

THESE INSTRUCTIONS SERVE AS A GENERAL GUIDE. FOR SPECIFICS, PLEASE CALL CELL-TEK 410-721-4844

### STEP 1: Prepare subgrade.

Excavate, compact, and shape foundation soils to proper depth and grade.

Check out our videos on [www.celltekdirect.com](http://www.celltekdirect.com)

### STEP 2: Place underlayment on the subgrade.

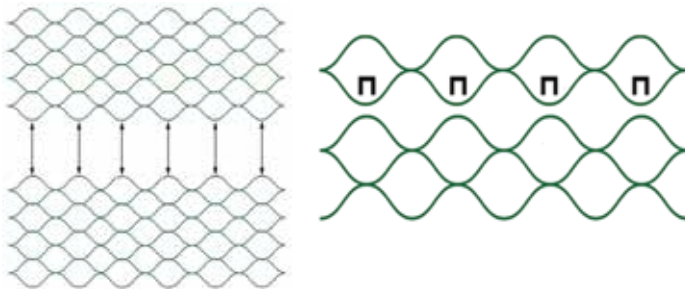
Use a non-woven geotextile fabric for most applications. Vegetated grassy paving would require Triax geogrid instead. The purpose of this underlayment is to keep the infill materials in the geocells; to prevent them from migrating down into the earth over time. Triax geogrid has large holes which allow grass roots to grow deep.

### STEP 3: Install LSG.

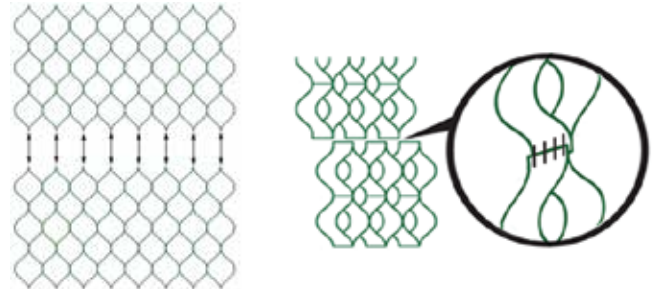
When fully expanded, a single unit of LSG will cover 8' x 22.5'. Be sure to fully expand the cells for best results. Cut the expanded grid to fit the area of your project. Use spikes to temporarily keep the grid expanded until you are ready to fill the cells. Interleaf or overlap edges of adjacent sections, connecting the grid to create a continuous matrix of cells. Connect all grid sections.

### Connecting Grids:

#### Connection Type 1 Cell Wall to Cell Wall



#### Connection Type 2 Weld End to Weld End



To create a strong seam, apply one staple per inch starting from top or bottom. A pneumatic stapler can be used for cell depths of 3" - 6". Or, we offer a hand-held stapler that can be used for the 3" - 4" cell depths.

Our hand-held stapler has an extra wide jaw. Use heavy duty staples.

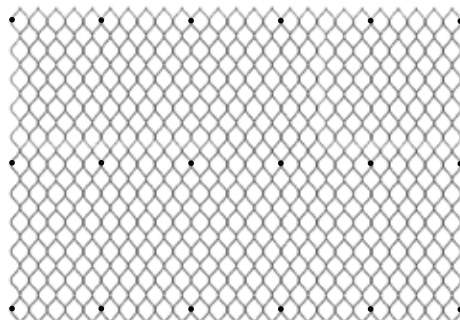
For small jobs, drill holes and use 1/4" zip ties instead of staples.

### STEP 4: **ONLY FOLLOW THIS STEP IF YOU WILL HAVE LOOSE GRAVEL OR GRASSY TOPPING**

(If you are installing pavers, bonded gravel, concrete, or asphalt on top, please skip this step)

#### Install 18" rebar J hooks every 4 feet in all directions.

Rebar J hooks keep the grid pinned down to prevent the infill materials from undermining the grid and lifting it up over time. Be sure to install the J hooks on all perimeters. Here is an example of J hook placement on a full 8' x 22.5' unit of LSG (18 per grid). These are made of 1/2" (#4) rebar. In some instances, with a 6" deep cell, a 24" rebar J hook is recommended.



Installation instructions continued on back

# LSG INSTALLATION INSTRUCTIONS CONTINUED

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## STEP 4: Infill Cells.

Cells can be filled with any infill materials such as gravel, crushed gravel, sand, etc. However, if your goal is a permeable pavement, use a clean, washed angular stone to allow water to pass through easily. **IMPORTANT NOTE:** For grassy paving, install a 50% / 50% mix of top soil and clean angular 3/4" stone. Overfill cells by 1". Avoid using limestone as it will affect the pH balance of soil and inhibit grass growth.

## STEP 6: Compact infill materials

Using appropriate equipment, compact the infill materials.

## STEP 7: Install the topping of your choice: Pavers, Gravel, Grass, or Bonded Gravel (SEE 4 BASIC OPTIONS BELOW)

**TIP!**  
Rebar J hooks are useful to keep grid expanded when filling cells!

### OPTION A: Brick Pavers (with a layer of bedding sand or fine gravel)

Residential Driveway System with LSG Series

**LEGEND**

- Concrete Paver with sand joints
- Cell-Tek LSG (3", 4" or 6") with aggregate infill. Approx 1/2" - 1" adjustment layer on top
- DuPont SF20 or SF40 Non-woven Geotextile Fabric
- Compacted Subgrade

**NOTES:**

- Max weight per Cell Depth
- 3" = 8000 lbs (single loads 18kN)
- 4" = H30 Loading 40,000 lbs (single loads 75kN)
- 6" = H20 Loading 80,000 lbs (single loads 145kN)

### OPTION B: Gravel

Non-Vegetated / Porous Paving with LSG Series (Load Support Grid)

**LEGEND**

- Cell-Tek LSG filled with 1/4" to 3/4" clean angular stone with 1" - 2" granular surface
- Rebar J-Hook #4 rebar (18" H or 24" H per engineer)
- DuPont SF20 or SF40 Non-woven Geotextile Fabric
- Compacted Subgrade

**NOTES:**

- Max weight per Cell Depth
- 3" = 8000 lbs (single loads 18kN)
- 4" = H30 Loading 40,000 lbs (single loads 75kN)
- 6" = H20 Loading 80,000 lbs (single loads 145kN)

### OPTION C: Grass (sod or soil / seed)

Vegetated Green Paving with LSG Series (Load Support Grid)

**LEGEND**

- Cell-Tek LSG filled with aggregate / topsoil mix with 1" layer of topsoil
- Rebar J-Hook #4 rebar (18" H or 24" H per engineer)
- Triax Geogrid
- Compacted Subgrade

**NOTES:**

- Max weight per Cell Depth
- 3" = 8000 lbs (single loads 18kN)
- 4" = H30 Loading 40,000 lbs (single loads 75kN)
- 6" = H20 Loading 80,000 lbs (single loads 145kN)

### OPTION D: Bonded gravel (Gravel-Lok®)

Permeable Gravel-Lok® Pavement

**LEGEND**

- Rebar Coat of Gravel-Lok liquid
- 1.5" to 2" bonded Gravel-Lok layer
- Cell-Tek LSG (3", 4" or 6") with aggregate infill. Approx 1/2" - 1" adjustment layer on top
- DuPont SF20 or SF40 Non-woven Geotextile Fabric
- Compacted Subgrade

**NOTES:**

- If you are using our product for the first time, please call for installation advice.
- Within 4 - 8 weeks, inspect surface for loose stones. Repair promptly. Repeat inspection and repair annually. For repair method, contact Cell-Tek Geosynthetics LLC.
- Fill liquid with stones and trowel them out (Bound Method). For a smooth surface using the Bound Method, the troweled surface must be a minimum of 3 times the thickness of the stone you are using. OR
- Spread out the clean stones and sprinkle on the liquid with a watering can (Pour Bond Method). Both are permeable.
- Stones must be completely clean, dry and free from any fines.
- Angular stones will create a stronger pavement than rounded stones.
- For ADA compliance use stones which are 1/8" - 1/2" in size.