



# Technical Data

Revision Date: 5/1/09

## GEODECK™ COMPOSITE DECKING AND RAILING SYSTEM

### MANUFACTURER:

Green Bay Decking, LLC  
1518 S. Broadway  
Green Bay, WI 54304

**Important Note:** The information contained in this document is based on data presented to ICC-ES. The tests are performed on individual decking boards and not multiple boards placed together.

## DESCRIPTION

### General:

GeoDeck Decking and Railing System is manufactured by mixing, compounding, and extruding cellulose fiber with minerals and a thermoplastic material, using an approximate mixture ratio weight of thermoplastic material to other ingredients of 1:1.3. The product is available in three colors: Cedar, Driftwood, and Mahogany.

The raw materials used to make the composite material are high-density polyethylene, cellulose fiber, and a granular material containing refined cellulose fiber, calcium carbonate, and kaolin/clay.

GeoDeck Decking and Railing System components shall be limited to use on the exterior of structures of combustible construction and to the applications and products as stated herein. GeoDeck intends this Technical Data along with the ICC-ES Report No. ESR-1369 (dated August 1, 2008) and Illustrated Installation Instructions be used by the code official to determine that the report subject complies with the code requirements specifically addressed, provided that the products are installed in accordance with the conditions referenced herein this report. The supporting construction of the decking system and railing system is beyond the scope of this report.

GeoDeck Decking System shall be limited to the maximum uniformly distributed live loads and spans indicated in Table 1 of this report. The maximum spacing of the construction supporting the decking system (joists) on a deck (with minimum uniformly distributed live load of 100 psf) shall be 24" (610 mm) on center (O.C.) for 5/4" x 6" Traditional or Tongue & Groove decking boards, and 30" (762 mm) for 2" x 8" Heavy-Duty Commercial decking plank. When used in stair tread applications, the maximum spacing of the construction sub-framing shall be 16" (406 mm) for 5/4" x 6" Traditional or Tongue & Groove decking boards, and 2" x 8" Heavy-Duty Commercial decking plank. Use of GeoDeck Decking and Railing System as components of a fire-resistance rated assembly is beyond the scope of this report.

### GeoDeck Deck Boards:

GeoDeck Decking System is used as an alternative to a combustible flooring system for exterior balconies, porches, decks, and similar appendages designed of combustible construction where the floor/ceiling assemblies are permitted to be unprotected construction. The walking surface of the GeoDeck Decking System is wire-brushed to provide a coarse surface.

GeoDeck Decking System is manufactured in three engineered profiles in 12', 16', and 20' (3658, 4877, and 6096 mm) lengths. The three profiles include 5/4" x 6" Traditional board, 5/4" x 6" Tongue & Groove board, and 2" x 8" Heavy-Duty Commercial plank. **When installing deck boards, the use of random butt-joints are NOT RECOMMENDED!** Allowable loads and spans for the GeoDeck Decking System are provided in Table 1 of this report.

- The GeoDeck Traditional board (profile ID number 1015) is 5.5" (140 mm) wide and 1.27" (32 mm) thick. The wall thickness of the profile is 0.26" (6.6 mm). The decking profile has four ribbed cell openings created by three stiffeners which are 0.2" (5.1 mm) thick. See Figure Legends in this report for the profile of this decking system component.
- The GeoDeck Tongue & Groove board (profile ID number 1016) is 5.5" (140 mm) wide (5.78" wide, including the tongue) and 1.27" (32 mm) thick. The wall thickness of the profile is 0.26" (6.6 mm). The decking profile has three ribbed cell openings created by two stiffeners that are 0.235" (6.0 mm) thick. The decking board profile is shaped to interlock with adjacent decking boards. See Figure Legends in this report for the profile of this decking system component.
- The GeoDeck Heavy-Duty Commercial decking plank (profile ID number 1017) is 8.10" (206 mm) wide and 1.55" (39 mm) thick. The wall thickness of the profile is 0.26" (6.6 mm). The decking profile has five ribbed cell openings created by four stiffeners which are 0.2" (5.1 mm) thick. See Figure Legends in this report for the profile of this decking system component.

