



## SECTION 067316 - CAPPED COMPOSITE DECKING

This Section specifies capped composite plastic decking boards produced by Fiber Composites, LLC. Primary manufacturing site address is 181 Random Drive, New London, NC 28127. Tel. No.: 800-573-8841. A second manufacturing site is located at 420 W. Franklin Road, Meridian, ID 83642; tel. no. 208-888-6798. E-Mail: [info@fiberondecking.com](mailto:info@fiberondecking.com). Website: [www.fiberondecking.com](http://www.fiberondecking.com).

There are 6 decking lines featured in this guide specification: Horizon, Horizon Symmetry, ProTect Advantage, Sanctuary, Paramount, and Good Life. Companion railing and stair systems (including ADA-compliant railings) and LED deck lighting packages are also included.

Fiberon decking boards emulate exotic tropical hardwoods and offer a range of warm colors from rich solid tones to multi-chromatic colors with deep grain effects.

Fiberon decking products are highly resistant to mold, mildew, and rot, and provide long-term color retention. Long-lasting protection through a patented PermaTech process is available for several decking lines.

All decking board products have been fully tested for resistance to water penetration, UV degradation, termite infestation and related environmental effects. Structural tests have been performed for hurricane force debris impact resistance, deflection, and mechanical fastener holding power.

Decking boards are true to line and will not exhibit a wavy appearance when properly installed. Decking surfaces are smooth, without the possibility of splintering, and clean easily. These attributes provide distinct advantages over other decking materials.

Fiberon offers a 10 year stain and performance material warranty and a 10 year material warranty against manufacturing defects. Longer term warranties are also available.

Section Editing: "Editing Notes" will appear in red throughout text to aid in the writing of this Section. Also, bold bracketed text will require a choice to be made.

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

**Editing Note:** Edit to suit Project requirements.

- A. Capped composite decking boards.
- B. Railing and stair systems.
- C. LED deck lighting.



## 1.2 RELATED REQUIREMENTS

**Editing Note:** Edit the following referenced Sections to suit Project requirements.

- A. Section 013000 - Submittals.
- B. Section 054000 - Cold-Formed Metal Framing: For metal framing substructure to receive decking.
- C. Section 061000 - Rough Carpentry. For wood framing substructure to receive decking.

## 1.3 REFERENCES

**Editing Note:** Delete references not applicable to Project requirements.

- A. ANSI/AF&PA NDS: National Design Specifications (NDS) for Wood Construction.
- B. ASTM B117: Standard Practice for Operating Salt Spray (Fog) Apparatus.
- C. ASTM C1002: Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
- D. ASTM D792: Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
- E. ASTM D1413: Standard Test Method for Wood Preservatives by Laboratory Soil-Block Cultures.
- F. ASTM D1761: Standard Test Methods for Mechanical Fasteners in Wood.
- G. ASTM D1929: Standard Test Method for Determining Ignition Temperature of Plastics.
- H. ASTM D2565: Standard Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications.
- I. ASTM D3345: Standard Test Method for Laboratory Evaluation of Solid Wood for Resistance to Termites.
- J. ASTM D6109: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and Related Products.
- K. ASTM D6341: Standard Test Method for Determination of the Linear Coefficient of Thermal Expansion of Plastic Lumber and Plastic Lumber Shapes Between - 30 and 140°F (34.4 and 60°C).
- L. ASTM D7031: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products.



- M. ASTM D7032: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).
- N. ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
- O. ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- P. ASTM F1679: Standard Test Method for Using a Variable Incidence Tribometer (VIT).
- Q. AWPA E1: Laboratory Methods for Evaluating the Termite Resistance of Wood-Based Materials: Choice and No-Choice Tests.
- R. AWPA E10: Laboratory Method for Evaluating the Decay Resistance of Wood-Based Materials Against Pure Basidio Mycote Cultures: Soil/Block Test.
- S. ICC A117.1: Standard and Commentary: Accessible and Usable Buildings and Facilities.
- T. UL 723: Standard Test Method for Surface Burning Characteristics of Building Materials.

#### 1.4 DEFINITIONS

- A. ADA: Americans with Disabilities Act.
- B. AF&PA: American Forest & Paper Association.
- C. ANSI: American National Standards Institute.
- D. Composite Decking: Deck boards manufactured from wood fiber and plastic. ASTM D7032, Section 3.2.8 defines wood-plastic composite (WPC) as a composite made primarily from wood- or cellulose-based materials and plastic(s).
- E. FSI: Flame Spread Index.
- F. HDPE: High density polyethylene.
- G. LDPE: Low density polyethylene.
- H. ICC: International Code Council.
- I. SDI: Smoke Developed Index.



