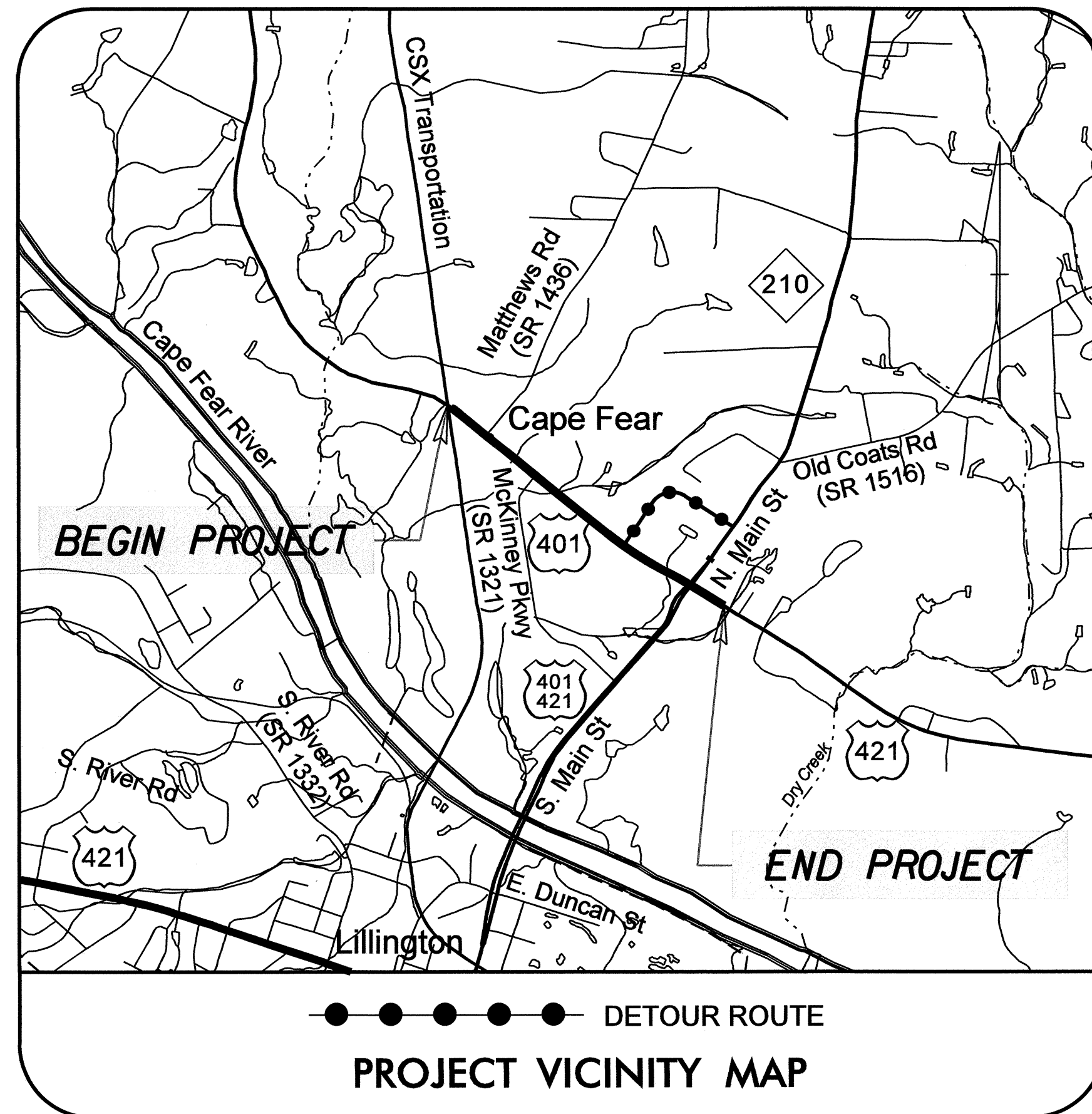


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HARNETT COUNTY



INDEX OF SHEETS

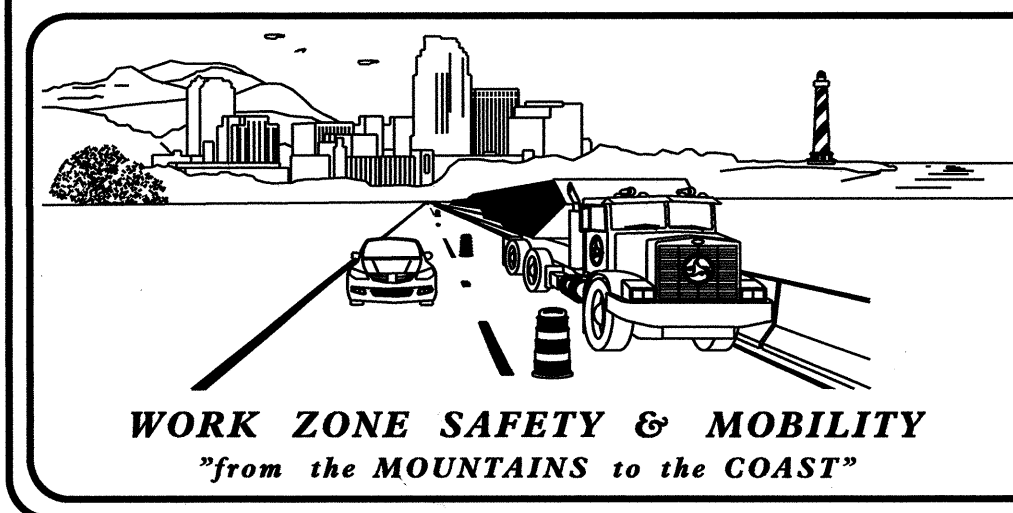
SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-1B AND 1C	GENERAL NOTES
TMP-2	TEMPORARY SHORING DATA
TMP-2A	ADVANCED WORK ZONE WARNING SIGNS
TMP-3 THRU 3B	TRAFFIC CONTROL PHASING
TMP-4 THRU 7	PHASE I DETAILS
TMP-8 THRU 11	PHASE II DETAILS
TMP-12	PHASE II OFF SITE DETOUR FOR DRAINAGE INSTALLATION
TMP-13 THRU 16	PHASE III DETAILS

SHEET NO.
TMP-1

R-5185

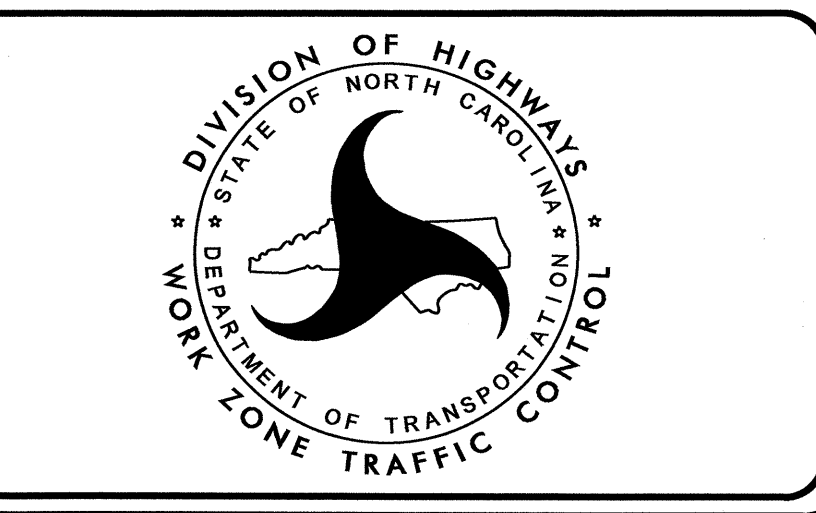
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25-MAR-2011 09:57 \\dot\dfsroot\0\p\o\TIP\Projects-R\5185\TrafficControl\TCP\TCP-R-5185-rc-fmp_01.dgn AT TE244749 dougjoynes



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1580 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1580
1020 BIRCH RIDGE DRIVE, RALEIGH, NC 27610 (DELIVERY)
PHONE: (919) 250-4094 FAX: (919) 250-4098

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
STEVE KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
DON PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER
DOUG JOYNER TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN



APPROVED: *[Signature]*
DATE: *April 1, 2011*

SEAL

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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
1101.04	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
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING 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 & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

WORK AREA

REMOVAL

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

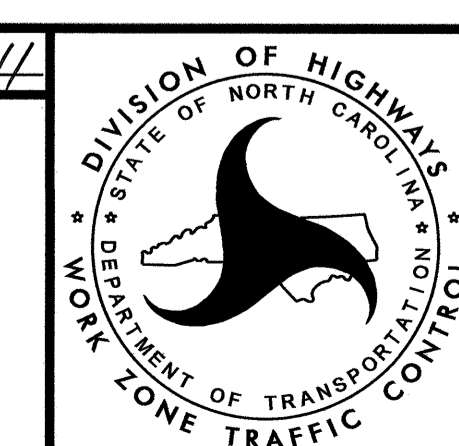
TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAVEMENT MARKINGS
		<u>PAINT (4")</u>
PA	WHITE EDGELINE	
PB	YELLOW EDGELINE	
PC	10 FT. WHITE SKIP	
PD	2 FT. WHITE MINISKIP	
PE	WHITE SOLID LANE LINE	
PI	YELLOW DOUBLE CENTER	
		<u>PAINT (8")</u>
PR	WHITE GORELINE	
PV	YELLOW DIAGONAL	
		<u>PAINT (24")</u>
P4	WHITE STOPBAR	
		<u>COLD APPLIED PLASTIC (4") TYPE 4-REMOVABLE TAPE</u>
RB	YELLOW EDGELINE	
		<u>PAINT (SYMBOL)</u>
QA	LEFT TURN ARROW	
QB	RIGHT TURN ARROW	
QC	STRAIGHT ARROW	
QE	COMBINATION RIGHT & STRAIGHT TURN ARROW	
		<u>PAINT (CHARACTER)</u>
QI	ALPHANUMERIC CHARACTER	

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AT TE244749
dougjoyner

APPROVED: DATE: 4/12/11

SEAL



ROADWAY STANDARD
DRAWINGS, LEGEND,
AND TEMPORARY
PAVEMENT MARKING
SCHEDULE

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 UNDESIRABLE 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:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
US 401	MONDAY THRU FRIDAY
NC 210	6:00 AM TO 9:00 AM
US 421	AND
	3:00 PM TO 6:00 PM

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

<u>ROAD NAME</u>
US 401
US 421
NC 210

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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 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.
- 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.
- DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US 401, NC 210, AND US 421.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- 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:

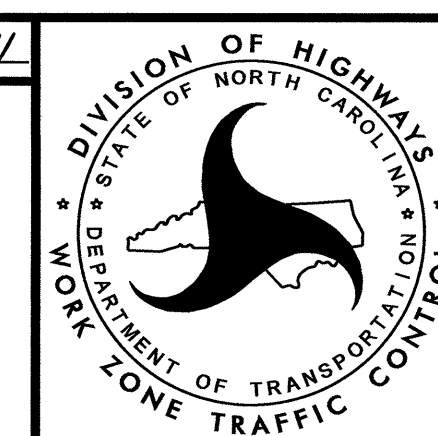
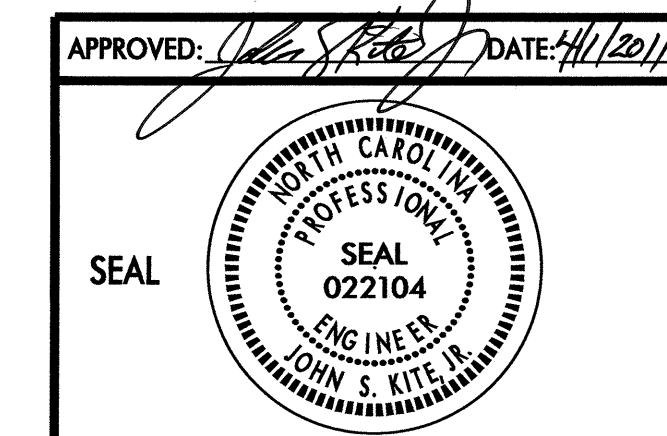
BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

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.
- 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 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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



GENERAL NOTES

GENERAL NOTES

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) PROVIDE PERMANENT SIGNING.
- N) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- O) PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- R) 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.

- S) 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 MOVABLE/PORTABLE CONCRETE 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	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

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

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

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
ALL ROADS	PAINT	TEMPORARY RAISED

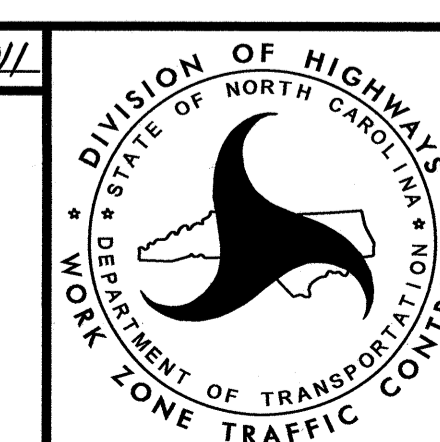
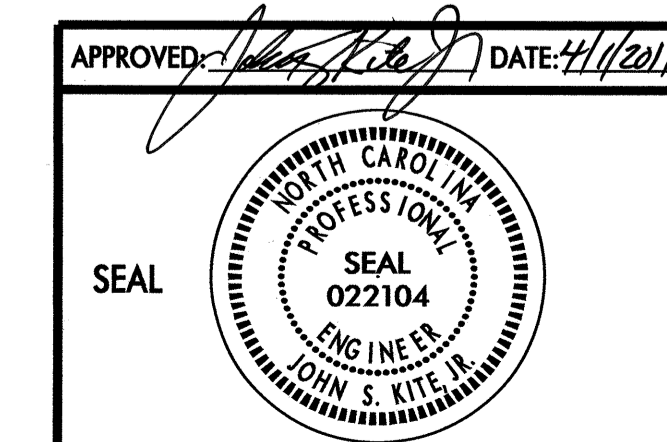
- Y) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- Z) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- AA) REMOVE/REPLACE ANY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

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

- DD) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- EE) 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.



GENERAL NOTES

TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
R-5185	TMP-2

TEMPORARY SHORING LOCATION NO.1

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. DO NOT USE STANDARD SHORING FROM STATION 21+32 +/- -L-, 3 FT RIGHT, TO STATION 21+79 +/- -L-, 3 FT RIGHT.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 21+32 +/- -L- TO STATION 21+79 +/- -L-, 3 FT RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
 - ABOVE ELEVATION 140 FT:
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ PSF
 - BELOW ELEVATION 140 FT:
 EFFECTIVE UNIT WEIGHT, $\gamma' = 90$ PCF
 FRICTION ANGLE, $\phi = 42$ DEGREES
 COHESION, $c = 0$ PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 21+32 +/- -L-, 3 FT RIGHT, TO STATION 21+79 +/- -L-, 3 FT RIGHT. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.
7. DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 21+32 +/- -L-, 3 FT RIGHT, TO STATION 21+79 +/- -L-, 3 FT RIGHT MAY NOT PENETRATE BELOW ELEVATION 140 FT DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

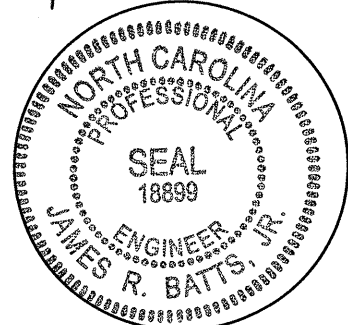
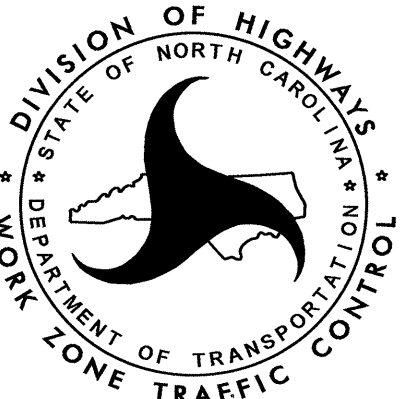
QUANTITY = 433 SF

TEMPORARY SHORING LOCATION NO.2

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. DO NOT USE STANDARD SHORING FROM STATION 31+33 +/- -L-, 5 FT LEFT, TO STATION 31+78 +/- -L-, 5 FT LEFT.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 31+33 +/- -L- TO STATION 31+78 +/- -L-, 5 FT LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
 - ABOVE ELEVATION 140 FT:
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ PSF
 - BELOW ELEVATION 140 FT:
 EFFECTIVE UNIT WEIGHT, $\gamma' = 90$ PCF
 FRICTION ANGLE, $\phi = 42$ DEGREES
 COHESION, $c = 0$ PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 31+33 +/- -L-, 5 FT LEFT, TO STATION 31+78 +/- -L-, 5 FT LEFT. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.
7. DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 31+33 +/- -L-, 5 FT LEFT, TO STATION 31+78 +/- -L-, 5 FT LEFT MAY NOT PENETRATE BELOW ELEVATION 140 FT DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK.

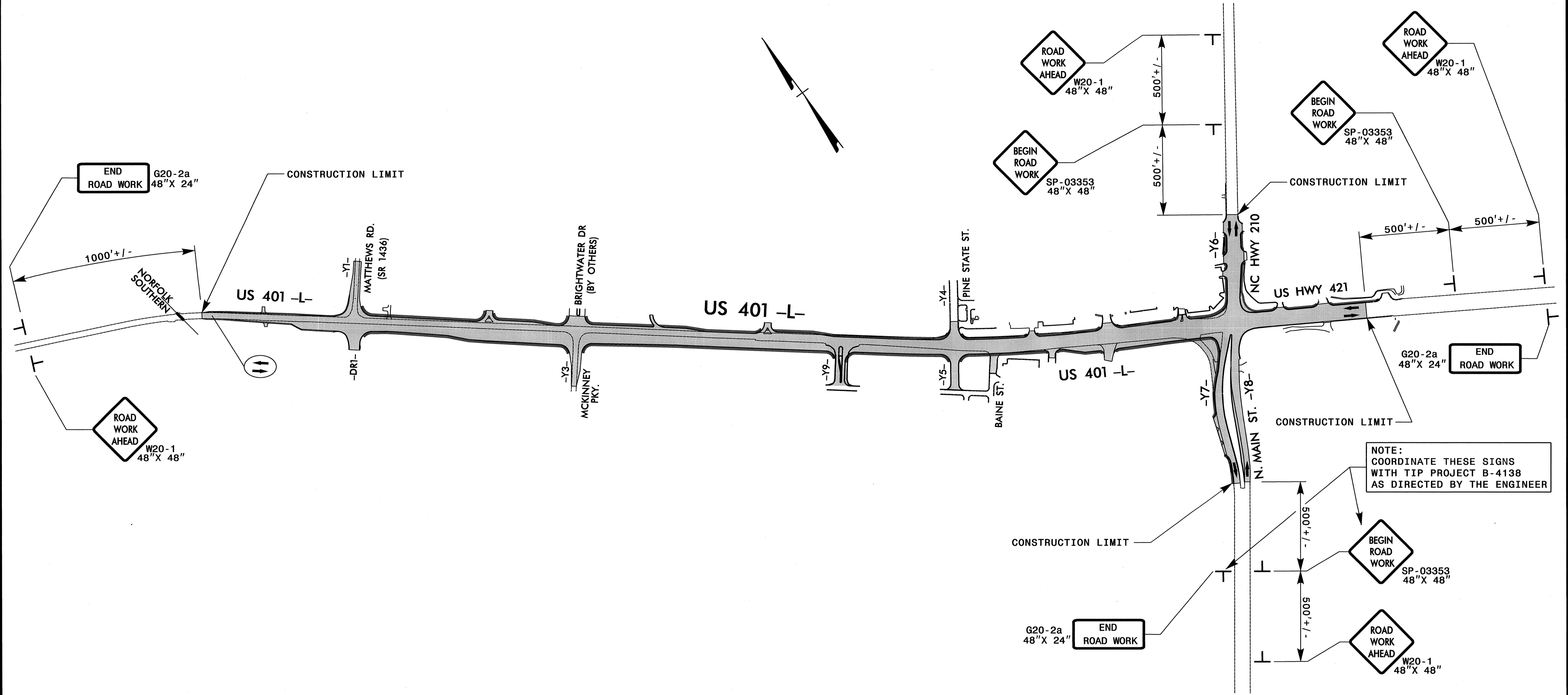
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 AT WZTC244749
 dougjoynes

APPROVED: <i>James R. Battis</i> DATE: 12/21/10 		<h2 style="margin: 0;">TEMPORARY SHORING DATA</h2>
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ADVANCED WORK ZONE WARNING SIGNING

PROJ. REFERENCE NO.	SHEET NO.
R-5185	TMP-2A



NOTE:
COORDINATE THESE SIGNS
WITH TIP PROJECT B-4138
AS DIRECTED BY THE ENGINEER

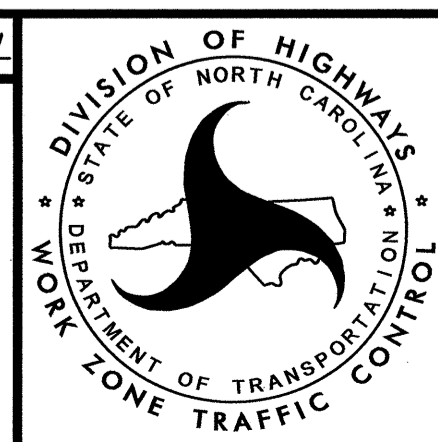
GENERAL NOTES

- 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.

LEGEND
STATIONARY SIGN DIRECTION OF TRAFFIC FLOW

APPROVED: *[Signature]* DATE: 4/1/2011

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 022104
 ENGINEER
 JOHN S. KITE, III



ADVANCED WORK ZONE WARNING SIGNS

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PHASING

PHASE I

STEP 1 -- INSTALL ADVANCE WARNING SIGNS. (SEE TMP-2A)

NOTE: CONTRACTOR MAY PROCEED TO STEP 3 PRIOR TO COMPLETION OF STEP 2.

STEP 2 -- AWAY FROM TRAFFIC AND USING FLAGGERS AS NECESSARY, BEGIN PHASE I GRADING AND DRAINAGE INSTALLATION FROM -L- STA. 8+75 +/- TO STA. 55+20 +/- (RIGHT). (SEE RSD 1101.02, SHEET 1 AND TMP-4 THRU TMP-7)

-- DRAINAGE INSTALLATION NOTES:

- A. FOR THE 15" PIPE AT -L- STA. 20+50 +/-, USE FLAGGERS TO OPEN CUT EXIST. US 401 (-L-) (SEE TMP-4)
- B. FOR THE 15" PIPE AT -L- STA. 22+40 +/-, AWAY FROM TRAFFIC PARTIALLY INSTALL AND PLUG. DO NOT INSTALL DRAINAGE STR. 0505 DURING THIS PHASE. (SEE TMP-5)
- C. FOR THE 42" PIPE AT -L- STA. 55+25 +/-, USE TRENCHLESS INSTALLATION. (SEE TMP-7)
- D. INSTALL REMAINING PHASE I DRAINAGE AWAY FROM TRAFFIC.

STEP 3 -- USING FLAGGERS, INSTALL 4" WHITE EDGELINE (PAINT) ADJACENT TO THE SOUTHBOUND TRAVEL LANE OF US 401 (-L-) FROM -L- STA. 19+00 +/- TO STA. 24+15 +/- & STA. 29+14 +/- TO STA. 34+14 +/- (SEE RSD 1101.02, SHEET 1 AND TMP-4 AND 5)

STEP 4 -- USING FLAGGERS, PAVE A TEMPORARY 55 FT. x 5 FT. ASPHALT PAD (1.5" S9.5C OR EQUIVALENT) FOR THE PCB END FLARES AND CRASH CUSHIONS (SEE RSD 1101.02, SHEET 1, AND DETAIL "A" AND "B" ON TMP-4 AND 5)

-- INSTALL STATIONARY WARNING SIGNS AT
-L- STA. 9+00 +/-, STA. 14+00 +/-, AND
STA. 19+00 +/- (SEE TMP-4)

STEP 5 -- USING FLAGGERS INSTALL PCB WITH CRASH CUSHIONS FOR CULVERT CONSTRUCTION IN THE FOLLOWING LOCATIONS (SEE RSD 1101.02, SHEET 1 AND TMP-4 AND 5):

- -L- STA. 19+65 +/- TO STA. 23+65 +/-
- -L- STA. 29+64 +/- TO STA. 33+64 +/-

STEP 6 -- BEHIND PCB, INSTALL TEMPORARY SHORING FOR CULVERT CONSTRUCTION IN THE FOLLOWING LOCATIONS (SEE TMP-4 AND 5):

- -L- STA. 21+32 +/- TO STA. 21+79 +/- (3 FT. RT. OF -L-)
- -L- STA. 31+33 +/- TO STA. 31+78 +/- (5 FT. LT. OF -L-)

SEE TMP-2 FOR TEMPORARY SHORING DATA.

STEP 7 -- BEHIND PCB, CONSTRUCT PHASE I CULVERTS AT -L- STA. 21+65 +/- AND -L- STA. 31+64 +/- (SEE TMP-4 AND 5)

NOTE: CONTRACTOR MAY PROCEED TO STEP 8 PRIOR TO COMPLETION OF STEP 7.

STEP 8 -- INSTALL AND ACTIVATE TEMPORARY SIGNAL 06-0129T1 AT THE INTERSECTION OF US 401/US 421/NC 210 (SEE SIGNAL PLANS)

- USING RSD 1101.02, SHEET 3 (RIGHT LANE CLOSURE), PAVE THE EXISTING GORE BETWEEN EXIST. US 401 (-L-) AND NORTH MAIN ST. (-Y7-) TO THE EDGE AND ELEVATION OF EXIST. PAVEMENT FROM -L- STA. 55+65 +/- TO -Y7- STA. 11+70 +/- INCLUDING CURB AND GUTTER, DRAINAGE STR. 810 AND A PARTIAL SEGMENT OF THE 15" PIPE. (SEE INSET "A" ON TMP-7)

STEP 9 -- USING FLAGGERS AND RIGHT LANE CLOSURE, REMOVE AND REPLACE EXISTING PAVEMENT MARKINGS IN THE SOUTHBOUND LANES AND STRIPE THE TEMPORARY PATTERN FROM -L- STA. 48+00 +/- TO -Y7- STA. 11+70 +/- (SEE RSD 1101.02, SHEET 1 AND 3, AND TMP-6 AND 7)

- ACTIVATE TEMPORARY SIGNAL 06-0129T2 AT US 401/US 421/NC 210 INTERSECTION FOR THE TEMPORARY TRAFFIC PATTERN DETAILED ON TMP-7. (SEE TMP-7 AND SIGNAL PLANS)

STEP 10 -- USING FLAGGERS AND LANE CLOSURES, BEGIN PHASE I PAVING OPERATIONS AS DESCRIBED BELOW:

- FROM -L- STA. 8+75 +/- TO STA. 16+45 +/- AND FROM -L- STA. 40+35 +/- TO -Y7- STA. 17+78 +/-, PAVE UP THRU THE INTERMEDIATE COURSE. (NOTE: THE FIRST LIFT OF SURFACE COURSE AND PHASE II TEMPORARY MARKINGS WILL BE PLACED AS PART OF THE UPCOMING SHIFT TO THE PHASE II TRAFFIC PATTERN. (SEE SECTION VIEWS AT -L- STA. 12+50, -L- STA. 48+00, AND -L- STA. 55+00 ON TMP-4,6 AND 7)
- FROM STA. 16+45 +/- TO STA. 40+35 +/- PAVE UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) FOR THE PHASE II TRAFFIC PATTERN (SEE SECTION VIEWS AT -L- STA. 18+00, -L- STA. 21+65 +/-, -L- STA. 31+64 +/- AND -L- STA. 41+00 +/- ON TMP-4 THRU TMP-6. FOR TEMPORARY PHASE II PATTERN, SEE TMP-8 THRU TMP-11.)

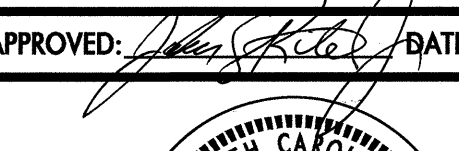


- CONSTRUCT AND PAVE -Y5- UP THRU THE INTERMEDIATE SURFACE COURSE AND STRIPE FOR THE PATTERN SHOWN ON TMP-6A. INSTALL AND ACTIVATE TEMPORARY SIGNAL 06-1317T1 AND OPEN -Y5- TO TRAFFIC.

- INSTALL TEMPORARY GUARDRAIL (DOWNSTREAM) AT BOTH CULVERT SITES. (SEE TMP-5 AND ROADWAY PLANS)

STEP 11 -- CLOSE AND CONSTRUCT BAIN ST. (SEE TMP-6A)

- CLOSE AND CONSTRUCT -Y9-. (SEE TMP-6A)

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AT TE244749
dougjoynes

APPROVED:  DATE: 4/1/2011 		<h1 style="margin: 0;">PHASING</h1>
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PHASING

PHASE III

- STEP 1 -- USING LANE CLOSURES AND FLAGGERS, WEDGE/RESURFACE EXISTING PAVEMENT THRU THE FIRST LAYER OF SURFACE COURSE AND PLACE TEMPORARY PAINT MARKINGS FOR THE PHASE III TRAFFIC PATTERN DETAILED ON SHEETS TMP-13 THRU TMP-16 (SEE SECTION VIEWS FOR WEDGING NECESSARY TO SHIFT TRAFFIC).
(SEE RSD 1101.02, SHEET 1 AND 3)
- REMOVE AND REPLACE EXISTING LEFT TURN SYMBOL WITH A STRAIGHT SYMBOL ON THE NB APPROACH TO THE INTERSECTION OF US 401/US 421/NC 210.
- REMOVE AND REPLACE STOP BAR ON -Y5- AND ACTIVATE TEMPORARY SIGNAL 06-1317T3 AND 06-0129T4 AND SHIFT NB TRAFFIC TO THE PHASE III TRAFFIC PATTERN. (SEE SIGNAL PLANS AND TMP-15 AND 16)
- STEP 2 -- AWAY FROM TRAFFIC, CONSTRUCT LEFT SIDE PAVING AND WIDENING INCLUDING CULVERT CONSTRUCTION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 8+75 +/- TO STA. 58+00 +/- (SEE TMP-13 THRU TMP-16)
- USING LANE CLOSURES, CONSTRUCT THE CURB AND GUTTER ON BOTH SIDES OF NC 210 (-Y6-) AND THE LEFT SIDE OF US 421 (-L-) (SEE RSD 1101.02, SHEET 3 AND TMP 16)
- USING LANE CLOSURES, CONSTRUCT THE WIDENING ON BOTH SIDES OF -Y8- TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT. (SEE RSD 1101.02, SHEET 3 AND TMP 16)

COMPLETE THE WORK OF STEP 3 BETWEEN THE HOURS OF 6:00 PM FRIDAY AND 6:00 AM THE FOLLOWING MONDAY MORNING. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

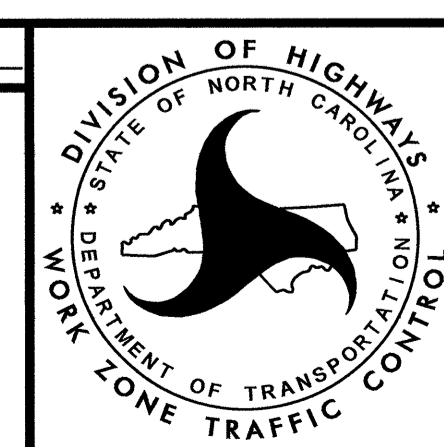
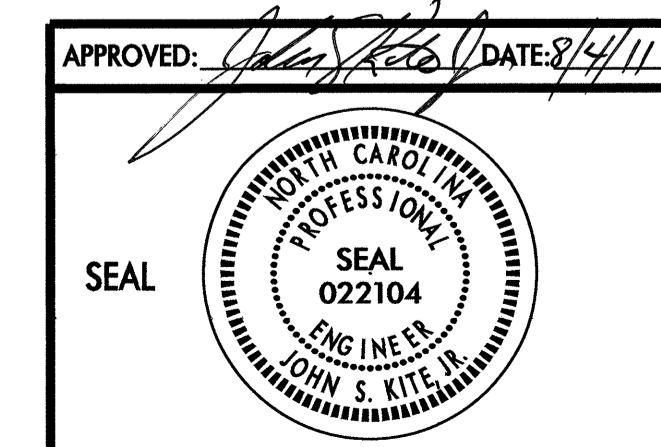
- STEP 3 -- INSTALL A LEFT LANE CLOSURE ON -Y8- INCLUDING CLOSURE OF THE LEFT TURN LANE TO US 401 NB AND INSTALL CMS MESSAGE BOARDS (SHORT TERM) AND UN-COVER STATIONARY DETOUR SIGN (SEE RSD 1101.02, SHEET 3 AND SIGNS A, F, D, AND E ON TMP-12)
- CONSTRUCT CONCRETE PAD WITHIN THE EXISTING LEFT AND THRU LANE ON -Y8-. LEFT TURN TRAFFIC DETOURED TO PINE STATE STREET. THRU TRAFFIC CHANNLED AROUND THE CONSTRUCTION USING THE EXISTING RIGHT TURN LANE.
- RE-OPEN TO EXISTING TRAFFIC PATTERN.

COMPLETE THE WORK OF STEP 4 BETWEEN THE HOURS OF 6:00 PM FRIDAY AND 6:00 AM THE FOLLOWING MONDAY MORNING. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

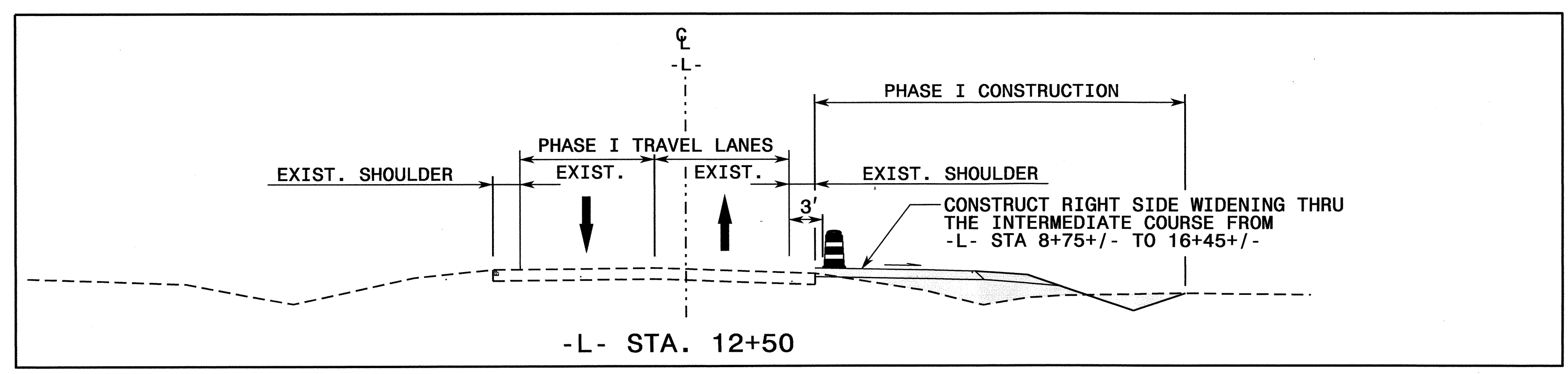
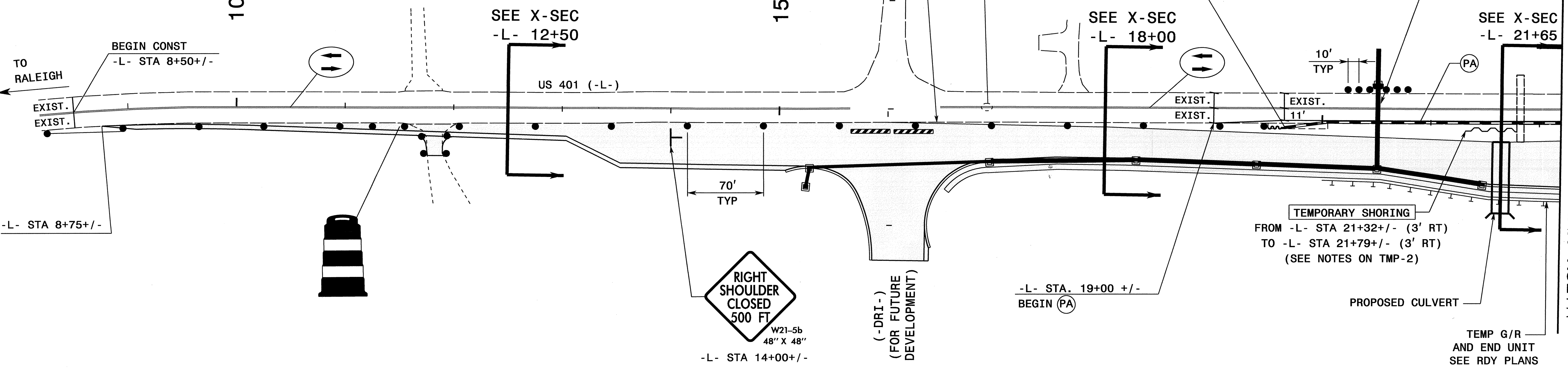
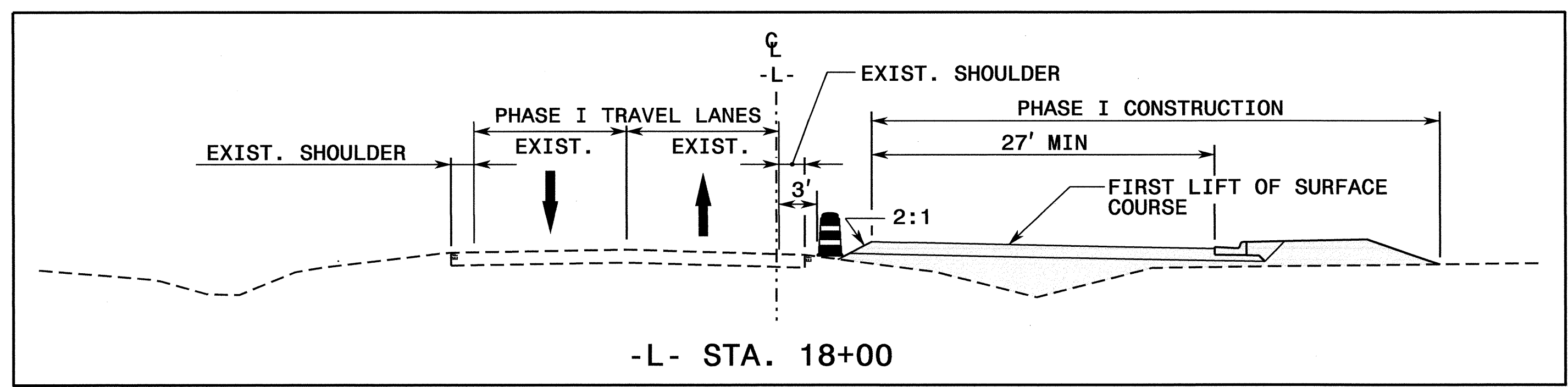
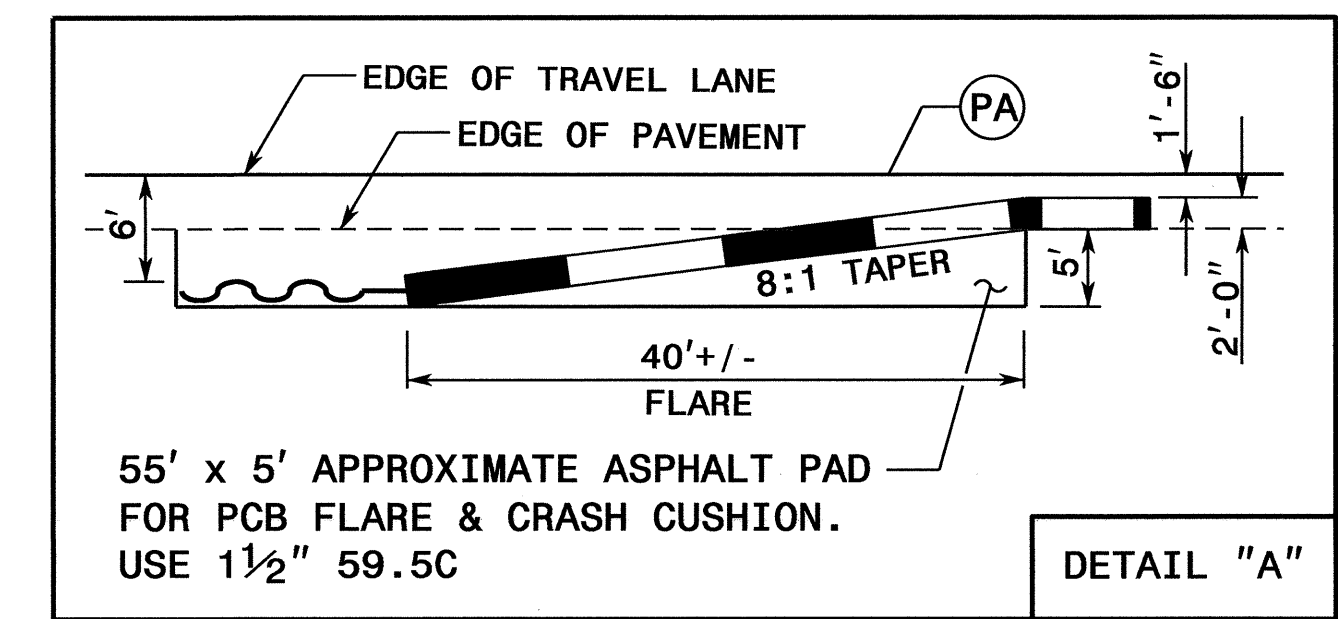
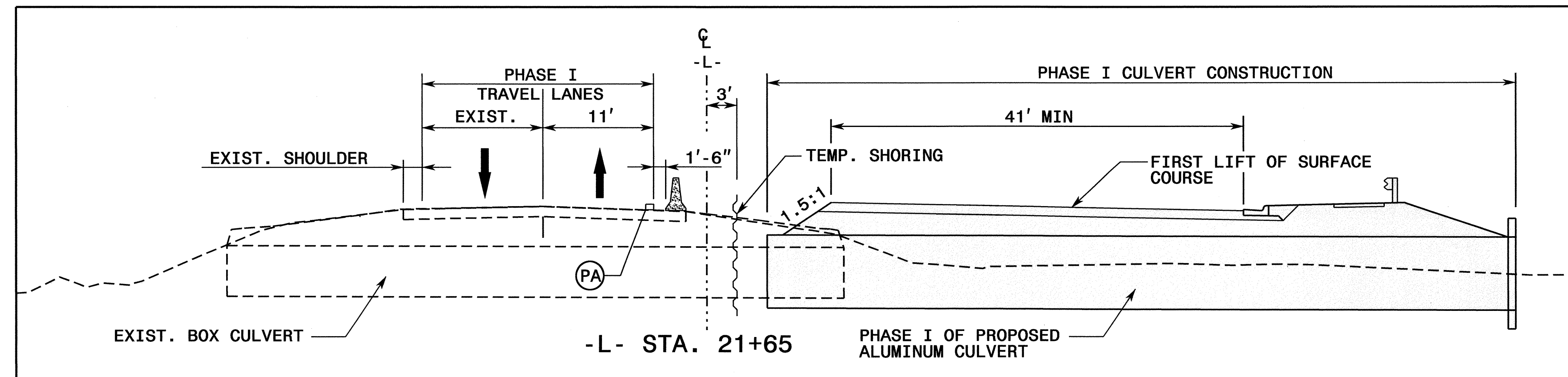
- STEP 4 -- PRIOR TO THE START OF THE THREE LANE SEGMENT OF US 421 (-L-) EAST OF THE PROJECT LIMITS, CLOSE THE CENTER TURN LANE AND LEFT THRU LANE IN ACCORDANCE WITH RSD 1101.02, SHEET 3. MAINTAIN A DRUM LINE TO -L- STA. 61+20 +/- . USE A 100' DOWNSTREAM TAPER TERMINATING AT STA. 60+20 +/- .
- CONSTRUCT CONCRETE LANE REPLACEMENT WITHIN THE LEFT TURN LANES OF US 421 (-L-) FROM -L- STA. 61+29 +/- TO STA. 61+79 +/- .
- RE-OPEN TO EXISTING TRAFFIC PATTERN.

PHASE IV

- STEP 1 -- USING FLAGGERS, REMOVE THE CONCRETE BARRIER AND CRASH CUSHIONS (SEE RSD 1101.02, SHEET 1)
- STEP 2 -- ADJUST STOPBARS ON PINE STATE ST. AND MATTHEWS RD. TO MATCH THE FINAL TRAFFIC PATTERN. (SEE PM PLANS)
- ACTIVATE FINAL SIGNAL AT PINE ST. STREET AND US 401 WITH INACTIVE LANES DRUMMED OFF.
- STEP 3 -- PLACE THE FINAL LIFT OF SURFACE COURSE FOR THE OUTSIDE NB LANE OF US 401 FROM -L- STA. 8+75 +/- TO STA. 57+30 +/- AND SHIFT NB TRAFFIC.
- STEP 4 -- WITH SB TRAFFIC REMAINING IN THE PHASE III PATTERN AND A SINGLE THRU LANE OF NB TRAFFIC IN THE PROPOSED OUTSIDE NB LANE, CONSTRUCT MONOLITHIC CONCRETE ISLANDS ON US 401 IN THE FOLLOWING LOCATIONS:
- -L- STA. 16+40 +/- TO STA. 18+30 +/-
 -- -L- STA. 27+36 +/- TO STA. 31+95 +/-
 -- -L- STA. 40+70 +/- TO STA. 44+20 +/-
 -- -L- STA. 45+20 +/- TO STA. 57+50 +/-
- USING LANE CLOSURES, CONSTRUCT THE MONOLITHIC CONCRETE ISLANDS ON NC 210 (-Y6-) AND US 421 (-L-) IN THE FOLLOWING LOCATIONS (SEE RSD 1101.02, SHEET 1 AND 3)
- -Y6- STA. 11+29 +/- TO STA. 15+00 +/-
 -- -L- STA. 58+50 +/- TO STA. 64+50 +/-
- STEP 5 -- USING LANE CLOSURES AND FLAGGERS, COMPLETE THE PLACEMENT OF THE FINAL LIFT OF SURFACE COURSE THROUGHOUT THE PROJECT LIMITS. PLACE FINAL MARKINGS IN THE FINAL TRAFFIC PATTERN. (SEE RSD 1101.02, SHEET 1 AND 3)
- ACTIVATE FINAL SIGNAL AT US 401/US 421/NC 210 AND OPEN PROJECT TO FINAL PATTERN (SEE SIGNAL PLANS).
- STEP 6 -- REMOVE ALL TRAFFIC CONTROL DEVICES.



PHASING



-L- STA 20+50 +/- USE FLAGGERS TO OPEN CUT EXIST US 401 TO INSTALL 15" PIPE

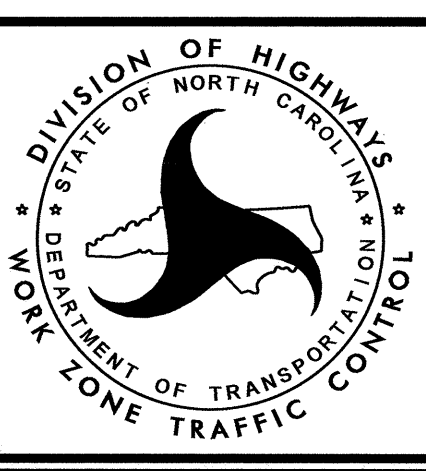
-L- STA. 19+65 +/- BEGIN DRAINAGE PCB WITH CRASH CUSHION 6' OFFSET FROM TRAVEL LANE. SEE DETAIL "A"

-L- STA. 19+00 +/- BEGIN (PA)

SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

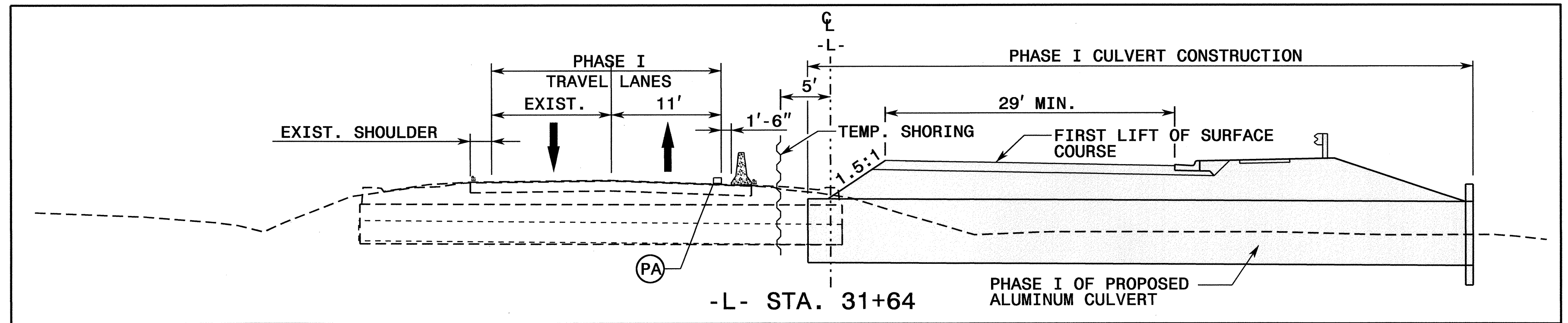
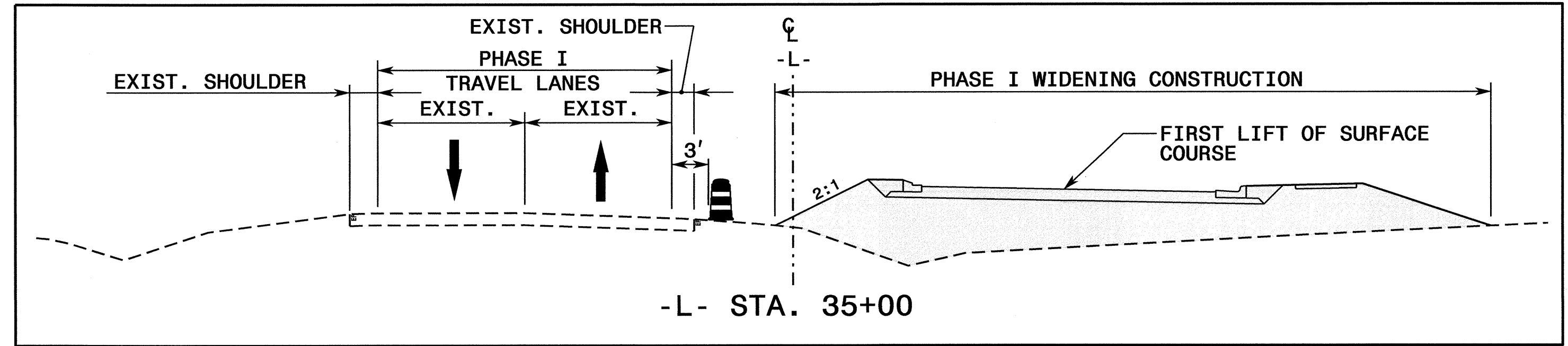
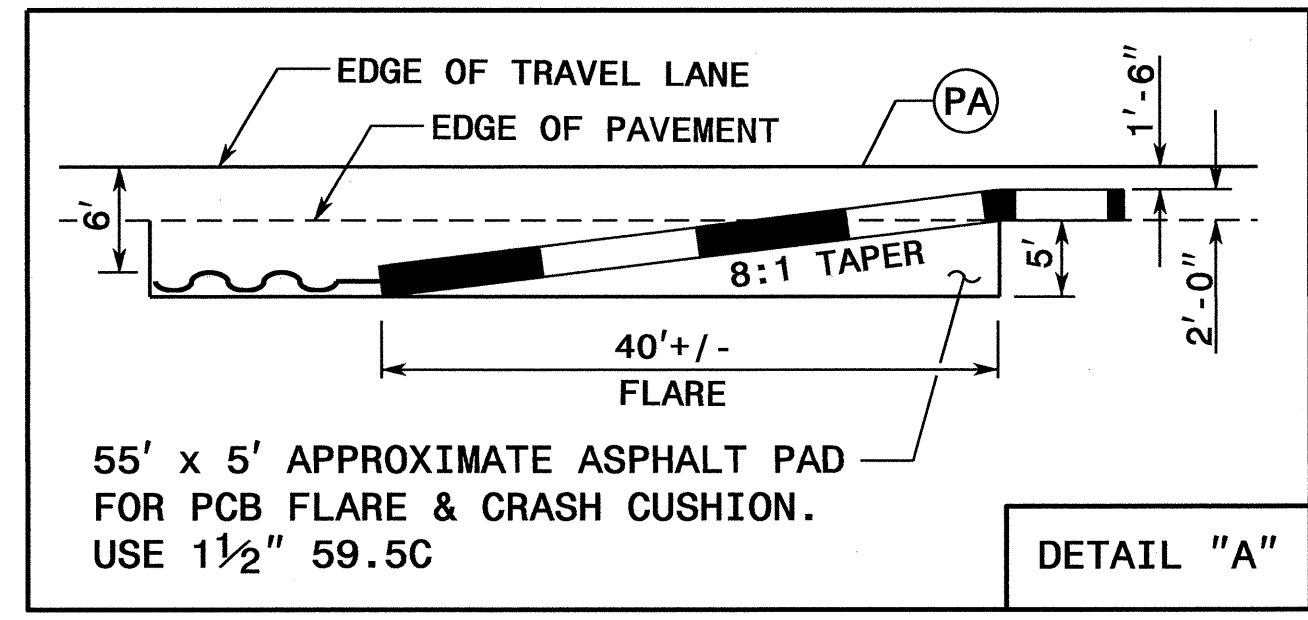
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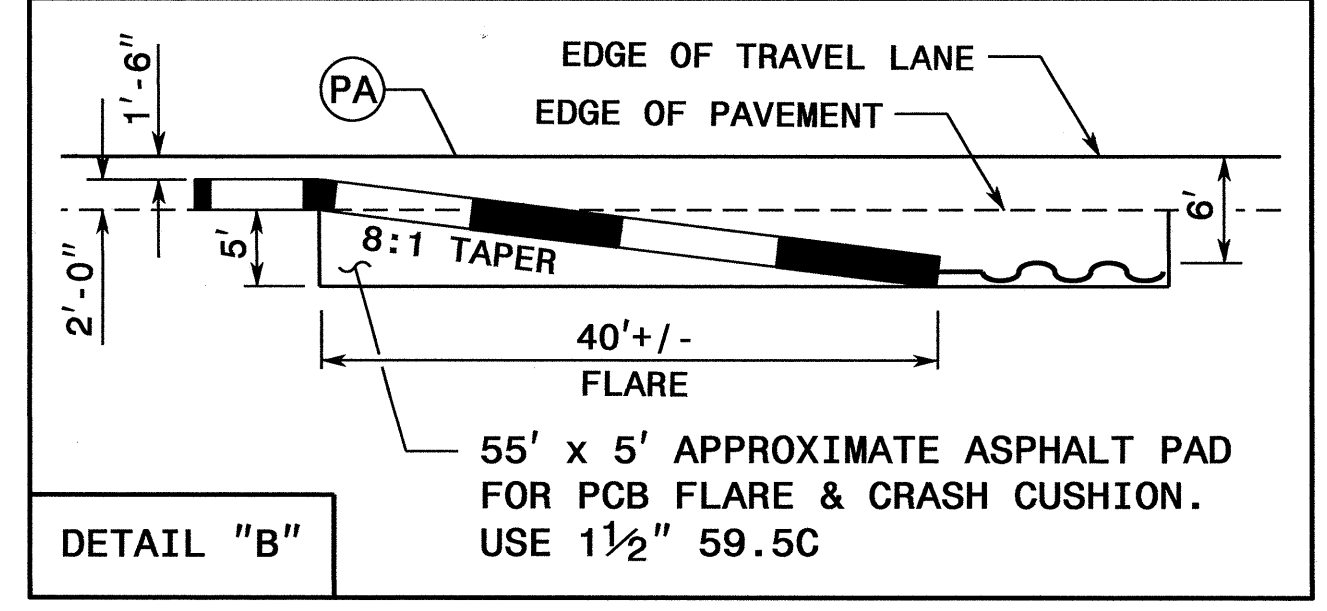
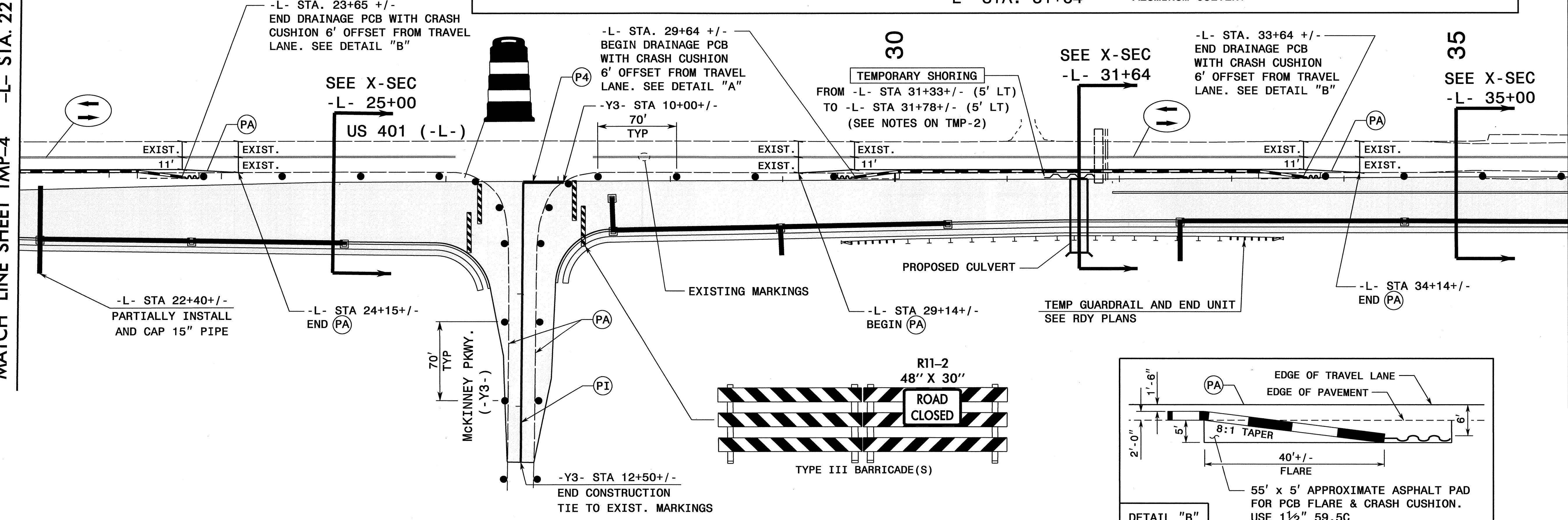
PHASE I
RIGHT SIDE WIDENING

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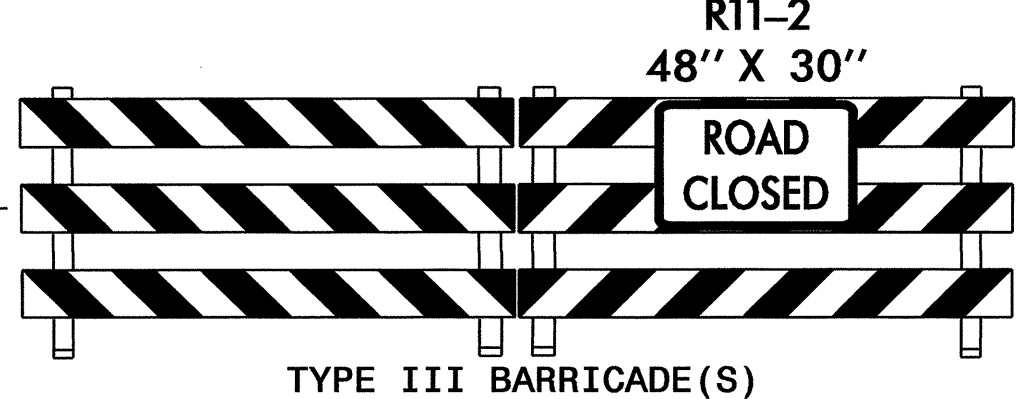
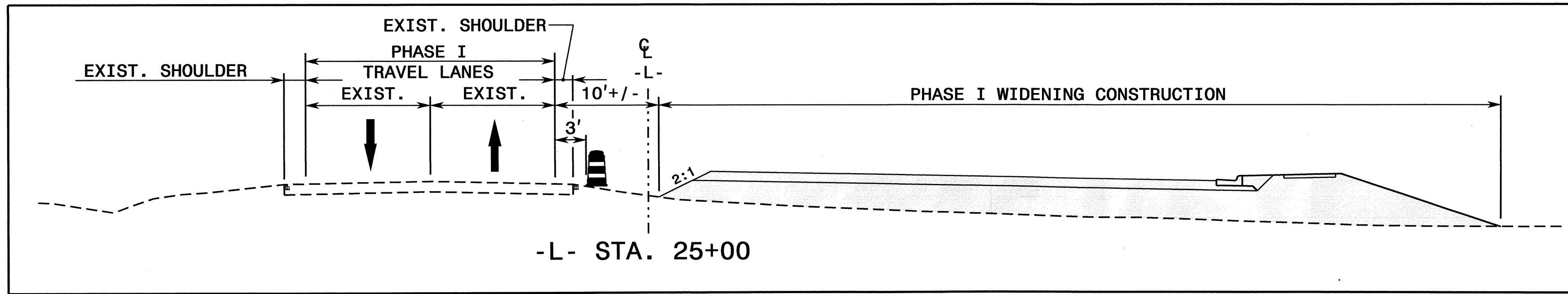


MATCH LINE SHEET TMP-4 -L- STA. 22 + 20.00

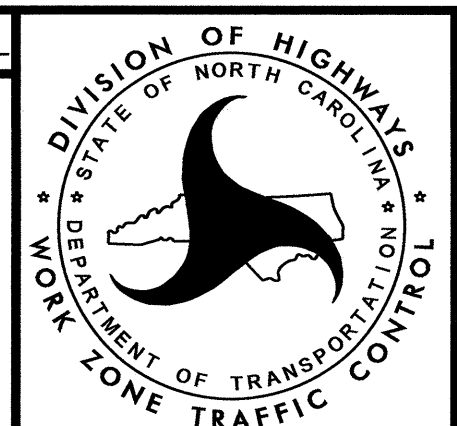
MATCH LINE SHEET TMP-6 -L- STA. 36 + 00.00



SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND



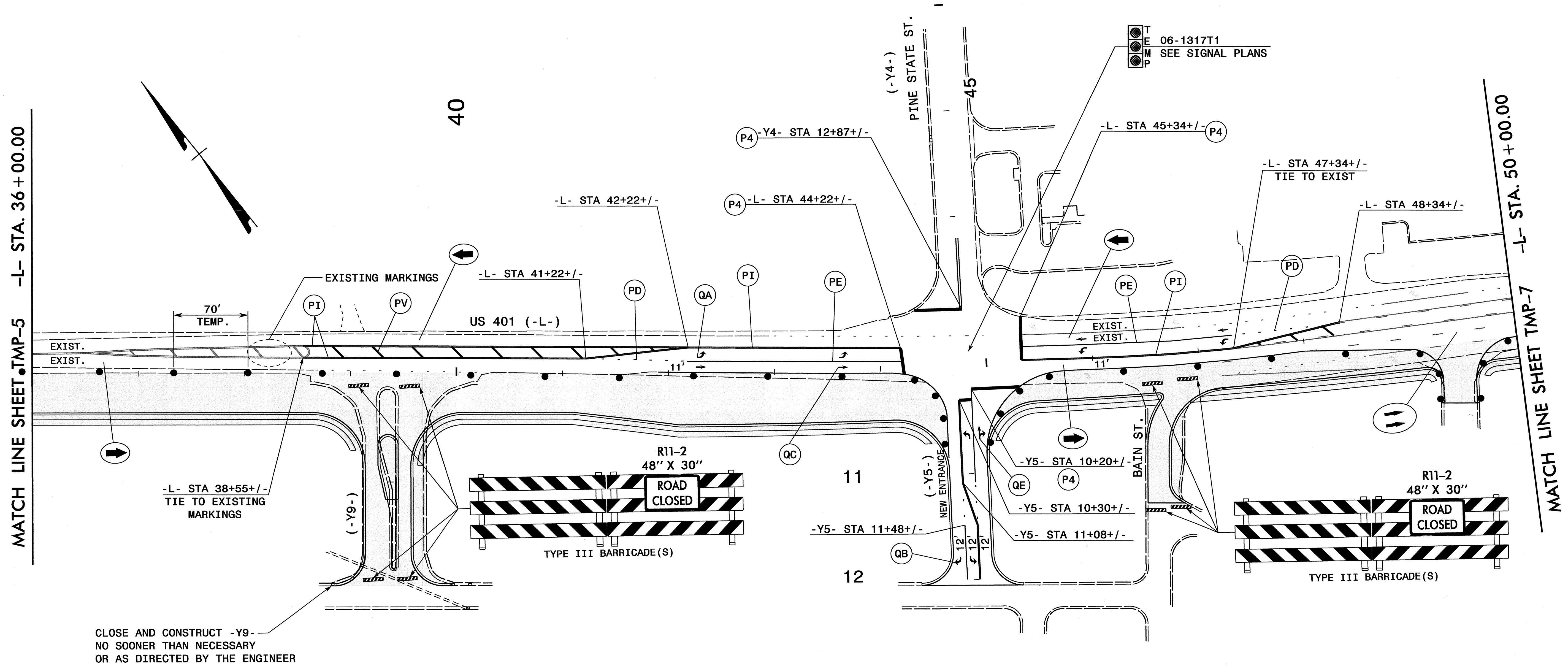
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 022104



PHASE I
RIGHT SIDE WIDENING

TEMPORARY PAVEMENT MARKINGS

- 1 - SPACE CHEVRONS IN PAINTED ISLANDS AT 35' CENTERS ON 2:1 SLOPE.
- 2 - INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 40' CENTERS ALONG DOUBLE YELLOW CENTERLINES OUTLINING THE PAINTED ISLAND SEE RSD.
- 3 - FOR TURN LANES, INSTALL TEMPORARY RPM'S AT 30' CENTERS ON MINI-SKIP LINES AND 20' CENTERS FOR SOLID LANE LINES.
- 4 - SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

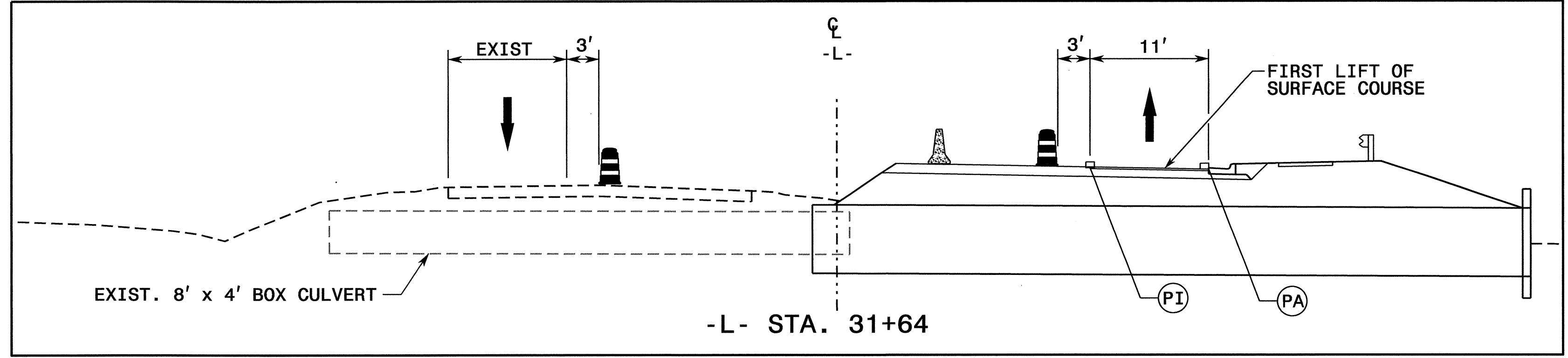
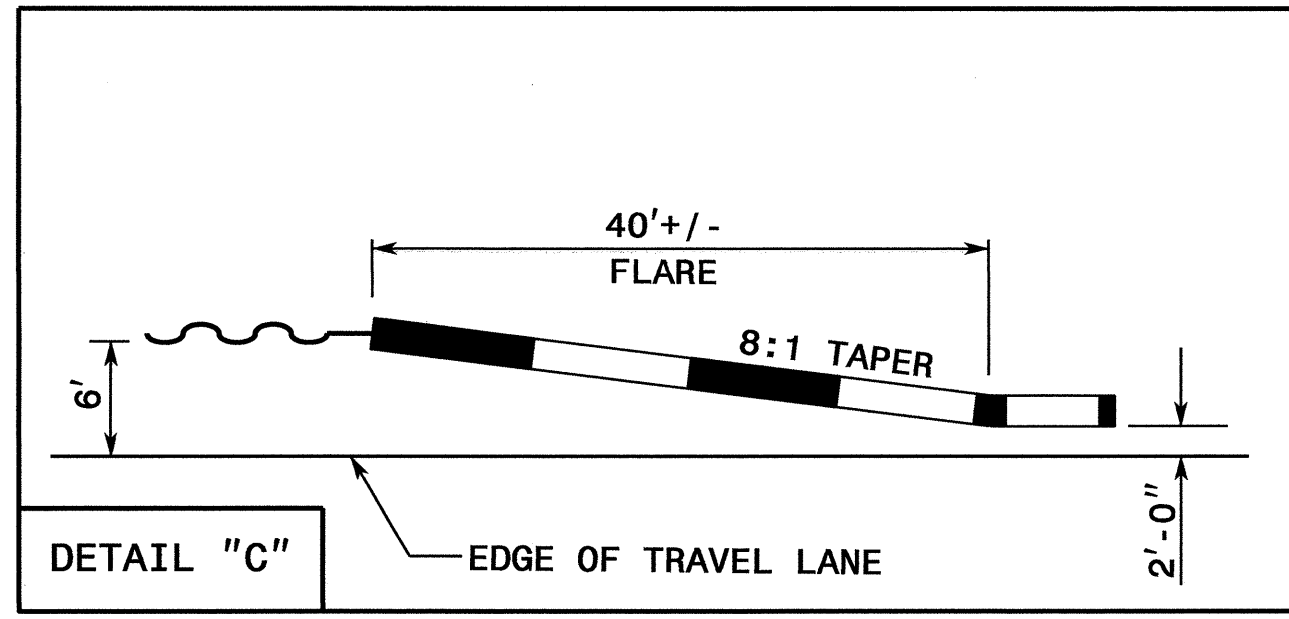


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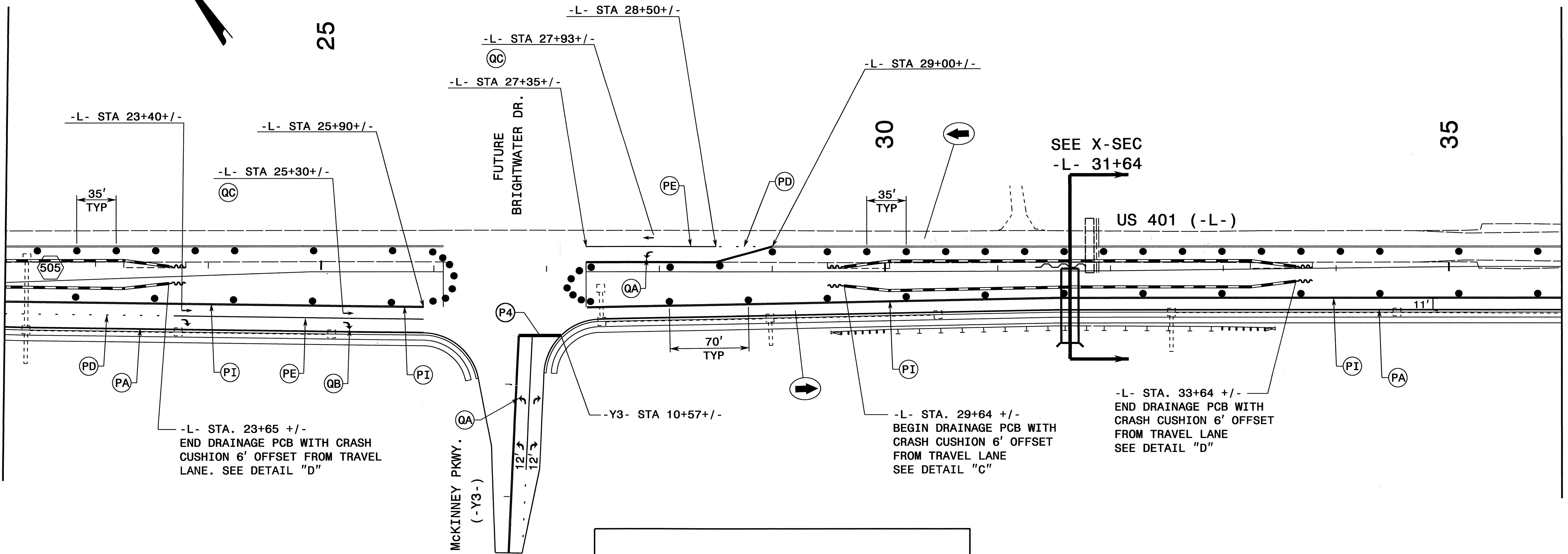
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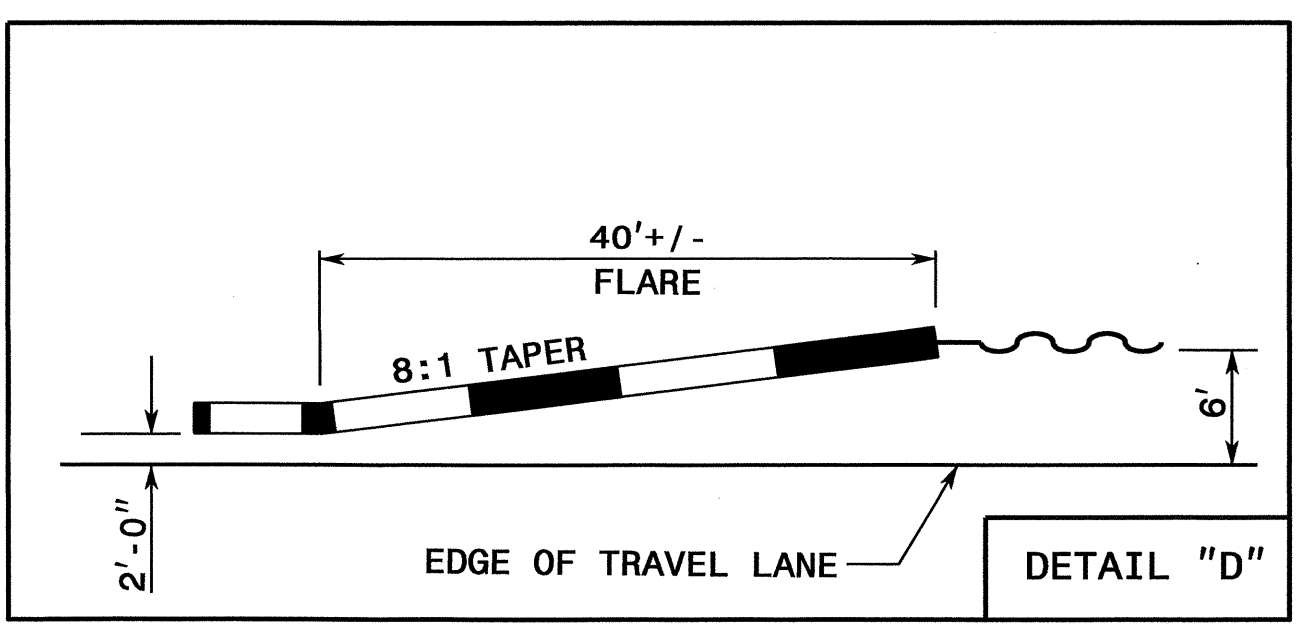
PHASE I
RIGHT SIDE WIDENING



MATCH LINE SHEET TMP-8 -L- STA. 22 + 20.00



MATCH LINE SHEET TMP-10 -L- STA. 36 + 00.00



NOTE
 INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 80' CENTERS (40' IN SHIFT TAPERS) ALONG DOUBLE YELLOW CENTERLINE. SEE TMP-1A FOR PAVEMENT MARKING LEGEND.

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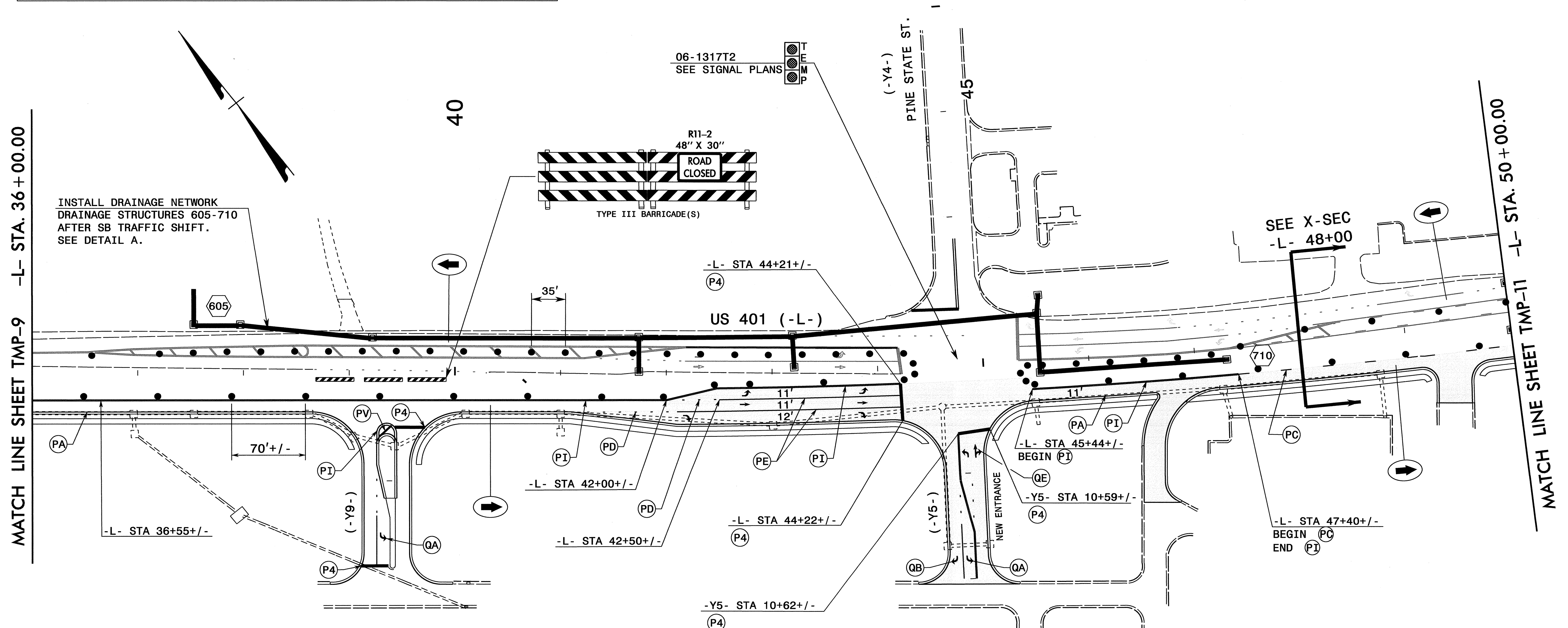
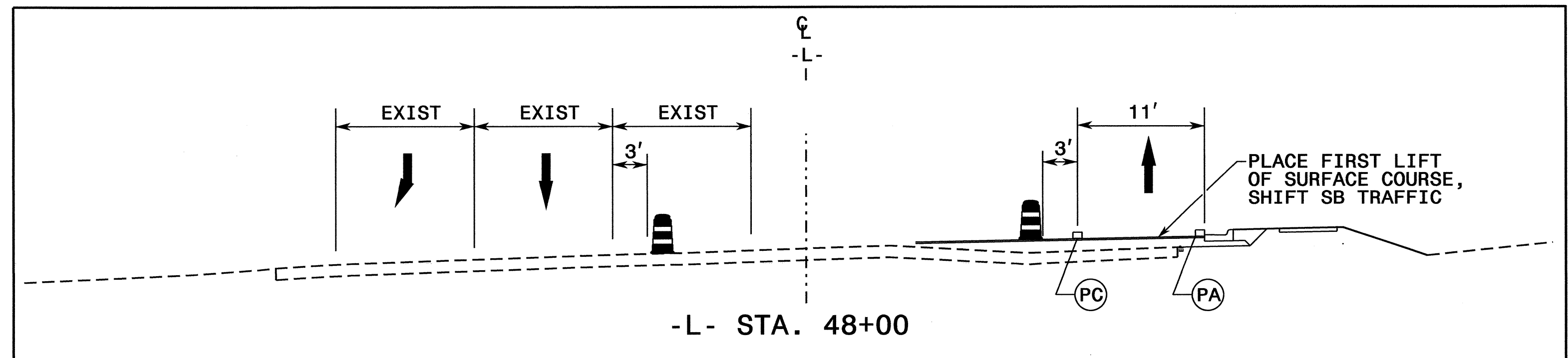
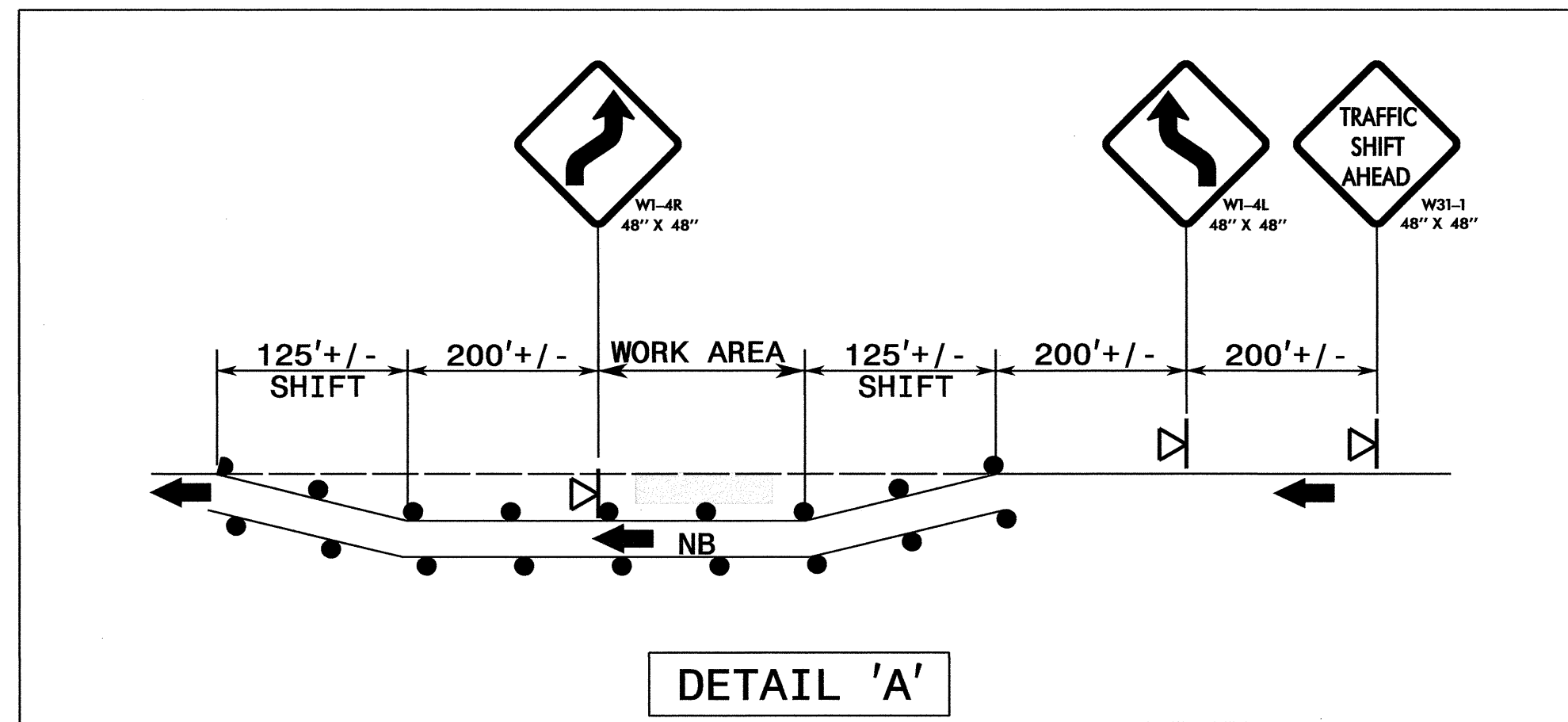
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 JOHN S. KITE, P.E.
 SEAL 022104



PHASE II
 SOUTHBOUND TRAFFIC SHIFT
 & INTERIOR DRAINAGE

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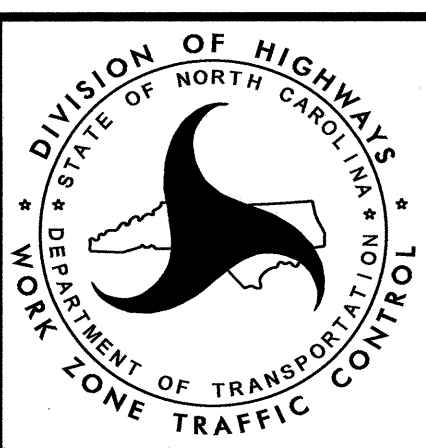
NOTE
 INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 80' CENTERS (40' IN SHIFT TAPERS) ALONG DOUBLE YELLOW CENTERLINE. SEE TMP-1A FOR PAVEMENT MARKING LEGEND.

PLACE FIRST LIFT OF SURFACE COURSE AND MARKINGS FOR PHASE II PATTERN

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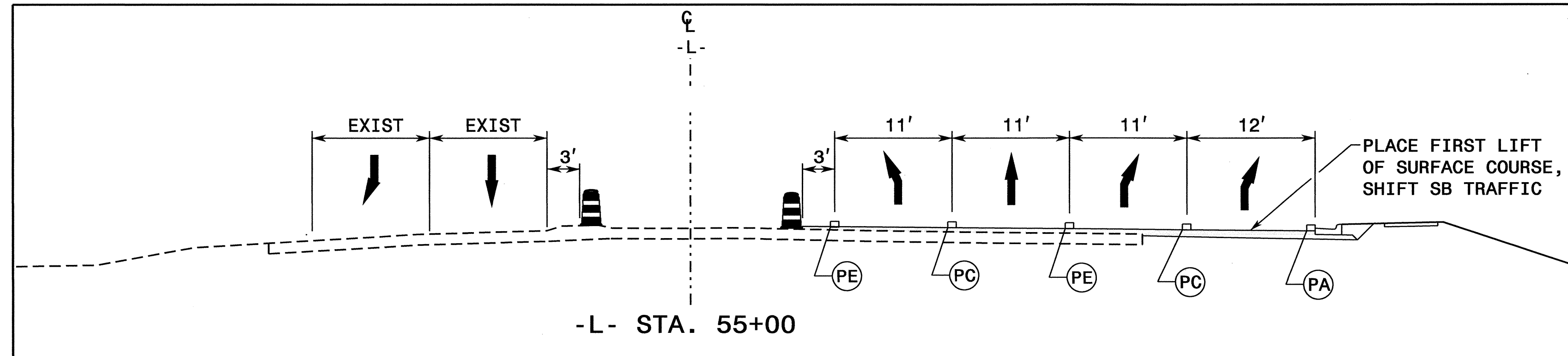
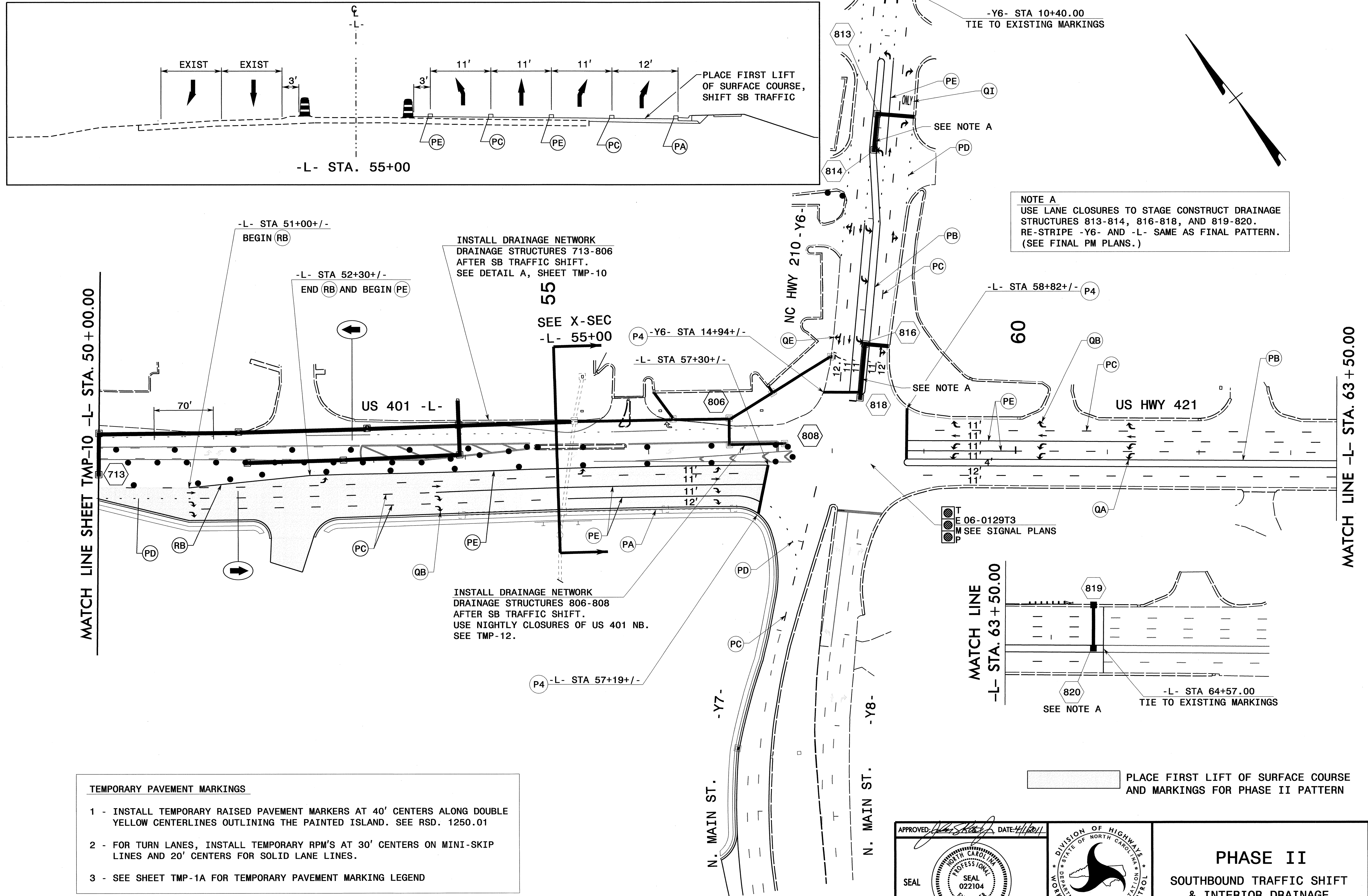
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022104 JOHN S. KITE, P.E.



PHASE II
 SOUTHBOUND TRAFFIC SHIFT & INTERIOR DRAINAGE

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 dougjoynes AT TE24749

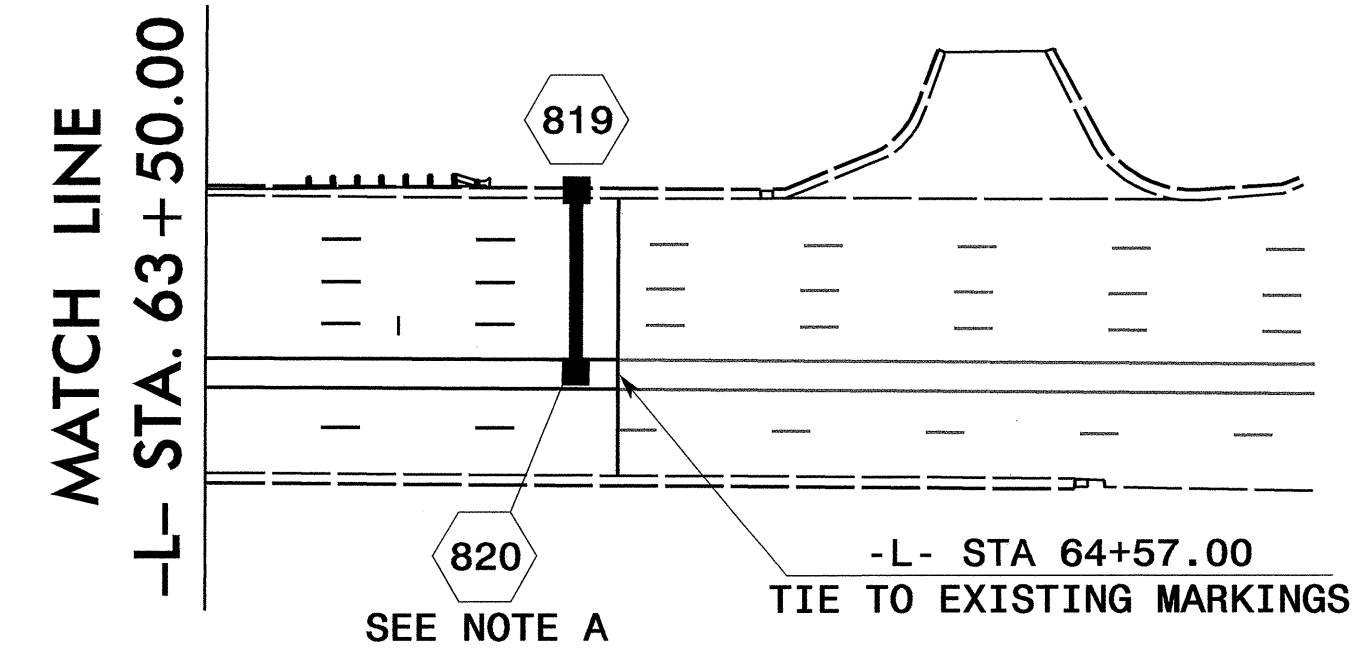


NOTE A
 USE LANE CLOSURES TO STAGE CONSTRUCT DRAINAGE STRUCTURES 813-814, 816-818, AND 819-820. RE-STRIPE -Y6- AND -L- SAME AS FINAL PATTERN. (SEE FINAL PM PLANS.)

MATCH LINE SHEET TMP-10 -L- STA. 50 + 00.00

MATCH LINE -L- STA. 63 + 50.00

- TEMPORARY PAVEMENT MARKINGS**
- 1 - INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 40' CENTERS ALONG DOUBLE YELLOW CENTERLINES OUTLINING THE PAINTED ISLAND. SEE RSD. 1250.01
 - 2 - FOR TURN LANES, INSTALL TEMPORARY RPM'S AT 30' CENTERS ON MINI-SKIP LINES AND 20' CENTERS FOR SOLID LANE LINES.
 - 3 - SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

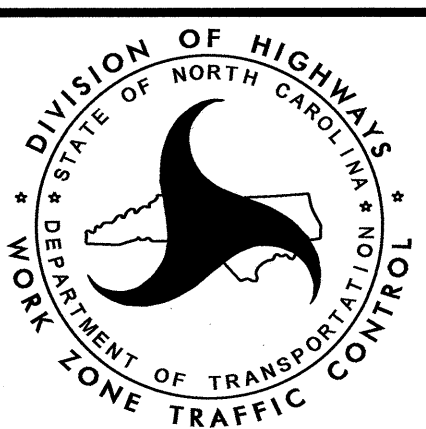


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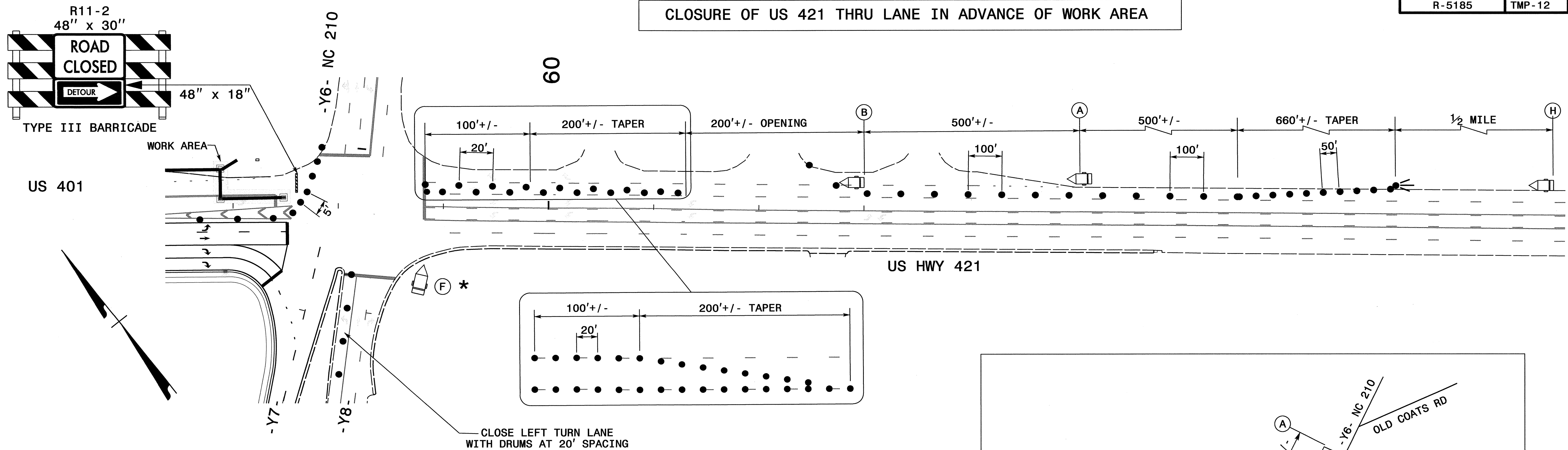
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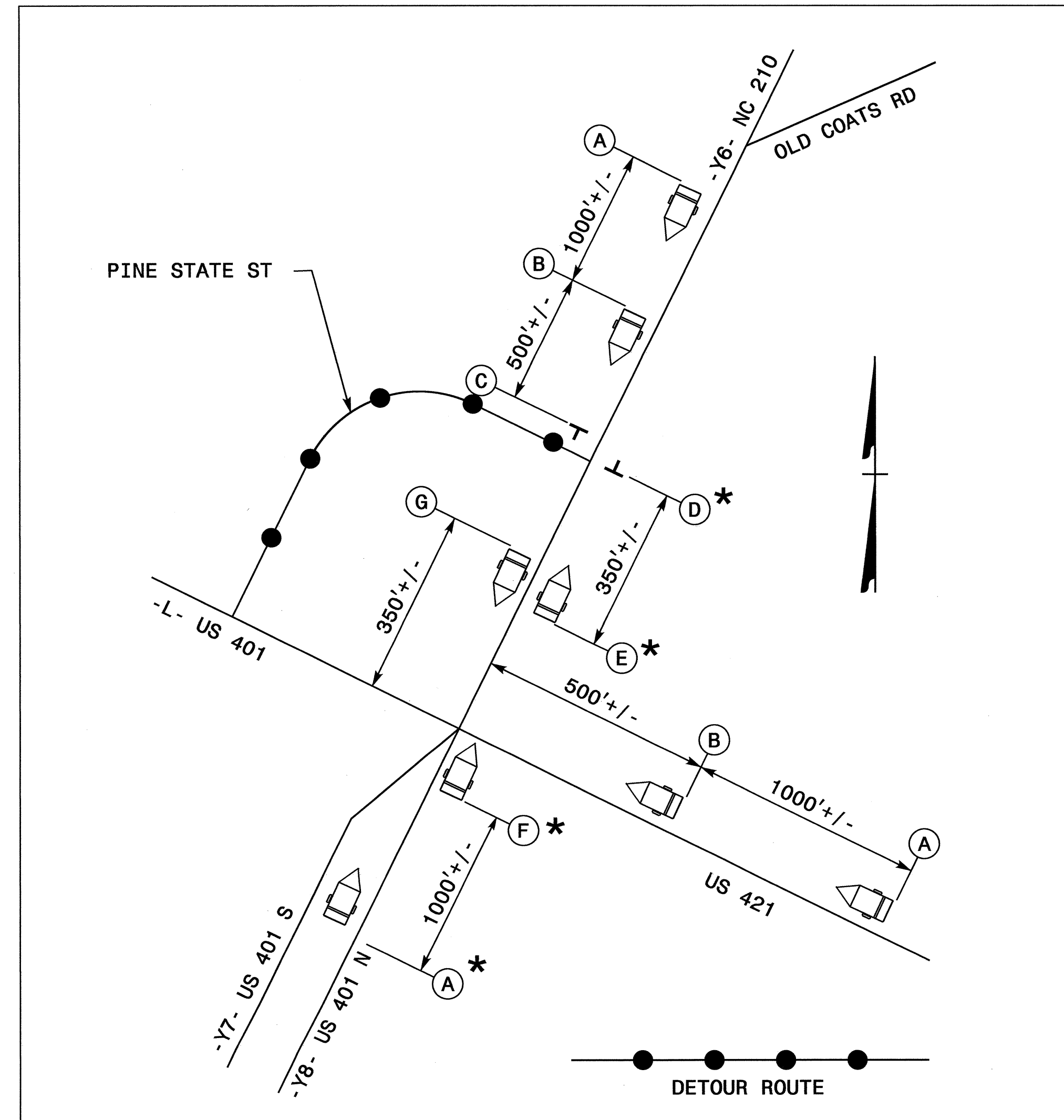
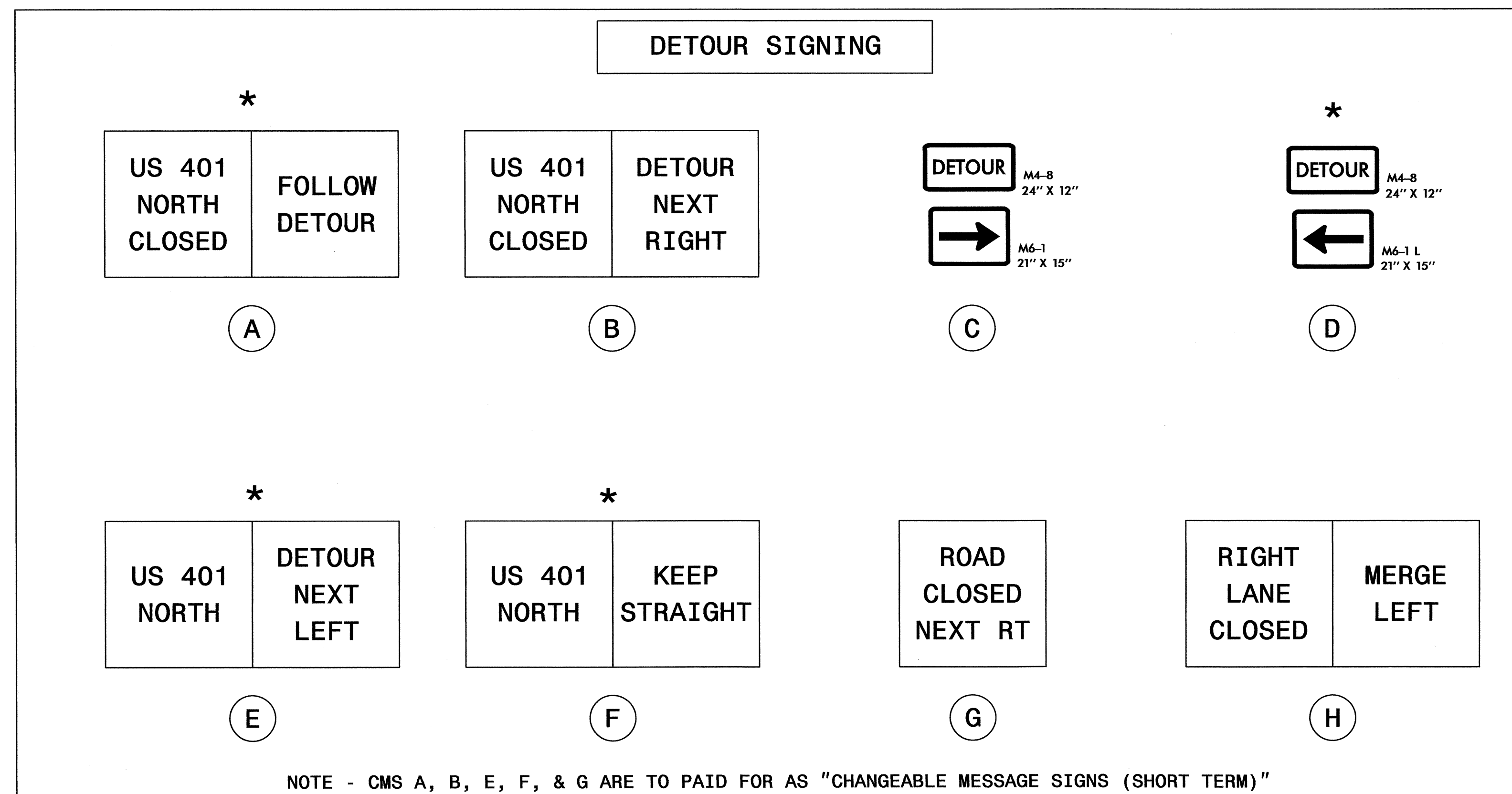


PHASE II
 SOUTHBOUND TRAFFIC SHIFT
 & INTERIOR DRAINAGE

CLOSURE OF US 421 THRU LANE IN ADVANCE OF WORK AREA

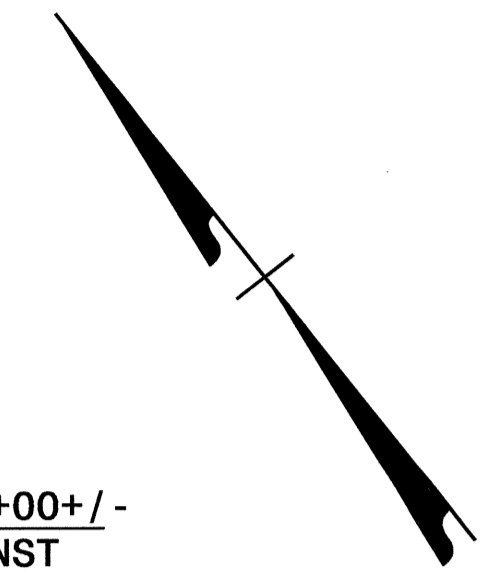
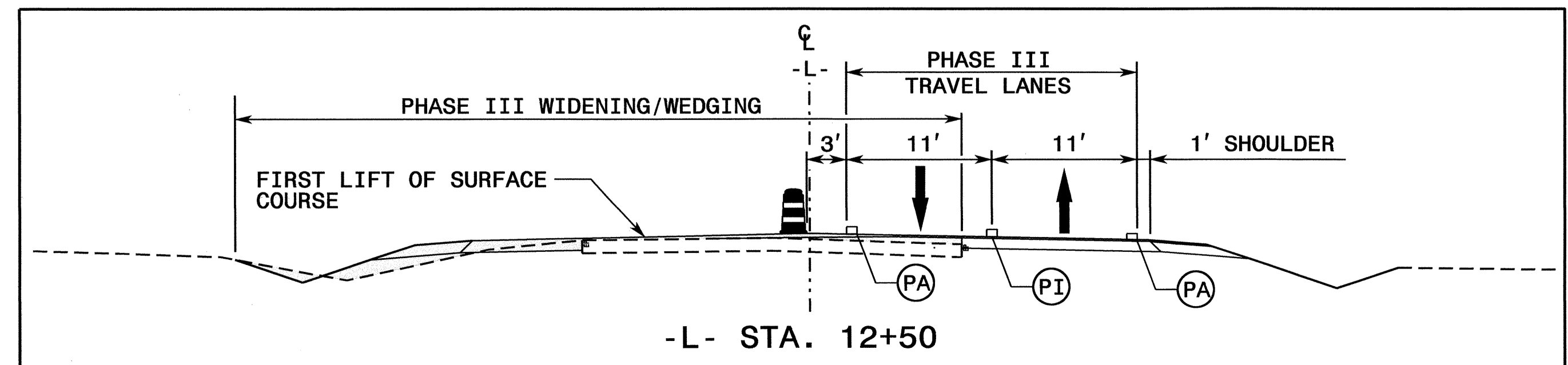
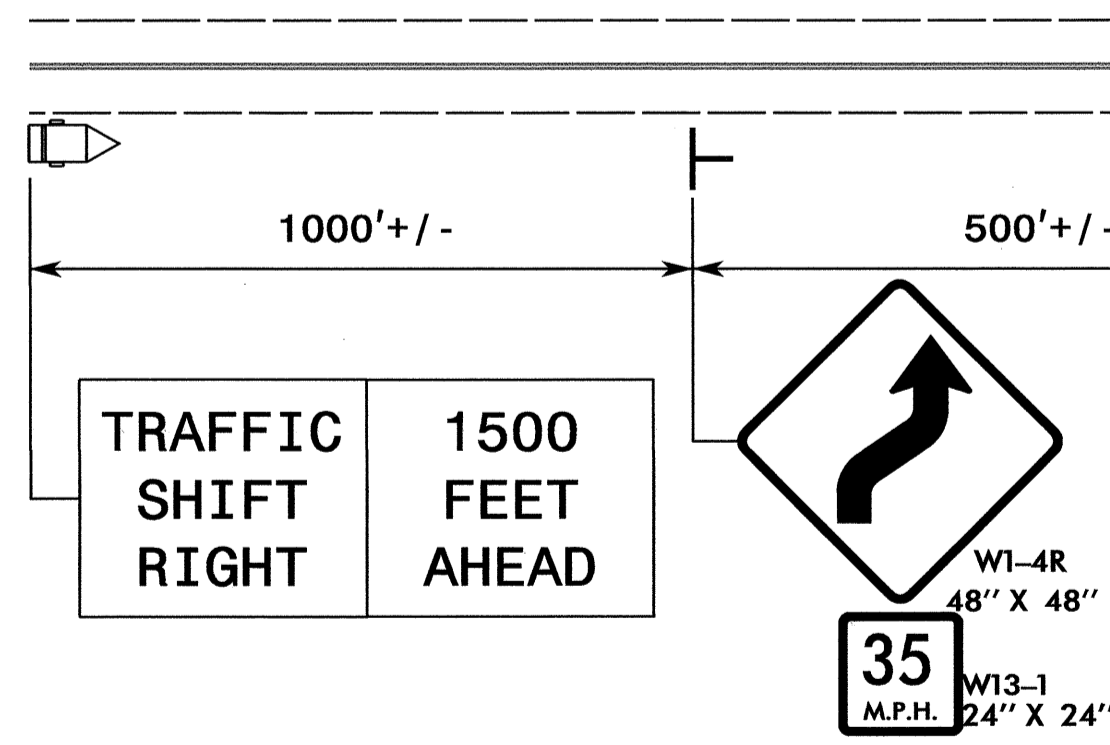
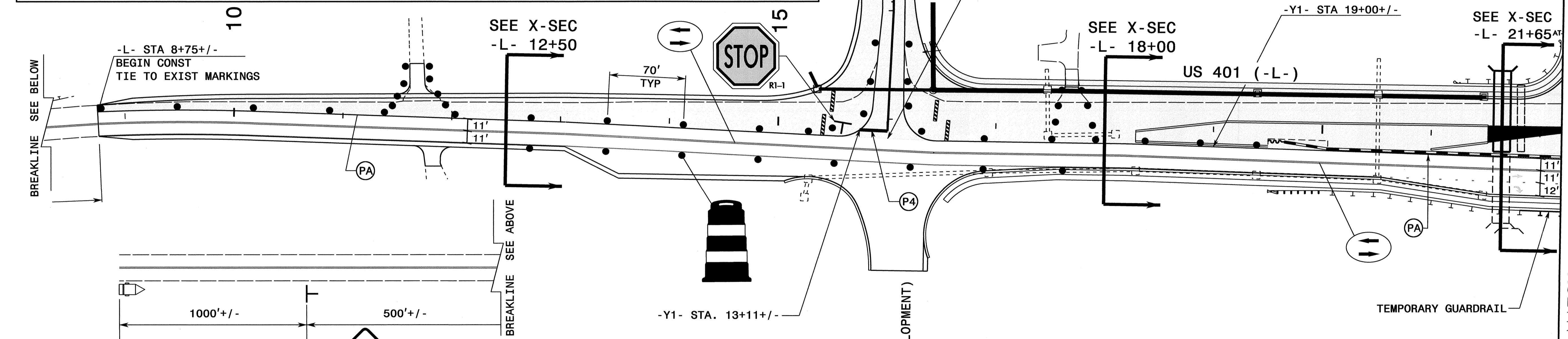
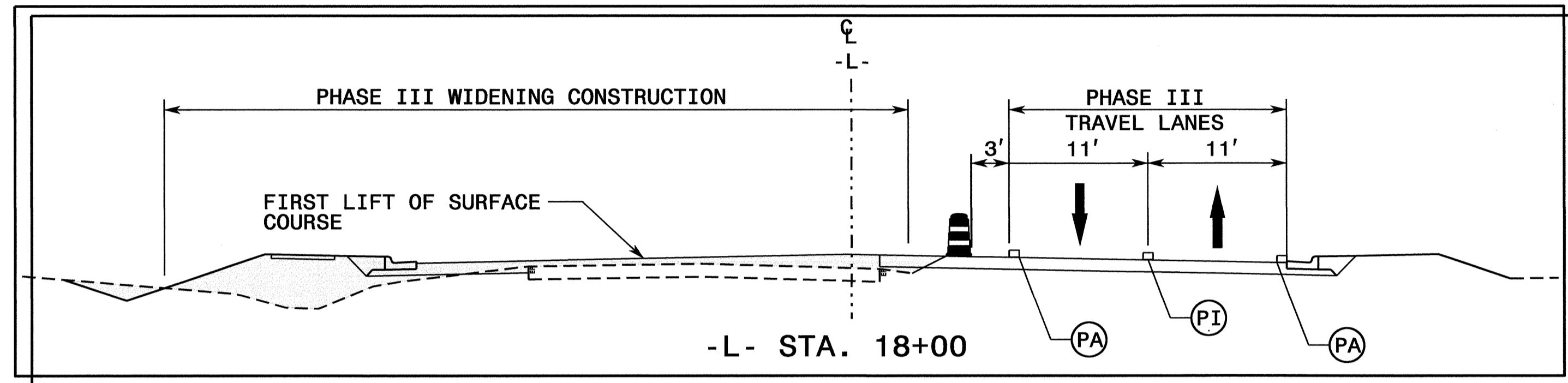
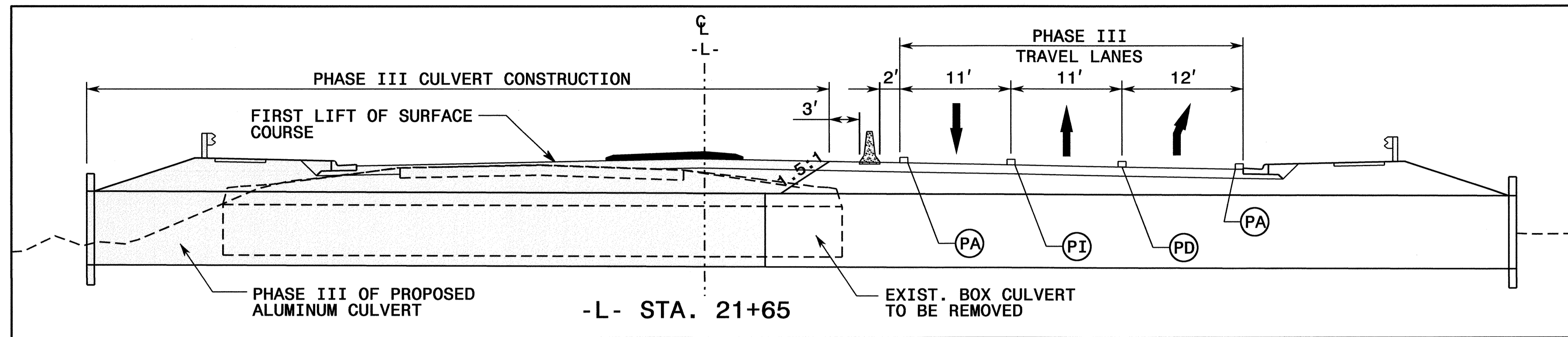


NOTE
 COMPLETE THE INSTALLATION OF DRAINAGE STRUCTURES 806-808 USING CONSECUTIVE, NIGHTLY CLOSURES OF US 401 NB BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM THE FOLLOWING MORNING.
 SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.



APPROVED: <i>[Signature]</i> DATE: 4/1/2011 		<h2 style="margin: 0;">PHASE II</h2> <h3 style="margin: 0;">OFF SITE DETOUR FOR DRAINAGE INSTALLATION</h3>
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25-MAR-2011 11:48
 \\dot\dfsroot\01\proj\TIP\projects-R\5185\TrafficControl\TCP\TCP-R-5185.fc.tmp_12.p2.dgn
 AT TE24749
 dougbyrner

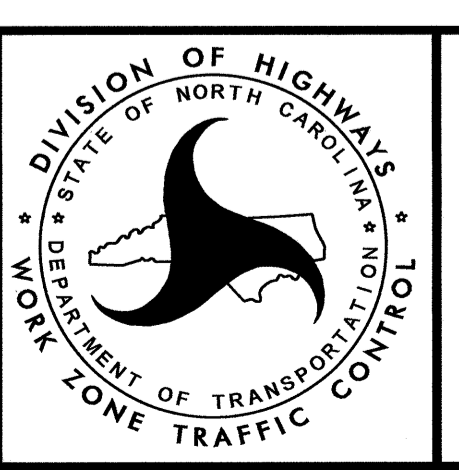


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(-DRI.-)
(FOR FUTURE DEVELOPMENT)

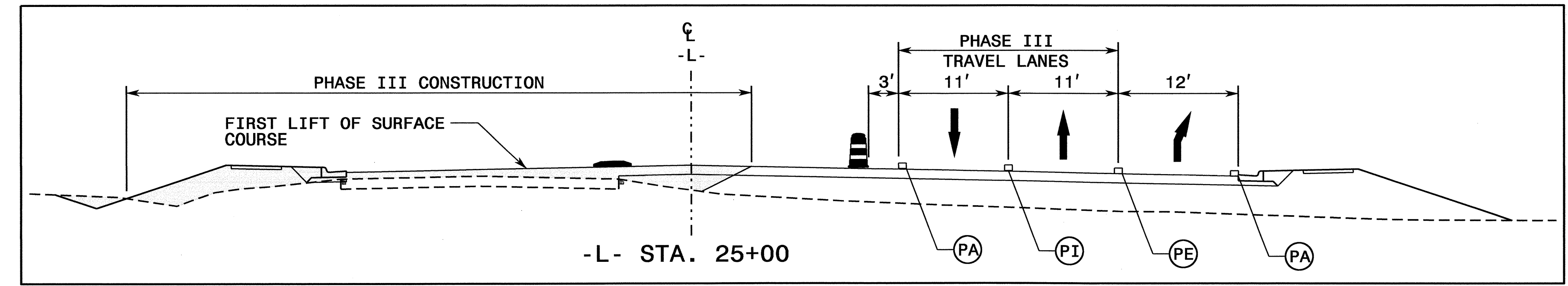
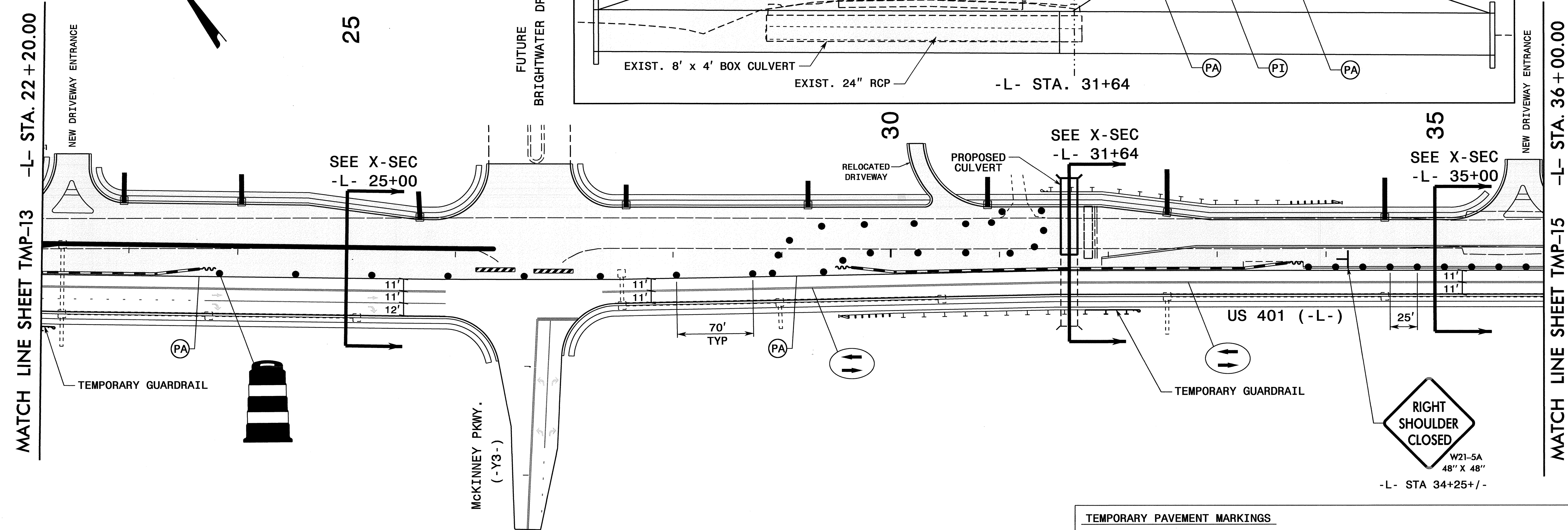
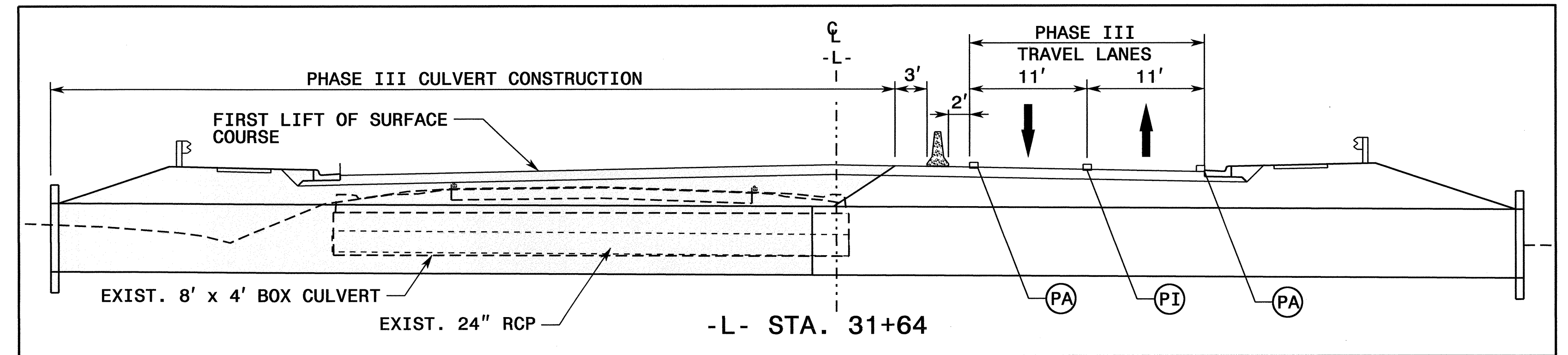
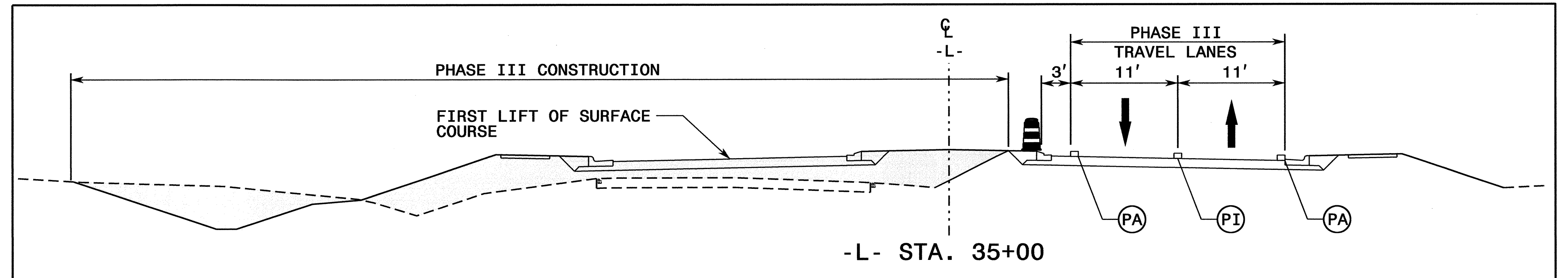
SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

APPROVED: *[Signature]* DATE: 4/1/2011



**PHASE III
LEFT SIDE WIDENING**

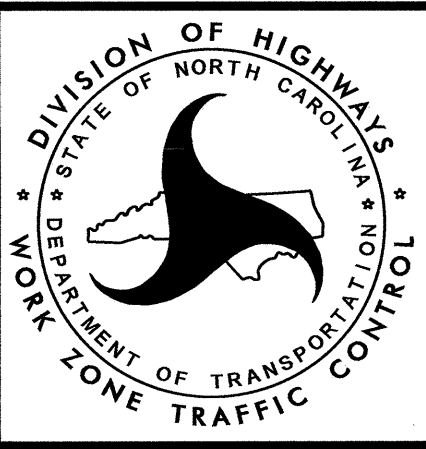
25-MAR-2011 11:49 \\dot\dfsroot\01\p\proj\TIP\Projects\R\5185\TrafficControl\TCP\TCP\R-5185.tc.tmp_13.p3.dgn AT TE244749 doug.byner



- TEMPORARY PAVEMENT MARKINGS**
- 1 - INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 40' CENTERS ALONG DOUBLE YELLOW CENTERLINES OUTLINING THE PAINTED ISLAND. SEE RSD. 1250.01
 - 2 - FOR TURN LANES, INSTALL TEMPORARY RPM'S AT 30' CENTERS ON MINI-SKIP LINES AND 20' CENTERS FOR SOLID LANE LINES.
 - 3 - SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

APPROVED: *[Signature]* DATE: 4/1/2011

SEAL

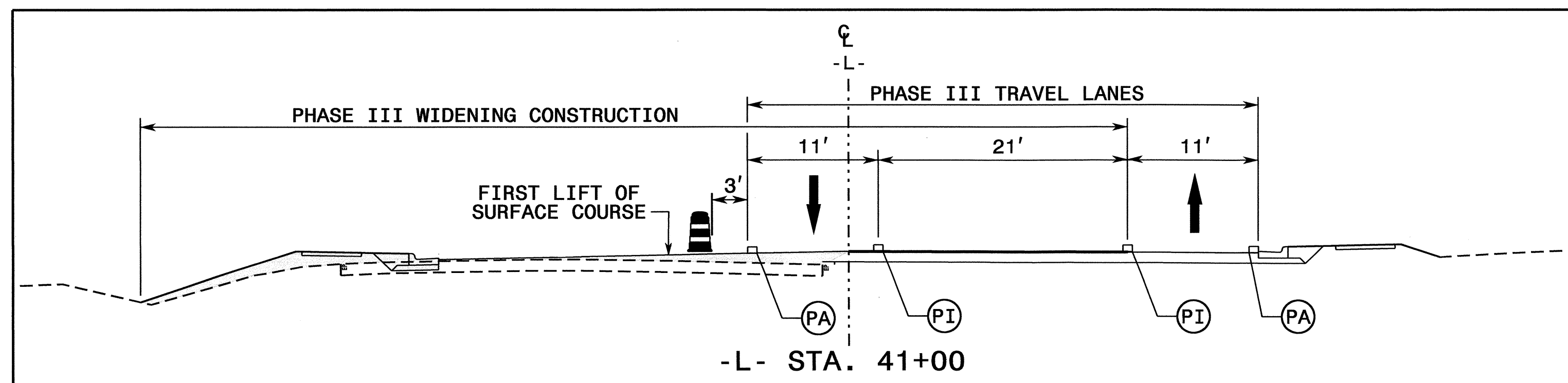
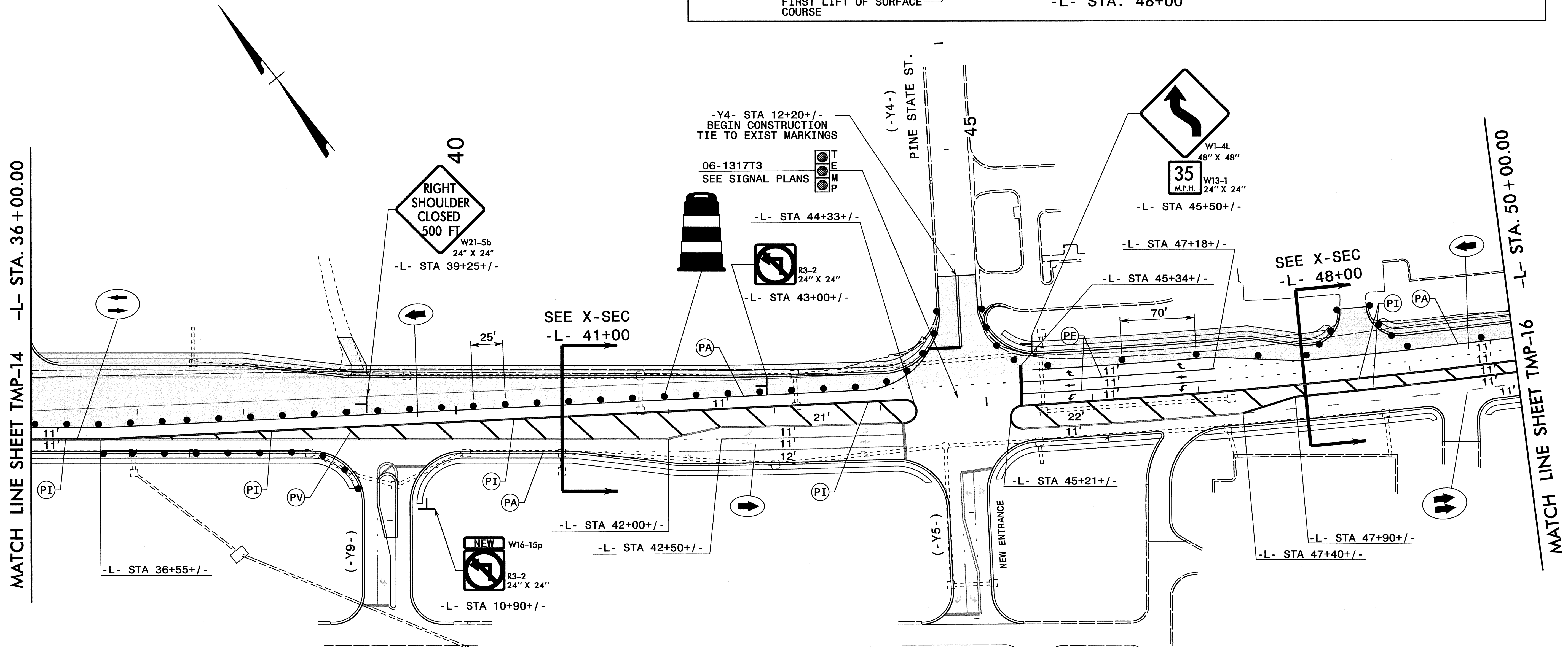
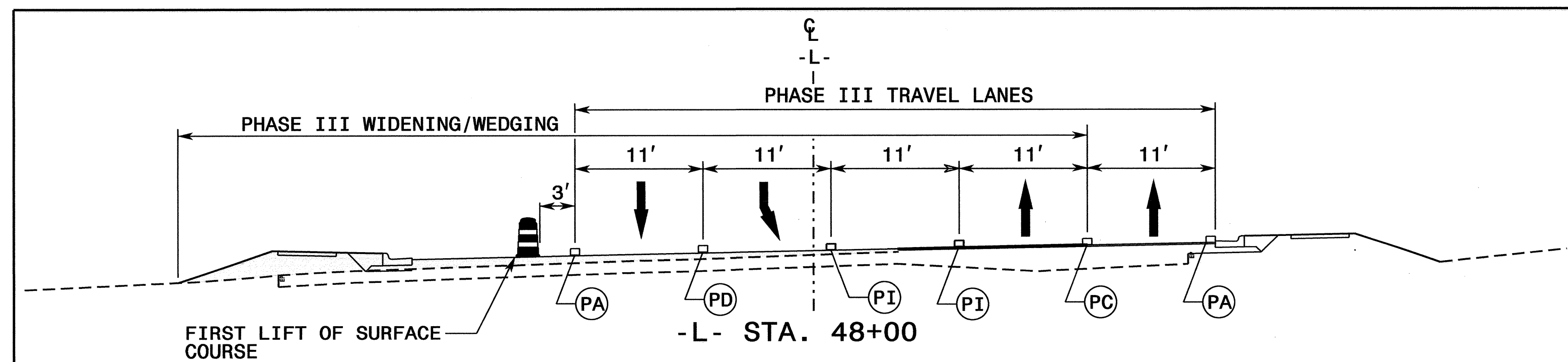


**PHASE III
LEFT SIDE WIDENING**

25-MAR-2011 10:20:11 \\dot\dfsroot\01\proj\IP\Projects-R\5185\TrafficControl\TCP\TCP-R-5185.fc.tmp_14_p3.dgn
 AT TE24749 doug.lyner

TEMPORARY PAVEMENT MARKINGS

- 1 - SPACE CHEVRONS IN PAINTED ISLANDS AT 35' CENTERS ON 2:1 SLOPE.
- 2 - INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 40' CENTERS ALONG DOUBLE YELLOW CENTERLINES OUTLINING THE PAINTED ISLAND SEE RSD.
- 3 - FOR TURN LANES, INSTALL TEMPORARY RPM'S AT 30' CENTERS ON MINI-SKIP LINES AND 20' CENTERS FOR SOLID LANE LINES.
- 4 - SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND



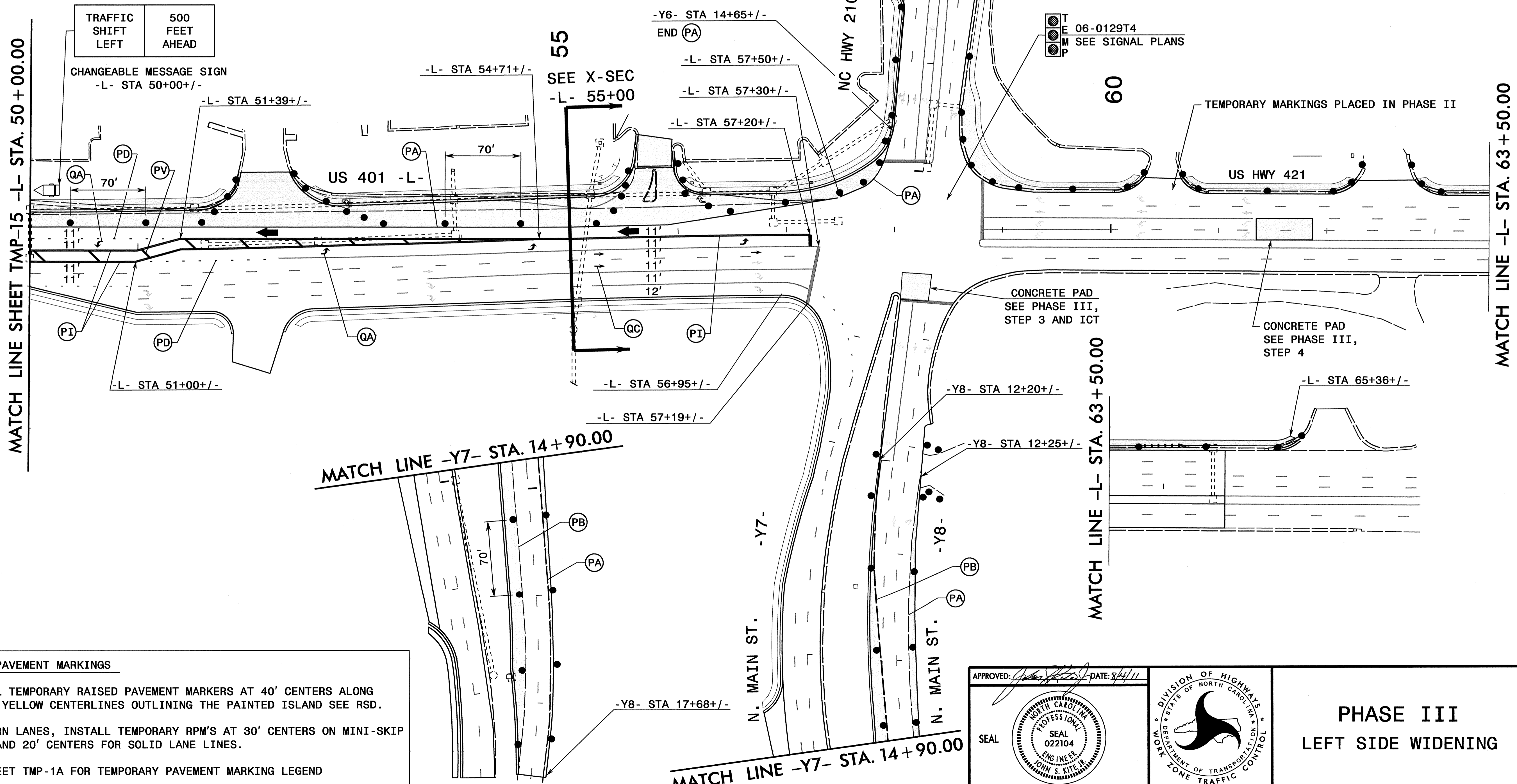
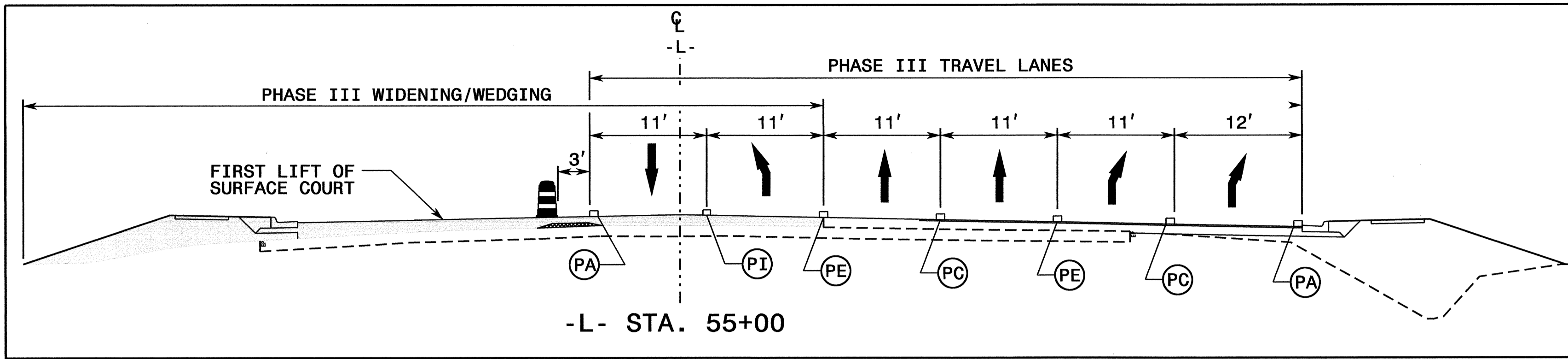
NOTE:
ALL DRUMS ARE TO BE PLACED AT 70'
SPACING UNLESS OTHERWISE NOTED.

APPROVED: *[Signature]* DATE: 4/1/2011

SEAL

**PHASE III
LEFT SIDE WIDENING**

25-MAR-2011 12:03
 \\dot\dfsroot\01\proj\TIP\projects-R\5185\TrafficControl\TCP\TCP-R-5185_fc.tmp_15.p3.dgn
 AT TE24749 douglbyner

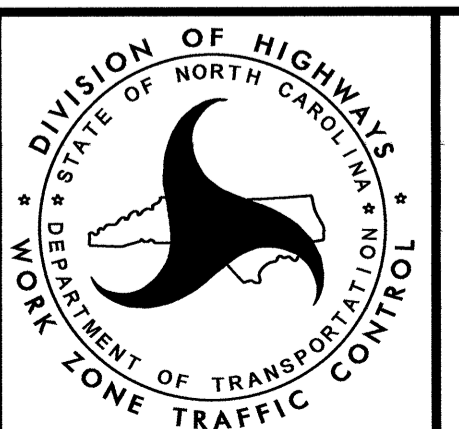


- TEMPORARY PAVEMENT MARKINGS**
- 1 - INSTALL TEMPORARY RAISED PAVEMENT MARKERS AT 40' CENTERS ALONG DOUBLE YELLOW CENTERLINES OUTLINING THE PAINTED ISLAND SEE RSD.
 - 2 - FOR TURN LANES, INSTALL TEMPORARY RPM'S AT 30' CENTERS ON MINI-SKIP LINES AND 20' CENTERS FOR SOLID LANE LINES.
 - 3 - SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING LEGEND

APPROVED: *[Signature]* DATE: 8/4/11

SEAL

PROFESSIONAL ENGINEER
JOHN S. KITE, JR.
022104



**PHASE III
LEFT SIDE WIDENING**

28-JUL-2011 15:30
 \\dot\dfs\0070\proj\01\TIP\Projects\R5185\TrafficControl\TCP\R-5185-fc-tmp-16.p3.dgn
 AT TE244749
 dougjoynes