

## **SECTION 067300**

### **COMPOSITE DECKING**

#### **PART 1 GENERAL**

##### **1.1 SUMMARY**

- A. Section Includes:
  - 1. Composite decking.
  - 2. Decking fastening system.
  - 3. Accessories.
- B. Related Requirements:
  - 1. Section 061000: Rough carpentry.
  - 2. Section 062013: Exterior finish carpentry.
  - 3. Section 076200: Sheet metal flashing and trim.

##### **1.2 REFERENCES**

- A. Reference Standards:
  - 1. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials.
  - 2. ASTM D7032: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems.
- B. Code Reports:
  - 1. UL ER25876-01: Testing for Composite Decking Materials.
  - 2. CAL-FIRE 8110-2044:0501: Fire Testing for Envision Fluted Composite Decking.
  - 3. CAL-FIRE 8110-2044:0004: Fire Testing for Envision Solid Composite Decking.
  - 4. ICC ES AC174: Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems.
  - 5. ICC ES AC10: Acceptance Criteria for Quality Documentation.

##### **1.3 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination Procedures:
  - 1. Coordinate composite decking with load bearing structural support locations.
- B. Preinstallation Meeting Attendees and Procedures:
  - 1. Conduct meeting **[one week] or [one month]**, minimum, before starting Work of this Section.

#### 1.4 ACTION SUBMITTALS

- A. Product Data:
  - 1. Initial selection color **[charts] and [samples]**.
  - 2. Installation methods, including fastener patterns.
- B. Samples:
  - 1. Composite Decking: Not more than 12 inches long, showing range of appearance and texture.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Test and Evaluation Reports: **[Manufacturer] or [Independent testing agency]** test results showing:
  - 1. Composite decking.
  - 2. Decking fastener system.
- B. Manufacturers' instructions.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For composite decking.
- B. Warranty Documentation: For composite decking.

#### 1.7 QUALITY ASSURANCE

- A. Mockups: Construct mockup. Demonstrate composite decking interfaces, intersections, and terminations.
  - 1. Mockups Location: Architect selected.

#### 1.8 FIELD CONDITIONS

- A. Ambient Conditions: Perform work within following limitations:
  - 1. Temperature: 100 degrees F, maximum.
- B. Existing Conditions: Verify field measurements before fabrication. Show field measurements on Shop Drawings.

#### 1.9 WARRANTY

- A. Manufacturer Warranty:
  - 1. Composite Decking: Warrant against product failure.
    - a. Failure includes the following:
      - 1) Manufacturing defects of decking material or fabrication.
      - 2) Installation is not included unless stated otherwise.
    - b. Residential Warranty Period - Solid Decking: 25 years.

- 1) Installation Warranty Period: 5 years.
- c. Residential Warranty Period - Fluted Decking: 25 years.
- d. Commercial Warranty Period - Solid Decking: 25 years.
- 1) Installation Warranty Period: 5 years.
- e. Commercial Warranty Period - Fluted Decking: 10 years.

## PART 2 PRODUCTS

### 2.1 COMPOSITE DECKING

- A. Composite Decking:
  - 1. Manufacturers and Product - Solid Decking:
    - a. Envision; **[Distinction], [Expression], or [EverGrain]**, basis of design.
  - 2. Manufacturers and Product - Fluted Decking:
    - a. Envision; **[Ridge Premium]**, basis of design.
  - 3. Product Characteristics:
    - a. Board Profile: **[Square edge] or [Grooved edge]**
    - b. Board Dimensions: **[1x6 inches solid], [2x6 inches solid], or [1x6 inches fluted]**, nominal.
    - c. Accessory Profiles and Dimensions:
      - 1) Stair Riser: 8 inches, nominal.
      - 2) Skirting: 12 inches, nominal.
    - d. Color - Envision Distinction:
      - 1) Grey Wood.
      - 2) Rustic Walnut.
      - 3) Spiced Teak.
      - 4) Shaded Auburn.
    - e. Color - Envision Expression:
      - 1) Harbor Grey.
      - 2) Woodland Bark.
      - 3) Caribou Brown.
      - 4) Canyon Ridge.
    - f. Color - Envision Ridge Premium:
      - 1) Gunstock.
      - 2) Alpine Fog.
      - 3) Black Walnut.
      - 4) Vintage Oak.
      - 5) Sandstone.
    - g. Color - Envision Evergrain:
      - 1) Cape Cod Grey.
      - 2) Weathered Wood.
      - 3) Redwood.
  - 4. Performance Characteristics:
    - a. Surface Burning - Solid Decking: ASTM E84 Class C.
      - 1) Flame Spread Index: 200, maximum.
      - 2) Smoke Developed Index: 450, maximum.
    - b. Surface Burning - Fluted Decking: ASTM E84 Class B.
      - 1) Flame Spread Index: 75, maximum.
      - 2) Smoke Developed Index: 450, maximum.

- c. Termite and Decay Resistance: Equal to preservative-treated wood. per UL testing.
- B. Deck Fastening System - Hidden Fasteners - Groove System:
  - 1. Manufacturer and Product:
    - a. Envision; EverClip Hidden Fasteners.
    - b. FastenMaster; TigerClaw TC-G Clips.
    - c. Comparable product submitted and accepted prior to bidding.
- C. Deck Fastening System - Hidden Fasteners - Plug System:
  - 1. Manufacturer and Product:
    - a. Envision; Pro Plug Hidden Fasteners.
    - b. Comparable product submitted and accepted prior to bidding.
- D. Deck Fastening System - Exposed Fasteners:
  - 1. Manufacturer and Product:
    - a. Envision; Envision Composite Deck Screws.
    - b. DECKFAST; Cap-Tor XD.
    - c. CAMO; Marksman Pro Deck Screw.
    - d. Comparable product submitted and accepted prior to bidding.
  - 2. Product Characteristics:
    - a. Material: **[Epoxy-coated] or [Stainless steel]**
      - 1) Color: Matching composite decking.
- E. Fascia Fastening System - Exposed Fasteners:
  - 1. Manufacturer and Product:
    - a. Envision; Envision Deckfast Fascia Fastening System.
    - b. Comparable product submitted and accepted prior to bidding.
  - 2. Product Characteristics:
    - a. Material: **[Epoxy-coated] or [Stainless steel]**
      - 1) Color: Matching composite decking.

## 2.2 PERFORMANCE DESIGN CRITERIA

- A. Structural Design Criteria: See [Structural Drawings].
- B. Structural Loads: [See Drawings] and [Applicable code compliant].
- C. Allowable Deflection: **[1/120], [1/240], [1/360], [1/600], and [1/720]**, maximum.
- D. Surface Burning - Solid Decking: ASTM E84 Class C.
  - 1. Flame Spread Index: 200, maximum.
  - 2. Smoke Developed Index: 450, maximum.
- E. Surface Burning - Fluted Decking: ASTM E84 Class B.
  - 1. Flame Spread Index: 75, maximum.
  - 2. Smoke Developed Index: 450, maximum.

- F. Accessibility Requirements: Applicable provisions in Department of Justice publication 2010 ADA Standards for Accessible Design, ICC/ANSI A117.1, and state accessibility code.
- G. Environmental Performance:
  - 1. Expansion and Contraction: Withstand 120 degree F ambient and 180 degree F surface thermal cycling without failure.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions:
  - 1. Verify support framing is acceptable and within tolerances to receive decking.
  - 2. Verify that joists are installed at spacing not exceeding that shown by manufacturer for uniform live load required.
  - 3. Verify ventilation and drainage under decking surface is provided and acceptable to manufacturer.
  - 4. Verify that composite decking is not used as a structural member.
  - 5. Do not begin installation until support framing has been properly prepared.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protection of In-Place Conditions:
  - 1. Protect adjacent substrates and work areas not shown to receive decking.
- B. Surface Preparation:
  - 1. Clean substrates of projections and substances detrimental to installation of decking.
- C. Lay out and view all boards prior to cutting and fastening.

### 3.3 INSTALLATION

- A. Install following manufacturer instructions, approved submittals, and coordination with adjacent construction.
- B. Fasten decking following manufacturer recommended fastener spacing tables.
- C. Follow manufacturer recommendations to allow thermal movement space between planks and ends of planks that butt against structure and adjacent decking.
  - 1. Side to Side Plank Spacing: 1/8 inch minimum.
  - 2. End to End Plank Spacing: Varies with temperature at time of installation.
    - a. At 80 Degrees F Installation Temperature: 1/16 inch minimum.
    - b. At 60 Degrees F Installation Temperature: 1/8 inch minimum.
    - c. At 40 Degrees F Installation Temperature: 3/16 inch minimum.

### 3.4 CLEANING

- A. Cleaning:
  - 1. Clean installed products following manufacturer recommendations, with water and mild soap. Do not use acidic or abrasive cleaning solutions.

### 3.5 PROTECTION

- A. Protection:
  - 1. Protect installed products until completion of the project.
  - 2. Touch up, repair, or replace damaged products before substantial completion.

**END OF SECTION**