPEED FACILITIES
 ≥ 60 MPH**

\$\$\$\$\$ CUSTOMER'S TIME \$\$\$ \$\$\$\$ DONOR'S \$\$\$ \$\$\$\$

THE EXISTING POSTED SPEED LIMIT R2-1 36" X 48"

SPEED LIMIT 70
END \$250 FINE
SP 11294 36" X 30"



MESSAGE NO. 1	MESSAGE NO. 2
60 MPH ZONE AHEAD	\$250 FINE AHEAD

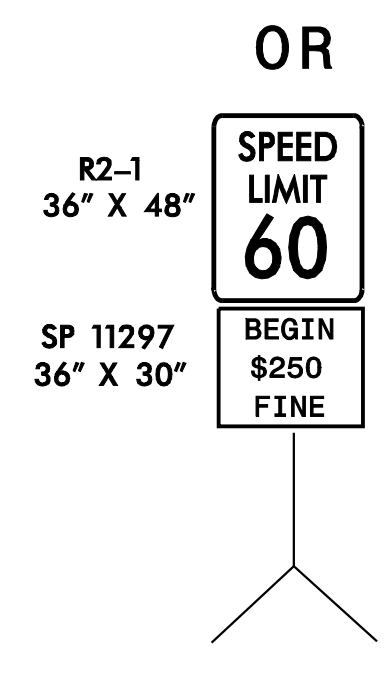
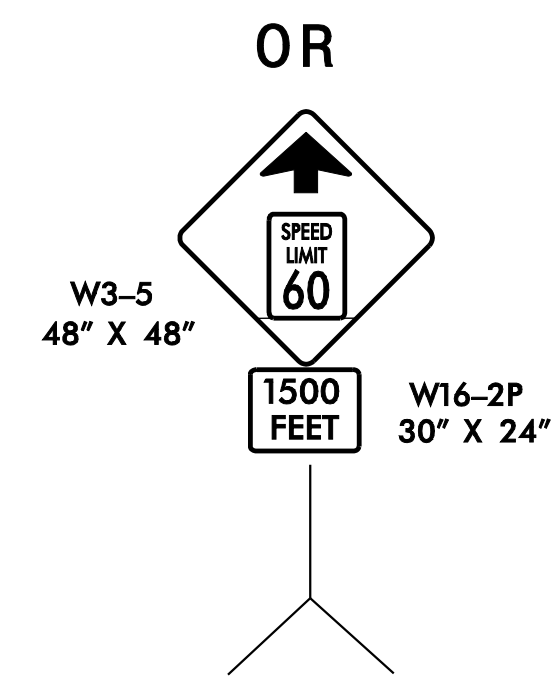
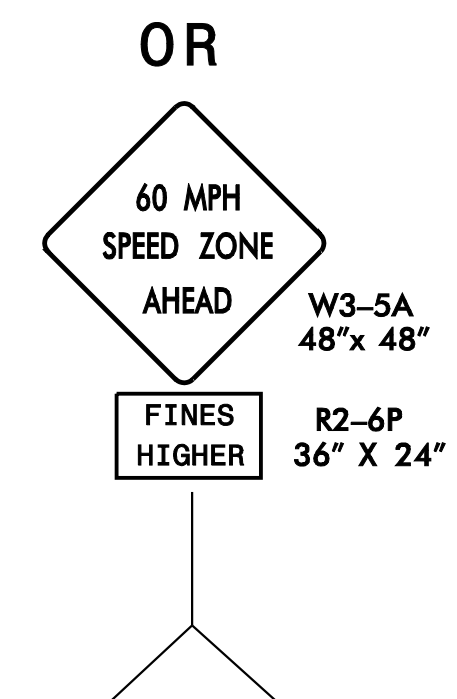
CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
BEGIN 60 MPH 1500 FT	WORKERS IN ROADWAY

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
SPEED LIMIT 60	BEGIN \$250 FINE

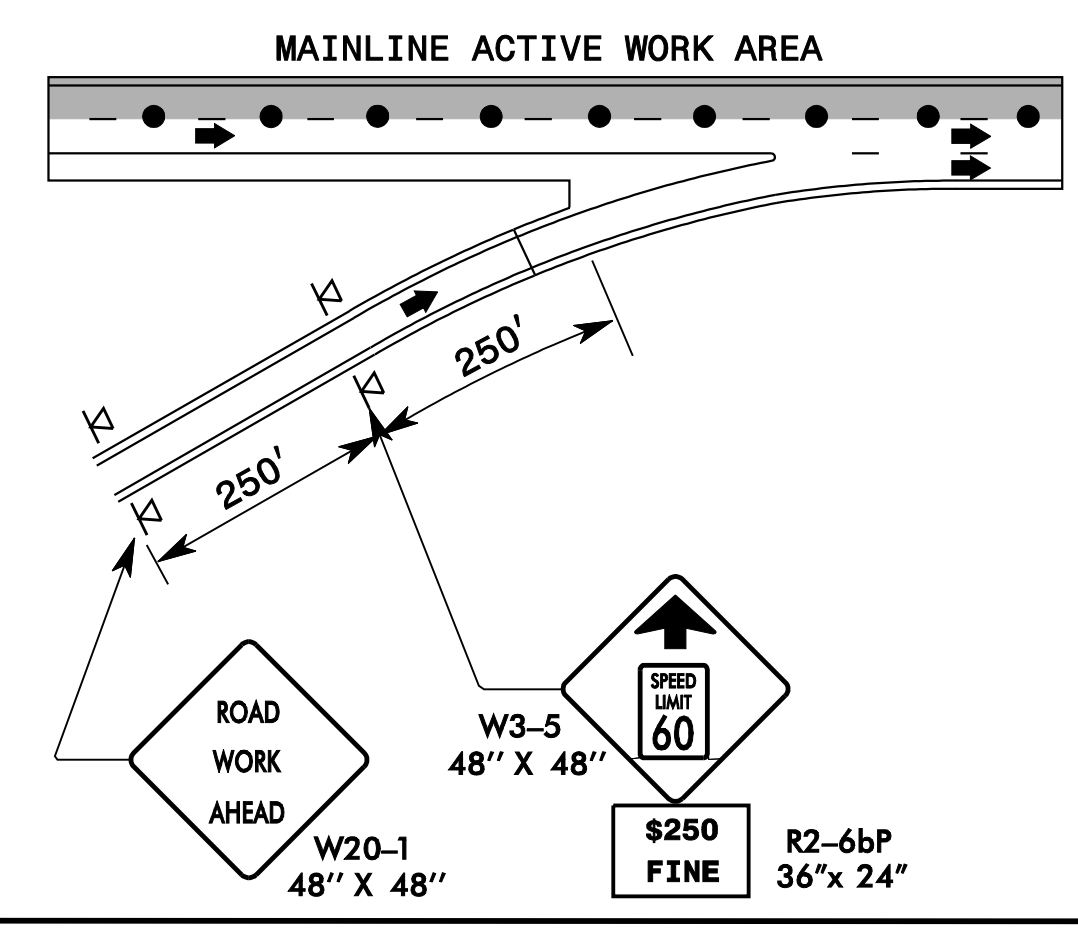
CHANGEABLE MESSAGE SIGN



GUIDELINES

1. THIS DRAWING IS FOR USE ONLY AFTER AN ENGINEERING INVESTIGATION HAS BEEN PERFORMED BY THE REGIONAL TRAFFIC ENGINEER AND WORK ZONE TRAFFIC CONTROL SECTION. THE WORK ZONE "VARIABLE" SPEED LIMIT IS INTENDED FOR USE ON FREEWAYS WITH SPEED LIMITS 65 MPH OR GREATER. SEE WORK ZONE "VARIABLE" SPEED LIMIT GUIDELINES FOR CRITERIA.
2. THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE SPEED LIMIT REDUCTION IN ORDER FOR THE REDUCTION AND/OR \$250 SPEEDING FINE TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT MESSAGES/SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE \$250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.
3. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
4. THE MAXIMUM LANE CLOSURE LENGTH IS 2 MILES UNLESS OTHERWISE SHOWN IN THE PLANS. IN ADDITION, FOR ACTIVE WORK AREAS THAT EXCEED 1 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL CMS'S/SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEEDING PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMP LOCATED WITHIN THE ACTIVE WORK AREA.
5. THE \$250 SPEEDING FINE PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION.
6. THIS APPLICATION IS FOR SHORT-TERM ACTIVITIES SUCH AS LANE CLOSURES AND ROAD CLOSURES. THE WORK ZONE "VARIABLE" SPEED LIMIT SHALL NOT BE IN OPERATION CONTINUOUSLY (24/7) FOR A PERIOD EXCEEDING 30 CALENDAR DAYS. THE WORK ZONE "VARIABLE" SPEED LIMIT MESSAGING/SIGNAGE SHALL BE REMOVED AT THE COMPLETION OF THE ACTIVITY. THE REGIONAL TRAFFIC ENGINEER WILL BE NOTIFIED BY THE RESIDENT ENGINEER TO RESCIND THE ORDINANCE.
7. WHEN WORK ZONE "VARIABLE" SPEED LIMIT REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION.

ENTRANCE RAMP

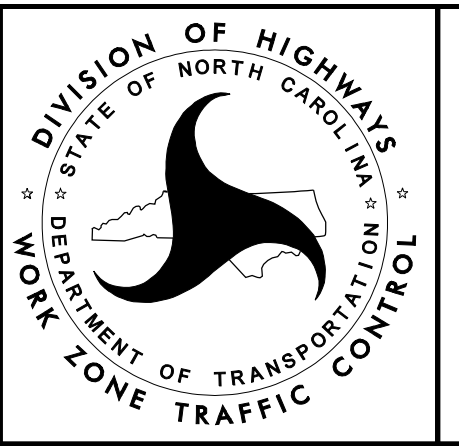


NOTES

1. THE WORK ZONE "VARIABLE" SPEED LIMIT WILL BE ESTABLISHED IN COLLABORATION BETWEEN THE REGIONAL TRAFFIC ENGINEER, THE DIVISION, AND THE WORK ZONE TRAFFIC CONTROL SECTION. THIS DRAWING SHOWS THE TYPICAL APPLICATION OF REDUCING THE SPEED LIMIT TO 60 MPH.
2. TYPICALLY THE WORK ZONE "VARIABLE" SPEED LIMIT APPLIES TO A SPECIFIC PORTION AND NOT THE ENTIRE PROJECT. THE WORK AREA AFFECTED BY THE SPEED REDUCTION SHOULD NOT EXCEED 2 MILES UNLESS THE MAXIMUM LENGTH OF LANE CLOSURE ALLOWED BY THE PLANS EXCEEDS THE 2 MILE MAXIMUM.
3. THE WORK ZONE "VARIABLE" SPEED LIMIT AND THE \$250 SPEEDING FINE IS TO BEGIN 500' IN ADVANCE OF THE FLASHING ARROW PANEL AT THE MERGE TAPER. THE EXISTING SPEED LIMIT SIGNS AND THE "END \$250 FINE" SIGNS ARE TO BE INSTALLED AT THE LOCATION WHERE THE EXISTING SPEED LIMIT IS TO RESUME.
4. THE NEED AND LOCATION OF ADDITIONAL POSTED WORK ZONE "VARIABLE" SPEED LIMIT SIGNS WITHIN THE LANE CLOSURE IS TO BE DETERMINED BY THE REGIONAL TRAFFIC ENGINEER.

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
PH 704 573 3003

APPROVED: *Jim Arey* DATE: 3/21/2016
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
JIM AREY
025465



WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION

WORK ZONE TRAFFIC CONTROL NARRATIVE

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS FOR THE PROJECT LIMITS AS SHOWN ON TMP-2C (PAVEMENT MARKING REPLACEMENT: ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES \geq 60 MPH.

NOTE: OPERATIONS DESCRIBED IN STEPS 2 THRU 4 MAY BE COMPLETED SIMULTANEOUSLY.

STEP 2: USING THE WORK ZONE VARIABLE SPEED LIMIT DETAIL SHOWN ON SHEET TMP-2D, AND ROADWAY STANDARD DRAWINGS 1101.02 SHEETS 4, 9 AND 10, REMOVE THE EXISTING PAVEMENT MARKINGS AND PLACE LONG-LIFE PAVEMENT MARKINGS IN BOTH DIRECTIONS OF I-74. REPLACE THE LENSES IN THE EXISTING SNOWPLOWABLE MARKERS IN BOTH DIRECTIONS OF I-74.

NOTE: UTILIZE THE CONSTRUCTION OPERATION DESCRIBED IN STEP 3 FOR ALL ENTRANCE AND EXIT RAMP EXCEPT I-74 EASTBOUND AND WESTBOUND EXIT RAMP TO NC 710.

STEP 3: FOR ALL ENTRANCE AND EXIT RAMP (EXCEPT FOR THE I-74 EASTBOUND AND I-74 WESTBOUND EXIT RAMP TO NC 710, EXIT 200), USE ROADWAY STANDARD DRAWINGS 1101.02 SHEETS 4, 9 AND 10 TO REMOVE EXISTING RAMP PAVEMENT MARKINGS, PLACE LONG-LIFE PAVEMENT MARKINGS, AND REPLACE LENSES IN EXISTING SNOWPLOWABLE PAVEMENT MARKERS.

FOR PLACEMENT OF SYMBOLS AND STOP BARS AT/NEAR TOP OF RAMP, USE DRUMS AND FLAGGING OPERATIONS TO ALTERNATE TRAFFIC PATTERN TO COMPLETE EACH SIDE (LEFT AND RIGHT LANE AT RAMP TERMINAL).

USE THE WORK ZONE VARIABLE SPEED LIMIT DETAIL ON SHEET TMP-2D AND ROADWAY STANDARD DRAWING 1101.02 SHEETS 4, 9, AND 10 TO CLOSE THE OUTSIDE LANE OF I-74 WHEN PAVEMENT MARKING OPERATIONS ARE WITHIN 10' OF THE OPEN TRAVEL LANE.

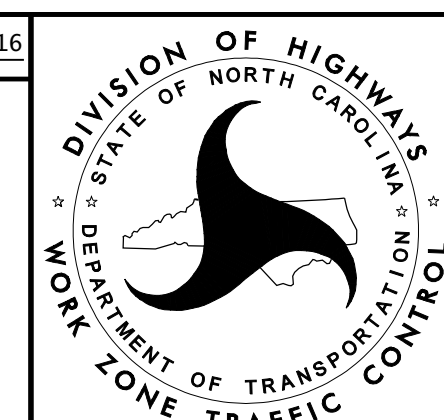
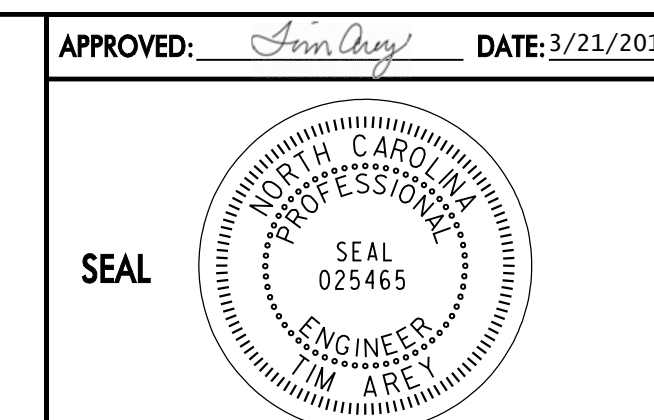
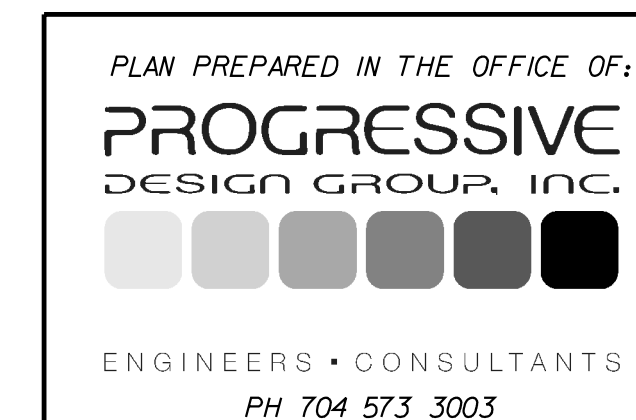
NOTE: UTILIZE THE CONSTRUCTION OPERATION DESCRIBED IN STEP 4 FOR THE CLOSURES OF I-74 EASTBOUND AND WESTBOUND EXIT RAMP TO NC 710 (EXIT 200). DO NOT CLOSE BOTH RAMP AT THE SAME TIME.

STEP 4: FOR THE APPROPRIATE RAMP AT EXIT 200, PLACE THE OFF SITE DETOUR DEVICES AS SHOWN ON SHEETS TMP-2A AND TMP-2B. A MINIMUM OF ONE CMS PER TURN ON THE DETOUR IS REQUIRED. CLOSE THE MAINLINE EXIT USING DRUMS. CLOSE THE RAMP USING TYPE III BARRICADES. PLACE DRUMS ALONG NC 710 AT THE RAMP TERMINAL.

USE THE WORK ZONE VARIABLE SPEED LIMIT DETAIL ON SHEET TMP-2D AND ROADWAY STANDARD DRAWING 1101.02 SHEETS 4, 9, AND 10 TO CLOSE THE OUTSIDE LANE OF I-74 WHEN PAVEMENT MARKING OPERATIONS ARE WITHIN 10' OF THE OPEN TRAVEL LANE.

REMOVE EXISTING RAMP PAVEMENT MARKINGS, PLACE LONG-LIFE PAVEMENT MARKINGS, AND REPLACE LENSES IN EXISTING SNOWPLOWABLE MARKERS ON THESE RAMP.

REOPEN RAMP BACK TO ORIGINAL PATTERN.




**TRANSPORTATION
MANAGEMENT PLAN
TRAFFIC CONTROL NARRATIVE**

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
ROBESON COUNTY**

LOCATION: I-74 FROM 0.5 MILE WEST OF NC 710 TO 0.5 MILE EAST OF NC 41

TIP NO. I-5732	SHEET NO. PMP-1
DocuSigned by: <i>Ayman Alqudwah</i>	
APPROVED: _____	
DATE: 3/1/2016	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

T.I.P.: I-5732

ROADWAY STANDARD DRAWING

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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
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
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1267.01	FLEXIBLE DELINEATORS - INSTALLATION
1267.02	FLEXIBLE DELINEATORS - SPACING TABLES
1267.03	FLEXIBLE DELINEATORS - INTERCHANGE PLACEMENT

GENERAL NOTES

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.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
I-74/RAMPS	THERMOPLASTIC	SNOWPLOWABLE
BRIDGES	POLYUREA	PERMANENT RAISED
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- E) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- F) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING POLYUREA PAVEMENT MARKING MATERIAL.
- G) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
- H) TYPE III COLD APPLIED PLASTIC MAY BE USED IN LIEU OF TYPE II COLD APPLIED PLASTIC. IF TYPE III COLD APPLIED PLASTIC IS USED, IT SHALL BE PAID FOR USING THE TYPE II COLD APPLIED PLASTIC PAY ITEM.

FINAL PAVEMENT MARKINGS

<u>THERMOPLASTIC(12", 120 MILS)</u> WHITE SOLID LANE LINE	<u>POLYUREA(6")</u> WHITE EDGELINE YELLOW EDGELINE 10 FT. WHITE SKIP
<u>THERMOPLASTIC(12", 90 MILS)</u> WHITE GORELINE	3 FT. - 9 FT./SP WHITE MINISKIP
<u>THERMOPLASTIC(24", 120 MILS)</u> WHITE STOPBAR	
<u>THERMOPLASTIC(6", 120 MILS)</u> 10 FT. WHITE SKIP 3 FT. - 9 FT./SP WHITE MINISKIP WHITE SOLID LANE LINE	<u>THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)</u> LEFT TURN ARROW RIGHT TURN ARROW COMBO.STRAIGHT/RIGHT ARROW COMBO LEFT/RIGHT/STRAIGHT ARROW MERGE ARROW RAMP ARROW SYMBOL
<u>THERMOPLASTIC(6", 90 MILS)</u> WHITE EDGELINE YELLOW EDGELINE	

PAVEMENT MARKERS

- PERMANENT RAISED PAVEMENT MARKERS
CRYSTAL & RED
- SNOWPLOWABLE RAISED PAVEMENT MARKERS
CRYSTAL & RED

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE, NOTES, AND PAVEMENT MARKING SCHEDULE

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

A. I. ALQUDWAH, P.E. SIGNING & DELINEATION REGIONAL ENGINEER
D. M. EATON SIGNING & DELINEATION PROJECT DESIGN ENGINEER/TECHNICIAN

