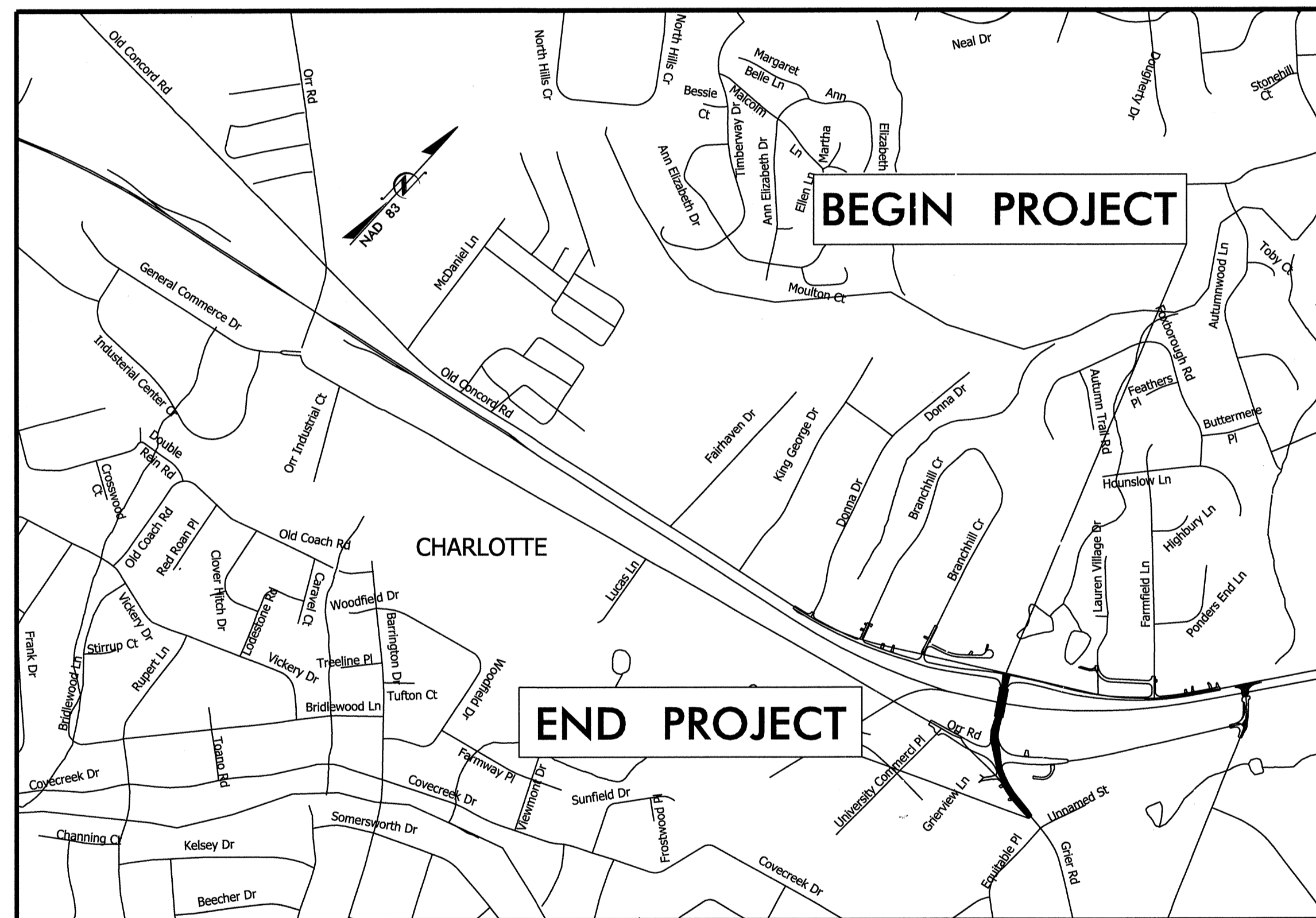
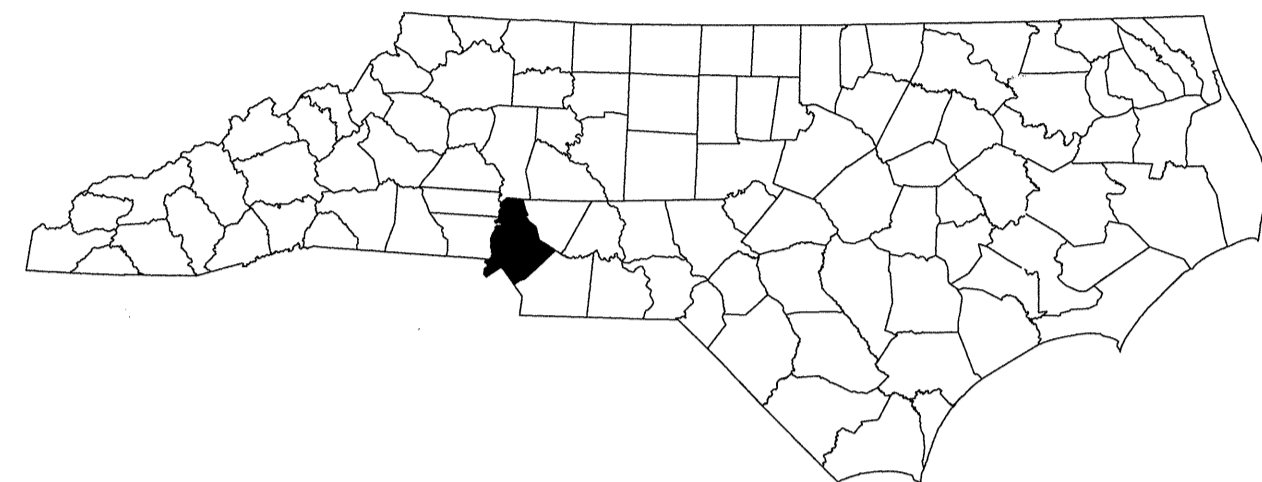


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**MECKLENBURG COUNTY**

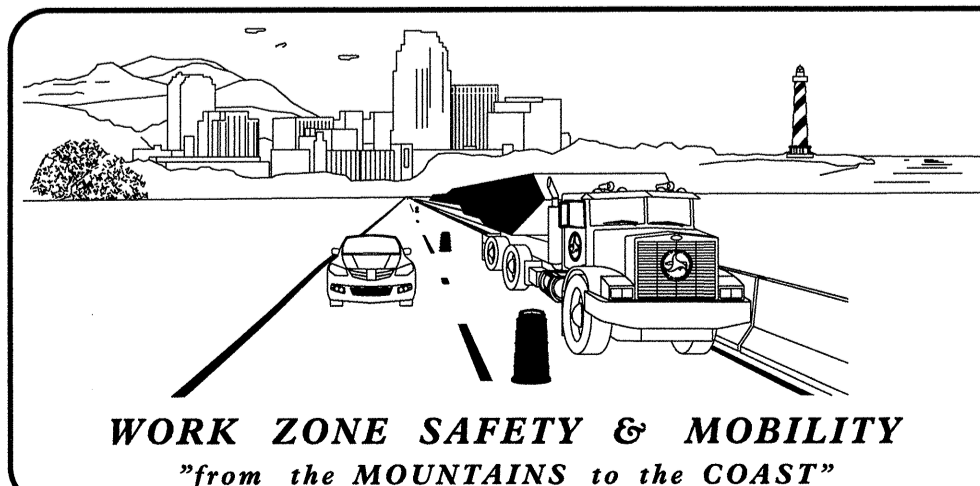


**VICINITY MAP**

LOCATION: CHARLOTTE - GRIER RD. GRADE SEPARATION FROM SOUTH OF ORR RD. TO OLD CONCORD RD.

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-2 AND 2A	PROJECT NOTES
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU 6	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-7 THRU 10	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-11 THRU 14	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL
TMP-15 THRU 17	TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL
TMP-18	SPECIAL SIGN DESIGNS



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

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER  
J. W. GILSTRAP TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
TRAFFIC CONTROL DESIGN ENGINEER



PLANS PREPARED BY :



RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560



FEB 27, 2013

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
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	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
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
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

- WORK AREA
- REMOVAL
- WEDGING
- ONGOING CONSTRUCTION

### TRAFFIC CONTROL DEVICES

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

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

### PAVEMENT MARKERS

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

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

### TEMPORARY PAVEMENT MARKING

- PAINT
- P2 - 24" WHITE STOPBAR
  - P9 - 2' - 10' SP., 4" WHITE MINISKIP
  - PA - 4" WHITE EDGE LINE
  - PD - 3' - 9' SP., 4" WHITE MINISKIP
  - PE - 4" WHITE LANE LINE
  - PI - 4" YELLOW DOUBLE CENTER LINE
  - PP - 8" YELLOW DIAGONAL
  - PQ - 8" WHITE CROSSWALK
  - QA - LEFT TURN ARROW
  - QB - RIGHT TURN ARROW
  - QC - STRAIGHT ARROW
  - QN - 24" YIELD LINE TRIANGLE
  - QJ - BICYCLE SYMBOL

- COLD APPLIED PLASTIC (TYPE 4)
- CE - 4" WHITE LANE LINE
  - CI - 4" YELLOW DOUBLE CENTER LINE
  - CP - 8" YELLOW DIAGONAL
  - DA - LEFT TURN ARROW
  - DB - RIGHT TURN ARROW
  - DI - ALPHANUMERIC CHARACTER

		<p style="font-weight: bold; margin: 0;">ROADWAY STANDARD DRAWINGS &amp; LEGEND</p>
--	--	---



# GENERAL NOTES

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

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

**TIME RESTRICTIONS**

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

ROAD NAME	DAY AND TIME RESTRICTIONS
GRIER ROAD	6:00 AM TO 9:00 AM
OLD CONCORD ROAD	4:00 PM TO 7:00 PM
ORR ROAD	MONDAY THROUGH FRIDAY

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

ROAD NAME
GRIER ROAD
OLD CONCORD ROAD
ORR ROAD

HOLIDAY

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31<sup>ST</sup> TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.

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

C. 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**

- D. 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.
- E. 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.
- F. 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.
- G. 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.
- H. 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.

**PAVEMENT EDGE DROP OFF REQUIREMENTS**

- I. 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.
- J. 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) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

<p>FEB 27, 2013</p>		<p><b>PROJECT NOTES</b></p>
---------------------	--	-----------------------------



PLANS PREPARED BY :  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

## GENERAL NOTES

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

L. 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.

M. 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.

N. 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.

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

### TRAFFIC BARRIER

P. INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL 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 TRAFFIC CONTROL 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 TRAFFIC CONTROL 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.

Q. 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 IMPACT 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:

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

R. 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 SPECIFICATION FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES), AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

### PAVEMENT MARKINGS AND MARKERS

T. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED
CONCRETE BRIDGE DECKS	COLD APPLIED PLASTIC (TYPE IV)	TEMPORARY RAISED

U. 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.

V. TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

### MISCELLANEOUS

X. 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.

<p>KEVIN W. BISBY          FEB 27, 2013</p>		<p><b>PROJECT NOTES</b></p>
---	--	-----------------------------



PLANS PREPARED BY :



RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

**PHASE I**

STEP 1:  
 ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD 1101.01 ON THE FOLLOWING ROADWAYS:

- -L- GRIER RD
- -Y1- OLD CONCORD RD
- -Y2- ORR RD
- -Y3- BRANCH HILL CIRCLE
- -Y3A- BRANCH HILL CIRCLE
- -Y4- LAUREN VILLAGE DR
- -Y5- FARM FIELD LN
- -Y6- GRIERVIEW LN
- UNIVERSITY COMMERCIAL PLACE
- DONNA DR

STEP 2:  
 USING RDWY STD 1101.02 SHEET 1, CONSTRUCT 4' TEMPORARY PAVEMENT ADJACENT TO THE EASTBOUND LANE OF OLD CONCORD RD FROM -Y1- STA 23+75 TO STA 31+95 AND PLACE PORTABLE CONCRETE BARRIER. **BEGIN** CONSTRUCTION OF THE PROPOSED BRIDGE OVER THE RAILROAD AND THE EAST BRIDGE APPROACH FROM -L- STA 12+75 TO STA 14+84 EXCLUDING THE FINAL LAYER OF SURFACE COURSE ONCE THE BARRIER HAS BEEN PLACED. (SEE TMP-4, 5)

USING RDWY STD 1101.03 SHEETS 1 AND 2 AND RDWY STD 1101.02 SHEET 1, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- -Y3B- STA 10+00 TO STA 15+15 (SEE TMP-4, 5)
- -Y3- STA 10+85 TO STA 12+96 (SEE TMP-4)

USING RDWY STD 1101.02 SHEET 1, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- -Y2- STA 10+75 TO STA 13+00 (SEE TMP-4, 5)
- -L- STA 18+50 TO STA 21+15 (SEE TMP-5)
- -Y2- STA 19+50 TO STA 21+60 (SEE TMP-5)
- -DR1- STA 10+00 TO STA 12+35 (SEE TMP-5)
- -Y4- STA 10+50 TO STA 15+29 (SEE TMP-6)
- -Y5- STA 10+90 TO STA 11+73 (SEE TMP-6)

**PHASE II**

**NOTE:**  
 CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING IN PHASE II, STEP 1 (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

**FOR SIGNAL CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF CHARLOTTE WHEN THE GRADE IS WITHIN 12" OF FINAL GRADE IN ALL QUADRANTS OF THE OLD CONCORD RD/GRIER RD INTERSECTION. THE CITY REQUIRES 110 DAYS FOR SIGNAL CONSTRUCTION. THE CONSTRUCTION OF THE PROPOSED SIGNAL BY THE CITY OF CHARLOTTE IS NOT PART OF THE INTERMEDIATE CONTRACT TIME FOR PHASE II, STEP 1.**

STEP 1:  
 USING RDWY STD 1101.03 SHEET 1 AND RDWY STD 1101.02 SHEET 1, CLOSE OLD CONCORD RD AND CONSTRUCT AS FOLLOWS EXCLUDING THE FINAL LAYER OF SURFACE COURSE:

- -Y1- STA 11+40 TO STA 44+10 (SEE TMP-7 THROUGH 9)
- -Y3A- STA 11+19 TO STA 11+85 (SEE TMP-7)
- -Y3- STA 12+96 TO STA 13+77 (SEE TMP-7)
- -L- STA 10+00 TO STA 11+10 (SEE TMP-8)
- -Y5- STA 11+73 TO STA 12+49 (SEE TMP-9)

REFER TO TMP-10 FOR OFFSITE DETOUR DETAIL. UPON COMPLETION, PLACE PAVEMENT MARKINGS AND OPEN TO TRAFFIC.