- J. Substructure: Deck subframing that supports deck boards and railing systems. Typical components are joists, joist hangers, ledgers, rim joists, beams, posts, anchors, and footings.

- K. WPC: Wood-plastic composite.

## 1.5 SUBMITTALS

- A. General: Comply with Section 013000 - Submittals.
- B. Product Data: For each product specified. Include the following:
  - 1. Technical product data, including component descriptions, details, and performance criteria.
  - 2. Manufacturer's printed surface preparation and installation instructions.
  - 3. Safety Data Sheets (SDS).
- C. Shop Drawings: Include plan layouts, elevations, large scale details, connections, and attachments to adjacent construction. Identify all component parts, including fastening system and installation hardware.
- D. Selection Samples: Full range of samples for color selection.
- E. Verification Samples: For selected color(s). Full board width by minimum 12 inch length in size.
- F. Quality Assurance Submittals:
  - 1. Installer qualifications.
  - 2. Certified test reports showing compliance with specified performance criteria.
  - 3. Product evaluation reports.

**Editing Note: Include following design data if structural analysis is a Project requirement.**

- 4. Design Data: Structural analysis information signed, dated, and sealed by a qualified Professional Engineer licensed to practice in the Project jurisdiction.
  - 5. Specimen copy of specified material warranties.
- G. Closeout Submittals:
  - 1. Maintenance data for installed system.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm with a minimum of three years documented experience installing capped composite decking similar to decking specified in this Section.

**Editing Note: Retain the following if accessibility compliance is required for Project.**

- B. Accessibility Standards Conformance:
  - 1. ADA Accessibility Guidelines (ADAAG).
  - 2. ICC A117.1.



C. Product Evaluation Conformance:

1. PEI Evaluation Service: Report PER-15097, Fibron Deck Boards and Fibron Grooved Deck Boards.
2. ICC Evaluation Service: AC174, Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails).
3. PEI Evaluation Service: Report PER-15099, Fibron Railings.

**Editing Note: Delete following evaluation report if not a Project requirement**

4. ICC Evaluation Service: ICC-ES Evaluation Report ESR-3887, Fibron Symmetry Railing.

D. Project-Site Mockups: Erect project-site mockups incorporating materials and workmanship required. After mockups have been reviewed for acceptability, retain on site and suitably protected until the decking **[and railing]** work has been completed. Accepted mockups will serve as quality control standards for judging acceptability of the installed work. Accepted mockups **[may] [may not]** be incorporated into the work.

1. Provide mockups as **[indicated on Drawings] [directed by Architect]**.

## 1.7 DELIVERY AND STORAGE

- A. General: Deliver and store materials in manufacturer's original packaging and clearly identified. Protect materials from harmful environmental elements, construction dust and other potentially detrimental conditions in a suitable dry, well-ventilated, weathertight storage location.

## 1.8 ENVIRONMENTAL CONDITIONS

- A. Do not apply deck materials when the air temperature or relative humidity is outside the manufacturer's range limitations.
- B. Excessive Static Electricity Buildup: Dry or windy conditions may create temporary static electricity buildup. Should this occur, remove loose debris from deck surface and spray or mop entire deck surface with manufacturer's recommended diluted static control concentrate. Allow to air dry.

## 1.9 WARRANTY

**Editing Note: Consult manufacturer for longer duration warranties and combined decking/railing warranties.**

- A. Manufacturer's Performance Warranty: Manufacturer's written materials warranty for long-term decking and railing performance against manufacturing defects, including checks, splinters, and delamination, or damage from rot and fungal decay.
1. Warranty Period: 10 years from date of Substantial Completion.
- B. Manufacturer's Stain and Fade Warranty: Manufacturer's written materials warranty for long-term decking and railing performance against staining and color fade.
1. Color Fade: Color change from light and weathering exposure not to exceed 5 Delta E (Hunter) units.



2. Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE CRITERIA

- A. Structural Performance Criteria for Capped Composite Decking Assembly:
  1. General: Comply with **[International Building Code] [Florida Building Code] [governing building code]** and authorities having jurisdiction for decking wind load resistance for the geographical location of the Project.

**Editing Note: Structural performance testing for wind uplift resistance and uniform load rating is based on AC174 and NDS test criteria.**
  2. Wind Uplift Resistance: Decking assembly tested according to ASTM E330 and ANSI/AF&PA NDS, by an accredited testing laboratory. Maximum wind uplift rating of 200 lbs./sq. ft.
  3. Uniform Load Rating: Decking assembly tested according to ASTM E330, by an accredited testing laboratory. Maximum decking load rating of 100 lbs./sq. ft. at 16 inch decking board spans between supports.
- B. Structural Performance Criteria for Railing and Stair Assemblies:
  1. General: Comply with **[International Building Code] [Florida Building Code] [governing building code]** and authorities having jurisdiction for wind load resistance for the geographical location of the Project.
  2. Railing Load Criteria: Pursuant to Project governing code.
  3. Stair Load Criteria: Pursuant to Project governing code.
- C. Performance Criteria for Decking Board Products: Comply with ASTM D7032. Refer to specified decking products for individual physical and mechanical property test results.

### 2.2 HORIZON SERIES CAPPED COMPOSITE DECKING

**Editing Note: Decking span limitations are 16 inches perpendicular to joists, 12 inches up to 45 degrees angle to joists, and 9 inches for stair stringer spacing.**

- A. Basis of Design: **[“Horizon”] [“Horizon Symmetry Collection”]**; Fiber Composites, LLC.
- B. Composition: Wood and plastic composite (WPC) core decking boards with “PermaTech,” a patented HDPE capping material for superior stain, fade, and scratch resistance. Manufactured through a continuous co-extrusion process with capping material on all four sides.
- C. Performance Criteria:
  1. Surface Burning Characteristics: Maximum 70 FSI and 350 SDI; ASTM E84 and UL 723.
  2. Self-Ignition Temperature: 743 deg F; ASTM D1929.
  3. Flash-Ignition Temperature: 698 deg F; ASTM D1929.



4. Specific Gravity: 1.10; ASTM D792.
5. Coefficient of Thermal Expansion:  $1.67 \times 10^{-5}$  in/in/deg F; ASTM D6341.
6. Modulus of Elasticity: 456,000 psi; ASTM D6109.
7. Modulus of Rupture: 3,500 psi; ASTM D6109.
8. Creep Recovery: Passes for minimum 75 percent recovery; ASTM D7032.
9. Maximum Load Deflection: Less than 0.120 inch; ASTM D7032.
10. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested according to ASTM D2565 Cycle 1.
11. Coefficient of Static Friction: 0.58 dry/0.52 wet; ASTM F1679.
12. Fungus Decay Resistance: No significant decay; AWPA E10 and ASTM D1413.
13. Formosan Termite Resistance: Passes; AWPA E1.

- D. Board Dimensions: 5.4 inches wide by 0.935 inch total thickness; 0.015 inch capping material thickness.

**Editing Note: Square edge boards available in 20 foot lengths only.**

- E. Board Length: **[12 feet] [16 feet] [20 feet] [As indicated on Drawings].**

**Editing Note: Four unique wood grain patterns for Horizon product to lessen visual repeats.**

- F. Board Profiles: Reversible wood grain pattern except fascia boards and riser boards. 1/8 inch radius on board edges.
1. Grooved Boards: Typical deck board profile. Accepts hidden fastening system and face-fastening.
  2. Square Edge Boards: For face-fastening only. Provide for the following applications:

**Editing Note: Select applications required for project.**

- a. Stair treads.
  - b. Decking picture framing.
  - c. Seating.
  - d. Accessory items.
- G. Gapping: The following open joint dimensions are required:
1. Butted Boards: 1/4 inch to 1/32 inch open joints, depending on temperature.
  2. Edge-to-Edge Boards: 3/16 inch open joints.
- H. Fascia Boards: Non-reversible; pattern one side. 0.75 inch thickness by 11.25 inch width by 12 foot lengths.
- I. Riser Boards: Non-reversible; pattern one side. 0.75 inch thickness by 7.25 inch width by 12 foot lengths.

**Editing Note: Following color selections for "Horizon" product.**

- J. Color: **[Ipe] [Tudor Brown] [Rosewood] [Castle Gray] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line].**



Editing Note: Following color selections for "Horizon Symmetry" product.

- K. Color: **[Burnt Umber] [Warm Sienna] [Cinnabar] [Graphite] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line].**

## 2.3 PROTECT ADVANTAGE CAPPED COMPOSITE DECKING

Editing Note: Decking span limitations are 16 inches perpendicular to joists, 12 inches up to 45 degrees angle to joists, and 8 inches for stair stringer spacing.

- A. Basis of Design: "ProTect Advantage"; Fiber Composites, LLC.
- B. Composition: Wood and plastic composite (WPC) core decking boards with "PermaTech," a patented polyethylene-based capping material for superior stain, fade, and scratch resistance. Manufactured through a continuous co-extrusion process with capping material on three sides (no capstock on bottom).
- C. Performance Criteria:
1. Surface Burning Characteristics: Maximum 115 FSI and 350 SDI; ASTM E84 and UL 723.
  2. Self-Ignition Temperature: 743 deg F; ASTM D1929.
  3. Flash-Ignition Temperature: 698 deg F; ASTM D1929.
  4. Specific Gravity: 1.10; ASTM D792.
  5. Coefficient of Thermal Expansion:  $1.67 \times 10^{-5}$  in/in/deg F; ASTM D6341.
  6. Modulus of Elasticity: 456,000 psi; ASTM D6109.
  7. Modulus of Rupture: 3,500 psi; ASTM D6109.
  8. Creep Recovery: Passes for minimum 75 percent recovery; ASTM D7032.
  9. Maximum Load Deflection: Less than 0.120 inch; ASTM D7032.
  10. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested according to ASTM D2565 Cycle 1.
  11. Coefficient of Static Friction: 0.58 dry/0.52 wet; ASTM F1679.
  12. Fungus Decay Resistance: No significant decay; AWPA E10 and ASTM D1413.
  13. Formosan Termite Resistance: Passes; AWPA E1.
- D. Board Dimensions: 5.3 inches wide by 0.93 inch total thickness; 0.015 inch capping material thickness.

Editing Note: Square boards available in 20 foot lengths only.

- E. Board Length: **[12 feet] [16 feet] [20 feet] [As indicated on Drawings].**
- F. Board Profiles: Non-reversible pattern. 1/8 inch radius for board edges.
1. Grooved Boards: Typical deck board profile. Accepts hidden fastening system and face-fastening.
  2. Square Edge Boards: For face-fastening only. Provide for the following applications:

Editing Note: Select applications required for project.

- a. Stair treads.
- b. Decking picture framing.
- c. Seating.



d. Accessory items.

- G. Gapping: The following open joint dimensions are required:
  - 1. Butted Boards: 1/4 inch to 1/32 inch open joints, depending on temperature.
  - 2. Edge-to-Edge Boards: 3/16 inch open joints.
- H. Fascia Boards: Non-reversible; pattern one side. 0.75 inch thickness by 11.25 inch width by 12 foot lengths.
- I. Riser Boards: Non-reversible; pattern one side. 0.75 inch thickness by 7.25 inch width by 12 foot lengths.
- J. Color: **[Chestnut] [Western Cedar] [Gray Birch] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line].**

## 2.4 SANCTUARY CAPPED COMPOSITE DECKING

- A. Basis of Design: "Sanctuary"; Fiber Composites, LLC.
- B. Composition: Wood and plastic composite (WPC) core decking boards with a polyethylene capping material. Manufactured through a continuous co-extrusion process with capping material on three sides (no capstock on bottom).
- C. Performance Criteria:
  - 1. Surface Burning Characteristics: Maximum 115 FSI and 350 SDI; ASTM E84 and UL 723.
  - 2. Self-Ignition Temperature: 743 deg F; ASTM D1929.
  - 3. Flash-Ignition Temperature: 698 deg F; ASTM D1929.
  - 4. Specific Gravity: 1.10; ASTM D792.
  - 5. Coefficient of Thermal Expansion:  $1.67 \times 10^{-5}$  in/in/deg F; ASTM D6341.
  - 6. Modulus of Elasticity: 456,000 psi; ASTM D6109.
  - 7. Modulus of Rupture: 3,500 psi; ASTM D6109.
  - 8. Creep Recovery: Passes for minimum 75 percent recovery; ASTM D7032.
  - 9. Maximum Load Deflection: Less than 0.120 inch; ASTM D7032.
  - 10. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested according to ASTM D2565 Cycle 1.
  - 11. Coefficient of Static Friction: 0.58 dry/0.52 wet; ASTM F1679.
  - 12. Fungus Decay Resistance: No significant decay; AWPA E10 and ASTM D1413.
  - 13. Formosan Termite Resistance: Passes; AWPA E1.
- D. Board Dimensions: 5.25 inches wide by 0.925 inch total thickness; 0.015 inch capping material thickness.

**Editing Note: Square edge boards available in 16 foot lengths only.**

- E. Board Length: **[12 feet] [16 feet] [20 feet] [As indicated on Drawings].**
- F. Board Profiles: Non-reversible pattern. 1/8 inch radius for board edges.



1. Grooved Boards: Typical deck board profile. Accepts hidden fastening system and face-fastening.
2. Square Edge Boards: For face-fastening only. Provide for the following applications:

**Editing Note: Select applications required for project.**

- a. Stair treads.
  - b. Decking picture framing.
  - c. Seating.
  - d. Accessory items.
- G. Gapping: The following open joint dimensions are required:
1. Butted Boards: 1/4 inch to 1/32 inch open joints, depending on temperature.
  2. Edge-to-Edge Boards: 3/16 inch open joints.
- H. Fascia Boards: Non-reversible; pattern one side. 0.75 inch thickness by 11.25 inch width by 12 foot lengths.
- I. Color: **[Espresso] [Earl Gray] [Latte] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line]**.

## 2.5 PARAMOUNT CAPPED COMPOSITE DECKING

**Editing Note: Decking span limitations are 16 inches perpendicular to joists, 12 inches up to 45 degrees angle to joists, and 24 inches for stair stringer spacing; continuous undersupport framing between stringers required. Riser boards are not available for the Paramount decking line.**

- A. Basis of Design: "Paramount"; Fiber Composites, LLC.
- B. Composition: Cellular foam polyvinyl chloride (PVC) core decking boards with a PVC alloy capping material. Manufactured through a continuous co-extrusion process with capping material on three sides (no capstock on bottom).
- C. Performance Criteria:
1. Surface Burning Characteristics: Maximum 30 FSI, 900 SDI (top surface), 850 SDI (bottom surface); ASTM E84 and UL 723.
  2. Self-Ignition Temperature: Not available.
  3. Flash-Ignition Temperature: Not available.
  4. Specific Gravity: 0.65; ASTM D792.
  5. Coefficient of Thermal Expansion:  $2.76 \times 10^{-5}$  in/in/deg F; ASTM D6341.
  6. Modulus of Elasticity: 150,300 psi; ASTM D6109.
  7. Modulus of Rupture: 3,588 psi; ASTM D6109.
  8. Creep Recovery: Passes for minimum 75 percent recovery; ASTM D7032.
  9. Maximum Load Deflection: 0.128 inch; ASTM D7032.
  10. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested according to ASTM D2565 Cycle 1.
  11. Coefficient of Static Friction: 0.85 dry/0.82 wet; ASTM F1679.
  12. Fungus Decay Resistance: No significant decay; AWWA E10 and ASTM D1413.



13. Termite Resistance: Passes; ASTM D3345.

D. Board Dimensions: 5.50 inches wide by 1.00 inch total thickness; 0.015 inch capping material thickness.

**Editing Note: Square edge boards available in 20 foot lengths only.**

E. Board Length: **[12 feet] [16 feet] [20 feet] [As indicated on Drawings]**.

F. Board Profiles: Non-reversible pattern. 1/8 inch radius for board edges.

1. Grooved Boards: Typical deck board profile. Accepts hidden fastening system and face-fastening.
2. Square Edge Boards: For face-fastening only. Provide for the following applications:

**Editing Note: Select applications required for project.**

- a. Stair treads.
- b. Decking picture framing.
- c. Seating.
- d. Accessory items.

3. Square Edge Boards: For face-fastening only. Suitable for decking picture framing.

G. Gapping: The following open joint dimensions are required:

1. Butted Boards: 1/8 inch to flush, depending on temperature.
2. Edge-to-Edge Boards: 3/16 inch open joints.

H. Fascia Boards: Non-reversible; pattern one side. 0.50 inch thickness by 11.75 inch width by 12 foot lengths.

I. Color: **[Brownstone] [Sandstone] [Flagstone] [Earthstone] [Fossil] [Mineral] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line]**.

## 2.6 GOOD LIFE CAPPED COMPOSITE DECKING

**Editing Note: Decking span limitations are 16 inches perpendicular to joists, 12 inches up to 45 degrees angle to joists, and 7 inches for stair stringer spacing. Riser boards are not available for the Paramount decking line.**

A. Basis of Design: "Good Life"; Fiber Composites, LLC.

B. Composition: Polyethylene (PE) composite core with a PE capping material. Manufactured through a continuous co-extrusion process with capping material on three sides (no capstock on bottom).

C. Performance Criteria:

1. Surface Burning Characteristics: Maximum 125 FSI and 300 SDI; ASTM E84 and UL 723.



2. Self-Ignition Temperature: 743 deg F; ASTM D1929.
3. Flash-Ignition Temperature: 698 deg F; ASTM D1929.
4. Specific Gravity: 1.10; ASTM D792.
5. Coefficient of Thermal Expansion:  $1.67 \times 10^{-5}$  in/in/deg F; ASTM D6341.
6. Modulus of Elasticity: 404,400 psi; ASTM D6109.
7. Modulus of Rupture: 2,845 psi; ASTM D6109.
8. Creep Recovery: Passes for minimum 75 percent recovery; ASTM D7032.
9. Maximum Load Deflection: Less than 0.120 inch; ASTM D7032.
10. UV Resistance: Successfully passed after 2000 hours of Xenon-Arc exposure. Tested according to ASTM D2565 Cycle 1.
11. Fungus Decay Resistance: No significant decay; AWPA E10 and ASTM D1413.
12. Formosan Termite Resistance: Passes; AWPA E1.

D. Board Dimensions: 5.25 inches wide by 0.93 inch total thickness; 0.015 inch capping material thickness.

**Editing Note: Square edge boards available in 20 foot lengths only.**

E. Board Length: **[12 feet] [16 feet] [20 feet] [As indicated on Drawings].**

F. Board Profiles: Non-reversible pattern. 1/8 inch radius for board edges.

1. Grooved Boards: Typical deck board profile. Accepts hidden fastening system and face-fastening.
2. Square Edge Boards: For face-fastening only. Provide for the following applications:

**Editing Note: Select applications required for project.**

- a. Stair treads.
- b. Decking picture framing.
- c. Seating.
- d. Accessory items.

G. Gapping: The following open joint dimensions are required:

1. Butted Boards: 1/4 inch to 1/32 inch open joints, depending on temperature.
2. Edge-to-Edge Boards: 3/16 inch open joints.

H. Fascia Boards: Non-reversible; pattern one side. 0.75 inch thickness by 11.75 inch width by 12 foot lengths.

I. Color: **[Cabin] [Village] [Cottage] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line].**

## 2.7 HORIZON COMPOSITE RAILING SYSTEM

A. Basis of Design: "Horizon Composite Railing"; Fiber Composites, LLC.

B. Composition: Composite core with a PVC coating.



- C. Components:
  - 1. Top rails, bottom rails, and rail brackets.
  - 2. Balusters.
  - 3. Post sleeves, caps, and base mouldings.
  - 4. Adjustable crush blocks.
  - 5. Hardware.
- D. Rail Height: **[36 inches] [42 inches] [As indicated on Drawings]**.
- E. Rail Length: **[6 feet] [8 feet] [As indicated on Drawings]**.
- F. Baluster Railing Infill, PVC: Matching square composite balusters. 1.25 inches by 1.25 inches. Hollow profile, PVC cap with composite core.
- G. Baluster Railing Infill, Metal: Round metal balusters. 0.75 inch diameter aluminum. Color "Black."
- H. Clear Panel Railing Infill: Acrylic panels with pre-drilled aluminum channels, panel tracks, and hardware.
  - 1. Basis of Design: "Clear Vision System (CVS)"; Fiber Composites LLC.
  - 2. Limitation: For decks 30 inches maximum above grade.
- I. Beaded Composite Post Sleeves: 4 inches by 4 inches. Fits over nominal 4 inch square wood posts. Complete with post sleeve moulding.
- J. Square Composite Post Sleeve: 5.75 inches by 5.75 inches.
- K. Post Sleeve Surface-Mount: 4 inch square metal bracket mount with nominal 4 inch square wood insert.
- L. Post Cap Design: **["Harbour Cap."]["Pyramid Cap."]**
- M. Color: **[White] [Bronze] [Black] [Dark Walnut] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line]**.

## 2.8 HORIZON SYMMETRY COMPOSITE RAILING SYSTEM

- A. Basis of Design: "Horizon Symmetry Composite Railing"; Fiber Composites, LLC.
- B. Composition: Composite core with a PVC coating.
- C. Components:
  - 1. Top rails, bottom rails, rail brackets, and rail reinforcing channels.
  - 2. Balusters.
  - 3. Post sleeves, caps, and base mouldings.
  - 4. Adjustable crush blocks.
  - 5. Hardware.
- D. Rail Height: **[36 inches] [42 inches] [As indicated on Drawings]**.



- E. Rail Length: **[6 feet] [8 feet] [10 feet] [12 feet] [As indicated on Drawings]**.
- F. Baluster Railing Infill, PVC: Matching **[square] [beveled]** composite balusters. 1.25 inches by 1.25 inches. Solid profile, PVC cap with solid CPVC core.
- G. Baluster Railing Infill, Metal: Round metal balusters. 0.75 inch diameter aluminum. Color "Black."
- H. Clear Panel Railing Infill: Acrylic panels with pre-drilled aluminum channels, panel tracks, and hardware.
  - 1. Basis of Design: "Clear Vision System (CVS)"; Fiber Composites LLC.
  - 2. Limitation: For decks 30 inches maximum above grade.
- I. Beveled Composite Post Sleeves: 5 inches by 5 inches. Fits over nominal 4 inch square wood posts. Complete with base moulding.
- J. Post Sleeve Surface-Mount: 4 inch square metal bracket mount with nominal 4 inch square wood insert.
- K. Post Sleeve Cap Design: "Pyramid Cap."
- L. Railing System Color: **[Tranquil White] [Serene Black] [Simply Brown] [Color indicated on Drawings] [Selected by Architect from manufacturer's standard color line]**.

## 2.9 GOOD LIFE COMPOSITE RAILING SYSTEM

- A. Basis of Design: "Good Life Composite Railing"; Fiber Composites, LLC.
- B. Composition: Composite core with a PVC coating.
- C. Components:
  - 1. Top rails, bottom rails, and rail brackets.
  - 2. Balusters.
  - 3. Post sleeves, caps, and base mouldings.
  - 4. Adjustable crush blocks.
  - 5. Hardware.
- D. Rail Height: **[36 inches] [42 inches] [As indicated on Drawings]**.
- E. Rail Length: **[6 feet] [8 feet] [As indicated on Drawings]**.
- F. Baluster Railing Infill, PVC: Matching square composite balusters. 1.25 inches by 1.25 inches. Hollow profile, PVC cap with composite core.
- G. Beaded Composite Post Sleeve: 4 inches by 4 inches. Fits over nominal 4 inch square wood post.
- H. Square Composite Post Sleeve: 5.75 inches by 5.75 inches.



- I. Post Sleeve Surface-Mount: 4 inch square metal bracket mount with nominal 4 inch square wood insert.
- J. Post Sleeve Cap Design: [**“Harbour Cap.”**] [**“Pyramid Cap.”**]
- K. Railing System Color: White.

## 2.10 ADA RAILING SYSTEM

**Editing Note: Compatible with Horizon, Horizon Symmetry, and Good Life Railings.**

- A. Basis of Design: “ADA Railing”; Fiber Composites, LLC.
- B. Composition: PVC.
- C. Components:
  - 1. Handrails and rail joiners.
  - 2. Corner and return fittings.
  - 3. Mounting brackets.
  - 4. End caps and cover plates.
- D. Railing System Color: [**White**] [**Black**] [**Brown**] [**Color as indicated on Drawings**] [**Selected by Architect from manufacturer’s standard color line**]:

## 2.11 DECK AND RAIL LIGHTING

- A. LED Recessed Deck Surface Light Kit: Includes the following:
  - 1. LED recessed lights.
  - 2. Transformer/power source.
  - 3. Wire and wire connectors.
  - 4. Remote driver.
  - 5. Remote control (dimmer and timer). [**Photoelectric timer.**]
- B. LED Recessed Stair Riser Lights: 4.50 inch by 2.75 inch faceplate with 1.125 inch by 3 inch lens. Powder-coat aluminum.
- C. Post Cap Lights: 5 inch by 5 inch powder-coated aluminum with translucent lens. Fits post sleeve of same size.
  - 1. Color: [**Tranquil White**] [**Serene Black**] [**Simply Brown**] [**Color indicated on Drawings**] [**Selected by Architect from manufacturer’s standard color line**].
- D. Post Cap Lights: 4 inch by 4 inch powder-coated aluminum with translucent lens. Fits post sleeve of same size.
  - 1. Color: [**White**] [**Black**] [**Dark Walnut**] [**Color indicated on Drawings**] [**Selected by Architect from manufacturer’s standard color line**].
- E. Post Sleeve Accent Lights: 3.5 inch diameter powder-coated aluminum.



## 2.12 FASTENING SYSTEMS

- A. General: Provide miscellaneous materials as recommended by the decking manufacturer.
- B. Fasteners, General: Type **[304] [316]** stainless steel or polymer-coated composite decking screw fasteners complying with ASTM C1002. Minimum #8 by 2-1/2 inch length for face fasteners and #8 by 2-1/2 inch length for decking board ends.
  - 1. Basis of Design: "SplitStop Titan III Composite Screws"; Titan MetalWerks, Inc.
  - 2. Screw Withdrawal Capacity: 377 lbs. allowable per fastener; ASTM D1761.
  - 3. ACQ Rated Fasteners: Provide fasteners acceptable for alkaline copper quaternary (ACQ) pressure preservative treated wood attachment substrates.
  - 4. Polymer-Coated Screw Fasteners: Comply with ASTM B117 for corrosion-resistance. **[Color-matched head.]**

**Editing Note: Delete following fastening provision if not a Project requirement.**

- 5. Fastening to Steel Subframing: Provide specialized surface fasteners as recommended by decking manufacturer.
- C. Hidden Fastener System, Grooved Boards: Line, butt, and end clips for screw fastener attachment to decking subframing. Color "Black."
  - 1. Basis of Design: "Phantom GT Hidden Fasteners" and "PhantomEC End Clips" (at perimeter boards); Fiber Composites, LLC.
  - 2. Uplift Capacity: 182 lbs./sq. ft. allowable; ASTM E330.
- D. Hidden Face-Fastening System: Color-matched to decking boards with integral plugs.
  - 1. Basis of Design: "Fiberon Cortex Fastening System"; Fiber Composites, LLC.
  - 2. Screw Withdrawal Capacity: 367 lbs. allowable per fastener; ASTM D1761.

