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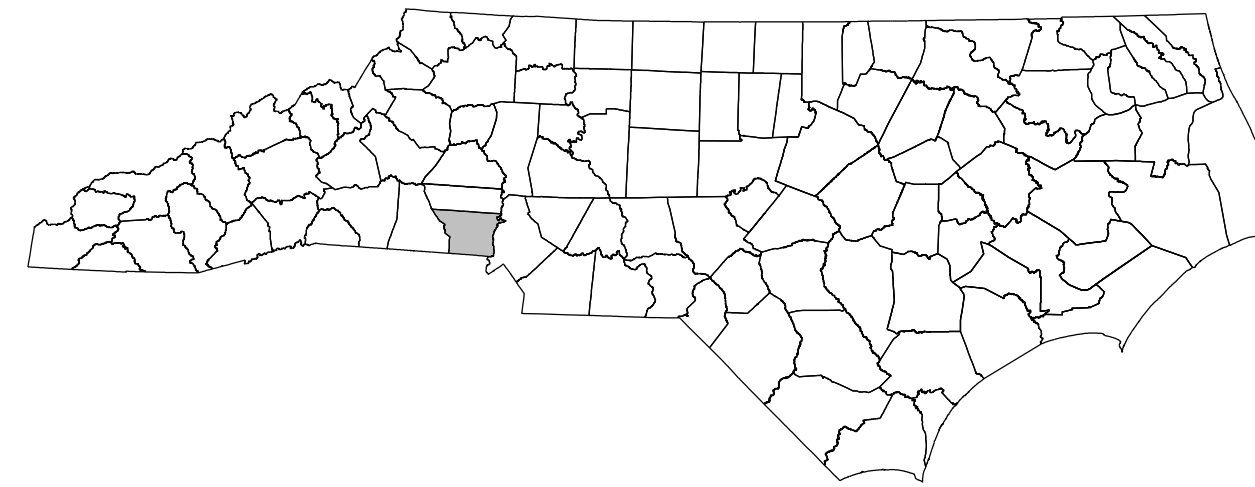
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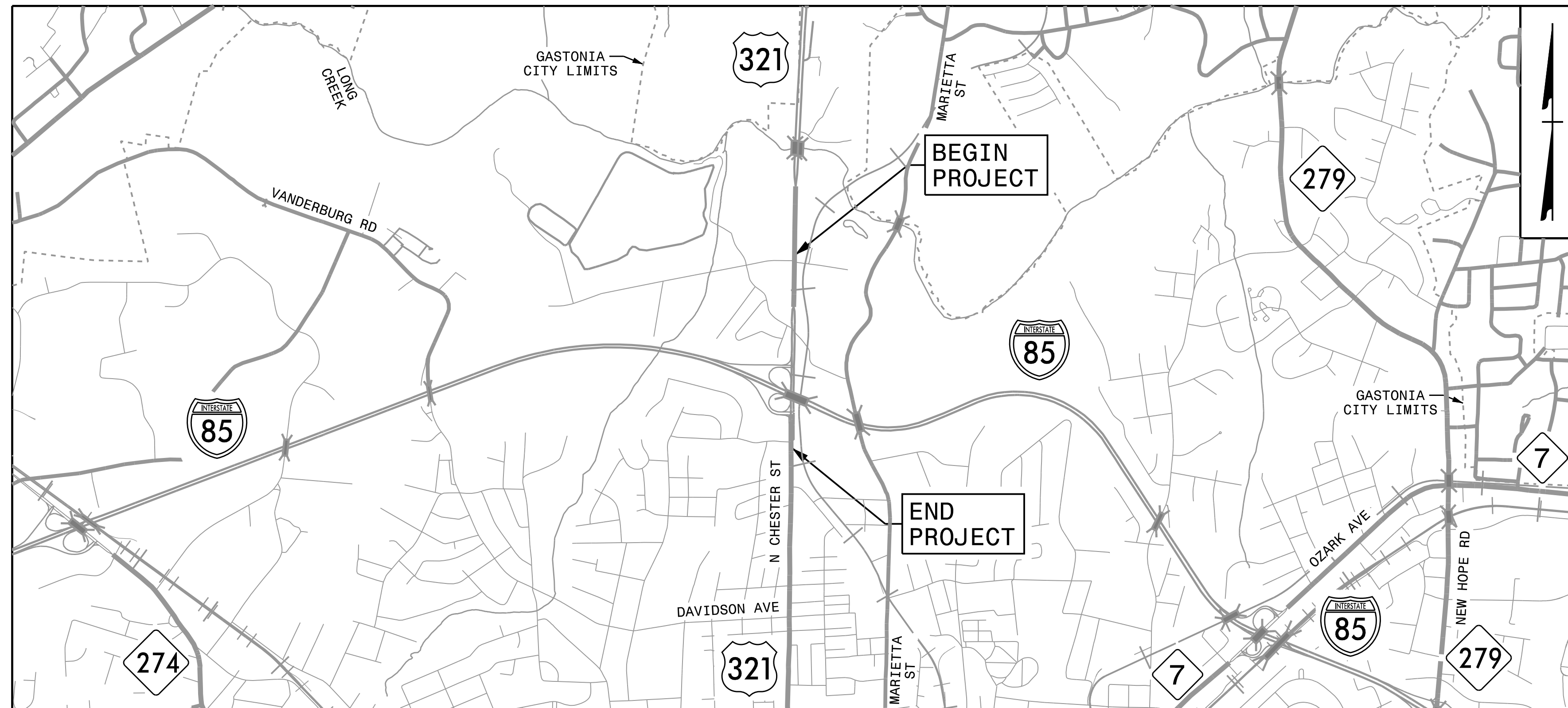
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**GASTON COUNTY**



**LOCATION: I-85 /US 321 GEOMETRIC SAFETY IMPROVEMENTS**



<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B & TMP-1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	SIGN DESIGN - RANKIN LAKE RD
TMP-3 & TMP-3A	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 - TMP-31	TEMPORARY TRAFFIC CONTROL PHASE 1 DETAILS
TMP-32 - TMP-37	TEMPORARY TRAFFIC CONTROL PHASE 2 DETAILS

SHEET NO.  
TMP-1

**I-5000**

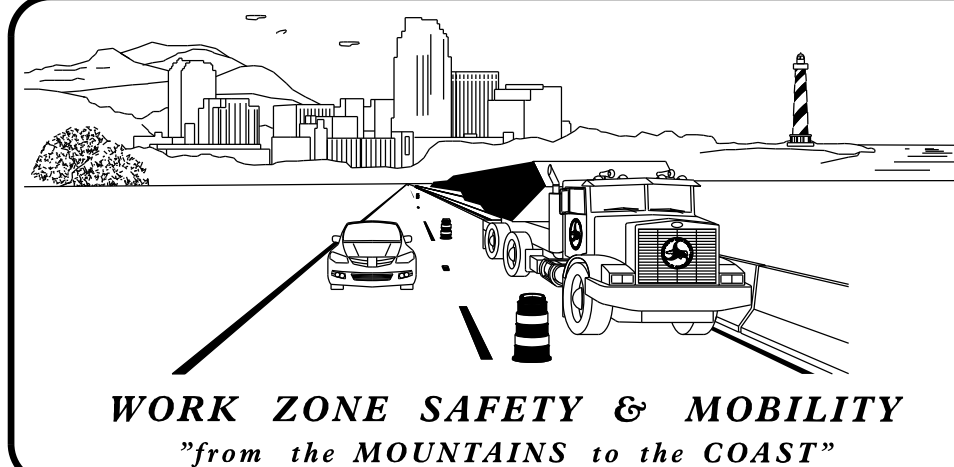
PLAN PREPARED BY:

**HDR** HDR Engineering, Inc. of the Carolinas  
3733 National Drive, Suite 207 Raleigh, N.C. 27612  
N.C.B.E.L.S. License Number: F-0116

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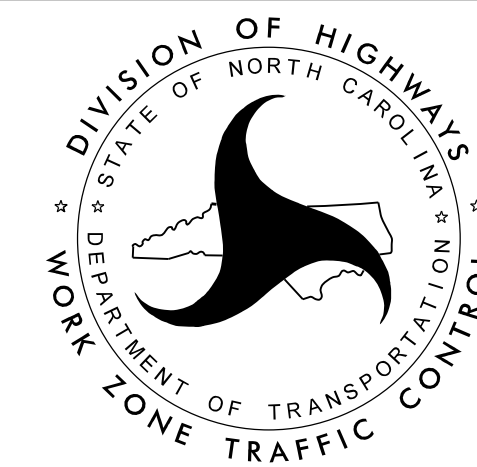
MICHELLE WARD, P.E. TRAFFIC CONTROL PROJECT ENGINEER

BRANDON SCOTT TRAFFIC CONTROL DESIGN ENGINEER



**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

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TRAFFIC CONTROL DESIGN ENGINEER




APPROVED: Michelle Ward  
DATE: 1/4/2017

SEAL



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**TIP PROJECT:**

PROJ. REFERENCE NO.	SHEET NO.
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 HDR Engineering, Inc. of the Carolinas 3733 National Drive, Suite 207 Raleigh, N.C. 27612 N.C.B.E.L.S. License Number: F-0116	







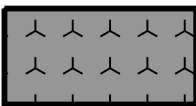
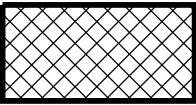
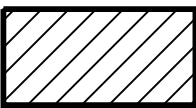
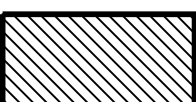
# ROADWAY STANDARD DRAWINGS

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 ADVANCE 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	DRUM
1135.01	CONES
1145.01	BARRICADES
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 MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS 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
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
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

## LEGEND




### GENERAL

-  DIRECTION OF TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  TEMP. SHORING (LOCATION PURPOSES ONLY)
-  WORK AREA
-  ONGOING CONSTRUCTION
-  REMOVAL
-  WEDGING
-  TEMPORARY WEDGING

### 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 MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES






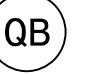


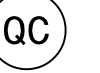














### PAVEMENT MARKERS

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



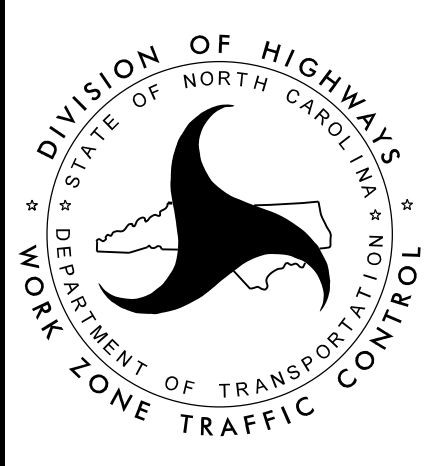
### PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

### TEMPORARY PAVEMENT MARKING

- |   |   |   |
|---|---|---|
|  P2 PAINT 24" WHITE STOPBAR            |  PE PAINT 4" WHITE SOLID LANE LINE     |  QA PAINT LEFT TURN ARROW            |
|  P6 PAINT 6" WHITE EDGELINE            |  PI PAINT 4" YELLOW DOUBLE CENTER      |  QB PAINT RIGHT TURN ARROW           |
|  P7 PAINT 6" YELLOW EDGELINE           |  PJ PAINT 6" WHITE 10' SKIP            |  QC PAINT STRAIGHT ARROW             |
|  P8 PAINT 4" 2'-6"/SP. WHITE MINI-SKIP |  PK PAINT 6" 3'-9"/SP. WHITE MINI-SKIP |  QE PAINT COMBO STRAIGHT/RIGHT ARROW |
|  PA PAINT 4" WHITE EDGELINE            |  PN PAINT 8" WHITE GORELINE            |  QI PAINT ALPHANUMERIC CHARACTER     |
|  PB PAINT 4" YELLOW EDGELINE           |  PO PAINT 8" WHITE DIAGONAL            |  QM PAINT 12" YIELD LINE TRIANGLE    |
|  PC PAINT 4" WHITE 10' SKIP            |  PP PAINT 8" YELLOW DIAGONAL           |  QP PAINT MERGE ARROW                |
|  PD PAINT 4" 3'-9"/SP. WHITE MINI-SKIP |  PS PAINT 12" WHITE GORELINE           |   |

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APPROVED:  DATE: 1/4/2017			ROADWAY STANDARD DRAWINGS & LEGEND
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# MANAGEMENT STRATEGIES

## PHASE 1, STEP 1:

SOUTHBOUND -Y1- (US 321) TRAFFIC IS MAINTAINED IN THE EXISTING PATTERN WHILE MOST OF THE OUTSIDE C&G IN THE SOUTHBOUND DIRECTION IS CONSTRUCTED USING A MAXIMUM OF 3 SEPARATE WEEKEND LANE CLOSURES.

NORTHBOUND -Y1- (US 321) TRAFFIC IS PLACED IN A TEMPORARY PATTERN FROM SOUTH OF RANKIN LAKE RD TO THE END OF THE PROJECT AND C&G IS CONSTRUCTED IN THIS AREA USING NIGHTLY LANE CLOSURES, AS NEEDED.

TRAFFIC IS MAINTAINED IN THE EXISTING PATTERN DURING CONSTRUCTION OF -Y2- (MARIETTA ST) AND -Y3- (BULB AVE).

CONSTRUCTION OF THE TRAIL BEGINS, EXCEPT AT RANKIN LAKE RD AND -RPA- AND -RPD- CONSTRUCTION BEGINS WITHOUT INTERFERING WITH -L- (I-85) OR RANKIN LAKE RD TRAFFIC.

EXISTING DRAINAGE BOXES IN THE MEDIAN OF -L- (I-85) ARE RETROFITTED WITH NEW STEEL GRATES USING NIGHTLY LANE CLOSURES. PROPOSED MEDIAN DRAINAGE NEAR -RPD- IS INSTALLED DURING A WEEKEND OPERATION, USING A LANE CLOSURE ON -L- (I-85) AND CLOSING EXISTING LOOP C.

## PHASE 1, STEP 2:

-Y2- (MARIETTA ST) IS SHIFTED TO THE NEW ALIGNMENT THEN THE REMAINDER OF -Y2- AND THE -Y3- (BULB AVE) TIE TO -Y2- (MARIETTA ST) IS CONSTRUCTED.

## PHASE 1, STEP 3:

-Y2- (MARIETTA ST) AND -Y3- (BULB AVE) IS OPENED TO THEIR FINAL TRAFFIC PATTERN AND RANKIN LAKE RD ON THE EAST SIDE OF -Y1- (US 321) IS CLOSED.

THE PORTION OF -RPA- / -RPD- AND THE TRAIL, BEGUN IN PHASE 1, STEP 1 IS COMPLETED AND THE REMAINDER OF -RPA- / -RPD- AND THE TRAIL UNDER -RPD- IS CONSTRUCTED.

## PHASE 1, STEP 4:

RUMBLE STRIPS ARE REMOVED IN THE MEDIAN ON -L- (I-85) NB AND SB, THEN TRAFFIC IS SHIFTED TOWARDS THE MEDIAN, WITH A BARRIER SEPARATOR, TO CONSTRUCT THE ACCELERATION AND DECELERATION LANES FOR -RPA- AND -RPD-. ONCE COMPLETE, BARRIER IS REMOVED, TRAFFIC IS SHIFTED BACK TO THE EXISTING LANES ON I-85 NB AND SB, -RPA- IS OPENED AND -RPD- REMAINS CLOSED. THIS WORK IS COMPLETED DURING A 30 DAY ICT.

## PHASE 1, STEP 5:

IN ADDITION TO OPENING -RPA- (I-85 SB OFF-RAMP), NB -Y1- (US 321) IS PLACED IN A TEMPORARY PATTERN TO CONSTRUCT THE REMAINDER OF THE C&G IN THE NORTHBOUND DIRECTION, USING NIGHTLY LANE CLOSURES WHEN NEEDED.

CONSTRUCT C&G, PAVEMENT REMOVAL AND SHOULDER CONSTRUCTION ALONG EXISTING RAMP B AND LOOP B USING LANE CLOSURES/LANE NARROWING.

REMAINDER OF -RPD- AND THE TRAIL ARE COMPLETED IN STEP 5.

## PHASE 1, STEP 6:

NB -Y1- (US 321) IS PLACED IN A TEMPORARY PATTERN WITH SB STILL IN THE EXISTING PATTERN. EXISTING ISLANDS ARE REMOVED AND PAVEMENT IS RECONSTRUCTED USING NIGHTLY LANE CLOSURES.

## PHASE 1, STEP 7:

WITH NB -Y1- (US 321) IN THE TEMPORARY PATTERN FROM STEP 6 AND SB -Y1- (US 321) STILL IN THE EXISTING PATTERN, MILL 1.5" AS SHOWN ON THE ROADWAY PLANS AND CONSTRUCT THE PROPOSED MONOLITHIC ISLANDS (EXCEPT FOR LOCATIONS THAT INTERFERE WITH LEFT TURN MOVEMENTS) DURING A MAXIMUM OF 2 WEEKEND LANE CLOSURE OPERATIONS. AS SOON AS PROPOSED ISLANDS ON -Y1- (US 321) AT -RPD- ARE COMPLETE, OPEN -RPD- (ON-RAMP TO I-85 NB) IN THE PHASE 2 TRAFFIC PATTERN.

## PHASE 2, STEP 1:

ALL ROADS ARE OPEN TO THE FINAL TRAFFIC PATTERN, EXCEPT LOOP B AND FROM SOUTH OF RANKIN LAKE RD TO EXISTING RAMP C ALONG SB -Y1- (US 321).

REMAINDER OF THE WORK ALONG THE SB SIDE OF -Y1- (US 321) AND THE REMAINDER OF THE MONOLITHIC ISLAND CONSTRUCTION ARE COMPLETED IN PHASE 2, USING A MAXIMUM OF 3 WEEKEND LANE CLOSURE OPERATIONS.

## PHASE 2, STEPS 2 & 3:

CLOSE -LPB- FOR ONE WEEKEND TO MILL 3" AND OVERLAY, INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS.

UTILIZE LANE CLOSURES ON -L- (I-85) NB AND SB TO MILL 1.5" AND PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS, AS WELL AS RE-INSTALL THE RUMBLE STRIPS IN THE MEDIAN SHOULDER.

UTILIZE LANE CLOSURES FOR ALL OTHER ROADS TO PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS.

# 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 UNDESIRABLE 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
-L- (I-85) & -Y1- (US 321)	MONDAY - SUNDAY: 6:00 A.M. TO 9:00 P.M.

NOTE: TIME RESTRICTIONS NOTED ABOVE WILL BE SUSPENDED FOR THE ALLOWABLE WEEKEND LANE CLOSURES IN PHASE 1, STEP 1A; PHASE 1, STEP 1B; PHASE 1, STEP 7 AND PHASE 2, STEP 1.

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

ROAD NAME
-L- (I-85) & -Y1- (US 321)

## HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 9:00 P.M. DECEMBER 31st TO 6:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 A.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 9:00 P.M. THURSDAY AND 6:00 A.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 9:00 P.M. FRIDAY TO 6:00 A.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 9:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 9:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 9:00 P.M. FRIDAY AND 6:00 A.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 9:00 P.M. TUESDAY TO 6:00 A.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 9:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR ANY NASCAR RACE AT THE CHARLOTTE MOTOR SPEEDWAY, BETWEEN THE HOURS OF 6:00 A.M. THE WEDNESDAY BEFORE THE FIRST TRACK EVENT UNTIL 9:00 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.

C) DO NOT STOP TRAFFIC AS FOLLOWS:


ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
-L- (I-85) & -Y1- (US 321)	MONDAY - SUNDAY: 5:00 A.M. - 12:00 A.M. (MIDNIGHT)	30 MINUTES FOR OVERHEAD SIGN INSTALLATION
-Y2- MARIETTA ST -Y3- BULB AVE	MONDAY - FRIDAY: 7:00 A.M. - 9:00 A.M. 4:00 P.M. - 7:00 P.M.	20 MINUTES FOR BLASTING

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

## LANE AND SHOULDER CLOSURE REQUIREMENTS

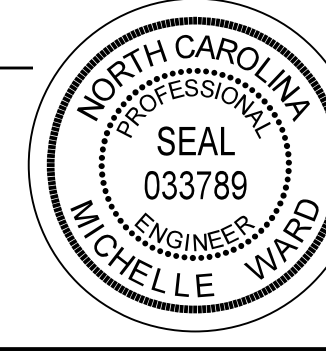

- E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- G) 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.
- H) 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.
- I) 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.
- J) 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.
- K) DO NOT INSTALL MORE THAN 1 MILE OF LANE CLOSURE ON -L- (I-85) AND -Y1- (US 321) MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- L) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON -L- (I-85) AND -Y1- (US 321).
- M) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PROJ. REFERENCE NO. I-5000	SHEET NO. TMP-1B
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555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.pht  
 USER: BSCOTT  
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<p>APPROVED: <i>Michelle Ward</i> F338756B206466</p> <p>DATE: 1/4/2017</p> <p>SEAL</p> 		<p style="text-align: center; font-weight: bold;">TRANSPORTATION OPERATIONS PLAN</p>
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# GENERAL NOTES (CONT.)

PROJ. REFERENCE NO.	SHEET NO.
I-5000	TMP-1C

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555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

## LOCAL NOTES

- DO NOT CLOSE LEFT TURN ONTO RANKIN LAKE RD UNTIL WORK IS READY TO BEGIN ON THE PROPOSED ISLANDS IN THE VICINITY OF THE EXISTING ISLANDS AT RANKIN LAKE RD.
- CONSTRUCT PROPOSED ISLANDS FROM -Y1- STA. 19+50 +/- TO STA. 27+17 +/- AND -Y1- STA. 24+98 +/- TO STA. 30+10 +/- AT THE END OF PHASE 1, STEP 7 IN ORDER TO GO DIRECTLY TO THE PHASE 2, STEP 1 TRAFFIC PATTERN ONCE THESE ISLANDS ARE COMPLETE. PROPOSED ISLANDS IN THESE LOCATIONS ARE INSIDE THE EXISTING TRAVEL LANE AND THEREFORE TRAFFIC CANNOT BE RETURNED TO THE CURRENT PHASE 1, STEP 7 TRAFFIC PATTERN AT THE END OF THE WEEKEND LANE CLOSURE OPERATION.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

M) 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.

N) 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

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

### SIGNING

P) 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.

Q) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

R) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

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

T) 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.

### TRAFFIC BARRIER

U) 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.

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

V) 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 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

### TRAFFIC CONTROL DEVICES

W) 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.

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

Y) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
-L- (I-85)	PAINT (6"/12")	TEMPORARY RAISED
-Y1- (US 321) & ALL OTHER ROADS	PAINT (4"/8")	TEMPORARY RAISED

AA) 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 AS DIRECTED BY THE ENGINEER.

BB) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

CC) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

DD) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION

### MISCELLANEOUS

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

FF) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

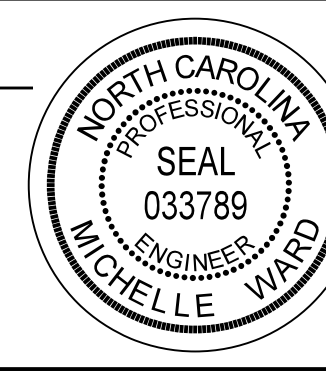
GG) COORDINATE WITH THE ENGINEER TO ENSURE THAT THE OVERSIZE/OVERWEIGHT PERMIT UNIT IS AWARE OF ONGOING TRAFFIC PATTERNS AND LANE OR ROAD CLOSURES THROUGHOUT CONSTRUCTION.

HH) USE STEEL PLATES TO COVER PARTIALLY INSTALLED DRAINAGE STRUCTURES AND BACKFILL AROUND EXPOSED STRUCTURES SO THAT IT IS NOT A HAZARD TO THE MOTORIST OR PEDESTRIAN. (SEE SPECIAL DETAIL IN THE ROADWAY PLANS)

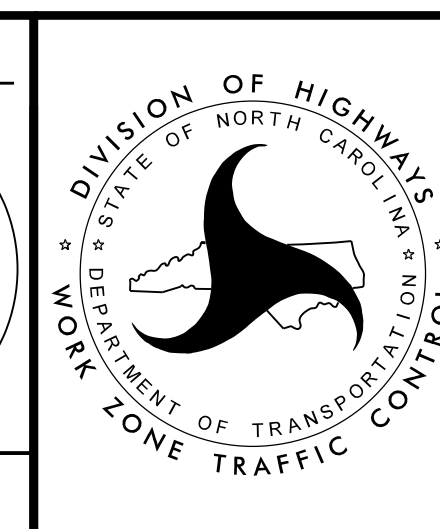
APPROVED: *Michelle Ward*  
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DATE: 1/4/2017

SEAL



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TRANSPORTATION  
OPERATIONS  
PLAN

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REVISIONS

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QUANTITY: 1

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TOTAL AREA: 4.5 Sq.Ft.

BORDER TYPE: FLUSH  
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WIDTH: 0.44"  
RADI: 1.50"

NO. Z BARS:  
LENGTH:

BACKG COLOR: Orange  
COPY COLOR: Black

SYMBOL	X	Y	WIDTH	HEIGHT

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: J. DOWDY      CHECKED BY: D. KERNS  
PROJECT ID: I-5000        DIV: 12                      DATE: Oct 19, 2016



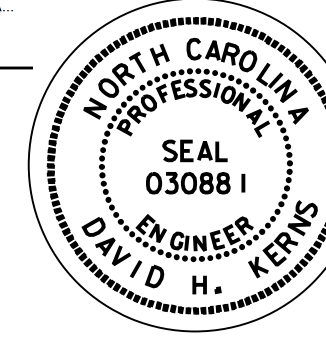

USE NOTES: 1,2

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

Letter spacings are to start of next letter														Series/Size Text Length											
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3	4	3.9	4.1	3.8	1.9	3.1	3	3.5	3.9	3.7	3.1	3	4.1	3.1	3									48	

REVISIONS

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APPROVED: <i>David H. Kerns</i> <small>DocuSigned by: David H. Kerns 851F8F89CE4447A...</small> DATE: 1/4/2017 SEAL			<b>SPECIAL SIGN DESIGN  RANKIN LAKE RD</b>
<b>DOCUMENT NOT CONSIDERED FINAL  UNLESS ALL SIGNATURES COMPLETED</b>			

# PHASING

## NOTES:

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES ACCORDING TO RSD 1101.01. FIELD VERIFY LOCATIONS WITH THE RESIDENT ENGINEER PRIOR TO INSTALLATION.

MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.

WHEN WEDGING OVER THE EXISTING PAVEMENT, WEDGE TO PROPOSED ELEVATION (LESS THE FINAL LAYER OF SURFACE COURSE), OR WEDGE AS NEEDED TO MAINTAIN TRAFFIC. MAINTAIN POSITIVE DRAINAGE AND MAINTAIN A MAXIMUM .04 ROLLOVER IN BOTH EXISTING AND/OR TEMPORARY TRAVEL LANES.

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

PAVE PROPOSED CONSTRUCTION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES, UNTIL STATED TO INSTALL THE FINAL LAYER OF SURFACE COURSE IN THE PHASING.

WHEN STOPPING TRAFFIC FOR TRAFFIC SHIFTS, RSD 1101.03, SHEETS 8 & 9 MAY BE USED.

WHEN INSTALLING AND ACTIVATING TEMPORARY AND FINAL SIGNALS, USE LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3) AND LAW ENFORCEMENT.

## PHASE 1 (SHEETS TMP-4 THRU TMP-31)

### STEP 1:

CONDUCT THE FOLLOWING SEQUENCE OF ACTIVITIES: (SEE SHEETS TMP-5 THRU TMP-7)

- A.) USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), LAW ENFORCEMENT, AND STOPPING TRAFFIC, PLACE TEMPORARY MARKING ON NB -Y1- (US 321), INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES, COMPLETE INSTALLATION AND ACTIVATE THE FOLLOWING TEMPORARY SIGNALS  
12-0023T1 AT -Y1- (US 321) / EXISTING RAMP B AND LOOP B  
12-0162T1 AT -Y1- (US 321) / EXISTING RAMP C AND LOOP C  
12-1623T1 AT -Y1- (US 321) / RADIO ST MUST BE  
THEN PLACE TRAFFIC IN THE TEMPORARY PATTERN ON THE NB LANES:
- B.) USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), BEGIN WIDENING (WHERE APPLICABLE) AND CONSTRUCTION OF CURB AND GUTTER ON THE NB SIDE OF -Y1- (US 321) FROM -Y1- STA. 26+50 +/- TO STA. 45+00 +/-.

USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3) BEGIN WIDENING CONSTRUCTION ON THE SB SIDE OF -Y1- (US 321) FROM -Y1- STA. 22+71 +/- TO STA. 27+00 +/- (NOTE: CURB AND GUTTER CONSTRUCTION IN THIS AREA WILL BE COMPLETED DURING A WEEKEND LANE CLOSURE IN STEP 1A.) (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #1 (12-0921T1) AT -Y1- (US 321) / RANKIN LAKE RD MUST BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION.) (SEE SHEET TMP-5)

USING LANE CLOSURES/FLAGGERS (RSD 1101.02, SHEET 1), AND MAINTAINING TRAFFIC AT ALL TIMES, BEGIN CONSTRUCTION OF -Y3- (BULB AVE) FROM STA. 10+43 +/- TO STA. 23+00 +/-, INCLUDING CULVERT AT HIGHLAND CREEK. (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #1 (12-0922T1) AT -Y1- (US 321) / -Y3- (BULB AVE) / TULIP DR MUST BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION.) (SEE SHEETS TMP-4 AND TMP-8)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -TRAIL- FROM STA. 14+50 +/- TO STA. 29+94 +/- AND FROM 32+00 +/- TO STA. 47+89 +/-, INCLUDING PEDESTRIAN CULVERT. (NOTE: CURB & GUTTER AND PROPOSED GUARDRAIL ALONG -Y1- (US 321) WILL NEED TO BE INSTALLED BEFORE CONTINUING CONSTRUCTION OF -TRAIL- FROM STA. 19+00 +/- TO 24+00 +/-) (SEE SHEETS TMP-5 THRU TMP-9)

USING LANE CLOSURES/FLAGGERS (RSD 1101.02, SHEET 1), BEGIN CONSTRUCTION OF -Y2- (MARIETTA ST) FROM STA. 10+50 +/- TO STA. 26+54 +/-, WEDGING OVER EXISTING TRAVEL LANES CONCURRENTLY WITH THE WIDENING OPERATIONS TO MAINTAIN TRAFFIC DURING CONSTRUCTION. (SEE SHEETS TMP-8 AND TMP-9)

USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), REMOVE EXISTING ISLANDS AND EITHER PAVE OR INSTALL PROPOSED ISLANDS IN THE FOLLOWING LOCATIONS AS SHOWN ON THE TRAFFIC CONTROL PLAN: (SEE SHEETS TMP-5 AND TMP-6)

- Y1- STA. 15+60 +/- (RT)
- Y1- STA. 19+43 +/- (RT)
- Y1- STA. 23+75 +/- (RT)
- Y1- STA. 30+05 +/- (RT)
- Y1- STA. 39+50 +/- (RT)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -RPD- FROM STA. 14+00 +/- TO STA. 30+00 +/-, INCLUDING CULVERT. (SEE SHEETS TMP-6 AND TMP-10)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -RPA- FROM STA. 15+50 +/- TO STA. 23+41.77 +/-, INCLUDING CULVERT EXTENSION. (SEE SHEETS TMP-6 AND TMP-10)

USING A LEFT LANE CLOSURE (RSD 1101.02, SHEET 4) ON -L- (I-85) NB AND SB, BEGIN RETROFIT OF EXISTING DROP INLETS WITH NEW STEEL GRATE & FRAME. (SEE SHEETS TMP-6 AND TMP-10)

WORK IN STEP 1A MAY BE CONDUCTED AS EARLY AS PHASE 1, STEP 1A OR BE COMPLETED IN A LATER STEP, UP THRU PHASE 1, STEP 5, IF THE CONTRACTOR CHOOSES. CURB AND GUTTER MUST BE COMPLETED PRIOR TO SHIFTING TO THE PHASE 1, STEP 6 TRAFFIC PATTERN.

WORK IN STEPS 1A AND 1B CAN BE CONDUCTED CONCURRENTLY WITH OTHER WORK IN STEP 1.

COMPLETE THE WORK REQUIRED ON -Y1- (US 321) IN PHASE 1, STEP 1A USING WEEKEND LANE CLOSURES FROM 9:00 PM FRIDAY TO 6:00 AM MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

REPEAT STEP 1A FOR A MAXIMUM OF 3 WEEKENDS UNTIL ALL WORK IS COMPLETE.

### STEP 1A:

USING LANE CLOSURES (RSD 1101.02, SHEET 3) ON -Y1- (US 321), COMPLETE WIDENING (IF APPLICABLE) AND CONSTRUCT CURB & GUTTER ON THE SB SIDE OF -Y1- (US 321), IN THE FOLLOWING LOCATIONS: (SEE SHEETS TMP-4 THRU TMP-7) (NOTE: INSTALL CMS AS SHOWN ON SHEET TMP-4 PRIOR TO EACH WEEKEND LANE CLOSURE OPERATION.)

- Y1- STA. 12+29 +/- TO STA. 19+32 +/-
- Y1- STA. 22+71 +/- TO STA. 30+18 +/-
- Y1- STA. 39+50 +/- TO STA. 43+78 +/-

COMPLETE THE WORK REQUIRED ON -L- (I-85) IN PHASE 1, STEP 1B DURING A WEEKEND OPERATION FROM 9:00 PM FRIDAY TO 6:00 AM MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

### STEP 1B:

USING A LEFT LANE CLOSURE (RSD 1101.02, SHEET 4) ON -L- (I-85) NB, A LEFT LANE CLOSURE OR SHOULDER CLOSURE (RSD 1101.04) ON -L- (I-85) SB, AND CLOSING EXISTING LOOP C TO -L- (I-85 NB), INSTALL MEDIUM DRAINAGE NEAR -RPD-. (SEE SHEETS TMP-11 THRU TMP-13) (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #2 (12-0162T2) AT -Y1- (US 321) / EXISTING RAMP C AND LOOP C MUST BE COMPLETED WHEN CLOSING EXISTING LOOP C AND SIGNAL RETURNED TO TEMPORARY SIGNAL #1 (12-0162T1) WHEN REOPENING EXISTING LOOP C AT THE END OF THE WEEKEND CLOSURE PERIOD.)

