## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.	$\prod$
U-3423	TCP-01	

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# CUMBERLAND COUNTY

### ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" -PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE

INSIDERED A PART OF THESE PLANS:				
	STD.NO.	TITLE		
	1101.02	TEMPORARY LANE 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		
	1150.01	FLAGGING DEVICES		
	1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS		
	1205.02	PAVEMENT MARKINGS - 2 LANE & 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		
	1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY AND PERMANENT)		
	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		
	1264.01	OBJECT MARKERS		
	1264.02	PLACEMENT OF OBJECT MARKERS		

TEMP	<b>PVMT</b>	MARKING	SCHEDULE
			O OLLED OLL

DESCI	RIPTION	QUANTITY BREAKDOWN	TOTAL QUANTI
t.	PAINT (4"	)	
		<u>,                                      </u>	
PA	WHITE EDGELINE	126,000 LF	
PB	YELLOW EDGELINE	126,000 LF	
PC	10 FT WHITE SKIP	63,000 LF	
PD	2 FT WHITE MINI SKIP	400 LF	
PE	WHITE LANE LINE	9960 LF	
ΡI	YELLOW DOUBLE CENTER LIN	E 12000 LF	TOTAL 337,360 LF
	PAINT (8"	)	
		<u>,</u>	
PR	WHITE GORE LINE	1600 LF	
PS	WHITE DIAGONAL	400 LF	
PV	YELLOW DIAGONAL	400 LF	TOTAL 3000 LF
	PAINT (24	")	
P4	WHITE STOPBAR	2700 LF	TOTAL 2700 LF
			L.
	COLD APPLIED PLASTIC (REMOVABLE TAP		
RA	WHITE EDGELINE	800 LF	
RB	YELLOW EDGELINE	800 LF	
RC	10 FT WHITE SKIP	600 LF	TOTAL 2200 LF
	TEMPORARY RAISED PA	AVEMENT MARKERS	
MH	YELLOW & YELLOW	50 EA	
IVITT	ODVOTAL O DED	50 EA	TOTAL 000 54

CRYSTAL & RED

880 EA

TOTAL

930 EA

## INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, INDEX OF SHEETS AND PAVEMENT MARKING SCHEDULE
TCP-02	GENERAL NOTES
TCP-3 & TCP-3A	PHASING
TCP-04	TEMPORARY PAVEMENT
TCP-05 THRU TCP-11	PHASE I DETAILS
TCP-12 THRU TCP-18	PHASE II DETAILS
TCP-19 AND TCP-20	PHASE III DETAILS
TCP-21	ADVANCE WARNING SIGNS

## **LEGEND**

### **GENERAL**

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

PROPOSED PVMT. ----- EXIST. PVMT.

**WORK AREA** 

REMOVAL OF EXISTING PAVEMENT

### TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE III BARRICADE

▲ CONE

FLASHING ARROW PANEL (TYPE C)

TYPE 'B' WARNING LIGHT

STATIONARY SIGN

PORTABLE SIGN

■ STATIONARY OR PORTABLE SIGN

-~ CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

**FLAGGER** 

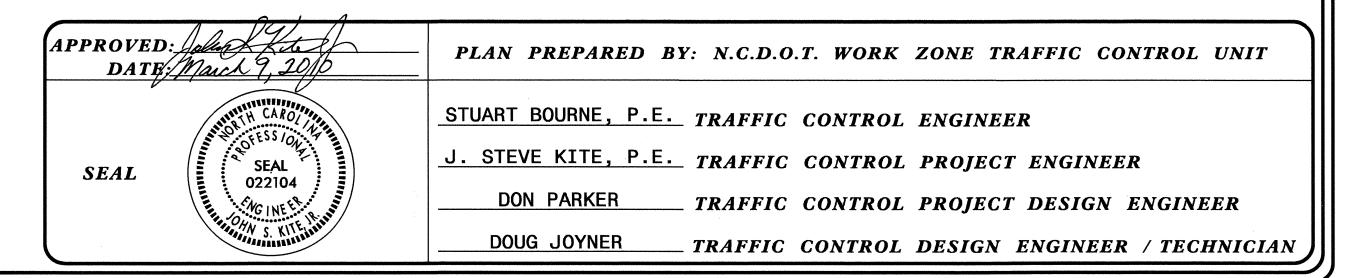
#### PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



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

BRAGG BLVD. (-L-) &

MONDAY THRU SUNDAY 6:00 AM TO 8:00 PM

SANTA FE (-Y5-)

SHAW RD. (-Y5-)

MONDAY THRU FRIDAY 7:00 AM TO 9:00 AM

AND 4:00 PM TO 6:00 PM

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

#### ROAD NAME

BRAGG BLVD. (-L-) SANTA FE (-Y5-)

#### 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 AM DECEMBER 31st TO 8:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 PM THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 8:00 PM MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 8:00 PM TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE THE DAY BEFORE INDEPENDENCE DAY AND 8:00 PM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 8:00 PM TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY TO 8:00 PM MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.
- DO NOT USE MEDIAN CROSSOVERS AS FOLLOWS:

### ROAD NAME

#### DAY AND TIME RESTRICTIONS

BRAGG BLVD. (-L-) MONDAY THRU SUNDAY 5:00 AM TO 9:00 PM

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.

### GENERAL NOTES

#### 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 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.

- 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.
- 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.
- I) DO NOT INSTALL MORE THAN 0.5 MILE OF LANE CLOSURE ON NC 24-87 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- J) DO NOT INSTALL MORE THAN ONE SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON BRAGG BLVD. (-L-).
- K) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON BRAGG BLVD. (-L-).

#### PAVEMENT EDGE DROP OFF REQUIREMENTS

L) 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.

M) 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) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- O) 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.
- P) PROVIDE PERMANENT SIGNING.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

PROJ. REFERENCE NO.	SHEET NO.	
U-3423	TCP-02	
CUMBERLAND	101-02	

#### TRAFFIC CONTROL DEVICES

- R) 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 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.
- S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

#### PAVEMENT MARKINGS AND MARKERS

- U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.
- INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

#### ROAD NAME

#### MARKING

PAINT

PLASTIC TYPE IV

COLD APPLIED

MARKER

BRAGG BLVD. (-L-) BRIDGE

TEMPORARY RAISED

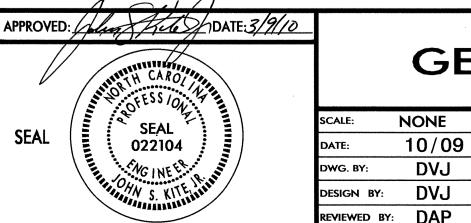
- W) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- REMOVE/REPLACE ANY CONFLICTING/DAMAGED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

#### TEMPORARY / FINAL SIGNALS

AA) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

#### MISCELLANEOUS

- BB) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- CC) ALL WHEELCHAIR 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.
- DD) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).



GENERAL NOTES

REVISIONS

### PHASING

PHASE I

STEP 1 - INSTALL ADVANCE WARNING SIGNS IN ACCORDANCE WITH TCP-21

> -- USING LANE CLOSURES, INSTALL TEMPORARY SIGNALS AT THE BRAGG/MIKE/JOHNSON AND BRAGG/SANTA FE/SHAW INTERSECTIONS. BAG HEADS UNTIL READY FOR USE. (SEE SIGNAL PLANS AND RSD 1101.02, SHEET 3 AND 5)

STEP 2 - USING LANE CLOSURES AND/OR FLAGGERS, BEGIN PHASE I CLEARING, GRADING, AND DRAINAGE INSTALLATION AS SHOWN ON SHEETS TCP-5 THRU 11, EXCEPT CERTAIN DRAINAGE SEGMENTS AS DESCRIBED IN STEPS 3 THRU 5 BELOW. (SEE RSD 1101.02, SHEET 1, 3 AND 5)

NOTE: THE INSTALLATION OF THE DRAINAGE NETWORKS AT RAMP C AND RAMP D AS DESCRIBED IN STEP 3 MAY NOT OCCUR SIMULTANEOUSLY. THESE NETWORKS MUST BE INSTALLED PRIOR TO TEMPORARY CROSSOVER CONSTRUCTION (STEP 4) TO ALLOW FOR U-TURNS DURING RAMP CLOSURE.

STEP 3 - INSTALL THE DRAINAGE NETWORK ON RAMP C- AND RAMP D- IN THE FOLLOWING SEQUENCE, OR AS DIRECTED BY THE ENGINEER:

> A. ONE WEEK PRIOR TO CLOSING THE RAMP, USE CHANGEABLE MESSAGE SIGNS ON BOTH DIRECTIONS OF THE RAMP TO ADVERTISE THE CLOSURE.

> B. USE DRUMS AND TYPE III BARRICADES TO CLOSE THE RAMP.

C. WORK IN A CONTINUOUS MANNER TO INSTALL DRAINAGE NETWORK AND RE-OPEN THE RAMP.

STEP 4 - USING LANE CLOSURES, CONSTRUCT TEMPORARY MEDIAN PAVEMENT FOR USE DURING PHASE I DRAINAGE INSTALLATION (SEE TCP-4 AND RSD 1101.02, SHEET 3)

NOTE: COMPLETE THE WORK OF PHASE I, STEP 5 BETWEEN THE HOURS OF 9:00 PM AND 5:00 AM IN ACCORDANCE WITH GENERAL NOTE C. SEE TCP-2 AND INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 5 - USING RSD 1101.02 SHEET 3 AND 5, AND RSD 1101.03, SHEET 6 OF 9, AND THE ASSISTANCE OF LAW ENFORCEMENT (SEE SPECIAL PROVISION) INSTALL TEMPORARY MEDIAN CROSSOVERS (25MPH DESIGN SPEED).

> -- INSTALL CROSSPIPES ACROSS BRAGG BLVD. AT THE FOLLOWING LOCATIONS:

-- -L- STA. 29+25 +/--- -L- STA. 38+10 +/--- -L- STA. 65+10 +/-

RETURN TRAFFIC TO THE EXISTING PATTERN AT THE CONCLUSION OF EACH WORK PERIOD.

STEP 6 - USING LANE CLOSURES AND FLAGGERS, MILL AND FILL THE EXISTING PAVEMENT, AS DIRECTED BY THE ENGINEER. (SEE ROADWAY PLANS, GENERAL NOTE "M" ON TCP-2, TCP-5 THRU TCP-11, AND RSD 1101.02, SHEET 3 AND 5)

> -- RESTRIPE THE EXISTING PATTERN (INCLUDING EDGELINES) AT THE END OF EACH WORK PERIOD.

PHASE I (CONT'D)

NOTE: IF THE CONTRACTOR ELECTS TO MILL ALL OF THE EXISTING PAVEMENT DOWN TO THE EXISTING CONCRETE PRIOR TO PAVING, THEN THE PAVING OF THE MILLED AREA SHALL BEGIN WITHIN 7 DAYS AFTER THE COMPLETION OF THE MILLING OPERATIONS.

#### NORTHBOUND DIRECTION

STEP 7 - USING LANE CLOSURES, WEDGE THE EXISTING NORTBOUND TRAVEL LANES OF BRAGG BLVD. (-L-) THRU THE INTERMEDIATE COURSE AND RE-STRIPE THE EXISTING TRAFFIC PATTERN WITH LANES REDUCED TO 10 FT. FROM -L- STA.18+00+/- (NB) TO STA. 76+00 +/- (NB). SEAL THE INTERMEDIATE COURSE AS DIRECTED BY THE ENGINEER (SEE TCP-5 THRU TCP-9 AND RSD 1101.02. SHEET 3 AND 5.)

