VICINITY MAP

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

# HAYWOOD COUNTY

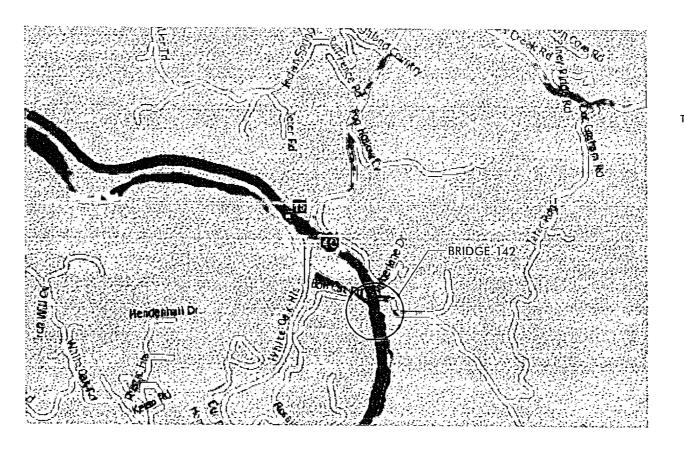
LOCATION: BRIDGE 142, I-40 EBL AND WBL OVER PIGEON RIVER, 0.5 MILE EAST OF JUNCTION I-40 AND SR 1338

TYPE OF WORK: BRIDGE DECK PRESERVATION

|      |        |                                   | MO | SHEETS      |     |
|------|--------|-----------------------------------|----|-------------|-----|
| N.C. |        | B-4700AM                          |    | 1           |     |
| ·    | и ж    | F & PROLIFO.                      |    | DESCRIPTION |     |
|      | 27.1.1 | BRNHS-000S[504]                   |    | PE          |     |
| 3672 | 7.3.37 | BRNHS-000S 504 <br>BRNHS-000S 370 |    | CON         | ST. |
|      |        |                                   |    |             |     |
|      |        |                                   |    |             |     |
|      |        |                                   |    |             |     |
|      |        |                                   |    |             |     |
|      |        |                                   | _  |             |     |
| L    |        |                                   |    |             |     |
|      |        |                                   |    |             |     |

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| S-4    | DECK REPAIR DETAILS            |
| S5     | DECK REPAIR DETAILS            |
| S6     | DECK REPAIR DETAILS            |
| S7     | DECK REPAIR DETAILS            |
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**PROJECT** 

#### PROJECT LENGTH

LENGTH OF ROADWAY T.I.P. PROJECT B-4700AM = 0.000 MI. LENGTH OF STRUCTURE T.I.P. PROJECT B-4700AM = 0.072 MI

PREPARED IN THE OFFICE OF: FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 2006 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: JOE KELVINGTON, PE LETTING DATE: NOV. 12, 2009



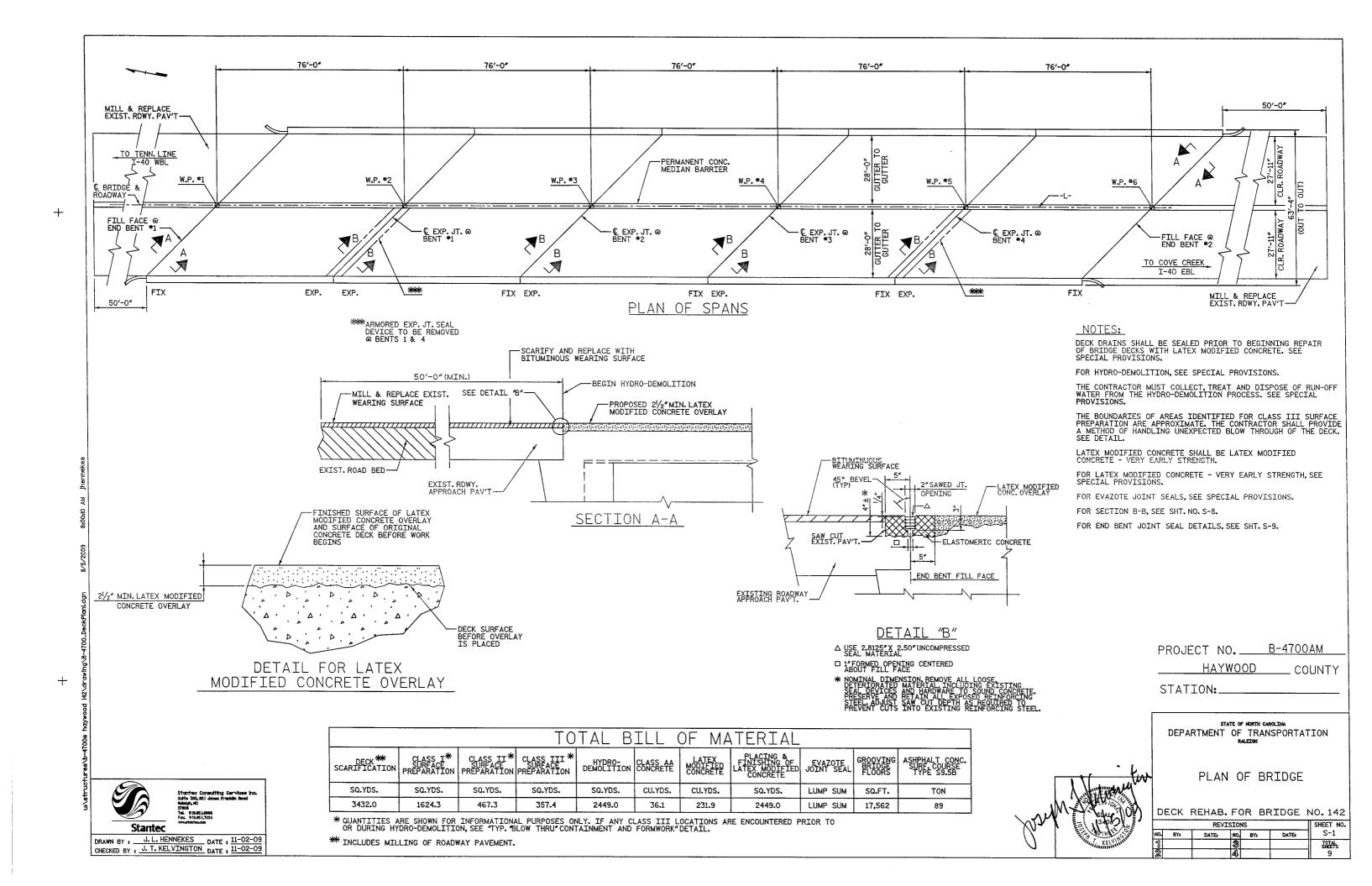
NCDOT CONTACT:

