

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| | |
|-----------------------------|-----------|
| STATE PROJECT REFERENCE NO. | SHEET NO. |
| B-3693 | TCP-1 |

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

B-3693

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 |
| 1101.03 | 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 | FLAGGERS DEVICES |
| 1160.01 | TEMPORARY CRASH CUSHION |
| 1165.01 | TRUCK MOUNTED IMPACT ATTENUATOR |
| 1170.01 | PORTABLE CONCRETE BARRIER |
| 1180.01 | SKINNY - DRUM |
| 1205.01 | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS |
| 1205.12 | PAVEMENT MARKINGS - BRIDGES |
| 1250.01 | PAVEMENT MARKER SPACING |
| 1251.01 | RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT |
| 1261.01 | GUARDRAIL AND BARRIER DELINEATOR SPACING |
| 1261.02 | GUARDRAIL AND BARRIER DELINEATOR TYPES |
| 1262.01 | GUARDRAIL END DELINEATION |

INDEX OF SHEETS

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| TCP-1 | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, INDEX OF SHEETS AND TEMPORARY PAVEMENT MARKING SCHEDULE |
| TCP-2 | PROJECT NOTES |
| TCP-3 | PHASE I OVERVIEW AND PHASING |
| TCO-4 THRU TCP-7 | PHASE I DETAILS |
| TCP-8 | PHASE II OVERVIEW AND PHASING |
| TCP-9 THRU TCP-12 | PHASE II DETAILS |
| TCP-13 | DETAIL DRAWING FOR WORK ZONE WARNING SIGNS |

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT.
 - EXIST. PVMT.
 - PROPOSED CONSTRUCTION
 - REMOVAL OF EXISTING PAVEMENT \ STRUCTURES
- TRAFFIC CONTROL DEVICES**
- 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

TEMP. PAV'T MARKING SCHEDULE

| SYMBOL | DESCRIPTION | BREAKDOWN | PAY ITEM |
|--------|--------------------------|------------------------|------------------|
| | | PAVEMENT MARKING LINES | |
| PA | WHITE EDGELINE | | PAINT (4") |
| PI | YELLOW DOUBLE CENTERLINE | | |
| | | PAVEMENT MARKERS | |
| MH | YELLOW & YELLOW | | TEMPORARY RAISED |

TIP PROJECT:

1/8/2010 P:\TrafficControl\TCP\000\B3693-fc-top-tfHe.dgn Florence & Hutchinson, Inc.

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|--|--|--|---|--|
| PLAN REVIEWED BY: WORK ZONE TRAFFIC CONTROL UNIT J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER G. L. GETTIER, P.E. WESTERN WZTC ENGINEER J. W. WOOLARD, P.E. TRAFFIC CONTROL PROJ. DESIGN ENGINEER TRAFFIC CONTROL DESIGN ENGINEER TRAFFIC CONTROL DESIGN TECHNICIAN | | APPROVED: <i>Michael J. Rzepka</i> DATE: 1-1-10 SEAL | PLAN PREPARED FOR N.C.D.O.T. BY: M. T. RZEPKA, P.E. PROJECT ENGINEER B. L. MARIOTTE DESIGN ENGINEER B. L. MARIOTTE DESIGN TECHNICIAN | |
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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 |
|----------------------------|---|
| PINE LOG ROAD (SR 1527) | WITHIN 15 MINUTES OF NOTICE BY THE ENGINEER WHEN PINE LOG ROAD IS USED AS AN ALTERNATE FOR I-95 TRAFFIC |

B) DO NOT STOP TRAFFIC AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS | DURATION AND OPERATION |
|----------------------------|---------------------------|-------------------------------|
| PINE LOG ROAD (SR 1527) | SCHOOL BUS ACTIVITY | 15 MINUTES TRAFFIC OPERATIONS |

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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) 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 WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

I) 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) 100 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

K) 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.

L) PROVIDE PERMANENT SIGNING.

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

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 100 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

PROJECT NOTES

TRAFFIC BARRIER

O) 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.

P) 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 TEMPORARY 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 | 30 FT |

TRAFFIC CONTROL DEVICES

Q) 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.

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

S) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES, DRUMS, PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

| ROAD NAME | MARKING | MARKER |
|----------------------------------|---------|------------------|
| PINE LOG ROAD (-L-) (SR 1527) | PAINT | 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.

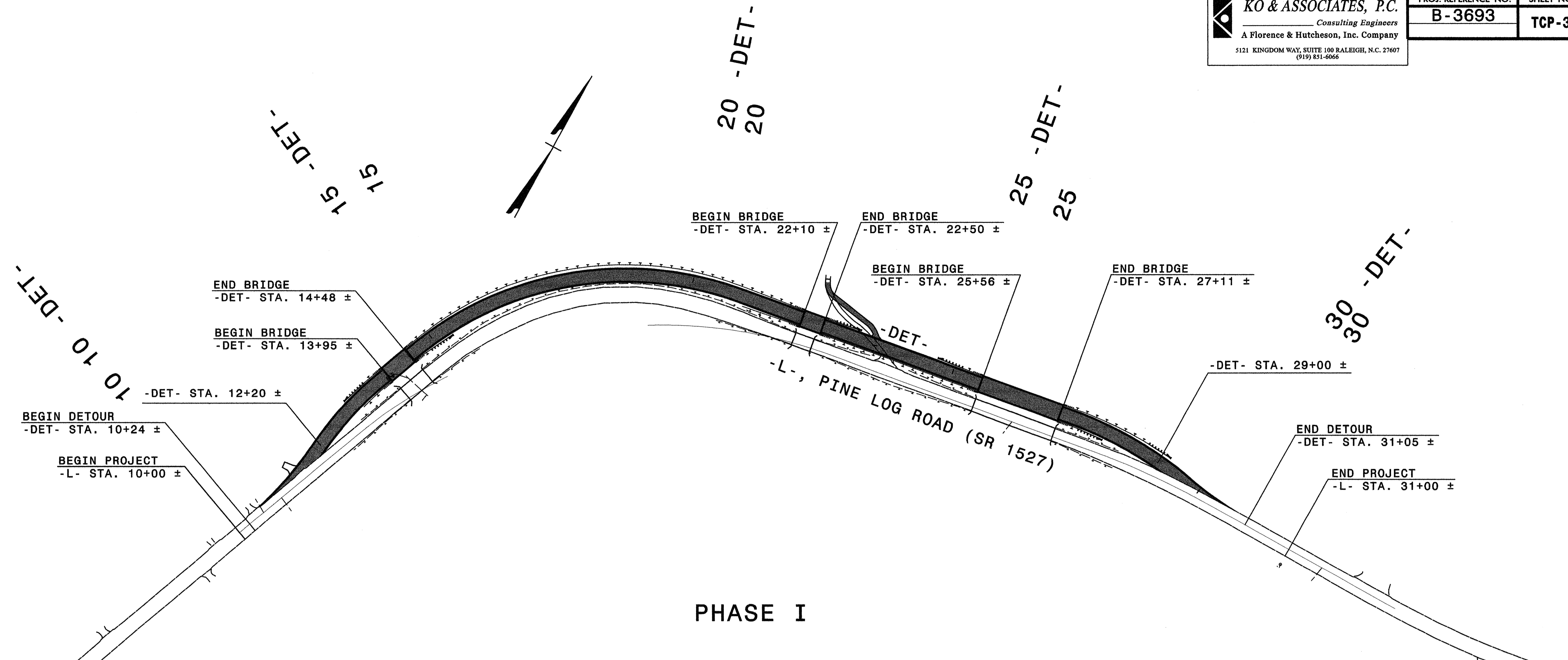
V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

MISCELLANEOUS

X) MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES WITHIN THE PROJECT LIMITS.

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|---|--------|------------------------|-----------|
| APPROVED: <i>Michael T. Kiepm</i> DATE: 1-11-10 | | <h1>PROJECT NOTES</h1> | |
| SEAL | | | |
| SCALE: | NONE | | REVISIONS |
| DATE: | JAN 10 | | |
| DWG. BY: | BLM | | |
| DESIGN BY: | BLM | | |
| REVIEWED BY: | MTR | | CADD FILE |



PHASE I

NOTE: WHEN USING LANE CLOSURES, REFER TO ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9.

STEP 1: - INSTALL WORK ZONE WARNING SIGNS (SEE SHEET TCP-13).

STEP 2: - AWAY FROM TRAFFIC BEGIN CONSTRUCTION OF DETOUR STRUCTURES (SEE STRUCTURE PLANS, TCP-4 AND TCP-5).

STEP 3: - USING LANE CLOSURES CONSTRUCT THE FOLLOWING (SEE ROADWAY PLANS, TCP-4 AND TCP-5):

WEDGE TEMPORARY SUPERELEVATION IN LEFT LANE OF EXISTING PINE LOG ROAD (SEE ROADWAY PLANS FOR LOCATIONS).

PLACE TEMPORARY PAVEMENT MARKING LINES ALONG EXISTING PINE LOG ROAD (SR 1527) AS SHOWN ON SHEETS TCP-4 AND TCP-5.

PROPOSED DETOUR UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -DET- STA. 12+20 ± TO -DET- STA. 29+00 ± INCLUDING DRIVEWAY LEFT OF PROPOSED DETOUR (SEE LOCAL NOTE 1) AND EXCLUDING GUARDRAILS RIGHT OF PROPOSED DETOUR AT THE FOLLOWING LOCATIONS:

-DET- STA. 11+82 ± TO -DET- STA. 13+23 ±
 -DET- STA. 19+96 ± TO -DET- STA. 21+00 ±

PROPOSED DETOUR UP TO THE EXISTING EDGE AND ELEVATION OF PINE LOG RD. AT THE FOLLOWING LOCATIONS:

-DET- STA. 10+24 ± TO -DET- STA. 12+20 ±
 -DET- STA. 29+00 ± TO -DET- STA. 31+05 ±

REMOVE LANE CLOSURE AT THE END OF EACH WORKDAY.

