

**DEAD LOAD DEFLECTION AND CAMBER TABLE FOR GIRDERS IN UNIT 1**

GIRDERS 1 AND 5	0.6" Ø LOW RELAXATION		SPAN A										SPAN B										SPAN C												
	TENTH POINTS		CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.	CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.	CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.
	CAMBER ( GIRDER ALONE IN PLACE )	↑	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000
* DEFLECTION DUE TO SUPERIMPOSED D.L.	↓	0.000	0.038	0.074	0.103	0.122	0.128	0.122	0.103	0.074	0.038	0.000	0.000	0.038	0.076	0.105	0.124	0.130	0.124	0.105	0.076	0.038	0.000	0.000	0.038	0.076	0.105	0.124	0.130	0.124	0.105	0.076	0.038	0.000	
FINAL CAMBER	↑	0	1/4"	1/2"	5/8"	3/4"	13/16"	3/4"	5/8"	1/2"	1/4"	0	0	1/4"	7/16"	5/8"	3/4"	3/4"	3/4"	5/8"	7/16"	1/4"	0	0	1/4"	7/16"	5/8"	3/4"	3/4"	3/4"	5/8"	7/16"	1/4"	0	

**DEAD LOAD DEFLECTION AND CAMBER TABLE FOR GIRDERS IN UNIT 1**

GIRDERS 2-4	0.6" Ø LOW RELAXATION		SPAN A										SPAN B										SPAN C												
	TENTH POINTS		CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.	CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.	CL BRG.	.1	.2	.3	.4	.5	.6	.7	.8	.9	CL BRG.
	CAMBER ( GIRDER ALONE IN PLACE )	↑	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000	0.000	0.061	0.115	0.157	0.184	0.193	0.184	0.157	0.115	0.061	0.000
* DEFLECTION DUE TO SUPERIMPOSED D.L.	↓	0.000	0.041	0.081	0.113	0.133	0.140	0.133	0.113	0.081	0.041	0.000	0.000	0.042	0.083	0.115	0.135	0.142	0.135	0.115	0.083	0.042	0.000	0.000	0.042	0.083	0.115	0.135	0.142	0.135	0.115	0.083	0.042	0.000	
FINAL CAMBER	↑	0	1/4"	3/8"	9/16"	5/8"	5/8"	5/8"	9/16"	3/8"	1/4"	0	0	1/4"	3/8"	1/2"	9/16"	5/8"	9/16"	1/2"	3/8"	1/4"	0	0	1/4"	3/8"	1/2"	9/16"	5/8"	9/16"	1/2"	3/8"	1/4"	0	

\* INCLUDES FUTURE WEARING SURFACE.

ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM)  
EXCEPT FINAL CAMBER, WHICH IS GIVEN IN  
INCHES (FRACTION FORM).

**NOTES**

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

ALL REINFORCING STEEL SHALL BE GRADE 60.

APPLY EPOXY PROTECTIVE COATING TO END OF GIRDER SURFACES INDICATED IN ELEVATION VIEW.

EMBEDDED PLATES "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. BEVEL EDGES OF PLATE "B-1" TO GIVE CLOSE FIT BUT NOT TIGHT FIT TO STEEL CASTING FORM.

ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THROUGH 1020 OR APPROVED EQUAL, AND SHALL MEET THE TYPE "B" REQUIREMENTS OF SUBSECTION 7.3 OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

AT END OF GIRDERS TO BE EMBEDDED IN CONCRETE DIAPHRAGMS OR END WALLS, PRESTRESSING STRANDS MAY EXTEND A MAXIMUM OF 2" BEYOND THE GIRDER ENDS. OTHERWISE, PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE GIRDERS ENDS.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 7,600 PSI.

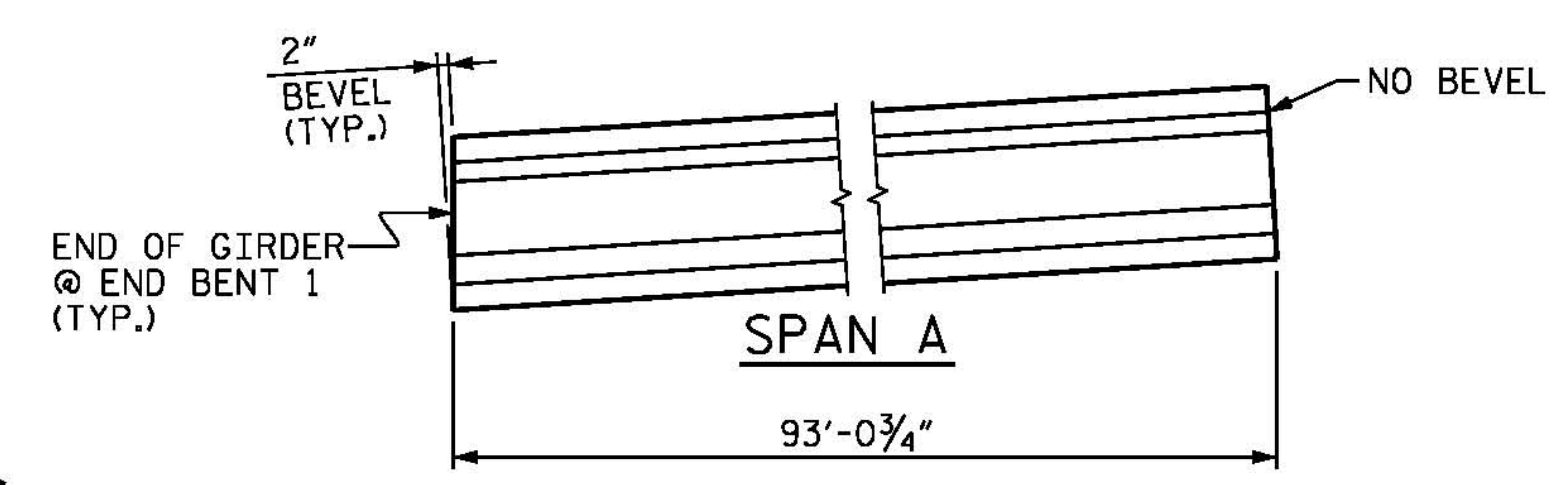
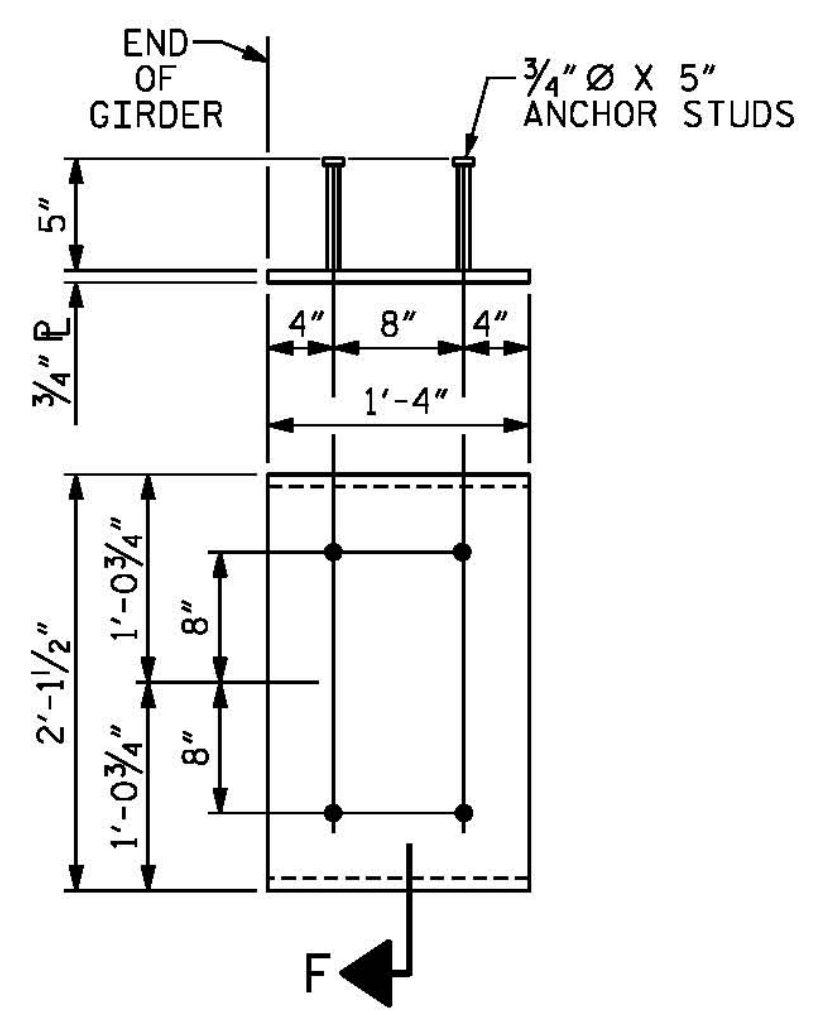
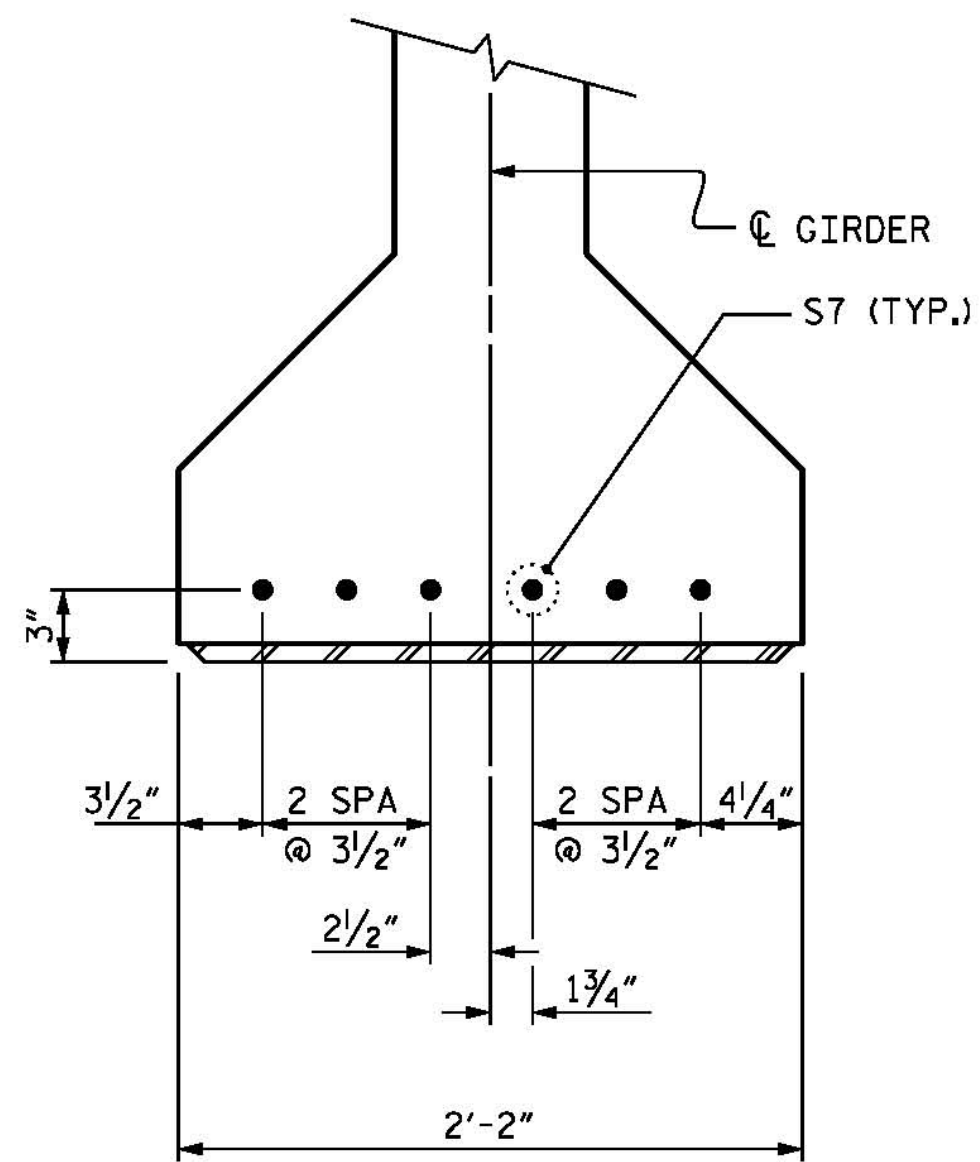
DEPENDING ON THE TYPE OF SYSTEM USED TO SUPPORT THE DECK SLAB FORMS, PRESET ANCHORS MAY BE NECESSARY IN THE PRESTRESSED CONCRETE GIRDER.

THE TOP SURFACE OF THE GIRDER, EXCLUDING THE OUTSIDE 4", SHALL BE RAKED TO A DEPTH OF 1/4".

WHEN DRAPED STRANDS ARE DETAILED, THE LONGITUDINAL LOCATION OF THE HOLD DOWN DEVICES SHALL BE WITHIN 6" OF THE LOCATION SHOWN AND THE CENTER OF GRAVITY OF THE GROUP OF DRAPED STRANDS SHALL BE LOCATED WITHIN 1/2" OF THE THEORETICAL LOCATION SHOWN.

THE CONTRACTOR HAS THE OPTION TO PROVIDE, AT NO ADDITIONAL COST TO THE DEPARTMENT, 2 ADDITIONAL STRANDS AT THE TOP OF THE GIRDER TO FACILITATE TYING OF THE REINFORCING STEEL. THESE STRANDS SHALL BE PULLED TO A LOAD OF 4500 lbs.

GIRDER CAMBER PREDICTED USING REFINED METHOD FOR CAMBER, PER NCDOT POLICY MEMO (8-28-14).



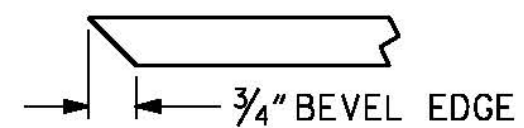
**EMBEDDED PLATE "B-1" DETAILS FOR AASHTO TYPE IV GIRDER**

(2 REQ'D PER GIRDER)

**GIRDER END BEVEL**

**DETAIL "A"**

(FOR AASHTO TYPE IV GIRDERS)

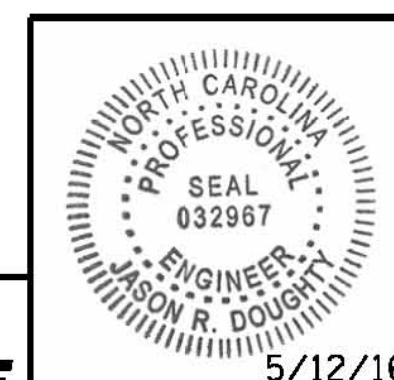


**SECTION "F"**

(SEE NOTES)

PROJECT NO. B-4929  
PENDER COUNTY  
 STATION: 38+13.81 -L2-

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 SUPERSTRUCTURE  
 PRESTRESSED CONCRETE  
 GIRDER CONTINUOUS  
 FOR LIVE LOAD  
 DETAILS - UNIT 1



**PARSONS BRINCKERHOFF**  
 434 FAYETTEVILLE STREET  
 SUITE 1500  
 RALEIGH, NC 27601  
 LICENSE NO. F-0165

DocuSigned by:  
 Jason R. Doughty  
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			
2			4			

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

5/10/2016 400\_193\_B4929\_SMU\_DL01.dgn

DESIGNED BY: J. BORUTA DATE: JAN 2016  
 DRAWN BY: M. HOBBS DATE: JAN 2016  
 CHECKED BY: M. WAGNER DATE: JAN 2016  
 DESIGN ENGINEER OF RECORD: J. DOUGHTY DATE: MAY 2016