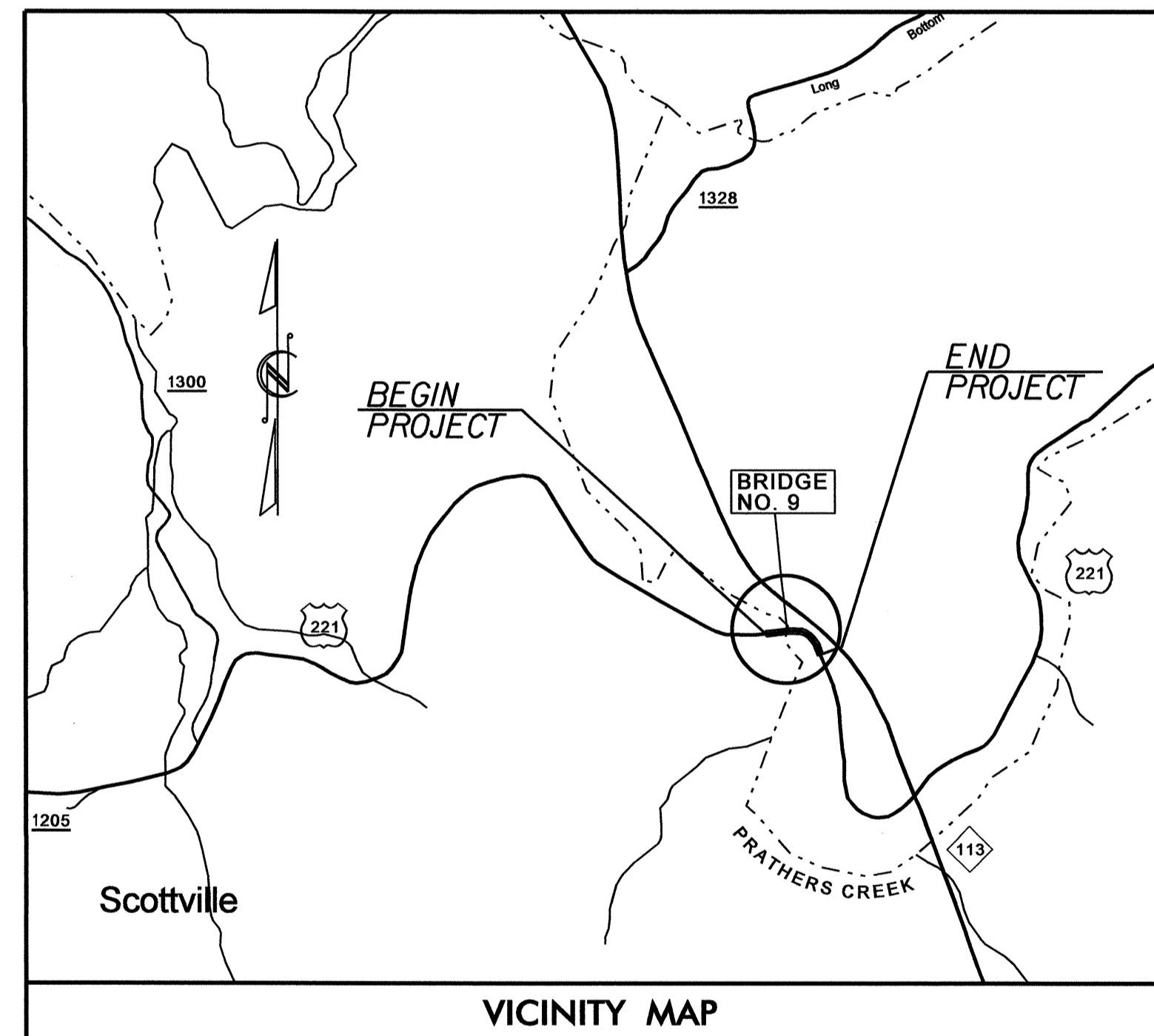


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**ALLEGHANY COUNTY**



**LOCATION: BRIDGE NO. 9 OVER PRATHERS CREEK ON US 221**

**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
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING; TEMPORARY SHORING DATA
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-4A	PHASE I SECTIONAL VIEWS
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-5A	PHASE II SECTION VIEWS

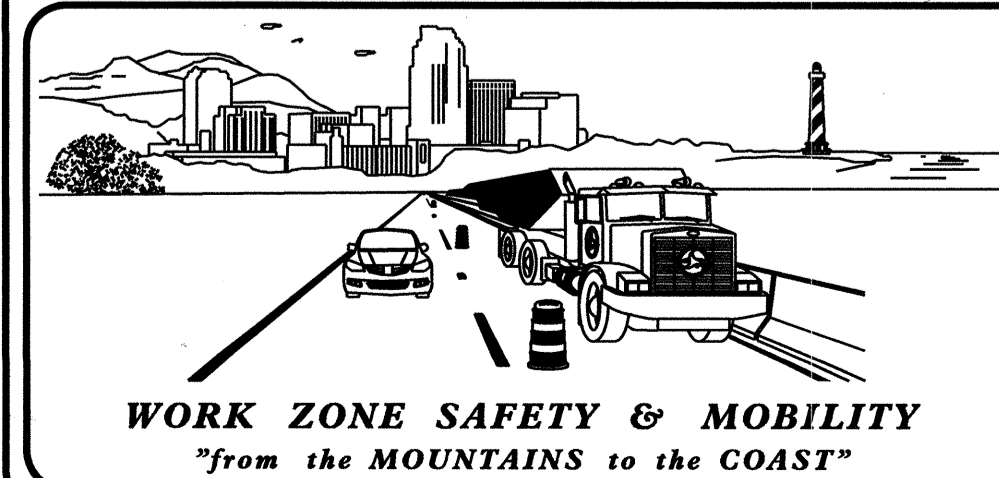
SHEET NO.

TMP-1

**B-4406**

**TIP PROJECT:**

19-DEC-2010 09:42 \\dot\dfs\001\proj\TIP\Projects-B\B4406\TrafficControl\TCP\B-4406\_TC-TMP-TMP-01.dgn Woolard AT 12/24/10



**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
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J. W. WOOLARD, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
L. K. DONALDSON, P.E. TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_

SEAL

12/19/11

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

<u>STD. NO.</u>	<u>TITLE</u>
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 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
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1253.01	SNOWFLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

## LEGEND

### GENERAL

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

### TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
	PAINT (4")
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER

### 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

APPROVED:  DATE: 1/19/12		<b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b>
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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 UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING 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.
- C) 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 ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 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.
- D) 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.
- E) 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**

- F) 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.
- G) 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 EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

**TRAFFIC PATTERN ALTERATIONS**

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

**SIGNING**

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

**TRAFFIC BARRIER**

- L) 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.

- M) 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**

- N) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

**PAVEMENT MARKINGS AND MARKERS**

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

ROAD NAME	MARKING	MARKER
US 221	PAINT	TEMPORARY RAISED

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

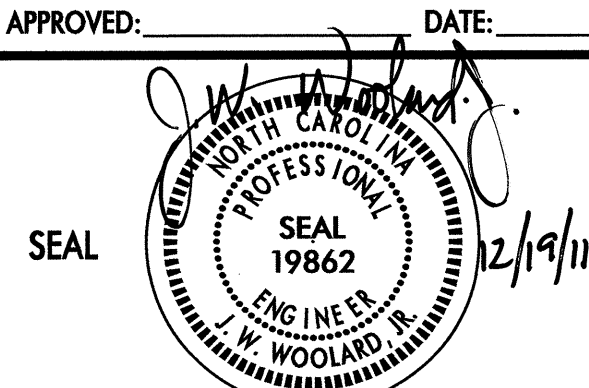

**MISCELLANEOUS**

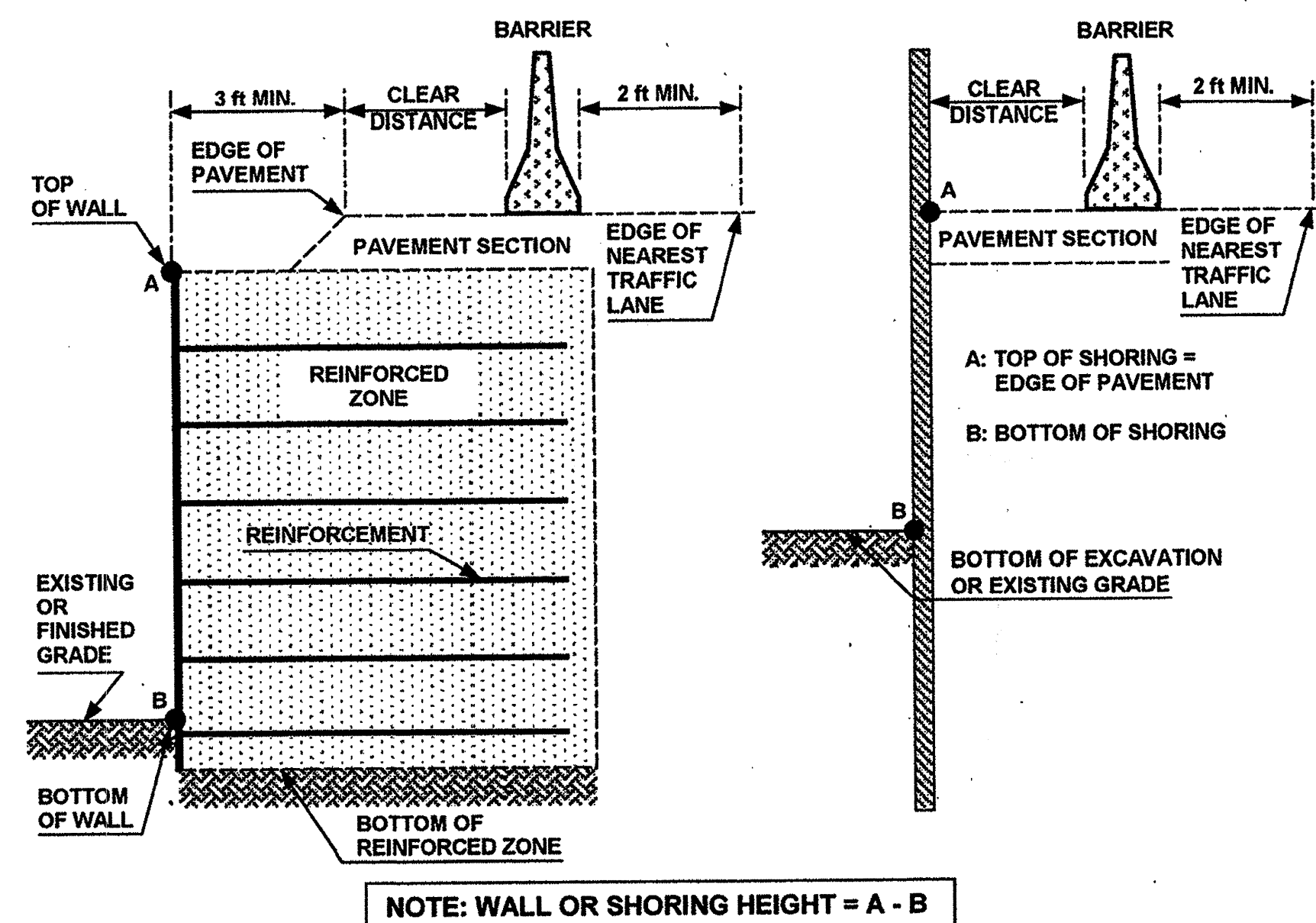
- T) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

**MANAGEMENT STRATEGIES**

TRAFFIC WILL BE MAINTAINED ON EXISTING ROAD AS NEW ALIGNMENT IS CONSTRUCTED. A FLAGGING OPERATION WILL BE USED TO CONSTRUCT THE NEW TIE-INS AND TRAFFIC WILL BE SHIFTED ON TO THE NEW ROADWAY.

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APPROVED: 	DATE: 12/19/11		<p><b>TRANSPORTATION OPERATIONS PLAN</b></p> <p>(MANAGEMENT STRATEGIES &amp; GENERAL NOTES)</p>
SEAL			



**FIGURE A**

**NOTES**

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- 3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN 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 PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:
 

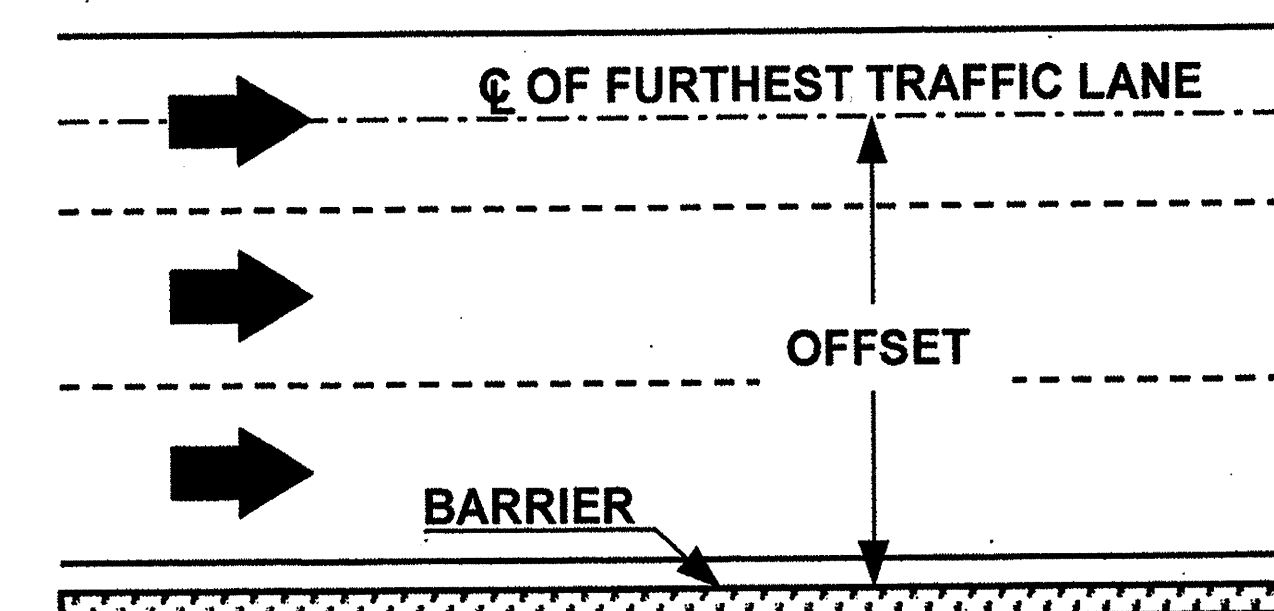
CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- 8- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.
- 9- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE 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' IN LENGTH AND WET OR DRY PAVEMENT.

**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 or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

\* See Figure Below



**FIGURE B**

APPROVED: _____ DATE: _____		PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS



NOTE: MAINTAIN TRAFFIC FOR ALL DRIVEWAYS AND SECONDARY ROADS THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT

**PHASE I**

**STEP 1**

PLACE ADVANCED WORK ZONE WARNING SIGNING PER ROADWAY STANDARD DRAWING NO. 1101.01.

**STEP 2**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKING, MARKERS AND TEMPORARY PORTABLE CONCRETE BARRIER AND CRASH CUSHIONS AS SHOWN ON TMP-04.

**STEP 3**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, CONSTRUCT NEW ROADWAY UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-04.

**STEP 4**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, REMOVE TEMPORARY PORTABLE CONCRETE BARRIER AND CRASH CUSHIONS. USE TMIA TO PROTECT ENDS OF BRIDGE UNTIL TRAFFIC IS PLACED ONTO NEW BRIDGE.

**PHASE II**

**STEP 1**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, CONSTRUCT TIE-IN OF NEW ROADWAY, UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AS SHOWN ON TMP-05, PLACING TRAFFIC ONTO NEW ROADWAY. USE TMIA TO PROTECT END OF BRIDGE UNTIL GUARDRAIL IS INSTALLED ON NORTH SIDE OF ROADWAY.

**STEP 2**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, CONSTRUCT NEW ROADWAY UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, AS SHOWN ON TMP-05. COMPLETE DEMOLITION OF ROADWAY AND EXISTING BRIDGE AS SHOWN ON TMP-05 AND CONSTRUCTION PLANS.

**STEP 3**

USING RSD 1101.02 SHEET 1 OF 9 AND FLAGGERS AS NEEDED, CONSTRUCT FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS AS SHOWN IN FINAL PAVMENT MARKING PLANS.

**STEP 4**

REMOVE ALL TRAFFIC CONTROL DEVICES.

**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 OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 15+53.00+ -L-, 22.3 FT. LEFT OF -L-, TO STATION 15+70.00+, 25.1 FT. LEFT OF -L-. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGNED SHORING FROM STATION 15+53.00+ -L-, 22.3 FT. LEFT OF -L-, TO STATION 15+70.00+ -L-, 25.1 FT. LEFT OF -L-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT

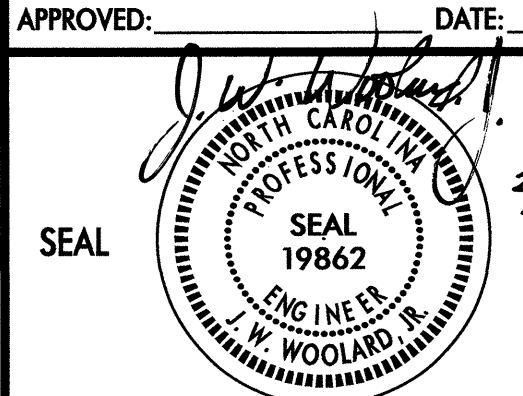
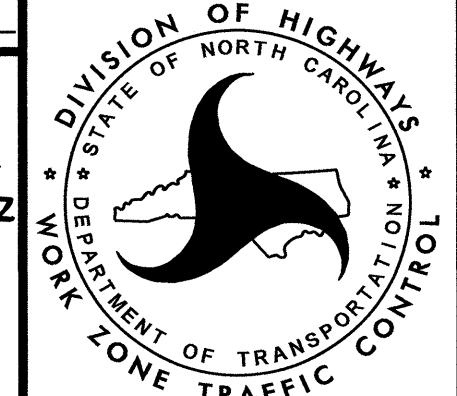
FRICTION ANGLE,  $\phi = 30$  DEGREES

COHESION,  $c = 0$  PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM 15+53.00± -L-, 22.3 FEET LEFT OF -L-, TO STATION 15+75.00± -L-, 25.1 FEET LEFT OF -L-. THE INFORMATION PROVIDED FOR TEMPORARY 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 JANUARY 24, 2012, BY PROFESSIONAL ENGINEER JOHN FARGHER. (SEAL # 023480)

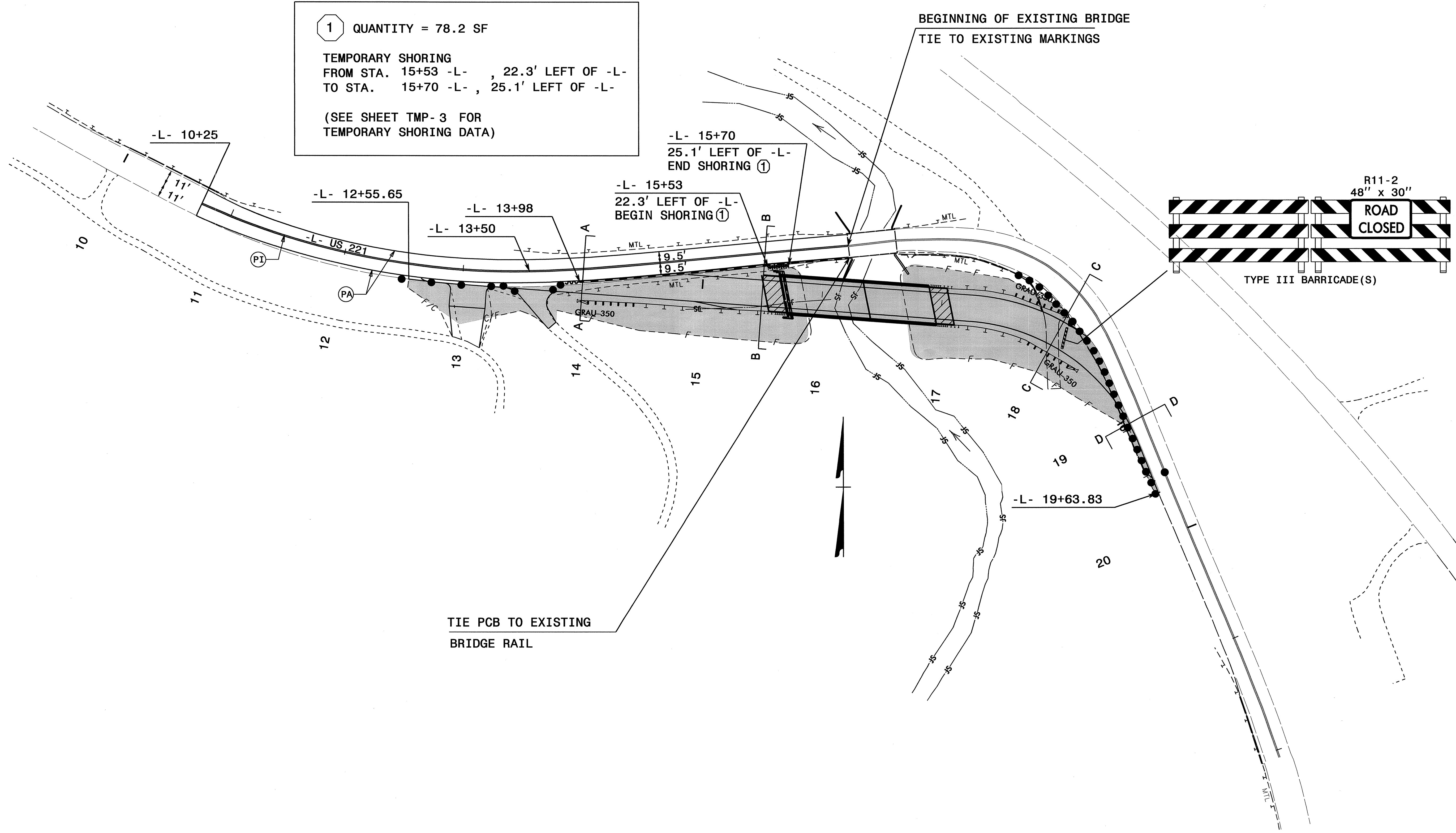
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APPROVED: 	DATE: 2/22/12		<p style="text-align: center;"><b>PHASING &amp; TEMPORARY SHORING DATA</b></p>
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① QUANTITY = 78.2 SF

TEMPORARY SHORING  
FROM STA. 15+53 -L- , 22.3' LEFT OF -L-  
TO STA. 15+70 -L- , 25.1' LEFT OF -L-

(SEE SHEET TMP-3 FOR  
TEMPORARY SHORING DATA)



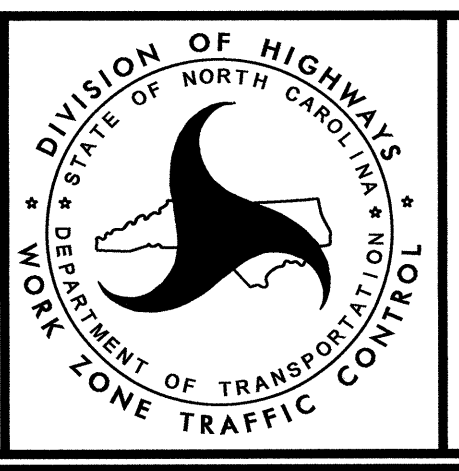
SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

\* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

APPROVED: *[Signature]* DATE: 12/19/11

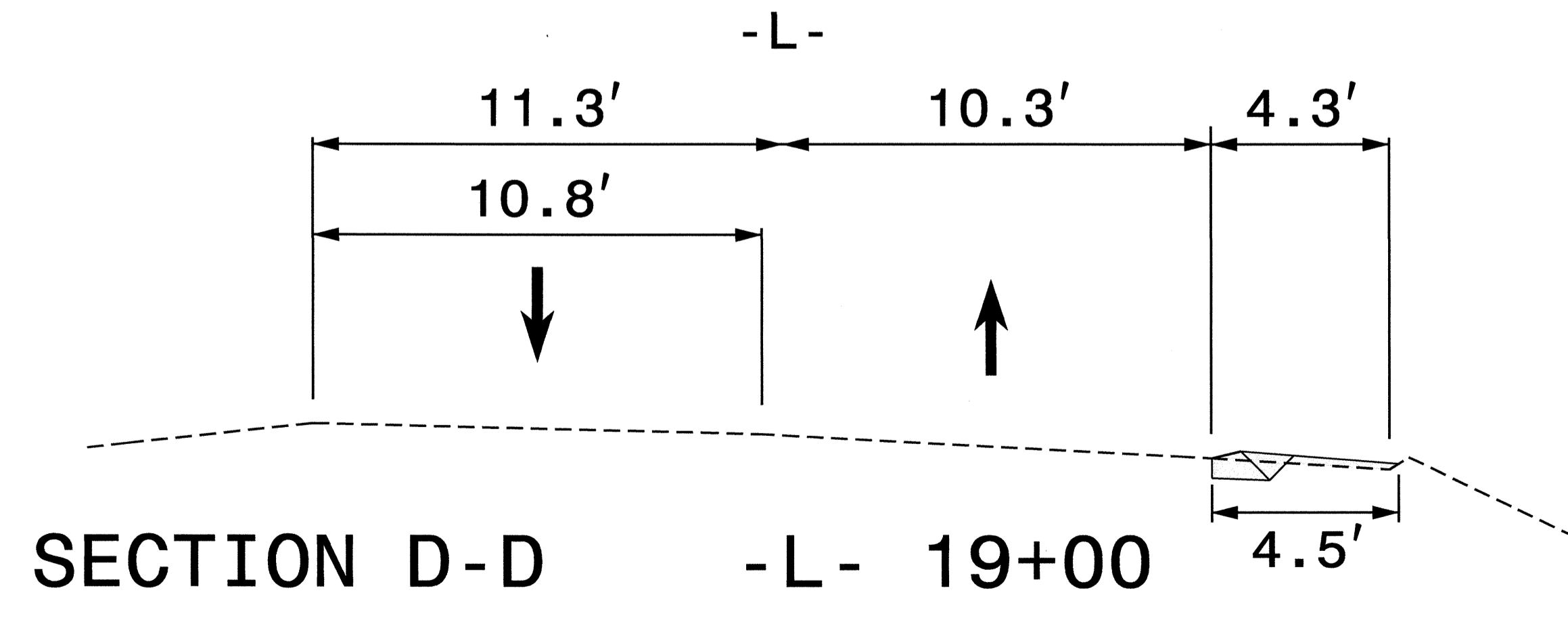
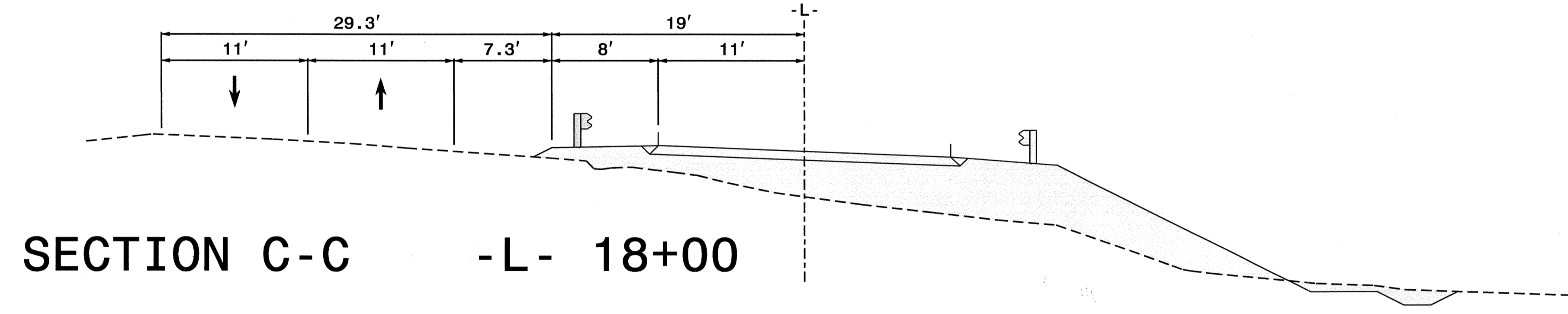
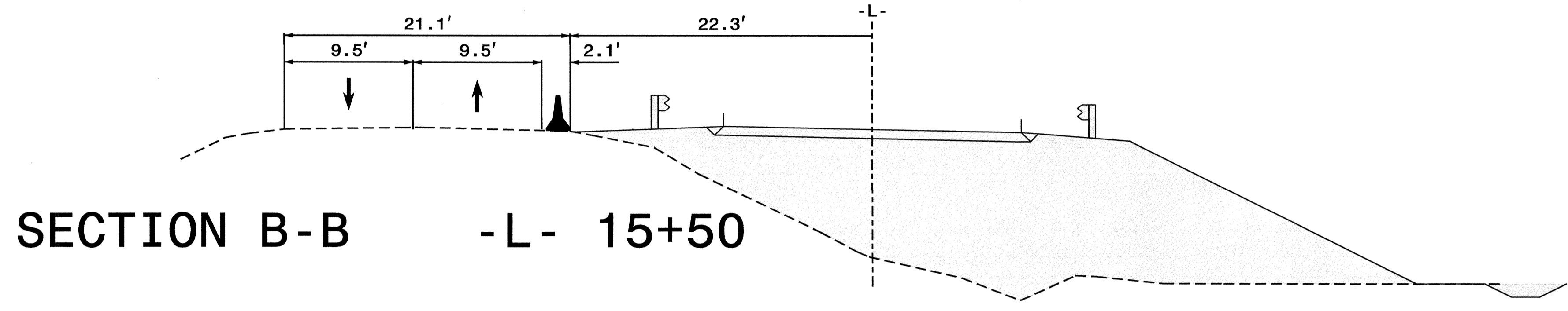
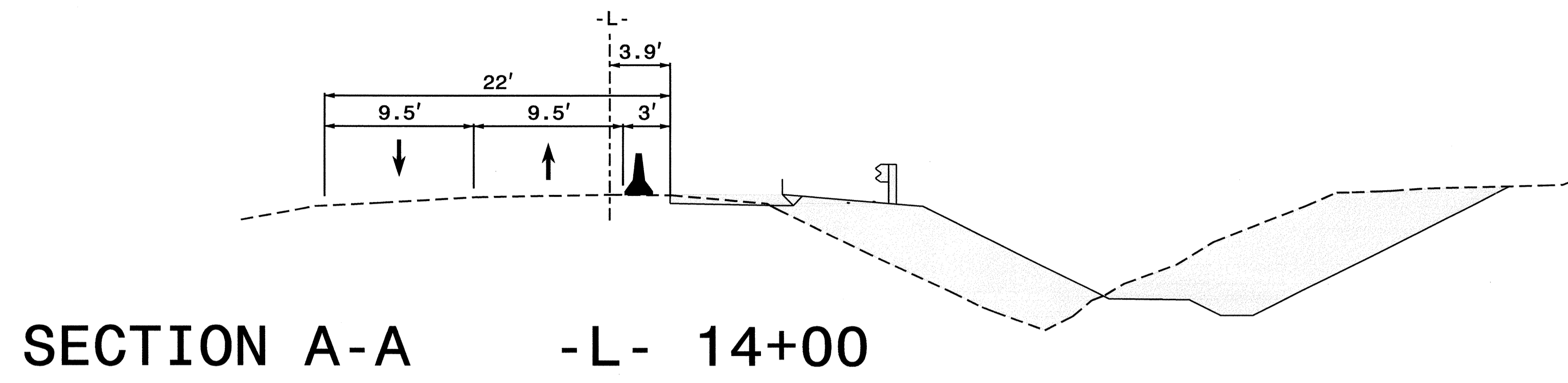
SEAL

PROFESSIONAL ENGINEER  
W. WOOLARD JR.  
19862

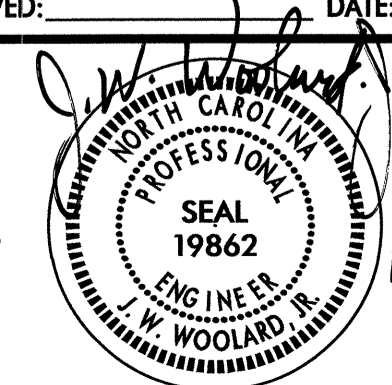
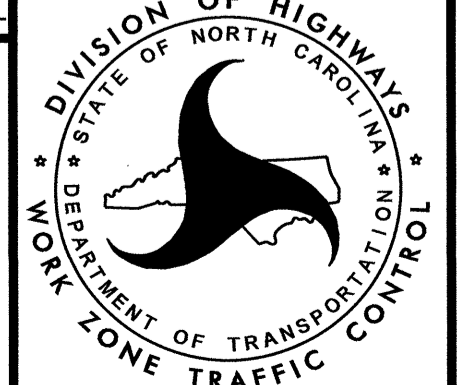


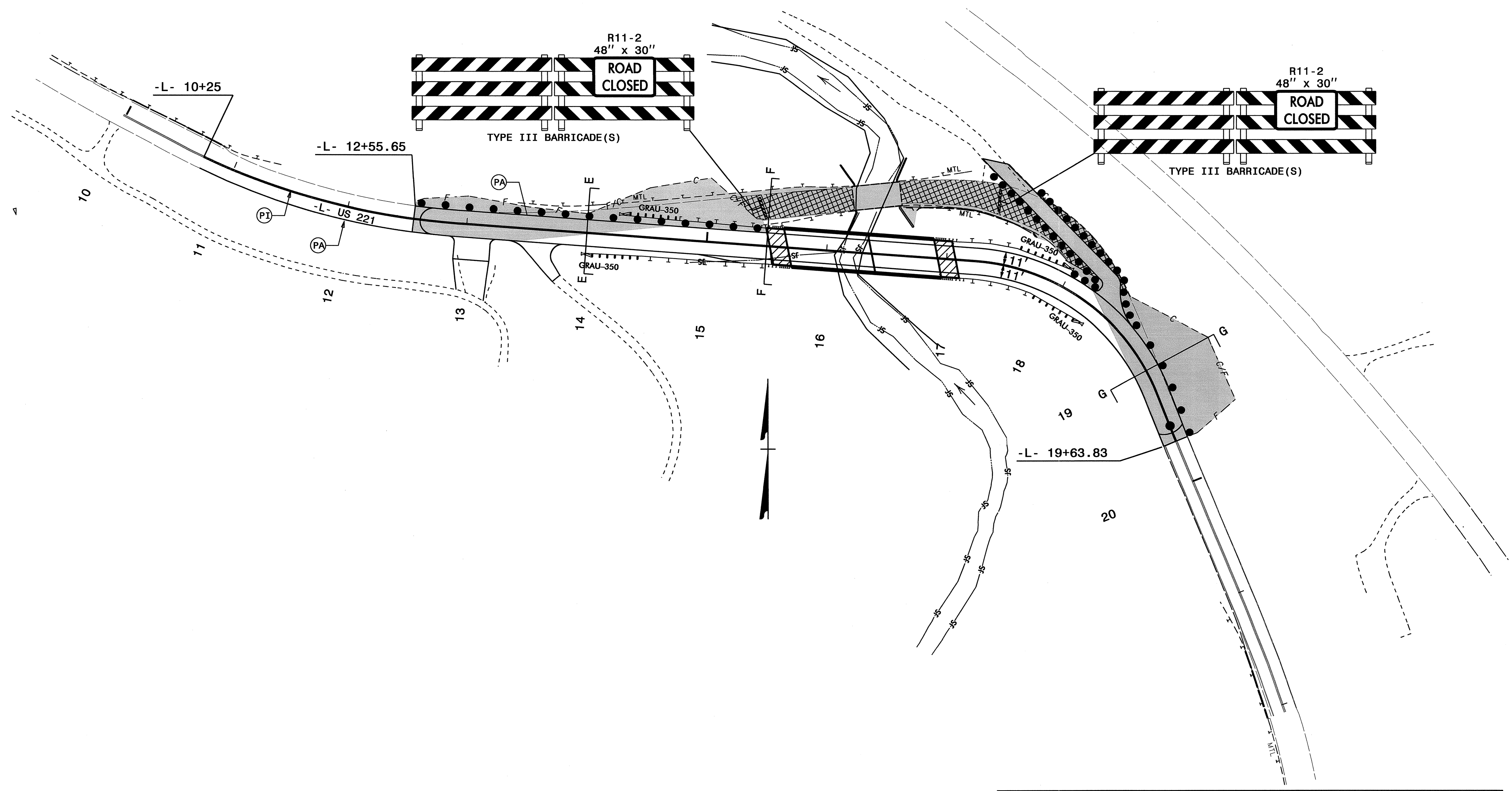
PHASE I DETAIL

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woolard - AT 1E244740



19-DEC-2011 09:24  
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 Jwoolard AT 12/14/11

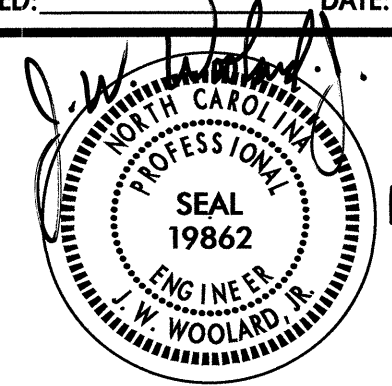

APPROVED: 	DATE: 12/14/11		PHASE 1 SECTION VIEWS
SEAL			



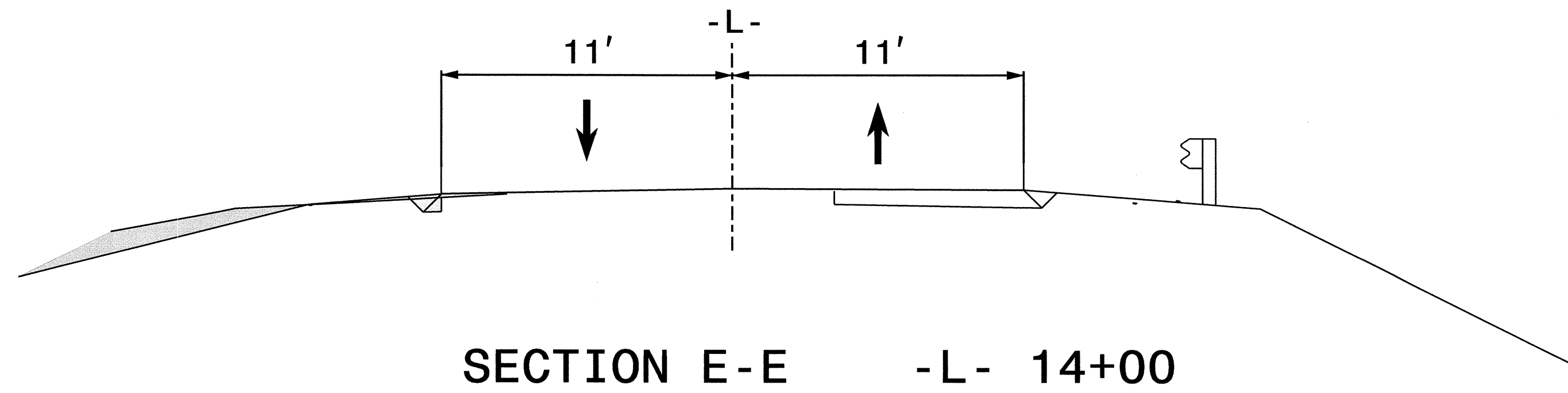
SEE SHEET TMP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE

\* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

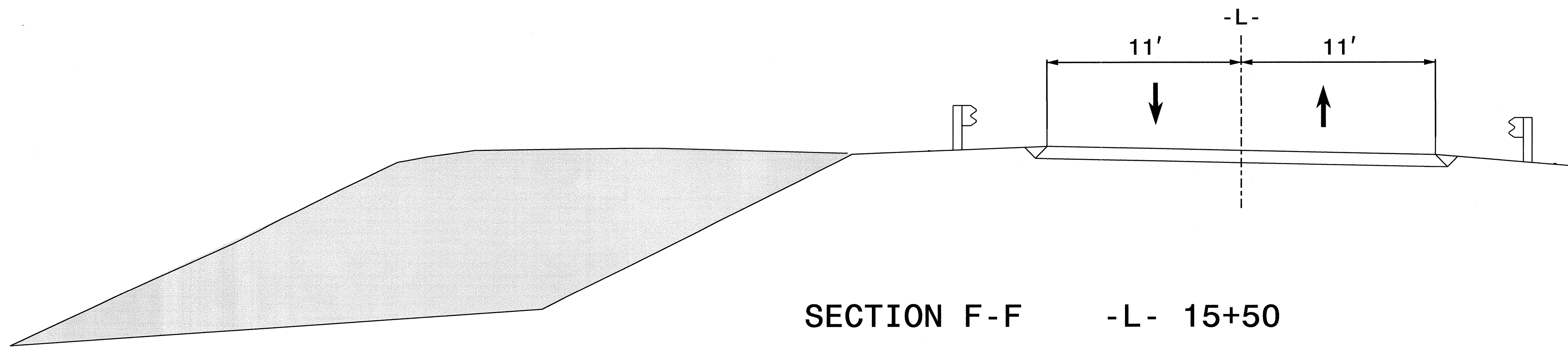
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 woodard AT 12/14/11

APPROVED: 	DATE: 12/19/11		<p style="text-align: center; font-size: 24pt; font-weight: bold;">PHASE II</p>
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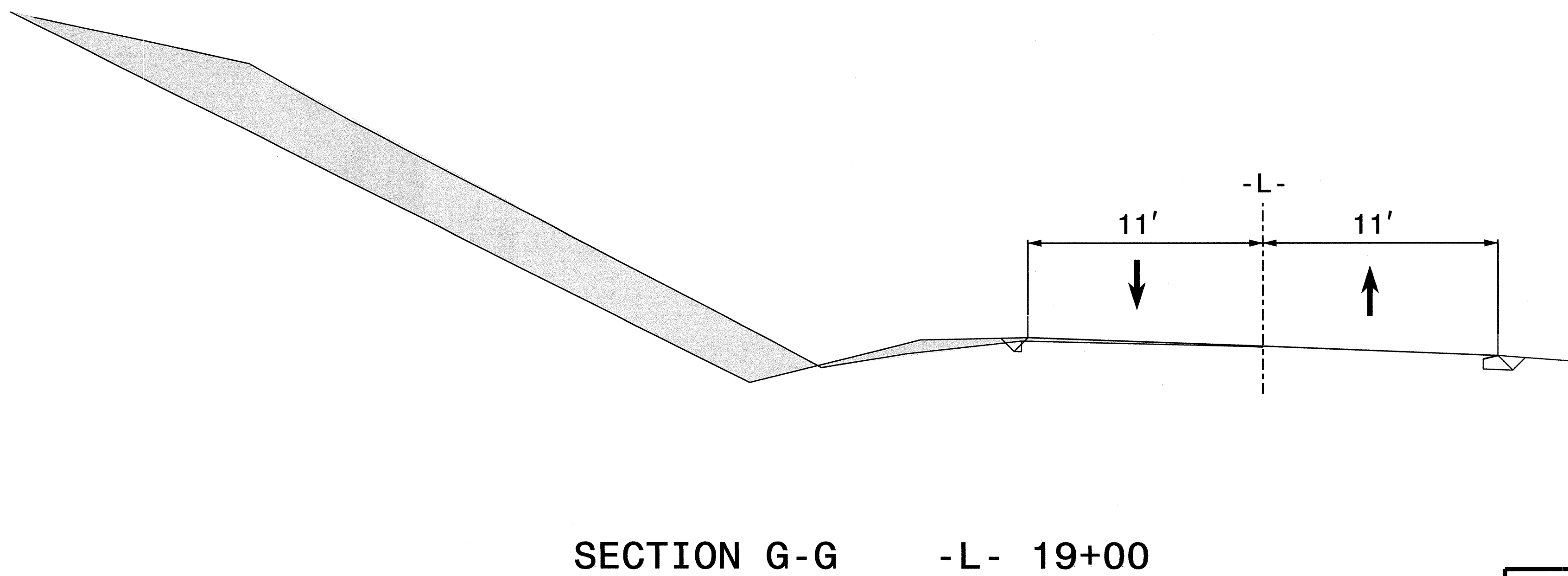




SECTION E-E -L- 14+00



SECTION F-F -L- 15+50



SECTION G-G -L- 19+00

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 jwoodard AT 12/14/11

APPROVED:	DATE:		<p>PHASE II SECTION VIEWS</p>
	12/14/11		