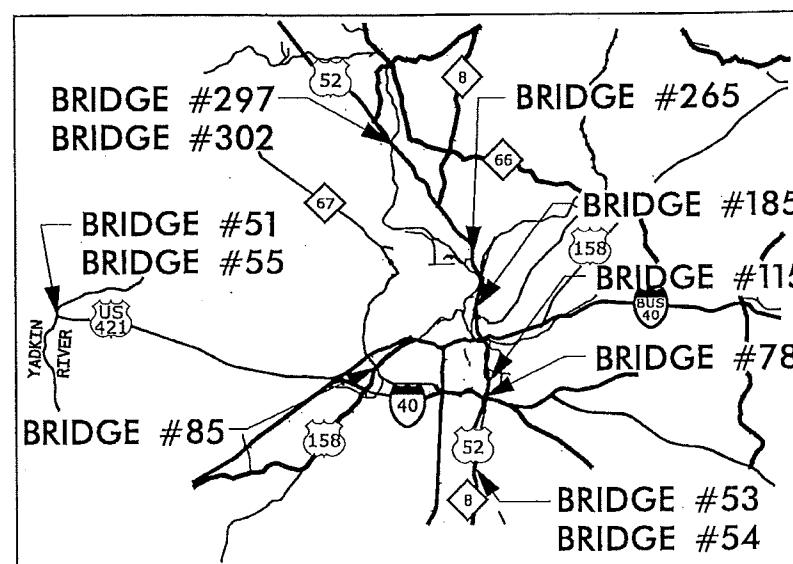


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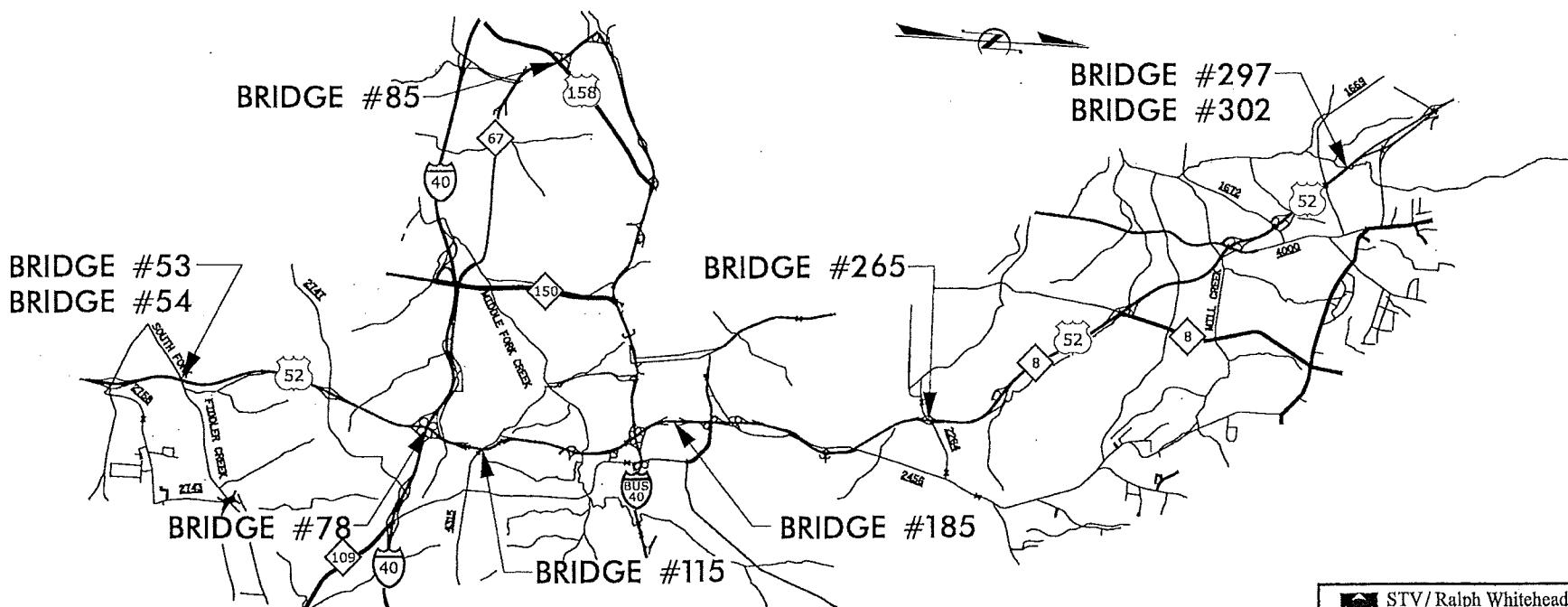
PROJECT: 17BP.9.P.1

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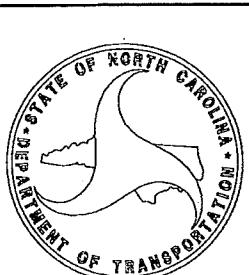
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VICINITY MAP



VICINITY MAP
BRIDGES #53, #54, #78, #85, #115, #185, #265, #297, & #302



PROJECT LENGTH
BRIDGE LENGTH STRUCTURE PROJECT

#51	.12 MILE
#53	.04 MILE
#54	.04 MILE
#55	.12 MILE
#78	.04 MILE
#85	.04 MILE
#115	.17 MILE
#185	.03 MILE
#265	.04 MILE
#297	.05 MILE
#302	.05 MILE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

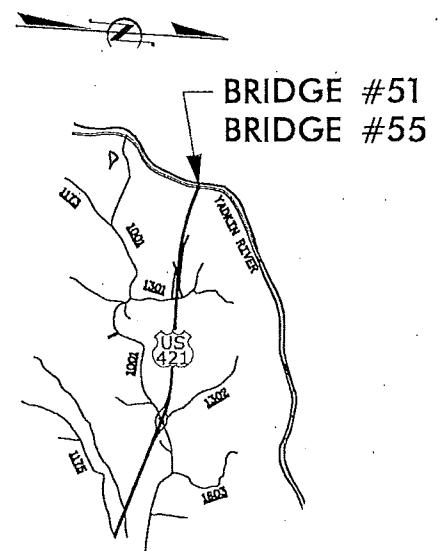
FORSYTH COUNTY

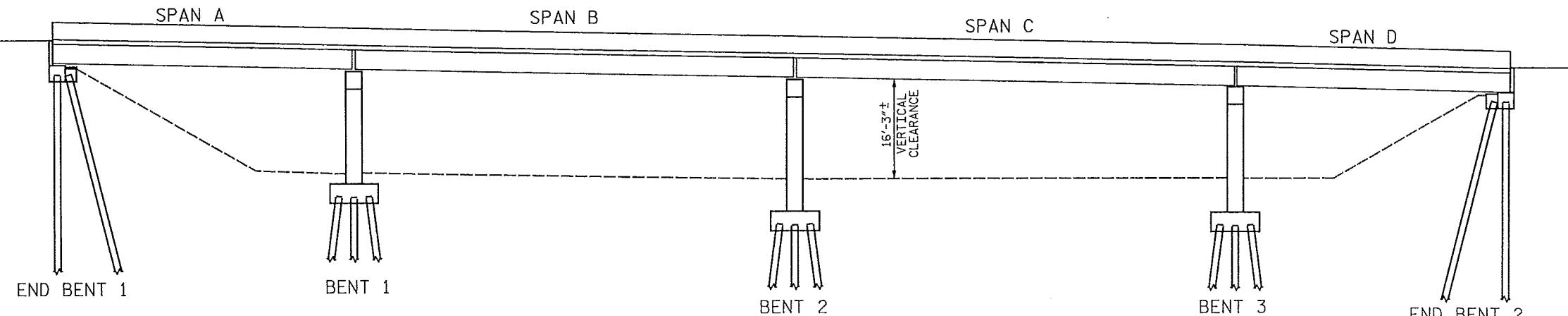
STATE	STATE PROJECT REFERENCE NO.	SHRIFT NO.	TOTAL SHEETS
N.C.	17BP.9.P.1	1	132
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
17BP.9.P.1	NA	PE	
17BP.9.P.1	NA	CONSTR.	

LOCATION: BRIDGES #51 AND #55 ON US 421 OVER YADKIN RIVER.
BRIDGES #53 AND #54 OVER SOUTH FORK FIDDLER CREEK.
BRIDGE #78 ON US 52 OVER I-40.
BRIDGE #85 ON US 158 OVER NC 67.
BRIDGE #115 ON US 52 OVER SR 4315.
BRIDGE #185 ON 3RD STREET OVER US 52.
BRIDGE #265 ON SR 2264 OVER US 52.
BRIDGES #297 AND #302 ON US 52 OVER SOUTHERN RR

TYPE OF

WORK: BRIDGE PRESERVATION: HYDRODEMOLITION, EPOXY OVERLAY, LMC & LMC-VES OVERLAY, METHACRYLATE-CRACK SEAL, SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR.

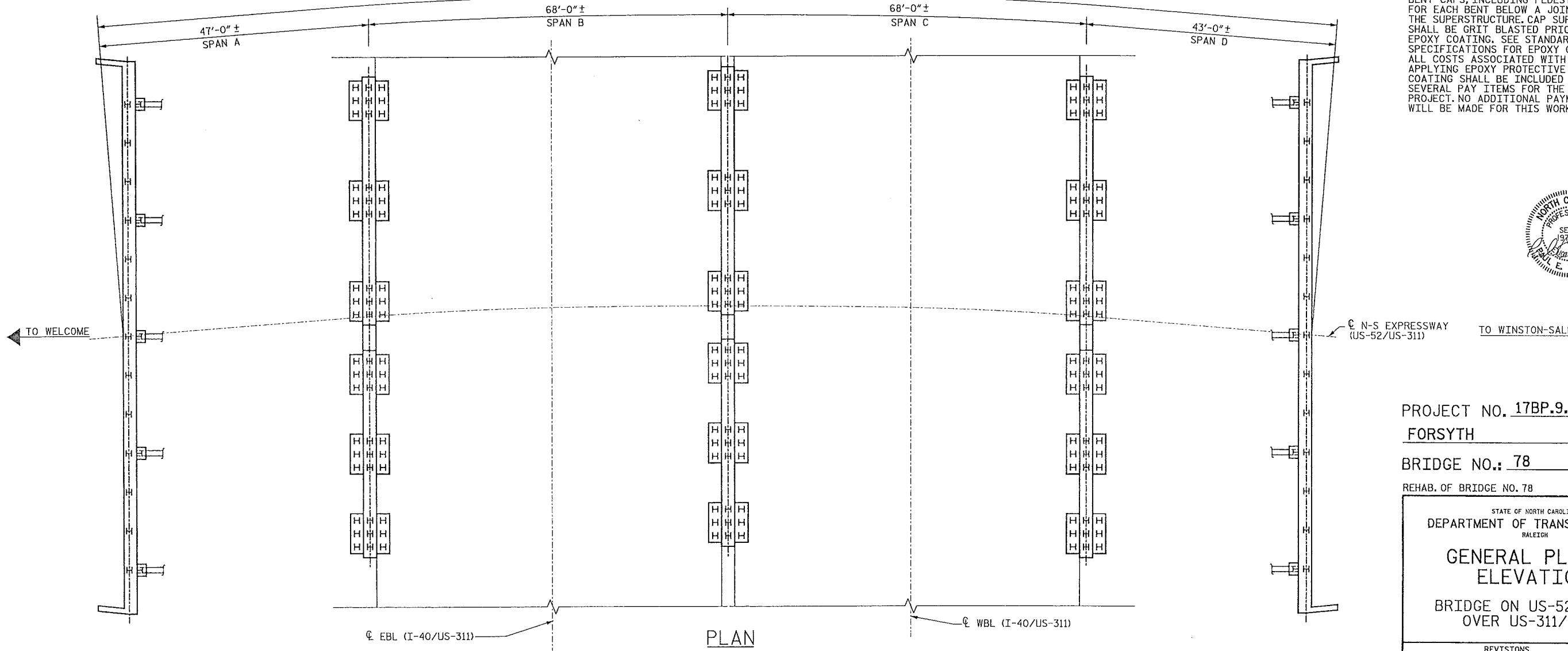




ELEVATION

(SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES)

226'-0" ± OVERALL LENGTH FROM FILL FACE TO FILL FACE (MEASURED ALONG ARC)



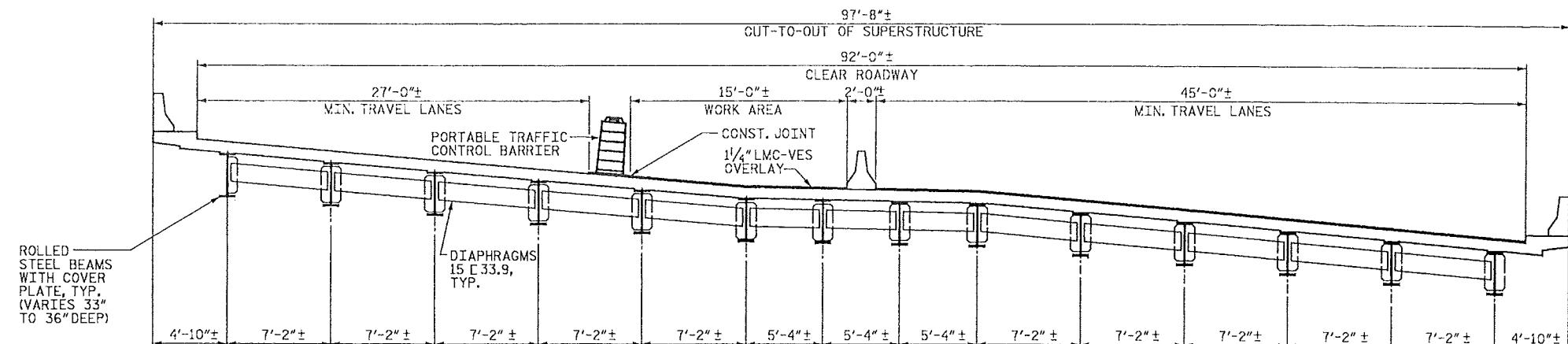
TOTAL BILL OF MATERIAL											
DECK SCARIFICATION	* CLASS II SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE VERY EARLY STRENGTH OVERLAY	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	FOAM JOINT SEAL	GROOVING BRIDGE FLOORS	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	BRIDGE JACKING	■ REINFORCING STEEL
SQ. YDS.	SQ. YDS.	SQ. YDS.	CU. YDS.	SQ. YDS.	LUMP SUM	SQ. FT.	CU. FT.	CU. FT.	LIN. FT.	LUMP SUM	LBS
2461	9	2461	94	2461	LUMP SUM	22148	9	49	68	LUMP SUM	100

* QUANTITIES FOR INFORMATION ONLY.

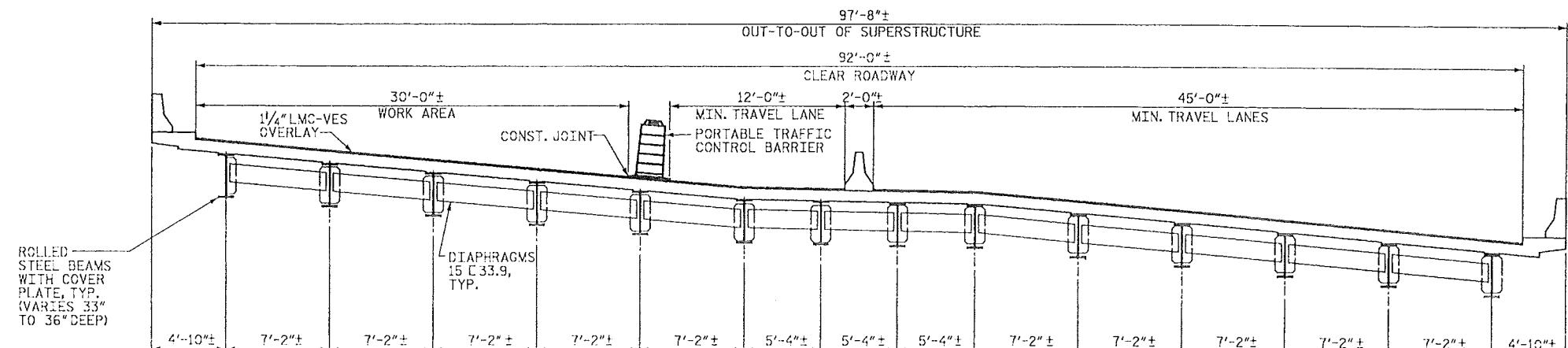
■ REINFORCING STEEL FOR REPLACEMENT OF REBAR DAMAGED PRIOR TO ONSET OF PROJECT.

NOTE:

PER EXISTING PLANS THE EXISTING DECK HAS $1\frac{1}{8}$ " CONCRETE COVER OVER EXISTING REINFORCING STEEL.



TYPICAL SECTION - STAGE 3



TYPICAL SECTION - STAGE 4

PROJECT NO. 17BP.9.P.1
FORSYTH COUNTY
BRIDGE NO.: 78

REHAB. OF BRIDGE NO. 78 SHEET 3 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

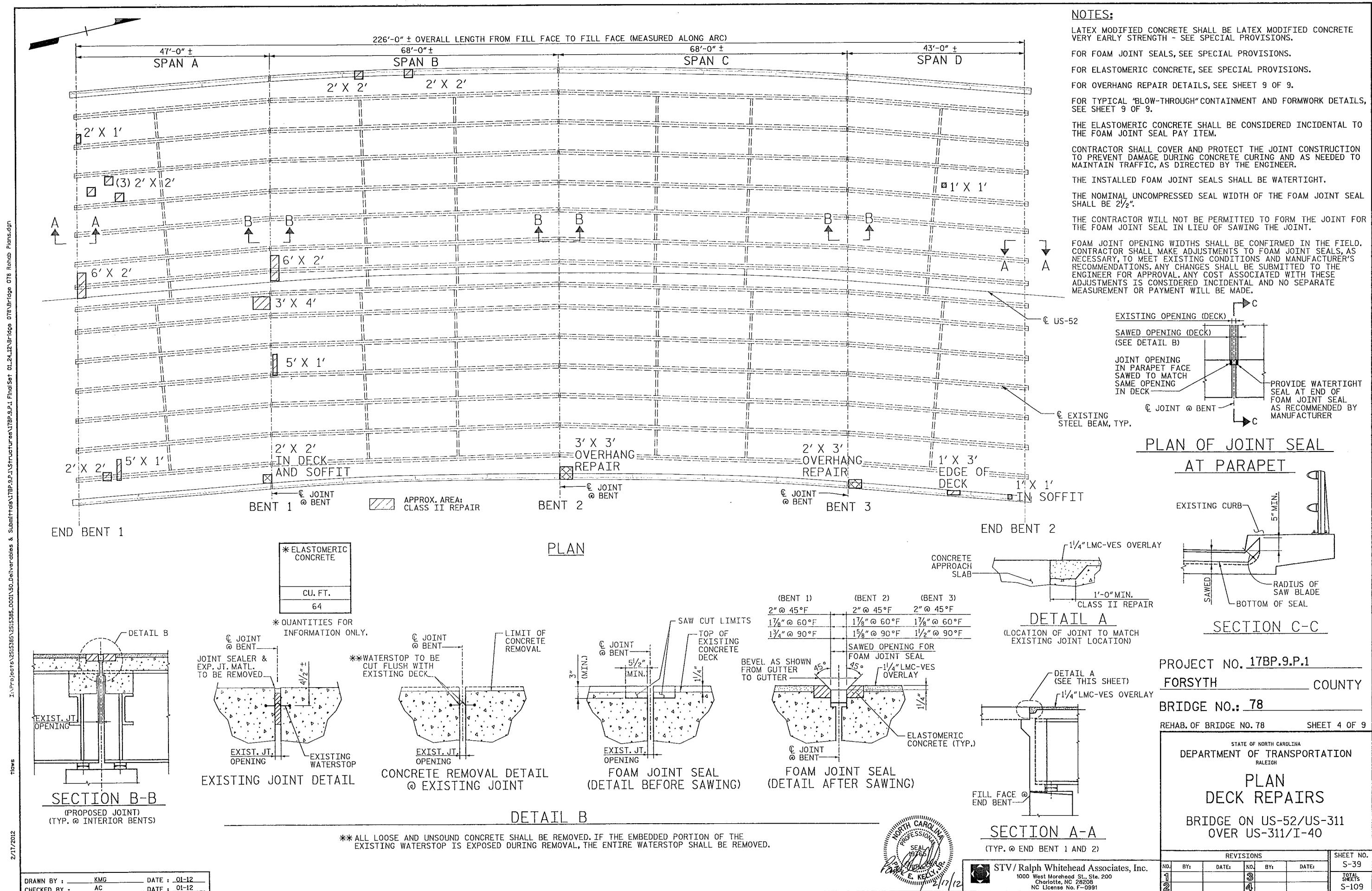
TYPICAL SECTIONS

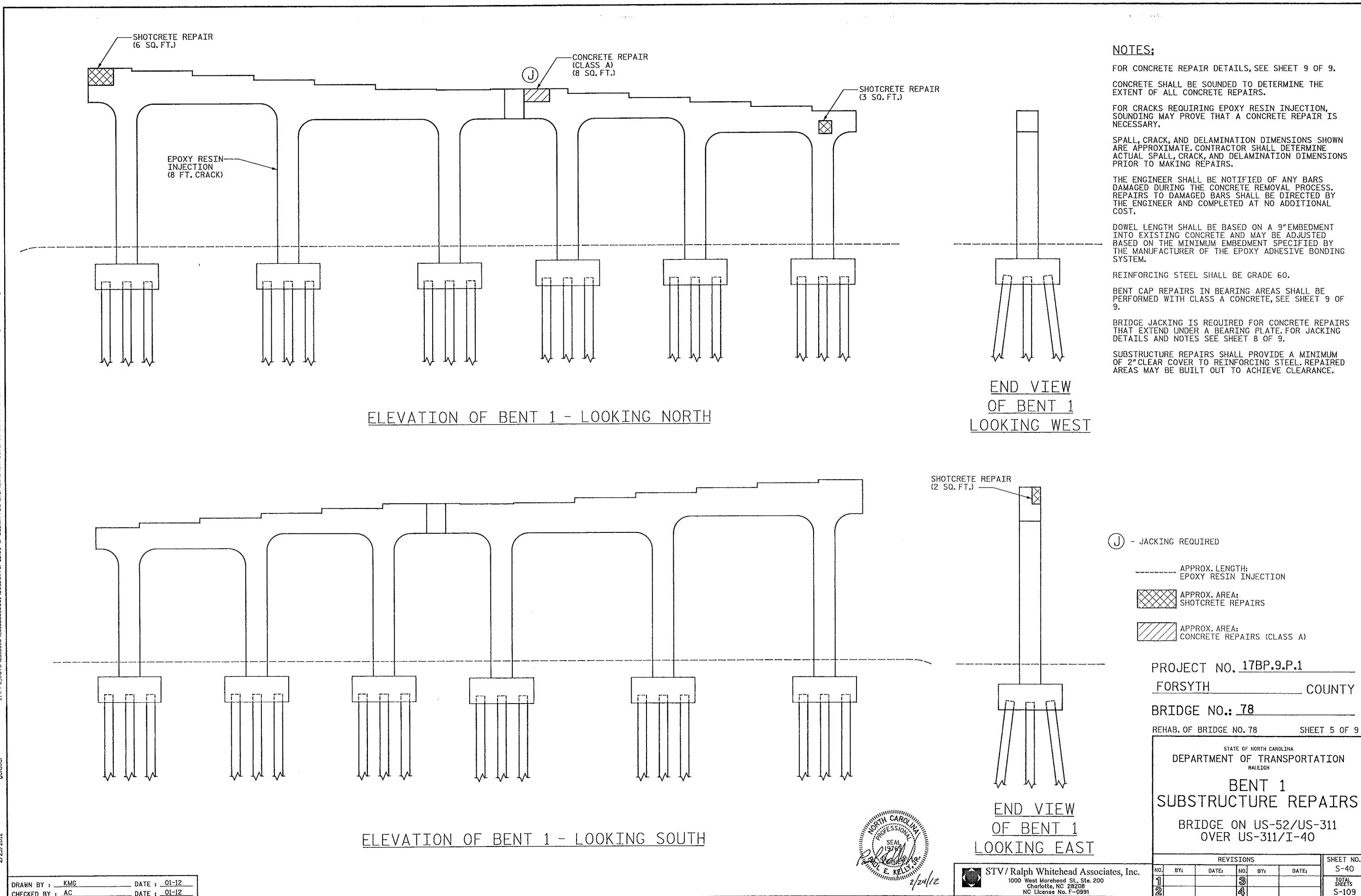
BRIDGE ON US-52/US-311
OVER US-311/I-40

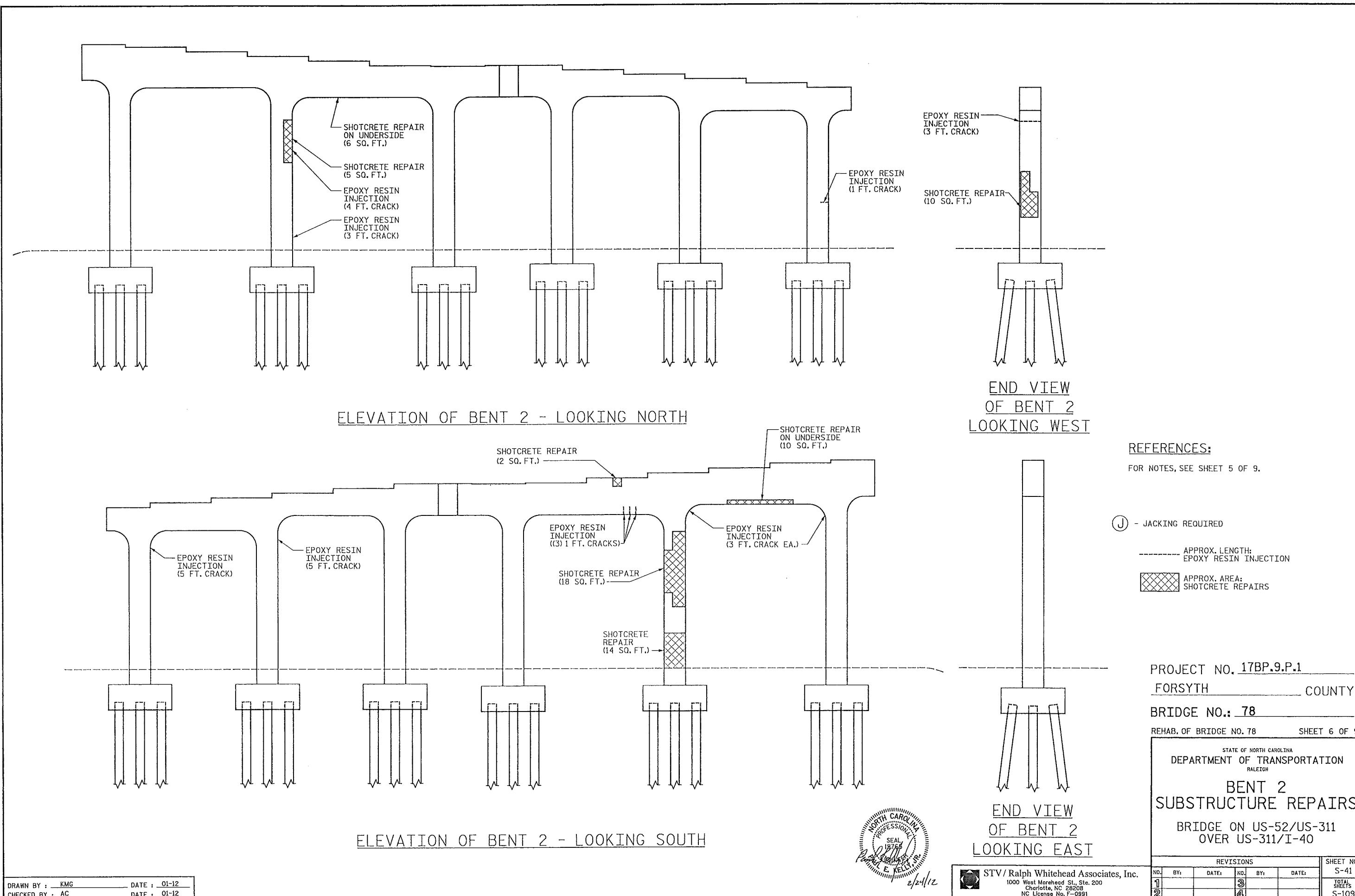


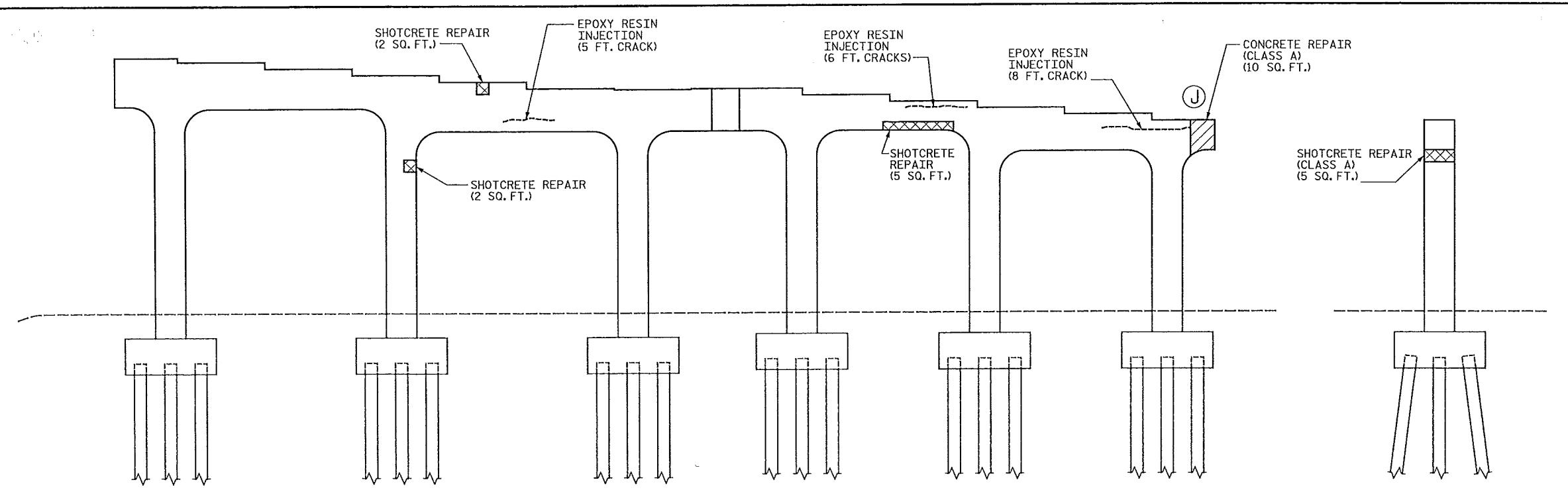
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1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License No. F-0991

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



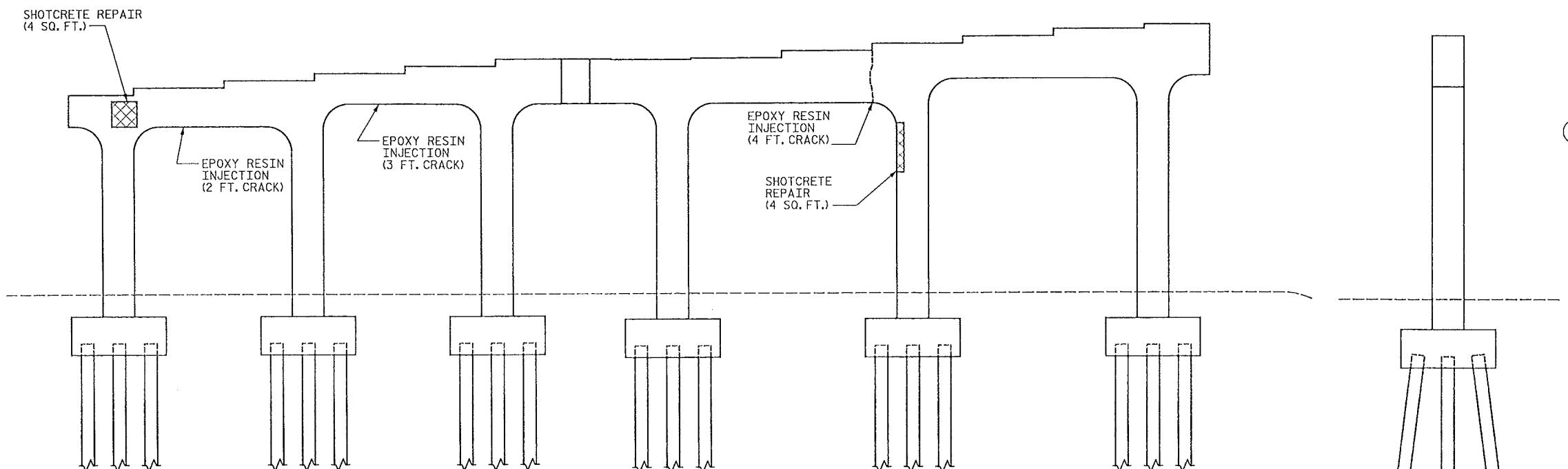






ELEVATION OF BENT 3 - LOOKING NORTH

END VIEW
OF BENT 3
LOOKING WEST



ELEVATION OF BENT 3 - LOOKING SOUTH

END VIEW
OF BENT 3
LOOKING EAST



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REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS S-109
2			4			

REFERENCES:

FOR NOTES, SEE SHEET 5 OF 9.

(J) - JACKING REQUIRED

----- APPROX. LENGTH:
EPOXY RESIN INJECTION

████████ APPROX. AREA:
SHOTCRETE REPAIRS

████████ APPROX. AREA:
CONCRETE REPAIRS (CLASS A)

PROJECT NO. 17BP.9.P.1

FORSYTH COUNTY

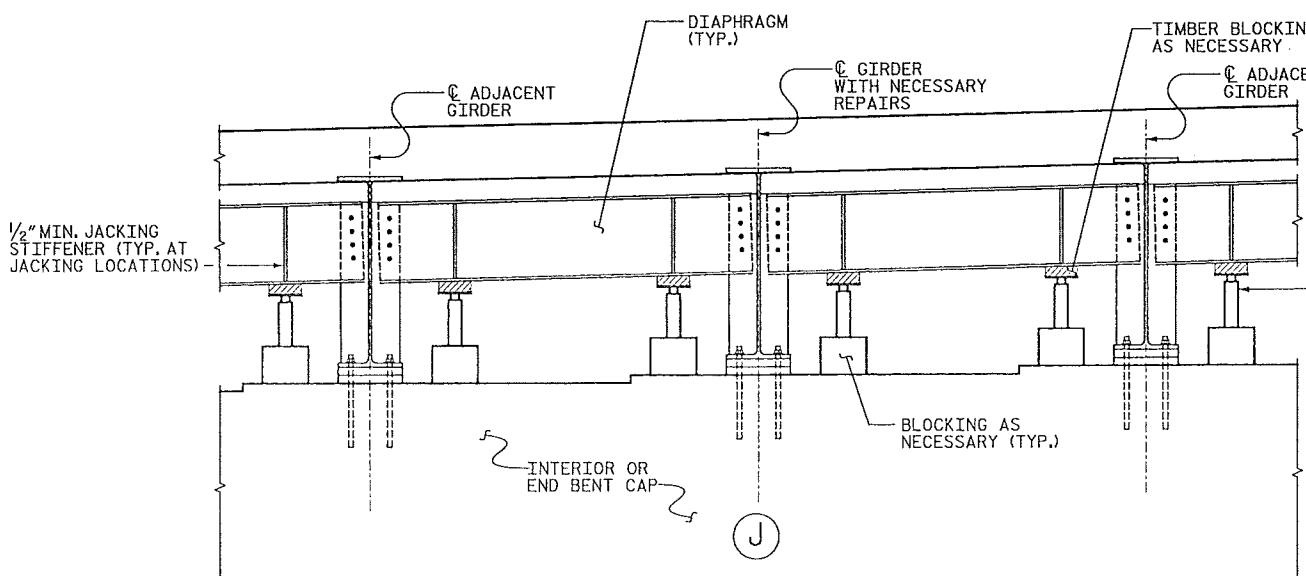
BRIDGE NO.: 78

REHAB. OF BRIDGE NO. 78 SHEET 7 OF 9

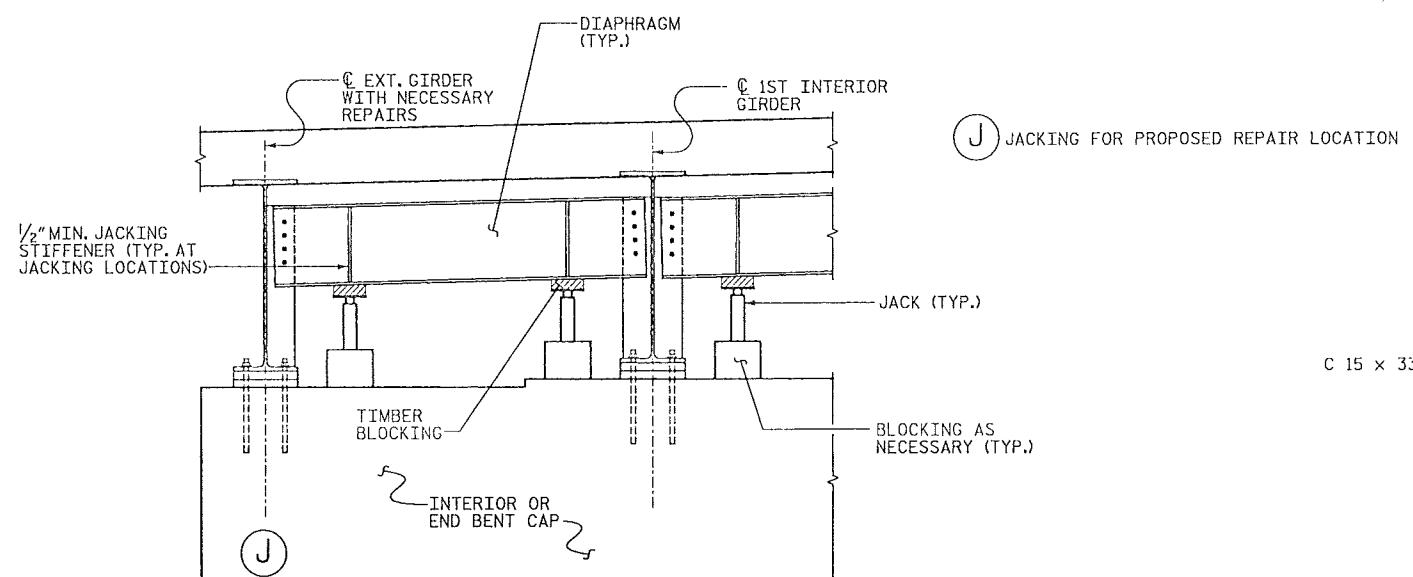
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3
SUBSTRUCTURE REPAIRS
BRIDGE ON US-52/US-311
OVER US-311/I-40

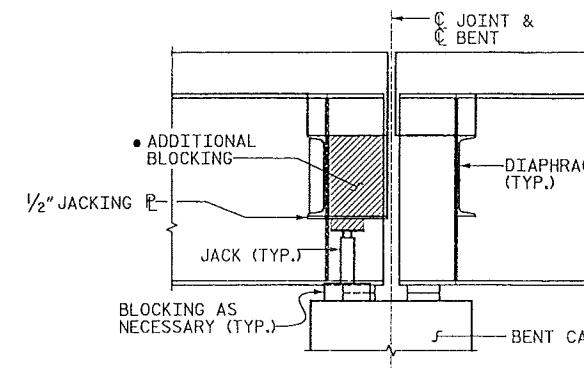
REVISIONS	SHEET NO.
S-42	S-109



GIRDER JACKING DETAIL AT INTERIOR GIRDER

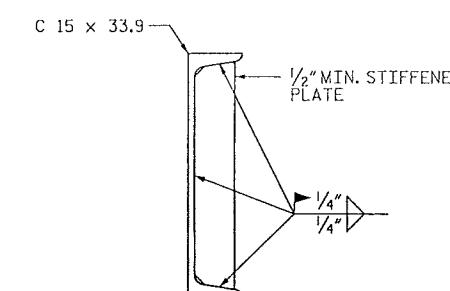


GIRDER JACKING DETAIL AT EXTERIOR GIRDER



TYPICAL SECTION @ JACKING LOCATION

- BLOCKING SHALL BE FULL WIDTH FROM BACK OF DIAPHRAGM CHANNEL TO THE END OF THE DECK TURN DOWN. BLOCKING SHALL BE INSTALLED THE FULL DEPTH OF THE DIAPHRAGM SUCH THAT THE BLOCKING WILL BE LIFTED SIMULTANEOUSLY WITH THE EXISTING DIAPHRAGM.



JACKING STIFFENER DETAIL

CONSTRUCTION SEQUENCE:

1. INSTALL JACKS AND BLOCKING AT LOCATIONS SHOWN ON PLAN.
2. REMOVE NECESSARY NUTS ON ANCHOR BOLTS.
3. JACK GIRDER A MAXIMUM OF $1/8$ " IN ORDER TO RELIEVE LOAD ON BENT CAP UNDER BEARING.
4. MECHANICALLY LOCK ALL JACKS AT BENT.
5. PERFORM CONCRETE REPAIRS AT SPECIFIED LOCATIONS.
6. ONCE ALL REPAIRS ARE COMPLETE, LOWER BRIDGE. CONTRACTOR SHALL NOT LOWER BRIDGE UNTIL CONCRETE REPAIR MATERIAL HAS REACHED A COMPRESSIVE STRENGTH OF 3,000 PSI.

NOTE: THE CONTRACTOR HAS THE OPTION TO PROPOSE AN ALTERNATE CONSTRUCTION SEQUENCE FOR THE APPROVAL OF THE ENGINEER.

NOTES:

JACKING DETAILS SHOWN ARE CONCEPTUAL AND CONSIDERED A MINIMUM. THE CONTRACTOR SHALL PROVIDE JACKING PLANS FOR ALL GIRDER LIFTED FOR APPROVAL BY THE ENGINEER PRIOR TO ANY JACKING OPERATIONS. JACKING SHALL BE PERFORMED SUCH THAT BRIDGE CAN REMAIN OPEN TO TRAFFIC DURING JACKING OPERATIONS.

JACKING PLANS SHALL BE SIGNED AND SEALED BY LICENSED PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA.

THE CONTRACTOR SHALL PROVIDE BLOCKING FOR ALL JACKS AS NECESSARY. A BLOCKING PLAN SHALL BE INCLUDED AS PART OF THE JACKING PLAN.

THE CONTRACTOR SHALL JACK GIRDER ON AN INDIVIDUAL BENT SIMULTANEOUSLY BY MEANS OF A DUAL-FLOW PRESSURIZED PUMP CONTROLLING THE JACKS.

THE CONTRACTOR SHALL MONITOR THE PLAN LOCATION OF THE GIRDER FROM INITIAL JACKING UNTIL GIRDER ARE SECURED ON THEIR PERMANENT BEARINGS. IF THE PLAN LOCATION OF THESE GIRDER SHIFT FROM ITS ORIGINAL POSITION, THE CONTRACTOR SHALL SECURE FROM ADDITIONAL MOVEMENT IMMEDIATELY. NOTIFY ENGINEER PRIOR TO PROCEEDING WORK OPERATIONS.

EACH JACK SHALL HAVE A MINIMUM SAFE WORKING CAPACITY OF 75 TONS.

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

ONCE SPAN HAS BEEN JACKED, CONTRACTOR SHALL INSTALL A MECHANICAL LOCKING DEVICE TO ENSURE THAT GIRDER WILL NOT BE LOWERED DURING CURING OF CONCRETE.

CONTRACTOR TO TAKE APPROPRIATE MEANS TO REMOVE NUT ON ANCHOR BOLT WITHOUT DAMAGING THE ANCHOR BOLT. CONTRACTOR SHALL SUBMIT NUT REMOVAL METHOD TO INCLUDE PROCEDURES THAT WILL LOSEN BOND BETWEEN INTERLOCKING THREADS TO ENGINEER FOR APPROVAL PRIOR TO REMOVING ANCHOR BOLT NUTS.

IN NO CIRCUMSTANCES SHOULD THE JACKING BY SOLELY SUPPORTED BY THE DIAPHRAGM. JACKS SHOULD BE CENTERED UNDER DIAPHRAGM AND ADDITIONAL BLOCKING.

PROJECT NO. 17BP.9.P.1

FORSYTH COUNTY

BRIDGE NO. 78

REHAB. OF BRIDGE NO. 78 SHEET 8 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH



JACKING DETAILS

BRIDGE ON US-52/US-311
OVER US-311/I-40

REVISIONS				SHEET NO.	
				S-43	
1				3	
2				4	

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