STEP 2:  
 USING RDWY STD 1101.02 SHEET 1, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- -L- STA 16+00 TO STA 17+03 (SEE TMP-8)
- -L- STA 17+03 TO STA 18+50 LT (SEE TMP-8)
- -Y2- STA 15+00 TO STA 19+50 RT (SEE TMP-8)
- -Y4- STA 10+50 TO STA 11+23 RIGHT SIDE CURB AND GUTTER (SEE TMP-9)

**PHASE III**

**NOTE:**  
 CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING IN PHASE III, STEP 1 (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

STEP 1:  
 USING RDWY STD 1101.03 SHEETS 1 AND 2; RDWY STD 1101.02 SHEET 1, CLOSE ORR RD AND CONSTRUCT AS FOLLOWS EXCLUDING THE FINAL LAYER OF SURFACE COURSE:

- -Y2- STA 13+00 TO STA 15+00 (SEE TMP-12)
- -Y2- STA 15+00 TO STA 19+50 LT (SEE TMP-12)
- -L- STA 14+84 TO STA 16+00 (SEE TMP-12)
- -L- STA 17+03 TO STA 18+50 RT (SEE TMP-12)
- -Y6- STA 11+61 TO STA 12+55 (SEE TMP-12)

REFER TO TMP-14 FOR OFFSITE DETOUR DETAIL. UPON COMPLETION, PLACE PAVEMENT MARKINGS AND OPEN TO TRAFFIC.

STEP 2:  
 USING RDWY STD 1101.02 SHEET 1, CONSTRUCT CURB AND GUTTER ADJACENT TO THE WESTBOUND LANE OF OLD CONCORD RD FROM STA 12+92 TO STA 18+04. (SEE TMP-11)

**COMPLETE CONSTRUCTION OF -L- FROM STA 11+10 TO STA 14+84 AS BEGUN IN PHASE I.**

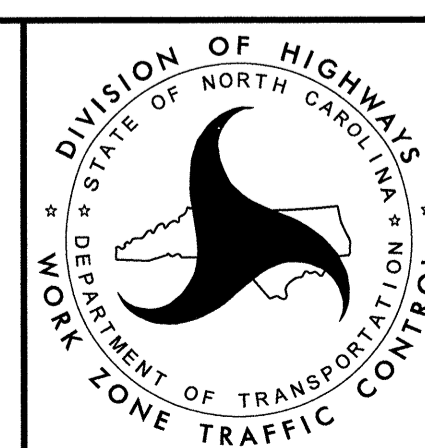
**PHASE IV**

STEP 1:  
 USING RDWY STD 1101.02 SHEET 1, REMOVE PAVEMENT AS REQUIRED IN THE ROADWAY PLANS. (SEE TMP-15 THROUGH 17)

USING RDWY STD 1101.02 SHEET 1 CONSTRUCT CURB AND GUTTER ADJACENT TO SOUTHBOUND GRIER RD FROM -L- STA 17+03 TO STA 18+50 INCLUDING -Y6- CONNECTION TO -L-. (SEE TMP-16)

THE CONTRACTOR SHALL NOTIFY THE CITY OF CHARLOTTE TO COMPLETE SIGNAL CONSTRUCTION AT THE OLD CONCORD RD/GRIER RD INTERSECTION.

STEP 2:  
 USING RDWY STD 1101.02 SHEET 1, PLACE THE FINAL LAYER OF SURFACE COURSE; FINAL PAVEMENT MARKINGS; AND OPEN ALL ROADS TO TRAFFIC; THE CITY OF CHARLOTTE SHALL BE CONTACTED TO ACTIVATE THE PROPOSED SIGNAL. **THE INTERSECTION SHALL NOT BE OPENED UNTIL THE PROPOSED SIGNAL IS OPERATIONAL.** REFER TO FINAL PAVEMENT MARKING PLAN.



**TEMPORARY TRAFFIC CONTROL PHASING**

0102DEL\_P10c6

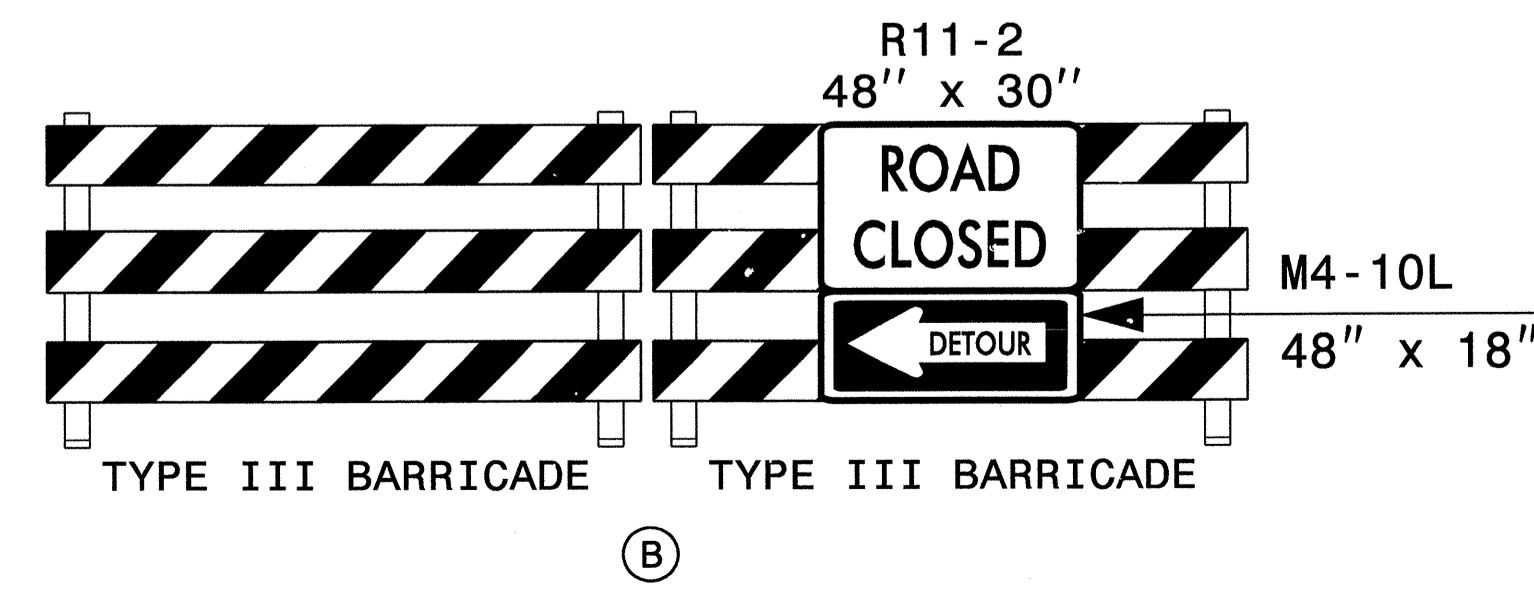
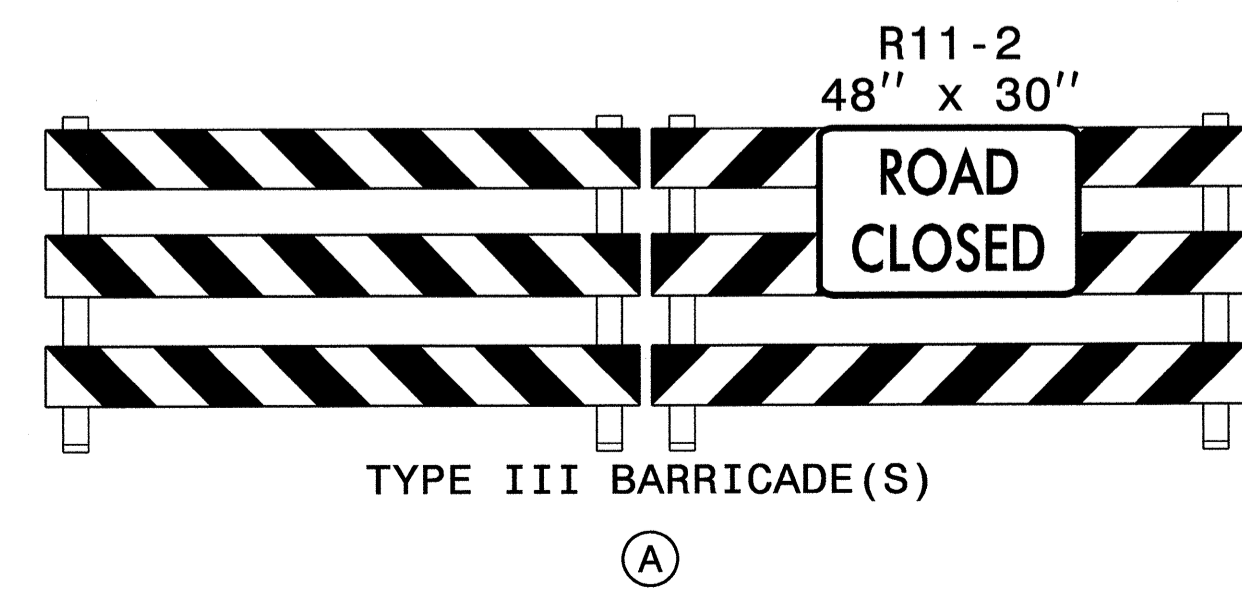
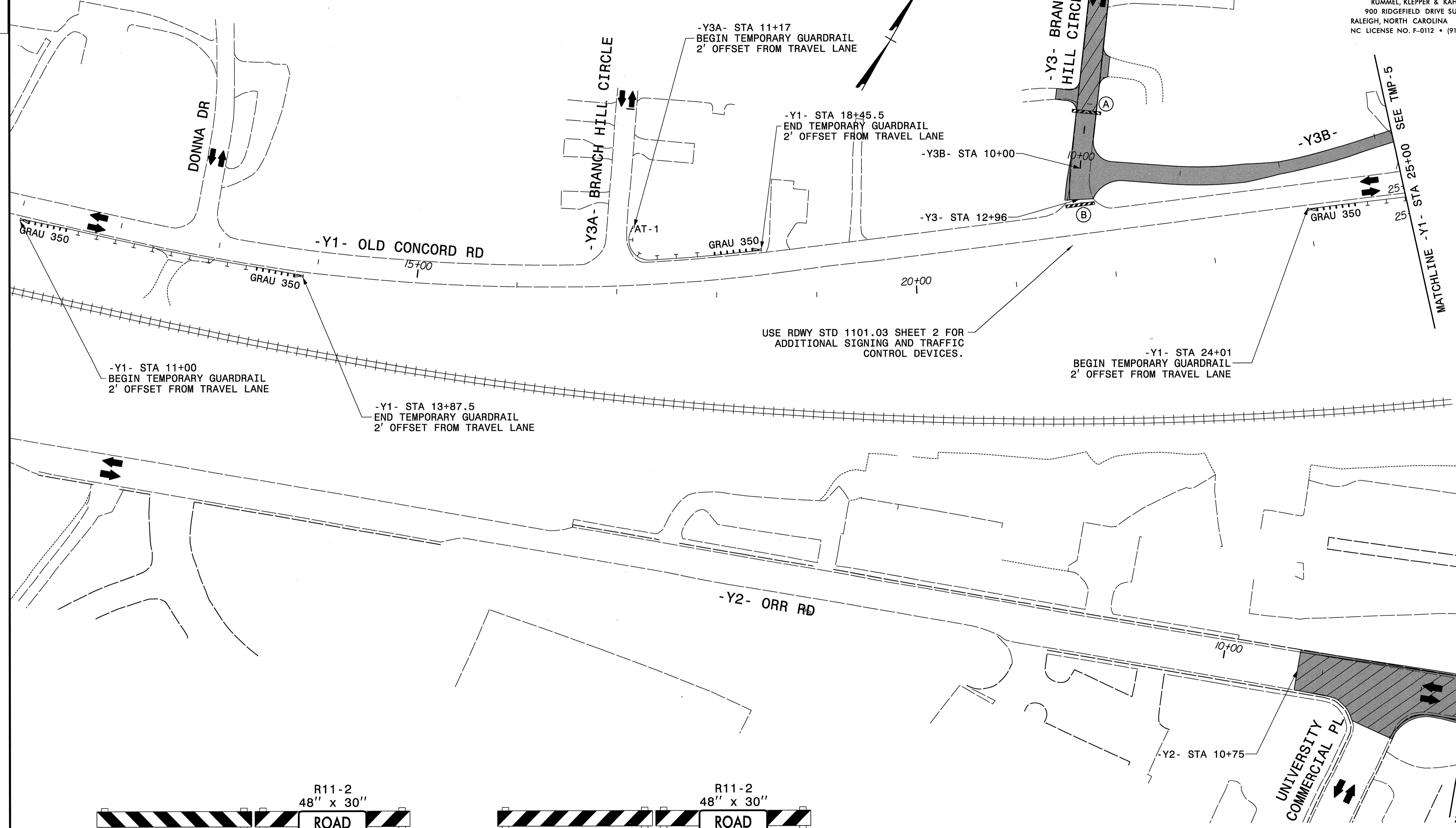


PROJ. REFERENCE NO. P-5208H SHEET NO. TMP-4

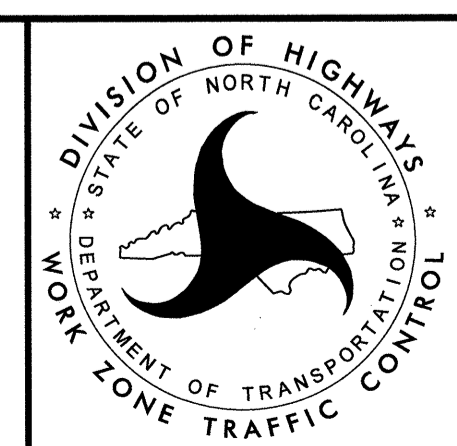
PLANS PREPARED BY: **RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

USE RDWY STD 1101.03 SHEET 1 FOR ADDITIONAL SIGNING.

USE RDWY STD 1101.03 SHEET 2 FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICES.



Professional Engineer Seal for Kevin W. Bissell, State of North Carolina, Seal 21047, dated APR 18, 2013.



