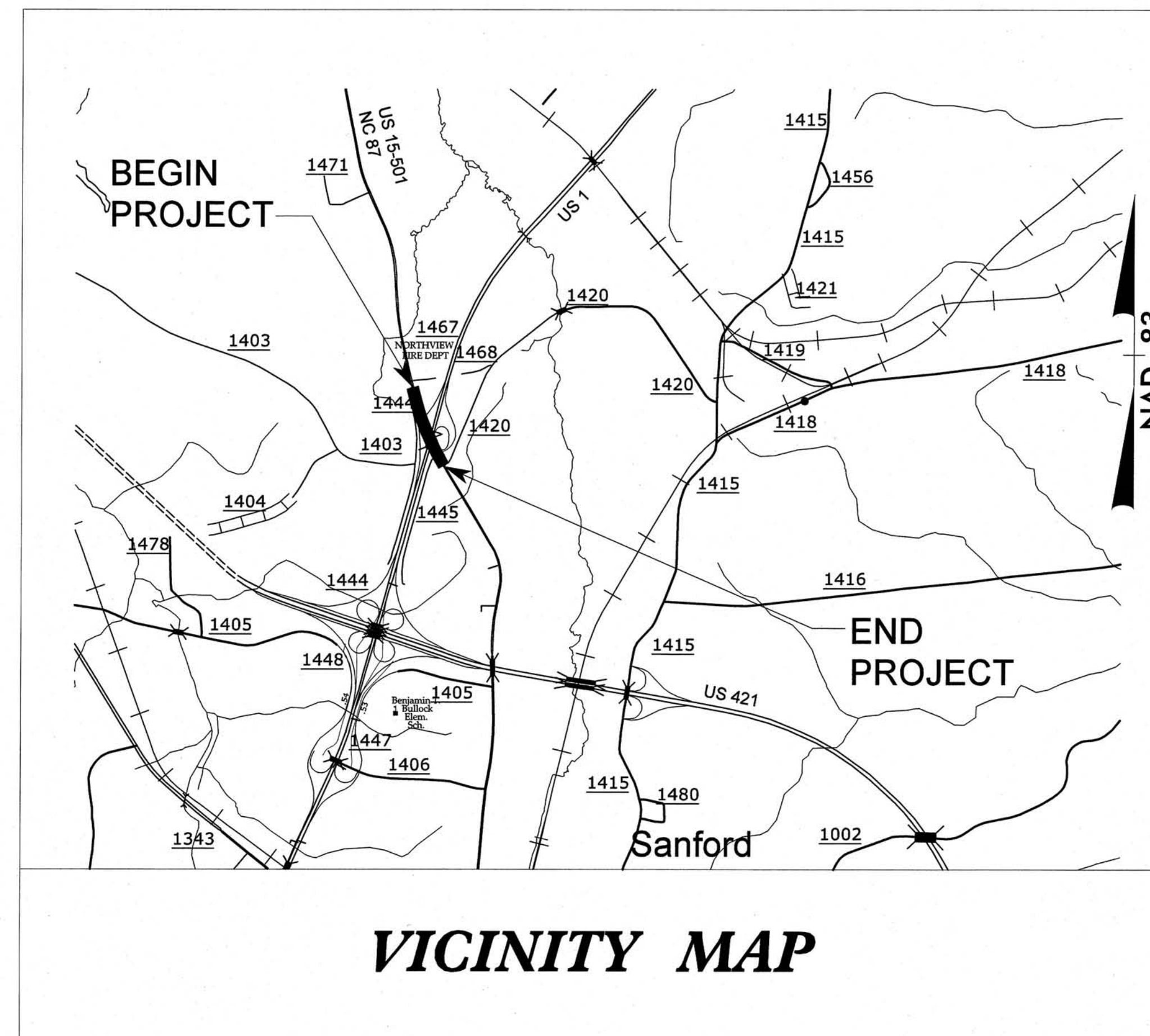
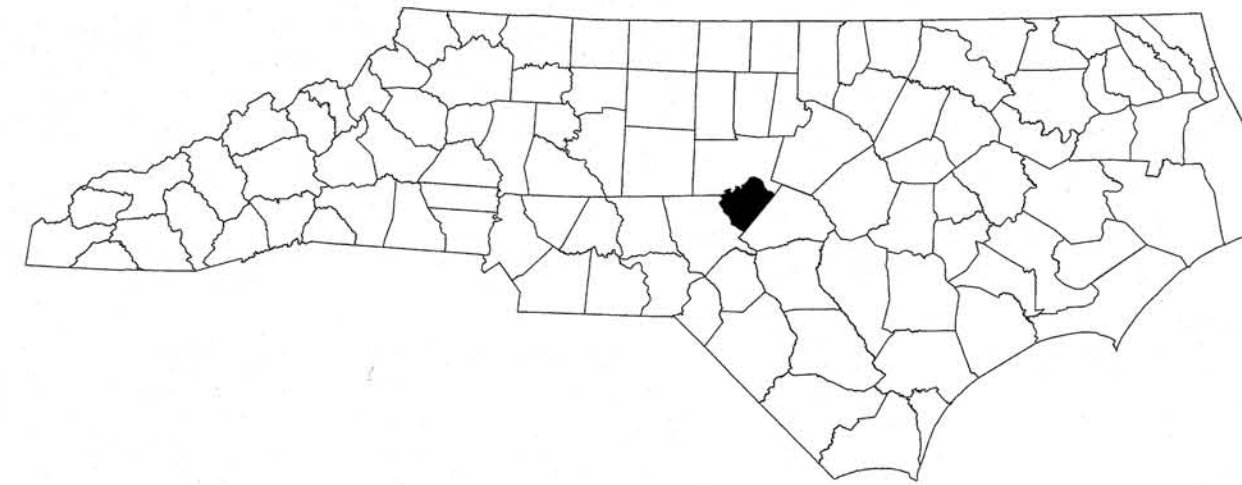


# ***TRANSPORTATION MANAGEMENT PLAN***

---

---

## ***LEE COUNTY***



<u>J. S. BOURNE, P.E.</u>	<i>STATE TRAFFIC MANAGEMENT ENGINEER</i>
<u>J. ISHAK, P.E.</u>	<i>TRAFFIC CONTROL PROJECT ENGINEER</i>
<u>M. STEELMAN</u>	<i>TRAFFIC CONTROL PROJECT DESIGN ENGINEER</i>
<u>A. HAYES, E.I.</u>	<i>TRAFFIC CONTROL DESIGN ENGINEER</i>



<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-2A-2B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4-5	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-6-9	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-10-14	OFF SITE DETOUR DETAILS
TMP-15	SIGN DESIGNS

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

SEAL



MP-1

W-5573

# III PROJECT:

03-MAR-2014 12:05  
0:\Transportation\Traffic\Curr\0003xxx-W5513 TMP\TMP\W5513\_TC\_TMP\_TS.dgn  
THIG5651 AT DUS2904I



03-MAR-2014 15:24  
0:\Transportation\Traffic\Curr\0003xxxx-W5513 TMP\TMP\W5513\_TC\_TMP-TS.dgn  
THIG5651 AT DUS2904I

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 JANAUARY 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
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
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 TYPE-3
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
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 RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
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
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION
1267.01	FLEXIBLE DELINEATORS - INSTALLATION
1267.02	FLEXIBLE DELINEATORS - SPACING TABLES
1267.03	FLEXIBLE DELINEATORS - INTERCHANGE PLACEMENT

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
	ONGOING CONSTRUCTION

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

SIGNALS

	EXISTING
	PROPOSED
	TEMPORARY

PAVEMENT MARKINGS

	EXISTING LINES
	TEMPORARY LINES

PAVEMENT MARKERS

	CRYSTAL/CRYSTAL
	CRYSTAL/RED
	YELLOW/YELLOW

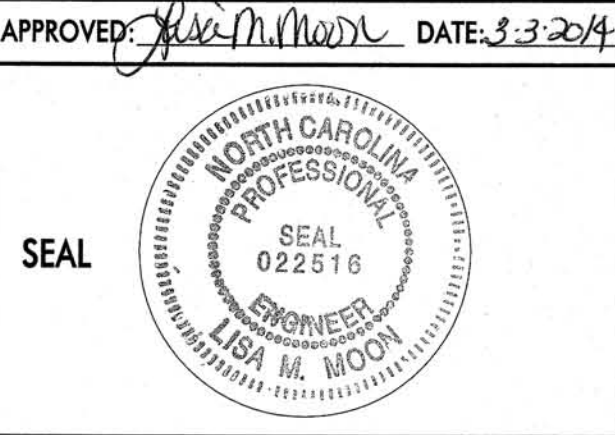
PAVEMENT MARKING SYMBOLS

	PAVEMENT MARKING SYMBOLS
--	--------------------------

TEMPORARY PAVEMENT MARKING

	YELLOW EDGELINE	COLD APPLIED PLASTIC (4")	LF
	WHITE EDGELINE	TYPE 4 - REMOVABLE TAPE	
	WHITE EDGE LINE	COLD APPLIED PLASTIC (6")	LF
	YELLOW EDGE LINE	TYPE 4 - REMOVABLE TAPE	
	YELLOW DOUBLE CENTER LINE	PAINT (4")	LF
	YELLOW DIAGONAL	PAINT (4")	LF
		PAINT (8")	LF

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEEES #F-0326



LIST OF APPLICABLE  
ROADWAY STANDARD  
DRAWINGS, LEGEND AND  
TEMPORARY PAVEMENT  
MARKING



MANAGEMENT STRATEGIES

HAWKINS AVE. PROJECT CONSTRUCTION SUMMARY:

THE HAWKINS AVE. PROJECT (W-5513) INVOLVES CONSTRUCTION OF 2 PROPOSED ROUNDABOUTS; REDUCING THE ROAD TO ONE THRU LANE IN EACH DIRECTION BETWEEN THE TWO ROUNDABOUTS.

HAWKINS AVE. (-L-) WILL BE CONSTRUCTED MAINLY AWAY FROM TRAFFIC UTILIZING OFF-SITE DETOURS FOR THRU TRAFFIC AND TEMPORARY PAVEMENT FOR RIGHT TURNING US 1 RAMP TRAFFIC, BUT WILL ALSO EMPLOY A COMBINATION OF LANE CLOSURES AND RESURFACING UNDER TRAFFIC ALONG HAWKINS AVE. (-L-) AND AT THE INTERCHANGE RAMPS WITH US 1.

CONTRACTOR TO COORDINATE WITH THE R-2417AA PROJECT AND ANY OTHER PROJECT IN THE AREA.

CONTRACTOR TO COORDINATE WITH EMERGENCY SERVICES FOR ACCESS THROUGH THE WORK ZONE.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 1	MONDAY THROUGH FRIDAY FROM 6:00 A.M. TO 8:30 A.M. AND FROM 4:00 P.M. TO 7:00 P.M.
HAWKINS AVENUE, -Y3- & -Y5A-	MONDAY THROUGH FRIDAY FROM 7:00 A.M. TO 9:00 A.M.

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

ROAD NAME
US 1

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 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY,SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 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 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.

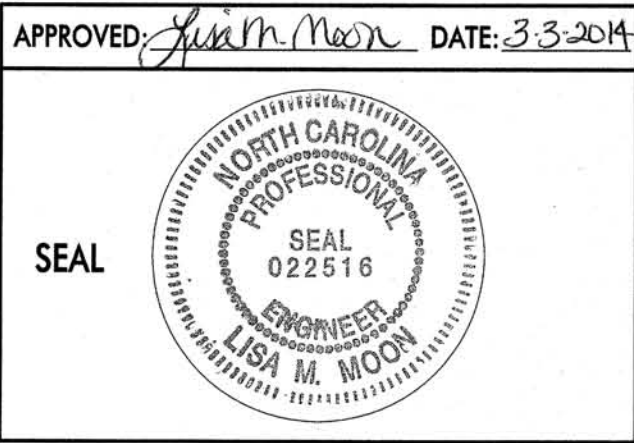
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY AND 7:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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.
- 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.

