COMPOSITE DECKING

Part 1 General

1.1 Section Includes

A. Composite Decking (Trex Transcend and Trex Enhance)

1.2 Related Sections

A. Section 06-1100 – Wood Framing

1.3 References

D. ASTM D 570: Water Absorption of Plastics
E. ASTM D 1761: Mechanical Fasteners in Wood
F. ASTM D -1413-99: Test method for Wood Preservatives by Laboratory Soil-block Cultures

1.4 Design/Performance Requirements

A. Structural Performance:
   b. Tread of Stairs: Concentrated Load: 750 lf/sq.ft., and 1/8” max. deflection with a concentrated load of 300 lbf on area of 4 sq. in.

B. Fire-Test Response Characteristics per ASTM E-84.
1.5 Submittals

A. Product Data Indicate sizes, profiles, surface style, and performance characteristics
B. Samples: For each product specified, one sample representing actual product color, size, and finish.

1.6 Delivery, Storage, and Handling

A. Store Trex products on a flat and level surface. Adjust support blocks accordingly
B. Support Trex bundles on supplied dunnage
C. When stacking Trex bundles, supports should start at each end and be spaced 2’ (0.61m) on center. Supports should align vertically
D. Do not stack Trex higher than 6 bundles on 12’ high
E. Keep material covered using the provided bundle cover until time of installation.
F. See www. Trex.com for detailed storage recommendations;
   a. http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf

1.7 Warranty

A. Provide manufactures warranty against rot, decay, splitting, checking, splintering, fungal damage, and termite damage for a period of 25 years for a residential installation and 10 years for a commercial installation. In addition provide the Trex Transcend and Trex Enhance Fade and Stain Warranty against food staining and fading beyond 5 Delta E (CIE units) for a period of 25 years for a residential installation and 10 years for a commercial installation. Specific terms for warranties can be found at; www.Trex.com

Part 2 Products

2.1 Manufacturers

A. Contract Documents are based on products supplied by; Trex Company, Inc., 160 Exeter Dr., Winchester, VA 22603.
B. Substitutions: Not permitted under Division 01

2.2 Applications/Scope

A. Wood-Plastic Composite Lumber;
   a. Material Description: Composite Decking consisting of recycled Linear Low Density Polyethylene (LLDPE) and recycled wood. The product is extruded into shapes and sizes as follows:
      i. Trex Transcend and Trex Enhance Decking Boards; 1 x 5.5”.
      ii. Lengths – 12, 16, and 20 feet
      iii. Color – To be specified by owner from Trex’ standard list of colors.
b. Physical and Mechanical Properties as follows:

<table>
<thead>
<tr>
<th>Test</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame spread</td>
<td>ASTM E 84</td>
<td>60</td>
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<tr>
<td>Thermal Expansion</td>
<td>ASTM D 1037</td>
<td>1.9 \times 10^{-5} \text{inch/inch/degreeF}</td>
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<tr>
<td>Moisture Absorption</td>
<td>ASTM D 1037</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Nail Withdrawal</td>
<td>ASTM D1761</td>
<td>163 lbs/in</td>
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<tr>
<td>Screw Withdrawal</td>
<td>ASTM D1761</td>
<td>558 lbs/in</td>
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<tr>
<td>Fungus Resistance</td>
<td>ASTM D1413</td>
<td>Rating - no decay</td>
</tr>
<tr>
<td>Termite Resistance</td>
<td>AWPAE1-72</td>
<td>Rating = 9.6</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Ultimate (Typical) Values *</th>
<th>Design Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression Parallel</td>
<td>ASTM D198</td>
<td>1588 psi</td>
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<tr>
<td>Compression Perpendicular</td>
<td>ASTM D143</td>
<td>1437 psi</td>
</tr>
<tr>
<td>Bending Strength</td>
<td>ASTM D198</td>
<td>3280 psi</td>
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<tr>
<td>Shear Strength</td>
<td>ASTM D143</td>
<td>1761 psi</td>
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<tr>
<td>Modulus of Elasticity</td>
<td>ASTM D4761</td>
<td>495,000 psi</td>
</tr>
<tr>
<td>Modulus of Rupture</td>
<td>ASTM D4761</td>
<td>3800 psi</td>
</tr>
</tbody>
</table>

* Ultimate strength values are not meant for design analysis. Design values are for temperatures up to 130°F (54°C)

2.2 Accessories

A. Fasteners:
   a. Trex Universal Hideaway Hidden Fasteners
   b. Screws; See - [http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf](http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf)

Part 3 Execution

3.1 Installation
A. Install according to Trex installation guidelines.
   [http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf](http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf)
B. Cut, drill, and rout using carbide tipped blades
C. Do not use composite wood material for structural applications

3.2 Cleaning
A. Following cleaning recommendations as found in Trex installation guide at;
   [http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf](http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf)