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This Manu-Spec® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A Manu-Spec is a manufacturer-specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate product model numbers, styles and types are used in specifier notes and in the specification text article titled "Acceptable Material." Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies slip, fade, stain, scratch, mold and mildew resistant composite wood decking with high recycled content and approved for direct ground and water contact.

**SECTION 09 65 73**  
**COMPOSITE DECKING**  
Revised 8/13/20

**PART 1 GENERAL**

1.1 SUMMARY

- A. Section Includes: This Section specifies slip, fade, stain, scratch, mold and mildew resistant composite wood decking and accessories approved for direct ground and water content.

**Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI MasterFormat and specifier's practice.**

- B. Related Requirements:

**Specifier Note: Include in this paragraph only those sections and documents that directly affect the work of this section. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the subparagraph below. Do not include Division 00 documents or Division 01 sections, as it is assumed all technical sections are related to all project Division 00 documents and Division 01 sections to some degree. Refer to other documents with caution, as referencing them may cause them to be considered part of the contract.**

1. Section [26 56 19 - LED Exterior Lighting: fixtures and wiring for deck lighting]
2. Section [\_\_\_\_\_].

1.2 REFERENCES

- A. Reference Standards:

1. ASTM International (ASTM).
  - a. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
  - b. ASTM D143 Standard Test Methods for Small Clear Specimens of Timber.
  - c. ASTM D648 Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
  - d. ASTM D1037 Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
  - e. ASTM D1525 Standard Test Method for Vicat Softening Temperature of Plastics.
  - f. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
  - g. ASTM D1761 Standard Test Methods for Mechanical Fasteners in Wood.

- h. ASTM D1929 Standard Test Method for Determining Ignition Temperature of Plastics.
- i. ASTM D2394 Standard Test Methods for Simulated Service Testing of Wood and Wood-Base Finish Flooring.
- j. ASTM D6109 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and Related Products.
- k. ASTM D7032 Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite and Plastic Lumber Deck Boards, Stair Treads, Guards, and Handrails.
- l. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- 2. American Wood Council (AWC).
  - a. AWC NDS National Design Specification for Wood Construction.
- 3. American Wood Protection Association (AWPA).
  - a. AWPA E1 Standard Method for Laboratory Evaluation to Determine Resistance to Subterranean Termite.
- 4. International Codes Council (ICC).
  - a. ICC- ES AC174 Acceptance Criteria for Deck Board, Span Ratings and Guardrail Systems (Guards and Handrails).
- 5. US Green Building Council (USGBC).

**Specifier Note: Edit the following two paragraphs to reflect the category of LEED® project.**

- a. LEED V4 LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide for Building Design and Construction.
- b. LEED V4 LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide for Homes Design and Construction.

**Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Contract Conditions and Section 01 33 00 - Submittal Procedures.**

### 1.3 SUBMITTALS

- A. Make submittals in accordance with [Section 01 33 00 - Submittal Procedures].
- B. Product Data: Manufacturer's standard specifications and descriptive literature, including:
  - 1. Manufacturer's product data sheets.
  - 2. Manufacturer's installation instructions.
  - 3. Material Safety Data Sheets (MSDS).
- C. Samples: One [12] inch long decking [and fascia] sample illustrating size, profile, color, and surface finish.
- D. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
- E. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.
- F. Manufacturer's Field Reports: Submit manufacturer's field reports within 3 days of each manufacturer representative's site visit and inspection.

**Specifier Note: Coordinate article below with Contract Conditions and with Section 01 78 36 - Warranties.**

- G. Installer's Experience: Submit verification of evidence of work similar to the work of this section.
- H. Warranty: Fully executed, issued in [Owner's] name and registered with manufacturer, including:
  - 1. Manufacturer's [1-year] warranty, from date of substantial completion, covering defects in materials.

**Specifier Note: Retain the following only if specifying for a LEED project. Specify only the technical submittal requirements necessary to achieve the credits desired for this project.**

- I. Sustainable Design (LEED) Submittals:
  - 1. LEED Submittals: In accordance with Section [01 35 21 – LEED Requirements].
  - 2. Submit verification for items when appropriate as follows:

**Specifier Note: If project is being developed under the LEED for Homes Rating System choose the MR2-B option.**

- a. MR2-B] [MRc4] Recycled Content.
- b. MR 5 - Regional Materials.

### 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Manufacturer's instructions on care and cleaning of composite wood products.

## 1.5 QUALITY ASSURANCE

- A. Installer: Experienced in performing work similar to work of this Section

## 1.6 DELIVERY, STORAGE & HANDLING

- A. Deliver materials in accordance with manufacturer's written instructions.
  - 1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact and product name and manufacturer clearly visible and sizes to suit project.
- B. Store materials protected from exposure to harmful environmental conditions, clean, dry, frost-free and at recommended temperature and humidity levels.
  - 1. Store composite wood level and flat, off ground or floor, with supports at each end and maximum 24 inches on center.
  - 2. Do not stack composite wood to heights greater than 12 feet high.
  - 3. Cover composite wood with waterproof covering, vented to prevent moisture buildup.

## 1.7 WARRANTY

- A. Project Warranty: Refer to Contract Conditions for project warranty provisions.
- B. Manufacturer's warranty: Submit, for owner's acceptance, manufacturer's standard warranty document executed by authorized company official.
  - 1. Manufacturer's warranty is in addition to and not intended to limit other rights owner may have under Contract Conditions.

## PART 2 PRODUCTS

**Specifier Note: Retain Article below for proprietary method specification. Add product attributes performance characteristics, material standards and descriptions in other Articles as applicable. Use of such phrases as or equal, approved equal or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining or equal products.**

### 2.1 MANUFACTURER

- A. MoistureShield Inc; 914 N Jefferson, Springdale, AR 72764; Phone: (866) 729-2378, (479) 756-400; Email: info@moistureshield.com; Website: www.moistureshield.com

**Specifier Note: Retain and edit the following paragraph to meet the project requirements.**

### 2.2 PERFORMANCE REQUIREMENTS

- A. Comply with ICC-ES Report ESR-2388.
- B. Composite Wood Decking: To ASTM D7032 and ASTM D1037.
- C. Thermal Transmission: To ASTM C518.
- D. Surface Burning Characteristics: To ASTM E84 Class C or Class III.
  - 1. Flame spread: 100.
  - 2. Smoke Developed: 350.
- E. Ignition Characteristics: To ASTM D1929
  - 1. Self Ignition: 741 degrees F.
  - 2. Flash ignition: 729 degrees F.
- F. Insect Resistance: To AWPA E1.
- G. Comply with Federal Manufactured Home Construction and Safety Standards.
- H. Flexural Properties: To ASTM D648 and ASTM D6109.
- I. Hardness: To ASTM D143.
- J. Abrasion Resistance: To ASTM D2394.
- K. Compressive Strength: To ASTM D1621, 962 psi.
- L. Heat Softening: Comply with ASTM D1525.

## 2.3 DESCRIPTION

- A. Slip, scratch, mold and mildew resistant composite wood decking with high recycled content and approved for direct ground and water contact.

**Specifier Note: Description should include fade and stain resistance for capped composite wood decking series.**

- 1. Acceptable material: MoistureShield, Inc., [Series] [Color Name]

## 2.4 MATERIALS

- A. Decking: Reclaimed wood and polyethylene plastic with additives for coloring and inhibiting fungal and algal growth; free from toxic chemicals.
  - 1. Profiles:
    - a. Deck board: [1 × 6] [2 × 4] [2 × 6] [2 × 8] inches × [12] [16] [20] feet long [with grooves for concealed fastening].
    - b. Fascia Trim Board: 0.67 × 11.25 × 12 feet long.

**Specifier Note: Visit [www.moistureshield.com](http://www.moistureshield.com) for additional details about available series and colors.**

- 2. Colors: [Moistureshield Color Name].
- 3. Recycled content:
  - a. 95% total recycled content.

## 2.5 ACCESSORIES

- A. Mechanical Fasteners: To ASTM D1761.
  - 1. [Hot dip galvanized steel] [or] [stainless steel] [composite wood screws] [nails] of length in accordance with composite decking **manufacturer's written recommendations**.
- B. Guardrail System: To ICC-ES AC174.
  - 1. Acceptable material: MoistureShield [Composite Railing System] [Aluminum Railing System].
- C. Hidden Fasteners: [Coated steel] [Stainless Steel] deck clips capable of supporting deck boards above joists.
  - 1. Acceptable material: MoistureShield Deck Clips.
- D. Deck Lighting: LED [post cap lighting] [accent lighting] [rail lighting] [stair lighting] and accessories.
  - 1. Acceptable material: MoistureShield [Post Cap Light] [Bullet Lights] [Rail Strips] [Stair Light] [Post Light] and Lighting Accessories.

## PART 3 EXECUTION

### 3.1 INSTALLER

- A. Use only installers who have training and experience of work similar to the work of this Section.

### 3.2 EXAMINATION

- A. Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for composite wood decking installation in accordance with manufacturer's **written recommendations**.
  - 1. Visually inspect substrate in presence of consultant.
  - 2. Inform consultant of unacceptable conditions immediately upon discovery.
  - 3. Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.
  - 4. Starting installation of composite wood decking implies substrate conditions are acceptable for Work of this Section.

**Specifier Note: Retain and edit the following Article to meet project requirements. Retain only those paragraphs appropriate to the project.**

### 3.3 INSTALLATION

**Specifier Note: Visit [www.moistureshield.com](http://www.moistureshield.com) for installation details.**

- A. Install composite wood decking in accordance with manufacturer's written recommendations.

**Specifier Note: For information on the National Design Specification for Wood Construction, visit the American Wood Council website at [www.awc.org/codes/standards/publications](http://www.awc.org/codes/standards/publications).**

- B. Deck Design: To AWC NDS.
- C. Layout and install joists at [16 inch maximum on center when decking will be installed perpendicular to joists] [12 inch maximum on center when deck boards will be installed at an angle to joists].
  - 1. Do not exceed maximum spans in accordance with **manufacturer's written recommendations**.
  - 2. Ensure joists are level, plumb and square.
- D. ATTACH POSTS USING MECHANICAL FASTENERS TO DECKING FRAME AT 72 INCHES MAXIMUM ON CENTER.
  - 1. Do not notch posts.

**Specifier Note: Retain and edit the following paragraph only if there will be deck lighting included in the project.**

- E. Install wiring for lighting in accordance with [Section 26 56 19 - LED Exterior Lighting].
- F. Install deck boards [in pattern indicated] [perpendicular] [diagonally] to joists [on hidden fastener deck clips] and secure with mechanical fasteners.
  - 1. Ensure each deck board has three joist supports minimum.
    - a. Use 2 minimum fasteners at each joist support.
    - b. Pre-drill fastener holes closer than 1 inch from deck board edges.
  - 2. Allow 1/4 inch side-to-side spacing between deck boards.
  - 3. Allow 1/8 inch minimum end-to-end spacing at butt joints between deck boards.
  - 4. Stagger butt joints on decks longer than 20 feet.
    - a. Stagger butt joints in adjacent rows one support minimum.
  - 5. Cut boards to fit around posts.
    - a. Allow 1/8 inch minimum space between deck boards and posts.
  - 6. Cut deck boards true and square to length after securing.

**Specifier Note: Retain and edit the following paragraph only if there will be a deck railing system included in the project.**

- 7. Install railing as indicated.
- 8. Install fascia trim boards as indicated.

**Specifier Note: Retain and edit the following paragraph only if there will be deck lighting included in the project.**

- 9. Install lighting in accordance with [Section 26 56 19 - LED Exterior Lighting] and **manufacturer's written instructions**.

### 3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Coordinate field inspection in accordance with Section [01 45 00 - Quality Control].

**Specifier Note: Specify requirements if manufacturers are to provide field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Manufacturer field reports are included under PART 1, Submittals.**

- B. Manufacturer's Services:

**Specifier Note: Use the following Paragraphs only when manufacturer's field services are provided and are required to verify the quality of the installed components. Establish the number and duration of periodic site visits required by manufacturer and specify below. Contact MoistureShield, Inc. to determine any costs associated with Technical Representatives providing manufacturer's field services. Delete if field services are not required.**

- 1. Coordinate manufacturer's services with Section [01 45 00 - Quality Control].

**Specifier Note: Delete the following paragraph if no costs are associated with manufacturer's services.**

- 2. Arrange for payment for manufacturer's services.
- 3. Have manufacturer review work involved in handling, installation, protection, and cleaning of composite wood decking, and submit written reports in acceptable format to verify compliance of Work with Contract conditions.

4. Manufacturer's Field Services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for product installation review in accordance with manufacturer's instructions.
  - a. Report any inconsistencies from manufacturer's recommendations immediately to Consultant.

**Specifier Note: Edit the following Paragraph to meet project requirements. Coordinate site visits with manufacturer or delete the paragraph and all of its subparagraphs if site visits are not required.**

5. Schedule site visits to review work at stages listed:
  - a. After delivery and storage of composite wood decking, and when preparatory work on which Work of this Section depends is complete, but before application begins.
  - b. Twice during progress of work at 25% and 60% complete.
  - c. Upon completion of Work, after cleaning is carried out.
  - d. Obtain reports within three days of review and submit immediately to Consultant.

### 3.5 CLEANING

- A. Perform daily progress cleaning.
  1. Leave work area clean at end of each day.
- B. Upon completion, remove surplus materials, rubbish, tools and equipment.
- C. Collect recyclable waste and dispose of at appropriate recycling facilities.
- D. Final Cleaning: Clean composite wood surfaces using conventional deck wash containing detergent or sodium hypochlorite.

**Specifier Note: Specify protection methods completed after installation, but prior to acceptance by the owner. Include only statements unique to this Section. Coordinate the following Article with Section 01 76 00 - Protecting Installed Construction.**

### 3.6 PROTECTION

- A. Protect applied composite wood decking from damage during construction.
- B. Repair or replace adjacent materials damaged by installation of composite wood decking.

**END OF SECTION**