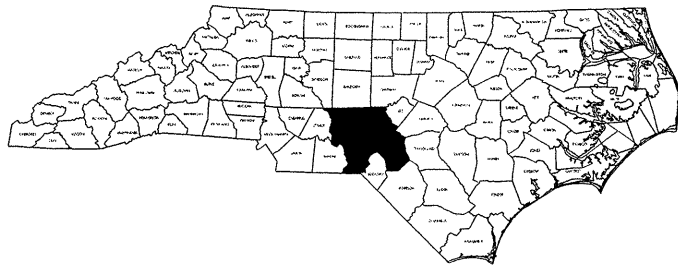


**TIP PROJECT: 17BP.8.P.1**

**CONTRACT NO: C202973**



**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS**

**LOCATION: RICHMOND COUNTY:**  
 BRIDGE #11 ON SR 1124 OVER US 220  
 BRIDGE #25 ON US 220, OVER SCL RR  
 BRIDGE #35 & #36 ON US 220 NBL/SBL OVER HITCHCOCK CREEK.

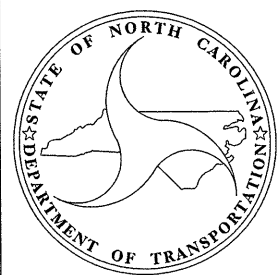
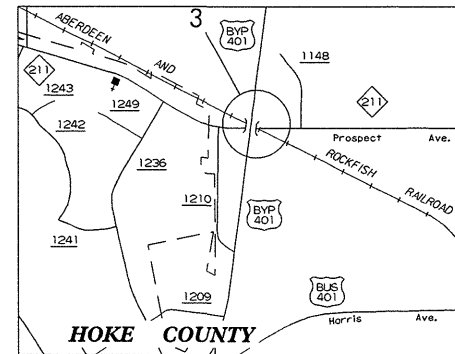
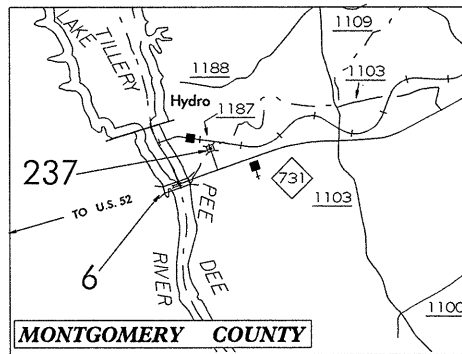
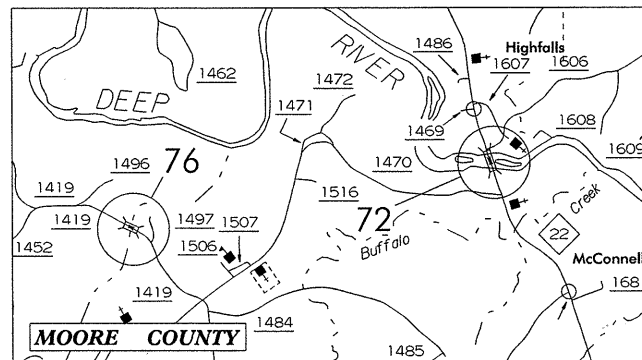
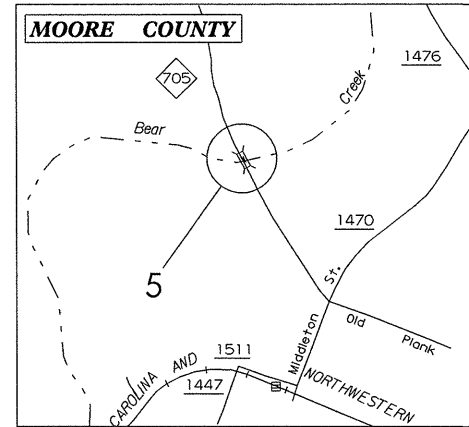
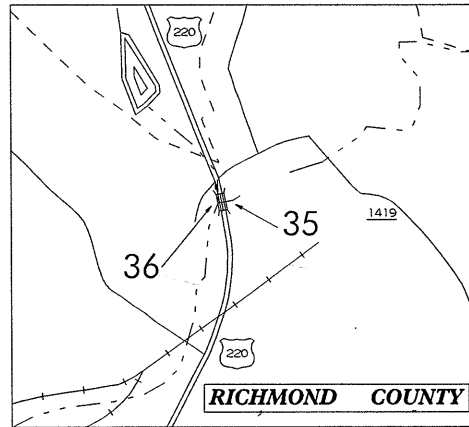
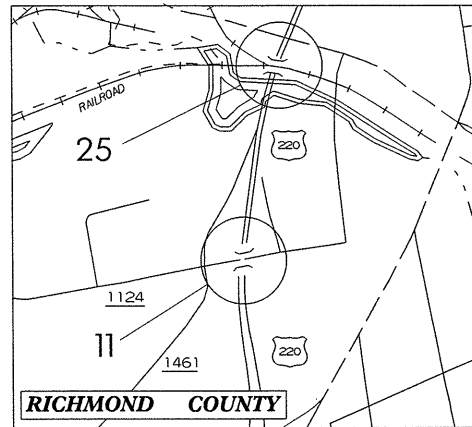
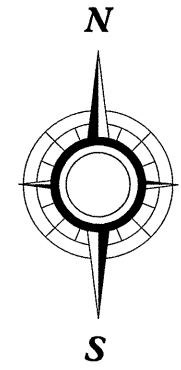
**MOORE COUNTY:**  
 BRIDGE #5 ON NC 705 OVER BEAR CREEK  
 BRIDGE #72 ON US 22 OVER DEEP CREEK  
 BRIDGE #76 ON SR 1419 OVER BEAR CREEK

**MONTGOMERY COUNTY:**  
 BRIDGE #6 ON NC 731 OVER PEE DEE RIVER  
 BRIDGE #237 ON SR 1187

**HOKE COUNTY:**  
 BRIDGE #3 ON US 401 OVER ABERDEEN AND ROCKFISH RAILROAD & NC 211

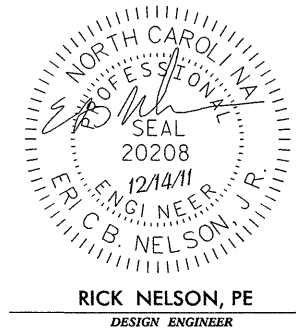
**TYPE OF WORK: BRIDGE PRESERVATION-CLEANING & PAINTING  
 OF EXISTING STRUCTURE AND BEARING REPLACEMENT OF (BRIDGE #72).**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.8.P.1	1	
STATE PROJECT NO.	F. A. PROJ. NO.	DESCRIPTION	
17BP.8.P.1	N/A	PE	
17BP.8.P.1	N/A	CONSTR	



Prepared in the Office of:  
**STRUCTURES MANAGEMENT UNIT**  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 2012 STANDARD SPECIFICATIONS

<b>LETTING DATE:</b> MARCH 20, 2012	<b>GREG PERFETTI, PE</b> STATE BRIDGE ENGINEER
--	---



DATES & FILES

**TIP PROJECT: 17BP.8.P.1**

**CONTRACT NO: C202973**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.8.P.1	1A	
STATE PROJECT NO.	F.A.PROJ.NO.	DESCRIPTION	
17BP.8.P.1	N/A	PE	
17BP.8.P.1	N/A	CONSTR	

LOCATION: RICHMOND COUNTY:  
BRIDGE #11 ON SR 1124 OVER US 220  
BRIDGE #25 ON US 220, OVER SCL RR  
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MOORE COUNTY:  
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BRIDGE #72 ON NC 22 OVER DEEP CREEK  
BRIDGE #76 ON SR 1419 OVER BEAR CREEK

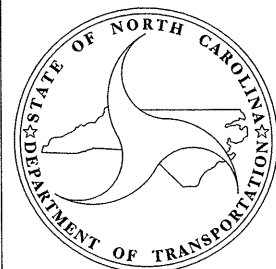
MONTGOMERY COUNTY:  
BRIDGE #6 ON NC 731 OVER PEE DEE RIVER  
BRIDGE #237 ON SR 1187

HOKE COUNTY:  
BRIDGE #3 ON US 401 OVER ABERDEEN AND ROCKFISH RAILROAD & NC 211

TYPE OF WORK: BRIDGE PRESERVATION-CLEANING & PAINTING  
OF EXISTING STRUCTURE AND BEARING REPLACEMENT OF (BRIDGE #72) .

INDEX OF SHEETS

<u>SHT#</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
2	SUMMARY OF QUANTITIES
S1 THRU S5	EXISTING STRUCTURE PLANS
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS



Prepared in the Office of:  
**STRUCTURES MANAGEMENT UNIT**  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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2012 STANDARD SPECIFICATIONS

<p>LETTING DATE: MARCH 20, 2012</p>	<p>GREG PERFETTI, PE <small>STATE BRIDGE ENGINEER</small></p>
---	---

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
20208  
12/14/11  
ENGINEER  
ERIC B. NELSON, J.R.

RICK NELSON, PE  
DESIGN ENGINEER

5/28/99

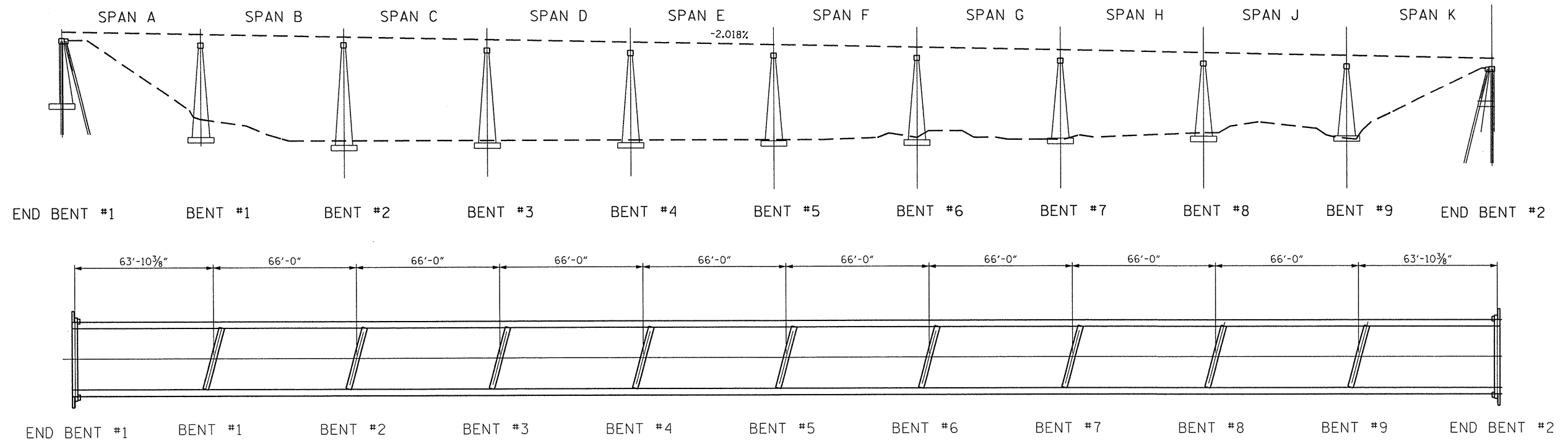
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

## SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202973

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM SPAN JACKING BRIDGE #620072
4405000000-E	1110	224	SF	WORK ZONE SIGNS (PORTABLE)					
4415000000-N	1115	2	EA	FLASHING ARROW BOARD					
4422000000-N	1120	24	DAY	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)					
4430000000-N	1130	25	EA	DRUMS					
4435000000-N	1135	23	EA	CONES					
4450000000-N	1150	320	HR	FLAGGER					
4480000000-N	1165	1	EA	TMA					
8657000000-N	430	Lump Sum		ELASTOMERIC BEARINGS					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #460003					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #610006					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #610237					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #620005					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #620072					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #620076					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #760011					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #760025					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #760035					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #760036					
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM POLLUTION CONTROL					

16-DEC-2011 15:03  
\*\*\*\*\*



TOTAL BILL OF MATERIAL													
MOBILIZATION	ELASTOMERIC BEARINGS P1, P2, P3, P4, P5, P6, P7 & P8 MOORE BRIDGE #72	CLEANING & REPAINTING MOORE BRIDGE #72	CLEANING & REPAINTING HOKE BRIDGE #3	CLEANING & REPAINTING MONTGOMERY BRIDGES #6	CLEANING & REPAINTING MONTGOMERY BRIDGES # 237	CLEANING & REPAINTING MOORE BRIDGE #5	CLEANING & REPAINTING MOORE BRIDGE #76	CLEANING & REPAINTING RICHMOND BRIDGE #11,	CLEANING & REPAINTING RICHMOND BRIDGE #25	CLEANING & REPAINTING RICHMOND BRIDGE #35	CLEANING & REPAINTING RICHMOND BRIDGE #36	POLLUTION CONTROL	SPAN JACKING MOORE BRIDGE #72
LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	EACH
LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM

ELASTOMERIC BEARING BRIDGE #72		
		NO.
P1	* ELASTOMERIC PAD AND SOLE PLATE	23
	ANCHOR BOLTS TOP PLATE	46
P2	* ELASTOMERIC PAD AND SOLE PLATE	8
	ANCHOR BOLTS TOP PLATE	16
P3	* ELASTOMERIC PAD AND SOLE PLATE	27
	ANCHOR BOLTS	54
P4	* ELASTOMERIC PAD AND SOLE PLATE	9
	ANCHOR BOLTS	18

ELASTOMERIC BEARING BRIDGE #72		
		NO.
P5	* ELASTOMERIC PAD AND SOLE PLATE	2
	ANCHOR BOLTS TOP PLATE	4
P6	* ELASTOMERIC PAD AND SOLE PLATE	1
	ANCHOR BOLTS TOP PLATE	2
P7	* ELASTOMERIC PAD AND SOLE PLATE	1
	ANCHOR BOLTS	2
P8	* ELASTOMERIC PAD AND SOLE PLATE	1
	ANCHOR BOLTS	2

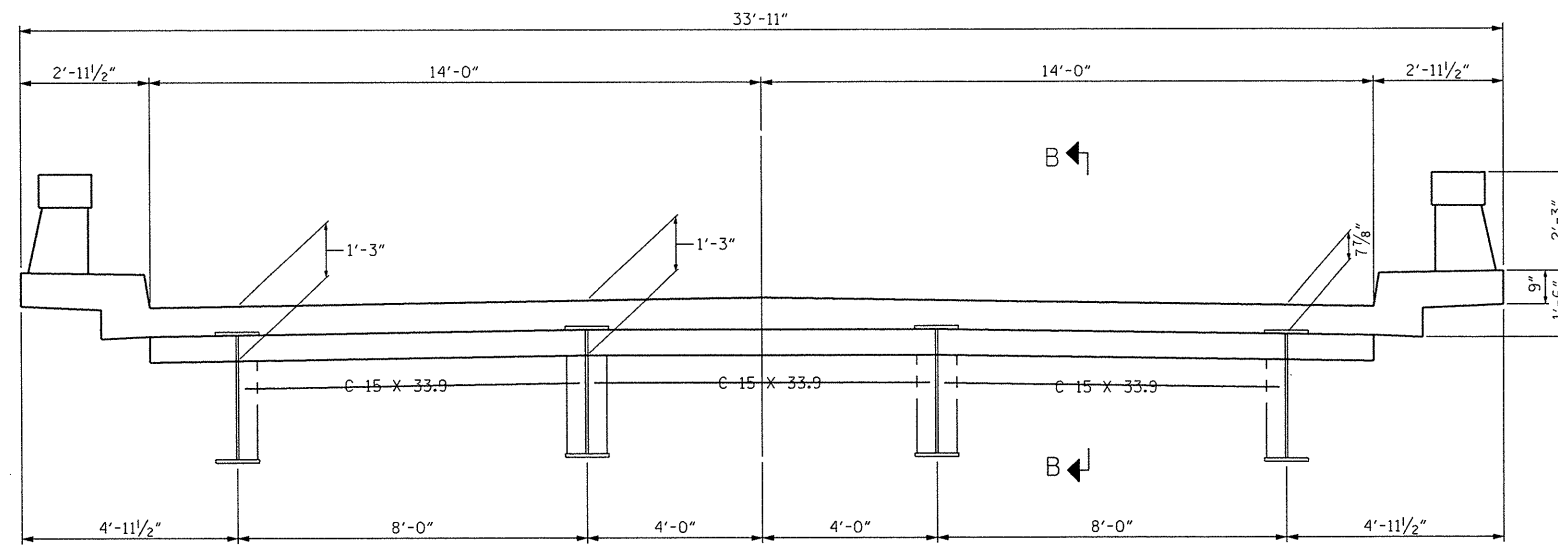
\* STEEL SOLE PLATE VULCANIZE BONDED TO ELASTOMER.

PROJECT NO. 17BP.8.P.1  
 COUNTY: MOORE  
 STATION:  
 BRIDGE NO. 72

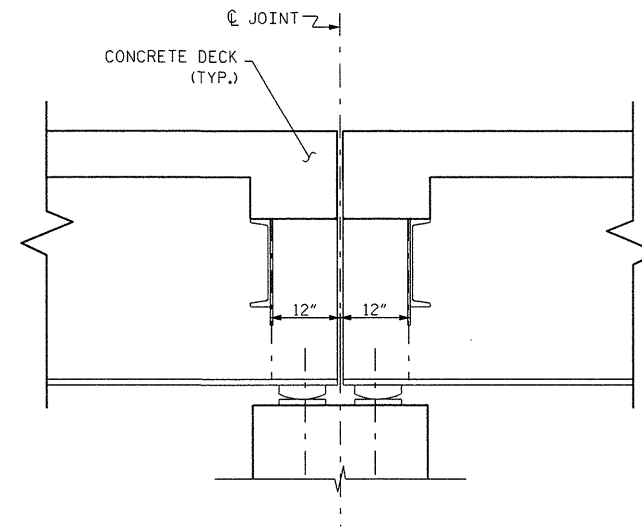
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 FRAMING PLAN  
 FOR  
 BRIDGE OVER DEEP RIVER  
 ON NC22

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			
2			4			

DRAWN BY: MW DATE: 1/11  
 CHECKED BY: AGA DATE: 7/11



EXISTING TYPICAL SECTION  
(SHOWING DIAPHRAGMS AT BENTS)



SECTION B-B

**GENERAL NOTES:**

EXISTING BRIDGE AND REPAIR DETAILS INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE AND REPAIR DETAILS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION SHOWN ON THESE PLANS AND SHALL OBTAIN ALL OTHER EXISTING BRIDGE DATA NECESSARY FOR THE EXECUTION OF THE WORK.

THE CONTRACTOR TO PROVIDE BLOCKING FOR ALL JACKS AS NECESSARY. A BLOCKING PLAN SHALL BE SUBMITTED FOR ALL SPANS LIFTED FOR APPROVAL BY THE ENGINEER.

THE CONTRACTOR SHALL MONITOR THE PLAN LOCATION OF THE GIRDERS FROM INITIAL JACKING UNTIL GIRDERS ARE SECURED ON THEIR PERMANENT BEARINGS. IF THE PLAN LOCATION OF THESE GIRDERS SHIFT FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

PRIOR TO JACKING THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE SPAN FROM BEING LIFTED.

PRIOR TO JACKING THE SPANS, LOCATE THE APPROXIMATE POSITION OF THE ANCHOR BOLT HOLES ON EACH CAP USING A PACHOMETER, CHECK THE CAP FOR MAIN REINFORCING STEEL INTERFERENCE WITH THE HOLES. IF NECESSARY, ADJUST THE HOLE LOCATIONS SLIGHTLY TO AVOID REINFORCING STEEL AND MARK THE LOCATIONS, DRILL THE HOLES AND CLEAN IN ACCORDANCE WITH THE SPECIAL PROVISION "ADHESIVELY ANCHORED ANCHOR BOLTS". CLEAN THE CAP OF DEBRIS.

SEE SPECIAL PROVISIONS FOR "SPAN JACKING".

REPLACE BEARINGS AS INDICATED ON THE FRAMING PLAN.

WELDING SOLE PLATES AND ANCHOR BOLT INSTALLATION SHALL BE PERFORMED WITHIN 24 HOURS OF SPAN JACKING.

UPON REMOVAL OF EXISTING BEARINGS, CLEAN THE CAP AND REMOVE ANY EPOXY COATING FROM THE AREA WHERE THE NEW BEARING WILL REST.

GRIND SURFACES OF THE SOLE PLATES THAT HAVE BEEN GALVANIZED IN AND AROUND THE AREA OF THE PLATE THAT IS TO BE WELDED.

SOLE PLATE WELDS SHALL BE MADE IN ONE PASS USING A MAXIMUM 1/8" ELECTRODE, AND THEN ALLOWED TO COOL BEFORE MAKING ANOTHER PASS. APPLY TWO COATS OF ZINC-RICH PAINT TO THE WELDED AREAS AND ANY DAMAGED AREAS IN ACCORDANCE WITH THE SPECIFICATION.

INSTALL BOLTS USING APPROVED ADHESIVE BONDING AGENT.

SEE SPECIAL PROVISIONS "FOR ADHESIVELY ANCHORED ANCHOR."

REAPPLY EPOXY COATING TO CAP IF, AFTER THE BEARING IS INSTALLED, UNCOATED PORTIONS OF THE CAP AREA AROUND THE BEARING ARE EXPOSED OR PORTIONS OF THE EXISTING EPOXY ARE DAMAGED.

ALL WORK SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT PLANS FOR REMOVAL AND REPAIR IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

ALL WELDING TO BE DONE IN ACCORDANCE WITH THE AWS D1.5, "BRIDGE WELDING CODE".

INSPECTION OF WELDS WILL BE PERFORMED BY NCDOT.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISION.

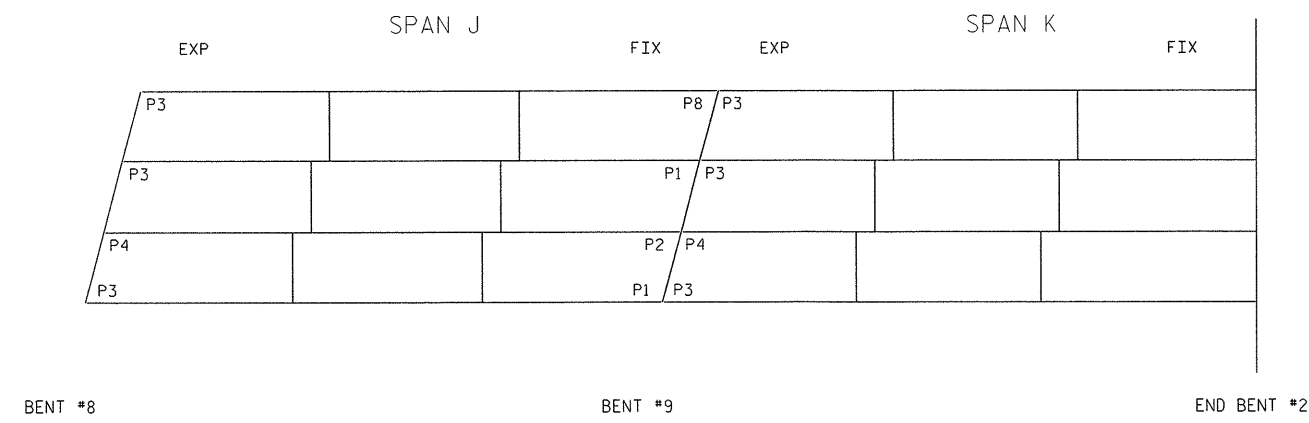
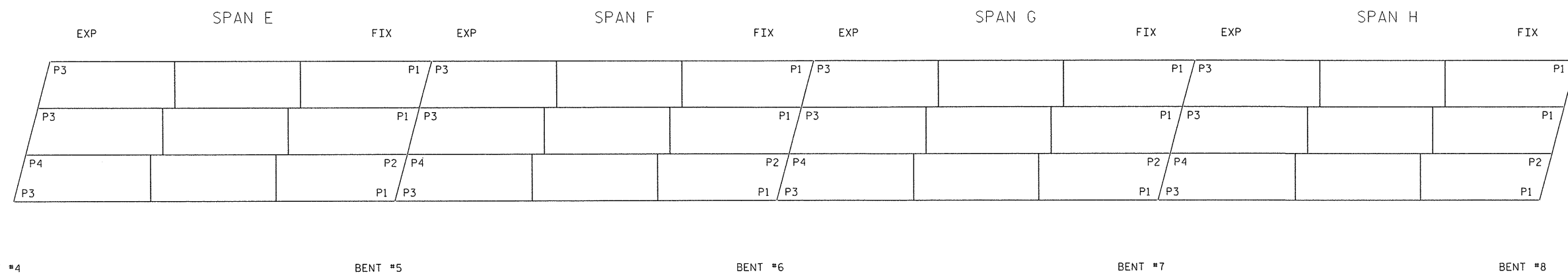
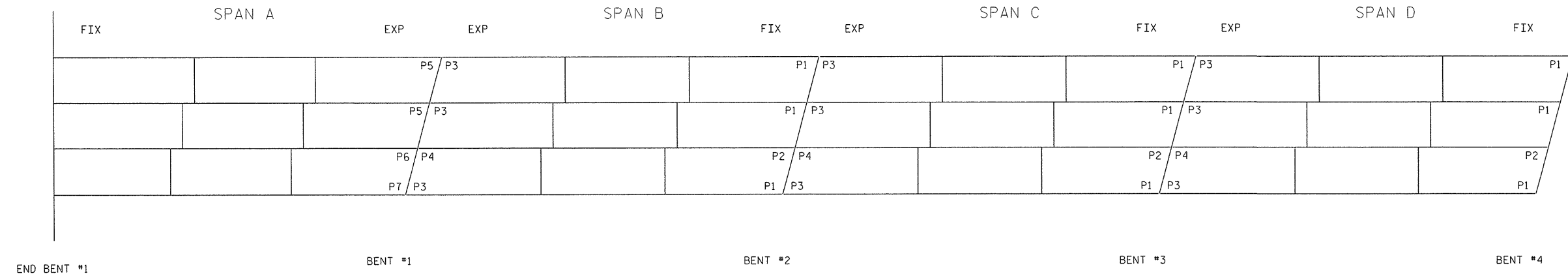
CLEAN AND PAINT STRUCTURAL STEEL.  
FOR PAINTING EXISTING STRUCTURAL STEEL SEE "PAINTING EXISTING STRUCTURES" SPECIAL PROVISIONS.

PROJECT NO. 17BP.8.P.1  
COUNTY: MOORE  
STATION:  
BRIDGE NO. 72

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
TYPICAL SECTION  
BRIDGE OVER DEEP RIVER  
ON NC22

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			52
2			4			

DRAWN BY: MW DATE: 7/11  
CHECKED BY: AGA DATE: 7/11



UNFACTORED LL REACTION + IMPACT	UNFACTORED SPAN WEIGHT (DEAD LOAD)
193.0 K	314.0 K

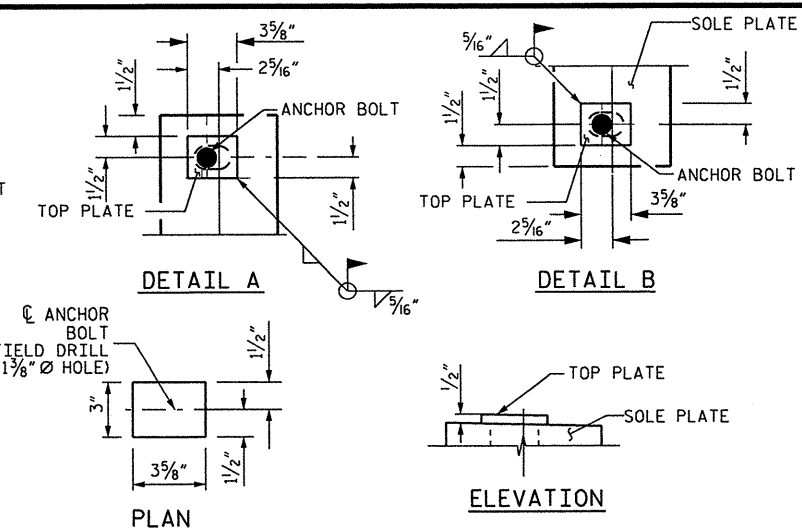
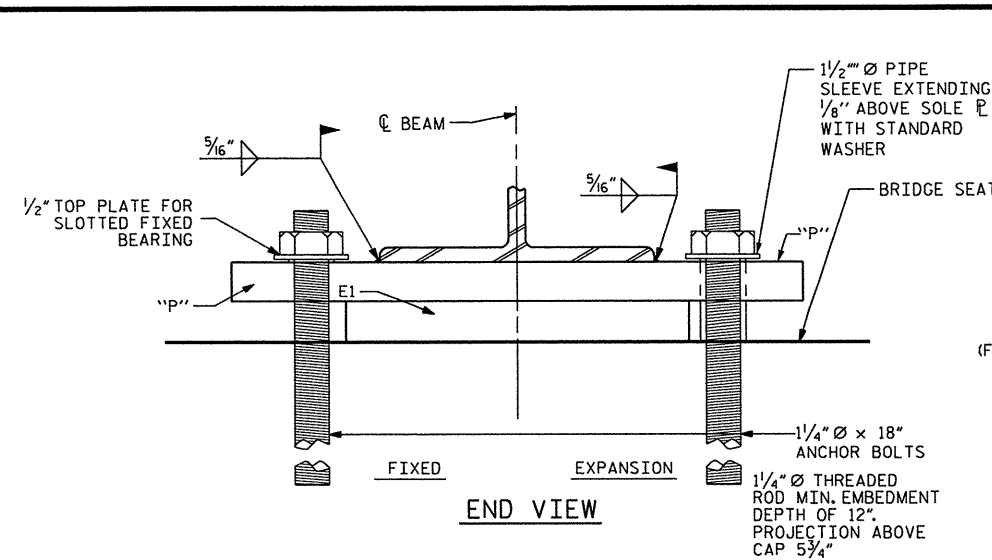
PROJECT NO. 17BP.8.P.1  
 COUNTY: MOORE  
 STATION:  
 BRIDGE NO. 72

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 FRAMING PLAN  
 FOR  
 BRIDGE OVER DEEP RIVER  
 ON NC22

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S3
1			3			TOTAL SHEETS
2			4			

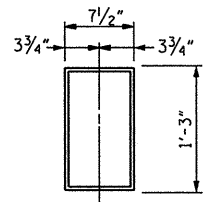
DRAWN BY: MW DATE: 1/11  
 CHECKED BY: AGA DATE: 7/11





**FIXED BEARINGS:**  
 1. SLOT PLATE THEN FIELD WELD 1/2" PLATE WITH 1 3/8" Ø HOLE ON TOP. SEE DETAIL A & B.  
 2. ANCHOR BOLT MAY BE OFFSET FROM C TO CLEAR REINFORCEMENT.

**EXPANSION BEARINGS:**  
 1. LONGER SLOTS ARE USED TO ALLOW OFFSETTING ANCHOR BOLT FROM C.



60 DUROMETER  
 E1  
 (72 REQ'D)  
**PLAN VIEW OF ELASTOMERIC BEARING**  
 TO BE VULCANIZED TO SOLE PLATE

**NOTES**

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

THE 1/2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

ANCHOR BOLT LENGTHS HAVE BEEN ASSUMED ON THE BASIS OF A 12" MINIMUM EMBEDMENT IN EXISTING CONCRETE CAPS. THIS EMBEDMENT REQUIREMENT SHALL BE ADJUSTED TO BE IN COMPLIANCE WITH MINIMUM EMBEDMENT SPECIFIED BY THE MANUFACTURER OF THE EPOXY ADHESIVE BONDING SYSTEM.

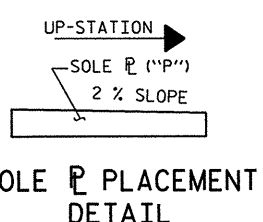
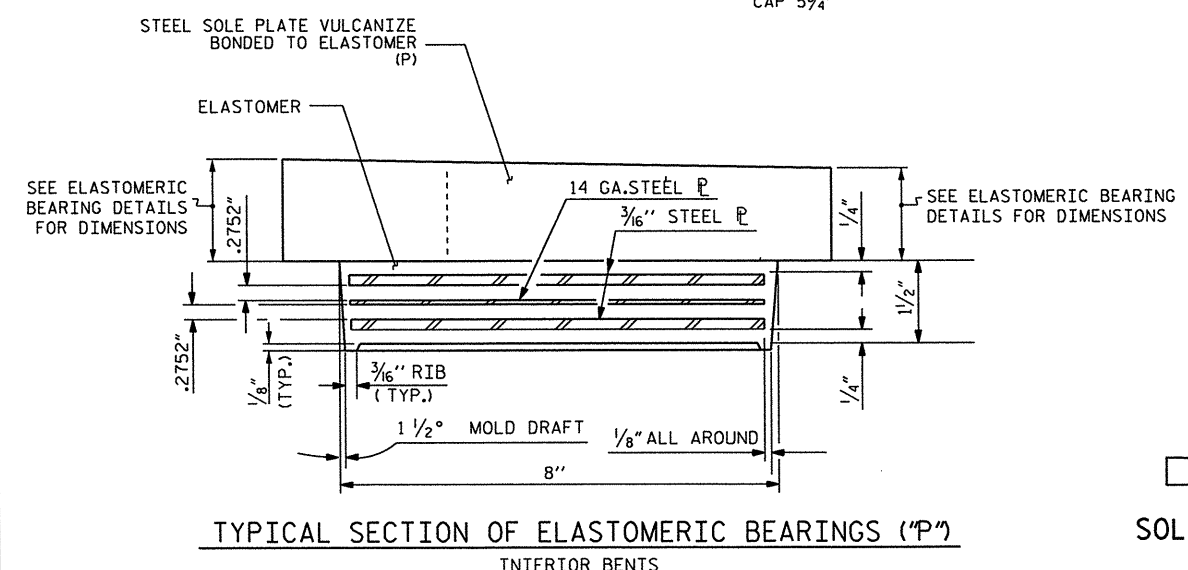
SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

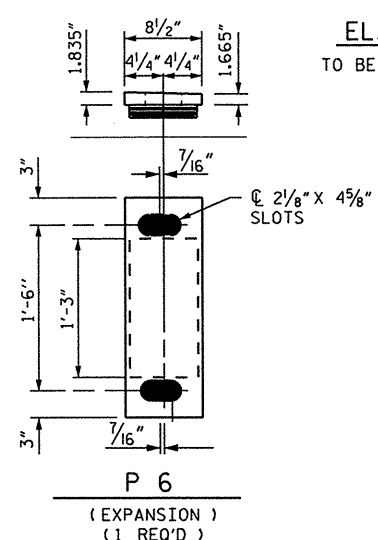
WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

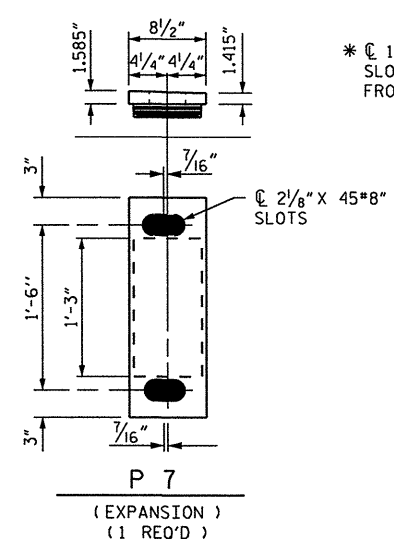
ELASTOMER IN BEARING SHALL BE 60 DUROMETER HARDNESS.



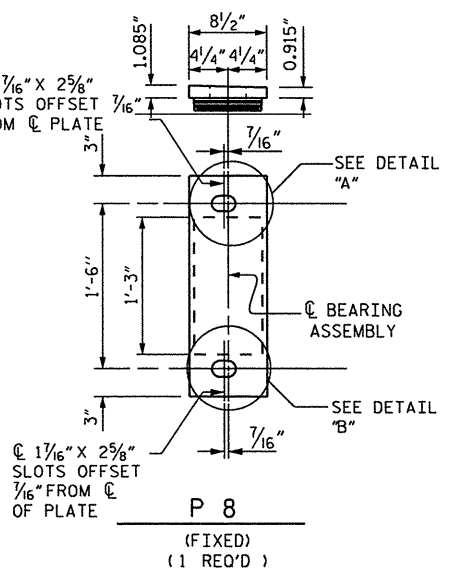
**SOLE PLATE PLACEMENT DETAIL**



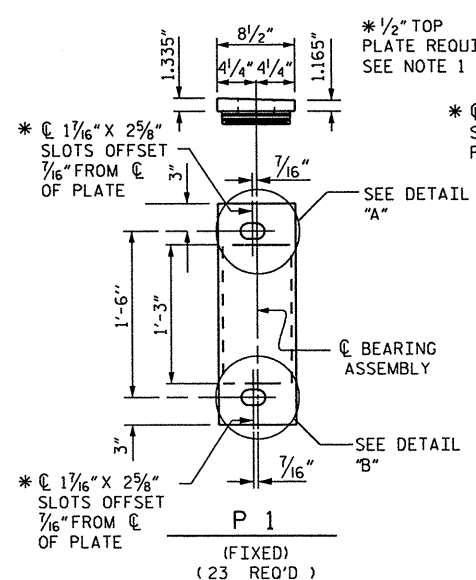
**P 6**  
 (EXPANSION)  
 (1 REQ'D)



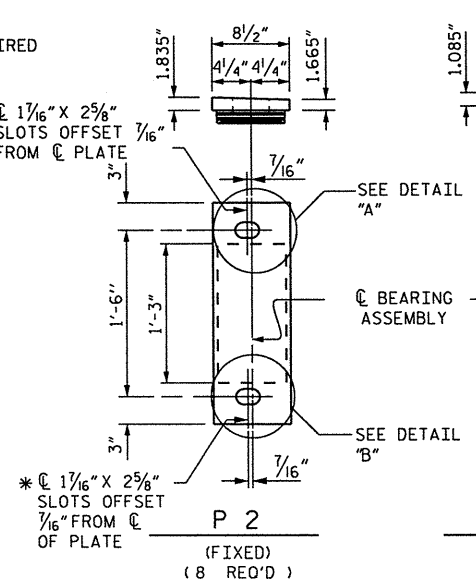
**P 7**  
 (EXPANSION)  
 (1 REQ'D)



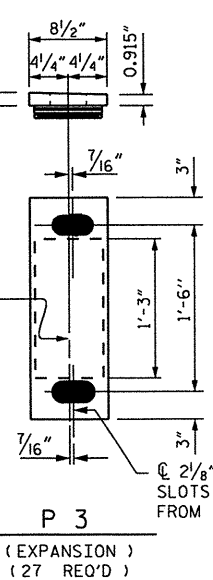
**P 8**  
 (FIXED)  
 (1 REQ'D)



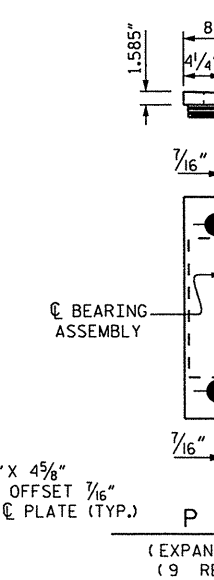
**P 1**  
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 (23 REQ'D)



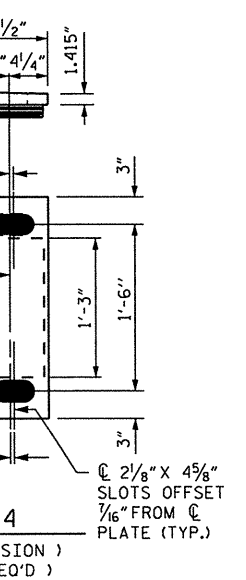
**P 2**  
 (FIXED)  
 (8 REQ'D)



**P 3**  
 (EXPANSION)  
 (27 REQ'D)



**P 4**  
 (EXPANSION)  
 (9 REQ'D)



**P 5**  
 (EXPANSION)  
 (2 REQ'D)

**ELASTOMERIC BEARING DETAILS ("P")**

PROJECT NO. 17BP.8.P.1  
 COUNTY: MOORE  
 STATION:  
 BRIDGE NO: 72

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**ELASTOMERIC BEARING DETAILS**

DRAWN BY: MW/RW DATE: 6/11  
 CHECKED BY: AGA DATE: 7/11

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 5

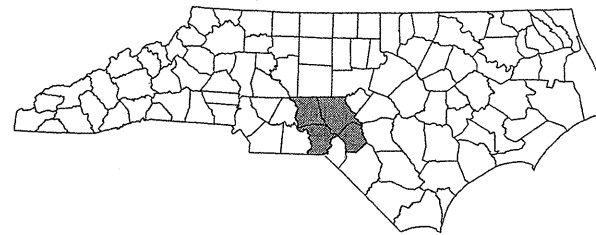


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**HOKE, MONTGOMERY, MOORE, &  
RICHMOND COUNTIES**

**DIVISION 8**



**BRIDGE PAINTING**

**HOKE BRIDGE #3 - US 401 OVER NC 211/SR 1313 /ROCK FISH RD.**

**MONTGOMERY BRIDGE #237 - SR 1187 OVER CLARKS CREEK  
MONTGOMERY BRIDGE #6 - NC 731 OVER PEE DEE RIVER**

**MOORE BRIDGE #5 - NC 705 OVER BEAR CREEK  
MOORE BRIDGE #72 - NC 22 OVER DEEP RIVER  
MOORE BRIDGE #76 - SR 1419 OVER BEAR CREEK**

**RICHMOND BRIDGE #11 - SR 1124 OVER US 220  
RICHMOND BRIDGE #25 - US 220 OVER SCL RAILROAD  
RICHMOND BRIDGE #35 - US 220 NBL OVER HITCHCOCK CREEK  
RICHMOND BRIDGE #36 - US 220 SBL OVER HITCHCOCK CREEK**

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS
TMP-2	GENERAL NOTES & PHASING

SHEET NO.

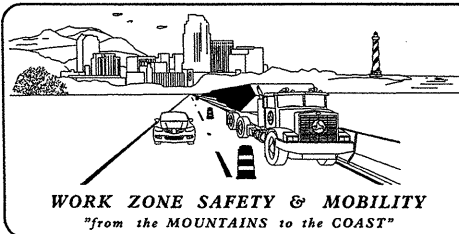
TMP-1

**WBS 17BP.8.P.1**

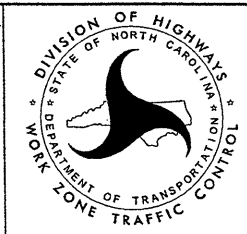
**TRAFFIC MANAGEMENT STRATEGY**

PROPOSED BRIDGE WORK WILL BE PERFORMED USING TIME RESTRICTED  
LANE CLOSURES.

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PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT  
RALEIGH, NC





















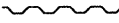



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BETSY L. WATSON, P.E. *TRAFFIC ENGINEER*  
KELLIE WIESKAMP, E.I. *TRANSPORTATION DESIGNER*

APPROVED *Betsy L. Watson*  
DATE: *12/8/11*

SEAL  
NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL 29449  
BETSY L. WATSON

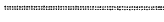



## LEGEND

-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  WORK AREA
-  PAVEMENT REMOVAL
-  NORTH ARROW
-  TYPE III BARRICADE
-  CONE
-  DRUM
-  SKINNY DRUM
-  TUBULAR MARKER
-  CHANGEABLE MESSAGE SIGN (CMS)
-  FLAGGER
-  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)
-  FLASHING ARROW BOARD (TYPE C)
-  LAW ENFORCEMENT
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  PORTABLE CONCRETE BARRIER (PCB)
-  TEMPORARY CRASH CUSHION
-  TEMPORARY SHORING
-  WORK ZONE SIGN-PORTABLE
-  WORK ZONE SIGN-STATIONARY
-  WORK ZONE SIGN-STATIONARY OR PORTABLE




### SIGNALS

-  EXISTING
-  PROPOSED
-  TEMPORARY




### PAVEMENT MARKINGS

-  EXISTING PAVEMENT MARKING (GRAY)
-  SKIP LINES
-  MINI-SKIP LINES
-  SOLID LINES

### PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS
-  EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)
-  ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

### PAVEMENT MARKERS

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

## ROADWAY STANDARD DRAWINGS

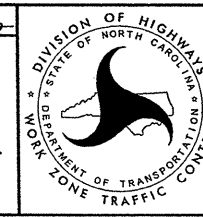
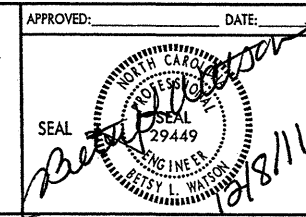
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES

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LEGEND  
&  
ROADWAY STANDARD DRAWINGS

## GENERAL NOTES

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

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.

### LANE CLOSURE TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
ALL ROADS	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY

### HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND HOLIDAY WEEKENDS AS FOLLOWS:

ROAD NAME  
ALL ROADS

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 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 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- D) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- E) 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. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW BOARDS AND MESSAGE BOARDS.
- F) 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.
- G) 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- H) 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

### MISCELLANEOUS

- I) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- J) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

## PHASING

### HOKE COUNTY BRIDGE #3

PERFORM WORK FROM BELOW BRIDGE USING FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15. IN THE EVENT LANE CLOSURES ARE NEEDED FOR SECURITY CONTAINMENT ON TOP OF THE BRIDGE, USE FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

### MONTGOMERY COUNTY BRIDGES #6 & 237

PERFORM WORK FROM BELOW BRIDGE. IN THE EVENT LANE CLOSURES ARE NEEDED FOR SECURITY CONTAINMENT ON TOP OF THE BRIDGE, USE FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.

### MOORE COUNTY BRIDGES #5, 72, & 76

PERFORM WORK FROM BELOW BRIDGE. IN THE EVENT LANE CLOSURES ARE NEEDED FOR SECURITY CONTAINMENT ON TOP OF THE BRIDGE, USE FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15.



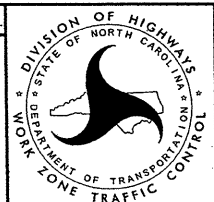
### RICHMOND COUNTY BRIDGE #11

PERFORM WORK FROM BELOW BRIDGE USING LEFT AND RIGHT LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 3 OF 15 OR SHEET 6 OF 15. IN THE EVENT LANE CLOSURES ARE NEEDED FOR SECURITY CONTAINMENT ON TOP OF THE BRIDGE, USE FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 15. DO NOT INSTALL MORE THAN ONE LANE CLOSURE AT A TIME ON US 220.

### RICHMOND COUNTY BRIDGES #25, 35, & 36

PERFORM WORK FROM BELOW BRIDGE. IN THE EVENT LANE CLOSURES ARE NEEDED FOR SECURITY CONTAINMENT ON TOP OF THE BRIDGE, USE LEFT OR RIGHT LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 3 OF 15. DO NOT INSTALL MORE THAN ONE LANE CLOSURE AT A TIME ON US 220.

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 <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: _____ DATE: _____ 		GENERAL NOTES & PHASING
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