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5809 STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS McDOWELL COUNTY .• • **PROJECT LOCATION:** McDOWELL COUNTY: BRIDGE #138 ON INTERSTATE 40 EASTBOUND OVER NC 226 BRIDGE #143 ON INTERSTATE 40 WESTBOUND OVER NC 226 BRIDGE #146 ON INTERSTATE 40 EASTBOUND OVER SR 1741 (FAIRVIEW ROAD) BRIDGE #149 ON INTERSTATE 40 WESTBOUND OVER SR 1741 (FAIRVIEW ROAD) BRIDGE #151 ON INTERSTATE 40 EASTBOUND OVER SR 1760 (HARMONY GROVE ROAD) BRIDGE #152 ON INTERSTATE 40 WESTBOUND OVER SR 1760 (HARMONY GROVE ROAD) BRIDGE #155 ON INTERSTATE 40 WESTBOUND OVER SR 1803 (SOUTH CREEK ROAD) TYPE OF WORK: BRIDGE PRESERVATION – DECK REPAIR, SUBSTRUCTURE REPAIR, AND PAINTING OF EXISTING BRIDGE STRUCTURES. 146,149 -VICINITY MAP - McDOWELL CO. C DESIGN DATA **PROJECT LENGTH ONTRA** Prepared in the Office of: DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS McDOWELL COUNTY McDOWELL COUNTY STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP 1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610 #138 ADT 2012 =13,000 #151 ADT 2012 =13,000 #138 = 0.038 MILE #151 = 0.041 MILE #143 ADT 2012 =13,000 #152 ADT 2012 =15,000 #143 = 0.038 MILE #152 = 0.041 MILE DOUGLAS R. CALHOUN, P.E. #146 ADT 2013 =15,500 #155 ADT 2012 =15,000 #146 = 0.052 MILE #155 = 0.045 MILE PROJECT ENGINEER #149 ADT 2012 =15,000 #149 = 0.052 MILE 2012 STANDARD SPECIFICATIONS LETTING DATE: FEBRUARY 21, 2017





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PROJECT

ONTRACT

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

McDOWELL COUNTY

LOCATION:

McDOWELL COUNTY: BRIDGE #138 ON INTERSTATE 40 EASTBOUND OVER NC 226 BRIDGE #143 ON INTERSTATE 40 WESTBOUND OVER NC 226 BRIDGE #146 ON INTERSTATE 40 EASTBOUND OVER SR 1741 (FAIRVIEW ROAD) BRIDGE #149 ON INTERSTATE 40 WESTBOUND OVER SR 1741 (FAIRVIEW ROAD) BRIDGE #151 ON INTERSTATE 40 EASTBOUND OVER SR 1760 (HARMONY GROVE ROAD) BRIDGE #152 ON INTERSTATE 40 WESTBOUND OVER SR 1760 (HARMONY GROVE ROAD) BRIDGE #155 ON INTERSTATE 40 WESTBOUND OVER SR 1803 (SOUTH CREEK ROAD)

TYPE OF WORK:

BRIDGE PRESERVATION - DECK REPAIRS, SUBSTRUCTURE REPAIRS, AND PAINTING OF EXISTING BRIDGE STRUCTURES.

INDEX OF SHEETS

1	TITLE SHEET
14	INDEX OF SHEETS
S-1	TOTAL BILL OF MATERIAL
S-2 THRU S-9	STRUCTURAL PLANS – BRL
S-10 THRU S-17	STRUCTURAL PLANS – BRL
S–18 THRU S–28	STRUCTURAL PLANS – BRL
S-29 THRU S-38	STRUCTURAL PLANS – BRI
S-39 THRU S-47	STRUCTURAL PLANS – BRI
S-48 THRU S-56	STRUCTURAL PLANS – BRI
S-57 THRU S-64	STRUCTURAL PLANS – BRL
S –65	OVERHANG & DIAPHRAGM
S-66	BEAM PLATING REPAIR D
S -67	JACKING DETAILS
S-68	TYPICAL CAP AND COLUM
SN	STANDARD NOTES

STATE	STA	TE PROJECT REPERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.		I-5809	1A	
STATI	FROJ. NO.	10J. NO. F. A. PROJ. NO.		TION
504	52.1.1	NHPP-0040(027)	P.E	
50452.3.1		0452.3.1 NHPP-0040(027)		

IDGE NO. 138

- **IDGE** NO. 143
- **IDGE** NO. 146
- **IDGE** NO. 149
- IDGE NO. 151
- **IDGE** NO. 152
- **IDGE** NO. 155
- M REPAIR DETAILS DETAILS

IN REPAIR DETAILS

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BRIDGE NO.	EPOXY OVERLAY SYSTEM - MECHANICALLY DISTRIBUTED	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	GROOVING BRIDGE FLOORS	CLASS II, SURFACE PREPARATION	CLASS III, SURFACE PREPARATION	LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONC. OVERLAY - VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK	HYDRO- DEMOLITION OF BRIDGE DECK	CONCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING & REPAINTING OF BRIDGE #	PAINTING CONTAINMENT FOR BRIDGE #	POLLUTION CONTROL	VOLUMETRIC MIXER	CONCRETE FOR DECK REPAIR	FOAM JOINT SEALS	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	BEAM REPAIR	BRIDGE JACKING	EPOXY COATING
	SQ.FT.	SQ.FT.	SQ.FT.	SQ. YDS.	SQ. YDS.	CU.YD.	SQ. YDS.	SQ. YDS.	SQ. YDS.	CU.FT.	LIN.FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	CU.FT.	LUMP SUM	CU.FT.	SQ.FT.	LBS.	EA.	SQ.FT.
138	9,304	2.0	_							38.1	36.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	48.4	193		6	258
143	9,304									51.3	38.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	48.4	193		4	258
146	10,526	3.8								26.0	26.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	100.8	402	55		768
149	10,526	3.5								58.0	33.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	100.8	402		2	768
151	10,164	0.5								38.8	38.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	69.5	277		5	386
152	8,470									31.0	29.0	LUMP SUM	LUMP SUM	LUMP SUM			LUMP SUM	58.0	231		2	339
155			8,057	45	2.0	51.3	978	978	978						LUMP SUM	11.6	LUMP SUM	27.6	110			
TOTAL	58,294	9.8	8,057	45	2.0	51.3	978	978	978	243.2	200.0	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	11.6	LUMP SUM	453.5	1,808	55	19	2,777

• QUANTITY HAS BEEN INCREASED DUE TO THE POTENTIAL FOR FURTHER DETERIORATION SINCE THE FIELD INSPECTION BY STRUCTURES MANAGEMENT UNIT.

DRAWN BY : _____ CHECKED BY : __ J. YANNACCONE S. WANCE __ DATE : <u>10/15</u> __ DATE : <u>1/16</u>

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— DocuSigned by:	PROJECT MC BRIDGE	r no. DOW No	<u> </u>	<u>-5809</u> C0 <u>3, 146,</u> , 152, 15) UNTY 149, 55
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LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

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IT IS THE CONTRACTOR'S SAFETY REQUIREMENTS. FOR CONTROL OF TRAFFIC TRANSPORTATION MANAGEM FOR EPOXY OVERLAY SYSTE

FOR CONCRETE DECK REPA EXISTING JOINTS AND DEC OF BRIDGE DECKS.

