

**DA00271** 

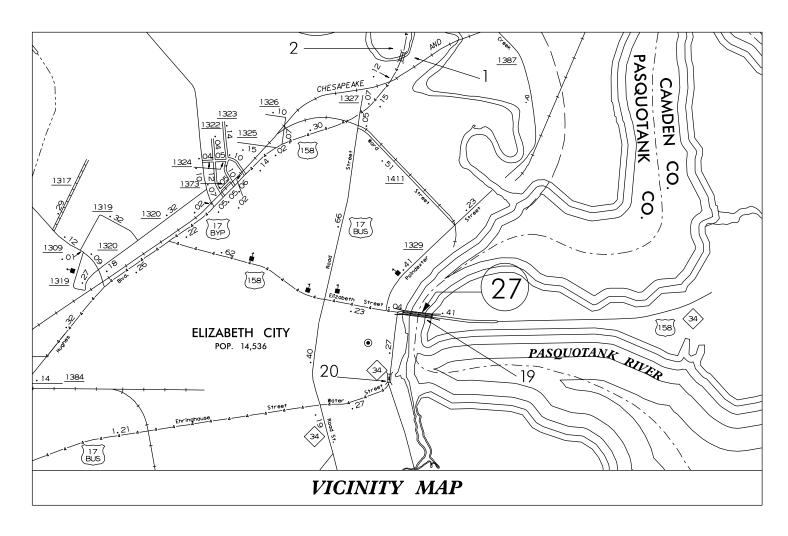
STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

# PASQUOTANK COUNTY

LOCATION: BRIDGE 27 OVER PASQUOTANK RIVER

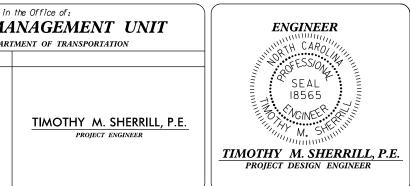
TYPE OF WORK: SUPERSTRUCTURE & SUBSTRUCTURE REPAIRS



T:			VICINITY MAP	
CONTRAC	OF TRANSPORT	DESIGN DATA BRIDGE 27 ADT 2013 = 8500	PROJECT LENGTH LENGTH STRUCTURE PROJECT = .17 Miles	Prepared 1 STRUCTURES M. NORTH CAROLINA DEPAR 2012 STANDARD SPECIFICATIONS LETTING DATE:

STATE STAT	SHEET NO.	TOTAL SHBETS		
N.C.	1	34		
STATE PROJ.NO.	P. A. PROJ. NO.	DESCRIPT	TON	
		P.E.		
		[		







STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

# PASQUOTANK COUNTY

LOCATION: BRIDGE 27 OVER PASQUOTANK RIVER TYPE OF WORK: SUPERSTRUCTURE & SUBSTRUCTURE REPAIRS

# INDEX OF SHEETS

1	TITLE SHEET
lA	INDEX OF SHEETS
2	BILL OF MATERIAL & LOCATION
S-1 THROUGH S-30	BRIDGE 27
SN	STRUCTURE STANDARD NOTES

STATE STATE PROJECT REFERENCE NO.				SHEET NO.	TOTAL SHBBTS		
N.C.			1A	34			
STATE PROLN	0.	P. A. PROJ. NO		DESCRIPTION			
_				P.E			



MAP



LOCATION MAP

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

TOTAL BILL OF MATERIAL										
BRIDGE	EPOXY RESIN INJECTION	CONCRETE REPAIRS	SHOTCRETE REPAIRS				TEMPORARY WORK PLATFORM			
	LIN.FT.	CU.FT.	CU.FT.	CU.FT.	SQ.FT.	EACH	EACH			
PASQUOTANK #27	86	41.6	260.8	9.2	1975	EACH	EACH			

DRAWN BY :		CL E	BRIGHT		 DATE	:	01/16
CHECKED BY :		T. S	HERRILL		 DATE	:	01/16
DESIGN ENGINEE	R OF	RECORD:		-	 DATE	:	

EXISTIN AVAILAB THE PLA DIFFER. IT IS T FOR SUB FOR FAL FOR GRO FOR CRA FOR CLE FOR CDE

+

### NOTES

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

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR CLEANING OF BRIDGE, SEE SPECIAL PROVISIONS.

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

PROJECT NO. <u>DAOO271</u>									
ΡA	PASQUOTANK COUNTY								
BRIDG									
SHEET 1 0	F 1								
DEPA	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH LOCATION MAP								
FOR BRIDGE 27 ON US 158 OVER THE PASQUOTANK RIVER									
	REVIS	SION	IS		SHEET NO.				
NO. BY:	DATE:	NO.	BY:	DATE:	2				
12		3 4			SHEETS 34				
1		3 4			total sheets 34				

# STANDARD NOTES

#### 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 SQ.IN.
CONCRETE IN COMPRESSION	1,200 LBS.PER SQ.IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR	
UNTREATED - EXTREME FIBER STRESS	1,800 LBS.PER SQ.IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS.PER SQ.IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS.PER CU.FT.

#### 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.

(MINIMUM)

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 REQUIRED 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 REQUIRED 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.

#### 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 ELEVATIONS 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 CAMBER. 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 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 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 FOR 4 - 3/4" Ø STUDS. STUDS ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS 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 CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED. WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES,ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

OR METALLIZING.

SPECIAL NOTES:

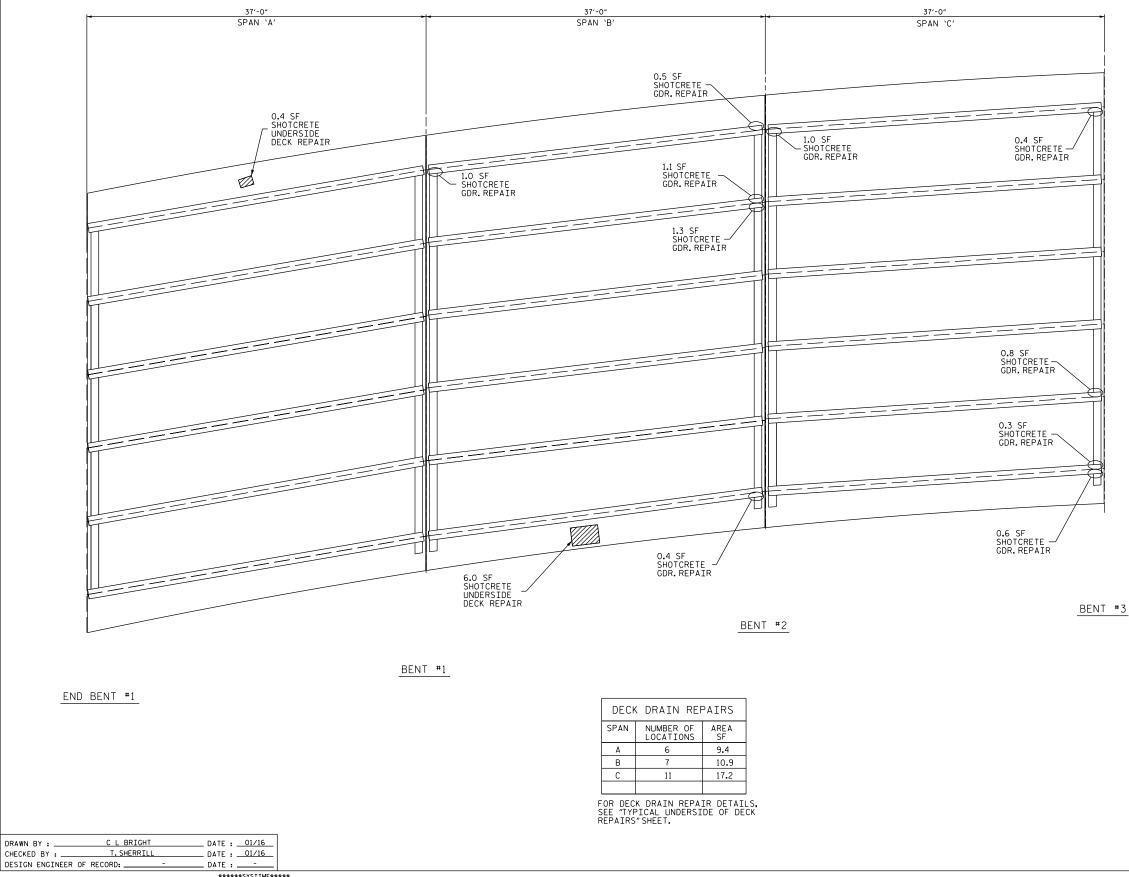
GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

+

#### HANDRAILS AND POSTS:

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 OR 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. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.





\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUAN	I T I	TIE	S	
SPANS A.B.C		QUANTI	TIES	
JEANS A,D,C	EST	IMATE	A	CTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	7.4	1.9		
INT. DIAPHRAGM	0.0	0.0		
OVERHANG DIAPHRAGM	0.0	0.0		
UNDERSIDE DECK	6.4	2.4		
UNDERSIDE DECK DRAIN REPAIR	37.5	9.4		
EPOXY RESIN INJECTION		LN. FT		LN. FT
UNDERSIDE OF DECK		0.0		
DIAPHRAGM		0.0		

# NOTES

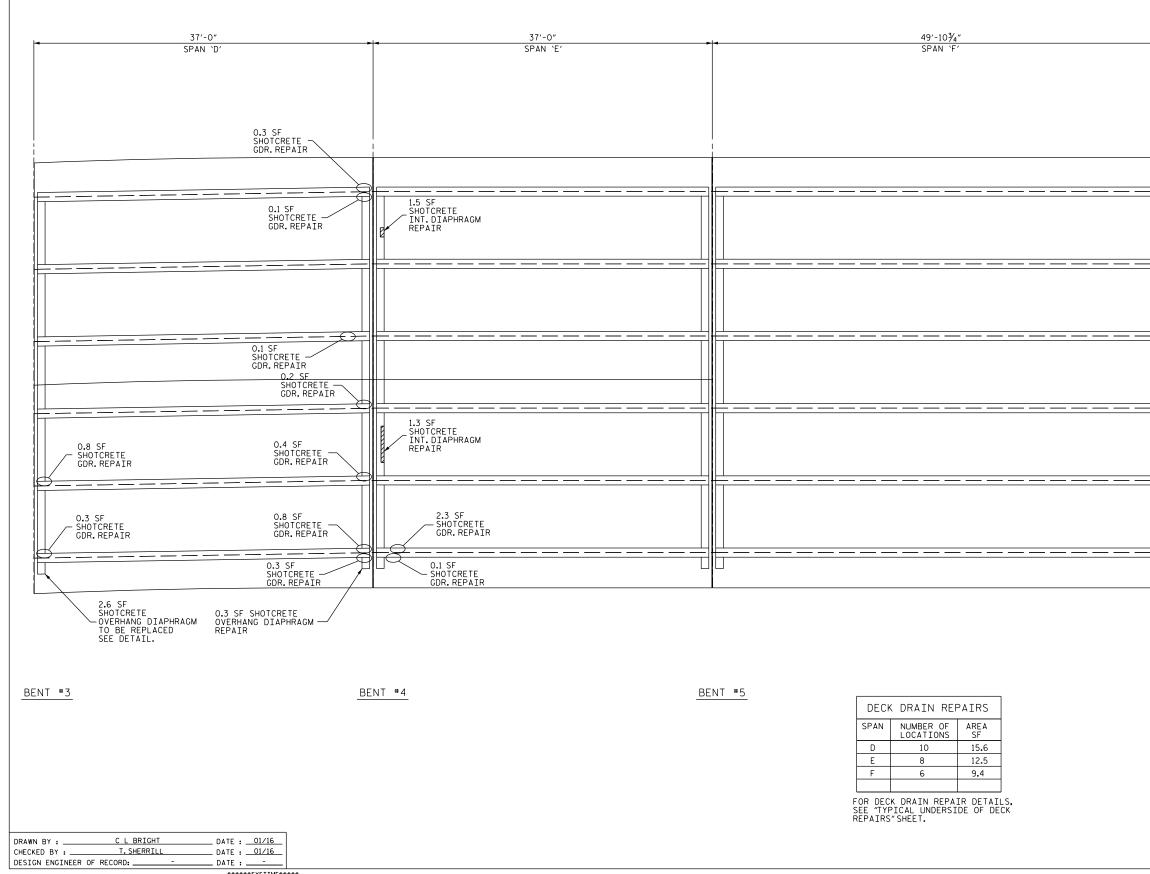
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED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

FOR REPAIR DETAILS.SEE "TYPICAL GIRDER,DIAPHRAGM & DRAIN REPAIR DETAILS" SHEETS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

SPAN `A' WAS INACCESSIBLE AT TIME OF PROJECT SCOPING. OUANTITIES FOR SPAN `A' ARE AN AVERAGE OF OTHER LIKE SPANS AND ARE INCLUDED IN THE OUANTITIES LISTED IN THE SUMMARY OF OUANTITIES TABLE.

		SQUO	T	ANK	<u>10027</u> cc 27	'1 iunty		
	BRIDGE NO							
	SHEET 1 OF	- 7						
	DEPA	-	OF	NORTH CAR TRAN RALEIGH	NSPORTA	TION		
THE CAROLAND	L		SF	IDE Pans ,B,C	DECI	<		
18565								
NONEL OF	NO. BY:	REVIS	510M	NS BY:	DATE:	SHEET NO. S-1		
HY M SHERIN	1	DATES	3		DATES	TOTAL		
	2		4			34		



SUMMARY OF QUA	NTI	TIE	S	
SPANS D.E.F		QUANTI	TIES	
SI ANS D,L,I	EST	IMATE	AC	CTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	5.7	1.4		
INT.DIAPHRAGM	2.8	1.1		
OVERHANG DIAPHRAGM	2.9	2.2		
UNDERSIDE DECK	0.0	0.0		
UNDERSIDE DECK DRAIN REPAIR	37.5	9.4		
EPOXY RESIN INJECTION		LN. FT		LN. FT
UNDERSIDE OF DECK		0.0		
DIAPHRAGM		0.0		

## NOTES

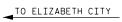
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED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

FOR REPAIR DETAILS, SEE "TYPICAL GIRDER, DIAPHRAGM & DRAIN REPAIR DETAILS" SHEET.

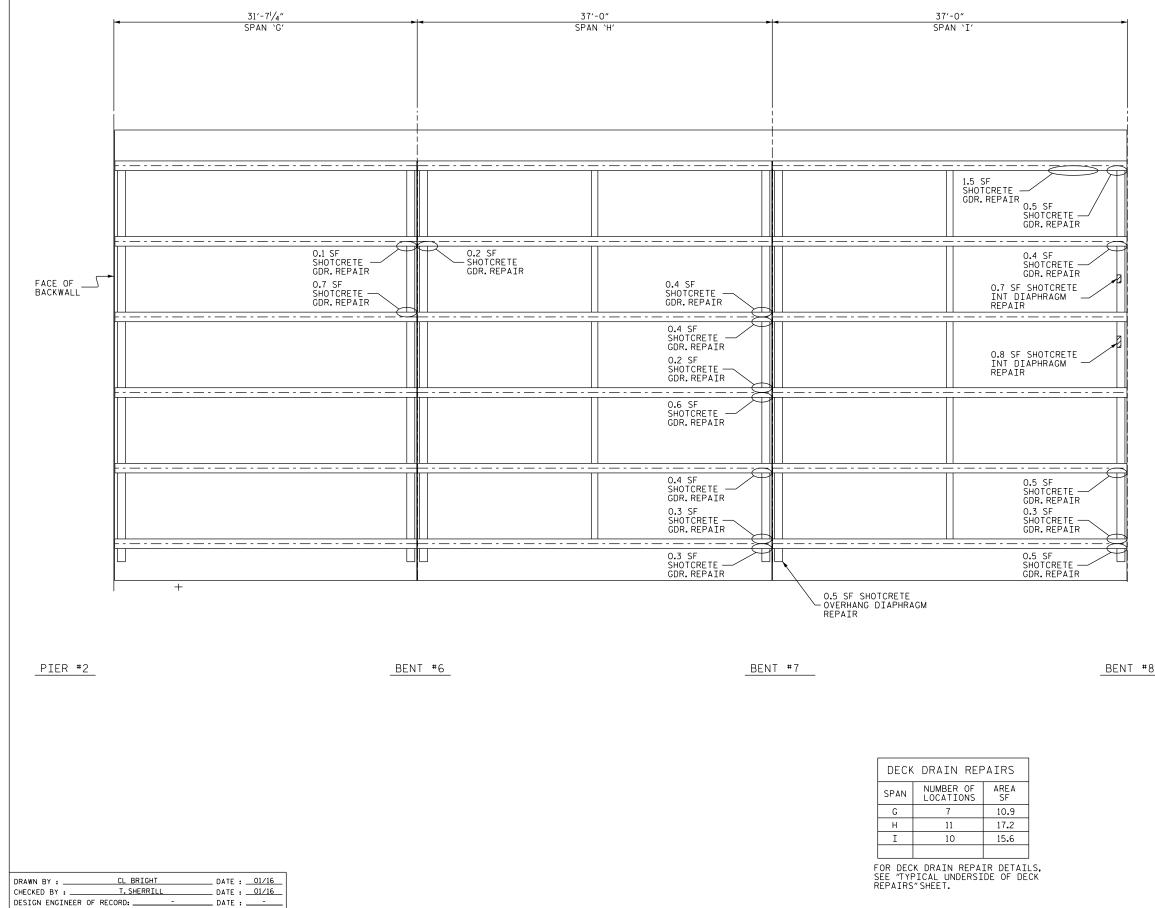
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

		CT NO. <u>SQUO</u> E NO	TANK	<u>40027</u> C0 <u>2</u> 7	' <u>1</u> unty
	SHEET 2 0	F 7			
<u>* *1</u>	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
SEAL 18565	L		SIDE Spans d,e,f		<
E Chance I		REVIS	IONS		SHEET NO.
- O VGINEC C	NO. BY:		NO. BY:	DATE:	S-2
M. SHUM	1 2		3 4		TOTAL SHEETS 34
	ß		æ۶		54

PIER #1



TO CAMDEN



SUMMARY OF QUA	NT ]	ETIE	S	
		QUANT	ITIES	
SPANS G,H,I	EST:	ΙΜΑΤΕ	ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	7.8	2.0		
INT. DIAPHRAGM	0.8	0.3		
OVERHANG DIAPHRAGM	0.5	0.2		
UNDERSIDE DECK	0.0	0.0		
UNDERSIDE DECK DRAIN REPAIR	43.7	11.0		
EPOXY RESIN INJECTION		LN FT		LN F T
UNDERSIDE OF DECK		0.0		
DIAPHRAGM		0.0		

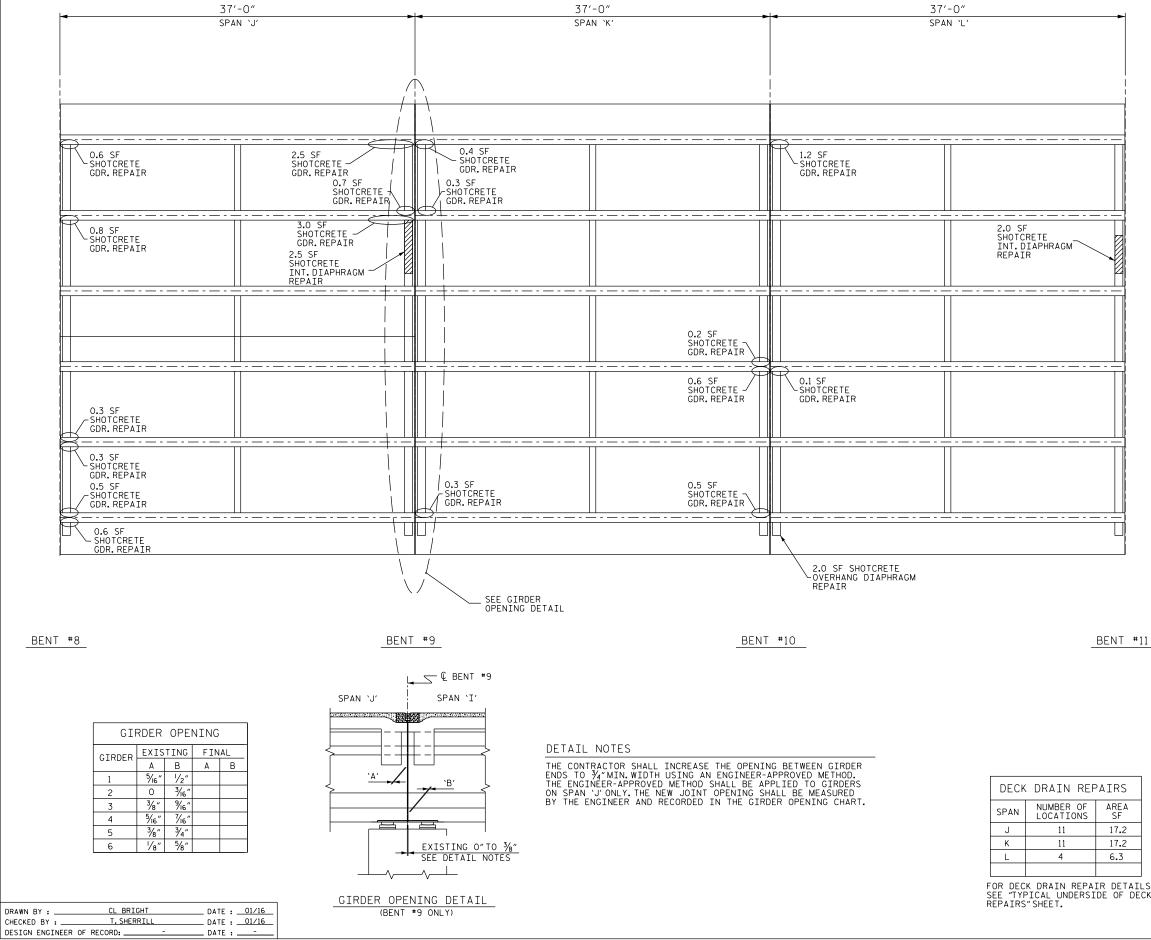
# NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

FOR REPAIR DETAILS.SEE "TYPICAL GIRDER,DIAPHRAGM & DRAIN REPAIR DETAILS" SHEET.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

3		T NO Asquo		/	<u>}</u> UNTY
	BRIDGE Sheet 3 o	E NO		27	
		// /			
	DEPA	state RTMENT	OF NORTH CAF OF TRA RALEIGH		TION
		PI	AN VI	E W	
		1 6	AN VI	L VV	
WITH CAROUND		UNE	)ERS]	TDF	
NIN OP					
S C OFESSION . T		SPA	NS G	,H,⊥	
SEAL 18565 M. SHERING					
		REVIS	ONS		SHEET NO.
FUX VUNEL	NO. BY:	DATE: 1	10. BY:	DATE:	S-3
M. SHEIM	1		3		TOTAL SHEETS
THINNIN'S STREET	2	6	1		34



SUMMARY OF QUA			C	
SUIVINARI OF QUA			. 3	
SPANS J.K.L			ITIES	
STANS 0,R,L	EST:	IMATE	ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	12.9	3.2		
INT. DIAPHRAGM	4.5	1.9		
OVERHANG DIAPHRAGM	2.0	0.8		
UNDERSIDE DECK	0.0	0.0		
UNDERSIDE DECK DRAIN REPAIR	37.7	9.4		
EPOXY RESIN INJECTION		LN FT		LN FT
UNDERSIDE OF DECK		0.0		
DIAPHRAGM		0.0		

## NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

FOR REPAIR DETAILS, SEE "TYPICAL GIRDER, DIAPHRAGM & DRAIN REPAIR DETAILS" SHEET.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	PROJECT NO. <u>U-348</u> <u>PASQUOTANK</u> BRIDGE NO. 27	
	SHEET 4 OF 7	
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORT RALEICH PLAN VIEW UNDERSIDE SPANS J,K& I	
AILS, DECK	REVISIONS	SHEET NO.
	NO.         BY:         DATE:         NO.         BY:         DATE:           1         3         4	S-4 TOTAL SHEETS 34

37'-0" SPAN `M'	37'-0" SPAN 'N'			
SPAN 'M'	SPAN 'N'			
1.8 SF SHOTCRETE INT. DIAPHRAGM REPAIR				
REPAIR				

BENT #11

BENT #12

BENT #13

DECK	CORAIN REF	PAIRS	
SPAN	NUMBER OF LOCATIONS	AREA SF	
М	10	15.6	
Ν	8	12.5	
OR DECK DRAIN REPAIR DETAILS			

SEE "TYPICAL UNDERSIDE OF DECK REPAIRS" SHEET.

DRAWN BY :	CL BRIGHT	DATE :01/16
CHECKED BY :	T. SHERRILL	DATE :01/16
DESIGN ENGINEE	R OF RECORD:	DATE :

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUA	NT ]	TIE	S	
		QUANT	ITIES	
SPANS M & N	EST:	EMATE	AC	TUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	0.0	0.7		
INT. DIAPHRAGM	1.8	0.8		
OVERHANG DIAPHRAGM	0.0	0.0		
UNDERSIDE DECK	0.0	0.0		
UNDERSIDE DECK DRAIN REPAIR	28.1	7.0		
EPOXY RESIN INJECTION		LN FT		LN FT
UNDERSIDE OF DECK		0.0		
DIAPHRAGM		0.0		

# NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE SUMMARY OF QUANTITIES TABLE.

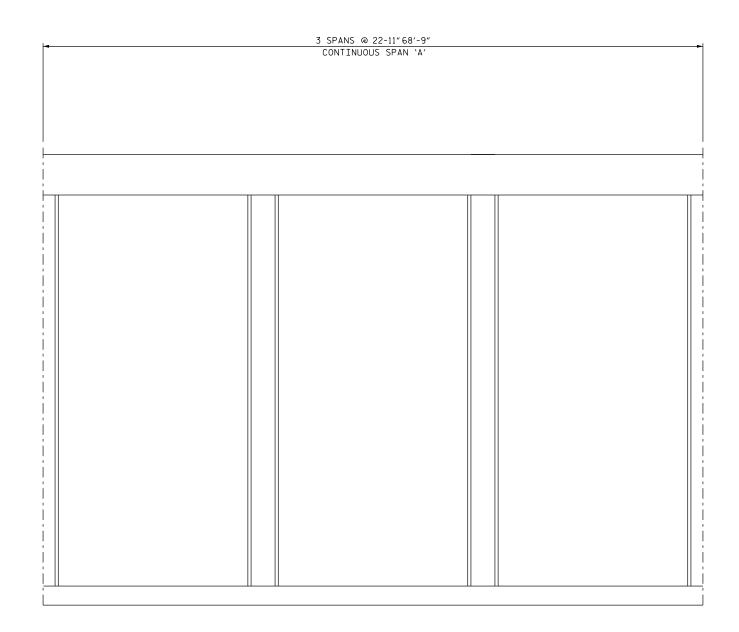
FOR REPAIR DETAILS.SEE "TYPICAL GIRDER,DIAPHRAGM & DRAIN REPAIR DETAILS" SHEET.

CONCRETE REPAIR MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

SPAN 'N' WAS INACCESSIBLE AT THE TIME OF PROJECT SCOPING. OUANTITIES FOR SPAN 'N' ARE AN AVERAGE OF OTHER LIKE SPANS AND ARE INCLUDED IN THE QUANTITIES LISTED IN THE SUMMARY OF QUANTITIES TABLE.

NOTE: SPAN 'N' WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED QUANTITIES. QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL QUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	PROJECT NO. <u>DAOO27</u> PASQUOTANKCC				
	BRIDGE NO. 27				
	SHEET 5 OF 7				
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
	PLAN VIEW				
WHATH CARO	UNDERSIDE				
SEESSION THE	SPANS M & N				
SEAL					
SEAL 18565					
18565					
13. CHONER OF	REVISIONS	SHEET NO.			
F. AL	NO. BY: DATE: NO. BY: DATE:	S-5			
M. Struit	1 3	TOTAL SHEETS			
	2 4	34			



BENT #13

BENT #14

BENT #15

BENT #16

DECK	DRAIN REF	PAIRS
SPAN	NUMBER OF	AREA SF
Α	3	4.7
OR DEC	K DRATN REPA	TR DETATI

FOR DECK DRAIN REPAIR DETAILS, SEE "TYPICAL UNDERSIDE OF DECK REPAIRS" SHEET.

DRAWN BY :	CL BRIGHT	DATE :01/16
CHECKED BY :	T. SHERRILL	DATE :01/16
DESIGN ENGINEER	OF RECORD:	DATE :

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUA	NT ]	ETIE	S	
CONTINUOUS SPAN A		QUANT	ITIES	
CUNTINUOUS SFAN A	EST	IMATE	AC	TUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE DECK	0.0	0.0		
UNDERSIDE DECK DRAIN REPAIR	4.7	1.4		
EPOXY RESIN INJECTION		LN FT		LN FT
UNDERSIDE OF DECK		0.0		

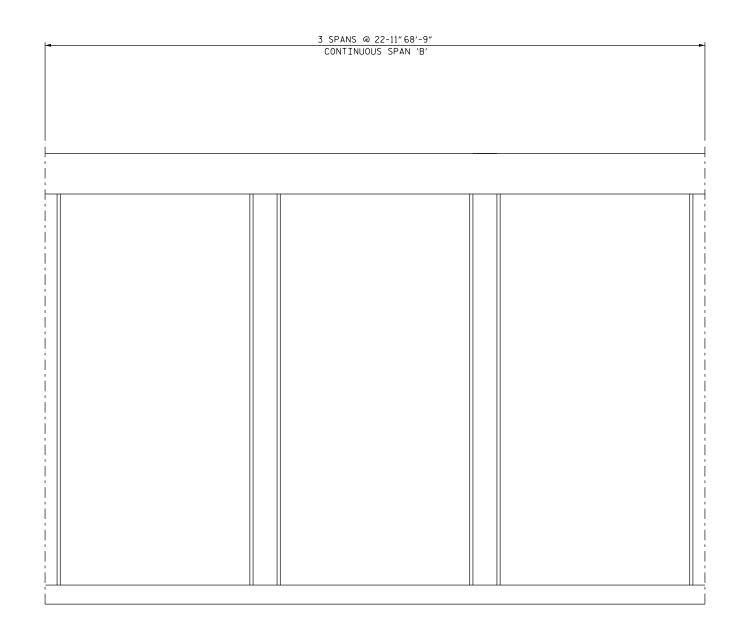
# NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE SUMMARY OF QUANTITIES TABLE.

CONCRETE REPAIR MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINNER.

NOTE: SPAN WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES, OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL OUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

		ect n PASQ			<u>\0027</u> ( co	
	BRID	GE NC	)		27	
	SHEET (	5 OF 7				
	DE	PARTME		F NORTH CAR F TRAN RALEIGH	olina NSPORTA	TION
			PLA	N VI	ΕW	
SEAL ISS65 MCINER		-		ERS		
SEAL				INU		
SEAL 18565			52.	AN `	A	
ES CLONER OF		R	EVISIO	NS		SHEET NO.
AL CALL	NO. BY:	DATE			DATE:	S-6
M. Shini	12		3 4			TOTAL SHEETS
1 200000	12		145	1		34



BENT #17

BENT #18

BENT #19

END BENT #2

DECK	CORAIN REF	PAIRS
SPAN	NUMBER OF LOCATIONS	AREA SF
В	6	9.4
OR DEC	K DRATN REPA	TR DETATI

FOR DECK DRAIN REPAIR DETAILS, SEE "TYPICAL UNDERSIDE OF DECK REPAIRS" SHEET.

DRAWN BY :	CL BRIGHT	DATE :01/16
CHECKED BY :	T. SHERRILL	DATE :01/16
DESIGN ENGINEER	OF RECORD:	DATE :

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUANTITIES						
CONTINUOUS SPAN B		QUANT	ITIES			
CUNTINUUUS SFAN D	EST	IMATE	AC	TUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
UNDERSIDE DECK	0.0	0.0				
UNDERSIDE DECK DRAIN REPAIR	9.4	2.7				
EPOXY RESIN INJECTION		LN FT		LN F T		
UNDERSIDE OF DECK		0.0				

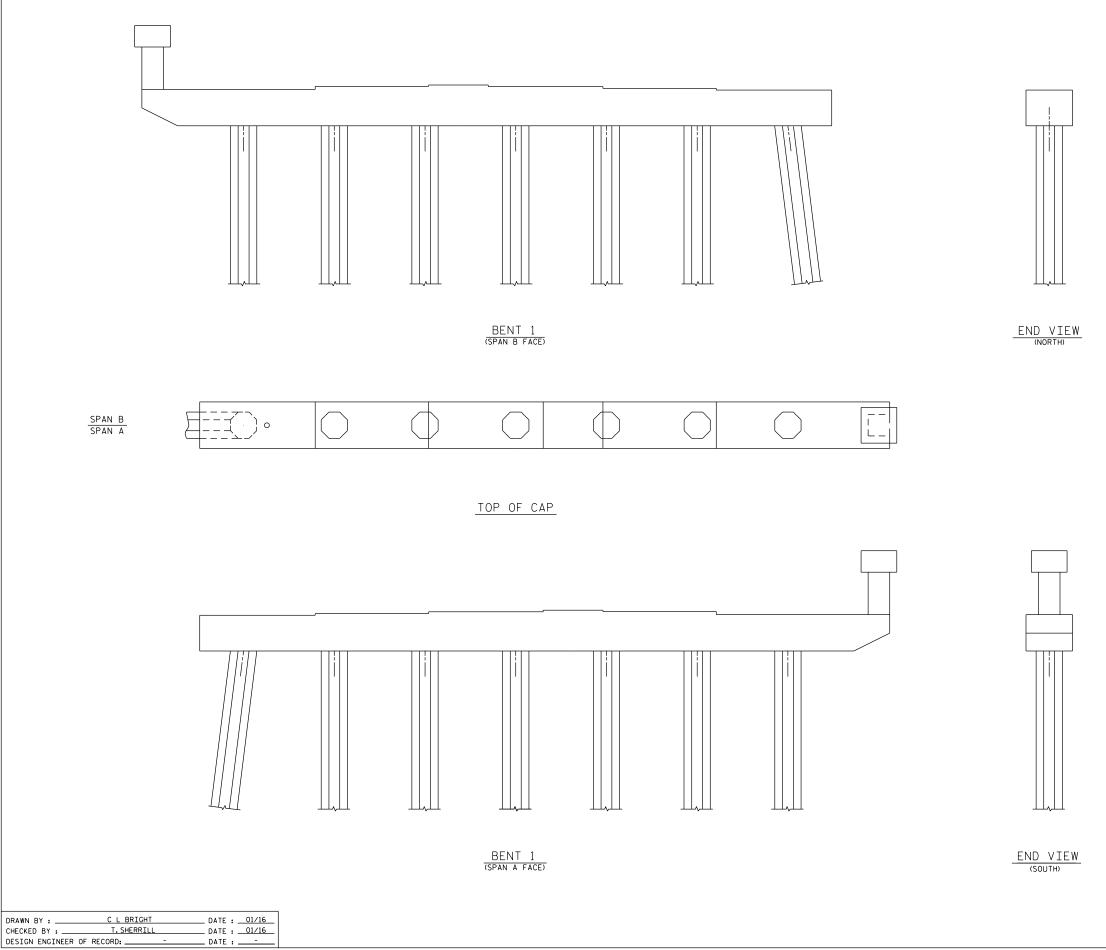
# NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE SUMMARY OF QUANTITIES TABLE.

CONCRETE REPAIR MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINNER.

NOTE: SPAN WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL QUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	PROJEC P <i>i</i> BRIDGE	<u>ASQU(</u>	DTAN	<u>A0027</u> Kcc 27			
	SHEET 7 OF 7						
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
		PL	AN VI	ΞEW			
LINNATH CAROLINI	UNDERSIDE CONTINUOUS						
SEAL 18565			PAN				
		REVIS	SIONS		SHEET NO.		
AL AL	NO. BY:	DATE:	NO. BY:	DATE:	S-7		
M. Shinn	1		3 A		TOTAL SHEETS 34		



\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

SUMMARY OF QUA	4 N T	ITI	ΈS	
REPAIRS BENT 1		QUANTI	TIES	
REFAIRS DENT I	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	12.5	5.2		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		3.3		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		154		

NOTES

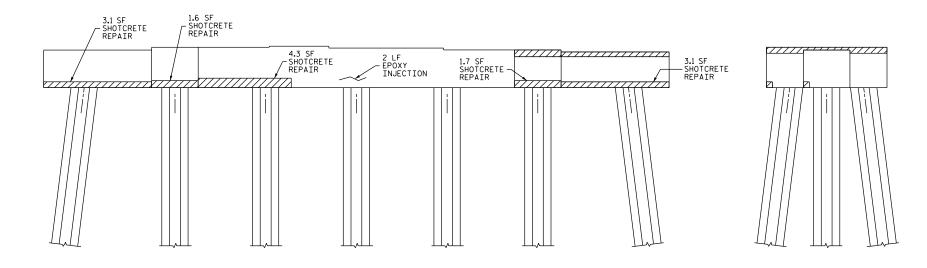
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE.IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

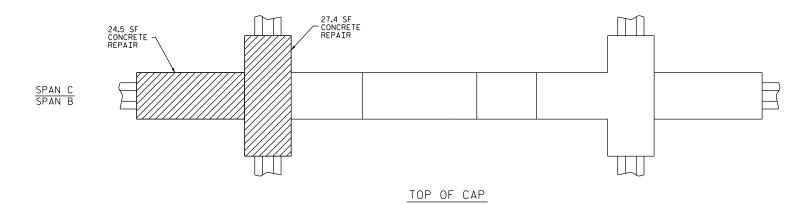
NOTE: BENT WAS NOT ACCESSIBLE DURING THE INSPECTION, QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART REFLECT AN AVERAGE OF QUANTITIES FROM OTHER LIKE BENTS. QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL QUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

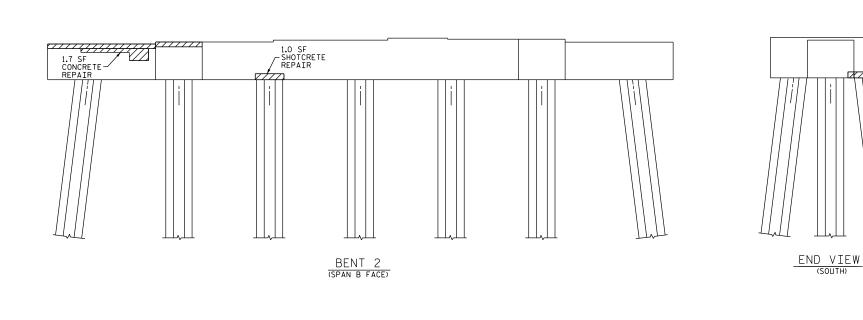
	projec PA	CT NO. SQUO		NK		7 <u>1</u> )unty
	BRIDGE	E NO		, 	27	
	SHEET 1 OF	- 19				
	DEPA	stat RTMENT	e of nor OF rale	TRAN		TION
SEAL 18565		E	3en	Т	1	
E S VGINEE S		REVIS	SIONS			SHEET NO.
CHER IN	NO. BY:	DATE:		BY:	DATE:	S-8
$M_{\bullet} \supset M_{\bullet}$	1		3			TOTAL SHEETS
	2		4			34





END VIEW





 DRAWN BY :
 C L BRIGHT
 DATE :
 01/16

 CHECKED BY :
 T. SHERRILL
 DATE :
 01/16

 DESIGN ENGINEER OF RECORD:
 DATE :

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUANTITIESREPAIRS BENT 2OUANTITIESESTIMATEACTUALCONCRETE REPAIRSAREA VOLUME SF.AREA VOLUME SF.AREA VOLUME SF.CAP53.622.3-CAP53.622.3-SHOTCRETE REPAIRSAREA VOLUME SF.AREA VOLUME SF.AREA VOLUME SF.CAP14.84.9-PILE0.00.0-EPOXY RESIN INJECTIONLN. FTFTCAP2.0PILE0.0EPOXY COATINGSO. FTSO. FTSO. FTTOP OF CAP17650.					
REPAIRS BENT 2ESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP53.622.3IImage: Colspan="2">Image: Colspan="2" Image:	SUMMARY OF QUA	4 N T	ITI	ΕS	
CONCRETE REPAIRS AREA VOLUME SF CAP 53.6 22.3 C CAP 53.6 22.3 C CAP C C C C	DEDATOS BENT 2		QUANTI	TIES	
SF         CF         SF         CF           CAP         53.6         22.3         Image: Comparison of the system of the	REFAIRS DENI Z	EST	IMATE	A	CTUAL
Image: Second	CONCRETE REPAIRS				
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     14.8     4.9        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     2.0        PILE     0.0        CAP     2.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT	CAP	53.6	22.3		
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     14.8     4.9        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     2.0        PILE     0.0        CAP     2.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
SHOTORICIC HERATION     SF     CF     SF     CCF       CAP     14.8     4.9         PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     2.0        PILE     0.0        CAP     2.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     14.8     4.9        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     2.0        PILE     0.0        CAP     2.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
DILE         D.0         D.0         D.0           PILE         0.0         0.0         0           EPOXY RESIN INJECTION         LN. FT         FT         LN. FT           CAP         2.0         0           PILE         0.0         0           EPOXY COATING         SO. FT         SO. FT         SO. FT	SHOTCRETE REPAIRS				
Image: Second	CAP	14.8	4.9		
CAP     2.0       PILE     0.0       EPOXY COATING     S0. FT	PILE	0.0	0.0		
CAP     2.0       PILE     0.0       EPOXY COATING     S0. FT					
CAP     2.0       PILE     0.0       EPOXY COATING     S0. FT					
PILE 0.0 EPOXY COATING SQ. FT FT	EPOXY RESIN INJECTION				
EPOXY COATING SQ. FT FT.	CAP		2.0		
FT FT	PILE		0.0		
FT FT					
FT FT					
TOP OF CAP 176	EPOXY COATING		SO. FT		SQ. FT
	TOP OF CAP		176		

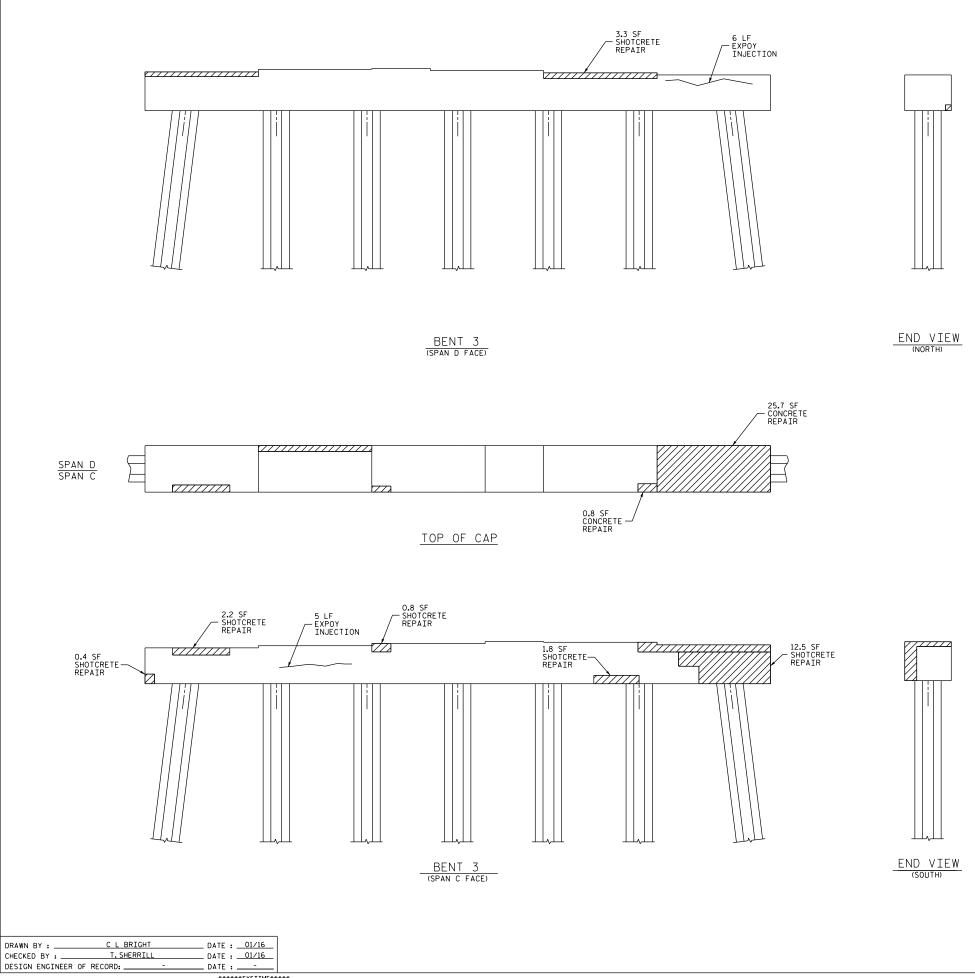
NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	)271 _ COUNTY
BRIDGE NO. 27	
SHEET 2 OF 19	
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPC RALEIGH	RTATION
BENT 2	
REVISIONS	SHEET NO.
NO. BY: DATE: NO. BY: DA	TE: S-9
1 3 2 4	TOTAL SHEETS 34
	PASQUOTANK BRIDGE NO. 27 SHEET 2 OF 19 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPO RALEIGH BENT 2 REVISIONS NO. BY: DATE: NO. BY: DA S



\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

SUMMARY OF QUA	ΔΝΤ	ITI	ΕS	
REPAIRS BENT 3		QUANTI	TIES	
REFAIRS DENT J	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	26.5	11.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.0	8.8		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		11.0		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		142		

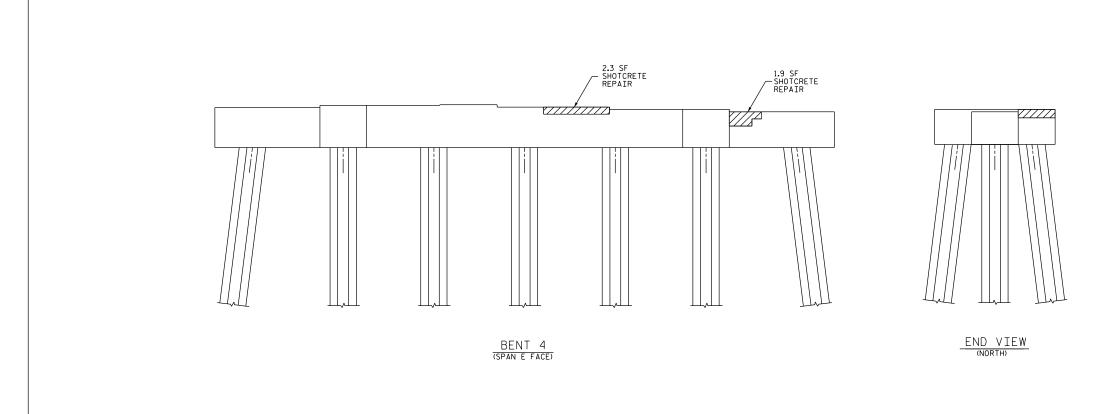
NOTES

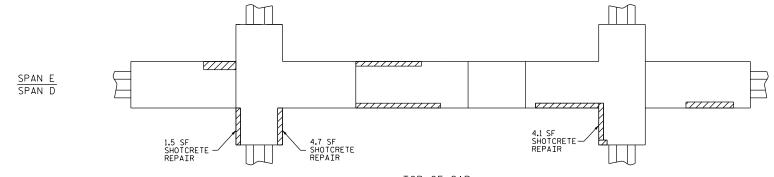
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE.IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

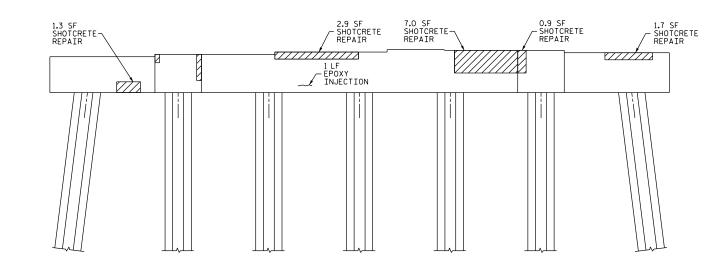
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	PROJEC	T NO. Asquo		١K	CO	<u>1</u> UNTY
	BRIDGE	E NO		2	7	
	SHEET 3 0	F 19				
	DEPA	stat RTMENT				TION
SEAL 18565		E	BEN	T 3	3	
E TO STORINEE		REVIS	SIONS			SHEET NO.
HET IN	NO. BY:	DATE:		3Y:	DATE:	S-10
	12		3 4			total sheets 34









BENT 4 (span d face)

DRAWN BY : \_\_\_\_

CHECKED BY : \_\_\_

DESIGN ENGINEER OF RECORD:

C L BRIGHT

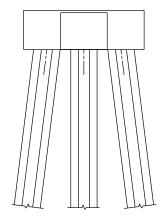
T. SHERRILL

\_ DATE : \_\_\_\_01/16\_\_\_

DATE : \_\_\_\_\_01/16\_\_\_

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

\_ DATE : \_\_\_\_





SUMMARY OF QUANTITIESREPAIRS BENT 4OUANTITIESESTIMATEACTUALCONCRETE REPAIRSAREA CFVOLUME CFCFCAP0.00.00.00.0Image: Colspan="2">Image: Colspan="2"CAP28.311.8Image: Colspan="2"Image: Colspan="2"CAP28.311.8Image: Colspan="2"Image: Colspan="2"PILE0.00.0Image: Colspan="2"Image: Colspan="2"CAP28.311.8Image: Colspan="2"Image: Colspan="2"PILE0.00.0Image: Colspan="2"Image: Colspan="2"CAP28.311.8Image: Colspan="2"Image: Colspan="2"CAP28.311.8Image: Colspan="2"Image: Colspan="2"CAP1.0Image: Colspan="2"Image: Colspan="2"Image: Colspan="2"CAP1.0Image: Colspan="2"Image: Colspan="2"Image: Colspan="2"CAPIm					
REPAIRS BENT 4ESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP0.00.01IIIIIIIISHOTCRETE REPAIRSAREA SFVOLUME CFAREA CFVOLUME SFCAP28.311.8IPILE0.00.0IIIIIEPOXY RESIN INJECTIONLN. FTFTCAP1.0IIPILE0.0IIEPOXY COATINGSO. FTSO. FTSO. FT	SUMMARY OF QU	ΔΝΤ	ITI	ΕS	
CONCRETE REPAIRS AREA VOLUME SF CAP O.O VOLUME SF CAP O.O VOLUME SF CAP			QUANTI	TIES	
CF         CF         SF         CF         SF         CF           CAP         0.0         0.0         0.0         0.0         0.0         0.0           SHOTCRETE REPAIRS         AREA SF         VOLUME CF         AREA SF         VOLUME CF         AREA SF         VOLUME CF           CAP         28.3         11.8         0.0         0.0         0.0           PILE         0.0         0.0         0.0         0.0         0.0           EPOXY RESIN INJECTION         LN. FT         FT         LN. FT         FT           CAP         0.0         0.0         0.0         0.0           EPOXY RESIN INJECTION         LN. FT         SO. FT         SO. FT         SO. FT	REFAIRS DENI 4	EST	IMATE	A	CTUAL
Image: Second system     Image: Second system       SHOTCRETE REPAIRS     AREA SFF     VOLUWE CF       CAP     28.3     11.8       PILE     0.0     0.0       EPOXY RESIN INJECTION     LN. FT       CAP     1.0       PILE     0.0       ILE     0.0 <td>CONCRETE REPAIRS</td> <td></td> <td></td> <td></td> <td></td>	CONCRETE REPAIRS				
SHOTORICIC IC METAINS     SF     CF     SF     CF       CAP     28.3     11.8        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     1.0        PILE     0.0        CAP     1.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT	CAP	0.0	0.0		
SHOTORICIC IC METAINS     SF     CF     SF     CF       CAP     28.3     11.8        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     1.0        PILE     0.0        CAP     1.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
SHOTORICIC IC METAINS     SF     CF     SF     CF       CAP     28.3     11.8        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     1.0        PILE     0.0        CAP     1.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
SHOTORICIC IC METAINS     SF     CF     SF     CF       CAP     28.3     11.8        PILE     0.0     0.0        EPOXY RESIN INJECTION     LN. FT     FT     LN. FT       CAP     1.0        PILE     0.0        CAP     1.0        PILE     0.0        EPOXY COATING     SO. FT     SO. FT					
DILE         D.O.         D.O. <th< td=""><td>SHOTCRETE REPAIRS</td><td></td><td></td><td></td><td></td></th<>	SHOTCRETE REPAIRS				
Image: Second	CAP	28.3	11.8		
CAP     1.0       PILE     0.0       EPOXY COATING     S0. FT	PILE	0.0	0.0		
CAP     1.0       PILE     0.0       EPOXY COATING     S0. FT					
CAP     1.0       PILE     0.0       EPOXY COATING     S0. FT					
PILE 0.0 EPOXY COATING SQ. FT SQ.	EPOXY RESIN INJECTION				
EPOXY COATING SQ. FT FT.	CAP		1.0		
FT FT	PILE		0.0		
FT FT					
FT FT					
TOP OF CAP 174	EPOXY COATING		SO. FT		SQ. FT
	TOP OF CAP		174		

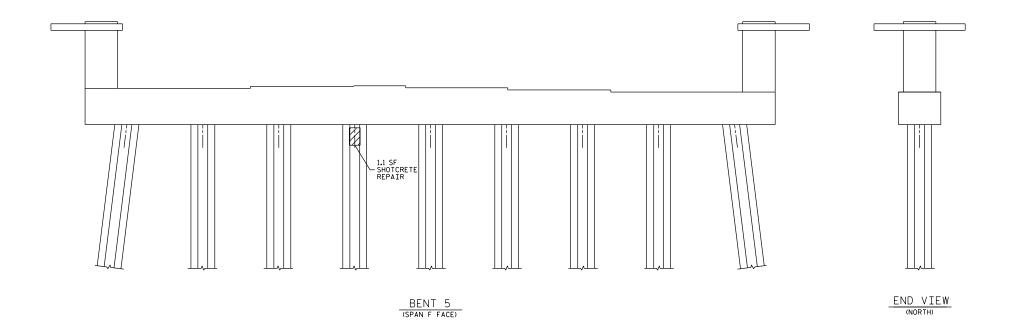
NOTES

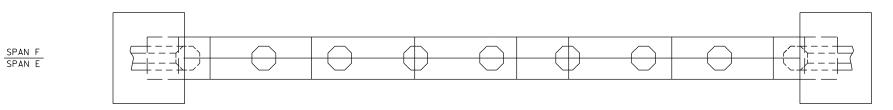
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE.IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

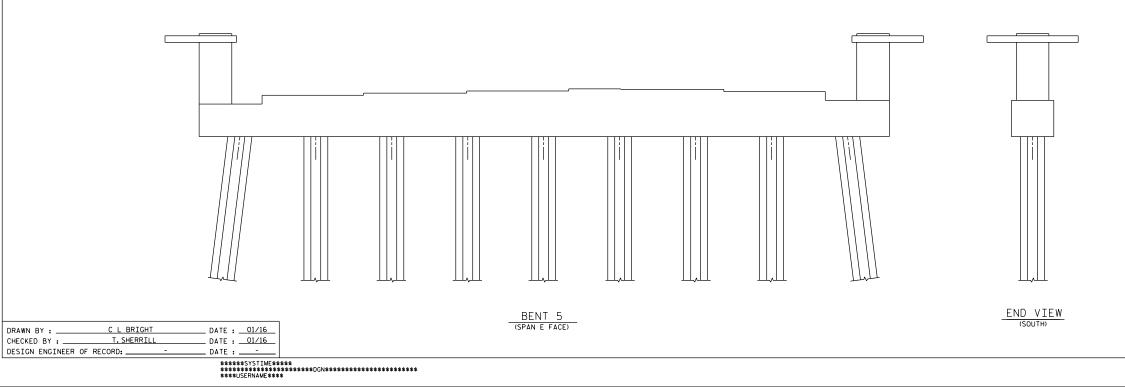
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	PROJECT NO PASQUOT	<u>DA0027</u> <u>ANK</u> cc				
	BRIDGE NO	27				
	HEET 4 OF 19					
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SEAL 18565	BE	INT 4				
ES CINER OF	REVISIO	NS	SHEET NO.			
THE AN SHELING	NO. BY: DATE: NO.	BY: DATE:	S-11			
	1 3 2 4		sheets 34			









SUMMARY OF QUA	4 N T	ITI	ЕS	
REPAIRS BENT 5		QUANTI	TIES	
REFAIRS DENT 5	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
PILE	1.1	0.4		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		156		

NOTES REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING,SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT N	vo. <u>D</u>	A002	271
PASQ	UOTANK	(	COUNTY
BRIDGE NO	D	27	

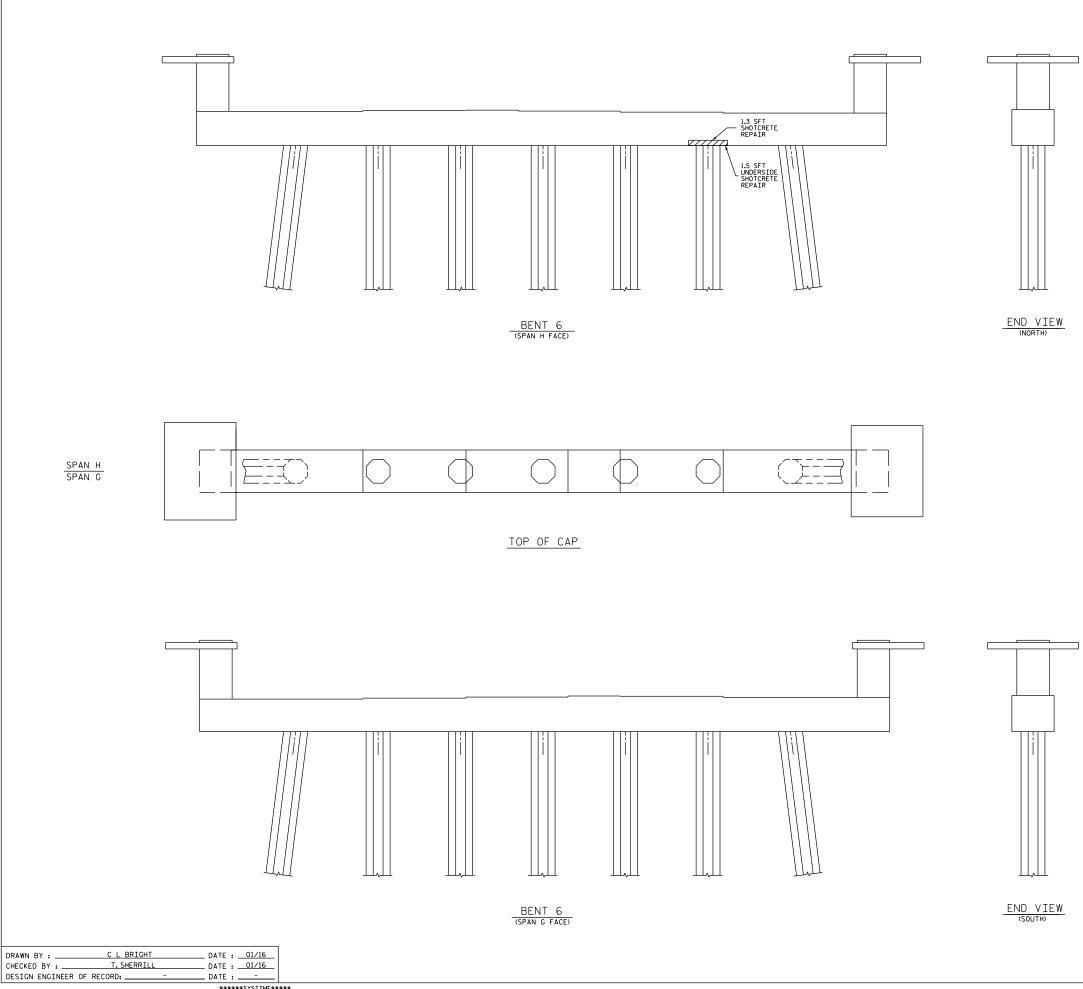
SHEET 5 OF 19

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

## BENT 5

		SHEET NO.				
0.	BY:	DATE:	N0.	BY:	DATE:	S-12
1			S			TOTAL SHEETS
2			4			34





SUMMARY OF QUA	4NT	ITI	ΕS	
REPAIRS BENT 6		QUANTI	TIES	
NELAINS BENIL 6	EST	IMATE	AC	TUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	2.8	1.2		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		156		

NOTES REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

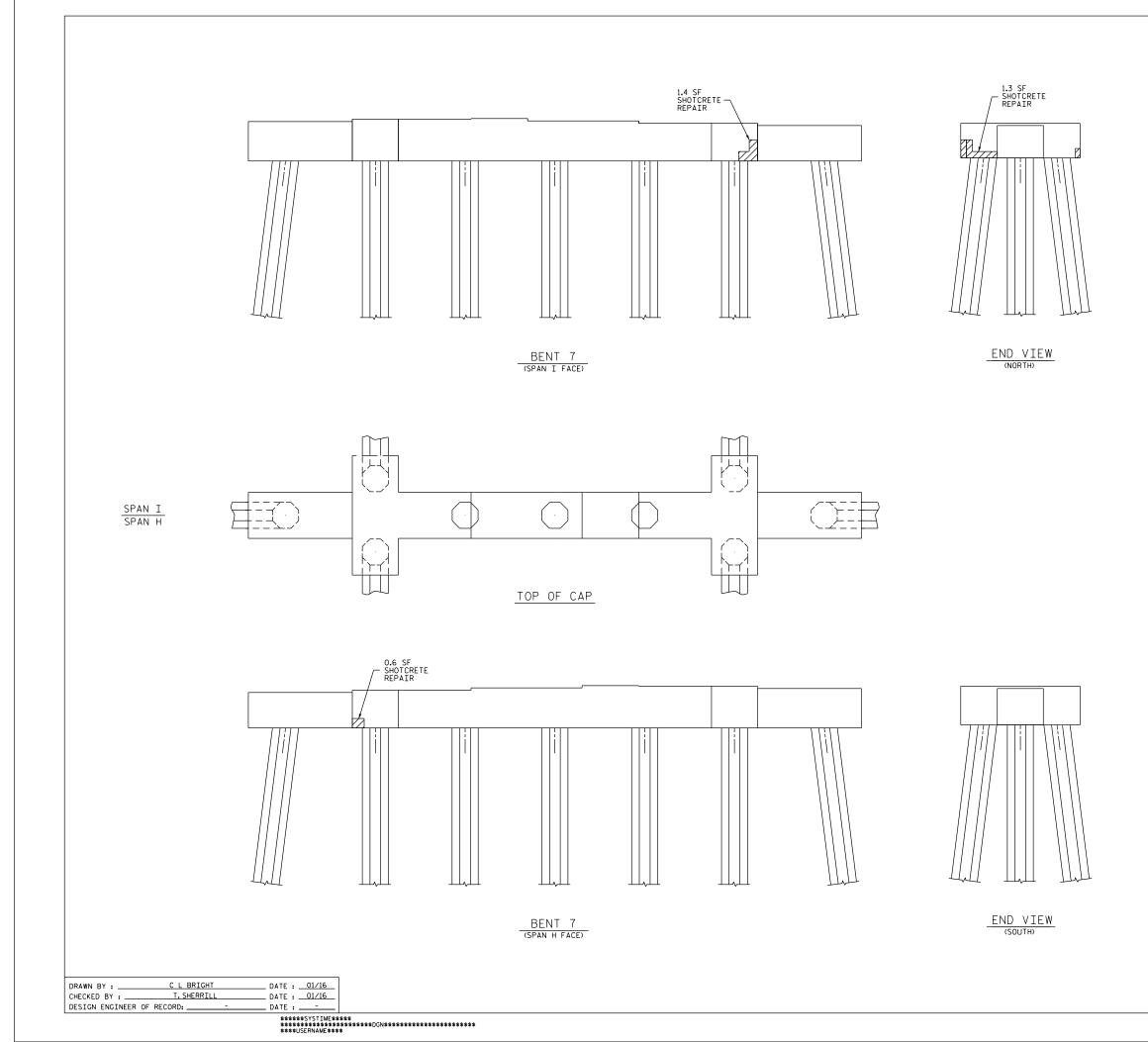
FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING,SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PF		CT NO. Pasqu			<u>A0027</u>	
	RIDGE eet 6 g	E NO			27	
	DEPA	-		NORTH CAR F TRAN RALEIGH	olina NSPORTA	TION
		B	ε	ΝT	6	
NO	BY:	REVIS	5IO NO.	NS BY:	DATE:	SHEET NO. S-13
1		DATES	3 4		DATES	TOTAL SHEETS 34





SUMMARY OF QUANTITIESREPAIRS BENT 7OUANTITIESCONCRETE REPAIRSAREA VOLUME SF CFAREA VOLUME SF CFCAP0.00.00.0Image: Colspan="2">Image: Colspan="2"CAP0.00.0Image: Colspan="2"Image: Colspan="2"CAP3.31.4Image: Colspan="2"Image: Colspan="2"CAP3.31.4Image: Colspan="2"Image: Colspan="2"CAP0.00.0Image: Colspan="2"Image: Colspan="2"EPOXY RESIN INJECTIONImage: Colspan="2"Image: Colspan="2"Image: Colspan="2"FILE0.0Image: Colspan="2"Image: Colspan="2"Image: Colspan="2"CAP0.0Image: Colspan="2"Image: Colspan="2"Image: Colspan="2"CAP0.0Image: Colspan="2"Image: Colspan="2"Image: Colspan="2"CAP0.0Image: Colspan="2"Image: Colspan="2"Image: Colspan=					
REPAIRS BENT /ESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP0.00.0IIIIISHOTCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP3.31.4IPILE0.00.0IIIIIEPOXY RESIN INJECTIONLN. FTFTIN. FTCAP0.0IIEPOXY COATINGSO. FTSO. FTSO. FT	SUMMARY OF QU/	4 N T	ITI	ΕS	
CONCRETE REPAIRS AREA VOLUME SF CAP O.O VOLUME SF CAP O.O VOLUME SF CAP O.O VOLUME SF CAP SHOTCRETE REPAIRS AREA VOLUME SF CAP S	DEDATOS BENT 7		QUANTI	TIES	
SF         CF         SF         CF           CAP         0.0         0.0         -           APEA         0.0         0.0         -           SHOTCRETE REPAIRS         AREA SF         VOLUME CF         AREA SF         VOLUME CF           CAP         3.3         1.4         -           PILE         0.0         0.0         -           CAP         3.3         1.4         -           PILE         0.0         0.0         -           CAP         0.0         0.0         -           EPOXY RESIN INJECTION         LN. FT         FT         -           CAP         0.0         -         -           EPOXY COATING         SO. FT         SO. FT         SO. FT	REFAIRS BENI I	EST	IMATE	A	CTUAL
Image: Second state of the se	CONCRETE REPAIRS				
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     3.3     1.4	CAP	0.0	0.0		
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     3.3     1.4					
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     3.3     1.4					
SHOTORICIC HERATION     SF     CF     SF     CF       CAP     3.3     1.4					
DILE         D.0         D.0         Image: Constraint of the second se	SHOTCRETE REPAIRS				
Image: Second	CAP	3.3	1.4		
CAP         O.0           PILE         O.0           EPOXY COATING         SO. FT	PILE	0.0	0.0		
CAP     0.0       PILE     0.0       EPOXY COATING     S0. FT					
CAP     0.0       PILE     0.0       EPOXY COATING     S0. FT					
PILE 0.0 EPOXY COATING SQ. FT SQ.	EPOXY RESIN INJECTION				
EPOXY COATING SQ. FT FT.	CAP		0.0		
FT FT	PILE		0.0		
FT FT					
FT FT					
TOP OF CAP 174	EPOXY COATING		SO. FT		SQ. FT
	TOP OF CAP		174		

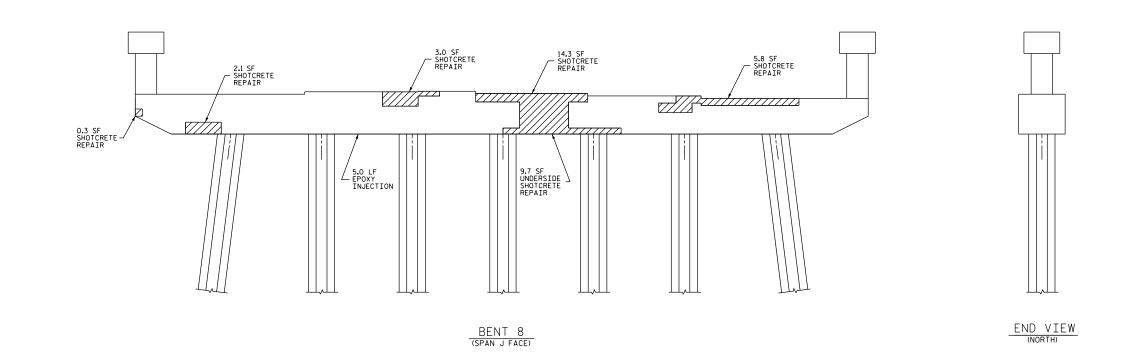
NOTES

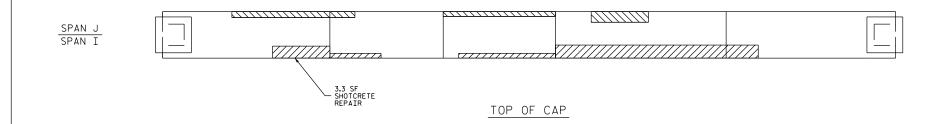
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE.IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

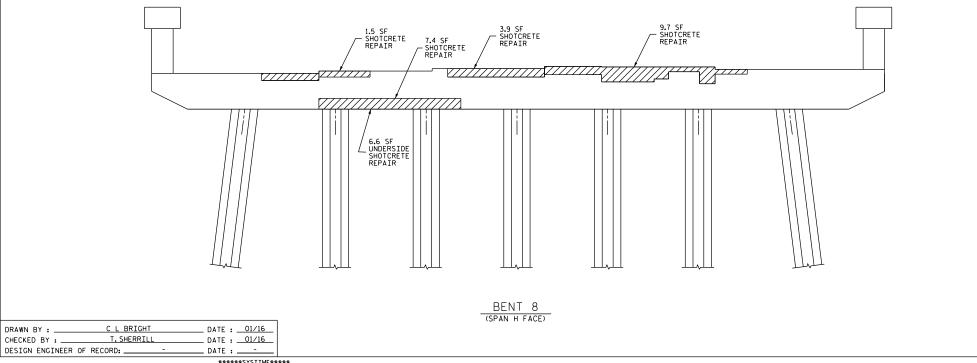
FOR REPAIR DETAILS.SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	PROJECT NO. <u>DAO</u> PASQUOTANK BRIDGE NO. <u>27</u>	<u>0271</u> _ county
	SHEET 7 OF 19	
	state of north carolina DEPARTMENT OF TRANSP( raleigh	ORTATION
SEAL 18565	BENT 7	
ES, SAGINEES ES	REVISIONS	SHEET NO.
M SHE		ATE: S-14
	1 3 2 4	TOTAL SHEETS 34







\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

DRAWN BY : \_\_\_\_

END VIEW (SOUTH)

SUMMARY OF QUA	4NT	ITI	ΕS	
REPAIRS BENT 8		QUANTI	TIES	
REFAIRS DENI O	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	67.6	28.2		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		5.0		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		162		

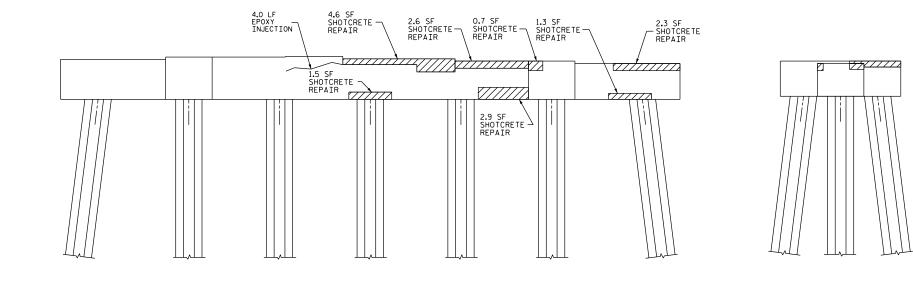
NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

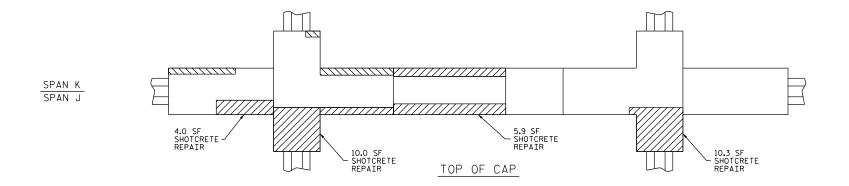
FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

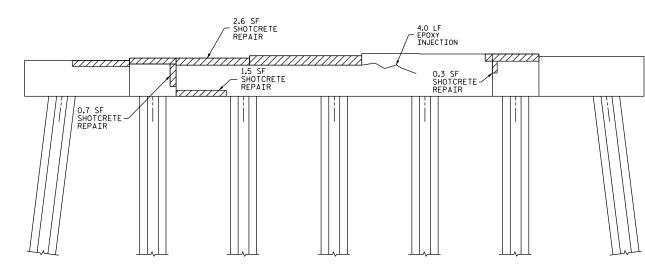
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

		CT NO. SQUC		<u>DA002<sup>-</sup> IK</u> co			
	BRIDG	E NO		27			
	SHEET 8 C	F 19					
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
SEAL 18565		E	3ent	Г 8			
ES SIGNEES	REVISIONS SHEET NO.						
HE SHE SHE	NO. BY:	DATE:	NO. BY	DATE:	S-15		
	1 2		3 4		TOTAL SHEETS 34		



BENT 9 (span k face) END VIEW





BENT 9 (SPAN J FACE)

DRAWN BY : \_\_\_\_

CHECKED BY : \_\_\_

DESIGN ENGINEER OF RECORD:

C L BRIGHT

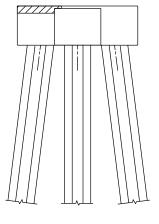
T. SHERRILL

\_ DATE : \_\_\_\_01/16\_\_\_

DATE : \_\_\_\_\_01/16\_\_\_

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

\_ DATE : \_\_\_\_





SUMMARY OF QUANTITIESREPAIRS BENT 9OUANTITIESESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME SFAREA CFVOLUME SFCAP0.00.00.00.0Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Im					
REPAIRS BENT 9ESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP0.00.0IIIIIIIIISHOTCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP51.221.4IPILE0.00.0IIIIIEPOXY RESIN INJECTIONLN. FTFTCAP8.0IIPILE0.0IIEPOXY COATINGSO. FTSO. FTSO. FT	SUMMARY OF QU	4 N T	ITI	ΕS	
CONCRETE REPAIRS AREA VOLUME SF CAP O.O VOLUME SF CAP O.O VOLUME SF CAP SHOTCRETE REPAIRS AREA VOLUME SF CAP SI CA	DEDATOS RENT Q		QUANTI	TIES	
CAP         O.O         O.O         SF         CF         SF         CF           CAP         O.O         O.O         O.O         O.O         O.O         O.O           SHOTCRETE REPAIRS         AREA SF         VOLUME CF         AREA SF         VOLUME CF         AREA SF         VOLUME CF           CAP         51.2         21.4         O.O         O.O         O.O           PILE         O.O         O.O         O.O         O.O         O.O           CAP         S1.2         21.4         O.O         O.O         O.O         O.O           PILE         O.O         O.O         O.O         O.O         O.O         O.O           PILE         O.O         O.O         O.O         O.O         O.O         O.O           EPOXY RESIN INJECTION         LN. FT         FT         FT         O.O         O.O         O.O           EPOXY COATING         SO. FT         SO. FT         SO. FT         SO. FT         SO.         SO. FT	REFAIRS DENI 9	EST	IMATE	A	CTUAL
Image: Second system     Image: Second system       SHOTCRETE REPAIRS     AREA SFF     VOLUWE CF       CAP     51.2     21.4       PILE     0.0     0.0       EPOXY RESIN INJECTION     LN. FT       CAP     8.0       PILE     0.0       CAP     8.0       PILE     0.0       SECOND     SO.       FT     SC. FT	CONCRETE REPAIRS				
SHOTORICIC IC HERATION     SF     CF     SF     CCF       CAP     51.2     21.4     Image: Comparison of the second s	CAP	0.0	0.0		
SHOTORICIC IC HERATION     SF     CF     SF     CCF       CAP     51.2     21.4     Image: Comparison of the second s					
SHOTORICIC IC HERATION     SF     CF     SF     CCF       CAP     51.2     21.4     Image: Comparison of the second s					
SHOTORICIC IC HERATION     SF     CF     SF     CCF       CAP     51.2     21.4     Image: Comparison of the second s					
Diametric         Diametric <thdiametric< th=""> <thdiametric< th=""> <thd< td=""><td>SHOTCRETE REPAIRS</td><td></td><td></td><td></td><td></td></thd<></thdiametric<></thdiametric<>	SHOTCRETE REPAIRS				
Image: Second	CAP	51.2	21.4		
CAP     8.0       PILE     0.0       EPOXY COATING     S0. FT	PILE	0.0	0.0		
CAP     8.0       PILE     0.0       EPOXY COATING     S0. FT					
CAP     8.0       PILE     0.0       EPOXY COATING     S0. FT					
PILE 0.0 EPOXY COATING SQ. FT FT	EPOXY RESIN INJECTION				
EPOXY COATING SQ. FT FT.	CAP		8.0		
FT FT	PILE		0.0		
FT FT					
FT FT					
TOP OF CAP 174	EPOXY COATING		SQ. FT		SQ. FT
	TOP OF CAP		174		

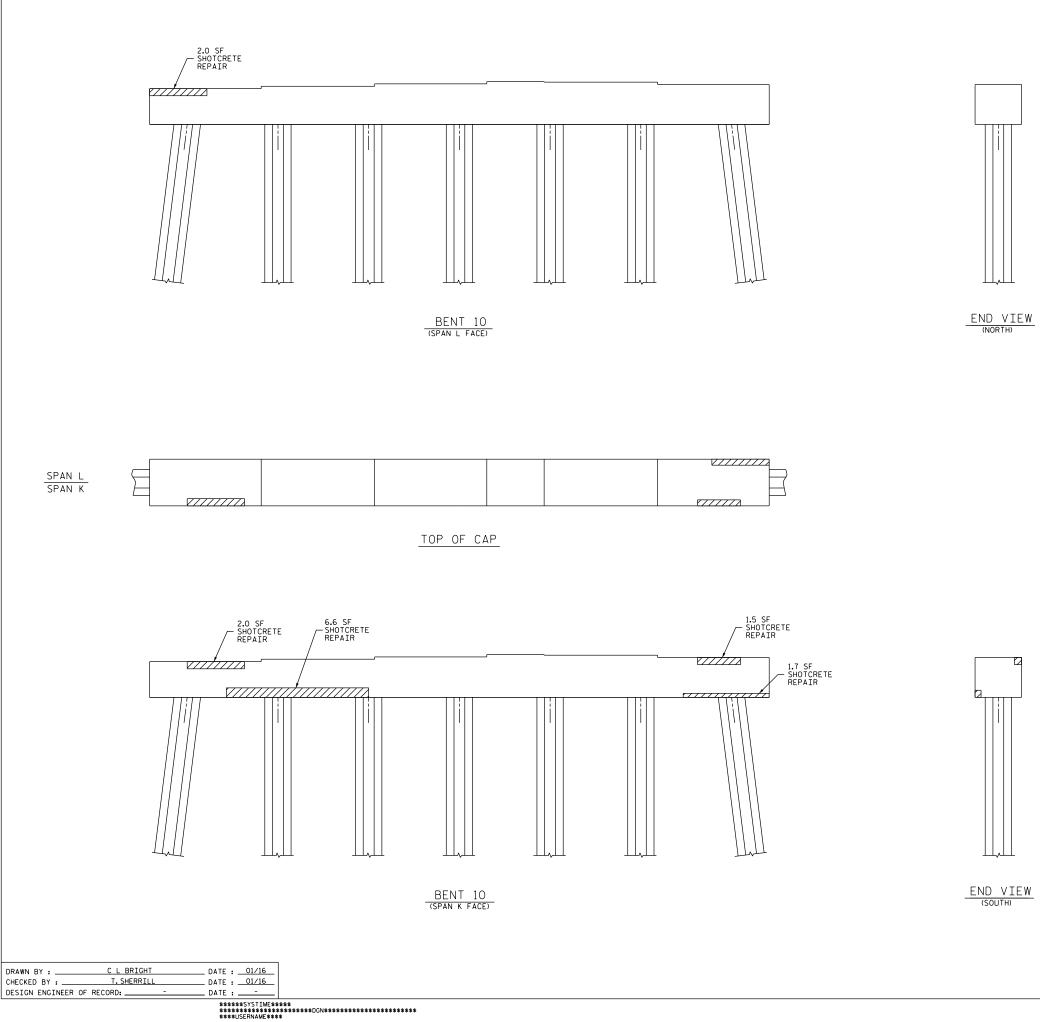
NOTES

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENCINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	PROJEC PA BRIDGE	<u>SQUO</u>	ΤΑΝ			1 UNTY
	SHEET 9 O	F 19				
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SEAL 18565		E	EN	ΓS	)	
ES, NOINEE		REVIS	IONS			SHEET NO.
HAY SHELIN	NO. BY:	DATE:	NO. B1	r:	DATE:	S-16
	1		3 4			total sheets 34
	· · · · · · · · · · · · · · · · · · ·					



SUMMARY OF QUA	4 N T	ITI	ΕS	
REPAIRS BENT 10		QUANTI	TIES	
REFAIRS BENT TO	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	13.8	5.8		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
PILE		0.0		
EPOXY COATING		SQ. FT		SQ. FT
TOP OF CAP		141		

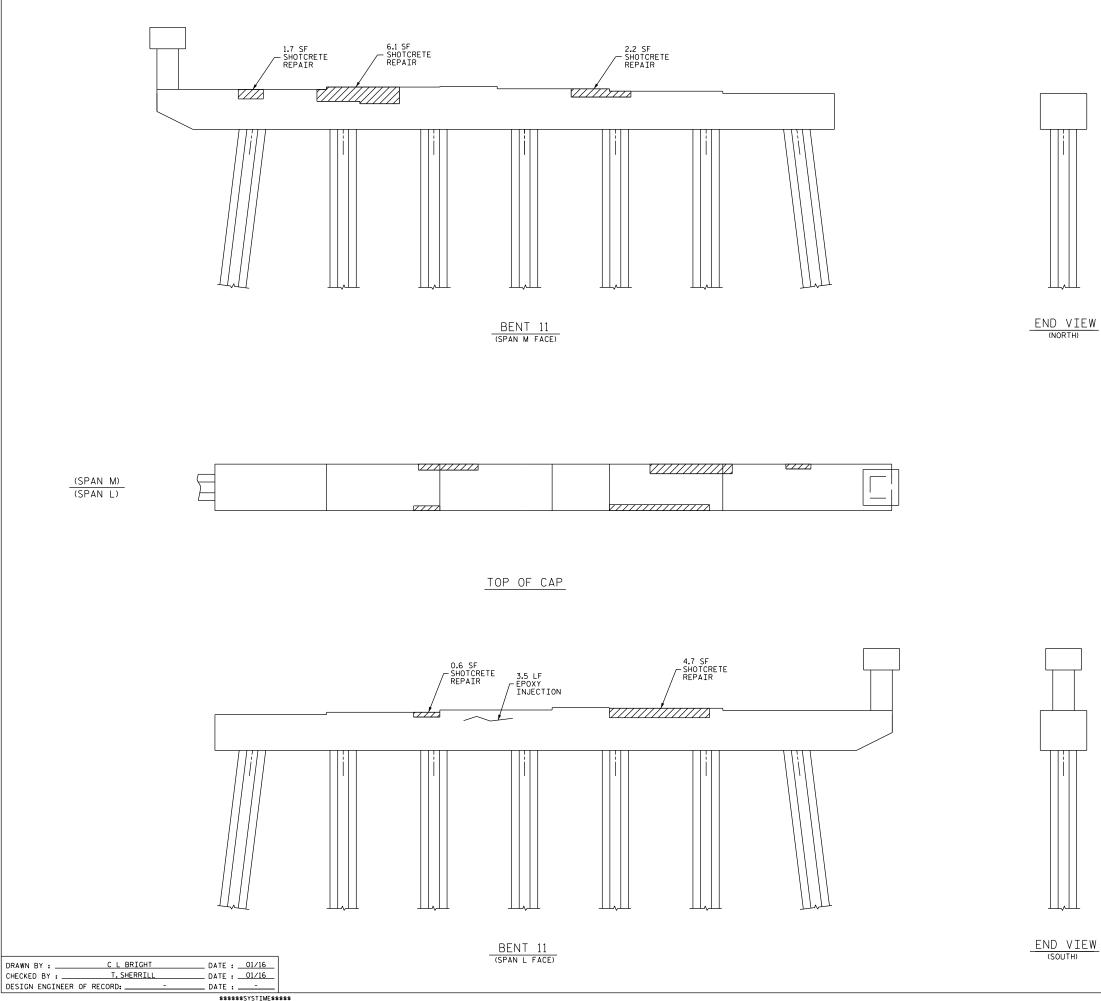
NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES, FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

BRIDGE NO			SQUO	TAN	112	271 County
DEPARTMENT OF TRANSPORTATION						
BENT 10 SEAL 18565 NO.INEE M. SHUTHING NO. BY: DATE: NO. BY: DATE: SHEET NO. S-17 1 2 2 4 3 3 4 3 4 3 3 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 3 3 4 3 3 3 3 4 3 4 3 3 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3		DEPA		OF T	RANSPOR	RTATION
REVISIONS         SHEET NO.           M.         SHEET NO.         SHEET NO.	THE CAROLINE SEAL 18565		В	Ent	10	
Mo.         BY:         DATE:         NO.         BY:         DATE:         S-17           M.         SHET:         I         I         I         III         IIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ES CINER OF		REVIS	SIONS		SHEET NO.
Mi.         Total         Streets         Stre	HAY SHETIN		DATE:		DATE	
		12		-		



L \$\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

SUMMARY OF QUANTITIESREPAIRS BENT 11OUANTITIESESTIMATEACTUALCONCRETE REPAIRSAREA VOLUME CFAREA VOLUME CFAREA VOLUME CFCAP0.00.00.0SHOTCRETE REPAIRSAREA VOLUME SFAREA VOLUME CFCAP15.36.4PILE0.00.0CAP15.36.4PILE0.00.0EPOXY RESIN INJECTIONLN. FTCAP3.5EPOXY COATINGSO. FTSO. FTTOP OF CAP151					
REPAIRS BENT IIESTIMATEACTUALCONCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP0.00.0IIIIIIIIISHOTCRETE REPAIRSAREA SFVOLUME CFAREA SFVOLUME CFCAP15.36.4IPILE0.00.0IIIIIEPOXY RESIN INJECTIONLN. FTFTCAP3.5IPILE0.0IEPOXY COATINGSO. FTSO. FT	SUMMARY OF QU,	αΝΤ	ITI	ΕS	
CONCRETE REPAIRS AREA VOLUME SF CAP O.O VOLUME SF CAP O.O VOLUME SF CAP SHOTCRETE REPAIRS AREA VOLUME SF CAP SF CA			QUANTI	TIES	
CAP         O.O         O.O         SF         CF         SF         CF           SHOTCRETE REPAIRS         AREA SF         VOLUME CF         AREA SF         VOLUME CF         AREA SF         VOLUME CF           CAP         15.3         6.4             PILE         0.0         0.0             EPOXY RESIN INJECTION         LN. FT         FT         LN. FT           PILE         0.0             CAP         3.5             PILE         0.0              EPOXY RESIN INJECTION         LN. FT         FT         SO. FT         SO. FT         SO. FT	REFAIRS DENT II	EST	IMATE	A	CTUAL
Image: Second system     Image: Second system       SHOTCRETE REPAIRS     AREA SFF     VOLUWE CF       CAP     15.3     6.4       PILE     0.0     0.0       EPOXY RESIN INJECTION     LN. FT       CAP     3.5       PILE     0.0       Image: Second system       CAP     3.5       PILE     0.0       Image: Second system     Second system	CONCRETE REPAIRS				
SHOTORICIC IC MERTING     SF     CF     SF     CF       CAP     15.3     6.4	CAP	0.0	0.0		
SHOTORICIC IC MERTING     SF     CF     SF     CF       CAP     15.3     6.4					
SHOTORICIC IC MERTING     SF     CF     SF     CF       CAP     15.3     6.4					
SHOTORICIC IC MERTING     SF     CF     SF     CF       CAP     15.3     6.4					
DILE         D.0         D.0           PILE         0.0         0.0           EPOXY RESIN INJECTION         LN. FT         LN. FT           CAP         3.5         -           PILE         0.0         -           EPOXY COATING         SO. FT         SO. FT	SHOTCRETE REPAIRS				
Image: Second	CAP	15.3	6.4		
CAP     3.5       PILE     0.0       EPOXY COATING     S0. FT	PILE	0.0	0.0		
CAP     3.5       PILE     0.0       EPOXY COATING     S0. FT					
CAP     3.5       PILE     0.0       EPOXY COATING     S0. FT					
PILE 0.0 EPOXY COATING SQ. FT FT.	EPOXY RESIN INJECTION				
EPOXY COATING SQ. FT FT.	CAP		3.5		
FT FT	PILE		0.0		
FT FT					
FT FT					
TOP OF CAP 151	EPOXY COATING		SO. FT		SQ. FT
	TOP OF CAP		151		

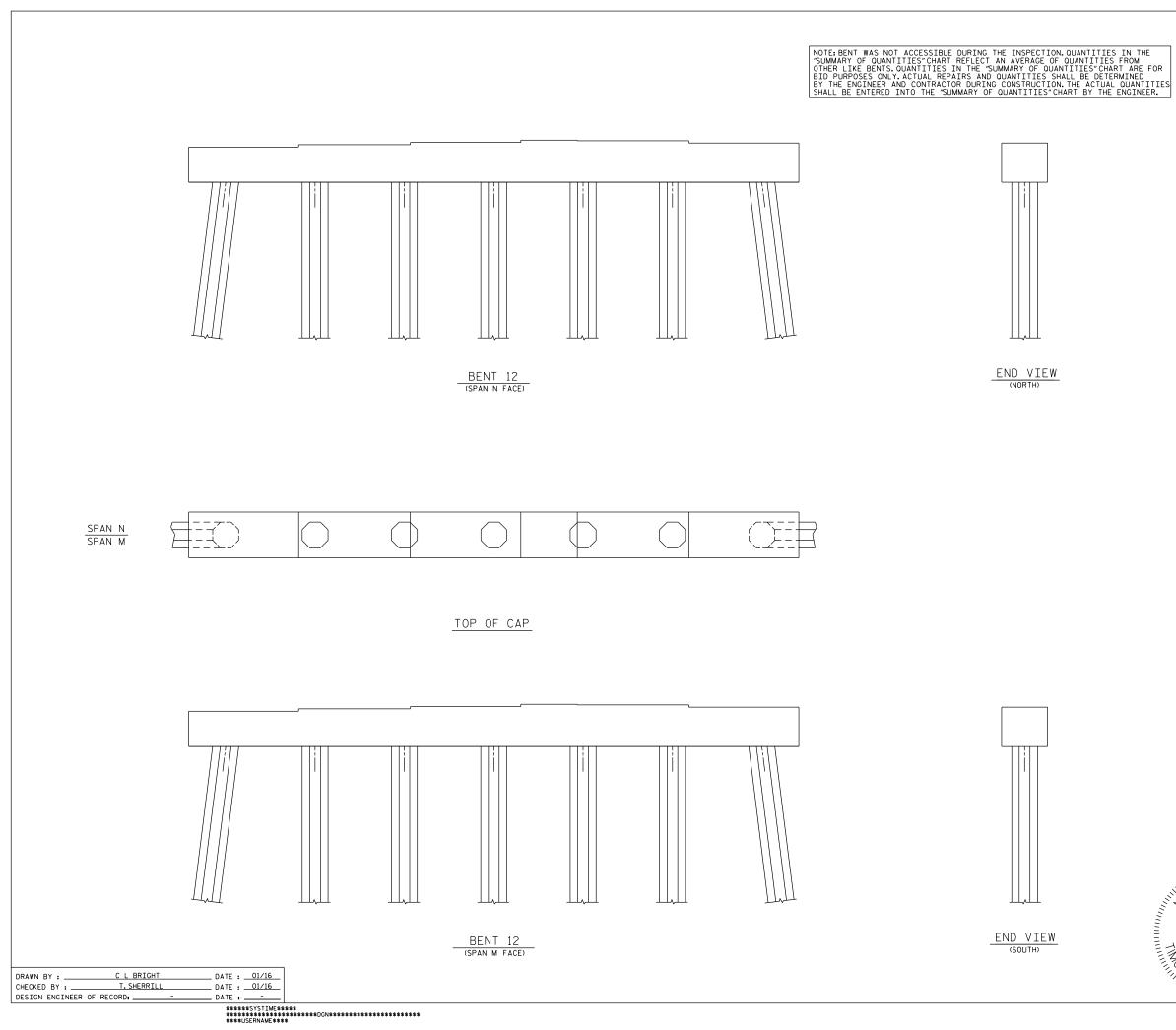
NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING.SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	projec <u>Pa</u>	CT NO. SQUC		ANK	<u>10027</u> 00	
	BRIDGE	E NO		4	27	
	SHEET 11 C	DF 19				
	DEPA	-	OF	NORTH CAR TRAN ALEIGH	olina NSPORTA	TION
SEAL 18565		В	ΕN	11	11	
10 NGINE S		REVI	SIONS	5		SHEET NO.
HE SHELIN	NO. BY:	DATE:	N0.	BY:	DATE:	S-18
	1 2		3 4			total sheets 34





SUMMARY OF QUANTITIES							
REPAIRS BENT 12		QUANT I		CTUAL			
CONCRETE REPAIRS	ARFA	IMATE VOLUME	AREA	VOLUME			
	SF	CF	SF	CF			
САР	0.0	0.0					
SHOTCRETE REPAIRS	AREA	VOLUME CF	AREA SF	VOLUME CF			
CAP	12.5	5.2					
PILE	0.0	0.0					
EPOXY RESIN INJECTION	•	LN. FT		LN. FT			
САР		3.3					
PILE		0.0					
EPOXY COATING		SQ. FT		SQ. FT			
TOP OF CAP		141					

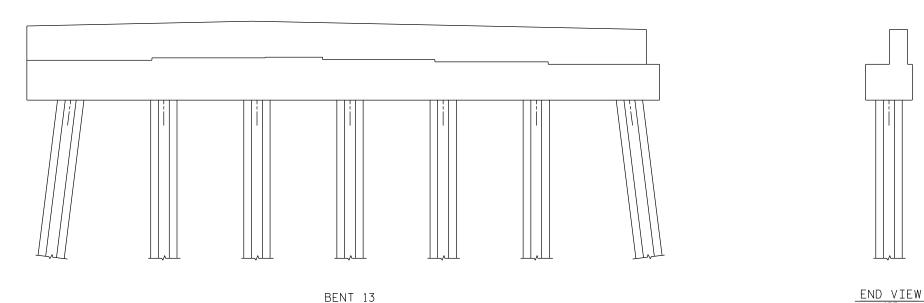
NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

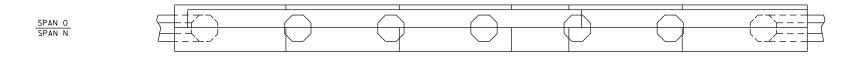
FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING.SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

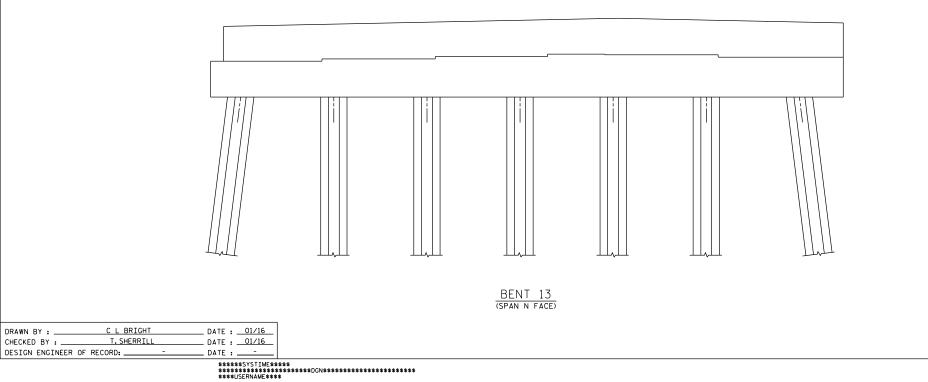
PROJECT NO. <u>DAOO271</u> <u>PASQUOTANK</u> count	Ý
BRIDGE NO27	
SHEET 12 OF 19	
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH	
RALEIGH RALEIGH BENT 12 BENT 12 REVISIONS REVISIONS SHEET NO. BY: DATE: NO. BY: DATE: 1 2 3 SHEET S- 1 2 4 3 3 3 3 3 3 3 3 3 3 3 3 3	
REVISIONS SHEET	
NO. BY: DATE: NO. BY: DATE: S-	
M. Strive         1         3         Torns           2         4         3	



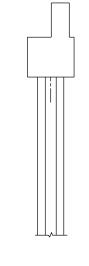
<u>BENT 1</u>3 SPAN 0





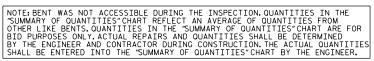


DRAWN BY : \_\_\_\_



(NORTH)

END VIEW (SOUTH)



#### SUMMARY OF QUANTITIES QUANTITIES REPAIRS BENT 13 ESTIMATE ACTUAL AREA VOLUME AREA VOLUME SF CF SF CF CONCRETE REPAIRS CAP 0.0 0.0 AREA VOLUME AREA VOLUME SF CF SF CF SHOTCRETE REPAIRS CAP 9.2 3.8 PILE 0.0 0.0 EPOXY RESIN INJECTION LN. FT LN. FT CAP 2.5 PILE 0.0

SQ. FT

74

SQ. FT

NOTES

TOP OF CAP

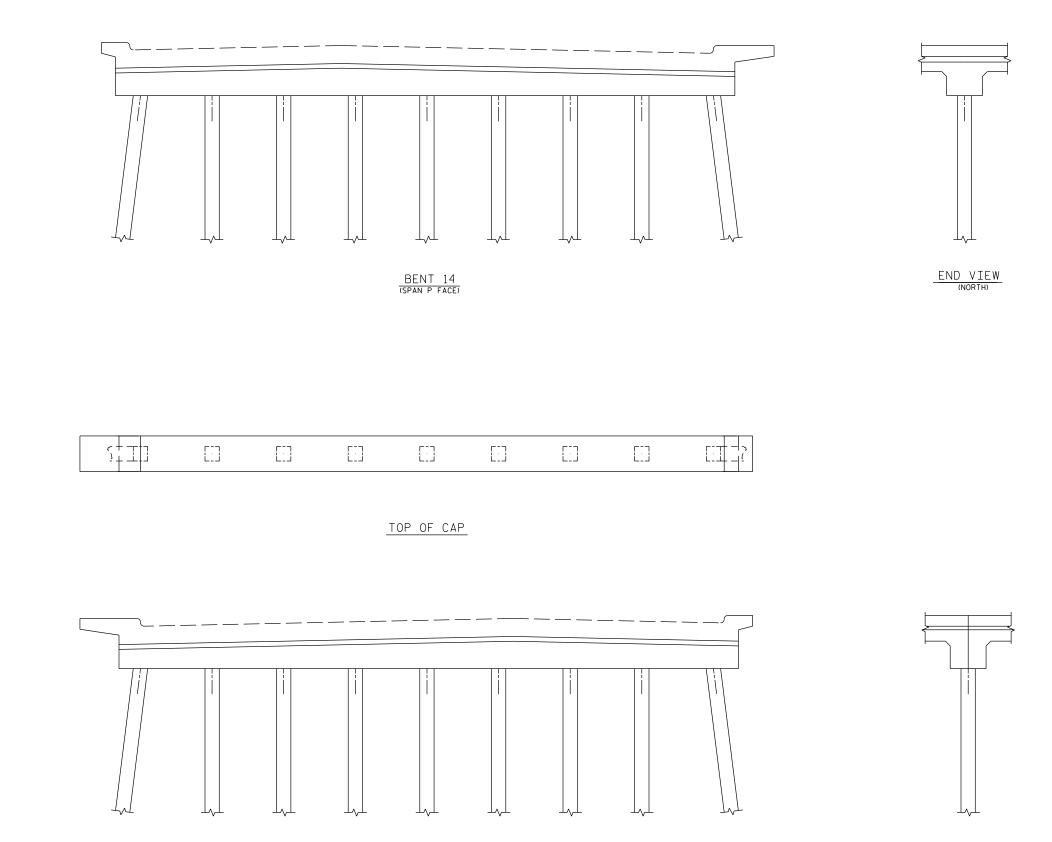
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING (SPAN N SIDE ONLY)

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

	projec <u>Pa</u>	T NO. <u>Squo</u>			AOO2	271 UNTY
	BRIDGE	E NO			27	
	SHEET 13	OF 19				
	DEPA	-	OF	RTH CARC TRAN EIGH	NSPORTA	TION
SEAL 18565		В	ΕN	Τ 1	13	
E TO VGINEE OF		REVIS	SIONS			SHEET NO.
CHER IN	NO. BY:	DATE:		BY:	DATE:	S-20
$M_{\bullet} \supset M_{\bullet} \supset M_{\bullet}$	1 2		3 4			sheets 34





DRAWN BY : \_\_\_\_

CHECKED BY : \_\_\_

DESIGN ENGINEER OF RECORD:

C L BRIGHT

T. SHERRILL

\_ DATE : \_\_\_\_01/16\_\_\_

DATE : \_\_\_\_\_01/16\_\_\_

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$

\_ DATE : \_\_\_\_

SUMMARY OF QU	ANT	ITI	ΈS	
REPAIRS BENT 14		QUANTI	TIES	
REFAIRS DENI 14	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.3	3.9		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
САР		2.0		
PILE		0.0		

NOTES

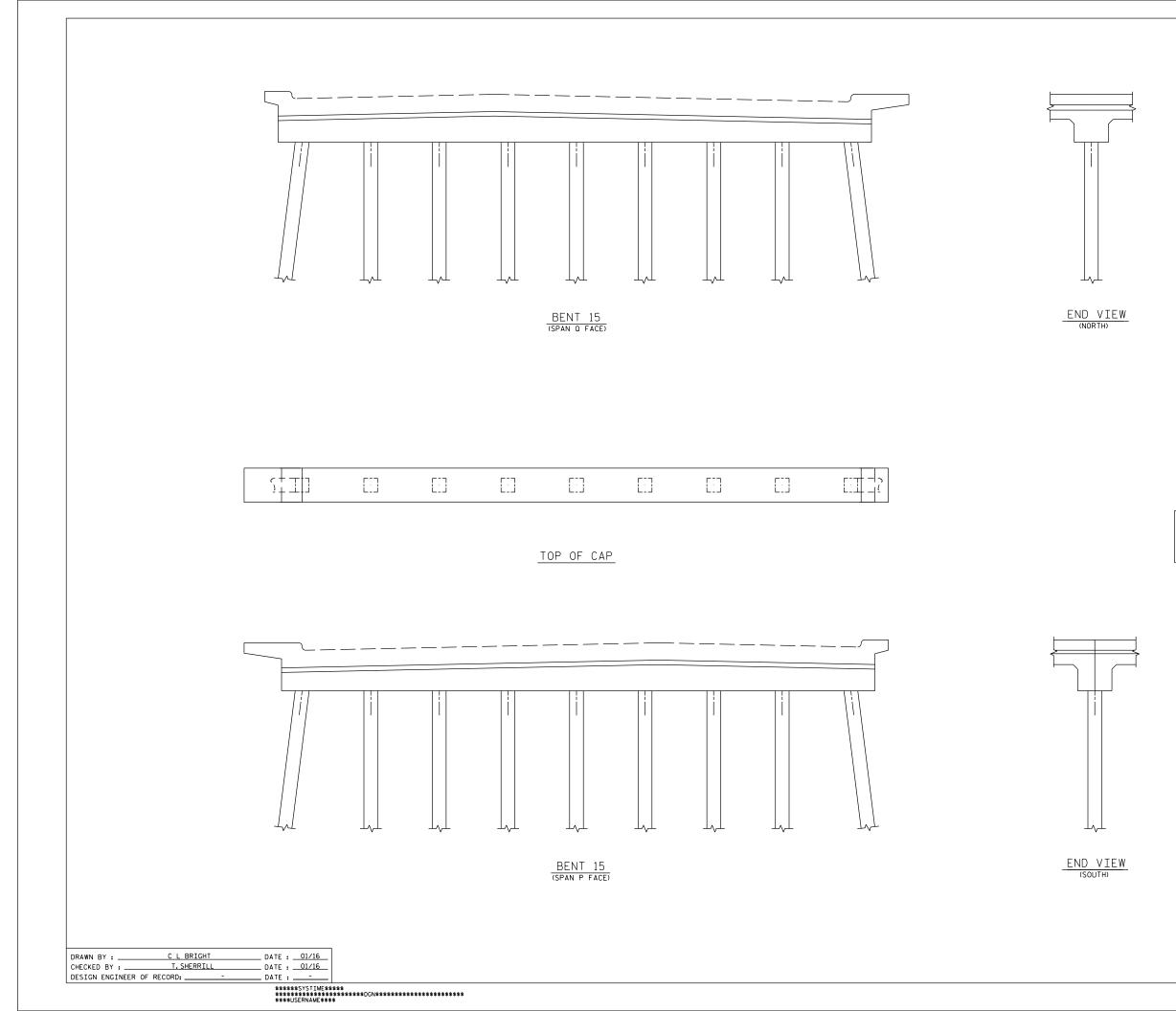
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL OUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	BRIDGE	<u>SQUO</u> E no	T,	<u>ank</u>		<u>'1</u> DUNTY
	SHEET 14 DEPA	STAT		NORTH CAR	OLINA NSPORTA	TION
SEAL 18565		В		ALEIGH	14	
10, VGINEL ES		REVIS	SION	S		SHEET NO.
11 AY CHELIN	NO. BY:	DATE:	N0.	BY:	DATE:	S-21
			3			TOTAL SHEETS
	2		4			34



SUMMARY OF QL	JANT	ITI	ΕS	
REPAIRS BENT 15		QUANTI	TIES	
REFAIRS BENT IS	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.3	3.9		
PILE	0.0	0.0		
EPOXY RESIN INJECTION	·	LN. FT		LN. FT
CAP		2.0		
PILE		0.0		

NOTES

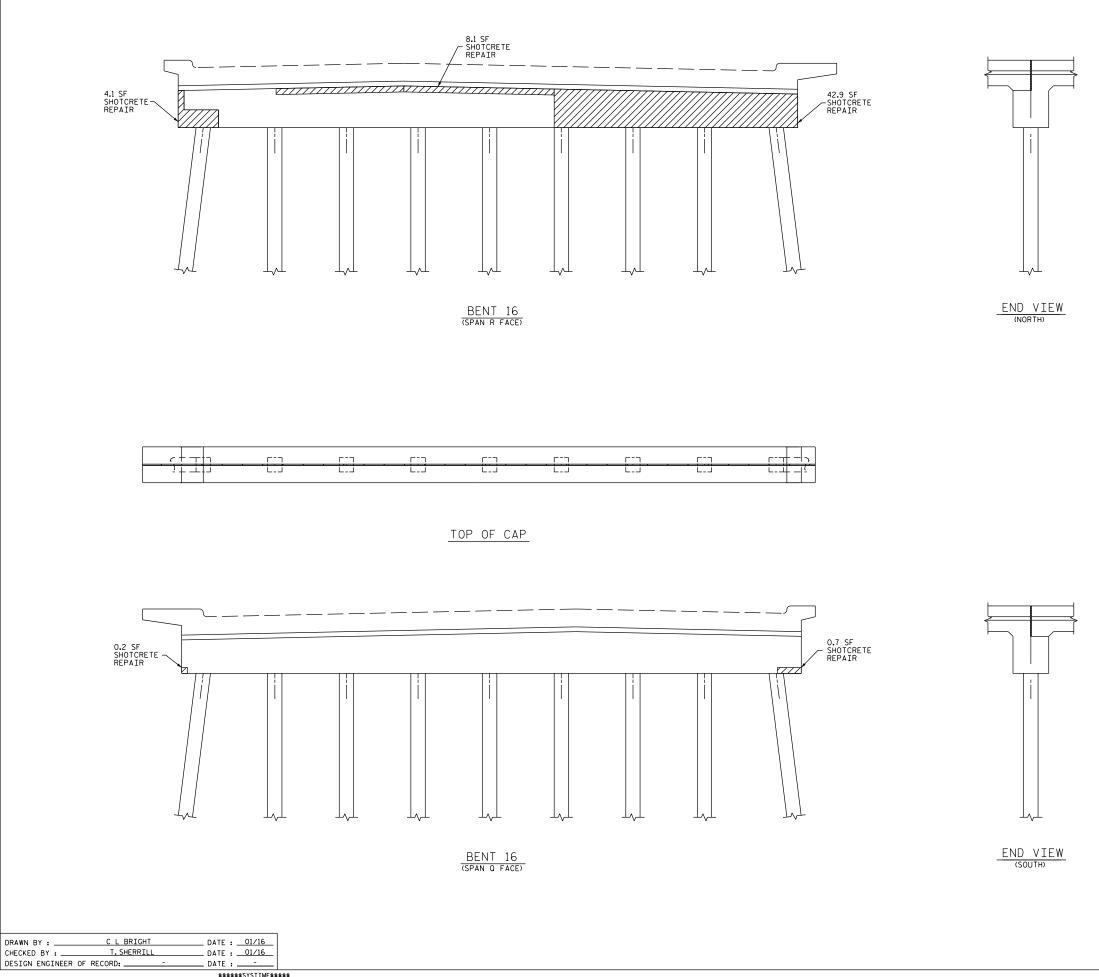
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL OUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	projec PA	T NO. SQUO				1 UNTY
	BRIDGE	E NO		2	27	
	SHEET 15	OF 19				
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SEAL 18565		В	E١	NT (	15	
E TO VOINFEX OF		REVIS	SION	IS		SHEET NO.
THE ALL CHERNING	NO. BY:	DATE:	NO.	BY:	DATE:	S-22
M. Show	1		3 4			total sheets 34



\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QU/	4 N T	ITI	ΕS	
REPAIRS BENT 16		QUANTI		
REFAIRS DENT 18	EST	IMATE	AC	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	56.0	23.3		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
PILE		0.0		

NOTES

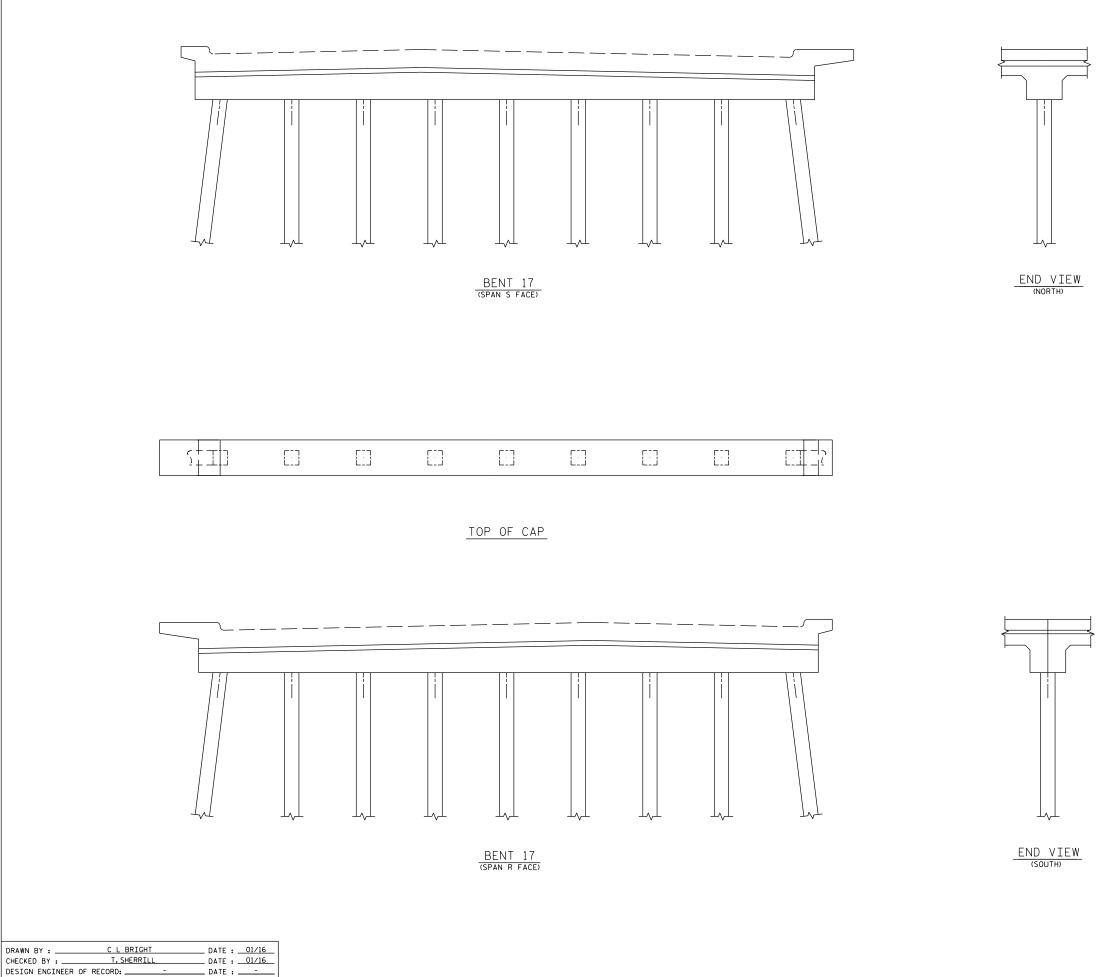
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION, QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED QUANTITIES. QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL QUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	<u> </u>	SQUO	TANK	00	'1 DUNTY		
	BRIDGE	E NO		27			
	SHEET 16	OF 19					
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
SEAL 18565		В	ENT	16			
ES SIGNER ES		REVIS	SIONS		SHEET NO.		
HE SHELLING	NO. BY:	DATE:	NO. BY:	DATE:	S-23		
	1		3 4		TOTAL SHEETS S-		
			~	1			



SUMMARY OF QUA	4NT	ITI	ΈS	
REPAIRS BENT 17		QUANTI	TIES	
REFAINS BENT IT	EST	IMATE	AC	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.3	3.9		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
PILE		0.0		

NOTES

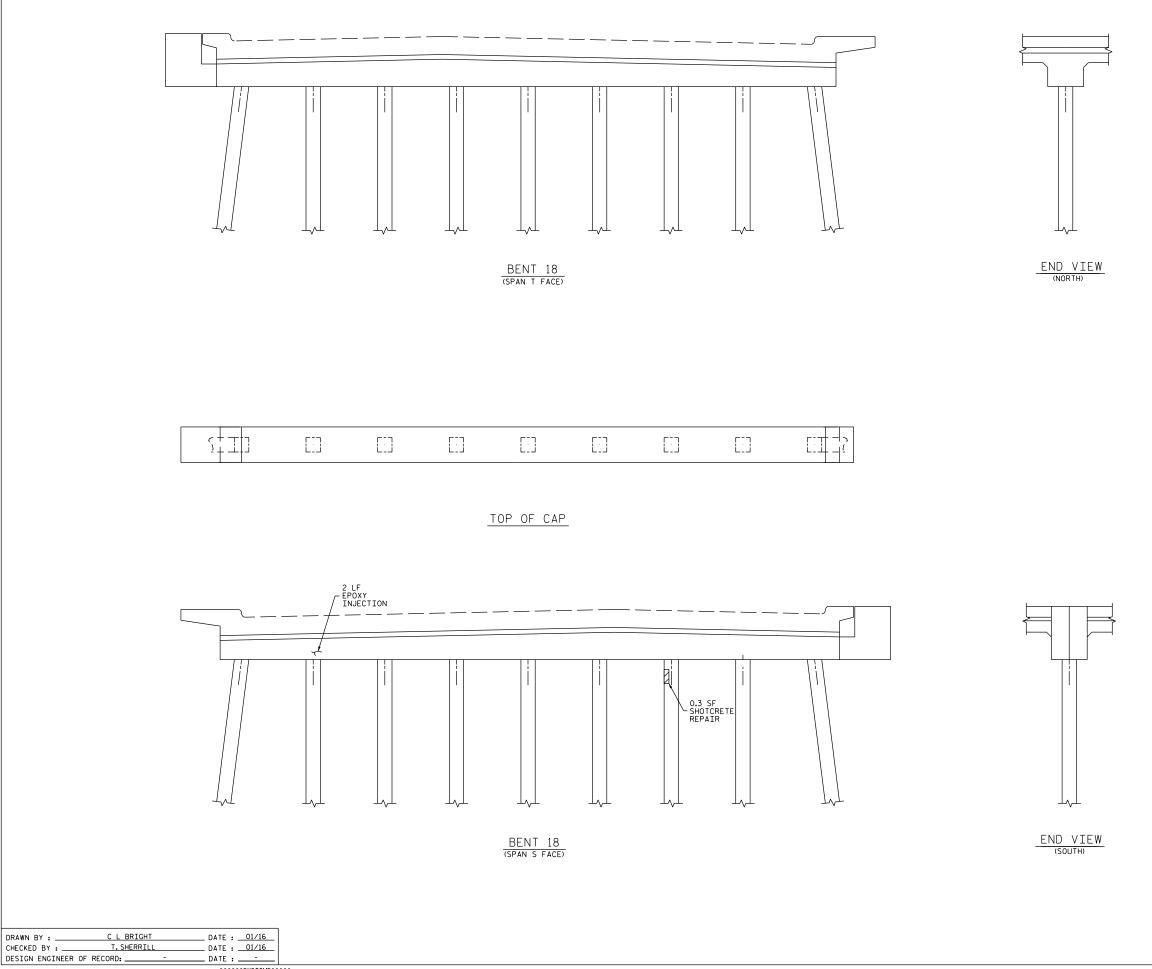
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL OUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	BRIDGE	<u>SQUO</u> E no	Т	ANK	<u>40027</u> C0 27	' <u>1</u> UNTY
SEAL 18565 M. SHER	SHEET 17 OF 19 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH BENT 17					
FOX VGINEE		REVIS		IS		SHEET NO.
M SHE	NO. BY:	DATE:	NO.	BY:	DATE:	S-24
	12		3 4			total sheets 34



DRAWN BY : \_\_\_\_

CHECKED BY : \_\_\_

SUMMARY OF QU	ΔΝΤ	ITI	ΕS	
REPAIRS BENT 18		QUANTI	TIES	
REFAIRS BENT 18	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.3	3.9		
PILE	0.3	0.1		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
PILE		0.0		

NOTES

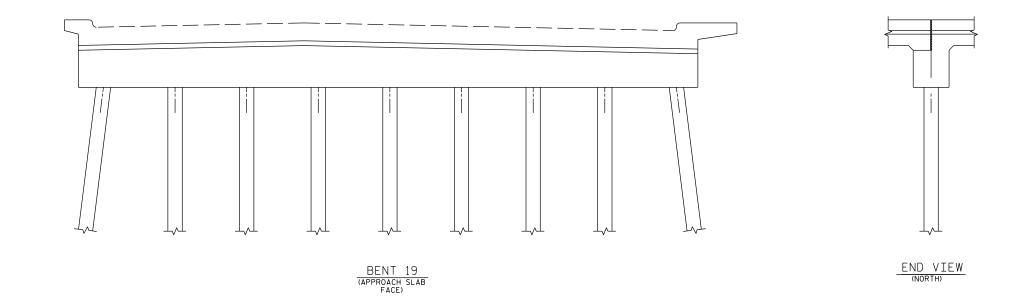
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER. THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

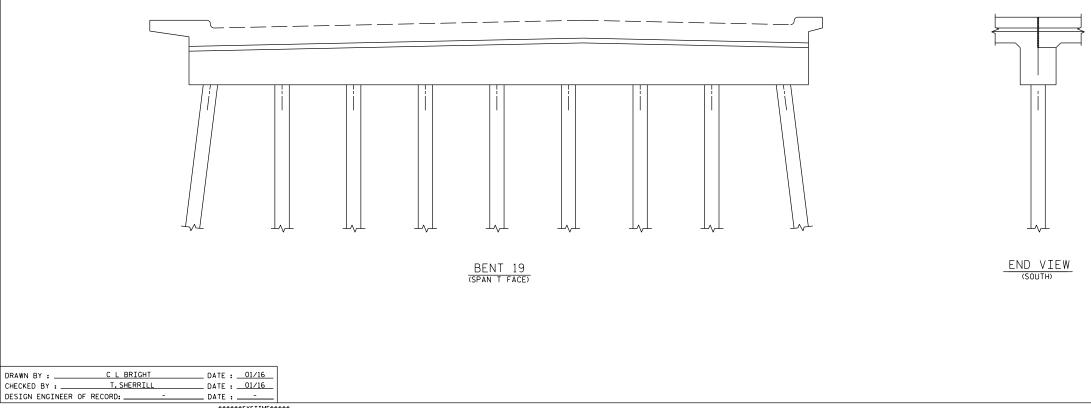
NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED OUANTITIES. OUANTITIES IN THE "SUMMARY OF OUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND OUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL OUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

	BRIDGE	<u>SQUO</u> E no	Τ	ANK		<u>1</u> unty
SHEET 18 OF 19 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATIO RALEIGH BENT 18 SEAL 18565 NO BY: DATE: NO BY: DATE: 18 10 20 43 10 20 43 10 20 10 10 10 10 10 10 10 10 10 1						TION
TO, MGINEER OF		REVIS	510	٧S		SHEET NO.
HE SHET IN	NO. BY:	DATE:	N0.	BY:	DATE:	S-25
	1		3 4			TOTAL SHEETS
	ß		싹			34





TOP OF CAP



\$\$\$\$\$\$YSTIME\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DCN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QU	4 N T	ITI	ΕS	
REPAIRS BENT 19		QUANTI	TIES	
REFAINS BENT IS	EST	IMATE	AC	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
САР	9.3	3.9		
PILE	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
PILE		0.0		

NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE OUANTITIES ENTERED INTO THE REPAIRS SUMMARY OF QUANTITIES TABLE.

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

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONARY PLATES.FOR EPOXY COATING, SEE SPECIAL PROVISIONS. CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

NOTE: BENT WAS ONLY VISUALLY ACCESSIBLE DURING THE INSPECTION, QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART REFLECT ONLY VISUAL DAMAGE AND ESTIMATED QUANTITIES. QUANTITIES IN THE "SUMMARY OF QUANTITIES" CHART ARE FOR BID PURPOSES ONLY. ACTUAL REPAIRS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER AND CONTRACTOR DURING CONSTRUCTION. THE ACTUAL QUANTITIES SHALL BE ENTERED INTO THE "SUMMARY OF QUANTITIES" CHART BY THE ENGINEER.

PROJECT	NO	00271
PASC	<u>duotank</u>	COUNTY

BRIDGE NO.\_

SHEET 19 OF 19

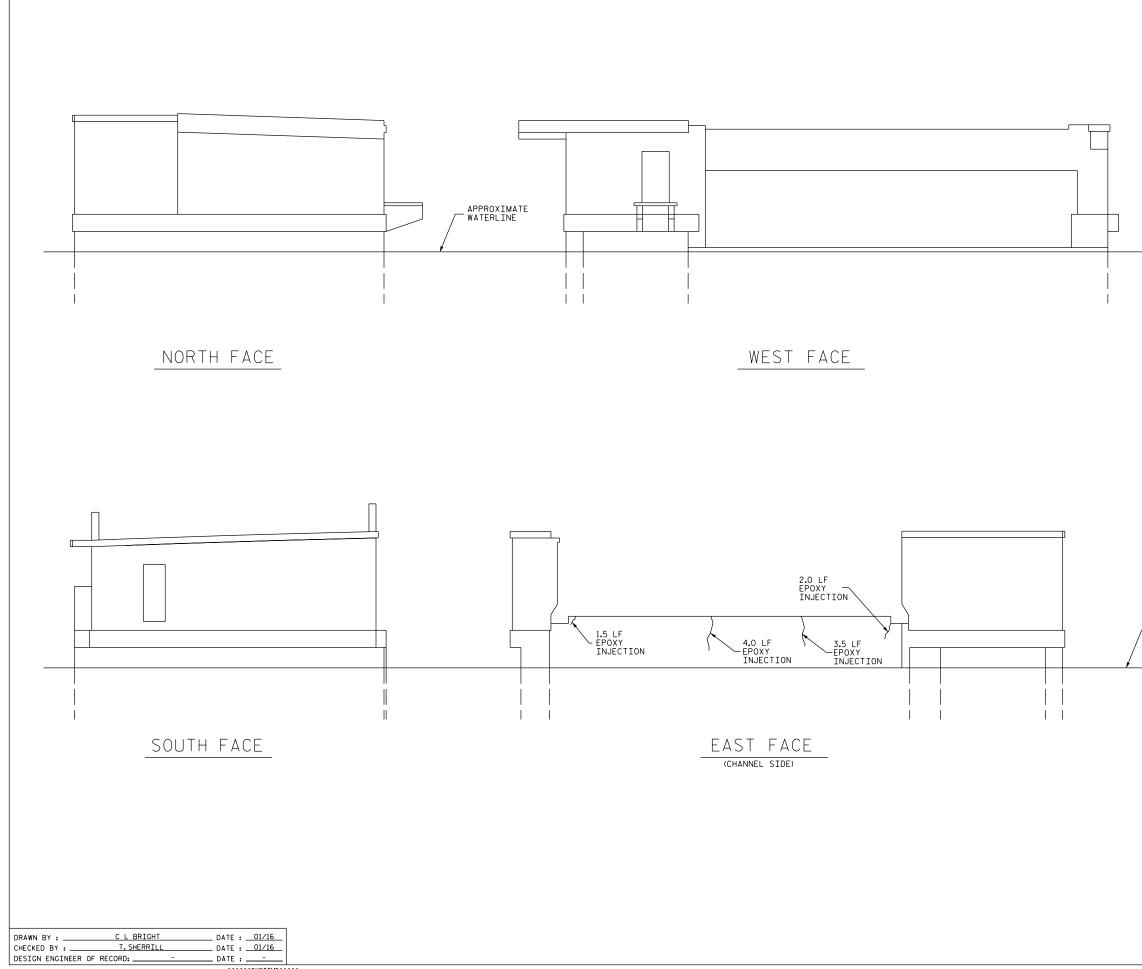
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

\_ \_

# BENT 19



		SHEET NO.				
10.	BY:	DATE:	N0.	BY:	DATE:	S-26
1			S			TOTAL SHEETS
2			Þ			34



SUMMARY OF QUA	NTI	TIE	S	
REPATRS BENT 12		QUANTI	TIES	
	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LF. FT		LF. FT
CAP		11.0		

# NOTES

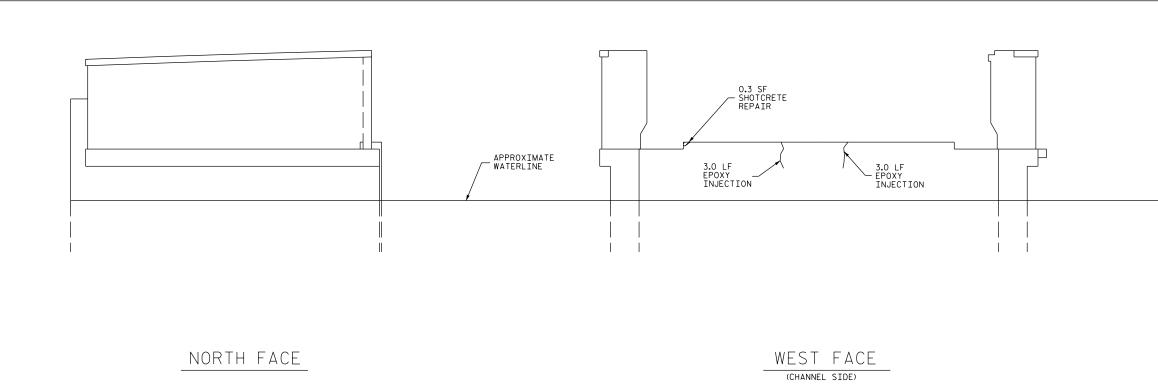
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED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

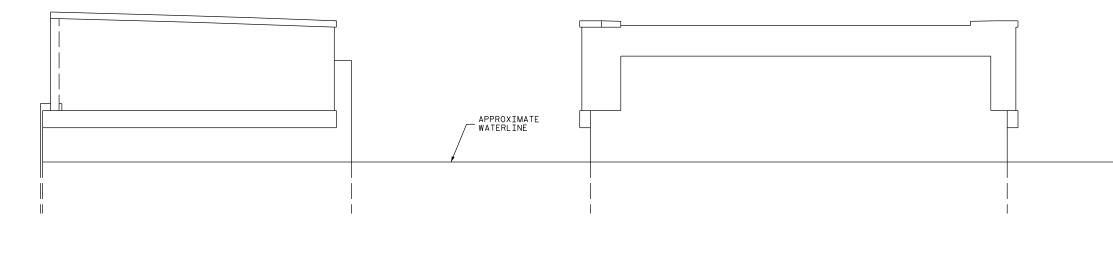
FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

- APPROXIMATE WATERLINE

	BRIDGE	<u>SQUO</u> E no	TA	ANK	<u>0027</u> co 27	' <u>1</u> UNTY
	SHEET 1 O	+ 2				
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SEAL 18565	PIER 1					
E SO SNOWER OF	REVISIONS SHEET NO.					
	NO. BY:	DATE:	N0.	BY:	DATE:	S-27
M. SHIM	1		3			TOTAL SHEETS
	2		4			34





SOUTH FACE

EAST FACE

DRAWN BY :	C L BRIGHT	DATE :01/16
CHECKED BY :	T. SHERRILL	DATE :01/16
DESIGN ENGINEER	OF RECORD:	DATE :

\$\$\$\$\$\$YSTIME\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

SUMMARY OF QUA	NTI	TIE	S	
REPAIRS BENT 12		QUANTI	TIES	
REFAIRS DENT 12	EST	IMATE	A	CTUAL
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.3	0.2		
EPOXY RESIN INJECTION		LF. FT		LF. FT
САР		6.0		

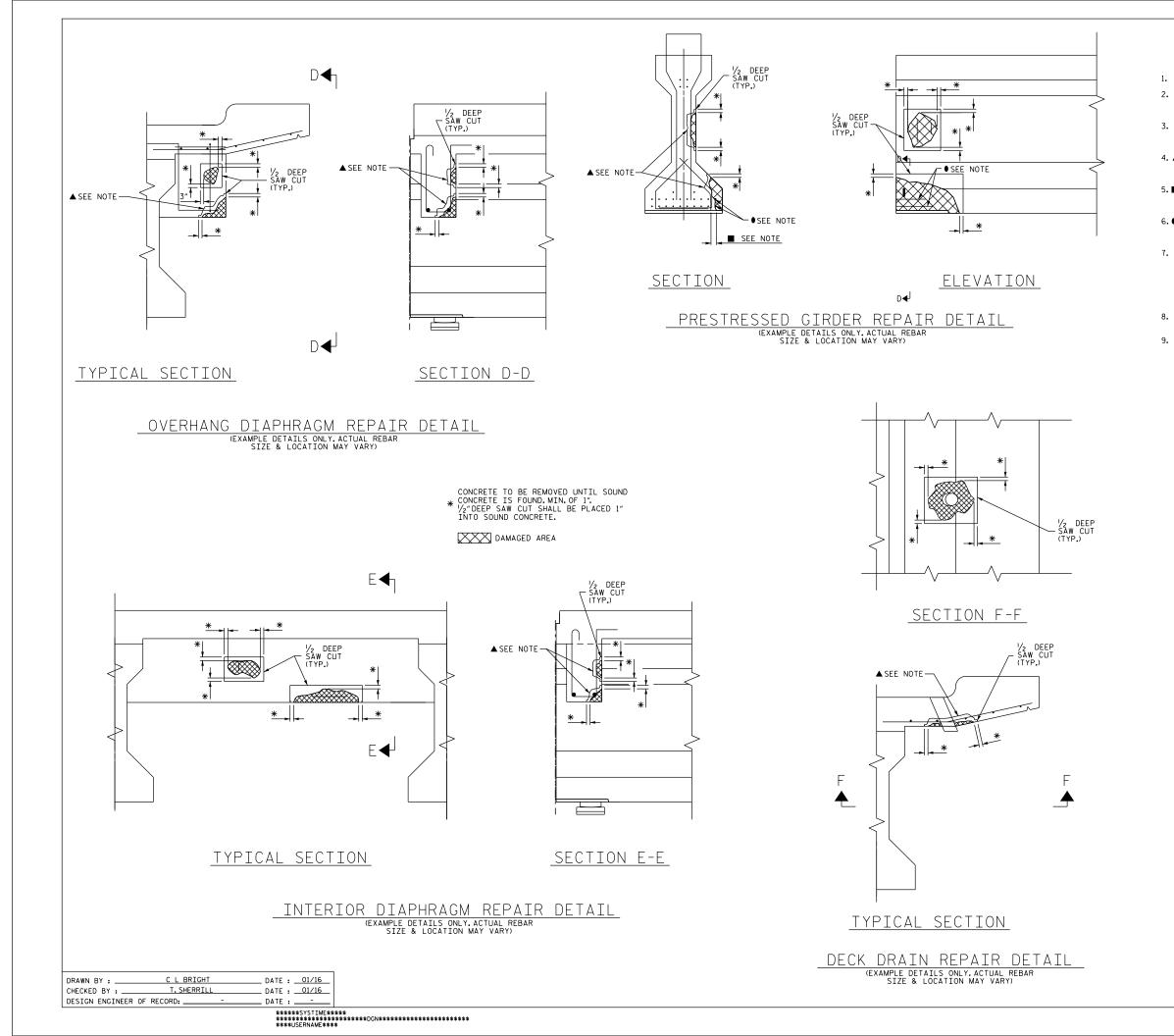
# NOTES

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE QUANTITIES ENTERED INTO THE REPAIR SUMMARY OF QUANTITIES TABLE.

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

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

		SQUO	T	<u>ank</u>	<u>0027</u> co 27			
	SHEET 2 C	)F 2						
	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH							
SEAL 18565 MGINEER RAU		F	ιI	ER	2			
ES VOINER OF		REVIS	SIO	٧S		SHEET NO.		
THE ALL CHERING	NO. BY:	DATE:	NO.	BY:	DATE:	S-28		
M. Shin	1		3 4			total sheets 34		



PRESTRESSED GIRDER REPAIR SEQUENCE:

- SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION.
- REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.SAW CUT AROUND REPAIR AREA TO A MIMIMUM DEPTH OF  $\frac{1}{2}$ .
- . REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM  $^{\prime\prime}_{\rm Z}{}^{\prime\prime}$  DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED.
- 4. ▲ IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1"MIN. BEHIND THE BAR.
- 5. ALL UNSOUND CONCRETE MUST BE REMOVED, HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
- 6. THE ENGINEER SHALL BE NOTIFIED OF ALL DEBONDED STRANDS. DEBONED STRANDS OUTSIDE OF REINFORCING STEEL MAYBE CUT BACK TO WHERE THE BOND IS STILL INTACT AT THE ENGINEERS DISCRETION.
- USE A WIRE BRUSH TO CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION. INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
- REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
- PREPARE SURFACE AND PLACE APPROVED SHOTCRETE OR REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR SHOTCRETE OR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.

NOTES:

PREPACKAGED MATERIAL IS REQUIRED.

CONSULT WITH THE ENGINEER TO DETERMINE PRELOADING REQUIREMENTS WHEN REPAIR IS WITHIN THE CENTER REGION OF THE BEAM (0.25L TO 0.75L).

FOR SHALLOW REPAIRS THAT DO NOT ENGAGE REINFORCEMENT, ANCHOR PATCH MATERIAL USING '/4°STAINLESS BOLTS, EPOXY ANCHORED WITH 2″EMBEDMENT, PLACE BOLTS IN A 6°GRID. USE A SHOTCRETE OR EPOXY PATCH MATERIAL FOR IMPROVED BOND. USE EXTREME CARE TO NOT DAMAGE STRANDS.

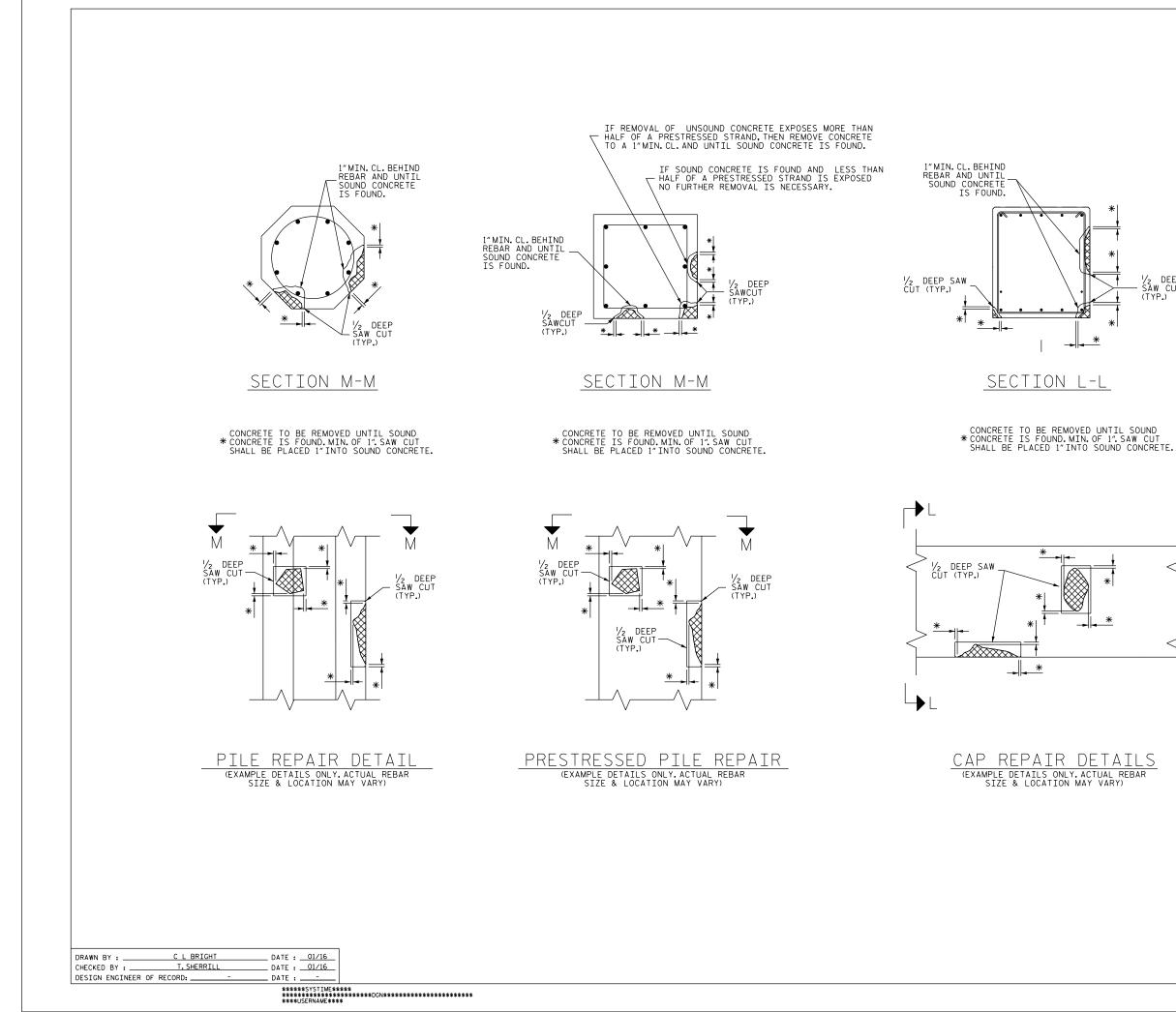
EXISTING REBAR TO REMAIN IN PLACE. CLEAN AND REPAIR AS NECESSARY.

OVERHANG DIAPHRAGMS SHALL BE REMOVED PRIOR BEAM REPAIRS AND REPLACED AFTER BEAM REPAIRS AND PAINTING ARE COMPLETE.

CONCRETE TO BE REMOVED UNTIL SOUND \* CONCRETE IS FOUND. MIN. OF 1". ½"DEEP SAW CUT SHALL BE PLACED 1" INTO SOUND CONCRETE.

DAMAGED AREA

	PF					<u>40027</u> CC			
	ΒF	RIDGE	E NO		6	27			
	SHE	ET 1 0	F 1						
		STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH							
CINER M. SHUMM		DIA	IRDEF & DR# TAIL	AIN					
8565									
VUINE RES			SHEET NO.						
M. SHILIN	NO.	BY:	DATE:	№. 3	BY:	DATE:	S-29 TOTAL		
//////////////////////////////////////	12			ا ا			TOTAL SHEETS 34		





DA00271 PROJECT NO.\_ PASQUOTANK \_ COUNTY 27 BRIDGE NO. SHEET 1 OF 1 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH TYPICAL CAP AND CAR COLUMN REPAIR DETAILS SEAL 18565 SHEET NO. REVISIONS DATE: NO. BY: S-30 NO. DATE: BY: SHK M. TOTAL SHEETS 34