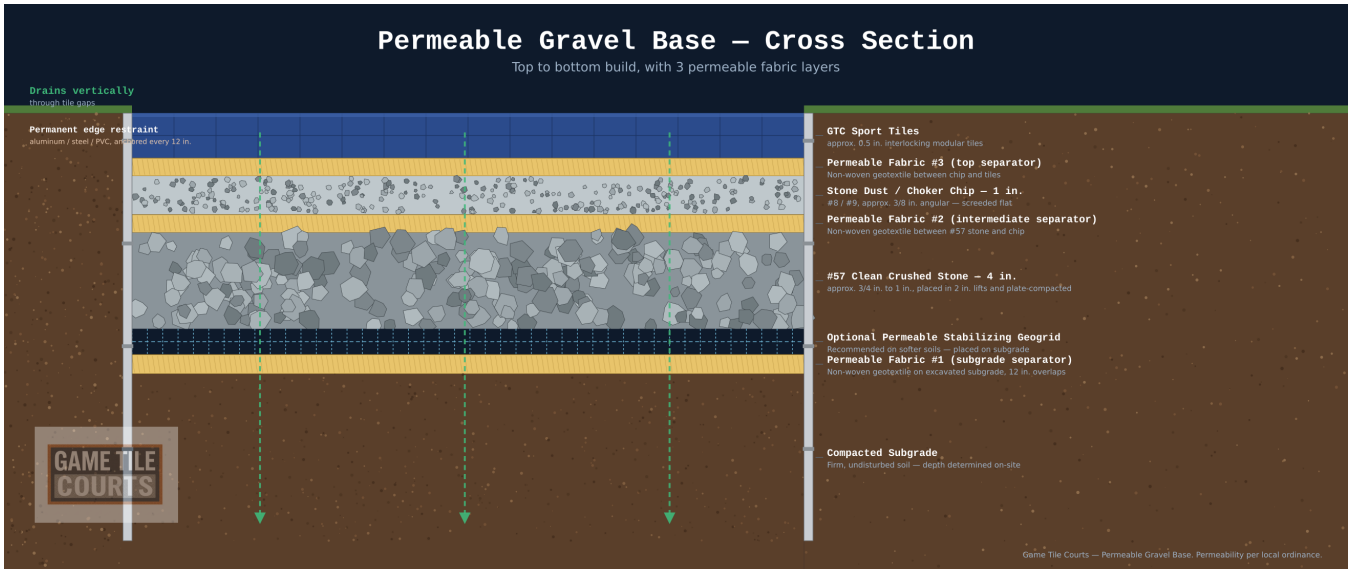
Permeable Gravel Base

Permit-friendly, stormwater-compliant, and removable foundation for modular sport tile courts. The system uses **three permeable fabric layers** for separation, filtration, and protection.



Recommended Specifications

Layer (top to bottom)	Spec
GTC Sport Tiles	Modular interlocking sport tiles
Permeable Fabric #3 (top separator)	Non-woven geotextile between chip and tiles
Stone Dust / Choker Chip	1 in. of clean #8 / #9 angular stone (approx. 3/8 in.), screeded flat
Permeable Fabric #2 (intermediate)	Non-woven geotextile between #57 stone and chip
#57 Clean Crushed Stone	4 in. (approx. 3/4-1 in. clean angular), placed in 2 in. lifts, plate-compacted
Optional Stabilizing Geogrid	Permeable woven geogrid / paver-grid on softer soils
Permeable Fabric #1 (subgrade separator)	Non-woven geotextile on excavated subgrade, 12 in. overlaps (mandatory)
Compacted Subgrade	Firm, undisturbed soil; depth determined on-site
Edge Restraint	Aluminum / steel / PVC paver edging, anchored every 12 in.
Slope	1% (1/8 in. per foot) one direction, optional - drains vertically
Flatness Tolerance	3/8 in. deviation over 10 ft straightedge

*Permeability is officially confirmed by what your local town ordinances accept as permeable. The system above is generally considered permeable. All fabrics specified must be permeable.

Step-by-Step Build

1. Excavate to firm, undisturbed subgrade. Depth is determined on-site by your contractor based on soil conditions and finished tile elevation.

2. Lay Permeable Fabric #1 (subgrade separator) - non-woven geotextile across the full footprint, lapped 12 in. at seams.

3. *Optional* - install a **permeable stabilizing geogrid / paver-grid** on top of Fabric #1 for extra court stability on softer soils.

4. Install perimeter edge restraint set to finished grade.

5. Place 4 in. of #57 crushed stone (approx. 3/4-1 in. clean angular) as the bottom layer, in 2 in. lifts, plate-compacting each lift.

6. Lay Permeable Fabric #2 (intermediate separator) - non-woven geotextile across the compacted #57 stone, lapped 12 in. at seams.

7. Spread the leveling chip on top of Fabric #2 - #8 / #9 stone (approx. 3/8 in. angular chip), 1 in. deep, screeded flat to the design slope.

8. Roll or plate-compact lightly until the surface is firm under foot.

9. Lay Permeable Fabric #3 (top separator) - non-woven geotextile across the screeded chip, lapped 12 in. at seams.

10. Install GTC tiles directly on top of Fabric #3. No cure time required. No rubber mat required.

Pro Tip

Use **clean, open-graded** stone (no fines) so water can pass through the base into the soil below. Dense-graded crusher run will trap water and is not permeable.

Common Mistakes to Avoid

• Skipping any of the three fabric layers - voids appear, fines migrate, the base settles.

• Using rounded pea gravel - it does not lock and shifts under load.

• Skipping edge restraint - the perimeter spreads and the surface collapses inward.

• Compacting in one big lift - leaves voids and causes long-term settling.

• Adding a rubber mat - GTC tiles install directly on Fabric #3; a mat is not required.

Cost Range

Typically **$3-$7 per square foot** for a fully engineered permeable gravel base, including geotextile fabrics, stabilizing grid, edge restraint, and labor.