### STEP 2:

USING LANE CLOSURES/FLAGGERS (RSD 1101.02, SHEET 1), COMPLETE CONSTRUCTION OF -Y2- (MARIETTA ST), BEGUN IN STEP 1, PLACE TEMPORARY MARKINGS ON -Y2- (MARIETTA ST) AND SHIFT TRAFFIC, THEN BEGIN CONSTRUCTION OF THE FOLLOWING: (SEE SHEETS TMP-14 AND TMP-15)

- REMAINDER OF -Y2- (MARIETTA ST) FROM STA. 10+50 +/- TO STA. 26+54 +/-, WEDGING OVER EXISTING TRAVEL LANES AS NEEDED
- -Y3- (BULB AVE) FROM -Y3- STA. 23+00 +/- TO -Y2- (MARIETTA ST)

### STEP 3:

USING LANE CLOSURES/FLAGGERS (RSD 1101.02, SHEET 1), CONDUCT THE FOLLOWING TO SHIFT TRAFFIC TO THE PHASE 1, STEP 3 TRAFFIC PATTERN ON -Y2- (MARIETTA ST) AND -Y3- (BULB AVE): (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #2 (12-0922T2) AT -Y1- (US 321) / -Y3- (BULB AVE) / TULIP DR MUST BE COMPLETED TO SHIFT TRAFFIC TO THE PHASE 1, STEP 3 PATTERN.) (SEE SHEETS TMP-16, TMP-19 AND TMP-20)

- A.) COMPLETE CONSTRUCTION OF -Y2- (MARIETTA ST), BEGUN IN STEP 2, AND CONSTRUCTION OF -Y3- (BULB AVE), INCLUDING CULVERTS UNDER -Y3- (BULB AVE), BEGUN IN STEPS 1 AND 2
- B.) PLACE TEMPORARY MARKING IN THE FINAL PATTERN ON -Y2- (MARIETTA ST) AND -Y3- (BULB AVE), THEN
- C.) SHIFT TRAFFIC ON -Y2- (MARIETTA ST) AND -Y3- (BULB AVE) TO THE FINAL TRAFFIC PATTERN.

CONDUCT THE FOLLOWING TO PERMANENTLY CLOSE -Y4A- (RANKIN LAKE RD) TO TRAFFIC:

- PLACE "END OF ROAD" OBJECT MARKERS (OM4-3) ON EXISTING RANKIN LAKE RD (SEE SHEET TMP-20)
- PLACE SIGNS AND CMSS TO DIRECT TRAFFIC TO -Y3- (BULB AVE) TO ACCESS -Y2- (MARIETTA ST) (SEE SHEETS TMP-16 AND TMP-18)
- REMOVE EXISTING BRIDGE ON EXISTING RANKIN LAKE RD (SEE SHEET TMP-20)

ONCE RANKIN LAKE RD IS CLOSED TO TRAFFIC, PLACE TEMPORARY MARKING ON -Y1- (US 321) FROM -Y1- STA. 24+00 +/- TO STA. 27+10 +/- AS SHOWN ON SHEET TMP-17 AND SHIFT TRAFFIC, THEN AWAY FROM TRAFFIC, CONDUCT THE FOLLOWING:

- COMPLETE CONSTRUCTION OF -RPD- FROM STA. 24+00 +/- TO STA. 30+00 +/-
- COMPLETE CONSTRUCTION OF -RPA- FROM STA. 15+50 +/- TO STA. 23+41.77
- CONSTRUCT -RPD- FROM STA. 30+00 +/- TO -Y1- (US 321)
- CONSTRUCT -TRAIL- FROM STA. 29+94 +/- TO STA. 32+00 +/-, INCLUDING PEDESTRIAN CULVERT UNDER -RPD-

COMPLETE THE WORK REQUIRED IN PHASE 1, STEP 4 WITHIN THIRTY (30) CONSECUTIVE DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

### STEP 4:

COMPLETE THE FOLLOWING SEQUENCE OF ACTIVITIES:

- A.) USING LANE CLOSURES (RSD 1101.02, SHEET 4) ON -L- (I-85) SB AND NB, MILL AND FILL EXISTING RUMBLE STRIPS ON THE INSIDE SHOULDER OF I-85 NB AND SB THEN PLACE TEMPORARY MARKINGS AND PCB AS SHOWN ON SHEETS TMP-21 AND TMP-22 AND SHIFT TRAFFIC TO THE TEMPORARY PATTERN.
- B.) BEHIND BARRIER, CONSTRUCT THE FOLLOWING: (SEE SHEETS TMP-21 AND TMP-22)

- RPA- STA. 10+00 +/- TO STA. 15+50 +/-, INCLUDING INSTALLATION OF CONDUIT FOR TRAFFIC SIGNAL LOOP LEAD-IN CABLE
- L- STA. 46+78 +/- (LT) TO STA. 53+57 +/- (LT)
- RPD- STA. 10+00 +/- TO STA. 14+00 +/-
- L- STA. 50+67 +/- (RT) TO STA. 68+00 +/- (RT)

- C.) USING LANE CLOSURES (RSD 1101.02, SHEET 4) ON -L- (I-85) SB AND NB, PLACE TEMPORARY MARKINGS IN THE TEMPORARY AND/OR FINAL PATTERN ON -L- (I-85), -RPA- AND -RPD- AS SHOWN ON SHEETS TMP-24 THRU TMP-27, AND SHIFT TRAFFIC TO THE PHASE 1, STEP 5 TRAFFIC PATTERN ON THESE ROADS. (NOTE: ON-RAMP TO I-85 NB (-RPD-) WILL REMAIN CLOSED USING DRUMS AND TYPE III BARRICADES UNTIL PHASE 2.)

### STEP 5:

USING LANE CLOSURES (RSD 1101.02, SHEET 3), PLACE TEMPORARY MARKING ON NB -Y1- (US 321) AS SHOWN ON SHEETS TMP-23 THRU TMP-25, THEN USING LANE CLOSURES (RSD 1101.02, SHEET 3), AS NEEDED, CONSTRUCT LEFT SIDE WIDENING AND CURB & GUTTER FROM -Y1- STA. 12+96 +/- TO STA. 23+71 +/- (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #3 (12-0922T3) AT -Y1- (US 321) / -Y3- (BULB AVE) / TULIP DR MUST BE COMPLETED TO SHIFT NB -Y1- (US 321) TRAFFIC TO THE PHASE 1, STEP 5 PATTERN.)

USING LANE CLOSURES (RSD 1101.02, SHEET 3) ON SB -Y1- (US 321), AS NECESSARY AND LANE NARROWING ON EXISTING RAMP B AND EXISTING LOOP C, PLACE TRAFFIC IN THE TEMPORARY TRAFFIC PATTERN SHOWN ON SHEET TMP-25, THEN CONSTRUCT CURB AND GUTTER, PAVEMENT REMOVAL AND SHOULDER CONSTRUCTION ALONG EXISTING RAMP B AND LOOP B. (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #2 (12-0023T2) AT -Y1- (US 321) / EXISTING RAMP B AND LOOP B MUST BE COMPLETED TO SHIFT EXISTING LOOP B TRAFFIC TO THE PHASE 1, STEP 5 PATTERN.)

AWAY FROM TRAFFIC OR USING LANE CLOSURES (RSD 1101.02, SHEET 3), COMPLETE THE FOLLOWING:

- CONSTRUCTION OF -RPD- FROM STA. 14+00 +/- TO -Y1- (US 321), INCLUDING CULVERT
- CONSTRUCTION OF WIDENING AND CURB AND GUTTER ALONG NB -Y1- (US 321) AND ALONG SB -Y1- (IF NOT COMPLETED EARLIER)

### STEP 6:

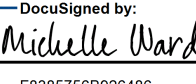
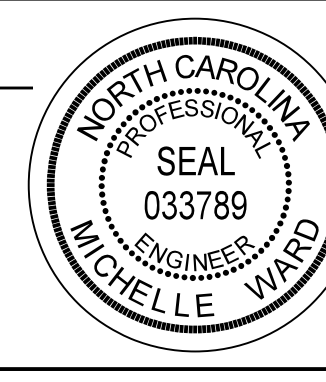
USING LANE CLOSURES (RSD 1101.02, SHEET 3), PLACE TEMPORARY MARKING ON NB -Y1- (US 321) AS SHOWN ON SHEETS TMP-28 THRU TMP-31 AND SHIFT TRAFFIC TO THE PHASE 1, STEP 6 TEMPORARY TRAFFIC PATTERN ON NB -Y1- (US 321), THEN REMOVE EXISTING CURB ISLANDS AND MONOLITHIC ISLANDS AND REPLACE WITH PAVEMENT. (SEE SHEETS TMP-28 THRU TMP-31) (NOTE: RETURN NB -Y1- (US 321) TO THE TEMPORARY TRAFFIC PATTERN AND SB -Y1- (US 321) TO THE EXISTING TRAFFIC PATTERN AT THE END OF THE WORK PERIOD.)

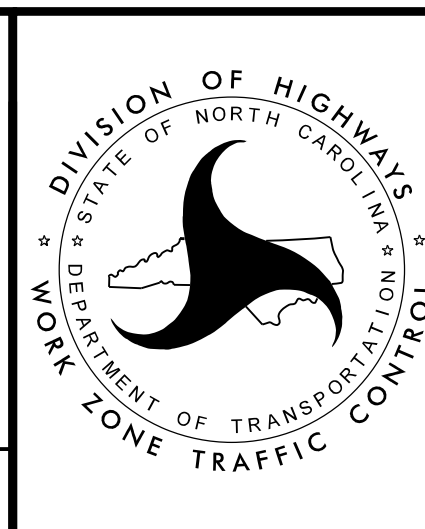
NOTE: INSTALLATION AND ACTIVATION OF THE FOLLOWING TEMPORARY SIGNALS WILL BE REQUIRED TO SHIFT TO THE PHASE 1, STEP 6 TRAFFIC PATTERN:

- TEMPORARY SIGNAL #4 (12-0922T4) AT -Y1- (US 321) / -Y3- (BULB AVE) / TULIP DR
- TEMPORARY SIGNAL #3 (12-0023T3) AT -Y1- (US 321) / EXISTING RAMP B AND LOOP B
- TEMPORARY SIGNAL #3 (12-0162T3) AT -Y1- (US 321) / EXISTING RAMP C AND LOOP C
- TEMPORARY SIGNAL #2 (12-1623T2) AT -Y1- (US 321) / RADIO ST

PROJ. REFERENCE NO.	SHEET NO.
I-5000	TMP-3




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DocuSigned by: Michelle Ward F335759B206486  
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TEMPORARY TRAFFIC CONTROL PHASING

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# PHASING

PROJ. REFERENCE NO.	SHEET NO.
I - 5000	TMP - 3A
 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	

COMPLETE THE WORK REQUIRED ON -Y1- (US 321 IN PHASE 1, STEP 7 USING WEEKEND LANE CLOSURES FROM 9:00 PM FRIDAY TO 6:00 AM MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

REPEAT STEP 7 FOR A MAXIMUM OF 2 WEEKENDS UNTIL ALL WORK IS COMPLETE.

**STEP 7:**

CONDUCT THE FOLLOWING SEQUENCE OF ACTIVITIES:

- A.) USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), COMPLETE THE FOLLOWING:
  - INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES FOR CLOSURE OF LEFT TURN FROM -Y1- (US 321) NB TO RANKIN LAKE RD AND CLOSE THE LEFT TURN TO TRAFFIC. (SEE SHEETS TMP-28 THRU TMP-30) (SEE LOCAL NOTE 1)
  - INSTALL TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES FOR WEEKEND LANE CLOSURE FOR PROPOSED ISLAND CONSTRUCTION (SEE SHEETS TMP-28 THRU TMP-31)
  
- B.) USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), ON BOTH NB AND SB -Y1- (US 321), CONDUCT THE FOLLOWING:
  - 1.5" MILL FROM -Y1- STA. 31+15 +/- TO STA. 45+00 +/- (SEE SHEETS TMP-30 AND TMP-31)
  - CONSTRUCT PROPOSED ISLANDS ALONG -Y1- (US 321) FROM -Y1- STA. 13+98 +/- TO STA. 38+48 +/- AS SHOWN ON SHEETS TMP-28 THRU TMP-30 ONLY. RETURN TRAFFIC TO THE CURRENT AND/OR PHASE 2 TRAFFIC PATTERN AT THE END OF THE WORK PERIOD. (SEE NEXT BULLET (C) FOR SHIFTING TO THE PHASE 2 TRAFFIC PATTERN.) (SEE LOCAL NOTE 2)
  
- C.) ONCE PROPOSED ISLANDS IN STEP 7(B) ARE COMPLETE, USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3), LAW ENFORCEMENT, AND STOPPING TRAFFIC, PLACE TEMPORARY MARKING IN THE PHASE 2 TRAFFIC PATTERN ON -Y1- (US 321), TULIP DRIVE, RANKIN LAKE RD, -RPD-, -L- (I-85 NB) EXISTING RAMP B, -LPB-, EXISTING RAMP C AND RADIO ST, THEN OPEN ALL ROADS TO THE PHASE 2 TRAFFIC PATTERN AND REMOVE OFF-SITE DETOUR SIGNING FOR RANKIN LAKE RD. (SEE SHEETS TMP-32 THRU TMP-35)

**NOTE:** INSTALLATION AND ACTIVATION OF THE FOLLOWING SIGNALS WILL BE REQUIRED WHEN SHIFTING TRAFFIC TO THE PHASE 2 TRAFFIC PATTERN:

- FINAL SIGNAL (12-0922) AT -Y1- (US 321) / -Y3- (BULB AVE) / TULIP DR
- TEMPORARY SIGNAL #2 (12-0921T2) AT -Y1- (US 321) / RANKIN LAKE RD
- FINAL SIGNAL (12-1803) AT -Y1- (US 321) / -RPD-
- TEMPORARY SIGNAL #4 (12-0023T4) AT -Y1- (US 321) / EXISTING RAMP B AND LOOP B
- TEMPORARY SIGNAL #4 (12-0162T4) AT -Y1- (US 321) / EXISTING RAMP C AND LOOP C
- FINAL SIGNAL (12-1623T2) AT -Y1- (US 321) / RADIO ST

## PHASE 2 (SHEETS TMP-32 THRU TMP-37)

**STEP 1:**

COMPLETE THE WORK REQUIRED ON -Y1- (US 321) IN PHASE 2, STEP 1 USING WEEKEND LANE CLOSURES FROM 9:00 PM FRIDAY TO 6:00 AM MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

REPEAT STEP 1 FOR A MAXIMUM OF 3 WEEKENDS UNTIL ALL WORK IS COMPLETE.

**STEP 1:**

USING LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3) ON -Y1- (US 321), CONDUCT THE FOLLOWING: (SEE SHEETS TMP-32 THRU TMP-35) (NOTE: INSTALL CMS AS SHOWN ON SHEET TMP-32 PRIOR TO EACH WEEKEND LANE CLOSURE OPERATION.)

- CONSTRUCTION OF CURB & GUTTER AND PAVEMENT REMOVAL (AS NEEDED) ON THE SB SIDE OF -Y1- (US 321) IN THE FOLLOWING LOCATIONS: (SEE SHEETS TMP-33 AND TMP-34)

**NOTE:** REMOVAL OF EXISTING LOOP C AND ALONG SB -Y1- (US 321) IN THE VICINITY OF THE CURB AND GUTTER MAY BE COMPLETED AFTER CURB AND GUTTER IS INSTALLED DURING THE WEEKEND LANE CLOSURE.

- Y1- STA. 19+62 +/- TO STA. 22+71 +/-
- LPB- STA. 15+20 +/- TO -Y1- STA. 39+00 +/-

**NOTE:** OPEN TRAFFIC TO THE CURRENT TEMPORARY TRAFFIC PATTERN AT THE END OF THE WORK PERIOD.

- INSTALLATION OF PROPOSED ISLANDS IN THE FOLLOWING LOCATIONS: (SEE SHEETS TMP-33 THRU TMP-35)

- Y1- STA. 24+00 +/- (RT)
- Y1- STA. 30+05 +/- (RT)
- Y1- STA. 30+10 +/- TO STA. 33+35 +/- (MEDIAN)
- Y1- STA. 39+42 +/- (RT)
- Y1- STA. 39+19 +/- TO STA. 43+52 +/- (MEDIAN)

**NOTE:** OPEN TRAFFIC TO THE CURRENT TEMPORARY TRAFFIC PATTERN AT THE END OF THE WORK PERIOD.

WORK IN PHASE 2, STEP 2 CAN BE COMPLETED IN CONJUNCTION WITH PLACEMENT OF FINAL LAYER OF SURFACE COURSE ON ALL OTHER ROADS IN PHASE 2, STEP 3.

COMPLETE THE WORK REQUIRED ON -LPB- IN PHASE 2, STEP 2 DURING A WEEKEND OPERATION FROM 9:00 PM FRIDAY TO 6:00 AM MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

**STEP 2:**

INSTALL OFF-SITE DETOUR SIGNS AS SHOWN ON SHEET TMP-37 AND CLOSE EXISTING LOOP B AS SHOWN ON SHEET TMP-36, THEN MILL EXISTING LOOP B 3" & OVERLAY, INCLUDING THE FINAL LAYER OF SURFACE COURSE, AND PLACE FINAL MARKINGS AND MARKERS, THEN OPEN -LPB- TO TRAFFIC. (NOTE: INSTALLATION AND ACTIVATION OF TEMPORARY SIGNAL #5 (12-0023T5) AT -Y1- (US 321) / EXISTING RAMP B AND LOOP B WILL BE REQUIRED WHEN CLOSING EXISTING LOOP B AND THE FINAL SIGNAL (12-0023) WILL BE REQUIRED WHEN REOPENING -LPB- TO TRAFFIC.)

**STEP 3:**

USING LANE CLOSURES (RSD 1101.02, SHEETS 1, 3, 4, 9 & 10), LAW ENFORCEMENT, AND STOPPING TRAFFIC, COMPLETE THE FOLLOWING:


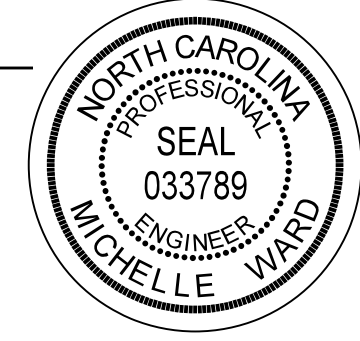

- MILL 1.5" ON -L- (I-85) FROM THE END OF THE EXISTING CONCRETE APPROACH SLAB TO -L- STA. 70+54 +/- (NB) AND -L- STA. 56+68 +/- (SB) AND PLACE THE FINAL LAYER OF SURFACE COURSE, REPLACE RUMBLE STRIPS IN THE SAME AREA, THEN PLACE THE FINAL MARKINGS AND MARKERS ON -L- (I-85) AND OPEN TO THE FINAL PATTERN. (SEE FINAL PMP)
- PLACE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS ON ALL OTHER ROADS AND OPEN ALL ROADS TO THE FINAL PATTERN. (SEE FINAL PMP) (NOTE: INSTALLATION AND ACTIVATION OF FINAL SIGNAL (12-0921) AT -Y1- (US 321) / RANKIN LAKE RD AND FINAL SIGNAL (12-0162) AT -Y1- (US 321) / EXISTING RAMP C AND LOOP C WILL BE REQUIRED WHEN PLACING TRAFFIC IN THE FINAL PATTERN. ALL OTHER FINAL SIGNALS WERE PLACED EARLIER.)

**STEP 4:**

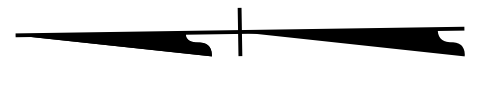
REMOVE ALL REMAINING TRAFFIC CONTROL SIGNS AND DEVICES.

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REVISIONS

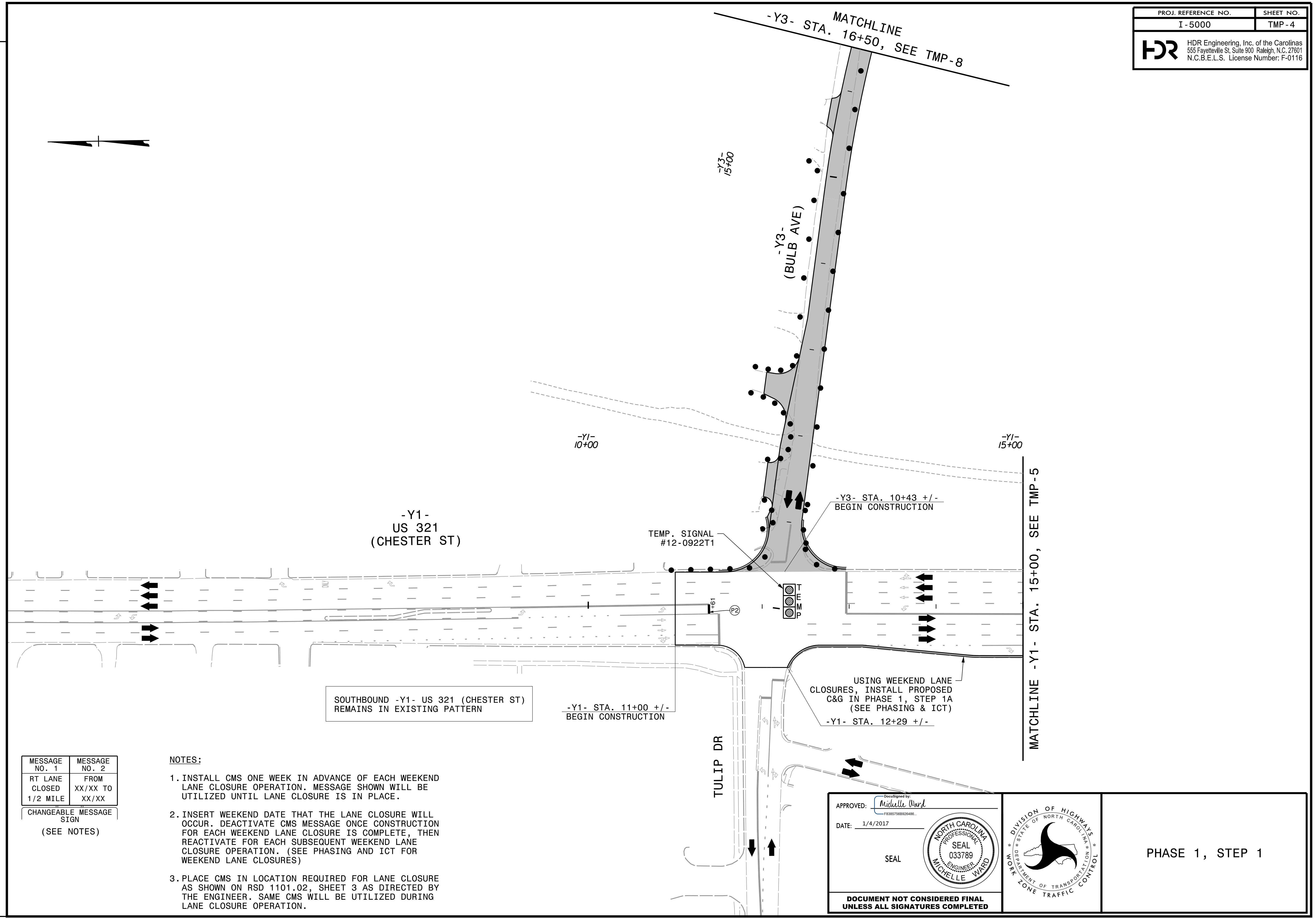
APPROVED:  DATE: 1/4/2017 SEAL 		<h3>TEMPORARY TRAFFIC CONTROL PHASING</h3>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		





REVISIONS

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MESSAGE NO. 1	MESSAGE NO. 2
RT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX


CHANGEABLE MESSAGE SIGN  
(SEE NOTES)

- NOTES:**
- INSTALL CMS ONE WEEK IN ADVANCE OF EACH WEEKEND LANE CLOSURE OPERATION. MESSAGE SHOWN WILL BE UTILIZED UNTIL LANE CLOSURE IS IN PLACE.
  - INSERT WEEKEND DATE THAT THE LANE CLOSURE WILL OCCUR. DEACTIVATE CMS MESSAGE ONCE CONSTRUCTION FOR EACH WEEKEND LANE CLOSURE IS COMPLETE, THEN REACTIVATE FOR EACH SUBSEQUENT WEEKEND LANE CLOSURE OPERATION. (SEE PHASING AND ICT FOR WEEKEND LANE CLOSURES)
  - PLACE CMS IN LOCATION REQUIRED FOR LANE CLOSURE AS SHOWN ON RSD 1101.02, SHEET 3 AS DIRECTED BY THE ENGINEER. SAME CMS WILL BE UTILIZED DURING LANE CLOSURE OPERATION.

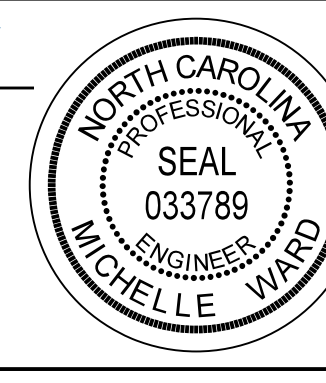
SOUTHBOUND -Y1- US 321 (CHESTER ST) REMAINS IN EXISTING PATTERN

-Y1- STA. 11+00 +/- BEGIN CONSTRUCTION

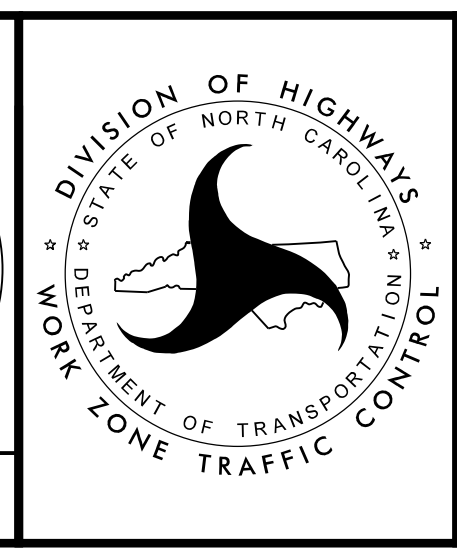
USING WEEKEND LANE CLOSURES, INSTALL PROPOSED C&G IN PHASE 1, STEP 1A (SEE PHASING & ICT)  
 -Y1- STA. 12+29 +/-

APPROVED:   
 DATE: 1/4/2017

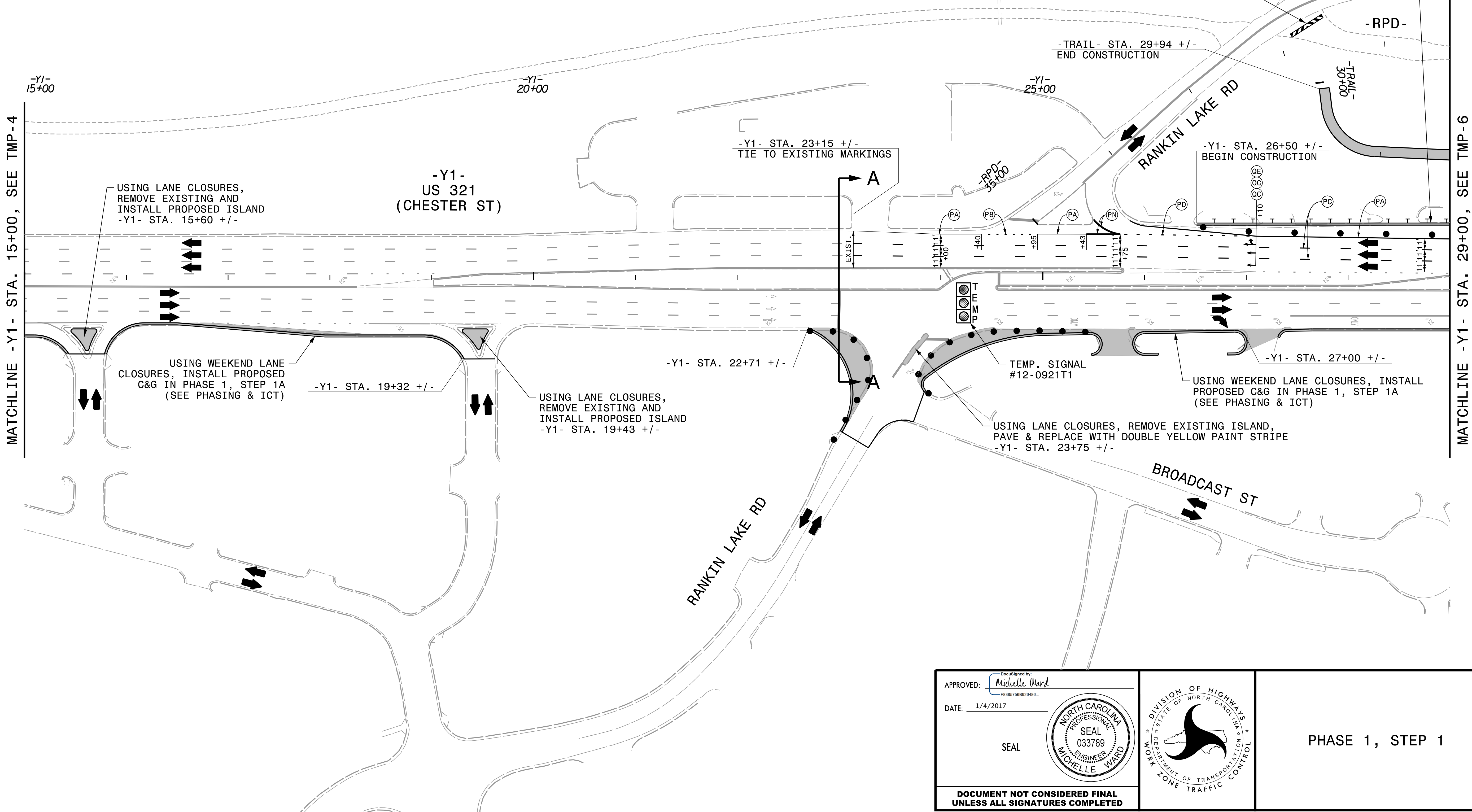
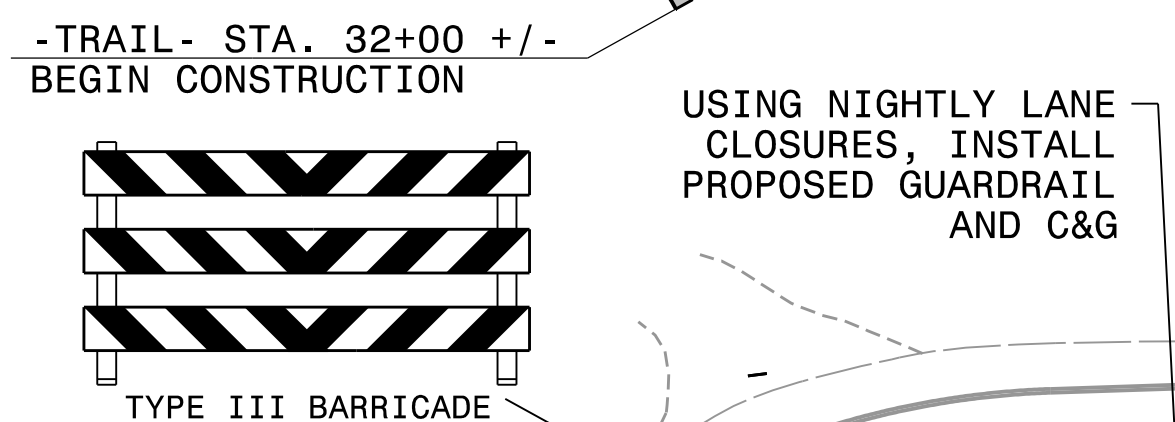
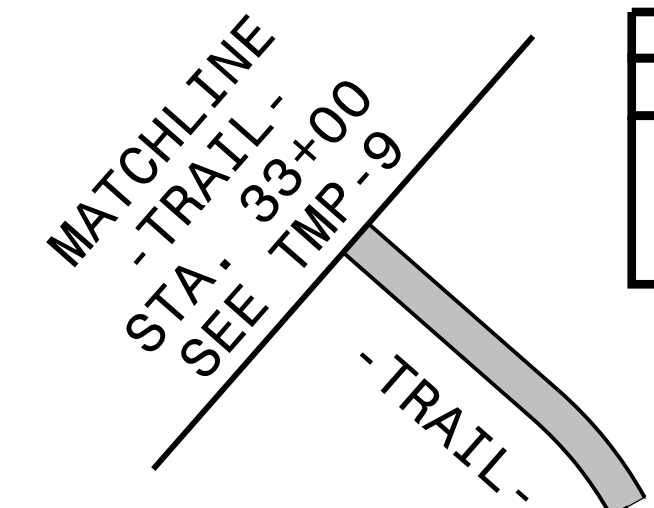
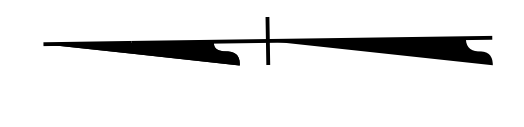
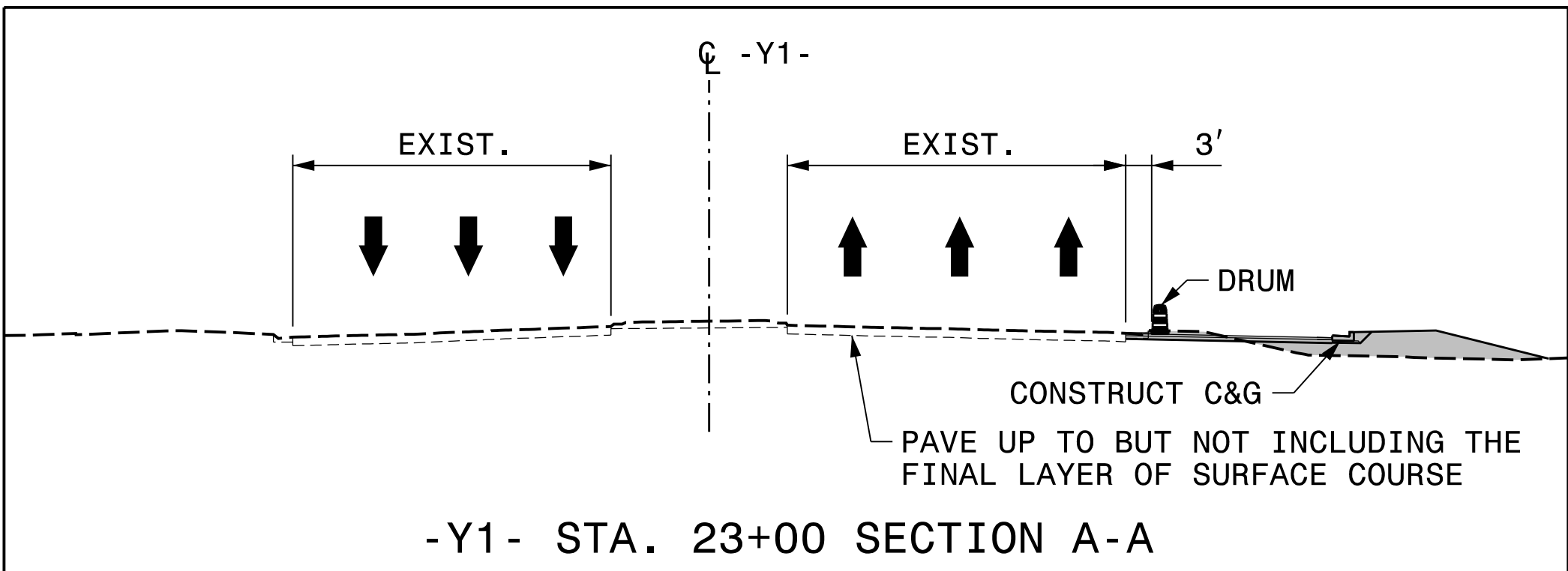
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PHASE 1, STEP 1

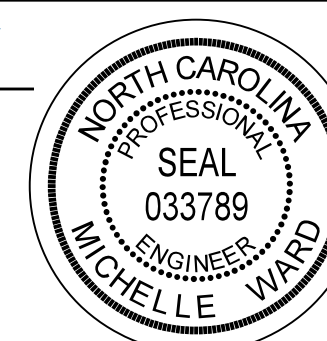


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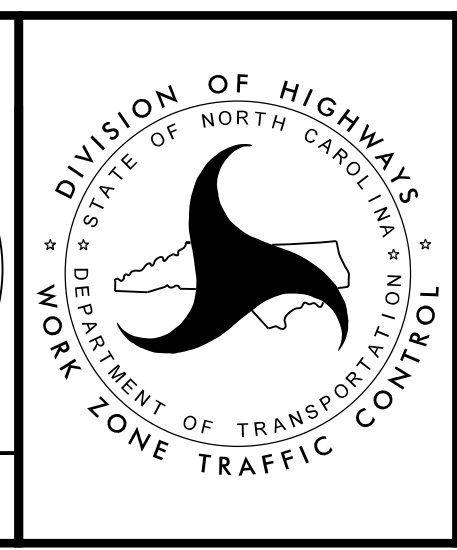
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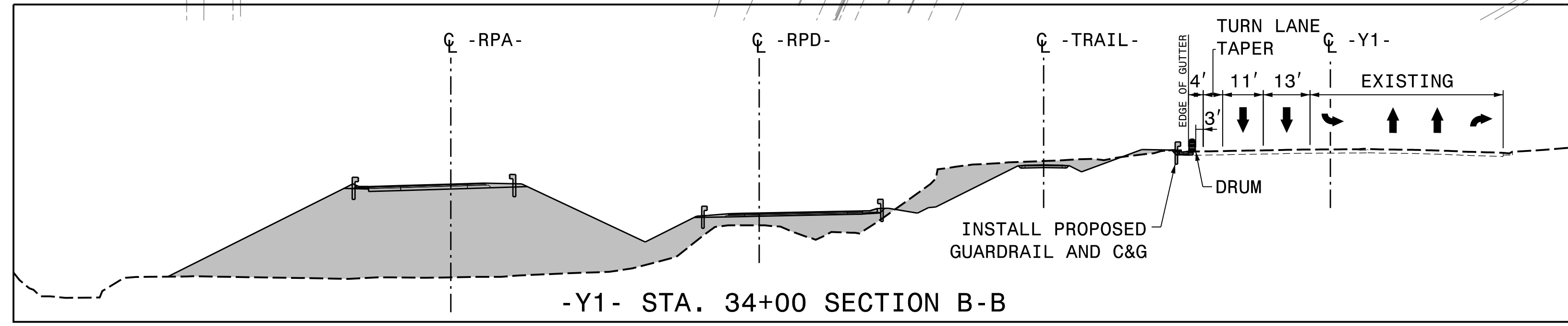
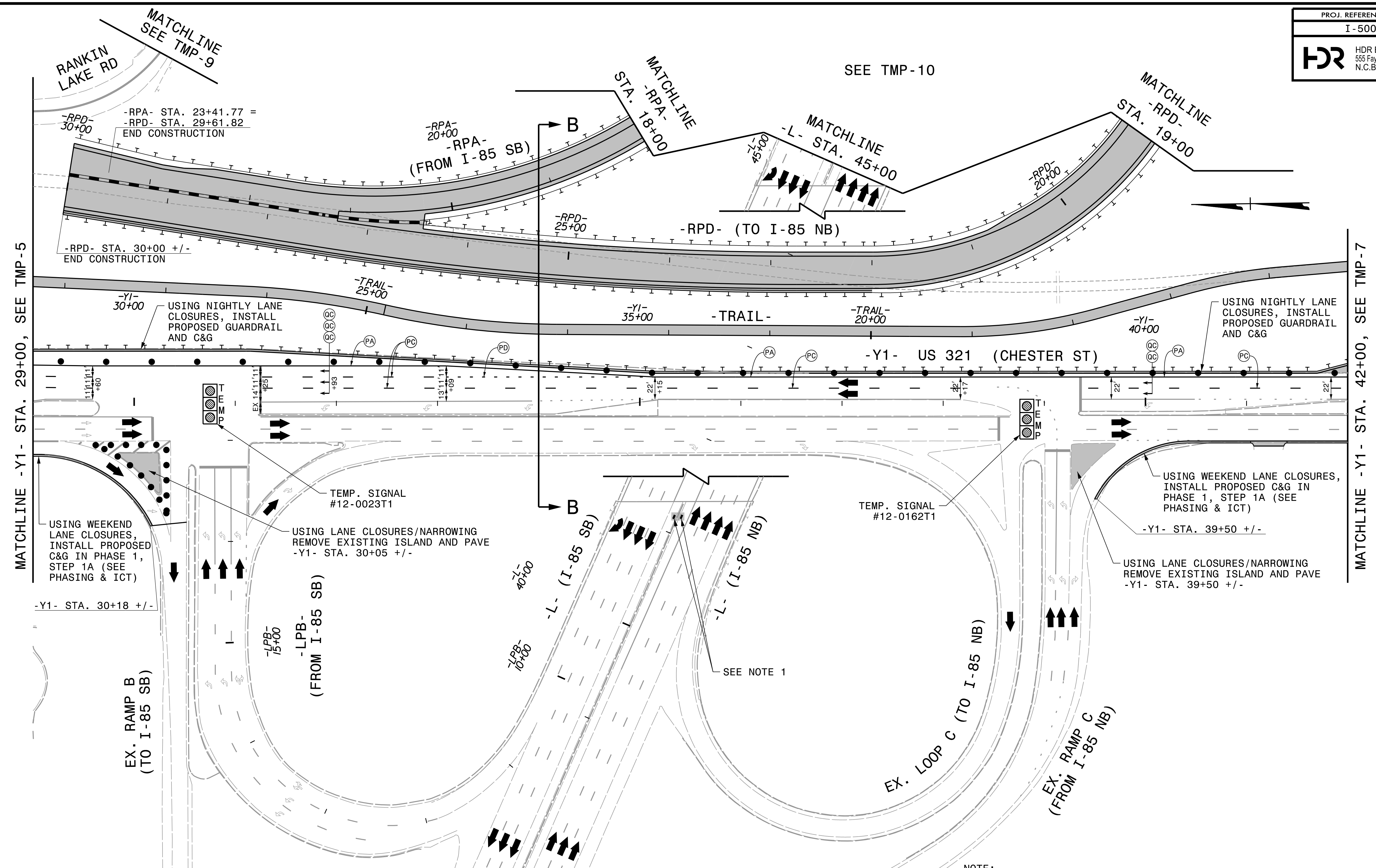
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UNLESS ALL SIGNATURES COMPLETED**



PHASE 1, STEP 1



**NOTE:**

1. RETROFIT EXISTING DROP INLET WITH NEW STEEL GRATE & FRAME USING LANE AND/OR SHOULDER CLOSURES, AS NECESSARY. SEE DRAINAGE PLANS FOR ALL LOCATIONS.

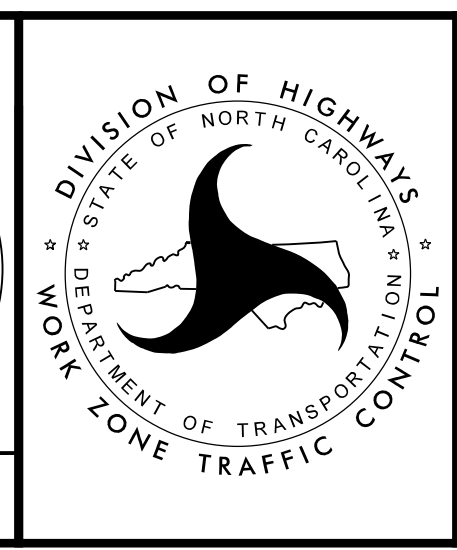
APPROVED: *Michelle Ward*

DATE: 1/4/2017

SEAL

**NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033789 MICHELLE WARD**

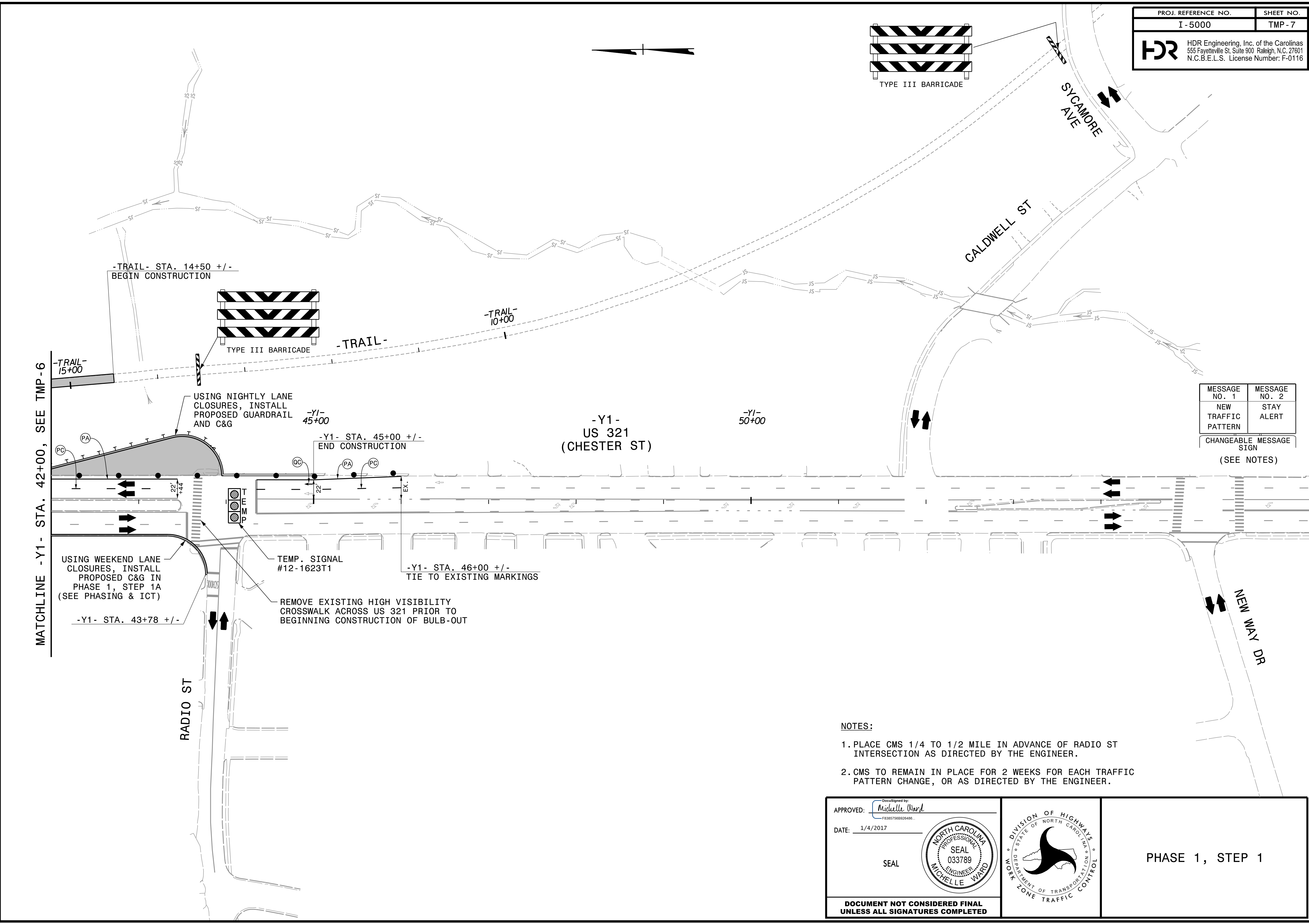
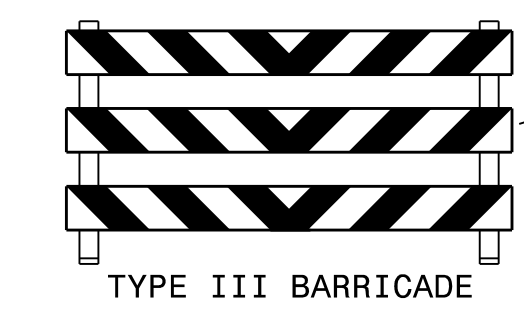
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**PHASE 1, STEP 1**

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REVISIONS



MESSAGE NO. 1 NEW TRAFFIC PATTERN	MESSAGE NO. 2 STAY ALERT
CHANGEABLE MESSAGE SIGN (SEE NOTES)	

MATCHLINE -Y1- STA. 42+00, SEE TMP-6

USING NIGHTLY LANE CLOSURES, INSTALL PROPOSED GUARDRAIL AND C&G

USING WEEKEND LANE CLOSURES, INSTALL PROPOSED C&G IN PHASE 1, STEP 1A (SEE PHASING & ICT)

REMOVE EXISTING HIGH VISIBILITY CROSSWALK ACROSS US 321 PRIOR TO BEGINNING CONSTRUCTION OF BULB-OUT

TEMP. SIGNAL #12-1623T1

-Y1- STA. 45+00 +/- END CONSTRUCTION

-Y1- STA. 46+00 +/- TIE TO EXISTING MARKINGS

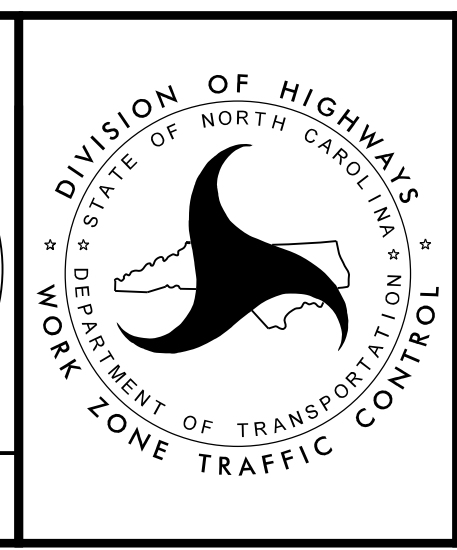
**NOTES:**

1. PLACE CMS 1/4 TO 1/2 MILE IN ADVANCE OF RADIO ST INTERSECTION AS DIRECTED BY THE ENGINEER.
2. CMS TO REMAIN IN PLACE FOR 2 WEEKS FOR EACH TRAFFIC PATTERN CHANGE, OR AS DIRECTED BY THE ENGINEER.

APPROVED:

DATE: 1/4/2017

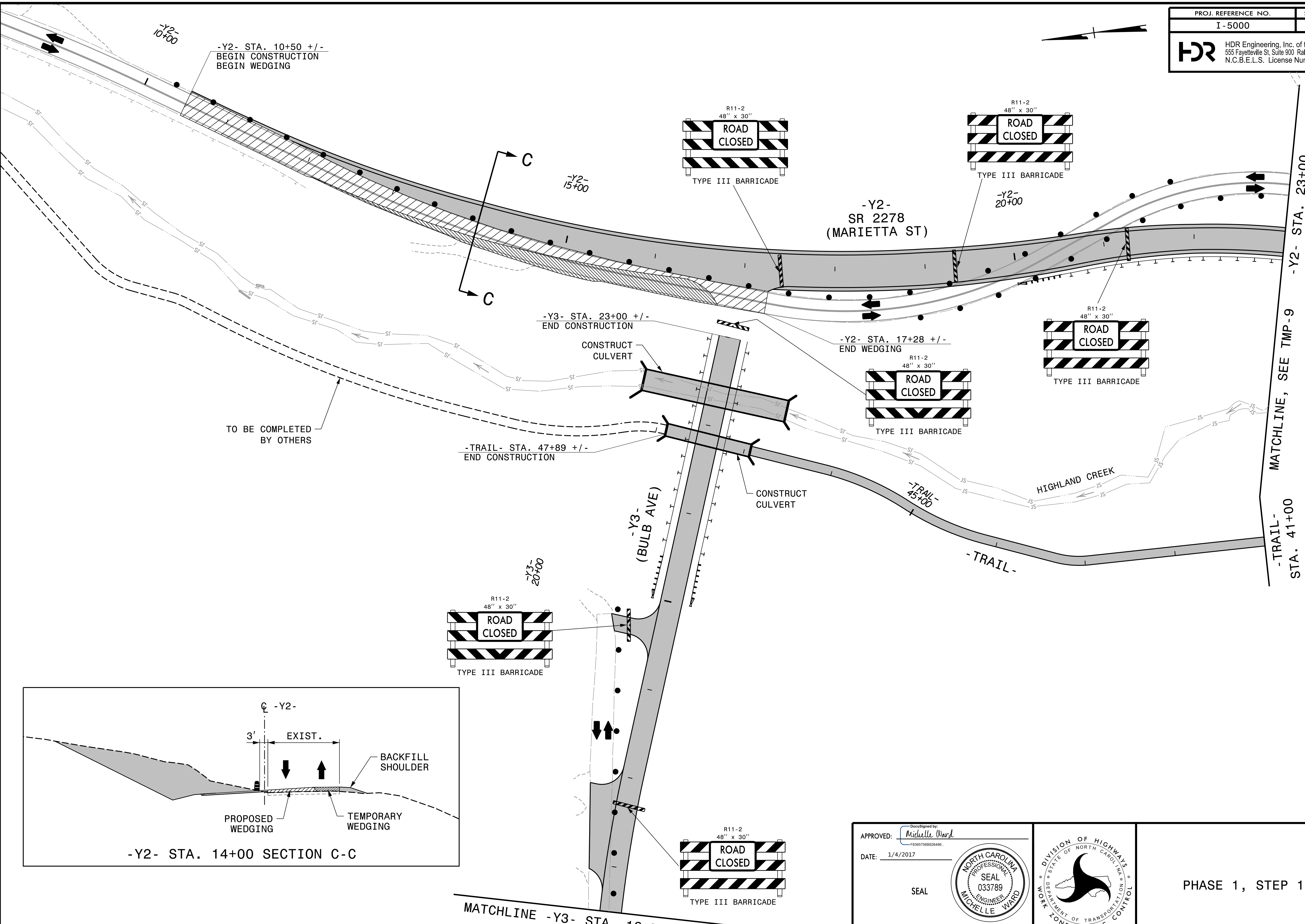
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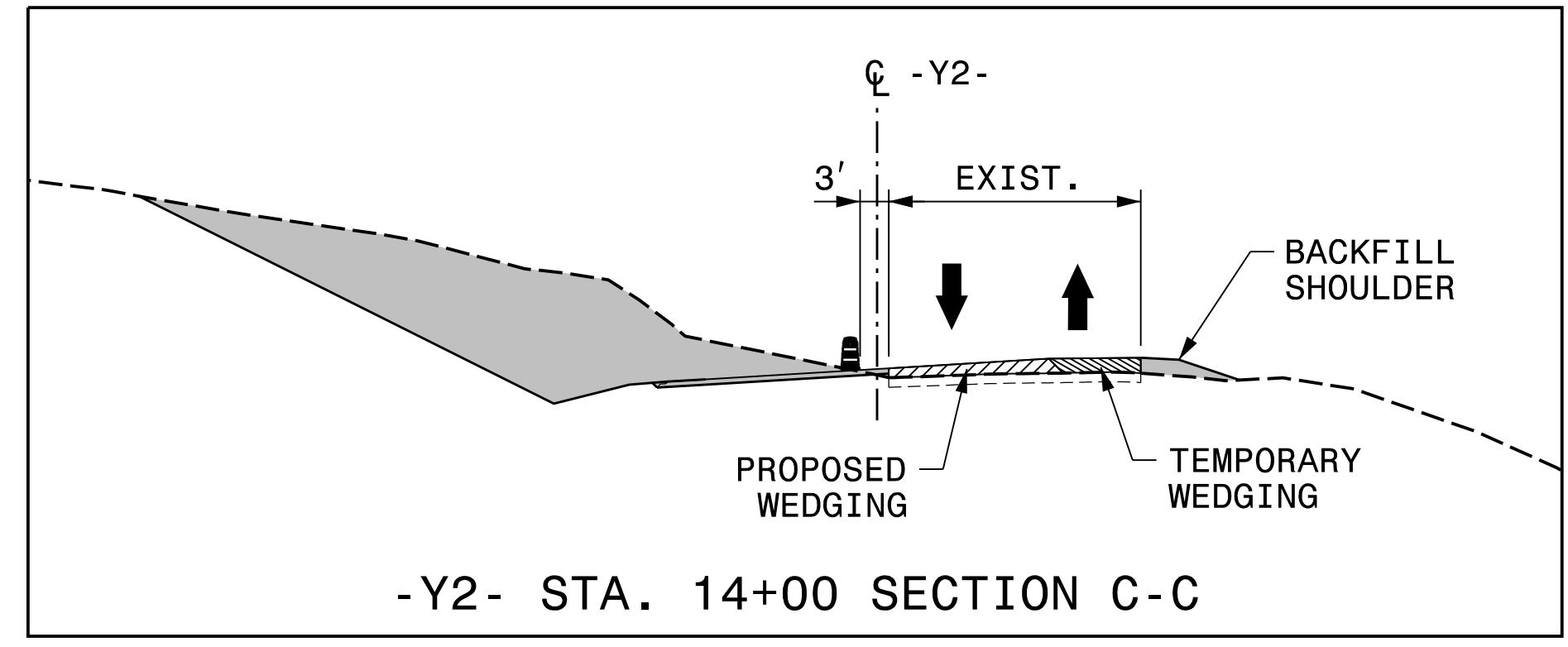
PHASE 1, STEP 1

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**REVISIONS**



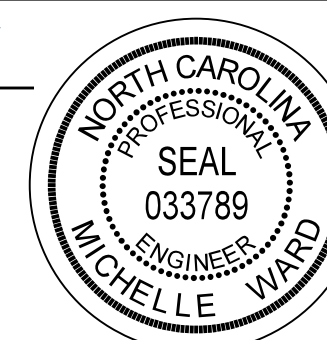
TO BE COMPLETED BY OTHERS



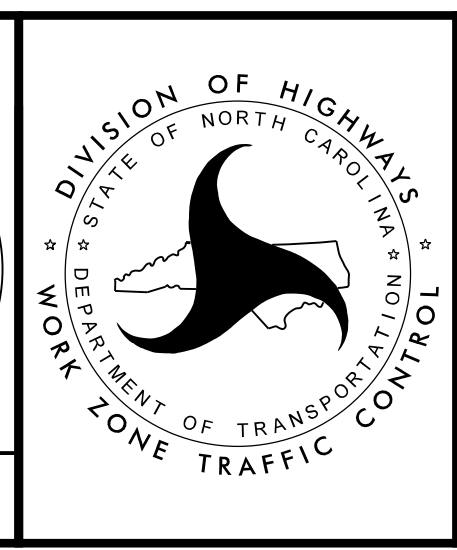
APPROVED: *Michelle Ward*  
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DATE: 1/4/2017

SEAL




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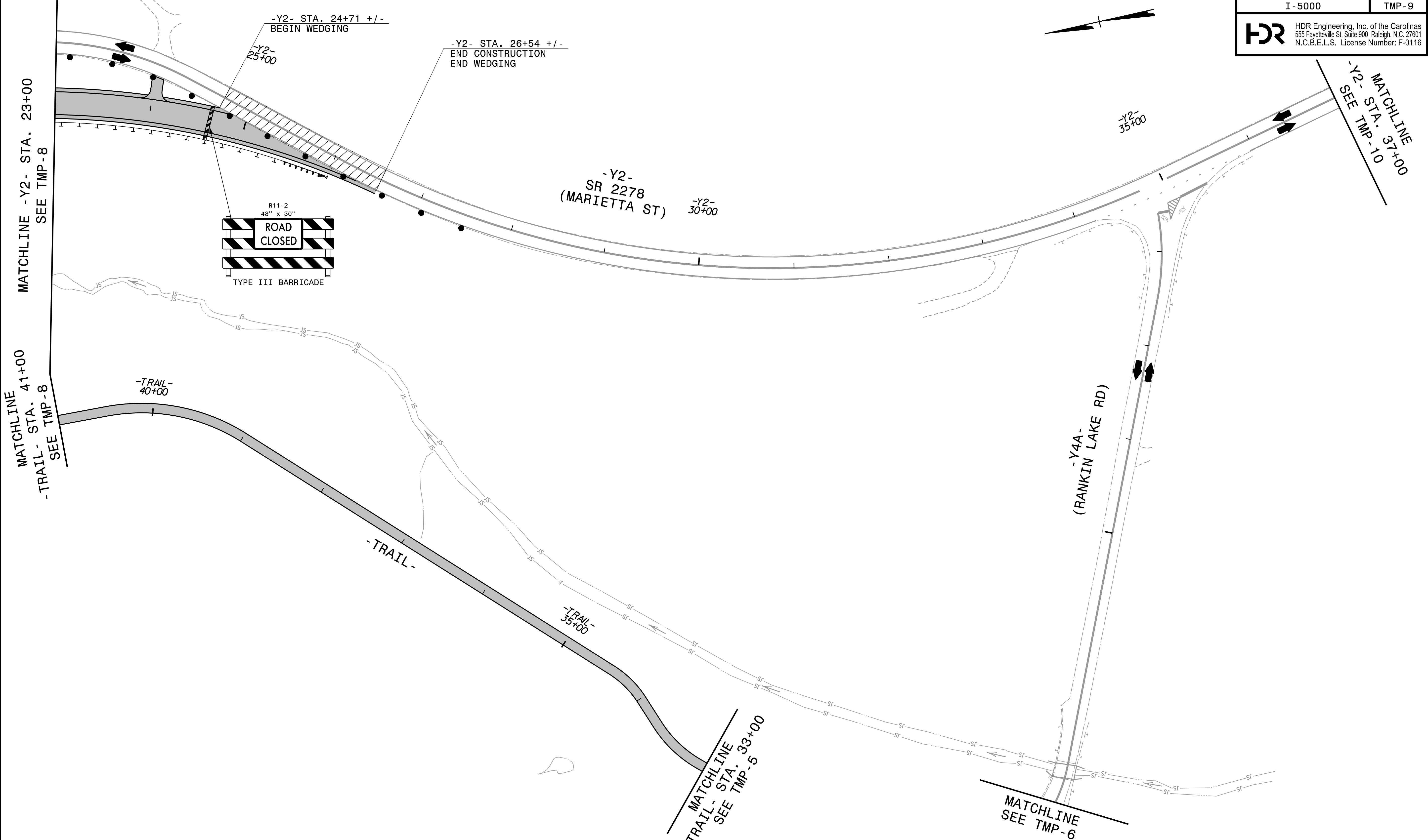
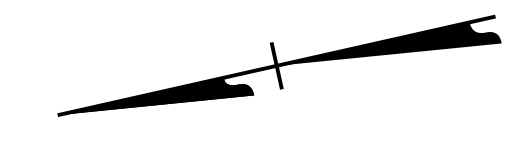


PHASE 1, STEP 1

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REVISIONS

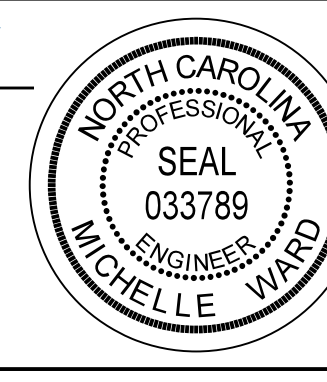
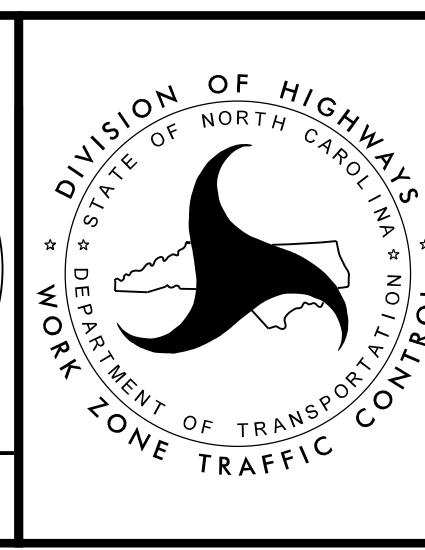
PROJ. REFERENCE NO.	SHEET NO.
I - 5000	TMP - 9
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St., Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



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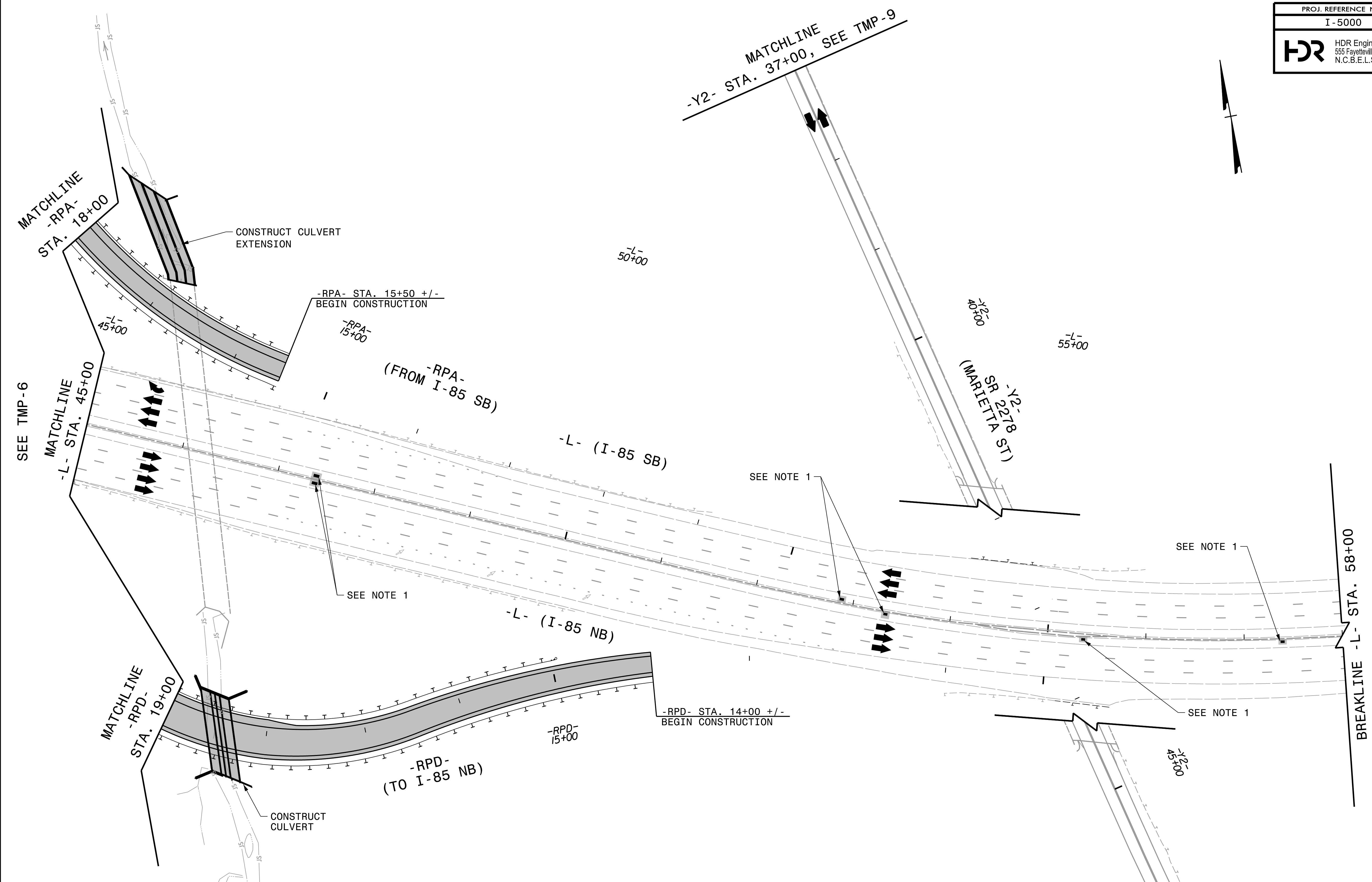
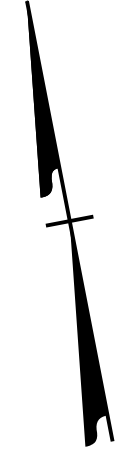
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APPROVED: *Michelle Ward*  
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 DATE: 1/4/2017  
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PHASE 1, STEP 1

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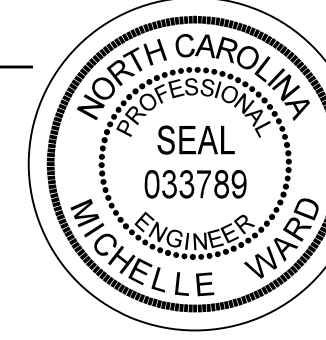


REVISIONS

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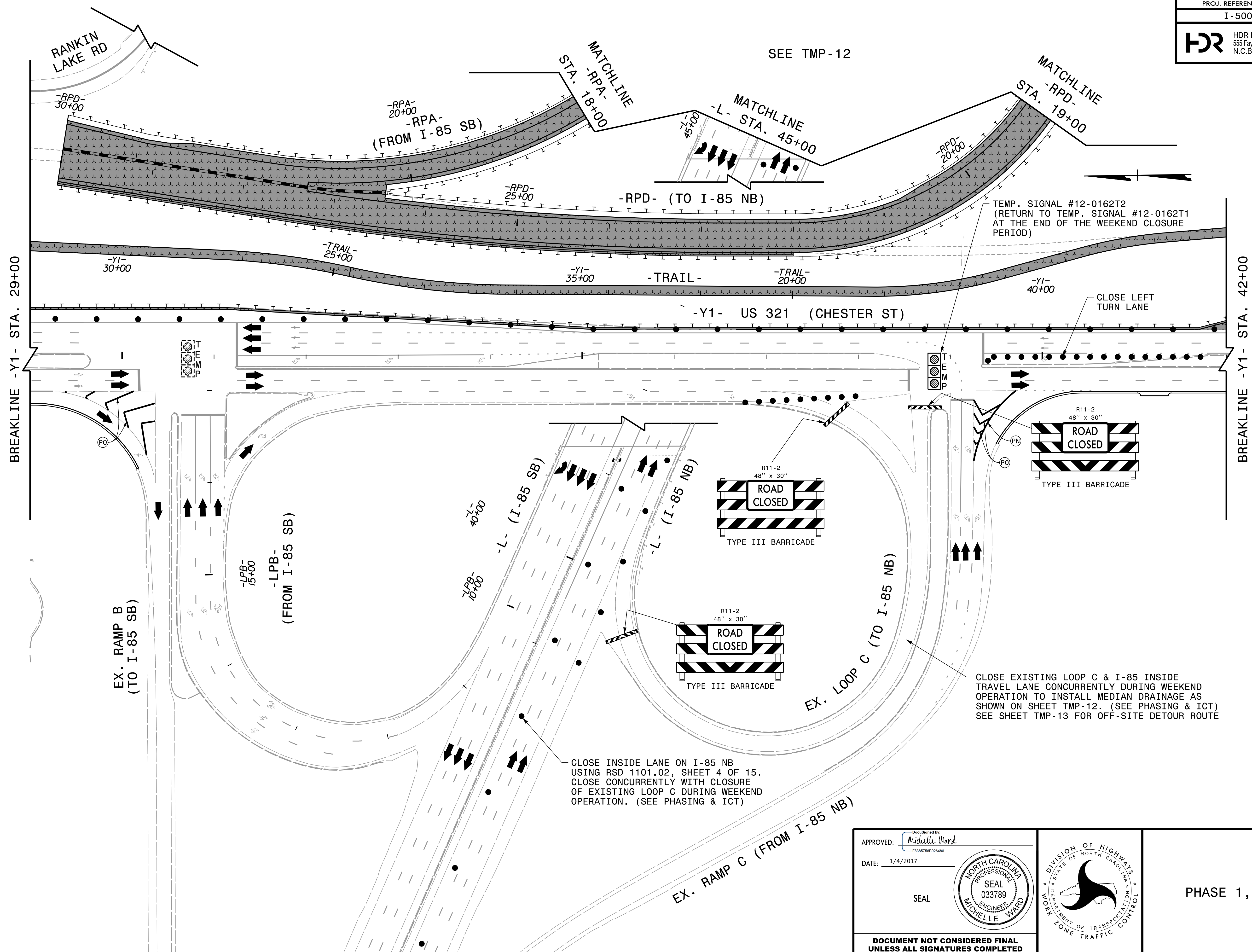
**NOTE:**

1. RETROFIT EXISTING DROP INLET WITH NEW STEEL GRATE & FRAME USING LANE AND/OR SHOULDER CLOSURES, AS NECESSARY. SEE DRAINAGE PLANS FOR ALL LOCATIONS.

APPROVED:   
 DATE: 1/4/2017  
 SEAL  





PHASE 1, STEP 1



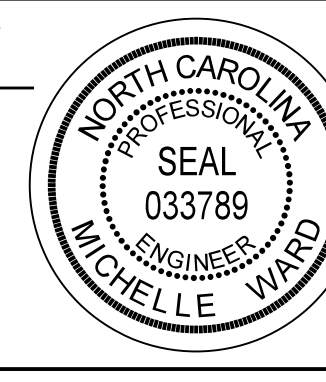
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REVISIONS

APPROVED: 

DATE: 1/4/2017

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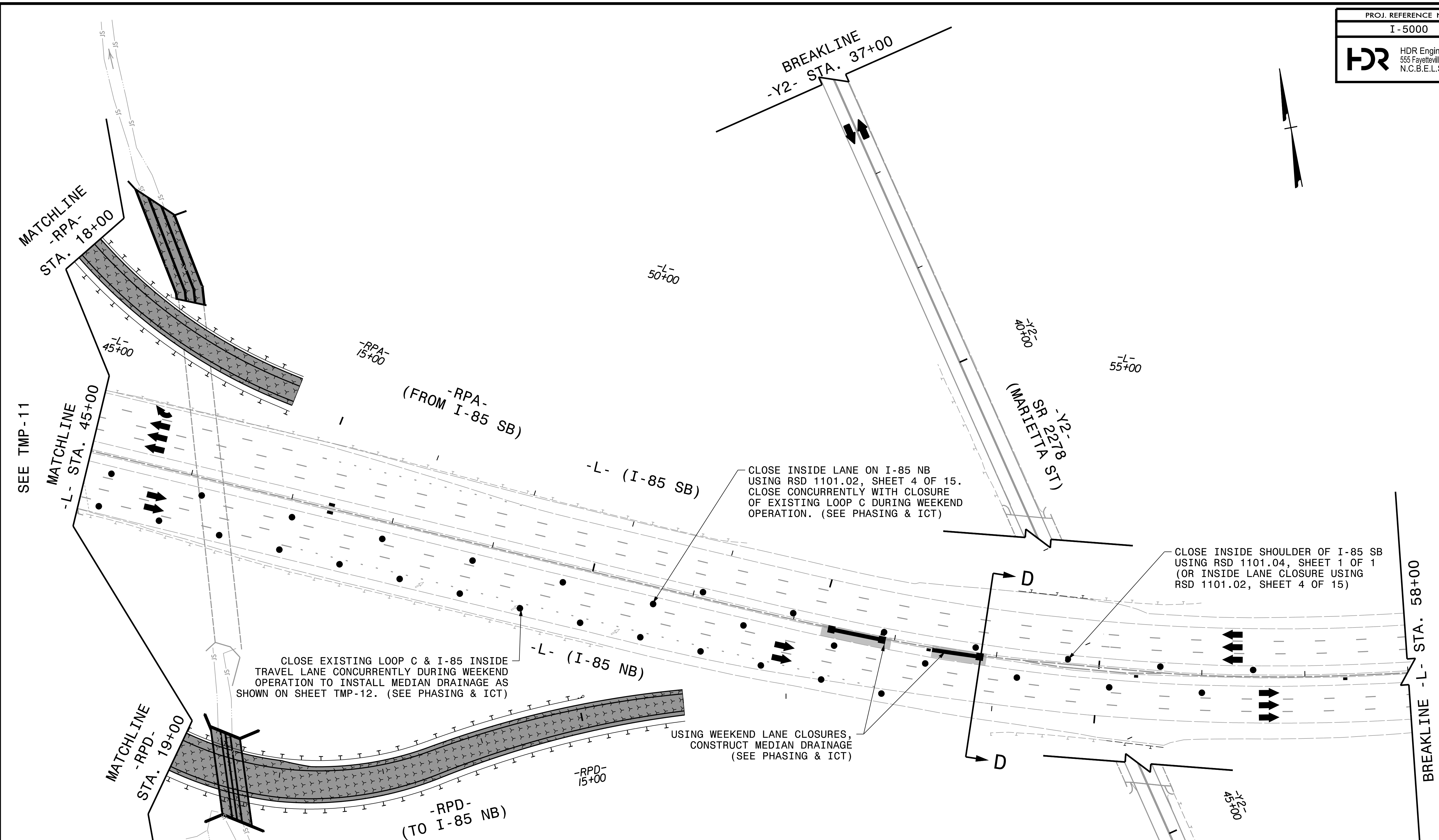
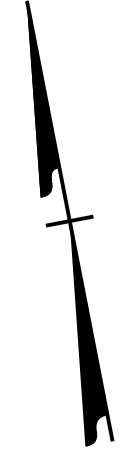


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE 1, STEP 1B





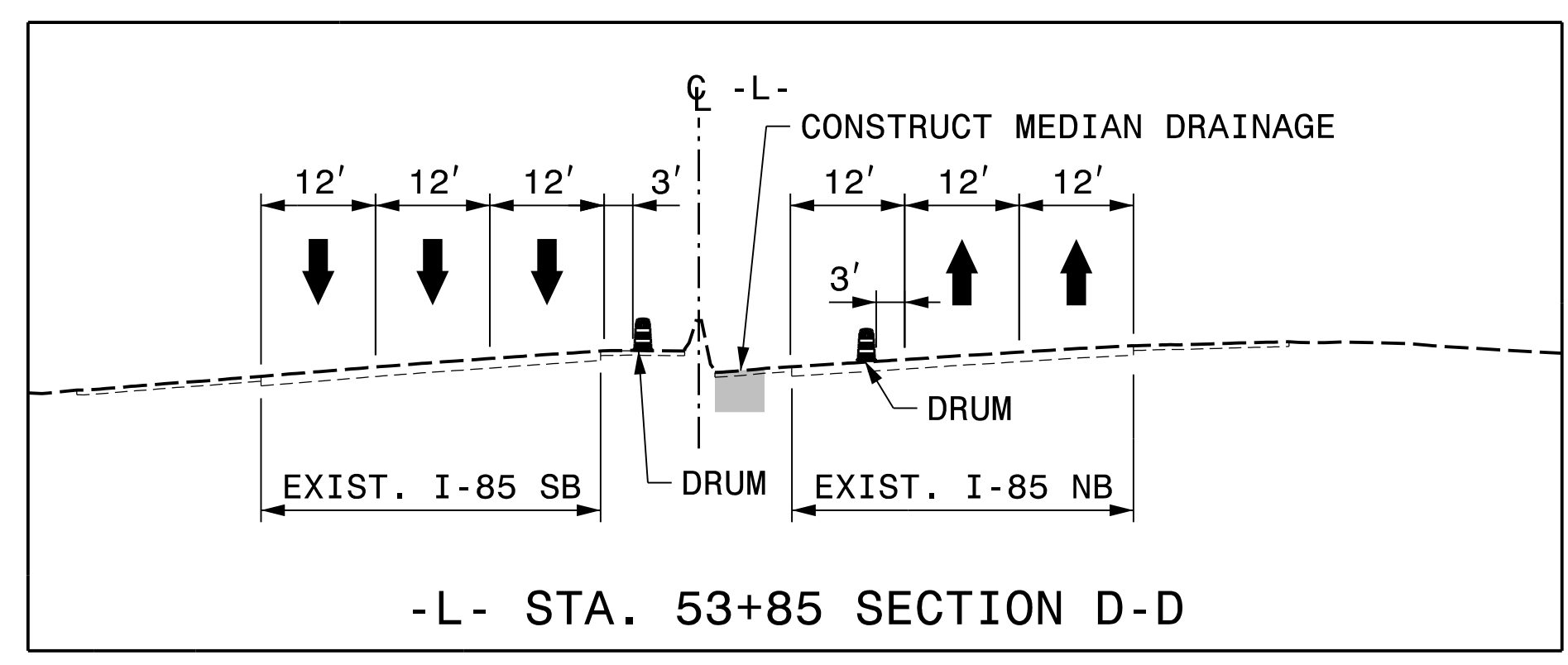
SEE TMP-11

CLOSE EXISTING LOOP C & I-85 INSIDE TRAVEL LANE CONCURRENTLY DURING WEEKEND OPERATION TO INSTALL MEDIAN DRAINAGE AS SHOWN ON SHEET TMP-12. (SEE PHASING & ICT)

CLOSE INSIDE LANE ON I-85 NB USING RSD 1101.02, SHEET 4 OF 15. CLOSE CONCURRENTLY WITH CLOSURE OF EXISTING LOOP C DURING WEEKEND OPERATION. (SEE PHASING & ICT)

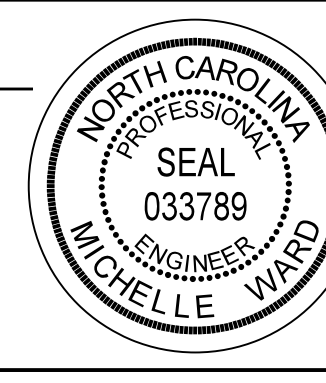
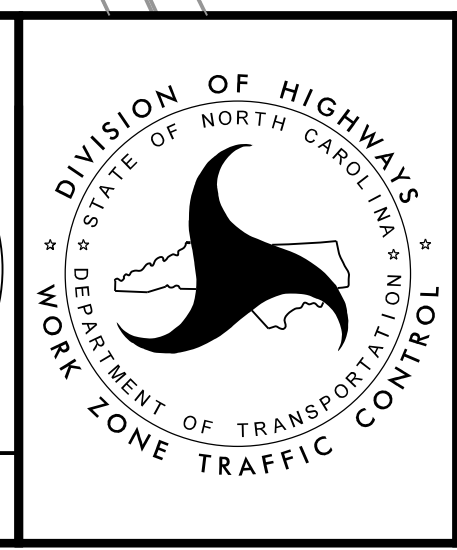
CLOSE INSIDE SHOULDER OF I-85 SB USING RSD 1101.04, SHEET 1 OF 1 (OR INSIDE LANE CLOSURE USING RSD 1101.02, SHEET 4 OF 15)

USING WEEKEND LANE CLOSURES, CONSTRUCT MEDIAN DRAINAGE (SEE PHASING & ICT)



APPROVED: *Michelle Ward*  
DocuSigned by: Michelle Ward F335756B020466  
 DATE: 1/4/2017

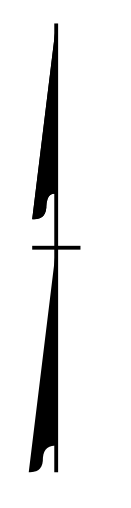
SEAL

PHASE 1, STEP 1B

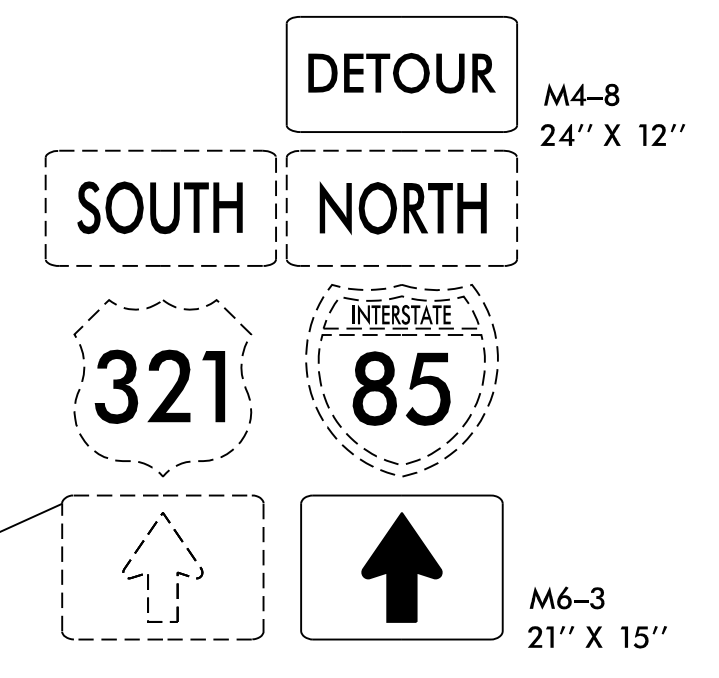
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 USER: BSCOTT  
 DATE: 1/4/2017  
 TIME: 11:34:13 AM  
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REVISIONS



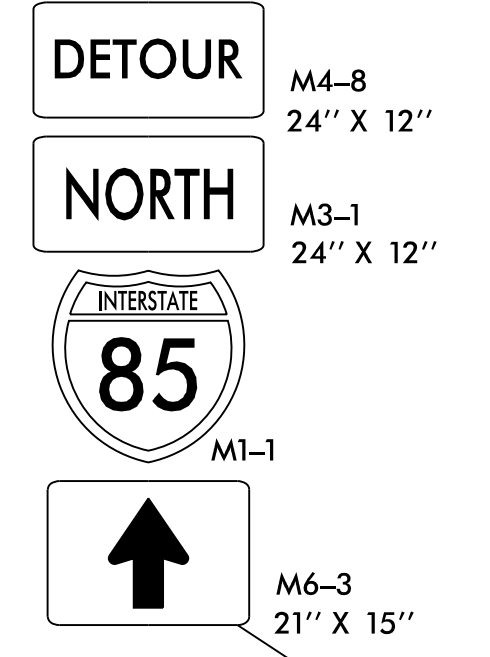
CMS 1

MESSAGE NO. 1 NB I-85 ON RAMP CLOSED	MESSAGE NO. 2 FOLLOW DETOUR ROUTE
CHANGEABLE MESSAGE SIGN	

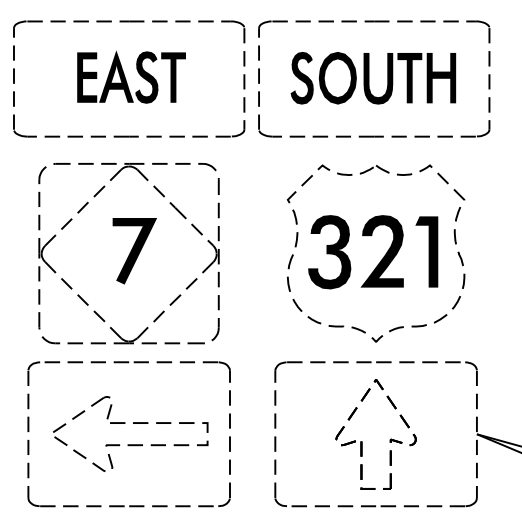
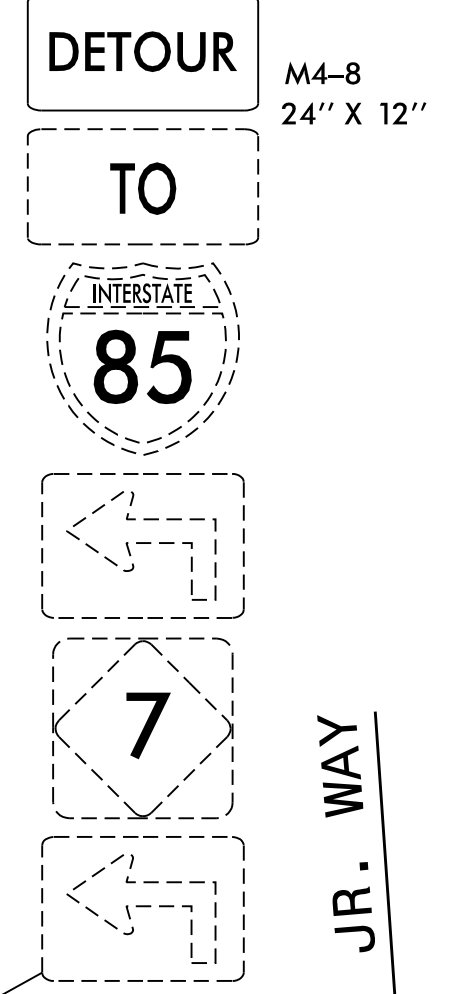
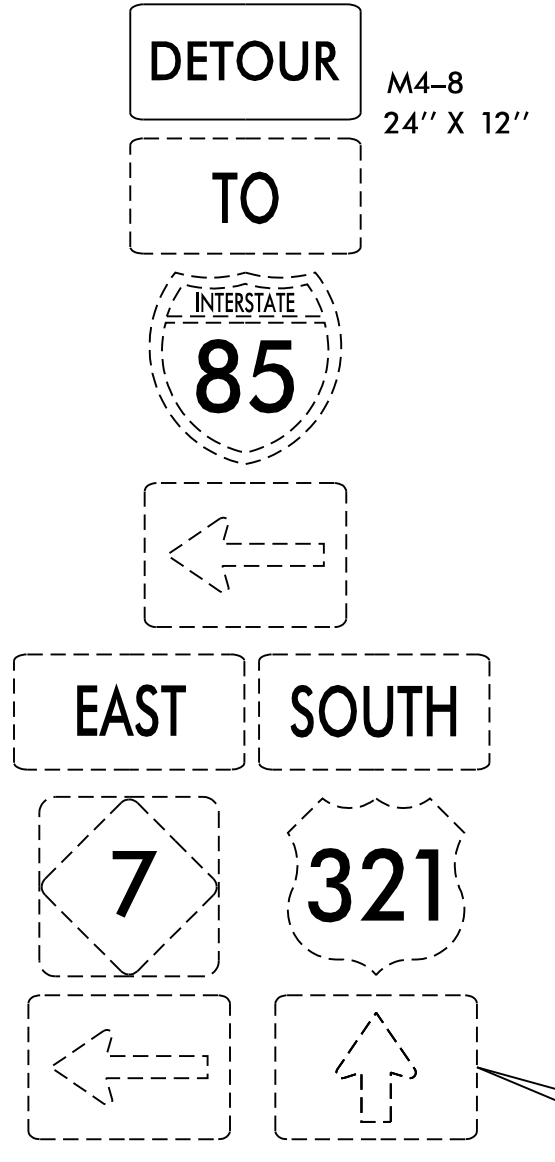


EXISTING LOOP C TO I-85 NB  
CLOSED (SEE SHEET TMP-11  
FOR BARRICADE PLACEMENT)

EXIT 17



EXIT 19



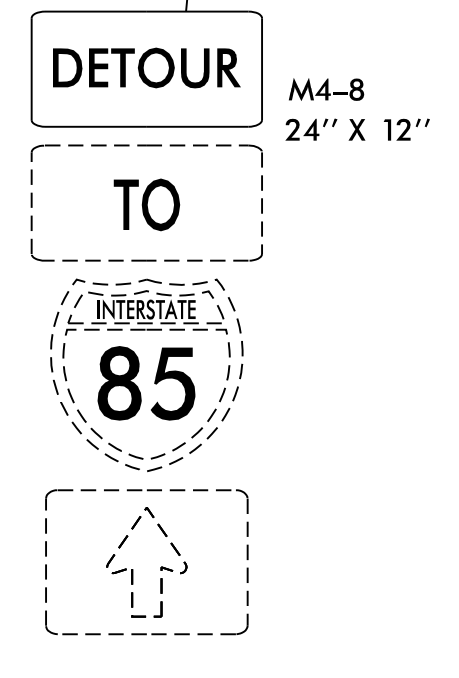
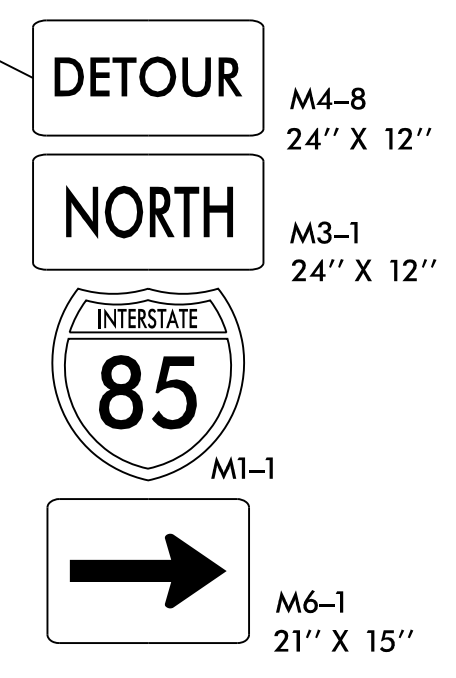
W AIRLINE AVE

US 321 S  
N CHESTER ST

NC 7  
W LONG AVE

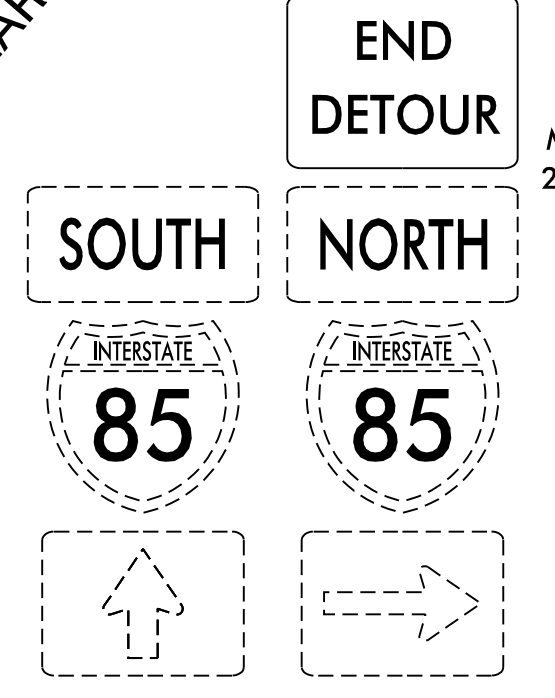
MILK, JR. WAY

NC 7  
E LONG AVE



MODENA ST  
NC 7  
E LONG AVE

NC 7  
E OZARK AVE

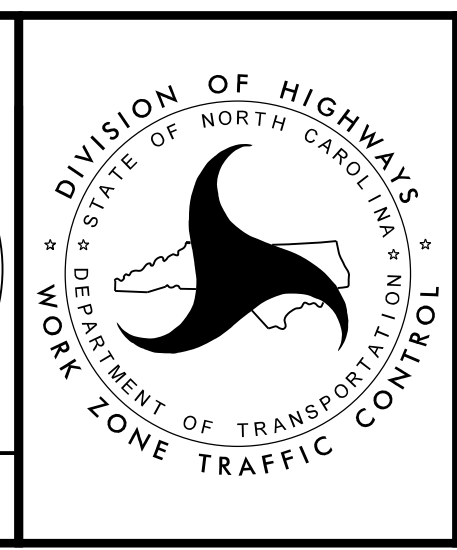


M4-8 A  
24" X 18"

APPROVED: *Michelle Ward*  
DATE: 1/4/2017

SEAL

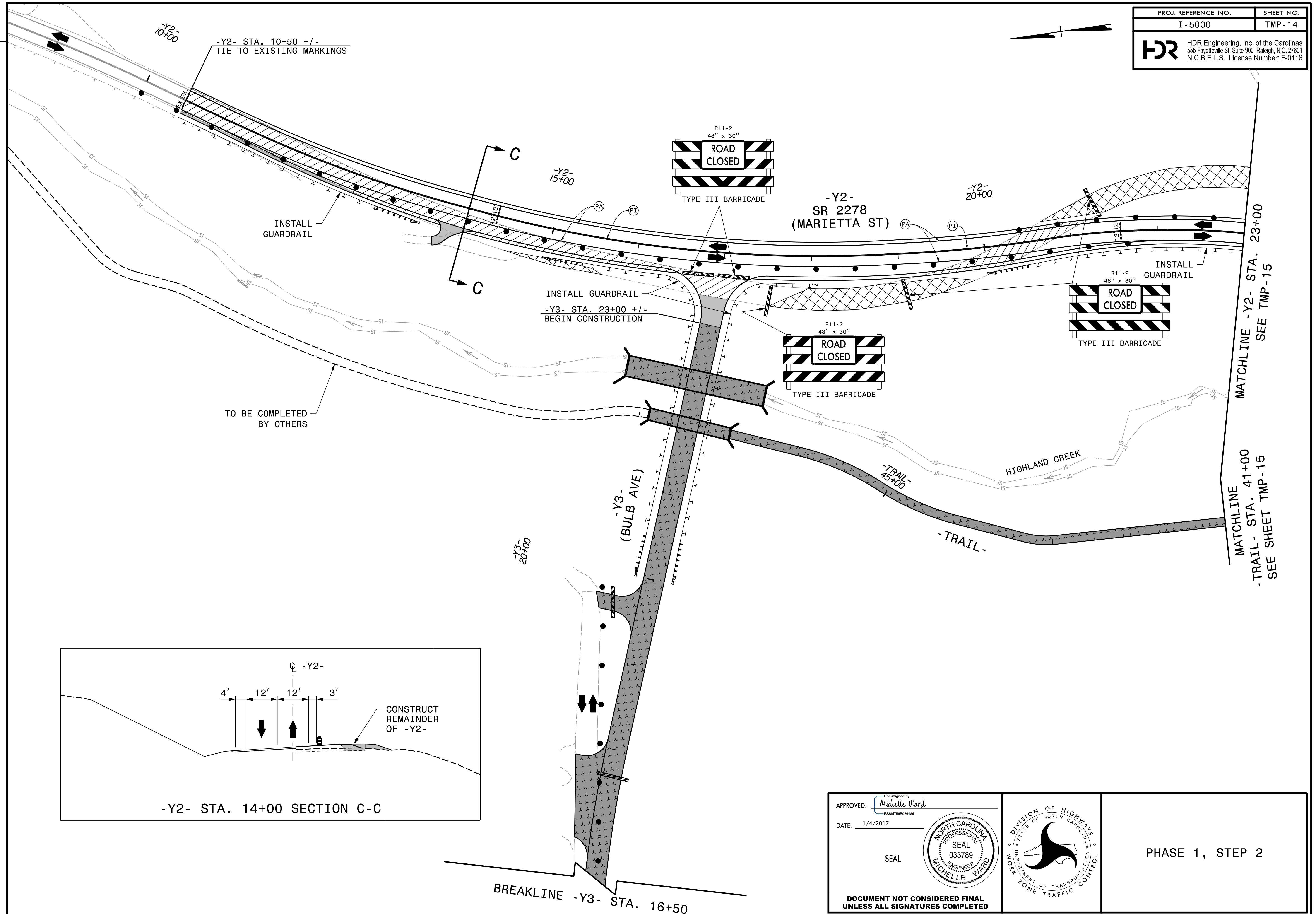
**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



PHASE 1, STEP 1B  
I-85 NORTHBOUND  
ON-RAMP  
DETOUR ROUTE

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt  
 USER: BSCOTT  
 DATE: 1/4/2017  
 PENTABLE: NCDOT\_tcp.tbl  
 TIME: 11:34:23 AM  
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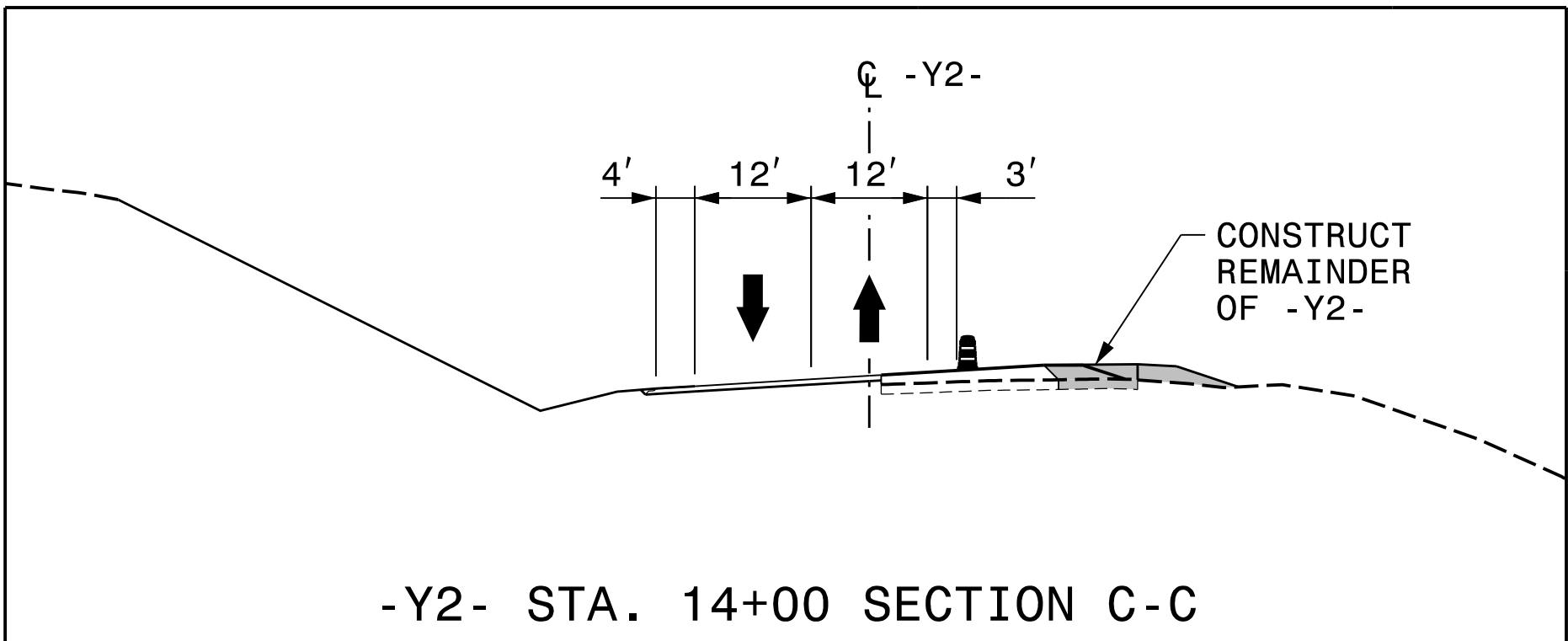
REVISIONS



INSTALL GUARDRAIL

INSTALL GUARDRAIL  
-Y3- STA. 23+00 +/-  
BEGIN CONSTRUCTION

TO BE COMPLETED  
BY OTHERS



-Y2- STA. 14+00 SECTION C-C


BREAKLINE -Y3- STA. 16+50

MATCHLINE -Y2- STA. 23+00  
SEE TMP-15

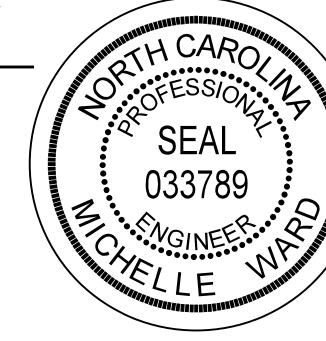
MATCHLINE  
-TRAIL- STA. 41+00  
SEE SHEET TMP-15

REVISIONS

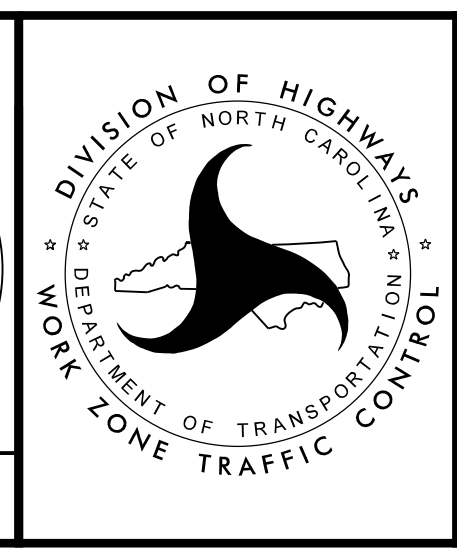
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APPROVED:   
 DATE: 1/4/2017

