



1) The aerial map is accurate to 6 inches - This is a mix-up between image pixel resolution and accuracy. The most recent imagery that we have available on MapGuide is the 2011 PAG (Pima Association of Governments) Color Orthophoto Imagery, and its pixel resolution is 6-inches. Image pixel resolution indicates the smallest size of an object on the ground that would be discernible in the image, and is generally stated to be twice the pixel resolution. For example, an object that is 1-foot by 1-foot would be the smallest size that would be discernible in a 6-inch resolution image. The image accuracy is +/- 2-feet at 95% confidence. The "95% confidence level" can be defined as the region in which there is a 95% probability that the true position lies. For example, if an elevation is 1012.4 ft ( $\pm 0.2$  ft at 95% confidence), then there is a 95% chance that the true elevation is between 1012.2 and 1012.6ft. Another way of describing this is that if the elevation is independently measured 100 times, then we expect that 95 of the measured elevations will fall between 1012.2 and 1012.6 ft. It is a statistical statement based on data analysis, and the 95% value is widely used in the geospatial community for assessing spatial accuracy. At an accuracy level of +/- 2-feet, measured ground locations can be off from their true positions by up to 4-feet at 95% confidence.

2) If the imagery lined up correctly, as it does on some properties, it would be easy to determine property lines - GIS data should never be used to determine the authoritative location of any boundary, e.g. property, jurisdictional, zoning, district, etc., and should only be used for general reference. Determining the authoritative locations of boundaries on the ground, by law, can only be performed by a licensed Land Surveyor, and falls outside the realm of GIS. Although GIS can provide a ballpark or referential indication of where boundaries lie on the ground, the greater use is for analyzing spatial relationships between two or more GIS layers, and linking to additional information about the features on a given GIS layer. An example that captures both of these uses would be looking at parcel zoning. By viewing the GIS parcel layer and zoning layer together, one can visually determine the zoning for individual or collective parcels. If the parcel layer had zoning as an attribute, one could also simply choose a given parcel or group of parcels and view the zoning attributes for the parcel(s). A GIS layer's attribute data can be used to link to other sources of information for that layer's features. The best example of this is from our MapGuide system, in that you can double-click on a parcel and a new webpage of information for that parcel comes up, including links to the official/authoritative Assessor's data, recorded documents such as subdivision plat maps and deeds, and a host of other related information sources for that parcel.

3) If the images and the property lines were a little out of sync, it would somehow be possible to measure from the lines showing the roads - This is pretty much the same situation as 2) above. Yes, you can make measurements on GIS data and within mapping systems such as MapGuide, but again, it should only be used as a general reference. Regarding the road Rights-Of-Way (ROW) that can be discerned from the parcel boundaries, in the majority of cases the ROW boundaries do not match the edge of pavement, rather they typically will include area beyond the edge of pavement for such things as sidewalks, signage, drainage, etc.

Property boundaries always matter, but we tend to forget exactly where they are when they are not marked with something obvious like a wall. In La Cholla Hills, few of the boundaries between lots and the common area are obvious. Some are fifty feet from the nearest wall.

Pima County has a magnificent map tool that you can access on your computer that superimposes the property lines of all lots on the aerial map of the county. Their records of property lines are the official version, and very clear. The aerial map is accurate to 6 inches.

To look up your neighborhood (or anybody else's), use Internet Explorer to go to [www.dsd.pima.gov](http://www.dsd.pima.gov). Click on the Pimaexpress link, to the Pima County Development Office. On that screen, look down the left hand side and click on the MapGuide link under Featured Sites. On the next screen, click on Main MapGuide Map. Accept the conditions, and a county map will appear. Use the Zoom feature (a magnifying glass with a +) or the mouse wheel to zoom in on your neighborhood.

This will give you the property lines. Nice, but not very useful without a way to connect those to the ground. For that, scroll down the left hand side of the screen about 80% of the way, and check the box for Imagery. Then check one of the boxes lower down, preferably one with high resolution. Presto! The aerial satellite images will appear under the property line grid, in amazing detail. You can even see who was moving in or out that day, and where the landscape trucks were parked.

The satellite images are slightly out of sync with the property line grid, but not much and you can easily figure out how much since we know that the lines marking streets should line up exactly with the streets.

So now if you want to know who should be pruning that shrub near your place, the map will tell you if it is yours or in common area. Enjoy.