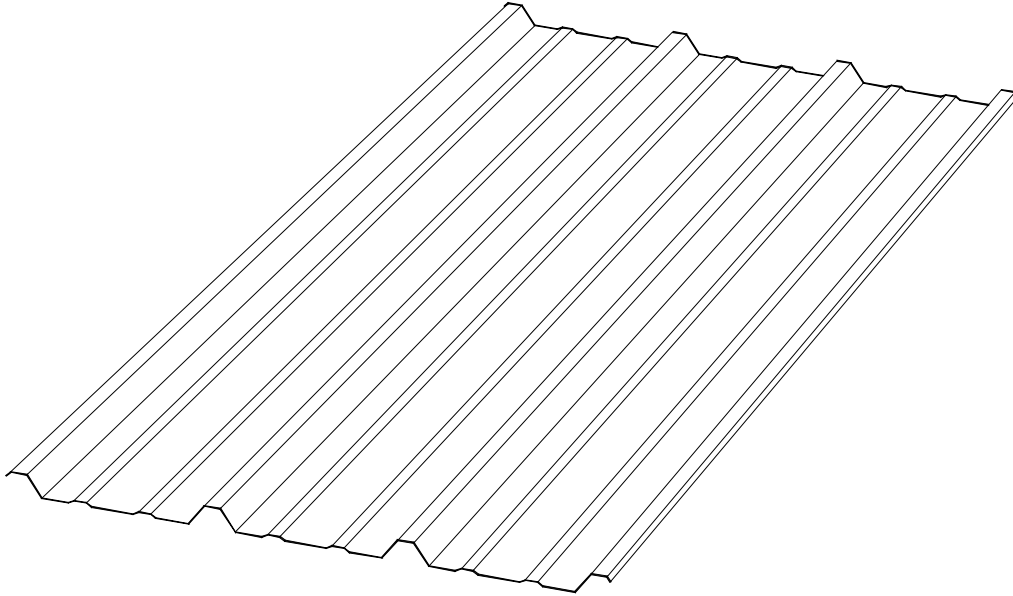




BIGBEE STEEL BUILDINGS, INC.  
2705 Avalon Avenue  
Muscle Shoals, AL 35661

## BigbeeRib II Roof & Wall Panel

### ENGINEERING PROPERTIES



Phone: 256-383-7322 or 800-633-3378  
Fax: 256-381-9669  
Web: [www.bigbee.com](http://www.bigbee.com)

Revised: July 11, 2007

**BIGBEE RIB II**

| SECTION PROPERTIES |                         |                 |                               |                               |                   |                               |                               |                   |
|--------------------|-------------------------|-----------------|-------------------------------|-------------------------------|-------------------|-------------------------------|-------------------------------|-------------------|
| PANEL              | F <sub>y</sub><br>(KSI) | WEIGHT<br>(PSF) | NEGATIVE MOMENT               |                               |                   | POSITIVE MOMENT               |                               |                   |
|                    |                         |                 | I <sub>xe</sub><br>(IN.4/FT.) | S <sub>xe</sub><br>(IN.3/FT.) | Maxo<br>(KIP-IN.) | I <sub>xe</sub><br>(IN.4/FT.) | S <sub>xe</sub><br>(IN.3/FT.) | Maxo<br>(KIP-IN.) |
| GAUGE              |                         |                 |                               |                               |                   |                               |                               |                   |
| 26                 | 80*                     | 0.86            | 0.0313                        | 0.0615                        | 1.4750            | 0.0313                        | 0.0302                        | 1.0860            |
| 24                 | 80*                     | 1.03            | 0.0387                        | 0.0789                        | 1.7770            | 0.0428                        | 0.0423                        | 1.5180            |

\* F<sub>y</sub> is 80-ksi reduced to 60-ksi for design in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members - A2.3.2.

**NOTES:**

1. All calculations are calculated in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
2. I<sub>xe</sub> is for deflection determination.
3. S<sub>xe</sub> is for bending.
4. Maxo is allowable bending moment.
5. All values are for one foot of panel width.

# BIGBEE STEEL BUILDINGS, INC.

## BIGBEE RIB II 26 GA. ROOF PANEL

### ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

#### BIGBEE RIB II 26 Gauge

| SPAN TYPE | LOAD TYPE               | SPAN (FEET) |      |      |      |      |      |      |      |      |
|-----------|-------------------------|-------------|------|------|------|------|------|------|------|------|
|           |                         | 3.0         | 3.5  | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  | 6.5  | 7.0  |
| SINGLE    | NEGATIVE WIND LOAD      | 109.3       | 80.3 | 55.6 | 39.0 | 28.5 | 21.4 | 16.5 | 13.0 | 10.4 |
|           | POSITIVE WIND/LIVE LOAD | 80.4        | 59.1 | 42.7 | 30.0 | 21.9 | 16.4 | 12.7 | 10.0 | 8.0  |
| 2-SPAN    | NEGATIVE WIND LOAD      | 80.4        | 59.1 | 45.3 | 35.8 | 29.0 | 23.9 | 20.1 | 17.1 | 14.8 |
|           | POSITIVE WIND/LIVE LOAD | 79.2        | 58.4 | 44.8 | 35.5 | 28.8 | 23.8 | 20.0 | 17.1 | 14.7 |
| 3-SPAN    | NEGATIVE WIND LOAD      | 100.6       | 73.9 | 56.6 | 44.7 | 36.2 | 29.9 | 25.1 | 21.4 | 18.5 |
|           | POSITIVE WIND/LIVE LOAD | 98.3        | 72.6 | 55.8 | 44.2 | 35.9 | 29.7 | 23.9 | 18.8 | 15.1 |
| 4-SPAN    | NEGATIVE WIND LOAD      | 93.9        | 69.0 | 52.8 | 41.7 | 47.5 | 27.9 | 23.5 | 20.0 | 17.2 |
|           | POSITIVE WIND/LIVE LOAD | 92.0        | 68.0 | 52.2 | 41.3 | 57.5 | 27.8 | 23.4 | 19.9 | 16.0 |

#### NOTES:

- 1) Section properties and allowable loads were computed in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
- 2) Allowable loads are based on uniform span lengths, Material thickness = .020", Design thickness = .0191",  $F_y = 80$  ksi but reduced to 60 ksi for design per AISI.
- 3) LIVE LOAD is limited by bending, shear, combined shear & bending and web crippling and deflection of  $L/180$ .
- 4) NEGATIVE WIND LOAD is limited by bending, shear, combined shear and bending and deflection of  $L/180$ .
- 5) NEGATIVE WIND LOAD Deflection has been increased by 30% per IBC 2003 Table 1604.3.
- 6) NEGATIVE WIND LOAD does not consider fastener pullout or pullover.
- 7) The weight of the panel has not been deducted from the allowable loads.
- 8) Panel Tested per ASTM E1592-01, 4 Spans @ 5'-0" by Force Engineering & Testing, Inc.
- 9) Load Table by Force Engineering & Testing, Inc.

# BIGBEE STEEL BUILDINGS, INC.

## BIGBEE RIB II 24 GA. ROOF PANEL

### ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

Bigbbe Rib II 24 Gauge

| SPAN TYPE | LOAD TYPE               | SPAN (FEET) |       |      |      |      |      |      |      |      |
|-----------|-------------------------|-------------|-------|------|------|------|------|------|------|------|
|           |                         | 3.0         | 3.5   | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  | 6.5  | 7.0  |
| SINGLE    | NEGATIVE WIND LOAD      | 131.6       | 96.7  | 68.7 | 48.3 | 35.2 | 26.4 | 20.4 | 16.0 | 12.8 |
|           | POSITIVE WIND/LIVE LOAD | 112.4       | 82.6  | 58.5 | 41.1 | 29.9 | 22.5 | 17.3 | 13.6 | 10.9 |
| 2-SPAN    | NEGATIVE WIND LOAD      | 112.4       | 82.6  | 63.3 | 50.0 | 40.5 | 33.5 | 28.1 | 24.0 | 20.7 |
|           | POSITIVE WIND/LIVE LOAD | 110.7       | 81.7  | 62.7 | 49.6 | 40.3 | 33.3 | 28.0 | 23.9 | 20.6 |
| 3-SPAN    | NEGATIVE WIND LOAD      | 140.6       | 103.3 | 79.1 | 62.5 | 50.6 | 41.8 | 35.1 | 29.9 | 24.2 |
|           | POSITIVE WIND/LIVE LOAD | 137.5       | 101.6 | 78.1 | 61.9 | 50.2 | 41.5 | 32.7 | 25.7 | 20.6 |
| 4-SPAN    | NEGATIVE WIND LOAD      | 131.2       | 96.4  | 73.8 | 58.3 | 62.5 | 39.0 | 32.8 | 28.0 | 24.1 |
|           | POSITIVE WIND/LIVE LOAD | 128.7       | 95.0  | 73.0 | 57.8 | 75.0 | 38.8 | 32.6 | 27.3 | 21.8 |

#### NOTES:

- 1) Section properties and allowable loads were computed in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
- 2) Allowable loads are based on uniform span lengths, Material thickness = .0235", Design thickness = .0228", Fy = 80 ksi but reduced to 60 ksi for design per AISI.
- 3) LIVE LOAD is limited by bending, shear, combined shear & bending and web crippling and deflection of L/180.
- 4) NEGATIVE WIND LOAD is limited by bending, shear, combined shear and bending and deflection of L/180.
- 5) NEGATIVE WIND LOAD Deflection has been increased by 30% per IBC 2003 Table 1604.3.
- 6) NEGATIVE WIND LOAD does not consider fastener pullout or pullover.
- 7) The weight of the panel has not been deducted from the allowable loads.
- 8) Panel Tested per ASTM E1592-01, 4 Spans @ 5'-0" by Force Engineering & Testing, Inc.
- 9) Load Table by Force Engineering & Testing, Inc.

# BIGBEE STEEL BUILDINGS, INC.

## BIGBEE RIB II 26 GA. WALL PANEL

### ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

| Bigbee Rib II 26 Gauge |                         |             |      |      |      |      |      |      |      |      |
|------------------------|-------------------------|-------------|------|------|------|------|------|------|------|------|
| SPAN TYPE              | LOAD TYPE               | SPAN (FEET) |      |      |      |      |      |      |      |      |
|                        |                         | 3.0         | 3.5  | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  | 6.5  | 7.0  |
| SINGLE                 | NEGATIVE WIND LOAD      | 109.3       | 80.3 | 61.5 | 48.6 | 39.3 | 32.1 | 24.7 | 19.4 | 15.6 |
|                        | POSITIVE WIND/LIVE LOAD | 80.4        | 59.1 | 45.3 | 35.8 | 29.0 | 23.9 | 19.0 | 14.9 | 12.0 |
| 2-SPAN                 | NEGATIVE WIND LOAD      | 80.4        | 59.1 | 45.3 | 35.8 | 29.0 | 23.9 | 20.1 | 17.1 | 14.8 |
|                        | POSITIVE WIND/LIVE LOAD | 79.2        | 58.4 | 44.8 | 35.5 | 28.8 | 23.8 | 20.0 | 17.1 | 14.7 |
| 3-SPAN                 | NEGATIVE WIND LOAD      | 100.6       | 73.9 | 56.6 | 44.7 | 36.2 | 29.9 | 25.1 | 21.4 | 18.5 |
|                        | POSITIVE WIND/LIVE LOAD | 98.3        | 72.6 | 55.8 | 44.2 | 35.9 | 29.7 | 25.0 | 21.3 | 18.4 |
| 4-SPAN                 | NEGATIVE WIND LOAD      | 93.9        | 69.0 | 52.8 | 41.7 | 47.5 | 27.9 | 23.5 | 20.0 | 17.2 |
|                        | POSITIVE WIND/LIVE LOAD | 92.0        | 68.0 | 52.2 | 41.3 | 57.5 | 27.8 | 23.4 | 19.9 | 17.2 |

**NOTES:**

- 2) Allowable loads are based on uniform span lengths, Material thickness = .020", Design thickness = .0191", Fy = 80 ksi but reduced to 60 ksi for design per AISI.
- 2) LIVE LOAD is limited by bending, shear, combined shear & bending and web crippling and deflection of L/120.
- 3) NEGATIVE WIND LOAD is limited by bending, shear, combined shear and bending and deflection of L/120.
- 4) NEGATIVE WIND LOAD Deflection has been increased by 30% per IBC 2003 Table 1604.3.
- 5) NEGATIVE WIND LOAD does not consider fastener pullout or pullover.
- 6) The weight of the panel has not been deducted from the allowable loads.
- 7) Panel Tested per ASTM E1592-01, 4 Spans @ 5'-0" by Force Engineering & Testing, Inc.
- 8) Load Table by Force Engineering & Testing, Inc.

# BIGBEE STEEL BUILDINGS, INC.

## BIGBEE RIB II 24 GA. WALL PANEL

### ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

Bigbee Rib II 24 Gauge

| SPAN TYPE | LOAD TYPE               | SPAN (FEET) |       |      |      |      |      |      |      |      |
|-----------|-------------------------|-------------|-------|------|------|------|------|------|------|------|
|           |                         | 3.0         | 3.5   | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  | 6.5  | 7.0  |
| SINGLE    | NEGATIVE WIND LOAD      | 131.6       | 96.7  | 74.0 | 58.5 | 47.4 | 39.2 | 30.5 | 24.0 | 19.2 |
|           | POSITIVE WIND/LIVE LOAD | 112.4       | 82.6  | 63.3 | 50.0 | 40.5 | 33.5 | 26.0 | 20.4 | 16.4 |
| 2-SPAN    | NEGATIVE WIND LOAD      | 112.4       | 82.6  | 63.3 | 50.0 | 40.5 | 33.5 | 28.1 | 24.0 | 20.7 |
|           | POSITIVE WIND/LIVE LOAD | 110.7       | 81.7  | 62.7 | 49.6 | 40.3 | 33.3 | 28.0 | 23.9 | 20.6 |
| 3-SPAN    | NEGATIVE WIND LOAD      | 140.6       | 103.3 | 79.1 | 62.5 | 50.6 | 41.8 | 35.1 | 29.9 | 25.8 |
|           | POSITIVE WIND/LIVE LOAD | 137.5       | 101.6 | 78.1 | 61.9 | 50.2 | 41.5 | 34.9 | 29.8 | 25.7 |
| 4-SPAN    | NEGATIVE WIND LOAD      | 131.2       | 96.4  | 73.8 | 58.3 | 62.5 | 39.0 | 32.8 | 28.0 | 24.1 |
|           | POSITIVE WIND/LIVE LOAD | 128.7       | 95.0  | 73.0 | 57.8 | 75.0 | 38.8 | 32.6 | 27.8 | 24.0 |

#### NOTES:

- 2) Allowable loads are based on uniform span lengths, Material thickness = .0235", Design thickness = .0228", Fy = 80 ksi but reduced to 60 ksi for design per AISI.
- 2) LIVE LOAD is limited by bending, shear, combined shear & bending and web crippling and deflection of L/120.
- 3) NEGATIVE WIND LOAD is limited by bending, shear, combined shear and bending and deflection of L/120.
- 4) NEGATIVE WIND LOAD Deflection has been increased by 30% per IBC 2003 Table 1604.3.
- 5) NEGATIVE WIND LOAD does not consider fastener pullout or pullover.
- 6) The weight of the panel has not been deducted from the allowable loads.
- 7) Panel Tested per ASTM E1592-01, 4 Spans @ 5'-0" by Force Engineering & Testing, Inc.
- 8) Load Table by Force Engineering & Testing, Inc.