

GNSS Surveying

Civil Engineering

What GNSS delivers, and where it fails.

Satellite positioning gives coordinates directly, and the correction method sets the accuracy achieved.

TYPICAL RTK HORIZONTAL
10 to 20 mm

TYPICAL RTK VERTICAL
About twice that

- Standalone gives metres, not survey accuracy
- RTK needs a base or a network correction
- Height is always the weakest component
- Ellipsoid height needs a geoid model
- Canopy, walls and multipath ruin a fix
- A float solution is not a fixed solution

LOOK FOR IT

A control point under trees is where a GNSS survey quietly goes wrong.

Educational reference. Datum, projection and geoid model must be recorded, and results verified against known control.