

User name: jlm.austin
 File name: R:\Projects\19-55.01_SMU.B.6046_SR1917_Over_Long_Creek\NC DOT Structures\Drawings\Find\401_006_B6046_SMU_LRFR_830102.dgn
 Plot time: 11/14/2023 4:06:54 PM
 Pen Table: R:\cecad\Plotting\Structures\NC DOT\Pen Tables\ICE_NC_Struct.tbl
 Print Driver: R:\cecad\Plotting\Structures\NC DOT\Plot Config\22x34_PDF_ICP.ctb

| LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------------------|---------------------------------|-----------------------------------|---------------|-----------------------------|------------------------------|---------------|------|--------------------|---|------------------------------|---------------|------|-----------------------------|-------------------------|---|------------------------------|---------------|------|--------------------|----------------|---|--|
| LOAD TYPE | 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 | | |
| | | | | | | LIVE-LOAD FACTORS (% LL) | MOMENT | | | | SHEAR | | | | LIVE-LOAD FACTORS (% LL) | 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 | HL-93 (INVENTORY) | N/A | 1 | 1.330 | -- | 1.75 | 0.275 | 1.33 | 60' | EL | 29.5 | 0.52 | 1.33 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.37 | 60' | EL | 29.5 | | |
| | HL-93 (OPERATING) | N/A | | 1.725 | -- | 1.35 | 0.275 | 1.73 | 60' | EL | 29.5 | 0.52 | 1.72 | 60' | EL | 5.9 | N/A | -- | -- | -- | -- | -- | | |
| | HS-20 (INVENTORY) | 36.000 | 2 | 1.601 | 57.643 | 1.75 | 0.275 | 1.69 | 60' | EL | 29.5 | 0.52 | 1.60 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.74 | 60' | EL | 29.5 | | |
| | HS-20 (OPERATING) | 36.000 | | 2.076 | 74.723 | 1.35 | 0.275 | 2.19 | 60' | EL | 29.5 | 0.52 | 2.08 | 60' | EL | 5.9 | N/A | -- | -- | -- | -- | -- | | |
| LEGAL LOAD | SINGLE VEHICLE (SV) | SNSH | | 3.745 | 50.557 | 1.4 | 0.275 | 4.55 | 60' | EL | 29.5 | 0.52 | 4.63 | 60' | EL | 5.9 | 0.80 | 0.275 | 3.74 | 60' | EL | 29.5 | | |
| | | SNGARBS2 | 20.000 | | 2.867 | 57.338 | 1.4 | 0.275 | 3.48 | 60' | EL | 29.5 | 0.52 | 3.33 | 60' | EL | 5.9 | 0.80 | 0.275 | 2.87 | 60' | EL | 29.5 | |
| | | SNAGRIS2 | 22.000 | | 2.748 | 60.460 | 1.4 | 0.275 | 3.34 | 60' | EL | 29.5 | 0.52 | 3.11 | 60' | EL | 5.9 | 0.80 | 0.275 | 2.75 | 60' | EL | 29.5 | |
| | | SNCOTTS3 | 27.250 | | 1.866 | 50.841 | 1.4 | 0.275 | 2.27 | 60' | EL | 29.5 | 0.52 | 2.31 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.87 | 60' | EL | 29.5 | |
| | | SNAGGRS4 | 34.925 | | 1.588 | 55.465 | 1.4 | 0.275 | 1.93 | 60' | EL | 29.5 | 0.52 | 1.95 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.59 | 60' | EL | 29.5 | |
| | | SNS5A | 35.550 | | 1.551 | 55.139 | 1.4 | 0.275 | 1.89 | 60' | EL | 29.5 | 0.52 | 1.99 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.55 | 60' | EL | 29.5 | |
| | | SNS6A | 39.950 | | 1.435 | 57.347 | 1.4 | 0.275 | 1.74 | 60' | EL | 29.5 | 0.52 | 1.83 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.44 | 60' | EL | 29.5 | |
| | SNS7B | 42.000 | | 1.367 | 57.434 | 1.4 | 0.275 | 1.66 | 60' | EL | 29.5 | 0.52 | 1.81 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.37 | 60' | EL | 29.5 | | |
| | TRUCK TRACTOR SEMI-TRAILER (TTST) | TNAGRIT3 | 33.000 | | 1.754 | 57.887 | 1.4 | 0.275 | 2.13 | 60' | EL | 29.5 | 0.52 | 2.17 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.75 | 60' | EL | 29.5 | |
| | | TNT4A | 33.075 | | 1.765 | 58.389 | 1.4 | 0.275 | 2.15 | 60' | EL | 29.5 | 0.52 | 2.10 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.77 | 60' | EL | 29.5 | |
| | | TNT6A | 41.600 | | 1.456 | 60.551 | 1.4 | 0.275 | 1.77 | 60' | EL | 29.5 | 0.52 | 1.96 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.46 | 60' | EL | 29.5 | |
| | | TNT7A | 42.000 | | 1.469 | 61.714 | 1.4 | 0.275 | 1.79 | 60' | EL | 29.5 | 0.52 | 1.88 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.47 | 60' | EL | 29.5 | |
| | | TNT7B | 42.000 | | 1.535 | 64.463 | 1.4 | 0.275 | 1.87 | 60' | EL | 29.5 | 0.52 | 1.76 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.53 | 60' | EL | 29.5 | |
| | | TNAGRIT4 | 43.000 | | 1.450 | 62.329 | 1.4 | 0.275 | 1.76 | 60' | EL | 29.5 | 0.52 | 1.70 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.45 | 60' | EL | 29.5 | |
| TNAGT5A | | 45.000 | | 1.361 | 61.247 | 1.4 | 0.275 | 1.65 | 60' | EL | 29.5 | 0.52 | 1.71 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.36 | 60' | EL | 29.5 | | |
| TNAGT5B | 45.000 | 3 | 1.340 | 60.282 | 1.4 | 0.275 | 1.63 | 60' | EL | 29.5 | 0.52 | 1.61 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.34 | 60' | EL | 29.5 | | | |
| EMERGENCY VEHICLE (EV) | EV2 | 28.750 | | 2.218 | 63.776 | 1.3 | 0.275 | 2.65 | 60' | EL | 29.5 | 0.52 | 2.50 | 60' | EL | 5.9 | 0.80 | 0.275 | 2.22 | 60' | EL | 29.5 | | |
| | EV3 | 43.000 | 4 | 1.444 | 62.085 | 1.3 | 0.275 | 1.73 | 60' | EL | 29.5 | 0.52 | 1.69 | 60' | EL | 5.9 | 0.80 | 0.275 | 1.44 | 60' | EL | 29.5 | | |

LOAD FACTORS:

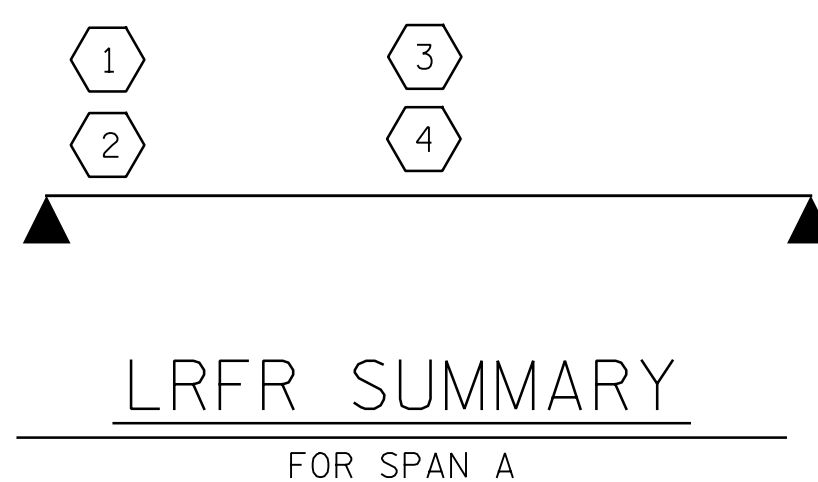
| DESIGN LOAD RATING FACTORS | LIMIT STATE | γDC | γDW |
|-------------------------------------|-------------|------|------|
| | STRENGTH I | 1.25 | 1.50 |
| | SERVICE III | 1.00 | 1.00 |

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.

| # | CONTROLLING LOAD RATING |
|-------------------------------|----------------------------------|
| 1 | DESIGN LOAD RATING (HL-93) |
| 2 | DESIGN LOAD RATING (HS-20) |
| 3 | LEGAL LOAD RATING ** |
| 4 | EMERGENCY VEHICLE LOAD RATING ** |
| ** SEE CHART FOR VEHICLE TYPE | |
| GIRDER LOCATION | |
| I - INTERIOR GIRDER | |
| EL - EXTERIOR LEFT GIRDER | |
| ER - EXTERIOR RIGHT GIRDER | |



PROJECT NO. B-6046
STANLY COUNTY
 STATION: 17+66.00 -L-

DRAWN BY : J. N. AUSTIN DATE : 8-10-22
 CHECKED BY : N. D'AIUTO DATE : 8-12-22
 DESIGN E.O.R. : N. D'AIUTO DATE : 1-4-23

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LRFR SUMMARY FOR
 60' CORED SLAB UNIT
 90° SKEW

(NON-INTERSTATE TRAFFIC)

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-05 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 24 |