

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR. SECRETARY

Minutes of Pre-Bid Conference

DATE: Monday, June 20, 2011

TIME: 1:00 p.m.

PROJECT: WBS 42575.3.1 / DO00124 / BK-5124 / Burke County Replacing

Bridge No. 307

LOCATION: Chief Engineer's Conference Room, Maintenance Building, Raleigh,

Wake County

A mandatory pre-bid conference was held for the above listed project. A list of attendees is attached to these minutes. Mr. Zaki Wafa of the Bridge Management Unit conducted the pre-bid conference. The bid opening date is at 2:00 p.m., Thursday, June 30, 2011. The following items are noted and are hereby made part of the contract:

- 1. The Engineer for this project is Mr. Garry Moore, Division 13 Bridge Program Manager.
- 2. Contractor shall pick up the precast prestressed concrete cored slabs and the precast concrete barrier rails from Burke County Maintenance Yard located at 2161 C, Mount Home Church road, Morganton, North Carolina 28655, and transport them to the construction site. Cored slab/barrier rail assemblies, transverse strands and anchorage as shown on plan sheet number 2, Detail "A" shall be provided by the contractor. All work covered herein shall be paid under the pay item number 41 and 43 and shall be full compensation for all material, tools, equipment, labor, and for all incidentals necessary to complete the work.

- 3. Revised bid sheet page 135 is attached adding a bid item for "Right of Way Markers."
- 4. Revised plan sheet numbers 2, 3, 4, 5, 6, 7, 9, 10, 12 and 13 are attached, reflecting the changes of cast-in-place concrete barrier rails to precast concrete barrier rails.
- 5. Environmental permit information is attached.

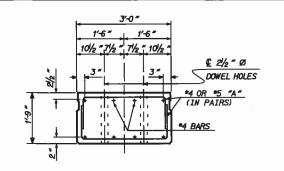
Attachments

Ec: Garry Moore, PLS Prospective Bidders File

REVISED 6-22-11

LINE NO.	ITEM NO.	SEC. NO.	DESCRIPTION	QUANTITY	UNIT COST	AMOUNT
31.	603000000-Е	1630	SILT EXCAVATION	75 CY		
32.	6036000000-Е	1631	MATTING FOR EROSION CONTROL	100 SY		
33.	6042000000-E	1632	1/4" HARDWARE CLOTH	75 LIN. FT.		
34.	6070000000-N	SP	SPECIAL STILLING BASIN	8 EACH		
35.	6071020000-E	SP	POLYACRYLAMIDE (PAM)	28 LB		
36.	6133000000-Е	SP	GENERIC EROSION CONTROL	LS	<u>LS</u>	
37.	8035000000-N	402	REMOVAL OF EXISTING STRUCTURES	LS	<u>LS</u>	
38.	8182000000-E	420	CLASS A CONCRETE (BRG)	136.9 CY		
39.	8210000000-N	422	BRIDGE APPROACH SLABS	LS	<u>LS</u>	
40.	8217000000-E	425	REINFORCING STEEL (BRG)	17,317 LB		
41.	8503000000-E	460	CONCRETE BARRIER RAIL (INSTALLATION ONLY)	90 LIN. FT.		
42.	8657000000-N	430	ELASTOMERIC BEARINGS	LS	<u>LS</u>	
43.	8762000000-E	430	3'-0" x 1'-9" PRESTRESSED CORED SLAB UNITS (INSTALLATION ONLY)	540 LIN. FT.		
44.	20000000-N	806	RIGHT OF WAY MARKERS	28 EACH		

TOTAL PROJECT BID



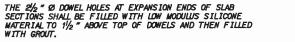
249" £-10 " 2-0/2 REINFORCING BAR TYPES BAR DIMENSIONS ARE OUT TO OUT

♥ 1/4"Ø H.S.TRANSVERSE POST-TENSIONING STRAND SHEATHED WITH A NON-CORROSIVE PIPE. SEE SPECIAL PROVISIONS. - HOLE FOR TRANSVERSE STRAND 1/4" WITH GROUT 1'-6"

ELEVATION VIEW

SECT ION B-B

DETAIL "A" GROUTED RECESS AT END OF POST-TENSIONED STRAND CORED SLABS

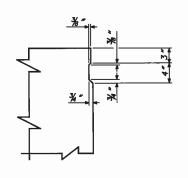


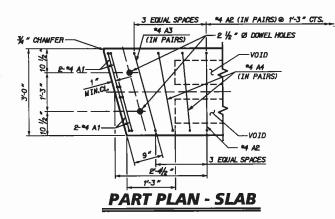
THE 2½ " DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT.

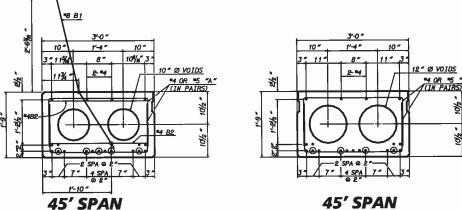
SLAB END ELEVATION

SHEATH CHART						
SPAN LENGTH	NUMBER OF SHEATHED STRANDS PER EXTERIOR SLAB SECTIONS	NUMBER OF SHEATHED STRANDS PER INTERIOR SLAB SECTIONS				
45'	*5@2"	*4@2"				

*** BOND SHALL BE BROKEN ON THESE STRANDS FOR A** DISTANCE OF 4 FEET FROM THE END OF THE SLAB







OSTRAND IS SHEATHED. 17 -1/2 " Ø H.S.STRANDS SEE SHEATH CHART. EXTÉRIOR SLAB SECTIONS

17 -1/2 " Ø H.S.STRANDS INTERIOR SLAB SECTIONS

GENERAL NOTES

ASSUMED LIVE LOAD - HS 20-44 OR ALTERNATE LOAD ING.

CONCRETE: FO

* (COMPRESSIVE STRENGTH @ TRANSFER OF STRESSING FORCE.)

ALL PRESTRESS STRANDS SHALL MEET THE REQUIREMENTS OF ASTM A416.

ALL PRESTRESS STRANDS SHALL BE 7 WIRE, LOW RELAXATION, HIGH STRENGTH CABLES IN ACCORDANCE WITH THE SPECIFICATIONS. SIZE TYPE AREA ULTIMATE STR. 1/2" Ø HIGH 0.153 🖾 41,300 * STR. PER CABLE

APPLIED FORCE

30,980 PER CABLE

EXP.JT.MAT'L.SHALL MEET THE

REQUIREMENTS OF AASHTO SPECIFICATION M 153 TYPE 1.TYPE II.OR TYPE III.

JOINT SEALER SHALL BE LOW MODULUS SILICONE SEALANT. SEE SECTION 1028-4 OF THE STANDARD SPECIFICATIONS. STRUCTURAL STEEL ITEMS SHALL BE OF A GRADE CONFORMING TO EITHER ASTM ASS OR ASTS, EXCEPT HIGH STRENGTH BOLTS. HIGH

STRENGTH BOLTS SHALL BE ASTM A325. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AS PER THE SPECIFICATIONS.

ALL MATERIAL AND WORKMANSHIP SHALL
COMPLY WITH THE APPLICABLE REQUIREMENTS
OF THE STANDARD SPECIFICATIONS FOR ROADS
AND STRUCTURES OF THE NC DEPARTMENT OF
TRANSPORTATION DATED JANUARY 2002 AND WITH THE SPECIAL PROVISIONS.