PHASE I DETAIL DRAWING

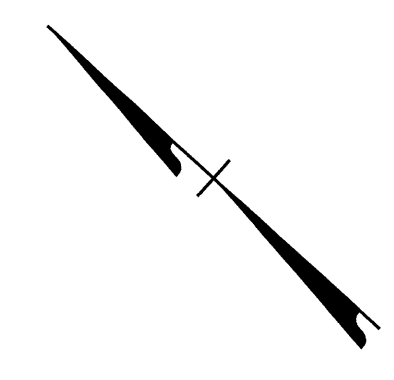
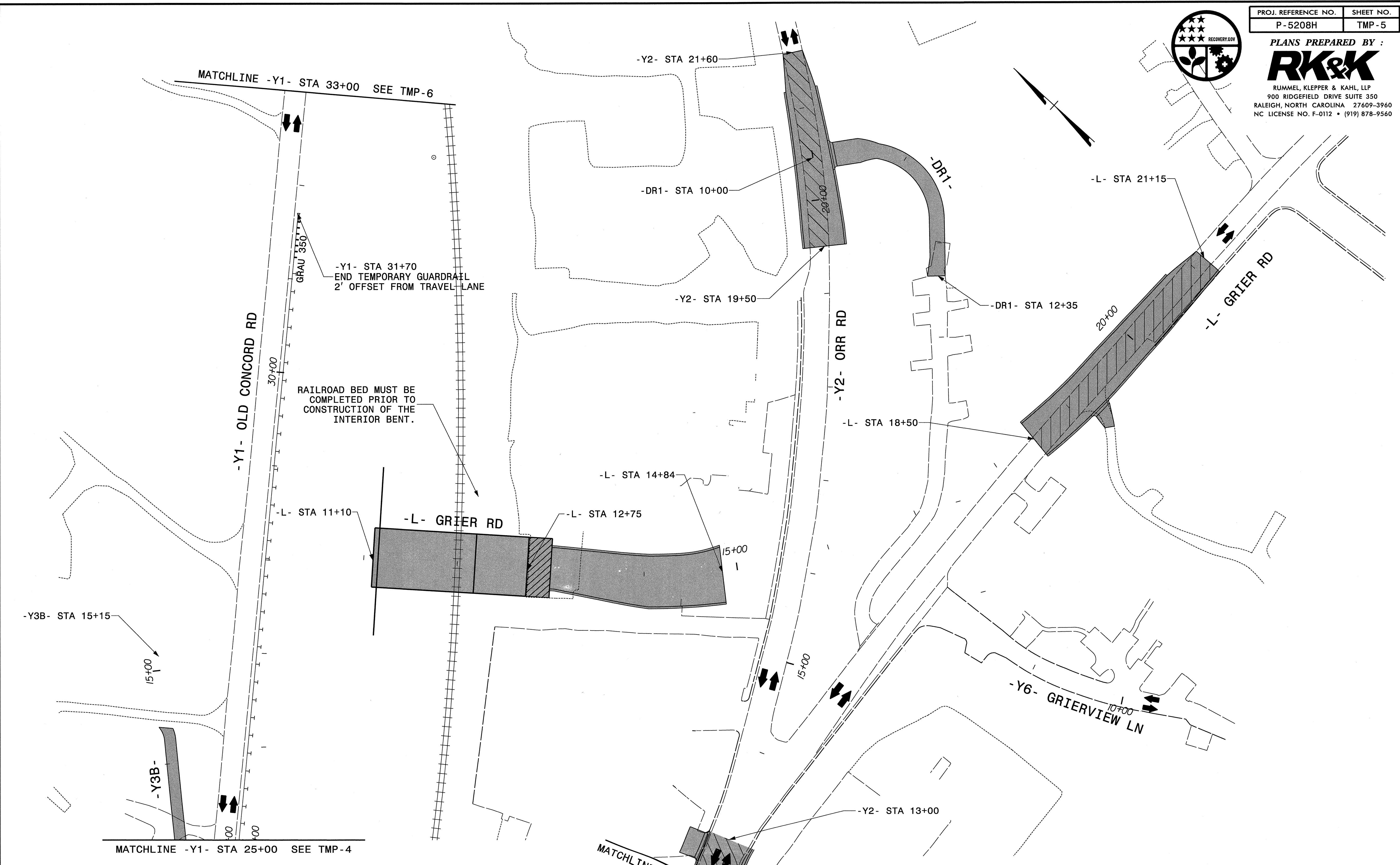
4/18/2013  
P:\5208H\TCP\_PL\_PSH01.dgn  
RKS

0102DEL\_P10a6

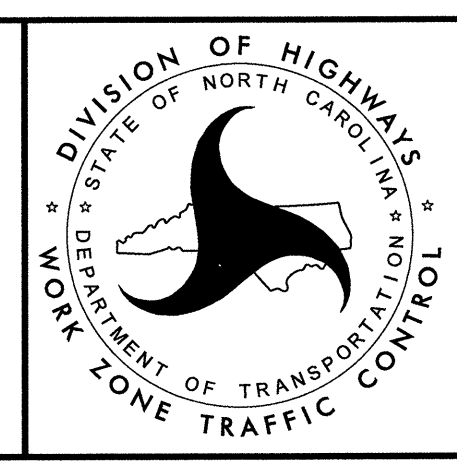
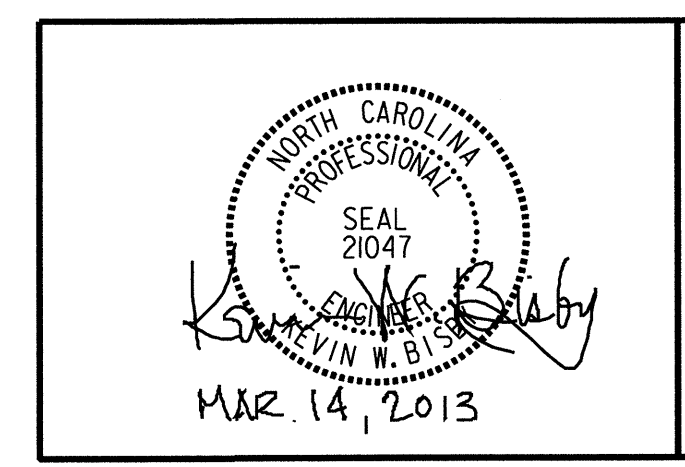
PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-5



PLANS PREPARED BY:  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



3/14/2013  
 P5208h\_TCP\_PL\_PSH02.dgn  
 K.Bisby



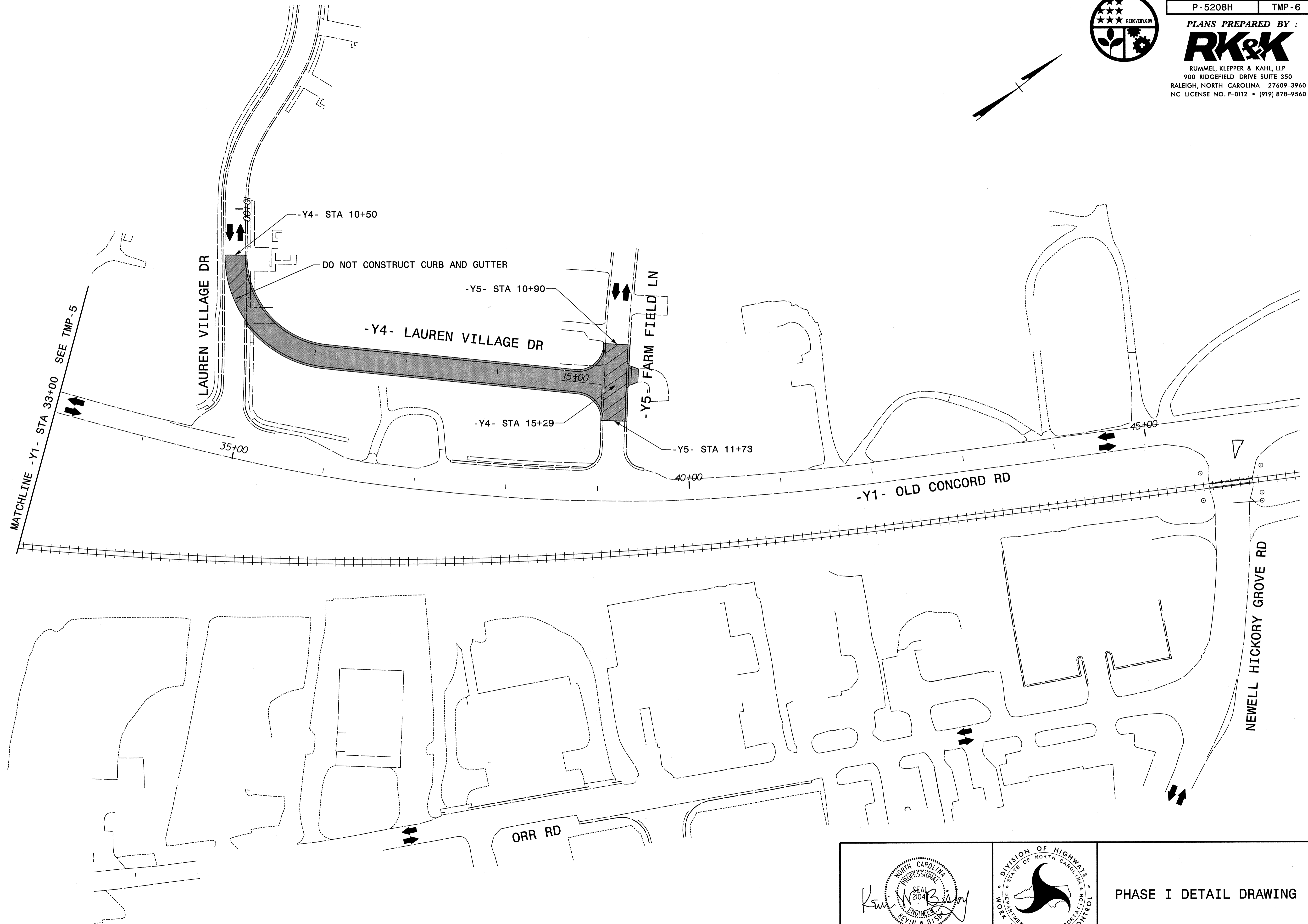
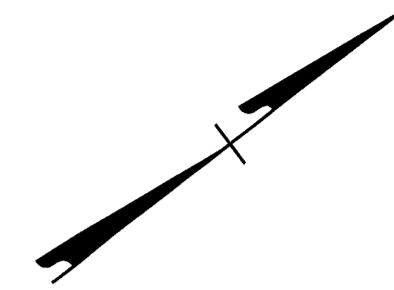
PHASE I DETAIL DRAWING

DCN  
0102DEL\_P10a6



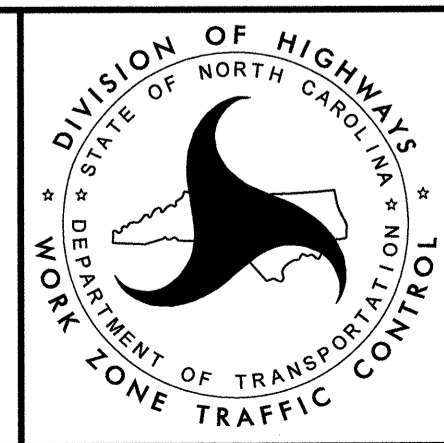
PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-6

PLANS PREPARED BY :  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



2/27/2013  
P5208H-TCP\_PL\_PSH03.dgn  
KBISBY

Kevin W. Bisby  
 ENGINEER  
 FEB 27, 2013



PHASE I DETAIL DRAWING



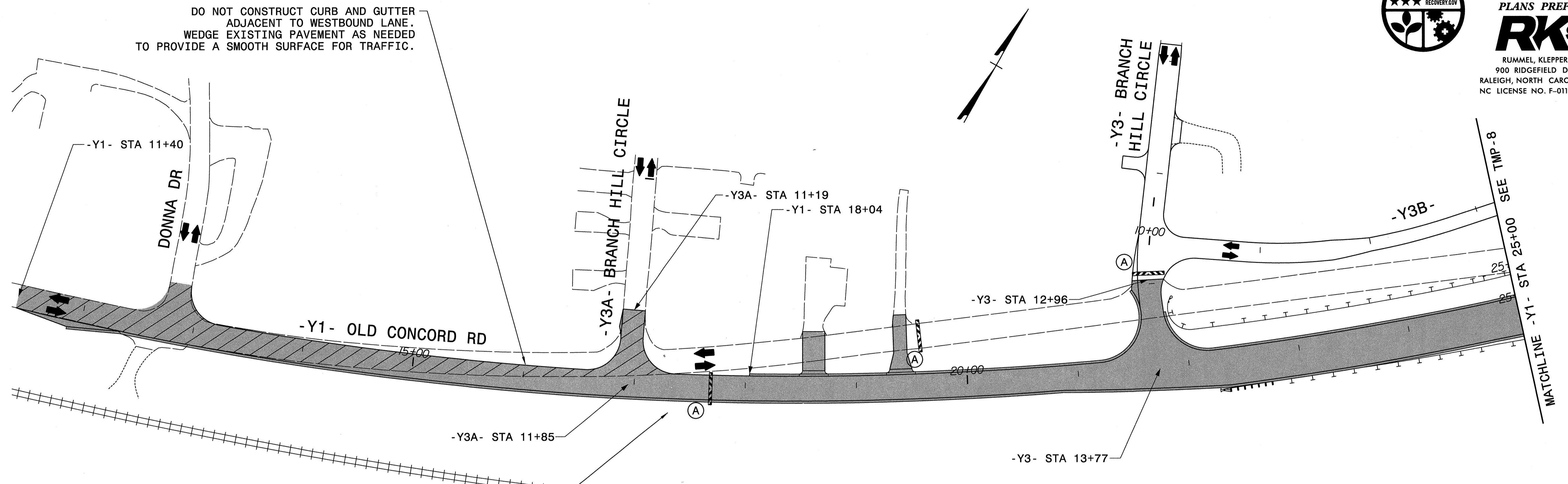
0102DEL\_P10a6



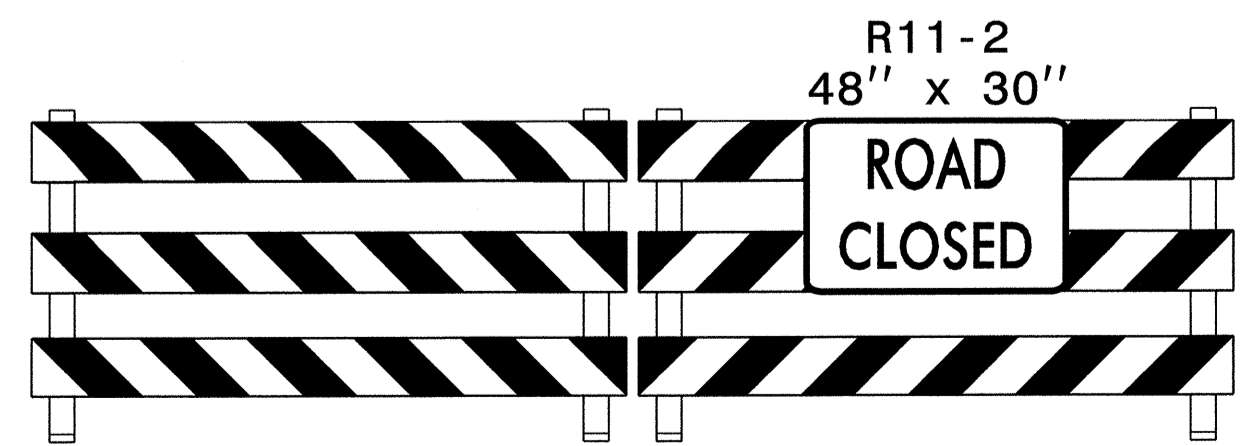
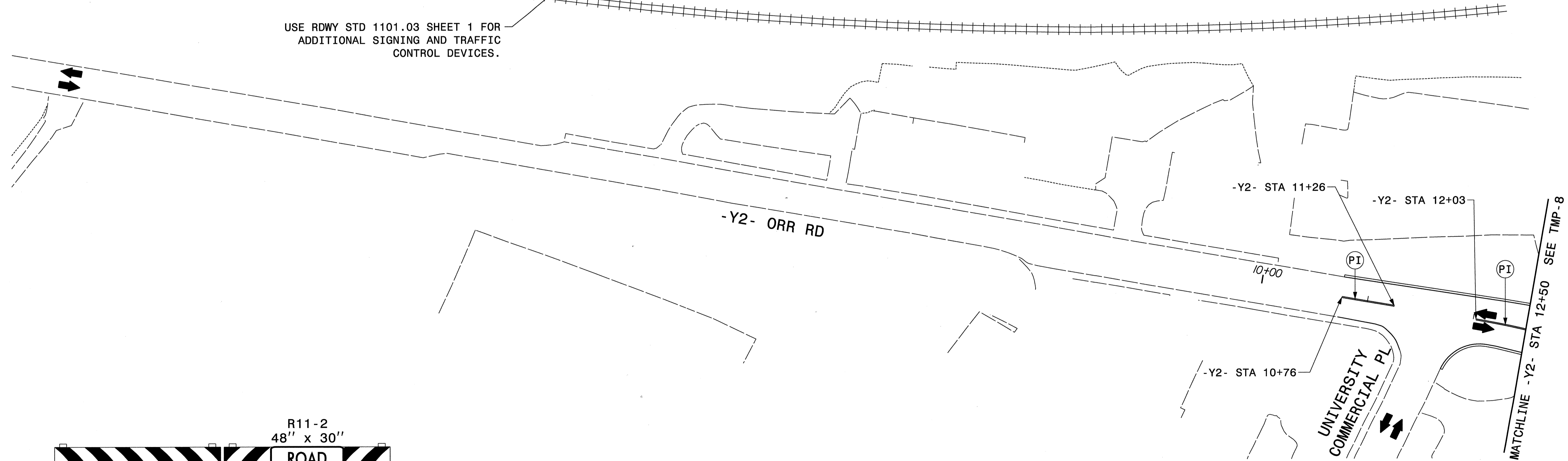
PROJ. REFERENCE NO. P-5208H	SHEET NO. TMP-7
--------------------------------	--------------------

PLANS PREPARED BY :  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

DO NOT CONSTRUCT CURB AND GUTTER  
 ADJACENT TO WESTBOUND LANE.  
 WEDGE EXISTING PAVEMENT AS NEEDED  
 TO PROVIDE A SMOOTH SURFACE FOR TRAFFIC.



