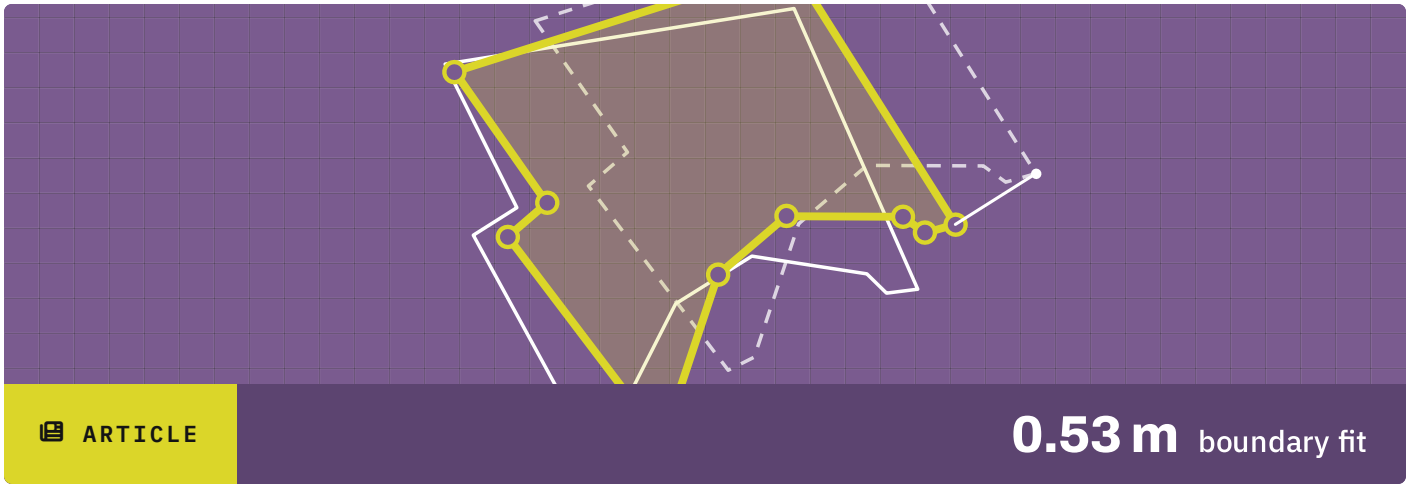
From survey plat to verified boundary: why the first map is the one that matters

Floodplain, wetlands, tanks, noise, contamination — every distance in an environmental review is measured from the site boundary. If the boundary is wrong, everything downstream is wrong too.

AUGUST 28, 2026 · 2 MINUTE READ · BY RICARDO A. CALDERÓN LÓPEZ



The picture: One lot drawn three ways, to show the three kinds of error described below: the cadastre's parcel out of place (dashed), a drawing placed without its grid rotation (white) and the verified boundary (yellow).

One boundary, many tools

AVA keeps one registry of project sites — the Site, the Off-Site areas (access roads, utility corridors) and a Site Point — and every tool reads it: map exhibits, screenings, the tank survey, field apps. That makes the first boundary the most important map of the project.

33
projects in the shared registry

1,718
features stored, with 114 saved geometry versions

835
file conversions — KMZ, shapefile, GeoJSON, NEPAssist

Three sources, three ways to be wrong

- **The cadastre (CRIM)** is convenient and often approximate. On one lot, the record survey showed the cadastral parcel up to **16 m** out of place on one side.
- **CAD drawings** carry their own grid. One project drawing had been placed ignoring an **8.5° rotation** of that grid, putting the site about 8.5 m off. Refitted to the drawing's own coordinate grid, it now lands within **0.53 m** (median) — and a check against LiDAR elevations at 2,269 survey spots agrees to the centimeter in the median.
- **Scanned survey plats** have no text layer. An AI agent reads the plat's survey-data table from the image; then code verifies the traverse — on one lot it closed within **±4 mm** — before anything is mapped.

The rule

The record survey governs over the cadastre. A new geometry version is saved beside the old one and only becomes the project's main boundary when a person says so. AI can read the table; it never decides where the line goes.

AVA Environmental Consultants, Inc. · PO Box 361300, San Juan, PR 00936-1300 · 787-505-4981 · augusto.velazquez@avaferpo.com · avaferpo.online