> -- ADJUST TEMPORARY SIGNAL AT THE BRAGG/MIKE/JOHNSON INTERSECTION TO ACCOMMODATE NARROWED TRAVEL LANES (SEE SIGNAL PLANS)

-- USING LANE CLOSURES, GRADE/PAVE AND INSTALL CURB AND GUTTER TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT FROM -L- STA. 76+00+/- TO STA. 84+00 +/-(SEE TCP-9 AND 10 AND RSD 1101.02 SHEET 3)

STEP 8 - UPON COMPLETION OF WEDGING THRU THE INTERMEDIATE COURSE, USE LANE CLOSURES TO GRADE/PAVE AND INSTALL CURB AND GUTTER TO SAME ELEVATION FROM -L- STA. 10+00+/- TO STA. 76+00 +/- (SEE TCP-5 THRU TCP-9 AND RSD 1101.02. SHEET 3).

#### SOUTHBOUND DIRECTION

STEP 7 - USING RSD 1101.02, SHEET 3, (USE STATIONARY SIGNS INSTEAD OF PORTABLE SIGNS) INSTALL A LONG TERM CLOSURE OF THE OUTSIDE LANE OF SOUTHBOUND BRAGG BLVD. (THIS WILL OVERLAP WITH PROJECT U-2519E (SEE TCP-11)

STEP 8 - USING LANE CLOSURES, REMOVE AND REPLACE EXISTING MARKINGS FOR THE PHASE I SOUTHBOUND TRAFFIC PATTERN AS SHOWN ON SHEETS TCP-5 AND 6 FROM -L- STA. 18+83 +/- (SB) TO STA. 33+84 +/- (SB) (SEE RSD 1101.02, SHEET 3)

STEP 9 - USE LANE CLOSURES TO CONSTRUCT THE FOLLOWING (SEE RSD 1101.02, SHEET 3):

> -- GRADE AND PAVE THE PROPOSED INSIDE TRAVEL LANE AND MEDIAN, INCLUDING CURB AND GUTTER FROM -L- STA. 18+20 +/- TO STA. 36+70 +/- (SEE SHEETS TCP-5 AND 6)

> -- GRADE AND PAVE THE OUTSIDE WIDENING, INCLUDING THE CURB AND GUTTER TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT FROM -L- STA. 34+00 +/-TO 105+58 +/- AND SANTA FE TO -Y5- STA. 13+76 +/-(SEE SHEETS TCP-6 THRU TCP-11).

PROJ. REFERENCE NO. SHEET NO. U-3423 TCP-03 CUMBERLAND

PHASE II

#### NORTHBOUND DIRECTION

STEP 1 - USING LANE CLOSURES, INSTALL PHASE II DRAINAGE AND CURB AND GUTTER ON SHAW RD. (RIGHT SIDE) FROM -Y5- STA. 18+00 +/- TO 19+49 +/- (SEE RSD 1101.02, SHEET 3 AND TCP-17)

STEP 2 - USE LANE CLOSURES TO PERFORM THE FOLLOWING (SEE RSD 1101.02, SHEET 3 AND 5):

> -- PAVE UP THRU THE FIRST LIFT OF SURFACE COURSE ON NORTHBOUND BRAGG BLVD. FROM -L- STA. 10+00 +/- TO STA. 85+50 +/- AND SHAW RD. TO Y5- STA. 23+25+/-(SEE TCP-12 THRU TCP-17)

> -- PLACE TEMPORARY PAVEMENT MARKINGS FOR THE PHASE II PATTERN AND MODIFY SIGNAL AT BRAGG/JOHNSON AND BRAGG/SHAW FOR THE PHASE II NORTHBOUND TRAFFIC PATTERN. (SEE TCP-12 THRU TCP-17.)

NOTE: BRAGG BLVD. NORTHBOUND TRAFFIC SHOULD NOW BE ON THE NEXT TO FINAL LAYER IN THE PHASE II PATTERN FROM THE BEGINNING OF THE PROJECT NORTH TO THE SANTA FE/SHAW INTERSECTION AND PRIOR TO BEGINNING THE WORK OF STEP 3.

STEP 3 - USING LANE CLOSURES CONSTRUCT THE MEDIAN, INCLUDING CURB AND GUTTER FROM -L- STA. 18+20 +/-TO 105+58 +/- (SEE RSD 1101.02, SHEET 3 AND SHEETS TCP-12 THRU TCP-18.)

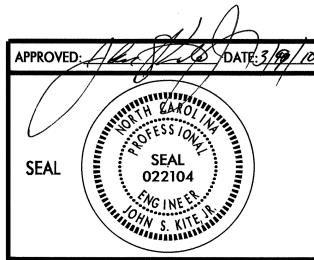
#### SOUTHBOUND DIRECTION

STEP 1 - USING LANE CLOSURES, WEDGE AND PAVE UP THRU THE FIRST LIFT OF SURFACE COURSE ON SOUTHBOUND BRAGG BLVD. FROM -L- STA. 17+89 +/- TO STA. 105+58 +/-AND SANTA FE DR. TO -Y5- STA. 13+95 +/- (SEE RSD 1101.02, SHEET 3 AND TCP-12 THRU TCP-18)

> -- PLACE TEMPORARY PAVEMENT MARKINGS/MARKERS FOR THE PHASE II PATTERN, MODIFY SIGNAL AT BRAGG/MIKE AND BRAGG/SANTA FE AND OPEN SOUTHBOUND BRAGG BLVD. AND SANTA FE DR. TO THE PHASE II PATTERN. (SEE SIGNAL PLANS AND TCP-12 THRU TCP-17)

NOTE: BRAGG BLVD. SOUTHBOUND TRAFFIC SHOULD NOW BE ON THE NEXT TO FINAL LAYER IN THE PHASE II PATTERN THE ENTIRE LENGTH OF THE PROJECT PRIOR TO BEGINNING THE WORK OF STEP 2.

STEP 2 - USING LANE CLOSURES, COMPLETE THE DRAINAGE NETWORK IN THE MEDIAN FROM -L- STA. 97+50 +/- TO STA. 103+15 +/-. (SEE RSD 1101.02, SHEET 3 AND TCP-18)



### PHASING

NONE 10/09 DWG. BY: DVJ DVJ DESIGN BY: REVIEWED BY: DAP



REVISIONS

### PHASING

PROJ. REFERENCE NO. SHEET NO. U-3423 TCP-3A

PHASE II SOUTHBOUND DIRECTION (CONT'D)

- STEP 3 USE LANE CLOSURES TO CONSTRUCT THE FOLLOWING (SEE RSD 1101.02, SHEET 3:
  - -- CONSTRUCT THE MEDIAN, INCLUDING CURB AND GUTTER FROM -L- STA. 36+70 +/- TO 105+58 +/-(SEE SHEETS TCP-13 THRU TCP-18.)
  - -- CONSTRUCT OUTSIDE WIDENING, INCLUDING PHASE II DRAINAGE AND CURB AND GUTTER AND REMOVAL OF EXISTING PAVEMENT FROM -L- STA. 17+89 +/-TO L- STA. 34+00 (SEE TCP-12 AND 13.)
  - -- COMPLETE LEFT SIDE CURB AND GUTTER ON SANTA FE FROM -Y5- STA. 13+95 +/- TO 16+00 +/- (SEE TCP-17.)
  - -- INSTALL THE DRAINAGE NETWORK AT SWAIN STREET IN THE FOLLOWING SEQUENCE OR AS DIRECTED BY THE **ENGINEER:**
  - A. ONE WEEK PRIOR TO CLOSING THE SWAIN ST., USE CHANGEABLE MESSAGE SIGNS ON BOTH DIRECTIONS OF THE STREET TO ADVERTISE THE CLOSURE.
  - B. USE DRUMS AND TYPE III BARRICADES TO CLOSE THE RAMP.
  - C. WORK IN A CONTINUOUS MANNER TO INSTALL DRAINAGE NETWORK AND RE-OPEN THE STREET

PHASE III

#### NORTHBOUND DIRECTION

- STEP 1 USING LANE CLOSURES, WEDGE AND PAVE UP THRU THE FIRST LIFT OF SURFACE COURSE FROM -L- STA. 85+50 +/- TO STA. 105+58 +/-(SEE RSD 1101.02, SHEET 3 AND 5 AND TCP-19 AND
  - -- PLACE TEMPORARY PAVEMENT MARKINGS FOR THE PHASE III PATTERN AND SHIFT SB BRAGG TRAFFIC TO THE PHASE III PATTERN FROM -L- STA. 85+50 +/- TO STA. 105+58+/- (SEE TCP-19 AND TCP-20)
  - -- USE DRUMS TO CLOSE THE RIGHT TURN LANE FROM SHAW RD. TO NORTHBOUND BRAGG BLVD.

NOTE: BRAGG BLVD. NORTHBOUND TRAFFIC IS STILL ON THE NEXT TO FINAL LAYER IN THE PHASE II PATTERN FROM THE BEGINNING OF THE PROJECT TO THE SANTA FE /SHAW INTERSECTION AND THE NEXT TO FINAL LAYER IN THE PHASE III PATTERN FROM SANTA FE/SHAW INTERSECTION TO THE END OF THE PROJECT PRIOR TO BEGINNING THE WORK OF STEP 3.

- STEP 2 USING LANE CLOSURES, GRADE/PAVE AND INSTALL CURB AND GUTTER TO THE EDGE AND ELEVATION OF CURRENT TRAVEL LANES FROM -L- STA. 85+50 +/- TO 105+58 +/- (SEE RSD 1101.02, SHEET 3 AND TCP-19 AND 20)
  - -- COMPLETE THE LEFT SIDE CURB AND GUTTER OF SHAW RD. TO -Y5- STA. 21+86 +/-. KEEP RIGHT TURN LANE CLOSED UNTIL COMPLETION OF FINAL SURFACE COURSE AND FINAL MARKINGS. (SEE TCP-19)

