

Flexible vs Rigid Pavement

Civil Engineering

Asphalt against concrete, honestly.

Flexible

- Asphalt layers over granular sub-base
- Load spread gradually through layers
- Deforms with the subgrade below it
- Cheap to resurface and to patch
- Fails by rutting and fatigue cracking

Rigid

- Concrete slab, usually jointed
- Slab bridges over local soft spots
- Load spread widely by slab stiffness
- High first cost, long service life
- Fails by joint faulting and cracking

THE DIFFERENCE THAT MATTERS

Flexible suits variable subgrade and staged work; rigid suits heavy, slow traffic.

Educational reference. Pavement type and thickness follow the road authority's design method for the traffic loading.