# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO. TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# IREDELL 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 CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY-DRUM

# INDEX OF SHEETS

#### SHEET NO. TITLE LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS. TCP-1 LEGEND, AND INDEX OF SHEETS TCP-2 PHASING AND PROJECT NOTES TCP-2A TEMPORARY PAVEMENT MARKING SCHEDULE PHASE I, DETAIL 1 TCP-3 TCP-4 THRU 6 PHASE I, DETAIL 2 TCP-7 OFFSITE DETOUR OFFSITE PEDESTRIAN DETOUR SIGNING/NO TRUCK CROSSING TCP-8 TCP-9 THRU 10 PHASE I, DETAIL 3 TCP-11 DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS SD-1 SPECIAL SIGN DESIGN

## LEGEND

#### **GENERAL**

DIRECTION OF VEHICULAR TRAFFIC FLOW



- NORTH ARROW

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

WORK AREA

REMOVAL OF EXISTING PAVEMENT

## TRAFFIC CONTROL DEVICES

TYPE III BARRICADE

**DRUM** 

- STATIONARY SIGN

APPROVED: 4/20/09

DATE: 4/20/09

SEAL SEAL 19862

PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT

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## PHASING

## PHASE I

STEP 1) INSTALL ALL ADVANCE WORK ZONE SIGNS ON -L- (SR 1421, WILSON L. LEE BLVD.), -Y6- (SR 1420, WESTERN AVE), AND US 70 (GARNER SIGNAL BLVD) (SEE SHEET TCP-11).

PHASE I, STEP 2 SHALL BE COMPLETED IN A CONTINUOUS MANNER.

- STEP 2) INSTALL TRAFFIC CONTROL DEVICES AND SIGNS AS SHOWN ON TCP-3, DETOUR PEDESTRIANS, AND CONSTRUCT THE RIGHT SIDE OF -L- FROM STA. 10+70 -L- TO STA. 12+99 -Y1- (CHARLOTTE ST.) UP TO THE EDGE AND ELEVATION OF THE EXISTING ROADWAY INCLUDING THE CURB AND GUTTER AND SIDEWALK.
- STEP 3) INSTALL TRAFFIC CONTROL DEVICES AND SIGNING AS SHOWN ON SHEETS TCP-4 THRU 8, CLOSE -L- BETWEEN -Y1- AND -Y6-, AND DETOUR TRAFFIC AND PEDESTRIANS OFFSITE.

AWAY FROM TRAFFIC, CONSTRUCT -L- FROM -Y1- (STA. 13+29 -L-) TO STA. 17+00 -L- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, CURB AND GUTTER, AND SIDEWALKS. MAINTAIN ACCESS TO DRIVEWAYS USING ABC OR OTHER SUITABLE COMPACT MATERIAL AT THE DISCRETION OF THE ENGINEER (USE ROADWAY STANDARD DRAWING (RSD) 1101.02, SHEET 1 OF 9 AS NEEDED TO MAKE TIE-IN'S TO -Y1-) (SEE SHEETS TCP-4 AND 5).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 17+00 -L- TO -Y6- (STA. 23+58 -L-) AND -Y2- (ASHEVILLE AVE) FROM STA. 10+80 -Y2- TO STA. 16+30 -Y2- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, CURB AND GUTTER, AND SIDEWALKS. MAINTAIN ACCESS TO DRIVEWAYS USING ABC OR OTHER SUITABLE COMPACT MATERIAL AT THE DISCRETION OF THE ENGINEER (USE RSD 1101.02, SHEET 1 OF 9 AS NEEDED TO MAKE TIE-IN'S TO -Y6-) (SEE SHEETS TCP-5 THRU 8).

USING RSD 1101.02, SHEET 1 OF 9 INSTALL TUBULAR MARKINGS, TEMPORARY PAVEMENT MARKINGS, AND SIGNS R5-2a "NO TRUCKS" AS SHOWN ON SHEET TCP-8.

PHASE I, STEP 4 SHALL BE COMPLETED IN A CONTINUOUS MANNER.

- STEP 4) INSTALL TRAFFIC CONTROL DEVICES, SIGNING, AND TEMPORARY PAVEMENT MARKINGS, DETOUR PEDESTRIANS, AND CONSTRUCT THE LEFT SIDE OF -L- FROM STA. 10+70 -L- TO STA. 11+77 -Y1- INCLUDING CURB AND GUTTER AND SIDEWALKS AS SHOWN ON TCP-9.
- STEP 5) INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON SHEET TCP-10 AND REMOVE EXISTING SIDEWALK.

## PHASE II

STEP 1) AWAY FROM TRAFFIC, COMPLETE CONSTRUCTION OF -L- FROM STA. 17+00 -L- TO -Y6- (STA. 23+58 -L-) (SEE SHEET TCP-5 & 6) AND -Y2- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, CURB AND GUTTER, AND SIDEWALKS.

AWAY FROM TRAFFIC, REMOVE ANY REMAINING PORTIONS OF EXISTING -L- AND -Y4- (CONNER ST.) AS SHOWN IN THE ROADWAY PLANS.

STEP 2) AWAY FROM TRAFFIC, INSTALL THE FINAL LIFT OF SURFACE COURSE ON -L- AND -Y2-, FINAL PAVEMENT MARKINGS ON -L-, REMOVE TRAFFIC CONTROL DEVICES AND ALL SIGNING, AND OPEN -L- AND -Y2- TO THE FINAL PATTERN (USE RSD 1101.02, SHEET 1 OF 9 AS NEEDED TO MAKE TIE-IN'S TO -Y6-).