STEP 4: - AWAY FROM TRAFFIC COMPLETE CONSTRUCTION OF DETOUR STRUCTURES (SEE STRUCTURE PLANS AND TCP-4 AND TCP-5).

STEP 5: - USING LANE CLOSURES COMPLETE THE FOLLOWING (SEE ROADWAY PLANS AND TCP-4 THRU TCP-7):

CONSTRUCT THE FINAL LAYER OF SURFACE COURSE OF PROPOSED DETOUR FROM -DET- STA. 12+20 ± TO -DET- STA. 29+00 ±.

PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND PAVEMENT MARKERS (TEMPORARY RAISED) ON PROPOSED DETOUR FROM -DET- STA. 12+20 ± TO -DET- STA. 29+00 ±.

REMOVE LANE CLOSURE AT THE END OF EACH WORKDAY.

STEP 6: - USING LANE CLOSURES AND WORKING IN A CONTINUOUS MANNER COMPLETE THE FOLLOWING (SEE ROADWAY PLANS, TCP-6 AND TCP-7):

PAVE / WEDGE PROPOSED DETOUR UP TO THE FINAL LAYER INCLUDING PLACING TEMPORARY PAVEMENT MARKINGS (PAINT) AND PAVEMENT MARKERS (TEMPORARY RAISED) AT THE FOLLOWING LOCATIONS:

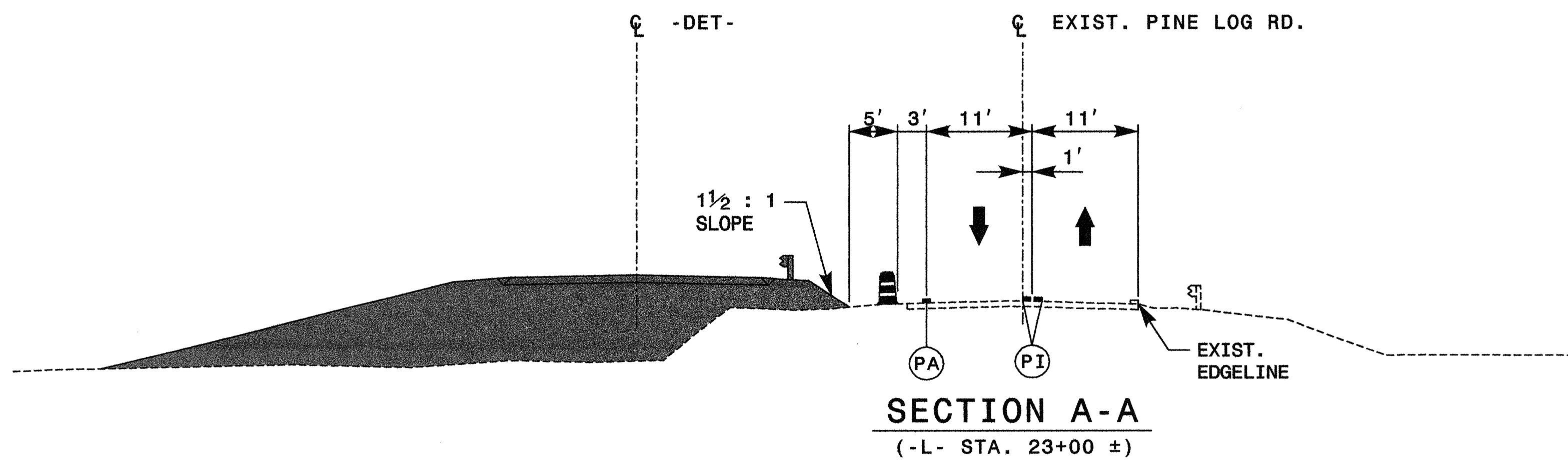
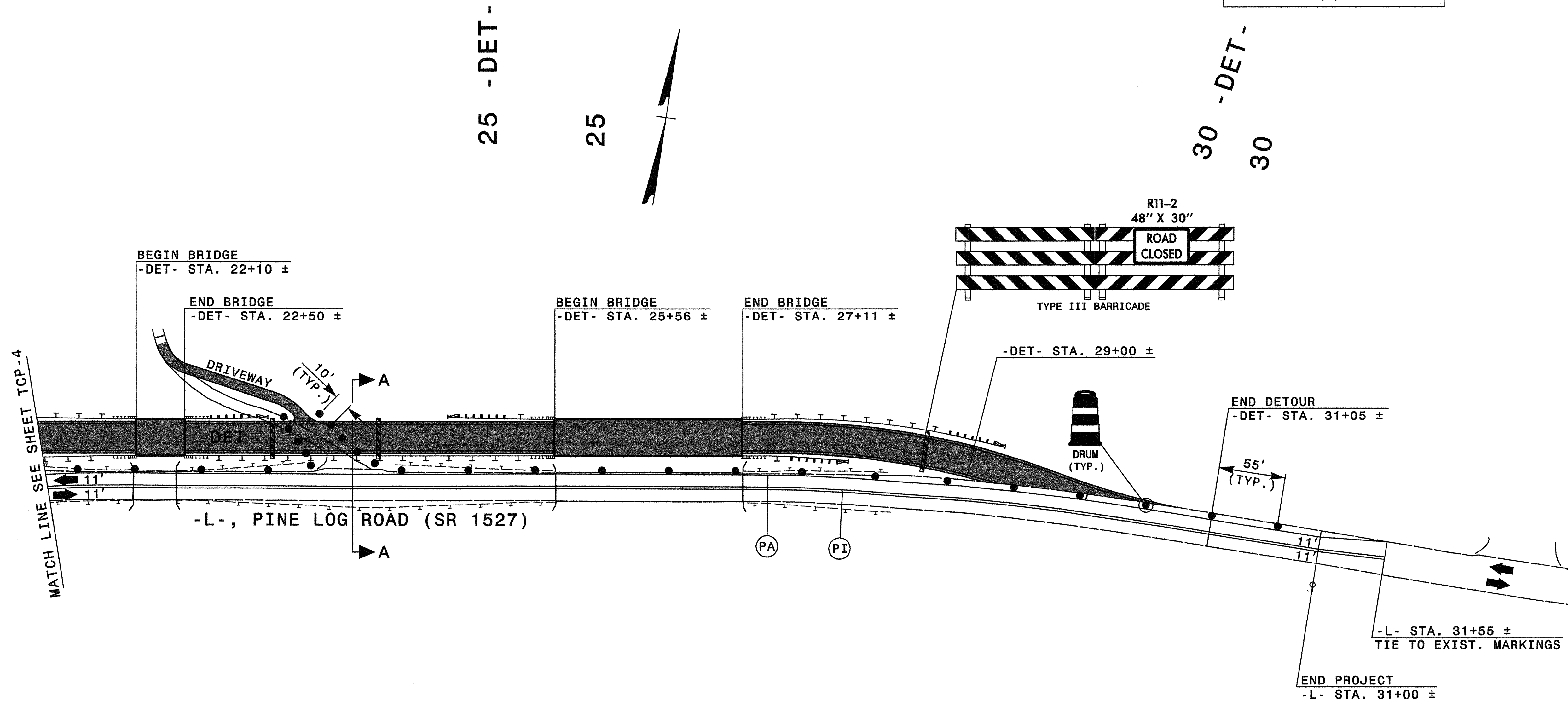
-DET- STA. 10+24 ± TO -DET- STA. 12+20 ±
 -DET- STA. 29+00 ± TO -DET- STA. 31+05 ±

COMPLETE SHOULDER WORK AND/OR INSTALL GUARDRAIL RIGHT OF PROPOSED DETOUR AT THE FOLLOWING LOCATIONS:

-DET- STA. 11+82 ± TO -DET- STA. 13+23 ±
 -DET- STA. 19+96 ± TO -DET- STA. 21+00 ±
 -DET- STA. 27+00 ± TO -DET- STA. 28+50 ±

REMOVE LANE CLOSURES AND OPEN BOTH LANES OF PROPOSED DETOUR TO TRAFFIC.

| | | |
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| APPROVED: <i>Michael T. Kiepl</i> DATE: 1-11-10 | PHASE I OVERVIEW AND PHASING | |
| | SCALE: NONE | |
| | DATE: JAN 10 | |
| | DWG. BY: BLM | |
| | DESIGN BY: BLM | |
| REVIEWED BY: MTR | REVISIONS | |



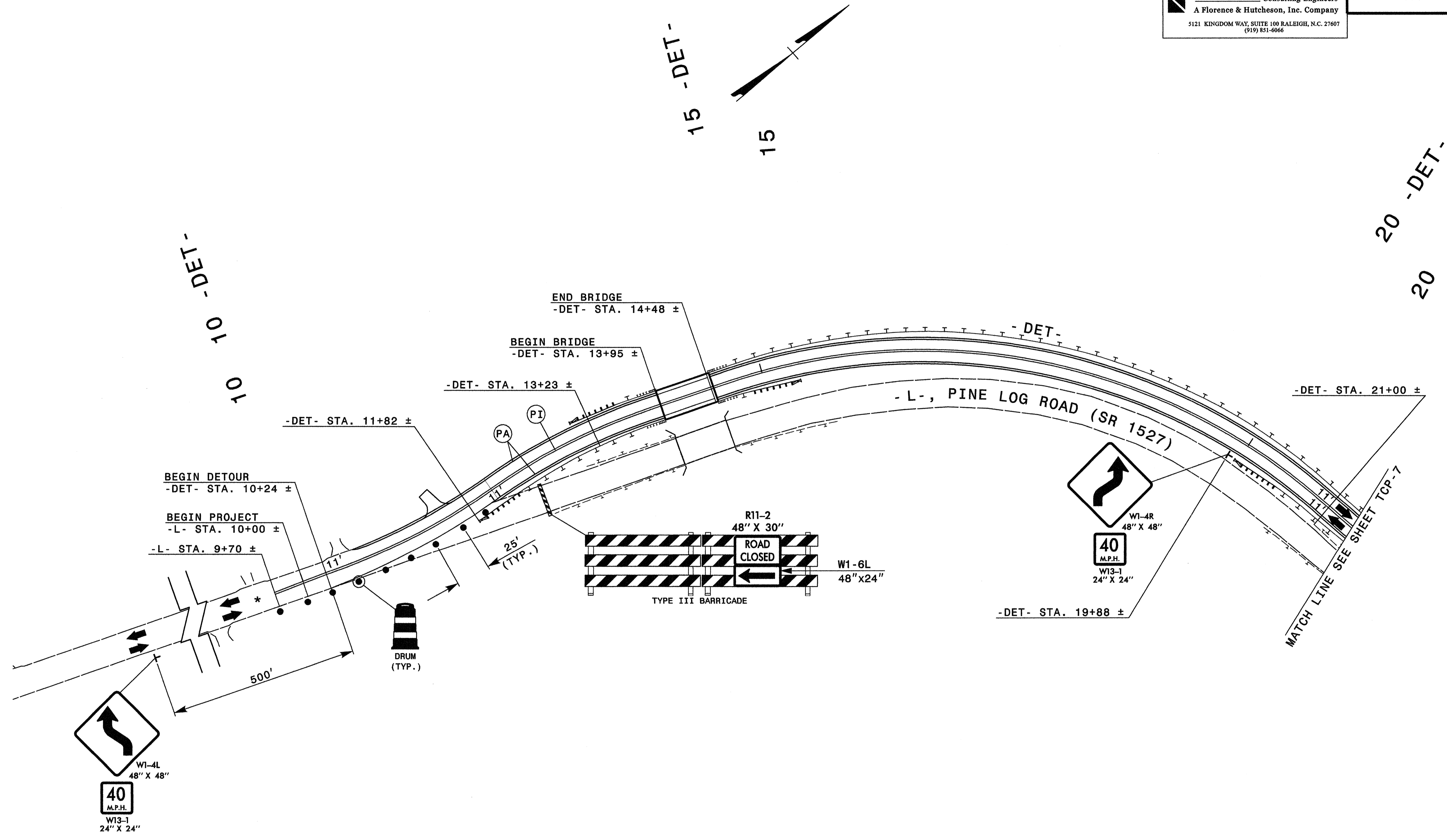
| LEGEND | |
|--------|-----------------------|
| | PROPOSED CONSTRUCTION |

APPROVED: *Michael T. Rzepka* DATE: 1-11-10

SEAL

| PHASE I DETAIL 1 | | | | | | | |
|-------------------------|---|-----------|--|--|--|--|--|
| SCALE: NONE | | | | | | | |
| DATE: JAN 10 | | | | | | | |
| DWG. BY: BLM | | | | | | | |
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* FOR PAVEMENT MARKINGS BEYOND PROJECT LIMITS
 SEE ROADWAY STANDARD DRAWING NUMBER 1101.03,
 SHEET 3 OF 9, AS DIRECTED BY THE ENGINEER.

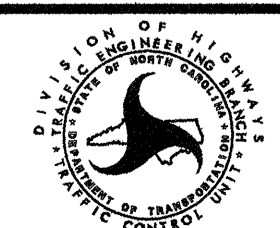
APPROVED: *Michael Rypha* DATE: 1-11-10

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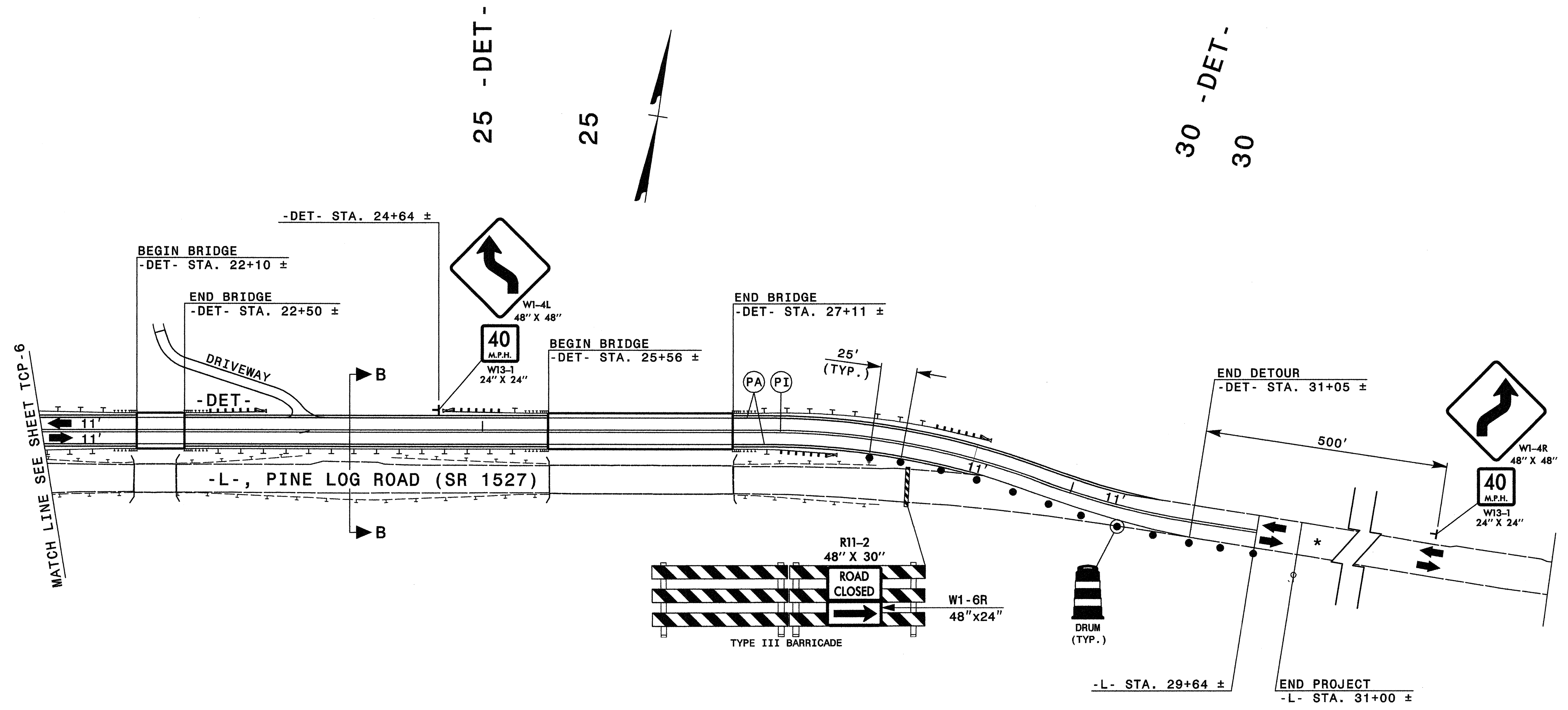


PHASE I DETAIL 2

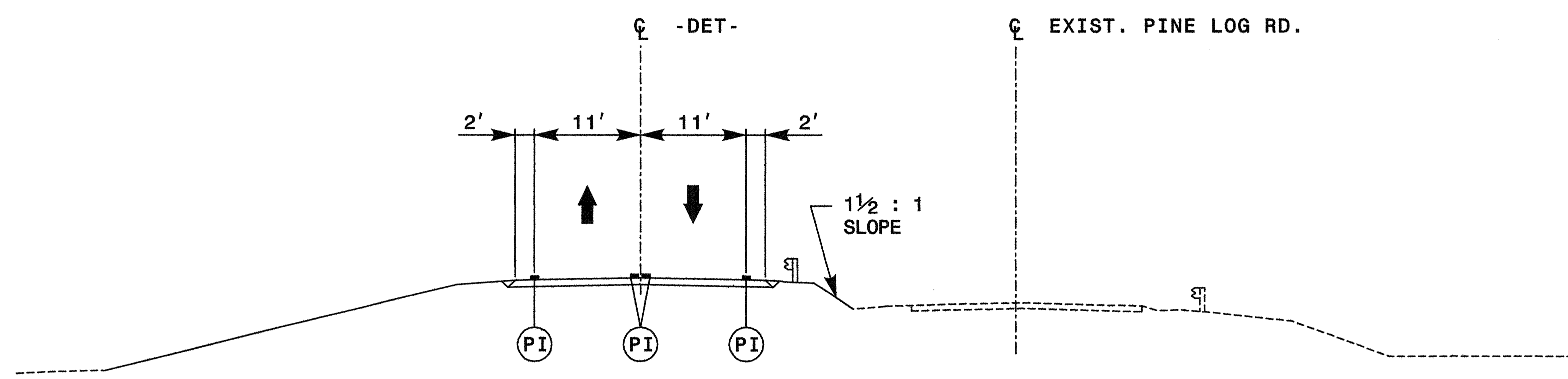
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| DESIGN BY: | BLM |
| REVIEWED BY: | MTR |



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MATCH LINE SEE SHEET TCP-6



SECTION B-B
 (-L- STA. 23+00 ±)

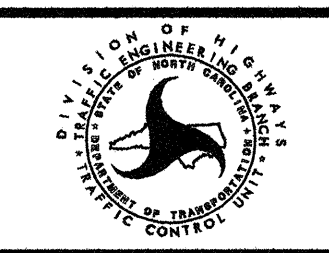
* FOR PAVEMENT MARKINGS BEYOND PROJECT LIMITS
 SEE ROADWAY STANDARD DRAWING NUMBER 1101.03,
 SHEET 3 OF 9, AS DIRECTED BY THE ENGINEER.