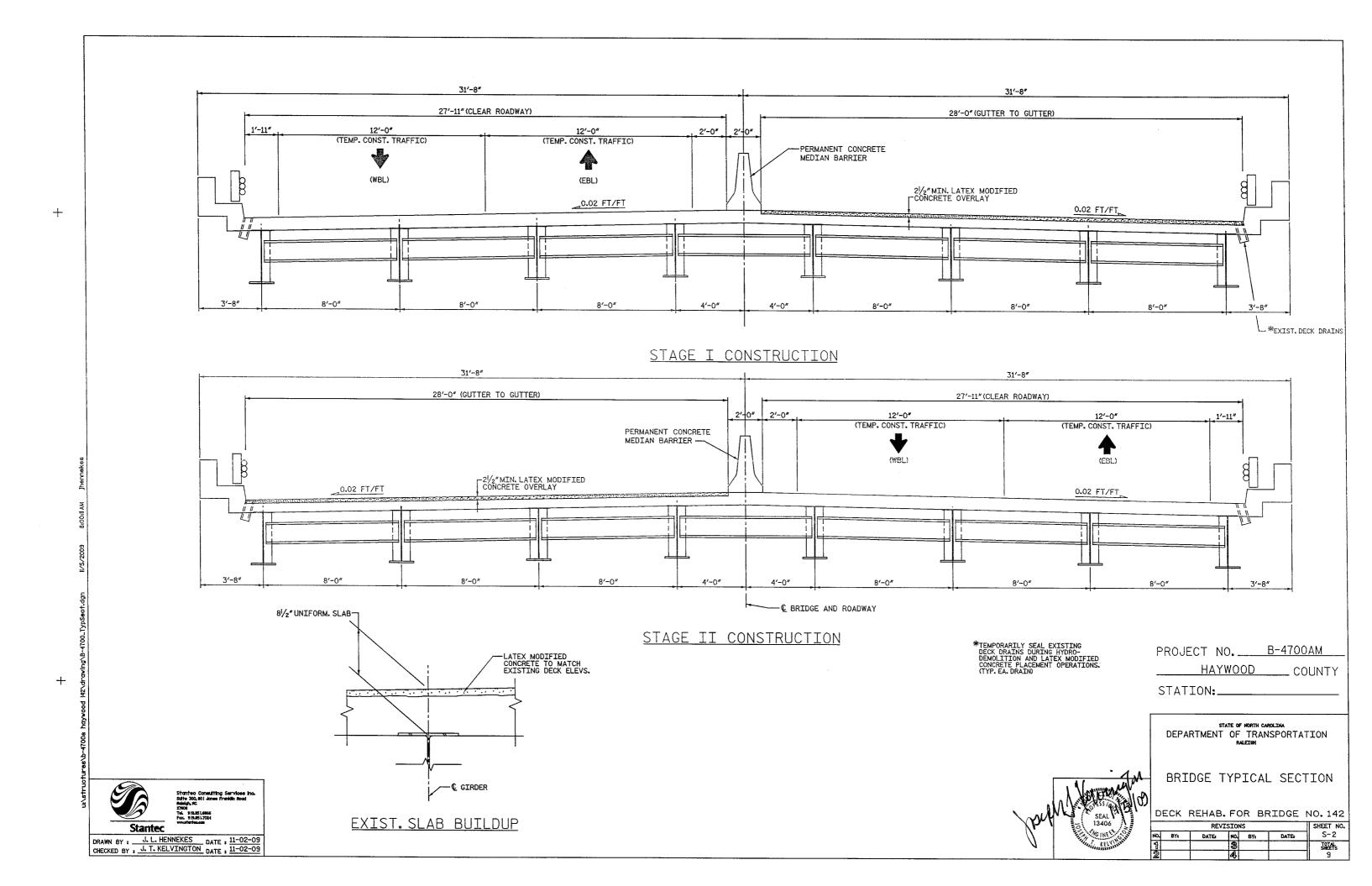
MIKE SUMMERS
BRIDGE MANAGEMENT PROJECT MANAGER

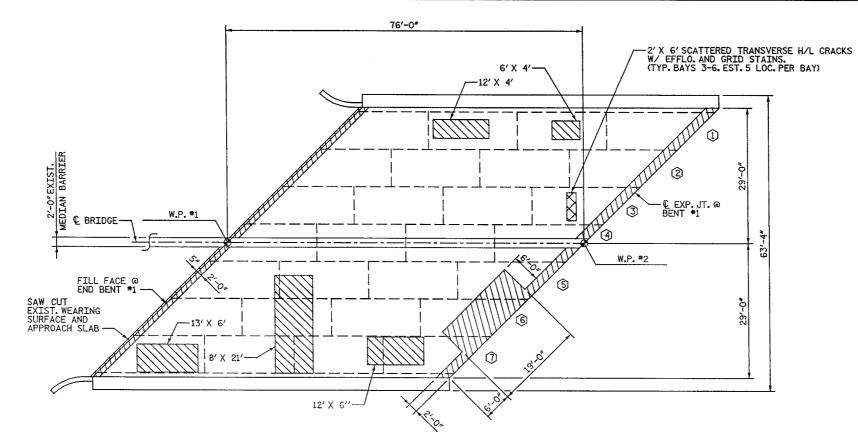
GRAPHIC SCALES

TOTAL LENGTH OF T.I.P. PROJECT B-4700AM

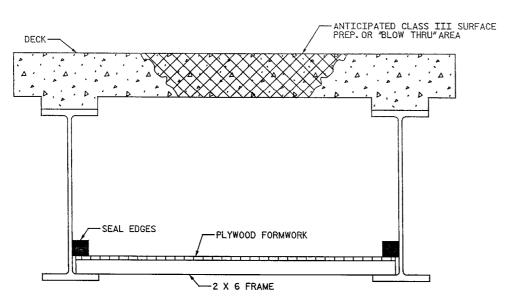
= 0.072 MI







#### PLAN OF SPAN A - DECK REPAIRS



#### TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALL IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



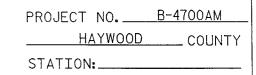
CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X WIDTH OF AREA NORMAL TO & BRIDGE

DENOTES BAY NUMBER



STATE OF HORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALETOH

DECK REPAIR DETAILS SPAN A

DECK REHAB. FOR BRIDGE NO. 142

|     | SHEET NO. |     |     |      |                 |
|-----|-----------|-----|-----|------|-----------------|
| BYe | DATE      | NO. | BYı | DATE | S-3             |
|     | _         | 3   |     |      | TOTAL<br>SHEETS |
|     |           | 43  |     |      | 9               |

Starteo Consulting Services inc.
Sath 300, 801 Janes Preside Road
Reddy, RC
27006
Tel. 918.251.7004

Stantec

DRAWN BY: J. L. HENNEKES DATE: 11-02-09
CHECKED BY: J. T. KELVINGTON DATE: 11-02-09

a/b-4700\_Planl.dgn II/

+

+

ur\struotures

-2'X 6'(TYP.) SCATTERED TRANSVERSE
HAIRLINE CRACKS W/ EFFLO. & GRID STAINS
(TYP.EA. BAY, EST. 5 LOCATIONS PER BAY)

CONTRACT 76'-0" 7-15' X 6' —32′ X 6′ W.P. #2 BRIDGE W.P. #3 -60' X 2' \* (TYP. EA. OVERHANG)

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO PRICE BID PER SQ. YD. OF CLASS III SURFACE PREPARATION. SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.

PLAN OF SPAN B - DECK REPAIRS

CLASS II SURFACE PREPARATION

CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X WIDTH OF AREA NORMAL TO & BRIDGE

PROJECT NO. B-4700AM HAYWOOD COUNTY STATION:\_

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS SPAN B

DECK REHAB. FOR BRIDGE NO 142

| SHEET NO.       | REVISIONS |     |     |      |     |  |  |
|-----------------|-----------|-----|-----|------|-----|--|--|
| S-4             | DATE      | BYs | NO. | DATE | BY₃ |  |  |
| TOTAL<br>SHEETS |           |     | 3   |      |     |  |  |
| 9               |           |     | 4   |      |     |  |  |

DRAWN BY : J. L. HENNEKES DATE : 11-02-09 CHECKED BY : J. T. KELVINGTON DATE : 11-02-09

PLAN OF SPAN C - DECK REPAIRS

\*NOTE:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO PRICE BID PER SQ. YD. OF CLASS III SURFACE PREPARATION. SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X WIDTH OF AREA NORMAL TO & BRIDGE

> PROJECT NO. B-4700AM HAYWOOD COUNTY STATION:\_

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS SPAN C

DECK REHAB. FOR BRIDGE NO. 142

REVISIONS SHEET NO. S-5

DRAWN BY : J. L. HENNEKES DATE : 11-02-09
CHECKED BY : J. T. KELVINGTON DATE : 11-02-09

PLAN OF SPAN D - DECK REPAIRS

CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X WIDTH OF AREA NORMAL TO & BRIDGE \* NOTE:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO PRICE BID PER SQ. YD. OF CLASS III SURFACE PREPARATION. SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.

DENOTES BAY NUMBER

PROJECT NO. B-4700AM HAYWOOD COUNTY STATION:\_\_

DEPARTMENT OF TRANSPORTATION

DECK REPAIR DETAILS SPAN D

DECK REHAB. FOR BRIDGE NO. 142

|     | REV  | SHEET NO. |     |       |                 |
|-----|------|-----------|-----|-------|-----------------|
| BYs | DATE | NO.       | BYs | DATEs | S-6             |
|     |      | 3         |     |       | TOTAL<br>SHEETS |
|     |      | 4         |     |       | 9               |

DRAWN BY : J. L. HENNEKES DATE : 11-02-09 CHECKED BY : J. T. KELVINGTON DATE : 11-02-09

#### PLAN OF SPAN E - DECK REPAIRS



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X WIDTH OF AREA NORMAL TO & BRIDGE

DENOTES BAY NUMBER

PROJECT NO. B-4700AM

HAYWOOD COUNTY

STATION:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEISH

DECK REPAIR DETAILS SPAN E

DECK REHAB. FOR BRIDGE NO. 142

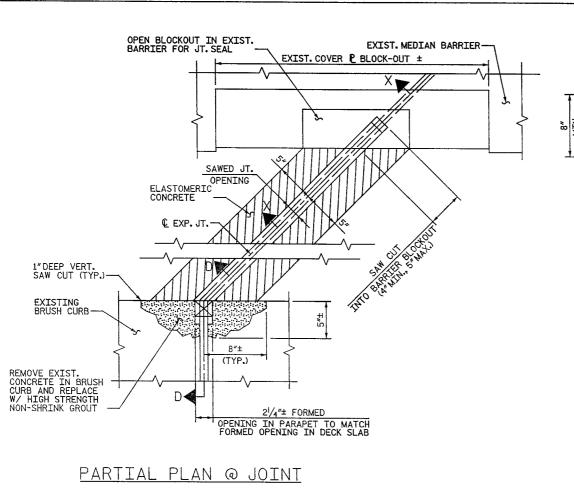
Startec Consuting Services Inc.
Sich 300, 80 Junes Freidin flood
Startec

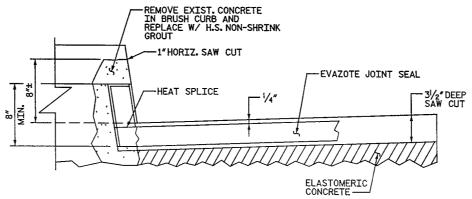
Startec

DRAWN 8Y: J. L. HENNEKES
CHECKED 8Y: J. T. KELVINGTON
DATE: 11-02-09
DATE: 11-02-09

1/5/2009 8:00:lk

+





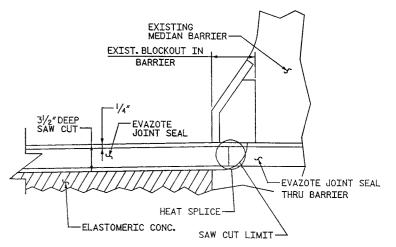
#### SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.

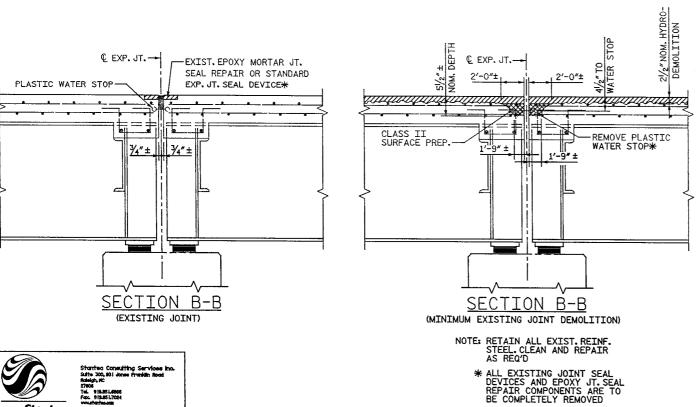
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISIONS. HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

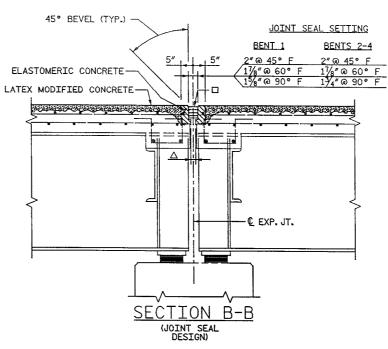
| ELASTOMERIC | CONCRETE  |
|-------------|-----------|
| LOCATION    | QTY       |
| END BENT 1  | 19.8 C.F. |
| BENT 1      | 27.2 C.F. |
| BENT 2      | 27.2 C.F. |
| BENT 3      | 27.2 C.F. |
| BENT 4      | 27.2 C.F. |
| END BENT 2  | 19.8 C.F. |

TOTAL ELASTOMERIC CONC. = 148.4 C.F. TOTAL ELASTOMERIC CONC. = 5.5 C.Y.



SECTION X-X





☐ USE 2.8125"X 2.50"UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL △ 1"FORMED OPENING

PROJECT NO. B-4700AM HAYWOOD COUNTY STATION:\_

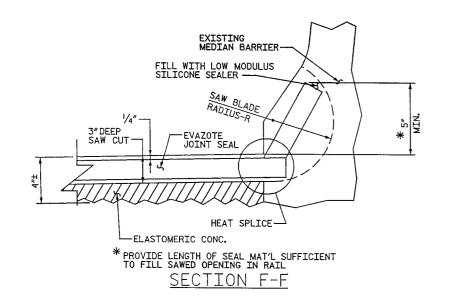
> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

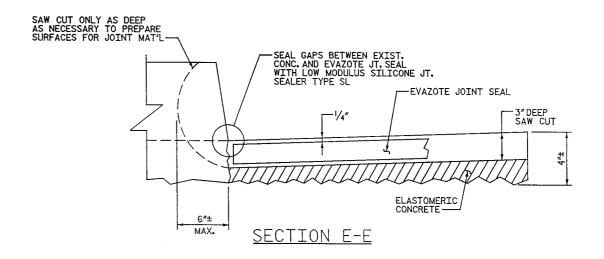
EXPANSION JOINT DETAILS

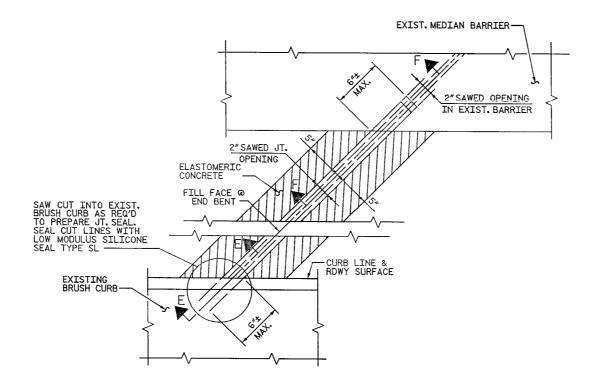
DECK REHAB. FOR BRIDGE NO. 142

|     | REVISIONS SHEET NO.     |   |  |  |                 |  |  |
|-----|-------------------------|---|--|--|-----------------|--|--|
| BYt | BYE DATES NO. BYE DATES |   |  |  | S-8             |  |  |
|     |                         | 3 |  |  | TOTAL<br>SHEETS |  |  |
|     |                         | 4 |  |  | 9               |  |  |

DRAWN BY : B. J. ELLIOT DATE : 11-02-09
CHECKED BY : J. T. KELVINGTON DATE : 11-02-09







PARTIAL PLAN @ END BENT #1

SEE SHT. NO. S-1, DETAIL B, FOR CROSS SECTION THRU JOINT AREA

(END BENT \*2 SIMILAR)

Stantec DRAWN BY : \_\_\_J. L. HENNEKES \_\_\_DATE : 11-02-09 CHECKED BY : \_J. T. KELVINGTON \_\_DATE : 11-02-09

STATE OF MORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

HAYWOOD

PROJECT NO.\_\_\_

STATION:\_

B-4700AM

\_\_\_\_ COUNTY

END BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 142

|     | SHEET NO. |     |     |      |                 |
|-----|-----------|-----|-----|------|-----------------|
| BYs | DATE      | NO. | BYz | DATE | ] S-9           |
|     |           | 3   |     |      | TOTAL<br>SHEETS |
|     |           | 4   |     |      | 9               |

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO B-4700AM TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# HAYWOOD COUNTY

LOCATION: BRIDGE 142 ON I-40 OVER PIGEON RIVER

TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE DECK PRESERVATION

#### 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. |
|------|-----|
| OID: |     |

#### TITLE

1110.01 1145.01

STATIONARY WORK ZONE SIGNS

BARRICADES

1205.01

PAVEMENT MARKINGS - LINE TYPES & OFFSETS 1205.02 PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS

### INDEX OF SHEETS

#### SHEET NO.

TITLE

TCP-1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, & INDEX OF SHEETS

TCP-2 GENERAL NOTES, PHASING, VICINITY MAP

TCP-3 PHASE I I-40 EASTBOUND DECK PRESERVATION

TCP-4 PHASE II I-40 WESTBOUND DECK PRESERVATION

#### **LEGEND**

#### **GENERAL**

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

EXISTING PAVEMENT



#### TRAFFIC CONTROL DEVICES

TYPE III BARRICADE

▲ CONE

SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

- STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

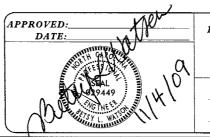
TEMPORARY CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

LAW ENFORCEMENT

FLAGGER



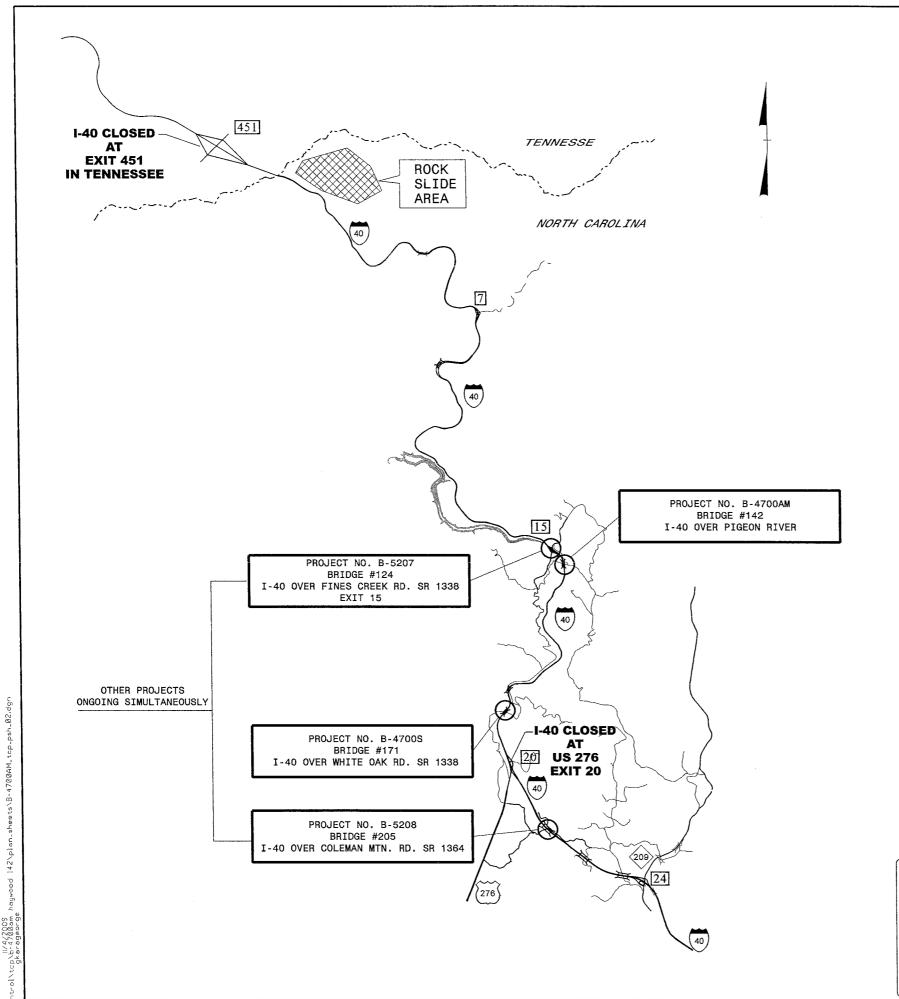
PLAN PREPARED BY:



BETSY L. WATSON, PE

GEORGE KARAGEORGE

TRAFFIC CONTROL ENGINEER TRAFFIC CONTROL DESIGNER



#### GENERAL NOTES

PROJECT REFERENCE NO. SHEET NO.

B-4700AM TCP-2

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 OFTHE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

- A) INTERSTATE 40 THROUGH THE AREA OF THIS PROJECT IS CLOSED TO PUBLIC TRAFFIC DUE TO ROCK SLIDE INCIDENT NEAR THE TENNESSEE BORDER.

  CONSTRUCTION VEHICLES WILL BE USING I-40 TO ACCESS THE ROCK SLIDE AREA FOR CLEAN-UP. IN ADDITION, LOCAL TRAFFIC WILL BE USING ONE SIDE OF I-40 FOR ACCESS TO EXITS 15 AND 7 AS DESCRIBED IN THE PHASING.
- B) THIS PROJECT IS LET TO CONTRACT SIMULTANEOUSLY WITH OTHER PROJECTS IN THE AREA WHILE I-40 IS CLOSED TO PUBLIC TRAVEL.
- C) COORDINATE WITH THE CONTRACTOR(S) OF THE OTHER ONGOING BRIDGE PRESERVATION PROJECTS AND THE CONTRACTOR OF THE ROCK SLIDE CLEAN-UP.
- D) UPON COMPLETION OF THE BRIDGE DECK OVERLAYS REPLACE THE EXISTING PAVEMENT MARKINGS ON I-40 WITH POLYUREA MARKINGS.

TRAFFIC CONTROL PHASING

PHASE I (SEE SHEET TCP-3)

STEP 1:

THE CONTRACTOR OF BRIDGE NO. 124/205 AT FINES CREEK RD./US 276 WILL INSTALL TRAFFIC CONTROL DEVICES AND PLACE I-40 TRAFFIC ON THE EASTBOUND SIDE IN A TWO-LANE TWO-WAY PATTERN.

COORDINATE WITH ADJACENT PROJECT CONTRACTORS BEFORE BEGINNING ANY WORK.

STEP 2:

WITH I-40 CLOSED TO PUBLIC THROUGH TRAFFIC AND WITH CONSTRUCTION/LOCAL TRAFFIC USING I-40 WESTBOUND SIDE, CONSTRUCT BRIDGE #142 DECK PRESERVATION ON THE I-40 EASTBOUND SIDE.

STEP 3:

UPON COMPLETION OF BRIDGE #142 DECK PRESERVATION ON THE EASTBOUND SIDE OF I-40, COORDINATE WITH THE ADJACENT PROJECT CONTRACTORS OF BRIDGE NO.S 124 AND 171. ENSURE THE I-40 EASTBOUND DECK PRESERVATION FOR ALL THREE BRIDGES #124, #142 AND #171 IS COMPLETE BEFORE BEGINNING THE I-40 WESTBOUND SIDE IN PHASE II.

PHASE II (SEE SHEET TCP-4)

CTED 1

UPON COMPLETION OF THE DECK PRESERVATION FOR THE I-40 EASTBOUND SIDE FOR BRIDGE NO.S 124, 142 AND 171, COORDINATE BEGINNING THE WESTBOUND SIDE WITH THE OTHER CONTRACTORS. THE CONTRACTOR OF BRIDGE #124/205 WILL REVISE TRAFFIC CONTROL DEVICES AND SWITCH I-40 LOCAL/CONSTRUCTION TRAFFIC TO THE I-40 EASTBOUND SIDE IN A TWO-LANE TWO-WAY TRAFFIC PATTERN.

STEP 2

WITH LOCAL/CONSTRUCTION TRAFFIC OPERATING ON THE I-40 EASTBOUND SIDE, CONSTRUCT BRIDGE #142 DECK PRESERVATION ON THE I-40 WESTBOUND SIDE.





### GENERAL NOTES TRAFFIC CONTROL PHASING

TE: NONE

TE: OCT. 2009

G. BY: GK

IGN BY: GK

IEWED BY: BLW



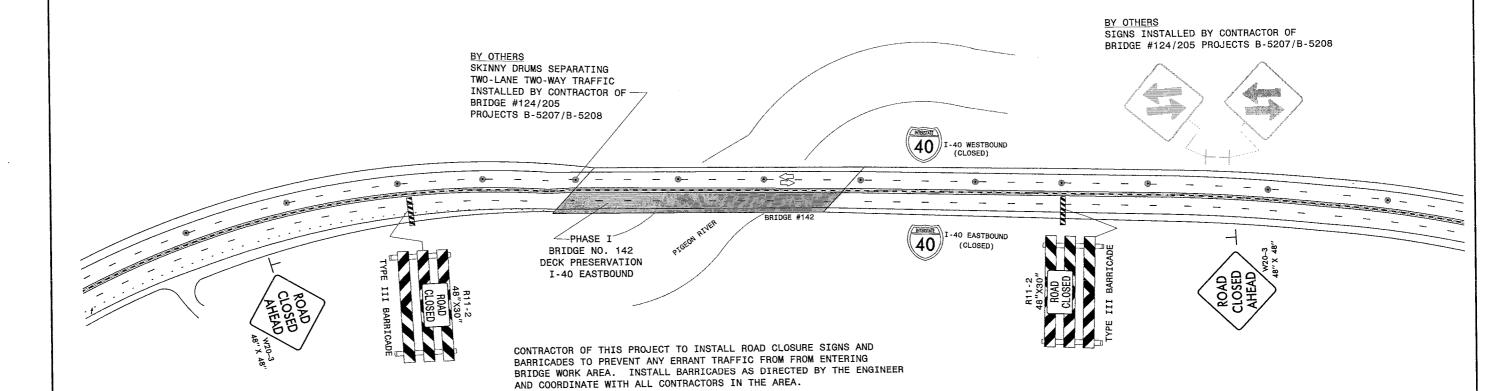
REVISIONS

CADD
PARE

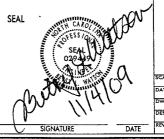
PROJECT REFERENCE NO. SHEET NO. B-4700AM TCP-3

INTERSTATE 40 CLOSED TO PUBLIC THROUGH TRAFFIC DUE TO ROCK SLIDE INCIDENT

PHASE I BRIDGE NO. 142 DECK PRESERVATION OF I-40 EASTBOUND. I-40 WESTBOUND LANES OPEN ONLY TO CONSTRUCTION VEHICLES FOR ACCESS TO ROCK SLIDE AREA AND LOCAL TRAFFIC ACCESSING EXITS 15 AND 7.





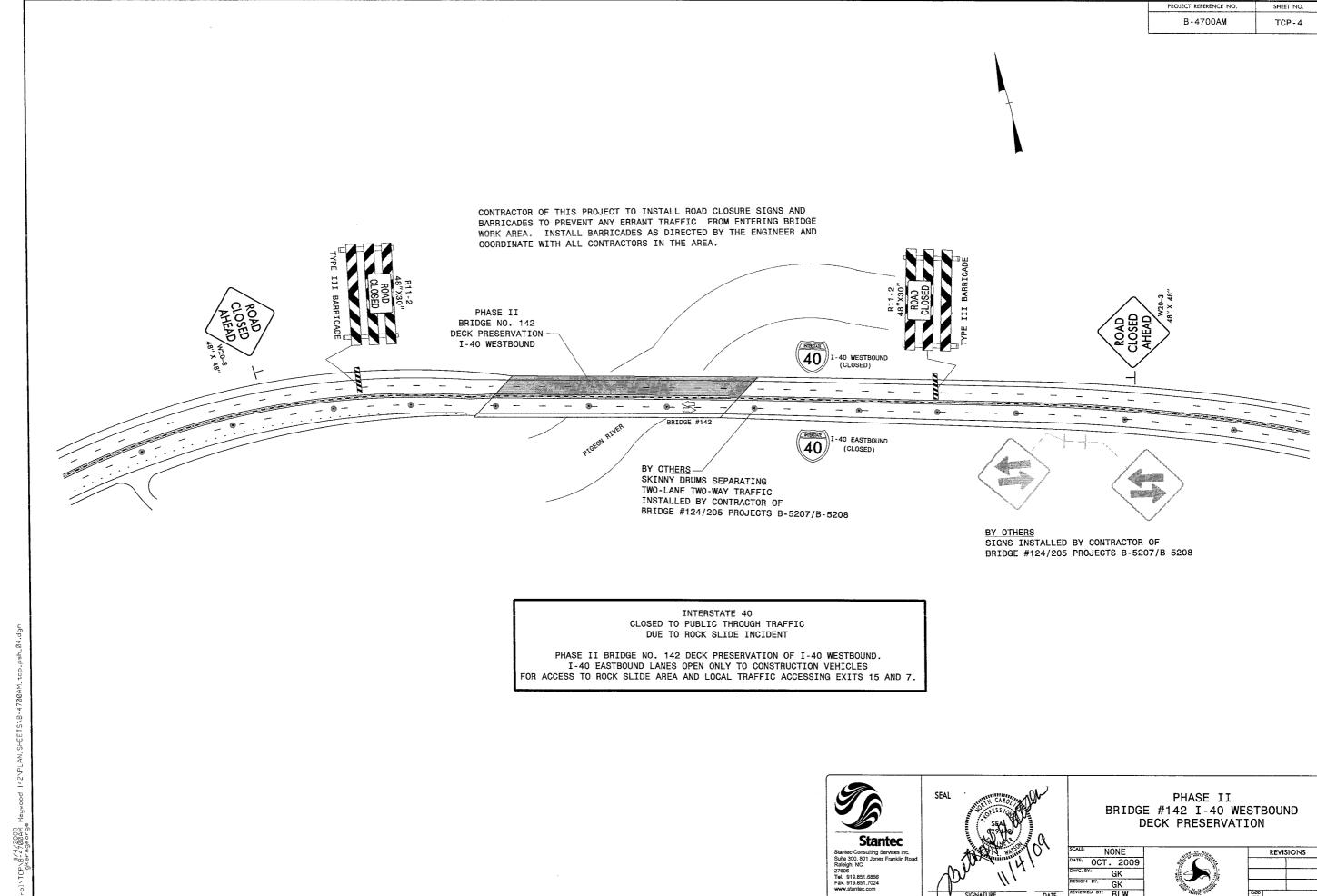


### PHASE I BRIDGE #142 I-40 EASTBOUND DECK PRESERVATION

| SCALE:  | NONE      |  |
|---------|-----------|--|
| DATE:   | OCT. 2009 |  |
| DWG. BY | GK        |  |
| DESIGN  | GK        |  |
| reviewe | D BY: BLW |  |







DESIGN BY: