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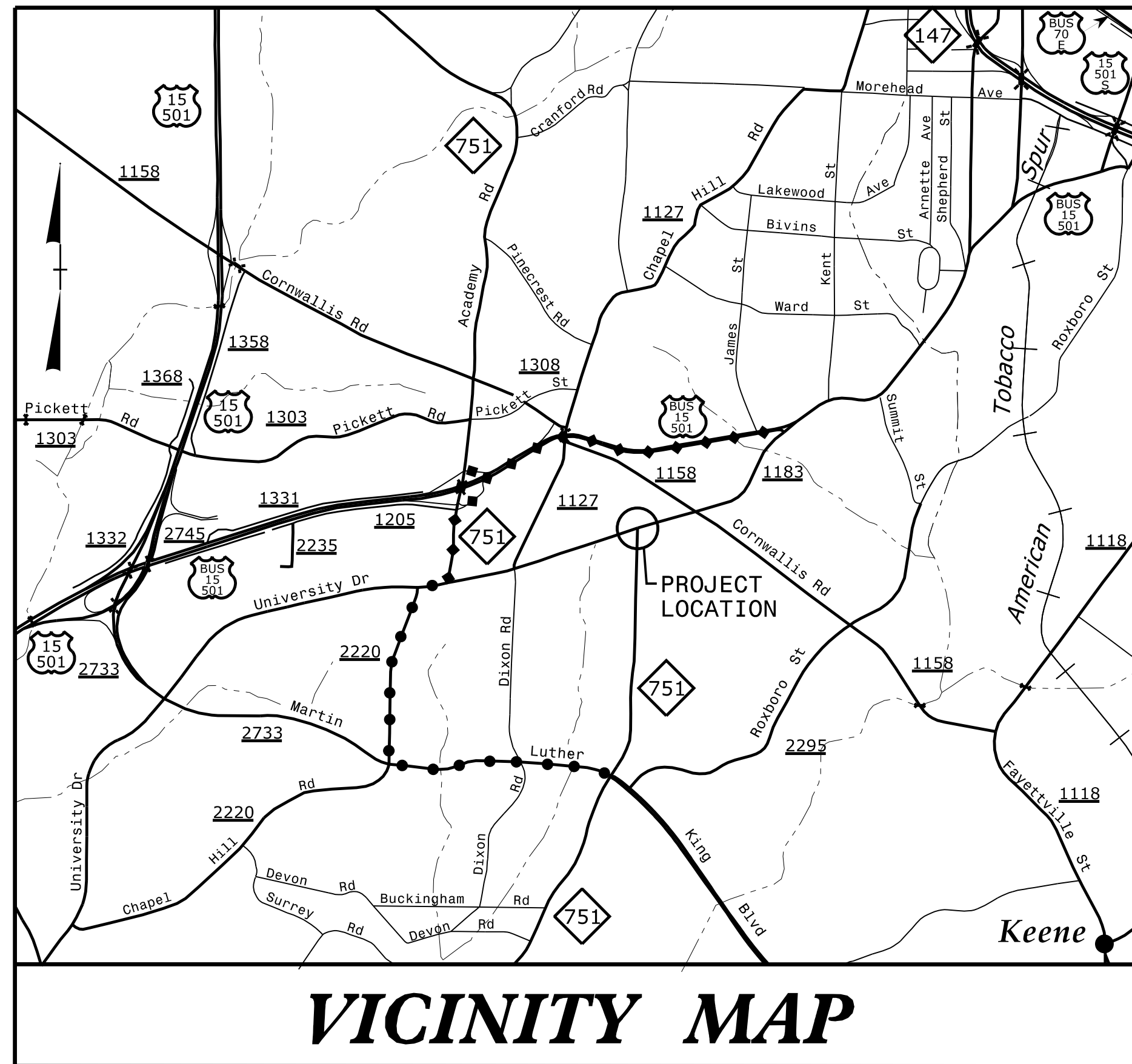
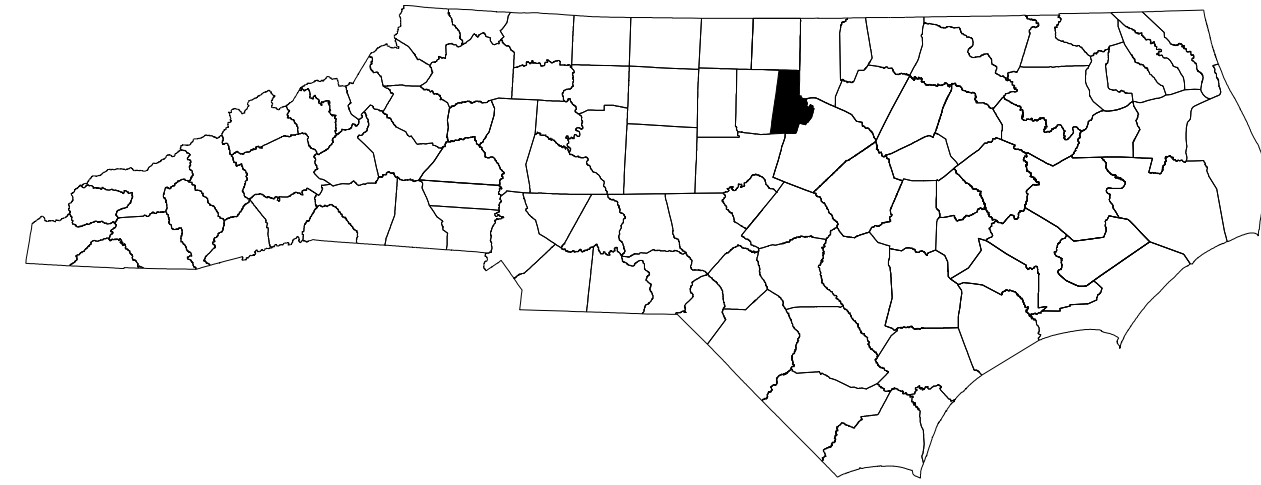
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

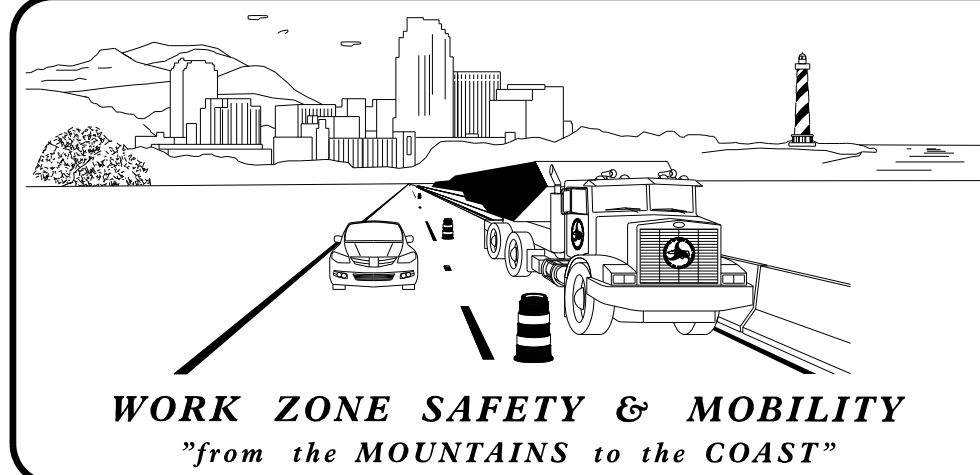
**TRANSPORTATION MANAGEMENT PLAN**

**DURHAM COUNTY**



**LOCATION:** INTERSECTION IMPROVEMENTS (ROUNDBABOUT)  
AT NC 751 (HOPE VALLEY ROAD) AND SR 1183  
(UNIVERSITY DRIVE) IN DURHAM

**TYPE OF WORK:** GRADING, PAVING, DRAINAGE



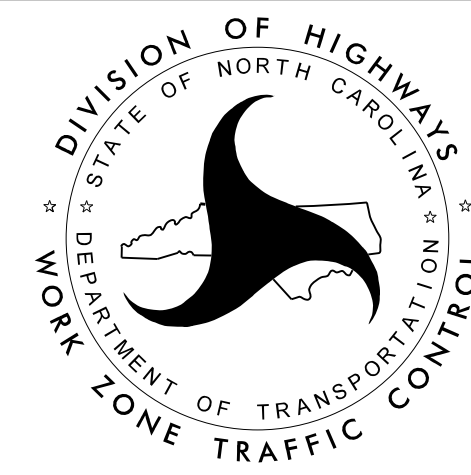
PLANS PREPARED BY:

M. RZEPKA, P.E.  
PROJECT ENGINEER

Y. MARIOTTE  
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

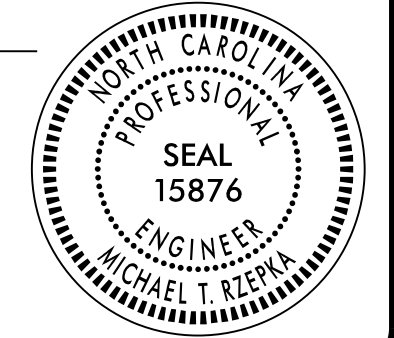
S. R. DAVIDSON, P.E.  
DIV. 5 DESIGN ENGINEER



**HDR** HDR Engineering, Inc. of the Carolinas  
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

APPROVED: *Michael T. Rzepka*  
DATE: 12/17/2018

SEAL



**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 (GENERAL NOTES, MANAGEMENT STRATEGIES, PHASING AND LOCAL NOTES)
TMP-3	DETOUR FOR NC 751 (HOPE VALLEY RD) AND SR 1183 (UNIVERSITY DR) INTERSECTION CLOSURE
TMP-4	ROAD CLOSURE SIGNS AND DETOUR SIGNS
TMP-5	SPECIAL SIGN DESIGN - UNIVERSITY DRIVE



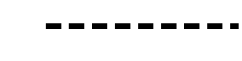


## ROADWAY STANDARD DRAWINGS

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

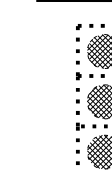
<u>STD. NO.</u>	<u>TITLE</u>
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1130.01	DRUM
1145.01	BARRICADES

## LEGEND






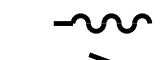
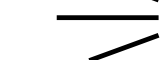




### GENERAL

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




### SIGNALS

-  EXISTING

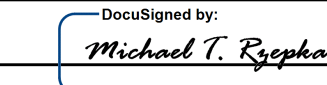
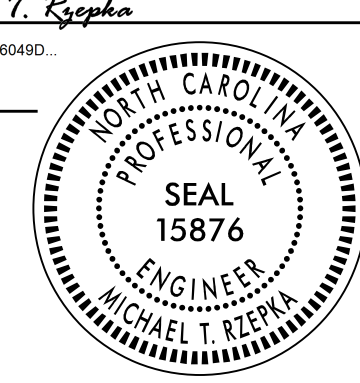

### TRAFFIC CONTROL DEVICES

-  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

9/18/2018  
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 11:02:20 AM

APPROVED:  DATE: 12/17/2018			<h3>ROADWAY STANDARD DRAWINGS &amp; LEGEND</h3>
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HDR Engineering, Inc. of the Carolinas  
 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
 N.C.B.E.L.S. License Number: F-0116

PROJ. REFERENCE NO.	SHEET NO.
U-5745	TMP-2

**MANAGEMENT STRATEGIES**

THE PROJECT CONSISTS OF INTERSECTION IMPROVEMENTS AT NC 751 (HOPE VALLEY RD) AND SR 1183 (UNIVERSITY DR). DURING CONSTRUCTION, NC 751 (HOPE VALLEY RD) AND SR 1183 (UNIVERSITY DR) WILL BE CLOSED AT THE CONSTRUCTION LIMITS AND TRAFFIC WILL BE PLACED ON OFF-SITE DETOURS.

NC 751 (HOPE VALLEY RD) AND SR 1183 (UNIVERSITY DR) INTERSECTION WILL BE REOPENED TO PROPOSED TRAFFIC PATTERN UPON COMPLETION OF CONSTRUCTION.

**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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- B) 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.

- C) 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.

- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

MISCELLANEOUS

- E) MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES DURING CONSTRUCTION.
- F) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

**LOCAL NOTES**

- 1) NOTIFY DURHAM COUNTY PUBLIC SCHOOLS AT LEAST THIRTY (30) CALENDAR DAYS PRIOR TO ROAD CLOSURE.

**PHASING**

STEP 1

NOTIFY ENGINEER OF SR 1183 (UNIVERSITY DR) AND NC 751 (HOPE VALLEY RD) INTERSECTION CLOSURE (SEE GENERAL NOTE 'A' AND LOCAL NOTE 1).

INSTALL AND ACTIVATE CMS BOARDS 14 DAYS BEFORE CLOSING SR 1183 (UNIVERSITY DR) AND NC 751 (HOPE VALLEY RD) INTERSECTION IN STEP 2.

STEP 2

USING ROADWAY STANDARD DRAWING 1101.03 (SHEET 1 OF 9) AND SHEET TMP-3, INSTALL ROAD CLOSURES AND DETOUR SIGNS, CLOSE SR 1183 (UNIVERSITY DR) AND NC 751 (HOPE VALLEY RD) AT PROPOSED ROUNDABOUT AND DETOUR TRAFFIC (SEE TMP-3). REMOVE CMS BOARDS. DEACTIVATE/COVER EXISTING SIGNAL AT SR 1183 (UNIVERSITY DR) AND NC 751 (HOPE VALLEY RD).

STEP 3

AWAY FROM TRAFFIC, CONSTRUCT PROPOSED ROUNDABOUT.


STEP 4

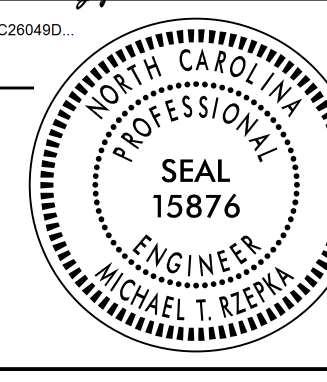
AWAY FROM TRAFFIC, PLACE FINAL PAVEMENT MARKINGS AND MARKERS AT PROPOSED ROUNDABOUT AND OPEN ROAD TO TRAFFIC.

STEP 5

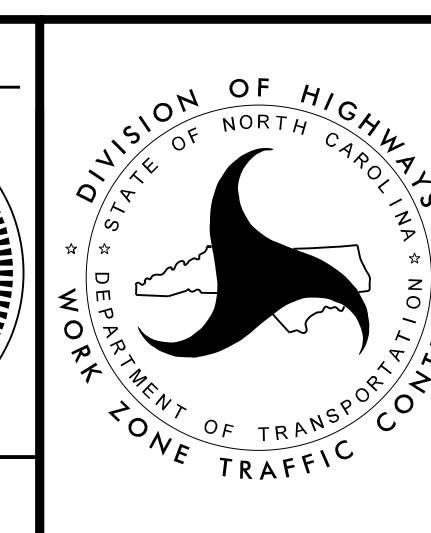
REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

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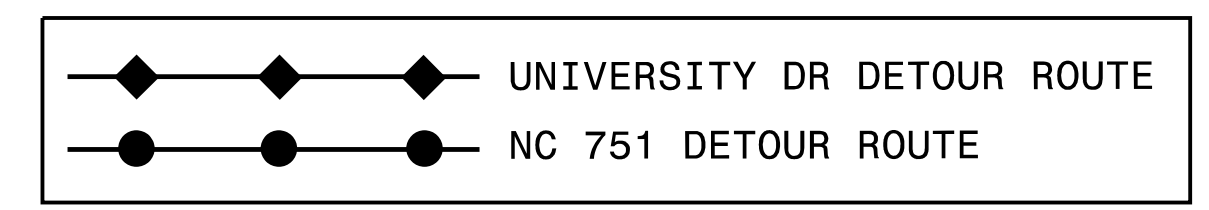
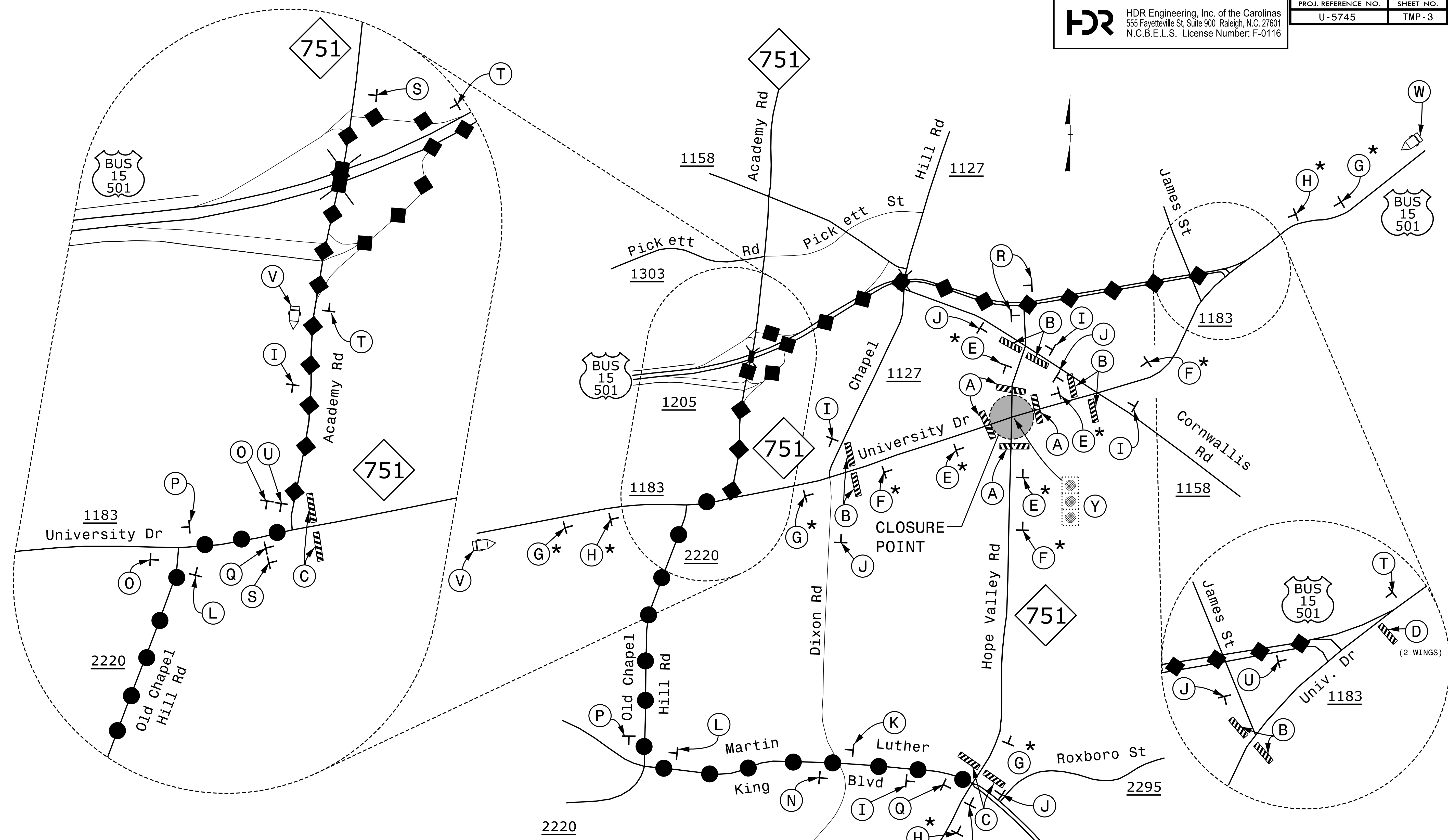
APPROVED:   
 DATE: 12/17/2018



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 UNLESS ALL SIGNATURES COMPLETED**



TRANSPORTATION OPERATIONS PLAN (MANAGEMENT STRATEGIES, GENERAL NOTES & LOCAL NOTES) AND PHASING



\* DUAL MOUNTED. PLACE SIGNS AS SHOWN ON RSD 1101.03, SHEET 1 OF 9.

REFER TO SHEETS TMP-4 & TMP-5 FOR ROAD CLOSURE SIGNS, DETOUR SIGNS AND SIGN DESIGN

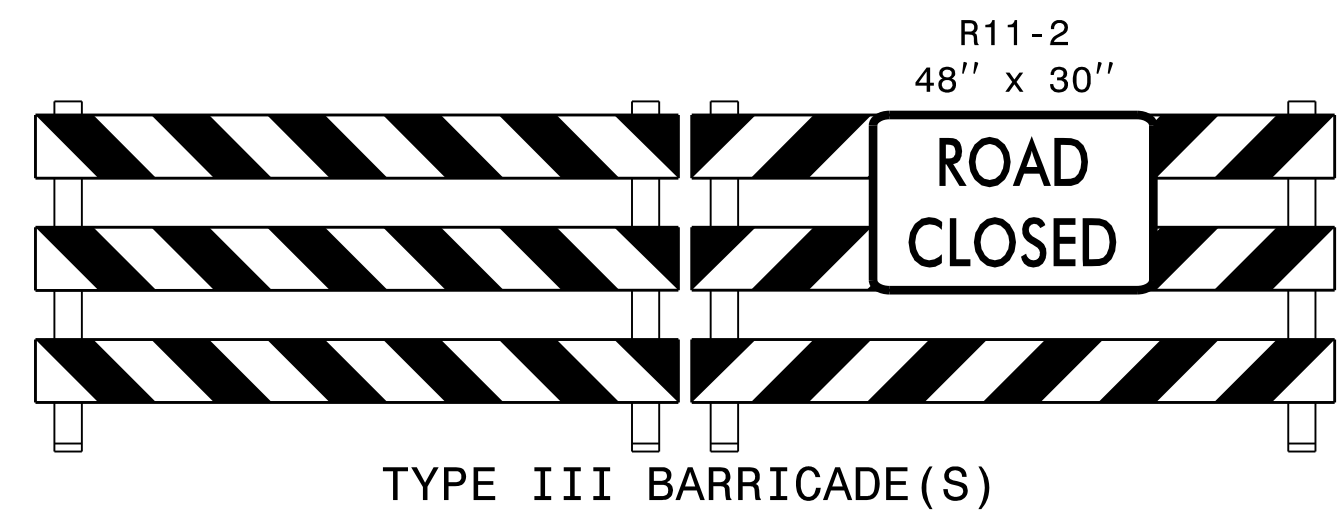
APPROVED: *Michael T. Ryzko*  
DATE: 12/17/2018

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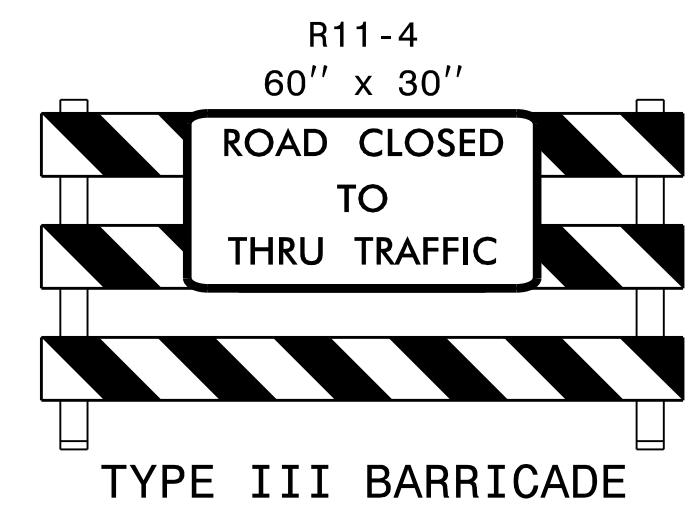


DETOUR FOR NC 751 (HOPE VALLEY RD) & SR 1183 (UNIVERSITY DR) INTERSECTION CLOSURE

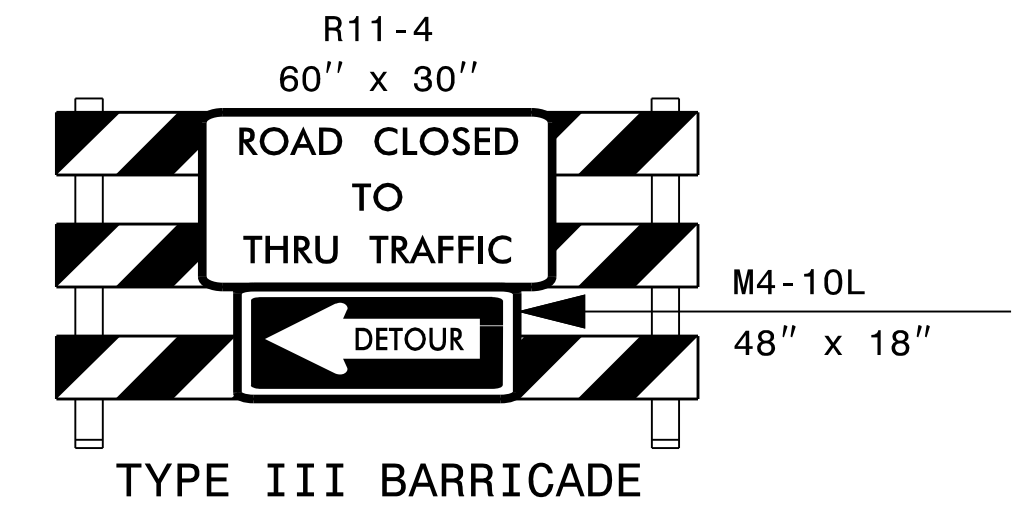
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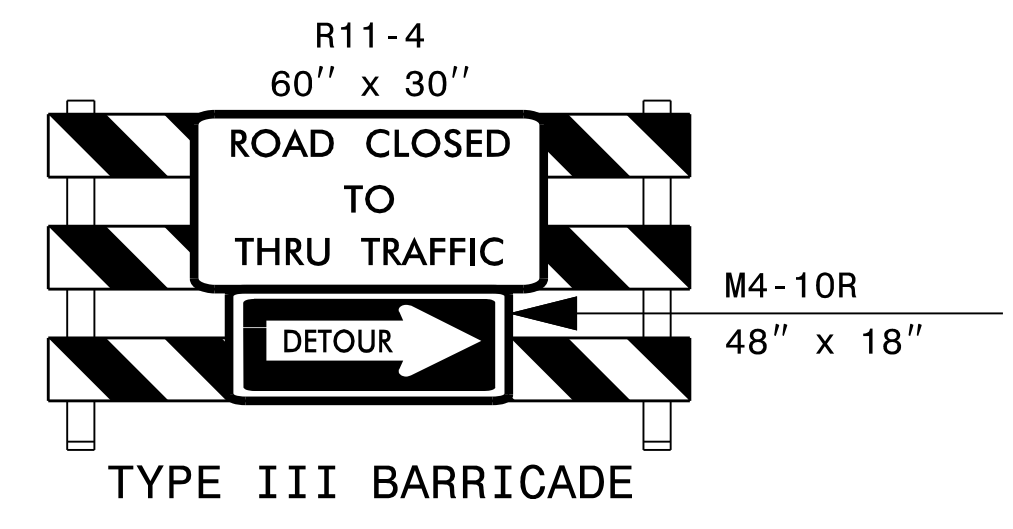
(A)



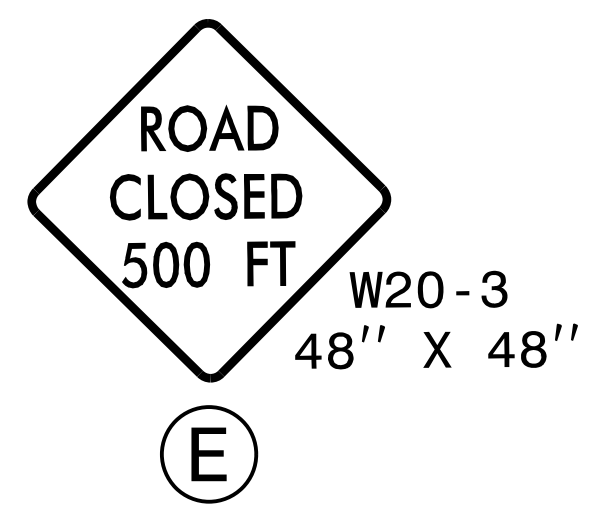
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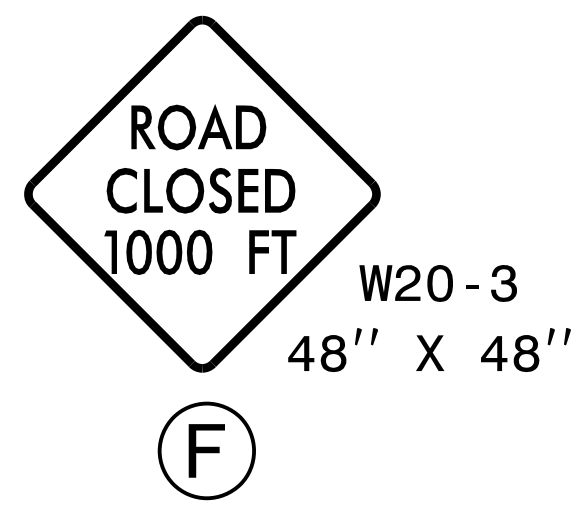
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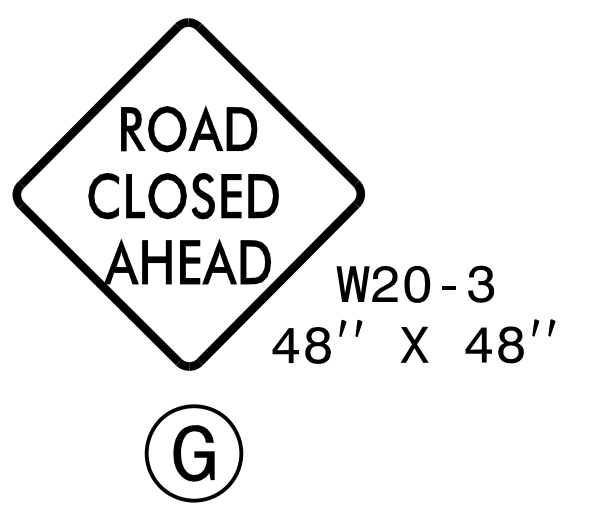
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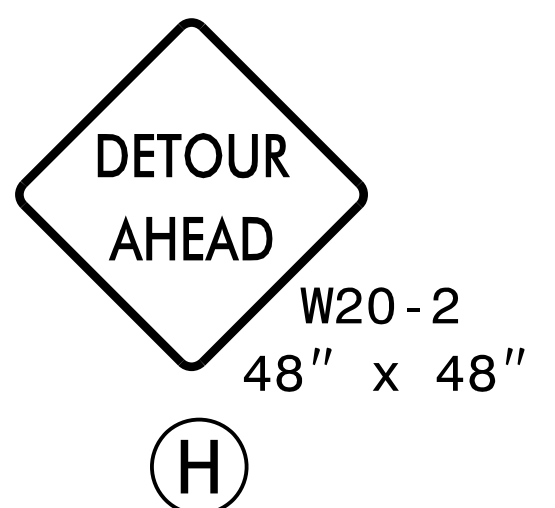
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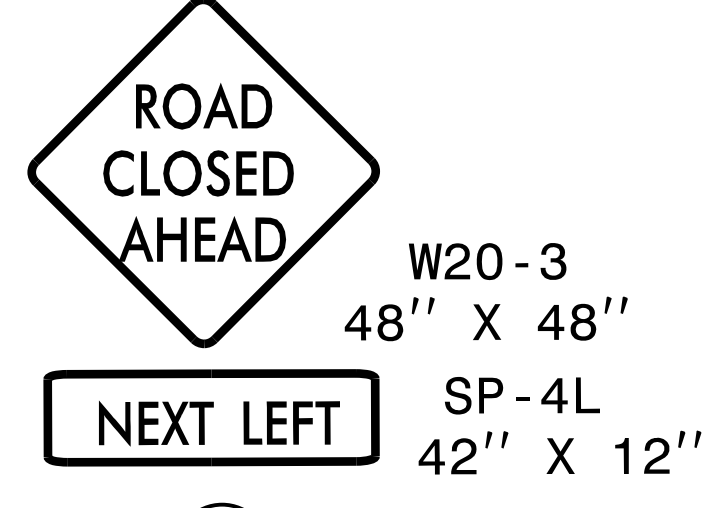
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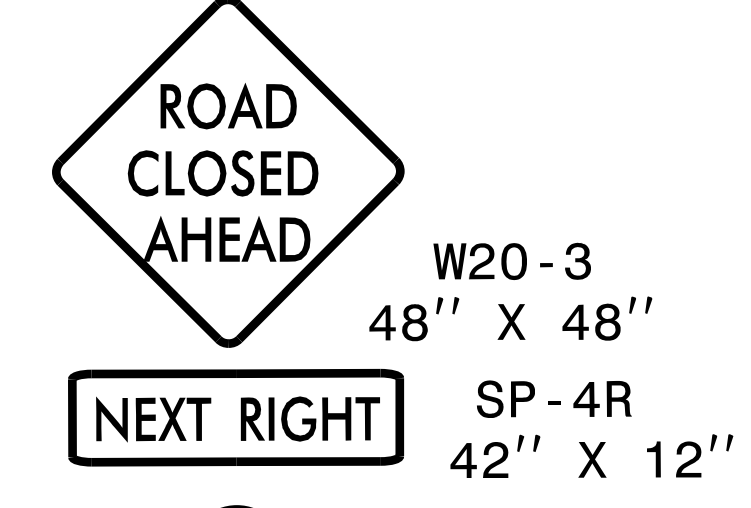
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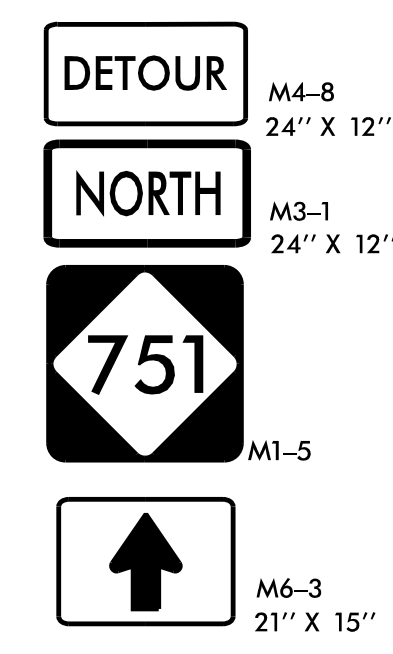
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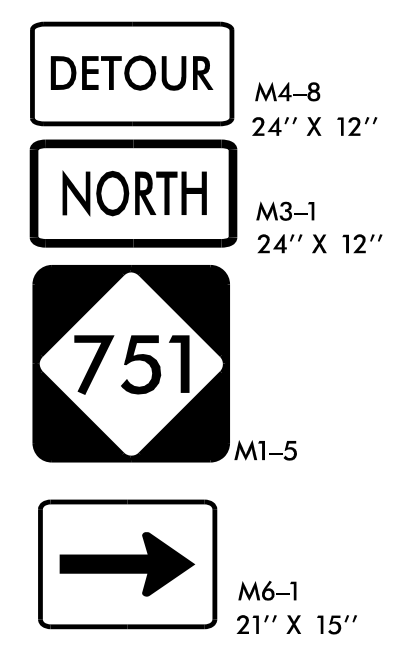
(I)



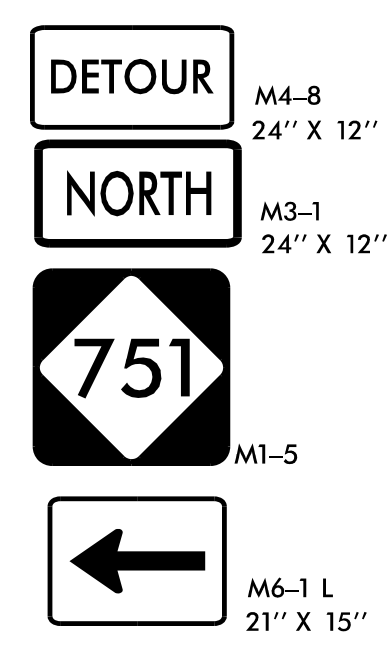
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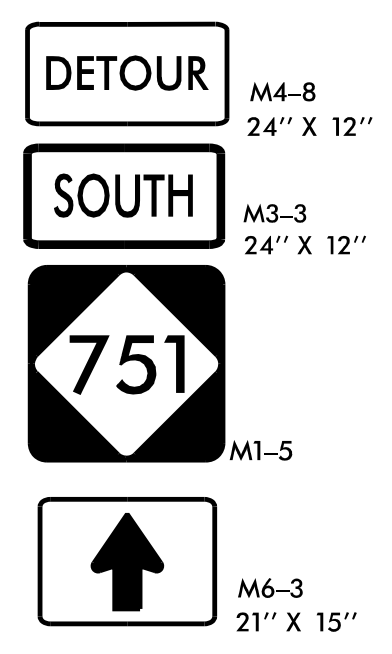
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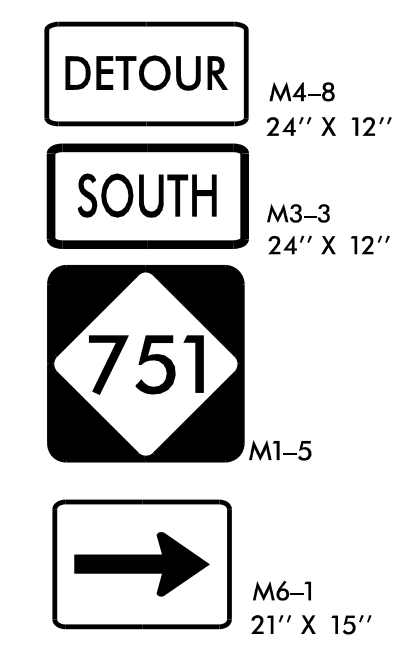
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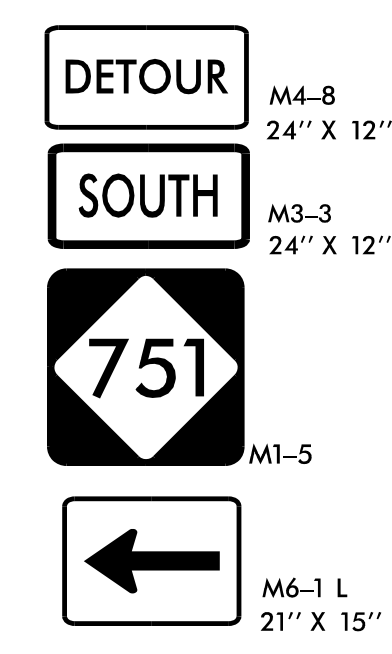
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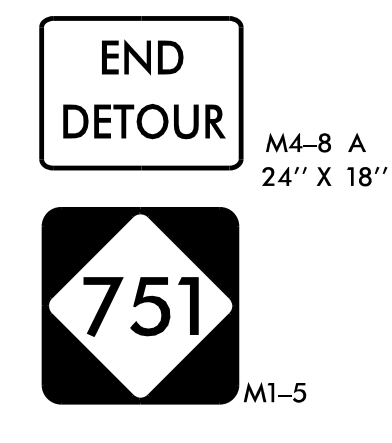
(N)



(O)



(P)



(Q)

MESSAGE AS DIRECTED BY THE ENGINEER

MESSAGE NO. 1	MESSAGE NO. 2
UNIV DR TO CLOSE AT NC751	(DATE) TO (DATE)

CHANGEABLE MESSAGE SIGN

(V)

MESSAGE AS DIRECTED BY THE ENGINEER

MESSAGE NO. 1	MESSAGE NO. 2
UNIV DR TO CLOSE AT US15	(DATE) TO (DATE)

CHANGEABLE MESSAGE SIGN

(W)

MESSAGE AS DIRECTED BY THE ENGINEER

MESSAGE NO. 1	MESSAGE NO. 2
NC751 TO CLOSE AT UNIV DR	(DATE) TO (DATE)

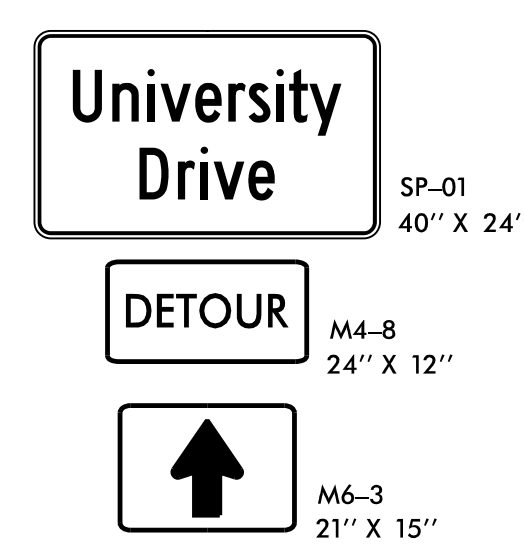
CHANGEABLE MESSAGE SIGN

(X)

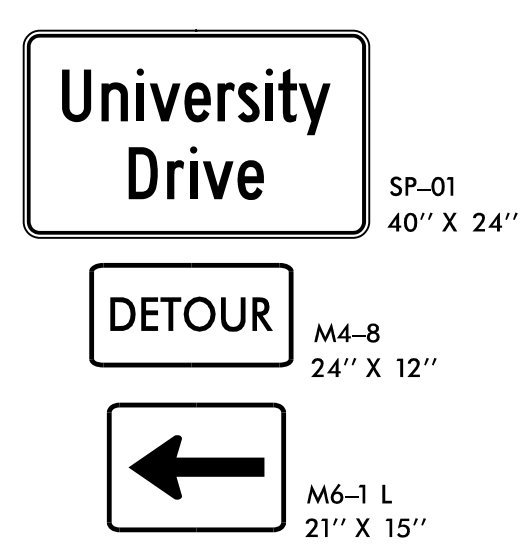
ACTIVATE ALL CMS 14 DAYS PRIOR TO ROAD CLOSURE

REMOVE ALL CMS AFTER ROAD CLOSURE

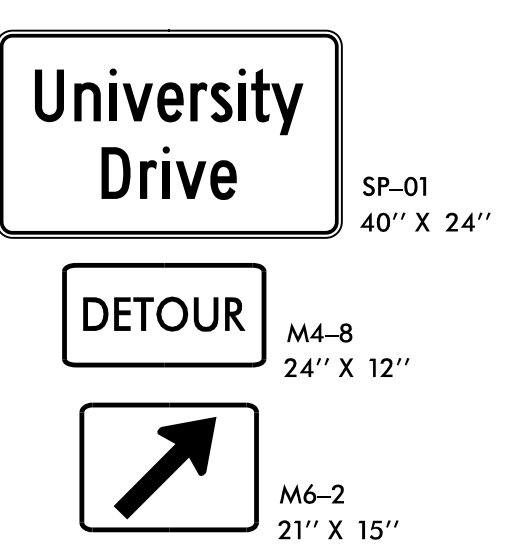
DELINEATE ALL CMS WITH DRUMS



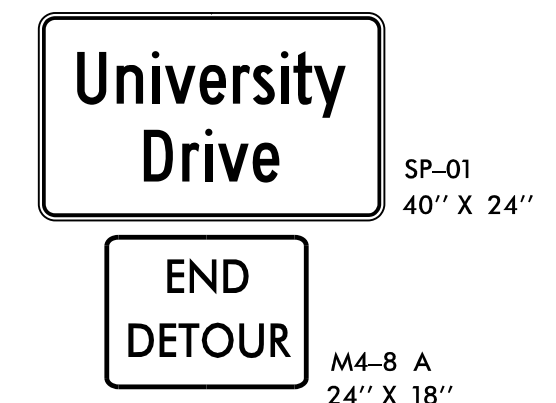
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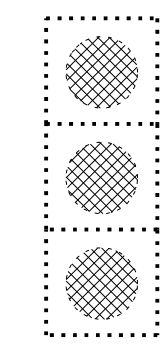
(S)



(T)



(U)



DEACTIVATE / COVER SIGNAL UPON CLOSURE OF INTERSECTION

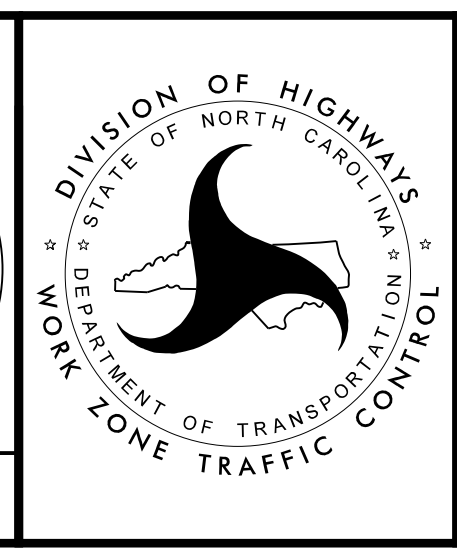
(Y)

SEE TMP-5 FOR SPECIAL SIGN DESIGN

APPROVED: *Michael T. Rzepka*  
 DATE: 12/17/2018

Professional Engineer Seal: Michael T. Rzepka, License No. 15876

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# ROAD CLOSURE SIGNS AND DETOUR SIGNS

9/18/2018 M:\TrafficControl\TMP\U5745\_TMP-TMP-04\_detour-signs.dgn li:02:35 AM



SIGN NUMBER: SP-01      BACKG COLOR: Orange  
TYPE: D      COPY COLOR: Black

QUANTITY: 1

SIGN WIDTH: 3'-6"  
HEIGHT: 2'-0"  
TOTAL AREA: 7.0 Sq.Ft.

BORDER TYPE: FLUSH  
RECESS: 0.38"  
WIDTH: 0.44"  
RADII: 1.5"

NO. Z BARS:      MAT'L: 0.125" (3.2 mm) ALUMINUM  
LENGTH:

SYMBOL	X	Y	WIDTH	HEIGHT

DESIGN BY: CHRIS HARNDEN      CHECKED BY: RON KING  
PROJECT ID: U-5745      DIV: 5      DATE: Aug 18, 2017

BORDER  
R=1.5"  
TH=0.44"  
IN=0.38"

USE NOTES: 1,2

1. Legend and border shall be direct applied non reflective sheeting.
2. Background shall be Grade B reflective sheeting.

Letter spacings are to start of next letter

		Letter spacings are to start of next letter												Series/Size Text Length				
		U	n	i	v	e	r	s	i	t	y							
	5.5	4.6	4.1	1.5	4	3.8	2.3	3.2	1.4	2.3	3.7	5.5						C 2000 31.1
		D	r	i	v	e												
	13.2	4.4	2.6	1.5	4	3.1	13.2											C 2000 15.7

9/18/2018  
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11:02:41 AM

APPROVED: *Michael T. Repka*      018C3480C29049D

DATE: 12/17/2018

**SPECIAL SIGN DESIGN  
UNIVERSITY DRIVE**

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