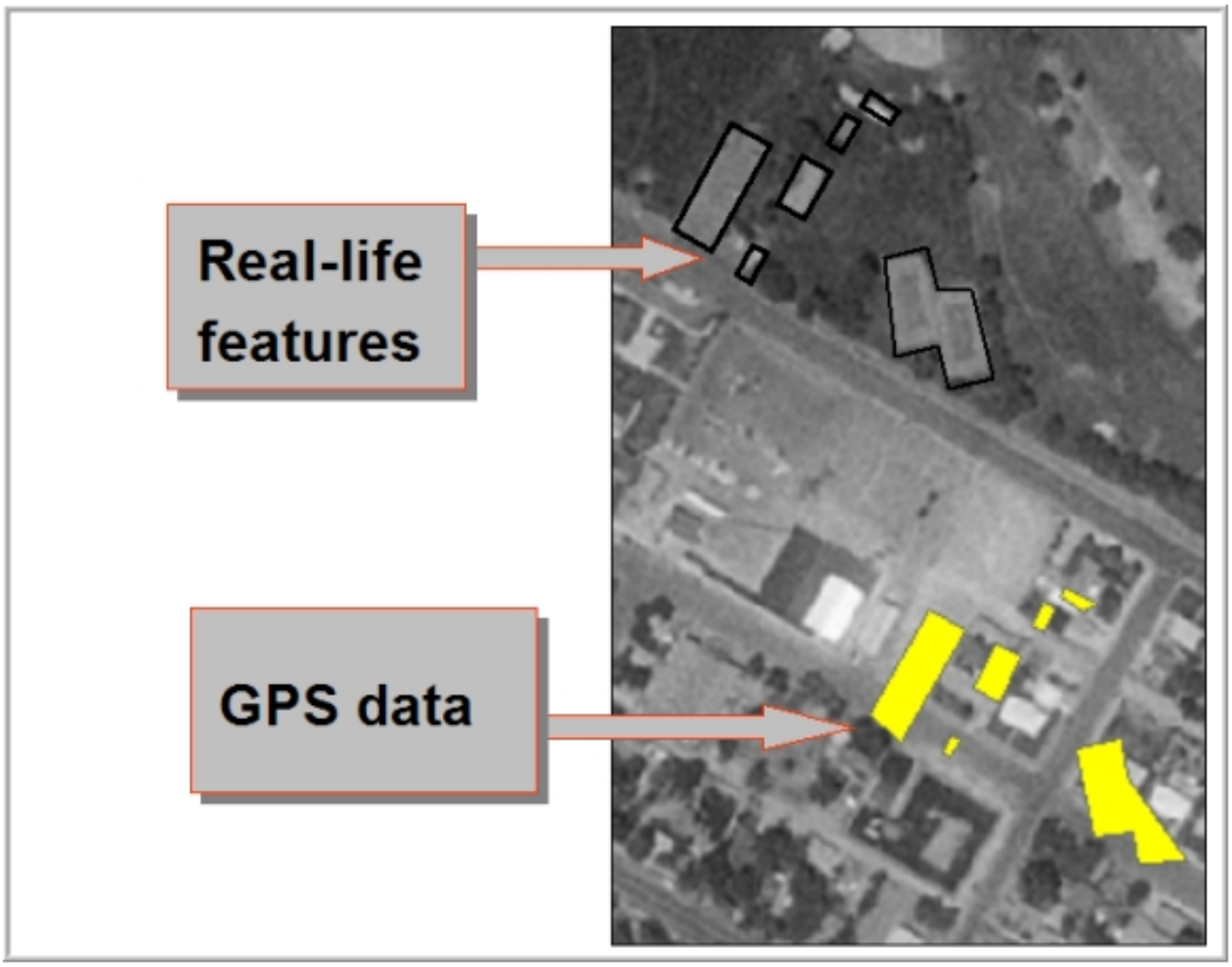
This shift is typical of a datum mismatch.



The city park features collected by GPS have landed blocks away on rooftops. They have shifted approxiamtely 80 meters east and 200 meters south of where they should be on the background image.
This is because
while the aerial photo is in the
NAD83 datum
, the GPS data has been exported to GIS in
the
NAD27 datum
. For this area, a coordinate in NAD27 is not surprisingly given the above example, 80 meters east and 200 meters south of the same coordinate in NAD83.

To avoid datum shifts

ALWAYS document the datum and coordinate system for all datasets you create and check the metadata for datasets you recieve from others. Failure to do so is the most common reason for mismatched data. While GIS software can project on the fly, it needs to know the projection each dataset is in to do so successfully.

Metadata, data about our data is always critical.

Here is a fun (really!) 6-minute METADATA video that uses HUMOR to drive that point home.