

20-OCT-09  
11:25:21

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN  
LIVE LOAD CASE PROGRAM  
REVISED: JUNE 26, 2008

PROB. NO. LL01

53.63' CURB-TO-CURB; 9 BEAMS; 140.00' AVERAGE SPAN

BRIDGE WIDTH	X1	X2	CENTER LINE DISTANCE	# OF BEAMS	REACTION FORCE	MAXIMUM # OF TRUCKS	# OF COLUMNS	COLUMN WIDTH	SKEW ANGLE
56.880	3.625	3.625	28.440	9	68.706	4	3	4.000	19

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20
3.396	6.261	6.261	6.261	6.261	6.261	6.261	6.261	6.261	6.261										

XCOL1	XCOL2	XCOL3	XCOL4	XCOL5
10.473	19.761	19.761		

LIVE LOAD CASE # 1 1 TRUCKS

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\* \*

I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I

BEAM	WHEEL FRACTION	P-LOAD
1	0.9685	66.544
2	1.0315	70.868
3	0.0000	0.000
4	0.0000	0.000
5	0.0000	0.000
6	0.0000	0.000
7	0.0000	0.000
8	0.0000	0.000
9	0.0000	0.000

LIVE LOAD CASE # 2 2 TRUCKS

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\* \* \* \*  
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I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I

BEAM	WHEEL FRACTION	P-LOAD
1	0.9685	66.544
2	1.3977	96.030
3	1.0417	71.570
4	0.5921	40.679
5	0.0000	0.000
6	0.0000	0.000
7	0.0000	0.000
8	0.0000	0.000
9	0.0000	0.000

LIVE LOAD CASE # 3 3 TRUCKS

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I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I

BEAM	WHEEL FRACTION	P-LOAD
1	0.9685	66.544
2	1.3977	96.030
3	1.0417	71.570
4	1.3611	93.517
5	1.0417	71.570
6	0.1893	13.004
7	0.0000	0.000
8	0.0000	0.000
9	0.0000	0.000

LIVE LOAD CASE # 4 4 TRUCKS

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\* \* \* \* \*

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      *      *      *      *      *      *      *
    ***    ***    ***    ***    ***    ***    ***
      *      *      *      *      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.9685      66.544
  2      1.3977      96.030
  3      1.0417      71.570
  4      1.3611      93.517
  5      1.2135      83.378
  6      1.2310      84.574
  7      0.7865      54.034
  8      0.0000      0.000
  9      0.0000      0.000

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LIVE LOAD CASE # 5 1 TRUCKS

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      *      *
      *      *
    ***    ***
      *      *

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I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000      0.000
  2      0.0000      0.000
  3      0.0000      0.000
  4      0.0000      0.000
  5      0.0000      0.000
  6      0.0000      0.000
  7      0.0000      0.000
  8      1.0315      70.868
  9      0.9685      66.544

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LIVE LOAD CASE # 6 2 TRUCKS

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      *      *      *      *
      *      *      *      *
      *      *      *      *
    ***    ***    ***    ***
      *      *      *      *

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I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000      0.000
  2      0.0000      0.000
  3      0.0000      0.000
  4      0.0000      0.000
  5      0.0000      0.000
  6      0.5921      40.679
  7      1.0417      71.570
  8      1.3977      96.030
  9      0.9685      66.544

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LIVE LOAD CASE # 7 3 TRUCKS

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      *      *      *      *      *
      *      *      *      *      *
      *      *      *      *      *
    ***    ***    ***    ***    ***
      *      *      *      *      *

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I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000      0.000
  2      0.0000      0.000
  3      0.0000      0.000
  4      0.1893      13.004
  5      1.0417      71.570
  6      1.3611      93.517
  7      1.0417      71.570
  8      1.3977      96.030
  9      0.9685      66.544

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LIVE LOAD CASE # 8 4 TRUCKS

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      *      *      *      *      *      *
      *      *      *      *      *      *

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      * * * * *
     *** ** *
    * * * * *
-----
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I

BEAM   WHEEL FRACTION   P-LOAD
1       0.0000           0.000
2       0.0000           0.000
3       0.7865           54.034
4       1.2310           84.574
5       1.2135           83.378
6       1.3611           93.517
7       1.0417           71.570
8       1.3977           96.030
9       0.9685           66.544

```

LIVE LOAD CASE # 9 1 TRUCKS

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      * *
     * *
    * *
   *** **
    * *
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I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I

BEAM   WHEEL FRACTION   P-LOAD
1       0.0000           0.000
2       0.0000           0.000
3       0.0000           0.000
4       0.4792           32.921
5       1.0417           71.570
6       0.4792           32.921
7       0.0000           0.000
8       0.0000           0.000
9       0.0000           0.000

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LIVE LOAD CASE # 10 2 TRUCKS

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      * * * *
     * * * *
    * * * *
   *** ** **
    * * * *
-----
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I

BEAM   WHEEL FRACTION   P-LOAD
1       0.0000           0.000
2       0.0763           5.245
3       1.0417           71.570
4       1.3611           93.517
5       1.0417           71.570
6       0.4792           32.921
7       0.0000           0.000
8       0.0000           0.000
9       0.0000           0.000

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LIVE LOAD CASE # 11 3 TRUCKS

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      * * * * *
     * * * * *
    * * * * *
   *** ** **
    * * * * *
-----
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I

BEAM   WHEEL FRACTION   P-LOAD
1       0.0000           0.000
2       0.0763           5.245
3       1.0417           71.570
4       1.3611           93.517
5       1.0417           71.570
6       1.3611           93.517
7       1.0417           71.570
8       0.0763           5.245
9       0.0000           0.000

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LIVE LOAD CASE # 12 4 TRUCKS

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     * * * * *
    * * * * *

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      *      *      *      *      *      *      *
     ***    ***    ***    ***    ***    ***    ***
      *      *      *      *      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.6735         46.276
  2      1.1180         76.816
  3      1.3265         91.136
  4      1.3611         93.517
  5      1.0417         71.570
  6      1.3611         93.517
  7      1.0417         71.570
  8      0.0763          5.245
  9      0.0000          0.000

```

LIVE LOAD CASE # 13                    2 TRUCKS

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      *      *      *      *
     *      *      *      *
     *      *      *      *
    ***    ***    ***    ***
     *      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000          0.000
  2      0.0000          0.000
  3      0.2778         19.083
  4      1.0417         71.570
  5      1.3611         93.517
  6      1.0417         71.570
  7      0.2778         19.083
  8      0.0000          0.000
  9      0.0000          0.000

```

LIVE LOAD CASE # 14                    3 TRUCKS

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      *      *      *      *      *      *
     *      *      *      *      *      *
     *      *      *      *      *      *
    ***    ***    ***    ***    ***
     *      *      *      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000          0.000
  2      0.8749         60.114
  3      1.3194         90.653
  4      1.1251         77.298
  5      1.3611         93.517
  6      1.0417         71.570
  7      0.2778         19.083
  8      0.0000          0.000
  9      0.0000          0.000

```

LIVE LOAD CASE # 15                    4 TRUCKS

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      *      *      *      *      *      *      *
     *      *      *      *      *      *      *
     *      *      *      *      *      *      *
    ***    ***    ***    ***    ***    ***    ***
     *      *      *      *      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
  1      0.0000          0.000
  2      0.8749         60.114
  3      1.3194         90.653
  4      1.1251         77.298
  5      1.3611         93.517
  6      1.1251         77.298
  7      1.3194         90.653
  8      0.8749         60.114
  9      0.0000          0.000

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LIVE LOAD CASE # 16                    2 TRUCKS

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      *      *
     *      *

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*      *
***   ***
*      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
1       0.9685          66.544
2       1.0315          70.868
3       0.0000           0.000
4       0.0000           0.000
5       0.0000           0.000
6       0.0000           0.000
7       0.0000           0.000
8       1.0315          70.868
9       0.9685          66.544
    
```

LIVE LOAD CASE # 17                    3 TRUCKS

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*      *      *      *
*      *      *      *
*      *      *      *
***   ***   ***   ***
*      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
1       0.9685          66.544
2       1.3977          96.030
3       1.0417          71.570
4       0.5921          40.679
5       0.0000           0.000
6       0.0000           0.000
7       0.0000           0.000
8       1.0315          70.868
9       0.9685          66.544
    
```

LIVE LOAD CASE # 18                    4 TRUCKS

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*      *      *      *
*      *      *      *
*      *      *      *
***   ***   ***   ***
*      *      *      *
-----
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I

BEAM   WHEEL FRACTION   P-LOAD
1       0.9685          66.544
2       1.3977          96.030
3       1.0417          71.570
4       0.5921          40.679
5       0.0000           0.000
6       0.5921          40.679
7       1.0417          71.570
8       1.3977          96.030
9       0.9685          66.544
    
```

20-OCT-09  
11:25:21

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN  
SUMMARY OF THE LIVE LOAD CASE PROGRAM  
REVISED: JUNE 26, 2008

PROB. NO. LL01

53.63' CURB-TO-CURB; 9 BEAMS; 140.00' AVERAGE SPAN

BRIDGE WIDTH	X1	X2	CENTER LINE DISTANCE	# OF BEAMS	REACTION FORCE	MAXIMUM # OF TRUCKS	# OF COLUMNS	COLUMN WIDTH	SKEW ANGLE										
56.880	3.625	3.625	28.440	9	68.706	4	3	4.000	19										
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20
3.396	6.261	6.261	6.261	6.261	6.261	6.261	6.261	6.261	6.261										
XCOL1	XCOL2	XCOL3	XCOL4	XCOL5															
10.473	19.761	19.761																	
	NO. OF TRUCKS	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10								
LL CASE 1	1	66.544	70.868	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
LL CASE 2	2	66.544	96.030	71.570	40.679	0.000	0.000	0.000	0.000	0.000	0.000								
LL CASE 3	3	66.544	96.030	71.570	93.517	71.570	13.004	0.000	0.000	0.000	0.000								
LL CASE 4	4	66.544	96.030	71.570	93.517	83.378	84.574	54.034	0.000	0.000	0.000								

LL-54-9-140.OUT												
LL CASE 5	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	70.868	66.544	0.000
LL CASE 6	2	0.000	0.000	0.000	0.000	0.000	40.679	71.570	96.030	66.544	0.000	0.000
LL CASE 7	3	0.000	0.000	0.000	13.004	71.570	93.517	71.570	96.030	66.544	0.000	0.000
LL CASE 8	4	0.000	0.000	54.034	84.574	83.378	93.517	71.570	96.030	66.544	0.000	0.000
LL CASE 9	1	0.000	0.000	0.000	32.921	71.570	32.921	0.000	0.000	0.000	0.000	0.000
LL CASE 10	2	0.000	5.245	71.570	93.517	71.570	32.921	0.000	0.000	0.000	0.000	0.000
LL CASE 11	3	0.000	5.245	71.570	93.517	71.570	93.517	71.570	5.245	0.000	0.000	0.000
LL CASE 12	4	46.276	76.816	91.136	93.517	71.570	93.517	71.570	5.245	0.000	0.000	0.000
LL CASE 13	2	0.000	0.000	19.083	71.570	93.517	71.570	19.083	0.000	0.000	0.000	0.000
LL CASE 14	3	0.000	60.114	90.653	77.298	93.517	71.570	19.083	0.000	0.000	0.000	0.000
LL CASE 15	4	0.000	60.114	90.653	77.298	93.517	77.298	90.653	60.114	0.000	0.000	0.000
LL CASE 16	2	66.544	70.868	0.000	0.000	0.000	0.000	0.000	70.868	66.544	0.000	0.000
LL CASE 17	3	66.544	96.030	71.570	40.679	0.000	0.000	0.000	70.868	66.544	0.000	0.000
LL CASE 18	4	66.544	96.030	71.570	40.679	0.000	40.679	71.570	96.030	66.544	0.000	0.000

FOR PIER PROGRAM INPUT

61LL 1 1 66544	0	70867	0	0	0	0	0	0	0	0	0	0
62 0	0	0										
61LL 2 2 66544	0	96030	0	71570	40679	0	0	0	0	0	0	0
62 0	0	0										
61LL 3 3 66544	0	96030	0	71570	93517	0	71570	0	13003	0	0	0
62 0	0	0										
61LL 4 4 66544	0	96030	0	71570	93517	0	83377	0	84573	54034	0	0
62 0	0	0										
61LL 5 1 0	0	0	0	0	0	0	0	0	0	0	0	0
62 70867	0	66544										
61LL 6 2 0	0	0	0	0	0	0	0	0	40679	71570	0	0
62 96030	0	66544										
61LL 7 3 0	0	0	0	0	13003	0	71570	0	93517	71570	0	0
62 96030	0	66544										
61LL 8 4 0	0	0	0	54034	84573	0	83377	0	93517	71570	0	0
62 96030	0	66544										
61LL 9 1 0	0	0	0	0	32920	0	71570	0	32920	0	0	0
62 0	0	0										
61LL10 2 0	0	5245	0	71570	93517	0	71570	0	32920	0	0	0
62 0	0	0										
61LL11 3 0	0	5245	0	71570	93517	0	71570	0	93517	71570	0	0
62 5245	0	0										
61LL12 4 46275	0	76815	0	91136	93517	0	71570	0	93517	71570	0	0
62 5245	0	0										
61LL13 2 0	0	0	0	19083	71570	0	93517	0	71570	19083	0	0
62 0	0	0										
61LL14 3 0	0	60113	0	90653	77298	0	93517	0	71570	19083	0	0
62 0	0	0										
61LL15 4 0	0	60113	0	90653	77298	0	93517	0	77298	90653	0	0
62 60113	0	0										
61LL16 2 66544	0	70867	0	0	0	0	0	0	0	0	0	0
62 70867	0	66544										
61LL17 3 66544	0	96030	0	71570	40679	0	0	0	0	0	0	0
62 70867	0	66544										
61LL18 4 66544	0	96030	0	71570	40679	0	0	0	40679	71570	0	0
62 96030	0	66544										