USE RDWY STD 1101.03 SHEET 1 FOR  
 ADDITIONAL SIGNING AND TRAFFIC  
 CONTROL DEVICES.



TYPE III BARRICADE(S)

(A)

<p>MAR 14 2013</p>	<p>DIVISION OF HIGHWAYS    NORTH CAROLINA    DEPARTMENT OF TRANSPORTATION    WORK ZONE TRAFFIC CONTROL</p>	<p>PHASE II DETAIL DRAWING</p>
--------------------	--	--------------------------------

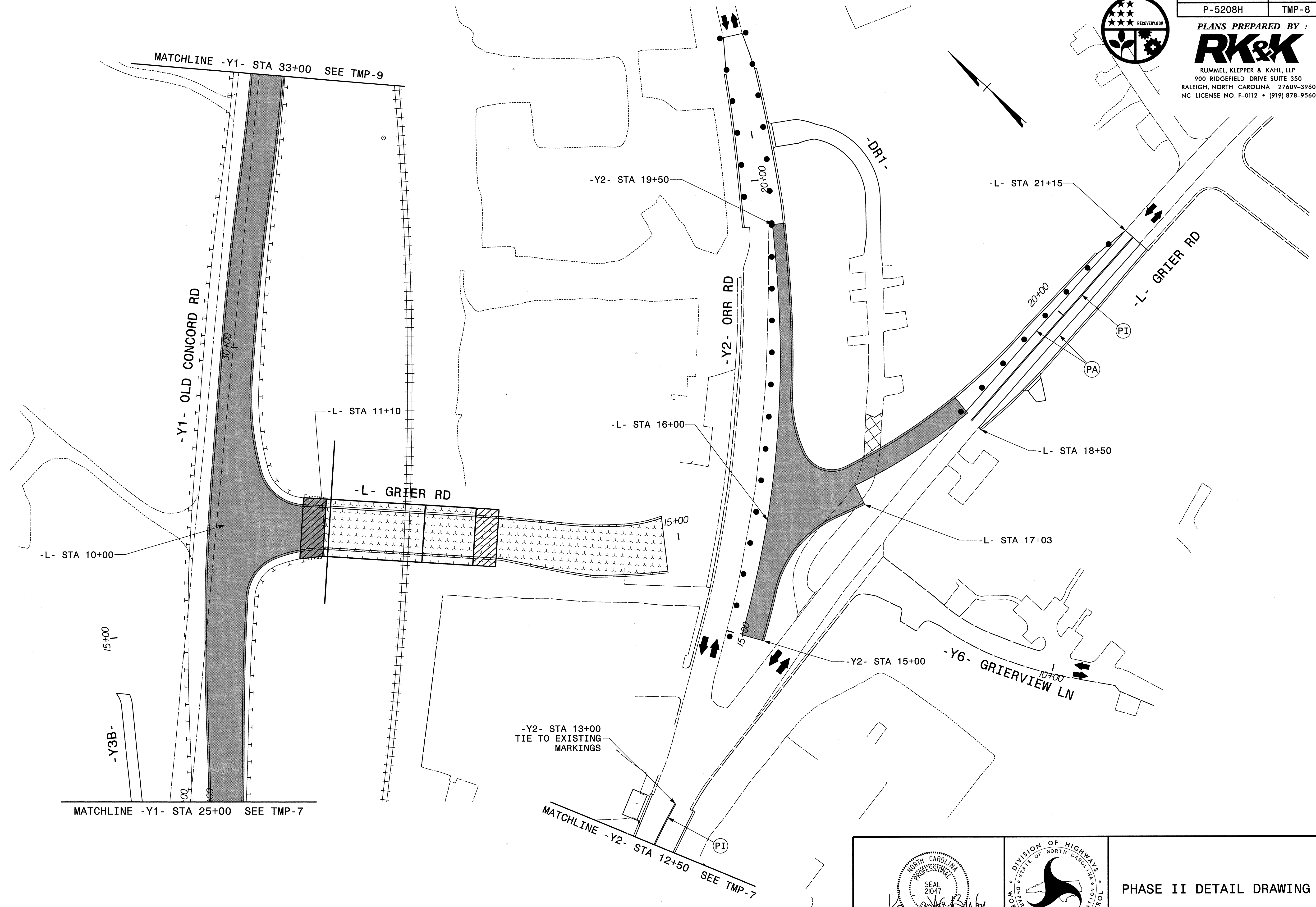
3/14/2013  
 P5208h\_TCP\_P2\_PSH01.dgn  
 Kbisby

0102DEL\_P10a6

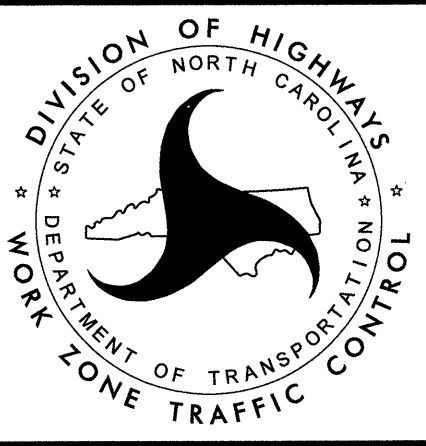
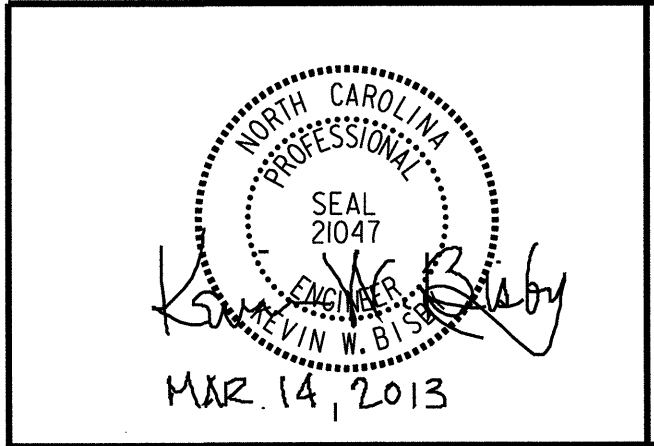


PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-8

PLANS PREPARED BY:  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



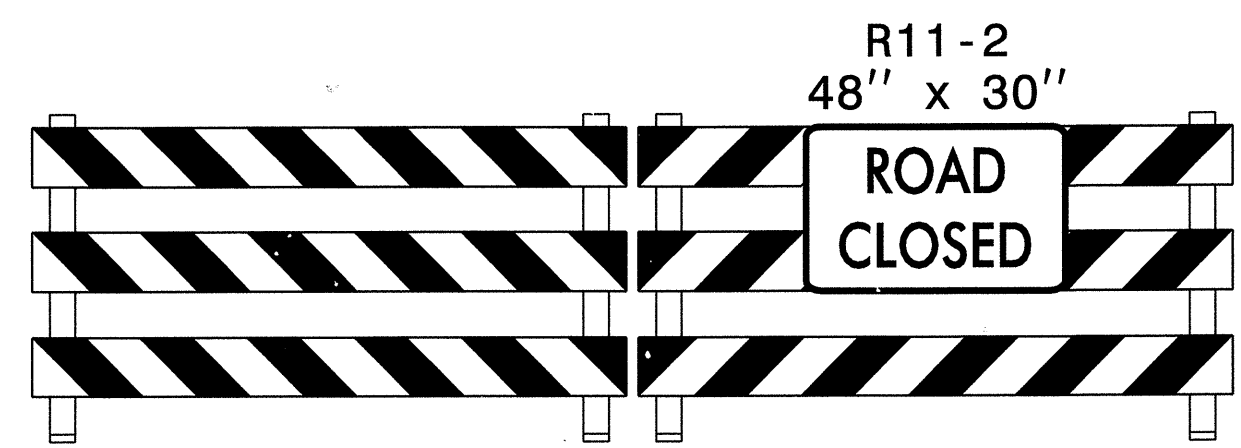
3/14/2013  
 P5208H\_TCP\_P2\_PSH02.dgn  
 kbfsby



PHASE II DETAIL DRAWING

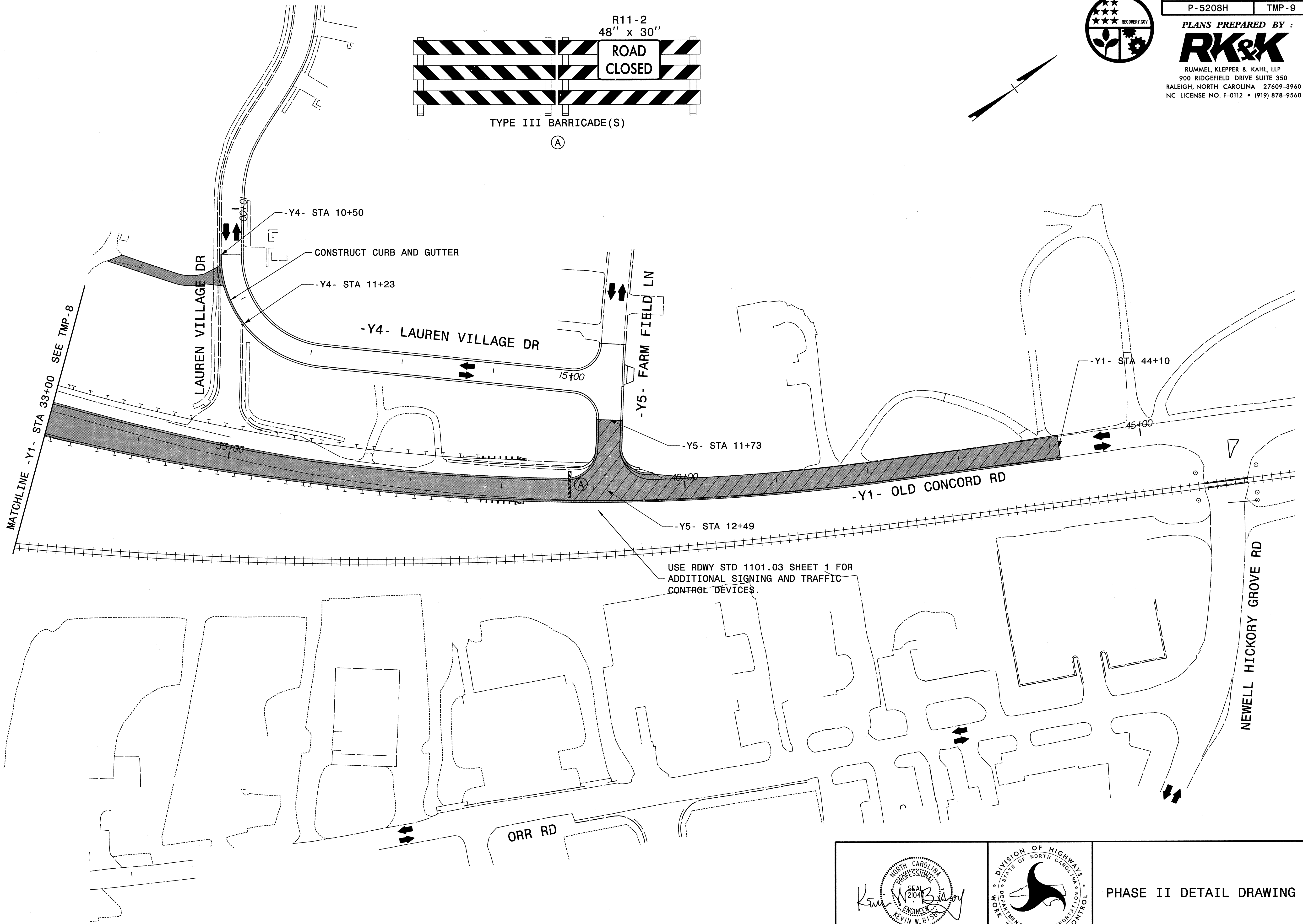
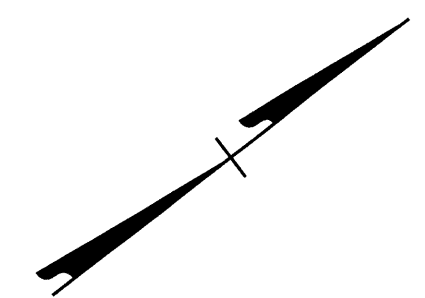


PLANS PREPARED BY :  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560



TYPE III BARRICADE(S)

(A)