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 TRANSPORTATION MANAGEMENT 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 TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) DO NOT INSTALL MORE THAN 1/2 MILE OF LANE CLOSURE ON HAWKINS AVE. MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON HAWKINS AVE.
- J) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.



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



GENERAL NOTES CONTINUED

PROJ. REFERENCE NO.	SHEET NO.
W-5513	TMP-2B

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 45 MPH 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) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- M) NOTIFY THE ENGINEER TWENTY ONE (21) 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 TRANSPORTATION MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRANSPORTATION MANAGEMENT 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) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

- S) USE BLACK-ON-ORANGE M5-1, M6-1, M6-2, AND M6-3 ARROWS WITH M4-8 DETOUR SIGNS.

TRAFFIC CONTROL DEVICES

- T) 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.

- U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- V) 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

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

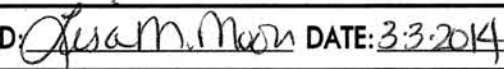
ROAD NAME	MARKING	MARKER
-L-, -Y3-, -Y4- -Y5A-, & -Y8-	PAINT	NONE
US 1	COLD APPLIED PLASTIC TYPE 4 - REMOVABLE TAPE	NONE

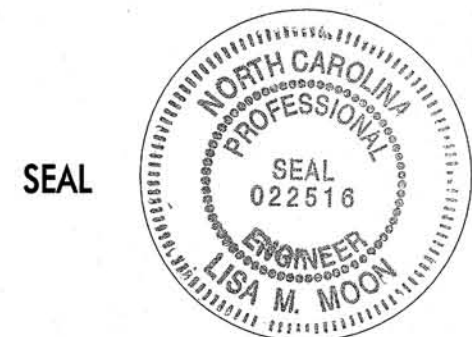
- X) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS OR AS DIRECTED BY THE ENGINEER.
- Y) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Z) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- AA) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS/SKINNY DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.


LOCAL NOTES

- LN-1 REMOVE PAVEMENT MARKINGS FROM ROADWAY SURFACE BY HIGH-PRESSURE WATER BLASTING WHEN ROADWAY SURFACE WILL NOT BE RESURFACED AND AS APPROVED BY THE ENGINEER.

03-MAR-2014 16:00  
Q:\Transportation\Traffic\Cur\0003xxxx-W5513 TMP\TMP\W5513\_TC\_TMP\_Notes.dgn  
THG5651 AT DUS23041

APPROVED:  DATE: 3/3/2014





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



PHASING

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING DRIVEWAYS AS DIRECTED BY THE ENGINEER.

PHASE I

- STEP 1 - INSTALL WORK ZONE ADVANCE WARNING SIGNS. SEE RSD 1101.01.
- STEP 2 - WHILE MAINTAINING TRAFFIC IN EXISTING TRAFFIC PATTERN, USING RSD 1101.02, SHEETS 1 AND 3 OF 15, CONSTRUCT THE FOLLOWING UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT. (SEE TMP-04 THROUGH TMP-05):
- PROPOSED TEMPORARY PAVEMENT FROM -L- STA 22+09+/- TO -Y3- STA 15+57+/-
  - PROPOSED TEMPORARY PAVEMENT FROM -Y5A- STA 11+12+/- TO -L- STA 34+42+/-
  - INSTALL WATER LINE ALONG SB RAMP BETWEEN BEECHTREE DRIVE AND BORE PIT. (TMP-04)

5 DAYS PRIOR TO BEGINNING PHASE I, STEP 3, INSTALL AND ACTIVATE CHANGEABLE MESSAGE SIGN (CMS) 4 AND 5 AT POSITION 1 ON HAWKINS AVENUE AS SHOWN ON TMP-12A AND TMP-13 TO ADVISE MOTORISTS OF UPCOMING 60-DAY CLOSURE AND DETOUR OF HAWKINS AVENUE THROUGH TRAFFIC AT THE US-1 OVERPASS.

THE CONTRACTOR SHALL COMPLETE PHASE I, STEP 3 THROUGH PHASE II, STEP 5 WITHIN A 60 DAY PERIOD. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

- STEP 3
- USING THE DETAILS SHOWN ON TMP-06, TMP-07 & TMP-13, CLOSE -L- (HAWKINS AVENUE) BETWEEN STA 21+00 +/- AND STA 36+00 +/-, AND DETOUR TRAFFIC OFF-SITE.
  - INSTALL TEMPORARY PAVEMENT MARKINGS AND SHIFT SOUTHBOUND OFF-RAMP AND NORTHBOUND ON-RAMP TRAFFIC TO TEMPORARY PAVEMENT AS SHOWN ON TMP-06 AND TMP-07.
  - USING RSD 1101.02, SHEETS 8, 9 & 10 OF 15, TEMPORARILY CLOSE THE RIGHT TWO LANES ON US 1 NORTHBOUND TO INSTALL TEMPORARY MARKINGS, SIGNS & DEVICE TO CLOSE THE US 1 NORTHBOUND OFF-RAMP TO HAWKINS AVENUE AS SHOWN ON TMP-10.
  - DETOUR TRAFFIC ALONG ROUTES AS SHOWN ON TMP-13.
  - USING THE DETAILS SHOWN ON TMP-07, CLOSE -Y7- (CHARLESTON DRIVE) BETWEEN STA 10+00 +/- AND THE FOOD LION DRIVEWAY.

PHASE II

- STEP 1 -INSTALL WATER LINE ACROSS SOUTHBOUND ON RAMP IN THE FOLLOWING MANNER (SEE TMP-06 FOR DETAILS):
- INSTALL PORTABLE CONCRETE BARRIER
  - JACK AND BORE WATER LINE
  - BACKFILL BORE PIT AND RECEIVING PIT AS NECESSARY
  - REMOVE PORTABLE CONCRETE BARRIER (REPLACE WITH DRUMS ON 20' CENTER)
  - INSTALL TEMPORARY MARKINGS ON -Y4- AS SHOWN ON TMP-06
  - AWAY FROM TRAFFIC COMPLETE CONSTRUCTION AS MUCH AS POSSIBLE INCLUDING MONOLITHIC CONCRETE ISLANDS, CURB AND GUTTER, AND UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE OF -L- (HAWKINS AVENUE) FROM -L- STA 16+90 TO STA 35+88 AND -Y7- (CHARLESTON DRIVE) FROM -Y7- STA 10+00 TO STA 14+21 AS SHOWN ON TMP-06 THROUGH TMP-07. AS MUCH AS POSSIBLE, INSTALL FINAL PAVEMENT MARKINGS (SEE PAVEMENT MARKING PLANS FOR FINAL PAVEMENT MARKING INFORMATION) AND PERMANENT SIGNING (COORDINATE WITH DIVISION TRAFFIC ENGINEER FOR NECESSARY SIGNING).
  - COMPLETE WATER LINE CONSTRUCTION.

THE CONTRACTOR SHALL COMPLETE PHASE II, STEP 2-4 WITHIN A 7 DAY PERIOD. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]. THE CONTRACTOR MAY PERFORM THE WORK FOR PHASE II, STEPS 2-4 CONCURRENTLY WITH ANY OTHER WORK IN PHASE II.

5 DAYS PRIOR TO BEGINNING PHASE II, STEP 2, INSTALL AND ACTIVATE CHANGEABLE MESSAGE SIGN (CMS) 6 AND 7 ON US 1 SOUTHBOUND AS SHOWN ON TMP-12A AND TMP-14 TO ADVISE MOTORISTS OF UPCOMING 7-DAY CLOSURE AND DETOUR OF SOUTHBOUND OFF RAMP (-Y3-) AT EXIT 71.

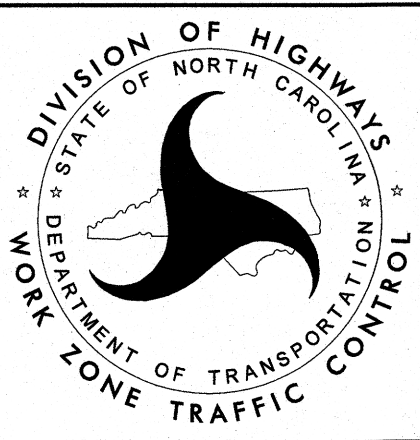
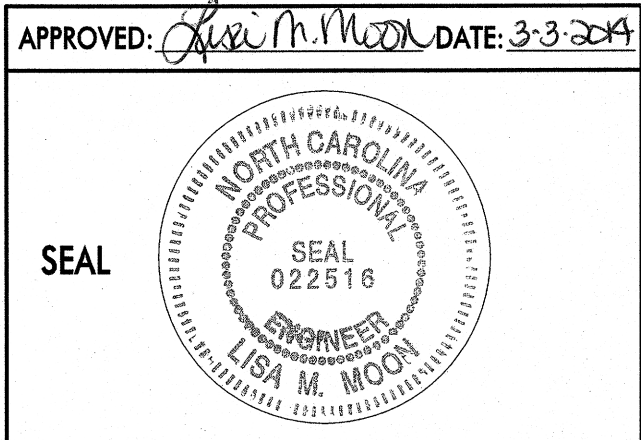
- STEP 2 - AWAY FROM TRAFFIC AND USING RSD 1101.04, SHEET 1 OF 1 AS NEEDED, COMPLETE THE FOLLOWING:
- CLOSE SOUTHBOUND OFF RAMP (-Y3-) AT EXIT 71 AND DETOUR TRAFFIC AS SHOWN ON TMP-14. CLOSE ACCESS TO SOUTHBOUND OFF-RAMP (-Y3-) USING DRUMS SPACED AT 10 FEET AND BARRICADE. SEE TMP-14 FOR NOTES ON DEVICES AND EXISTING SIGNS TO BE COVERED.
  - CLOSE NORTHBOUND ON-RAMP (-Y5A) AND DETOUR TRAFFIC AS SHOWN ON TMP-09 AND TMP-14.

