

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

ALAMANCE AND ORANGE COUNTIES

| STATE | STATE P | ROJECT REFERENCE | NO. SHEET NO. | TOTAL |
|-----------|----------|------------------|---------------|-------|
| N.C. | 17 | BP.7.P.5 | 1 | |
| STATE PRO | IECT NO. | P. A. PROJ. NO. | DESCRI | PTION |
| 17BP.7.I | 0.5 | N/A | P | E |
| 17BP.7.F | .5 | N/A | CON | STR |
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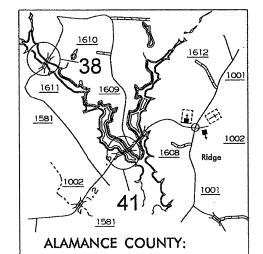
LOCATION: ALAMANCE COUNTY:

BRIDGE #38 ON SR 1611 (SARTIN RD.) OVER STONY CREEK (LAKE BURLINGTON RESERVOIR)

BRIDGE #41 ON SR 1002 (ALTAMAHAW UNION RIDGE RD.) OVER STONY CREEK (LAKE BURLINGTON RESERVOIR)

BRIDGE #52 ON SR 1729 (CAROLINA MILL RD.) OVER STONY CREEK

BRIDGE #121 ON SR 1136 (BELLEMONT-MT. HERMAN RD.) OVER STINKING QUARTER CREEK



LOCATION: ORANGE COUNTY:

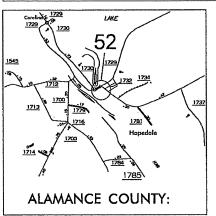
BRIDGE #6 ON US 70 BUS (S. CHURTON ST.) OVER ENO RIVER

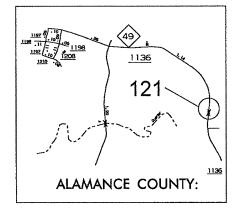
BRIDGE #59 ON NC 86 OVER I-85

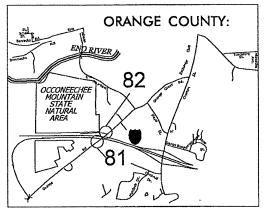
BRIDGE #81 NBL ON I-85 OVER SR 1006 (ORANGE GROVE RD.) BRIDGE #82 SBL ON I-85 OVER SR 1006 (ORANGE GROVE RD.)

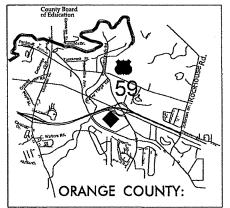


TYPE OF WORK: BRIDGE PRESERVATION - CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES, SUBSTRUCTURE REPAIRS



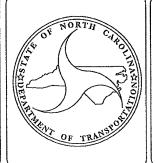






JUNE 18, 2013





DESIGN DATA

ORANGE ALAMANCE

#6 ADT 2010 = 19000 #38 ADT 2008 = 350
#59 ADT 2009 = 10500 #41 ADT 2009 = 950
#81 ADT 2009 = 19000 #52 ADT 2009 = 4200
#82 ADT 2010 = 19000 #121 ADT 2009 = 4500

PROJECT LENGTH ALAMANCE

ORANGE ALAMANCE

BRIDGE #6 = 0.05 MILES BRIDGE #38 = 0.04 MILES
BRIDGE #81 = 0.04 MILES BRIDGE #41 = 0.05 MILES
BRIDGE #82 = 0.04 MILES BRIDGE #52 = 0.03 MILES
BRIDGE #82 = 0.04 MILES BRIDGE #121 = 0.03 MILES

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

RICK NELSON, PE
PROJECT ENGINEER





STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

ALAMANCE AND ORANGE COUNTIES

| STATE STATE | PROJECT REFERENCE | NO. SHRET | TOTAL SHEETS |
|-------------------|-------------------|-----------|-----------------|
| N.C. 17 | . 17BP.7.P.5 | | |
| STATE PROJECT NO. | F. A. PROJ. NO. | DESCRIP | TION |
| 17BP.7.P.5 | N/A | PE | |
| 17BP.7.P.5 | N/A | CONS | TR |
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BRIDGE #38 ON SR 1611 (SARTIN RD.) OVER STONY CREEK (LAKE BURLINGTON RESERVOIR)
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LOCATION: ORANGE COUNTY:

BRIDGE #6 ON US 70 BUS (S. CHURTON ST.) OVER ENO RIVER

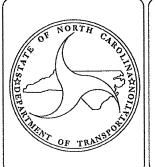
BRIDGE #59 ON NC 86 OVER I-85

BRIDGE #81 NBL ON I-85 OVER SR 1006 (ORANGE GROVE RD.) BRIDGE #82 SBL ON I-85 OVER SR 1006 (ORANGE GROVE RD.)

TYPE OF WORK: BRIDGE PRESERVATION - CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES, SUBSTRUCTURE REPAIRS

INDEX OF SHEETS

| SHT# | DESCRIPTION |
|------------------|--|
| 1 | TITLE SHEET |
| 1A | INDEX OF SHEETS |
| 2 | SUMMARY OF QUANTITIES |
| S-1 THRU S-8 | BILL OF MATERIAL AND SUBSTRUCTURE REPAIR PLANS |
| TMP-1 THRU TMP-3 | TRAFFIC MANAGEMENT PLANS |



Prepared in the Office of:

STRUCTURES MANAGEMENT UNIT

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

LETTING DATE:

JUNE 18, 2013

RICK NELSON, PE

PROJECT ENGINEER

FARZIN ASEFNIA P.E.

PROJECT DESIGN ENGINEER

CT REFERENCE NO. SHEET NO.

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

| | | | | TIES FOR CONTRACT - C203334 |
|--------------|----------|----------|------|--|
| ItemNumber | Sec # | Quantity | Unit | Description |
| 0000100000-N | 800 | Lump Sum | • | MOBILIZATION |
| 4400000000-E | 1110 | 48 | SF | WORK ZONE SIGNS (STATIONARY) |
| 4405000000-E | 1110 | 224 | SF | WORK ZONE SIGNS (PORTABLE) |
| 4415000000-N | 1115 | 1 | EA | FLASHING ARROW BOARD |
| 4422000000-N | 1120 | 30 | DAY | PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM) |
| 4430000000-N | 1130 | 100 | EA | DRUMS |
| 4435000000-N | 1135 | 50 | EA | CONES |
| 4450000000-N | 1150 | 160 | HR | FLAGGER |
| 4480000000-N | 1165 | 1 | EA | TMA |
| 4510000000-N | SP | 80 | HR | LAW ENFORCEMENT |
| 8296000000-N | 442 | Lump Sum | | POLLUTION CONTROL |
| 8660000000-E | SP | 6.5 | CF | CONCRETE REPAIRS |
| 8664000000-E | SP | 405 | CF | SHOTCRETE REPAIRS |
| 8678000000-E | SP | 79.5 | LF | EPOXY RESIN INJECTION |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ALAMANCE CO BRIDGE #121 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ALAMANCE CO BRIDGE #38 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ALAMANCE CO BRIDGE #41 |
| 8860000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ALAMANCE CO BRIDGE #52 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ORANGE CO BRIDGE #59 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ORANGE CO BRIDGE #6 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ORANGE CO BRIDGE #81 |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM CLEANING & REPAINTING ORANGE CO BRIDGE #82 |

| ItemNumber | Sec # | Quantity | Unit | Description | |
|--------------|----------|----------|------|---|--|
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ALAMANCE CO BRIDGE #121 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ALAMANCE CO BRIDGE #38 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ALAMANCE CO BRIDGE #41 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ALAMANCE CO BRIDGE #52 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ORANGE CO BRIDGE #59 | |
| 8860000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ORANGE CO BRIDGE #6 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ORANGE CO BRIDGE #81 | |
| 886000000-N | SP | Lump Sum | | GENERIC STRUCTURE ITEM PAINTING CONTAINMENT ORANGE CO BRIDGE #82 | |
| 8889000000-E | SP | 1,400 | LB | GENERIC STRUCTURE ITEM STRUCTURAL STEEL FOR GIRDER REPAIR | |
| 8892000000-E | SP | 553 | SF | GENERIC STRUCTURE ITEM EPOXY COATING | |
| 8897000000-N | SP | 8 | EA | GENERIC STRUCTURE ITEM BRIDGE JACKING BRIDGE #6 | |
| 8897000000-N | SP | 5 | EA | GENERIC STRUCTURE ITEM TEMPORARY WORK PLATFORM | |

| TOTAL BILL OF MATERIAL | | | | | | | |
|---|---|---|--|---|---|--|--|
| | | | | ORANGE | COUNTY | | |
| POLLUTION CONTROL | STRUCTURAL STEEL FOR GIRDER REPAIR▲ | CLEANING AND REPAINTING OF BRIDGE #59 | PAINTING CONTAINMENT FOR BRIDGE *59 | CLEANING AND REPAINTING OF BRIDGE #81 | PAINTING CONTAINMENT FOR BRIDGE #81 | CLEANING AND REPAINTING OF BRIDGE #82 | PAINTING CONTAINMENT FOR BRIDGE #82 |
| LUMP SUM | LBS | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM |
| LUMP SUM | 1,400 | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM | LUMP SUM |
| | | 0 | RANGE COUNTY | BRIDGE NO. | 6 | | |
| CONCRETE REPAIRS | SHOTCRETE REPAIRS | EPOXY RESIN INJECTION | CLEANING AND REPAINTING OF BRIDGE #6 | PAINTING CONTAINMENT FOR BRIDGE #6 | TEMPORARY WORK PLATFORM | EPOXY COATING | BRIDGE JACKING BRIDGE *6 |
| CU.FT. | CU. FT. | LF | LUMP SUM | LUMP SUM | EA | SO.FT. | EA |
| 6.5 | 405.0 | 79.5 | LUMP SUM | LUMP SUM | 5 | 553 | 8 |
| ALAMANCE COUNTY | | | | | | | |
| CLEANING AND REPAINTING OF BRIDGE *38 | PAINTING CONTAINMENT FOR BRIDGE *38 | CLEANING AND REPAINTING OF BRIDGE *41 | PAINTING CONTAINMENT FOR BRIDGE *41 | CLEANING AND REPAINTING OF BRIDGE #52 | PAINTING CONTAINMENT FOR BRIDGE #52 | CLEANING AND REPAINTING OF BRIDGE #121 | PAINTING CONTAINMENT FOR BRIDGE #121 |
| 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 | LUMP SUM | LUMP SUM |

A FOR INFORMATION ONLY. ACTUAL QUANTITY WILL BE DETERMINED IN THE FIELD.

NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN SHEETS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 17BP.7.P.5
ALAMANCE AND

ORANGE

____ COUNTIES

STATION:____

N/A

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEICH

TOTAL BILL OF MATERIAL

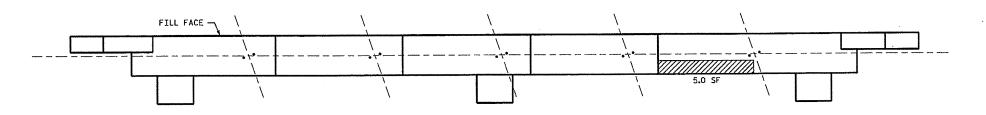
DRAWN BY: J. YANNACCONE DATE: 2/13 CHECKED BY: F. ASEFNIA DATE: 2/13

NOTE:

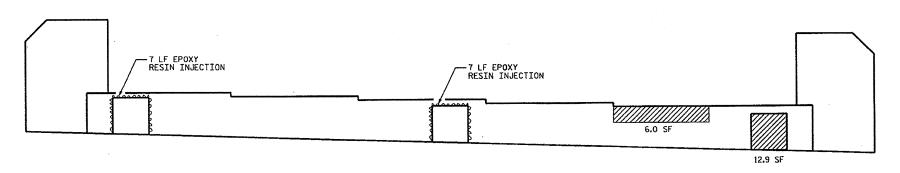
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE, IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR STRUCTURE REPAIRS, SEE SHEET S-8.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE END BENT CAP AND PILE CAPS.



PLAN



CONCRETE REPAIR

SHOTCRETE REPAIR

ELEVATION

| REPAIR QL | JANTI. | ry T | ABLE | |
|----------------------------|-------------|---------------|-------------|---------------|
| REPAIRS END BENT 1 | | QUANT | | |
| THE PARTY BETT I | ESTIMA | TE | ACTU | AL |
| SHOTCRETE REPAIRS | AREA SF. | VOLUME CF. | AREA SF. | VOLUME CF. |
| CAP (VERTICAL FACE) | 6.0 | 3,5 | | |
| CAP (HORIZONTAL FACE) | 5.0 | 3.0 | | |
| PILE CAP (VERTICAL FACE) | 12.9 | 6.0 | | |
| PILE CAP (HORIZONAL FACE) | 0 | 0 | | 1 |
| CONCRETE REPAIRS | 0 | 0 | | |
| EPOXY RESIN INJEC | CTION | LN. FT. | | LN. FT. |
| CAP | 0 | | | |
| PILE CAP | 14.0 | | | |
| EPOXY COATING | SO. FT. | | SO. FT. | |
| TOP OF END BENT CAP & PILE | CAPS | 80 | | |

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1"BEHIND REBAR AND MIN. 1"CL TO SAWCUT. SEE REPAIR DETAILS.

| | PROJECT NO | 17BP.7.P.5 |
|--|------------|------------|
| | COUNTY: | ORANGE |
| | BRIDGE NO | 6 |
| | | |

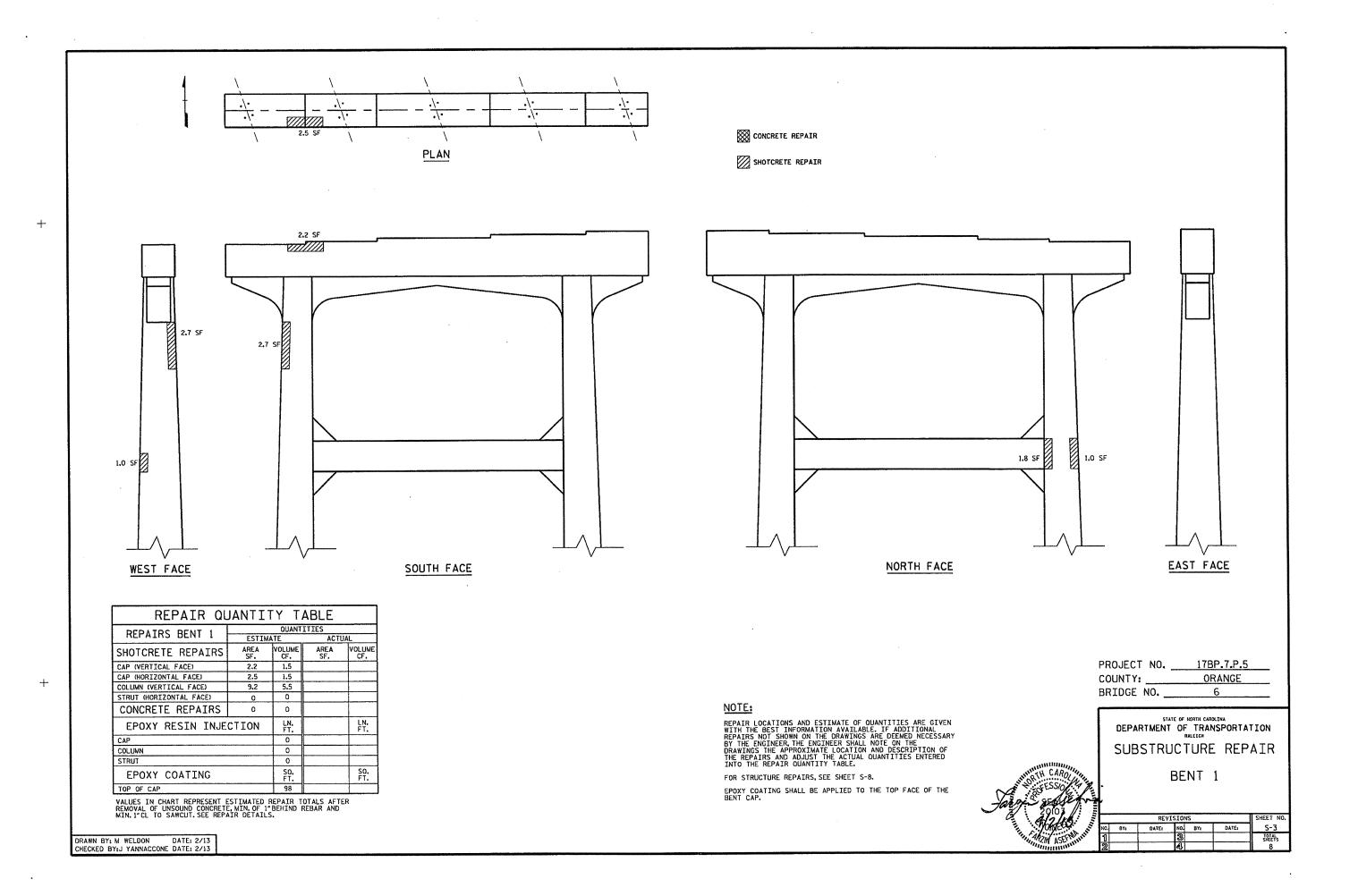
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

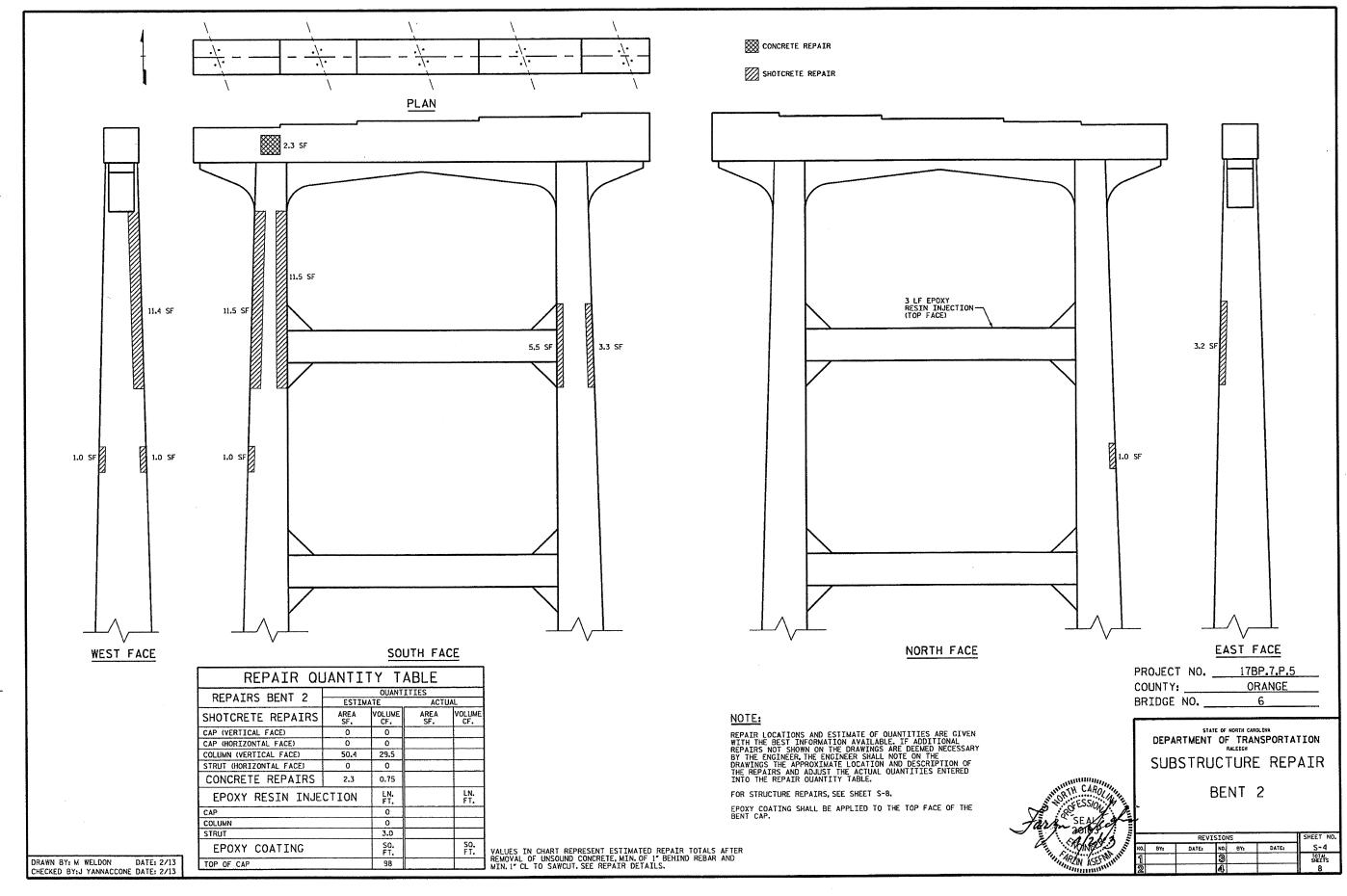
SUBSTRUCTURE REPAIR
END BENT 1

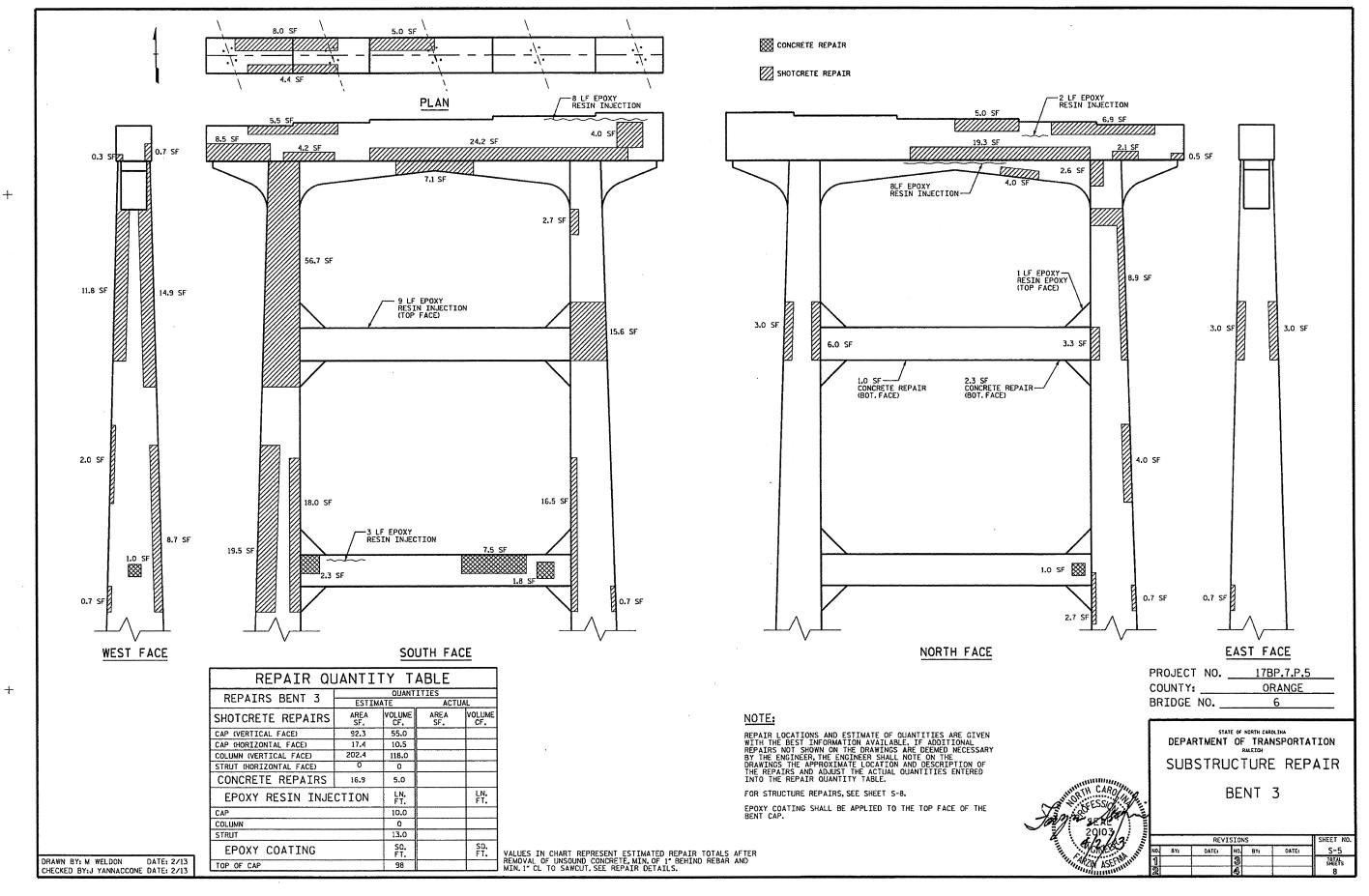


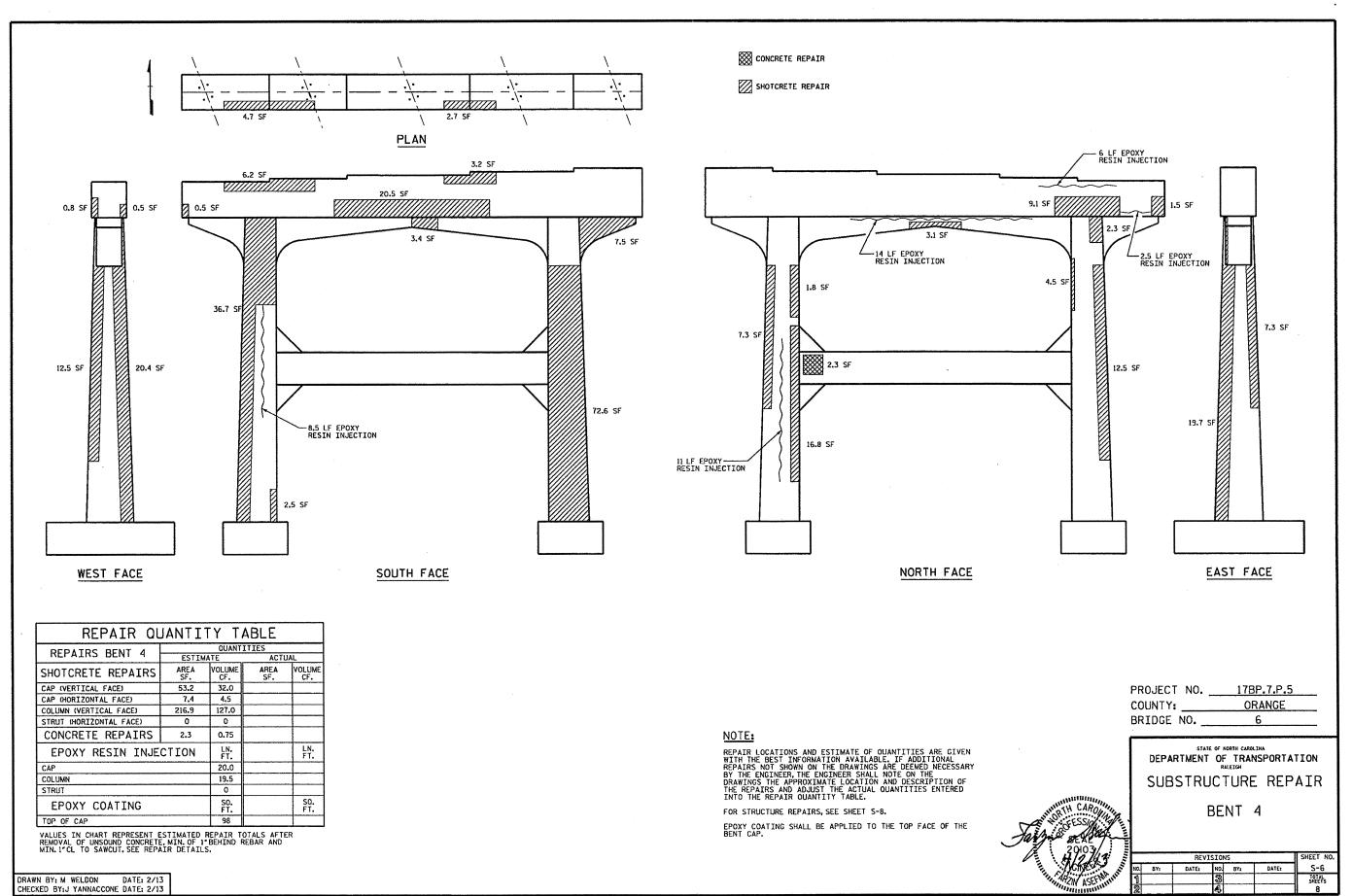
| _ | REVISIONS | | | | | SHEET NO. |
|---|-----------|-------|-----|-----|------|-----------------|
| Ŧ | BY: | DATE: | NO. | BY; | DATE | S-2 |
| Ť | | | 3 | | | TOTAL SHEETS |
| 1 | | | 4 | | | 8 |

DRAWN BY: M WELDON DATE: 2/13 CHECKED BY:J YANNACCONE DATE: 2/13



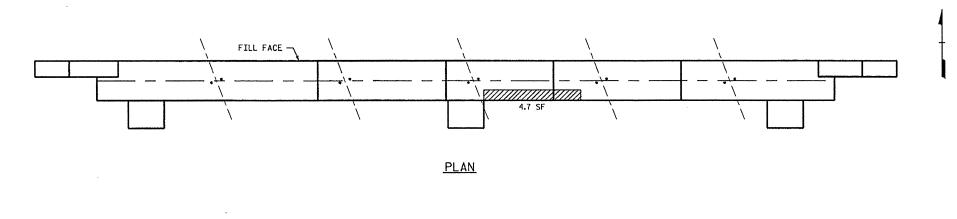


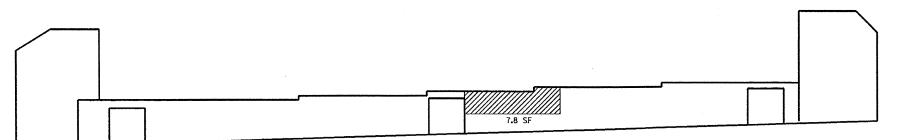




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ELEVATION

| REPAIR QUANTITY TABLE | | | | |
|----------------------------|-------------|---------------|---------------|---------------|
| REPAIRS END BENT 2 | ESTIMA | OUANT | ITIES ACTL | IAI |
| SHOTCRETE REPAIRS | AREA SF. | VOLUME CF. | AREA SF. | VOLUME CF. |
| CAP (VERTICAL FACE) | 7.8 | 4.5 | | 1 |
| CAP (HORIZONTAL FACE) | 4.7 | 3.0 | | |
| PILE CAP (VERTICAL FACE) | 0 | 0 | | |
| PILE CAP (HORIZONAL FACE) | 0 | 0 | | |
| CONCRETE REPAIRS | 0 | 0 | | |
| EPOXY RESIN INJECTION | | LN. FT. | | LN. FT. |
| CAP | 0 | | | |
| PILE CAP | | 0 | | |
| EPOXY COATING | | SQ. FT. | | SO. FT. |
| TOP OF END BENT CAP & PILE | E CAPS | 81 | | |

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1"BEHIND REBAR AND MIN. 1"CL TO SAWCUT. SEE REPAIR DETAILS.

NOTE:

REPAIR LOCATIONS AND ESTIMATE OF OUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEBMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL OUANTITIES ENTERED INTO THE REPAIR OUANTITY TABLE.

FOR STRUCTURE REPAIRS, SEE SHEET S-8.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE END BENT CAP AND FILE CAPS.

CONCRETE REPAIR

SHOTCRETE REPAIR

PROJECT NO. 17BP.7.P.5
COUNTY: ORANGE
BRIDGE NO. 6

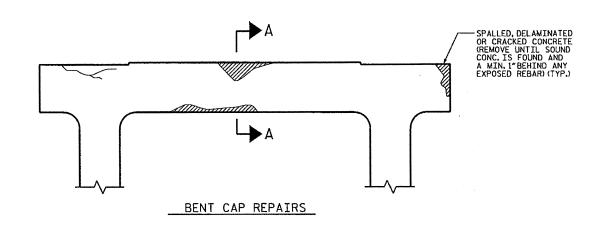
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

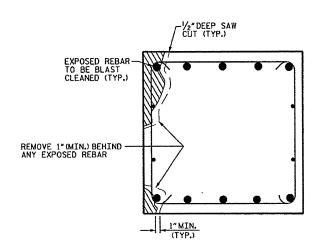
SUBSTRUCTURE REPAIR END BENT 2

| REVISIONS | SHEET NO | NO. BY: DATE: NO. BY: DATE: SHEET NO. S-7 | 107M, SHEET NO. S

DRAWN BY: M WELDON DATE: 2/13 CHECKED BY:J YANNACCONE DATE: 2/13

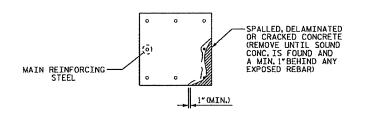
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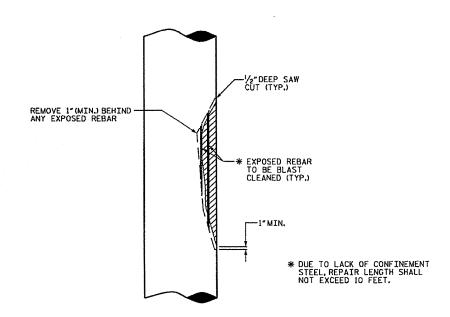


SECTION THRU CAP

CAP REPAIR



PLAN OF COLUMN



ELEVATION OF CAP

COLUMN REPAIR

PROJECT NO. _ 17BP.7.P.5 COUNTY: _ ORANGE BRIDGE NO.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CAP & COLUMN REPAIR DETAILS

REVISIONS DATES NO. BYS

DRAWN BY: J. YANNACCONE DATE: 2/13
CHECKED BY: F. ASEFNIA DATE: 2/13

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ALAMANCE & ORANGE COUNTIES

DIVISION 7



ALAMANCE COUNTY:

BRIDGE #38 - SR 1611 (Sartin Rd) over Stoney Creek

BRIDGE #41 - SR 1002 (Altamahaw Union Ridge Rd) over Stoney Creek

BRIDGE #52 - SR 1729 (Carolina Mill Rd) over Stoney Creek

BRIDGE #121 - SR 1136 (Bellemont-Mt Herman Rd) over Stinking Quarter Creek

ORANGE COUNTY:

BRIDGE #6 - US 70 Business /NC 86 (N Churton St) over Eno River

BRIDGE #59 - NC 86 over I-85

BRIDGE #81 - I-85 NB over SR 1006 (Orange Grove Rd)

BRIDGE #82 - I-85 SB over SR 1006 (Orange Grove Rd)

PLAN PREPARED FOR NCDOT STRUCTURES MANAGEMENT UNIT RALEIGH, NC



BETSY L. WATSON, P.E.

KELLIE WIESKAMP, E.I.

TMP-1

INDEX OF SHEETS

SHEET NO.

TITLE

TITLE SHEET, AND INDEX OF SHEETS

LIST OF ROADWAY STANDARD DRAWINGS AND LEGEND

VICINITY MAP AND PHASING

TRAFFIC MANAGEMENT STRATEGY

PROPOSED BRIDGE PAINTING OR PRESERVATION WILL BE PERFORMED USING DAY AND TIME RESTRICTED LANE CLOSURES. REFER TO SHEET TMP-3 FOR TRAFFIC CONTROL PHASING.

APPROVED SITUAL VOLTOW

BP

LEGEND

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

WORK AREA

PAVEMENT REMOVAL

NORTH ARROW

TYPE III BARRICADE

DRUM SKINNY DRUM © TUBULAR MARKER

CHANGEABLE MESSAGE SIGN (CMS)

FLASHING ARROW PANEL (TYPE C)



LAW ENFORCEMENT



TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)





PORTABLE CONCRETE BARRIER (PCB)



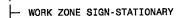
TEMPORARY CRASH CUSHION



TEMPORARY SHORING



WORK ZONE SIGN-PORTABLE



WORK ZONE SIGN-STATIONARY OR PORTABLE

SIGNALS



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)

PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS



CRYSTAL/RED

◆ YELLOW/YELLOW

PROJ. REFERENCE NO. SHEET NO. 17BP.7.P.5 TMP-1A

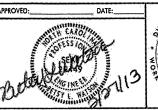
ROADWAY STANDARD DRAWINGS

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 |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLE |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1110.02 | PORTABLE WORK ZONE SIGNS |
| 1115.01 | FLASHING ARROW PANELS |
| 1130.01 | DRUMS |
| 1135.01 | CONES |
| 1150.01 | FLAGGING DEVICES |
| | |



Stantec Consulting Service 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8686 Fax. (919) 851-7024





ROADWAY STANDARD DRAWINGS & **LEGEND**

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

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:

| NOAD NAME | DAT AND TIME HEATHER |
|----------------|---------------------------------------|
| SR 1006 | |
| SR 1002 | 6:00 A.M9:00 A.M. MONDAY THRU FRIDAY |
| SR 1729 | 4:00 P.M7:00 P.M. MONDAY THRU FRIDAY |
| SR 1136 | |
| SR 1611 | |
| I-85 | 6:00 A.M 7:00 P.M. MONDAY THRU SUNDAY |
| US 70 BUSINESS | (EVERY DAY) |

B) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC, DETAIN AND/OR ALTER THE TRAFFIC FLOW ON OR DURING HOLIDAYS, HOLIDAY WEEKENDS, OR ANY OTHER TIME WHEN TRAFFIC IS UNUSUALLY HEAVY, INCLUDING THE FOLLOWING SCHEDULES:

DAY AND TIME RESTRICTIONS

ROAD NAME

NC 86

BOAD NAME

I-85, NC 86, US 70, SR 1611, SR 1006, SR 1729, SR 1002, SR 1136, SR 1611,

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

- 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. THESDAY
- 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) 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.
- F) 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.
- G) 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.

FLAGGER CONTROLLED LANE CLOSURES

- H) DURING FLAGGER OPERATIONS DO NOT STOP TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- I) LOCATE FLAGGER STATIONS SUCH THAT APPROACHING TRAFFIC WILL HAVE SUFFICIENT DISTANCE TO STOP AT THE INTENDED STOPPING POINT. IF NEEDED, EXTEND THE LANE CLOSURE SUCH THAT THE FLAGGER STATION IS POSITIONED BEFORE A HORIZONTAL OR CREST VERTICAL CURVE WHERE ADEQUATE STOPPING SIGHT DISTANCE TO THE FLAGGER IS PROVIDED. REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2.
- J) FLAGGERS SHALL NOT STAND IN THE ROADWAY.
- K) USE FLAGGERS TO CONTROL VEHICLES AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. USE FLAGGER SIGN W20-7A IN ADVANCE OF ALL FLAGGER STATIONS. WHEN AN INTERSECTION IS SIGNALIZED HAVE AUTHORIZED PERSONNEL PLACE THE SIGNAL IN FLASH MODE WHEN DIRECTED BY THE ENGINEER.
- L) PROVIDE ILLUMINATION FOR FLAGGER STATIONS DURING NIGHT HOURS.
 ILLUMINATION FOR FLAGGER STATIONS WILL NOT BE PAID FOR SEPARATELY AND WILL BE CONSIDERED INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.
- M) PLACE CHANNELIZING DEVICES FOR FLAGGER OPERATION LANE CLOSURES AT A MAXIMUM SPACING OF 20 FEET IN TAPERS AND AT A MAXIMUM SPACING OF 80 FEET ALONG THE BUFFER SPACE AND WORK AREA.
- N) USE PILOT VEHICLES IN CONJUNCTION WITH FLAGGERS WHEN SHOWN IN THE PLAN OR WHEN DIRECTED BY THE ENGINEER. MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A VISIBLE LOCATION ON THE REAR OF PILOT VEHICLES.
- O) ADVISE RESIDENTS AND BUSINESSES AFFECTED BY THE LANE CLOSURE ABOUT METHODS OF SAFE INGRESS AND EGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

MISCELLANEOUS

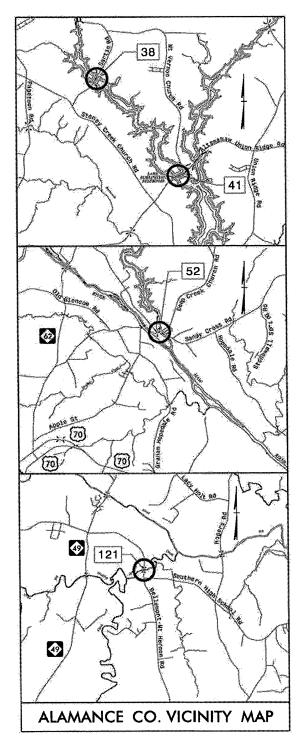
- P) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- Q) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

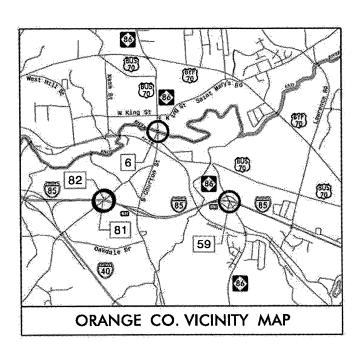
Stantec Consulting Service 801 Jones Frenklin Road Surte 300 Raleigh, NC 27606 Tel. (919) 651-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672

APPROVED: DATE:



GENERAL NOTES





PHASING

ALAMANCE COUNTY

BRIDGE #38 - SR 1611 (SARTIN RD) OVER STONEY CREEK USE FLAGGING OPERATION, PER ROADWAY STANDARD DRAWING 1101.02

BRIDGE #41 - SR 1002 (ALTAMAHAW UNION RIDGE RD) OVER STONEY CREEK USE FLAGGING OPERATION, PER ROADWAY STANDARD DRAWING 1101.02

BRIDGE #52 - SR 1729 (CAROLINA MILL RD) OVER STONEY CREEK
USE FLAGGING OPERATION, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

BRIDGE #121 - SR 1136 (BELLEMONT-MT HERMAN RD) OVER STINKING QUARTER CREEK USE FLAGGING OPERATION, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

ORANGE COUNTY

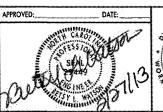
BRIDGE #6 - US 70 BUSINESS/NC 86 (N CHURTON ST) OVER ENO RIVER USE FLAGGING OPERATION TO SECURE CONTAINMENT AND PERFORM SUBSTRUCTURE WORK, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1. LAW ENFORCEMENT MAY BE USED AT THE INTERSECTIONS OF US 70 BUSINESS WITH US 70 BUSINESS, EXCHANGE PARK LANE, AND NASH AND KOLLOCK STREET, AS NEEDED.

BRIDGE #59 - NC 86 OVER I-85 USE LEFT LANE CLOSURE WITH SHIFT ALONG I-85, PER ROADWAY STANDARD DRAWING SHEET 1101.02 SHEET 6.

BRIDGES #81 AND #82 - I-85 OVER SR 1006 (ORANGE GROVE RD) USE FLAGGING OPERATION ON SR 1006, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1. IF LANE CLOSURES ARE REQUIRED ON I-85 FOR SECUREMENT OF CONTAINMENT, USE RSD 1101.02 SHEETS 4, 5, OR 6.



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VICINITY MAPS & PHASING