APPROVED: *Michael R. Rzepka* DATE: 1-11-10



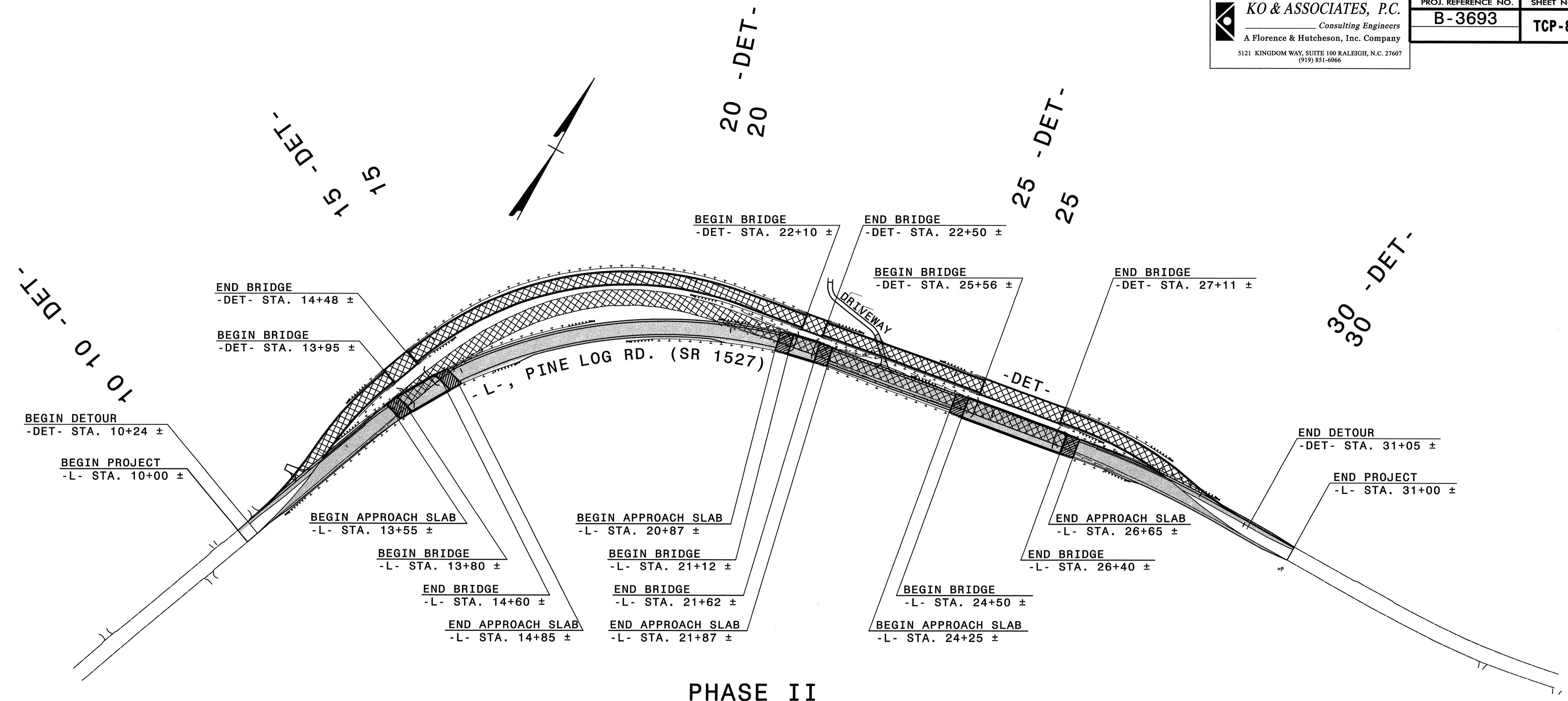
PHASE I DETAIL 2

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PHASE II

NOTE: WHEN USING LANE CLOSURES, REFER TO ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9.

- STEP 1: - AWAY FROM TRAFFIC, INSTALL TEMPORARY SHORING AND BEGIN CONSTRUCTION OF PROPOSED STRUCTURES (SEE STRUCTURE PLANS, TCP-9, TCP-10 AND TCP-10A).
- STEP 2: - USING LANE CLOSURES CONSTRUCT THE FOLLOWING (SEE ROADWAY PLANS, TCP-9 AND TCP-10):
- PROPOSED -L-, PINE LOG RD. UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 13+00 ± TO -L- STA. 27+00 ± EXCLUDING GUARDRAILS LEFT OF PROPOSED -L-, PINE LOG RD. AT THE FOLLOWING LOCATIONS:
 - L- STA. 12+39 ± TO -L- STA. 13+80 ±
 - L- STA. 21+87 ± TO -L- STA. 22+56 ±
 - L- STA. 26+40 ± TO -L- STA. 29+39 ±
 - PROPOSED -L-, PINE LOG RD. RIGHT AND 10 FEET LEFT UP TO THE EXISTING EDGE AND ELEVATION OF EXISTING DETOUR AT THE FOLLOWING LOCATIONS:
 - L- STA. 10+00 ± TO -L- STA. 13+00 ±
 - L- STA. 27+00 ± TO -L- STA. 31+00 ±
- REMOVE LANE CLOSURE AT THE END OF EACH WORKDAY.
- STEP 3: - AWAY FROM TRAFFIC COMPLETE CONSTRUCTION OF PROPOSED STRUCTURES (SEE STRUCTURE PLANS AND TCP-9 AND TCP-10).
- STEP 4: - USING LANE CLOSURES COMPLETE THE FOLLOWING (SEE ROADWAY PLANS AND TCP-9 THRU TCP-12):
- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND PAVEMENT MARKERS (TEMPORARY RAISED) ON PROPOSED -L-, PINE LOG RD. FROM -L- STA. 13+00 ± TO -L- STA. 27+00 ±.
 - REMOVE LANE CLOSURE AT THE END OF EACH WORKDAY.

- STEP 5: - AWAY FROM TRAFFIC PLACE TEMPORARY CONCRETE BARRIER LEFT OF -L-, PINE LOG RD. AT THE FOLLOWING LOCATIONS:
- L- STA. 13+00 ± TO -L- STA. 14+95 ±
 - L- STA. 24+15 ± TO -L- STA. 27+00 ±
- STEP 6: - USING LANE CLOSURES AND WORKING IN A CONTINUOUS MANNER COMPLETE THE FOLLOWING (SEE ROADWAY PLANS, TCP9 THRU 12):
- REMOVE GUARDRAIL RIGHT OF EXISTING DETOUR FROM -DET- STA. 11+82 ± TO -L- STA. 13+00 ±.
 - PAVE / WEDGE PROPOSED -L-, PINE LOG RD. RIGHT AND 10 ft LEFT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE INCLUDING PLACING TEMPORARY PAVEMENT MARKINGS (PAINT) AND PAVEMENT MARKERS (TEMPORARY RAISED) AT THE FOLLOWING LOCATIONS:
 - L- STA. 10+00 ± TO -L- STA. 13+00 ±
 - L- STA. 27+00 ± TO -L- STA. 31+00 ±
 - INSTALL GUARDRAIL LEFT OF PROPOSED -L-, PINE LOG RD. FROM -L- STA. 21+87 ± TO -L- STA. 22+56 ±.
 - PLACE CONCRETE BARRIER LEFT OF -L-, PINE LOG RD. AT THE FOLLOWING LOCATIONS:
 - L- STA. 11+80 ± TO -L- STA. 13+00 ±
 - L- STA. 27+00 ± TO -L- STA. 28+78 ±
 - PLACE TRAFFIC ON PROPOSED -L-, PINE LOG RD. IN THE TEMPORARY PATTERN.

- STEP 7: - BEHIND TEMPORARY BARRIER AND USING LANE CLOSURES CONSTRUCT LEFT SIDE OF -L-, PINE LOG RD. UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS (SEE ROADWAY PLANS, TCP-11 AND TCP-12):
- L- STA. 10+00 ± TO -L- STA. 13+00 ±
 - L- STA. 27+00 ± TO -L- STA. 31+00 ±
- BEHIND TEMPORARY BARRIER AND USING LANE CLOSURES INSTALL PROPOSED GUARDRAIL LEFT OF PROPOSED -L-, PINE LOG RD. AT THE FOLLOWING LOCATIONS:
- L- STA. 12+39 ± TO -L- STA. 13+80 ±
 - L- STA. 26+40 ± TO -L- STA. 29+39 ±
- AWAY FROM TRAFFIC, REMOVE DETOUR FROM -DET- STA. 10+24 ± TO -DET- STA. 31+05 ±.
- STEP 8: - USING LANE CLOSURES REMOVE TEMPORARY CONCRETE BARRIER, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND FINAL PAVEMENT MARKERS ON -L-, PINE LOG RD. IN THE FINAL PATTERN AND PLACE TRAFFIC IN THE FINAL PATTERN.
- REMOVE LANE CLOSURE AT THE END OF EACH WORKDAY.
- STEP 9: - REMOVE ALL TRAFFIC CONTROL DEVICES.

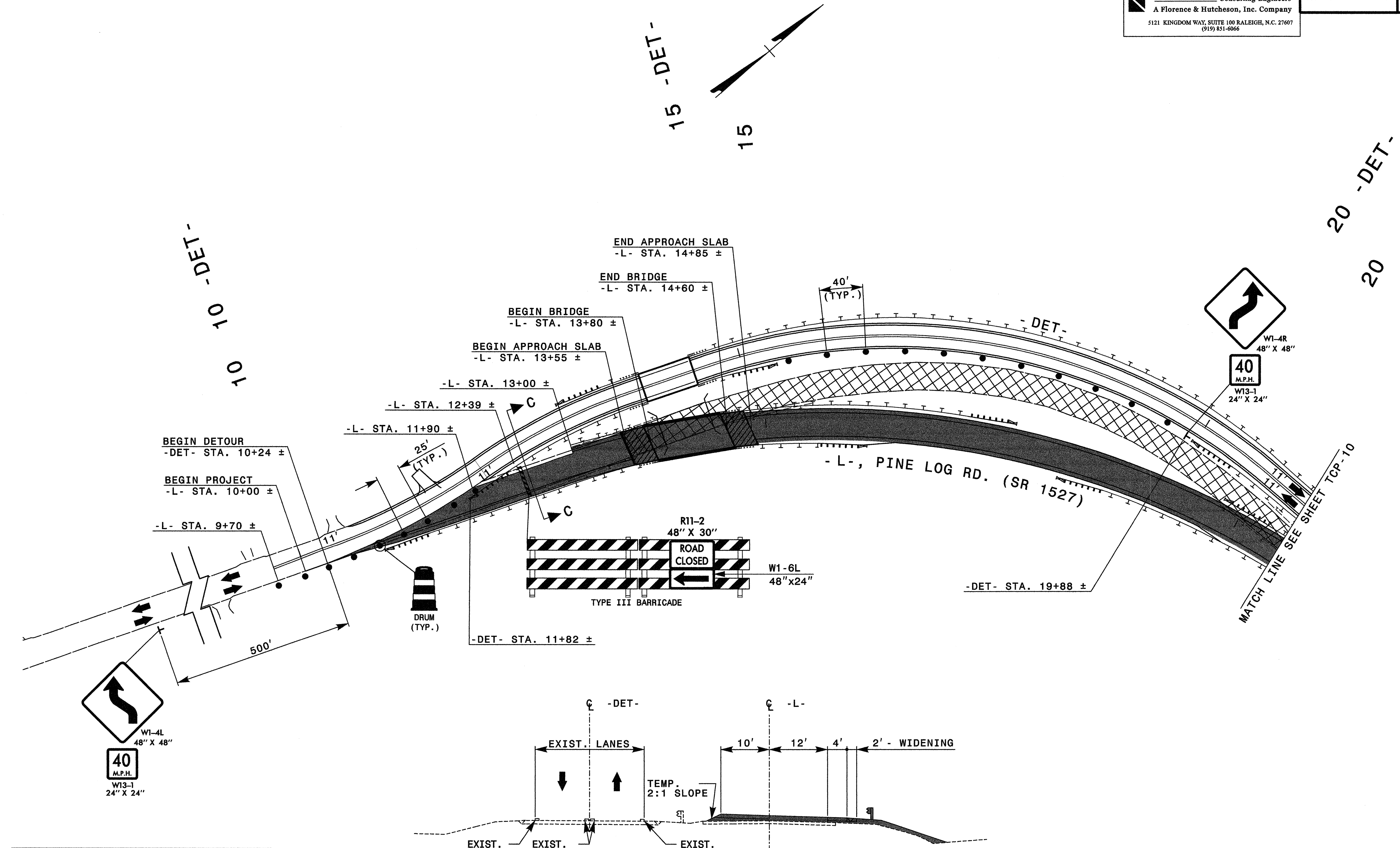
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APPROVED: *Michael T. Rzepka* DATE: 2-16-10

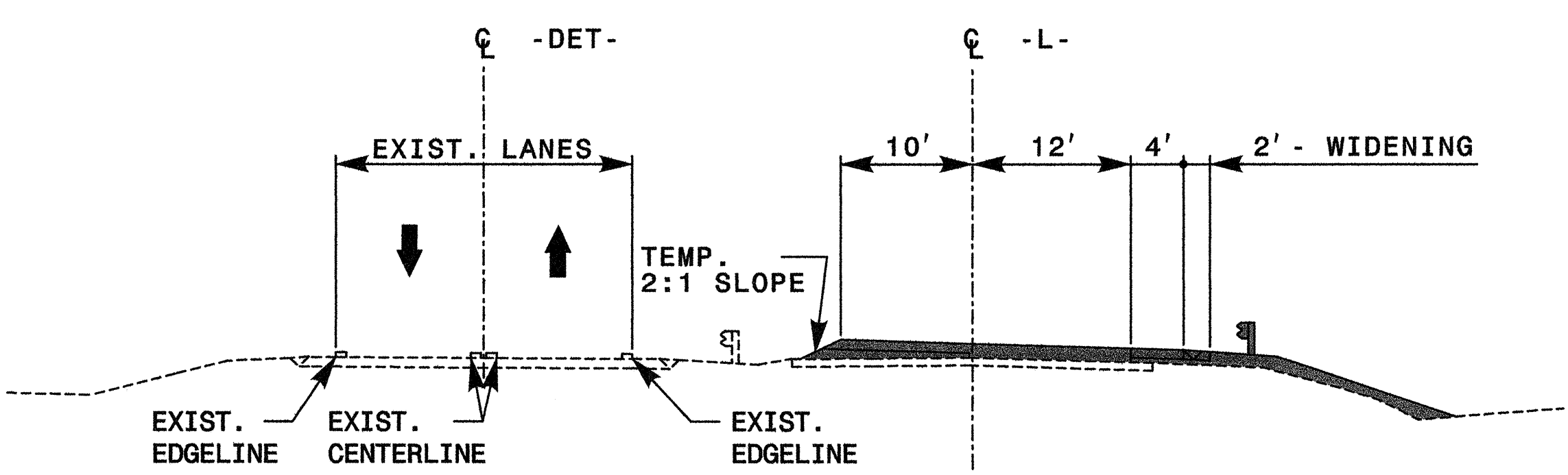
SEAL

PHASE II OVERVIEW AND PHASING

| | | |
|------------------|--|-----------|
| SCALE: NONE | | REVISIONS |
| DATE: JAN 10 | | |
| DWG. BY: BLM | | |
| DESIGN BY: BLM | | |
| REVIEWED BY: MTR | | |



| LEGEND | |
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| | PROPOSED CONSTRUCTION |
| | STRUCTURE AND PAVEMENT REMOVAL |



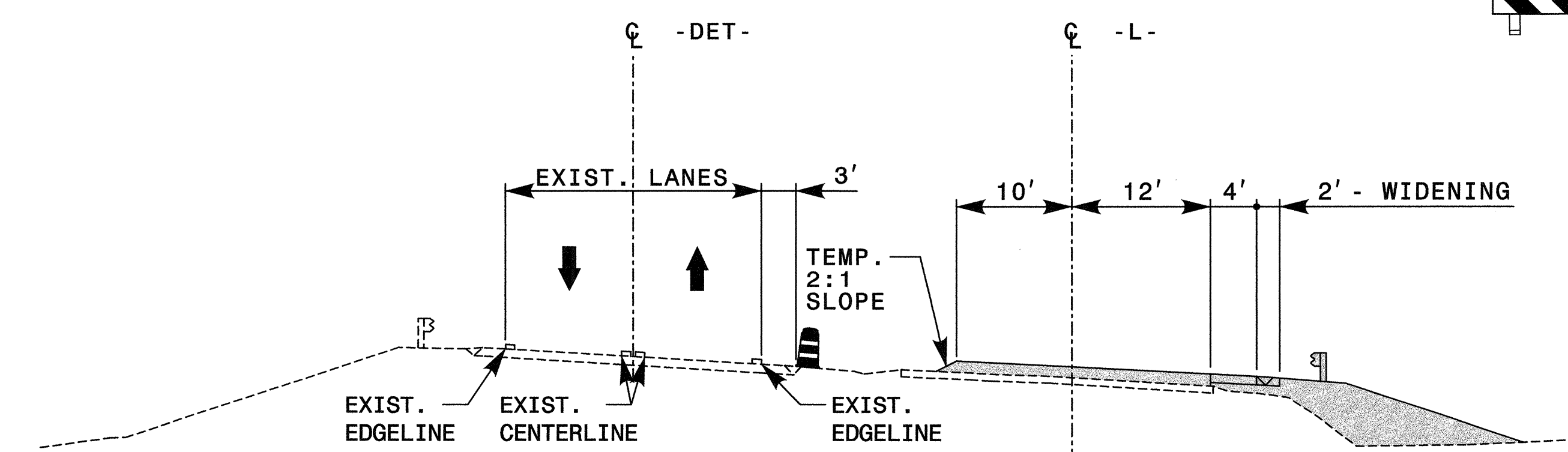
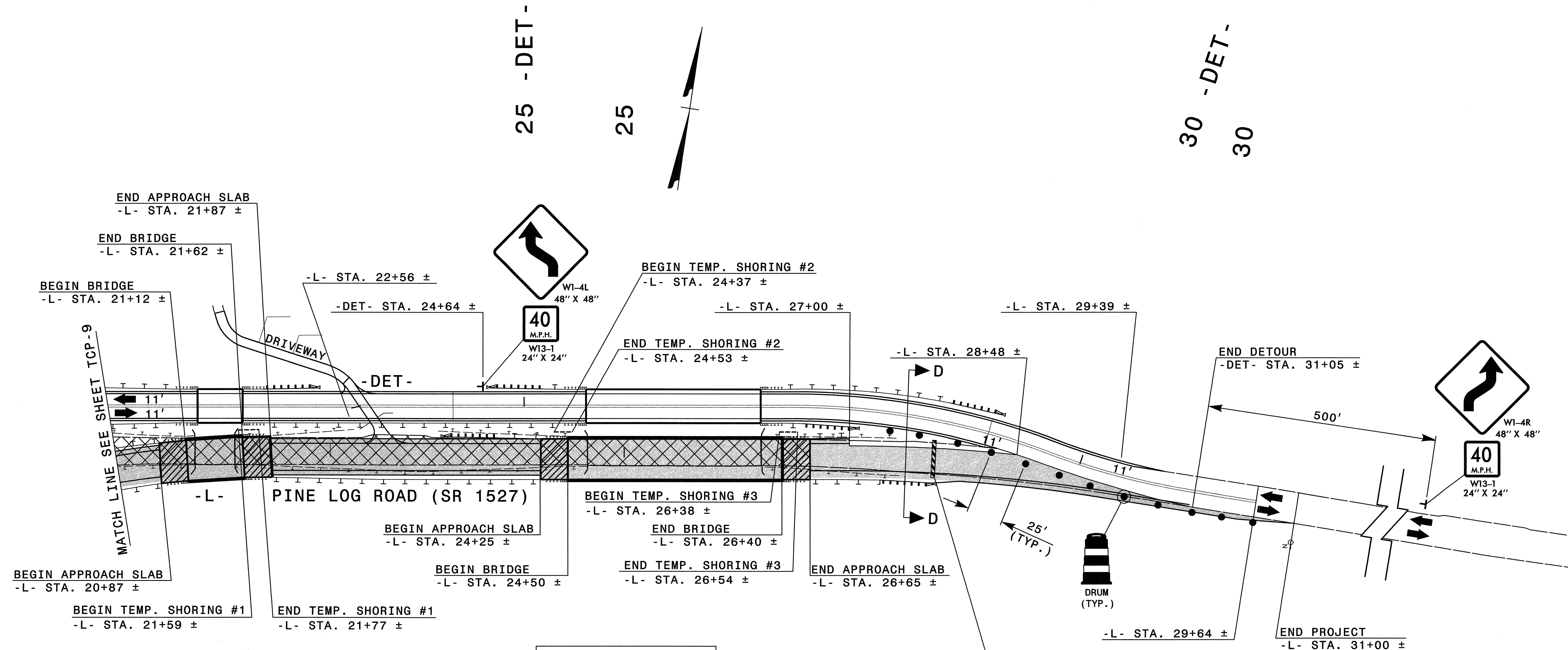
SECTION C-C
 (-L- STA. 12+50 ±)

APPROVED: *Michael T. Kiepp* DATE: 1-11-10

SEAL

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| PHASE II DETAIL 1 | | REVISIONS | |
| SCALE: | NONE | | |
| DATE: | JAN 10 | | |
| DWG. BY: | BLM | | |
| DESIGN BY: | BLM | | |
| REVIEWED BY: | MTR | | |

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| LEGEND | |
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| | PROPOSED CONSTRUCTION |
| | STRUCTURE AND PAVEMENT REMOVAL |

APPROVED: *Michael T. Rzepka* DATE: 2-16-10

SEAL

PHASE II DETAIL 1

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| DATE: JAN 10 | | | | | | | | | | |
| DWG. BY: BLM | | | | | | | | | | |
| DESIGN BY: BLM | | | | | | | | | | |
| REVIEWED BY: MTR | CADD FILE | | | | | | | | | |

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TEMPORARY SHORING #1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 21+59± -L- TO STA. 21+77± -L-, 24.0 FT± LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma' = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $C = 0$ PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING #2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 24+37± -L- TO STA. 24+53± -L-, 22.0 FT± LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma' = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $C = 0$ PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING #3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 26+38± -L- TO STA. 26+54± -L-, 22.0 FT± LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

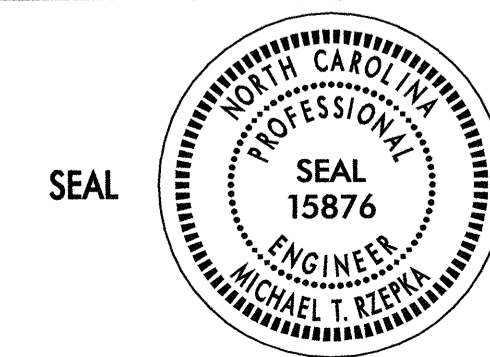
- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma' = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $C = 0$ PSF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

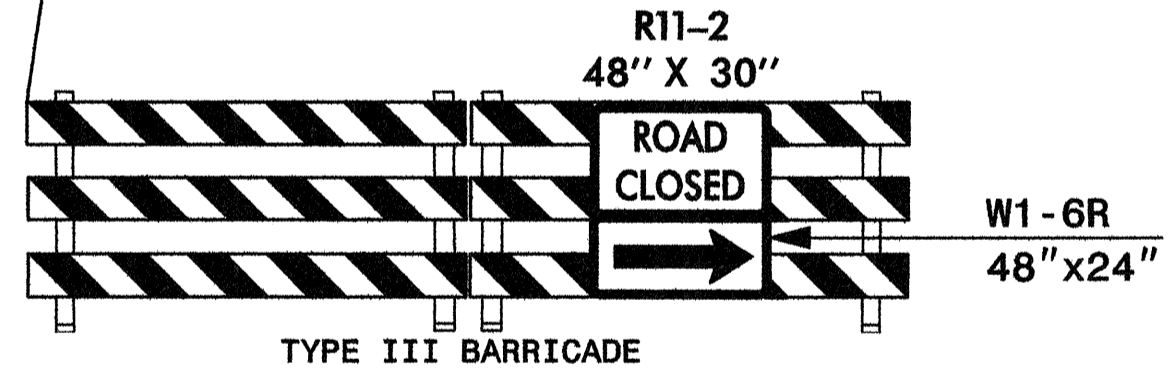
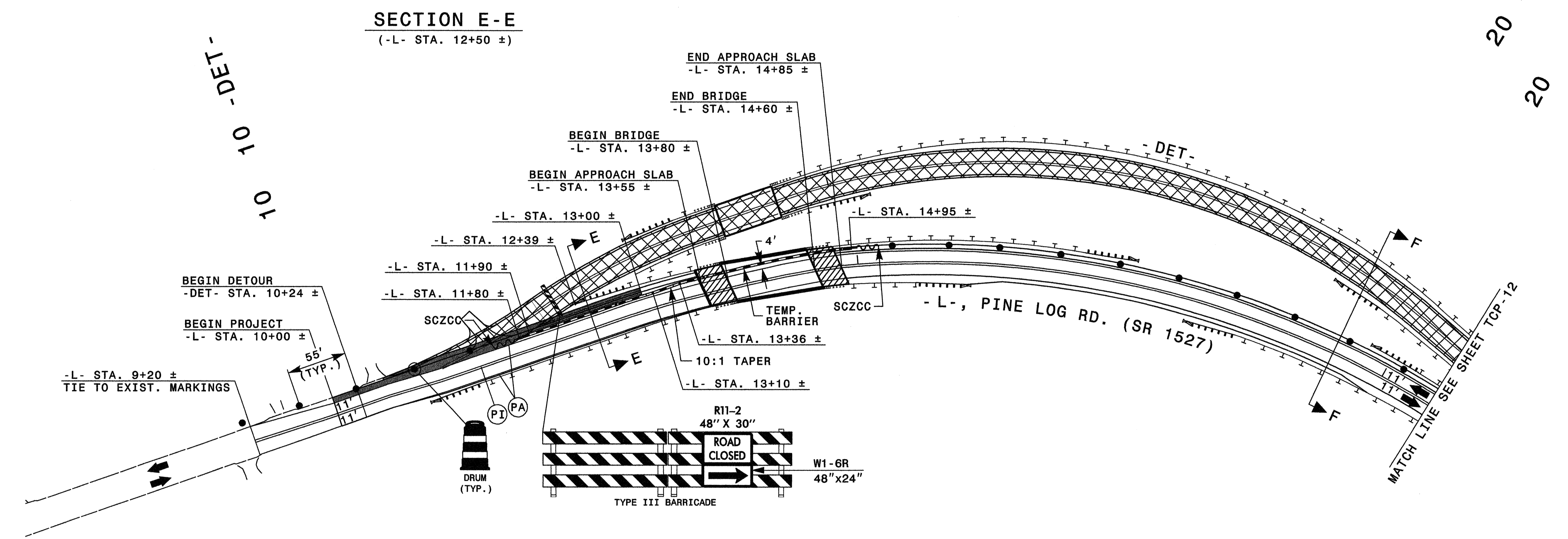
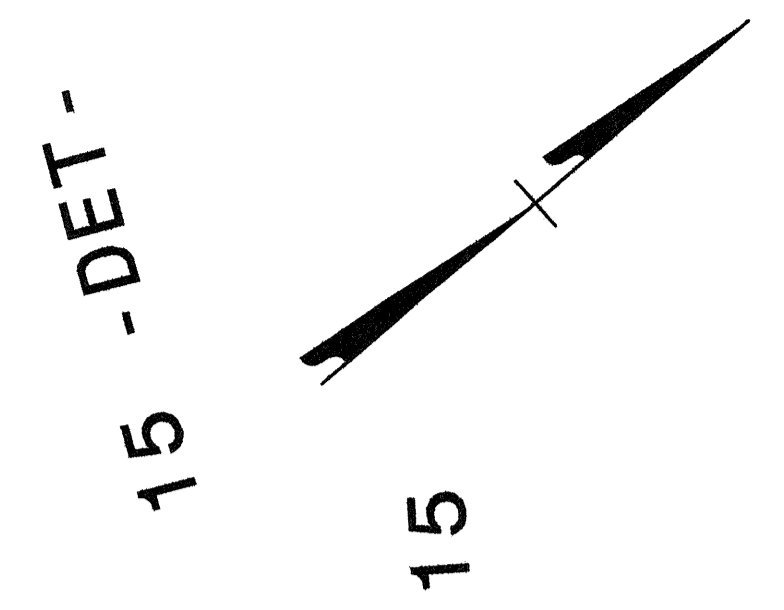
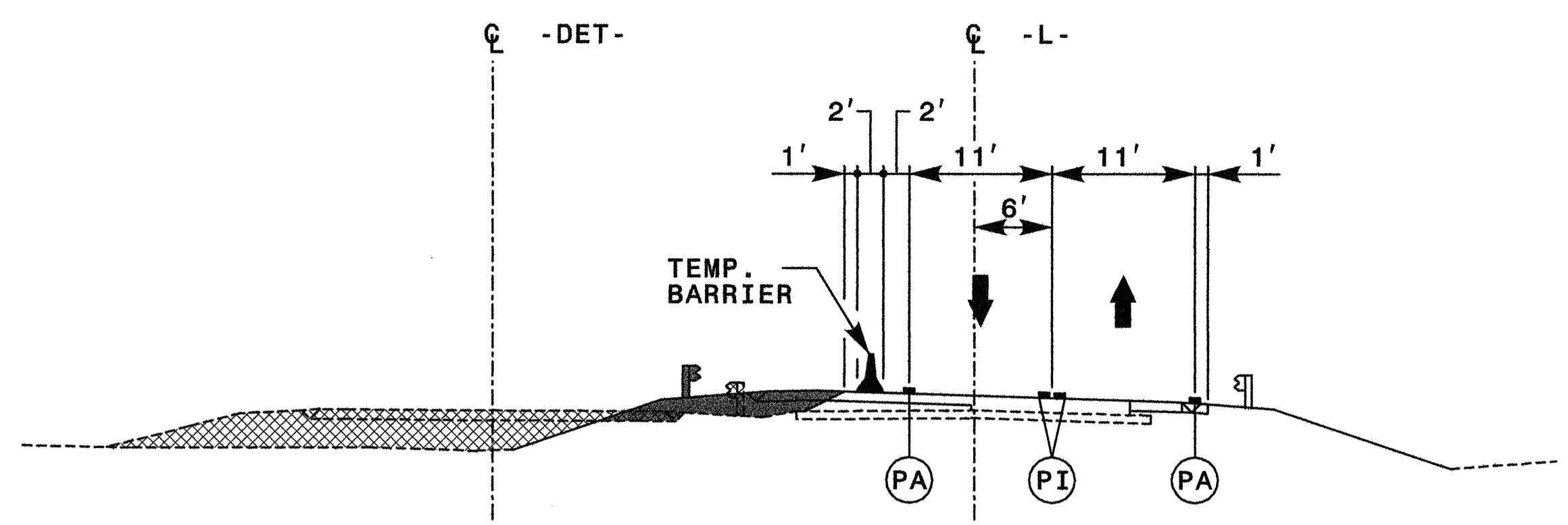
SEE SHEET TCP-10
 FOR TEMPORARY SHORING
 LOCATIONS

APPROVED: *Michael T. Rzepka* DATE: 2-16-10

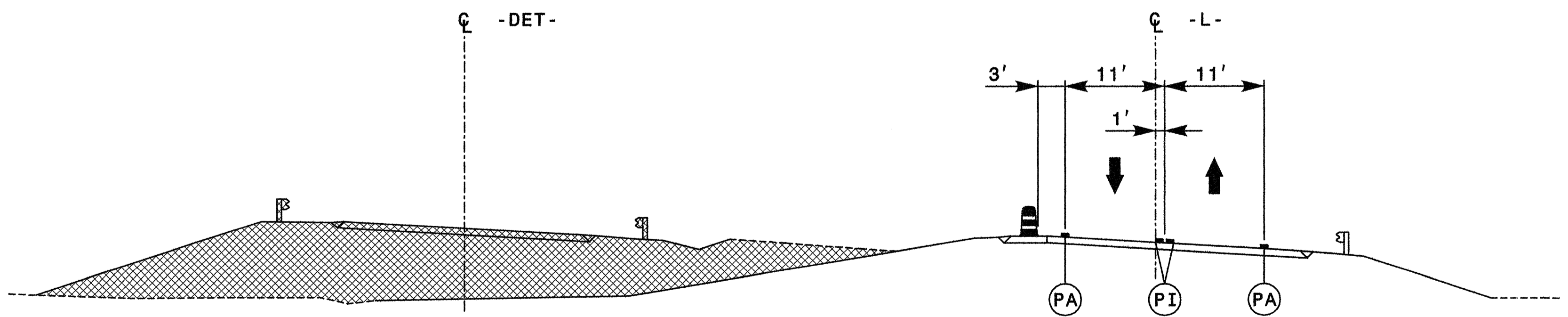


**PHASE II DETAIL 1
 TEMP. SHORING INFO.**

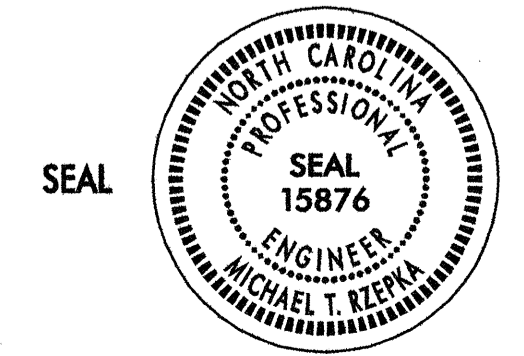
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| SCALE: NONE | | REVISIONS |
| DATE: JAN 10 | | |
| DWG. BY: BLM | | |
| DESIGN BY: BLM | | |
| REVIEWED BY: MTR | | |



| LEGEND | |
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| | PROPOSED CONSTRUCTION |
| | STRUCTURE AND PAVEMENT REMOVAL |



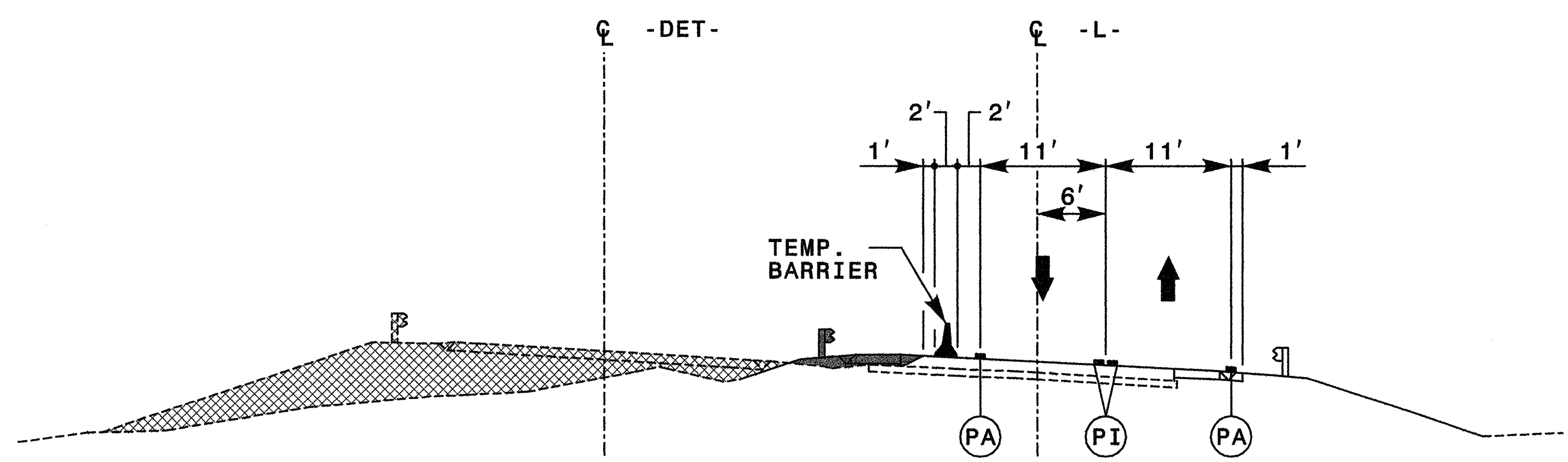
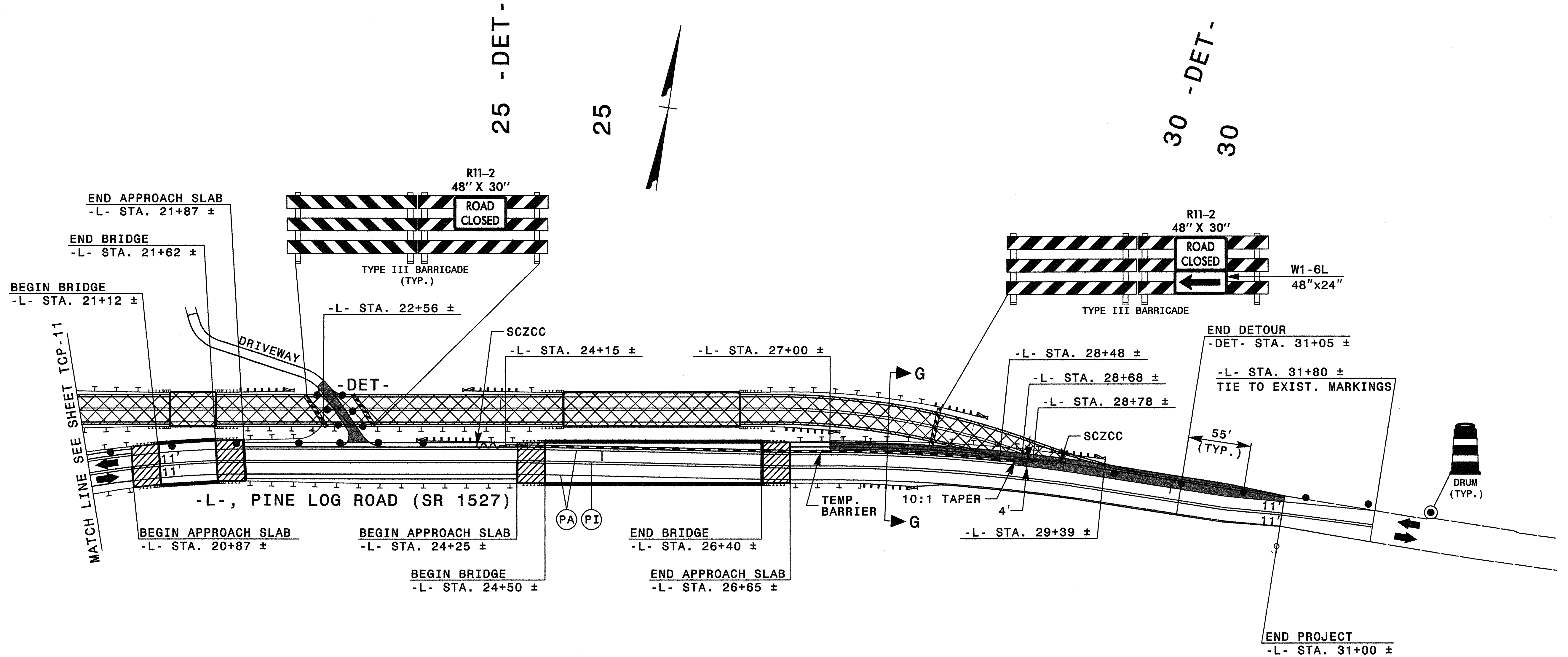
APPROVED: *Michael J. Koppa* DATE: 1-11-10



PHASE II DETAIL 2

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| SCALE: NONE | | REVISIONS |
| DATE: JAN 10 | | |
| DWG. BY: BLM | | |
| DESIGN BY: BLM | | |
| REVIEWED BY: MTR | | |

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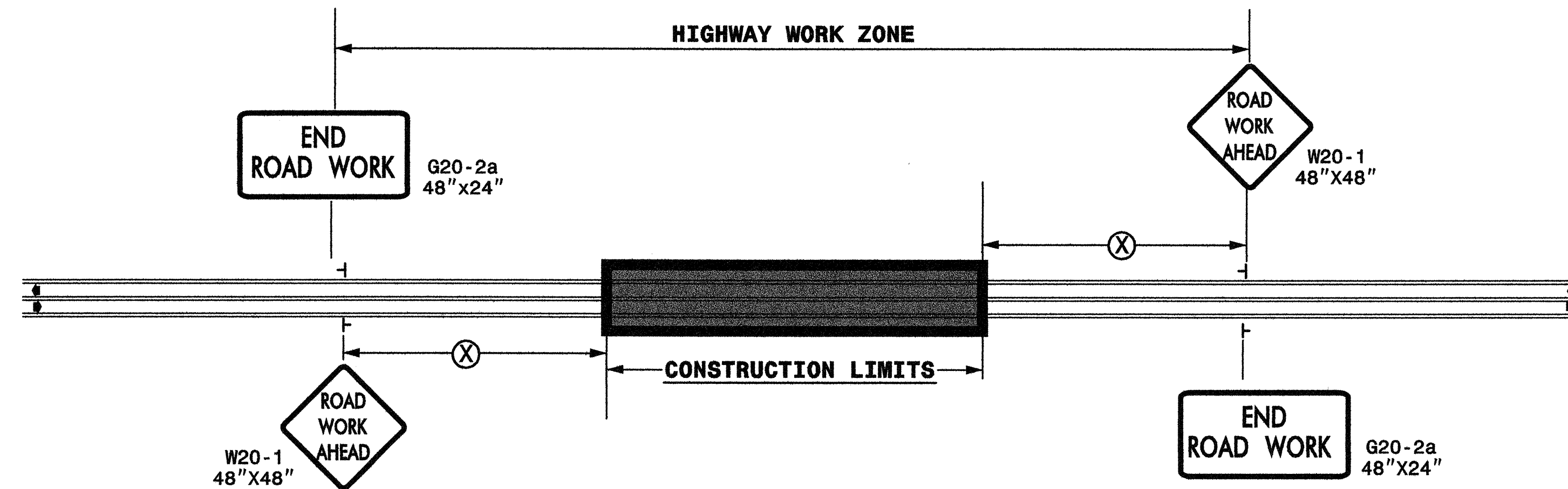


| LEGEND | |
|--------|--------------------------------|
| | PROPOSED CONSTRUCTION |
| | STRUCTURE AND PAVEMENT REMOVAL |

| | | |
|---|--------------------------|--|
| APPROVED: <i>M. Michael T. Rzepka</i> DATE: 1-11-10 | PHASE II DETAIL 2 | |
| SEAL | | |
| | SCALE: NONE | |
| | DATE: JAN 10 | |
| | DWG. BY: BLM | |
| | DESIGN BY: BLM | |
| REVIEWED BY: MTR | REVISIONS | |

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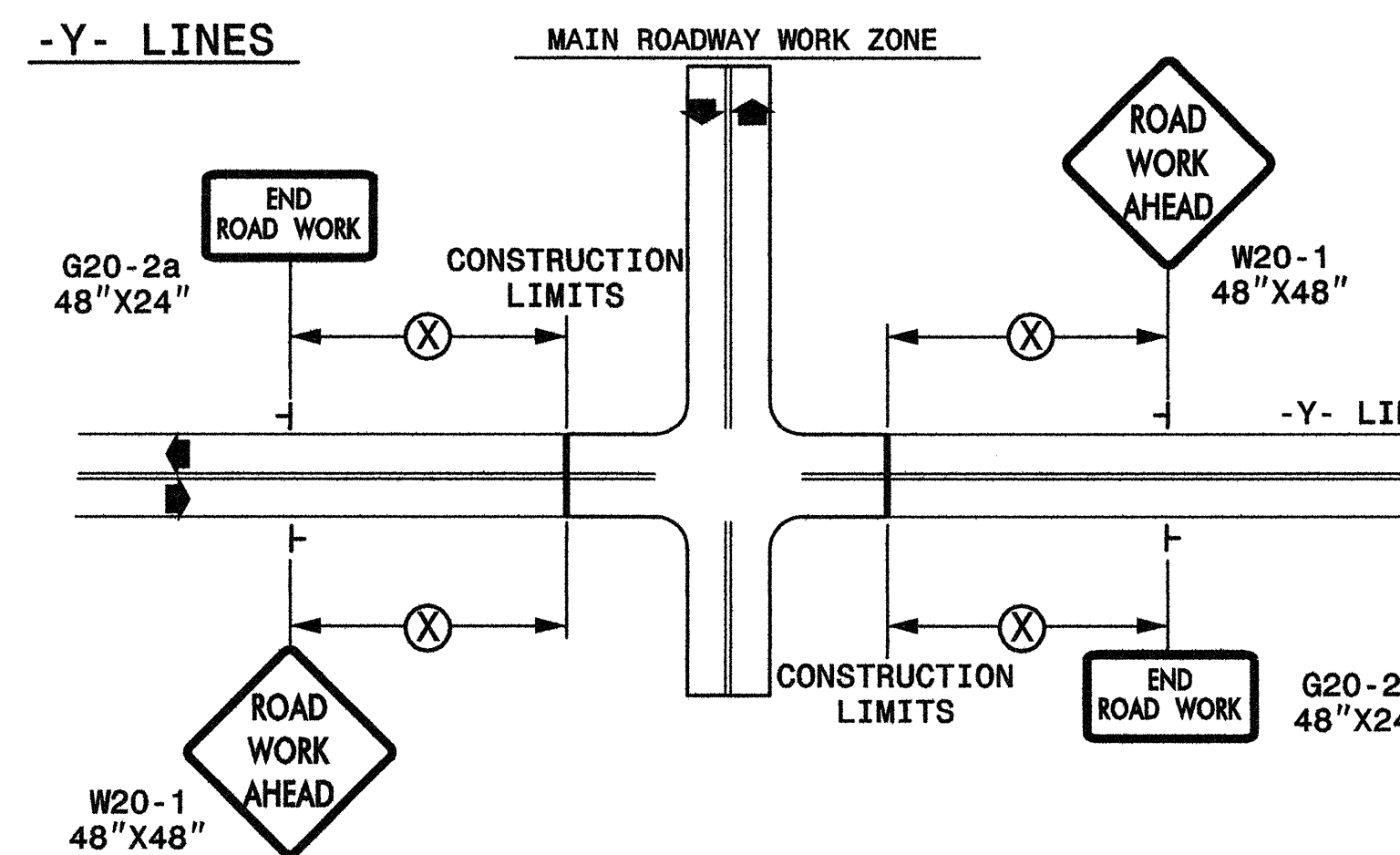
TWO-WAY UNDIVIDED ** (L-LINES)



| POSTED SPEED LIMIT (M.P.H.) | RECOMMENDED MINIMUM SIGN SPACING |
|-----------------------------|----------------------------------|
| ≤ 50 | 500' |
| ≥ 55 | 1000' |

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



DETAIL DRAWING FOR
 TWO-WAY UNDIVIDED
 WORK ZONE WARNING SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE 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.

LEGEND

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

| | | | |
|---|---|--|-----------|
| APPROVED: <i>Michael T. Kiepp</i> DATE: 1-11-10 | DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCE WORK ZONE WARNING SIGNS | | |
| | SCALE: NONE | | |
| | DATE: JAN 10 | | REVISIONS |
| | DWG. BY: BLM | | |
| | DESIGN BY: BLM | | |
| REVIEWED BY: MTR | | | |