**Editing Note: Delete following fastening system if not a Project requirement.**

- E. Paramount PVC Decking Fastening System: Combination of hidden fasteners and non-hidden face-fasteners. Provide hidden (clip-style) fasteners for grooved edge boards only. Use non-hidden face fasteners for square edge boards and with grooved edge boards to "center-pin" boards in place and prevent walking; composite deck screws with ACQ corrosion-resistant coating or stainless steel.
  - 1. Basis of Design: "Tiger Claw TC-G" hidden fasteners," "Fiberon Cortex Fastening System" hidden face fasteners, and "Phantom 20EC End Clips" (at perimeter boards); Fiber Composites, LLC.
  - 2. Screw Withdrawal Capacity: 463 lbs. allowable per fastener; ASTM D1761.

## 2.13 ACCESSORY MATERIALS

- A. General: Provide accessory materials as recommended by the decking manufacturer and as specified in this Section.



## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates to receive the decking work and conditions under which the work will be performed.
- B. Verify:
  - 1. Substructure is in place and properly installed.
  - 2. Substructure framing members are correctly spaced for decking board span and load limitations and suitable for railing post installation.
  - 3. Substructure framing provides suitable drainage of water from deck surfaces.
  - 4. Minimum 50 percent unobstructed air flow underneath decking.
  - 5. Minimum 1-1/2 inch clearance from grade to bottom of joists.
- C. Commencement of decking work will constitute acceptance of substrates to receive the work.

### 3.2 PREPARATION

- A. General: Comply with manufacturer's printed installation instructions.
- B. Protect adjacent substrates not to receive decking.

### 3.3 INSTALLATION

- A. General: Comply with decking manufacturer's printed installation instructions and approved shop drawings.
- B. Decking Board Orientation: As indicated on Drawings. Where required for intricate decking patterns, verify ladder style solid blocking is properly installed in substructure framing.
- C. Securely attach decking boards to substructure. Fastener size, number, spacing, and minimum dimensions from board edges and ends according to decking manufacturer's current recommendations.
  - 1. Cut and rout decking boards using only approved carbide-tipped blades, to preclude frayed edge cuts.
  - 2. Cut board ends square. 45 degree scarf-running butt joints in the field of decking boards are not acceptable.
  - 3. Predrill holes located closer than 1-1/2 inches from ends of boards and 1 inch from board edges.
  - 4. Install fasteners perpendicular to decking board substrates and flush with board surface.
  - 5. All surface fasteners installed at a 90 degree angle to decking surface.
  - 6. Butt joints to occur only over substructure framing members and centered on framing. As board courses are added, stagger butt joints in a consistent "stair step" manner.



7. Board lengths to span a minimum of three framing members.
8. Gapping: Provide minimum 3/16 inch spacing between board edges. Spacing at end of boards is temperature dependent; refer to decking manufacturer's published technical data for spacing dimensions; provided minimum 1/4 inch gap between deck boards and any permanent structure.

**Editing Note: Retain following for Paramount decking.**

9. Paramount Decking: Supplement deck attachment with self-adhesive joist tape to reduce potential noise caused by deck boards moving against joists. Provide Grace Vycor Deck Protector, Tite-Seal, or acceptable equivalent.

**Editing Note: Retain glue bead option for Paramount fascias.**

- D. Fascia Board Installation: Secure with approved screw fasteners at maximum 12 inches o.c. and construction adhesive bead applied in zigzag fashion on board backside for Paramount fascias.
  1. Butt joints to occur only over substructure framing members and centered on framing. As board courses are added, stagger butt joints in a consistent "stair step" manner.
- E. Railing Installation: Plumb, level, true, and suitable to resist Project imposed loads. Shim as necessary.
  1. Secure posts to installation substrates according to approved shop drawings, prior to installing post sleeves, caps, and base mouldings.
  2. Provide rail sections with uniform baluster spacings as indicated on Drawings. Properly locate end balusters to permit correct installation of railing posts.
  3. Clear Panel Infill Assemblies: Protect acrylic panels from damage or defacement during installation.
- F. Stair Installation: Verify stair angle (pitch) and width are Code-compliant, and suitable to resist Project imposed loads. Completed installation plumb, level, and true.

**Editing Note: Delete following if not a Project requirement. This applies only to Paramount decking stair installations.**

1. Paramount Decking: Secure stair treads to pressure preservative treated 2 inch by 6 inch nominal pine installed flat, not on edge. Secure with approved Simpson Strong-Tie A23 18 gage G90 hot-dip galvanized connectors and approved Simpson Strong-Tie 10d by 1-1/2 inch hot dip galvanized nails.

### 3.4 CLEANING AND PROTECTION

- A. Clean decking boards according to decking manufacturer's printed maintenance instructions, using only cleaning materials and methods acceptable manufacturer.
- B. Repair any damage to adjacent substrates and surfaces due to work of this Section.
- C. Upon completion of decking work, protect for remainder of construction period.

END OF SECTION 067316