

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-3613	TCP-1

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
BLADEN / SAMPSON COUNTIES**

**B-3613**

**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	DRUMS
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
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

**INDEX OF SHEETS**

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, PAVEMENT MARKING SCHEDULE, INDEX OF SHEETS AND LEGEND
TCP-2	PROJECT NOTES
TCP-3	PHASE I
TCP-4	PHASE II
TCP-5	WORK ZONE ADVANCE WARNING SIGNS

**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT. EXIST. PVMT.
  - WORK AREA
  - REMOVAL OF EXISTING PAVEMENT

- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
  - TYPE II BARRICADE
  - TYPE III BARRICADE
  - CONE
  - DRUM SKINNY DRUM
  - FLASHING ARROW PANEL (TYPE C)
  - 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

PAVEMENT MARKING SCHEDULE			
SYMBOL	DESCRIPTION	PAY ITEM QUANTITY	TOTAL
FINAL			
PAVEMENT MARKINGS			
TI	YELLOW DOUBLE CENTER THERMOPLASTIC(4", 120 MILS)	3600 LF	TOTAL 3600 LF
TA	WHITE EDGELINE THERMOPLASTIC(4", 90 MILS)	3600 LF	TOTAL 3600 LF
MARKERS			
ME	YELLOW & YELLOW SNOWPLOWABLE RAISED PAVEMENT MARKERS	23 EA	TOTAL 23 EA
TEMPORARY			
PAVEMENT MARKINGS			
PA	WHITE EDGELINE (2X) PAINT(4")	13700 LF	TOTAL 27400 LF
PI	YELLOW DOUBLE CENTER (2X)	13700 LF	
MARKERS			
MH	YELLOW & YELLOW TEMPORARY RAISED PAVEMENT MARKERS	41 EA	TOTAL 61 EA
MM	CRYSTAL & CRYSTAL	20 EA	

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATION, 2X IMPLIES TWO APPLICATIONS, AND 3X IMPLIES THREE APPLICATIONS.

APPROVED:	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
DATE: 10-30-08	J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER
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	J. D. KUSE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	D. W. BISSETTE, P.E. TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

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**TIP PROJECT:**

# PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-3613	TCP-2

## 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

- A) 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.
- B) 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.
- C) 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.
- D) 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

- E) 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.

- F) 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 (WB-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- H) 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.
- I) PROVIDE PERMANENT SIGNING.
- J) PROVIDE DETOUR SIGNING WITHIN THE PROJECT LIMITS.
- K) COVER OR REMOVE ALL DETOUR SIGNS WITHIN THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

- M) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADIUS, 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.
- N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
NC 41	THERMOPLASTIC	SNOWPLOWABLE

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

ROAD NAME	MARKING	MARKER
NC 41	PAINT	RAISED TEMPORARY

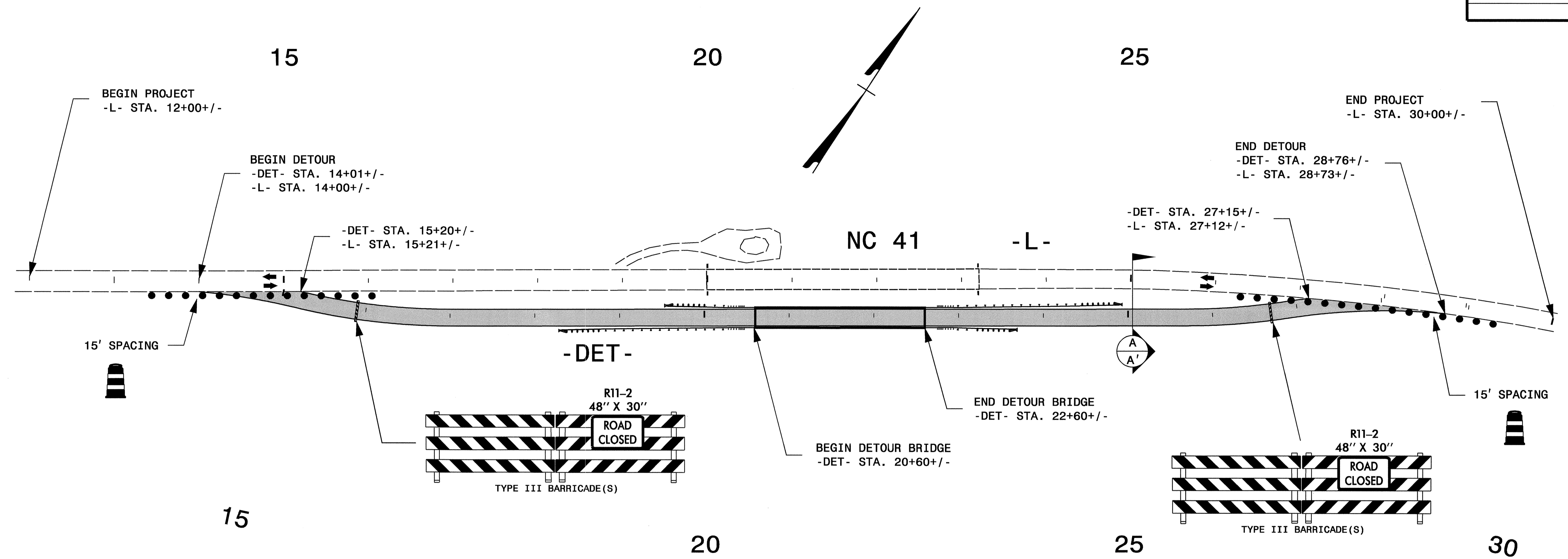
- Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

## LOCAL NOTES

1. INSTALL SIGNS BEFORE THE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE THE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
2. REAPPLY PAVEMENT MARKINGS UP TO 100' BEYOND CONSTRUCTION LIMITS IF NEEDED TO REPAIR DAMAGE AND/OR TRACKING FROM CONSTRUCTION.

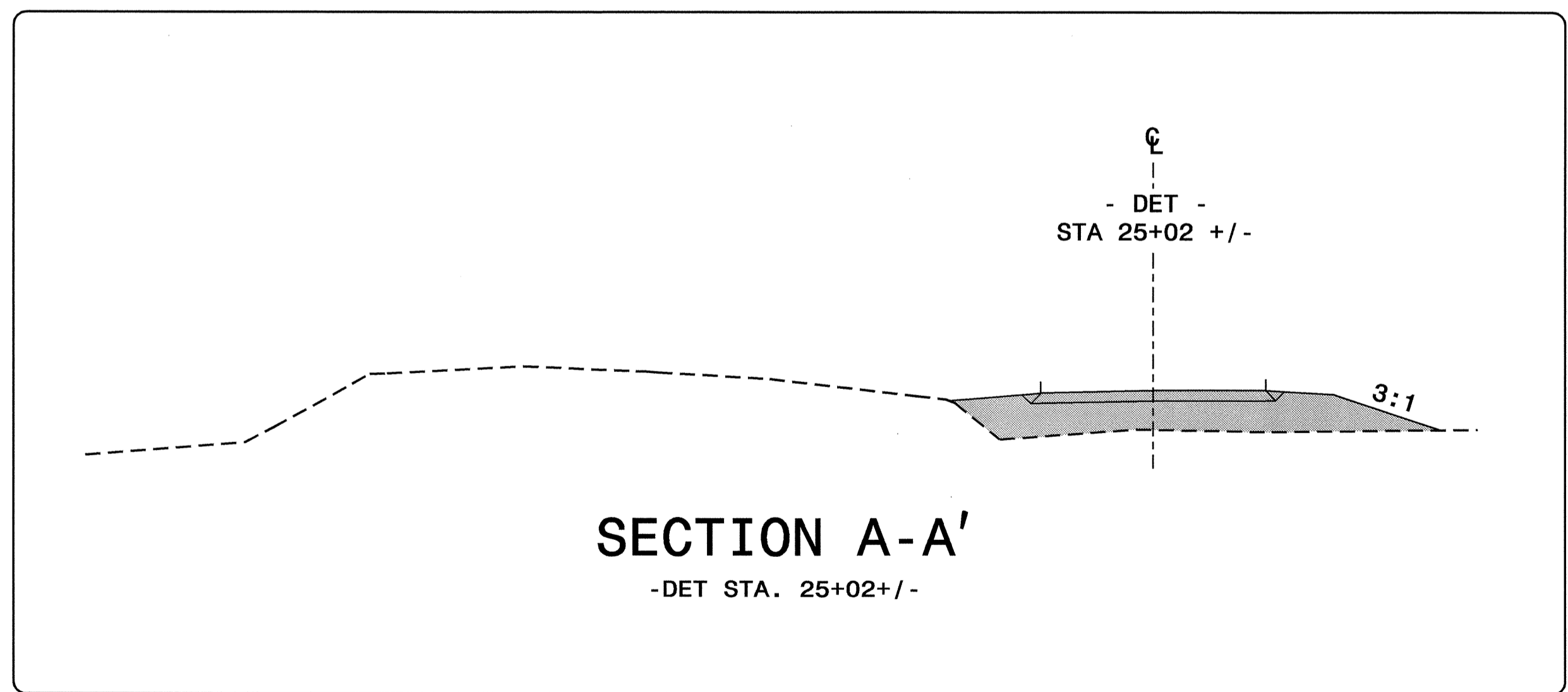
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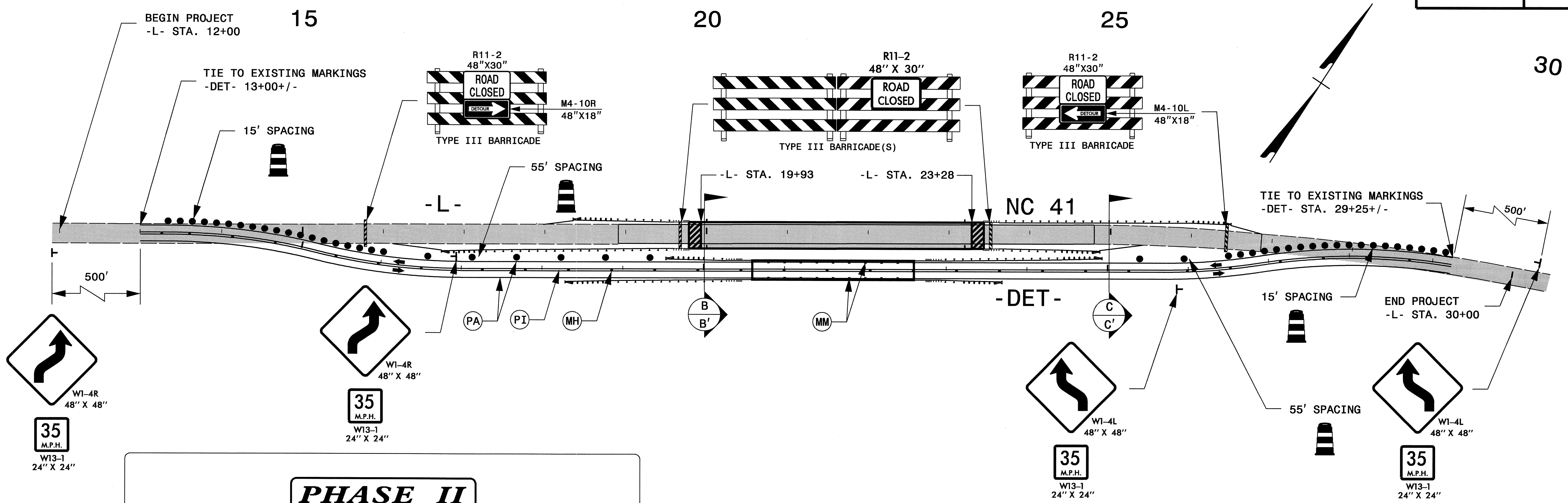
### PHASE I