- STEP 3 - COMPLETE CONSTRUCTION INCLUDING MONOLITHIC CONCRETE ISLANDS, CURB AND GUTTER, AND UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-08 THROUGH TMP-09. COMPLETE INSTALLATION OF FINAL PAVEMENT MARKINGS (SEE PAVEMENT MARKING PLANS FOR FINAL PAVEMENT MARKING INFORMATION).
- TO INSTALL FINAL SURFACE COURSE AND FINAL PAVEMENT MARKINGS ON -Y4-, SHIFT -Y4- TRAFFIC INTO LEFT LANE AND DIRECT TRAFFIC THROUGH ROUNDABOUT TO SOUTHBOUND ON-RAMP. USE BARRICADES AND DRUMS TO CHANNELIZE VEHICLES TO SOUTHBOUND RAMP.
- STEP 4 - AWAY FROM TRAFFIC AND USING RSD 1101.04, SHEET 1 OF 1 AS NEEDED, COMPLETE THE FOLLOWING:
- REMOVE ALL DETOUR SIGNING AND CMS'S NEEDED TO RE-OPEN THE SOUTHBOUND OFF-RAMP AND NORTHBOUND ON-RAMP THAT WERE CLOSED IN PHASE II, STEP 2.
  - REMOVE ALL DEVICES USED TO CLOSE SOUTHBOUND OFF-RAMP AND NORTHBOUND ON-RAMP AND REPLACE DEVICES NEEDED TO RE-OPEN RAMPS AS SHOWN ON SHEETS TMP-06 THROUGH TMP-07.
  - RE-OPEN RAMPS (-Y3-) AND (-Y5A-). USE DRUMS AT -L- RAMP INTERSECTIONS TO DELINEATE DESIRED TRAFFIC PATTERN AS DIRECTED BY THE ENGINEER.
- STEP 5 - AWAY FROM TRAFFIC AND USING RSD 1101.04, SHEET 1 OF 1, AND RSD 1101.02, SHEETS 1, 3, 8, 9 & 10 OF 15 AS NEEDED, COMPLETE THE FOLLOWING:
- COMPLETE WORK TO SHIFT TRAFFIC TO FINAL PATTERN INCLUDING:
    - REMOVE ALL DETOUR SIGNING
    - REMOVE TEMPORARY MARKINGS ON US 1 NORTHBOUND
    - INSTALL TEMPORARY MARKINGS FOR ISLAND ON -Y8- AS SHOWN ON TMP-09, INSET 1
    - INSTALL PERMANENT SIGNING (COORDINATE WITH DIVISION TRAFFIC ENGINEER FOR NECESSARY SIGNING)
    - REMOVE ALL DEVICES USED TO DETOUR TRAFFIC
    - OPEN ALL LANES TO PROPOSED TRAFFIC PATTERN
  - AFTER TRAFFIC IS IN FINAL PATTERN COMPLETE CONSTRUCTION OF MONOLITHIC CONCRETE ISLAND AT INTERSECTION OF -Y8- AND -L- AS SHOWN ON SHEET TMP-09, INSET 2.

06-MAR-2014 15:27  
06-TransportationTraffic\Curr\0003xxxx-W5513 TMP\TMP-W-5513-IC-Phasing.dgn  
THG5651 AT DUS23014

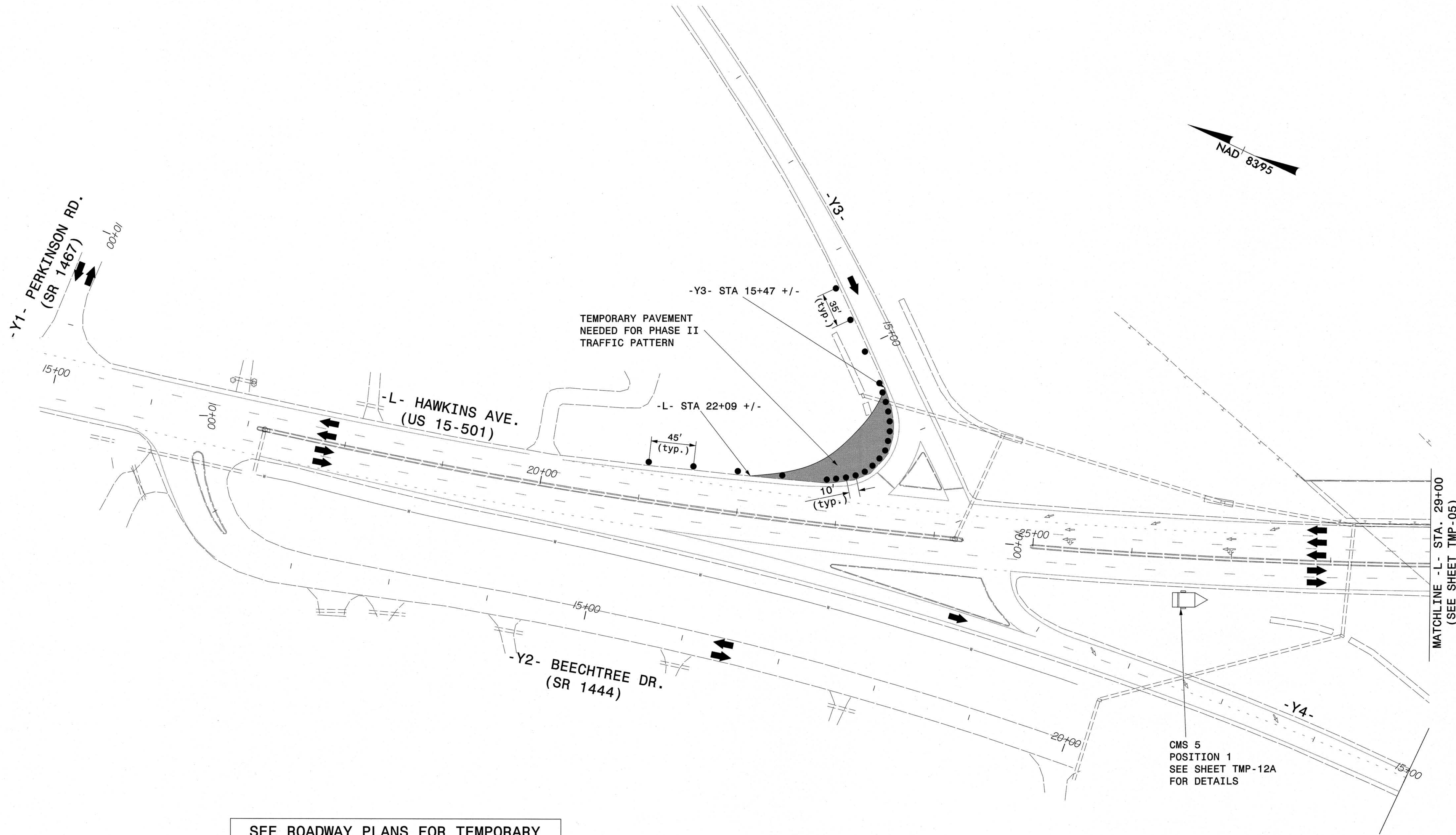
ATKINS

1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326



TEMPORARY TRAFFIC  
CONTROL PHASING



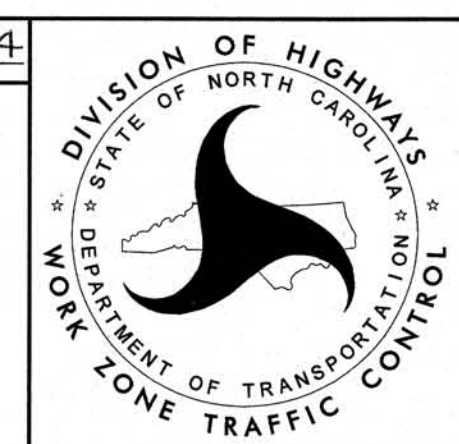


SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT INFORMATION

03-MAR-2014 14:52  
 O:\Transportation\Traffic\Cur\0003xxxx-W5513 TMP\TMP-W-5513.TC.TMP-4.dgn  
 THG5651 AT DUS2904

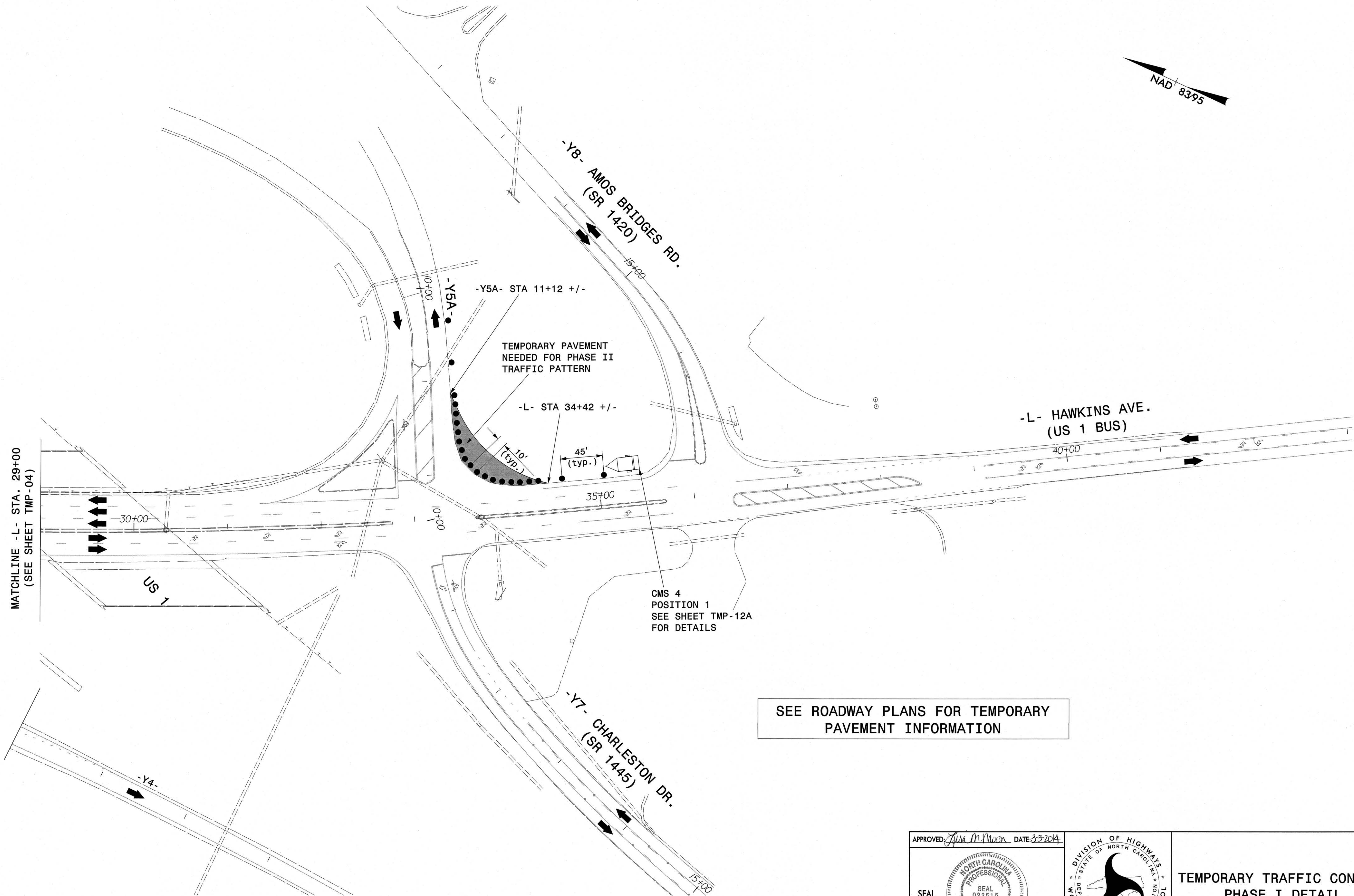
**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

APPROVED: *Lisa M. Moon* DATE: 3-3-2014  
 SEAL



TEMPORARY TRAFFIC CONTROL  
 PHASE I DETAIL



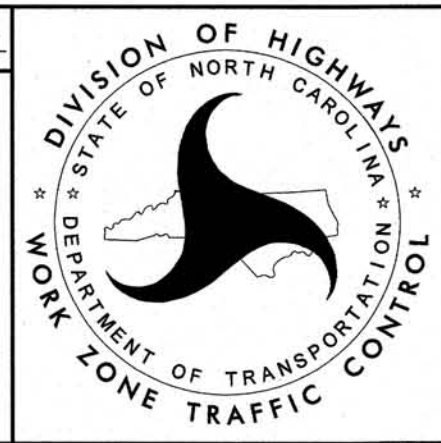


03-MAR-2014 12:05  
O:\Transportation\Traffic\Cur\10003xxxx-W5513 TMP\TMP-W-5513\_TC\_TMP\_5.dgn  
TH05651 AT DUS2904

**ATKINS**

1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED: <i>Lisa M. Moon</i> DATE: 3/3/2014
SEAL 



<b>TEMPORARY TRAFFIC CONTROL PHASE I DETAIL</b>
---





TEMPORARILY CLOSE -L- (HAWKINS AVE.)  
TO THRU TRAFFIC AND DETOUR TRAFFIC AS  
SHOWN ON SHEET TMP-13. SEE RSD 1101.03  
FOR NOTES ON CLOSURE. ROAD CLOSURE WILL  
BE FOR DURATION OF PHASE II (60 DAYS).  
SEE INTERMEDIATE CONTRACT TIME.

**B2**

**DETOUR** M4-8 24" X 12"

**NORTH** M3-1 24" X 12"

**1** M1-4 24" X 24"

**BUSINESS** M4-3 24" X 12"

**1** M1-4 24" X 24"

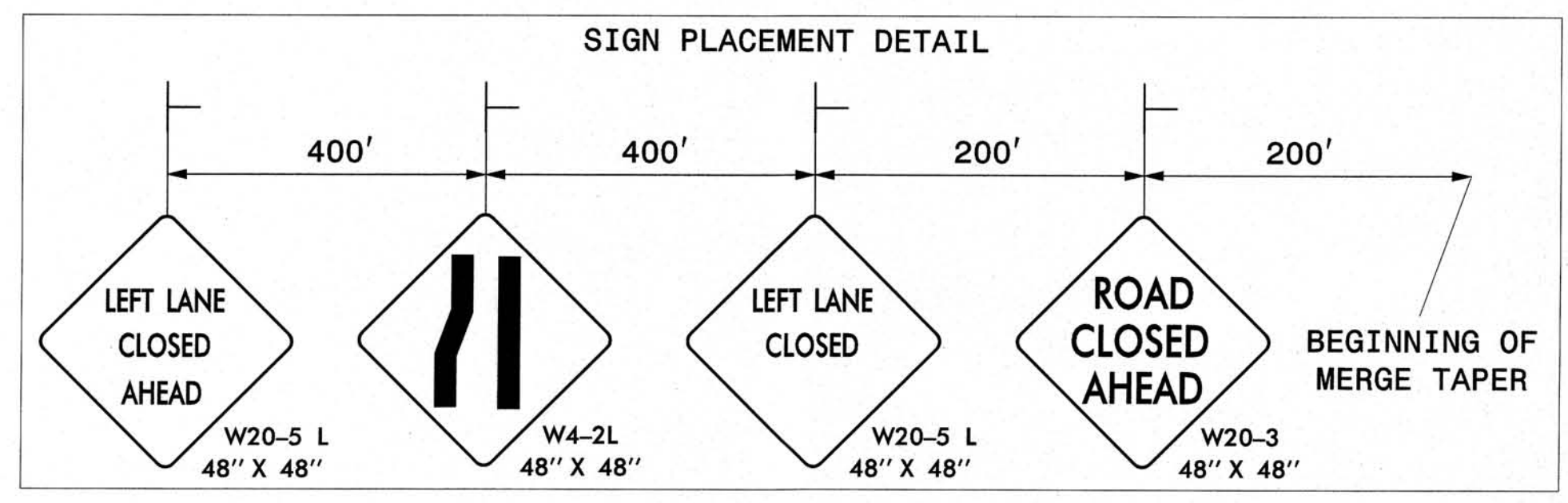
**↑** M6-2 21" X 15"

R11-2 48" X 30"

**ROAD CLOSED**

**DETOUR**

**TYPE III BARRICADE**

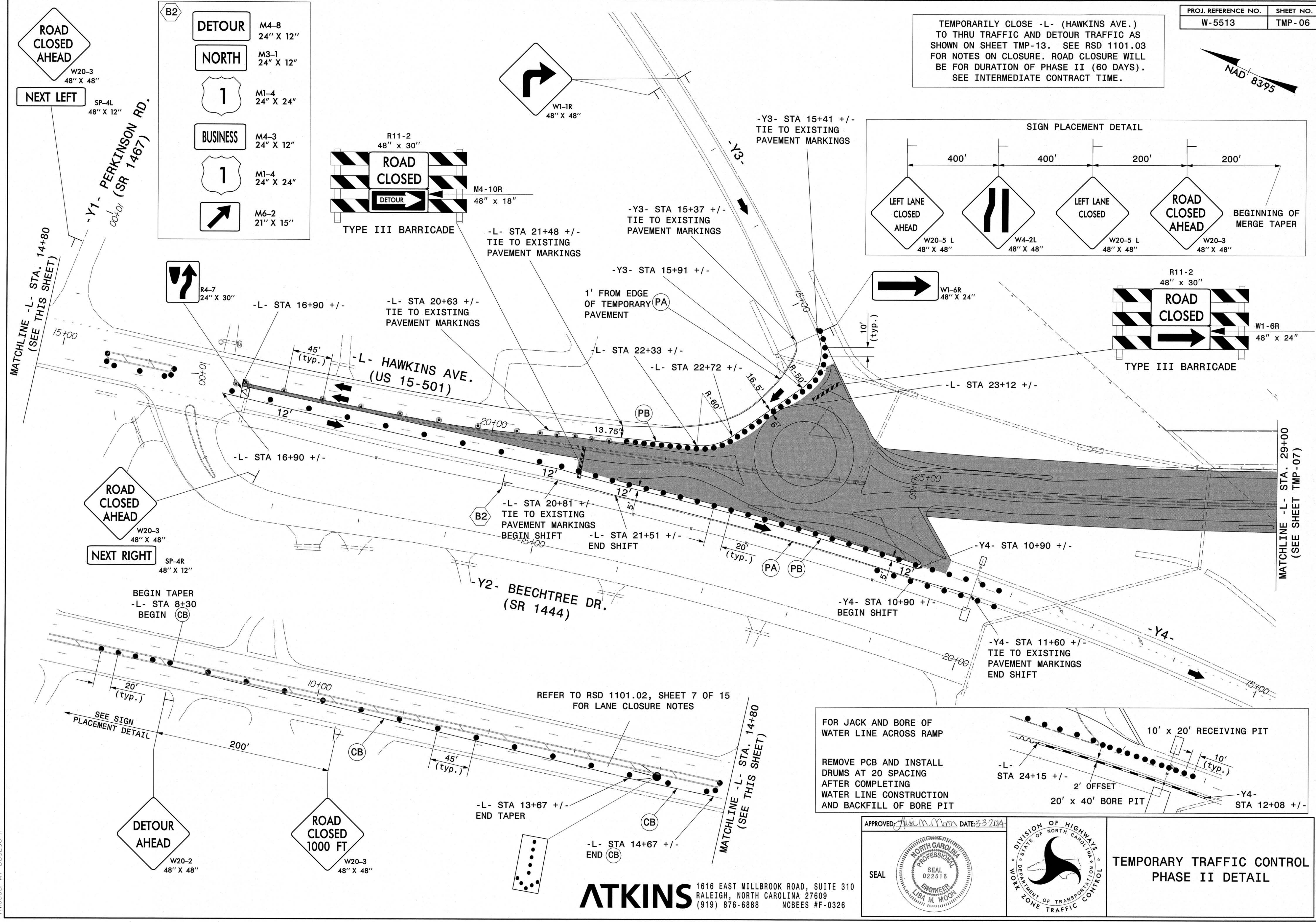


R11-2 48" X 30"

**ROAD CLOSED**

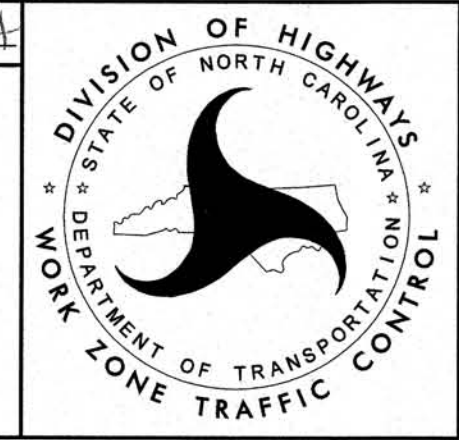
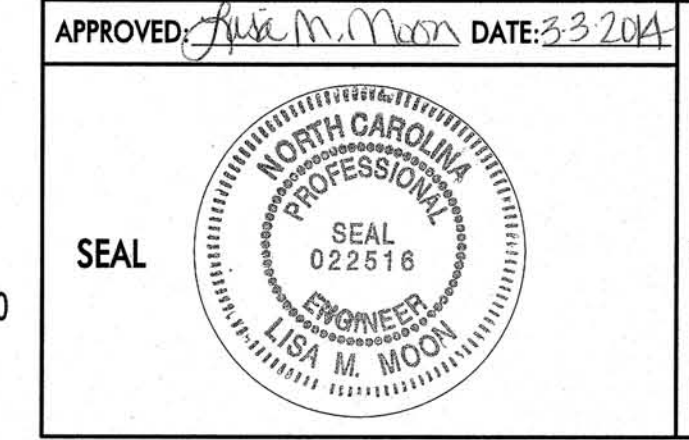
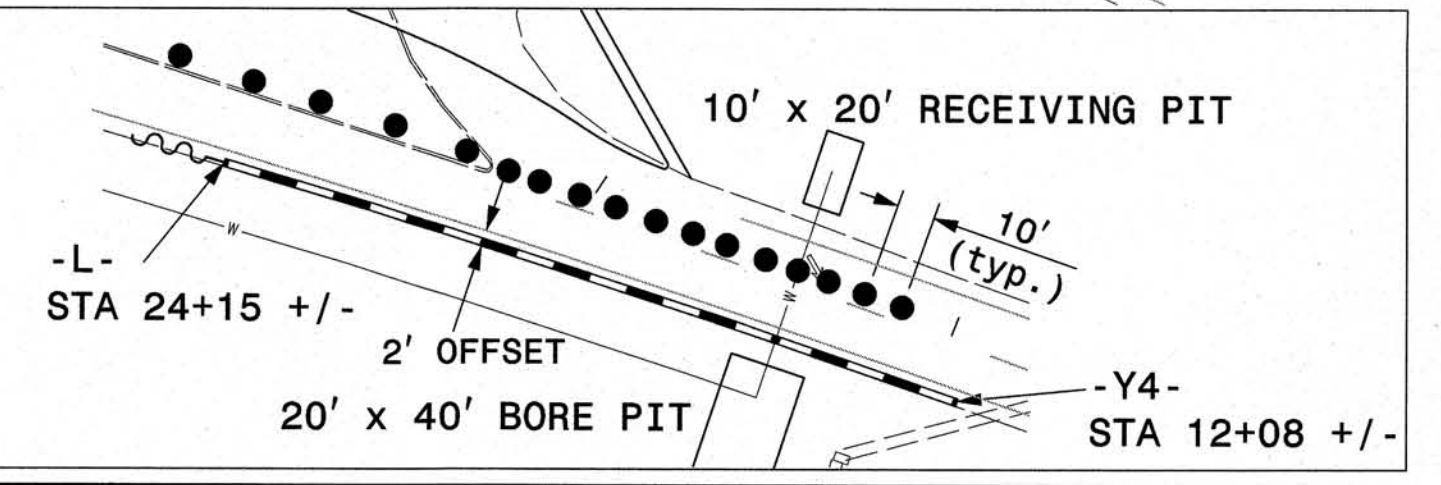
**TYPE III BARRICADE**

W1-6R 48" X 24"



