

NOTE :
ORDINATE DUE TO SUPERELEVATION
IS ZERO FOR EACH GIRDER.

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------|---------|--------|----------|----------|--------|---------|----------|---------|---------|---------|---------|---------|---------|-------|--------|--------|---------|--------|--------|-------|
| SPAN A | | | | | | | | | | | | | | | | | | | | | | |
| GIRDER #5 | | | | | | | | | | | | | | | | | | | | | | |
| TWENTIETH POINTS | 0 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 | 0 | |
| DEFLECTION DUE TO WEIGHT OF GIRDER | ↓ | 0.000 | 0.007 | 0.012 | 0.018 | 0.023 | 0.027 | 0.031 | 0.033 | 0.035 | 0.035 | 0.034 | 0.032 | 0.029 | 0.025 | 0.021 | 0.017 | 0.012 | 0.008 | 0.004 | 0.000 | |
| DEFLECTION DUE TO WEIGHT OF SLAB * | ↓ | 0.000 | 0.023 | 0.044 | 0.063 | 0.081 | 0.096 | 0.108 | 0.117 | 0.123 | 0.126 | 0.125 | 0.121 | 0.113 | 0.103 | 0.090 | 0.075 | 0.060 | 0.044 | 0.029 | 0.014 | 0.000 |
| DEFLECTION DUE TO WEIGHT OF BARRIER RAIL | ↓ | 0.000 | 0.008 | 0.014 | 0.021 | 0.026 | 0.031 | 0.035 | 0.038 | 0.040 | 0.041 | 0.041 | 0.040 | 0.038 | 0.034 | 0.030 | 0.026 | 0.021 | 0.015 | 0.010 | 0.005 | 0.000 |
| TOTAL DEAD LOAD DEFLECTION | ↓ | 0.000 | 0.038 | 0.070 | 0.102 | 0.130 | 0.154 | 0.174 | 0.188 | 0.198 | 0.202 | 0.201 | 0.195 | 0.183 | 0.166 | 0.145 | 0.122 | 0.098 | 0.071 | 0.047 | 0.023 | 0.000 |
| VERTICAL CURVE ORDINATE | ↑ | 0.000 | 0.080 | 0.151 | 0.214 | 0.269 | 0.315 | 0.353 | 0.382 | 0.403 | 0.416 | 0.420 | 0.416 | 0.403 | 0.382 | 0.353 | 0.315 | 0.269 | 0.214 | 0.151 | 0.080 | 0.000 |
| REQUIRED CAMBER | ↑ | 0 | 1 1/16" | 2 5/8" | 3 13/16" | 4 13/16" | 5 5/8" | 6 5/16" | 6 13/16" | 7 3/16" | 7 7/16" | 7 7/16" | 7 5/16" | 7 1/16" | 6 9/16" | 6" | 5 1/4" | 4 3/8" | 3 7/16" | 2 3/8" | 1 1/4" | 0 |

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------|--------|--------|--------|---------|--------|---------|---------|--------|--------|---------|---------|--------|---------|--------|--------|--------|--------|--------|--------|-------|
| SPAN B | | | | | | | | | | | | | | | | | | | | | | |
| GIRDER #5 | | | | | | | | | | | | | | | | | | | | | | |
| TWENTIETH POINTS | 0 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 | 0 | |
| DEFLECTION DUE TO WEIGHT OF GIRDER | ↓ | 0.000 | -0.002 | -0.003 | -0.004 | -0.005 | -0.006 | -0.006 | -0.007 | -0.007 | -0.007 | -0.007 | -0.007 | -0.006 | -0.006 | -0.005 | -0.005 | -0.004 | -0.003 | -0.001 | 0.000 | |
| DEFLECTION DUE TO WEIGHT OF SLAB * | ↓ | 0.000 | -0.006 | -0.011 | -0.015 | -0.019 | -0.021 | -0.023 | -0.024 | -0.026 | -0.026 | -0.026 | -0.026 | -0.025 | -0.024 | -0.022 | -0.020 | -0.017 | -0.014 | -0.010 | -0.005 | 0.000 |
| DEFLECTION DUE TO WEIGHT OF BARRIER RAIL | ↓ | 0.000 | -0.002 | -0.004 | -0.005 | -0.006 | -0.007 | -0.008 | -0.008 | -0.009 | -0.009 | -0.008 | -0.008 | -0.008 | -0.007 | -0.006 | -0.005 | -0.004 | -0.003 | -0.002 | 0.000 | |
| TOTAL DEAD LOAD DEFLECTION | ↓ | 0.000 | -0.010 | -0.018 | -0.024 | -0.030 | -0.034 | -0.037 | -0.039 | -0.041 | -0.042 | -0.041 | -0.040 | -0.038 | -0.035 | -0.031 | -0.027 | -0.022 | -0.016 | -0.008 | 0.000 | |
| VERTICAL CURVE ORDINATE | ↑ | 0.000 | 0.027 | 0.050 | 0.071 | 0.089 | 0.105 | 0.117 | 0.127 | 0.134 | 0.138 | 0.139 | 0.138 | 0.134 | 0.127 | 0.117 | 0.105 | 0.089 | 0.071 | 0.050 | 0.027 | 0.000 |
| REQUIRED CAMBER | ↑ | 0 | 3/16" | 3/8" | 9/16" | 1 1/16" | 7/8" | 1 5/16" | 1 1/16" | 1 1/8" | 1 1/8" | 1 3/16" | 1 3/16" | 1 1/8" | 1 1/16" | 1" | 7/8" | 3/4" | 9/16" | 7/16" | 1/4" | 0 |

