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# Google Earth requires a math converter

## How to see your property without leaving your chair

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**Special to A.M. Costa Rica**

Here is a great tip for expats to find property with Google Earth when a real estate sales agent provides them with a *catastro* or a plat map of a parcel. Google Earth has come a long way in the last several years. Back in 2005, there was very little high-definition photography available for Costa Rica, but today there is much more and it is very impressive.

Granted some of the sections in high-definition are a bit dated, but they still provide a good guide as to the location of a property. The date of any frame provided in a higher resolution can be found by running a mouse over the section and looking at the bottom right of the Google Earth screen.

In Costa Rica, coordinates on plat maps use the Lambert system. One cannot take the numbers found in the *ubicación* or *localización* section — both of these words mean location in Spanish — of a plat map and find its location with Google Earth without some heavy-duty calculations. The Lambert system is a conic map projection frequently used in aeronautical charts. For lay persons, this means it is a measurement derived from a mathematician's calculation when a curve — as in the earth's curve — intersects with a flat surface, like a map that is flat. Google uses longitude and latitude.


**A.M. Costa Rica graphic**
**Orosí property on a Costa Rica sectional map**

The location section is normally on all plat maps prepared in the past 40 or 50 years. Very old maps do not have this section because the *hojas cartográficas*, or cartographic charts, were not created for the country until the late 50s and early 60's. The coordinates on older maps with the


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location section may not be very accurate because in the past surveyors did not have very good equipment. Even today, some surveyors use antiquated measurement devices, and the information is not very precise.

There is no exact area on a catastro for the ubicación section. It is placed where it fits on the map prepared by a surveyor. One just needs to look carefully at the map to find it. The area is small and is represented as a grid. The grid has numbers on the top and on one of the sides, usually the right side. The top numbers represent the Lambert X coordinate and the side numbers Lambert Y coordinate.

Now here is the secret to change those numbers into something Google Earth can use. A person named Tomas de Camino Beck created a simple calculator to convert Lambert into a decimal latitude and longitude value. These values can be used in the "fly to" section of Google Earth. The calculator can be downloaded HERE!

The calculator is in a zip file. It is free of anything nasty like viruses, malware, or spyware. It is just a simple calculator, nothing fancy. Users can download the zip file and extract it to the desktop of a computer. This program is for Windows only. The program in the zip file is named *convertcr*. A click on the program will run the calculator. The first thing that pops up is a welcome screen. A click on *continuar* or "continue," and the input fields will be displayed.

Here is an example of how to use the calculator and its results for Google Earth:

Using the map in the picture above 552000 goes into the Lambert X field and 200000 into the Lambert Y field. The calculator returns the decimal values of 9.81692529625514 for latitude and -83.8593293754473 for longitude. Users should change the option setting for Google Earth to accept decimal values instead of degrees and minutes and put in the numbers in the "fly to" section of Google Earth as 9.81692529625514N, 83.8593293754473W. The Google Earth system will move to the section of the grid above where points 552 and 200 cross. This area is just outside of Orosi, a city east of San José and just south of Cartago.

Location numbers on Costa Rican plat maps are based on Costa Rica's cartographic charts that use grids, and surveyors use the numbers of the grids. Costa Rica also has Lambert north and Lambert south areas. All the charts of the country can be found HERE!

This is a neat way for someone to find on a computer that property someone is trying to sell in Costa Rica.

There are currently many buying opportunities for real estate in Costa Rica due to the world's financial crisis. Expats interested in buying property should do their research and take nothing for granted including a property's location.

When interested in a piece of real estate, they should always ask for the "catastro" and, if possible, the GPS coordinates. Real estate agents usually have the former but not the later. GPS readings are much more accurate, but now if one does not have them and only has a plat map to work with, the property can be found with Google Earth.

**Garland M. Baker is a 38-year resident and naturalized citizen of Costa Rica who provides multidisciplinary professional services to the international community. Reach him at info@crexpertise.com. Baker has undertaken the research leading to these series of articles in conjunction with A.M. Costa Rica. Find the collection at http://crexpertise.info, a complimentary reprint is available at the end of each article.** 