FOR JACK AND BORE OF  
WATER LINE ACROSS RAMP

REMOVE PCB AND INSTALL  
DRUMS AT 20' SPACING  
AFTER COMPLETING  
WATER LINE CONSTRUCTION  
AND BACKFILL OF BORE PIT



**TEMPORARY TRAFFIC CONTROL  
PHASE II DETAIL**

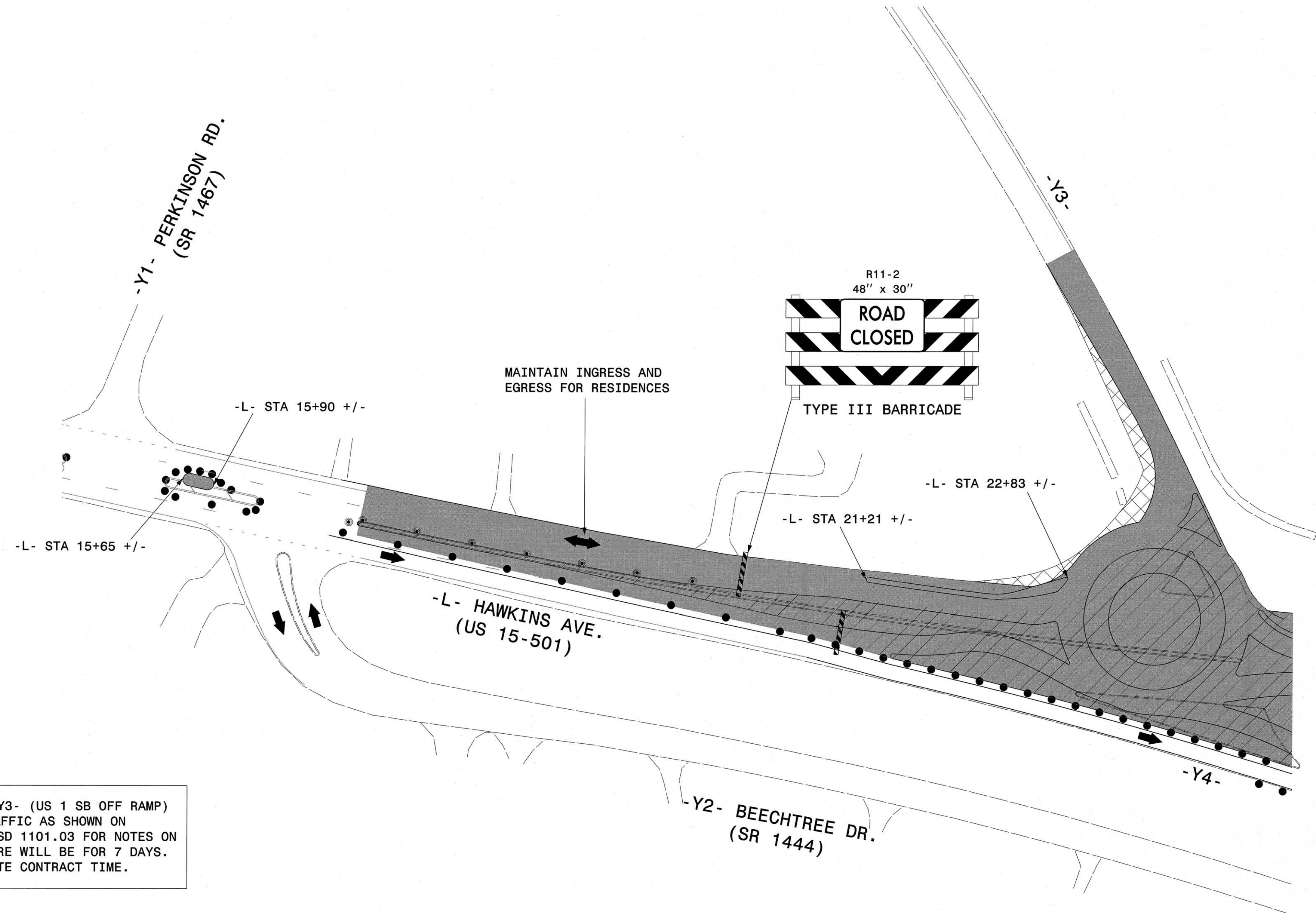
**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

04-MAR-2014 14:10  
9:\Transportation\Traffic\Cur\0003xxxxx-W5513 TMP\TMP-W-5513.TC.TMP\_6.dgn  
THG5651 AT DUS29041



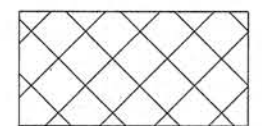






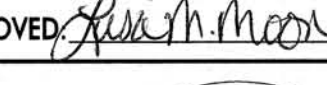
TEMPORARILY CLOSE -Y3- (US 1 SB OFF RAMP)  
AND DETOUR TRAFFIC AS SHOWN ON  
SHEET TMP-14. SEE RSD 1101.03 FOR NOTES ON  
CLOSURE. ROAD CLOSURE WILL BE FOR 7 DAYS.  
SEE INTERMEDIATE CONTRACT TIME.


REFER TO SHEET TMP-06 FOR  
PREVIOUSLY INSTALLED SIGNING

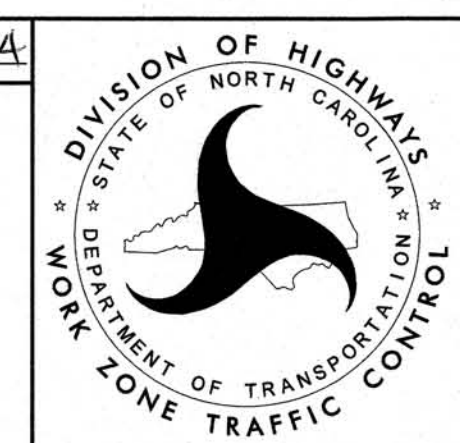
 EXISTING PAVEMENT  
TO BE REMOVED

03-MAR-2014 16:13  
O:\Transportation\Traffic\Cur\10003xxxx-W5513 TMP\TMP W-5513 TC TMP-8A.dgn  
THG5651 AT DUS29014

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBES #F-0326

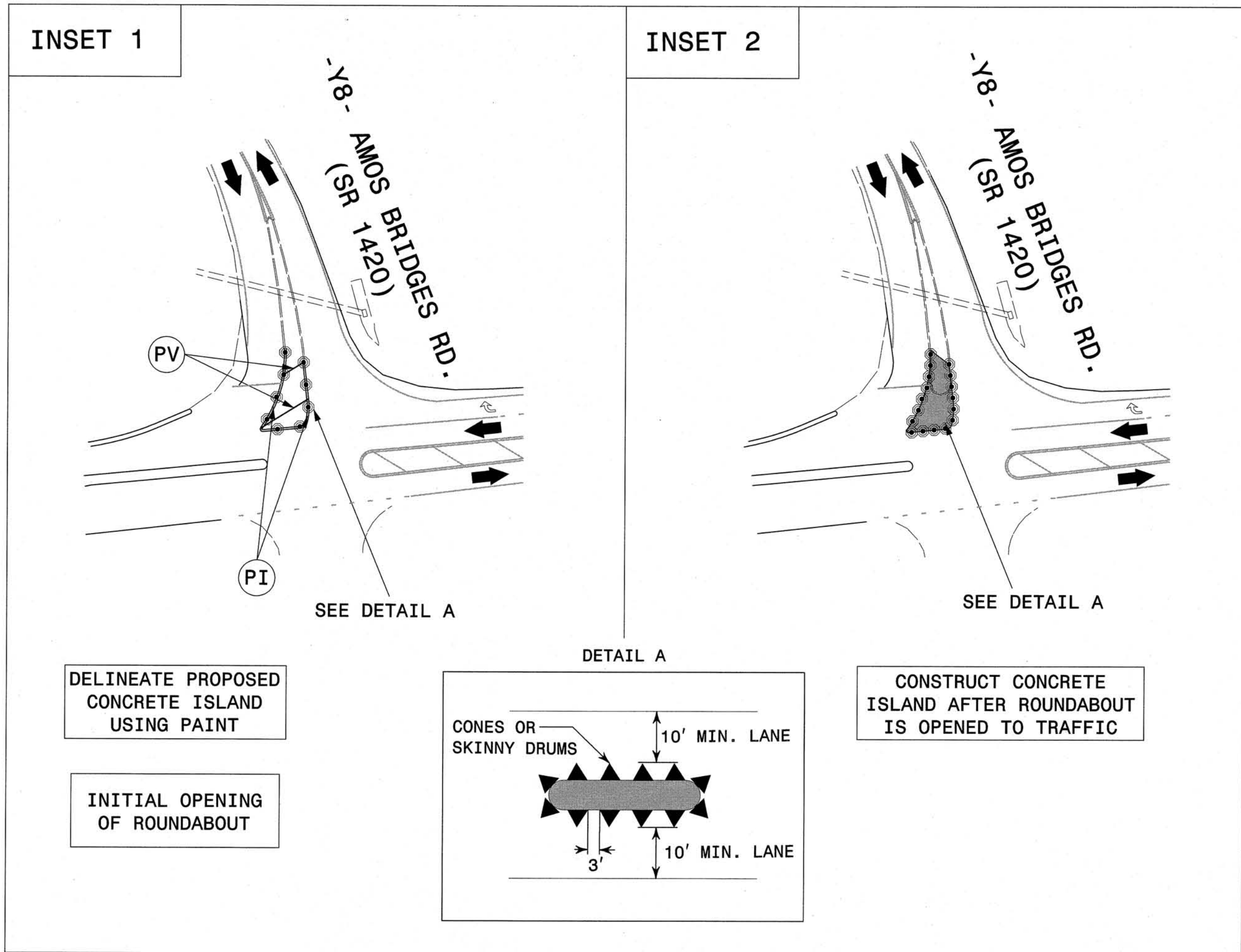
APPROVED  DATE: 3-3-2014

SEAL 

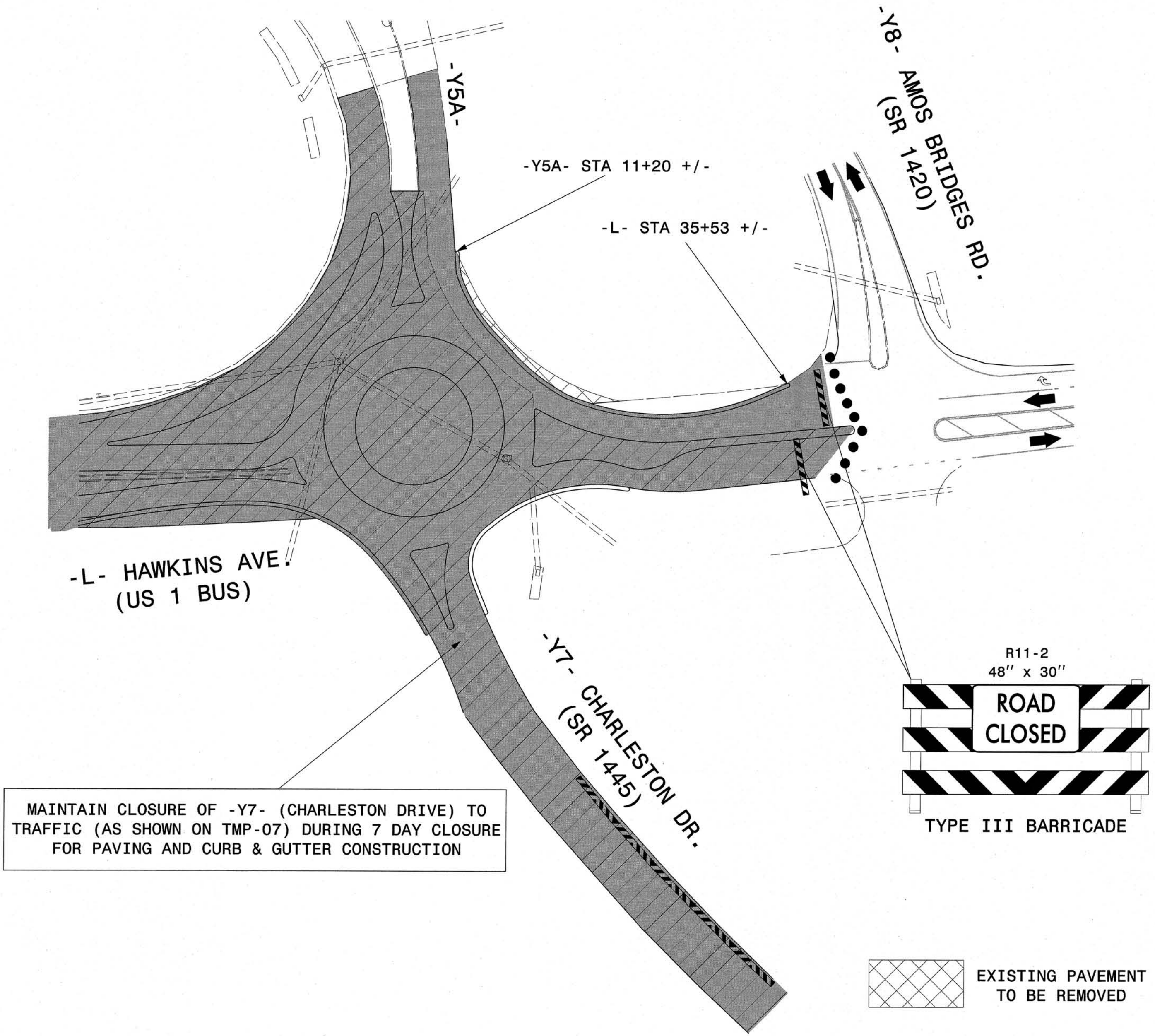


**TEMPORARY TRAFFIC CONTROL  
PHASE II DETAIL**





TEMPORARILY CLOSE -Y5A- (US 1 NB ON-RAMP) AND DETOUR TRAFFIC AS SHOWN ON SHEET TMP-14. SEE RSD 1101.03 FOR NOTES ON CLOSURE. ROAD CLOSURE WILL BE FOR 7 DAYS. SEE INTERMEDIATE CONTRACT TIME.



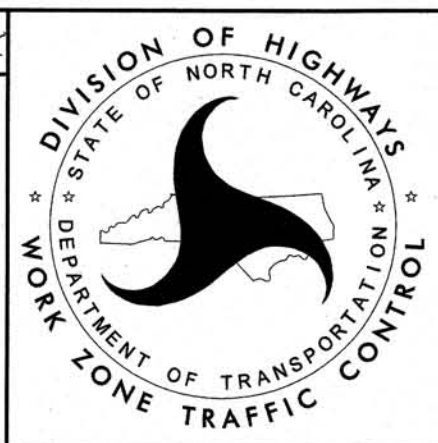
03-MAR-2014 16:13  
9:\Transportation\Traffic\Curr\0003xxxx-W5513 TMP\TMP-W-5513\_TC\_TMP\_7A.dgn  
THG5651 AT DUS29041

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED: *Lisa M. Moon* DATE: 3-3-2014

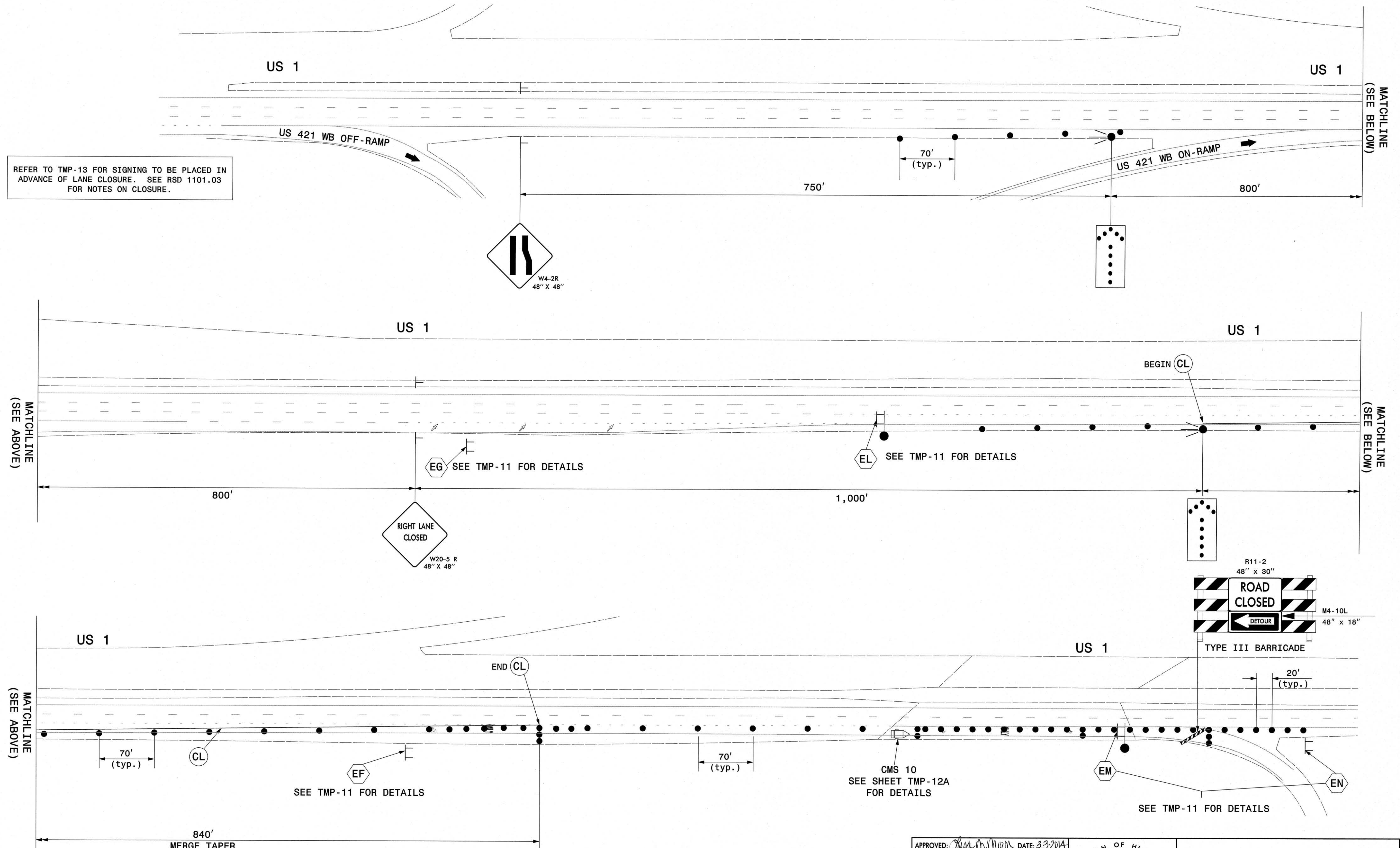
SEAL

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
022516  
ENGINEER  
LISA M. MOON

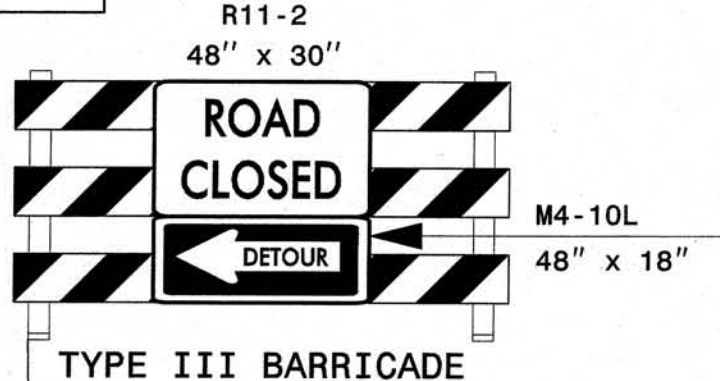


TEMPORARY TRAFFIC CONTROL  
PHASE II DETAIL

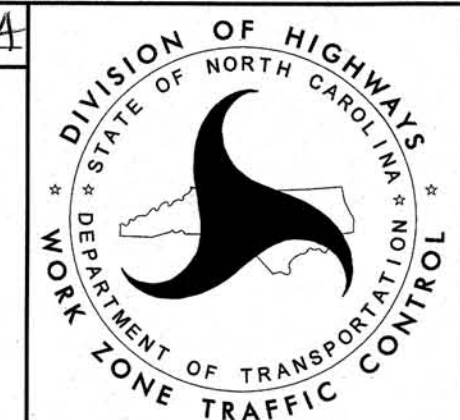
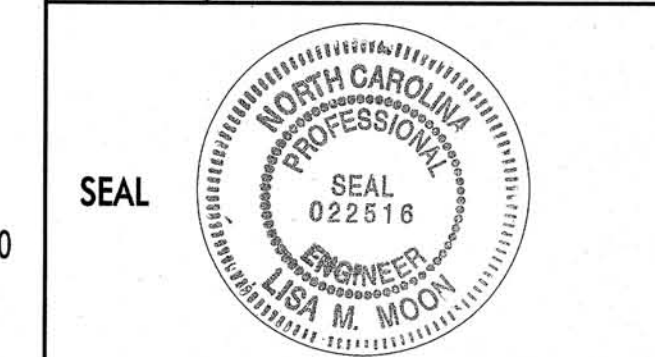




REFER TO TMP-13 FOR SIGNING TO BE PLACED IN ADVANCE OF LANE CLOSURE. SEE RSD 1101.03 FOR NOTES ON CLOSURE.



APPROVED: *[Signature]* DATE: 3/3/2014

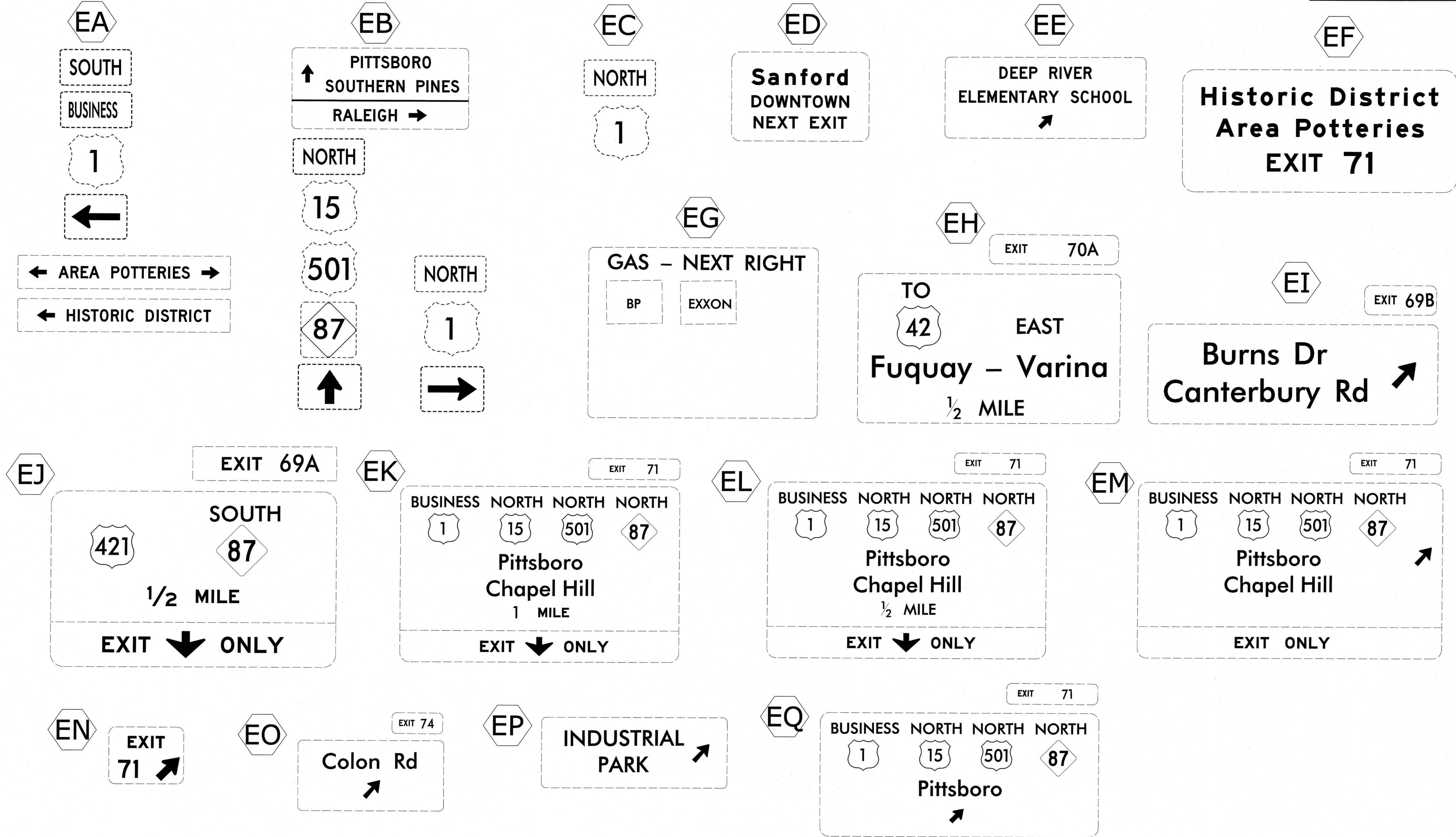


OFF SITE DETOUR DETAILS

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

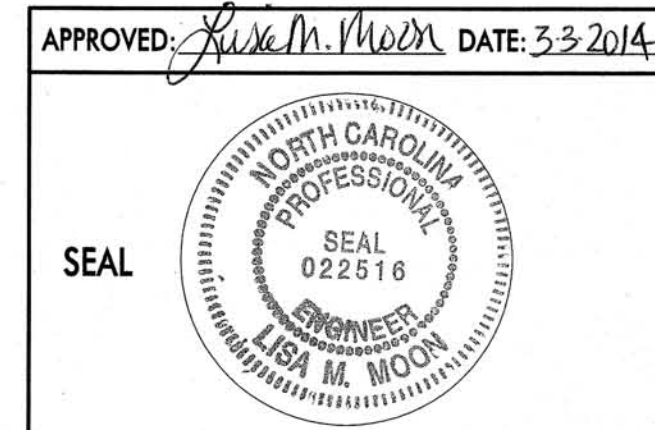
03-MAR-2014 16:31  
D:\Transportation\Traffic\Cur\0003xxxx-W5513 TMP\TMP\W5513-US1-LOOP CLOSURE-DETAIL.dgn  
THG5651 AT DUS2904





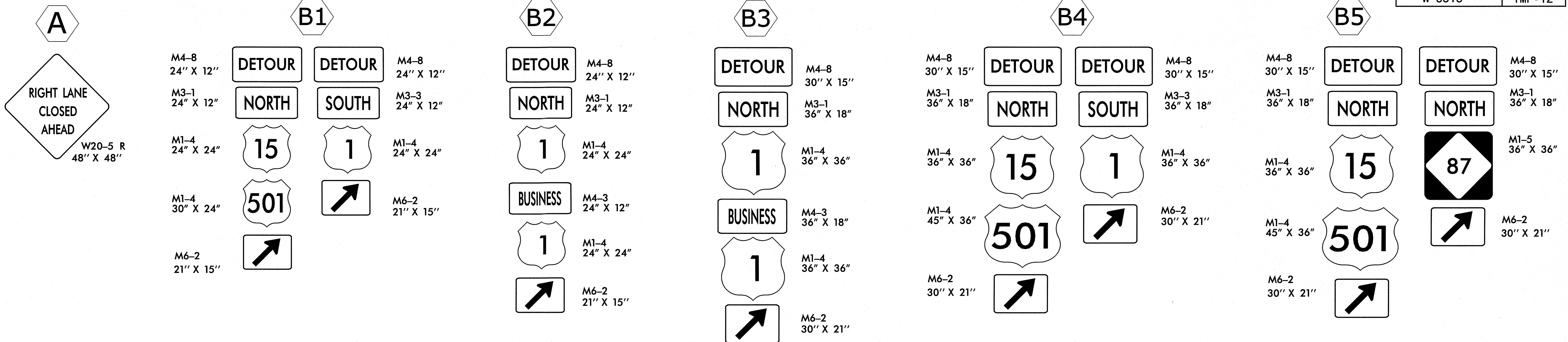
EXISTING SIGNS SHOWN FOR REFERENCE ONLY.  
NO WORK TO BE DONE ON EXISTING SIGNS SHOWN  
DUE TO DETOURS FOR TRAFFIC CONTROL PURPOSES.

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

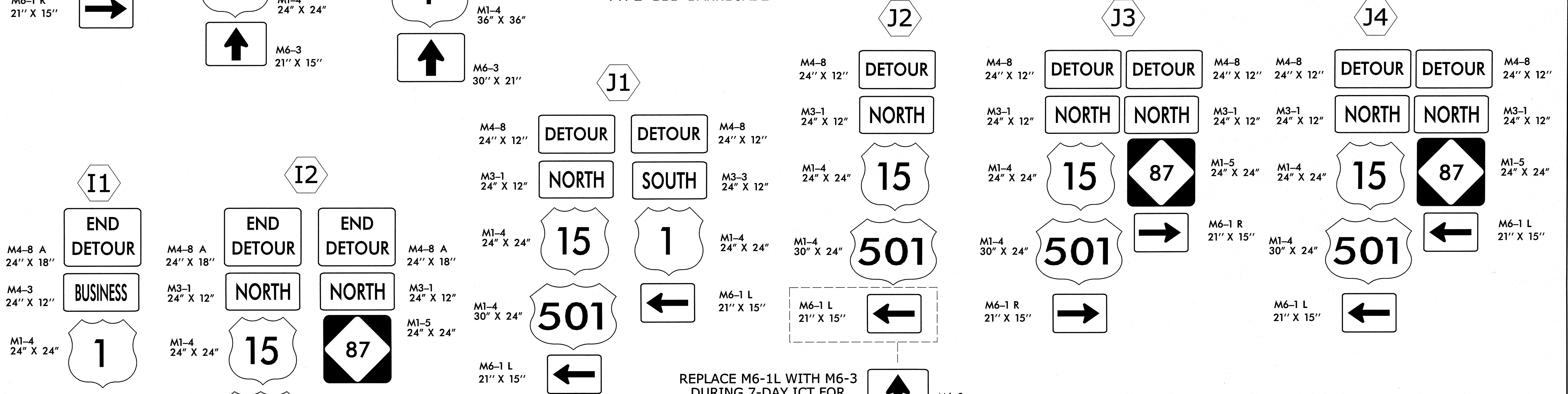
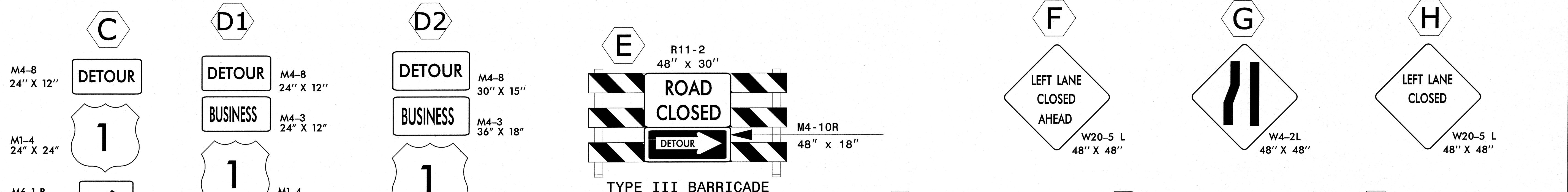


OFF SITE DETOUR DETAILS





INSTALL ON TWO 4" X 4" WOOD POSTS



REPLACE M6-1L WITH M6-3 DURING 7-DAY ICT FOR US 1 SB RAMP CLOSURE. REINSTALL M6-1L AT CONCLUSION OF RAMP CLOSURE.

M SERIES SIGNS (ARROWS) SHALL BE BLACK ON ORANGE

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]* DATE: 3/3/2014

OFF SITE DETOUR DETAILS



**K**

M4-8  
24" X 12"

**DETOUR**

M3-1  
24" X 12"

**NORTH**

M1-4  
24" X 24"

**1**

M4-3  
24" X 12"

**BUSINESS**

M1-4  
24" X 24"

**1**

M6-1 R  
21" X 15"

**→**

**L**

**ROAD  
CLOSED  
AHEAD**

W20-3  
48" X 48"

**M**

**ROAD  
CLOSED  
1000 FT**

W20-3  
48" X 48"

**N**

**DETOUR  
AHEAD**

W20-2  
48" X 48"

**O**

**TO**

**NORTH**

**1**

**TO**

**BUSINESS**

**1**

2 - M4-5  
24" X 12"

1 - M3-1  
24" X 12"

1 - M4-3  
24" X 12"

2 - M1-4  
24" X 24"

**USE EXIT 69B**

INSTALL ON TWO 4" X 4" WOOD POSTS

**P**

**TO**

**NORTH**

**15**

**TO**

**NORTH**

**501**

**TO**

**SOUTH**

**1**

3 - M4-5  
24" X 12"

2 - M3-1  
24" X 12"

1 - M3-3  
24" X 12"

2 - M1-4  
24" X 24"

1 - M1-4  
24" X 30"

**USE EXIT 74**

INSTALL ON TWO 4" X 4" WOOD POSTS

**Q**

R11-3  
60" X 30"

**ROAD CLOSED  
1 MILE AHEAD  
LOCAL TRAFFIC ONLY**

**DETOUR**

M4-10L  
48" X 18"

TYPE III BARRICADE

**R**

R11-4  
60" X 30"

**ROAD CLOSED  
TO  
THRU TRAFFIC**

TYPE III BARRICADE

**R11-4  
60" X 30"**

**ROAD CLOSED  
TO  
THRU TRAFFIC**

TYPE III BARRICADE

**S**

**ROAD  
CLOSED  
AHEAD**

W20-3  
48" X 48"

**NEXT LEFT**

SP-4L  
48" X 12"

**T**

**ROAD  
CLOSED  
AHEAD**

W20-3  
48" X 48"

**NEXT RIGHT**

SP-4R  
48" X 12"

**U**

**DETOUR**

M4-8  
30" X 15"

**NORTH**

M3-1  
36" X 18"

**1**

M1-4  
36" X 36"

**←**

M6-1 L  
21" X 15"

**V**

**DETOUR**

M4-8  
30" X 15"

**NORTH**

M3-1  
36" X 18"

**1**

M1-4  
36" X 36"

**←**

M5-1 L  
21" X 15"

**W**

R11-2  
48" X 30"

**ROAD  
CLOSED**

TYPE III BARRICADE

**X**

**ROAD  
CLOSED  
500 FT**

W20-3  
48" X 48"