LONGITUDINAL CONSTRUCT CENTERLINE OR EDGE OF FOR BRIDGE JOINT DEMOL FOR ELASTOMERIC CONCRE FOR FOAM JOINT SEALS, SE FOR CLEANING AND REPAIN FOR PAINTING CONTAINMEN FOR POLLUTION CONTROL, FOR CONCRETE REPAIRS, SE FOR EPOXY RESIN INJECT FOR EPOXY COATING, SEE FOR SUBMITTAL OF WORKIN FOR FALSEWORK AND FORM FOR GROUT FOR STRUCTURE FOR CRANE SAFETY, SEE SE FOR BRIDGE JACKING, SEE

> Joh 9/27/20

> > DOCUME

DATE : _______

_ DATE : 6/2016

W.F. PARKER

J.P. ADAMS

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OF TRAVEL LANES.		IC			
NCRETE SEE SPECIAL PRO		13.			
LS.SEE SPECIAL PROVIS	IONS.				
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INMENT, SEE PAINTING E	XISTING S	TRUCTURE	SPECIAL	PROVISIO	Ν.
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SUMMARY OF QUA	ANTITIES	
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	2.0 SQ.FT.	
BRIDGE JOINT DEMOLITION	193 SQ.FT.	
EPOXY OVERLAY SYSTEM	9304 SQ.FT.	
UNDERSIDE EPOXY RESIN INJECTION	7.0 LIN.FT.	

NOTES:



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BENT 1	12.1	(CU.FT.)	
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* TOTAL	48.4	(CU.FT.)	
* BASED ON THE	MINIMUM	BLOCKOUT SH	OWN.

NOTES:

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS. THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT. NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE $2^{\prime}\!/_2$ at the end bents and 2" at the bents. THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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AS-BUILT REPAIR QU	ANT	ITY	ΤA	BLE				
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SHOTCRETE REPAIRS	AREA		AREA	VOLUME				
САР	0.0	0.0						
CONCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME				
САР	3.0	2.0 *	SF	UF				
FPOXY RESTN INJECTION		LN.						
CAP		FT. 3.0						
			Τ.					
AS-BUILT REPAIR QU		TIX	IA	BLF				
REPAIRS END BENT 2	EST	QUANT IMATE	ITIES ACT	UAL				
SHOTCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME				
САР	0.0	0.0						
CONCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME				
САР	0.0	0.0						
EPOXY RESIN INJECTION		LN.						
CAP		2.0						
REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS. NOTES: 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 WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIRS AND ADJUST THE ACTUAL CAP AND COLUMN REPAIR DETAILS" STRUCTURES MANAGEMENT UNIT. FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET. PROJECT NO. I-5809 MCDOWELL COUNTY BRIDGE: 138								
John Aundamacione DEPARTMENT	OF NORTH		RTATI	τον				
SEAL 32492 END BE		5 1 8	& 2	2				
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W.F. PARKER

J.P. ADAMS

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

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LONGITUDINAL CONSTRUCTIO CENTERLINE OR EDGE OF TR FOR BRIDGE JOINT DEMOLIT FOR ELASTOMERIC CONCRETE FOR FOAM JOINT SEALS, SEE FOR CLEANING AND REPAIN FOR PAINTING CONTAINMEN FOR POLLUTION CONTROL, SE FOR CONCRETE REPAIRS, SEE FOR EPOXY RESIN INJECTIO FOR EPOXY COATING, SEE EF FOR SUBMITTAL OF WORKING FOR FALSEWORK AND FORMWO FOR GROUT FOR STRUCTURES FOR CRANE SAFETY, SEE SPI FOR BRIDGE JACKING, SEE S

John
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JOF
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_ DATE : 6/2016

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ONS AND BRIDGE CONDITION NTRACTOR SHALL FIELD VERI FIFY THE ENGINEER IF ACTU	ARE FROM THE BEST INFORMATION FY THE INFORMATION SHOWN ON JAL DIMENSIONS AND CONDITIONS
CTOR'S RESPONSIBILITY TO	FOLLOW ALL STATE AND FEDERAL
AFFIC AND LIMITS ON PHAS ANAGEMENT PLANS.	SING OF CONSTRUCTION, SEE
SYSTEM, SEE SPECIAL PROV	/ISIONS.
REPAIR FOR EPOXY OVERLA	Y SYSTEM, SEE SPECIAL PROVISIONS.
ND DECK DRAINS SHALL BE	SEALED PRIOR TO BEGINNING REPAIR
TRUCTION JOINTS OF OVERL E OF TRAVEL LANES.	LAYS SHALL BE LOCATED ALONG THE
DEMOLITION, SEE SPECIAL F	PROVISIONS.
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FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS. THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT. NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE $2^{\prime}\!/_2^{\prime\prime}$ AT THE END BENTS AND 2" AT THE BENTS. THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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N ANNALANNALLO MELEERSATA SELANALAN SELANALAN	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
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SHOTCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME			
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	NOTES
	PROFILE INFOMATION IS TAKEN FROM THE
	REPORT DATED 04/14/2014.
	BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.
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S FROM TOP OF I	SENT CAPS AND APPLY EPOXY COATING. X CONCRETE USING SHOTBLASTING METHODS.
ARED BRIDGE DEC BRIDGE JOINTS A	.ur julnis. K with Epoxy Overlay system. Nd Install joint seals.
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	MCDUWELL COUNTY
	BRIDGE NO. 146
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TH CARD	DEPARTMENT OF TRANSPORTATION
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	(FAIRVIEW ROAD)
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LOCATION SKETCH

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_ DATE : 6/2016

W.F. PARKER

J.P. ADAMS

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CK REPAIR FOR EPOXY OVERLA	Y SYSTE	M, SEE SPECIA	_ PRO	VISIONS.	
AND DECK DRAINS SHALL BE	SEALED F	RIOR TO BEG	INNIN	G REPAIR	
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PAIRS, SEE SPECIAL PROVISIO	INS.				
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NG, SEE EPOXY COATING AND D	DEBRIS R	EMOVAL SPECI	AL PR	OVISION.	
F WORKING DRAWINGS, SEE SP	ECIAL PF	ROVISIONS.			
ND FORMWORK, SEE SPECIAL PI	ROVISION	IS.			
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END BENT 1	16.8	(CU.FT.)
BENT 1	16.8	(CU.FT.)
BENT 2	16.8	(CU.FT.)
BENT 3	16.8	(CU.FT.)
BENT 4	16.8	(CU.FT.)
END BENT 2	16.8	(CU.FT.)
* TOTAL	100.8	(CU.FT.)
* BASED ON THE	MENTMUM	BLOCKOUT SHO

₭ BASED ON THE MINIMUM BLOCKOUT SHOWN.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS. THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT. NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE $2^{\prime}\!/_{2}''$ at the END BENTS and 2'' at the BENTS. THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

suSigned by:	PROJE	CT NO. 1 <u>cDOV</u> E NO.	 <u>VE</u>	<u> </u>	<u>-5809</u> cc 46	<u>)</u> UNTY	
M Hannall	DEPARTMENT OF TRANSPORTATION						
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	AS-BUILT REPAIR QU	ANT	ITY	ΤA	BLE
	REPAIRS END BENT 1	EST	QUANT IMATE	ITIES ACT	UAL
	SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
	САР	0.0	0.0		
	CONCRETE REPAIRS	AREA	VOLUME CF	AREA SF	VOLUME CF
	САР	0.0	0.0		
2	EPOXY RESIN INJECTION		LN. FT.		
	САР		0.0		
	AS-BUILT REPAIR QU	ANT	ITY	ΤA	BLE
	REPAIRS END BENT 2	EST	QUANT IMATE	ITIES ACT	UAL
	SHOTCRETE REPAIRS	AREA	VOLUME		VOLUME
	САР	0.0	0.0		
ן ך					
_	CONCRETE REPAIRS	AREA SF	VOLUME CF	ARE A SF	VOLUME CF
	САР	10.0	6.0 *		
	EPOXY RESIN INJECTION		LN. FT.		
	САР		0.0		
	VALUES IN CHART REPRESENT ESTIMATED	REPA]	IR TOTA	LS AF	TER
	REMOVAL OF UNSOUND CONCRETE, MINIMUM AND MINIMUM 2" CLEAR TO SAWCUT. SEE	OF 1' REPAI	' BEHIND R DETAI) REBA [LS.	R
	NOTES				
	NUTES: REPATE LOCATIONS AND ESTIMATE OF OU	ANTTT	TES ARE	GTVFI	N
	WITH THE BEST INFORMATION AVAILABLE. REPAIRS NOT SHOWN ON THE DRAWINGS AN	IF AD	DITION	AL CESSAF	۲Y
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	QUANTITY TABLE.	ERED	INIO II	HE REP	AIR
*	OUANTITY HAS BEEN INCREASED DUE TO T FURTHER DETERIORATION SINCE THE FIEL STRUCTURES MANAGEMENT UNIT.	THE PO D INS	TENTIAL	FOR BY	
	FOR REPAIRS, SEE "TYPICAL CAP AND COL SHEET.	.UMN F	EPAIR (DETAIL	_S″
	DAMAGED AREA				
	EPOXY RESIN				
	INJECTION		т го		
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IR QUANTITY TABLE										
	QUANTITIES									
	ESTI	ΜΑΤΕ	ACT	UAL						
	AREA SF	VOLUME CF	AREA SF	VOLUME CF						
	0.0	0.0								
	0.0	0.0								
	AREA SF	VOLUME CF	AREA SF	VOLUME CF						
	4.0	3.0 *								
	0.0	0.0								
TION		LN. FT.		LN. FT.						
		0.0								
		0.0								
		SO. FT.		SQ. FT.						
		192								
5	TTMATED REPATE TOTALS AFTER									

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 WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR OUNNITY TABLE

CLEAN AND REMOVE DEBRIS FROM TOP OF CAP AND APPLY EPOXY PROTECTIVE COATING.EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

* QUANTITY HAS BEEN INCREASED DUE TO THE POTENTIAL FOR FURTHER DETERIORATION SINCE THE FIELD INSPECTION BY STRUCTURES MANAGEMENT UNIT.

FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

DAMAGED AREA

----- EPOXY RESIN INJECTION

	PROJE(<u>N</u> BRIDG	CT NO. ICDOW E NO	/E	<u>I</u> LL 1	<u>-5809</u> co 46) UNTY		
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In Ann Mannall	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH							
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IR QL	JANTI	ΓΥ ΤΑ	BLE	
	QUANT	ITIES		
ESTI	ΜΑΤΕ	ACT	UAL	
AREA SF	VOLUME CF	AREA SF	VOLUME CF	
0.0	0.0			
0.0	0.0			
AREA SF	VOLUME CF	AREA SF	VOLUME CF	
4.0	3.0 *			
7.0	5.0 *			
ION	LN. FT		LN. FT	
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TE OF QUAN VIRS NOT S OTE ON THE ND ADJUST	TITIES ARE HOWN ON TH DRAWINGS THE ACTUA	E GIVEN WI HE DRAWING THE APPRO L QUANTIT	TH THE BE S ARE DEEL XIMATE LO IES ENTERE	ST INFORMATION MED NECESSARY BY TH DCATION AND ED INTO THE REPAIR
1 TOP OF C THE TOP FA MASONRY PL	AP AND APF ACE OF THE ATES, FOR	PLY EPOXY CAP. THE EPOXY COA	PROTECTIV CONTRACTO TING, SEE	E COATING.EPOXY R SHALL NOT COAT TH SPECIAL PROVISIONS.
DUE TO THI RES MANAGE	E POTENTIA Ment unit.	L FOR FUR	THER DETER	TIORATION SINCE THE
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٦		QUANT	ITIES		1		
	ESTI		AC		-		
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	0.0	0.0			-		
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RS	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
	14.0	9.0 *			-		
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ED TO H THE EASED RUCTUF ``TYPI	THE TOP F, MASONRY PI DUE TO TH RES MANAGE CCAL CAP AI	ACE OF THE LATES. FOR E POTENTIA MENT UNIT. ND COLUMN DAMAGED AF EPOXY RESI	CAP. THE EPOXY CO L FOR FUF REPAIR DI REA	CONTRACTC ATING, SEE RTHER DETE ETAILS'' SHI	R SHALL SPECIA RIORATJ	_ NOT COA L PROVISI ION SINCE	T THE ONS. THE
Jolu	uSigned by: With CARD	F - E annacco	PROJEC M BRIDGE BHEET 3 0 M DEPA	CDOWE CDOWE NO F 4 STATE C	I ELL 1 DF NORTH CAR F TRAN RALEIGH	-5809 C0 46) UNTY TION
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4	ESTI	MATE	AC1	UAL			
RS	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
	0.0	0.0					
	0.0	0.0			-		
S	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
	0.0	0.0			-		
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CHECKED BY :

W.F. PARKER

J.P. ADAMS

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

EXI	STING	DIME	NSIONS
AVA	ILABLE	. THE	CONTRA
THE	PLANS	AND	NOTIFY
DIF	FER.		

IT IS THE CONTRACTOR SAFETY REQUIREMENTS. FOR CONTROL OF TRAFFI TRANSPORTATION MANAG FOR EPOXY OVERLAY SYS FOR CONCRETE DECK REF EXISTING JOINTS AND OF BRIDGE DECKS. LONGITUDINAL CONSTRUC CENTERLINE OR EDGE OF

FOR BRIDGE JOINT DEM FOR ELASTOMERIC CONC FOR FOAM JOINT SEALS FOR CLEANING AND REP FOR PAINTING CONTAIN FOR POLLUTION CONTROL FOR CONCRETE REPAIRS, FOR EPOXY RESIN INJEC FOR EPOXY COATING, SE FOR SUBMITTAL OF WOR FOR FALSEWORK AND FOF FOR GROUT FOR STRUCT FOR CRANE SAFETY, SEE FOR BRIDGE JACKING, S



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NSIONS AND BRIDGE CONDIT CONTRACTOR SHALL FIELD V NOTIFY THE ENGINEER IF A	ION ARE FI ERIFY THE CTUAL DIM	ROM THE INFORMA MENSIONS	BEST INF TION SHO AND COND	ORMATION WN ON UTIONS			
RACTOR'S RESPONSIBILITY	TO FOLLOW	ALL STA	TE AND F	EDERAL			
TRAFFIC AND LIMITS ON P N MANAGEMENT PLANS.	HASING O	- CONSTRU	JCTION, SE	EE			
RLAY SYSTEM, SEE SPECIAL P	ROVISION	5.					
ECK REPAIR FOR EPOXY OVE	RLAY SYST	EM, SEE S	PECIAL P	ROVISIONS	5.		
S AND DECK DRAINS SHALL I S.	BE SEALED	PRIOR T	O BEGINN	ING REPAI	R		
CONSTRUCTION JOINTS OF OV EDGE OF TRAVEL LANES.	'ERLAYS SH	HALL BE L	OCATED A	LONG THE			
NT DEMOLITION, SEE SPECIA	L PROVIS	EONS.					
C CONCRETE, SEE SPECIAL P	ROVISIONS	5.					
SEALS, SEE SPECIAL PROVI	SIONS.						
ND REPAINTING OF BRIDGE,	SEE SPECI	AL PROVI	SIONS.				
CONTAINMENT, SEE PAINTING	EXISTING	STRUCTU	RE SPECI	AL PROVIS	ION.		
CONTROL, SEE PAINTING EXI	STING ST	RUCTURE	SPECIAL F	ROVISION	•		
EMAIRS, SEE SPECIAL PROVI	SLUNS.	IS					
ING. SEE EPOXY COATING AN	D DERRIS	REMOVAL	SPECTAL	PROVISIO	Ν.		
OF WORKING DRAWINGS, SEE	SPECIAL	PROVISIO	INS.				
AND FORMWORK, SEE SPECIAL	_ PROVISI	ONS.					
STRUCTURES, SEE SPECIAL F	PROVISION	s.					
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John A. Mainin acco		STAT	E OF NORTH CAP	ROLINA			
TEGEOEFESSAEQ	DEPA	RTMENT	OF TRA	NSPORTA	TION		
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ELASTOMERIC CONCRETE							
END BENT	1	16.8	(CU.FT.)				
BENT 1		16.8	(CU.FT.)				
BENT 2		16.8	(CU.FT.)				
BENT 3		16.8	(CU.FT.)				
BENT 4		16.8	(CU.FT.)				
END BENT	2	16.8	(CU.FT.)				
* TOTAL		100.8	(CU.FT.)				
* BASED ON	THE	MINIMUM	BLOCKOUT S	SHOWN.			

FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS. THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT. NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE $2^{1}\!/_{2}$ at the END BENTS AND 2" at the BENTS. THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

uSigned by:	PROJE(<u>N</u> BRIDG	CT NO. 1cd00 E NO.	/E	<u>I</u> LL 1	<u>-5809</u> co 49) UNTY	
M. Hannall CAR SEAL 32492 MONESCOM	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH JOINT DETAILS						
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AS-BUILT	REPAIR QU	ANT	ITY	ТΑ	BLE	
REPAIRS	S END BENT 1	EST:	QUANT: IMATE	ITIES ACT	UAL	
SHOTCRETE REPA	IRS	AREA		AREA	VOLUME	
САР		0.0	0.0		01	
CONCRETE REPAI	RS	AREA	VOLUME	AREA	VOLUME	
CAP		21.1	13.2 *	31	Ur	
EPOXY RESIN IN	JECTION		LN.			
CAP			1.0			
AS-BUILT	REPAIR QU	ANT	ITY	ΤA	BLE	
REPAIRS	END BENT 2	ЕСТ		ITIES		
SHOTCRETE REPA	IRS	AREA	VOLUME	AREA	VOLUME	
CAP	-	5⊦ 0.0	0.0	51	CF	
CONCRETE REPAT	RS	AREA	VOLUME	AREA	VOLUME	
		5⊦ 23.0	14.0 *	51		
EPOXY RESIN IN	JECTION		LN.			
САР			0.0			
AND MINIMUM 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS. NOTES: 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 WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE. QUANTITY HAS BEEN INCREASED DUE TO THE POTENTIAL FOR FURTHER DETERIORATION SINCE THE FIELD INSPECTION BY STRUCTURES MANAGEMENT UNIT. FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET. DAMAGED AREA PROJECT NO. <u>1-5809</u>						
	BRIDGE:		149			
USIGNED BY: STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH SEAL 32492 FND RENTS 1 & 2						
YANNA MININ						

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	QUANT	ITIES				
ESTI		ACT		-		
SF	CF	SF	CF	-		
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0.0	0.0					
AREA	VOLUME	AREA	VOLUME			
15.7	9.8 *	51		1		
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ON	LN. FT		LN. FT			
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E REPAIR	DETAILS.					
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TE ON TH	E DRAWINGS	THE APPR	OXIMATE L	OCATION	AND	
U ADJUSI	THE ACTUA	L QUANTIT	IES ENTER	ED INIO	THE REPA	IR
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<u> </u>	ala la a//A		STATE	OF NORTH CAP	ROLINA	
MINING CAR	Round Contraction	DEPA	RTMENT	OF TRA	NSPORTA	TION
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IR QUANTITY TABLE								
	QUANT	I⊺IES						
ESTI	ΜΑΤΕ	ACT	UAL					
AREA SF	VOLUME CF	AREA SF	VOLUME CF					
0.0	0.0							
0.0	0.0							
AREA SF	VOLUME CF	AREA SF	VOLUME CF					
6.0	4.0 *							
0.0	0.0							
ION	LN. FT		LN. FT					
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	SQ. FT		SQ. FT					
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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 WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM TOP OF CAP AND APPLY EPOXY PROTECTIVE COATING.EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS. * QUANTITY HAS BEEN INCREASED DUE TO THE POTENTIAL FOR FURTHER DETERIORATION SINCE THE FIELD INSPECTION BY STRUCTURES MANAGEMENT UNIT.

FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

DAMAGED AREA

EPOXY RESIN INJECTION

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# LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

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IT IS THE CONTRACTOR' SAFETY REQUIREMENTS. FOR CONTROL OF TRAFFI TRANSPORTATION MANAG FOR EPOXY OVERLAY SYS FOR CONCRETE DECK REP EXISTING JOINTS AND D OF BRIDGE DECKS.

LONGITUDINAL CONSTRUC CENTERLINE OR EDGE OF FOR BRIDGE JOINT DEMC FOR ELASTOMERIC CONCE FOR FOAM JOINT SEALS, FOR CLEANING AND REPA FOR PAINTING CONTAINS FOR POLLUTION CONTROL FOR CONCRETE REPAIRS, FOR EPOXY RESIN INJEC FOR EPOXY COATING, SEE FOR SUBMITTAL OF WOR FOR FALSEWORK AND FOR FOR GROUT FOR STRUCTU FOR CRANE SAFETY, SEE FOR BRIDGE JACKING, SE



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THE ENGINEER IF AC	TUAL DIMENSIONS AND CONDITIONS	
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IC AND LIMITS ON PH GEMENT PLANS.	HASING OF CONSTRUCTION, SEE	
STEM, SEE SPECIAL PF	ROVISIONS.	
PAIR FOR EPOXY OVER	LAY SYSTEM, SEE SPECIAL PROVISIONS	
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OLITION, SEE SPECIAL	PROVISIONS.	
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SUMMARY OF QUANTITIES						
	ESTIMATE	ACTUAL				
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	0.5 SQ.FT.					
BRIDGE JOINT DEMOLITION	277 SQ.FT.					
EPOXY OVERLAY SYSTEM	10,164 SQ.FT.					
UNDERSIDE EPOXY RESIN INJECTION	29.0 LIN.FT.					

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ELASTOMERI		NCRETE
END BENT 1	13.9	(CU.FT.)
BENT 1	13.9	(CU.FT.)
BENT 2	13.9	(CU.FT.)
BENT 3	13.9	(CU.FT.)
END BENT 2	13.9	(CU.FT.)
* TOTAL	69.5	(CU.FT.)

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

- 3/8" EPOXY OVERLAY

NOTES: FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS. THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT. NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE  $2^{\prime}\!/_2^{\prime\prime}$  at the END BENTS and 2" at the BENTS. THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT IN LIEU OF SAWING THE JOINT. FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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	AS-BUILT REPAIR QU	ΑΝΤ	ITY	ΤA	BLE
	REPAIRS END BENT 1	QUANTITIES			
-	SHOTCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME
-	CAP	0.0	0.0	5F	
		AREA		AREA	VOLUME
-	CONCRETE REPAIRS	SF	CF	SF	CF
	САР	0.0	0.0		
	EPOXY RESIN INJECTION		LN. FT.		
	САР		0.0		
-					
ľ	AS-BUILT REPAIR QU	ANT	ITY	ΤA	BLE
	REPAIRS END BENT 2	L CCT	QUANT	ITIES	
-		AREA	VOLUME	AREA	VOLUME
ŀ		SF	CF	SF	CF
ŀ	<u></u>	0.0	5.0		
	CONCRETE REPAIRS	SF	CF	SF	VULUME CF
ŀ	САР	0.0	0.0	<u> </u>	
ŀ		1	I		
	EPOXY RESIN INJECTION		LN. FT.		
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	REMOVAL OF UNSOUND CONCRETE, MINIMUM	I OF 1	" BEHINE	LS AF ) REBA	.R
	AND MINIMUM 2 CELAN TO SAWCOT. SEE	NLI A	IN DETA	11.5.	
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	FOR REPAIRS, SEE ``TYPICAL CAP AND CC Sheet.	LUMN	REPAIR	DETAI	LS''
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AS-BUILT REPA	IR QL	JANILI ETNAUQ	T TA	BLE		
REPAIRS BENT I	ESTI	MATE	AC	TUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	0.0	0.0				
COLUMN	0.0	0.0				
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
COLUMN	4.0	2.0 *				
EPOXY RESIN INJECT	ION	LN. FT		LN. FT		
САР		1.0				
COLUMN		0.0				
EPOXY COATING		SQ. FT		SQ. FT		
TOP OF BENT CAP		136				
VALUES IN CHART REPRESENT ES REMOVAL OF UNSOUND CONCRETE,I MINIMUM 2″ CLEAR TO SAWCUT.S	TIMATED RI MINIMUM C SEE REPAIF	EPAIR TOTAL DF 1" BEHIND R DETAILS.	S AFTER REBAR AN	ND		
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AS-BUILT REPA REPAIRS BENT 2 SHOTCRETE REPAIRS CAP COLUMN CONCRETE REPAIRS CAP COLUMN EPOXY RESIN INJECT CAP COLUMN EPOXY COATING TOP OF BENT CAP VALUES IN CHART REPRESENT EST REMOVAL OF UNSOUND CONCRETE M MINIMUM 2" CLEAR TO SAWCUT. S NOTES: REPAIR LOCATIONS AND ESTIMATE AVAILABLE.IF ADDITIONAL REPAIN ENGINEER.THE ENGINEER WILL NOT DESCRIPTION OF THE REPAIRS AND QUANTITY TABLE. CLEAN AND REMOVE DEBRIS FROM COATING SHALL BE APPLIED TO T AREA OF THE CAP BENEATH THE M. * QUANTITY HAS BEEN INCREASED D FIELD INSPECTION BY STRUCTURE FOR REPAIR DETAILS, SEE "TYPIC FOR BRIDGE JACKING DETAILS, SE



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AS-BUILT REPA	IR QI	JANTI	ΓΥ ΤΑ	BLE			
REPAIRS BENT 3	FCT	QUANT	ITIES	T			
SHOTCRETE REPATRS	AREA	VOLUME	AREA	VOLUME			
CAP	SF 0.0	CF 0.0	SF	CF			
COLUMN	0.0	0.0					
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
САР	9.5	6.0 *					
COLUMN	1.0	1.5 *					
EPOXY RESIN INJECT	ION	LN. FT		LN. FT			
CAP		5.0					
COLUMN		0.0					
EPOXY COATING		SQ. ET		SQ.			
TOP OF BENT CAP		125					
ALUES IN CHART REPRESENT ES REMOVAL OF UNSOUND CONCRETE,	TIMATED R	REPAIR TOTA	LS AFTER ) REBAR A	ND			
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REPAIR LOCATIONS AND ESTIMA AVAILABLE.IF ADDITIONAL REP. ENGINEER,THE ENGINEER WILL N DESCRIPTION OF THE REPAIRS / OLANITY TABLE.	TE OF QUA AIRS NOT NOTE ON TH AND ADJUS	NTITIES AR SHOWN ON T HE DRAWINGS T THE ACTUA	E GIVEN W HE DRAWIN 5 THE APPF AL QUANTI	ITH THE BE IGS ARE DEE ROXIMATE LU TIES ENTER	ST INFO MED NEC DCATION ED INTO	DRMATION CESSARY E AND THE REP	AIR
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FOR REPAIR DETAILS, SEE "TYP	ICAL CAP	AND COLUMN	REPAIR D	ETAILS" SHE	ET.		
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# NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/15/2014. BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

# SCOPE OF WORK

CLEAN AND PAINT STEEL I-BEAMS AND BEARINGS.
 EPOXY INJECTION OF CONCRETE CRACKS.
 CLEAN AND REPAIR REBAR IN CONCRETE REPAIR AREAS.
 PERFORM CONCRETE REPAIRS IN PREPARED AREAS.
 REMOVE DEBRIS FROM TOP OF BENT CAPS AND APPLY EPOXY COATING.
 PARTIALLY REMOVE BRIDGE DECK CONCRETE USING SHOTBLASTING METHODS.
 OVERLAY PREPARED BRIDGE DECK WITH EPOXY OVERLAY SYSTEM.
 RECONSTRUCT BRIDGE JOINTS AND INSTALL JOINT SEALS.

APPROACH SLAB

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T.L. AVERETTE

J.P. ADAMS

# LOCATION SKETCH

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IT IS THE CONTRACTOR' SAFETY REQUIREMENTS. FOR CONTROL OF TRAFFI TRANSPORTATION MANAGE FOR EPOXY OVERLAY SYS FOR CONCRETE DECK REPA EXISTING JOINTS AND DE OF BRIDGE DECKS.

LONGITUDINAL CONSTRUC CENTERLINE OR EDGE OF FOR BRIDGE JOINT DEMO FOR ELASTOMERIC CONCR FOR FOAM JOINT SEALS, FOR CLEANING AND REPA FOR PAINTING CONTAINM FOR POLLUTION CONTROL FOR CONCRETE REPAIRS, FOR EPOXY RESIN INJECT FOR EPOXY COATING, SEE FOR SUBMITTAL OF WORK FOR FALSEWORK AND FOR FOR GROUT FOR STRUCTU FOR CRANE SAFETY, SEE FOR BRIDGE JACKING, SE



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SIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS	_
RACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL MENTS.	
TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE MANAGEMENT PLANS.	
AY SYSTEM, SEE SPECIAL PROVISIONS.	
CK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.	
S AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR	
DNSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE EDGE OF TRAVEL LANES.	
IT DEMOLITION, SEE SPECIAL PROVISIONS.	
C CONCRETE, SEE SPECIAL PROVISIONS.	
SEALS, SEE SPECIAL PROVISIONS.	
ND REPAINTING OF BRIDGE, SEE SPECIAL PROVISIONS.	
ONTAINMENT, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISION.	
CONTROL, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISION.	
PAIRS, SEE SPECIAL PROVISIONS.	
N INJECTION, SEE SPECIAL PROVISIONS.	
ING, SEE EPOXY COATING AND DEBRIS REMOVAL SPECIAL PROVISION.	
OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.	
ND FORMWORK, SEE SPECIAL PROVISIONS.	
STRUCTURES, SEE SPECIAL PROVISIONS.	
Y, SEE SPECIAL PROVISIONS.	
ING, SEE SPECIAL PROVISIONS.	
PROJECT NO. <u>1-5809</u>	
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-7BCaRECEEESTECH	
GENERAL DRAWING	
FOR BRIDGE ON I-40 WE	3L
VIANA OVER SR 1760	
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SUMMARY OF QUANTITIES						
	ESTIMATE	ACTUAL				
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	0.0 SQ.FT.					
BRIDGE JOINT DEMOLITION	231 SQ.FT.					
EPOXY OVERLAY SYSTEM	8,470					
UNDERSIDE EPOXY RESIN INJECTION	18.0 LIN.FT.					

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# ELEVATION

END BENT 1



END BENT 2

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REPAIRS END	BENT 1	EST	QUANT IMATE	ITIES ACT	UAL
SHOTCRETE REPAIRS		AREA SF	VOLUME CF	AREA SF	VOLUME CF
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CONCRETE REPAIRS		AREA SF	VOLUME CF	AREA SF	VOLUME CF
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REPAIRS END	BENT 2	EST		ACT	
SHOTCRETE REPAIRS		SF	CF	SF	CF
		0.0	0.0		
CONCRETE REPATRS		AREA	VOLUME	AREA	VOLUME
		SF 0.0	CF 0.0	SF	CF
EPOXY RESIN INJECTI	ON		LN. FT.		
САР			1.0		
VALUES IN CHART REPRESE	NT ESTIMATED	REPA	L TOTA	LS AF	TER
NOTES: REPAIR LOCATIONS AND ES WITH THE BEST INFORMATI REPAIRS NOT SHOWN ON TH BY THE ENGINEER, THE ENGI THE APPROXIMATE LOCATION AND ADJUST THE ACTUAL ON OUANTITY TABLE. * OUANTITY HAS BEEN INCRE FURTHER DETERIORATION S STRUCTURES MANAGEMENT U FOR REPAIRS, SEE "TYPICA SHEET. DAMAGED // PROJ BRID	TIMATE OF OUD ON AVAILABLE. E DRAWINGS AF NEER WILL NO N AND DESCRIF JANTITIES ENT ASED DUE TO T INCE THE FIEL NIT. L CAP AND COI AREA SIN ON MCDOWE	IF AL TE OE TE ON ERED HE PC D INS	IES ARE DDITION IMED NEI THE DR OF THE INTO TH PECTION REPAIR	GIVEI CESSAF AWING REPAI FE REF DETAI	N RY SERS PAIR
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REPAIRS BENT 1	ECT.	QUANT	ITIES	THAT		
SHOTCRETE REPATRS	AREA	VOLUME	AREA	VOLUME		
	SF 0.0	CF 0.0	SF	CF		
COLUMN	0.0	0.0				
CONCRETE REPATRS	AREA	VOLUME	AREA	VOLUME		
	SF 31.3	20.0 *	SF	CF		
COLUMN	3.0	2.0 *				
		LN.		LN.		
CAP	TON	FT 6.0		FT		
COLUMN		0.0				
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EPOXY COATING		FT		FT		
VALUES IN CHART REPRESENT ES	TIMATED R	EPAIR TOTA	LS AFTER		l	
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COATING SHALL BE APPLIED TO AREA OF THE CAP BENEATH THE I	THE TOP OF O THE TOP F MASONRY P	ACE OF THE LATES. FOR	CAP. THE EPOXY CO.	CONTRACTOR ATING, SEE	E CUATING.EPOXY R SHALL NOT COAT TH SPECIAL PROVISIONS.	E
QUANTITY HAS BEEN INCREASED	DUE TO TH	E POTENTIA	L FOR FUR	RTHER DETER	IORATION SINCE THE	
FOR REPAIR DETAILS. SEE "TYPI	CAL CAP A	ND COLUMN	REPAIR DE	ETAILS'' SHE	ET.	
		DAMAGE	) AREA			
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_1.0 SF CONCRETE REPAIR

APPROX. / NATURAL GROUND



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AS-BUILT REPA	IR QL	JANTII	ΓΥ ΤΑ	BLE		
REPAIRS BENT 2	ESTI	QUANT: MATE	ITIES AC	TUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
САР	0.0	0.0				
COLUMN	0.0	0.0				
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	7.0	4.0 *				
CULUMN	3.0	2.0 *				
EPOXY RESIN INJECT	ION	LN. FT		LN. FT		
		4.0				
COLUMIN		0.0				
EPOXY COATING		SQ. FT		SQ. FT		
TOP OF BENT CAP		113				
VALUES IN CHART REPRESENT ES REMOVAL OF UNSOUND CONCRETE,	TIMATED R MINIMUM (	EPAIR TOTA DF 1″ BEHIND	LS AFTER ) REBAR A	ND		
MINIMUM 2" CLEAR TO SAWCUT.	SEE REPAIR	R DETAILS.				
NOTES:						
REPAIR LOCATIONS AND ESTIMA AVAILABLE. IF ADDITIONAL REP ENGINEER, THE ENGINEER WILL N DESCRIPTION OF THE REPAIRS A OUANTITY TABLE	TE OF QUA AIRS NOT S OTE ON TH AND ADJUST	NTITIES ARI SHOWN ON TH E DRAWINGS T THE ACTUA	E GIVEN W HE DRAWIN THE APPF L QUANTI	/ITH THE BES IGS ARE DEEN ROXIMATE LC TIES ENTERE	ST INFORMAT MED NECESSAF CATION AND D INTO THE	ION RY BY THE REPAIR
CLEAN AND REMOVE DEBRIS FROM COATING SHALL BE APPLIED TO AREA OF THE CAP BENEATH THE	N TOP OF THE TOP F MASONRY F	CAP AND APP ACE OF THE PLATES. FOR	PLY EPOXY CAP. THE EPOXY CO	PROTECTIV CONTRACTOR	E COATING.EF R SHALL NOT SPECIAL PROV	POXY COAT THE /ISIONS.
QUANTITY HAS BEEN INCREASED FIELD INSPECTION BY STRUCTUR	DUE TO TH RES MANAGI	HE POTENTIA EMENT UNIT.	L FOR FU	RTHER DETER	IORATION SI	NCE THE
FOR REPAIR DETAILS, SEE "TYPE	ICAL CAP	AND COLUMN	REPAIR D	ETAILS" SHE	ET.	
FOR BRIDGE JACKING DETAILS,	SEE ``JACK	ING DETAILS	S" SHEET.			
			GED AREA			
	-	- EPOX	Y RESIN	INJECTION		
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_2.0 SF CONTCRETE REPAIR

_APPROX. NATURAL GROUND

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SIDE VIEW COLUMN 3

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AS-BUILI REPA	τκ αι	JANILI QUANT:	Y I A	BLE		
REPAIRS BENI 3	ESTI	IMATE	AC	TUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP COLUMN	0.0	0.0			-	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
САР	1.0	1.0 *				
CULUMN	1.0	1.0 *			-	
EPOXY RESIN INJECT	ION	LN. FT		LN. FT		
CAP		0.0				
COLUMN		0.0				
EPOXY COATING		SQ.		SQ.		
TOP OF BENT CAP		113				
VALUES IN CHART REPRESENT ES REMOVAL OF UNSOUND CONCRETE.I	TIMATED R WINIMUM (	EPAIR TOTAL DF 1″ BEHIND	S AFTER REBAR AN	ND	-	
REPAIR LOCATIONS AND ESTIMAT AVAILABLE.IF ADDITIONAL REPA ENGINEER, THE ENGINEER WILL NO DESCRIPTION OF THE REPAIRS AN QUANTITY TABLE. CLEAN AND REMOVE DEBRIS FROM COATING SHALL BE APPLIED TO AREA OF THE CAP BENEATH THE N QUANTITY HAS BEEN INCREASED I FIELD INSPECTION BY STRUCTUR FOR REPAIR DETAILS, SEE "TYPIC	E OF QUAN IRS NOT S DTE ON THE ND ADJUST TOP OF C THE TOP F, MASONRY PI DUE TO TH ES MANAGE CAL CAP AI	TITTIES ARE HOWN ON THE DRAWINGS THE ACTUAL AP AND APPI ACE OF THE LATES. FOR H E POTENTIAL MENT UNIT. ND COLUMN F DAMAGED	GIVEN WI E DRAWING THE APPR( OUANTIT LY EPOXY CAP. THE EPOXY COA FOR FUR REPAIR DE AREA ESIN INJE	TH THE BESS S ARE DEED DXIMATE LO IES ENTERE PROTECTIVE CONTRACTOF TING, SEE S THER DETER TAILS' SHEE	ST INFORMATION MED NECESSARY B CATION AND D INTO THE REP, E COATING.EPOXY R SHALL NOT COA SPECIAL PROVISI IORATION SINCE ET.	Y THE AIR , T THE ONS. THE
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# NOTES

PLAN INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 05/02/2016. BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

# SCOPE OF WORK

 PARTIALLY REMOVE BRIDGE DECK CONCRETE USING SCARIFICATION AND HYDRO-DEMOLITION METHODS.
 DEMOLISH EXISTING BRIDGE JOINTS AT END BENTS.
 OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.
 RECONSTRUCT BRIDGE JOINTS AND INSTALL FOAM JOINT SEALS AT END BENTS.
 GROOVE LMC-VES BRIDGE DECK.



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LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

# EXISTING DIMENSIONS A AVAILABLE.THE CONTRAC THE PLANS AND NOTIFY DIFFER.

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EXISTING DIMENSIONS AND BRIDGE CONDITI AVAILABLE.THE CONTRACTOR SHALL FIELD VE THE PLANS AND NOTIFY THE ENGINEER IF AC DIFFER.	DN ARE FROM THE BEST INFORMATION RIFY THE INFORMATION SHOWN ON TUAL DIMENSIONS AND CONDITIONS
IT IS THE CONTRACTOR'S RESPONSIBILITY T SAFETY REQUIREMENTS.	O FOLLOW ALL STATE AND FEDERAL
FOR CONTROL OF TRAFFIC AND LIMITS ON PH TRANSPORTATION MANAGEMENT PLANS.	HASING OF CONSTRUCTION, SEE
DURING CONSTRUCION, BERMS OR APPROPRIAT	E MEASURES SHALL BE LOCATED ALONG
EXISTING JOINTS AND DECK DRAINS SHALL B	E SEALED PRIOR TO BEGINNING REPAIR
FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLI	TION OF BRIDGE DECK, AND CLASS II
THE CONTRACTOR MUST COLLECT, TREAT AND E HYDRO-DEMOLITION PROCESS, SEE OVERLAY SI PROVISIONS	DISPOSE OF RUNOFF WATER FROM THE JRFACE PREPARATION SPECIAL
THE CONTRACTOR SHALL PROVIDE A METHOD C	F HANDLING UNEXPECTED BLOW THROUGH
FOR OVERLAY OF BRIDGE DECK WITH LATEX M	ODIFIED CONCRETE-VERY EARLY STRENGTH,
LONGITUDINAL CONSTRUCTION JOINTS OF OVE	RLAYS SHALL BE LOCATED ALONG THE
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL	L PROVISIONS.
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PP	ROVISIONS.
FOR FOAM JOINT SEALS, SEE SPECIAL PROVIS	SIONS.
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVI	SIONS.
FOR SUBMITTAL OF WORKING DRAWINGS, SEE	SPECIAL PROVISIONS.
FOR FALSEWORK AND FORMWORK, SEE SPECIAL	PROVISIONS.
FOR GROUT FOR STRUCTURES, SEE SPECIAL PR	OVISIONS.
FOR CRANE SAFETY, SEE SPECIAL PROVISIONS	5.
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DocuSigned by: Journ Hannaldon 7BC2010CLEPSQEQUE SEAL 32492 9/27/2016	SHEET 2 OF 2 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH GENERAL DRAWING FOR BRIDGE ON I-40 OVER SR 1803 (SOUTH CREEK ROAD)
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	AS-BUILT REPAIR QUANTITY TABLE						
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	SCARIFYING BRID	GE DECK		214	4 SY		- O/LE
	HYDRO-DEMOLITION	N OF BRIDO	GE DECK	214	4 SY		
	CLASS II SURFACE	E PREPARAT	ION	10.	0 SY *		
	CLASS III SURFAC	CE PREPARA	TION	0.5	5 SY 米		
	BRIDGE JOINT DEN	NOLITION		55.	0 SF		
	EPOXY RESIN INJE	CTION		0.0			
	CONCRETE FOR DEC	K REPAIR		2.9	JUF *		
		DERSIDE	UF DEC	K REI	PAIRS		<b>T</b>
	SHOTCRETI	E REPAIF	RS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
	UNDERSIDE OF DEC	K		0.0	0.0		
	OVERHANG DIAPHRA	AGMS		0.0	0.0		
	UNDERSIDE OF OVE	RHANG		0.0	0.0		
	INTERIOR DIAPHR	AGMS		0.0	0.0		
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	UNDERSIDE EPOXY	RESIN INJ	ECTION	0.0	) LF		
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SCARIFYING BRIDG	E DECK	21	O SY		TOAL	
HYDRO-DEMOLITION	OF BRIDGE DECK	21	0 SY			
CLASS II SURFACE	PREPARATION	10.	0 SY *			
CLASS III SURFAC	E PREPARATION	0.	5 SY *			
BRIDGE JOINT DEM	IOLITION	0.	0 SF			
EPOXY RESIN INJE	CTION	0.	0 LF			
CONCRETE FOR DEC	K REPAIR	2.	9 CF 米			
UNI	DERSIDE OF DEC	CK RE	PAIRS			
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OVERHANG DTAPHRA		0.0	0.0			
UNDERSIDE OF OVF	RHANG	0.0	0.0			
INTERIOR DIAPHRA	GMS	0.0	0.0		1	
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ELASTOMERIC	CONCRETE				
END BENT 1	13.8	(CU.FT.)			
END BENT 2	13.8	(CU.FT.)			
* TOTAL	27.6	(CU.FT.)			
* BASED ON THE MINIMUM	BLOCKOUT	SHOWN.			

_ELASTOMERIC CONCRETE _EXIST.ARMORED EVAZOTE JOINT € EXIST.JT.-€ EXIST.JT.— € EXIST.JT.-EXIST. -CONC. DECK _1¾″LATEX MODIFIED CONCRETE OVERLAY 2'-7" MAX. 6″ 2'-6" ۵5 EXIST. ASPHALT WEARING SURFACE 3" (TYP.) 6″ 1/4" BEVEL AS SHOWN (TYP.) (MIN.) (TYP.) XXXXXXXXXX// MIN 13/4 1^{1/2}" MIN. DEMO. EXIST. APPROACH SLAB $\frac{1}{2}$ EXIST. APPROACH EXIST. APPROACH SLAB SLAB DIAPHRAGM DIAPHRAGM DIAPHRAGM (TYP.) (TYP.) (TYP.) -EXIST.JT. -EXIST.JT. -EXIST.JT. EXISTING JOINT MINIMUM EXISTING JOINT DEMOLITION PROPOSED JOINT PRE-SAWED SECTION A-A DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE.



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END BENT

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

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-EXISTING RAIL (VARIES) 1″MIN.CL.BEHIND REBAR AND UNTIL SOUND CONCRETE IS FOUND. ½″ DEEP SAW CUT (TYP.) 2" 2" Е Ε TYPICAL SECTION DAMAGED AREA DEEF ώw cutl Ш 2" Ш 11

SECTION E-E



_ DATE : <u>12/14</u> _ DATE : <u>01/15</u>

C.BRIGHT

J. YANNACCONE

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CONCRETE IN THIS AREA SHALL BE REMOVED AND REPLACED

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EXISTING RAIL (VARIES)-

MATCH EXISTING

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BEAM END PLATING REPAIR



ALL CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OR INSTALLATION OF ANY COMPONENTS. REPAIR PLATES SHALL BE MINIMUM 36 KSI STEEL. REPAIR SEQUENCE: COORDINATE WITH MATERIALS AND TEST UNIT AT LEAST 4 DAYS PRIOR TO ANTICIPATED WORK. REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA. IF NECESSARY, REMOVE EXISTING STIFFENER TO INSTALL WELDED PLATE REPAIR. REPLACE WITH A NEW STIFFENER PLATE OF SIMILAR SIZE. IF BEAM DETERIORATION EXTENDS INTO THE CONCRETE DIAPHRAGM THEN CHIP AWAY CONCRETE TO DETERMINE THE EXTENT OF THE DAMAGE. MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST $3^{\prime\prime}$ Beyond Repair area. PRIME ENTIRE REPAIR AREA AND REPAIR PLATES WITH AN ORGANIC ZINC PRIMER PRIOR TO WELDING NEW PLATES. REMOVE PRIMER IN WELD AREA. ONE PLATE SHALL BE PLACED, AS INDICATED ON EACH SIDE OF THE BEAM EACH PLATE SHALL BE APPROXIMATELY ONE- HALF THE ORIGINAL THICKNESS OF THE BEAM WEB. FULLY WELD ALONG TOP AND SIDES OF THE PLATES AS SHOWN. ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS. ALL WELDS SHALL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS. IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AFTER REPAIR, GRIND ALL WELDS FLUSH, THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM THE REPAIR PROCESS. CLEANING AND PAINTING OF REPAIRED STRUCTURAL STEEL SHALL BE PERFORMED AS PART OF THE OVERALL CLEANING AND PAINTING FOR CLEANING AND PAINTING, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISIONS. AFTER BEAMS ARE REPAIRED AND PAINTED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE CAST BACK, ANY REINFORCING STEEL CUT DURING THE REMOVAL PROCESS SHALL BE SPLICED WITH A SIMILAR SIZE BAR WITH AT LEAST A ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAYMENT SHALL BE MADE FOR CONCRETE AND REINFORCING STEEL AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "BEAM REPAIR". FOR BEAM REPAIR, SEE SPECIAL PROVISIONS. REMOVE ALL TRAFFIC CONTROL DEVICES. I-5809 PROJECT NO. McDOWELL COUNTY BRIDGE NO. 138.143.146.149. 151, 152 -DocuSigned by: Mannaccone A John STATE OF NORTH CAROLINA SEESCEPESSION DEPARTMENT OF TRANSPORTATION RALEIGH SEAL 32492 BEAM PLATING . ACINEER REPAIR DETAILS YANNA 9/27/2016 REVISIONS SHEET NO DATE: NO. BY: DATE: S-66 DOCUMENT NOT CONSIDEREN FINAL UNLESS ALL SIGNATURES COMPLETED BY: TOTAL SHEETS 68



BEAM PLATING REPAIR



SECTION THRU DIAPHRAGM



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JACKING NOTES:

THE CONTRACTOR SHALL SUMIT JACKING PLANS AND CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO MATERIAL PURCHASE OR FABRICATION OF THE JACKING SYSTEM.

THE BEAM SHALL BE LIFTED ENOUGH THAT THE BEAM CLEAR THE BEARINGS AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE THE CONTRACTOR SHALL PROVIDE A METHOD TO SUPPORT THE BEAM FOR DEAD AND LIVE LOADS AND REMOVE THE JACKS DURING THE REPAIR OPERATIONS. IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION. THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF DURING THE JACKING PROCESS OR WHILE THE BEAM IS BEING SUPPORTED THE BEAM SHIFTS 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 BEAM FROM BEING LIFTED.

ALL ADJACENT BEARINGS OF BEAMS NOT BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS $\mathcal{V}_{8}"\!\!.$

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NOTE

TYPICAL REPAIRS FOR ROUND-COLUMNED BENTS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND SQUARE-COLUMNED BENTS.



DESIGN DATA:

SPECIFICATIONS	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF	
STRUCTURAL STEEL - AASHTO M270 GRADE 36 -	20,000 LBS.PER SQ.IN.
- AASHTO M270 GRADE 50W -	27,000 LBS.PER SQ.IN.
- AASHTO M270 GRADE 50 -	27,000 LBS.PER SQ.IN.
REINFORCING STEEL IN TENSION	
GRADE 60	24,000 LBS.PER SO.IN.
CONCRETE IN COMPRESSION	1,200 LBS.PER SO.IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR	
UNTREATED - EXTREME FIBER STRESS	1,800 LBS.PER SO.IN.
COMPRESSION PERPENDICULAR TO GRAIN	
OF LIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS.PER CU.FT.
	(MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES. ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4"WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4"FINISHING TOOL UNLESS OTHERWISE REOUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4"RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REOUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12"INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

STANDARD NOTES

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE LEVALTIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CRUBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER. DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT

IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS. WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8"Ø SHEAR STUDS FOR THE %4"Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8"Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4"Ø STUDS BASED ON THE RATIO OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0". EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED. WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SUBFACES,ALL SHARP EDGES AND DOS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SUFFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

SPECIAL NOTES:

SPECIFICATIONS ARTICLE 105-4.

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB. METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OF OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS. NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE



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