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------|-------|---------|--------|--------|---------|----------|--------|---------|----------|--------|--------|--------|---------|-------|---------|----------|-------|--------|--------|-------|
| SPAN C | | | | | | | | | | | | | | | | | | | | | | |
| GIRDER #5 | | | | | | | | | | | | | | | | | | | | | | |
| TWENTIETH POINTS | 0 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 | 0 | |
| DEFLECTION DUE TO WEIGHT OF GIRDER | ↓ | 0.000 | 0.003 | 0.006 | 0.009 | 0.012 | 0.015 | 0.018 | 0.021 | 0.023 | 0.024 | 0.025 | 0.025 | 0.025 | 0.023 | 0.022 | 0.019 | 0.016 | 0.013 | 0.009 | 0.005 | 0.000 |
| DEFLECTION DUE TO WEIGHT OF SLAB * | ↓ | 0.000 | 0.010 | 0.021 | 0.032 | 0.044 | 0.056 | 0.067 | 0.075 | 0.082 | 0.087 | 0.089 | 0.090 | 0.089 | 0.085 | 0.078 | 0.069 | 0.058 | 0.046 | 0.032 | 0.017 | 0.000 |
| DEFLECTION DUE TO WEIGHT OF BARRIER RAIL | ↓ | 0.000 | 0.003 | 0.007 | 0.011 | 0.014 | 0.018 | 0.021 | 0.024 | 0.025 | 0.027 | 0.027 | 0.028 | 0.027 | 0.026 | 0.024 | 0.021 | 0.018 | 0.014 | 0.010 | 0.005 | 0.000 |
| TOTAL DEAD LOAD DEFLECTION | ↓ | 0.000 | 0.016 | 0.034 | 0.052 | 0.070 | 0.089 | 0.106 | 0.120 | 0.130 | 0.138 | 0.141 | 0.143 | 0.141 | 0.134 | 0.124 | 0.109 | 0.092 | 0.073 | 0.051 | 0.027 | 0.000 |
| VERTICAL CURVE ORDINATE | ↑ | 0.000 | 0.067 | 0.126 | 0.178 | 0.224 | 0.262 | 0.294 | 0.318 | 0.336 | 0.346 | 0.350 | 0.346 | 0.336 | 0.318 | 0.294 | 0.262 | 0.224 | 0.178 | 0.126 | 0.067 | 0.000 |
| REQUIRED CAMBER | ↑ | 0 | 1" | 1 5/16" | 2 3/4" | 3 1/2" | 4 3/16" | 4 13/16" | 5 1/4" | 5 9/16" | 5 13/16" | 5 7/8" | 5 7/8" | 5 3/4" | 5 7/16" | 5" | 4 1/16" | 3 13/16" | 3" | 2 1/8" | 1 1/8" | 0 |

* INCLUDES SLAB, BUILDUPS & STAY-IN-PLACE FORMS.
ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT " FINAL CAMBER ", WHICH IS GIVEN IN INCHES (FRACTION FORM).

PROJECT NO. B-5121/B-5317

WAKE COUNTY

STATION: 20+19.94 -FLYOVER-

SHEET 5 OF 6



DocuSigned by:
Westy W. Alford
4/13/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
DEAD LOAD
DEFLECTIONS

DRAWN BY : J.P. ADAMS DATE : 1/2016
CHECKED BY : I.L. AVERETTE DATE : 2/2016
DESIGN ENGINEER OF RECORD: R.L. CHESSON DATE : 2/2016

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-71 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 110 |