- STEP 1. INSTALL ADVANCE WARNING SIGNS AS SHOWN ON PLAN SHEET TCP-5.
- STEP 2. USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AS NEEDED, AND COMPLETE THE FOLLOWING:
- INSTALL DRUMS AND BARRICADES AS SHOWN ON PLAN SHEET TCP-3
  - CONSTRUCT THE PROPOSED DETOUR STRUCTURE FROM -DET- STA. 20+60+/- TO -DET- STA. 22+60+/-
  - CONSTRUCT THE PROPOSED DETOUR ROADWAY FROM -DET- STA. 14+01+/- TO -DET- STA. 28+76+/-
- STEP 3. USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AS NEEDED, AND COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:
- INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKERS ON THE PROPOSED DETOUR FROM -DET- STA. 13+00+/- TO -DET- STA. 29+25+/- AS SHOWN ON PLAN SHEET TCP-4
  - SHIFT TRAFFIC TO THE PROPOSED DETOUR ALIGNMENT
  - CLOSE THE EXISTING ROAD WITH DRUMS AND BARRICADES AS SHOWN ON PLAN SHEET TCP-4



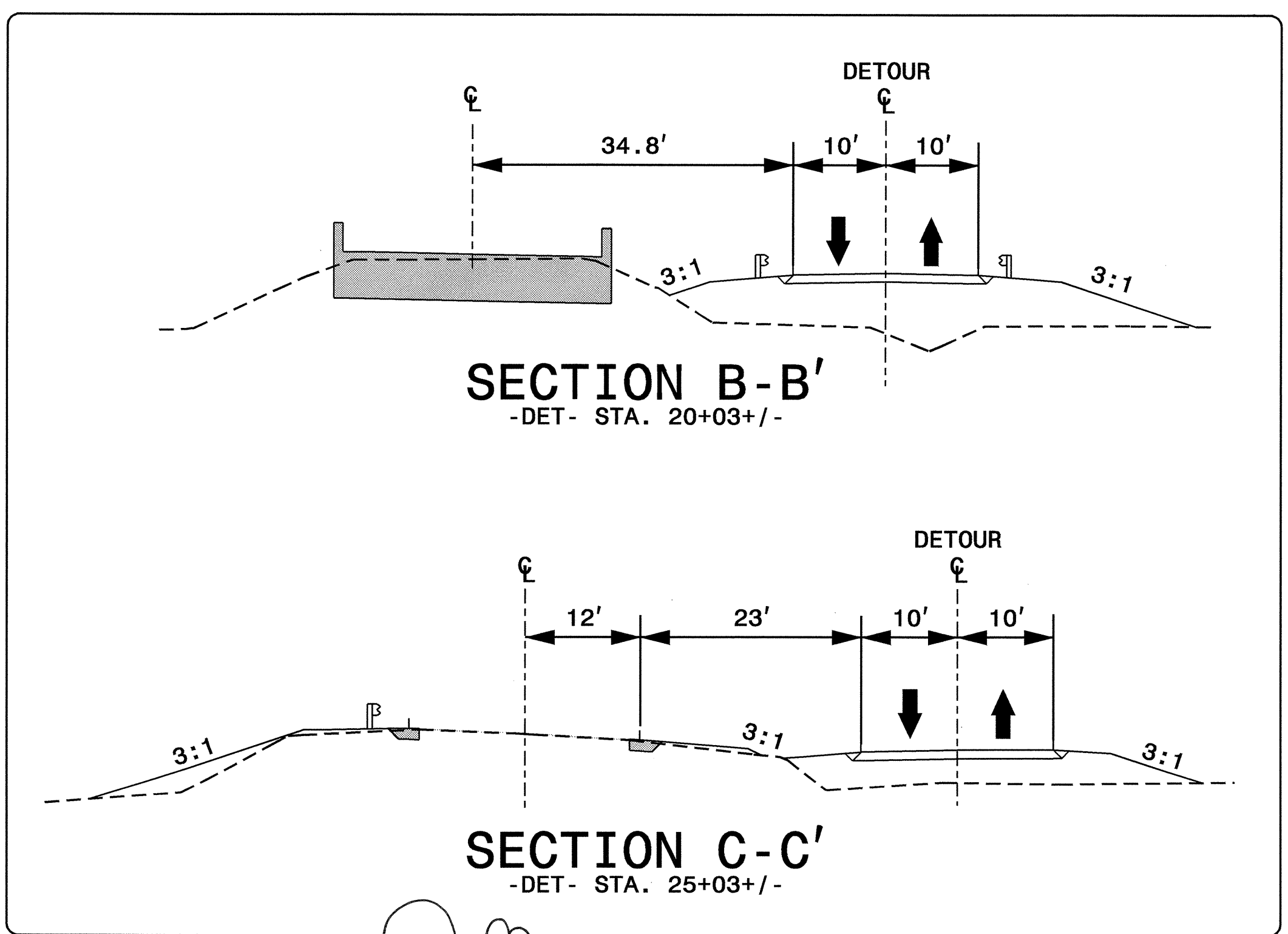
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## PHASE II

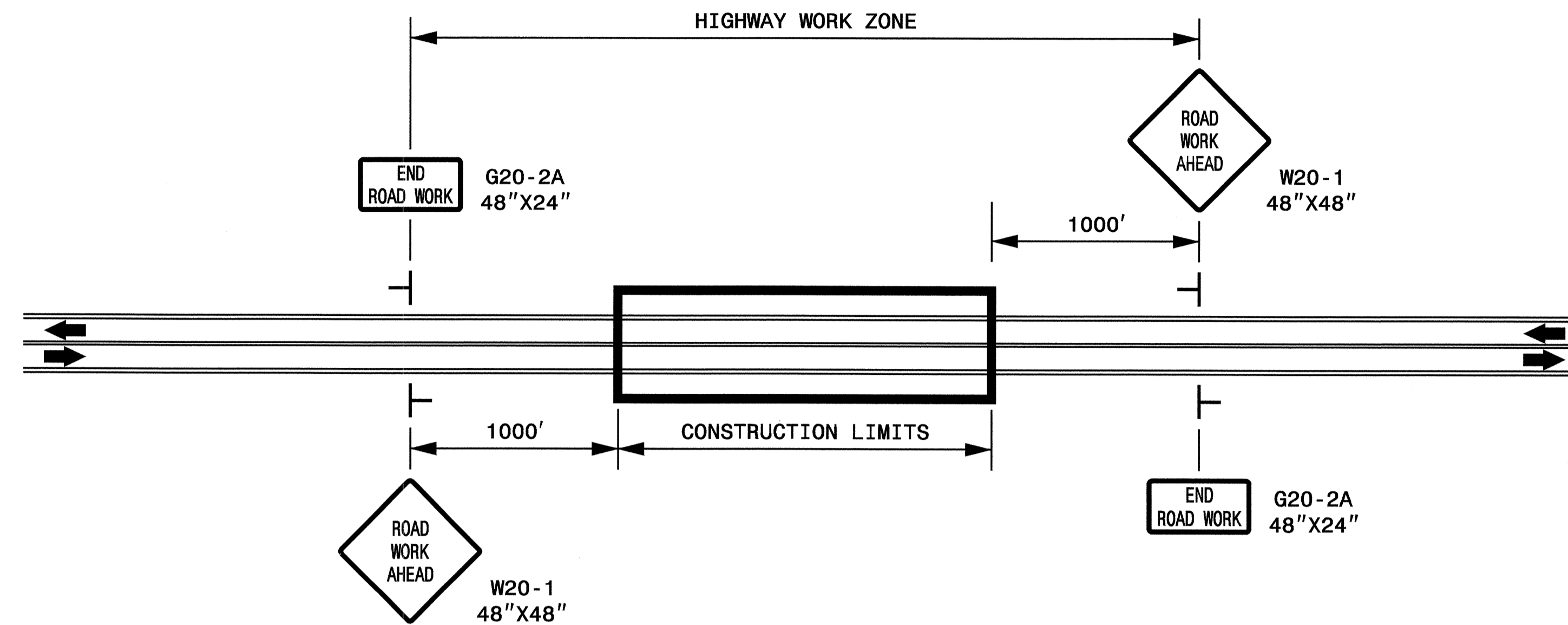
- STEP 1.** WORKING WITHIN THE ROAD CLOSURE OR USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AS NEEDED, AND COMPLETE THE FOLLOWING:
- REMOVE THE EXISTING -L- STRUCTURE
  - CONSTRUCT THE PROPOSED -L- STRUCTURE FROM STA. 19+93+/- TO STA. 23+28+/-
  - CONSTRUCT -L-, INCLUDING TRANSITIONS, FROM STA. 16+71+/- TO STA. 19+93+/- AND FROM STA. 23+28+/- TO STA. 26+87+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE
- STEP 2.** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AS NEEDED, AND COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:
- REMOVE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKERS ON THE PROPOSED DETOUR FROM -DET- STA. 13+00+/- TO -DET- STA. 15+50+/- AND FROM -DET- STA. 27+00+/- TO -DET- STA. 29+25+/-
  - INSTALL TEMPORARY PAVEMENT MARKINGS IN THE FINAL PATTERN ON THE PROPOSED -L- FROM STA. 13+00+/- TO STA. 29+25+/-
  - SHIFT TRAFFIC TO THE PROPOSED -L- ALIGNMENT
  - CLOSE THE DETOUR USING DRUMS AND TYPE III BARRICADES AS SHOWN ON SHEET TCP-3
- STEP 3.** WORKING WITHIN THE ROAD CLOSURE OR USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AS NEEDED, AND COMPLETE THE FOLLOWING:
- REMOVE THE ON-SITE DETOUR
  - CONSTRUCT THE PROPOSED GRADE RIGHT OF -L- INCLUDING THE HAZARDOUS SPILL RETENTION BASINS
- STEP 4.** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AND COMPLETE THE FOLLOWING:
- INSTALL THE FINAL SURFACE LAYER ON -L- FROM STA. 12+00 +/- TO -L- STA. 30+00 +/-
  - INSTALL FINAL PAVEMENT MARKINGS AND AND FINAL PAVEMENT MARKERS ON -L- FROM STA. 12+00 +/- TO STA. 30+00 +/-
- STEP 5.** REMOVE ALL TRAFFIC CONTROL SIGNS AND DEVICES



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## TWO-WAY UNDIVIDED (L-LINES)



### 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.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3 LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3 LB 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, 3 LB 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 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

### LEGEND

- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

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