Cadastral Maps and Contents

Cadastre - A parcel-based and up-to-date land information system containing a record of land that describes the geometry of parcels and linked to records such as nature of interests, ownership and value of the parcel and its improvements. (FIG 2005)

Cadastral surveys document the boundaries of land ownership, by the production of documents, diagrams, sketches, plans, charts, and maps. They were originally used to ensure reliable facts for land valuation and taxation.

- historically developed to collect land taxes (fiscal purpose)
- widely adopted to support land registration (legal purpose)
- a tool to improve land development (physical purpose)

Cadastral map consist of:

- inventory of property parcels indicating parcel boundaries and Unique Parcel Identifier (*cadastral plans*)
- register of interests (rights, restrictions, responsibilities) and interest holders (eg. owners)

Cadastre information on a computer system to determine its:

- cadastral identifier and links
- location;
- boundary route
- land use
- components distinguished with respect to a different function or land use;
- technical fittings (mains connections)
- land purpose assigned in the local spatial development plan
- distinct attributes of a particular real estate, especially its surface and value

Mapping requirements

- Basic scale shall be in the range of 1:1000 to 1:5000
- Follow Cassini map Projection
- Datum need to be Everest Spheroid.
- Units shall be Square meters.
- Map contents need to be standardized including symbols

cadastral map content ?

Spatial information

-Property parcel boundaries
-Geodetic control monuments
-Easements and right-of-ways (roads)
-Building footprints
-Administrative boundaries (general and cadastral)

Textural information

-Property identifier
-Property address
-Surveyor identifier
-Datum and coordinate reference system and Disclaimer

Basic approaches adopted for cadastral surveying and mapping;

- ground survey techniques
- combination of photogrammetric/Remote sensing and ground survey techniques.

- Ground survey techniques are the basis of most cadastral survey systems and photogrammetry has only been used in the last 30 years or so.

- Ground survey is usually a component of land registration towards conveyance based mainly on the user pays.

- total station and real time Kinematic GPS survey.
- GIS of Cadastral Maps
- Azimuth & Traverse Computation
- Plotting of Cadastral Map in P-70 sheets from the Control Points derived from the Traverse Computations