USING RSD 1101.02, SHEET 1 OF 9, INSTALL THE FINAL LIFT OF SURFACE COURSE, REMOVE TRAFFIC CONTROL DEVICES AND ALL SIGNING, AND OPEN -Y1- TO THE FINAL PATTERN.

STEP 3) USING TYPE III BARRICADES CLOSE MULBERRY ST. FROM THE MULBERRY ST./WISE ST. INTERSECTION TO THE MULBERRY ST./STEELE ST. INTERSECTION. AWAY FROM TRAFFIC AND COORDINATING WITH THE RAILROAD COMPANIES, REMOVE THE MULBERRY ST. CROSSING WITH -Y3- (NORFOLK RR) AND -Y5- (ALEXANDER RR) AS SHOWN IN THE ROADWAY PLANS ON SHEET 2C.

## 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- ) 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.
- 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 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.
- E) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- G) 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.
- H) PROVIDE PERMANENT SIGNING.
- PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS AND PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- UNION OF THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

  COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- () ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

#### TRAFFIC BARRIER

M) 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.

#### TRAFFIC CONTROL DEVICES

N) 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.

SHEET NO.

TCP-2

PROJ. REFERENCE NO.

B-2576

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

#### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME MARKING MARKER

1. SR 1421 (WILSON L. LEE BLVD) PAINT N/A

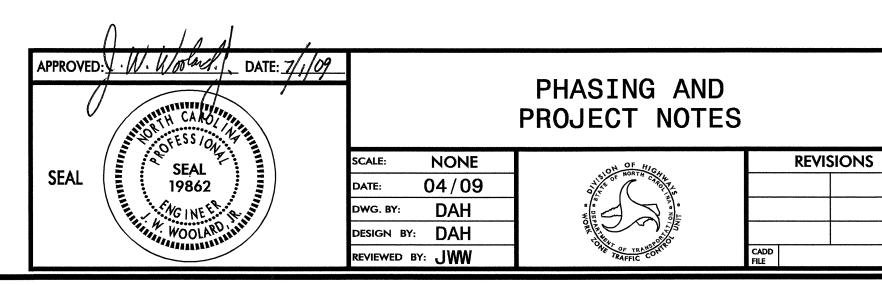
Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKE
1. SR 1421 (WILSON L. LEE BLVD)	PAINT	N/A
2. CHARLOTTE AVE	PAINT	N/A

- R) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- S) 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.
- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

#### MISCELLANEOUS

- SS) ALL WHEEL CHAIR 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.
- TT) 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.).



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PROJ. REFERENCE NO. SHEET NO. B-2576 TCP-2A

## TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL DESCRIPTION

TEMPORARY PAVEMENT MARKINGS

COLD APPLIED PLASTIC (8") Type4 - Removable Tape

CX WHITE CROSSWALK LINE

COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL Type4 - Removable Tape

DA LEFT TURN ARROW

PAINT(4")

PI YELLOW DOUBLE CENTER

PAINT MARKING SYMBOLS

QA LEFT TURN ARROW

PAINT MARKING CHARACTERS

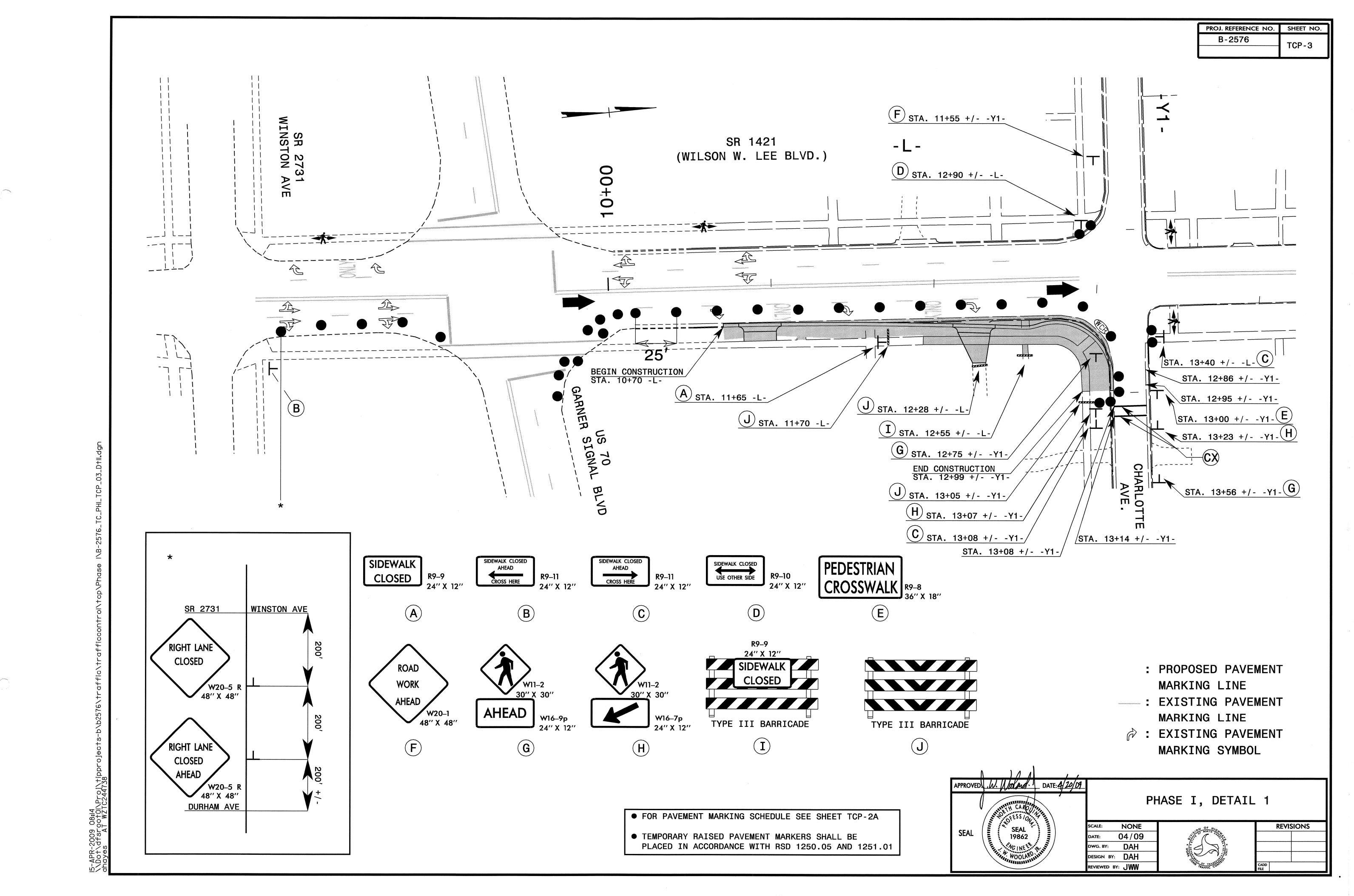
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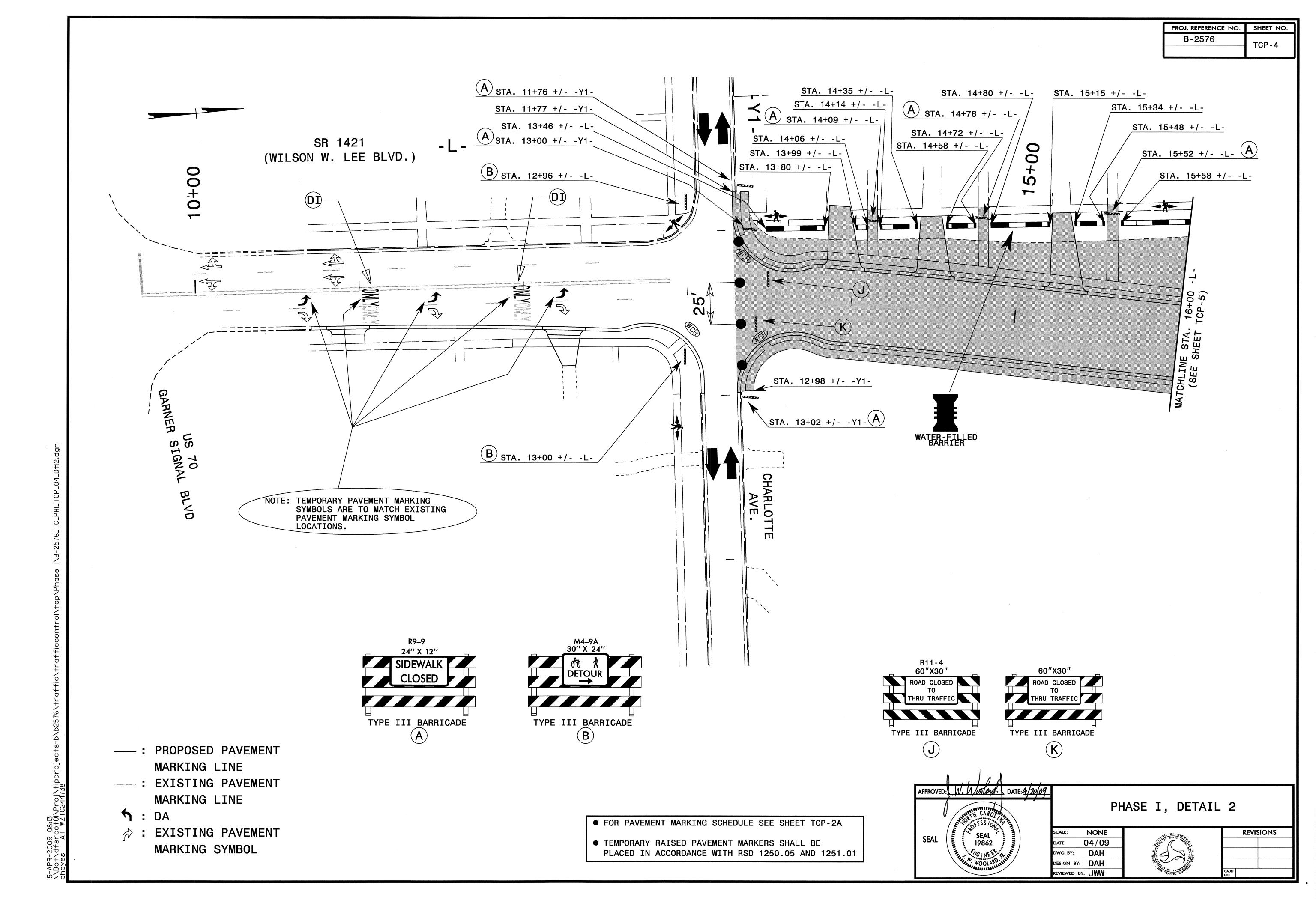
APPROVED: W. Worland . DATE: 4/20/9

TEMPORARY PAVEMENT MARKING SCHEDULE

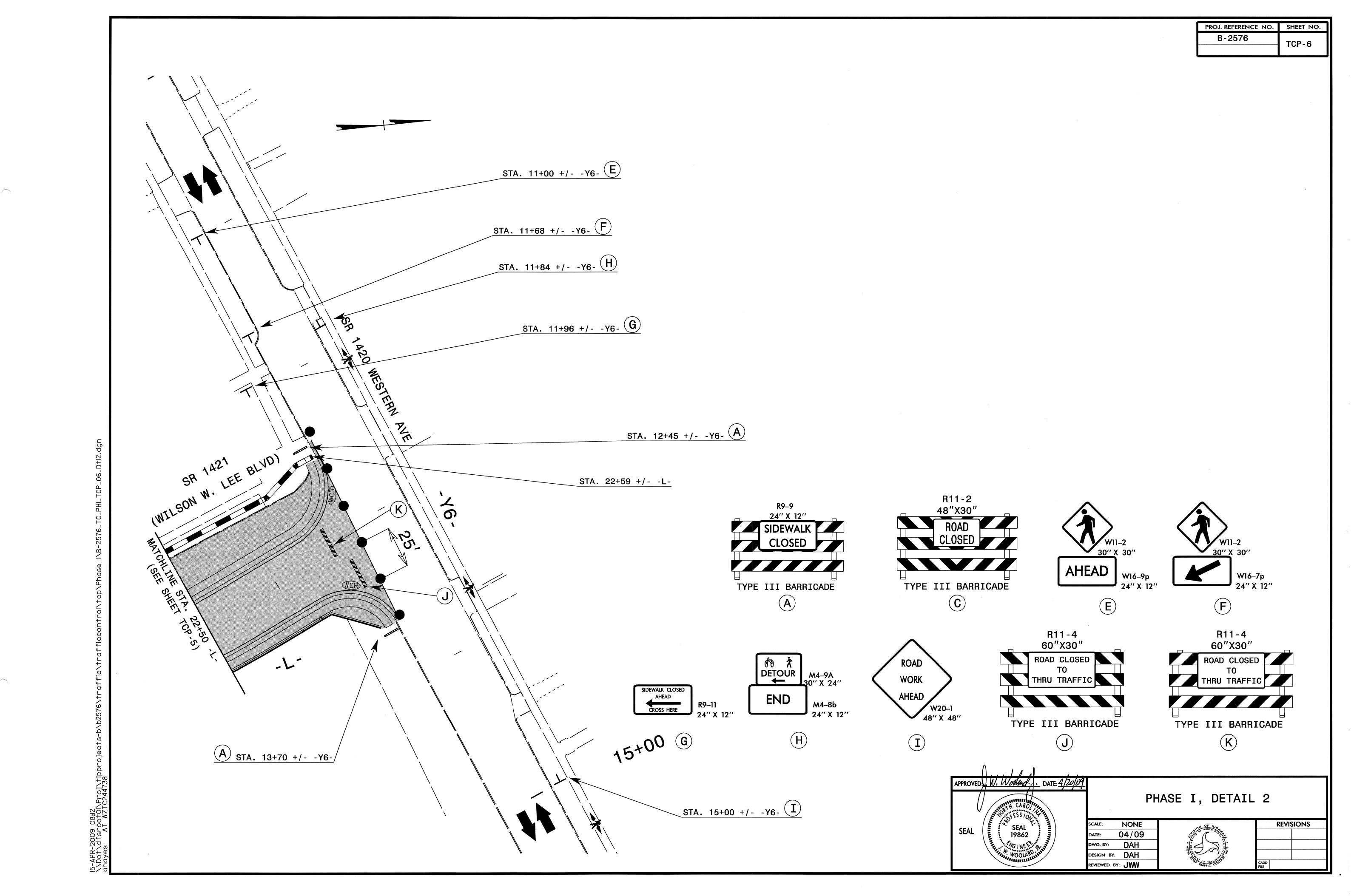
NONE 04/09 DWG. BY: DAH
DESIGN BY: DAH
REVIEWED BY: JWW

REVISIONS

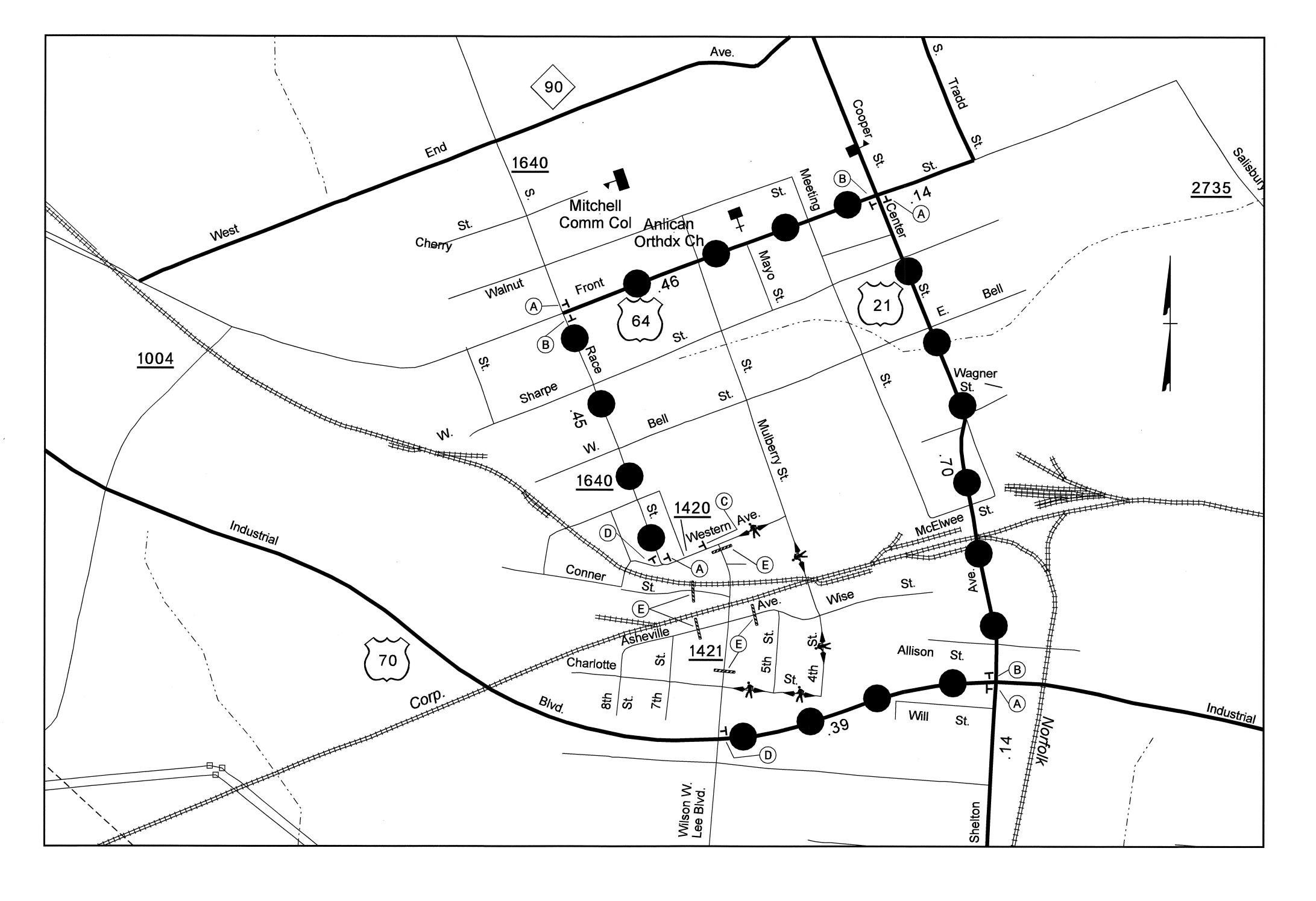




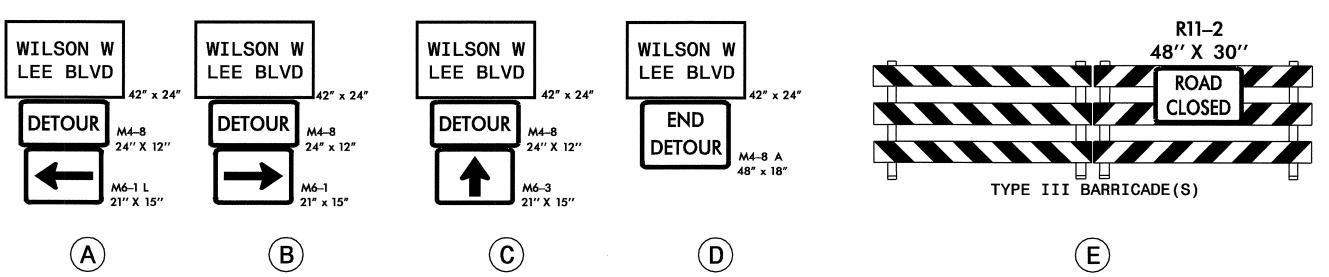
PROJ. REFERENCE NO. B-2576 TCP-5 CONNER STA. 16+42 +/- -L- A STA. 22+02 +/- -L-STA. 16+07 +/- -L-STA. 16+14 +/- -L- (A) 20+00 STA. 16+39 +/- -L-STA. 16+17 +/- -L-STA. 16+24 +/- -L-BRIDGE# 513 - <u>L</u> -SR 1421 「M (WILSON W. LEE BLVD) BRIDGE# 514 MATCHLINE STA. 16+00 (SEE SHEET TCP-4) A STA. 21+75 +/- -L-A STA. 22+07 +/- -L-WATER-FILLED BARRIER 75 15+00 STA. 16+50 +/- -L- A A STA. 17+13 +/- -Y2-R11-2 48"X30" R11-2 48"X30" END CONSTRUCTION STA. 16+30 +/- -Y2-22.81<sup>2</sup> +49.02 A FIFTH ST TYPE III BARRICADE TYPE III BARRICADE TYPE III BARRICADE A APPROVED: 4/20/09 PHASE I, DETAIL 2 REVISIONS NONE SEAL 04/09 DWG. BY: DAH DESIGN BY: DAH REVIEWED BY: JWW

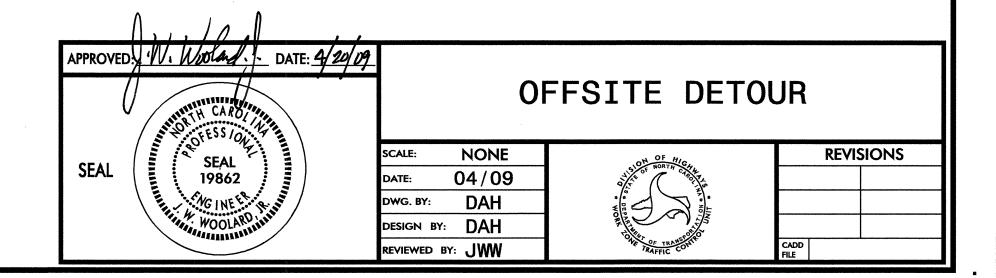


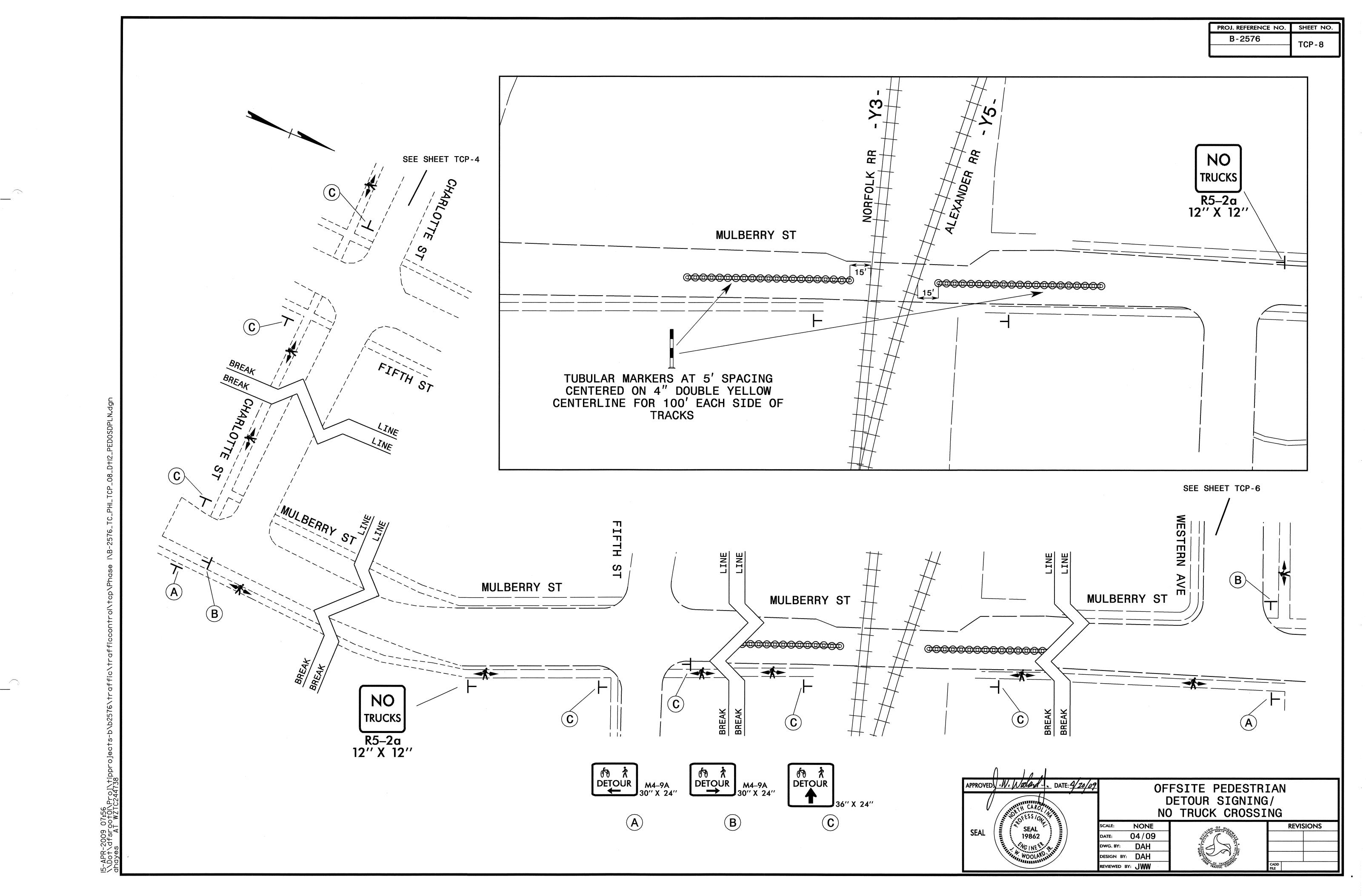
PROJ. REFERENCE NO. SHEET NO. B-2576 TCP-7

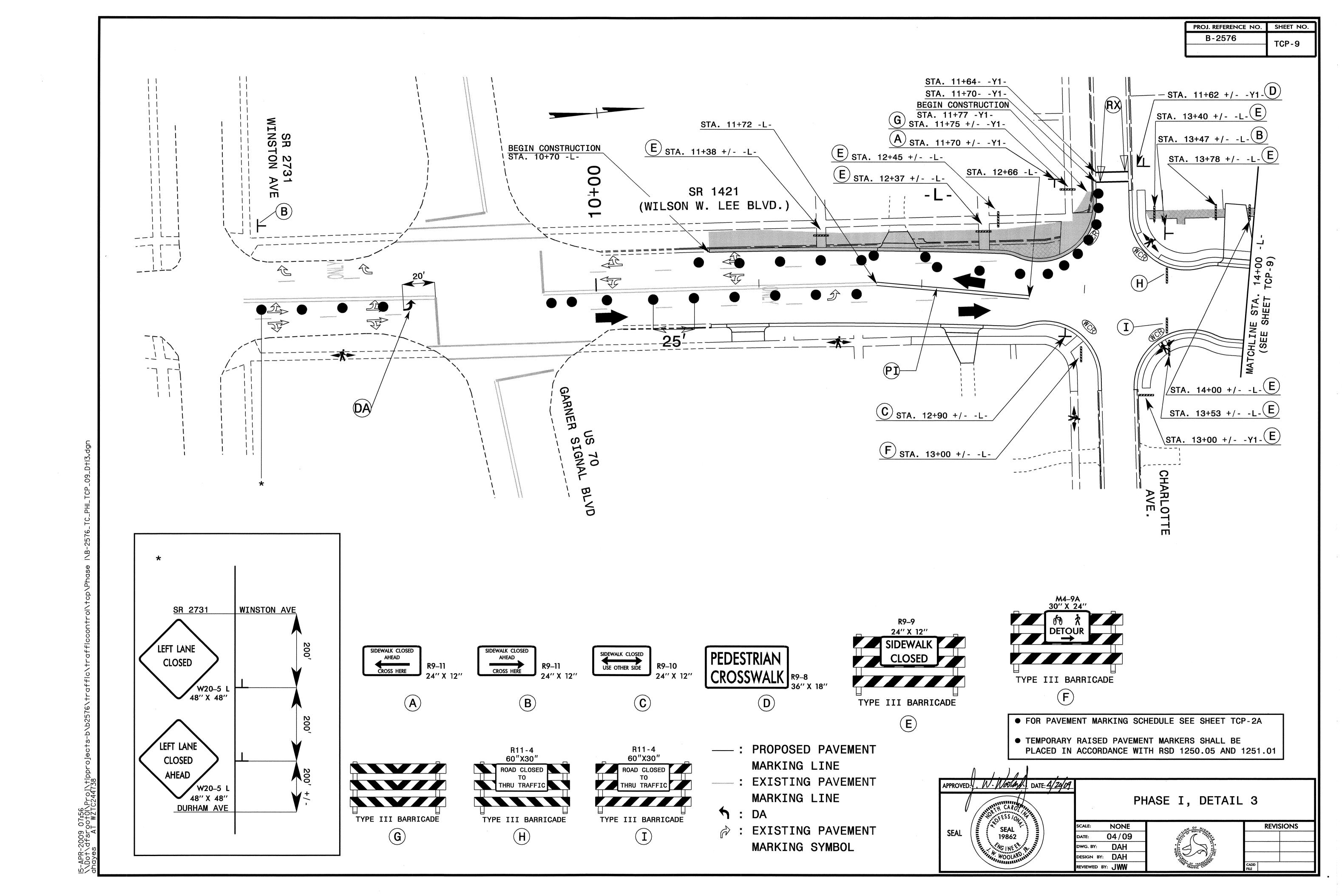


R11–2 48'' X 30''



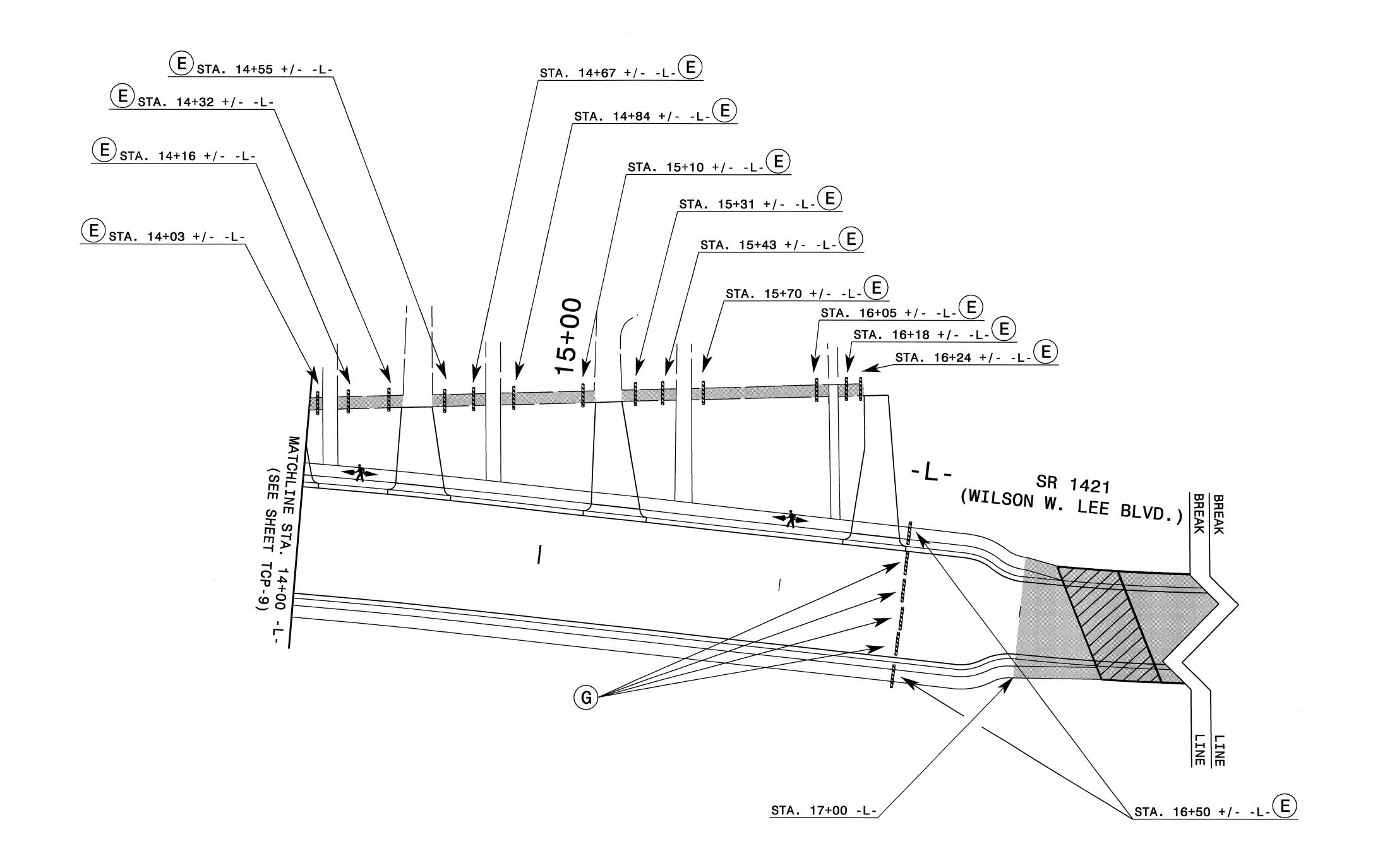




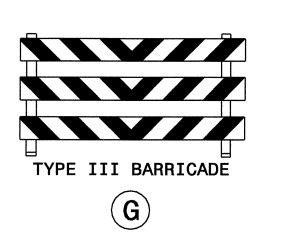


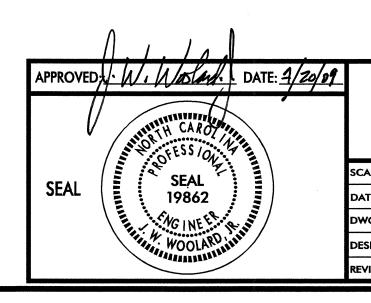
PROJ. REFERENCE NO. SHEET NO.

B-2576
TCP-10









	PHASE	I,	DETAIL	3	
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/na		7/2/01 NO	HIGH BANKS		

SCALE: NONE

DATE: 04/09

DWG. BY: DAH

DESIGN BY: DAH

REVIEWED BY: JWW

REVISIONS

CADD FILE

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PROJ. REFERENCE NO. B-2576 TCP-1

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RALEIGH

TRANSPORTATION CAROLINA NORTH 0F 0F

HIGHWAYS **0F** STATE DEPT.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (US 70 (GARNER SIGNAL BLVD) & CHARLOTTE ST.)

MAIN ROADWAY WORK ZONE

CONSTRUCTION

LIMITS

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (SR 1420, WESTERN AVE.)

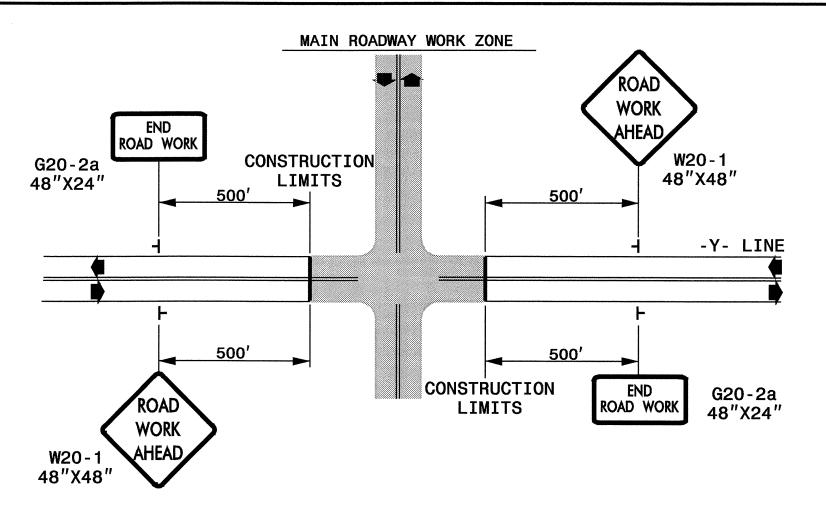
CONSTRUCTION

G20-2a 48"X24"

W20-1 48"X48"

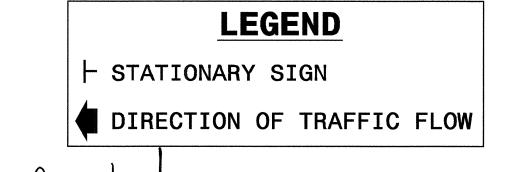
-Y- LINE

G20-2a 48"X24"

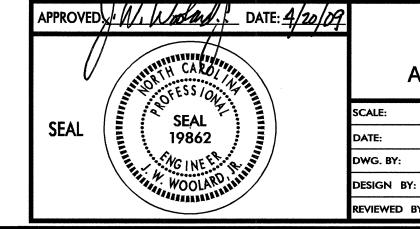


## **GENERAL NOTES**

- 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.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



SHEET 1 OF 1



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<b>ADVANCED</b>	WORK	ZONE	WAR	NING	SIGNS
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