THE ULTIMATE STRENGTH OF THE CORED SLAB UNIT MUST MEET THE REQUIREMENTS OF THE APPLICABLE AASHTO SPECIFICATIONS. STRANDS SHALL BE CUT FLUSH WITH ENDS OF SLABS AND EPOXY COATED. SEE SPECIAL PROVISIONS.

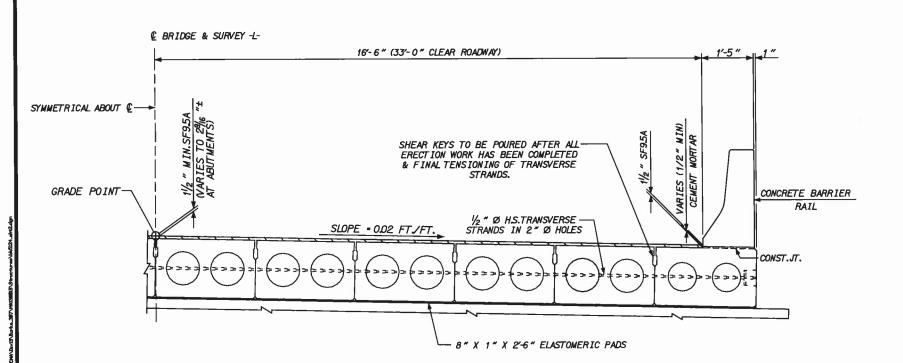
A POSITIVE HOLD DOWN SYSTEM MUST BE EMPLOYED TO PREVENT VOIDS FROM RISING.

SPIRAL WIRE REINFORCEMENT MAY BE USED IN LEIU OF DEFORMED BARS FOR STIRRUPS. MIN.W3.5 X 6" PITCH.

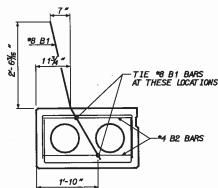
UNLESS OTHERWISE NOTED ON THE PLANS ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾ ".

REPLACES DRAWING 2 (6-7-11).

SHEAR KEY DETAIL



TYPICAL HALF SECTION



Florence & Hutcheson

CONSULTING ENGINEERS

NC License No: F-0258

	(GLAB UNIT ALONE IN PLACE)	1.086 (UP)
VS	DEPLECTION (SUPERIMPOSED DEVO LOAD)	0. 170 (DOM
	FINAL DEFLECTION	0.916° (UP)
	· INCLUDES FUTURE WEAR!	NG BUFFACE

EXTERIOR SLAB UNIT

OMBER (BLAS UNIT ALONE IN FLAGE)	1.255	(UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	O. 177	(DOMN)
FINAL DEFLECTION	1.078	(UP)
• INCLUDES FUTURE WEAR!	NO GLAF	ACE

45'

27

INTERIOR SLAB UNIT

TIE LOCATION FOR #8 B1

PROJECT NO. 42575 **COUNTY:** BURKE STATION: 16 + 14.15**REPLACES BRIDGE NO. 307**

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

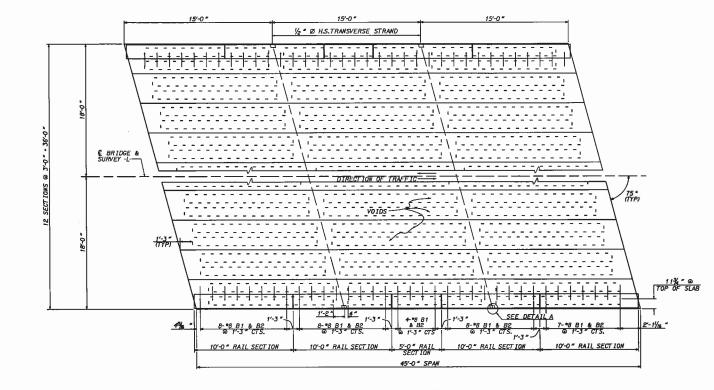
> 3'-0" X 1'-9" PRESTRESSED CORED



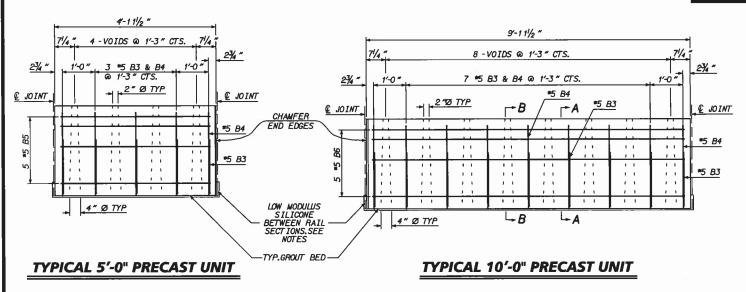
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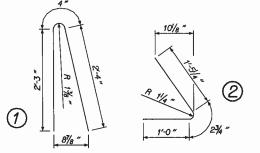
SLAB UNIT 33'-0" CLEAR ROADWAY - 75° SKEW REVISIONS 2

DRAWN BY: B.L. MARIOTTE DATE: NOV 200 HECKED BY: I.E. MONDOLFI DATE: NOV 200



PLAN VIEW - 45' SPAN

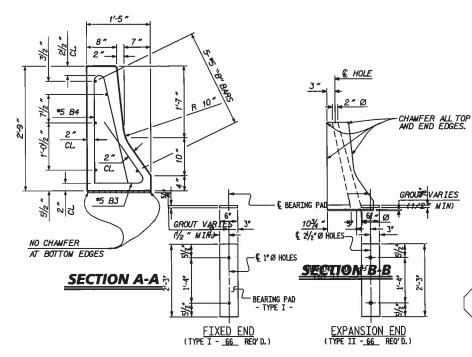




REINFORCING BAR TYPES
BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL									
FOR ONE 10'-0" RAIL SECTION									
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT				
B3	9	#5	1	4'-11"	46				
B4	9	#5	2	2′-8"	25				
B6	5	#5	STR	9'-7"	50				
		<u> </u>	├						
	_	<u> </u>	<u> </u>						
REINFORCING STEEL LBS. = 121									
CLA	SS A	A CONC	RETE C	U. YDS. =	1.0				

	FOR	ONE	5'-0" R	AIL SEC	TION			
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT			
B3	5	#5	1	4'-11"	26			
B4	5	#5	2	2'-8"	14			
85	5	#5	STR	4'-7"	24			
			1					
REINFORCING STEEL LBS. = 64								



ELASTOMERIC BEARING DETAILS

<u>NOTES</u>

EACH PRECAST RAIL UNIT SHALL BE CAST WITH CLASS AA CONCRETE. RAIL TO BE FLUSH WITH CORED SLAB UNITS AT EACH END OF SPAN.

EACH PRECAST RAIL UNIT SHALL BE SUPPLIED WITH LIFTING DEVICE(S). NO CABLES ARE TO BE WRAPPED AROUND THE RAIL UNITS FOR LIFTING.

THE EXPANSION JOINT SEALER SHALL BE LOW MODULUS SILICONE SEALANT. SEE SECTION 1028-4 OF THE STANDARD SPECIFICATIONS.

REPLACES DRAWING 3 (6-7-11).

SEAL 20532 PROJECT NO. 42575 COUNTY: BURKE

STATION: 16+14.15

REPLACES BRIDGE NO. 307

STATE OF MORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGN

STANDARD PRECAST CONCRETE BARRIER RAIL SECTIONS

| REVISIONS | ORIGINAL ORIGINA

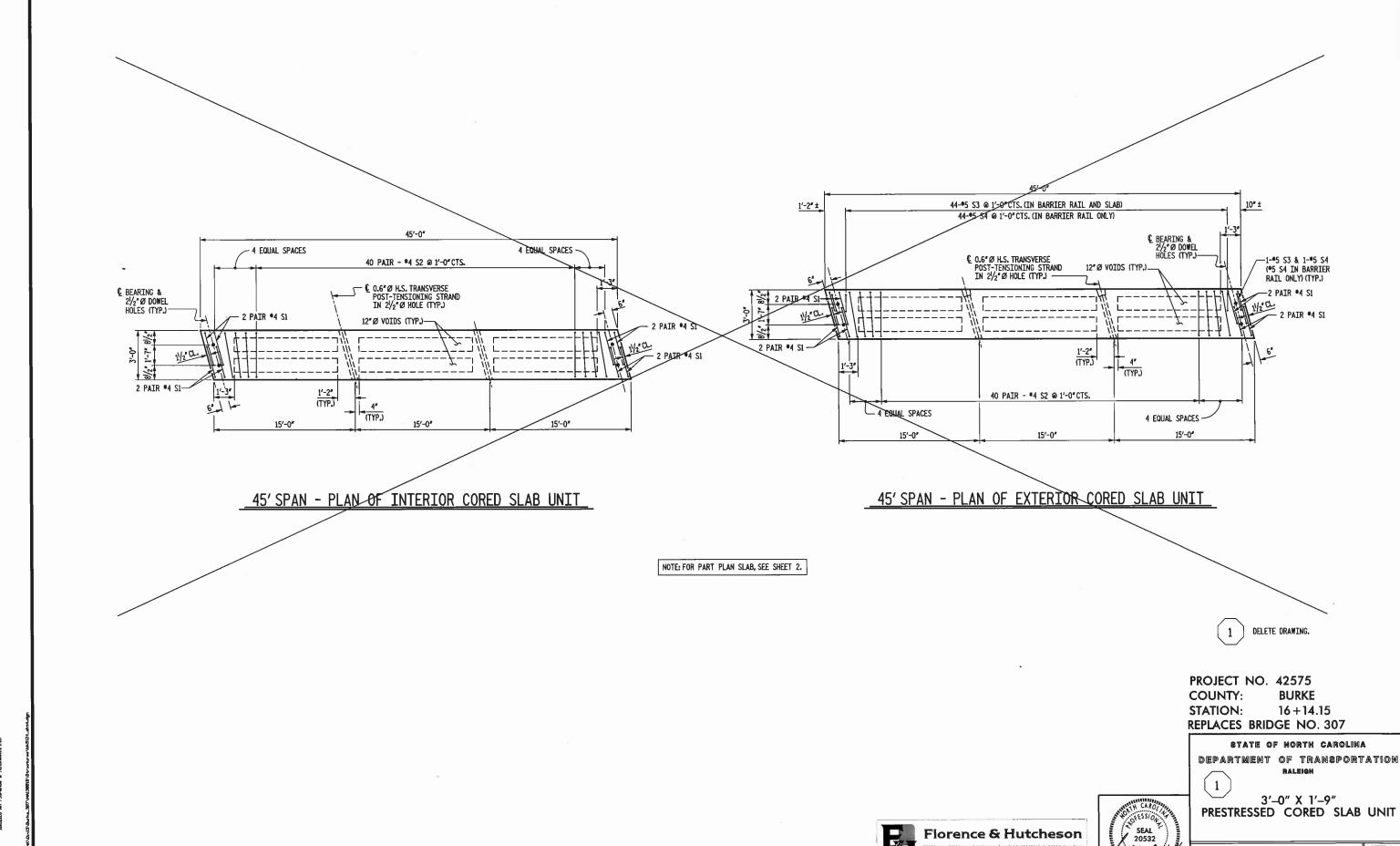
Florence & Hutcheson

Consulting Engineers
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0288

NOT TO SCALE

DRAWN BY: B.L. MARIOTTE DATE: NOV 2009 CHECKED BY: J.E. MONDOLFI DATE: NOV 2009

811 1845ulf AM Florence & Hutchevon.



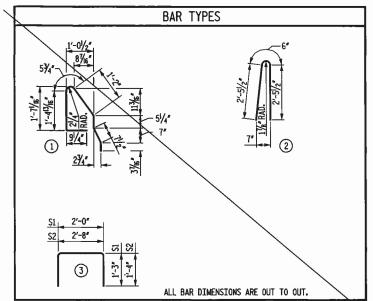
DRAWN BY: B.L. MARIOTTE DATE: NOV 2009

CHECKED BY: J.E. MONDOLFI DATE: NOV 2009





SHEET NO.	REVISIONS								
4	DATE	BY	NO.	DATE	BY	٥.			
TOTAL SEED			3	6-20-11	JEM				
2/			4			2			

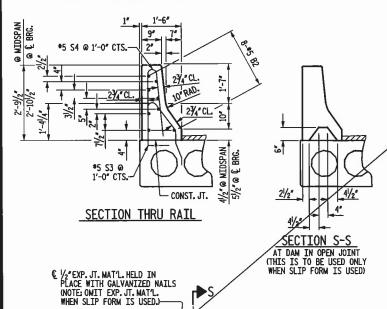


BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
B1	4	*4	STR	23'-3"	62	
	4.0			4 64	40	
S1	16	*4	3	4'-6"	48	
S2	92	•4	3	5′-4″	328	
	<u> </u>					
REINFO	ORCING	STEEL	LB	. 438		
5000 P.S.I. CONCRETE C. Y. 6.4						
0.6"Ø	LR STR	NO	. 13			

B1	LL (EXTE)F RI	MATER OR CO	RIAL RED :	FOR (SLAB	ONE SEC	45'-0" TION
BAR	NO).	SIZE	TYPE	LÉNG	TH	WEIGHT
B1	4		•4	STR	23'-3	"	62
SI	10	6	*4	3	4'-6	"	48
SZ	9:	2	*4	3	5'-4	"	328
¾ √S3	4	6	# 5	1	5′-2	**	248
	J						
	$\overline{}$						
		/					
			$\overline{}$				
REIN	FORCI	NG	STEEL			LB.	438
*EP	OXY CC)ATI	D REINF	DRCING	STEEL	LB.	248
5000	P.S.I	. 00	NCRETE			C. Y.	6.5
						$\overline{}$	
0.6"	Ø L.R.	STR	ANDS			XNO.	13

DEAD LOAD DEFLECTION AND	CAMBER
	3'-0"x 1'-9" CORED SLAB
	0.6"Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1.167
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	0.161 🕴
FINAL CAMBER	1.006

** INCLUDES FUTURE WEARING SURFACE



CHAMFER

ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS

CHAMFER

	SUMMARY FOR EX	KTERI	OR CORED SLAB SECTIONS	
			45'-0" SPAN	TOTAL
	REINFORCING STEEL	LBS.	876	876
_	*EPOXY COATED REINFORCING STEEL	LBS.	496	496
	5000 P.S.I. CONCRETE	C. Y.	13.0	13.0
	0.6" Ø L.R. STRANDS	NO.	26	26
				$\overline{}$

SUMMARY FOR I	NTERI	OR CORED SLAB SECTIONS	
		45'-0" SPAN	TOTAL
REINFORCING STEEL	LBS.	4380	4380
*EPOXY COATED REINFORCING STEEL	LBS.		
5000 P.S.I. CONCRETE	C. Y.	64.0	64.0
0.6" Ø L.R. STRANDS	NO.	130	130

		BARI	RIER		
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
∗ 82	64	*5	STR	13'-0"	868
∗ \$4	92	•5	2	5′-5″	520
∗ EP0X	Y COATE	D REINF	ORCING	steel LBS.	1,38
CLASS	AA CON	CRETE		C. Y.	. 9.
TOTAL	I TAL ET	05 004	אחרדר חי	ARRIER RAIL	90,

	GRADE 270 ST	RANDS
\		0.6°Ø
	AREA (SQUARE INCHES)	0.2
	ULTIMATE STRENGTH (LBS.PER STRAND)	58,6
	APPLIED PRESTRESS (LBS. PER STRAND.)	43,95

	€ BEARING PAD
% 4 -	
,9-Z-e,	© 1"Ø HOLES
	BEARING PAD - TYPE I -

	CORED SLABS	REQUIRED	
	NÜMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	45'-0"	90'-0"
INTERIOR C.S.	10	45'-0"	450'-0"

ELASTOMERIC BEARING DETAILS



Florence & Hutcheson CONSULTING ENGINEERS

0.6"Ø L.R.

0.217

58,600

43,950

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLIME REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE $2\frac{1}{2}$ BOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH. AT LEAST THREE WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

THE TRANSFER OF LOAD FROM THE NNCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE WAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 1000 PSQ.

ALL REINFORCING STEEL IN BARRIER RANLS SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

VERTICAL GROUPD CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS, A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER FAIL EXPANSION JOINTS.

TRANSVERSE POST-TENSIONING OF THE CORED SLAB UNITS SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT THAT THE STRANDS SHALL BE 0.600 AND TENSIONED TO 43,950 POUNDS.

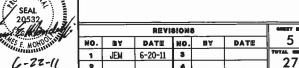
THE MINIMUM AND MAXIMUM HEIGHTS OF THE BARRIER RAIL ARE SNOWN. THE HEIGHT OF THE BARRIER RAIL VARIES WHILE THE TOP OF THE RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE.

DELETE DRAWING.

PROJECT NO. 42575 COUNTY: BURKE STATION: 16 + 14.15**REPLACES BRIDGE NO. 307**

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

BILL OF MATERIALS



DRAWN BY: B.L. MARIOTTE DATE: NOV 2009 CHECKED BY: LE MONDOLFI DATE: NOV 2009

CONST. JT.

ELASTOMER IN BEARING PAD SHALL BE 50 DUROMETER HARDNESS

PLAN OF BARRIER RAIL AND CURB CORED SLAB AT END BENTS

NOT TO SCALE



NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 1/4" 1/4 BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE "%" OF GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE FINITHEFED!

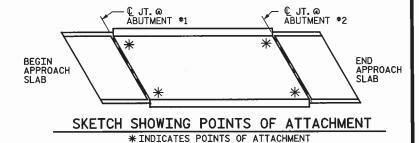
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF CONCRETE BARRIER RAIL OR CONCRETE END POSTS, FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1 $I_4^{\prime\prime}$ Ø HOLES SHALL BE DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE Y' Ø X 6' BOLTS WITH WASHERS, LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE Y4' Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.

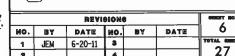


REPLACES DRAWING 6 (6-7-11)

PROJECT NO. 42575 COUNTY: BURKE STATION: 16 + 14.15**REPLACES BRIDGE NO. 307**

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

> SUPERSTRUCTURE **GUARDRAIL ANCHORAGE DETAILS**

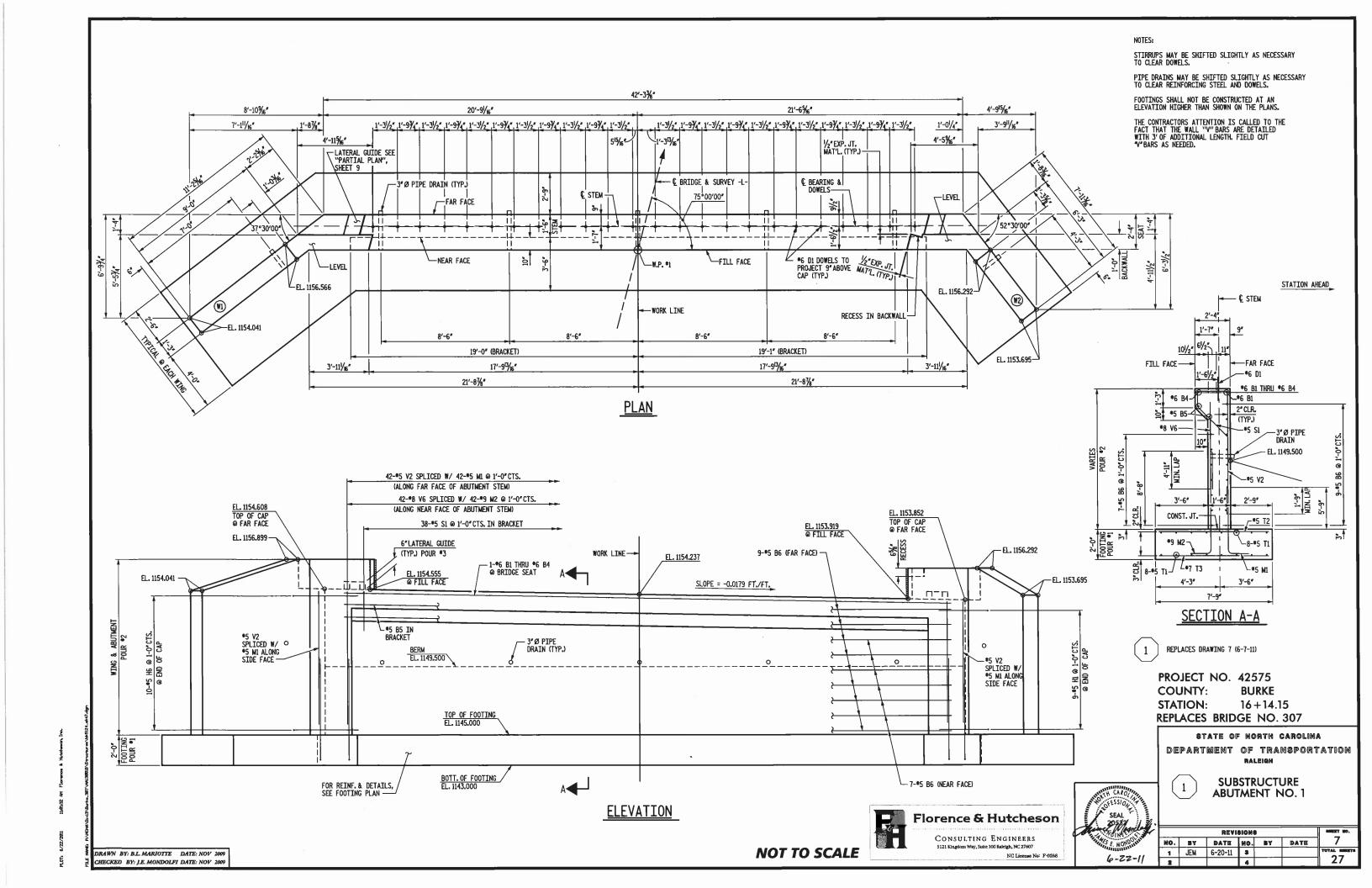


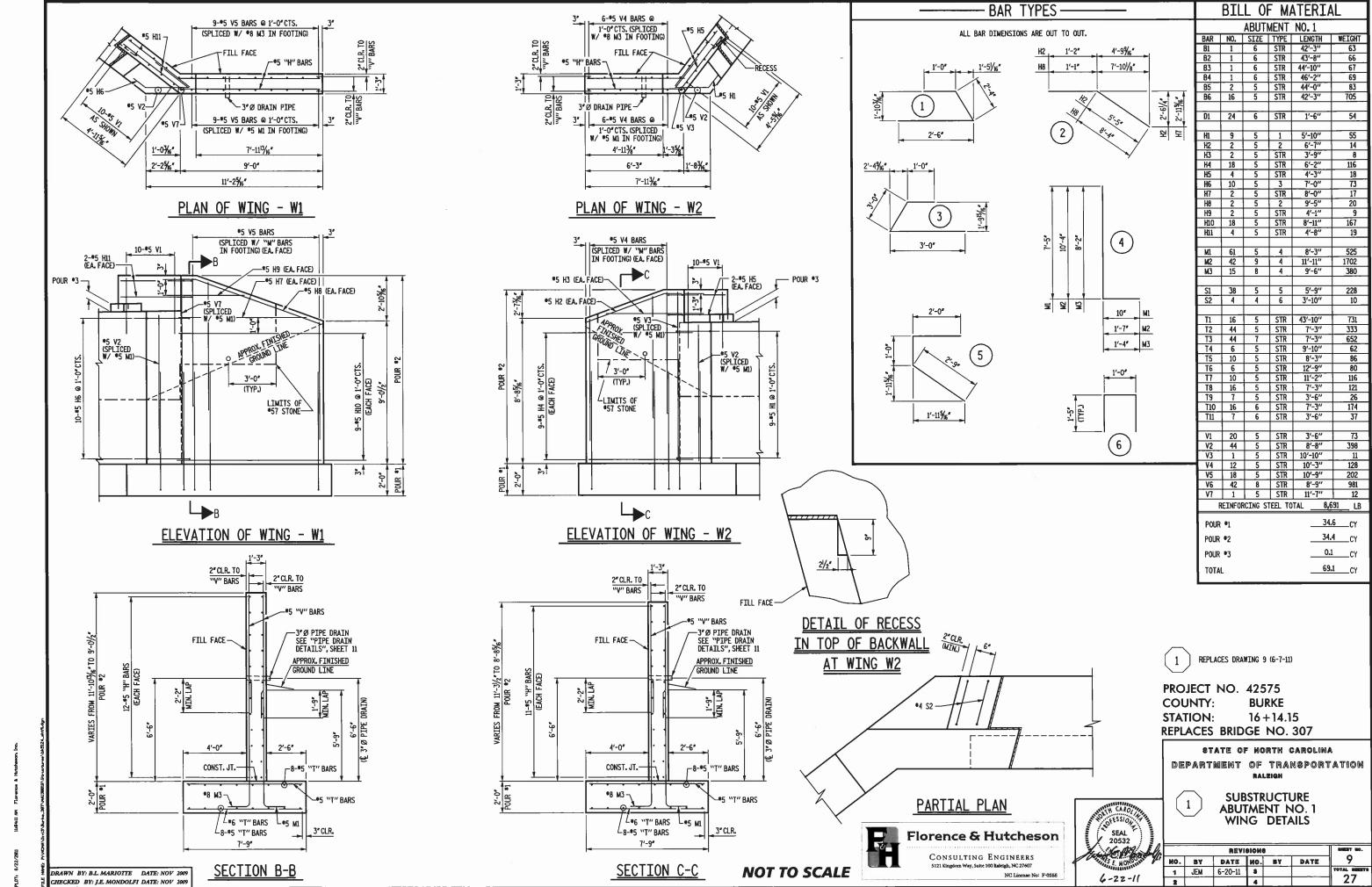
DRAWN BY: B.L. MARIOTTE DATE: NOV 2009 CHECKED BY: I.E. MONDOLFI DATE: NOV 2009

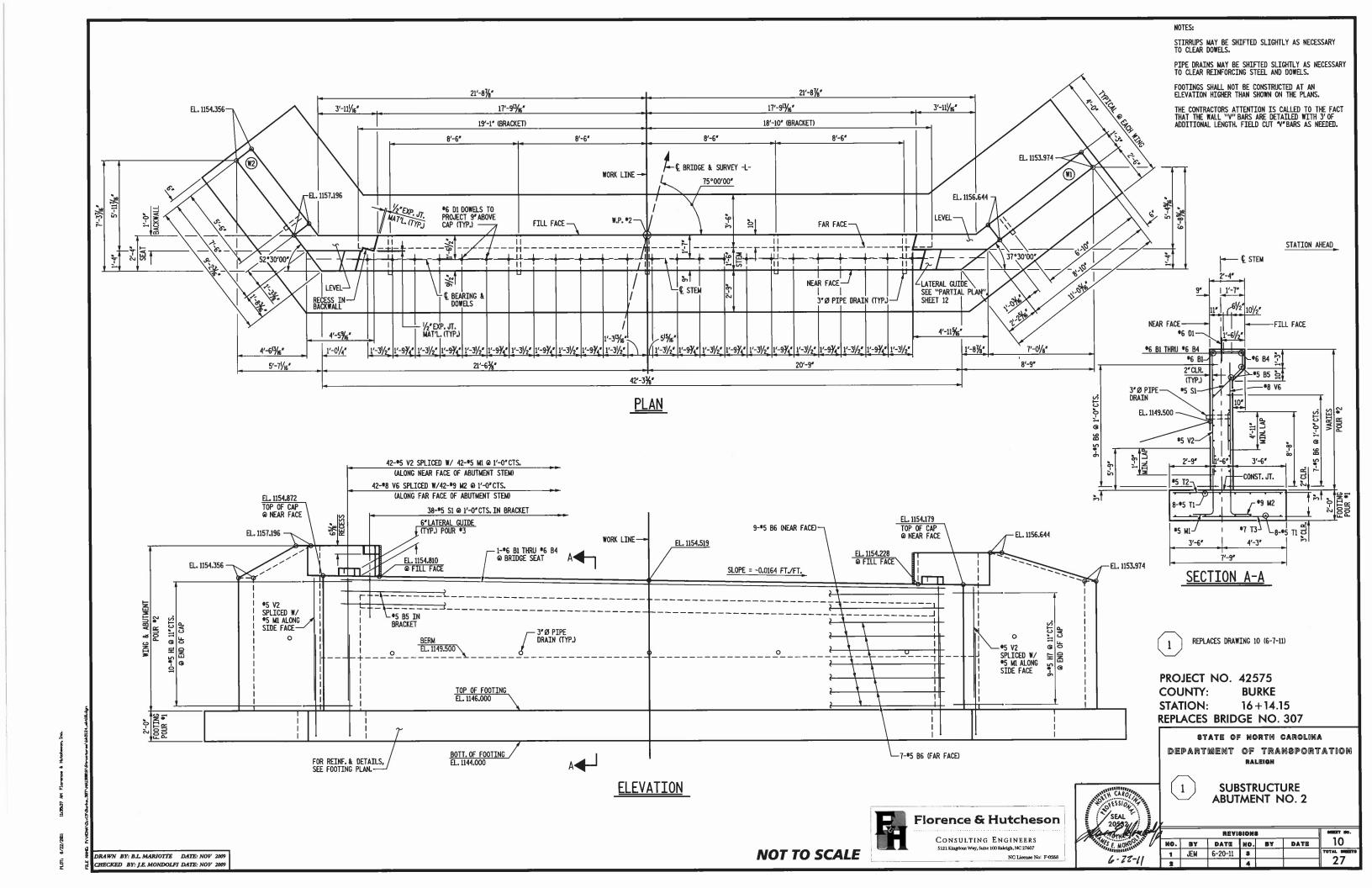
SEAL 20532

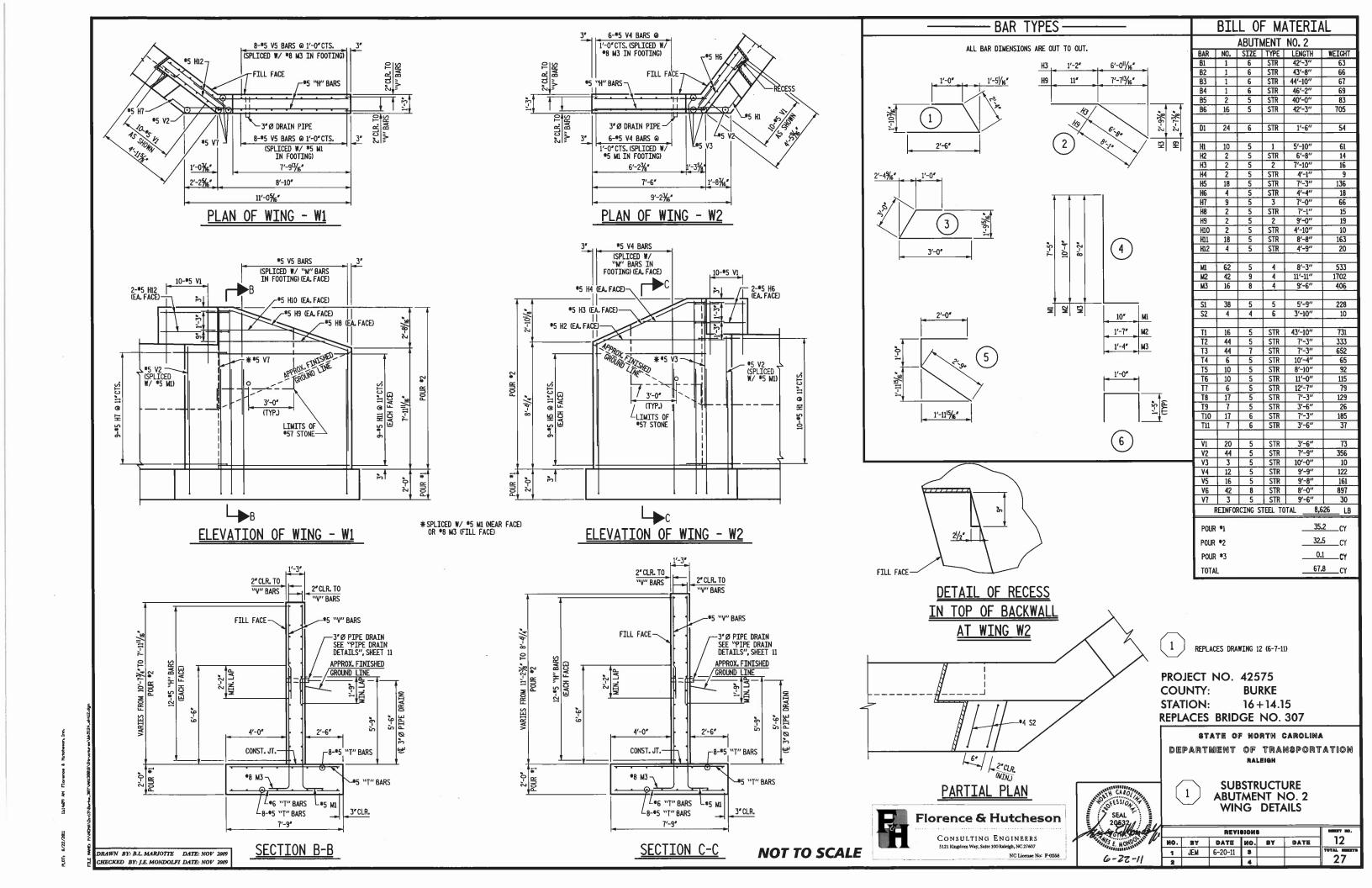
FRONT FACE OF

CONCRETE BARRIER RAIL









PLAN OF APPROACH SLABS DIMENSIONS ARE TYPICAL FOR BOTH APPROACH SLABS

NOTES

FOR BRIDGE APPROACH FILL INCLUDING FABRIC AND #78M STONE BACKFILL, SEE ROADWAY STANDARD DRAWINGS.

APPROACH SLAB SHALL NOT BE CONSTRUCTED PRIOR TO INSTALLATION OF CORED SLAB.

FABRIC SHALL BE TYPE 1 ENGINEERING FABRIC IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

*78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

*78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF ABUTMENT FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

*78 STONE BACKFILL AND FABRIC SHALL BE INCLUDED IN THE LUMP SUM

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED.

THE 6°COMP.A.B.C. SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB AND SHALL EXTEND 1'-0" OUTSIDE OF EACH EDGE OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 4"TYPE B-25.0B ASPHALT CONCRETE BASE COURSE IN LIEU OF 6"COMP. A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 5"CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30 LB ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

FOR JOINT DETAILS, SEE "PRESTRESSED CONCRETE CORED SLAB UNIT"

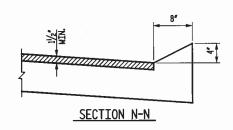
THE JOINT AT THE ABUTMENT SHALL BE GROUTED AS SOON AS PRACTICAL AFTER THE CONSTRUCTION OF THE APPROACH SLABS.

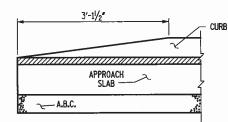
APPROACH SLAB GROOVING IS NOT REQUIRED.

BILL OF MATERIAL APPROACH SLAB FOR ONE (2 REQUIRED) BAR NO. SIZE TYPE LENGTH WEIGHT **A1 26 *4 STR 18'-7" 323 323 A2 26 *4 STR 18'-5" 320 *B1 68 *5 STR 11'-2" 792 B2 68 66 STR 11'-7" 1,183 REINFORCING STEEL LBS. 1,503 * EPOXY COATED REINFORCING STEEL LBS.

C. Y.

CLASS AA CONCRETE





END OF CURB WITHOUT SHOULDER BERM GUTTER

CURB DETAILS

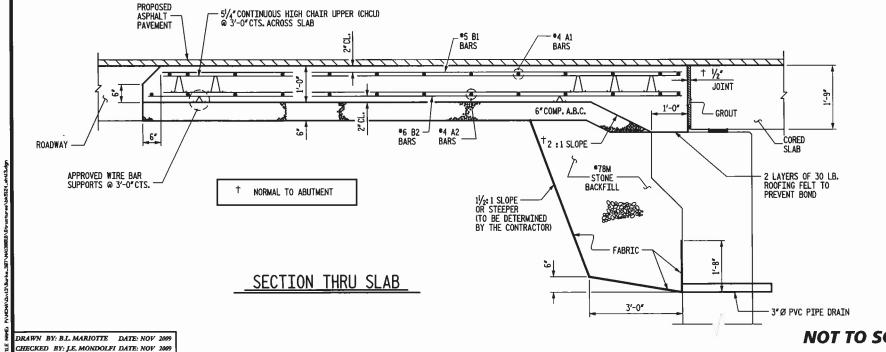
SEAL 6-22-11 REPLACES DRAWING 13 (6-7-11)

PROJECT NO. 42575 COUNTY: BURKE STATION: 16 + 14.15**REPLACES BRIDGE NO. 307**

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

RALEIGH APPROACH SLAB 32'-10" CLEAR ROADWAY 75° SKEW (SUB REGIONAL TIER)

13 NO. BY DATE NO. BY DATE 1 JEM 6-20-11 3 27



Florence & Hutcheson

CONSULTING ENGINEERS



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE **GOVERNOR**

EUGENE A. CONTI, JR. SECRETARY

Asheville, NC 28802

Fax: 828/251-6709

June 22, 2011

MEMORANDUM TO:

Garry L. Moore

Division 13 Bridge Engineer

FROM:

Roger D. Bryan Roger D. Bryan Division 13 Environmental Officer

SUBJECT:

BK-5124

Bridge 307, SR 1924

Burke County

Following a field survey of proposed project during May 2010, I determined that the project will not require Corps of Engineer 404/401 permits or trout buffer variance. No threatened or endangered species will be affected by the project. The PCE Document is attached for your file.

Please proceed with the project at your convenience.

If you have any questions, give me a call at (828) 251-6171.

cc:

J. J. Swain, Jr., P.E. Ed Ingle, CPESC

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	BK-5124
State Project No.	42575.1.1
Federal Project No.	12075.1.1

Project Description: (Include project scope and location and refer to the attached A. project location map.)

The project will replace Bridge #307 consisting of a single 32' span on I-beams and concrete abutments with a 45' single span cored slab bridge. The bridge is located on SR 1924 across an unnamed tributary to Henry Fork, Burke County, NC. Traffic will be maintained with an off-site detour during construction.

В. Purpose and Need:

To replace a structurally deficient bridge.

C. **Proposed Improvements:**

> Circle one or more of the following Type II improvements which apply to the project:

- 1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).
 - Restoring, Resurfacing, Rehabilitating, and Reconstructing a. pavement (3R and 4R improvements)
 - Widening roadway and shoulders without adding through lanes b. C.
 - Modernizing gore treatments đ.
 - Constructing lane improvements (merge, auxiliary, and turn lanes) Adding shoulder drains e.
 - f.
 - Replacing and rehabilitating culverts, inlets, and drainage pipes,
 - Providing driveway pipes g.
 - Performing minor bridge widening (less than one through lane)
- Highway safety or traffic operations improvement projects including the 2. installation of ramp metering control devices and lighting.
 - Installing ramp metering devices a.
 - b. Installing lights
 - Adding or upgrading guardrail c.
 - Installing safety barriers including Jersey type barriers and pier d. protection
 - Installing or replacing impact attenuators e.
 - Upgrading medians including adding or upgrading median barriers f. g.
 - Improving intersections including relocation and/or realignment h. Making minor roadway realignment
 - Channelizing traffic

- j. Performing clear zone safety improvements including removing hazards and flattening slopes
- k. Implementing traffic aid systems, signals, and motorist aid
- 1. Installing bridge safety hardware including bridge rail retrofit
- Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
 - Rehabilitating, reconstructing, or replacing bridge approach slabs Rehabilitating or replacing bridge decks
 - c. Rehabilitating bridges including painting (no red lead paint), scour
 - repair, fender systems, and minor structural improvements Replacing a bridge (structure and/or fill)
- 4. Transportation corridor fringe parking facilities.
- 5. Construction of new truck weigh stations or rest areas.
- 6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
- 7. Approvals for changes in access control.
- 8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
- Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
- 10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
- 11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
- 12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

υ.	Required.)	ents and Po	ermits
	No environmental commitments or permits are required for the	oroject.	
E.	Threshold Criteria	. •	
	The following evaluation of threshold criteria must be completed actions	l for Type	II
ECC	<u>DLOGICAL</u>	<u>YES</u>	NO
(1)	Will the project have a substantial impact on any Unique or important natural resource?		_ X
(2)	Does the project involve habitat where federally Listed endangered or threatened species may occur?		X
(3)	Will the project affect anadromous fish?		_X
(4)	If the project involves wetlands, is the amount of Permanent and/or temporary wetland taking less than One-third (1/3) of an acre and have all practicable measures To avoid and minimize wetland takings been evaluated?	N/A	
(5)	Will the project require the use of U. S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely Impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Water Resources (OWR) and/or High Quality Waters (HQW)?		X_
(8)	Will the project require fill in waters of the United States In any of the designated mountain trout counties?		_X_
(9)	Does the project involve any known underground storage Tanks (UST's) or hazardous materials sites?		X
PERM	MITS AND COORDINATION	<u>YES</u>	<u>NO</u>
10)	If the project is located within a CAMA county, will the project significantly affect the coastal zone and/or any "Area of Environmental Concern" (AEC)?		N/A

(11)	Does the project involve Coastal Barrier Resources Act resources?		
(12)	Will a U. S. Coast Guard permit be required?		<u>X</u>
(10)	***************************************		<u> X</u>
(13)	Will the project result in the modification of any existing regulatory floodway?		<u>X</u>
(14)	Will the project require any stream relocations or channel changes?		X
SOC	IAL, ECONOMIC, AND CULTURAL RESOURCES	<u>YES</u>	<u>NO</u>
(15)	Will the project induce substantial impacts to planned growth or land use for the area?		X
(16)	Will the project require the relocation of any family or business?		X
(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?		X
(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	_X_	
(19)	Will the project involve any changes in access control?		_x_
(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?		X
(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?		X
(22)	Is the project included in an approved thoroughfare plan and/or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	X	
(23)	Is the project anticipated to cause an increase in traffic volumes?		Х
SOCL	AL, ECONOMIC, AND CULTURAL RESOURCES	YES	NO
(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	X	
(25)	If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the		

ju • plgre

	bridge replacement project be contained on the existing facility?	X	
(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?		_X
(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	X	
(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?		X
(29)	Will the project affect any archaeological remains which are important to history or pre-history?		_X
(30)	Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)?		x
(31)	Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended?		X
(32)	Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the Natural System of Wild and Scenic Rivers?		X
F.	Additional Documentation Required for Unfavorable Responses in (Discussion regarding all unfavorable responses in Part E should below. Additional supporting documentation may be attached as a	e provided	

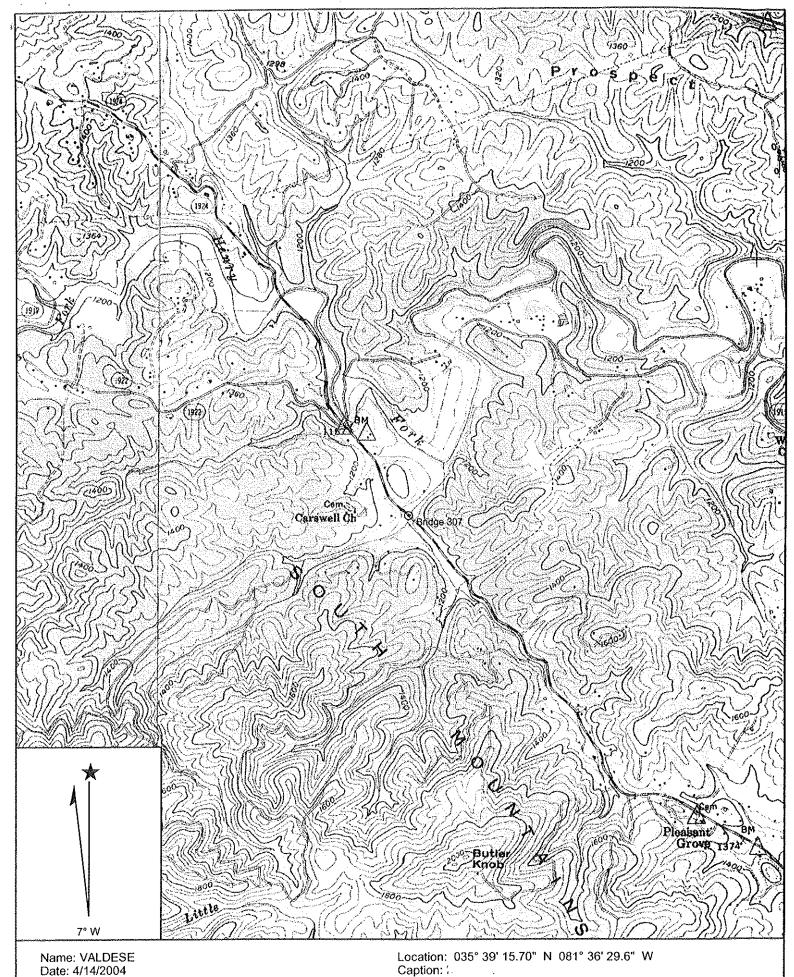
G.	CE Approval
	TIP Project No. State Project No. Federal Project No. BK-5124 42575.1.1
	Project Description: (Include project scope and location. Attach location map.)
	The project will replace Bridge #307 consisting of a single 32' span on I-beams and concrete abutments with a 45' single span cored slab bridge. The bridge is located on SR 1924 across an unnamed tributary to Henry Fork, Burke County, NC. Traffic will be maintained with an off-site detour during construction.
	Categorical Exclusion Action Classification: (Check one) TYPE II(A) TYPE II(B)
	Approved:
	Date Roger D. Bryan Division 13 Environmental Officer
5	14/10 AM ZX
	Date R. A. Tipton, P.E. Division Construction Engineer

For Type II (B) projects only:

Date

J.J. Swain, Jr., P.E. Division Engineer

Division Administrator
Federal Highway Administration



Scale: 1 inch equals 2000 feet

Bridge 307, SR 1924 Burke County, NC

OFFICIAL ROSTER OF PRE-BID CONFERENCE ATTENDEES NCDOT- BRIDGE MANAGEMENT UNIT-POC

Sheet / of 3

DATE: Mon, 6/20/11
TIME: 1:00 0m

BRIDGE REPLACEMENT CONTRACTS:

1. Burke Co. Br. #307, DO00124 (BK-5124)

NAME	COMPANY REPRESENTED AND ADDRESS	CONTACT INFORMATION	
Mike Miller	Miller Engineering Co. PO Box 1048 Marion, NC 28TSZ	Email: Miller, engineering (*) ye Phone: <u>\$28 738-944)</u> Fax: <u>\$28-738 -8440</u>	
Leigh Hughes	TCB builders LLC P 0 Box 1625 Lexington NC 27293	Email: <u>+CbbW lder@aol</u> .C Phone <u>336, 224-2299</u> Fax: <u>336-224-2299</u>	
Clark	Clark Lelloth Gul;	T 11 C/ M + 200	
Ledbeth	1806 Gaffner P.1 Shelby N.C. 28152	Email: <u>CleD be Hor 30 Caro</u> Phone: <u>704~472~2185</u> Fax: <u>704~434~590</u> 6	
Loke Blythe	Blyte Revelopment Co	10 Email: 10 ke b@blytedevelupm Phone: 704-588-0023 Fax: 704-588-9935	
	2 - 1		
Joel Hawkins	R.E. Burnsosons P.O. Box 7168 Statesville, NC 28687	Email: <u>Kevin & reburns.(04</u>) Phone: 704-924-8646 Fax: 704-924-8607	
01 11. 27			
Phillip Shore	Davie Grading Inc	Email: Dave gradind de Yadke Phone: 757-0622 Fax: 336-757-1622	

OFFICIAL ROSTER OF PRE-BID CONFERENCE ATTENDEES NCDOT- BRIDGE MANAGEMENT UNIT-POC

Sheet 2 of 3

DATE: Mon. 6/20/11 TIME: __/: 00 0:m.

BRIDGE REPLACEMENT CONTRACTS:

1. Burke Co. Br. #307, DO00124 (BK-5124)

, , , , , , , , , , , , , , , , , , , ,		
NAME	COMPANY REPRESENTED AND ADDRESS	CONTACT INFORMATION
ADAM HOLCOMB	DAWE CONSTRUCTION, INC.	Email: <u>ADAM@ DAMECONSTK</u> UCTA Phone: <u>704.533.0070</u> Fax: <u>704.663.2475</u>
	and T	
Con Brown	APPLETUCISE ASSO. POBOX 904 Rutherfordton NC 28139	Email: <u>apple Tuck act</u>), me Phone: <u>828281-3767</u> Fax: <u>828287-2181</u>
JAMES RAND	J.T. RUSSELL \$ SONS 1721 USSZ NORTH ALBEMANLE, NC 28001	NATHANRUSSELE Email: <u>JTRUSSELANDSAUS</u> 00 Phone: <u>704, 982, 2225</u> Fax: <u>704, 986, 2270</u>
1. (. 0 . (
Wisliy Wickson	TAYLAR & MULASY COST.	Email: WINCKSON QT HOLAND Y Phone: 60 667-4526 Fax: 628 667-1770
		Email:Phone:Fax:
		Email:Phone:

OFFICIAL ROSTER OF PRE-BID CONFERENCE ATTENDEES NCDOT- BRIDGE MANAGEMENT UNIT-POC

Sheet 3 of 3

BRIDGE REPLACEMENT CONTRACTS:

1. Burke Co. Br. #307, DO00124 (BK-5124)

NAME	COMPANY REPRESENTED AND ADDRESS	CONTACT INFORMATION
Tray Wilson	NCPOT DIN 13 BKIDGE	Email: \swilson @ ncdot. 90 V Phone: \\$24-298-1124 Fax: \\$28-299-0654
Michael Moore	Palmetto Interstructure 3620 Polham Pel. PMB 349 Greenville SC 29602	Email: <u>MMOO/e@palme Hoilico</u> Phone: <u>864-879-2164</u> Fax: <u>864-879-2167</u>
		Email:Phone:Fax:
		Email: Phone: Fax:
		Email: Phone: Fax:
		Email:Phone:Fax: