

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE WBS PROJECT REFERENCE NO.	SHEET NO.
37897-B	TCP-1

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
CATAWBA COUNTY**

**ROADWAY STANDARD DRAWINGS**

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
1101.02	Temporary Lane Closures
1101.04	Temporary Shoulder Closures
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	Flaggers Devices
1180.01	Skinny - Drum
1205.01	Pavement Markings - Line Types and Offsets
1205.02	Pavement Markings - 2 Lane and Multilane Roadways
1205.04	Pavement Markings - Intersections
1205.05	Pavement Markings - Turn Lanes
1205.08	Pavement Markings - Symbols and Word Messages
1250.01	Pavement Marker Spacing
1253.01	Snowplowable Raised Pavement Markers
1261.01	Guardrail and Barrier Delineator Spacing
1261.02	Guardrail and Barrier Delineator Types
1262.01	Guardrail End Delineation

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NCMA-1	SIGN DESIGN FOR CONTRACTORS COMPANY NAME
NCMA-2	

**INTERMEDIATE PAVEMENT MARKING SCHEDULE**

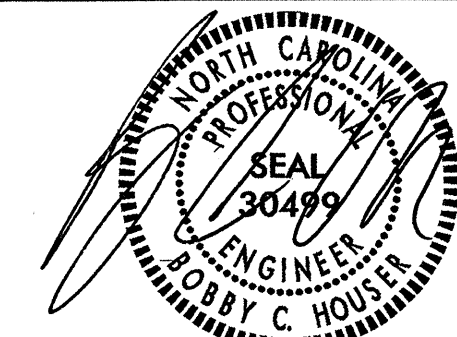
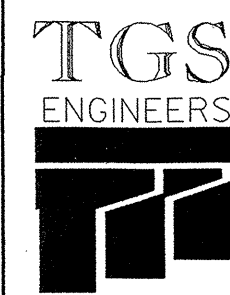
SYMBOL	DESCRIPTION	PAY ITEM	QUANTITY BREAKDOWN	TOTAL QUANTITY
PAVEMENT MARKINGS LINES				
		PAINT (4")		
PD	2 FT. WHITE MINISKIP		33 LF	
PE	WHITE SOLD LANE LINE		121 LF	
			TOTAL	154 LF
PAINTMARKING SYMBOLS				
QB	RIGHT TURN ARROW		2 EA	
			TOTAL	2 EA

**LEGEND**

- GENERAL**
- ← DIRECTION OF TRAFFIC FLOW
  - ↑ NORTH ARROW
  - PROPOSED PVMT. - - - - - EXIST. PVMT.
  - WORK AREA
  - ▨ REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- I TYPE I BARRICADE
  - II TYPE II BARRICADE
  - III TYPE III BARRICADE
  - ▲ CONE
  - DRUM
  - ⬮ FLASHING ARROW PANEL (TYPE C)
  - ⊙ TYPE 'B' WARNING LIGHT
  - ⊥ STATIONARY SIGN
  - ⊏ PORTABLE SIGN
  - ⊕ STATIONARY OR PORTABLE SIGN
  - ⚠ WARNING FLAGS
  - ⊞ CRASH CUSHION
  - Ⓜ CHANGEABLE MESSAGE SIGN
  - Ⓜ TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
  - Ⓜ POLICE
  - Ⓜ FLAGGER
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
  - ◆ YELLOW/YELLOW PAVEMENT MARKER
  - CRYSTAL/RED PAVEMENT MARKER
  - ↔ PAVEMENT MARKING SYMBOLS

**CONTRACT:**

SYSTEMS  
SERVICES

APPROVED: DATE:	PLAN PREPARED FOR N.C.D.O.T. BY:
 10/11/07	 TGS ENGINEERS SUITE 141 975 WALNUT STREET CARY, NC 27511 PH (919) 319-8850
	C. L. FLOWE, PE PROJECT ENGINEER B. C. HOUSER, PE DESIGN ENGINEER DESIGN TECHNICIAN

# PROJECT NOTES

W.B.S. REFERENCE NO.	SHEET NO.
37897-B	TCP-2
MA12042R-B	

## 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 UNDESIRE 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 DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

**ROAD NAME**

NC HWY 10  
SR 1008

**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 8:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 8:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 8:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 8:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 8:00 FRIDAY AND 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- B) 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.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN 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.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.  
  
WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- E) 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.
- F) 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.

- G) DO NOT INSTALL MORE THAN 1000 ft OF LANE CLOSURE ON NC HWY 10 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC HWY10.

**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) 350' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

**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) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

**TRAFFIC CONTROL DEVICES**

- P) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- Q) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS, CONES OR SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

**PAVEMENT MARKINGS AND MARKERS**

- R) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC HWY10	THERMOPLASTIC	SNOWPLOWABLE RAISED
SR 1008	THERMOPLASTIC	SNOWPLOWABLE RAISED

- S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

**TEMPORARY / FINAL SIGNALS**

- U) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.
- V) OTHERS WILL SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

## LOCAL NOTES

THE FOLLOWING LOCAL NOTES APPLY ONLY AT THE TIMES THEY ARE REFERENCED IN THE PLAN.

- 1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.
- 2) 37897 PART B MUST BE COMPLETED BEFORE WORK ON 37897 PART A CAN BEGIN.

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**PLANS PREPARED BY:**

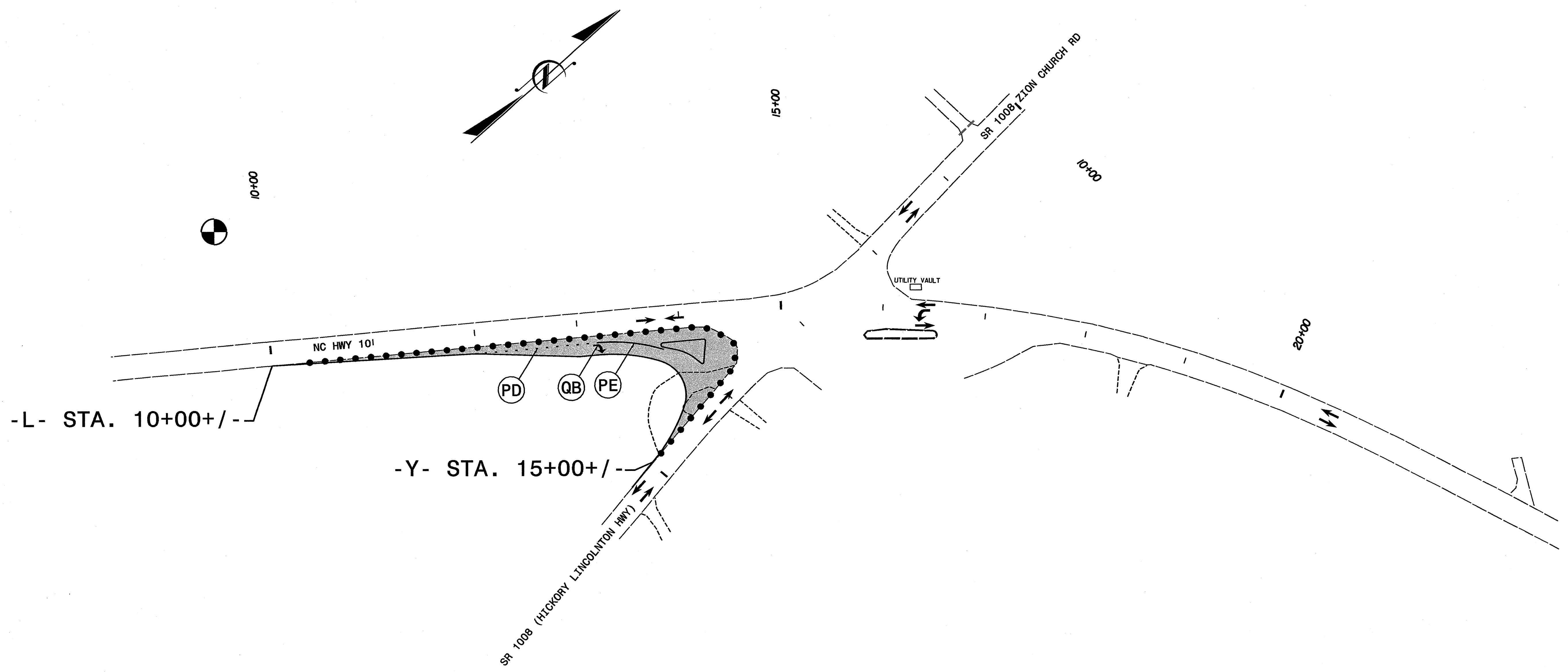
**TGS ENGINEERS**  
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975 WALNUT STREET  
CARY, NC 27511  
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**LEGEND**

-  PROPOSED CONSTRUCTION
-  EXISTING PAVEMENT REMOVAL
-  DRUMS



**PHASE I**

NOTE: 37897 PART B MUST BE COMPLETE BEFORE WORK CAN BEGIN ON 37897 PART A.

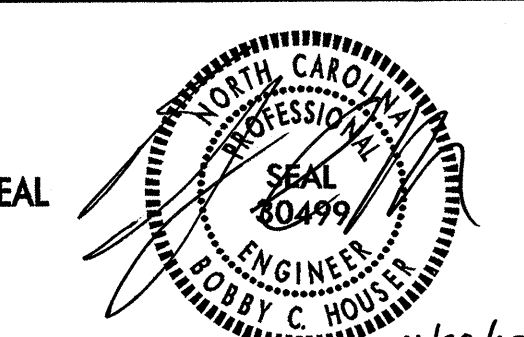
- STEP 1: INSTALL ALL WORKZONE WARNING SIGNS AND LOGO SIGNS AS SHOWN ON SHEET NCMA-1. IF WORK IS NOT PURSUED WITHIN 3 DAYS OF SIGN INSTALLATION, THE SIGN SHALL BE COVERED IN A METHOD APPROVED BY THE ENGINEER ACCORDING TO SECTION 1100.
- STEP 2: USING STANDARD DRAWING 1101.04 (SHEET 1 OF 1), WIDEN -L- FROM STA. 10+00+/- TO -Y- STA. 15+00+/-, UP TO EXISTING PAVEMENT EDGE AND ELEVATION. CONSTRUCT CONCRETE ISLANDS. USE FLAGGERS AT ALL ENDS OF THE WORK ZONE AND AT THE INTERSECTION OF SR1008/HICKORY LINCOLNTON HWY (-Y) AND NC HWY 10 (-L-). MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
- STEP 3: PLACE TEMPORARY PAVEMENT MARKINGS AS FOLLOWS:  
 -L- STA. 12+00+/- TO -L- STA. 14+00+/-
- STEP 4: REMOVE DRUMS AND PLACE TRAFFIC INTO NEW PATTERNS.

**PLANS PREPARED BY:**

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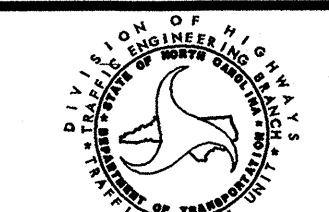
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11/29/07




**PHASE I**

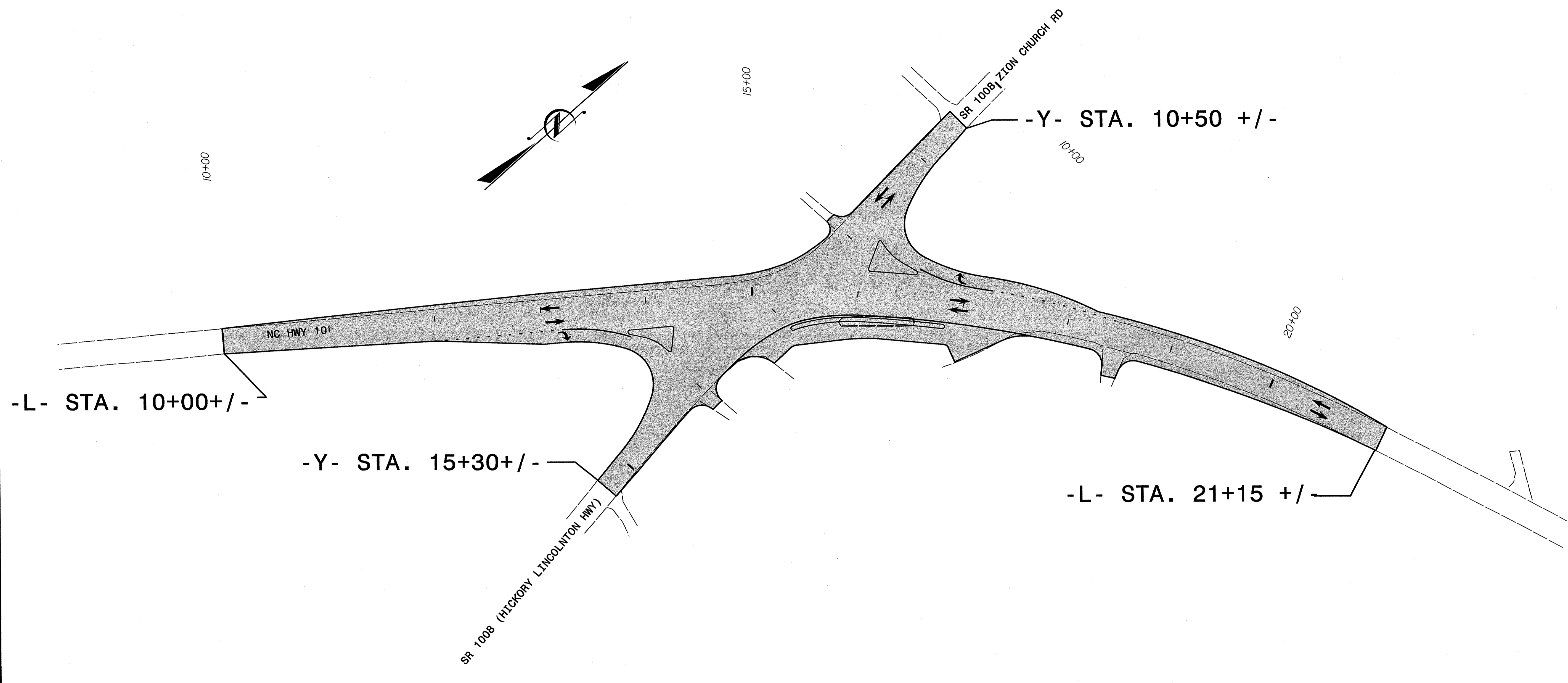
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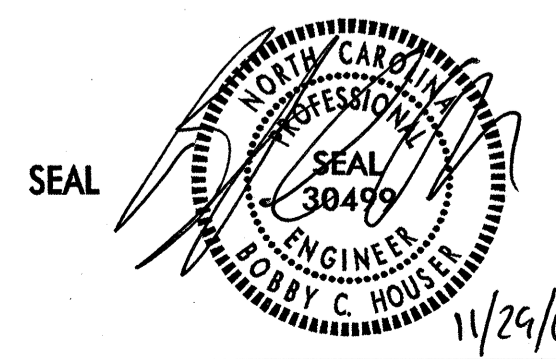
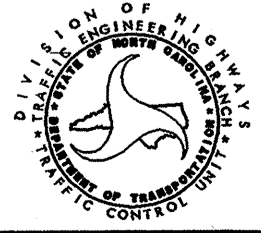
**LEGEND**  
 PROPOSED CONSTRUCTION  
 EXISTING PAVEMENT REMOVAL  
 DRUMS



**PHASE III**

- STEP 1: USING STANDARD DRAWING 1101.02 (SHEET 1 OF 9) AND FLAGGERS, CONSTRUCT AS FOLLOWS:  
 -L- STA. 10+00+/- TO -L- STA. 21+15+/-  
 -Y- STA. 10+50+/- TO -Y- STA. 15+30+/-  
 MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
- STEP 2: PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN ON PM-1 FROM:  
 -L- STA. 10+00+/- TO -L- STA. 21+15+/-  
 -Y- STA. 10+50+/- TO -Y- STA. 15+30+/-
- STEP 3: REMOVE ALL WORK ZONE SIGNS AND DEVICES AND PLACE TRAFFIC INTO FINAL PATTERNS.

**PLANS PREPARED BY:**  
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