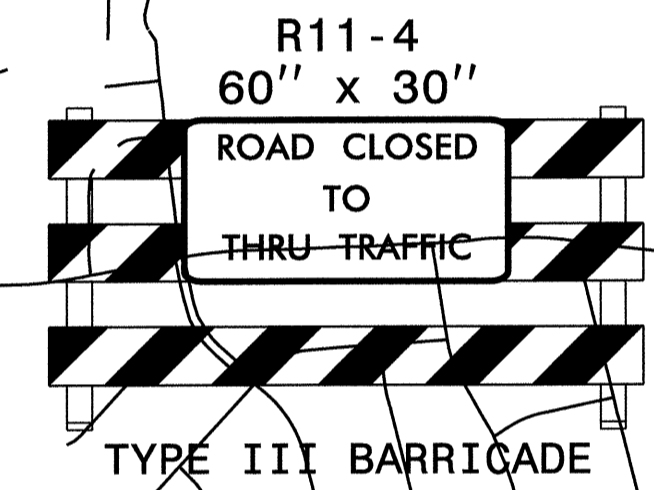
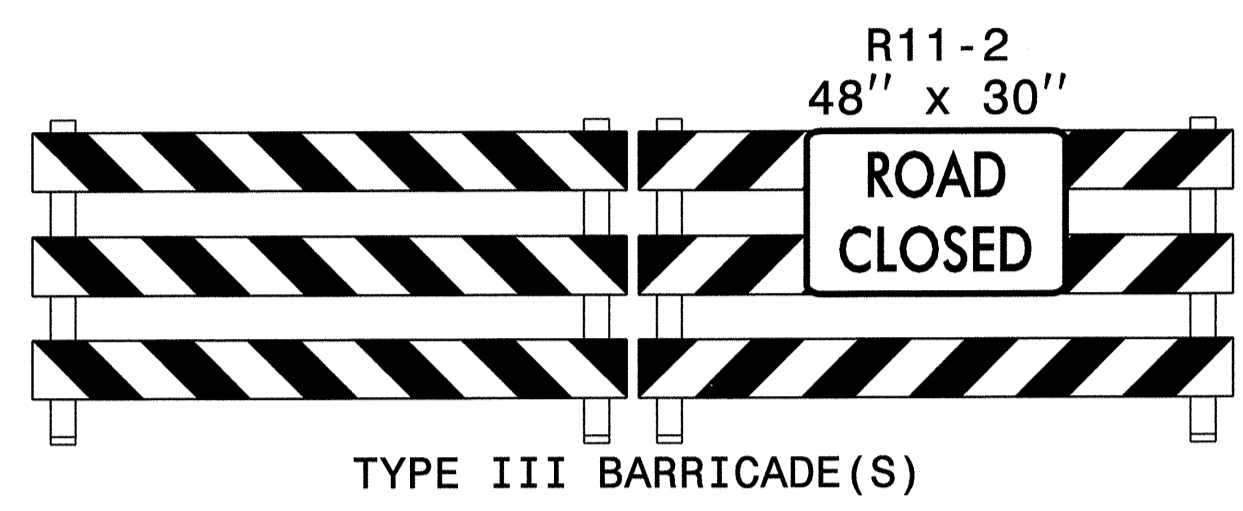
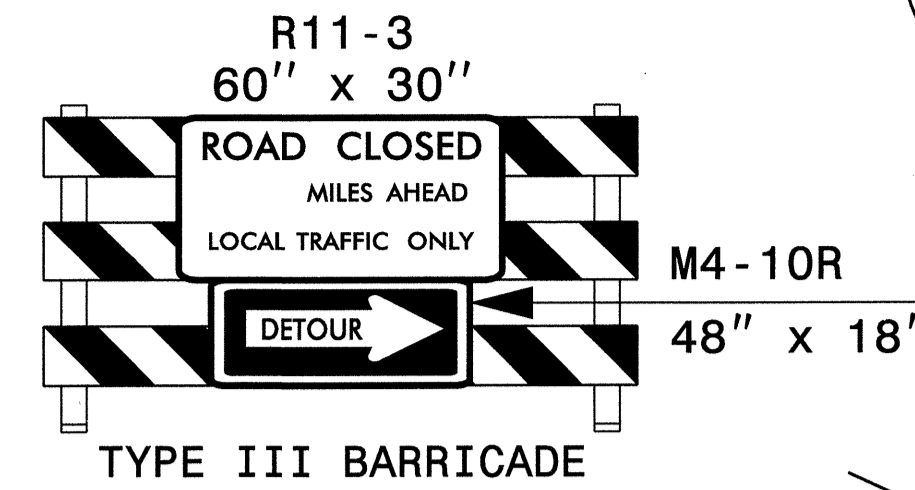
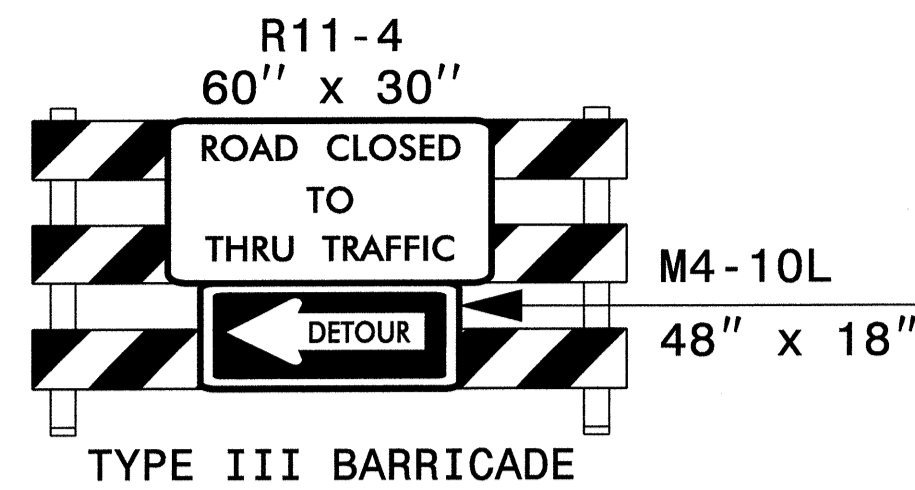
Professional Engineer Seal for Kevin W. Blaylock, State of North Carolina, License No. 21047, dated FEB 27, 2013.



PHASE II DETAIL DRAWING

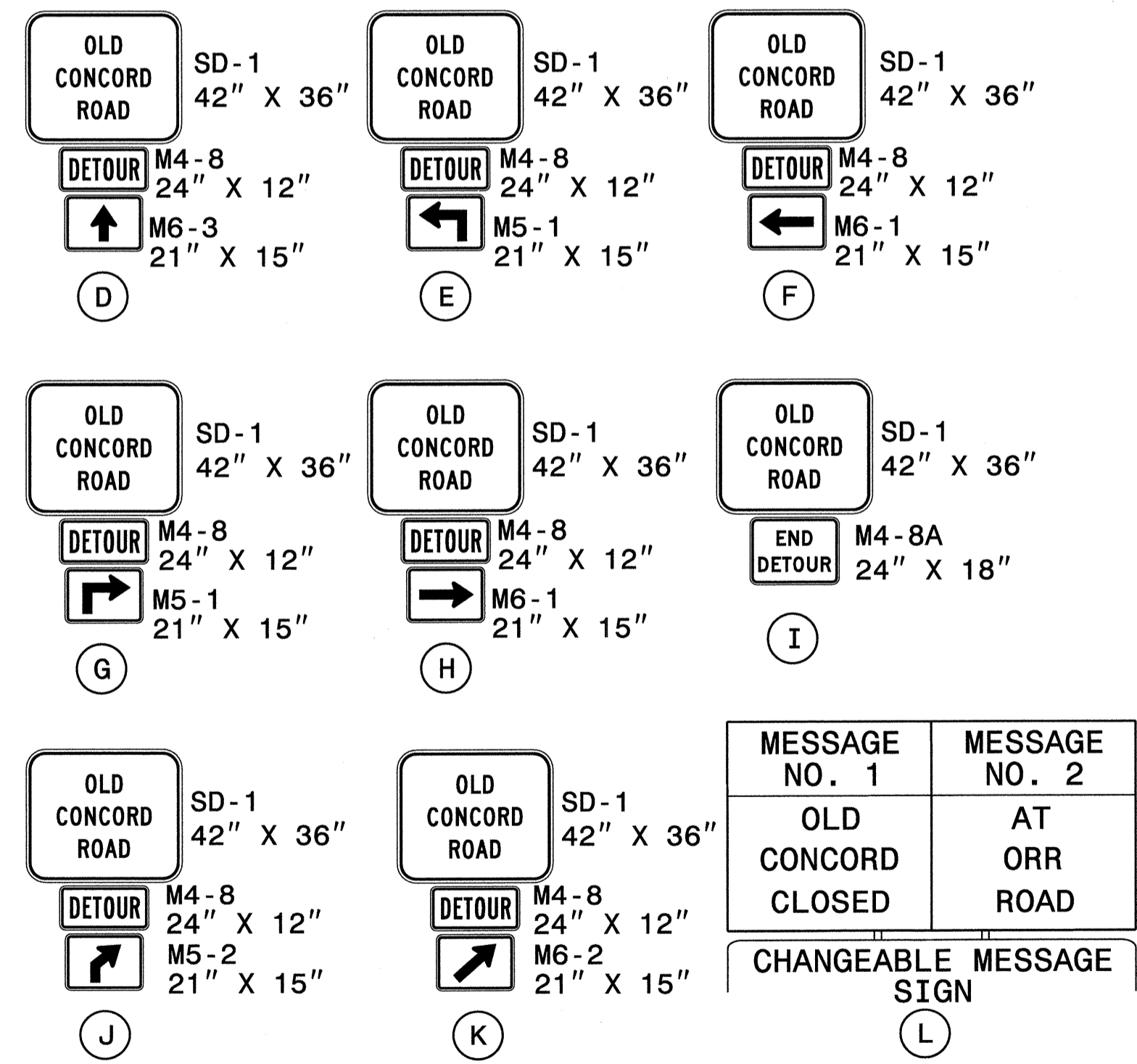
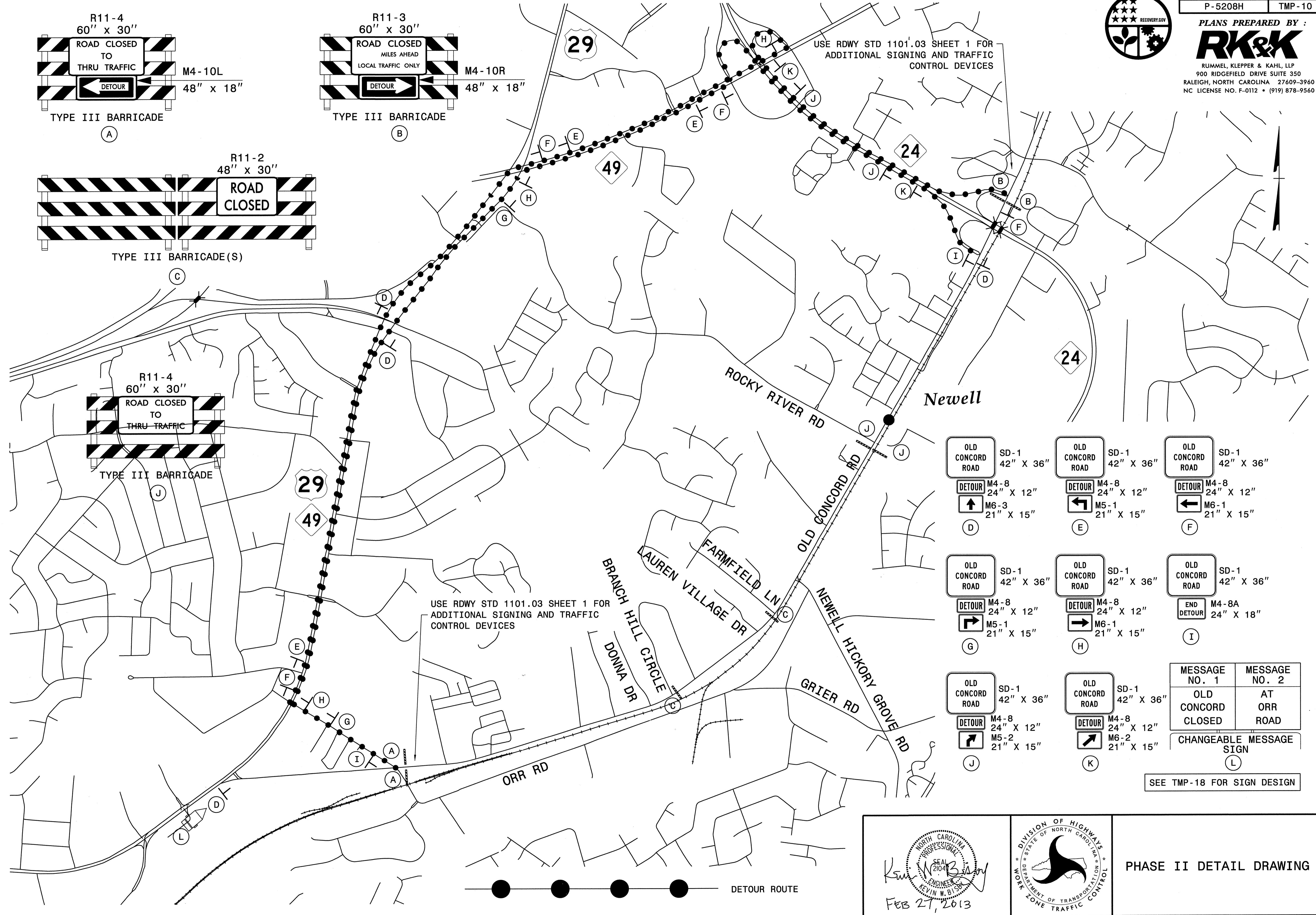


PLANS PREPARED BY:  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



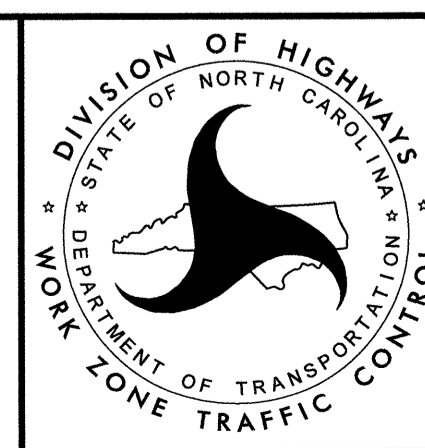
USE RDWY STD 1101.03 SHEET 1 FOR  
ADDITIONAL SIGNING AND TRAFFIC  
CONTROL DEVICES

USE RDWY STD 1101.03 SHEET 1 FOR  
ADDITIONAL SIGNING AND TRAFFIC  
CONTROL DEVICES



SEE TMP-18 FOR SIGN DESIGN

Professional Engineer Seal for Kevin W. B. S. dated FEB 27, 2013.



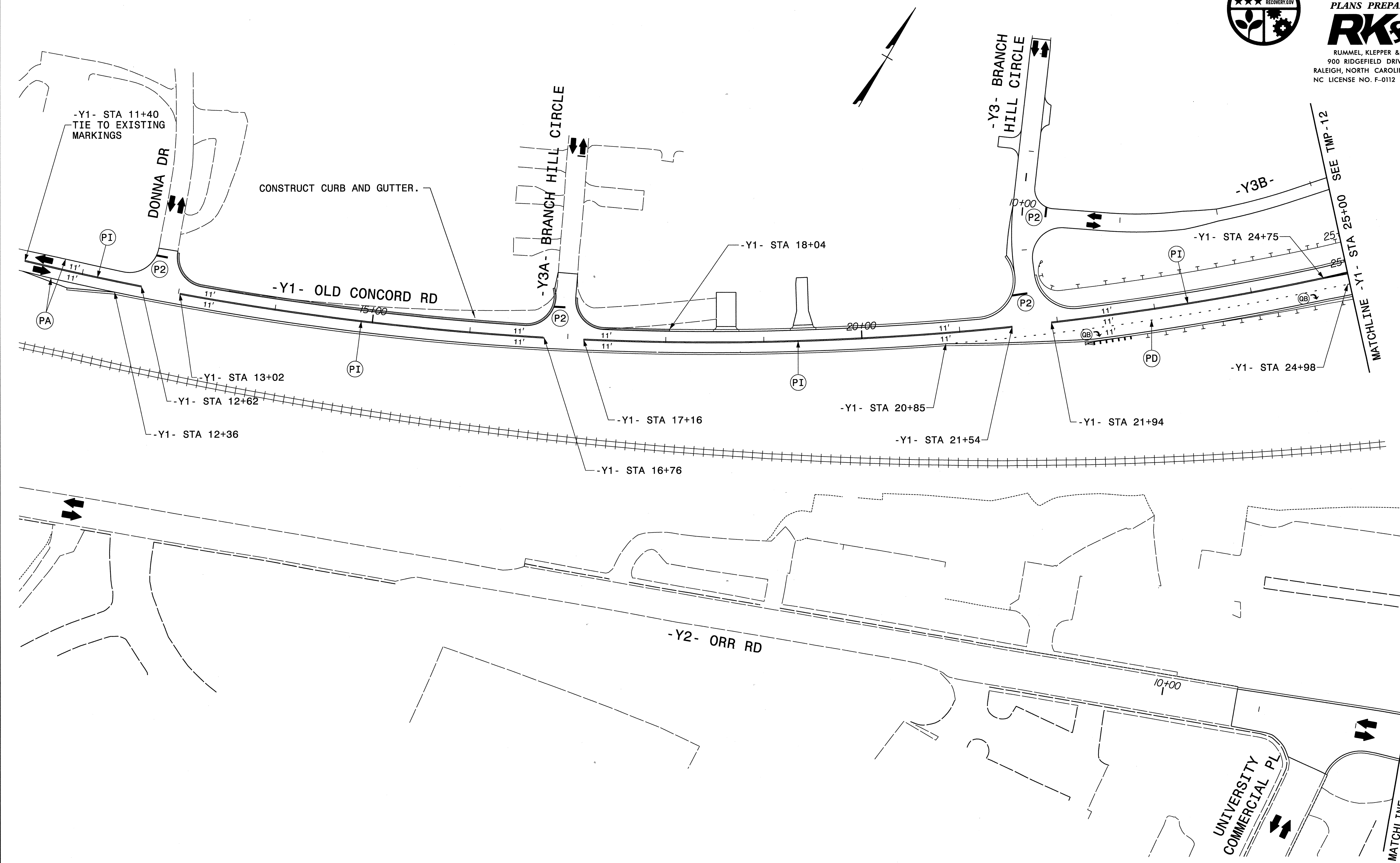
PHASE II DETAIL DRAWING

0102DEL\_P10a6



PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-11

PLANS PREPARED BY :  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



3/14/2013  
 P5208h\_Tcp\_P3\_PSH01.dgn  
 Kbsdy

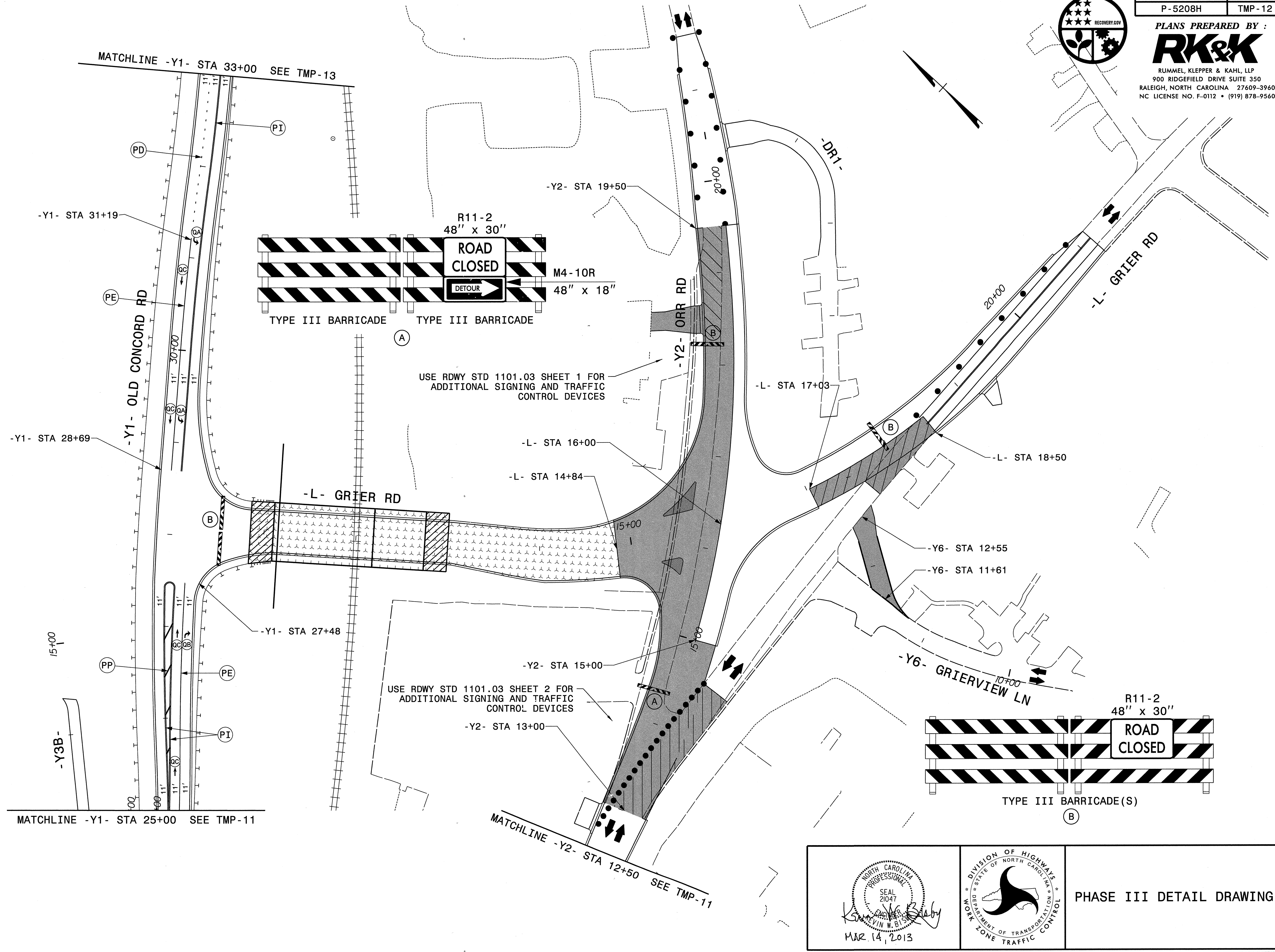
		<p>PHASE III DETAIL DRAWING</p>
--	--	---------------------------------

0102DEL\_P10a6

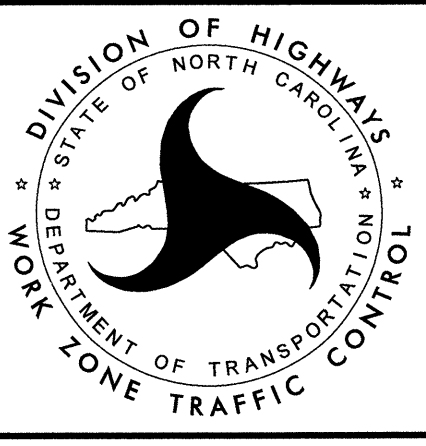
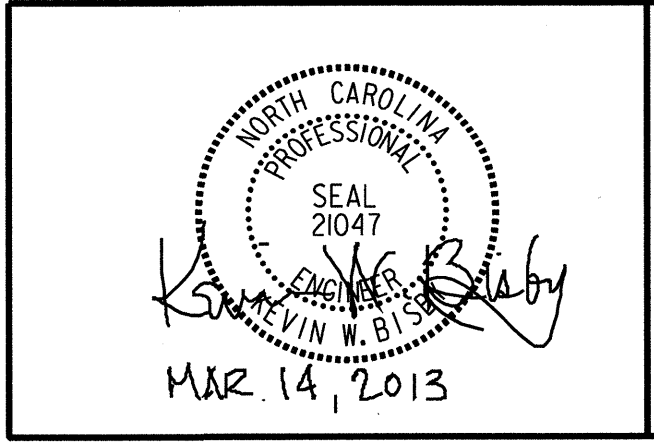


PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-12

PLANS PREPARED BY:  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



3/14/2013  
 P5208H\_CP\_P3\_PSH02.dgn  
 K.Bisby



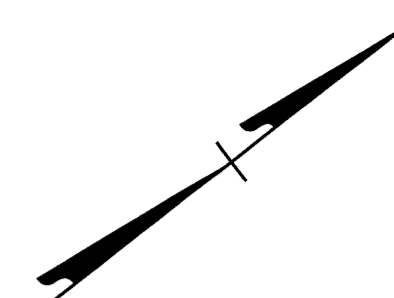
PHASE III DETAIL DRAWING

DCN  
0102DEL\_P10a6



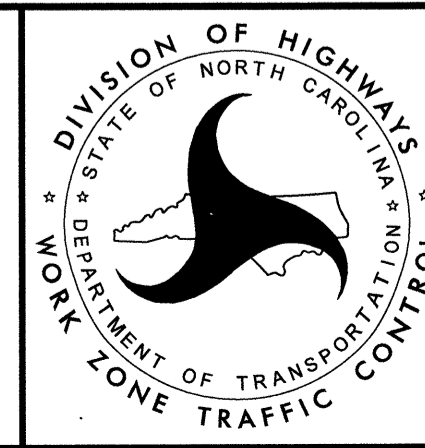
PROJ. REFERENCE NO. P-5208H SHEET NO. TMP-13

PLANS PREPARED BY:  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560



2/27/2013  
P5208h\_TCP\_P3\_PSH03.dgn  
KBISBY

Professional Engineer Seal for Kevin W. Blanton, State of North Carolina, License No. 81038, dated Feb 27, 2013.



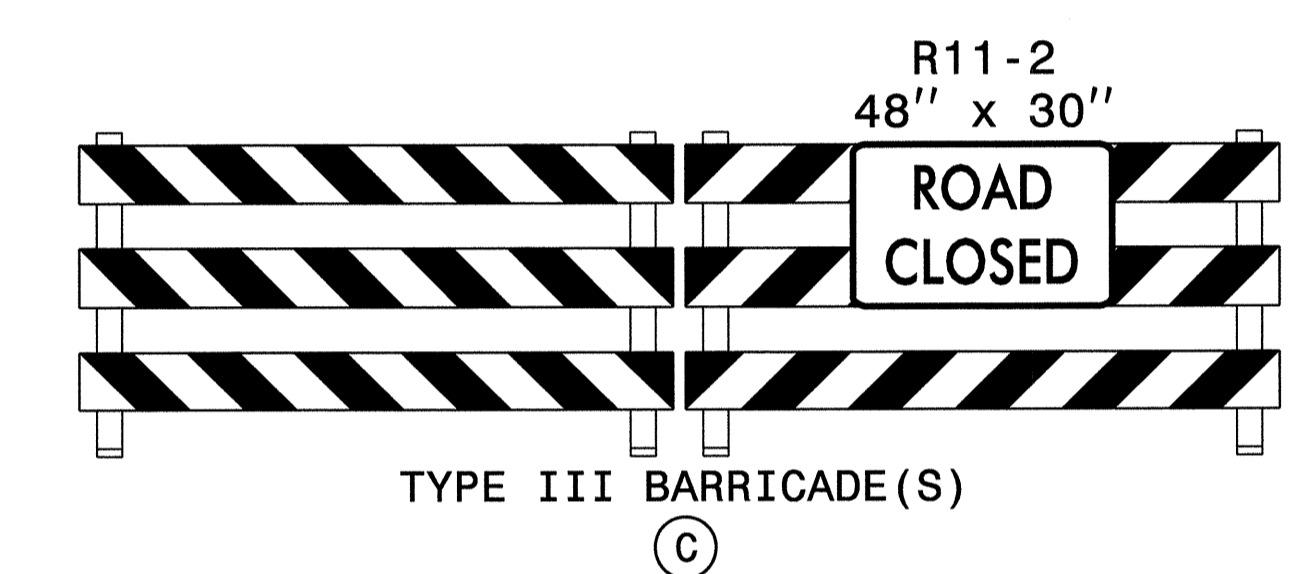
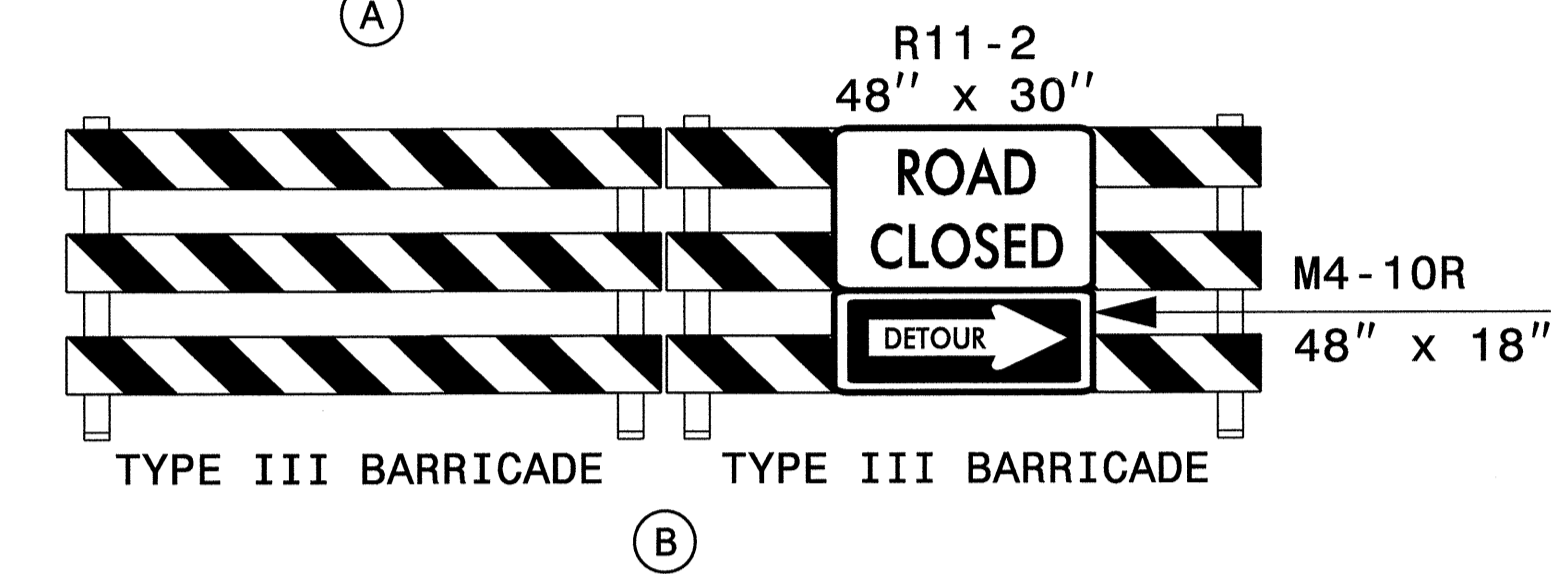
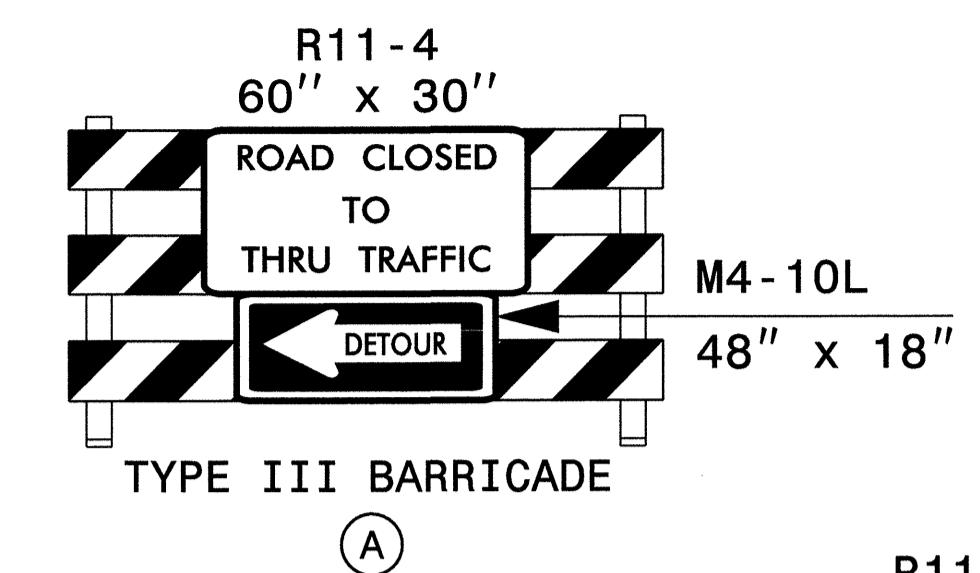
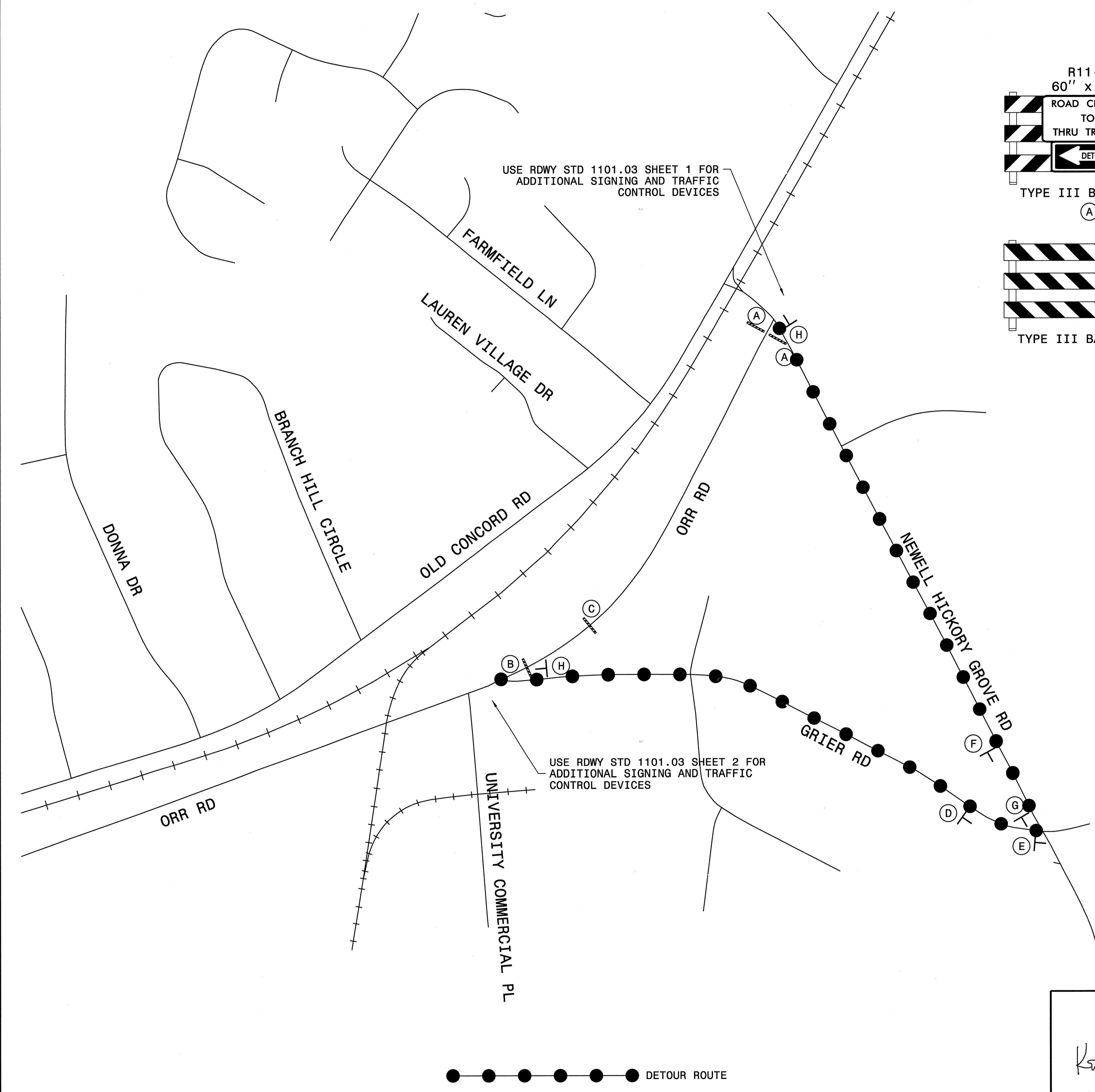
PHASE III DETAIL DRAWING

