INTRODUCTION

SkyPaver Composite Roof Pavers should be installed in accordance with local building codes, and with the installation instructions included below. Since all installations are unique, it is the installer’s responsibility to determine specific requirements for each flat roof application. Firestone recommends that all applications be reviewed by a licensed architect, engineer or local building official prior to installation. SkyPaver Composite Roof Pavers are intended for application over low-slope roofs up to \( \frac{1}{2}:12 \). If you have any technical questions or need further assistance, please contact your Firestone Technical Coordinator.

SkyPaver Composite Roof Pavers are designed for safe and trouble-free installations. Site preparations are simple and only limited equipment is needed.

EQUIPMENT

- Safety Glasses, Gloves, Ear Plugs
- Hand Dolly
- Broom
- Edging
- Cutting Equipment (6+ amp Jigsaw, Mitre Saw)
  - Recommended Blades:
    - 5-6 tooth per inch jigsaw blade
    - 10" 24-tooth carbide tipped wood-ripping blade
    - 12" 30-tooth carbide tipped wood-ripping blade
- ALWAYS WEAR SAFETY GLASSES, GLOVES, AND EAR PLUGS WHEN CUTTING PAVERS OR GRIDS. Obey all safety and operational instructions provided with your cutting equipment.

If a curved design is to be installed, you may also need:
- SkyPaver Accessory Pavers
- Caulking Gun
- Heavy-Duty Construction Adhesive (e.g. Loctite PL375)
PROJECT DESIGN

SkyPaver Composite Roof Pavers allow for both straight and curved designs. Follow the steps listed below for best results, and contact Firestone for project design assistance, if desired.

1. Calculate Square Footage:
Measure the dimensions of the paver area and calculate the total square footage. Be sure to add 5% extra to the measured square footage to allow for scrap and to have a few extras on hand in case of future damage.

2. Calculate Amount of Pavers Required:
Each unit of SkyPavers includes 8 pavers and a 16.0” x 16.0” grid, which covers 1.78 square feet. To calculate how many units are needed for a project, divide the total square footage of the project by 1.78. Here is a table for reference:

<table>
<thead>
<tr>
<th>Project Measurements (length x width = square feet)</th>
<th>Required Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Color</td>
</tr>
<tr>
<td>50 sq ft</td>
<td>29 units (15 units of each color)</td>
</tr>
<tr>
<td>100 sq ft</td>
<td>57 units (29 units of each color)</td>
</tr>
<tr>
<td>250 sq ft</td>
<td>141 units (71 units of each color)</td>
</tr>
<tr>
<td>500 sq ft</td>
<td>282 units (141 units of each color)</td>
</tr>
</tbody>
</table>

3. Choose a Pattern:
SkyPaver Composite Roof Pavers can be installed in a multitude of different patterns and combinations. Designs can include small and large repeating patterns. Some example patterns are provided below:

IMPORTANT: At least one paver must connect two grids in each direction. The herringbone pattern does this without needing to specially orientate the grids. Here is how the grids must be orientated to assure overlap in all directions for other patterns:
**Herringbone:**

This is the most popular and easiest to install pattern. Pavers will interlock grids in both directions.
- Lay the installation grids as illustrated below.
- Start laying pavers at the starting corner.

**Basketweave:**

This is the simplest installation method for a Basketweave pattern, but it will require extra installation grids.
- The starting paver must be laid 4” down and 4” over from the top left corner of the grid. This will shift the pattern over and assure at least one paver will connect two grids in both directions.
- The leftover grid can either be trimmed off, or a 4” border can used to fill in the extra space.

**Running Bond:**

This pattern will require the staggering of grids to assure the pavers will connect them in both directions.
- The starting paver can be laid in the top left corner, but the next column of grids must be staggered halfway down the starting row. Every other column will need one half grid at the top.
- Each half of the cut grid can be used.
4. Decide on Border / Soldier Course (2.4” SkyPavers ONLY):

The SkyPaver Composite Roof Paver system allows for several border and soldier course options. These can either be straight or curved. The accessory pavers can help limit the cutting and give a finished look to the project. (For more details see “Install Accessory SkyPavers” below).

Pick Colors:

SkyPaver Composite Roof Pavers come in five colors that may be used either singly or in combination to create unique looks. To help select the colors for your project, please consult the SkyPaver Composite Roof Paver Technical Information Sheet and Sell Sheet, both available at www.firestonebpco.com.
INSTALLATION

- Firestone SkyDrain drainage mat is required under all SkyPaver applications. It serves to both protect the roofing membrane from abrasion and allows a pathway for water to escape to the drains. The rooftop surface must have adequate drainage to meet local codes.

- For small undulations in the flat roof surface, scrap pieces of roofing membrane can be used as shims. This will help create a smoother top surface once the SkyPaver system is installed.

- SkyPavers are not a structural replacement for flat roof surfaces, and are not suited for all flat roof applications. Please consider wind uplift and fire rating guidelines, along with the weight capacity of the roof when designing a project. Always consult your Firestone Technical Coordinator for the recommended rooftop adhesion guidelines for your specific project.

- The SkyPaver system is designed for installation over low slope roofs, up to ½:12”.

- The roof surface must be free from substantial undulations or “waves”.

- Door and other thresholds must be able to accommodate the minimum added height.

1. INSTALL FIRESTONE SKYDRAIN:

Follow all SkyDrain installation instructions found on the Technical Information Sheet.

- Prior to installation of the roofing membrane, all substrates must be clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials which may damage the membrane.
- Starting at one corner of the highest point of the roof paver installation area, unroll the SkyDrain drainage panels.
- Panels should be butted together, with both the top and bottom geocomposite fabrics overlapped at all ends and edges.
- SkyDrain may be cut to fit around deck penetrations and protrusions; either shears or box cutters may be used. Do not cut SkyDrain when it is in contact with the roofing membrane or flashings.

2. INSTALL SKYPAVER GRIDS
REMINDER: Grids must be orientated to allow the pattern of pavers to interlock grids in both directions.

- Begin laying grids from the starting point of your choice, usually up against a structure, or the longest straight run.
- Offset seams of the grids and seams of SkyDrain for best results.
- Lay out approximately 10 grids to make room to install pavers.
- As pavers are brought over and installed, the grids from those pavers will continuously be laid out across the install.
- Grids can be cut to fit with the same cutting tools used for the pavers (e.g. mitre saw or jigsaw).
To Cut a Grid:

- Use the recommended cutting equipment provided on page one of these installation instructions.
- One or two swipes of the blade works best, keeping the blade speed up and avoiding binding.
- If the ending grid is less than 4”, cut off 4” or 8” of the grid before it, so the ending grids can be longer and will connect into the install with overlapping pavers (e.g. instead of a 16” grid and a 3” grid, create an 8” grid and an 11” grid). See example below.

3. INSTALL SKYPAVERS

Pick a Starting Point:

Picking the right starting point will make your installation quicker and easier:

- Start off the longest straight edge to reduce the amount of cutting, or off of a building structure.
- Starting in a corner and working out in both directions is typically preferred.

Account for Expansion:

Pavers will expand and contract with temperature change, similar to other composite materials. To accommodate for expansion, leave a 1” gap around all deck protrusions, and always install in temperatures greater than 40°F.

Installing SkyPaver Composite Roof Pavers:

- Bring stacks of pavers on the grids over to the starting point on a hand dolly.
- Empty pavers off of grid and lay them in the desired pattern in the grids.
- Take empty grids and lay them out in the continued orientation needed for your pattern.
- Continue laying pavers until all full pavers are installed.

Cutting Pavers:

ALWAYS WEAR SAFETY GLASSES, GLOVES, AND EAR PLUGS WHEN TRIMMING PAVERS OR GRIDS. Obey all safety and operational instructions provided with your cutting equipment.

To Cut a Single Paver:

- Use the recommended cutting equipment (top of installation instructions).
- Cut pavers individually using a spare grid to hold it in place.
• Short quick swipes with the blade works best. Keep the blade speed up and avoid binding.
• Cut pavers may be adhered to the grid for more security.

4. INSTALL ACCESSORY SKYPAVERS
If the project requires curved or straight borders, accessory Firestone SkyPavers can eliminate much of the cutting. These include Legless, Wedge, Bullnose, Half, and Transition pavers.
• Draw the shape of the desired border onto the pavers that will need to be cut. Laying the accessory pavers on top of the other pavers and tracing the interior edge is the easiest. A string line may also be used.
• Cut the pavers on the line in place using a jigsaw.
  o DO NOT cut through the grids.
• Adhere Legless and/or Wedge pavers on top of grids using Loctite PL375 or other heavy-duty construction adhesive (see next section) to create the border.

5. ADHERING PAVERS TO GRID
In certain cases, pavers must be adhered to the grid for security (e.g. cut pavers, wind uplift conditions, around drains or where potential standing water could exist, stairs). Consult your Firestone Technical Coordinator representative for additional recommendations in all applications where wind uplift is a concern.
• Using a heavy-duty construction adhesive, place a 1/8” bead across the top ribs of the grid.
• Place the paver in the grid and press down firmly.
• Let pavers sit undisturbed for duration of adhesive cure time.
• A 28 oz. tube of adhesive will cover approximately 15 square feet.

6. SECURING PERIMETER PAVERS
Each application is different, and the perimeter must be secured accordingly. For most applications, adhere pavers to grids a minimum of 16” around the perimeter. For applications that do not end at a wall or parapet, edge metal, Transition pavers, or Bullnose pavers may be installed to finish the edge of the paver system. Flashing may also be an option, and our system may be used in conjunction with other edging products if appropriate. Contact AZEK Pavers for further details.

MAINTENANCE
Cleaning your SkyPaver system is simple and easy. Clean once a month during warmer months using a garden hose, and a small mild detergent if desired. Start at the high point of the roof and work the water toward the drains. High-pressure washing systems, harsh detergents, and scrub brushes are not needed.