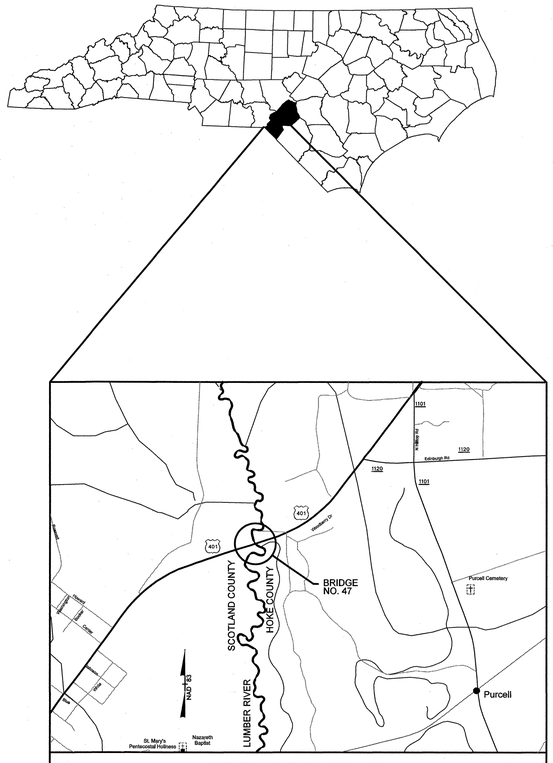
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HOKE & SCOTLAND COUNTIES



VICINITY MAP N.T.S.

INDEX OF SHEETS

SHEET NO.
TMP-1

B-4273

TIP PROJECT:

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R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
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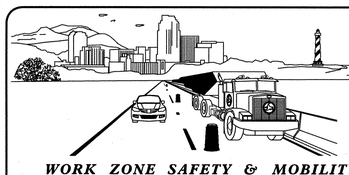
APPROVED: Rhonda B Early
DATE: 8.9.12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

Plans Prepared for: *N.C.D.O.T. WORK ZONE TRAFFIC CONTROL*
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
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DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$SYSTIME$$$$
$$$$FILENAME$$$$
$$$$USERNAME$$$$

8/17/99

REVISIONS

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 JANAUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
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 BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

QA/QC STAGE:

REVIEW:
CONCUR:
REVISE:
VERIFY:

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PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-1A

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- ---------- EXIST. PVMT.
- NORTH ARROW
- ——— PROPOSED PVMT.
- WORK AREA
- REMOVAL
- WEDGING

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 (TEMP)

PAVEMENT MARKINGS

- ——EXISTING LINES
- ——TEMPORARY LINES

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

SYMBOL	PAVEMENT MARKING LINES
PAINT (4")	
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER

APPROVED: Rhonda B. Early DATE: 8.2.12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

ROADWAY STANDARD DRAWINGS AND LEGEND

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-1B

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.

A) 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

B) 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.

C) 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.

D) 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.

E) 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 REMAINS WITHIN THE CLOSED TRAVEL LANE.

F) 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

G) 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.

H) 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) 500' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

J) 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.

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

L) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' 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.

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.

N) 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

O) WHEN LANE CLOSURES ARE NOT IN EFFECT, 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 OPENED TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

R) 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.

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

T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

U) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

8/17/99

REVISIONS

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

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APPROVED: [signature] DATE: 8-2-12

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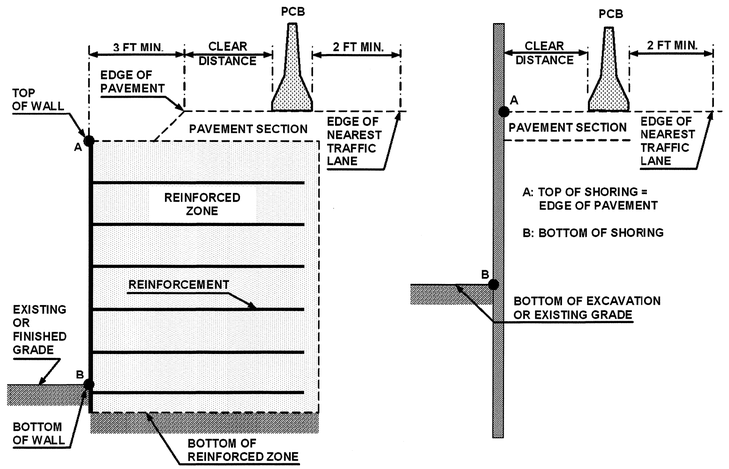
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

GENERAL NOTES



NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).

3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.

9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-2

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

*** See Figure Below**

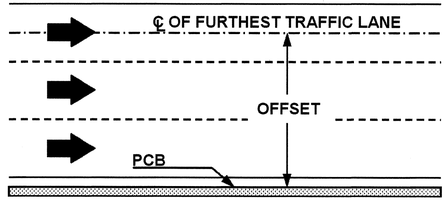


FIGURE B

APPROVED: David W. Smith DATE: 09-04-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 30864 ENGINEER DAVID W. BISSETTE

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-2A

TEMPORARY SHORING DATA

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 20+85.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 21+28.00± -L-, 27.4 FT. LEFT OF -L-. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 20+85.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 21+28.00± -L-, 27.4 FT. LEFT OF -L-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 20+85.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 21+28.00± -L-, 27.4 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 22+24.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 24+05.00± -L-, 27.4 FT. LEFT OF -L-. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 22+24.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 24+05.00± -L-, 27.4 FT. LEFT OF -L-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 22+24.00± -L-, 27.4 FT. LEFT OF -L-, TO STATION 24+05.00± -L-, 27.4 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON AUGUST 31, 2012 AND SEALED BY A PROFESSIONAL ENGINEER, SHANE C. CLARK, LICENSE # 029869.

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TEMPORARY SHORING NOTES

PROJECT PHASING

NOTES:
REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED MILLING / WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. COMPLETE WEDGING AND WIDENING SIMULTANEOUSLY SO THAT CURRENT TRAFFIC PATTERNS, DROP-OFF REQUIREMENTS AND POSITIVE DRAINAGE ARE MAINTAINED.

PAVE PROPOSED CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN THE PHASING.

PHASE I (TMP-4)

STEP 1:
INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L- (US 401) ACCORDING TO ROADWAY STANDARD DRAWING 1101.01, SHEET 3 OF 3.

STEP 2:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, BEGIN CONSTRUCTION OF THE FOLLOWING AS SHOWN ON TMP-4
-DET- ROADWAY SECTION FROM STA 12+02+/- TO STA 21+15+/-
-DET- ROADWAY SECTION FROM STA 22+45+/- TO STA 30+39+/-
-DET- BRIDGE FROM STA 21+15+/- TO STA 22+45+/-
-TEMPORARY SHORING NO. 1 FROM STA 20+85+/- TO STA 21+28+/- 27.4′ LEFT OF -L-
-TEMPORARY SHORING NO. 2 FROM STA 22+24+/- TO STA 24+05+/- 27.4′ LEFT OF -L-

STEP 3:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, REMOVE THE EXISTING GUARDRAIL AND GUARDRAIL ANCHOR UNITS LEFT OF -L- AND INSTALL TEMPORARY GUARDRAIL ANCHOR UNITS AS SHOWN ON THE ROADWAY PLANS AND TMP-4.

STEP 4:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, COMPLETE THE WORK BEGUN IN PHASE 1, STEP 2.

INSTALL PORTABLE CONCRETE BARRIER ANCHORED RIGHT OF -DET- FROM STA 22+45+/- TO STA 25+23+/- AS SHOWN ON TMP-4. (SEE ROADWAY DETAIL SHEET FOR ANCHOR TO CONNECT PORTABLE CONCRETE BARRIER TO -DET- BRIDGE.)

STEP 5:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKINGS, TEMPORARY PAVEMENT MARKERS, STATIONARY WORK ZONE SIGNS AND BARRICADES AS SHOWN ON TMP-6 AND ROADWAY STANDARD DRAWING 1101.03, SHEET 3 OF 9. SHIFT TRAFFIC AND USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15), COMPLETE PCB INSTALLATION FROM STA 25+23+/- TO STA 25+84.

PHASE II (TMP-6)

STEP 1:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, REMOVE THE EXISTING BRIDGE AND CONSTRUCT THE FOLLOWING AS SHOWN ON TMP-6:
-L- PROPOSED BRIDGE FROM STA 21+02+/- TO STA 23+87+/-
-L- PROPOSED ROADWAY SECTION FROM STA 11+50+/- TO STA 21+02+/-
-L- PROPOSED ROADWAY SECTION FROM STA 23+87+/- TO STA 30+50+/-

STEP 2:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKINGS IN THE FINAL PATTERN AS SHOWN ON THE PAVEMENT MARKING PLANS. SHIFT TRAFFIC TO THE PROPOSED ALIGNMENT AND CLOSE -DET- WITH DRUMS AND BARRICADES.

STEP 3:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, REMOVE THE -DET- ALIGNMENT, -DET- BRIDGE, TEMPORARY SHORING AND COMPLETE THE CONSTRUCTION OF PROPOSED -L- AS SHOWN IN THE ROADWAY PLANS.

STEP 4:
USING ROADWAY STANDARD DRAWING 1101.02 (SHEET 1 OF 15) AS NEEDED, PLACE THE FINAL LAYER OF SURFACE COURSE AND INSTALL THE FINAL PAVEMENT MARKINGS AND FINAL PAVEMENT MARKERS.

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NC License No: C-1554

APPROVED: [signature] DATE: 8.9.12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

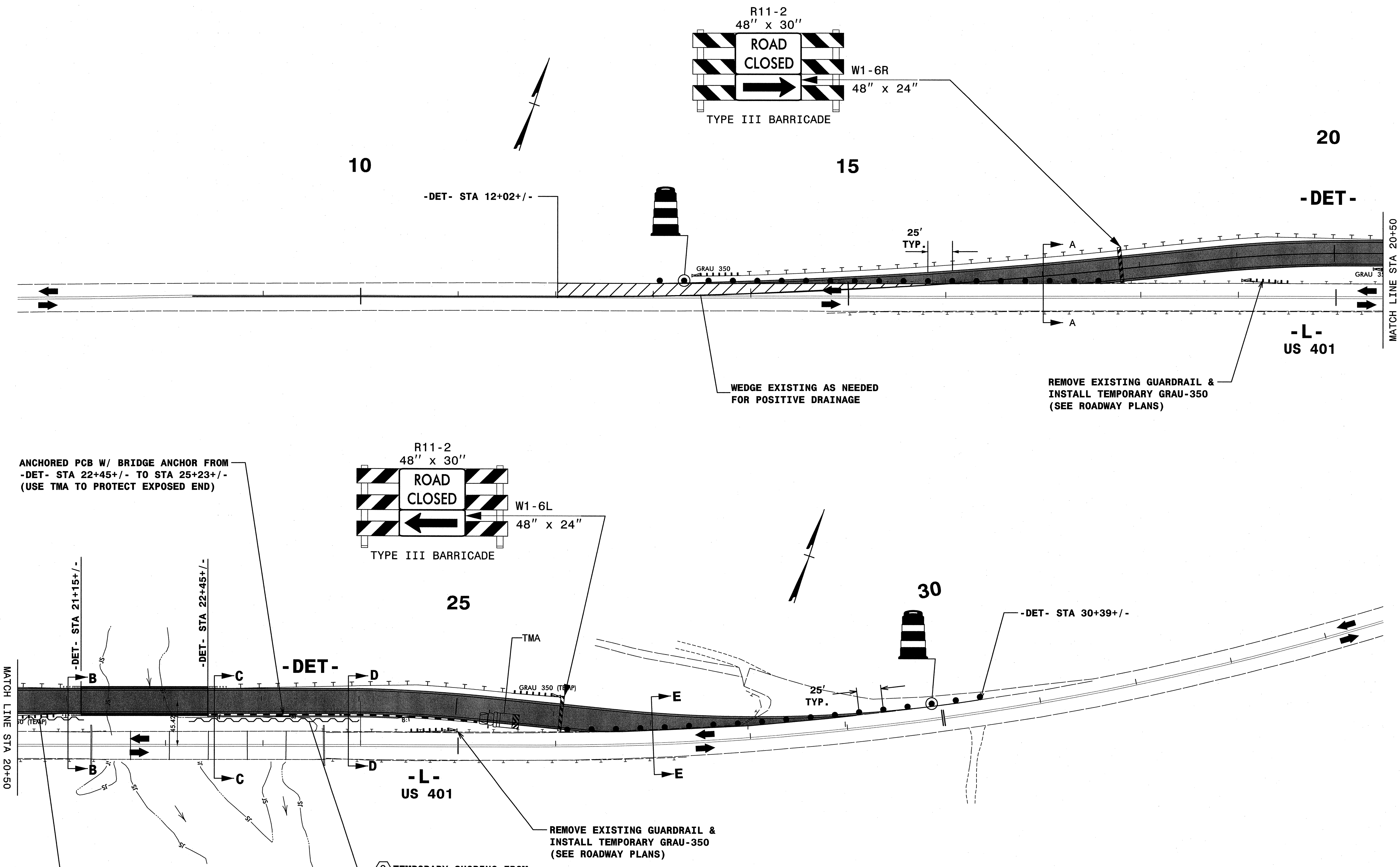
PHASING

REVISIONS

8/17/99

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



8/17/99

REVISIONS

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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APPROVED: [signature] DATE: 8-2-12

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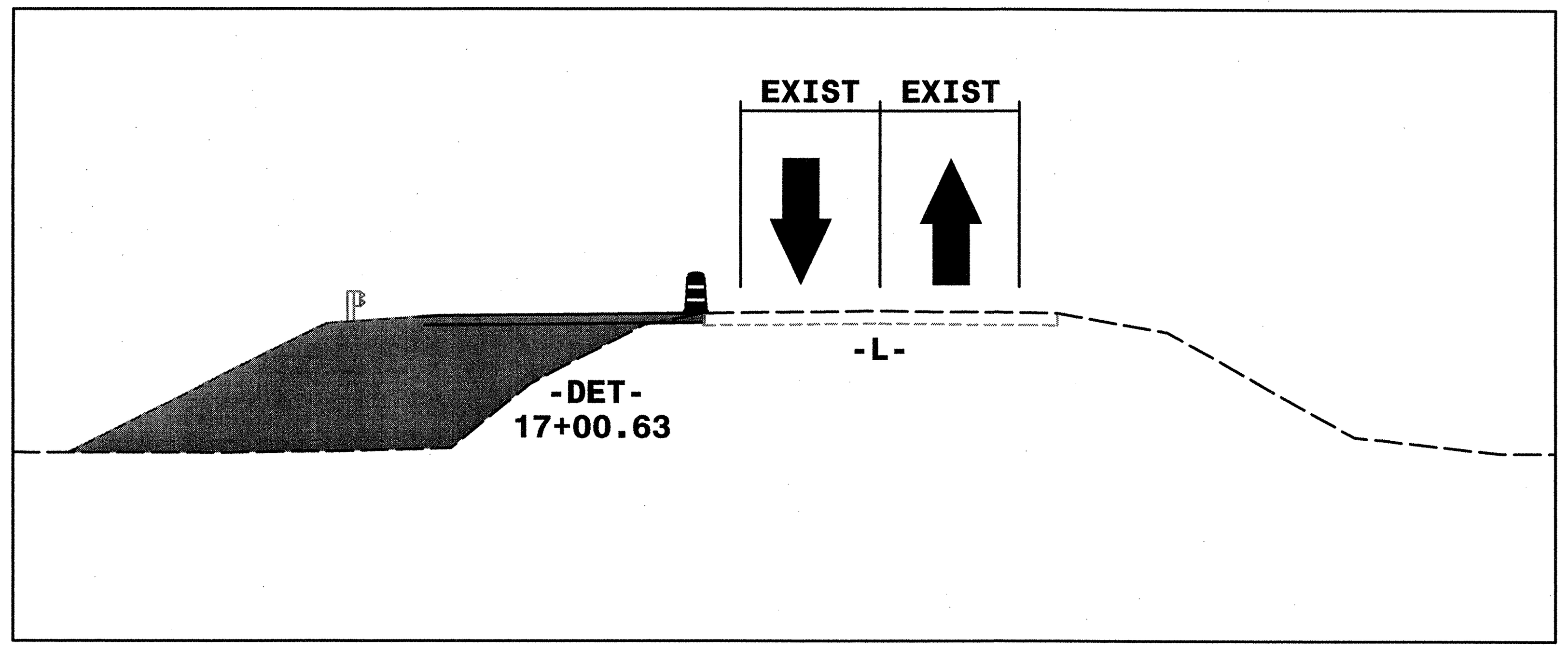
TRANSPORTATION MANAGEMENT PLAN

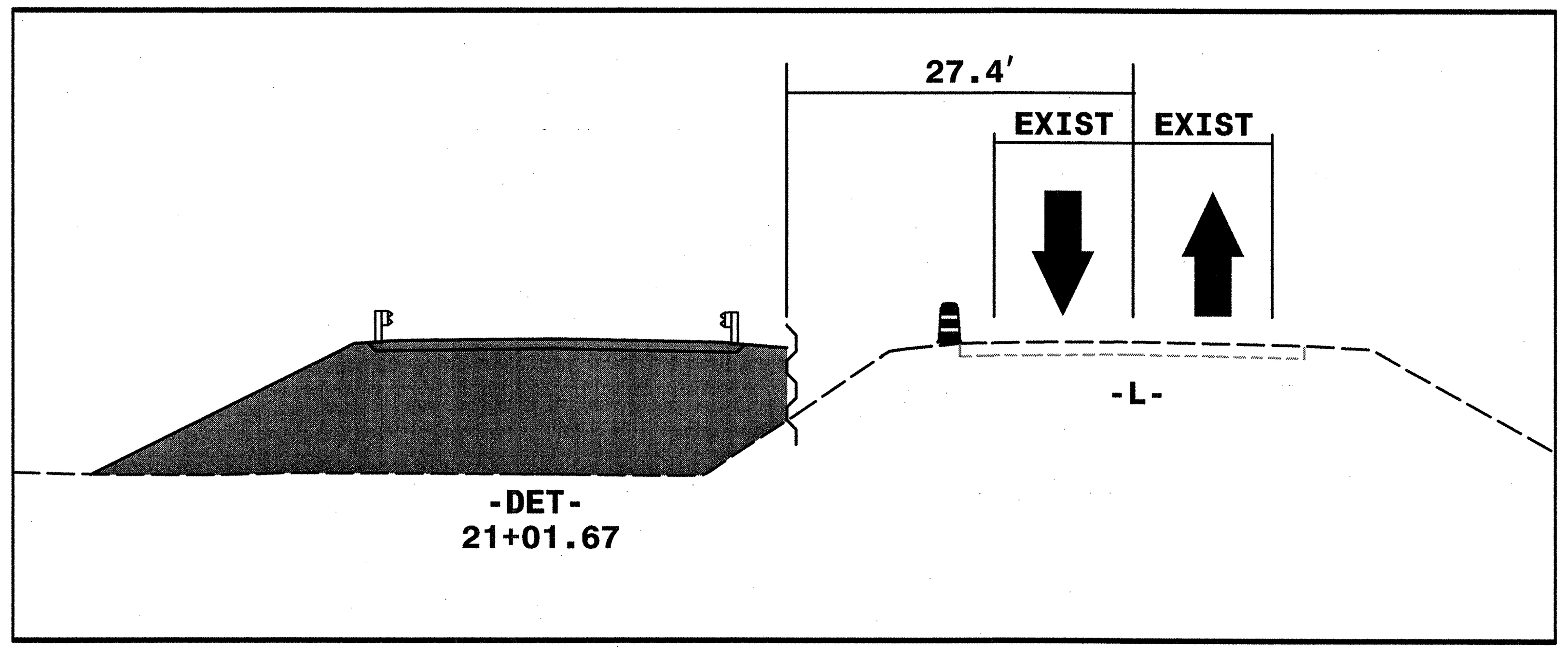
PHASE I DETAIL

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-5

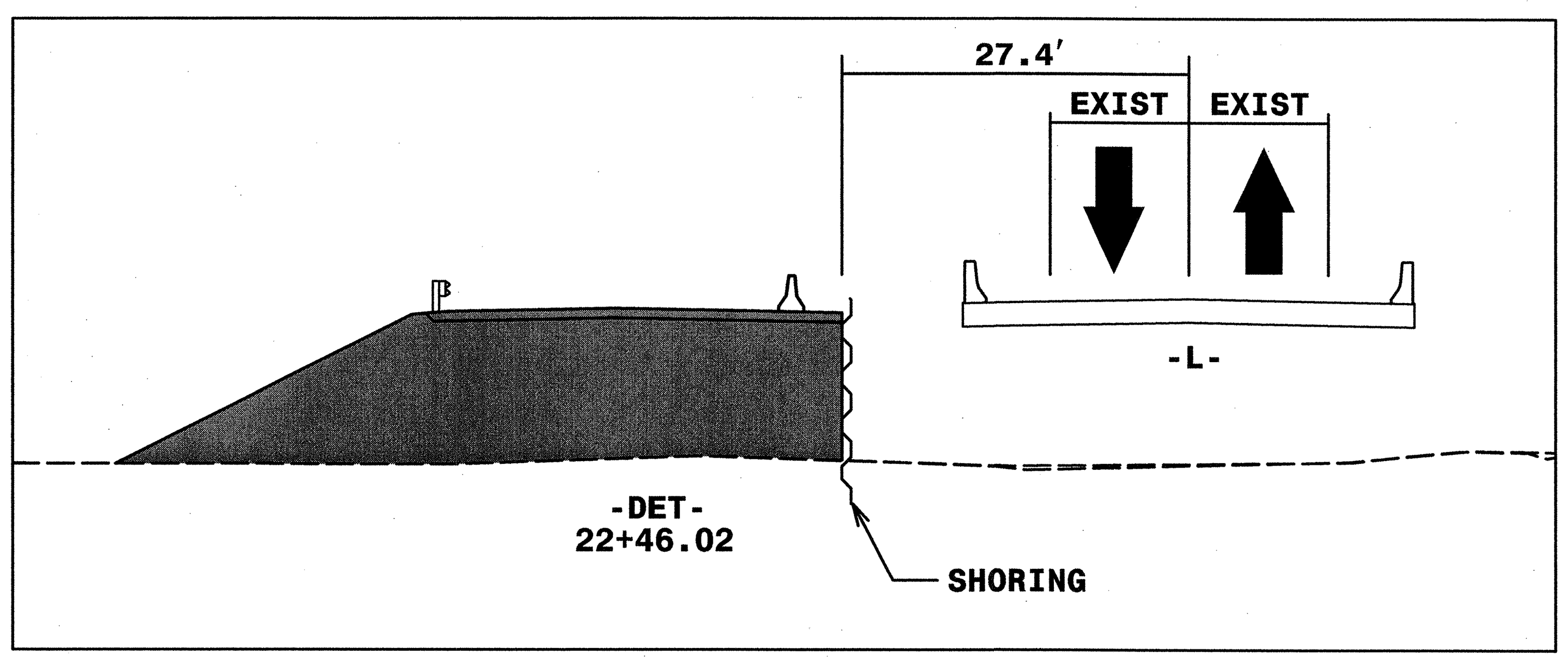
A-A
-L- 17+00



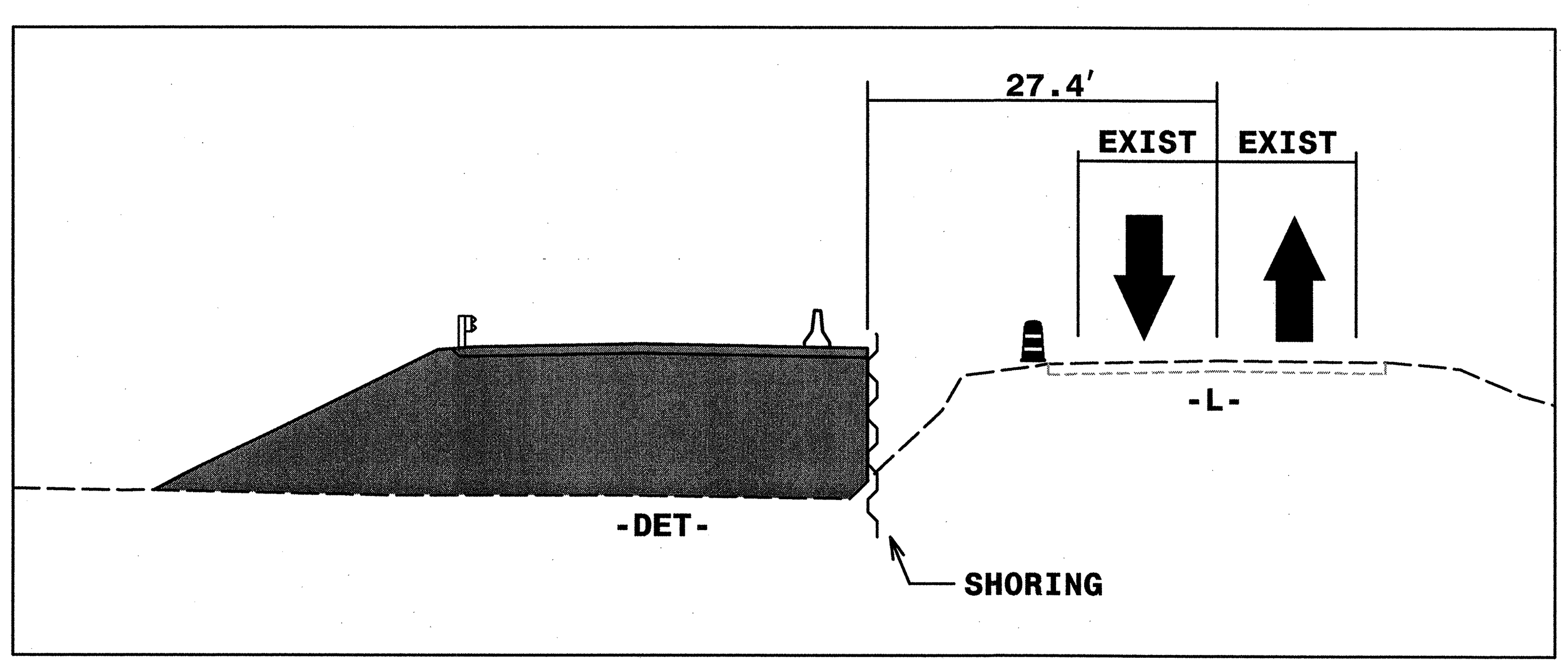
B-B
-L- 21+00



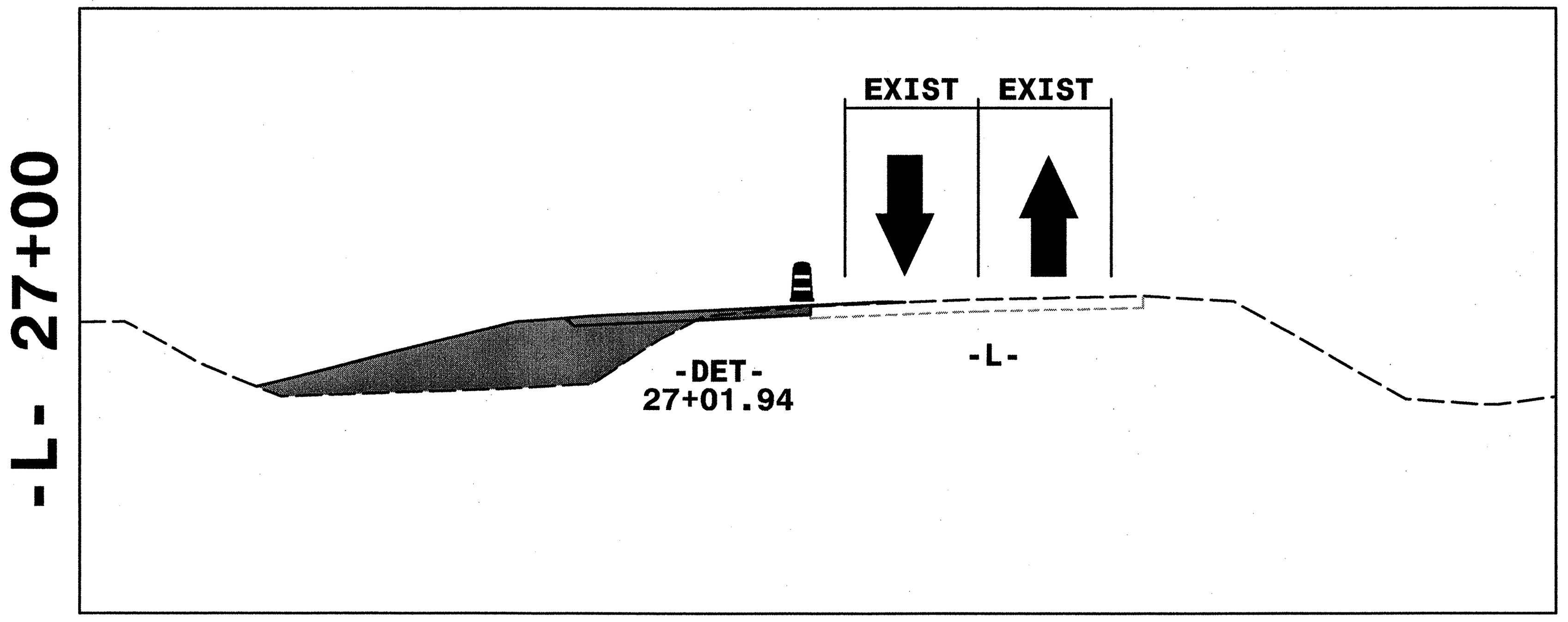
C-C
-L- 22+50



D-D
-L- 23+87.50



E-E
-L- 27+00



8/17/99

REVISIONS

QAQC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$SYSTIME$$$$
$$$$$$DGN$$$$$$
$$$USERNAME$$$$

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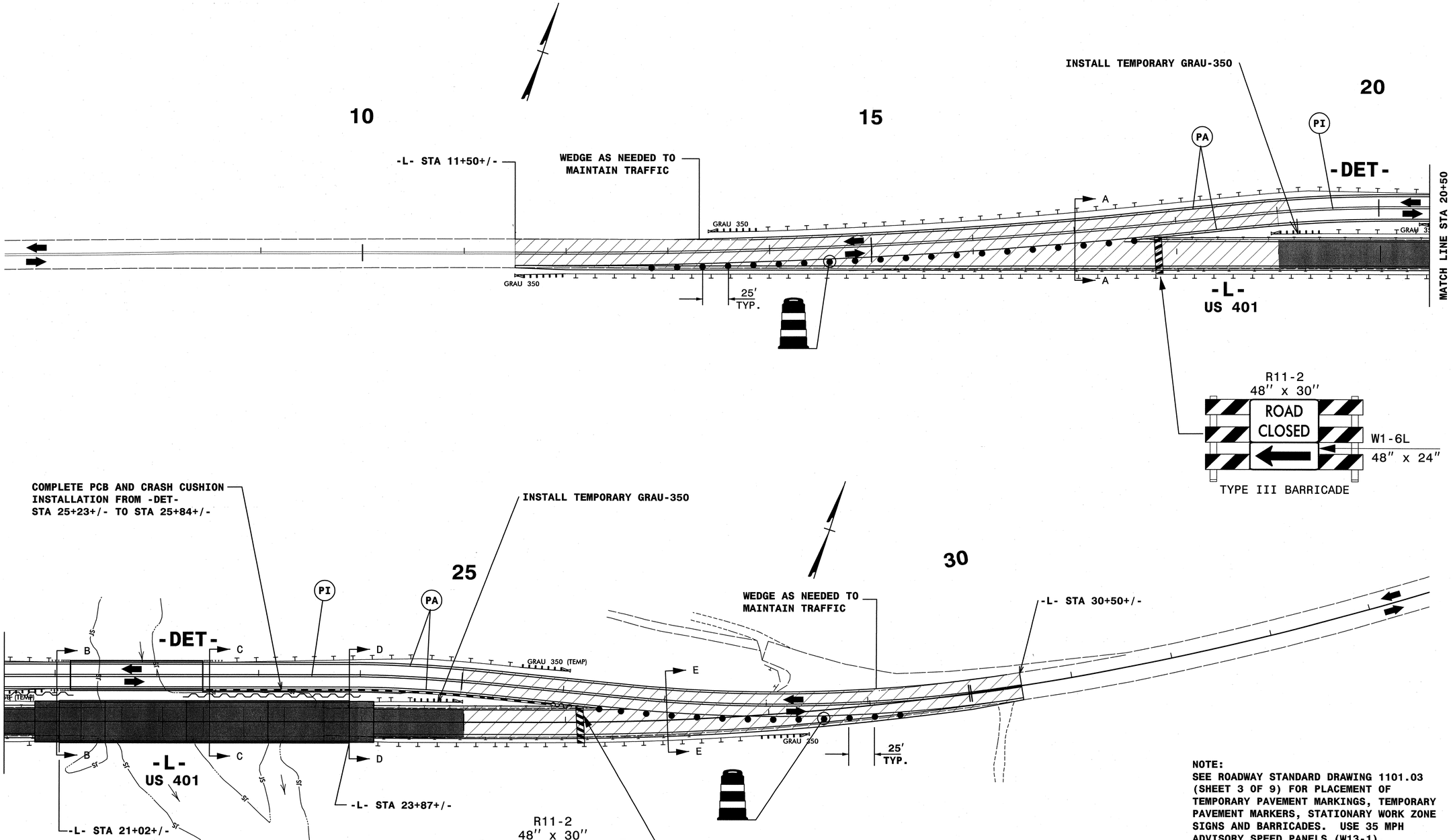
TRANSPORTATION MANAGEMENT PLAN

PHASE I CUT SECTIONS

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-6

8/17/99

REVISIONS



NOTE:
SEE ROADWAY STANDARD DRAWING 1101.03 (SHEET 3 OF 9) FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, TEMPORARY PAVEMENT MARKERS, STATIONARY WORK ZONE SIGNS AND BARRICADES. USE 35 MPH ADVISORY SPEED PANELS (W13-1).

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

$$$$SYSTIME$$$$
$$$$DESIGN$$$$
$$$$USERNAME$$$$

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APPROVED: [signature] DATE: 8-9-12

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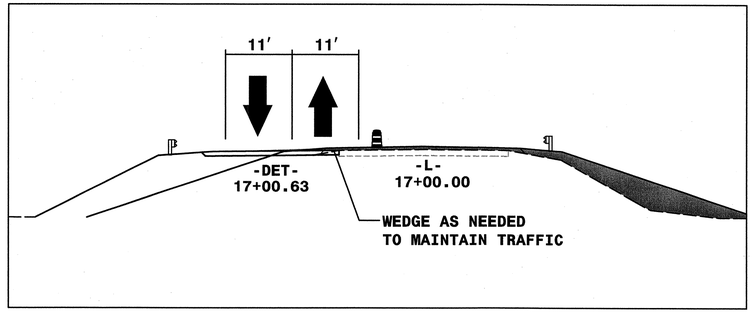
TRANSPORTATION MANAGEMENT PLAN

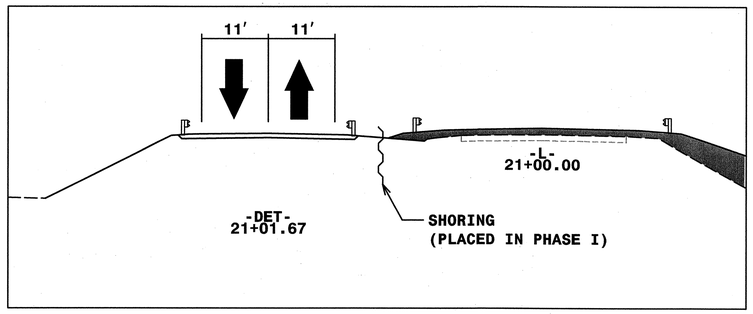
PHASE II DETAIL

PROJ. REFERENCE NO.	SHEET NO.
B-4273	TMP-7

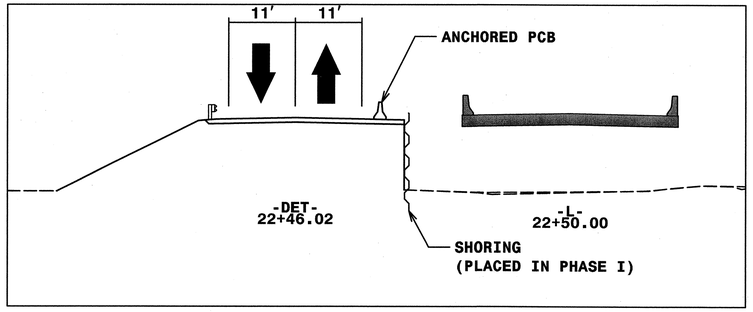
A-A
-L- 17+00



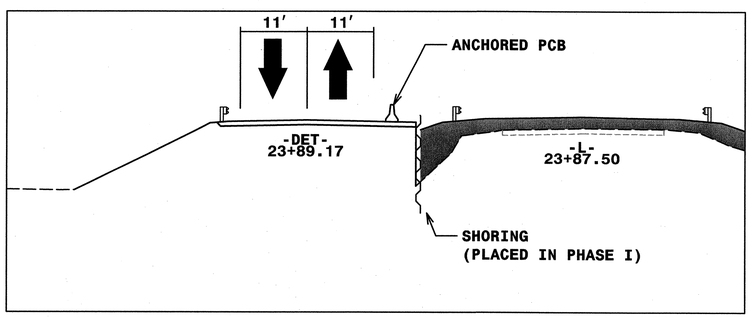
B-B
-L- 21+00



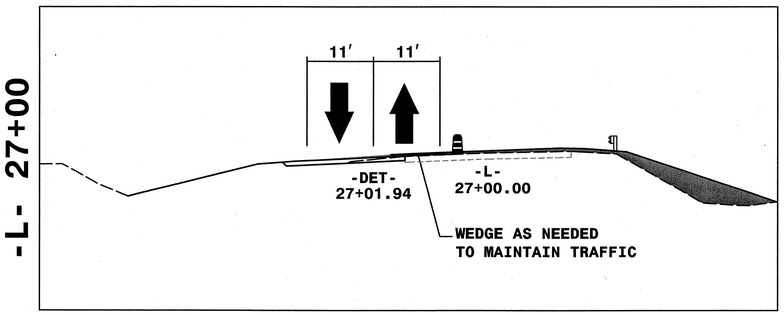
C-C
-L- 22+50



D-D
-L- 23+87.50



E-E
-L- 27+00



REVISIONS

8/17/99

$$$$$$$$CYCTIME$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

QAQC STAGE:

REVIEW:
CONCUR:
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VERIFY:

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APPROVED: Rhonda B. Early DATE: 8.2.12

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TRANSPORTATION
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PHASE II
CUT SECTIONS