

**[ DENR ADMINISTRATIVE ORDER NO. 72, August 13, 1990 ]**

**SURVEY STANDARD INSTRUMENTATION AND PROCEDURES IN  
THE VERIFICATION AND APPROVAL OF MAPS IN THE  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

Pursuant to DENR Administrative Order No. 1 dated January 13, 1988, and in line with the continuing program of organizational development improvement, and in order to further enhance the capability, efficiency and the effectiveness of the Department's survey verification and monitoring functions and in meeting the ever increasing demands for varied land maps in the implementation of the Comprehensive Agrarian Reform Program and other related technical services of numerous land based undertakings of both the government and the private sectors, the following survey standards, equipments and procedures are hereby adopted for the guidance and compliance of all concerned.

*A. Cadastral Land Surveys*

Cadastral Survey shall cover the survey of extensive areas of lands for more accurate delineation of timberland and classified A & D lands within a municipality, the political boundary delineation, and the individual survey of lots for registration proceedings, agricultural development, or for any other purposes deemed necessary.

The method, conduct and terms of survey shall be governed by the Lands Administrative Order No. 4 dated 3 July 1980, more commonly referred to as the Manual for Land Surveys in the Philippines, and the Most Recent Version of Instruction to Bidders being adopted by the Department, except for provisions superseded by the introduction of new policy guidelines and procedures introduced by this Administrative Order or subsequent issuance that may later be signed.

*B. Survey of Integrated Social Forestry (ISF) Areas:*

- 1) The perimeter survey of the ISF shall be surveyed with procedures precision and standards prescribed for the kind of survey and using calibrated and registered surveying instruments that could give the required precision.
- 2) In case of the on-going Cadastral Projects, the perimeter survey of ISF areas shall be surveyed concurrently with the lot boundary surveys in A & D areas and projected in Cadastral or Social Forestry Maps.

3) The perimeter survey of the ISF areas upon issuance of the survey authority by the RED shall be conducted based on the sketches prepared by the Land Evaluation and Survey Team with the guidance of the Forestry Officer assigned by the RED to the project.

4) The survey shall be tied to any reference point of known position established by a circuit or loop traverse of tertiary precision. If EDM is used, it shall be periodically tested over a line of known length to verify the instrument constant and check for frequency drift.

5) The corners of the prominent turns of the boundaries shall be defined by concrete monuments 15 x 15 x 50 cm. marked on top "ISF" and the monument number below it, set 40 cm. in the ground. The rest to be "X" marks on immovable or fixed hard rocks or boulders with exposed surfaces of more than one meter in diameter, trees belonging to the first group or indigenous or living edible fruit trees.

6) The parcellary mapping of the individual ISF awards within the ISF areas shall be undertaken by the Administration using instrument of lesser precision or lower standards such as tachimetry or stadia methods.

#### 7) Preparation of Social Forestry Maps

7.1 In the case of perimeter survey and parcellary survey of the ISF areas in previously cadastrally and not yet cadastrally surveyed municipalities, the survey shall be plotted on the isolated survey plan form and the survey symbol shall be "SF-Region Code Number ". The plan and the survey record shall be verified and certified correct only by the Chief, Regional Surveys Division after its verification to prevent its use in titling.

7.2 In the case of an on-going cadastral, an overlay of the cadastral map segregating the forest land shall be prepared. This overlay shall be prepared similar to the cadastral map in all aspect but shall be called SFM instead of CM. The perimeter survey of the ISF parcels shall be plotted on the SFM and numbered consecutively from ISF-Parcel 1, ISF-Parcel 2, etc.

#### *C. Mineral Land Surveys :*

1) Mineral surveys are surveys for quarry applications, sand and gravel concessions, mining claims, coal and petroleum, and other mineral lands, executed for quarry license/permit, location, patent, lease, concession or production sharing agreement and other mining agreement. These surveys shall now be executed consistent with the

standards and precision prescribed for isolated land surveys per Manual for Lands Surveys of the Philippines.

2) The mineral survey shall be executed like any isolated survey tied to acceptable reference point of known position, using registered and calibrated instruments such as transit and tapes or Theodolite and EDM.

3) The survey shall be plotted on the isolated survey plan form and given the appropriate survey symbol.

4) The previously approved property surface surveys and other occupancies shall be plotted in dashes on the mineral land survey plan.

5) The mineral land survey returns shall be submitted to the Regional Surveys Division thru the Mines and Geo-Sciences Sector for verification and approval. The plan shall bear the words "Not for Registration in Court".

#### *D. Land Classification Surveys :*

1) Classified forests shall be delimited by a survey of tertiary precision using at least Forestry Transits and prescribed tapes. Photo maps or enlarged rectified aerial photographs may be used as guide in the delimitation of the forest lands before the actual ground survey.

2) As far as it is practicable, the boundary shall be marked with parallelepiped concrete markers 15 x 15 x 50 cm. set 40 cm. below surface of the ground leaving a projection of 10 cm. above ground with "FZ" and marker number engraved on top, wherever concrete monument iron spikes, is not practicable, the corner shall be "x" marks etched on big immovable boulders with exposed surface of at least one meter in diameter defined by natural features, such as creeks, streams, etc., the centerline of which is located by intersection method or by stadia method.

3) The delimitation survey shall be plotted in a Land Classification Map (LC Map).

4) The surveys of Land Classification shall be under the responsibility of NAMRIA.

5) The land use/capability survey shall be the responsibility of the Forest Management Sector.

E. New methodologies and instrumentation such as photogrammetric method and satellite surveying which will be accepted as alternate or a supplemental survey methodologies in the conduct of the above surveys may be approved by the Lands Management Bureau.

#### *F. Geodetic Control Survey*