

3/21/2023 8:05:34 AM P:\Raleigh\Projects\2019\Division 9 (Davenport)\B-5783\Structures\Drawings\NEW\280164_NB\B-5783_SMU_DL_280164.dgn

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | |
|--|-----|-------|-------|------|-------|-------|-------|------|------|------|------|------|------|------|-------|-------|-------|------|-------|-------|------|
| SPAN A | | | | | | | | | | | | | | | | | | | | | |
| GIRDERS G1-G5 | | | | | | | | | | | | | | | | | | | | | |
| TWENTIETH POINTS | 0 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 | 1.00 |
| DEFLECTION DUE TO WEIGHT OF STEEL | ↓ 0 | .000 | .000 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .000 | .000 | 0 |
| * DEFLECTION DUE TO WEIGHT OF SLAB | ↓ 0 | .001 | .002 | .003 | .004 | .005 | .005 | .006 | .006 | .006 | .006 | .006 | .006 | .006 | .005 | .005 | .004 | .003 | .002 | .001 | 0 |
| DEFLECTION DUE TO WEIGHT OF RAIL | ↓ 0 | .000 | .000 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .000 | .000 | 0 |
| TOTAL DEAD LOAD DEFLECTION | ↓ 0 | .001 | .002 | .005 | .006 | .007 | .007 | .008 | .008 | .008 | .008 | .008 | .008 | .008 | .007 | .007 | .006 | .005 | .002 | .001 | 0 |
| VERTICAL CURVE ORDINATE | ↑ 0 | .002 | .005 | .007 | .008 | .010 | .011 | .012 | .012 | .013 | .013 | .013 | .012 | .012 | .011 | .010 | .008 | .007 | .005 | .002 | 0 |
| SUPERELEVATION ORDINATE | ↑ 0 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | 0 |
| REQUIRED CAMBER | ↑ 0 | 1/16" | 1/16" | 1/8" | 3/16" | 3/16" | 3/16" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 3/16" | 3/16" | 3/16" | 1/8" | 1/16" | 1/16" | 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).

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | |
|--|-----|-------|--------|---------|--------|--------|----------|---------|----------|--------|----------|--------|--------|--------|---------|----------|----------|---------|---------|--------|---------|
| SPAN B | | | | | | | | | | | | | | | | | | | | | |
| GIRDERS G1-G5 (0 THRU .500) | | | | | | | | | | | | | | | | | | | | | |
| FORTIETH POINTS | 0 | .025 | .050 | .075 | .100 | .125 | .150 | .175 | .200 | .225 | .250 | .275 | .300 | .325 | .350 | .375 | .400 | .425 | .450 | .475 | .500 |
| DEFLECTION DUE TO WEIGHT OF STEEL | ↓ 0 | .010 | .021 | .031 | .041 | .050 | .059 | .068 | .077 | .085 | .092 | .099 | .105 | .111 | .115 | .120 | .123 | .126 | .128 | .129 | .129 |
| * DEFLECTION DUE TO WEIGHT OF SLAB | ↓ 0 | .019 | .046 | .074 | .100 | .126 | .152 | .176 | .198 | .220 | .240 | .258 | .275 | .290 | .303 | .314 | .324 | .331 | .336 | .339 | .340 |
| DEFLECTION DUE TO WEIGHT OF RAIL | ↓ 0 | .007 | .014 | .022 | .029 | .035 | .042 | .048 | .054 | .060 | .065 | .070 | .074 | .078 | .081 | .084 | .087 | .088 | .090 | .091 | .091 |
| TOTAL DEAD LOAD DEFLECTION | ↓ 0 | .036 | .081 | .127 | .170 | .211 | .253 | .292 | .329 | .365 | .397 | .427 | .454 | .479 | .499 | .518 | .534 | .545 | .554 | .559 | .560 |
| VERTICAL CURVE ORDINATE | ↑ 0 | .012 | .024 | .035 | .046 | .056 | .065 | .074 | .082 | .089 | .096 | .102 | .107 | .112 | .116 | .120 | .123 | .125 | .126 | .127 | .128 |
| SUPERELEVATION ORDINATE | ↑ 0 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| REQUIRED CAMBER | ↑ 0 | 9/16" | 1 1/4" | 1 5/16" | 2 5/8" | 3 1/4" | 3 13/16" | 4 7/16" | 4 15/16" | 5 1/2" | 5 15/16" | 6 3/8" | 6 3/4" | 7 1/8" | 7 7/16" | 7 11/16" | 7 15/16" | 8 1/16" | 8 3/16" | 8 1/4" | 8 5/16" |

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

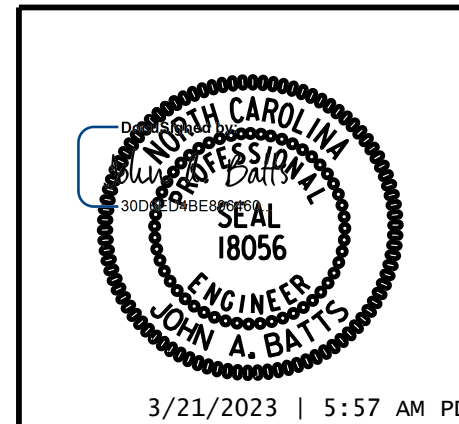
| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|--------|---------|---------|----------|----------|---------|--------|--------|--------|----------|--------|----------|---------|---------|----------|--------|----------|--------|-------|------|
| SPAN B | | | | | | | | | | | | | | | | | | | | | |
| GIRDERS G1-G5 (.500 THRU 1.000) | | | | | | | | | | | | | | | | | | | | | |
| FORTIETH POINTS | .500 | .525 | .550 | .575 | .600 | .625 | .650 | .675 | .700 | .725 | .750 | .775 | .800 | .825 | .850 | .875 | .900 | .925 | .950 | .975 | 1.00 |
| DEFLECTION DUE TO WEIGHT OF STEEL | ↓ .129 | .129 | .128 | .126 | .123 | .120 | .115 | .111 | .105 | .099 | .092 | .085 | .077 | .068 | .059 | .050 | .041 | .031 | .021 | .010 | 0 |
| * DEFLECTION DUE TO WEIGHT OF SLAB | ↓ .340 | .339 | .336 | .331 | .324 | .314 | .303 | .290 | .275 | .258 | .240 | .220 | .198 | .176 | .152 | .126 | .100 | .074 | .046 | .019 | 0 |
| DEFLECTION DUE TO WEIGHT OF RAIL | ↓ .091 | .091 | .090 | .088 | .087 | .084 | .081 | .078 | .074 | .070 | .065 | .060 | .054 | .048 | .042 | .035 | .029 | .022 | .014 | .007 | 0 |
| TOTAL DEAD LOAD DEFLECTION | ↓ .560 | .559 | .554 | .545 | .534 | .518 | .499 | .479 | .454 | .427 | .397 | .365 | .329 | .292 | .253 | .211 | .170 | .127 | .081 | .036 | 0 |
| VERTICAL CURVE ORDINATE | ↑ .128 | .127 | .126 | .125 | .123 | .120 | .116 | .112 | .107 | .102 | .096 | .089 | .082 | .074 | .065 | .056 | .046 | .035 | .024 | .012 | 0 |
| SUPERELEVATION ORDINATE | ↑ .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | 0 |
| REQUIRED CAMBER | ↑ 8 5/16" | 8 3/4" | 8 3/16" | 8 3/16" | 7 15/16" | 7 11/16" | 7 7/16" | 7 3/8" | 6 3/4" | 6 3/8" | 5 15/16" | 5 1/2" | 4 15/16" | 4 7/16" | 3 3/16" | 2 11/16" | 2 5/8" | 1 15/16" | 1 1/4" | 9/16" | 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).

| DEAD LOAD DEFLECTION TABLE FOR GIRDERS | | | | | | | | | | | | | | | | | | | | | |
|--|-----|-------|-------|------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|-------|-------|------|-------|-------|
| SPAN C | | | | | | | | | | | | | | | | | | | | | |
| GIRDERS G1-G5 | | | | | | | | | | | | | | | | | | | | | |
| TWENTIETH POINTS | 0 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 | 1.00 |
| DEFLECTION DUE TO WEIGHT OF STEEL | ↓ 0 | .000 | .000 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .000 | .000 | 0 |
| * DEFLECTION DUE TO WEIGHT OF SLAB | ↓ 0 | .001 | .002 | .003 | .004 | .005 | .005 | .006 | .006 | .006 | .006 | .006 | .006 | .006 | .005 | .005 | .004 | .003 | .002 | .001 | 0 |
| DEFLECTION DUE TO WEIGHT OF RAIL | ↓ 0 | .000 | .000 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .001 | .000 | .000 | 0 |
| TOTAL DEAD LOAD DEFLECTION | ↓ 0 | .001 | .002 | .005 | .006 | .007 | .007 | .008 | .008 | .008 | .008 | .008 | .008 | .008 | .007 | .007 | .006 | .005 | .002 | .001 | 0 |
| VERTICAL CURVE ORDINATE | ↑ 0 | .002 | .005 | .007 | .008 | .010 | .011 | .012 | .012 | .013 | .013 | .013 | .012 | .012 | .011 | .010 | .008 | .007 | .005 | .002 | 0 |
| SUPERELEVATION ORDINATE | ↑ 0 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | 0 |
| REQUIRED CAMBER | ↑ 0 | 1/16" | 1/16" | 1/8" | 3/16" | 3/16" | 3/16" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 3/16" | 3/16" | 3/16" | 1/8" | 1/16" | 1/16" |

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PROJECT NO. B-5783
DAVIDSON COUNTY
STATION: 21+13.32 -NBL-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

DEAD LOAD DEFLECTION AND GIRDER CAMBER

DRAWN BY : S.D. COOPER DATE : 12-22
CHECKED BY : J.A. BATTS DATE : 12-22
DESIGN ENGINEER OF RECORD: J.A. BATTS DATE : 12-22

| | | | | | | |
|-----------|-----|-------|-----|-----|-------|--------------|
| REVISIONS | | | | | | SHEET NO. |
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-18 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 40 |

LICENSURE NO. C-4434

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UNLESS ALL SIGNATURES COMPLETED**