SEAL



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

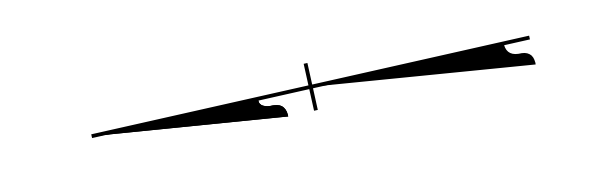


PHASE 1, STEP 2

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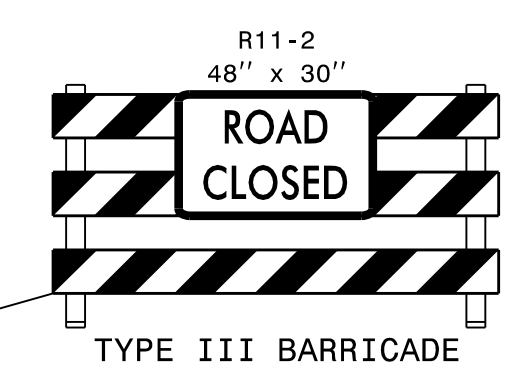
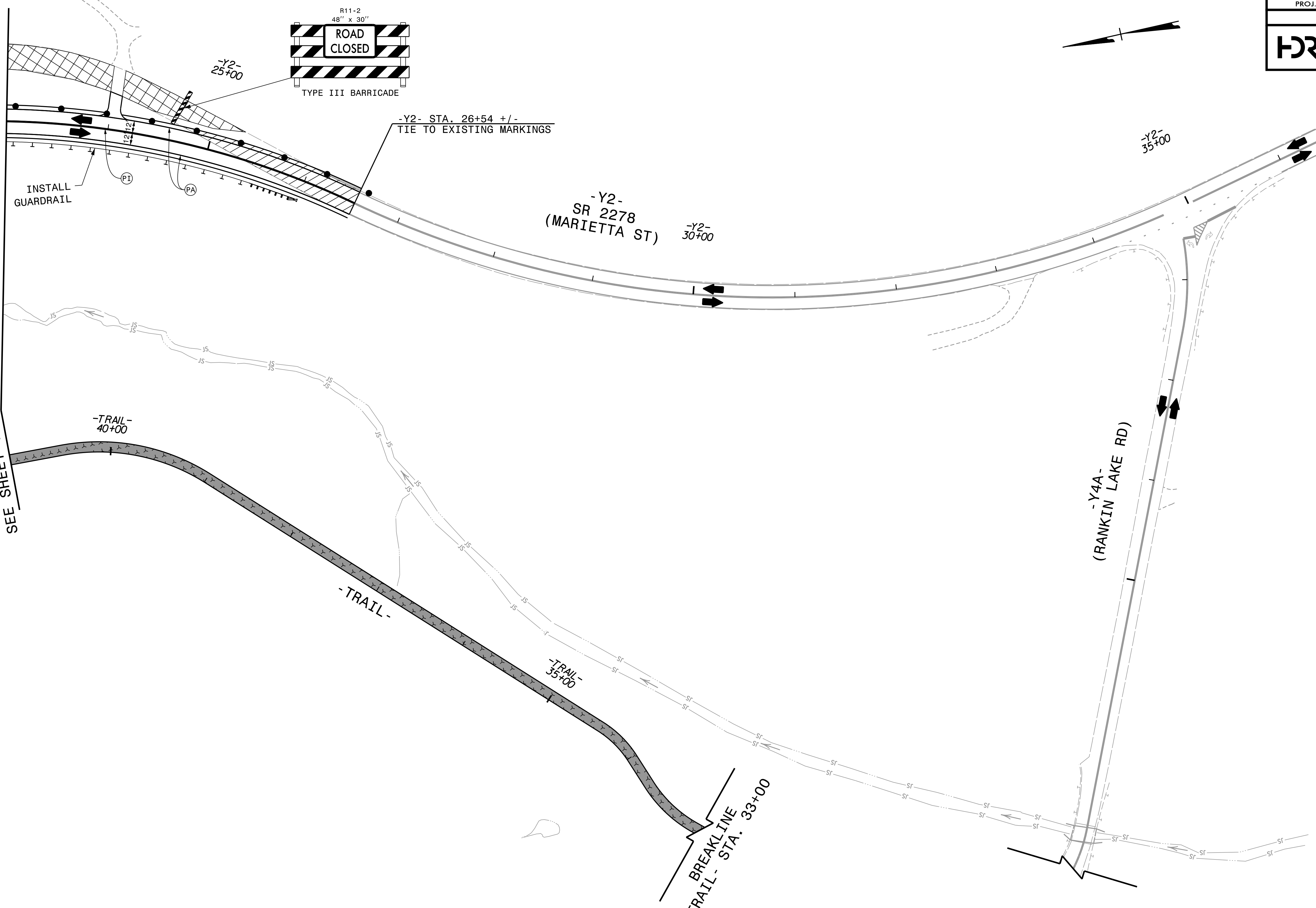
REVISIONS

PROJ. REFERENCE NO. I - 5000	SHEET NO. TMP - 15
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	



MATCHLINE -Y2- STA. 23+00  
SEE TMP-14

MATCHLINE -TRAIL- STA. 41+00  
SEE SHEET TMP-14



-Y2- STA. 26+54 +/-  
TIE TO EXISTING MARKINGS

-Y2- SR 2278  
(MARIETTA ST)  
-Y2- 30+00

-Y2- 35+00

-Y2- BREAKLINE  
STA. 37+00

-TRAIL- 40+00

-TRAIL-

-TRAIL- 35+00

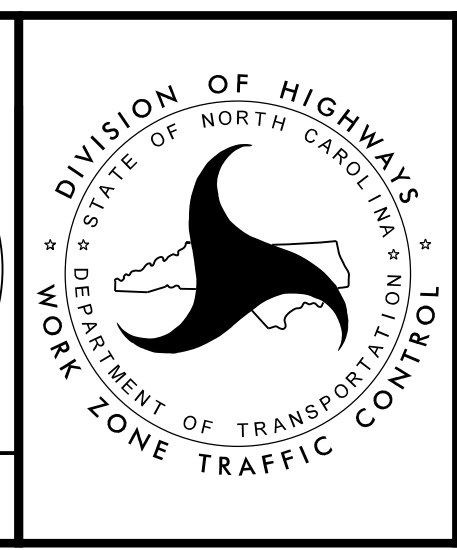
-TRAIL- BREAKLINE  
STA. 33+00

-Y4A- (RANKIN LAKE RD)

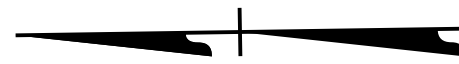
APPROVED:   
DATE: 1/4/2017

SEAL  
  
MICHELLE WARD

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PHASE 1, STEP 2



PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y3-. (SEE FINAL PAVEMENT MARKING PLAN)

-Y1-  
US 321  
(CHESTER ST)

-Y3- STA. 16+50, SEE TMP-19

-Y3-  
(BULB AVE)

-Y1-  
10+00

-Y1-  
15+00

-Y1- STA. 12+97 +/-  
TIE TO EXISTING MARKINGS

MATCHLINE -Y1- STA. 15+00, SEE TMP-17

SOUTHBOUND -Y1- US 321 (CHESTER ST)  
REMAINS IN EXISTING PATTERN

TEMP. SIGNAL  
#12-0922T2

CMS 2

MESSAGE NO. 1	MESSAGE NO. 2
MARIETTA STREET ACCESS	USE BULB AVE NEXT LFT

CHANGEABLE MESSAGE SIGN  
(SEE NOTES)

CMS 1

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX

CHANGEABLE MESSAGE SIGN

REMAINS IN USE FROM PHASE 1, STEP 1  
IF CONDUCTING WEEKEND LANE CLOSURES  
IN PHASE 1, STEP 3

- NOTES:
1. PLACE CMS 500' IN ADVANCE OF INTERSECTION.
  2. ADJUST MESSAGE AS DIRECTED BY THE ENGINEER.
  3. CMS TO REMAIN IN PLACE FOR TWO WEEKS OR AS DIRECTED BY THE ENGINEER.

APPROVED: *Michelle Ward*  
DATE: 1/4/2017

SEAL

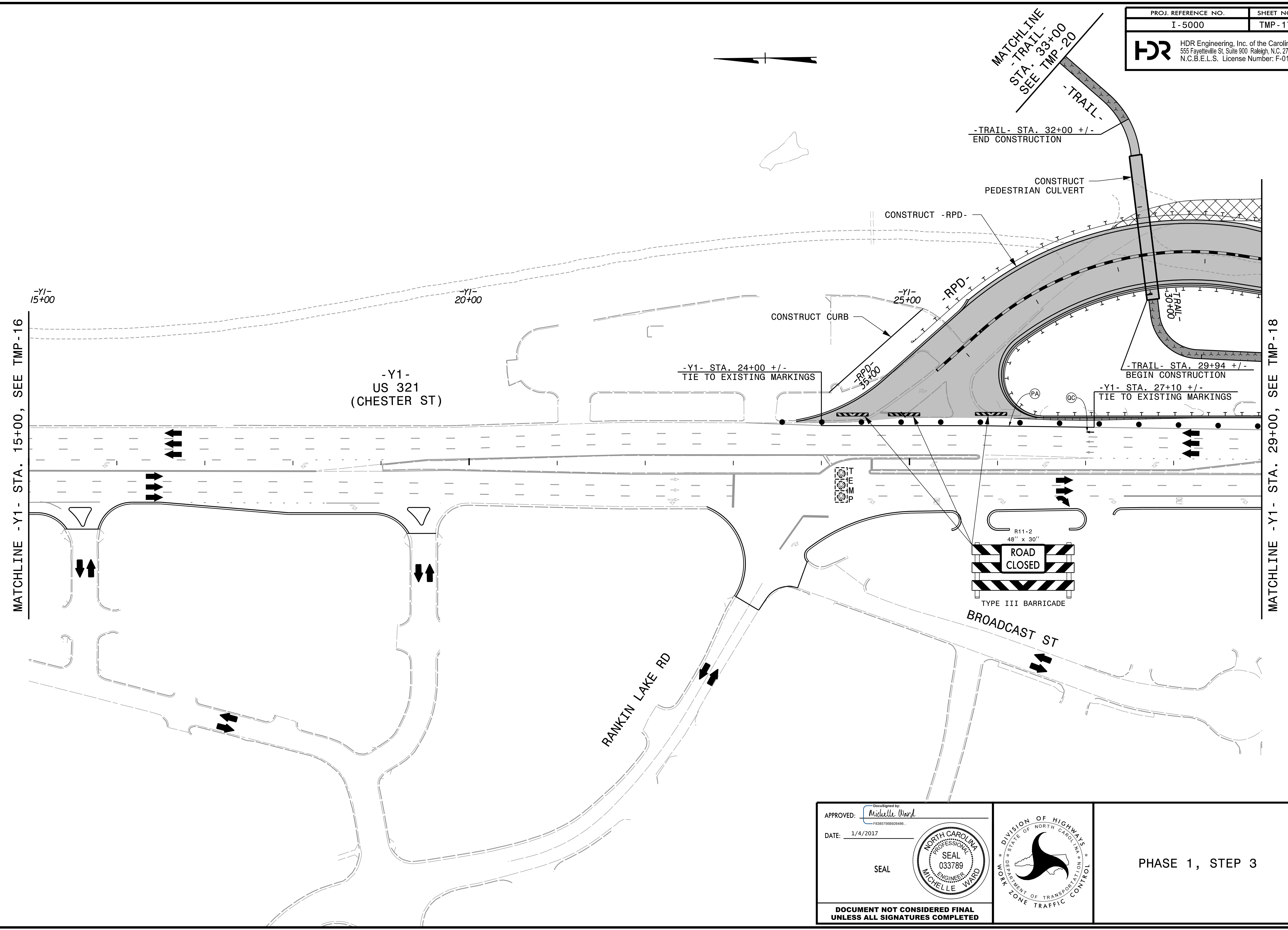
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

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

PHASE 1, STEP 3

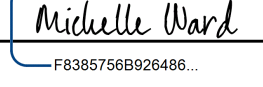
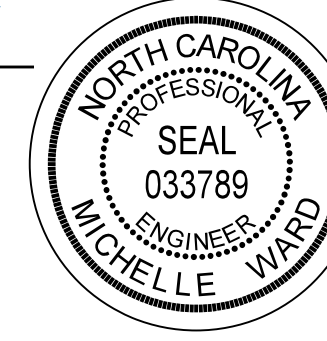
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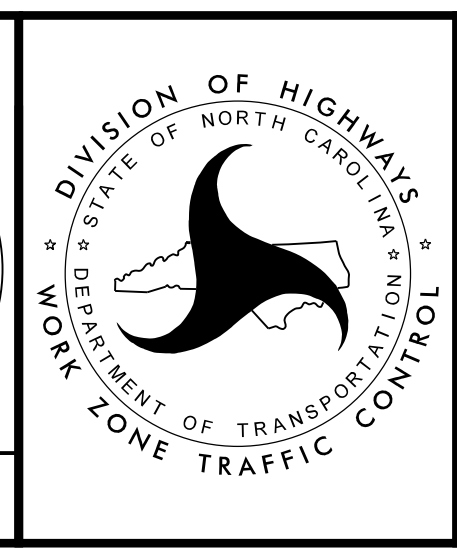
REVISIONS



REVISIONS

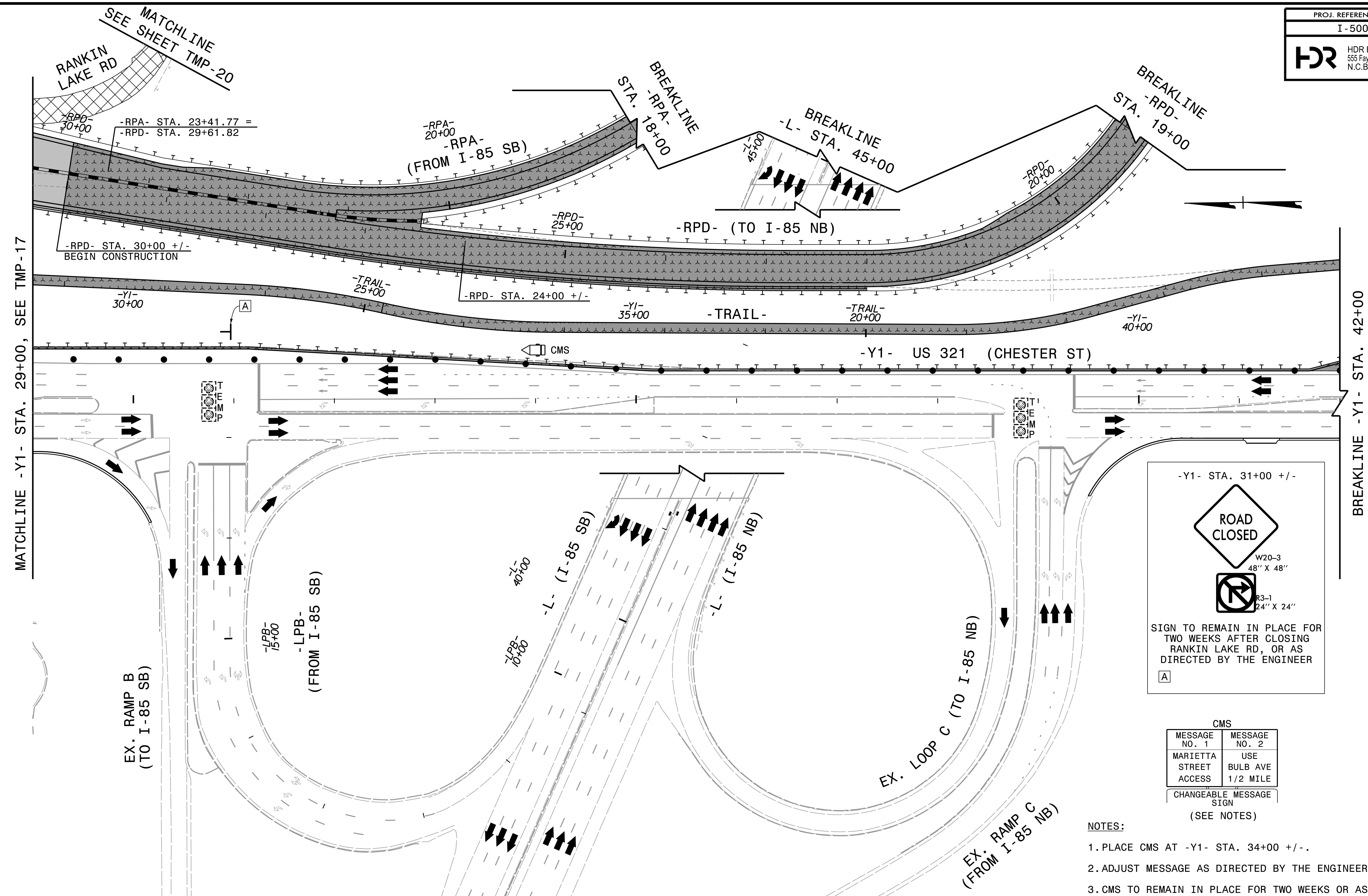
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APPROVED:   
 DATE: 1/4/2017  
 SEAL  




PHASE 1, STEP 3

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -Y1- STA. 29+00, SEE TMP-17

BREAKLINE -Y1- STA. 42+00

-Y1- STA. 31+00 +/-

SIGN TO REMAIN IN PLACE FOR TWO WEEKS AFTER CLOSING RANKIN LAKE RD, OR AS DIRECTED BY THE ENGINEER

A


CMS

MESSAGE NO. 1	MESSAGE NO. 2
MARIETTA STREET ACCESS	USE BULB AVE 1/2 MILE

CHANGEABLE MESSAGE SIGN

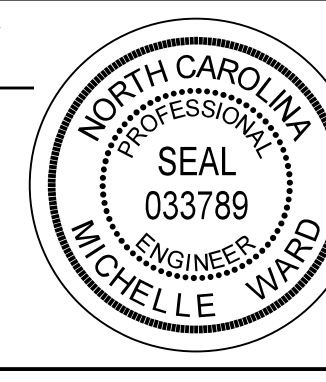
(SEE NOTES)

- NOTES:
1. PLACE CMS AT -Y1- STA. 34+00 +/-.
  2. ADJUST MESSAGE AS DIRECTED BY THE ENGINEER.
  3. CMS TO REMAIN IN PLACE FOR TWO WEEKS OR AS DIRECTED BY THE ENGINEER.

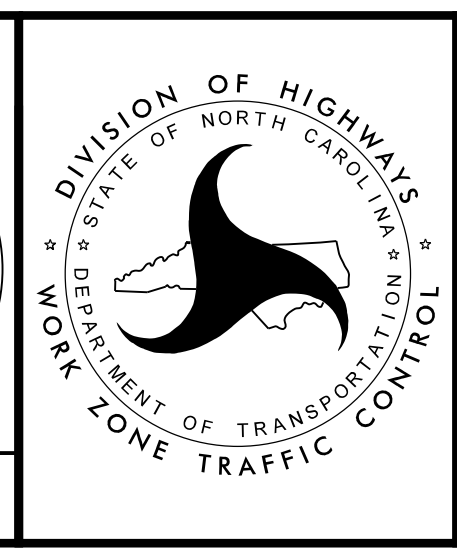
APPROVED: 

DATE: 1/4/2017

SEAL



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



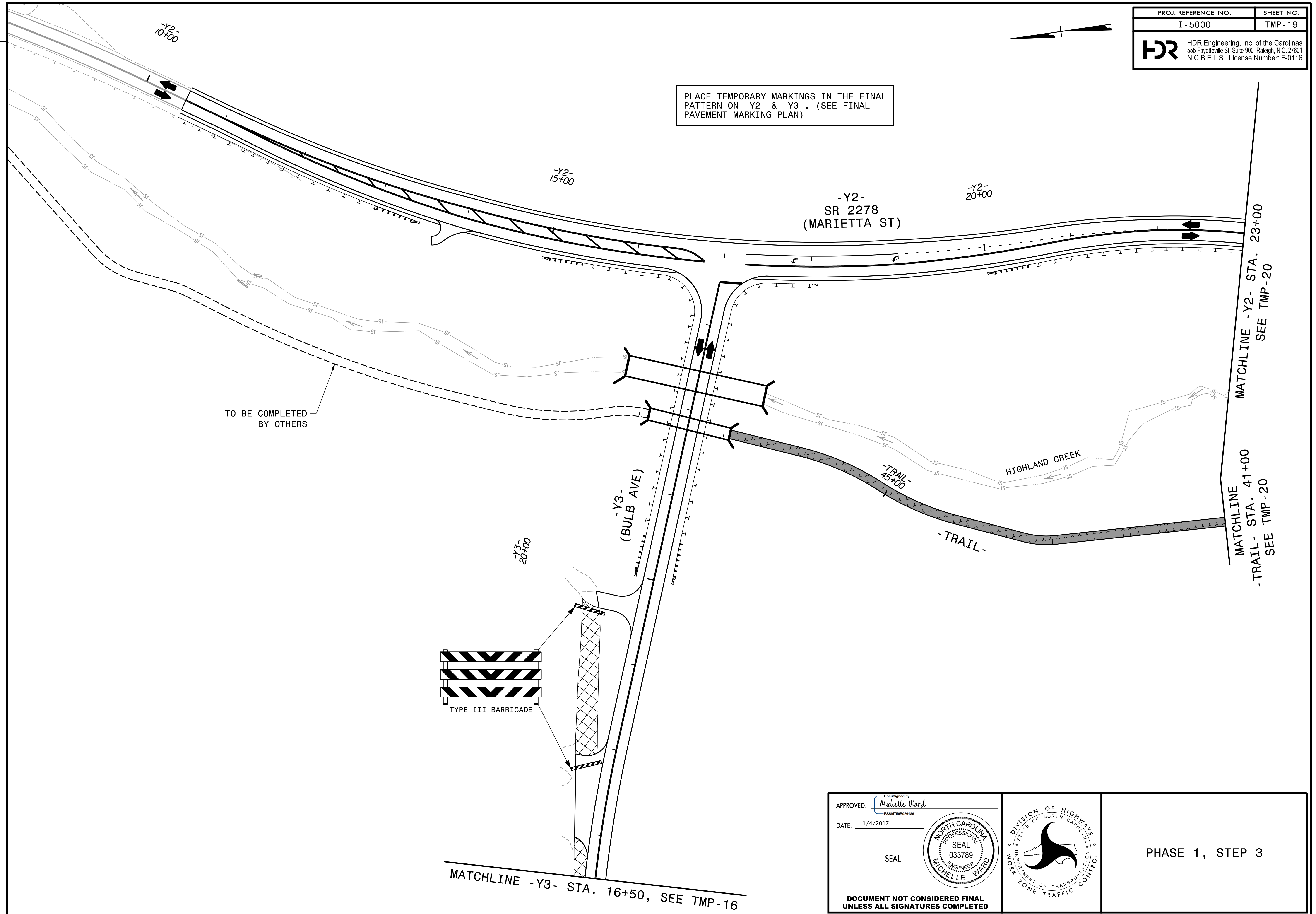
PHASE 1, STEP 3

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 TIME: 11:35:22 AM  
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REVISIONS



PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y2- & -Y3-. (SEE FINAL PAVEMENT MARKING PLAN)



TO BE COMPLETED BY OTHERS



MATCHLINE -Y3- STA. 16+50, SEE TMP-16

MATCHLINE -Y2- STA. 23+00  
SEE TMP-20

MATCHLINE -TRAIL- STA. 41+00  
SEE TMP-20

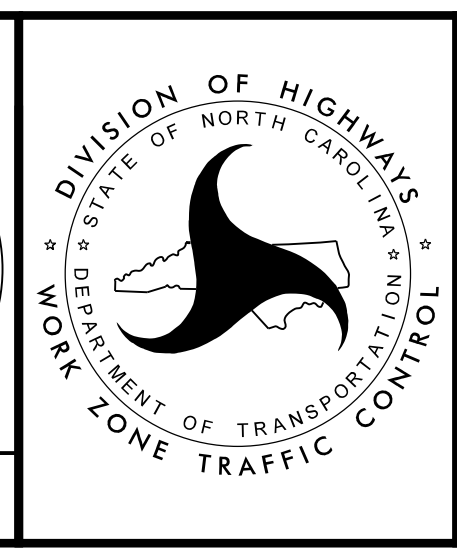
REVISIONS

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 USER: BSCOTT DATE: 1/4/2017 TIME: 11:35:34 AM  
 FILE: p:\PWAPPTFA01\SouthEast\_Tampa\Documents\000166\CON07915\0600.Project\_Design\I-5000\TrafficControl\TCP\_I-5000\_TMP-TMP-19.dgn

APPROVED: *Michelle Ward*  
F335756B020466

DATE: 1/4/2017

SEAL

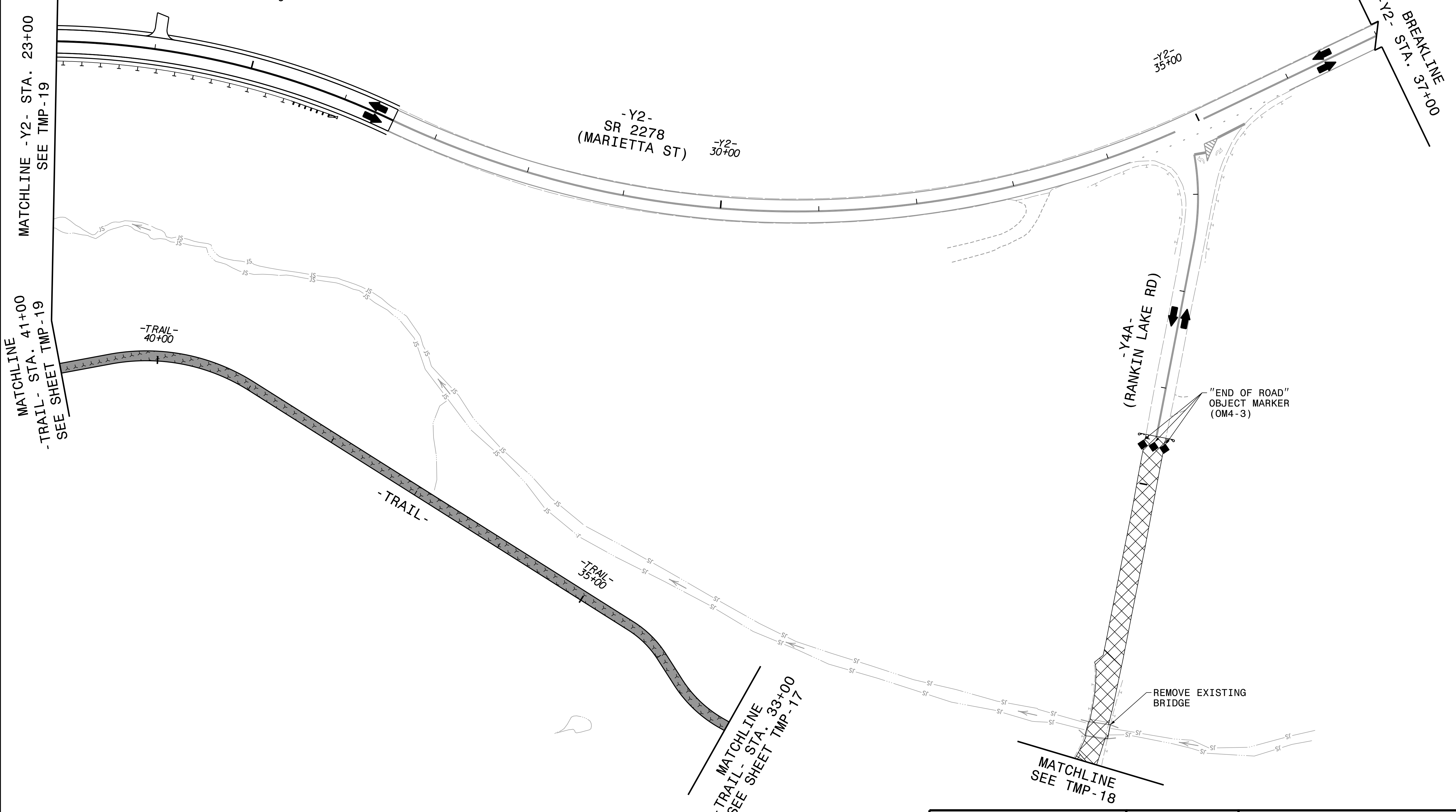
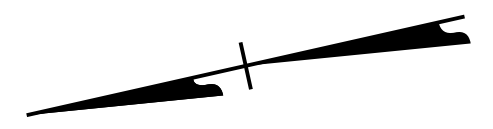


PHASE 1, STEP 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

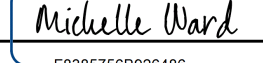


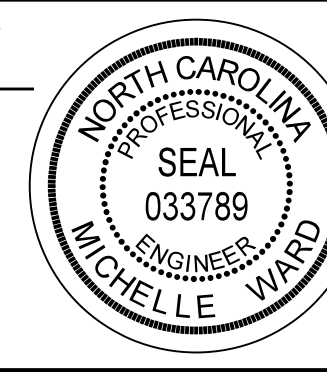
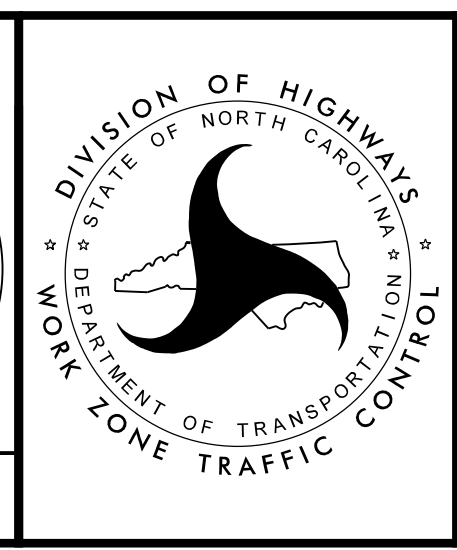
PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y2-. (SEE FINAL PAVEMENT MARKING PLAN)



REVISIONS

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 USER: BSCOTT  
 DATE: 1/4/2017  
 TIME: 11:35:45 AM  
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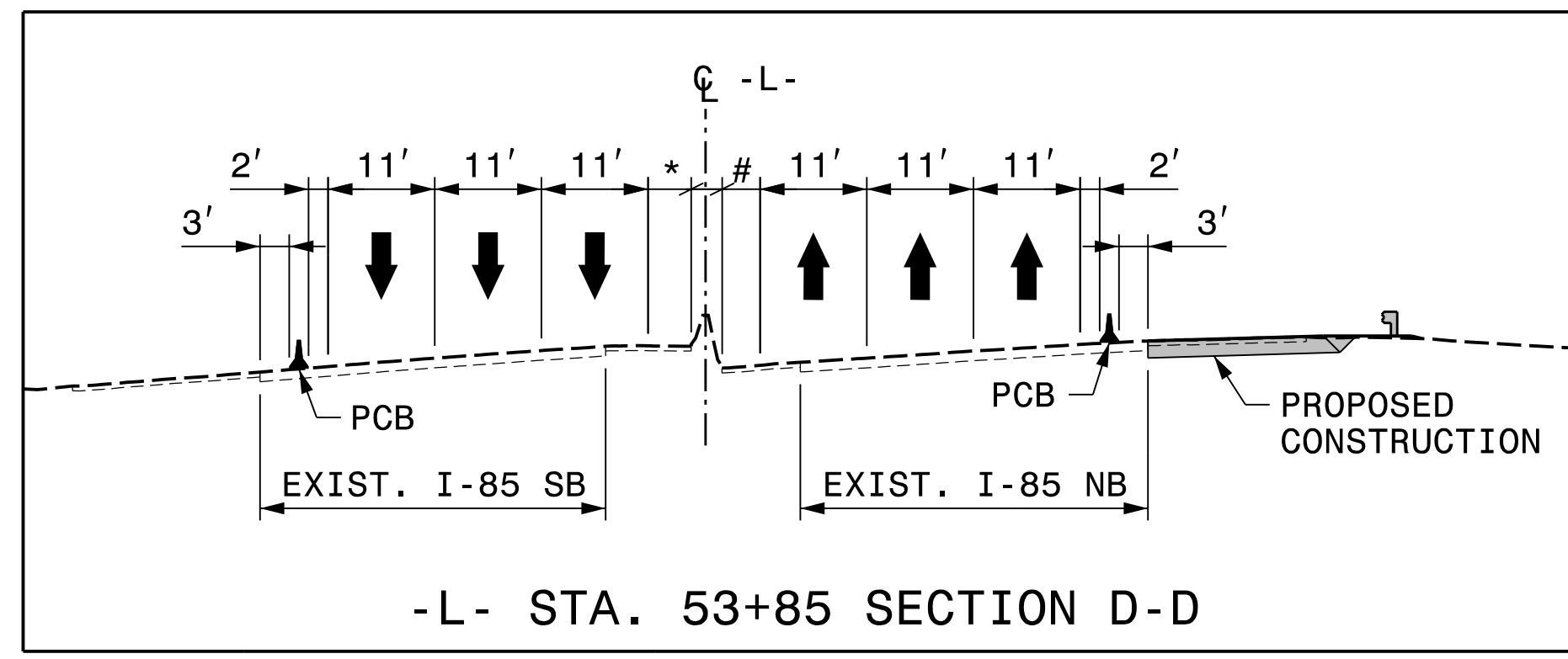
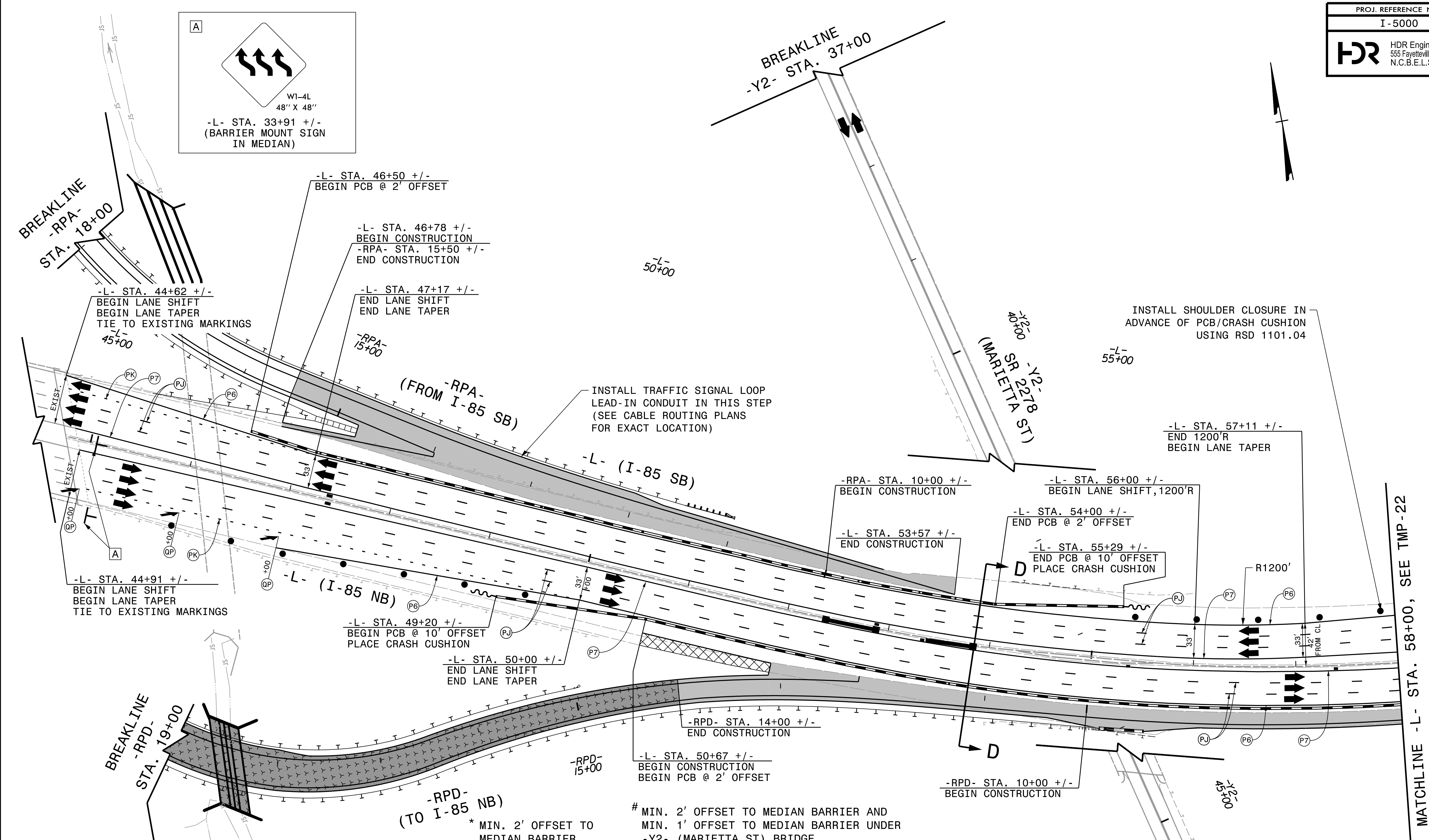
APPROVED:   
 DATE: 1/4/2017  
 SEAL

PHASE 1, STEP 3

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

PLOT DRIVER: NCDOT\_color\_eng\_50.plt  
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 DATE: 1/4/2017  
 FILE: p:\PWP\PTA014\SouthEast\_Tampa\Documents\000166\CON079\59\0000000000227915\06.00\_Project\_Design\_I-5000\_TrafficControl\TCP\I-5000\_TMP-TMP-21.dgn



APPROVED: *Michelle Ward*  
DATE: 1/4/2017

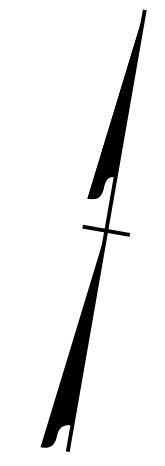
SEAL

**NORTH CAROLINA PROFESSIONAL ENGINEER SEAL**  
033789  
MICHELLE WARD

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



**PHASE 1, STEP 4**



-L- 70+00

-L- 65+00

-L- 60+00

MATCHLINE -L- STA. 58+00, SEE TMP-21

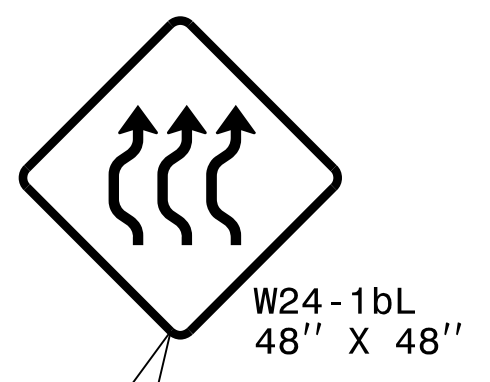
36'

33'

-L- STA. 58+02 +/-  
 END LANE SHIFT  
 END LANE TAPER  
 TIE TO EXISTING MARKINGS

INSTALL SHOULDER CLOSURE IN  
 ADVANCE OF PCB/CRASH CUSHION  
 USING RSD 1101.04

-L- STA. 68+02 +/-  
 (BARRIER MOUNT SIGN IN MEDIAN)



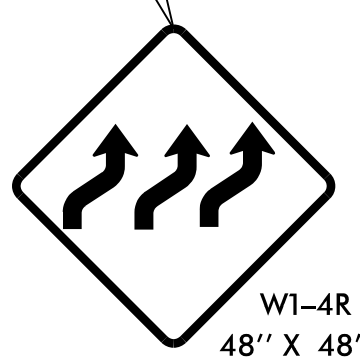
-L- (I-85 SB)

-L- (I-85 NB)

-L- STA. 68+50 +/-  
 END PCB  
 BEGIN LANE SHIFT  
 BEGIN LANE TAPER

-L- STA. 70+54 +/-  
 END LANE SHIFT  
 END LANE TAPER  
 TIE TO EXISTING MARKINGS

-L- STA. 68+00 +/-  
 END CONSTRUCTION

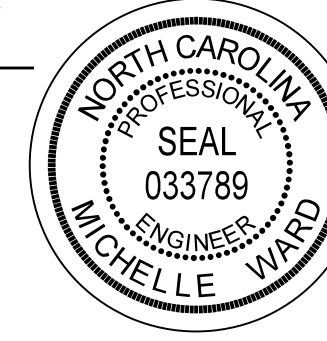
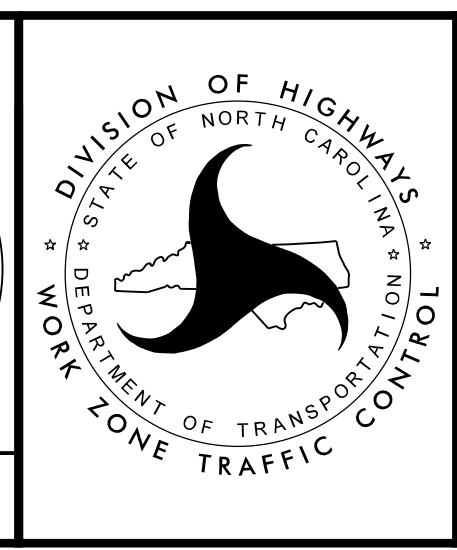


-L- STA. 58+50 +/-  
 (BARRIER MOUNT SIGN IN MEDIAN)

APPROVED: *Michelle Ward*  
F335756B020466

DATE: 1/4/2017

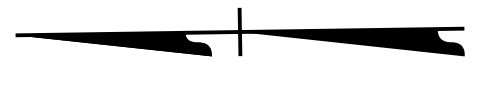
SEAL

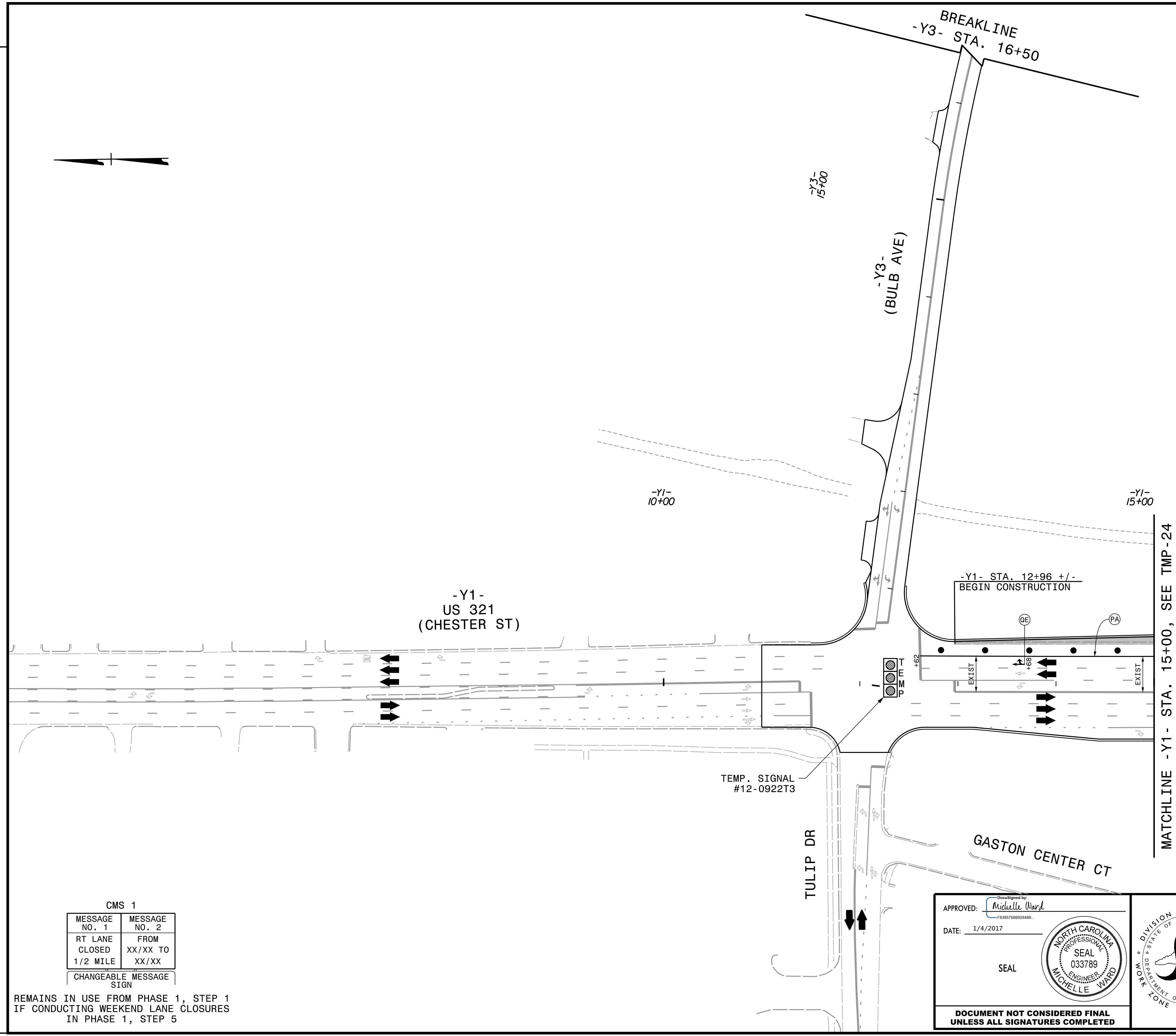
PHASE 1, STEP 4

REVISIONS

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt  
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REVISIONS



PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt  
 USER: BSCOTT  
 FILE: dw:\PWAPP\TFA01\SouthEast\_Tampa\Documents\000166\CON079\59\000000000227915\06.00\_Project\_Design\I-5000\TrafficControl\TCP\I-5000\_TMP\_TMP-23.dgn

CMS 1

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX

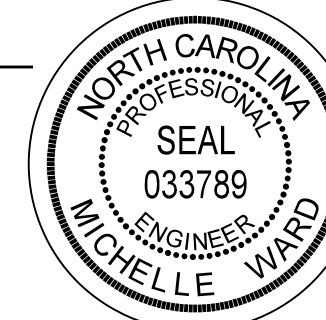
CHANGEABLE MESSAGE SIGN

REMAINS IN USE FROM PHASE 1, STEP 1  
 IF CONDUCTING WEEKEND LANE CLOSURES  
 IN PHASE 1, STEP 5

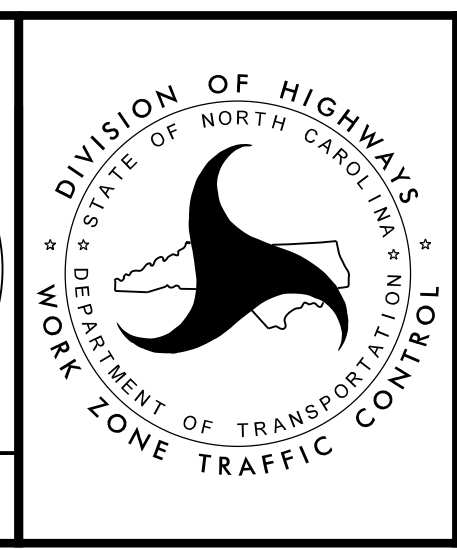
TEMP. SIGNAL  
 #12-0922T3

APPROVED: *Michelle Ward*  
 DATE: 1/4/2017

SEAL



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 UNLESS ALL SIGNATURES COMPLETED**



PHASE 1, STEP 5

MATCHLINE -Y1- STA. 15+00, SEE TMP -24

-Y1- STA. 12+96 +/-  
 BEGIN CONSTRUCTION

BREAKLINE  
 -Y3- STA. 16+50

-Y3-  
 (BULB AVE)

-Y1-  
 US 321  
 (CHESTER ST)

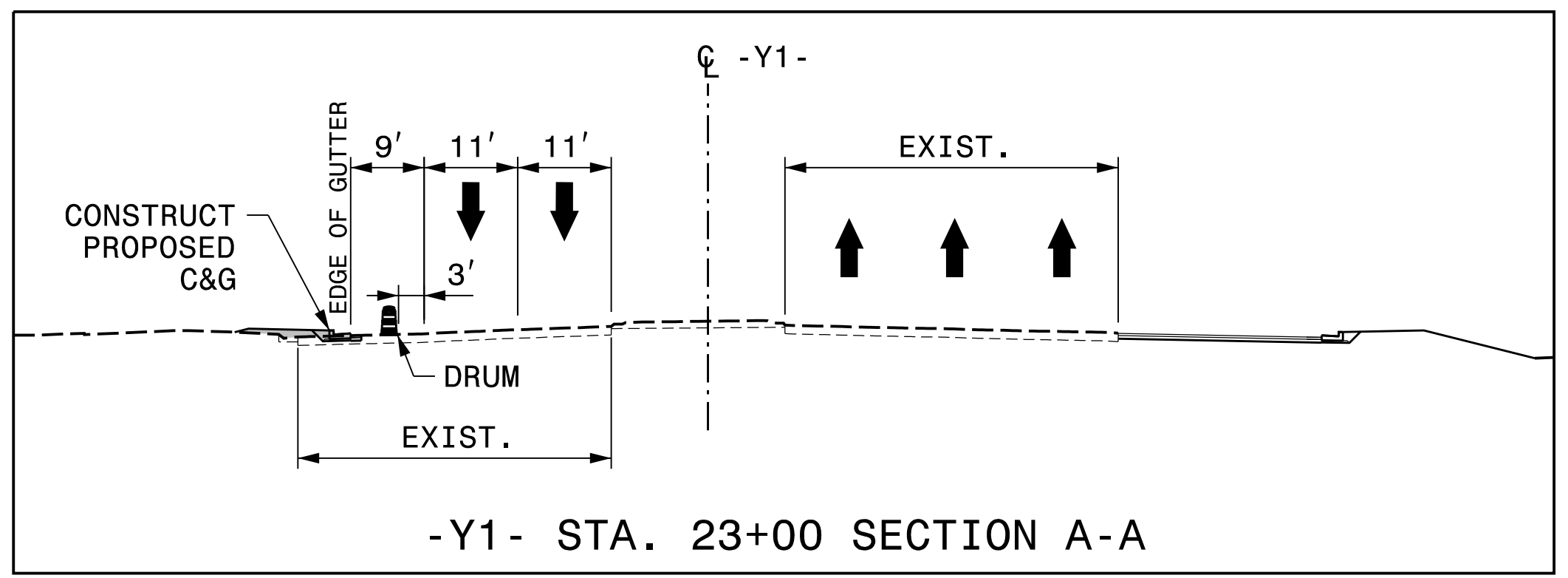
-Y1-  
 10+00

-Y3-  
 15+00

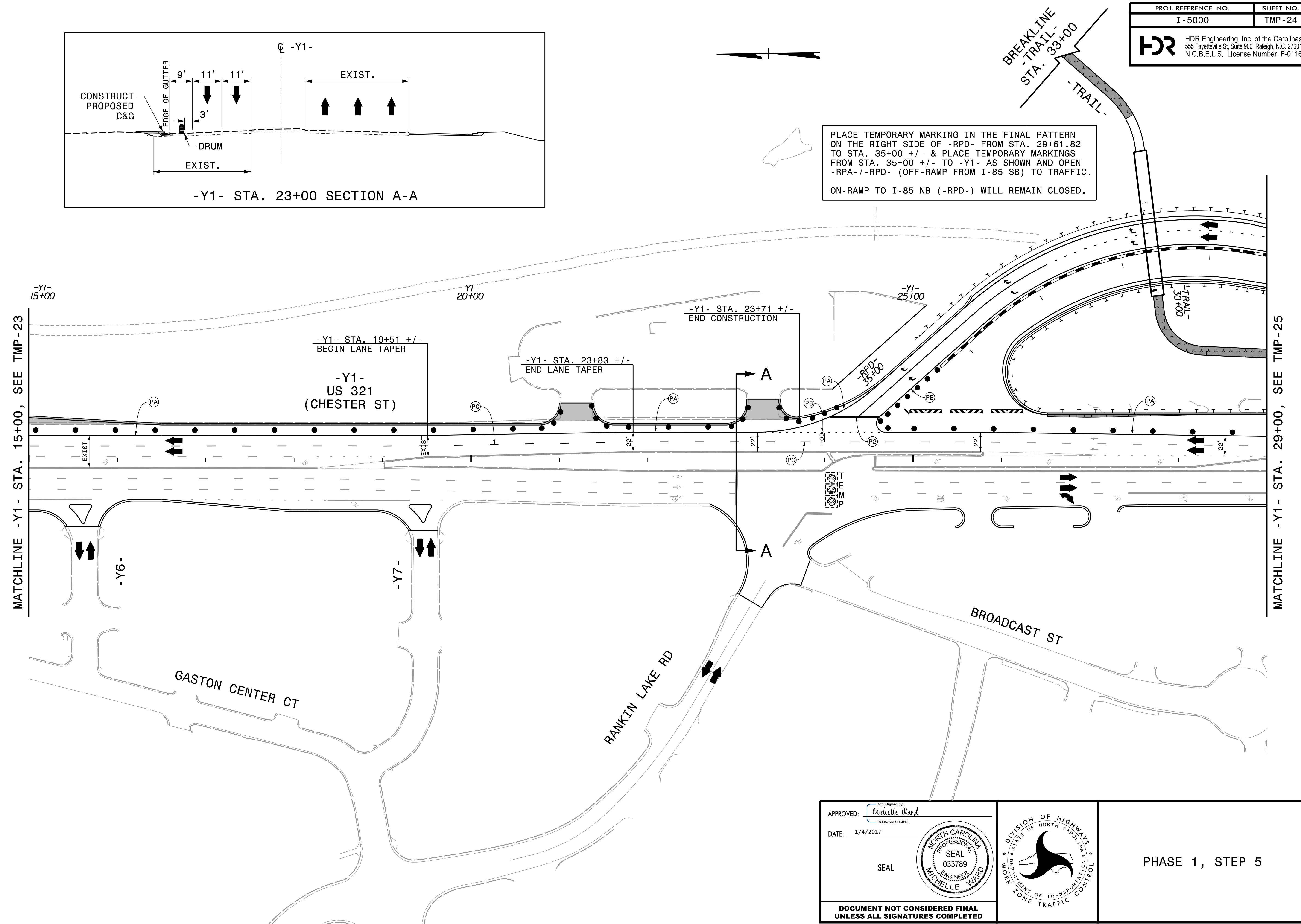
-Y1-  
 15+00

TULIP DR

GASTON CENTER CT



PLACE TEMPORARY MARKING IN THE FINAL PATTERN ON THE RIGHT SIDE OF -RPD- FROM STA. 29+61.82 TO STA. 35+00 +/- & PLACE TEMPORARY MARKINGS FROM STA. 35+00 +/- TO -Y1- AS SHOWN AND OPEN -RPA-/-RPD- (OFF-RAMP FROM I-85 SB) TO TRAFFIC. ON-RAMP TO I-85 NB (-RPD-) WILL REMAIN CLOSED.

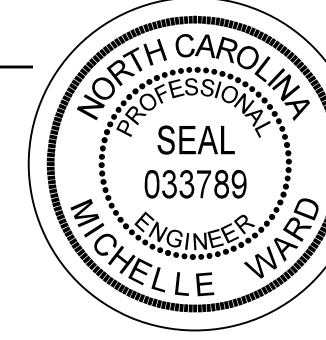


REVISIONS

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt  
 USER: BSCOTT  
 DATE: 1/4/2017  
 TIME: 11:36:35 AM  
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APPROVED: *Michelle Ward*  
 DATE: 1/4/2017

SEAL

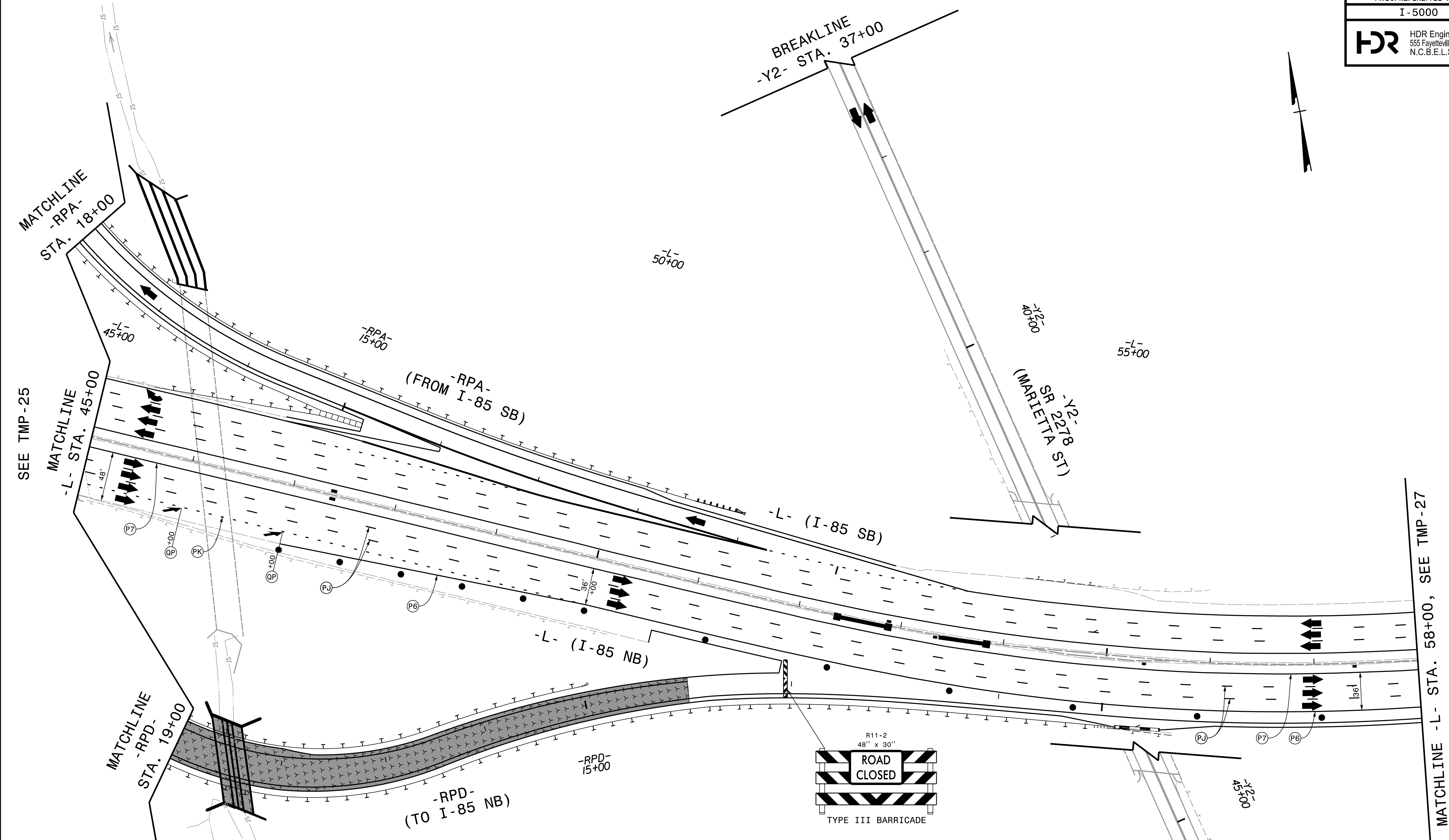


**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



**PHASE 1, STEP 5**





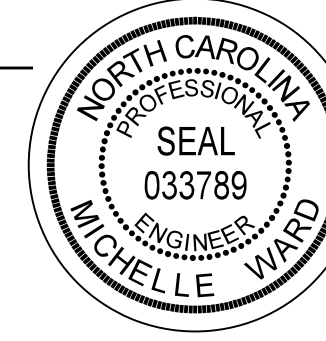
SEE TMP-25

MATCHLINE -L- STA. 58+00, SEE TMP-27

PLACE TEMPORARY MARKING IN THE FINAL PATTERN ON -RPA- AND -L- (I-85 SB). (SEE FINAL PM PLAN)  
 PLACE TEMPORARY MARKING ON -L- (I-85 NB) IN THE PATTERN SHOWN.  
 ON-RAMP TO I-85 NB (-RPD-) WILL REMAIN CLOSED.

APPROVED: *Michelle Ward*  
 DATE: 1/4/2017

SEAL



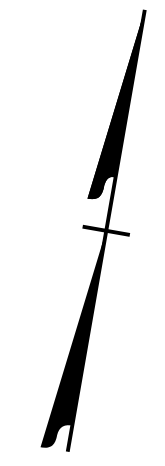
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE 1, STEP 5

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 USER: BSCOTT  
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 TIME: 11:36:57 AM  
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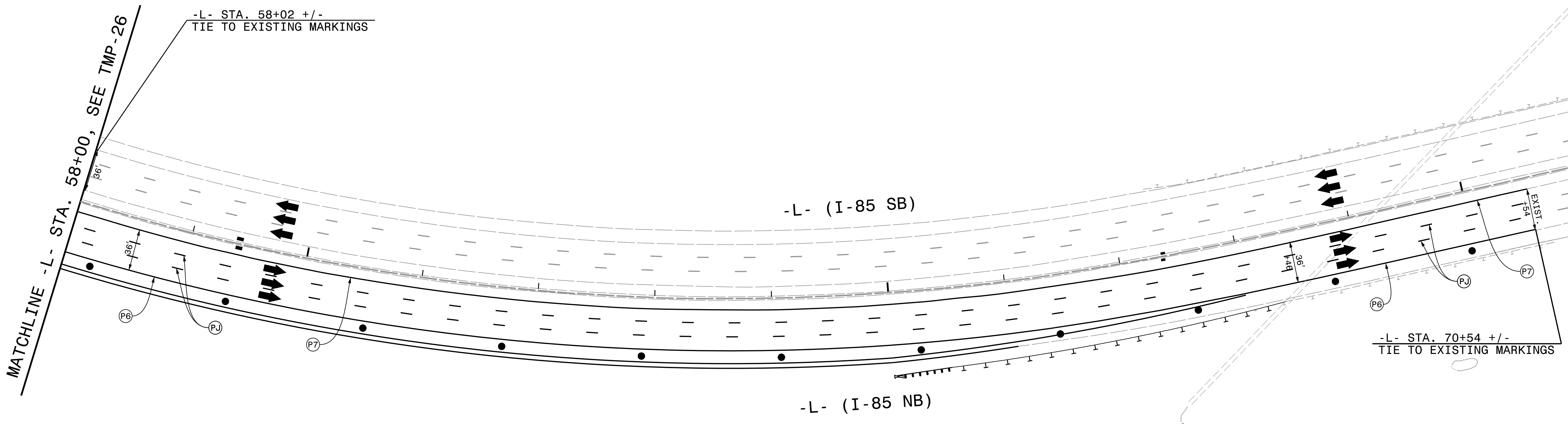
REVISIONS



-L-  
70+00

-L-  
65+00

-L-  
60+00



REVISIONS

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt PENTABLE: NCDOT\_tcp.tbl  
 USER: BSCOTT DATE: 1/4/2017 TIME: 11:37:08 AM  
 FILE: p:\PWAPP\TFA01\SouthEast\_Tampa\Documents\000166\CON079\59\00000000027915\06\00\_Project\_Design\_I-5000\TrafficControl\TCP\_I-5000\_TMP\_TMP-27.dgn

-RPD- WILL REMAIN CLOSED.

APPROVED: *Michelle Ward*  
DocuSigned by:  
Michelle Ward  
F335756B020466

DATE: 1/4/2017

SEAL

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

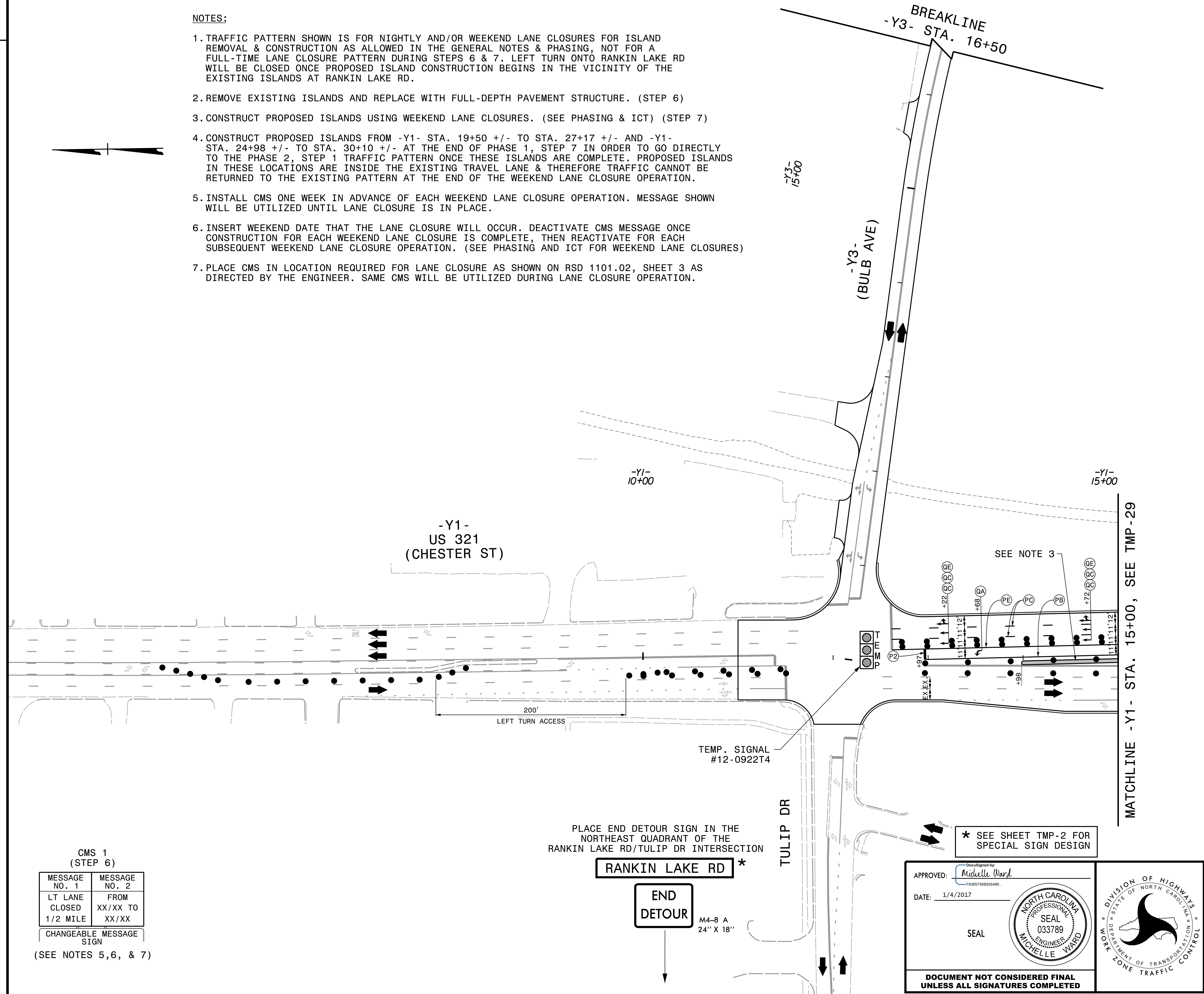


PHASE 1, STEP 5



**NOTES:**

1. TRAFFIC PATTERN SHOWN IS FOR NIGHTLY AND/OR WEEKEND LANE CLOSURES FOR ISLAND REMOVAL & CONSTRUCTION AS ALLOWED IN THE GENERAL NOTES & PHASING, NOT FOR A FULL-TIME LANE CLOSURE PATTERN DURING STEPS 6 & 7. LEFT TURN ONTO RANKIN LAKE RD WILL BE CLOSED ONCE PROPOSED ISLAND CONSTRUCTION BEGINS IN THE VICINITY OF THE EXISTING ISLANDS AT RANKIN LAKE RD.
2. REMOVE EXISTING ISLANDS AND REPLACE WITH FULL-DEPTH PAVEMENT STRUCTURE. (STEP 6)
3. CONSTRUCT PROPOSED ISLANDS USING WEEKEND LANE CLOSURES. (SEE PHASING & ICT) (STEP 7)
4. CONSTRUCT PROPOSED ISLANDS FROM -Y1- STA. 19+50 +/- TO STA. 27+17 +/- AND -Y1- STA. 24+98 +/- TO STA. 30+10 +/- AT THE END OF PHASE 1, STEP 7 IN ORDER TO GO DIRECTLY TO THE PHASE 2, STEP 1 TRAFFIC PATTERN ONCE THESE ISLANDS ARE COMPLETE. PROPOSED ISLANDS IN THESE LOCATIONS ARE INSIDE THE EXISTING TRAVEL LANE & THEREFORE TRAFFIC CANNOT BE RETURNED TO THE EXISTING PATTERN AT THE END OF THE WEEKEND LANE CLOSURE OPERATION.
5. INSTALL CMS ONE WEEK IN ADVANCE OF EACH WEEKEND LANE CLOSURE OPERATION. MESSAGE SHOWN WILL BE UTILIZED UNTIL LANE CLOSURE IS IN PLACE.
6. INSERT WEEKEND DATE THAT THE LANE CLOSURE WILL OCCUR. DEACTIVATE CMS MESSAGE ONCE CONSTRUCTION FOR EACH WEEKEND LANE CLOSURE IS COMPLETE, THEN REACTIVATE FOR EACH SUBSEQUENT WEEKEND LANE CLOSURE OPERATION. (SEE PHASING AND ICT FOR WEEKEND LANE CLOSURES)
7. PLACE CMS IN LOCATION REQUIRED FOR LANE CLOSURE AS SHOWN ON RSD 1101.02, SHEET 3 AS DIRECTED BY THE ENGINEER. SAME CMS WILL BE UTILIZED DURING LANE CLOSURE OPERATION.



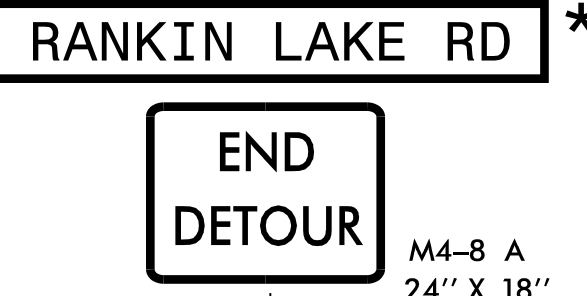
REVISIONS

CMS 1 (STEP 6)

MESSAGE NO. 1	MESSAGE NO. 2
LT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX

CHANGEABLE MESSAGE SIGN  
(SEE NOTES 5, 6, & 7)

PLACE END DETOUR SIGN IN THE NORTHEAST QUADRANT OF THE RANKIN LAKE RD/TULIP DR INTERSECTION



\* SEE SHEET TMP-2 FOR SPECIAL SIGN DESIGN

APPROVED: *Michelle Ward*  
F338750820466

DATE: 1/4/2017

SEAL

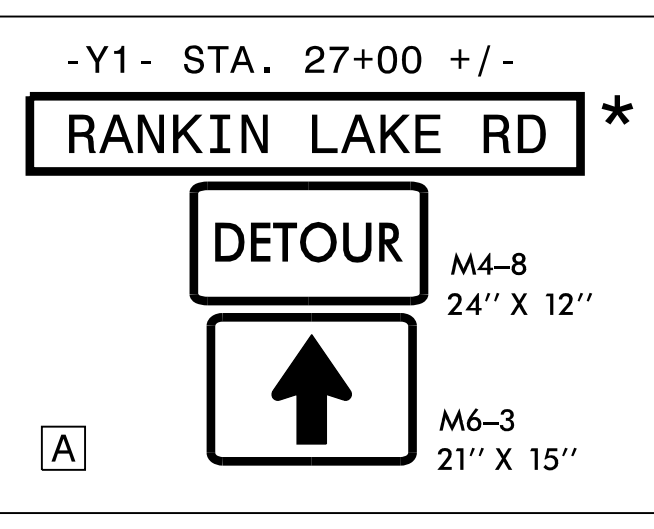
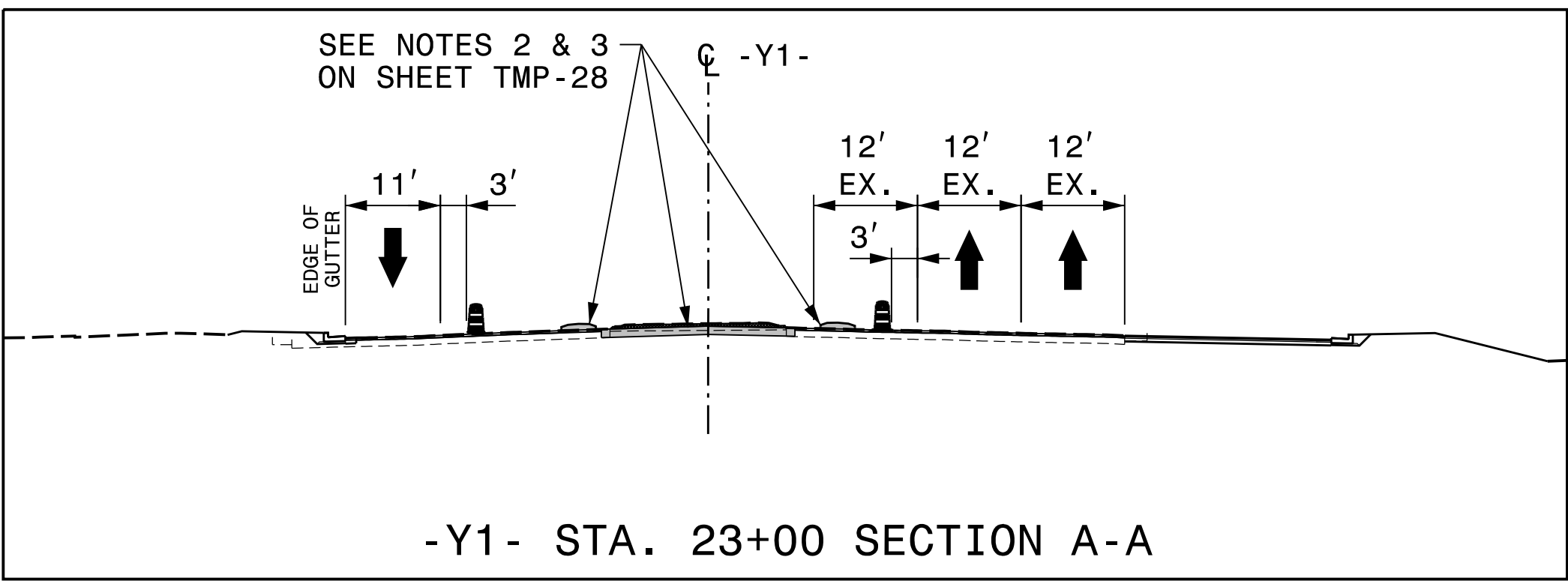
**NORTH CAROLINA PROFESSIONAL ENGINEER SEAL**  
033789  
MICHELLE WARD

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

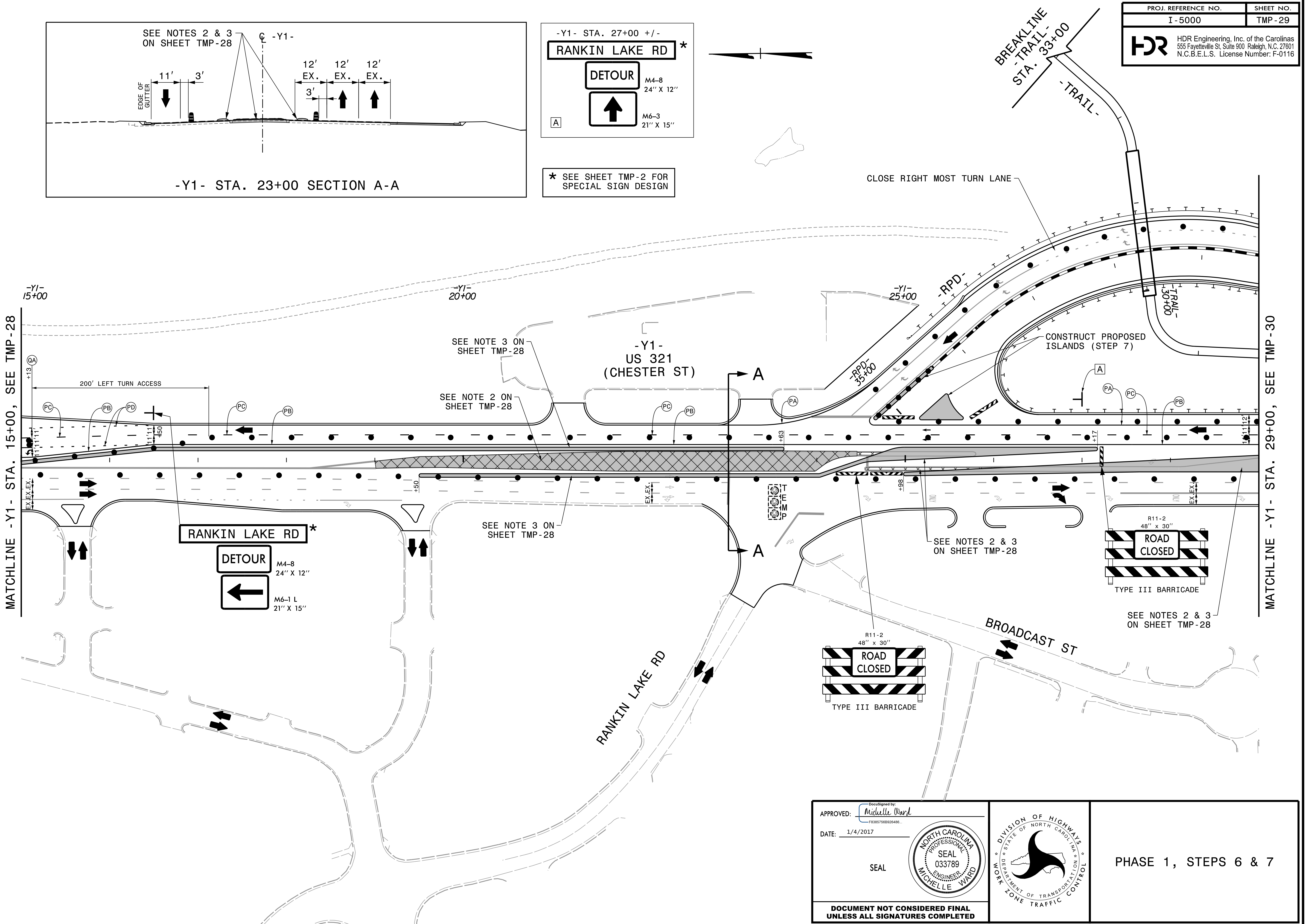


PHASE 1, STEPS 6 & 7

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 USER: BSCOTT  
 DATE: 1/4/2017  
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\* SEE SHEET TMP-2 FOR SPECIAL SIGN DESIGN



PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.plt  
 USER: BSCOTT  
 DATE: 1/4/2017  
 TIME: 11:37:31 AM  
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REVISIONS

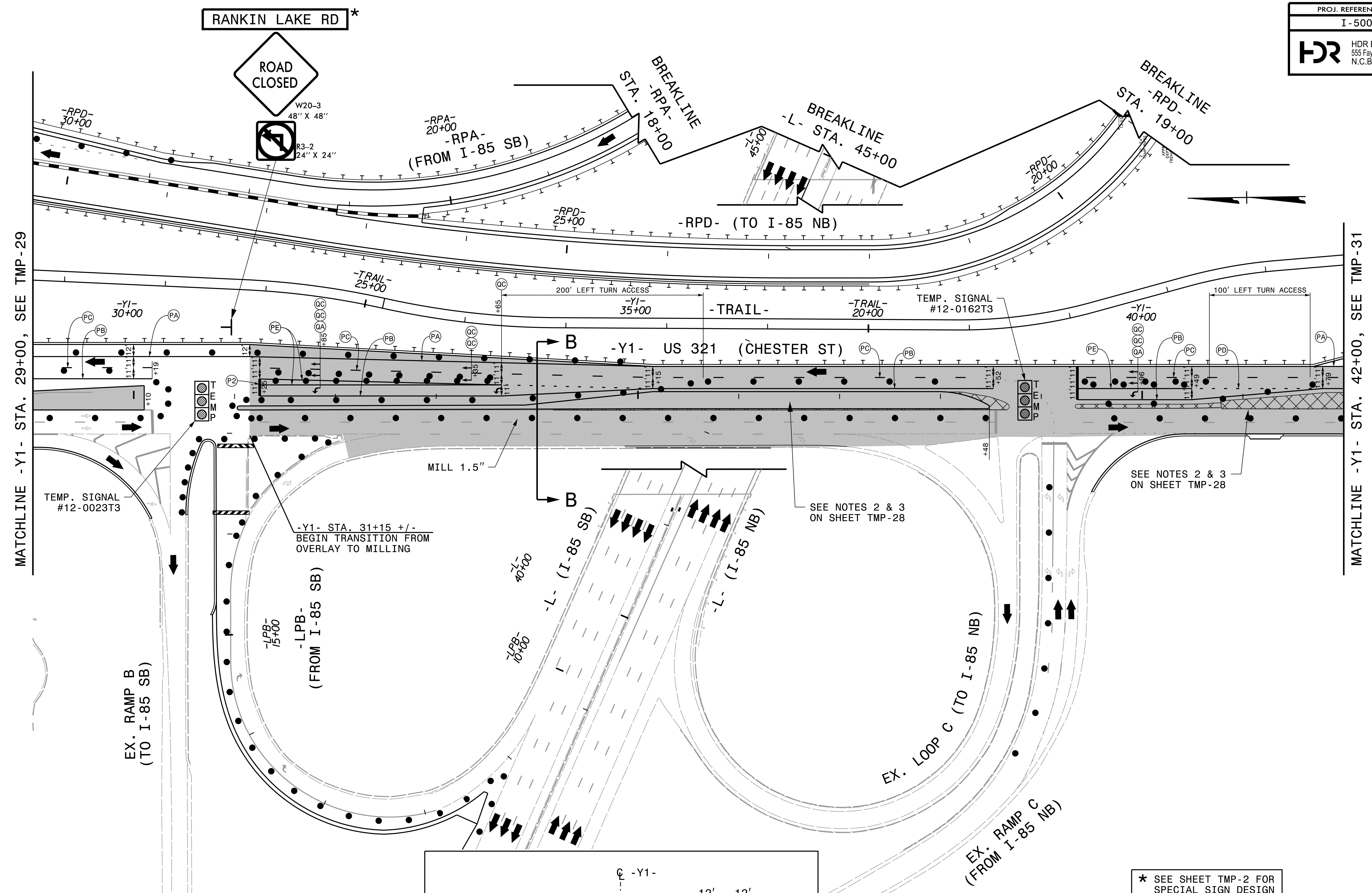
APPROVED: Michelle Ward  
 DATE: 1/4/2017

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE 1, STEPS 6 & 7

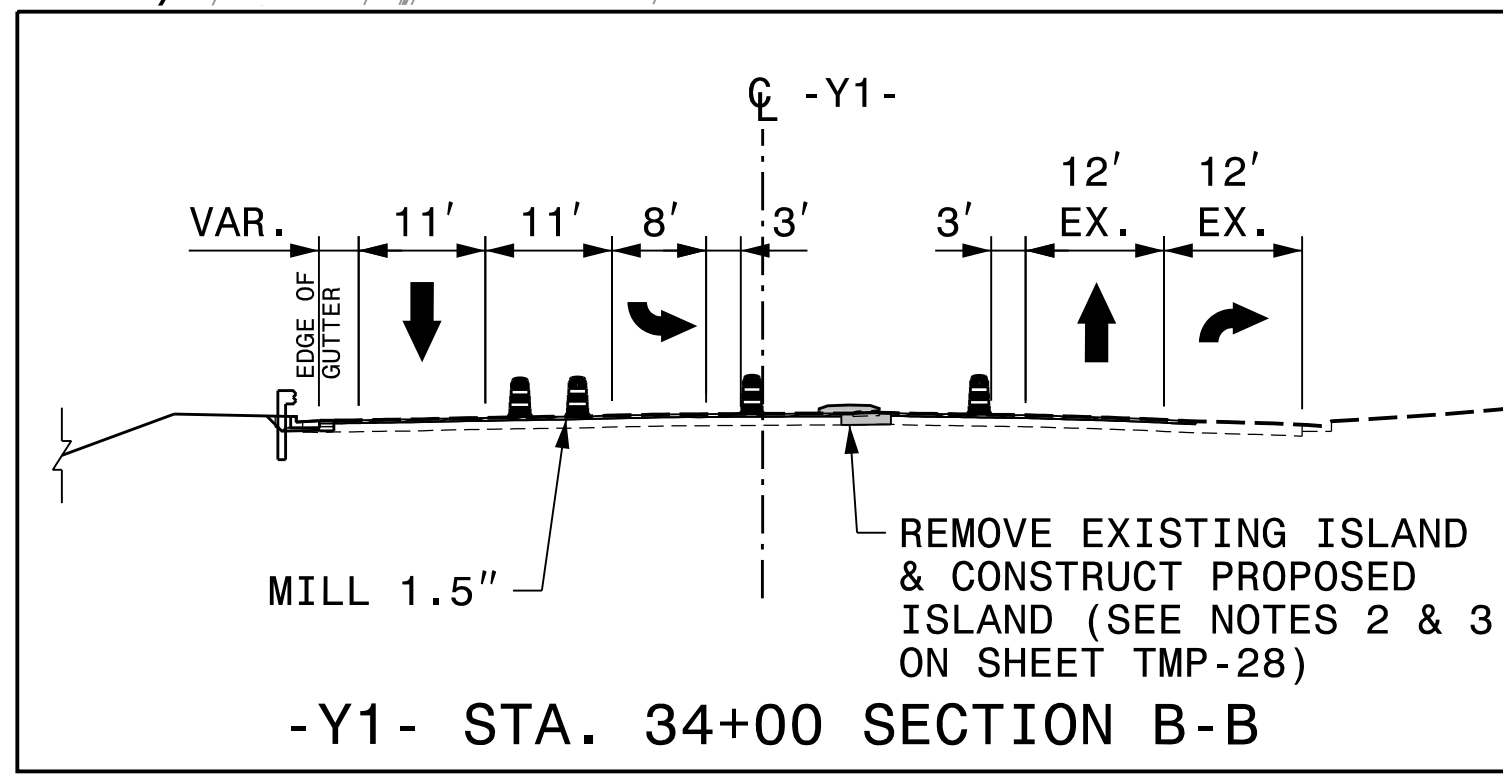


RANKIN LAKE RD \*

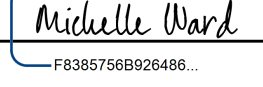


MATCHLINE -Y1- STA. 29+00, SEE TMP-29

MATCHLINE -Y1- STA. 42+00, SEE TMP-31

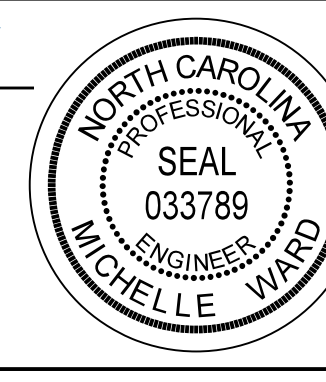


\* SEE SHEET TMP-2 FOR SPECIAL SIGN DESIGN


APPROVED: 

DATE: 1/4/2017

SEAL



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



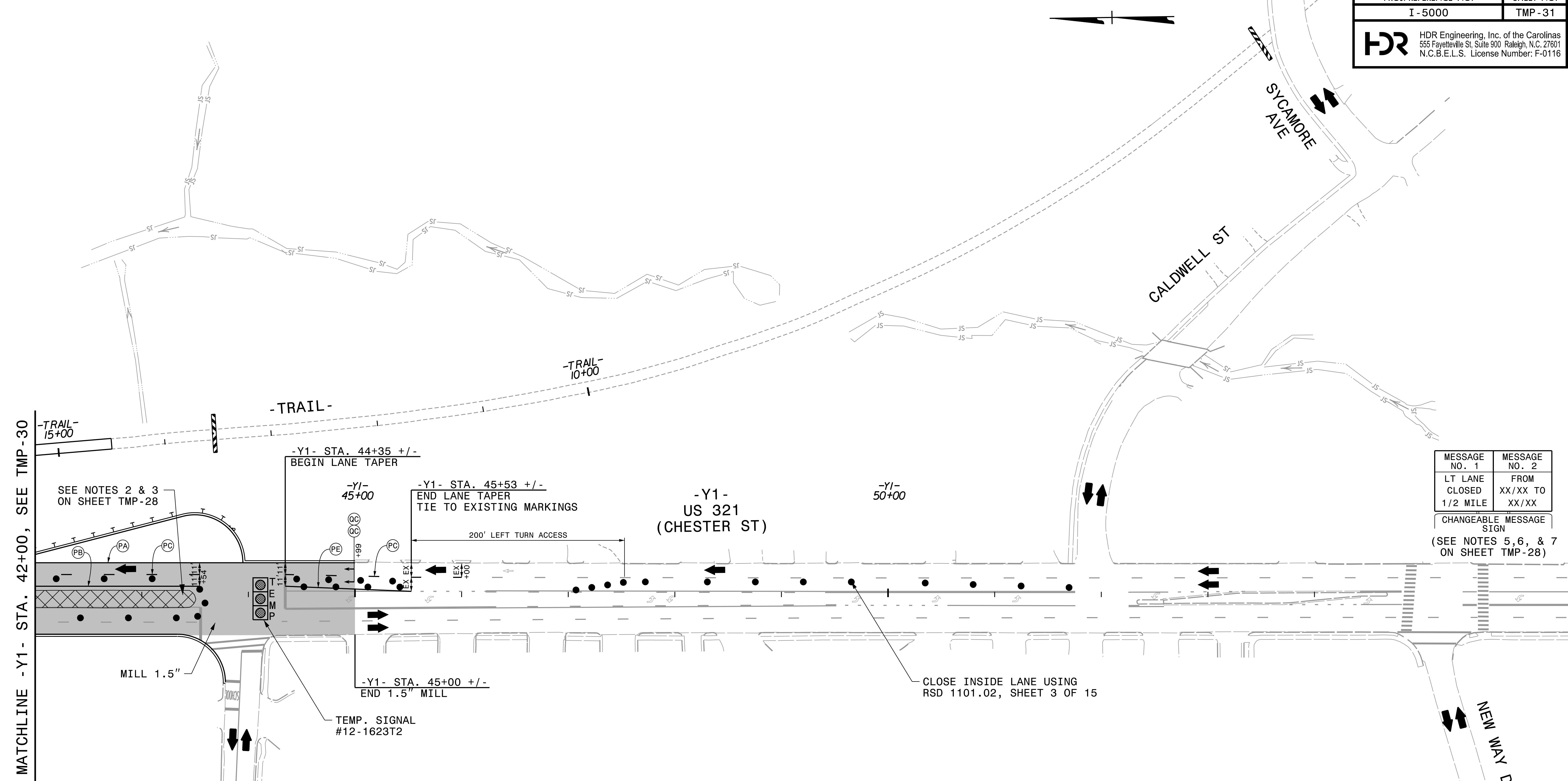
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL

PHASE 1, STEPS 6 & 7

PLOT DRIVER: NCDOT\_color\_eng\_50.plt  
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 TIME: 11:38:05 AM  
 DATE: 1/4/2017

REVISIONS

PROJ. REFERENCE NO. I-5000	SHEET NO. TMP-31
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	



MESSAGE NO. 1	MESSAGE NO. 2
LT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX

CHANGEABLE MESSAGE SIGN  
(SEE NOTES 5, 6, & 7 ON SHEET TMP-28)

REVISIONS

MATCHLINE -Y1- STA. 42+00, SEE TMP-30

CLOSE INSIDE LANE USING RSD 1101.02, SHEET 3 OF 15

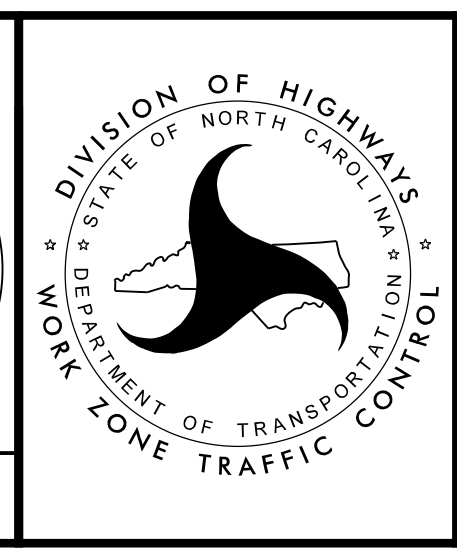
NOTES:

1. PLACE CMS 1/4 TO 1/2 MILE IN ADVANCE OF RADIO ST INTERSECTION AS DIRECTED BY THE ENGINEER.
2. CMS TO REMAIN IN PLACE FOR 2 WEEKS FOR EACH TRAFFIC PATTERN CHANGE, OR AS DIRECTED BY THE ENGINEER.

PLOT DRIVER: NCDOT\_color\_eng\_50.plt  
 USER: BSCOTT  
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 TIME: 11:38:17 AM  
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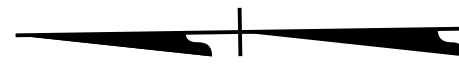
APPROVED: *Michelle Ward*  
F338758B020486  
 DATE: 1/4/2017

SEAL



PHASE 1, STEPS 6 & 7

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



REVISIONS

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 USER: BSCOTT  
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APPLIES TO BOTH LEFT AND RIGHT LANE CLOSURES

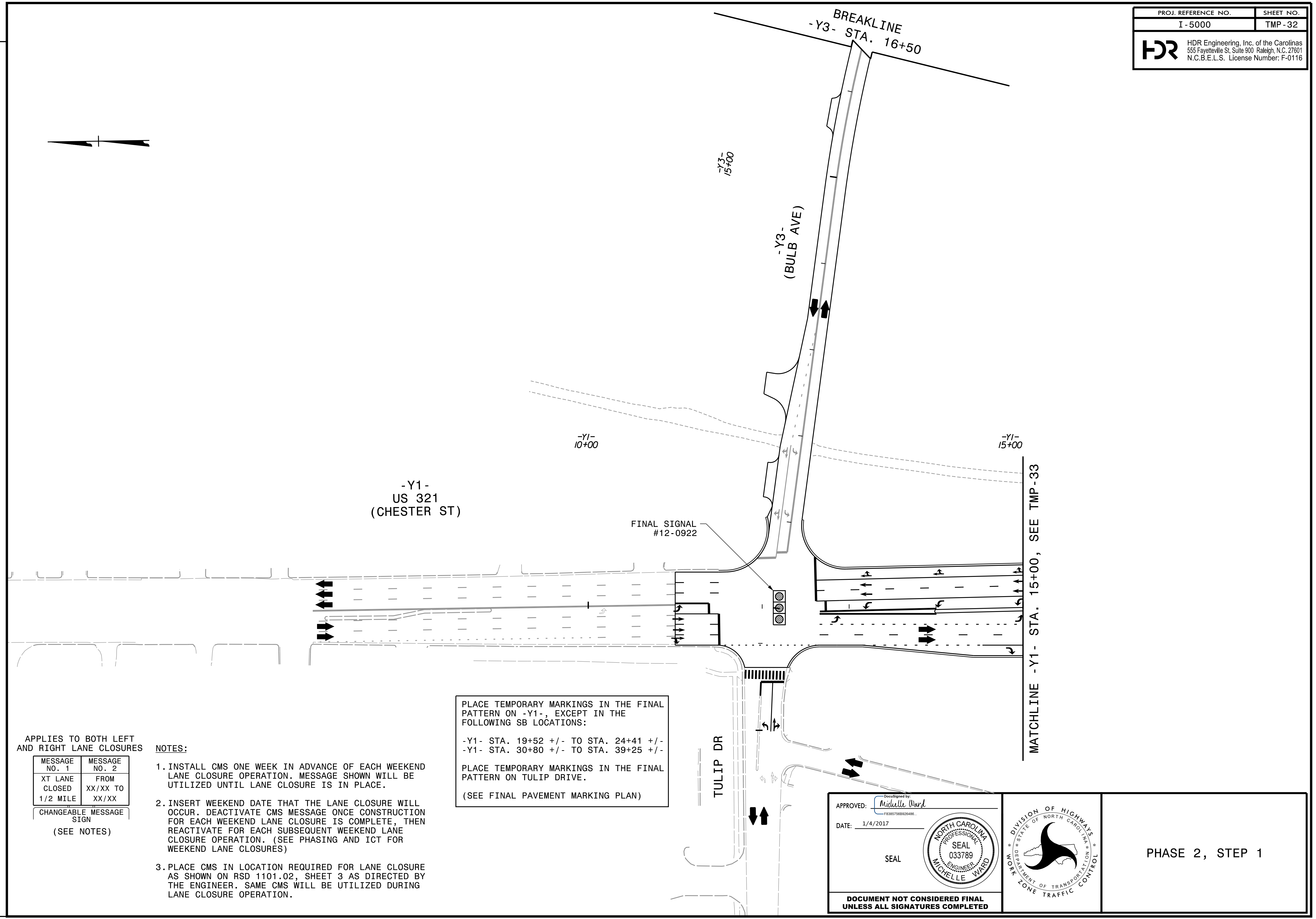
MESSAGE NO. 1	MESSAGE NO. 2
XT LANE CLOSED 1/2 MILE	FROM XX/XX TO XX/XX

CHANGEABLE MESSAGE SIGN  
 (SEE NOTES)

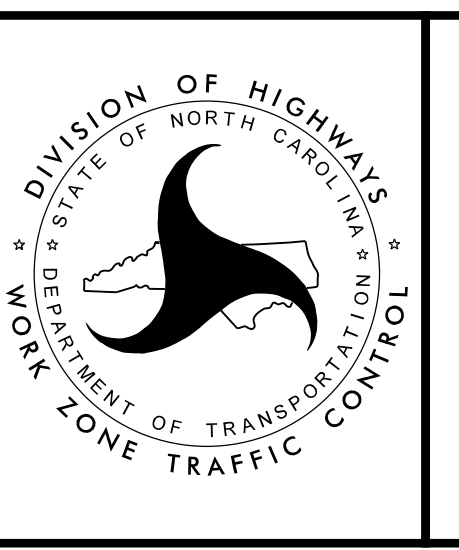
**NOTES:**

1. INSTALL CMS ONE WEEK IN ADVANCE OF EACH WEEKEND LANE CLOSURE OPERATION. MESSAGE SHOWN WILL BE UTILIZED UNTIL LANE CLOSURE IS IN PLACE.
2. INSERT WEEKEND DATE THAT THE LANE CLOSURE WILL OCCUR. DEACTIVATE CMS MESSAGE ONCE CONSTRUCTION FOR EACH WEEKEND LANE CLOSURE IS COMPLETE, THEN REACTIVATE FOR EACH SUBSEQUENT WEEKEND LANE CLOSURE OPERATION. (SEE PHASING AND ICT FOR WEEKEND LANE CLOSURES)
3. PLACE CMS IN LOCATION REQUIRED FOR LANE CLOSURE AS SHOWN ON RSD 1101.02, SHEET 3 AS DIRECTED BY THE ENGINEER. SAME CMS WILL BE UTILIZED DURING LANE CLOSURE OPERATION.

PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y1-, EXCEPT IN THE FOLLOWING SB LOCATIONS:  
 -Y1- STA. 19+52 +/- TO STA. 24+41 +/-  
 -Y1- STA. 30+80 +/- TO STA. 39+25 +/-  
 PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON TULIP DRIVE.  
 (SEE FINAL PAVEMENT MARKING PLAN)



APPROVED: *Michelle Ward*  
 DATE: 1/4/2017  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033789 MICHELLE WARD  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



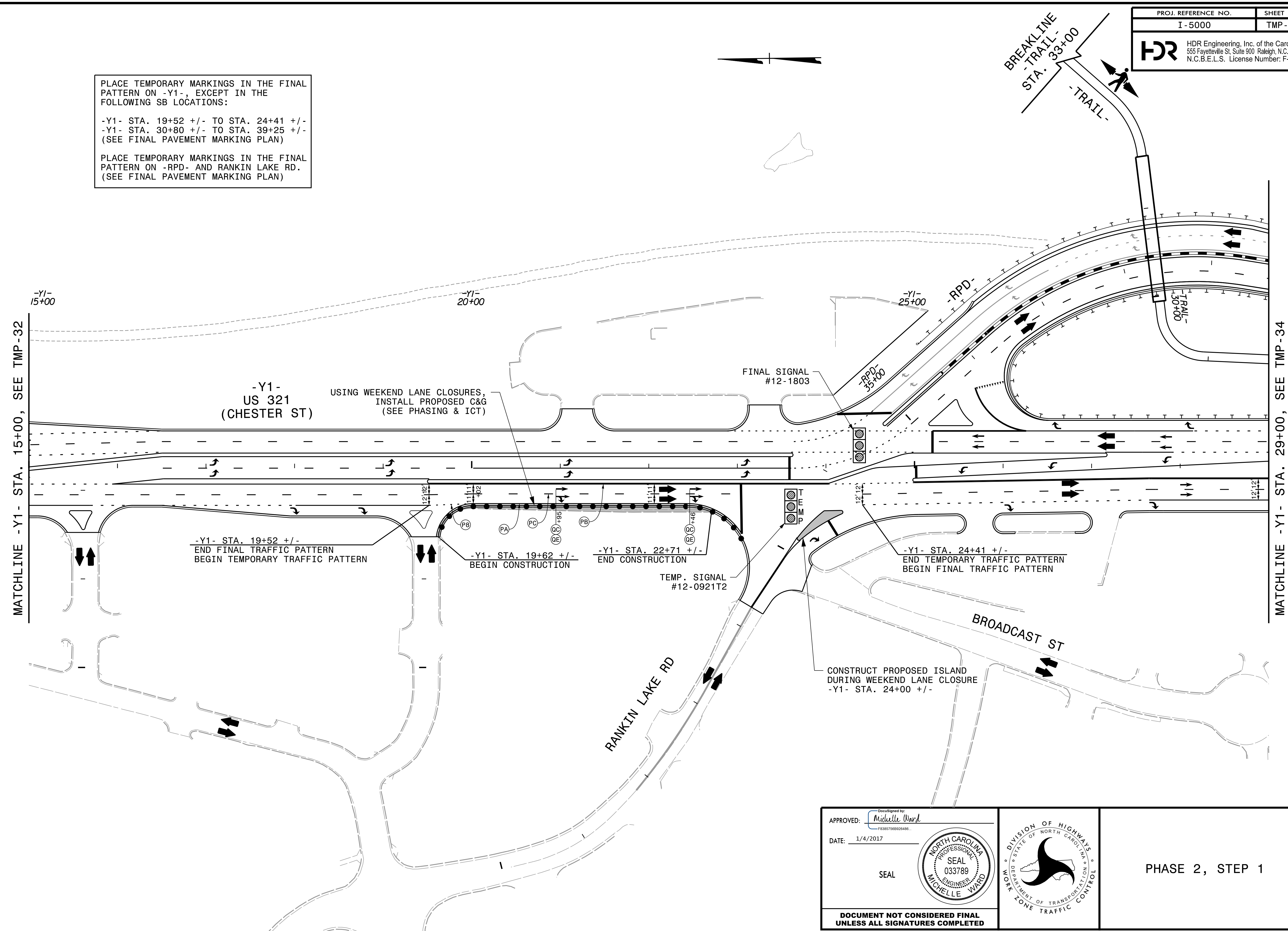
PHASE 2, STEP 1

PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y1-, EXCEPT IN THE FOLLOWING SB LOCATIONS:

- Y1- STA. 19+52 +/- TO STA. 24+41 +/-
- Y1- STA. 30+80 +/- TO STA. 39+25 +/-

(SEE FINAL PAVEMENT MARKING PLAN)

PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -RPD- AND RANKIN LAKE RD.  
(SEE FINAL PAVEMENT MARKING PLAN)



MATCHLINE -Y1- STA. 15+00, SEE TMP-32

MATCHLINE -Y1- STA. 29+00, SEE TMP-34

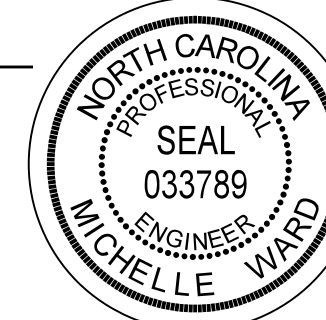
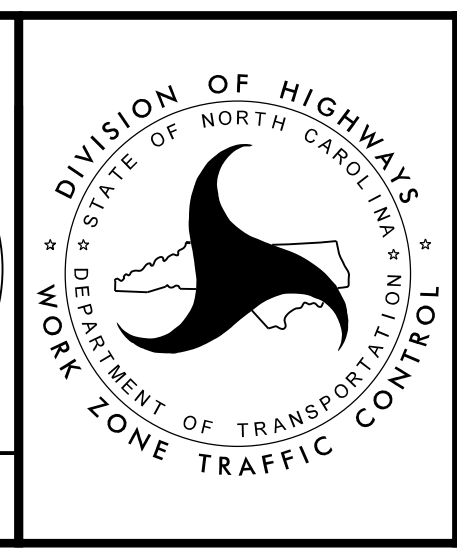
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REVISIONS

APPROVED: *Michelle Ward*  
DocuSigned by: Michelle Ward  
F335756B020466

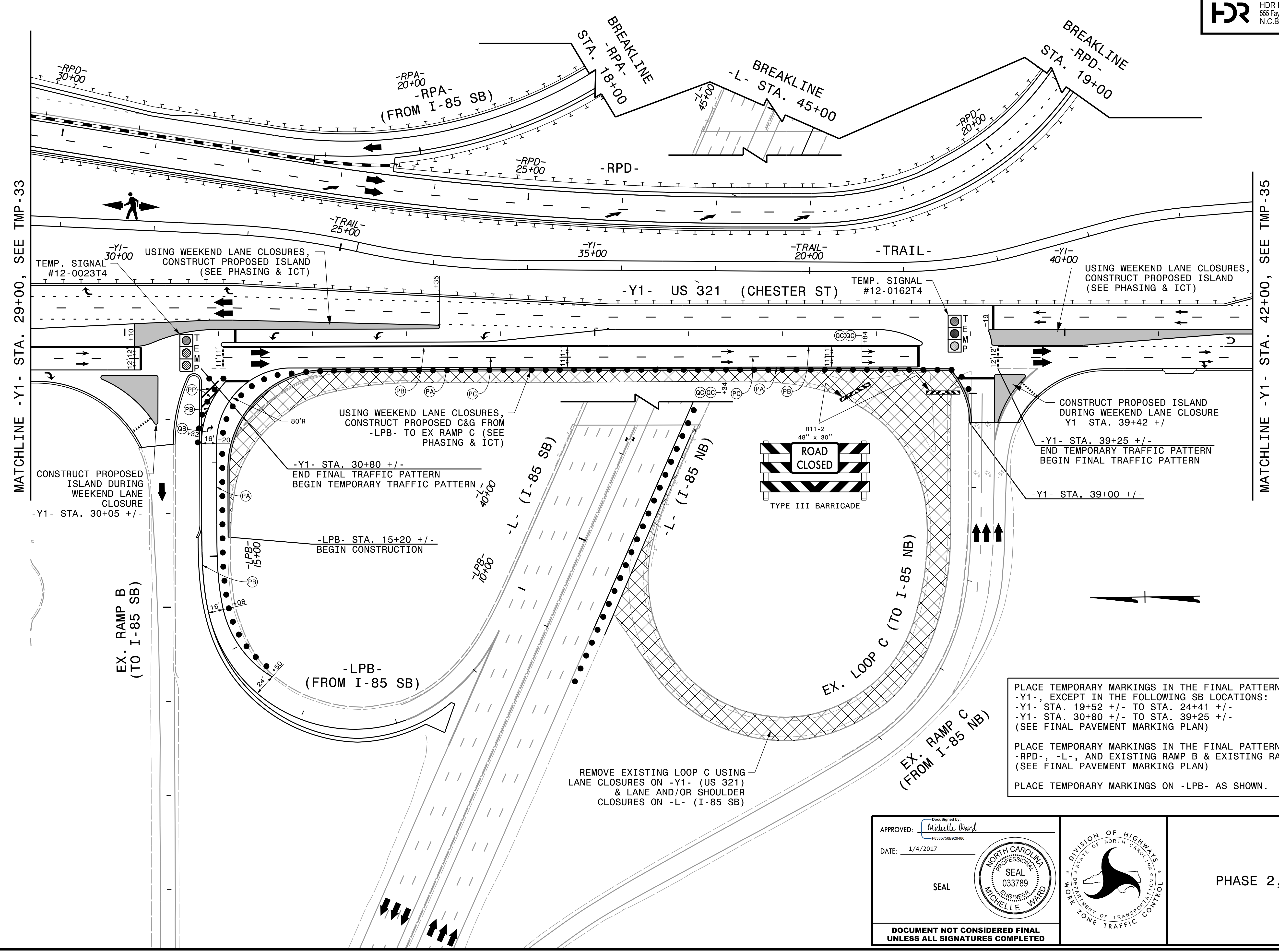
DATE: 1/4/2017

SEAL

PHASE 2, STEP 1

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MATCHLINE -Y1- STA. 29+00, SEE TMP-33

MATCHLINE -Y1- STA. 42+00, SEE TMP-35

CONSTRUCT PROPOSED ISLAND DURING WEEKEND LANE CLOSURE -Y1- STA. 30+05 +/-

USING WEEKEND LANE CLOSURES, CONSTRUCT PROPOSED ISLAND (SEE PHASING & ICT)

USING WEEKEND LANE CLOSURES, CONSTRUCT PROPOSED C&G FROM -LPB- TO EX RAMP C (SEE PHASING & ICT)

USING WEEKEND LANE CLOSURES, CONSTRUCT PROPOSED ISLAND (SEE PHASING & ICT)

CONSTRUCT PROPOSED ISLAND DURING WEEKEND LANE CLOSURE -Y1- STA. 39+42 +/-

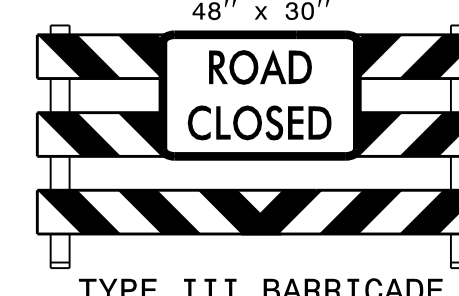
-Y1- STA. 39+25 +/-  
END TEMPORARY TRAFFIC PATTERN  
BEGIN FINAL TRAFFIC PATTERN

EX. RAMP B (TO I-85 SB)

-LPB- (FROM I-85 SB)

-Y1- STA. 30+80 +/-  
END FINAL TRAFFIC PATTERN  
BEGIN TEMPORARY TRAFFIC PATTERN

-LPB- STA. 15+20 +/-  
BEGIN CONSTRUCTION



EX. LOOP C (TO I-85 NB)

EX. RAMP C (FROM I-85 NB)

REMOVE EXISTING LOOP C USING LANE CLOSURES ON -Y1- (US 321) & LANE AND/OR SHOULDER CLOSURES ON -L- (I-85 SB)


PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -Y1-, EXCEPT IN THE FOLLOWING SB LOCATIONS:  
 -Y1- STA. 19+52 +/- TO STA. 24+41 +/-  
 -Y1- STA. 30+80 +/- TO STA. 39+25 +/-  
 (SEE FINAL PAVEMENT MARKING PLAN)

PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -RPD-, -L-, AND EXISTING RAMP B & EXISTING RAMP C. (SEE FINAL PAVEMENT MARKING PLAN)

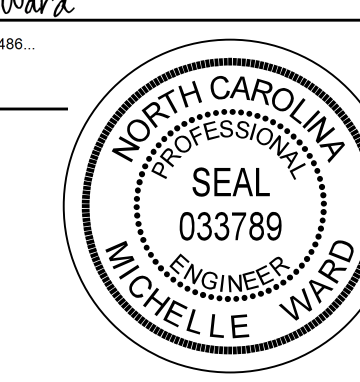
PLACE TEMPORARY MARKINGS ON -LPB- AS SHOWN.

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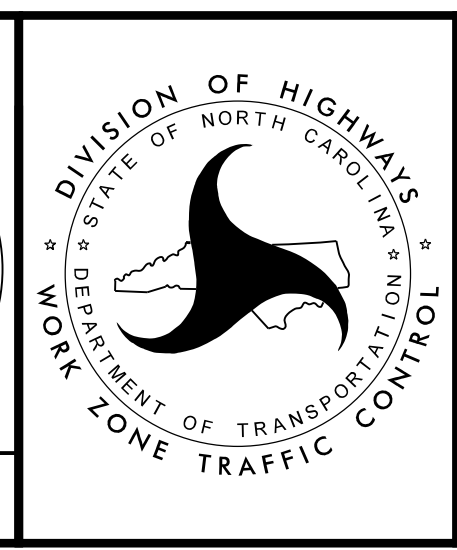
REVISIONS

APPROVED:   
 DATE: 1/4/2017

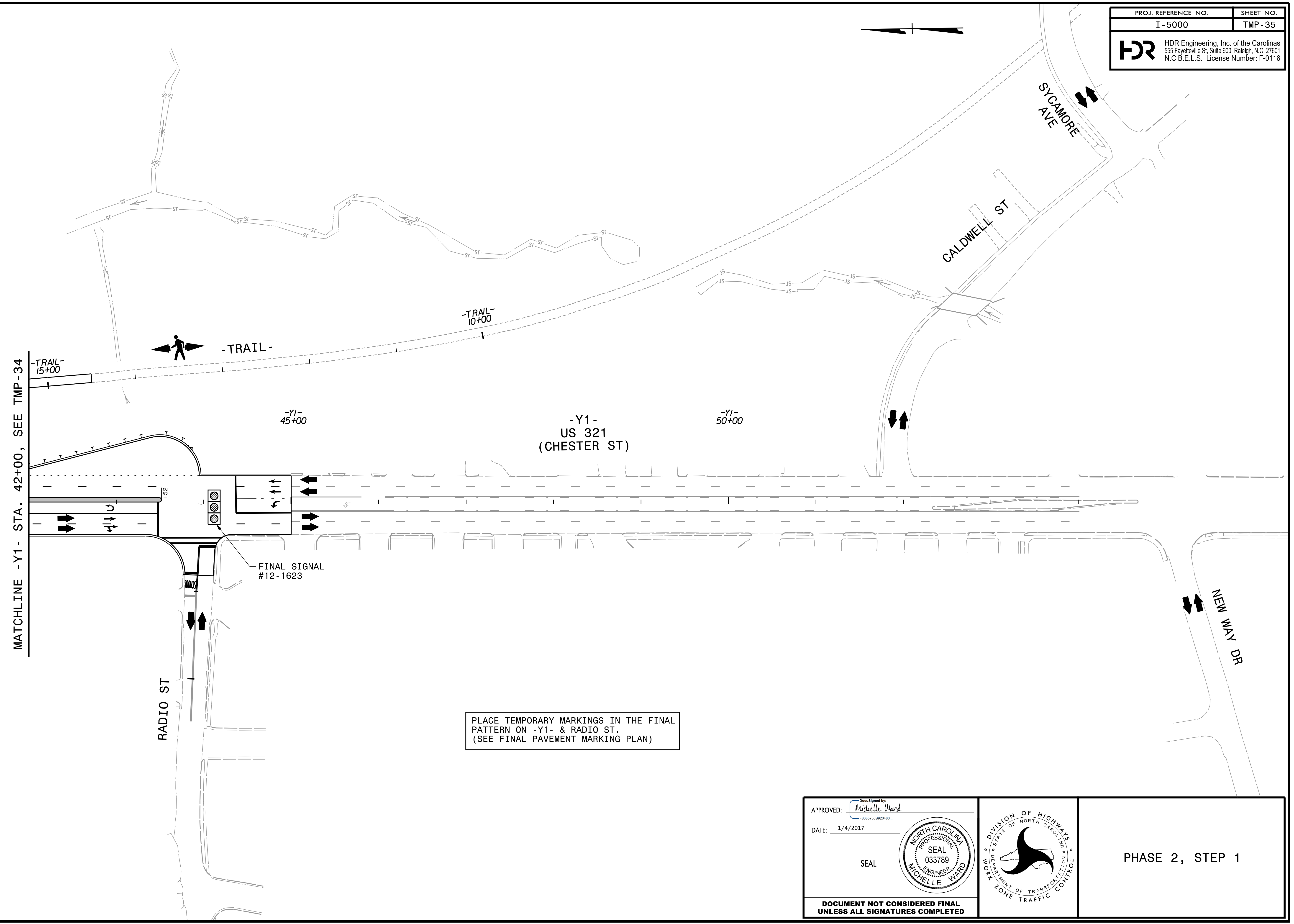
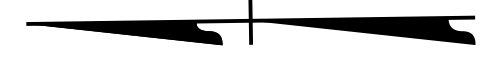
SEAL



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PHASE 2, STEP 1



MATCHLINE -Y1- STA. 42+00, SEE TMP-34

-TRAIL-

-TRAIL-  
10+00

-Y1-  
45+00

-Y1-  
US 321  
(CHESTER ST)

-Y1-  
50+00

CALDWELL ST

SYCAMORE  
AVE

NEW WAY DR

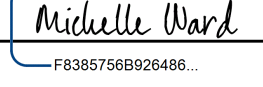
FINAL SIGNAL  
#12-1623

RADIO ST

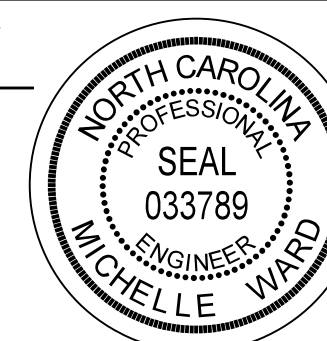
PLACE TEMPORARY MARKINGS IN THE FINAL  
PATTERN ON -Y1- & RADIO ST.  
(SEE FINAL PAVEMENT MARKING PLAN)

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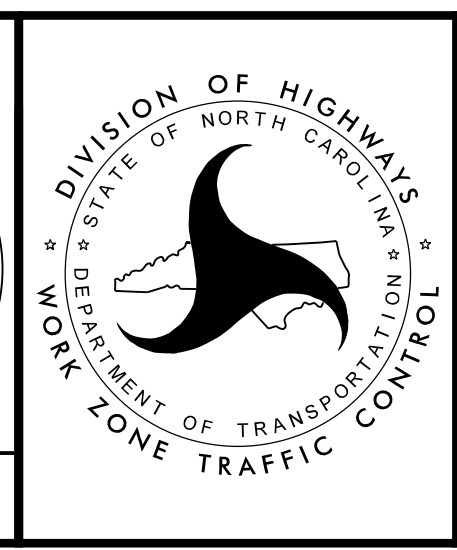
REVISIONS

APPROVED:   
DocuSigned by: Michelle Ward  
 DATE: 1/4/2017

SEAL

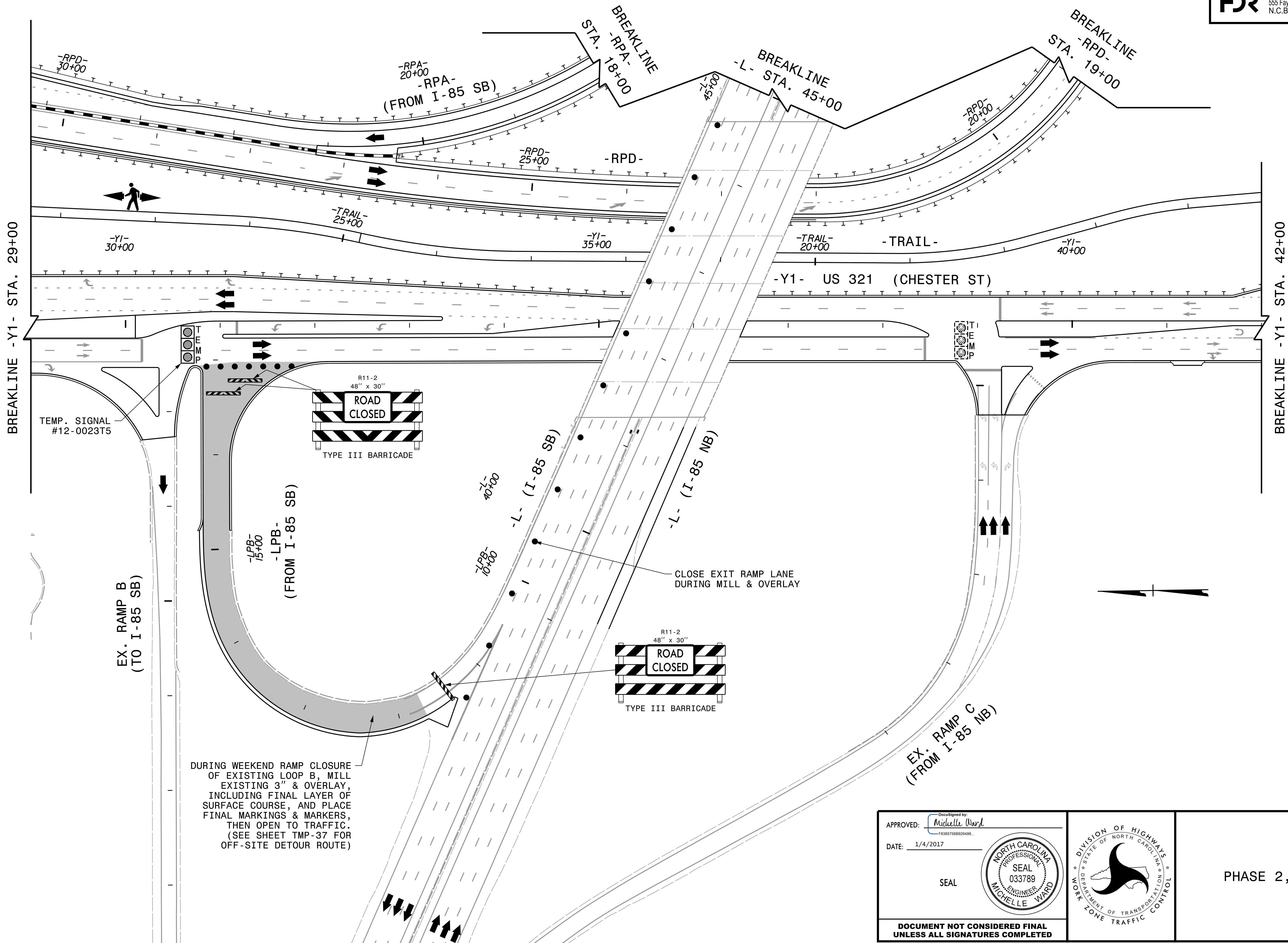


**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



PHASE 2, STEP 1

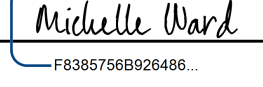




REVISIONS

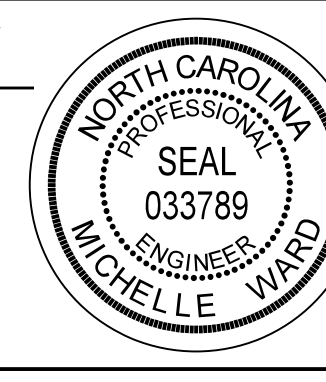
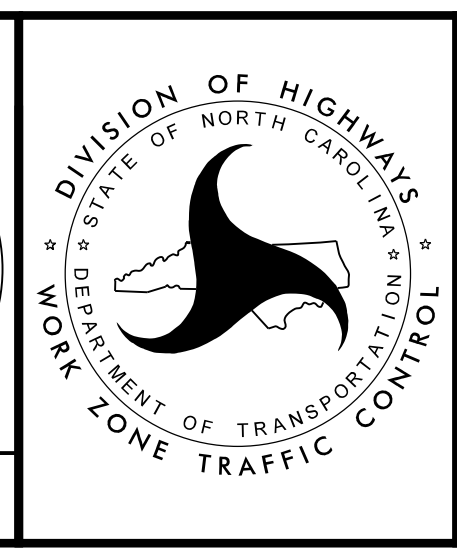
DURING WEEKEND RAMP CLOSURE OF EXISTING LOOP B, MILL EXISTING 3" & OVERLAY, INCLUDING FINAL LAYER OF SURFACE COURSE, AND PLACE FINAL MARKINGS & MARKERS, THEN OPEN TO TRAFFIC. (SEE SHEET TMP-37 FOR OFF-SITE DETOUR ROUTE)

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_50.pit  
 USER: BSCOTT  
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 DATE: 1/4/2017

APPROVED:   
F338750820466

DATE: 1/4/2017

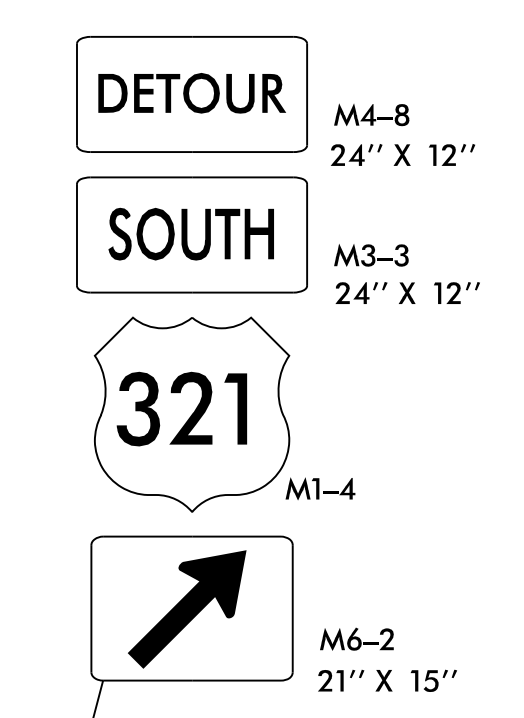
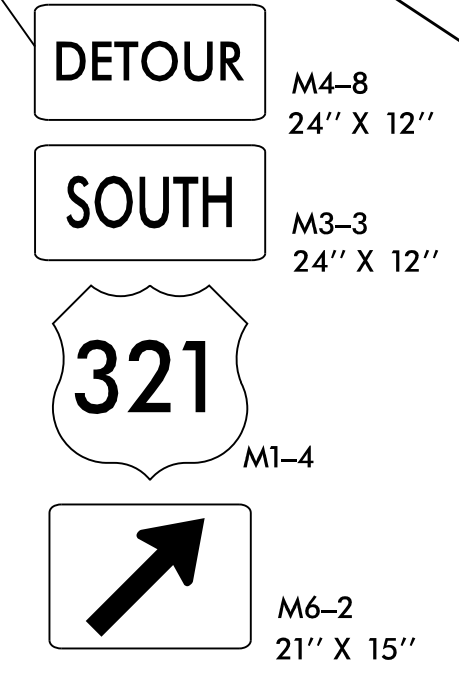
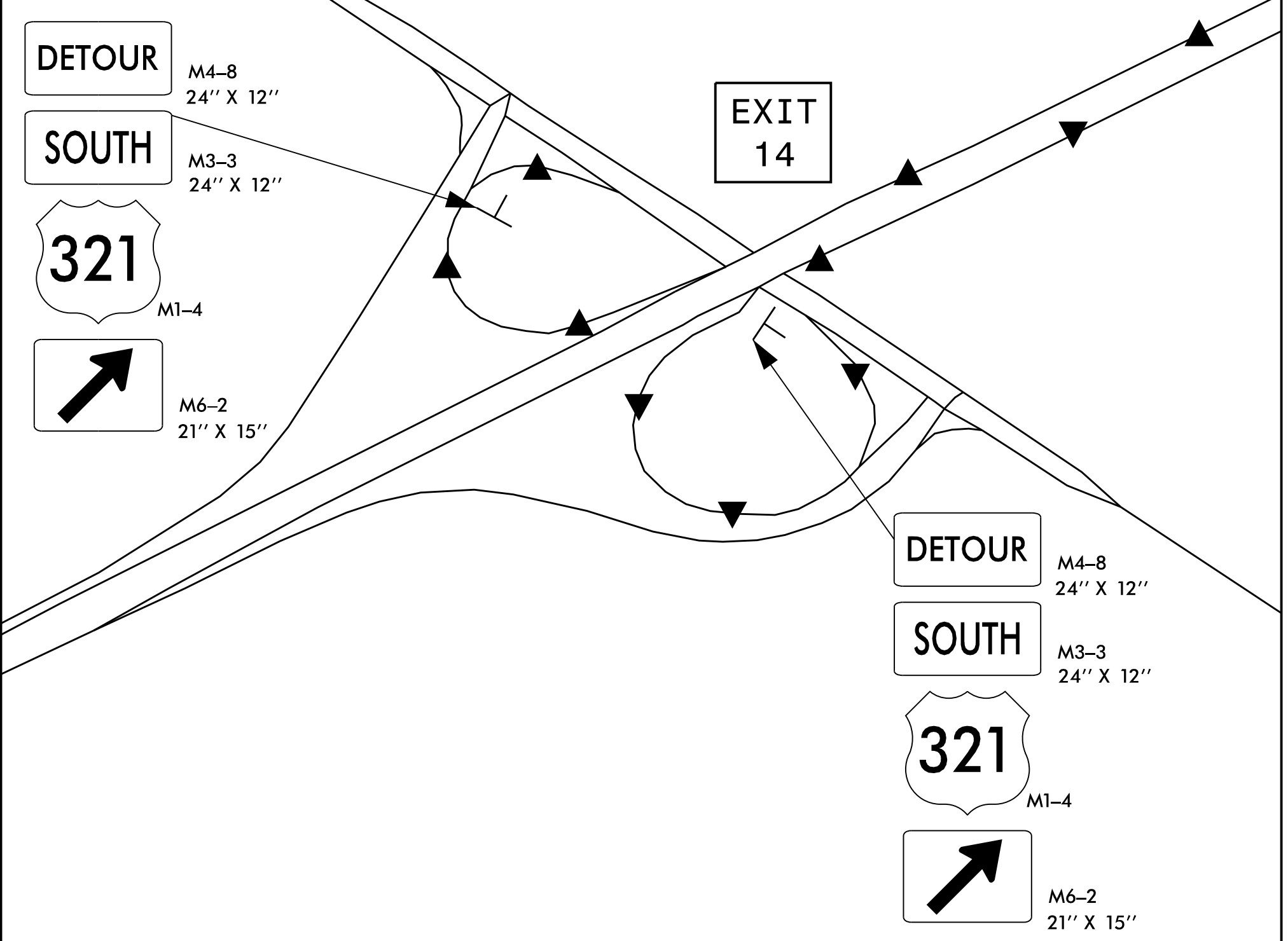
SEAL

PHASE 2, STEP 2

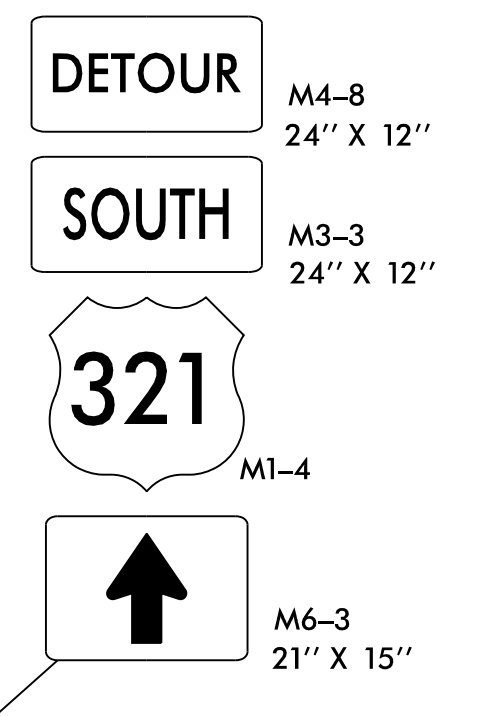
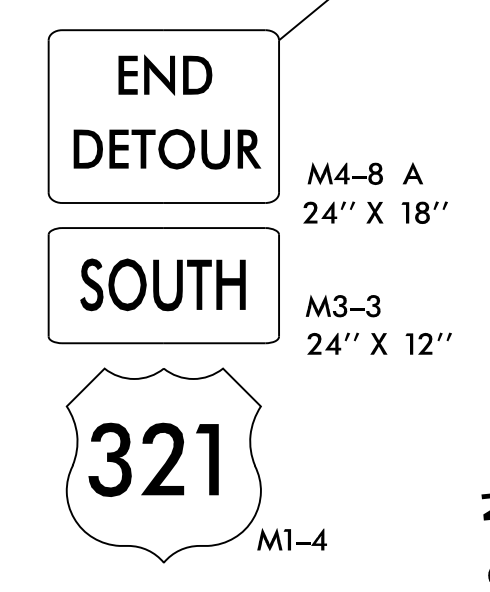
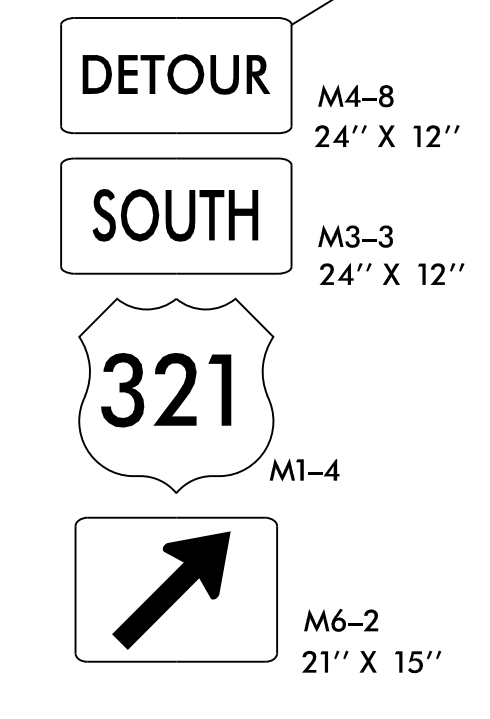
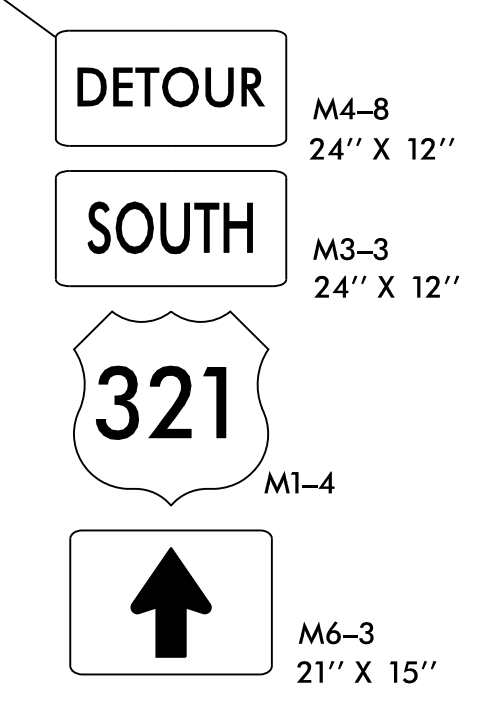
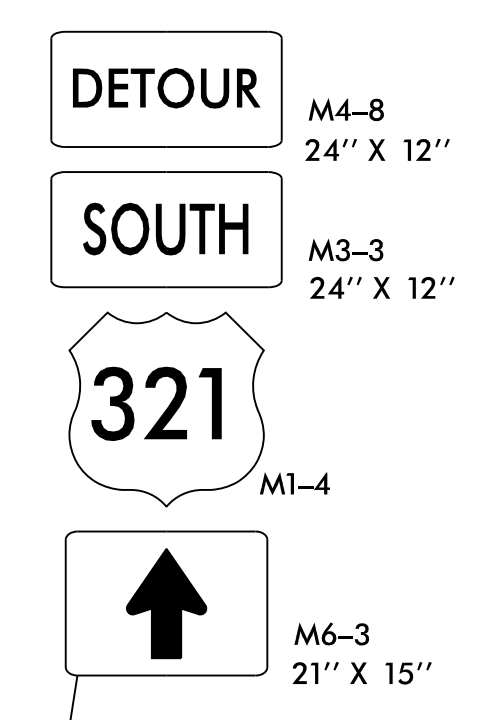
**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

### DETAIL



SEE DETAIL

US 274



CMS	
MESSAGE NO. 1	MESSAGE NO. 2
EXIT 17A CLOSED AHEAD	FOLLOW DETOUR EXIT 14
CHANGEABLE MESSAGE SIGN	

N CHESTER ST.  
US 321

EXISTING LOOP B FROM I-85 SB CLOSED  
(SEE SHEET TMP-36 FOR BARRICADE PLACEMENT)



PROJ. REFERENCE NO. I - 5000	SHEET NO. TMP - 37
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	

REVISIONS

PLOT DRIVER: NCDOT\_color\_eng\_50.plt  
 USER: BSCOTT  
 DATE: 1/4/2017  
 FILE: p:\PWAPP\TFA01\SouthEast\_Tampa\Documents\000166\CON079\59\000000000227915\06\00\_Project\_Design\I-5000\TrafficControl\TCP\I-5000\_TMP-TMP-37.dgn

APPROVED: *Michelle Ward*  
 DATE: 1/4/2017  
 SEAL

US 321 SOUTH  
 DETOUR ROUTE

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED