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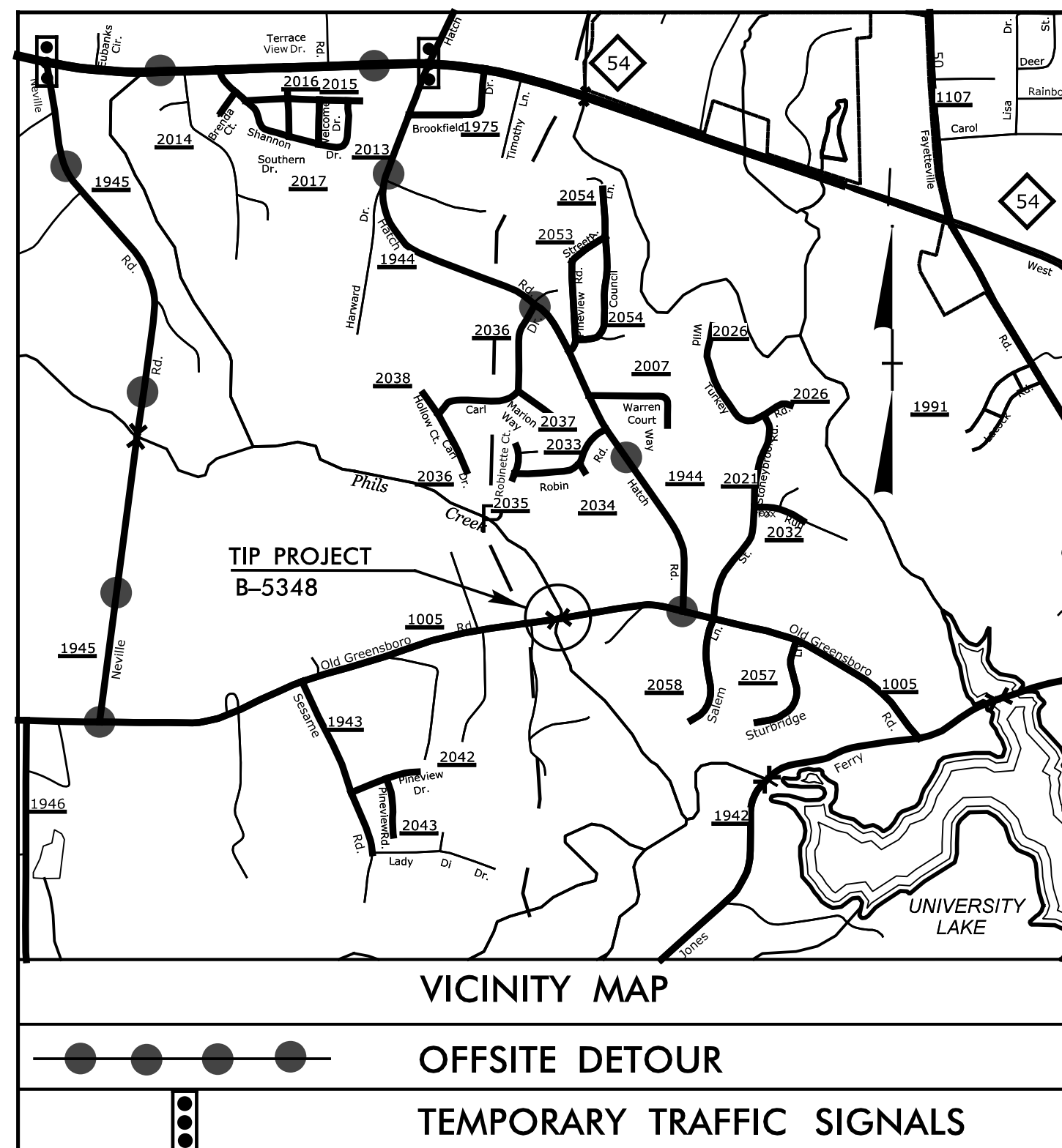
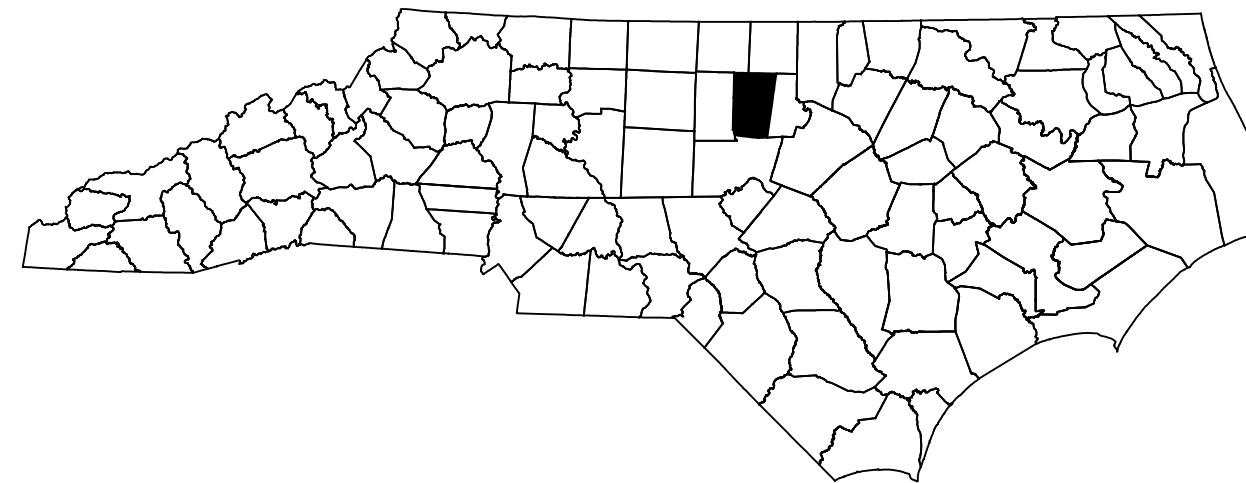
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ORANGE COUNTY



LOCATION: BRIDGE NO. 85 OVER PHILS CREEK ON SR 105 (OLD GREENSBORO ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, TEMPORARY TRAFFIC SIGNALS, AND STRUCTURE

INDEX OF SHEETS

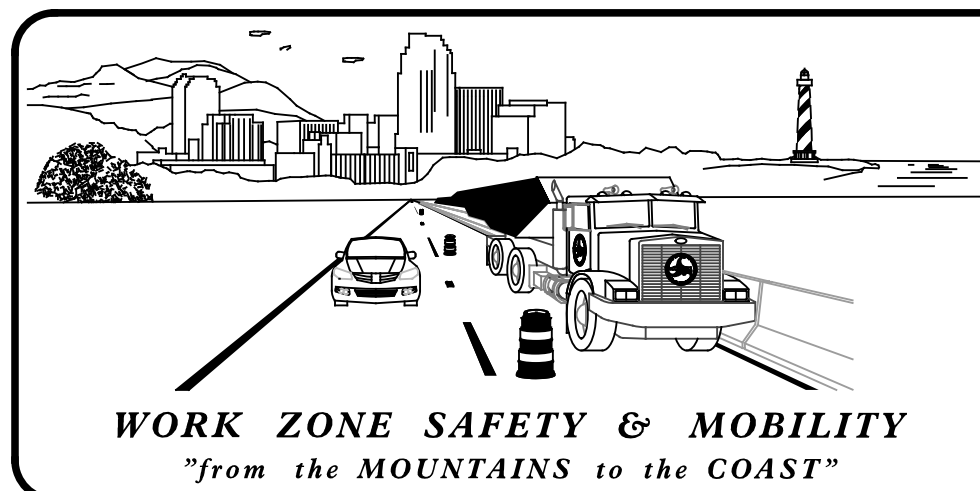
| SHEET NO. | TITLE |
|-----------|---|
| TMP-1 | TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS |
| TMP-1A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE |
| TMP-1B | TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND PHASING) |
| TMP-2 | SPECIAL SIGN DESIGN SP-1 |
| TMP-2A | SPECIAL SIGN DESIGN SP-2 |
| TMP-3 | OFF-SITE DETOUR |
| TMP-4 | ROAD CLOSURE |

SHEET NO.
TMP-1

B-5348

TIP PROJECT:

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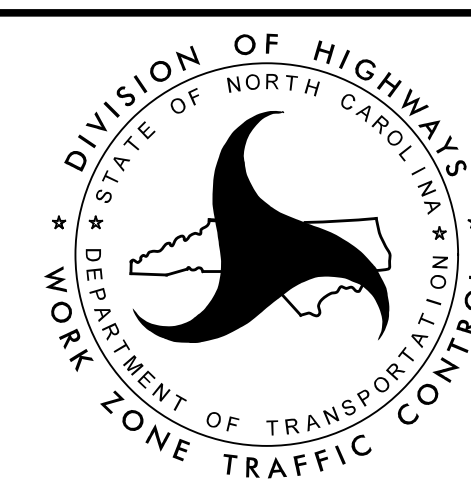
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

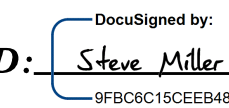
_____ STATE TRAFFIC MANAGEMENT ENGINEER

_____ TRAFFIC CONTROL PROJECT ENGINEER


S. COLEMAN, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

A. Y. LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: 
DATE: 4/13/2017

SEAL



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:

| <u>STD. NO.</u> | <u>TITLE</u> |
|-----------------|---------------------------------|
| 1101.01 | WORK ZONE ADVANCE WARNING SIGNS |
| 1101.02 | TEMPORARY LANE CLOSURE |
| 1101.03 | TEMPORARY ROAD CLOSURES |
| 1101.04 | TEMPORARY SHOULDER CLOSURE |
| 1101.05 | WORK ZONE VEHICLE ACCESSES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1145.01 | BARRICADES |

LEGEND

GENERAL

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

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING SCHEDULE

| SYMBOL | DESCRIPTION |
|--------|---------------------------------|
| | PAINT (4") |
| P8 | 2 FT. - 6 FT./SP WHITE MINISKIP |
| PA | WHITE EDGELINE |
| PI | YELLOW DOUBLE CENTER |
| | PAINT (24") |
| P2 | WHITE STOPBAR |

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ENGINEERING & CONSTRUCTION

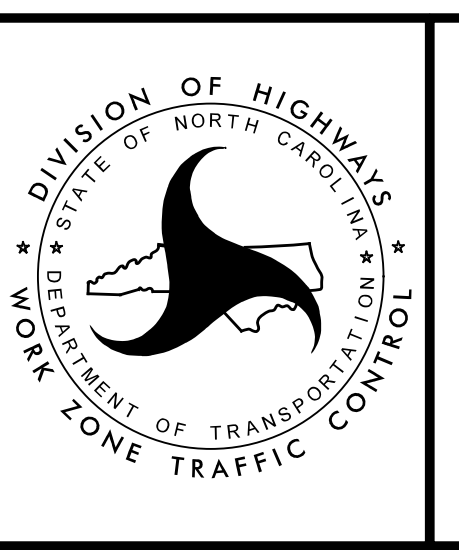
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

APPROVED: Steve Miller
9FBC9C15CEE8486...

DATE: 4/13/2017

SEAL

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ROADWAY STANDARD
DRAWINGS, LEGEND,
AND TEMPORARY
PAVEMENT MARKING
SCHEDULE

MANAGEMENT STRATEGIES

- INSTALL TWO TEMPORARY TRAFFIC SIGNALS FOR THE DURATION OF THE OFFSITE DETOUR AT THE FOLLOWING INTERSECTIONS:
NC HW 54 & NEVILLE RD (SR 1945)
NC HW 54 & HATCH RD (SR 1944)
- CLOSE SR 1005 (OLD GREENSBORO ROAD) AND DETOUR TRAFFIC OFFSITE
- LOCAL ACCESS TO ALL RESIDENCES AND BUSINESSES WILL BE MAINTAINED BETWEEN CLOSURE POINTS AT ALL TIMES DURING CONSTRUCTION
- PROVIDE THIRTY DAYS NOTICE TO THE ENGINEER, ORANGE COUNTY EMERGENCY SERVICES, AND ORANGE COUNTY SCHOOL OFFICIALS PRIOR TO ROAD CLOSURE

GENERAL NOTES

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

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

TIME RESTRICTIONS

- A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:
- | | |
|------------------|---|
| <u>ROAD NAME</u> | <u>DAY AND TIME RESTRICTIONS</u> |
| NC 54 | MONDAY THROUGH FRIDAY 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM |
- B) DO NOT STOP TRAFFIC AS FOLLOWS:
- | | | |
|------------------|---|--|
| <u>ROAD NAME</u> | <u>DAY AND TIME RESTRICTIONS</u> | <u>DURATION AND OPERATION</u> |
| NC 54 | MONDAY THROUGH FRIDAY 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM | 15 MINUTES FOR INSTALLING TEMPORARY PAVEMENT MARKINGS |

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- I) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- K) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

PAVEMENT MARKINGS AND MARKERS

- M) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:
- | | | |
|-----------|---------|--------|
| ROAD NAME | MARKING | MARKER |
| ALL ROADS | PAINT | NONE |
- N) 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.
 - O) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
 - P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

LOCAL NOTE

- Q) STATE FORCES WILL BE RESPONSIBLE FOR PROVIDING ADVISORY SIGNING REQUIRED FOR TEMPORARY TRAFFIC SIGNALS.

PHASING

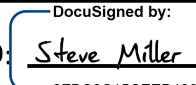
PROVIDE THIRTY DAYS NOTICE TO THE ENGINEER, ORANGE COUNTY EMERGENCY SERVICES, AND ORANGE COUNTY SCHOOL OFFICIALS PRIOR TO ROAD CLOSURE.

- STEP 1 USING RSD 1101.01 SHEET 3 OF 3, PLACE ADVANCE WARNING SIGNS ON NC 54, NEVILLE RD, AND HATCH RD.
- STEP 2 USING RSD 1101.02 SHEET 1 OF 15 AND RSD 1101.04 AS NECESSARY, INSTALL TEMPORARY SIGNALS ACCORDING TO THE SIGNAL PLANS, TEMPORARY PAVEMENT MARKINGS, AND STATIONARY WORK ZONE SIGNS W3-3 (SIGNAL AHEAD) AND SP-1 (TEMPORARY SIGNAL).
- STEP 3 USING RSD 1101.03 SHEET 1 OF 9, CLOSE OLD GREENSBORO ROAD (SR 1005), ACTIVATE TEMPORARY SIGNALS, AND DETOUR TRAFFIC OFFSITE AS SHOWN ON TMP-3. MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES BETWEEN CLOSURE POINTS.
- STEP 4 AWAY FROM TRAFFIC, PERFORM THE FOLLOWING:
 - REMOVE THE EXISTING STRUCTURE, AND CONSTRUCT THE PROPOSED STRUCTURE AND ROADWAY.
 - PLACE FINAL PAVEMENT MARKINGS ACCORDING TO THE PAVEMENT MARKING PLANS.
- STEP 5 COVER TEMPORARY SIGNAL AND STATIONARY WORK ZONE TRAFFIC SIGNS W3-3 AND SP-1, INSTALLED IN STEP 2. AND OPEN OLD GREENSBORO ROAD (SR 1005) TO TRAFFIC.
- STEP 6 USING RSD 1101.02 SHEET 1 OF 15 AS NECESSARY, REMOVE TEMPORARY SIGNALS, REMOVE TEMPORARY PAVEMENT MARKINGS, AND RETURN PAVEMENT MARKINGS TO THE PRECONSTRUCTION CONDITION.
- STEP 7 REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

3/8/2017
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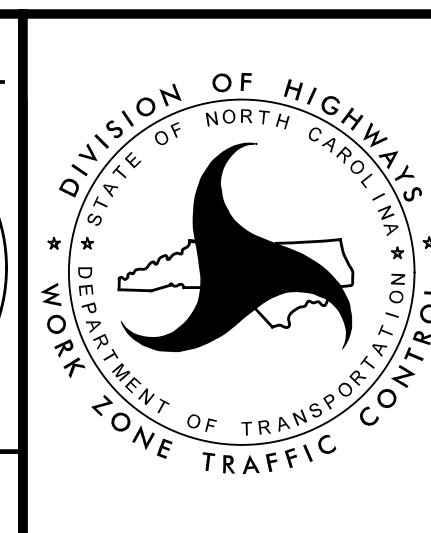
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License: C-2197

APPROVED: 
DATE: 4/13/2017

SEAL
037026
STEVEN D. MILLER
ENGINEER

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TRANSPORTATION OPERATION PLAN

SIGN NUMBER: SP1 **BACKG COLOR:** Fluorescent Orange
TYPE: STATIONARY **COPY COLOR:** Black
QUANTITY: SEE PLANS

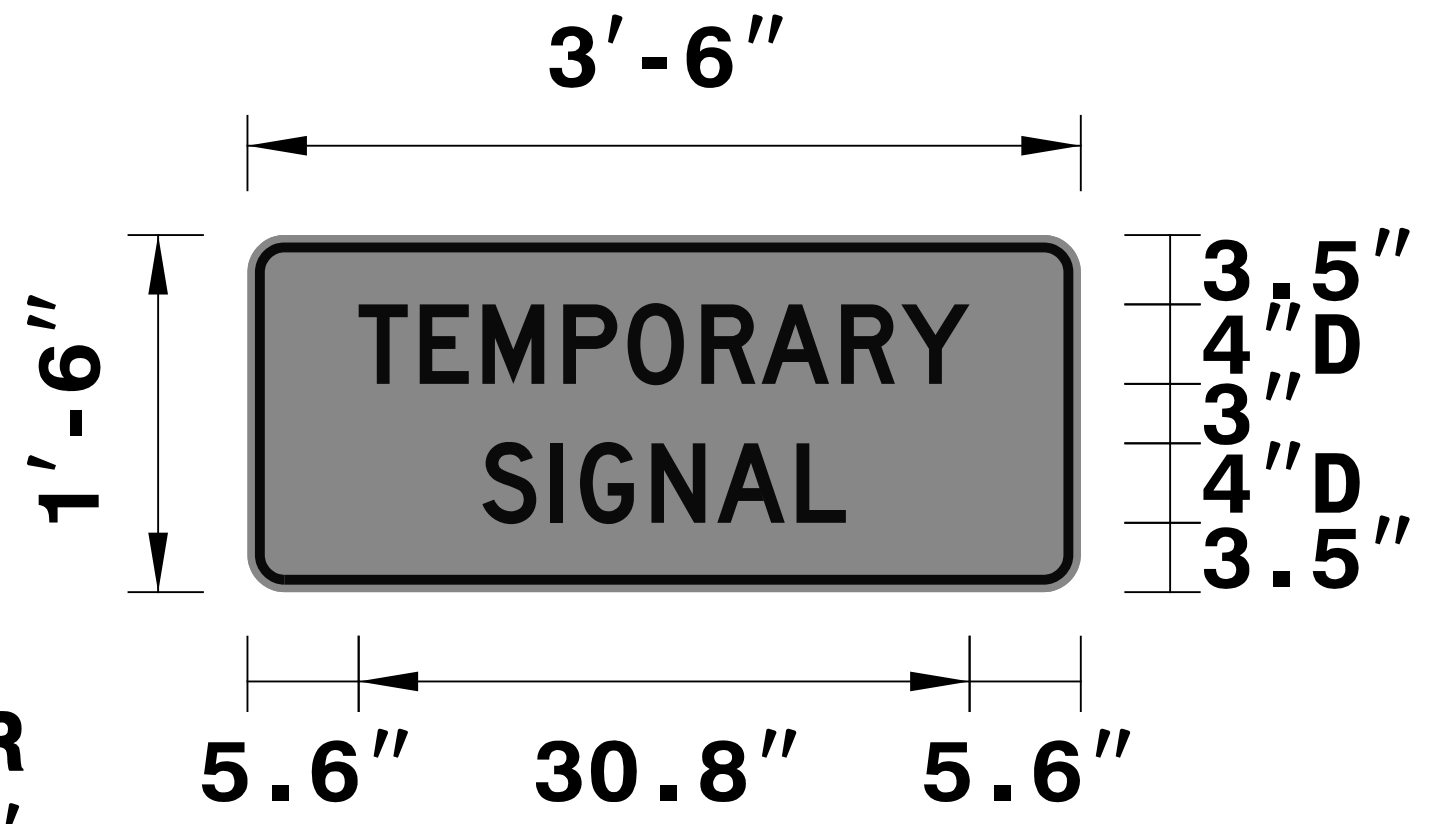
| SYMBOL | X | Y | WID | HT |
|--------|---|---|-----|----|
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SIGN WIDTH: 3'-6"
HEIGHT: 1'-6"
TOTAL AREA: 5.3 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.5"
RADII: 1.5"

NO. Z BARS: **MAT'L:** 0.080" (2.0 mm) ALUMINUM
LENGTH:

DESIGN BY: M ISHAK **CHECKED BY:** S. MILLER
PROJECT ID: B-5348 **LOCATION:** ORANGE COUNTY
AUGUST 18, 2016
DIV: 7



BORDER
R=1.5"
TH=0.5"
IN=0.38"

Spacing Factor is 1 unless specified otherwise

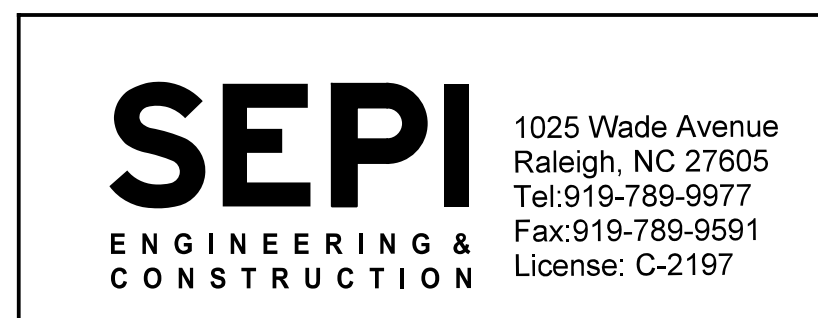
LETTER POSITIONS

| Letter spacings are to start of next letter | | | | | | | | | | | | Series/Size | |
|---|-----|-----|-----|-----|-----|-----|------|---|-----|-----|--|-------------|--------|
| | | | | | | | | | | | | Text Length | |
| | T | E | M | P | O | R | A | R | Y | | | | D 2000 |
| 5.6 | 3.1 | 3.2 | 4.1 | 3.2 | 3.7 | 3 | 4 | 3 | 3.4 | 5.6 | | | 30.8 |
| | S | I | G | N | A | L | | | | | | | D 2000 |
| 11.8 | 3.4 | 1.5 | 3.6 | 3.3 | 4 | 2.5 | 11.8 | | | | | | 18.3 |
| | | | | | | | | | | | | | |
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FILENAME: Guidsign_English_8-2-13

NORTH CAROLINA D.O.T. SIGN DETAIL

2/23/2017
 X:\2016\TRIG.006.00 NCDOT 2016 Traffic LSA\TRIG.006.07 (B-5348)\WZTC plans\B-5348_TC_TMP-2.dgn
 mishak



APPROVED: *Steve Miller*
PROFESSOR OF ENGINEERING
 DATE: 4/13/2017

SEAL

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SPECIAL SIGN DESIGN SP-1

SIGN NUMBER: SP2
 TYPE: STATIONARY
 QUANTITY: SEE PLANS
 SIGN WIDTH: 3'-6"
 HEIGHT: 2'-0"
 TOTAL AREA: 7.0 Sq.Ft.
 BORDER TYPE: INSET
 RECESS: 0.38"
 WIDTH: 0.5"
 RADII: 1.5"
 NO. Z BARS:
 LENGTH:

BACKG COLOR: Fluorescent Orange
 COPY COLOR: Black

| SYMBOL | X | Y | WID | HT |
|--------|---|---|-----|----|
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MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: M ISHAK
 PROJECT ID: B-5348

CHECKED BY: S MILLER
 LOCATION: ORANGE COUNTY

AUGUST 18, 2016
 DIV: 7



- USE NOTES: 1,2
- Legend and border shall be direct applied black non-reflective sheeting.
 - Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

| Letter spacings are to start of next letter | | | | | | | | | | | | | Series/Size Text Length |
|---|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|--|----------------------------|
| | O | L | D | | | | | | | | | | D 2000 9.5 |
| 16.2 | 3.7 | 3.1 | 2.7 | 16.2 | | | | | | | | | |
| | G | R | E | E | N | S | B | O | R | O | | | D 2000 33.3 |
| 4.3 | 3.6 | 3.4 | 3.2 | 3.2 | 3.4 | 3.4 | 3.3 | 3.7 | 3.3 | 2.8 | 4.3 | | |
| | R | O | A | D | | | | | | | | | D 2000 13.4 |
| 14.3 | 3.3 | 3.4 | 4 | 2.7 | 14.3 | | | | | | | | |

FILENAME: Guidsign_English_8-2-13

NORTH CAROLINA D.O.T. SIGN DETAIL

2/23/2017 X:\2016\TRIG.006.00 NCDOT 2016 Traffic LSA\TRIG.006.07 (B-5348)\WZTC_plans\B-5348_TC_TMP-2A.dgn mishak

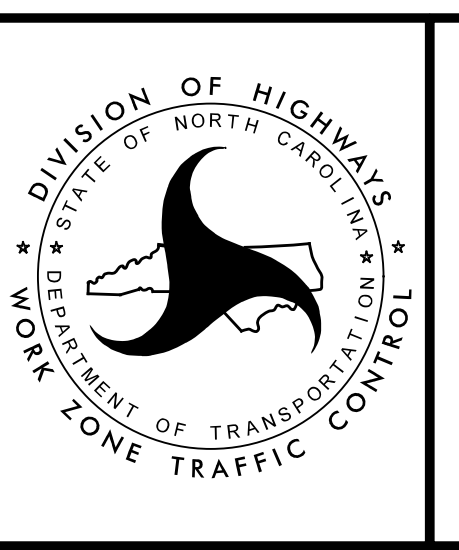
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APPROVED: *Steve Miller*
 DATE: 4/13/2017

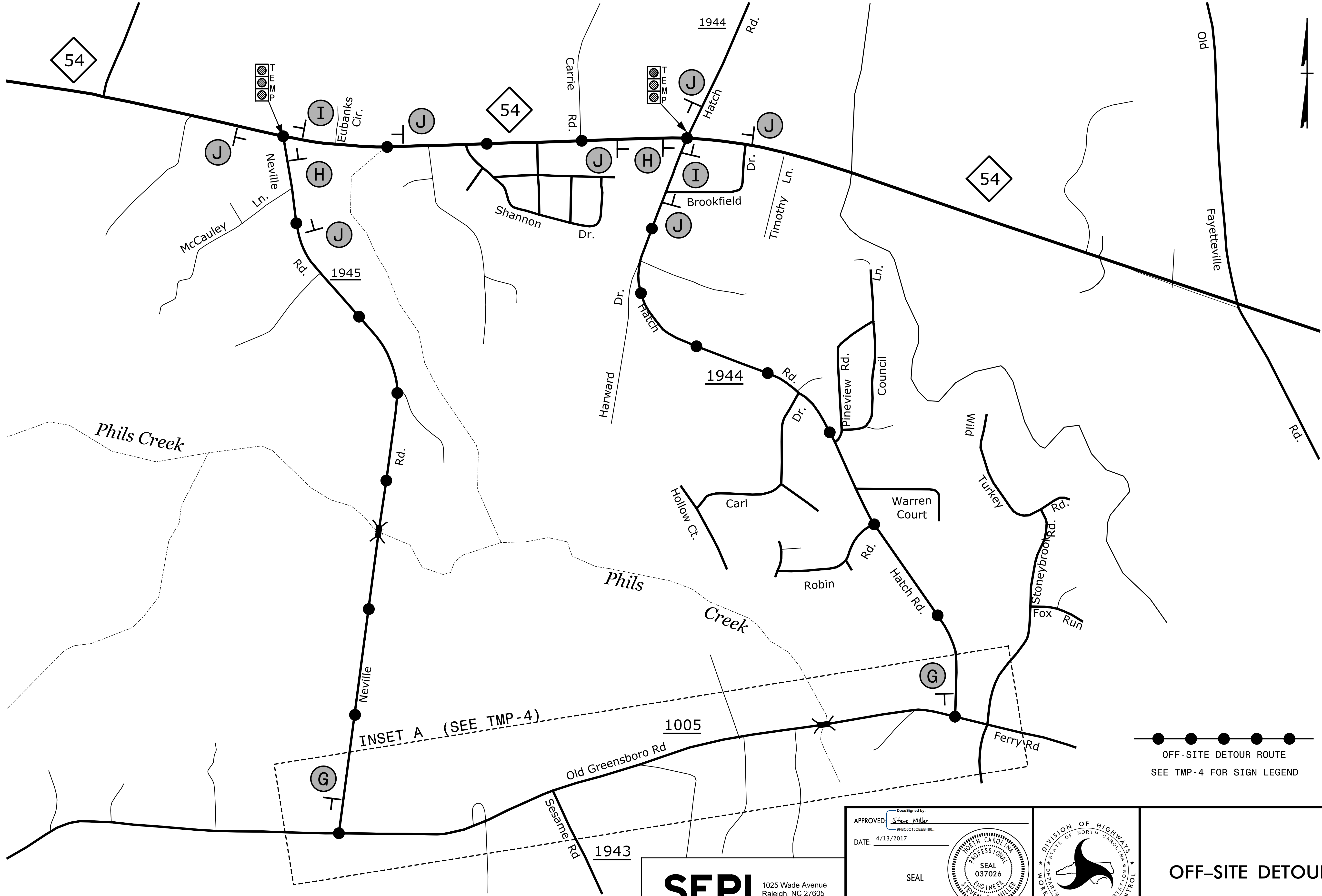
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SPECIAL SIGN DESIGN SP-2

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

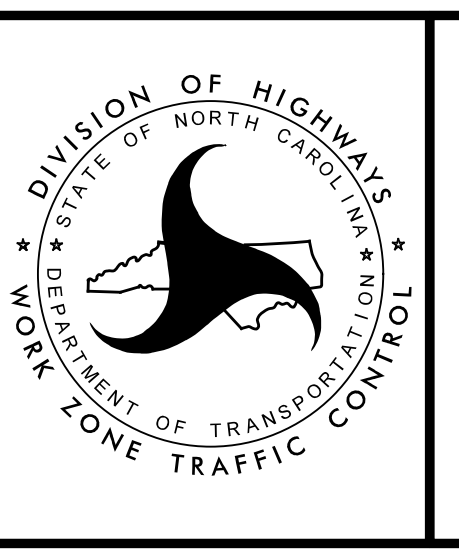


1/13/2017
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 mshak

INSET A (SEE TMP-4)

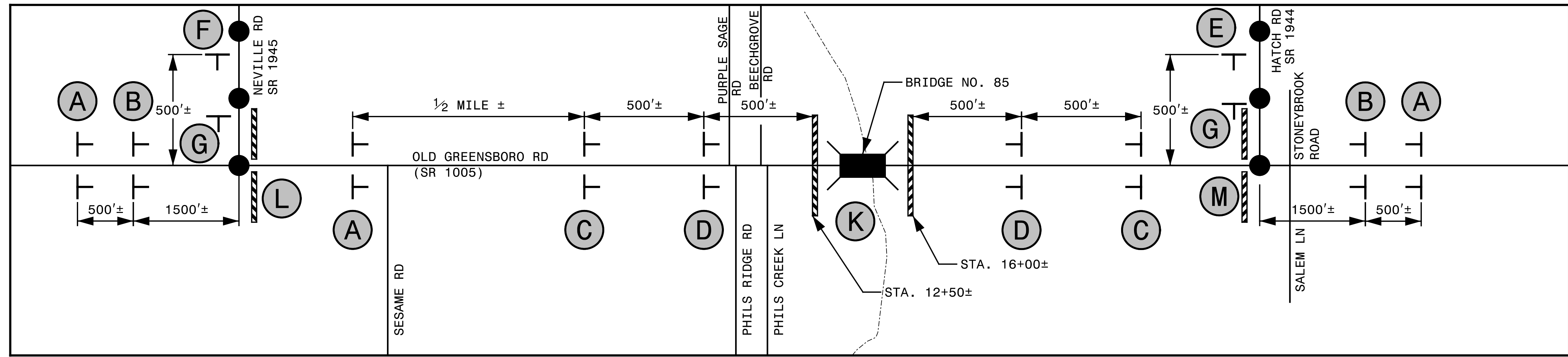
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OFF-SITE DETOUR

INSET A

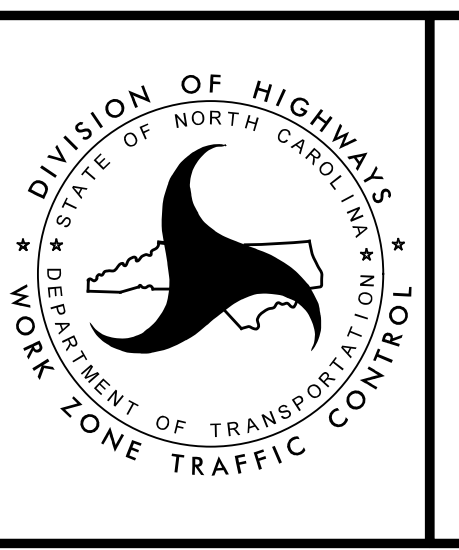


| | | | | | | | |
|---|--|------------------------|---|---|------------------------|-------------------------|---|
| W20-3 48" x 48" | W20-2 48" x 48" | W20-3 48" x 48" | W20-3 48" x 48" | W20-3 48" x 48" | W20-3 48" x 48" | M4-8 A 24" x 18" | SP-2 42" x 24" M4-8 24" x 12" M6-1 21" x 15" |
| A | B | C | D | E | F | G | H |
| SP-2 42" x 24" M4-8 24" x 12" M6-1 21" x 15" | W3-3 48" x 48" SP-1 42" x 18" | R11-2 48" x 30" | R11-3 60" x 30" M4-10L 48" x 18" | R11-4 60" x 30" M4-10R 48" x 18" | | | |
| I | J | K | L | M | | | |

1/19/2017
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 smiller

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ROAD CLOSURE