

BASE GUIDE

Asphalt Base Guide for Sport Tile Courts

A faster, often lower-cost permanent foundation for modular sport tile courts. Built to GTC spec, an asphalt base performs reliably for 15–25 years.

GAME TILE COURTS™ · Asphalt Base Cross-Section

gametilecourts.com



KEY SPECS

TOTAL ASPHALT
3" (2" binder + 1" wearing)
FLATNESS
¼" / 10' straightedge

SUB-BASE
6" compacted crushed stone
HMA DENSITY
92-96% Gmm

SLOPE
1% in one direction
CURE BEFORE TILE
30 days minimum

Cross-section diagram. Components not to scale.

When Asphalt Makes Sense

Choose asphalt for a **permanent court at a lower up-front cost**, when paving an existing driveway, or when timeline matters. Typically 15–30% less than equivalent concrete.

GTC Recommended Specifications

- **Wearing (surface) course:** 1" of fine-graded HMA — 9.5 mm Superpave or DOT equivalent
- **Binder course:** 2" of base-grade HMA — 19 mm Superpave
- **Tack coat:** CRS-1 or SS-1h emulsion (ASTM D977) at 0.05–0.10 gal/yd² between lifts
- **Aggregate sub-base:** 6" compacted crushed stone (Class 5 / DGA)
- **Geotextile:** Non-woven separation fabric between subgrade and aggregate (12" overlapped seams)
- **Subgrade compaction:** 95% Standard Proctor density (ASTM D698)

- **Aggregate compaction:** 95%+ relative compaction, placed in 3" max lifts
- **HMA compaction:** 92–96% of theoretical maximum density (Gmm)
- **Slope:** 1% (1/8" per foot) in one direction — never crowned
- **Flatness tolerance:** 1/4" deviation over 10' straightedge
- **Cure time before tile install:** 30 days minimum (45+ in cool climates)

GTC's spec exceeds the typical "2" binder + 1/2" wearing" residential standard by adding a full 1" wearing course for better long-term wear and a 6" compacted stone sub-base for superior load distribution.



Step-by-Step Build

1. Excavate 9–10" below finished grade and proof-roll the subgrade.
2. Compact subgrade to 95% Standard Proctor; correct any soft spots.
3. Lay non-woven geotextile fabric over compacted subgrade with 12" overlapped seams.
4. Place crushed stone in 3" max lifts, compacting each lift to 95%+ relative density. Total 6".
5. Pave the binder course (2" base-grade HMA) at 275–325°F mat temperature; roll while hot to 92–96% density.
6. Apply tack coat (CRS-1 or SS-1h emulsion); allow to break.
7. Pave the wearing course (1" fine HMA) at the design slope; finish-roll smooth.
8. Cure 30 days minimum before tile install (45+ days in cool climates).
9. Pressure wash the cured surface to remove residual oils and dust.
10. Verify flatness with a 10' straightedge before tile install — repair any > 1/4" deviations.

Existing Asphalt? Suitability Checklist

- ✓ No cracks wider than 1/4" or longer than 3' (patch and seal first).
- ✓ No depressions that hold standing water after rain.
- ✓ Slope present in one direction (1% minimum).
- ✓ Edges firm — no crumbling or alligator cracking.
- ✓ Surface clean of oil, moss, or loose aggregate.
- ✓ At least 30 days cured since last paving or seal coat.

Common Mistakes to Avoid

- ✗ Installing tiles on fresh asphalt — oils will bleed and stain the tile underside.
- ✗ Skipping the binder course — single-lift paving deforms under point loads (hoop posts, net posts).
- ✗ Inadequate sub-base compaction — causes settlement, birdbaths, and frost heave.
- ✗ Crowning the surface — modular tile expects a single-direction slope.
- ✗ No tack coat between lifts — leads to delamination of the wearing course.

Cost Range

Expect **\$7–\$12 per square foot** for a professionally placed, court-grade asphalt base built to GTC spec in most U.S. markets — typically 15–30% less than equivalent concrete.

Engineering disclaimer: Mix designs, lift thicknesses, and compaction targets should be confirmed with a local Professional Engineer or licensed paving contractor based on regional climate, soil conditions, and DOT specifications.