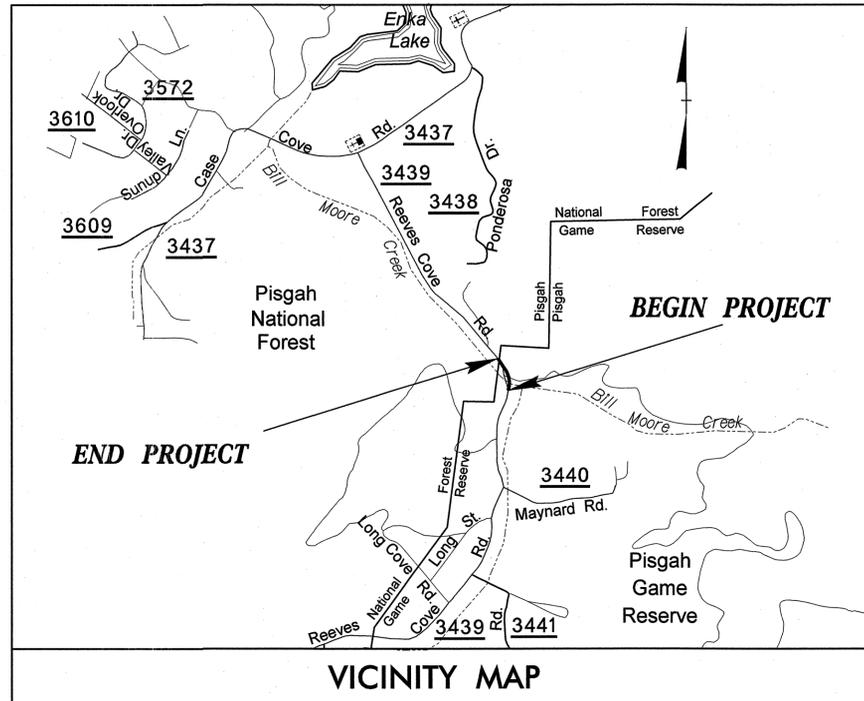


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**BUNCOMBE COUNTY**



VICINITY MAP

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

SHEET NO.  
TMP-1

WBS 33167.3.1

TIP PROJECT: B-3619

6/21/2011 U:\Traffic\TrafficControl\TCPLAN SHEETS\B3619\_TC\_TMP01.dgn Bwatson



**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL LIST OF CONTACTS**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E.	STATE TRAFFIC MANAGEMENT ENGINEER
J. ISHAK, P.E.	TRAFFIC CONTROL PROJECT ENGINEER
B.P. SCHOENBAUER, P.E.	TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	TRAFFIC CONTROL DESIGN ENGINEER



PLAN PREPARED BY:

Stantec Consulting Services Inc.  
Suite 300, 801 Jones Franklin Road  
Raleigh, NC 27606  
Tel: 919.851.6888  
Fax: 919.851.7024  
www.stantec.com

BETSY L. WATSON, P.E.  
TRAFFIC ENGINEER

GEORGE KARAGEORGE  
TRANSPORTATION DESIGNER

APPROVED: *Betsy L. Watson*  
DATE: *June 21, 2011*

SEAL

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

## LEGEND

### GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- WORK AREA
- REMOVAL
- NORTH ARROW

### 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 (CMS)
- PORTABLE CONCRETE BARRIER (PCB)

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

### PAVEMENT MARKERS

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

4/20/2011 U:\Traffic\TrafficControl\TOP\PLAN SHEETS\B3619\_TC\_TMP01A.dgn gkaragoor.g

<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED  DATE: 4/24/11			ROADWAY STANDARD DRAWINGS & LEGEND
	SEAL			

## MANAGEMENT STRATEGIES

THE PROPOSED CONSTRUCTION WORK AND REPLACEMENT OF BRIDGE NO.56 WILL BE ACCOMPLISHED USING A COMBINATION OF LANE CLOSURES AND TEMPORARY SIGNALS WHEN TRAFFIC IS PLACED IN A ONE-LANE TWO-WAY PATTERN. TEMPORARY PORTABLE CONCRETE BARRIER, TEMPORARY PAVEMENT AND TEMPORARY SHORING WILL BE UTILIZED DURING CONSTRUCTION.

## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

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

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING 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.
- 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 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) 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) PROVIDE PERMANENT SIGNING.
- 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 FT. 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 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 PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION AS SHOWN IN THE PLANS.

### TRAFFIC CONTROL DEVICES

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

ROAD NAME	MARKING	MARKER
REEVES COVE RD.	PAINT	NONE

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

ROAD NAME	MARKING	MARKER
REEVES COVE RD. (WITHIN PROJ. LIMITS)	PAINT	TEMPORARY RAISED
REEVES COVE RD. (OUTSIDE PROJ. LIMITS)	COLD APPLIED PLASTIC (TYPE IV)	NONE

- S) 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.

- T) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION AFTER SUFFICIENT DRYING TIME OF THE FIRST.

- U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

### TEMPORARY SIGNALS

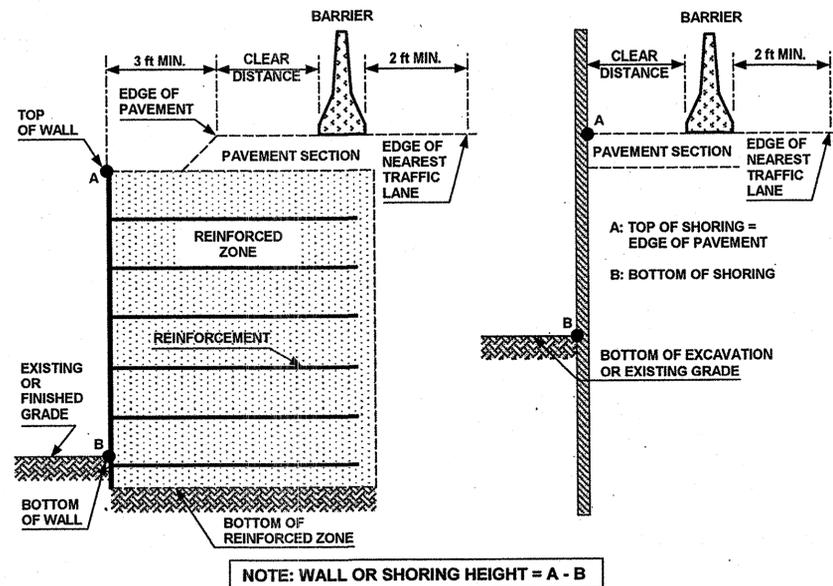
- W) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.

### MISCELLANEOUS

- X) ALL DIMENSIONS SHOWN IN THE TRAFFIC CONTROL PLAN ARE APPROXIMATE; FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- Y) MAINTAIN DRIVEWAY ACCESS WITHIN PROJECT LIMITS USING INCIDENTAL STONE.
- Z) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- AA) COORDINATE WITH THE ENGINEER TO ENSURE THAT THE FOREST SERVICE IS INFORMED OF THE ONGOING CONSTRUCTION AND TRAFFIC OPERATIONS IN THE AREA. PROVIDE OR RESTRICT ACCESS TO THE FOREST SERVICE ROAD AND ASSOCIATED PARKING AREAS AS REQUIRED.

4/20/2011  
 J:\TrafficControl\TrafficControl\TCP\PLAN SHEETS\3619\_tcp\_psh1b.dgn  
 jkrc@george

 <b>Stantec</b>	Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED <i>Betsy L. Watson</i> DATE: <i>4/20/11</i> 	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION & WORK ZONE TRAFFIC CONTROL	<h2 style="margin: 0;">GENERAL NOTES</h2>
---	--	---	--	---



**FIGURE A**

**NOTES**

- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- 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).
- 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:
 

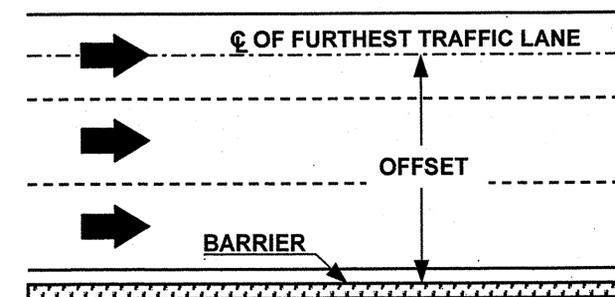
CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

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.
- 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 "SURCHARGÉ 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).
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- 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.
- 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.
- 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**

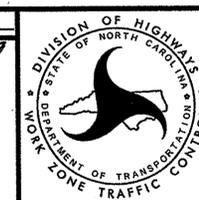
Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	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: \_\_\_\_\_  
 SEAL  
 Sept 10 2010



PORTABLE CONCRETE BARRIER  
 AT  
 TEMPORARY SHORING LOCATIONS

## TRAFFIC CONTROL PLAN PHASING

### PHASE I

FOR THE WORK REQUIRED IN PHASE I, MAINTAIN TRAFFIC ON THE EXISTING REEVES COVE RD. ROADWAY IN THE EXISTING PATTERN. USE FLAGGER CONTROLLED TEMPORARY LANE CLOSURES PER RSD. 1101.02, SHEET 1 OF 9, FOR ANY WORK WITHIN 5' OF THE EXISTING TRAVELWAY AS SPECIFIED IN THE GENERAL NOTES. RETURN TRAFFIC TO THE EXISTING TWO-LANE TWO-WAY PATTERN AT THE END OF EACH WORK PERIOD.

**STEP 1: (TMP-4)**  
 INSTALL WORK ZONE ADVANCE WARNING SIGNS WITH ADVISORY SPEED PANELS ON REEVES COVE RD.

**STEP 2: (TMP-4)**  
 CONSTRUCT 4' TEMPORARY ASPHALT PAVEMENT UP TO THE EDGE & ELEVATION OF EXISTING PAVEMENT ADJACENT TO EXISTING REEVES COVE RD. NB LANE (100' LENGTH TO EXISTING BRIDGE). THIS TEMPORARY PAVEMENT IS UTILIZED FOR SETTING PORTABLE CONCRETE BARRIER IN THE NEXT STEP.

BEGIN CONSTRUCTION OF TEMPORARY SIGNAL. BAG HEADS AS APPROPRIATE UNTIL ACTIVATED IN PHASE II.

**STEP 3: (TMP-4)**  
 INSTALL PORTABLE CONCRETE BARRIER (PCB) AND TEMPORARY CRASH CUSHION ON 4' TEMPORARY SHOULDER PAVEMENT.

**STEP 4: (TMP-4)**  
 INSTALL TEMPORARY SHORING LOCATION NO.1 RIGHT SIDE OF EXISTING ROADWAY.

CONSTRUCT STAGE 1 OF PROPOSED CULVERT.  
 BEGIN PROPOSED ROADWAY (-L-) AND -DR1- CONSTRUCTING AS MUCH AS POSSIBLE AWAY FROM EXISTING TRAFFIC. EXCLUDE THE FINAL LAYER OF SURFACE COURSE.

INSTALL TEMPORARY SHORING LOCATION NO.2 -L- LEFT SIDE OF PROPOSED ROADWAY AND CONSTRUCT AS MUCH AS POSSIBLE OF NEW LEFT SIDE EMBANKMENTS WHERE SHORING IS NOT PROVIDED.

COMPLETE PORTION OF PROPOSED ROADWAY CONSTRUCTING UP TO THE EDGE & ELEVATION OF EXISTING PAVEMENT AND EXCLUDING THE FINAL LAYER OF SURFACE COURSE.

COMPLETE TEMPORARY TRAFFIC SIGNAL AS MUCH AS POSSIBLE. BAG HEADS AS APPROPRIATE UNTIL ACTIVATED IN PHASE II.

### PHASE II

COMPLETE THE WORK REQUIRED OF PHASE II STEP 1 (A-F) IN A CONTINUOUS OPERATION WITHIN ONE WORK PERIOD.

- STEP 1: (TMP-5)**
- A) INSTALL A FLAGGER CONTROLLED TEMPORARY LANE CLOSURE ON EXISTING REEVES COVE RD. CLOSING THE NORTHBOUND LANE (RSD. 1101.02, SHEET 1 OF 9).
  - B) BEHIND THE LANE CLOSURE, PAVE PROPOSED -L- RIGHT SIDE TIE-INS TO EXISTING ROADWAY. CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. REMOVE PREVIOUSLY PLACED PCB/CRASH CUSHION AND BEGIN TO RELOCATE.
  - C) SHIFT LANE CLOSURE DEVICES AND DIRECT TRAFFIC TO THE PROPOSED ROADWAY -L- RIGHT SIDE IN A ONE LANE TWO-WAY PATTERN AND CLOSE EXISTING ROADWAY.
  - D) BEHIND THE LANE CLOSURE PAVE REMAINING -L- LEFT SIDE TIE-INS TO EXISTING. CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
  - E) BEHIND THE LANE CLOSURE, COMPLETE RESET AND NEW INSTALLATION OF PCB AND TEMPORARY CRASH CUSHIONS. COMPLETE TEMPORARY TRAFFIC SIGNAL, TEMPORARY PAVEMENT MARKINGS, TEMPORARY SIGNING AND REMAINDER OF TEMPORARY TRAFFIC CONTROL DEVICES NECESSARY FOR THE ONE-LANE TWO-WAY PATTERN SHOWN ON SHEET TMP-5.
  - F) REMOVE THE LANE CLOSURE AND OPEN PROPOSED ROADWAY TO A ONE-LANE TWO-WAY PATTERN WITH TEMPORARY TRAFFIC SIGNAL (TMP-5).

**STEP 2: (TMP-5)**  
 REMOVE EXISTING STRUCTURE.  
 CONSTRUCT STAGE 2 CULVERT CONSTRUCTION.

CONSTRUCT REMAINDER OF ROADWAY INCLUDING GUARDRAIL, EMBANKMENTS AND PAVEMENT OBLITERATION. CONSTRUCT ROADWAY PAVEMENT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

### PHASE III

COMPLETE THE WORK REQUIRED OF PHASE III STEP 1 IN A CONTINUOUS OPERATION WITHIN ONE WORK PERIOD.

**STEP 1:**  
 INSTALL A FLAGGER CONTROLLED TEMPORARY LANE CLOSURE (RSD. 1101.02 SHEET 1 OF 9) AND PLACE TEMPORARY SIGNAL IN FLASH RED MODE. BEHIND THE LANE CLOSURE REMOVE PCB AND CRASH CUSHIONS AND REPLACE WITH DRUMS. AT THE END OF THE WORK PERIOD RETURN TRAFFIC TO A ONE-LANE TWO-WAY PATTERN WITH THE TEMPORARY SIGNAL IN NORMAL OPERATING MODE.

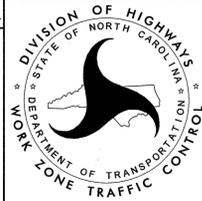
COMPLETE THE WORK REQUIRED OF PHASE III STEP 2 (A-B) IN A CONTINUOUS OPERATION WITHIN ONE WORK PERIOD.

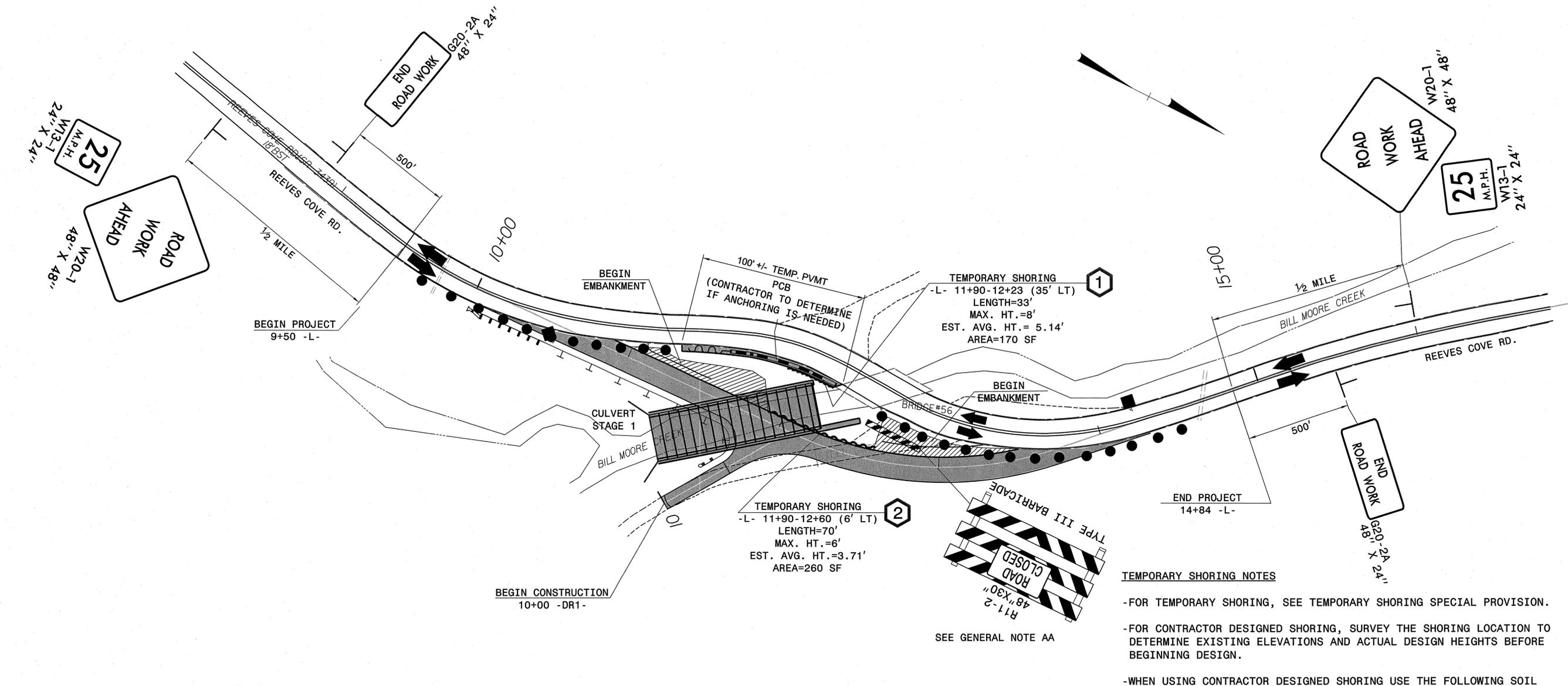
- STEP 2: (TMP-6)**
- A) USING FLAGGER CONTROLLED TEMPORARY LANE CLOSURES (RSD. 1101.02 SHEET 1 OF 9) AND WITH TEMPORARY SIGNAL IN FLASH RED MODE, REMOVE CONFLICTING PAVEMENT MARKINGS AND PLACE PAVEMENT MARKINGS FOR A TWO-LANE TWO WAY PATTERN. DEACTIVATE TRAFFIC SIGNAL AND BAG HEADS, COVER/REMOVE TEMPORARY SIGNS ASSOCIATED WITH TRAFFIC SIGNAL AND INSTALL TEMPORARY TWO-WAY TRAFFIC SIGNS. (TMP-6)
  - B) REMOVE THE LANE CLOSURE AND OPEN PROPOSED -L- REEVES COVE RD. TO A TWO-LANE TWO-WAY TRAFFIC PATTERN. (TMP-6)

**STEP 3:**  
 USING FLAGGER CONTROLLED TEMPORARY LANE CLOSURES PER RSD. 1101.02 SHEET 1 OF 9, REMOVE TRAFFIC SIGNAL. RETURN TRAFFIC TO A TWO-LANE TWO-WAY PATTERN AT THE END OF EACH WORK PERIOD. (TMP-6)

**STEP 4: (TMP-6)**  
 UPON COMPLETION OF ALL OTHER CONSTRUCTION WORK USE FLAGGER CONTROLLED TEMPORARY LANE CLOSURES PER RSD. 1101.02 SHEET 1 OF 9 TO PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS. RETURN TRAFFIC TO A TWO-LANE TWO-WAY PATTERN AT THE END OF EACH WORK PERIOD.

7/11/2011 11:41:11 AM I:\Projects\TrafficControl\TCP\PLAN SHEETS\B3619\_TC\_TMP03.dgn

 <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	<p>APPROVED: <i>Betsy L. Watson</i> DATE: 7/11/11</p> 		<h2 style="margin: 0;">TEMPORARY TRAFFIC CONTROL PHASING</h2>
---	---	---	---

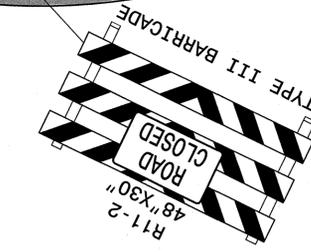
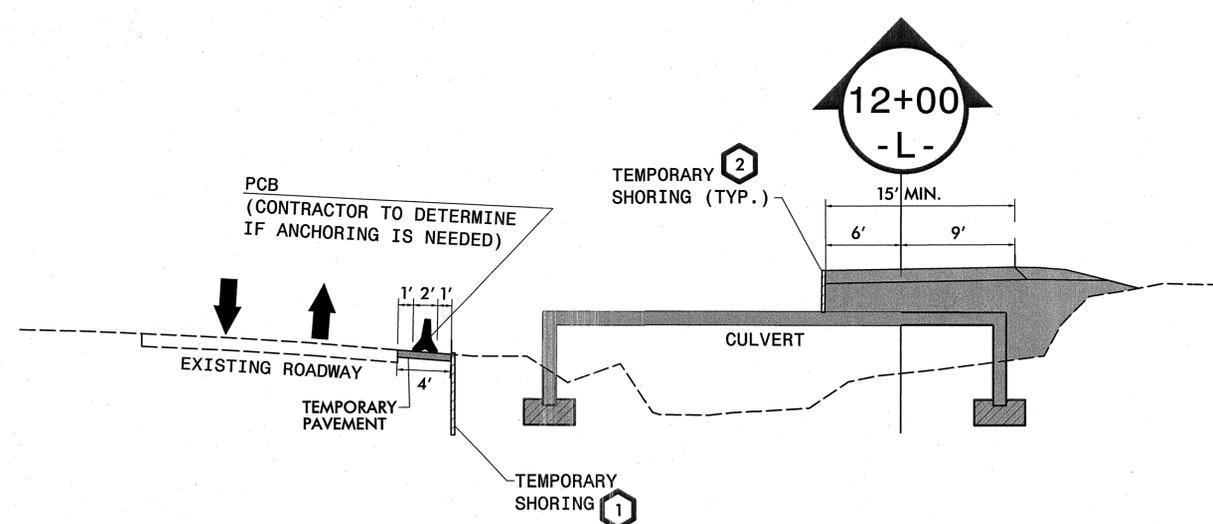


TEMPORARY SHORING 1  
 -L- 11+90-12+23 (35' LT)  
 LENGTH=33'  
 MAX. HT.=8'  
 EST. AVG. HT.= 5.14'  
 AREA=170 SF

TEMPORARY SHORING 2  
 -L- 11+90-12+60 (6' LT)  
 LENGTH=70'  
 MAX. HT.=6'  
 EST. AVG. HT.=3.71'  
 AREA=260 SF

**TEMPORARY SHORING NOTES**

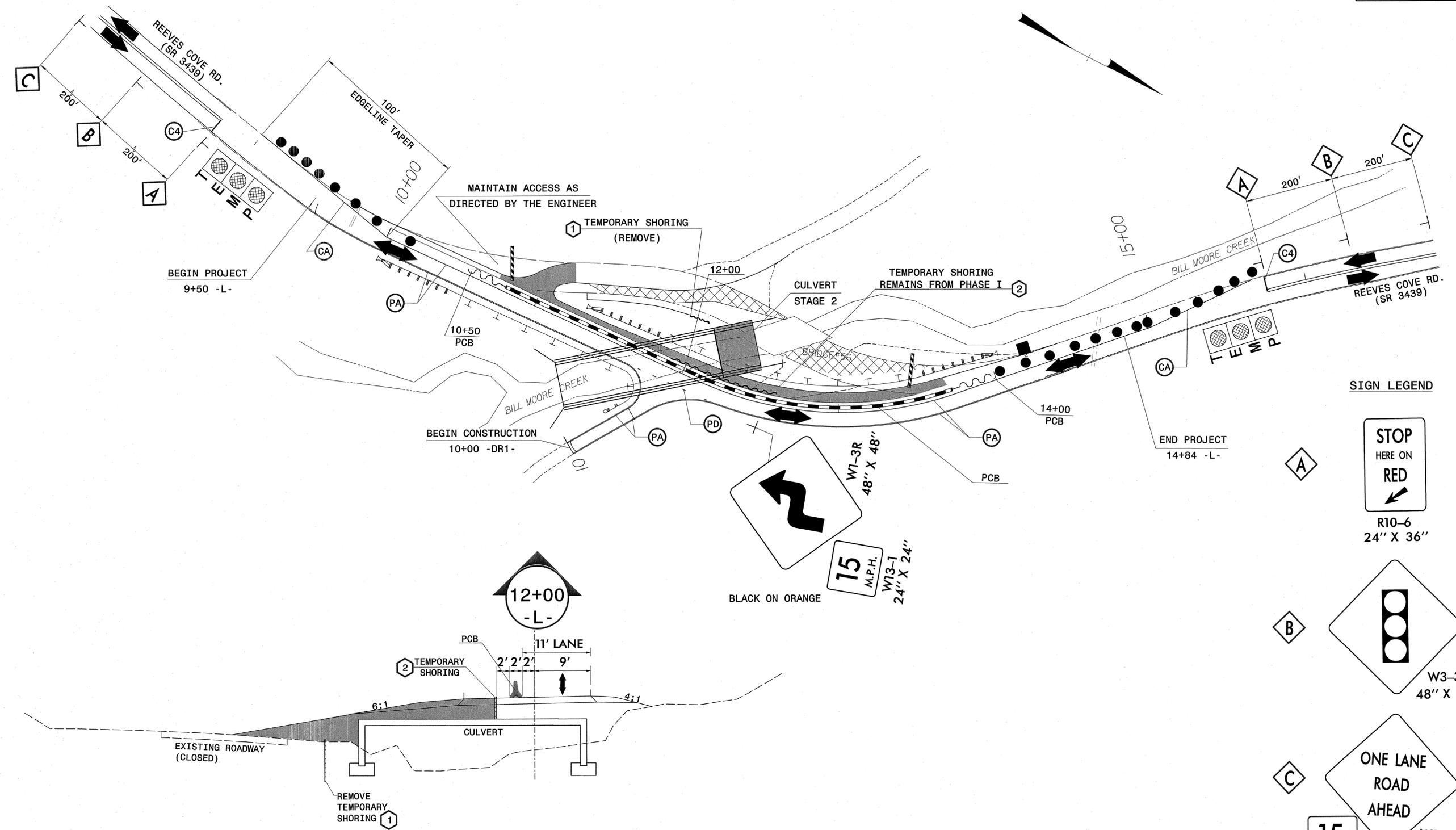
- FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.
- FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
- WHEN USING CONTRACTOR DESIGNED SHORING USE THE FOLLOWING SOIL PARAMETERS:  
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE  $\gamma = 120$  PCF  
 UNIT WEIGHT OF SOIL BELOW WATER TABLE  $\gamma = 60$  PCF  
 FRICTION ANGLE  $\phi = 30$  DEGREES  
 COHESION  $c=0$  PSF
- NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
- FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.



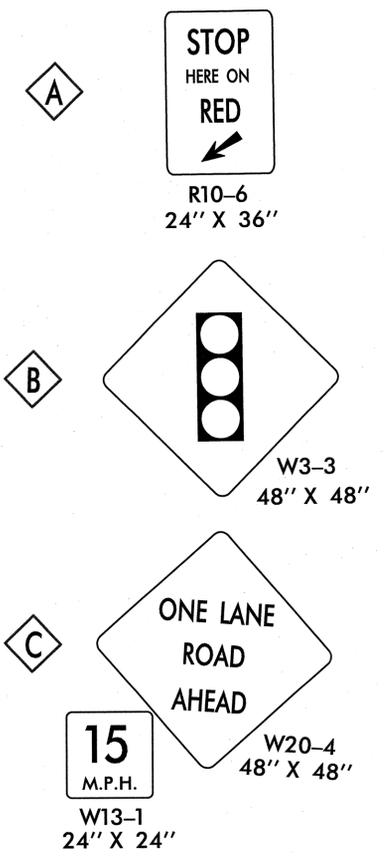
SEE GENERAL NOTE AA

4/20/2011  
 U:\TrafficControl\TCP\PLAN SHEETS\b3619\_tcp\_psh04.dgn  
 gkarageorge

<p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	APPROVED: <i>[Signature]</i> DATE: 1/20/11 	<p>DIVISION OF HIGHWAYS        STATE OF NORTH CAROLINA        DEPARTMENT OF TRANSPORTATION        WORK ZONE TRAFFIC CONTROL</p>	<p>PHASE I</p>



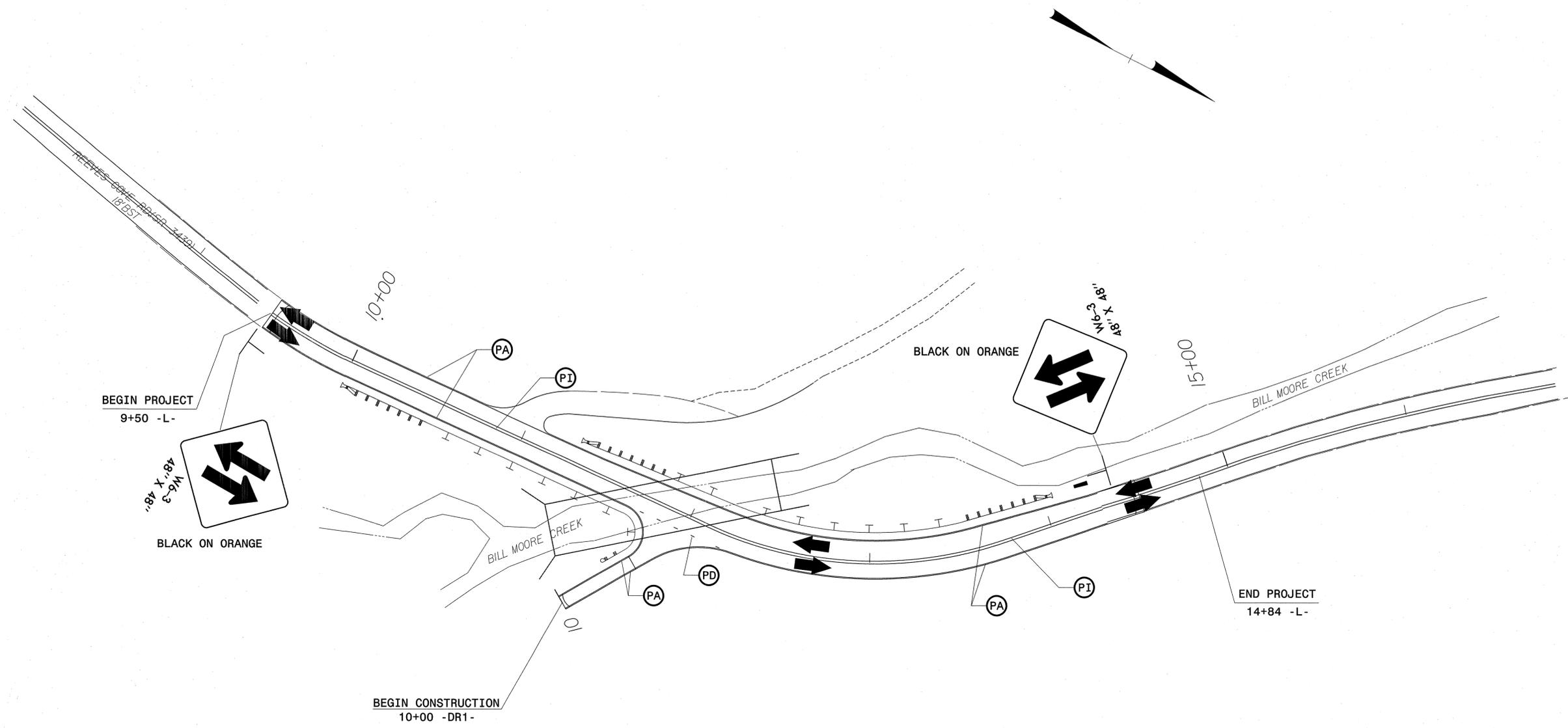
**SIGN LEGEND**



TEMPORARY PAVEMENT MARKING SCHEDULE				
SYMBOL	DESCRIPTION	TOTAL QUANTITY	UNIT	PAY ITEM QUANTITY
	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE 4 (24")	30	LF	
C4	WHITE STOPBAR			30
	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE 4 (4")	200	LF	
CA	WHITE EDGELINE			200
	PAINT PAVEMENT MARKING LINES, (4")	4,227	LF	
PA	WHITE EDGELINE			2,000
PD	2 FT. WHITE MINISKIP			27
PI	YELLOW DOUBLE CENTER			2,200

4/20/2011  
 U:\TrafficControl\TCP\PLAN SHEETS\B3619\_tcp\_psh05.dgn  
 gkarageorge

<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED <i>[Signature]</i> DATE: 1/20/11 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>PHASE II</p>



6/7/2011  
 J:\TrafficControl\TCP\PLAN SHEETS\3619\_TC\_TMP06.dgn  
 gkr ags or ge

 <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	<p>APPROVED <i>Betsy L. Watson</i> DATE <i>6/7/11</i></p> 		<p>PHASE III</p>
---	---	---	------------------