DCN  
0102DEL\_P10a6

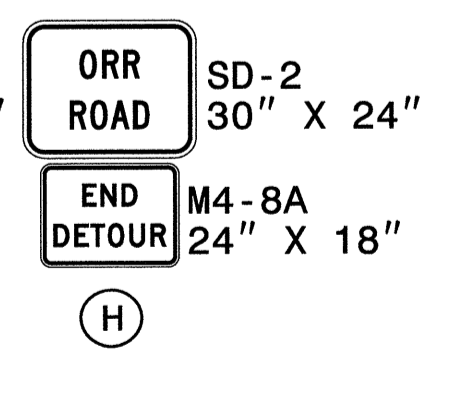
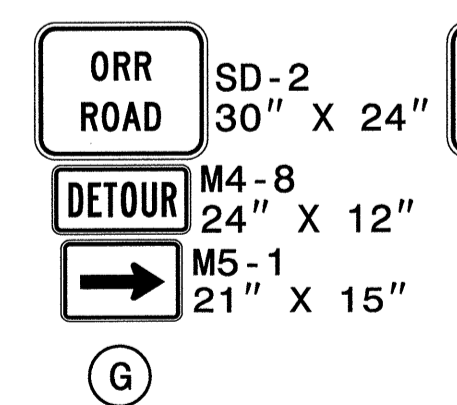
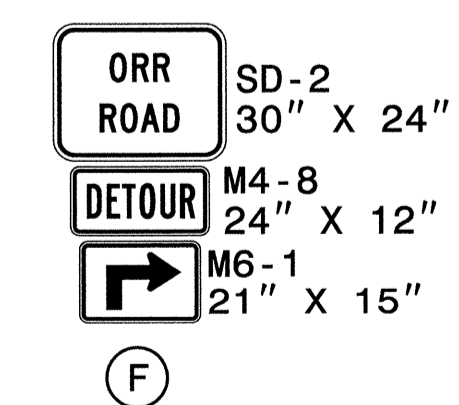
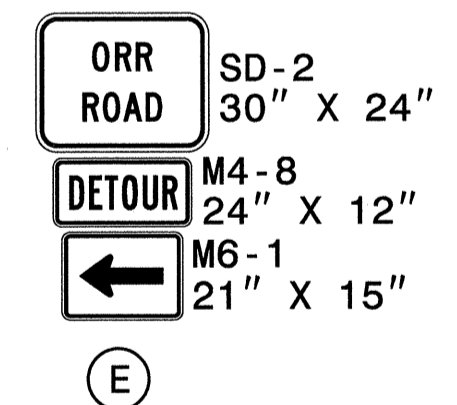
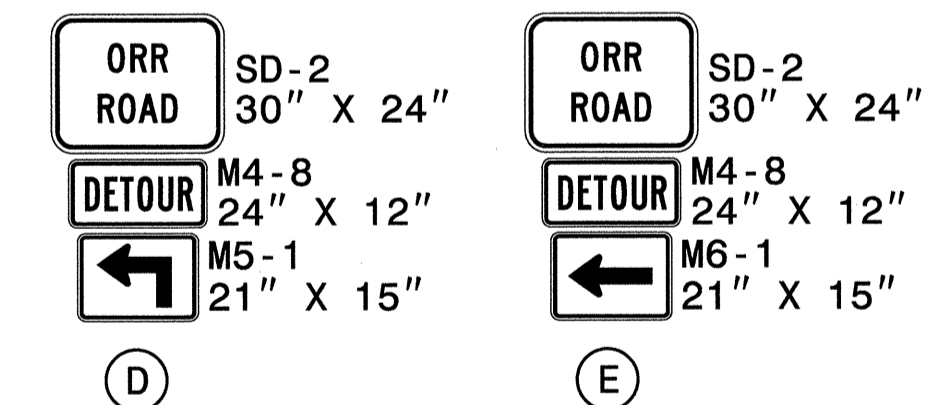


PROJ. REFERENCE NO. P-5208H SHEET NO. TMP-14

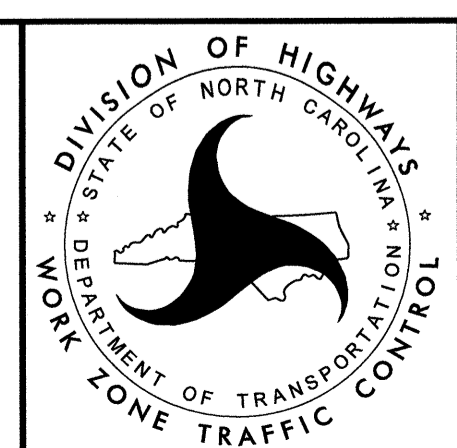
PLANS PREPARED BY:  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560



SEE TMP-18 FOR SIGN DESIGN



Professional Engineer Seal for Kevin W. B. (2014), State of North Carolina. Date: FEB 27, 2013.



PHASE III DETAIL DRAWING

2/27/2013  
P5208H\_TCP\_DETOUR\_ORR.dgn  
Kbisy

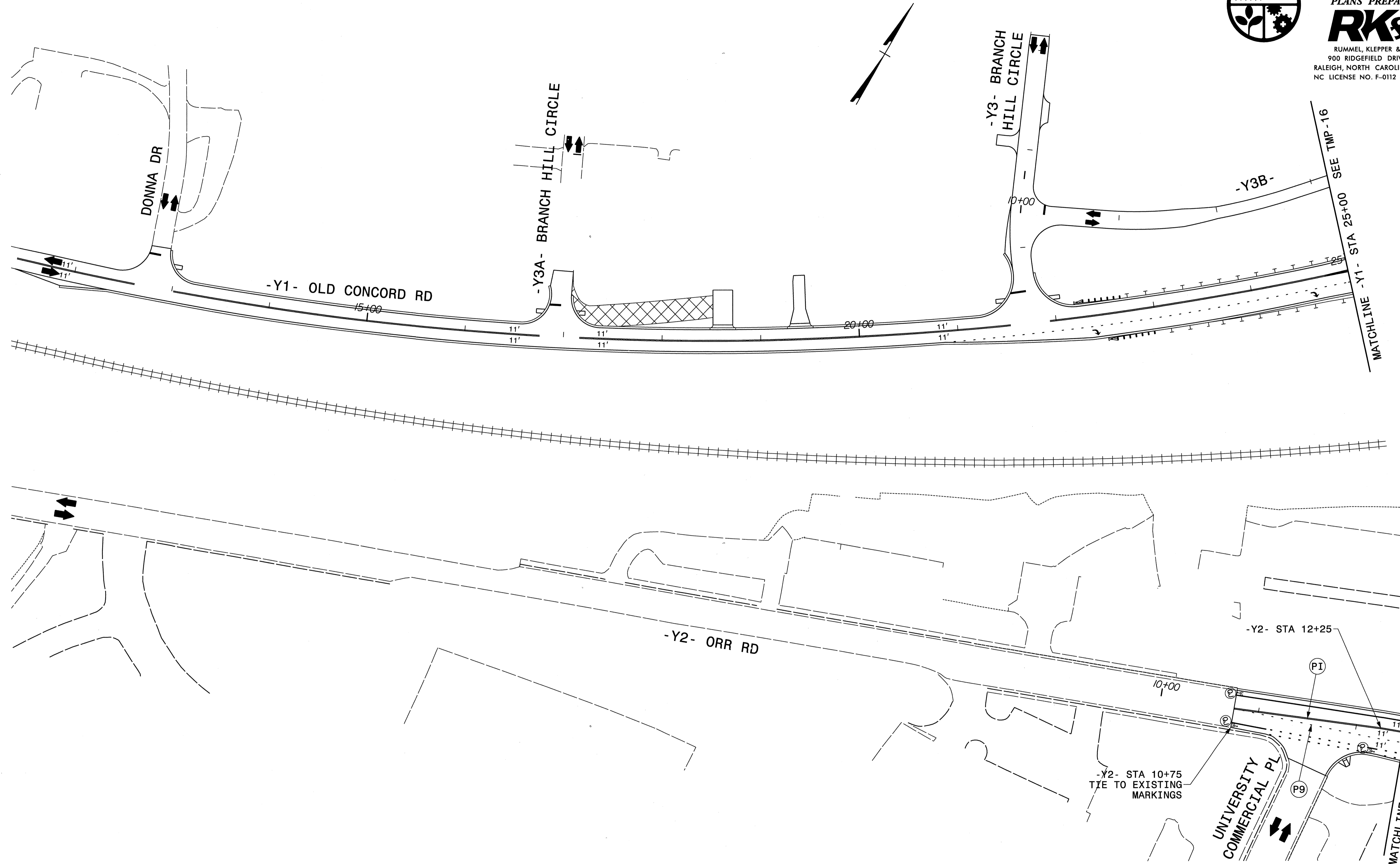


0102DEL\_P10a6

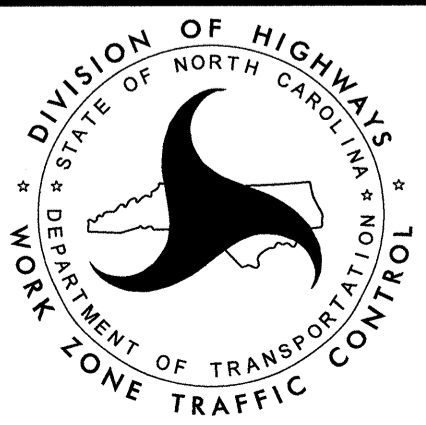
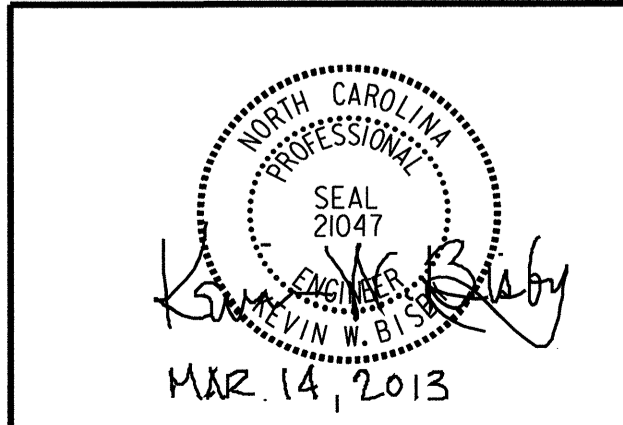


PROJ. REFERENCE NO.	SHEET NO.
P-5208H	TMP-15

PLANS PREPARED BY:  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



3/14/2013  
 P5208H\_TCP\_P4\_PSH01.dgn  
 KDISBY



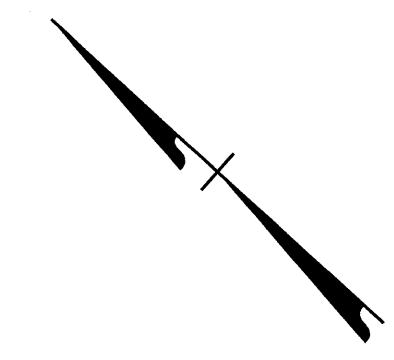
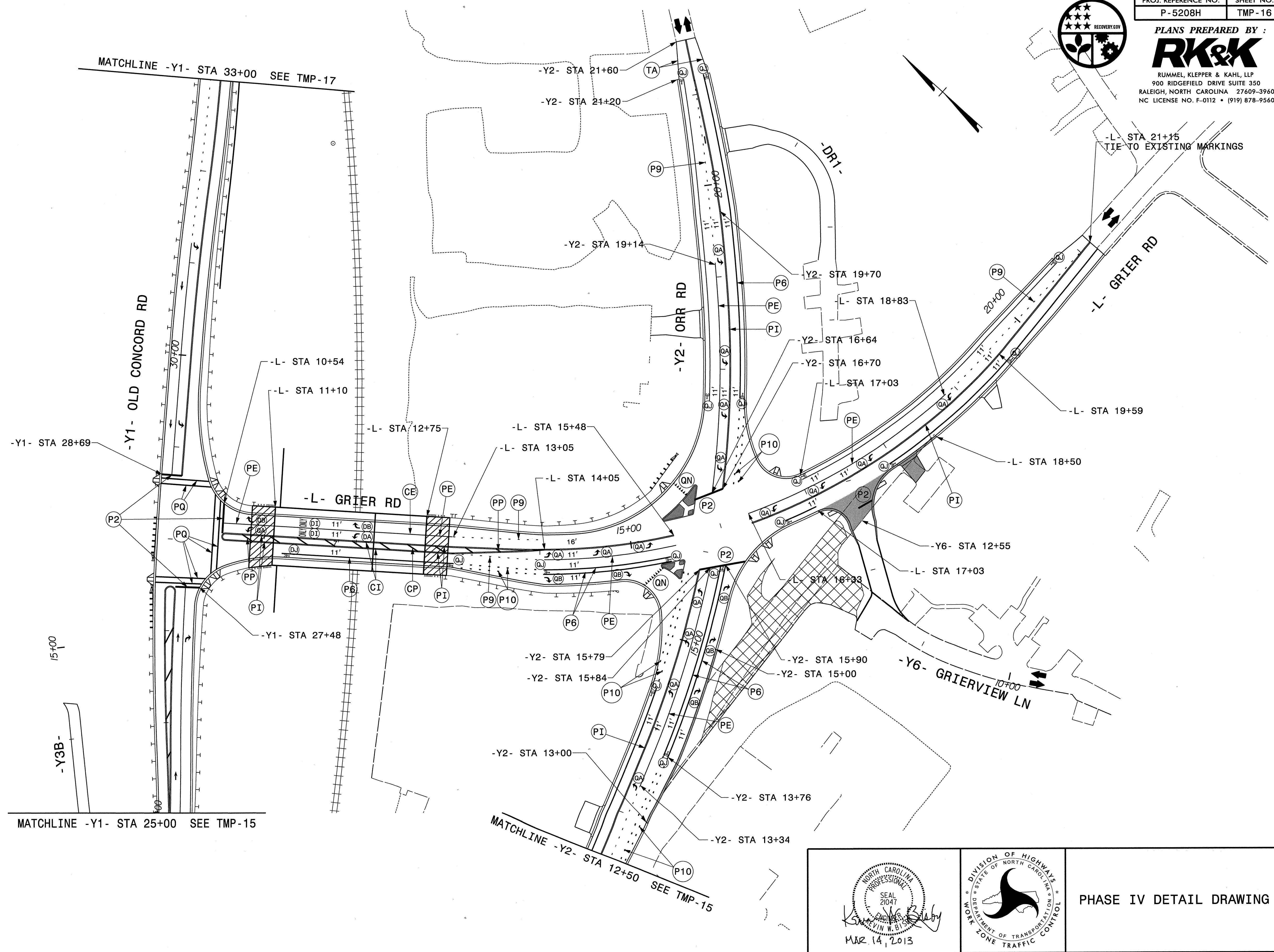
PHASE IV DETAIL DRAWING

0102DEL\_P10a6



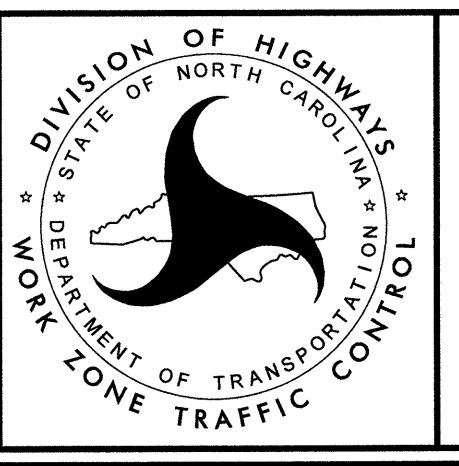
PROJ. REFERENCE NO. P-5208H SHEET NO. TMP-16

PLANS PREPARED BY: RK&K RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 • (919) 878-9560



3/14/2013 P5208H\_TCP\_P4\_PSH02.dgn KJ:lsdy

Professional Engineer Seal for North Carolina, State No. 21047, dated MAR 14 2013.



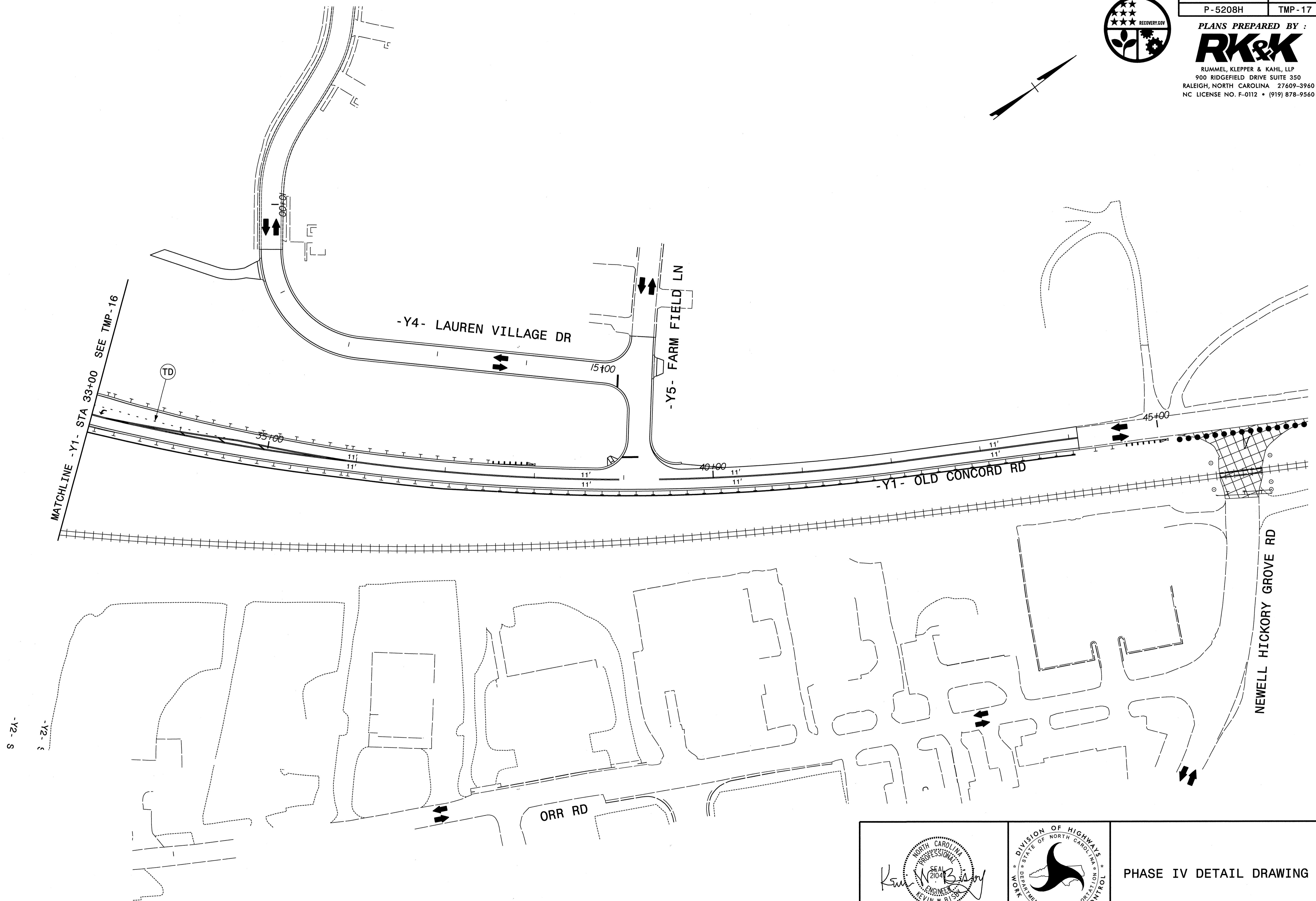
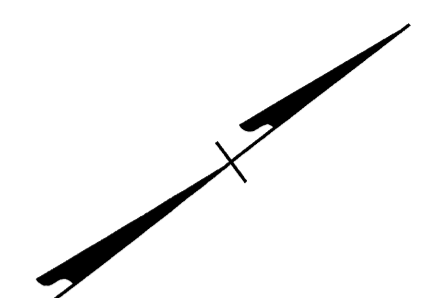
PHASE IV DETAIL DRAWING

DCN  
0102DEL\_P10a6



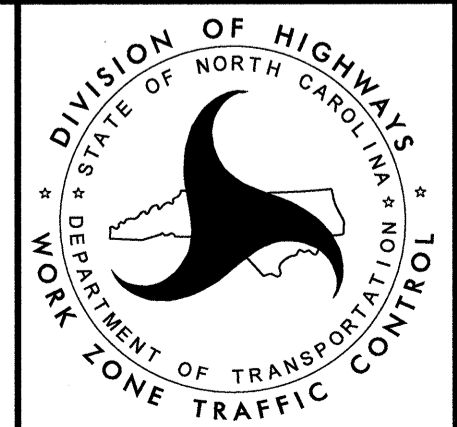
PROJ. REFERENCE NO. P-5208H	SHEET NO. TMP-17
--------------------------------	---------------------

PLANS PREPARED BY :  
**RK&K**  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560



2/27/2013  
 P5208h\_TCP\_P4\_PSH03.dgn  
 kbisby

Professional Engineer Seal for Kevin M. Biscardi, State of North Carolina, License No. 2104. The seal is dated FEB 27, 2013.



PHASE IV DETAIL DRAWING



PLANS PREPARED BY :



RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

SIGN NUMBER: SD-1	BACKG COLOR: Fluorescent Orange	DESIGN BY: K. Bisby	CHECKED BY: M. Cole	DATE: Jun 28, 2012
TYPE: D	COPY COLOR: Black	PROJECT ID: P-5208H	DIV: 10	
QUANTITY: 1				
SIGN WIDTH: 3'-6"				
HEIGHT: 3'-0"				
TOTAL AREA: 10.5 Sq.Ft.				
BORDER TYPE: RECESSED				
RECESS: 0.7"				
WIDTH: 0.7"				
RADII: 4.5"				
NO. Z BARS:	MAT'L: 0.080" (2.0 mm) ALUMINUM			
LENGTH:				
NOTES: 1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange reflective sheeting.				

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS										Series/Size
Letter spacings are to start of next letter										Text Length
	O	L	D							C 2000
	16	4	3.3	2.8	16					10
	C	O	N	C	O	R	D			C 2000
	8.2	3.7	3.9	3.8	3.7	4	3.7	2.8	8.2	25.6
	R	O	A	D						C 2000
	14.1	3.6	3.5	3.9	2.8	14.1				13.8

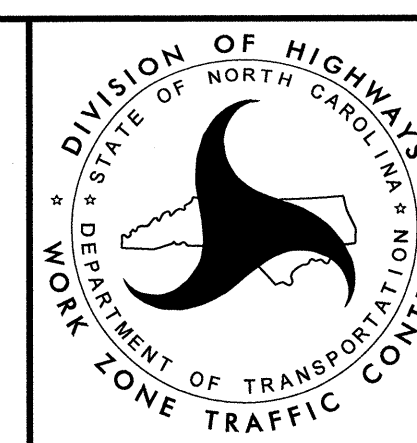
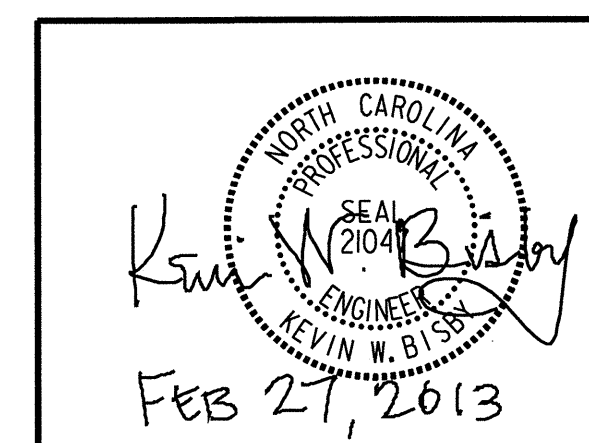
FILENAME: p5208h\_tcp\_sign DESIGN NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-2	BACKG COLOR: Fluorescent Orange	DESIGN BY: K. Bisby	CHECKED BY: M. Cole	DATE: Jun 28, 2012
TYPE: D	COPY COLOR: Black	PROJECT ID: P-5208H	DIV: 10	
QUANTITY: 1				
SIGN WIDTH: 2'-6"				
HEIGHT: 2'-0"				
TOTAL AREA: 5.0 Sq.Ft.				
BORDER TYPE: RECESSED				
RECESS: 0.7"				
WIDTH: 0.7"				
RADII: 3"				
NO. Z BARS:	MAT'L: 0.063" (1.6 mm) ALUMINUM			
LENGTH:				
NOTES: 1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be Type VII, VIII, or IX (prismatic) fluorescent orange reflective sheeting.				

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS										Series/Size
Letter spacings are to start of next letter										Text Length
	O	R	R							C 2000
	9.8	4	3.7	2.8	9.8					10.4
	R	O	A	D						C 2000
	8.1	3.5	3.6	3.9	2.8	8.1				13.8

FILENAME: p5208h\_tcp\_sign DESIGN NORTH CAROLINA D.O.T. SIGN DETAIL



SPECIAL SIGN DESIGNS