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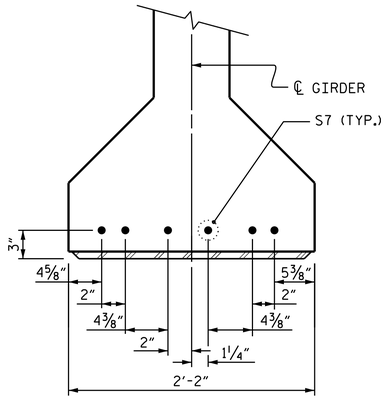
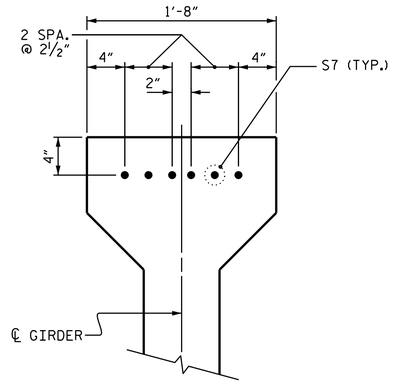
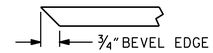


DETAIL "A"

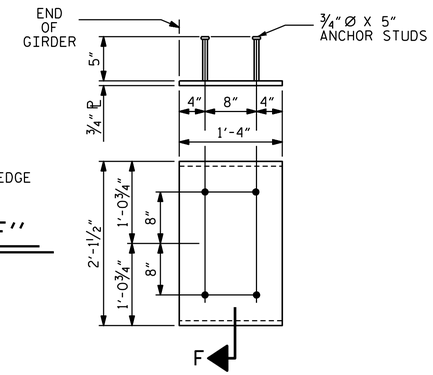
(FOR AASHTO TYPE IV GIRDERS)





SECTION "F"

(SEE NOTES)



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

(2 REQ'D PER GIRDER)

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION 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 PLATE "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

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 ENDS 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 GIRDER 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 4500 PSI (SPANS A AND C) OR 6500 PSI (SPAN B).

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" AND THE SHADED AREA NEAR BENTS, SHALL BE RAKED TO A DEPTH OF ¼".

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 ½" 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.

DEAD LOAD DEFLECTION TABLE FOR GIRDERS

0.6" DIA. LOW-RELAXATION STRANDS	SPAN A																				
	GIRDERS 1 & 5																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.005	0.009	0.014	0.017	0.021	0.024	0.026	0.028	0.029	0.029	0.029	0.028	0.026	0.024	0.021	0.017	0.014	0.009	0.005	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.002	0.004	0.006	0.007	0.009	0.011	0.012	0.013	0.013	0.013	0.013	0.013	0.012	0.011	0.009	0.008	0.006	0.004	0.002	0.000
FINAL CAMBER ↑	0	0	1/16"	1/16"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	1/8"	1/8"	1/16"	1/16"	0	0

0.6" DIA. LOW-RELAXATION STRANDS	SPAN A																				
	GIRDERS 2, 3 AND 4																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.005	0.009	0.014	0.017	0.021	0.024	0.026	0.028	0.029	0.029	0.029	0.028	0.026	0.024	0.021	0.017	0.014	0.009	0.005	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.002	0.004	0.006	0.008	0.010	0.011	0.013	0.013	0.014	0.014	0.014	0.013	0.013	0.011	0.010	0.008	0.006	0.004	0.002	0.000
FINAL CAMBER ↑	0	0	1/16"	1/16"	1/8"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	1/8"	1/8"	1/8"	1/16"	1/16"	0	0

0.6" DIA. LOW-RELAXATION STRANDS	SPAN B																				
	GIRDERS 1 & 5																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.031	0.061	0.090	0.115	0.140	0.159	0.175	0.186	0.193	0.196	0.193	0.186	0.175	0.159	0.140	0.116	0.090	0.061	0.031	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.025	0.046	0.071	0.090	0.110	0.125	0.138	0.147	0.152	0.154	0.152	0.147	0.138	0.125	0.110	0.090	0.071	0.046	0.025	0.000
FINAL CAMBER ↑	0	1/16"	3/16"	1/4"	5/16"	3/8"	7/16"	7/16"	1/2"	1/2"	1/2"	1/2"	1/2"	7/16"	7/16"	3/8"	5/16"	1/4"	3/16"	1/16"	0

0.6" DIA. LOW-RELAXATION STRANDS	SPAN B																				
	GIRDERS 2, 3 AND 4																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.031	0.061	0.090	0.115	0.140	0.159	0.175	0.186	0.193	0.196	0.193	0.186	0.175	0.159	0.140	0.116	0.090	0.061	0.031	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.026	0.049	0.076	0.096	0.117	0.133	0.147	0.156	0.162	0.164	0.162	0.156	0.147	0.133	0.117	0.096	0.076	0.049	0.026	0.000
FINAL CAMBER ↑	0	1/16"	1/8"	3/16"	1/4"	1/4"	5/16"	5/16"	3/8"	3/8"	3/8"	3/8"	3/8"	5/16"	5/16"	1/4"	1/4"	3/16"	1/8"	1/16"	0

0.6" DIA. LOW-RELAXATION STRANDS	SPAN C																				
	GIRDERS 1 & 5																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.007	0.014	0.020	0.026	0.031	0.036	0.039	0.042	0.044	0.044	0.044	0.042	0.039	0.036	0.031	0.026	0.020	0.014	0.007	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.003	0.005	0.009	0.011	0.013	0.015	0.017	0.018	0.019	0.019	0.019	0.018	0.017	0.015	0.013	0.011	0.009	0.005	0.003	0.000
FINAL CAMBER ↑	0	1/16"	1/8"	1/8"	3/16"	3/16"	1/4"	1/4"	5/16"	5/16"	5/16"	5/16"	5/16"	1/4"	1/4"	3/16"	3/16"	1/8"	1/8"	1/16"	0

0.6" DIA. LOW-RELAXATION STRANDS	SPAN C																				
	GIRDERS 2, 3 AND 4																				
TENTH POINTS	BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.007	0.014	0.020	0.026	0.031	0.036	0.039	0.042	0.044	0.044	0.044	0.042	0.039	0.036	0.031	0.026	0.020	0.014	0.007	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.003	0.006	0.009	0.012	0.013	0.016	0.018	0.019	0.020	0.020	0.020	0.019	0.018	0.016	0.014	0.012	0.009	0.006	0.003	0.000
FINAL CAMBER ↑	0	1/16"	1/8"	1/8"	3/16"	3/16"	1/4"	1/4"	1/4"	5/16"	5/16"	5/16"	1/4"	1/4"	1/4"	3/16"	3/16"	1/8"	1/8"	1/16"	0

* INCLUDES FUTURE WEARING SURFACE IN SUPERIMPOSED DEAD LOAD.

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

ASSEMBLED BY : B.D. HODACK DATE : 05/2021
CHECKED BY : G.L. HAMILTON DATE : 08/2021

DRAWN BY : ELR 11/91
CHECKED BY : GRP 11/91

REV. 1/15 MAA/TMG
REV. 2/15 MAA/TMG
REV. 12/17 MAA/THC

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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AECOM License No. F-0342

NORTH CAROLINA PROFESSIONAL SEAL 041343 ENGINEER GREGORY R. COLE
DocuSigned by: 1B6CF6CC0C0... 4/8/2022

PROJECT NO. B-5717
GUILFORD COUNTY
STATION: 21+22.00 -L-

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

PRESTRESSED CONCRETE GIRDER CONTINUOUS FOR LIVE LOAD DETAILS

(LEFT LANE)

REVISIONS										SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:					S2-14
1			3							TOTAL SHEETS
2			4							38

STD. NO. PCG9

DATE: 3/31/2022
TIME: 3:26:59 PM
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