## Fasteners, Decking Board

### Tongue & Groove:

- Use #8 or #9 stainless or coated "trim head" screws 2-1/2" (or longer), or 8d 2-1/2" (or longer) stainless or coated ring shank "siding" nails. Apply one fastener on every joist. Fasteners should be driven through the tongue at a 55° to 60° angle to the horizontal, through the tongue-to-shoulder junction, and into the joist below. Be careful to avoid forcing Tongue & Groove boards together, particularly when using screws. Hand fit the boards only, using a credit card or an item of similar thickness (~1/32") as a spacing guide. An installation that is too tight will restrict water run-off and may cause buckling.

### Traditional:

- Use #8 or #9 stainless or coated "trim head" screws 2-1/2" (or longer), or 8d 2-1/2" (or longer) stainless or coated ring shank "siding" nails. Apply a minimum of two fasteners on every joist, and three at the ends of each board. Avoid fastening within 3/4" from the ends of boards to prevent cracking. If hand nailing, a 2-1/2" 8d small head stainless steel ring shank nail provides superior holding with minimal fastener exposure. If using a Feature Strip, allow the ends that will butt the Feature Strip to run long and overlap the opening where the Feature Strip will be installed. These ends will be trimmed to length later.

### Heavy-Duty Commercial board:

- Use #9 or #10 stainless or coated "trim head" screws at least 3" long, or 10d 3" (or longer) stainless or coated ring shank "siding" nails. Apply a minimum of three fasteners on every joist. Avoid fastening within 3/4" from the ends of boards to prevent cracking.

### Perimeter Strips and Feature Strips:

- Use #8 or #9 3" (or longer) stainless or coated "trim head" screws, or 8d 3" (or longer) stainless or coated ring shank "siding" nails. Apply the fasteners through the 5/4 hollow portion of the board. Do not fasten through the portion that overlaps the deck boards. Apply 2 fasteners every 16 to 24 inches. Avoid fastening within 3/4" from the ends of the boards. Trim head screws can be driven just below the surface of the board and hidden by using a hammer to tap the decking material over the screw head.

### Fascia:

- Use a minimum of three fasteners every 12". If the fascia has been ripped down to 6" wide or less, then use a minimum of 2 fasteners every 12". The same fasteners used on the deck may be used on the fascia. Use corner moulding when two fascia boards meet at an angle. Corner moulding can be fashioned from GeoDeck™ baluster stock. To join two or more pieces of the fascia board, butt the boards with a 1/8" to 3/16" gap and cover the gap with a 1" to 2" piece of trim nailed vertically. This allows the board to slide behind and conceal any contraction and expansion.

### All Board Types:

- If the look of visible fasteners is not wanted, consider using either a hidden fastener system, GeoDeck Tongue & Groove boards, or splitless ring shank siding nails that match GeoDeck colors. A pneumatic nail gun, such as a siding/fencing nailer, greatly speeds installation. Adjust the air pressure (between 90 and 110 psi) to ensure consistent pressure for proper nail penetration. Check for correct pressure by testing the nail gun with the chosen fastener on a scrap board.

## GeoDeck Railing System components:

GeoDeck Railing System is used as a guard system for exterior balconies, porches, decks, and similar appendages on structures designed of combustible construction. The railing system is comprised of 2 x 2 balusters, 2 x 4 hand rails, 4 x 4 post sleeves, 6 x 6 post sleeves, stair rail collars, hand rail collars, aluminum channels, metal post-rail brackets, post caps, post base trim, and fasteners. See Figure Legends in this report for a detail of the GeoDeck Railing System.

- The GeoDeck 2 x 2 Balusters (profile ID number 1004) are manufactured in nominal 1-3/4" x 1-3/4" (44 x 44 mm) engineered profiles in minimum lengths of 32" (813 mm), and the maximum lengths of 38.125" (968 mm). The wall thickness of the component is 0.25" (6.4 mm). The balusters, which are used as the vertical balusters in the railing system, are inserted into the pre-drilled holes in the top and bottom rails. The clear distance between the vertical balusters, when installed in each predrilled hole, is 3-1/2" (89 mm). When vertical posts are spaced greater than 48" (1220 mm) O.C.,

balusters are cut and placed between the posts to support the railing system at the bottom. See Figure Legends in this report for the profile of this railing system component.

- The GeoDeck 2 x 4 Rails (profile ID number 1006) are manufactured in a 2" x 3.36" (51 x 85 mm) engineered profile in lengths of 72" (1829 mm), and 96" (2438 mm). The rail system panel has a minimum height of 32.5" (826 mm) and the maximum height of 42" (1067 mm). The installed height of the GeoDeck Railing System above the decking surface is between 36" (914 mm) and 45.5" (1156 mm). The wall thickness of the component is 0.34" (8.6 mm). Each of the rails has pre-drilled holes, to accept and hold in place, the GeoDeck 2 x 2 Balusters. The top and bottom rails (with included aluminum channels) are secured in place by using the GeoDeck Hand Rail Collar and post-rail brackets per procedures outlined in the Installation Instructions. See Figure Legends in this report for the profile of this railing system component.
- The GeoDeck 4 x 4 Post Sleeves (profile ID number 1007) are manufactured in 4.315" x 4.315" (109.6 x 109.6 mm) engineered profiles in minimum lengths of 37" (940 mm), and the maximum lengths of 96" (2438 mm). The composite wall thickness of the component is 0.26" (6.6 mm). See Figure Legends in this report for the profile of this railing system component.
- The GeoDeck 6 x 6 Post Sleeves (profile ID number 1099-144) are manufactured in 6.41" x 6.41" (163 x 163 mm) engineered profiles in lengths of 144" (3658 mm). The composite wall thickness of the component is 0.27" (6.9 mm). See Figure Legends in this report for the profile of this railing system component.
- The GeoDeck Hand Rail Collar is designed to fit over and restrain the GeoDeck 2 x 4 Hand Rails using four #10 diameter screws. It has outside dimensions of 3-11/16" tall x 3" wide x 1-1/4" deep (94 x 76 x 32 mm).
- The nonstructural, GeoDeck Post Caps, which are installed on the top of GeoDeck 4 x 4 and 6 x 6 Post Sleeves, are manufactured in nominal 5" x 5" (127 x 127 mm) for the 4 x 4 sleeves and 7" x 7" (178 x 178 mm) for the 6 x 6 sleeves. See Figure Legends in this report for the profile of this railing system component.
- Connections are comprised of GeoDeck Post Sleeves, post-rail brackets, and wood screws. The post sleeve is installed over a conventional, pressure-treated wood, nominal 4" x 4" (102 x 102 mm) or 6" x 6" (152 x 152 mm) posts. The top and bottom GeoDeck 2 x 4 Hand Rail is secured between the supporting GeoDeck Post Sleeves with the inserted post-rail brackets. Wood screws are 1-5/8" (41.3 mm) stainless steel screws. See procedure outlined in the Illustrated Installation Instructions.

## **Structural Capacity:**

Load: Table 1 shows allowable spans for GeoDeck decking components used as planking (flatwise bending). This Table is used for determining the maximum allowable span of GeoDeck used as decking, unless the user/designer submits structural calculations to the local building official, for approval of the specific application using the design values indicated in Table 2.

Table 2 contains material and installation requirements for railing assemblies. When installed in accordance with this report, the system complies with the structural load requirements specified in the code for lateral load conditions applied to railings. The system is capable of resisting a uniform load of 50 lbs./ft. (730 N/m) or a concentrated load of 200 lbs. (890 N) applied horizontally to the top rail of an 8' railing system. Additionally, the system is capable of withstanding a concentrated load of 200 lbs. (890 N) applied at the top of the post. Fasteners used to construct the railing system must comply with Table 2 of this evaluation report.

The 5/4" x 6" composite board are permitted to be used as stair treads provided that the maximum span, measured from center to center of supports (stair stringers), cannot exceed 16" (406 mm) O.C., with tread equal to 11" wide (two 5/4" profiles placed together).

- Fasteners: Refer to Fasteners Section for fasteners for GeoDeck Tongue & Groove/Traditional decking board and GeoDeck Heavy-Duty Commercial decking plank. Refer to GeoDeck Railing System Section and Table 2 for fasteners used to construct the GeoDeck Railing System. Refer to Illustrated Installation Instructions and Warranty.

## **Fire Characteristics:**

GeoDeck Decking and Railing System composite material has a self-ignition temperature of 806°F (430°C) when tested in accordance with UBC Standard 26-6 (ASTM D1929). GeoDeck Decking boards also have an average flame-spread rating of 100, and a smoke-developed rating of 165 when tested in accordance with UBC Standard 8-1 (ASTM E84).

## **Durability:**

GeoDeck Decking and Railing System composite material significantly exceeds in durability pressure treated lumber when subjected to weathering, insect attack, and other decaying elements.

## **Installation:**

Installation must comply with the manufacturer's instructions (entitled Illustrated Installation Instructions), Warranty, GeoDeck ICC-ES Report No. ESR-1369 (dated August 1, 2008) and Legacy Report No. #21-71 (dated December 3, 2005), and this Technical Data.

## **REPORTS ON TESTING**

Reports of tests and data on GeoDeck Decking System in accordance with the ICC-ES Report No. ESR-1369 (dated August 1, 2008) and Legacy Report No. #21-71 (dated December 3, 2005); Installation Instructions, and a quality control manual.

## **INFORMATION ON TESTING AVAILABLE**

- Requirements for Quality Assurance System, including Quality Control Manual, signed by the manufacturer and approved annually by the quality control agency, PFS Corporation.
- GeoDeck Deck and Railing System Installation Instructions (see website for newest revision of Installation Instructions).
- PFS Test Report # 07-18 GeoDeck Guardrail System, dated August 13, 2007. This testing report shows compliance with ICC-ES Acceptance Criteria AC-174.
- PFS Test Report # 05-76 ICC-ES Acceptance Criteria on Thermoplastic Composite Lumber GeoDeck Deckboard, dated February 9, 2006, and containing the following test results:
  - Ambient Flexure, ASTM D6109 (by PFS Corporation, Madison, WI)
  - Low Temperature (-20°F) Flexure, ASTM D6109 (by PFS Corporation)
  - High Temperature (125°F) Flexure, ASTM D6109 (by PFS Corporation)
  - Freeze-Thaw Resistance (Hygrothermal Flexure), ASTM D6109 (by PFS Corporation)
  - 21-Day Water Soak, ASTM D6109 (by PFS Corporation)
  - Creep Recovery – ambient conditions, 16" span, 156 lbs. load (by PFS Corporation)
  - Lateral Resistance/Slip, ASTM D1761 (by PFS Corporation)
  - Moisture Content, ASTM D2395 (by PFS Corporation)
  - Specific Gravity, ASTM D2395 (by PFS Corporation)
  - Fastener Withdrawal, ASTM D1761 (by PFS Corporation)
  - Fastener Head Pull-Through, ASTM D1037 (by PFS Corporation)
- PFS Test Report # 05-29 ASTM D6109 Testing on Wood Thermoplastic Composite Lumber GeoDeck Deckboard, dated August 24, 2005, and containing the following test results:
  - Ambient Flexures (2" x 8") Heavy-Duty Commercial Decking, ASTM D6109 (by PFS Corporation)
  - Ambient Flexures (5/4" x 6") Tongue & Groove Decking, ASTM D6109 (by PFS Corporation)
  - Ambient Flexures (5/4" x 6") Traditional Decking, ASTM D6109 (by PFS Corporation)
- PFS Test Report # 02-48C ICBO ES Acceptance Criteria on Wood Thermoplastic Composite Lumber GeoDeck Traditional Deckboard, dated/revised May 3, 2005, and containing the following test results:
  - Ambient Flexure, ASTM D6109 (by PFS Corporation)
  - High Temperature Flexure, ASTM D6109 (by PFS Corporation)
  - Stair Tread Flexure, ASTM D6109 (by PFS Corporation)
- PFS Test Report # 02-48 ICBO ES Acceptance Criteria on Wood Thermoplastic Composite Lumber GeoDeck Deckboard, dated/revised May 13, 2003, and containing the following test results:
  - Durability, ASTM D6109, ASTM G155 (by Ramtech Laboratories, Inc.)
  - Soil Block Cultures, ASTM D1413 (by Mississippi State University)

- Termite Resistance, ASTM D3345 (by Mississippi State University)
- Weight per Lineal Foot, (by PFS corporation)
- Maximum Water Absorption, ASTM D6109 (by PFS Corporation)
- Creep Recovery – ambient conditions, 20" span, 246 lbs. load (by PFS Corporation)
- Surface Burning, ASTM E-84 (by National Gypsum Laboratory)

## COMPLIANCES AND LIMITATIONS

GeoDeck Decking and Railing System components described in this report comply with the 1997 Uniform Building Code™, the 2003 International Building Code® (IBC), and the 2003 International Residential Code® (IRC), subject to the following conditions:

- GeoDeck Decking System and GeoDeck Railing System components shall be limited to use for exterior deck, stair tread, and rail only. Interior use of this material is beyond the scope of this Technical Data.
- Installation of the GeoDeck Decking System and GeoDeck Railing System components shall comply with the manufacturer's published Illustrated Installation Instructions.
- The supporting construction of the GeoDeck Decking System and GeoDeck Railing System components is beyond the scope of this Technical Data.
- When GeoDeck Railing System is used, information is submitted to the building official to verify compliance with Table 2 of this report. When GeoDeck Decking System or GeoDeck Railing System components are used as structural members that are outside the scope of Tables 1 and 2, structural calculations, drawings, and details, verifying compliance with the code, are made available to the building official having jurisdiction. When required by the code or the building official, such documents are prepared, signed, and sealed by a registered design professional in accordance with the registration laws of the state in which the project is located.
- The maximum spans of GeoDeck decking boards must comply with Table 1 unless structural calculations for the decking are provided. GeoDeck Railing System assemblies must comply with Table 2. The data in Table 1 are applicable to either dry or wet conditions of use.
- The maximum O.C. spacing on the GeoDeck Railing Post Sleeves (4 x 4 and 6 x 6) shall be 96" (2440 mm).
- The maximum spacing of joists supporting the GeoDeck Decking System on a deck (with minimum uniformly distributed live load of 100 psf) shall be 24" (610 mm) on center (O.C.) for 5/4" x 6" Traditional or Tongue & Groove decking boards, and 30" (762 mm) for 2" x 8" Heavy-Duty Commercial decking plank. When used in stair tread applications, the maximum spacing of the construction sub-framing shall be 16" (406 mm) for 5/4" x 6" Traditional or Tongue & Groove decking boards, and 2" x 8" Heavy-Duty Commercial decking plank.
- GeoDeck Decking System is designed and installed to limit bending deflection under total design load to a deflection less than or equal to L/180.
- GeoDeck Decking System and GeoDeck Railing System are limited to use in building types that permit the use of combustible material. Use of GeoDeck Decking System and GeoDeck Railing System as components of a fire-resistance rated assembly is beyond the scope of this Technical Data.
- GeoDeck Decking System and GeoDeck Railing System components are not used as components of heavy timber construction.
- GeoDeck Decking System and GeoDeck Railing System components are gapped to permit adequate drainage and thermal expansion/contraction, in accordance with the Illustrated Installation Instructions.
- GeoDeck Decking System and GeoDeck Railing System components are not attached to any solid surface or watertight flooring system, such as waterproof membranes, concrete, roof decks, or patios.
- GeoDeck Tongue & Groove components are not used in conjunction with under deck drainage systems, tarps, or any materials adhered or affixed under the decking substructure.
- GeoDeck Decking System when installed 24" (610 mm) or less from grade or on rooftops is limited to Traditional and Commercial profiles with a 3/16" (5 mm) space between boards. When installed in excess of 24" from grade or rooftop,

either the Traditional or Commercial Deck board with 1/8" (3 mm) space between boards, or the Tongue & Groove board with at least two sides opened for ventilation is allowed.

- GeoDeck Decking System and GeoDeck Railing System are fastened directly to floor joists having adequate strength and stiffness. Inadequate and inferior substructures will result in product issues.

**Table 1 - GEODECK DECKING SYSTEM SPAN CHART**

| Minimum Uniformly Distributed Live Loads <sup>1,2,3</sup> |   |
|---|---|
| GeoDeck Component   | Maximum Member Span Between Supports <sup>4</sup> |
| 5/4 x 6 Traditional Board                                 | 24" O.C.  |
| 5/4 x 6 Tongue & Groove Board                             | 24" O.C.  |
| 2 x 8 Heavy-Duty Commercial Plank                         | 30" O.C.  |

For SI: 1" = 25.4 mm

<sup>1</sup> Tabulated span values are for GeoDeck decking components used as planking (flatwise bending). The values are permitted to be used in lieu of application-specific calculations. Other applications or loading conditions require submittal of design calculations, showing compliance with this evaluation report, to the building official for approval.

<sup>2</sup> GeoDeck Decking System components shall span a minimum of three (3) joists and shall be fastened at each joist.

<sup>3</sup> Tabulated spans are based on a deflection limit of L/180.

<sup>4</sup> The ICC reports on individual decking boards and not multiple boards placed together. Although the ICC approved 16" O.C. on all GeoDeck boards, 24" O.C. is permissible when using the Tongue & Groove boards if proper installation techniques are followed.

**Table 2 - GEODECK RAILING SYSTEM ASSEMBLIES<sup>1</sup>**

| Component     | Installation Requirements  |
|---------------|--|
| Balusters     | GeoDeck 2 x 2 balusters spaced a minimum of 5-1/4" (133 mm) O.C., or 3-1/2" (89 mm) between baluster tip. They should be inserted into the predrilled holes in the top and bottom rails.   |
| Top Hand Rail | GeoDeck 2 x 4. Measure the opening between the two post sleeves, cut both the top rail and bottom rail 3/16" (5 mm) shorter than the opening between the two sleeves. Drill hole using tool for bracket fastener. Place collars over the ends of both the top and bottom handrails, insert brackets, fasten brackets to aluminum channel. Install squash blocks into the bottom handrail and place the rail section into position to be secured to the sleeves with the provided screws.   |
| Bottom Rail   | GeoDeck 2 x 4. When 4 x 4 sleeves (or 6 x 6) are spaced greater than 48" (1219 mm) O.C., a support block (no longer than 4" or 102 mm) should be placed under the bottom rail, in the center or in two 3' increments for 6'- or 8' spans. Adjust for even spacing. Blocks can be cut from balusters to fit between the underneath of the bottom rail and deck below. Measure the opening between the two sleeves, cut both the top rail and bottom rail 3/16" (5 mm) shorter than the opening between the two sleeves. Place collars over the ends of both the top and bottom handrails, insert squash blocks into the bottom handrail and place the rail section into position to be secured to the sleeves with the provided screws. |
| Post          | 4 x 4 post (or 6 x 6) or other approved post material, such as wet or dry pressure-treated wood post. Maximum post spacing must not exceed 96" (2438 mm) O.C. Post must be securely fastened to the deck's substructure, or as required by local code.   |
| Post Sleeve   | GeoDeck 4 x 4 and 6 x 6 Post Sleeve slide over appropriate post.   |

For SI: 1 inch = 25.4 mm

<sup>1</sup> The rail system panel has a minimum height of 32.5" (826 mm) and the maximum height of 42" (1067 mm). The installed height of the GeoDeck Railing System above the decking surface is between 36" (914 mm) and 45.5" (1156 mm).

**Table 3: MECHANICAL PROPERTIES**

| <b>Mechanical Property</b>   | <b>Test Method</b>      | <b>Average Value</b>   |
|--|-------------------------|--|
| Modulus of Rupture (MOR) <sup>1</sup><br>Ambient<br>125F<br>-20F                 | ASTM D6109 <sup>2</sup> | 2,780 psi<br>1,900 psi<br>4,040 psi                                  |
| Modulus of Elasticity (MOE) <sup>3</sup><br>Ambient<br>125F<br>-20F              | ASTM D6109              | 406,000 psi<br>181,000 psi<br>620,000 psi                            |
| Freeze-Thaw Resistance Flexure <sup>4</sup><br>Strength (MOR)<br>Stiffness (MOE) | ASTM D6109              | 2,560 psi<br>287,000 psi   |
| Water Soak Flexure <sup>5</sup><br>Strength (MOR)<br>Stiffness (MOE)             | ASTM D6109              | 2,740 psi<br>367,000 psi   |
| Water Absorption <sup>6</sup>  | ASTM D1037              | 1.0%<br>(24% for pressure treated lumber)                            |
| Static Coefficient of Friction Dry, Leather                                      | ASTM D2047              | 0.51/0.55  |
| Nail Withdrawal <sup>7</sup>   | ASTM D1761              | 23.6 lbs.  |
| Direct Nail Pull Through Test <sup>7</sup>                                       | ASTM D1761              | 255 lbs.   |
| Lateral Resistance/Slip <sup>7,8</sup><br>Ultimate Load<br>Load at 0.3"          | ASTM D1761              | 291 lbs.<br>284 lbs.   |
| Stair Tread Flexure  | ASTM D6109              | Passes <sup>9</sup>  |
| Creep Recovery   | ICC Requirement         | 84% (at 156 lbs. load, 16" span)<br>94% (at 246 lbs. load, 20" span) |
| Thermal Expansion/Contraction  | ASTM E228               | 3.58 x 10 <sup>-5</sup> /F   |
| Screw Withdrawal, #10, 1"  | ASTM D1037              | 204 lbs. 1/4"  |
| Weathering   | ASTM G155               | Negligible <sup>10</sup>   |
| Weight (5/4" x 6")   |                         | 1.80 lbs./ft.  |

**Notes:**

<sup>1</sup>: Modulus of Rupture (MOR), or bending strength

<sup>3</sup>: Modulus of Elasticity (MOE), or Young's Modulus or bending stiffness

<sup>5</sup>: Test materials submerged in water for 21 days

<sup>7</sup>: Tested with 8d, 2-1/2 Primeguard Stainless Spiral Thread Deck Nail, driven through the hollow portion of the board

<sup>9</sup>: 300 lbs. at midspan ICC requirement with deflection ≤ L/180

<sup>2</sup>: Flexural bending test based on 4-point (aka "third-point") configuration

<sup>4</sup>: Freeze-thaw cycle (3x): 24hr water soak, 24hr @ -20F, then 24hr @ 70F

<sup>6</sup>: Test materials submerged in water for 24 hours

<sup>8</sup>: Built with 2x6 treated southern pine main member & GeoDeck composite deck board side member

<sup>10</sup>: 6,000 hrs. at 102 min/18 min cycle regime (UV and UV/water/spray) test

## WARRANTY

GeoDeck comes with a 20-year limited warranty that provides comprehensive coverage against splintering, splitting, rot or decay, and termite damage.

## MAINTENANCE

GeoDeck can be cleaned with any general-purpose household cleaner and/or degreaser. For stubborn stains, the use of an industrial cleaner or rubbing alcohol along with a wire brush is recommended.

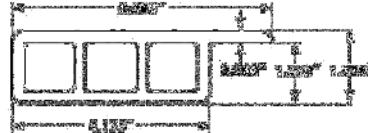
Painting or staining is not required nor recommended, but can be done if desired. Use a high-quality acrylic latex primer and topcoat. Painted GeoDeck surfaces lose some slip resistance and will require annual maintenance.

For more information, call toll free:  
(877) 804-0137

Green Bay Decking, LLC  
1518 South Broadway  
Green Bay, WI 54304

# FIGURE LEGENDS

## Deck Component



5/4" x 6" Perimeter Strip



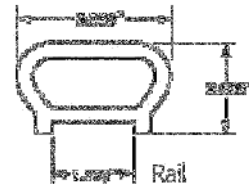
5/4" x 6" Tongue & Groove



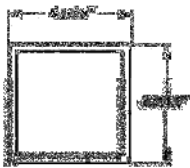
5/4" x 6" Feature Strip



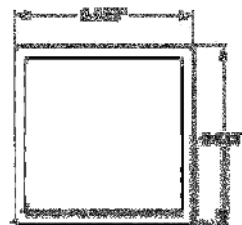
6/4" x 8" Heavy-Duty Commercial



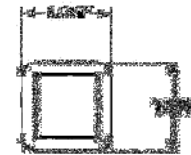
Rail



4" x 4" Post

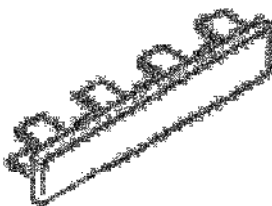


6" x 6" Post

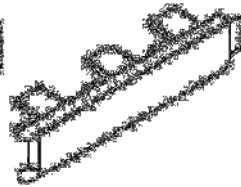


2" x 2" Baluster

## Deck Accessories



5/4" x 6" Profile End Cap



Tongue & Groove Profile End Cap



Stair Rail Collar



Hand Rail Collar



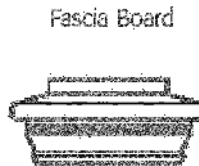
Fascia Board



Post Base Trim



Post Cap



Decorative Post Cap



Finish Strip