

LOAD FACTORS:

| | | | |
|----------------------------|-------------|---------------|---------------|
| DESIGN LOAD RATING FACTORS | LIMIT STATE | γ_{DC} | γ_{DW} |
| | STRENGTH I | 1.25 | 1.50 |
| | SERVICE III | 1.00 | 1.00 |

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

| LEVEL | VEHICLE | WEIGHT (W) (TONS) | CONTROLLING LOAD RATING # | MINIMUM RATING FACTORS (RF) | TONS = W X RF | STRENGTH I LIMIT STATE | | | | | | | | | | SERVICE III LIMIT STATE | | | | | COMMENT NUMBER | | | |
|--------------------|-----------|-------------------|---------------------------|-----------------------------|---------------|------------------------|---------------------------|---------------|------|-----------------|-------------------------------------|---------------------------|---------------|------|-----------------|-------------------------------------|------------------|---------------------------|---------------|------|----------------|-----------------|-------------------------------------|--|
| | | | | | | LIVELOAD FACTORS | MOMENT | | | | | SHEAR | | | | | LIVELOAD FACTORS | MOMENT | | | | | | |
| | | | | | | | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | |
| DESIGN LOAD RATING | HL93(Inv) | N/A | 1 | 1.29 | - | 1.75 | 0.860 | 1.41 | A | I | 36.625 | 1.032 | 1.54 | A | I | 43.95 | 0.80 | 0.860 | 1.29 | A | I | 36.625 | | |
| | HL93(Opr) | N/A | -- | 1.83 | -- | 1.35 | 0.860 | 1.83 | A | I | 36.625 | 1.032 | 2.00 | A | I | 43.95 | N/A | 0.860 | 1.29 | A | I | 36.625 | | |
| | HS20(Inv) | 36.00 | 2 | 1.69 | 60.89 | 1.75 | 0.860 | 1.85 | A | I | 36.625 | 1.032 | 1.82 | A | I | 43.95 | 0.80 | 0.860 | 1.69 | A | I | 36.625 | | |
| | HS20(Opr) | 36.00 | -- | 2.35 | 84.73 | 1.35 | 0.860 | 2.40 | A | I | 36.625 | 1.032 | 2.35 | A | I | 43.95 | N/A | 0.860 | 1.69 | A | I | 36.625 | | |
| LEGAL LOAD RATING | SV | SNSH | 13.50 | -- | 3.82 | 51.61 | 1.4 | 0.860 | 5.24 | A | I | 36.625 | 1.032 | 5.07 | A | I | 43.95 | 0.80 | 0.860 | 3.82 | A | I | 36.625 | |
| | | SNGARBS2 | 20.00 | -- | 2.85 | 56.93 | 1.4 | 0.860 | 3.90 | A | I | 36.625 | 1.032 | 3.70 | A | I | 43.95 | 0.80 | 0.860 | 2.85 | A | I | 36.625 | |
| | | SNAGRIS2 | 22.00 | -- | 2.69 | 59.29 | 1.4 | 0.860 | 3.69 | A | I | 36.625 | 1.032 | 3.48 | A | I | 43.95 | 0.80 | 0.860 | 2.69 | A | I | 36.625 | |
| | | SNCOTTS3 | 27.25 | -- | 1.90 | 51.84 | 1.4 | 0.860 | 2.61 | A | I | 36.625 | 1.032 | 2.54 | A | I | 43.95 | 0.80 | 0.860 | 1.90 | A | I | 36.625 | |
| | | SNAGGRS4 | 34.93 | -- | 1.59 | 55.49 | 1.4 | 0.860 | 2.18 | A | I | 36.625 | 1.032 | 2.18 | A | I | 43.95 | 0.80 | 0.860 | 1.59 | A | I | 36.625 | |
| | | SNS5A | 35.55 | -- | 1.55 | 55.24 | 1.4 | 0.860 | 2.13 | A | I | 36.625 | 1.032 | 2.25 | A | I | 43.95 | 0.80 | 0.860 | 1.55 | A | I | 36.625 | |
| | | SNS6A | 39.95 | -- | 1.43 | 56.94 | 1.4 | 0.860 | 1.95 | A | I | 36.625 | 1.032 | 2.08 | A | I | 43.95 | 0.80 | 0.860 | 1.43 | A | I | 36.625 | |
| | SNS7B | 42.00 | -- | 1.36 | 57.01 | 1.4 | 0.860 | 1.86 | A | I | 36.625 | 1.032 | 2.09 | A | I | 43.95 | 0.80 | 0.860 | 1.36 | A | I | 36.625 | | |
| | TTST | TNAGRIT3 | 33.00 | -- | 1.74 | 57.35 | 1.4 | 0.860 | 2.38 | A | I | 36.625 | 1.032 | 2.45 | A | I | 43.95 | 0.80 | 0.860 | 1.74 | A | I | 36.625 | |
| | | TNT4A | 33.08 | -- | 1.75 | 57.73 | 1.4 | 0.860 | 2.39 | A | I | 36.625 | 1.032 | 2.36 | A | I | 43.95 | 0.80 | 0.860 | 1.75 | A | I | 36.625 | |
| | | TNAGRIT4 | 43.00 | -- | 1.41 | 60.67 | 1.4 | 0.860 | 1.93 | A | I | 36.625 | 1.032 | 1.93 | A | I | 43.95 | 0.80 | 0.860 | 1.41 | A | I | 36.625 | |
| | | TNAGRIT5A | 45.00 | -- | 1.33 | 59.87 | 1.4 | 0.860 | 1.82 | A | I | 36.625 | 1.032 | 1.97 | A | I | 43.95 | 0.80 | 0.860 | 1.33 | A | I | 36.625 | |
| | | TNAGRIT5B | 45.00 | 3 | 1.31 | 59.15 | 1.4 | 0.860 | 1.80 | A | I | 36.625 | 1.032 | 1.83 | A | I | 43.95 | 0.80 | 0.860 | 1.31 | A | I | 36.625 | |
| | | TNT6A | 41.60 | -- | 1.43 | 59.36 | 1.4 | 0.860 | 1.95 | A | I | 36.625 | 1.032 | 2.31 | A | I | 43.95 | 0.80 | 0.860 | 1.43 | A | I | 36.625 | |
| TNT7A | | 42.00 | -- | 1.43 | 60.22 | 1.4 | 0.860 | 1.96 | A | I | 36.625 | 1.032 | 2.25 | A | I | 43.95 | 0.80 | 0.860 | 1.43 | A | I | 36.625 | | |
| TNT7B | 42.00 | -- | 1.48 | 62.28 | 1.4 | 0.860 | 2.03 | A | I | 36.625 | 1.032 | 2.01 | A | I | 43.95 | 0.80 | 0.860 | 1.48 | A | I | 36.625 | | | |