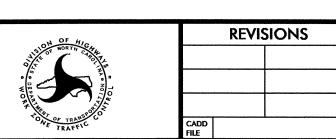
PHASE IV

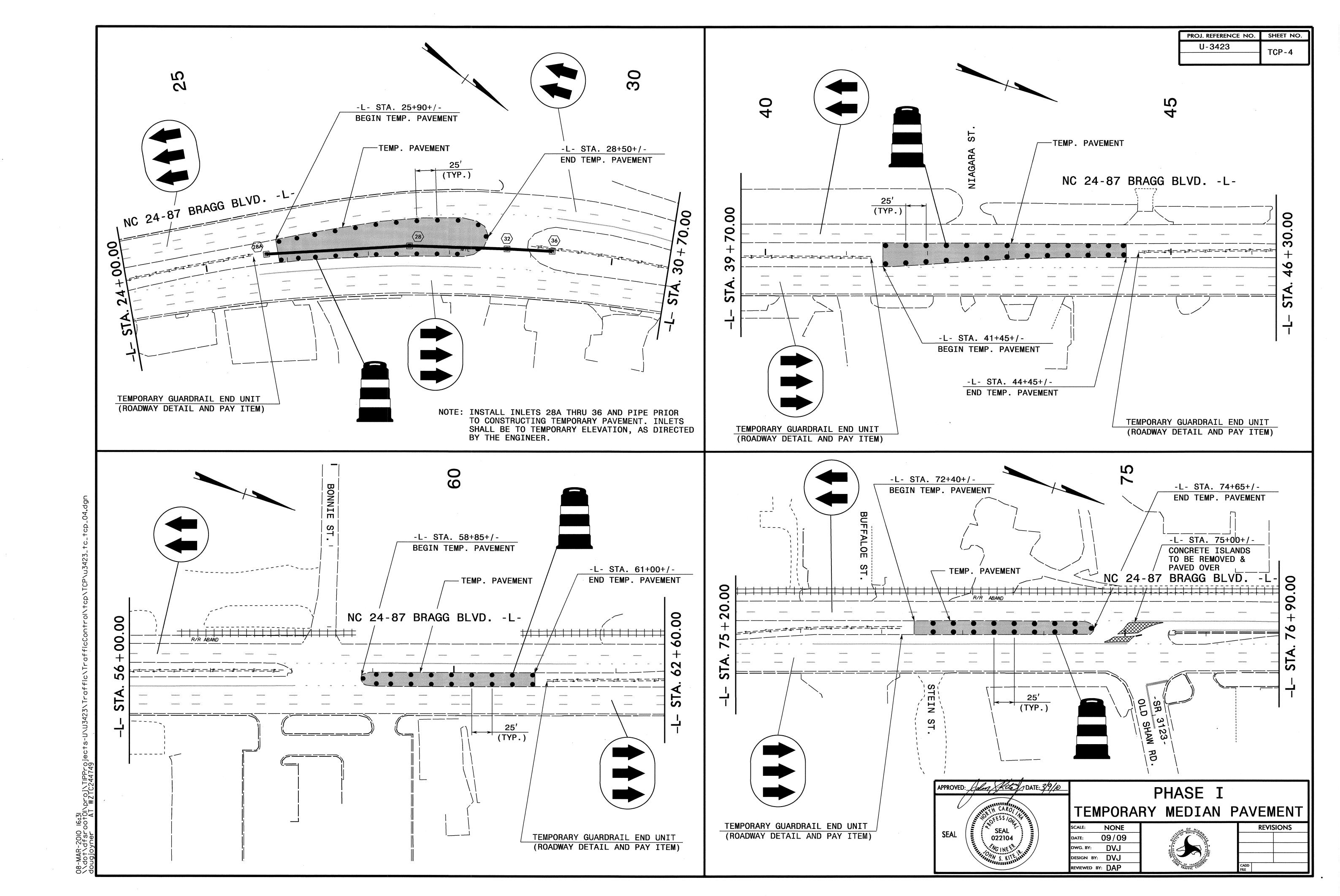
- STEP 1 USING LANE CLOSURES, INSTALL FINAL SIGNALS AT BRAGG/MIKE/JOHNSON AND BRAGG/SANTA FE/SHAW INTERSECTIONS. BAG HEADS UNTIL READY FOR USE. (SEE SIGNAL PLANS AND RSD 1101.02, SHEET 3 AND 5.)
- STEP 2 USING LANE CLOSURES AND FLAGGERS, CONSTRUCT THE REMAINING CONCRETE ISLANDS AND PAVE THE FINAL LAYER OF SURFACE COURSE AND PLACE FINAL MARKINGS/MARKERS THROUGHOUT THE PROJECT LIMITS IN THE FINAL TRAFFIC PATTERN. (SEE SIGNAL AND PAVEMENT MARKING PLANS AND RSD 1101.02, SHEET 1, 3, AND 5)
  - -- ACTIVATE FINAL SIGNALS.
- STEP 3 REMOVE ALL TRAFFIC CONTROL DEVICES.

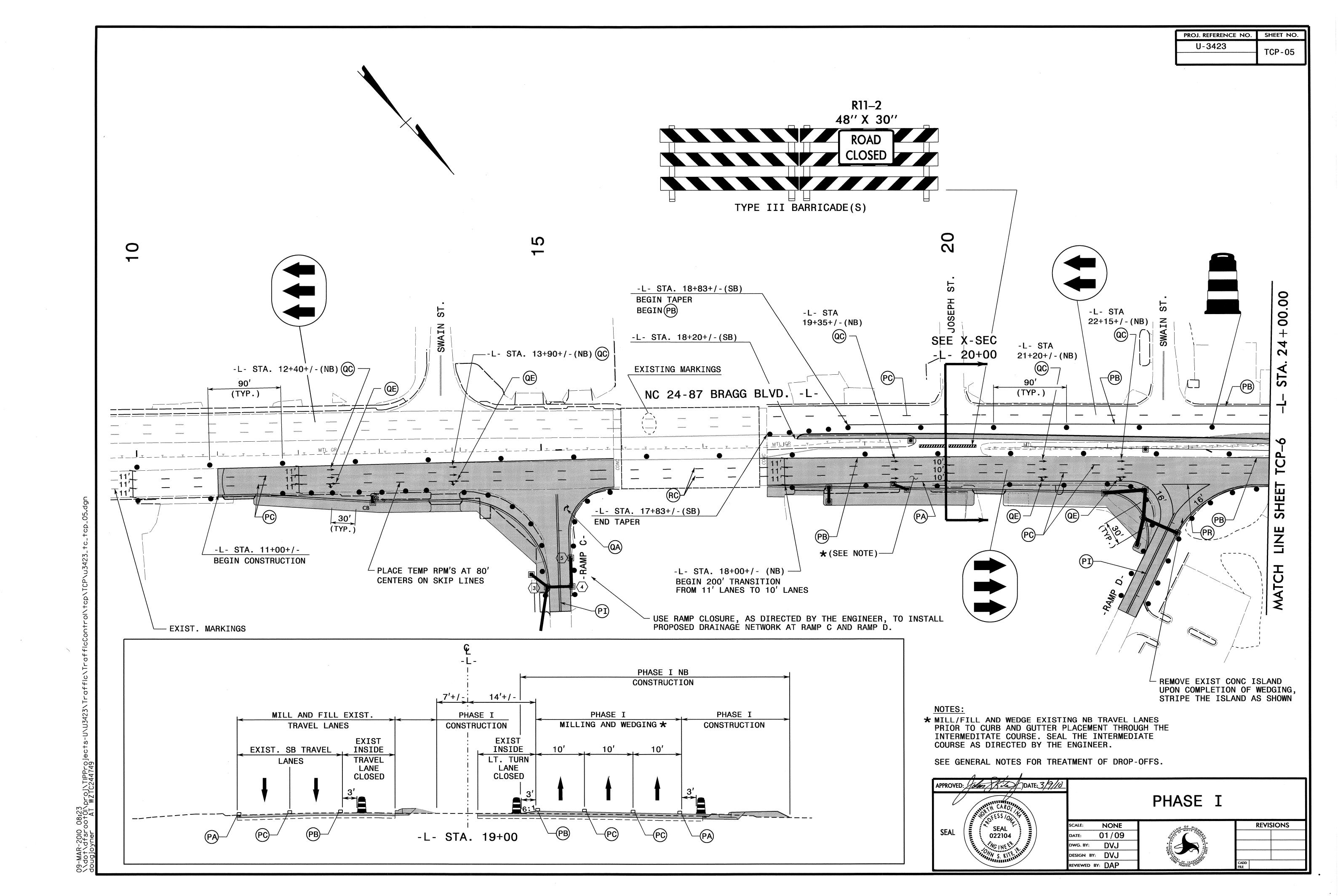
APPROVED: John Fite DATE: 3/9/10 022104

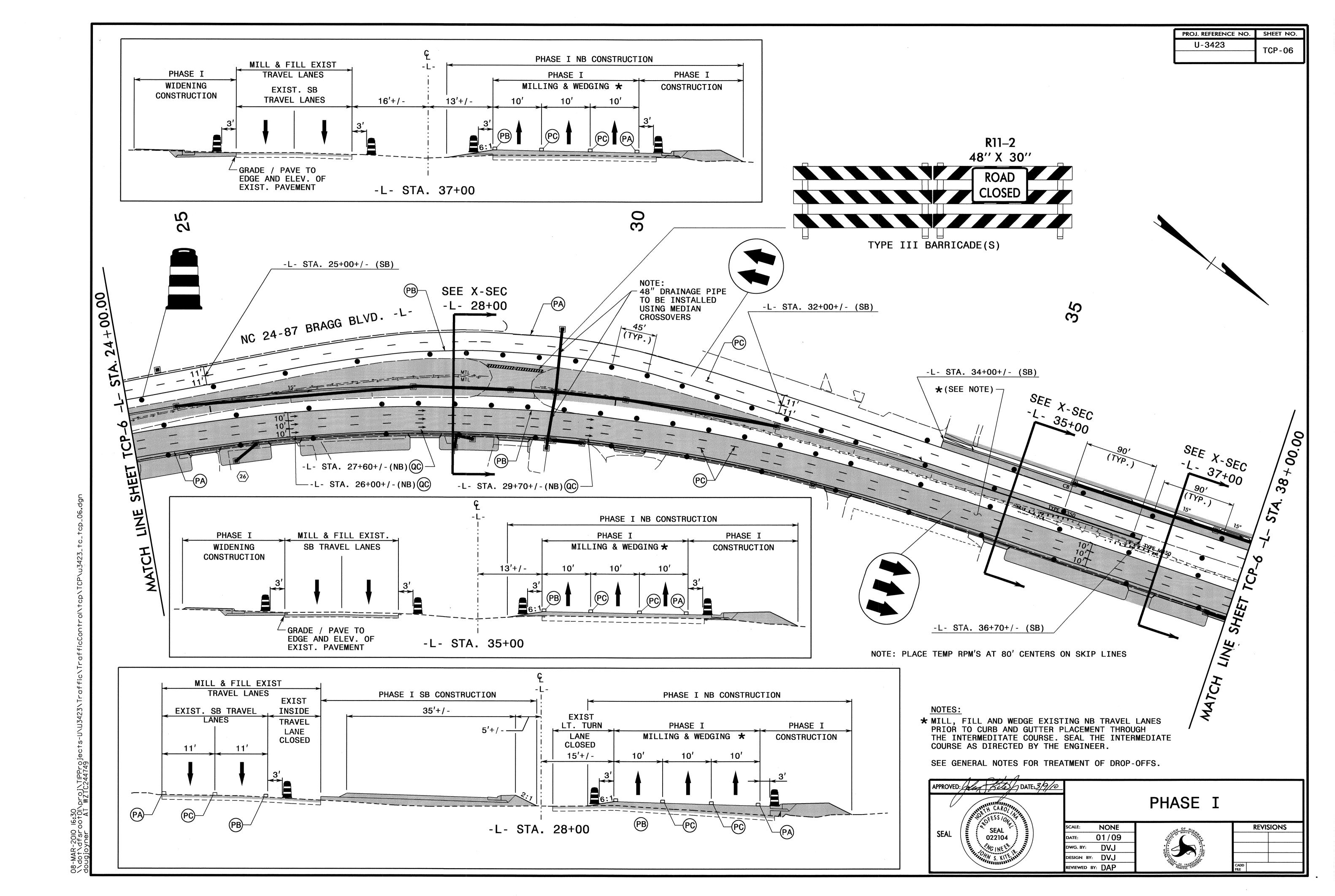
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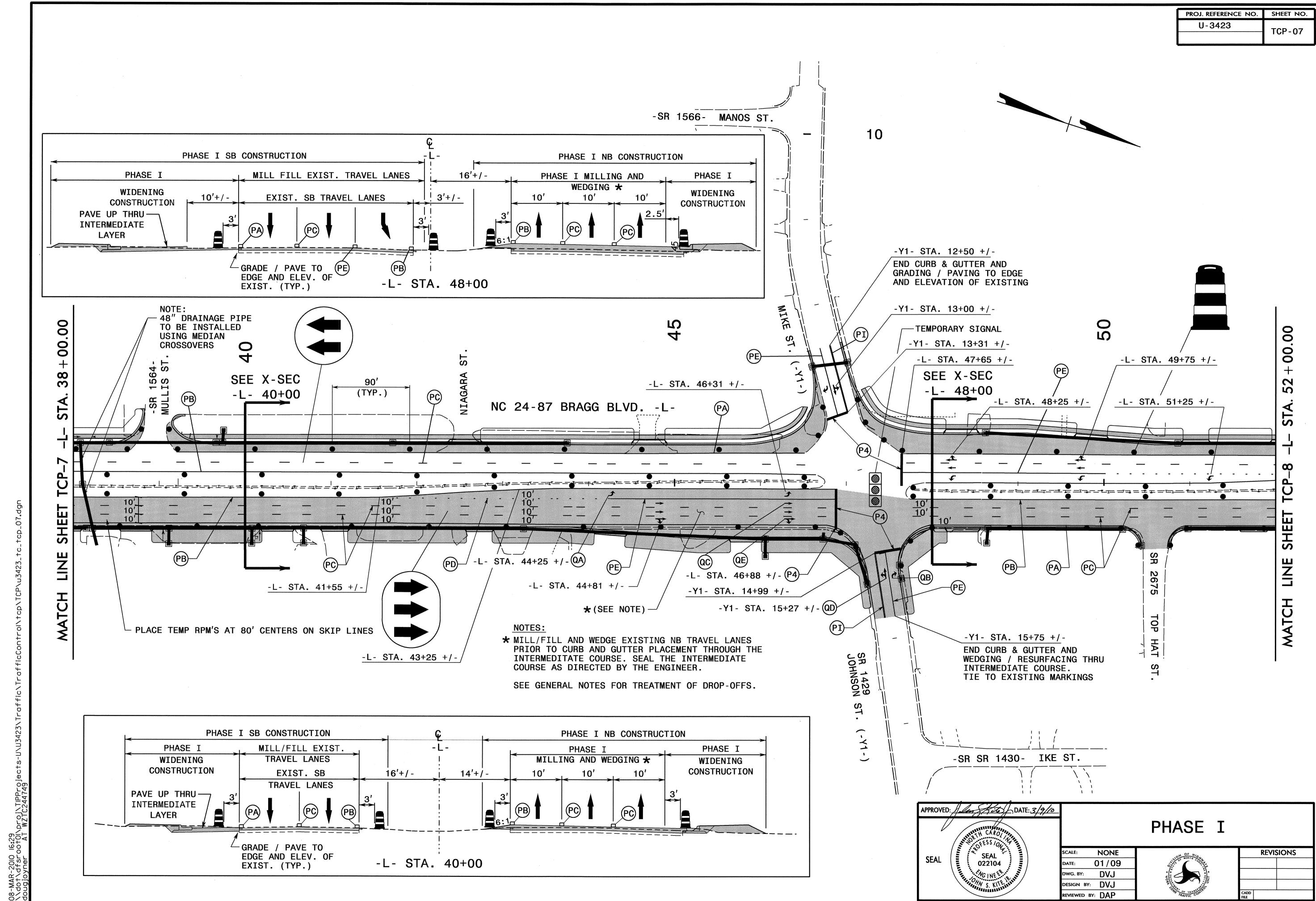
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TE:	10/09	
/G. BY:	DVJ	
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VIEWED BY:	DAP	

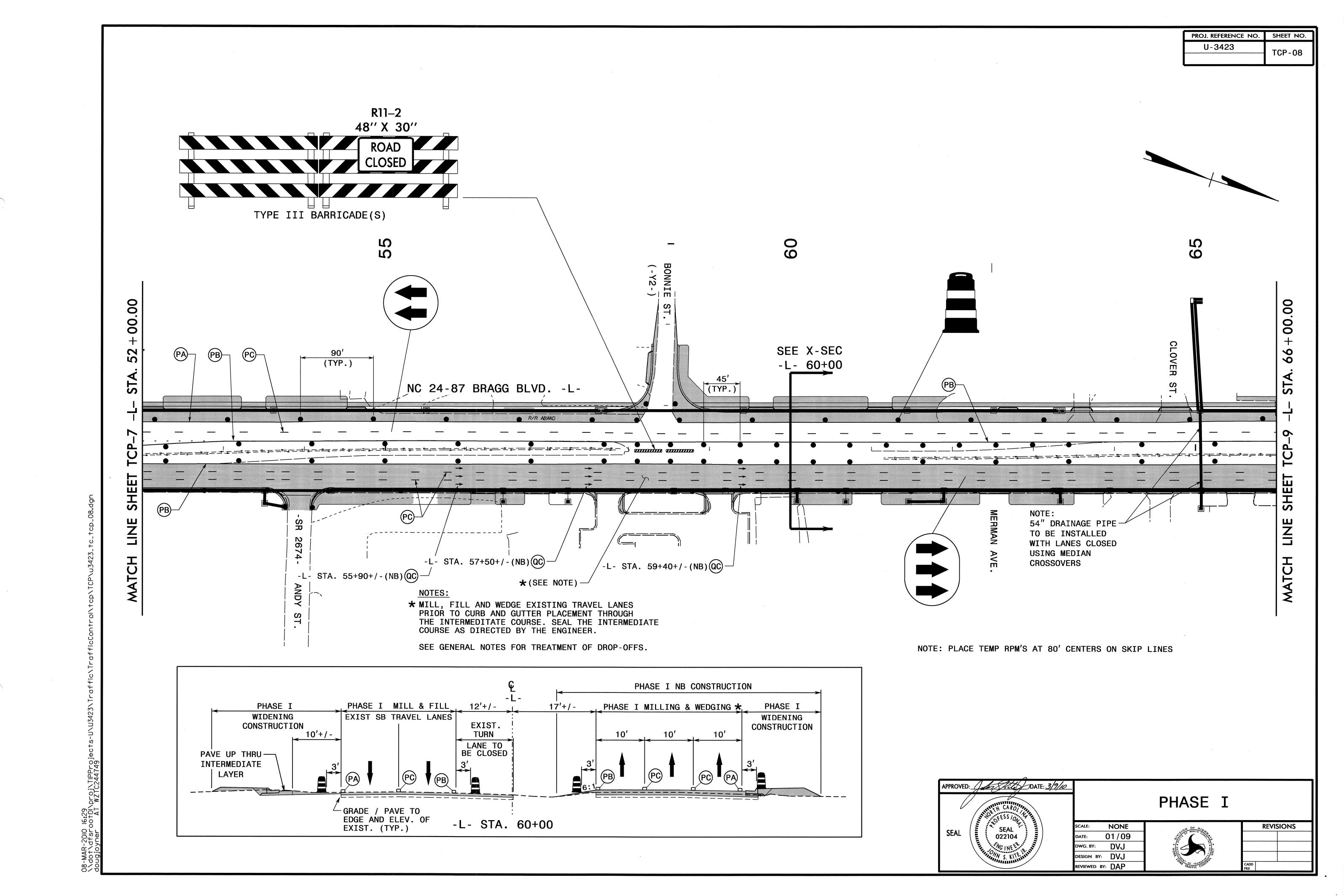


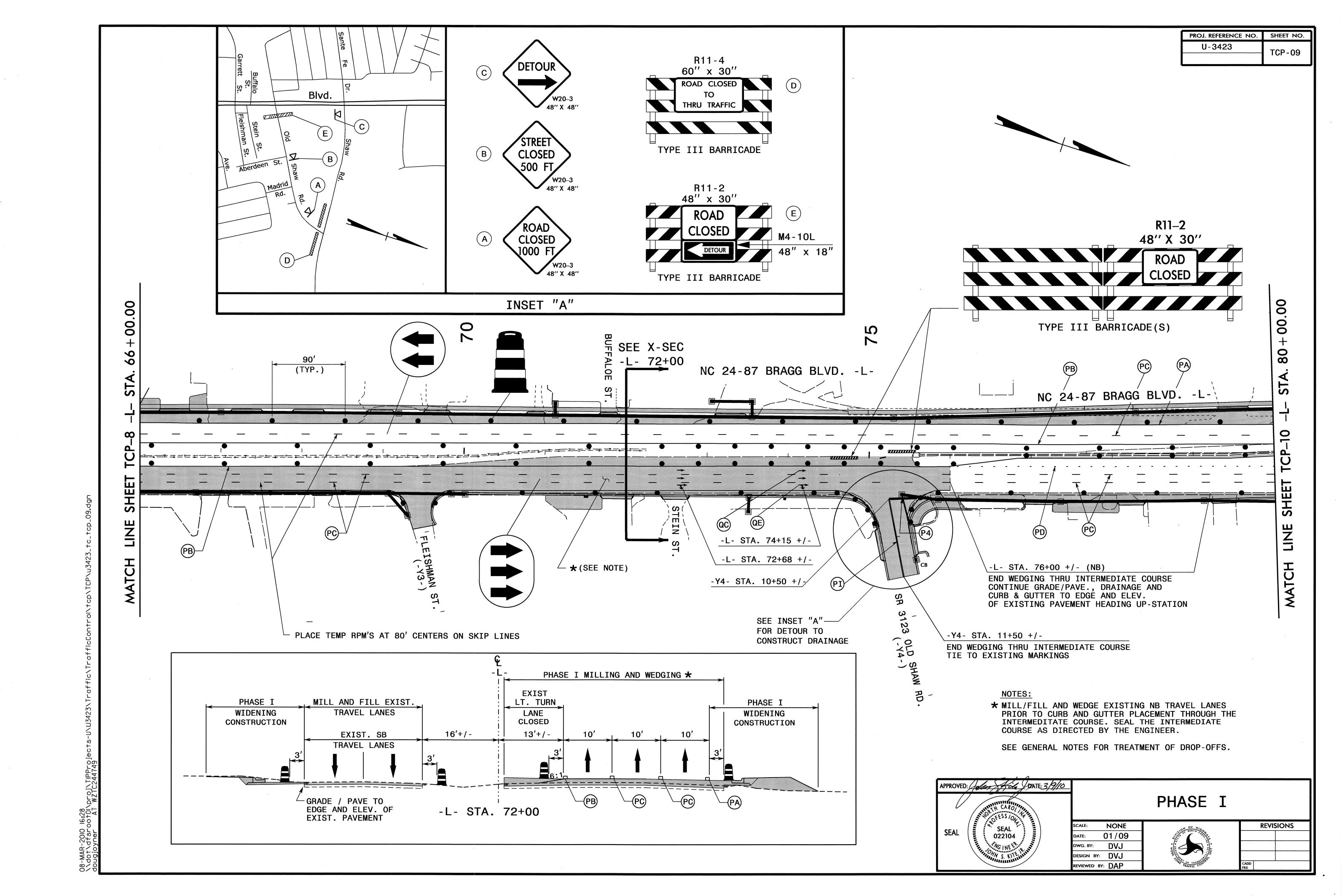


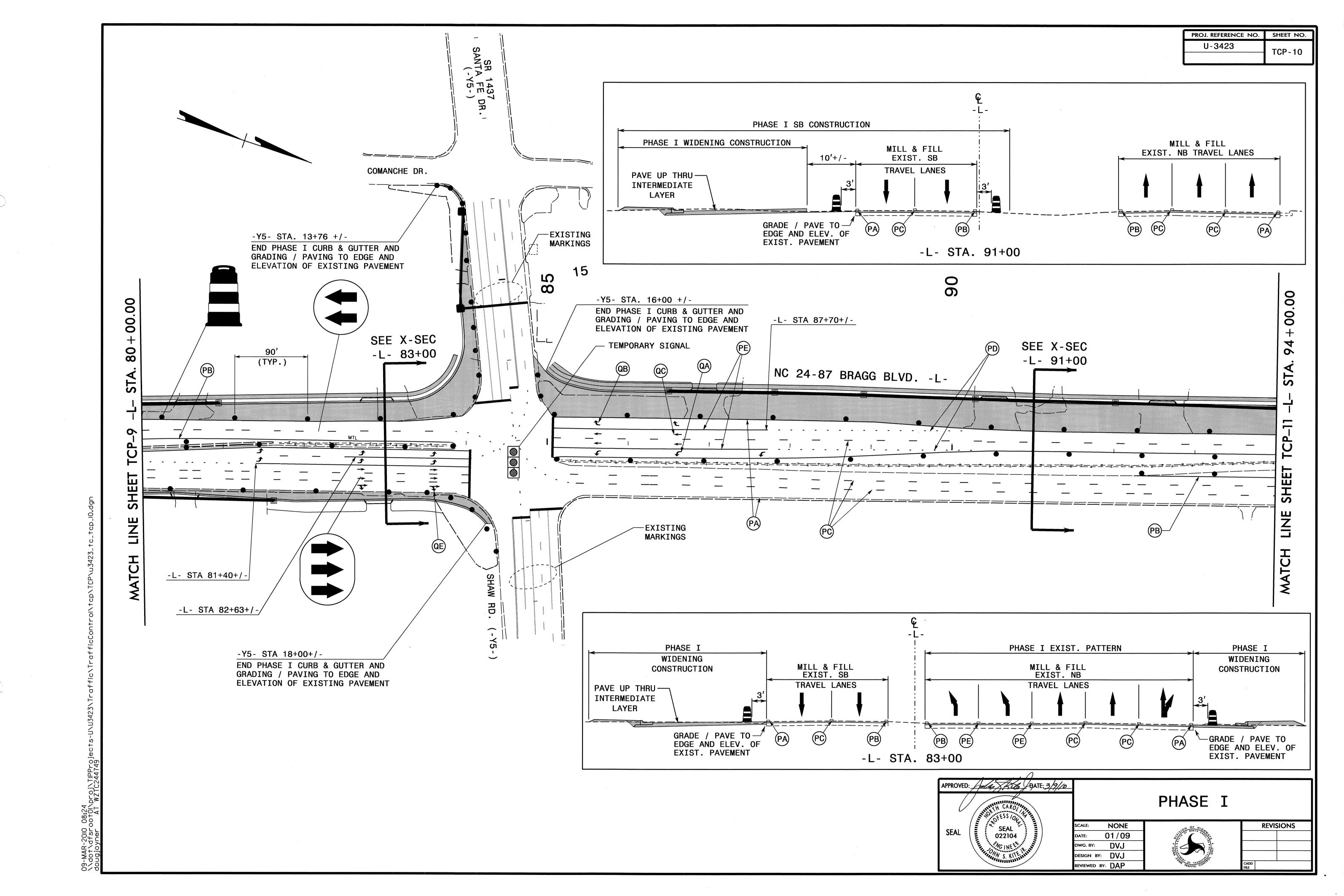


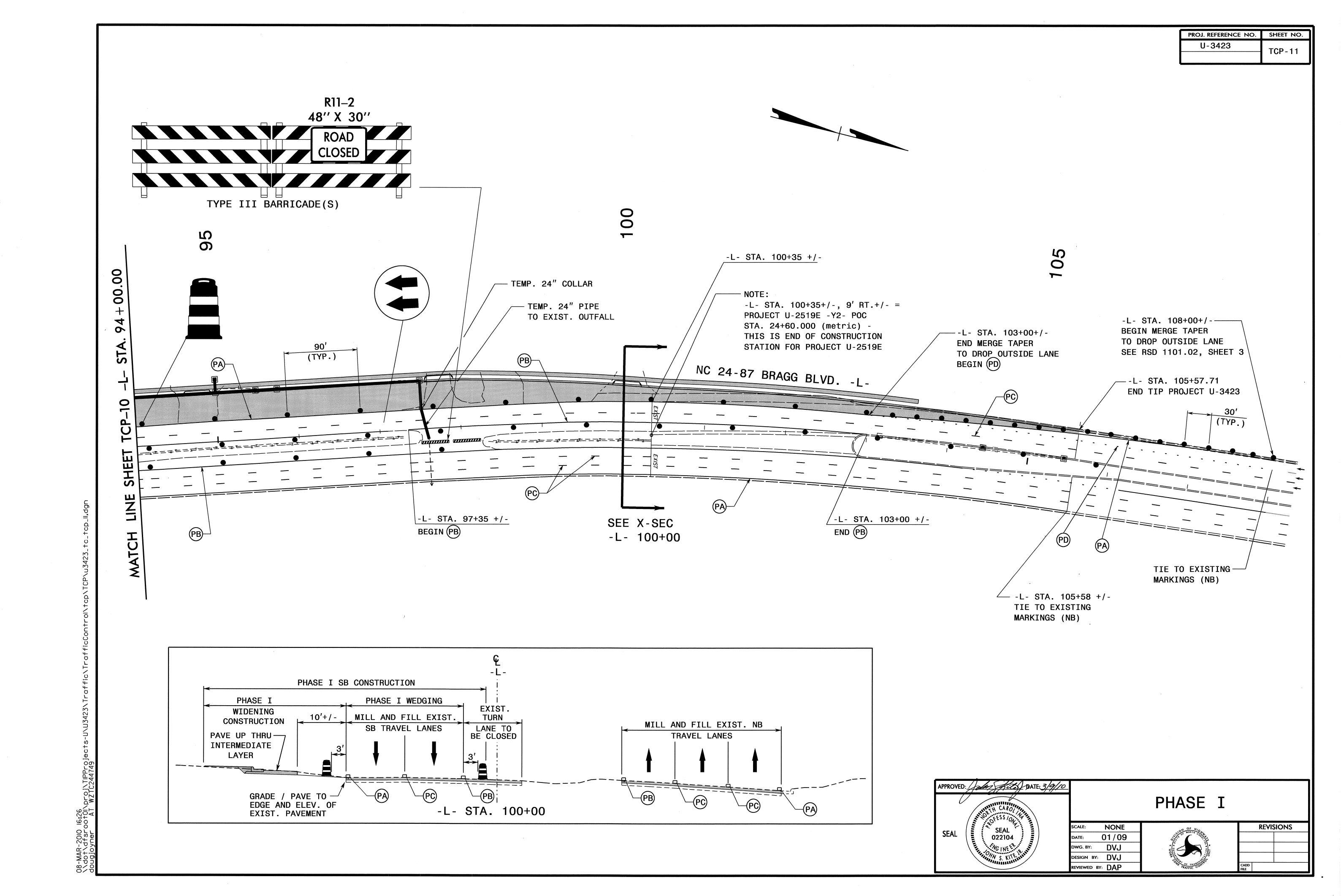