**1**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 US15-501 CLOSED	DETOUR TO EXIT 74

CHANGEABLE MESSAGE SIGN

**2**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 US15-501 CLOSED	MERGE LEFT

CHANGEABLE MESSAGE SIGN

**3**

MESSAGE NO. 1	MESSAGE NO. 2
BUSINESS US 1 CLOSED	DETOUR TO EXIT 69B

CHANGEABLE MESSAGE SIGN

**4 & 5  
POSITION 1**

MESSAGE NO. 1	MESSAGE NO. 2
HAWKINS TO CLOSE XXXX DAY	AT US-1 OVERPASS

CHANGEABLE MESSAGE SIGN

DISPLAY 5 DAYS PRIOR TO  
HAWKINS ROAD TEMPORARY  
CLOSURE

XXXX DAY = DAY OF WEEK

**4 & 5  
POSITION 2**

MESSAGE NO. 1	MESSAGE NO. 2
HAWKINS CLOSED AT US-1	MMM DD THRU MMM DD

CHANGEABLE MESSAGE SIGN

DISPLAY WHILE HAWKINS AVE.  
IS CLOSED TO THROUGH TRAFFIC

MMM = 3 LETTER MONTH ABBREVIATION  
DD = 2 DIGIT DATE

**6 & 7**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 US15-501 TO CLOSE	MMM DD THRU MMM DD

CHANGEABLE MESSAGE SIGN

DISPLAY 5 DAYS PRIOR TO  
TEMPORARY RAMP CLOSURE

XXXX DAY = DAY OF WEEK  
MMM = 3 LETTER MONTH ABBREVIATION  
DD = 2 DIGIT DATE

**6 & 7**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 US15-501 CLOSED	DETOUR USE EXIT 74

CHANGEABLE MESSAGE SIGN

DISPLAY FOR DURATION OF  
RAMP CLOSURE

**8**

MESSAGE NO. 1	MESSAGE NO. 2
RIGHT LN CLOSED ON US1 N	EXIT 71 ON US 1 CLOSED

CHANGEABLE MESSAGE SIGN

DISPLAY FOR DURATION OF  
60-DAY RAMP CLOSURE AT  
EXIT 71

**9**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 CLOSED DETOUR	EXIT 69 TO US 1 NORTH

CHANGEABLE MESSAGE SIGN

DISPLAY FOR DURATION OF  
7-DAY FULL RAMP CLOSURE  
AT EXIT 71

**10**

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 71 CLOSED DETOUR	USE EXIT 74 COLON RD

CHANGEABLE MESSAGE SIGN

DISPLAY FOR DURATION OF  
60-DAY RAMP CLOSURE AT  
EXIT 71

APPROVED: *[Signature]* DATE: 3-3-2014

SEAL

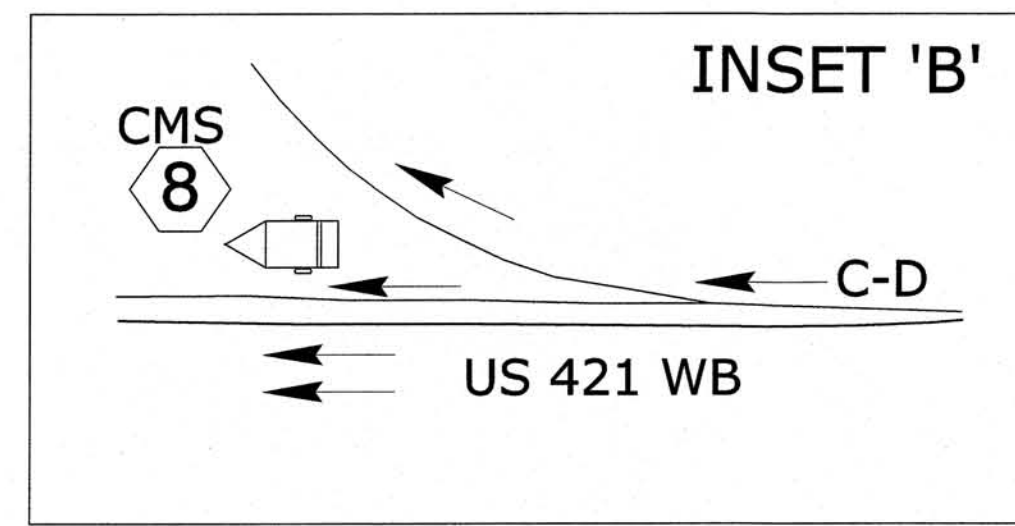
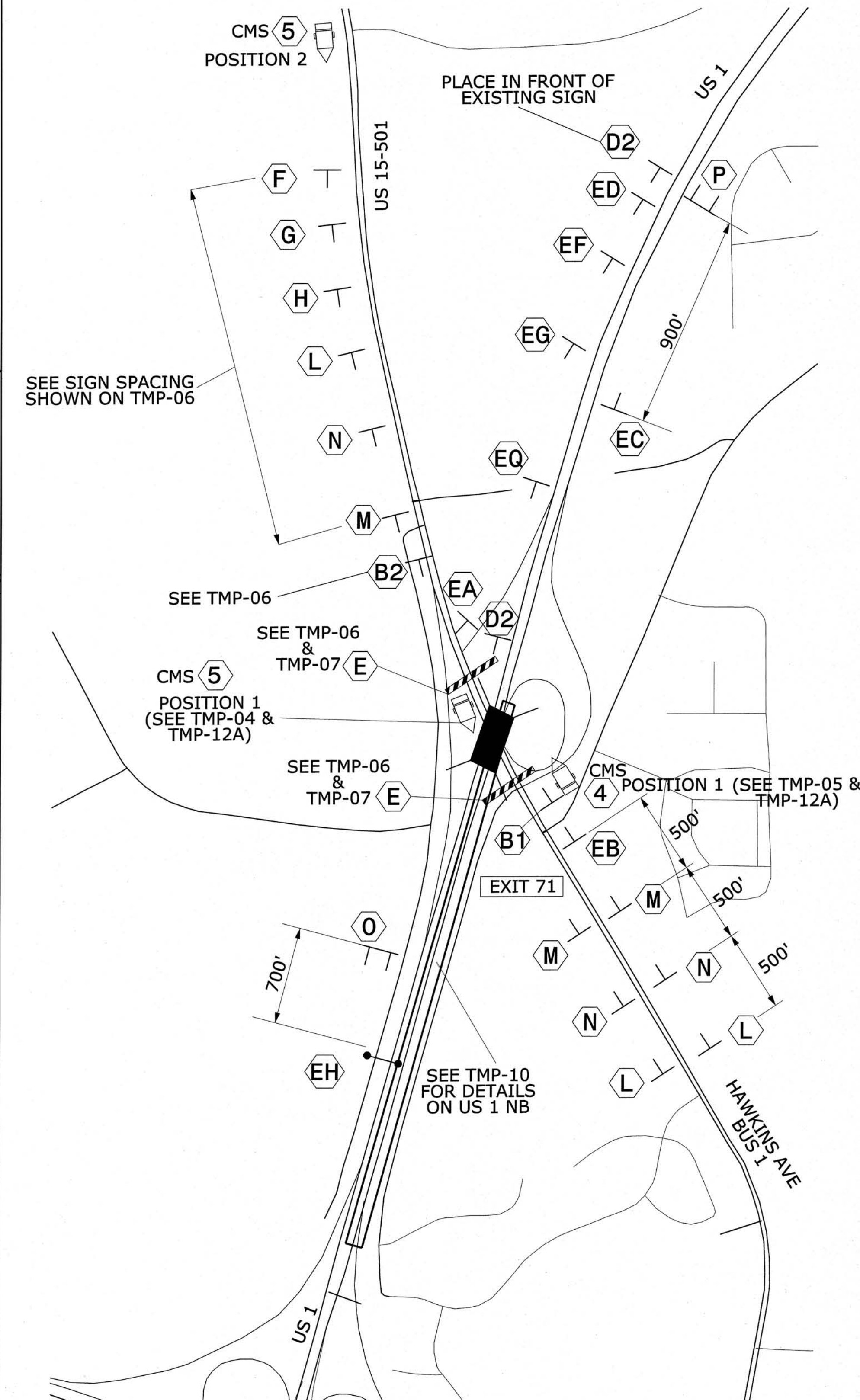
**NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
LISA M. MOON  
022516**

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

**OFF SITE DETOUR DETAILS**

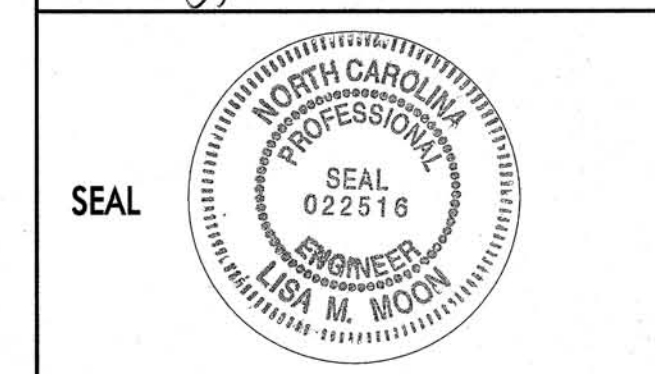


# INSET 'A'



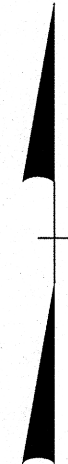
SEE SHEET TMP-12A  
FOR CMS  
MESSAGE DETAILS

APPROVED: *[Signature]* DATE: 3-3-2014

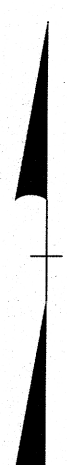


OFF SITE DETOUR DETAILS



06-MAR-2014 15:21  
0: Transportation\Traffic\Curr\10003xxx-W5513 TMP\TMP\W5513\_Detour.dgn  
THG5651 AT DUS29014

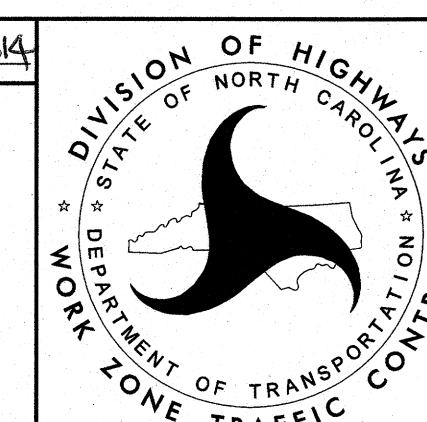
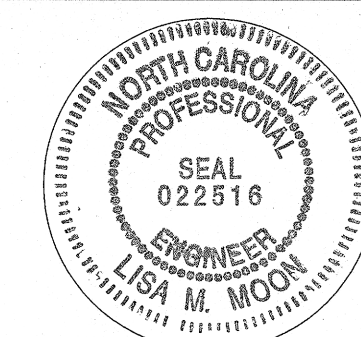
PROJ. REFERENCE NO.	SHEET NO.
W-5513	TMP-14



ALL PROPOSED DETOUR SIGNING  
INSTALLED PER TMP-13 TO REMAIN  
IN PLACE UNLESS OTHERWISE  
DIRECTED ON THIS SHEET.

PLACE DRUMS AT 10' SPACING 3' FROM  
THE US 1 SOUTH BOUND EDGE OF  
TRAVEL TO CLOSE ACCESS TO EXIT 71  
RAMP FOR DURATION OF 7 DAY CLOSURE

APPROVED: Ruslan M. Moor DATE: 3.3.20



### OFF SITE DETOUR DETAILS



SIGN NUMBER: 1	BACKG COLOR: Fluorescent Orange	DESIGN BY: M Toth
TYPE: STATIONARY	COPY COLOR: Black	CHECKED BY: L Moon
		DIV: 08
QUANTITY: SEE PLANS		DATE: Feb 19, 2014

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 6'-0"  
HEIGHT: 1'-6"

TOTAL AREA: 9.0 Sq.Ft.

BORDER TYPE: INSET  
RECESS: 0.75"  
WIDTH: 0.75"  
RADII: 3.75"

NO. Z BARS:  
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

BORDER  
R=3.75"  
TH=0.75"  
IN=0.75"

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

[illegible]