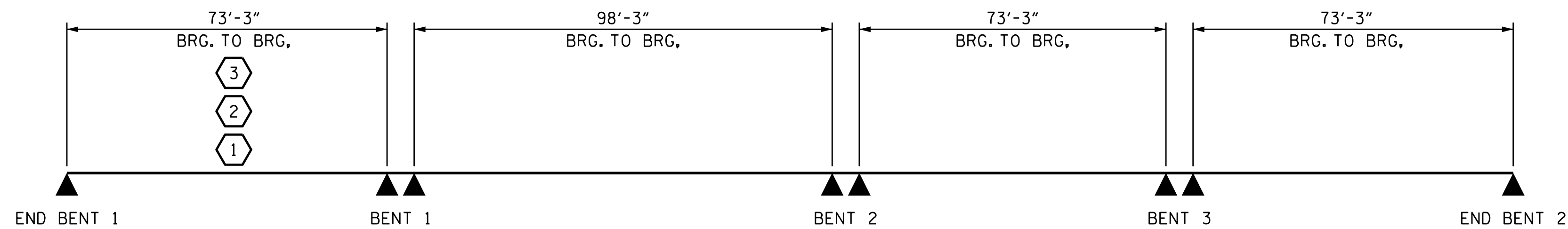
NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.
ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

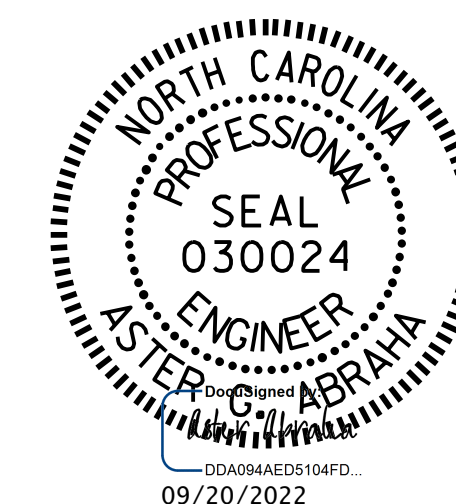
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|--|----------------------------|
| # | CONTROLLING LOAD RATING |
| 1 | DESIGN LOAD RATING (HL-93) |
| 2 | DESIGN LOAD RATING (HS-20) |
| 3 | LEGAL LOAD RATING ** |
| ** SEE CHART FOR VEHICLE TYPE | |
| GIRDER LOCATION | |
| I - INTERIOR GIRDER EL - EXTERIOR LEFT GIRDER ER - EXTERIOR RIGHT GIRDER | |



LRFR SUMMARY

PROJECT NO. B-5670
NASH COUNTY
 STATION: 16+98.00 -L-



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (NON-INTERSTATE TRAFFIC)

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-5 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 40 |

| | |
|-------------------------|-----------------------|
| ASSEMBLED BY : G. AYES | DATE : 6/2022 |
| CHECKED BY : S. WANCE | DATE : 07/2022 |
| DRAWN BY : MAA 1/08 | REV. 11/2/08RR MAA/GM |
| CHECKED BY : GM/DI 2/08 | REV. 10/11/11 MAA/GM |