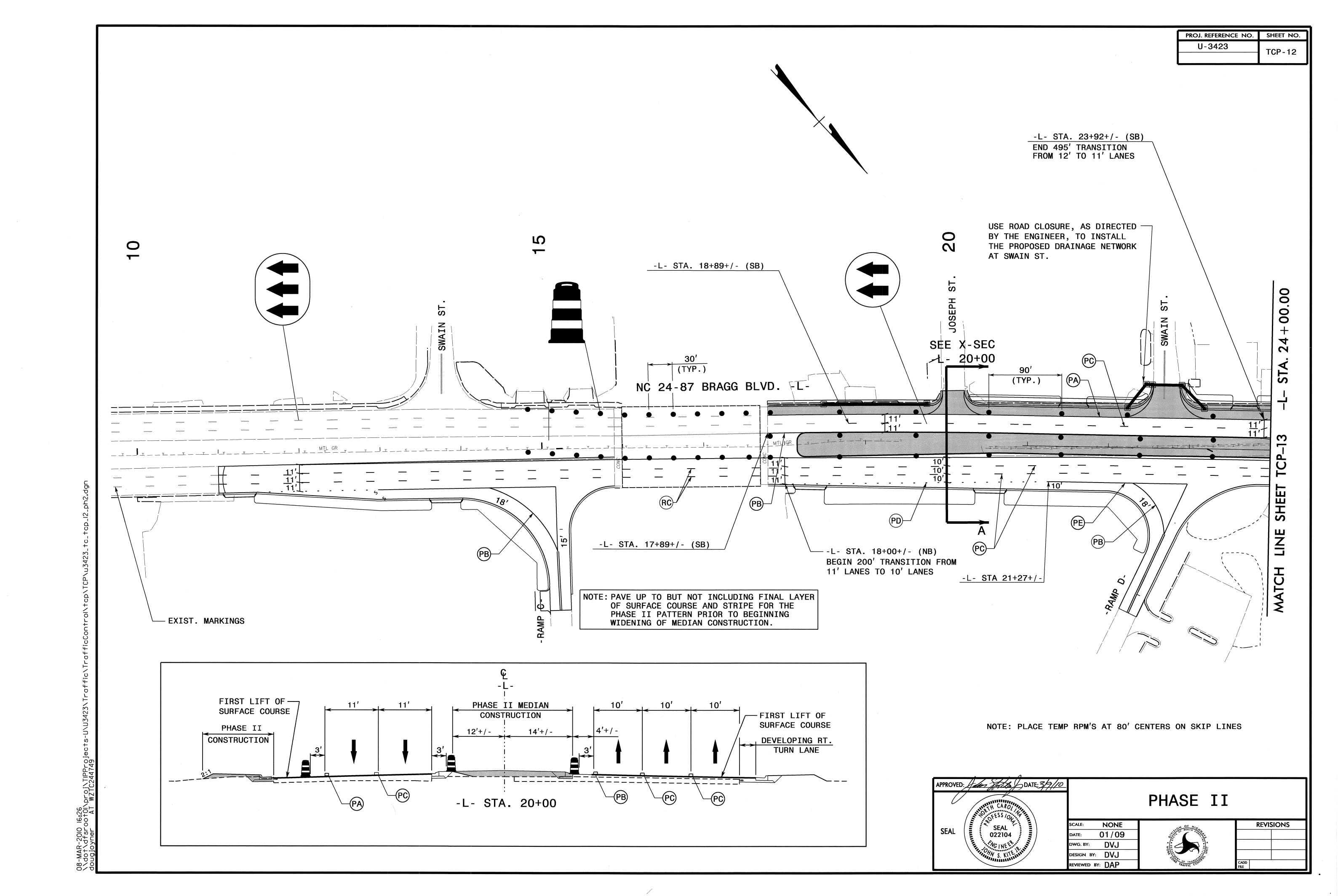


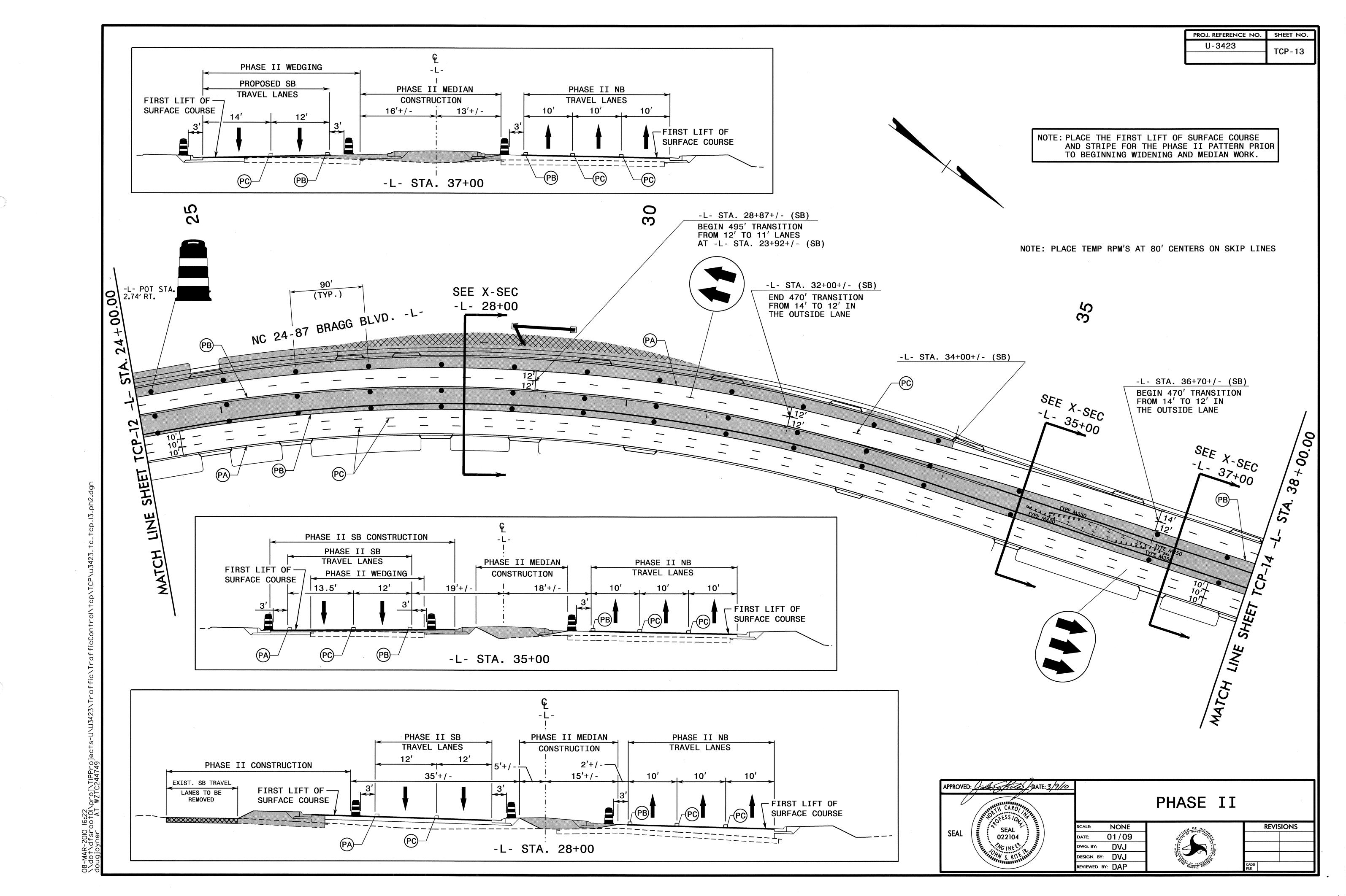


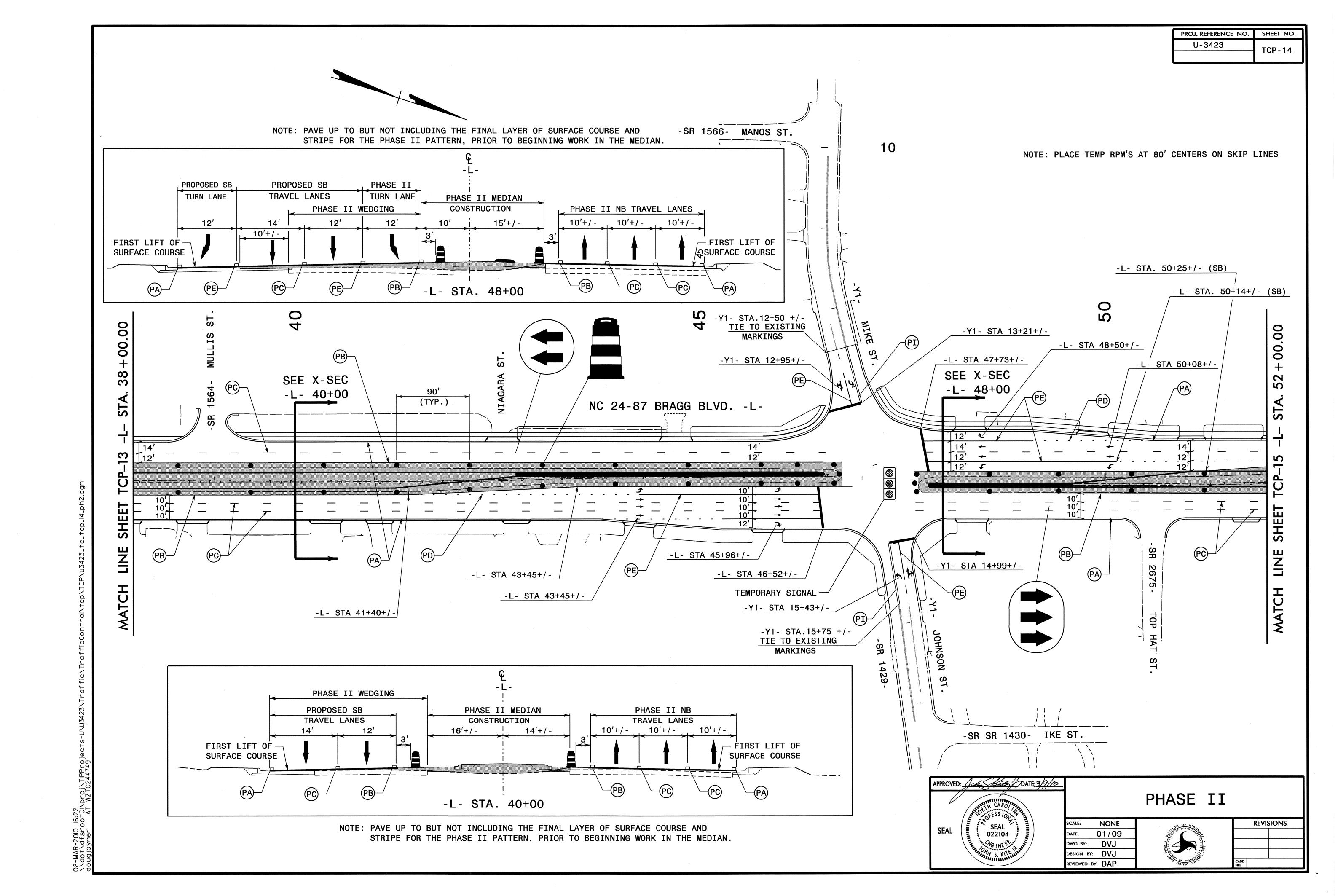


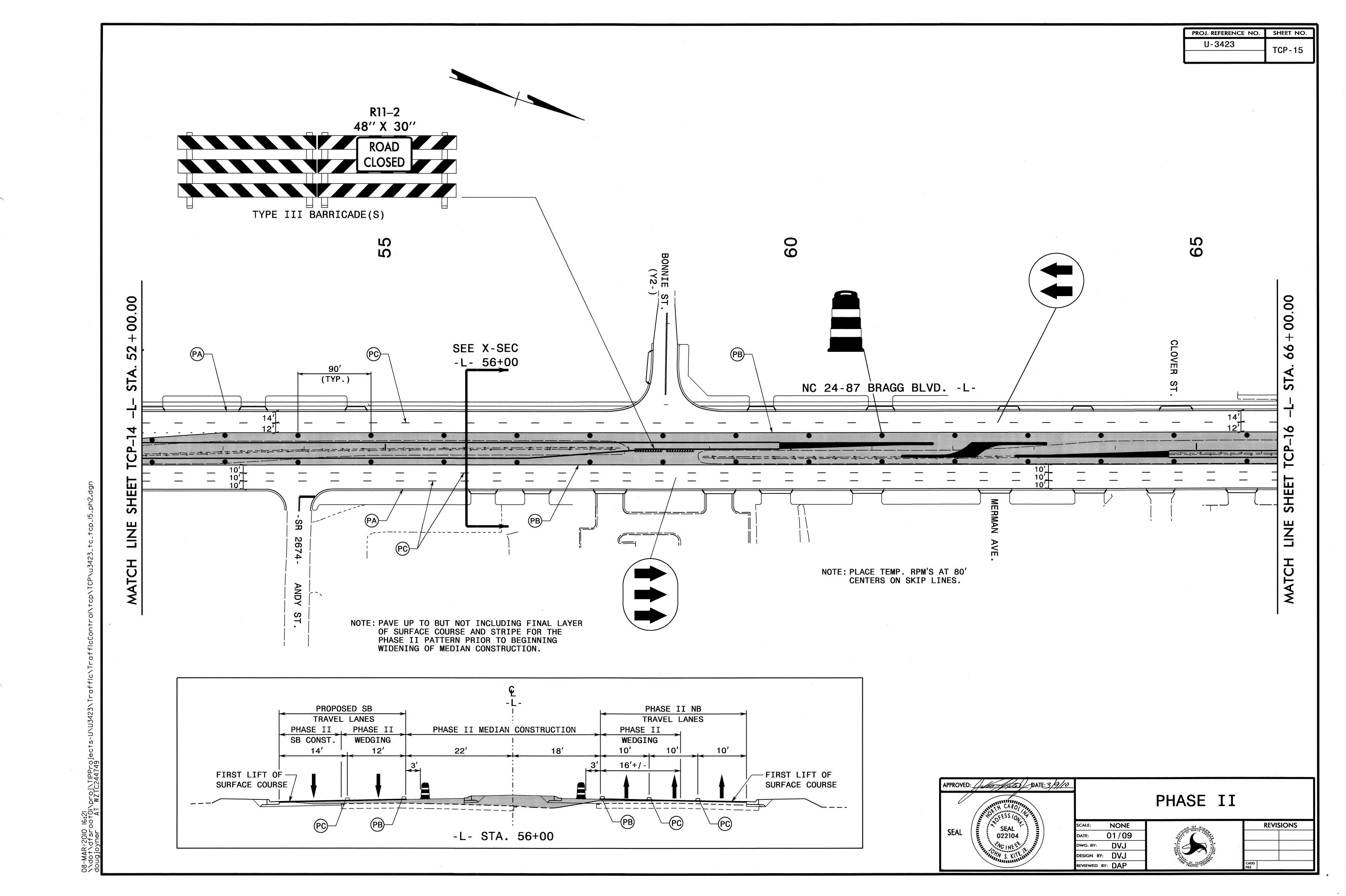


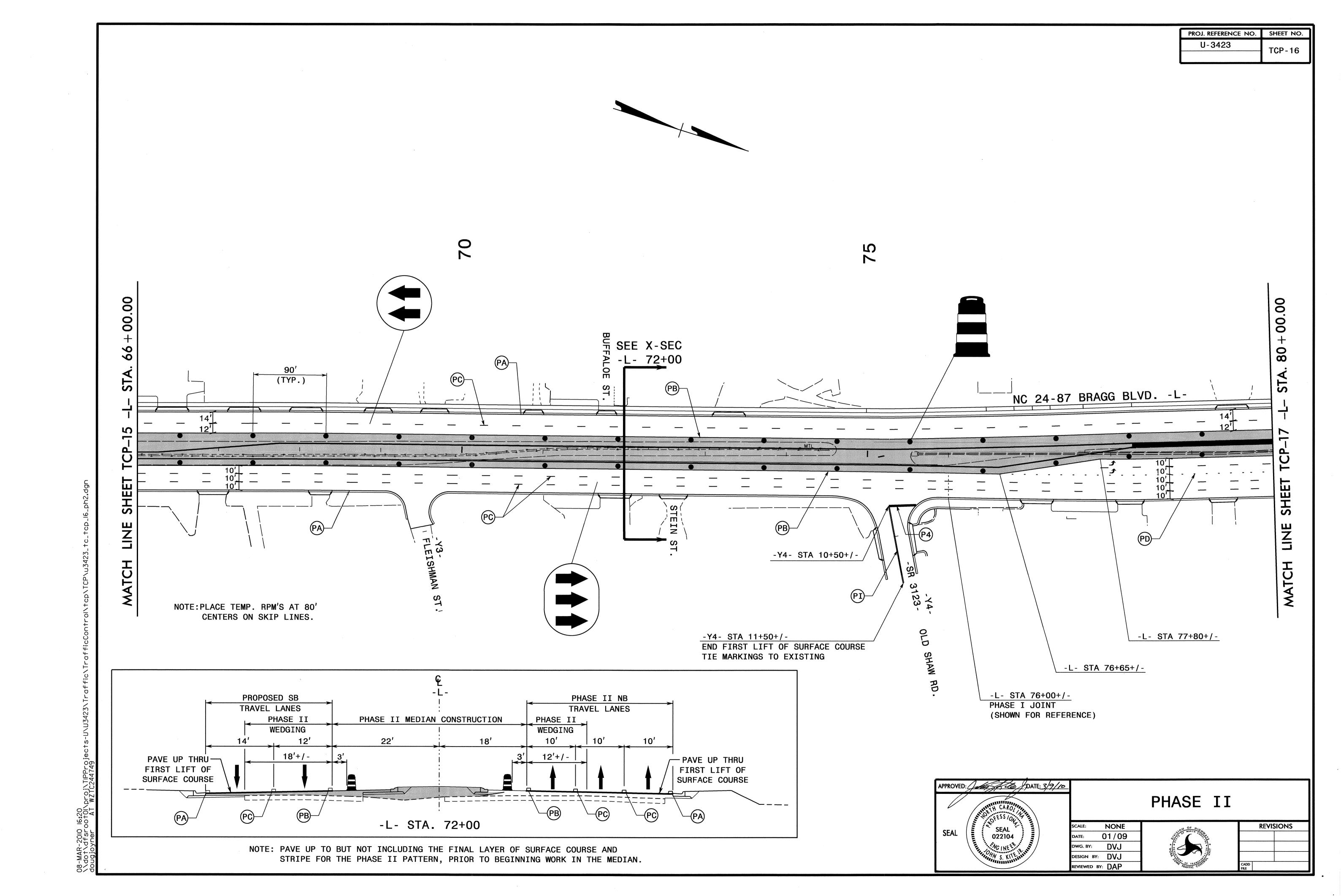


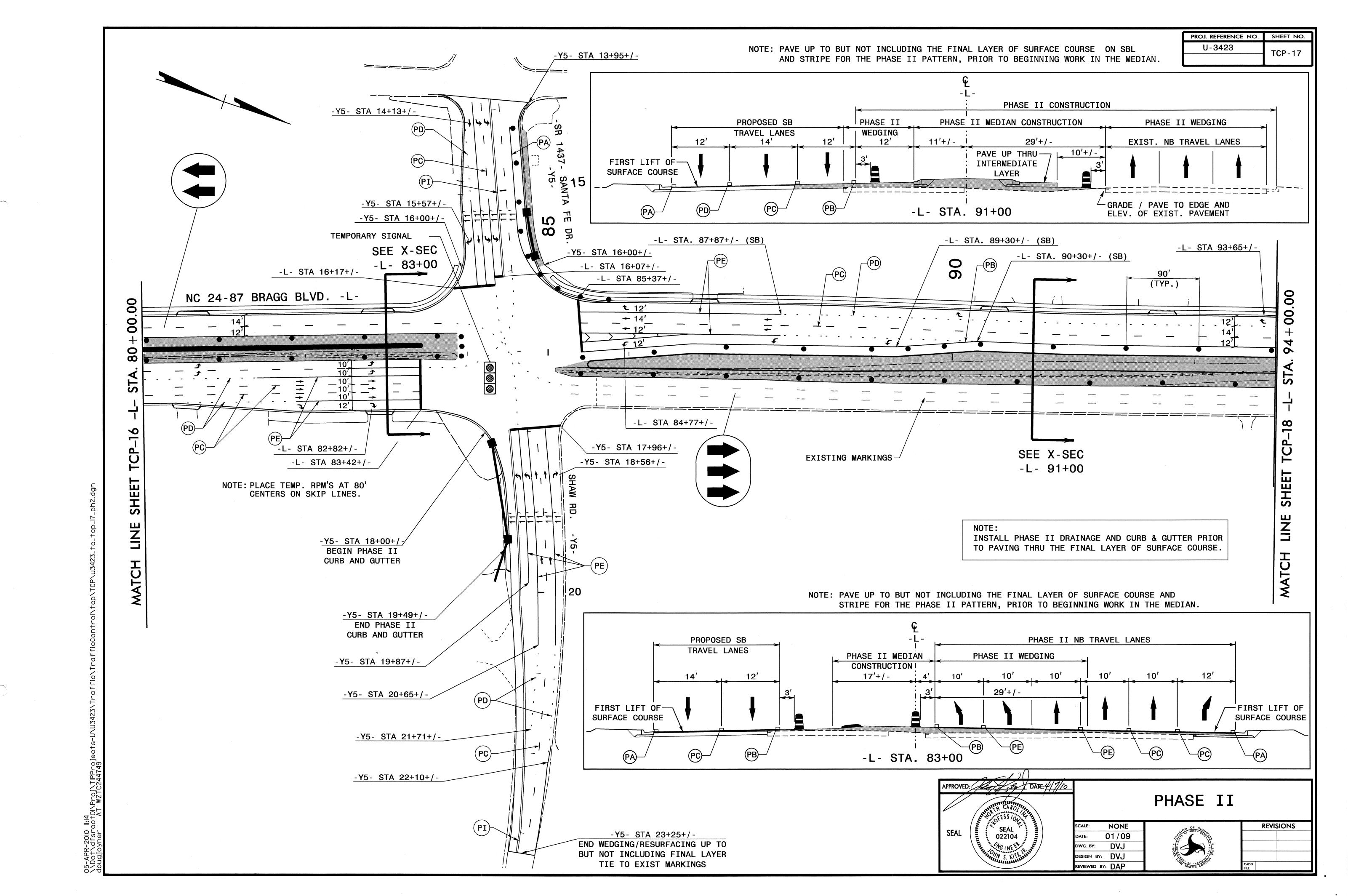


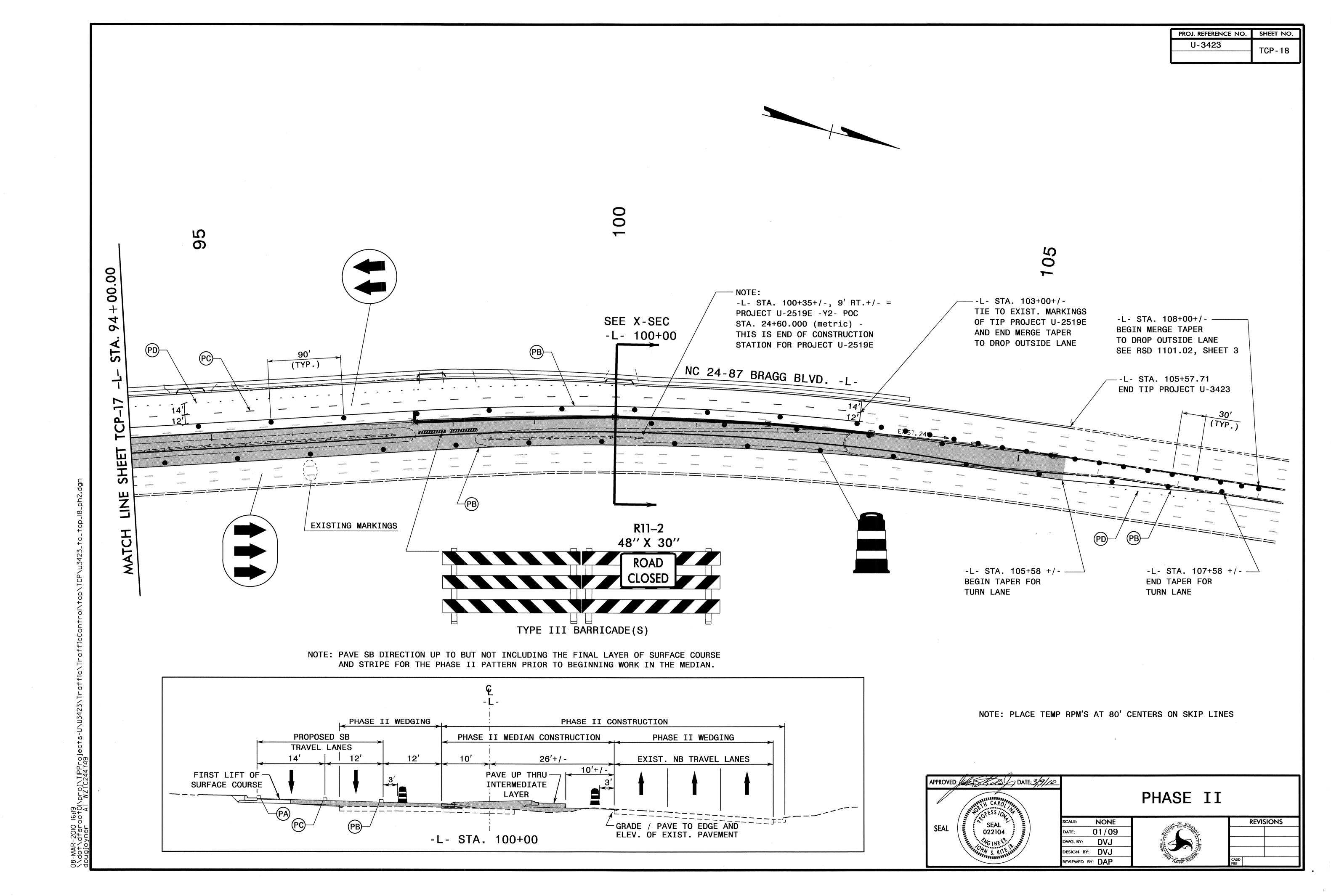


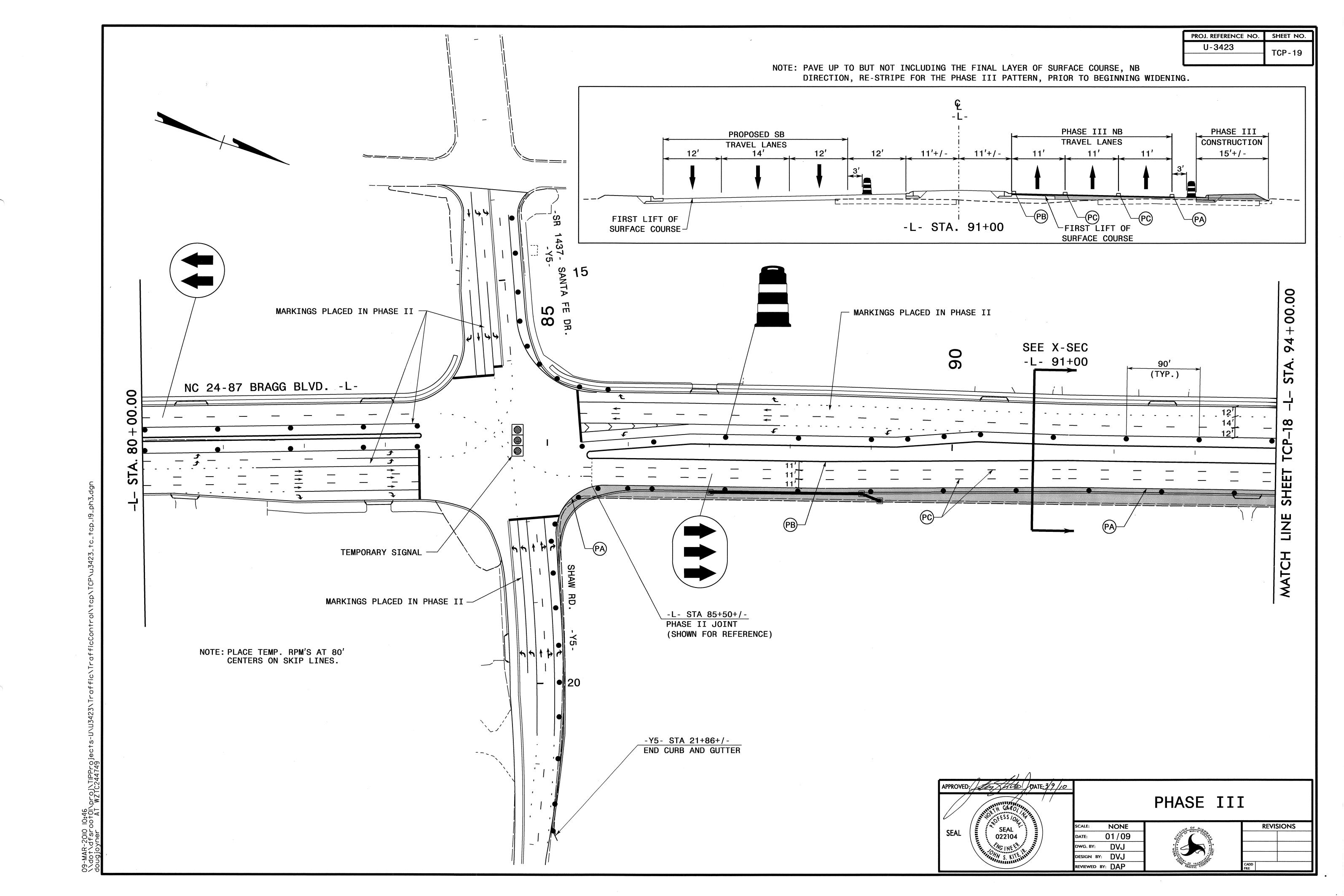


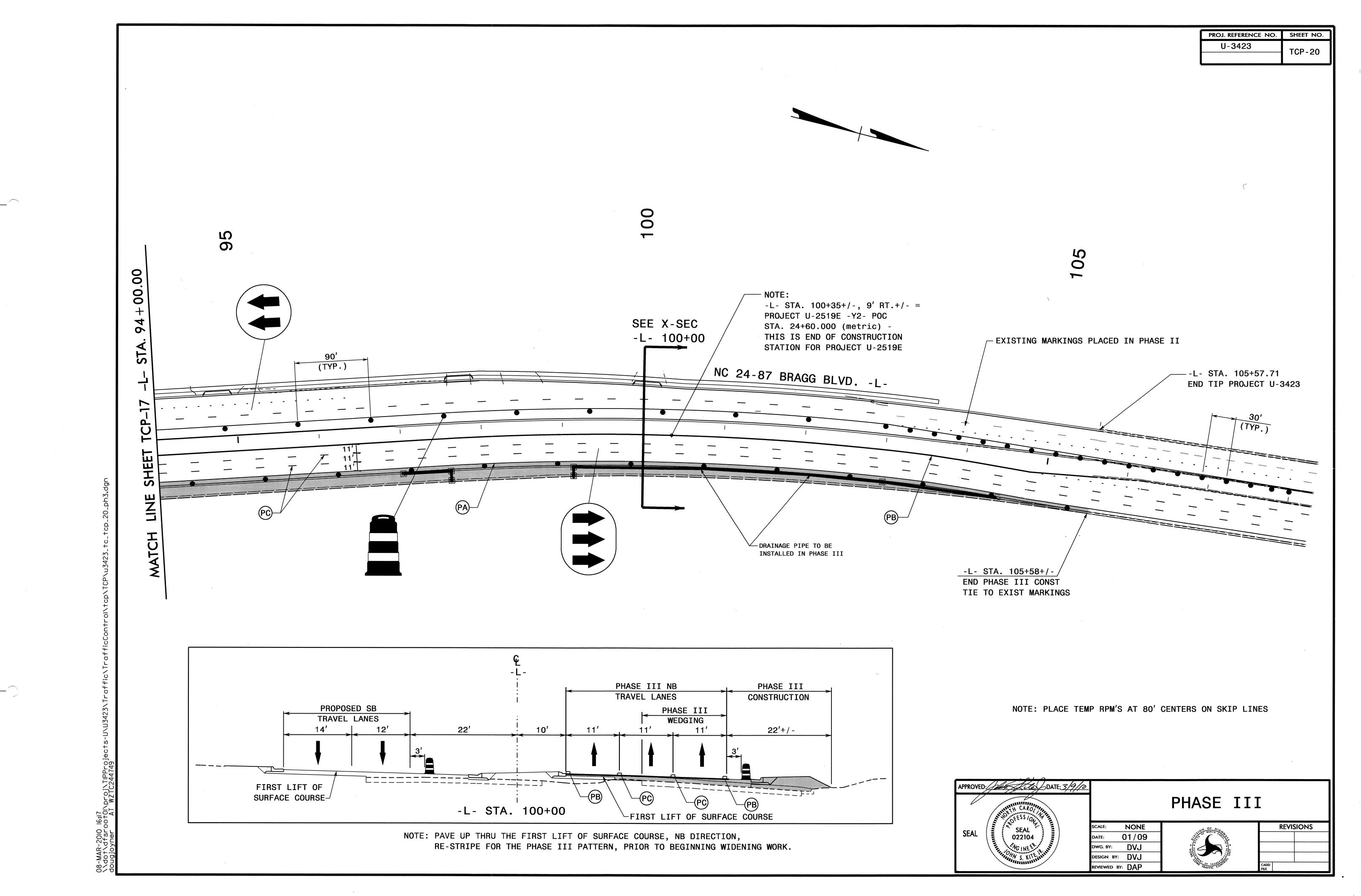








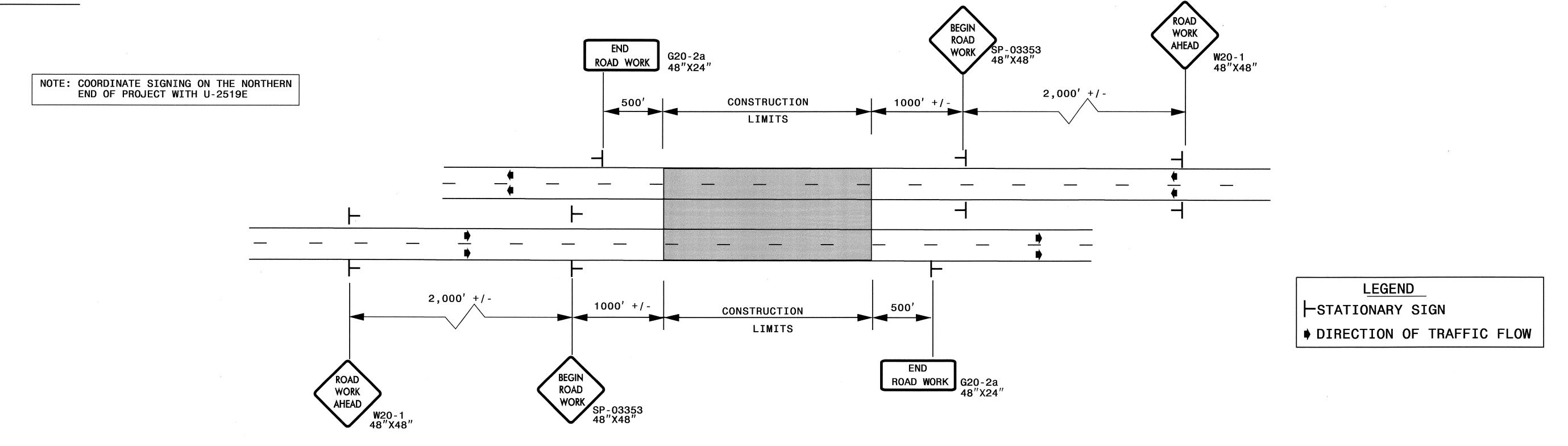


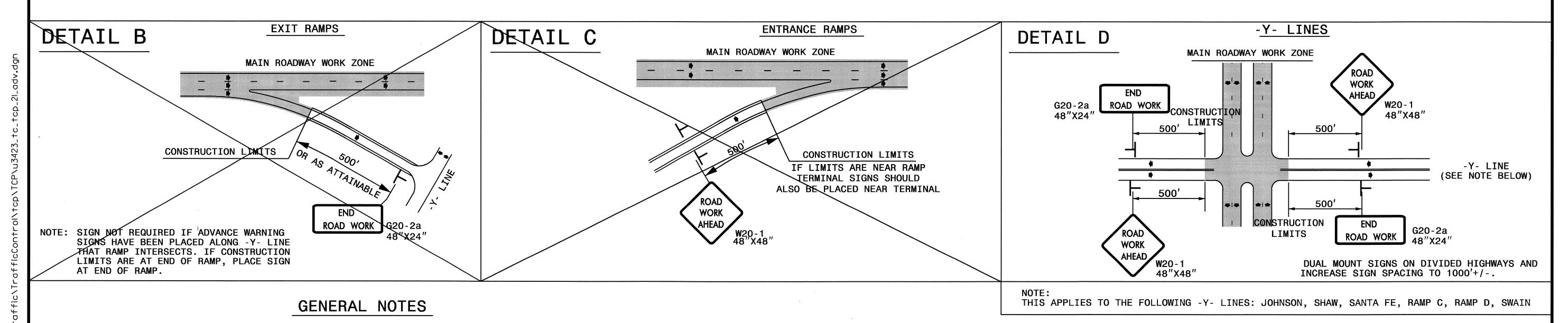


PROJ. REFERENCE NO. SHEET NO.

U-3423
TCP-21

### DETAIL A





- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

